



**ONE SAFE SOURCE**



**2013-2014 FAST MOVING PARTS CATALOG**





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## **Total Support from One Source: Your Cat® Dealer**

Welcome to the newest edition of the One Safe Source catalog. Inside you'll find part numbers, descriptions, sizes and more for thousands of genuine Cat® parts — all manufactured to strict, original equipment specifications.

You can count on these reliable, durable Cat parts to deliver top performance and long life in your applications — and you can count on us to provide the right parts and service solutions, when and where you need them.

We carry most of the parts featured in this catalog for your immediate, off-the-shelf convenience. And thanks to Caterpillar's worldwide distribution system, we can deliver most others within 24 hours. If you can't find what you're looking for, just ask. Plus, our highly trained experts understand the complete lineup of Cat parts — original, Classic and Reman — and can answer any questions or make recommendations.

**This catalog contains only high-volume parts. If you are looking for something different, we may have what you need in stock or can order it for you quickly.**

Whether you're maintaining one Cat machine or many, you can turn to us for the parts, comprehensive service options and total support that keeps you up and running — maximizing your equipment investment.

Part numbers and specifications are subject to change without notice. To ensure you receive the correct parts, please provide the model and serial numbers of the machines or engines on which they will be used.

Some of the products listed in this catalog are not available in certain parts of the world. Please check with us for more information.



## CAT® CLASSIC™ PARTS

**THE BEST FIT FOR YOUR OLDER CAT EQUIPMENT AND YOUR BOTTOM LINE.**

Cat® Classic™ Parts cut repair costs for older Cat machines and engines. They are the only lower cost parts options that are backed by the Cat standard warranty and by the dependable Cat dealer network. Cat machines have long, productive lives. In fact, the average age for a Cat machine is nineteen years. One of the reasons they keep working for that many years is because Cat dealers ensure that the customer is getting the right support — and the right parts throughout the entire product life cycle. Used alone or in combination with new and Cat Reman parts, Cat Classic parts give you another way to lower your owning and operating costs without losing the value that comes with the Cat brand.

See your local Cat dealer or <http://parts.cat.com/parts/cat-classic-parts> for additional information.





**BATTERIES AND ELECTRICAL PARTS**

# Cat® Battery Specifications

## CAT® PREMIUM HIGH OUTPUT BATTERIES

— AVAILABLE WORLDWIDE —

Premium line of batteries designed by Caterpillar for sure starting power and performance in the toughest and most demanding application in earthmoving machines or electric power, industrial and marine engines

### CAT® PREMIUM HIGH OUTPUT BATTERIES ARE DESIGNED TO MEET THE FOLLOWING PERFORMANCE TEST REQUIREMENTS

#### 100 Hour Vibration Testing — 5-times the Industry Standard

- Battery must be able to withstand vibration forces without suffering mechanical damage, loss of capacity, loss of electrolyte or without developing internal/external leaks.
- Battery must pass a high rate discharge test after the vibration testing.

#### Five 72-hour Deep Discharge/Recharge Test Cycles

- Battery must recover to 25 charging amps within 20 minutes and meet Industry Electrical Performance Standards.

#### Complete Discharge Test

- Battery must recover to 25 charging amps within 60 minutes and meet Industry Electrical Performance Standards after recharging.

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	Add Water Maint. Check Hrs.	BCI Overall Dimensions			Nominal Weight		Nominal Acid To Fill
								Length	Width	Height	Wet	Dry	
<b>SPECIFICATIONS FOR CAT PREMIUM HIGH OUTPUT BATTERIES</b>													
24	153-5656	650	110	12	52	SC	MF	278.9 mm (10.98 in)	174 mm (6.85 in)	229.1 mm (9.02 in)	18 kg (39.68 lb)	--	--
65	230-6368	880	140	12	80	SC	MF	303.4 mm (11.94 in)	190.8 mm (7.51 in)	191.4 mm (7.54 in)	21 kg (46.30 lb)	--	--
31/30H	3T-5760	750	165	12	100	C SAE	MF	330.2 mm (13 in)	172 mm (6.77 in)	240.3 mm (9.46 in)	25 kg (55.12 lb)	--	--
31/30H	9X-3404	950	165	12	100	C SAE	MF	330.2 mm (13 in)	172 mm (6.77 in)	240.3 mm (9.46 in)	26 kg (57.32 lb)	--	--
31/30H	115-2422	1000	170	12	90	C SAE	MFA	--	171.2 mm (6.74 in)	240.3 mm (9.46 in)	27 kg (59.52 lb)	--	--
31/30H	115-2421	950	170	12	90	C SAE +	MFA	328.4 mm (12.93 in)	171.2 mm (6.74 in)	240.3 mm (9.46 in)	27 kg (59.52 lb)	20 kg (44.09 lb)	6.2 L (6.57 qt)
31	175-4390	1000	180	12	90	C/S	MFA	328.4 mm (12.93 in)	171.2 mm (6.74 in)	236 mm (9.29 in)	27 kg (59.52 lb)	--	--
31	175-4370	825	190	12	100	C/S**	MFA	328.4 mm (12.93 in)	171.2 mm (6.74 in)	236 mm (9.29 in)	27 kg (59.52 lb)	--	--
31	175-4360	710	185	12	100	C/S***	MFA	328.4 mm (12.93 in)	171.2 mm (6.74 in)	236 mm (9.29 in)	27 kg (59.52 lb)	--	--
4D	153-5700	1125	305	12	145	C	MFA	520 mm (20.47 in)	218 mm (8.58 in)	248 mm (9.76 in)	46 kg (101.41 lb)	--	--
4D	9X-9720	1000	275	12	140	LAC +	1000	527 mm (20.75 in)	218 mm (8.58 in)	248 mm (9.76 in)	46 kg (101.41 lb)	27 kg (59.52 lb)	15 L (15.90 qt)

(Continued)



**CAT® PREMIUM HIGH OUTPUT BATTERIES (Continued)**

— AVAILABLE WORLDWIDE —

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	Add Water Maint. Check Hrs.	BCI Overall Dimensions			Nominal Weight		Nominal Acid To Fill
								Length	Width	Height	Wet	Dry	
<b>SPECIFICATIONS FOR CAT PREMIUM HIGH OUTPUT BATTERIES (Continued)</b>													
4D	153-5710	1400	425	12	200	C	MFA	520 mm (20.47 in)	218 mm (8.58 in)	248 mm (9.76 in)	54 kg (119.05 lb)	--	--
4D	9X-9730	1300	400	12	190	LAC +	1000	527 mm (20.75 in)	218 mm (8.58 in)	248 mm (9.76 in)	54 kg (119.05 lb)	37 kg (81.57 lb)	14 L (14.84 qt)
8D	153-5720	1500	465	12	210	C	MFA	520 mm (20.47 in)	275 mm (10.83 in)	248 mm (9.76 in)	60 kg (132.28 lb)	--	--
8D	101-4000	1400	400	12	190	LAC +	1000	526.5 mm (20.73 in)	278 mm (10.94 in)	248 mm (9.76 in)	60 kg (132.28 lb)	39 kg (85.98 lb)	17 L (18.02 qt)

**Construction Notes:**

Batteries have taper post design and are shipped wet except as:

LAC — Low Maintenance — Hybrid Construction

C — Calcium Lead Alloy Grid Design

MF — Maintenance Free

MFA — Maintenance Free — Calcium Grids — Accessible Vent Caps

S — Stud Terminals

+ — Shipped Dry Only

\* — Side Terminals

\*\* — Starting and Deep Cycle Battery

\*\*\* — Deep Cycle and Starting Battery

≈ — Cold Cranking Amps for 30 seconds at 0° F (-18° C)

† — Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

SAE — Uses SAE Posts

SDT — Dual, Top mounted Terminals — Stud and SAE Post. Marine Deep Cycle/Starting Battery

SC — Silver (Ag) Calcium Alloy Grids for resistance to high under hood temperatures.

**CAT® GENERAL SERVICE BATTERIES**

— AVAILABLE WORLDWIDE —

Quality line of batteries designed for automotive, light-duty commercial, industrial, agriculture, marine and recreational applications

- Maintenance Free Calcium Lead Alloy Grids
- Maintenance Free Silver Calcium Alloy Grids
- Low Maintenance-Low Antimony Grids Available
- Anchor Lock Elements for Vibration Resistance
- Flame Arrestor Safety Vents
- Deep Cycle — Valve Regulated Gelled Electrolyte and Absorbed Glass Mat (AGM) Batteries Available

**MAINTENANCE FREE-ACCESSIBLE: SEALED OR DRY BATTERIES; WET BATTERIES**

(Continued)

# Cat® Battery Specifications

## CAT® GENERAL SERVICE BATTERIES (Continued)

— AVAILABLE WORLDWIDE —

Batteries and Electrical Parts

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	BCI Overall Dimensions			Nominal Weight Wet
							Length	Width	Height	
<b>TRUCK/AGRICULTURAL/INDUSTRIAL</b>										
1	8C-3617	640	180	6	100	C/MF	229 mm (9.02 in)	175 mm (6.89 in)	224 mm (8.82 in)	15 kg (33.07 lb)
2	8C-3629	780	200	6	90	LA	264 mm (10.39 in)	175 mm (6.89 in)	224 mm (8.82 in)	17 kg (37.48 lb)
24F	3T-5858	650	120	12	55	SC/MF	269 mm (10.59 in)	173 mm (6.81 in)	229 mm (9.02 in)	18 kg (39.68 lb)
27	8C-3601	710	120	12	65	SC/MF	305 mm (12.01 in)	170 mm (6.69 in)	229 mm (9.02 in)	21 kg (46.30 lb)
27F	8C-3602	710	120	12	65	SC/MF	315 mm (12.40 in)	170 mm (6.69 in)	229 mm (9.02 in)	21 kg (46.30 lb)
31	8C-3628	760	170	12	80	C/MF/S	330 mm (12.99 in)	173 mm (6.81 in)	241 mm (9.49 in)	25 kg (55.12 lb)
3EE	8C-3620	400	95	12	54	LA	490 mm (19.29 in)	109 mm (4.29 in)	229 mm (9.02 in)	20 kg (44.09 lb)
3EH	8C-3632	875	230	6	115	LA	490 mm (19.29 in)	109 mm (4.29 in)	254 mm (10 in)	22 kg (48.50 lb)
4	8C-3633	975	250	6	125	C/MF	318 mm (12.52 in)	175 mm (6.89 in)	241 mm (9.49 in)	21 kg (46.30 lb)
4DLT	8C-3622	850	240	12	100	LA	508 mm (20 in)	208 mm (8.19 in)	208 mm (8.19 in)	36 kg (79.37 lb)
8D	8C-3624	1400	430	12	190	LA	526 mm (20.71 in)	279 mm (10.98 in)	254 mm (10 in)	59 kg (130.07 lb)
<b>BUS — SPECIAL TERMINAL</b>										
8D	250-0473	1400	450	12	190	C/MFA/TB	526 mm (20.71 in)	279 mm (10.98 in)	254 mm (10 in)	61 kg (134.48 lb)
<b>AUTOMOTIVE/LIGHT TRUCK and SUV</b>										
22F	3T-5859	425	65	12	35	SC/MF	239 mm (9.41 in)	173 mm (6.81 in)	211 mm (8.31 in)	13 kg (28.66 lb)
24	3T-5857	650	120	12	55	SC/MF	259 mm (10.20 in)	173 mm (6.81 in)	229 mm (9.02 in)	17 kg (37.48 lb)
26	8C-3600	540	80	12	45	SC/MF	224 mm (8.82 in)	173 mm (6.81 in)	203 mm (7.99 in)	11 kg (24.25 lb)
26R	369-9958	540	80	12	45	SC/MF	224 mm (8.82 in)	173 mm (6.81 in)	203 mm (7.99 in)	11 kg (24.25 lb)
41	8C-3605	650	100	12	64	SC/MF	292 mm (11.50 in)	175 mm (6.89 in)	175 mm (6.89 in)	17 kg (37.48 lb)
42	250-0490	475	70	12	40	SC/MF	241 mm (9.49 in)	175 mm (6.89 in)	175 mm (6.89 in)	13 kg (28.66 lb)
49	307-0751	900	185	12	100	C/MF	354 mm (13.94 in)	175 mm (6.89 in)	190 mm (7.48 in)	26 kg (57.32 lb)
55/56/62	8C-3611	570	90	12	52	SC/MF/DT	224 mm (8.82 in)	152 mm (5.98 in)	216 mm (8.50 in)	15 kg (33.07 lb)
58	8C-3612	580	85	12	53	SC/MF	254 mm (10 in)	183 mm (7.20 in)	175 mm (6.89 in)	14 kg (30.86 lb)

(Continued)

**CAT® GENERAL SERVICE BATTERIES (Continued)**

— AVAILABLE WORLDWIDE —

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	BCI Overall Dimensions			Nominal Weight Wet
							Length	Width	Height	
<b>AUTOMOTIVE/LIGHT TRUCK and SUV (Continued)</b>										
75	7X-6100	690	90	12	60	SC/MF *	229 mm (9.02 in)	178 mm (7.01 in)	185 mm (7.28 in)	16 kg (35.27 lb)
75/86	250-0489	540	85	12	47	SC/MF/DT	248 mm (9.76 in)	178 mm (7.01 in)	206 mm (8.11 in) !	15 kg (33.07 lb)
78	369-9957	690	110	12	58	SC	273 mm (10.75 in)	175 mm (6.89 in)	--	16.6 kg (36.51 lb)
<b>AUTOMOTIVE/LIGHT TRUCK and SUV — FOR SEVERE SERVICE/HIGH TEMPERATURE WITH SILVER LEAD ALLOY TECHNOLOGY</b>										
25	250-0488	625	95	12	45	SC/MF	230 mm (9.06 in)	175 mm (6.89 in)	225 mm (8.86 in)	14 kg (30.86 lb)
34/78	250-0486	550	90	12	60	SC/MF/DT	273 mm (10.75 in)	175 mm (6.89 in)	203 mm (7.99 in) !	18 kg (39.68 lb)
35	250-0487	625	95	12	45	SC/MF	230 mm (9.06 in)	175 mm (6.89 in)	225 mm (8.86 in)	14 kg (30.86 lb)
65	250-0484	690	110	12	55	SC/MF	304 mm (11.97 in)	187 mm (7.36 in)	194 mm (7.64 in)	18 kg (39.68 lb)
<b>MARINE</b>										
24M	8C-3638	650	120	12	55	SC/MF/ DT/~#	274 mm (10.79 in)	173 mm (6.81 in)	239 mm (9.41 in)	18 kg (39.68 lb)
27M	8C-3639	650	150	12	80	@/S/DT#	318 mm (12.52 in)	173 mm (6.81 in)	239 mm (9.41 in)	22 kg (48.50 lb)
<b>LAWN and GARDEN</b>										
U1	8C-3636	300	--	12	25	C/MF	198 mm (7.80 in)	130 mm (5.12 in)	185 mm (7.28 in)	7 kg (15.43 lb)
<b>GOLF CART/SCISSOR and HIGH LIFTS</b>										
GC-2	8C-3641	115 min §	--	6	230	@ OP	262 mm (10.31 in)	180 mm (7.09 in)	277 mm (10.91 in)	29 kg (63.93 lb)
<b>DUAL TERMINAL BATTERIES</b>										
34/78	127-0826	875	120	12	66	SC/MF/DT	274 mm (10.79 in)	175 mm (6.89 in)	203 mm (7.99 in) !	19 kg (41.89 lb)
34/78	250-0486	550	90	12	60	SC/MF/DT	273 mm (10.75 in)	175 mm (6.89 in)	203 mm (7.99 in) !	18 kg (39.68 lb)
75/86	250-0489	540	85	12	47	SC/MF/DT	248 mm (9.76 in)	178 mm (7.01 in)	206 mm (8.11 in) !	15 kg (33.07 lb)

Batteries and Electrical Parts

(Continued)

# Cat® Battery Specifications

## Dry Batteries

Batteries and Electrical Parts

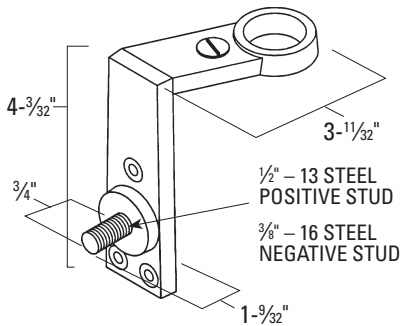
BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	BCI Overall Dimensions			Nominal Weight		Nominal Acid To Fill
							Length	Width	Height	Wet	Dry	
<b>MARINE/RECREATIONAL</b>												
8V	8C-3640	980	350	8	175	LA +	528 mm (20.79 in)	185 mm (7.28 in)	269 mm (10.59 in)	41 kg (90.39 lb)	27 kg (59.52 lb)	10.9 L (11.55 qt)

### Construction Notes:

Batteries have taper post design and are shipped wet except as:

- LA — Low Maintenance — Low Antimony Grids
- LAC — Low Maintenance — Hybrid Construction
- C — Calcium Lead Alloy Grid Design
- SC — Silver (Ag) Calcium Alloy Grids for resistance to high under hood temperatures.
- MF — Maintenance Free
- MFA — Maintenance Free — Calcium Grids — Accessible Vent Caps
- S — Stud Terminals
- DT — Dual Terminal
- TB — Transit Bus one piece end terminal. Right end of battery. Positive Stud: 1/2"-13 steel, Negative Stud: 3/8"-16 steel
- OP — Offset Post with Horizontal Hole Stainless Steel 5/16" Bolt & Hex Nut
- \* — Side Terminals
- ≈ — Cold Cranking Amps for 30 seconds at 0° F (-18° C)
- † — Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)
- ! — For height with removable adapter, add 7/8" (22 mm)
- @ — Deep Cycle-Antimony Grids
- ~ — Marine Starting
- + — Shipped Dry Only
- § — 75 amps @ 80° F (27° C)
- # — Wing nut for 8C-3638 & 8C-3639 is part number 3B-0723

### Transit Bus Terminal



#### Transit Bus Terminal for 8D Part # 250-0473

One piece end terminal. Right end of Battery.

1/2" — 13 Steel Positive Stud

3/8" — 16 Steel Negative Stud



## Valve Regulated Lead Acid (VRLA) Batteries

### GELLED (GEL) ELECTROLYTE

- Starting/Deep Cycle Marine or Recreational Use Battery. Could be used for Gen-Sets, UPS or Photovoltaic applications.
- VRLA batteries use recombination reaction to prevent the escape of hydrogen and oxygen gases normally lost in a flooded lead acid battery. They are non-spillable, never need watering and should never be opened.

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr Cap. @ 20 Hrs.	Const. Notes	BCI Overall Dimensions			Nominal Weight Wet
							Length	Width	Height	
4D	152-8006	970	375	12	183	MF-G/VRLA	528 mm (20.79 in)	216 mm (8.50 in)	254 mm (10 in)	59 kg (130.07 lb)
8D	152-7242	1150	475	12	225	MF-G/VRLA	528 mm (20.79 in)	282 mm (11.10 in)	254 mm (10 in)	73 kg (160.94 lb)

### Construction Notes:

MF-G/VRLA — Maintenance Free-Gel Battery. Sealed, Valve-Regulated Lead Acid (VRLA) battery with gelled electrolyte.

≈ — Cold Cranking Amps for 30 seconds at 0° F (-18° C)

† — Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

## Absorbed Glass Mat (AGM) Batteries

- Designed for high-rate uninterruptible power supply or standby applications
- Sealed Valve-Regulated Lead Acid (VRLA) with electrolyte absorbed in separators consisting of a sponge-like mass of matted glass fibers.
- Preferred for high-rate performance in uninterruptible power supply (UPS) or standby applications.
- VRLA batteries use recombination reaction to prevent the escape of hydrogen and oxygen gases normally lost in a flooded lead acid battery. They are non-spillable, never need watering and should never be opened.

BCI Group Size	Part No.	A	B	C	Volts	Const. Notes	Term.	BCI Overall Dimensions				Nominal Weight Wet
								Length	Width	Terminal Height	Container Height	
45	250-0475	156	84.3	2.75	12	MF-AGM/VRLA	2	225 mm (8.86 in)	135 mm (5.31 in)	221 mm (8.70 in)	207 mm (8.15 in)	18 kg (39.68 lb)
24	250-0476	262	140	3.95	12	MF-AGM/VRLA	2	259 mm (10.20 in)	173 mm (6.81 in)	232 mm (9.13 in)	206 mm (8.11 in)	24 kg (52.91 lb)
27	250-0477	304	165	4.61	12	MF-AGM/VRLA	2	323 mm (12.72 in)	173 mm (6.81 in)	220 mm (8.66 in)	206 mm (8.11 in)	29 kg (63.93 lb)
31	250-0478	350	186	5.25	12	MF-AGM/VRLA	3	329 mm (12.95 in)	171 mm (6.73 in)	222 mm (8.74 in)	218 mm (8.58 in)	31 kg (68.34 lb)
31	250-0479	475	261	6.66	12	MF-AGM/VRLA	3	342 mm (13.46 in)	172 mm (6.77 in)	286 mm (11.26 in)	281 mm (11.06 in)	45 kg (99.21 lb)
U1	250-0474	116	62	1.63	12	MF-AGM/VRLA	1	196 mm (7.72 in)	132 mm (5.20 in)	182 mm (7.17 in)	157 mm (6.18 in)	11 kg (24.25 lb)
4D	250-0483	624	338	9.91	12	MF-AGM/VRLA	4	552 mm (21.73 in)	210 mm (8.27 in)	237 mm (9.33 in)	222 mm (8.74 in)	59 kg (130.07 lb)

### Construction Notes:

A — Power Watts per Cell for 15 minutes to 1.67 Volts Per Cell @ 77° F (25° C)

B — Amp Hour @ 20 Hour Rate to 1.75 Volts Per Cell @ 77° F (25° C)

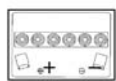
C — Amp Hour @ 10 Hour Rate to 1.80 Volts Per Cell @ 68° F (20° C)

MF-AGM/VRLA — Maintenance Free — Absorbed Glass Mat (AGM) Battery.

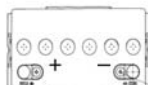
# Cat® Battery Specifications

## Terminals:

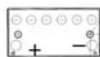
1. Lead terminal. L Shaped. Terminals have square holes.
  2. Lead terminal with brass inserts. 1/4-20 × 0.25 Deep Female Thread.
  3. Lead terminal with brass inserts. 1/4-20 × 0.25 Deep Female Thread.
  4. Lead terminal with brass inserts. 1/4-20 × Female Thread.
- Ratings conform to IEEE — 485 Standards.



**1-BCI**  
Group U1



**2-BCI**  
Group 45



**3-BCI**  
Group 31



**4-BCI**  
Group 4D

## CAT® GENERAL SERVICE BATTERIES

— LIMITED AVAILABILITY — Europe, Africa, Middle East, Asia —

Group Size	Part No.	BCI CCA ≈	DIN CCA ^	EN CCA ±	RC Mins †	Volts	Amp Hr Capacity @ 20 Hrs.	Const. Notes	Overall Dimensions			Nominal Weight Wet
									Length	Width	Height	
78	369-9957	690	--	--	110	12	58	--	273 mm (10.75 in)	175 mm (6.89 in)	184 mm (7.24 in)	16.6 kg (36.51 lb)
C11	369-9955	270	150	250	43	12	30	C	187 mm (7.36 in)	128 mm (5.04 in)	165 mm (6.50 in)	8.1 kg (17.86 lb)
T4	356-6211	380	250	350	66	12	44	C	210 mm (8.27 in)	175 mm (6.89 in)	175 mm (6.89 in)	7.3 kg (16.09 lb)
T4	369-9956	400	225	--	66	12	44	C	210 mm (8.27 in)	175 mm (6.89 in)	175 mm (6.89 in)	7.3 kg (16.09 lb)
T5	356-6212	450	290	420	85	12	55	C	241 mm (9.49 in)	175 mm (6.89 in)	175 mm (6.89 in)	8.4 kg (18.52 lb)
T6	356-6213	550	315	520	105	12	66	C	278 mm (10.94 in)	175 mm (6.89 in)	175 mm (6.89 in)	9.9 kg (21.83 lb)
T7	356-6214	625	420	570	133	12	80	C	315 mm (12.40 in)	175 mm (6.89 in)	175 mm (6.89 in)	12.1 kg (26.68 lb)
T8	356-6215	770	420	715	150	12	88	C	345 mm (13.58 in)	175 mm (6.89 in)	175 mm (6.89 in)	13.7 kg (30.20 lb)

## Construction Notes:

Batteries have taper post design and are shipped wet except as:

≈ — Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 7.2V or above cut-off

^ — Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 9V or above cut-off

± — Cold Cranking Amps at 0° F (-18° C), discharge rate of 90 seconds, meeting 6V or above cut-off

† — Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

C — Calcium Lead Alloy Grid Design

**CAT® GENERAL SERVICE BATTERIES**

— LIMITED AVAILABILITY — Latin America Region Only —

Group Size	Part No.	BCI CCA ≈	DIN CCA ^	RC Mins †	Volts	Amp Hr Capacity @ 20 Hrs.	Const. Notes	Overall Dimensions			Nominal Weight Wet
								Length	Width	Height	
31	242-0831	600	335	100	12	165	C	330 mm (12.99 in)	172 mm (6.77 in)	239 mm (9.41 in)	27.3 kg (60.19 lb)
4D	102-0400	950	535	270	12	150	SC	510 mm (20.08 in)	213 mm (8.39 in)	230 mm (9.06 in)	43.4 kg (95.68 lb)
4D	242-0829	700	395	170	12	330	C	510 mm (20.08 in)	213 mm (8.39 in)	230 mm (9.06 in)	46 kg (101.41 lb)
4D	242-0825	1000	560	330	12	170	C	510 mm (20.08 in)	213 mm (8.39 in)	230 mm (9.06 in)	46.2 kg (101.85 lb)
4D	242-0824	750	420	240	12	135	C	510 mm (20.08 in)	213 mm (8.39 in)	230 mm (9.06 in)	39.8 kg (87.74 lb)
H7	242-0828	725	380	90	12	170	C	313 mm (12.32 in)	175 mm (6.89 in)	175 mm (6.89 in)	23.1 kg (50.93 lb)
T5	242-0826	425	250	90	12	55	C	242 mm (9.53 in)	175 mm (6.89 in)	175 mm (6.89 in)	13.9 kg (30.64 lb)
T5	242-0827	425	250	90	12	55	C	242 mm (9.53 in)	175 mm (6.89 in)	175 mm (6.89 in)	13.9 kg (30.64 lb)
T6	112-9564	620	345	110	12	65	SC	278 mm (10.94 in)	175 mm (6.89 in)	175 mm (6.89 in)	17.8 kg (39.24 lb)

**Construction Notes:**

Batteries have taper post design and are shipped wet except as:

≈ — Cold Cranking Amps for 30 seconds at 0° F (-18° C)

^ — Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 9V or above cut-off

† — Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

C — Calcium Lead Alloy Grid Design

SC — Silver (Ag) Calcium Alloy Grids for resistance to high under hood temperatures.

## ASSEMBLY NUMBERS, CELL AND TERMINAL LAYOUTS

BY BCI NUMBERS (SHOWN IN PARENTHESIS)

### 6-VOLT ASSEMBLIES — TERMINAL POSITIONS & CELL LAYOUTS

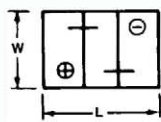


FIG. 1 (2L, 2N)

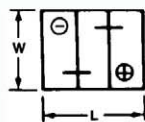


FIG. 2 (1, 2, 3, 3D, 4, 5D, 7D, 9D, 19L, GC2, GC2H)

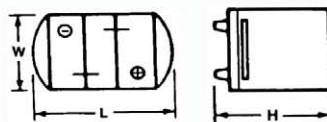


FIG. 2B (17HF)

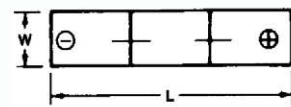


FIG. 5 (2E, 3EH, 4EH)

### 12-VOLT ASSEMBLIES — TERMINAL POSITIONS & CELL LAYOUTS

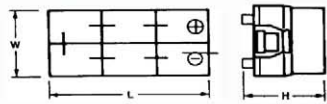


FIG. 8 (4B³, 4D, 6D, 8D³)

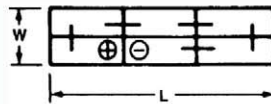


FIG. 9 (3EE, 3ET)

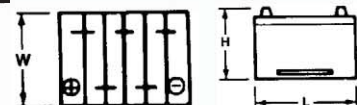


FIG. 10 (12T, 20H, 21, 24, 24H, 24T, 25, 26, 27, 27H, 29H, 30H, 34, 50, 51, 52, 86, U1†, U2†)

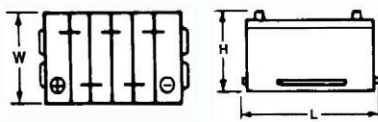


FIG. 10F (16TF, 45, 46)

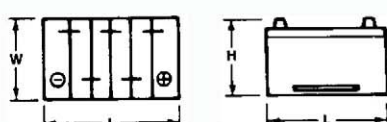


FIG. 11 (21R, 22NL¹m 22/rm 24.24/fm 24/R, 26R, 27R, 29HR, 30HR, 32N, 34R, 35, 51R, 85, LM, U1R†)

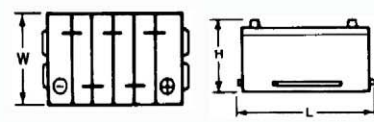


FIG. 11F (22F, 22HF, 22NF, 24F, 27F, 27HF, 29NF, 33)

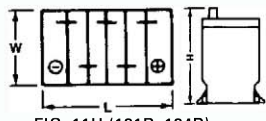


FIG. 11H (121R, 124R)

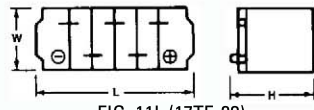


FIG. 11L (17TF, 23)



FIG. 12 (60)

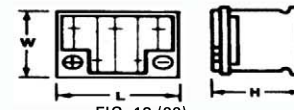


FIG. 13 (66)

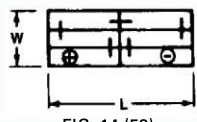


FIG. 14 (53)

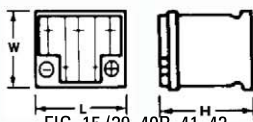


FIG. 15 (39, 40R, 41, 42, 43, 44, 96R, 97R, 98R)

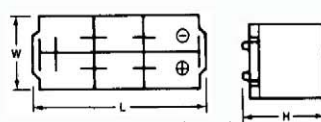


FIG. 16L (4DLT)

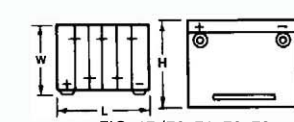


FIG. 17 (70, 71, 72, 73, 74, 75, 76, 77, 78, 101)

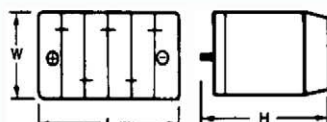


FIG. 18 (28, 31²)

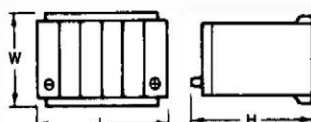


FIG. 19 (36R, 54, 55, 56, 58R)

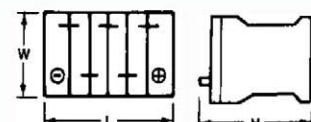


FIG. 20 (61, 62, 63, 64)

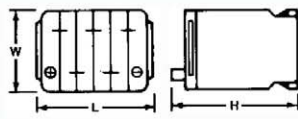


FIG. 21 (59, 65)

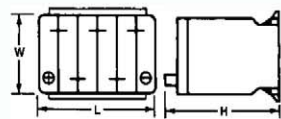


FIG. 22 (57)

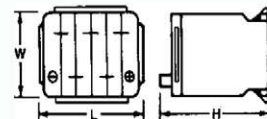


FIG. 23 (58R)

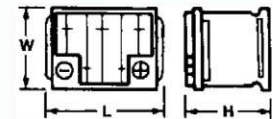


FIG. 24 (47, 48, 49, 90, 91, 92, 93, 94R, 95R, 99R)

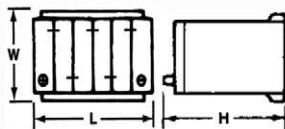


FIG. 25 (58)

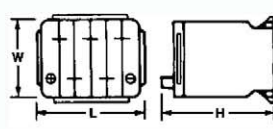


FIG. 26 (58)

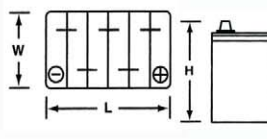


FIG. 28 (151R)

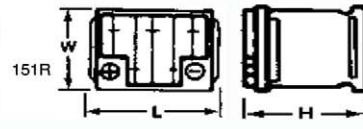


FIG. 34 (99)

Footnotes for Cell Layout Section

<sup>1</sup> Pencil posts supplied as O.E.

<sup>3</sup> SAE or special "bus" side terminals

<sup>2</sup> SAE or 3/8" stud posts

† Special lawn mower "L" terminals

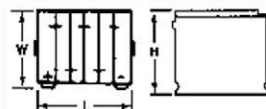


FIG. 35 (79, 100)

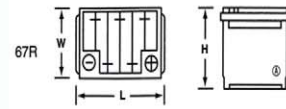


FIG. 39 (67R)



**BCI GROUP SIZES AND OVERALL DIMENSIONS**

All dimensions match BCI Original Equipment Sizes and may not include handles.

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
1	2	6	9 <sup>1</sup> / <sub>8</sub> (232)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
2	2	6	10 <sup>3</sup> / <sub>8</sub> (264)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
2E	5	6	19 <sup>3</sup> / <sub>8</sub> (492)	4 <sup>1</sup> / <sub>8</sub> (105)	9 <sup>1</sup> / <sub>8</sub> (232)
2N	1	6	10 (254)	5 <sup>9</sup> / <sub>16</sub> (141)	8 <sup>15</sup> / <sub>16</sub> (227)
3	2	6	11 <sup>3</sup> / <sub>4</sub> (298)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
3D	2	6	20 <sup>3</sup> / <sub>8</sub> (518)	8 <sup>3</sup> / <sub>4</sub> (222)	10 (254)
3EE	9	12	19 <sup>5</sup> / <sub>16</sub> (491)	4 <sup>3</sup> / <sub>8</sub> (111)	8 <sup>7</sup> / <sub>8</sub> (225)
3EH	5	6	19 <sup>5</sup> / <sub>16</sub> (491)	4 <sup>3</sup> / <sub>8</sub> (111)	9 <sup>13</sup> / <sub>16</sub> (249)
3ET	9	12	19 <sup>5</sup> / <sub>16</sub> (491)	4 <sup>3</sup> / <sub>8</sub> (111)	9 <sup>13</sup> / <sub>16</sub> (249)
4	2	6	13 <sup>1</sup> / <sub>8</sub> (334)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
4B	8	12	21 <sup>1</sup> / <sub>4</sub> (540)	11 <sup>1</sup> / <sub>8</sub> (283)	10 <sup>7</sup> / <sub>8</sub> (276)
4D	8	12	20 <sup>3</sup> / <sub>4</sub> (527)	8 <sup>3</sup> / <sub>4</sub> (222)	9 <sup>13</sup> / <sub>16</sub> (249)
4DLT	16L	12	20 (508)	8 <sup>3</sup> / <sub>16</sub> (208)	7 <sup>15</sup> / <sub>16</sub> (202)
4EH	5	6	19 <sup>5</sup> / <sub>16</sub> (491)	5 (127)	9 <sup>13</sup> / <sub>16</sub> (249)
5D	2	6	13 <sup>3</sup> / <sub>4</sub> (349)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
6D	8	12	20 <sup>3</sup> / <sub>4</sub> (527)	10 (254)	10 <sup>1</sup> / <sub>4</sub> (260)
7D	2	6	16 <sup>1</sup> / <sub>4</sub> (413)	7 <sup>1</sup> / <sub>8</sub> (181)	9 <sup>3</sup> / <sub>8</sub> (238)
8D	8	12	20 <sup>3</sup> / <sub>4</sub> (527)	11 <sup>1</sup> / <sub>8</sub> (283)	9 <sup>13</sup> / <sub>16</sub> (249)
12T	10	12	7 <sup>1</sup> / <sub>16</sub> (179)	6 <sup>15</sup> / <sub>16</sub> (177)	7 <sup>15</sup> / <sub>16</sub> (202)
16TF	10F	12	16 <sup>9</sup> / <sub>16</sub> (421)	7 <sup>1</sup> / <sub>8</sub> (181)	11 <sup>1</sup> / <sub>8</sub> (283)

**BCI GROUP SIZES AND OVERALL DIMENSIONS (Continued)**

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
17HF	2B	6	7 <sup>3</sup> / <sub>8</sub> (187)	6 <sup>7</sup> / <sub>8</sub> (175)	9 (229)
17TF	11L	12	17 <sup>1</sup> / <sub>16</sub> (433)	6 <sup>15</sup> / <sub>16</sub> (177)	7 <sup>15</sup> / <sub>16</sub> (202)
19L	2	6	8 <sup>1</sup> / <sub>2</sub> (216)	7 (178)	7 <sup>1</sup> / <sub>2</sub> (191)
21	10	12	8 <sup>3</sup> / <sub>16</sub> (208)	6 <sup>13</sup> / <sub>16</sub> (173)	8 <sup>3</sup> / <sub>4</sub> (222)
21R	11	12	8 <sup>3</sup> / <sub>16</sub> (208)	6 <sup>13</sup> / <sub>16</sub> (173)	8 <sup>3</sup> / <sub>4</sub> (222)
22F	11F	12	9 <sup>1</sup> / <sub>2</sub> (241)	6 <sup>7</sup> / <sub>8</sub> (175)	8 <sup>5</sup> / <sub>16</sub> (211)
22HF	11F	12	9 <sup>1</sup> / <sub>2</sub> (241)	6 <sup>7</sup> / <sub>8</sub> (175)	9 (229)
22NF	11F	12	9 <sup>7</sup> / <sub>16</sub> (240)	5 <sup>1</sup> / <sub>2</sub> (140)	8 <sup>15</sup> / <sub>16</sub> (227)
22R	11	12	9 (229)	6 <sup>7</sup> / <sub>8</sub> (175)	8 <sup>5</sup> / <sub>16</sub> (211)
24	10	12	10 <sup>1</sup> / <sub>4</sub> (260)	6 <sup>13</sup> / <sub>16</sub> (173)	8 <sup>7</sup> / <sub>8</sub> (225)
24F	11F	12	10 <sup>3</sup> / <sub>4</sub> (273)	6 <sup>13</sup> / <sub>16</sub> (173)	9 (229)
24H	10	12	10 <sup>1</sup> / <sub>4</sub> (260)	6 <sup>13</sup> / <sub>16</sub> (173)	9 <sup>3</sup> / <sub>8</sub> (238)
24R	11	12	10 <sup>1</sup> / <sub>4</sub> (260)	6 <sup>13</sup> / <sub>16</sub> (173)	9 (229)
24T	10	12	10 <sup>1</sup> / <sub>4</sub> (260)	6 <sup>13</sup> / <sub>16</sub> (173)	9 <sup>3</sup> / <sub>4</sub> (248)
25	10	12	9 <sup>1</sup> / <sub>16</sub> (230)	6 <sup>7</sup> / <sub>8</sub> (175)	8 <sup>7</sup> / <sub>8</sub> (225)
26	10	12	8 <sup>3</sup> / <sub>16</sub> (208)	6 <sup>13</sup> / <sub>16</sub> (173)	7 <sup>3</sup> / <sub>4</sub> (197)
26R	11	12	8 <sup>3</sup> / <sub>16</sub> (208)	6 <sup>13</sup> / <sub>16</sub> (173)	7 <sup>3</sup> / <sub>4</sub> (197)
27	10	12	12 <sup>1</sup> / <sub>16</sub> (306)	6 <sup>13</sup> / <sub>16</sub> (173)	8 <sup>7</sup> / <sub>8</sub> (225)

(Continued)

# BCI to Battery Group Sizes (BCI, DIN, JIS, EN)

## BCI GROUP SIZES AND OVERALL DIMENSIONS (Continued 2)

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
27F	11F	12	12 1/2 (318)	6 13/16 (173)	8 15/16 (227)
27H	10	12	11 3/4 (298)	6 13/16 (173)	9 1/4 (235)
27R	11	12	12 1/16 (306)	6 13/16 (173)	8 7/8 (225)
28	18	12	10 1/4 (260)	6 13/16 (173)	9 7/16 (240)
29H	10	12	13 1/8 (334)	6 11/16 (170)	9 1/8 (232)
29NF	11F	12	13 (330)	5 1/2 (140)	8 15/16 (227)
30H	10	12	13 1/2 (343)	6 13/16 (173)	9 1/4 (235)
31	18	12	13 (330)	6 13/16 (173)	9 7/16 (240)
33	11F	12	13 5/16 (338)	6 13/16 (173)	9 3/8 (238)
34	10	12	10 1/4 (260)	6 13/16 (173)	7 7/8 (200)
34R	11	12	10 1/4 (260)	6 13/16 (173)	7 7/8 (200)
35	11	12	9 1/16 (230)	6 7/8 (175)	8 7/8 (225)
36R	19	12	10 3/8 (263)	7 3/16 (183)	8 1/8 (206)
39	15	12	8 1/8 (206)	6 7/8 (175)	7 (178)
40R	15	12	10 15/16 (278)	6 7/8 (175)	6 7/8 (175)
41	15	12	11 9/16 (293)	6 7/8 (175)	6 7/8 (175)
42	15	12	9 1/2 (241)	6 7/8 (175)	6 7/8 (175)
43	15	12	13 1/8 (334)	6 7/8 (175)	8 1/16 (205)
45	10F	12	9 7/16 (240)	5 1/2 (140)	8 15/16 (227)
46	10F	12	10 3/4 (273)	6 13/16 (173)	9 (229)

## BCI GROUP SIZES AND OVERALL DIMENSIONS (Continued 3)

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
47	24	12	9 1/2 (242)	6 7/8 (175)	7 1/2 (190)
48	24	12	10 15/16 (278)	6 7/8 (175)	7 1/2 (190)
49	24	12	13 7/8 (353)	6 7/8 (175)	7 1/2 (190)
50	10	12	13 1/2 (343)	5 (127)	10 (254)
51	10	12	9 3/8 (238)	5 1/16 (129)	8 3/4 (223)
51R	11	12	9 3/8 (238)	5 1/16 (129)	8 3/4 (223)
52	10	12	7 5/16 (186)	5 13/16 (147)	8 1/4 (210)
53	14	12	13 (330)	4 11/16 (119)	8 1/4 (210)
54	19	12	7 5/16 (186)	6 1/16 (154)	8 3/8 (212)
55	19	12	8 9/16 (218)	6 1/16 (154)	8 3/8 (212)
56	19	12	10 (254)	6 1/16 (154)	8 3/8 (212)
57	22	12	8 1/16 (205)	7 3/16 (183)	6 15/16 (177)
58	26	12	10 1/16 (255)	7 3/16 (183)	6 15/16 (177)
58R	19	12	10 1/16 (255)	7 3/16 (183)	6 15/16 (177)
59	21	12	10 1/16 (255)	7 11/16 (195)	7 3/4 (196)
60	12	12	13 1/16 (332)	6 5/16 (160)	8 7/8 (225)
61	20	12	7 9/16 (192)	6 3/8 (162)	8 7/8 (225)
62	20	12	8 7/8 (225)	6 3/8 (162)	8 7/8 (225)
63	20	12	10 3/16 (258)	6 3/8 (162)	8 7/8 (225)
64	20	12	11 5/8 (296)	6 3/8 (162)	8 7/8 (225)

(Continued)

## BCI GROUP SIZES AND OVERALL DIMENSIONS (Continued 4)

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
65	21	12	12 1/6 (306)	7 9/16 (192)	7 9/16 (192)
66	13	12	12 1/16 (306)	7 9/16 (192)	7 5/8 (194)
67R	39	12	9 1/8 (231)	6 15/16 (175)	6 15/16 (175)
70	17	12	8 3/16 (208)	7 1/16 (180)	7 11/16 (196) <sup>1</sup>
71	17	12	8 3/16 (208)	7 1/16 (179)	8 1/2 (216)
72	17	12	9 1/16 (230)	7 1/16 (179)	8 1/4 (210)
73	17	12	9 1/16 (230)	7 1/16 (179)	8 1/2 (216)
74	17	12	10 1/4 (260)	7 1/4 (184)	8 3/4 (222)
75	17	12	9 1/16 (230)	7 1/16 (180)	7 11/16 (196) <sup>1</sup>
76	17	12	13 1/8 (334)	7 1/16 (180)	8 1/2 (216) <sup>1</sup>
78	17	12	10 1/4 (260)	7 1/16 (180)	7 11/16 (196) <sup>1</sup>
79	35	12	12 1/16 (307)	7 1/16 (180)	7 3/8 (188)
85	11	12	9 1/16 (230)	6 13/16 (173)	8 (203)
86	10	12	9 1/16 (230)	6 13/16 (173)	8 (203)
90	24	12	9 1/2 (242)	6 7/8 (175)	6 7/8 (175)
91	24	12	10 15/16 (278)	6 7/8 (175)	6 7/8 (175)
92	24	12	12 3/8 (315)	6 7/8 (175)	6 7/8 (175)
93	24	12	13 3/8 (353)	6 7/8 (175)	6 7/8 (175)
94R	24	12	12 3/8 (315)	6 7/8 (175)	7 1/2 (190)
95R	24	12	15 1/2 (394)	6 7/8 (175)	7 1/2 (190)

## BCI GROUP SIZES AND OVERALL DIMENSIONS (Continued 5)

BCI Grp. No.	BCI Fig. No.	Volts	Max. Length (in/mm)	Max. Width (in/mm)	Max. Height (in/mm)
96R	15	12	79 1/2 (242)	6 13/16 (173)	6 7/8 (175)
97R	15	12	9 15/16 (252)	6 7/8 (175)	7 1/2 (190)
98R	15	12	11 1/8 (283)	6 7/8 (175)	7 1/2 (190)
99	34	12	8 1/2 (207)	6 7/8 (175)	6 7/8 (175)
99R	24	12	8 5/16 (210)	6 7/8 (175)	6 7/8 (175)
100	35	12	10 1/4 (260)	7 1/16 (179)	7 3/8 (188)
101	17	12	10 1/4 (260)	7 1/16 (179)	6 11/16 (170)
121R	11H	12	8 1/4 (222)	7 (178)	8 1/2 (216)
124R	11H	12	10 3/4 (274)	7 (178)	8 5/8 (194)
151R	28	12	7 7/16 (188)	4 15/16 (125)	8 7/8 (225)
GC2	2	6	10 3/8 (264)	7 3/16 (183)	10 5/8 (270) <sup>2</sup>
U1	10	12	7 3/4 (197)	5 3/16 (132)	7 5/16 (186)
U1R	11	12	7 3/4 (197)	5 3/16 (132)	7 5/16 (186)
U2	10	12	6 5/16 (160)	5 3/16 (132)	7 1/8 (181)

<sup>1</sup> Maximum height dimension shown includes batteries with raised quarter cover design. Flat-top design model height (minus quarter covers) reduced by approximately 3/8 inch (10 mm).

<sup>2</sup> Height may vary with different terminal types.

## BCI/JIS REFERENCE CHART

### Best Fit Estimate — BCI Group Size

JIS Number Interpretation:

Example — 55D23R

- 55 — Performance Ranking
- D — Classification by battery width × container height
- 23 — Approximate battery length in mm when multiplied by 10
- R — Last letter designates polarity: R = standard (LHF), L = Reversed (RHF) (LHF) — Left Hand Front Positive Termination

The information contained in this chart is deemed accurate and appropriate at the time of its publication. It represents our “best fit estimate” of the BCI group size to the JIS dimensional reference size. BCI provides this information as a service to the subscribers of the Data Book. While BCI strives for accuracy, it makes no promises or warranties regarding the accuracy or usefulness of this information and expressly disclaims any liability related to the use or reliability of the information contained in this chart. BCI, its officers, directors, employees, agents and its member affiliates cannot be held liable for the accuracy or use of this data.

BCI Grp. No.	BCI Assy. Figure	Max. JIS Length	Max. JIS Width	Max. JIS Height	JIS Designation	Conventional
21	10	202 mm	173 mm	225 mm	50D20R	N50S
21R	11	202 mm	173 mm	225 mm	50D20L	N50SL
24	10	260 mm	173 mm	225 mm	48D26R, 55D26R, 65D26R, 75D26R, 80D26R	N50, N50Z, NS70
24R	11	260 mm	173 mm	225 mm	48D26L, 55D26L, 65D26L, 75D26L, 80D26L	N50L, N50ZL, NS70L
25	10	232 mm	173 mm	225 mm	55D23R, 65D23R, 70D23R, 75D23R	
27	10	306 mm	173 mm	225 mm	65D31R, 75D31R, 95D31R	N70, N70B, NX120
27R	11	306 mm	173 mm	225 mm	65D31L, 75D31R, 95D31L	N70L, N70ZL, NX120-7L
29H <sup>3</sup>	10	410 mm	176 mm	234 mm	95E41R, 105E41R, 115E41R, 130E41R, 95E41L, 105E41L, 115E41L, 130E41L	N100
35	11	232 mm	173 mm	225 mm	55D23L, 65D23L, 70D23L, 75D23L	
51 <sup>1</sup>	10	238 mm	135 mm	227 mm	46B24R, 50B24R, 55B24R, 32C24R	N40, NS60
51R <sup>1</sup>	11	238 mm	129 mm	227 mm	46B24L, 50B24L, 55B24L, 32C24L	N40L, NS60L
151R	28	188 mm	125 mm	225 mm	44B19L(S)	
4D	8	505 mm	182 mm	257 mm	115F51 <sup>2</sup> , 145F51 <sup>2</sup> , 150F51 <sup>2</sup> , 170F51 <sup>2</sup>	N120 <sup>2</sup>
		508 mm	222 mm	257 mm	14G51, 165G51, 180G51, 195G51	NS150 <sup>2</sup>
8D	8	521 mm	278 mm	270 mm	190H52, 245H52	N200

(Continued)

**BCI/JIS REFERENCE CHART (Continued)****Best Fit Estimate — BCI Group Size**

BCI Grp. No.	BCI Assy. Figure	Max. JIS Length	Max. JIS Width	Max. JIS Height	JIS Designation	Conventional
N/A <sup>1</sup>	11	194 mm	126 mm	224 mm	S34B20L — Toyota Prius: Remote Venting	
N/A	10	165 mm	124 mm	218 mm	S34B24R — Honda Insight	
N/A	11	248 mm	127 mm	190 mm	46A24L — Mazda Miata: Remote Venting	
N/A	-	167 mm	127 mm	227 mm	28B17L, 34B17L, 28B17R, 34B17R	
N/A	-	187 mm	127 mm	227 mm	34B19L, 34B19R	
N/A	-	197 mm	129 mm	227 mm	38B20L, 38B20R	
N/A	-	187 mm	127 mm	184 mm	26A19L, 26A19R	
N/A	-	187 mm	127 mm	187 mm	26A19L, 26A19R, 28A19R, 32A19R	
N/A	-	167 mm	127 mm	227 mm	26B17L, 26B17R	
N/A	-	187 mm	127 mm	227 mm	28B19L, 28B19R	
N/A	-	197 mm	129 mm	227 mm	36B20L, 36B20R	

<sup>1</sup> OEM post may be small diameter JIS size, connector change may be required.

<sup>2</sup> BCI designated Group 4D is 38 mm wider than JIS part. 4D will fit most JIS applications.

<sup>3</sup> BCI Group 29H is 76 mm shorter in length than JIS designated part.

## BCI/DIN/EN REFERENCE CHART

### European Reference Information

#### CAUTION

These are common holddown types but others may be used.

#### Holddown descriptions:

B1 = 10.5 mm high with 3 or 5 notches on sides only.

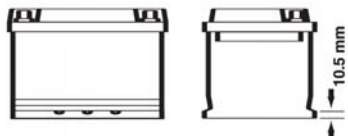
B3 = 10.5 mm high on sides with 3 or 5 notches on sides and 3 notches on ends.

B4 = 19.0 mm high on sides only with 3 or 5 notches on sides only.

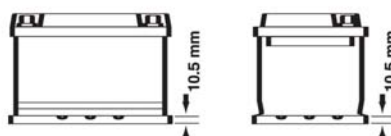
This chart is provided for reference purposes only and is deemed accurate as of the printing of the Data book. BCI, its members, officers, directors agents and employees expressly deny any responsibility for the accuracy of the information provided.

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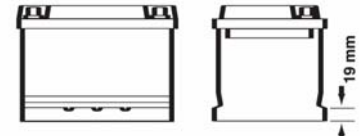
BCI Grp. No.	BCI Assy. Figure	Length (mm)	Width (mm)	Height (mm)	Holddown	Lifting Ledge	Positive Terminal Location	DIN Code	EN Codes
40R	15	278	175	175	B1	No	Right	T6 LB3	66LB
41	15	293	175	175	B4	No	Right	T65 N/A	54LB
42	15	242	175	175	B4	No	Right	T5 LB2	45LB
47	24	242	175	190	B3	Yes	Right	H5 L2	55L2
48	24	278	175	190	B3	Yes	Right	H6 L3	66L3
49	24	354	175	190	B3	Yes	Right	H8 L5	99L5
90	24	242	175	175	B3	Yes	Right	T5 LB2	45LB
91	24	278	175	175	B3	Yes	Right	T6 LB3	66LB
92	24	315	175	175	B3	Yes	Right	T7 LB4	77LB
93	24	354	175	175	B3	Yes	Right	T8 LB5	88LB
94R	24	315	175	190	B3	Yes	Right	H7 L4	77L4
95R	24	394	175	190	B3	No	Right	H9 L6	
97R	15	252	175	190	B4	No	Right	H5 L2	55L2
98R	15	283	175	190	B4	No	Right	H6 L3	66L3
99	34	207	175	175	B1	Yes	Left	T4 LB1	36LB
99R	34	210	175	175	B3	Yes	Right	T4 LB1	36LB
N/A	N/A	175	175	190	B3	Yes	Right	H3 L0	32L0
N/A	N/A	207	175	190	B3	Yes	Right	H4 L1	45L1



B1  
Base holddown 10.5 mm  
(on long sides)



B3  
Base Holddown 10.5 mm  
(on long and short sides)







B4  
Base Holddown 19 mm  
(on long sides)



**SAFETY FIRST**

**⚠ DANGER/POISON**

 <p><b>SHIELD EYES.</b> EXPLOSIVE GASES CAN CAUSE BLINDNESS OR INJURY.</p>	 <p><b>NO</b> • SPARKS • FLAMES • SMOKING</p>	 <p><b>SULFURIC ACID</b> CAN CAUSE BLINDNESS OR SEVERE BURNS.</p>	<p><b>FLUSH EYES IMMEDIATELY WITH WATER.</b></p>  <p><b>GET MEDICAL HELP FAST.</b></p>
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**KEEP OUT OF THE REACH OF CHILDREN. DO NOT TIP. KEEP VENT CAPS TIGHT AND LEVEL. DO NOT OPEN FLUSH COVER BATTERIES.**

**Danger EXPLOSIVE GASES**

**POISON CAUSES SEVERE BURNS**

Cigarettes, flames or sparks could cause battery to explode. Always shield eyes and face from battery. Do not charge or use booster cables or adjust post connections without proper instruction and training.  
KEEP VENT CAPS TIGHT AND LEVEL.

Contains sulfuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately.  
KEEP OUT OF REACH OF CHILDREN.

Batteries and Electrical Parts

**⚠ CALIFORNIA PROPOSITION 65 WARNING**

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

**DO NOT INHALE SULFURIC ACID MIST**

**DANGER OF EXPLODING BATTERIES**

Batteries contain sulfuric acid and produce explosive mixtures of hydrogen and oxygen. Because self-discharge action generates hydrogen gas even when the battery is not in operation, make sure batteries are stored and worked on in a well-ventilated area. ALWAYS wear safety glasses and a face shield when working on or near batteries. When working with batteries:

- Always wear proper eye, face and hand protection.
- Keep all sparks, flames and cigarettes away from the battery.
- Do not attempt to open a flush cover battery.
- Never lean over battery while boosting, testing or charging.
- Cover vent caps with a damp cloth to minimize gas seepage.
- Make sure work area is well ventilated.
- Do not remove or damage vent caps.
- Do not breathe acid mist.

**SAFE BATTERY INSTALLATION**

To assure safe installation and proper operation, follow these installation procedures:

- Always wear proper eye, face and hand protection.
- Disconnect ground cable first (this is usually the negative cable; however, older vehicles may have a positive ground).
- Remove old battery — note position of positive (+) terminal and negative (-) terminal. Mark the cables for correct connection to new battery.
- Clean terminals and cable connections with a wire brush.  
Broken connections or frayed or cut cables should be replaced.
- Install the new battery in the same position as the old one. Be sure to secure it with the hold-down assembly.
- Make sure the terminals do not touch any metal mounting, engine or body parts.
- Connect cables tightly. Connect ground cable last to avoid sparks and explosion.

## SAFE CHARGING

Before beginning the charging operation, read and follow the instructions that come with the charger.

**Never attempt to charge a battery without first reviewing the instructions for the charger being used.**

In addition to the charger manufacturer's instructions, these general precautions should be followed:

- Always charge batteries in a well-ventilated area and wear proper eye protection.
- Turn the charger and timer "OFF" before connecting the leads to the battery to avoid dangerous sparks.
- To avoid an explosion, never try to charge a visibly damaged or frozen battery.
- Connect the charger leads to the battery; red positive (+) lead to the positive (+) terminal and black negative (-) lead to the negative (-) terminal. If the battery is still in the vehicle, connect the negative lead to the engine block, away from the battery, to serve as a ground. (If the vehicle is positive grounded, connect the positive lead to the engine block.)
- Make sure that the leads to the connections are tight.
- Set the timer, turn the charger on and slowly increase the charging rate until the desired ampere value is reached.
- If the battery becomes hot or if violent gassing or spewing of electrolyte occurs, reduce the charging rate or temporarily halt the charger.
- Always turn the charger "OFF" before removing charger leads from the battery to avoid dangerous sparks.

## HANDLING BATTERY ACID

Battery acid, or electrolyte, is a solution of sulfuric acid and water that can destroy clothing and burn the skin. Use extreme caution when handling electrolyte and keep an acid neutralizing solution — such as baking soda or household ammonia mixed with water — readily available. When handling batteries:

- Always wear proper eye, face and hand protection.
- If the electrolyte is splashed into an eye, immediately force the eye open and flood it with clean, cool water for at least 15 minutes. Get prompt medical attention.
- If electrolyte is taken internally, drink large quantities of water or milk. DO NOT induce vomiting. Call a physician immediately.
- Neutralize with baking soda any electrolyte that spills on a vehicle or in the work area. After neutralizing, rinse contaminated area clean with water.

Mixing acid can be very dangerous! Do not attempt without proper training. To prepare electrolyte of a specific gravity, always pour the concentrated acid slowly into the water; DO NOT pour water into the acid. Always stir the water while adding small amounts of acid. If noticeable heat develops, allow the solution to cool before continuing to add acid.

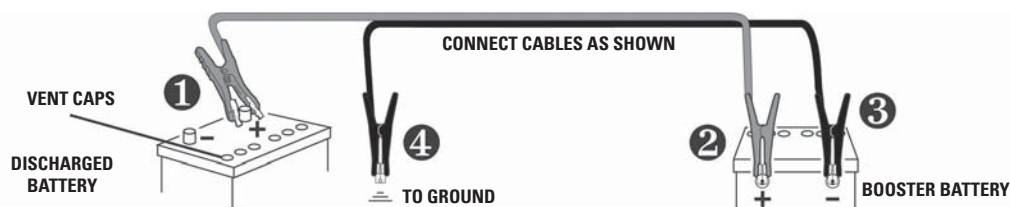
## SAFE BOOSTER CABLE OPERATION

When jump starting, always wear proper eye protection and never lean over battery. Do not jump start a damaged battery, inspect both batteries before connecting booster cable. Be sure vent caps are tight and level, place a damp cloth over the vent caps of both batteries. Make certain that the vehicles and cable ends are not touching and both ignition switches are turned to the "OFF" position:

1. Connect positive (+) booster cable to positive (+) terminal of discharged battery.
2. Connect other end of positive (+) cable to positive (+) terminal of assisting battery.
3. Connect negative (-) cable to negative (-) terminal of assisting battery.
4. MAKE FINAL CONNECTION OF NEGATIVE (-) CABLE TO ENGINE BLOCK OF STALLED VEHICLE, AWAY FROM BATTERY.
5. Start vehicle and remove cables in REVERSE order of connections.





**PROTECT YOUR EYES!**

**IMPORTANT! Connect to a ground, away from battery...away from moving fan and gas lines.**



**SAFETY PRECAUTIONS**

**⚠ DANGER/POISON**

 <p><b>SHIELD EYES.</b> EXPLOSIVE GASES CAN CAUSE BLINDNESS OR INJURY.</p>	 <p><b>NO</b> • SPARKS • FLAMES • SMOKING</p>	 <p><b>SULFURIC ACID</b> CAN CAUSE BLINDNESS OR SEVERE BURNS.</p>	<p><b>FLUSH EYES IMMEDIATELY WITH WATER.</b></p>  <p><b>GET MEDICAL HELP FAST.</b></p>
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**KEEP OUT OF THE REACH OF CHILDREN. DO NOT TIP. KEEP VENT CAPS TIGHT AND LEVEL. DO NOT OPEN FLUSH COVER BATTERIES.**

Batteries and Electrical Parts

**⚠ CALIFORNIA PROPOSITION 65 WARNING**

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling!

**ALWAYS DISCONNECT GROUNDED CABLE FIRST AND CONNECT IT LAST TO PREVENT DANGEROUS SPARKS.**

Perform all work in a well ventilated area. Never lean directly over a battery while boosting, testing or charging it. **PROTECT YOUR EYES!**

Batteries contain corrosive sulfuric acid that can destroy clothing and burn the skin. Neutralize acid spills with a paste made of baking soda and water or large quantities of water. **BE CAREFUL!**

**⚠ WARNING**

Follow all safety instructions when handling batteries! Always wear safety glasses and a face shield when working on or near batteries. All batteries generate explosive hydrogen gas. Keep sparks, flames and cigarettes away from batteries at all times. Do not connect or disconnect “live” circuits. To avoid creating sparks, always turn charging and testing equipment off before attaching or removing clamps.

**IN-VEHICLE SERVICE AND TESTING**

Follow safety precautions:

**WEAR PROPER EYE PROTECTION!**

**Prior to any testing, visually inspect the battery. Look for:**

- Cracked or broken case or cover
- Loose cable connections
- Leaking case-to-cover seal
- Corrosion
- Damaged or leaking terminals

Neutralize any corrosion with a baking soda/water paste or battery cleaner spray. Scrape or brush off the residue and wash the area with clean water. Following your visual inspection, check the battery’s state of charge with a voltmeter.

You must boost charge a weak battery before load testing. (See charging chart under “Charging Tips” section).

If fully charged, perform a load test. **PROTECT YOUR EYES!**

**DRY CHARGE ACTIVATION**

**Important...WEAR PROPER EYE PROTECTION!**

1. Fill each cell to proper level with battery-grade sulfuric acid of 1.265 specific gravity. Battery and acid must be at a temperature of 60° F to 100° F (16° C to 38° C) at time of filling.
2. Boost charge 12V batteries at 15 amps until specific gravity is 1.250 or higher and the electrolyte temperature is at least 60° F (15.5° C). **BOTH CONDITIONS MUST BE MET.** (Boost charge 6V and 12V heavy-duty batteries at 30 amps.) If violent gassing or spewing occurs, reduce charge rate.
3. After charging, check electrolyte levels. If required, add additional electrolyte to bring all levels to the bottom of the vent wells. **DO NOT OVERFILL.** If the battery requires top-off while in service, add distilled water...**DO NOT ADD ACID.**

## SAFE INSTALLATION

Follow safety precautions:

### WEAR PROPER EYE PROTECTION!

1. Before removing old battery, mark the positive (+) and negative (-) cables for proper connection to the new battery.
2. Always disconnect the ground cable first [usually negative (-)] to avoid any sparking around battery. Then disconnect the positive (+) cable and carefully remove the old battery.
3. Clean and inspect. If necessary, repaint or replace the tray, hold-down and/or battery cables. Cable ends must be clean and corrosion free. Cable must not be frayed or bare.
4. Put corrosion protection washers on battery terminals. Install new battery in same position as old one and tighten hold-down. Be sure terminals will clear hood, fender, box lid, etc. to avoid vehicle damage and/or explosion.
5. Connect positive (+) cable first. Connect ground cable last. If side terminal connection, use a special side terminal torque tool to tighten side terminal cables to avoid damage. Never overtighten or hammer cables onto terminals.
6. Coat terminals and cable connection with a corrosion protection spray.

## CHECK THE CHARGING SYSTEM

The voltage regulator should be checked every 10,000 miles or every time you change oil. It should be checked immediately if the battery is hot to the touch, if electrolyte is bubbling or spewing from the vents, if your hydrometer reading is below 1.225 or above 1.300, or if the open circuit voltage is below 12.4 volts or above 12.9 volts. Overcharging is evident by excessive water consumption and/or spewing or bubbling of electrolyte out of the vents. Undercharging is evident by slow cranking or lights dimming at idle.

## LOAD TESTING

Follow safety precautions:

### WEAR PROPER EYE PROTECTION!

First perform an open circuit voltage test, then an adjustable load test. A load test is the best way to determine if the battery is delivering adequate electrical performance. Make sure your variable load tester is working properly.

1. You can't load test a discharged battery. If the voltage is below 12.4, be sure to completely charge it before continuing. Refer to the charging chart under "Charging Tips" section for important information.
2. To avoid sparking and explosive gases, be sure load tester is OFF and battery is disconnected before hookup. Use computer memory saver to retain the vehicle's electronic memory while the battery is disconnected.
3. Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. Always protect your eyes.
4. Set the tester for one-half the battery's 0° F cold crank rating and apply the load for 15 seconds. (If the CCA rating is unknown, use 1/2 of the minimum O.E. battery CCA requirement of the vehicle.)
5. Estimate the internal temperature of the battery to the nearest 10° F. Apply the load for 15 seconds. Note the voltage at 15 seconds with the load on and immediately shut the load off. A reading at least equal to the value from the chart below indicates a good battery.
6. If the battery did not meet the required voltage and if it was not charged in Step 1, completely recharge the battery and repeat the test. If it still fails to meet requirements, replace the battery.

BATTERY TEMPERATURE	12-VOLT BATTERY	6-VOLT BATTERY
70° F (21° C) or above	9.60	4.80
60° F (16° C)	9.50	4.75
50° F (10° C)	9.40	4.70
40° F (4° C)	9.30	4.65
30° F (-1° C)	9.10	4.55
20° F (-6° C)	8.90	4.45
10° F (-12° C)	8.70	4.35
0° F (-18° C)	8.50	4.25

## CONDUCTANCE TESTING

Follow safety precautions:

### WEAR PROPER EYE PROTECTION!

Conductance uses the battery's response to a very small signal in an attempt to predict the effects of a much larger current. Conductance testing is ineffective on a discharged battery. If the battery is known to be discharged or if the tester tells the operator to charge before testing again, the battery must be completely recharged.

1. It may not be required to turn a conductance tester off or on. If off, you must turn on immediately when connected to a battery. Most will turn off automatically if ignored long enough. Some have no battery of their own and get all their power from the battery being tested.
2. Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. If the battery has more than one pair of terminals (e.g. top posts and side terminals) always perform the testing on the terminals that are used in the vehicle. Use the proper charging adapters for stud or side terminal batteries. Never connect tester to a bolt or stud.
3. Turn on if needed. Enter the requested information. Be sure to distinguish between a CCA rating and a CA or MCA rating. If no rating is available, use the minimum O.E. battery CCA requirement of the vehicle.
4. If the tester says to replace a battery that was tested in the vehicle, repeat the testing after removing the cables and cleaning the posts.

## CHECK THE STATE OF CHARGE

There are two styles of battery...non-accessible maintenance-free types and accessible maintainable types with removable vent caps.

Before adding water to a maintainable battery, take an open circuit voltage reading and/or hydrometer reading of one cell. Use a different cell each time. If the readings are below 75%, charge the battery. If the electrolyte level is too low to read with a hydrometer, add water and take the hydrometer reading the following day, after the vehicle has been driven and the water has had an opportunity to mix. Check electrolyte levels in all cells. If necessary, add only clear, odorless drinking water to bring the liquid level to the level indicator or to 1/2" (13 mm) above the top of the separators. Distilled water is preferred, especially if the water in your area has high iron. Do not overfill any cells. Excess electrolyte may be forced from an overfilled cell and cause corrosion on adjacent metal parts, reduce performance, and shorten life. In cold weather, do not fill cells with water and let stand without running engine or driving the vehicle long enough to allow water to mix with acid. Otherwise, freezing might occur and the battery may crack or explode.

Maintenance-free, non-accessible batteries are designed to eliminate the need to add water. Yet the volume of electrolyte above plates may eventually become depleted due to abnormal conditions such as high heat or improper regulator setting. Use a voltmeter to check the state of charge. See chart under "CHARGING TIPS" to determine if charging is necessary.

**DO NOT OPEN FLUSH COVER BATTERIES! If opened, serious personal injury can result and warranty will be voided.**

## CHARGING TIPS

Follow safety precautions:

### WEAR PROPER EYE PROTECTION!

- To avoid a battery explosion, never attempt to charge a frozen battery. Allow it to warm up to room temperature before placing on charge.
- Prior to charging, read the manufacturer's instructions for proper charger hook-up and use.
- Turn charger off prior to hook-up to avoid dangerous sparks. PROTECT YOUR EYES!
- The maximum charge rate in amperes should be no more than 1/3 of the battery's reserve capacity minute rating. If the terminal voltage exceeds 16.0 volts while charging, reduce the charge rate.
- Continue charging and reduce the rate as needed until a two-hour period results in no increase in voltage or decrease in current.
- If violent gassing or spewing of electrolyte occurs, or the battery case feels hot to the touch, temporarily reduce or halt charging.

### IMPORTANT:

Never overcharge batteries. Excessive charging will shorten battery life.

(Continued)



## CHARGING TIPS (Continued)

Voltage for Standard Battery	State of Charge	50 AMPS <sup>1</sup>	30 AMPS <sup>1</sup>	20 AMPS <sup>1</sup>	10 AMPS <sup>1</sup>
6V					
6.3	100 %	Full Charge	Full Charge	Full Charge	Full Charge
6.2	75 %	20 min.	35 min.	48 min.	90 min.
6.1	50 %	45 min.	75 min.	95 min.	180 min.
6.0	25 %	65 min.	115 min.	145 min.	280 min.
5.9	0 %	85 min.	150 min.	195 min.	370 min.
12V					
12.6	100 %	Full Charge	Full Charge	Full Charge	Full Charge
12.4	75 %	20 min.	35 min.	48 min.	90 min.
12.2	50 %	45 min.	75 min.	95 min.	180 min.
12.0	25 %	65 min.	115 min.	145 min.	280 min.
11.0	0 %	85 min.	150 min.	195 min.	370 min.

<sup>1</sup> Approx. battery charging time\* to full charge at 80° F/27° C

\* Charging time depends upon battery capacity, condition, age, temperature and efficiency of charger.

### WARNING

Gel and AGM (Absorbed Glass Mat) batteries require a voltage-limited charger. Charging a Gel or AGM battery on a typical shop charger, even one time, may greatly shorten its life.

### Side Terminal Charging Posts



Side Terminal Charging Posts should be used to ensure the best testing and charging results for side terminal batteries. The charging posts will provide a flush lead-to-lead contact. Be sure to tighten the charging post until it is snug and secure. This will allow a strong current to pass from the charging post to the battery terminal.

### Do Not Use:



DO NOT USE Battery Bolt Extenders or Battery Bolts for testing or charging batteries. They do not provide the necessary lead-to-lead contact, and can reduce your cold cranking amperage (CCA) and state of charge readings. Batteries should be boost charged if the open circuit voltage (voltmeter) reading is below 12.4 volts. See charging chart above.

### WARNING

If the electrolyte is accessible, verify that plates are covered before beginning to charge. At the end of charge, add distilled water as needed to bring levels to the proper height. If water is added, charge for an additional 30 minutes to mix. If electrolyte levels are low, but battery is not accessible, remove battery from service.

## ROTATE BATTERY STOCK

Use oldest batteries first. Batteries require periodic stock rotation and routine charging. Always rotate stock using the FIFO (First In, First Out) method...NOT FISH (First In, Still Here).

**REMEMBER...WET OR DRY, ALWAYS ROTATE YOUR STOCK!**

Shipping Date Code <sup>1</sup>	
Month	Year
A — January	7 — 2007
B — February	8 — 2008
C — March	9 — 2009
D — April	0 — 2010
E — May	1 — 2011
F — June	2 — 2012
G — July	3 — 2013
H — August	4 — 2014
J — September	5 — 2015
K — October	6 — 2016
L — November	7 — 2017
M — December	8 — 2018

<sup>1</sup> Example: L0 — Battery shipped November 2010

Always use oldest batteries first

## BATTERY STORAGE TIPS

Batteries should be stored in cool, dry area in an upright position. Never stack batteries directly on top of each other unless they're in cartons. Do not stack more than 3 high (2 high if battery type is heavy commercial).

Test wet batteries every 4-6 months and recharge if necessary. Always test and charge if necessary before installation. (See "Charging Tips" sections.)

## SELL PLENTY OF POWER

Sell cranking amps...Not months of warranty!

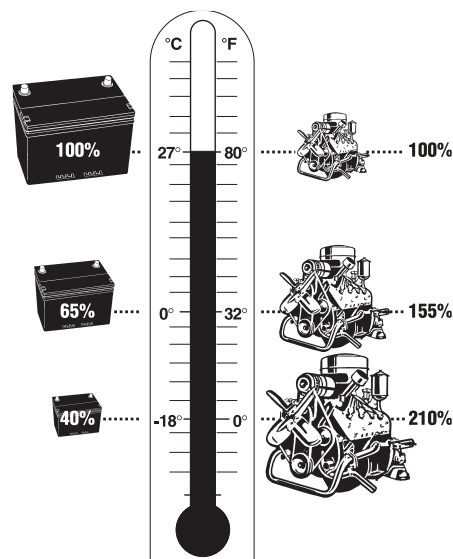
Always sell your customer a battery that has enough cranking power and reserve capacity to get the job done. Consider the vehicle manufacturer's recommended capacity to be a minimum-capacity guideline. A vehicle that has a lot of electrical accessories such as on-board computers, air-conditioning, two way radios, etc. will need a more powerful battery for optimum performance.

Along with electrical accessories, temperature also has an effect on battery performance. Vehicles operated in extremely cold climates will need a battery rated well above the O.E. recommendation. Likewise, vehicles operated in hot climates will not need extremely high CCA ratings.

Point these facts out to your customer and sell up to the higher grade level if necessary.

**Remember, you can't sell a battery with too much power in colder climates!**

Temperature has a dramatic effect on a battery's ability to crank an engine. Not only does cold rob batteries of power, it also stiffens motor oil making engines harder to start. And heat can damage batteries by causing internal components to wear out quickly while also making engines difficult to start.



## JUMP STARTING

Refer to owner's manual for manufacturer's recommended procedure.

Shield eyes and face all times...Never lean directly over battery when testing, jump starting or performing other maintenance. Be sure vent caps are tight and level. Place a damp rag over the vent caps of both batteries. Be sure vehicles do not touch each other.

1. Connect one end of positive (+) booster cable to positive (+) terminal of discharged battery, wired to starter or solenoid.
2. Connect other end of positive (+) booster cable to positive (+) terminal of booster battery.
3. Connect one end of negative (-) booster cable to negative (-) terminal of booster battery, wired to ground.
4. Complete hook-up by connecting other end of negative (-) booster cable to engine block of stalled vehicle — as far away from battery as possible...AWAY FROM MOVING FAN AND GAS LINES.
5. Start both vehicles and remove cables in reverse order of connection. Discard the rags.

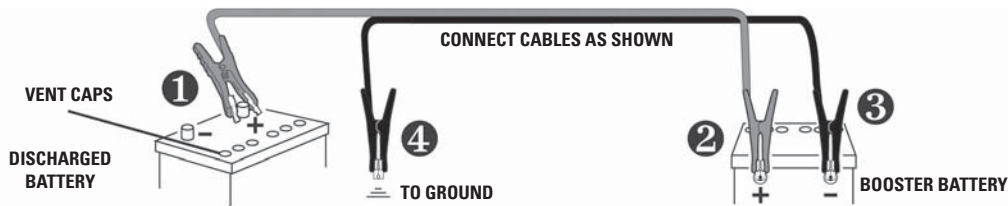
See diagram below for proper hookup.

### Jump Starting Diagram

**PROTECT YOUR EYES!**

**IMPORTANT! Connect to a ground, away from battery...away from moving fan and gas lines**

\* Source: Battery Council International



**Battery Accessories**

Note: Ratings and Part Numbers are subject to change without notice

**295-2618 Pocket Multimeter**

Part Number	Description
295-2618	Pocket Multimeter

**Wing Nuts**

Part Number	Description	Where Used
2B-9498	Wing Nut	For use with 175-4390, 175-4370, 175-4360, and 8C-3628
3B-0723	Wing Nut	For use with 8C-3638, 8C-3639 and Marine Batteries

**177-2330 Digital Battery Analyzer**

SMCS Code: 1401-081, 0785

Model: All

Warranty: One Year

- Replaces 127-8078 Battery Analyzer
- Used to quickly and accurately test condition of 6 and 12 volt batteries (even discharged to as low as 4 volt)
- Check for full state charge, condition of battery, and battery voltage in 20 seconds
- Test batteries in machine or vehicle without disconnecting battery cables
- Battery does not have to be fully charged at time of testing
- Saves time and money by allowing dealers to test condition of a battery while customer is present (works great for warranty claims)
- Eliminates need to charge and discharge a battery to test its condition
- Compensates for cold temperatures when testing batteries in extreme conditions
- Power-down feature prolongs battery life in analyzer
- Analyzer has reverse polarity and is protected to 17 volts maximum

**References**

NEHS0764, Tool Operating Manual, Using the 177-2330 Battery Analyzer

Battery Rating Range	
Cold cranking amps (CCA)	50-4000
Cranking amps (CA)	65-5000
Ampere hours (A h)	6-500
DC voltmeter range	1.0-14V
Voltmeter accuracy	±0.1V
Power source	9V battery or test battery
Test time	20 seconds
Analyzer cable length	815 mm (32 in)
Overall size	210 × 140 × 38 mm (8.25 × 5.5 × 1.5 in)
Weight	0.68 kg (1.5 lb)
Operating temperature range	0° to 50° C (32° to 120° F)
Storage temperature range	-20° to 70° C (0° to 160° F)
Over voltage protection	Up to 18V

Part Number	Description
177-2330	Digital Battery Analyzer

## 4C-4911 Battery Load Tester

SMCS Code: 1401-081, 0785

Model: All Models

Warranty: One Year



- Used to test 6, 8 and 12 volt heavy equipment and automotive batteries
- Has built-in LCD digital voltmeter and ammeter
- Load adjustment knob for current drawn from battery to be adjusted up to maximum of 1000 amperes
- Cooled by internal fan automatically activated when load applied to prevent carbon pile overheating
- Large, 15 mm (0.59 in) high display digits are easier to read

### Reference

SEHS9249, Special Instruction

Load test	6, 8 and 12V batteries
Load current	0-1000 A (carbon pile)
Duty cycle	Continuous, limited only by cable and clamp heating
Operating temperature	0°-50° C (32° ± 122° F)
Voltmeter accuracy	0.1% of full scale ± 1 digit
Ammeter accuracy	±3% of reading ± 1 digit
Size	33 × 33 × 30 cm (13 × 13 × 12 in)
Weight	12.428 kg (27.375 lb)

Part Number	Description
4C-4911	Battery Load Tester

## 271-8590 24-Volt Analyzer Group

Model: All

Warranty: Manufacturer's



European Union compliant, CE marked

- Used to perform battery, electrical system, and diode tests
- Used with 225-8266 Amp Probe and 271-8585 Printer
- Used on 12 and 24 volt electrical systems (digital circuitry accurately controls testing — requires minimal interaction)
- Hand-held
- Large, backlit display requires less scrolling, provides more information
- Long 4.6 m (15.0 ft) cables allow operator to perform tests from cab of machine
- Step-by-step instructions quickly and easily guide technician through tests
- Tests flooded lead acid and absorbed glass mat (AGM) batteries with 50 to 4000 Cold Cranking Amp (CCA), Cranking Amp (CA), Amp Hours (A-HR), Japanese Industrial Standard (JIS), or German-Deutsche Industry Norm (DIN) capacity ratings

(Continued)



**271-8590 24-Volt Analyzer Group (Continued)**

Model: All

Warranty: Manufacturer's

- Tests battery pack configurations, through algorithm design:
  - single battery, 6- or 12-volt
  - 2 batteries in series, 24-volt
  - 2, 3, or 4 batteries in parallel, 12-volt
  - 2 banks in parallel, each bank with batteries in series, 24-volt
- Internal resistance loads are applied for all configurations
- Amp clamp connections allow use of optional amp clamp cables for current drain and starting/charging tests
- Features infrared communications compatibility for optional wireless printer with user defined header and footer for custom printouts
- PC interface port allows unit updates as new software is released — download software for new battery types, system updates, and features
- Ergonomically designed over-molded surround with soft-touch keys for easy operation while wearing gloves during cold weather
- Security cable connection tethers tool in order to prevent drops or for security purposes
- Includes 24-volt analyzer, test cables, battery terminal adapters, manual, and case with foam insert

**Repair Information**

The unit is warranted by the manufacturer for 3 years from the date of receipt. Cables are warranted for 90 days from the date of receipt. If the unit needs servicing, contact the manufacturer's repair facility.

SPX Service Repair

755 Eisenhower Drive

Owatonna, MN 55060

Attn: Repair Department

Phone: 800-344-4013

Visit the SPX Repair Track web link to complete and submit the form for proper authorization: <https://repairtrack.spx.com>

**Reference**

NEHS0973, Tool Operating Manual, 271-8590 Analyzer Group (24 Volt)

(Continued)

# Electrical Parts

## 271-8590 24-Volt Analyzer Group (Continued)

Model: All

Warranty: Manufacturer's

Batteries and Electrical Parts

Item	Description
Battery tests	Flooded lead acid (FLA) absorbed glass mat (AGM)
Cold cranking amp range	50-4000 CCA/24V
Battery voltage	Single, series, or parallel to 24V
Electrical system tests	12 and 24V, starting/charging/diode test
Scales	CCA, CA, AHR, MCA, JIS, DIN
PC interface	For field software updates
IR compatible	For optional infrared wireless printer
Amp clamp ports	For optional amp clamp connections
Display	Backlit 4 × 20 character display

Part Number	Description
271-8590	24-Volt Analyzer Group
<b>Replacement Parts</b>	
271-8587	Test cables, 4.6 m (15 ft)
281-1947	Rechargeable Battery
281-1950	Carrying Case with Foam Insert
271-8589	Analyzer Only

Part Number	Description
<b>Optional Accessories</b>	
225-8266	Clamp On Ammeter (400, 1200 A ranges)
271-8585	Optional Printer Group
281-1948	Printer Serial Cable
184-7679	Paper — Roll

## 245-5829 Battery and Coolant Refractometer



- Used to measure freezing point of coolants plus battery charge condition.
- Refractometer uses a prism and lens with simple focus adjustment to provide accurate and repeatable measurements on easy to read scales.
- Easy to operate.
- Automatic temperature compensation (ATC).
- Requires only 2 to 3 drops of solution.
- Carrying case and calibration screwdriver included.
- Reads degrees Centigrade and Fahrenheit.

Range	Resolution
-60 to 32° F propylene glycol freeze point	10° F
-50 to 0° C ethylene glycol freeze point	5° C
1.15 to 1.30 specific gravity of battery acid	0.01

Product	Part Number
Battery and Coolant Refractometer	245-5829

### Battery Post Set

Warranty: Caterpillar Standard Warranty, 6 Months

Part Number	Description
4C-5637	10 mm (3/8 in) Female for Stud Type Batteries
4C-5638	10 mm (3/8 in) Male for Side Terminal Batteries



### Booster Cables

Warranty: Caterpillar Standard Warranty, 6 Months

- Professional quality
- Ensure quick and efficient connections
- Designed for convenience and safety
- Replacement clamps available



Part Number	Length	Gauge	Gauge (circular mil)	Jacket	Clamp Rating	Side Terminal Adapters	Approx. Individual Weight
<b>Heavy Duty and Super Heavy Duty Cables</b>							
4C-4934 <sup>1</sup>	4 m (12 ft)	5 AWG	32,900	T-94 <sup>2</sup>	500 A	Yes	3.6 kg (7.94 lb)
4C-4938	5 m (15 ft)	1/0 AWG	106,400	T-94 <sup>2</sup>	800 A	No	7.3 kg (16.09 lb)
<b>Booster Cables</b>							
300-5899	6 m (20 ft)	2 AWG	62,450	T-94	600P	No	6.4 kg (14.11 lb)
4C-4933	4 m (12 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	2.7 kg (5.95 lb)
4C-4935	5 m (16 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	3.6 kg (7.94 lb)
4C-4936	6 m (20 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	4.1 kg (9.04 lb)

<sup>1</sup> Equipped with stop/go light — red L.E.D.s warn operator if polarity is reversed

<sup>2</sup> T-94: flexible to 4° C (-40° F)

## Portable Chargers

Warranty: Manufacturer, Mixed<sup>1</sup>



### 4C-4924

- Chargers all standard and maintenance free 6/12 Volt Batteries with 4 charging positions
- Fully portable
- Fan cooling mechanism prevents overheating enhancing unit's life span significantly
- Certified for outdoor use in any weather
- Cautions against incorrect polarity with patented "stop-go-light" technology
- 500 Amp clamps are covered with vinyl insulation; will not arc or spark

### 200-6319

- Analyzes battery condition and automatically selects proper charging technique
- Voltage controlled charging
- Suitable for flooded batteries including GEL and AGM
- Utilizes three color LEDs to monitor charging status
- Program for deep discharge recovery of flooded batteries
- Capable of charging both small and large batteries
- Switch for selecting battery type
- Maintains battery charge, can be left connected to battery

Part Number	Battery Voltage	AC Input	Continuous Rating	Amps Boost Rating	Cranking Assist Rating	Timer	Weight	AC Cord	DC Leads	Clamp Rating	Shipping Dimensions (H x W x D)
<b>4C-4924 Specifications</b>											
4C-4924 <sup>1</sup>	6/12 Volt	120V AC, 12.9A, 60 Hz	70/60 Amp	420 Amp	230 Amp	90 min Auto	17 kg (38 lb)	16-3 m (6 ½ ft)	7 ft 4/AWG	500 Amp	--
<b>200-6319 Specifications</b>											
200-6319 <sup>1</sup>	12 Volt	120V AC, 2.2A, 60 Hz	10 Amp	--	--	--	5 kg (11 lb)	18-3 m (6 ft)	6 ft 16/AWG	50 Amp	10 in x 9 in x 9 in

<sup>1</sup>Part number 200-6319: One Year; Part number 4C-4924: One Year on parts/labor, five years on transformer/rectifier

## 1U-9921 Battery Post Brush

Warranty: Caterpillar Standard Warranty, 6 Months

- Stiff wire bristles thoroughly clean posts



Part Number	Description
1U-9921	Battery Post Brush

**140-9944 Terminal Kit**

SMCS Code: 1400-023, 0700

Model: All Cat® Engines

Warranty: Six Months

- Replaces discontinued 1P-2305 Terminal Kit
- Used to repair wiring harness terminal ends which have become damaged or unserviceable
- Hand crimping tool has built-in dies for crimping insulated and non-insulated terminals, cutting edges for cutting wire, notches for stripping 10 to 22 gauge wire, shears for cutting up to 4.7 mm (0.18 in) diameter bolts, 2-thread chasers for screws with 24 and 32 threads-per-inch screws, and a scale for measuring screw length
- Splice connectors have hot-melt adhesive and shrink ends that when heated will provide an environmental seal around wire



Qty. Shipped	Part No.	Description	Replacement Qty.
1	140-9944	Terminal Kit	1
<b>Terminal and Wire Splice Service/Repair Parts</b>			
1	9S-9150	Terminal Crimp Tool	1
10	2L-8058	Terminal (8 Gauge ¼ in Stud)	10
10	2L-8066	Terminal (12 — 10 Gauge No. 10 Stud)	10
10	2L-8067	Terminal (12 — 10 Gauge ¼ in Stud)	10
10	2L-8069	Terminal (12 — 10 Gauge ⅜ in Stud)	10
10	2L-8071	Terminal (12 — 10 Gauge ½ in Stud)	10
20	2L-8075	Terminal (16 — 14 Gauge No. 8 Stud)	20
20	2L-8076	Terminal (16 — 14 Gauge No. 10 Stud)	20
15	2L-8077	Terminal (16 — 14 Gauge ¼ in Stud)	15
15	2L-8079	Terminal (16 — 14 Gauge ⅜ in Stud)	15
30	5P-4571	Terminal (16 — 14 Gauge)	20
10	4S-1988	Terminal (Blade, Crimp Type)	50
15	136-4876	Wire Splice (12 — 10 Gauge)	1
15	136-4877	Wire Splice (16 — 14 Gauge)	1
15	136-4878	Wire Splice (22 — 18 Gauge)	1

## 175-3700 DT Connector Service Kit

### 147-6456 Wedge Removal Tool

SMCS Code: 1408-023

Model: All Models with Electronic Controls

Warranty: One Year



- Used to maintain and repair Deutsch “DT” style connectors on electronic engine control harnesses
- 175-3700 DT Connector Service Kit — connector/contact assortment for owners of discontinued 4C-3406 Connector Service Kits which have 1U-5804 Crimp Tool
- 147-6456 Wedge Removal Tool included in kits — also available separately

#### Reference

SEHS9615, Special Instruction — A black plug and connector body has been released to improve sealing. Please refer to SEHS9615 for a more detailed explanation of interchangeability.

#### NOTE:

1U-5804 Crimp Tool is not included but can be ordered separately.

Item	Part Number	Description
1	175-3700	Connector Service Kit (less crimp tool)
2	147-6456	Wedge Removal Tool (included in kit)
3	152-7997	Utility Box



**9U-7560 Field Soldering Iron Group**

**9U-7561 Field Soldering Iron**

SMCS Code: 0709

Model: All Models

Warranty: One Year

- Used to solder electrical connections in the field — light-weight and easy to use
- Used with 4C-9024 Battery Pack Group
- Tip is temperature regulated (provides better control for outdoor usage)
- In-line fuse prevents damage and/or overload
- Plugs into any 12V vehicle cigarette lighter plug
- Optional 4C-9024 Portable Battery Pack will power 9U-7561 for 3 hours continuously

**Reference**

NEHS0601, Tool Operating Manual



Voltage Requirement	12V DC
Wattage	42 Watts
Tip temperature	370° C (700° F)
Length	190 mm (7.5 in)
Cord length	3.5 m (11.50 ft)
NEEG2588	Soldering Iron Label
NEEG2587	Case Label

Item	Part Number	Description
1	9U-7561	Soldering Iron
2	9U-7562	Solder, 0.5 kg (1 lb) Spool
3	6V-3073	Case — Plastic
--	9U-7560	Field Soldering Iron Group
<b>Service/Repair Parts (Sold Separately)</b>		
--	9U-7563	Tip, Soldering Iron Replacement
--	2S-6024	5 Amp Fuse
--	6V-6024	Foam Block

## 5P-7277 Voltage Tester

SMCS Code: 1400-038, 1400-081, 1450-081, 1700-081, 1800-081, 3168-035, 5050-081, 7300-081, 7400-081, 7451-038  
 Model: 215, 428, 621E, 627E, 768C, 769C, 793 All models  
 Warranty: One Year



- Used to make quick checks for presence of voltage
- Indispensable for checking out circuits, relays, bulbs, wires, and switches
- Designed for voltage range from 12 to 36 volts
- Bulb lights brightly when connected to 36 volts and gets progressively dimmer with lower voltages
- Encased in rugged, high-impact plastic housing which is grease and chemical resistant
- Standard 8D-1429 Bulb required for replacement

Part Number	Description
5P-7277	Voltage Tester

## 8T-0500 Continuity Testing Light

SMCS Code: 1000-017, 1000-025, 1250-025, 1250-036, 1355-081, 1400-038, 3071-017, 3100-017, 3156-010, 3156-012, 3200-038, 3224-025, 4208-010, 5050-038, 7400-036, 7451-038, 7401-045  
 Model: All Models  
 Warranty: One Year

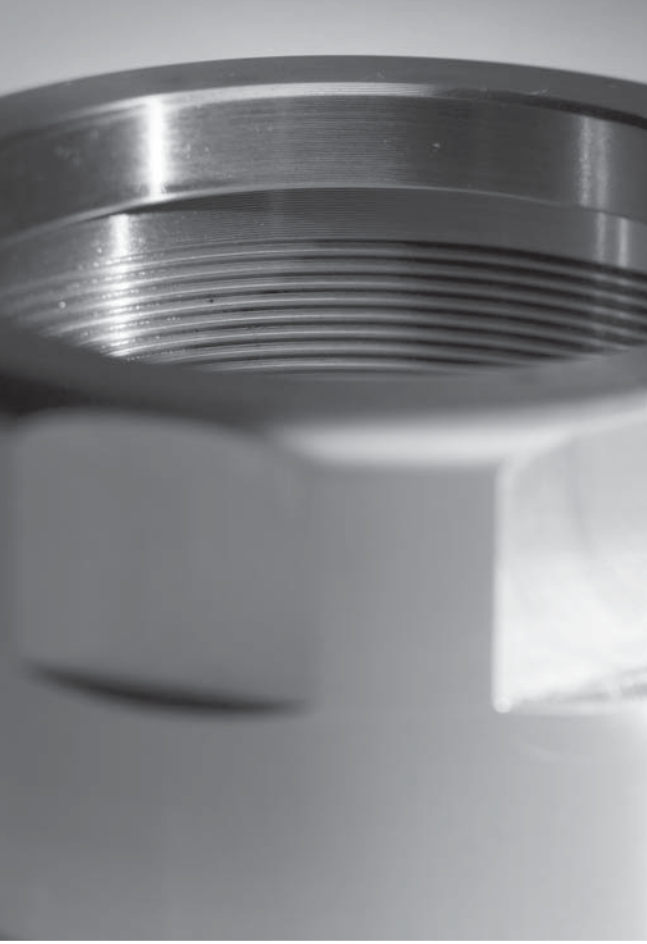


- Used to test non-energized circuits; lamp comes on brightly when connected across low resistance circuit; no light appears if resistance of circuit exceeds 10 ohms
- Designed for rugged field use
- Comes with light bulb and 2 "N" size batteries (1.5 volts) and instruction decals

### Reference

NEHS0543, Special Instruction, Checking Diodes

Part Number	Description
8T-0500	Light — Continuity Testing
Service/Repair Parts	
4C-8363	Battery, Size N, 1.5V
6V-3061	Bulb



**CLASSIC PARTS**

## Cat® Classic™ Parts

Cat® Classic™ Parts provide owners of older Cat equipment with low cost replacement parts that offer quality and convenience that can be trusted. Cat machines and engines have long, productive lives. As the equipment ages, maintenance costs often need to be re-evaluated, taking the remaining market value into consideration. Cat Classic Parts are lower-cost, genuine Cat parts that provide acceptable service life for older Cat equipment. Not all Cat original parts have a Classic Parts option. The Classic Parts line generally contains parts that have a greater impact on the overall repair costs. Together with Cat original and remanufactured parts, Cat Classic Parts help Caterpillar offer value-priced repair alternatives over the entire product life cycle.

# ALL YOUR OPTIONS.



Original



Reman/Exchange



Classic™ Parts



Quality Used

# ONE LOCATION.



## Benefits



- Lower owning and operating costs for older Cat equipment
- Standard Cat parts warranty
- One stop shopping for all parts needs
- Quality controlled parts: Cat Classic parts approved by Caterpillar engineers, ensuring the part will meet form, fit, or function. Quality control procedures in place at parts locations to ensure highest quality parts are delivered.
- Parts provided from the name you can trust — Cat®

## Part Numbers Beginning With 0

Original Part Number	Part Name	Classic Part Number
OR-7806	Gear Pump	226-0173
OR-7828	Pump Group	325-6178
OR-8169	Air Compressor	386-2063
OR-8402	Core As. — Oil Clr	325-6045
OS-0175	Clevis Pin	376-3629
OT-0259	Nut — Bearing Sleeve	311-9431
002-0754	Bearing Race	386-4966
008-1902	Tapered Roller Bearing	396-4143
054-2213	Spider and Bearing As.	347-0464
054-6549	Pinion	347-0478
054-7091	Roller Bearing	384-5959
055-1260	Housing Bk — Outer	347-0479
055-1986	Seal	347-0465
061-6711	Retaining Ring	394-0215
064-3274	Mount	391-9834
086-0414	Flange	392-4522
086-0523	Pin	314-8696
087-5499	Bearing — Sleeve	314-8640
087-5533	Bearing — Sleeve	314-8628
087-5548	Sleeve Bearing	396-1568
087-5802	Link (RH)	301-7964
087-5803	Track Link Assembly	301-7966
087-5805	Pin	301-7967
087-5806	Pin	301-7968

Original Part Number	Part Name	Classic Part Number
087-5845	Pin	301-7969
087-5847	Bearing — Sleeve	314-8629
087-5978	Flange	374-3496
087-6372	Pin	396-7284
089-8249	Spacer	391-9901
094-1509	Shaft — Planet	360-2273
095-0863	Cotter	287-3232
095-9291	Valve — Fill	360-2293
096-7911	Bearing — Sleeve	314-8653
096-7912	Bearing — Sleeve	314-8654
096-7913	Bearing — Sleeve	314-8655
099-0718	Bearing — Sleeve	360-2313
099-0721	Bearing — Sleeve	314-8641
OR-0821	Head Assembly	242-3436
OR-0822	Cylinder Head	242-3435
OR-0823	Head Assembly	247-3369
OR-0825	Head Assembly	256-4762
OR-0914	Connecting Rod	269-5291
OR-0915	Connecting Rod	242-3441
OR-0920	Pump Gp — Eng Oil	295-5674
OR-1003	Pump Gp — Water	296-1365
OR-1081	Head Assembly	242-3434
OR-1216	Crankshaft As.	242-3439
OR-1626	Hub	219-2965
OR-1628	Hub	219-2977
OR-1633	Hub	219-2969
OR-1634	Gear Hub	221-1064

Original Part Number	Part Name	Classic Part Number
OR-1635	Hub	222-1763
OR-1637	Hub	219-2980
OR-1638	Gear Hub	221-1066
OR-1639	Hub	219-2982
OR-1642	Hub	219-2976
OR-1646	Hub	219-2966
OR-1648	Gear Hub	221-1056
OR-1649	Hub	222-1762
OR-1651	Hub	211-2135
OR-1659	Hub	219-2972
OR-1663	Spindle	223-4817
OR-1704	Hub	219-2979
OR-2221	Spindle	295-6443
OR-2324	Gear Hub	221-1070
OR-2549	Cylinder Head	269-5290
OR-2587	Head Assembly	269-8761
OR-3271	Valve Lifter	311-9402
OR-3499	Core Assembly	295-5670
OR-3500	Core Assembly	299-1994
OR-3501	Core As. — Oil Clr	319-3435
OR-3537	Fuel Transfer Pump	279-4980
OR-5017	Clutch Plate	302-2712
OR-5515	Core Assembly	279-4983
OR-5601	Core As. — O Clr	299-1996
OR-7797	Gear Pump	226-0160
OR-7798	Gear Pump	308-9913
OR-7799	Pump Gp — Gear	283-5221
OR-7803	Gear Pump	226-0164

Classic Parts

## Part Numbers Beginning With 1

Original Part Number	Part Name	Classic Part Number
100-2941	Gasket Kit	393-1020
100-2930	Gasket Kit	393-1026
100-2953	Gasket Kit	393-1025
100-3431	Stop	314-8723
100-3596	Clutch Piston	380-1511
100-3597	Reaction — Clutch Plate	380-1501
100-3650	Trunnion	394-2580
100-3652	Thrust Plate	378-3999
100-4594	Muffler As.	360-7862
100-5927	Joint	390-5260

Original Part Number	Part Name	Classic Part Number
100-5930	Joint Gp — Slip	372-7514
100-6267	Idler Plate	375-9983
100-6268	Pulley As. — Idler	301-5219
100-6920	Fuel Injection Adapter	380-1552
100-7408	Camshaft	378-4000
100-7860	Inlet Valve	270-4360
100-7861	Exhaust Valve	270-4361
101-1503	Planet Shaft	394-9199
101-1504	Shaft — Planet	373-5379
101-1816	Intake Bridge	374-4689

Original Part Number	Part Name	Classic Part Number
101-1817	Exhaust Bridge	374-4690
101-1818	Exhaust Bridge	374-4691
101-2749	Adapter	375-9984
101-3374	Camshaft Gear	376-9069
101-4020	Pin	396-7285
101-4897	Ball Bearing	380-1491
101-5141	Friction Disc	380-7473
101-5144	Friction Disc	380-7516
101-7354	Exhaust Manifold	386-3060
101-7517	Differential Housing	391-1094

(Continued)



## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
101-8314	Exhaust Valve	384-8701	107-8109	Exhaust Manifold	374-7488	111-4343	Pin	390-5272
102-1561	Valve Lifter	311-9402	107-8112	Exhaust Manifold	376-9063	111-8015	Gasket Head	279-4977
102-4560	Sleeve Bearing	347-0469	107-9172	Piston	375-2622	111-8181	Hydraulic Cylinder	390-0986
102-8112	Cylinder — Adjustable	360-2276	107-9739	Pin	393-3689	111-8208	Spider	384-5962
102-8139	Track Spring	392-4526	108-0980	Pin Assembly	314-8692	111-8209	Spider	364-5263
102-8501	Exhaust Manifold	377-5853	108-2735	Locking Ring	386-4935	112-1773	Piston	347-0462
102-8503	Exhaust Manifold	392-4513	108-2736	Locking Ring	384-3476	112-3249	Muffler As.	247-2661
102-8608	Exhaust Manifold	376-9062	108-5603	Adjusting Screw	379-0166	112-3818	Shaft — Input	302-2698
103-1713	Yoke	382-6892	108-5680	Oil Gage	378-4001	112-5003	Hydraulic Cylinder	393-3654
103-5345	Sleeve Bearing	393-3640	108-7930	Roller Bearing	377-7463	112-5060	Bracket	364-5270
104-3014	Gasket Kit	388-0656	109-0380	Pin	396-7276	112-5061	Bracket	364-5271
104-4253	Line As. — Fuel Injector	279-4988	109-0958	Pin	394-0208	112-5089	Muffler	390-0982
104-4254	Line As. — Fuel Injector	279-4989	109-1231	Wear Strip	393-3683	112-5495	Joint Gp — Univ	297-4858
104-4747	Pin	392-4527	109-5562	Bevel Shaft	275-5272	112-5585	Shaft — Planet	308-9932
104-5283	Exhaust Manifold	394-9831	109-5679	Pin Gear	380-7465	112-7309	Planet Shaft	380-7521
104-6374	Piston	393-1052	109-7279	Sleeve	386-4936	112-7750	Exhaust Manifold	390-0919
104-7238	Plate	380-7404	109-9323	Muffler	369-9491	112-7751	Exhaust Manifold	390-0917
104-8585	Gasket	390-0941	109-9349	Mount	384-3469	112-8041	Carrier — Planet	295-5681
104-8655	Sleeve Bearing	391-9892	109-9350	Mount	393-1046	112-8042	Carrier	390-0916
105-1738	Exhaust Manifold	374-4692	109-9368	Mount	384-3471	113-1526	Pump Group	226-0160
105-2070	Bushing	394-0221	109-9369	Mount	393-1047	113-2966	Pin	380-7398
105-2486	Transfer Gear	391-9882	109-9445	Mount	393-1048	114-0915	Shield	394-0887
105-2487	Transfer Gear	391-9881	109-9446	Mount	393-1049	114-1071	Clutch Piston	388-6583
105-3196	Motor Gp	282-6547	109-9463	Muffler	360-7864	114-1398	Oil Gage	394-9815
105-8586	Pin Gear	375-2630	110-0013	Bearing Race	384-5960	114-1582	Sun Gear	301-4761
105-8743	Sleeve Bearing	393-1013	110-0840	Tie Rod	391-1097	114-4680	Pump Gear	374-7485
106-0714	Shaft	364-5260	110-1337	Piston Ring Kit	377-5834	114-4682	Pump Gear	374-7486
106-4327	Gasket Kit	382-5068	110-1488	Ring Gear	394-0882	114-4787	Gasket Kit	388-0657
106-6878	Pin	372-7510	110-2665	Planet Shaft	391-9871	114-9036	Shaft	297-4859
106-7098	Torque Converter Flange	390-5271	110-3252	Gear — Ring	373-1756	114-9224	Spacer	391-9900
106-7099	Carrier	388-6585	110-4652	Housing	302-2683	115-0605	Track Idler Group	288-3691
106-7131	Shaft	288-8714	110-5096	Cylinder Head	394-0915	115-0637	Pump Group	226-0160
106-8711	Exhaust Elbow	383-3709	110-6167	Pin	375-9972	115-2367	Exhaust Valve	384-8700
106-9408	Exhaust Seal	386-3058	110-7053	Planet Gear	394-9198	115-2368	Inlet Valve	384-8704
107-2139	Pin	360-2352	110-7056	Planet Gear	374-3497	115-2958	Lower Pin	393-0939
107-3950	Hydraulic Head	383-1588	110-7058	Carrier — Planet	301-4630	115-3184	Bearing Cap	395-1324
107-5002	Bearing Cage	396-7261	110-7059	Carrier — Planet	301-4636	115-4204	Pulley As. — Idler	301-5219
107-7473	Muffler	385-7223	110-7209	Carrier	301-5237	115-4237	Pulley — Idler	374-4693
107-7750	Pulley	382-6896	110-7216	Sun Gear	391-9877	115-4238	Pulley As. — Idler	301-5219
107-8106	Exhaust Manifold	374-7487	110-7228	Carrier	390-0918	115-6427	Spring	301-4776
107-8108	Exhaust Manifold	385-6141	110-7243	Carrier	384-5961	115-6428	Piston	394-0188
			111-0416	Guard Assembly	325-6096	115-6429	Cylinder	301-4679
			111-0419	Guard Assembly	325-6097	115-7048	Pin	393-3684
			111-0431	Guard As.	325-6098	116-7885	Oil Pan	379-0173
			111-4332	Plate	396-7290	117-0456	Crankshaft	394-2587

(Continued)



## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
117-1022	Track Link Assembly	175-8555	119-8770	Motor Pump	374-5379	128-9882	Bearing — Sleeve	314-8642
117-1024	Track — CL Link Assembly	188-5595	121-7583	Planet Gear	364-5257	128-9883	Bearing — Sleeve	360-2314
117-1616	Segment Group	260-5851	121-7585	Ring Gear	371-4303	128-9884	Bearing — Sleeve	360-2315
117-5435	Pin	393-0934	121-7632	Friction Disc	394-9195	129-2339	Spider	308-9936
117-9887	Spider	390-0915	121-7746	Precleaner	360-2311	129-2381	Planet Gear	275-5274
118-1611	Single Flange Roller Group	175-8024 (Roller Gp-Single Flange), 175-8025 (Roller Gp-Df)	122-0216	Single Flange Roller Group	175-8035	129-3046	Carrier	393-1015
118-1612	Single Flange Roller Group	175-8024 (Roller Gp-Sf), 175-8025 (Roller Gp-Double Flange)	122-0321	Exhaust Valve	384-8698	129-3068	Rebuild Water Pump	363-7455
118-1614	Single Flange Roller Group	175-8035	122-0322	Inlet Valve	384-8703	129-3069	Water Pump Rebuild Kit	363-7456
118-1615	Double Flange Roller Group	175-8036	122-1881	Clutch Plate	347-0475	129-4259	Hydraulic Cylinder	393-3655
118-1617	Single Flange Roller Group	188-5272	122-5076	Rod	301-4569	129-7768	Bearing — Sleeve	360-2316
118-1618	Double Flange Roller Group	188-5271	122-5077	Cylinder	301-4673	129-9907	Impeller	383-1589
118-1619	Track Roller Group	188-5257	122-5178	Piston As.	301-5252	130-0485	Pin	396-7286
118-1620	Track Roller Group	188-5258	122-7353	Inlet Valve	384-8702	130-1521	Gasket Kit	393-1030
118-1623	Track Roller Group	188-5596	123-3472	Gear Pump	345-1978	130-1637	Shaft	347-0471
118-1625	Track Roller Group	188-5597	124-2726	Cylinder Head	377-5855	130-1918	Pin	393-0933
118-5196	Pin	380-7397	124-3240	Pin	282-6548	130-2533	Pin	396-7265
118-7804	Bevel Gear	384-5963	124-5741	Pin	394-0204	130-2621	Pin	390-5273
118-7805	Bevel Gear	394-9197	124-7569	Gasket Kit	393-1041	130-3013	Drive — Cal Shaft	391-9865
118-8458	Fan Spider	395-1306	125-0025	Hydraulic Rod	394-8208	130-3014	Drive — Cal Shaft	391-9864
118-9906	Muffler As.	360-7865	125-1037	Pin	375-9985	130-3139	Sleeve Bearing	391-9875
119-2863	Pin	314-8698	125-2728	Oil Cooler	395-1302	130-5333	Track Link (RH)	289-0635
119-2940	Gasket	378-4002	125-2950	Gear Assembly	301-4762	130-5334	Track Link (LH)	289-0636
119-5229	Sleeve Bearing	376-7651	126-5056	LH Shield	369-9492	130-5451	Pin	394-9816
119-6772	Exhaust Valve	384-8699	126-5057	LH Shield	369-9493	130-6856	Precleaner	361-1717
119-7042	Shaft	347-0480	126-5061	Track Shoe	335-5478	130-6879	Seal	347-0482
119-7047	Seal	347-0481	126-5062	Track Shoe	286-9827	130-8412	Clutch Piston	394-0910
119-8747	Motor Pump	374-5377	126-5875	Flywheel As.	374-4694	130-9293	Rod	314-8708
119-8763	Motor Pump	374-5378	126-7130	Shaft Assembly	275-5300	131-3736	Socket Gp — Basic	325-6211
			126-9461	Pin	392-4528	131-3737	Socket As.	282-6626
			127-1693	Yoke	373-5380	131-3738	Socket Assembly	282-6627
			127-3365	Slip Joint	367-6067	131-4164	Gasket	394-0895
			127-3467	Exhaust Manifold	394-9827	131-6001	Pin	376-3646
			127-4525	Oil Gage	386-3043	131-6091	Transmission Gear	385-7201
			127-5537	Core As.	325-6045	131-8674	Drive Gear	394-0911
			127-5969	Gear — Sun	301-4761	133-2437	Link	377-6199
			127-5970	Gear — Planet	301-3398	133-3565	Exhaust Tube	374-4695
			127-6974	Gasket Kit	393-3638	133-3566	Exhaust Tube	378-4003
			127-8592	Muffler As.	347-0463	133-3919	Gasket Kit	393-1031
			127-8594	Muffler	390-0981	133-4798	Sun Gear	394-9204
			128-0307	Plate	325-6165	133-4799	Axle Shaft	394-8240
			128-2922	Gasket Kit	386-3814	133-8991	Fuel Injection Line	378-4004
			128-4128	Tie Rod	385-6136	133-8992	Fuel Injection Line	378-4005
			128-9260	Sleeve Bearing	374-3498	133-8993	Fuel Injection Line	378-4006
			128-9863	Bearing — Sleeve	314-8630			

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## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
133-8994	Fuel Injection Line	378-4007	140-2246	Gasket Kit	383-3710	148-0885	Torque Converter Stator	379-0161
133-8995	Fuel Injection Line	378-4008	140-2382	Gasket Kit	390-5285	148-2593	Hydraulic Head	383-1591
133-8996	Fuel Injection Line	378-4009	140-2749	Gasket Kit	393-1033	148-3091	Sleeve Bearing	365-8825
134-2659	Hydraulic Rod	388-6568	140-6188	Valve Spring	391-9855	148-3465	Pin	383-2112
134-3036	Gasket Kit	393-3629	140-9902	Gasket Kit	393-0916	148-4634	Shaft — Planet	360-2274
134-3068	Gasket Kit	393-3636	141-4617	Gasket Kit	393-0917	148-7455	Exhaust Valve	270-4361
134-8949	Plate	383-2110	141-4974	Gasket Kit	388-0658	148-9288	Differential Case	380-1496
134-8951	Plate	382-5061	141-6136	Socket	333-4953	148-9810	Gasket Kit	393-3631
135-2376	Gasket Kit	393-3634	141-6137	Socket Gp	325-6212	149-2752	Muffler	360-9628
135-2707	Gasket Kit	392-4506	141-6138	Socket Gp	325-6213	150-0351	Bushing	396-7291
135-4928	Water Pump Shaft	386-3813	141-9792	Gasket Kit	393-3632	150-1916	Exhaust Manifold	395-1322
135-5553	Bearing	394-0203	142-0226	Gasket Kit	393-1034	150-3416	Muffler	360-9620
135-6160	Sun Gear Shaft	394-8239	142-0228	Gasket Kit	393-1035	150-4637	Oil Pan	377-5843
135-7393	Hydraulic Head	382-6895	142-1662	Gasket Kit	392-4511	150-8685	Gasket Kit	392-4503
135-7989	Gasket Kit	393-3633	142-1699	Gasket Kit	392-4507	151-5349	Hydraulic Head	383-1592
135-8167	Extension Pipe	395-1305	142-2220	Gasket Kit	383-3711	152-3952	Impeller — Pump	374-4696
136-0812	Gasket	394-0900	142-3035	Gasket Kit	393-0926	152-6485	Hydraulic Cylinder	390-0985
136-0819	Exhaust Valve	384-8697	142-7526	Gasket Kit	393-0918	153-3192	Planet Gear	347-0483
137-1338	Pump Gp — Water (Basic)	375-4336	142-8811	Muffler	360-2297	153-3580	Shaft	299-2055
137-1970	Pump Impeller	380-1553	142-8845	Muffler	360-9619	153-7023	Inlet Valve	391-1106
137-2818	Sleeve Bearing	380-7381	143-2605	Gasket Kit	393-0915	153-7024	Exhaust Valve	391-1107
137-2819	Bearing — Sleeve	360-2317	143-5447	Gasket Kit	393-1036	154-3656	Track Link Assembly	259-7066
137-2820	Bearing — Sleeve	360-2318	143-7356	Double Roller Bearing	380-1483	154-3660	Track Pin	257-7769
137-2919	Bearing — Sleeve	360-2319	144-0480	Cover Gasket	393-5203	154-3662	Link As.	257-8020
137-3060	Bearing — Sleeve	360-2320	144-0502	Piston Ring Kit	395-1312	154-3664	Track Pin	259-7067
137-4097	Muffler As.	360-7866	144-0503	Piston Kit	380-1554	154-3667	Link As.	260-1509
137-6501	Oil Shield	383-1590	144-1150	Gasket Kit	391-9879	154-3672	Track Link Assembly	257-8020
137-6718	Valve Spring	391-9854	144-9072	Hydraulic Cylinder	394-8209	154-3676	Link As.	257-8021
137-6995	Muffler	360-7868	145-0803	Pin	393-0936	154-5278	Pin	393-3685
137-8479	Shim	395-1323	145-0804	Sleeve	391-9905	154-5279	Pin	392-4529
138-1840	Retainer — Seal	374-6511	145-0804	Sleeve	391-9905	154-5280	Pin	391-9868
138-4338	Gasket Kit	393-1032	145-3030	Cylinder	360-2260	154-5679	Gasket Kit	390-5277
138-6744	Rebuild Water Pump	363-7457	145-3036	Track Tension Spring	375-5445	154-5685	Gasket Kit	396-0649
139-0683	Gasket Kit	390-5290	145-4585	Muffler	360-9627	154-8030	Gasket	394-0894
139-6842	Gasket Kit	384-4810	147-1006	Gasket Kit	384-4807	155-1379	Gasket Kit	386-3815
139-6849	Gasket Kit	388-6586	147-1007	Gasket Kit	388-6587	155-2819	Ejector Assembly	325-6078
139-6850	Gasket Kit	384-4809	147-1010	Gasket Kit	390-5278	155-5619	Gasket	382-5054
139-9171	Gasket Kit	384-4808	147-1740	Planet Gear	377-7466	155-6057	Gasket Kit	388-6588
139-9172	Gasket Kit	384-5964	147-1902	Gasket Kit	384-4806	155-8691	Gasket Kit	396-0650
139-9175	Gasket Kit	377-7464	147-3309	Spindle	282-6628	155-8698	Gasket Kit	394-0914
139-9176	Gasket Kit	390-5283	147-3310	Spindle	383-2111	156-0738	Hydraulic Rod	394-8210
139-9177	Gasket Kit	377-7465	147-3400	Spindle	282-6549	156-6237	Exhaust Elbow	396-1567
139-9179	Gasket Kit	390-5289	147-4359	Pin	393-0937			

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## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
156-8210	Gasket Kit	384-4812	170-0556	Water Pump Rebuild Kit	383-3712	175-8529	Track Link Assembly	290-6587
157-2828	Muffler	360-9621	170-0558	Water Pump Rebuild Kit	390-1001	175-8810	Track Link Assembly	290-3451
157-5075	Planet Gear	394-9821	170-0560	Rebuild Water Pump	363-7458	175-8835	Track Link Assembly	288-3694
157-6257	Collar	393-0912	170-0564	Water Pump Rebuild Kit	380-7576	175-8836	Track Link Assembly	288-3694
158-1433	Gasket Kit	393-1003	170-0566	Water Pump Rebuild Kit	377-5835	175-8837	Track Link Assembly	288-3694
158-1441	Gasket Kit	394-9207	170-0570	Water Pump Rebuild Kit	380-7577	176-9273	Piston	297-4860
158-4380	Greased Seal	289-0646	170-7502	Idler Shaft	374-7484	177-4132	Gasket Kit	394-8227
159-0961	Pin	396-7287	170-8541	Radiator Core	379-0180	177-9024	Adapter — Damper	299-1956
159-1845	Yoke	380-1494	171-6696	Diaphragm	384-4811	178-3086	Ballstud	374-1453
159-1847	Yoke	373-5381	172-5185	Water Pump Shaft	325-6201	179-1970	Yoke	376-9053
159-3021	Gasket	377-5845	172-5188	Water Pump Shaft	325-6202	179-3044	Cylinder	385-6138
159-8169	Planet Gear	391-9870	172-5189	Impeller — Pump	295-5687	179-6152	Bearing	361-1704
160-1014	Pin	347-0473	172-5190	Impeller — Pump	325-6111	180-3767	Adapter	299-1957
160-1400	Yoke	319-3479	172-5190	Impeller — Pump	325-6111	180-6645	Pump Shaft	396-1566
160-5691	Pin	393-0931	172-6712	Impeller — Pump	325-6112	184-1413	Pin	393-1050
160-6305	Cap — Bearing	295-5686	172-7760	Water Pump	380-7574	184-4395	Guide	393-1042
160-6308	Cap — Bearing	325-6036	172-7763	Water Pump	374-7499	184-6590	Idler Group	275-4086
160-7819	Track Pin	188-5694	172-7765	Water Pump	394-9835	184-6591	Idler Group	275-4086
160-8178	Connecting Rod	379-8869	172-7766	Water Pump	374-4698	184-9843	Head	347-0461
160-7818	Track Pin	260-1507	172-7767	Water Pump Group	296-1365	185-2831	Fuel Injection Line	380-1516
160-9874	Seal Kit Liner	386-3048	172-7776	Water Pump	395-1314	185-4037	Idler Gp	275-3581
161-3411	Gasket	394-0896	173-0888	Spider	394-0898	185-6151	Segment, Segment Gp	260-1510, 260-1511 (sprocket group)
161-4111	Pump	374-7502	174-5385	Gasket Kit	393-1037	186-4117	Carrier	394-8235
161-9918	Drive Shaft Bearing Retainer	395-1321	174-6820	Sleeve Bearing	387-2903	186-4118	Planet Gear	347-0483
162-0270	Carrier	394-9819	174-6822	Sleeve Bearing	387-2901	186-4439	Planet Gear	380-1485
162-2166	Ring	385-3807	174-6829	Gasket Kit	394-8237	186-4440	Shaft — Planet	364-5261
163-1387	Fly Gear	374-4697	174-7432	Hydraulic Head	388-0660	186-5652	Pin	392-4532
163-4063	Radiator Core	391-9826	175-4070	Bushing — Sleeve	347-0484	186-5730	Pin	393-3688
163-4143	Single Flange Roller Group	286-9823	175-8178	Track Link Assembly	290-3449	187-0605	Gasket Kit	382-5055
164-1047	Idler Gp	275-3581	175-8183	Track Link Assembly	290-3451	187-8979	Gear	393-3656
164-4891	Plate	391-1093	175-8262	Track Master Bushing	290-3457	188-2887	Gasket Kit	394-8244
165-4262	Piston	270-4351 (Piston), 270-4353 (Kit-Liner)	175-8398	Pin and Bushing Group	316-1443	188-3064	Track Master Pin	287-3231
165-7211	Strip	325-6219	175-8526	Track Link Assembly	259-7066	188-5709	Seal Assembly	259-7065
165-9864	Gasket Kit	388-0659	175-8527	Track Link Assembly	257-8019	188-5772	Thrust Ring	289-9300
166-2142	Coupling Hub	394-8238	175-8528	Track Link Assembly	290-6586	188-5834	Track Bushing	259-7068
167-8123	Damper As.	299-2006				188-6126	Gasket	388-0654
167-8126	Damper	382-8019				188-6246	Track Bushing	257-7770
168-0444	Pin	393-3687						
169-5560	Coupling Gear	394-9192						

(Continued)

## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number
188-8764	Track Link Assembly	257-1990
189-3041	Hydraulic Rod	394-9811
189-3922	Pin	393-0938
189-3923	Pin	393-0935
190-3523	Track Bushing	289-4955
190-3524	Track Master Bushing	289-4956
190-6115	Valve Spring	391-9857
190-6117	Valve Spring	391-9856
190-7396	Segment Gp	275-3576 (sprocket group), 275-4087 segment
190-8609	Fill Valve	360-2288
190-9861	Gasket Kit	386-3812
191-3235	Sprocket Housing	394-0200
191-4457	Gasket	394-0891
191-7941	Fuel Injection Line	378-4011
191-7942	Fuel Injection Line	374-4699
191-7943	Fuel Injection Line	374-4700
191-7944	Fuel Injection Line	374-4701
131-3815	Pump Seal	325-6193
131-3739	Tie Rod	380-7519
191-7946	Fuel Injection Line	378-4013
192-6445	Hydraulic Cylinder	393-3651
192-6446	Hydraulic Cylinder	393-3657
192-8318	Sleeve Bearing	360-2321
193-1684	Pad	396-0645
193-1685	Pad	396-0643
193-1687	Pad	396-0642
193-1689	Pad	396-0647
193-4591	Transfer Gear	380-7487
193-9155	Cover Gasket	392-4494
194-1608	Link As.	308-6230
194-1609	Track Link Assembly	308-6229
194-6843	Track Link Assembly	257-1992
195-0302	Sleeve Bearing	374-8364
195-0319	Water Pump Gear	391-9888
195-7339	Gasket	393-3630
196-0028	Idler Gear	364-5259
196-0029	Pump Gear	374-4674
196-3986	Gasket Kit	390-5275

Original Part Number	Part Name	Classic Part Number
196-9988	Sleeve Bearing	374-8353
197-9580	Gasket	394-0893
197-9679	Sprocket Segment Group	188-5638
199-4582	Needle Bearing	388-6589
199-5067	Muffler	360-7894
10R-1713	Rocker Arm	314-8623
10R-1714	Rocker Arm	314-8624
10R-3815	Pump Group	295-5445
10R-5182	Slip Joint	308-9872
1A-0744	Adjusting Screw	379-0167
1A-2846	Cap As. — Filler	311-9368
1A-2847	Cap Assembly	311-9368
1A-3987	Disc	230-7119
1A-9252	Rod End	377-5849
1B-3931	Bearing Race	384-4793
1B-3934	Bearing Race	392-4487
1B-3937	Roller Bearing Cup	377-7394
1B-3953	Tapered Roller Bearing	396-4146
1B-4043	Roller Bearing Cone	377-7395
1B-5675	Ball Bearing	377-7396
1B-6577	Roller Bearing	374-1839
1D-3996	Fork	228-9428
1F-2254	Bushing	314-8510
1F-4419	Cover Gasket	311-9393
1F-9223	Cover Gasket	391-1101
1G-9787	Hand Pump	374-5374
1H-4106	Pin Assembly	325-6126
1H-4478	Pin	330-9272
1H-4493	Roller Bearing	386-4939
1H-5338	Roller Bearing	374-8345
1H-8037	Yoke	228-9415
1H-8262	Shaft	226-8016
1H-8382	Gear	226-6103
1H-8937	Drum	226-7993
1H-8938	Lever	226-8028
1J-0774	Bracket	369-9485
1J-1738	Pin	319-3448
1J-2860	Tapered Roller Bearing	374-8347
1J-4757	Roller Bearing	374-1840
1J-6744	Bearing	361-1705
1J-6746	Pin	256-4817
1J-6747	Pin	367-6078

Original Part Number	Part Name	Classic Part Number
1J-6749	Screw — Adjustable	256-4824
1K-6985	Retaining Ring	391-9894
1K-7974	Gear	226-7984
1K-7991	Bearing Race	386-4940
1K-8041	Sleeve Bearing	330-9257
1K-8928	Gear	223-6319
1M-0176	Flange	223-4810
1M-0598	Gear	213-8636
1M-1341	Rod End	388-6602
1M-1408	Nut (5/8-18)	200-9150
1M-1440	Spring Plate	385-7207
1M-1455	Track Pin	290-0822
1M-1456	Track Pin	290-0822
1M-1618	Collar As. — Shift	226-8029
1M-1663	Collar As. — Retain	226-8030
1M-1698	Gear	215-1659
1M-1809	Shaft	231-3314
1M-1930	Cage — Pinion Bearing	217-7727
1M-1947	Support Assembly	226-6096
1M-2607	Cage — Bearing	239-7970
1M-2626	Cage — Carrier Bearing	216-7458
1M-2635	Clutch Housing	216-3549
1M-3046	Gear	213-8747
1M-3669	Track Bushing	289-0642
1M-3670	Track — Master Bush	289-0644
1M-3917	Shaft	386-4915
1M-4153	Carrier — Planet	213-1114
1M-4155	Ring Gear	214-0519
1M-4156	Ring Gear	214-0520
1M-4167	Shaft — Planet	219-9700
1M-4171	Cage — Bearing	216-7460
1M-4344	Cage As.	216-7466
1M-4485	Housing Assembly	215-1662
1M-4486	Cl Piston	215-1660
1M-5151	Pinion — Bevel	215-1661
1M-5165	Pinion	231-8766
1M-5270	Extension Pipe	367-6065
1M-6128	Exhaust Manifold	261-0906
1M-6603	Gear	217-7720
1M-6604	Gear	217-7715
1M-7250	Cleaner Bowl	360-2296
1M-7912	Roller Bearing	380-7503

(Continued)



## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number
1M-8647	Housing	215-1662
1M-8875	Plate Assembly	226-8023
1M-8967	Holder Assembly	226-7985
1M-9029	Guard	226-0219
1M-9177	Plate	226-6112
1M-9444	Retainer — Spring	299-2046
1N-2936	Muffler As.	298-2782
1N-2946	Exhaust Extension	367-6064
1N-3165	Valve Plunger	373-1883
1N-3300	Shield As.	374-4702
1N-3576	Cylinder Block	279-4978
1N-3821	Rod Bearing	376-9076
1N-3822	Rod Bearing	376-9077
1N-3958	Elbow	325-6087
1N-4304	Head Assembly	269-8761
1N-5943	Upper Manifold	311-9429
1N-7478	Frt Manifold	311-9428
1P-0005	Pump Group	256-4756
1P-0009	Connecting Rod	311-9450
1P-0320	Retainer	226-5987
1P-0451	Turbo Gasket	380-7572
1P-0579	Housing Assembly	219-9678
1P-0963	Guard Assembly	226-0179
1P-0965	Bevel Gear	213-8215
1P-1006	Strip — Guard	226-0245
1P-1216	Manifold	261-0902
1P-1605	Transmission Gear	215-1663
1P-1608	Gear	302-2707
1P-1636	Lever As.	226-8013
1P-1721	Gear	298-2769
1P-1722	Gear	298-2770
1P-1758	Grd Bolt	311-9350
1P-1897	Final Drive Gear	215-1670
1P-1931	Shaft	227-4772
1P-2187	Pump	299-2044
1P-2636	Bearing Race	396-4147
1P-2662	Roller Bearing	374-1851
1P-2694	Roller Bearing	374-1841
1P-2695	Roller Bearing	374-8344
1P-2696	Roller Bearing	374-1834
1P-2697	Roller Bearing	374-8343
1P-3318	Strip	385-7206
1P-3935	Roller Bearing Cone	377-7397
1P-3957	Pulley	264-5866

Original Part Number	Part Name	Classic Part Number
1P-4145	Valve Group	247-4436
1P-4231	Gear Pump	226-0156
1P-4303	Head Assembly	242-3434
1P-4579	Half Flange	380-7548
1P-4693	Roller Bearing Cup	377-7398
1P-4694	Roller Bearing	380-7504
1P-4695	Roller Bearing	374-1842
1P-4696	Roller Bearing	374-1843
1P-5262	Cage — Bearing	226-5989
1P-5411	Sleeve	385-3785
1P-5419	Roller Bearing	374-1835
1P-5480	Cover As. — End	299-1998
1P-6160	Gear	231-8760
1P-6265	Gear	221-9177
1P-6400	Pump Plunger	383-1568
1P-6752	Gear Pump	226-0161
1P-7125	Air Compressor Governor	383-3672
1P-7522	Yoke	382-6893
1P-7590	Support Assembly	213-4400
1P-7835	Roller Bearing Cone	377-7399
1P-7895	Tapered Roller Bearing	396-4145
1P-7936	Fan Spider	383-3673
1P-8005	Chamber Gasket	314-8527
1P-8554	Exhaust Coupling	325-6052
1P-8717	Carrier Roller Group	188-5600
1P-8835	Shaft Assembly	215-1672
1P-9024	Spring — Equalizer	231-3311
1P-9593	Roller Bearing Cone	377-7400
1P-9594	Roller Bearing Cup	377-7401
1P-9663	Carrier — Bearing	217-7731
1P-9807	Track Shoe	188-5333
1P-9808	Track Shoe	175-8802
1P-9809	Track Shoe	175-8882
1P-9810	Track Shoe	188-5334
1P-9945	Bracket	296-1344
1P-9946	Fan Shaft	325-6194
1P-9952	Impeller — Pump	314-8685
1P-9989	Thm Pipe	363-7453
1Q-4983	Track Shoe	289-5117
1R-6322	Cylinder	384-3463
1S-0057	Clutch Plate	377-7404

Original Part Number	Part Name	Classic Part Number
1S-0876	Bolt	226-0224
1S-1532	Flange	215-1673
1S-1801	Shaft Assembly	215-1674
1S-1859	Track Bolt	188-5633
1S-1860	Nut (3/4-16)	188-5856
1S-1888	Bracket — Lamp	297-7147
1S-1967	Chamber As.	247-3291
1S-1970	Chamber As.	247-3292
1S-2232	Support	213-4400
1S-2233	Sleeve Bearing	379-0188
1S-2268	Piston	226-2726
1S-2269	Sleeve	226-2720
1S-3197	Scavenger Pump	345-1964
1S-3743	Ball Bearing	384-4786
1S-4295	Gasket	379-0175
1S-4445	Spacer	290-0847
1S-4446	Seal Washer	290-0835
1S-4701	Pulley	264-5866
1S-4810	Gasket	380-1564
1S-5315	Cap As. — Brace Bearing	226-4848
1S-5331	Cylinder — Adjustable	226-0214
1S-5738	Exhaust Seat Insert	311-9396
1S-6422	Pilot Assembly	226-4849
1S-6595	Gasket	380-1559
1S-8186	Idler As.	188-5268
1S-8607	Baffle	380-7540
1S-8734	Bracket	226-0212
1S-8753	Plate	308-9910
1S-8754	Joint Gp — Univ	308-9873
1S-8764	Ring	226-8014
1S-9209	Shaft	374-6499
1T-0020	Wheel — Turbine	297-4862
1T-0024	Housing	297-4864
1T-0043	Ball Bearing	390-5294
1T-0051	Impeller	388-6582
1T-0052	Wheel	235-0920
1T-0079	Turbine Wheel	382-6894
1T-0221	Torque Converter Turbine	390-5268
1T-0224	Carrier	239-7928
1T-0228	Housing — Rotating	216-7467
1T-0231	Retainer	319-3471
1T-0237	Flange Assembly	239-7929

(Continued)

## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number
1T-0256	Gear	239-7930
1T-0278	Sleeve Bearing	394-0213
1T-0300	Torque Converter Kit	235-1803
1T-0334	Ball Bearing	380-1476
1T-0364	Yoke	388-6567
1T-0406	Impeller	384-3854
1T-0421	Flange Assembly	295-5442
1T-0436	Gear	247-3367
1T-0437	Housing — Rotating	295-5685
1T-0438	Retainer	295-0410
1T-0443	Carrier Assembly	247-3368
1T-0447	Carrier	295-0409
1T-0521	Retainer	325-6180
1T-0541	Retainer	300-2587
1T-0553	Gear Assembly	226-5983
1T-0555	Carrier	330-9268
1T-0576	Sleeve Bearing	379-0186
1T-0589	Bearing Race	386-4942
1T-0591	Carrier	247-4124
1T-0595	Carrier	239-7939
1T-0610	Ball Bearing	396-4136
1T-0611	Torque Converter Kit	235-1804
1T-0633	Torque Converter Impeller	390-5266
1T-0655	Thrust Bearing	377-7409
1T-0660	Torque Converter Impeller	388-6595
1T-0662	Turbine — Conv	235-1819
1T-0665	Ring	308-9918
1T-0670	Converter As.	235-1805 (Repair Kit)
1T-0679	Roller	384-4797
1T-0686	Thrust Bearing	380-7464
1T-0699	Torque Converter Impeller	235-1808
1T-0709	Torque Converter Impeller	235-1812
1T-0724	Torque Converter Impeller	216-7469
1T-0727	Hub	229-8236
1T-0737	Bearing Race	384-4798
1T-0762	Bearing Race	384-4803
1T-0766	Sleeve Bearing	383-2107
1T-0767	Sleeve Bearing	383-2108

Original Part Number	Part Name	Classic Part Number
191-7945	Fuel Injection Line	378-4012
1T-0782	Torque Converter Turbine	377-7410
1T-0851	Torque Converter Impeller	253-1418
1T-0902	Sleeve Bearing	389-6326
1T-0930	Torque Converter	388-6566 (Con-Trq), 235-0913 (Tc Kit)
1T-0947	Flange Assembly	229-8224
1T-0949	Housing — Rotating	217-7732
1T-0972	Carrier Assembly	216-7470
1T-0987	Hub	247-4118
1T-1016	Torque Converter Stator Carrier	388-6584
1T-1051	Torque Converter Impeller	388-6598
1T-1053	Torque Converter Turbine	377-7412
1T-1078	Thrust Bearing	384-4802
1T-1081	Gear Assembly	217-7734
1T-1082	Turbine Hub	384-4795
1T-1089	Turbine Hub	216-7471
1T-1091	Hub	308-9869
1T-1255	Torque Converter Kit	235-1806
1T-1278	Thrust Bearing	370-8370
1T-1281	Bearing Retainer	390-0924
1T-1282	Thrust Bearing	373-1755
1T-1285	Gear Assembly	217-7734
1T-1331	Torque Converter Stator	229-8237
1T-1332	Drive Flange	380-1489
1T-1338	Drive Gear	371-4304
1T-1339	Bearing Carrier	385-7205
1T-1350	Torque Converter Kit	235-0912
1T-1386	Yoke	325-6239
1T-1389	Carriers	247-4124
1T-1396	Drive Gear	371-4310
1T-1399	Torque Converter Impeller	391-9829
1T-1401	Ring Seal	384-4799
1T-1428	Retainer	300-2587
1T-1446	Torque Converter Impeller	377-7413
1T-1480	X-Clutch Turbine	376-9054

Original Part Number	Part Name	Classic Part Number
1T-1494	Torque Converter Impeller	388-6564
1T-1522	Carrier	377-7414
1T-1534	Ring Carrier	386-4916
1T-1562	Wheel	388-6580
1T-1631	Gear Pump	374-7472
1T-1647	Torque Converter Impeller	377-7415
1T-1691	Torque Converter Impeller	297-4863
1T-1701	Torque Converter Stator Carrier	384-3853
1T-1729	Torque Converter Stator	385-7195
1T-1785	Carrier	295-0408
1T-1790	Carrier	296-1347
1T-1804	Torque Converter Stator	388-0572
1T-1805	X Turbine	380-1490
1T-1828	Housing	297-4864
1T-1880	Carrier	295-0408
1T-1909	Wheel	235-0920
1T-1927	Housing	297-4864
1T-1940	Housing	396-0646
1T-1981	Torque Converter Stator	377-7416
1T-1987	Housing — Rotating	297-4864
1T-1991	Torque Converter Stator	380-1482
1T-1993	Wheel — Turbine	235-0920
1T-1994	Wheel	235-0920
1T-2050	Carrier	325-6040
1T-2052	Stator Assembly	295-5683
1T-2077	Bearing Retainer	380-7408
1U-0105	Brace As.	295-5684
1U-0159	Pin	325-6134
1U-0725	Retainer	314-8707
1U-0738	Sleeve Bearing	333-4942
1U-0872	Pin	325-6136
1U-0873	Pin	325-6137
1U-0899	Pin	296-1363
1U-0928	Screw — Adjusting	325-6187
1U-0990	Pin	325-6138
1U-1204	Trunnion	325-6224
1U-1267	Brace As.	296-1343



## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number
1U-2135	Hydraulic Cylinder	395-1304
1U-2738	Piston	367-6074
1U-3522	Hydraulic Rod	390-5281
1U-3988	Self Aligning Bearing	388-0577
1U-4103	Trunnion	295-5680
1U-4661	Lever	396-7267
1V-0188	Brake Disc	386-4943
1V-0557	Track Shoe	288-6678
1V-0940	Holder	216-7472
1V-1080	Housing — Bearing Spt	260-0775
1V-1409	Carrier — Planet	253-1423
1V-1554	Hub	219-2972
1V-1687	Wheel	226-5990
1V-2281	Carrier — Planet	226-5984
1V-2992	Gear	224-1301
1V-3242	Release Bearing Cage	216-7475
1V-3335	Carrier — Planet	253-1424
1V-3361	Ring — Thrust Nx	289-9300
1V-3676	Final Drive Case (LH)	216-7799
1V-3677	Final Drive Gear Case	216-7802
1V-3995	Pin	319-3449
1V-4603	Track Master Link (RH)	257-8014
1V-4604	Track Master Link (LH)	257-8015
1V-4605	Track Master Link (RH)	257-8014
1V-4606	Track Master Link (LH)	257-8015
1V-4718	Spindle	223-4817
1V-5410	Bearing	308-9806
1V-5724	Differential Group	260-0776
1V-5736	Sleeve Bearing	379-0187
1V-5744	Pin	241-2554
1V-6342	Gear As.	308-9847
1V-6934	Sleeve Bearing	364-5265
1V-6978	Bolt — Shoulder	308-9803
1V-7072	Track Link Assembly	290-6586
1V-7556	Support	216-7804
1V-8240	Bearing — Sleeve	308-9807
1V-8241	Bearing — Sleeve	308-9808

Original Part Number	Part Name	Classic Part Number
1V-8242	Bearing — Sleeve	308-9809
1V-8280	Clutch Plate	382-6889
1V-8439	Pin Assembly	308-9881
1V-8604	Gear	308-9853
1V-8606	Sun Gear	308-9860
1V-8655	Lever As.	226-5991
1V-8849	Collar	308-9838
1V-8850	Pin	308-9891
1V-8851	Cap	308-9833
1V-8852	Cap	308-9834
1V-8947	Pin Assembly	308-9882
1V-8949	Pin Assembly	308-9883
1V-8953	Pin	308-9892
1V-8954	Pin	361-1696
1V-9143	Bearing — Sleeve	308-9810
1V-9148	Bearing — Sleeve	308-9811
1V-9208	Track Link Assembly — Rear	299-2020
1W-0311	Main Bearing	376-9078
1W-0312	Main Bearing	376-9079
1V-4838	Track Link Assembly — Spring	308-9874
1W-0370	Muffler As.	360-7869
1W-0458	Shield	367-6082
1W-0466	Turbo Shield	369-9495
1W-0481	Ring	395-1319
1W-0568	Fuel Transfer Pump	377-5859
1W-0777	Muffler As.	247-2662
1W-1064	Fly Gear	374-4703
1W-1219	Trunnion Assembly	314-8724
1W-1661	Main Bearing	376-9080
1W-1662	Main Bearing	382-6900
1W-1669	Piston	325-6158
1W-1695	Pump Group	279-4980
1W-1698	Housing	296-1356
1W-1700	Fuel Transfer Pump	377-5846
1W-1766	Muffler As.	298-2783
1W-2489	Muffler	360-7870
1W-2491	Muffler As.	360-7871
1W-2572	Muffler As.	247-2663
1W-2870	Shaft As. — Balance	314-8715
1W-2871	Shaft As. — Balance	314-8716
1W-3062	Retainer As.	311-9445

Original Part Number	Part Name	Classic Part Number
1W-3175	Camshaft Gear	383-3674
1W-3397	Plate	391-9810
1W-4206	Weight — Inertia	299-2006
1W-4207	Damper Assembly	299-2006
1W-4369	Pulley — Alt	296-1340
1W-4402	Gear — Camshaft	279-4981
1W-4405	Crankshaft Gear	279-4982
1W-4407	Hub — Fan Pulley	296-1358
1W-4506	Adapter — Seal	372-7515
1W-4623	Muffler As.	360-9622
1W-4737	Gear	295-5688
1W-4738	Bearing — Sleeve	325-6020
1W-4740	Gear As. — Drive	295-5689
1W-4746	Retainer	295-5690
1W-4797	Diaphragm	383-3675
1W-5105	Ring Gp — Piston	311-9446
1W-5910	Guide Tappet	383-1569
1W-5912	Tappet Assembly — Guide	325-6223
1W-6183	Shield	367-6083
1W-6185	Shield As.	374-4704
1W-6186	Shield As.	374-4705
1W-6541	Pump Plunger	325-6173
1W-7029	Water Pump Rebuild Kit	383-3676
1W-7073	Water Pump Rebuild Kit	383-3677
1W-7077	Water Pump Rebuild Kit	383-3679
1W-7080	Water Pump Rebuild Kit	392-4515
1W-7082	Water Pump Rebuild Kit	383-3681
1W-7238	Pump Shaft	379-0164
1W-7239	Pump Shaft	379-0163
1W-7940	Spider As. — Fan	295-5443
1W-9171	Valve Bonnet	374-4707
1W-9191	Fuel Injection Line	311-9403
1W-9192	Fuel Injection Line	311-9404
1W-9193	Fuel Injection Line	311-9405
1W-9194	Fuel Injection Line	311-9406
1W-9195	Fuel Injection Line	311-9407
1W-9196	Fuel Injection Line	311-9408
1W-9197	Fuel Injection Line	311-9409
1W-9198	Fuel Injection Line	311-9410

(Continued)

## Part Numbers Beginning With 1 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
1W-9201	Fuel Injection Line	311-9411	1W-9207	Fuel Injector Line	311-9417	1W-9229	Muffler Assembly	302-4282
1W-9202	Fuel Injection Line	311-9412	1W-9208	Fuel Injection Line	311-9418	1W-9302	Crankshaft Gear	386-3059
1W-9203	Fuel Injection Line	311-9413	1W-9209	Fuel Injection Line	311-9419	1W-9490	Pulley	394-0885
1W-9204	Fuel Injector Line	311-9414	1W-9210	Fuel Injection Line	311-9420	1W-9771	Crankshaft As.	368-5913
1W-9205	Fuel Injector Line	311-9415	1W-9211	Fuel Injection Line	311-9421	1W-9812	Crankshaft Gear	380-1513
1W-9206	Fuel Injection Line	311-9416	1W-9212	Fuel Injection Line	311-9422	1T-0781	Impeller	380-7488

## Part Numbers Beginning With 2

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
200-3199	Muffler	396-1565	222-0458	Muffler	393-0929	234-1983	Gasket Kit	393-0924
200-9140	Seal Assembly	259-7061	222-5915	Gasket	394-0897	234-8002	Gasket Kit	386-3817
200-9228	Track Link Assembly	260-1509	223-3095	Gauge As.	360-2295	234-8009	Gasket Kit	382-5056
205-8267	Track Link Assembly	257-1991	224-4323	Gasket Kit	393-3627	234-8016	Gasket Kit	393-0919
206-3130	Track Link Assembly	257-1994	224-4384	Gasket Kit	383-3713	236-6271	Bearing — Sleeve	360-2324
206-5794	Sun Gear	394-8233	225-4529	Hydraulic Cylinder	393-3658	236-7724	Retainer	299-2048
207-2919	Gasket Kit	384-4826	226-0930	Transfer Gear	394-0888	236-9861	Link As.	175-8555
208-0421	Muffler	360-9624	226-0931	Transfer Gear	391-9883	236-9864	Link As.	188-5527
208-4836	Water Pump Gasket	380-7575	226-2018	Gasket Kit	393-0921	236-9866	Link As.	188-5588
208-5026	Pin	325-6133	227-0620	Sight Gauge	360-2348	237-0944	Sleeve Bearing	394-0194
208-7534	Differential Case	388-6590	227-6228	Cage	360-2343	237-2252	Bearing — Sleeve	347-0474
209-6188	Plate	393-1053	227-6789	Bearing — Sleeve	360-2322	237-2859	Roller Bearing	368-0125
210-2154	Gasket Kit	394-8232	228-5621	Bearing — Sleeve	360-2323	238-5507	Screw Orifice	383-1593
211-3122	Valve Spring	390-0989	229-1490	Sleeve	393-3659	238-5508	Screw Orifice	383-1594
213-1304	Gasket Kit	394-8231	229-2949	Track Rod	347-0486	238-9951	Link As.	290-6589
213-1305	Gasket Kit	394-8230	229-2950	Track Rod	347-0487	239-1497	Trunnion	394-0197
213-1364	Bearing — Sleeve	330-9255	231-1591	Muffler	360-9625	239-9956	Brake Disc	347-0485
213-1365	Bearing — Sleeve	330-9256	231-3079	Single Flange Roller	275-3579	240-2913	Bearing — Sleeve	360-2325
213-1370	Sleeve Bearing	380-7370	231-3080	Double Flange Roller	275-3580	240-2915	Bearing — Sleeve	360-2326
213-3193	Connecting Rod	379-8870	232-1841	Gasket Kit	387-2922	240-2916	Bearing — Sleeve	360-2327
213-6732	Muffler (LH)	363-7099	232-2672	Gasket Kit	393-0922	241-1399	Gasket Kit	394-9211
213-6733	Muffler (RH)	363-7098	232-3233	Main Bearing	376-9085	242-9834	Gasket Kit	387-2923
215-2398	Reaction Plate	384-5965	232-6173	Gasket Kit	393-0923	243-0723	Gasket Kit	391-9886
216-5361	Gasket Kit	383-2109	233-6995	Planet Gear	394-8229	243-0726	Gasket Kit	394-9210
216-5582	Sleeve Bearing	390-0914	233-7083	Gasket Kit	387-2919	243-0728	Gasket Kit	394-9206
216-5586	Sleeve Bearing	392-4509	233-8669	Gasket Kit	393-1038	244-8504	Pin Assembly	314-8692
220-4556	Gasket Kit	391-9878	233-8681	Gasket Kit	393-0920	245-8342	Gasket	393-5216
221-6946	Gasket Kit	394-9208	233-8683	Gasket Kit	393-1039	246-3130	Water Pump Shaft	392-4508
221-6947	Gasket Kit	394-9209	233-9200	Gasket Kit	393-0927	246-5228	Track Sprk Rim	289-2207
221-9755	Planet Gear	390-5293	233-9464	Gasket Kit	393-0925	246-5810	Link As. — Track	288-3694
			234-1630	Gasket Kit	393-1040	247-8856	Hydraulic Rod	395-1317
			234-1929	Gasket Kit	393-1022	247-9908	Valve Spring	392-4530
						248-2041	Track Sprk Rim	289-2211

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## Part Numbers Beginning With 2 (Continued)

Original Part Number	Part Name	Classic Part Number
248-5826	Track Master Bushing	290-3457
248-5827	Track Master Pin	290-3456
248-7143	Idler Gp	286-9830
250-1984	Trunnion Assembly	319-3476
250-2398	Pin	382-8047
2P-4470	Turbine	390-0910
2P-4472	Clutch Plate	377-7420
2P-4510	Piston Assembly	275-5293
2P-4611	Exhaust Pipe	365-8821
2P-4698	Sleeve Bearing	389-6318
2P-4701	Shaft Assembly	297-7257
2P-5081	Muffler As.	360-7872
2P-5608	Extension Pipe	367-6066
2P-5609	Muffler Assembly	247-2665
2P-5680	Torque Converter Turbine	308-9942
2P-5693	Housing	308-9866
2P-5769	Coupling	394-9812
2P-6127	Pulley	264-5871
2P-6128	Pulley	264-5872
2P-6159	Pulley	264-5873
250-2402	Pin As.	360-2351
250-3990	Seal Assembly	259-7062
250-3996	Seal Assembly	259-7063
250-3998	Seal Assembly	259-7064
250-4002	Seal Assembly	257-7771
250-4004	Seal Assembly	259-7061
252-1152	Muffler	395-1307
253-1752	Thrust Plate	379-0170
253-4393	Muffler — Converter	301-7975
253-4426	Muffler — Converter	301-7974
258-0768	Sleeve Bearing	394-0201
258-2303	Sleeve Bearing	307-1524
258-2305	Sleeve Bearing	325-6029
258-2308	Bearing — Sleeve	325-6019
258-9797	Sprocket Segment Group	188-5635
260-7799	Pinion	367-6094
264-1260	Gasket Kit	393-5190
264-6898	Gasket Kit	382-5069
269-0381	Hydraulic Cylinder	393-3660
271-5658	Crankshaft	368-5912
274-4274	Sleeve Bearing	391-9896
276-6166	Track Master Pin	289-4954

Original Part Number	Part Name	Classic Part Number
276-6168	Seal Washer	188-5765
277-4492	Idler Assembly	188-5268
277-7089	Water Pump Shaft	380-7578
278-1972	Hydraulic Cylinder	394-9813
281-2813	Gasket Kit	387-2921
281-8338	Double Flange Roller	275-3580
281-8339	Single Flange Roller	275-3579
283-5666	Cylinder Head Gasket	388-6565
286-2494	Gasket Kit	387-2920
288-0934	Single Flange Roller Group	175-8035 (Roller Gp-Single Flange), 188-5272 (Roller Gp-Single Flange)
288-0935	Double Flange Roller Group	175-8036 (Roller Gp-Double Flange), 188-5271 (Roller Gp-Double Flange)
288-2552	Gasket Kit	391-9884
289-4953	Track Pin	175-8923
292-5516	Gasket Kit	391-9885
297-6872	Gasket Kit	394-8228
2A-1162	Gasket	383-3682
2A-4429	Valve Lock	379-0174
2A-4576	Bearing Race	386-4944
2A-4577	Cone — Roller Brg	374-1836
2A-7089	Sleeve Bearing	380-7382
2B-3708	Chamber As.	247-3293
2B-8824	Drum	216-7817
2D-0604	Button	376-3642
2D-1345	Drum	228-9430
2D-1659	Rack — Shift	228-9431
2D-2565	Seal	390-5292

Original Part Number	Part Name	Classic Part Number
2D-2654	Retaining Ring	380-1488
2D-3188	Yoke	365-8822
2D-3467	Hub	228-9396
2D-3609	Shaft	228-8919
2D-4010	Adjuster	228-8916
2D-4205	Block — Pivot	228-9432
2D-4209	Pin	228-9434
2D-4211	Steering Arm	228-9435
2D-4215	Knuckle (RH)	228-9436
2D-4216	Knuckle (LH)	228-9437
2D-5658	Bearing	301-4628
2D-5795	Sleeve	243-0360
2D-5799	Pinion	243-0342
2D-5961	Axle Pin	228-9438
2D-6341	Pin	330-9273
2D-6381	Pinion	228-8915
2D-6382	Gear	228-9558
2D-6511	Roller Bearing Cup	377-7417
2D-7694	Shaft — Pivot	256-4774
2D-7933	Cover	243-0340
2D-8212	Plate Assembly	229-1582
2D-9130	Washer	308-9943
2D-9191	Roller Bearing	374-1837
2D-9453	Roller Bearing	380-7508
2D-9457	Roller Bearing Cone	377-7418
2F-0025	Tube	325-6233
2F-5721	Ball Bearing	311-9354
2F-5894	Drum	228-9439
2F-5969	Collar	228-9440
2F-5970	Collar	228-9441
2F-6046	Pinion	228-9442
2F-6050	Gear	229-1584
2F-6051	Gear	229-1585
2F-6053	Gear	228-9443
2F-6057	Gear	228-9444
2F-7576	Shaft	226-6071
2F-7577	Shaft	226-6072
2F-8001	Shaft	228-9445
2F-9047	Block — Pivot	228-9446
2F-9074	Link	228-9447
2G-1034	Relief Valve	380-7555
2G-1085	Differential Housing	393-0928
2G-1089	Housing	384-5919
2G-2411	Ballstud	387-2899

(Continued)

## Part Numbers Beginning With 2 (Continued)

Original Part Number	Part Name	Classic Part Number
2G-2858	Cap — Pivot	243-0345
2G-2946	Shim	379-0162
2G-4011	Collar	330-9269
2G-4187	Shell — Bearing	245-5794
2G-5768	Bevel Gear	388-0646
2G-5769	Bevel Shaft	275-5272
2G-5876	Housing	302-2684
2G-6157	Pin	282-6550
2G-6285	Control Valve	383-1570
2G-6336	Hub — Brake	282-6551
2G-6337	Brake Hub	385-3778
2G-6375	Drive Shaft	275-5282
2G-6377	Sprocket	275-5286
2G-6378	Sprocket	275-5286
2G-6742	Plate	389-6317
2G-7309	Shaft	393-3682
2G-7387	Sleeve Bearing	330-9258
2G-7388	Sleeve Bearing	330-9259
2G-7464	Insert	386-4918
2G-7829	Housing Assembly	297-7196
2G-8083	Pin	393-3666
2G-8084	Pin	392-4531
2G-8238	Yoke Assembly	282-6631
2G-8239	Assembly Yoke	282-6632
2G-8608	Sleeve Bearing	385-3783
2G-8609	Pin	319-3450
2G-8610	Pin	389-6316
2G-8612	Pin	282-6552
2G-8613	Pin	282-6553
2G-8616	Pin	282-6554
2G-8617	Pin	282-6555
2G-8618	Pin	299-2031
2G-8620	Pin	282-6556
2G-8621	Pin	282-6557
2G-8622	Pin	299-2032
2G-8623	Pin	393-3675
2G-8625	Pin	282-6558
2G-8628	Pin	282-6559
2G-8629	Pin	282-6560
2G-8630	Pin	389-6304
2G-8631	Sleeve Bearing	391-9811
2G-8633	Pin	282-6561
2G-8639	Sleeve Bearing	380-7560
2G-8735	Pin	391-1105
2G-8736	Bearing — Sleeve	299-1959

Original Part Number	Part Name	Classic Part Number
2G-8739	Retainer	389-6314
2G-8769	Pin	282-6562
2G-8872	Bevel Shaft	275-5271
2G-9098	Cap	300-2573
2H-3069	Valve Lifter	387-2927
2H-3712	Ball Bearing	392-4488
2H-4338	Plate	226-8010
2H-4450	Washer	325-6237
2H-4482	Collar	229-8218
2H-5046	Link — Flywheel Clutch	299-2024
2H-5047	Roller	385-7204
2H-5048	Link	389-6334
2H-5549	Retaining Ring	384-3851
2H-6489	Roller Bearing	374-8350
2H-6776	Plate	226-8011
2H-6777	Plate	226-8012
2H-6936	Steering Disc	380-7471
2H-9192	Ball Bearing	394-8236
2J-1506	Pin	319-3451
2J-2152	Roller Bearing	374-1852
2J-2622	Bracket	256-4826
2J-3271	Pin	319-3452
2J-5233	Thrust Bearing	388-0578
2J-5394	Collar	256-4779
2J-5468	Pin	256-4781
2J-5531	Collar	256-4780
2J-5596	Pin	297-7211
2J-5649	Pin	256-4782
2J-5662	Shaft	256-4775
2J-8489	Bearing — Sleeve	295-5691
2K-0227	Sleeve Bearing	384-4780
2K-0535	Nut	299-2026
2K-0703	Bar	389-6313
2K-0714	Plate	299-2040
2K-3592	Boss	314-8501
2K-3632	Yoke	297-4866
2K-4177	Pin — Lock	308-9893
2K-4442	Bearing — Sleeve	308-9812
2K-4502	Bearing	299-1986
2K-4507	Bearing — Sleeve	325-6021
2K-4512	Bearing — Sleeve	308-9813
2K-4513	Bearing — Sleeve	308-9814
2K-5066	Roller Bearing	396-4142
2K-5069	Roller Bearing	374-8346
2K-5073	Bushing	299-1989

Original Part Number	Part Name	Classic Part Number
2K-5103	Roller Bearing	380-7505
2K-5254	Outer Bearing	377-7419
2K-5830	Needle Bearing	386-4945
2K-5977	Yoke	226-5992
2K-6001	Shaft — Planet	221-9107
2K-6413	Pin	360-2270
2K-7418	Pin	241-2572
2K-7979	Sleeve Bearing	383-2122
2K-8753	Gear	253-1432
2K-8754	Gear	253-1433
2L-4238	Mount	385-7222
2L-4731	Housing Adapter	311-9343
2L-5271	Ball Bearing	371-4305
2M-0125	Cylinder — Adjustable	226-0215
2M-0344	Toric Sealing Ring	385-7191
2M-0365	Stop	226-0230
2M-0366	Stop — Spring (LH)	226-0231
2M-0369	Pilot	226-0226
2M-0398	Sleeve	226-0235
2M-0473	Lug	389-6312
2M-1086	Plate As. — Press	226-8023
2M-1129	Cap — Support	239-7974
2M-1163	Spring Plate	383-2123
2M-2150	Nut	239-7965
2M-2290	Bracket	299-1979
2M-2415	Guard	226-4931
2M-2416	Guard	226-4933
2M-2417	Guard	226-4934
2M-2418	Guard	226-4935
2M-3339	Piston	221-7944
2M-4550	Plate	239-7940
2M-4668	Retainer	297-4867
2M-5588	Gear	239-7936
2M-5589	Pinion	239-7942
2M-5685	Bearing Cage	380-7469
2M-6920	Hub	239-7968
2M-6960	Cage	239-7971
2M-6984	Drum	239-7946
2M-7116	Strip	384-3480
2M-8297	Pinion	218-4429
2M-8340	Rod End	374-4678
2M-8590	Chamber Assembly	247-3294
2M-8591	Chamber Assembly	247-3295
2M-8762	Drum	239-7944

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## Part Numbers Beginning With 2 (Continued)

Original Part Number	Part Name	Classic Part Number
2M-8912	Clutch Piston	393-3649
2N-0931	Gasket	383-3683
2N-1572	Muffler	361-6575
2N-1599	Gear	378-3970
2N-2138	Bearing Race	384-5920
234-7988	Gasket Kit	387-2925
2N-3221	Idler Gear	390-0925
2N-3227	Lift Bracket	311-9367
2N-3254	Roller Bearing	380-7501
2N-7194	Main Bearing Cap	311-9369
2N-7224	Main Bearing Cap	311-9370
2N-7942	Spacer	363-7462
2N-8519	Spring Guide	314-8525
2N-9297	Retainer	314-8535
2P-0483	Precleaner Assembly	256-4760
2P-0484	Chamber As.	247-3296
2P-1005	Bearing	296-1342
2P-1126	Pulley	264-5868
2P-1129	Pulley	264-5869
2P-1170	Shaft Assembly	296-1367
2P-1370	Bearing Race	384-5921
2P-1373	Bearing Race	382-5075
2P-1374	Roller Bearing	374-1844
2P-1438	Exhaust Pipe	325-6157
2P-1502	Transmission Gear	214-0956
2P-1503	Ctrshft Gear	213-8637
2P-1604	St Clutch Piston	219-9694
2P-1605	Piston Pilot	219-9695
2P-1606	Piston	239-7948
2P-1607	Pilot — Piston	239-7975
2P-1738	Plate As. — Oil Pan	325-6164
2P-1739	Tube As. — Pump	325-6229
2P-1757	Hub	296-1357
2P-1781	Spacer	325-6214
2P-2386	Oil Pan	314-8691
2P-2406	Pulley	264-5870
2P-2407	Pulley	383-3684
2P-2519	Tube As. — Inlet	325-6230
2P-2697	Vent Tube	382-6901
2P-2719	Flr Pipe	363-7454
2P-2744	Muffler As.	247-2664
2P-2784	Ejector	367-6063
2P-2788	Adapter	390-0984
2P-2922	Transfer Gear	219-9679

Original Part Number	Part Name	Classic Part Number
2P-2923	Transfer Gear	219-9680
2P-3294	Muffler Assembly	247-2663
2P-3422	Reducer Gear	213-8451
2P-3423	Pinion	216-3553
2P-3424	Final Drive Gear	215-1675
2P-3425	Pinion	217-7697
2P-3586	Piston	260-0777
2P-3598	Shaft	215-1676
2P-3669	Pinion — Bevel	215-1677
2P-3767	Disposal Tube	377-5850
2P-3912	Damper Assembly	299-2006
2P-3992	Bevel Gear	219-9666
2P-4363	Clutch Housing	391-9833
2P-4370	Plate	325-6166
2P-4404	Housing Assembly	226-8027
2P-4409	Gear	226-7981
2P-4426	Planet Shaft	384-3478
2P-4429	Planet Shaft	384-4828
2P-4431	Ring Gear	394-9832
2P-4433	Ring Gear	384-4787
2P-4435	Plate	275-5295
2P-4443	Coupling — Flywheel	301-0233
2P-6245	Pump Shaft	325-6197
2P-6255	Muffler Assembly	247-2666
2P-7622	Bolt	226-4850
2P-7828	Oil Pan	314-8691
2P-7830	Pump Group	314-8533
2P-7984	Yoke Assembly	226-0220
2P-8907	Spider Assembly	330-9289
2P-8987	Roller Bearing	374-1845
2P-9037	Steering Clutch Drum	219-9696
2P-9038	Ster Drum	216-7821
2P-9039	Clutch Drum Hub	219-9697
2P-9314	Friction Disc	384-4791
2P-9484	Track Bushing	188-5658
2P-9486	Track Pin	188-5710
2P-9632	Damper As.	299-2004
2P-9653	Track Master Link (RH)	188-5700
2P-9654	Master LH Link	188-5701
2P-9655	Track Master Link (RH)	188-5700
2P-9656	Master LH Link	188-5701
2P-9660	Gear	226-5995

Original Part Number	Part Name	Classic Part Number
2P-9667	Cage — Shaft Bearing	226-7971
2P-9669	Track Master Shoe	188-5604
2P-9670	Track Master Bolt	188-5637
2P-9672	Cage — Pinion Bearing	226-7972
2P-9858	Needle Bearing	386-4946
2R-0179	Pin Assembly	325-6127
2S-0154	Pump Group	217-2593
2S-0479	Roller Bearing	380-7506
2S-0613	Retaining Ring	387-2934
2S-0669	Bearing Cage	380-7466
2S-0795	Gasket	380-1560
2S-1273	Chamber As.	319-3434
2S-1416	Oil Pump	345-1965
2S-1477	Clutch Holder Assembly	226-7985
2S-1631	Check Valve	383-3685
2S-2140	Nut (7/8-14)	188-5857
2S-2430	Oil Thrower	380-7543
2S-2781	Relief Plunger	311-9435
2S-3188	Plate	299-2041
2S-3443	Drum	219-9689 (Drum), 230-7113 (Ster Cl Kit)
2S-3803	Gear	226-6106
2S-3804	Gear	226-6107
2S-3913	Cage	217-7722
2S-3946	Final Drive Gear	215-1678
2S-3966	Ring	297-7237
2S-4015	Valve Plunger	311-9438
2S-4357	Pinion	217-7706
2S-4364	Retainer Assembly	216-3554
2S-4365	Retainer Assembly	216-3554
2S-4900	Planet Shaft	384-4792
2S-5100	Gate Valve	386-3049
2S-6097	Tang	375-9979
2S-6263	Guard Group	226-0192
2S-6264	Guard Group	226-0193
2S-6265	Rod Group	226-0197
2S-6344	Gear	297-7173
2S-6345	Track Shoe	188-5617
2S-6346	Track Shoe	188-5311
2S-6347	Track Shoe	188-5613

(Continued)

## Part Numbers Beginning With 2 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
2S-6357	Track Shoe	281-6373	2V-1722	Pin Assembly	241-2525	2W-2621	Inlet Valve	247-6892 (Valve), 241-3381 (Valve Kit)
2S-6364	Track Shoe	188-5615	2V-3687	Bevel Gear	308-9849			
2S-6401	Bearing Race	380-7497	2V-4148	Planet Shaft	388-6579	2W-3294	Valve Plunger	383-3686
2S-6739	Pulley	298-2794	2V-4331	Collar	387-2910	2W-3391	Injector Valve	383-3687
2S-7062	Shaft	219-9673	2V-4332	Collar	299-1993	2W-3428	Muffler	298-2784
2S-7063	Nut	300-2584	2V-4374	Slip Joint	308-9872	2W-4437	Idler Gear	388-0556
2S-7064	Cap	299-1991	2V-4405	Housing	396-0648	2W-5240	Outlet Pipe	376-9055
2S-7264	Fuel Injection Pump	395-1318	2V-4700	Pin	308-9894	2W-5536	Radiator Core	380-7554
2S-7527	Flange	213-8163	2V-5551	Final Drive Pinion	216-7822	2W-5539	Core As. — Radiator (Folded Core)	374-7492
2S-7596	Retainer	215-1679	2V-5552	Gear and Pinion	216-7823	2W-5540	Core, Radiator (Folded)	363-7452
2S-7603	Drum	213-6951	2V-5656	Snap Ring	374-1454	2W-6030	Tube	314-8729
2S-7607	Steering Flange	213-8165	2V-5697	Cover As.	299-1999	2W-6632	Radiator Core	391-1096
2S-7873	Gear Pump	226-0162	2V-5709	Shaft	299-2056	2W-6757	Trunnion	295-5678
2S-7917	Gear	247-4119	2V-5714	Ring Gear	288-8716	2W-7255	Water Pump Shaft	325-6203
2S-7920	Pump Group	217-2594	2V-5715	Bushing	299-1987	2W-7458	Crankshaft Assembly	242-3439
2S-7931	Sleeve Bearing	387-2904	2V-5722	Carrier — Planet	297-7164	2W-7590	Oil Cooler	378-3971
2S-8269	Guard Group	226-4936	2V-5881	Gear — Bevel Ring	253-1434	2W-7678	Gear Assembly	325-6088
2S-8277	Guard Group	226-4936	2V-6129	Cover	390-5295	2W-7774	Ejector	393-0914
2S-8278	Guard Group	226-4937	2V-6220	Shaft	221-9073	2W-7933	Core As.— O Clr	374-4708
2S-8356	Rod Group	226-0199	2V-6221	Shaft — Planet	221-9108	2W-7980	Camshaft	378-3972
2S-8892	Pulley	264-5874	2V-6327	Frame Support	391-9832	2W-8437	Muffler	385-7198
2S-8961	Pulley	264-5875	2V-6551	Pin	297-7212	2W-8494	Pulley	295-5692
2U-7225	Pump Group	371-2708	2V-6554	Bevel Gear	308-9849	2W-9094	Adapter	299-2534
2V-0447	Sleeve Bearing	380-7559	2V-7083	Yoke	224-1302	2W-9978	Core As. — Oil Cooler	279-4983
2V-0705	Pin Assembly	241-2524	2V-7091	Plate	382-6907	2Y-4213	Pulley	314-8703
2V-0706	Sleeve Bearing	388-0637	2V-7092	Retainer Plate	374-6510	2Y-5124	Gear	253-1434
2V-0707	Sleeve Bearing	360-2328	2V-7170	Yoke	308-9948	2Y-6659	Gear	253-1432
2V-0812	Pinion	231-0250	2V-7198	Pilot Assembly	302-2709	2N-3220	Oil Pump Gear	311-9392
2V-0813	Gear	231-0232	2V-7393	Retainer	308-9914			
2V-0814	Gear	231-0233	2V-7990	Str Tube	373-5382			
2V-0816	Pinion	231-0017	2W-0994	Pcl Body	367-6084			
2V-0817	Gear	231-0234	2W-1223	Water Pump	385-7197			
2V-0961	Driver	231-0255	2W-1225	Water Pump	380-7532			
2V-1074	Shaft — Planet	364-5262	2W-2620	Intake Valve	270-4360			

Classic Parts

## Part Numbers Beginning With 3

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
3Y-4071	Spindle	223-4817	310-1899	Pin	393-0932	316-4396	Gasket Kit	393-3661
3Y-9984	Exhaust Manifold	325-6123	310-4912	Single Flange Roller Group	175-8024	319-2229	Shoe	396-7288
3Y-1638	Guard	213-9110	310-4915	Double Flange Roller Group	175-8025	323-8756	Track Link Assembly	257-1992
3Y-9985	Exhaust Manifold	325-6124	312-0782	Circle Drive Worm	282-6623			
303-9455	Track Pin	257-7769						
307-1303	Muffler As.	361-6574						

(Continued)

## Part Numbers Beginning With 3 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
323-8757	Link As.	257-1990 (Link Assembly [39 Section]), 257-1991 (Link Assembly [37 Section])	3D-2945	Rim Flange	394-8223	3G-2665	Cover	308-9842
			3D-4343	Chain	394-0214	3G-2797	Bearing — Sleeve	360-2329
			3D-4442	Shaft	243-0354	3G-3346	Bushing	385-3786
			3D-4443	Shaft	243-0351	3G-3347	Bushing	385-3792
			3D-4498	Shaft	243-0348	3G-3521	Bearing	380-7513
			3D-4718	Bearing	245-5795	3G-3522	Stop	314-8723
			3D-5315	Pin Gear	308-9856	3G-4704	Sleeve Bearing	379-0185
			3D-5457	Cage — Bearing	228-9400	3G-4752	Hydraulic Cylinder	390-0987
			3D-6672	Gear	229-1586	3G-4929	Pin	325-6139
300-9500	Gasket Kit	387-2914	3D-9125	Roller Bearing	386-4948	3G-5264	Hydraulic Cylinder	393-1018
323-8758	Link As.	257-1994	3D-9194	Gear	245-5796	3G-5285	Bearing — Sleeve	360-2312
323-8759	Link As.	257-1991	3D-9502	Bolt	243-0332	3G-5492	Hydraulic Rod	377-5836
325-2721	Gasket Kit	393-3662	3D-9786	Ballstud	228-9559	3G-5496	Hydraulic Cylinder	383-3688
328-4266	Hydraulic Cylinder	393-3664	3D-9932	Cage — Bearing	228-9401	3G-5497	Hydraulic Cylinder	394-9822
328-4267	Hydraulic Cylinder	393-3653	3E-3339	Gasket Kit	393-3614	3G-5502	Hydraulic Cylinder	390-0988
328-4374	Friction Disc	384-5966	3E-4878	Bushing	386-4919	3G-5999	Sleeve Bearing	391-9813
331-8538	Seal	391-9874	3E-4903	Mount	396-7274	3G-6058	Pin	389-6306
333-9877	Pin	394-0217	3E-4924	Mount	391-9812	3G-6098	Pin	383-2124
334-1033	Friction Disc	394-8242	3E-6772	Water Seal	382-8017	3G-6313	Bearing	325-6007
334-8389	Crankshaft Assembly	242-3439	3E-7466	Gasket Kit	393-3615	3G-6565	Bearing	325-6008
337-0872	Crankshaft Assembly	242-3440	3E-7471	Gasket Kit	382-5070	3G-7637	Vane Pump	345-1981
348-1867	Single Flange Roller Group	286-9823	3E-7473	Gasket Kit	393-3616	3G-7752	Pin	384-4779
352-0209	Water Pump	375-4336	3E-8905	Gasket Kit	393-3617	3G-8069	Hydraulic Cylinder	385-7230
357-7540	Fill Valve	360-2292	3F-0017	Gear	229-1587	3G-8070	Hydraulic Cylinder	385-7225
360-7863	Muffler	360-7878	3F-0018	Gear	229-1588	3G-8746	Hydraulic Rod	394-8217
392-6301	Spider	390-0915	3F-0019	Collar	229-1589	3G-8900	Pin	325-6140
3A-4132	Track Master Pin	290-3461	3F-1537	Nut — Spanner	226-6098	3G-8917	Pin	325-6141
3A-4133	Track Pin	290-3459	3F-1956	Cap	226-7987	3G-8932	Pin	325-6143
3B-1142	Retainer	391-1099	3F-1972	Retainer Assemblies	226-7988	3G-9191	Sleeve Bearing	382-6906
3B-1143	Valve Lock	390-0991	3F-4971	Pin	295-5693	3G-9303	Pin	367-6079
3B-1464	Cap — Bearing	226-0206	3F-6149	Pin	299-2033	3H-1996	Ball Bearing	380-1498
3B-3967	Thrust Bearing Race	386-4947	3F-6185	Pin	295-5694	3H-3378	Gear Assembly	298-2795
3B-5067	Shaft — Shift Worm	228-8907	3F-6334	End — Tie Rod (RH)	228-9451	3H-5867	Retainer	390-0992
3B-6217	Muffler As.	247-2671	3F-6338	End — Tie Rod (LH)	228-9452	3H-7161	Pin	256-4819
3B-6218	Muffler As.	247-2672	3F-6446	Pivot — Push Pole	256-4827	3H-7162	Collar	256-4830
3B-6695	Gear	228-9448	3F-6492	Ballstud	388-0588	3H-7164	Pin	256-4820
3B-9970	Worm	228-8908	3F-6523	Pin	256-4818	3H-8726	Mount	385-7208
3D-0224	Bearing Cage	380-7468	3F-6561	Arm As. — Brace	256-4828	3J-2373	Sleeve Bearing	380-7562
3D-0409	Arm	228-9397	3F-6612	Cap — Ball Joint	297-7155	3J-2443	Bearing	383-2125
3D-2149	Pinion	228-9450	3F-7445	Bearing — Sleeve	314-8508	3J-2452	Cap — Ball Joint	297-7156
3D-2236	Sprocket Assemblies	228-9399	3G-0027	Pin	388-6601	3J-2682	Bracket	296-1345
			3G-0034	Trunnion	361-1712	3J-3493	Ballstud	256-4832
			3G-0222	Bearing — Sleeve	374-6512	3J-3953	Sleeve Bearing	384-4778
			3G-0910	Cap — Bearing	325-6037	3J-4284	Cap — Bearing	314-8656
						3J-4352	Arm As. — Brace	297-7137

(Continued)



## Part Numbers Beginning With 3 (Continued)

Original Part Number	Part Name	Classic Part Number
3J-4778	Roller	394-2582
3J-5190	Cap — Bearing	256-4837
3J-5432	Pin	297-7213 (Pin), 361-1711 (Pin-Pivt)
3J-6043	Trunnion	319-3477
3J-6167	Bearing — Sleeve	299-1960
3J-6182	Pin Assembly	325-6128
3J-6204	Pin Assembly	325-6129
3J-6412	Sleeve Bearing	386-4920
3J-6442	Bearing — Sleeve	299-1961
3J-6484	Sleeve Bearing	380-7383
3J-6497	Screw — Adjusting	256-4825
3J-6502	Pin	319-3453
3J-6559	Cap — Bearing	296-1346
3J-6560	Screw — Adjustable	297-7240
3J-6561	Screw — Adjustable	297-7241
3J-6570	Support — Bearing	299-2069
3J-6573	Screw — Adjusting	302-2714
3J-6575	Trunnion	297-7265
3J-6577	Pin	367-6077
3J-7798	Bracket	385-3791
3J-8688	Sleeve Bearing	380-1561
3J-9133	Bearing — Sleeve	361-1691
3J-9325	Piston	390-0993
3J-9511	Sleeve Bearing	385-3782
3J-9710	Bearing — Sleeve	256-4793
3K-0526	Ball Bearing	386-4949
3K-0963	Pin — Lock	308-9895
3K-2230	Gear — Planet	219-9658
3K-2498	Shaft — Planet	216-7824
3K-2510	Dowel	385-3800
3K-2511	Dowel	383-2126
3K-2559	Retaining Ring	391-9898
3K-3124	Muffler — Trap	247-2673
3K-3257	Gasket	390-1002
3K-3774	Gear	217-7716
3K-3814	Gear & Pinion	216-7825
3K-4290	Rod End	374-1823
3K-5075	Pin	252-6852
3K-5461	Wheel	308-9945
3K-7020	Gear	221-9074
3K-7021	Gear	221-9075
3K-7110	Gear	253-1435

Original Part Number	Part Name	Classic Part Number
3K-7111	Gear	253-1436
3K-7112	Gear	253-1437
3K-9604	Bearing Cage	396-0654
3K-9608	Guard	374-1447
3L-1425	Ball Bearing	311-9356
3L-9410	Roller Bearing	391-9899
3N-0837	Track Shoe	175-8838
3N-2078	Fuel Transfer Pump	311-9444
3N-3148	Tube As.	311-9461
3N-3368	Exhaust Pipe	311-9434
3N-5869	Exhaust Support	375-9973
3N-6408	Bearing Race	386-4950
3N-6815	Track Shoe	288-6681
3N-6841	Inlet Tube	311-9464
3N-7326	Oil Thrower	311-9458
3N-7327	Oil Thrower	311-9459
3N-8463	Double Roller Bearing	394-9193
3N-9160	Crankshaft Ring	311-9447
3P-0114	Exhaust Elbow	314-8516
3P-0165	Pulley	298-2775
3P-0214	Transfer Gear	219-9681
3P-0215	Transfer Gear	219-9682
3P-0297	Shaft As.	275-5297
3P-0298	Input Carrier	384-5922
3P-0307	Cage As. — Bearing	300-2572
3P-0324	Coupling	301-0234
3P-0329	Drum Gear	380-7484
3P-0335	Plate R	297-7228
3P-0395	Cage — Carrier Bearing	217-7723
3P-0615	Track Master Shoe	188-5601
3P-0616	Track Master Shoe	175-8881
3P-0617	Track Master Shoe	188-5246
3P-0618	Track Master Shoe	188-5602
3P-0620	Track Master Shoe	188-5606
3P-0621	Track Bushing	188-5698
3P-0622	Pin — Track	188-5699
3P-0623	Ring — Thrust	188-5721
3P-0628	Link As.	175-8759
3P-0651	Seal — O-Ring	314-8541
3P-0726	Shaft As.	275-5298
3P-0785	Hub Assembly	302-2688
3P-0798	Clutch Piston	384-5924
3P-0801	Clutch Plate	383-2119

Original Part Number	Part Name	Classic Part Number
3P-0862	Carrier — Input	301-4764
3P-0894	Shaft As. — Planet	302-3446
3P-0895	Ball Bearing	394-9184
3P-1104	Thrust Ring	188-5679
3P-1109	Bushing — Track	188-5693
3P-1112	Track Link (RH)	289-0631
3P-1113	Track Link (LH)	289-0632
3P-1245	Track Master Shoe	188-5616
3P-1459	Idler Spring	375-5448
3P-1465	Idler Spring	384-3479
3P-1602	Shaft	380-7514
3P-1609	Carrier — Planet	302-4292
3P-1626	Hub	302-2687
3P-1651	Piston Assembly	302-4296
3P-1686	Clutch Piston	388-0586
3P-1697	Coupling	390-0911
3P-1757	Yoke As. — Idler	226-2729
3P-1885	Idler Spring	375-5449
3P-2274	Master Bolt	200-9133
3P-2346	Clutch Plate	380-7520
3P-2414	Clutch Housing	391-9831
3P-2415	Carrier	396-0653
3P-2672	Ball Bearing	396-4135
3P-2685	Piston	308-9908
3P-2692	Cage — Bearing	302-2663
3P-2759	Carrier	394-9820
3P-2768	Piston	308-9909
3P-2769	Support	299-2064
3P-2811	Flange	239-7976
3P-2852	Clutch Hub	301-4902
3P-2855	Clutch Plate	377-7422
3P-2856	Plate	302-2693
3P-2859	Drum As.	301-4644
3P-2865	Shaft	393-1056
3P-2872	Final Drive Case	390-5296
3P-2874	Clutch Piston	380-7402
3P-3059	Sun Gear	308-9861
3P-3060	Sun Gear	308-9862
3P-3096	Sun Gear	308-9863
3P-3103	Ring Carrier	385-7203
3P-3208	Flange — Joint	301-4647
3P-3241	Plate	325-6167
3P-3242	Shaft — Planet	308-9923
3P-3245	Shaft — Planet	308-9924
3P-3246	Shaft — Planet	308-9925

(Continued)

## Part Numbers Beginning With 3 (Continued)

Original Part Number	Part Name	Classic Part Number
3P-3259	Cage — Bearing	217-7728
3P-3450	Yoke	229-8225
3P-3505	Brake Shaft	384-3477
3P-3623	Lock — Adjustable Nut	226-7989
3P-3713	Gear As.	275-5288
3P-3735	Housing	391-9830
3P-3738	Clutch Housing	385-7196
3P-3755	Guard As.	226-2721
3P-3757	Guard Assembly	226-2722
3P-3878	Thrust Ring	188-5773
3P-3889	Shoe — Track Master Nx	175-8021
3P-3890	Shoe — Track Master Nx	175-8366
3P-3891	Shoe — Track Master Nx	175-8368
3P-3892	Track Master Shoe	175-8674
3P-3896	Shoe — Track Master Nx	175-8023
3P-3935	Shaft Assembly	299-2053
3P-4002	Gear Pump	217-2595
3P-4089	Gear As. — Ring	239-7952
3P-4094	Housing As.	239-7954
3P-4096	Gear Assembly	239-7953
3P-4135	Support	396-7266
3P-4142	Plate As.	299-2039
3P-4143	Equalizer Bar Suspension Assembly	393-3644
3P-4157	Yoke Assembly	226-0221
3P-4197	Guard As. — Idler	226-0189
3P-4850	Gear Assembly	308-9848
3P-4855	Gear Pump	217-2596
3P-5349	Piston As.	275-5292
3P-5359	Piston — Clutch	299-2037
3P-5672	Yoke	223-6313
3P-5736	Hub — Gear	219-2975
3P-5737	Shaft As. — Clutch	275-5273
3P-5754	Hub — Gear	219-2976
3P-5755	Extension — Final Drive	226-7990
3P-5762	Link As.	257-8022
3P-6269	Cage — Pinion Bearing	239-7972
3P-6293	Gear Pump	217-2597
3P-6318	Flange — Drum	213-8165

Original Part Number	Part Name	Classic Part Number
3P-6560	Stop — Recoil Spring	226-0232
3P-6561	Stop — Recoil Spring	226-0233
3P-6584	Gear Hub	221-1056
3P-6814	Gear Pump	226-0163
3P-6816	Pump Gp	226-0164
3P-6880	Housing As.	302-2685
3P-7042	Clutch Housing	390-0912
3P-7153	Track Link (RH)	289-4949
3P-7154	Track Link (LH)	289-4950
3D-2136	Sprocket	228-9398
3P-7155	Track Link (RH)	289-4949
3P-7156	Track Link (LH)	289-4950
3P-7482	Cap — Drive Bearing	226-2731
3P-7489	Clutch Plate	377-7423
3P-7623	Gear Pump	217-2598
3P-7640	Transmission Gear	325-6093
3P-7641	Transmission Gear	325-6094
3P-7642	Gear	302-2668
3P-7643	Gear	302-2669
3P-7644	Gear	302-2706
3P-8186	Housing	390-5261
3P-8283	Spacer	325-6215
3P-8393	Clutch Piston	388-0592
3P-9366	Clutch Piston	391-9861
3P-9394	Shaft — Planet	215-1680
3Q-5391	Track Shoe	292-5634
3R-5327	Exhaust Pipe	383-1571
3S-0040	Clutch Piston	384-4796
3S-0044	Clutch Plate	377-7424
3S-0303	Duo Cone Seal Group	377-7425
3S-0311	Rod Group	226-4953
3S-0777	Bearing	229-8226
3S-1167	Gear — Planet	221-9101
3S-1261	Shaft	239-7958
3S-1262	Retainer	308-9915
3S-1274	Shaft	215-1681
3S-1691	Disc	302-2705
3S-2252	Exhaust Manifold	261-0887
3S-2337	Shaft	231-8765
3S-2420	Pilot Assembly	226-2733
3S-2616	Gear Pump	226-0165
3S-2710	Shaft — Planet	260-0779

Original Part Number	Part Name	Classic Part Number
3S-2712	Gear	226-7977
3S-3439	Cover	392-4489
3S-3917	Guard Assembly	226-0188
3S-3918	Guard Assembly	226-4950
3S-4386	Gear Pump	217-2599
3S-4945	Guard	213-9110
3S-5017	Exhaust Elbow	369-9498
3S-6907	Transfer Gear	217-9774
3S-6908	Transfer Gear	217-9775
3S-6989	Nut — Spanner	219-9701
3S-7153	Gear — Sliding	227-0024
3S-7305	Flange	239-7976
3S-7306	Flange — Drum	216-7827
3S-7308	Cage	219-9702
3S-7504	Gear	226-6084
3S-7517	Pulley	264-5876
3S-7519	Pulley	264-5877
3S-7987	Shaft — Planet	226-6074
3S-7996	Gear	226-6087
3S-8034	Shaft — Planet	308-9926
3S-8634	Hub	219-2977
3S-8735	Guard Assembly	226-2723
3S-8736	Guard Assembly	226-9992
3S-8800	Gear	325-6090
3S-9466	Bearing — Sleeve	314-8509
3S-9919	Shaft Assembly	239-7959
3S-9975	Piston	260-0778
3T-0996	Bearing — Sleeve	295-5695
3T-0997	Bearing — Sleeve	307-1524
3T-1162	Sleeve — Wear	325-6209
3T-1407	Friction Disc	392-4516
3T-1445	Gear Pump	386-3051
3T-1446	Pump Group	325-6178
3T-1502	Housing	390-5267
3T-1554	Guard Assembly	295-5696
3T-1898	Drum	219-9674
3T-1899	Drum	219-9690 (Drum), 230-7114 (Ster CI Kit)
3T-1921	Drum	229-8227 (Drum), 230-7116 (Ster CI Kit)

(Continued)

## Part Numbers Beginning With 3 (Continued)

Original Part Number	Part Name	Classic Part Number
3T-2094	Sleeve Bearing	388-0638
3T-2095	Sleeve Bearing	384-3459
3T-2139	Clutch Housing	394-2583
3T-2145	Carrier	325-6041
3T-2481	Strip	295-5448
3T-2849	Strip	295-5697
3T-3150	Guide	394-0191
3T-3203	Gear	302-2675
3T-3206	Carrier Roller Group	188-5590
3T-3690	Track Shoe	175-8553
3T-4008	Gear — Planet	295-5444
3T-4011	Shaft As. — Planet	295-5698
3T-4223	Gear	319-3438
3T-4224	Gear	297-7175
3T-4299	Joint Gp — Univ	325-6114
3T-4308	Bearing — Sleeve	296-1341
3T-4482	Guide	226-0248
3T-4516	Trunnion As.	325-6226
3T-4568	Shaft — Planet	314-8712
3T-4824	Gear	295-5699
3T-5021	Carrier — Planet	295-5700
3T-5200	Carrier — Planet	295-5701
3T-5294	Spacer	325-6216
3T-5355	Flange	386-3052
3T-5672	Gear Assembly	295-5447
3T-5674	Gear Assembly	295-5449
3T-5929	Gear	288-8718
3T-6247	Shaft	314-8713
3T-6795	Clutch Piston	281-1693
3T-7192	Guard Assembly	325-6100
3T-7195	Guard Assembly	325-6101
3T-7399	Piston	325-6159
3T-7701	Cylinder As.	325-6058
3T-7710	Guide	325-6102
3T-7711	Guide	325-6103

Original Part Number	Part Name	Classic Part Number
3T-7897	Gear Pump	345-1973
3T-8359	Pump Group	295-5445
3T-9152	Sprocket Rim	322-6377
3T-9153	Track Sprocket	322-6302 (Sprocket-Tck Cla), 322-6303 (Rim-Sprocket Cla)
3T-9496	Plate — Retainer	299-2042
3V-1025	Shaft — Pinion	226-6109
3V-2042	Hub	217-7735
3V-2281	Track Link Assembly	299-2023
3V-2337	Pin Assembly	319-3440
3V-2771	Retainer	216-7830
3V-3855	Housing — Brg Spt	375-9980
3V-4046	Clutch Plate	380-7470
3V-4622	Bracket	297-7148
3V-4643	Rod	389-6333
3V-4874	Pin	241-2544
3V-5148	Pinion	231-0251
3V-5257	Bracket	297-7149
3V-5317	Gear	231-0010
3V-5378	Gear	231-0235
3V-5476	Piston	375-2619
3V-5604	Final Drive Pinion	216-7832
3V-5605	Final Drive Gear	216-7833
3V-5762	Support	389-6310
3V-5778	Shaft	216-7834
3V-5916	Plate Assembly	226-8025
3V-5918	Gear	217-7717
3V-5920	Hub	222-1762
3V-6515	Link	394-0186
3V-6648	Pin Assembly	308-9884

Original Part Number	Part Name	Classic Part Number
3V-6655	Drum	226-7995
3V-7065	Clutch Plate	380-1487
3V-7365	Hub	219-2965
3V-7427	Housing Assembly	297-7197
3V-8777	Gear	297-7176
3V-8927	Pin	241-2545
3V-9025	Link As.	289-4946
3V-9281	Bearing	314-8631
3V-9285	Pin	241-2546
3V-9439	Retainer Assemblies	231-0257
3W-0241	Pin	393-3676
3W-0630	Pin	307-1525
3W-0640	Piston	325-6160
3W-0643	Cylinder	325-6061
3W-2196	Housing	396-0661
3W-2215	Plate	396-0655
3W-3284	Strip	296-1368
3W-3285	Strip	296-1369
3W-3628	Guard Assembly	295-5677
3W-4363	Pin	375-2634
3W-5158	Pin Gear	374-4675
3W-5159	Parking Brake Plate	391-9904
3W-5424	Output Shaft	380-1575
3W-5501	Gear	288-8719
3W-6144	Sprocket Hub	396-7277
3W-6551	Shaft	295-5702
3W-6555	Shaft	295-5703
3W-7770	Exhaust Pipe	385-7227
3W-8160	Piston	393-1051
3W-8239	Wear Slv	360-2342
3W-8398	Sleeve Bearing	379-0189
3W-8403	Sleeve	393-3673
3W-8572	Pin	393-3672

Classic Parts

## Part Numbers Beginning With 4

Original Part Number	Part Name	Classic Part Number
4V-3623	Pin	375-9967
4V-3680	Bell Crank	308-9802
4V-3693	Pin	391-9897

Original Part Number	Part Name	Classic Part Number
4V-3862	Bearing Support Housing	394-0199
4V-5100	Support	299-2068
4V-5213	Spindle	299-2060

Original Part Number	Part Name	Classic Part Number
4V-5388	Shaft	297-7244
4V-5392	Spider	377-7430
4V-5393	Gear — Bevel	297-7189
4V-5394	Gear	297-7177

(Continued)

## Part Numbers Beginning With 4 (Continued)

Original Part Number	Part Name	Classic Part Number
4V-5400	Bearing Housing	385-7202
4V-5454	Link	299-2025
4V-5608	Pin As.	241-2529
4V-6040	Drum	297-7168
4V-6156	Saddle As.	299-2052
4V-6421	Pin As.	319-3442
4V-6430	Bracket As.	299-1974
4V-6527	Friction Disc	376-9050
4V-7079	Joint Gp — Universal	368-0111
4V-7082	Slip Joint	367-6068
4V-7099	Pin As.	361-1698
4V-7105	Pin Assembly	297-7222 (Pin As.), 361-1699 (Pin)
4V-7344	Pin	241-2574
4V-7543	Retainer	281-1699
4V-7545	Ring Gear	394-9823
4V-7725	Clutch Piston	394-2581
4V-8518	Bearing and Link Assembly	374-1450
4V-8519	Sleeve Bearing	307-1526
4V-8520	Sleeve Bearing	307-1527
4V-8534	Planet Shaft	281-1700
4V-8538	Gear	288-8720
4V-8541	Carrier	384-4804
4V-8629	Sleeve Bearing	379-0194
4V-8643	Sleeve Bearing	374-8354
4V-8661	Pin	375-9968
4V-8673	Bearing — Sleeve	307-1528
4V-8674	Sleeve Bearing	307-1529
4V-8675	Sleeve Bearing	394-0187
4V-8687	Boss	299-1971
4V-8690	Boss	299-1972
4V-9236	Plate	231-0260
4V-9577	Shaft — Planet	231-0001
4V-9901	Pin Assembly	374-6508
4W-0255	Fan Spider	382-5052
4W-0337	Damper Assembly	299-2006
4W-0419	Oil Cooler Core	379-0182
4W-0452	Crankshaft Seal	325-6191
4W-0456 <sup>1</sup>	Muffler	360-7879
4W-1007	Tube	314-8729
4W-2042	Spacer	325-6217
4W-2321	Scv Pump	374-7474

Original Part Number	Part Name	Classic Part Number
4W-2357	Mount	386-4927
4W-2446	Damper As.	279-4990
4W-2471	Valve Spring	380-7413
4W-2472	Valve Spring	380-7550
4W-2474	Rotocoil	388-6571
4W-2566	Seal Adapter	383-1573
4W-2567	Seal Adapter	383-1574
4W-2606	Crankshaft Seal	311-9452
4W-2607	Crankshaft Seal	311-9453
4W-3632	Muffler	385-7224
4W-4588	Sleeve	394-0218
4W-5053	Muffler As.	360-7881
4W-5363	Oil Cooler Core	380-7531
4W-5477	Fuel Transfer Pump	380-1512
4W-5549	Core As. — Oil Cooler	311-9376
4W-5550	Oil Cooler Core	311-9377
4W-5551	Oil Cooler Core	311-9378
4W-5719	Injector Valve	373-1906
4W-5729	Exhaust Pipe	373-1909
4W-5733	Injector Valve	378-3975
4W-5998	Push Rod	379-0168
4W-7188	Oil Cooler	374-7501
4W-7382	Oil Cooler Core	380-1514
4W-9480	Piston	378-3976
4W-9492	Rebuild Kit	375-2261
4W-9771	Gear — Crankshaft	302-2674
4W-9773	Drive Gear	380-7549
4W-9822	Core Gp — O Clr	374-4711
4W-9989	Idler Gear	302-2677
4Y-0709	Friction Disc	377-7431
4Y-1034	Pin	396-0641
4Y-2817	Ejector Assembly	295-6423
4Y-4340	Pin	375-9976
4B-1455	Filr Cap	361-1719
4B-3897	Bushing	314-8510
4B-5806	Shaft	243-0347
4B-7064	Shaft	245-5803
4B-7255	Roller Bearing	386-4951
4B-9374	Bearing Race	380-7494
4D-0335	Planet Gear	394-8220
4D-0487	Check Valve	375-4334
4D-0913	Arm	228-9402
4D-0926	Pin	247-4439
4D-0929	Rod End	228-9403
4D-0930	End	228-9404

Original Part Number	Part Name	Classic Part Number
4D-1626	Shaft	245-5805
4D-2184	Shaft	229-1592
4D-2185	Shaft	229-1593
4D-2198	Cage	229-1594
4D-2218	Gear	229-1595
4D-2219	Gear	229-1597
4D-2220	Pinion	228-8920
4D-2227	Pinion	228-9453
4D-2229	Cage	229-1598
4D-2268	Cover	228-9454
4D-3462	Pin	247-4440
4D-3898	Gear	228-8921
4D-3966	Gear	228-8924
4D-4064	Rod End	382-8048
4D-4065	Rodend	374-1824
4D-4863	Pinion	229-1599
4D-6664	Coupling	243-0338
4D-6665	Shaft	243-0349
4D-6698	Bearing	228-9405
4D-6926	Segment	228-9455
4D-7213	Coupling	228-9406
4D-7282	Shaft	228-9408
4D-9934	Trunnion	229-1601
4E-0183	Pin	301-7976
4E-0403	Gear	260-0781
4E-1035	Pin	241-2553
4E-1063	Mount	375-9978
4E-1065	Pin Assembly	241-2538
4E-1285	Link Assembly	299-2021
4E-2165	Sun Gear	376-9070
4E-2166	Carrier	373-5383
4E-2168	Piston	375-2623
4E-3196	Pin	361-1697
4E-3197	Pin Assembly	374-6507
4E-3456	Lever	367-6081
4E-3997	Housing	374-6498
4E-4524	Pin	380-7392
4E-5213	Cover Assembly	299-2000
4E-5882	Axle Shaft	308-9921
4E-7608	Sleeve Bearing	388-0639
4E-8500	Track Idler Group	288-3691
4E-8534	Retainer	300-2588
4E-8535	Retainer	300-2589
4E-9426	Collar	231-0000
4F-0255	Pin	385-3802

(Continued)



## Part Numbers Beginning With 4 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
4F-1121	Bracket	299-1981	4J-3589	Cap	297-7157	4K-7287	Support	383-2116
4F-1252	Pin	295-5704	4J-3590	Bearing	297-7139	4K-7386	Plate	226-4851
4F-2393	Ball Bearing	380-1499	4J-3591	Bracket	299-1983	4K-7420	Retainer	297-7234
4F-4974	Clamp	311-9373	4J-3816	Plate	387-2932	4K-7467	Double Roller Bearing	380-1500
4F-5003	Idler Spring	383-2127	4J-5693	Sleeve Bearing	385-3790	4K-7556	Yoke	385-6118
4F-5004	Idler Spring	383-2128	4J-5694	Sleeve Bearing	379-0190	4K-8225	Pin — Cylinder	297-7215
4H-2029	Gear	229-1602	4J-5695	Sleeve Bearing	386-4922	4K-8416	Shaft	308-9927
4H-2442	Plate Assembly	229-1582	4J-6167	Bearing	325-6009	4K-8561	Pin	299-2036
4H-4021	Plate Assembly	229-8219	4J-6326	Half Bearing	376-3630	4K-8653	Collar	299-1993
4H-7869	Gasket	391-1100	4J-6374	Bearing	295-6407	4K-8659	Sleeve Bearing	330-9261
4H-7969	Bearing	245-5811	4J-6899	Sleeve Bearing	308-9815	4K-8734	Bearing	299-1962
4H-9040	Nut	226-7996	4K-0255	Retainer Assemblies	226-6102	4K-9598	Retainer	297-7235
4H-9640	Sleeve Bearing	386-4921	4K-0299	Sleeve Bearing	308-9816	4L-3307	Manifold Elbow	311-9387
4I-0453	Sleeve Bearing	360-2331	4K-0300	Sleeve Bearing	308-9817	4L-3756	Thrust Bearing	311-9366
4I-0465	Pin	372-7511	4K-1102	Bearing	325-6010	4L-4653	Thrust Plate	311-9440
4I-0704	Sleeve Bearing	360-2332	4K-1328	Ster Drum	216-7840 (Drum-Ster), 230-7112 (Ster Cl Kit)	4L-7820	Rod Assembly	311-9449
4I-1524	Hydraulic Cylinder	394-8216	4K-1331	Cage	216-7475	4M-0411	Valve Bonnet	391-1317
4I-3954	Tube As.	301-4779	4K-2151	Bolt	308-9803	4M-0433	Shaft	239-7960
4I-3955	Tube As.	301-4802	4K-3004	Bearing	314-8632	4M-0503	Gear Assembly	297-7184
4I-3956	Tube As.	301-4780	4K-3128	Bearing	314-8633	4M-0660	Toric Sealing Ring	386-4923
4I-3957	Tube As.	301-4801	4K-3150	Pin	385-3788	4M-1001	Gear Pump	226-0166
4I-4665	Sleeve Bearing	364-5267	4K-4277	Gear	224-1301	4M-1641	Dowel	386-4952
4I-4666	Sleeve Bearing	388-0640	4K-4460	Pin	241-2609	4M-3915	Caged Bearing	377-7427
4I-4804	Pin	383-2138	4K-4632	Bel Gear	216-7842	4M-4431	Pump Shaft	390-0994
4I-4805	Pin	365-8828	4K-4780	Strip As. — Wear	299-2063	4M-5989	Track Pin	175-8929
4I-4806	Pin	364-5268	4K-5074	Pinion	215-1683	4M-5991	Track Bushing	310-6654
4I-4807	Pin	383-2139	4K-5086	Yoke	215-1684	4M-6107	Roller Bearing	380-7507
4I-5015	Pin	365-8829	4K-5109	Gear	219-9659	4M-7099	Ring Gear	214-0521
4I-5016	Pin	396-7272	4K-6212	Shaft	223-4806	4M-7100	Ring Gear	214-0522
4I-6897	Bearing — Sleeve	372-7509	4K-6558	Pin	302-2710	4M-7102	Ring Gear	214-0523
4I-7401	Spring	380-7414	4K-6702	Pin	241-2573	4M-8845	Shaft — Planet	215-1685
4I-8881	Tube As.	301-4777	4K-6736	Drum	223-6320	4M-8967	Gear	219-9661
4J-0121	Cap — Bearing	360-2344	4K-6737	Gear	221-9097	4M-9183	Sleeve Bearing	386-4924
4J-1612	Pin	308-9896	4K-6760	Cap	300-2574	4M-9214	Pump Shaft	314-8543
4J-1614	Pin	297-7214	4K-6761	Cap	300-2575	4M-9215	Idler Gear	311-9391
4J-1616	Bracket	299-1982	4K-6806	Shaft	221-9108	4M-9216	Drive Gear	311-9390
4J-1641	Trunnion	314-8725	4K-6810	Retainer	300-2586	4N-0209	Discharge Bonnet Valve	378-3973
4J-1999	Ballstud	314-8625	4K-7251	Cover	299-2003	4N-0342	Camshaft Thrust Plate	375-9974
4J-2379	Sleeve Bearing	393-1014	4K-7269	Support	299-2067	4N-0406	Transfer Gear	373-1903
4J-2414	Trunnion	296-1370	4K-7270	Support	373-5384	4N-0429	Transfer Gear	373-1915
4J-2585	Pin	299-2034				4N-0641	Gasket	388-0648
4J-2590	Bearing	299-1958				4N-0685	Sleeve Bearing	379-0191
4J-2847	Trunnion	297-7267						
4J-3015	Shaft	325-6204						
4J-3583	Screw	297-7242						

(Continued)

## Part Numbers Beginning With 4 (Continued)

Original Part Number	Part Name	Classic Part Number
4N-0913	Suction Bell Screen	374-7489
4N-1059	Gasket	383-3689
4N-1098	Shaft As.	374-1455
4N-1106	Rocker Arm Shaft	377-5837
4N-1116	Pump Shaft	374-7473
4N-1119	Transfer Gear	373-1884
4N-1157	Exhaust Coupling	379-0177
4N-1797	Fuel Injection Adapter	380-7546
4N-1828	Check Elbow	374-4672
4N-1946	Gasket	388-0649
4N-1948	Gear Pump	373-1904
4N-2564	Gasket	392-4517
4N-2690	Belt Tightener Shaft	386-3053
4N-2697	Pulley	376-9056
4N-2954	Sleeve — Camshaft	299-2059
4N-3092	Spider	363-7465
4N-3281	Line As. — Fuel Injector	247-3362
4N-3282	Line As. — Fuel Injector	247-3363
4N-3283	Line As. — Fuel Injector	247-3364
4N-3284	Line As. — Fuel Injector	247-3365
4N-3664	Intake Valve Guide	314-8524
4N-3714	Chamber, Precom	363-7450
4N-4161	Mount Assembly	374-1448
4N-4356	Pulley	264-5878
4N-4520	Guide	388-6600
4N-4534	Pulley	374-4709
4N-4539	Sleeve	314-8720
4N-4577	Muffler Assembly	308-9877
4N-4668	Breather	396-7271
4N-4679	Pulley	394-9837
4N-4782	Pulley	325-6176
4N-4864	Pump Group	242-3442
4N-4878	Fuel Transfer Pump	390-0995
4N-4880	Pump Gp — Fuel Transfer	256-4758
4N-5184	Muffler As.	360-7874
4N-5191	Muffler	298-2785
4N-5390	Pulley	264-5879
4N-5503	Adapter	299-1954
4N-5614	Rocker Arm	374-4710

Original Part Number	Part Name	Classic Part Number
4N-5857	Bearing Cap	376-9086
4N-5906	Valve Spring	380-7412
4N-5958	Exhaust Tube	385-3811
4N-6302	Belt Set — Vee	314-8495
4N-6638	Muffler As.	360-7875
4N-6658	Bearing — Sleeve	373-1885
4N-7000	Head Assembly	325-6105
4N-7253	Gasket	383-1572
4N-7357	Sleeve Bearing	386-4925
4N-7526	Pump Seal	311-9454
4N-7692	Crankshaft	269-8764
4N-7693	Crankshaft	269-8763
4N-7870	Muffler Assembly	247-2661
4N-7977	Balance Shaft	314-8709
4N-7978	Balance Shaft	314-8710
4N-7982	Pulley	264-5880
4N-8204	Mount Assembly	374-1449
4N-8591	Exhaust Coupling	325-6053
4N-8628	Gasket	388-0650
4N-8809	Chamber Assembly	247-3297
4N-8814	Line As. — Fuel Injector	247-3366
4N-8941	Muffler Assembly	247-2661
4N-8942	Muffler	298-2786
4N-9180	Pump Seal	311-9455
4N-9213	Exhaust Elbow	330-9270
4N-9587	Shield — Heat	297-7260
4N-9941	Fuel Injection Line	380-1562
4N-9942	Fuel Injection Line	380-1563
4N-9943	Fuel Injection Line	380-1572
4N-9944	Fuel Injection Line	380-1565
4P-0660	Muffler As.	298-2787
4P-0893	Radiator Core	376-9057
4P-0897	Radiator Core	376-9058
4P-1463	Muffler	360-7876
4P-2942	Kit Cmsht	369-9486
4P-3538	Throttle Shaft	378-3974
4P-3546	Valve Assembly	325-6236
4P-3683	Water Pump	374-7498
4P-4010	Muffler	298-2788
4P-4757	Muffler	360-7877
4P-6508	Radiator Core	376-9059
4P-6548	Muffler	360-7878
4P-6589	Exhaust Pipe	382-6898

Original Part Number	Part Name	Classic Part Number
4P-7051	Pulley	376-9064
4P-7731	Oil Cooler Core	385-7228
4P-7801	Fuel Injection Line	373-1888
4P-7802	Fuel Injection Line	373-1889
4P-7803	Fuel Injection Line	373-1890
4P-7804	Fuel Injection Line	373-1891
4P-7805	Fuel Injection Line	373-1892
4P-7806	Fuel Injection Line	373-1893
4P-7807	Fuel Injection Line	373-1894
4P-7808	Fuel Injection Line	373-1895
4P-7809	Fuel Injection Line	373-1896
4P-7810	Fuel Injection Line	373-1897
4P-7811	Fuel Injection Line	373-1898
4P-7812	Fuel Injection Line	373-1899
4P-7827	Crankshaft Gear	380-7533
4P-8495	Rod Bearing	379-0197
4P-8915	Gasket	377-5838
4P-9381	Line Assembly	279-4984
4P-9382	Line As. — Fuel Injector	279-4985
4P-9383	Line As. — Fuel Inj	296-1359
4P-9384	Line Assembly	279-4989
4P-9385	Line As. — Fuel Injector	279-4986
4P-9386	Line As. — Fuel Injector	279-4987
4P-9395	Fuel Injection Line	383-3690
4P-9396	Fuel Injection Line	383-3691
4P-9942	Seal	385-7217
4P-9943	Seal	385-7216
4P-9961	Fuel Injection Line	325-6115
4P-9962	Fuel Injection Line	325-6116
4P-9963	Line As. — Fuel Injector	298-2777
4P-9964	Line Assembly	298-2778
4S-5049	Guard Assembly	226-0183
4S-5050	Guard Assembly	226-0184
4S-5367	Bushing	375-9986
4S-5825	Shaft	213-9966
4S-5833	Spacer	239-7961
4S-5891	Clutch Piston	388-0575
4S-5943	Piston	221-9112
4S-5944	Gear	221-9078
4S-5945	Gear	221-9079
4S-5946	Shaft	229-8238

(Continued)

## Part Numbers Beginning With 4 (Continued)

Original Part Number	Part Name	Classic Part Number
4S-5947	Gear	221-9080
4S-5948	Gear	221-9082
4S-5979	Carrier Assembly	216-7843
4S-5981	Gear	221-9084
4S-6189	Pinion	226-6077
4S-6190	Pinion	226-6078
4S-6256	Nut	235-8008
4S-6559	Tube	325-6234
4S-6707	Piston	215-1686
4S-7793	Oil Thrower	367-6085
4S-8005	Pinion	226-6076
4S-8472	Hood Assembly	296-1355
4S-8530	Shaft	221-9111
4S-8534	Shaft As. — Planet	221-9116
4S-8660	Gear Pump	226-0167
4S-8670	Shaft	300-2590
4S-8687	Piston	226-8008
4S-8707	Gear	226-6089
4S-8708	Clutch Housing	216-3557
4S-8713	Gear	226-6090

Original Part Number	Part Name	Classic Part Number
4S-8716	Gear	226-7978
4S-8718	Cage	217-7724
4S-8855	Exhaust Coupling	369-9488
4S-8906	Exhaust Seat Insert	311-9397
4S-8908	Inlet Insert	311-9399
4S-8909	Inlet Insert	311-9400
4S-9062	Cap	226-0204
4S-9782	Roller Bearing	385-3779
4T-0202	Pin Assembly	325-6130
4T-0231	Retainer	376-3641
4T-0406	Hydraulic Rod	394-8215
4T-0732	Bracket	314-8627
4T-0998	Lever	314-8687
4T-1504	Trunnion	314-8727
4T-1684	Bearing	377-7428
4T-5172	Seal As.	325-6189
4T-5405	Trunnion As.	319-3476
4T-5495	Ballstud	314-8626
4T-6151	Trunnion	295-5671
4T-7640	Shaft	393-3643
4T-8088	Screw	325-6188

Original Part Number	Part Name	Classic Part Number
4T-9311	Housing	396-0652
4T-9444	Pin	325-6146
4V-0015	Plate	282-6563
4V-0093	Planet Gear	394-9826
4V-0094	Planet Shaft	380-1486
4V-0189	Pin	374-6504
4V-0381	Bearing	299-1963
4V-1704	Anchor	377-7429
4V-2120	Pin	365-8830
4V-2518	Shaft	297-7243
4V-2744	Gear	224-1303
4V-2872	Sleeve Bearing	380-7558
4V-2873	Sleeve Bearing	379-0192
4V-2881	Bearing and Link Assembly	384-3464
4V-2883	Sleeve Bearing	379-0193
4V-3044	Plate — Lock	308-9911
4V-3396	Hub	222-1763
4V-3397	Hub	219-2979
4V-3603	Pin Assembly	319-3441
4V-3619	Pin	380-7393

<sup>1</sup>Ejector is included with muffler

## Part Numbers Beginning With 5

Original Part Number	Part Name	Classic Part Number
5A-4003	Shaft	229-8228
5A-3187	Master Bolt	257-7773
5A-5196	Gear Hub	221-1066
5A-5740	Gear	229-8229
5A-6897	Guard	226-4951
5A-6898	Guard	226-4952
5A-7840	Shaft	215-1687
5A-7841	Hub	219-2966
5A-8374	Carrier Roller Group	200-9185
5A-9551	Gear	226-7979
5B-0577	Collar	299-1992
5B-9651	Plug	391-9903
5C-0451	Gear Group	235-5053
5C-0857	Friction Plate	376-3624
5C-0949	Link As.	290-3452
5C-1834	Gear	231-0002
5C-3474	Driver	231-0255

Original Part Number	Part Name	Classic Part Number
5C-3712	Gear	231-0003
5C-3714	Gear	231-0222
5C-3715	Gear	231-0223
5C-3716	Gear	231-0224
5C-3717	Gear	231-0225
5C-3784	Pin Assembly	241-2512
5C-4088	Track Master Bush	290-3462
5C-5038	Pin Assembly	241-2506
5C-5153	Cartridge	231-0011
5C-5236	Gear	231-0226
5C-5829	Pin Assembly	241-2510
5C-5837	Retainer	299-2047
5C-5937	Gear	231-0004
5C-6690	Pin Assembly	241-2508
5C-8172	Pin As.	241-2515
5C-8564	Exhaust Manifold	261-0902
5C-8582	Shaft — Planet	231-0241

Original Part Number	Part Name	Classic Part Number
5C-8583	Gear	231-0005
5C-8584	Gear	231-0006
5C-8586	Gear	231-0007
5C-8587	Cover	231-0243
5C-8966	Gear	231-0227
5C-9207	Drum	301-4623
5D-0034	Plate	228-9456
5D-0134	Strip	330-9290
5D-0395	Bracket	243-0335
5D-0396	Bracket — Rail (LH)	243-0334
5D-0470	Valve Gp	314-8549
5D-0927	Shaft	229-1605
5D-2989	Bearing	380-7511
5D-3283	Coupling	243-0339
5D-3961	Block — Brake	245-5813
5D-4010	Rack	228-8909
5D-5039	Ballstud	228-8910

(Continued)



## Part Numbers Beginning With 5 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
5D-5498	Sleeve Bearing	385-3806	5J-1807	Pin	384-4777	5K-2893	Shaft	221-7953
5D-6201	Shoe	243-0356	5J-1825	Pin	367-6080	5K-3079	Housing	260-0775
5D-6375	Shaft	228-9409	5J-1968	Shaft	386-4928	5K-3490	Spacer	308-9933
5D-7339	Coupling	245-5816	5J-1980	Pin	385-3805	5K-3491	Spacer	308-9934
5D-7461	Pin	247-4441	5J-2445	Sleeve Bearing	380-7563	5K-3493	Cover	391-9814
5D-7462	Pin	247-4442	5J-2453	Hydraulic Rod	394-8214	5K-3495	Collar	383-2129
5D-9548	Hub	228-9412	5J-2528	Valve Plunger	391-1318	5K-3497	Pin	308-9897
5D-9675	Spider	394-9203	5J-2602	Plate Assembly	256-4838	5K-3499	Pin — Lower	308-9898
5D-9745	Shoe	330-9285	5J-3492	Sleeve Bearing	308-9879	5K-3502	Cap	308-9835
5D-9906	Shaft	228-9413	5J-4321	Trunnion	302-2700	5K-3967	Yoke Assembly	308-9946
5D-9972	Shaft	229-1607	5J-4542	Sleeve Bearing	308-9818	5K-3968	Caged Bearing	308-9804
5F-0689	Pin	256-4821	5J-4798	Bearing Assembly	256-4840	5K-4079	Caged Bearing	308-9805
5F-0706	Pin	256-4822	5J-4924	Shaft — Pivot	256-4777	5K-4180	Gear	308-9854
5F-0707	Collar	256-4831	5J-4929	Bearing	256-4796	5K-4268	Retainer	308-9916
5F-0736	Pin	256-4823	5J-5315	Rod End	374-1825	5K-4273	Sleeve Bearing	374-1461
5F-1401	Pin	297-7216	5J-5365	Pin	380-7553	5K-4305	Support Assembly	308-9937
5F-2256	Cage	226-7973	5J-5643	Connector Assembly	325-6043	5K-4426	Bushing	308-9831
5F-2830	Needle Bearing	384-5925	5J-6417	Bearing	256-4798	5K-4787	Sleeve Bearing	308-9819
5F-6393	Shaft	308-9928	5J-6418	Bearing	256-4799	5K-4801	Pin	308-9899
5F-7404	Nut	308-9878	5J-6419	Bearing	256-4800	5K-4802	Pin	308-9900
5F-7993	Pin	319-3454	5J-6421	Bearing	256-4801	5K-4819	Pin	308-9901
5G-3612	Fuel Cap	295-6419	5J-6430	Sleeve Bearing	379-0195	5K-5129	Toric Sealing Ring	385-7192
5G-8708	Drum	384-4794	5J-6611	Sleeve Bearing	383-2140	5K-5288	Duo Cone Seal Group	374-1827
5G-9075	Strip	295-0412	5J-7980	Pin	256-4783	5K-5927	Boss	299-1973
5G-9076	Strip	295-0413	5J-7981	Pin	256-4784	5K-5933	Cover Assembly	247-4125
5H-0047	Clutch Piston	388-0576	5J-7983	Pin	256-4785	5K-6090	Flange	216-7844
5H-0049	Hub	229-1608	5J-8052	Trunnion	256-4843	5K-6142	Cage	223-4811
5H-0051	Plate	229-1610	5J-8103	Sleeve Bearing	389-6309	5K-6377	Pin	241-2610
5H-0057	Ring	229-1613	5J-8361	Sleeve Bearing	384-4775	5K-6382	Pin	241-2611
5H-1719	Gear Pump	226-0168	5J-8363	Sleeve Bearing	394-0209	5K-6383	Pin	241-2612
5H-5500	Collar — Flywheel	302-2704	5J-9451	Self Aligning Bearing	374-8338	5K-7027	Pin	241-2575
5H-5553	Tap Screw	311-9451	5K-0609	Cover	308-9843	5K-7995	Bearing — Sleeve	308-9820
5H-7071	Water Director	388-0555	5K-0871	Pin	282-6630	5K-8265	Pin	241-2590
5I-3301	Pin	387-2929	5K-0984	Sleeve Bearing	330-9262	5K-8330	Holder — Tooth	299-2013
5I-3371	Pin	393-3668	5K-0989	Cap	297-7158	5K-8591	Roller Bearing	380-7502
5I-7619	Pulley	301-4772	5K-0990	Pin	299-2035	5K-8606	Cage — Gear Bearing	223-6310
5I-7694	Impeller	301-4763	5K-0991	Cap	319-3433	5K-8628	Cage	216-7845
5I-7959	Pulley As.	301-5256	5K-1068	Retainer	260-0786	5K-9367	Pin	241-2613
5I-8628	Plate — Valve	301-4771	5K-1078	Duo Cone Seal Group	377-7432	5L-2031	Bearing Race	384-5927
5J-0698	Pin	319-3456	5K-1278	Pilot Assembly	302-2709	5L-2648	Sleeve Bearing	311-9362
5J-1192	Sleeve Bearing	374-8355	5K-1576	Shaft	221-9073	5L-2660	Bearing — Sleeve	311-9363
5J-1193	Sleeve Bearing	382-8046	5K-2432	Cylinder Pin	384-3473	5L-2894	Sleeve Bearing	311-9364
5J-1204	Pin Assembly	325-6131	5K-2570	Spacer	226-5996	5L-4751	Retaining Ring	380-7410
5J-1449	Pin	393-3671						
5J-1806	Pin	396-0662						

(Continued)

## Part Numbers Beginning With 5 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
5L-5772	Roller Bearing	394-9200	5M-5073	Joint Gp — Univ	325-6113	5M-7882	Joint Gp — Univ	297-7210
5L-7634	Exhaust Elbow	380-1555	5M-5244	Hub	219-2982	5M-7900	Bolt — Hex Head	311-9349
5L-8856	Exhaust Coupling	311-9379	5M-5822	Gear	247-4120	5M-7923	Shaft	215-1697
5L-9370	Manifold Elbow	311-9388	5M-5856	Extension Pipe	373-1913	5M-7936	Roller Bearing	386-4953
5L-9371	Inlet Connector	311-9375	5M-6113	Gear	223-4816	5M-7953	Carrier Assembly	239-7977
5L-9738	Exhaust Coupling	311-9380	5M-6116	Gear	215-1734	5M-7955	Planet Shaft	364-5273
5M-0549	Gear	215-1689	5M-6119	Gear	223-4815	5M-7990	Gear	239-7938
5M-1127	Countershaft	216-3558	5M-6120	Gear — Sun	213-8740	5M-8007	Gear	239-7932
5M-1133	Gear	214-0524	5M-6126	Bearing	377-7433	5M-9644	Roller Bearing	384-5929
5M-1137	Gear As. — Ctrshft	214-0960	5M-6198	Shaft — Planet	297-7245	5N-2691	Air Inlet Elbow	311-9383
5M-1139	Gear Assembly	214-0961	5M-6199	Shaft As. — Planet	215-1694	5N-2692	Air Inlet Elbow	311-9384
5M-1141	Gear As. — Ctrshft	214-0962	5M-6208	Gear	247-4121	5N-2902	Oil Seal	314-8540
5M-1143	Gear Assembly	214-0963	5M-6210	Planet Shaft	219-9683	5N-3009	Inlet Tube	311-9465
5M-1145	Gear Assembly	214-0964	5M-6211	Planet Shaft	219-9684	5N-3012	Inlet Tube	311-9466
5M-1147	Gear Assembly	214-0965	5M-6212	Tube	390-0996	5N-3050	Out Elbow	311-9389
5M-1246	Carrier Roller Group	188-5612	5M-6636	Support — Frame	235-8007	5N-4378	Pump Shaft	311-9456
5M-1909	Shaft	260-0780	5M-6637	Sleeve Bearing	380-7376	5N-8501	Head Assembly	256-4762
5M-1988	Piston	219-9691	5M-6651	Hub	211-2135	5N-8657	Frt Manifold	261-0886
5M-1990	Pilot — Piston	229-8233	5M-6670	Shaft — Sprocket	216-7847	5N-8879	Manifold	261-0898
5M-1998	Drum	213-6952	5M-6673	Guard — F Idler (RH)	226-2735	5N-9055	Manifold	261-0890
5M-2026	Ster Cls Hub	216-4471	5M-6674	Guard	226-2736	5P-2503	Bearing Race	384-5930
5M-2037	Track Master Bushing	290-0826	5M-6690	Ster Hub	215-1695	5P-2526	Bearing Race	380-7498
5M-2051	Bearing Cage	380-7467	5M-6709	Fill Valve	380-7542	5P-3119	Retaining Ring	393-3648
5M-2054	Roller Bearing	380-7510	5M-7290	Bevel — Gear Cage	216-7848	5P-3414	Retaining Ring	387-2936
5M-2055	Bearing Cage	384-4790	5M-7306	Cylinder	226-2737	5P-3490	Tapered Roller Bearing	380-7518
5M-2971	Guard Assembly	226-0190	5M-7336	Retainer	325-6181	5P-4992	Ball Bearing	380-1507
5M-3470	Gear	224-1305	5M-7340	Bearing Cage	325-6034	5P-5067	Bearing Race	396-4137
5M-3474	Shaft	215-1690	5M-7342	Flange	215-1696	5P-5410	Ball Bearing	396-4134
5M-3499	Shaft — Planet	319-3475	5M-7344	Gear — 5th	213-8741	5P-6663	Roller Bearing	374-1838
5M-3560	Sleeve Bearing	392-4521	5M-7345	Gear	214-0957	5P-6982	Ball Bearing	392-4501
5M-3906	Ring Gear	214-0526	5M-7346	Bevel Gear	214-0958	5P-7143	Duo Cone Seal Group	377-7434
5M-3907	Rr Carrier	210-8475	5M-7348	Transmission Gear	215-1699	5P-7145	Toric Sealing Ring	385-3804
5M-3925	Planet Gear	213-8749	5M-7349	Gear — 2nd	213-8742	5P-7146	Duo Cone Seal Group	374-1828
5M-3941	Shaft — Planet	215-1691	5M-7352	Gear	217-7713	5P-7807	Ball Bearing	314-8502
5M-3942	Shaft — Planet	215-1692	5M-7353	Gear	217-7714	5P-8194	Retaining Ring	308-9920
5M-3946	Cage	217-7728	5M-7354	Gear	226-6106	5P-8366	Gasket Kit	387-2911
5M-3996	Ring Gear	214-0527	5M-7355	Gear	216-3581	5P-8768	Gasket Kit	393-1024
5M-3998	Ring Gear	214-0528	5M-7365	Gear	226-6107	5P-8772	Gasket Kit	383-1575
5M-3999	Transmission Shaft	215-1693	5M-7701	Cylinder	385-7229	5P-8789	Gasket Kit	393-3620
5M-4427	Sun Gear	214-0529	5M-7740	Bevel Gear	213-8216	5P-8950	Gasket Kit	393-3621
5M-5009	Idler As.	175-8263	5M-7841	Gear — Ring	214-0525	5P-8970	Gasket Kit	383-1576
5M-5018	Roller Bearing	380-7509	5M-7864	Gear Pump	226-0169	5P-8974	Gasket Kit	387-2912
5M-5037	Hub	219-2980	5M-7869	Gear — Ring	214-0530			
			5M-7875	Carrier	213-4495			

(Continued)

## Part Numbers Beginning With 5 (Continued)

Original Part Number	Part Name	Classic Part Number
5P-9121	Duo Cone Seal Group	374-1832
5P-9176	Roller Bearing	396-4141
5P-9177	Bearing Inner Race	396-4139
5P-9400	Roller Bearing	386-4954
5P-9439	Bearing — Spl Ball	371-4306
5P-9531	Roller Bearing	386-4956
5P-9532	Bearing Race	386-4955
5P-9550	Gasket Kit	383-3692
5P-9552	Gasket Kit	393-3623
5P-9553	Gasket Kit	393-3624
5P-9568	Gasket Kit	393-3625
5P-9814	Gasket Kit	393-3635
5P-9841	Gasket Kit	393-3626
5P-9972	Gasket Kit	393-5207
5S-0073	Plate	302-2692
5S-0135	Cage	222-1766
5S-0160	Strip — Guard	226-2738
5S-0161	Strip — Guard	226-2739
5S-0162	Guard Assembly	226-2740
5S-0163	Guard Assembly	226-2741
5S-0192	Final Drive Pinion	215-1698
5S-0464	Gear	216-7852
5S-0709	Washer — Seal Nx	188-5765
5S-0710	Track Bushing	260-1512
5S-0726	Hub As. — Sprocket	227-4769
5S-0753	Track — Master Bush	289-4956
5S-0821	Shoe — Track Nx	175-8020
5S-0822	Shoe — Track Nx	175-8365
5S-0823	Shoe — Track Nx	175-8367
5S-0884	Gear	226-7982
5S-0894	Shaft	226-6075
5S-1211	Cover	314-8665
5S-1213	Plate	390-5258
5S-1218	Relief Valve	383-1577
5S-1220	Valve Lifter	387-2926
5S-1601	Steering Pump	386-3054
5S-1684	Gasket Kit	393-5224
5S-1757	Inlet Insert	311-9401
5S-1822	Pc Assembly	248-5406
5S-1833	Chamber As.	247-3298
5S-4023	Gear	229-8230
5S-4359	Gear Pump	226-0157
5S-4470	Gear	224-1304

Original Part Number	Part Name	Classic Part Number
5S-4493	Carrier — Planet	223-6321
5S-4557	Bearing	311-9360
5S-4863	Holder Assembly	215-1732
5S-5058	Drive Gear	378-3977
5S-5684	Joint	308-9873
5S-5746	Retainer	319-3472
5S-5879	Bracket	330-9247
5S-5917	Adjusting Screw	380-7537
5S-5918	Push Rod	394-0903
5S-6513	Guard Assembly	226-4938
5S-6531	Holder Assembly	214-2078
5S-6795	Pc Assembly	242-3437
5S-6796	Drum	213-6953 (Drum), 230-7115 (Ster Cl Kit)
5S-6910	Track Shoe	188-5603
5S-6911	Track Shoe	188-5605
5S-6972	Gear	221-9087
5S-6978	Shaft — Planet	221-9103
5S-7009	Plate Assembly	226-4957
5S-7010	Shaft — Planet	221-9104
5S-7013	Gear	221-9088
5S-7023	Carrier	226-5986
5S-7262	Head Assembly	242-3434
5S-7609	Pulley	264-5881
5S-7630	Sleeve Bearing	394-0219
5S-7863	Steering Pump	345-1980
5S-7877	Ball Bearing	392-4491
5S-7888	Retainer — Bearing	226-5988
5S-7893	Drive Joint	380-7387
5S-7894	Flange Assembly	216-7854
5S-7944	Shaft — Planet	297-7246
5S-7945	Shaft As. — Planet	275-5299
5S-8038	Pulley	264-5882
5S-8543	Sleeve Bearing	376-3635
5S-8767	Gear	226-6085
5S-9062	Spacer	363-7463
5S-9080	Pulley	264-5883
5T-0735	Chain	390-5262
5T-0906	Cover	282-6625
5T-0925	Actuator	379-0198
5T-1362	Bearing — Spider	325-6011
5T-2925	Strip	282-6564

Original Part Number	Part Name	Classic Part Number
5T-2926	Shoe	302-2699
5T-3030	Pin	389-6308
5T-3323	Pin	380-7394
5T-3327	Pin	383-2130
5T-3329	Pin	380-7395
5T-3475	Shaft	297-7247
5T-5157	Brake Cam	394-9189
5T-5158	Brake Cam	394-9190
5T-5222	Shoe	297-7261
5T-6298	Lever	299-2018
5T-7130	Housing	396-0656
5T-8143	Spindle	282-6628
5T-8365	Strip	380-7418
5T-8500	Drive Shoe	243-0359
5T-8501	Shoe	243-0358
5T-8525	Plate	389-6307
5T-8526	Pin	396-7270
5T-8528	Pin	396-7269
5T-8652	Pin	383-2131
5T-8654	Pin	396-0668
5T-8739	Spider and Bearing Group	373-5386
5V-1168	Spider and Bearing Assembly	377-7435
5V-1246	Diaphragm	384-4789
5V-1271	Differential	299-2008
5V-1274	Differential Spider	385-6110
5V-1277	Differential Carrier	384-3852
5V-1480	Sun Gear	288-8721
5V-1508	Pin	361-1703
5V-1509	Pin Assembly	319-3443
5V-1510	Pin Assembly	252-6876
5V-1514	Pin Assembly	374-6509
5V-1530	Link Assembly	374-1463
5V-1882	Pin	361-1700
5V-4075	Gear	288-8722
5V-4573	Brake Disc	388-0591
5V-4969	Track Sprocket	289-2205
5V-5279	Bearing	299-1966
5V-5661	Bearing — Sleeve	299-1965
5V-5866	Pin	361-1707
5V-5917	Pinion	297-7224
5V-6125	Diaphragm	384-5931
5V-6327	Yoke	391-1086
5V-7207	Pinion	231-0252

(Continued)

## Part Numbers Beginning With 5 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
5V-7214	Pin Assembly	241-2522	5V-8782	Lever As.	299-2014	5Y-0769	Joint Assembly	297-4858
5V-7222	Gear	231-0237	5Y-0766	Joint Assembly	297-4858	5Y-1546	Crankshaft Assembly	242-3439
5V-7574	Retaining Ring	392-4483	5Y-0768	Joint Assembly	297-4858			

## Part Numbers Beginning With 6

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
6B-3158	Shoe	243-0357	6D-7690	Bearing Race	380-7496	6G-5155	Thrust Bearing	394-0220
6B-4524	Sleeve Bearing	314-8508	6D-7788	Joint	380-7388	6G-5704	Clutch Piston	394-9838
6B-5278	Track Pin	257-7775	6D-8671	Bolt	243-0333	6G-6241	Gear	299-2010
6B-5502	Track Pin	175-8923	6D-9164	Shaft	243-0353	6G-8425	Control Valve	367-6086
6B-6911	Worm	245-5819	6D-9193	Hub	228-9417	6G-9428	Bracket	396-7264
6B-6912	Worm	245-5820	6D-9294	Shaft	228-9418	6G-9429	Bracket	396-7263
6B-7178	Fork	299-2009	6E-1108	Sleeve Bearing	325-6023	6H-2577	Spider and Bearing Group	333-4954
6C-0570	Pump Group	374-5380	6E-1500	Piston	346-5677	6H-3217	Shaft As. — Rocker	311-9457
6C-0739	Carrier As.	231-0012	6E-2190	Hydraulic Rod	394-8213	6H-3568	Bearing Race	384-4829
6C-1573	Rod	297-7238	6E-2192	Piston	374-7490	6H-3957	Ball Bearing	311-9358
6C-2267	Muffler	298-2782	6E-3535	Sleeve Bearing	360-2333	6H-5139	Plate	387-2933
6C-3495	Track Sprocket	322-6302	6E-4892	Hydraulic Cylinder	394-9828	6H-5843	Oil Thrower	393-3612
6C-3500	Pin Gear	384-4788	6E-6153	Port Plate	346-5678	6H-5845	Baffle	390-0926
6C-3617	Support	374-4712	6E-6163	Shaft	346-5679	6I-0031	Fuel Injection Line	374-4713
6C-3740	Shaft Assembly	231-0013	6F-2904	Bearing	295-5673	6I-0032	Fuel Injection Line	374-4714
6C-5062	Pinion	231-0016	6F-3183	Bearing Cap	325-6038	6I-0033	Fuel Injection Line	374-4715
6D-0217	Bearing — Sleeve	325-6022	6F-5201	Gear — Worm	245-5797	6I-0034	Fuel Injection Line	375-2262
6D-0687	Gear	228-8922	6F-6992	Cap	297-7160	6I-0035	Fuel Injection Line	374-4716
6D-0708	Pinion	228-8923	6F-7523	Bearing Cap	325-6039	6I-0036	Fuel Injection Line	374-4717
6D-0738	Pin Gear	394-9840	6F-9163	Ring Seal	385-3809	6I-0037	Fuel Injection Line	374-4718
6D-1138	Bearing Race	386-4958	6G-0387	Disc	394-2579	6I-0038	Fuel Injection Line	374-4719
6D-1599	Block — Link Pivot	228-9414	6G-0389	Gear	384-4800	6I-0341	Fuel Injection Line	325-6117
6D-1639	Plug	394-0196	6G-0607	Pin	282-6548	6I-0342	Fuel Injection Line	325-6118
6D-1644	Shaft	228-9562	6G-1100	Shaft	297-7248	6I-0343	Fuel Injection Line	325-6119
6D-1777	Gear — Planet	245-5799	6G-1633	Classic Chain	282-6565	6I-0344	Fuel Injection Line	325-6120
6D-1778	Gear	245-5800	6G-1664	Adapter	297-7135	6I-0346	Fuel Injection Line	325-6122
6D-1779	Gear	245-5801	6G-1908	Housing Assembly	297-7198	6I-1032	Fuel Injection Line	390-0931
6D-2348	Friction Disc	380-7489	6G-1919	Pvt Cap	243-0337	6I-1035	Fuel Injection Line	390-0921
6D-2362	Worm	243-0361	6G-2947	Shaft	243-0346	6I-1036	Fuel Injection Line	390-0922
6D-3986	Cap	243-0345	6G-3378	Clutch Piston	384-4818	6I-1038	Fuel Injection Line	390-0923
6D-4909	Cap	297-7159	6G-4240	Joint Assembly	297-4858	6I-1240	Air Compressor Governor	380-7538
6D-5415	Plate	382-8043	6G-4372	Strip	380-7416	6I-1345	Pump Shaft	374-7475
6D-6114	Cap	245-5822	6G-4524	Strip	380-7417	6I-1346	Pump Group	295-5674
6D-6201	Ballstud	228-9103	6G-4525	Strip	282-6624	6I-1363	Fan Spider	380-1517
6D-6859	Bearing	330-9248	6G-4680	Adapter	302-2633	6I-1364	Fan Spider	391-9824
6D-6943	Housing	228-9416	6G-4831	Shaft	391-9809			

(Continued)



## Part Numbers Beginning With 6 (Continued)

Original Part Number	Part Name	Classic Part Number
6I-1453	Crankshaft	368-5916
6I-2408	Muffler	378-3978
6I-2409	Exhaust Pipe	383-3693
6I-2981	Block Plate	374-7495
6I-3066	Gasket	380-1518
6I-3662	Muffler	360-7882
6I-4024	Gasket	377-5839
6I-4613	Spacer Plate	380-7405
6I-4689	Gasket	377-5840
6I-6425	Muffler	386-3045
6I-8132	Pinion	226-6080
6I-8481	Gear Pump	373-1905
6I-8500	Clutch Plate	377-7436
6I-8510	Housing As. — Clutch	373-5387
6I-8736	Guard Assembly	295-6434
6I-8860	Bearing Race	380-7495
6I-9034	Guard Assembly	295-6435
6I-9454	Track Shoe	286-9826
6I-9508	Clutch Piston	390-5274
6J-0774	Trunnion	256-4844
6J-0800	Bearing	297-7140
6J-2326	Pin	319-3458
6J-5179	Retainer	380-7406
6J-5342	Retainer	325-6182
6J-5354	Bearing	297-7142
6J-5359	Diagonal Brace Assembly	384-3458
6J-6043	Sleeve Bearing	374-1456
6J-6229	Pin	299-2030
6J-7500	Retainer	383-2104
6J-7563	Pin	319-3459
6J-8183	Bracket	394-0195
6J-8805	Bearing Assembly	256-4841
6J-9258	Trunnion Assembly	256-4846
6J-9480	Pin	384-4774
6J-9482	Pin	380-7400
6J-9793	Bearing	256-4835
6K-0053	Housing	297-7191
6K-1983	Pin	241-2614
6K-2034	Shaft	297-7249
6K-2036	Rack	299-2045
6K-2085	Shaft — Bevel Pinion	221-9102
6K-2697	Sleeve Bearing	330-9263
6K-2703	Pin	252-6853

Original Part Number	Part Name	Classic Part Number
6K-2704	Pin	252-6873
6K-2707	Plate	319-3470
6K-3447	Pin	241-2576
6K-3674	Shaft	253-1427
6K-3937	Pin	241-2557
6K-4148	Sleeve Bearing	393-3670
6K-4180	Pin	252-6854
6K-4189	Spacer	367-6075
6K-4190	Cap	297-7161
6K-4191	Cap	300-2576
6K-4192	Pin	252-6855
6K-4193	Plate	282-6566
6K-4204	Track Link Assembly	308-9874
6K-4442	Balljoint Assembly	373-5388
6K-4497	Bracket Assembly	299-1975
6K-4498	Bracket As. (LH)	299-1976
6K-4599	Yoke	385-6111
6K-4600	Yoke	226-5993
6K-4617	Shaft	221-7951
6K-5448	Pin	252-6856
6K-5472	Pin	252-6857
6K-5513	Pin	241-2558
6K-5619	Shaft	253-1429
6K-5621	Retainer	253-1443
6K-5625	Gear	253-1438
6K-5744	Bearing Cage	330-9266
6K-5745	Retainer	330-9281
6K-5836	Spindle	223-4817
6K-5837	Carrier	253-1424
6K-6001	Pin	308-9902
6K-6046	Pin	241-2602
6K-6047	Pin	241-2603
6K-6051	Pin	252-6858
6K-6053	Pin	241-2604
6K-6054	Pin	241-2605
6K-6175	Pin	241-2606
6K-6185	Pin	252-6859
6K-6349	Pin	252-6860
6K-7161	Pin	241-2559
6K-7162	Pin	241-2560
6K-7164	Pin	241-2561
6K-7165	Pin	241-2562
6K-7166	Pin	241-2563
6K-7167	Pin	241-2569
6K-7284	Pin	241-2591

Original Part Number	Part Name	Classic Part Number
6K-7285	Pin	252-6861
6K-7286	Pin	241-2592
6K-7287	Pin	241-2564
6K-7288	Pin	252-6862
6K-7356	Yoke Assembly	330-9296
6K-8307	Pin	241-2593
6K-8308	Pin	241-2594
6K-8309	Pin	241-2595
6K-8311	Pin	241-2599
6K-8314	Pin	252-6863
6K-8315	Pin	252-6864
6K-8316	Pin	252-6865
6K-8317	Pin	252-6866
6K-8329	Tapered Roller Bearing	392-4484
6K-8466	Carrier	253-1423
6K-8542	Pin	252-6867
6K-8544	Pin	252-6874
6K-8546	Pin	252-6868
6K-8848	Hub	219-2972
6K-8895	Cap	374-6500
6K-8897	Bracket As.	299-1977
6K-9070	Washer	330-9294
6K-9150	Sleeve Bearing	330-9264
6K-9151	Sleeve Bearing	330-9265
6K-9841	Lever Assembly	226-5997
6L-1883	Gasket	380-1558
6L-3902	Fuel Injection Line	311-9423
6L-3910	Fuel Injection Line	311-9424
6L-4714	Filter Panel	314-8532
6L-6481	Air Inlet Elbow	311-9385
6L-6482	Air Inlet Elbow	311-9386
6L-6491	Crs Pipe	311-9433
6L-7816	Seal — O-Ring	314-8542
6L-8585	Drive Gear	314-8526
6L-8761	Sleeve	396-7268
6L-8968	Exhaust Coupling	311-9381
6L-9210	Idler Gp (Complete Idler Group)	175-8038 (Idler As.), 200-9236
6L-9211	Idler Gp	200-9237
6L-9212	Idler Gp	200-9238
6M-1592	Sleeve Bearing	374-1462
6N-0425	Exhaust Coupling	394-9836

(Continued)



## Part Numbers Beginning With 6 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
6N-0590	Fan Spider	383-1579	6N-8847	Exhaust Valve Guide	314-8523	6P-7627	Guard Assembly	226-0187
6N-0622	Exhaust Elbow	380-7534	6N-8940	Thrust Plate	383-2120	6P-7704	Carrier	314-8658
6N-0714	Pulley	264-5884	6N-8992	Adapter	394-9810	6P-7706	Ring Carrier	388-6603
6N-0731	Muffler	382-8018	6N-9653	Oil Cooler Core	386-3056	6P-7742	Planet Shaft	281-1695
6N-0762	Pulley	264-5885	6N-9743	Support — Muffler	308-9940	6P-7743	Planet Shaft	281-1696
6N-1036	Oil Pump Gear	279-4991	6N-9915	Inlet Valve	270-4360	6P-8003	Planet Gear	281-1689
6N-1218	Radiator Core	379-0181	6N-9916	Exhaust Valve	270-4361	6P-8005	Planet Gear	281-1691
6N-1553	Coupling	295-6422	6P-0169	Hub — Flywheel Clutch	297-7204	6P-8829	Retainer	380-7407
6N-1572	Mount Assembly	308-9876	6P-0549	Guard	223-4812	6P-8884	Guard Assembly	226-2742
6N-1813	Pump Group	330-9279	6P-0593	Needle Bearing	386-4959	6P-8904	Guard Group	226-2744
6N-1878	Muffler	360-7883	6P-0748	Carrier	373-5389	6P-9107	Hub Assembly	222-1765
6N-1931	Relief Plunger	379-0171	6P-1382	Pin	241-2615	6S-2828	Bearing Race	384-5932
6N-1965	Line As. — Fuel Injector	250-7535	6P-1383	Pin	241-2616	6S-3146	Seal Washer	257-7777
6N-1966	Line As. — Fuel Injector	250-7536	6P-2233	Planet Gear	281-1690	6S-3158	Yoke	380-1478
6N-2450	Oil Pump	383-3694	6P-2234	Planet Gear	380-1479	6S-3203	Steering Drum	388-0590
6N-2460	Oil Pump	395-1316	6P-2322	Plate	389-6311	6S-3397	Shaft	388-6593
6N-2549	Mount	384-3467	6P-2776	Gear	217-7718	6S-3398	Steering Drum	390-5279
6N-2687	Fan Spider	385-7199	6P-2923	Yoke	382-6891	6S-3442	Wear Strip	386-4929
6N-2789	Pulley	264-5886	6P-3068	Track Shoe	188-5333	6S-3457	Pin	325-6147
6N-3256	Mount Assembly	314-8688	6P-3593	Support	229-8231	6S-3463	Sleeve Bearing	374-6513
6N-3641	Pulley	380-7536	6P-3596	Hub	222-1764	6S-3465	Sleeve Bearing	382-6903
6N-3964	Muffler	360-7884	6P-3597	Retainer	222-1770	6S-3474	Pin	375-9981
6N-4184 <sup>1</sup>	Muffler	385-7226	6P-3735	Shaft — Planet	368-0103	6S-3609	Carrier Roller	275-3578
6N-4597	Exhaust Coupling	369-9489	6P-3904	Bearing Retainer	396-0644	6S-3759	Pin Assembly	241-2543
6N-5300	Pulley	378-3979	6P-4327	Pad	384-3472	6S-3976	Bearing Race	388-0589
6N-5339	Fan Spider	380-7545	6P-4897	Track Roller Group	188-5607	6S-4074	Bearing	330-9249
6N-5392	Exhaust Manifold	394-0905	6P-4898	Track Roller Group	188-5608	6S-6902	Spider	390-5280
6N-5437	Muffler Assembly	247-2674	6P-4948	Cap	226-0205	6S-7220	Plate	396-0657
6N-5482	Friction Plate	376-3637	6P-5172	Guard Group	226-0196	6S-9049	Thrust Ring	257-7772
6N-5967	Air Inlet Elbow	394-9825	6P-5173	Guard Gp — Recoil	229-8617	6T-0064	Shaft — Planet	295-6442
6N-5978	Exhaust Coupling	369-9487	6P-5343	Rod Gp — Track Adjustable	226-0200	6T-0234	Retainer	325-6183
6N-5987	Water Pump Shaft	390-0998	6P-5404	Plate	325-6168	6T-0235	Clutch Piston	385-7233
6N-6721	Air Coupling	377-5830	6P-6129	Track Link (RH)	289-0631	6T-0241	Piston	325-6161
6N-6969	Chamber Assembly	247-3299	6P-6130	Track Link (LH)	289-0632	6T-0243	Plate	325-6169
6N-7154	Rotocoil	380-7556	6P-6556	Carrier As.	308-9836	6T-0248	Ring — Seal	295-6440
6N-7175	Rotocoil	382-8042	6P-6653	Guide Plate	226-0208	6T-0443	Pinion — Shaft & Bevel	226-7999
6N-7263	Cylinder Head Gasket	380-7386	6P-6739	Shaft — Planet	308-9929	6T-0511	Link As.	290-3449
6N-7295	Manifold	261-0903	6P-7357	Oil Gear	388-0561	6T-0513	Track Shoe	175-8789
6N-8016	Valve Kit	241-3381	6P-7358	Pump Group	308-9913	6T-0517	Track Shoe	175-8811
6N-8413	Pump Housing	325-6110	6P-7360	Adapter	374-7476	6T-0830	Housing Assembly	297-7199
6N-8441	Sleeve Bearing	380-7371	6P-7564	Ring Carrier	384-3850	6T-0952	Pad Assembly	367-6087
6N-8645	Ejector	388-0560	6P-7625	Guard Assembly	226-0185	6T-0956	Pad As.	367-6088
			6P-7626	Guard Assembly	226-0186	6T-0960	Pad Assembly	367-6089
						6T-1702	Support As.	299-2065

(Continued)

## Part Numbers Beginning With 6 (Continued)

Original Part Number	Part Name	Classic Part Number
6T-1705	Shaft	283-5201
6T-1706	Gear	283-5202
6T-1711	Plate	389-6324
6T-1724	Bar Assembly	283-5223
6T-1933	Collar	226-2746
6T-1980	Collar	226-0210
6T-1996	Clutch Plate	368-0117
6T-3009	Piston	297-7226
6T-3080	Plate	325-6170
6T-3324	Clutch Housing	391-9827
6T-3651	Gear Pump	345-1978
6T-3726	Carrier	390-5269
6T-4481	Shaft — Planet	221-7946
6T-5383	Ring Gear	375-2624
6T-6053	Pinion — Shaft & Gear	226-6079
6T-6782	Segment Gp — Sprocket	188-5641 (sprocket)
6T-6987	Piston — Clutch	297-7227
6T-7882	Gear	296-1352
6T-8250	Retainer	319-3473
6T-8433	Duo Cone Seal Group	377-7438
6T-8439	Duo Cone Seal Group	377-7440
6T-8703	Shaft Assembly	275-5300
6T-8801	Guide	396-0640
6T-8886	Steering Clutch Disc	380-7517
6T-8907	Pad	380-7391
6V-0241	Gasket Kit	393-3628
6V-1013	Roller Bearing	396-4140
6V-1033	Rod End	375-5444
6V-1339	Gasket Kit	388-0651
6V-1781	Ball Bearing	380-1508
6V-2202	Ball Bearing	380-1574
6V-2246	Gasket Kit	391-1091
6V-2305	Toric Sealing Ring	380-7571
6V-2527	Gasket Kit	387-2918
6V-2580	Gasket Kit	393-3637
6V-2909	Gasket Kit	388-0652
6V-2936	Gasket Kit	387-2915
6V-3709	Gasket Kit	393-5223
6V-3745	Gasket Kit	383-1580
6V-3748	Gasket Kit	383-3695

Original Part Number	Part Name	Classic Part Number
6V-3749	Gasket Kit	387-2916
6V-3751	Gasket Kit	393-5222
6V-3916	Ball Bearing	386-4960
6V-4350	Bearing Race	384-5933
6V-4540	Gasket Kit	393-1021
6V-4582	Ball Bearing	380-1504
6V-4785	Gasket Kit	388-0661
6V-5413	Gasket Kit	390-5291
6V-5428	Gasket Kit	386-3044
6V-5467	Gasket Kit	387-2924
6V-5495	Gasket Kit	393-5211
6V-5920	Gasket Kit	388-0653
6V-5976	Gasket Kit	393-5200
6V-5985	Gasket Kit	380-1566
6V-6384	Gasket Kit	387-2917
6V-6444	Gasket Kit	375-2263
6V-6894	Water Pump Rebuild Kit	383-3696
6V-6896	Water Pump Gasket	390-1006
6V-7266	Gasket Kit	393-5212
6V-7459	Gasket Kit	391-1095
6V-7461	Gasket Kit	382-5071
6V-7476	Gasket Kit	390-5282
6V-9221	Gasket Kit	391-1092
6V-9255	Gasket Kit	387-2913
6V-9259	Gasket Kit	393-5213
6V-9698	Gasket Kit	388-0647
6V-9727	Gasket Kit	393-5201
6V-9729	Gasket Kit	393-5195
6W-0240	Bearing	297-7143
6W-1629	Shaft	297-7250
6W-1631	Differential Case	385-7232
6W-1958	Pump Coupling	390-5284
6W-2398	Retainer	231-0014
6W-2451	Track Sprocket	322-6376
6W-3674	Gear	231-0228
6W-4281	Yoke	308-9949
6W-4284	Bearing Cage	308-9832
6W-4733	Bearing Retainer	391-1089
6W-7290	Shaft — Planet	308-9930
6W-7331	Cover Assembly	308-9845
6W-9172	Sleeve Bearing	389-6330
6W-9173	Sleeve Bearing	374-1457

Original Part Number	Part Name	Classic Part Number
6W-9677	Tube	388-6569
6W-9678	Tube	388-6570
6Y-0299	Shaft Assembly	275-5300
6Y-0305	Cage Assembly	297-7150
6Y-0306	Sleeve Bearing	391-1104
6Y-0580	Carrier	301-4768
6Y-0710	Gear	226-6104
6Y-0857	Duo Cone Seal Group	374-1833
6Y-0926	Gear	295-6427
6Y-0935	Track Link (RH)	257-7765
6Y-0936	Track Link (LH)	257-7766
6Y-0937	Track Master Link (RH)	257-7767
6Y-0938	Track Master Link (LH)	257-7768
6Y-0939	Track Master Link (RH)	257-7767
6Y-0940	Track Master Link (LH)	257-7768
6Y-0984	Gear	295-6428
6Y-1084	Torque Converter Impeller	380-1477
6Y-1089	Torque Converter Turbine	385-6112
6Y-1090	Torque Converter Stator	385-6113
6Y-1320	Clutch Plate	384-5935
6Y-1381	Track Shoe	275-3564
6Y-1382	Track Shoe	275-3565
6Y-1385	Track Shoe	275-3570
6Y-1386	Track Shoe	275-3571
6Y-1690	Ring Carrier	384-3849
6Y-1711	Track Link Assembly	261-8008
6Y-1713	Link As.	257-1993
6Y-1717	Track Bushing	257-7776
6Y-2027	Friction Disc	377-7441
6Y-2054	Clutch Piston	302-2695
6Y-2065	Mount	377-5844
6Y-2192	Track Shoe	288-6668
6Y-2329	Track Link Assembly	188-5310
6Y-2330	Track Link Assembly	188-5310
6Y-3151	Torque Converter Stator	388-6562
6Y-3545	Pin	391-9815

(Continued)

## Part Numbers Beginning With 6 (Continued)

Original Part Number	Part Name	Classic Part Number
6Y-3896	Pin Assembly	325-6132
6Y-4027	Pin	325-6148
6Y-4819	Carrier — Planet	296-1348
6Y-4840	Plate Assembly	297-7233
6Y-4845	Transmission Plate	385-7194
6Y-5219	Duo Cone Seal Group	374-1829
6Y-5244	Segment Group	260-1511
6Y-5344	Track Shoe	275-3566
6Y-5345	Track Shoe	275-3567
6Y-5348	Friction Disc	384-4827
6Y-5692	Clutch Plate	380-7492
6Y-5812	Sleeve Bearing	325-6019
6Y-5814	Pin	389-6305
6Y-5913	Friction Disc	391-9836
6Y-5914	Friction Disc	390-5265
6Y-5915	Friction Disc	384-5936
6Y-5916	Friction Disc	377-7442
6Y-6126	Wear Plate	325-6174
6Y-6127	Wear Plate	325-6175
6Y-6134	Bearing	325-6013
6Y-6234	Bearing — Sleeve	325-6014
6Y-6236	Sleeve Bearing	325-6024

Original Part Number	Part Name	Classic Part Number
6Y-6289	Track Shoe	188-5270
6Y-6290	Track Master Shoe	175-8728
6Y-6291	Track Shoe	175-8031
6Y-6292	Track Master Shoe	175-8032
6Y-6293	Shoe — Track	175-8369
6Y-6294	Track Master Shoe	175-8370
6Y-6295	Track Shoe	175-8371
6Y-6296	Track Master Shoe	175-8372
6Y-6394	Track Master Shoe	188-5591
6Y-6395	Track Shoe	188-5396
6Y-6397	Track Master Shoe	188-5594
6Y-6398	Shoe — Track	188-5593
6Y-6405	Shoe — Track	290-9938
6Y-6407	Shoe — Track	288-6679
6Y-6411	Shoe — Track	188-5397
6Y-6412	Shoe — Track Master	188-5592
6Y-6751	Pin	325-6149
6Y-6752	Pin	325-6150
6Y-6775	Pin	325-6151
6Y-6931	Shaft As.	325-6206
6Y-7471	Pin — Pivot	325-6152
6Y-7474	Pin	325-6153
6Y-7795	Pad	391-9816

Original Part Number	Part Name	Classic Part Number
6Y-7796	Pad	391-9817
6Y-7877	Housing Assembly	297-7200
6Y-7909	Friction Disc	374-4676
6Y-7914	Friction Disc	390-5264
6Y-7920	Friction Disc	388-0587
6Y-7934	Friction Disc	384-5937
6Y-7935	Friction Disc	383-2121
6Y-7946	Friction Disc	384-4801
6Y-7956	Friction Disc	374-4677
6Y-7965	Friction Disc	392-4518
6Y-8183	Track Link Assembly	289-4948
6Y-8184	Link As.	289-4948
6Y-8186	Track Pin	175-8923
6Y-8248	Pin	325-6154
6Y-9468	Retainer	325-6185
6Y-9930	Rubber Mount	360-2353
6Y-9960	Mount	376-3639
6A-4701	Gear	231-0231
6A-7099	Sleeve Bearing	388-0644
6A-7129	Bearing	301-3130
6A-7196	Pilot	385-7200
6A-7534	Retainer	231-0244
6A-7539	Track Sprocket	322-6304

<sup>1</sup>Ejector is included with muffler

## Part Numbers Beginning With 7

Original Part Number	Part Name	Classic Part Number
7B-0503	Ballstud	308-9801
7B-2420	Director Ferrule	314-8517
7B-5036	Shaft — Bracket	297-7251
7B-5088	Drum — Steering	223-4813
7C-0145	Oil Cooler Core	374-4720
7C-0942	Adapter	302-2636
7C-1067	Pump Impeller	378-3980
7C-1068	Pump Impeller	378-3981
7C-1371	Exhaust Coupling	369-9490
7C-2880	Suction Bell	380-1520
7C-3039	Core, Oil Cooler	363-7451
7C-3567	Mount Assembly	314-8689
7C-3729	Pulley	376-9066
7C-3760	Drain Tube	375-5443
7C-4297	Crankshaft Seal	325-6192

Original Part Number	Part Name	Classic Part Number
7C-4349	Mount	383-2117
7C-5403	Oil Tube	374-4673
7C-5851	Muffler	298-2790
7C-5920	Exhaust Seat Insert	314-8528
7C-5921	Exhaust Seat Insert	314-8529
7C-5922	Exhaust Seat Insert	314-8530
7C-6398	Muffler	360-7885
7C-6450	Exhaust Pipe	377-5862
7C-7344	Muffler	360-7886
7C-7890	Pulley	378-3982
7C-7955	Cover Gasket	382-6899
7D-2199	Sleeve As.	228-9563
7D-2267	Track Link Assembly	228-9564
7D-2637	Gear — Worm	231-8761
7D-3815	Gear — Final Drive	228-9419

Original Part Number	Part Name	Classic Part Number
7D-4519	Shaft	245-5807
7D-4523	Coupling	245-5817
7D-4688	Shaft As. — Steering	228-9565
7D-5446	Shaft As. — Control Drive	229-1616
7D-5813	Gear	228-8911
7D-5847	Pinion	228-8912
7D-5859	Adapter	297-7136
7D-5861	Adapter	243-0364
7D-6436	Pinion	243-0344
7D-6516	Pinion	243-0343
7D-6524	Shaft	228-8917
7D-6568	Cover As.	228-9457
7D-6588	Worm	243-0362

(Continued)

## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
7D-6841	Joint As. — Univ	228-9566	7G-1139	Yoke	375-2620	7G-5301	Gear Pump	217-2600
7D-7075	Worm	243-0363	7G-2037	Joint Gp — Univ	226-8017	7G-5323	Pinion — Final Drive	231-8767
7D-7078	Shaft	243-0355	7G-2038	Tube	297-7268	7G-5444	Carrier — Planet	297-7165
7D-7259	Roller Bearing	394-9201	7G-2473	Gear	221-9101	7G-5572	Gear	300-2580
7D-7289	Hub Assembly	229-1617	7G-2474	Gear	300-2577	7G-5589	Ring Gear	281-1692
7D-7386	Shaft	228-9567	7G-2475	Gear	223-4815	7G-5593	Gear	300-2581
7D-7427	Sprocket	228-9458	7G-2476	Gear	223-4816	7G-5614	Planet Shaft	281-1697
7D-7442	Hub	228-8918	7G-2477	Gear	221-9090	7G-5618	Manifold	283-5204
7D-7607	Bevel Gear	388-0595	7G-2480	Gear	226-6091	7G-5746	Clutch Housing	392-4520
7D-7889	Ring Gear	275-5276	7G-2481	Gear	226-6092	7G-5776	Shaft — Planet	325-6195
7D-8346	Planet Gear	275-5274	7G-2485	Gear	226-7983	7G-5780	Shaft — Planet	325-6196
7D-8348	Bearing Race	384-5939	7G-2486	Gear — Planet	219-9658	7G-5783	Gear	288-8724
7D-8362	Cover	396-0658	7G-2487	Gear	221-9092	7G-5784	Gear	288-8725
7D-8434	Friction Disc	377-7443	7G-2488	Planet Gear	380-7485	7G-5972	Thrust Plate	393-1055
7D-8437	Tapered Roller Bearing	380-1502	7G-2492	Gear	239-7933	7G-6042	Cage As.	216-7856
7D-9267	Yoke	330-9297	7G-2500	Gear	296-1350	7G-6044	Cage Assembly	216-7857
7E-0853	Muffler As.	360-7887	7G-2510	Planet Gear	394-8218	7G-6059	Ring Carrier	393-0911
7E-2464	Valve	379-0160	7G-2511	Gear	260-0782	7G-6060	Plate — Center	302-2694
7E-2944	Muffler As.	360-7888	7G-2513	Gear — Planet	215-1734	7G-6062	Gear	302-2678
7E-3205	Inlet Manifold	376-9060	7G-2516	Gear — Planet	283-5203	7G-6576	Cage As.	216-7859
7E-3455	Tube	374-4721	7G-2517	Gear	213-8747	7G-6681	Cage As.	216-7860
7E-3509	Extension Pipe	373-1907	7G-2520	Gear	221-9094	7G-6689	Joint	377-5848
7E-3554	Tube	374-4722	7G-2521	Planet Gear	213-8749	7G-7013	Coupling	295-5450
7E-4728	Connecting Rod	379-8863	7G-2526	Planet Gear	380-7490	7G-7218	Carrier — Planet	283-5205
7E-4892	Thrust Bearing Race	384-5941	7G-2824	Piston	295-6439	7G-7610	Ring Gear	375-2625
7E-5085	Bushing	377-5829	7G-2828	Plate	325-6171	7G-7681	Shaft As.	307-1530
7E-5663	Muffler Assembly	247-2667	7G-2830	Ring	295-6441	7G-7724	Piston — Clutch	283-5206
7E-5713	Pulley	301-5219	7G-3450	Planet Gear	275-5289	7G-8389	Guard	226-0202
7E-5996	Connecting Rod	379-8864	7G-3451	Gear	297-7188	7G-8459	Gear Hub	221-1070
7E-6167	Head Gasket	279-4977	7G-3452	Planet Gear	275-5290	7G-8513	Guard Tr	361-1714
7E-7912	Gasket	394-0901	7G-3453	Planet Gear	377-7444	7G-8517	Guard Tr	361-1715
7E-8830	Fan Bracket	383-3697	7G-3454	Gear	300-2578	7G-8809	Track Roller Group	188-5608
7E-8926	Rebuild Kit	377-5847	7G-3455	Gear	300-2582	7G-8810	Track Roller Group	188-5607
7E-9907	Fuel Pump Timing Spacer	394-0222	7G-3456	Gear	300-2583	7G-9555	Bearing — Spider	314-8721
7E-9918	Gasket Kit	388-0655	7G-3457	Planet Gear	308-9857	7G-9708	Thrust Plate	393-1054
7E-9980	Camshaft	377-5851	7G-3461	Planet Gear	275-5291	7G-9721	Gear	297-7178
7F-6269	Gear	245-5798	7G-3707	Piston — Clutch	302-2691	7G-9722	Gear	297-7179
7F-7780	Pin	384-4825	7G-3708	Piston	300-2585	7H-0602	Cltch Driving	314-8515
7F-9263	Cap	243-0336	7G-3815	Gear Pump	226-0171	7H-1318	Coupling	226-8002
7F-9541	Pin Assembly	296-1361	7G-4281	Housing Assembly	297-7201	7H-2424	Sleeve	226-4852
7F-9547	Pin As. — Drawbar	295-0414	7G-4302	Housing — Clutch	302-2708	7H-2742	Nut	229-8220
7G-1013	Gear Pump	226-0170	7G-4306	Plate — Center	297-7229	7H-3597	Bolt (5/8-18)	175-8552
			7G-4605	Support	387-2938	7H-3598	Track Bolt	188-5636
			7G-4758	Gear — Planet	288-8723	7H-3599	Bolt — Track	188-5639
			7G-4990	Transmission Case	388-6561	7H-3641	End Rod	385-7211

(Continued)



## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
7H-4710	Bushing	299-1990	7J-9346	Sleeve Bearing	374-8357	7K-7237	Gear	231-0009
7H-7630	Spacer	239-7962	7J-9366	Bearing — Sleeve	299-1985	7K-7459	Spindle	223-4817
7I-3830	Swing Gear Assembly	388-0585	7J-9434	Shaft	380-7557	7K-7468	Hub	219-2972
7I-4187	Yoke	380-1510	7J-9682	Sleeve Bearing	360-2335	7K-7613	Joint Gp — Slip	302-2689
7I-6843	Pin	301-4766	7J-9694	Sleeve Bearing	385-3794	7K-8237	Drum	226-6100
7I-7181	Hydraulic Piston	393-5217	7J-9707	Bearing — Sleeve	308-9821	7K-8238	Flange	213-8166
7I-7712	Cylinder	393-1019	7J-9708	Bearing	299-1964	7K-8876	Bearing Race	384-5944
7I-7713	Rod	391-9873	7J-9731	Sleeve Bearing	308-9822	7K-8877	Cone — Bearing	374-1847
7I-7717	Track Spring	392-4525	7J-9732	Sleeve Bearing	308-9823	7K-8890	Tube	391-1098
7J-0086	Bearing Assembly	256-4842	7J-9814	Sleeve Bearing	308-9824	7K-9343	Pin	241-2571
7J-1185	Bearing As.	297-7146	7J-9842	Bearing	299-1968	7K-9344	Pin	241-2607
7J-1309	Bearing — Aligning	360-2275	7J-9884	Bearing	325-6016	7K-9345	Pin	241-2608
7J-1333	Bearing	295-6408	7K-0078	Sleeve Bearing	308-9825	7K-9346	Pin	252-6871
7J-1334	Bearing — Sleeve	325-6015	7K-0085	Sleeve Bearing	393-3646	7K-9347	Pin	252-6875
7J-1335	Sleeve Bearing	380-7567	7K-0087	Sleeve Bearing	374-6514	7K-9348	Pin	252-6872
7J-1336	Sleeve Bearing	384-4776	7K-0252	Gear — Ring	231-0008	7K-9360	Pin	319-3461
7J-1337	Bearing	380-7367	7K-0373	Pin As.	308-9885	7K-9361	Pin	241-2565
7J-1770	Bearing Cap	396-0664	7K-0374	Pin As.	308-9886	7K-9366	Pin	241-2617
7J-2604	Sleeve Bearing	380-7369	7K-0449	Yoke Assembly	297-7271	7K-9370	Pin	241-2618
7J-3216	Self Aligning Bearing	368-0104	7K-0450	Yoke Assembly	297-7272	7K-9371	Pin	241-2619
7J-3338	Hydraulic Rod	394-0906	7K-0686	Trunnion — Rear	297-7266	7K-9372	Pin	241-2577
7J-3351	Hydraulic Head	380-1515	7K-1261	Yoke	385-6114	7K-9373	Pin	241-2620
7J-3390	Pin	256-4786	7K-1311	Hub As. — Sprocket	224-1313	7K-9375	Pin	241-2621
7J-4827	Yoke	299-2070	7K-1510	Washer — Thrust	330-9295	7K-9487	Sleeve Bearing	308-9812
7J-4888	Sleeve Bearing	385-3789	7K-1550	Slip Joint Shaft	330-9284	7K-9488	Pin	241-2578
7J-4981	Trunnion	394-0210	7K-1818	Cover	308-9844	7K-9499	Pin	241-2579
7J-4982	Bearing	383-2132	7K-1843	Carrier	226-5984	7K-9502	Pin	241-2580
7J-4983	Bearing Cap	384-3460	7K-2020	Track Master Bushing	290-3457	7K-9503	Pin	241-2581
7J-5131	Trunnion	296-1371	7K-3045	Gear and Pinion	216-7823	7K-9504	Pin	241-2582
7J-6250	Sleeve Bearing	385-3803	7K-3421	Gear and Pinion	216-7823	7K-9505	Pin	241-2583
7J-6461	Crown	325-6054	7K-3582	Nut	226-6099	7K-9506	Pin	241-2584
7J-6525	Retaining Ring	392-4490	7K-3689	Final Drive Pinion	216-7822	7K-9513	Pin	241-2596
7J-6580	Retaining Ring	393-3647	7K-4458	Gear	226-6093	7K-9514	Pin	241-2597
7K-9640	Sleeve Bearing	389-6328	7K-4512	Pinion	226-6081	7K-9515	Pin	241-2589
7J-6869	Ring	389-6329	7K-4770	Pinion	226-6082	7K-9528	Sleeve Bearing	308-9828
7J-6883	Shaft	256-4778	7K-4771	Gear	229-8221	7K-9530	Bearing — Sleeve	299-1967
7J-6884	Shaft	387-2937	7K-5213	Pin	252-6869	7K-9591	Sleeve Bearing	365-8826
7J-6886	Pin	256-4787	7K-5449	Roller Bearing	384-4824	7K-9592	Sleeve Bearing	360-2336
7J-7488	Bearing	256-4836	7K-6260	Shaft	308-9931	7K-9593	Sleeve Bearing	360-2337
7J-8295	Hydraulic Head	388-0566	7K-6497	Pin	252-6870	7K-9601	Sleeve Bearing	360-2338
7J-8458	Sleeve Bearing	380-7374	7K-7102	Pin	308-9903	7K-9602	Sleeve Bearing	360-2339
7J-8893	Roller Bearing	374-1846	7K-7176	Pin	241-2570	7K-9604	Sleeve Bearing	308-9829
7J-9344	Bearing — Sleeve	360-2334	7K-7195	Sleeve Bearing	325-6025	7K-9638	Bearing — Sleeve	365-8827
			7K-7200	Pin	241-2600	7K-9639	Bearing	314-8643
						7K-9642	Sleeve Bearing	360-2340

(Continued)



## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
7K-9644	Sleeve Bearing	360-2341	7M-7219	Thrust Bearing	384-4816	7N-3515	Gear	314-8669
7K-9981	Pin Assembly	308-9887	7M-7273	Gasket	380-1570	7N-3521	Oil Cooler Core	383-3699
7K-9985	Sleeve Bearing	308-9812	7M-7358	Valve	298-2774	7N-3536	Fp Gear	279-4993
7K-9988	Pin	308-9904	7M-7817	Inlet Valve	311-9474	7N-4170	Oil Pump	379-0169
7K-9989	Pin	308-9905	7M-8395	Piston	223-6322	7N-4515	Pstn Bdy	311-9346
7K-9990	Pin	308-9906	7M-8397	Housing Assembly	239-7956	7N-4674	Muffler As.	373-1910
7K-9992	Pin	308-9907	7M-8453	Piston	215-1755	7N-5089	Gasket	394-0890
7L-0104	Pump Impeller	311-9395	7M-9398	Plate	297-7230	7N-5206	Mount As. — Resilient	374-1451
7M-0457	Guard	226-0217	7N-0061	Muffler	360-7889	7N-5503	Gear — Camshaft Rr	233-2182
7M-0475	Toric Sealing Ring	380-7570	7N-0110	Core Assembly	319-3435	7N-5511	Gear As. — Idler	233-2180
7M-0665	EqL Bar	231-3312	7N-0113	Oil Cooler Core	388-0564	7N-5539	Muffler As.	360-7891
7M-0699	Cap	247-4123	7N-0128	Core As. — Oil Cooler	299-1994	7N-5645	Water Tube	378-3984
7M-0820	Gear	226-6086	7N-0165	Core Assembly	295-5670	7N-5656	Sleeve	384-3848
7M-0859	Fork Assembly	297-7172	7N-0573	Exhaust Valve	270-4361	7N-5810	Gear Assembly	233-2179
7M-1184	Housing Assembly	219-9704	7N-0619	Pulley	383-1581	7N-5815	Gear — Camshaft Rr	233-2181
7M-1185	Housing Assembly	219-9705	7N-0691	Water Regulator Elbow	378-3983	7N-5819	Gear — Hyd Pump Drive	215-1758
7M-1186	Housing Assembly	219-9706	7N-1152	Pulley	333-4951	7N-5825	Gear	215-1759
7M-1195	Housing	219-9707	7N-1164	Mount Assembly	295-5451	7N-5910	Impeller — Pump	314-8686
7M-1249	Piston	215-1748	7N-1275	Fan Pulley	380-7535	7N-6151	Fuel Injection Line	373-1900
7M-1296	Relief Valve	390-0990	7N-1393	Muffler	374-7477	7N-6677	Core Assembly	299-1995
7M-1776	Plate	226-0222	7N-1572	Water Pump Cover	377-5854	7N-7386	Cylinder Head Gasket	392-4519
7M-1840	Gear As. — Ctrshft	214-0966	7N-1760	Ejector	373-1914	7N-7435	Rebuild Kit	374-4724
7M-1842	Gear Assembly	214-0967	7N-2063	Pump Shaft	386-3055	7N-7639	Rotocoil	383-1582
7M-1845	Spring Plate	384-3474	7N-2155	Sleeve Bearing	383-2133	7N-7765	Air Compressor Governor	377-5841
7M-1850	Wear Strip	389-6327	7N-2156	Sleeve Bearing	380-7373	7N-7970	Sleeve Bearing	374-8360
7M-1851	Bolt	226-0223	7N-2213	Sleeve Bearing	394-0190	7N-7998	Block Plate	374-7496
7M-1855	Rod Group	226-0197	7N-2834	Rebuild Kit	374-4723	7N-8021	Block Plate	374-7497
7M-1856	Pilot	226-0225	7N-2871	Fuel Injection Line	319-8172	7N-8022	Gasket	378-3985
7M-1859	Pilot As. — Spring	226-0207	7N-2872	Fuel Injection Line	319-8173	7N-8117	Muffler Assembly	247-2668
7M-1861	Stop — Spring (RH)	226-0228	7N-2874	Line As. — Fuel Injector	298-2779	7N-8371	Fuel Injection Line	373-1901
7M-1862	Stop — Spring (LH)	226-0229	7N-2875	Line As. — Fuel Injector	298-2780	7N-9145	Fly. Gear	279-4994
7M-1889	Guard	213-9108	7N-2876	Line As. — Fuel Injector	298-2781	7N-9146	Fly. Gear	279-4995
7M-1890	Guard	213-9109	7N-2949	Pulley	264-5887	7N-9312	Damper Assembly	299-2005
7M-2167	Lk Ring	308-9919	7N-2957	Rcap Cover	361-1722	7N-9590	Trunnion Assembly	314-8724
7M-2531	Rod	297-7239	7N-3032	Spacer Plate	383-3698	7N-9647	Muffler	386-3050
7M-4046	Sleeve Bearing	394-8206	7N-3229	Connecting Rod	379-8865	7N-9674	Muffler As.	360-7892
7M-4204	Exhaust Manifold	261-0901	7N-3349	Pump Shaft	394-0889	7N-9805	Pin — Piston	295-6438
7M-4358	Manifold	261-0907	7N-3350	Gear As. — Pump Drive	319-3437	7N-9810	Piston Pin	311-9432
7M-4603	Fuel Valve Body	311-9348	7N-3352	Block Plate	386-3062	7P-1577	Pin	375-9969
7M-4926	Pn Retainer	314-8538	7N-3486	Manifold	261-0899	7P-2285	Pin	393-3669
7M-5002	Drum	226-7992						
7M-5050	Collar	226-4958						
7M-5289	Hub	217-7736						
7M-5756	Ring Gear	214-0531						
7M-6621	Gear Pump	226-0172						

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## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number
7P-2372	Joint Assembly	367-6072
7P-3472	Pin	374-8366
7P-5082	Pin	374-8367
7P-6596	Bearing	295-6409
7P-6770	Support	389-6299
7P-6984	Pin	393-3674
7P-7245	Valve	386-3811
7P-7734	Rod	376-3643
7P-7858	Sleeve Bearing	374-8362
7P-8076	Planet Gear	390-5263
7P-8370	Bearing	295-6410
7S-0706	Track Shoe	175-8673
7S-0847	Cage	223-6311
7S-1234	Bushing	394-0192
7S-1579	Nut — Spanner	239-7964
7S-2980	Plate — Reaction	226-5998
7S-3002	Ball Bearing	386-4961
7S-3033	Hub	226-5985
7S-3161	Lifter — Valve	279-4996
7S-4097	Exhaust Manifold Adapter	383-3700
7S-4411	Cap Assembly	373-1912
7S-4494	Piston	226-5999
7S-4611	Cage	226-5989
7S-4629	Gear Pump	226-0158
7S-4995	Rain Cap	382-5063
7S-5003	Rain Cap	379-0184
7S-5787	Chamber As.	247-3300
7S-6104	Gear — Sun	239-7934
7S-6284	Exhaust Pipe	390-5286
7S-6531	Guard As. (RH)	226-4939
7S-6532	Guard As. (LH)	226-4940
7S-6537	Guard Assembly	226-4941
7S-6538	Guard As. — LH Basic	226-4942
7S-6723	Bracket — Alternator	299-1978
7S-6875	Gear Pump	217-2601
7S-6902	Gear — Sun	229-1619
7S-6964	Ring Gear	214-0532
7S-7043	Mount	389-6332
7S-7069	Head Assembly	242-3434
7S-7070	Head As. — Cylinder	325-6107
7S-7144	Valve Spring	394-8211
7S-7400	Pump Gp	226-0173

Original Part Number	Part Name	Classic Part Number
7S-7602	Gear Pump	226-0174
7S-7625	Support As.	226-6095
7S-7681	Exhaust Pipe	385-7213
7S-7809	Cap As. — Radiator	295-6417
7S-7973	Guard — Final Drive Wear	213-9110
7S-7975	Guard — Final Drive Wear	239-7966
7S-8213	Guard As. — Final Drive Wear	226-4943
7S-8214	Guard As. — Final Drive Wear	226-4944
7S-8443	Muffler	247-2675
7S-8572	Gear	221-9095
7S-8631	Shaft As.	275-5296
7S-8660	Gear Pump	226-0175
7S-8736	Extension	382-5066
7S-9093	Shoe — Track	188-5617
7S-9094	Shoe — Track	188-5313
7S-9096	Track Shoe	281-6370
7S-9098	Track Shoe	188-5615
7S-9099	Track Shoe	188-5613
7S-9101	Track Shoe	281-6372
7S-9181	Track Link (RH)	188-5531
7S-9182	Track Link (LH)	188-5532
7S-9567	Shoe — Track Nx	175-8022
7S-9601	Track Link (LH)	188-5712
7S-9602	Track Master Link (LH)	188-5711
7S-9603	Track Master Link (RH)	188-5712
7S-9604	Track Master Link (LH)	188-5711
7S-9749	Pulley	264-5888
7T-0119	Support As.	299-2066
7T-0203	Guide	226-4959
7T-0204	Bearing — Brace	247-4126
7T-0205	Bearing	247-4127
7T-0206	Bearing	297-7144
7T-1285	Planet Gear	297-7190
7T-1310	Track Sprk Rim	290-0861
7T-1311	Sprocket Rim	289-2211
7T-1776	Slide	396-0659
7T-2036	Filler Cap	361-1721
7T-2879	Trunnion	396-7262
7T-3173	Piston	346-5680

Original Part Number	Part Name	Classic Part Number
7T-3194	Yoke	346-5681
7T-3343	Plate	297-7231
7T-3365	Carrier	388-6563
7T-3370	Yoke As.	302-2702
7T-3501	Idler Assembly	175-8255
7T-3566	Clutch Piston	394-9191
7T-3676	Reaction Hub	388-6578
7T-3952	Gear	295-6429
7T-4043	Track Link (RH)	289-4951
7T-4044	Track Link (LH )	289-4952
7T-4155	Sleeve Bearing	374-1458
7T-4539	Track Link (RH)	257-8012
7T-4540	Track Link (LH)	257-8013
7T-4541	Master RH Link	257-8016
7T-4542	Master LH Link	257-8017
7T-4543	Master RH Link	257-8016
7T-4544	Master LH Link	257-8017
7T-4562	Idler As.	175-8263
7T-4628	Track Bushing	259-7068
7T-4636	Track Bushing	260-1508
7T-4645	Track Link (RH)	175-8256
7T-4646	Track Link (LH)	175-8257
7T-4753	Torque Converter Stator	384-5945
7T-4754	Torque Converter Impeller	385-7231
7T-4781	Track Shoe	188-5617
7T-4782	Track Master Shoe	188-5618
7T-4783	Track Shoe	188-5313
7T-4784	Track Master Shoe	188-5314
7T-5038	Housing Assembly	297-7202
7T-5510	Pad Assembly	367-6090
7T-6427	Pin	319-3462
7T-6654	Roller Bearing	388-0584
7T-7621	Roller Bearing	384-4823
7T-8136	Shaft — Planet	314-8714
7T-8174	Planet Gear	388-0583
7T-9272	Gear — Sun	296-1354
7T-9369	Sun Gear	376-9071
7T-9370	Gear — Sun	283-5207
7T-9542	Ring Gear	384-4822
7T-9586	Bearing	314-8645
7T-9647	Piston Assembly	275-5294
7T-9931	Countershaft	215-1760
7T-9963	Case As. — Transfer Gear	219-9665

(Continued)

## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number
7T-9989	Clutch Housing	380-1509
7V-3719	Collet	376-3644
7V-3791	Guard	389-6315
7V-3842	Spider Gp — Brg	367-6069
7V-5249	Shaft	215-1761
7V-5347	Tube As.	373-1902
7V-5979	Gear	231-0238
7V-5981	Driver	231-0256
7V-6398	Stack	374-7478
7V-6715	Pin	361-1701
7V-6716	Pin	396-7273
7V-6790	Pinion Shaft	308-9922
7V-6791	Pin Gear	384-4821
7V-6898	Pin Assembly	241-2539
7V-7017	Pinion	231-0018
7V-7973	Gear	231-0239
7V-7974	Pinion	231-0253
7V-7976	Pinion — Swing Drive	231-0254
7W-0182	Pump Plunger	391-9893
7W-0205	Oil Cooler Core	379-0183
7W-0450	Water Pump Gear	279-4997
7W-0507	Oil Pump Gear	279-4998
7W-0508	Gear	296-1351
7W-0688	Gasket	393-5209
7W-1058	Tube	393-3613
7W-1532	Pulley	298-2793
7W-1902	Adapter	299-1955
7W-1927	Retaining Ring	387-2935
7W-2059	Gasket	380-1548
7W-2164	Core Assembly	299-1996
7W-2315	Retainer	384-3475
7W-2398	Gasket	390-1003
7W-3042	Tube Assembly	325-6231
7W-3773	Pulley	383-1583
7W-3779	Plate As.— Idler	301-5219
7W-4070	Camshaft Gear	380-1551
7W-4137	Rocker Arm	378-3986
7W-5194	Muffler	346-5682
7W-5426	Camshaft	378-3987
7W-5435	Fuel Injector Adapter	374-7493
7W-5648	Gasket	393-5208
7W-5684	Pulley	298-2771
7W-5685	Pulley	298-2772

Original Part Number	Part Name	Classic Part Number
7W-5687	Hub	314-8684
7W-5692	Pulley	386-3041
7W-5698	Pulley	295-5679
7W-5699	Pulley	378-3988
7W-5929	Pump Plunger	391-9895
7W-6459	Oil Cooler Core	395-1313
7W-7071	Gasket	393-5225
7W-7181	Muffler (RH)	360-7906
7W-7182	Muffler (LH)	360-7907
7W-8064	Inlet Valve	384-8705
7W-8120	Bushing	387-2907
7W-9020	Suction Bell	378-3989
7W-9707	Muffler	360-9626
7X-2396	Gasket Kit	393-5194
7X-2397	Gasket Kit	393-5193
7X-7954	Gasket Kit	393-5204
7Y-0207	Cylinder	383-1584
7Y-0213	Gear	301-4760
7Y-0219	Coupling Gear	376-7652
7Y-0221	Gear	301-4758
7Y-0223	Shaft — Planet	301-4625
7Y-0224	Gear	301-4759
7Y-0225	Shaft — Planet	301-4571
7Y-0228	Carrier	301-5239
7Y-0238	Gear	301-4689
7Y-0241	Carrier	301-4635
7Y-0242	Carrier	301-4637
7Y-0249	Gear	301-4694
7Y-0631	Track Tension Spring	375-5446
7Y-0680	Piston	360-2262
7Y-0681	Cylinder	374-3499
7Y-0745	Swing Bearing Group	384-4819
7Y-0797	Ring Gear	288-8726
7Y-1035	Mount	383-2118
7Y-1100	Roller Bearing	394-8226
7Y-1258	Piston	367-6091
7Y-1315	Exhaust Pipe	385-7209
7Y-1427	Gear — Sun	288-8727
7Y-1428	Gear — Planet	288-8728
7Y-1430	Gear — Sun	314-8671
7Y-1431	Gear — Planet	288-8729
7Y-1432	Carrier	314-8659
7Y-1461	Coupling	301-4649

Original Part Number	Part Name	Classic Part Number
7Y-1508	Muffler	395-1303
7Y-1513	Pipe As. — Exhaust	301-5249
7Y-1517	Pipe As. — Tail	301-5246
7Y-1563	Swing Bearing	385-3776
7Y-1565	Swing Gear	392-4510
7Y-1606	Track Tension Spring	375-5447
7Y-1631	Ring Gear	376-7653
7Y-1643	Gear	314-8670
7Y-1644	Gear	301-3406
7Y-1646	Shaft	301-4624
7Y-1685	Rod	333-4952
7Y-1687	Piston	360-2266
7Y-1751	Carrier	314-8660
7Y-1752	Carrier	314-8661
7Y-1772	Bearing Cage	374-3500
7Y-1774	Carrier	376-7654
7Y-1775	Shaft	314-8718
7Y-1780	Cylinder	360-2261
7Y-1874	Spring	380-7415
7Y-1978	Muffler	360-7893
7Y-2040	Muffler	301-7975
7Y-2345	Pin	394-0211
7Y-2348	Pin	314-8697
7Y-2349	Pin	301-4556
7Y-2357	Pin	301-4564
7Y-2391	Track Link Assembly	301-5240
7Y-2392	Link (RH)	301-4765
7Y-2395	Bearing	314-8646
7Y-2396	Bearing	314-8634
7Y-3427	Bearing	314-8635
7Y-3428	Bearing	314-8647
7Y-3528	Link	380-7551
7Y-3547	Pin	396-7278
7Y-3548	Pin	396-7289
7Y-3549	Pin	360-2349
7Y-3550	Pin	360-2350
7Y-3551	Sleeve Bearing	380-7375
7Y-3552	Sleeve Bearing	364-5266
7Y-3553	Bearing	301-0433
7Y-4270	Roller Bearing	388-6577
7Y-4666	Bearing	314-8636
7Y-5100	Hydraulic Cylinder	374-3501
7Y-5102	Sleeve Bearing	380-7368
7Y-5108	Hydraulic Rod	394-0912

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## Part Numbers Beginning With 7 (Continued)

Original Part Number	Part Name	Classic Part Number
7Y-5128	Bearing	314-8648
7Y-5131	Bearing	301-4626
7Y-6389	Sleeve Bearing	372-7507

Original Part Number	Part Name	Classic Part Number
7Y-6607	Sleeve Bearing	372-7508
7Y-6608	Bearing	314-8649
7Y-6617	Pin	372-7512

Original Part Number	Part Name	Classic Part Number
7Y-6618	Pin	372-7513
7Y-6619	Pin	314-8696
7Y-6626	Bearing	314-8650

## Part Numbers Beginning With 8

Original Part Number	Part Name	Classic Part Number
8A-2305	Component Rebuild Kit	386-3042
8B-2327	Retaining Ring	392-4495
8B-5972	Ball Bearing	314-8503
8C-0580	Gasket Kit	393-1023
8C-3111	Rod End	392-4523
8C-4456	Gasket Kit	393-1029
8C-5704	Gasket Kit	393-1027
8C-8556	Gasket Kit	390-5287
8D-0527	Gear	229-1621
8D-0926	Rod Assembly	228-9422
8D-0983	Mount	384-3470
8D-0994	Rod Assembly	228-9459
8D-0995	Rod Assembly	228-9460
8D-1648	Disc	367-6070
8D-1651	Cover	396-7279
8D-1769	Plate	229-1622
8D-1784	Pin	282-6567
8D-1833	Pin	364-5269
8D-2116	Ring Gear	384-4805
8D-2256	Roller Bearing	374-1848
8D-2351	Pin	297-7217
8D-2423	Drive Shaft	394-8221
8D-2429	Pin Assembly	319-3445
8D-2452	Gear	297-7180
8D-2459	Gear	297-7181
8D-2469	Shaft	275-5280
8D-2519	Shaft — Planet	300-2591
8D-2528	Drive Shaft	394-9829
8D-2532	Carrier — Planet	301-4773
8D-2628	Nut	299-2027
8D-2878	Ring	330-9282
8D-3591	Carrier	301-4769
8D-3665	Pin	297-7218
8D-3743	Sprocket	391-9876
8D-3744	Drive Shaft	275-5283

Original Part Number	Part Name	Classic Part Number
8D-3877	Sun Gear	275-5278
8D-3949	Ring	330-9283
8D-3997	Pin	389-6302
8D-4009	Brake Line	392-4496
8D-4027	Differential Housing	380-7522
8D-4335	Pin Gear	384-4817
8D-4402	Yoke	365-8823
8D-4528	Spider	330-9287
8D-4673	Pin — Cylinder	302-2711
8D-4675	Cylinder Pin	391-9863
8D-4766	Pin — Cylinder	365-8832
8D-4942	Differential Housing	392-4514
8D-5059	Differential Group	388-6572
8D-5344	Gear	243-0341
8D-5346	Shaft	243-0350
8D-5347	Shaft	243-0352
8D-5377	Differential Housing	380-7477
8D-6138	Brake Cam	394-9187
8D-6139	Brake Cam	394-9188
8D-6489	Bevel Shaft	275-5271
8D-7083	Bearing	386-4930
8D-7086	Bearing	330-9251
8D-7096	Pin	297-7219
8D-7167	Pin	389-6319
8D-7174	Cover As.	299-1997
8A-2251	Liner	376-9068
8D-7284	Bearing	330-9252
8D-7427	Dr Shaft	282-6568
8D-7693	Differential Housing	384-4830
8D-7719	Spider and Bearing Assembly	384-5946
8D-8186	Yoke Assembly	282-6631
8D-8572	Sleeve Bearing	380-7384
8D-8633	Shaft	275-5281
8D-8634	Planet Gear	275-5275

Original Part Number	Part Name	Classic Part Number
8D-8638	Sun Gear	275-5279
8D-8639	Ring Gear	275-5277
8D-8804	Brake Hub	282-6551
8D-8805	Cover	299-2002
8D-8829	Sleeve Bearing	361-1692
8D-9296	Bearing	330-9253
8D-9479	Gear	302-2670
8D-9482	Gear	302-2673
8D-9662	Spider	330-9288
8D-9687	Pin	282-6550
8D-9804	Housing	302-2682
8D-9815	Pin	297-7220
8D-9973	Housing	391-9825
8E-0855	Track Master Pin	289-0639
8E-1442	Track Link Assembly	290-3450
8E-1707	Clutch Piston	384-5947
8E-1882	Track Sprocket	322-6236
8E-2043	Yoke	385-6115
8E-2058	Self Aligning Bearing	384-5949
8E-3332	Track Shoe	175-8184
8E-3525	Sprocket Hub	393-1043
8E-3726	Torque Converter Stator	394-0907
8E-4026	Pin	394-0902
8E-4055	Track Link (RH)	290-0838
8E-4056	Track Link (LH)	290-0839
8E-4272	Track Pin	289-0638
8E-4273	Track Master Pin	289-0640
8E-4275	Link As.	288-3694
8E-4365	Sprocket Segment Group	188-5635
8E-4426	Track Shoe	288-6671
8E-4427	Track Shoe	288-6670
8E-4428	Track Shoe	288-6669
8E-4429	Track Shoe	288-6677

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## Part Numbers Beginning With 8 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
8E-4430	Track Shoe	288-6676	8E-8643	Link As.	288-5754	8H-7810	Transmission Gear	213-8753
8E-4434	Track Shoe	188-5263	8E-8644	Link As.	288-5755	8H-7813	Collar	215-1780
8E-4435	Track Master Shoe	188-5264	8E-9214	Pin	325-6156	8H-7980	Piston	226-0249
8E-4436	Track Shoe	188-5261	8E-9741	Oil Pump Gear	391-1088	8H-8175	Sleeve Bearing	376-3636
8E-4437	Track Master Shoe	188-5262	8E-9795	Connector Assembly	256-4851	8H-8898	Pin	385-3801
8E-4499	Track Shoe	188-5383	8E-9805	Sprocket	286-9821	8H-9789	Ball Bearing	374-8342
8E-4500	Track Master Shoe	188-5387	8F-5104	Screen Assembly	314-8539	8H-9806	Gear	325-6091
8E-4501	Track Shoe	188-5381	8F-7278	Diaphragm	392-4485	8I-1098	Shaft	396-7275
8E-4502	Track Master Shoe	188-5385	8F-7422	Gear	228-9461	8J-0201	Sleeve Bearing	384-4781
8E-4576	Single Flange Roller Group	288-3690	8F-8523	Sleeve Bearing	383-3701	8J-0278	Sleeve Bearing	385-3808
8E-4579	Roller Group — Single Flange Nx	175-8216	8F-8858	Button	314-8511	8J-0632	Pin	396-7280
8E-4675	Sprocket Segment Group	188-5638	8F-9365	Pin	319-3463	8J-1300	Pin Assembly	256-4788
8E-4713	Link As.	288-3705	8G-0876	Pin	374-8368	8J-1616	Lever	330-9271
8E-4714	Link As.	288-3693	8G-0890	Self Aligning Bearing	374-8340	8J-1624	Valve Assembly	390-0997
8E-4954	Housing	391-9823	8G-1682	Pin	241-2585	8J-1818	Piston	376-9061
8E-5284	Roller Bearing	388-0582	8G-3102	Piston	325-6162	8J-2022	Pump Assembly	367-6073
8E-5450	Seal	325-6190	8G-4027	Pin	393-3677	8J-2652	Shaft	299-2054
8E-5600	Carrier Roller Group	286-9824	8G-4187	Pin Assembly	295-5676	8J-2653	Lever As.	299-2015
8E-5993	Idler Gear	215-1903	8G-4189	Bearing	295-6411	8J-2654	Lever As.	299-2016
8E-6135	Idler Gp — Track	288-3691	8G-4190	Seal	296-1366	8J-2880	Cap — Bearing	295-6420
8E-6221	Pin	325-6155	8G-4259	Self Aligning Bearing	374-8341	8J-3431	Pin	256-4789
8E-6752	Sleeve Bearing	388-6576	8G-4371	Self Aligning Bearing	374-8339	8J-3443	Bearing	396-7281
8E-6754	Connector Assembly	325-6044	8G-4372	Support	376-3645	8J-3714	Stop	314-8723
8E-6755	Sleeve Bearing	325-6026	8G-4510	Clutch Plate	383-2113	8J-4382	Bearing	380-7512
8E-6756	Sleeve Bearing	325-6027	8G-4563	Sprocket Hub	394-0212	8J-4411	Self Aligning Bearing	384-4815
8E-6758	Connector Assembly	396-0639	8G-7133	Carrier	376-3647	8J-4492	Hydraulic Stem	383-3702
8E-7232	Track Idler Group	288-3691	8G-8311	Bearing	295-6412	8J-4504	Sleeve Bearing	385-3799
8E-7455	Gear	221-7947	8H-0901	Roller Bearing	374-1853	8J-4585	Self Aligning Bearing	394-9185
8E-7456	Gear	221-7948	8H-0902	Roller Bearing	374-1849	8J-5014	Pin	384-4773
8E-7494	Single Flange Roller Group	175-8185	8H-1174	Drum	226-6101 (Drum), 231-1937 (Kit-Strg Cl)	8J-5392	Ballstud	364-5264
8E-7569	Transmission Case	394-0899	8H-1383	Rod	299-2051	8J-5604	Breather	396-7282
8E-7855	Track Pin	290-0841	8H-1993	Valve — Inlet	256-4765 (Valve Kit)	8J-5654	Sleeve Bearing	325-6028
8E-7856	Track Master Pin	290-0843	8H-2300	Pinion	226-6083	8J-5778	Sleeve Bearing	374-8359
8E-7857	Link As.	290-0819	8H-2434	Ster Drum	216-7862	8J-6861	Self Aligning Bearing	384-5950
8E-7868	Track Shoe	290-9940	8H-2810	Ftr Case	314-8512	8J-7424	Sleeve Bearing	380-7564
8E-8488	Pump Gear	376-9072	8H-7577	Lock Plate	392-4486	8J-7466	Hydraulic Seat	385-3787
8E-8585	Track Master Link (RH)	308-3056				8J-7596	Sleeve Bearing	361-1693
8E-8586	Track Master Link (LH)	308-3057				8J-7727	Pin	380-7552
						8J-7978	Self Aligning Bearing	388-0581
						8J-9926	Sleeve Bearing	383-2115

(Continued)



## Part Numbers Beginning With 8 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
8K-0042	Bevel Gear	308-9850	8K-4764	Pin	241-2556	8M-8628	Joint Flange	217-9776
8K-0067	Shim	396-1569	8K-5283	Plate	299-2043	8M-8642	Housing	219-9669
8K-0323	Link As.	290-3450	8K-5334	Pin	241-2598	8M-8644	Housing	215-1782
8K-0393	Pin	241-2548	8K-5587	Rod Group	226-4954	8M-8646	Plate Assembly	216-3583
8K-0437	Gear	231-0233	8K-5757	Sleeve Bearing	367-6076	8M-8649	Clutch Piston	217-9777
8K-0439	Gear	231-0234	8K-5758	Pin	241-2566	8M-8650	Clutch Piston	217-9778
8K-0440	Pinion	231-0017	8K-5991	Gear	253-1439	8M-8652	Shaft	297-7252
8K-0442	Gear	231-0240	8K-5999	Gear	253-1440	8M-8677	Carrier	213-4449
8K-0455	Pin	241-2547	8K-6015	Gear	221-9076	8M-8930	Roller Bracket	386-4931
8K-0509	Clutch Plate	382-5053	8K-6282	Sun Gear	281-1698	8N-0002	Trunnion	314-8728
8K-0518	Pin	241-2549	8K-6283	Gear	221-9077	8N-0081	Trunnion	393-5196
8K-0533	Bearing	314-8637	8K-6285	Shaft	299-2057	8N-0111	Mount Assembly	374-1452
8K-0576	Cage	231-0261	8K-6320	Shaft	253-1430	8N-0560	Drive Gear	378-3990
8K-0578	Spacer	231-0248	8K-6321	Gear	253-1441	8N-0561	Idler Gear	373-1886
8K-0579	Retainer	231-0245	8K-6357	Pin	241-2586	8N-0597	Pulley	264-5890
8K-0665	Cage	231-0262	8K-6359	Pin	241-2588	8N-0784	Turbo Mount Manifold	393-1044
8K-1107	Rack Disconnect	231-0264	8K-9661	Bevel Gear	213-8218	8N-0875	Exhaust Valve	247-6893
8K-1317	Shaft	231-0019	8L-3972	Baffle	311-9345	8N-1184	Exhaust Elbow	392-4497
8K-1749	Shaft	231-0242	8L-4529	Pulley	264-5889	8N-1187	Head Assembly	242-3435
8K-1754	Spacer	231-0247	8M-0493	Cage — Outer Bearing	216-7866	8N-1188	Head Assembly	242-3436
8K-1755	Retainer	231-0246	8M-0874	Valve Plunger	311-9439	8N-1214	Mount Assembly	325-6125
8K-1756	Cage	231-0263	8M-2169	Track Bushing	290-0844	8N-1300	Bushing	394-0193
8K-1940	Retainer Assemblies	231-0258	8M-2549	Connecting Rod	314-8537	8N-1365	Gear	394-8222
8K-1944	Case Assembly	231-0265	8M-2619	Track Bushing	290-0844	8N-1594	Shield	378-3991
8K-1945	Shaft Assembly	231-0266	8M-2620	Seal Washer	290-0846	8N-1616	Shield	377-5856
8K-1946	Retainer Assemblies	231-0259	8M-2621	Spacer	290-0836	8N-1619	Shield	377-5857
8K-2082	Idler Spring	388-6560	8M-3224	Muffler	247-2676	8N-1620	Manifold Shield	374-4725
8K-2198	Cylinder	382-5062	8M-6191	Sleeve	226-0234	8N-1622	Manifold Shield	374-4726
8K-2518	Joint Assembly	231-0267	8M-6219	Spring Assembly	293-7606	8N-1628	Pump Shaft	383-3703
8K-2682	Adapter	231-0268	8M-6238	Spacer	289-0648	8N-1721	Rod Assemblies	269-5291
8K-2743	Track Sprocket	289-2206	8M-6615	Spring #1	293-7607	8N-1726	Connecting Rod	379-8866
8K-2779	Cage	231-0483	8M-6616	Spring #2	293-7608	8N-1849	Rod Bearing	379-0196
8K-2860	Flange	297-7171	8M-6676	Cylinder	226-4960	8N-1965	Tube — Disposal	325-6235
8K-2896	Sleeve Bearing	387-2902	8M-7065	Gasket	380-1567	8N-1984	Rod Assembly	242-3441
8K-2956	Pin	241-2550	8M-7166	Housing	297-7192	8N-2051	Air Compressor	386-2063
8K-3712	Pin Assembly	241-2541	8M-7207	Guard Assembly	226-0236	8N-2104	Suction Bell	380-1521
8K-4127	Gear Group	235-5055	8M-7208	Guard Assembly	226-0237	8N-2275	Sleeve Bearing	311-9365
8K-4296	Pin	241-2555	8M-7231	Seal Washer	314-7841	8N-2510	Shaft	325-6208
8K-4392	Sleeve Bearing	389-6325	8M-7290	Spacer	289-0647	8N-2516	Valve Bonnet	377-5858
8K-4699	Link As.	290-3451	8M-7456	Track Master Pin	289-4954	8N-2641	Sleeve	325-6210
8K-4753	Link As.	290-0837	8M-8161	Flange	215-1781	8N-3180	Piston	250-6563
8K-4754	Track Link (RH)	290-0820	8M-8489	Dowel	385-3793	8N-3181	Liner Kit	250-6555
8K-4756	Track Link (LH)	290-0821	8M-8619	Cage	217-7725	8N-3182	Piston	250-6564
			8M-8623	Sun Gear	213-8755	8N-3183	Liner Kit	250-6556

(Continued)

## Part Numbers Beginning With 8 (Continued)

Original Part Number	Part Name	Classic Part Number
8N-3251	Shaft As. — Rocker Arm	314-8711
8N-3311	Shaft As. — Rocker Arm	325-6199
8N-3312	Shaft As. — Rocker Arm	325-6200
8N-3325	Rocker Arm	314-8623
8N-3327	Rocker Arm	314-8624
8N-3451	Fuel Injection Line	390-0927
8N-3452	Fuel Injection Line	390-0928
8N-3453	Fuel Injection Line	390-0940
8N-3454	Fuel Injection Line	390-0930
8N-3455	Fuel Injection Line	390-0920
8N-3539	Pump Plunger	377-5861
8N-3666	Component Rebuild Kit	377-5842
8N-3723	Exhaust Valve	311-9472
8N-3753	Connecting Rod	379-8867
8N-4110	Sleeve Bearing	394-8207
8N-4445	Extension Pipe	386-3061
8N-5305	Spacer	363-7464
8N-5385	Exhaust Manifold	391-9835
8N-5387	Extension Elbow	373-1908
8N-5388	Muffler	360-7895
8N-5565	Muffler Assembly	247-2665
8N-5779	Coupling — Exhaust	325-6047
8N-5929	Cover	296-1349
8N-6004	Head Assembly	247-3369
8N-6796	Head Assembly	269-5290
8N-7257	Mount	396-0660
8N-7315	Tube As. — Outlet	325-6232
8N-7769	Rod Bearing	314-8505
8N-7770	Rod Bearing	314-8506
8N-7780	Oil Shield	314-8544
8N-7782	Rotocoil	383-1585
8N-8196	Exhaust Manifold Adapter	377-5852
8N-8220	Rod Bearing	377-5860
8N-8226	Main Bearing	376-9081
8N-8227	Main Bearing	376-9082
8N-8228	Main Bearing	376-9083
8N-8229	Main Bearing	376-9084
8N-9174	Liner — Cylinder	314-8531
8N-9402	Coupling	325-6048
8N-9489	Chamber Assembly	247-3301

Original Part Number	Part Name	Classic Part Number
8N-9733	Fuel Injection Line	319-8174
8P-0025	Gear	217-7721
8P-0187	Nut	219-9676
8P-0203	Drum	226-8004
8P-0514	Yoke Assembly	308-9947
8P-0605	Gear	213-8453
8P-0606	Final Drive Pinion	215-1783
8P-0622	Hub — Sprocket	288-8731
8P-0769	Turbine Hub	308-9870
8P-0953	Turbine — Converter	297-7269
8P-0957	Torque Converter Impeller	297-7209
8P-1121	Ring	299-2049
8P-1182	Shaft	227-4771
8P-1183	Gear	226-7980
8P-1324	Cage	229-8239
8P-1325	Hub	226-8005
8P-1326	Pilot — Piston	226-6097
8P-1327	Pinion	226-8000
8P-1328	Flange	226-8006
8P-1353	Piston	226-8007
8P-1656	Clutch Plate	367-6071
8P-1774	Pinion	226-8001
8P-1851	Hub As. — Sprocket	224-1314
8P-1853	Nut	226-7997
8P-1855	Hub As. — Sprocket	227-4770
8P-1892	Piston	283-5208
8P-1916	Gear	283-5209
8P-1918	Gear	283-5210
8P-1919	Gear	300-2579
8P-1964	Clutch Plate	377-7445
8P-2042	Shaft — Planet	283-5211
8P-2051	Clutch Plate	385-6116
8P-2430	Shaft Assembly	297-7258
8P-3252	Pin	319-3464
8P-3377	STL Tube	392-4498
8P-4047	Shaft — Planet	373-5390
8P-4111	Guard As.	226-4945
8P-4112	Guard As.	226-4946
8P-4306	Pump Group	217-2594
8P-4520	Clutch Piston	394-0908
8P-4537	Pinion	216-7867
8P-4538	Gear	216-7868
8P-4539	Pinion	217-7711
8P-4734	Housing Assembly	239-7955

Original Part Number	Part Name	Classic Part Number
8P-4735	Piston	239-7949
8P-5117	Rod Group	226-2747
8P-5229	Torque Converter Stator	395-1309
8P-5687	Clutch Plate	380-7493
8P-5961	Ring Gear	385-6137
8P-6245	Carrier Roller Group	188-5612
8P-6256	Carrier Roller Group	188-5612
8P-6274	Guard Assembly	226-4949
8P-6275	Guard Assembly	226-0191
8P-6495	Drum	213-6954 (Drum), 227-9302 (Ster Cl Kit)
8P-6803	Shaft Assembly	215-1842
8P-6949	Plate	260-0787
8P-7396	Hub — Planet Gear	239-7967
8P-7595	Washer — Thrust	239-7940
8P-7639	Gear	239-7935
8P-7790	Valve Gp — Press	247-4437
8P-8221	Plate — Guide	226-2748
8P-8570	Pilot As. — Piston	226-6097
8P-8677	Hub	297-7205
8P-8843	Yoke	373-5391
8P-9265	Torque Converter Turbine	369-9497
8P-9266	Torque Converter Stator	385-6127
8P-9507	Piston	283-5212
8P-9657	Pin	241-2622
8P-9658	Pin	241-2623
8R-0931	Housing	302-4300
8R-0942	Reaction — Clutch Plate	380-1484
8R-1015	Support	374-4727
8R-2193	Clutch Piston	376-9051
8R-2196	Reaction Plate	375-2626
8R-2533	Reaction Piston	377-7446
8R-2535	Reaction Plate	377-7447
8R-3252	Shaft — Planet	297-7259
8R-3787	Shaft	299-2058
8R-3921	Collet	308-9839
8R-3941	Collet	393-1016

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## Part Numbers Beginning With 8 (Continued)

Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number	Original Part Number	Part Name	Classic Part Number
8R-3943	Collet	308-9840	8S-1832	Guard Assembly	226-4948	8T-1606	Gasket Kit	386-3046
8R-3946	Collet	308-9841	8S-1925	Transfer Gear	373-1887	8T-1643	Gasket Kit	388-6575
8R-4184	Sleeve Bearing	374-6515	8S-2123	Cage	217-7726	8T-2466	Gasket Kit	393-5199
8R-4265	Collet	384-3462	8S-2126	Spacer	222-1767	8T-2470	Gasket Kit	393-5219
8R-4268	Collet	384-3461	8S-2140	Trunnion	226-8020	8T-2500	Gasket Kit	393-1028
8R-4525	Collet	374-6501	8S-2389	Fuel Valve Body	377-5831	8T-7047	Gasket Kit	384-5952
8R-4568	Reaction Piston	385-6108	8S-2560	Idler Gp, Idler As.	200-9235 (Complete Idler Group), 175-8255 (Idler As.)	8T-9485	Gasket Kit	383-3704
8R-4821	Carrier	308-9837				8T-9486	Gasket Kit	393-5197
8R-6213	Mount	389-6301				8V-1540	Universal Joint	388-6574
8R-6830	Slip Shaft	388-0567				8V-1613	Lever	299-2017
8R-7336	Bearing	301-3394				8V-1624	Lever	299-2019
8R-7425	Retainer	308-9917				8V-2631	Pin Assembly	241-2526
8R-8335	Gear — Bevel	368-0105				8V-2632	Pin Assembly	241-2523
8R-8740	Pinion Shaft	373-5392	8S-2589	Track Link (RH)	188-5251	8V-2634	Pin Assembly	241-2518
8R-9306	Bevel Gear	388-0569	8S-2590	Track Link (LH)	188-5252	8V-2639	Pin Assembly	241-2542
8R-9750	Planet Gear	391-9869	8S-2809	Muffler	247-2677	8V-3134	Pinion	260-0788
8R-9798	Lock Plate	308-9912	8S-3487	Gear Assembly	221-7949	8V-3135	Gear	260-0783
8S-0134	Sleeve Bearing	389-6331	8S-3491	Housing Assembly	221-7950	8V-3136	Gear	253-1442
8S-0248	Breather Assembly	325-6033	8S-3617	Chamber Assembly	247-3302	8V-3846	Gear	224-1301
8S-0385	Track Master Shoe	188-5618	8S-3653	Valve Bonnet	374-4728	8V-5439	Pin Assembly	241-2531
8S-0386	Track Master Shoe	188-5312	8S-3970	Precleaner Assembly	242-3438	8V-6382	Hub Assembly	308-9868
8S-0387	Track Master Shoe	188-5614				8V-6384	Spacer	308-9935
8S-0388	Track Master Shoe	188-5616	8S-4182	Belt Adjusting Strap	389-6335	8V-6390	Brake Drum	377-7449
8S-0390	Track Master Shoe	281-6371	8S-4996	Muffler	390-0909	8V-6435	Spider and Bearing Kit	377-7451
8S-0391	Track Master Shoe	188-5618	8S-5438	Muffler	360-7896			
8S-0392	Shoe — Track Master	188-5314	8S-5722	Plate	226-8009	8V-7175	Pin	241-2567
8S-0393	Track Master Shoe	188-5614	8S-6511	Sleeve Bearing	380-7372	8V-7176	Pin	241-2568
8S-0394	Track Master Shoe	315-6693	8S-6782	Extension	383-1586	8V-7659	Pin	361-1702
8S-0395	Track Master Bolt	188-5640	8S-7601	Chamber Assembly	247-3296	8V-7884	Housing	302-2681
8S-0396	Track Link Assembly	188-5310	8S-7716	Manifold	295-0415	8V-7885	Housing	297-7193
8S-0493	Pump Shaft	325-6198	8S-7717	Manifold	261-0894	8V-9360	Drum	377-7452
8S-0556	Coupling	221-9114	8S-7718	Manifold	295-0416	8V-9570	Indicator Rod	384-4814
8S-0569	Gear	213-8754	8S-7818	Bracket	226-0211	8W-0376	Drive Shaft	394-9194
8S-0573	Transfer Gear	215-1844	8S-9070	Carrier	213-4464	8W-1708	Pin	388-0643
8S-0905	Muffler As.	302-2690	8S-9071	Bearing Cage	216-7869	8W-1749	Plate	380-7403
8S-0915	Track Master Shoe	281-6374	8S-9104	Retaining Ring	386-4932	8W-1751	Bracket Assembly	288-8732
8S-1061	Pilot Assembly	226-0227	8S-9151	Tapered Roller Bearing	374-8348	8W-1752	Bracket Assembly	288-8733
8S-1194	Shaft	217-7733	8S-9152	Roller Bearing	374-1850	8W-1753	Bracket	288-8734
8S-1198	Hub	219-2969	8S-9184	Gear Assembly	260-0785	8W-2307	Shaft — Planet	275-5284
8S-1522	Chamber	390-1004	8S-9686	Gasket Kit	393-5215	8W-2308	Shaft — Planet	275-5285
8S-1523	Chamber	388-0565	8S-9698	Gasket Kit	393-5221	8W-2309	Planet Shaft	392-4504
8S-1606	Cover Gasket	380-1568	8T-0072	Roller Bearing Cone	377-7448	8W-2357	Spindle	282-6549
8S-1831	Guard Assembly	226-4947	8T-0209	Bearing Race	384-5951	8W-3589	Track Link Assembly Spring	380-7389

(Continued)

## Part Numbers Beginning With 8 (Continued)

Original Part Number	Part Name	Classic Part Number
8W-3881	Bearing	394-8224
8W-4066	Bracket	288-8735
8W-4067	Bracket	288-8736
8W-4167	Sleeve Bearing	361-1694
8W-4523	Sleeve Bearing	385-3798
8W-4652	Spindle	385-7215
8W-4653	Spindle	385-7214
8W-5092	Circ Pinion	282-6569
8W-5293	Pin	282-6570
8W-5294	Pin	282-6556
8W-6473	Sleeve Bearing	380-7565
8W-6476	Pin	387-2930
8W-6493	Pin	395-1320
8W-6494	Pin	391-9902
8W-6497	Pin	319-3465

Original Part Number	Part Name	Classic Part Number
8W-8138	Output Shaft	377-7453
8W-8286	Sprocket	299-2061
8W-8288	Sprocket	299-2062
8W-8289	Sprocket	282-6629
8W-8317	Sprocket	275-5287
8W-8319	Drive Sprocket	380-7482
8W-8334	Sprocket	388-6573
8W-8346	Sprocket	388-6581
8W-8512	Pin	385-7220
8W-8610	Spindle	282-6549
8W-8628	Spindle	282-6571
8W-9004	Fuel Injection Line	391-9867
8W-9005	Fuel Injection Line	391-9866
8W-9566	Flange	376-9073
8W-9587	Flange	373-5394

Original Part Number	Part Name	Classic Part Number
8X-0576	Strip	383-2105
8X-4741	Insert	375-4335
8X-6738	Planet Shaft	394-8225
8X-8067	Mount	394-0205
8Y-0035	Yoke	393-1057
8Y-0395	Pin	393-3678
8Y-0783	Joint-Gp Univ	375-2621
8Y-0787	Universal Joint	373-5395
8Y-1198	Strip	325-6220
8Y-1199	Strip	325-6221
8Y-1624	Guard Assembly	295-6432
8Y-1625	Guard Assembly	295-6433
8Y-2735	Spring	383-2134
8Y-7024	Pin	375-9970
8Y-7031	Pin	375-9971

## Part Numbers Beginning With 9

Original Part Number	Part Name	Classic Part Number
9G-5313	Duo Cone Seal Group	377-7459
9G-5315	Duo Cone Seal Group	374-1830
9G-5818	Piston — Clutch	297-4860
9G-5841	Gear — Transfer	375-4087
9G-5842	Transfer Gear	394-0913
9G-6159	Track Bushing	290-0825
9G-6161	Track Master Bushing	290-0845
9G-6476	Rod Gp — Idler Recoil	226-0198
9G-6743	Sleeve Bearing	388-0642
9G-7038	Pin	396-0665
9R-7696	Pin	346-5705
9G-7411	Gear — Oil Pump Drive	297-7182
9G-7412	Gear	297-7183
9G-7414	Body As. — Oil Pump	374-7479
9G-7962	Track Master Pin	290-0823
9G-7993	Cage — Gr Bearing (RH)	239-7973
9G-8020	Retainer Plate	389-6322
9G-8117	Housing As.	302-2686

Original Part Number	Part Name	Classic Part Number
9G-8246	Rod Gp — Idler Recoil	226-4955
9G-8302	Guide	226-4853
9G-8303	Collar — Idler End	226-0242
9G-8638	Gear — Planet	295-6425
9G-9174	Gear — Sun	295-6430
9G-9178	Spindle	295-6443
9G-9180	Hub — Sprocket	295-6436
9G-9183	Shaft	295-0417
9G-9543	Gear — Oil Pump	295-6426
9G-9764	Yoke As.	319-3478
9H-1918	Gear — Bevel	219-9698
9H-1980	Pinion — Bevel	219-9699
9H-2256	Fp Pump	311-9443
9H-4104	Pilot — Spring	226-4962
9H-5233	Piston — Clutch	219-9708
9H-5433	Spacer	239-7963
9H-5797	Pump Plunger	391-9891
9H-6236	Push Rod	390-0999
9H-6980	Shaft — Pinion	226-6110
9H-7670	Piston	226-4961
9H-8489	Idler Assembly	188-5268
9H-9559	Pilot Assembly	302-2709
9J-0123	Trunnion	325-6227
9J-0940	Pin	319-3467

Original Part Number	Part Name	Classic Part Number
9J-0944	Pin	380-7399
9J-0945	Sleeve Bearing	383-2135
9J-0948	Bushing	394-2585
9J-0950	Sleeve Bearing	396-0667
9J-0951	Sleeve Bearing	396-0666
9J-1105	Pin As.	256-4790
9J-1140	Bushing	384-4782
9J-1141	Bushing	384-4783
9J-1187	Sleeve Bearing	384-4785
9J-1379	Pin	389-6303
9J-1676	Sleeve Bearing	380-7378
9J-1679	Sleeve Bearing	380-7566
9J-2332	Bearing	299-1969
9J-2365	Retainer	325-6186
9J-2759	Trunnion	394-0216
9J-3206	Self Aligning Bearing	380-1506
9J-3346	Plate As. — Trunnion	256-4839
9J-3466	Hydraulic Cylinder	393-0913
9J-3741	Shaft	386-4933
9J-5273	Trunnion As.	256-4848
9J-5284	Sleeve Bearing	380-7379
9J-5477	Stop	314-8723
9J-5875	Bearing — Sleeve	308-9830

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## Part Numbers Beginning With 9 (Continued)

Original Part Number	Part Name	Classic Part Number
9J-5942	Sleeve Bearing	380-7380
9J-6556	Hydraulic Rod	394-8212
9J-7099	Sleeve Bearing	391-9818
9J-7964	Bearing — Spherical	325-6017
9J-8166	Hydraulic Cylinder	394-9834
9J-8323	Trunnion	361-1713
9J-8427	Bracket	299-1984
9J-9147	Nut	299-2028
9J-9427	Bearing — Sleeve	361-1695
9J-9543	Pin As.	256-4791
9J-9598	Pin	296-1362
9K-0028	Track Link (LH)	289-9338
9K-0029	Track Link (RH)	289-9337
9K-0092	Pinion	231-0484
9K-0198	Gear — Sun	308-9865
9K-0424	Shaft — Pinion	215-1874
9K-0447	Shaft — Bevel Pinion	216-7870
9K-0723	Pin	396-7283
9K-0724	Collar	392-4524
9K-0726	Hitch Cap	393-3680
9K-0804	Pin	367-6092
9K-1193	Gear — Sun	221-9099
9K-1749	Shaft	221-9108
9K-1759	Carrier — Planet	221-9113
9K-1773	Gear — Ring	221-9100
9K-2300	Hub Assembly	224-1300
9K-2514	Sleeve Bearing	385-3797
9K-3413	Gear — Bevel Ring	223-4807
9K-3565	Shoe — Track	290-9941
9K-3568	Shoe — Track	290-9942
9K-4059	Spacer	290-3458
9K-4060	Track Pin	290-3453
9K-4061	Track Bushing	290-3454
9K-4062	Track Master Pin	290-3456
9K-4887	Carrier	253-1423
9K-5780	Wheel Rim	388-6597
9K-6628	Track Link (LH)	289-9338
9K-6629	Track Link (RH)	289-9337
9K-6841	Cage As.	216-7871
9K-6842	Cage As.	216-7872
9K-8425	Bearing — Sleeve	314-8638
9K-8427	Pin Assembly	241-2527
9K-8428	Pin Assembly	241-2533

Original Part Number	Part Name	Classic Part Number
9K-8430	Pin Assembly	241-2540
9K-8435	Pin	241-2552
9K-8757	Rod End — Bearing	311-9361
9K-9008	Differential Group	260-0776
9K-9156	Retainer	297-7236
9K-9158	Bearing — Sleeve	299-1970
9K-9271	Holder As. — Cage	217-7730
9K-9273	Nut — Adjusting	226-7998
9L-5519	Exhaust Manifold	392-4500
9L-5520	Exhaust Manifold	383-1587
9L-5836	Exhaust Coupling	385-7212
9L-5839	Exhaust Coupling	374-7480
9L-6371	Rod	363-7459
9L-7630	Gasket	392-4492
9L-7682	Inlet Valve	385-9266
9L-9315	Rocker Arm Shaft	378-3992
9M-0701	Piston — Steer	219-9692
9M-0702	Pilot — Piston	229-8232
9M-1328	Bearing — Aligning	325-6018
9M-1500	Planet Shaft	219-9685
9M-1502	Bearing Cage	219-9686
9M-1853	Mount	376-3638
9M-1990	Dowel	386-4963
9M-1995	Sun Gear	213-8756
9M-1996	Shaft — Planet	215-1875
9M-1997	Ball Bearing	384-5954
9M-2013	Housing Assembly	216-3585
9M-2028	Sun Gear	214-0959
9M-2038	Transfer Gear	215-1876
9M-2039	Transfer Driving Gear	219-9672
9M-2045	Pinion — Bevel	215-1878
9M-2049	Gear — Ring	214-0533
9M-2417	Gear Retainer	380-7409
9M-2418	Sleeve Bearing	376-3634
9M-2744	Tapered Roller Bearing	380-1480
9M-3013	Gear Assembly	215-1903
9M-3025	Cover As.	299-2001
9M-3818	Track Sprocket Rim	289-2207
9M-4163	Valve — Exhaust	298-2773
9M-4789	Shaft — Gov Control	297-7256
9M-4955	Pump Gp — Fuel Transfer	242-3443
9M-5045	Guard As. — Wear	213-9111

Original Part Number	Part Name	Classic Part Number
9M-5350	Valve Spring	380-7573
9M-5477	Bearing — Sleeve	374-6517
9M-6692	Strip	386-4934
9M-8117	Shaft — Flywheel Clutch	226-6073
9M-8119	Retainer — Inlet	226-8022
9M-8281	Gear Assembly	325-6089
9M-8284	Gear Pump	226-0159
9M-8395	Sleeve Bearing	391-1103
9N-1161	Fuel Injection Line	383-3705
9N-1545	Thrust Bearing Race	394-9205
9N-3970	Fuel Injection Line	390-1005
9N-4460	Housing Assembly	297-7203
9N-4622	Pin	319-3468
9N-5246	Camshaft Bearing	384-4772
9N-5251	Liner Kit	250-6557
9N-5403	Liner Kit	250-6558
9N-5529	Injector Valve	378-3993
9N-5769	Cover — Housing	325-6050
9N-6221	Crankshaft As.	368-5914
9N-6500	Push Rod	383-3706
9N-6611	Pulley	325-6177
9P-0418	Cage	223-6311
9P-0620	Cage — Pinion Bearing	221-1052
9P-0863	Pin	389-6321
9P-1779	Bearing — Sleeve	325-6029
9P-2201	Relief Valve	386-3816
9P-2653	Transmission Pump	386-3057
9P-3242	Plate — Clutch	325-6172
9P-3308	Single Flange Roller Group	281-6380
9P-3309	Double Flange Roller Group	281-6386
9P-3436	Holder Assembly	216-7875
9P-3663	Carrier — Planet	213-6939
9P-3731	Carrier — Planet	301-4767
9P-3757	Gear	394-9196
9P-4857	Ring Carrier	383-2136
9P-4859	Cage As. — Bearing	297-7151
9P-5363	Clutch Piston	219-9687
9P-5379	Clutch Housing	215-1904
9P-6476	Torque Converter Impeller	385-6132
9P-6592	Gear	215-1915
9P-6594	Gear — Planet	215-1921

(Continued)



## Part Numbers Beginning With 9 (Continued)

Original Part Number	Part Name	Classic Part Number
9P-6800	Clutch Piston	380-1505
9P-6888	Shaft — Output	221-9105
9P-6903	Plate	368-0108
9P-6912	Pin	394-0189
9P-7101	Plate Clutch	368-0122
9P-7757	Gear	283-5218
9P-7917	Control Valve	385-3810
9P-8283	Plate — Clutch	296-1364
9P-8451	Carrier	385-7193
9P-8452	Hub — Output	297-7206
9P-8455	Cage As. — Bearing	297-7152
9P-8456	Shaft Assembly	275-5300
9P-8516	Gear — Ring	373-5398
9P-8517	Transmission Case	394-0909
9P-8521	Gear	296-1353
9P-8623	Shaft — Planet	314-8719
9P-8624	Shaft — Planet	295-5446
9P-8626	Gear	283-5219
9P-8866	Gear — Transfer	299-2012
9P-9000	Shaft — Steering	217-7738
9P-9031	Gear — Sun	283-5220
9P-9360	Gear — First Reduction	213-8454
9P-9361	Gear	223-4809
9P-9362	Final Drive Pinion	215-1944
9P-9363	Pinion — Reduction	219-9677
9P-9507	Thrust Bearing	371-4309
9P-9517	Torque Converter Stator	297-7262
9P-9552	Planet Gear	386-4964
9P-9575	Bevel Gear Cage	216-7876
9P-9610	Pump	283-5221
9P-9742	Cage Assembly	297-7153
9P-9790	Shaft — Output	302-2696
9R-0080	Coupling	346-5683
9R-0097	Pin	346-5684
9R-0237	Pin	346-5685
9R-0313	WBR Hub	388-6591
9R-0424	Pin	346-5686
9R-0437	Pin	389-6320
9R-1572	Wheel Rim	388-6604
9R-2410	Retainer As.	346-5688
9R-2419	Bearing Kit	383-2137
9R-2421	Shaft	346-5689
9R-2424	Gear — Planet Sun	346-5690

Original Part Number	Part Name	Classic Part Number
9R-2476	Block Disc	346-5691
9R-2477	Disc	346-5692
9R-2480	Differential Case	394-0881
9R-2487	Bevel Gear	394-9186
9R-2491	Spider	346-5693
9R-2601	Tie Rod	385-6133
9R-2842	Tie Rod	385-6134
9R-2843	Tie Rod	385-6135
9R-2846	Pin	346-5694
9R-3933	Pin	346-5697
9R-4067	Universal Joint	373-5399
9R-6070	Pin	393-3681
9R-6158	Cylinder Pin	346-5698
9R-6159	Cylinder Pin	346-5699
9R-6160	Pin	346-5700
9R-6161	Pin	374-6505
9R-6163	Cylinder Pin	346-5701
9R-6475	Pad As.	346-5702
9R-6545	Pin	346-5703
9R-6950	Pin Gear	391-9872
9R-7092	Bar	364-5272
9R-7158	Pin As.	346-5704
9R-7895	Pin	346-5707
9R-8199	Universal Joint	384-4813
9R-8202	Pin	346-5708
9R-8206	Pin	346-5709
9R-8235	Pad	383-2106
9R-8523	Pin	346-5710
9R-8579	Pin	346-5711
9R-8639	Cylinder	346-5712
9R-8662	Pin	346-5713
9R-8663	Pin	365-8831
9R-8707	Cylinder Pin	346-5714
9R-8709	Pin	346-5715
9R-8714	Fork	390-0929
9R-8715	Spider and Bearing As.	346-5716
9R-8718	Yoke	364-5258
9R-9190	Rod Gp — Tie	346-5718
9R-9400	Case Dif	346-5719
9R-9402	Seal — Rax	347-0476
9R-9403	Pinion	347-0477
9R-9475	Sleeve Bearing	380-7377
9R-9631	Pin	347-0467
9R-9812	Pin	347-0468

Original Part Number	Part Name	Classic Part Number
9S-0440	STL Tube	392-4499
9S-0798	Sleeve Bearing	385-3796
9S-1026	Bevel Gear Cage	216-7873
9S-1043	Guard As. — Guiding	226-0240
9S-1044	Guard As. — Guiding	226-0241
9S-1045	Strip — Guard	226-0246
9S-1046	Strip — Guard	226-0247
9S-1195	Oil Pump	390-1000
9S-1768	Extension Pipe	380-7544
9S-1838	Bolt Master	188-5634
9S-2354	Exhaust Manifold	261-0888
9S-2355	Exhaust Manifold	261-0891
9S-2356	Exhaust Manifold	261-0905
9S-3321	Cage — Pinion Bearing	226-7974
9S-3582	Tapered Roller Bearing	396-4144
9S-3955	Bevel Gear Cage	216-7874
9S-4732	Guard Gp — Spring	226-0195
9S-5211	Clutch Plate	380-1493
9S-5265	Shaft As.	215-1945
9S-5267	Carrier	392-4512
9S-5277	Gear — Transfer	213-8758
9S-5746	Seal Ferrule	392-4493
9S-5771	Bushing	385-7219
9S-6129	Pulley — Alternator Drive	264-5891
9S-6147	Precleaner Body	369-9499
9S-6465	Needle Bearing	388-0570
9S-6590	Gear Pump	226-0176
9S-6729	Sleeve Bearing	387-2905
9S-6743	Chamber As.	247-3303
9S-6788	Gear Pump	217-2602
9S-6875	Pinion — Final Drive	217-7705
9S-6948	Shaft — Center	213-9966
9S-7079	Muffler As.	247-2669
9S-7148	Cap Rain	378-3994
9S-7221	Idler As.	188-5610
9S-7515	Head Assembly	242-3434
9S-8245	Strip — Track	226-0243
9S-8246	Strip — Track	226-0244
9S-8257	Guard Assembly	226-0238
9S-8258	Guard Assembly	226-0239
9S-8304	Carrier Roller Group	188-5612

(Continued)

## Part Numbers Beginning With 9 (Continued)

Original Part Number	Part Name	Classic Part Number
9S-8353	Strip — Track	226-4854
9S-8354	Strip — Track	226-4855
9S-8358	Guard As. — Guiding	226-4856
9S-8359	Guard Assembly	226-4857
9S-8679	Chamber As.	325-6042
9S-8789	Clutch Plate	302-2712
9S-8802	Ring Gear	214-0952
9S-9328	Muffler	395-1308
9S-9385	Gear As. — Oil Pump	297-7185
9S-9696	Fan Spider	383-3707
9S-9922	Clutch Plate	385-7210
9T-0064	Bearing	361-1706
9T-0066	Trunnion	325-6228
9T-0142	Hydraulic Cylinder	394-9830
9T-1213	Pump Group	371-2709
9T-1802	Group Pump	371-2710
9T-2373	Head	347-0461
9T-2387	Hydraulic Rod	393-5218
9T-2860	Hydraulic Cylinder	395-1310
9T-3502	Cylinder Head	383-3708
9T-3884	Piston	393-3639
9T-3948	Hydraulic Rod	393-0940
9T-4761	Head	325-6108
9T-4762	Head	325-6109
9T-5529	Pump Group	371-2711
9T-5976	Motor Group	282-6547
9T-6526	Joint As. — Univ	365-8824
9T-8424	Bearing — Sleeve	325-6030
9T-8944	Hydraulic Cylinder	393-3665
9U-0465	Pin Gear	394-0904
9U-0654	Coupling	297-7167
9U-0971	Gear — Sun	368-0124
9U-0974	Bushing — Sleeve	374-1460
9U-0975	Hub	390-5259
9U-2400	Housing Assembly	231-0249
9U-2787	Gear — Planet	367-6093
9U-3124	Gear — Planet	288-8806
9U-3125	Gear — Sun	288-8807
9U-8481	Pin As.	295-5675
9U-9198	Strip	388-0641
9U-9657	Bearing — Spl Ball	371-4308
9V-2410	Housing	302-2679
9V-2411	Housing	302-2680

Original Part Number	Part Name	Classic Part Number
9V-3289	Pin	382-6904
9V-3363	Pin	396-0663
9V-3829	Collar	382-6905
9V-3853	Pin	319-3469
9V-4333	Gear — Oil Pump Input	226-6105
9V-4975	Sleeve Bearing	384-4784
9V-5160	Plunger Kit	385-7218
9V-5174	Joint-Gp Univ	375-2628
9V-6165	Outer Plate	377-7460
9V-6167	Pin	387-2931
9V-6523	Cap	297-7162
9V-6524	Cap	297-7163
9V-6775	Drum	226-7994
9V-6982	Brake Disc	380-1503
9V-7710	Spider	394-8234
9V-7860	Support As. — Front	308-9938
9V-8693	Actuator Gp — Bk	375-2629
9V-9833	Bevel Gear	394-8243
9W-0099	Bearing — Sleeve	314-8639
9W-0318	Spacer	325-6218
9W-0517	Carrier — Planet	281-1686
9W-0550	Shaft — Transmission Upper	226-6000
9W-0551	Pin Gear	388-6592
9W-0552	Shaft — Pinion	226-6001
9W-0876	Bearing — Sleeve	325-6031
9W-1546	Tapered Roller Bearing	380-1481
9W-1566	Torque Converter Impeller	390-5270
9W-1567	Torque Converter Impeller	391-9880
9W-1677	Bearing	297-7145
9W-1683	Pin	391-9819
9W-2344	Pump Coupling	314-8666
9W-2579	Plate	314-8701
9W-2979	Housing	389-6300
9W-3120	Pin	393-3641
9W-3137	Track Link (RH)	287-3118
9W-3138	Track Link (LH)	287-3119
9W-3361	Nut — Track	200-9127
9W-3563	Thrust Ring	188-5689
9W-3605	Carrier — Ring	314-8662

Original Part Number	Part Name	Classic Part Number
9W-3619	Bolt — Track	286-9828
9W-3732	Duo Cone Seal Group	380-7472
9W-4163	Bearing Race	394-9202
9W-4175	Transmission Input Shaft	394-8241
9W-4702	Torque Converter Stator	308-9939
9W-4897	Bracket As.	295-6414
9W-4949	Carrier — Planet	281-1687
9W-4950	Gear — Sun	281-1688
9W-4957	Carrier	390-0913
9W-5768	Ring Gear	380-7474
9W-6044	Planet Shaft	384-5957
9W-6046	Carrier	388-0645
9W-6099	Clutch Piston	391-9828
9W-6358	Drum	226-7995
9W-6390	Sleeve	385-3795
9W-6433	Torque Converter Impeller	308-9871
9W-6435	Flange — Drive	308-9846
9W-6483	Shoe — Track	288-6672, 288-6673
9W-6484	Track Shoe	288-6673
9W-7019	Friction Disc	377-7461
9W-7040	Clutch Piston	377-7462
9W-7259	Sprocket Segment Group	188-5641
9W-7458	Clutch Piston	391-9862
9W-7481	Gear — Planet	295-6431
9W-7839	Carrier	295-6421
9W-8270	Gear — Ring	308-9859
9W-8384	Hub — Turbine	297-7207
9W-8433	Shaft As. — Output	302-4249
9W-8937	Track Link Assembly	188-5310
9W-8938	Track Link Assembly	188-5310
9W-9069	Shaft — Input	302-2715
9W-9351	Track Shoe	286-9825
9W-9930	Mount As.	295-6437
9W-9931	Rubber Mount	360-2354
9W-9940	Rubber Mount	360-2355
9X-2192	Gasket Kit	393-5189
9X-6560	Gasket Kit	382-5073

(Continued)

## Part Numbers Beginning With 9 (Continued)

Original Part Number	Part Name	Classic Part Number
9Y-0231	Fuel Injection Line	390-0932
9Y-0232	Fuel Injection Line	390-0933
9Y-0233	Fuel Injection Line	390-0934
9Y-0234	Fuel Injection Line	390-0935
9Y-0235	Fuel Injection Line	390-0936
9Y-0236	Fuel Injection Line	390-0937
9Y-0237	Fuel Injection Line	390-0938
9Y-0238	Fuel Injection Line	390-0939
9Y-1403	Muffler	393-0930
9Y-1723	Camshaft Kit	374-1419
9Y-1798	Water Seal	379-0165
9Y-1917	Pulley	395-1311
9Y-2148	Exhaust Tube	378-3995
9Y-2149	Tube	374-7481
9Y-2150	Exhaust Tube	374-4729
9Y-2151	Tube	374-7482
9Y-2988	Breather As.	361-1716
9Y-2991	Sleeve Bearing	377-5833
9Y-2992	Bearing — Sleeve	325-6032
9Y-3317	Radiator Core	378-3996
9Y-3318	Core As. — Radiator (Folded Core)	374-7491
9Y-3778	Pump Impeller	378-3997
9Y-3969	Fuel Injection Line	378-3998
9Y-4668	Muffler As.	373-1911
9Y-5168	Exhaust Manifold	374-7483
9Y-6054	Connecting Rod	379-8868
9Y-9431	Precleaner	361-1718
9B-1320	Check Valve	377-5832
9C-0624	Pin	361-1709
9C-0625	Pin Assembly	308-9888
9C-1484	Pin Assembly	319-3446
9C-1618	Gear	231-0229
9C-2249	Yoke	382-6890
9C-2646	Track Sprk Rim	289-9674
9C-2797	Output Gear	377-7454
9C-3095	Spider	394-8219
9C-3187	Pin Assembly	314-8694
9C-3581	Pin Assembly	374-6506
9C-3857	Lower Pin	374-6503
9C-4007	Sleeve Bearing	374-1459
9C-4080	Yoke	302-2703
9C-4096	Brake Yoke	369-9496
9C-4211	Pin Assembly	241-2519
9C-4737	Pin Assembly	241-2520

Original Part Number	Part Name	Classic Part Number
9C-4811	Hub As.	224-1300
9C-4912	Pin Assembly	241-2517
9C-4978	Pin	319-3466
9C-4985	Bevel Gear	373-5396
9C-5060	Link As. — Bearing	299-2022
9C-5687	Separator	377-7456
9C-5852	Hub Assembly	297-7208
9C-6015	Pinion	297-7225
9C-6017	Gear	297-7187
9C-6024	Bevel Gear	375-2627
9C-6027	Carrier	297-7166
9C-6029	Planet Bearing	375-9982
9C-6187	Pin Assembly	241-2521
9C-6244	Gear	231-0230
9C-6317	Shaft — Planet	373-5397
9C-6318	Sleeve Bearing	374-6516
9C-6329	Reaction Plate	377-7457
9C-6335	Gear	319-3439
9C-6544	Drum	297-7169
9C-8074	Planet Gear	308-9858
9C-8075	Sun Gear	308-9864
9C-8204	Pinion Shaft	319-3474
9C-8205	Bevel Gear	319-8175
9C-8218	Shaft — Bevel Pinion	302-2697
9C-8219	Gear	297-7186
9C-8276	Bevel Pinion Shaft	377-7458
9C-8277	Bevel Gear	308-9851
9C-8367	Spider	388-0580
9C-8418	Reaction Plate	385-6129
9C-8669	Bevel Pinion Shaft	368-0107
9C-8772	Clutch Piston	376-9052
9C-8986	Collet	374-6502
9C-9191	Trunnion	302-2701
9C-9748	Gear	302-2671
9C-9773	Gear	302-2672
9D-0120	Gear	288-8737
9D-0127	Gear	288-8738
9D-0701	Axle Shaft	385-3780
9D-1142	Drive Worm	282-6623
9D-1177	Shaft	297-7253
9D-1487	Housing	297-7194
9D-1511	Sleeve Bearing	333-4943
9D-1512	Sleeve Bearing	333-4944
9D-1515	Yoke Assembly	282-6632
9D-1532	Pin	333-4950

Original Part Number	Part Name	Classic Part Number
9D-1589	Mounting	387-2928
9D-2252	Insert	385-6139
9D-2716	Spindle	228-9463
9D-2731	Spindle	228-9423
9D-2754	Insert	333-4948
9D-2756	Insert	333-4949
9D-3288	Bolt	333-4941
9D-4441	Housing	297-7195
9D-5444	Pin	380-7396
9D-5741	Worm — Circle Drive	297-7270
9D-5746	Gear	299-2011
9D-5921	Shaft	297-7254
9D-6523	Assembly Socket	282-6626
9D-6524	Socket Assembly	282-6627
9D-6638	Strip — Wear	297-7263
9D-6889	Damper Plate	394-9818
9D-7924	Rubber Mount	360-2356
9D-8285	Cap	391-9822
9D-8632	End Rod	382-6902
9D-8972	Differential Housing	385-6130
9D-9665	Bracket	299-1980
9D-9967	Thrust Washer	389-6323
9D-9968	Thrust Washer	391-9890
9F-3212	Ball Bearing	384-5953
9F-3358	Drive Link	394-0207
9F-7101	Bushing — Collar	299-1988
9F-8180	Retainer	299-2046
9G-0007	Hub	224-1311
9G-0280	Piston	283-5213
9G-0284	Housing — Clutch	283-5214
9G-0285	Piston — Clutch	283-5215
9G-0289	Shaft — Planet	283-5216
9G-0290	Hub — Clutch	283-5217
9G-0383	Hub — Gear	221-1064
9G-1231	Plate	297-7232
9G-1491	Carrier — Planet	281-1685
9G-1499	Gear — Oil Pump	295-6424
9G-1696	Pad	391-9820
9G-1697	Pad	391-9821
9G-1918	Sun Gear	380-7486
9G-1919	Gear — Planet	371-4307
9G-2413	Shaft — Output	297-7255
9G-3526	Gear — Pump Drive	231-8763





# CYLINDER SEALS



# Identification

## Seal Identification

### What is a Seal?

A seal is a device which prevents the escape or passage of a fluid (liquid or gas). A hydraulic cylinder seal is used to seal two surfaces under fluctuating pressure conditions.

### Hydraulic Cylinders

Hydraulic cylinders convert fluid pressure into motion that helps equipment perform different tasks. Caterpillar manufactures three cylinder designs: bolt-on head, threaded cylinder and threaded gland. Because these designs are very similar in the way they are sealed and repaired, this book makes no further attempt to address the different designs.

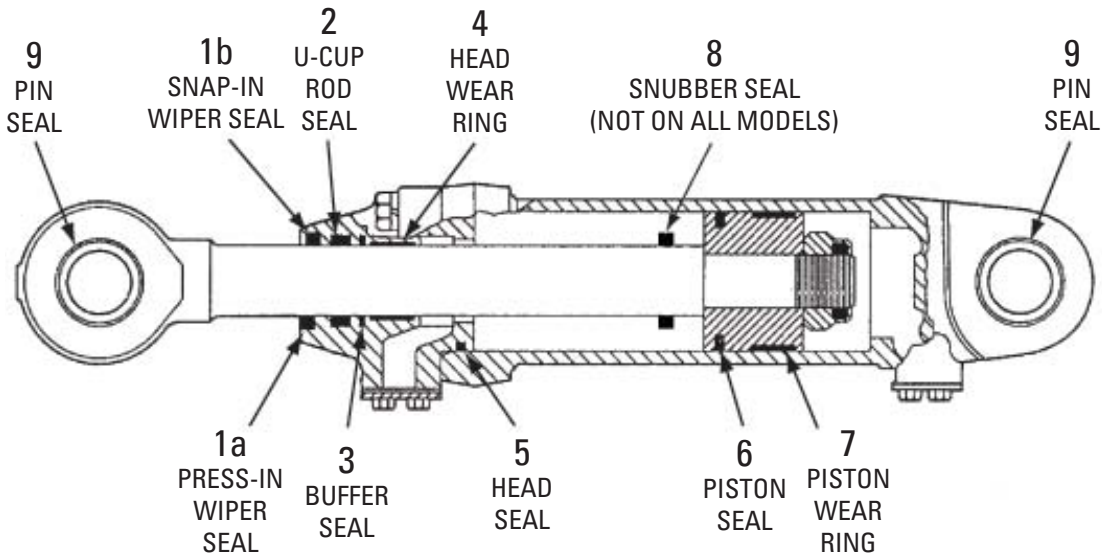
### Hydraulic Cylinder Seals

Cat® seals are available as either individual pieces or kits. Kits offer a convenience as well as a cost-savings, priced substantially below the sum of the individual pieces.

Cat hydraulic seals can be used on other makes of cylinders. See the "Seal Selection for Other Than Cat® Equipment" section for more details.

### Identifying Hydraulic Cylinder Seals

Refer to the hydraulic cylinder illustration below. The seals in this Cat® cylinder are those typically found in hydraulic cylinders.

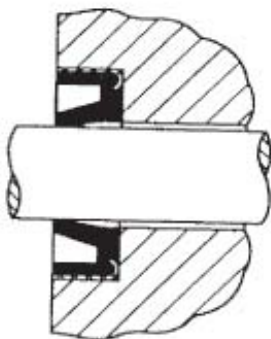


**Usage**

Use the seal pictures, cross-sections, cutaway illustrations and descriptions on the following pages to help you identify the different types of hydraulic cylinder seals.

**1a. Press-in Wiper Seal**

Prevents external contaminants from entering the system. Single-lip (the lip is the projecting rim or edge of the seal) wipers clean the rod as it retracts. Double-lip wipers clean the rod as it retracts and seals oil, eliminating “weeping” (cosmetic leakage). The double-lip wipers are secured in place with a bearing mount. These urethane wipers are metal-encased for added strength. They are often referred to as “canned” wipers (metal-encased) or “J” wipers (the metal often forms a “J” shape when viewed in the cross-section).



TYPE E  
Angled Single



TYPE F  
Scraper Single

TYPE A  
Single-lip wiper



TYPE B  
Double-lip wiper



TYPE C  
Modified



TYPE D  
Modified Single

**1b. Snap-in Wiper Seal**

Prevents external contaminants from entering the system, but used in less severe environmental conditions and lighter duty hydraulic applications than its press-in counterpart.



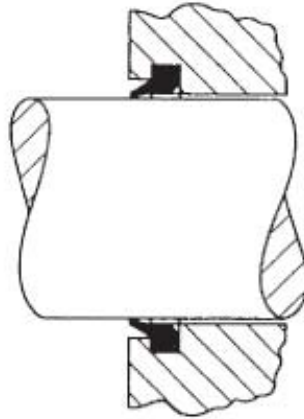
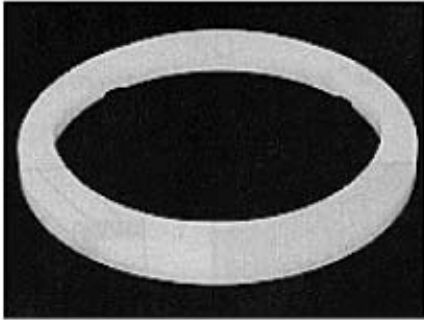
TYPE REG

## Types of Snap-in Wipers

The following various types of snap-in wipers are available for use on other makes of hydraulic cylinders.

### Type SHU

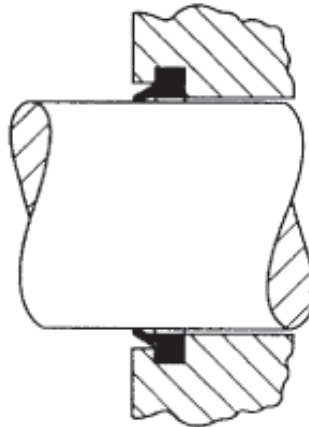
Type SHU wipers are slotted heel, universal style urethane wipers. The slotted heel acts as a relief slot to prevent a pressure trap occurring between the rod seal and the wiper. A pressure trap is excessive fluid pressure trapped between two seals.



TYPE SHU

### Type AN

Type AN wipers are a non-current design, originally made for the military (AN refers to Army/Navy). This single-lip wiper is made of urethane.

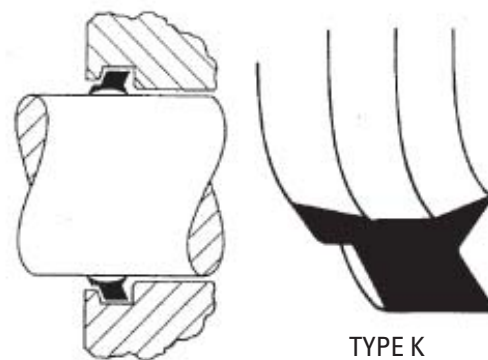
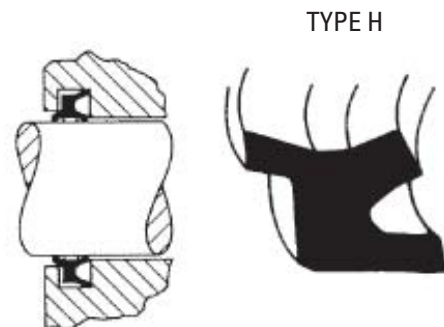


TYPE AN

### Type H and Type K

"Type H" and "Type K" wipers are double-lip, urethane wipers.

Type H and Type K (Continued)



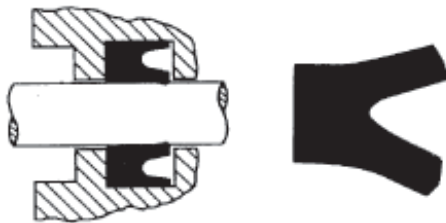
**2. U-Cup Rod Seal**

Performs as the primary rod seal. The U-Cup is made of urethane or nitrile. The nitrile U-Cup is used with a backup ring in water-glycol hydraulic systems. The backup ring prevents the seal from extruding (forced movement of a seal under pressure into the clearance between the metal parts being sealed).

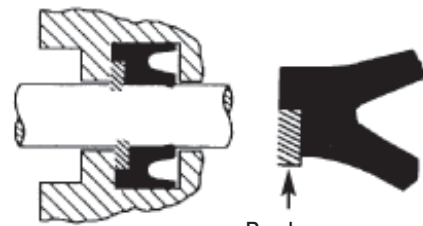
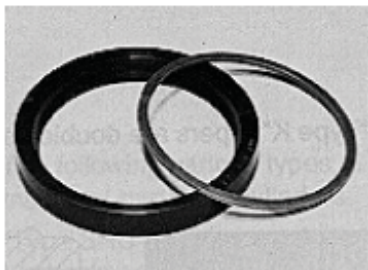
(Continued)

# Identification

## 2. U-Cup Rod Seal (Continued)

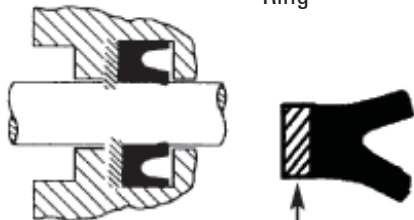


TYPE A



TYPE B

Backup Ring

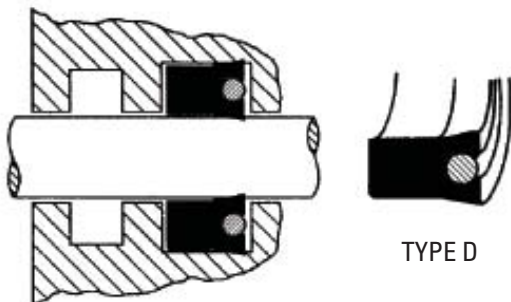


TYPE C

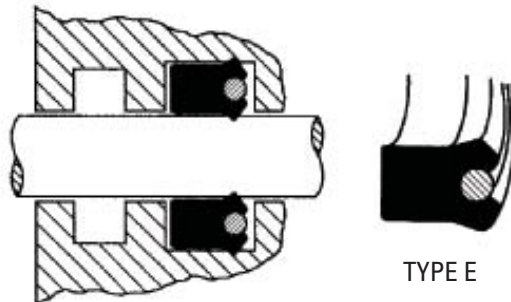
Backup Ring

## Loaded U-Cups

Loaded U-Cups are also available for use on other makes of cylinders. The Type E loaded U-Cup has a back-bevel lip for increased sealability.



TYPE D



TYPE E

Backup Ring

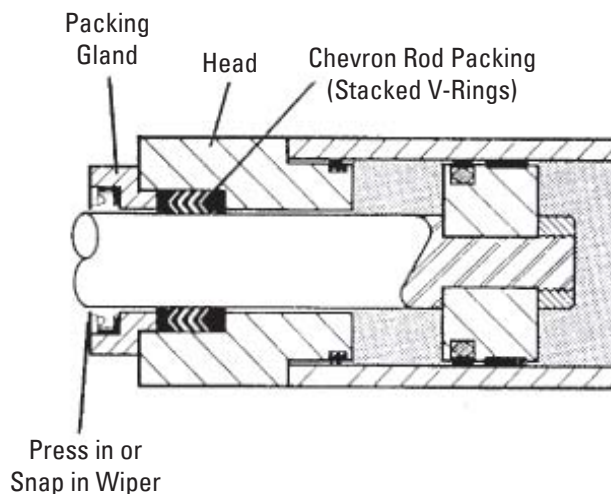


TYPE F



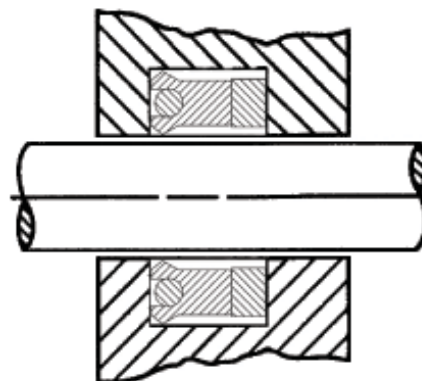
### 2a. Chevron Packing

Used as gland packing prior to the use of U-Cup seals. Made with a multi-compound material (usually cotton duck cloth and nitrile), it is often referred to as V-Packing, the shape formed by its cross-section. The end adapters can be tightened down, making the seal adjustable. Caterpillar no longer uses this seal design.



### 2b. U-Cup Seal Assembly

Designed to replace Chevron Packing. These assemblies combine U-Cup Rod Seals with spacers to fill the original Chevron Packing grooves. Both U-Cup Seal Assemblies and Chevron Packing meet the same functional sealing specifications.



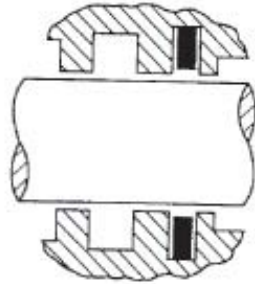
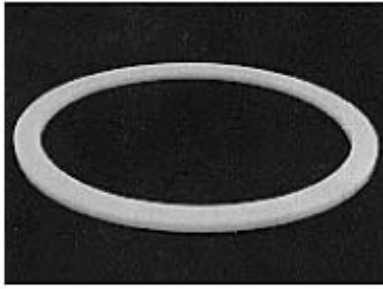
### 3. Buffer Seal

Acts as a secondary rod seal and protects the rod from sudden increases in system pressure. There are currently three types of buffer seals. Type A is a one-piece seal made of urethane. Type B is a two-piece bronze filled PTFE seal with a nitrile expander. The notched view in the cross section must face the pressure side for maximum seal performance. Type C is a two-piece urethane seal with a thermoplastic backup ring. This design allows the seal to withstand higher pressures. Type B and Type C buffer seals are designed to prevent seal extrusion and pressure trapping.

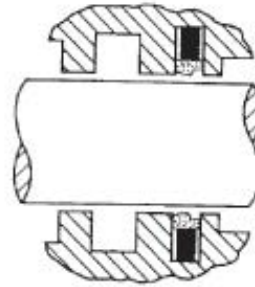
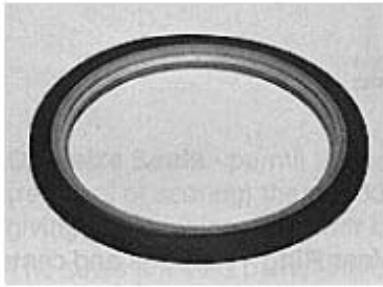
(Continued)

# Identification

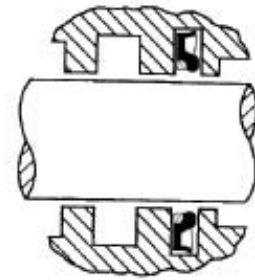
## 3. Buffer Seal (Continued)



TYPE A



TYPE B



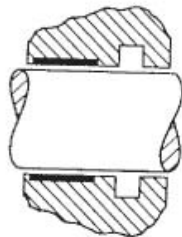
TYPE C



TYPE D

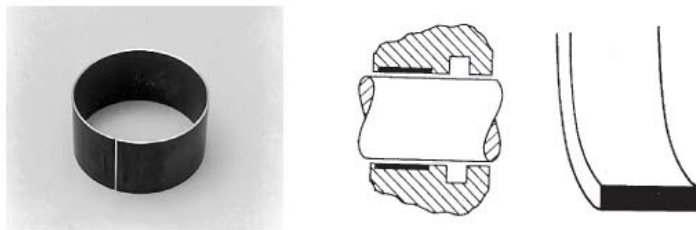
## 4. Head Wear Ring

Eliminates metal-to-metal contact between the head and rod and prevents scoring (scratching) of the rod by the head.



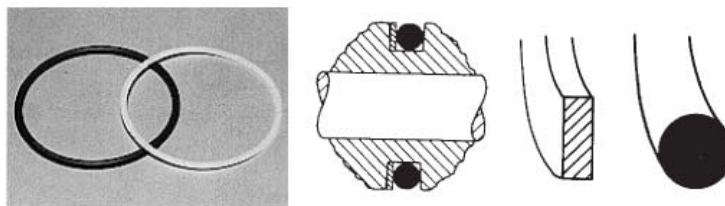
### 4a. Metal Bearing Head Wear Ring

Used instead of plastic head wear ring for some applications. The coated bearing is pressed into the cylinder group head and held in place with a split metal retaining ring. This bearing supports the hydraulic cylinder rod and prevents metal-to-metal contact between the head and the cylinder rod. This bearing can be reused as long as the coating on the ring remains intact.



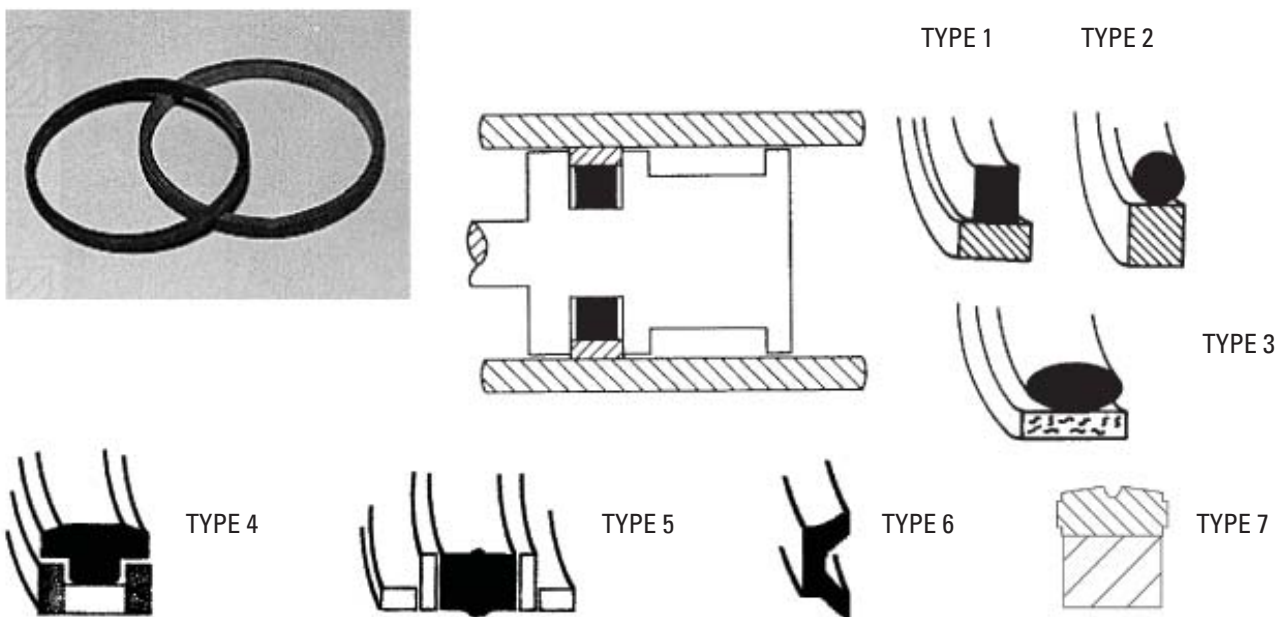
### 5. Head Seal

A two-piece seal, consisting of a nitrile O-ring and a backup ring, which seals the head to the cylinder wall.



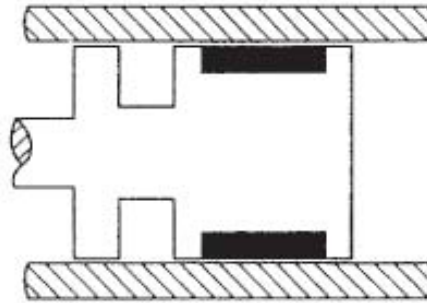
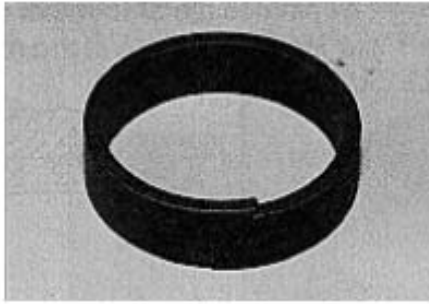
### 6. Piston Seal

A two-piece seal, consisting of a piston ring and an expander, which prevents oil transfer between the rod end of the cylinder and the cap end. The piston seal is usually made of Teflon, with nylon available for pressures greater than 3000 psi (20,670 kPa). The various shaped expanders are nitrile. Type 4 consists of a Teflon piston ring with a nitrile rubber expander. Type 5 consists of a rubber expander surrounded by bronze filled Teflon on both sides. Type 6 is a urethane U-Cup seal used in single acting cylinders.



## 7. Piston Wear Ring

Supports and centers the piston to prevent metal-to-metal contact between the piston and the cylinder wall.



## 8. Snubber Seals



Used in some cylinder designs, in conjunction with a stop, to cushion the extension and/or retraction of the rod. The snubber seal is located between the stop and the rod.

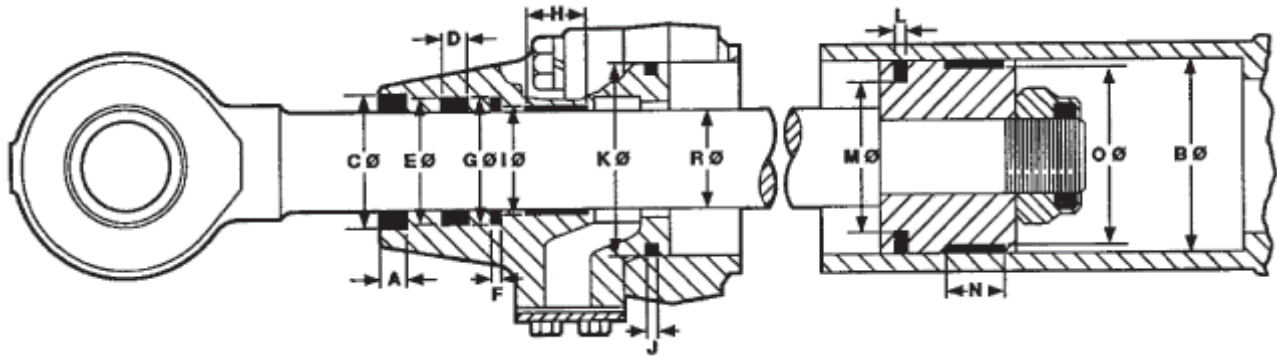
## 9. Pin Seals



Used on either side of the rod eye and cap eye to seal the linkage pins in place. Information on pin seal part numbers is not included in this guide. Please refer to SIS or the machines parts book for pin seal information.

## Seal Selection for Other Than Cat® Equipment

Cat® seals can be used on other than Cat equipment. The following section will help you identify which seal is necessary for your repair.



### How to Select the Correct Seals:

- For cylinders used on other than Cat® equipment, measure the components using the following procedure. To find the correct replacement seal size, the seal groove dimensions in the iron itself should always be measured whenever possible. Measuring a used seal can give false dimensions due to distortion in size from wear. The hydraulic cylinder illustration below calls out the iron dimensions required to identify the proper size replacement seal.

Seal Type	Diameter of Rod (R) or Cylinder Bore (B)	Groove Width	Groove Diameter
Rod Wiper	R	A	C
Rod Seal	R	D	E
Buffer Seal	R	F	G
Head Wear Ring	R	H	I
Head Seal	B	J	K
Piston Seal	B	L	M
Piston Wear Ring	B	N	O

(Continued)



# Seal Selection for Other Than Cat® Equipment

## Measurement

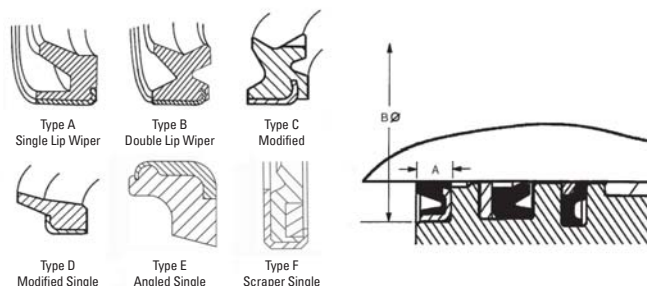
Should seal replacement be requested by a customer over-the-counter rather than through the service shop, measure the seal's outside diameter at four equally-spaced areas around the seal. Take the average of these measurements to determine the seal's outside diameter. Repeat this procedure with the seal's inside diameter and width (height) to determine seal replacement size. Seal dimensions equivalent to iron dimensions are shown in the following table.

Type of Seal	Iron Dimension	Equivalent Seal Dimension
Wiper Seal, U-Cup Seal, Buffer Seal, Head Wear Ring	Rod Diameter	Inside Diameter
	Groove Width	Width
	Groove Diameter	Outside Diameter
Snap-in Wiper Seal	Seal Bore Diameter	Base Thickness
Head Seal, Piston Seal, Piston Wear Ring	Bore Diameter	Outside Diameter
	Groove Width	Width
	Groove Diameter	Inside Diameter

## Parts Tables

Use the tables in the following sections to find the right seal for your repair.

Press-In Wiper Seals



Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 1.00 in (25.40 mm)</b>				
7K-1864	URE	--	0.31 in (7.92 mm)	1.50 in (38.20 mm)
<b>I.D. — 1.18 in (30.00 mm)</b>				
144-9480	URE	D	0.39 in (10.00 mm)	1.58 in (40.02 mm)
<b>I.D. — 1.25 in (31.75 mm)</b>				
2H-1746	NIT	A	0.28 in (7.00 mm)	1.75 in (44.50 mm)
3E-4160	URE	A	0.31 in (7.92 mm)	1.75 in (44.45 mm)
4J-8982	URE	A	0.34 in (8.60 mm)	1.75 in (44.50 mm)
167-2447	URE	E	0.34 in (8.60 mm)	1.75 in (44.50 mm)
<b>I.D. — 1.38 in (35.00 mm)</b>				
140-2392	URE	D	0.39 in (10.00 mm)	1.77 in (45.02 mm)
<b>I.D. — 1.50 in (38.10 mm)</b>				
3E-4161	URE	A	0.31 in (7.92 mm)	2.00 in (50.80 mm)
4J-8979	URE	A	0.43 in (11.00 mm)	2.25 in (57.15 mm)
9J-4037	NIT	A	0.43 in (11.00 mm)	2.25 in (57.15 mm)
167-2450	URE	E	0.43 in (11.00 mm)	2.25 in (57.15 mm)
8C-9131	URE	B	0.43 in (11.00 mm)	2.25 in (57.15 mm)
226-8202	URE	B	0.43 in (11.00 mm)	2.25 in (57.15 mm)
<b>I.D. — 1.57 in (40.00 mm)</b>				
144-9492	URE	D	0.39 in (10.00 mm)	1.97 in (50.02 mm)
<b>I.D. — 1.63 in (41.28 mm)</b>				
4T-0486	URE	A	0.33 in (8.50 mm)	2.13 in (53.98 mm)
<b>I.D. — 1.75 in (44.40 mm)</b>				
150-6739	URE	C	0.43 in (11.00 mm)	2.44 in (62.07 mm)
5P-0092	NIT	A	0.25 in (6.35 mm)	2.25 in (57.25 mm)
3E-4162	URE	A	0.31 in (7.92 mm)	2.25 in (57.15 mm)
7J-6932	URE	--	0.31 in (7.94 mm)	2.25 in (57.25 mm)
4J-8980	URE	A	0.43 in (11.00 mm)	2.44 in (61.90 mm)
167-2452	URE	E	0.43 in (11.00 mm)	2.44 in (61.90 mm)
8J-5817	NIT	A	0.43 in (11.00 mm)	2.44 in (61.90 mm)
231-3539	URE	B	0.43 in (11.00 mm)	2.44 in (61.90 mm)
8C-9132	URE	B	0.43 in (11.00 mm)	2.44 in (61.90 mm)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 1.77 in (45.00 mm)</b>				
141-0713	URE	D	0.28 in (7.00 mm)	2.16 in (54.97 mm)
167-2448	URE	E	0.33 in (8.50 mm)	2.32 in (59.05 mm)
233-0617	URE	B	0.33 in (8.50 mm)	2.32 in (59.05 mm)
<b>I.D. — 1.83 in (46.50 mm)</b>				
099-3929	URE	A	0.33 in (8.35 mm)	2.52 in (64.02 mm)
<b>I.D. — 1.87 in (47.62 mm)</b>				
4T-6777	URE	A	0.43 in (11.00 mm)	2.56 in (65.07 mm)
167-2455	URE	E	0.43 in (11.00 mm)	2.56 in (65.07 mm)
9X-3565	URE	B	0.43 in (11.00 mm)	2.56 in (65.07 mm)
<b>I.D. — 1.88 in (47.63 mm)</b>				
227-1143	URE	B	0.43 in (11.00 mm)	2.56 in (65.07 mm)
<b>I.D. — 1.89 in (47.90 mm)</b>				
116-3393	URE	A	0.33 in (8.35 mm)	2.52 in (64.02 mm)
<b>I.D. — 1.97 in (50.00 mm)</b>				
233-0619	URE	B	0.43 in (11.00 mm)	2.66 in (67.45 mm)
<b>I.D. — 2.00 in (50.75 mm)</b>				
143-3670	URE	C	0.43 in (11.00 mm)	2.69 in (68.42 mm)
3E-4164	URE	A	0.31 in (7.92 mm)	2.50 in (63.50 mm)
7J-8277	NIT	A	0.43 in (11.00 mm)	2.69 in (68.23 mm)
167-2457	URE	E	0.43 in (11.00 mm)	2.69 in (68.23 mm)
1K-6981	URE	A	0.43 in (11.00 mm)	2.69 in (68.23 mm)
8C-9133	URE	B	0.43 in (11.00 mm)	2.69 in (68.23 mm)
229-9382	URE	B	0.43 in (11.00 mm)	2.69 in (68.23 mm)
<b>I.D. — 2.03 in (51.50 mm)</b>				
099-6995	URE	A	0.33 in (8.35 mm)	2.72 in (69.02 mm)
<b>I.D. — 2.12 in (53.93 mm)</b>				
150-6745	URE	C	0.43 in (11.00 mm)	2.88 in (73.20 mm)
<b>I.D. — 2.13 in (53.98 mm)</b>				
4T-6125	URE	A	0.43 in (11.00 mm)	2.88 in (73.03 mm)
167-2458	URE	E	0.43 in (11.00 mm)	2.88 in (73.03 mm)
9X-3567	URE	B	0.43 in (11.00 mm)	2.88 in (73.03 mm)
227-1145	URE	B	0.43 in (11.00 mm)	2.88 in (73.03 mm)
<b>I.D. — 2.17 in (55.00 mm)</b>				
116-3392	URE	A	0.33 in (8.35 mm)	2.72 in (69.02 mm)

Cylinder Seals

(Continued)

# Press-In Wiper Seals

## Press-In Wiper Seals (Continued)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 2.22 in (56.50 mm)</b>				
096-1884	URE	A	0.33 in (8.35 mm)	2.91 in (74.02 mm)
<b>I.D. — 2.25 in (57.15 mm)</b>				
5J-3937	URE	A	0.29 in (7.35 mm)	3.13 in (79.38 mm)
3E-4165	URE	A	0.31 in (7.92 mm)	2.75 in (69.85 mm)
167-2460	URE	E	0.41 in (10.50 mm)	3.00 in (76.13 mm)
7J-8278	NIT	A	0.43 in (11.00 mm)	3.00 in (76.13 mm)
4J-3515	URE	A	0.43 in (11.00 mm)	3.00 in (76.13 mm)
167-2459	URE	E	0.43 in (11.00 mm)	3.00 in (76.13 mm)
8C-9134	URE	B	0.43 in (11.00 mm)	3.00 in (76.13 mm)
231-3538	URE	B	0.43 in (11.00 mm)	3.00 in (76.13 mm)
5H-1513	URE	A	0.51 in (12.83 mm)	3.25 in (82.55 mm)
<b>I.D. — 2.36 in (59.85 mm)</b>				
093-1433	URE	F	0.16 in (4.15 mm)	2.96 in (75.12 mm)
116-3391	URE	A	0.33 in (8.35 mm)	2.91 in (74.02 mm)
<b>I.D. — 2.37 in (60.32 mm)</b>				
6J-3892	URE	A	0.43 in (11.00 mm)	3.12 in (79.35 mm)
9J-1319	NIT	A	0.43 in (11.00 mm)	3.12 in (79.35 mm)
9X-7259	URE	B	0.43 in (11.00 mm)	3.12 in (79.35 mm)
167-2461	URE	E	0.43 in (11.00 mm)	3.12 in (79.35 mm)
231-3540	URE	B	0.43 in (11.00 mm)	3.12 in (79.35 mm)
<b>I.D. — 2.42 in (61.50 mm)</b>				
095-7102	URE	D	0.44 in (11.30 mm)	3.12 in (79.21 mm)
<b>I.D. — 2.50 in (63.45 mm)</b>				
150-6751	URE	C	0.43 in (11.00 mm)	3.26 in (82.75 mm)
3E-4166	URE	A	0.31 in (7.92 mm)	3.00 in (76.20 mm)
7J-8273	NIT	A	0.43 in (11.00 mm)	3.25 in (82.55 mm)
1K-6982	URE	A	0.43 in (11.00 mm)	3.25 in (82.55 mm)
8C-3840	URE	B	0.43 in (11.00 mm)	3.25 in (82.55 mm)
225-3281	URE	B	0.43 in (11.00 mm)	3.25 in (82.55 mm)
167-2463	URE	E	0.43 in (11.00 mm)	3.25 in (82.55 mm)
<b>I.D. — 2.56 in (65.00 mm)</b>				
116-3390	URE	A	0.33 in (8.35 mm)	3.11 in (79.02 mm)
167-2466	URE	E	0.43 in (11.00 mm)	3.31 in (84.02 mm)
227-1148	URE	B	0.43 in (11.00 mm)	3.31 in (84.02 mm)
<b>I.D. — 2.63 in (66.68 mm)</b>				
1U-4021	URE	D	0.43 in (11.00 mm)	3.37 in (85.72 mm)
167-2464	URE	E	0.43 in (11.00 mm)	3.37 in (85.72 mm)
9X-3569	URE	D	0.43 in (11.00 mm)	3.37 in (85.72 mm)
227-1146	URE	B	0.43 in (11.00 mm)	3.37 in (85.72 mm)
<b>I.D. — 2.75 in (69.80 mm)</b>				
149-1488	URE	C	0.55 in (14.00 mm)	3.76 in (95.49 mm)
3E-4168	URE	A	0.31 in (7.92 mm)	3.25 in (82.55 mm)
7J-8274	NIT	A	0.55 in (14.00 mm)	3.75 in (95.27 mm)
1J-3540	URE	A	0.55 in (14.00 mm)	3.75 in (95.27 mm)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 2.75 in (69.80 mm) (Continued)</b>				
8C-3842	URE	B	0.55 in (14.00 mm)	3.75 in (95.27 mm)
225-3283	URE	B	0.55 in (14.00 mm)	3.75 in (95.27 mm)
167-2467	URE	E	0.55 in (14.00 mm)	3.75 in (95.27 mm)
<b>I.D. — 2.76 in (70.00 mm)</b>				
167-2451	URE	E	0.31 in (8.00 mm)	3.31 in (84.02 mm)
116-3389	URE	A	0.33 in (8.35 mm)	3.31 in (84.02 mm)
<b>I.D. — 2.95 in (75.00 mm)</b>				
167-2468	URE	E	0.32 in (8.20 mm)	3.50 in (89.02 mm)
233-0621	URE	B	0.32 in (8.20 mm)	3.50 in (89.02 mm)
116-3388	URE	A	0.33 in (8.35 mm)	3.50 in (89.02 mm)
<b>I.D. — 3.00 in (76.15 mm)</b>				
143-3671	URE	C	0.55 in (14.00 mm)	4.01 in (101.92 mm)
3E-4170	URE	A	0.31 in (7.92 mm)	3.50 in (88.90 mm)
2J-1411	URE	A	0.55 in (14.00 mm)	4.00 in (101.67 mm)
8J-0249	NIT	A	0.55 in (14.00 mm)	4.00 in (101.67 mm)
8C-5218	URE	B	0.55 in (14.00 mm)	4.00 in (101.67 mm)
225-3284	URE	B	0.55 in (14.00 mm)	4.00 in (101.67 mm)
167-2469	URE	E	0.55 in (14.00 mm)	4.00 in (101.67 mm)
<b>I.D. — 3.06 in (77.70 mm)</b>				
165-9285	URE	B	0.43 in (11.00 mm)	3.71 in (94.23 mm)
<b>I.D. — 3.14 in (79.85 mm)</b>				
096-0854	URE	F	0.16 in (4.15 mm)	3.75 in (95.15 mm)
<b>I.D. — 3.15 in (80.00 mm)</b>				
116-3387	URE	A	0.33 in (8.35 mm)	3.70 in (94.02 mm)
<b>I.D. — 3.21 in (81.50 mm)</b>				
7Y-5115	URE	A	0.33 in (8.35 mm)	3.90 in (99.02 mm)
<b>I.D. — 3.25 in (82.50 mm)</b>				
153-7558	URE	C	0.55 in (14.00 mm)	4.26 in (108.16 mm)
3E-4173	URE	A	0.31 in (7.92 mm)	3.88 in (98.43 mm)
7J-7732	NIT	A	0.55 in (14.00 mm)	4.25 in (107.95 mm)
6J-4169	URE	A	0.55 in (14.00 mm)	4.25 in (107.95 mm)
8T-8389	URE	B	0.55 in (14.00 mm)	4.25 in (107.95 mm)
225-3285	URE	B	0.55 in (14.00 mm)	4.25 in (107.95 mm)
167-2471	URE	E	0.55 in (14.00 mm)	4.25 in (107.95 mm)
<b>I.D. — 3.26 in (82.70 mm)</b>				
165-9286	URE	B	0.43 in (11.00 mm)	3.91 in (99.23 mm)
<b>I.D. — 3.35 in (85.00 mm)</b>				
114-0644	URE	A	0.33 in (8.50 mm)	3.90 in (99.02 mm)
167-2470	URE	E	0.33 in (8.50 mm)	3.90 in (99.03 mm)
233-0622	URE	B	0.33 in (8.50 mm)	3.90 in (99.03 mm)
121-1611	URE	B	0.51 in (13.00 mm)	3.90 in (99.00 mm)
<b>I.D. — 3.41 in (86.50 mm)</b>				
093-1441	URE	A	0.33 in (8.35 mm)	4.10 in (104.02 mm)

Cylinder Seals

(Continued)

Press-In Wiper Seals (Continued)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 3.50 in (88.85 mm)</b>				
143-3672	URE	C	0.55 in (14.00 mm)	4.51 in (114.57 mm)
3E-4176	URE	A	0.31 in (7.92 mm)	4.13 in (104.78 mm)
4J-8981	URE	A	0.55 in (14.00 mm)	4.50 in (114.32 mm)
7J-8276	NIT	A	0.55 in (14.00 mm)	4.50 in (114.32 mm)
8C-5219	URE	A	0.55 in (14.00 mm)	4.50 in (114.32 mm)
225-3286	URE	B	0.55 in (14.00 mm)	4.50 in (114.32 mm)
167-2474	URE	E	0.55 in (14.00 mm)	4.50 in (114.32 mm)
<b>I.D. — 3.54 in (90.00 mm)</b>				
116-3386	URE	A	0.33 in (8.35 mm)	4.10 in (104.02 mm)
167-2473	URE	E	0.43 in (11.00 mm)	4.10 in (104.02 mm)
<b>I.D. — 3.65 in (92.70 mm)</b>				
114-0645	URE	A	0.33 in (8.50 mm)	4.29 in (109.03 mm)
165-9288	URE	B	0.43 in (11.00 mm)	4.30 in (109.23 mm)
<b>I.D. — 3.74 in (95.00 mm)</b>				
167-2477	URE	E	0.32 in (8.20 mm)	4.29 in (109.03 mm)
167-2476	URE	E	0.33 in (8.50 mm)	4.29 in (109.03 mm)
233-0624	URE	B	0.33 in (8.50 mm)	4.29 in (109.03 mm)
<b>I.D. — 3.75 in (95.20 mm)</b>				
227-1149	URE	B	0.55 in (14.00 mm)	4.75 in (120.65 mm)
9J-1325	NIT	A	0.55 in (14.00 mm)	4.75 in (120.65 mm)
8J-6069	URE	A	0.55 in (14.00 mm)	4.75 in (120.65 mm)
8C-9135	URE	B	0.55 in (14.00 mm)	4.75 in (120.65 mm)
167-2478	URE	E	0.55 in (14.00 mm)	4.75 in (120.65 mm)
<b>I.D. — 3.80 in (96.50 mm)</b>				
096-0059	URE	A	0.33 in (8.35 mm)	4.49 in (114.02 mm)
<b>I.D. — 3.94 in (100.00 mm)</b>				
107-6254	URE	D	0.31 in (8.00 mm)	4.49 in (114.00 mm)
167-2480	URE	E	0.31 in (8.00 mm)	4.49 in (114.00 mm)
<b>I.D. — 4.00 in (101.55 mm)</b>				
138-9740	URE	A	0.31 in (8.00 mm)	4.50 in (114.24 mm)
143-3673	URE	C	0.55 in (14.00 mm)	5.01 in (127.23 mm)
3E-4177	URE	A	0.31 in (7.92 mm)	4.63 in (117.48 mm)
7Y-4667	URE	A	0.39 in (10.00 mm)	4.76 in (121.02 mm)
2D-8540	NIT	A	0.50 in (12.70 mm)	5.00 in (127.10 mm)
7J-5673	URE	A	0.55 in (14.00 mm)	5.00 in (127.00 mm)
3G-2650	NIT	A	0.55 in (14.00 mm)	5.00 in (127.00 mm)
8C-5220	URE	B	0.55 in (14.00 mm)	5.00 in (127.00 mm)
225-3287	URE	B	0.55 in (14.00 mm)	5.00 in (127.00 mm)
167-2482	URE	E	0.55 in (14.00 mm)	5.00 in (127.00 mm)
<b>I.D. — 4.04 in (102.50 mm)</b>				
133-6813	URE	B	0.37 in (9.30 mm)	4.77 in (121.26 mm)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 4.13 in (105.00 mm)</b>				
114-0647	URE	A	0.37 in (9.50 mm)	4.76 in (121.02 mm)
167-2483	URE	E	0.37 in (9.50 mm)	4.76 in (121.03 mm)
165-9290	URE	B	0.47 in (12.00 mm)	4.77 in (121.26 mm)
2U-5368	--	A	0.47 in (12.00 mm)	5.12 in (130.00 mm)
114-0705	URE	D	0.59 in (15.00 mm)	4.76 in (121.00 mm)
<b>I.D. — 4.19 in (106.50 mm)</b>				
7Y-4940	URE	A	0.37 in (9.35 mm)	4.96 in (126.02 mm)
<b>I.D. — 4.23 in (107.50 mm)</b>				
133-6814	URE	B	0.47 in (12.00 mm)	4.97 in (126.26 mm)
<b>I.D. — 4.25 in (107.95 mm)</b>				
225-3288	URE	B	0.55 in (14.00 mm)	5.25 in (133.35 mm)
167-2484	URE	E	0.55 in (14.00 mm)	5.25 in (133.35 mm)
7J-8942	URE	A	0.55 in (14.00 mm)	5.25 in (133.35 mm)
6E-0426	URE	B	0.55 in (14.00 mm)	5.25 in (133.35 mm)
9J-1333	NIT	A	0.55 in (14.00 mm)	5.25 in (133.35 mm)
<b>I.D. — 4.33 in (110.00 mm)</b>				
111-9957	URE	A	0.37 in (9.35 mm)	4.96 in (126.02 mm)
167-2485	URE	E	0.37 in (9.35 mm)	4.96 in (126.02 mm)
165-9291	URE	B	0.47 in (12.00 mm)	4.97 in (126.26 mm)
<b>I.D. — 4.50 in (114.30 mm)</b>				
3E-4178	URE	A	0.31 in (7.92 mm)	5.13 in (130.18 mm)
225-3289	URE	B	0.55 in (14.00 mm)	5.50 in (139.70 mm)
167-2487	URE	E	0.55 in (14.00 mm)	5.50 in (139.70 mm)
3J-4458	URE	A	0.55 in (14.00 mm)	5.50 in (139.70 mm)
9J-1337	NIT	A	0.55 in (14.00 mm)	5.50 in (139.70 mm)
9X-3580	URE	D	0.55 in (14.00 mm)	5.50 in (139.70 mm)
143-3674	URE	C	0.55 in (14.00 mm)	5.51 in (139.93 mm)
<b>I.D. — 4.75 in (120.60 mm)</b>				
227-1150	URE	B	0.55 in (14.00 mm)	5.75 in (146.13 mm)
7J-9256	URE	A	0.55 in (14.00 mm)	5.75 in (146.05 mm)
9J-1341	NIT	A	0.55 in (14.00 mm)	5.75 in (146.05 mm)
9X-7262	URE	B	0.55 in (14.00 mm)	5.75 in (146.05 mm)
167-2488	URE	E	0.55 in (14.00 mm)	5.75 in (146.13 mm)
<b>I.D. — 4.82 in (122.50 mm)</b>				
155-9194	URE	A	0.35 in (9.00 mm)	5.56 in (141.26 mm)
165-9292	URE	B	0.47 in (12.00 mm)	5.56 in (141.26 mm)
<b>I.D. — 4.90 in (124.50 mm)</b>				
121-1596	URE	A	0.39 in (10.02 mm)	5.64 in (143.14 mm)
<b>I.D. — 5.00 in (126.95 mm)</b>				
150-6263	URE	C	0.55 in (14.00 mm)	6.01 in (152.70 mm)
225-3290	URE	B	0.55 in (14.00 mm)	6.00 in (152.40 mm)
167-2489	URE	E	0.55 in (14.00 mm)	6.00 in (152.40 mm)
9J-1681	NIT	A	0.55 in (14.00 mm)	6.00 in (152.40 mm)
9X-3582	URE	B	0.55 in (14.00 mm)	6.00 in (152.40 mm)

Cylinder Seals

(Continued)

# Press-In Wiper Seals

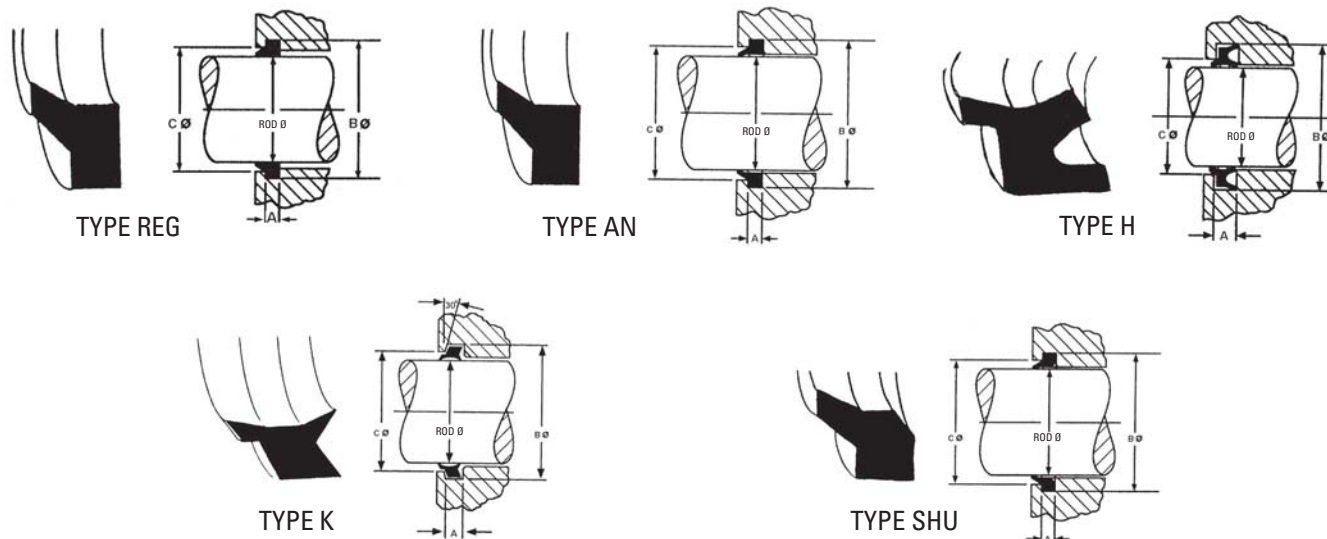
## Press-In Wiper Seals (Continued)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 5.00 in (126.95 mm) (Continued)</b>				
8J-4520	URE	D	0.55 in (14.00 mm)	6.00 in (152.40 mm)
<b>I.D. — 5.12 in (130.00 mm)</b>				
167-2490	URE	E	0.36 in (9.20 mm)	5.75 in (146.05 mm)
111-9958	URE	A	0.37 in (9.35 mm)	5.75 in (146.02 mm)
167-2491	URE	E	0.37 in (9.35 mm)	5.75 in (146.02 mm)
165-9293	URE	B	0.47 in (12.00 mm)	5.76 in (146.26 mm)
<b>I.D. — 5.25 in (133.30 mm)</b>				
233-0632	URE	B	0.55 in (14.00 mm)	6.25 in (158.75 mm)
167-2492	URE	E	0.55 in (14.00 mm)	6.25 in (158.75 mm)
9X-7268	URE	B	0.55 in (14.00 mm)	6.25 in (158.75 mm)
<b>I.D. — 5.50 in (139.65 mm)</b>				
152-5063	URE	D	0.55 in (14.00 mm)	6.51 in (165.41 mm)
167-2993	--	E	0.55 in (14.00 mm)	6.50 in (165.10 mm)
225-3291	URE	B	0.55 in (14.00 mm)	6.50 in (165.10 mm)
167-2493	URE	E	0.55 in (14.00 mm)	6.50 in (165.10 mm)
9X-3573	URE	D	0.55 in (14.00 mm)	6.50 in (165.10 mm)
<b>I.D. — 5.51 in (140.00 mm)</b>				
107-6615	URE	A	0.41 in (10.35 mm)	6.30 in (160.02 mm)
167-2494	URE	E	0.41 in (10.35 mm)	6.30 in (160.02 mm)
165-9294	URE	B	0.51 in (13.00 mm)	6.31 in (160.26 mm)
<b>I.D. — 5.71 in (145.00 mm)</b>				
167-2505	URE	E	0.39 in (10.00 mm)	6.50 in (165.02 mm)
<b>I.D. — 5.75 in (146.05 mm)</b>				
225-3293	URE	B	0.54 in (13.70 mm)	6.75 in (171.45 mm)
167-2495	URE	E	0.54 in (13.70 mm)	6.75 in (171.45 mm)
9J-5473	NIT	A	0.55 in (14.00 mm)	6.75 in (171.45 mm)
9J-5469	URE	A	0.55 in (14.00 mm)	6.75 in (171.45 mm)
9X-3574	URE	B	0.55 in (14.00 mm)	6.75 in (171.45 mm)
<b>I.D. — 5.91 in (150.00 mm)</b>				
107-6616	URE	A	0.41 in (10.35 mm)	6.69 in (170.02 mm)
167-2496	URE	E	0.41 in (10.50 mm)	6.69 in (170.02 mm)
165-9296	URE	B	0.51 in (13.00 mm)	6.70 in (170.26 mm)
<b>I.D. — 6.00 in (152.40 mm)</b>				
3J-7622	URE	A	0.54 in (13.70 mm)	7.00 in (177.80 mm)
225-3294	URE	B	0.54 in (13.70 mm)	7.00 in (177.80 mm)
167-2497	URE	E	0.54 in (13.70 mm)	7.00 in (177.80 mm)
9J-1697	NIT	A	0.55 in (14.00 mm)	7.00 in (177.80 mm)
161-5789	URE	D	0.55 in (14.00 mm)	7.01 in (178.11 mm)
<b>I.D. — 6.50 in (165.10 mm)</b>				
225-3295	URE	B	0.54 in (13.70 mm)	7.50 in (190.50 mm)
167-2498	URE	E	0.54 in (13.70 mm)	7.50 in (190.50 mm)
9X-7323	URE	B	0.55 in (14.00 mm)	7.50 in (190.50 mm)
7J-2806	URE	A	0.65 in (16.50 mm)	7.50 in (190.50 mm)
8J-1877	NIT	A	0.65 in (16.50 mm)	7.50 in (190.50 mm)

Part Number	Material	Seal Type	A	B
			Width (± 0.02 in)	O.D.
<b>I.D. — 6.75 in (171.40 mm)</b>				
227-1147	URE	B	0.55 in (14.00 mm)	7.75 in (196.85 mm)
3J-4460	--	A	0.55 in (14.00 mm)	7.75 in (196.85 mm)
167-2499	URE	E	0.55 in (14.00 mm)	7.75 in (196.85 mm)
8C-9146	URE	B	0.55 in (14.00 mm)	7.75 in (196.85 mm)
<b>I.D. — 7.00 in (177.80 mm)</b>				
3G-2646	NIT	A	0.55 in (14.00 mm)	8.00 in (203.20 mm)
9X-7333	URE	A	0.55 in (14.00 mm)	8.00 in (203.20 mm)
8C-9136	URE	D	0.55 in (14.00 mm)	8.00 in (203.20 mm)
225-3296	URE	B	0.59 in (15.00 mm)	8.00 in (203.20 mm)
167-2500	URE	E	0.59 in (15.00 mm)	8.00 in (203.20 mm)
<b>I.D. — 7.25 in (184.15 mm)</b>				
108-0133	--	B	0.32 in (8.25 mm)	8.08 in (205.30 mm)
225-3297	URE	B	0.54 in (13.70 mm)	8.25 in (209.45 mm)
167-2501	URE	E	0.54 in (13.70 mm)	8.25 in (209.45 mm)
3J-7761	URE	A	0.55 in (14.00 mm)	8.25 in (209.55 mm)
108-0134	URE	D	0.55 in (14.00 mm)	8.25 in (209.55 mm)
<b>I.D. — 7.50 in (190.50 mm)</b>				
225-3298	URE	B	0.54 in (13.70 mm)	8.50 in (215.90 mm)
167-2502	URE	E	0.54 in (13.70 mm)	8.50 in (215.90 mm)
108-0132	URE	B	0.55 in (14.00 mm)	8.50 in (215.90 mm)
<b>I.D. — 8.00 in (203.20 mm)</b>				
225-3299	URE	B	0.54 in (13.70 mm)	9.00 in (228.60 mm)
167-2503	URE	E	0.54 in (13.70 mm)	9.00 in (228.60 mm)
6E-0036	URE	B	0.55 in (14.00 mm)	9.00 in (228.60 mm)
152-5064	URE	D	0.55 in (14.00 mm)	9.01 in (228.91 mm)
<b>I.D. — 8.75 in (222.25 mm)</b>				
225-3300	URE	B	0.54 in (13.70 mm)	9.75 in (247.65 mm)
167-2504	URE	E	0.54 in (13.70 mm)	9.75 in (247.65 mm)
108-6214	URE	B	0.55 in (14.00 mm)	9.75 in (247.65 mm)
<b>I.D. — 9.00 in (228.60 mm)</b>				
9X-7354	URE	A	0.59 in (15.00 mm)	9.75 in (247.70 mm)
<b>I.D. — 9.50 in (241.30 mm)</b>				
167-2508	URE	E	0.59 in (15.00 mm)	10.50 in (266.77 mm)
<b>I.D. — 11.00 in (279.40 mm)</b>				
9X-7353	URE	A	0.59 in (15.00 mm)	12.00 in (304.85 mm)
<b>I.D. — 12.50 in (317.50 mm)</b>				
9X-7352	URE	A	0.59 in (15.00 mm)	13.50 in (342.95 mm)
<b>I.D. — 13.50 in (342.90 mm)</b>				
9X-7350	URE	A	0.59 in (15.00 mm)	14.50 in (368.35 mm)
<b>I.D. — 15.75 in (400.05 mm)</b>				
149-2697	URE	B	0.55 in (14.00 mm)	16.76 in (425.82 mm)
<b>I.D. — 18.45 in (468.60 mm)</b>				
9X-7355	NIT	A	0.55 in (14.00 mm)	19.45 in (494.12 mm)



## Snap-In Wiper Seals



Part Number	Seal Type	A	B	C
		Width ( $\pm 0.002$ in)	O.D. ( $\pm 0.003$ in)	Base Thickness ( $\pm 0.010$ in)
<b>I.D. — 0.63 in (15.88 mm)</b>				
5J-2274	REG	0.13 in (3.20 mm)	0.88 in (22.28 mm)	0.79 in (20.10 mm)
<b>I.D. — 0.75 in (19.05 mm)</b>				
6J-1879	REG	0.19 in (4.80 mm)	1.13 in (28.63 mm)	1.00 in (25.40 mm)
<b>I.D. — 1.00 in (25.40 mm)</b>				
6J-1890	REG	0.19 in (4.80 mm)	1.38 in (34.98 mm)	1.25 in (31.75 mm)
3E-4124	K	0.19 in (4.95 mm)	1.39 in (35.18 mm)	1.08 in (27.48 mm)
<b>I.D. — 1.13 in (28.58 mm)</b>				
3E-4138	SHU	0.19 in (4.75 mm)	1.50 in (38.02 mm)	1.37 in (34.80 mm)
<b>I.D. — 1.25 in (31.75 mm)</b>				
3E-4139	SHU	0.19 in (4.75 mm)	1.62 in (41.20 mm)	1.49 in (37.97 mm)
3E-4125	K	0.19 in (4.95 mm)	1.64 in (41.53 mm)	1.33 in (33.83 mm)
<b>I.D. — 1.38 in (34.93 mm)</b>				
3E-4140	SHU	0.19 in (4.75 mm)	1.75 in (44.37 mm)	1.62 in (41.15 mm)
<b>I.D. — 1.50 in (38.10 mm)</b>				
141-7451	H	0.34 in (8.76 mm)	--	2.00 in (50.80 mm)
3E-4103	AN	0.11 in (2.72 mm)	1.80 in (45.77 mm)	1.67 in (42.37 mm)
3E-4141	SHU	0.19 in (4.75 mm)	1.87 in (47.55 mm)	1.74 in (44.32 mm)
5J-6795	REG	0.19 in (4.80 mm)	1.88 in (47.68 mm)	1.75 in (44.45 mm)
3E-4126	K	0.19 in (4.95 mm)	1.89 in (47.88 mm)	1.58 in (40.18 mm)
<b>I.D. — 1.63 in (41.28 mm)</b>				
3E-4104	AN	0.11 in (2.72 mm)	1.93 in (48.95 mm)	1.79 in (45.54 mm)
3E-4163	SHU	0.19 in (4.75 mm)	2.00 in (50.72 mm)	1.74 in (44.32 mm)
<b>I.D. — 1.75 in (44.40 mm)</b>				
8T-5431	REG	0.19 in (4.80 mm)	--	2.13 in (54.03 mm)
7U-7648	REG	--	2.13 in (54.00 mm)	--
3E-4105	AN	0.11 in (2.72 mm)	2.05 in (52.12 mm)	1.92 in (48.72 mm)
3E-4150	H	0.22 in (5.54 mm)	2.11 in (53.72 mm)	1.89 in (47.88 mm)
3E-4142	SHU	0.19 in (4.75 mm)	2.12 in (53.90 mm)	1.99 in (50.67 mm)

(Continued)

# Snap-In Wiper Seals

## Snap-In Wiper Seals (Continued)

Part Number	Seal Type	A	B	C
		Width ( $\pm 0.002$ in)	O.D. ( $\pm 0.003$ in)	Base Thickness ( $\pm 0.010$ in)
<b>I.D. — 1.75 in (44.40 mm) (Continued)</b>				
3E-4127	K	0.19 in (4.95 mm)	2.14 in (54.23 mm)	1.83 in (46.53 mm)
<b>I.D. — 1.87 in (47.62 mm)</b>				
3G-4721	REG	0.19 in (4.80 mm)	2.25 in (57.20 mm)	2.13 in (53.98 mm)
<b>I.D. — 1.97 in (50.00 mm)</b>				
5U-3693	REG	0.25 in (6.35 mm)	--	2.50 in (63.50 mm)
3E-4151	H	0.22 in (5.54 mm)	2.36 in (60.07 mm)	2.14 in (54.23 mm)
3E-4143	SHU	0.25 in (6.32 mm)	2.50 in (63.42 mm)	2.33 in (59.11 mm)
<b>I.D. — 2.00 in (50.80 mm)</b>				
3E-4106	AN	0.11 in (2.72 mm)	2.30 in (58.47 mm)	2.18 in (55.32 mm)
3E-4128	K	0.19 in (4.95 mm)	2.39 in (60.58 mm)	2.08 in (52.88 mm)
4T-0415	REG	0.25 in (6.38 mm)	2.50 in (63.55 mm)	2.33 in (59.25 mm)
<b>I.D. — 2.01 in (50.96 mm)</b>				
1K-5354	REG	0.18 in (4.68 mm)	--	2.37 in (60.25 mm)
<b>I.D. — 2.25 in (57.15 mm)</b>				
3E-4107	AN	0.11 in (2.72 mm)	2.55 in (64.82 mm)	2.43 in (61.67 mm)
3E-4152	H	0.28 in (7.14 mm)	2.74 in (69.72 mm)	2.39 in (60.58 mm)
3E-4144	SHU	0.25 in (6.32 mm)	2.75 in (69.77 mm)	2.58 in (65.46 mm)
6J-0217	REG	0.25 in (6.38 mm)	2.75 in (69.90 mm)	2.58 in (65.60 mm)
3E-4129	K	0.26 in (6.48 mm)	2.76 in (70.10 mm)	2.41 in (61.14 mm)
<b>I.D. — 2.37 in (60.32 mm)</b>				
5J-8016	REG	0.25 in (6.38 mm)	2.88 in (73.08 mm)	2.71 in (68.78 mm)
<b>I.D. — 2.38 in (60.33 mm)</b>				
3E-4167	SHU	0.25 in (6.32 mm)	2.87 in (72.95 mm)	2.70 in (68.63 mm)
<b>I.D. — 2.50 in (63.50 mm)</b>				
3E-4108	AN	0.11 in (2.72 mm)	2.80 in (71.17 mm)	2.68 in (68.02 mm)
3E-4153	H	0.28 in (7.14 mm)	2.99 in (76.07 mm)	2.64 in (66.93 mm)
3E-4145	SHU	0.25 in (6.32 mm)	3.00 in (76.12 mm)	2.83 in (71.81 mm)
5J-8156	REG	0.25 in (6.38 mm)	3.00 in (76.25 mm)	2.83 in (71.95 mm)
3E-4130	K	0.26 in (6.48 mm)	3.01 in (76.45 mm)	2.66 in (67.49 mm)
<b>I.D. — 2.63 in (66.68 mm)</b>				
3G-4719	REG	0.25 in (6.38 mm)	3.13 in (79.43 mm)	2.96 in (75.13 mm)
3E-4131	K	0.26 in (6.48 mm)	3.14 in (79.63 mm)	2.78 in (70.66 mm)
<b>I.D. — 2.75 in (69.85 mm)</b>				
3E-4109	AN	0.12 in (3.10 mm)	3.11 in (79.10 mm)	2.96 in (75.16 mm)
3E-4169	SHU	0.25 in (6.32 mm)	3.25 in (82.47 mm)	3.08 in (78.16 mm)
5J-7036	REG	0.25 in (6.38 mm)	3.25 in (82.60 mm)	3.08 in (78.30 mm)
3E-4132	K	0.26 in (6.48 mm)	3.26 in (82.80 mm)	2.91 in (73.84 mm)
<b>I.D. — 3.00 in (76.20 mm)</b>				
3E-4154	H	0.28 in (7.14 mm)	3.49 in (88.77 mm)	3.13 in (79.53 mm)
3E-4146	SHU	0.25 in (6.32 mm)	3.50 in (88.82 mm)	3.33 in (84.51 mm)
5U-2818	REG	0.25 in (6.40 mm)	3.50 in (88.90 mm)	--
5J-7030	REG	0.25 in (6.38 mm)	3.50 in (88.95 mm)	3.33 in (84.65 mm)
3E-4110	AN	0.12 in (3.10 mm)	3.36 in (85.45 mm)	3.21 in (81.51 mm)
3E-4133	K	0.26 in (6.48 mm)	3.51 in (89.15 mm)	3.16 in (80.19 mm)

(Continued)

## Snap-In Wiper Seals (Continued)

Part Number	Seal Type	A	B	C
		Width ( $\pm 0.002$ in)	O.D. ( $\pm 0.003$ in)	Base Thickness ( $\pm 0.010$ in)
<b>I.D. — 3.25 in (82.55 mm)</b>				
5J-7034	REG	0.25 in (6.38 mm)	3.75 in (95.30 mm)	3.58 in (91.00 mm)
<b>I.D. — 3.38 in (85.73 mm)</b>				
3E-4171	SHU	0.25 in (6.32 mm)	3.87 in (98.35 mm)	3.70 in (94.03 mm)
3E-4111	AN	0.12 in (3.10 mm)	3.74 in (94.97 mm)	3.58 in (91.03 mm)
<b>I.D. — 3.50 in (88.90 mm)</b>				
3E-4112	AN	0.12 in (3.10 mm)	3.86 in (98.15 mm)	3.71 in (94.21 mm)
3E-4155	H	0.28 in (7.14 mm)	3.99 in (101.47 mm)	3.64 in (92.33 mm)
3E-4147	SHU	0.25 in (6.32 mm)	4.00 in (101.52 mm)	3.83 in (97.21 mm)
5U-3529	REG	0.25 in (6.30 mm)	4.00 in (101.60 mm)	--
5J-7032	REG	0.25 in (6.38 mm)	4.00 in (101.65 mm)	3.83 in (97.35 mm)
3E-4134	K	0.26 in (6.48 mm)	4.01 in (101.85 mm)	3.66 in (92.89 mm)
<b>I.D. — 3.75 in (95.25 mm)</b>				
3E-4113	AN	0.12 in (3.10 mm)	4.11 in (104.50 mm)	3.96 in (100.56 mm)
3E-4172	SHU	0.25 in (6.32 mm)	4.25 in (107.87 mm)	4.08 in (103.56 mm)
4T-5540	REG	0.25 in (6.38 mm)	4.25 in (108.00 mm)	4.08 in (103.70 mm)
<b>I.D. — 4.00 in (101.55 mm)</b>				
138-9739	REG	0.25 in (6.37 mm)	--	4.50 in (114.30 mm)
3E-4114	AN	0.14 in (3.51 mm)	4.43 in (112.45 mm)	4.24 in (107.70 mm)
3E-4156	H	0.28 in (7.14 mm)	4.49 in (114.17 mm)	4.14 in (105.03 mm)
3E-4148	SHU	0.25 in (6.32 mm)	4.50 in (114.22 mm)	4.33 in (109.91 mm)
5J-2221	REG	0.25 in (6.38 mm)	4.50 in (114.35 mm)	4.33 in (110.05 mm)
3E-4135	K	0.26 in (6.48 mm)	4.51 in (114.55 mm)	4.16 in (105.59 mm)
<b>I.D. — 4.25 in (107.95 mm)</b>				
3E-4115	AN	0.14 in (3.51 mm)	4.68 in (118.80 mm)	4.49 in (114.05 mm)
7U-4138	REG	0.25 in (6.30 mm)	4.75 in (120.65 mm)	--
4T-1637	REG	0.25 in (6.38 mm)	4.75 in (120.70 mm)	4.61 in (117.05 mm)
<b>I.D. — 4.50 in (114.30 mm)</b>				
3E-4116	AN	0.14 in (3.51 mm)	4.93 in (125.15 mm)	4.74 in (120.40 mm)
3E-4157	H	0.28 in (7.14 mm)	4.99 in (126.87 mm)	4.64 in (117.73 mm)
3E-4136	K	0.26 in (6.48 mm)	5.01 in (127.25 mm)	4.66 in (118.29 mm)
3G-8505	REG	0.38 in (9.55 mm)	5.25 in (133.40 mm)	5.00 in (127.00 mm)
<b>I.D. — 4.75 in (120.65 mm)</b>				
3E-4117	AN	0.14 in (3.51 mm)	5.18 in (131.50 mm)	4.99 in (126.75 mm)
<b>I.D. — 5.00 in (127.00 mm)</b>				
3E-4118	AN	0.14 in (3.51 mm)	5.43 in (137.85 mm)	5.24 in (133.10 mm)
3E-4158	H	0.28 in (7.14 mm)	5.49 in (139.57 mm)	5.14 in (130.43 mm)
3E-4137	K	0.26 in (6.48 mm)	5.51 in (139.95 mm)	5.16 in (130.99 mm)
3E-4149	SHU	0.37 in (9.50 mm)	5.75 in (145.97 mm)	5.49 in (139.52 mm)
9J-2547	REG	0.38 in (9.55 mm)	5.75 in (146.10 mm)	5.50 in (139.70 mm)
<b>I.D. — 5.25 in (133.35 mm)</b>				
3E-4119	AN	0.14 in (3.51 mm)	5.68 in (144.20 mm)	5.49 in (139.45 mm)
4T-5663	REG	0.38 in (9.55 mm)	6.00 in (152.45 mm)	5.75 in (146.05 mm)
<b>I.D. — 5.50 in (139.70 mm)</b>				
3E-4174	SHU	0.37 in (9.50 mm)	6.25 in (158.67 mm)	5.99 in (152.22 mm)

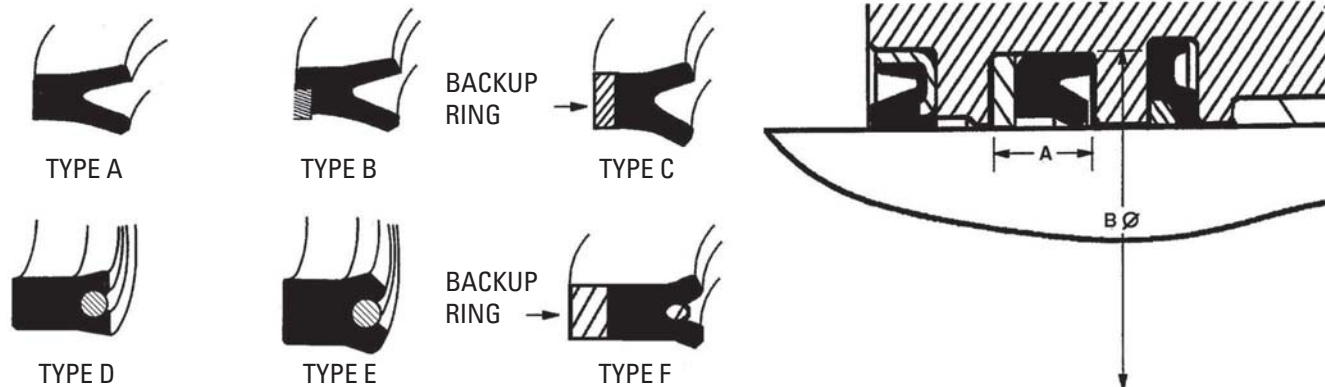
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# Snap-In Wiper Seals

## Snap-In Wiper Seals (Continued)

Part Number	Seal Type	A	B	C
		Width ( $\pm 0.002$ in)	O.D. ( $\pm 0.003$ in)	Base Thickness ( $\pm 0.010$ in)
<b>I.D. — 5.75 in (146.05 mm)</b>				
6J-3073	REG	0.38 in (9.55 mm)	6.13 in (155.63 mm)	5.87 in (149.20 mm)
3E-4120	AN	0.15 in (3.91 mm)	6.24 in (158.47 mm)	6.02 in (152.96 mm)
<b>I.D. — 6.00 in (152.40 mm)</b>				
3E-4121	AN	0.15 in (3.91 mm)	6.49 in (164.82 mm)	6.27 in (159.31 mm)
1U-2708	REG	0.38 in (9.55 mm)	6.75 in (171.50 mm)	6.50 in (165.10 mm)
<b>I.D. — 6.13 in (155.58 mm)</b>				
7J-3319	REG	0.38 in (9.55 mm)	6.88 in (174.68 mm)	6.63 in (168.28 mm)
<b>I.D. — 6.50 in (165.10 mm)</b>				
3E-4122	AN	0.15 in (3.91 mm)	6.99 in (177.52 mm)	6.77 in (172.01 mm)
6J-0542	REG	0.40 in (10.20 mm)	7.50 in (190.55 mm)	7.17 in (182.00 mm)
<b>I.D. — 6.75 in (171.45 mm)</b>				
3E-4123	AN	0.15 in (3.91 mm)	7.24 in (183.87 mm)	7.02 in (178.36 mm)
<b>I.D. — 7.00 in (177.80 mm)</b>				
9X-7366	REG	0.40 in (10.19 mm)	--	8.00 in (203.20 mm)
5J-2682	REG	0.40 in (10.20 mm)	8.00 in (203.25 mm)	7.67 in (194.70 mm)
<b>I.D. — 7.25 in (184.15 mm)</b>				
4T-4802	REG	0.38 in (9.55 mm)	8.00 in (203.25 mm)	7.75 in (196.85 mm)
<b>I.D. — 7.50 in (190.50 mm)</b>				
7J-3320	REG	0.40 in (10.20 mm)	8.50 in (215.95 mm)	8.17 in (207.40 mm)
<b>I.D. — 7.75 in (196.80 mm)</b>				
121-4172	SHU	0.40 in (10.20 mm)	8.50 in (215.95 mm)	8.25 in (209.55 mm)
<b>I.D. — 8.50 in (215.90 mm)</b>				
8J-9934	REG	0.40 in (10.20 mm)	9.25 in (235.00 mm)	9.00 in (228.60 mm)
<b>I.D. — 8.75 in (222.25 mm)</b>				
6E-0252	REG	0.38 in (9.55 mm)	9.50 in (241.35 mm)	9.25 in (234.95 mm)
<b>I.D. — 9.00 in (228.60 mm)</b>				
9X-7367	SHU	0.40 in (10.20 mm)	9.75 in (247.70 mm)	9.50 in (241.30 mm)
6J-7694	REG	0.40 in (10.20 mm)	9.75 in (247.70 mm)	9.50 in (241.35 mm)
<b>I.D. — 10.50 in (266.70 mm)</b>				
4T-4805	REG	0.50 in (12.75 mm)	11.50 in (292.15 mm)	11.17 in (283.60 mm)
<b>I.D. — 11.00 in (279.40 mm)</b>				
1U-4625	REG	0.50 in (12.75 mm)	12.00 in (304.85 mm)	11.67 in (296.30 mm)
9X-7368	SHU	0.50 in (12.75 mm)	12.00 in (304.85 mm)	11.67 in (296.30 mm)
<b>I.D. — 11.50 in (292.05 mm)</b>				
121-4171	SHU	0.50 in (12.75 mm)	12.50 in (317.55 mm)	12.17 in (309.00 mm)
<b>I.D. — 12.50 in (317.50 mm)</b>				
4T-4130	REG	0.50 in (12.75 mm)	13.50 in (342.95 mm)	13.17 in (334.40 mm)
9X-7369	SHU	0.50 in (12.75 mm)	13.50 in (342.95 mm)	13.17 in (334.40 mm)

## U-Cup Rod Seals



Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 0.37 in (9.52 mm)</b>						
1U-3147	URE	A	0.16 in (4.10 mm)	0.63 in (16.00 mm)	--	--
<b>I.D. — 0.63 in (15.88 mm)</b>						
7J-0375	URE	A	0.29 in (7.26 mm)	0.88 in (22.28 mm)	--	--
<b>I.D. — 0.75 in (19.05 mm)</b>						
6J-1878	URE	A	0.29 in (7.26 mm)	1.00 in (25.45 mm)	--	--
<b>I.D. — 1.00 in (25.40 mm)</b>						
6J-1889	URE	A	0.29 in (7.26 mm)	1.25 in (31.80 mm)	--	--
<b>I.D. — 1.13 in (28.58 mm)</b>						
3E-4175	URE	E	0.34 in (8.74 mm)	1.50 in (38.10 mm)	0.19 in (4.76 mm)	--
3E-4284	URE	E	0.41 in (10.49 mm)	1.63 in (41.28 mm)	0.25 in (6.35 mm)	--
<b>I.D. — 1.18 in (30.00 mm)</b>						
144-9481	URE	A	0.43 in (11.00 mm)	1.57 in (40.00 mm)	0.20 in (5.00 mm)	--
<b>I.D. — 1.25 in (31.75 mm)</b>						
3E-4181	URE	E	0.34 in (8.74 mm)	1.63 in (41.28 mm)	0.19 in (4.76 mm)	--
3E-4180	URE	D	0.34 in (8.74 mm)	1.63 in (41.28 mm)	0.19 in (4.76 mm)	--
167-2295	URE	A	0.29 in (7.26 mm)	1.63 in (41.33 mm)	--	--
4T-0959	--	E	0.29 in (7.26 mm)	1.63 in (41.33 mm)	--	--
5J-8125	URE	A	0.29 in (7.26 mm)	1.63 in (41.33 mm)	--	--
3E-4193	URE	E	0.41 in (10.49 mm)	1.75 in (44.45 mm)	0.25 in (6.35 mm)	--
<b>I.D. — 1.38 in (34.93 mm)</b>						
3E-4182	URE	E	0.34 in (8.74 mm)	1.75 in (44.45 mm)	0.19 in (4.76 mm)	--
3E-4283	URE	D	0.34 in (8.74 mm)	1.75 in (44.45 mm)	0.19 in (4.76 mm)	--
3E-4194	URE	E	0.41 in (10.49 mm)	1.88 in (47.63 mm)	0.25 in (6.35 mm)	--
140-2377	URE	A	0.43 in (11.00 mm)	1.77 in (45.05 mm)	--	--
<b>I.D. — 1.50 in (38.10 mm)</b>						
3E-4183	URE	E	0.41 in (10.49 mm)	1.88 in (47.63 mm)	0.19 in (4.76 mm)	--
167-2294	URE	A	0.29 in (7.26 mm)	1.88 in (47.68 mm)	--	--
5J-8150	URE	A	0.29 in (7.26 mm)	1.88 in (47.68 mm)	--	--
9J-4038	NIT	B	0.29 in (7.26 mm)	1.88 in (47.68 mm)	--	--
3E-4195	URE	E	0.41 in (10.49 mm)	2.00 in (50.80 mm)	0.25 in (6.35 mm)	--
3E-4215	URE	E	0.55 in (13.97 mm)	2.13 in (53.98 mm)	0.31 in (7.94 mm)	--

(Continued)



# U-Cup Rod Seals

## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 1.63 in (41.28 mm)</b>						
3E-4184	URE	E	0.41 in (10.49 mm)	2.00 in (50.80 mm)	0.19 in (4.76 mm)	--
3E-4201	URE	D	0.41 in (10.49 mm)	2.00 in (50.80 mm)	0.19 in (4.76 mm)	--
4T-0488	URE	A	0.35 in (8.85 mm)	2.00 in (50.85 mm)	--	--
<b>I.D. — 1.75 in (44.45 mm)</b>						
3E-4185	URE	E	0.41 in (10.49 mm)	2.13 in (53.98 mm)	0.19 in (4.76 mm)	--
167-2443	URE	E	0.29 in (7.26 mm)	2.13 in (54.03 mm)	--	--
5J-8175	URE	A	0.29 in (7.26 mm)	2.13 in (54.03 mm)	--	--
8J-5816	NIT	B	0.29 in (7.26 mm)	2.13 in (54.03 mm)	--	--
167-2300	URE	A	0.29 in (7.26 mm)	2.13 in (54.03 mm)	--	--
3E-4287	URE	E	0.41 in (10.49 mm)	2.25 in (57.15 mm)	0.25 in (6.35 mm)	--
3E-4216	URE	E	0.55 in (13.97 mm)	2.38 in (60.33 mm)	0.31 in (7.94 mm)	--
<b>I.D. — 1.77 in (44.95 mm)</b>						
143-8914	URE	A	0.43 in (11.00 mm)	2.36 in (60.00 mm)	--	--
167-2297	URE	A	0.29 in (7.26 mm)	2.15 in (54.58 mm)	--	--
<b>I.D. — 1.87 in (47.62 mm)</b>						
4T-6898	URE	A	0.35 in (8.85 mm)	2.25 in (57.20 mm)	--	--
<b>I.D. — 1.88 in (47.63 mm)</b>						
167-2302	URE	A	0.35 in (8.85 mm)	2.25 in (57.20 mm)	--	--
<b>I.D. — 1.97 in (50.00 mm)</b>						
167-2303	URE	A	0.35 in (8.85 mm)	2.35 in (59.58 mm)	--	--
<b>I.D. — 2.00 in (50.80 mm)</b>						
3E-4186	URE	E	0.41 in (10.49 mm)	2.38 in (60.33 mm)	0.19 in (4.76 mm)	--
5U-3644	URE	D	0.38 in (9.53 mm)	2.50 in (63.50 mm)	0.25 in (6.40 mm)	--
3E-4196	URE	E	0.41 in (10.49 mm)	2.50 in (63.50 mm)	0.25 in (6.35 mm)	--
5J-8200	URE	A	0.41 in (10.49 mm)	2.50 in (63.55 mm)	--	--
167-2304	URE	A	0.41 in (10.49 mm)	2.50 in (63.55 mm)	--	--
9J-1318	NIT	B	0.41 in (10.49 mm)	2.50 in (63.55 mm)	--	--
3G-3259	URE	A	0.41 in (10.50 mm)	2.50 in (63.55 mm)	--	--
3E-4217	URE	E	0.55 in (13.97 mm)	2.63 in (66.68 mm)	0.31 in (7.94 mm)	--
3E-4227	URE	E	0.69 in (17.48 mm)	2.75 in (69.85 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 2.13 in (53.98 mm)</b>						
3P-1344	URE	A	0.41 in (10.49 mm)	2.63 in (66.73 mm)	--	--
4T-6126	URE	A	0.41 in (10.49 mm)	2.63 in (66.73 mm)	--	--
167-2305	URE	A	0.41 in (10.49 mm)	2.63 in (66.73 mm)	--	--
<b>I.D. — 2.17 in (55.00 mm)</b>						
099-6996	URE	C	0.56 in (14.10 mm)	2.68 in (68.02 mm)	--	099-6999
167-2306	URE	A	0.56 in (14.10 mm)	2.68 in (68.03 mm)	--	--
<b>I.D. — 2.25 in (57.15 mm)</b>						
3E-4187	URE	E	0.41 in (10.49 mm)	2.63 in (66.68 mm)	0.19 in (4.76 mm)	--
3E-4197	URE	E	0.41 in (10.49 mm)	2.75 in (69.85 mm)	0.25 in (6.35 mm)	--
7J-4820	NIT	B	0.41 in (10.49 mm)	2.75 in (69.90 mm)	--	--
5J-8225	URE	A	0.41 in (10.49 mm)	2.75 in (69.90 mm)	--	--
167-2307	URE	A	0.41 in (10.49 mm)	2.75 in (69.90 mm)	--	--
3E-4218	URE	E	0.55 in (13.97 mm)	2.88 in (73.03 mm)	0.31 in (7.94 mm)	--

Cylinder Seals

(Continued)

## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 2.25 in (57.15 mm) (Continued)</b>						
3E-4228	URE	E	0.69 in (17.48 mm)	3.00 in (76.20 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 2.36 in (60.00 mm)</b>						
167-2301	URE	A	0.35 in (8.85 mm)	2.74 in (69.58 mm)	--	--
093-1475	URE	C	0.56 in (14.10 mm)	2.87 in (73.02 mm)	--	093-1518
<b>I.D. — 2.37 in (60.28 mm)</b>						
5J-8238	URE	A	0.41 in (10.49 mm)	2.88 in (73.08 mm)	--	--
167-2310	URE	A	0.41 in (10.49 mm)	2.88 in (73.08 mm)	--	--
<b>I.D. — 2.38 in (60.33 mm)</b>						
3E-4204	URE	D	0.41 in (10.49 mm)	2.75 in (69.85 mm)	0.19 in (4.76 mm)	--
3E-4188	URE	E	0.41 in (10.49 mm)	2.75 in (69.86 mm)	0.19 in (4.76 mm)	--
3G-2911	URE	A	0.41 in (10.50 mm)	2.88 in (73.08 mm)	--	--
<b>I.D. — 2.50 in (63.50 mm)</b>						
3E-4189	URE	E	0.41 in (10.49 mm)	2.88 in (73.03 mm)	0.19 in (4.76 mm)	--
167-2311	URE	A	0.35 in (8.92 mm)	2.88 in (73.13 mm)	--	--
3E-4198	URE	E	0.41 in (10.49 mm)	3.00 in (76.20 mm)	0.25 in (6.35 mm)	--
3G-3752	URE	A	0.41 in (10.49 mm)	3.00 in (76.25 mm)	--	--
167-2438	URE	E	0.41 in (10.49 mm)	3.00 in (76.25 mm)	--	--
5J-0964	URE	A	0.41 in (10.49 mm)	3.00 in (76.25 mm)	--	--
7J-4824	NIT	B	0.41 in (10.49 mm)	3.00 in (76.25 mm)	--	--
167-2312	URE	A	0.41 in (10.50 mm)	3.00 in (76.25 mm)	--	--
3E-4285	URE	D	0.55 in (13.97 mm)	3.13 in (79.38 mm)	0.31 in (7.94 mm)	--
3E-4219	URE	E	0.55 in (13.97 mm)	3.13 in (79.38 mm)	0.31 in (7.94 mm)	--
167-2313	URE	A	0.54 in (13.70 mm)	3.13 in (79.50 mm)	--	--
3E-4229	URE	E	0.69 in (17.48 mm)	3.25 in (82.55 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 2.56 in (65.00 mm)</b>						
167-2314	URE	A	0.41 in (10.49 mm)	3.06 in (77.75 mm)	--	--
093-1476	URE	C	0.56 in (14.10 mm)	3.07 in (78.02 mm)	--	096-1055
<b>I.D. — 2.63 in (66.68 mm)</b>						
167-2315	URE	A	0.41 in (10.49 mm)	3.13 in (79.43 mm)	--	--
3G-4718	URE	A	0.41 in (10.49 mm)	3.13 in (79.43 mm)	--	--
<b>I.D. — 2.75 in (69.85 mm)</b>						
3E-4199	URE	E	0.41 in (10.49 mm)	3.25 in (82.55 mm)	0.25 in (6.35 mm)	--
167-2317	URE	A	0.41 in (10.49 mm)	3.25 in (82.60 mm)	--	--
6E-1459	URE	E	0.41 in (10.49 mm)	3.25 in (82.60 mm)	0.38 in (9.65 mm)	--
5J-8275	URE	A	0.41 in (10.49 mm)	3.25 in (82.60 mm)	--	--
9J-2944	NIT	B	0.41 in (10.49 mm)	3.25 in (82.60 mm)	--	--
3E-4220	URE	E	0.55 in (13.97 mm)	3.38 in (85.73 mm)	0.31 in (7.94 mm)	--
3E-4230	URE	E	0.69 in (17.48 mm)	3.50 in (88.90 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 2.76 in (70.00 mm)</b>						
167-2299	URE	A	0.56 in (14.10 mm)	3.27 in (83.03 mm)	--	--
093-1477	URE	C	0.56 in (14.10 mm)	3.27 in (83.03 mm)	--	093-1519
<b>I.D. — 2.95 in (75.00 mm)</b>						
096-3468	URE	C	0.56 in (14.10 mm)	3.47 in (88.03 mm)	--	096-3467
167-2318	URE	A	0.52 in (13.15 mm)	3.55 in (90.05 mm)	--	--

(Continued)

# U-Cup Rod Seals

## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 3.00 in (76.20 mm)</b>						
3E-4190	URE	E	0.41 in (10.49 mm)	3.38 in (85.73 mm)	0.19 in (4.76 mm)	--
3E-4200	URE	E	0.41 in (10.49 mm)	3.50 in (88.90 mm)	0.25 in (6.35 mm)	--
5J-8300	URE	A	0.41 in (10.49 mm)	3.50 in (88.95 mm)	--	--
8J-0248	NIT	B	0.41 in (10.49 mm)	3.50 in (88.95 mm)	--	--
167-2319	URE	A	0.41 in (10.49 mm)	3.50 in (88.95 mm)	--	--
3E-4221	URE	E	0.55 in (13.97 mm)	3.63 in (92.08 mm)	0.31 in (7.94 mm)	--
3E-4231	URE	E	0.69 in (17.48 mm)	3.75 in (95.25 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 3.15 in (80.00 mm)</b>						
167-2343	URE	A	0.35 in (8.85 mm)	3.53 in (89.58 mm)	--	--
093-1479	URE	C	0.56 in (14.10 mm)	3.66 in (93.03 mm)	--	096-1054
<b>I.D. — 3.25 in (82.55 mm)</b>						
7J-2145	NIT	B	0.41 in (10.49 mm)	3.75 in (95.30 mm)	--	--
5J-8325	URE	A	0.41 in (10.49 mm)	3.75 in (95.30 mm)	--	--
167-2320	URE	A	0.41 in (10.49 mm)	3.75 in (95.30 mm)	--	--
<b>I.D. — 3.35 in (85.00 mm)</b>						
096-1567	URE	A	--	--	--	--
137-3656	URE	A	0.35 in (9.00 mm)	3.94 in (100.00 mm)	--	--
167-2322	URE	A	0.56 in (14.10 mm)	3.94 in (100.03 mm)	--	--
7Y-5117	URE	C	0.56 in (14.10 mm)	3.94 in (100.03 mm)	--	7Y-5116
<b>I.D. — 3.38 in (85.73 mm)</b>						
3E-4286	URE	D	0.55 in (13.97 mm)	4.00 in (101.60 mm)	0.31 in (7.94 mm)	--
3E-4222	URE	E	0.55 in (13.97 mm)	4.00 in (101.60 mm)	0.31 in (7.94 mm)	--
3G-5051	URE	A	0.41 in (10.49 mm)	3.88 in (98.48 mm)	--	--
<b>I.D. — 3.50 in (88.90 mm)</b>						
3E-4191	URE	E	0.41 in (10.49 mm)	3.88 in (98.43 mm)	0.19 in (4.76 mm)	--
3E-4202	URE	E	0.41 in (10.49 mm)	4.00 in (101.60 mm)	0.25 in (6.35 mm)	--
7J-2150	--	B	0.41 in (10.49 mm)	4.00 in (101.65 mm)	--	--
5J-8350	URE	A	0.41 in (10.49 mm)	4.00 in (101.65 mm)	--	--
167-2324	URE	A	0.41 in (10.49 mm)	4.00 in (101.65 mm)	--	--
3E-4223	URE	E	0.55 in (13.97 mm)	4.13 in (104.78 mm)	0.31 in (7.94 mm)	--
167-2323	URE	A	0.82 in (20.77 mm)	4.13 in (104.78 mm)	--	--
3E-4232	URE	E	0.69 in (17.48 mm)	4.25 in (107.95 mm)	0.38 in (9.53 mm)	--
104-9658	URE	A	0.39 in (10.00 mm)	4.29 in (108.90 mm)	0.39 in (10.00 mm)	--
<b>I.D. — 3.54 in (90.00 mm)</b>						
105-2577	URE	A	--	--	--	--
133-6913	URE	A	0.35 in (9.00 mm)	4.13 in (105.00 mm)	--	--
167-2325	URE	A	0.44 in (11.10 mm)	4.14 in (105.03 mm)	--	--
096-1587	URE	C	0.56 in (14.10 mm)	4.14 in (105.03 mm)	--	096-1588
<b>I.D. — 3.74 in (95.00 mm)</b>						
150-5826	URE	C	0.35 in (9.00 mm)	4.33 in (110.00 mm)	--	150-5827
167-2327	URE	A	0.56 in (14.10 mm)	4.33 in (110.03 mm)	--	--
7Y-4629	URE	A	0.56 in (14.10 mm)	4.33 in (110.03 mm)	--	--
167-2326	URE	A	0.64 in (16.15 mm)	4.53 in (115.03 mm)	--	--

(Continued)

U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 3.75 in (95.25 mm)</b>						
3E-4192	URE	E	0.41 in (10.49 mm)	4.13 in (104.78 mm)	0.19 in (4.76 mm)	--
3E-4203	URE	E	0.41 in (10.49 mm)	4.25 in (107.95 mm)	0.25 in (6.35 mm)	--
5J-8375	URE	A	0.41 in (10.49 mm)	4.25 in (108.00 mm)	--	--
167-2328	URE	A	0.41 in (10.49 mm)	4.25 in (108.00 mm)	--	--
9J-1328	--	B	0.41 in (10.49 mm)	4.25 in (108.00 mm)	--	--
3E-4224	URE	E	0.55 in (13.97 mm)	4.38 in (111.13 mm)	0.31 in (7.94 mm)	--
<b>I.D. — 3.94 in (100.00 mm)</b>						
096-1572	URE	A	--	--	--	--
121-1371	URE	A	0.35 in (9.00 mm)	4.53 in (115.00 mm)	--	--
137-3659	URE	C	0.35 in (9.00 mm)	4.53 in (115.00 mm)	--	137-3660
8U-6849	URE	A	0.51 in (13.00 mm)	4.53 in (115.00 mm)	0.30 in (7.50 mm)	--
167-2330	URE	A	0.56 in (14.10 mm)	4.53 in (115.03 mm)	--	--
096-2664	URE	C	0.56 in (14.10 mm)	4.53 in (115.03 mm)	--	096-2655
133-6902	URE	A	0.47 in (12.00 mm)	4.72 in (120.00 mm)	--	--
167-2329	URE	A	0.51 in (13.00 mm)	4.72 in (120.00 mm)	--	--
107-6256	URE	C	0.63 in (16.00 mm)	4.72 in (120.00 mm)	0.38 in (9.75 mm)	107-6255
<b>I.D. — 4.00 in (101.60 mm)</b>						
3E-4225	URE	E	0.62 in (15.72 mm)	4.63 in (117.48 mm)	0.31 in (7.94 mm)	--
3G-2655	--	B	0.41 in (10.50 mm)	4.63 in (117.52 mm)	--	--
5J-8400	URE	A	0.41 in (10.49 mm)	4.63 in (117.53 mm)	--	--
167-2331	URE	A	0.41 in (10.49 mm)	4.63 in (117.53 mm)	--	--
2U-9113	URE	A	0.39 in (10.00 mm)	4.72 in (120.00 mm)	0.36 in (9.20 mm)	--
3E-4233	URE	E	0.69 in (17.48 mm)	4.75 in (120.65 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 4.13 in (105.00 mm)</b>						
128-9269	URE	A	0.56 in (14.10 mm)	4.73 in (120.03 mm)	--	--
167-2332	URE	A	0.56 in (14.10 mm)	4.73 in (120.03 mm)	--	--
7Y-4670	URE	C	0.56 in (14.10 mm)	4.73 in (120.03 mm)	--	7Y-4669
<b>I.D. — 4.25 in (107.95 mm)</b>						
3E-4205	URE	E	0.62 in (15.72 mm)	4.75 in (120.65 mm)	0.25 in (6.35 mm)	--
6J-1425	URE	A	0.66 in (16.84 mm)	5.00 in (127.05 mm)	--	--
167-2333	URE	A	0.66 in (16.84 mm)	5.00 in (127.05 mm)	--	--
9J-1336	--	B	0.66 in (16.84 mm)	5.00 in (127.05 mm)	--	--
<b>I.D. — 4.33 in (110.00 mm)</b>						
167-2334	URE	A	0.56 in (14.10 mm)	4.92 in (125.03 mm)	--	--
128-9270	URE	C	0.56 in (14.10 mm)	4.92 in (125.03 mm)	--	7Y-4941
7Y-4942	URE	C	0.56 in (14.10 mm)	4.92 in (125.03 mm)	--	7Y-4941
167-2338	URE	A	0.61 in (15.50 mm)	5.12 in (130.05 mm)	--	--
<b>I.D. — 4.37 in (111.12 mm)</b>						
1U-3363	URE	B	0.54 in (13.61 mm)	5.13 in (130.23 mm)	--	--
3G-5054	URE	A	0.54 in (13.61 mm)	5.13 in (130.23 mm)	--	--
<b>I.D. — 4.50 in (114.25 mm)</b>						
6J-1450	URE	A	0.41 in (10.49 mm)	5.13 in (130.23 mm)	--	--
6U-9505	--	B	0.42 in (10.62 mm)	4.00 in (101.57 mm)	0.50 in (12.76 mm)	--
3E-4206	URE	D	0.62 in (15.72 mm)	5.00 in (127.00 mm)	0.25 in (6.35 mm)	--

Cylinder Seals

(Continued)

# U-Cup Rod Seals

## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 4.50 in (114.25 mm) (Continued)</b>						
9J-1340	--	B	0.41 in (10.50 mm)	5.13 in (130.22 mm)	--	--
167-2440	URE	E	0.41 in (10.49 mm)	5.13 in (130.23 mm)	--	--
167-2336	URE	A	0.41 in (10.49 mm)	5.13 in (130.23 mm)	--	--
3E-4234	URE	E	0.69 in (17.48 mm)	5.25 in (133.35 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 4.75 in (120.65 mm)</b>						
3E-4207	URE	D	0.62 in (15.72 mm)	5.25 in (133.35 mm)	0.25 in (6.35 mm)	--
6J-1475	URE	A	0.66 in (16.84 mm)	5.50 in (139.75 mm)	--	--
167-2337	URE	A	0.66 in (16.84 mm)	5.50 in (139.75 mm)	--	--
9J-1344	--	B	0.66 in (16.84 mm)	5.50 in (139.75 mm)	--	--
<b>I.D. — 4.76 in (121.00 mm)</b>						
155-9192	URE	C	0.56 in (14.10 mm)	5.51 in (140.03 mm)	--	155-9193
<b>I.D. — 4.87 in (123.82 mm)</b>						
4T-5664	URE	A	0.54 in (13.61 mm)	5.62 in (142.87 mm)	--	--
<b>I.D. — 5.00 in (126.95 mm)</b>						
121-1594	URE	C	0.38 in (9.53 mm)	5.60 in (142.13 mm)	--	121-1595
3E-4208	URE	D	0.62 in (15.72 mm)	5.50 in (139.70 mm)	0.25 in (6.35 mm)	--
3E-4226	URE	E	0.69 in (17.48 mm)	5.63 in (142.88 mm)	0.31 in (7.94 mm)	--
3E-4235	URE	E	0.69 in (17.48 mm)	5.75 in (146.05 mm)	0.38 in (9.53 mm)	--
167-2339	URE	A	0.66 in (16.84 mm)	5.75 in (146.10 mm)	--	--
8J-4524	URE	A	0.66 in (16.84 mm)	5.75 in (146.10 mm)	--	--
9J-1684	URE	B	0.66 in (16.84 mm)	5.75 in (146.10 mm)	--	--
<b>I.D. — 5.12 in (130.00 mm)</b>						
167-2341	URE	A	0.56 in (14.10 mm)	5.71 in (145.03 mm)	--	--
087-5396	URE	C	0.56 in (14.10 mm)	5.71 in (145.03 mm)	--	087-5397
167-2340	URE	A	0.64 in (16.15 mm)	5.91 in (150.05 mm)	--	--
<b>I.D. — 5.25 in (133.30 mm)</b>						
167-2342	URE	A	0.66 in (16.84 mm)	6.00 in (152.45 mm)	--	--
3E-4209	URE	D	0.62 in (15.72 mm)	5.75 in (146.05 mm)	0.25 in (6.35 mm)	--
4T-5699	URE	A	0.66 in (16.84 mm)	6.00 in (152.45 mm)	--	--
<b>I.D. — 5.35 in (136.00 mm)</b>						
147-5770	URE	C	0.56 in (14.10 mm)	6.10 in (155.03 mm)	--	147-5771
<b>I.D. — 5.50 in (139.70 mm)</b>						
3E-4210	URE	D	0.62 in (15.72 mm)	6.00 in (152.40 mm)	0.25 in (6.35 mm)	--
6J-1550	URE	A	0.41 in (10.49 mm)	6.13 in (155.63 mm)	--	--
167-2938	URE	E	0.41 in (10.49 mm)	6.13 in (155.63 mm)	--	--
167-2344	URE	A	0.41 in (10.49 mm)	6.13 in (155.63 mm)	--	--
9J-1692	URE	B	0.41 in (10.49 mm)	6.13 in (155.63 mm)	--	--
3E-4236	URE	E	0.69 in (17.48 mm)	6.25 in (158.75 mm)	0.38 in (9.53 mm)	--
<b>I.D. — 5.51 in (140.00 mm)</b>						
167-2428	URE	E	0.55 in (14.00 mm)	6.10 in (155.00 mm)	--	--
8C-9187	URE	F	0.06 in (1.42 mm)	6.10 in (155.05 mm)	0.03 in (0.73 mm)	8C-9188
<b>I.D. — 5.71 in (145.00 mm)</b>						
167-2347	URE	A	0.55 in (14.00 mm)	6.30 in (160.03 mm)	--	--



## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 5.75 in (146.00 mm)</b>						
121-1602	URE	D	0.56 in (14.10 mm)	6.34 in (161.16 mm)	--	--
3G-2286	URE	A	0.66 in (16.84 mm)	6.50 in (165.15 mm)	--	--
167-2345	URE	A	0.66 in (16.84 mm)	6.50 in (165.15 mm)	--	--
9J-5470	--	B	0.66 in (16.84 mm)	6.50 in (165.15 mm)	--	--
9J-5467	URE	A	0.66 in (16.84 mm)	6.50 in (165.15 mm)	--	--
<b>I.D. — 5.91 in (150.00 mm)</b>						
167-2429	URE	E	0.55 in (14.00 mm)	6.50 in (165.00 mm)	--	--
8C-9191	URE	F	0.06 in (1.42 mm)	6.50 in (165.05 mm)	0.03 in (0.73 mm)	8C-9192
<b>I.D. — 6.00 in (152.40 mm)</b>						
3E-4211	URE	D	0.62 in (15.72 mm)	6.50 in (165.10 mm)	0.25 in (6.35 mm)	--
3E-4237	URE	E	0.69 in (17.48 mm)	6.75 in (171.45 mm)	0.38 in (9.53 mm)	--
136-7394	URE	C	0.54 in (13.65 mm)	6.75 in (171.50 mm)	--	--
4T-9901	URE	A	0.54 in (13.65 mm)	6.75 in (171.50 mm)	--	--
167-2421	URE	B	0.54 in (13.65 mm)	6.75 in (171.50 mm)	--	--
167-2346	URE	A	0.54 in (13.65 mm)	6.75 in (171.50 mm)	--	--
<b>I.D. — 6.25 in (158.70 mm)</b>						
8J-4394	URE	A	0.54 in (13.61 mm)	6.75 in (171.50 mm)	--	--
167-2348	URE	A	0.54 in (13.61 mm)	6.75 in (171.50 mm)	--	--
<b>I.D. — 6.50 in (165.10 mm)</b>						
3E-4212	URE	D	0.62 in (15.72 mm)	7.00 in (177.80 mm)	0.25 in (6.35 mm)	--
3E-4238	URE	E	0.69 in (17.48 mm)	7.25 in (184.15 mm)	0.38 in (9.53 mm)	--
6J-1650	URE	A	0.54 in (13.61 mm)	7.25 in (184.20 mm)	--	--
167-2415	URE	B	0.54 in (13.61 mm)	7.25 in (184.20 mm)	--	--
8J-1880	NIT	B	0.54 in (13.61 mm)	7.25 in (184.20 mm)	--	--
167-2349	URE	A	0.66 in (16.80 mm)	7.25 in (184.20 mm)	--	--
8J-4387	URE	A	0.66 in (16.84 mm)	7.25 in (184.20 mm)	--	--
<b>I.D. — 6.75 in (171.45 mm)</b>						
167-2351	URE	A	0.41 in (10.49 mm)	7.25 in (184.20 mm)	--	--
3G-4627	URE	A	0.41 in (10.49 mm)	7.25 in (184.20 mm)	--	--
<b>I.D. — 7.00 in (177.80 mm)</b>						
3E-4213	URE	D	0.62 in (15.72 mm)	7.50 in (190.50 mm)	0.25 in (6.35 mm)	--
9X-7450	URE	D	0.41 in (10.50 mm)	7.68 in (195.02 mm)	--	--
3E-4239	URE	D	0.69 in (17.48 mm)	7.75 in (196.85 mm)	0.38 in (9.53 mm)	--
6J-1700	URE	A	0.54 in (13.61 mm)	7.75 in (196.90 mm)	--	--
136-7397	URE	C	0.54 in (13.61 mm)	7.75 in (196.90 mm)	--	--
167-2416	URE	B	0.54 in (13.61 mm)	7.75 in (196.90 mm)	--	--
3G-2649	URE	B	0.54 in (13.61 mm)	7.75 in (196.90 mm)	--	--
167-2352	URE	A	0.54 in (13.61 mm)	7.75 in (196.90 mm)	--	--
<b>I.D. — 7.25 in (184.15 mm)</b>						
6E-0172	URE	A	0.54 in (13.65 mm)	8.00 in (203.25 mm)	--	--
136-7398	URE	C	0.54 in (13.65 mm)	8.00 in (203.25 mm)	--	--
167-2417	URE	B	0.54 in (13.65 mm)	8.00 in (203.25 mm)	--	--
167-2353	URE	A	0.54 in (13.65 mm)	8.00 in (203.25 mm)	--	--

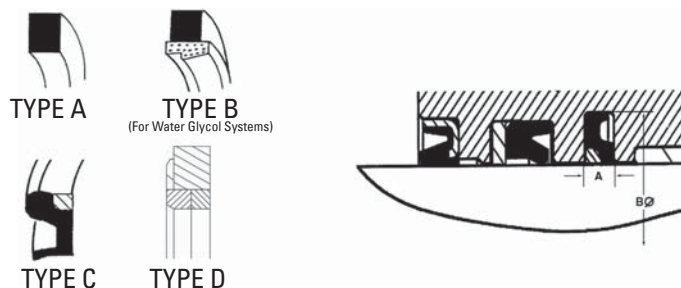
(Continued)

# U-Cup Rod Seals

## U-Cup Rod Seals (Continued)

Part Number	Material	Seal Type	A	B	Cross Section	Back-Up Ring
			Width (+0.015, -0.000 in)	O.D. (+0.002, -0.000 in)		
<b>I.D. — 7.50 in (190.50 mm)</b>						
3E-4240	URE	E	0.69 in (17.48 mm)	8.25 in (209.55 mm)	0.38 in (9.53 mm)	--
7J-3322	URE	A	0.54 in (13.61 mm)	8.25 in (209.60 mm)	--	--
136-7399	URE	C	0.54 in (13.61 mm)	8.25 in (209.60 mm)	--	--
167-2418	URE	B	0.54 in (13.61 mm)	8.25 in (209.60 mm)	--	--
167-2355	URE	A	0.54 in (13.61 mm)	8.25 in (209.60 mm)	--	--
<b>I.D. — 8.00 in (203.20 mm)</b>						
3E-4214	URE	E	0.62 in (15.72 mm)	8.50 in (215.90 mm)	0.25 in (6.35 mm)	--
6E-0039	URE	A	0.54 in (13.65 mm)	8.75 in (222.30 mm)	--	--
167-2354	URE	E	0.54 in (13.65 mm)	8.75 in (222.30 mm)	--	--
<b>I.D. — 8.75 in (222.20 mm)</b>						
162-3943	URE	--	0.55 in (14.00 mm)	9.76 in (247.96 mm)	--	--
136-7400	URE	C	0.54 in (13.65 mm)	9.50 in (241.35 mm)	--	--
167-2419	URE	B	0.54 in (13.65 mm)	9.50 in (241.35 mm)	--	--
108-6219	URE	A	0.54 in (13.65 mm)	9.50 in (241.35 mm)	--	--
167-2356	URE	A	0.54 in (13.65 mm)	9.50 in (241.35 mm)	--	--
<b>I.D. — 9.00 in (228.50 mm)</b>						
9X-7334	URE	D	0.41 in (10.50 mm)	9.68 in (245.82 mm)	--	--
<b>I.D. — 11.00 in (279.30 mm)</b>						
9X-7389	URE	D	0.41 in (10.50 mm)	0.41 in (10.50 mm)	--	--
<b>I.D. — 11.04 in (280.31 mm)</b>						
8C-9157	NIT	B	0.64 in (16.13 mm)	11.81 in (300.10 mm)	--	--
<b>I.D. — 12.50 in (317.40 mm)</b>						
9X-7388	URE	D	0.41 in (10.50 mm)	13.18 in (334.72 mm)	--	--
<b>I.D. — 13.50 in (342.90 mm)</b>						
167-2435	URE	E	0.41 in (10.50 mm)	14.18 in (360.12 mm)	--	--
<b>I.D. — 15.75 in (399.98 mm)</b>						
149-0814	URE	A	0.41 in (10.50 mm)	16.43 in (417.27 mm)	0.34 in (8.65 mm)	--

Buffer Seals



Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 1.25 in (31.75 mm)</b>			
9J-3497	A	1.78 in (45.29 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 1.38 in (34.95 mm)</b>			
141-0706	C	1.99 in (50.50 mm)	0.25 in (6.40 mm)
140-2310	C	1.99 in (50.50 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 1.50 in (38.10 mm)</b>			
8C-9122	B	2.03 in (51.64 mm)	0.14 in (3.56 mm)
167-2186	D	2.03 in (51.64 mm)	0.14 in (3.56 mm)
6J-9733	A	2.03 in (51.64 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 1.63 in (41.28 mm)</b>			
8C-9117	B	2.16 in (54.81 mm)	0.14 in (3.56 mm)
167-2188	D	2.16 in (54.81 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 1.75 in (44.40 mm)</b>			
8C-9123	B	2.28 in (57.99 mm)	0.14 in (3.56 mm)
6J-9178	A	2.28 in (57.99 mm)	0.14 in (3.56 mm)
150-6738	C	2.39 in (60.73 mm)	0.22 in (5.60 mm)
167-2190	D	2.28 in (57.99 mm)	0.14 in (3.56 mm)
167-2191	D	2.39 in (60.73 mm)	0.22 in (5.60 mm)
<b>Rod Diameter — 1.77 in (44.95 mm)</b>			
143-8915	C	2.38 in (60.50 mm)	0.27 in (6.75 mm)
<b>Rod Diameter — 1.87 in (47.62 mm)</b>			
9X-3566	B	2.25 in (57.20 mm)	0.14 in (3.56 mm)
4T-6778	A	2.25 in (57.20 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 1.88 in (47.63 mm)</b>			
167-2192	D	2.25 in (57.20 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 1.97 in (50.00 mm)</b>			
167-2183	D	2.47 in (62.75 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 2.00 in (50.80 mm)</b>			
8C-9124	B	2.53 in (64.34 mm)	0.14 in (3.56 mm)
167-2195	D	2.53 in (64.34 mm)	0.14 in (3.56 mm)
6J-6917	A	2.53 in (64.34 mm)	0.14 in (3.56 mm)
144-4055	C	2.53 in (64.34 mm)	0.14 in (3.56 mm)
<b>Rod Diameter — 2.12 in (53.93 mm)</b>			
150-6744	C	2.77 in (70.26 mm)	0.22 in (5.60 mm)

Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 2.13 in (53.98 mm)</b>			
9X-3568	B	2.63 in (66.73 mm)	0.14 in (3.56 mm)
167-2198	D	2.63 in (66.73 mm)	0.14 in (3.56 mm)
4T-6127	A	2.63 in (66.73 mm)	0.14 in (3.56 mm)
167-2197	D	2.77 in (70.26 mm)	0.22 in (5.60 mm)
<b>Rod Diameter — 2.17 in (55.00 mm)</b>			
167-2199	D	2.78 in (70.52 mm)	0.25 in (6.40 mm)
133-6785	C	2.78 in (70.52 mm)	0.25 in (6.40 mm)
099-6997	C	2.78 in (70.52 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 2.25 in (57.15 mm)</b>			
8C-9125	B	2.89 in (73.43 mm)	0.22 in (5.59 mm)
167-2200	D	2.89 in (73.43 mm)	0.22 in (5.59 mm)
5J-3616	A	2.89 in (73.43 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 2.36 in (60.00 mm)</b>			
167-2185	D	2.86 in (72.75 mm)	0.14 in (3.56 mm)
093-1481	C	2.97 in (75.52 mm)	0.25 in (6.40 mm)
133-6784	C	2.97 in (75.52 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 2.37 in (60.32 mm)</b>			
167-2202	D	3.02 in (76.61 mm)	0.22 in (5.59 mm)
8C-9138	B	3.02 in (76.61 mm)	0.22 in (5.59 mm)
6J-6916	A	3.02 in (76.61 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 2.50 in (63.50 mm)</b>			
167-2201	D	3.14 in (79.78 mm)	0.22 in (5.59 mm)
8C-3839	B	3.14 in (79.78 mm)	0.22 in (5.59 mm)
5J-3620	A	3.14 in (79.78 mm)	0.22 in (5.59 mm)
150-6750	C	3.14 in (79.78 mm)	0.22 in (5.60 mm)
167-2203	D	3.18 in (80.70 mm)	0.23 in (5.94 mm)
<b>Rod Diameter — 2.56 in (65.00 mm)</b>			
126-2149	C	3.17 in (80.53 mm)	0.25 in (6.40 mm)
167-2204	D	3.20 in (81.28 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 2.63 in (66.68 mm)</b>			
9T-9363	B	3.27 in (82.96 mm)	0.22 in (5.59 mm)
1U-4020	A	3.27 in (82.96 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 2.72 in (69.00 mm)</b>			
126-2150	C	3.37 in (85.53 mm)	0.25 in (6.40 mm)

Cylinder Seals

(Continued)

# Buffer Seals

## Buffer Seals (Continued)

Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 2.75 in (69.85 mm)</b>			
167-2207	D	3.39 in (86.13 mm)	0.22 in (5.59 mm)
8C-3841	B	3.39 in (86.13 mm)	0.22 in (5.59 mm)
6J-6553	A	3.39 in (86.13 mm)	0.22 in (5.59 mm)
148-5674	C	3.39 in (86.13 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 2.76 in (70.00 mm)</b>			
093-1483	C	3.37 in (85.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 2.91 in (74.00 mm)</b>			
126-2151	C	3.56 in (90.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 2.95 in (75.00 mm)</b>			
096-3469	C	3.56 in (90.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.00 in (76.20 mm)</b>			
152-9022	C	3.64 in (92.48 mm)	0.22 in (5.58 mm)
167-2208	D	3.64 in (92.48 mm)	0.22 in (5.59 mm)
8C-9126	B	3.64 in (92.48 mm)	0.22 in (5.59 mm)
6J-6915	A	3.64 in (92.48 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 3.11 in (79.00 mm)</b>			
126-2152	C	3.76 in (95.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.15 in (80.00 mm)</b>			
093-1484	C	3.76 in (95.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.25 in (82.55 mm)</b>			
8C-9121	B	3.89 in (98.83 mm)	0.22 in (5.59 mm)
167-2209	D	3.89 in (98.83 mm)	0.22 in (5.59 mm)
6J-7167	A	3.89 in (98.83 mm)	0.22 in (5.59 mm)
140-0234	C	3.89 in (98.83 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 3.31 in (84.00 mm)</b>			
123-1943	C	3.96 in (100.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.35 in (85.00 mm)</b>			
167-2210	D	3.96 in (100.53 mm)	0.25 in (6.40 mm)
7Y-5118	C	3.96 in (100.54 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.50 in (88.90 mm)</b>			
8C-9127	B	4.14 in (105.18 mm)	0.22 in (5.59 mm)
167-2211	D	4.14 in (105.18 mm)	0.22 in (5.59 mm)
6J-6736	A	4.14 in (105.18 mm)	0.22 in (5.59 mm)
142-2633	C	4.14 in (105.18 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 3.54 in (90.00 mm)</b>			
096-1585	C	4.16 in (105.54 mm)	0.25 in (6.40 mm)
167-2212	D	4.16 in (105.54 mm)	0.25 in (6.40 mm)
123-2048	C	4.16 in (105.54 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.63 in (92.08 mm)</b>			
3G-1259	A	4.27 in (108.36 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 3.70 in (94.00 mm)</b>			
7Y-4630	C	4.35 in (110.54 mm)	0.25 in (6.40 mm)

Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 3.74 in (95.00 mm)</b>			
093-1482	C	3.17 in (80.52 mm)	0.25 in (6.40 mm)
167-2213	D	4.35 in (110.54 mm)	0.25 in (6.40 mm)
150-5885	C	4.35 in (110.54 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 3.75 in (95.25 mm)</b>			
8J-6070	A	4.39 in (111.53 mm)	0.22 in (5.59 mm)
167-2214	D	4.39 in (111.53 mm)	0.22 in (5.59 mm)
8C-9128	B	4.39 in (111.53 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 3.94 in (100.00 mm)</b>			
096-2663	C	4.55 in (115.53 mm)	0.25 in (6.40 mm)
167-2215	D	4.55 in (115.53 mm)	0.25 in (6.40 mm)
123-1983	C	4.55 in (115.53 mm)	0.25 in (6.40 mm)
107-6257	D	4.55 in (115.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 4.00 in (101.60 mm)</b>			
167-2216	D	4.64 in (117.88 mm)	0.22 in (5.59 mm)
8J-4627	A	4.64 in (117.88 mm)	0.22 in (5.59 mm)
8C-9129	B	4.64 in (117.88 mm)	0.22 in (5.59 mm)
130-6056	C	4.64 in (117.88 mm)	0.22 in (5.59 mm)
<b>Rod Diameter — 4.13 in (105.00 mm)</b>			
167-2217	D	4.75 in (120.53 mm)	0.25 in (6.40 mm)
128-9265	C	4.75 in (120.53 mm)	0.25 in (6.40 mm)
123-1942	C	4.75 in (120.53 mm)	0.25 in (6.40 mm)
7Y-4671	C	4.75 in (120.54 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 4.25 in (107.95 mm)</b>			
167-2218	D	5.23 in (132.72 mm)	0.25 in (6.35 mm)
7J-8943	A	5.23 in (132.72 mm)	0.25 in (6.35 mm)
6E-0425	B	5.23 in (132.72 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 4.29 in (109.00 mm)</b>			
123-2031	C	4.94 in (125.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 4.33 in (110.00 mm)</b>			
128-9266	C	4.94 in (125.53 mm)	0.25 in (6.40 mm)
167-2219	D	4.94 in (125.54 mm)	0.25 in (6.40 mm)
7Y-4943	C	4.94 in (125.54 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 4.37 in (111.12 mm)</b>			
3G-5055	A	5.23 in (132.72 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 4.50 in (114.30 mm)</b>			
167-2220	D	5.48 in (139.07 mm)	0.25 in (6.35 mm)
8C-9144	B	5.48 in (139.07 mm)	0.25 in (6.35 mm)
142-2634	C	5.48 in (139.07 mm)	0.25 in (6.35 mm)
3G-8507	A	5.48 in (139.07 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 4.53 in (115.00 mm)</b>			
167-2189	D	5.14 in (130.53 mm)	0.25 in (6.40 mm)

Cylinder Seals

(Continued)

## Buffer Seals (Continued)

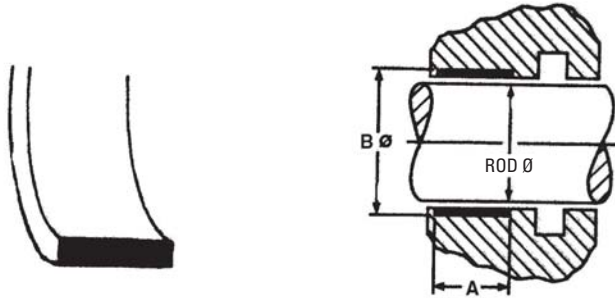
Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 4.75 in (120.65 mm)</b>			
9X-7261	B	5.73 in (145.42 mm)	0.25 in (6.35 mm)
167-2221	D	5.73 in (145.42 mm)	0.25 in (6.35 mm)
7J-9257	A	5.73 in (145.42 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 4.88 in (124.00 mm)</b>			
155-9191	C	5.53 in (140.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 5.00 in (127.00 mm)</b>			
121-1593	C	5.63 in (142.88 mm)	0.25 in (6.40 mm)
9X-3581	B	5.96 in (151.38 mm)	0.25 in (6.35 mm)
167-2222	D	5.96 in (151.38 mm)	0.25 in (6.35 mm)
8J-4509	A	5.96 in (151.38 mm)	0.25 in (6.35 mm)
150-6262	C	5.96 in (151.38 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 5.12 in (130.00 mm)</b>			
167-2223	D	5.73 in (145.53 mm)	0.25 in (6.40 mm)
126-2108	C	5.73 in (145.53 mm)	0.25 in (6.40 mm)
096-5169	C	5.73 in (145.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 5.25 in (133.35 mm)</b>			
9X-7267	B	6.21 in (157.73 mm)	0.25 in (6.35 mm)
167-2224	D	6.21 in (157.73 mm)	0.25 in (6.35 mm)
4T-5717	A	6.21 in (157.73 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 5.47 in (139.00 mm)</b>			
147-5769	C	6.12 in (155.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 5.50 in (139.70 mm)</b>			
167-2225	D	6.12 in (155.35 mm)	0.25 in (6.35 mm)
9X-3572	B	6.12 in (155.35 mm)	0.25 in (6.35 mm)
133-9572	C	6.12 in (155.35 mm)	0.25 in (6.35 mm)
167-2725	D	6.12 in (155.35 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 5.51 in (140.00 mm)</b>			
167-2226	D	6.12 in (155.50 mm)	0.25 in (6.30 mm)
8C-9189	C	6.12 in (155.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 5.71 in (145.00 mm)</b>			
167-2231	D	6.32 in (160.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 5.75 in (146.05 mm)</b>			
167-2227	D	6.73 in (170.82 mm)	0.25 in (6.35 mm)
9X-3575	B	6.73 in (170.82 mm)	0.25 in (6.35 mm)
9J-5468	A	6.73 in (170.82 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 5.91 in (150.00 mm)</b>			
167-2229	D	6.52 in (165.50 mm)	0.25 in (6.30 mm)
8C-9193	C	6.52 in (165.53 mm)	0.25 in (6.40 mm)
<b>Rod Diameter — 6.00 in (152.40 mm)</b>			
167-2228	D	6.62 in (168.10 mm)	0.25 in (6.35 mm)
161-5787	C	6.62 in (168.10 mm)	0.25 in (6.35 mm)
9X-3614	B	6.62 in (168.11 mm)	0.25 in (6.35 mm)
161-5788	C	6.75 in (171.50 mm)	0.54 in (13.65 mm)

Part Number	Seal Type	A	B
		Groove Width (± 0.005 in)	Groove Diameter (± 0.005 in)
<b>Rod Diameter — 6.50 in (165.10 mm)</b>			
136-7396	C	7.25 in (184.20 mm)	0.54 in (13.61 mm)
167-2230	D	7.50 in (190.55 mm)	0.25 in (6.35 mm)
9X-7322	B	7.50 in (190.55 mm)	0.25 in (6.35 mm)
6J-8631	A	7.50 in (190.55 mm)	0.25 in (6.35 mm)
136-7358	C	7.50 in (190.55 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 6.75 in (171.45 mm)</b>			
167-2232	D	7.69 in (195.45 mm)	0.25 in (6.35 mm)
8C-9145	B	7.69 in (195.45 mm)	0.25 in (6.35 mm)
3G-8506	A	7.69 in (195.45 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 7.00 in (177.80 mm)</b>			
167-2233	D	7.94 in (201.80 mm)	0.25 in (6.35 mm)
9J-2495	A	7.94 in (201.80 mm)	0.25 in (6.35 mm)
8C-9130	B	7.94 in (201.80 mm)	0.25 in (6.35 mm)
135-1995	C	7.94 in (201.80 mm)	0.25 in (6.35 mm)
<b>Rod Diameter — 7.25 in (184.10 mm)</b>			
136-7359	C	8.08 in (205.30 mm)	0.25 in (6.35 mm)
108-0133	B	8.08 in (205.30 mm)	0.25 in (6.35 mm)
167-2234	D	8.08 in (205.30 mm)	0.32 in (8.25 mm)
<b>Rod Diameter — 7.50 in (190.50 mm)</b>			
167-2236	D	8.33 in (211.65 mm)	0.32 in (8.25 mm)
135-1997	C	8.33 in (211.65 mm)	0.32 in (8.25 mm)
108-0131	B	8.33 in (211.65 mm)	0.32 in (8.25 mm)
<b>Rod Diameter — 8.00 in (203.20 mm)</b>			
149-3256	C	8.83 in (224.28 mm)	0.32 in (8.25 mm)
167-2239	D	8.83 in (224.35 mm)	0.32 in (8.25 mm)
6E-0246	B	8.83 in (224.35 mm)	0.32 in (8.25 mm)
<b>Rod Diameter — 8.75 in (222.25 mm)</b>			
167-2240	D	9.58 in (243.40 mm)	0.32 in (8.25 mm)
135-1999	C	9.58 in (243.40 mm)	0.32 in (8.25 mm)
108-6212	B	9.58 in (243.40 mm)	0.32 in (8.25 mm)



# Head Wear Rings

## Head Wear Rings



Part Number	A	B
	Groove Width (± 0.003 in)	Groove Diameter (± 0.001 in)
<b>Rod Diameter — 1.50 in (38.10 mm)</b>		
8C-9120	0.83 in (21.00 mm)	1.62 in (41.18 mm)
4T-6780	0.98 in (25.00 mm)	1.62 in (41.18 mm)
8T-5443	1.25 in (31.75 mm)	1.62 in (41.18 mm)
8C-3853	1.62 in (41.18 mm)	2.09 in (53.00 mm)
<b>Rod Diameter — 1.75 in (44.45 mm)</b>		
4T-6907	0.98 in (25.00 mm)	1.87 in (47.53 mm)
<b>Rod Diameter — 1.87 in (47.62 mm)</b>		
8T-6441	0.26 in (6.50 mm)	2.00 in (50.70 mm)
8T-6442	0.73 in (18.50 mm)	2.00 in (50.70 mm)
4T-6779	0.98 in (25.00 mm)	2.00 in (50.70 mm)
<b>Rod Diameter — 2.00 in (50.80 mm)</b>		
8T-8205	0.79 in (20.00 mm)	2.12 in (53.88 mm)
4T-5613	0.98 in (25.00 mm)	2.12 in (53.88 mm)
7J-2171	1.06 in (27.00 mm)	2.51 in (63.63 mm)
8T-7030	1.25 in (31.75 mm)	2.12 in (53.88 mm)
8C-3836	1.57 in (40.00 mm)	2.12 in (53.88 mm)
<b>Rod Diameter — 2.13 in (53.98 mm)</b>		
8T-6682	0.37 in (9.50 mm)	2.25 in (57.06 mm)
8T-6681	0.73 in (18.50 mm)	2.25 in (57.06 mm)
4T-6128	0.98 in (25.00 mm)	2.25 in (57.06 mm)
<b>Rod Diameter — 2.25 in (57.15 mm)</b>		
8T-4958	0.98 in (25.00 mm)	2.37 in (60.23 mm)
8T-8204	1.18 in (30.00 mm)	2.37 in (60.23 mm)
8J-1585	1.43 in (36.31 mm)	3.35 in (85.09 mm)
<b>Rod Diameter — 2.37 in (60.32 mm)</b>		
9X-7260	1.26 in (32.00 mm)	2.50 in (63.45 mm)
<b>Rod Diameter — 2.50 in (63.50 mm)</b>		
8T-0785	0.98 in (25.00 mm)	2.62 in (66.58 mm)
8T-5668	1.25 in (31.75 mm)	2.62 in (66.58 mm)
8T-8394	1.69 in (43.00 mm)	2.62 in (66.58 mm)
8T-8365	2.28 in (58.00 mm)	2.62 in (66.58 mm)
<b>Rod Diameter — 2.63 in (66.68 mm)</b>		
8T-7372	0.98 in (25.00 mm)	2.75 in (69.76 mm)

Part Number	A	B
	Groove Width (± 0.003 in)	Groove Diameter (± 0.001 in)
<b>Rod Diameter — 2.75 in (69.85 mm)</b>		
8C-9200	1.00 in (25.50 mm)	2.87 in (72.93 mm)
8C-9114	1.00 in (25.50 mm)	2.87 in (72.93 mm)
4T-7283	1.25 in (31.75 mm)	3.01 in (76.33 mm)
6C-2385	1.26 in (32.00 mm)	2.87 in (72.93 mm)
8T-7849	1.57 in (40.00 mm)	2.87 in (72.93 mm)
8T-7020	1.81 in (46.00 mm)	2.87 in (72.93 mm)
8T-6743	1.97 in (50.00 mm)	2.95 in (74.93 mm)
<b>Rod Diameter — 3.00 in (76.20 mm)</b>		
8C-9161	0.98 in (25.00 mm)	3.12 in (79.28 mm)
8C-9153	1.18 in (30.00 mm)	3.20 in (81.28 mm)
9T-0094	1.26 in (32.00 mm)	3.12 in (79.28 mm)
8T-1714	1.57 in (40.00 mm)	3.12 in (79.28 mm)
8T-7584	1.65 in (42.00 mm)	3.12 in (79.28 mm)
<b>Rod Diameter — 3.25 in (82.55 mm)</b>		
8C-9101	1.12 in (28.50 mm)	3.37 in (85.63 mm)
8T-4813	1.61 in (41.00 mm)	3.45 in (87.63 mm)
8T-0777	1.73 in (44.00 mm)	3.37 in (85.63 mm)
8T-6745	1.97 in (50.00 mm)	3.45 in (87.63 mm)
8T-6744	2.76 in (70.00 mm)	3.45 in (87.63 mm)
<b>Rod Diameter — 3.50 in (88.90 mm)</b>		
119-4761	0.98 in (25.00 mm)	3.76 in (95.42 mm)
8C-5245	1.06 in (27.00 mm)	3.62 in (91.98 mm)
8C-3829	1.77 in (45.00 mm)	3.70 in (93.98 mm)
8T-3329	1.89 in (48.00 mm)	3.62 in (91.98 mm)
6J-3075	2.00 in (50.70 mm)	3.76 in (95.40 mm)
8T-6746	2.36 in (60.00 mm)	3.70 in (93.98 mm)
<b>Rod Diameter — 3.75 in (95.25 mm)</b>		
8T-7848	1.57 in (40.00 mm)	3.87 in (98.33 mm)
8T-3330	2.44 in (62.00 mm)	3.95 in (100.33 mm)
<b>Rod Diameter — 4.00 in (101.60 mm)</b>		
119-4760	1.00 in (25.40 mm)	4.26 in (108.12 mm)
8T-7538	1.57 in (40.00 mm)	4.20 in (106.68 mm)
4T-4753	1.89 in (48.00 mm)	4.26 in (108.08 mm)
7J-3300	2.50 in (63.50 mm)	4.26 in (108.15 mm)

Cylinder Seals

(Continued)

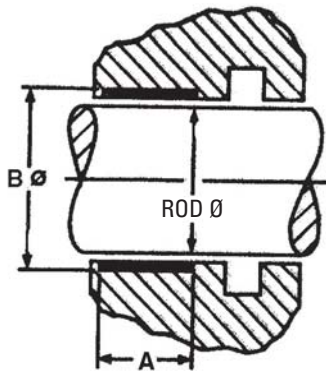
## Head Wear Rings (Continued)

Part Number	A	B
	Groove Width (± 0.003 in)	Groove Diameter (± 0.001 in)
<b>Rod Diameter — 4.00 in (101.60 mm) (Continued)</b>		
8T-6747	2.56 in (65.00 mm)	4.20 in (106.68 mm)
<b>Rod Diameter — 4.25 in (107.95 mm)</b>		
8T-6748	2.36 in (60.00 mm)	4.45 in (113.03 mm)
<b>Rod Diameter — 4.50 in (114.30 mm)</b>		
9X-3579	1.97 in (50.00 mm)	4.70 in (119.38 mm)
4T-6929	3.50 in (88.90 mm)	4.75 in (120.74 mm)
9J-9792	3.50 in (88.90 mm)	4.75 in (120.74 mm)
<b>Rod Diameter — 4.75 in (120.65 mm)</b>		
8T-7850	1.97 in (50.00 mm)	4.95 in (125.73 mm)
<b>Rod Diameter — 5.00 in (127.00 mm)</b>		
8T-3331	2.52 in (64.00 mm)	5.20 in (132.08 mm)
9J-3054	3.62 in (92.07 mm)	5.25 in (133.45 mm)
<b>Rod Diameter — 5.25 in (133.35 mm)</b>		
4T-5718	2.50 in (63.50 mm)	5.45 in (138.43 mm)
<b>Rod Diameter — 5.50 in (139.70 mm)</b>		
8J-9917	2.37 in (60.30 mm)	5.75 in (146.09 mm)
9X-7420	2.37 in (60.32 mm)	5.76 in (146.30 mm)
<b>Rod Diameter — 5.51 in (140.00 mm)</b>		
9X-3571	1.97 in (50.00 mm)	5.71 in (145.08 mm)
<b>Rod Diameter — 5.75 in (146.05 mm)</b>		
8T-7851	1.97 in (50.00 mm)	5.95 in (151.13 mm)
8T-3332	3.62 in (92.00 mm)	5.95 in (151.13 mm)
<b>Rod Diameter — 5.91 in (150.00 mm)</b>		
6E-0499	2.36 in (60.00 mm)	6.10 in (155.06 mm)
<b>Rod Diameter — 6.00 in (152.40 mm)</b>		
9X-3613	1.97 in (50.00 mm)	6.20 in (157.48 mm)
4T-9319	2.76 in (70.00 mm)	6.26 in (158.88 mm)
<b>Rod Diameter — 6.13 in (155.58 mm)</b>		
7J-3299	2.50 in (63.50 mm)	6.38 in (162.13 mm)
<b>Rod Diameter — 6.38 in (161.93 mm)</b>		
096-5606	0.35 in (8.90 mm)	6.69 in (169.83 mm)
<b>Rod Diameter — 6.50 in (165.10 mm)</b>		
8C-9102	2.27 in (57.75 mm)	6.70 in (170.18 mm)
8C-3848	2.60 in (66.00 mm)	6.70 in (170.18 mm)
<b>Rod Diameter — 6.75 in (171.45 mm)</b>		
4T-6931	3.50 in (88.90 mm)	7.01 in (177.96 mm)
<b>Rod Diameter — 7.00 in (177.80 mm)</b>		
8T-6749	3.15 in (80.00 mm)	7.20 in (182.88 mm)
8T-7693	7.14 in (181.36 mm)	7.26 in (184.28 mm)
<b>Rod Diameter — 7.25 in (184.15 mm)</b>		
6E-0173	2.36 in (60.00 mm)	7.45 in (189.24 mm)
4T-4811	2.95 in (75.00 mm)	7.50 in (190.60 mm)
<b>Rod Diameter — 7.50 in (190.45 mm)</b>		
108-0130	3.15 in (80.00 mm)	7.70 in (195.58 mm)

Part Number	A	B
	Groove Width (± 0.003 in)	Groove Diameter (± 0.001 in)
<b>Rod Diameter — 8.00 in (203.20 mm)</b>		
6E-0245	2.95 in (75.00 mm)	8.20 in (208.28 mm)
<b>Rod Diameter — 8.34 in (211.93 mm)</b>		
4I-6443	0.35 in (8.90 mm)	8.50 in (215.88 mm)
<b>Rod Diameter — 8.75 in (222.25 mm)</b>		
108-6216	2.95 in (75.00 mm)	8.95 in (227.33 mm)
6E-0248	2.95 in (75.00 mm)	9.01 in (228.80 mm)
<b>Rod Diameter — 9.00 in (228.52 mm)</b>		
8C-3846	8.98 in (228.00 mm)	9.38 in (238.25 mm)
<b>Rod Diameter — 11.00 in (279.32 mm)</b>		
8C-9156	5.04 in (127.97 mm)	11.18 in (284.09 mm)
<b>Rod Diameter — 13.13 in (333.38 mm)</b>		
8C-9155	5.03 in (127.71 mm)	12.93 in (328.52 mm)
<b>Rod Diameter — 13.50 in (342.90 mm)</b>		
9X-7439	2.37 in (60.25 mm)	13.88 in (352.61 mm)
9X-3563	10.02 in (254.41 mm)	13.88 in (352.61 mm)
<b>Rod Diameter — 15.75 in (400.05 mm)</b>		
149-0812	2.37 in (60.25 mm)	16.13 in (409.76 mm)
149-0813	10.02 in (254.41 mm)	16.13 in (409.76 mm)

# Metal Bearing Head Wear Rings

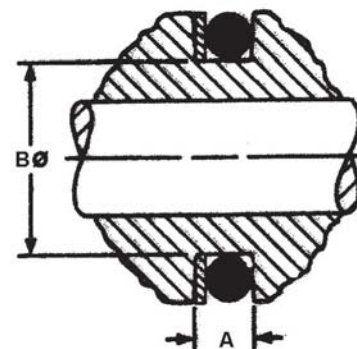
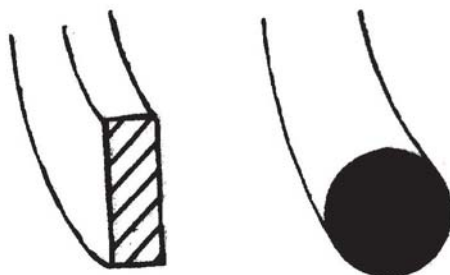
## Metal Bearing Head Wear Rings



Bearing Sleeve Part Number	A Groove Width	B Groove Outside Diameter	Ring Retaining Part Number
<b>Rod Diameter — 1.77 in (45.00 mm)</b>			
198-0664	0.79 in (20.00 mm)	1.97 in (50.00 mm)	NA
<b>Rod Diameter — 2.17 in (55.00 mm)</b>			
114-0752	1.19 in (30.30 mm)	2.36 in (60.00 mm)	99-7001
<b>Rod Diameter — 2.36 in (60.00 mm)</b>			
114-0751	1.59 in (40.30 mm)	2.56 in (65.00 mm)	99-6975
<b>Rod Diameter — 2.56 in (65.00 mm)</b>			
194-8330	1.38 in (35.00 mm)	2.76 in (70.00 mm)	NA
114-0754	1.59 in (40.30 mm)	2.76 in (70.00 mm)	99-0700
<b>Rod Diameter — 2.76 in (70.00 mm)</b>			
114-0753	1.59 in (40.30 mm)	2.95 in (75.00 mm)	99-5400
<b>Rod Diameter — 2.95 in (75.00 mm)</b>			
114-0750	1.59 in (40.30 mm)	3.15 in (80.00 mm)	99-0661
114-8836	1.98 in (50.30 mm)	3.23 in (82.00 mm)	099-0661
<b>Rod Diameter — 3.15 in (80.00 mm)</b>			
150-5839	1.18 in (30.00 mm)	3.35 in (85.00 mm)	99-3205
114-0755	1.59 in (40.30 mm)	3.35 in (85.00 mm)	96-8139
<b>Rod Diameter — 3.35 in (85.00 mm)</b>			
096-4402	1.18 in (30.00 mm)	3.54 in (90.00 mm)	94-0747
114-0756	1.59 in (40.30 mm)	3.54 in (90.00 mm)	7Y-5119
<b>Rod Diameter — 3.54 in (90.00 mm)</b>			
105-2575	1.18 in (30.00 mm)	3.74 in (95.00 mm)	93-1571
114-0758	1.59 in (40.30 mm)	3.74 in (95.00 mm)	93-1571
121-1574	1.98 in (50.30 mm)	3.74 in (95.00 mm)	93-1571
<b>Rod Diameter — 3.74 in (95.00 mm)</b>			
096-4430	1.18 in (30.00 mm)	3.94 in (100.00 mm)	7Y-4631
128-9260	1.59 in (40.30 mm)	3.94 in (100.00 mm)	7Y-4631
6C-6093	1.98 in (50.30 mm)	3.94 in (100.00 mm)	7Y-4361
<b>Rod Diameter — 3.94 in (100.00 mm)</b>			
096-5625	1.38 in (35.00 mm)	4.13 in (105.00 mm)	94-1931
114-0757	1.59 in (40.30 mm)	4.13 in (105.00 mm)	93-1572

Bearing Sleeve Part Number	A Groove Width	B Groove Outside Diameter	Ring Retaining Part Number
<b>Rod Diameter — 4.13 in (105.00 mm)</b>			
099-5572	1.38 in (35.00 mm)	4.33 in (110.00 mm)	99-5573
114-0760	1.98 in (50.30 mm)	4.33 in (110.00 mm)	7Y-4672
<b>Rod Diameter — 4.33 in (110.00 mm)</b>			
114-0762	1.98 in (50.30 mm)	4.53 in (115.00 mm)	7Y-4944
114-0761	2.37 in (60.30 mm)	4.53 in (115.00 mm)	7Y-4944
<b>Rod Diameter — 4.53 in (115.00 mm)</b>			
191-5644	2.37 in (60.30 mm)	4.72 in (120.00 mm)	191-5643
<b>Rod Diameter — 4.92 in (125.00 mm)</b>			
155-9190	2.37 in (60.30 mm)	5.12 in (130.00 mm)	155-9189
<b>Rod Diameter — 5.00 in (127.00 mm)</b>			
121-1599	2.37 in (60.30 mm)	5.20 in (132.02 mm)	121-1598
<b>Rod Diameter — 5.12 in (130.00 mm)</b>			
114-0763	2.37 in (60.30 mm)	5.31 in (135.00 mm)	87-5393
<b>Rod Diameter — 5.51 in (140.00 mm)</b>			
128-9261	2.18 in (55.30 mm)	5.71 in (145.00 mm)	102-0786
<b>Rod Diameter — 5.71 in (145.00 mm)</b>			
155-9100	2.37 in (60.30 mm)	5.91 in (150.00 mm)	155-9099
<b>Rod Diameter — 5.75 in (146.00 mm)</b>			
121-1607	1.98 in (50.30 mm)	5.95 in (151.07 mm)	121-1606
<b>Rod Diameter — 5.91 in (150.00 mm)</b>			
128-9262	2.37 in (60.30 mm)	6.10 in (155.00 mm)	103-8364
<b>Rod Diameter — 9.00 in (228.52 mm)</b>			
8C-3849	5.04 in (127.97 mm)	9.19 in (233.32 mm)	NA
<b>Rod Diameter — 10.55 in (268.00 mm)</b>			
8C-3850	5.03 in (127.71 mm)	10.75 in (273.05 mm)	NA

Head Seals



Part Number	Dash Size	A	B	Cross Section	Back-Up Ring
		Groove Width (± 0.004 in)	Groove Diameter (± 0.005 in)		
<b>Bore Diameter — 2.36 in (60.05 mm)</b>					
6V-7658	--	0.12 in (3.10 mm)	2.34 in (59.40 mm)	0.12 in (3.10 mm)	--
<b>Bore Diameter — 2.50 in (63.50 mm)</b>					
8F-6711	-228	0.22 in (5.61 mm)	2.28 in (57.80 mm)	0.14 in (3.53 mm)	3C-3239
<b>Bore Diameter — 2.75 in (69.85 mm)</b>					
1H-5728	-230	0.22 in (5.61 mm)	2.54 in (64.45 mm)	0.14 in (3.53 mm)	4J-9225
<b>Bore Diameter — 3.00 in (76.20 mm)</b>					
5H-8848	-232	0.22 in (5.61 mm)	2.79 in (70.80 mm)	0.14 in (3.53 mm)	6J-5731
<b>Bore Diameter — 3.15 in (80.00 mm)</b>					
095-1710	--	0.25 in (6.43 mm)	3.15 in (79.95 mm)	0.12 in (3.10 mm)	099-7000
<b>Bore Diameter — 3.25 in (82.55 mm)</b>					
1H-7339	-234	0.22 in (5.61 mm)	3.04 in (77.15 mm)	0.14 in (3.53 mm)	8J-2574
5P-6302	-240	0.22 in (5.61 mm)	3.95 in (100.21 mm)	0.14 in (3.53 mm)	2K-6830
<b>Bore Diameter — 3.50 in (88.90 mm)</b>					
2H-3931	-236	0.22 in (5.61 mm)	3.29 in (83.50 mm)	0.14 in (3.53 mm)	4J-9224
<b>Bore Diameter — 3.54 in (90.00 mm)</b>					
095-1711	--	0.16 in (4.00 mm)	3.46 in (88.00 mm)	0.12 in (3.10 mm)	--
095-1671	--	0.20 in (5.00 mm)	3.78 in (95.95 mm)	0.12 in (3.10 mm)	--
<b>Bore Diameter — 3.75 in (95.25 mm)</b>					
2H-4145	-238	0.22 in (5.61 mm)	3.54 in (89.85 mm)	0.14 in (3.53 mm)	1S-0669
8H-7521	--	0.14 in (3.53 mm)	3.61 in (91.67 mm)	0.14 in (3.53 mm)	--
<b>Bore Diameter — 3.94 in (100.00 mm)</b>					
095-1625	--	0.35 in (8.93 mm)	3.54 in (89.95 mm)	0.22 in (5.70 mm)	099-0699
095-1713	--	0.25 in (6.43 mm)	3.74 in (94.95 mm)	0.12 in (3.10 mm)	099-5399
095-1626	--	0.36 in (9.13 mm)	3.74 in (94.95 mm)	0.22 in (5.70 mm)	105-7393
095-1673	--	0.20 in (5.00 mm)	4.17 in (105.95 mm)	0.12 in (3.10 mm)	--
199-8394	--	0.14 in (3.53 mm)	4.54 in (115.21 mm)	0.10 in (2.62 mm)	--
<b>Bore Diameter — 4.00 in (101.60 mm)</b>					
1H-8128	-240	0.22 in (5.61 mm)	3.79 in (96.20 mm)	0.14 in (3.53 mm)	2K-6830
<b>Bore Diameter — 4.13 in (104.78 mm)</b>					
9X-4611	-241	0.22 in (5.61 mm)	3.91 in (99.38 mm)	0.14 in (3.53 mm)	1K-7098
<b>Bore Diameter — 4.25 in (107.95 mm)</b>					
1H-6227	-242	0.22 in (5.61 mm)	4.04 in (102.55 mm)	0.14 in (3.53 mm)	5J-7865

Cylinder Seals

(Continued)

# Head Seals

## Head Seals (Continued)

Part Number	Dash Size	A	B	Cross Section	Back-Up Ring
		Groove Width (± 0.004 in)	Groove Diameter (± 0.005 in)		
<b>Bore Diameter — 4.33 in (110.00 mm)</b>					
095-1627	--	0.43 in (10.93 mm)	3.94 in (99.95 mm)	0.22 in (5.70 mm)	099-0660
112-6920	--	0.26 in (6.70 mm)	4.08 in (103.60 mm)	0.16 in (4.00 mm)	--
095-1716	--	0.23 in (5.73 mm)	4.33 in (109.95 mm)	0.12 in (3.10 mm)	105-7360
095-1674	--	0.20 in (5.00 mm)	4.37 in (110.95 mm)	0.12 in (3.10 mm)	--
095-1675	--	0.20 in (5.00 mm)	4.56 in (115.95 mm)	0.12 in (3.10 mm)	--
199-8393	--	0.14 in (3.53 mm)	5.11 in (129.76 mm)	0.10 in (2.62 mm)	--
<b>Bore Diameter — 4.50 in (114.30 mm)</b>					
1J-2859	--	0.32 in (8.22 mm)	4.18 in (106.06 mm)	0.21 in (5.33 mm)	8J-3752
2H-3928	-244	0.22 in (5.61 mm)	4.29 in (108.90 mm)	0.14 in (3.53 mm)	1K-7095
<b>Bore Diameter — 4.72 in (120.00 mm)</b>					
123-7724	--	0.32 in (8.20 mm)	4.41 in (112.00 mm)	0.20 in (5.00 mm)	123-8614
095-1717	--	0.23 in (5.73 mm)	4.53 in (114.95 mm)	0.12 in (3.10 mm)	087-5510
095-1718	--	0.23 in (5.73 mm)	4.72 in (119.95 mm)	0.12 in (3.10 mm)	105-7375
095-1676	--	0.20 in (5.00 mm)	4.76 in (120.95 mm)	0.12 in (3.10 mm)	--
133-0128	--	0.13 in (3.23 mm)	5.35 in (136.00 mm)	0.10 in (2.62 mm)	--
<b>Bore Diameter — 4.75 in (120.65 mm)</b>					
1S-7408	--	0.32 in (8.22 mm)	4.43 in (112.41 mm)	0.21 in (5.33 mm)	9X-7278
5H-6734	-246	0.22 in (5.61 mm)	4.54 in (115.25 mm)	0.14 in (3.53 mm)	2J-3961
<b>Bore Diameter — 5.00 in (127.00 mm)</b>					
5P-4326	--	0.32 in (8.22 mm)	4.68 in (118.76 mm)	0.21 in (5.33 mm)	9X-7279
5F-3144	-248	0.22 in (5.61 mm)	4.79 in (121.60 mm)	0.14 in (3.53 mm)	2K-4096
131-3716	--	0.09 in (2.16 mm)	5.43 in (137.92 mm)	0.07 in (1.78 mm)	--
<b>Bore Diameter — 5.12 in (130.00 mm)</b>					
095-1631	--	0.36 in (9.13 mm)	4.72 in (119.95 mm)	0.22 in (5.70 mm)	7Y-4633
095-1719	--	0.23 in (5.73 mm)	4.92 in (125.00 mm)	0.12 in (3.10 mm)	095-1719
199-8392	--	0.09 in (2.40 mm)	5.70 in (144.80 mm)	0.07 in (1.78 mm)	--
<b>Bore Diameter — 5.25 in (133.35 mm)</b>					
5F-3999	--	0.14 in (3.53 mm)	4.86 in (123.42 mm)	0.14 in (3.53 mm)	--
5F-3106	-250	0.22 in (5.61 mm)	5.04 in (127.95 mm)	0.14 in (3.53 mm)	2J-7767
<b>Bore Diameter — 5.50 in (139.70 mm)</b>					
8F-4469	-429	0.48 in (12.13 mm)	5.05 in (128.25 mm)	0.27 in (6.98 mm)	6U-3042
8J-1688	-354	0.32 in (8.22 mm)	5.18 in (131.46 mm)	0.21 in (5.33 mm)	8J-1689
2H-9247	-252	0.22 in (5.61 mm)	5.29 in (134.30 mm)	0.14 in (3.53 mm)	2K-2961
<b>Bore Diameter — 5.51 in (140.00 mm)</b>					
095-1632	--	0.36 in (9.13 mm)	5.12 in (129.95 mm)	0.22 in (5.70 mm)	087-5436
095-1721	--	0.23 in (5.73 mm)	5.31 in (135.00 mm)	0.12 in (3.10 mm)	4I-3627
<b>Bore Diameter — 5.91 in (150.00 mm)</b>					
095-1633	--	0.36 in (9.13 mm)	5.51 in (139.95 mm)	0.22 in (5.70 mm)	7Y-4673
199-8391	--	0.14 in (3.53 mm)	6.61 in (167.94 mm)	0.10 in (2.62 mm)	--
<b>Bore Diameter — 6.00 in (152.40 mm)</b>					
6D-9157	-358	0.32 in (8.22 mm)	5.68 in (144.16 mm)	0.21 in (5.33 mm)	8J-1717
5H-3252	-256	0.22 in (5.61 mm)	5.79 in (147.00 mm)	0.14 in (3.53 mm)	2K-3258
6J-5541	-256	0.22 in (5.61 mm)	5.79 in (147.00 mm)	0.14 in (3.53 mm)	7X-4807



## Head Seals (Continued)

Part Number	Dash Size	A	B	Cross Section	Back-Up Ring
		Groove Width (± 0.004 in)	Groove Diameter (± 0.005 in)		
<b>Bore Diameter — 6.25 in (158.75 mm)</b>					
8F-8733	-258	0.22 in (5.61 mm)	6.04 in (153.35 mm)	0.14 in (3.53 mm)	4J-9223
<b>Bore Diameter — 6.30 in (160.00 mm)</b>					
095-1635	--	0.36 in (9.13 mm)	5.90 in (149.95 mm)	0.22 in (5.70 mm)	087-5550
<b>Bore Diameter — 6.50 in (165.10 mm)</b>					
7J-8956	-361	0.32 in (8.22 mm)	6.18 in (156.86 mm)	0.21 in (5.33 mm)	7J-8955
2K-4472	-259	0.22 in (5.61 mm)	6.29 in (159.70 mm)	0.14 in (3.53 mm)	2K-4473
<b>Bore Diameter — 6.69 in (170.00 mm)</b>					
095-1726	--	0.36 in (9.13 mm)	6.30 in (159.95 mm)	0.22 in (5.70 mm)	7Y-4945
<b>Bore Diameter — 7.00 in (177.80 mm)</b>					
8J-1665	-363	0.32 in (8.22 mm)	6.68 in (169.56 mm)	0.21 in (5.33 mm)	9X-7273
9F-1399	-261	0.22 in (5.61 mm)	6.79 in (172.40 mm)	0.14 in (3.53 mm)	4J-9218
<b>Bore Diameter — 7.09 in (180.00 mm)</b>					
095-1728	--	0.36 in (9.13 mm)	6.69 in (169.95 mm)	0.22 in (5.70 mm)	087-5391
095-1731	--	0.36 in (9.13 mm)	7.48 in (189.95 mm)	0.22 in (5.70 mm)	4I-6330
<b>Bore Diameter — 7.25 in (184.10 mm)</b>					
4T-4803	--	0.19 in (4.72 mm)	8.00 in (203.14 mm)	--	--
5P-7593	-364	0.32 in (8.22 mm)	6.93 in (175.91 mm)	0.21 in (5.33 mm)	1U-1738
2K-2939	-262	0.22 in (5.61 mm)	7.04 in (178.75 mm)	0.14 in (3.53 mm)	2K-2940
<b>Bore Diameter — 7.50 in (190.50 mm)</b>					
4H-6520	-263	0.22 in (5.61 mm)	7.29 in (185.10 mm)	0.14 in (3.53 mm)	4T-3107
<b>Bore Diameter — 7.75 in (196.85 mm)</b>					
5K-1787	-366	0.32 in (8.22 mm)	7.43 in (188.61 mm)	0.21 in (5.33 mm)	8J-0548
3J-0634	-264	0.22 in (5.61 mm)	7.54 in (191.45 mm)	0.14 in (3.53 mm)	3J-9742
<b>Bore Diameter — 7.99 in (203.00 mm)</b>					
1H-8278	-265	0.22 in (5.61 mm)	7.79 in (197.80 mm)	0.14 in (3.53 mm)	5J-6444
<b>Bore Diameter — 8.25 in (209.55 mm)</b>					
8J-4386	--	0.32 in (8.22 mm)	7.93 in (201.31 mm)	0.21 in (5.33 mm)	3G-3747
1J-2176	-266	0.22 in (5.61 mm)	8.04 in (204.15 mm)	0.14 in (3.53 mm)	2J-0744
<b>Bore Diameter — 8.50 in (215.90 mm)</b>					
9M-5024	-267	0.22 in (5.61 mm)	8.29 in (210.50 mm)	0.14 in (3.53 mm)	4J-6557
<b>Bore Diameter — 8.66 in (220.00 mm)</b>					
095-1733	--	0.36 in (9.13 mm)	8.27 in (209.95 mm)	0.22 in (5.70 mm)	4I-6442
<b>Bore Diameter — 9.25 in (234.95 mm)</b>					
1U-3174	--	0.32 in (8.22 mm)	8.93 in (226.71 mm)	0.21 in (5.33 mm)	1U-3173
8F-6230	-429	0.22 in (5.61 mm)	9.04 in (229.55 mm)	0.14 in (3.53 mm)	3J-8466
<b>Bore Diameter — 9.50 in (241.30 mm)</b>					
1T-0132	-271	0.22 in (5.61 mm)	9.29 in (235.90 mm)	0.14 in (3.53 mm)	3J-2688
<b>Bore Diameter — 10.00 in (254.00 mm)</b>					
5P-2235	-375	0.32 in (8.22 mm)	9.68 in (245.76 mm)	0.21 in (5.33 mm)	1U-3307
<b>Bore Diameter — 10.25 in (260.35 mm)</b>					
5H-4909	-274	0.22 in (5.61 mm)	10.04 in (254.95 mm)	0.14 in (3.53 mm)	4J-1151
<b>Bore Diameter — 10.50 in (266.70 mm)</b>					
8L-9241	-377	0.32 in (8.22 mm)	10.18 in (258.46 mm)	0.14 in (3.53 mm)	1U-1770

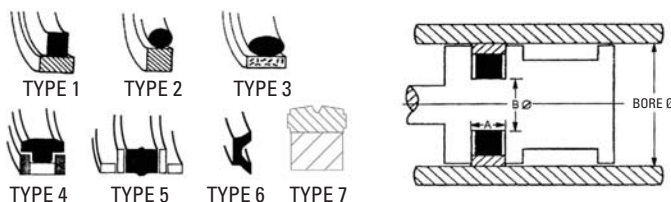
(Continued)

# Head Seals

## Head Seals (Continued)

Part Number	Dash Size	A	B	Cross Section	Back-Up Ring
		Groove Width (± 0.004 in)	Groove Diameter (± 0.005 in)		
<b>Bore Diameter — 10.75 in (273.05 mm)</b>					
8J-8879	-275	0.22 in (5.61 mm)	10.54 in (267.65 mm)	0.14 in (3.53 mm)	8J-8880
<b>Bore Diameter — 11.50 in (292.10 mm)</b>					
5P-2236	-379	0.32 in (8.22 mm)	11.18 in (283.86 mm)	0.21 in (5.33 mm)	1U-1626
<b>Bore Diameter — 12.25 in (311.05 mm)</b>					
6V-5057	--	0.21 in (5.33 mm)	11.48 in (291.47 mm)	0.21 in (5.33 mm)	--
<b>Bore Diameter — 12.50 in (317.50 mm)</b>					
6V-3263	-381	0.32 in (8.22 mm)	12.18 in (309.26 mm)	0.21 in (5.33 mm)	1U-3383
<b>Bore Diameter — 13.13 in (333.38 mm)</b>					
4M-0737	--	0.43 in (10.93 mm)	12.70 in (322.62 mm)	0.28 in (6.99 mm)	6V-3580
<b>Bore Diameter — 13.50 in (342.90 mm)</b>					
4D-4508	-454	0.43 in (10.93 mm)	13.02 in (330.80 mm)	0.27 in (6.98 mm)	122-0440
<b>Bore Diameter — 13.75 in (349.25 mm)</b>					
7S-8554	-382	0.32 in (8.22 mm)	13.43 in (341.01 mm)	0.21 in (5.33 mm)	9X-4595
<b>Bore Diameter — 14.25 in (361.95 mm)</b>					
2M-3818	--	0.32 in (8.22 mm)	13.93 in (353.71 mm)	0.21 in (5.33 mm)	4T-4127
<b>Bore Diameter — 15.13 in (384.18 mm)</b>					
4J-1253	-457	0.43 in (10.93 mm)	14.70 in (373.43 mm)	0.28 in (6.99 mm)	4T-5929
<b>Bore Diameter — 18.38 in (466.78 mm)</b>					
149-2695	--	0.28 in (6.99 mm)	17.59 in (446.88 mm)	0.28 in (6.99 mm)	--

Piston Seals



Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 0.63 in (15.88 mm)</b>				
3E-4242	2	--	0.08 in (2.11 mm)	0.36 in (9.27 mm)
<b>Bore Diameter — 0.75 in (19.05 mm)</b>				
3E-4243	2	--	0.08 in (2.11 mm)	0.49 in (12.45 mm)
<b>Bore Diameter — 1.00 in (25.40 mm)</b>				
3E-4244	2	--	0.08 in (2.11 mm)	0.74 in (18.80 mm)
3E-4277	1	--	0.13 in (3.28 mm)	0.69 in (17.55 mm)
<b>Bore Diameter — 1.13 in (28.58 mm)</b>				
3E-4245	2	--	0.08 in (2.11 mm)	0.86 in (21.97 mm)
<b>Bore Diameter — 1.25 in (31.75 mm)</b>				
3E-4246	2	--	0.08 in (2.11 mm)	0.99 in (25.15 mm)
3E-4278	1	--	0.13 in (3.28 mm)	0.94 in (23.90 mm)
4W-2186	6	--	0.16 in (3.96 mm)	0.99 in (25.02 mm)
<b>Bore Diameter — 1.50 in (38.10 mm)</b>				
3E-4247	2	--	0.08 in (2.11 mm)	1.24 in (31.50 mm)
5J-9822	1	--	0.12 in (3.00 mm)	1.11 in (28.09 mm)
<b>Bore Diameter — 1.63 in (41.28 mm)</b>				
3E-4248	2	--	0.12 in (3.10 mm)	1.24 in (31.40 mm)
<b>Bore Diameter — 1.75 in (44.45 mm)</b>				
3E-4249	2	--	0.12 in (3.10 mm)	1.36 in (34.54 mm)
3E-4279	1	--	0.13 in (3.28 mm)	1.44 in (36.60 mm)
<b>Bore Diameter — 2.00 in (50.80 mm)</b>				
3E-4250	2	--	0.13 in (3.30 mm)	1.61 in (40.79 mm)
5J-7004	1	--	0.19 in (4.88 mm)	1.63 in (41.28 mm)
<b>Bore Diameter — 2.17 in (55.00 mm)</b>				
144-9483	7	--	0.25 in (6.40 mm)	1.55 in (39.46 mm)
<b>Bore Diameter — 2.25 in (57.15 mm)</b>				
3E-4251	2	--	0.13 in (3.30 mm)	1.86 in (47.14 mm)
1U-3998	1	--	0.19 in (4.88 mm)	1.88 in (47.63 mm)
8J-1587	6	--	0.53 in (13.49 mm)	3.00 in (76.20 mm)
<b>Bore Diameter — 2.36 in (60.00 mm)</b>				
118-3129	--	--	0.06 in (1.40 mm)	2.56 in (65.00 mm)
144-9485	--	--	0.25 in (6.40 mm)	1.75 in (44.46 mm)
<b>Bore Diameter — 2.50 in (63.50 mm)</b>				
3E-4252	2	--	0.13 in (3.30 mm)	2.11 in (53.49 mm)
8J-6213	1	--	0.19 in (4.88 mm)	2.13 in (53.98 mm)
8C-9167	3	--	0.19 in (4.88 mm)	2.13 in (53.98 mm)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 2.50 in (63.50 mm) (Continued)</b>				
8C-4911	3	0.030	0.19 in (4.88 mm)	2.13 in (53.98 mm)
<b>Bore Diameter — 2.75 in (69.85 mm)</b>				
3E-4253	2	--	0.13 in (3.30 mm)	2.36 in (59.84 mm)
5J-7010	1	--	0.19 in (4.88 mm)	2.38 in (60.33 mm)
8C-4917	3	0.030	0.19 in (4.88 mm)	2.38 in (60.33 mm)
<b>Bore Diameter — 2.76 in (70.00 mm)</b>				
118-2727	--	--	0.06 in (1.40 mm)	2.95 in (75.00 mm)
161-7145	7	--	0.25 in (6.40 mm)	2.14 in (54.46 mm)
<b>Bore Diameter — 2.95 in (75.04 mm)</b>				
161-7146	7	--	0.25 in (6.40 mm)	2.34 in (59.46 mm)
<b>Bore Diameter — 3.00 in (76.20 mm)</b>				
3E-4254	2	--	0.13 in (3.30 mm)	2.61 in (66.19 mm)
6J-1972	1	--	4.88 in (0.19 mm)	62.48 in (2.46 mm)
8T-8209	3	0.030	0.19 in (4.88 mm)	2.46 in (62.48 mm)
<b>Bore Diameter — 3.15 in (80.00 mm)</b>				
099-6998	4	--	0.44 in (11.10 mm)	2.56 in (64.96 mm)
<b>Bore Diameter — 3.25 in (82.55 mm)</b>				
3E-4255	1	--	0.13 in (3.30 mm)	2.86 in (72.54 mm)
6J-0793	1	--	0.19 in (4.88 mm)	2.71 in (68.83 mm)
8C-4923	3	0.030	0.19 in (4.88 mm)	2.71 in (68.83 mm)
9J-1797	--	--	0.41 in (10.49 mm)	2.75 in (69.85 mm)
<b>Bore Diameter — 3.50 in (88.90 mm)</b>				
3E-4256	2	--	0.13 in (3.30 mm)	3.11 in (78.89 mm)
5J-7013	1	--	0.19 in (4.88 mm)	2.96 in (75.18 mm)
4T-8054	3	--	0.19 in (4.88 mm)	2.96 in (75.18 mm)
8T-8215	3	0.030	0.19 in (4.88 mm)	2.96 in (75.18 mm)
<b>Bore Diameter — 3.54 in (90.00 mm)</b>				
144-5287	7	--	0.25 in (6.40 mm)	2.93 in (74.45 mm)
099-6973	4	--	0.44 in (11.10 mm)	2.95 in (74.96 mm)
093-1488	5	--	1.52 in (38.70 mm)	2.99 in (75.96 mm)
<b>Bore Diameter — 3.74 in (95.00 mm)</b>				
118-3126	--	--	0.37 in (9.50 mm)	3.94 in (100.00 mm)
<b>Bore Diameter — 3.75 in (95.25 mm)</b>				
3E-4257	2	--	0.13 in (3.30 mm)	3.21 in (81.53 mm)
5J-8011	1	--	0.19 in (4.88 mm)	3.21 in (81.53 mm)
8T-8221	3	0.030	0.19 in (4.88 mm)	3.21 in (81.53 mm)

Cylinder Seals

(Continued)

# Piston Seals

## Piston Seals (Continued)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 3.75 in (95.25 mm) (Continued)</b>				
9X-7274	3	--	0.19 in (4.88 mm)	3.21 in (81.53 mm)
<b>Bore Diameter — 3.94 in (100.00 mm)</b>				
133-3094	3	0.030	0.29 in (7.24 mm)	3.38 in (85.75 mm)
9X-7298	3	--	0.29 in (7.24 mm)	3.38 in (85.75 mm)
195-0392	3	--	0.50 in (12.60 mm)	3.34 in (84.90 mm)
5I-5928	4	--	0.50 in (12.60 mm)	3.34 in (84.96 mm)
<b>Bore Diameter — 4.00 in (101.50 mm)</b>				
3E-4258	2	--	0.13 in (3.30 mm)	3.61 in (91.59 mm)
9J-9872	4	--	0.19 in (4.88 mm)	3.21 in (81.53 mm)
5J-5402	1	--	0.19 in (4.88 mm)	3.21 in (81.53 mm)
8C-9160	3	--	0.19 in (4.88 mm)	3.21 in (81.53 mm)
8T-8227	3	0.030	0.25 in (6.40 mm)	3.34 in (84.71 mm)
165-6880	6	--	0.42 in (10.59 mm)	3.50 in (88.90 mm)
<b>Bore Diameter — 4.13 in (104.78 mm)</b>				
9X-3586	3	--	0.29 in (7.24 mm)	3.57 in (90.75 mm)
125-9698	--	--	0.37 in (9.50 mm)	4.33 in (110.00 mm)
<b>Bore Diameter — 4.25 in (107.95 mm)</b>				
3E-4259	2	--	0.13 in (3.30 mm)	3.86 in (97.94 mm)
5J-7854	1	--	0.25 in (6.40 mm)	3.59 in (91.06 mm)
8T-8233	3	0.030	0.25 in (6.40 mm)	3.59 in (91.06 mm)
8C-9164	3	--	0.25 in (6.40 mm)	3.59 in (91.06 mm)
<b>Bore Diameter — 4.33 in (110.00 mm)</b>				
133-3098	3	0.030	0.29 in (7.24 mm)	3.77 in (95.75 mm)
9X-7301	3	--	0.29 in (7.24 mm)	3.77 in (95.75 mm)
195-0388	3	--	0.50 in (12.60 mm)	3.74 in (94.90 mm)
099-6922	4	--	0.50 in (12.60 mm)	3.74 in (94.96 mm)
<b>Bore Diameter — 4.50 in (114.30 mm)</b>				
3E-4260	2	--	0.13 in (3.30 mm)	4.11 in (104.29 mm)
5J-4986	1	--	0.25 in (6.40 mm)	3.84 in (97.41 mm)
8T-8239	3	0.030	0.25 in (6.40 mm)	3.84 in (97.41 mm)
9X-7269	3	--	0.25 in (6.40 mm)	3.84 in (97.41 mm)
165-6882	--	--	0.42 in (10.62 mm)	4.50 in (114.31 mm)
4T-5172	3	--	0.50 in (12.75 mm)	3.84 in (97.41 mm)
8J-3747	4	--	0.50 in (12.75 mm)	3.84 in (97.41 mm)
9X-4551	3	0.030	0.50 in (12.75 mm)	3.84 in (97.41 mm)
<b>Bore Diameter — 4.53 in (115.00 mm)</b>				
9X-3589	3	--	0.29 in (7.24 mm)	3.97 in (100.76 mm)
118-2723	--	--	0.37 in (9.50 mm)	4.72 in (120.00 mm)
<b>Bore Diameter — 4.72 in (120.00 mm)</b>				
9X-3592	3	--	0.29 in (7.24 mm)	4.16 in (105.74 mm)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 4.75 in (120.65 mm)</b>				
3E-4261	2	--	0.13 in (3.30 mm)	4.36 in (110.64 mm)
5J-4987	1	--	0.25 in (6.40 mm)	4.09 in (103.76 mm)
8T-8245	3	0.030	0.25 in (6.40 mm)	4.09 in (103.76 mm)
4T-8588	3	--	0.25 in (6.40 mm)	4.09 in (103.76 mm)
9X-7542	4	--	0.25 in (6.40 mm)	4.09 in (103.76 mm)
8C-5215	3	--	0.63 in (15.98 mm)	4.09 in (103.76 mm)
<b>Bore Diameter — 4.92 in (125.00 mm)</b>				
135-7938	--	--	0.59 in (14.90 mm)	5.12 in (130.00 mm)
<b>Bore Diameter — 5.00 in (127.00 mm)</b>				
3E-4262	2	--	0.13 in (3.30 mm)	4.61 in (116.99 mm)
7J-2032	1	--	0.25 in (6.35 mm)	3.48 in (88.44 mm)
6J-9354	4	--	0.38 in (9.63 mm)	4.23 in (107.32 mm)
8T-8251	3	0.030	0.38 in (9.63 mm)	4.23 in (107.32 mm)
5J-5020	1	--	0.38 in (9.63 mm)	4.23 in (107.32 mm)
9X-7264	3	--	0.38 in (9.63 mm)	4.23 in (107.32 mm)
9J-7868	4	--	0.63 in (15.98 mm)	4.23 in (107.32 mm)
8T-1787	3	--	0.63 in (15.98 mm)	4.23 in (107.32 mm)
<b>Bore Diameter — 5.12 in (130.00 mm)</b>				
108-2869	3	0.030	0.29 in (7.24 mm)	4.56 in (115.74 mm)
9X-3595	3	--	0.29 in (7.24 mm)	4.56 in (115.74 mm)
<b>Bore Diameter — 5.25 in (133.35 mm)</b>				
3E-4263	2	--	0.13 in (3.30 mm)	4.86 in (123.34 mm)
5J-7234	1	--	0.38 in (9.63 mm)	4.48 in (113.67 mm)
8T-0763	3	--	9.64 in (0.38 mm)	113.40 in (4.46 mm)
8T-8257	3	0.030	0.38 in (9.63 mm)	4.48 in (113.76 mm)
<b>Bore Diameter — 5.50 in (139.70 mm)</b>				
3E-4264	2	--	0.13 in (3.30 mm)	5.11 in (129.69 mm)
6E-0465	3	--	0.38 in (9.63 mm)	4.73 in (120.02 mm)
8T-8263	3	0.030	0.38 in (9.63 mm)	4.73 in (120.02 mm)
5J-4988	1	--	0.38 in (9.63 mm)	4.73 in (120.02 mm)
8J-8767	4	--	0.63 in (15.98 mm)	4.73 in (120.02 mm)
4T-5173	3	--	0.63 in (15.98 mm)	4.73 in (120.02 mm)
9X-4563	3	0.030	0.63 in (15.98 mm)	4.73 in (120.02 mm)
<b>Bore Diameter — 5.51 in (140.00 mm)</b>				
123-3135	3	--	0.32 in (8.20 mm)	4.69 in (119.00 mm)
133-3102	3	0.030	0.38 in (9.63 mm)	4.75 in (120.62 mm)
9X-3598	3	--	0.38 in (9.63 mm)	4.75 in (120.62 mm)
<b>Bore Diameter — 5.75 in (146.05 mm)</b>				
3E-4265	2	--	0.16 in (4.06 mm)	5.23 in (132.89 mm)
9J-4981	1	--	0.38 in (9.63 mm)	4.98 in (126.37 mm)
<b>Bore Diameter — 5.91 in (150.00 mm)</b>				
108-2871	3	0.030	0.38 in (9.63 mm)	5.14 in (130.63 mm)
9X-3601	3	--	0.38 in (9.63 mm)	5.14 in (130.63 mm)

Cylinder Seals

(Continued)

## Piston Seals (Continued)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 6.00 in (152.40 mm)</b>				
3E-4266	2	--	0.16 in (4.06 mm)	5.48 in (139.24 mm)
8T-8269	3	0.030	0.38 in (9.63 mm)	5.09 in (129.41 mm)
5J-4989	1	--	0.38 in (9.63 mm)	5.09 in (129.41 mm)
8C-9173	3	--	0.38 in (9.63 mm)	5.09 in (129.41 mm)
9J-1242	4	--	0.63 in (15.98 mm)	5.09 in (129.41 mm)
4T-4144	3	--	0.63 in (15.98 mm)	5.09 in (129.41 mm)
8C-4929	3	0.030	0.63 in (15.98 mm)	5.09 in (129.41 mm)
<b>Bore Diameter — 6.25 in (158.75 mm)</b>				
3E-4267	2	--	0.16 in (4.06 mm)	5.73 in (145.59 mm)
8T-8278	3	--	0.38 in (9.63 mm)	5.34 in (135.76 mm)
8T-8275	3	0.030	0.38 in (9.63 mm)	5.34 in (135.76 mm)
5J-4990	1	--	0.38 in (9.63 mm)	5.34 in (135.76 mm)
9J-5558	4	--	0.63 in (15.98 mm)	5.34 in (135.76 mm)
8T-1788	3	--	0.63 in (15.98 mm)	5.34 in (135.76 mm)
8C-4935	3	0.030	0.63 in (15.98 mm)	5.34 in (135.76 mm)
<b>Bore Diameter — 6.30 in (160.00 mm)</b>				
133-3106	3	0.030	0.38 in (9.63 mm)	5.54 in (140.61 mm)
9X-3604	3	--	0.38 in (9.63 mm)	5.54 in (140.61 mm)
<b>Bore Diameter — 6.38 in (161.93 mm)</b>				
096-5609	--	--	0.35 in (8.90 mm)	6.69 in (169.83 mm)
<b>Bore Diameter — 6.50 in (165.10 mm)</b>				
3E-4268	2	--	0.16 in (4.06 mm)	5.98 in (151.94 mm)
8T-8281	3	0.030	0.38 in (9.63 mm)	5.59 in (142.11 mm)
5J-4991	1	--	0.38 in (9.63 mm)	5.59 in (142.11 mm)
4T-8695	3	--	0.63 in (15.98 mm)	5.59 in (142.11 mm)
8J-8703	4	--	0.63 in (15.98 mm)	5.59 in (142.11 mm)
8C-4941	3	0.030	0.63 in (15.98 mm)	5.59 in (142.11 mm)
<b>Bore Diameter — 6.69 in (170.00 mm)</b>				
133-3110	3	0.030	0.38 in (9.63 mm)	5.93 in (150.62 mm)
9X-3607	3	--	0.38 in (9.63 mm)	5.93 in (150.62 mm)
<b>Bore Diameter — 6.75 in (171.45 mm)</b>				
3E-4269	2	--	0.16 in (4.06 mm)	6.23 in (158.29 mm)
<b>Bore Diameter — 6.77 in (171.93 mm)</b>				
096-5167	--	--	0.35 in (8.90 mm)	7.08 in (179.83 mm)
<b>Bore Diameter — 7.00 in (177.80 mm)</b>				
3E-4270	2	--	0.16 in (4.06 mm)	6.48 in (164.64 mm)
8T-8287	3	0.030	0.38 in (9.63 mm)	6.09 in (154.81 mm)
5J-4997	1	--	0.38 in (9.63 mm)	6.09 in (154.81 mm)
8J-3749	4	--	0.63 in (15.98 mm)	6.09 in (154.81 mm)
8T-1789	3	--	0.63 in (15.98 mm)	6.09 in (154.81 mm)
8C-5100	3	0.030	0.63 in (15.98 mm)	6.09 in (154.81 mm)
124-8364	6	--	0.79 in (20.00 mm)	6.00 in (152.30 mm)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 7.09 in (180.00 mm)</b>				
133-3114	3	0.030	0.38 in (9.63 mm)	6.32 in (160.62 mm)
9X-3610	3	--	0.38 in (9.63 mm)	6.32 in (160.62 mm)
<b>Bore Diameter — 7.25 in (184.15 mm)</b>				
3E-4271	2	--	0.16 in (4.06 mm)	6.73 in (170.99 mm)
8T-8293	3	0.030	0.38 in (9.63 mm)	6.34 in (161.16 mm)
5J-4993	1	--	0.38 in (9.63 mm)	6.34 in (161.16 mm)
8J-4510	4	--	0.63 in (15.98 mm)	6.34 in (161.16 mm)
8T-1790	3	--	0.63 in (15.98 mm)	6.34 in (161.16 mm)
8C-5112	3	0.030	0.63 in (15.98 mm)	6.34 in (161.16 mm)
<b>Bore Diameter — 7.48 in (190.00 mm)</b>				
125-1286	3	--	0.38 in (9.63 mm)	6.72 in (170.62 mm)
<b>Bore Diameter — 7.50 in (190.50 mm)</b>				
3E-4272	2	--	0.16 in (4.06 mm)	6.98 in (177.34 mm)
9J-7117	1	--	0.38 in (9.63 mm)	6.59 in (167.51 mm)
8C-0558	3	0.030	0.38 in (9.63 mm)	6.59 in (167.51 mm)
9J-5567	4	--	0.63 in (15.98 mm)	6.59 in (167.51 mm)
8T-1791	3	--	0.63 in (15.98 mm)	6.59 in (167.51 mm)
8C-5118	3	0.030	0.63 in (15.98 mm)	6.59 in (167.51 mm)
<b>Bore Diameter — 7.75 in (196.85 mm)</b>				
3E-4273	2	--	0.16 in (4.06 mm)	7.23 in (183.69 mm)
5J-7016	1	--	0.38 in (9.63 mm)	6.84 in (173.86 mm)
8J-5644	4	--	0.63 in (15.98 mm)	6.84 in (173.86 mm)
8T-1792	3	--	0.63 in (15.98 mm)	6.84 in (173.86 mm)
8C-5124	3	0.030	0.63 in (15.98 mm)	6.84 in (173.86 mm)
<b>Bore Diameter — 7.87 in (200.00 mm)</b>				
133-3118	3	0.030	0.38 in (9.63 mm)	6.88 in (174.73 mm)
8C-9179	3	--	0.38 in (9.63 mm)	6.88 in (174.73 mm)
<b>Bore Diameter — 8.00 in (203.20 mm)</b>				
3E-4274	2	--	0.16 in (4.06 mm)	7.48 in (190.04 mm)
3E-4280	1	--	0.38 in (9.60 mm)	7.25 in (184.25 mm)
<b>Bore Diameter — 8.25 in (209.55 mm)</b>				
3E-4275	2	--	0.16 in (4.06 mm)	7.73 in (196.39 mm)
5J-5559	1	--	0.38 in (9.63 mm)	7.26 in (184.28 mm)
8T-8299	3	0.030	0.38 in (9.63 mm)	7.26 in (184.28 mm)
8J-4390	4	--	0.63 in (15.98 mm)	7.26 in (184.28 mm)
8T-1793	3	--	0.63 in (15.98 mm)	7.26 in (184.28 mm)
8C-5130	3	0.030	0.63 in (15.98 mm)	7.26 in (184.28 mm)
<b>Bore Diameter — 8.34 in (211.93 mm)</b>				
4I-6443	--	--	0.35 in (8.90 mm)	8.50 in (215.88 mm)
<b>Bore Diameter — 8.50 in (215.90 mm)</b>				
3E-4276	2	--	0.16 in (4.06 mm)	7.98 in (202.74 mm)
6J-9385	1	--	0.38 in (9.63 mm)	7.51 in (190.63 mm)
9T-0119	3	--	0.63 in (15.98 mm)	7.51 in (190.63 mm)

(Continued)



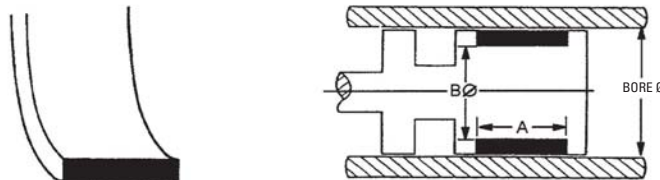
# Piston Seals

## Piston Seals (Continued)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 8.50 in (215.90 mm) (Continued)</b>				
3G-4762	4	--	0.63 in (15.98 mm)	7.51 in (190.63 mm)
8C-5136	3	0.030	0.63 in (15.98 mm)	7.51 in (190.63 mm)
<b>Bore Diameter — 8.66 in (220.00 mm)</b>				
8C-9182	3	--	0.38 in (9.63 mm)	7.67 in (194.74 mm)
<b>Bore Diameter — 9.00 in (228.60 mm)</b>				
3E-4281	1	--	0.38 in (9.60 mm)	8.14 in (206.68 mm)
<b>Bore Diameter — 9.25 in (234.95 mm)</b>				
8T-8384	3	0.030	0.38 in (9.63 mm)	8.26 in (209.68 mm)
5J-7019	1	--	0.38 in (9.63 mm)	8.26 in (209.68 mm)
4T-4143	3	--	0.38 in (9.63 mm)	8.26 in (209.68 mm)
108-6198	--	--	0.47 in (11.99 mm)	9.26 in (235.25 mm)
<b>Bore Diameter — 9.28 in (235.71 mm)</b>				
8T-8305	3	--	0.38 in (9.63 mm)	8.26 in (209.68 mm)
<b>Bore Diameter — 9.50 in (241.30 mm)</b>				
3E-4282	1	--	0.38 in (9.60 mm)	8.64 in (219.38 mm)
9X-7321	3	--	0.38 in (9.63 mm)	8.51 in (216.04 mm)
123-3129	--	--	0.79 in (20.00 mm)	8.49 in (215.76 mm)
<b>Bore Diameter — 10.00 in (254.00 mm)</b>				
121-4179	1	--	0.44 in (11.18 mm)	8.88 in (225.55 mm)
9J-3406	2	--	0.69 in (17.53 mm)	8.88 in (225.55 mm)
8T-1794	3	--	0.69 in (17.53 mm)	8.88 in (225.55 mm)
8C-5142	3	0.030	0.69 in (17.53 mm)	8.88 in (225.55 mm)
<b>Bore Diameter — 10.25 in (260.35 mm)</b>				
8T-1795	3	--	0.69 in (17.53 mm)	9.13 in (231.90 mm)
8C-5148	3	0.030	0.69 in (17.53 mm)	9.13 in (231.90 mm)
<b>Bore Diameter — 10.50 in (266.70 mm)</b>				
5J-6762	1	--	0.44 in (11.18 mm)	9.38 in (238.25 mm)
3G-4765	2	--	0.69 in (17.53 mm)	9.38 in (238.25 mm)
8T-1796	3	--	0.69 in (17.53 mm)	9.38 in (238.25 mm)
8C-5154	3	0.030	0.69 in (17.53 mm)	9.38 in (238.25 mm)

Part Number	Seal Type	Oversize Dim	A	B
			Groove Width (± 0.002 in)	Groove Diameter (± 0.003 in)
<b>Bore Diameter — 11.00 in (279.32 mm)</b>				
6E-0253	1	--	0.69 in (17.53 mm)	9.88 in (250.95 mm)
129-3706	3	0.030	0.69 in (17.53 mm)	9.88 in (250.95 mm)
108-0125	3	--	0.69 in (17.53 mm)	9.88 in (250.95 mm)
<b>Bore Diameter — 11.50 in (292.10 mm)</b>				
8T-1797	3	--	0.69 in (17.53 mm)	10.38 in (263.65 mm)
8C-5160	3	0.030	0.69 in (17.53 mm)	10.38 in (263.65 mm)
<b>Bore Diameter — 12.25 in (311.15 mm)</b>				
8T-6923	1	--	0.44 in (11.18 mm)	8.38 in (212.85 mm)
<b>Bore Diameter — 12.50 in (317.50 mm)</b>				
6E-0307	3	--	0.69 in (17.53 mm)	11.38 in (289.05 mm)
129-3712	3	0.030	0.69 in (17.53 mm)	11.38 in (289.05 mm)
<b>Bore Diameter — 13.00 in (330.20 mm)</b>				
129-3709	3	0.030	0.69 in (17.53 mm)	11.88 in (301.75 mm)
108-6211	3	--	0.69 in (17.53 mm)	11.88 in (301.75 mm)
<b>Bore Diameter — 13.50 in (342.90 mm)</b>				
130-1857	3	0.030	0.69 in (17.53 mm)	12.40 in (314.95 mm)
121-4185	3	--	0.69 in (17.53 mm)	12.40 in (314.95 mm)

Piston Wear Rings



Part Number	Oversize Dim	A	B
		Width (± 0.03 in)	I.D. (± 0.08 in)
<b>O.D. — 1.50 in (38.10 mm)</b>			
5J-9073	--	0.50 in (12.60 mm)	1.24 in (31.53 mm)
<b>O.D. — 2.00 in (50.80 mm)</b>			
5J-7942	--	0.50 in (12.60 mm)	1.74 in (44.22 mm)
<b>O.D. — 2.25 in (57.15 mm)</b>			
7H-2423	--	0.89 in (22.50 mm)	1.99 in (50.57 mm)
<b>O.D. — 2.50 in (63.50 mm)</b>			
8C-4804	0.030	0.75 in (19.05 mm)	2.24 in (56.92 mm)
8J-6212	--	0.75 in (19.05 mm)	2.24 in (56.92 mm)
<b>O.D. — 2.75 in (69.85 mm)</b>			
8C-4806	0.030	0.94 in (23.82 mm)	2.49 in (63.27 mm)
8J-0112	--	0.94 in (23.82 mm)	2.49 in (63.27 mm)
<b>O.D. — 2.76 in (70.00 mm)</b>			
118-2717	--	0.58 in (14.80 mm)	2.95 in (75.00 mm)
<b>O.D. — 3.00 in (76.20 mm)</b>			
6J-5733	--	1.00 in (25.40 mm)	2.74 in (69.62 mm)
8T-8361	0.030	1.00 in (25.40 mm)	2.74 in (69.62 mm)
8T-6443	--	1.00 in (25.40 mm)	2.80 in (71.06 mm)
<b>O.D. — 3.15 in (80.00 mm)</b>			
099-7002	--	1.19 in (30.10 mm)	2.91 in (73.98 mm)
105-7252	--	0.24 in (6.15 mm)	2.83 in (71.98 mm)
<b>O.D. — 3.25 in (82.55 mm)</b>			
8J-2577	--	0.75 in (19.05 mm)	2.99 in (75.97 mm)
7U-7647	--	0.75 in (19.05 mm)	3.50 in (88.90 mm)
8C-4808	0.030	1.13 in (28.70 mm)	2.99 in (75.97 mm)
8J-6371	--	1.13 in (28.70 mm)	2.99 in (75.97 mm)
8T-6683	--	1.13 in (28.70 mm)	3.05 in (77.41 mm)
<b>O.D. — 3.35 in (85.00 mm)</b>			
197-7982	--	1.17 in (29.80 mm)	3.11 in (78.98 mm)
<b>O.D. — 3.50 in (88.90 mm)</b>			
7J-9885	--	1.12 in (28.57 mm)	3.24 in (82.32 mm)
8T-8317	0.030	1.12 in (28.57 mm)	3.24 in (82.32 mm)
4J-3236	--	1.50 in (38.00 mm)	3.24 in (82.32 mm)
8T-8331	0.030	1.50 in (38.00 mm)	3.24 in (82.32 mm)
<b>O.D. — 3.54 in (90.00 mm)</b>			
105-2630	--	0.24 in (6.15 mm)	3.23 in (81.98 mm)
099-6976	--	1.19 in (30.10 mm)	3.31 in (83.98 mm)

Part Number	Oversize Dim	A	B
		Width (± 0.03 in)	I.D. (± 0.08 in)
<b>O.D. — 3.75 in (95.25 mm)</b>			
8T-8337	0.030	1.00 in (25.40 mm)	3.49 in (88.67 mm)
8J-6245	--	1.00 in (25.40 mm)	3.49 in (88.67 mm)
8C-0547	0.030	1.25 in (31.65 mm)	3.49 in (88.67 mm)
5J-8019	--	1.25 in (31.65 mm)	3.49 in (88.67 mm)
<b>O.D. — 3.94 in (100.00 mm)</b>			
093-1628	--	0.25 in (6.25 mm)	3.62 in (91.93 mm)
093-1605	--	1.19 in (30.30 mm)	3.70 in (93.87 mm)
<b>O.D. — 4.00 in (101.60 mm)</b>			
5J-7154	--	0.62 in (15.75 mm)	3.74 in (95.02 mm)
8C-0539	0.030	0.62 in (15.77 mm)	3.74 in (95.02 mm)
3D-4522	--	0.71 in (18.13 mm)	3.74 in (94.99 mm)
8T-8311	0.030	1.00 in (25.30 mm)	3.74 in (95.02 mm)
6J-2797	--	1.00 in (25.30 mm)	3.74 in (95.02 mm)
8T-8335	0.030	1.25 in (31.65 mm)	3.74 in (95.02 mm)
1M-1571	--	1.25 in (31.65 mm)	3.74 in (95.02 mm)
<b>O.D. — 4.13 in (105.00 mm)</b>			
125-9699	--	0.58 in (14.80 mm)	4.33 in (110.00 mm)
<b>O.D. — 4.25 in (107.95 mm)</b>			
8C-0541	0.030	1.00 in (25.32 mm)	3.99 in (101.37 mm)
6J-7264	--	1.00 in (25.32 mm)	3.99 in (101.37 mm)
8T-8325	0.030	1.25 in (31.75 mm)	3.99 in (101.37 mm)
6J-4003	--	1.25 in (31.75 mm)	3.99 in (101.37 mm)
8T-8329	0.030	1.50 in (38.00 mm)	3.99 in (101.37 mm)
5J-8157	--	1.50 in (38.00 mm)	3.99 in (101.37 mm)
<b>O.D. — 4.33 in (110.00 mm)</b>			
093-1629	--	0.25 in (6.25 mm)	4.01 in (101.98 mm)
093-1603	--	1.19 in (30.30 mm)	4.09 in (103.87 mm)
<b>O.D. — 4.50 in (114.30 mm)</b>			
2D-0829	--	0.79 in (19.95 mm)	4.24 in (107.72 mm)
4J-4605	--	0.93 in (23.72 mm)	4.24 in (107.72 mm)
8T-8327	0.030	1.00 in (25.32 mm)	4.24 in (107.72 mm)
4J-3745	--	1.00 in (25.32 mm)	4.24 in (107.72 mm)
4J-2620	--	1.50 in (38.00 mm)	4.24 in (107.72 mm)
8T-8355	0.030	1.50 in (38.00 mm)	4.24 in (107.72 mm)
8C-4810	0.030	1.87 in (47.52 mm)	4.24 in (107.72 mm)
6J-4175	--	1.87 in (47.52 mm)	4.24 in (107.72 mm)
4T-8758	--	1.87 in (47.52 mm)	4.24 in (107.72 mm)

Cylinder Seals

(Continued)

# Piston Wear Rings

## Piston Wear Rings (Continued)

Part Number	Oversize Dim	A	B
		Width (± 0.03 in)	I.D. (± 0.08 in)
<b>O.D. — 4.53 in (115.00 mm)</b>			
118-2724	--	0.58 in (14.80 mm)	4.72 in (120.00 mm)
<b>O.D. — 4.72 in (120.00 mm)</b>			
093-1630	--	0.25 in (6.25 mm)	4.41 in (111.93 mm)
093-1604	--	1.19 in (30.30 mm)	4.48 in (113.87 mm)
087-5505	--	1.39 in (35.30 mm)	4.48 in (113.87 mm)
<b>O.D. — 4.75 in (120.65 mm)</b>			
7J-8879	--	0.39 in (9.97 mm)	3.99 in (101.24 mm)
8T-8390	--	1.00 in (25.40 mm)	4.49 in (114.07 mm)
4J-3342	--	1.25 in (31.65 mm)	4.49 in (114.07 mm)
8T-8345	0.030	1.25 in (31.75 mm)	4.49 in (114.07 mm)
4T-9248	--	1.25 in (31.75 mm)	4.49 in (114.07 mm)
<b>O.D. — 4.92 in (125.00 mm)</b>			
135-7939	--	0.58 in (14.80 mm)	5.12 in (130.00 mm)
<b>O.D. — 5.00 in (127.00 mm)</b>			
7J-1627	--	0.86 in (21.80 mm)	4.74 in (120.42 mm)
8C-4812	0.030	1.12 in (28.57 mm)	4.74 in (120.42 mm)
4J-4630	--	1.12 in (28.57 mm)	4.74 in (120.42 mm)
8M-4226	--	1.25 in (31.65 mm)	4.74 in (120.42 mm)
8T-8339	0.030	1.56 in (39.67 mm)	4.74 in (120.42 mm)
4J-3420	--	1.56 in (39.67 mm)	4.74 in (120.42 mm)
<b>O.D. — 5.12 in (130.00 mm)</b>			
7Y-4632	--	0.32 in (8.25 mm)	4.80 in (121.93 mm)
108-2890	--	0.32 in (8.25 mm)	4.80 in (121.93 mm)
7Y-4636	--	1.59 in (40.30 mm)	4.84 in (122.87 mm)
108-2884	--	1.59 in (40.30 mm)	4.84 in (122.87 mm)
<b>O.D. — 5.25 in (133.35 mm)</b>			
2D-0714	--	1.03 in (26.08 mm)	4.99 in (126.77 mm)
4J-3887	--	1.32 in (33.60 mm)	4.99 in (126.77 mm)
8T-8359	0.030	1.50 in (38.10 mm)	4.99 in (126.77 mm)
9J-7978	--	1.50 in (38.10 mm)	4.99 in (126.77 mm)
7J-8878	--	3.92 in (99.69 mm)	4.50 in (114.25 mm)
<b>O.D. — 5.50 in (139.70 mm)</b>			
8T-8315	0.030	1.25 in (31.65 mm)	5.24 in (133.12 mm)
4J-4606	--	1.25 in (31.65 mm)	5.24 in (133.12 mm)
8C-4816	0.030	1.37 in (34.82 mm)	5.24 in (133.12 mm)
3J-9026	--	1.37 in (34.82 mm)	5.24 in (133.12 mm)
7J-3303	--	1.62 in (41.27 mm)	5.24 in (133.12 mm)
9J-7191	--	1.75 in (44.45 mm)	5.12 in (129.96 mm)
8C-4818	0.030	1.75 in (44.45 mm)	5.12 in (129.96 mm)
8C-4814	0.030	1.75 in (44.45 mm)	5.24 in (133.12 mm)
7J-1731	--	1.75 in (44.45 mm)	5.24 in (133.12 mm)
8C-9112	--	2.00 in (50.70 mm)	5.24 in (133.12 mm)
8C-4820	0.030	2.00 in (50.70 mm)	5.24 in (133.12 mm)
4J-3518	--	2.00 in (50.70 mm)	5.24 in (133.12 mm)

Part Number	Oversize Dim	A	B
		Width (± 0.03 in)	I.D. (± 0.08 in)
<b>O.D. — 5.50 in (139.70 mm) (Continued)</b>			
8J-1690	--	2.25 in (57.15 mm)	5.24 in (133.12 mm)
8C-4822	0.030	2.25 in (57.15 mm)	5.24 in (133.12 mm)
<b>O.D. — 5.51 in (140.00 mm)</b>			
107-6264	--	0.32 in (8.25 mm)	5.19 in (131.93 mm)
096-1800	--	0.32 in (8.25 mm)	5.19 in (131.93 mm)
107-6263	--	0.38 in (9.70 mm)	5.31 in (134.87 mm)
5U-4278	--	0.75 in (19.05 mm)	5.25 in (133.30 mm)
087-5429	--	1.78 in (45.30 mm)	5.23 in (132.87 mm)
<b>O.D. — 5.75 in (146.05 mm)</b>			
9J-4164	--	1.62 in (41.27 mm)	5.49 in (139.47 mm)
6J-3074	--	2.00 in (50.70 mm)	5.49 in (139.47 mm)
<b>O.D. — 5.91 in (150.00 mm)</b>			
096-1581	--	0.32 in (8.25 mm)	5.59 in (141.93 mm)
7Y-4697	--	1.78 in (45.30 mm)	5.62 in (142.87 mm)
<b>O.D. — 6.00 in (152.40 mm)</b>			
7J-8877	--	0.39 in (9.97 mm)	5.25 in (133.30 mm)
4J-7503	--	1.00 in (25.30 mm)	5.62 in (142.66 mm)
3G-6537	--	1.07 in (27.25 mm)	5.74 in (145.82 mm)
8C-4824	0.030	1.07 in (27.25 mm)	5.74 in (145.82 mm)
8C-0543	0.030	1.25 in (31.65 mm)	5.74 in (145.82 mm)
5J-0014	--	1.25 in (31.65 mm)	5.74 in (145.82 mm)
1J-0708	--	1.32 in (33.60 mm)	5.74 in (145.82 mm)
8T-8343	0.030	1.32 in (33.60 mm)	5.74 in (145.82 mm)
8T-8347	0.030	1.50 in (38.10 mm)	5.74 in (145.82 mm)
9J-5860	--	1.50 in (38.10 mm)	5.74 in (145.82 mm)
8T-8349	0.030	1.75 in (44.45 mm)	5.74 in (145.82 mm)
7J-5326	--	1.75 in (44.45 mm)	5.74 in (145.82 mm)
8J-1746	--	2.75 in (69.85 mm)	5.62 in (142.66 mm)
4T-6930	--	2.75 in (69.85 mm)	5.62 in (142.67 mm)
8C-4826	0.030	2.75 in (69.85 mm)	5.62 in (142.67 mm)
<b>O.D. — 6.25 in (158.75 mm)</b>			
8T-8357	0.030	1.50 in (38.00 mm)	5.99 in (152.17 mm)
5J-3326	--	1.50 in (38.00 mm)	5.99 in (152.17 mm)
9J-5550	--	1.75 in (44.45 mm)	5.99 in (152.17 mm)
8C-4828	0.030	1.75 in (44.45 mm)	5.99 in (152.17 mm)
<b>O.D. — 6.30 in (160.00 mm)</b>			
096-3201	--	0.36 in (9.25 mm)	5.98 in (151.93 mm)
087-5539	--	1.78 in (45.30 mm)	6.02 in (152.87 mm)
<b>O.D. — 6.50 in (165.10 mm)</b>			
7J-8880	--	0.25 in (6.25 mm)	5.99 in (152.15 mm)
4J-7532	--	1.00 in (25.30 mm)	6.12 in (155.36 mm)
8C-0545	0.030	1.25 in (31.65 mm)	6.24 in (158.52 mm)
5J-0058	--	1.25 in (31.65 mm)	6.24 in (158.52 mm)
3J-9027	--	1.37 in (34.82 mm)	6.24 in (158.52 mm)

Cylinder Seals

(Continued)

## Piston Wear Rings (Continued)

Part Number	Oversize Dim	A	B
		Width ( $\pm 0.03$ in)	I.D. ( $\pm 0.08$ in)
<b>O.D. — 6.50 in (165.10 mm) (Continued)</b>			
8C-4836	0.030	1.37 in (34.82 mm)	6.24 in (158.52 mm)
3J-9703	--	1.50 in (38.00 mm)	6.24 in (158.52 mm)
8T-8353	0.030	1.50 in (38.00 mm)	6.24 in (158.52 mm)
9T-0096	--	1.50 in (38.00 mm)	6.24 in (158.52 mm)
9J-9806	--	1.75 in (44.45 mm)	6.24 in (158.52 mm)
8C-4830	0.030	1.75 in (44.45 mm)	6.24 in (158.52 mm)
8C-9111	--	2.00 in (50.80 mm)	6.24 in (158.52 mm)
7J-1938	--	2.00 in (50.80 mm)	6.24 in (158.52 mm)
8C-4832	0.030	2.00 in (50.80 mm)	6.24 in (158.52 mm)
9X-7553	0.030	2.74 in (69.70 mm)	6.24 in (158.50 mm)
9X-7554	0.030	2.86 in (72.64 mm)	6.24 in (158.50 mm)
9J-3055	--	2.88 in (73.03 mm)	6.24 in (158.52 mm)
7J-9232	--	2.88 in (73.03 mm)	6.50 in (165.10 mm)
7J-8881	--	3.50 in (88.90 mm)	5.99 in (152.22 mm)
8C-4834	0.030	3.50 in (88.90 mm)	5.99 in (152.22 mm)
9J-0811	--	3.50 in (88.90 mm)	6.24 in (158.52 mm)
<b>O.D. — 6.68 in (169.77 mm)</b>			
5I-8589	--	0.35 in (8.90 mm)	6.99 in (177.67 mm)
<b>O.D. — 6.69 in (170.00 mm)</b>			
096-5609	--	0.36 in (9.25 mm)	6.38 in (161.93 mm)
105-7262	--	1.98 in (50.30 mm)	6.37 in (161.87 mm)
<b>O.D. — 6.88 in (174.63 mm)</b>			
7J-3302	--	2.00 in (50.80 mm)	6.62 in (168.05 mm)
<b>O.D. — 7.00 in (177.80 mm)</b>			
8M-4228	--	1.75 in (44.45 mm)	6.74 in (171.22 mm)
8C-4838	0.030	1.75 in (44.45 mm)	6.74 in (171.22 mm)
3G-5098	--	2.00 in (50.80 mm)	6.74 in (171.22 mm)
8T-8363	0.030	2.00 in (50.80 mm)	6.74 in (171.22 mm)
3G-3470	--	2.37 in (60.30 mm)	6.74 in (171.22 mm)
9J-0711	--	3.12 in (79.35 mm)	6.74 in (171.22 mm)
8C-4840	0.030	3.12 in (79.37 mm)	6.74 in (171.22 mm)
3G-4641	--	3.50 in (88.90 mm)	6.74 in (171.22 mm)
<b>O.D. — 7.09 in (180.00 mm)</b>			
096-5167	--	0.36 in (9.25 mm)	6.77 in (171.93 mm)
105-2653	--	2.18 in (55.30 mm)	6.77 in (171.86 mm)
<b>O.D. — 7.25 in (184.15 mm)</b>			
8T-8319	0.030	1.40 in (35.60 mm)	6.99 in (177.57 mm)
8J-1662	--	1.40 in (35.60 mm)	6.99 in (177.57 mm)
3J-7848	--	2.00 in (50.70 mm)	6.99 in (177.57 mm)
1J-2674	--	2.00 in (50.70 mm)	6.99 in (177.57 mm)
8T-8341	0.030	2.00 in (50.70 mm)	6.99 in (177.57 mm)
1U-1734	--	3.07 in (78.00 mm)	6.87 in (174.41 mm)
8C-4846	0.030	3.07 in (78.00 mm)	6.87 in (174.41 mm)

Part Number	Oversize Dim	A	B
		Width ( $\pm 0.03$ in)	I.D. ( $\pm 0.08$ in)
<b>O.D. — 7.50 in (190.50 mm)</b>			
1U-2218	--	1.50 in (38.00 mm)	7.24 in (183.92 mm)
8C-0549	0.030	1.50 in (38.00 mm)	7.24 in (183.92 mm)
8J-9936	--	2.37 in (60.32 mm)	7.24 in (183.92 mm)
8C-4848	0.030	2.50 in (63.50 mm)	7.24 in (183.92 mm)
9J-5562	--	2.50 in (63.50 mm)	7.24 in (183.92 mm)
<b>O.D. — 7.75 in (196.85 mm)</b>			
7J-8886	--	0.25 in (6.25 mm)	7.37 in (187.12 mm)
108-2880	0.030	1.62 in (41.27 mm)	7.49 in (190.27 mm)
9J-5037	--	1.62 in (41.27 mm)	7.49 in (190.27 mm)
8C-4850	0.030	2.00 in (50.80 mm)	7.49 in (190.27 mm)
9J-3624	--	2.00 in (50.80 mm)	7.49 in (190.27 mm)
7J-9247	--	3.50 in (88.90 mm)	7.49 in (190.27 mm)
8C-4854	0.030	3.50 in (88.90 mm)	7.49 in (190.27 mm)
3G-4625	--	4.50 in (114.30 mm)	7.37 in (187.12 mm)
8C-4852	0.030	4.50 in (114.30 mm)	7.37 in (187.17 mm)
4T-6932	--	4.50 in (114.30 mm)	7.37 in (187.17 mm)
<b>O.D. — 7.87 in (200.00 mm)</b>			
085-7248	--	0.36 in (9.25 mm)	7.56 in (191.93 mm)
9X-3570	--	1.77 in (45.00 mm)	7.61 in (193.37 mm)
<b>O.D. — 8.00 in (203.15 mm)</b>			
8T-7695	--	5.00 in (126.90 mm)	7.74 in (196.62 mm)
<b>O.D. — 8.25 in (209.55 mm)</b>			
9J-8102	--	0.11 in (2.75 mm)	0.31 in (7.87 mm)
7J-8887	--	0.50 in (12.75 mm)	7.74 in (196.60 mm)
8T-8333	0.030	1.50 in (38.00 mm)	7.99 in (202.97 mm)
2J-0745	--	1.50 in (38.00 mm)	7.99 in (202.97 mm)
4J-7376	--	1.50 in (38.00 mm)	7.99 in (202.97 mm)
3J-8683	--	1.75 in (44.35 mm)	7.99 in (202.97 mm)
8T-8323	0.030	1.75 in (44.35 mm)	7.99 in (202.97 mm)
3G-9882	--	2.00 in (50.80 mm)	7.87 in (199.81 mm)
8C-4864	0.030	2.00 in (50.80 mm)	7.87 in (199.81 mm)
8J-8375	--	2.12 in (53.97 mm)	7.99 in (202.97 mm)
8C-4856	0.030	2.12 in (53.97 mm)	7.99 in (202.97 mm)
3J-7632	--	2.25 in (57.05 mm)	7.99 in (202.97 mm)
7J-3301	--	2.50 in (63.50 mm)	7.99 in (202.97 mm)
8J-8826	--	2.75 in (69.85 mm)	7.99 in (202.97 mm)
4T-9320	--	3.50 in (88.90 mm)	7.74 in (196.57 mm)
8C-4866	0.030	3.50 in (88.90 mm)	7.74 in (196.57 mm)
3G-1315	--	4.00 in (101.60 mm)	7.87 in (199.80 mm)
9J-3056	--	4.13 in (104.78 mm)	7.99 in (202.97 mm)
<b>O.D. — 8.50 in (215.90 mm)</b>			
6J-9365	--	2.00 in (50.70 mm)	8.24 in (209.32 mm)
7J-8064	--	2.37 in (60.30 mm)	8.24 in (209.32 mm)
8C-4868	0.030	2.37 in (60.30 mm)	8.24 in (209.32 mm)

(Continued)

# Piston Wear Rings

## Piston Wear Rings (Continued)

Part Number	Oversize Dim	A	B
		Width ( $\pm 0.03$ in)	I.D. ( $\pm 0.08$ in)
<b>O.D. — 8.50 in (215.90 mm) (Continued)</b>			
8T-7694	--	3.01 in (76.45 mm)	8.24 in (209.32 mm)
<b>O.D. — 8.66 in (220.00 mm)</b>			
4I-6443	--	0.36 in (9.25 mm)	8.34 in (211.93 mm)
6E-0496	--	1.18 in (30.00 mm)	8.40 in (213.37 mm)
125-1204	--	1.50 in (38.00 mm)	8.40 in (213.42 mm)
<b>O.D. — 9.25 in (234.95 mm)</b>			
1J-5281	--	1.75 in (44.35 mm)	8.99 in (228.37 mm)
8T-8321	0.030	1.75 in (44.35 mm)	8.99 in (228.37 mm)
4T-5949	--	1.97 in (50.00 mm)	8.99 in (228.37 mm)
8C-0551	0.030	2.25 in (57.15 mm)	8.99 in (228.37 mm)
7J-2087	--	2.25 in (57.15 mm)	8.99 in (228.37 mm)
<b>O.D. — 9.50 in (241.30 mm)</b>			
7J-8883	--	0.50 in (12.78 mm)	9.25 in (234.95 mm)
4T-6097	--	1.97 in (50.00 mm)	9.12 in (231.56 mm)
8J-9932	--	3.08 in (78.20 mm)	9.24 in (234.72 mm)
7J-8884	--	3.50 in (88.90 mm)	8.99 in (228.42 mm)
<b>O.D. — 10.00 in (254.00 mm)</b>			
8C-4874	0.030	3.25 in (82.55 mm)	9.74 in (247.42 mm)
9J-3369	--	3.25 in (82.55 mm)	9.74 in (247.42 mm)
117-8865	--	1.50 in (38.00 mm)	9.74 in (247.42 mm)
8C-3843	--	2.76 in (70.00 mm)	9.74 in (247.42 mm)
<b>O.D. — 10.03 in (254.81 mm)</b>			
129-3701	--	1.50 in (38.00 mm)	9.74 in (247.42 mm)
<b>O.D. — 10.25 in (260.35 mm)</b>			
7J-8890	--	0.25 in (6.25 mm)	9.74 in (247.40 mm)
7J-8891	--	3.50 in (88.90 mm)	9.74 in (247.47 mm)
8C-4876	0.030	3.50 in (88.90 mm)	9.74 in (247.47 mm)
<b>O.D. — 10.50 in (266.70 mm)</b>			
8C-4878	0.030	2.75 in (69.85 mm)	10.24 in (260.12 mm)
9J-1159	--	2.75 in (69.85 mm)	10.24 in (260.12 mm)
7J-1065	--	3.50 in (88.93 mm)	10.24 in (260.12 mm)
8J-8900	--	3.75 in (95.25 mm)	10.24 in (260.12 mm)
8J-5980	--	4.00 in (101.60 mm)	10.24 in (260.12 mm)
<b>O.D. — 10.75 in (273.05 mm)</b>			
8T-6637	--	6.50 in (165.10 mm)	10.37 in (263.31 mm)
<b>O.D. — 11.00 in (279.40 mm)</b>			
129-3703	0.030	1.93 in (49.00 mm)	10.74 in (272.82 mm)
6E-0249	--	1.93 in (49.00 mm)	10.74 in (272.82 mm)
129-3702	0.030	3.25 in (82.55 mm)	10.74 in (272.82 mm)
108-0124	--	3.25 in (82.55 mm)	10.74 in (272.82 mm)
<b>O.D. — 11.50 in (292.10 mm)</b>			
4T-4815	--	1.97 in (50.00 mm)	8.99 in (228.37 mm)
8C-4882	0.030	3.87 in (98.42 mm)	11.24 in (285.52 mm)
9J-2991	--	3.87 in (98.42 mm)	11.24 in (285.52 mm)

Part Number	Oversize Dim	A	B
		Width ( $\pm 0.03$ in)	I.D. ( $\pm 0.08$ in)
<b>O.D. — 12.25 in (311.15 mm)</b>			
4T-6096	--	4.00 in (101.60 mm)	11.87 in (301.41 mm)
<b>O.D. — 12.50 in (317.50 mm)</b>			
129-3705	0.030	1.46 in (37.00 mm)	12.24 in (310.92 mm)
6E-0308	--	1.46 in (37.00 mm)	12.24 in (310.92 mm)
1U-2694	--	4.00 in (101.60 mm)	12.24 in (310.92 mm)
<b>O.D. — 13.00 in (330.20 mm)</b>			
129-3704	0.030	1.46 in (37.00 mm)	12.74 in (323.62 mm)
108-6215	--	1.46 in (37.00 mm)	12.74 in (323.62 mm)
<b>O.D. — 13.13 in (333.38 mm)</b>			
8C-9155	--	5.03 in (127.71 mm)	12.93 in (328.52 mm)
1U-4627	--	7.87 in (200.00 mm)	12.74 in (323.64 mm)
<b>O.D. — 13.50 in (342.90 mm)</b>			
121-4188	--	1.46 in (37.00 mm)	13.24 in (336.32 mm)
130-1859	0.030	1.46 in (37.00 mm)	13.24 in (336.32 mm)
<b>O.D. — 13.75 in (349.25 mm)</b>			
6E-0247	--	4.02 in (102.00 mm)	13.49 in (342.67 mm)
<b>O.D. — 14.25 in (361.95 mm)</b>			
4T-4129	--	4.00 in (101.60 mm)	13.99 in (355.37 mm)
<b>O.D. — 15.13 in (384.18 mm)</b>			
4T-4825	--	7.72 in (196.00 mm)	14.74 in (374.44 mm)
<b>O.D. — 16.13 in (409.60 mm)</b>			
9X-3564	--	7.72 in (196.00 mm)	15.71 in (399.00 mm)
<b>O.D. — 18.38 in (466.78 mm)</b>			
149-0811	--	7.72 in (196.00 mm)	17.99 in (456.98 mm)



**Snubber Seals**

<b>Part Number</b>	<b>Groove Width</b>	<b>Groove Diameter</b>
6J-1972	4.88 in (0.19 mm)	62.48 in (2.46 mm)
105-7265	7.00 in (0.28 mm)	44.95 in (1.77 mm)
121-1997	7.00 in (0.28 mm)	53.00 in (2.09 mm)
185-9084	7.00 in (0.28 mm)	53.95 in (2.12 mm)
6I-6922	7.00 in (0.28 mm)	56.95 in (2.24 mm)
6I-6910	7.00 in (0.28 mm)	58.95 in (2.32 mm)
185-9051	7.00 in (0.28 mm)	58.95 in (2.32 mm)
103-8341	7.00 in (0.28 mm)	61.90 in (2.44 mm)
6I-6911	7.00 in (0.28 mm)	61.95 in (2.44 mm)
185-9050	7.00 in (0.28 mm)	63.90 in (2.52 mm)
6I-6921	7.00 in (0.28 mm)	66.95 in (2.64 mm)
283-5995	9.00 in (0.35 mm)	52.00 in (2.05 mm)
283-5971	9.00 in (0.35 mm)	57.00 in (2.24 mm)
266-7859	9.00 in (0.35 mm)	58.00 in (2.28 mm)
283-5972	9.00 in (0.35 mm)	62.00 in (2.44 mm)
6I-6786	9.00 in (0.35 mm)	64.92 in (2.56 mm)
7I-1352	9.00 in (0.35 mm)	69.90 in (2.75 mm)
6I-6784	9.00 in (0.35 mm)	74.90 in (2.95 mm)

<b>Part Number</b>	<b>Groove Width</b>	<b>Groove Diameter</b>
6I-6787	9.00 in (0.35 mm)	79.90 in (3.15 mm)
5I-8516	9.00 in (0.35 mm)	84.90 in (3.34 mm)
6I-6785	9.00 in (0.35 mm)	88.90 in (3.50 mm)
155-9187	9.00 in (0.35 mm)	99.90 in (3.93 mm)
087-5389	9.00 in (0.35 mm)	104.90 in (4.13 mm)
8T-0763	9.64 in (0.38 mm)	113.40 in (4.46 mm)
5J-8200	10.49 in (0.41 mm)	63.55 in (2.50 mm)
167-2304	10.49 in (0.41 mm)	63.55 in (2.50 mm)
3G-3752	10.49 in (0.41 mm)	76.25 in (3.00 mm)
9J-7257	10.49 in (0.41 mm)	76.25 in (3.00 mm)
9J-2944	10.49 in (0.41 mm)	82.60 in (3.25 mm)
5J-8350	10.49 in (0.41 mm)	101.65 in (4.00 mm)
6J-1450	10.49 in (0.41 mm)	130.23 in (5.13 mm)
3G-2911	10.50 in (0.41 mm)	73.08 in (2.88 mm)
247-8789	11.00 in (0.43 mm)	62.00 in (2.44 mm)
289-7921	11.00 in (0.43 mm)	66.85 in (2.63 mm)
247-8829	11.00 in (0.43 mm)	71.85 in (2.83 mm)
247-8791	11.00 in (0.43 mm)	76.85 in (3.03 mm)
242-6833	11.00 in (0.43 mm)	81.85 in (3.22 mm)

## Seal Failures

When seal failure occurs, it is important to determine the cause of failure in order to provide maximum replacement seal performance and life.

The most common causes of seal failures, other than normal wear, are improper installation, incorrect seal application and seal damage resulting from the condition of the cylinder assembly components.

Other contributing factors to seal failure are contamination in the hydraulic system, seal extrusion and excessive heat. As seal failure may occur from more than one factor, it is critical to examine all aspects of the hydraulic system.

These steps will assist you in analyzing seal failures. Also provided are questions to ask or clues to look for when performing each step.

1. Investigate the worn seal's previous performance
2. Visually examine the worn seal for damage
3. Inspect the cylinder assembly component

### Step 1: Investigate Previous Performance

- Find out if there has been a history of failures. Repeated failures may indicate the seal itself is not the problem.
- Determine when a leak started. Can it be related to a change in maintenance or operating procedures?

### Step 2: Visual Examination

- Look for physical damage such as surface tears, scratches, extruded material, foreign particles, etc.
- Look for wear patterns on the seal lip(s).
  - Normal wear will flatten the sharp edge of the lip at its contact point.
  - Excessive lip wear can be caused by too little lubrication.
  - Rapid lip wear, often evidenced by the lip being totally blown off, can be caused by too much pressure.
  - Cracked and hardened lips can result from excessive heat.
- Measure the seal's inside and outside diameters to determine changes in the seal's dimensions.
- Look at the markings on the outside diameter of piston seals.
  - Marks should be straight and uniform if the seal was properly installed.
  - Deep scratches can be caused by a damaged bore.
  - Alternating pattern of smooth and marked areas can be a sign of an out-of-round bore.
- Has the seal's material softened or hardened?
  - Check for incompatibility between the seal's material and the system's fluid, excessive heat, and/or too little lubrication.
- Match the seal type and material to the application.

### Step 3: Inspect Cylinder Assembly Components

- Inspect the cylinder bore and rod for damage. Look for:
  - burrs, nicks, cuts, scratches or sharp edges
  - corrosion
  - flaking of rod chrome
  - bent rod

If the cause of premature seal failure cannot be determined after completing the above three steps, investigate the operating conditions of the entire hydraulic system. Investigate the system's operating pressure and hydraulic fluid and look for changes in service or operating conditions.

## Seal Installation

Improper seal installation is one of the major causes of seal failures. To provide maximum seal performance and life, the use of proper seal installation procedures is critical.

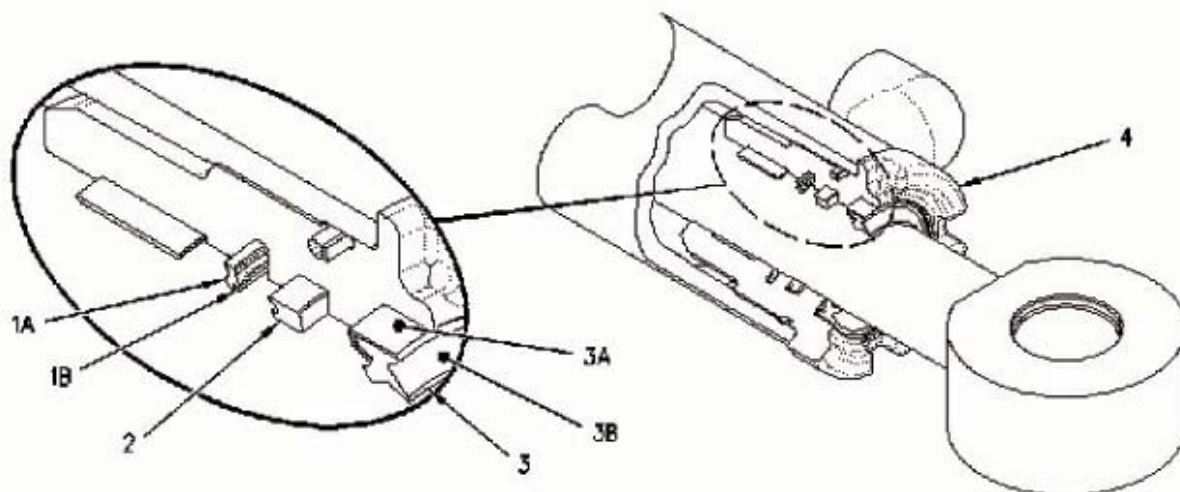
When disassembling the cylinder, place the used seals on a clean, flat work surface in the order in which they were removed. Identify the seals, making sure that none of the required seals are missing. Inspect the seals to help you determine the cause of seal failure. Look for signs of normal wear or damage caused by the condition of the cylinder components or problems related to the system's pressure or fluid (temperature or seal material compatibility).

If wear appears to be normal, replace the used seals with new Cat® seals of the same type and size. If seal failure appears to be from other than normal wear, determine the corrective action to be taken in terms of: seal replacement, cylinder component repair, or adjustments to the hydraulic system's fluid or operating pressure.

### Installation of Vented Buffer Seal Assembly, U-Cup Seal, and Wiper Seal for Hydraulic Cylinders

#### Introduction

This instruction gives the procedure for installing seals in the head of hydraulic cylinders. There are three seals in this kit. The three seals are one vented buffer seal assembly, one U-Cup seal, and one double lip wiper seal.



#### Instructions

- Install vented buffer seal assembly (1). The seal assembly consists of one seal (1A) and one backup ring (1B).
  - Install vented buffer seal (1A) in the correct groove of cylinder head (4). Seal (1) has a groove for backup ring (1B). The groove must face the rod end of the cylinder. Refer to Illustration 1 for the correct assembly position.
  - Install backup ring (1B) in seal (1A). Refer to Illustration 1 for the correct assembly position.
- Install the U-Cup seal (2) in head (4). Install the seal with the open end of the "U" facing toward the piston end of the cylinder. Refer to Illustration 1 for the correct assembly position.
- Use sandpaper or emery cloth to scuff the surfaces of the counterbore in the cylinder head and the outside diameter (3A) of the wiper seal's metal shell, if applicable.
- Clean the counterbore in the head and the outside diameter (3A) of the wiper seal's metal shell with 222-3124 Component Cleaner or 169-5464 Acetone Primer. Clean the counterbore and the metal shell until neither of the components discolors a clean white towel.

#### Note:

The metal shell of the wiper seal is coated with a corrosion inhibitor. This may prevent proper bonding of the wiper seal to the cylinder head if the inhibitor is not removed. After cleaning, do not touch the counterbore or the metal shell because the oil from your fingers may prevent a good bond. Handle the seal by the lip only.

- Apply 169-5464 Acetone Primer on the counterbore and the metal shell. Allow the primer to dry. The primer will dry in approximately 30 seconds.
- Apply 7M-7456 Bearing Mount Compound evenly but do not apply the compound excessively. Apply the compound to the counterbore and to the metal shell. Do NOT allow the compound to contact the sealing lip.

(Continued)

# Installation

## Instructions (Continued)

7. Install double lip wiper seal (3) into the cylinder head. Refer to Illustration in this section for the correct assembly position. The seal should be firmly seated against the bottom of the counterbore. Wipe away any excess bearing mount compound. Allow the compound to dry for 15 minutes before assembling the hydraulic cylinder.
8. Lightly lubricate the seals with clean hydraulic fluid before installing the head on the cylinder rod.

## General Installation Procedures:

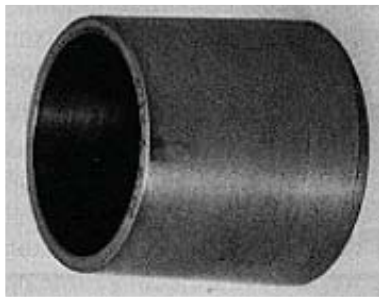
- Keep seals packaged until needed for assembly.
- Double-check seal part number for accuracy.
- Double-check part number dimensions with iron dimensions.
- Clean and inspect all surfaces before installation.
- Protect the seal from any sharp edges it may come into contact with during installation.
- Prelubricate the surfaces the seal will contact during installation (usually with system fluid).
- Use only clean, recommended installation tools.

## Installation Tools:

Many of the hydraulic cylinder seals can be pressed or snapped into place by hand. The more flexible seals can be formed by hand into a kidney shape and then “popped” into the groove. Never use steel hammers, chisels, screwdrivers, or any item with a sharp surface which can damage the seal during installation. Caterpillar offers the following tools to aid in hydraulic cylinder seal installation. These tools are also listed in the Tools and Shop Products Guide (NENG2500).

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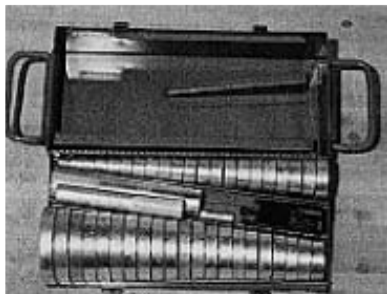
## Rod Seal Guide



Used for guiding the head (with rod seals already installed) on rods with square shoulders. The rod shoulder can be sharp and cut the seal. This tool will guide the seal over the rod without cutting or damaging the seal.

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## 1P-0510 Driver Group

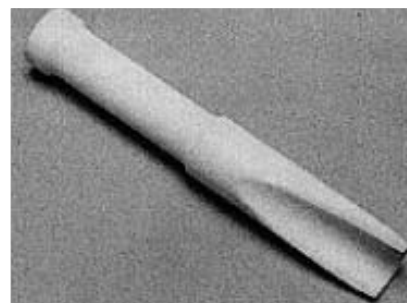


Used for installing press-in wipers flush with a housing or some distance below a housing surface. Contains a set of drive plates from 7/16" (11.1 mm) to 3.00" (76.2 mm) diameter. Drive plates are in 1/16" (1.59 mm) increments.

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**Buffer Installer**  
**4C-4069 1.5" Installer**

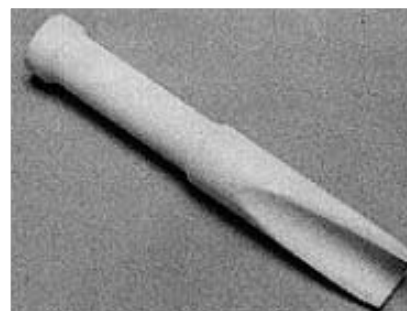
Used to install the 8C-9122 Step Buffer Seal Assembly in hydraulic cylinders on the 910 and 910E Wheel Loader, 508 Skidders, and the D3B Track-Type Tractor.



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**4C-4070 1.75" Installer**

Used to install the 8C-9123 Step Buffer Seal Assembly in hydraulic cylinders on the 416, 426, 428, 436 and 438 Backhoe Loaders.



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**162-7704 Seal Installer Group**

Used to install 096-7308 Seal onto 4I-3614 Cylinder Piston for 318B, 320, 320B, 322, 322B and 325 excavators. Helps prevent seal damage during installation.



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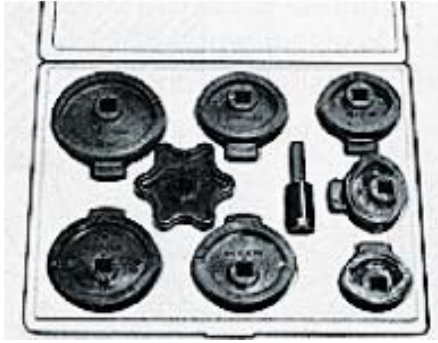
**5P-1720 Seal Pick**

Used for removal and installation of all types of oil seals. One end of the pick is pointed for prying out flexible seals. The blunt, hook end is used to align seals for installation and to eliminate the twist that occurs when installing O-ring seals. Both ends of the pick are hardened and provide much greater strength than would normally be expected from a tool of this size.



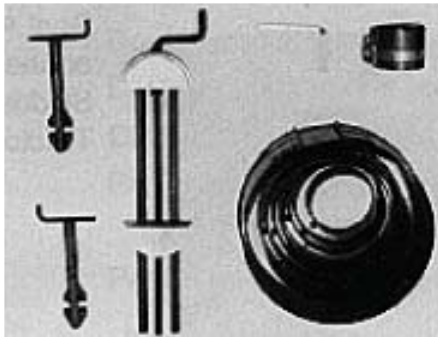


## 5P-5263 Tool Group

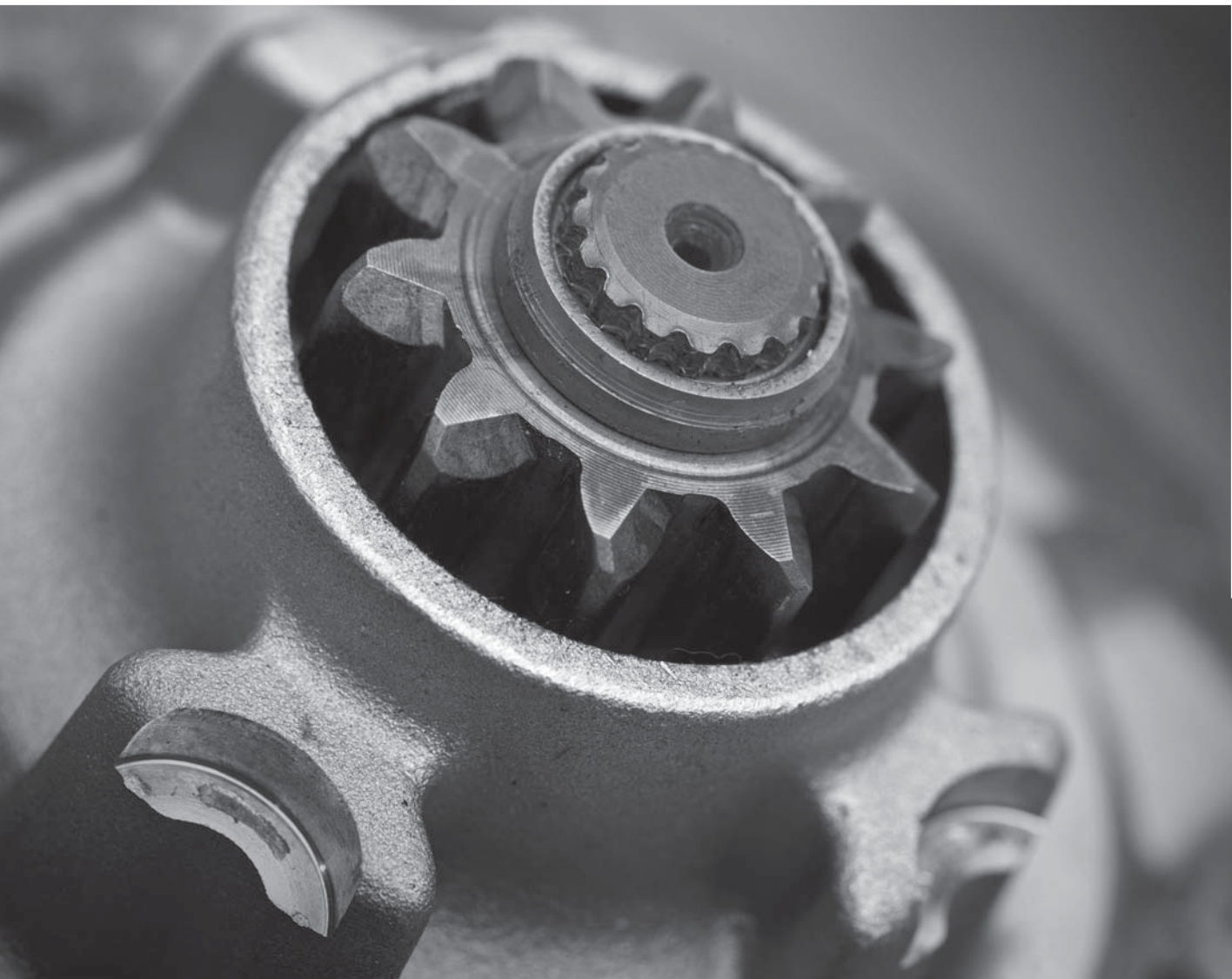
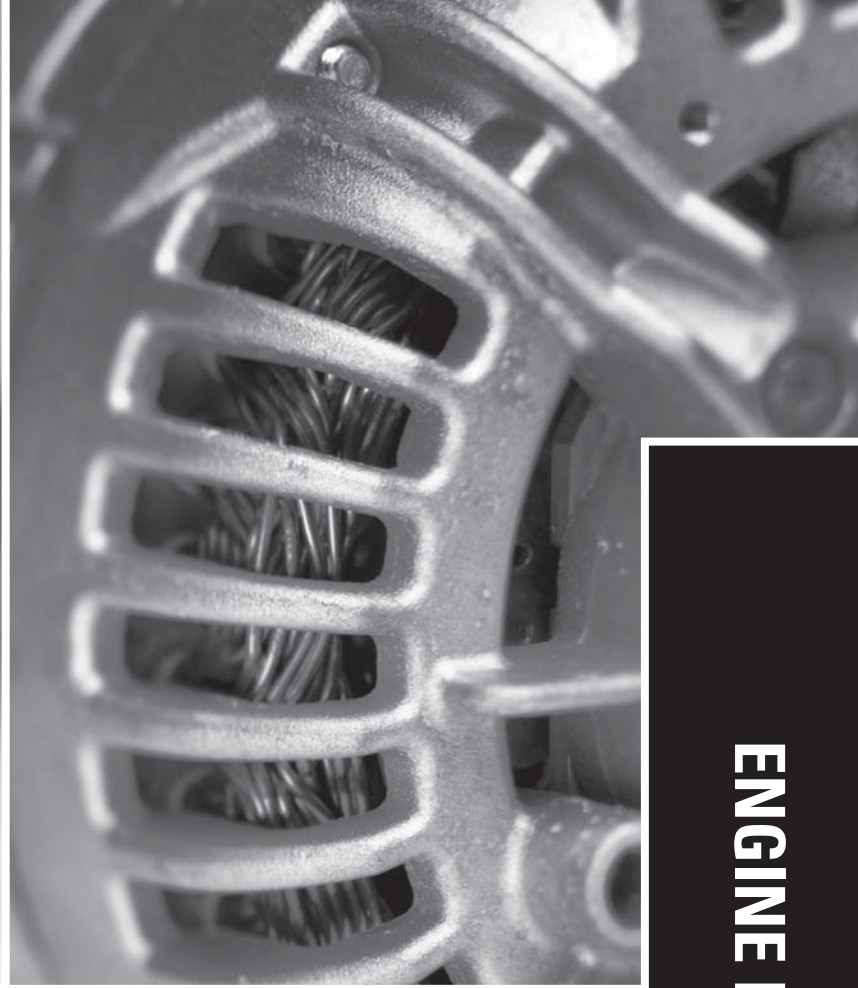
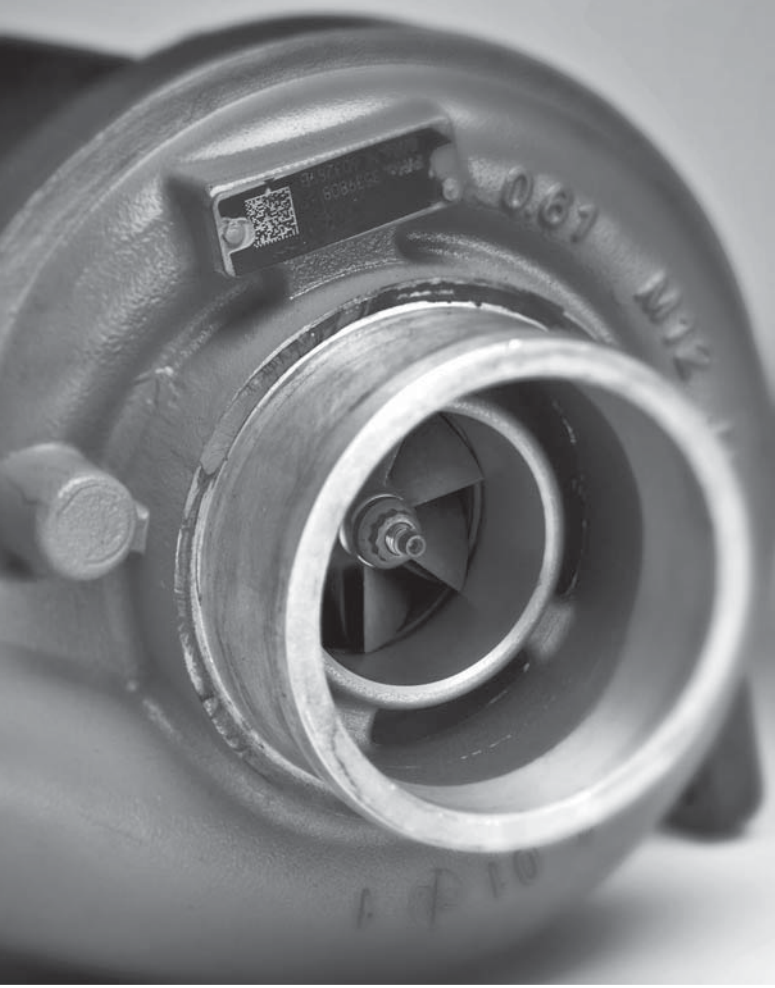


Used to install Teflon piston seals on the pistons of threaded crown hydraulic cylinders with bore sizes ranging from 2.50" (63.50 mm) to 4.00" (101.60 mm). Installation by hand can cause too much distortion, and the seal can be cut when the piston is assembled into its cylinder.

## Teflon Seal Tools



The following tools are available to install cylinder pistons and to reassemble the piston into the cylinder bore: Various size compressor assemblies 4S-9447, 4S-9448, 4S-9449, 4S-9450, 9S-9451, 9S-9452, 9S-9453, 9S-9454, 9S-9455 and 9S-9456; expander assembly 4S-9181; and clamp assembly 4S-9446. See the Numerical Parts Record for individual part details.



**ENGINE PARTS & KITS**

## Introduction

Your Cat dealer offers engine parts that are designed by Caterpillar engineers to work and wear as a system to deliver the product and efficiency you expect from your Cat equipment. This section contains some of the most commonly purchased maintenance parts. If you don't find what you are looking for, contact your Cat dealer. We can help you choose the right parts for your machine arrangement and application.

## The Right Parts, Right Now.

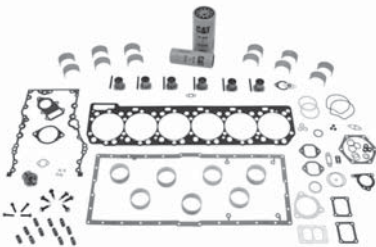
Your Cat® machine's engine is built for a second, even third, life. So rebuild it right, with the top performance and long life only genuine Cat parts can deliver. And now, with our Precious Metals Engine Rebuild Kits, everything you need to do it right is available in easy-to-order, cost-effective kits that get you back to work fast.

With Bronze, Silver, Gold and Platinum, you're assured every part meets rigid Cat quality standards. Choose the appropriate kit level, plus a variety of suggested options to obtain all the parts necessary to complete your engine rebuild.

- Get more for your money. Prepackaged kit options feature improved pricing and contain everything you need for a cost-effective repair solution.
- Count on quality. Genuine Cat® engine components are manufactured to precise specifications and engineered for a reliable rebuild, boosting productivity and minimizing downtime. They work together as a system to give your machine new life.
- Save time and effort. Because there's no need to select individual parts for the repair, you always get exactly what you need — no more, no less. That simplifies ordering and handling, shortens turnaround time and reduces the chance for errors.

**The engine rebuild kit pictures are an example of the parts that are included in the kits, but may differ from the actual parts received.**

## Bronze Kit



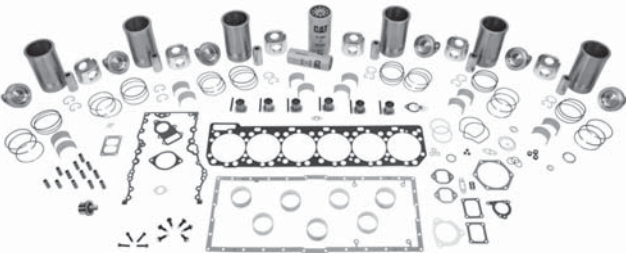
### Features

- Basic building block for all higher levels
- Includes additional value-add components, such as rod bearings
- Includes components you might not think of replacing, but that could lead to unplanned downtime and costly failures, such as exhaust manifold sleeves
- Includes required gaskets and seals to reassemble the engine (out of frame rebuild kit)

### Benefits

- Includes all parts necessary for low-cost repair option
- Ideal for repair before failure

## Silver Kit



### Features

- Includes Bronze Kit
- 6 pistons, liners, wrist pins, rings and retainers
- Rodless, unassembled cylinder pack

### Benefits

- Basic rebuild
- Where Reman is not a preference
- Similar consist to aftermarket kits
- Additional engine components can be ordered as needed



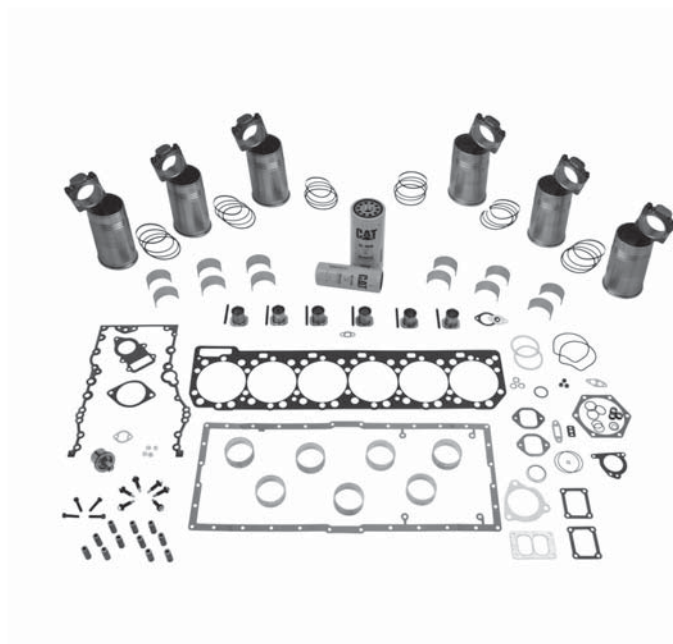
## Gold Kit

### Features

- Includes Bronze Kit
- Includes 6 Cat® Reman cylinder pack assemblies

### Benefits

- Basic rebuild
- Cat Reman cylinder packs are preassembled with rods, pistons, rings and liners, saving four to six hours of labor during engine rebuild
- Ideal for repair before failure
- Additional engine components can be ordered as needed



## Platinum Kit

### Features

- Bronze Kit
- 6 Cat® Reman cylinder packs
- 6 Cat® Reman injectors or fuel nozzles
- Cat Reman complete cylinder head, water pump and oil pump

### Benefits

- More complete engine rebuild option
- Preassembled Reman cylinder packs and cylinder head will save additional labor hours during engine rebuild
- Maximizes the built-in second or third life of your engine
- Additional engine components can be ordered as needed



This section contains the engine rebuild kits available for the for 3306 and 3406 engines. Additional related parts are available, and rebuild kits for additional models will be coming soon. Check with your dealer for availability.

## 3406 Order Matrix

### Sales Model 621G

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
ALP	3406E	160-0651	387-0807	N/A	20R-0686	20R-1182
CEN	3406E	192-4242	387-0807	N/A	20R-0686	20R-1182
CEN	3406E	235-4690	387-0807	N/A	20R-0686	20R-1183

# Precious Metals Engine Rebuild Kits

## Sales Model 623G

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
ARW	3406E	160-0651	387-0807	N/A	20R-0686	20R-1182
CES	3406E	192-4242	387-0807	N/A	20R-0686	20R-1182
CES	3406E	235-4690	387-0807	N/A	20R-0686	20R-1183

## Sales Model 627F

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1DL	3406	4P-3476	379-9131	380-1474	20R-0682	20R-1099
1DL	3406	4P-3482	379-9131	380-1474	20R-0682	20R-1099
1DL	3406	124-4675	379-9131	N/A	N/A	20R-1100

## Sales Model 627G

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
AXF	3406E	160-0651	387-0807	N/A	20R-0686	20R-1182
CEX	3406E	192-4242	387-0807	N/A	20R-0686	20R-1182
CEX	3406E	235-4690	387-0807	N/A	20R-0686	20R-1183

## Sales Model 735

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
AWR	3406E	235-4688	387-0807	N/A	20R-0686	20R-1183
AWR	3406E	153-7077	387-0807	N/A	20R-0686	20R-1182

## Sales Model 740

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
AXM; AZZ	3406E	153-7076	380-0468	380-1593	20R-0684	20R-1105
AXM; AZZ	3406E	235-4689	380-0468	380-1593	20R-0684	20R-1108

## Sales Model 824G

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
4SN	3406	111-1779	379-9131	380-1383	20R-0688	20R-1101
4SN	3406C	146-5815	379-9131	380-1383	20R-0688	20R-1101
AWW	3406E	188-2475	379-9575	N/A	20R-0683	N/A
AWW	3406E	235-4728	379-9575	N/A	20R-0683	N/A

## Sales Model 826G

Machine Serial Prefix 2	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
7LN	3406	111-1779	379-9131	380-1383	20R-0688	20R-1101
7LN	3406C	146-5815	379-9131	380-1383	20R-0688	20R-1101
AYH	3406E	188-2475	379-9575	N/A	20R-0683	N/A
AYH	3406E	235-4728	379-9575	N/A	20R-0683	N/A

## Sales Model 980F

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
3HK; 5XJ; 8CJ; 4RN; 8JN	3406C	4P-7980	379-9131	380-1234	20R-0682	20R-1099
3HK; 4RN	3406 *	2W-1004	379-9131	380-1234	20R-0682	20R-1099



**Sales Model 980G**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2KR; 2SR; 9CM	3406C	144-3431	379-9131	380-1234	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	108-0348	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	152-7468	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	192-7101	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	146-5815	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	202-3124	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	202-3123	379-9131	380-1383	20R-0688	20R-1101
2KR; 2SR; 9CM	3406C	134-4138	379-9131	380-1383	20R-0688	20R-1101
AWH; AYT	3406E	235-4678	379-9575	N/A	20R-0683	20R-1107
AWH; AYT	3406E	169-4823	379-9575	N/A	20R-0683	20R-1104
AXG	3406E	235-4691	379-9575	N/A	20R-0683	20R-1107

**Sales Model D8N**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
9TC; 1XJ	3406 **	4W-9497	379-8856	396-2338	20R-0681	20R-1102
5TJ; 7TK	3406	9Y-5555	379-8856	396-2338	20R-0681	20R-1102

**Sales Model D8R**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
7XM; 9EM	3406C	222-5432	379-8856	380-1059	20R-0687	20R-1103
7XM; 9EM	3406C	105-9697	379-8856	380-1059	20R-0687	20R-1103
AKA; 6YZ	3406E	157-7195	380-0469	380-1594	20R-0685	20R-1106
AKA; 6YZ	3406E	157-7196	380-0469	380-1594	20R-0685	20R-1106
AKA; 6YZ	3406E	235-4676	380-0469	380-1594	20R-0685	20R-1109

**Ordering Steps**

- Step 1: Select your Machine Model.
  - Step 2: Select the Machine Serial Number Prefix.
  - Step 3: Select the Engine Arrangement Number.
  - Step 4: Determine which level kit you need, i.e. Bronze, Silver, Gold, Platinum.
  - Step 5: Determine if additional parts are needed for your Engine Rebuild.
  - Step 6: Refer to the Related Parts Order Matrix for additional parts needed.
  - Step 7: Order the corresponding parts from your local Cat® authorized dealer.
- \*, \*\* - For engine serial number 11N00479 and up only. Engine must have wide journal connecting rods.

**3306 Order Matrix**

**Sales Model 12G; 14G; 140G; 12H; 140H; 143H; 160H**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	110-5760	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4336	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4338	393-2631	398-0451	20R-1426	20R-1450

(Continued)

# Precious Metals Engine Rebuild Kits

## Sales Model 12G; 14G; 140G; 12H; 140H; 143H; 160H (Continued)

Engine Parts and Kits

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4339	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4337	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4340	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4341	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	146-4342	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	110-1607	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	130-7111	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	274-3980	393-2631	398-0451	20R-1426	20R-1450
1AL; 13W; 2FM; 2GS; 2WR; 2ZK; 3AS; 3FR; 3HR; 4ER; 4XM; 5HM; 72V; 8MN; XZJ; 9EJ; 9TN; 9ZN; XZH; XZK	3306	266-9815	393-2631	398-0451	20R-1426	20R-1450
2FM; 4XM; 5ZM; 8MN; 9EJ; XZK	3306	110-1609	393-2631	398-0451	20R-1426	20R-1451
2FM; 4XM; 5ZM; 8MN; 9EJ; XZK	3306	146-4344	393-2631	398-0451	20R-1426	20R-1451
2FM; 4XM; 5ZM; 8MN; 9EJ; XZK	3306	269-6940	393-2631	398-0451	20R-1426	20R-1451
3PL; 3WC; 5MD; 61M; 72V; 96U	3306	2V-0819	393-2242	398-0449	20R-1423	20R-1445
3PL; 3WC; 5MD; 61M; 72V; 96U	3306	2V-0820	393-2242	398-0449	20R-1423	20R-1445
3PL; 3WC; 5MD; 61M; 72V; 96U	3306	7W-1766	393-2242	398-0449	20R-1423	20R-1445
3PL; 3WC; 5MD; 61M; 72V; 96U	3306	7W-4102	393-2242	398-0449	20R-1423	20R-1445

## Sales Model 235B; 235C; 235D

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2EN; 2HR; 3DN; 3ZR	3306	108-2447	393-2817	398-0456	20R-1432	20R-1459

## Sales Model 330; 330B; W330B Material Handler

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
3YR; 4RS; 5LR; 5LS; 6DR; 8SR; 8TR	3306	144-6303	393-2643	398-0453	20R-1428	20R-1454
2ZM; 5YM; 6SK; 8RL; 9ML; 9PJ	3306	118-9730	393-2643	398-0452	20R-1427	N/A
1JS; 5EZ; 6DR; 8SR; 8TR; AME	3306	116-7568	393-5181	398-0461	20R-1439	20R-1474
3YR; 4RS; 5LR; 5LS; 6DR; 8SR; 8TR	3306	122-9790	393-2643	398-0453	20R-1428	20R-1454

## Sales Model 572R

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2EN; 2HR; 3DN; 3ZR	3306	108-2448	393-2817	398-0456	20R-1432	20R-1459

**Sales Model 611**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
6SZ	3306	275-7767	393-2824	398-0458	20R-1435	N/A
6SZ; 7WZ	3306	125-1354	393-2824	398-0458	20R-1435	20R-1466

**Sales Model 615C**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2XG; 46Z; 5TF; 9XG; B6M	3306	4P-4730	393-2824	398-0458	20R-1435	20R-1468
2XG; 46Z; 5TF; 9XG; B6M	3306	9Y-2640	393-2824	398-0458	20R-1435	20R-1468
2XG; 46Z; 5TF; 9XG; B6M	3306	7N-1141	393-2824	398-0458	20R-1435	20R-1468
2XG; 46Z; 5TF; 9XG; B6M	3306	125-1354	393-2824	398-0458	20R-1435	20R-1466
2XG; 5TF; 9XG; B6M	3306	275-7767	393-2824	398-0458	20R-1435	N/A

**Sales Model 627B; 627E; 627F; 627G**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
37V; 38V; 3WJ; 4YK; 6FB; 6HB; AYK	3306	116-7557	393-3560	398-0455	20R-1430	20R-1456
37V; 38V; 3WJ; 4YK; 6FB; 6HB; AYK	3306	164-0729	393-3560	398-0455	20R-1430	20R-1456

**Sales Model 814F; 815F; 816F**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1GN; 2BS; 5FN; 9DM	3306	122-4210	393-5181	398-0460	20R-1438	20R-1473

**Sales Model 966E**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
94X; 99Y	3306	9Y-1719	393-2242	398-0450	20R-1424	20R-1446
94X; 99Y	3306	6N-3055	393-2242	398-0450	20R-1424	20R-1446
94X; 99Y	3306	6C-2471	393-2242	398-0450	20R-1424	20R-1446

**Sales Model 966F**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1SL; 3XJ; 4YG; 8BG; 9YJ	3306	6C-3458	393-2242	398-0450	20R-1424	20R-1446
1SL; 3XJ; 4YG; 8BG; 9YJ	3306	6I-2965	393-2242	398-0450	20R-1424	20R-1446
1SL; 3XJ; 4YG; 8BG; 9YJ	3306	7E-0082	393-2242	398-0450	20R-1424	20R-1446
1SL; 3XJ; 4YG; 9YJ	3306	122-4210	393-5181	398-0460	20R-1438	20R-1473
3XJ; 6FJ; 6ML; 8BG; 9YJ	3306	106-3145	393-2242	398-0450	20R-1424	20R-1448
3XJ; 6FJ; 6ML; 8BG; 9YJ	3306	6C-8499	393-2242	398-0450	20R-1424	20R-1448

**Sales Model 966G**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
3PW; 3SW; 3ZS; 9RS	3306	133-0826	393-2643	398-0452	20R-1427	20R-1453
3PW; 3SW; 3ZS; 9RS	3306	147-1850	393-2643	398-0452	20R-1427	20R-1453

**Sales Model 972G**

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1EW; 4WW; 6AW; 7LS; 9GW	3306	133-0827	393-2643	398-0454	20R-1429	20R-1455
1EW; 4WW; 6AW; 7LS; 9GW	3306	147-1851	393-2643	398-0454	20R-1429	20R-1455

# Precious Metals Engine Rebuild Kits

## Sales Model D6H

Engine Parts and Kits

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CF; 6CK; 8SK; 9KJ; 9LK	3306	113-5380	393-2476	398-0463	20R-1442	N/A
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CF; 6CK; 8SK; 9KJ; 9LK	3306	116-7581	393-2476	398-0463	20R-1442	N/A
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CF; 6CK; 8SK; 9KJ; 9LK	3306	123-5839	393-2476	398-0463	20R-1442	N/A
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	6I-2097	393-2476	398-0463	20R-1442	20R-1482
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	6C-9274	393-2476	398-0463	20R-1442	20R-1482
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	6C-9273	393-2476	398-0463	20R-1442	20R-1482
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	6C-8179	393-2476	398-0463	20R-1442	20R-1482
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	7C-0501	393-2476	398-0463	20R-1442	20R-1482
1YL; 2TL; 3YG; 3ZF; 4YF; 5HF; 6CK; 9KJ; 9LK	3306	6I-2096	393-2476	398-0463	20R-1442	20R-1482
1YL; 3ZF; 3YG; 5HF; 6CF; 9LK	3306	6C-2476	393-2476	398-0463	20R-1442	20R-1482
1YL; 3ZF; 3YG; 5HF; 6CF; 9LK	3306	6C-8177	393-2476	398-0463	20R-1442	20R-1482
1YL; 3ZF; 3YG; 5HF; 6CF; 9LK	3306	6C-4350	393-2476	398-0463	20R-1442	20R-1482
2KD; 3YG; 3ZF; 4LG; 4RC; 5HF; 6CF; 7PC; 8YC	3306	1W-2630	393-2476	398-0463	20R-1442	20R-1482
2KD; 3YG; 3ZF; 4LG; 4RC; 5HF; 6CF; 7PC; 8YC	3306	4P-2973	393-2476	398-0463	20R-1442	20R-1482
2KD; 3YG; 3ZF; 4LG; 4RC; 5HF; 6CF; 7PC; 8YC	3306	5C-9937	393-2476	398-0463	20R-1442	20R-1482

## Sales Model D6R

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
4JR; 4MN; 5LN; 5RR; 6HR; 6JN; 6MR; 7GR; 7KN; 8XN; 9BM; 9MN; DMP	3306	108-1076	393-1943	398-0464	20R-1443	20R-1483
2HM; 2YN; 3ZN; 4FM; 5PR	3306	121-9362	393-1943	398-0464	20R-1443	20R-1483
4HN; 4JR; 4MN; 4TR; 8LN; 8TM; 9BM; 9PN; DMP	3306	121-9363	393-1943	398-0464	20R-1443	20R-1483
4JR; 4MN; 5LN; 5RR; 6HR; 6JN; 6MR; 7GR; 7KN; 8XN; 9BM; 9MN; DMP	3306	121-9364	393-1943	398-0464	20R-1443	20R-1483
4HN; 4JR; 4MN; 4TR; 8LN; 8TM; 9BM; 9PN; DMP	3306	121-9366	393-1943	398-0464	20R-1443	20R-1483
2HM; 2YN; 3ZN; 4FM; 5PR	3306	108-1073	393-1943	398-0464	20R-1443	20R-1483
4HN; 4JR; 4MN; 4TR; 8LN; 8TM; 9BM; 9PN; DMP	3306	108-1078	393-1943	398-0464	20R-1443	20R-1483

## Sales Model D7G

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
65V; 72W; 92V	3306	1W-0543	393-4717	398-0457	20R-1434	20R-1462
3GF; 3ZD; 4YB	3306	5R-6935	393-4717	398-0457	20R-1434	20R-1462
3GF; 3ZD; 4YB	3306	5R-7776	393-4717	398-0457	20R-1434	20R-1462
3GF; 3ZD; 4YB	3306	5R-7956	393-4717	398-0457	20R-1434	20R-1462

## Sales Model D7H

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2RG; 4FG; 5BF	3306	116-7574	393-2817	398-0456	20R-1432	N/A
2RG; 3XG; 4FG; 5BF	3306	7C-2032	393-4698	398-0462	20R-1441	20R-1477
4AB; 80Z	3306	7N-2740	393-4698	398-0462	20R-1441	20R-1477

## Sales Model D7R

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
2EN; 2HR; 3DN; 3ZR	3306	108-2447	393-2817	398-0456	20R-1432	20R-1459
2EN; 2HR; 3DN; 3ZR	3306	108-2448	393-2817	398-0456	20R-1432	20R-1459
2EN; 2HR; 3DN; 3ZR	3306	108-2450	393-2817	398-0456	20R-1432	20R-1459

## Sales Model D250E

Machine Serial Prefix	Engine Model	Engine Arrangement	Bronze	Silver	Gold	Platinum
5TN	3306	116-7570	393-3585	398-0459	20R-1437	N/A
4PS	3306	135-8107	393-3585	398-0459	20R-1437	N/A
5TN	3306	134-9457	393-3585	398-0459	20R-1437	20R-1472

## Ordering Steps

- Step 1: Select your Machine Model.
- Step 2: Select the Machine Serial Number Prefix.
- Step 3: Select the Engine Arrangement Number.
- Step 4: Determine which level kit you need, i.e. Bronze, Silver, Gold, Platinum.
- Step 5: Determine if additional parts are needed for your Engine Rebuild.
- Step 6: Refer to the Related Parts Order Matrix for additional parts needed.
- Step 7: Order the corresponding parts from your local Cat® authorized dealer.



# Belts

## V-Belt Sizing Guide



- Belt size refers to the pulley groove width (B) for belt under and equal to 1/2 in.
- Belt size refers to the belt top width (A) for belts over 1/2 in.

	A	B
Belt Size	Belt Top Width	Pulley Groove Width
9.6 mm (3/8 in)	10.72 mm (0.422 in)	9.65 mm (0.380 in)
12.7 mm (1/2 in)	13.89 mm (0.547 in)	12.70 mm (0.500 in)
17.5 mm (11/16 in)	17.48 mm (0.688 in)	15.88 mm (0.625 in)
19.1 mm (3/4 in)	19.05 mm (0.750 in)	17.53 mm (0.690 in)
22.2 mm (7/8 in)	21.51 mm (0.847 in)	19.94 mm (0.785 in)
23.8 mm (15/16 in)	23.83 mm (0.938 in)	22.30 mm (0.878 in)
27.0 mm (1 1/16 in)	26.97 mm (1.062 in)	25.48 mm (1.003 in)
31.8 mm (1 1/4 in)	32.94 mm (1.297 in)	31.83 mm (1.253 in)

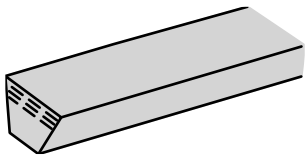
### SAE effective length for COG and NON-COG belts equals:

- Outer circumference minus 9.65 mm (0.38 in) for 3/8 inch and 1/2 inch belt sizes.
- Outer circumference minus 14.48 mm (0.57 in) for 11/16 inch and larger belt sizes.

### V-Belt Maintenance Tips

- Check for cracked, worn, or frayed belts. On matched belt sets, always replace the complete set. If just one belt is bad, uneven load on belts, pulleys, bearings, and shafts can occur.
- Check pulley grooves to make sure they are not worn, damaged, or aligned incorrectly. Poor belt to pulley contact will result in rapid wear and short life.

### V-Belts — Non-Cogged



Size	Length	Part Number	Set Part Number	Set Quantity
13 mm (0.51 in)	1219 mm (47.99 in)	255-2927	--	--
10.7 mm (0.42 in)	895 mm (35.24 in)	286-1041	--	--
12.7 mm (0.50 in)	641 mm (25.24 in)	220-8129	--	--
12.7 mm (0.50 in)	787 mm (30.98 in)	7C-2163	--	--
12.7 mm (0.50 in)	800 mm (31.50 in)	190-0369	--	--
12.7 mm (0.50 in)	850 mm (33.46 in)	156-7124	156-7121	2
12.7 mm (0.50 in)	885 mm (34.84 in)	248-3100	--	--
12.7 mm (0.50 in)	965.2 mm (38 in)	258-3539	--	--
12.7 mm (0.50 in)	985 mm (38.78 in)	241-2894	--	--
12.7 mm (0.50 in)	1016 mm (40 in)	7C-8236	--	--
12.7 mm (0.50 in)	1054 mm (41.50 in)	1P-9744	--	--
12.7 mm (0.50 in)	1080 mm (42.52 in)	228-9937	--	--
12.7 mm (0.50 in)	1085.9 mm (42.75 in)	229-3540	--	--
12.7 mm (0.50 in)	1092 mm (42.99 in)	4N-7335	--	--
12.7 mm (0.50 in)	1105 mm (43.50 in)	9N-1329	9N-1330	2
12.7 mm (0.50 in)	1118 mm (44.02 in)	1N-3743	--	--
12.7 mm (0.50 in)	1143 mm (45 in)	2P-6820	9N-1322	2
12.7 mm (0.50 in)	1148 mm (45.20 in)	112-6055	--	--
12.7 mm (0.50 in)	1168 mm (45.98 in)	2P-6819	--	--
12.7 mm (0.50 in)	1181 mm (46.50 in)	4N-9891	--	--

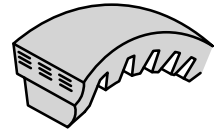
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## V-Belts — Non-Cogged (Continued)

Size	Length	Part Number	Set Part Number	Set Quantity
12.7 mm (0.50 in)	1194 mm (47.01 in)	2P-6818	--	--
12.7 mm (0.50 in)	1206 mm (47.48 in)	1W-2934	--	--
12.7 mm (0.50 in)	1232 mm (48.50 in)	1P-3085	9N-1323	2
12.7 mm (0.50 in)	1245 mm (49.02 in)	7E-1362	--	--
12.7 mm (0.50 in)	1257 mm (49.49 in)	1P-4334	4N-8580	2
12.7 mm (0.50 in)	1270 mm (50 in)	3P-0130	9L-6128	2
12.7 mm (0.50 in)	1283 mm (50.51 in)	2P-6212	209-8749	2
12.7 mm (0.50 in)	1295 mm (50.98 in)	9Y-6117	--	--
12.7 mm (0.50 in)	1308 mm (51.50 in)	4N-6130	4N-8597	2
12.7 mm (0.50 in)	1334 mm (52.52 in)	2P-4191	7W-3896	2
12.7 mm (0.50 in)	1346 mm (52.99 in)	068-0610	--	--
12.7 mm (0.50 in)	1372 mm (54.02 in)	9L-6125	9L-6126	3
12.7 mm (0.50 in)	1384 mm (54.49 in)	4P-2405	--	--
12.7 mm (0.50 in)	1397 mm (55 in)	8N-0503	--	--
12.7 mm (0.50 in)	1410 mm (55.51 in)	2P-4685	--	--
12.7 mm (0.50 in)	1435 mm (56.50 in)	4N-7610	--	--
12.7 mm (0.50 in)	1460 mm (57.48 in)	2P-4230	7N-8518	2
12.7 mm (0.50 in)	1473 mm (57.99 in)	159-9261	--	--
12.7 mm (0.50 in)	1549 mm (60.98 in)	1P-6868	9N-3483	2
12.7 mm (0.50 in)	1588 mm (62.52 in)	1P-4313	6N-0724	2
12.7 mm (0.50 in)	1600 mm (62.99 in)	2P-6161	--	--
12.7 mm (0.50 in)	1613 mm (63.50 in)	174-9030	--	--
12.7 mm (0.50 in)	1626 mm (64.02 in)	216-0349	--	--
12.7 mm (0.50 in)	1638 mm (64.49 in)	2P-7333	053-3453	2
12.7 mm (0.50 in)	1664 mm (65.51 in)	2P-8720	9L-6130	3
12.7 mm (0.50 in)	1689 mm (66.50 in)	1N-4556	--	--
12.7 mm (0.50 in)	1714 mm (67.48 in)	2P-6532	--	--
12.7 mm (0.50 in)	1727 mm (67.99 in)	199-6602	--	--
12.7 mm (0.50 in)	1803 mm (70.98 in)	1W-6039	9Y-8312	2
12.7 mm (0.50 in)	1829 mm (72.01 in)	7W-5207	--	--
12.7 mm (0.50 in)	1842 mm (72.52 in)	127-4766	127-4767	2
12.7 mm (0.50 in)	1854 mm (72.99 in)	1N-3795	--	--
12.7 mm (0.50 in)	1880 mm (74.02 in)	1W-9693	--	--
12.7 mm (0.50 in)	1905 mm (75 in)	160-1821	--	--
12.7 mm (0.50 in)	1918 mm (75.51 in)	147-8910	147-8908	2
12.7 mm (0.50 in)	2083 mm (82.01 in)	9Y-1954	--	--
12.7 mm (0.50 in)	2108 mm (82.99 in)	6I-1758	--	--
12.7 mm (0.50 in)	2159 mm (85 in)	103-1612	--	--
12.7 mm (0.50 in)	2184 mm (85.98 in)	1W-8908	--	--
12.7 mm (0.50 in)	2235 mm (87.99 in)	2W-3906	--	--
12.7 mm (0.50 in)	2286 mm (90 in)	4W-5825	--	--
15.9 mm (0.63 in)	1435 mm (56.50 in)	156-7126	156-7123	3
15.9 mm (0.63 in)	1524 mm (60 in)	9N-1321	9N-1326	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	9N-1320	9N-2802	2
15.9 mm (0.63 in)	1740 mm (68.50 in)	6N-7721	--	--

# Belts

## V-Belts — Cogged



Size	Length	Part Number	Set Part Number	Set Qty.
12.7 mm (0.50 in)	1829 mm (72.01 in)	9L-2519	6L-6557	2
12.7 mm (0.50 in)	1842 mm (72.52 in)	166-3355	166-3363	3
12.7 mm (0.50 in)	1842 mm (72.52 in)	1S-4761	1S-4760	2
12.7 mm (0.50 in)	1854 mm (72.99 in)	8N-2814	139-9011	2
12.7 mm (0.50 in)	1880 mm (74.02 in)	9L-1629	9L-1630	4
12.7 mm (0.50 in)	1905 mm (75 in)	5M-0923	7E-3372	3
12.7 mm (0.50 in)	1905 mm (75 in)	166-3353	166-3361	3
12.7 mm (0.50 in)	1918 mm (75.51 in)	1N-4555	6N-3843	2
12.7 mm (0.50 in)	1943 mm (76.50 in)	9L-2349	9L-2350	3
12.7 mm (0.50 in)	1956 mm (77.01 in)	8M-3092	136-3646	2
12.7 mm (0.50 in)	1968 mm (77.48 in)	9L-4265	7E-6441	2
12.7 mm (0.50 in)	1981 mm (77.99 in)	8M-0760	7C-7204	2
12.7 mm (0.50 in)	2007 mm (79.02 in)	7E-6191	7E-6192	2
12.7 mm (0.50 in)	2032 mm (80 in)	7E-1365	7E-1364	3
12.7 mm (0.50 in)	2057 mm (80.98 in)	4P-4998	4P-4997	2
12.7 mm (0.50 in)	2187 mm (86.10 in)	117-0036	--	--
12.7 mm (0.50 in)	2235 mm (87.99 in)	213-6558	--	--
12.7 mm (0.50 in)	2288 mm (90.08 in)	117-0030	--	--
13 mm (0.51 in)	1845 mm (72.64 in)	304-9792	304-9807	2
15.9 mm (0.63 in)	889 mm (35 in)	1L-6557	--	--
15.9 mm (0.63 in)	1080 mm (42.52 in)	6B-5653	--	--
15.9 mm (0.63 in)	1156 mm (45.51 in)	8P-3064	--	--
15.9 mm (0.63 in)	1232 mm (48.50 in)	6B-2746	--	--
15.9 mm (0.63 in)	1245 mm (49.02 in)	9L-6653	9L-6654	2
15.9 mm (0.63 in)	1270 mm (50 in)	147-7178	147-7177	2
15.9 mm (0.63 in)	1270 mm (50 in)	202-0131	--	--
15.9 mm (0.63 in)	1295 mm (50.98 in)	5B-8473	9L-0361	6
15.9 mm (0.63 in)	1308 mm (51.50 in)	6N-0341	205-1029	3
15.9 mm (0.63 in)	1359 mm (53.50 in)	7N-3948	7N-3949	3
15.9 mm (0.63 in)	1372 mm (54.02 in)	8L-5136	8L-5137	3
15.9 mm (0.63 in)	1390 mm (54.72 in)	204-1334	344-2738	6
15.9 mm (0.63 in)	1410 mm (55.51 in)	4L-4648	5L-5012	2
15.9 mm (0.63 in)	1422 mm (55.98 in)	4N-8216	4N-8217	2
15.9 mm (0.63 in)	1448 mm (57.01 in)	9L-6639	9N-1324	2
15.9 mm (0.63 in)	1460 mm (57.48 in)	6N-7135	9Y-4047	2
15.9 mm (0.63 in)	1473 mm (57.99 in)	130-7477	--	--
15.9 mm (0.63 in)	1486 mm (58.50 in)	4N-8220	4N-6373	4
15.9 mm (0.63 in)	1499 mm (59.02 in)	9L-6641	284-8095	3
15.9 mm (0.63 in)	1524 mm (60 in)	4P-1666	4P-1667	3
15.9 mm (0.63 in)	1549 mm (60.98 in)	9L-6643	6N-9159	3
15.9 mm (0.63 in)	1557 mm (61.30 in)	189-9826	205-2922	5
15.9 mm (0.63 in)	1562 mm (61.50 in)	4N-2531	4N-2532	3

(Continued)

## V-Belts — Cogged (Continued)

Size	Length	Part Number	Set Part Number	Set Qty.
15.9 mm (0.63 in)	1588 mm (62.52 in)	9L-6645	9L-6646	3
15.9 mm (0.63 in)	1588 mm (62.52 in)	133-6443	--	--
15.9 mm (0.63 in)	1613 mm (63.50 in)	125-8025	--	--
15.9 mm (0.63 in)	1613 mm (63.50 in)	6N-6657	6N-6656	4
15.9 mm (0.63 in)	1639 mm (64.53 in)	4N-8218	6N-0388	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	4P-8398	4P-8397	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	7C-9001	--	--
15.9 mm (0.63 in)	1689 mm (66.50 in)	9L-6647	6N-6652	4
15.9 mm (0.63 in)	1740 mm (68.50 in)	9L-6649	9L-6650	4
15.9 mm (0.63 in)	1752 mm (68.98 in)	7E-7645	7E-7646	4
15.9 mm (0.63 in)	1778 mm (70 in)	6N-6654	6N-6655	2
15.9 mm (0.63 in)	1803 mm (70.98 in)	9Y-9702	--	--
15.9 mm (0.63 in)	1803 mm (70.98 in)	3R-5603	3N-8848	3
15.9 mm (0.63 in)	1803 mm (70.98 in)	4N-8221	180-9571	4
15.9 mm (0.63 in)	1816 mm (71.50 in)	9L-6651	164-3780	3
15.9 mm (0.63 in)	1829 mm (72.01 in)	6N-0073	5N-4751	4
15.9 mm (0.63 in)	1854 mm (72.99 in)	4N-8277	4N-8278	3
15.9 mm (0.63 in)	1892 mm (74.49 in)	166-3357	166-3365	3
15.9 mm (0.63 in)	1892 mm (74.49 in)	6N-6650	6N-6651	2
15.9 mm (0.63 in)	1905 mm (75 in)	3R-9089	3R-9090	4
15.9 mm (0.63 in)	1918 mm (75.51 in)	4N-8219	4N-6302	3
15.9 mm (0.63 in)	1956 mm (77.01 in)	4P-8088	4P-8087	4
15.9 mm (0.63 in)	1956 mm (77.01 in)	166-3358	166-3366	3
15.9 mm (0.63 in)	1981 mm (77.99 in)	6N-7054	1W-0422	4
15.9 mm (0.63 in)	2007 mm (79.02 in)	4W-6256	216-7877	3
15.9 mm (0.63 in)	2032 mm (80 in)	7W-6129	7C-2500	2
15.9 mm (0.63 in)	2032 mm (80 in)	4Q-5034	--	--
15.9 mm (0.63 in)	2032 mm (80 in)	5L-7422	5L-7423	4
15.9 mm (0.63 in)	2055 mm (80.91 in)	244-0536	244-0537	2
15.9 mm (0.63 in)	2057 mm (80.98 in)	166-3356	166-3364	3
15.9 mm (0.63 in)	2057 mm (80.98 in)	6N-5338	6N-5337	3
15.9 mm (0.63 in)	2083 mm (82.01 in)	7N-7056	7N-7055	2
15.9 mm (0.63 in)	2108 mm (82.99 in)	7W-8132	118-2018	3
15.9 mm (0.63 in)	2134 mm (84.02 in)	4N-8197	8N-6710	2
15.9 mm (0.63 in)	2135 mm (84.05 in)	266-2372	--	--
15.9 mm (0.63 in)	2159 mm (85 in)	7N-8538	270-2639	3
15.9 mm (0.63 in)	2159 mm (85 in)	1N-9382	1N-9383	5
15.9 mm (0.63 in)	2184 mm (85.98 in)	1N-3464	129-2416	3
15.9 mm (0.63 in)	2210 mm (87.01 in)	7N-4828	7N-4829	2
15.9 mm (0.63 in)	2235 mm (87.99 in)	7N-2143	1W-0530	2
15.9 mm (0.63 in)	2261 mm (89.02 in)	8N-6693	7N-9417	2
15.9 mm (0.63 in)	2286 mm (90 in)	1W-8044	7W-5228	2
15.9 mm (0.63 in)	2337 mm (92.01 in)	1N-3714	1N-3713	6
15.9 mm (0.63 in)	2362 mm (92.99 in)	2L-9492	254-3526	6
15.9 mm (0.63 in)	2388 mm (94.02 in)	8N-6717	8N-6700	6
15.9 mm (0.63 in)	2413 mm (95 in)	5L-7425	5L-7426	4
15.9 mm (0.63 in)	2413 mm (95 in)	7W-5259	254-3527	6

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# Belts

## V-Belts — Cogged (Continued)

Engine Parts and Kits

Size	Length	Part Number	Set Part Number	Set Qty.
15.9 mm (0.63 in)	2438 mm (95.98 in)	8N-6709	8N-6705	6
15.9 mm (0.63 in)	2464 mm (97.01 in)	8N-6719	8N-6711	6
15.9 mm (0.63 in)	2489 mm (97.99 in)	7N-3121	7N-3122	6
15.9 mm (0.63 in)	2515 mm (99.02 in)	2W-5092	4W-0752	3
15.9 mm (0.63 in)	2515 mm (99.02 in)	9Y-9700	9Y-9699	3
15.9 mm (0.63 in)	2591 mm (102.01 in)	7N-3117	7N-3118	5
15.9 mm (0.63 in)	2616 mm (102.99 in)	1N-4092	1N-4480	6
15.9 mm (0.63 in)	2667 mm (105 in)	8N-6698	8N-6716	6
15.9 mm (0.63 in)	2692 mm (105.98 in)	1N-4090	8N-6720	6
15.9 mm (0.63 in)	2718 mm (107.01 in)	7N-3119	7N-3120	6
15.9 mm (0.63 in)	2794 mm (110 in)	1N-4093	8N-6694	6
15.9 mm (0.63 in)	2819 mm (110.98 in)	1N-4089	1N-4098	6
15.9 mm (0.63 in)	2850 mm (112.20 in)	270-2637	270-2638	6
15.9 mm (0.63 in)	2921 mm (115 in)	256-2712	256-3246	6
15.9 mm (0.63 in)	2997.2 mm (118 in)	256-3244	256-3609	6
16.7 mm (0.66 in)	1520 mm (59.84 in)	247-5895	--	--
17.5 mm (0.69 in)	1054 mm (41.50 in)	5M-5344	--	--
17.5 mm (0.69 in)	1143 mm (45 in)	5L-1584	--	--
17.5 mm (0.69 in)	1156 mm (45.51 in)	9S-9010	--	--
17.5 mm (0.69 in)	1181 mm (46.50 in)	1S-5138	--	--
17.5 mm (0.69 in)	1206 mm (47.48 in)	5M-5345	--	--
17.5 mm (0.69 in)	1232 mm (48.50 in)	3L-9717	5L-4660	2
17.5 mm (0.69 in)	1257 mm (49.49 in)	8F-2434	--	--
17.5 mm (0.69 in)	1334 mm (52.52 in)	7M-0169	--	--
17.5 mm (0.69 in)	1372 mm (54.02 in)	3S-8402	--	--
17.5 mm (0.69 in)	1397 mm (55 in)	5M-0924	7M-4691	2
17.5 mm (0.69 in)	1435 mm (56.50 in)	7M-0297	7M-0298	2
17.5 mm (0.69 in)	1448 mm (57.01 in)	8M-3646	--	--
17.5 mm (0.69 in)	1473 mm (57.99 in)	4M-9678	--	--
17.5 mm (0.69 in)	1486 mm (58.50 in)	3R-2689	--	--
17.5 mm (0.69 in)	1511 mm (59.49 in)	7M-3921	--	--
17.5 mm (0.69 in)	1524 mm (60 in)	8S-1574	8S-3199	2
17.5 mm (0.69 in)	1562 mm (61.50 in)	3P-0025	7M-6104	2
17.5 mm (0.69 in)	1575 mm (62.01 in)	4M-6292	7S-9807	2
17.5 mm (0.69 in)	1588 mm (62.52 in)	2P-6141	2P-6142	2
17.5 mm (0.69 in)	1600 mm (62.99 in)	8H-9832	7M-6105	2
17.5 mm (0.69 in)	1613 mm (63.50 in)	1P-2421	1P-2423	2
17.5 mm (0.69 in)	1626 mm (64.02 in)	2M-8502	7M-6100	2
17.5 mm (0.69 in)	1638 mm (64.49 in)	4S-7755	4S-7754	2
17.5 mm (0.69 in)	1651 mm (65 in)	5M-2733	7S-9811	2
17.5 mm (0.69 in)	1676 mm (65.98 in)	7S-9859	7S-9860	2
17.5 mm (0.69 in)	1689 mm (66.50 in)	8M-1715	8M-1714	3
17.5 mm (0.69 in)	1702 mm (67.01 in)	2L-2991	1S-1126	2
17.5 mm (0.69 in)	1727 mm (67.99 in)	5S-9505	5S-9078	2
17.5 mm (0.69 in)	1753 mm (69.02 in)	5S-9506	5S-9079	2
17.5 mm (0.69 in)	1765 mm (69.49 in)	7S-1691	7S-1690	2
17.5 mm (0.69 in)	1778 mm (70 in)	7S-9809	7S-9810	2

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## V-Belts — Cogged (Continued)

Size	Length	Part Number	Set Part Number	Set Qty.
17.5 mm (0.69 in)	1791 mm (70.51 in)	5M-6096	5M-5343	2
17.5 mm (0.69 in)	1803 mm (70.98 in)	4M-9386	7M-5535	4
17.5 mm (0.69 in)	1842 mm (72.52 in)	9M-6934	9M-6933	2
17.5 mm (0.69 in)	1854 mm (72.99 in)	2P-6139	2P-6140	2
17.5 mm (0.69 in)	1880 mm (74.02 in)	2P-2356	2P-2357	2
17.5 mm (0.69 in)	1892 mm (74.49 in)	6N-2349	6N-2348	2
17.5 mm (0.69 in)	1930 mm (75.98 in)	7S-8349	7S-8350	2
17.5 mm (0.69 in)	1943 mm (76.50 in)	9M-5146	8S-6178	2
17.5 mm (0.69 in)	1956 mm (77.01 in)	9M-3633	--	--
22.3 mm (0.88 in)	1638 mm (64.49 in)	6N-3636	6N-3637	2
22.3 mm (0.88 in)	1651 mm (65 in)	1L-5681	7M-0981	2
22.3 mm (0.88 in)	1676 mm (65.98 in)	7M-7477	4N-3587	2
22.3 mm (0.88 in)	1689 mm (66.50 in)	3L-7540	7L-7099	2
22.3 mm (0.88 in)	1702 mm (67.01 in)	2H-1383	7M-7864	2
22.3 mm (0.88 in)	1714 mm (67.48 in)	2M-8183	5L-5015	2
22.3 mm (0.88 in)	1753 mm (69.02 in)	9M-7220	9M-7221	3
22.3 mm (0.88 in)	1765 mm (69.49 in)	5H-4207	3P-0071	2
22.3 mm (0.88 in)	1778 mm (70 in)	4M-5429	7M-4706	2
22.3 mm (0.88 in)	1803 mm (70.98 in)	4M-5413	7M-4707	3
22.3 mm (0.88 in)	1816 mm (71.50 in)	7B-0344	7M-4719	2
22.3 mm (0.88 in)	1854 mm (72.99 in)	5H-7448	7M-4702	2
22.3 mm (0.88 in)	1867 mm (73.50 in)	3P-0099	3P-0098	2
22.3 mm (0.88 in)	1880 mm (74.02 in)	6H-5705	7M-0185	2
22.3 mm (0.88 in)	1918 mm (75.51 in)	2M-8255	8S-1475	3
22.3 mm (0.88 in)	1930 mm (75.98 in)	7H-9806	7M-4717	2
22.3 mm (0.88 in)	1943 mm (76.50 in)	2M-7863	7M-4703	2
22.3 mm (0.88 in)	1956 mm (77.01 in)	1H-6929	7M-4718	2
22.3 mm (0.88 in)	1968 mm (77.48 in)	3L-7539	5L-5014	3
22.3 mm (0.88 in)	1994 mm (78.50 in)	8B-3546	7M-4721	2
22.3 mm (0.88 in)	2007 mm (79.02 in)	8M-0959	8M-0934	2
22.3 mm (0.88 in)	2019 mm (79.49 in)	7M-0304	5R-7276	2
22.3 mm (0.88 in)	2032 mm (80 in)	9M-7800	9M-7801	3
22.3 mm (0.88 in)	2057 mm (80.98 in)	3L-6052	8M-8681	3
22.3 mm (0.88 in)	2083 mm (82.01 in)	3L-9489	6L-1987	2
22.3 mm (0.88 in)	2083 mm (82.01 in)	4R-9240	5R-9996	2
22.3 mm (0.88 in)	2108 mm (82.99 in)	4S-7796	4S-9791	2
22.3 mm (0.88 in)	2159 mm (85 in)	5H-7371	7M-4710	3
22.3 mm (0.88 in)	2184 mm (85.98 in)	7C-3560	7C-3559	2
22.3 mm (0.88 in)	2210 mm (87.01 in)	1M-7303	2W-8951	4
22.3 mm (0.88 in)	2235 mm (87.99 in)	2W-6765	2W-6766	4
22.3 mm (0.88 in)	2261 mm (89.02 in)	7N-3966	2W-8952	2
22.3 mm (0.88 in)	2286 mm (90 in)	5B-9790	6N-7575	2
22.3 mm (0.88 in)	2311 mm (90.98 in)	110-0375	124-5113	2
22.3 mm (0.88 in)	2337 mm (92.01 in)	4W-7507	4W-7508	2
22.3 mm (0.88 in)	2388 mm (94.02 in)	110-0376	123-3995	2
22.3 mm (0.88 in)	2460 mm (96.85 in)	167-7547	167-7549	2
22.3 mm (0.88 in)	2464 mm (97.01 in)	251-7494	251-7495	2

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# Belts

## V-Belts — Cogged (Continued)

Size	Length	Part Number	Set Part Number	Set Qty.
22.3 mm (0.88 in)	2489 mm (97.99 in)	110-0377	123-3996	2
22.3 mm (0.88 in)	2540 mm (100 in)	6B-9737	7M-4720	2
22.3 mm (0.88 in)	2565 mm (100.98 in)	251-7492	251-7493	2
22.3 mm (0.88 in)	2591 mm (102.01 in)	4Q-5035	4Q-5036	4
22.3 mm (0.88 in)	2591 mm (102.01 in)	7W-1664	7W-1665	4
22.3 mm (0.88 in)	2688 mm (105.83 in)	313-3709	313-3710	5
22.3 mm (0.88 in)	2718 mm (107.01 in)	4W-5092	4W-5091	6
22.3 mm (0.88 in)	2768.6 mm (109 in)	133-6444	133-6445	4
22.3 mm (0.88 in)	2768.6 mm (109 in)	123-5890	123-5889	4
22.3 mm (0.88 in)	2780 mm (109.45 in)	6I-1757	6I-1973	6
22.3 mm (0.88 in)	2869 mm (112.95 in)	9Y-8466	9Y-8467	4
22.3 mm (0.88 in)	2895 mm (113.98 in)	119-6373	119-6374	6
25.5 mm (1 in)	1156 mm (45.51 in)	6B-1039	--	--
25.5 mm (1 in)	1245 mm (49.02 in)	7B-4032	--	--
25.5 mm (1 in)	1270 mm (50 in)	4F-7956	--	--
25.5 mm (1 in)	1334 mm (52.52 in)	5H-4239	--	--
31.8 mm (1.25 in)	1537 mm (60.51 in)	7B-2774	--	--
31.8 mm (1.25 in)	1562 mm (61.50 in)	8H-7180	--	--
31.8 mm (1.25 in)	1588 mm (62.52 in)	3B-8904	5L-6672	2
31.8 mm (1.25 in)	1651 mm (65 in)	1H-3592	6L-6552	2
31.8 mm (1.25 in)	1753 mm (69.02 in)	1H-5899	7M-4948	2
31.8 mm (1.25 in)	1880 mm (74.02 in)	5H-4462	7M-4953	2
2,921 mm (115 in)	15.9 mm (0.63 in)	291-1476	294-2593	5
9.6 mm (0.38 in)	673 mm (26.50 in)	6L-6212	6L-6213	2
9.6 mm (0.38 in)	813 mm (32.01 in)	7N-0510	--	--
9.6 mm (0.38 in)	914 mm (35.98 in)	1N-8404	1N-8405	2
9.6 mm (0.38 in)	1016 mm (40 in)	030-2630	7L-4528	2
9.6 mm (0.38 in)	1105 mm (43.50 in)	2W-2531	9Y-7159	2
9.6 mm (0.38 in)	1257 mm (49.49 in)	1N-9310	2N-0159	2
9.6 mm (0.38 in)	1283 mm (50.51 in)	7N-3160	7N-3157	2
9.6 mm (0.38 in)	1308 mm (51.50 in)	7L-5090	7L-5091	2
9.6 mm (0.38 in)	1410 mm (55.51 in)	7N-3159	7N-3158	2
12.7 mm (0.50 in)	711 mm (27.99 in)	4H-0552	--	--
12.7 mm (0.50 in)	737 mm (29.02 in)	2L-1478	--	--
12.7 mm (0.50 in)	800 mm (31.50 in)	9L-2266	9L-2267	2
12.7 mm (0.50 in)	838 mm (32.99 in)	004-0909	--	--
12.7 mm (0.50 in)	851 mm (33.50 in)	061-8384	--	--
12.7 mm (0.50 in)	864 mm (34.02 in)	036-6775	--	--
12.7 mm (0.50 in)	876 mm (34.49 in)	7E-0744	--	--
12.7 mm (0.50 in)	889 mm (35 in)	030-3289	--	--
12.7 mm (0.50 in)	902 mm (35.51 in)	037-2448	--	--
12.7 mm (0.50 in)	914 mm (35.98 in)	036-2176	--	--
12.7 mm (0.50 in)	940 mm (37.01 in)	030-3291	--	--
12.7 mm (0.50 in)	952 mm (37.48 in)	5L-3979	5L-3980	2
12.7 mm (0.50 in)	975 mm (38.39 in)	304-4010	--	--
12.7 mm (0.50 in)	991 mm (39.02 in)	1N-4635	2W-0237	2
12.7 mm (0.50 in)	1003 mm (39.49 in)	8N-3504	--	--

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## V-Belts — Cogged (Continued)

Size	Length	Part Number	Set Part Number	Set Qty.
12.7 mm (0.50 in)	1016 mm (40 in)	9L-4896	9L-6177	2
12.7 mm (0.50 in)	1029 mm (40.51 in)	001-5645	--	--
12.7 mm (0.50 in)	1041 mm (40.98 in)	9L-1126	9L-1125	2
12.7 mm (0.50 in)	1054 mm (41.50 in)	4M-6291	9L-4226	2
12.7 mm (0.50 in)	1080 mm (42.52 in)	061-7139	2N-1493	2
12.7 mm (0.50 in)	1092 mm (42.99 in)	9L-4012	9L-4013	2
12.7 mm (0.50 in)	1105 mm (43.50 in)	1W-5555	1N-4223	2
12.7 mm (0.50 in)	1118 mm (44.02 in)	068-5590	061-9508	2
12.7 mm (0.50 in)	1130 mm (44.49 in)	5L-3834	5L-3826	2
12.7 mm (0.50 in)	1143 mm (45 in)	4L-6060	3N-4658	2
12.7 mm (0.50 in)	1168 mm (45.98 in)	9M-1091	6L-7954	2
12.7 mm (0.50 in)	1181 mm (46.50 in)	9Y-1131	--	--
12.7 mm (0.50 in)	1194 mm (47.01 in)	8L-8646	--	--
12.7 mm (0.50 in)	1206 mm (47.48 in)	6L-3408	6L-8161	2
12.7 mm (0.50 in)	1219 mm (47.99 in)	9L-2248	9L-0619	2
12.7 mm (0.50 in)	1232 mm (48.50 in)	6N-3113	111-0575	2
12.7 mm (0.50 in)	1245 mm (49.02 in)	3K-3408	5N-6350	2
12.7 mm (0.50 in)	1257 mm (49.49 in)	6F-1992	1S-1193	2
12.7 mm (0.50 in)	1270 mm (50 in)	5M-8137	8L-8984	3
12.7 mm (0.50 in)	1283 mm (50.51 in)	5L-4996	5L-4995	2
12.7 mm (0.50 in)	1308 mm (51.50 in)	5M-8135	3N-1491	2
12.7 mm (0.50 in)	1321 mm (52.01 in)	9L-0894	9L-0895	2
12.7 mm (0.50 in)	1334 mm (52.52 in)	3S-8448	3S-8447	3
12.7 mm (0.50 in)	1346 mm (52.99 in)	5L-3307	5L-3308	2
12.7 mm (0.50 in)	1359 mm (53.50 in)	3S-6272	8L-4526	2
12.7 mm (0.50 in)	1372 mm (54.02 in)	061-7140	130-3216	2
12.7 mm (0.50 in)	1397 mm (55 in)	9L-1553	9L-1557	2
12.7 mm (0.50 in)	1410 mm (55.51 in)	2S-2743	2S-2756	3
12.7 mm (0.50 in)	1422 mm (55.98 in)	3S-3964	5N-9303	2
12.7 mm (0.50 in)	1448 mm (57.01 in)	9L-1128	9L-1127	4
12.7 mm (0.50 in)	1460 mm (57.48 in)	3S-3961	4W-6025	2
12.7 mm (0.50 in)	1473 mm (57.99 in)	7L-5001	9L-1226	3
12.7 mm (0.50 in)	1486 mm (58.50 in)	2S-5218	2S-9779	2
12.7 mm (0.50 in)	1499 mm (59.02 in)	6L-5115	2N-2297	2
12.7 mm (0.50 in)	1511 mm (59.49 in)	7E-5798	7E-5799	3
12.7 mm (0.50 in)	1524 mm (60 in)	2S-9506	9L-1106	2
12.7 mm (0.50 in)	1524 mm (60 in)	4N-2745	--	--
12.7 mm (0.50 in)	1549 mm (60.98 in)	5N-4692	6L-4100	3
12.7 mm (0.50 in)	1575 mm (62.01 in)	8M-8336	8M-8341	2
12.7 mm (0.50 in)	1600 mm (62.99 in)	9L-4479	068-8546	2
12.7 mm (0.50 in)	1626 mm (64.02 in)	8M-8335	8M-8340	2
12.7 mm (0.50 in)	1651 mm (65 in)	4S-6209	8S-5154	3
12.7 mm (0.50 in)	1664 mm (65.51 in)	1S-4699	1S-4700	2
12.7 mm (0.50 in)	1689 mm (66.50 in)	5S-5249	4W-8729	2
12.7 mm (0.50 in)	1702 mm (67.01 in)	9L-1130	9L-1129	2
12.7 mm (0.50 in)	1727 mm (67.99 in)	3S-9652	1S-1187	2
12.7 mm (0.50 in)	1727 mm (67.99 in)	166-3354	--	--

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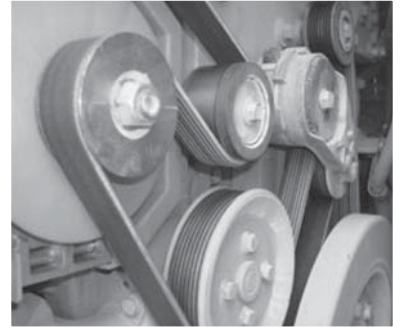
# Belts

## V-Belts — Cogged (Continued)

Engine Parts and Kits

Size	Length	Part Number	Set Part Number	Set Qty.
12.7 mm (0.50 in)	1740 mm (68.50 in)	4W-8654	4W-8655	2
12.7 mm (0.50 in)	1753 mm (69.02 in)	166-3352	166-3360	3
12.7 mm (0.50 in)	1753 mm (69.02 in)	5S-5052	9L-2526	2
12.7 mm (0.50 in)	1778 mm (70 in)	4S-8353	2S-2481	2
12.7 mm (0.50 in)	1782 mm (70.16 in)	364-7251	--	--
12.7 mm (0.50 in)	1791 mm (70.51 in)	2P-5617	2P-5618	2
12.7 mm (0.50 in)	1803 mm (70.98 in)	166-3351	166-3359	3
12.7 mm (0.50 in)	1803 mm (70.98 in)	6F-2590	1S-1208	3
12.7 mm (0.50 in)	1816 mm (71.50 in)	7E-6158	319-6293	3
17.5 mm (0.69 in)	2007 mm (79.02 in)	4M-9072	5R-2455	2
17.5 mm (0.69 in)	2019 mm (79.49 in)	4N-4789	4N-4773	4
17.5 mm (0.69 in)	2032 mm (80 in)	5S-0290	5S-0291	3
17.5 mm (0.69 in)	2057 mm (80.98 in)	2S-9911	2S-8268	3
17.5 mm (0.69 in)	2083 mm (82.01 in)	7M-7373	4N-1745	3
17.5 mm (0.69 in)	2108 mm (82.99 in)	2S-5279	3S-9646	3
17.5 mm (0.69 in)	2184 mm (85.98 in)	5S-1762	7N-7502	2
17.5 mm (0.69 in)	2642 mm (104.02 in)	115-2459	115-2460	4
17.5 mm (0.69 in)	2642 mm (104.02 in)	125-6515	125-6516	4
17.5 mm (0.69 in)	2692 mm (105.98 in)	127-5564	127-5563	4
17.5 mm (0.69 in)	2769 mm (109.02 in)	169-0146	169-0147	4
22.3 mm (0.88 in)	1232 mm (48.50 in)	5F-7676	--	--
22.3 mm (0.88 in)	1270 mm (50 in)	5H-2896	--	--
22.3 mm (0.88 in)	1308 mm (51.50 in)	5H-9857	--	--
22.3 mm (0.88 in)	1372 mm (54.02 in)	7E-5096	7E-5097	2
22.3 mm (0.88 in)	1384 mm (54.49 in)	9Y-8865	9Y-8864	2
22.3 mm (0.88 in)	1397 mm (55 in)	7E-5114	7E-5113	2
22.3 mm (0.88 in)	1410 mm (55.51 in)	9F-1899	7M-4711	2
22.3 mm (0.88 in)	1422 mm (55.98 in)	1L-5514	1S-1127	2
22.3 mm (0.88 in)	1435 mm (56.50 in)	139-5170	139-5171	2
22.3 mm (0.88 in)	1448 mm (57.01 in)	5L-9902	4N-6529	2
22.3 mm (0.88 in)	1460 mm (57.48 in)	9Y-0290	9Y-0291	2
22.3 mm (0.88 in)	1486 mm (58.50 in)	8F-5164	7M-4715	2
22.3 mm (0.88 in)	1499 mm (59.02 in)	8M-9708	--	--
22.3 mm (0.88 in)	1511 mm (59.49 in)	4M-8218	4P-4905	2
22.3 mm (0.88 in)	1549 mm (60.98 in)	3S-2347	2P-2369	2
22.3 mm (0.88 in)	1575 mm (62.01 in)	5M-5347	8N-4128	2
22.3 mm (0.88 in)	1588 mm (62.52 in)	5M-5965	2P-2696	2
22.3 mm (0.88 in)	1600 mm (62.99 in)	4F-6390	7M-4716	2
22.3 mm (0.88 in)	1613 mm (63.50 in)	6B-8536	--	--
22.3 mm (0.88 in)	1626 mm (64.02 in)	2P-1272	2P-1388	2

## Serpentine Belts



Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	1515 mm (59.65 in)	8	190-6560
2 mm (0.08 in)	1626 mm (64.02 in)	2	288-7195
3.6 mm (0.14 in)	1787 mm (70.35 in)	8	336-4436
3.6 mm (0.14 in)	2385 mm (93.90 in)	8	349-3353
8 mm (0.31 in)	1813 mm (71.38 in)	8	330-0663
14 mm (0.55 in)	1547 mm (60.91 in)	14	330-0662
19 mm (0.75 in)	1664 mm (65.51 in)	2	299-0179
20.8 mm (0.82 in)	917 mm (36.10 in)	6	179-7078
20.8 mm (0.82 in)	1510 mm (59.45 in)	6	285-2943
20.8 mm (0.82 in)	1700 mm (66.93 in)	6	310-7127
20.8 mm (0.82 in)	1750 mm (68.90 in)	6	318-6151
20.8 mm (0.82 in)	2170 mm (85.43 in)	6	304-4511
20.9 mm (0.82 in)	1392 mm (54.80 in)	6	8Q-1508
20.9 mm (0.82 in)	1420 mm (55.91 in)	6	101-4910
20.9 mm (0.82 in)	1455 mm (57.28 in)	6	129-3574
20.9 mm (0.82 in)	1511 mm (59.49 in)	6	133-4871
24.4 mm (0.96 in)	1404 mm (55.28 in)	7	155-4769
24.4 mm (0.96 in)	1790 mm (70.47 in)	7	135-9505
25.4 mm (1 in)	1778 mm (70 in)	2	198-6890
25.4 mm (1 in)	1829 mm (72.01 in)	2	198-6827
25.4 mm (1 in)	1912 mm (75.28 in)	2	211-6557
25.4 mm (1 in)	2108 mm (82.99 in)	2	205-2201
25.4 mm (1 in)	2159 mm (85 in)	2	201-9911
27.9 mm (1.10 in)	917 mm (36.10 in)	8	218-9823
27.9 mm (1.10 in)	1341 mm (52.80 in)	8	312-4712
27.9 mm (1.10 in)	1361 mm (53.58 in)	8	312-4710
27.9 mm (1.10 in)	1900 mm (74.80 in)	8	337-3023
27.9 mm (1.10 in)	1930 mm (75.98 in)	8	277-8724
27.9 mm (1.10 in)	2005 mm (78.94 in)	8	260-1527
27.9 mm (1.10 in)	2005 mm (78.94 in)	8	334-1624
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	260-1528
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	334-1623
27.9 mm (1.10 in)	2900 mm (114.17 in)	8	249-8740
27.9 mm (1.10 in)	2958 mm (116.46 in)	8	211-5406
27.9 mm (1.10 in)	1054 mm (41.50 in)	8	100-3725
27.9 mm (1.10 in)	1075 mm (42.32 in)	8	178-6402

Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	1093 mm (43.03 in)	8	141-7116
27.9 mm (1.10 in)	1170 mm (46.06 in)	8	186-4195
27.9 mm (1.10 in)	1181 mm (46.50 in)	8	7E-8244
27.9 mm (1.10 in)	1314 mm (51.73 in)	8	131-0762
27.9 mm (1.10 in)	1350 mm (53.15 in)	8	324-3408
27.9 mm (1.10 in)	1480 mm (58.27 in)	8	226-0443
27.9 mm (1.10 in)	1520 mm (59.84 in)	8	253-4794
27.9 mm (1.10 in)	1530 mm (60.24 in)	8	262-4995
27.9 mm (1.10 in)	1830 mm (72.05 in)	8	230-7207
27.9 mm (1.10 in)	1897 mm (74.68 in)	8	142-0861
27.9 mm (1.10 in)	1990 mm (78.35 in)	3	250-0678
27.9 mm (1.10 in)	2130 mm (83.86 in)	8	230-7198
27.9 mm (1.10 in)	2200 mm (86.61 in)	8	243-1559
27.9 mm (1.10 in)	2223 mm (87.52 in)	8	221-3775
27.9 mm (1.10 in)	2365 mm (93.11 in)	8	277-4586
27.9 mm (1.10 in)	2658 mm (104.65 in)	8	239-5944
27.9 mm (1.10 in)	1054 mm (41.50 in)	8	350-7106
27.9 mm (1.10 in)	1072 mm (42.20 in)	8	357-7153
27.9 mm (1.10 in)	1158.9 mm (45.63 in)	8	352-6439
27.9 mm (1.10 in)	1220 mm (48.03 in)	8	190-8142
27.9 mm (1.10 in)	1230 mm (48.43 in)	8	236-3842
27.9 mm (1.10 in)	1245 mm (49.02 in)	8	236-3839
27.9 mm (1.10 in)	1310 mm (51.57 in)	8	257-5523
27.9 mm (1.10 in)	1345 mm (52.95 in)	8	241-4981
27.9 mm (1.10 in)	1361 mm (53.58 in)	8	353-3976
27.9 mm (1.10 in)	1385 mm (54.53 in)	8	359-7476
27.9 mm (1.10 in)	1395 mm (54.92 in)	8	241-4982
27.9 mm (1.10 in)	1450 mm (57.09 in)	8	190-8143
27.9 mm (1.10 in)	1509 mm (59.41 in)	8	362-3039
27.9 mm (1.10 in)	1516 mm (59.68 in)	8	351-6508
27.9 mm (1.10 in)	1518 mm (59.76 in)	8	348-7891
27.9 mm (1.10 in)	1563 mm (61.54 in)	8	331-9604
27.9 mm (1.10 in)	1585 mm (62.40 in)	8	374-8476
27.9 mm (1.10 in)	1606 mm (63.23 in)	8	277-8713
27.9 mm (1.10 in)	1610 mm (63.39 in)	8	243-2143
27.9 mm (1.10 in)	1610 mm (63.39 in)	8	348-7036

(Continued)



# Belts

## Serpentine Belts (Continued)

Engine Parts and Kits

Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	1627 mm (64.05 in)	8	357-0492
27.9 mm (1.10 in)	1645 mm (64.76 in)	8	275-9346
27.9 mm (1.10 in)	1650 mm (64.96 in)	8	291-4051
27.9 mm (1.10 in)	1715 mm (67.52 in)	8	292-0678
27.9 mm (1.10 in)	1730 mm (68.11 in)	3	266-1464
27.9 mm (1.10 in)	1740 mm (68.50 in)	8	313-4537
27.9 mm (1.10 in)	1753 mm (69.02 in)	8	363-7389
27.9 mm (1.10 in)	1755 mm (69.09 in)	8	273-7533
27.9 mm (1.10 in)	1760 mm (69.29 in)	8	357-2890
27.9 mm (1.10 in)	1787 mm (70.35 in)	8	374-8480
27.9 mm (1.10 in)	1824 mm (71.81 in)	8	185-1911
27.9 mm (1.10 in)	1854 mm (72.99 in)	8	263-9079
27.9 mm (1.10 in)	1855 mm (73.03 in)	8	226-4020
27.9 mm (1.10 in)	1860 mm (73.23 in)	8	203-7765
27.9 mm (1.10 in)	1860 mm (73.23 in)	8	219-3303
27.9 mm (1.10 in)	1900 mm (74.80 in)	8	246-6296
27.9 mm (1.10 in)	1950 mm (76.77 in)	8	313-9120
27.9 mm (1.10 in)	1970 mm (77.56 in)	8	206-4229
27.9 mm (1.10 in)	1979 mm (77.91 in)	8	222-5511
27.9 mm (1.10 in)	1980 mm (77.95 in)	8	267-2949
27.9 mm (1.10 in)	1990 mm (78.35 in)	8	348-7890
27.9 mm (1.10 in)	2010 mm (79.13 in)	8	348-7888
27.9 mm (1.10 in)	2040 mm (80.31 in)	8	206-6497
27.9 mm (1.10 in)	2041 mm (80.35 in)	8	220-1856
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	320-0788
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	364-6417
27.9 mm (1.10 in)	2060 mm (81.10 in)	8	254-0298
27.9 mm (1.10 in)	2115 mm (83.27 in)	8	260-6641
27.9 mm (1.10 in)	2117 mm (83.35 in)	8	351-0497
27.9 mm (1.10 in)	2127 mm (83.74 in)	6	374-8478
27.9 mm (1.10 in)	2160 mm (85.04 in)	8	374-8479
27.9 mm (1.10 in)	2165 mm (85.24 in)	8	348-7885
27.9 mm (1.10 in)	2245 mm (88.39 in)	8	348-7886
27.9 mm (1.10 in)	2250 mm (88.58 in)	8	208-2827
27.9 mm (1.10 in)	2255 mm (88.78 in)	8	260-6107
27.9 mm (1.10 in)	2260 mm (88.98 in)	8	212-3176
27.9 mm (1.10 in)	2274 mm (89.53 in)	8	226-9380
27.9 mm (1.10 in)	2275 mm (89.57 in)	8	348-7889
27.9 mm (1.10 in)	2285 mm (89.96 in)	8	357-0490
27.9 mm (1.10 in)	2296 mm (90.39 in)	8	189-2216
27.9 mm (1.10 in)	2315 mm (91.14 in)	8	211-3576
27.9 mm (1.10 in)	2335 mm (91.93 in)	8	206-7825
27.9 mm (1.10 in)	2360 mm (92.91 in)	8	359-0185
27.9 mm (1.10 in)	2376 mm (93.54 in)	8	189-2218
27.9 mm (1.10 in)	2410 mm (94.88 in)	8	202-3198
27.9 mm (1.10 in)	2430 mm (95.67 in)	8	350-2822

Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	2445 mm (96.26 in)	8	191-5215
27.9 mm (1.10 in)	2450 mm (96.46 in)	8	240-3373
27.9 mm (1.10 in)	2481 mm (97.68 in)	8	219-3304
27.9 mm (1.10 in)	2485 mm (97.83 in)	8	345-0409
27.9 mm (1.10 in)	2485 mm (97.83 in)	8	243-1324
27.9 mm (1.10 in)	2495 mm (98.23 in)	8	298-4466
27.9 mm (1.10 in)	2520 mm (99.21 in)	8	224-2638
27.9 mm (1.10 in)	2521 mm (99.25 in)	8	253-4531
27.9 mm (1.10 in)	2533 mm (99.72 in)	8	216-6935
27.9 mm (1.10 in)	2555 mm (100.59 in)	8	219-8689
27.9 mm (1.10 in)	2594 mm (102.13 in)	8	217-3031
27.9 mm (1.10 in)	2600 mm (102.36 in)	8	350-5810
27.9 mm (1.10 in)	2620 mm (103.15 in)	8	263-1862
27.9 mm (1.10 in)	2622 mm (103.23 in)	8	352-6441
27.9 mm (1.10 in)	2630 mm (103.54 in)	8	275-9345
27.9 mm (1.10 in)	2635 mm (103.74 in)	8	350-5391
27.9 mm (1.10 in)	2690 mm (105.91 in)	8	273-7531
27.9 mm (1.10 in)	2730 mm (107.48 in)	8	204-6587
27.9 mm (1.10 in)	2740 mm (107.87 in)	8	348-5783
27.9 mm (1.10 in)	2768 mm (108.98 in)	8	352-6437
27.9 mm (1.10 in)	2780 mm (109.45 in)	8	206-7824
27.9 mm (1.10 in)	2790 mm (109.84 in)	8	240-3374
27.9 mm (1.10 in)	2798 mm (110.16 in)	8	189-2214
27.9 mm (1.10 in)	2808 mm (110.55 in)	8	202-3197
27.9 mm (1.10 in)	2820 mm (111.02 in)	8	260-6106
27.9 mm (1.10 in)	2827 mm (111.30 in)	8	215-3015
27.9 mm (1.10 in)	2835 mm (111.61 in)	8	189-2213
27.9 mm (1.10 in)	2840 mm (111.81 in)	8	226-9381
27.9 mm (1.10 in)	2890 mm (113.78 in)	8	224-2636
27.9 mm (1.10 in)	2933 mm (115.47 in)	8	352-4863
27.9 mm (1.10 in)	3000 mm (118.11 in)	8	241-4231
27.9 mm (1.10 in)	3058 mm (120.39 in)	8	337-4339
27.9 mm (1.10 in)	3230 mm (127.16 in)	8	310-2103
28 mm (1.10 in)	1610 mm (63.39 in)	8	348-7884
28 mm (1.10 in)	1624 mm (63.94 in)	8	328-0811
28.1 mm (1.11 in)	1413 mm (55.63 in)	8	330-0661
28.1 mm (1.11 in)	2125 mm (83.66 in)	8	341-4938
28.3 mm (1.11 in)	1491 mm (58.70 in)	8	350-8741
28.3 mm (1.11 in)	1684 mm (66.30 in)	8	350-8742
28.4 mm (1.12 in)	2460 mm (96.85 in)	3	288-1607
28.4 mm (1.12 in)	1365 mm (53.74 in)	8	228-9100
28.4 mm (1.12 in)	1430 mm (56.30 in)	8	267-9281
28.4 mm (1.12 in)	1445 mm (56.89 in)	8	336-2178
28.4 mm (1.12 in)	1585 mm (62.40 in)	8	220-2945
28.4 mm (1.12 in)	1600 mm (62.99 in)	8	157-2830
28.4 mm (1.12 in)	1640 mm (64.57 in)	8	275-6653

(Continued)

## Serpentine Belts (Continued)

Size	Length	No. of Peaks	Part Number	Size	Length	No. of Peaks	Part Number
28.4 mm (1.12 in)	1790 mm (70.47 in)	8	212-9353	32 mm (1.26 in)	1550 mm (61.02 in)	9	310-9778
28.4 mm (1.12 in)	1840 mm (72.44 in)	8	288-4641	32 mm (1.26 in)	1625 mm (63.98 in)	9	219-2324
28.4 mm (1.12 in)	1970 mm (77.56 in)	8	239-0238	35 mm (1.38 in)	1705 mm (67.13 in)	10	318-2528
28.4 mm (1.12 in)	2030 mm (79.92 in)	8	285-6217	35 mm (1.38 in)	1715 mm (67.52 in)	3	294-7665
28.4 mm (1.12 in)	2095 mm (82.48 in)	8	185-5872	35 mm (1.38 in)	1730 mm (68.11 in)	10	318-2530
28.4 mm (1.12 in)	2110 mm (83.07 in)	8	263-1830	35 mm (1.38 in)	1745 mm (68.70 in)	10	292-2187
28.4 mm (1.12 in)	2140 mm (84.25 in)	8	263-1849	35 mm (1.38 in)	2345 mm (92.32 in)	10	307-4643
28.4 mm (1.12 in)	2145 mm (84.45 in)	8	211-5021	35 mm (1.38 in)	2440 mm (96.06 in)	10	304-4510
28.4 mm (1.12 in)	2160 mm (85.04 in)	8	241-2896	35 mm (1.38 in)	2080 mm (81.89 in)	10	318-4830
28.4 mm (1.12 in)	2165 mm (85.24 in)	8	293-3908	35 mm (1.38 in)	2125 mm (83.66 in)	10	313-4400
28.4 mm (1.12 in)	2180 mm (85.83 in)	8	183-4494	35 mm (1.38 in)	2395 mm (94.29 in)	10	318-6086
28.4 mm (1.12 in)	2210 mm (87.01 in)	8	211-5022	35.6 mm (1.40 in)	1455 mm (57.28 in)	10	114-3552
28.4 mm (1.12 in)	2230 mm (87.80 in)	8	172-2245	35.6 mm (1.40 in)	1477.5 mm (58.17 in)	10	147-5440
28.4 mm (1.12 in)	2246 mm (88.42 in)	8	190-4155	35.6 mm (1.40 in)	1506 mm (59.29 in)	10	114-6414
28.4 mm (1.12 in)	2275 mm (89.57 in)	8	312-8934	42.2 mm (1.66 in)	1740 mm (68.50 in)	12	357-0493
28.4 mm (1.12 in)	2275 mm (89.57 in)	8	178-8481	42.2 mm (1.66 in)	1595 mm (62.80 in)	12	348-3785
28.4 mm (1.12 in)	2275 mm (89.57 in)	8	208-2832	42.2 mm (1.66 in)	1733 mm (68.23 in)	12	349-7267
28.4 mm (1.12 in)	2290 mm (90.16 in)	8	289-2980	42.4 mm (1.67 in)	2098 mm (82.60 in)	12	361-3339
28.4 mm (1.12 in)	2295 mm (90.35 in)	8	208-2833	42.7 mm (1.68 in)	2335 mm (91.93 in)	3	296-1503
28.4 mm (1.12 in)	2325 mm (91.54 in)	8	211-7878	42.8 mm (1.69 in)	2240 mm (88.19 in)	12	253-4011
28.4 mm (1.12 in)	2370 mm (93.31 in)	8	162-2742	42.8 mm (1.69 in)	2350 mm (92.52 in)	12	310-7131
28.4 mm (1.12 in)	2555 mm (100.59 in)	8	243-1276	42.8 mm (1.69 in)	2475 mm (97.44 in)	12	253-4012
28.4 mm (1.12 in)	2586 mm (101.81 in)	8	192-5479	42.8 mm (1.69 in)	2755 mm (108.46 in)	12	310-7128
28.4 mm (1.12 in)	2720 mm (107.09 in)	8	291-1025	49.3 mm (1.94 in)	1438 mm (56.61 in)	14	149-3417
28.4 mm (1.12 in)	2855 mm (112.40 in)	8	312-8933	49.3 mm (1.94 in)	1515 mm (59.65 in)	14	359-0188
28.4 mm (1.12 in)	2860 mm (112.60 in)	8	174-9690	49.3 mm (1.94 in)	1585 mm (62.40 in)	14	357-0494
28.4 mm (1.12 in)	3335 mm (131.30 in)	8	166-1324	49.3 mm (1.94 in)	1680 mm (66.14 in)	14	316-7714
28.5 mm (1.12 in)	1320 mm (51.97 in)	8	171-2321	49.3 mm (1.94 in)	1855 mm (73.03 in)	14	284-1215
28.5 mm (1.12 in)	1332 mm (52.44 in)	8	198-1118	49.8 mm (1.96 in)	1170 mm (46.06 in)	14	172-2246
28.5 mm (1.12 in)	1465 mm (57.68 in)	8	202-0951	49.8 mm (1.96 in)	1454 mm (57.24 in)	14	197-6292
28.5 mm (1.12 in)	1523 mm (59.96 in)	8	164-4599	49.8 mm (1.96 in)	1695 mm (66.73 in)	14	230-2188
28.5 mm (1.12 in)	1672 mm (65.83 in)	8	192-2169	49.8 mm (1.96 in)	2050 mm (80.71 in)	14	311-0338
28.5 mm (1.12 in)	1816 mm (71.50 in)	8	198-3611	49.8 mm (1.96 in)	1720 mm (67.72 in)	14	321-5169
28.5 mm (1.12 in)	1825 mm (71.85 in)	8	154-6036	49.8 mm (1.96 in)	1762 mm (69.37 in)	14	330-0659
28.5 mm (1.12 in)	2021 mm (79.57 in)	8	191-6635	49.8 mm (1.96 in)	2090 mm (82.28 in)	14	321-5168
28.5 mm (1.12 in)	2127 mm (83.74 in)	8	230-2190	51.9 mm (2.04 in)	1892 mm (74.49 in)	2	236-4190
28.5 mm (1.12 in)	2545 mm (100.20 in)	8	197-4567	51.9 mm (2.04 in)	1969 mm (77.52 in)	2	206-7870
28.5 mm (1.12 in)	2645.5 mm (104.15 in)	8	173-7178	51.9 mm (2.04 in)	2210 mm (87.01 in)	2	135-8652
28.5 mm (1.12 in)	2758 mm (108.58 in)	8	219-7450	51.9 mm (2.04 in)	2362 mm (92.99 in)	2	135-8653
28.5 mm (1.12 in)	1845 mm (72.64 in)	8	245-4628	51.9 mm (2.04 in)	2438 mm (95.98 in)	2	198-6750
28.5 mm (1.12 in)	2010 mm (79.13 in)	8	248-6195	51.9 mm (2.04 in)	2464 mm (97.01 in)	2	251-7496
29.5 mm (1.16 in)	1727 mm (67.99 in)	2	199-6601	51.9 mm (2.04 in)	2565 mm (100.98 in)	2	252-9028
29.5 mm (1.16 in)	1943 mm (76.50 in)	2	350-1223	54.5 mm (2.15 in)	2032 mm (80 in)	3	9Q-3669
32 mm (1.26 in)	1245 mm (49.02 in)	9	310-9543	54.5 mm (2.15 in)	2057 mm (80.98 in)	3	8Q-1499
32 mm (1.26 in)	1485 mm (58.46 in)	9	296-4737	54.5 mm (2.15 in)	2083 mm (82.01 in)	3	216-9993
32 mm (1.26 in)	1540 mm (60.63 in)	9	310-9592	54.5 mm (2.15 in)	2108 mm (82.99 in)	3	9Q-3668

(Continued)

# Belts

## Serpentine Belts (Continued)

Size	Length	No. of Peaks	Part Number
54.5 mm (2.15 in)	2159 mm (85 in)	3	216-4326
54.5 mm (2.15 in)	2184 mm (85.98 in)	3	9Q-3670
54.5 mm (2.15 in)	2210 mm (87.01 in)	3	129-5119
55.4 mm (2.18 in)	2489 mm (97.99 in)	3	7V-0833
55.6 mm (2.19 in)	1969 mm (77.52 in)	3	269-1974
61 mm (2.40 in)	2121 mm (83.50 in)	3	4V-9341

Size	Length	No. of Peaks	Part Number
83 mm (3.27 in)	2642 mm (104.02 in)	4	126-7587
83 mm (3.27 in)	2692 mm (105.98 in)	4	127-8398
83 mm (3.27 in)	2769 mm (109.02 in)	4	204-8034
106.6 mm (4.20 in)	2591 mm (102.01 in)	4	8Q-1500
106.6 mm (4.20 in)	2718 mm (107.01 in)	4	135-8654
42.2 mm (1.66 in)	1505 mm (59.25 in)	12	348-2705
49.3 mm (1.94 in)	1657 mm (65.24 in)	14	149-3416



**EQUIPMENT FLUIDS**

## Health and Safety

Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at [www.catmsds.com](http://www.catmsds.com).

## Cat® DEO™



### Recommended Use

- Low-emission diesel engines including Cat® engines with ACERT® Technology.
- Heavy-duty diesel engines made by other manufacturers that recommend API CI-4 and CH-4. See “Typical Characteristics” for more information.
- Automotive gasoline engines that require API SL or SJ category oils. See “Typical Characteristics” for more information.
- Cat earthmoving, commercial, marine and on-highway truck diesel engines, excluding 3600, C280, 3126 and 3116 MUI Marine and MaK diesel engines. The 3116 and 3126 MUI Marine diesel engines with closed crankcase ventilation systems should use Cat SAE0™.

### Discover the Difference

- Cat DEO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill — Used as standard factory-fill for Cat machines.
- Increased Engine Life — Resists oxidation and prevents build-up of deposits on pistons and rings.
- Extended Drain Intervals — Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with our S•O•S<sup>SM</sup> Services oil analysis program.
- Proven Performance — Tested thoroughly in Cat diesel engines including Cat engines with ACERT Technology to ensure excellent engine life and performance.
- Long-Lasting Protection — Improved soot control and enhanced shear stability enable oil to maintain proper viscosity for longer operating periods in Cat engines with ACERT Technology, especially those equipped with HEUI systems.



**Cat® DEO™ (Continued)**

Typical Characteristics {A}							
Location	Worldwide	Worldwide	Canada, Mexico and United States	Canada, Mexico and United States	Brazil	Brazil	Egypt and Saudi Arabia
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40
API Service Classifications — Diesel	CI-4, CH-4	CI-4, CH-4	CI-4 PLUS, CI-4, CH-4	CI-4, CH-4	CI-4, CH-4	CI-4, CH-4	CI-4, CH-4
API Service Classifications — Gasoline	SL	SL	SL	SL	SL	SL	SJ
ACEA Classifications	E5/B3/A2/E7-08				E5		
Caterpillar Performance Level	ECF-2	ECF-2	ECF-2	ECF-2	ECF-2	ECF-2	ECF-2
Volvo Performance Level	VDS-3	VDS-2	VDS-3	VDS-3	VDS-3	VDS-2	
MB Performance Level	MB228.3				MB228.3		
Cummins Performance Level	CES 20071/72/76/77	CES 20071/76	CES 20071/76	CES 20071/76/78	CES 20071/72/76/77	CES 20071/76	CES 20071/72/76/77
Mack Performance Level	EO-M Plus	EO-M Plus, EO-M	EO-NPP, EO-M	EO-M Plus, EO-M	EO-M Plus	EO-M Plus	EO-M Plus
MAN Performance Level	M3275				3275		
RVI Performance Level	RLD				RLD		

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

**Equipment Fluids**

## Cat® DEO™ (Continued)

Location	Worldwide	Worldwide	Canada, Mexico, and United States	Canada, Mexico, and United States	Brazil	Brazil	Egypt and Saudi Arabia
Allison Performance Level					C4		
Flash Point, °C (ASTM D92)	230	222	224	220	220	222	240
Pour Point, °C (ASTM D97)	-30	-36	-30	-33	-33	-36	-33
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40
Viscosity cSt @ 40° C (ASTM D445)	103	76	120.5	76	105	75	105
Viscosity cSt @ 100° C (ASTM D445)	14.2	11.5	15.5	11.5	14.4	11.2	14.0
Viscosity Index (ASTM D2270)	135	144	135	145	141	142	135
Sulfated Ash, % wt. (ASTM D874)	1.3	1.3	1.3	1.3	1.1	1.1	1.2
TBN (ASTM D2896)	11.3	10.4	10.4	10.4	10.6	10.6	10.3
Zinc, % wt. (ASTM D4951)	0.146	0.146	0.146	0.146	0.133	0.133	0.123
Gravity @ 16° C API (ASTM D287)	29.3	31.3	30	31.7	28.7	31.5	29
Gravity @ 16° C Specific	0.88	0.87	0.88	0.87	0.88	0.87	0.88

Equipment Fluids

English Volume (gal)	Metric Volume (L)	Qty.	Part Number <sup>1</sup>
<b>SAE 10W-30</b>			
5	--	--	3E-9709
55	--	--	3E-9708
Bulk	--	--	155-6198
--	5	--	335-9830
--	18	--	283-1709
--	20	--	3E-9844
--	200	--	130-7055
--	208	--	3E-9707
--	1000	--	148-3539
--	1004	--	5P-2586
--	1100	--	384-8146
<b>SAE 15W-40</b>			
0.250 (1 Qt.)	--	4	3E-9715
1	--	--	248-7518
5	--	--	3E-9713
55	--	--	3E-9712

English Volume (gal)	Metric Volume (L)	Qty.	Part Number <sup>1</sup>
<b>SAE 15W-40 (Continued)</b>			
Bulk	--	--	155-6199
--	1	--	123-4077
--	4	--	3E-9902
--	5	--	3E-9901
--	18	--	3E-9900
--	19	--	3E-9849
--	20	--	3E-9848
--	60	--	121-4038
--	200	--	3E-9842
--	205	--	3E-9841
--	208	--	3E-9840
--	900	--	381-7213
--	1000	--	3E-9838
--	1040	--	201-0775
--	1100	--	384-8147
--	2000	--	120-5285

(Continued)

**Cat® DEO™ (Continued)**

English Volume (gal)	Metric Volume (L)	Qty.	Part Number <sup>1</sup>
<b>SAE 15W-40 (Continued)</b>			
--	10 000	--	119-5131
--	10 004	--	8T-9548

<sup>1</sup>Part numbers listed below are not available in all regions. See your Cat dealer for part numbers appropriate for your region.

**Cat® DEO™ Monograde**

For Cat 3600 Series Diesel Engines

**Recommended Use**

- Cat® DEO Monograde is recommended for use in 3600 series diesel engines operating on distillate diesel fuels.
- Cat DEO Monograde is recommended for older Cat engines equipped with precombustion fuel injection systems that permit the use of American Petroleum Institute CD or CF oil.
- Cat DEO Monograde can be used with low-sulfur diesel fuel and protects Cat engines operating on higher sulfur diesel fuels (3600 Series engines operating on fuel containing up to 1.30% sulfur, and precombustion engines operating on fuel containing up to 0.065% sulfur fuel.)

**Discover the Difference**

- Cat DEO Monograde is developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.
- Increased Engine Life — Resists oxidation and prevents build-up of deposits on pistons and rings.
- Extended Drain Intervals — Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with our S•O•S<sup>SM</sup> Services oil analysis program.
- Proven Performance — Tested in Cat 3600 Series diesel engines worldwide.

Typical Characteristics {A}	
SAE Viscosity Grade	SAE 40 {B}
API Service Classification	CF {C}
CCMC	D3
Caterpillar Performance Level (engine)	1M-PC
Allison Performance Level (transmission)	C-3
Flash Point, °C (ASTM D92)	234
Pour Point, °C (ASTM D97)	-32
Viscosity cSt @ 40° C (ASTM D445)	133
Viscosity cSt @ 100° C (ASTM D445)	13.8
Viscosity Index (ASTM D2270)	107
Sulfated Ash, % wt. (ASTM D874)	1.8
TBN (ASTM D2896)	13.5
Zinc, % wt. (ASTM D4951)	0.11
Gravity @ 16° C API (ASTM D287)	26.2
Phosphorus, % wt. (ASTM D1091)	0.10

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

{B} Passes FZG DIN 51354-2 A/8, 3/90 FLS 12.

{C} Can be used in applications where the obsolete API CD classification oil is recommended.

English Volume (gal)	Metric Volume (L)	Part Number	English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40</b>			<b>SAE 40 (Continued)</b>		
0.250 (1 Qt.)	--	8C-3707	55	--	8C-3704
1	--	8C-3706	Bulk	--	155-6202
5	--	8C-3705	--	18	9X-2004

(Continued)

**Cat® DEO™ Monograde (Continued)**

For Cat 3600 Series Diesel Engines

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40 (Continued)</b>		
--	19	9X-8529
--	20	7X-7843
--	200	9X-8528
--	205	7X-7842

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40 (Continued)</b>		
--	1000	9X-6272
--	1200	203-1044
--	2000	119-5134
--	10 000	119-5133
--	10 004	8C-3703

**Cat® DEO Cold Weather****Best Performance and Protection for Cold Weather Applications**

Cat® DEO Cold Weather is a synthetic diesel engine oil designed with an extremely stable formula tailored to provide long-lasting engine protection over a wide temperature range, -40° F (-40° C) to 104° F (40° C). The backwards compatibility of Cat DEO Cold Weather makes it well suited for mixed fleets of new and old machines. When used in engines equipped with emissions reduction technologies, Cat DEO Cold Weather delivers the full life and performance of aftertreatment components. Cat DEO Cold Weather exceeds the performance requirements of Cat ECF-3 (Engine Crankcase Fluid Specification) and the API CJ-4 and API SM categories.

Cat DEO Cold Weather takes the trouble out of starting your engine when temperatures are very low. The special formulation flows readily at low temperatures, reducing startup wear and improving fuel economy in some applications. The outstanding thermal stability and oxidation resistance of Cat DEO Cold Weather keeps engine components cleaner, further reducing wear. In testing, Cat DEO Cold Weather was shown to reduce piston deposits by more than 30% and to have more than 80% better viscosity control than ECF-3 standards. These results demonstrate that Cat DEO Cold Weather will help lower your owning and operating costs through fewer oil changes and repairs.

**Benefits**

- Easier Engine Starts — Excellent low temperature performance eliminates hard starts
- Reduced Engine Wear — Improved detergents keep engine components cleaner
- Minimized Deposits — Reduced oxidation breakdown and thermal degradation improves stability which minimizes the formation of deposits, sludge and varnish
- Full Component Life — Specially designed additives deliver superior engine protection while supporting consistent emissions performance and extending the life of aftertreatment system components
- Extended Drain Intervals — When regular S•O•S<sup>SM</sup> Oil Analysis is utilized, long oil life is possible

**Applications**

Cat DEO Cold Weather is the preferred diesel engine oil for low temperature applications.<sup>1</sup> Cat DEO Cold Weather supports consistent emissions performance in engines equipped with aftertreatment devices designed to meet:<sup>2</sup>

- 2007/2010 On-Highway exhaust emissions standards (US)
- Tier 4 (US)
- Stage IIIB/IV (EU)
- Step 4 (Japan)

(Continued)

**Cat® DEO Cold Weather (Continued)**

Typical Characteristics {A}	
SAE Viscosity Grade	0W-40
API Service Classification	Diesel: CJ-4, CI-4 PLUS/CI-4, CH-4; Gasoline: SM
OEM Performance	Cat ECF-3, Cummins CES 20081, Mack EO-N PP '03
Viscosity cST @ 40° C (ASTM D445)	87
Viscosity cST @ 100° C (ASTM D445)	15.2
Viscosity Index (ASTM 2270)	186
Phosphorous, % wt. (ATM D4951)	0.111
Sulfated Ash, % wt. (ASTM D874)	0.99
Sulfur, % wt. (ASTM D2622)	0.4
TBN (ASTM D2896)	7.8
Zinc, %wt. (ASTM D4951)	0.121
Gravity @ 16° C API (ASTM D287)	36.2
Specific Gravity @ 16° C	0.844

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 0W-40</b>		
--	5	347-8468
5.3	20	347-8469
54.2	205	347-8470

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 0W-40 (Continued)</b>		
--	Bulk	347-8471
1.1	4	361-0923

<sup>1</sup>Oil recommendations for 3116 and 3126 MUI Marine and MaK diesel engines can be found in the Operations & Maintenance Manual (OMM).

<sup>2</sup>Aftertreatment devices can include Diesel Particulate Filters (DPF), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction (SCR) and/or Lean NOx Trap (LNT).

**Cat® DEO-ULS™**

(For the United States, Canada, and Mexico only)

**Recommended Use**

- Cat DEO-ULS exceeds the performance requirements of Cat ECF-3 (Engine Crankcase Fluid Specification) and API CJ-4.
- Preferred for all 2007 on-highway, non-road Tier 4 U.S. EPA engines and Euro Stage IIIB engines equipped with aftertreatment systems using 15-ppm sulfur fuel.
- May also be used with engines not equipped with aftertreatment systems using 2,000-ppm (or less) sulfur fuel without affecting the oil change interval.

**Discover the Difference**

- Cat DEO-ULS is developed and tested to provide superior protection and life for Cat engines.
- Better Detergents — Protect against piston and ring groove deposits.
- Advanced Additive Package — Improves protection of the engine and the Diesel Particulate Filter (DPF).
- Enhanced Dispersants — Provide better soot-related viscosity control, prevents viscosity loss from shearing and reduce oil consumption.
- Improved Protection from Thermal and Oxidative Breakdown — Withstands higher sump temperatures while offering low-temperature pumpability.



Equipment Fluids

(Continued)



**Cat® DEO-ULS™ (Continued)**

(For the United States, Canada, and Mexico only)

Typical Characteristics {A}		
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30
API Service Classification — Diesel	CJ-4, CI-4 PLUS/CI-4, CH-4	
API Service Classification — Gasoline	SM/SL	
Caterpillar Performance Level	ECF-3	ECF-3
Volvo Performance Level	VDS-4/VDS-3	VDS-4/VDS-3
ACEA Performance Level	E9-08/E7-04	E9-08/E7-04
Cummins Performance Level	CES 20081	
Mack Performance Level	EO-O Premium Plus	
DDC Performance Level	PGOS 93K218	
Flash Point, °C (ASTM D92)	236	230
Pour Point, °C (ASTM D97)	-30	-27
Viscosity cSt @ 40° C (ASTM D445)	114	79
Viscosity cSt @ 100° C (ASTM D445)	15.0	11.9
Viscosity Index (ASTM D2270)	137	145
Sulfated Ash, % wt. (ASTM D874)	0.98	0.97 (ASTM D4739)
TBN (ASTM D2896)	10.4	10.4
Phosphorus, % wt. (ASTM D4951)	0.100	0.100
Sulfur, % wt. (ASTM D2622)	0.3	0.3
Gravity @ 16° C API (ASTM D287)	30.2	
Gravity @ 16° C Specific	0.876	

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Equipment Fluids

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
<b>SAE 15W-40</b>			
1	--	--	291-3866
5	--	--	291-3868
55	--	--	291-3869
<b>Cat DEO-ULS 15W-40</b>			
Bulk	--	--	300-7913
--	1	--	300-7914
--	1000	--	381-7214
--	20	--	300-7915
--	208	--	301-2233
--	4	--	378-6535
--	5	--	368-4791
--	Bulk	--	349-2581
--	Bulk — Rail	--	335-2491

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
<b>Cat DEO-ULS 10W-30</b>			
1	--	4	317-3081
5	--	--	317-3083
55	--	--	317-3084
Bulk	--	--	319-2260
--	1	--	341-0729
--	1200	--	385-5942
--	20	--	308-1476
--	208	--	317-3085
--	5	--	368-4792
--	Bulk	--	346-0465

**Cat® SAE0™**

**Recommended Use**

- Cat Special Application Engine Oil is the only oil approved by Caterpillar for use in the 3116 and 3126 Marine Diesel Engines with mechanical unit injection and a closed crankcase ventilation system. This system circulates blowby gases from the engine crankcase to the turbocharger inlet. These blowby gases can form harmful deposits in the turbocharger and the aftercooler. Cat Special Application Engine Oil is designed to reduce or eliminate the formation of these harmful deposits.<sup>1</sup>



**Discover the Difference**

- Stops the buildup of deposits in the turbocharger compressor and the aftercooler that can reduce power and cause an increase in smoke.
- Maintains stable oil consumption within the specified oil change interval and from one interval to the next.
- Stabilizes functional chemistry throughout each service interval.
- Stops the buildup of deposits on pistons and rings that can increase oil consumption.
- Helps to eliminate the formation of deposits on pistons that are abrasive enough to polish the hone pattern from the surface of the liners.
- Prevents the clumping of soot particles that can cause an abnormal increase in viscosity, piston deposits, or sludge.

Typical Characteristics {A}		
SAE Viscosity Grade	SAE 30	SAE 40
Manufacturer	1K	1K
Manufacturer	C4	
Flash Point, °C (ASTM D92)	232	232
Pour Point, °C (ASTM D97)	-23	-18
Viscosity cSt @ 100° C (ASTM D445)	11.0	14.0
Sulfated Ash, % wt. (ASTM D874)	0.9	0.9
TBN (ASTM D2896)	6.5	6.5
Zinc, % wt. (ASTM D1549)	0.12	0.12
Phosphorus, % wt. (ASTM D1091)	0.10	0.10

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 30</b>		
1	--	170-5262
5	--	198-7368
Bulk	--	161-5824
--	20	9X-6462
--	208	9X-6463

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40</b>		
1	--	170-5261
5	--	198-7369
--	20	7X-7840
--	208	7X-7843

<sup>1</sup> Cat SAE0 should not be used in 3406, 3126, C-10, C-12, or 3116 low emission on-highway truck engines. Use Cat DEO multi-grade oils.

Equipment Fluids

## Cat® NGEO™

**Recommended Use**

- Designed for engines using gaseous fuels.
- Compatible with exhaust catalyst applications that require a low-phosphorus oil.
- Provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen sulfide per mega Joule (0.35 mg hydrogen sulfide per BTU).

**Discover the Difference**

- Cat NGEO is formulated from select base stocks blended with special additives to provide an economical engine oil for natural gas applications. Cat NGEO is developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.
- High-Endurance Lubrication — Performs throughout the long oil change intervals common for gaseous fuel engines.
- Reduced Piston and Cylinder Wear — Anti-oxidation and anti-nitration properties prevent carbon deposit buildup to minimize scuffing, scoring and wear.
- Increased Valve Life — Protects against damage to guide faces and seals.
- Corrosion Protection — Neutralizes acids to prevent rust and copper corrosion.
- High-Temperature Performance — Provides excellent thermal stability and resists foaming and sludge formation.

Typical Characteristics {A}

Typical Characteristics {A}	
SAE Viscosity Grade	SAE 40
Gravity, API	27.5
Flash Point, °C (ASTM D92)	265
Pour Point, °C (ASTM D97)	-15
Viscosity cSt @ 40° C (ASTM D445)	130
Viscosity cSt @ 100° C (ASTM D445)	13.5
Viscosity Index (ASTM D567)	99
Sulfated Ash, % wt. (ASTM D874)	0.48
TBN, mg KOH/g (ASTM D2896)	6.2
Phosphorus, % wt. (Spectro or AA)	0.030
Calcium, % wt. (Spectro or AA)	0.125

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number	English Volume (gal)	Metric Volume (L)	Part Number
SAE 40			SAE 40 (Continued)		
--	200	197-6911	--	208	105-3336
--	19	121-0327	--	209	166-3491
--	205	9X-8527	--	1000	159-8156

## Cat® NGEO EL250™

**Applications**

- For natural gas engines and other engines requiring low ash oil.

**Features**

- Increased detergent concentration and acid neutralizing capability to assure less lacquer and deposits on pistons and valves.
- Control of sludge formulation.
- Outstanding resistance to oil nitration and oxidation.

**Benefits**

- Improves ring and liner service life.
- Increased soot-handling capability.

(Continued)

**Cat® NGE0 EL250™ (Continued)**

- Protection against valve guide face and seat damage, piston scuffing, scoring and piston/cylinder wear, foam and corrosion damage, and piston carbon deposits.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40</b>		
--	20	216-9221
--	208	216-9224
--	Bulk	7X-2426

**Cat® NGE0 EL350™**

**Recommended Use**

- Provides superior lubrication in high-horsepower gaseous-fueled engines.
- Compatible with exhaust catalyst applications that require a low-phosphorus oil.
- Compatible with “lean burn” engines requiring low-ash oil.
- Provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen per mega Joule (0.35 mg hydrogen sulfide per BTU).
- May be used in engines that use high-sulfur gas or bio-gas, provided that shorter drain intervals are employed.



**Discover the Difference**

- Cat NGE0 EL350 is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill — Used as standard factory-fill for Cat natural gas engines.
- Reduced Piston and Cylinder Wear — Anti-oxidation and anti-nitration properties prevent deposit buildup to minimize scuffing, scoring and wear.
- Increased Spark Plug and Valve Life — Excellent detergent and dispersant additives protect against deposits and damage.
- Corrosion Protection — Acid neutralizers protect parts from rust and copper corrosion.
- Extended Drain Intervals — Provide extended oil drain capabilities when used in conjunction with our S•O•S<sup>SM</sup> Services oil analysis program.

Typical Characteristics {A}	
SAE Viscosity Grade	SAE 40
Gravity @ 16° C, API (ASTM D287)	29.3
Gravity @ 16° C, Specific	0.882
Flash Point, °C (ASTM D92)	247
Pour Point, °C (ASTM D97)	-21
Viscosity cSt @ 40° C (ASTM D445)	125
Viscosity cSt @ 100° C (ASTM D445)	13
Viscosity Index (ASTM D2270)	97
Sulfated Ash, % wt. (ASTM D874)	0.54
TBN, mg KOH/g (ASTM D2896)	6.2
Phosphorus, % wt. (Spectro or AA)	0.03
Calcium, % wt. (Spectro or AA)	0.13

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number	English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40</b>			<b>SAE 40 (Continued)</b>		
5	--	225-5082	--	1000	249-2309
55	--	225-5083	--	20	225-5084
Bulk	--	272-3217	--	205	269-1971

(Continued)

**Cat® NGE0 EL350™ (Continued)**

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 40 (Continued)</b>		
--	208	225-5085
--	Bulk	283-0781

**Cat® NGE0 Advanced 40**

Cat® NGE0 Advanced 40 is an SAE 40 viscosity grade. The oil is designed to specifications that provide superior lubrication performance in Cat® natural gas engines. Cat NGE0 Advanced 40 is formulated from select base stocks blended with special additives to provide:

- Excellent oxidation stability and nitration control properties
- Good thermal stability for high temperature deposit control
- Reduced carbon and sludge formation

**Reduced Piston and Cylinder Liner Wear**

- High temperature deposit control properties prevent deposit buildup on pistons and piston rings to minimize scuffing, scoring, and wear.

**Increased Spark Plug and Valve Life**

- Excellent detergent and dispersant additives protect against deposits and damage.

**Corrosion Protection**

- Acid neutralizers protect parts from rust and copper corrosion.

NGE0 Advanced 40 provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen per mega Joule (0.35 mg hydrogen sulfide per BTU). NGE0 Advanced 40 may be used in engines that use high-sulfur gas, provided that shorter drain intervals are employed.

Typical Characteristics {A}	
Viscosity Grade	SAE 40
Flash Point, °C (ASTM D92)	252
Pour Point, °C (ASTM D97)	-30
Viscosity cSt (D445)	
40° C	115
100° C	12.7
Viscosity Index (ASTM D2270)	103
Sulfated Ash, % wt. (ASTM D874)	0.5
Total Base Number, mg KOH/g (ASTM D2896)	6
Phosphorus, % wt. (Spectro)	0.03
Calcium, % wt. (Spectro)	0.15

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>Cat NGE0 Advanced 40</b>		
--	208	331-7031
--	Bulk	331-7032
5	--	381-2364
55	--	381-2365
--	1000	381-2367
--	20	331-7030



**Cat® Bio HYDO™ Advanced****High Performing, Environmentally Friendly**

Cat® Bio HYDO™ Advanced is an environmentally friendly hydraulic fluid that has the drain interval of premium mineral-based oil. Developed for use in any environment, Cat BIO HYDO Advanced provides superior performance across a wide temperature range and many applications, including: Construction, Forestry, Dredging, Ports, and Tunnel Boring.

**Benefits:****Environmentally Friendly**

- Non-toxic formula
- Readily biodegradable
- EU Flower eco-label certified

**Extended Drain Intervals**

- Excellent oxidation stability
- Comparable to premium mineral-based hydraulic oils

**Exceptional System Protection**

- Superior wear protection
- Corrosion resistance
- Fast air release

**Features**

- Long Life — Cat Bio HYDO Advanced outperforms the previously recommended Cat Bio HYDO and competitive brands. In fact, Cat Bio HYDO Advanced performance is comparable to premium mineral-based hydraulic oils. Like Cat HYDO Advanced, Cat Bio HYDO Advanced can be taken up to a 6,000 hour drain interval with Cat S•O•S<sup>SM</sup> Fluid Analysis.
- Biodegradable — readily biodegradable and non-toxic, so that it can be used in environmentally sensitive areas without concern.
- Wide temperature Range Protection — maintains consistent wear protection throughout the entire temperature range, -22° F (-30° C) — 113° F (45° C). From cold start through to operating temperature, Cat Bio HYDO Advanced gives you the best system protection.
- Improved Flow Through Filters — retains its ability to flow through filters even when water is present.
- Seal Compatibility — Cat Bio HYDO Advanced is highly compatible with the seals used in Cat Hydraulic systems. This means fewer leaks and lower maintenance costs.
- Component Protection — specially developed additives form a protective layer on wear surfaces, reducing wear in hydraulic pumps and other components. Cat BIO HYDO Advanced provides excellent corrosion protection to steel and bronze components, even at high temperatures.

(Continued)

## Cat® Bio HYDO™ Advanced (Continued)

Cat Bio HYDO Advanced Typical Characteristics {A}				
Characteristics	Cat Bio HYDO Advanced (HEES)	Typical Environmentally Friendly Synthetic Ester HEES Hydraulic Oil {B}	Typical Premium Industrial Hydraulic Oil {B}, HVLP {B}, HV {B}	Benefits of Cat Bio HYDO Advanced
Oxidation Stability Test, ASTM D493 (Longer is better)	More than 3,000 hrs (Dry)	Less than 500 hrs (Dry)	2,000 hrs	Long Drain Interval Results in Reduced Owning & Operating Cost
Long Drain Interval Capability	Yes	No	No	--
Suitable for use in Environmentally Sensitive Areas	Yes	Yes	No	Low Environmental Impact
Renewable Content, ASTM D6866	>80%	>50%	None	--
Viscosity at 100° C, ASTM D445	8.6 cSt	8.1-9.0 cSt	8.0 cSt	Excellent Wear Protection and Wide Operating Temperature Range
Viscosity at 40° C, ASTM D445	44.3 cSt	46 cSt	46 cSt	Cat Bio HYDO Advanced is Recommended for Ambient Temperatures from -30° C to +45° C
Viscosity Index, ASTM D2270 (Higher is Better) {C}	176	150-180	140	--
Viscosity at 100° C, ASTM D445 During Use After Shear {C}	8.6 cSt	9 cSt	6.6 cSt	--
Pour Point, ASTM D 97	-45° C	-36° C	-36° C	--
Brookfield Viscosity at -20° C ASTM D2983	1,227 cP	2,500 cP	2,500 cP	--
Brookfield Viscosity at -30° C ASTM D2983	3,039 cP	--	--	--

{A} The values shown here are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

{B} Not recommended for use in Cat Hydraulic systems.

{C} High Viscosity Index oils containing viscosity modifier additives will become thinner during use, this will reduce the level of protection.

(Continued)

**Cat® Bio HYDO™ Advanced (Continued)**

Cat Bio HYDO Advanced Typical Characteristics {A} (Continued)				
Characteristics	Cat Bio HYDO Advanced (HEES)	Typical Environmentally Friendly Synthetic Ester HEES Hydraulic Oil {B}	Typical Premium Industrial Hydraulic Oil {B}, HVLP {B}, HV {B}	Benefits of Cat Bio HYDO Advanced
FZG Gear Test, DIN 51534, Fail Stage (Higher is better) {D}	>12	12	11	Excellent Wear Protection and Wide Operating Temperature Range
4-Ball Wear Test, ASTM D4172	0.35 mm	—	—	Cat Bio HYDO Advanced is recommended for Ambient Temperatures from -30° C to +45° C
35VQ25 Total Wear, mg (Lower is better)	25 mg	<90 mg	<90 mg	--
Air Release at 50° C (ASTM D3427) (Lower is better)	1 minute	7 min-13 min	7 min-13 min	Faster Air Release Reduces Cavitation Damage
Copper Strip Corrosion, ASTM D130, 3 Hours (1A is better than 1B, 1A at 150° C is better than 1A at 100° C)	1A at 150° C	1B at 100° C	1B at 100° C	Best in Class Corrosion Protection
Corrosion Protection, ASTM D665B	Pass	Pass	Pass	--

{A} The values shown here are typical values and should not be used as quality control parameters to either accept or reject product.

Specifications are subject to change without notice.

{B} Not recommended for use in Cat Hydraulic systems.

{D} In addition to high FZG rating, the oil must demonstrate excellent protection to hydraulic pumps and motors, excellent corrosion protection and compatibility with metal and seals.

Cat Bio Hydo Advanced		
English Volume (gal)	Metric Volume (L)	Part Number
--	5	143-3218
5.3	--	339-3249
55	--	339-3250
--	20	341-2442
--	208	341-2443

Equipment Fluids

## Cat® HYDO™ Advanced 10



### 6,000 Hour Extended Drain Intervals

Cat is introducing a new hydraulic oil to the fluid product line, Cat HYDO Advanced 10. This new oil is a combination of premium additives and specially selected and controlled higher quality base oils designed to provide extended drain intervals and extra protection to hydraulic system components.

Cat HYDO Advanced 10 represents a significant performance breakthrough in hydraulic oil technology. This oil has been developed with an optimized formulation that has been subjected to severe qualification testing in the field and laboratory for thousands of hours. The result is the best product available for Cat hydraulic systems.

### Features & Benefits

- 6,000 hour extended drain intervals — up to the hours of Cat HYDO 10W when monitored with Cat S•O•S<sup>SM</sup> Services oil analysis program—every 500 hours. Reduces owning and operating costs and increases uptime.
- Enhances long lasting anti-wear protection — specially developed additives form a protective layer on the wear surfaces, reducing component wear in high-pressure piston, vane and gear hydraulic pumps.
- Holds water in dispersion — contains emulsifiers specially designed to disperse water. Cat does not recommend oils that “separate,” “shed” or “release” water. Separated water drawn through the hydraulic system can damage pumps and other components. If this water freezes, it can cause serious damage.
- Backward compatibility — the only hydraulic oil you need to stock for your maintenance operations. Preferred fill for Cat equipment.
- Improved filtration properties — special detergent dispersants keep components clean and improve transport of contaminants through the filters. Compatible with Cat Ultra High Efficiency filters.
- Improved corrosion protection — protects metal surfaces from rust. Better corrosion protection than most oils in the Cat line-up.
- Faster air release — rapid air separation reduces air release time, preventing cavitation, Cat HYDO Advanced 10 air release time of less than 4 minutes is far superior compared to Cat HYDO 10W at 7-10 minutes air release time (per ASTM D3427 testing).
- Wide temperature range protection — maintains consistent wear protection at both cold and hot temperatures. Designed to flow readily at cold temperature start up, and maintains excellent wear protection at operating temperatures.
- Improved oil stability — 250% increase in oxidation stability per ASTM D943. Improved oil stability and wear protection make Cat HYDO Advanced 10 last longer.

(Continued)

Cat® HYDO™ Advanced 10 (Continued)

Cat HYDO Advanced 10 Typical Characteristics {A}				
Characteristics	HYDO Advanced 10	Typical Diesel Engine Oil API CF SAE 10W	Typical Premium Industrial Hydraulic Oil, HVLP or HV	HYDO Advanced 10 Advantages
SAE Viscosity Grade	10W	10W	Varies	
Viscosity				
cSt @ 40° C (ASTM D445)	42	40	46	Better wear protection, wider operating temperature range
cSt @ 100° C (ASTM D445)	6.7	6.3	8.0	--
Viscosity Index (ASTM D2270)	114	105	146	--
Viscosity after Shear (cSt, during use) {B}	6.7	6.3	6.6	--
FZG Gear Test DIN 51534, Fail Stage {C}	12	12	11	--
35VQ25 Vickers Total Wear Test	33 mg	40-90 mg	<90 mg	--
4 Ball (40 kg/30 min/600 rpm/93° C ASTM D4172)	0.37 mm	Varies	Varies	--
Pour Point, °C (ASTM D97)	-39	-30	-36	--
Pumping @ -30° C mPaS (ASTM D4684)	15,000	Varies	Varies	--
Zinc, % wt. (ASTM D4951) typical	0.090	Varies	<0.040	--
Copper Strip Corrosion (3 hr, ASTM D130) {D}	1A @ 150° C	1A @ 100° C	1A @ 100° C	Corrosion protection

Equipment Fluids

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

{B} Oils that contain viscosity modifier additives will become thinner during use in this machine. This will reduce protection level.

{C} Higher is typically better, but too much active anti-wear additives may lead to reduced component life.

{D} 1A is better than 1B, 1A at 150° C is better than 1A at 100° C.

(Continued)



## Cat® HYDO™ Advanced 10 (Continued)

Cat HYDO Advanced 10 Typical Characteristics				
Characteristics	HYDO Advanced 10	Typical Diesel Engine Oil API CF SAE 10W	Typical Premium Industrial Hydraulic Oil, HVLP or HV	HYDO Advanced 10 Advantages
Rust Protection (ASTM D665B) {E}	Pass	Varies	Varies	Corrosion protection
Oxidation stability, hours (ASTM D943)	>5,000	2,000 hours	2,000 hours	Long Drain Interval, lower owning and operating costs
Long Drain Interval, confirmed by field testing	Yes	No	No	--
Filterability, Wet, E DIN ISO 13357-1	Pass	Fail	Pass	Reduced filter plugging improves contamination control, due to better filtration
Air Release @ 50° C (ASTM D3427)	4 minutes	7-10 minutes	7-13 minutes	Better air release reduces cavitation damage
Foam Test {F}		Varies	Varies	--
Seq. 1 ml. (ASTM D892)	0/0			--
Seq. 2 ml. (ASTM D892)	5/0			--
Seq. 3 ml. (ASTM D892)	0/0			--
Cleanliness	No interference with optical particle counters	Interferes with optical particle counters	Varies	Accurate contamination control
Ability to keep water in emulsion	Yes	Yes	No	Sludge control and water damage prevention

{E} May be difficult to pass with 10W engine oils.

{F} New oil, as received, with 0.1% water by volume added.

English Volume (gal)	Metric Volume (L)	Package Quantity	Part Number
1	--	4	309-6932
5	--	--	309-6931
55	--	--	309-6930
Bulk	--	--	314-5168
Bulk Railcar	--	--	309-6929
--	5	--	309-6945
--	18	--	309-6944
--	19	--	309-6943
--	20	--	309-6942

English Volume (gal)	Metric Volume (L)	Package Quantity	Part Number
--	60	--	309-6941
--	200	--	309-6940
--	205	--	309-6939
--	208	--	309-6938
--	1000	--	309-6937
--	2000	--	309-6936
--	10 000	--	309-6935
--	15 000	--	309-6934
--	15 004	--	314-5169

## Cat® HYDO™ Advanced 30

### 6,000 Hour Extended Drain Intervals

Caterpillar is introducing a new Cat® HYDO Advanced 30 hydraulic oil to the fluid product line. Cat HYDO Advanced 30 compliments the recently introduced Cat HYDO Advanced 10. These new oils are a combination of premium additives and specially selected and controlled higher quality base oils designed to provide extended drain intervals and extra protection to hydraulic system components.

Cat HYDO Advanced 30 and 10 represent a significant performance breakthrough in hydraulic oil technology. These oils have been developed with an optimized formulation that has been subjected to severe qualification testing in the field and laboratory for thousands of hours. The result is the best product available for Cat machine hydraulic systems.

Cat HYDO Advanced 30 is an oil specifically formulated for working in consistently hot climates with temperatures ranging above 40° C (104° F).

### Features & Benefits

- 6,000 hour extended drain intervals — up to triple the hours of Cat® HYDO 30 when monitored with Cat® S•O•S<sup>SM</sup> Services oil analysis program — every 500 hours. Reduces owning and operating costs and increases uptime.
- Enhances long lasting anti-wear protection — specially developed additives form a protective layer on the wear surfaces, reducing component wear in high-pressure piston, vane, and gear hydraulic pumps.
- Holds water in dispersion — contains emulsifiers specifically designed to disperse water. Cat does not recommend oils that “separate,” “shed,” or “release” water. Separated water drawn through the hydraulic system can damage pumps and other components. If this water freezes, it can cause serious damage.
- Backward compatibility — the only hydraulic oil you need to stock for your maintenance operations. Preferred fill for Cat equipment.
- Improved filtration properties — special detergent dispersants keep components clean and improve transport of contaminants through the filters. Compatible with Cat Ultra High Efficiency filters.
- Improved corrosion protection — protects metal surfaces from rust. Better corrosion protection than most oils in the Cat line-up.
- Wide temperature range protection — maintains consistent wear protection at both cold and hot temperatures. Designed to flow readily at cold temperature start up, and maintains excellent wear protection at operating temperatures.
- Improved oil stability — 250% increase in oxidation stability per ASTM D943. Improved oil stability and wear protection make Cat HYDO Advanced last longer.

## Cat® HYDO™ Advanced 30 (Continued)

Cat HYDO Advanced 30 Typical Characteristics {A}		
Characteristics	HYDO Advanced 30	HYDO Advanced 30 Advantages
SAE Viscosity Grade	30	Better wear protection, wider operating temperature range
Viscosity		--
cSt @ 40° C (ASTM D445)	90	--
cSt @ 100° C (ASTM D445)	10.6	--
Viscosity Index (ASTM D2270)	100	--
Viscosity after Shear (cSt, during use) {B}	10.6	--
4 Ball (40 kg/30 min/600 rpm/93° C ASTM D4172)	0.30 mm	--
Pour Point, °C (ASTM D97)	-24	--
Brookfeld Viscosity @ -20° C (ASTM D2983) mPaS	13,600	--
Zinc, % wt. (ASTM D495) typical	0.090	--
Copper Strip Corrosion (3 hr, ASTM D130) {C}	1A @ 150° C	Corrosion protection
Rust Protection (ASTM D665B)	Pass	--
Oxidation stability, hours (ASTM D943)	>5,000	Longer drain interval; lower owning and operating costs
Long Drain Interval, confirmed by field testing	Yes	--
Filterability, Wet, E DIN ISO 13357-1	Pass	Reduced filter plugging; improves contamination control due to better filtration
Foam Test {D}		Reduces foaming
Seq. 1 ml. (ASTM D892)	0/0	--
Seq. 3 ml. (ASTM D892)	0/0	--
Seq. 3 ml. (ASTM D892)	0/0	--
Cleanliness	No interference with optical particle counters	Accurate contamination control
Ability to keep water in emulsion	Yes	Sludge control and water damage prevention

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

{B} Oils that contain viscosity modifier additives will become thinner during use in this machine. This will reduce protection level.

{C} 1A is better than 1B, 1A at 150° C is better than 1A at 100° C.

{D} New oil, as received, with 0.1% water by volume added.

Metric Volume (L)	Part Number
18	319-5920
20	319-5921
200	319-5922

Metric Volume (L)	Part Number
208	319-5923
Bulk	319-5919

**Cat® TDTO™**

**Recommended Use**

- Preferred lubricant for Cat power shift transmissions, most final drives and wet brake compartments.
- Cat machine compartments where TO-4 and TO-4M specification oils are recommended.
- Other manufacturers' machines that recommend TO-4 or TO-4M or specification oils for their transmissions, final drives and wet brake compartments.

**Discover the Difference**

- Cat TDTO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill — Used as standard factory-fill for Cat machine compartments where TO-4 oils are specified.
- Longer Clutch Life — Prolongs clutch disc life up to 45%.
- Optimum Wear Life — Ensures long life and excellent performance for gears, bearings and friction disc material.
- System-Matched Formula — Engineered as an integral part of Cat power shift transmissions, most wet brake compartments, and Hydrostatic Systems.



Typical Characteristics {A}			
SAE Viscosity Grade	SAE 10W	SAE 30	SAE 50
Caterpillar Test	TO-4	TO-4	TO-4
Allison Test	C-4	C-4	C-4
ISO Viscosity Grade	46	100	220
Flash Point, °C (°F) (ASTM D92)	202 (395)	224 (435)	240 (464)
Pour Point, °C (°F) (ASTM D97)	-33 (-27) min.	-18 (0) min.	-15 (5) min.
Viscosity cP @ -25° C (ASTM D5293)	6840		
Viscosity cSt @ 40° C (ASTM D445)	42.0	100	195
Viscosity cSt @ 100° C (ASTM D445)	6.3	11.2	18.0
Viscosity Index (ASTM D2270)	97	97	96
Sulfated Ash, % wt. (ASTM D4951)	1.2	1.2	1.2
TBN (ASTM D2896)	7.9	7.9	7.9
Zinc, % wt. (ASTM D4951)	0.127	0.127	0.127
Gravity API (ASTM D287)	29.7	27.0	24.7
Phosphorus, % wt. (ASTM D4951)	0.110	0.110	0.110
Calcium, % wt.	0.298	0.298	0.298

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Equipment Fluids

(Continued)

## Cat® TDTO™ (Continued)

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
<b>SAE 10W</b>			
5	--	--	8T-9568
55	--	--	8T-9569
Bulk	--	--	155-6212
--	5	--	100-7019
--	19	--	145-0995
--	20	--	7X-7852
--	25	--	9X-8525
--	200	--	112-2866
--	205	--	7X-7851
--	208	--	103-2528
--	209	--	123-3104
--	1000	--	166-0393
--	Bulk	--	3P-0659
<b>SAE 30</b>			
1	--	4	248-7521
5	--	--	8T-9572
55	--	--	8T-9573
Bulk	--	--	155-6213
--	5	--	9X-6467
--	18	--	9X-2010
--	19	--	9X-8469

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
<b>SAE 30 (Continued)</b>			
--	20	--	7X-7855
--	200	--	7X-2888
--	205	--	7X-7854
--	208	--	9X-6466
--	1000	--	7X-7611
--	Bulk	--	2P-9869
<b>SAE 50</b>			
5	--	--	8T-9576
55	--	--	8T-9577
Bulk	--	--	155-6214
--	5	--	9X-8443
--	18	--	9X-2012
--	19	--	9X-8531
--	20	--	7X-7858
--	200	--	9X-8530
--	205	--	7X-7857
--	208	--	3E-9478
--	1000	--	7X-7612
--	Bulk	--	5P-1228

## Cat® TDTO-TMS™

**Recommended Use**

- Cat transmissions, wet brakes and hydraulic compartments that must operate in wide temperature ranges.
- Cat machine compartments where TO-4 and TO-4M specification oils are recommended.
- Other manufacturers' machines that recommend TO-4 or TO-4M specification oils for their transmissions, final drives and wet brake compartments.

**Discover the Difference**

- Cat TDTO-TMS is a proprietary formulation that was specifically developed, tested and approved by Caterpillar to ensure peak performance in your transmission and to meet the same high standards as all genuine Cat parts.
- Longer Component Life — Reduces wear on transmission gears.
- Improved Cold-Weather Performance — Improves performance and efficiency of transmissions in cold weather, especially for machines with electronic controls.
- Optimum Wear Life — Ensures long life and excellent performance for gears, bearings and friction disc material.
- Fewer Oils, Fewer Changes — Can be used in multiple compartments with extended drain intervals over multiple seasons.

(Continued)

**Cat® TDTO-TMS™ (Continued)**

Typical Characteristics {A}	
SAE Viscosity Grade	Multi-Viscosity
Caterpillar Test	TO-4M, TO-4
Allison Test	C-4
Gravity, API (ASTM D287)	29.2
Flash Point, °C (°F) (ASTM D92)	222 (432)
Pour Point, °C (°F) (ASTM D97)	-39 (-38)
Viscosity cSt @ 40° C (ASTM D445)	107
Viscosity cSt @ 100° C (ASTM D445)	14.2
Viscosity Index (ASTM D2270)	134
Sulfated Ash, % wt. (ASTM D4951)	1.2
TBN (ASTM D2896)	8.4
Zinc, % wt. (ASTM D4951)	0.127
Phosphorus, % wt. (ASTM D4951)	0.110
Calcium, % wt.	0.298
KRL Shear Stability	10.0%

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>Multi-Viscosity</b>		
5	--	154-0195
55	--	154-0194
Bulk	--	154-0192

English Volume (gal)	Metric Volume (L)	Part Number
<b>Multi-Viscosity (Continued)</b>		
--	20	154-0196
--	208	154-0197
--	Bulk	154-0193

**Cat® TDTO™ Cold Weather**

**Best Performance and Protection for Cold Weather Applications**

Cat TDTO Cold Weather is a synthetic blend lubricant that provides superior performance and protection in transmissions, torque converters, final drives, hydraulics and/or wet brakes at temperatures down to -40° F (-40° C). The special formulation creates optimal friction performance and controls transmission slippage while eliminating clutch glazing. Cat TDTO Cold Weather has excellent compatibility with all materials used in Cat machines, including friction materials, seals and elastomers. The outstanding thermal stability and oxidation resistance gives Cat TDTO Cold Weather long drain intervals.

**Benefits:**

**Performance**

- Easier Engine Starts
- Greater Machine Rim Pull and Breakout Force
- Long Drain Intervals

**Protection**

- Promotes Transmission Durability
- Increased Clutch, Gears and Bearing Life
- Optimal Cold Weather Friction Performance



Equipment Fluids

(Continued)



**Cat® TDTO™ Cold Weather (Continued)****Applications**

Cat TDTO Cold Weather is the preferred transmission and drive train oil for low temperature operation in certain applications and can be used in wet brakes and hydraulics. Refer to SEBU6250 for more information.

Cat TDTO Cold Weather is also recommended for applications with the following original equipment manufacturer requirements:

- Cat TO-4
- Allison C-4
- Komatsu Micro-Clutch
- Vickers 35VQ25

**Long Drain Intervals**

With the use of Cat S•O•S<sup>SM</sup> Oil Analysis and Cat Filters, Cat TDTO Cold Weather is capable of long change intervals.

Typical Characteristics {A}	
SAE Viscosity Grade	0W-20
Gravity @ 16° C (60° F)	
Gravity @ API (ASTM D287)	30.8
Specific Gravity	0.872
Flash Point @ °C (ASTM D92)	170
Pour Point @ °C (ASTM D97)	-54
Kinematic Viscosity (ASTM D445)	
cSt @ 40° C	32.9
cSt @ 100° C	7.5
Brookfield Viscosity (ASTM D2983)	
cP @ -40° C	7,000
Total Base Number (TBN) (ASTM D664)	7.9
Low Temperature Pumpability @ °C (ASTM D4684)	-54
Phosphorus, ppm	1,060
Zinc, ppm	1,250
Calcium, ppm	3,000
Sulfated Ash, % wt.	1.2

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
--	4	4	341-1949
--	4	1	332-8851
--	20	--	228-6069

English Volume (gal)	Metric Volume (L)	Qty.	Part Number
--	205	--	228-6070
Bulk	--	--	301-4523

**Cat® FDAO™**

**Recommended Use**

- Preferred lubricant for Cat Off-Highway Truck front wheels, differentials and final drives.
- Preferred lubricant for Cat Large Track-Type Tractor, Pipelayer, and Track Skidder final drives (steel-tracked machines with elevated final drives except the D5M, D6M and 561M).
- Compatible with Cat final drives and axles that previously specified TO-4 lubricants and do not contain friction material.

**Discover the Difference**

- Cat FDAO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill — Used as standard factory-fill for Cat Off-Highway Trucks and Large Track-Type Tractors.
- Extended Drain Intervals — Allows for double-length drain intervals in off-highway truck final drives, as compared to TO-4 commercial oils.
- Minimal Foaming — Formulated to protect against the damaging effects of air.



Typical Characteristics {A}	
SAE Viscosity Grade	SAE 60
ISO Viscosity Grade	320
Caterpillar Test	FD-1
Gravity, 16° C API (ASTM D287)	25.9
Gravity, 16° C Specific	0.899
Flash Point, °C (°F) (ASTM D92)	225 (491)
Pour Point, °C (°F) (ASTM D97)	-15 (5)
Viscosity cSt @ 40° C (ASTM D445)	334
Viscosity cSt @ 100° C (ASTM D445)	25.2
Viscosity cP @ -10° C (ASTM D2983)	75,000
Viscosity Index (ASTM D2270)	97
Copper Strip (ASTM D130, 2 hrs @ 100° C)	1A

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 60</b>		
5	--	184-6022
55	--	184-6021
Bulk	--	184-6020
--	18	206-5210
--	20	184-8055

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 60 (Continued)</b>		
--	200	198-7672
--	205	201-9855
--	208	184-8056
--	1000	221-3445
--	1200	202-9753
--	Bulk	184-8054

**Cat® FDAO SYN™**



**Recommended Use**

- Preferred lubricant for Cat Off-Highway Truck and D11R carrydozer front wheels, differentials and final drives operating under high load factors.
- Compatible with Cat final drives and axles that previously specified Cat FDAO or T0-4 lubricants and do not contain friction material.

**Discover the Difference**

- Cat FDAO SYN is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Extended Drain Intervals — Extend drain intervals up to a factor of three in off-highway truck final drives, as compared to Cat TDTO and T0-4 oils.
- Minimal Foaming — Formulated to protect against the damaging effects of air.
- Longer Bearing and Gear Life — Has demonstrated the capability to double bearing life and quadruple gear life when compared to TDTO and T0-4 oils used in off-highway truck final drives.

Typical Characteristics {A}

SAE Viscosity Grade	Multigrade
ISO Viscosity Grade	320
Caterpillar Test	FD-1
Gravity, 16° C API (ASTM D287)	33.4
Flash Point, °C (°F) (ASTM D92)	246 (474) min.
Pour Point, °C (°F) (ASTM D97)	-36 (-38)
Viscosity cSt @ 40° C (ASTM D445)	320
Viscosity cSt @ 100° C (ASTM D445)	31.6
Viscosity cP @ -20° C (ASTM D2983)	34,000
Viscosity cP @ -30° C (ASTM D2983)	131,200
Viscosity Index (ASTM D2270)	138
Copper Strip (ASTM D130, 2 hrs @ 100° C)	1A

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Equipment Fluids

English Volume (gal)	Metric Volume (L)	Part Number
<b>Multi-Viscosity</b>		
5	--	208-2390
55	--	198-7450

English Volume (gal)	Metric Volume (L)	Part Number
<b>Multi-Viscosity (Continued)</b>		
--	18	206-5211
--	208	206-5212

**Cat® GO**

**Recommended Use**

- Cat GO does not meet Cat TO-4 specifications and should not be used when TO-4 is recommended
- Cat GO is a multi-viscosity API GL-5 classification gear oil intended for extreme-pressure applications, such as the following:
- Differentials and final drives on Cat Wheel Tractor-Scrapers, specific Articulated Trucks, Wheel Excavators, and Backhoe Loaders.
- Cold Planer direct drive transmissions, differentials and final drives.
- Drum bearings on Vibratory Soil Compactors.

**Discover the Difference**

- Cat GO is tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Longer Gear and Bearing Life — Superior thermal stability and oxidation resistance reduce deposits and wear.
- Extreme-Pressure Performance — Provides extra protection for improved performance and life in extreme-load conditions.
- Simplified Maintenance — Multi-purpose capability reduces number of gear lubricants needed for maintenance.
- Wide Temperature Range — Provides excellent stability at high temperatures and superior performance at low temperatures for easier start-ups.



Typical Characteristics {A}		
SAE Viscosity Grade	SAE 80W-90	SAE 85W-140
Gravity @ 16° C API (ASTM D287)	26.6	25.1
Flash Point, °C (°F) (ASTM D92)	210 (410)	230 (446)
Pour Point, °C (°F) (ASTM D97)	-27 (-17)	-18 (0)
Viscosity cSt @ 40° C (ASTM D445)	139	333
Viscosity cSt @ 100° C (ASTM D445)	14.5	25.4
Viscosity cP @ -26° C (ASTM D2983)	110,000	N/A
Viscosity Index (ASTM D2270)	104	99
Phosphorus, % wt. (ASTM D1091)	0.087	0.087

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 80W-90</b>		
5	--	8T-9582
15	--	8C-7398
30	--	8T-9583
55	--	8T-9584
Bulk	--	155-6220
--	5	9X-6470
--	20	7X-7867
--	60	7X-7887
--	208	9X-6469

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 80W-90 (Continued)</b>		
--	1000	119-5129
--	1200	8C-9927
--	Bulk	2P-9863
<b>SAE 85W-140</b>		
5	--	9X-6185
--	4	7X-7618
--	18	133-9643
--	19	9X-8535
--	20	7X-7617

Equipment Fluids

(Continued)

## Cat® GO (Continued)

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 85W-140 (Continued)</b>		
--	200	205-4312
--	205	7X-7616
--	209	133-9644

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 85W-140 (Continued)</b>		
--	1000	7X-7615
--	Bulk	7X-7614

## Cat® Synthetic GO

**Recommended Use**

- Cat GO does not meet Cat TO-4 specifications and should not be used when TO-4 is recommended.
- Cat Synthetic GO is a full synthetic multi-viscosity API GL-5 classification multipurpose gear oil for the following applications:
  - Sealed-and-lubricated track pins on Cat Track-Type Tractors and Track-Type Loaders.
  - Track-Type Tractor equalizer bar ends.
  - Differentials and final drives on Cat Wheel Tractor-Scrapers, specific Articulated Trucks, Wheel and Mini Excavators, and Backhoe Loaders.
  - Specific Articulated Trucks as recommended in your Operation and Maintenance Manual.
  - Motor Grader circle drives.
  - Cold Planer direct drive transmissions, differentials and final drives.
  - Drum bearings on Vibratory Soil Compactors.
  - Speed reducers on augers and elevators.

**Discover the Difference**

- Cat Synthetic GO is tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Maximum Gear and Bearing Life — Provides ultimate protection against scoring of gear teeth, as well as pitting in gear teeth and rolling-element bearings.
- Extended Track Life — Improves galling resistance, reduces seal wear and minimizes bushing end grooving in sealed-and-lubricated track joints.
- Wide Temperature Range — Offers superior stability at high temperatures and superior performance at low, even arctic, temperatures.
- Reduced Wear — Provides excellent oxidation resistance which reduces buildup of harmful deposits.
- Extreme-Pressure Performance — Offers powerful protection under extreme duty conditions.
- Factory-Fill — Used as standard factory-fill for Cat machines.

(Continued)

**Cat® Synthetic GO (Continued)**

Typical Characteristics {A}	
SAE Viscosity Grade	SAE 75W-140
API Service Classification	GL-5, MT-1
Gravity API (ASTM D287)	31.7
Gravity, Specific	0.867
Flash Point, °C (°F) (ASTM D92)	220 (428)
Pour Point, °C (°F) (ASTM D97)	-46 (-51)
Channel Point, °C (°F, max [FTMS 791A-3456])	-45 (-49)
Viscosity cSt @ 40° C (ASTM D445)	185
Viscosity cSt @ 100° C (ASTM D445)	25
Viscosity Index (ASTM D2270)	172
Phosphorus, % wt. (ASTM D1091)	0.141

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 75W-140</b>		
1	--	350-9509
5	--	242-3466
55	--	242-3467
--	Bulk	8C-3400

**Equipment Fluids**



## Compactor Oil



- Special synthetic oil used in vibrator drum of Compactors
- Packaged in 20 L (5 gal) pails
- Large machines take 20 L (5 gal) per drum
- Small machines take 10 L (2 1/2 gal) per drum

Part Number	EAME Part Number	Qty.	Size
353-4980	--	1	3.800 L (1.004 gal)
4C-6767	185-4759	1	20 L (5.283 gal)

## Cat® MTO



### Recommended Use

- Recommended for older Cat Backhoe Loader rear axles and Cat Challenger Tractors.
- Cat components and systems recommending multipurpose tractor fluid that meet Ford/New Holland M2C134D specification.
- Most Cat Hydraulic Systems.

### Discover the Difference

- Cat MTO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Improved Braking and Clutching — Where approved for use, enhances control and extends life in clutches and wet brakes.
- Lower Maintenance Costs — Exceptional anti-wear properties extend equipment and component lives.
- Cold-Weather Operation — Can be used in temperatures as low as -13° F (-25° C).
- Simplified Maintenance — Can be used in multiple compartments, reducing inventory and the chance of using the wrong oil.
- Long-Lasting Performance — Offers high thermal stability and oxidation resistance for long service life in severe applications.

(Continued)

Cat® MTO (Continued)

OEM Compatibility	
Cat MTO meets the following OEM specifications {A}:	
API	GL-4
CNH	MAT3525
Ford New Holland	FNHA-2-C-201
Kubota	UDT
Volvo	WB 101/BM
Cat MTO can be substituted in applications that require the following:	
AGCO Powerfluid	821 XL
Allison	C4 (Agriculture Applications Only)
Denison	HF-0/HF-1/HF-2 (T5D & P46)
Ford	ESN-M2C 134 D
JI Case	MS 1204-07/09
John Deere	JMD J20C
Massey Ferguson	MF 1135/1141
Vickers	35VQ25
Typical Characteristics {B}	
Gravity API (ASTM D287)	28.6
Flash Point, °C (°F) (ASTM D92)	214 (417)
Pour Point, °C (°F) (ASTM D97)	-42 (-44)
Viscosity Brookfield, cP at -20° C	4,300
Viscosity cSt @ 40° C (ASTM D445)	58
Viscosity cSt @ 100° C (ASTM D445)	9.3
Viscosity Index (ASTM D2270)	140
Zinc, % wt.	0.15 min.

{A} Cat MTO does not meet Cat TO-4 or FD-1 and should not be used in compartments that specify TO-4 or FD-1 oil.

{B} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 10W-30</b>		
5	--	105-3335
55	--	105-3334
Bulk	--	155-6218
--	5	172-6894
--	18	135-3189

English Volume (gal)	Metric Volume (L)	Part Number
<b>SAE 10W-30 (Continued)</b>		
--	19	112-9183
--	20	109-4395
--	200	126-2700
--	205	138-4271
--	208	120-5286
--	Bulk	105-3333

## Brake Fluid



- Meets DOT and SAE requirements

### DOT 3

- Use where DOT 3 brake fluid is specified by service manual or operators guide
- Loaders, lift trucks, and service trucks

### DOT 5

- DOT 5 is for extreme service conditions where higher than normal temperatures will be encountered or where moisture absorption is a problem
- High performance cars and off-road vehicles

Part Number	Qty.	Size
<b>DOT 3</b>		
4C-5585	12	0.94 L (1 qt)
4C-5586	4	3.79 L (1 gal)
<b>DOT 5</b>		
4C-5588	12	0.94 L (1 qt)

## Governor Oil

Model: 3600 Engine



- For 3600 Engine Woodward Governor

Part Number	Qty.	Size
136-9642	1	0.95 L

**Cat® Axle and Brake Oil Additive**

English Volume (qt)	Metric Volume (L)	Part Number
1 qt.	--	197-0017



**Oil Stabilizer**

- Reduces oil consumption
- Reduces engine wear
- Helps keep vital engine parts clean
- Reduces thermal oil and viscosity breakdown

This product should only be used as needed in the following engines:	
Engine Model	Engine Serial No.
3406E	5EK1-Up, 5DS1-Up, 6TS1-Up, 1LW1-Up, 2WS1-Up, 1MM1-Up, 4AS1-Up
C-15	6NZ1-82494
C-16	7CZ1-Up

Part Number	Qty.	Size
143-3655	12	0.94 L



**Hydraulic Oil Additive**

- Low friction additive for some hydraulic systems
- Relieves “stick-slip” on noisy hydraulic cylinders
- Not for use on machines which have a common sump for hydraulics, brake, and transmissions

Part Number	Size	Qty.
1U-9891	0.95 L (1 qt) bottle	12



Equipment Fluids

## Health and Safety

Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at [www.catmsds.com](http://www.catmsds.com).

### Cat® ELC™



#### Recommended Use

- Cat ELC meets or exceeds the requirements of the following specifications and guidelines:
- Cat EC-1
- ASTM D-3306
- ASTM D-6210
- TMC RP-329
- TMC RP-338
- SAE J1034

#### Discover the Difference

- Cat ELC is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill — Used as standard factory-fill for all Cat machine cooling systems.
- Lower Maintenance Costs — Reduces engine coolant and additive costs by as much as 500% compared to conventional coolants. Cat ELC eliminates the need for supplemental coolant additives, extends coolant change-out intervals and reduces disposal requirements.
- Advanced Metal Protection — Incorporates an advanced formula technology with organic acid additive corrosion inhibitors, such as a combination of mono and dicarboxylates for maximum protection of copper, solder, brass, steel, cast iron and aluminum.

Typical Characteristics {A}	
Color	Strawberry Red
Boiling protection with 15 psi (1 bar) radiator cap	
50% Cat ELC/50% water	129° C (265° F)
60% Cat ELC/40% water (ELC concentrate added)	132° C (270° F)
Freezing protection	
50% Cat ELC/50% water	-37° C (-34° F)
60% Cat ELC/40% water (ELC concentrate added)	-52° C (-62° F)
Nitrite (50% solution)	500 ppm
Molybdate (50% solution)	530 ppm

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

(Continued)

Cat<sup>®</sup> ELC™ (Continued)

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
<b>Cat ELC Concentrate (with embitterment)</b>			
--	4	365-8394	Asia Pacific
--	5	205-6615	Europe, Africa, Middle East
1	--	238-8647	North America and Latin America excluding Brazil
<b>Cat ELC Premix 50/50 (with embitterment)</b>			
--	4	365-8395	Asia Pacific
--	18	365-8396	Asia Pacific
--	200	365-8397	Asia Pacific
--	1000	365-8398	Asia Pacific
275	--	361-1024	North America and Latin America excluding Brazil
--	200	215-4242	Brazil
--	5	215-4245	Brazil
--	20	215-4246	Brazil
1	--	238-8648	North America and Latin America excluding Brazil
5	--	238-8649	North America and Latin America excluding Brazil
55	--	238-8650	North America and Latin America excluding Brazil
--	5	205-6611	Europe, Africa, Middle East
--	20	205-6612	Europe, Africa, Middle East
--	210	205-6613	Europe, Africa, Middle East
--	1000	205-6614	Europe, Africa, Middle East

Cat<sup>®</sup> ELI**Recommended Use**

- Inhibitor concentrate based on Cat<sup>®</sup> ELC technology
- For use in generator sets, industrial engines and marine engines that do not require freeze protection

**Discover the Difference**

- Corrosion protection, like Cat ELC, only without glycol
- Extended drain interval and little maintenance makes an excellent alternative to conventional supplement coolant additives with water
- Lower total owning and operating costs compared to water and SCA because of the extended drain interval and limited maintenance of Cat ELC

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
<b>Cat ELI Concentrate</b>			
1	--	351-9431	Worldwide except Europe, Africa, Middle East
--	1000	366-2753	Latin America, Australia and North America
--	20	351-9432	Worldwide except Europe, Africa, Middle East
--	208	351-9433	Worldwide except Europe, Africa, Middle East



## Cat® DEAC™

**Recommended Use**

- Cat DEAC is approved for use in all Cat machines, commercial engine and truck engine applications and most diesel, gas or natural gas engines made by other manufacturers.
- Cat DEAC meets the following ASTM standards:
- ASTM D6210 (Heavy-duty antifreeze/coolants)
- ASTM D3306 (Automotive applications)
- ASTM D1384 (Glassware corrosion test)

**Discover the Difference**

- Cat DEAC is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Excellent Performance — Contains organic and inorganic corrosion inhibiting and antifoam additives, and provides superior protection against pitting, corrosion and freezing down to -37° C (-34° F).
- Convenience — Fully formulated, no pre-mixing with supplemental coolant additive required at initial fill. Concentrate available in 1 gallon, 20 liter, and 55 gallon containers for top off.

Typical Characteristics {A}	
Color	Magenta
Boiling protection °C (°F) 15 psi pressure cap (ASTM D1177)	
50% Cat DEAC/50% water	129 (265)
60% Cat DEAC/40% water (maximum)	132 (270)
Freezing protection °C (°F)	
50% Cat DEAC/50% water	-37 (-34)
60% Cat DEAC/40% water (maximum)	-52 (-62)
Silicon concentrate (in the form of Silicates)	240 ppm
Ethylene Glycol (% volume)	95.2% min.

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
<b>Cat DEAC — Concentrate with Embitterment</b>			
5	20	339-3770	North America and Latin America excluding Brazil
55	--	339-3769	North America and Latin America excluding Brazil
--	Bulk	339-3771	North America and Latin America excluding Brazil
--	210	362-2181	Europe, Africa, Middle East
--	200	365-2713	Asia Pacific
--	4	365-8399	Asia Pacific
--	5	362-2180	Europe, Africa, Middle East

**Cat® NGECTM****Recommended Use**

- Cat NGECE Premix 50/50 is a heavy-duty cooling system fluid especially designed to provide superior protection against pitting, freezing, and corrosion in Cat natural gas engines or natural gas engines made by other manufacturers.
- Cat NGECE meets the following ASTM standards:
- ASTM D6210 (Heavy-duty antifreeze/coolants)
- ASTM D3306 (Automotive applications)
- ASTM D1384 (Glassware corrosion test)

**Discover the Difference**

- Cat NGECE is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Fully Formulated — Does not require an initial supplemental cooling additive.
- Quick, easy servicing.
- Superior Protection — Contains both organic and inorganic corrosion inhibitors as well as antifoam additives. It provides superior protection against pitting, corrosion and freezing down to -37° C (-34° F).



Typical Characteristics {A}	
Color	Purple
Boiling protection with 15 psi pressure cap °C (°F) (ASTM D1177)	
50% Cat NGECE/50% water	265 (129)
60% Cat NGECE/40% water (concentrate added)	270 (132)
Freezing protection °C (°F)	
50% Cat NGECE/50% water	-34 (-37)
60% Cat NGECE/40% water (maximum)	-62 (-52)
Ash content, % wt. (ASTM D1119)	0.60
Silicon concentrate (in the form of Silicates)	120 ppm
Ethylene Glycol (% volume)	45.3

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
--	210	362-2182	Europe, Africa, Middle East
<b>Cat NGECE Premix 50/50 with Embitterment</b>			
--	4	366-2714	Asia Pacific
--	18	366-2715	Asia Pacific
--	200	366-2716	Asia Pacific
--	1000	339-3766	Australia
1	--	339-3776	North America and Latin America excluding Brazil
5	--	339-3777	North America and Latin America excluding Brazil
55	--	339-3778	North America and Latin America excluding Brazil
275	--	339-3779	North America and Latin America excluding Brazil

### Cooling System Cleaner — Standard



#### Applications

- Cooling system cleaner; full effect after several weeks in the cooling system.
- Not for use in removing large amounts of oil from cooling systems.

#### Features

- Removes scale or lime deposits.

#### Benefits

- Cleans cooling system while the machine works.

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
0.500 (2 qt.)	--	6V-4511	North America
--	1.89	185-5121	Europe, Africa, Middle East

### Cooling System Cleaner — Quick Flush



#### Applications

- For use as preventative maintenance or as a short-time flush at the time of coolant change.
- Not for use in removing large amounts of oil from cooling systems.

#### Features

- Removes lime deposits, scale and solder bloom.

#### Benefits

- Allows for one-step cleaning in just 90 minutes.

English Volume (gal)	Metric Volume (L)	Part Number
0.125 (1 pt.)	--	4C-4609
0.250 (1 qt.)	--	4C-4610
1	--	4C-4611
5	--	4C-4612
55	--	4C-4613

### 275 Gallon Tote Ball Valve Dispensing Tool

To dispense coolant from 275-gallon totes, a new ball valve dispensing tool has been added to the Cat product line-up. It was designed specifically to dispense coolant from disposable totes.

The tote dispensing tool is easy to use, and instructions are included with each tool group. Also included are toll-free 800 numbers to receive assistance from an experienced professional on the ball valve tool, plus other accessories that may be useful per your specific installation.

The valve group should last for several years, but the cutting tool may dull, necessitating the replacement of the cutting tool only.



Part Number	Description
232-4452	Ball Valve Group
<b>Group Consists of:</b>	
232-4451	Ball Valve Assembly
232-4450	Cutting Tool
239-5289	Buttress Nipple

### Cooling Conditioner Test Kit

#### Applications

- Simple dip test takes just minutes to perform. Measures coolant nitrite levels.
- Use on coolants containing nitrites (for measuring nitrite levels)

#### Features

- Does not require dilution, titration or drops to count.

#### Benefits

- Includes a color density change for people with color blindness.



Product	Part Number
Coolant Conditioner Test Kit (100 test strips, sample, bottle, pipette)	4C-9301
Refill test strips	4C-9297

**Battery and Coolant Refractometer**

- Used to measure freezing point of coolants plus battery charge condition.
- Refractometer uses a prism and lens with simple focus adjustment to provide accurate and repeatable measurements on easy to read scales.
- Easy to operate.
- Automatic temperature compensation (ATC).
- Requires only 2 to 3 drops of solution.
- Carrying case and calibration screwdriver included.
- Reads degrees Centigrade and Fahrenheit.

Range	Resolution
-60 to 32° F propylene glycol freeze point	10° F
-50 to 0° C ethylene glycol freeze point	5° C
1.15 to 1.30 specific gravity of battery acid	0.01

Product	Part Number
Battery and Coolant Refractometer	245-5829

**Battery, Coolant and Diesel Exhaust Fluid Refractometer**

- Digital refractometer is simple to use and to read
- Used for measuring concentration levels for multiple fluids including ethylene glycol-based coolants such as Cat ELC and Cat DEAC, propylene glycol-based coolants, Cat ELI and battery charge condition
- Tool operating manual provides conversion for concentration of coolant glycol level to corresponding freeze protection level
- Automatic temperature compensation
- Requires only a few drops of fluid
- Case and cleaning cloth included

Product	Part Number
Test Kit, Brix Refractometer	360-0774

**Cat® ELC Extender**

**Recommended Use**

- Protects against cylinder liner/block pitting and cavitation erosion
- Should be added to Cat ELC at 500,000 km (300,000 miles) for Cat powered on-highway trucks and 6,000 hours for commercial engines
- Extender is typically necessary only once during the life of the coolant
- Ensures Cat ELC performance to 1,000,000 km (600,000 miles) or 12,000 hours

**ELC Extender and Flush Intervals**

Cat ELC Extender should be added after 6,000 hours or 300,000 miles (500,000 km) of operation, and the system should be drained and flushed with clean water after 12,000 hours or 600,000 miles (1,000,000 km). No cleaning agents are needed.



English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
<b>Cat ELC Extender</b>			
>0.250 (1 qt.)	--	119-5152	--
1	--	210-0786	--
--	1	215-4241	Brazil
--	5	219-3039	Brazil

**Cat® SCA**

**Application**

- For regular maintenance use with Cat DEAC and other heavy duty diesel engine coolants requiring maintenance with SCA.
- For use in water-based cooling systems, such as marine applications that do not require glycol for antifreeze protection.
- Use for initial does in non-fully formulated (ASTM D4985) engine coolants.

**Features**

- Helps stop rust and mineral deposits from forming in the cooling system.

**Benefits**

- Protects all metals.
- Protects against cylinder liner cavitation and corrosion.
- Will not affect gaskets or hoses.



English Volume (gal)	Metric Volume (L)	Part Number
<b>Cat SCA</b>		
0.063 (1/2 pt.)	--	6V-3542
0.125 (1 pt.)	--	8T-1589
0.250 (1 qt.)	--	3P-2044
5	--	8C-3680

English Volume (gal)	Metric Volume (L)	Part Number
<b>Cat SCA (Continued)</b>		
55	--	5P-2907
--	1	217-0616
--	20	217-0617
--	208	217-0618



## Health and Safety

Cat Grease is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts. Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at [www.catmsds.com](http://www.catmsds.com).

## Cat® Multipurpose Grease



Equipment Fluids

### Recommended Use

- Cat Multipurpose Grease is recommended for use in low-load, low-speed applications and ambient temperatures ranging from -30° to 40° C (-22° to 104° F).

### Discover the Difference

- Reduced Component Wear — Resists softening and protects parts from wear.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.
- Excellent General Purpose — Lithium complex grease for applications where load, speed, temperature and moisture conditions are low.

Typical Characteristics {A}	
NGLI #	2
Ambient Range	-30° to +40° C (-22° to +104° F)
Operating Range	-32° to +149° C (-25° to +300° F)
Base Fluid Type	Petroleum
Thickener Type	Lithium Complex
Color	Blue
% Molybdenum disulfide	0
Worked Penetration (mm)	265-295
% Change/100,000 stroke	-5 to +15
Roll Stability w/H <sub>2</sub> O, % change	N/A
Viscosity Index, Min	N/A
Viscosity @ 100° C, cSt	19.5-22.5
Viscosity @ 40° C, cSt	230-245
4 Ball Wear (mm) Max, Typ.	0.75
4 Ball E.P. Weld Point (kg) Min.	315
Timken E.P. Test OK load (lb) Typ.	55 Min
Oxidation-psi drop/500 hr Max	N/A
Rust Test	Pass
Copper Corrosion	1b
Dropping Point	+260° C (+500° F)

{A} The values shown below are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #2</b>		
14 oz (cartridge)	397 g (cartridge)	1P-0808
15.9 oz (cartridge)	450 g (cartridge)	129-1950 <sup>1</sup>
35 (metal pail)	16 (metal pail)	129-1919
35 (plastic pail)	16 (plastic pail)	7X-7664
120 (keg)	54 (keg)	9X-6488

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #2 (Continued)</b>		
400 (drum)	181 (drum)	7X-7665
3500 (tote)	1588 (tote)	129-1921
14 oz (cartridge)	--	324-8141 <sup>2</sup>
35 lb (plastic pail)	--	324-8142 <sup>2</sup>
400 lb (drum)	--	324-8143 <sup>2</sup>

<sup>1</sup> Australia use

<sup>2</sup> China only

## Cat® Advanced 3Moly Grease

### Recommended Use

- Cat Advanced 3Moly Grease is recommended for use in medium-load and medium-speed applications with ambient temperatures ranging from -20° to 40° C (-4° to 104° F).

### Discover the Difference

- Long Life — Lithium Complex formula enhanced with 3% molybdenum disulfide (moly), Cat Advanced 3Moly Grease is an excellent grease for applications where speed, load and temperature are moderate and moisture is low.
- Reduced Component Wear — Resists softening and protects parts from wear.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.



Typical Characteristics {A}	
NGLI #	2
Ambient Range	-20° to +40° C (-4° to +104° F)
Operating Range	-21° to +149° C (-5° to +300° F)
Base Fluid Type	Petroleum
Thickener Type	Lithium Complex
Color	Gray
% Molybdenum disulfide	3
Worked Penetration (mm)	265-295
% Change/100,000 stroke	10 Max
Roll Stability w/H <sub>2</sub> O, % change	N/A
Viscosity Index, Min	N/A
Viscosity @ 100° C, cSt	22
Viscosity @ 40° C, cSt	320
4 Ball Wear (mm) Max, Typ.	0.55
4 Ball E.P. Weld Point (kg) Min.	315
Timken E.P. Test OK load (lb) Typ.	55 Min
Oxidation-psi drop/500 hr Max	N/A
Rust Test	Pass
Salt Fog Test, hours	N/A
Copper Corrosion	1b
Dropping Point	+260° C (+500° F)

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (lb)	Metric Volume (kg)	Part Number
NLGI Grade #2 (3% Moly)		
120 (keg)	54 (keg)	9X-6489
14 oz (cartridge)	397 g (cartridge)	5P-0960
14 oz (cartridge)	--	324-8140 <sup>1</sup>
15.9 oz (cartridge)	450 g (cartridge)	129-1952 <sup>2</sup>
35 (metal pail)	16 (metal pail)	129-1924

English Volume (lb)	Metric Volume (kg)	Part Number
NLGI Grade #2 (3% Moly) (Continued)		
35 (plastic pail)	16 (plastic pail)	7X-7699
35 lb (plastic pail)	--	324-8139 <sup>1</sup>
3500 (tote)	1588 (tote)	129-1926
400 (drum)	181 (drum)	7X-7701
400 lb (drum)	--	324-8138 <sup>1</sup>

<sup>1</sup>China only

<sup>2</sup>Australia use

## Cat® Ultra 5Moly Grease



### Recommended Use

- Cat Ultra 5Moly Grease is formulated for use in high-load and high-speed applications with ambient temperatures ranging from -35° to 40° C (-31° to 104° F) for NLGI #1, -30° to 50° C (-22° to 122° F) for NLGI #2, and -40° C to 36° C (40° F to 95° F) for NLGI #0.

### Discover the Difference

- Moisture Resistance — Resists washout from fresh and salt water.
- Long Life — High-quality Calcium Sulfonate Complex formula with 5% molybdenum disulfide (moly) provides long service life in Cat applications.
- Reduced Component Wear — Resists softening and continues to protect parts under extreme loads and high speeds.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.
- Low Environmental Risk — Formulated to use no lead, antimony, zinc, barium, chlorine, phosphorus or free sulfur.

Typical Characteristics {A}			
NLGI #	0	1	2
Ambient Range	-40° to +35° C (-40° to +95° F)	-35° to +40° C (-31° to +104° F)	-30° to +50° C (-22° to +122° F)
Operating Range	-45° to +149° C (-49° to +300° F)	-40° to +149° C (-40° to +300° F)	-32° to +149° C (-25° to +300° F)
Base Fluid Type	Petroleum	Petroleum	Petroleum
Thickener Type	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex
Color	Gray	Gray	Gray
% Molybdenum disulfide	5	5	5
Worked Penetration (mm)	355-385	310-340	265-295
% Change/100,000 stroke	±5	±5	±5
Roll Stability w/H <sub>2</sub> O, % change	±5	±5	±5
Viscosity Index, Min	N/A	N/A	N/A
Viscosity @ 100° C, cSt	7	11.5	11.5
Viscosity @ 40° C, cSt	64	150	150
4 Ball Wear (mm) Max, Typ.	0.5	0.5	0.5
4 Ball E.P. Weld Point (kg) Min.	620	620	620
Timken E.P. Test OK load (lb) Typ.	60	60	60
Oxidation-psi drop/500 hr Max	N/A	N/A	N/A
Rust Test	Pass	Pass	Pass
Salt Fog Test, hours	+4,000	+4,000	+4,000
Copper Corrosion	1a	1a	1a
Dropping Point	+288° C (+550° F)	+288° C (+550° F)	+288° C (+550° F)

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

(Continued)

**Cat® Ultra 5Moly Grease (Continued)**

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #0</b>		
2000 lb (disposable tote)	907 kg	344-4001
3500 (tote)	1588 (tote)	206-7411
400 (drum)	181 (drum)	206-7406
<b>NLGI Grade #1</b>		
120 (keg)	54 (keg)	161-0970
14 oz (cartridge)	397 g (cartridge)	161-9203
15.9 oz (cartridge)	450 g (cartridge)	197-9227 <sup>1</sup>
2000 lb (disposable tote)	907 kg	344-4000
35 (metal pail)	16 (metal pail)	266-8562 <sup>1</sup>
35 (plastic pail)	16 (plastic pail)	183-3432
3500 (tote)	1588 (tote)	266-8564

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #1 (Continued)</b>		
400 (drum)	181 (drum)	161-0971
<b>NLGI Grade #2</b>		
120 (keg)	54 (keg)	183-3427
14 oz (cartridge)	397 g (cartridge)	183-3424
15.9 oz (cartridge)	450 g (cartridge)	183-3425 <sup>1</sup>
2000 lb (disposable tote)	907 kg	344-3999
35 (metal pail)	16 (metal pail)	266-8563 <sup>1</sup>
35 (plastic pail)	16 (plastic pail)	183-3426
3500 (tote)	1588 (tote)	183-3429
400 (drum)	181 (drum)	183-3428

<sup>1</sup>Australia use

**Cat® Desert Gold Grease**

**Recommended Use**

- Cat Desert Gold Grease is recommended for use in all load and speed applications and ambient temperature ranges of -20° to 60° C (-4° to 140° F).

**Discover the Difference**

- Extreme Heat Operation — Performs and protects where ambient temperatures are regularly above 32° C (90° F).
- Extreme Life — High-quality Calcium Sulfonate Complex synthetic base with 5% molybdenum disulfide (moly) delivers unmatched performance in Cat applications.
- Moisture Resistance — Resists washout from fresh and salt water.
- Reduced Component Wear — Resists softening and continues to protect parts under extreme loads and high speeds.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.
- Low Environmental Risk — Is formulated not to contain lead, antimony, zinc, barium, chlorine, phosphorus or free sulfur.



(Continued)

## Cat® Desert Gold Grease (Continued)

Typical Characteristics {A}	
NGLI #	2
Ambient Range	-20° to +60° C (-4° to +140° F)
Operating Range	-23° to +2320° C (-10° to +4,500° F)
Base Fluid Type	Synthetic
Thickener Type	Calcium Sulfonate Complex
Color	Gold
% Molybdenum disulfide	5
Worked Penetration (mm)	265-295
% Change/100,000 stroke	±1
Roll Stability w/H <sub>2</sub> O, % change	±1
Viscosity Index, Min	125
Viscosity @ 100° C, cSt	38-42
Viscosity @ 40° C, cSt	370-425
4 Ball Wear (mm) Max, Typ.	0.45
4 Ball E.P. Weld Point (kg) Min.	620
Timken E.P. Test OK load (lb) Typ.	65
Oxidation-psi drop/500 hr Max	5
Rust Test	Pass
Salt Fog Test, hours	+1,100
Copper Corrosion	1a
Dropping Point	+302° C (+575° F)

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Equipment Fluids

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #2</b>		
14 oz (cartridge)	397 g (cartridge)	129-1938
15.9 oz (cartridge)	450 g (cartridge)	129-1937 <sup>1</sup>
35 (metal pail)	16 (metal pail)	129-1942

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #2 (Continued)</b>		
35 (plastic pail)	16 (plastic pail)	129-1941
120 (keg)	54 (keg)	129-1943
400 (drum)	181 (drum)	129-1944
3500 (tote)	1588 (tote)	129-1946

<sup>1</sup>Australia use

## Cat® Arctic Platinum Grease

### Recommended Use

- Cat Arctic Platinum Grease is recommended for use in all load and speed applications and ambient temperature ranges of -50° to 20° C (-58° to 68° F).

### Discover the Difference

- Extreme-Cold Operation — Performs and protects where ambient temperatures are regularly below 0° F.
- Extreme Life — High-quality Calcium Sulfonate Complex synthetic base with 5% molybdenum disulfide (moly) delivers unmatched performance in Cat applications.
- Moisture Resistance — Resists washout from fresh and salt water.
- Reduced Component Wear — Resists softening and continues to protect parts under extreme loads and high speeds.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.
- Low Environmental Risk — Is formulated not to contain lead, antimony, zinc, barium, chlorine, phosphorus or free sulfur.



Typical Characteristics {A}	
NGLI #	0
Ambient Range	-50° to +20° C (-58° to +68° F)
Operating Range	-57° to +135° C (-70° to +275° F)
Base Fluid Type	Synthetic
Thickener Type	Calcium Sulfonate Complex
Color	Platinum
% Molybdenum disulfide	5
Worked Penetration (mm)	355-385
% Change/100,000 stroke	±5
Roll Stability w/H <sub>2</sub> O, % change	±5
Viscosity Index, Min	125
Viscosity @ 100° C, cSt	5-7
Viscosity @ 40° C, cSt	30-40
4 Ball Wear (mm) Max, Typ.	0.45
4 Ball E.P. Weld Point (kg) Min.	620
Timken E.P. Test OK load (lb) Typ.	65
Oxidation-psi drop/500 hr Max	5
Rust Test	Pass
Salt Fog Test, hours	N/A
Copper Corrosion	1a
Dropping Point	+260° C (+500° F)

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #0</b>		
35 (plastic pail)	16 (plastic pail)	129-8708
120 (keg)	54 (keg)	129-8709
400 (drum)	181 (drum)	129-8710

English Volume (lb)	Metric Volume (kg)	Part Number
<b>NLGI Grade #0 (Continued)</b>		
14 oz (cartridge)	397 g (cartridge)	341-0726
2000 (tote)	907 (tote)	344-4002



## Cat® High Speed Ball Bearing Grease

### Recommended Use

- Electric motors, fan drives, starters, alternators, generators
- It can also be used in automotive and industrial applications, especially where equipment is operated intermittently in severe conditions.

### Discover the Difference

- Formulated with synthetic thickener and corrosion inhibitors, High Speed Ball Bearing Grease provides excellent lubrication in ball and roller bearings operating over a broad temperature range.
- High-Stress Performance — Provides outstanding protection at high speeds (10,000 rpm and greater) and the high temperatures (163° C/325° F) associated with high speeds.
- Moisture Resistance — Resists wash out from fresh and salt water.
- Increased Component Life — Heat resistance provides improved protection, reducing component wear rates.
- Low-Temperature Operation — Remains mobile in temperatures as low as -30° C (-22° F).

Equipment Fluids

Typical Characteristics {A}	
NGLI #	2
Ambient Range	-20° to +40° C (-4° to +104° F)
Operating Range	-40° to +163° C (-40° to +325° F)
Base Fluid Type	Petroleum
Thickener Type	Polyurea
Color	Blue-Green
% Molybdenum disulfide	0
Worked Penetration (mm)	265-295
% Change/100,000 stroke	±1
Roll Stability w/H <sub>2</sub> O, % change	N/A
Viscosity Index, Min	N/A
Viscosity @ 100° C, cSt	9-13
Viscosity @ 40° C, cSt	95-110
4 Ball Wear (mm) Max, Typ.	N/A
4 Ball E.P. Weld Point (kg) Min.	N/A
Timken E.P. Test OK load (lb) Typ.	N/A
Oxidation-psi drop/500 hr Max	5
Rust Test	Pass
Salt Fog Test, hours	+1,100
Copper Corrosion	1a
Dropping Point	+260° C (+500° F)

{A} The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (gal)	Metric Volume (L)	Part Number
<b>NLGI #2</b>		
14 oz (cartridge)	397 g (cartridge)	2S-3230

## White Assembly Grease

### Applications

- For use in general assembly and other light-duty applications.

### Features

- Added tackifiers, making it ideal for holding gears, bearings, gaskets and other parts during assembly.
- Contains no molybdenum disulfide.

### Benefits

- Exceptional general purpose Lithium Complex grease.

English Volume (gal)	Metric Volume (L)	Part Number
<b>NLGI #0</b>		
10 oz (tube)	254 g (tube)	266-9682
<b>NLGI #2</b>		
14 oz (cartridge)	397 g (cartridge)	129-1966
35 (plastic pail)	16 (plastic pail)	129-1969

## Cat® Hammer Paste

Cat® Hydraulic Hammer Paste (Grease) is formulated to lower friction and improve tool and bushing life in the harsh environments encountered with hydraulic impact hammer applications. These work tools generate high heat, severe shock, and heavy friction loads, which can fuse parts together. Cat Hydraulic Hammer Paste is made from copper and graphite to provide excellent wear protection even at temperatures higher than 2,000° F (1093° C).

### Performance

- Formulated for extreme temperatures and applications
- Strong adhesion, even in the presence of water

### Protection

- Significantly slows wear
- Prevents seizing
- Extremely stable and corrosion resistant



Typical Characteristics {A}	
Color	Copper
NLGI Class	2
Thicker Type	Aluminum Complex
Base Oil Type	Mineral
Operating Range	-20 to 1100° C (-4 to 2,012° F)
Worked Penetration (mm)	265-295
Viscosity @ 40° C, cSt	350
4 Ball E.P. Weld Point (kg)	400
Dropping Point	260° C (500° F)

{A} The values shown are typical values and should not be used as quality control parameters

English Volume (gal)	Metric Volume (L)	Part Number
<b>NLGI #2</b>		
14 oz (cartridge)	397 g (cartridge)	130-6951
11 lb (tub)	5 kg (tub)	133-8807
--	400 g (auto lube cartridge)	317-8491
--	12 pack (auto lube cartridge)	317-8492

## High Vacuum Grease

- Applications where maintaining a seal under vacuum or pressure is required.

English Volume (gal)	Metric Volume (L)	Part Number
4 oz (cartridge)	113 g (cartridge)	186-1530

## Ultra Synthetic Generator Grease



- Clay-thickened, synthetic based oil, multi-service grease.
- Provides low temperature breakaway performance.

English Volume (gal)	Metric Volume (L)	Part Number
<b>NLGI #1.5</b>		
14 oz (cartridge)	397 g (cartridge)	108-8611

## Cat Multipurpose Marine Grease



### Recommended Use

- Cat Multipurpose Marine Grease is recommended for use in medium load and high speed applications and ambient temperature ranges of -30° to 175° C (-22° to 347° F).
- Long Life — High quality Calcium Sulfonate Complex base delivers unmatched performance in marine applications.
- Moisture Resistance — Resists washout from fresh and salt water.
- Reduced Component Wear — Resists softening and continues to protect parts under medium loads and high speeds.
- Corrosion Protection — Resists oxidation and protects metal against rust. Will not corrode or damage steel, copper bearing alloys or conventional seal materials.
- Low Environmental Risk — Is formulated not to contain lead, antimony, zinc, barium, chlorine, phosphorus or free sulfur.

(Continued)

## Cat Multipurpose Marine Grease (Continued)

Typical Characteristics {A}	
Color	Blue Green
NLGI Grade	2
Thickener	Overbased Calcium Sulfonate
Base Oil	Petroleum
Operating Range	-30° to -175° C (-22° to 347° F)
Viscosity Index, Min	95
Viscosity CST @ 40° C	110
Viscosity CST @ 100° C	12
Penetration Worked 60 Strokes	265-295
% Change/10,000 Stroke	±2
% Change/100,000 Stroke	±5
Oil Separation 24 Hrs @ (77° F)	0.25
Roll Stability Penetration w/H <sub>2</sub> O, % change	±1
4 Ball Wear Test (mm) Scar (kg)	40
4 Ball E.P. Test Weld Point (kg)	500
Load Wear Index (kg)	65
Timken E.P. Test OK Load (lb) Typ.	65
Rust Test	Pass
Salt Fog Test, hours	+4,000
Water Washout @ 79° C (175° F), % loss	275
Wheel Bearing Leakage Grams Modified @ 163° C (325° F)	0.4
Dropping Point	298° C (570° F)

{A} Values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

English Volume (lb)	Metric Volume (kg)	Part Number
14 oz (cartridge)	397 g (cartridge)	347-9017
35 (plastic pail)	16 (plastic pail)	347-9016





**FILTERS**



## Cat® Filters...Engineered Protection for Every Application



- Genuine parts optimized for Cat Equipment.
- Manufactured worldwide to Caterpillar specifications for global quality assurance.
- Complete line of products and services to meet your business needs.

## Engine Oil Filter — Standard Efficiency

- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Removes contaminants before the lube oil reaches critical components.
- Available for most Cat equipment models.



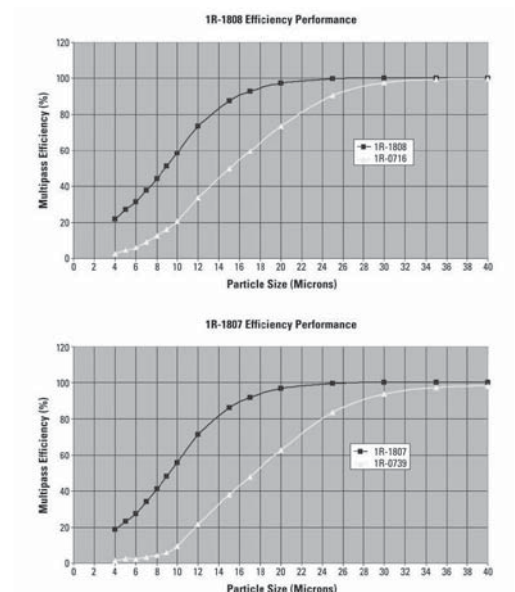
## Engine Oil Filter — Advanced Efficiency

Cat Advanced Efficiency Engine Oil Filters provide increased contamination control over Standard Efficiency Filters, without requiring a shortened change interval. And, they are more economically priced than Ultra High Efficiency filters.

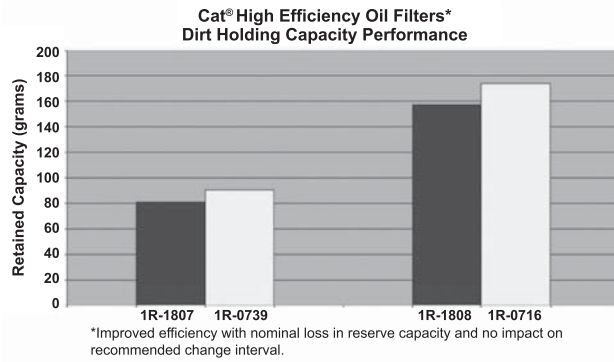


## Improved Filtering Media

Cat Advanced Efficiency Oil Filters contain an improved filtering media which captures more contaminants, reducing wear on critical oil-lubricated engine components. This results in extended life and improved performance. The graphs below illustrate the efficiency of the 1R-1807 and 1R-1808 filters as compared to their Standard Efficiency Counterparts.



## Reserve Dirt-Holding Capacity



Although higher-efficiency filters accumulate dirt more quickly than Standard Efficiency filters, Cat Advanced Efficiency Engine Oil filters do not require a shortened change interval. They feature a reserve dirt-holding capacity, which compensates for the majority of dirt accumulation increase, letting customers maintain standard oil change intervals. The relative dirt-holding capacity of Advanced and Standard Efficiency filters are illustrated in the graph.

## Engine Oil Filter — Ultra High Efficiency



- Extends filter life up to 6× that of standard filters.
- Benefits engine life and reduces engine wear.
- Longer filter life leads to reduced contamination.

**Fuel Filter (Secondary Fuel Filter) — Standard Efficiency**

- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Removes contaminants before the fuel reaches critical components.
- Available for most Cat equipment models.



**Fuel Filter (Secondary Fuel Filter) — Advanced Efficiency**

- Engineered for maximum protection, performance and fuel economy.
- Removes more contaminants, maximizing protection of injectors, pumps and other critical engine components.
- Best choice to meet today’s fuel contamination challenges, especially in applications with dirty fuel.
- Engineered for today’s diesel engines with higher injection pressures and closer tolerances.
- High efficiency cellulose/synthetic blend filtration removes more than 98% of particles 4 microns or larger.



TECHNOLOGY FEATURES	BENEFITS	RESULTS
One-piece aluminum base plate	Added reinforcing to prevent ruptures due to cold starts	Protects against leaks and the introduction of contaminants for longer component life
One-piece urethane end caps	Tighter bond with filter media	Eliminates gaps, keeping contaminants out of the engine for added protection, eliminates leak paths
Spiral roving and acrylic beads	Maintains pleat stability and spacing to eliminate bunching; holds dirt in environments with vibration	Maximum efficiency and capacity; better protection and longer life engine
Non-metallic center tube to prevent collapsing during pressure spikes and cold oil start-ups	30% stronger than metal	Eliminates scored bearings and damage to other critical engine components
Resin-impregnated filter media	Custom blended media	Maximizes performance and life
One-piece, heavy gauge canister	Provides structural strength and anti-rupture protection	Durability and structural integrity supports extended intervals
Full range of media options	Engineered to meet specific operating conditions, equipment requirements and economical considerations	Filtration matched to your performance needs

Filters

### Fuel Filter (Secondary Fuel Filter) — Ultra High Efficiency



- Offers unsurpassed component protection by capturing particles four microns or smaller.
- Maximizes engine performance and component life.
- Offers easier serviceability and can be changed in most cases without the need for tools.

## Fuel Water Separator (Primary Fuel Filter) — Standard Efficiency

- Removes more than 98% of debris 10 microns and larger — and eliminates virtually all free water and more than 87% emulsified water.
- Minimize the risk of plunger-to-barrel scuffing and seizure in fuel injectors, reducing failure rates.
- Extends the life of engine fuel injectors and the secondary, high efficiency fuel filter.

FEATURES	BENEFITS	RESULTS
Thicker gauge canister	Resist canister cracking and failure in extensive field testing	Longer life and increased protection
Primary fuel filter	Removes more than 98% of debris 10 microns and larger	Minimize the risk of plunger-to-barrel scuffing and seizure in fuel injectors, reducing failure rates
Water separator	Removes virtually all free water and more than 87% of emulsified water from diesel fuel	Extend the life of engine fuel injectors and the secondary, high efficiency fuel filter
Manual screw knob	Drains the collection bowl in less than a minute	Reduces maintenance and downtime
Reusable water collection bowl	Transparent for easy monitoring	Reduces maintenance costs



## Fuel Water Separator (Primary Fuel Filter) — Ultra High Efficiency

- Increased separation of fuel water from fuel minimizes the risk of plunger-to-barrel scuffing and seizure in fuel injectors, reducing failure rates.
- Extends the life of engine fuel injectors and the secondary, ultra high efficiency fuel filter.

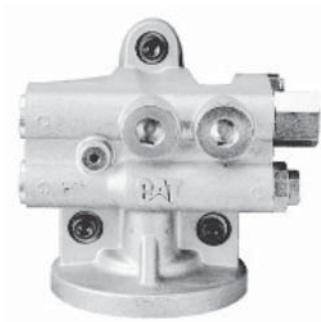




## Cat Fuel Water Separators — Retrofits

ENGINE	PRIMETIME FULL FLOW CONFIGURATION	PRIMETIME PRIME ONLY CONFIGURATION	BASIC CONFIGURATION
Small Engines C12 and smaller	Kit 206-5756	N/A	Base 195-1068 with 326-1642 (axial seal) FWS or Base 177-9778 with 326-1644 (radial seal) FWS
Medium Engines C15-C16, 3408-3412	Kit 206-5756 The 326-1644, included in the kit, can be replaced with the 326-1643 for additional capacity.	N/A	Base 195-1068 with 326-1641 (axial seal) FWS or Base 177-9778 with 326-1643 (radial seal) FWS
Large Engines 3500 Series	N/A	Kit 206-5756	(2) 207-2422 groups, each includes a 316-9954 (axial seal) FWS

## Cat PrimeTime Priming Pumps



Cat PrimeTime Priming Pumps are easily installed on the frame or engine as retrofits. They prime the filter and fuel system with a flip of the switch.

- No need to pre-fill filter and risk debris reaching injectors
- Primes fuel filter in two to six minutes
- No time-consuming, difficult manual pumping

### Radial Seal Engine Air Filter — Standard Efficiency

- Features standard elements for normal duty filtration.
- Designed for larger capacity and longer service life.
- Prevents dirt, soot, sand and other contaminants from entering your system.
- Available for all Cat equipment models.



TECHNOLOGY FEATURES	BENEFITS	RESULTS
Radial seal design	No tools required	Service times and maintenance costs minimized
All-steel adapter ring available to retrofit axial seal cleaners	Quickly bolts into position to accept the new filter design	Easily converts older machines
One-piece molded urethane end caps	Forms a tough, reliable, corrosion-proof bond to paper media	Up to 30% more seal contact area; more reliable seal than conventional elements
Densely pleated filter paper	Large media area provides up to 50% more capacity	Superior capacity without impeding airflow
Built-in pleat support and positive pleat spacing	Prevents pleat bunching	Ensures optimum filter media surface area
Heavy-duty metal inner and outer wrap	Increases structural strength and durability	Added protection and longer life
Baked-on enamel outer filter wrap	Resists corrosion	Longer component life

### Radial Seal Engine Air Filter — Ultra High Efficiency

- Features a unique media with a very fine fiber surface layer that improves filtration efficiency early in the life of the elements.
- Super fast efficiency rate eliminates window of opportunity for sharp abrasive particles to damage engine.
- Sustained low restriction leads to improved filter capacity, engine performance and fuel economy.
- Highly effective in today's engines with tight engine tolerances; maintain low emission and high performance requirements.
- Unique design for applications where extremely fine dust particles make up a high percentage of the contaminants in the atmosphere.
- Ideal for applications that have operating conditions with high amounts of exhaust soot, which tends to plug normal filters at low hours.



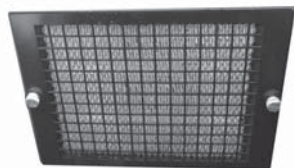
TECHNOLOGY FEATURES	BENEFITS	RESULTS
High initial filtration efficiency and high overall efficiency	Less dust reaches the engine	Reduced engine wear
Immediate dust cake build-up on the filter surface	Media at maximum efficiency when new; dust cake builds faster	Reduced engine wear, improved fuel economy and lower maintenance costs
Low initial and overall restriction throughout the life of the filter	Engine breathes easier; less power required to pull in air	Improved fuel economy and better engine performance and power
Super capacity	Filter lasts longer with fewer filter changes	Less chance of contamination during service
Exclusive Cat media	Super capacity, long life, maximum protection	Protect engine, reduce wear of hard sharp particles that can score cylinder

## Axial Seal Air Filter to Radial Air Seal Filter Adapter Kit Cross Reference

Axial Seal Type — Standard Primary	Axial Seal Type — Secondary	Optional Radial Seal Retrofit Kits — Axial to radial seal adapter kit	Radial Seal Type — Standard Primary	Radial Seal Type — Standard Primary Radial Seal Type — UHE Primary	Radial Seal Type — Secondary
7W-5389	2S-1285	6I-3828	6I-2499	132-7164	6I-2500
7W-5389	8N-4901	6I-3829	6I-2499	132-7164	6I-2500
7W-5317	2S-1286	6I-3830	6I-2501	128-2686	6I-2502
7W-5317	9S-9972	6I-3831	6I-2501	128-2686	6I-2502
7W-5316	8N-6883	6I-3831	6I-2503	132-7165	6I-2504
7W-5316	2S-1287	6I-3830	6I-2503	132-7165	6I-2504
7W-5495	1P-7360	6I-3832	6I-0273	122-1674	6I-0274
7W-5313	1P-8482	6I-3833	6I-2505	122-1675	6I-2506
7W-5313	6N-6444	6I-3833	6I-2507	132-7166	6I-2508
7W-5216	7N-1308	6I-3833	6I-2509	132-7167	6I-2510
7W-9853	7W-9567	106-7120	106-3969	132-7168	106-3973
4W-5716	6N-6067	106-7120	106-3969	132-7168	106-3973
8N-6309	8N-2556		123-6855	132-7169	123-6856
251-5885	9Y-7663		131-8822	134-0685	131-8821

## Cab Air Filters — Standard Efficiency

Not for use in filtering hazardous materials



### Odor Reduction Cabin Air Filters

- Caterpillar now offers a selection of charcoal impregnated cabin air filters for use in applications, where odors or airborne irritants are a concern. These filters provide significant odor reduction, but they are not designed to filter hazardous materials.

### Compatibility and Fit

- Odor Reduction Cabin Air Filters can be used as direct replacements for standard filters. No modification is necessary, and pressure drop is similar to standard, so there is no adverse effect on air flow, A/C and heat performance, or cabin air pressure. Correct substitutions are indicated in the table below.

### Activated-carbon Filtering

- Odor Reduction Cabin Air Filters use high-performance activated carbon to quickly absorb odor-causing particles and reduce odors to a comfortable level. A bonded structure holds carbon in place even in high-vibration conditions and prevents carbon dusting. This design also makes the filters easy to install and safe to dispose.

### Improved Particle Removal

- Odor Reduction filters also provide higher particle removal efficiency, both initially and throughout filter life. Fewer particles of soil, dust, pollen, mold spores and other irritants enter the cab, even after sustained use.

### High Surface Dust Loading

- By holding more dust on the surface, Odor Reduction Cabin Air Filters provide a number of benefits. They last longer, are easier to clean, protect the A/C core from performance-robbing build-up, and reduce maintenance costs for the HVAC unit.

### Cleaning and re-use is not recommended for Odor-Reduction filters.

### Replacement Guidelines

- Replace damaged filters, filters used longer than 12 months or filters that no longer reduce odors.

## Cab Air Filters — Ultra High Efficiency

Not for use in filtering hazardous materials

### Dust Reduction Cabin Air Filter

- The Cat Dust Reduction Cabin Air Filter can be used anywhere excessive cab dust exists.
- It offers excellent removal of dust, soil, pollen and mold spores in enclosed operator cabs.
- It is an optional replacement for the corresponding standard filters.

### Dust and Odor Reduction Cabin Air Filter

- The Cat Dust and Odor Reduction Cabin Air Filter is designed for use in landfill applications or anywhere superior odor reduction is necessary.
- It offers extended service life without compromising heating or cooling capabilities.
- The activated carbon in the filter provides a fast rate of absorption.
- There is no operator exposure to loose carbon particles, even in rough applications.
- It is an optional replacement for the corresponding standard filters.



## Retro-Fit Breather Upgrade Options<sup>1</sup>

### Function of Breathers

- Breathers are an important part of any professional contamination control strategy. As the volume of liquid changes inside a container (e.g., a hydraulic tank), air must enter and exit the container in order to prevent the container from becoming over-pressurized or in vacuum. Without a breather the exchange of air as it enters and exits tanks introduces air borne contaminants.

### Not Filtering Small Air-borne Particles Results in:

- Pre-mature component replacement
- Lower productivity
- More frequent filter changes

### Use of Breathers

- Track-type tractors, stationary engines (industrial, marine, generator sets), motor graders, and Challenger® agriculture tractors are a few product families that have breathers installed on production fuel tanks, hydraulic systems, and gear boxes. Utilizing breathers in order to improve system performance on Caterpillar® production equipment is expanding.
- To improve existing fluid system contamination control, Caterpillar is providing retrofit breathers for field installation on Cat equipment and other manufacturer's equipment.

### Advantage of a Breather

- In general, small particles cause abrasive wear on components and larger particles tend to cause sudden breakdowns by clogging pathways or creating interference between components. Usually, a breather is much less expensive than a filter, and its use can increase the service interval for the filter. In systems where air is forced out through the breather, such as in hydraulic or fast fill applications, the dirt is blown out of the element, thereby increasing its life.

### Breather Selection

- The level of breather filtration required in a system depends on the application. The more sensitive to contamination the system is, the greater the need for filtration.

### General Rule of Thumb

- Efficiency — Higher breather efficiencies will maintain a cleaner system.
- Restriction — If air flow capacity is in question, use the larger breather.
- Location — When choosing the location for the breather, make sure that it is as convenient as possible to inspect and change: good clearance and visual line.

### Change Intervals

- Breather change interval can vary widely depending on extremes in operating conditions. As a general rule, change breathers with every fluid change or when breather vent slots appear clogged.

### Inspection

- Include visual inspection of breathers in routine maintenance inspections. If in doubt, change the breather. The cost of a new breather is minimal in comparison to the potential downstream costs of not changing it.

Description	Part Number
<b>0.125 inch NPT Pipe Thread</b>	
Breather	8M-2665
Breather	5F-5434
<b>0.25 inch NPT Pipe Thread</b>	
Breather	124-2831
Breather Assembly	183-3873
Breather	4H-6112
Breather-Vent	9G-5127
<b>0.375 inch NPT Pipe Thread</b>	
Breather	171-5286
Breather	9G-9981
<b>0.75 inch NPT Pipe Thread</b>	
Breather	7U-7613
Breather	6G-0078

Description	Part Number
<b>1.06 inch NPT Pipe Thread — Breather Vents with Pressure and Vacuum Relief — DO NOT MODIFY, REPLACEMENT PARTS ONLY<sup>2</sup></b>	
Breather	116-2810
Breather	160-5615
Breather	188-8844
Breather	191-5439
Breather	207-5997
Breather	4T-4145
Breather	9J-4703
Breather	2U-7441
<b>1.06 inch NPT Pipe Thread — Breather Vents with Manual Pressure Relief — DO NOT MODIFY, REPLACEMENT PARTS ONLY<sup>2</sup></b>	
Breather	157-7911
Breather	154-6165
Breather	220-0812

(Continued)

Retro-Fit Breather Upgrade Options<sup>1</sup> (Continued)

Description	Part Number
<b>1.06 inch NPT Pipe Thread — Breather Vents with Manual Pressure Relief — DO NOT MODIFY, REPLACEMENT PARTS ONLY (Continued)<sup>2</sup></b>	
Breather	220-0813
Breather	220-0814
Breather	9T-0818
<b>Cartridge/Spin-On Type</b>	
Cleaner — Air	245-7451
Breather	6G-0078
Breather	8X-4575
Breather	9C-4937
Breather	9T-1119

Description	Part Number
<b>Cartridge/Spin-On Type (Continued)</b>	
Hydraulic Filter Advanced	077-5232
Breather	171-5286
Hydraulic Filter Advanced	186-5778
Breather	194-7849
<b>Metric</b>	
Breather	145-0870
Breather	055-1990

<sup>1</sup>Breather Efficiency Micron Rating Guide – Standard efficiency: > 50 µm absolute

Advanced efficiency: 10 – 50 µm absolute

<sup>2</sup>Warning! For breather vents with manual or automatic pressure/vacuum relief, do not modify relief setting! These are replacement parts only, and must not be interchanged with parts that have different pressure/vacuum relief settings. Original pressure/vacuum relief setting must be retained in order to prevent pump and/or seal damage.



## Choosing the Correct Cat Hydraulic Filter



The Cat Hydraulic Filter line now includes Standard, Advanced Efficiency and Ultra High Efficiency (UHE) filters, providing our customers the best selection and the best engineered protection available anywhere.

### Selection Guidelines

In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper change interval and recommended filter part numbers. It is usually safe to substitute a higher-efficiency filter, but NEVER substitute a lower-efficiency filter than the one recommended.

If your transmission or hydraulic system has a filter bypass dash indicator and a Standard filter is recommended, you can use an Advanced Efficiency or UHE. If you do not have a bypass indicator, consult your Cat dealer before upgrading.

## Hydraulic and Transmission Filters — Standard Efficiency



### Cat Standard Efficiency Hydraulic and Transmission Filters

- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Available for most Cat equipment models.

### Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

### Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.

## Hydraulic and Transmission Filters — Advanced Efficiency



### Cat Advanced High Efficiency Hydraulic and Transmission Filters

- Special media provides advanced protection against contaminant introduction during maintenance and repair.
- Engineered for effective contamination control.
- Protects hydraulic and drive train systems against accelerated wear.

### Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

### Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.

## Hydraulic and Transmission Filters — Ultra High Efficiency

### Cat Ultra High Efficiency Hydraulic and Transmission Filters

- Super-fine synthetic media removes a higher proportion of very small particles and an even higher proportion of larger particles.
- Specially engineered to aid in optimum contamination control efforts.
- Increases system efficiency, eliminate system failures and extend oil life.
- Reduces exposure of abrasives to critical components — extending component wear life.
- Use to clean up systems following repairs and rebuilds.

### Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

### Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.



# Filter Upgrade Options

## Hydraulic/Transmission Part Options

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
4I-3948	184-3931	126-1813		
090-2900	144-6691	126-1815	121-9868	
094-3229		139-1539		
094-4412		139-1540		
9U-6985	9U-5870	9U-6983	198-3188	9U-5870 higher efficiency than 9U-6984
9U-6985	9U-6984	9U-6983	198-3188	9U-6984 more capacity than 9U-5870
123-8999		117-9900		
1R-0719	1R-0773	132-8875	4T-3131	1R-0773 — hydraulic applications only
1R-0719	343-4464	132-8875	4T-3131	343-4464 — transmission applications only
1R-0728		139-1532	4T-3130	
1R-0735	1R-0777	139-1537	104-6931	
1R-0741	1R-0778	132-8876	4T-3132	1R-0778 — hydraulic applications only
1R-0741	343-4465	132-8876	4T-3132	343-4465 — transmission applications only
1R-0746		126-1810		
1R-0726		284-9054		
1R-0722	1R-0774	139-1536	4T-2134	
	4T-6788	223-7809		
	9T-8578	144-0832		
	9T-6636	126-1816		
	119-4740	211-1026		
126-2081	179-9806	126-2131		179-9806 lower efficiency than 342-1823
126-2081	342-1823	126-2131		342-1823 higher efficiency than 179-9806
1R-0732	1R-0792	167-2009	4T-3133	
	201-0875	223-7810		
	1G-8878	102-2828	156-0214	1G-8878 — hydraulic applications only
	341-6643	102-2828	156-0214	341-6643 — transmission applications only

**Hydraulic/Transmission Part Options (Continued)**

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
9T-9054		9T-7656		
	130-3212	126-1814		130-3212 higher efficiency & capacity than 185-0337
	185-0337	126-1814		185-0337 lower efficiency & capacity than 130-3212
	4I-3950	126-1814		4I-3950 lower efficiency than 185-0337
	109-7287	132-7249		
	134-0964	4C-6860		
185-1379		185-1278		
	108-1153	126-1817	134-3014	108-1153 higher efficiency & capacity than 9T-0973
	9T-0973	126-1817	134-3014	9T-0973 lower efficiency & capacity than 108-1153
	6E-6408	126-1818		
	152-6902	207-5035		
185-1375	192-1560			
	198-7397	139-1533		
	328-3655	338-3540		328-3655 — transmission applications only

**Engine Lube Oil Part Options**

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
1R-0726	276-5403	284-9054		
1R-0739	1R-1807	257-9344		
1R-0716	1R-1808	244-4484		1R-0716/1R-1808 — not for use on 3500 Engines
272-1788	275-2604	244-4484		272-1788/275-2604 — used on 3500 Engines
179-1502	249-2340	354-1560		

**Fuel Part Options**

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
1R-1740	1R-0750			
121-9868	1R-0751	306-9199		306-9199 less capacity than 364-5287
121-9868	1R-0751	364-5287		364-5287 more capacity than 306-9199
1R-1712	1R-0749			
1R-1725	1R-0766			

# Filter Upgrade Options

## Fuel Water Separator Part Options

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)
	326-1643	364-5286	

## Engine Air Part Options

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
6I-2499		132-7164		
6I-2501		128-2686		
6I-2503		132-7165		
6I-0273		122-1674		
6I-2505		122-1675		
6I-2507		132-7166		
6I-2509		132-7167		
106-3969		132-7168		
123-6855		132-7169		
131-8822		134-0685		
142-1339		220-0453		
142-1340		220-1454		
165-1689		220-0455		
267-3005		267-3004		
277-7838		277-7837		
4W-5716		132-7170		
4W-5228		132-7171		
8N-6309		185-8786		
251-5885		292-5862		
251-5886		292-5863		

**Cab Air Part Options**

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistant (UHE)	Notes
105-4968		139-3204		Dust & Odor Reduction
107-0266		175-2841		Dust Reduction
107-0266		282-5339		Dust & Odor Reduction
112-7448		175-2838		Dust & Odor Reduction
113-0305		196-3161		Dust & Odor Reduction
116-5796		142-7069		Dust & Odor Reduction
119-3355		233-8359		Dust & Odor Reduction
119-3355		268-6704		Lower Restriction
149-1912		220-8800		Dust & Odor Reduction
180-7487		282-5340		Dust & Odor Reduction
209-8217		307-4442		Dust & Odor Reduction
209-8217		268-6705		Lower Restriction
209-8217		318-7190		Dust Reduction
238-0479		319-7944		Dust Reduction
238-0479		291-3928		Dust & Odor Reduction
259-3222		266-7765		Lower Restriction
2V-0036		175-2837		Dust & Odor Reduction
6T-0988		175-2837		Dust & Odor Reduction
7G-8116		141-7903		Dust & Odor Reduction
7T-1889		175-2836		Dust & Odor Reduction
7T-1890		175-2839		Dust Reduction
7T-1890		175-2832		Dust & Odor Reduction
7X-6012		200-8460		Dust & Odor Reduction
7X-6041		175-2834		Dust & Odor Reduction
8P-5343		175-2834		Dust & Odor Reduction
9G-1518		175-2833		Dust & Odor Reduction
9W-3639		3E-7904		Dust & Odor Reduction
9X-8216		175-2840		Dust Reduction



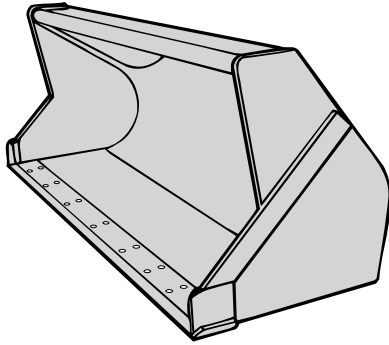




**GROUND ENGAGING TOOLS**

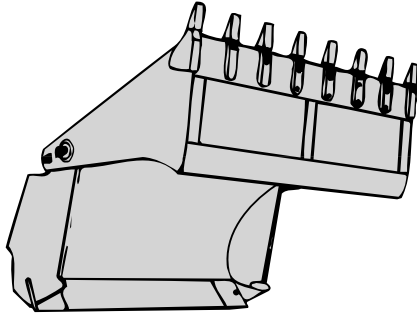
Front Buckets

Ground Engaging Tools



**General Purpose Bucket**

- For use in handling bank and stockpile materials.



**Multi-Purpose Bucket**

- Provides more dump clearance and grabbing capabilities due to its movable clam.
- For use in general loading.

Model*	Base Edge Width	Base Edge	Bucket Corner	
			LH	RH
416/416B/416C/416C IT	2240 mm (88.0 in)	9R-0316		
416D/420/420D/426	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674
426B/426C/426C IT	2262 mm (89.0 in)	9R-4672	9R-5205	9R-5206
428/428B/428C IT	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674
430D/436B/436C/436C IT	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206
446/446B/446D	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197
	2413 mm (95.0 in)	9R-4672		

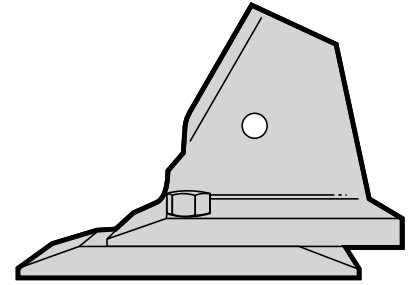
\* J225 Tip Size for Machine Models 446, 446B and 446D.  
J200 for all other Bucket Types and Machine Models.

**Front Bucket Bolt-On Edges**

When penetration is not a problem, use bolt-on cutting edges.

Bolt-on cutting edges:

- Increase base edge life up to five times over an unprotected base edge.
- Are quick and easy to replace.
- Increase bucket capacity.
- Provide smooth floor maintenance capability.
- Are made of DH-2™ steel alloy and are hardened to 430-520 Brinell.



Model	Base Edge Width	Base Edge**	Bucket Corner		Bolt-on Edge	Bolt	Nut
			LH	RH			
416/416B/416C/416C IT 416D/420/420D/426 426B/426C/426C IT 428/428B/428C IT 430D/436B/436C/436C IT 446/446B/446D	2240 mm (88.0 in)	9R-0316					
	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674	9W-8215 (2)	3F-5108 (8)	4K-0367 (8)
	2262 mm (89.0 in)	9R-4672***	9R-5205	9R-5206	9W-8215 (2)	3F-5108 (8)	8E-0367 (8)
	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674	118-7110 (2)	3F-5108 (8)	8E-0367 (8)
	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206	118-7110 (2)	3F-5108 (8)	8E-0367 (8)
	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747	9U-9665 (2)	3F-5188 (12)	4K-0367 (12)
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197	9U-9665 (2)	3F-5188 (12)	4K-0367 (12)
	2413 mm (95.0 in)	9R-4672			9W-8215 (2)	3F-5108 (8)	4K-0367 (8)

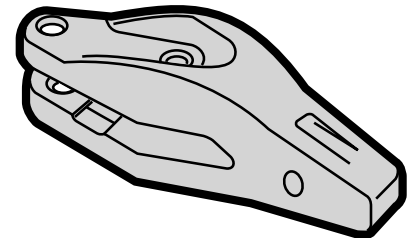
\*\* Eight teeth for all bucket types and machine models except for 9R-0316, 9R-4101 and 6Q-2193 base edges that have no teeth.

\*\*\* This base edge does not include teeth when used on 9R-5988 bucket. The base edge is drilled for bolt-on unitooth tips.

Number in parentheses () after the part number indicates the quantity required.

**Front Bucket Bolt-On Adapters**

- Provide excellent impact resistance.
- Provide excellent penetration ability.
- For use with larger backhoe loaders that work in abrasive conditions.



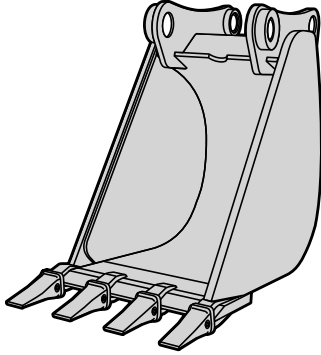
Model	Base Edge Width	Base Edge**	Bucket Corner		Bolt-on Adapter	Bolt	Nut
			LH	RH			
416/416B/416C/416C IT 416D/420/420D/426 426B/426C/426C IT 428/428B/428C IT 430D/436B/436C/436C IT 446/446B/446D	2240 mm (88.0 in)	9R-0316					
	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674	8E-2184 (8)	4F-3656 (16)	4K-0367 (16)
	2262 mm (89.0 in)	9R-4672***	9R-5205	9R-5206	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747			
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197			
	2413 mm (95.0 in)	9R-4672			8E-2184 (8)	4F-3656 (16)	4K-0367 (16)

\*\* Eight teeth for all bucket types and machine models except for 9R-0316, 9R-4101 and 6Q-2193 base edges that have no teeth.

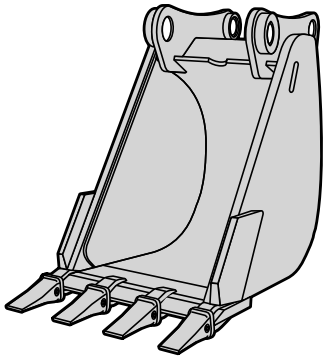
\*\*\* This base edge does not include teeth when used on 9R-5988 bucket. The base edge is drilled for bolt-on unitooth tips.

Number in parentheses () after the part number indicates the quantity required.

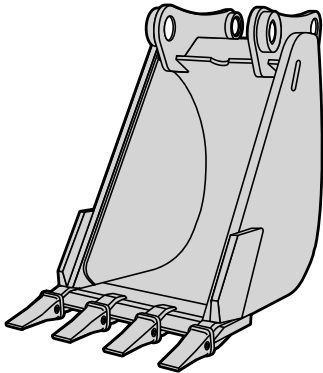
## Rear Buckets

**Standard Duty Bucket**

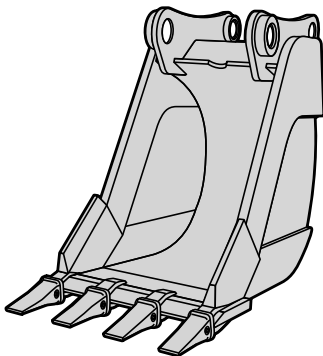
- For use in handling bank and stockpile materials.

**Heavy Duty Bucket**

- Provides longer life in abrasive materials due to replaceable corners, a thicker base edge, and bottom wear strips.

**High Capacity Bucket**

- Provides more capacity and a longer tip radius.
- Contains the same construction as the heavy duty bucket.
- For use in abrasive materials that are easily penetrated.

**Extreme Service Bucket**

- Contains heavy duty side plates, base edges, and corner adapters in addition to sidebar protectors and bottom wear strips.
- For use in prying out rock and concrete.

Rear Bucket — Base Edge and Corners\*

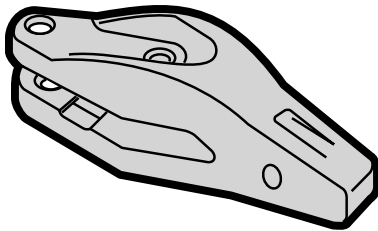
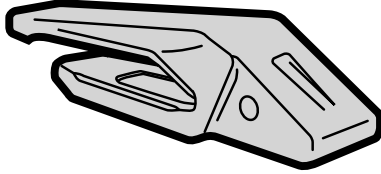
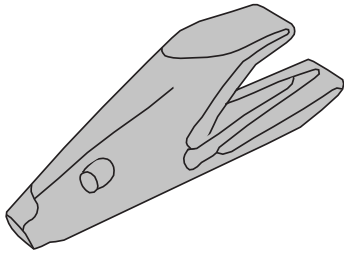
Model	Base Edge Width	Base Edge	Bucket Corner		Weld-On Adapter	Weld-On Double Strap Adapter	Bolt-On Adapter	Bolt	Nut
			LH	RH					
416/416B/416C/416C IT 420/426/426B/426C 426C IT/428/428B 428C IT/436B/436C IT 446/446B/446D	296 mm (12 in)	100-6002	9R-8987	9R-8988			8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	335 mm (12 in)	134-5877	134-5884	134-5885	119-3204/119-3205 (3)		8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	339 mm (12 in)	136-6886	136-7150	136-7150	119-3204/119-3205 (3)		8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	413 mm (16 in)	134-5878	134-5884	134-5885	119-3204 (3)				
	457 mm (18 in)	136-7046	136-7051	136-7049	119-3204/119-3205 (4 or 5)		8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	451 mm (18 in)	136-6887	136-6885	136-6885	119-3204/119-3205 (4 or 5)		8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	413 mm (16 in)	9R-8983*	9R-8987	9R-8988	6Y-3224 (3)		8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	419 mm (16 in)	9R-9459	9R-9456	9R-9454	6Y-3224 (3)	119-3204/119-3205 (4 or 5)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	603 mm (24 in)	134-5880	134-5884	134-5885		119-3204 (5)			
	609 mm (24 in)	136-7047	136-7051	136-7049	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	603 mm (24 in)	136-6888	136-6885	136-6885	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	570 mm (22 in)	9R-9241	9R-9819	9R-9820	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	572 mm (23 in)	9R-9458	9R-9456	9R-9454		119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	566 mm (22 in)	9R-8984*	9R-8987	9R-8988	6Y-3224 (4)		8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	718 mm (28 in)	9R-8985*	9R-8987	9R-8988	6Y-3224 (5)		8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	722 mm (28 in)	9R-9833	9R-9819	9R-9820	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	755 mm (30 in)	136-6889	136-6885	136-6885	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	724 mm (29 in)	9R-9457	9R-9456	9R-9454	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	908 mm (36 in)	136-6890	136-6885	136-6885	6Y-3224 (6)	119-3204/119-3205 (6)	8E-2184 (6)	4F-3656 (12)	4K-0367 (12)
	871 mm (34 in)	9R-8986*	9R-8987	9R-8988	6Y-3224 (6)		8E-2184 (6)	4F-3656 (12)	4K-0367 (12)
876 mm (34 in)	9R-9455	9R-9456	9R-9454	6Y-3224 (6)		8E-2184 (6)	4F-3656 (12)	4K-0367 (12)	

\* Bucket does not include teeth. The base edge is drilled for Bolt-On Unitooth tips. J225 for 446, 446B, and 446D. J200 for all other machine models.



**Rear Bucket Adapters**

Ground Engaging Tools

**Weld-On Double Strap Adapters**

- Provides good retention in high-impact conditions.
- Protects the base edge well.
- For use in general loading applications where adapter retention is important.

**Bolt-On Adapters**

- Provides excellent impact resistance.
- Provides excellent penetration ability.
- For use with larger backhoe loaders that work in abrasive conditions.

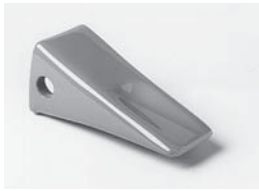
Model	Base Edge Width	Base Edge	Bucket Corner		Weld-on Adapter	Weld-on Double Strap Adapter	
			LH	RH			
416D/420D/430D	305 mm (12 in)	174-3951				168-1204/195-9204 (3)	
		154-5254	134-5884	134-5885		168-1204/195-9204 (3)	
		154-5268				168-1204/195-9204 (3)	
			219-9494				201-1235 (3)
			219-9493				201-1234 (3)
			219-9496				201-1234 (4)
		406 mm (16 in)	134-5878	134-5884	134-5885		195-9204 (3)
			219-9482				201-1234 (3)
		457 mm (18 in)	136-7046				168-1204/195-9204 (4)
			134-5879	134-5884	134-5885		168-1204/195-9204 (4)
			136-6887				168-1204/195-9204 (4)
			219-9487				201-1234 (4)
		219-9483				201-1234 (4)	
		219-9491				201-1234 (4)	
	610 mm (24 in)	136-7047				168-1204/195-9204 (5)	
		134-5880	134-5884	134-5885		168-1204/195-9204 (5)	
		136-6888				168-1204/195-9204 (5)	
		219-9488				201-1234 (5)	
		219-9484				201-1234 (5)	
		219-9492				201-1234 (8)	
	762 mm (30 in)	172-8270				195-9204 (10)	
		134-5881	134-5884	134-5885		168-1204/195-9204 (5)	
		136-6889				168-1204/195-9204 (5)	
		219-9489				201-1235 (5)	
		219-9485				201-1234 (5)	
		219-9495				201-1234 (10)	
	914 mm (36 in)	134-5882	134-5884	134-5885		168-1204/195-9204 (6)	
		136-6890				168-1204/195-9204 (6)	
		219-9490				201-1235 (6)	
		219-9486				201-1234 (6)	

Base Edge Part Numbers that start with 174-XXXX, 154-XXXX, 136-XXXX, 134-XXXX, 172-XXXX use DRS200.

Base Edge Part Numbers that start with 219-XXXX use DRS230.

Tips

Ground Engaging Tools



Cat backhoe loader bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.

**Long Tip**

- The best choice for most applications.

**Short Tip**

- Provides more strength.
- Contains less wear material.

**Utility Tip**

- For use in general purpose excavator and loader bucket applications.

**Wide Tip**

- Contains less wear material.
- Provides less penetration.
- Provides a cleaner floor and less spillage.

**Penetration Tip**

- Provides better penetration.
- Contains less wear material.

**Bolt-On Unitooth**

- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.

**Sharp Corner Tip/Sharp Center Tip**

- Provides the best penetration.
- Contains the least wear material.

## Tips

### Twin Sharp Tip

- For use for severe digging in rock and frost.



### Heavy Duty Long Tip

- Contains more wear material than Abrasion Tip.
- Provides greater strength than Long Tip.
- Provides better penetration due to a streamlined-profile.



### Heavy Duty Abrasion Tip

- Contains the greatest amount of wear material.
- Provides good strength.
- Provides good penetration.



Ground Engaging Tools

## Tips — Diagonal Retention System

### DRS200 and DRS230

The new system for all rear Backhoe Loader buckets except for the 446 model, provides good retention that is not affected by surface wear and easier installation since no clearance is needed between tips.

- Proprietary (RH Drive).
- 20-30% more wear material vs. J200.
- Easy access for pin installation & removal (40°).



Tips

Front Bucket Tips

	J200	J225
Heavy Duty Abrasion		6Y-6223
Heavy Duty Long		8E-4222
Long	1U-3202	6Y-3222
Penetration	1U-3209	6Y-8229
Short		6Y-6221
Utility	7T-8202	
Unitooth Center Tip	8J-6207	
Unitooth Center Tip — Bolt	5J-4771	
Unitooth Corner Tip (lh)	1U-1868	
Unitooth Corner Tip (rh)	1U-1869	
Unitooth Corner Tip — Bolt	6F-0196	
Standard Pin	8E-6208	6Y-3228
Standard Retainer	8E-6209	8E-6259
Heavy Duty Pin		132-4762
Heavy Duty Retainer		149-5733

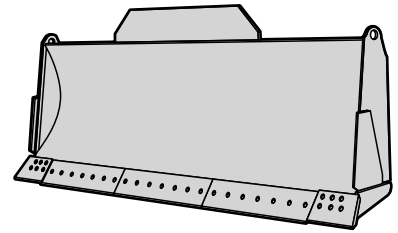
Rear Bucket Tips

	J200	J225	DRS200	DRS230
Chisel			195-7202	208-5232
Heavy Duty Abrasion		6Y-6223		
Heavy Duty Long		8E-4222		
Impact			195-7205	
Long	1U-3202	6Y-3222	195-7206	208-5236
Penetration	1U-3209	6Y-8229		208-5235
Sharp			195-7209	208-5239
Sharp Center	9W-8209	6Y-7229		
Sharp Center	9W-8208	6Y-7228		
Short		6Y-6221		
Twin Sharp	135-8208		195-7207	208-5237
Utility	7T-8202			
Wide	109-9200	186-3010	195-7210	208-5240
Standard Pin	8E-6208	6Y-3228		201-1238
Standard Retainer	8E-6209	8E-6259		201-1239
Heavy Duty Pin		132-4762		
Heavy Duty Retainer		149-5733		
Flex Pin			195-7200	

## Bulldozer Cutting Edges

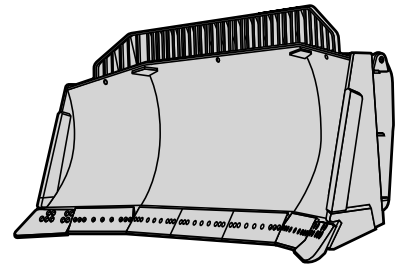
### Straight Blade (S)

- A good general purpose blade for most dozing applications. Available for most machines.



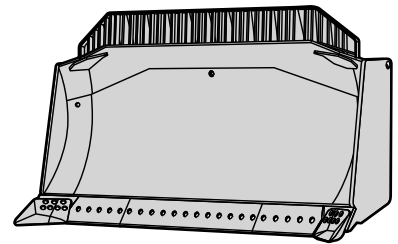
### Universal Blade (U)

- A straight blade with large “wings” to carry large loads more efficiently over long distances. Available only for larger models.



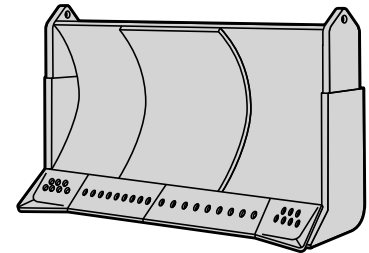
### Semi-U Blade (SU)

- A straight blade with small “wings” to provide better load carrying characteristics for mid-sized and large machines.



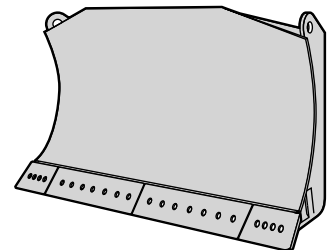
### Cushion Blade (C)

- A relatively narrow blade, primarily for pushing scrapers.



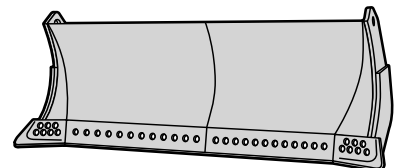
### Power Angle and Tilt Blade (P)

- A very versatile blade for smaller machines.



### Angle Blade (A)

- An economical, light to medium duty blade designed for use on D8 and smaller machines where the ability to side-cast is desired.





Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
3S	6EH,15W,86U 31M,40V	Straight	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	
		Straight	16 mm (0.62 in)	Center Edge	4T-6231 (2)	3F-5108 (7)	4K-0367 (7)	
3P	8SU,1GP,2JP,9RH 96X,5WH,8JP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6232 (2)	3F-5108 (8)	4K-0367 (8)	
Super LGP	8HP,8KP 8XP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5641 (2)	3F-5108 (6)	4K-0367 (6)	
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	141-0413 (2)	3F-5108 (8)	4K-0367 (8)	
Narrow PLGP	5LH		16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
			16 mm (0.62 in)	Center Edge	4T-6231	3F-5108 (7)	4K-0367 (7)	5P-8247 (7)
4A	12D,78D,05F1-2850 05F,97E,24F,65F 10D,79D,06F1-11299 52E,96E,26F,06F11300-UP,95G,33R		16 mm (0.62 in)	Center Edge	157-7338 (2)	3F-5108 (7)	4K-0367 (7)	
		Angle	16 mm (0.62 in)	Center Edge	4T-2977	4F-3654 (18)	4K-0367 (18)	
		Angle	16 mm (0.62 in)	Center Edge	4T-2979	4F-3654 (13)	4K-0367 (13)	
		Angle	16 mm (0.62 in)	Center Edge	4T-2981	4F-3654 (23)	4K-0367 (23)	
		Angle	16 mm (0.62 in)	Center Edge	4T-2974	4F-3654 (5)	4K-0367 (5)	
			End Edge		4T-2973 (2)	4F-3654 (6)	4K-0367 (6)	
		Angle	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
		Straight	16 mm (0.62 in)	Center Edge	4T-2980	4F-3654 (15)	4K-0367 (15)	
		Straight	16 mm (0.62 in)	Center Edge	4T-3720 (2)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
		Straight	16 mm (0.62 in)	Center Edge	4T-2977	4F-3654 (18)	4K-0367 (18)	
4S	6AC,2GC 2A,25F,67F 2TC,3CH,3DC 4A,40D 27F,67E,94G	Angle	16 mm (0.62 in)	Center Edge	4T-3021	4F-3654 (18)	4K-0367 (18)	
		Straight	16 mm (0.62 in)	Center Edge	4T-2972	4F-3654 (4)	4K-0367 (4)	
		Straight	16 mm (0.62 in)	Center Edge	4T-2983	4F-3654 (3)	4K-0367 (3)	
		Straight	19 mm (0.75 in)	Left End/Right End	4T-3028	4F-3654 (4)	4K-0367 (4)	
		Straight	16 mm (0.62 in)	Center Edge	4T-3027	4F-3654 (3)	4K-0367 (3)	
		Straight	16 mm (0.62 in)	Left End/Right End	8A-8581	4F-3654 (7)	4K-0367 (7)	
		Straight	16 mm (0.62 in)	Center Edge	8A-8580	4F-3654 (7)	4K-0367 (7)	
		Straight	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
		Straight	19 mm (0.77 in)	Center Edge	4T-3028 (2)	4F-3654 (4)	4K-0367 (4)	
		Straight	16 mm (0.62 in)	Center Edge	4T-3029	4F-3654 (7)	4K-0367 (7)	
4S-LGP	84E,19J,45J 4HC 84E,19J,45J	Straight	16 mm (0.62 in)	Center Edge	4T-2972 (2)	4F-3654 (4)	4K-0367 (4)	
		Straight	16 mm (0.62 in)	Center Edge	4T-2982	4F-3654 (7)	4K-0367 (7)	
		Straight	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Straight	16 mm (0.62 in)	Center Edge	3G-9306 (2)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
		Straight	16 mm (0.62 in)	Center Edge	6Y-5641 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Straight	16 mm (0.62 in)	Center Edge	140-2187 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Straight	16 mm (0.62 in)	Center Edge	104-9634 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Straight	16 mm (0.62 in)	Center Edge	4T-6232 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
		Straight	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
		Straight	16 mm (0.62 in)	Center Edge				
4P	2YH 4AC,92B,5NH,7EH 6CH 8LP 9SH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	3G-9306 (2)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5641 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	140-2187 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	104-9634 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6232 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
4P-LGP	4GH,8ZH,9YH 5EC,5RH,7CH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
		Power Angle & Tilt	16 mm (0.62 in)	Center Edge				

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
4P-LGP (cont.)	6DH,9TH,8MP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5842 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
	8YP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	141-2238 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
4P-XL	6XH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	8E-9377 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	91H,96H,42K	Angle	19 mm (0.77 in)	Center Edge	4T-6659 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
5A		Angle	16 mm (0.62 in)	Center Edge	4T-2978	3F-5108 (24)	4K-0367 (24)	
	93H1-3846 98H,11J,13J	Angle	19 mm (0.75 in)	Center Edge	4T-3030 (2)	3F-5108 (12)	4K-0367 (12)	
5S	3AH,2FH,2TH	Angle	19 mm (0.75 in)	Left End/Right End	4T-3008	3F-5108 (24)	4K-0367 (24)	
	6AC, 2GC 2BH,4FH 10J,12J,92H,97H	Angle Straight Straight	19 mm (0.75 in)	Center Edge	4T-3020	3F-5108 (12)	4K-0367 (12)	
5S-LGP	19R,16K	Straight	19 mm (0.75 in)	Center Edge	4T-3013	5J-4773	2J-3506	5P-8248
	90H	Straight	16 mm (0.62 in)	Left End/Right End	1U-2207	5J-4773	2J-3506	5P-8248
5S Pet.	1Z,3KH	Straight	19 mm (0.75 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
	4AH	Straight	19 mm (0.75 in)	Center Edge	3G-6062 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
5SU	7BH	Semi-U	19 mm (0.75 in)	Left End/Right End	4T-3026	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)
	2AH,2MH,7AH	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	4T-3025	3F-5108 (7)	4K-0367 (7)	5P-8247 (7)
5P	4GP,6JP	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	4T-3024	3F-5108 (28)	4K-0367 (28)	5P-8247 (28)
	6MH,9WH	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	4T-2972	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)
5P-LPG	1YH,2SH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-2983	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)
	4FP,BHY	Power Angle & Tilt	19 mm (0.75 in)	Left End/Right End	4T-3028	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)
6A	6PH,9XH,8NP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-3027	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)
	8ZP	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	1U-2211 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
6A	16C5001-UP,37D,81D,16E,03F,04F,40H	Angle	19 mm (0.75 in)	Left End Edge/Right End	4T-0731 (2)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
	15C5001-UP,39D,82D,08E,09E	Angle	16 mm (0.62 in)	Center Edge	9U-8057	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
6A	54U,44E,47G,58G,18H	Angle	19 mm (0.75 in)	Center Edge	4T-6659	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	1BH1-0569,4DH,4LH,3EH	Angle	25 mm (1.00 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
6A (cont.)	1BH0570-UP  1XP3GP,1ZP,1YP,3PP,4BP,8TP	Angle  Angle	19 mm (0.75 in)	Center Edge	4T-2952 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
			25 mm (1.00 in)	Center Edge	4T-2985 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
			19 mm (0.75 in)	Center Edge	4T-2952 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
6A Custom Wide	6HP,A6B	Angle	25 mm (1.00 in)	Center Edge	4T-2985 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
			19 mm (0.75 in)	Center Edge	109-9093 (4)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
			19 mm (0.75 in)	Left End/Right End	4T-3010	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
6S	1DH1-599,2HH,3JH,4BH  1DH600-Up,1RP,3EP,CLH,BHM 2G,3G,15E,36D,38D,39H,80D,85C 15C1-5000 17H,46G,55G,63S,95E	Straight  Straight Straight Straight Straight	19 mm (0.75 in)	Center Edge	4T-6659	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			25 mm (1.00 in)	Left End/Right End	7T-9978	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
			25 mm (1.00 in)	Center Edge	7T-9976**	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			25 mm (1.00 in)	Center Edge	4T-2985 (3)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
			19 mm (0.75 in)	Center Edge	4T-3023	3F-5108 (22)	4K-0367 (22)	5P-8247 (22)
			19 mm (0.75 in)	Center Edge	4T-3021	3F-5108 (18)	4K-0367 (18)	5P-8247 (18)
			19 mm (0.75 in)	Left End/Right End	4T-3010	4F-7827 (4)	2J-3506 (4)	5P-8248 (4)
			19 mm (0.75 in)	Center Edge	4T-3013	4F-7827 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Left End/Right End	4T-3010	4F-7827 (4)	2J-3506 (4)	5P-8248 (4)
			19 mm (0.75 in)	Center Edge	4T-3011	4F-7827 (11)	2J-3506 (11)	5P-8248 (11)
6S-LPG	21H,41H  16C1-5000 09A,01C,06C 1AH,2LH,3FH,1SP,3HP,BHG	Straight  Straight Straight Straight	16 mm (0.62 in)	Center Edge	4T-2976	3F-5108 (22)	4K-0367 (22)	
			16 mm (0.62 in)	Center Edge	4T-2977	3F-5108 (18)	4K-0367 (18)	
			19 mm (0.75 in)	Center Edge	4T-6659 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			25 mm (1.00 in)	Center Edge	7T-9976 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	9W-1878 (8)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
			25 mm (1.00 in)	Center Edge	6Y-3840 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
			25 mm (1.00 in)	Center Edge	6Y-3840 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
			19 mm (0.75 in)	Center Edge	4T-6659	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
			19 mm (0.75 in)	End	9U-8057 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	9W-1878 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
6SU	1TP,3FP,1WP,3RP,4AP,8SP,BHM, D6C,D6A,D2S,M6H  1CH,2NH,4PH,1TP,3FP,1WP,3RP 8AH,8BH 2SP,6G,PECA,SGD	Semi-U  Semi-U Semi-U Semi-U Semi-U	25 mm (1.00 in)	Center Edge	6Y-3840 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
			19 mm (0.75 in)	Center Edge	106-0956 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			25 mm (1.00 in)	Center Edge	229-6599 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	4T-2315 (2)	5J-4773 (10)	2J-3506 (10)	5P-8248 (10)
			19 mm (0.75 in)	Center Edge	127-3050 (2)	5J-4773 (10)	2J-3506 (10)	5P-8248 (10)
			19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	177-4550 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			19 mm (0.75 in)	Center Edge	4T-2954	5J-4771 (23)	2J-3506 (23)	
			25 mm (1.00 in)	Center Edge	4T-2864	5J-4771 (23)	2J-3506 (23)	
6PXL	B6X,G6M,G6N	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	4T-2315 (2)	5J-4773 (10)	2J-3506 (10)	5P-8248 (10)
			19 mm (0.75 in)	Center Edge	127-3050 (2)	5J-4773 (10)	2J-3506 (10)	5P-8248 (10)
6P-LGP	4MP,B6L,G6G 4TP,4WP	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	177-4550 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			19 mm (0.75 in)	Center Edge	177-4550 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
6P-LGP Foldable	F6W,F6Y	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	177-4550 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			19 mm (0.75 in)	Center Edge	4T-2954	5J-4771 (23)	2J-3506 (23)	
7S	2E,5A,17C1-5000,17E,34D,83D,84C	Straight	19 mm (0.75 in)	Center Edge	4T-2954	5J-4771 (23)	2J-3506 (23)	
			25 mm (1.00 in)	Center Edge	4T-2864	5J-4771 (23)	2J-3506 (23)	

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
7S (cont.)	6KB,8ZB,4XC,8NH,8L,CDC,8GH	Straight	19 mm (0.75 in)	Center Edge	4T-5318 (3)	6F-0196 (6)	2J-3505 (6)	5P-8248 (6)
			25 mm (1.00 in)	Center Edge	7T-6678*	6F-0196 (6)	2J-3505 (6)	5P-8248 (6)
			35 mm (1.38 in)	Center Edge	107-3363 (3)	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)
	23F,31F,59F,14H	Straight	19 mm (0.75 in)	Center Edge	4T-2946	5J-4773 (7)	2J-3506 (7)	
			25 mm (1.00 in)	Left End/Right End	4T-2945 (2)	5J-4773 (5)	2J-3506 (5)	
				Left End/Right End	4T-2991	5J-4773 (5)	2J-3506 (5)	
				Center Edge	4T-2990	5J-4773 (7)	2J-3506 (7)	
			19 mm (0.75 in)	Center Edge	4T-2921	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)
			25 mm (1.00 in)	Left End/Right End	4T-2922 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
				Left End/Right End	4T-2992	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
7S-LGP	49K,53J,60K,64K,57G	Straight	19 mm (0.75 in)	Center Edge	4T-2983	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)
				Left End/Right End	9W-9794	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
				Center Edge	9W-9795*	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)
			19 mm (0.75 in)	Center Edge	4T-3901 (3)	6F-0196 (7)	2J-3505 (7)	
			35 mm (1.38 in)	Center Edge	135-9778 (3)*	6F-0196 (7)	2J-3505 (7)	
			19 mm (0.75 in)	Center Edge	128-5883 (3)	6F-0196 (7)	2J-3505 (7)	
			25 mm (1.00 in)	Center Edge	135-6537*	6F-0196 (9)	2J-3505 (9)	
			35 mm (1.38 in)	Center Edge	145-7846 (3)	6F-0196 (7)	2J-3505 (7)	
			25 mm (1.00 in)	Left End/Right End	7T-6537*	6F-0196 (5)	2J-3505 (5)	
			25 mm (1.00 in)	Left End/Right End	7T-6592	6F-0196 (4)	2J-3505 (4)	5P-8249 (4)
7U	55B,7AC,9JB,8MH,JIL,CDL	Universal	19 mm (0.75 in)	Center Edge	7T-6591 (2)*	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)
				Center Edge	4T-2955	5J-4773 (9)	2J-3506 (9)	
				Left End/Right End	4T-2952 (2)	5J-4773 (5)	2J-3506 (5)	
				Left End/Right End	4T-2985	5J-4773 (5)	2J-3506 (5)	
				Center Edge	4T-2890	5J-4773 (9)	2J-3506 (9)	
	42G	Universal	19 mm (0.75 in)	Center Edge	4T-2917	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)
				Left End/Right End	4T-2916 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
				Center Edge	4T-3421	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)
				Left End/Right End	4T-3420 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
				Center Edge	9W-9783*	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)
7SU	85D,61K,94R	Universal	25 mm (1.00 in)	Left End/Right End	9W-9792* (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
			19 mm (0.75 in)	Left End/Right End	7T-6936	6F-0196 (4)	2J-3505 (4)	
				Center Edge	7T-6678*	6F-0196 (6)	2J-3505 (6)	
			35 mm (1.38 in)	Left End/Right End	107-3362	6F-0196 (4)	2J-3505 (4)	
				Center Edge	107-3363	6F-0196 (6)	2J-3505 (6)	
			19 mm (0.75 in)	Center Edge	4T-5318	6F-0196 (6)	2J-3505 (6)	
			19 mm (0.75 in)	Left End/Right End	1U-1192 (2)	6F-0196 (6)	2J-3505 (6)	
				Center Edge	4T-3901 (3)	6F-0196 (7)	2J-3505 (7)	5P-8248 (8)
				Center Edge	7T-6589 (3)*	6F-0196 (7)	2J-3505 (7)	5P-8249 (7)
				Center Edge		6F-0196 (7)	2J-3505 (7)	5P-8249 (7)

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge		
7A (cont.)	3CC,4EB,4ZC	Angle	35 mm (1.38 in)	Center Edge	135-9778*	6F-0196 (7)	2J-3505 (7)	5P-8248 (8)		
		Angle	19 mm (0.75 in)	Center Edge	4T-2949 (2)	5J-4771 (15)	2J-3506 (15)	5P-8248 (15)		
	6A,17C5001-Up,35D,84D,6E,18E	25 mm (1.00 in)	Angle	19 mm (0.75 in)	Center Edge	4T-2863 (2)	5J-4771 (15)	2J-3506 (15)	5P-8248 (15)	
				25 mm (1.00 in)	Center Edge	4T-2948 (3)	5J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
		13F,13H,22F,30F,72F	Angle	19 mm (0.75 in)	Center Edge	4T-2989 (3)	5J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
				25 mm (1.00 in)	Center Edge	9W-9796 (3)**	5J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
		8U	1JH,2WP,6AH,9CH,9WPC,XB,A5G,DZB	Universal	28 mm (1.12 in)	Center Edge	9W-5232 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
					35 mm (1.38 in)	Left End/Right End	4T-6378 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
	35 mm (1.38 in)			Left End/Right End	Center Edge	9W-6092 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
					45 mm (1.77 in)	Left End/Right End	112-2473	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
6Y1-1395	Universal			25 mm (1.00 in)	Center Edge	112-2475 (2)**	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
				35 mm (1.38 in)	Left End/Right End	4T-3422 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
35 mm (1.38 in)	Left End/Right End			Center Edge	4T-3417 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
				35 mm (1.38 in)	Left End/Right End	1U-4929	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)	
35 mm (1.38 in)	Left End/Right End			Center Edge	1U-4931 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
				40 mm (1.57 in)	Left End/Right End	6Y-6359*	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)	
45 mm (1.77 in)	Left End/Right End	Center Edge	6Y-6360 (2)*	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)				
		45 mm (1.77 in)	Left End/Right End	7T-4346/45*	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
28 mm (1.12 in)	Universal	28 mm (1.12 in)	Center Edge	7T-4347 (2)*	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)			
		35 mm (1.38 in)	Left End/Right End	107-3480	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
45 mm (1.77 in)	Universal	45 mm (1.77 in)	Center Edge	107-3483 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)			
		28 mm (1.12 in)	Center Edge	4T-9590	4J-9058 (14)	2J-3507 (14)				
35 mm (1.38 in)	Universal	35 mm (1.38 in)	Left End/Right End	4T-9587 (2)	4J-9058 (5)	2J-3507 (5)				
		45 mm (1.77 in)	Left End/Right End	9W-4398	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
25 mm (1.00 in)	Universal	25 mm (1.00 in)	Center Edge	9W-4397	4J-9058 (14)	2J-3507 (14)	5P-8250 (14)			
		45 mm (1.77 in)	Left End/Right End	9W-3927	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
25 mm (1.00 in)	Universal	25 mm (1.00 in)	Center Edge	9W-3926*	4J-9058 (14)	2J-3507 (14)	5P-8250 (14)			
		25 mm (1.00 in)	Left End/Right End	4T-3419	1J-6762 (12)	2J-3506 (12)				
35 mm (1.38 in)	Universal	35 mm (1.38 in)	Center Edge	4T-2861 (2)	1J-6762 (9)	2J-3506 (9)				
		40 mm (1.57 in)	Left End/Right End	4T-6513	5J-2409 (10)	2J-3505 (10)				
45 mm (1.77 in)	Universal	45 mm (1.77 in)	Left End/Right End	4T-6512 (2)	5J-2409 (6)	2J-3505 (6)				
		45 mm (1.77 in)	Left End/Right End	6Y-6762	5J-2409 (6)	2J-3505 (6)				
45 mm (1.77 in)	Universal	45 mm (1.77 in)	Center Edge	6Y-6765	5J-2409 (10)	2J-3505 (10)				
		45 mm (1.77 in)	Center Edge	7T-4355**	4J-9058 (10)	2J-3507 (10)				
45 mm (1.77 in)	Universal	45 mm (1.77 in)	Left End/Right End	7T-4354 (2)**	4J-9058 (6)	2J-3507 (6)				
		45 mm (1.77 in)	Left End/Right End	107-3475	5J-2409 (6)	2J-3505 (6)				
45 mm (1.77 in)	Universal	45 mm (1.77 in)	Center Edge	107-3478	5J-2409 (10)	2J-3505 (10)				
		45 mm (1.77 in)	Left End/Right End	107-3474	5J-2409 (6)	2J-3505 (6)				

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.

\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge	
8U (cont.)	29J,30E,73E 30V,34W,65X,69V	Universal Universal	45 mm (1.77 in)	Center Edge	107-3478	5J-2409 (10)	2J-3505 (10)		
			25 mm (1.00 in)	Center Edge	4T-2986	4J-9058 (5)	2J-3507 (5)		
	35 mm (1.38 in)	Left End/Right End Left End/Right End Center Edge	4T-2987 (2)	Left End/Right End	4J-9058 (6)	2J-3507 (6)			
			9W-8856	Left End/Right End	4J-9058 (5)	2J-3507 (5)			
			9W-8655 (2)	Center Edge	4J-9058 (6)	2J-3507 (6)			
	40 mm (1.57 in)	Left End/Right End Center Edge	7T-4349/50**	Left End/Right End	4J-9208 (5)	2J-3507 (5)			
			7T-4352 (2)*	Center Edge	4J-9208 (6)	2J-3507 (6)			
	8SU	1KH,2PP,2TP,3MP,3WH, 1HP,6LH,9BH,9PH,2NP 05A,9TP,BHW,88S,DZA,DZX  3E,8A,12C,18C,32D,44C1-1192,86D  4Y1-1939	Semi-U          Semi-U	45 mm (1.77 in)	Left End/Right End Center Edge	107-3481 107-3473 (2)	4J-9058 (6) 4J-9058 (5)	2J-3507 (6) 2J-3507 (5)	
				28 mm (1.12 in)	Center Edge	4T-6381	4J-9058 (9)	2J-3507 (9)	5P-8250 (9)
				35 mm (1.38 in)	Left End/Right End Center Edge	6Y-5540 (2) 7T-9126	4J-9058 (5) 4J-9058 (9)	2J-3507 (5) 2J-3507 (9)	5P-8250 (5) 5P-8250 (9)
				45 mm (1.77 in)	Left End/Right End Center Edge	7T-9125 (2) 112-2472	4J-9058 (5) 4J-9058 (9)	2J-3507 (5) 2J-3507 (9)	5P-8250 (5) 5P-8250 (9)
				19 mm (0.75 in)	Center Edge	112-2471 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
				25 mm (1.00 in)	Center Edge	4T-2944 (2)	1J-6762 (13)	2J-3506 (13)	5P-8248 (13)
				28 mm (1.12 in)	Center Edge Left End/Right End Center Edge	4T-2860 (2) 4T-3417 4T-3423 (2)	1J-6762 (13) 4J-9208 (5) 4J-9208 (6)	2J-3506 (13) 2J-3507 (5) 2J-3507 (6)	5P-8248 (13) 5P-8250 (5) 5P-8250 (6)
				35 mm (1.38 in)	Left End/Right End Center Edge	1U-4929 1U-4930 (2)	4J-9208 (5) 4J-9208 (6)	2J-3507 (5) 2J-3507 (6)	5P-8250 (5) 5P-8250 (6)
40 mm (1.57 in)				Left End/Right End Center Edge	6Y-6359** 6Y-6358 (2)**	4J-9208 (5) 4J-9208 (6)	2J-3507 (5) 2J-3507 (6)	5P-8250 (5) 5P-8250 (6)	
45 mm (1.77 in)				Left End/Right End Center Edge	7T-4346/45** 7T-5235**	4J-9208 (5) 4J-9208 (6)	2J-3507 (5) 2J-3507 (6)	5P-8250 (5) 5P-8250 (6)	
4Y1940-Up	Semi-U          Semi-U	Semi-U	28 mm (1.12 in)	Center Edge	107-3482	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)	
			35 mm (1.38 in)	Left End/Right End Left End/Right End Center Edge	107-3480 (2) 4T-9586 6Y-5540 (2)	4J-9208 (6) 4J-9058 (11) 4J-9058 (5)	2J-3507 (6) 2J-3507 (11) 2J-3507 (5)	5P-8250 (6) 5P-8250 (11) 5P-8250 (5)	
			45 mm (1.77 in)	Left End/Right End Center Edge	9W-4398 9W-4396	4J-9058 (5) 4J-9058 (11)	2J-3507 (5) 2J-3507 (11)	5P-8250 (5) 5P-8250 (11)	
			25 mm (1.00 in)	Center Edge	9W-3927	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)	
			35 mm (1.38 in)	Center Edge	9W-3925	4J-9058 (11)	2J-3507 (11)	5P-8250 (11)	
			40 mm (1.57 in)	Center Edge	4T-3418 (2)	5J-2409 (10)	2J-3505 (10)	5P-8249 (10)	
			45 mm (1.77 in)	Center Edge	6Y-6763 (2)	5J-2409 (10)	2J-3505 (10)	5P-8249 (10)	
			25 mm (1.00 in)	Center Edge	6Y-5777 (2)**	5J-2409 (10)	2J-3505 (10)	5P-8249 (10)	
			35 mm (1.38 in)	Center Edge	107-3476 (2)	5J-2409 (10)	2J-3505 (10)	5P-8249 (10)	
			45 mm (1.77 in)	Center Edge	4T-6531 (2)	5J-2409 (10)	2J-3505 (10)	5P-8249 (10)	

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.



Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
8SU (cont.)	29E,78C,94E	Semi-U	40 mm (1.57 in)	Center Edge	6Y-5776 (2)*	5J-2409 (14)	2J-3505 (14)	5P-8249 (14)
			45 mm (1.77 in)	Center Edge	107-3477 (2)	5J-2409 (14)	2J-3505 (14)	5P-8249 (14)
8SU LGP	44C,1193-Up,73D KMB, LAA, DZC	Semi-U	25 mm (1.00 in)	Center Edge	4T-2862 (2)	1J-6762 (14)	2J-3506 (14)	5P-8248 (14)
			28 mm (1.12 in)	Center Edge	4Z-9058	4J-9058 (13)	2J-3507 (13)	5P-8250 (13)
8A	1HH,2XP,6NH,9AH,4ZP  5Y,27B,41Z	Angle	28 mm (1.12 in)	Left End/Right End	6Y-5540 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
			35 mm (1.38 in)	Center Edge	9W-9432*	4F-4042 (9)	2J-3505 (9)	5P-8250 (9)
			45 mm (1.77 in)	Center Edge	9W-9098	4F-4042 (7)	2J-3505 (7)	5P-8250 (7)
			25 mm (1.00 in)	Center Edge	112-2474 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)
			35 mm (1.38 in)	Left End/Right End	4T-2987	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)
			35 mm (1.38 in)	Center Edge	4T-2988 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)
		Angle	40 mm (1.57 in)	Left End/Right End	9W-8657	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)
			45 mm (1.77 in)	Center Edge	9W-8655 (2)*	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)
			40 mm (1.57 in)	Left End/Right End	1U-4932	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)
			45 mm (1.77 in)	Center Edge	1U-4933 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)
			40 mm (1.57 in)	Left End/Right End	7T-4352	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)
			45 mm (1.77 in)	Center Edge	7T-4353 (2)**	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)
8R	07A,18C,35D,99D,87D,07E,22E,72D  28E1-11125	Angle	19 mm (0.75 in)	Center Edge	107-3479 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)
			25 mm (1.00 in)	Center Edge	4T-2943 (2)	1J-6762 (16)	2J-3506 (16)	
			35 mm (1.38 in)	Center Edge	4T-2888 (2)	1J-6762 (16)	2J-3506 (16)	
			25 mm (1.00 in)	Center Edge	9W-8657 (2)	1J-6762 (16)	2J-3506 (16)	
			35 mm (1.38 in)	Center Edge	4T-6532 (4)	5J-2409 (6)	2J-3505 (6)	
			40 mm (1.57 in)	Center Edge	6Y-6761 (4)	5J-2409 (6)	2J-3505 (6)	
		Angle	25 mm (1.00 in)	Left End/Right End	107-3474 (4)**	5J-2409 (6)	2J-3505 (6)	
			25 mm (1.00 in)	Center Edge	7T-4348 (4)**	5J-2409 (6)	2J-3505 (6)	
			35 mm (1.38 in)	Center Edge	4T-2994 (3)	4J-9058 (8)	2J-3507 (8)	
			40 mm (1.57 in)	Center Edge	9W-8658 (3)	4J-9058 (8)	2J-3507 (8)	
			28 mm (1.12 in)	Left End/Right End	107-3484 (3)**	4J-9058 (8)	2J-3507 (8)	
			35 mm (1.38 in)	Center Edge	7T-4351 (3)**	4J-9058 (8)	2J-3507 (8)	
8C	71F,77G	Cushion	28 mm (1.12 in)	Center Edge	135-9373 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)
			45 mm (1.77 in)	Center Edge	136-9628 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)
8R	43K	Rip Dozer	25 mm (1.00 in)	Center Edge	135-9629 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)
			25 mm (1.00 in)	Center Edge	4T-2867 (1)	5J-2409 (13)	2J-3505 (13)	
9U	1LH,1MP,2ZH,7PH,9MP,CMH,CMN CMS,CMW,CMZ,T9H	Universal	28 mm (1.12 in)	Center Edge	4T-3418 (2)	5J-2409 (10)	2J-3505 (10)	
			35 mm (1.38 in)	End	6Y-5538	4J-9208 (15)	2J-3507 (15)	5P-8250 (15)
9U		Universal	35 mm (1.38 in)	Left End/Right End	6Y-5540 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)
			45 mm (1.77 in)	Center Edge	7T-9125	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
			45 mm (1.77 in)	Center Edge	7T-5701	4J-9058 (15)	2J-3507 (15)	5P-8250 (15)
			45 mm (1.77 in)	Left End/Right End	112-2471	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
9U (cont.)	1LH,1MP,2ZH,7PH,9MP,CMH,CMN CMS,CMW,CMZ	Universal	45 mm (1.77 in)	Center Edge	9W-7044**	4J-9058 (15)	2J-3507 (15)	5P-8250 (15)
	14C,19K,78X	Universal	28 mm (1.12 in)	Center Edge	4T-6378 (3)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
9SU	1LP,1MH,2LP,5BH,7NH,2ZP,2B,9LH,9RP CLC,CLN,CLY,CMA,T8J	Semi-U	35 mm (1.38 in)	Intermediate Edge	4T-6379 (2)	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)
				Right /Left End Edge	9W-6092	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
				Intermediate Edge	9W-9197	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)
				Center Edge	9W-6092	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
				Left End/Right End	7T-4341*	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
				Left Intermediate	7T-4336*	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)
				Center Edge	7T-4341*	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
				Right Intermediate	7T-4337*	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)
				Right/Left End Edge	7J-2959	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)
				Intermediate Edge	7J-2979	4J-9208 (4)	2J-3507 (4)	5P-8250 (4)
				Center Edge	7J-2959	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)
				Left End/Right End	4T-6382	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)
				Center Edge	4T-6381	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)
				Left End/Right End	9W-4503	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)
Center Edge	7T-9126 (2)	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)				
Left End/Right End	6Y-0315*	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)				
Center Edge	6Y-0313 (2)**	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)				
Right End Edge	6Y-0314*	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)				
Left End/Right End	9W-4506	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)				
Center Edge	9W-4507 (2)	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)				
Left End Edge/Right End	6Y-0481/80*	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)				
Center Edge	6Y-0479 (2)**	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)				
Left End/Right End	7T-9781	6V-8360 (5)	3K-9770 (5)	4K-0684 (5)				
Center Edge	9W-0775 (3)	6V-8360 (5)	3K-9770 (5)	4K-0684 (5)				
Left End/Right End	9W-3929	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)				
Center Edge	9W-3931 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)				
Center Edge	4T-6453 (1)	4J-9058 (13)	2J-3507 (13)	5P-8250 (13)				
End Edge	4T-6457 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)				
Left End/Right End	7J-2964	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)				
Center Edge	7J-2963	4J-9058 (13)	2J-3507 (13)	5P-8250 (13)				
Center Edge	6Y-5539 (1)	4J-9208 (12)	2J-3507 (12)	5P-8250 (12)				
End	6Y-5540 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)				
Left End/Right End	7T-9125	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)				
Center Edge	7T-5702	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)				
Left End/Right End	112-2471	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)				

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
9SU (cont.)	1LP,1MH,2LP,5BH,7NH,2ZP2B,9LH,9RP CLC,CLN,CLY,CMA,T9J	Semi-U	45 mm (1.77 in)	Center Edge	9W-7043	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)
				Center Edge	4T-6386 (3)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
				Center Edge	9W-4500 (3)	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
	5A,18K,46K,61U,73R	Semi-U	40 mm (1.57 in)	Center Edge	7T-4342 (3)*	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
				Center Edge	7J-2980 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)
				Center Edge	4T-6386	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
				End Edge	4T-6385 (2)	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)
				Left End/Right End	9W-4502	1J-4948 (8)	2J-3507 (8)	5P-8250 (8)
				Center Edge	9W-4500	1J-4948 (7)	2J-3507 (7)	5P-8250 (7)
				Left End Edge	6Y-0311*	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)
18Y1-1875,42S,52Y	Semi-U	40 mm (1.57 in)	Center Edge	6Y-0310**	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
			Right End Edge	6Y-0312*	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)	
			Left End/Right End	9W-4508	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)	
			Center Edge	7J-2980	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
			Left End Edge	6Y-0477*	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)	
			Center Edge	6Y-0476**	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
			Right End Edge	6Y-0478*	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)	
21E1-831,25E,06A	Semi-U	28 mm (1.12 in)	Center Edge	4T-6459 (1)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)	
			End Edge	4T-6456 (2)	8J-2928 (6)	2J-3507 (6)	5P-8250 (6)	
			Center Edge	7J-2961 (1)	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)	
			End Edge	7J-2960 (2)	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)	
			Left End/Right End	7T-9779	6V-8360 (5)	3K-9770 (5)	4K-0684 (5)	
			Center Edge	7T-9782 (2)	6V-8360 (6)	3K-9770 (6)	4K-0684 (6)	
			Left End/Right End	9W-3930	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)	
			Center Edge	9W-3928 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)	
			Center Edge	4T-6448	4J-9208 (10)	2J-3507 (10)	5P-8250 (10)	
			Center Edge	7J-2962 (2)	4J-9208 (10)	2J-3507 (10)	5P-8250 (10)	
9U SXS	20H	28 mm (1.12 in)	Center Edge	4T-6378 (4)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
			Center Edge	4T-6377 (3)	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)	
			Center Edge	4T-6379 (2)	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)	
			Center Edge	4T-6388 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)	
			End Edge	4T-6387 (2)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)	
			Center Edge	7J-2966 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)	
			End Edge	7J-2965 (2)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)	
9A	55C,52C,90D,11E,26E	Angle	28 mm (1.12 in)	Center Edge	4T-6388 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)
			40 mm (1.57 in)	Center Edge	4T-6387 (2)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)
			Center Edge	7J-2966 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)	
9C	70F,45G,20Y	Cushion	28 mm (1.12 in)	Center Edge	4T-6450(1)	8J-2928 (15)	2J-3507 (15)	5P-8250 (15)
			End Edge	4T-6388 (2)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)	
9R	39K	Rip Dozer	28 mm (1.12 in)	Center Edge	4T-6386 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)
			40 mm (1.57 in)	Center Edge	7J-2980 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)

\* Edges are 280 mm (11") wide.

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Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge			
10U	80W	Universal	35 mm (1.38 in)	Left End/Right End	1U-4457 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)			
				Center Edge	1U-4458 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Left End/Right End	4T-0084 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)			
			40 mm (1.57 in)	Center Edge	4T-0083 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Left End/Right End	6Y-0019 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)			
				Center Edge	6Y-0018 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
			50 mm (2.00 in)	Left End/Right End	4T-0608 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)			
				Center Edge	4T-0609 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Left End/Right End	6Y-0022 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)			
			10SU	79W	Semi-U	35 mm (1.38 in)	Center Edge	6Y-0023 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
							End	9W-6615 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
							Center Edge	9W-6608 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
						45 mm (1.77 in)	End	9W-6658 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
							Center Edge	9W-6657 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
							End	8E-2087 (3)**	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
60 mm (2.36 in)	End	8E-2086 (2)**				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
	Center Edge (ARM)	223-8149 (3)**				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
	End Edge (ARM)	195-9170 (1)**				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
10SU	79W	Semi-U				35 mm (1.38 in)	End Edge (ARM)	201-1230 (1)**	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
							Center Edge	1U-4459 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
							End	1U-4455 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
						40 mm (1.57 in)	Center Edge	4T-0081 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
							End	4T-0082 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
							Left End/Right End	6Y-0017 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	6Y-0016 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Center Edge	4T-0607 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				End	4T-0604 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
			60 mm (2.36 in)	Left End/Right End	6Y-0021 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Center Edge	6Y-0020 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)			
				Center Edge	9W-6609 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)			
			10SU	79W	Semi-U	35 mm (1.38 in)	End	9W-6608 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
							Center Edge	9W-6656 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
							End	9W-6657 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
45 mm (1.77 in)	Center Edge	9W-6656 (2)				5P-8823 (6)	3K-9770 (6)	4K-0684 (6)			
	End	9W-6657 (2)				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
	Center Edge (ARM)	195-9171 (2)				5P-8823 (6)	3K-9770 (6)	4K-0684 (6)			
60 mm (2.36 in)	End	195-9170 (2)				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
	Center Edge	195-9170 (2)				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
	End	201-1230 (1)**				5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
75 mm (2.95 in)	Center Edge	135-9580 (2)**				5P-8823 (6)	3K-9770 (6)	4K-0684 (6)			

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
10SU (cont.)	1RH,7RH,4KP,6EP,BHJ,BHA	Semi-U	75 mm (2.95 in)	End Edge	135-9579 (2)**	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
10C	83W	Cushion	35 mm (1.38 in)	Right/Left End Edge	9J-3751	8J-2928 (10)	2J-3507 (10)	5P-8250 (10)
11U	4CB,5TB,9MH,9ZH,4YP,8RP	Universal	45 mm (1.77 in)	Right/Left End Edge	9W-2425	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Right/Left Center Edge	9W-2424	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	9W-2426	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	138-6483 (2)#	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	138-6484	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	138-6485	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	138-6486	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Right/Left End Edge	9W-4494	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Right/Left Center Edge	9W-4493	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge	9W-4495	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge (ARM)	195-9173 (2)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge (ARM)	195-9174 (1)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge (ARM)	195-9175 (1)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge (ARM)	201-1231 (1)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			75 mm (3.00 in)	Center Edge	195-7187 (2)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			75 mm (3.00 in)	Center Edge	135-9577 (2)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			75 mm (3.00 in)	Center Edge	135-9578**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
11SU	1AP,4BB,4KB,9NH,4XP,8PP	Semi-U	45 mm (1.77 in)	Left End/Right End	9W-2425	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	9W-2426 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Left End/Right End	9W-4494	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Center Edge	9W-4495 (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			75 mm (3.00 in)	Center Edge	135-9578 (2)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			75 mm (3.00 in)	End Edge	135-9577 (2)**	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
11 Carrydozer	5JP,BHZ	General Duty	45 mm (1.77 in)	Reversible Edge	238-3171 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)
		Extended Wear Life	60 mm (2.36 in)	Reversible Edge	229-7052 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)
		Extended Wear Life (ARM)	60 mm (2.36 in)	Reversible Edge	238-3177 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)
			60 mm (2.36 in)	One-Way Edge	267-8654 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)
			60 mm (2.36 in)	Reversible Edge	268-8751 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)
			60 mm (2.36 in)	One-Way Edge	268-8750 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)

\* Edges are 280 mm (11") wide.

Number in parentheses ( ) after the part number indicates the quantity required.

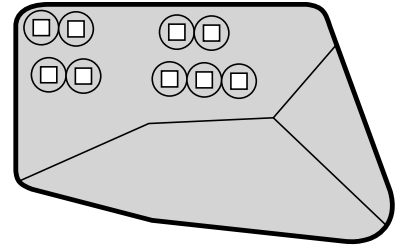
\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

# 195-5118 — Same as 136-6153/4 with one sharp edge.

**Bulldozer End Bits**

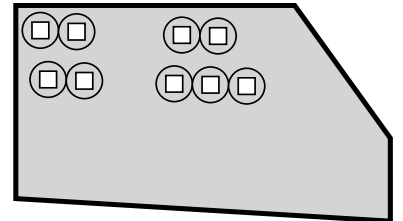
**General Duty End Bits**

- Provides a thicker wear area than the cutting edge.
- Made from DH-2 steel in the D3 through D6 sizes.
- Made from DH-3 steel in the D7 through D11 sizes.
- For use in most dozing applications.



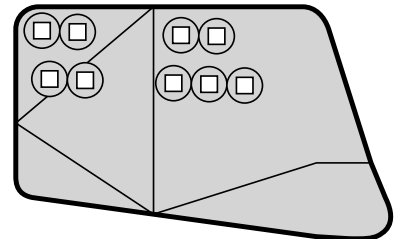
**Utility End Bits**

- Provides good corner protection in high impact, high abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in applications where face wear is a problem.



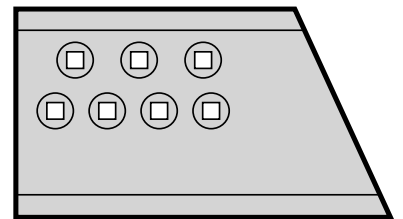
**Extended Wear Life End Bits**

- Provides an excellent cutting edge to end bit wear ratio in abrasive conditions.
- Provides a maximum depth of cut relative to the cutting edge.
- Provides a thicker wear area than the cutting edge.
- Made from DH-2 steel in the D4 through D6 sizes.
- Made from DH-3 steel in the D7 through D11 sizes.



**Finish Dozing End Bits**

- Provides a depth of cut equal to the cutting edge.
- Protects the blade corner in low impact, low abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in finish and semi-finish dozing.





Model	Serial Number	Blade Model Power Angle & Tilt	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
D3	5WH,6EH,85U 96X,8XP,8HP 8KP,2JP,9RH 1GP,8JP	Power Angle & Tilt	16 mm (0.62 in)							4T-6229	4T-6229	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)
	15W,31M,40V 86J,5LH	Straight	16 mm (0.62 in)							4T-6229	4T-6229	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)
	2A,4A,19J 25F,27F,40D 45J,67E,67F 84E,93C,94G	Straight	19 mm (0.75 in) 22 mm (0.88 in)	9F-7074 3G-8322	9F-7073 3G-8321					4T-3052 4T-3052	4T-3051 4T-3051	3F-5108 (6) 3F-5108 (6)	4K-0367 (6) 4K-0367 (6)	5P-8247 (6) 5P-8247 (6)
	2TC,3CH,3DC 4HC	Straight	22 mm (0.88 in)	140-6788	140-6787			4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
D4 LGP	2YH,4AC,4GH 6CH,6DH,8ZH 9YH	Power Angle & Tilt	16 mm (0.62 in) 16 mm (0.62 in)						4T-6229	4T-6229	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
	5EC,5NH,5RH 6XH,9ZB,7CH 7EH	Power Angle & Tilt	22 mm (0.88 in)					4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
	2A,4A,19J 25F,27F,40D 45J,67E,67F 84E,93C,94G	Straight	19 mm (0.75 in) 22 mm (0.88 in)	9F-7074 3G-8322	9F-7073 3G-8321					4T-3052 4T-3052	4T-3051 4T-3051	3F-5108 (6) 3F-5108 (6)	4K-0367 (6) 4K-0367 (6)	5P-8247 (6) 5P-8247 (6)
	2TC,3CH,3DC 4HC	Straight	22 mm (0.88 in)					4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
D5	2YH,4AC,4GH 6CH,6DH,8ZH 9SH,9TH,9YH 8MP,8YP,8LP	Power Angle & Tilt	16 mm (0.62 in) 22 mm (0.88 in)							4T-6229	4T-6229	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)
	5NH,7CH,5EC, 5RH,9ZB	Power Angle & Tilt	22 mm (0.88 in)					4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
	2AH,2MH,7AH 6JP,4GP HGP,W5C	Power Angle & Tilt	22 mm (0.88 in)	140-6786#	140-6787#					8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
	2BH,4FH,4AH 6MH,9WH,8GP 7BH	Straight Power Angle & Tilt	22 mm (0.88 in) 22 mm (0.88 in)	140-6786# 140-6786#	140-6787# 140-6787#			4T-5408	4T-5407	8E-9378 8E-7078	8E-9379 8E-7079	5J-4773 (4) 5J-4771 (4)	2J-3506 (4) 2J-3506 (4)	5P-8248 (4) 5P-8248 (4)
D4	10J,12J,16K 10J,12J,16K 19R,90H,92H 97H	Straight Straight	19 mm (0.75 in) 22 mm (0.88 in)	9F-7074 3G-8322	9F-7073 3G-8321					4T-3052 4T-3052	4T-3051 4T-3051	3F-5108 (6) 3F-5108 (6)	4K-0367 (6) 4K-0367 (6)	5P-8247 (6) 5P-8247 (6)
	91H,96H,42K 11J,13J,98H	Angle	19 mm (0.75 in)	9F-7076	9F-7075					4T-3050	4T-3049	3F-5108 (6)	4K-0367 (6)	

Number in parentheses ( ) after the part number indicates the quantity required. \* Heavy Duty Mining end bit. # Hot cupped end bits. \*\* Angled.

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
D5 (cont.)	93H1-3846		22 mm (0.88 in)	3G-8296	3G-8295					4T-3050	4T-3049	3F-5108 (6)	4K-0367 (6)		
	93H-3847-Up 6RH		19 mm (0.75 in)	4J-8262	4J-8261					4T-3042	4T-3041	4F-7827 (6)	2J-3506 (6)		
	3AH,2FH,2TH	Angle	22 mm (0.88 in)	3G-8298	3G-8297					4T-3042	4T-3041	4F-7827 (6)	2J-3506 (6)		
D5 LGP	1YH,2SH,8HY	Power Angle & Tilt	22 mm (0.88 in)	140-6786#	140-6787#			4T-5408	4T-5407	8E-9378**	8E-9378**	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
	1ZH,3KH	Straight	22 mm (0.88 in)	140-6786#	140-6787#			4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
	8NP,8ZP 6PH,9XH	Power Angle & Tilt		140-6786#	140-6787#			4T-5408	4T-5407	6Y-5840**	6Y-5839**	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
D6	1BH570-Up	Angle	30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	3PP,4BP,1XP		35 mm (1.38 in)									5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	3GP,1ZP6HP,1YP	Straight	22 mm (0.88 in)	3G-8322	3G-8321							4F-0391 (3)	4K-0367 (3)		
	01C,02G,03G														
	6C,9A,800														
	15C1-5000,15E														
	02G,16C1-5000														
	36D,03G,38D														
	39H,85C														
	1CH,2NH,4PH	Semi-U		30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
	8BH,8AH			35 mm (1.38 in)									5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
	2SP,6GP ECA,S6D	Semi-U							4T-5408	4T-5407	8E-9378	8E-9379	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
1TP,3FP,1WP 3RP,4AP,8SP 9BP,BHM	Semi-U		30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1875	9W-1876	9W-8875	9W-8874	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
1DH1-599,1AH 2HH,3JH,4BH	Straight							4T-4454	4T-4455	4T-4436	4T-4435	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
1DH600-Up 1RP,3EP CLH,BHN	Straight		30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
3EH,4DH,4LH 1BH1-569	Angle							4T-4454	4T-4455	4T-4436	4T-4435	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
3F,4F,8E 9E,15C5001-Up 16C5001-Up 16E,37D,39D 40H,81D,82D	Angle		22 mm (0.88 in)	3G-8296	3G-8295					4T-3050	4T-3049	3F-5108 (6)	4K-0367 (6)		
17H,21H,46G 55G,63S,95E	Straight		22 mm (0.88 in)	5J-1420	5J-1419					4T-3046	4T-3045	4F-7827 (6)	2J-3506 (6)		
18H,44E,47G 54U,58G	Angle		22 mm (0.88 in)	3G-8320	3G-8319							4F-7827 (6)	2J-3506 (6)		
1AH,2LH,3FH 1SP,3HP,BHN	Straight		25 mm (1.00 in)	8E-9900	8E-9901			4T-4454	4T-4455	4T-4436	4T-4435	4F-7827 (6)	2J-3506 (6)	5P-8248 (6)	

\* Heavy Duty Mining end bit.

Number in parentheses ( ) after the part number indicates the quantity required.

# Hot cupped end bits.

\*\* Angled.

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
D6 LGP (cont.)	4MP,4TP,4WP B6L,G6G,G6M	Power Angle & Tilt	22 mm (0.88 in)	140-6786#	140-6787#		4T-5408	4T-5407	8E-9378**	8E-9379**	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
						177-4552						5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
D6, D6XL	3WP,3XP,66X G6M,G6N	Power Angle & Tilt	22 mm (0.88 in)	140-6786#	140-6787#		4T-5408	4T-5407	8E-9378**	8E-9379**	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
				6Y-4410	6Y-4411	122-8617	9W-1875	9W-1876	9W-8875	9W-8874	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
D7	2E,5A 17C1-5000,17E 34D,83D,84C	Straight	35 mm (1.38 in)						4T-6672	4T-6671	5J-4771 (7)	2J-3506 (7)		
				9W-6198	9W-6199				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
D7	4DB,1JP,8LH 2FC,2JH,BHT J6L,CDT,8EH	Semi-Universal	35 mm (1.38 in)											
				3G-8294	3G-8293				4T-6506	4T-6505	5J-2409 (7)	2J-3505 (7)		
D7	22F,30F,72F 13F,3CC,4ZC	Angle	22 mm (0.88 in)	3G-8316	3G-8315				4T-6506	4T-6505	5J-2409 (7)	2J-3505 (7)	5P-8249 (7)	
				4J-8844	4J-8843									
D7	5SB,42G,61K 85D,94R,8MH 7AC,9JB,J1L,CDL	Universal	35 mm (1.38 in)	9W-6198	9W-6199	105-0574					5J-2409 (7)	2J-3505 (7)	5P-8249 (7)	
						105-0576	105-0577							
D7	6A,6E 17C5001-Up,18E 35D,84D	Angle	45 mm (1.75 in)	3G-8294	3G-8293				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
				3G-8316	3G-8315	105-0574	105-0575							
D7	6KB,14H,8ZB 23F,31F,49K 53J,59F,60K 64K,4XC,8ZB 8NH,CDC J8L,576	Straight	45 mm (1.75 in)								6F-0196 (7)	2J-3505 (7)		
				3J-2466	3J-2465	105-0576	105-0577							
D7	42G,61K,85D 5SB,8MH,CDL J1L,9J,8,7AC,94R	Universal	22 mm (0.88 in)	3J-2466	3J-2465				4T-6668	4T-6667	1J-6761 (3)	2J-3506 (3)		
				3G-8294	3G-8293				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
D7 LGP	6JB,2RP,8RH 5SP,9KP,CDN J4L,8JH	Straight	25 mm (1.00 in)	3G-8316	3G-8315				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
				4J-8844	4J-8843				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
D8	1HH,2XP,8NH 9AH,4ZP,DZD BHR,9ZP	Angle	35 mm (1.37 in)	9W-6198	9W-6199	105-0574					6F-0196 (7)	2J-3505 (7)		
						105-0576	105-0577							
D8	42G,61K,85D 5SB,8MH,CDL J1L,9J,8,7AC,94R	Universal	45 mm (1.75 in)								6F-0196 (7)	2J-3505 (7)	5P-8249 (7)	
				4J-8844	4J-8843	105-0576	105-0577							
D8	6JB,2RP,8RH 5SP,9KP,CDN J4L,8JH	Straight	28 mm (1.12 in)	9W-6198	9W-6199				4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
				8E-4194	8E-4193	105-0576	105-0577							
D8	1HH,2XP,8NH 9AH,4ZP,DZD BHR,9ZP	Angle	40 mm (1.57 in)				8E-4538	8E-4537	6Y-4278	6Y-4277	4F-4042 (7)	2J-3507 (7)	5P-8250 (7)	
				100-3140	100-3139								4F-4042 (7)	2J-3507 (7)
D8	1HH,2XP,8NH 9AH,4ZP,DZD BHR,9ZP	Angle	50 mm (1.97 in)											
				136-8756	136-8757									

Number in parentheses ( ) after the part number indicates the quantity required.  
 # Hot cupped end bits.  
 \* Heavy Duty Mining end bit.  
 \*\* Angled.

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
DB (cont.)	1JH,6AH,2WP 9CH,9WP,CXB A5G,DZB	Universal	40 mm (1.57 in)	8E-4194	8E-4193			8E-4538	8E-4537	6Y-4278	6Y-4277	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
			50 mm (1.97 in)			100-3140	100-3139						4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
			60 mm (2.36 in)			136-8756	136-8757								
	1KH,2PP,3MP 2TP,9BH,2NP 1HP,6LH,9PH 3WH,05A,9TP KMB,1AA,BHW B85,DZA,DZX	Semi-U	40 mm (1.58 in)	8E-4194	8E-4193			8E-4538	8E-4537	6Y-4278	6Y-4277	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
			50 mm (1.97 in)			100-3140	100-3139						4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
			60 mm (2.36 in)			136-8756	136-8757								
3E,8A,12C 18C,32D,44C 73D,86D	Semi-U	25 mm (1.00 in)								4T-6672	4T-6671	1J-6761 (7)	2J-3506 (7)		
		25 mm (1.00 in)	3J-2465	3J-2466						4T-6668	4T-6667	1J-6761 (7)	2J-3506 (7)		
07A,18C,33D 72D,87D,99D 07E,22E	Angle	28 mm (1.12 in)	4J-8844	4J-8843								5J-2409 (7)	2J-3505 (7)		
		28 mm (1.12 in)	3G-8316	3G-8315								5J-2409 (7)	2J-3505 (7)		
28E11126-UP	Angle	40 mm (1.57 in)	3G-8286	3G-8285								5J-2409 (7)	2J-3505 (7)		
		30 mm (1.18 in)	3G-8318	3G-8317								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
		40 mm (1.57 in)	3G-8288	3G-8287								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
		30 mm (1.18 in)	3G-8318	3G-8317								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		40 mm (1.58 in)	3G-8288	3G-8287							4T-8090	4T-8089	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
		28 mm (1.12 in)	4J-8724	4J-8723	100-3136	100-3135			8E-4540	8E-4539			4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
4Y1-1939	Semi-U	35 mm (1.38 in)	3G-8292	3G-8291								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		40 mm (1.58 in)	3G-8284	3G-8283								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		50 mm (1.97 in)	8E-4196	8E-4197								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		60 mm (2.36 in)			100-3138	100-3137						4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		30 mm (1.18 in)	3G-8318	3G-8317									4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
		40 mm (1.58 in)	3G-8288	3G-8287									4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
5Y,27B,41Z	Angle	28 mm (1.12 in)	9J-1478	9J-1477								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
		40 mm (1.58 in)	3G-8288	3G-8287								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
6Y1-1395 30V,34W,65X 69V	Universal	28 mm (1.12 in)	3G-8288	3G-8287						4T-6240	4T-6239	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
		40 mm (1.58 in)								4T-6240	4T-6239	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
6Y1396-Up 82M,42Z	Universal	35 mm (1.38 in)	3G-8292	3G-8291								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		45 mm (1.75 in)			100-3136	100-3135						4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		50 mm (1.97 in)	8E-4196	8E-4197								4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
		60 mm (2.36 in)			100-3138	100-3137						4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
11C,74D,88D 24E	Universal	28 mm (1.12 in)	3J-2466	3J-2465					4T-6667	4T-6668	1J-6762 (7)	2J-3506 (7)			

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers			
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)						
D8 (cont.)	14J,29E,44K 47K,69E,78C 94E	Semi-U	28 mm (1.12 in)	3G-8300	3G-8299							5J-2409 (7)	2J-3505 (7)				
			40 mm (1.58 in)	3G-8278	3G-8277								5J-2409 (7)	2J-3505 (7)			
	20F,24E,29J 30E,45K,48K 73E	Universal	28 mm (1.12 in)	4J-8844	4J-8843								5J-2409 (7)	2J-3505 (7)			
			28 mm (1.12 in)	3G-8316	3G-8315								5J-2409 (7)	2J-3505 (7)			
			40 mm (1.58 in)	3G-8286	3G-8285								5J-2409 (7)	2J-3505 (7)			
			28 mm (1.12 in)	3G-8302	3G-8301								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)		
	29V,30W,60V 68V	Semi-U	40 mm (1.58 in)	3G-8280	3G-8279								4J-9058 (7)	2J-3507 (7)	5P-8250 (7)		
			28 mm (1.12 in)	4J-8844	4J-8843								5J-2409 (7)	2J-3505 (7)			
	D9	71F,77G  43K	Cushioned	28 mm (1.12 in)	3G-8316	3G-8315								5J-2409 (7)	2J-3505 (7)		
				40 mm (1.57 in)	3G-8286	3G-8285									5J-2409 (7)	2J-3505 (7)	
				40 mm (1.57 in)											5J-2409 (7)	2J-3505 (7)	
				45 mm (1.75 in)											5J-2409 (7)	2J-3505 (7)	
50 mm (1.97 in)				8E-4196	8E-4197	100-3136	100-3135							4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
50 mm (1.97 in)														4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	
D9	1MH,5BH,2BP 2ZP,1LP2LP 7NH,9LH,9RP CLC,CLN,CLY CMA,CMN  5A,18K,21E 25E,53C,61U 73R,89D  14C,19K,20H 55C,78X,CMH  18Y,42S,52Y	Rip Dozer	40 mm (1.57 in)														
			45 mm (1.75 in)														
			50 mm (1.97 in)	8E-4196	8E-4197	100-3136	100-3135										
			50 mm (1.97 in)														
			60 mm (2.36 in)														
			45 mm (1.75 in)														
			50 mm (1.97 in)	8E-4196	8E-4197	100-3136	100-3135										
			60 mm (2.36 in)														
			35 mm (1.38 in)	3G-8290	3G-8289												
			40 mm (1.58 in)	3G-8282	3G-8281												
			D9	14C,19K,20H 55C,78X,CMH	Universal	32 mm (1.25 in)	4J-8724	4J-8723									
						35 mm (1.38 in)	3G-8292	3G-8291									
40 mm (1.58 in)	3G-8284	3G-8283															
50 mm (1.97 in)	8E-4196	8E-4197															
40 mm (1.58 in)	1U-1546	1U-1545															
45 mm (1.75 in)						100-3132	100-3131										
D9	18Y,42S,52Y	Semi-U	55 mm (2.16 in)	8E-4198	8E-4199												
			60 mm (2.36 in)														
			60 mm (2.38 in)	7T-4688	7T-4689												
			40 mm (1.58 in)	1U-1546	1U-1545												
			45 mm (1.75 in)			100-3132	100-3131										
			55 mm (2.16 in)														
D9	19Y,78S	Universal	60 mm (2.36 in)	7T-4688	7T-4689												
			40 mm (1.58 in)	1U-1546	1U-1545												
			45 mm (1.75 in)			100-3132	100-3131										
			55 mm (2.16 in)	8E-4198	8E-4199												
			60 mm (2.36 in)														
			60 mm (2.38 in)	7T-4688	7T-4689												

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
D9 (cont.)	52C,90D	Angle	32 mm (1.25 in)	4J-8724	4J-8723							8J-2928 (7)	2J-3507 (7)	5P-8250 (7)
	11E,26E		35 mm (1.38 in)	3G-8291	3G-8292								8J-2928 (7)	2J-3507 (7)
	70F,45G	Cushioned	40 mm (1.57 in)	3G-8283	3G-8284							4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
	20Y											4T-6389		
	39K	R										4T-6389	4T-6391	
D10	1RH,1SH,4LP	Universal	45 mm (1.75 in)	8E-4198	8E-4199	100-3132	100-3131	8E-4542	8E-4541			5P-8823 (7)	3K-9770 (7)	4K-0684 (7)
	6FP,BHF,BHP		60 mm (2.36 in)			100-3134	100-3133					5P-8823 (7)	3K-9770 (7)	4K-0684 (7)
	1RH,4KP6EP	Semi-U	45 mm (1.75 in)	8E-4198	8E-4199	100-3132	100-3131	8E-4542	8E-4541			5P-8823 (7)	3K-9770 (7)	4K-0684 (7)
	7RH,BHJ,BHA		120 mm (4.72 in)	107-3516*	107-3515*							5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	1RH,4KP6EP	Universal	120 mm (4.72 in)	113-0338*	113-0338*							5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	7RH,BHJ,BHA		60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
	1SH,4LP6EP	Semi-U	75 mm (2.95 in)			8E-9748	8E-9749					5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
	7WH,BHF,BHP		60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
	79W,80W	Universal	75 mm (2.95 in)			8E-9748	8E-9749					5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
	83W		Cushioned									8J-2928 (6)	2J-3507 (6)	5P-8250 (6)
D11	4BB,4KB,9NH	Semi-U	60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	19P,8PP,1AP		75 mm (2.95 in)	8E-4544	8E-4543	8E-9748	8E-9749					5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	4CB,5TB,9MH	Universal	60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	9ZH,4YP,8DP		75 mm (2.95 in)	8E-4544	8E-4543	8E-9748	8E-9749					5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	8RP		120 mm (4.72 in)	109-9047*	109-9047*							5P-8823 (9)	3K-9770 (9)	4K-0684 (9)

Number in parentheses ( ) after the part number indicates the quantity required.

\* Heavy Duty Mining end bit.

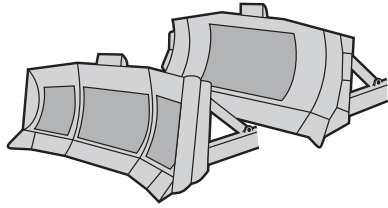
\*\* Angled.

Model	Serial Number	Edge Thickness	Penetration End Bits		Extended Wear Life (EWL) End Bits		Short End Bits		EWL — Short End Bits		ARM — EWL End Bits		ARM — Penetration End Bits		Bolts Per Edge	Nuts Per Edge	Washers Per Edge
			(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
11 Carrydozer	5JP,BHZ	60 mm (2.36 in)	273-7224	273-7223			273-7229	273-7228							5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
				273-7226	273-7225					273-7233	273-7232	273-7235	273-7234	223-8128	223-8127		
		75 mm (3 in)			273-7231	273-7230									5P-8361 (9)	3K-9770 (9)	4K-0684 (9)

Number in parentheses ( ) after the part number indicates the quantity required.



**Bulldozer Wear Bars**



- Offers additional wear resistance and strength to the dozer blade in high wear/high impact applications.
- Made of DH-2 through-hardened alloy steel.
- For use over the blade liner or wear plate on a dozer blade.

Item	Length	Part Number
Wear Bar	2.438 m (8 ft)	107-3386
Wear Bar	2.743 m (9 ft)	107-3387
Wear Bar	3.353 m (11 ft)	107-3388
Wear Bar	3.658 m (12 ft)	107-3389
Wear Bar	3.962 m (13 ft)	107-3390
Wear Bar	4.572 m (15 ft)	107-3391

**Bulldozer Plates**

Reinforcing Wear Plates:

- Provides extended blade life in highly abrasive or extreme impact conditions.
- Provides a repair or resurface option for worn or damaged moldboards.
- Are formed to fit the curve of the blade so that they are easily installed.

Pusher Plates:

- Are made of heat treated steel.
- Are formed to fit the curve of the blade so that they are easily installed.
- For use on bulldozer blades that are used to push loading scrapers.

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate		
D3	85U8376-Up	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3117		
			Wear Plates			8 mm (0.31 in)	3J-3116 (2)		
			Wear Plates			8 mm (0.31 in)	1J-3108 (5)		
D3 LGP	85U1-8375	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3114 (3)		
			Wear Plates			8 mm (0.31 in)	3J-3114 (2)		
D4	2A,25F,67F	Straight Angle	Wear Plates			8 mm (0.31 in)	3J-3116 (2)		
			Wear Plates			8 mm (0.31 in)	3J-3116 (4)		
D5	5F,12D,24F,65F,78D,97E 6YH,8LP,7EH,6DH,9TH,9ZB,4GH 9SH,4AC,5NH 10D,52E,79D,96E,06F,26F,95G,33R 67E 9WH 2AH,4GP,6JP 2BH 10J,12J,19R,92H,97H 11J,13J,93H,98H 42K,91H,96H 90H ICH,2NH,3TH,4JH,4PH 1RP,3EP 1DH,2HH,30H,50H 3FP,1TP,8SP,4AP,1CH,2NH,1WP,3RP,9BP 2SP,ECA,S6D,JCE,S6S 3WP,3XP,B6X,G6N 54U,44E,18H,476 01C,06C,15C,37D,16C5001-Up,39D 81D,82D,08E,09E,16E,03F,04F,40H 09A,16C-5000,85C,80D,15E,02G,03G,39H 95E 1AH,2LH,3FH,1SP,3HP,55H 4MP,B6L 21H 6A,17C,5001-Up,35D,84D,6E,18E 13F,22F,30F,72F,13H,4EB,3CC 23F-31F,59F,14H,58J,49K,60K 64K,05A,1701-5000,84C,34D,83D 02E,6KB,8NH,8ZB,4XC 85D,42G,61K,94R,55B,8MH,9JB,7AC	Power Angle & Tilt	Wear Plates	940 mm (37.0 in)	702 mm (27.6 in)	8 mm (0.31 in)	3J-3115		
			Wear Plates	1302 mm (51.3 in)	546 mm (21.5 in)	8 mm (0.31 in)	3J-3117		
			Wear Plates				3J-3740 (4)		
			Wear Plates			10 mm (0.38 in)	3J-3740 (5)		
			Wear Plates			10 mm (0.38 in)	2J-8526 (4)		
			Wear Plates			10 mm (0.38 in)	1J-3108 (6)		
			Wear Plates			10 mm (0.38 in)	1J-3106 (6)		
			Wear Plates			10 mm (0.38 in)	1J-3106 (5)		
			Wear Plates			10 mm (0.38 in)	1J-3108 (5)		
			Wear Plates			787 mm (31.0 in)	854 mm (33.6 in)	10 mm (0.38 in)	2J-8526 (4)
D6	1RP,3EP	Semi-U	Wear Plates			8 mm (0.31 in)	3J-3142 (3)		
			Wear Plates			10 mm (0.38 in)	2J-8526 (4)		
			Wear Plates			12 mm (0.5 in)	9J-1659 (4)		
			Right End Wear Plate			14 mm (0.55 in)	9W-2757		
			Center Wear Plate			14 mm (0.55 in)	9J-1659 (3)		
			Left End Wear Plate			14 mm (0.55 in)	9W-2760		
			Wear Plates			8 mm (0.31 in)	3J-3142 (3)		
			Wear Plates			10 mm (0.38 in)	3J-3740 (6)		
			Wear Plates			10 mm (0.38 in)	1J-3106 (5)		
			Wear Plates			10 mm (0.38 in)	1J-3108 (5)		
D6 LGP	1AH,2LH,3FH,1SP,3HP,55H 4MP,B6L 21H 6A,17C,5001-Up,35D,84D,6E,18E 13F,22F,30F,72F,13H,4EB,3CC 23F-31F,59F,14H,58J,49K,60K 64K,05A,1701-5000,84C,34D,83D 02E,6KB,8NH,8ZB,4XC 85D,42G,61K,94R,55B,8MH,9JB,7AC	Power Angle & Tilt	Wear Plates	787 mm (31.0 in)	854 mm (33.6 in)	10 mm (0.38 in)	2J-8526 (5)		
			Wear Plates			10 mm (0.38 in)	2J-8526 (5)		
			Wear Plates			10 mm (0.38 in)	3J-3380 (4)		
			Wear Plates			8 mm (0.31 in)	3J-3142 (4)		
			Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		
			Wear Plates			1077 mm (42.4 in)	1076 mm (42.4 in)	8 mm (0.31 in)	3J-3142 (3)
			Pusher Plate			1054 mm (41.5 in)	1054 mm (41.5 in)	16 mm (0.63 in)	4J-3699
			Wear Plates			1077 mm (42.4 in)	1076 mm (42.4 in)	8 mm (0.31 in)	3J-3142 (4)
			Pusher Plate			1054 mm (41.5 in)	1054 mm (41.5 in)	16 mm (0.63 in)	4J-3699
D7	85U1-8375	Semi-U	Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		
D7 LGP	85U1-8375	Power Angle & Tilt	Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		
D7	85U1-8375	Angle	Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		
D7	85U1-8375	Straight	Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		
D7	85U1-8375	Universal	Wear Plates			10 mm (0.38 in)	1J-3108		
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)		

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Item	Plate Width	Plate Thickness	Reinforcing Wear Plate
D7 (cont.)	4DB,1JP,8L11,CDT	Semi-U	Push Plate		16 mm (0.63 in)	4J-3699
	All	Semi-U	Wear Plates		8 mm (0.31 in)	3J-3142 (4)
	CDT	Semi-U	Right End Wear Plate		12 mm (0.5 in)	4Z-9148
D7 LGP	6JB,2RP,BRH,3GH,4XH,5GH,5SP,9K9	Straight	Center Wear Plate		12 mm (0.5 in)	4Z-9151
			Left End Wear Plate		12 mm (0.5 in)	4Z-9150
			Wear Plates		12 mm (0.5 in)	2J-8523 (5)
			Left End Wear Plate		16 mm (0.63 in)	6V-7246
			Center Wear Plate		16 mm (0.63 in)	6V-7244
	1JH,6AH,2WP,A5G,DZB,9CH,6AH	Universal	Right End Wear Plate		16 mm (0.63 in)	6V-7245
			Left End Wear Plate		16 mm (0.63 in)	9W-2760
			Left End Wear Plate		16 mm (0.63 in)	9W-2760
			Left Center Wear Plate		16 mm (0.63 in)	9W-2759
			Center Wear Plate		16 mm (0.63 in)	9W-2756
D8	1KH,2PP,2TP,3MP,DZA,B8S,2NP 9BH,9PH,1HP,6LH	Semi-U	Center Wear Plate		16 mm (0.63 in)	9W-1771
			Center Wear Plate		16 mm (0.63 in)	9W-2758
			Right Center Wear Plate		16 mm (0.63 in)	9W-2757
			Right End Wear Plate		16 mm (0.63 in)	9W-2757
			Right End Pusher Plate		16 mm (0.63 in)	9W-2756
	1LH,2ZH 4Y1-1939	Angle Semi-U	Wear Plates		10 mm (0.40 in)	2J-8526 (5)
			Wear Plates		13 mm (0.50 in)	1U-4417 (5)
			Pusher Plate		16 mm (0.63 in)	6J-9248
			Left Center Wear Plate		16 mm (0.63 in)	9T-0252
			Left Center Wear Plate		16 mm (0.63 in)	9T-0250
4Y1940-Up,74M,402,9TB,26B		Semi-U	Center Wear Plate		16 mm (0.63 in)	4T-9592
			Right End Wear Plate		16 mm (0.63 in)	9T-0249
			Right Center Pusher Plate		16 mm (0.63 in)	9T-0251
			Wear Plates		13 mm (0.50 in)	1U-4417 (6)
			Left End Wear Plate		16 mm (0.63 in)	9T-0254
	6Y1-1395,4SZ,82M 6Y1396-Up	Universal Universal	Left Center Wear Plate		16 mm (0.63 in)	9T-0256
			Right Center Wear Plate		16 mm (0.63 in)	9T-0255
			Right End Wear Plate		16 mm (0.63 in)	9T-0253
			Center Pusher Plate		16 mm (0.63 in)	4T-9592
			Wear Plates		13 mm (0.50 in)	6J-9286 (4)
20F,45K,48K 29V,30W,68V,60V	Universal Semi-U	Wear Plates		12 mm (0.47 in)	9J-1659 (5)	
		Pusher Plate		16 mm (0.63 in)	9J-6870	
		Wear Plates		12 mm (0.47 in)	4J-4205 (4)	
30E,73E,29J 30V,65X,69V,34W	Universal Universal	Pusher Plate		20 mm (0.79 in)	4J-4129	
		Left End Wear Plate		12 mm (0.47 in)	9J-7540	
		Right End Wear Plate		12 mm (0.47 in)	9J-7539	

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate
D8 (cont.)	30V,65X,69V,34W	Universal	Wear Plates			12 mm (0.47 in)	9J-1659 (4)
			Pusher Plate			16 mm (0.63 in)	9J-6870
			Wear Plates			16 mm (0.63 in)	6J-9285
	43K	Rip Dozer	Pusher Plate			16 mm (0.63 in)	9J-6870
			Wear Plates			12 mm (0.47 in)	9J-1659
			Wear Plates			13 mm (0.50 in)	6J-9286 (4)
	60V,68V,29V,30W	Semi-U	Wear Plates			12 mm (0.47 in)	4J-4129
			Wear Plates			20 mm (0.79 in)	4J-4129
			Wear Plates			16 mm (0.63 in)	2J-9418
	69E,80V,95S,14J,44K,47K	Semi-U	Wear Plates			10 mm (0.4 in)	2J-8526 (5)
			Wear Plates				
			Wear Plates				
	78C,29E,94E	Semi-U	Wear Plates				
			Wear Plates				
			Wear Plates				
71F,77G	Cushioned	Wear Plates					
		Wear Plates					
		Wear Plates					
28E,93E,14F,77C,2XP,4ZP,054,412	Angle	Wear Plates					
		Wear Plates					
		Wear Plates					
D9	1LH,2ZH,7PH,1MP,9MPCMS,CMZ,T9H	Universal	Left End Wear Plate			16 mm (0.63 in)	217-7157
			Center Wear Plate			16 mm (0.63 in)	217-7156
			Right End Wear Plate			16 mm (0.63 in)	217-7155
	1MH,5BH,CLY,CMA,7NH,1LP,2LP,2ZP,T9J	Semi-U	Left End Wear Plate			16 mm (0.63 in)	218-3887
			Left Center Wear Plate			16 mm (0.63 in)	9T-0252
			Center Wear Plate			16 mm (0.63 in)	7T-5803
			Center Wear Plate			16 mm (0.63 in)	218-3888
			Right Center Wear Plate			16 mm (0.63 in)	9T-0251
			Right End Wear Plate			16 mm (0.63 in)	218-3885
			Right End Wear Plate			16 mm (0.63 in)	218-3885
			Pusher Plate			16 mm (0.63 in)	7T-5803
			Wear Plates			13 mm (0.50 in)	6J-9269 (4)
	All	Universal	Center Wear Plate			16 mm (0.63 in)	6J-9248
			Wear Plates			13 mm (0.50 in)	6J-9249 (4)
			Wear Plates			13 mm (0.50 in)	3J-3380 (5)
18Y1876-Up	Semi-U	Left End Wear Plate			16 mm (0.63 in)	9W-1261	
		Left Center Wear Plate			16 mm (0.63 in)	9W-1260	
		Center Wear Plate			16 mm (0.63 in)	9W-0810	
19Y1-1474,78S1-1474	Universal	Right Center Wear Plate			16 mm (0.63 in)	9W-1259	
		Right End Wear Plate			16 mm (0.63 in)	9W-1258	
		Left End Wear Plate			16 mm (0.63 in)	4T-3735	
		Left Center Wear Plate			16 mm (0.63 in)	4T-3737	
		Center Wear Plate			16 mm (0.63 in)	1U-0902	
		Right Center Wear Plate			16 mm (0.63 in)	4T-3736	
19Y1475-Up	Universal	Right End Wear Plate			16 mm (0.63 in)	4T-3734	
		Left End Wear Plate			16 mm (0.63 in)	9W-0808	
		Left Center Wear Plate			16 mm (0.63 in)	9W-0811	
		Center Wear Plate			16 mm (0.63 in)	9W-0810	
		Right Center Wear Plate			16 mm (0.63 in)	9W-0809	
		Right Center Wear Plate			16 mm (0.63 in)		

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate	
D9 (cont.)	19Y1475-Up 52Y	Universal	Right End Wear Plate			16 mm (0.63 in)	9W-0812	
		Semi-U	Left End Wear Plate			16 mm (0.63 in)	4T-3731	
	55C	Universal	Universal	Right Center Wear Plate			16 mm (0.63 in)	4T-3732
			Semi-U	Left Center Pusher Plate			16 mm (0.63 in)	4T-3733
			Universal	Center Pusher Plate			16 mm (0.63 in)	1U-0902
			Semi-U	Wear Plates			12 mm (0.47 in)	2J-8525 (4)
	14C,19K,78X 18K,46K,73R,61U,05A	Universal	Wear Plates			12 mm (0.47 in)	6J-9269 (4)	
		Semi-U	Wear Plates			12 mm (0.47 in)	6J-9249 (4)	
	9RP,CLC	Semi-U	Universal	Push Plate			16 mm (0.63 in)	6J-9248
			Semi-U	Right End Wear Plate			14 mm (0.55 in)	218-3885
			Semi-U	Center Wear Plate			14 mm (0.55 in)	218-3888
			Semi-U	Left End Wear Plate			14 mm (0.55 in)	218-3887
	All Push-Plates	Semi-U	Universal	Push Plate			12 mm (0.47 in)	1U-0903
			Semi-U	Push Plate			16 mm (0.63 in)	1U-0902
			Semi-U	Wear Plates			12 mm (0.47 in)	2J-8523 (4)
			Semi-U	Push Plate			20 mm (0.79 in)	2J-8524
	53C,89D,21E,25E,06A	Semi-U	Universal	Right End Wear Plate			16 mm (0.63 in)	4T-3730
			Semi-U	Right Center Wear Plate			16 mm (0.63 in)	4T-3732
			Semi-U	Center Wear Plate			16 mm (0.63 in)	1U-0902
			Semi-U	Left Center Wear Plate			16 mm (0.63 in)	4T-3733
18Y1-1875,52Y1-1875,425	Semi-U	Universal	Left End Wear Plate			16 mm (0.63 in)	4T-3731	
		Semi-U	Push Plate			16 mm (0.63 in)	4J-3868	
		Semi-U	Push Plate			20 mm (0.79 in)	9J-4567	
		Semi-U	Push Plate			20 mm (0.79 in)	4T-9534	
70F,45G,20Y1-533,20Y543	Cushioned	Universal	Push Plate			16 mm (0.63 in)	7T-5803	
		Semi-U	All			12 mm (0.47 in)	3J-3380 (5)	
		Semi-U	Sides			12 mm (0.47 in)	6J-9249 (4)	
		Semi-U	Center			16 mm (0.63 in)	6J-9248	
CMH,CMN 52C,90D,11E,26E 63E,39K	Angle Rip Dozer	Universal	Left End Wear Plate			16 mm (0.63 in)	9W-7265	
		Universal	Left Center Wear Plate			16 mm (0.63 in)	9W-7264	
		Universal	Center Wear Plate			16 mm (0.63 in)	9W-2409	
		Universal	Center Wear Plate			16 mm (0.63 in)	6Y-1080	
1SH,7WH	Universal	Universal	Right Center Wear Plate			16 mm (0.63 in)	9W-7262	
		Universal	Right End Wear Plate			16 mm (0.63 in)	9W-7263	
		Semi-U	Wear Plates	2005 mm (78.9 in)	710 mm (28 in)	13 mm (0.50 in)	3G-6344 (8)	
		Semi-U	Pusher Plate	1679 mm (66.1 in)	1524 mm (60 in)	16 mm (0.63 in)	3G-6343	
79W1-536 79W537-Up	Semi-U	Universal	Left End Wear Plate			16 mm (0.63 in)	4T-3723	
		Semi-U	Left Center Wear Plate			16 mm (0.63 in)	4T-3724	
		Semi-U	Right Center Wear Plate	1570 mm (61.8 in)	1074 mm (42.3 in)	16 mm (0.63 in)	4T-3725	
		Semi-U	Right Center Wear Plate			16 mm (0.63 in)		

Number in parentheses ( ) after the part number indicates the quantity required.

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate	
D10 (cont.)	79W537-Up	Semi-U	Right End Wear Plate	1430 mm (56.3 in)	524 mm (20.6 in)	16 mm (0.63 in)	4T-3722	
			Center Pusher Plate	1905 mm (75.0 in)	2000 mm (78.7 in)	1 mm (0.63 in)	1U-3697	
			Wear Plates	2005 mm (78.9 in)	710 mm (28.0 in)	13 mm (0.50 in)	3G-6344 (9)	
	80W1-467 80W468-Up	Universal Universal	Left End Wear Plate				16 mm (0.63 in)	4T-3727
			Left Center Wear Plate				16 mm (0.63 in)	4T-3728
			Center Wear Plate				16 mm (0.63 in)	1U-3697
			Right Center Wear Plate				16 mm (0.63 in)	4T-3729
			Right End Wear Plate				16 mm (0.63 in)	4T-3726
			Pusher Plate	922 mm (36.3 in)	1900 mm (74.8 in)	20 mm (0.80 in)	9J-4567	
	83W 4LP,6FP,BHF,BHP 1RH,7RH,4KP,6EP,BHA,BHJ	Cushion Universal Semi-U	Right End Wear Plate				14 mm (0.55 in)	218-3939
			Center Wear Plate				14 mm (0.55 in)	218-3941
			Left End Wear Plate				14 mm (0.55 in)	218-3940
			Right End Wear Plate				14 mm (0.55 in)	218-3922
			Right Center Wear Plate				16 mm (0.63 in)	9W-7260
			Center Wear Plate				16 mm (0.63 in)	9W-2409
Left Center Wear Plate						16 mm (0.63 in)	9W-7261	
Left End Wear Plate						14 mm (0.55 in)	218-3923	
Right End Wear Plate						14 mm (0.55 in)	218-3922	
Center Wear Plate						14 mm (0.55 in)	218-3924	
D11	4BB,4KB,9NH,1AP 8PP 4CB,5TB,4CB-Up to 00787	Semi-U Semi-U Semi-U Universal	Left End Wear Plate				16 mm (0.63 in)	9W-2409
			Left End Wear Plate				16 mm (0.63 in)	4T-8144
			Left Center Wear Plate				16 mm (0.63 in)	4T-8144
			Center Wear Plate	1994 mm (78.5 in)	2050 mm (80.7 in)	16 mm (0.63 in)	4T-8146	
			Center Wear Plate			16 mm (0.63 in)	4T-5308	
			Right Center Wear Plate	1783 mm (70.2 in)	1220 mm (48.0 in)	16 mm (0.63 in)	6V-1100	
			Right End Wear Plate			16 mm (0.63 in)	4T-8145	
			Pusher Plate			16 mm (0.63 in)	4T-8143	
			Right End Wear Plate			16 mm (0.63 in)	4T-5308	
			Center Wear Plate			14 mm (0.55 in)	136-3984	
			Center Wear Plate			14 mm (0.55 in)	136-3986	
			Left End Wear Plate			14 mm (0.55 in)	139-3985	
			Left End Wear Plate			16 mm (0.63 in)	4T-7630	
			Left End Wear Plate			16 mm (0.63 in)	4T-7630	
			Left Center Wear Plate	1994 mm (78.5 in)	2050 mm (80.7 in)	16 mm (0.63 in)	4T-7631	
Center Wear Plate			16 mm (0.63 in)	4T-5308				
Right Center Wear Plate	1783 mm (70.2 in)	693 mm (27.3 in)	16 mm (0.63 in)	6V-1319				
Right End Wear Plate			16 mm (0.63 in)	4T-7632				
Right End Wear Plate			16 mm (0.63 in)	4T-7629				

Number in parentheses ( ) after the part number indicates the quantity required.



Ground Engaging Tools

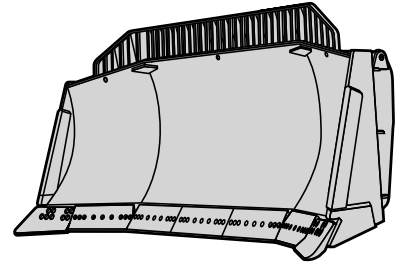
Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate
D11 (cont.)	4CB for 00788 and Up, 9MH, 9ZH	Universal	Right End Wear Plate			16 mm (0.63 in)	122-2320
			Center Wear Plate			16 mm (0.63 in)	122-2322
			Left End Wear Plate			16 mm (0.63 in)	122-2321
	8RP	Universal	Right End Wear Plate			14 mm (0.55 in)	126-8341
			Center Wear Plate			14 mm (0.55 in)	126-8343
			Left End Wear Plate			14 mm (0.55 in)	126-8342

Number in parentheses ( ) after the part number indicates the quantity required.

## Compactor Cutting Edges

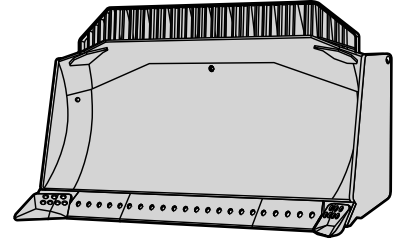
### Universal Blade

- A straight blade with large “wings” to carry large loads more efficiently over long distances. Available only for larger models.



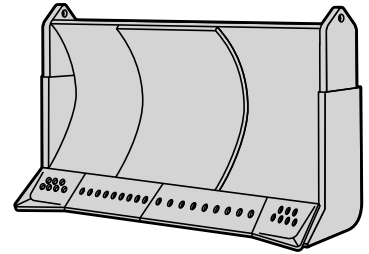
### Semi-U Blade

- A straight blade with small “wings” to provide better load carrying characteristics for mid-sized and large machines.



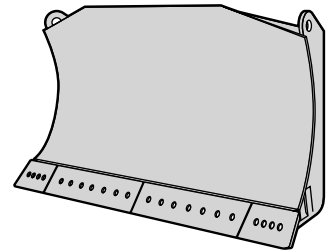
### Cushion Blade

- A relatively narrow blade, primarily for pushing scrapers.



### Power Angle and Tilt Blade

- A very versatile blade for smaller machines.



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## Compactor Cutting Edges

Caterpillar compactor cutting edges are made of through-hardened alloy steel for excellent abrasion resistance and strength, and all Caterpillar compactor cutting edges are guaranteed against breakage. Caterpillar compactor cutting edges are available in various thicknesses to match your machine size and application, and they are available in shorter lengths for ease of storage, handling, installation, and maintenance.

Caterpillar compactor cutting edges are made of DH-2 steel.

- DH-2 steel provides increased hardness and toughness for excellent wear and impact resistance.

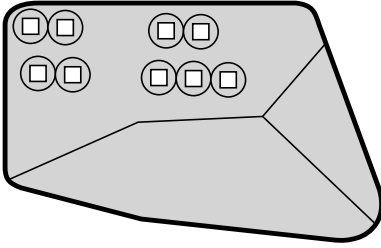
Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
814	36S,16Z,3YP 56D,23K		19 mm (0.75 in)	Right/Left End Edges	4T-2923	5J-2409	2J-3505	5P-8249
				Center Edge	4T-2922	5J-2409	2J-3505	5P-8249
				Right/Left End Edges	4T-2922	6F-019	2J-3505	
815	24K1-1044,59E1-341 24K1045-UP,59E342-UP		19 mm (0.75 in)	Center Edge	4T-2993	6F-0196	2J-3505	
				Left/Right End Edges	4T-2922	6F-0196	2J-3505	
				Left/Right End Edges	4T-3020	3F-5108	4K-0567	
816	41S,15Z,3ZP 51K		19 mm (0.75 in)	Center Edge	4T-3008	3F-5108	4K-0567	
				Center Edge	4T-3004	4F-7827	2J-3506	
				Center Edge	4T-3012	5J-4773	2J-3506	
824	2HP 35G 35G,64G,93G 88H 4JP 89X	Straight Straight	19 mm (0.75 in)	Left/Right End Edges	4T-2923	5J-2409	2J-3505	
				Center Edge	4T-2922	5J-2409	2J-3505	
				Left/Right End Edges	4T-6532	6F-0196	2J-3505	
825	97X,90K,2GP 14B	Universal	25 mm (1.00 in)	Center Edge	4T-6531	6F-0196	2J-3505	
				Left End Edge	122-9227 (2)	6F-0196	2J-3505	
				Right/Center End Edges	4T-3420	6F-0196	2J-3505	
826	64G 93G,93GB	Cushion	25 mm (1.00 in)	Center Edge	4T-6514 (2)	5J-2409	2J-3505	
				Center Edge	107-3524+	5J-2409	2J-3505	
				Center Edge	109-9014 (2)+	5J-2409	2J-3505	
834	27K,14B,36G,96G		25 mm (1.00 in)	Center Edge	4T-6448 (2)	4J-9058	2J-3507	
				Center Edge	4T-6532	6F-0196	2J-3505	
				Center Edge	4T-6238	4F-4042	2J-3507	
834G	27K,14B,36G,96G		60 mm (2.36 in)	Center Edge	4T-6515 (2)	5J-2409	2J-3505	
				Left/Right End Edges	4T-8798	6F-0196	2J-3505	
				Center Edge	4T-8797 (2)	6F-0196	2J-3505	
835	27K,36G,96G		25 mm (1.00 in)	Center Edge	4T-2889 (2)	6F-0196	2J-3505	
				Left/Right Edges	4T-6532	6F-0196	2J-3505	
				Center Edge	4T-6531	6F-0196	2J-3505	
834G	27K,14B,36G,96G		60 mm (2.36 in)	Left End Edge	123-3756+	5J-2409	2J-3505	
				Center Edge	123-3754 (2)+	5J-2409	2J-3505	
				Right End Edge	123-3755+	5J-2409	2J-3505	
835	27K,36G,96G		25 mm (1.00 in)	Center Edge	4T-6515 (2)	5J-2409	2J-3505	

\* Edges are 280 mm (11") wide.  
+ G930 Heavy Duty Mining Edge.

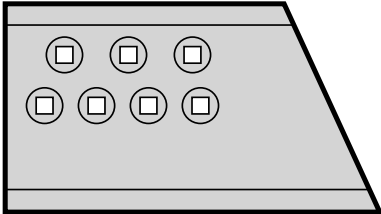
Number in parentheses ( ) after the part number indicates the quantity required.  
\*\* Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

## Compactor End Bits

Ground Engaging Tools

**General Duty End Bits**

- Provides a thicker wear area than the cutting edge.
- Made from DH-2 or DH-3 steel, depending on the application.
- For use in most dozing applications.

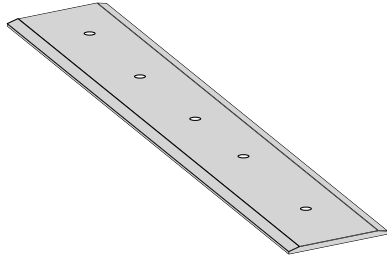
**Finish Dozing End Bits**

- Provides a depth of cut equal to the cutting edge.
- Protects the blade corner in low impact, low abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in finish and semi-finish dozing.

Model	Serial Number	Blade Model	Thickness	General Duty End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers
				(lh)	(rh)	(lh)	(rh)			
814	36S,41S,3ZP		28 mm (1.12 in)	3G-8294	3G-9283	4T-6242	4T-6241	5J-2409	2J-3505	5P-8249
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
	56D,51K,23K		28 mm (1.12 in)	3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				9F-7076	9F-7075	4T-3050	4T-3049	3F-5108	4K-0367	
				3G-8296	3G-8295	4T-3050	4T-3049	3F-5108	4K-0367	
815	24K1-1044		19 mm (0.75 in)	4J-8262	4J-8261	4T-3042	4T-3041	4F-7827	2J-3506	
				3G-8298	3G-8297	4T-3042	4T-3041	4F-7827	2J-3506	
	24K1045-UP		22 mm (0.88 in)	3G-8296	3G-8295	4T-3050	4T-3049	3F-5108	4K-0367	
				3G-8298	3G-8297	4T-3042	4T-3041	4F-7827	2J-3506	
				3G-8296	3G-8295	4T-3050	4T-3049	3F-5108	4K-0367	
815S	59E1-341		22 mm (0.88 in)	3G-8298	3G-8297	4T-3042	4T-3041	4F-7827	2J-3506	
				3G-8298	3G-8297	4T-3042	4T-3041	4F-7827	2J-3506	
	59E342-UP		22 mm (0.88 in)	5J-1420	5J-1419	4T-3046	4T-3045	5J-4773	2J-3506	
				3G-8298	3G-8297	4T-3046	4T-3045	5J-4773	2J-3506	
				3G-8294	3G-8293	4T-6242	4T-6241	5J-2409	2J-3505	
816	36S,41S,3ZP,3YP		28 mm (1.12 in)	3G-8294	3G-8293	3G-8294	3G-8293	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
	56D,51K,23K		28 mm (1.12 in)	4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8294	3G-8293	3G-8294	3G-8293	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
824	2HP,35G,64G,93G		22 mm (0.88 in)	3G-8294	3G-8293	3G-8294	3G-8293	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
	88H		28 mm (1.12 in)	3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				109-9025*	109-9024*					
				3G-8290	3G-8289			4J-9208	2J-3507	
824S	88H		35 mm (1.38 in)	3G-8282	3G-8281			4J-9208	2J-3507	
				3G-8282	3G-8281					
	4JP,93G		60 mm (2.36 in)	109-9025*	109-9024*			5J-2406	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8288	3G-8287	4T-6240	4T-6239	4F-4042	2J-3505	
825	89X		28 mm (1.12 in)	9J-1478	9J-1477	4T-6240	4T-6239	4F-4042	2J-3505	
				3G-8318	3G-8317	4T-6240	4T-6239	4F-4042	2J-3505	
	27K,14B,36G		30 mm (1.18 in)	3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				97X,90K,26P,93G						
834	27K,14B,36G		28 mm (1.12 in)	4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
	64G,93G,96G		22 mm (0.88 in)	3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
834G	27K,14B,36G		60 mm (2.36 in)	124-7285*	124-7284*			6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
	27K,14B,36G,64G		22 mm (0.88 in)	4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				93G,96G						

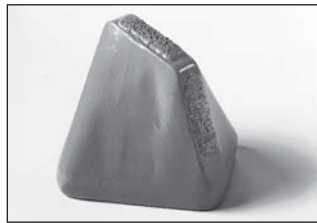
Number in parentheses ( ) after the part number indicates the quantity required.

**Compactor Sole Plates**



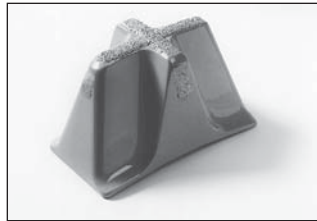
Model	Serial Number	Blade Model	Sole Plate	Bolts Per Plate	Nuts Per Plate
814	23K,56D	Straight	4T-3019 (2)	5J-4773 (5)	2J-3506 (5)
814	36S,3YP	Straight	4T-3018 (2)	5J-4773 (4)	2J-3506 (4)
824	2HP	Cushion	4T-8799 (3)	5J-4772 (5)	2J-3505 (5)
824	35G1-222	Straight	7T-3491 (3)	5J-4773 (7)	2J-3506 (7)
824	35G223-Up	Straight	7T-3492 (3)	5J-4773 (7)	2J-3506 (7)
834	14B	Universal	4T-8799 (2)	6F-0196 (7)	2J-3505 (7)
834	36G,96G	Straight	4T-6650 (2)	5J-4772 (8)	2J-3505 (8)
834	36G,96G	Straight	4T-6651 (1)	5J-4772 (9)	2J-3505 (9)
834	64G	Cushion	4T-6645 (2)	5J-4772 (6)	2J-3505 (6)

**Landfill Compactor Tip/Blades**



**Landfill Compactor Traction Tips:**

- Forged for maximum strength and equipped with ARM for critical wear areas.
- For use in applications where maximum traction is required, such as frozen or difficult to penetrate materials.



**Landfill Compactor Weld-On Plus Tips:**

- Provide superior compaction densities, excellent traction, and excellent side hill stability.
- Provides less plugging and lower replacement costs because fewer teeth are required in its widely spaced distribution pattern.
- Lasts longer than chopper blades in high wear conditions.



**ARM Chopper Blades:**

- Provides good traction and aggressive chopping action in all types of trash.
- Manufactured from heat-treated, DH-2 steel.
- For use in sanitary landfill applications.

Model	Wheel Diameter	Weld-On Plus Tips	ARM Chopper Blade	ARM Chopper Blade Support	
816B,816C		232-0160 (20)	6Y-6766 (20)	2V-6400 (10)	2V-6401 (10)
816B,816C		232-0160 (20)	6Y-6766 (20)	2V-6400 (10)	2V-6401 (10)
826B,826C	40 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B,826C	48 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B,826C	40 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B,826C	48 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
836		232-0160 (35)	107-3374 (28)	2V-6400 (14)	2V-6401 (14)
836G		232-0160 (35)	107-3374 (28)	2V-6400 (14)	2V-6401 (14)



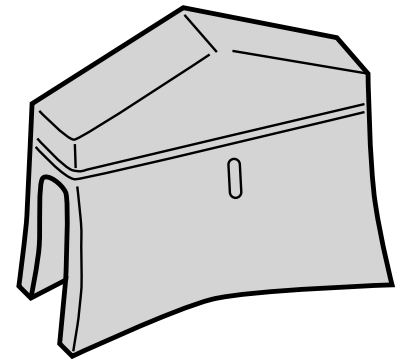
**Landfill Compactor Wheel Assemblies**

Model	Rim Thickness	Weld-On Plus Tip	Narrow Weld-On Plus Tip	ARM Chopper Blade	
				(lh front and rh rear)	(rh front and lh rear)
816	16 mm (0.625 in)	2Q-1498 (4)		4E-3523 (2)	4E-3524 (2)
826	25 mm (1.000 in)	128-8113 (4)	2Z-9142 (4)*	128-8116 (2)	128-8117 (2)
836	25 mm (1.000 in)	129-2405 (4)		111-8237 (2)	111-8238 (2)
836G	25 mm (1.000 in)	143-5952		189-1584	189-1585
836G	25 mm (1.000 in)	165-4970**			

\* Applicable for a narrow wheel width (40"). Only available for machine orders.  
 \*\* Includes wheel extension.

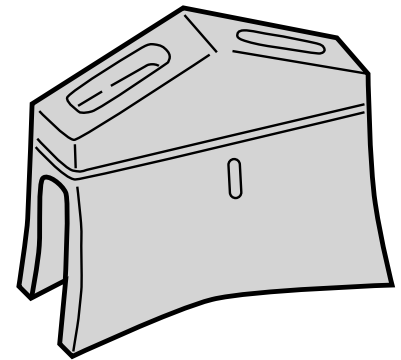
**Weld-On Soil Compactor Feet**

Model	Blade Serial Number	Tamping Foot	Rock Tamping Foot	Base
815	91P		4V-3851	7K-6908
815B	17Z	2V-7053		7K-6908
825C	86X	2V-6628	4V-0668	7K-7071



**Bolt-On Soil Compactor Feet**

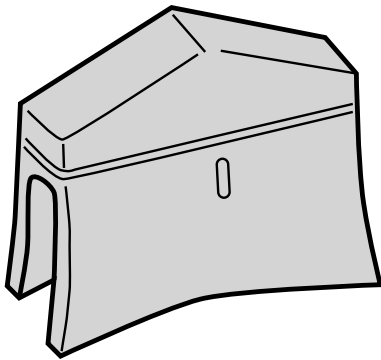
Model	Blade Serial Number	Tamping Foot	Base	Bolts	Nuts	Washers
815	91P	8K-9189	7K-6908	0S-0484 (2)	6B-6684 (2)	5P-8245 (4)
825C	86X	8K-9171	7K-7071	0T-0856 (2)	6B-6682 (2)	5H-1504 (4)
835	44N333-UP	8K-9171	7K-7071	0T-0856 (2)	6B-6682 (2)	5H-1504 (4)



Ground Engaging Tools

Pin-On Soil Compactor Feet

Ground Engaging Tools



Model	Blade Serial Number	Tamping Foot	Rock Tamping Foot	Sheepsfoot	Base	Pin	Spring Assembly	Snap Ring
824B	36H	7K-2939	7K-2939		9S-1645	7K-9535	9S-1644	5S-1522
824B,C,G	36H,85X,45N			3S-3992		7K-9937	9S-1644	5S-1522
825B	43N	7K-2939			9S-1645	7K-9535	9S-1644	5S-1522
825C,G	86X,6RN			3S-3992		7K-9937	9S-1644	5S-1522
834	43E	7K-2939		3S-3992	9S-1645	7K-9535	9S-1644	5S-1522
835	44N1-332	7K-2939		3S-3992	9S-1645	7K-9535	9S-1644	5S-1522

Compactor Cleaner Bars

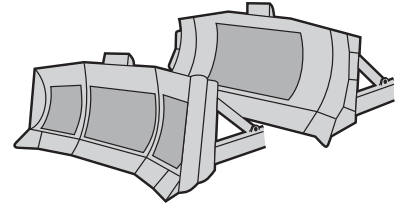
Model	Blade Serial Number	Tamping Foot Cleaner Bar	Rock Tamping Foot Cleaner Bar	Sheepsfoot Cleaner Bar	Landfill Cleaner Bar
815	91P	4S-7928			
815B,F	17Z,1GN	106-204,141-7407, 3G-8250*			
816B,F	15Z, 5FN				71-3968
824B	36H	3S-3228	3S-3228	4S-7928	
825B	36H,43N	3S-3228**	3S-3228	4S-7928	
825C,825G	86X,6RN	3S-3228**	3G-8250*		
826B	58U				71-3968
826C	87X				71-3968
826G	7LH				71-3968
834	43E	4S-7928	4S-7928	3S-3228	
835	44N	4S-7928	4S-7928	3S-3228	
836					71-3968

\* Replaceable Tip — use 8E-6258 Pin and 8E-6259 Retainer.

\*\* Optional one-way cleaner bar available: front wheel — 9V-5074; rear wheel — 9V-5073.

**Compactor Reinforcing Wear Plates**

- Provides extended blade life in highly abrasive or extreme impact conditions.
- Provides a repair or resurface option for worn or damaged moldboards.
- Formed to fit the curve of the blade so they are easily installed.



Model	Serial Number	Item	Plate Thickness	Reinforcing Wear Plate
816	41S,51K	Wear Plate	8 mm (0.31 in)	3J-3141
824	88H	Wear Plate	12 mm (0.47 in)	6J-0164 (2)
		Wear Plate	12 mm (0.47 in)	2J-8523 (4)
824C	2HP,64G	Wear Plate	20 mm (0.79 in)	5J-2663
		Pusher Plate	20 mm (0.79 in)	4J-5622
		Wear Plate	20 mm (0.79 in)	4J-5622
824F	93G	Wear Plate	8 mm (0.31 in)	3J-3141
824G		Wear Plate	20 mm (0.79 in)	5J-2663
825	89X,93G	Wear Plate	8 mm (0.31 in)	3J-3141
826	97X,90K	Wear Plate	8 mm (0.31 in)	3J-3141
834C	64G	Pusher Plate	20 mm (0.79 in)	4J-5622
		Wear Plate	20 mm (0.79 in)	4J-5622
	96G	Wear Plate	8 mm (0.31 in)	3J-3142
835	27K	Wear Plate	8 mm (0.31 in)	3J-3141

Compact Wheel Loader Buckets

Ground Engaging Tools

Model	Bucket Type	Bucket Width	Bucket Group		Bucket Assembly	Rated Capacity	Base Edge	Bucket Corners		Rear Wear Plate
			Bolt-on Teeth	Bolt-on Edge				LH	RH	
902	General Purpose	1770 mm (70 in)	150-8368	150-8369	138-8941	0.2 m <sup>3</sup> (0.8 yd <sup>3</sup> )	138-8938	9R-5205	9R-5206	152-1096
	Multi-Purpose	1770 mm (70 in)	150-8370	150-8371	138-8912	0.2 m <sup>3</sup> (0.8 yd <sup>3</sup> )	138-8938	9R-5205	9R-5206	
	Light Materials	1880 mm (74 in)		152-2005	149-9261	0.3 m <sup>3</sup> (1.3 yd <sup>3</sup> )	138-8932	9R-5205	9R-5206	151-5131
	Stone Sieve	1770 mm (70 in)	152-2008	152-2009	148-6412	0.2 m <sup>3</sup> (0.8 yd <sup>3</sup> )	160-5334	9R-5205	9R-5206	
	High Dump	1770 mm (70 in)	152-5214	152-1998	150-1917	0.2 m <sup>3</sup> (0.8 yd <sup>3</sup> )	138-8938	9R-5205	9R-5206	
	Material Handling Grapple	1880 mm (74 in)		186-0152	184-3268		138-8932			151-5131
906	General Purpose	1880 mm (74 in)	150-8385	150-8386	138-8931	0.25 m <sup>3</sup> (1.0 yd <sup>3</sup> )	138-8932	9R-5205	9R-5206	151-5131
	Multi-Purpose	1880 mm (74 in)	150-8387	150-8388	138-8914	0.23 m <sup>3</sup> (0.9 yd <sup>3</sup> )	138-8932	9R-5205	9R-5206	
	Light Materials	1940 mm (76 in)		152-2006	147-3152	0.41 m <sup>3</sup> (1.6 yd <sup>3</sup> )	152-1051	9R-5205	9R-5206	152-1097
	Stone Sieve	1880 mm (74 in)	152-2010	152-2011	148-5385	0.23 m <sup>3</sup> (0.9 yd <sup>3</sup> )	160-5335	9R-5205	9R-5206	
	High Dump	1880 mm (74 in)	152-5215	152-1999	141-4990	0.23 m <sup>3</sup> (0.9 yd <sup>3</sup> )	138-8932	9R-5205	9R-5206	
	Side Dump	1880 mm (74 in)	152-2001	152-2002	141-7263	0.23 m <sup>3</sup> (0.9 yd <sup>3</sup> )	138-8932	9R-5205	9R-5206	
	Material Handling Grapple	1880 mm (74 in)		186-0152	184-3268		138-8932			151-5131
908	General Purpose	2060 mm (81 in)	150-8389	150-8390	138-8905	0.33 m <sup>3</sup> (1.3 yd <sup>3</sup> )	138-8937	9R-5205	9R-5206	152-1098
	Multi-Purpose	2060 mm (81 in)	150-8391	150-8392	138-8916	0.31 m <sup>3</sup> (1.2 yd <sup>3</sup> )	147-1040	9R-5205	9R-5206	
	Light Materials	2060 mm (81 in)		152-2007	147-3153	0.51 m <sup>3</sup> (2.0 yd <sup>3</sup> )	138-8937	9R-5205	9R-5206	152-1098
	Stone Sieve	2060 mm (81 in)	152-2012	152-2013	148-5386	0.31 m <sup>3</sup> (1.2 yd <sup>3</sup> )	138-8937	9R-5205	9R-5206	
	High Dump	2060 mm (81 in)	152-5216	152-2000	141-4992	0.31 m <sup>3</sup> (1.2 yd <sup>3</sup> )	138-8937	9R-5205	9R-5206	
	Side Dump	2060 mm (81 in)	152-2003	152-2004	141-7265	0.31 m <sup>3</sup> (1.2 yd <sup>3</sup> )	138-8937	9R-5205	9R-5206	
	Material Handling Grapple	2060 mm (81 in)		186-0154	186-0153		138-8937			152-1098

**Compact Wheel Loader Tips & Edges**

**Bolt-On Unitooth**

- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.



Model	Unitooth	Bolts	Nuts
902, 906, 908	132-4720 (7)	159-2953 (14)	8T-4778 (14)

**Bolt-on Edges**

Model	Edges	Bolts	Nuts
902	132-4723	159-2953 (13)	8T-4778 (13)
906	132-4724	159-2953 (13)	8T-4778 (13)
908	132-4725	159-2953 (13)	8T-4778 (13)

Mini Excavators Buckets

Ground Engaging Tools

Model	Bucket Type	Bucket Width	Bucket Group	Bucket Assembly	Rated Capacity	Base Edge	Number of Teeth	Bolt-on Urethane	Bolts	Nuts	Sidecutters***		
											LH	RH	
302.5 303.5	Digging	260 mm (10 in)	176-7283*	179-6704*	0.035 m <sup>3</sup> (0.046 yd <sup>3</sup> )	153-7873	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377	
	Digging	260 mm (10 in)	153-7848	153-7849	0.035 m <sup>3</sup> (0.046 yd <sup>3</sup> )	153-7873	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377	
301.5 301.6 301.8	Digging	300 mm (12 in)	153-7851	153-7852	0.041 m <sup>3</sup> (0.053 yd <sup>3</sup> )	153-7874	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377	
	Digging	400 mm (16 in)	153-7854	153-7855	0.054 m <sup>3</sup> (0.070 yd <sup>3</sup> )	153-7875	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377	
	Digging	457 mm (18 in)	190-7390	190-7392	0.065 m <sup>3</sup> (0.085 yd <sup>3</sup> )	190-7394	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377	
	Digging	500 mm (20 in)	153-7857	153-7858	0.073 m <sup>3</sup> (0.095 yd <sup>3</sup> )	153-7876	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	135-9376	135-9377	
	Digging	600 mm (24 in)	153-7860	153-7861	0.092 m <sup>3</sup> (0.120 yd <sup>3</sup> )	153-7877	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	135-9376	135-9377	
	Ditch Cleaning	800 mm (32 in)		153-7863	0.080 m <sup>3</sup> (0.105 yd <sup>3</sup> )	153-7878 (N/S)							
	Ditch Cleaning	1000 mm (40 in)		153-7865	0.102 m <sup>3</sup> (0.133 yd <sup>3</sup> )	153-7879 (N/S)							
	Ditch Cleaning	1200 mm (47 in)		153-7867	0.116 m <sup>3</sup> (0.152 yd <sup>3</sup> )	153-7880 (N/S)							
	Digging	230 mm (9 in)	147-1014	147-1015	0.018 m <sup>3</sup> (0.023 yd <sup>3</sup> )	147-1033 (N/S)	3	135-9380** (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379	
	Digging	300 mm (12 in)	147-1018	147-1017	0.018 m <sup>3</sup> (0.029 yd <sup>3</sup> )	147-1034 (N/S)	3	135-9380** (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379	
304.5	Digging	400 mm (16 in)	147-1020	147-1021	0.033 m <sup>3</sup> (0.043 yd <sup>3</sup> )	147-1035 (N/S)	3	135-9380** (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379	
	Digging	457 mm (18 in)	190-7387	190-7388	0.040 m <sup>3</sup> (0.052 yd <sup>3</sup> )	190-7389 (N/S)	3	135-9380** (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379	
	Digging	500 mm (20 in)	147-1023	147-1024	0.045 m <sup>3</sup> (0.059 yd <sup>3</sup> )	147-1036 (N/S)	4	135-9380** (4)	8T-4183 (8)	8T-4244 (8)	135-9378	135-9379	
	Digging	600 mm (24 in)	147-1026	147-1027	0.056 m <sup>3</sup> (0.073 yd <sup>3</sup> )	147-1037 (N/S)	4	135-9380** (4)	8T-4183 (8)	8T-4244 (8)	135-9378	135-9379	
	Ditch Cleaning	800 mm (32 in)		147-1029	0.044 m <sup>3</sup> (0.057 yd <sup>3</sup> )	147-1038 (N/S)							
	Ditch Cleaning	1000 mm (40 in)		147-1031	0.056 m <sup>3</sup> (0.073 yd <sup>3</sup> )	147-1039 (N/S)							
	Digging	300 mm (12 in)	188-4369*	180-3627*	0.058 m <sup>3</sup> (0.076 yd <sup>3</sup> )	180-3638 (N/S)	3	135-9203 (3)	4F-3656 (6)	4K-0367 (6)	180-3639	180-3640	
	Digging	300 mm (12 in)	180-3622	180-3627	0.058 m <sup>3</sup> (0.076 yd <sup>3</sup> )	180-3638 (N/S)	3	135-9203 (3)	4F-3656 (6)	4K-0367 (6)	180-3639	180-3640	
	Digging	400 mm (16 in)	180-3623	180-3628	0.076 m <sup>3</sup> (0.099 yd <sup>3</sup> )	180-3647 (N/S)	4	135-9203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640	
	Digging	500 mm (20 in)	180-3624	180-3629	0.104 m <sup>3</sup> (0.136 yd <sup>3</sup> )	180-3648 (N/S)	4	135-9203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640	
303.5	Digging	600 mm (24 in)	180-3625	180-3630	0.133 m <sup>3</sup> (0.174 yd <sup>3</sup> )	180-3649 (N/S)	4	135-9203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640	
	Digging	700 mm (28 in)	180-3626	180-3631	0.162 m <sup>3</sup> (0.212 yd <sup>3</sup> )	180-3650 (N/S)	4	135-9203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640	
	Ditch Cleaning	1000 mm (40 in)		180-1355	0.139 m <sup>3</sup> (0.182 yd <sup>3</sup> )	180-1365 (N/S)							
	Ditch Cleaning	1300 mm (51 in)		180-1356	0.184 m <sup>3</sup> (0.241 yd <sup>3</sup> )	180-1366 (N/S)							
	Ditch Cleaning	1600 mm (63 in)		180-1357	0.229 m <sup>3</sup> (0.299 yd <sup>3</sup> )	180-1367 (N/S)							
	Digging	300 mm (12 in)	171-2759	171-2760	0.049 m <sup>3</sup> (0.065 yd <sup>3</sup> )	174-2141 (N/S)	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	174-2133	174-2134	
	Digging	400 mm (16 in)	171-2761	171-2762	0.065 m <sup>3</sup> (0.085 yd <sup>3</sup> )	174-2152 (N/S)	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	174-2133	174-2134	
	Digging	500 mm (20 in)	171-2763	171-2764	0.089 m <sup>3</sup> (0.116 yd <sup>3</sup> )	174-2154 (N/S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134	
	Digging	600 mm (24 in)	171-2767	171-2768	0.113 m <sup>3</sup> (0.148 yd <sup>3</sup> )	174-2154 (N/S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134	
	Ditch Cleaning	650 mm (26 in)	171-2769	171-2770	0.126 m <sup>3</sup> (0.165 yd <sup>3</sup> )	174-2155 (N/S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134	
Ditch Cleaning	1000 mm (40 in)		174-2460	0.111 m <sup>3</sup> (0.145 yd <sup>3</sup> )	153-7879 (N/S)								
	1200 mm (47 in)		174-2461	0.135 m <sup>3</sup> (0.177 yd <sup>3</sup> )	153-7880 (N/S)								
	1400 mm (55 in)		174-1811	0.159 m <sup>3</sup> (0.208 yd <sup>3</sup> )	173-9770 (N/S)								

\* Includes 2 bucket mounting pins, 2 hydraulic fittings, and 4 retaining rings.  
 \*\* Service replacement for 135-9380 factory tooth is 138-6410. Use 160-0018 flat head screw.  
 \*\*\* Please reference Information Release Memo (PELJ0617) (GET 0603 infocast) for bolt-on options.  
 (N/S) — Non serviceable

Skid Steer Loaders/Work Tools



Ground Engaging Tools

Size	Toothbar	Bucket Assembly	Bucket Arrangement	Bolts	Nuts	Fasteners	Washers
		(GP)	(MP)			Lockwashers	
1525 mm (60 in)	136-8734	165-6152	154-5004	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1675 mm (66 in)	136-8735	165-6153	154-5008	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1830 mm (72 in)	136-8736	165-6154	154-5010	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1980 mm (78 in)	217-4878	199-7721	199-8321	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
2135 mm (84 in)	275-5427	292-9270	293-0139	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)

(GP) – General Purpose  
(MP) – Multi-Purpose



Size	Toothbar	Bucket Assembly	Bucket Arrangement	Cutting Edge	Bolts	Nuts	Fasteners	Washers
		(GP)	(MP)				Lockwashers	
1525 mm (60 in)	159-0330	165-6152	154-5004	135-9394	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1675 mm (66 in)	159-0340	165-6153	154-5008	135-9395	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1830 mm (72 in)	159-0350	165-6154	154-5010	135-9396	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1980 mm (78 in)	195-9160	199-7721	199-8321	135-9387	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
2135 mm (84 in)	264-2084	296-8192	296-8057	195-7124	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)

(GP) – General Purpose  
(MP) – Multi-Purpose



Skid Steer Loaders/Work Tools

Ground Engaging Tools

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
General Purpose	Base Edge	1525 mm (60 in)	165-6152			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-6152	152-0224			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1525 mm (60 in)	165-6152	152-0223	132-4720		174-7966	16.0 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1525 mm (60 in)	165-6152	152-0223	132-4720		174-7972	19.0 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1675 mm (66 in)	165-6153			149-5436						
	Bolt-on Edge	1675 mm (66 in)	165-6153	152-0226			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1675 mm (66 in)	165-6153	152-0225	132-4720		174-7967	16.0 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1675 mm (66 in)	165-6153	152-0225	132-4720		174-7973	19.0 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1830 mm (72 in)	165-6154			149-5437						
	Bolt-on Edge	1830 mm (72 in)	165-6154	152-0229			135-9396	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Teeth	1830 mm (72 in)	165-6154	152-0228	132-4720		174-7968	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1830 mm (72 in)	165-6154	152-0228	132-4720		174-7974	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
Dirt	Base Edge	1370 mm (54 in)	165-6155			149-5434						
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			135-9393	12.7 mm (0.50 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			174-7965	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			174-7971	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1525 mm (60 in)	165-6156			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			174-7966	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			174-7972	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1675 mm (66 in)	165-6157			149-5436						
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			174-7967	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			174-7973	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
Utility	Base Edge	1525 mm (60 in)	165-8835			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			174-7966	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			174-7972	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1675 mm (66 in)	165-8746			149-5436						
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			174-7967	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			174-7973	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1830 mm (72 in)	165-8747			149-5437						
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			135-9396	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			174-7968	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			174-7974	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		

(Continued)

Skid Steer Loaders/Work Tools (Continued)

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
Light Material	Base Edge	1830 mm (72 in)	164-7414			149-5437						
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			135-9396	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			174-7968	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)		
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			174-7974	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)		
	Base Edge	1980 mm (78 in)	164-7415			167-7433 ‡						
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			135-9397	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			174-7969	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)		
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			174-7975	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)		

‡ Discontinued, replaced by 199-7722

Skid Steer Loaders/Work Tools

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Bulldozer Assembly	Clam Assembly	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut	
Multi-Purpose	Base Edge	1525 mm (60 in)	154-5004		159-5345 ±A			154-5037							
	Base Edge	1525 mm (60 in)	154-5004	154-5045		149-4232		149-5435							
	Bolt-on Edge	1525 mm (60 in)	154-5004	154-5045					135-9394	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)	
	Bolt-on Teeth	1525 mm (60 in)	154-5004	154-5045			132-4720		174-7966	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)	
	Bolt-on Teeth	1525 mm (60 in)	154-5004	154-5045			132-4720		174-7972	19 mm (0.73 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)	
	Base Edge	1675 mm (66 in)	154-5008		159-5346 ±B			154-5059							
	Base Edge	1675 mm (66 in)	154-5008	154-5047		154-5053		149-5436							
	Bolt-on Edge	1675 mm (66 in)	154-5008	154-5048						135-9395	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1675 mm (66 in)	154-5008	154-5048				132-4720		174-7967	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1675 mm (66 in)	154-5008	154-5048				132-4720		174-7973	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1830 mm (72 in)	154-5010		154-5080				154-5077						
	Base Edge	1830 mm (72 in)	154-5010	154-5049			154-5070		149-5437						
	Bolt-on Edge	1830 mm (72 in)	154-5010	154-5050						135-9394	16 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Teeth	1830 mm (72 in)	154-5010	154-5050				132-4720		174-7968	16 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1830 mm (72 in)	154-5010	154-5050				132-4720		174-7974	19 mm (0.73 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)

‡ Discontinued, replaced by:

A — 149-3477

B — 154-5063

(Continued)

Skid Steer Loaders/Work Tools (Continued)

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
Industrial Grapple	Base Edge	1525 mm (60 in)	169-8941	157-7223	149-5435						
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		135-9394	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		174-7966	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)		
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		174-7972	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)		
	Base Edge	1675 mm (66 in)	169-8942	157-7224	149-5436						
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		135-9395	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		174-7967	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)		
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		174-7973	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)		
	Base Edge	1830 mm (72 in)	169-8943	157-7225	149-5437						
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		135-9396	16 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		174-7968			4F-3654 (11)	4K-0367 (11)	
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		174-7974			4F-3654 (11)	4K-0367 (11)	

Ground Engaging Tools

Bucket Type	Edge Type	Size	Blade GP	Blade Arrangement	Blade Assembly	Cutting Edge	Cutting Edge Length	Bolt	Nut	Screw	Locknut	Washer	End Plate	
Angle Dozer	Cutting Edge	1830 mm (72.0 in)		177-1989		135-9396	1893 mm (74.5 in)			159-2953 (6)	8T-4778 (6)			
	Non-metallic Cutting Edge	1830 mm (72.0 in)		177-1989		165-8477		8T-4140 (6)			8T-4778 (6)	165-7095 (6)		
	Cutting Edge	2070 mm (81.5 in)		177-1990		149-5740 †A	2134 mm (84.0 in)			159-2953 (6)	8T-4778 (6)			
	Non-metallic Cutting Edge	2070 mm (81.5 in)		177-1990		165-8478		8T-4140 (6)			8T-4778 (6)	165-7095 (6)		
	Cutting Edge	2320 mm (90.5 in)	186-5671	208-3331 † (N/S)	166-1686 †B	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)		5P-8247 (17)		159-0372 (2)	
	Cutting Edge	2320 mm (90.5 in)	186-5671	183-1769 † (N/S)	166-1686 †B	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)				5P-8247 (17)	159-0372 (2)
	Cutting Edge	2320 mm (90.5 in)	186-5671	169-7646	166-1686 †B	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)				5P-8247 (17)	159-0372 (2)
	Cutting Edge	2320 mm (90.5 in)	186-5671	208-3297 † (N/S)	166-1686 †B	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)				5P-8247 (17)	159-0372 (2)
	Cutting Edge	2470 mm (94.4 in)	208-2038	208-3277 † (N/S)	166-1687 †C	143-3089	1730 mm (68.0 in)	3F-5108 (17)	4K-0367 (17)				5P-8247 (17)	195-7193 (2)

† Discontinued, replaced by:

A — 195-5124

B — 235-3852

C — 235-3856

(N/S) — Non serviceable

Base Edge Thickness	Bucket Width	Base Edge Assy <sup>1</sup>	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
22 mm (0.87 in)	305 mm (12 in)	121-9162	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	330 mm (13 in)	231-2988	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	457 mm (18 in)	158-3958	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	610 mm (24 in)	153-1558	4	6Y-3224	6Y-3224 (2)	6Y-3224	J225
22 mm (0.87 in)	762 mm (30 in)	153-1583	5	6Y-3224	6Y-3224 (3)	6Y-3224	J225
22 mm (0.87 in)	914 mm (36 in)	153-1585	6	6Y-3224	6Y-3224 (4)	6Y-3224	J225
32 mm (1.25 in)	457 mm (18 in)	226-1311	3	119-3253	119-3253	119-3253	J250
32 mm (1.25 in)	610 mm (24 in)	229-7650	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	635 mm (25 in)	241-0283	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	686 mm (27 in)	127-6104	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	762 mm (30 in)	193-4786	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	762 mm (30 in)	229-7653	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	800 mm (31.5 in)	241-0282	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	813 mm (32 in)	7Y-6664 <sup>2</sup>	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	840 mm (33 in)	127-6106	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	106-6857 <sup>2</sup>	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	190-3332	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	229-7656	6	119-3253	119-3253 (4)	119-3253	J250
32 mm (1.25 in)	990 mm (39 in)	127-6108	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	1067 mm (42 in)	229-7659	7	119-3253	119-3253 (5)	119-3253	J250
32 mm (1.25 in)	1145 mm (45 in)	127-6110	6	119-3253	119-3253 (4)	119-3253	J250
32 mm (1.25 in)	1219 mm (48 in)	229-7662	7	119-3253	119-3253 (5)	119-3253	J250
32 mm (1.25 in)	1295 mm (51 in)	127-6112	6	119-3253	119-3253 (4)	119-3253	J250
35 mm (1.37 in)	559 mm (22 in)	276-5880 <sup>2</sup>	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	610 mm (24 in)	279-3909 <sup>2</sup>	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	610 mm (24 in)	239-2810	3	220-9086	220-9084	220-9085	K80
35 mm (1.37 in)	610 mm (24 in)	240-9602	3	220-9086	220-9084	220-9085	K80
35 mm (1.37 in)	610 mm (24 in)	279-4080	3	232-2086	220-9084	232-2085	K80
35 mm (1.37 in)	610 mm (24 in)	232-0022 <sup>3</sup>	1		220-9084		K80
35 mm (1.37 in)	610 mm (24 in)	253-0132 <sup>3</sup>	2		220-9084 (2)		K80
35 mm (1.37 in)	711 mm (28 in)	276-5881 <sup>2</sup>	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	762 mm (30 in)	279-3910 <sup>2</sup>	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	762 mm (30 in)	239-2774	4	220-9086	220-9084 (2)	220-9085	K80
35 mm (1.37 in)	762 mm (30 in)	240-9603	4	220-9086	220-9084 (2)	220-9085	K80
35 mm (1.37 in)	762 mm (30 in)	279-4081	4	232-2086	220-9084 (2)	232-2085	K80
35 mm (1.37 in)	762 mm (30 in)	232-0023 <sup>3</sup>	2		220-9084 (2)		K80
35 mm (1.37 in)	813 mm (32 in)	279-3911 <sup>2</sup>	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	864 mm (34 in)	276-5882 <sup>2</sup>	5	229-7086	220-9084 (3)	229-7085	K80
35 mm (1.37 in)	914 mm (36 in)	279-3912 <sup>2</sup>	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	914 mm (36 in)	239-2615	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	239-2619	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	240-9604	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	279-4082	5	232-2086	220-9084 (3)	232-2085	K80
35 mm (1.37 in)	914 mm (36 in)	232-0024 <sup>3</sup>	3		220-9084 (3)		K80
35 mm (1.37 in)	1016 mm (40 in)	271-5409 <sup>2</sup>	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	1016 mm (40 in)	276-5883 <sup>2</sup>	6	229-7086	220-9084 (4)	229-7085	K80
35 mm (1.37 in)	1067 mm (42 in)	239-2764	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	1067 mm (42 in)	240-9605	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	1067 mm (42 in)	279-4083	5	232-2086	220-9084 (3)	232-2085	K80
35 mm (1.37 in)	1067 mm (42 in)	232-0025 <sup>3</sup>	3		220-9084 (3)		K80

<sup>1</sup> Consists of base edge and adapters

<sup>2</sup> Straight corner adapters

<sup>3</sup> Upgrade/conversion – no corner adapters

<sup>4</sup> Spade w/straight corner adapters

<sup>5</sup> Spade w/angled corner adapters

<sup>6</sup> Spade upgrade/conversion – no corner adapters

Base Edge Thickness	Bucket Width	Base Edge Assy <sup>1</sup>	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
35 mm (1.37 in)	1118 mm (44 in)	279-3913 <sup>2</sup>	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	1168 mm (46 in)	276-5884 <sup>2</sup>	7	229-7086	220-9084 (5)	229-7085	K80
35 mm (1.37 in)	1219 mm (48 in)	271-5410 <sup>2</sup>	5	229-7086	220-9084 (3)	229-7085	K80
35 mm (1.37 in)	1219 mm (48 in)	239-2784	6	220-9086	220-9084 (4)	220-9085	K80
35 mm (1.37 in)	1219 mm (48 in)	240-9606	6	220-9086	220-9084 (4)	220-9085	K80
35 mm (1.37 in)	1219 mm (48 in)	279-4084	6	232-2086	220-9084 (4)	232-2085	K80
35 mm (1.37 in)	1219 mm (48 in)	232-0026 <sup>3</sup>	4		220-9084 (4)		K80
35 mm (1.37 in)	1321 mm (52 in)	276-5885 <sup>2</sup>	8	229-7086	220-9084 (6)	229-7085	K80
35 mm (1.37 in)	1321 mm (52 in)	279-3914 <sup>2</sup>	5	229-7086	220-9084 (3)	229-7085	K80
35 mm (1.37 in)	1372 mm (54 in)	240-9607	6	220-9086	220-9084 (4)	220-9085	K80
35 mm (1.37 in)	1372 mm (54 in)	279-4085	7	232-2086	220-9084 (5)	232-2085	K80
35 mm (1.37 in)	1422 mm (56 in)	279-3915 <sup>2</sup>	5	229-7086	220-9084 (3)	229-7085	K80
35 mm (1.37 in)	1524 mm (60 in)	292-8978 <sup>2</sup>	5	229-7086	220-9084 (3)	229-7085	K80
40 mm (1.57 in)	559 mm (22 in)	276-5890 <sup>2</sup>	3	223-8096	220-9094	223-8095	K90
40 mm (1.57 in)	610 mm (24 in)	239-2819	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	239-2676	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	227-8740	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	279-4090	3	232-2096	220-9094	232-2095	K90
40 mm (1.57 in)	610 mm (24 in)	232-0027 <sup>3</sup>	1		220-9094		K90
40 mm (1.57 in)	711 mm (28 in)	276-5891 <sup>2</sup>	4	223-8096	220-9094 (2)	223-8095	K90
40 mm (1.57 in)	762 mm (30 in)	239-2818	4	220-9096	220-9094 (2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	239-2634	4	220-9096	220-9094 (2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	228-6951	4	220-9096	220-9094 (2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	279-4091	4	232-2096	220-9094 (2)	232-2095	K90
40 mm (1.57 in)	762 mm (30 in)	232-0028 <sup>3</sup>	2		220-9094 (2)		K90
40 mm (1.57 in)	864 mm (34 in)	276-5892 <sup>2</sup>	5	223-8096	220-9094 (3)	223-8095	K90
40 mm (1.57 in)	914 mm (36 in)	239-2716	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	239-2545	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	228-6952	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	279-4092	5	232-2096	220-9094 (3)	232-2095	K90
40 mm (1.57 in)	914 mm (36 in)	232-0029 <sup>3</sup>	3		220-9094 (3)		K90
40 mm (1.57 in)	1016 mm (40 in)	276-5893 <sup>2</sup>	5	223-8096	220-9094 (3)	223-8095	K90
40 mm (1.57 in)	1067 mm (42 in)	239-2792	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	239-2642	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	228-6953	5	220-9096	220-9094 (3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	279-4093	5	232-2096	220-9094 (3)	232-2095	K90
40 mm (1.57 in)	1067 mm (42 in)	232-0030 <sup>3</sup>	3		220-9094 (3)		K90
40 mm (1.57 in)	1168 mm (46 in)	276-5894 <sup>2</sup>	6	223-8096	220-9094 (4)	223-8095	K90
40 mm (1.57 in)	1219 mm (48 in)	279-3916 <sup>2</sup>	4	223-8096	220-9094 (2)	223-8095	K90
40 mm (1.57 in)	1219 mm (48 in)	239-2801	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	239-2650	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	225-6813	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	279-4094	6	232-2096	220-9094 (4)	232-2095	K90
40 mm (1.57 in)	1219 mm (48 in)	238-3199 <sup>3</sup>	3		220-9094 (3)		K90
40 mm (1.57 in)	1219 mm (48 in)	232-0031 <sup>3</sup>	4		220-9094 (4)		K90
40 mm (1.57 in)	1321 mm (52 in)	276-5895 <sup>2</sup>	7	223-8096	220-9094 (5)	223-8095	K90
40 mm (1.57 in)	1372 mm (54 in)	235-2498	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1372 mm (54 in)	279-4095	7	232-2096	220-9094 (5)	232-2095	K90
40 mm (1.57 in)	1372 mm (54 in)	232-0032 <sup>3</sup>	5		220-9094 (5)		K90
45 mm (1.77 in)	610 mm (24 in)	241-6724	3	220-9106	220-9104	220-9105	K100

<sup>1</sup> Consists of base edge and adapters

<sup>2</sup> Straight corner adapters

<sup>3</sup> Upgrade/conversion – no corner adapters

<sup>4</sup> Spade w/straight corner adapters

<sup>5</sup> Spade w/angled corner adapters

<sup>6</sup> Spade upgrade/conversion – no corner adapters



Base Edge Thickness	Bucket Width	Base Edge Assy <sup>1</sup>	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
45 mm (1.77 in)	610 mm (24 in)	279-4100	3	232-2106	220-9104	232-2105	K100
45 mm (1.77 in)	724 mm (28.5 in)	279-4121 <sup>2</sup>	3	232-0106	220-9104	232-0105	K100
45 mm (1.77 in)	762 mm (30 in)	241-6725	3	220-9106	220-9104	220-9105	K100
45 mm (1.77 in)	762 mm (30 in)	279-4101	3	232-2106	220-9104	232-2105	K100
45 mm (1.77 in)	762 mm (30 in)	232-0033 <sup>3</sup>	1		220-9104		K100
45 mm (1.77 in)	876 mm (34.5 in)	279-4122 <sup>2</sup>	4	232-0106	220-9104 (2)	232-0105	K100
45 mm (1.77 in)	914 mm (36 in)	241-6726	4	220-9106	220-9104 (2)	220-9105	K100
45 mm (1.77 in)	914 mm (36 in)	279-4102	4	232-2106	220-9104 (2)	232-2105	K100
45 mm (1.77 in)	914 mm (36 in)	232-0034 <sup>3</sup>	2		220-9104 (2)		K100
45 mm (1.77 in)	1029 mm (40.5 in)	279-4123 <sup>2</sup>	5	232-0106	220-9104 (3)	232-0105	K100
45 mm (1.77 in)	1067 mm (42 in)	241-6727	5	220-9106	220-9104 (3)	220-9105	K100
45 mm (1.77 in)	1067 mm (42 in)	279-4103	5	232-2106	220-9104 (3)	232-2105	K100
45 mm (1.77 in)	1067 mm (42 in)	232-0039 <sup>3</sup>	3		220-9104 (3)		K100
45 mm (1.77 in)	1181 mm (46.5 in)	279-4124 <sup>2</sup>	5	232-0106	220-9104 (3)	232-0105	K100
45 mm (1.77 in)	1219 mm (48 in)	241-6728	5	220-9106	220-9104 (3)	220-9105	K100
45 mm (1.77 in)	1219 mm (48 in)	279-4104	5	232-2106	220-9104 (3)	232-2105	K100
45 mm (1.77 in)	1219 mm (48 in)	232-0035 <sup>3</sup>	3		220-9104 (3)		K100
45 mm (1.77 in)	1334 mm (52.5 in)	279-4125 <sup>2</sup>	6	232-0106	220-9104 (4)	232-0105	K100
45 mm (1.77 in)	1372 mm (54 in)	241-6729	6	220-9106	220-9104 (4)	220-9105	K100
45 mm (1.77 in)	1372 mm (54 in)	279-4105	6	232-2106	220-9104 (4)	232-2105	K100
45 mm (1.77 in)	1372 mm (54 in)	232-0036 <sup>3</sup>	4		220-9104 (4)		K100
45 mm (1.77 in)	1486 mm (58.5 in)	279-4126 <sup>2</sup>	7	232-0106	220-9104 (5)	232-0105	K100
45 mm (1.77 in)	1524 mm (60 in)	241-6730	7	220-9106	220-9104 (5)	220-9105	K100
45 mm (1.77 in)	1524 mm (60 in)	279-4106	7	232-2106	220-9104 (5)	232-2105	K100
45 mm (1.77 in)	1524 mm (60 in)	232-0037 <sup>3</sup>	5		220-9104 (5)		K100
45 mm (1.77 in)	1676 mm (66 in)	242-1794	7	220-9106	220-9104 (5)	220-9105	K100
45 mm (1.77 in)	1676 mm (66 in)	279-4107	7	232-2106	220-9104 (5)	232-2105	K100
45 mm (1.77 in)	1676 mm (66 in)	232-0038 <sup>3</sup>	5		220-9104 (5)		K100
60 mm (2.36 in)	762 mm (30 in)	258-4571	3	232-0116	232-0114	232-0115	K110
60 mm (2.36 in)	762 mm (30 in)	241-6717	3	232-0116	232-0114	232-0115	K110
60 mm (2.36 in)	762 mm (30 in)	279-4110	3	264-2116	232-0114	264-2115	K110
60 mm (2.36 in)	762 mm (30 in)	253-0103 <sup>3</sup>	1		232-0114		K110
60 mm (2.36 in)	813 mm (32 in)	279-9956	3	264-2116	232-0114	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	260-9411 <sup>2</sup>	4	232-0114	232-0114 (2)	232-0114	K110
60 mm (2.36 in)	914 mm (36 in)	258-4572	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	914 mm (36 in)	244-3895	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	914 mm (36 in)	279-4111	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	279-9957	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	253-0104 <sup>3</sup>	1		232-0114		K110
60 mm (2.36 in)	1054 mm (41.5 in)	260-9413 <sup>2</sup>	4	232-0114	232-0114 (2)	232-0114	K110
60 mm (2.36 in)	1067 mm (42 in)	258-4573	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	1067 mm (42 in)	241-6719	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	1067 mm (42 in)	279-4112	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	1067 mm (42 in)	279-9958	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	1067 mm (42 in)	253-0105 <sup>3</sup>	2		232-0114 (2)		K110
60 mm (2.36 in)	1219 mm (48 in)	260-9414 <sup>2</sup>	5	232-0114	232-0114 (3)	232-0114	K110
60 mm (2.36 in)	1219 mm (48 in)	258-4574	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1219 mm (48 in)	241-6720	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1219 mm (48 in)	279-4113	5	264-2116	232-0114 (3)	264-2115	K110
60 mm (2.36 in)	1219 mm (48 in)	279-9959	5	264-2116	232-0114 (3)	264-2115	K110

<sup>1</sup> Consists of base edge and adapters

<sup>2</sup> Straight corner adapters

<sup>3</sup> Upgrade/conversion – no corner adapters

<sup>4</sup> Spade w/straight corner adapters

<sup>5</sup> Spade w/angled corner adapters

<sup>6</sup> Spade upgrade/conversion – no corner adapters

Base Edge Thickness	Bucket Width	Base Edge Assy <sup>1</sup>	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
60 mm (2.36 in)	1219 mm (48 in)	253-0106 <sup>3</sup>	3		232-0114 (3)		K110
60 mm (2.36 in)	1219 mm (48 in)	257-1771 <sup>3</sup>	3		232-0114 (3)		K110
60 mm (2.36 in)	1372 mm (54 in)	260-9415 <sup>2</sup>	6	232-0114	232-0114 (4)	232-0114	K110
60 mm (2.36 in)	1372 mm (54 in)	258-4575	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1372 mm (54 in)	241-6721	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1372 mm (54 in)	279-4114	5	264-2116	232-0114 (3)	264-2115	K110
60 mm (2.36 in)	1372 mm (54 in)	279-9960	5	264-2116	232-0114 (3)	264-2115	K110
60 mm (2.36 in)	1372 mm (54 in)	253-0107 <sup>3</sup>	3		232-0114 (3)		K110
60 mm (2.36 in)	1372 mm (54 in)	253-0108 <sup>3</sup>	3		232-0114 (3)		K110
60 mm (2.36 in)	1524 mm (60 in)	260-9416 <sup>2</sup>	6	232-0114	232-0114 (4)	232-0114	K110
60 mm (2.36 in)	1524 mm (60 in)	258-4576	6	232-0116	232-0114 (4)	232-0115	K110
60 mm (2.36 in)	1524 mm (60 in)	241-6722	6	232-0116	232-0114 (4)	232-0115	K110
60 mm (2.36 in)	1524 mm (60 in)	279-4115	6	264-2116	232-0114 (4)	264-2115	K110
60 mm (2.36 in)	1524 mm (60 in)	279-9961	6	264-2116	232-0114 (4)	264-2115	K110
60 mm (2.36 in)	1524 mm (60 in)	253-0109 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1524 mm (60 in)	253-0110 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1600 mm (63 in)	253-0111 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1676 mm (66 in)	260-9417 <sup>2</sup>	7	232-0114	232-0114 (5)	232-0114	K110
60 mm (2.36 in)	1676 mm (66 in)	258-4577	7	232-0116	232-0114 (5)	232-0115	K110
60 mm (2.36 in)	1676 mm (66 in)	241-6723	7	232-0116	232-0114 (5)	232-0115	K110
60 mm (2.36 in)	1676 mm (66 in)	279-4116	7	264-2116	232-0114 (5)	264-2115	K110
60 mm (2.36 in)	1676 mm (66 in)	253-0112 <sup>3</sup>	3		232-0114 (3)		K110
60 mm (2.36 in)	1676 mm (66 in)	253-0113 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1676 mm (66 in)	253-0114 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1727 mm (68 in)	304-3114	7	264-2116	232-0114 (5)	264-2115	K110
60 mm (2.36 in)	1727 mm (68 in)	253-0115 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1727 mm (68 in)	253-0116 <sup>3</sup>	4		232-0114 (4)		K110
60 mm (2.36 in)	1829 mm (72 in)	260-9418 <sup>2</sup>	7	232-0114	232-0114 (5)	232-0114	K110
60 mm (2.36 in)	1829 mm (72 in)	258-4578	7	232-0116	232-0114 (5)	232-0115	K110
60 mm (2.36 in)	1829 mm (72 in)	244-3889	7	232-0116	232-0114 (5)	232-0115	K110
60 mm (2.36 in)	1829 mm (72 in)	279-4117	7	264-2116	232-0114 (5)	264-2115	K110
60 mm (2.36 in)	1829 mm (72 in)	253-0117 <sup>3</sup>	5		232-0114 (5)		K110
60 mm (2.36 in)	1880 mm (74 in)	279-9963	7	264-2116	232-0114 (5)	264-2115	K110
60 mm (2.36 in)	1980 mm (78 in)	260-9419 <sup>2</sup>	8	232-0114	232-0114 (6)	232-0114	K110
70 mm (2.76 in)	991 mm (39 in)	279-9971	3	264-2136	232-0130	264-2135	K130
70 mm (2.76 in)	1040 mm (41 in)	253-0126 <sup>3</sup>	1		232-0130		K130
70 mm (2.76 in)	1219 mm (48 in)	253-9075	4	232-0132	232-0130 (2)	232-0131	K130
70 mm (2.76 in)	1219 mm (48 in)	279-9972	4	264-2136	232-0130 (2)	264-2135	K130
70 mm (2.76 in)	1219 mm (48 in)	253-0127 <sup>3</sup>	2		232-0130 (2)		K130
70 mm (2.76 in)	1372 mm (54 in)	253-9076	4	232-0132	232-0130 (2)	232-0131	K130
70 mm (2.76 in)	1372 mm (54 in)	279-9973	4	264-2136	232-0130 (2)	264-2135	K130
70 mm (2.76 in)	1372 mm (54 in)	253-0128 <sup>3</sup>	3		232-0130 (3)		K130
70 mm (2.76 in)	1524 mm (60 in)	253-9077	5	232-0132	232-0130 (3)	232-0131	K130
70 mm (2.76 in)	1524 mm (60 in)	279-9974	5	264-2136	232-0130 (3)	264-2135	K130
70 mm (2.76 in)	1524 mm (60 in)	265-3398 <sup>4</sup>	4	232-0130	232-0130 (2)	232-0130	K130
70 mm (2.76 in)	1550 mm (61 in)	257-1752 <sup>3</sup>	3		232-0130 (3)		K130
70 mm (2.76 in)	1676 mm (66 in)	279-9975	5	264-2136	232-0130 (3)	264-2135	K130
70 mm (2.76 in)	1905 mm (75 in)	257-1753 <sup>3</sup>	4		232-0130 (4)		K130
70 mm (2.76 in)	1930 mm (76 in)	265-3400 <sup>4</sup>	6	232-0130	232-0130 (4)	232-0130	K130
70 mm (2.76 in)	1981 mm (78 in)	279-9976	6	264-2136	232-0130 (4)	264-2135	K130

<sup>1</sup> Consists of base edge and adapters

<sup>2</sup> Straight corner adapters

<sup>3</sup> Upgrade/conversion – no corner adapters

<sup>4</sup> Spade w/straight corner adapters

<sup>5</sup> Spade w/angled corner adapters

<sup>6</sup> Spade upgrade/conversion – no corner adapters

Base Edge Thickness	Bucket Width	Base Edge Assy <sup>1</sup>	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
70 mm (2.76 in)	1981 mm (78 in)	257-1755 <sup>3</sup>	4		232-0130 (4)		K130
80 mm (3.15 in)	1067 mm (42 in)	293-6380	3	264-2156	195-9154	264-2155	K150
80 mm (3.15 in)	1372 mm (54 in)	293-6381	4	264-2156	195-9154 (2)	264-2155	K150
80 mm (3.15 in)	1676 mm (66 in)	293-6382	4	264-2156	195-9154 (2)	264-2155	K150
80 mm (3.15 in)	1778 mm (70 in)	264-2027 <sup>3</sup>	3		195-9154 (3)		K150
80 mm (3.15 in)	1981 mm (78 in)	293-6383	5	264-2156	195-9154 (3)	264-2155	K150
80 mm (3.15 in)	2007 mm (79 in)	260-1244	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2007 mm (79 in)	260-1158 <sup>5</sup>	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2083 mm (82 in)	264-2035 <sup>6</sup>	2		195-9154 (2)		K150
80 mm (3.15 in)	2108 mm (83 in)	260-1241	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2108 mm (83 in)	264-2031 <sup>3</sup>	4		195-9154 (4)		K150
80 mm (3.15 in)	2261 mm (89 in)	264-2043 <sup>6</sup>	4		195-9154 (4)		K150
80 mm (3.15 in)	2286 mm (90 in)	264-2039 <sup>6</sup>	3		195-9154 (3)		K150
80 mm (3.15 in)	2438 mm (96 in)	264-2033 <sup>3</sup>	5		195-9154 (5)		K150
80 mm (3.15 in)	2464 mm (97 in)	264-2029 <sup>3</sup>	3		195-9154 (3)		K150
80 mm (3.15 in)	2464 mm (97 in)	264-2037 <sup>6</sup>	2		195-9154 (2)		K150
80 mm (3.15 in)	2489 mm (98 in)	264-2041 <sup>6</sup>	3		195-9154 (3)		K150
80 mm (3.15 in)	2540 mm (100 in)	264-2045 <sup>6</sup>	4		195-9154 (4)		K150
90 mm (3.54 in)	2311 mm (91 in)	293-6388	6	264-2176	232-2170 (4)	264-2175	K170
90 mm (3.54 in)	2311 mm (91 in)	293-6392 <sup>4</sup>	5	232-2170	232-2170 (3)	232-2170	K170
90 mm (3.54 in)	2388 mm (94 in)	264-2051 <sup>6</sup>	4		232-2170 (4)		K170
90 mm (3.54 in)	2438 mm (96 in)	293-6389	6	264-2176	232-2170 (4)	264-2175	K170
90 mm (3.54 in)	2489 mm (98 in)	264-2047 <sup>6</sup>	3		232-2170 (3)		K170
90 mm (3.54 in)	2489 mm (98 in)	264-2049 <sup>6</sup>	3		232-2170 (3)		K170

<sup>1</sup> Consists of base edge and adapters

<sup>2</sup> Straight corner adapters

<sup>3</sup> Upgrade/conversion – no corner adapters

<sup>4</sup> Spade w/straight corner adapters

<sup>5</sup> Spade w/angled corner adapters

<sup>6</sup> Spade upgrade/conversion – no corner adapters

Thickness	Length at Front	Width	Bevel Angle	Part Number
80 mm (3.15 in)	2363 mm (93.0 in)	500 mm (19.7 in)	22.5	119-3174
70 mm (2.76 in)	1999 mm (78.7 in)	380 mm (15.0 in)	22.5	6I-5303
70 mm (2.76 in)	1185 mm (46.7 in)	380 mm (15.0 in)	22.5	100-6198
60 mm (2.36 in)	1954 mm (76.9 in)	380 mm (15.0 in)	22.5	108-1066
50 mm (1.97 in)	1784 mm (70.2 in)	400 mm (15.75 in)	22.5	137-4104
50 mm (1.97 in)	1369 mm (53.9 in)	400 mm (15.75 in)	22.5	137-4101
50 mm (1.97 in)	1646 mm (64.8 in)	325 mm (12.8 in)	22.5	9C-3955
45 mm (1.77 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	135-3164
45 mm (1.77 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	232-2924
45 mm (1.77 in)	1689 mm (66.5 in)	305 mm (12.0 in)	22.5	135-3163
45 mm (1.77 in)	1658 mm (65.3 in)	305 mm (12.0 in)	22.5	127-2317
45 mm (1.77 in)	1226 mm (48.3 in)	305 mm (12.0 in)	22.5	127-2290
40 mm (1.57 in)	1830 mm (72.0 in)	300 mm (11.8 in)	22.5	232-2923
40 mm (1.57 in)	1524 mm (60.0 in)	300 mm (11.8 in)	22.5	227-8203
40 mm (1.57 in)	1484 mm (58.4 in)	300 mm (11.8 in)	22.5	129-1540
40 mm (1.57 in)	1442 mm (56.8 in)	306 mm (12.0 in)	22.5	135-8636
40 mm (1.57 in)	1207 mm (47.5 in)	300 mm (11.8 in)	22.5	129-5715
38 mm (1.50 in)	1727 mm (68.0 in)	306 mm (12.0 in)	22.5	135-8637
38 mm (1.50 in)	1575 mm (62.0 in)	254 mm (10.0 in)	35	5V-0166
38 mm (1.50 in)	1045 mm (41.1 in)	254 mm (10.0 in)	35	8K-0668
36 mm (1.42 in)	1349 mm (53.1 in)	290 mm (11.4 in)	22.5	7I-6713
36 mm (1.42 in)	1054 mm (41.5 in)	290 mm (11.4 in)	22.5	100-4150
32 mm (1.25 in)	1725 mm (67.9 in)	282 mm (11.1 in)	22.5	8R-2662
32 mm (1.25 in)	1676 mm (66.0 in)	305 mm (12.0 in)	22.5	135-3165
32 mm (1.25 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	135-3167
32 mm (1.25 in)	1090 mm (42.9 in)	200 mm (7.88 in)	22.5	086-0814
32 mm (1.25 in)	1000 mm (39.4 in)	200 mm (7.88 in)	22.5	086-0813
32 mm (1.25 in)	920 mm (36.2 in)	200 mm (7.88 in)	22.5	085-9510
32 mm (1.25 in)	821 mm (32.3 in)	200 mm (7.88 in)	22.5	086-0809
32 mm (1.25 in)	700 mm (27.6 in)	200 mm (7.88 in)	22.5	086-0812
32 mm (1.25 in)	600 mm (23.6 in)	200 mm (7.88 in)	22.5	086-0811
25 mm (1.00 in)	1960 mm (77.2 in)	230 mm (9.10 in)	22.5	5W-7957
20 mm (0.79 in)	2269 mm (89.3 in)	200 mm (8.66 in)	22.5	8U-2639
20 mm (0.79 in)	1110 mm (43.7 in)	220 mm (8.66 in)	22.5	7Y-6601

## K Series™ Tips

Cat K Series™ excavator bucket tips use a new vertical retention system that allows quick and easy tip changes. Providing a new locking interface at every tip change to improve retention reliability. Lower profile improves penetration and wear life.

### General Duty Tip

- General excavation and loading in moderate impact/abrasion.
- Moderate penetration.
- Symmetric, top and bottom self-sharpening cavities.



### Extra Duty Tip

- General excavation and loading w/more wear material.
- Moderate impact, moderate penetration.
- Top self-sharpening cavity.



### Penetration Tip

- For harder-to-penetrate, moderate impact, lower abrasion.
- Very good penetration.
- Top rib, bottom cavity to stay sharp.



### Penetration Plus Tip

- High impact trenching, excavation and loading.
- Good penetration, stays sharp.
- Symmetric, ribbed top and bottom.



### Spike Tip

- For maximum penetration, especially in cohesive material.
- Stays sharp for enhanced wear life.
- Top and bottom rib design.



### Double Spike Tip

- For harder-to-penetrate, fracturable materials.
- Very good penetration, stays sharp.
- Use in corner positions with Spike Centers.
- Length matches spike.

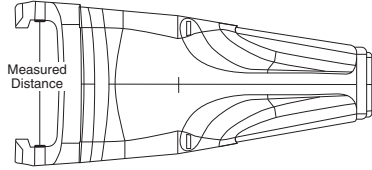


### Wide Tip

- For easy-to-penetrate trenching applications.
- Low impact.
- Smooth floor trenches.



**K Family Identification**



To identify tip or adapter family simply measure the distance between the “ears” of the tip in millimeters and round to the nearest 5 mm.

- Ex: 80 mm (3.15”) = K80
- 87.4 mm (3.44”) = K90
- 96.1 mm (3.78”) = K100

**Tip Chart**

	K80	K90	K100	K110	K130	K150	K170
General Duty	220-9089	220-9099	220-9109	286-2117	220-9139	229-7159	232-0179
Extra Duty	220-9081	220-9091	220-9101	286-2112	264-2131	264-2151	264-2171
Penetration	220-9082	220-9092	220-9102	286-2113	220-9132	229-7152	232-0172
Penetration Plus	220-9083	220-9093	220-9103	286-2114	220-9133	229-7153	232-0173
Spike	220-9087	220-9097	220-9107	286-2115	220-9137	229-7157	232-0177
Double Spike	220-9088	220-9098	220-9108	286-2116	220-9138	229-7158	232-0178
Wide	222-1080	222-1090	223-8100	286-2111	223-8130	195-5151	223-8170
Retainer	220-9090	220-9090	220-9090	286-2110	220-9130	233-7150	232-0170
SLAG Retainer				309-1119	232-2139	232-2159	232-2179

K Family Identification (Continued)

Tips or Points

Description	J300	K80	J350	K90	J400	K100	J460	K110	J550	K130	J600	K150	J700	K170
J Wide = K Wide	107-3300	222-1080	107-3350	222-1090	107-3400	223-8100	107-3450	286-2111	107-3550	223-8130	N/A	195-5151	N/A	223-8170
J Heavy Duty Long = K Extra Duty	9N-4302	220-9081	9N-4352	220-9091	8E-4402	220-9101	9N-4452	286-2112	9N-4552	264-2131	7Y-0602	264-2151	9U-9702	264-2171
J Penetration = K Penetration	9J-4309	220-9082	9J-4359	220-9092	6Y-7409	220-9102	9W-8459	286-2113	9W-8559	220-9132	71-7609	229-7152	4T-4709	232-0172
J Penetration Plus = K Penetration Plus	183-5300	220-9083	168-1359	220-9093	168-1409	220-9103	159-0459	286-2114	159-0559	220-9133	159-0607	229-7153	171-1709	232-0173
J Long Sharp = K Spike	168-1300	220-9087	168-1350	220-9097	159-0400	220-9107	159-0450	286-2115	159-0550	220-9137	159-0600	229-7157	136-8700	232-0177
J Twin Sharp = K Double Spike	135-9308	220-9088	135-9357	309-1098	135-9408	220-9108	138-6458	286-2116	138-6558	220-9138	135-9608	229-7158	N/A	232-0178
J Long = K General Duty	1U-3302	220-9089	1U-3352	220-9099	7T-3402	220-9109	9W-8452	286-2117	9W-8552	220-9139	61-6602	229-7159	4T-4702	232-0179
J HDP = K Heavy Penetration	135-9300	222-1081	144-1358	222-1091	135-9400	223-8101	138-6451	286-2118	138-6552	264-2132	135-9600	264-2152	135-9700	264-2172
J HD Abrasion = K Heavy Abrasion	9N-4303	222-1082	9N-4353	222-1092	7T-3403	223-8102	9N-4453	286-2119	6Y-2553	223-8132	61-6603	229-7156	9U-9703	232-2178
Extra Duty Long Life (ARM)	125-8302	229-7080	135-9352	232-0090	116-7402	232-0100	101-9054	315-0110	101-9055	232-2130	107-8602	232-0150	107-2001	233-7170
Penetration Long Life (ARM)	125-8309	229-7081	119-9359	232-0091	124-7409	232-0101	116-7459	315-0115	113-0559	232-2131	119-9609	232-0151	N/A	233-7171
Short									9W-8551	232-2137	61-6601	232-2157		
Rock Chisel Tip							317-4456		338-0550		338-0600			
Retainer		220-9090		220-9090		220-9090		286-2110		220-9130		233-7150		232-0170
SLAG Retainer								309-1119		232-2139		232-2159		232-2179

Adapters or Shanks

Description	J300	K80	J350	K90	J400	K100	J460	K110
HEX Two Strap Center (Edge Thickness)	8E-9490	220-9084	61-6354	220-9094	61-6404	220-9104	159-0464	309-1114
HEX Two Strap Corner RH			61-6355	220-9095	61-6405	220-9105	159-0465	309-1115
HEX Two Strap Corner LH			61-6356	220-9096	61-6406	220-9106	159-0466	309-1116
Description	J550	K130	J600	K150	J700	K170		
HEX Two Strap Center (Edge Thickness)	153-1696	232-0130	113-9604	195-9154	222-7700	232-2170		
HEX Two Strap Corner RH	N/A	232-0131	113-9605	195-9155	N/A	232-2171		
HEX Two Strap Corner LH	N/A	232-0132	113-9606	195-9156	N/A	232-2172		



## Tips

Cat excavator bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.



### Penetration Long Life Tip

- Increases wear life.
- Enhances penetration due to self-sharpening tip.
- Includes ARM strips.



### Long Tip

- General duty in low-abrasion applications.



### Short Tip

- Provides more strength.
- Use to prevent breakage.



### Wide Tip

- Provides less penetration.
- Provides a cleaner floor and less spillage.



### Penetration Tip

- Provides better penetration.
- Contains less wear material.

### Penetration Plus Tip

- Provides a good combination of strength and wear life.
- For use where penetration and increased wear life are desired.
- For use in most jobs.



### Sharp Corner Tip/Sharp Center Tip

- Provides the best penetration.
- Contains the least wear material.



### Twin Sharp Tip

- For use for severe digging in rock and frost.
- Use in combination with sharp tips.



### Long Sharp Tip

- Provides more wear material than standard sharp tip.
- For use when penetration is the primary concern.



### Heavy Duty Long Life Tip

- Contains ARM which is positioned to increase wear life and penetration.
- Not for use in extreme impact applications.



### Heavy Duty Long Tip

- Provides more wear material and greater strength than long tip.
- Has a streamlined-profile for better penetration.



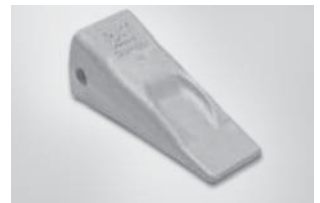
### Heavy Duty Abrasion Tip

- Contains greater wear material.
- Not for use in high impact applications.

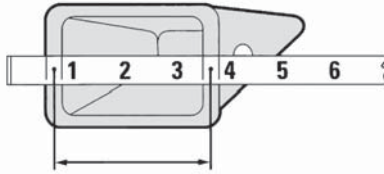


### Light Duty Long Tip

- For use in low impact with low to medium abrasiveness.
- Self-sharpening design and symmetrical shape.



J Family Identification



To identify the tip or adapter family, place a tape measure across the back of the tip at the midpoint of the side walls. For example:

76.20 mm (3.0") measurement = J300 Family

88.90 mm (3.5") measurement = J350 Family

139.70 mm (5.5") measurement = J550 Family

In addition, the second and third to last locations in the part number often times refer to the J size.

Example: 9W-8551 = J550 Family

Tip Chart

	J200	J225	J250	J300	J350	J400	J450/J460	J550	J600	J700	J800
Long	1U-3202	6Y-3222	1U-3252	1U-3302	1U-3352	7T-3402	9W-8452	9W-8552	6I-6602	4T-4702	6I-8802
Short		6Y-6221	1U-3251	1U-3301	1U-3351	7T-3401	9W-8451	9W-8551	6I-6601		
Light Duty Long	195-9209		168-1253	168-1301	168-1351	168-1401	168-1451				
Wide	109-9200	186-3010	208-5254	107-3300	107-3350	107-3400	107-3450	107-3550			
Penetration	1U-3209	6Y-8229	9J-4259	9J-4309	9J-4359	6Y-7409	9W-8459	9W-8559	7I-7609	4T-4709	117-6809
Penetration Long Life				125-8309	119-9359	124-7409	116-7459	113-0559	119-9609		
Penetration Plus				183-5300	168-1359	168-1409	159-0459	159-0559	159-0607	171-1709	
Sharp Corner	9W-8208	6Y-7228	9W-8258	9W-8308	9W-2358	6Y-5408	6I-8458	6I-8558	107-8608		
Sharp Center	9W-8209	6Y-7229	9W-8259	9W-8309	9W-2359	6Y-5409	7T-8459	9W-6559	107-8609		
Twin Sharp	135-8208	135-8228	135-8258	135-9308	135-9357	135-9408	138-6458	222-7553	222-7603		
Long Sharp				168-1300	168-1350	159-0400	159-0450	159-0550	159-0600	136-8700	
Heavy Duty Long		8E-4222	9N-4252	9N-4302	9N-4352	8E-4402	9N-4452	9N-4552	7Y-0602	9U-9702	
Heavy Duty Long Life			135-8252	125-8302	135-9352	116-7402	101-9054	101-9055	107-8602	107-2001	117-6802
Heavy Duty Abrasion		6Y-6223	9N-4253	9N-4303	9N-4353	7T-3403	9N-4453	6Y-2553	6I-6603	9U-9703	6I-8803
Heavy Duty Penetration				135-9300	144-1358	135-9400	138-6451	138-6552	135-9600	135-9700	135-9800
Standard Pin	8E-6208										
Standard Retainer	8E-6209										
Heavy Duty Pin		132-4762	132-4763	132-4766	114-0358	116-7408	114-0468*	107-3378	113-9608	113-4708	134-1808
Heavy Duty Retainer Assembly		149-5733	149-5733	149-5733	114-0359	116-7409	107-3469*	107-8559	113-9609	113-4709	134-1809
Rock Chisel Tip							317-4456	338-0550	338-0600		

\* Some older adapters have a 19 mm (0.75") pin diameter, instead of the current 22 mm (0.875") pin diameter. For those older adapters which have the 19 mm (0.75") pin diameter, use a 6Y-2527 pin and a 8E-6359 retainer.

## Sidecutters

- Increases bucket width and capacity.
- Protects bucket sides.
- Improves sidebar penetration.

### Blade Type 1 Sidecutter

- For use in most conditions.

### One Piece Sidecutter

- For use in most soil conditions.
- Widens bite width.
- Provides good protection to bucket sides.

### Heavy Duty Sidecutter

- For use in tough digging conditions.
- Contains more wear material and covers more of the sidebar for enhanced protection.
- Profile enhances digging performance.

### Combination Blade Sidecutter

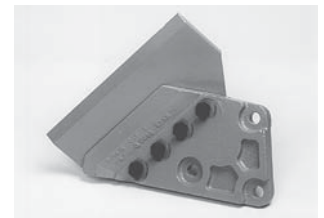
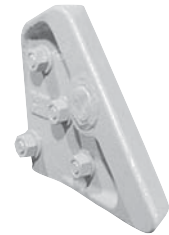
- For use in light to moderate conditions.

### Tooth Type Sidecutter

- For use in tough conditions.
- Uses the same tips as the cutting edge.

### Strike-Off Sidecutter

- For use in all conditions.
- Does not add width to bucket.



Type	LH Cutter	RH Cutter	Bolt	Nut	Washer
<b>307, 308</b>					
Sidecutters	153-1647	153-1646	096-7074	093-7676	
<b>312, 314</b>					
Sidecutters	7Y-0203	7Y-0204	096-7074	093-7676	
<b>315</b>					
Sidecutters	096-4747	096-4748	8T-0380	7X-0851	
<b>318</b>					
Sidecutters	7Y-0358	7Y-0357	6I-6371	2J-3507	
Sidecutters	357-2697	357-2696	1D-4635	2J-3507	3K-5234
<b>B, S, C, CB, D, DB</b>					
Sidecutters	7Y-0358	7Y-0357	6I-6371	2J-3507	
Sidecutters	357-2697	357-2696	1D-4635	2J-3507	3K-5234
<b>F, TB, VB, HB</b>					
Sidecutters	326-3406	326-3405	1D-4637	2J-3507	3K-5234
<b>J, JB</b>					
Sidecutters	326-3406	326-3405	7X-0410	2J-3507	3K-5234
<b>JC</b>					
Sidecutters	326-3406	326-3405	7X-0410	2J-3507	3K-5234

NOTE: These new style sidecutters will fit on older style HEX buckets, but the old style sidecutters and sidebar protectors will not fit on new D and E Series buckets.

Type	LH	RH	Blade	LH Upper	RH Upper	Bolt	Nut	Washer
<b>Later B Linkage, C, CB, D, DB, S Linkages</b>								
One Piece	7Y-0358	7Y-0357				1D-4635 (6)	2J-3507 (6)	3K-5234 (6)
Strike-off	174-8044	232-2140		232-2140	174-8044	1D-4635 (10)	2J-3507 (10)	3K-5234 (10)
Blade	8J-9614	8J-9615				7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Combination	8J-9614	8J-9615	4T-2886 (2)			7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Blade Hardware						1J-6762 (8)	2J-3506 (8)	
Heavy Duty	232-2148	232-2147				1D-4635 (8)	2J-3507 (8)	3K-5234 (8)
Tooth	8J-4952*	8J-4951*				7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Use J350 Tip (i.e. 1U-3352) + 114-0358 Pin + 114-0359 Retainer with Tooth Sidecutter								

\* For D/DB buckets, use 8E-1468/69 plus J450 Tip (i.e. 9W-8452) + 114-0468 Pin + 114-3469 Retainer

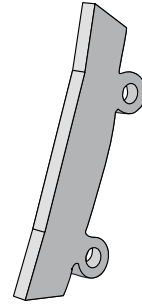
<b>Early E, F, G, H Linkages</b>								
Strike-off	8J-5188	8J-5188				1D-4635 (4)	2J-3507 (4)	3K-5234 (4)
Blade	8J-9826	8J-9825				7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Combination	8J-9826	8J-9825	4T-6664 (2)			7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Blade Hardware						4J-9208 (8)	2J-3507 (8)	
Tooth	8J-4948	8J-4947				7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Use J550 Tip (i.e. 9W-8552) + 107-3378 Pin + 107-8554 Retainer with Tooth Sidecutter								
<b>Early J Linkage</b>								
Strike-off	8J-5188	8J-5188				7Y-2146 (4)	2J-3507 (4)	3K-5234 (4)
Blade	8J-9826	8J-9825				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Combination	8J-9826	8J-9825	4T-6664 (2)			1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Blade Hardware						4J-9208 (8)	2J-3507 (8)	
Tooth	8J-4948	8J-4947				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Use J550 Tip (i.e. 9W-8552) + 107-3378 Pin + 107-8554 Retainer with Tooth Sidecutter								
<b>Later F, G, HB, TB, UB, V, VB Linkages</b>								
Strike-off	275-5999	275-5998		195-5136	195-5136	7Y-2146 (12)	2J-3507 (12)	3K-5234 (12)
Heavy Duty	256-8691	256-8690				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
<b>Later J, JB Linkages</b>								
Heavy Duty	238-3170	238-3169				9X-8896 (12)	2J-3507 (12)	3K-5234 (12)

**Hex Sidebar Protectors**

- Use in rock loading applications.
- Protects bucket sidebar.

Type	Retainer	Pin	Protector	Shim Kit	Shear Block
<b>318</b>					
Sidebar Protector	132-0999	275-5962	329-5958	286-2140	330-2174
<b>B, S, C, CB, D, DB</b>					
Sidebar Protector	132-0999	275-5962	329-5958	286-2140	330-2174
Sidebar Protector	132-0999	275-5982	329-5958	286-2140	
<b>F, TB, VB, HB</b>					
Sidebar Protector	132-0999	132-0998	326-3407	286-2140	330-2174
		132-0998	326-3407	286-2140	
<b>J, JB</b>					
Sidebar Protector	132-0999	132-1008	329-5955	286-2140	329-8805
<b>JC</b>					
Sidebar Protector	132-0999	357-2689	329-5957	286-2140	329-8805

NOTE: These new style sidebar protectors will fit on older style HEX buckets, but the old style sidecutters and sidebar protectors will not fit on new D and E Series buckets.





Part No.	Description	Length (mm)	Width (mm)	Thickness (mm)
280-4088	1.5 inch Chocky	241	38	25
280-4089	2.0 inch Chocky	241	51	25
280-4090	2.5 inch Chocky	241	64	25
280-4091	4.0 inch Chocky	241	102	25

Part No.	Description	Diameter (mm)	Thickness (mm)
280-4092	2.5 inch Button	64	22
280-4093	3.5 inch Button	89	29
280-4094	4.5 inch Button	114	33
280-4095	6.0 inch Button	152	35

Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4096	1.25 inch Roll Bar	229	38	32
280-4097	2.0 inch Roll Bar	305	52	51
280-4098	3.0 inch Roll Bar	305	69	76

Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4099	6.0 inch x 8.0 inch Wear Block	200	150	37

Description	Straight Heel Shroud Part Number	Curved Heel Shroud Part Number	Width (mm)	Height (mm)
Small Heel Shroud	280-4078	280-4079	120	108
Medium Heel Shroud	138-6529	138-6551	175	150
Large Heel Shroud	157-1019	157-1027	250	200



992 Base Edge/Base Edge Assembly

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments
<b>992G</b>							
218-3418*	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
146-8955*	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
146-8966	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)			Yes
247-7241*	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K170	8	Yes
153-5621*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
142-5790*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J600	8	Yes
112-9032*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J600	8	Yes
132-7091*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J550	8	Yes
112-9033	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)			Yes
170-1748	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	BOCE		No
138-4386*	Straight	70 mm (2.76 in)	4824 mm (189.92 in)	541 mm (21.30 in)	J600	8	No
235-1090*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K150	8	Yes
247-7232*	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K170	8	Yes
132-7091*	Spade	63.5 mm (2.50 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J550	8	Yes
107-6763*b	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	378 mm (14.88 in)	J600	8	Lugs
247-7247*b	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	380 mm (14.96 in)	K150	8	Yes
278-8205*b	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	405 mm (15.94 in)	K150	9	Yes
<b>992C/D</b>							
134-8333*	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	430 mm (16.93 in)	J700	8	Yes
257-8870*	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)	K150	8	Yes
109-9094*	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J600	8	Yes
107-8570	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)			Yes
257-8859*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	K130	8	Yes
257-8857*	Spade	63.5 mm (2.50 in)	4597 mm (180.98 in)	438 mm (17.24 in)	K130	8	No
2Q-0318*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J700	8	Yes
179-7379*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J600	8	Yes
4E-6462	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	BOCE		Yes
112-2122*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	Yes
4E-6464*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	Yes
9V-0014*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	No
9V-0005	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)			No
112-2121*a	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	J550	8	Yes
9V-3566a	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)			Yes
257-1836*	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	K130	8	Yes
9V-0013*a	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	J550	8	No
9V-0006a	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)			No
142-1416	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	695 mm (27.36 in)	BOCE		No
112-2123*	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	J550	8	Yes
9U-3846	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)			Yes
9V-0010*	Straight (F)	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	J550	8	No
9V-0007	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)			No
275-2477*	Straight (F)	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	K130	8	No
208-5326*b	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	454 mm (17.87 in)	J600	8	Yes
250-7577*b	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	454 mm (17.87 in)	K150	8	Yes

\* Base edge assembly  
a High-lift bucket edge  
b High abrasion bucket edge  
(F) Designates Flushmount adapters

## 990 Base Edge/Base Edge Assembly

Ground Engaging Tools

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments
990							
145-0795	Spade	76.2 mm (3.00 in)	4610 mm (181.50 in)	533 mm (20.98 in)			No
112-2118*	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8	No
101-9188	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)			No
151-5980	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	BOCE		No
112-2119*	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8	Yes
4E-9915	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)			Yes
112-2120*	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	441 mm (17.36 in)	J550	8	Yes
101-9186	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	441 mm (17.36 in)			Yes
111-9048*	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	506 mm (19.92 in)	J550	8	No
111-9049	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	506 mm (19.92 in)			No
20-4246*	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)	J550	8	Yes
20-4247	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)			Yes
20-7059*	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8	Yes
195-5088*	Spade (S)	63.5 mm (2.50 in)	4574 mm (180.08 in)	355 mm (13.98 in)	J550	7	Lugs
255-3759*	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	K130	8	Yes
255-3756*	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)	K130	8	Yes
255-3765*a	Spade (S)	70 mm (2.76 in)	4574 mm (180.08 in)	477 mm (18.78 in)	K150	7	Yes
251-7776*a	Spade (S)	70 mm (2.76 in)	4574 mm (180.08 in)	477 mm (18.78 in)	K150	7	Yes

(w/9 MAWPS bases — no base edge wear plates)

\* Base edge assembly

a High Abrasion bucket edge

(S) = Stepped spade edge (all center adapters)

988 Base Edge/Base Edge Assembly

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments	BOCE
<b>988B</b>								
3V-0187	Straight	45 mm (1.77 in)	3645 mm (143.50 in)	305 mm (12.01 in)			No	Yes
9V-0232	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)			No	No
9C-2932	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)			Yes	Yes
8V-9585	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)			No	No
8R-4649	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)			Yes	Yes
4E-0056*	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)	J460	8	No	N/A
116-7201*	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
116-7206*	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	J460	8	No	N/A
256-2934*	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	K110	8	Yes	N/A
256-2931*	Straight (F)	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)	K110	8	No	N/A
<b>988F</b>								
4E-8112	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)			Yes	Yes
2Q-3133	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)			No	No
4E-7616	Spade (W)	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			Yes	Yes
9U-4713	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			No	No
132-3117	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			Yes	Yes
2Q-4344	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)			Yes	No
116-7204*	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	8	Yes	N/A
2Q-3132*	Straight (F)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	8	No	N/A
257-1829*	Straight (F)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	K110	8	No	N/A
253-0163*	Straight (F)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	10	No	N/A
257-1830*	Straight (F)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	K110	10	No	N/A
132-3116*	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
133-0820*	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	No	N/A
133-0818*	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J550	8	Yes	N/A
2Q-7060*	Spade (W)	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
256-2938*	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	K130	8	Yes	N/A
144-0106*	Spade	50.8 mm (2.00 in)	3822 mm (150.47 in)	304 mm (11.97 in)	J550	8	Yes	N/A
257-1834*	Spade	50.8 mm (2.00 in)	3822 mm (150.47 in)	304 mm (11.97 in)	K130	8	Yes	N/A
2Q-4342*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	J460	8	Yes	N/A
257-1835*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	K130	8	Yes	N/A
2Q-7019*	Spade	63.5 mm (2.50 in)	3862 mm (152.05 in)	314 mm (12.36 in)	J550	7	Yes	N/A
257-1833*	Spade	63.5 mm (2.50 in)	3862 mm (152.05 in)	314 mm (12.36 in)	K130	7	Yes	N/A
<b>988G</b>								
149-5915	Spade	50.8 mm (2.00 in)	3964 mm (156.06 in)	311 mm (12.24 in)			No	Yes
246-2743*	Spade	50.8 mm (2.00 in)	3800 mm (149.61 in)	310 mm (12.20 in)	K110	8	Yes	N/A
156-1040*	Straight	50.8 mm (2.00 in)	3800 mm (149.61 in)	418 mm (16.46 in)	J460	8	Yes	N/A
136-6175*	Spade	50.8 mm (2.00 in)	3800 mm (149.61 in)	310 mm (12.20 in)	J460	8	Yes	N/A
195-0410*	Spade (S)	50.8 mm (2.00 in)	3900 mm (153.54 in)	368 mm (14.49 in)	J460	8	Yes	N/A
257-1831*	Spade (S)	50.8 mm (2.00 in)	3900 mm (153.54 in)	368 mm (14.49 in)	K110	8	Yes	N/A
204-0721*	Straight (F)	50.8 mm (2.00 in)	3900 mm (153.54 in)	510 mm (20.08 in)	J460	8	No	N/A
257-1832*	Straight (F)	50.8 mm (2.00 in)	3900 mm (153.54 in)	510 mm (20.08 in)	K110	8	No	N/A
151-1213*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	J460	8	Yes	N/A
156-6391*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	359 mm (14.13 in)	J460	8	Yes	N/A
186-3282*a	Spade (S)	63.5 mm (2.50 in)	3926 mm (154.57 in)	310 mm (12.20 in)	J550	6	Lugs	N/A
253-9582*a	Spade (S)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A

(w/5 MAWPS bases — no base edge wear plates)

\* Base edge assembly  
a High Abrasion bucket edge  
(W) = Wide nose spade (3 center segments)  
Spade = 1 center, 3 RH, 3 LH segments  
(S) = Stepped spade edge (all center adapters)  
(F) = Flushmount adapters

(Continued)

Ground Engaging Tools

988 Base Edge/Base Edge Assembly (Continued)

Ground Engaging Tools

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments	BOCE
988H								
257-3667	CGS	50 mm (1.97 in)	3695 mm (145.47 in)	400 mm (15.75 in)			Yes	Yes
257-3649*	Straight	50.8 mm (2.00 in)	3800 mm (149.61 in)	318 mm (12.52 in)	K110	8	Yes	N/A
246-2766*	Spade (S)	50.8 mm (2.00 in)	3810 mm (150.00 in)	275 mm (10.83 in)	K110	8	Yes	N/A
246-2746*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	359 mm (14.13 in)	K110	8	Yes	N/A
246-2764*	Spade (S)	50.8 mm (2.00 in)	3980 mm (156.69 in)	360 mm (14.17 in)	K110	8	Yes	N/A
246-2768*	Spade (S)	63.5 mm (2.50 in)	3862 mm (152.05 in)	375 mm (14.76 in)	K130	7	Yes	N/A
257-3695*a	Spade (S)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A
253-9582*a	Spade (S)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A
(w/5 MAWPS bases — no base edge wear plates)								

\* Base edge assembly

a High Abrasion bucket edge

(W) = Wide nose spade (3 center segments)

Spade = 1 center, 3 RH, 3 LH segments

(S) = Stepped spade edge (all center adapters)

(F) = Flushmount adapters

910-980 Loader Bucket Base Edges & Assemblies (Weld-On System)

Length at Front	Width at End	Thickness	Part Number	Edge Type	Adapters	Adapter Type	Qty	Segments	BOCE
2218.5 mm (87.3 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-5764	Straight				No	No
2328 mm (91.7 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8526	Straight				No	No
2434 mm (95.8 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8911*	Straight	J200	F	8	No	No
2434 mm (95.8 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8912	Straight				No	No
2454 mm (96.6 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	128-1489	Straight				No	No
2076.5 mm (81.8 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-0074*	Straight	J250	F	6a	No	No
2076.5 mm (81.8 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	9K-8471	Straight				No	No
2156 mm (84.9 in)	228.5 mm (9.0 in)	25 mm (1.0 in)	9V-5110	Straight				No	No
2248 mm (88.5 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	9K-8461	Straight				No	No
2286 mm (90.0 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-9077	Straight				No	No
2436.5 mm (95.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9755*	Straight	J250	F	8	No	No
2438.5 mm (96.0 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-3916	Straight				No	No
2477 mm (97.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	106-3192*	Straight	J250	F	8	No	No
2594 mm (102.1 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-2482*	Straight				No	No
2594 mm (102.1 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-2483	St-F	J250	F	8	No	No
2686 mm (105.7 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-3915	Straight				No	No
2731 mm (107.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9072	St-F				No	No
2731 mm (107.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9521*	Straight	J250	F	8	No	No
3090 mm (121.7 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7416	Straight				No	No
2346 mm (92.4 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5340	Straight				No	No
2489 mm (98.0 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9K8472	Straight				No	No
2498 mm (98.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	256-4723*	Straight	K90	F	8	No	No
2552 mm (100.5 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5327*	Straight	J300	F	8	No	No
2552 mm (100.5 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5328	Straight				No	No
2583 mm (101.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	8Y-9405*	Straight	J350	F	8	No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-4598	St-F				No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-4599*	Straight	J300	F	8	No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	257-1826*	Straight	K80	F	8	No	No
2921 mm (115.0 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	1V-3917	Straight				No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	6W-2973	Spade				No	Yes
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	9C-0967	Spade				No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	9W-9879*	Spade	J350	B st	8	No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	257-1827*	Spade	K90	2 st	8	No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	141-8823	Spade				No	Yes
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	141-8824*	Spade	J350	B st	8	No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	142-9406	Spade				No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	154-7375*	Spade	J350	2 st	8	Yes	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	257-1828*	Spade	K90	2 st	8	Yes	No
2583 mm (101.7 in)	300 mm (11.8 in)	40 mm (1.6 in)	219-3171	Straight				No	No
2690 mm (105.9 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5287	Straight				No	No
2705 mm (106.5 in)	287 mm (11.3 in)	40 mm (1.6 in)	9V-0171	Spade				No	No
2705 mm (106.5 in)	287 mm (11.3 in)	40 mm (1.6 in)	9V-0178*	Spade	J350	B st	7	No	No
2934 mm (115.5 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5283	Straight				No	No
2934 mm (115.5 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5284*	Straight	J350	F	8	No	No
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	9V-0170	Spade				No	No
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	9V-0176*	Spade	J350	B st	8	No	No
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	257-1825*	Spade	K90	2 st	8	No	No
3128 mm (123.1 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-5520*	Straight	J350	F	8	No	No

\* Base edge assembly

a No end adapters

St-F = Edge notched for Flushmount adapters

F = Flushmount

B st = Bottom strap

2 st = Double strap

BOCE = Bolt-on cutting edge(s)

Ground Engaging Tools

(Continued)

## 910-980 Loader Bucket Base Edges &amp; Assemblies (Weld-On System) (Continued)

Ground Engaging Tools

Length at Front	Width at End	Thickness	Part Number	Edge Type	Adapters	Adapter Type	Qty	Segments	BOCE
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6915	Spade				Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6914*	Spade	J350	2 st	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	254-4505*	Spade	K90	2 st	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	154-1604	Spade				No	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	6W-2994	Spade				Yes	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	292-3263*	Spade	J460	2 st	7	Yes	No
3085 mm (121.5 in)	262 mm (10.3 in)	45 mm (1.8 in)	6W-2993	Spade				Yes	Yes
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6806*	Spade	J460	2 st	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6807*	Spade	J350	B st	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	8V-9581	Spade				No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-0233*	Spade	J350	B st	8	No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	257-1824*	Spade	K100	2 st	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-3561	Spade				Yes	Yes
3410 mm (134.3 in)	305 mm (12.0 in)	45 mm (1.8 in)	8V-6274	Straight				No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	113-9942	Spade				Yes	Yes
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	123-1396	Spade				No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6539*	Spade	J400	2 st	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6540*	Spade	J400	2 st	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	130-4606*	Straight	J400	F	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	136-0878	Straight				No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	261-8713*	Straight	K100	F	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8714*	Spade	K100	2 st	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8715*	Spade	K100	2 st	8	Yes	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	9V0255	Straight				No	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	137-6264*	Straight	J460	2 st	6	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1747*	Spade	J460	2 st	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1748	Spade				Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	260-1385*	Spade	K110	2 st	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	135-7114*	Straight	J460	2 st	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	260-1384*	Straight	K110	2 st	8	Yes	No

\* Base edge assembly

a No end adapters

St-F = Edge notched for Flushmount adapters

F = Flushmount

B st = Bottom strap

2 st = Double strap

BOCE = Bolt-on cutting edge(s)

**Loader Bucket Straight Base Edges (Bolt-On System)**

Length at Front	Width at End	Thickness	Part Number	One Bolt Bucket Corner		Two Bolt Bucket Corner		Adapters (qty)	Segments (y/n)	Cutting Edges (y/n)
				(lh)	(rh)	(lh)	(rh)			
1823 mm (71.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-2808	5G-2806	5G-2807			8	n	y
1898 mm (74.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	6S-6501	5G-2806	5G-2807			6	n	y
1950 mm (76.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	8Y-4738	5G-2806	5G-2807			8	y	y
1950 mm (76.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8467	5G-2806	5G-2807			8	n	y
2075 mm (81.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-2809	5G-2806	5G-2807			7	n	y
2150 mm (84.6 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-6133	5G-2806	5G-2807			7	y	y
2264 mm (89.1 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8763	5G-2806	5G-2807			7	y	y
2330 mm (91.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-3477	5G-2806	5G-2807			7	n	y
2366 mm (93.1 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8342	5G-2806	5G-2807			8	y	y
2406 mm (94.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	6S-7291	5G-2806	5G-2807			7	n	n
2018 mm (79.4 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2977	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2079 mm (81.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6571	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2079 mm (81.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	4V-8335	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2152 mm (84.7 in)	245 mm (9.6 in)	25 mm (1.0 in)	8Y-8763	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2210 mm (87.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	4V-8850	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2210 mm (87.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6570	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7437			6I-8310	6I-8311	8	n	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	8V-7453	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2976	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2370 mm (93.3 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-4670	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2370 mm (93.3 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6572	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2408 mm (94.8 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2984	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2435 mm (95.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	110-4781	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2524 mm (99.4 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-0659	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2639 mm (103.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	8V-1825	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2639 mm (103.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2985	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2690 mm (105.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	105-2345	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2723 mm (107.2 in)	245 mm (9.6 in)	25 mm (1.0 in)	110-4712	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2412 mm (95.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2986	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2615 mm (103.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2987	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
Note: All the above 245 mm wide × 25 mm thick base edges can be equipped with the following bucket corners for upsized adapters. On narrower edges check for segment-tip interference.										
				5V-7395	5V-7396	8E-5302	8E-5303			
2744 mm (108.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7410			6I-8310	6I-8311	0	n	y
2237 mm (88.1 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2978	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2268 mm (89.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	4V-4958	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2268 mm (89.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2979	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2430 mm (95.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	5V-7263	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2474 mm (97.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	4V-3174	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2474 mm (97.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2980	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2736 mm (107.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	5V-4696	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2736 mm (107.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	9V-6573	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2840 mm (111.8 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2989	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2856 mm (112.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2990	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2886 mm (113.6 in)	282 mm (11.1 in)	32 mm (1.3 in)	141-4847	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
Note: All the above 282 mm wide × 32 mm thick base edges can be equipped with the following bucket corners for upsized adapters. On narrower edges check for segment-tip interference. (Corners are not dimensionally equal.)										

Ground Engaging Tools

(Continued)



## Loader Bucket Straight Base Edges (Bolt-On System) (Continued)

Length at Front	Width at End	Thickness	Part Number	One Bolt Bucket Corner		Two Bolt Bucket Corner		Adapters (qty)	Segments (y/n)	Cutting Edges (y/n)
				(lh)	(rh)	(lh)	(rh)			
				5V-2773	5V-2772	8E-5321	8E-5320			
2498 mm (98.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	8Y-6263			8E-5321	8E-5320	8	y	y
3040 mm (119.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	7V-0912	5V-2773	5V-2772	8E-5321	8E-5320	0	n	y
2430 mm (95.7 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2983	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2602 mm (102.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5V-0600	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2602 mm (102.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2982	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2702 mm (106.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5G-7303	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2702 mm (106.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5G-7304	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2846 mm (112.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	4V-9714	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2846 mm (112.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2981	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2912 mm (114.6 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-6844	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2925 mm (115.2 in)	300 mm (11.8 in)	40 mm (1.6 in)	7I-3631	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3032 mm (119.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-1490	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
3032 mm (119.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	9V-6575	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3200 mm (126.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	7I-3015	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3323 mm (130.8 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-0909	4V-7174	4V-7175	8E-5310	8E-5311	0	n	y
3179 mm (125.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	6W-2991	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3315 mm (130.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	7V-4188	7V-4180	7V-4181	6I-8250	6I-8249	8	n	y
3315 mm (130.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	9V-6574	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3405 mm (134.1 in)	305 mm (12.0 in)	45 mm (1.8 in)	111-9770	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3560 mm (140.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	4E-6085	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3607 mm (142.0 in)	305 mm (12.0 in)	45 mm (1.8 in)	193-9015	7V-4180	7V-4181	6I-8250	6I-8249	0	n	y
3687 mm (145.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	9U-3748	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3810 mm (150.0 in)	305 mm (12.0 in)	45 mm (1.8 in)	194-0659	7V-4180	7V-4181	6I-8250	6I-8249	0	n	y
3687 mm (145.2 in)	325 mm (12.8 in)	50 mm (2.0 in)	183-5190			6I-8250	6I-8249	8	y	y
3695 mm (145.5 in)	400 mm (15.7 in)	50 mm (2.0 in)	257-3667			6I-8250	6I-8249	8	y	y

## Bolt-On Edges

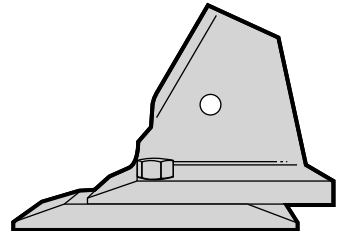
When penetration is not a problem, use bolt-on cutting edges.

Bolt-on cutting edges:

- Increases base edge life up to five times over an unprotected base edge.
- Are quick and easy to replace.
- Increases bucket capacity.
- Provides smooth floor maintenance capability.
- Are made of DH-2 steel alloy and are hardened to 430-520 Brinell.

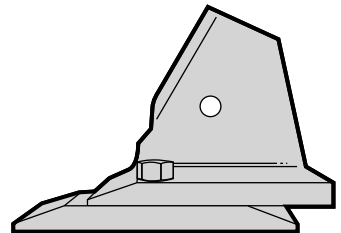
### Standard Bolt-On Edges

- Reversible for a second wear life.



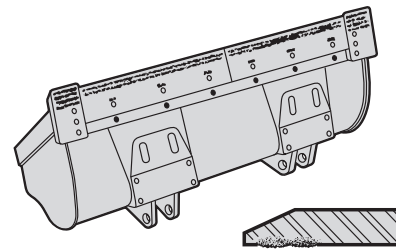
### Heavy Duty Bolt-On Edges

- Provides at least 50% more wear material than standard bolt-on edges.
- Reversible for a second wear life.



### ARM Bolt-On Edges

- Provides three to five times the wear life of standard bolt-on edges.
- For use in low to moderate impact applications where wear rates are high — such as in abrasive materials.



## Loader Rock Bucket Bolt-On Cutting Edges

Note: All quantities are (1) unless indicated otherwise

Base Edge Part Number	BOCE Type	LH End (qty)	LH Center (qty)	Center (qty)	RH Center (qty)	RH End (qty)	Hardware		Washer
							Bolt (qty)	Nut (qty)	
4E-6462	Standard	6I-8368	6I-8367	6I-8364	6I-8365	6I-8366	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
	Heavy Duty	127-7430	127-7432	127-7429	127-7433	127-7431	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
4E-7616	Standard	101-9032		101-9350		101-9351	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	Heavy Duty	107-3544		107-3540		107-3543	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	ARM	136-6794		136-6790		136-6793	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
4E-8112	Standard	102-2184		102-9350		102-2184	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	Heavy Duty	107-3541		107-3540		107-3541	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	ARM	132-1067		132-1068		132-1067	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
4E-9915	Standard	162-3296	106-6423	106-6420	106-6421	162-3297	5P-8823 (32)	3K-9770 (32)	4K-0684 (32)
6W-2973	Standard	7T-5964	7T-5961	7T-5962	7T-5963	7T-5960	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
6W-2993	Standard	4T-9127	4T-9125	4T-9185	4T-9128	4T-9126	6V-6535 (16)	3K-9770 (16)	4K-0684 (16)
6W-2994	Standard	9W-3678		9W-3676		9W-3677	6V-6535 (12)	3K-9770 (12)	4K-0684 (12)
8R-4649	Standard	9W-5732	9W-5731	9W-5733	9W-5736	9W-5735	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
	Heavy Duty	106-1095	106-1094	106-1096	106-1098	106-1097	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
	ARM	208-5282	208-5281	208-5283	208-5286	208-5285	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
9C-2932	Standard	9W-8249		9W-8250		9W-8249	6V-6535 (11)	3K-9770 (11)	4K-0684 (11)
9V-3561	Standard	4T-7143	4T-7145	4T-7141	4T-7144	4T-7142	6V-6535 (18)	3K-9770 (18)	4K-0684 (18)
	Heavy Duty	107-8588	107-8590	107-8586	107-8589	107-8587	6V-6535 (18)	3K-9770 (18)	4K-0684 (18)
101-9186	Standard	106-6378		106-6377 (2)		106-6378	5P-8823 (26)	3K-9770 (26)	4K-0684 (26)
113-9942	Standard	109-9125	109-9124	109-9123	109-9122	109-9121	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
132-3117	Standard	101-9352		144-1331		101-9351	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
141-8823	Standard	109-9016	7T-5961	132-1089	7T-5963	109-9017	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
149-5915	Standard	9W-5732	9W-5731	9W-5733	9W-5736	9W-5735	6V-6535 (28)	3K-9770 (28)	4K-0684 (28)
				+9W-5734					
	Heavy Duty	106-1095	106-1094	106-1096	106-1098	106-1097	6V-6535 (28)	3K-9770 (28)	4K-0684 (28)
			+107-3490						
154-1604	Standard	135-8242	135-8244	135-8240	135-8243	135-8241	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
151-5980	Standard	162-3296	106-6423	106-6420	106-6421	162-3297	5P-8823 (32)	3K-9770 (32)	4K-0684 (32)
170-1748	Standard	6I-8368	6I-8367	6I-8364	6I-8365	6I-8366	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
	Heavy Duty	127-7430	127-7432	127-7429	127-7433	127-7431	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)

**Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates**

Note: All quantities are (1) unless indicated otherwise

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
3V-0187	Standard	4T-6588	4T-6588	4T-6588			4J-9058 (18)	2J-3507 (18)
4E-0659	Standard	8E-4567 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	135-6728/9	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
4E-6085	Standard	9W-1375 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	ARM	109-2697 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
4V-3174	Standard	1U-0600 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
4V-4958	Standard	1U-0599 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
4V-8335	Standard	1U-0294 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
4V-8850	Standard	1U-0293 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
4V-9714	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-2808	Standard	4T-2911	4T-2910	4T-2910			4F-7827 (8)	2J-3506 (8)
	Heavy Duty		195-7130	195-7130			4F-7827 (8)	2J-3506 (8)
5G-2809	Standard	4T-8796	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7131	195-7132			4F-7827 (7)	2J-3506 (7)
5G-2395*	Standard		4T-2912	4T-2912			4F-7827 (8)	2J-3506 (8)
5G-3477	Standard	4T-2915	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7135	195-7136			4F-7827 (7)	2J-3506 (7)
5G-6133	Standard	4T-2913	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7133	195-7134			4F-7827 (7)	2J-3506 (7)
5G-7303	Standard	9W-8334 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-7304	Standard	9W-8334 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-8342	Standard	9W-8620	4T-2914	4T-2914			4F-7827 (8)	2J-3506 (8)
	Heavy Duty		195-7137	195-7137			4F-7827 (8)	2J-3506 (8)
5G-8467	Standard	9W-9943	9W-9944	9W-9944			4F-7827 (8)	2J-3506 (8)
5G-8763	Standard	9W-8694	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7139	195-7140			4F-7827 (7)	2J-3506 (7)
5V-0600	Standard	1U-0591 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5V-4670	Standard	1U-0295 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3486/7	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
5V-4696	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W-3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
5V-7263	Standard	1U-2411 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
5V-7410	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
5V-7437	Standard		1U-1471	1U-1471			1J-5607 (8)	2J-3507 (8)
6S-6500*	Standard	4T-2920	4T-2910	4T-2910			4F-7827 (7)	2J-3506 (7)
6S-6501	Standard		4T-2919	4T-2919			4F-7827 (6)	2J-3506 (6)
6W-2976	Standard	4T-9563 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
6W-2977	Standard	1U-0605 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
6W-2978	Standard	1U-2410 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2979	Standard	1U-0599 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2980	Standard	1U-0600 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2981	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
6W-2982	Standard	1U-0591 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
6W-2983	Standard	1U-2408 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
6W-2984	Standard	1U-0607 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3483 (2)	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)

\* Base edge not serviced

(Continued)

Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates (Continued)

Ground Engaging Tools

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
6W-2985	Standard	1U-0292 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3484/5	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
6W-2986	Standard	1U-2414 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1030 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
6W-2987	Standard	1U-2412 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1031 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W-3490/1	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
6W-2988*	Standard	1U-2413 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1032 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
6W-2989	Standard	1U-2407 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9532 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
6W-2990	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4045 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3479/80	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
6W-2991	Standard	4T-5273 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
7I-3015	Standard	100-6668 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	140-6823 (2)	167-7430	167-7430			5P-8823 (12)	3K-9770 (12)
	ARM	107-3287/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	229-6944 (2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0071 (3)	253-0069	253-0070			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0075 (3)	253-0073	253-0074			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1981 (2)	286-1980	286-1979			5P-8361 (8)	
7I-3631	Standard	1U-1909 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9533 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	107-3282/3	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
7V-0898*	Standard	1U-2409 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
7V-0909	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
7V-0912	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
7V-1490	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4046 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3477/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5345 (2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0079 (3)	253-0077	253-0078			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0083 (3)	253-0081	253-0082			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1984 (2)	286-1983	286-1982			5P-8361 (8)	
7V-4188	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4725 (3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)
	HA (arm)	236-7033 (3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)
7V-6844	Standard	1U-1909 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9533 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	107-3282/3	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
8K-8161*	Standard	1U-1465	1U-1464	1U-1464			1J-5607 (9)	2J-3507 (9)
	Heavy Duty	132-1026	132-1027	132-1027			1J-5607 (9)	2J-3507 (9)
	ARM	9W-3469	9W-3470	9W-3471			1J-5607 (9)	2J-3507 (9)
8V-1825	Standard	1U-0292 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3484/5	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
8V-7453	Standard	4T-9563 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)

\* Base edge not serviced

(Continued)

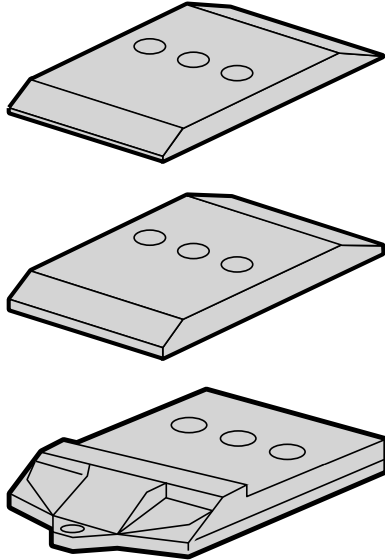
Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates (Continued)

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
8Y-4738	Standard	9W-9943	9W-9944	9W-9944			4F-7827 (8)	2J-3506 (8)
8Y-6263	Standard	8E-5793 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
8Y-8763	Standard	100-6359 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
9U-3748	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
9V-6570	Standard	1U-0293 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
9V-6571	Standard	1U-0294 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
9V-6572	Standard	1U-0295 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3486/7	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
9V-6573	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W-3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
9V-6574	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4725 (3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)
	HA (arm)	236-7033 (3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		309-6120 (2)	309-6119	309-6118			5P-8361 (8)	
9V-6575	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4046 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3477/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5345 (2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0079 (3)	253-0077	253-0078			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0083 (3)	253-0081	253-0082			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1984 (2)	286-1983	286-1982			5P-8361 (8)	
105-2345	Standard	107-3746 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	Heavy Duty	138-6425 (2)	138-6560	138-6560			1J-5607 (10)	2J-3507 (10)
	ARM	107-3298/9	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
110-4712	Standard	110-4711 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	123-9195/6	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
110-4781	Standard	110-4782 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
111-9770	Standard	109-9212 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	109-9230 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	109-9214 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5178 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4727 (3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)
	HA (arm)	236-7034 (3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		253-0184 (2)	253-0183	253-0182			5P-8361 (8)	
141-4847	Standard	139-9230 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	135-9666 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	138-0672/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
183-5190	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
193-9015	Standard	4T-6588	4T-6588	4T-6588			8J-2928 (18)	2J-3507 (18)
194-0659	Standard	4T-6589 (2)	1U-0761	1U-0761	1U-0764	1U-0764	8J-2928 (16)	2J-3507 (16)
					End bit hardware		5P-8823 (6)	3K-9770 (6)
257-3667	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)

\* Base edge not serviced

Ground Engaging Tools

## Bolt-On Segments



Bolt-on segments bolt directly to the bottom of the base edge between adapters.

Bolt-on segments:

- Increase bucket capacity.
- Maintain a smoother work surface.
- Protect the base edge between teeth, eliminating scalloping.
- Increase base edge life up to five times.
- Hardened to 430-520 Brinell.

### Standard Bolt-On Segments

- Reversible for a second wear life.

### Heavy Duty Bolt-On Segments

- Provides at least 50% more wear material than standard bolt-on segments.
- Reversible for a second wear life.

### Half-Arrow Bolt-On Segments

- Stay sharper and enhance protection of the base edge front and bevel.
- Protects against scalloping of the base edge between adapters.
- Protects against scalloping of the segment.
- Match bottom strap thickness of the shouldered adapters.



**992 Segments & Top Wear Plates**

Standard (40 mm)	Center	1	4T-6760
	RH	3	4T-6761
	LH	3	4T-6762
Heavy Duty (50 mm)	Center	1	107-3530
	RH	3	107-3531
	LH	3	107-3532
Heavy Duty (60 mm)	Center	1	107-6294
	RH	3	107-6295
	LH	3	107-6296
Half Arrow (60 mm)	Center	1	275-5460
	RH	3	275-5461
	LH	3	275-5462
Half Arrow (75 mm)	Center	1	275-5470
	RH	3	275-5471
	LH	3	275-5472
ARM (40 mm)	Center	1	138-0861
	RH	3	138-0862
	LH	3	138-0863
	Bolts	28	5P-8823
	Nuts	28	3K-9770
Top Plates++	Center	1	195-7096
	RH	3	195-7097
	LH	3	195-7098
	ARM Center	1	195-7246
	ARM RH	3	195-7247
	ARM LH	3	195-7248

++ Top Plates used with Half Arrow segments.

**High Abrasion Bucket Top Plates**

8 Tip Edge	Center	1	208-5327
	RH	3	208-5328
	LH	3	208-5329
9 Tip Edge	RH	4	235-8777
	LH	4	235-8778
	Long Bolts	14 or 18	198-1092
	Lug Nuts	14 or 18	5P-8362

## 924H &amp; G/924Hz &amp; Gz – General Purpose and Material Handling Buckets (2540 mm/100 in)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
8E-4566 (25 mm)	Edge – End	2	4T-8091
	Edge – Cutting	2	8E-4567
	Bolt	10	1J-5607
	Nut	10	2J-3507

Corner Protectors			
174-7947	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Nut	4	2J-3507
	Bolt	4	4F-4042

Bolt-on Adapters (Set of 8)			
116-9713 (J250)	Adapter – Center	6	1U-0257
	Adapter – LH	1	6I-9250
	Adapter – RH	1	6I-9251
	Nut	4	2J-3507
	Bolt	2	4F-4042
	Bolt	2	4J-9058
	Bolt	12	8J-2928
	Nut	12	8J-2933

Bolt-on Segments (Set of 7)			
8E-4569 (25 mm)	Bolt	14	1J-5607
	Nut	14	2J-3507

## 938H &amp; GII/IT38H &amp; GII – General Purpose and Material Handling Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
107-3747 (25 mm)	Edge – End	2	4T-8091
	Edge – Cutting	2	107-3746
	Bolt	10	1J-5607
	Nut	10	2J-3507
138-6426 (HD – 35 mm)	Edge – End	2	138-6560
	Edge – Cutting	2	138-6425
	Bolt	10	1J-5607
	Nut	10	2J-3507
107-3297 (ARM – 25 mm)	Edge End – RH	1	9W-3481
	Edge End – LH	1	9W-3482
	Edge – ARM	1	107-3298
	Edge – ARM	1	107-3299
	Bolt	10	1J-5607
	Nut	10	2J-3507

938H & GII/IT38H & GII – General Purpose and Material Handling Buckets (Continued)

Bolt-on Cutting Edge and Corner Protectors			
275-5481 (25 mm)	Edge – End	2	4T-8091
	Edge – Cutting	2	107-3746
	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Bolt	10	1J-5607
	Nut	14	2J-3507
	Bolt	4	4F-4042
275-5482 (HD – 38 mm)	Edge – End	2	138-6560
	Edge – Cutting	2	138-6425
	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Bolt	10	1J-5607
	Nut	14	2J-3507
	Bolt	4	4F-4042

Corner Protectors			
174-7947	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Nut	4	2J-3507
	Bolt	4	4F-4042

Bolt-on Adapters (Set of 8)			
116-9713 (J250)	Adapter – Center	6	1U-0257
	Adapter – LH	1	6I-9250
	Adapter – RH	1	6I-9251
	Nut	4	2J-3507
	Bolt	2	4F-4042
	Bolt	2	4J-9058
	Bolt	12	8J-2928
	Nut	12	8J-2933

Bolt-on Segments (Set of 7)			
7T-9326 (25 mm)	Edge Segment	7	4T-6695
	Nut	14	2J-3507
	Bolt	14	1J-5607
132-1062 (HD – 35 mm)	Edge Segment	7	132-1037
	Nut	14	2J-3507
	Bolt	14	1J-5607

## 950H &amp; G/962H &amp; G – General Purpose and Material Handling Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
139-9229 (30 mm)	Edge – End	2	4T-8101
	Edge – Cutting	2	139-9230
	Bolt	12	4F-4042
	Nut	12	2J-3507
132-1052 (HD – 35 mm)	Edge – End	2	132-1033
	Edge – Cutting	2	135-9666
	Bolt	12	4F-4042
	Nut	12	2J-3507
138-0674 (ARM – 25 mm)	Edge End – RH	1	9W-3488
	Edge End – LH	1	9W-3489
	Edge – ARM	1	138-0672
	Edge – ARM	1	138-0673
	Bolt	12	4F-4042
	Nut	12	2J-3507

Bolt-on Cutting Edge and Corner Protectors			
275-5483 (25 mm)	Edge – End	2	4T-8101
	Edge – Cutting	2	139-9230
	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	12	2J-3507
	Nut	4	3K-9770
	Bolt	12	4F-4042
	Bolt	4	8T-9079
275-5484 (HD – 38 mm)	Edge – End	2	132-1033
	Edge – Cutting	2	135-9666
	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	12	2J-3507
	Nut	4	3K-9770
	Bolt	12	4F-4042
	Bolt	4	8T-9079

Corner Protectors			
174-7948	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	4	3K-9770
	Bolt	4	8T-9079

Bolt-on Adapters (Set of 8)			
257-1766 (K80)	Adapter – Center	6	222-1087
	Adapter – RH	1	222-1088
	Adapter – LH	1	222-1089
	Nut	4	2J-5997
	Bolt	2	6V-6535
	Bolt	2	8T-9079
	Bolt	12	5P-8136
	Nut	12	8J-2933

950H & G/962H & G – General Purpose and Material Handling Buckets (Continued)

Bolt-on Segments (Set of 7)			
139-9279 (30 mm)	Edge Segment	5	140-7601
	Edge – Cutting	2	263-7545
	Nut	14	2J-3507
	Bolt	14	4F-4042
107-3394 (HD – 35 mm)	Edge Segment	5	132-4715
	Edge – Cutting	2	257-1762
	Nut	14	2J-3507
	Bolt	14	4F-4042

966K & H/972K & H – General Purpose and Material Handling (3226 mm/127 in)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
100-6669 (30 mm)	Edge – End	2	3G-6395
	Edge – Cutting	2	100-6668
	Bolt	12	5P-8823
	Nut	12	3K-9770
140-6824 (HD – 35 mm)	Edge – End	2	167-7430
	Edge – Cutting	2	140-6823
	Bolt	12	5P-8823
	Nut	12	3K-9770
253-0072 (Half Arrow)	Edge End – RH	1	253-0070
	Edge End – LH	1	253-0070
	Edge – Center	3	253-0071
	Bolt	18	6V-8360
	Nut	18	3K-9770

Bolt-on Cutting Edge and Corner Protectors			
275-5407 (30 mm)	Edge – End	2	3G-6395
	Edge – Cutting	2	100-6668
	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	16	3K-9770
	Bolt	12	5P-8823
	Bolt	4	6V-6535
275-5406 (HD – 35 mm)	Edge – End	2	167-7430
	Edge – Cutting	2	140-6823
	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	16	3K-9770
	Bolt	12	5P-8823
	Bolt	4	6V-6535
275-5405 (Half Arrow)	Edge – End LH	1	253-0069
	Edge – End RH	1	253-0070
	Edge Segment – Center	3	253-0071
	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	22	3K-9770
	Bolt	18	6V-8360
	Bolt	4	6V-6535

## 966K &amp; H/972K &amp; H – General Purpose and Material Handling (3226 mm/127 in) (Continued)

Corner Protectors			
174-7949	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	4	3K-9770
	Bolt	4	6V-6535

Bolt-on Adapters (Set of 8)			
229-6942 (K90)	Adapter – Center	6	222-1097
	Adapter – RH	1	229-7098
	Adapter – LH	1	229-7099
	Nut	4	2J-5997
	Bolt	2	5P-8823
	Bolt	2	6V-6535
	Bolt	12	5P-8361
	Nut	12	5P-8362

Bolt-on Segments (Set of 7)			
100-6667 (30 mm)	Edge Segment	5	100-6666
	Edge – Cutting	2	308-4322
	Nut	14	3K-9770
	Bolt	14	5P-8823
143-3062 (HD – 35 mm)	Edge Segment	5	140-6870
	Edge – Cutting	2	310-4067
	Nut	14	3K-9770
	Bolt	14	5P-8823
174-4169 (Half Arrow)	Half Arrow	7	313-5550
	Nut	14	3K-9770
	Bolt	14	5P-8823

## 966K &amp; H/972K &amp; H – Rock and HD Rock Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
135-9293 (40 mm)	Segment – Center	1	135-9294
	Segment – RH	3	135-9295
	Segment – LH	3	135-9296
	Nut	14	3K-9770
	Bolt	14	8T-9079
135-9543 (Half Arrow)	Segment – Center	1	135-9544
	Segment – RH	3	135-9545
	Segment – LH	3	135-9546
	Nut	14	3K-9770
	Bolt	14	6V-6535

Sidebar Protectors			
135-8245	Retainer	4	114-0359
	Sidebar Protector	2	135-8246
	Pin	4	135-9292
	Shear Blocks	4	331-7418

**980 G & H – General Purpose and Material Handling**

- Commonly used GET
- Not compatible with all buckets

<b>Bolt-on Cutting Edges</b>			
109-9213 (35 mm)	Edge – End	2	280-4068
	Edge – Cutting	2	109-9212
	Bolt	12	5P-8823
	Nut	12	3K-9770
127-0718 (HD – 40 mm)	Edge – End	2	100-4043
	Edge – Cutting	2	109-9230
	Bolt	12	5P-8823
	Nut	12	3K-9770
109-3129 (ARM 1-Way)	Edge – Cutting	2	109-9214
	Edge – End RH	1	123-0334
	Edge – End LH	1	123-0335
	Bolt	12	5P-8823
	Nut	12	3K-9770
287-1901 (Reversible ARM)	Edge – End	2	291-9126
	Edge – Cutting	2	315-5761
	Bolt	12	5P-8361
	Nut	12	3K-9770
229-6959 (Half Arrow)	Edge – End	2	217-4726
	Edge – Cutting	3	217-4727
	Bolt	18	6V-8360
	Nut	18	3K-9770
257-1791 (ARM Half Arrow)	Edge – End ARM	2	229-6526
	Edge – Center ARM	3	236-7034
	Bolt	18	6V-8360
	Nut	18	3K-9770

<b>Bolt-on Cutting Edge and Corner Protectors</b>			
264-2105 (35 mm)	Edge – End	2	1U-0761
	Edge – Cutting	2	109-9212
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	16	3K-9770
	Bolt	16	5P-8823
	264-2104 (HD – 40 mm)	Edge – End	2
Edge – Cutting		2	109-9230
Corner Guard RH		1	253-0066
Corner Guard LH		1	253-0067
Nut		16	3K-9770
Bolt		16	5P-8823
264-2103 (Half Arrow)		Edge – End	1
	Edge – Center	1	217-4727
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	22	3K-9770
	Bolt	18	6V-8360
	Bolt	4	5P-8823



## 980 G &amp; H – General Purpose and Material Handling (Continued)

Corner Protectors			
174-7950	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	4	3K-9770
	Bolt	4	5P-8823

Bolt-on Adapters (Set of 8)			
257-1770 (K100)	Adapter – Center	6	223-8107
	Adapter – LH	1	223-8108
	Adapter – RH	1	223-8109
	Nut	4	3K-9770
	Bolt	14	5P-8361
	Bolt	2	6V-6535
	Nut	12	5P-8362

Bolt-on Half Arrow Cutting Edge			
264-2085 (Half Arrow with TMWP)	Nut	22	3K-9770
	Bolt	8	5P-8361
	Half Arrow – End	2	217-4726
	Half Arrow – Center	3	217-4727
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Top Wear Plate – RH	1	253-0182
	Top Wear Plate – LH	1	253-0183
	Top Wear Plate – Center	2	253-0184
	Bolt	4	5P-8823
	Bolt	10	6V-8360

Bolt-on Segments (Set of 7)			
109-9059 (30 mm)	Edge Segment	7	109-9019
	Nut	14	3K-9770
	Bolt	14	5P-8823
135-9667 (HD – 45 mm)	Edge Segment	2	135-8219
	Nut	14	3K-9770
	Bolt	14	5P-8823

Sidebar Protectors			
135-8245	Retainer	4	114-0359
	Sidebar Protector	2	135-8246
	Pin	4	135-9292
	Shear Blocks	4	331-7418

## 980 G & H – Rock Spade Nose

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
109-9120 (35 mm)	Washer	25	4K-0684
	Bolt	25	6V-6535
	Cutting Edge – RH	1	109-9121
	Cutting Edge – RH	1	109-9122
	Cutting Edge – Center	1	109-9123
	Cutting Edge – LH	1	109-9124
	Cutting Edge – LH	1	109-9125
Nut	25	3K-9770	

Bolt-on Segments (Set of 7)			
119-3230 (30 mm)	Segment – Center	1	9W-5734
	Segment – LH	3	9W-5730
	Segment – RH	3	9W-5737
	Nut	21	3K-9770
	Bolt	21	8T-9079
107-3498 (HD – 45 mm)	Segment – Center	1	107-3490
	Segment – RH	3	107-3491
	Segment – LH	3	107-3492
	Nut	21	3K-9770
	Bolt	21	8T-9079
138-6473 (35 mm – ARM)	Segment – Center	1	138-6470
	Segment – RH	3	138-6471
	Segment – LH	3	138-6472
	Nut	21	3K-9770
	Bolt	21	8T-9079
109-3123 (Half Arrow)	Half Arrow – Center	1	116-7460
	Half Arrow – RH	3	116-7461
	Half Arrow – LH	3	116-7462
	Nut	21	3K-9770
	Bolt	21	8T-9079

Sidebar Protectors			
106-0912	Retainer	4	114-0359
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

## 988 G &amp; H – General Purpose

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
183-5318 (40 mm)	Edge – End	2	1U-0761
	Edge – Cutting	2	183-5325
	Nut	12	3K-9770
	Bolt	12	6V-8360

Corner Protectors			
174-7950	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	4	3K-9770
	Bolt	4	5P-8823

Bolt-on Adapters (Set of 8)			
232-0167 (K110)	Adapter – Center	6	315-0117
	Adapter – LH	1	315-0119
	Adapter – RH	1	315-0118
	Nut	4	3K-9770
	Bolt	14	198-1092
	Bolt	2	5P-8361
	Nut	12	5P-8362

Bolt-on Segments (Set of 7)			
183-5321 (45 mm)	Edge Segment	7	183-5324
	Nut	14	3K-9770
	Bolt	14	6V-8360

## 988 G &amp; H – Rock (Straight Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
8E-9898 (40 mm)	Segment	7	101-9435
	Nut	21	3K-9770
	Bolt	21	6V-6535
107-3545 (HD 45 mm)	Segment – Center	7	107-3536
	Nut	21	3K-9770
	Bolt	21	6V-6535

Sidebar Protectors			
106-0912	Retainer	4	114-0359
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

**988 G & H – Rock (Spade Nose)**

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
109-9051 (40 mm)	Segment – Center	1	101-9435
	Segment – RH	3	101-9436
	Segment – LH	3	101-9437
	Nut	21	3K-9770
	Bolt	21	6V-6535
107-3533 (HD 45 mm)	Segment – Center	1	107-3536
	Segment – RH	3	107-3537
	Segment – LH	3	107-3538
	Nut	21	3K-9770
	Bolt	21	6V-6535
138-0869 (ARM)	Segment – Center	1	138-0865
	Segment – RH	3	138-0866
	Segment – LH	3	138-0867
	Nut	21	3K-9770
	Bolt	21	6V-6535
124-6346 (Half Arrow)	Half Arrow – Center	1	109-9080
	Half Arrow – RH	3	109-9081
	Half Arrow – LH	3	109-9082
	Nut	21	3K-9770
	Bolt	21	6V-6535

Edge Protector (Half Arrow with Top Mounted Wear Plate)			
232-0161 (45 mm Half Arrow with TMWP)	Half Arrow – Center	1	109-9080
	Half Arrow – RH	3	109-9081
	Half Arrow – LH	3	109-9082
	Wear Plate – Center	1	195-7180
	Wear Plate – RH	3	195-7181
	Wear Plate – LH	3	195-7182
	Bolt	21	5P-8361
	Nut	21	3K-9770
	Nut	21	5P-8362

Top Mounted Wear Plate			
195-7141	Wear Plate – Center	1	195-7180
	Wear Plate – RH	3	195-7181
	Wear Plate – LH	3	195-7182
	Bolt	21	5P-8361
	Nut	21	3K-9770
	Nut	21	5P-8362

Sidebar Protectors			
106-0912	Retainer	4	114-0359
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

## 990 – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
4T-6763 (40 mm)	Segment – Center	1	4T-6760
	Segment – RH	3	4T-6761
	Segment – LH	3	4T-6762
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-3529 (HD 50 mm)	Segment – Center	1	107-3530
	Segment – RH	3	107-3531
	Segment – LH	3	107-3532
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-6293 (HD 60 mm)	Segment – Center	1	107-6294
	Segment – RH	3	107-6295
	Segment – LH	3	107-6296
	Nut	28	3K-9770
	Bolt	28	5P-8823
123-4392 (Half Arrow – 60 mm)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8823
109-2674 (Half Arrow – 75 mm)	Half Arrow – Center	1	275-5470
	Half Arrow – LH	3	275-5471
	Half Arrow – RH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8823

Half Arrow with Top Mounted Wear Plate			
232-0162 (60 mm Half Arrow with TMWP)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Wear Plate – Center	1	195-7096
	Wear Plate – RH	3	195-7097
	Wear Plate – LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Half Arrow with ARM Top Mounted Wear Plate			
303-3319 (60 mm Half Arrow with ARM TMWP)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Wear Plate – Center	1	195-7246
	Wear Plate – RH	3	195-7247
	Wear Plate – LH	3	195-7248
	Bolt	14	5P-8823
	Bolt	14	5P-8361
	Nut	14	5P-8362
	Nut	28	3K-9770

990 – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose) (Continued)

Top Mounted Wear Plate (Use with 195-7190, 195-7191 and 195-7192 Half Arrows)			
195-7094	Wear Plate – Center	1	195-7096
	Wear Plate – RH	3	195-7097
	Wear Plate – LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456

992 G & K – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
4T-6763 (40 mm)	Segment – Center	1	4T-6760
	Segment – RH	3	4T-6761
	Segment – LH	3	4T-6762
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-3529 (HD 50 mm)	Segment – Center	1	107-3530
	Segment – RH	3	107-3531
	Segment – LH	3	107-3532
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-6293 (HD 60 mm)	Segment – Center	1	107-6294
	Segment – RH	3	107-6295
	Segment – LH	3	107-6296
	Nut	28	3K-9770
	Bolt	28	5P-8823
123-4392 (Half Arrow – 60 mm)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8823
109-2674 (Half Arrow – 75 mm)	Half Arrow – Center	1	275-5470
	Half Arrow – LH	3	275-5471
	Half Arrow – RH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8823

## 992 G &amp; K – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose) (Continued)

Half Arrow with Top Mounted Wear Plate			
232-0162 (60 mm Half Arrow with TMWP)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Wear Plate – Center	1	195-7096
	Wear Plate – RH	3	195-7097
	Wear Plate – LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Half Arrow with ARM Top Mounted Wear Plate			
303-3319 (60 mm Half Arrow with ARM TMWP)	Half Arrow – Center	1	275-5460
	Half Arrow – LH	3	275-5461
	Half Arrow – RH	3	275-5462
	Wear Plate – Center	1	195-7246
	Wear Plate – RH	3	195-7247
	Wear Plate – LH	3	195-7248
	Bolt	14	5P-8823
	Bolt	14	5P-8361
	Nut	14	5P-8362
	Nut	28	3K-9770

Top Mounted Wear Plate (Use with 195-7190, 195-7191 and 195-7192 Half Arrows)			
195-7094	Wear Plate – Center	1	195-7096
	Wear Plate – RH	3	195-7097
	Wear Plate – LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456

Wings			
	Wing Plate	6	288-8235



**993K**

- Commonly used GET
- Not compatible with all buckets

<b>Bolt-on Segments (Set of 7)</b>			
309-1071 (60 mm)	Segment – Center	1	107-6294
	Segment – RH	3	107-6295
	Segment – LH	3	107-6296
	Nut	28	3K-9770
	Bolt	28	5P-8361

<b>Half Arrow – 60 mm</b>			
309-1070	Half Arrow – Center	1	275-5460
	Half Arrow – RH	3	275-5461
	Half Arrow – LH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8361

<b>Half Arrow – 75 mm</b>			
309-1043	Half Arrow – Center	1	275-5470
	Half Arrow – RH	3	275-5471
	Half Arrow – LH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8361

<b>Half Arrow with Top Mounted Wear Plate</b>			
315-0140 (60 mm Half Arrow with TMWP)	Half Arrow – Center	1	275-5460
	Half Arrow – RH	3	275-5461
	Half Arrow – LH	3	275-5462
	Wear Plate – Center	1	307-5600
	Wear Plate – RH	3	307-5601
	Wear Plate – LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770

<b>Half Arrow with ARM Top Mounted Wear Plate</b>			
264-2068 (75 mm Half Arrow with TMWP)	Half Arrow – Center	1	275-5470
	Half Arrow – LH	3	275-5471
	Half Arrow – RH	3	275-5472
	Wear Plate – Center	1	307-5600
	Wear Plate – RH	3	307-5601
	Wear Plate – LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770

## 993K (Continued)

Top Mounted Wear Plate (Use with 275-5460, 275-5461 and 275-5462 Half Arrows)			
195-7094	Wear Plate – Center	1	307-5600
	Wear Plate – RH	3	307-5601
	Wear Plate – LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770

Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456

Wings			
	Wing Plate	6	288-8235

Loader GP Bucket Bolt-On Segments

Base Edge Part Number	Segment Type								Hardware	
	Standard		Heavy Duty		ARM		Half Arrow			
	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Bolt (qty)	Nut (qty)
4E-0659	8E-4569 (7)								1J-5607 (14)	2J-3507 (14)
4E-6085	4T-6700 (7)		107-8580 (7)				173-7447 (7)		5P-8823 (14)	3K-9770 (14)
4E-6085***	4T-6700 (5)	308-4327 (2)							5P-8823 (14)	3K-9770 (14)
5G-6133	128-2873 (6)								4F-7827 (12)	2J-23506 (12)
5G-7304	4T-6697 (7)		140-6866 (7)		135-9648 (7)				5P-8823 (14)	3K-9770 (14)
5G-8342	128-2873 (7)								4F-7827 (14)	2J-23506 (14)
5G-8763	128-2873 (4)	128-2872 (2)							4F-7827 (12)	2J-23506 (12)
6W-2976	4T-6692 (5)	4T-6693 (2)							1J-5607 (14)	2J-3507 (14)
6W-2977	4T-6691 (7)								1J-5607 (14)	2J-3507 (14)
6W-2978	4T-6692 (7)								4F-4042 (14)	2J-3507 (14)
6W-2979	4T-6692 (5)	4T-6693 (2)							4F-4042 (14)	2J-3507 (14)
6W-2980	4T-6694 (7)		132-1035 (7)						4F-4042 (14)	2J-3507 (14)
6W-2980**	4T-6694 (5)	308-4324 (2)							4F-4042 (14)	2J-3507 (14)
6W-2981	4T-6698 (7)		140-6867 (7)						5P-8823 (14)	3K-9770 (14)
6W-2981**	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)					5P-8823 (14)	3K-9770 (14)
6W-2982	4T-6697 (7)		140-6866 (7)		135-9648 (7)				5P-8823 (14)	3K-9770 (14)
6W-2982**	4T-6697 (5)	309-1042 (2)							5P-8823 (14)	3K-9770 (14)
6W-2983	4T-6696 (7)		140-6865 (7)						5P-8823 (14)	3K-9770 (14)
6W-2984	4T-6694 (5)	4T-6693 (2)	132-1035 (5)	132-1036 (2)					1J-5607 (14)	2J-3507 (14)
6W-2985	4T-6695 (7)		132-1037 (7)						1J-5607 (14)	2J-3507 (14)
6W-2986	4T-6694 (5)	4T-6693 (2)	132-1035 (5)	132-1036 (2)					1J-5607 (14)	2J-3507 (14)
6W-2987	4T-6694 (5)	4T-6695 (2)	132-1035 (5)	132-1037 (2)					1J-5607 (14)	2J-3507 (14)
6W-2988*	4T-6694 (5)	4T-6695 (2)	132-1035 (5)	132-1037 (2)					1J-5607 (14)	2J-3507 (14)
6W-2989	4T-6698 (7)		140-6867 (7)						5P-8823 (14)	3K-9770 (14)
6W-2989**	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)					5P-8823 (14)	3K-9770 (14)
6W-2990	4T-6698 (7)		140-6867 (7)						5P-8823 (14)	3K-9770 (14)
6W-2990**	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)					5P-8823 (14)	3K-9770 (14)
6W-2991	4T-6700 (7)		107-8580 (7)				173-7447 (7)		5P-8823 (14)	3K-9770 (14)
6W-2991**	4T-6700 (5)	308-4327 (2)							5P-8823 (14)	3K-9770 (14)
7I-3015	100-6666 (7)		140-6870 (7)				174-4116 (7)		5P-8823 (14)	3K-9770 (14)
7I-3015**	100-6666 (5)	308-4322 (2)	140-6870 (5)	310-4067 (2)			315-5550 (7)		5P-8823 (14)	3K-9770 (14)
7I-3631	100-6664 (7)		140-6869 (7)						5P-8823 (14)	3K-9770 (14)
8Y-4738	6Y-6362 (7)								4F-7827 (14)	2J-23506 (14)
8Y-6263	4T-6697 (5)	4T-6696 (2)	140-6866 (5)	140-6865 (2)					6V-6535 (14)	3K-9770 (14)
8Y-6263**	4T-6697 (5)	308-4325 (2)	140-6866 (5)	308-4326 (2)					6V-6535 (14)	3K-9770 (14)
8Y-8763	4T-6692 (7)								1J-5607 (14)	2J-3507 (14)
9U-3748	138-6540 (7)		183-5324 (7)						5P-8823 (14)	3K-9770 (14)
9V-6570	4T-6692 (7)								1J-5607 (14)	2J-3507 (14)
9V-6571	4T-6691 (7)								1J-5607 (14)	2J-3507 (14)
9V-6572	4T-6694 (7)		132-1035 (7)						1J-5607 (14)	2J-3507 (14)
9V-6572**	4T-6694 (5)	308-4324 (2)							4F-4042 (14)	2J-3507 (14)
9V-6573	4T-6695 (7)		132-1037 (7)						4F-4042 (14)	2J-3507 (14)
9V-6574	4T-6700 (7)		107-8580 (7)				173-7447 (7)		5P-8823 (14)	3K-9770 (14)
9V-6574**	4T-6700 (5)	308-4327 (2)							5P-8823 (14)	3K-9770 (14)
9V-6575	4T-6699 (7)		140-6868 (7)				174-4114 (7)		5P-8823 (14)	3K-9770 (14)
9V-6575**	4T-6699 (5)	308-3054 (2)	140-6868 (5)	310-4064 (2)			315-5548 (7)		5P-8823 (14)	3K-9770 (14)
105-2345	4T-6695 (7)		132-1037 (7)						1J-5607 (14)	2J-3507 (14)
110-4712	4T-6695 (7)		132-1037 (7)						1J-5607 (14)	2J-3507 (14)
110-4781	4T-6694 (7)		132-1035 (7)						1J-5607 (14)	2J-3507 (14)

\* Base edge is not serviced  
 \*\* K Series arrangement

(Continued)

Loader GP Bucket Bolt-On Segments (Continued)

Base Edge Part Number	Segment Type								Hardware		
	Standard		Heavy Duty		ARM		Half Arrow				
	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Bolt (qty)	Nut (qty)	
110-4781**	4T-6694 (5)	308-4324 (2)								4F-4042 (14)	2J-3507 (14)
111-9770	109-9019 (7)		135-8219 (7)					174-4115 (7)		5P-8823 (14)	3K-9770 (14)
141-4847	140-7601 (7)		132-4715 (7)							4F-4042 (14)	2J-3507 (14)
141-4847**	140-7601 (5)	263-7545 (2)	132-4715 (5)	257-1762 (2)						4F-4042 (14)	2J-3507 (14)
183-5190	138-6540 (7)		183-5324 (7)							5P-8823 (14)	3K-9770 (14)
257-3667	138-6540 (7)		183-5324 (7)							5P-8823 (14)	3K-9770 (14)

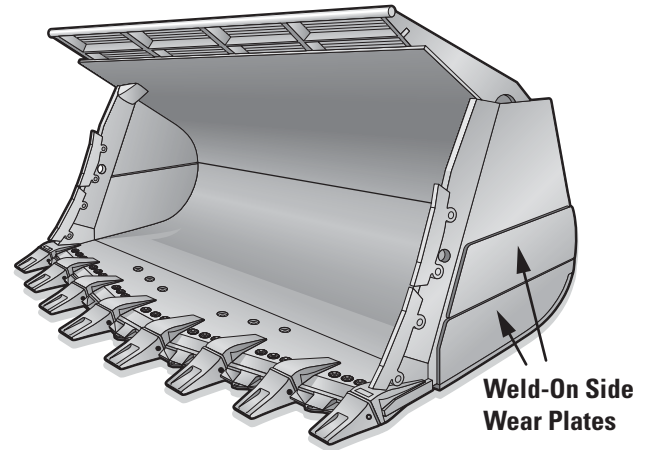
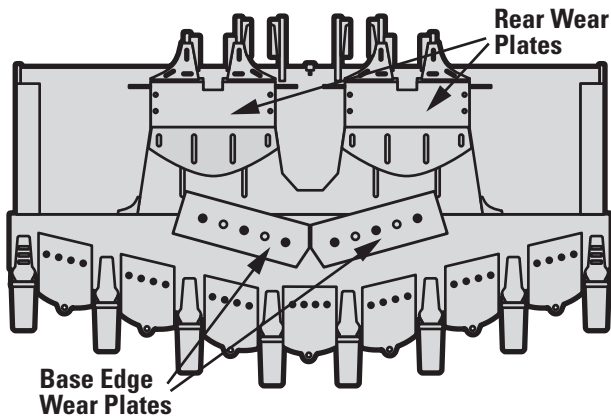
\* Base edge is not serviced

\*\* K Series arrangement

Ground Engaging Tools

**Wear Plates**

Wear plates offer enhanced protection to the base edge, bucket sides, and bucket rear.



**Base Edge Wear Plates**

- Covers the bottom area of the base edge not protected by segments.
- Extends base edge life.

**Heavy Duty Base Edge Wear Plates**

- Provides extended base edge life due to a thicker base edge wear plate.

**Rear Wear Plates**

- Extends life by protecting the rear of the bucket.

**Heavy Duty Rear Wear Plates**

- Extends life by protecting the rear of the bucket.
- Provides more protection than the standard rear wear plates.

**Weld-On Rear Wear Plates**

- Extends life by protecting the rear of the bucket.

**Weld-On Side Wear Plates**

- Protects against bucket side plate wear.

Model	Bucket Width	Wear Plate Type	Wear Plate Part Number		Edge Thickness	Bolt	Nut	Washer
			(lh)	(ctr) (rh)				
938F, 938G	2690 mm (105.90 in)	Weld-On Rear	9V-4484 (4)		16 mm (0.63 in)			
938G II		Weld-On Rear	216-4320 (2)		12 mm (0.47 in)			
			217-2928 (2)		10 mm (0.39 in)			
			216-4320 (2)		12 mm (0.47 in)			
			216-5023 (2)		10 mm (0.39 in)			
			216-4320 (2)		12 mm (0.47 in)			
			216-5032 (2)		10 mm (0.39 in)			
			257-3248 (2)		12 mm (0.47 in)			
			216-0220 (2)		10 mm (0.39 in)			
		944, 950	Rear	9W-6747 (2)		25 mm (0.98 in)	4F-7827 (8)	2J-3506 (8)
950B, E, F, G	Rear	9W-6747 (2)		25 mm (0.98 in)	4F-7827 (8)	2J-3506 (8)	5P-8248 (8)	
950G II	Weld-On Rear	209-6660 (4)		12 mm (0.47 in)				
955	Weld-On Rear	9V-6105 (2)		19 mm (0.75 in)				
960F, 962G	Rear	9W-6747 (2)		25 mm (0.98 in)	4F-7827 (8)	2J-3506 (8)	5P-8248 (8)	
960F	Rear	9W-6747 (2)		25 mm (0.98 in)	4F-7827 (8)	2J-3506 (8)	5P-8248 (8)	
962G II	Weld-On	9V-2899 (4)		10 mm (0.38 in)				
963	3035 mm (119.50 in)	Weld-On Rear	150-6918		12 mm (0.47 in)			
			150-6903 (2)		20 mm (0.79 in)			
966	Rear	9W-6748 (2)		25 mm (0.98 in)	4F-7827 (8)	2J-3506 (8)	5P-8248 (8)	
966D, E, F	Weld-On Rear	9V-6106 (2)		19 mm (0.75 in)	5P-8823 (14)	3K-9770 (14)		
966G, 972G	Rear	9W-6749 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)	
966G II	Rear	161-8573 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)	
970F	3035 mm (119.49 in)	Weld-On Rear	128-9623 (4)		10 mm (0.39 in)			
			218-2692 (2)		40 mm (1.57 in)			
970F	Rear	9W-6749 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)	
970F	Weld-On Rear	8R-0319 (2)		22 mm (0.87 in)				
973	3035 mm (119.49 in)		104-5423 (2)		22 mm (0.87 in)			
		Rear	9W-6750 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
973C	2714 mm (106.90 in)	Base Edge	225-9338 (6)		13 mm (1.97 in)			
			225-9339 (5)		13 mm			
		Weld-On Rear	204-0040 (3)		8 mm (1.97 in)			
			204-0041		8 mm			
			204-0042		8 mm			
			204-2006		13 mm			
			204-2007					
Hinge Bracket		204-0043 (4)						
Side		204-0023		20 mm				
Base Edge		204-0039		50 mm (1.97 in)				
			204-0021					
			204-0038					

Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Use with half arrow segments.

Model	Bucket Width	Wear Plate Type	Wear Plate Part Number		Edge Thickness	Bolt	Nut	Washer	
			(lh)	(ctr)					(rh)
973C (cont.) 977	2714 mm (106.90 in)	Weld-on Rear	7V-0910 (2)		40 mm (1.57 in)				
			9V-6106 (2)		19 mm (0.75 in)	5F-9823 (14)	3K-9770 (14)		
980C, 908F		Rear	9V-6109 (2)		19 mm (0.75 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
			7V-0910 (2)		40 mm (1.57 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
			9W-6750 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
			109-9215 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
980F, G 980G, 980H	3492 mm (137.50 in)	Base Edge	4T-2986 (2)		25 mm (2.01 in)	4J-9208 (6)	2J-3507 (6)	5F-8250 (6)	
			109-9215 (2)		35 mm (1.38 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
	3568-3492 mm (140.5-137.5 in)	Rear	113-0349 (2)		20 mm (2.01 in)	5J-4773 (8)	2J-3506 (8)	5F-8248 (8)	
		Liner-flat	134-1754						
		Liner-Curved	134-1755 (3)						
		Skid Plate	134-1759 (2)						
		Hinge Bracket Plate	134-1756 (4)						
		Out Side Lower Plate	134-1758 (2)						
		Out Side Upper Plate	134-1757 (2)						
		Inner Side	134-1752 (2)						
		Weld-on Rear	194-0658 (2)			25 mm (0.98 in)			
		Weld-On Bottom Outer	197-6081 (2)			20 mm (0.79 in)			
		Weld-On Bottom Mid	197-6080 (2)			20 mm (0.79 in)			
		Weld-on Rear	238-9709 (2)			30 mm (1.18 in)			
		Weld-On Bottom Outer	216-7202 (4)			20 mm (0.79 in)			
		Weld-On Bottom Mid	216-7198 (2)			20 mm (0.79 in)			
	3405 mm (134.06 in)	Hinge Bracket Plate	134-1756 (4)						
		Out Side Lower Plate	202-8669 (2)		16 mm (0.63 in)				
		Out Side Upper Plate	202-8668 (2)		8 mm (0.31 in)				
		Inner Side	202-8667 (2)		8 mm (0.31 in)				
		Liner-flat	202-8670		12 mm (0.47 in)				
		Liner-Curved	202-8672 (3)		12 mm (0.47 in)				
		Skid Plate	202-8672		20 mm (0.79 in)				
		Base Edge	1U-4929	1U-4929		35 mm (1.38 in)	4F-4042 (6)	2J-3507 (6)	5F-8250 (6)
		Base Edge**	7T-9127**	7T-9127**		35 mm (1.38 in)	4F-4042 (6)	2J-3507 (6)	5F-8250 (6)
		Rear	9V-5793 (2)			25 mm (0.98 in)	4J-9058 (8)	2J-3507 (8)	5F-8250 (8)
		Heavy Duty Rear	6V-3609 (2)			35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5F-8250 (8)
		HEX Bolt Rear	132-4713 (2)			25 mm (0.98 in)	1D-4709 (8)	2J-3507 (8)	5F-8250 (8)
		Weld-On Rear	190-9793	190-9793		40 mm (1.57 in)			
		Intermediate	190-9794	190-9794		25 mm (0.98 in)			
Weld-On Rear	136-6204	136-6204		25 mm (0.98 in)					
Intermediate	154-6367	154-6367		25 mm (0.98 in)					

Number in parentheses ( ) after the part number indicates the quantity required.

\*\* Use with half arrow segments.



Model	Bucket Width	Wear Plate Type	Wear Plate Part Number		Edge Thickness	Bolt	Nut	Washer	
			(lh)	(ctr)					(rh)
988G, 988H	3862 mm (150.00 in)	Weld-on Rear		235-6712	20 mm (0.79 in)				
				235-6711	16 mm (0.63 in)				
		Heavy Duty Rear		136-6204 (2)					
			Top Wear Plates	195-7098 (2)	195-7096 (2)	195-7097 (2)	5P-8361 (24)	5P-8362 (24)	5P-8250 (4)
		Base Edge Wear		4T-6617			4J-4042 (4)	2J-3507 (4)	
			Liner-flat		240-0285				
		Liner-Curved		240-0284 (3)					
		Skid Plate (RH)		257-3661					
		Skid Plate (LH)		257-3662					
		Out Side Lower Plate		257-3660 (2)					
		Out Side Upper Plate		240-7983 (2)					
		Inner Side		240-0286 (2)					
990	3926 mm (154.60 in)	Base Edge Wear		4T-6540 (2)	35 mm (1.38 in)	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)	
		Rear Wear		236-4674					
				236-4675					
				236-4676					
990	3980 mm (156.70 in)	Weld-on Rear		234-6230 (2)	25 mm (0.98 in)				
		Weld-on Rear		234-6231	25 mm (0.98 in)				
		Base Edge		1U-4933 (2)					
		Outer Lower Plates		4E-9889 (2)			4J-9208 (8)	2J-3507 (8)	5P-8250 (8)
		Base Edge	1U-4929			35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5P-8250 (8)
		Base Edge**	6Y-0312**			35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5P-8250 (8)
		Heavy Duty Rear		6Y-3573 (2)		35 mm (1.38 in)	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)
		Top Wear Plates (K-Series)	229-7047 (2)	229-7045 (2)	229-7046 (2)			5P-8362 (24)	
		Base Edge		9U-9862 (2)			5P-8138 (12)	2J-3507 (12)	5P-8250 (12)
		Liner-flat		2Q-3647					
		Liner-Curved		2Q-7065 (3)					
		992C, 992D	4574 mm (180.10 in)	Skid Plate (RH)		2Q-7063			
Skid Plate (LH)				2Q-7063					
Out Side Lower Plate				2Q-7071 (2)					
Out Side Upper Plate				2Q-7042 (2)					
Inner Side				2Q-3645					
Hinge Bracket				2Q-7064 (4)					
Base Edge	1U-4933				1U-4933	35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5P-8250 (8)
Base Edge**	6Y-0312**				6Y-0311**	35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5P-8250 (8)
Rear				6W-0276 (2)		35 mm (1.38 in)	4J-9058 (8)	2J-3507 (8)	5P-8250 (8)
Heavy Duty Rear				6Y-3610 (2)		45 mm (1.77 in)	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)

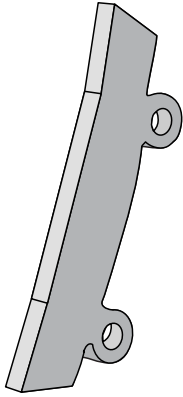
Number in parentheses ( ) after the part number indicates the quantity required.  
 \*\* Use with half arrow segments.

Model	Bucket Width	Wear Plate Type	Wear Plate Part Number			Edge Thickness	Bolt	Nut	Washer
			(lh)	(ctr)	(rh)				
992C, 992D (cont.) 992G	4750 mm (187.0 in)	HEX Bolt Rear		132-4712 (2)		45 mm (1.77 in)	1D-4637 (8)	2J-3507 (8)	5P-8250 (8)
	4823 mm (189.9 in)	Base Edge	1U-4933		1U-4933	35 mm (1.38 in)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
		Base Edge**	6Y-0312**		6Y-0311**	35 mm (1.38 in)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
	4841 mm (190.6 in)	Weld-On Rear	115-1548	115-1549	115-1548	35 mm (1.38 in)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
		Base Edge	100-6356	100-6357	100-6356	45 mm (1.77 in)	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)
		Weld-On Rear	115-1548	115-1549	115-1548	40 mm (1.57 in)			
994	5640 mm (222.0 in)	Weld-On Side		112-8998		12 mm (0.47 in)			
		Base Edge		103-1833 (3)		75 mm (2.95 in)	5P-8823 (9)	3K-9770 (9)	
	Heavy Duty Rear		8E-3160 (2)			60 mm (2.36 in)	6V-8360 (8)	3K-9770 (8)	4K-0684 (8)
		Rear		100-4015 (2)		75 mm (2.95 in)	6V-8360 (8)	3K-9770 (8)	4K-0684 (8)
	6220 mm (245.0 in)	HEX Bolt Rear		132-4714 (2)		75 mm (2.95 in)	1S-6560 (8)	3K-9770 (8)	4K-0684 (8)
		Weld-On Rear	2A-6724 (2)		2A-6724 (2)	20 mm (0.79 in)			
		Base Edge	103-1835	103-1833	103-1834	75 mm (2.95 in)	5P-8823 (1)	3K-9770 (1)	
		Heavy Duty Rear		8E-3160 (2)		60 mm (2.36 in)	6V-8360 (8)	3K-9770 (8)	4K-0684 (8)
	HEX Bolt Rear			100-4015 (2)		75 mm (2.95 in)	6V-8060 (8)	3K-9770 (8)	4K-0684 (8)
		Weld-On Rear		132-4714 (2)		75 mm (2.95 in)	1S-6560 (8)	3K-9770 (8)	4K-0684 (8)
			2A-6724 (2)		20 mm (0.79 in)				

Number in parentheses ( ) after the part number indicates the quantity required.

\*\* Use with half arrow segments.

## Sidebar Protectors



- Protects the bucket sides.

Model	Bucket Type	Sidebar Protector	Pin	Retainer Assembly
980F, 980G	Rock	135-8246 (2)	135-9292 (4)	114-0359 (4)
988B, F, G	Rock	9J-9600 (2)	135-9350 (4)	114-0359 (4)
990, 992C, D, 992G	Rock	1U-0740 (2)	133-0738 (4)	107-8559 (4)
966G	Rock	135-8246 (4)	135-9292 (8)	114-0359 (8)
972G	Rock	135-8246 (4)	135-9292 (8)	114-0359 (8)

## Bucket Corner Protector

Tip Size	Corner Protector Part Number		Bolt	Nut
	Left Hand	Right Hand		
J250	253-0061	253-0060	4F-4042 (4)	2J-3507 (4)
J300	253-0063	253-0062	8T-9079 (4)	3K-9770 (4)
J350	253-0065	253-0064	6V-6535 (4)	3K-9770 (4)
J400, J460	253-0067	253-0066	5P-8823 (4)	3K-9770 (4)

## Tips

Cat loader bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.

### Long Tip

- The best choice for most applications.
- Made of longer wearing DH-3 steel for 988 and 992 sizes.



### Short Tip

- Provides more strength.
- Contain less wear material.



### Light Duty Long Tip

- For use in low impact with low to medium abrasiveness.
- Self-sharpening design and symmetrical shape.



### Penetration Tip

- Provides better penetration.
- Contains less wear material.



### Heavy Duty Long Tip

- Contains more wear material than Long Tip.
- Provides greater strength than Long Tip.
- Provides better penetration due to a streamlined-profile.



### Heavy Duty Long Life Tip

- Increases wear life 2 to 5 times more than the Heavy Duty Long Tip.
- Provides better productivity because they get sharper as they wear.



### Heavy Duty Abrasion Tip

- Contains the greatest amount of wear material.
- Provides good strength.
- Provides good penetration.



### Heavy Duty Penetration Tip

- Use in high impact, hard-to-penetrate material.
- Longer wear life.
- Stays sharp.



## Tips

	J200	J225	J250	J300	J450/J350	J400	J460	J550	J600	J700	J800
Long	1U-3202	6Y-3222	1U-3252	1U-3302	1U-3352	7T-3402	9W-8452	9W-8552	6I-6602	4T-4702	
Short		6Y-6221	1U-3251	1U-3301	1U-3351	7T-3401	9W-8451	9W-8551	6I-6601		
Abrasion	4T-2203									4T-4703	
Light Duty Long Tip	195-9209		168-1253	168-1301	168-1351	168-1401	168-1451				
Penetration	1U-3209	6Y-8229	9J-4259	9J-4309	9J-4359	6Y-7409	9W-8459	9W-8559	7I-7609	4T-4709	117-6809
Heavy Duty Long		8E-4222	9N-4252	9N-4302	9N-4352	8E-4402	9N-4452	9N-4552	7Y-0602	9U-9702	6I-8802
Heavy Duty Long Life			135-8252	125-8302	135-9352	116-7402	101-9054	101-9055	107-8602	107-2001	
Heavy Duty Abrasion		6Y-6223	9N-4253	9N-4303	9N-4353	7T-3403	9N-4453	6Y-2553	6I-6603	9U-9703	6I-8803
Heavy Duty Penetration				135-9300	144-1358	135-9400	138-6451	138-6552	135-9600	135-9700	135-9800
Pin	8E-6208	132-4762	132-4763	132-4766	114-0358	116-7408	114-0468*	107-3378	113-9608	113-4708	134-1808
Retainer	8E-6209	149-5733	149-5733	149-5733	114-0359	116-7409	107-3469*	107-8559	113-9609	113-4709	134-1809

\* Some older models have a 19 mm (0.75") pin diameter, instead of the current 22 mm (0.875") pin diameter. For those older models which have the 19 mm (0.75") pin diameter, use a 6Y-2527 pin and a 8E-6359 retainer.

## Bolt-On Unitooth Tips



- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.

Tip Size	Model
J200	910, 931, 914G, 935, IT12, IT14G
J250	916, 920, 924, 926, 928, 930, 936, 938, 939, 941, 943, 951, 953, IT18, IT28
J300*	944, 950, 953B
J300**	950B, 955, 960F, 963
J300***	966C
J350	960F, 966D, 970F, 973, 977

## Bolt-On Unitooth Tip Chart

Unitooth Components	J200	J250	J300*	J300**	J300***	J350
Unitooth Center Tip	8J-6207	1U-1857	1U-1877	8E-1637	1U-1877	6Y-0649
Unitooth One Bolt Corner Tip (lh)	1U-1868	1U-1858	1U-1878	1U-1878	1U-1888	1U-1888
Unitooth One Bolt Corner Tip (rh)	1U-1869	1U-1859	1U-1879	1U-1879	1U-1889	1U-1889
Unitooth Two Bolt Corner Tip (lh)		6I-8388	8E-8608	8E-8608	8E-5318	8E-5318
Unitooth Two Bolt Corner Tip (rh)		6I-8389	8E-8609	8E-8609	8E-5319	8E-5319

\* 25 mm edge.

\*\* 32 mm edge.

\*\*\* 32 mm edge (bigger bolts).

## Cat K Series™ Tips

Cat K Series™ excavator bucket tips use a new vertical retention system that allows quick and easy tip changes. Providing a new locking interface at every tip change to improve retention reliability. Lower profile improves penetration and wear life.

### Penetration Tip

- For harder-to-penetrate, moderate impact, lower abrasion.
- Very good penetration.
- Top rib, bottom cavity to stay sharp.



### Spike Tip

- For maximum penetration, especially in cohesive material.
- Stays sharp for enhanced wear life.
- Top and bottom rib design.



### Double Spike Tip

- For harder-to-penetrate, fracturable materials.
- Very good penetration, stays sharp.
- Use in corner positions with Spike Centers.
- Length matches spike.



### Wide Tip

- For easy-to-penetrate trenching applications.
- Low impact.
- Smooth floor trenches.



### Heavy Penetration

- Recommended for high abrasive and impact conditions, especially shot rock.
- Excellent penetration and wear material, stays sharp.



### Heavy Abrasion

- Recommended for high abrasive, moderate impact, easier-to-penetrate materials.
- Excellent wear material, less penetration.



### General Duty

- Recommended for general applications in moderate impact and abrasive conditions.
- Good penetration, self-sharpening cavities.



### Extra Duty — (plus ARM parts option)

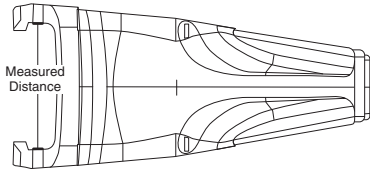
- Recommended for general applications requiring more wear material in moderate impact conditions.
- Good wear material, good penetration.



### Penetration — (plus ARM parts option)

- Recommended for harder-to-penetrate, moderate impact, lower abrasive materials.
- Very good penetration, less wear material, stays sharp.





**K Family Identification**

To identify tip or adapter family simply measure the distance between the “ears” of the tip in millimeters and round to the nearest 5 mm.

Ex: 80 mm (3.15”) = K80

Ex: 87.4 mm (3.44”) = K90

Ex: 96.1 mm (3.78”) = K100

Ground Engaging Tools

**Tip Chart**

	K80	K90	K100	K110	K130	K150	K170
Wide	222-1080	222-1090	223-8100	223-8110	223-8130	195-5151	223-8170
Extra Duty	220-9081	220-9091	220-9101	232-2111	264-2131	264-2151	264-2171
Penetration	220-9082	220-9092	220-9102	220-9112	220-9132	229-7152	232-0172
Penetration Plus	220-9083	220-9093	220-9103	220-9113	220-9133	229-7153	232-0173
Spike	220-9087	220-9097	220-9107	220-9117	220-9137	229-7157	232-0177
Double Spike	220-9088	220-9098	220-9108	220-9118	220-9138	229-7158	232-0178
General Duty	220-9089	220-9099	220-9109	220-9119	220-9139	229-7159	232-0179
Heavy Penetration	222-1081	222-1091	223-8101	232-2112	264-2132	264-2152	264-2172
Heavy Abrasion	222-1082	222-1092	223-8102	223-8112	223-8132	229-7156	232-2178
Extra Duty Long Life (ARM)	229-7080	232-0090	232-0100	232-0110	232-2130	232-0150	233-7170
Penetration Long Life (ARM)	229-7081	232-0091	232-0101	232-0111	232-2131	232-0151	233-7171
Retainer	220-9090	220-9090	220-9090	220-9110	220-9130	233-7150	232-0170
SLAG Retainer				309-1119	232-2139	232-2159	232-2179



K Family Identification (Continued)

Tips or Points

Description	J300	K80	J350	K90	J400	K100	J460	K110	J550	K130	J600	K150	J700	K170
J Wide = K Wide	107-3300	222-1080	107-3350	222-1090	107-3400	223-8100	107-3450	286-2111	107-3550	223-8130	N/A	195-5151	N/A	223-8170
J Heavy Duty Long = K Extra Duty	9N-4302	220-9081	9N-4352	220-9091	8E-4402	220-9101	9N-4452	286-2112	9N-4552	264-2131	7Y-0602	264-2151	9U-9702	264-2171
J Penetration = K Penetration	9J-4309	220-9082	9J-4359	220-9092	6Y-7409	220-9102	9W-8459	286-2113	9W-8559	220-9132	7I-7609	229-7152	4T-4709	232-0172
J Penetration Plus = K Penetration Plus	183-5300	220-9083	168-1359	220-9093	168-1409	220-9103	159-0459	286-2114	159-0559	220-9133	159-0607	229-7153	171-1709	232-0173
J Long Sharp = K Spike	168-1300	220-9087	168-1350	220-9097	159-0400	220-9107	159-0450	286-2115	159-0550	220-9137	159-0600	229-7157	136-8700	232-0177
J Twin Sharp = K Double Spike	135-9308	220-9088	135-9357	309-1098	135-9408	220-9108	138-6458	286-2116	138-6558	220-9138	135-9608	229-7158	N/A	232-0178
J Long = K General Duty	1U-3302	220-9089	1U-3352	220-9099	7T-3402	220-9109	9W-8452	286-2117	9W-8552	220-9139	6I-6602	229-7159	4T-4702	232-0179
J HDP = K Heavy Penetration	135-9300	222-1081	144-1358	222-1091	135-9400	223-8101	138-6451	286-2118	138-6552	264-2132	135-9600	264-2152	135-9700	264-2172
J HD Abrasion = K Heavy Abrasion	9N-4303	222-1082	9N-4353	222-1092	7T-3403	223-8102	9N-4453	286-2119	6Y-2553	223-8132	6I-6603	229-7156	9U-9703	232-2178
Extra Duty Long Life (ARM)	125-8302	229-7080	135-9352	232-0090	116-7402	232-0100	101-9054	315-0110	101-9055	232-2130	107-8602	232-0150	107-2001	233-7170
Penetration Long Life (ARM)	125-8309	229-7081	119-9359	232-0091	124-7409	232-0101	116-7459	315-0115	113-0559	232-2131	119-9609	232-0151	N/A	233-7171
Short									9W-8551	232-2137	6I-6601	232-2157		
Rock Chisel Tip							317-4456		338-0550		338-0600			
Retainer		220-9090		220-9090		220-9090		286-2110		220-9130		233-7150		232-0170
SLAG Retainer								309-1119		232-2139		232-2159		232-2179

## K Family Identification (Continued)

## Ground Engaging Tools

## Adapters or Shanks

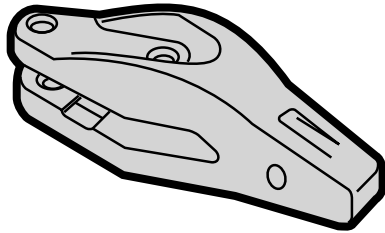
Description	J300	K80	J350	K90	J400	K100	J460	K110
LDR Two Strap Center			135-9354	222-1094	125-8404	223-8104	114-0464	315-0114 (51 mm)
LDR Two Strap RH			135-9355	222-1095	125-8405	223-8105	114-0465	315-0115 (51 mm)
LDR Two Strap LH			135-9356	222-1096	125-8406	223-8106	114-0466	315-0116 (51 mm)
LDR Two Strap Long Life Center					125-8407	229-7100	116-7464	309-1110 (51 mm)
LDR Two Strap Long Life RH					125-8408	229-7101	116-7465	309-1111 (51 mm)
LDR Two Strap Long Life LH					125-8409	229-7102	116-7466	309-1112 (51 mm)
LDR Flushmount Center	1U-1304	229-7084	1U-1304	229-7094	107-3404	229-7104	8E-0464	309-1113 (45 mm-51 mm)
LDR Abrasion Center							8E-1464	N/A (51 mm)
LDR Abrasion Corner								N/A (51 mm)
LDR Bolt-On Center	4T-4307	222-1087	3G-3357	222-1097	61-9898	223-8107	183-4605	315-0117 (50 mm)
LDR Bolt-On RH Corner	8E-5309	222-1088	8E-5359	229-7098	61-8243	223-8108	61-8299	315-0118 (50 mm)
LDR Bolt-On LH Corner	8E-5308	222-1089	8E-5358	229-7099	61-8244	223-8109	61-8298	315-0119 (50 mm)
LDR Bolt-On Center	1U-0307	229-7087	170-0073	223-8097				
LDR Bolt-On RH Corner	8E-5309	222-1088	8E-5359	229-7098				
LDR Bolt-On LH Corner	8E-5308	222-1088	8E-5358	229-7099				

K Family Identification (Continued)

Adapters or Shanks (Continued)

Description	J550	K130	J600	K150	J700	K170
LDR Two Strap Center	107-3554 (63.5 mm)	223-8134 (63.5 mm)	119-8604 (63.5 mm)	195-7154 (70 mm)	171-1704 (70 mm)	232-2174 (76 mm)
LDR Two Strap RH	107-3555 (63.5 mm)	223-8135 (63.5 mm)	119-8605 (63.5 mm)	195-7155 (70 mm)	171-1705 (70 mm)	232-2175 (76 mm)
LDR Two Strap LH	107-3556 (63.5 mm)	223-8136 (63.5 mm)	119-8606 (63.5 mm)	195-7156 (70 mm)	171-1706 (70 mm)	232-2176 (76 mm)
LDR Two Strap Center	138-6554 (51 mm)	232-0134 (51 mm)	N/A	232-0154 (63.5 mm)	133-0704 (63.5 mm)	232-0174 (70 mm)
LDR Two Strap RH	138-6555 (51 mm)	232-0135 (51 mm)	N/A	232-0155 (63.5 mm)	133-0705 (63.5 mm)	232-0175 (70 mm)
LDR Two Strap LH	138-6556 (51 mm)	232-0136 (51 mm)	N/A	232-0156 (63.5 mm)	133-0706 (63.5 mm)	232-0176 (70 mm)
LDR Two Strap Long Life Center	112-2554 (63.5 mm)	229-7130 (63.5 mm)	119-8607 (63.5 mm)	232-2150 (70 mm)	187-2113 (70 mm)	233-7174 (76 mm)
LDR Two Strap Long Life RH	112-2555 (63.5 mm)	229-7131 (63.5 mm)	119-8609 (63.5 mm)	232-2151 (70 mm)	187-2114 (70 mm)	233-7175 (76 mm)
LDR Two Strap Long Life LH	112-2556 (63.5 mm)	229-7132 (63.5 mm)	119-8608 (63.5 mm)	232-2152 (70 mm)	187-2115 (70 mm)	233-7176 (76 mm)
LDR Two Strap Long Life Center	159-0554 (51 mm)	232-2134 (51 mm)	N/A	233-7154 (63.5 mm)	133-0707 (63.5 mm)	238-3174 (70 mm)
LDR Two Strap Long Life RH	159-0555 (51 mm)	232-2135 (51 mm)	N/A	233-7155 (63.5 mm)	133-0709 (63.5 mm)	238-3175 (70 mm)
LDR Two Strap Long Life LH	159-0556 (51 mm)	232-2136 (51 mm)	N/A	233-7156 (63.5 mm)	133-0708 (63.5 mm)	238-3176 (70 mm)
LDR Flushmount Center	3G-4554 (51 mm-64 mm)	229-7134 (51 mm-64 mm)	N/A	232-2154 (64 mm-76 mm)		
LDR Abrasion Center	N/A	232-0138 (63.5 mm)	119-9604 (63.5 mm)	232-0158 (70 mm)		
LDR Abrasion Corner	N/A	232-0139 (63.5 mm)	119-9605 (63.5 mm)	232-0159 (70 mm)		

**Bolt-On Center Adapters**

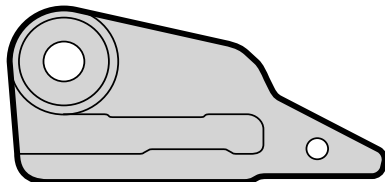


Ground Engaging Tools

Tip Size	Model	Edge Thickness	Bolt-On Adapter (center)	Bolt	Nut
J200	938, 939, 914G	19 mm (0.75 in)	9J-4207	5J-4771	2J-3506
	416, 426, 428, 436	20 mm (0.80 in)	8E-2184		
J225	938, 939, 914G	19 mm (0.75 in)	6Y-6227	1J-6762	2J-3506
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25 mm (1.00 in)	1U-0257	8J-2928	8J-2933
J300	944, 950, 953B, 953C	25 mm (1.00 in)	1U-0307	8J-2928	8J-2933
	950B, 950E, 950F, 944	32 mm (1.25 in)	4T-4307	5P-8136	8J-2933
	966C	32 mm (1.25 in)	3G-9307	5P-8361	5P-8362
	966C	32 mm (1.25 in)	3G-5307*	8J-2928	8J-2933
J350	977, 973, 966D, 970F	38 mm (1.50 in)	3G-3357	5P-8361	5P-8362
	963B, 973, 977, 966C	32 mm (1.25 in)	170-0073	6V-8360	5P-8362
	980A, 980B, 980C, 980G, 980F	45 mm (1.75 in)	1U-1357	5P-8361	5P-8362
	980B	45 mm (1.75 in)	3G-2357*	8J-2928	8J-2933
	977	38 mm (1.50 in)	3G-1357*	8J-2928	8J-2933
J400	980C, 980F	45 mm (1.75 in)	6I-9898	5P-8361	5P-8362
J460	988, 980C, 980F	45 mm (1.75 in)	8E-2467	5P-8361	5P-8362
	977, 973, 966D, 970F	38 mm (1.50 in)	8E-3467	5P-8361	5P-8362

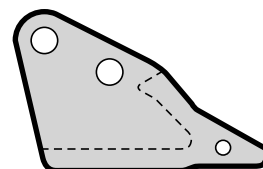
\* 3-bolt adapter.

**One-Bolt Corner Adapters**



Tip Size	Model	Edge Thickness	One-Bolt Adapter		Bolt	Nut
			(lh)	(rh)		
J200	935, 931, 910, IT12	19 mm (0.75 in)	1U-2208	1U-2209	6F-0196	2J-3505
J225	935, 931	19 mm (0.75 in)	6Y-6228	6Y-6229	6F-0196	2J-3505
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25 mm (1.00 in)	3G-4258	3G-4259	4J-9058	8J-2933
J300	944, 950, 950B, 950E, 950F, 960F	25-32 mm (1.00-1.25 in)	3G-4308	3G-4309	6V-6535	5P-8362
	953B, 953C, 963	25-32 mm (1.00-1.25 in)	3G-4308	3G-4309	4J-9058	8J-2933
	966C	32 mm (1.25 in)	3G-8308	3G-8309	5P-8823	5P-8362
J350	960F, 963B, 966D, 966E, 966F	32-38 mm (1.25-1.50 in)	3G-5358	3G-5359	5P-8823	5P-8362
	970F, 973, 977	32-38 mm (1.25-1.50 in)	3G-5358	3G-5359	5P-8823	5P-8362
	980A, 980B, 980C, 980F, 980G	45 mm (1.75 in)	1U-1358	1U-1359	6V-8360	5P-8362
J460	988, 980	45 mm (1.75 in)	8E-2469	8E-2468	6V-8360	5P-8362
	977, 973, 966D	38 mm (1.50 in)	8E-3469	8E-3468	6V-8360	5P-8362

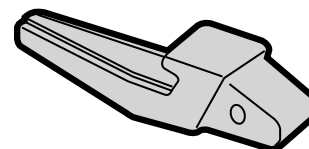
Two-Bolt Corner Adapters



Tip Size	Model	Edge Thickness	Two-Bolt Adapter		Bolt	Bolt	Nut
			(lh)	(rh)			
J250	920, 924F, 926, 928, 928F, 928G	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
	930, 936, 936E, 936F, 938F	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
	939, 941, 943, 951, 953	25 mm (1.00 in)	6I-9250	6I-9251	4J-9208	4F-4042	2J-3507
	IT18, IT24F, IT28	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
J300	944, 950, 953B, 953C, 963	25-32 mm (1.00-1.25 in)	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
	950B, 950E, 950F, 960F	25-32 mm (1.00-1.25 in)	8E-5308	8E-5309	8T-9079	5P-8823	3K-9770
J350	977, 973, 966, 963	32-38 mm (1.25-1.50 in)	8E-5358	8E-5359	5P-8361	6V-6535	3K-9770
J400/J460	980/988	44 mm (1.75 in)	6I-8244	6I-8243	8T-9079	6V-8360	3K-9770
J460	988	51 mm (2.00 in)	6I-8298	6I-8299	6V-6535	5P-8361	3K-9770

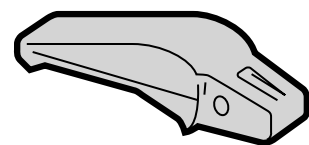
Ground Engaging Tools

Bottom Strap Adapters



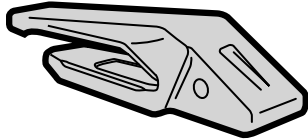
Tip Size	Model	Edge Thickness	Bottom Strap Adapter		
			(lh)	(center)	(rh)
J200	935, 931, 910, IT12, 428, 426, 416	13-19 mm (0.50-0.75 in)	—	8J-7525	—
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25-32 mm (1.00-1.25 in)	—	3G-0169	—
J300	966C, 963, 955, 950	25-32 mm (1.00-1.25 in)	—	9J-8929	—
J350	980, 977, 973, 966D	32-45 mm (1.25-1.75 in)	1U-1352	1U-1350	1U-1351
J350	966D, 966E, 966F	40 mm (1.57 in)	1U-1352	1U-1350	1U-1351
J460	988, 983	45-57 mm (1.75-2.25 in)	8E-5466	8E-5464	8E-5465
J550	992	51-64 mm (2.00-2.50 in)	9J-3664	9J-3662	9J-3663

Flushmount Adapters



Tip Size	Model	Edge Thickness	Flushmount Adapter		
			(lh)	(center)	(rh)
J200	935, 931, 910, IT12, 428, 426, 416	13-25 mm (0.50-1.00 in)	—	4T-1204	—
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	19-32 mm (0.75-1.25 in)	—	1U-1254	—
J300	966C, 963, 955, 950	25-38 mm (1.00-1.50 in)	—	1U-1304	—
J350	980, 977, 973, 966D	32-45 mm (1.25-1.75 in)	1U-1356	1U-1354	1U-1355
J400	980	38-51 mm (1.50-2.00 in)	—	107-3404	—
J460	988, 983	45-51 mm (1.75-2.00 in)	8E-0466	8E-0464	8E-0465
J550	990, 992C	51-64 mm (2.00-2.50 in)	3G-4556	3G-4554	3G-4555
	992, 992B	51-64 mm (2.00-2.50 in)	7J-9556	7J-9554	7J-9555

Two-Strap Adapters

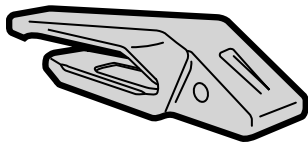


Ground Engaging Tools

Tip Size	Model	Edge Thickness	Two-Strap Adapter		
			(lh)	(center)	(rh)
J450	980, 973*, 966D*	45 mm (1.75 in)	4T-8456	4T-8454	4T-8455
J460	988, 983	51 mm (2.00 in)	8E-3466	8E-3464	8E-3465
	980	45 mm (1.75 in)	8E-2166	8E-2164	8E-2165
J550	990, 992	64 mm (2.50 in)	3G-9496	3G-9494	3G-9495
	988	51 mm (2.00 in)	4T-7556	4T-7554	4T-7555
J600	992	70 mm (2.75 in)	6I-8606	6I-8604	6I-8605
J700	994	76 mm (3.00 in)	4T-4706	4T-4704	4T-4705
	990, 992	64 mm (2.50 in)	9W-9706	9W-9704	9W-9705
	994	100 mm (4.00 in)	100-7416	—	—
J800	994	100 mm (4.00 in)	6I-8804	—	—

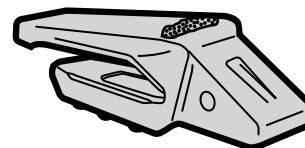
\* Requires spade base edge with segment bolt holes.

Heavy Duty Adapters



Tip Size	Model	Edge Thickness	Heavy Duty Adapter		
			(lh)	(center)	(rh)
J350	966	40 mm (1.50 in)	135-9356	135-9354	135-9355
	980	45 mm (1.75 in)	113-0356	113-0354	113-0355
J400	980	45 mm (1.75 in)	125-8406	125-8404	125-8405
J460	988	51 mm (2.00 in)	114-0466	114-0464	114-0465
J550	990, 992	63 mm (2.50 in)	107-3556	107-3554	107-3555
	988	51 mm (2.00 in)	138-6556	138-6554	138-6555
J600	992	70 mm (2.75 in)	119-8606	119-8604	119-8605
	990, 992	63 mm (2.50 in)	143-3116	143-3115	143-3114
J700	992	70 mm (2.75 in)	133-0706	133-0704	133-0705
J700	994	100 mm (4.00 in)	—	100-7416	—
	992	70 mm (2.75 in)	133-0706	133-0704	133-0705
	992	76 mm (3.00 in)	171-1706	171-1704	171-1705
J800	994	100 mm (4.00 in)	—	6I-8804	—

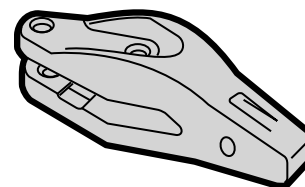
Heavy Duty ARM Adapters



Tip Size	Model	Edge Thickness	Heavy Duty Arm Adapter		
			(lh)	(center)	(rh)
J400	980	45 mm (1.75 in)	125-8409	125-8407	125-8408
J460	988	51 mm (2.00 in)	116-7466	116-7464	116-7465
J550	990, 990	63 mm (2.50 in)	112-2556	112-2554	112-2555
	988	51 mm (2.00 in)	159-0556	159-0554	159-0555
J600	992	70 mm (2.75 in)	119-8606	119-8604	119-8605
	990, 992	63 mm (2.50 in)	186-5386	186-5384	186-5385
J700	992	70 mm (2.75 in)	133-0708	133-0707	133-0709
	994	76 mm (3.00 in)	187-2115	187-2113	187-2114

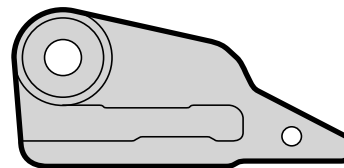
Ground Engaging Tools

Upsize Bolt-On Center Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Bolt-On Adapter (center)	Upsize Bolt	Upsize Nut
J200	19 mm (0.75 in)	910, 914G, 939	J225	6Y-6227	5J-4771	2J-3506
J250	25 mm (1.00 in)	916, 920, 926, 930, 936	J300	1U-0307	8J-2928	8J-2933
	25 mm (1.00 in)	941, 943, 951, 953	J300	1U-0307	8J-2928	8J-2933
	25 mm (1.00 in)	IT18, IT28	J300	1U-0307	8J-2928	8J-2933
J300	32 mm (1.25 in)	966C	J350	3G-7357	6V-8360	5P-8362
J350	38 mm (1.50 in)	966D, 970F, 973, 977	J460	8E-3467	5P-8361	5P-8362
	45 mm (1.75 in)	980	J460	8E-2467	5P-8361	5P-8362
J400	46 mm (1.80 in)	980G	J460	8E-2467	5P-8361	5P-8362

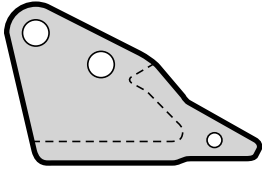
Upsize One-Bolt Corner Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Bolt-On Adapter		Upsize Bolt	Upsize Nut
				(lh)	(rh)		
J200	19 mm (0.75 in)	910, 914G, 939	J225	6Y-6228	6Y-6229	6F-0196	2J-3505
J250	25 mm (1.00 in)	916, 920, 926, 930, 936	J300	3G-4308	3G-4309	6V-6535	5P-8362
	25 mm (1.00 in)	941, 943, 951, 953	J300	3G-4308	3G-4309	6V-6535	5P-8362
	25 mm (1.00 in)	IT18, IT28	J300	3G-4308	3G-4309	6V-6535	5P-8362
J300	32 mm (1.25 in)	966C	J350	3G-5358	3G-5359	5P-8823	5P-8362
J350	38 mm (1.50 in)	966, 973, 977	J460	8E-3469	8E-3468	5P-8823	6V-8360
	45 mm (1.75 in)	980	J460	8E-2469	8E-2468	6V-8360	5P-8362



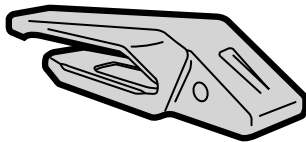
Upsize Two-Bolt Corner Adapters



Ground Engaging Tools

Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Two-Bolt Adapter		Upsize Bolt	Upsize Bolt	Upsize Nut
				(lh)	(rh)			
J250	25 mm (1.00 in)	916, 920, 926, 930	J300	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
	25 mm (1.00 in)	941, 943, 951, 953	J300	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
J300	32 mm (1.25 in)	950, 953, 955, 963	J350	8E-5358	8E-5359	5P-8361	6V-6535	3K-9770

Upsize Two-Strap Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Two-Strap Adapter		
				(lh)	(center)	(rh)
J350	45 mm (1.75 in)	980	J450	4T-8456	4T-8454	4T-8455
J350	45 mm (1.75 in)	980	J460	8E-2166	8E-2164	8E-2165
J460	51 mm (2.00 in)	983, 988	J550	4T-7556	4T-7554	4T-7555
J550	64 mm (2.50 in)	992	J700	9W-9706	9W-9704	9W-9705
J600	76 mm (3.00 in)	992	J700	133-0706	133-0704	133-0705
J700	100 mm (4.00 in)	994	J800		6I-8804	

**K Series Adapters**

Description	Base Edge Thickness											
	K80		K90		K100	K110	K130		K150		K170	
	25 mm	32 mm	32 mm	36 mm	45 mm	50 mm	50 mm	63 mm	63 mm	70 mm	70 mm	76 mm
Adapters												
LDR Two Strap CNTR				222-1094	223-8104	232-2114	232-0134	223-8134	232-0154	195-7154	232-0174	232-2174
LDR Two Strap RH				222-1095	223-8105	232-2115	232-0135	223-8135	232-0155	195-7155	232-0175	232-2175
LDR Two Strap LH				222-1096	223-8106	232-2116	232-0136	223-8136	232-0156	195-7156	232-0176	232-2176
LDR Two Strap Long Life CNTR (ARM)					229-7100	229-7110	232-2134	229-7130	233-7154	232-2150	238-3174	233-7174
LDR Two Strap Long Life RH					229-7101	229-7111	232-2135	229-7131	233-7155	232-2151	238-3175	233-7175
LDR Two Strap Long Life LH					229-7102	229-7112	232-2136	229-7132	233-7156	232-2152	238-3176	233-7176
LDR Flushmount CNTR		229-7084		229-7094	229-7104	232-2117		229-7134		232-2154		
LDR Abrasion CNTR								232-0138		232-0158		
LDR Abrasion Corner								232-0139		232-0159		
LDR Bolt-On CNTR	229-7087	222-1087	223-8097	222-1097	223-8107	232-2110						
LDR Bolt-On Corner RH	222-1088	222-1088	222-1098	229-7098	223-8108	223-8118						
LDR Bolt-On Corner LH	222-1089	222-1089	222-1099	229-7099	223-8109	223-8119						
Models	953	950, 962	963	950, 962, 966, 972, 973	980	988	988	990, 992D, 990H, 992G, 992K	990, 992D, 992G, 992K	992G, 992K	992G, 992K	992G, 992K, 993K

Ground Engaging Tools



Part No.	Description	Length (mm)	Width (mm)	Thickness (mm)
280-4088	1.5 inch Chocky	241	38	25
280-4089	2.0 inch Chocky	241	51	25
280-4090	2.5 inch Chocky	241	64	25
280-4091	4.0 inch Chocky	241	102	25

Part No.	Description	Diameter (mm)	Thickness (mm)
280-4092	2.5 inch Button	64	22
280-4093	3.5 inch Button	89	29
280-4094	4.5 inch Button	114	33
280-4095	6.0 inch Button	152	35

Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4096	1.25 inch Roll Bar	229	38	32
280-4097	2.0 inch Roll Bar	305	52	51
280-4098	3.0 inch Roll Bar	305	69	76

Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4099	6.0 inch x 8.0 inch Wear Block	200	150	37

Description	Straight Heel Shroud Part Number	Curved Heel Shroud Part Number	Width (mm)	Height (mm)
Small Heel Shroud	280-4078	280-4079	120	108
Medium Heel Shroud	138-6529	138-6551	175	150
Large Heel Shroud	157-1019	157-1027	250	200

## Mechanically Attached Wear Plate System

### Wear Indicator

The wear plate has recessed holes (blind holes) cast into each corner to serve as a wear indicator making inspections quick and easy. When the holes become exposed in one or more corners, it is time to change the wear plate. If the wear plate is allowed to wear beyond the wear indicator, damage to base plate may occur.

### Parts Consist

Mechanically Attached Wear Plate System						
Series	Suggested Models	Base Plate (thk)	Wear Plate (dimension)	Compression Retainer	Radius Capability*	Retainer Plug
20 Series	844, 966, 980, 988, 345B, other similar sizes	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0022 8.85 in × 7.87 in × 1.38 in (225 mm × 200 mm × 35 mm) 14.15 lb (6.42 kg)	138-0006	7.87 in (200 mm) minimum	275-5444
Heavy Duty	same	same	138-0023 8.85 in × 7.87 in × 1.97 in (225 mm × 200 mm × 50 mm) 23.9 lb (10.85 kg)	138-0006	same	275-5444
Heavy Duty ARM	same	same	264-2195	138-0006	same	275-5444
30 Series	854, 990, 992, 375, 5080, other similar sizes	138-0030 0.86 in thick (22 mm) 8.2 lb (3.72 kg)	138-0032 10.8 in × 7.87 in × 1.77 in (275 mm × 200 mm × 45 mm) 21.3 lb (9.67 kg)	138-0006	15.75 in (400 mm) minimum	275-5444
Standard ARM	same	same	229-7067	138-0006	same	275-5444
Heavy Duty	same	same	138-0033 (10.8 in × 7.87 in × 2.36 in) 275 mm × 200 mm × 60 mm 32.6 lb (14.8 kg)	138-0006	same	275-5444
Heavy Duty ARM	same	same	317-3350	138-0006	same	275-5444
40 Series	5110, 5130, other similar sizes	138-0040 1.14 in thick (29 mm) 10.15 lb (4.61 kg)	138-0042 10.8 in × 7.87 in × 2.36 in (275 mm × 200 mm × 60 mm) 29.25 lb (13.28 kg)	138-0007	31.50 in (800 mm) minimum	275-5444
Heavy Duty	same	same	138-0043 10.8 in × 7.87 in × 2.95 in (275 mm × 200 mm × 75 mm) 41.2 lb (18.7 kg)	138-0007	same	275-5444
50 Series	994, 5230, other similar sizes	138-0050 1.14 in thick (29 mm) 13.4 lb (6.08 kg)	138-0052 11.81 in × 9.8 in × 2.95 in (300 mm × 250 mm × 75 mm) 55.25 lb (25.08 kg)	138-0007	47.25 in (1200 mm) minimum	275-5444
Heavy Duty	same	same	138-0053 11.81 in × 9.8 in × 3.93 in (300 mm × 250 mm × 100 mm) 83.15 lb (37.75 kg)	138-0007	same	275-5444

Skeletal Mechanically Attached Wear Plate System						
Series	Suggested Models	Base Plate (thk)	Wear Plate (dimension)	Compression Retainer	Radius Capability*	Retainer Plug
Standard	Off Highway Trucks	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0024 8 in × 12.2 in × 1.38 in (202 mm × 310 mm × 35 mm) 12.9 lb (5.9 kg)	138-0006	7.87 in (200 mm)	275-5444
Heavy Duty	Off Highway Trucks	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0025 8.15 in × 12.2 in × 1.77 in (207 mm × 310 mm × 45 mm) 18.3 lb (8.4 kg)	138-0006	7.87 in (200 mm)	275-5444

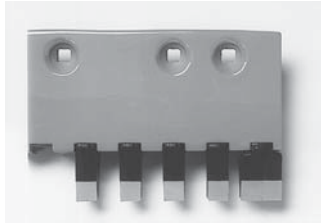
\* Not recommended for convex radii smaller than those specified in this chart.

GraderBits™ Systems

Ground Engaging Tools

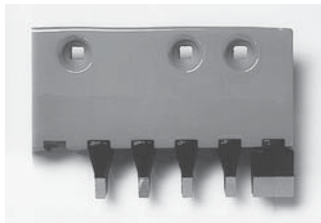
The Caterpillar GraderBits™ System is a road maintenance edge that lowers owning and operating costs by increasing productivity, decreasing blade maintenance, and reducing downtime.

The Caterpillar GraderBits System works by using special adapters and grader bits instead of a conventional cutting edge. The adapters are bolted onto the moldboard, and then, the grader bits are secured within the adapter using snap rings. Different combinations of grader bit sizes and types allow you to customize the edge pattern to deliver the best performance in any surface condition, including mining haul roads, public roads, farm roads, logging roads, and even paved roads.



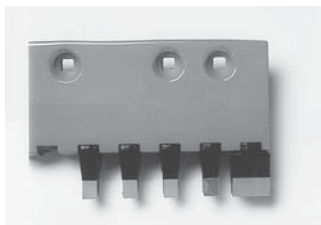
**Standard Bit Arrangement**

- For use on larger motor graders.
- Good in highly abrasive applications where penetration is not critical.



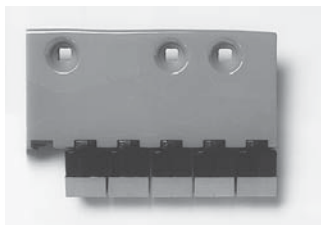
**Sharp Bit Arrangement**

- For use on smaller motor graders.
- Use where maximum penetration is required.



**Penetration Bit Arrangement**

- Use with midsize motor graders.



**Wide Bit Arrangement**

- Available in a continuous design with narrow gap adapters.
- May be used on the ends of all grader bit configurations to extend wear life.

Model	Gap Size	Edge Length	GraderBit Arrangement*				Snap Ring Retainer**
			Standard	Sharp	Penetration	Wide	
All	Narrow	0.914 m (3 ft)	6Y-4339 (15)	105-5183 (15)	105-5180 (15)	6Y-4340 (15)	353-2624 (15)
		1.219 m (4 ft)	6Y-4339 (20)	105-5183 (20)	105-5180 (20)	6Y-4340 (20)	353-2624 (15)
14, 16	Wide	0.914 m (3 ft)	6Y-4339 (12)	105-5183 (12)	105-5180 (12)	6Y-4340 (12)	353-2624 (15)
		1.219 m (4 ft)	6Y-4339 (16)	105-5183 (16)	105-5180 (16)	6Y-4340 (16)	353-2624 (15)

\* Includes snap ring retainer.

\*\* Uses 1P-1860 snap ring pliers.

GraderBit™ Systems Adapters

Model	Gap Size	Edge Length	Moldboard Length	Adapter Part Number	Bolts	Nuts			
14, 16, 140H (¾" bolts), 143H (¾" bolts)	Narrow ¾" bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0318 (2)	5J-4771 (19)	2J-3506 (19)			
			3.35 m (11 ft)	159-0318	5J-4771 (21)	2J-3506 (21)			
			3.96 m (13 ft)	159-0318 (3)	5J-4771 (24)	2J-3506 (24)			
			4.27 m (14 ft)	159-0318 (2)	5J-4771 (30)	2J-3506 (30)			
			4.57 m (15 ft)	159-0318	5J-4771 (28)	2J-3506 (28)			
		1.219 m (4 ft)	3.05 m (10 ft)	159-0317	5J-4771 (19)	2J-3506 (19)			
			3.35 m (11 ft)	159-0317 (2)	5J-4771 (21)	2J-3506 (21)			
			3.66 m (12 ft)	159-0317 (3)	5J-4771 (23)	2J-3506 (23)			
			3.96 m (13 ft)	159-0317	5J-4771 (24)	2J-3506 (24)			
			4.27 m (14 ft)	159-0317 (2)	5J-4771 (30)	2J-3506 (30)			
			4.57 m (15 ft)	159-0317 (3)	5J-4771 (28)	2J-3506 (28)			
			4.88 m (16 ft)	159-0317 (4)	5J-4771 (36)	2J-3506 (36)			
			Wide ¾" bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0313 (2)	5J-4771 (19)	2J-3506 (19)	
					3.35 m (11 ft)	159-0313	5J-4771 (21)	2J-3506 (21)	
	3.96 m (13 ft)	159-0313 (3)			5J-4771 (24)	2J-3506 (24)			
	4.27 m (14 ft)	159-0313 (2)			5J-4771 (30)	2J-3506 (30)			
	4.57 m (15 ft)	159-0313			5J-4771 (28)	2J-3506 (28)			
	1.219 m (4 ft)	3.05 m (10 ft)		159-0314	5J-4771 (19)	2J-3506 (19)			
		3.35 m (11 ft)		159-0314 (2)	5J-4771 (21)	2J-3506 (21)			
		3.66 m (12 ft)		159-0314 (3)	5J-4771 (23)	2J-3506 (23)			
		3.96 m (13 ft)		159-0314	5J-4771 (24)	2J-3506 (24)			
		4.27 m (14 ft)		159-0314 (2)	5J-4771 (30)	2J-3506 (30)			
		4.57 m (15 ft)		159-0314 (3)	5J-4771 (28)	2J-3506 (28)			
		4.88 m (16 ft)		159-0314 (4)	5J-4771 (36)	2J-3506 (36)			
		All except 14, 16, 140H (⅝" bolts), 143H (⅝" bolts)		Narrow ⅝" bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0311 (2)	3F-5108 (19)	4K-0367 (19)
						3.35 m (11 ft)	159-0311	3F-5108 (21)	4K-0367 (21)
	3.96 m (13 ft)		159-0311(3)			3F-5108 (24)	4K-0367 (24)		
	4.27 m (14 ft)		159-0311 (2)			3F-5108 (30)	4K-0367 (30)		
4.57 m (15 ft)	159-0311		3F-5108 (28)			4K-0367 (28)			
1.219 m (4 ft)	3.05 m (10 ft)		159-0312		3F-5108 (19)	4K-0367 (19)			
	3.35 m (11 ft)		159-0312 (2)		3F-5108 (21)	4K-0367 (21)			
	3.66 m (12 ft)		159-0312 (3)		3F-5108 (23)	4K-0367 (23)			
	3.96 m (13 ft)		159-0312		3F-5108 (24)	4K-0367 (24)			
	4.27 m (14 ft)		159-0312 (2)		3F-5108 (30)	4K-0367 (30)			
	4.57 m (15 ft)		159-0312 (3)		3F-5108 (28)	4K-0367 (28)			
	4.88 m (16 ft)		159-0312 (4)		3F-5108 (36)	4K-0367 (36)			
	Wide ⅝" bolts		0.914 m (3 ft)		3.05 m (10 ft)	159-0315 (2)	3F-5108 (19)	4K-0367 (19)	
					3.35 m (11 ft)	159-0315	3F-5108 (21)	4K-0367 (21)	
3.96 m (13 ft)				159-0315 (3)	3F-5108 (24)	4K-0367 (24)			
4.27 m (14 ft)				159-0315 (2)	3F-5108 (30)	4K-0367 (30)			
4.57 m (15 ft)				159-0315	3F-5108 (28)	4K-0367 (28)			
1.219 m (4 ft)			3.05 m (10 ft)	159-0316	3F-5108 (19)	4K-0367 (19)			
			3.35 m (11 ft)	159-0316 (2)	3F-5108 (21)	4K-0367 (21)			
			3.66 m (12 ft)	159-0316 (3)	3F-5108 (23)	4K-0367 (23)			
			3.96 m (13 ft)	159-0316	3F-5108 (24)	4K-0367 (24)			
			4.27 m (14 ft)	159-0316 (2)	3F-5108 (30)	4K-0367 (30)			
			4.57 m (15 ft)	159-0316 (3)	3F-5108 (28)	4K-0367 (28)			
			4.88 m (16 ft)	159-0316 (4)	3F-5108 (36)	4K-0367 (36)			

Ground Engaging Tools

Mining Bit Systems

Mining Bit System for larger machines (16H and 24H) in heavy-duty applications like haul road maintenance. The Mining Bits have two separate pieces of carbide for added wear protection. The first is brazed on the face of the bit to reduce wear as the bit moves through the material. The second piece of carbide is inserted into a slot behind the face to protect the bottom of the bit. The Mining Bit also has an angled shank to facilitate proper orientation with respect to the ground — reducing chances for premature wear.

Model	Gap Size	Edge Length	Mining Bit Arrangement*	
			Standard	Wide
16H	Narrow	0.914 m (3 ft)	308-5193 (13)	135-9586
		1.219 m (4 ft)	308-5193 (13)	135-9586
	Wide	0.914 m (3 ft)	308-5193 (13)	135-9586
		1.219 m (4 ft)	308-5193 (13)	135-9586
24H	Wide	0.914 m (3 ft)	310-2113	N/A

\* Includes snap ring retainer 178-4092.

Mining Bit System Adapters

Model	Gap Size	Edge Length	Moldboard Length	Adapter Part Number	Bolts	Nuts
16H	Narrow 5/8" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9596	3F-5108 (30)	4K-0367 (30)
			4.877 m (16 ft)	135-9596	3F-5108 (36)	4K-0367 (30)
	Wide 5/8" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9593	3F-5108 (30)	4K-0367 (30)
			4.877 m (16 ft)	135-9593	3F-5108 (36)	4K-0367 (36)
	Narrow 3/4" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9592	5J-4771 (30)	2J-3506 (30)
			4.877 m (16 ft)	135-9592	5J-4771 (36)	2J-3506 (36)
	Wide 3/4" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9591	5J-4771 (30)	2J-3506 (30)
			4.877 m (16 ft)	135-9591	5J-4771 (36)	2J-3506 (36)
	Narrow 5/8" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9590	3F-5108	4K-0367 (30)
			4.877 m (16 ft)	135-9590	3F-5108	4K-0367 (36)
	Wide 5/8" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9589	3F-5108	4K-0367 (30)
			4.877 m (16 ft)	135-9589	3F-5108	4K-0367 (36)
	Narrow 3/4" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9588	5J-4771	2J-3506 (30)
			4.877 m (16 ft)	135-9588	5J-4771	2J-3506 (36)
	Wide 3/4" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9587	5J-4771	2J-3506 (30)
			4.877 m (16 ft)	135-9587	5J-4771	2J-3506 (36)
24H	Wide 1" bolts	0.914 m (3 ft)	7.315 m (24 ft)	178-4095	1J-3527	2J-3507



**Cutting Edges**

Caterpillar Motor Grader Cutting Edges are made of DH2 alloy steel, SAE specification high carbon steel, or Tungsten Carbide and are double bevel shaped for improved penetration.

DH2 Through-Hardened Edges are heat treated for longer wear life and greater breakage resistance than surface hardened edges or high carbon steel edges. DH2 Through-Hardened Edges have a lifetime warranty against breakage.

High Carbon Edges are wear resistant and intended for light duty applications.

Tungsten Carbide Edges provide up to twenty times more wear life in low impact, high wear applications.

**Curved Cutting Edges**

- Provides best penetration.
- For use in most construction and finish grading applications.



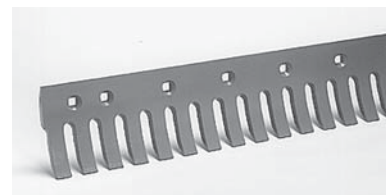
**Flat Cutting Edges**

- Provide greater strength and more wear material.
- For use with large machines in road maintenance and pioneering applications.



**Serrated Cutting Edges**

- Provides better penetration of frozen or hard-packed materials.
- For use in gravel raking and spreading applications, as well as other special applications.



Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts
121 mm (4.75 in)	19 mm (0.75 in)	0.610 m (2 ft)	Curved	Tungsten Carbide	0.62	207-4695	3F-5108 (5)	4K-0367 (5)
					0.75	208-8863	4F-7827 (5)*	2J-3506 (5)
		0.914 m (3 ft)	Curved	Tungsten Carbide	0.62	208-8862	3F-5108 (7)	4K-0367 (7)
					0.75	217-4698	4F-7827 (7)*	2J-3506 (7)
152 mm (6.00 in)	13 mm (0.50 in)	1.219 m (4 ft)	Curved	DH2	0.62	3G-8016	3F-5108 (9)	4K-0367 (9)
					0.75	9W-2293	3F-5108 (6)	4K-0367 (6)
				High Carbon	0.62	9W-2294	4F-7827 (6)*	2J-3506 (6)
					0.75	9W-2294	4F-7827 (6)*	2J-3506 (6)
		1.524 m (5 ft)	Curved	DH2	0.62	9J-3862	3F-5108 (11)	4K-0367 (11)
					0.75	9W-2296	4F-7827 (7)*	2J-3506 (7)
				High Carbon	0.62	9W-2295	3F-5108 (7)	4K-0367 (7)
					0.75	9W-2296	4F-7827 (7)*	2J-3506 (7)
1.828 m (6 ft)	Curved	DH2	0.62	8D-2786	3F-5108 (13)	4K-0367 (13)		
			0.75	9J-3660	4F-7827 (13)*	2J-3506 (13)		

\* For a 14G Motor Grader, use 5J-4773 bolts.  
 For a 16G Motor Grader with a 16 ft. blade, use 5F-8933 bolts.  
 For a 16G Motor Grader without a 16 ft. blade, use 5J-4771 bolts.  
 For a 24H Motor Grader, use 1J-3527 bolts for the last five bolts on each end of the edge.

Cutting Edges

Ground Engaging Tools

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts
152 mm (6.00 in)	13 mm (0.50 in)	1.828 m (6 ft)	Curved	High Carbon	0.62	9W-2297	3F-5108 (8)	4K-0367 (8)
					0.75	9W-2298	4F-7827 (8)*	2J-3506 (8)
		2.133 m (7 ft)	Curved	DH2	0.62	8D-2787	3F-5108 (15)	4K-0367 (15)
					0.75	9J-3659	4F-7827 (15)*	2J-3506 (15)
				High Carbon	0.62	9W-2299	3F-5108 (9)	4K-0367 (9)
					0.75	9W-2300	4F-7827 (9)*	2J-3506 (9)
		2.438 m (8 ft)	Curved	DH2	0.62	8J-7782	3F-5108 (17)	4K-0367 (17)
					0.75	9J-3656	4F-7827 (17)*	2J-3506 (17)
				High Carbon	0.62	9W-2301	3F-5108 (10)	4K-0367 (10)
					0.75	9W-2302	4F-7827 (10)*	2J-3506 (10)
		2.743 m (9 ft)	Curved	High Carbon	0.62	4Z-8968	3F-5108 (11)	4K-0367 (11)
		3.048 m (10 ft)	Curved	High Carbon	0.62	9W-2303	3F-5108 (12)	4K-0367 (12)
					0.75	9W-2304	4F-7827 (12)*	2J-3506 (12)
		3.658 m (12 ft)	Curved	High Carbon	0.62	9W-2305	3F-5108 (13)	4K-0367 (13)
					0.75	9W-2306	4F-7827 (14)*	2J-3506 (14)
		4.267 m (14 ft)	Curved	High Carbon	0.62	9W-2307	3F-5108 (16)	4K-0367 (16)
					0.75	9W-2308	4F-7827 (16)*	2J-3506 (16)
				DH2	0.62	9W-1835	3F-5108 (4)	4K-0367 (4)
	0.75				9W-2325	3F-5108 (6)	4K-0367 (6)	
	1.219 m (4 ft)	Curved	High Carbon	0.62	9W-2326	4F-7827 (6)*	2J-3506 (6)	
				0.75	9W-2327	4F-7827 (7)*	2J-3506 (7)	
	1.524 m (5 ft)	Curved	DH2	0.62	7D-4508	3F-5108 (11)	4K-0367 (11)	
				0.75	9W-2327	4F-7827 (7)*	2J-3506 (7)	
			High Carbon	0.62	7T-1640	3F-5108 (7)	4K-0367 (7)	
				0.75	7T-1637	4F-7827 (8)*	2J-3506 (8)	
	1.828 m (6 ft)	Curved	DH2	0.62	5D-9553	3F-5108 (13)	4K-0367 (13)	
				0.75	9J-3657	4F-7827 (13)*	2J-3506 (13)	
			High Carbon	0.62	7T-1633	3F-5108 (8)	4K-0367 (8)	
				0.75	7T-1637	4F-7827 (8)*	2J-3506 (8)	
	2.133 m (7 ft)	Curved	DH2	0.62	5D-9554	3F-5108 (15)	4K-0367 (15)	
				0.75	9J-3658	4F-7827 (15)*	2J-3506 (15)	
			High Carbon	0.62	7T-1645	3F-5108 (9)	4K-0367 (9)	
				0.75	7T-1626	4F-7827 (9)*	2J-3506 (9)	
	2.438 m (8 ft)	Curved	DH2	0.62	8J-4043	3F-5108 (17)	4K-0367 (17)	
				0.75	9J-3655	4F-7827 (17)*	2J-3506 (17)	
			High Carbon	0.62	7T-1632	3F-5108 (10)	4K-0367 (10)	
0.75				7T-1629	4F-7827 (10)*	2J-3506 (10)		
3.353 m (11 ft)	Curved	High Carbon	0.62	4Z-8652	3F-5108 (13)	4K-0367 (13)		
3.658 m (12 ft)	Curved	High Carbon	0.62	4Z-8653	3F-5108 (14)	4K-0367 (14)		
19 mm (0.75 in)	1.524 m (5 ft)	Curved	DH2	0.62	3G-7966	3F-5108 (11)	4K-0367 (11)	
				0.62	5D-9556	3F-5108 (13)	4K-0367 (13)	
				0.62	5D-9557	3F-5108 (15)	4K-0367 (15)	
				0.75	4Z-8785	4F-7827 (15)*	2J-3506 (15)	
				0.75	208-8864	3F-5108 (5)	4K-0367 (5)	
170 mm (6.69 in)	25 mm (1.00 in)	0.610 m (2 ft)	Curved Serrated	Tungsten Carbide	0.62	208-8864	3F-5108 (5)	4K-0367 (5)
					0.75	208-8865	4F-7827 (5)*	2J-3506 (5)
		0.914 m (3 ft)	Curved Serrated	Tungsten Carbide	0.62	217-4696	3F-5108 (7)	4K-0367 (7)
0.75	217-4697				4F-7827 (7)*	2J-3506 (7)		
171 mm (6.75 in)	19 mm (0.75 in)	0.610 m (2 ft)	Curved	Tungsten Carbide	0.62	195-7265	3F-5108 (5)	4K-0367 (5)
					0.75	195-7266	4F-7827 (5)*	2J-3506 (5)
		0.914 m (3 ft)	Curved	Tungsten Carbide	0.62	208-8866	3F-5108 (7)	4K-0367 (7)
					0.75	195-7267	4F-7827 (7)*	2J-3506 (7)
		1.219 m (4 ft)	Curved	Tungsten Carbide	0.75	208-8866	4F-7827 (9)*	2J-3506 (9)
					0.75	208-8866	4F-7827 (9)*	2J-3506 (9)

\* For a 14G Motor Grader, use 5J-4773 bolts.  
 For a 16G Motor Grader with a 16 ft. blade, use 5F-8933 bolts.  
 For a 16G Motor Grader without a 16 ft. blade, use 5J-4771 bolts.  
 For a 24H Motor Grader, use 1J-3527 bolts for the last five bolts on each end of the edge.

Cutting Edges

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts	
203 mm (8.00 in)	13 mm (0.50 in)	1.219 m (4 ft)	Curved	DH2	0.62	3G-7965	3F-5108 (9)	4K-0367 (9)	
					0.75	135-6738	4F-7827 (9)*	2J-3506 (9)	
			High Carbon	0.62	9W-2309	3F-5108 (6)	4K-0367 (6)		
				0.75	9W-2310	4F-7827 (6)*	2J-3506 (6)		
		1.524 m (5 ft)	Curved	DH2	0.62	9J-3863	3F-5108 (11)	4K-0367 (11)	
					0.75	134-1779	4F-7827 (11)*	2J-3506 (11)	
			High Carbon	0.62	9W-2311	3F-5108 (7)	4K-0367 (7)		
				0.75	9W-2312	4F-7827 (7)*	2J-3506 (7)		
		1.828 m (6 ft)	Curved	DH2	0.62	8D-2788	3F-5108 (13)	4K-0367 (13)	
					0.75	3G-1626	4F-7827 (13)*	2J-3506 (13)	
			High Carbon	0.62	9W-2313	3F-5108 (8)	4K-0367 (8)		
				0.75	9W-2314	4F-7827 (8)*	2J-3506 (8)		
		2.133 m (7 ft)	Curved	DH2	0.62	8D-2789	3F-5108 (15)	4K-0367 (15)	
					0.75	3G-1627	4F-7827 (15)*	2J-3506 (15)	
			High Carbon	0.62	9W-2315	3F-5108 (9)	4K-0367 (9)		
				0.75	9W-2316	4F-7827 (9)*	2J-3506 (9)		
		2.438 m (8 ft)	Curved	DH2	0.62	8J-8980	3F-5108 (17)	4K-0367 (17)	
					0.75	3G-1628	4F-7827 (17)*	2J-3506 (17)	
		High Carbon	0.62	9W-2317	3F-5108 (10)	4K-0367 (10)			
		2.438 m (8 ft)	Curved	High Carbon	0.75	9W-2318	4F-7827 (10)*	2J-3506 (10)	
		3.048 m (10 ft)	Curved	High Carbon	0.62	9W-2319	3F-5108 (12)	4K-0367 (12)	
					0.75	9W-2320	4F-7827 (12)*	2J-3506 (12)	
		3.658 m (12 ft)	Curved	High Carbon	0.62	9W-2321	3F-5108 (14)	4K-0367 (14)	
					0.75	9W-2322	4F-7827 (14)*	2J-3506 (14)	
	4.267 m (14 ft)	Curved	High Carbon	0.62	9W-2323	3F-5108 (16)	4K-0367 (16)		
				0.75	9W-2324	4F-7827 (16)*	2J-3506 (16)		
		16 mm (0.62 in)	0.610 m (2 ft)	Curved	DH2	0.62	109-3137	3F-5108 (5)	4K-0367 (5)
						0.75	3G-2166	4F-7827 (4)*	2J-3506 (4)
	1.219 m (4 ft)	Curved	DH2	0.62	132-1088	3F-5108 (9)	4K-0367 (9)		
					0.75	134-1773	4F-7827 (9)*	2J-3506 (9)	
		High Carbon	0.62	9W-2328	3F-5108 (6)	4K-0367 (6)			
			0.75	9W-2329	4F-7827 (6)*	2J-3506 (6)			
	1.524 m (5 ft)	Curved	DH2	0.62	7D-4509	3F-5108 (11)	4K-0367 (11)		
					0.75	9W-2330	4F-7827 (7)*	2J-3506 (7)	
			High Carbon	0.62	7T-1641	3F-5108 (7)	4K-0367 (7)		
		Flat	DH2	0.62	4T-2967	3F-5108 (11)	4K-0367 (11)		
				0.75	4Z-8120	4F-7827 (13)*	2J-3506 (13)		
			High Carbon	0.62	7T-1636	3F-5108 (8)	4K-0367 (8)		
	1.828 m (6 ft)	Curved	DH2	0.62	5D-9562	3F-5108 (13)	4K-0367 (13)		
					0.75	9J-7701	4F-7827 (13)*	2J-3506 (13)	
			High Carbon	0.62	7T-1639	4F-7827 (8)*	2J-3506 (8)		
		Flat	DH2	0.62	4T-2968	3F-5108 (13)	4K-0367 (13)		
				0.75	4T-2971	4F-7827 (13)*	2J-3506 (13)		
			High Carbon	0.62	7T-1639	4F-7827 (8)*	2J-3506 (8)		
	2.133 m (7 ft)	Curved	DH2	0.62	5D-9561	3F-5108 (15)	4K-0367 (15)		
					0.75	7D-1158	4F-7827 (15)*	2J-3506 (15)	
			High Carbon	0.62	7T-1643	3F-5108 (9)	4K-0367 (9)		
		Flat	DH2	0.62	7T-1624	4F-7827 (9)*	2J-3506 (9)		
			0.75	7T-1624	4F-7827 (9)*	2J-3506 (9)			
High Carbon			0.62	4T-2969	3F-5108 (15)	4K-0367 (15)			
2.438 m (8 ft)	Curved	DH2	0.62	4T-2970	4F-7827 (15)*	2J-3506 (15)			
				0.75	4T-2970	4F-7827 (15)*	2J-3506 (15)		
	DH2	0.62	5D-9731	3F-5108 (17)	4K-0367 (17)				
		0.75	8J-9821	4F-7827 (17)*	2J-3506 (17)				

Ground Engaging Tools

\* For a 14G Motor Grader, use 5J-4773 bolts.  
 For a 16G Motor Grader with a 16 ft. blade, use 5F-8933 bolts.  
 For a 16G Motor Grader without a 16 ft. blade, use 5J-4771 bolts.  
 For a 24H Motor Grader, use 1J-3527 bolts for the last five bolts on each end of the edge.

Cutting Edges

Ground Engaging Tools

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts		
203 mm (8.00 in)	16 mm (0.62 in)	2.438 m (8 ft)	Curved	High Carbon	0.62	7T-1631	3F-5108 (10)	4K-0367 (10)		
					0.75	7T-1628	4F-7827 (10)*	2J-3506 (10)		
			Flat	DH2	0.62	4T-2966	3F-5108 (17)	4K-0367 (17)		
					0.75	4T-9603	4F-7827 (17)*	2J-3506 (17)		
	19 mm (0.75 in)	0.610 m (2 ft)	Curved	DH2	0.62	6G-8623	3F-5108 (4)	4K-0367 (4)		
					0.75	3G-2165	4F-7827 (4)*	2J-3506 (4)		
			Flat	DH2	0.62	4Z-8129	3F-5108 (11)	4K-0367 (11)		
					0.75	4Z-8119	3F-5108 (6)	4K-0367 (6)		
			1.219 m (4 ft)	Flat	DH2	0.62	4Z-8119	3F-5108 (6)	4K-0367 (6)	
						0.75	4Z-8119	3F-5108 (6)	4K-0367 (6)	
				Curved	DH2	0.62	132-1087	3F-5108 (9)	4K-0367 (9)	
						0.75	109-3124	4F-7827 (9)*	2J-3506 (9)	
					High Carbon	0.62	9W-2338	3F-5108 (6)	4K-0367 (6)	
						0.75	9W-2339	4F-7827 (6)*	2J-3506 (6)	
				Curved Serrated	DH2	0.62	8D-3428	3F-5108 (9)	4K-0367 (9)	
						0.75	8J-8255	4F-7827 (9)*	2J-3506 (9)	
			DH2		0.62	9W-6252	3F-5108 (11)	4K-0367 (11)		
					0.75	4Z-8131	4F-7827 (7)*	2J-3506 (7)		
			1.524 m (5 ft)	Curved	DH2	0.62	9W-6252	3F-5108 (11)	4K-0367 (11)	
						0.75	4Z-8131	4F-7827 (7)*	2J-3506 (7)	
					High Carbon	0.62	9W-2340	3F-5108 (7)	4K-0367 (7)	
						0.75	9W-2341	4F-7827 (7)*	2J-3506 (7)	
				Curved Serrated	DH2	0.62	8D-3429	3F-5108 (11)	4K-0367 (11)	
						0.75	8J-8256	4F-7827 (11)*	2J-3506 (11)	
					Flat	DH2	0.62	4T-3034	3F-5108 (11)	4K-0367 (11)
							0.75	4T-3034	3F-5108 (11)	4K-0367 (11)
			1.828 m (6 ft)	Curved	DH2	0.62	5D-9558	3F-5108 (13)	4K-0367 (13)	
						0.75	7D-1576	4F-7827 (13)*	2J-3506 (13)	
		High Carbon			0.62	7T-1634	3F-5108 (8)	4K-0367 (8)		
					0.75	7T-1638	4F-7827 (8)*	2J-3506 (8)		
		Curved Serrated		DH2	0.62	132-1072	3F-5108 (13)	4K-0367 (13)		
					0.75	132-1072	3F-5108 (13)	4K-0367 (13)		
				Flat	DH2	0.62	4T-3007	3F-5108 (13)	4K-0367 (13)	
						0.75	4T-3033	4F-7827 (13)*	2J-3506 (13)	
		2.133 m (7 ft)		Curved	DH2	0.62	5D-9559	3F-5108 (15)	4K-0367 (15)	
						0.75	7D-1577	4F-7827 (15)*	2J-3506 (15)	
					High Carbon	0.62	7T-1623	3F-5108 (9)	4K-0367 (9)	
						0.75	7T-1625	4F-7827 (9)*	2J-3506 (9)	
			Curved Serrated	DH2	0.62	4Z-9020	3F-5108 (15)	4K-0367 (15)		
					0.75	4Z-9020	3F-5108 (15)	4K-0367 (15)		
				Flat	DH2	0.62	4T-3036	3F-5108 (15)	4K-0367 (15)	
						0.75	4T-3032	4F-7827 (15)*	2J-3506 (15)	
		2.438 m (8 ft)	Curved	DH2	0.62	5D-9732	3F-5108 (17)	4K-0367 (17)		
					0.75	7D-1949	4F-7827 (17)*	2J-3506 (17)		
				High Carbon	0.62	7T-1630	3F-5108 (10)	4K-0367 (10)		
					0.75	7T-1627	4F-7827 (10)*	2J-3506 (10)		
				Curved Serrated	DH2	0.62	132-1073	3F-5108 (17)	4K-0367 (17)	
						0.75	132-1073	3F-5108 (17)	4K-0367 (17)	
Flat			DH2	0.62	4T-3035	3F-5108 (17)	4K-0367 (17)			
				0.75	4T-3037	4F-7827 (17)*	2J-3506 (17)			
			Curved	DH2	0.75	109-3150	4F-7827 (9)*	2J-3506 (9)		
					0.75	4T-3512	4F-7827 (9)*	2J-3506 (9)		
	Flat			DH2	0.62	135-9692	3F-5108 (11)	4K-0367 (11)		
					0.75	4Z-8926	4F-7827 (13)*	2J-3506 (13)		
1.524 m (5 ft)	Flat Serrated	DH2	0.75	7T-3600	4F-7827 (9)*	2J-3506 (9)				
			0.75	7T-3600	4F-7827 (9)*	2J-3506 (9)				
	Curved	DH2	0.62	4T-2240	3F-5108 (11)	4K-0367 (11)				
			0.75	4T-2240	3F-5108 (11)	4K-0367 (11)				
	Curved Serrated	DH2	0.75	4T-3511	4F-7827 (11)*	2J-3506 (11)				
			0.75	4T-3511	4F-7827 (11)*	2J-3506 (11)				
Flat	DH2	0.62	7T-3497	3F-5108 (11)	4K-0367 (11)					
		0.62	7T-3497	3F-5108 (11)	4K-0367 (11)					

\* For a 14G Motor Grader, use 5J-4773 bolts.  
 For a 16G Motor Grader with a 16 ft. blade, use 5F-8933 bolts.  
 For a 16G Motor Grader without a 16 ft. blade, use 5J-4771 bolts.  
 For a 24H Motor Grader, use 1J-3527 bolts for the last five bolts on each end of the edge.

Cutting Edges

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts		
203 mm (8.00 in)	25.0 mm (1.00 in)	1.524 m (5 ft)	Flat Serrated	DH2	0.75	7T-3601	4F-7827 (11)*	2J-3506 (11)		
			Curved	DH2	0.62	4T-2244	3F-5108 (13)	4K-0367 (13)		
					0.75	4T-2231	4F-7827 (13)*	2J-3506 (13)		
			Flat	DH2	0.62	7T-3499	3F-5108 (13)	4K-0367 (13)		
		0.75			7T-3493	4F-7827 (13)*	2J-3506 (13)			
		2.133 m (7 ft)			Curved	DH2	0.62	4T-2242	3F-5108 (15)	4K-0367 (15)
							0.75	4T-2233	4F-7827 (15)*	2J-3506 (15)
		Flat	DH2	0.62	7T-3498	3F-5108 (15)	4K-0367 (15)			
				0.75	7T-3494	4F-7827 (15)*	2J-3506 (15)			
				2.438 m (8 ft)	Curved	DH2	0.62	4T-2237	3F-5108 (17)	4K-0367 (17)
							0.75	4T-2236	4F-7827 (17)*	2J-3506 (17)
		Flat	DH2	0.62	7T-3496	3F-5108 (17)	4K-0367 (17)			
0.75	7T-3495			4F-7827 (17)*	2J-3506 (17)					
254 mm (10.00 in)	25.0 mm (1.00 in)			1.219 m (4 ft)	Flat Serrated	DH2	0.75	4T-8800	4F-7827 (9)*	2J-3506 (9)
					Flat Serrated	DH2	0.75	4T-8801	4F-7827 (11)*	2J-3506 (11)
		Flat	DH2		0.75	4T-6502	4F-7827 (13)*	2J-3506 (13)		
		Flat	DH2		0.75	4T-6508	4F-7827 (15)*	2J-3506 (15)		
					0.75	4Z-8055	4F-7827 (15)*	2J-3506 (15)		
		Flat	DH2		0.75	4T-6511	4F-7827 (17)*	2J-3506 (17)		
				0.75	4Z-8056	4F-7827 (17)*	2J-3506 (17)			
		35.0 mm (1.38 in)	2.133 m (7 ft)	Flat	DH2	0.75	4T-8316	4F-7827 (15)*	2J-3506 (15)	
						0.75	4Z-8346	4F-7827 (15)*	2J-3506 (15)	
				Flat	DH2	0.75	4T-8317	4F-7827 (17)*	2J-3506 (17)	
						0.75	100-4581	4F-7827 (17)*	2J-3506 (17)	
			2.438 m (8 ft)	Flat	DH2	0.75	104-3628	4F-7827 (17)*	2J-3506 (17)	
0.75	104-3631					4F-7827 (17)*	2J-3506 (17)			
45.0 mm (1.75 in)	2.438 m (8 ft)	Flat	DH2	0.75	104-3628	4F-7827 (17)*	2J-3506 (17)			
	2.438 m (8 ft)	Flat Serrated	DH2	0.75	104-3631	4F-7827 (17)*	2J-3506 (17)			
280 mm (11.00 in)	25.0 mm (1.00 in)	2.133 m (7 ft)	Flat	DH2	0.75	140-6790	4F-7827 (15)*	2J-3506 (15)		
		2.438 m (8 ft)	Flat	DH2	0.75	140-6832	4F-7827 (17)*	2J-3506 (17)		
	35.0 mm (1.38 in)	2.438 m (8 ft)	Flat	DH2	0.75	132-1086	4F-7827 (17)*	2J-3506 (17)		
305 mm (12.00 in)	35.0 mm (1.38 in)	2.436 m (8 ft)	Flat	DH2	0.75	4Z-9188	4F-7827 (17)*	2J-3506 (17)		
330 mm (13.00 in)	28.5 mm (1.18 in)	1.217 m (4 ft)	Flat	DH2	1.00	109-3117	4J-9058 (9)*	2J-3507 (9)		
			Flat Serrated	DH2	1.00	138-6542	4J-9058 (9)*	2J-3507 (9)		
					1.00	109-3116	4J-9058 (9)*	2J-3507 (9)		
	45.0 mm (1.75 in)	2.436 m (8 ft)	Flat	DH2	0.75	128-2577	4F-7827 (17)*	2J-3506 (17)		
					0.75	134-1778	4F-7827 (17)*	2J-3506 (17)		
		60.0 mm (2.38 in)	1.219 m (4 ft)	Flat	DH2	1.00	132-1019	4J-9058 (9)*	2J-3507 (9)	
						1.00	132-4753	4J-9058 (9)*	2J-3507 (9)	
406 mm (16.00 in)	28.0 mm (1.18 in)	1.219 m (4 ft)	Flat	DH2	1.00	135-9690	4J-9058 (9)*	2J-3507 (9)		
			Flat	DH2	1.00	138-6440	4J-9058 (9)*	2J-3507 (9)		
	60.0 mm (2.38 in)	1.219 m (4 ft)	Flat	DH2	1.00	135-9349	4J-9058 (9)*	2J-3507 (9)		
			Flat Serrated	DH2	1.00	135-9796	4J-9058 (9)*	2J-3507 (9)		
					1.00	135-9576	4J-9058 (9)*	2J-3507 (9)		
	75.0 mm (3.00 in)	Flat Serrated	DH2	1.00	135-9797	4J-9058 (9)*	2J-3507 (9)			

Ground Engaging Tools

\* For a 14G Motor Grader, use 5J-4773 bolts.  
 For a 16G Motor Grader with a 16 ft. blade, use 5F-8933 bolts.  
 For a 16G Motor Grader without a 16 ft. blade, use 5J-4771 bolts.  
 For a 24H Motor Grader, use 1J-3527 bolts for the last five bolts on each end of the edge.

Moldboard End Bits

Ground Engaging Tools



- Designed to protect the end of the moldboard from wear and damage.
- For use in all applications.
- For machines equipped with a power blade arrangement, please refer to the Machine CAM parts book for the applicable moldboard end bits.

Model	Serial Number	Moldboard End Bit (2) Required	Bolts	Nuts
12, 12G	12 (All), 12G (61M1-11715)	7D-2052	3F-5108 (5)	4K-0367 (5)
12G	61M11716-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
12H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
14	All	7D-2083/4	3F-5108 (5)	4K-0367 (5)
14G	96U1-7324	9J-4405/6	4F-7827 (4)	2J-3506 (4)
	96U7325-UP	8E-5529	5J-4773 (5)	2J-3506 (5)
14H	All	8E-5529	5J-4773 (5)	2J-3506 (5)
16	All	9J-4407/8	3F-5108 (4)	4K-0367 (4)
16G	93U1-2777	9D-4880/1	4F-7827 (4)	2J-3506 (4)
	93U2778-UP	8E-5530	1J-6762 (5)*	2J-3506 (5)
16H	All	8E-5530	1J-6762 (5)*	2J-3506 (5)
24H	All	109-3118	1J-3527 (6)	2J-3507 (6)
112	All	7D-2052	3F-5108 (5)	4K-0367 (5)
120	87V1-6134	7D-2052	3F-5108 (5)	4K-0367 (5)
120G	87V6135-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
120H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
130	74V1-2292	7D-2052	3F-5108 (5)	4K-0367 (5)
130G	74V2293-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
135H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
140	72V1-9828	7D-2052	3F-5108 (5)	4K-0367 (5)
140G	72V9829-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
140H (Blades using 3/4 bolts)	All with 112-4520 and 112-4521 Blade Groups	8E-5529	5J-4773 (5)	4K-0367 (5)
140H (Blades using 1/2 bolts)	All with 8X-8011 and 8X-8016 Blade Groups	8E-5531	3F-5108 (5)	2J-3506 (5)
143H (Blades using 3/4 bolts)	All with 112-4520 and 112-4521 Blade Groups	8E-5529	5J-4773 (5)	4K-0367 (5)
143H (Blades using 1/2 bolts)	All with 8X-8011 and 8X-8016 Blade Groups	8E-5531	3F-5108 (5)	2J-3506 (5)
				4K-0367 (5)
160H, 163H	All	8E-5529	5J-4773 (5)	2J-3506 (5)
212	All	9J-4411	3F-5108 (4)	4K-0367 (4)

\* Use the larger 5F-8933 bolt when rear moldboard reinforcing plates are used.

Overlay End Bits

- Designed to protect the ends of the cutting edge from excessive wear.
- Curved overlay end bits can be rotated 180° and used on the other end of the moldboard for a second wear life.
- For use on machines used for ditching where cutting edges wear fastest on the outer corners.



Ground Engaging Tools

Model	Serial Number	Edge Width	Edge Type	Overlay End Bit		Bolts	Nuts
				(lh)	(rh)		
12, 12G	61M1-11715	152 mm (6.00 in)	Curved		6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat*	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
12G	61M11716-UP	121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
12H		121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
14	early models	203 mm (8.00 in)	Curved		7D-5583	1J-6762 (5)	2J-3506 (5)
	later models	203 mm (8.00 in)	Flat*	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
14G	96U1-7324	203 mm (8.00 in)	Curved		7D-9999	1J-6762 (5)	2J-3506 (5)
	96U7325-UP	203 mm (8.00 in)	Curved		6Y-2805	1J-6762 (5)	2J-3506 (5)
14H		203 mm (8.00 in)	Curved		6Y-2805	1J-6762 (5)	2J-3506 (5)
16	early models	152 mm (6.00 in)	Curved		7D-5582	1J-6762 (5)	2J-3506 (5)
		203 mm (8.00 in)	Curved		7D-5193	4F-3658 (5)	4K-0367 (5)
16G	93U1-2777	203 mm (8.00 in)	Curved		7D-9999	1J-6762 (5)	2J-3506 (5)
	93U2778-UP	203 mm (8.00 in)	Curved		6Y-2805	1J-6762 (5)	2J-3506 (5)
120, 120G	87V1-6135	152 mm (6.00 in)	Curved		6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat*	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
120G	87V6135-UP	121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
120H		121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
130, 130G	74V1-2292	152 mm (6.00 in)	Curved		6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat*	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
130G	74V2293-UP	121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
135H		121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)

\* Flat overlay end bits must be used with flat edges.

\*\* Applicable for blade group numbers 8X-8011 and 8X-8016.

+ Applicable for blade group numbers 112-4520 and 112-4521.



Overlay End Bits

Ground Engaging Tools

Model	Serial Number	Edge Width	Edge Type	Overlay End Bit		Bolts	Nuts
				(lh)	(rh)		
140, 140G	72V1-9828	152 mm (6.00 in)	Curved		6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat*	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
140G	72V9829-UP	152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
140H**, 143H**		121 mm (4.75 in)	Curved		135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved		9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved		9W-1768	4F-3658 (5)	4K-0367 (5)
140H+, 143H+		203 mm (8.00 in)	Curved		6Y-2805	1J-6762 (5)	2J-3506 (5)
160H, 163H		203 mm (8.00 in)	Curved		6Y-2805	1J-6762 (5)	2J-3506 (5)

\* Flat overlay end bits must be used with flat edges.

\*\* Applicable for blade group numbers 8X-8011 and 8X-8016.

+ Applicable for blade group numbers 112-4520 and 112-4521.

Reducer Bushings

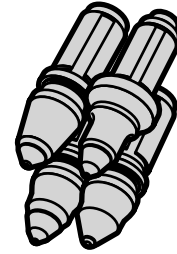
- For moldboards with 3/4 inch bolt holes.

Part Number	Moldboard Thickness
280-4070	7/8 in
280-4071	1 in

NOTE: M Series Grader Moldboards are all 3/4 inch hole size (exception: 24M).

**Profiler/Road Reclaimer**

- Caterpillar cutter bits are designed for optimum performance in a variety of materials.
- Proprietary carbide tips provide longer life and lower operational costs.



Item	Part Number		
<b>Blocks/Holders</b>			
Holder – Breakaway Reclaimer (3/4")	6R-3927		
Holder – Dual Bit Stabilizer (1")	113-0313		
Holder – Heavy Duty Breakaway Cold Planer/Reclaimer (3/4")	151-9941		
Holder – Heavy Duty Weld-On Cold Planer (3/4")	113-0328		
Holder – Quick Change (7/8")	117-3887		
Holder – Standard Weld-On Reclaimer (3/4")	7R-6187		
Holder – Weld-On Cold Planer (3/4")	9U-9617		
Holder – Weld-On Reclaimer/Stabilizer (7/8")	117-4076		
Mounting Block (For use with Weld-On Holders)	8T-4084		
Mounting Block – Breakaway (For use with 6R-3927 Holder)	6R-3926		
Mounting Block – Heavy Duty Breakaway (For use with 151-9941 Holder)	169-1412		
Mounting Block – Standard Reclaimer (For use with 7R-6187 Holder)	077-2848		
Holder – Quick Change (For use with 077-4018/077-2820)	107-3343		
<b>Soil Stabilizer Tools</b>			
Chopper Tools – Carbide Face		077-7343	077-4727
Chopper Tools – Hardened Steel		077-2775	077-2776
Quick Change Tools – Carbide Face	077-4018		
Quick Change Tools – Hardened Steel	077-2820		
Quick Change Tools – Holder	077-2807		
Straight Tool	077-2774		
Straight Tool Holder	077-2789		
<b>Cutter Bits</b>			
Asphalt Bit – Low Horse Power (3/4" Shank)	222-7571	222-7578	
Asphalt Bit – Heavy Duty (3/4" Shank)	140-2864	144-1238	
Asphalt Bit – Heavy Duty – Washered (3/4" Shank)	222-7570	222-7579	
Asphalt Bit – Full Bodied – Washered (3/4" Shank)	238-3191	238-3182	
Asphalt Bit (3/4" Shank)	350-7198	350-7199	
Asphalt Bit – Washered (3/4" Shank)	222-7570	222-7579	
Asphalt Bit – Washered (3/4" Shank)	316-2326	316-2327	
Asphalt Bit – Washered (3/4" Shank)	349-4945	349-4947	
Asphalt Bit – Washered (3/4" Shank)	349-4944	349-4946	
Asphalt and Concrete Bit (3/4" Shank)	351-2677	351-2678	
Concrete Bit – Low Horse Power (3/4" Shank)	227-7340		
Concrete Bit (3/4" Shank)	149-5763	144-1236	
Concrete Bit (3/4" Shank)	375-7681	376-2346	
Asphalt and Soil Stabilizer Bit (7/8" Shank)	117-3884	342-1302	
Asphalt and Soil Stabilizer Bit – Carbide Face (7/8" Shank)	117-3885		
Soil Stabilizer Bit (7/8" Shank)	195-7244		
Soil Stabilizer Bit (7/8" Shank)	316-6084	342-1304	
Stabilizer Bit (1" Shank for use with 113-0313 Dual Holder)	113-0312		
Washer – Hardened	8C-1856		
<b>Specialty Tools</b>			
Installation/Removal Tool	8T-4474		
Punch	104-8591		

## Large Rippers

For large rippers, there are two types of tips available — centerline and penetration. Both types of tips have a center rib for strength and sharpness, in addition to being forged from DH-3 steel for added strength and wear resistance. Available in several lengths to meet various applications.

**Centerline Ripper Tips**

- Offers good penetration and more wear material.
- Can be flipped for maximum performance.

**Penetration Ripper Tips**

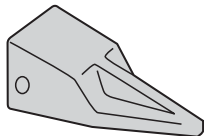
- Offer better initial penetration.
- Penetration tips should be installed with the rib up.

**ARM Ripper Tips**

- Offers increased wear life, and enhanced penetration and productivity.
- ARM Ripper Tips should not be used in severe impact conditions.

**Sharp Tips**

- Enhanced initial penetration in hard to penetrate materials like limestone and caliche applications.



Model	Centerline			ARM Centerline Intermediate	Penetration			ARM Penetration Intermediate	Sharp Limestone	Sharp Centerline ARM
	Long	Intermediate	Short		Long	Intermediate	Short			
D8L, D8, D8N D8R, D8K, D8T	114-0453	9W-2452	9W-2451	8E-5770		4T-5452	4T-5451	8E-5771		
D9, D9N, D9H D9R MS, D9T MS	114-0453	9W-2452	9W-2451	8E-5770		4T-5452	4T-5451	8E-5771		
D9L, D9R SS*, D9T SS	8E-8503	4T-4502	4T-4501	8E-5774	4T-5503	4T-5502	4T-5501	8E-5772	159-0377	201-3502
D10, D10N, D10R D10T	8E-8503	4T-4502	4T-4501	8E-5774	4T-5503	4T-5502	4T-5501	8E-5772	159-0377	201-3502
D11 MS	8E-8503	4T-4502	4T-4501	8E-5774	4T-5503	4T-5502	4T-5501	8E-5772	159-0377	201-3502
D11 SS		9W-4552	9W-4551	122-2552		6Y-3552		135-9552		

\* Applicable for serial numbers 8BL1000-UP and 7TL753-UP.

MS – Multi-Shank

SS – Single Shank

**Shank Protectors and Pin/Retainers**

Model	Shank Protector			Counterbored Ripper Shank				Non-Counterbored Pin Assy.
				Non-reusable		Reusable		
	Standard	Sharp	Extended	Pin	Ret. Assy.	Pin	Retainer	
D8, D8N, D8R, D8L	6J-8814	8E-1848	132-4716			6Y-3394	8E-4743	4T-2479+ 6J-8814++
D9, D9N, D9R, D9H	6J-8814	8E-1848	132-4716			6Y-3394	8E-4743	4T-2479+ 6J-8814++
D9L (1 pin protector)		6Y-9704						102-9062
D9L (2 pin protector) D9R SS*, D9T SS		9W-8365	132-1014	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D10, D10R SS, D10T SS, D10T MS		6Y-8960	132-1015	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D10R MS, D10N		9W-8365	132-1014	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D11 MS		6Y-8960	132-1015	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D11 SS		9N-4621	132-1016	9N-4245	6Y-1205	8E-2229	8E-2230	6Y-2443
D10 (1 pin protector)	3G-9514	6Y-9704						102-9062

\* Applicable for serial numbers 8BL1000-UP and 7TL753-UP.

+ Top protector hole.

++ Lower protector hole.

MS – Multi-Shank

SS – Single Shank

Ground Engaging Tools

**Shank Repair/Conversion Parts**

Model	Adapter	Nose
D8L, D8, D8N, D8R, D8K	8E-8418	9U-9694
D9, D9N, D9R, D9H	8E-8418	9U-9694
D9L (1 pin protector)	1U-3630	103-8114
D9L, D9R HD (2 pin protector)	103-8115	107-3361
D10 (1 pin protector)	1U-3630	103-8114
D10 (2 pin protector)	103-8115	107-3361
D11 MS (1 pin protector)	1U-3630	103-8114
D11 MS (2 pin protector)	103-8115	107-3361
D11 SS	104-9279	

MS – Multi-Shank

SS – Single Shank

## Small Rippers and Scarifiers

For small rippers and scarifiers, there are two types of tips available — centerline and penetration. Both types of tips have a center rib for strength and sharpness, in addition to being forged from DH-3 steel for added strength and wear resistance. Available in several lengths to meet various applications.

### Centerline Ripper Tips

- Offers good penetration and more wear material.
- Can be flipped for maximum performance.

### Penetration Ripper Tips

- Offers better initial penetration.
- Penetration tips should be installed with the rib up.



## Sharp Ripper Tips

Model	Centerline Long	Penetration Long	Sharp	Arm	Pin	Retainer
No. 3, 931, 933, 939, D4C, D5C 135H, 120H	1U-3202*	1U-3209*	9W-8209		8E-6208	8E-6209
No. 4, 963, 955, 951, 941, 12, 14, 130, 140, 143H, 160H, 163, D5M, D5N	6Y-0352	6Y-0309	9W-7309	168-1309	136-8308	114-0359
943, 953, D3G, D4G, D5G		9J-4259*	9W-8259		132-4763	149-5733
No. 5, No. 6, 963, 973, 977, 983, No. 7, 16, 24H, D6M, D6N, D6R, D7R	6Y-0352	6Y-0359		159-0355 Centerline 159-0356 Penetration	114-0358	114-0359

\* DH-2 Steel.

## Replacement Parts for Scarifiers

Components	V-Block (Rear Notched)	V-Block (Front Notched)	Straight Block (Rear Notched)	No. 6 (Non-Current)
Shank				
Standard	5B-0947	195-7218	195-7219	6K-5704*
Long		7D-4501		
Tips				
General Purpose (DH-2)	195-7234*	195-7234*	195-7234*	
High Temperature (DH-3)	6Y-5230**	6Y-5230**	6Y-5230**	5K-0450*
High Abrasion (ARM)	143-3074**	143-3074**	143-3074**	143-3074**

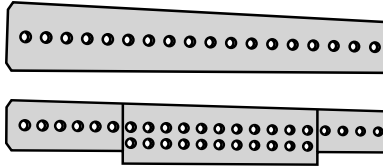
\* Uses DH-2 Steel.

\*\* Use 6B-3260 tool for driving scarifier tips off shanks.

Scraper Cutting Edges

There's a complete line of scraper cutting edges, providing the right combination of edge thickness and arrangement to match practically any job condition.

All edges are rolled from DH-2 steel and through-hardened for strength and wear resistance. Two types are available:



**Level Cut Arrangement**

- For finish work or very high impact conditions where stinger breakage is a problem.

**Stinger Arrangement**

- The standard configuration of cutting edge on most scrapers. Provides good penetration and efficient flow of material into the bowl.

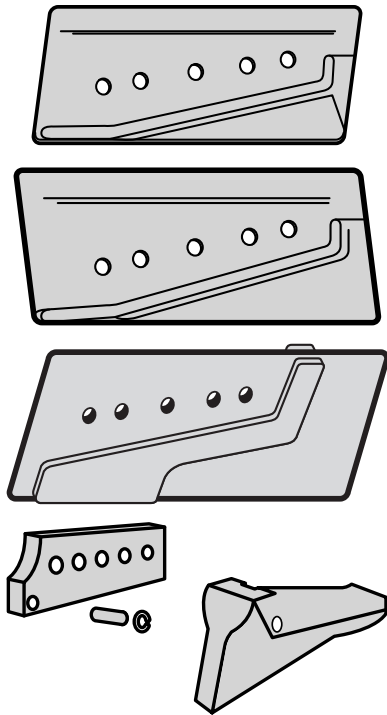
Model	Thickness	Stinger Arrangement		Changes for Level Cut		Bolts	Nuts
		Center	Ends	Center	Ends		
613, 613C	22 mm (0.88 in)	4T-6611	4T-6613 (2)		b	4F-7827 (15)	2J-3506 (15)
615 (46Z1-1342, 47Z1-1339)	22 mm (0.88 in)	7T-5104	7T-5105 (2)		b	5J-2409 (13)	2J-3505 (13)
	22 mm (0.88 in)	9W-5807	9W-5810		9W-5806 (2)	4J-9058 (17)	2J-3507 (17)
621B, 621E, 621F, 627B, 627E, 627F	22 mm (0.88 in)	4T-6568	4T-6612 (2)	a		3J-2801 (14)	2J-3507 (14)
	28 mm (1.12 in)	4T-2896	4T-6380 (2)		4T-2894 (2)	3J-2801 (14)	2J-3507 (14)
623B, 623E, 623F, J619, J621	22 mm (0.88 in)	4T-2887	4T-6612 (2)	4T-6620		4F-4042 (20)	2J-3507 (20)
	28 mm (1.12 in)	4T-2895	4T-6380 (2)	a		4F-4042 (20)	2J-3507 (20)
631D, 631E, 637D, 637E	22 mm (0.88 in)	4T-6566	4T-6614 (2)	a		4F-4042 (16)	2J-3507 (16)
	28 mm (1.12 in)	4T-3444	4T-6378 (2)	a		4F-4042 (16)	2J-3507 (16)
	35 mm (1.38 in)	9J-4369	9W-6092 (2)		7J-0225 (2)	4F-4042 (16)	2J-3507 (16)
	41 mm (1.62 in)	9J-5899	7J-2959 (2)	a		4F-4042 (16)	2J-3507 (16)
633D, 639	28 mm (1.12 in)	4T-3428	4T-2899 (2)	a		4F-4042 (17)	2J-3507 (17)
	35 mm (1.38 in)	9J-1111	9J-1109 (2)	a		4F-4042 (17)	2J-3507 (17)
651B, 657B	35 mm (1.38 in)	7J-1551	7J-0225 (2)	7J-0226		4J-9058 (34)	2J-3507 (17)
	41 mm (1.62 in)	7J-2977	7J-2978 (2)	7J-2981		4J-9058 (34)	2J-3507 (17)
651E (88Z146-UP)	35 mm (1.38 in)	9W-4901	9W-4902	a		4J-9058 (48)	2J-3507 (48)
	35 mm (1.38 in)	9W-4505	9W-4399 (2)	a		6V-6535 (29)*	3K-9770 (29)
	41 mm (1.62 in)	9W-4394	9W-4509 (2)	a		6V-6535 (29)*	3K-9770 (29)
	45 mm (1.75 in)	9W-9701	9W-9702	a		4J-9058 (48)	2J-3507 (48)
651F, 657F	35 mm (1.38 in)	9W-4901	9W-4902	a		4J-9058 (48)	2J-3507 (48)
	45 mm (1.75 in)	9W-9701	9W-9702	a		4J-9058 (48)	2J-3507 (48)
657E (86Z241-UP, 6MB91-UP)	35 mm (1.38 in)	9W-4901	9W-4902	a		4J-9058 (48)	2J-3507 (48)
	35 mm (1.38 in)	9W-4505	9W-4399 (2)	a		6V-6535 (29)*	3K-9770 (29)
	41 mm (1.62 in)	9W-4394	9W-4509 (2)	a		6V-6535 (29)*	3K-9770 (29)
	45 mm (1.75 in)	9W-9701	9W-9702	a		4J-9058 (48)	2J-3507 (48)

a – Reposition center section.

b – Reposition end sections.

\* Requires 4K-0684.

## Router Bits



Router Bits are used on all scrapers to protect the lower corners of the bowl. They are made of DH-2 steel and through-hardened for extra strength and wear resistance. Three types are available:

**Standard Router Bits**

- Recommended for most applications. Reversible for added life and value.

**Heavy Duty Router Bits**

- Have 45% more wear material than standard router bits and are reversible. To avoid possible damage to the bowl, they should not be used in high impact conditions.

**Level Cut Bits**

- Level cut end bits are used for clean-up or finishing type work with elevating scrapers. They clean-up windrows by extending further forward to keep material in front of the center cutting edge.

**Quick Change Router Bits**

- Designed to reduce downtime in abrasive conditions. Pinned onto supports which bolt to the bowl.

Model	Std.	Heavy Duty	Level Cut	Quick-Change				Bolts	Nuts	Washers
				Support	Bit	Pin	Retain.			
613, 613B	9F-1831*							a	4K-0367 (3)	
613C	4T-4336	9W-4903**						8S-9092 (3)	4K-0367 (3)	5P-8247 (3)
615, 621, 623, 627	4J-8665							1D-4637 (5)	2J-3507 (5)	5P-8250 (5)
615, 621, 623, 627			220-9150					1D-4709 (5)	2J-3507 (5)	
631, 633, 637	4J-8665	7J-3023++		4T-0051	4T-0054	4T-0055	1U-2405	4F-4042 (5)	2J-3507 (5)	5P-8250 (5)
631, 633, 637			220-9150					1D-4709 (5)	2J-3507 (5)	
639, 651B, 657B	4J-8665	7J-3023++		4T-0051	4T-0054	4T-0055	1U-2405	4F-4042 (5)	2J-3507 (5)	5P-8250 (5)
639, 651B, 657B			220-9150					1D-4709 (5)	2J-3507 (5)	
651E (88Z146-UP)		7J-3023		4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
651E (88Z146-UP)			220-9150					1D-4709 (5)	2J-3507 (5)	
651E (88Z1-145)	4T-0668			4T-1512	4T-1514	8E-6358	8E-6359	5P-8823 (5)+	3K-9770 (5)	4K-0684 (5)
651E (88Z1-145)			220-9150					1D-4709 (5)	2J-3507 (5)	
651F, 657F		7J-3023		4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
651F, 657F			220-9150					1D-4709 (5)	2J-3507 (5)	
657E (86Z241-UP, 6MB91-UP)		7J-3023		4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
657E (86Z241-UP, 6MB91-UP)			220-9150					1D-4709 (5)	2J-3507 (5)	
657E (86Z1-240, 6MB1-90)	4T-0668			4T-1512	4T-1514	8E-6358	8E-6359	5P-8823 (5)+	3K-9770 (5)	4K-0684 (5)
657E (86Z1-240, 6MB1-90)			220-9150					1D-4709 (5)	2J-3507 (5)	

a – 613 and 613B require one 1B-4367 bolt and two 8S-9092 bolts per router bit.

\* 9J-4414 (LH) and 9J-4413 (RH) end bits are also available for finishing and cleaning operations.

\*\* Clean up or two position router bit.

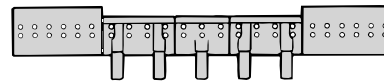
+ Uses 6V-6535 bolts rather than 5P-8823 with quick-change.

++ Uses 4J-9058 bolts.



## Integrated Tooth Cutting Edges

- Improves penetration in compacted soils.
- Consists of three center edge sections with cast-in adapters and two standard end sections.
- Replaceable tips provide low operating costs in abrasive conditions.



Model	Center Tooth Edge	End Tooth Edge	Cutting Edge Ends	Bolts	Nuts
623	1U-1901 (1)	1U-1902 (2)	4T-6612 (2)	3J-2801 (10)* 4F-4042 (20)	2J-3507 (30)
633, 639	9J-1108 (1)	9J-1107 (2)	9J-1109 (2)**	4F-4042 (34)	2J-3507 (34)

\* For use on 4T-6612 Cutting Edge (5 per end).

\*\* Applicable for serial number 19W only. For serial number 86H, use 8J-3137 (2) cutting edge ends.

## Integrated Tooth Cutting Edge Tips

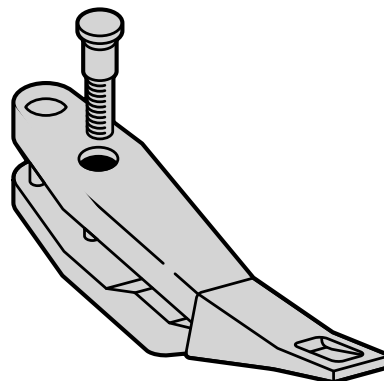
Model	Number of Teeth	Short	Long	Penetration	Wide	Sharp	Heavy Duty Long	Heavy Duty Abrasion	Pin	Retainer Assembly
623	5	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
633, 639	5	1U-3351	1U-3352	9J-4359	107-3350	9W-2359	9N-4352	9N-4353	8E-6358	8E-6359

## Bolt-On Adapters

- Improves penetration in compacted soils.
- Provides an easily replaceable tooth option for machines that change applications frequently and may not need teeth on all jobs.
- Installs over the center section in the stinger configuration.

Model	Adapter	Bolts	Nuts	Washers
613	9J-8455	5F-8933 (2)	2J-3506 (2)	
615 (47Z1-1339)	4T-5805	1J-0849 (2)	2J-3505 (2)	
615 (47Z1340-UP)	9J-2307	1J-3527 (2)	2J-3507 (2)	5P-8250 (2)
J619, J621, 623, 633, 639	9W-9971*	1J-4947 (2)	2J-3507 (2)	5P-8250 (2)

\* Recommended for use only with 9W-9972 notched center edge. Use 8J-3137 end edges with 86H models. Use 9J-1109 end edges with 19W models.



**Bolt-On Adapter Tips**

Model	Number of Teeth	Short	Long	Penetration	Wide	Sharp	Heavy Duty Long	Heavy Duty Abrasion	Pin	Retainer Assembly
613	4	1U-3251	1U-3252	9J-4259	107-3300	9W-8309	9N-4252	9N-4253	8E-6258	8E-6259
615 (47Z1-1339)	5	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
615 (47Z1340-UP)	4	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
J619, J621, 623, 633, 639	5	1U-3351	1U-3352	9J-4359	107-3350	9W-2359	9N-4352	9N-4353	8E-6358	8E-6359

**ARM Cutting Edges**

In addition to our standard cutting edges, your dealer now has a full line of ARM Cutting Edges for Scrapers. These include ARM Center C/E, ARM End Edge, ARM Router Bits, and ARM Serrated Center C/E.

**Bowlside Protector — Pin-On**

Model	Protector	Qty.	Pin	Qty.	Retainer	Qty.	Adapter Plate	Qty.
620, 630 650 Series	8J-4143	2	9J-8441	4	8E-5559	4	152-0034	2

**Bowlside Protector — Bolt-On**

Model	Protector	Qty.	Bolt	Qty.	Nut	Qty.	Adapter Plate	Qty.
620, 630 650 Series	232-0048	2	1J-4948	8	2J-3507	8	232-0049	2

Elevating Scraper Parts

Model	613	613B	613C	615	615C	615D	615G
Chain Assembly			2T-0104	2T-0072 239-8147	308-0325 2T-0072 2T-3038 239-8147	8I-2435	216-6925
61 Link Assembly	2T-0104	2T-0104					
80 Link Assembly	9J-0115	9J-0115					
Link Assembly —							
Outside (with pins)	2T-1133	2T-1133	2T-1133	2T-0290	2T-0290		8J-7675
Inside	2T-1134	2T-1134	2T-1134	2T-0075	2T-0075		3G-3392
Offset (with pin)	2T-0076	2T-0076	2T-0076	2T-0076	2T-0076		3G-3393
Flight	2T-1136	2T-1136	2T-1136	2T-0073	2T-0073		8J-7672
Lock Pin	2T-1137	2T-1137	2T-1137	2T-1137	2T-1137	6J-8873	6J-8873
Link Pin	2T-1138	2T-1138	2T-1138	2T-1609	2T-1609		8J-7791
Roller	2T-3963	2T-3963	2T-3963		5J-3708		5J-3708
Bushing					216-6927		216-6927
Flight Link		6J-0560					
Flight Assembly	2T-0679 2T-3883 8J-4174	2T-0679 2T-3883 8J-4174	2T-0679	2T-3893	2T-3893	8I-2113	217-9042
Sprocket	2T-2623 9J-1653	2T-2744 9J-1653	2T-0704 2T-2623	2T-0249 2T-2259	316-4419 2T-0249 2T-2259	8I-2192	216-6900
Idler Group			2T-3964				
Small					2T-0046		
Medium					2T-0047		
Large					2T-0048		
Roller Group					215-4459		215-4459
Idler					2T-0242		2T-0242

Ground Engaging Tools

(Continued)

## Elevating Scraper Parts (Continued)

Model	623	623B	623E	623F	623G	631B	633
Chain Assembly	2T-3038	3G-3391	3G-3391 2T-3038	2T-3038	2T-3038 308-0325		
Link Assembly —							
Outside (with pins)		8J-7675	8J-7675		8J-7675		
Inside	3G-3392		3G-3392		3G-3392	6J-0556	8J-0556
Offset (with pin)	3G-3393	3G-3393	3G-3393		3G-3393		6J-3621
Flight	8J-7672	8J-7672	8J-7672		8J-7672		
Lock Pin	6J-8873	6J-8873	6J-8873	6J-8873	6J-8873		6J-8873
Link Pin	8J-7791	8J-7791	8J-7791		8J-7791	6J-0557	6J-0557
Roller	5J-3708	5J-3708	5J-3708		5J-3708	7J-4320	7J-4320
Bushing	216-6927	216-6927	216-6927		216-6927		
Flight Link							6J-0560
Flight Assembly	2T-3883	8J-7122	8J-7122 2T-3883	2T-3883	2T-3883		
Sprocket	2T-2891	8J-6544	2T-2891 8J-6544	2T-2891	2T-2891 316-4419	7J-9382	7J-9382
Idler Group	3G-0960		2T-0046 3G-1086				
Upper			3G-0960				
Small		2T-0046					
Medium		3G-0960					
Large		3G-1086					
Roller Group		8J-6562	8J-6562		215-4459		
Idler		8J-6561	8J-6561			7J-1384	7J-1384

Ground Engaging Tools

(Continued)

**Elevating Scraper Parts (Continued)**

Model	633B	633C	633D	633E	639D	639E	J619
Chain Assembly			8J-3059	2T-3762	9J-9920	9J-9920	
Link Assembly —							
Outside (with pins)							8J-7675
Inside	6J-0556		8J-3221	6J-0556 8J-3221	8J-3221	8J-3221	3G-3392
Offset (with pin)							5J-3710
Offset (without pin)			8J-4340	8J-4340	8J-4340	8J-4340	
Flight							9J-5187
Lock Pin	6J-8873		6J-0555	6J-0555	6J-0555	6J-0555	6J-8873
Link Pin	6J-0557	6J-0557	8J-3217	8J-3217	8J-3217	8J-3217	8J-7791
Roller	7J-4320		7J-4320 7J-7507	7J-4320 7J-7507	7J-4320 7J-7507	7J-4320 7J-7507	5J-3708
Bushing							216-6927
Flat Link —							
Sidebar Link			8J-3218 8J-3219	8J-3218 8J-3219	8J-3218 8J-3219	8J-3218 8J-3219	
Flight Link —	6J-0560	6J-0560					
Outside Link			8J-3220	8J-3220	8J-3220	8J-3220	
Inside Link			8J-3222	8J-3222	8J-3222	8J-3222	
Flight Assembly			9J-1587	8I-1272	9J-1587	9J-1587	
Sprocket	7J-9382		7J-9382	7J-9382	7J-9382	7J-9382	6J-5070
Idler Group			9J-1035	9J-1035	9J-1035	9J-1035	
Roller Assembly			7J-1184	7J-1184	7J-1184	7J-1184	
Idler Assembly			9J-1513	9J-1513	9J-1513	9J-1513	
Roller Group				2T-3972 2T-3973 8I-1643			
Idler		7J-1384	7J-1384				

Ground Engaging Tools

(Continued)

## Elevating Scraper Parts (Continued)

Model	J621	950
Chain Assembly	3G-5327	
Link Assembly —		
Outside (with pins)	8J-7675	
Inside	3G-3392	
Flight	8J-7672	
Lock Pin	6J-8873	8J-2746
Link Pin	8J-7791	8J-2743
Roller	5J-3708	
Bushing	216-6927	
Sprocket	6J-5070	

## Elevating Scraper Parts Kits

Model	613C	615, 615C	623E, 623F, 623G
<b>To receive all Part Kit quantities, order Part Kit number in bold.</b>			
Parts Kit	<b>217-4880 (1)</b>	<b>217-4882 (1)</b>	<b>217-4884 (1)</b>
Components:			
Chain Assembly	2T-0104 (2)	2T-0072 (2)	2T-3038 (2)
Sprockets	2T-2623 (2)	2T-0249 (2)	2T-2891 (2)
Bolts	1A-8537 (16)	0S-1756 (8) 3B-2968 (8)	0S-1756 (16)
Nuts	4K-0367 (16)	2J-3506 (16)	2J-3506 (16)
Washers	5P-8247 (16)	5P-8248 (16)	5P-8248 (32)
Bolts	0S-1603 (120)	0S-1576 (144)	0S-1576 (120)
Nuts	6B-6684 (120)	6B-6683 (144)	6B-6683 (120)
Washers	5P-8245 (240)	5P-8247 (288)	5P-8247 (240)
Parts Kit	<b>217-4881* (1)</b>	<b>217-4883* (1)</b>	<b>217-4885* (1)</b>
Components:			
Flight Assembly	2T-0679 (15)	2T-3893 (18)	2T-3883 (15)

\* NOTE: Hardware not included. Hardware for flight assemblies included in appropriate chain and sprocket kits listed above.

**Plastic Auger Groups — Models: 621F, 621G, 627F, 627G**

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
108-0424	Wear Plate	6			
108-0423	Liner — Upper	1	Washer	146-5795	94*
			Plug	146-5796	94*
108-0421	Liner — Middle	4			
108-0418	Liner — Lower	1			
108-0413	Shoe — Tungsten Carbide	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0412	Shoe — Nickel	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0410	Shoe — Std.	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76

\* Washer, Plug and Total Quantity apply to all Liners.

**Plastic Auger Groups — Models: 631E, 631G, 637E, 637G**

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
150-2658	Wear Plate	8			
150-2661	Liner	1	Washer	146-5795	46*
			Plug	146-5796	46*
108-0431	Liner — Upper	1			
108-0430	Liner — Middle	3			
108-0427	Liner — Lower	1			
150-2663	Shoe — Std.	52	Bolt — Plow	4F-3654	104
			Nut — Full	7X-0448	104
150-2665	Shoe — Nickel Alloy	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

\* Washer, Plug and Total Quantity apply to all Liners.

**Plastic Auger Groups — Models: 651E, 657E**

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	2J-3507	3
150-2658	Wear Plate	8			
1Q-6649	Liner — Lower	1	Washer	146-5795	69*
			Plug	146-5796	69*
1Q-6654	Liner — Plastic	2			
1Q-6656	Liner — Plastic	2			
150-2663	Shoe — Std.	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2665	Shoe — Nickel	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

\* Washer, Plug and Total Quantity apply to all Liners.

NOTE: **Difference between Plastic and Steel Augers:** Steel Augers use multiple steel wear plates.



## Steel Auger Groups — Models: 621F, 621G, 629F, 629G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
108-0424	Wear Plate	37			
108-0420	Liner — Top	1	Washer	146-5795	34*
			Plug	146-5796	34*
108-0419	Liner — Middle	1			
108-0418	Liner — Lower	1			
108-0413	Shoe — Tungsten Carbide	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0412	Shoe — Nickel Alloy	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0410	Shoe — Std.	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76

\* Washer, Plug and Total Quantity apply to all Liners.

## Steel Auger Groups — Models: 631E, 631G, 637E, 637G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
150-2628	Wear Plate	42			
108-0429	Liner — Top	1	Washer	146-5795	46*
			Plug	146-5796	46*
108-0428	Liner — Middle	4			
108-0427	Liner — Lower	1			
150-2663	Shoe — Std.	52	Bolt — Plow	4F-3654	104
			Nut — Full	7X-0448	104
150-2665	Shoe — Nickel Alloy	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

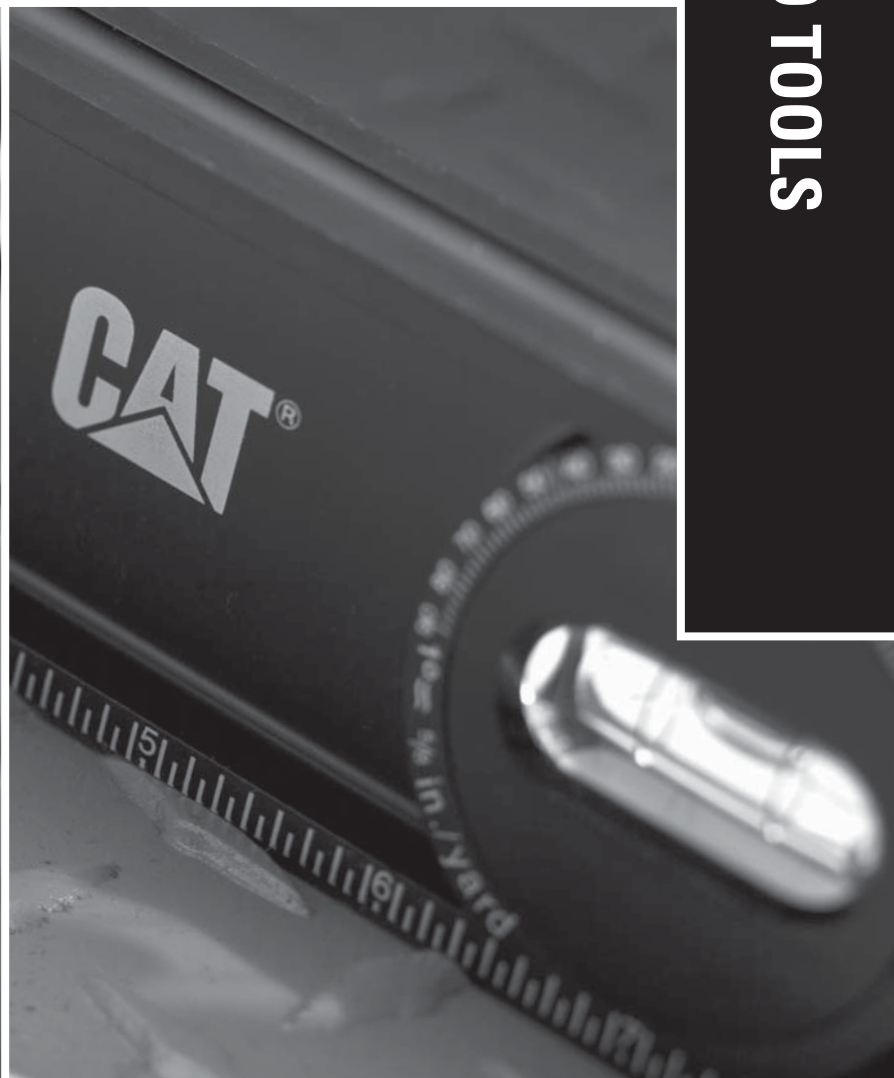
\* Washer, Plug and Total Quantity apply to all Liners.

## Steel Auger Groups — Models: 651E, 657E

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	2J-3507	3
150-2658	Wear Plate	47			
10-6649	Liner — Lower	1	Washer	146-5795	46*
			Plug	146-5796	46*
10-6653	Liner — Plastic	4			
150-2663	Shoe — Std.	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2665	Shoe — Nickel	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

\* Washer, Plug and Total Quantity apply to all Liners.

NOTE: **Difference between Plastic and Steel Augers:** Steel Augers use multiple steel wear plates.



**HAND TOOLS**

## Tool Storage Units — Roller and Side Cabinets

Warranty: Manufacturer, Lifetime



- Uniweld modular design increases the durability of cabinets
- Full suspension ball bearing drawers
- 400-pound capacity drawers
- Drawer interior customization (partitions and dividers provided)
- Drawer inserts provided
- 30- and 45-inch roller cabinets have 6 inch, heavy duty, 900-pound-capacity casters
- 60-inch roller cabinet has spring loaded 6 inch, heavy duty, 1,200-pound capacity casters
- For the 45- and 60-inch cabinets, drawer bank widths are 20 and 27 inches
- Sturdy locking mechanism included with roller cabinets
- Accessories: hardwood tops, stainless steel tops, side cabinets
- Black is the standard color, and it is available for immediate shipping. Yellow, Red, and Blue are optional colors and require 3-4 weeks lead time.
- For any questions regarding repair or replacement of parts, please contact the sales department: 800-523-9462 extension: 33944 (Canada & US only) or 610-776-3979 or dklase@stanleyworks.com

Hand Tools

Part Number	Description	Color	Width	Depth	Height	Weight	Load Capacity
<b>30 inch, 7 Drawer Roller Cabinets:</b>							
292-2359	30 inch Roller Cabinet	Black	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3,600 lb)
292-2363	30 inch Roller Cabinet	Red	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3,600 lb)
292-2364	30 inch Roller Cabinet	Blue	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3,600 lb)
312-6483	30 inch Roller Cabinet	Yellow	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3,600 lb)
<b>45 inch, 14 Drawer Roller Cabinets:</b>							
292-2365	45 inch Roller Cabinet	Black	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3,600 lb)
292-2366	45 inch Roller Cabinet	Red	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3,600 lb)
292-2367	45 inch Roller Cabinet <sup>1</sup>	Blue	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3,600 lb)
312-6485	45 inch Roller Cabinet	Yellow	114.3 cm (45 in)	70.5 cm (27.76 in)	109.2 cm (42.99 in)	327 kg (720 lb)	1632.93 kg (3,600 lb)
<b>60 inch, 13 Drawer Roller Cabinets:</b>							
292-2368	60 inch Roller Cabinet	Black	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4,800 lb)
292-2369	60 inch Roller Cabinet	Red	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4,800 lb)
292-2370	60 inch Roller Cabinet	Blue	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4,800 lb)
312-6486	60 inch Roller Cabinet	Yellow	152.4 cm (60 in)	70.5 cm (27.76 in)	109.2 cm (42.99 in)	372 kg (820 lb)	2177.24 kg (4,800 lb)

(Continued)

**Tool Storage Units — Roller and Side Cabinets (Continued)**

Warranty: Manufacturer, Lifetime

Part Number	Description	Color	Width	Depth	Height	Weight	Load Capacity
<b>Side Cabinets for 45 and 60 Inch Cabinets:</b>							
292-2371	Side Cabinet	Black	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.36 kg (100 lb)
292-2372	Side Cabinet	Red	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.35 kg (100 lb)
292-2373	Side Cabinet	Blue	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.35 kg (100 lb)
<b>Roller Cabinet Accessories:</b>							
292-2380	Hardwood Top for the 45 in Cabinets	--	114.3 cm (45 in)	71.2 cm (28.04 in)	3.3 cm (1.30 in)	--	--
292-2381	Stainless Steel Top for the 45 in Cabinets	--	114.3 cm (45 in)	71.2 cm (28.04 in)	3.8 cm (1.50 in)	--	--
292-2422	Hardwood Top for the 60 in Cabinets	--	152.4 cm (60 in)	71.2 cm (28.04 in)	3.3 cm (1.30 in)	--	--
292-2423	Stainless Steel Top for the 60 in Cabinets	--	152.4 cm (60 in)	71.2 cm (28.04 in)	3.8 cm (1.50 in)	--	--

<sup>1</sup>Warranty: Six Months

**Tool Storage Units — Chests and Roller Cabinets**

Warranty: Lifetime unless otherwise noted

- 40 inch and 26 inch top chests have a top compartment — gas spring in 40 inch top chest and slide lock on 26 inch top chest allow top compartment to open easily
- Double-wall steel construction provides strength and durability to support loaded drawers so they stay level
- Full length stiffener under the cover is welded to sides of the cover to provide the strongest top cover available and to minimize racking
- Extra deep drawer pulls give more finger room (almost 1 inch) to comfortably pull the drawer
- Rolled edges on drawers add strength, rigidity, and safety
- Ball-bearing slides provide extra weight support with smooth, one-hand operation
- Ergonomic handle design provides comfortable gripping and ease of maneuvering
- Gussets on corners improve cabinet strength so the cabinet stays square
- Drawer liners included
- Caster plates and weldnuts keep casters tight for smooth rolling — caster screws pass through double thick steel plates and pre-threaded weldnuts

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension: 6168 (Canada & US only) or 262-656-5200 extension: 6168.



Hand Tools

(Continued)

# Tool Boxes

## Tool Storage Units — Chests and Roller Cabinets (Continued)

Warranty: Lifetime unless otherwise noted

Part Number	Description	Width	Depth	Height	Cubic cm (in)	Weight	Load Capacity
<b>26 inch Cabinets</b>							
313-1489	26 Inch Top Chest, 4 Drawers <sup>1</sup>	678.7 mm (26.7 in)	503.2 mm (19.8 in)	492.2 mm (19.4 in)	101 352 cm (6,180 in)	54 kg (119 lb)	--
313-1490	26 inch Roller Cabinet, 7 Drawers <sup>2</sup>	678.7 mm (26.7 in)	503.2 mm (19.8 in)	950.9 mm (37 in)	150 880 cm (9,200 in)	83 kg (183 lb)	508 kg (1,120 lb)
313-1491	26 inch Combo (Roller Cabinet and Top chest) <sup>3,1</sup>	--	--	--	--	--	--
<b>40 inch Cabinets</b>							
313-1492	40 inch Top Chest <sup>1</sup>	101.6 cm (40 in)	50.29 cm (19.8 in)	49.28 cm (19.4 in)	161 080.8 cm (9,822 in)	83.54 kg (184 lb)	--
313-1493	40 inch Roller Cabinet 7 Drawers <sup>1</sup>	101.6 cm (40 in)	50.29 cm (19.8 in)	102.62 cm (40.4 in)	270 878.8 cm (16,517 in)	127.12 kg (280 lb)	508.48 kg (1,120 lb)
313-1494	40 inch Combo (Roller Cabinet and Top Chest) <sup>3,4</sup>	--	--	--	--	--	--
<b>Accessories: Covers — black with Cat logo printed in yellow and white on the front of the cover</b>							
223-3832	Cover for the 76.2 cm (30 in) combo top chest and roller cabinet	--	--	--	--	--	--
223-3833	Cover for the 101.6 cm (40 in) combo top chest and roller cabinet	--	--	--	--	--	--
223-3834	Cover for the 134.62 cm (53 in) combo top chest and roller cabinet	--	--	--	--	--	--
<b>Accessories: Organizing Foam</b>							
246-7948	Organizing Foam for 214-6146 30 inch Combo for 222-7876 Student Tool Set <sup>2</sup>	--	--	--	--	--	--
246-7950	Organizing Foam for 214-6149 40 inch Combo for 222-7876 Student Tool Set <sup>2</sup>	--	--	--	--	--	--
<b>Accessories: Work Surfaces</b>							
223-3835	Laminated Press Board Top for the 76.2 cm (30 in) roller cabinet	76.2 cm (30 in)	50.80 cm (20 in)	0.97 cm (0.38 in)	--	--	--
223-3836	Laminated Press Board Top for the 101.6 cm (40 in) roller cabinet	101.6 cm (40 in)	50.80 cm (20 in)	0.97 cm (0.38 in)	--	--	--

<sup>1</sup>Warranty: Manufacturer, Lifetime

<sup>2</sup>Warranty: Six Months

<sup>3</sup>Combo part numbers available for sale only in North and South America

<sup>4</sup>Warranty: Manufacturer, 90 Day

Hand Tools



**Chest — 325-1133**

Warranty: Manufacturer, Lifetime

- 6 drawer, drop front tool chest

	Drawers	Width	Depth	Height
325-1133 Chest	Overall (6 drawers)	66.0 cm (26 in)	30.5 cm (12 in)	36.8 cm (14.5 in)
Drawer	3	17.8 cm (7 in)	26.7 cm (10.5 in)	5.1 cm (2 in)
	2	58.4 cm (23 in)	26.7 cm (10.5 in)	5.1 cm (2 in)
	1	58.4 cm (23 in)	26.7 cm (10.5 in)	6.4 cm (2.5 in)
Tray		52.7 cm (20.75 in)	21 cm (8.25 in)	5.1 cm (2 in)

Part Number	Description	Shipping Weight	Color
325-1133	Chest Tool Box	26 kg (57 lb)	Red



**Tool Box — 9U-6219**

Warranty: Manufacturer, Lifetime

- Black, steel construction
- Tote tray included

Part Number	Description	Length	Width	Height	Material
9U-6219	Tool Box	508 mm (20 in)	219.08 mm (8.63 in)	219.08 mm (8.63 in)	Steel



**Plastic Tool Box — 202-8643**

Warranty: Manufacturer, 60 Day

- Plastic, water-tight container (will not rust or scratch like metal boxes)

Part Number	Description	Dimension	Tool Box Capacity	Color
202-8643	Tool Box (plastic)	514.4 × 212.7 × 225.4 mm (20.25 × 8.37 × 8.87 in)	9 kg (20 lb)	Gray



Hand Tools

**Hand Tool Set — 256-4816**

Warranty: See individual part number

- Used for routine maintenance and adjustment
- Flat top tool box provides adequate storage for all tools in this group
- Using proper tools reduces downtime

Part Number	Description	Size
256-4816	Hand Tool Set <sup>1</sup>	--
<b>Hand Tool Group Consists of:</b>		
185-3630	Filter Strap Wrench <sup>1</sup>	--
194-3565	Socket	30 mm, ½ in Drive, 12 Pt.
199-6154	Socket (½ in Drive)	24 mm, ½ in Drive, 12 Pt.
1U-7563	Hex Wrench, 4 mm	4 mm
1U-7564	Hex Wrench, 5 mm	5 mm
1U-7565	Allen Key	6 mm
1U-7566	Hex Wrench	8 mm
1U-7567	Hex Wrench	10 mm
1U-7569	Hex Wrench	14 mm
1U-7585	Hex Wrench	⅝ in
200-1929	Metric Hex Key Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm
213-6926	Impact Socket (½ in Drive)	10.0 mm, ½ in Drive, 6 Pt.
213-6927	Impact Socket (½ in Drive)	11.0 mm, ½ in Drive, 6 Pt.
213-6929	Impact Socket (½ in Drive)	13.0 mm, ½ in Drive, 6 Pt.
214-7223	Combination Wrench	36.0 mm

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
214-7322	Adjustable Wrench	8 in
214-7324	Torx® Bit Set	--
214-7329	Open End Wrench	41.0 mm
239-6826	Reversible Ratchet	½ in
256-4879	Torx Wrench, T50	--
6V-7932	Standard Screwdriver	⅜ in tip, 342.1 mm (13.47 in) long
6V-9096	Wrench	16.0 mm
6V-9098	Wrench	18.0 mm
6V-9099	Wrench	19.0 mm
6V-9101	Combination Wrench	21.0 mm
6V-9102	Combination Wrench	22.0 mm
6V-9103	Combination Wrench	24.0 mm
6V-9104	Combination Wrench	30.0 mm
6V-9111	Socket (½ in Drive)	16.0 mm, ½ in Drive, 12 Pt.
6V-9113	Socket (½ in Drive)	18.0 mm, ½ in Drive, 12 Pt.
6V-9116	Socket (½ in Drive)	22.0 mm, ½ in Drive, 12 Pt.
8F-9866	Grease Gun Assembly <sup>1</sup>	--
8H-8577	Ball Peen Hammer <sup>1</sup>	2 lb, 1 ¼ in
9S-1732	Extension – 127 mm (5.0 in) long (½ in Drive)	½ in Drive, 127 mm (5.0 in) long
9U-6219	Tool Box	--
9U-7968	Pry Bar <sup>2</sup>	--

<sup>1</sup>Warranty: Six Months

<sup>2</sup>Warranty: Lifetime



**Fractional Combination Wrench Set, Standard Length, 11 Piece — 4C-9600**

Warranty: Lifetime

- Polished chrome finish
- 271-4700 Wrench Gripper Rack available

Size	Part Number	Description	Length
--	4C-9600	Combination Wrench Set, Standard Length	--
<b>Combination Wrench Set, Standard Length, Consists of:</b>			
3/8 in	4C-9592	Combination Wrench	165.1 mm (6.50 in)
7/16 in	4C-9593	Combination Wrench	184.2 mm (7.25 in)
1/2 in	4C-9594	Wrench, 1/2 in (low idle adjustment)	204 mm (8.03 in)
9/16 in	4C-9595	Combination Wrench	222.3 mm (8.75 in)
5/8 in	4C-9596	Combination Wrench	241.3 mm (9.50 in)
11/16 in	4C-9597	Combination Wrench	260.4 mm (10.25 in)
3/4 in	4C-9598	Combination Wrench	280.2 mm (11.03 in)
13/16 in	4C-9599	Combination Wrench	299.2 mm (11.78 in)
7/8 in	4C-9601	Combination Wrench	318.3 mm (12.53 in)
15/16 in	4C-9602	Combination Wrench (2)	338.1 mm (13.31 in)
1 in	4C-9603	Combination Wrench	357.1 mm (14.06 in)
<b>Wrench Gripper Rack:</b>			
--	271-4700	Wrench Gripper Rack	--



**Metric Combination Wrench Set, 14 Piece — 1U-5545**

Warranty: Lifetime

- Metric, 6.0 mm through 19.0 mm
- Polished chrome finish
- Includes storage pouch

Size	Part Number	Description	Length
--	1U-5545	Combination Wrench Set	--
<b>Combination Wrench Set Consists of:</b>			
6.0 mm	1U-5546	Wrench	113 mm (4.45 in)
7.0 mm	1U-5547	Wrench	118 mm (4.65 in)
8.0 mm	1U-5548	Wrench, 8 mm (high idle adjustment)	123 mm (4.84 in)
9.0 mm	1U-5549	Wrench	159 mm (6.26 in)
10.0 mm	6V-9090	Wrench	171 mm (6.73 in)
11.0 mm	6V-9091	Wrench	184 mm (7.24 in)
12.0 mm	6V-9092	Wrench	195 mm (7.68 in)
13.0 mm	6V-9093	Wrench	207 mm (8.15 in)
14.0 mm	6V-9094	Wrench	219 mm (8.62 in)
15.0 mm	6V-9095	Wrench	233 mm (9.17 in)
16.0 mm	6V-9096	Wrench	242 mm (9.53 in)
17.0 mm	6V-9097	Wrench	256 mm (10.08 in)
18.0 mm	6V-9098	Wrench	267 mm (10.51 in)
19.0 mm	6V-9099	Wrench	280 mm (11.02 in)



**Fractional Ratcheting Wrench Set, 8 piece — 248-8810**

Warranty: Lifetime



- Dual pawl ratcheting box end
- 15 degrees offset box head
- Box ends are reversible
- Durable nickel chrome finish

Part Number	Description	Size	Length
248-8810	Fractional Ratcheting Wrench Set	--	--
<b>Fractional Ratcheting Wrench Set Consists of:</b>			
248-8811	Ratcheting Wrench	5/16 in	135 mm (5 5/16 in)
248-8812	Ratcheting Wrench	3/8 in	160 mm (6 5/16 in)
248-8813	Ratcheting Wrench	7/16 in	170 mm (6 11/16 in)
248-8814	Ratcheting Wrench	1/2 in	180 mm (7 1/16 in)
248-8815	Ratcheting Wrench	9/16 in	190 mm (7 1/2 in)
248-8816	Ratcheting Wrench	5/8 in	210 mm (8 1/4 in)
248-8817	Ratcheting Wrench	11/16 in	230 mm (9 1/16 in)
248-8818	Ratcheting Wrench	3/4 in	250 mm (9 13/16 in)

**Metric Ratcheting Wrench Set, 12 piece — 248-8819**

Warranty: Lifetime



- Dual pawl ratcheting box end
- 15° offset box head
- Box ends are reversible
- Durable nickel chrome finish

Size	Part Number	Description	Length
--	248-8819	Ratcheting Wrench Set	--
<b>Metric Ratcheting Wrench Set Consists of:</b>			
14.0 mm	248-8827	Ratcheting Wrench	190.0 mm (7.5 in)
15.0 mm	248-8828	Ratcheting Wrench	200.0 mm (7.9 in)
16.0 mm	248-8829	Ratcheting Wrench	210.0 mm (8.3 in)
17.0 mm	248-8830	Ratcheting Wrench	230.0 mm (9.1 in)
18.0 mm	248-8831	Ratcheting Wrench	240.0 mm (9.4 in)
19.0 mm	248-8832	Ratcheting Wrench	250.0 mm (9.8 in)
8.0 mm	248-8820	Ratcheting Wrench	135.0 mm (5.5 in)
9.0 mm	248-8822	Ratcheting Wrench	150.0 mm (5.9 in)
10.0 mm	248-8823	Ratcheting Wrench	160.0 mm (6.3 in)
11.0 mm	248-8824	Ratcheting Wrench	170.0 mm (6.7 in)
12.0 mm	248-8825	Ratcheting Wrench	175.0 mm (6.9 in)
13.0 mm	248-8826	Ratcheting Wrench	180.0 mm (7.1 in)

**Angle Wrench Set, 30° and 60° Offset, 14 Piece — 1P-3515**

Warranty: Lifetime

- Offset wrenches allow the use of one wrench in four different positions to gain additional turning angles.

Part Number	Description	Size	Length
1P-3515	Angle Wrench Set	--	--
<b>Angle Wrench Set Consists of:</b>			
1P-3501	Angle Wrench	3/8 in	122.9 mm (4.84 in)
1P-3502	Angle Wrench	7/16 in	137.4 mm (5.41 in)
1P-3503	Angle Wrench	1/2 in	151.6 mm (5.97 in)
1P-3504	Angle Wrench	9/16 in	166.6 mm (6.56 in)
1P-3505	Angle Wrench	5/8 in	180.8 mm (7.12 in)
1P-3506	Angle Wrench	11/16 in	197.6 mm (7.78 in)
1P-3507	Angle Wrench	3/4 in	210.3 mm (8.28 in)
1P-3508	Angle Wrench	13/16 in	225.6 mm (8.88 in)
1P-3509	Angle Wrench	7/8 in	239.8 mm (9.44 in)
1P-3510	Angle Wrench	15/16 in	254 mm (10 in)
1P-3511	Angle Wrench	1 in	269 mm (10.59 in)
1P-3512	Angle Wrench	1 1/16 in	283.5 mm (11.16 in)
1P-3513	Angle Wrench	1 1/8 in	298.5 mm (11.75 in)
1P-3514	Angle Wrench	1 1/4 in	327.2 mm (12.88 in)
<b>Optional Wrenches (not included in set)</b>			
127-2277	Angle Wrench	1 3/8 in	356.6 mm (14.04 in)
127-2278	Angle Wrench	1 1/2 in	385.8 mm (15.19 in)
127-2279	Angle Wrench	1 5/8 in	415 mm (16.34 in)
127-2280	Angle Wrench	1 7/8 in	473.2 mm (18.63 in)



**Adjustable Wrenches**

Warranty: See individual part number



Part Number	Jaw Range	Length	Finish
214-7322	24.0 mm (0.94 in) <sup>1</sup>	203.2 mm (8 in)	Black Oxide
214-7323	29.0 mm (1.13 in) <sup>2</sup>	254 mm (10 in)	Black Oxide
214-7330	33.0 mm (1.31 in) <sup>1</sup>	304.8 mm (12 in)	Black Oxide
214-7332	42.0 mm (1.66 in) <sup>2</sup>	381 mm (15 in)	Black Oxide

<sup>1</sup>Warranty: Lifetime<sup>2</sup>Warranty: Six Months

**Aluminum Pipe Wrenches**

Warranty: Lifetime

- 10 inch through 24 inch
- 35% lighter than cast iron wrenches
- Heat treated titanium — aluminum alloy handle
- Forged hook jaw
- Heat-treated alloy steel parts interchangeable with iron wrenches

Item	Part Number	Description	Pipe Capacity	Length
1	4C-6974	Aluminum Wrench	14.0 mm - 63.0 mm (0.25 in - 2.00 in)	356 mm (14.02 in)
2	4C-6975	Aluminum Wrench	14.0 mm - 75.0 mm (0.25 in - 2.50 in)	457 mm (17.99 in)
3	4C-6976	Aluminum Wrench	14.0 mm - 90.0 mm (1.25 in - 3.00 in)	610 mm (24.02 in)
Not shown	4C-6973	Aluminum Wrench	10.0 mm - 48.0 mm (0.13 in - 1.50 in)	254 mm (10 in)



**Heavy-Duty Pipe Wrenches**

Warranty: Lifetime

- High-tensile ductile iron handle and hardened tool-steel parts
- Designed to withstand heavy demands

Part Number	Pipe Capacity	Length	Weight
4C-6962	10.0 mm - 48.0 mm (0.13 in - 1.50 in)	254.0 mm (10.00 in)	5.4 kg (12 lb)
4C-6963	10.0 mm - 60.0 mm (0.13 in - 2.00 in)	305.0 mm (12.00 in)	8.1 kg (18 lb)
4C-6964	14.0 mm - 63.0 mm (0.25 in - 2.00 in)	356.0 mm (14.00 in)	9.5 kg (21 lb)
4C-6965	14.0 mm - 75.0 mm (0.25 in - 2.50 in)	457.0 mm (18.00 in)	15.0 kg (33 lb)
4C-6972	14.0 mm - 90.0 mm (0.25 in - 3.00 in)	610.0 mm (24.00 in)	27.2 kg (60 lb)



Hand Tools

**Chain Wrench for Special Applications — 1U-8760**

Warranty: Cat® Standard Warranty, 6 Months



- Used for holding cylinders and other irregularly shaped objects — works for parts of most any size and shape
- Special head design for turning wrench in either direction
- Ratcheting action makes it possible to regrip without removal
- Chain wrench capacity: ½ inch to 4 ¾ inch O.D.

Part Number	Description	Size
1U-8760	Wrench for Special Applications	Chain wrench capacity: ½ in to 4 ¾ in O.D.

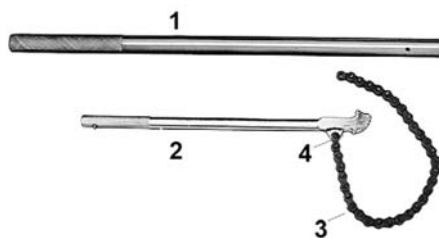
**Chain Wrench Group — 3P-1535**

SMCS Code: 4303-017, 5105-017, 5309-017, 5102-017

Model: 16G, 518, 613C, 615, 910

Warranty: Cat® Standard Warranty, 6 Months

- Used to remove and install threaded crown, which is used to retain head on later hydraulic cylinders
- General purpose tool that can be used in many applications



Item	Part Number	Description
--	3P-1535	Chain Wrench Group
<b>Group Consists of:</b>		
1	3P-1536	Handle
2	1U-8792	Chain Wrench Assembly, Handle Length 482.6 mm (19.0 in)
3	1U-8791	Chain — part of 1U-8792, 76.2 mm (3.0 in) O.D. Minimum and 171.5 mm (6.75 in) O.D. Maximum
4	3P-1537	Pin — part of 1U-8792

Hand Tools

**Filter Wrench — 187-2718**

SMCS Code: 5050-011

Various Models — including Skid Steer Loaders, Compact Wheel Loaders, and Mini-Hex Excavators

Warranty: Lifetime

- Used to remove spin-on oil and fuel filters
- Makes filter removal quick and easy
- Fits filter diameters between 88.9 to 98.6 mm (3.50 to 3.88 in)

Part Number	Description
187-2718	Filter Wrench



**Filter Strap Wrench — 185-3630**

SMCS Code: 0602

Marine Engines, Truck Engines, Industrial Engines, Generator Sets, Machine Engines

Warranty: Cat® Standard Warranty, 6 Months

- Provides quick, efficient service when removing or installing all spin-on type fuel and oil filters
- Capable of applying higher torques required on larger filters without denting filter can

Item	Part Number	Description
--	185-3630	Filter Strap Wrench <sup>1</sup>
<b>Assembly Consists of:</b>		
1	6H-7378	Retaining Ring
2	1P-0551	Spring Pin
3	2P-8253	Strap



<sup>1</sup>Warranty: Six Months

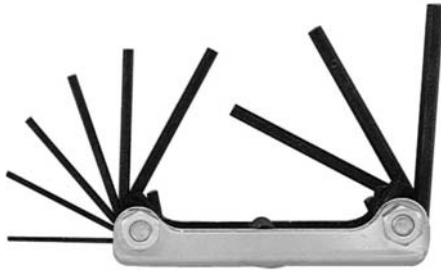
Hand Tools



**Fractional Hex Bit Set, 9 Piece — 9S-1742**

Warranty: Lifetime

- Black oxide finish
- 3 1/2 inch cadmium case



Part Number	Description	Length	Size
9S-1742	Hex Key Wrench Assembly	3 in bits	9 bits: 0.05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in

**Fractional "L" Shaped Hex Key Wrench Set, 13 Piece — 200-1928**

Warranty: Lifetime

- Cat® branded plastic holder included



Part Number	Description	Size
200-1928	Fractional Hex Key Set	0.05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in, 7/32 in, 1/4 in, 5/16 in and 3/8 in

**Fractional Hex Key Wrench Set with Ball End, 13 Piece — 293-3025**

Warranty: Lifetime

- Cat® branded plastic holder included



Part Number	Description	Size
293-3025	Fractional Hex Wrench Set	0.05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in, 7/32 in, 1/4 in, 5/16 in and 3/8 in

**Metric Hex Bit Set, 7 Piece — 200-1931**

Warranty: Lifetime

- Black oxide finish bits
- Chrome plated case



Part Number	Description	Length	Size
200-1931	Metric Hex Key Set	76.2 mm (3.0 in) long bits	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm

**Metric “L” Shaped Hex Key Wrench Set, 9 Piece — 200-1929**

Warranty: Lifetime

- Cat® branded plastic holder included

Part Number	Description	Size
200-1929	Metric Hex Key Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm



**Metric Hex Key Wrench Set with Ball End, 9 Piece — 293-3026**

Warranty: Lifetime

- Cat® branded plastic holder included

Part Number	Description	Size
293-3026	Metric Hex Wrench Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm



**Spark Plug Wrench — 2P-5481**

**1P-5559 Spark Plug Adapter Wrench**

SMCS Code: 1555-011

Model: 5.4 inch Bore Natural Gas Engines

Warranty: Lifetime



- Used to remove spark plugs and adapters on 5.4 inch Bore Natural Gas Engines (G342, G353, G379, G398)
- Especially useful because plugs and adapters are deeply recessed in top of engine
- 1P-5559 Wrench: Large end, 1.25 in; Small end, 0.75 in

Part Number	Description
1P-5559	Spark Plug Adapter Wrench
2P-5481	Spark Plug Wrench

**Fractional Socket Set, 17 Piece, 1/4 inch Drive — 213-4443**

Warranty: See individual part number

- 12 point
- 1/4 inch square drive
- Standard length sockets
- Chrome finish



Size	Length	Part Number	Description
--	--	213-4443	Socket Set <sup>1</sup>
<b>Socket Set Consists of:</b>			
3/16 in	22.2 mm (0.88 in)	9S-1711	Socket
7/32 in	22.2 mm (0.88 in)	9S-1712	Socket
1/4 in	22.2 mm (0.88 in)	9S-1713	Socket
9/32 in	22.2 mm (0.88 in)	9S-1714	Socket
5/16 in	22.2 mm (0.88 in)	9S-1715	Socket
11/32 in	22.2 mm (0.88 in)	9S-1716	Socket
3/8 in	22.2 mm (0.88 in)	9S-1717	Socket
7/16 in	22.2 mm (0.88 in)	9S-1718	Socket
1/2 in	22.2 mm (0.88 in)	9S-1719	Socket

Size	Length	Part Number	Description
<b>Accessories</b>			
1/4 in Female to 3/8 in male	--	213-4437	Socket Adapter
1/4 in	--	239-6823	Reversible Ratchet
3/8 in Female to 1/4 in male	--	261-0443	Socket Adapter
50.8 m (2.00 in)	--	9S-1720	Socket Extension
101.6 mm (4.00 in)	--	9S-1721	Extension
1/4 in	--	9S-1722	Socket Driver
1/4 in	--	9S-1724	Universal Joint
--	159.5 mm (6.28 in)	9S-1725	Case <sup>2</sup>

<sup>1</sup>Warranty: Lifetime

<sup>2</sup>Warranty: Manufacturer, 90 Day

**Fractional Socket Set, 11 Piece, 3/8 inch Drive — 9S-1746**

Warranty: Lifetime

- 12 point
- 3/8 inch square drive
- Chrome finish
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	9S-1746	Socket Set
<b>Sockets Set consists of:</b>			
3/8 in	23 mm (0.91 in)	8S-2274	Socket
7/16 in	23 mm (0.91 in)	8H-8567	Socket
1/2 in	23.8 mm (0.94 in)	8H-8568	Socket
9/16 in	24.6 mm (0.97 in)	8H-8569	Socket
5/8 in	26.2 mm (1.03 in)	8H-8570	Socket
11/16 in	27 mm (1.06 in)	9S-1728	Socket
3/4 in	27.8 mm (1.09 in)	8H-8571	Socket



Hand Tools

(Continued)

**Fractional Socket Set, 11 Piece,  $\frac{3}{8}$  inch Drive — 9S-1746 (Continued)**

Warranty: Lifetime

Size	Length	Part Number	Description
<b>Accessories Included</b>			
76.2 mm (3.00 in) long	76.2 mm (3 in)	8H-8574	Socket Extension
152.4 mm (6.00 in) long	152.4 mm (6 in)	8H-8575	Extension Assembly
$\frac{3}{8}$ in	187.5 mm (7.38 in)	239-6824	Reversible Ratchet, $\frac{3}{8}$ in Drive
$\frac{3}{8}$ in	447.5 mm (17.62 in)	8H-8573	Speeder Handle

**Fractional Socket Set, 16 Piece,  $\frac{1}{2}$  inch Drive — 9S-1748**

Warranty: Lifetime

- 12 point
- $\frac{1}{2}$  inch square drive
- Chrome finish
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	9S-1748	Socket Set
<b>Socket Set Consists of:</b>			
$\frac{1}{2}$ in	38.1 mm (1.50 in)	1S-0259	Socket
$\frac{9}{16}$ in	38.1 mm (1.50 in)	8H-8549	Socket
$\frac{5}{8}$ in	38.1 mm (1.50 in)	8H-8550	Socket
$\frac{11}{16}$ in	38.1 mm (1.50 in)	8H-8551	Socket
$\frac{3}{4}$ in	38.1 mm (1.50 in)	8H-8552	Socket
$\frac{13}{16}$ in	38.1 mm (1.50 in)	8H-8553	Socket
$\frac{7}{8}$ in	38.1 mm (1.50 in)	8H-8554	Socket
$\frac{15}{16}$ in	38.1 mm (1.50 in)	8H-8555	Socket
1 in	38.1 mm (1.50 in)	8H-8556	Socket, 1 in
$1 \frac{1}{16}$ in	41.3 mm (1.63 in)	9S-1729	Socket
$1 \frac{1}{8}$ in	44.5 mm (1.75 in)	9S-1730	Socket
$1 \frac{1}{4}$ in	47.6 mm (1.87 in)	9S-1731	Socket
<b>Accessories Included</b>			
$\frac{1}{2}$ in	381 mm (15 in)	239-6826	Reversible Ratchet
$\frac{1}{2}$ in	457.2 mm (18 in)	168-0383	Breaker Bar
$\frac{1}{2}$ in drive, 254.0 mm (10.00 in) long	279 mm (10.98 in)	8H-8559	Socket Extension
$\frac{1}{2}$ in drive, 127.0 mm (5.00 in) long	127 mm (5 in)	9S-1732	Extension – 127 mm (5.0 in) long ( $\frac{1}{2}$ in Drive)

**Fractional Socket Set, 21 Piece, 3/4 inch Drive — 9S-1749**

Warranty: Lifetime

- 12 point
- 3/4 inch drive
- Chrome finish
- Can be ordered by set or individually



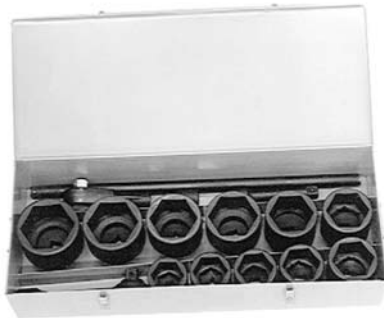
Size	Length	Part Number	Description
--	--	9S-1749	Socket Set
<b>Socket Set Consists of:</b>			
15/16 in	50.8 mm (2 in)	8H-8531	Socket
3/4 in	50.8 mm (2 in)	8H-8529	Socket
7/8 in	50.8 mm (2 in)	8H-8530	Socket
1 in	52.4 mm (2.06 in)	8H-8532	Socket
1 1/16 in	54 mm (2.13 in)	8H-8533	Socket
1 1/8 in	55.5 mm (2.19 in)	8H-8534	Socket
1 1/4 in	57.2 mm (2.25 in)	8H-8535	Socket
1 5/16 in	58.7 mm (2.31 in)	8H-8536	Socket
1 1/2 in	63.5 mm (2.50 in)	8H-8537	Socket
1 5/8 in	66.7 mm (2.63 in)	8H-8539	Socket
1 11/16 in	69.9 mm (2.75 in)	8H-8538	Socket

Size	Length	Part Number	Description
<b>Socket Set Consists of: (Continued)</b>			
1 3/4 in	69.9 mm (2.75 in)	8H-8540	Socket
1 7/8 in	79.4 mm (3.13 in)	8H-8541	Socket
2 in	79.4 mm (3.13 in)	8H-8542	Socket
2 1/4 in	82.6 mm (3.25 in)	8H-8504	Socket
2 1/8 in	82.6 mm (3.25 in)	8H-8543	Socket
2 3/16 in	82.6 mm (3.25 in)	8H-8544	Socket
<b>Accessories Included</b>			
3/4 in	93.6 mm (3.69 in)	8H-8546	Breaker Bar Head
203.2 mm (8.00 in) long	203.2 mm (8 in)	8H-8548	Socket Extension
--	489 mm (19.25 in)	162-8716	Ratchet Head Handle
3/4 in	--	160-6389	Reversible Ratchet Head <sup>1</sup>

<sup>1</sup> 160-6390 Repair Kit

**Fractional Heavy-Duty Socket Set, 17 Piece, 1 inch Drive — 5S-6093**

Warranty: See individual part number



- 6 point
- 1 inch square drive
- Black oxide finish
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	5S-6093	Socket Set <sup>1</sup>
<b>Heavy-Duty Socket Set Consists of:</b>			
2 3/8 in Hex	98.4 mm (3.87 in)	5S-6077	Socket
2 1/2 in <sup>2</sup>	104.8 mm (4.13 in)	5S-6078	Socket
2 5/8 in <sup>2</sup>	57.2 mm (2.25 in)	5S-6079	Socket
2 3/4 in <sup>2</sup>	114.3 mm (4.50 in)	5S-6080	Socket
3 1/8 in <sup>2</sup>	127 mm (5 in)	5S-6082	Socket
3 in <sup>2</sup>	123.8 mm (4.87 in)	5S-6081	Socket
3 1/4 in <sup>2</sup>	127 mm (5 in)	5S-6083	Socket
3 1/2 in <sup>2</sup>	133.4 mm (5.25 in)	5S-6084	Socket
3 5/8 in <sup>2</sup>	133.4 mm (5.25 in)	5S-6085	Socket
3 3/4 in <sup>2</sup>	136.5 mm (5.37 in)	5S-6086	Socket
4 in <sup>2</sup>	127 mm (5 in)	5S-6087	Socket
<b>Accessories Included</b>			
--	788.7 mm (31.05 in)	5S-6092	Tool Box <sup>3</sup>
--	--	5S-6088	Sledge Socket Wrench
--	--	161-3983	Ratchet Head <sup>4</sup>
--	736.6 mm (29 in)	5S-6089	Wrench Handle
203.2 mm (8.00 in)	203.2 mm (8 in)	5S-6076	Socket Extension
--	--	5S-6090	Sliding T Wrench Head

<sup>1</sup>Warranty: Lifetime<sup>2</sup>Chrome Finish<sup>3</sup>Warranty: Manufacturer, 90 Day<sup>4</sup>161-3985 Repair Kit (5S-6094 Repair Kit is available for former 5S-6091 Ratchet Head.)



**Metric Ratchet Set, 17 Piece, 1/4 inch Drive — 233-1642**

Warranty: Lifetime

- Socket contacts the fastener on the flats rather than on the corners, preventing rounding of the fastener and allowing for more torque to be applied
- Concentric or uniform wall thickness eliminates weak spots while allowing for a thin wall design for greater accessibility
- Creates positive engagement with the drive tool for a tight/slop-free driving system. Detents are located on all four inner walls ensuring positive engagement with the drive tool in any orientation.
- Hex and drive ends of the socket are countersunk or funnel-shaped, making engagement with the fastener or drive tool quicker and easier
- Nickel chrome plating provides a durable, corrosion resistant coating and a brilliant tool finish



Size	Length	Part Number	Description
--	--	233-1642	Metric Ratchet Set
<b>Metric Ratchet Set Consists of:</b>			
4.0 mm	22.2 mm (0.87 in)	200-8415	Socket (1/4 in Drive)
5.0 mm	22.2 mm (0.87 in)	200-8417	Socket (1/4 in Drive)
5.5 mm	22.2 mm (0.87 in)	200-8418	Socket (1/4 in Drive)
6.0 mm	22.2 mm (0.87 in)	200-8419	Socket (1/4 in Drive)
7.0 mm	22.2 mm (0.87 in)	200-8420	Socket (1/4 in Drive)
8.0 mm	22.2 mm (0.87 in)	200-8421	Socket (1/4 in Drive)
9.0 mm	22.2 mm (0.87 in)	200-8422	Socket (1/4 in Drive)

Size	Length	Part Number	Description
<b>Metric Ratchet Set Consists of: (Continued)</b>			
10.0 mm	22.2 mm (0.87 in)	200-8423	Socket (1/4 in Drive)
11.0 mm	22.2 mm (0.87 in)	200-8424	Socket (1/4 in Drive)
12.0 mm	22.2 mm (0.87 in)	200-8426	Socket (1/4 in Drive)
13.0 mm	22.2 mm (0.87 in)	200-8427	Socket (1/4 in Drive)
14.0 mm	22.2 mm (0.87 in)	200-8428	Socket (1/4 in Drive)
15.0 mm	23 mm (0.91 in)	200-8429	Socket (1/4 in Drive)
50.8 mm (2.00 in)	50.8 mm (2 in)	9S-1720	Socket Extension
101.6 mm (4.00 in)	101.6 mm (4 in)	9S-1721	Extension
1/4 in	--	9S-1724	Universal Joint
1/4 in	112.3 mm (4.42 in)	9U-6635	Ratchet

Hand Tools

**Ratchets**

Warranty: Lifetime except ratchet 214-7340



- Sealed heads protect internal components from outside environment which leads to longer product life and reduced maintenance, and prevents gear slippage
- Heads forged to exact tolerances for longer tool life and greater head strength
- High strength internal mechanism provides longer tool life
- Ergonomic handle reduces user fatigue and has a more comfortable grip
- Reverse lever can be shifted with one hand which saves time when the gear mechanism needs to be reversed in tight places
- Square drive is close to the end of the head, giving maximum accessibility to fasteners in restricted areas
- Nickel chrome plating provides a durable, corrosion resistant coating and a brilliant tool finish

Hand Tools

Part Number	Description	Size	Length	Smallest Working Arc	Repair Kit
239-6823	Reversible Ratchet	¼ in	112.3 mm (4.42 in)	12.0 Degrees	230-0812
239-6824	Reversible Ratchet, ¾ in Drive	¾ in	187.5 mm (7.38 in)	12.0 Degrees	230-0813
194-4944 <sup>1</sup>	Ratchet	¾ in	260.4 mm (10.25 in)	5.0 Degrees	--
239-6825	Ratchet (½ in Drive)	½ in	261.9 mm (10.31 in)	10.0 Degrees	214-7339
214-7340 <sup>2</sup>	Ratchet <sup>3</sup>	½ in	287.3 mm (11.31 in)	4.5 Degrees	214-7341
239-6826	Reversible Ratchet	½ in	381 mm (15 in)	10.0 Degrees	214-7339
263-3341 <sup>4</sup>	Ratchet	½ in	448.6 mm (17.66 in)	10.0 Degrees	214-7339
Repair Kits for Discontinued Ratchets					
8H-8557	Ratchet	--	--	--	4S-7326
5P-7443	Ratchet	--	--	--	5P-7444 (20 tooth gear) 5P-7445 (30 tooth gear)
9U-6635	Ratchet	--	112.3 mm (4.42 in)	--	9U-6636 (30 tooth gear)
9U-6637	Ratchet	--	--	--	9U-6638 (30 tooth gear)
9U-6639	Ratchet	--	--	--	9U-6640 (30 tooth gear)
214-7333	Flex Head Ratchet	--	--	--	214-7339

<sup>1</sup> Offset round swivel head

<sup>2</sup> Round head

<sup>3</sup> Warranty: Six Months

<sup>4</sup> Long flex handle

**Metric Socket Set, 12 Piece, 3/8 inch Drive — 194-3574**

Warranty: Lifetime

- 12 point
- 3/8 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	194-3574	3/8 Drive, 12 Point Metric Socket Set, 12-piece
<b>Socket Set Consists of:</b>			
8.0 mm	23 mm (0.91 in)	194-3480	Socket (3/8 in Drive)
9.0 mm	23 mm (0.91 in)	194-3483	Socket (3/8 in Drive)
10.0 mm	23 mm (0.91 in)	194-3488	Socket (3/8 in Drive)
11.0 mm	23 mm (0.91 in)	194-3490	Socket (3/8 in Drive)
12.0 mm	23.8 mm (0.94 in)	194-3492	Socket (3/8 in Drive)
13.0 mm	24.6 mm (0.97 in)	194-3494	Socket (3/8 in Drive)
14.0 mm	26.2 mm (1.03 in)	194-3495	Socket (3/8 in Drive)
15.0 mm	27 mm (1.06 in)	194-3496	Socket (3/8 in Drive)
16.0 mm	27.8 mm (1.09 in)	194-3497	Socket (3/8 in Drive)
17.0 mm	28.6 mm (1.13 in)	194-3498	Socket (3/8 in Drive)
18.0 mm	28.6 mm (1.13 in)	194-3499	Socket (3/8 in Drive)
19.0 mm	30.2 mm (1.19 in)	194-3500	Socket (3/8 in Drive)



Hand Tools

**Metric Socket Set, 13 Piece, 1/4 inch Drive — 200-8413**

Warranty: Lifetime



- 6 point
- 1/4 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips

Size	Length	Part Number	Description
--	--	200-8413	Metric Socket Set
<b>Socket Set Consists of:</b>			
4.0 mm	22.2 mm (0.87 in)	200-8415	Socket (1/4 in Drive)
5.0 mm	22.2 mm (0.87 in)	200-8417	Socket (1/4 in Drive)
5.5 mm	22.2 mm (0.87 in)	200-8418	Socket (1/4 in Drive)
6.0 mm	22.2 mm (0.87 in)	200-8419	Socket (1/4 in Drive)
7.0 mm	22.2 mm (0.87 in)	200-8420	Socket (1/4 in Drive)
8.0 mm	22.2 mm (0.87 in)	200-8421	Socket (1/4 in Drive)
9.0 mm	22.2 mm (0.87 in)	200-8422	Socket (1/4 in Drive)
10.0 mm	22.2 mm (0.87 in)	200-8423	Socket (1/4 in Drive)
11.0 mm	22.2 mm (0.87 in)	200-8424	Socket (1/4 in Drive)
12.0 mm	22.2 mm (0.87 in)	200-8426	Socket (1/4 in Drive)
13.0 mm	22.2 mm (0.87 in)	200-8427	Socket (1/4 in Drive)
14.0 mm	22.2 mm (0.87 in)	200-8428	Socket (1/4 in Drive)
15.0 mm	23 mm (0.91 in)	200-8429	Socket (1/4 in Drive)

**Fractional Socket Set, 11 Piece, 1/2 inch Drive — 214-1161**

Warranty: Lifetime

- 12 point
- 1/2 inch square drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	214-1161	Socket Set
<b>Socket Set Consists of:</b>			
1/2 in	82.6 mm (3.25 in)	214-1162	Socket
9/16 in	82.6 mm (3.25 in)	214-1163	Socket
5/8 in	82.6 mm (3.25 in)	214-1164	Socket
11/16 in	82.6 mm (3.25 in)	214-1165	Socket
3/4 in	82.6 mm (3.25 in)	214-1166	Socket
13/16 in	82.6 mm (3.25 in)	214-1167	Socket
7/8 in	82.6 mm (3.25 in)	214-1168	Socket
15/16 in	82.6 mm (3.25 in)	214-1169	Socket
1 in	82.6 mm (3.25 in)	214-1170	Socket
1 1/16 in	82.6 mm (3.25 in)	214-1171	Socket
1 1/8 in	82.6 mm (3.25 in)	214-1172	Socket

**Metric Socket Set, 13 Piece, 1/2 inch Drive — 199-6156**

Warranty: Lifetime

- 12 point
- 1/2 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	199-6156	Metric Socket Set
<b>Socket Set Consists of:</b>			
12.0 mm	38.1 mm (1.50 in)	199-6149	Socket (1/2 in Drive)
13.0 mm	38.1 mm (1.50 in)	199-6150	Socket (1/2 in Drive)
14.0 mm	38.1 mm (1.50 in)	8T-3041	Socket (1/2 in Drive)
15.0 mm	38.1 mm (1.50 in)	6V-9110	Socket (1/2 in Drive)
16.0 mm	38.1 mm (1.50 in)	6V-9111	Socket (1/2 in Drive)
17.0 mm	38.1 mm (1.50 in)	6V-9112	Socket (1/2 in Drive)
18.0 mm	38.1 mm (1.50 in)	6V-9113	Socket (1/2 in Drive)
19.0 mm	38.1 mm (1.50 in)	6V-9114	Socket (1/2 in Drive)
20.0 mm	38.1 mm (1.50 in)	199-6152	Socket (1/2 in Drive)
21.0 mm	38.1 mm (1.50 in)	6V-9115	Socket (1/2 in Drive)
22.0 mm	38.1 mm (1.50 in)	6V-9116	Socket (1/2 in Drive)
23.0 mm	38.1 mm (1.50 in)	199-6153	Socket (1/2 in Drive)
24.0 mm	38.8 mm (1.53 in)	199-6154	Socket (1/2 in Drive)

Hand Tools

**Fractional Impact Socket Set, 12 Piece, 3/8 inch Drive — 271-4600**

Warranty: Lifetime



- 6 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	271-4600	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
5/16 in	22.2 mm (0.87 in)	271-4601	Socket
3/8 in	23.8 mm (0.94 in)	271-4602	Socket
7/16 in	23.8 mm (0.94 in)	271-4603	Socket
1/2 in	23.8 mm (0.94 in)	271-4604	Socket
9/16 in	23.8 mm (0.94 in)	271-4605	Socket
5/8 in	23.8 mm (0.94 in)	271-4606	Socket
11/16 in	26.2 mm (1.03 in)	271-4607	Socket
3/4 in	26.2 mm (1.03 in)	271-4608	Socket
13/16 in	30.2 mm (1.19 in)	271-4609	Socket
7/8 in	32.5 mm (1.28 in)	271-4610	Socket
15/16 in	33.3 mm (1.31 in)	271-4611	Socket
1 in	25.4 mm (1 in)	271-4612	Socket

**Fractional Impact Socket Set, 7 Piece, 3/8 inch Drive — 271-4613**

Warranty: Lifetime



- 12 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	271-4613	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
3/8 in	22.2 mm (0.87 in)	271-4615	Socket
7/16 in	23.8 mm (0.94 in)	271-4616	Socket
1/2 in	23.8 mm (0.94 in)	271-4617	Socket
9/16 in	23.8 mm (0.94 in)	271-4618	Socket
5/8 in	23.8 mm (0.94 in)	271-4619	Socket
11/16 in	26.2 mm (1.03 in)	271-4620	Socket
3/4 in	26.2 mm (1.03 in)	271-4621	Socket

**Fractional Impact Socket Set, 12 Piece, 3/8 inch Drive — 271-4669**

Warranty: Lifetime

- 6 point
- 3/8 inch drive
- Deep length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	271-4669	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
5/16 in	54 mm (2.13 in)	271-4670	Socket
3/8 in	54 mm (2.13 in)	271-4671	Socket
7/16 in	54 mm (2.13 in)	271-4672	Socket
1/2 in	54 mm (2.13 in)	271-4673	Socket
9/16 in	60.3 mm (2.37 in)	271-4674	Socket
5/8 in	60.3 mm (2.37 in)	271-4675	Socket
11/16 in	74.6 mm (2.94 in)	271-4676	Socket
3/4 in	69.9 mm (2.75 in)	271-4677	Socket
13/16 in	69.9 mm (2.75 in)	271-4678	Socket
7/8 in	69.9 mm (2.75 in)	271-4679	Socket
15/16 in	69.9 mm (2.75 in)	271-4680	Socket
1 in	69.9 mm (2.75 in)	271-4681	Socket

**Metric Impact Socket Set, 14 Piece, 3/8 inch Drive — 271-4622**

Warranty: Lifetime

- 6 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	271-4622	Impact Socket Set
<b>Socket Set Consists of:</b>			
8.0 mm	23 mm (0.91 in)	271-4623	Socket (3/8 in Drive)
9.0 mm	23 mm (0.91 in)	271-4624	Socket (3/8 in Drive)
10.0 mm	23 mm (0.91 in)	271-4625	Socket (3/8 in Drive)
11.0 mm	23.8 mm (0.94 in)	271-4626	Socket (3/8 in Drive)
12.0 mm	23.8 mm (0.94 in)	271-4627	Socket (3/8 in Drive)
13.0 mm	24.6 mm (0.97 in)	271-4628	Socket (3/8 in Drive)
14.0 mm	27 mm (1.06 in)	271-4630	Socket (3/8 in Drive)

Size	Length	Part Number	Description
<b>Socket Set Consists of: (Continued)</b>			
15.0 mm	27 mm (1.06 in)	271-4631	Socket (3/8 in Drive)
16.0 mm	27.8 mm (1.09 in)	271-4632	Socket (3/8 in Drive)
17.0 mm	28.2 mm (1.11 in)	271-4633	Socket (3/8 in Drive)
18.0 mm	29 mm (1.14 in)	271-4634	Socket (3/8 in Drive)
19.0 mm	30.6 mm (1.20 in)	271-4635	Socket (3/8 in Drive)
21.0 mm	29.5 mm (1.16 in)	271-4636	Socket (3/8 in Drive)
24.0 mm	33 mm (1.30 in)	271-4637	Socket (3/8 in Drive)

Hand Tools



**Fractional Impact Socket Set, 11 Piece, 1/2 inch Drive — 213-3086**

Warranty: Lifetime



- 6 point
- 1/2 inch square drive
- Standard length sockets
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	213-3086	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
1/2 in	38.1 mm (1.50 in)	213-3087	Socket
9/16 in	38.1 mm (1.50 in)	213-3088	Socket
5/8 in	38.1 mm (1.50 in)	213-3089	Socket
11/16 in	38.1 mm (1.50 in)	213-3091	Socket

Size	Length	Part Number	Description
<b>Impact Socket Set Consists of: (Continued)</b>			
3/4 in	38.1 mm (1.50 in)	213-3094	Socket
13/16 in	38.1 mm (1.50 in)	213-3099	Socket
7/8 in	38.1 mm (1.50 in)	213-3102	Socket
15/16 in	44.5 mm (1.75 in)	213-3104	Socket
1 in	44.5 mm (1.75 in)	213-3107	Socket
1 1/16 in	50.8 mm (2 in)	213-3109	Socket
1 1/8 in	50.8 mm (2 in)	213-3110	Socket, 1 1/8 in

Hand Tools

**Fractional Impact Socket Set, 12 Piece, 1/2 inch Drive — 213-3515**

Warranty: Lifetime



- 6 point
- 1/2 inch square drive
- Deep length sockets
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	213-3515	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
7/16 in	82.6 mm (3.25 in)	213-3516	Socket
1/2 in	82.6 mm (3.25 in)	213-3517	Socket
9/16 in	82.6 mm (3.25 in)	213-3518	Socket
5/8 in	82.6 mm (3.25 in)	213-3520	Socket
11/16 in	82.6 mm (3.25 in)	213-3521	Socket

Size	Length	Part Number	Description
<b>Impact Socket Set Consists of: (Continued)</b>			
3/4 in	82.6 mm (3.25 in)	213-3522	Socket
13/16 in	82.6 mm (3.25 in)	213-3523	Socket
7/8 in	88.9 mm (3.50 in)	213-3524	Socket
15/16 in	88.9 mm (3.50 in)	213-3525	Socket
1 in	88.9 mm (3.50 in)	213-3526	Socket
1 1/16 in	88.9 mm (3.50 in)	213-3528	Socket
1 1/8 in	88.9 mm (3.50 in)	213-3530	Socket

**Metric Impact Socket Set, 12 Piece, 1/2 Inch Drive — 213-6923**

Warranty: Lifetime

- 6 point
- 1/2 inch drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	213-6923	Impact Socket Set
<b>Socket Set Consists of:</b>			
10.0 mm	38.1 mm (1.50 in)	213-6926	Impact Socket (1/2 in Drive)
11.0 mm	38.1 mm (1.50 in)	213-6927	Impact Socket (1/2 in Drive)
12.0 mm	38.1 mm (1.50 in)	213-6928	Impact Socket (1/2 in Drive)
13.0 mm	38.1 mm (1.50 in)	213-6929	Impact Socket (1/2 in Drive)
14.0 mm	38.1 mm (1.50 in)	213-6930	Impact Socket (1/2 in Drive)
15.0 mm	38.1 mm (1.50 in)	213-6932	Impact Socket (1/2 in Drive)
16.0 mm	38.1 mm (1.50 in)	213-6933	Impact Socket (1/2 in Drive)
17.0 mm	38.1 mm (1.50 in)	213-6934	Impact Socket (1/2 in Drive)
18.0 mm	38.1 mm (1.50 in)	213-6935	Impact Socket (1/2 in Drive)
19.0 mm	38.1 mm (1.50 in)	213-6936	Impact Socket (1/2 in Drive)
20.0 mm	38.1 mm (1.50 in)	213-6924	Impact Socket (1/2 in Drive)
21.0 mm	38.1 mm (1.50 in)	213-6937	Impact Socket (1/2 in Drive)

**Metric Impact Socket Set, 11 Piece, 1/2 inch Drive — 214-6643**

Warranty: Lifetime



- 6 point
- 1/2 inch drive
- Black oxide finish
- Deep length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	214-6643	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
10.0 mm	82.6 mm (3.25 in)	214-6644	Impact Socket (1/2 in Drive)
11.0 mm	82.6 mm (3.25 in)	214-6645	Impact Socket (1/2 in Drive)
12.0 mm	82.6 mm (3.25 in)	214-6646	Impact Socket (1/2 in Drive)
13.0 mm	82.6 mm (3.25 in)	214-6647	Impact Socket (1/2 in Drive)
14.0 mm	82.6 mm (3.25 in)	214-6648	Impact Socket (1/2 in Drive)
15.0 mm	82.6 mm (3.25 in)	214-6649	Impact Socket (1/2 in Drive)
16.0 mm	82.6 mm (3.25 in)	214-6650	Impact Socket (1/2 in Drive)
17.0 mm	82.6 mm (3.25 in)	214-6651	Impact Socket (1/2 in Drive)
18.0 mm	82.5 mm (3.25 in)	214-6652	Impact Socket (1/2 in Drive)
19.0 mm	82.6 mm (3.25 in)	214-6653	Impact Socket (1/2 in Drive)
20.0 mm	82.6 mm (3.25 in)	214-7346	Impact Socket (1/2 in Drive)

**Metric Impact Socket Set, 24 Piece, 3/4 inch Drive — 9U-6547**

Warranty: Lifetime

- 6 point
- 3/4 inch drive
- Black oxide finish
- Standard length impact sockets
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	9U-6547	Impact Socket Set
<b>Impact Socket Set Consists of:</b>			
17.0 mm	44.5 mm (1.75 in)	9U-6523	Impact Socket
19.0 mm	44.5 mm (1.75 in)	9U-6524	Impact Socket
20.0 mm	44.5 mm (1.75 in)	9U-6525	Impact Socket
21.0 mm	47.8 mm (1.88 in)	9U-6526	Impact Socket
22.0 mm	47.6 mm (1.87 in)	9U-6527	Impact Socket
23.0 mm	47.8 mm (1.88 in)	9U-6528	Impact Socket
24.0 mm	47.6 mm (1.87 in)	9U-6529	Impact Socket
26.0 mm	50.8 mm (2 in)	9U-6530	Impact Socket
27.0 mm	50.8 mm (2 in)	9U-6531	Impact Socket
28.0 mm	53.8 mm (2.12 in)	9U-6532	Impact Socket
30.0 mm	53.8 mm (2.12 in)	9U-6533	Impact Socket

Size	Length	Part Number	Description
<b>Impact Socket Set Consists of: (Continued)</b>			
31.0 mm	54 mm (2.13 in)	9U-6534	Impact Socket
32.0 mm	54 mm (2.13 in)	9U-6535	Impact Socket
33.0 mm	53.8 mm (2.12 in)	9U-6536	Impact Socket
34.0 mm	54 mm (2.13 in)	9U-6537	Impact Socket
35.0 mm	57.2 mm (2.25 in)	9U-6538	Impact Socket
36.0 mm	57.2 mm (2.25 in)	9U-6539	Impact Socket
38.0 mm	57.2 mm (2.25 in)	9U-6540	Impact Socket
40.0 mm	66.7 mm (2.63 in)	9U-6541	Impact Socket
41.0 mm	66.5 mm (2.62 in)	9U-6542	Impact Socket
42.0 mm	66.5 mm (2.62 in)	9U-6543	Impact Socket
43.0 mm	66.5 mm (2.62 in)	9U-6544	Impact Socket
46.0 mm	66.7 mm (2.63 in)	9U-6545	Impact Socket
50.0 mm	73.2 mm (2.88 in)	9U-6546	Impact Socket

**Fractional Universal Socket Set, 7 Piece, 3/8 inch Drive — 9S-1747**

Warranty: Lifetime

- 12 point
- 3/8 inch universal drive
- Polished chrome finish
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	9S-1747	Universal Socket Set
<b>Socket Set Consists of:</b>			
3/8 in	40.1 mm (1.58 in)	8S-2284	Universal Socket
7/16 in	40.1 mm (1.58 in)	8H-8562	Universal Socket
1/2 in	42.1 mm (1.66 in)	8H-8563	Universal Socket
9/16 in	42.8 mm (1.69 in)	8H-8564	Universal Socket
5/8 in	44.5 mm (1.75 in)	8H-8565	Universal Socket
11/16 in	49.6 mm (1.95 in)	9S-1727	Universal Socket
3/4 in	50.4 mm (1.98 in)	8H-8566	Universal Socket

**Metric Universal Socket Set, 9 Piece, 3/8 inch Drive — 9U-6124**

SMCS Code: 1251-010, 0601

Warranty: Lifetime

- Model: 3066 Engine
- 9U-6128 used to remove and install fuel injection pump
- Standard length, 12 point universal socket set
- Specially forged and heat treated for toughness and long life — meets rigid industry standards
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	9U-6124	Universal Metric Socket Set
<b>Metric Socket Set Consists of:</b>			
10.0 mm	43.5 mm (1.71 in)	9U-6125	Socket (3/8 in Drive)
12.0 mm	45.5 mm (1.79 in)	9U-6126	Socket (3/8 in Drive)
13.0 mm	45.5 mm (1.79 in)	9U-6127	Socket (3/8 in Drive)
14.0 mm	47.9 mm (1.89 in)	9U-6128	Socket (3/8 in Drive)
15.0 mm	47.9 mm (1.89 in)	9U-6129	Socket (3/8 in Drive)
16.0 mm	47.9 mm (1.89 in)	9U-6130	Socket (3/8 in Drive)
17.0 mm	50.7 mm (2 in)	9U-6131	Socket (3/8 in Drive)
18.0 mm	50.7 mm (2 in)	9U-6132	Socket (3/8 in Drive)
19.0 mm	52.5 mm (2.07 in)	9U-6133	Socket (3/8 in Drive)

**Metric Swivel Impact Socket Set, 7 Piece, 3/8 inch Drive — 261-8572**

Warranty: Lifetime

- 6 point
- 3/8 inch square drive
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	261-8572	Metric Swivel Impact Socket Set
<b>Metric Swivel Impact Set Consists of:</b>			
10.0 mm	50.8 mm (2 in)	261-8573	Metric Swivel Impact Socket (3/8 in Drive)
12.0 mm	53.1 mm (2.09 in)	261-8574	Metric Swivel Impact Socket (3/8 in Drive)
13.0 mm	54.1 mm (2.13 in)	261-8575	Metric Swivel Impact Socket (3/8 in Drive)
14.0 mm	55.4 mm (2.18 in)	261-8576	Metric Swivel Impact Socket (3/8 in Drive)
15.0 mm	56.4 mm (2.22 in)	261-8577	Metric Swivel Impact Socket (3/8 in Drive)
17.0 mm	62.2 mm (2.45 in)	261-8578	Metric Swivel Impact Socket (3/8 in Drive)
18.0 mm	64 mm (2.52 in)	261-8579	Metric Swivel Impact Socket (3/8 in Drive)



**Fractional Universal Impact Socket Set, 5 Piece, 1/2 inch Drive — 214-6518**

Warranty: Lifetime



- 6 point
- 1/2 inch square drive
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	214-6518	Universal Impact Socket Set
<b>Universal Impact Socket Set Consists of:</b>			
1/2 in	73.8 mm (2.91 in)	214-6521	Socket
9/16 in	73.8 mm (2.91 in)	214-6522	Socket
5/8 in	73.8 mm (2.91 in)	214-6523	Socket
11/16 in	77.8 mm (3.06 in)	214-6524	Socket
3/4 in	77.8 mm (3.06 in)	214-6526	Socket

**Fractional Universal Impact Socket Set, 14 Piece, 1/2 inch Drive — 246-8184**

Warranty: Lifetime



- 6 point
- 1/2 inch square drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Length	Part Number	Description
--	--	246-8184	Socket Set
<b>Universal Impact Socket Set Consists of:</b>			
1/2 in	73.8 mm (2.91 in)	214-6521	Socket
9/16 in	73.8 mm (2.91 in)	214-6522	Socket
5/8 in	73.8 mm (2.91 in)	214-6523	Socket
11/16 in	77.8 mm (3.06 in)	214-6524	Socket
3/4 in	77.8 mm (3.06 in)	214-6526	Socket
13/16 in	77.8 mm (3.06 in)	246-8173	Socket
7/8 in	77.8 mm (3.06 in)	246-8175	Socket
15/16 in	77.8 mm (3.06 in)	246-8176	Socket
1 in	77.8 mm (3.06 in)	246-8177	Socket
1 1/16 in	80.2 mm (3.16 in)	246-8178	Socket
1 1/8 in	84.9 mm (3.34 in)	246-8179	Socket
1 3/16 in	84.9 mm (3.34 in)	246-8180	Socket
1 1/4 in	86.5 mm (3.41 in)	246-8181	Socket
1 5/16 in	86.5 mm (3.41 in)	246-8182	Socket



**Metric Universal Impact Socket Set, 10 Piece, 1/2 inch Drive — 246-8199**

Warranty: Lifetime

- 6 point
- 1/2 inch square drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Length	Part Number	Description
--	--	246-8199	Metric Universal Impact Socket Set
<b>Metric Universal Impact Socket Set Consists of:</b>			
10.0 mm	73.7 mm (2.90 in)	246-8185	Universal Impact Socket (1/2 in Drive)
11.0 mm	73.7 mm (2.90 in)	246-8186	Universal Impact Socket (1/2 in Drive)
12.0 mm	73.7 mm (2.90 in)	246-8187	Universal Impact Socket (1/2 in Drive)
13.0 mm	73.7 mm (2.90 in)	246-8188	Universal Impact Socket (1/2 in Drive)
14.0 mm	73.7 mm (2.90 in)	246-8189	Universal Impact Socket (1/2 in Drive)
15.0 mm	73.7 mm (2.90 in)	246-8190	Universal Impact Socket (1/2 in Drive)
16.0 mm	73.7 mm (2.90 in)	246-8191	Universal Impact Socket (1/2 in Drive)
17.0 mm	77.8 mm (3.06 in)	246-8192	Universal Impact Socket (1/2 in Drive)
18.0 mm	77.7 mm (3.06 in)	246-8194	Universal Impact Socket (1/2 in Drive)
19.0 mm	77.7 mm (3.06 in)	246-8197	Universal Impact Socket (1/2 in Drive)

**Fractional Twist Socket Set, 13 Piece, 3/8 inch Drive — 241-0873**

Warranty: Lifetime



- SAE/Metric impact sockets quickly and easily remove damaged or rounded nuts and bolts
- 6 fluted sockets grip onto fastener and tighten as more torque is applied (no hammering required to install socket over fastener)
- Applications include oil pan drain plugs, exhaust manifold nuts, studs, pipe nipples, and corroded marine fasteners
- Shallow depth
- Fits sizes from 10 to 19 mm (3/8 to 3/4 inch)
- 3/8 inch square drive
- Standard length
- Industrial black finish
- Includes plastic tray, socket bar, and clips
- Can be ordered by set or individual

Hand Tools

Size	Length	Part Number	Description
--	--	241-0873	Twist Socket Set
<b>Twist Socket Set Consists of:</b>			
1/2 in	31.7 mm (1.25 in)	241-0868	Socket (3/8 in Drive)
10 mm	31.7 mm (1.25 in)	241-0860	Socket (3/8 in Drive)
11 mm	31.7 mm (1.25 in)	241-0867	Socket (3/8 in Drive)
1 1/16 in	34.9 mm (1.37 in)	241-0871	Socket (3/8 in Drive)
12 mm	31.7 mm (1.25 in)	241-0861	Socket (3/8 in Drive)
13 mm	31.7 mm (1.25 in)	241-0862	Socket (3/8 in Drive)

Size	Length	Part Number	Description
<b>Twist Socket Set Consists of: (Continued)</b>			
14 mm	31.7 mm (1.25 in)	241-0863	Socket (3/8 in Drive)
15 mm	31.7 mm (1.25 in)	241-0864	Socket (3/8 in Drive)
16 mm	31.7 mm (1.25 in)	241-0870	Socket (3/8 in Drive)
17 mm	31.7 mm (1.25 in)	241-0865	Socket (3/8 in Drive)
19 mm	34.9 mm (1.37 in)	241-0872	Socket (3/8 in Drive)
3/8 in	31.7 mm (1.25 in)	241-0866	Socket (3/8 in Drive)
9/16 in	31.7 mm (1.25 in)	241-0869	Socket (3/8 in Drive)

**Fractional Hex Driver Set, 10 Piece — 214-6142**

Warranty: See individual part number

- Seven 3/8 inch drive hex sockets and three 1/2 inch drive hex sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Hex Size	Square Drive	Overall Length	Replacement Bit
214-6142	Hex Driver Set <sup>1</sup>	--	--	--	--
<b>Hex Driver Set Consists of:</b>					
2P-8263	Drive Hex Socket	1/8 in	3/8 in	52.39 (2.06 in)	2P-8269
2P-8264	Socket	5/32 in	3/8 in	52.39 (2.06 in)	2P-8271
2P-8265	Socket	3/16 in	3/8 in	52.39 (2.06 in)	2P-8272
2P-8266	Drive Hex Socket	1/4 in	3/8 in	52.39 (2.06 in)	2P-8273
2P-8267	Drive Hex Socket	5/16 in	3/8 in	52.39 (2.06 in)	--
2P-8268	Drive Hex Socket	3/8 in	3/8 in	53.18 (2.09 in)	2P-8275 <sup>2</sup>
8T-3042	Drive Hex Socket	7/32 in	3/8 in	52.39 (2.06 in)	8T-3043
214-7320	Drive Hex Socket	1/2 in	1/2 in	53.18 (2.09 in)	214-7321
214-7327	Drive Hex Socket	5/16 in	1/2 in	53.18 (2.09 in)	1P-3566
214-7328	Drive Hex Socket	5/8 in	1/2 in	53.18 (2.09 in)	214-7331
<b>Individual Socket and Hex Bit</b>					
5P-7253	Socket and Hex Bit	5/64 in	3/8 in	--	--



<sup>1</sup>Warranty: Lifetime

<sup>2</sup>Warranty: Six Months

**Fractional Hex Ball Driver Socket Set, 8 Piece — 246-8499**

Warranty: Lifetime

- Four 1/4 inch drive hex ball sockets and four 3/8 inch drive hex ball sockets
- Material: steel
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Hex Size	Square Drive	Overall Length
246-8499	Hex Ball Driver Socket Set	--	--	--
<b>Hex Ball Driver Socket Set Consists of:</b>				
243-5178	Socket	1/8 in	1/4 in	47.63 mm (1 7/8 in)
243-5179	Socket	9/64 in	1/4 in	47.63 mm (1 7/8 in)
243-5180	Socket	5/32 in	1/4 in	47.63 mm (1 7/8 in)
243-5181	Socket	3/16 in	1/4 in	49.21 mm (1 15/16 in)
243-5175	Socket	7/32 in	3/8 in	52.39 mm (2 1/16 in)
243-5177	Socket	1/4 in	3/8 in	52.39 mm (2 1/16 in)
243-5173	Socket	5/16 in	3/8 in	53.18 mm (2 3/32 in)
243-5174	Socket	3/8 in	3/8 in	53.18 mm (2 3/32 in)



**Metric Hex Driver Set, 9 Piece — 194-3585**

Warranty: See individual part number

- Includes socket bar and clips
- Can be ordered by set or individually



Hand Tools

Part Number	Description	Hex Size	Drive	Bit Length	Overall Length	Replacement Bit
194-3585	Hex Bit Socket Set <sup>1</sup>	--	--	--	--	--
<b>Set Consists of:</b>						
194-3541	Metric Hex Driver	4.0 mm	$\frac{3}{8}$ in	25.4 mm	52.3 mm (2.06 in)	--
194-3542	Hex Socket Bit Driver	5.0 mm	$\frac{3}{8}$ in	25.7 mm	52.6 mm (2.07 in)	--
194-3544	Metric Hex Driver	7.0 mm	$\frac{3}{8}$ in	25.7 mm	52.6 mm (2.07 in)	--
194-3545	Metric Hex Driver	8.0 mm	$\frac{3}{8}$ in	25.1 mm	52.1 mm (2.05 in)	--
194-3546	Metric Hex Driver	10.0 mm	$\frac{3}{8}$ in	25.5 mm	52.5 mm (2.07 in)	--
194-3547	Metric Hex Driver	12.0 mm	$\frac{1}{2}$ in	--	81 mm (3.19 in)	--
194-3548	Metric Hex Driver	14.0 mm	$\frac{1}{2}$ in	--	81 mm (3.19 in)	--
194-3549	Metric Hex Driver	17.0 mm	$\frac{1}{2}$ in	--	93.7 mm (3.69 in)	--
<b>Optional Metric Hex Drivers</b>						
194-3543	Metric Hex Driver	6.0 mm	$\frac{3}{8}$ in	25.7 mm	52.6 mm (2.07 in)	--
6V-9086	Metric Hex Driver <sup>2</sup>	14.0 mm	$\frac{1}{2}$ in	35.0 mm	81 mm (3.19 in)	--
168-8395	Drive Impact Socket	17.0 mm	$\frac{3}{4}$ in	50.8 mm	61.7 mm (2.43 in)	169-0782
9U-7418	Metric Hex Driver	19.0 mm	$\frac{3}{4}$ in	47.7 mm	111.3 mm (4.38 in)	1U-7419
1U-6151	Metric Hex Driver	17.0 mm	$\frac{3}{4}$ in	47.0 mm	92 mm (3.62 in)	1U-6152
1U-9474	Metric Hex Driver <sup>2</sup>	22.0 mm	1 in	32.0 mm	84 mm (3.31 in)	1U-9476 <sup>2</sup>
129-4552	Metric Hex Driver	27.0 mm	1 in	72.0 mm	129 mm (5.08 in)	129-4553
140-8780 <sup>3</sup>	Metric Hex Driver <sup>2</sup>	24.0 mm	--	50.8 mm	50.8 mm (2 in)	--

<sup>1</sup>Warranty: Lifetime<sup>2</sup>Warranty: Six Months<sup>3</sup>Hex bit only

**Metric Hex Ball Driver Socket Set, 8 Piece — 243-5182**

Warranty: Lifetime

- Four ¼ inch drive hex ball sockets and four ⅜ inch drive hex ball sockets
- Material: steel
- Includes socket bar and clips
- Can be ordered by set or individually

Hex Size	Part Number	Description	Drive	Bit Length	Overall Length
--	243-5182	Complete Hex Ball Driver Socket Set	--	--	--
<b>Set Consists of:</b>					
3.0 mm	243-5190	Hex Ball Driver	¼ in	--	47.7 mm (1.88 in)
4.0 mm	243-5184	Hex Ball Driver	¼ in	--	47.6 mm (1.87 in)
5.0 mm	243-5185	Hex Ball Driver	¼ in	--	47.9 mm (1.89 in)
6.0 mm	243-5186	Hex Ball Driver	¼ in	--	47.9 mm (1.89 in)
7.0 mm	243-5187	Hex Ball Driver	⅜ in	25.6 mm	52.5 mm (2.07 in)
8.0 mm	243-5188	Hex Ball Driver	⅜ in	25.6 mm	52.5 mm (2.07 in)
9.0 mm	243-5189	Hex Ball Driver	⅜ in	25.6 mm	52.5 mm (2.07 in)
10.0 mm	243-5183	Hex Ball Driver	⅜ in	25.6 mm	52.5 mm (2.07 in)
<b>Optional Metric Hex Ball Drivers</b>					
4.0 mm	4C-8996	Hex Ball Driver	⅜ in	--	128.3 mm (5.05 in)
10.0 mm	155-3046	Hex Ball Driver	⅜ in	--	128.3 mm (5.05 in)



**TORX® Driver Set, 10 Piece — 194-3584**

Warranty: Lifetime



- Ten pieces, ¼ inch and ⅜ inch square drive
- TORXALIGN® design grips TORX® fasteners for easier fastener starting (TORX® and TORXALIGN® are registered trademarks of Camcar, Inc.)
- Includes socket bar and clips
- Can be ordered by set or individually

Torx Size	Part Number	Description	Square Drive	Overall Length
<b>Complete Driver Set</b>				
--	194-3584	Torx Socket Set	--	--
<b>TORXALIGN Bits</b>				
T10	194-3531	Socket, Assembly, T10	¼ in	39.6 mm (1.56 in)
T15	194-3532	Socket, Assembly, T15	¼ in	39.6 mm (1.56 in)
T20	194-3533	Socket, Assembly, T20	¼ in	39.6 mm (1.56 in)
T25	194-3534	Socket, Assembly, T25	¼ in	39.6 mm (1.56 in)
T30	194-3535	Socket, Assembly, T30	⅜ in	44.5 mm (1.75 in)
T40	194-3536	Socket, Assembly, T40	⅜ in	44.5 mm (1.75 in)
T45	194-3537	Socket, Assembly, T45	⅜ in	52.3 mm (2.06 in)
T50	194-3538	Socket, Assembly, T50	⅜ in	52.3 mm (2.06 in)
T55	194-3539	Socket, Assembly, T55	⅜ in	51.6 mm (2.03 in)
<b>One Piece, ¼ inch Square Drive TORX Socket Included</b>				
E8	194-3540	Square Drive TORX Socket	¼ in	22.2 mm (0.87 in)

**Socket Extensions**

Warranty: Lifetime except part 158-8723

Part Number	Drive	Length
9S-1720	¼ in	50.8 mm (2 in)
9S-1721	¼ in	101.6 mm (4 in)
8H-8574	⅜ in	76.2 mm (3 in)
3P-2240	⅜ in	304.8 mm (12 in)
8H-8575	⅜ in	152.4 mm (6 in)
5P-8676	½ in	76.2 mm (3 in)
9S-1732	½ in	127 mm (5 in)
8H-8559	½ in	279 mm (10.98 in)
271-4722 <sup>1</sup>	½ in	76.2 mm (3 in)
271-4723 <sup>1</sup>	½ in	127 mm (5 in)
271-4724 <sup>1</sup>	½ in	279 mm (10.98 in)
8H-8548	¾ in	203.2 mm (8 in)
8T-9265 <sup>2</sup>	¾ in	254 mm (10 in)
8T-5183 <sup>2</sup>	¾ in	406.4 mm (16 in)
5S-6076	1 in	203.2 mm (8 in)
158-8723 <sup>3</sup>	1 in <sup>4</sup>	476 mm (18.74 in)



<sup>1</sup> Impact

<sup>2</sup> Requires locking pin

<sup>3</sup> Double hole extension

<sup>4</sup> Warranty: Six Months

**Socket Drive Adapters**

Warranty: Lifetime

Part Number	Description	Size	Replacement Bit
213-4437	Socket Adapter	¼ in Female to ⅜ in Male	--
261-0443	Socket Adapter	⅜ in Female to ¼ in Male	261-0446
8H-8576	Adapter	⅜ in Female to ½ in Male	--
261-0444	Socket Adapter	½ in Female to ⅜ in Male	261-0447
8H-8561	Adapter	½ in Female to ¾ in Male	--
261-0445	Socket Adapter	¾ in Female to ½ in Male	261-0448
2P-8261	Adapter	¾ in Female to 1 in Male	--
5P-3588	Socket Adapter	1 in Female to ¾ in Male	--
261-8569	Socket Adapter	1 in Female to 1 ½ in Male	--
261-8570	Socket Adapter	1 ½ in Female to 1 in Male	--





**Impact Wrench Socket Adapters**

Warranty: See individual part number

- Heavy-duty adapter and extensions can be used with 1 ½ inch drive impact wrenches
- Allows the use of 1 inch drive sockets instead of the higher priced 1 ½ inch drive sockets



Item	Part Number	Description
1	9S-4028	Extension, 1 in drive both ends, 133.4 mm (5.25 in) long <sup>1</sup>
2	9S-4026	Adapter, 1 ½ in to 1 in drive <sup>1</sup>
3	9S-4027	Extension, 1 in drive both ends, 60.3 mm (2.38 in) long <sup>1</sup>
Not shown	207-8160	Extension, 1 in drive, 76.2 mm (3 in) long <sup>2</sup>

<sup>1</sup>Warranty: Manufacturer, 30 Day

<sup>2</sup>Warranty: Lifetime

**Universal Joint**

Warranty: Lifetime



Drive	Part Number
¼ in	9S-1724
¾ in	6V-0094
½ in	8H-8560

Hand Tools

**Impact Wrenches,  $\frac{3}{8}$  inch**

Warranty: Manufacturer, 18 Month

**European Union Compliant, CE marked**

- Reverse bias air motor provides greater power in reverse for extra break away torque
- Molded ergonomic handle grip reduces vibration and operator fatigue
- Built in power regulator allows power output to be adjusted to operating conditions

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension: 6168 (Canada & US only) or 262-656-5200 extension: 6168



Part Number: 222-3048	
Drive size	$\frac{3}{8}$ in
Recommended air pressure	620 kPa (90 PSIG)
Air consumption, free speed	14 SCFM (1.9 CFM) [53.8 l/min.]
Air consumption, working	25 SCFM (3.5 CFM) [99.11 l/min.]
Free speed, forward	8,000 rpm
Free speed, reverse	9,000 rpm
Sound level, free speed	84.6 dBa
Sound level, working	95.6 dBa
Blows per minute	1170
Maximum Torque	251- N·m (185 ft-lb) Forward/ 285 N·m (210 ft-lb) Reverse
Air inlet thread size	$\frac{1}{4}$ in — 18 NPT
Recommended hose size, ID min.	10 mm ( $\frac{3}{8}$ in)
Overall length	159 mm (6.25 in)
Height	179 mm (7 in)
Width	57 mm (2.24 in)
Weight	1.70 kg (3.75 lb)

Part Number	Description	Anvil Part Number
222-3048	Impact Wrench, $\frac{3}{8}$ inch	280-2681

**Impact Wrenches, 1/2 and 3/4 inch**

Warranty: Manufacturer, 18 Months

**European Union Compliant, CE marked**

- Aluminum housing reduces weight and provides durable long life
- Steel nose front for extra protection, easy service access
- Power speed regulator allows power output to be adjusted to operating conditions
- Variable speed trigger allows operator versatility over wide range of fasteners

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension: 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part No.	222-3050	222-3053
Drive Size	1/2 in	3/4 in
Recommended air pressure	620 kPa (90 PSIG)	620 kPa (90 PSIG)
Air consumption, free speed	30 SCFM (4.2 CFM) [118.9 l/min.]	41 SCFM (5.8 CFM) [164.2 l/min.]
Free speed forward	8,000 rpm	4,500 rpm
Free speed reverse	8,000 rpm	5,000 rpm
Sound level free speed	108 dBa	92 dBa
Maximum torque	578 N·m (425 ft-lb) forward	1626 N·m (1,200 ft-lb)
Air inlet thread size	1/4 in — 18 NPT	3/8 in — 18 NPT
Recommended hose size, ID min.	8 mm (5/16 in)	10 mm (3/8 in)
Overall length	185 mm (7.3 in)	259 mm (10.2 in)
Weight	2.63 kg (5.8 lb)	6.59 kg (14.5 lb)

Part Number	Description	Anvil Part Number
222-3050	Impact Wrench, 1/2 in	280-2682
222-3053	Impact Wrench, 3/4 in	280-2683

**Impact Wrenches, 1 inch**

Warranty: Manufacturer, 18 Months

**European Union Compliant, CE marked**

- Power speed regulator allows power output to be adjusted to operating conditions
- Variable speed trigger allows operator versatility over wide range of fasteners

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension: 6168 (Canada & US only) or 262-656-5200 extension: 6168



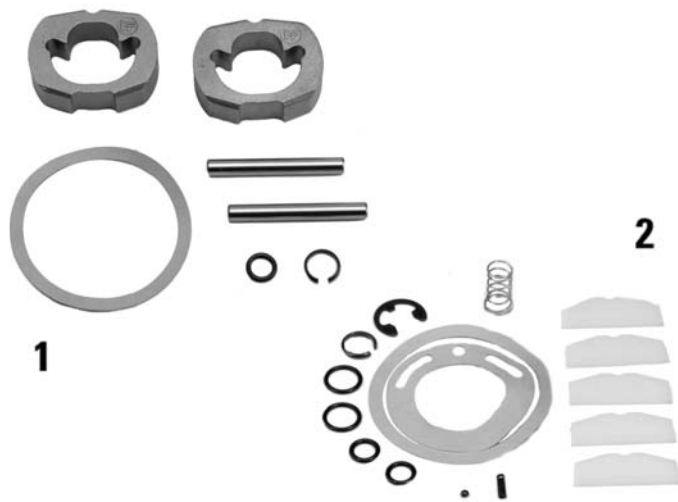
Part No.	222-3054	222-3055
Drive size	1 in	1 in
Recommended air pressure	620 kPa (90 PSIG)	620 kPa (90 PSIG)
Air consumption free speed	60 SCFM (8.3 CFM) [235 l/min]	60 SCFM (8.3 CFM) [235 l/min]
Air consumption working	38 SCFM (5.3 CFM) [150.1 l/min]	38 SCFM (5.3 CFM) [150.1 l/min]
Free speed forward	4,000 rpm	4,000 rpm
Free speed reverse	4,000 rpm	4,000 rpm
Sound level free speed	92 dBa	92 dBa
Sound level working	103 dBa	103 dBa
Blows per minute	500	505
Maximum torque	3796 N·m (2,800 ft·lb)	4067 N·m (3,000 ft·lb)
Air inlet thread size	½ in — 14 NPT	½ in — 14 NPT
Recommended hose size, ID min.	13 mm (½ in)	13 mm (½ in)
Overall length	302 mm (11.8 in)	535 mm (21 in)
Height	270 mm (10.6 in)	172 mm (6.8 in)
Width	111 mm (4.37 in)	110 mm (4.33 in)
Weight	12.05 kg (26.5 lb)	12.27 kg (27 lb)

Part Number	Description	Anvil Part No.
222-3054	Impact Wrench, 1 in	280-2684
222-3055	Impact Wrench, 1 in	280-2684

Hand Tools

**Impact Wrenches Repair Kits**

Warranty: Lifetime unless otherwise noted



- Used to repair current Cat® branded air-powered impact wrenches
- Reduce air tool repair cost by performing in-house repairs
- Reduced downtime (no need to ship air tool to a repair center)

**Typical Anvil Repair Kit Components — 231-6064**

Anvil repair kit for 12.7 mm (½ in) Impact Wrench

Kit Includes:

2-Hammers

2-Hammer Pins

1-Hammer Case Gasket

1-Retainer O-Rings

1-Socket Retainer

Material: Steel, Rubber, and Plastic

Motor and Throttle Repair Kit — 231-6063, for 12.7 mm (½ in) Impact Wrench

Kit Includes:

1-Detent Ball

1-Detent Spring

1-Gasket

1-Hammer Case Gasket

1-Retainer O-Ring

Material: Steel, Rubber, and Plastic

Hand Tools

Item	Part Number	Description	Impact Wrench Part Number	Anvil Part Number
<b>Impact Wrench Repair Kits</b>				
1	231-6064	½ inch Anvil Repair Kit	222-3050	280-2682
2	231-6063	½ inch Motor and Throttle Repair Kit	222-3050	--
--	231-6074	1 inch Anvil Repair Kit	222-3055	280-2684
--	231-6071	1 inch Anvil Repair Kit	222-3054	280-2684
--	231-6073	1 inch Motor and Throttle Repair Kit	222-3054	--
--	231-6098	1 inch Motor and Throttle Repair Kit	222-3055	--
--	280-2680	½ inch Anvil Repair Kit <sup>1</sup>	266-3736 <sup>2</sup>	--
--	280-2679	½ inch Motor and Throttle Repair Kit <sup>1</sup>	266-3736 <sup>2</sup>	--
--	231-6070	¾ inch Anvil Repair Kit	222-3053	280-2683
--	231-6068	¾ inch Motor and Throttle Repair Kit	222-3053	--
--	231-6043	⅝ inch Anvil Repair Kit	222-3048	280-2681
--	280-2677	⅝ inch Anvil Repair Kit <sup>1</sup>	266-3737 <sup>2</sup>	280-2675
--	231-6041	⅝ inch Motor and Throttle Repair Kit	222-3048	--
--	280-2676	⅝ inch Motor and Throttle Repair Kit <sup>1</sup>	266-3737	--

<sup>1</sup>Warranty: Six Months

<sup>2</sup>Warranty: Manufacturer, 18 Months

**Safety Air Guns**

Warranty: Cat® Standard Warranty, 6 Months

**High Power Extension Air Gun**

- Versatile tool ideal for cleaning hard-to-reach locations
- Good for cleaning benchtops, workstations, machinery, and equipment
- Venturi tip increases the power and limits static pressure to less than 207 kPa (30 psi) when tip is blocked
- Includes durable cast aluminum, pistol-style body, aluminum extension, and aluminum nozzle
- ¼ inch NPT inlet
- Meets OSHA standards

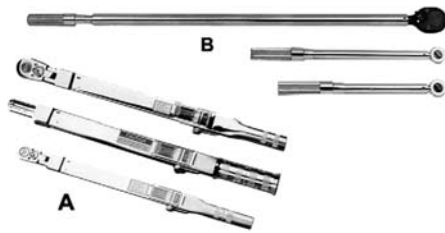


Part Number	Description	Size
156-0930	Safety Air Gun	61 cm (24.0 in)
156-0931	Safety Air Gun	91 cm (36.0 in)
156-0932	Safety Air Gun	122 cm (48.0 in)

**Hand Tools**

## Click Type Torque Wrenches

Warranty: Manufacturer, 90 Day



## Style A

- Work only in the right-hand or clockwise direction, and are guaranteed to be accurate within 4% of setting of the top 80% of the scale
- Easily adjusted by a small calibrated dial along the wrench arm
- Eliminates the need to reduce the torque setting to the low end of the scale for storage in order to retain accuracy
- The 162-8718 Torque Wrench can be disassembled into three components for storage in a tool box
- Includes a certificate of calibration

## Style B

- Work in both right and left-hand (clockwise and counter-clockwise) directions
- Micrometer handle style adjustment
- These wrenches are labeled in both ft-lb and N-m
- Includes a certificate of calibration

## Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension: 6168 (Canada & US only) or 262-656-5200 extension: 6168

Style	Part Number	Minimum Torque Range	Max. Torque Range	Drive	Accuracy	Head Type	Increments	Length	Head Width	Head Depth	Case Included	Kit Part Number	Kit Part Number
A	8T-9293	54.5 N·m (40 ft-lb)	341.7 N·m (252 ft-lb)	½ in	±4%	Flex-Ratchet	6.8 N·m (5 ft-lb)	591.97 mm (22 ⅞ in)	41.27 mm (1 ⅝ in)	19.05 mm (¾ in)	Yes	5P-7429 <sup>1</sup>	260-3765 <sup>2</sup>
A	162-8718	271 N·m (200 ft-lb)	813.5 N·m (600 ft-lb)	¾ in	±4%	Detach-Ratchet	13.6 N·m (10 ft-lb)	1219.2 mm (48 in)	60.32 mm (2 ⅜ in)	31.75 mm (1 ¼ in)	--	160-6390 <sup>1</sup>	260-3766 <sup>2</sup>
A	4C-5492	27.1 N·m (20 ft-lb)	135.6 N·m (100 ft-lb)	⅝ in	±4%	Flex-Ratchet	2.7 N·m (2 ft-lb)	447.67 mm (17 ⅝ in)	28.57 mm (1 ⅞ in)	14.28 mm (⅞ in)	Yes	4C-5819 <sup>1</sup>	260-3764 <sup>2</sup>
B	9U-5019	6.8 N·m (5 ft-lb)	101.8 N·m (75 ft-lb)	⅝ in	±6%	Fixed Ratchet	0.7 N·m (0.5 ft-lb)	393.7 mm (15.5 in)	--	--	Yes	--	--
B	9U-5020	13.6 N·m (10 ft-lb)	135.7 N·m (100 ft-lb)	⅝ in	±6%	Fixed Ratchet	0.7 N·m (0.5 ft-lb)	393.7 mm (15.5 in)	--	--	Yes	--	--
B	214-7349	27.1 N·m (20 ft-lb)	203.6 N·m (150 ft-lb)	½ in	±6%	Fixed Ratchet	1.4 N·m (1 ft-lb)	469.9 mm (18.5 in)	--	--	Yes	214-7350	--
B	9U-5006	40.7 N·m (30 ft-lb)	339.3 N·m (250 ft-lb)	½ in	±6%	Fixed Ratchet	1.4 N·m (1 ft-lb)	539.6 mm (21.25 in)	--	--	Yes	--	--
B	9U-5007	135.7 N·m (100 ft-lb)	814.2 N·m (601 ft-lb)	¾ in	±6%	Fixed Ratchet	7 N·m (5.2 ft-lb)	1092.2 mm (45 in)	--	--	Yes	--	--

<sup>1</sup> Service Kit for ratchets that have brand on the head

<sup>2</sup> Service Kit for ratchets that do not have brand on the head

**Torque Multipliers**

Warranty: Manufacturer, Lifetime

- Used to apply torques above the capability of torque wrenches with an accuracy of ±5%
- Overload protection is provided by the square output drive which shears at a torque slightly above the maximum output rating
- Decals providing torque input and output values are located on the multiplier



Part Number	Description	Input Square Drive	Output Square Drive	Power Ratio	Rated Input Capacity	Max. Rated Output	Weight
6V-7820	Torque Multiplier	½ in	¾ in	6 to 1	271 N·m (199.88 ft-lb)	1620 N·m (1,194.85 ft-lb)	4 kg (8.82 lb)
6V-6080	Torque Multiplier	½ in	1 in	18.5 to 1	240 N·m (177.01 ft-lb)	4335 N·m (3,197.33 ft-lb)	8.2 kg (18.08 lb)
<b>6V-7820 — Serviceable Parts</b>							
6V-4079	Drive Assembly	--	--	--	--	--	--
6V-4081	Pinion	--	--	--	--	--	--
3B-3911	Bearing	--	--	--	--	--	--
6V-4083	Gear	--	--	--	--	--	--
6V-6134	Protractor	--	--	--	--	--	--
<b>6V-6080 — Serviceable Parts</b>							
6L-4082	Race	--	--	--	--	--	--
6V-6135	Gear	--	--	--	--	--	--
6V-6136	Pinion	--	--	--	--	--	--
6V-9137	Pinion	--	--	--	--	--	--
6V-9136	Gear	--	--	--	--	--	--
6V-6134	Protractor	--	--	--	--	--	--
5P-4115	Washer <sup>1</sup>	--	--	--	--	--	--
6V-6137	Dowl	--	--	--	--	--	--
6V-9135	Pin	--	--	--	--	--	--
6V-6139	Pin	--	--	--	--	--	--
6V-6762	Race	--	--	--	--	--	--
2M-1672	Bearing	--	--	--	--	--	--
2H-2213	Bearing	--	--	--	--	--	--
8T-0893	Screw	--	--	--	--	--	--
8T-5181	Input End Assembly	--	--	--	--	--	--
8T-0894	Hardware Kit	--	--	--	--	--	--
<b>Repair Parts for 6V-6080</b>							
280-3451	Reaction Anchor	--	--	--	--	--	--
280-3452	Repair Kit	--	--	--	--	--	--

<sup>1</sup> Parts serviced separately.



## Lever Grease Gun, Model Pro "L" — 8F-9866

Warranty: Cat® Standard Warranty, 6 Months



- Heavy-duty construction
- Cast iron head equipped with a check valve and an air-bleed valve
- Spring primed
- Two way loading
- Uses standard Cat® Grease cartridges (14.5 oz)
- Lever gun will operate with partial lever strokes for use in close quarters
- Zinc plated
- Cat® branded

### 8F-9866

- Maximum operating pressure of assembly: 68 948 kPa (10,000 psi)

### Reference

NEHS0793 Tool Operating Manual

Part Number	Description
8F-9866	Grease Gun Assembly <sup>1</sup>
<b>8F-9866 Consists of:</b>	
190-1668	Coupler
190-1669	Hose Assembly, 12 in long
<b>Optional</b>	
190-5623	Hose Assembly, 18 in long
<b>Service Parts for Noncurrent 8F-9866</b>	
<b>(This model is not marked Pro L and uses the 2M-2689 or 190-1670 Coupler with a check valve)</b>	
190-1670	Coupler (valve with steel insert)
2M-2689	Coupler (valve with rubber insert)
9F-2637	Nipple (part of 9F-2636) <sup>2</sup>
9F-2636	Nozzle Assembly <sup>2</sup>

<sup>1</sup>Warranty: Six Months

<sup>2</sup>Warranty: Manufacturer, 30 Day

**Pistol Grip Grease Gun — 190-5622**

Warranty: Cat® Standard Warranty, 6 Months

- Heavy-duty construction
- Cast iron head equipped with a check valve and an air-bleed valve
- Spring primed
- Two way loading
- Uses standard Cat® Grease cartridges (14.5 oz)
- Lever gun will operate with partial lever strokes for use in close quarters
- Zinc plated
- Cat® branded

**190-5622**

- Maximum operating pressure of assembly: 31 026 kPa (4,500 psi)

**Reference**

NEHS0793 Tool Operating Manual



Part Number	Description
190-5622	Pistol Grip Grease Gun
<b>Grease Gun Consists of:</b>	
190-1668	Coupler
190-5623	Hose Assembly, 18 in long
<b>Optional</b>	
190-1669	Hose Assembly, 12 in long

# Chisels and Punches

## Pin Punch Set, 7 Piece — 226-1900

Warranty: Cat® Standard Warranty, 6 Months



- Replaces discontinued 1U-7250 Pin Punch Set, 7 Piece
- Individually heat treated for uniform hardness
- Includes pouch

Part Number	Point Size	Length	Description
226-1900	--	--	Pin Punch Set
<b>Pin Punch Set Consists of:</b>			
226-1901	1/16 in	102 mm (4.0 in)	Drive Pin Punch (3/32 in)
226-1902	3/32 in	114 mm (4.5 in)	Punch
226-1903	1/8 in	127 mm (5.0 in)	Punch
226-1904	5/32 in	140 mm (5.5 in)	Punch
226-1905	3/16 in	140 mm (5.5 in)	Punch
226-1906	7/32 in	178 mm (7.0 in)	Punch
226-1907	1/4 in	178 mm (7.0 in)	Punch

## Drift Punch Set, 5 Piece — 227-3129

Warranty: Cat® Standard Warranty, 6 Months



- Replaces discontinued 1U-7260 Drift Punch Set, 5 Piece
- Material: high carbon steel
- Individually heat treated for uniform hardness
- Includes pouch

Part Number	Point Size	Length	Description
227-3129	--	--	Drift Punch Set
<b>Drift Punch Set Consists of:</b>			
227-3130	1/8 in	229 mm (9.0 in)	Punch
227-3131	3/16 in	279 mm (11.0 in)	Punch
227-3132	7/32 in	305 mm (12.0 in)	Punch
227-3133	1/4 in	305 mm (12.0 in)	Punch
227-3134	5/16 in	305 mm (12.0 in)	Punch

## Chisel Group, 5 Piece — 227-3795

Warranty: Cat® Standard Warranty, 6 Months



- Individually heat-treated for uniform hardness
- Resharpened and polished after blasting for a sharper cutting edge
- Includes pouch

Part Number	Punch Size	Length	Description
227-3795	--	--	Chisel Group
<b>Chisel Group Consists of:</b>			
227-3796	5/16 in	114.3 mm (4.50 in)	Chisel
227-3797	3/8 in	127.0 mm (5.00 in)	Chisel
227-3798	7/16 in	139.7 mm (5.50 in)	Chisel
227-3799	1/2 in	146.1 mm (5.75 in)	Chisel
227-3800	5/8 in	152.4 mm (6.00 in)	Chisel

**Screwdriver Set — 9U-7290**

Warranty: Lifetime

- Exclusive high-tech handle design for a more comfortable grip and more powerful performance

Part Number	Description	Size
9U-7290	Screwdriver Set	Includes a flat ¼ in tip and #1 Phillips



**Black Plastic Handle Screwdriver Set, 6 Piece — 162-7804**

Warranty: Lifetime

- Black plastic handles
- 6-piece set
- Includes vinyl pouch

Item	Part Number	Tip Size	Description
--	162-7804	--	Complete Screwdriver Set
<b>Complete Set Consists of:</b>			
4	6V-7932	⅜ in	Standard Screwdriver
3	6V-7933	⅝ in	Standard Screwdriver
6	6V-7934	No. 2	Phillips Screwdriver
2	6V-7935	¼ in	Standard Screwdriver
5	6V-7936	No. 1	Phillips Screwdriver
1	6V-7937	⅜ in	Standard Screwdriver



Hand Tools

## Ratcheting Screwdriver, 5 Bits — 9U-7291

Warranty: Lifetime



Part Number	Description	Size	Length
9U-7291	Ratcheting Screwdriver	$\frac{3}{16}$ in and $\frac{9}{32}$ in flat tips, #1 and #2 Phillips, and #10 Torx stored in hollow handle	222.25 mm (8 $\frac{3}{4}$ in) long overall; 96.04 mm (3 $\frac{25}{32}$ in) stainless steel shank length

## Tool Bit Set, 6 Piece — 9U-7328

Warranty: Cat® Standard Warranty, 6 Months



- High impact, pocket-sized ABS plastic case
- Convenient magnetic bit holder (to fit power drills or for use with the case as a hand-held screwdriver) is included

Part Number	Description	Contents
9U-7328	Tool Bit Set	Includes #1, #2, and #3 Phillips and 6.5 mm × 1.2 mm, 6.0 mm × 1.0 mm, and 5.5 mm × 0.8 mm flat tips

**Yellow Grip Pliers Set, 3 Piece — 233-1639**

Warranty: Lifetime

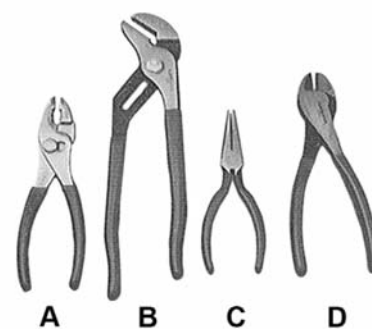
- Hardened cutting edges stay sharper longer and cut with less effort
- Machined cutter heads for matched blades
- Black oxide finish
- Vinyl grip



Part Number	Description	Length
233-1639	Pliers Set	--
<b>Pliers Set Consists of:</b>		
6V-6192	Slip Joint Pliers	190.5 mm (7.50 in)
6V-6193	Diagonal Cutting Pliers, 44.45 cm (17 ½ in)	185.7 mm (7.30 in)
6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)

**Combination and Multiple Position Pliers**

Warranty: Lifetime unless otherwise noted



Type	Part Number	Description	Length	Finish	Vinyl Grip
A	1S-0255	Combination Pliers	163.5 mm (6.40 in)	Chrome	No
A	213-1983	Combination Pliers	159.3 mm (6.30 in)	Chrome	Yes
A	6V-6192	Slip Joint Pliers	190.5 mm (7.50 in)	Black Oxide	Yes
B	236-1169	Multiple Position Pliers <sup>1</sup>	400.0 mm (16.00 in)	Chrome	Yes
B	6V-6195	Interlocking Joint Pliers	235.0 mm (9.30 in)	Black Oxide	Yes
B	214-7347	Multiple Position Pliers	304.8 mm (12.00 in)	Chrome	Yes
C	6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)	Black Oxide	Yes
D	6V-6193	Diagonal Cutting Pliers, 44.45 cm (17 ½ in)	185.7 mm (7.30 in)	Black Oxide	Yes
--	8H-8582 <sup>2</sup>	Vise Grip <sup>3</sup>	250 mm (9.80 in)	Chrome	No
--	246-5134	Locking Pliers Set, 5 piece	--	--	--
--	246-5133	Locking Pliers, Straight Jaw	254.0 mm (10.00 in)	Black	No
--	246-5132	Locking Pliers, Curved Jaw w/cotter	254.0 mm (10.00 in)	Black	No
--	246-5131	Locking Pliers, Long Rounded Jaw	254.0 mm (10.00 in)	Black	No
--	246-5129	Locking Pliers, Curved Jaw	177.8 mm (7.00 in)	Black	No
--	246-5128	Locking Pliers, Straight Jaw	127.0 mm (5.00 in)	Black	No
--	212-3607	End Cutter Pliers	187.3 mm (7.40 in)	Black Oxide	Yes
--	214-7348	Vise Grip, Curved Jaw <sup>3</sup>	250.0 mm (9.80 in)	Chrome	No

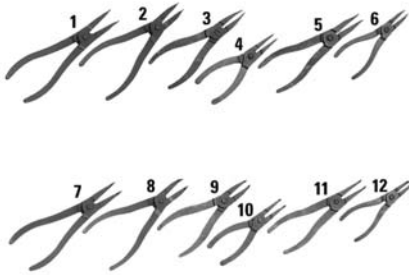
<sup>1</sup>Warranty: Manufacturer, 120 Day

<sup>2</sup>Not available for individual sale

<sup>3</sup>Warranty: Six Months

## Retaining Ring Pliers

Warranty: Cat® Standard Warranty, 6 Months



Item	Part Number	No.	Tip Size	Type
<b>Straight Tips</b>				
1	1P-1863	No. 26	0.12 in	External
2	1P-1861	No. 25	0.09 in	Internal
3	1P-1857	No. 23	0.07 in	Internal
4	1P-1855	No. 22	0.04 in	External
5	1P-1859	No. 24	0.07 in	External
6	1P-1853	No. 21	0.04 in	Internal
<b>Right Angle Tips</b>				
7	1P-1864	No. 26-90	0.12 in	External
8	1P-1862	No. 25-90	0.09 in	Internal
9	1P-1858	No. 23-90	0.07 in	Internal
10	1P-1856	No. 22-90	0.04 in	External
11	1P-1860	No. 24-90	0.07 in	External
12	1P-1854	No. 21-90	0.04 in	Internal

## External Pliers — 5P-5197

Warranty: Cat® Standard Warranty, 6 Months



- Use to compress or expand large retaining rings
- A double ratchet locks to hold the handles at any given point without hand pressure
- Gap between the plier tips ranges from 12.7 mm (0.50 in) fully closed to 76.0 mm (3.00 in) fully open

Item	Part Number	Description
1	5P-5197	External Pliers
2	136-1452	Internal Pliers Assembly
3 and 4	1U-6728	Tip Set
Not Shown	6V-2062	Tip Set, 90 Degrees <sup>1</sup>

<sup>1</sup> Used for 5P-5197

**Internal Retaining Ring Pliers — 1U-8758**

Warranty: Cat® Standard Warranty, 6 Months

- Used to remove and install the large internal retaining rings in power shift transmissions
- Double ratchet lock
- Pliers include 0.15 in (3.8 mm) diameter tips
- Service Part: 1U-8759 Replacement Tips (2 per package)

Part Number	Description	Length
1U-8758	Internal Retaining Ring Pliers	29.00 in (737.0 mm)



**External Retaining Ring Pliers — 2P-8312**

Warranty: Lifetime

- Used to remove and install tempered steel retaining rings used in many applications
- Right angle tips to provide the necessary clearance where the lock ring is accessible only from a perpendicular position

Part Number	Description
2P-8312	External Retaining Ring Pliers



Hand Tools



# Hammers and Slide Sledges

## Hammers

Warranty: Lifetime unless otherwise noted



Hand Tools

Item	Part Number	Size	Height	Length	Weight	Material
<b>Ball Peen Hammers</b>						
1	1S-0257	1 1/8 in	--	298.5 mm (11.75 in)	340 g (12 oz)	--
2	1B-7810	1 5/32 in	113.5 mm (4.47 in)	406.4 mm (16 in)	680 g ( 1 1/2 lb)	--
3	8H-8577	1 1/4 in	128.6 mm (5.06 in)	406.4 mm (16 in)	900 g (2 lb)	--
<b>Soft Face Hammers</b>						
4	1S-0258	1 11/16 in	117.5 mm (4.63 in)	330.2 mm (13 in)	900 g (2 lb)	--
<b>Replacement Tips for 1S-0258<sup>1</sup></b>						
5	3S-0460	--	--	--	--	Medium tip
6	3S-0459	--	--	--	--	Hard tip
<b>Hammer Handles<sup>2</sup></b>						
--	263-3817	305 mm (12 in) <sup>3</sup>	--	--	--	Hickory
--	263-3820	458 mm (18 in) <sup>3</sup>	--	--	--	Hickory
--	263-3819	407 mm (16 in) <sup>3</sup>	--	--	--	Hickory

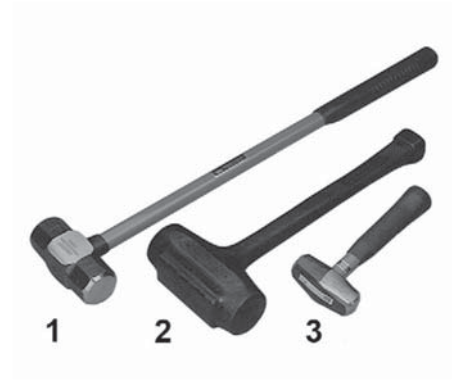
<sup>1</sup>Warranty: Six Months

<sup>2</sup>Warranty: Manufacturer, 120 Day

<sup>3</sup>Warranty: Manufacturer, 120 Day

## Multiple Use Hammers

Warranty: Lifetime unless otherwise noted



Item	Part Number	Description	Face Diameter	Overall Length	Weight	Size	Material
1	223-1697	Double Face Sledge	47.8 mm (1.88 in)	889 mm (35 in)	4.4 kg (9.61 lb)	--	--
2	223-1694	Dead Blow Sledge <sup>1</sup>	69.8 mm (2.75 in)	508 mm (20 in)	2.5 kg (5.51 lb)	--	--
3	223-1693	Hand Drilling (Short Handle)	38.1 mm (1.50 in)	273 mm (10.75 in)	1.8 kg (4.01 lb)	--	--
--	223-1695	Dead Blow Sledge <sup>1</sup>	82.6 mm (3.25 in)	914.4 mm (36 in)	5.4 kg (12.02 lb)	--	--
--	223-1698	Double Face Sledge	54 mm (2.13 in)	905 mm (35.63 in)	5 kg (10.91 lb)	--	--
--	245-9823	Double Face Sledge <sup>2</sup>	73 mm (2.87 in)	914 mm (35.98 in)	7.2 kg (15.98 lb)	--	--
<b>Hammer Handles</b>							
--	263-3821	--	--	--	--	762 mm (30 in) <sup>2</sup>	Hickory
--	263-3822	--	--	--	--	915 mm (36.02 in) <sup>2</sup>	Hickory

<sup>1</sup>Warranty: Six Months

<sup>2</sup>Warranty: Manufacturer, 120 Day

# Hammers and Slide Sledges

## Slide Sledge®

Warranty: Manufacturer, 90 Day

One operator can safely and easily maneuver the Slide Sledge Heavy Equipment Repair Tool into hard-to-reach places, simplifying repairs while reducing operator effort.

Slide Sledge is powered by sliding the steel drive bar back and forth, allowing the operator to deliver a precise impact — when and where it's needed. This eliminates inaccurate sledgehammer swings that can damage machinery.

- Eliminates need for special equipment or additional operators
- Reduces preventive and unscheduled maintenance hours
- Used to remove and install pins on almost any equipment
- Cuts through stripped or rusted bolts in seconds
- Reaches between ripper teeth for easy removal and installation
- Drives seals into place, quickly and easily
- Adapts to separator forks for fast, easy changeouts
- Promotes a safer work environment — eliminates flying debris associated with hammer and chisel use
- Minimizes operator effort and reduces muscle strain through finger-pressure control
- Accommodates interchangeable, application-specific tips that allow one tool to do the job of many
- Adapts to quick-change tips engineered to get the job done faster and easier
- Delivers powerful, precise impact; use a 5 lb handle weight for additional impact
- Made of induction-hardened steel for long life

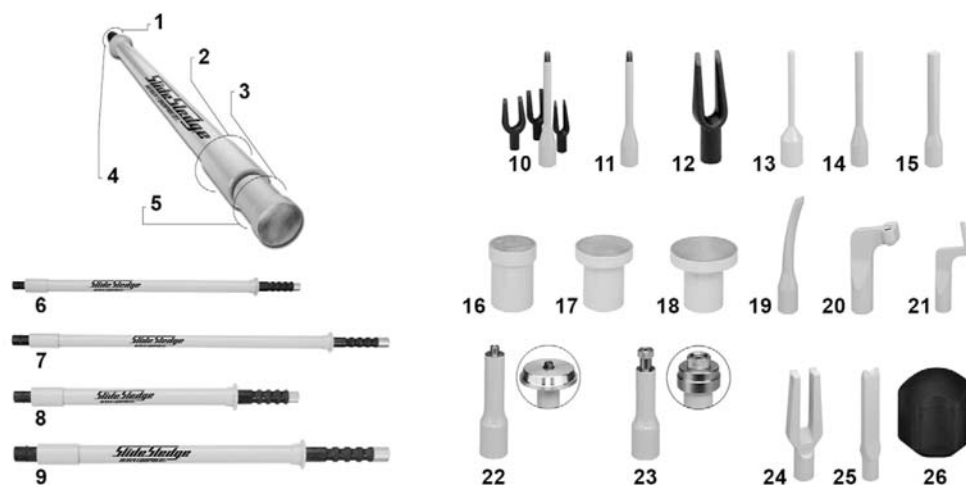
Item 1	Item 2	Item 3	Item 4	Item 5
Induction-Hardened Steel Drive Bar delivers a powerful impact.	Linear Impact Delivery System maximizes power transfer to tip.	Quick-Change secures tips and allows for quick tip changes.	Ergonomic Handle — provides solid grip. Slide Lock — keeps bar in place when tool is not in use.	D-Head Design keeps tip from rotating.

Hand Tools

(Continued)

## Slide Sledge® (Continued)

Warranty: Manufacturer, 90 Day



Item	Part Number	Weight	Length	Description	Use
<b>Slide Sledge</b>					
6	272-1208	9.00 lb <sup>1</sup>	30.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	For fitting into tight areas
7	272-1212	13.00 lb <sup>1</sup>	46.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Ideal for most standard applications
8	272-1215	14.00 lb <sup>1</sup>	30.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Larger diameter allows tool to fit into tight areas while delivering Biggest Maximum Force
9	272-1218	21.00 lb <sup>1</sup>	46.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Longer length and greater weight deliver Biggest Maximum Force for your toughest applications
<b>Accessories</b>					
10	272-1222	--	--	Tie Rod/Ball Joint Separator 3 Tip Set	Slide Sledge separator adapter and 1 <sup>1</sup> / <sub>16</sub> in, and 1 1/8 forks
11	272-1223	--	--	Tie Rod/Ball Joint Splitter Adapter	Attach all Slide Sledge separator fork and most common forks available
12	272-1224	--	--	Tie Rod/Ball Joint Separator Fork, 1 <sup>1</sup> / <sub>16</sub> in	--
12	272-1225	--	--	Tie Rod/Ball Joint Separator Fork, 1 <sup>5</sup> / <sub>16</sub> in	--
12	272-1226	--	--	Tie Rod/Ball Joint Separator Fork, 1 1/8 in	--
12	272-1227	--	--	Tie Rod/Ball Joint Separator Fork, 1 7/8 in	--
13	272-1228	--	--	Pin Driver, 1/2 in diameter	Recommended for pins and bolts greater than 1/2 in up to 3/8 in diameter
14	272-1230	--	--	Pin Driver, 3/8 in diameter	Recommended for pins greater than 3/8 in up to 1 1/4 in diameter
15	272-1233	--	--	Pin Driver, 1 1/4 in diameter	Recommended for pins greater than 1 1/4 in up to 2 in diameter
16	272-1237	--	--	Pin Driver, 2 in diameter	Recommended for pins greater than 2 in up to 2 1/2 in diameter
17	272-1239	--	--	Pin Driver, 2 1/2 in diameter	Recommended for pins greater than 2 1/2 in up to 3 in diameter

(Continued)

# Hammers and Slide Sledges

## Slide Sledge® (Continued)

Warranty: Manufacturer, 90 Day

Item	Part Number	Weight	Length	Description	Use
<b>Accessories (Continued)</b>					
18	272-1240	--	--	Pin Driver, 3 in diameter	Recommended for pins greater than 3 in up to 4 in diameter
19	272-1241	--	--	Curved Chisel Tip, 1 3/8	For chopping away hardened debris and shearing metal bolts, pins, and rivets up to 3/8 in, grade 8
20	272-1242	--	--	Ripper Tooth Pin Inserter, 3/4 in diameter	Use on pins as small as 3/16 in up to 1 in with minimum tooth spacing of 4 1/2 in
20	272-1244	--	--	Ripper Tooth Pin Inserter, 1/2 in diameter	Use on pins as small as 1/2 in up to 3/4 in with minimum tooth spacing of 3 1/2 in
20	272-1247	--	--	Ripper Tooth Pin Inserter, 3/8 in diameter	Use on pins as small as 3/8 in up to 1/2 in with minimum tooth spacing of 2 3/4 in
21	272-1243	--	--	Ripper Tooth Pin Remover, 3/4 in diameter	Use on pins as small as 3/4 in up to 1 in with minimum tooth spacing of 4 1/2 in
21	272-1245	--	--	Ripper Tooth Remover, 1/2 in diameter	Use on pins as small as 1/2 in up to 3/4 in with minimum tooth spacing of 3 1/2 in
21	272-1246	--	--	Ripper Tooth Pin Remover, 3/8 in diameter	Use on pins as small as 3/8 in up to 1/2 in with minimum tooth spacing of 2 3/4 in
22	272-1249	--	--	Race/Bearing/Seal Adapter	Adapter driver tip to install races, bearings, and seals. Add drive plates to the end in various combinations. Fits plates with a common 9/16 center hole, up to 4/4 in high (plates not included)
23	272-1250	--	--	Bushing Driver Adapter	Adapter driver tip to properly install bushings easily and quickly. Fits drivers with a common 3/4 center hole, up to 7/8 in high (drivers not included)
24	272-1251	--	--	Scarifier Tooth Tip	Removes scarifier teeth on most motor graders. The fork design allows the technician to split the trenching arm were the scarifier tooth is forced to fit.
25	272-1252	--	--	Utility Wedge Tip	All-purpose impact tool designed to separate parts and straighten steel with maximum force.
26	272-1253	--	--	5 Pound Handle Weight	Increases the Slide Sledge striking force by 5 lb; works with any of the four tools by threading onto tool handle
<b>Not Shown</b>					
--	272-1248	--	--	Bushing/Bearing/Seal Plate Driver	Use with Cat® plates (not included)
--	287-2075	--	--	Small Tire Bead Breaker, 2 1/4 in head width	Most standard applications
--	287-2076	--	--	Large Tire Bead Breaker, 2 7/8 in head width	Ideal for tractor trailers, backhoes, motor graders, and other large equipment

<sup>1</sup>Warranty: Manufacturer, 1 Year

## Slide Sledge Tool Bags and Case

Warranty: Manufacturer, 90 Day

Part Number	Description	Size
273-3527	Heavy Nylon Tool Bag with Interior Pockets	38 in long
273-3528	Heavy Nylon Tool Bag with Interior Pockets	52 in long
273-3529	Hard Shell Tool Case with Custom Foam and Wheels	53 × 14 in



# Pry Bars

## Pry Bars

Warranty: Cat® Standard Warranty, 6 Months



Part Number	Description	Size
1U-7587	Pry Bar, 6 in long <sup>1</sup>	152.4 mm (6.00 in)
194-3553	Rolling Head Pry Bar	304.8 mm (12.00 in)
5F-4764	Rolling Head Pry Bar, 40.64 cm (16 in) <sup>2</sup>	406.4 mm (16.00 in) long
194-3556	Rolling Head Pry Bar	533.4 mm (21.00 in)
1U-7591	Pry Bar	0.625 mm × 457.2 mm (0.63 in × 18.00 in)
1U-7592	Pry Bar	0.75 mm × 609.6 mm (0.75 in × 24.00 in)
1U-7593	Pry Bar	0.875 mm × 762.0 mm (0.88 in × 30.00 in)
4C-5742	Pry Bar	1168.4 mm (46.00 in)
4C-5647	Long Pry Bar	1371.6 mm (54.00 in)

<sup>1</sup>Warranty: Lifetime

<sup>2</sup>Warranty: Six Months

**Universal Level — 9U-7329**

Warranty: Cat® Standard Warranty, 6 Months

- Made of high-impact ABS
- Has two easy-to-read Plexiglas vials, one a vertical angle dial adjustable from 0° to 180°



Part Number	Description
9U-7329	Universal Level

**Tape Measures**

Warranty: Manufacturer's

**9U-7326 Tape Measure, ¼ inch × 6 ft**

- Black ABS-encased steel tape
- Slim and contemporary — fits easily in your pocket
- Has auto stop and return
- Readings in mm and inches

**9U-7327 Tape Measure, ½ inch × 10 ft**

- Can read dimensions directly on the tape by looking in a see-through window
- Great for inside measurements such as window dimensions
- Readings in mm and inches



Part Number	Description	Size
9U-7327	Tape Measure	½ in × 10 ft
9U-7326	Pocket Tape	¼ in × 6 ft

**Feeler Gauges**

Warranty: Lifetime

Item	Part Number	Description	Size
1	1U-7234	Feeler Gauge	25 Blade, 0.0015 in-0.040 in
2	8H-8581	Feeler Gauge <sup>1</sup>	25 blade, 0.0015 in-0.025 in

<sup>1</sup>Warranty: Six Months





**Utility Knife and Blades**

Warranty: Cat® Standard Warranty, 6 Months



- “Slick lock” push-button knife that includes 2 blades stored in the handle

Part Number	Description	Length	Thickness	Qty.
4C-4870	Utility Knife	152.4 mm (6 in)	--	1
4C-4871	Utility Knife Blades	--	0.635 mm (0.025 in)	100 blades per box

**Hacksaws**

Warranty: Lifetime unless otherwise noted



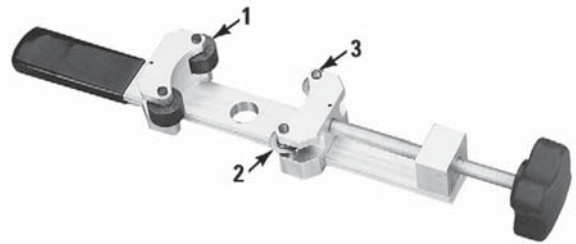
Part Number	Description	Length	Use	Teeth	Material	Qty.
194-3552	Hacksaw	350.0 mm (13.78 in)	for use with 12 inch blade; blade tensioning device in handle	--	--	--
208-6183	Hacksaw	419.1 mm (16.50 in)	for use with 12 inch blade	--	--	--
<b>Replacement Hacksaw Blade Sets</b>						
1U-9234	Replacement Hacksaw Blade Sets <sup>1</sup>	305.0 mm (12 in)	--	457 mm (18 in)	Bi-Metal	5
1U-9236	Replacement Hacksaw Blade Sets <sup>1</sup>	305.0 mm (12 in)	--	610 mm (24 in)	Bi-Metal	10
1U-9238	Replacement Hacksaw Blade Sets <sup>1</sup>	305.0 mm (12 in)	--	813 mm (32 in)	Bi-Metal	5

<sup>1</sup>Warranty: Manufacturer, 120 Day

**Filter Cutter — 175-7546**

Warranty: Cat® Standard Warranty, 6 Months

- Used to cut open spin-on filters to inspect filter media for contaminants, a common practice when diagnosing potential machine problems and internal contaminants.
- Aluminum frame construction
- Designed to cut all types of filters, including aircraft-style filters, without repositioning cutting wheels
- Heavy-duty double roller and cutting wheel design eliminates binding of filters
- All wear parts are heat-treated steel for added durability
- Cutting wheels are ground with a double-taper edge for easier cutting



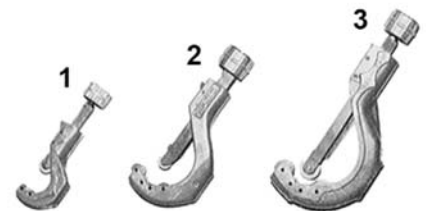
Item	Part Number	Description	Required
--	175-7546	Oil Filter Cutter Group	--
<b>Replacement Parts</b>			
1	177-0364	Roller	2
2	177-0365	Cutting Wheel	2
Not shown	177-0366	Spacer	2
3	177-0367	Pin	4

**Quick Release Tubing Cutters**

Warranty: Lifetime except part 4C-6979

- Offer the best tracking and easiest cutting available anywhere
- Cut copper, aluminum and steel tubing (not steel pipe)
- With a quick wheel change, they also cut a wide variety of plastic pipe and tubing

Item	Part Number	O.D. Capacity	Length	Weight	Wheel for Copper, Aluminum, Brass, Steel	Wheel for Stainless Steel
1	4C-6977	3.0 mm-33.0 mm (0.13 in-1.31 in)	152 mm (5.98 in)	0.2 kg (0.44 lb)	4C-6980	4C-6981
2	4C-6978	6.0 mm-60.0 mm (0.25 in-2.63 in)	203 mm (7.99 in)	0.5 kg (1.10 lb)	4C-6980	4C-6981
3	4C-6979	10.0 mm-90.0 mm (0.38 in-3.50 in) <sup>1</sup>	279 mm (10.98 in)	1.1 kg (2.43 lb)	4C-6982	--



<sup>1</sup>Warranty: Six Months

**Seal Pick — 5P-1720**

Warranty: Cat® Standard Warranty, 6 Months



- Used to remove and install all types of oil seals
- One end of pick is pointed for prying out flexible seals
- Blunt, hook end is used to align seals for installation and to eliminate the twist that occurs when installing O-ring or quad-ring seals
- Both ends of the pick are hardened and provide much greater strength than would normally be expected from a tool this size

Part Number	Description
5P-1720	Seal Pick

**Seal Pick Kit — 5P-7414**

Warranty: Lifetime



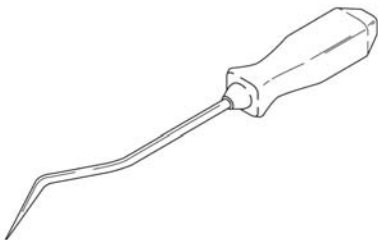
Part Number	Description
5P-7414	Seal Pick Kit

Hand Tools

**Seal Pick — 195-4609**

Model: All Hydraulic Cylinders

Warranty: Lifetime



- Used to remove cylinder rod seals
- Large size allows faster and easier removal of seals from large hydraulic cylinders
- Heavy-duty design

Part Number	Description	Length
195-4609	Seal Pick	248.0 mm (9.80 in)

**Scratch Brushes**

Warranty: Cat® Standard Warranty, 6 Months

- Hand scratch brushes are excellent for removing rust, scale, old paint, chips and dirt, and for cleaning castings and metal parts
- Provide long, effective service at extremely low cost

Part Number	Description	Size
1U-9915	Curved Handle Brush	0.014 in (3 × 19 Row)
1U-9916	Curved Handle Brush	0.012 in (4 × 19 Row)
1U-9917	Shoe Handle Brush	0.014 in (4 × 16 Row)
1U-9918	Inspection Stainless Brush	0.006 in (3 × 7 Row)



**Corner Cleaner Wire Brush — 160-0774**

Warranty: Cat® Standard Warranty, 6 Months

- Quickly removes flaking paint, rust, and scale
- Handy small size with pointed end works well in hard to reach areas
- Full size handle with finger grips and thumb rest provides added control and comfort
- Made of tough polypropylene

Part Number	Description	Overall Length
160-0774	Corner Cleaner Wire Brush	254.0 mm (10.00 in)



**Longneck Wire Brush — 160-0772**

Warranty: Cat® Standard Warranty, 6 Months

- Excellent for removing rust, scale, old paint, chips, or dirt
- Unique wrap-around handle protects your fingers
- Full size handle and molded finger grips add control and reduce fatigue
- Over 80 yards of wire for maximum performance
- Made of tough polypropylene
- Heavy-duty steel scraper has a baked-on, rust resistant finish
- Scraper is permanently secured to brush

Part Number	Description	Width	Overall Length
160-0772	Longneck Wire Brush	76.2 mm (3.00 in)	330.2 mm (13.00 in)



**Industrial Wire Scrubber — 160-0775**

Warranty: Cat® Standard Warranty, 6 Months



- Quickly removes flaking paint, rust, and scale
- Dual grip design reduces fatigue — grasp either the handle or specially molded block
- Made of tough polypropylene

Part Number	Description	Overall Length
160-0775	Industrial Wire Scrubber	177.8 mm (7.00 in)

**Parts Cleaning Brushes**

Warranty: Cat® Standard Warranty, 6 Months



Item	Part Number	Description	Wire Size	Wire Row
1	1U-9920	11 in O.A.L.	Size #10	Black Polypropylene
2	1U-9919	11 in O.A.L.	Size #10	Tampico
3	2B-4317	10 3/4 in O.A.L.	Paint Style 1 1/2 in	Black Nylon

Hand Tools

**Paint Brushes**

Warranty: Manufacturer, 120 Day



- Use with interior or exterior paints, stains, varnishes, and urethanes
- Quantity: one box of 12 brushes
- 262-9752 not available in Australia, New Zealand, Republic of Fiji or Papua New Guinea

Part Number	Width x Length	Material
262-9749	25 mm x 178 mm (1 in x 7 in)	Nylon Brush, Metal Ferrule, Plastic Handle
262-9750	51 mm x 203 mm (2 in x 8 in)	Nylon Brush, Metal Ferrule, Plastic Handle
262-9752	76 mm x 203 mm (3 in x 8 in)	Hog Bristle Brush, Metal Ferrule, Wood Handle

**Acid Brushes**

Warranty: Cat® Standard Warranty, 6 Months

- Genuine horsehair bristles, crimped with flat tin handle
- Chemical resistant handle

Part Number	Description	Size
1U-9977	Acid Brush	3/8 in
1U-9978	Acid Brush	1/2 in



**Battery Post Brush — 1U-9921**

Warranty: Cat® Standard Warranty, 6 Months

- Stiff wire bristles thoroughly clean posts

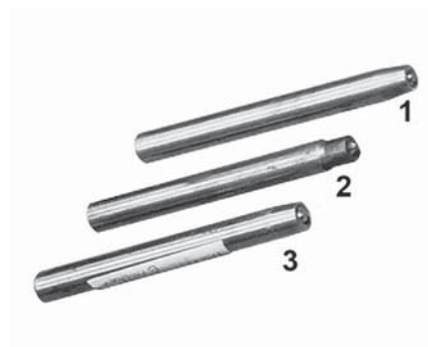
Part Number	Description
1U-9921	Battery Post Brush



**Hand Tools**

**Rivet Sets**

Warranty: Cat® Standard Warranty, 6 Months



- Available for either “Star” set rivets or “Roll” set rivets
- “Star” set rivets, identified by a star stamped in the head, should be used only where the clinching is done against a non-metallic surface. To form a good clinch, there should be approximately 3/16 inch of rivet extension before the rivet is set.
- “Roll” set rivets, marked with a circle on the head, should be used when clinching is done against metal. To form a good clinch, there should be approximately 1/8 inch of rivet extension before the rivet is set.

Item	Part Number	Description
1	1P-2874	Roll Set (for 1/4 in rivets)
2	6F-6947	Star Set
3	6F-6946	Roll Set (for 3/16 in rivets)
--	6V-7013	Roll Set (for 5/32 in rivets)

**Riveter Kit — 129-1063**

SMCS Code: 4054  
 Model: M312 Wheeled Excavators  
 Warranty: Lifetime



- Used for miscellaneous repairs requiring rivets
- Comes with three different nose pieces

Part Number	Description	Length
129-1063	Riveter Set	53.0 cm (21.0 in)

**Shovels and Spades**

Warranty: Manufacturer, Lifetime



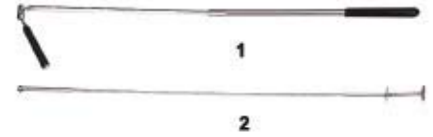
- Ergonomically engineered for balance and safety
- Latest technology fiberglass handles
- Super-duty, pultruded core with reinforcement sections adds strength
- Molded-exterior, polymer clad jacket for handling comfort

Item	Part Number	Description
1	157-2264	Shovel, Round Point with 122 cm (48 in) long handle
2	157-2276	Spade, Drain with 122 cm (48 in) long handle
3	157-2268	Shovel, Square with 122 cm (48 in) long handle
4	157-2273	Scoop, # 12 Aluminum
5	157-2278	Spade, Drain with 69 cm (27 in) D handle
6	157-2269	Shovel, Square Point with 69 cm (27 in) D handle
7	157-2266	Shovel, Round Point with 69 cm (27 in) D handle

**Retrieval Tools**

Warranty: Lifetime

Item	Part Number	Description
1	1U-7262	Magnet
2	146-2728	Flex Pickup Tool



**Inspection Mirror**

Warranty: Cat® Standard Warranty, 6 Months

- The mirror extends to 15 ¼ in long
- The mirror swivels 360 degrees

Part Number	Description
9U-6182	Inspection Mirror



**Putty Knife/Scraper**

Warranty: Cat® Standard Warranty, 6 Months

Part Number	Description	Size
8H-8580	Scraper <sup>1</sup>	38.1 mm (1.50 in) wide

<sup>1</sup>Warranty: Six Months



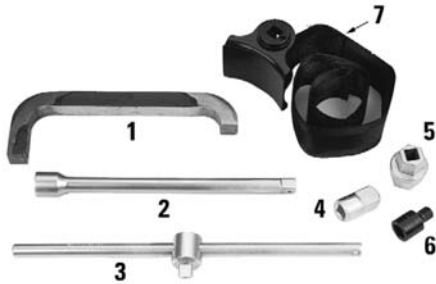
Hand Tools



**Filter and Plug Removal and Installation Tools**

Warranty: Lifetime unless otherwise noted

- Used to remove and install drain and fill plugs
- Most hexagonal plugs can also be removed and installed using the 213-1985 Sliding T-Handle and 8H-8561 Socket



Item	Part Number	Description
1	1S-2475	Wrench, 3/4 in square <sup>1</sup>
2	8H-8559	Socket Extension
3	213-1985	Sliding T-Handle
4	212-8145	Drain Plug Socket <sup>1</sup>
5	212-8146	Drain Plug Socket, 1/2 in Female, 1 in and 1 1/2 in Hex <sup>1</sup>
6	261-0444	Socket Adapter
7	185-3630	Filter Strap Wrench <sup>1</sup>

<sup>1</sup>Warranty: Six Months

**Cab Glass Installation Tools**

Warranty: Cat® Standard Warranty, 6 Months

- For installing the filler strips around the glass in cabs



Part Number	Description
4C-9946	Filler Strip Tool Assembly
5H-4845	Seal Installation Tool Assembly
5H-4846	Handle
5H-4847	End
5H-4848	Bit

Hand Tools

**Cordless Drill Kit (18v) — 151-0968**

Warranty: Manufacturer's



Cordless Driver/Drill, 18v Ni-Cad Battery Pack, Charger, Storage Case.

- Industrial strength gear train and heat treated alloy gears for durability and long life
- Patented air flow system cools the motor
- Single sleeve keyless chuck for one handed bit changes
- 22-position clutch makes dialing in the right torque easy
- UL, CUL, CE marked

Part Number	Description
151-0968	Cordless Drill Kit (18v)

**Superior E-Z Thrust Caulker**

Warranty: Cat® Standard Warranty, 6 Months

- Holds any 12 oz. tube designed for use with a caulking gun
- Recommended for all grades of caulks, sealants and adhesives from heavy to light consistencies

Part Number	Description	Cartridge Size
4C-6922	E-Z Thrust Caulker	0 L (0.01 gal)



**Super Ratchet-Type Caulker**

Warranty: Cat® Standard Warranty, 6 Months

- Designed for the professionals who prefer ratchet guns
- Will outlast, outperform all other ratchet guns
- Engineered to withstand heavy use
- Equipped with ladder hook, built-in spout cutter, seal puncture tool, and convenient “D” ring and wrist strap

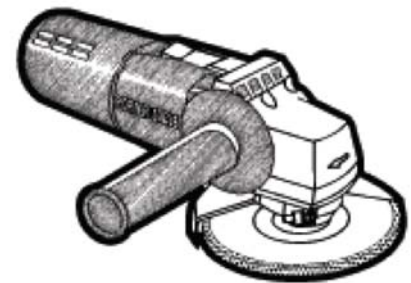
Part Number	Description	Cartridge Size
4C-6923	Ratchet-Type Caulker	1/10 gal



**Heavy-Duty Angle Grinder, 11,000 rpm, 4.5 inch — 288-2512**

Warranty: Lifetime

- Turns at 11,000 rpm for maximum grinding performance and efficiency
- Vibration-control side handle reduces vibration up to 60%, providing uncompromising comfort for extended periods of work
- AC/DC capability extends the versatility of the tool by working from DC outlets such as welders and generators
- Sealed switch keeps debris out of the switch mechanism and extends switch life
- Service Minder brushes eliminate guesswork, stop the tool when preventative maintenance is required
- Epoxy-coated field windings provide ultimate protection against abrasive dust and metal debris
- 5/8 inch — 11 spindle for mounting most popular accessories
- Tool-free adjustable guard for quick guard installation and adjustments
- Spindle lock for quick wheel changes
- 2-position auxiliary handle specifically designed and angled to a “natural” position for maximum comfort and control
- Double insulated, UL listed, OSHA compliant



Part Number	Power	Motor Amps	No Load Speed (rpm)	Spindle Thread Size	Wheel Size	Length	Net Weight
288-2512	120V AC/DC	7.5	11,000	5/8 in — 11	114.3 mm (4 1/2 in)	285.75 mm (11 1/4 in)	1.95 mm (4.3 lb)

**BIM Saw Blades**

Warranty: Manufacturer, 120 Day



Part Number	Length	Teeth	Package Quantity	Teeth Specs
1U-9234	305.0 mm (12 in)	457 mm (18 in)	5	Raker BIM <sup>1</sup>
1U-9236	305.0 mm (12 in)	610 mm (24 in)	10	Wavy BIM
1U-9238	305.0 mm (12 in)	813 mm (32 in)	5	Wavy BIM

<sup>1</sup> BIM — All purpose blade, highly flexible, for the most difficult materials.**Bi-Metal All-Purpose Tiger Saw Blades**Warranty: Cat<sup>®</sup> Standard Warranty, 6 Months

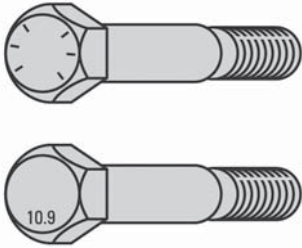
Part Number	Length	Teeth/Inch	Package Quantity	Recommended Use
4C-9942	152 mm (6 in), flexible	18	5	Heavy gauge (non-ferrous metals) — bar and angle stock-stainless-galvanized pipe-tubing (over 18 ga.)
4C-9943	152 mm (6 in), flexible	14	5	Heavy gauge (non-ferrous metals) — bar and angle stock-cast aluminum-copper-brass-galvanized
4C-9944	229 mm (9 in)	5/7	5	General roughing-in wood
4C-9945	305 mm (12 in)	6	5	General roughing-in wood



**HARDWARE**

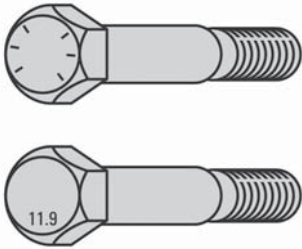


## Hex Head Bolts



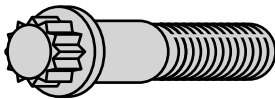
- Designed with smooth rolled threads for better clamp load, shear resistance and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Inch Bolts:
  - Meet or exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
  - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
  - Marked with 6 radial dashes on the bolt head.
- Metric Bolts:
  - Meet or exceed ISO Class 10.9 specifications for tensile strength and proof load, minimum tensile strength of 1040 mPa (150,000 psi).
  - Marked with 10.9 on the bolt head.
- Bolt Coatings:
  - Phosphate and Oil coating provides better clamp loads and torque retention.
  - Zinc plating provides better long term corrosion resistance.

## High Strength Hex Head Bolts



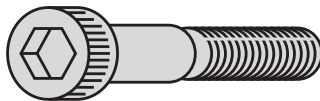
- Thread design and steel — similar to HEX Head Bolts
- Inch Bolts:
  - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
  - Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
  - Marked with seven radial dashes on the bolt head.
- Metric Bolts:
  - Exceed ISO 10.9 specifications for tensile strength of 1170 mPa (170,000 psi).
  - Marked with 11.9 on the bolt head.
- Coatings — similar to HEX Head Bolts.

## 12 Point Head Bolts



- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 1170 mPa (170,000 psi).
- For use in restricted clearance applications.

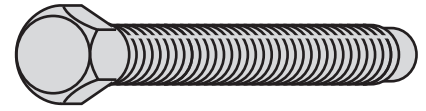
## Hex Socket Head Screw Bolts



- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 1170 mPa (170,000 psi).
- For use in restricted clearance applications.

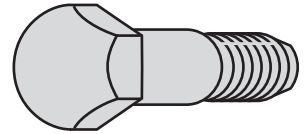
### Hex Head Forcing Bolts

- Designed with smooth rolled threads for better clamp load, shear resistance, and strip resistance.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.



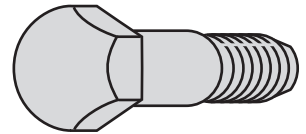
### Track Bolt and Split Master Link Bolts

- High dome Hex head for longer wear life and reusability.
- Exceeds SAE Grade 8 specification for tensile strength and proof load, minimum tensile strength 170,000 psi.
- Special induction heat treat process provides Rockwell C37-42 hardness.



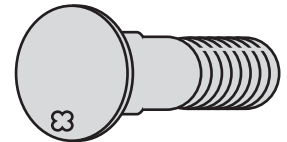
### High Strength Track Bolts

- Similar high dome Hex head as standard Track Bolts.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength 180,000 psi.
- Special induction heat treat process provides Rockwell C39-43 hardness.



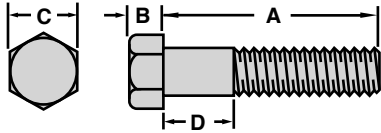
### Cutting Edge Bolts

- Dome shaped head for added strength and wear resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
- Special induction heat treat process provides Rockwell C33-39 minimum.



# Bolts

## Hex Head Bolts/Inch/Coarse Thread UNC/Phosphate & Oil Coated



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1/4 - 20</b>					
1/4 - 20	3/8 in	0.19 in	0.44 in	0.06 in	OS-1613
1/4 - 20	1/2 in	0.19 in	0.44 in	0.06 in	OS-1614
1/4 - 20	1 1/4 in	0.19 in	0.44 in	0.13 in	7B-2742
1/4 - 20	3/4 in	0.19 in	0.44 in	0.13 in	OS-1615
1/4 - 20	7/8 in	0.19 in	0.44 in	0.13 in	4F-7957
1/4 - 20	5/8 in	0.19 in	0.44 in	0.13 in	2A-0762
1/4 - 20	1 in	0.19 in	0.44 in	0.13 in	OS-1616
1/4 - 20	1 1/2 in	0.19 in	0.44 in	0.25 in	9F-7022
1/4 - 20	1 1/8 in	0.19 in	0.44 in	0.37 in	9F-6580
1/4 - 20	1 3/8 in	0.19 in	0.44 in	0.63 in	2A-5546
1/4 - 20	1 5/8 in	0.19 in	0.44 in	0.87 in	7B-8167
1/4 - 20	1 3/4 in	0.19 in	0.44 in	1.00 in	1B-2713
1/4 - 20	2 in	0.19 in	0.44 in	1.13 in	8B-2377
1/4 - 20	2 1/4 in	0.19 in	0.44 in	1.37 in	1D-4533
1/4 - 20	2 1/2 in	0.19 in	0.44 in	1.75 in	1B-2714
1/4 - 20	2 3/4 in	0.19 in	0.44 in	2.00 in	2A-4781
1/4 - 20	3 in	0.19 in	0.44 in	2.00 in	4B-9365
1/4 - 20	3 1/4 in	0.19 in	0.44 in	2.50 in	8F-8178
1/4 - 20	3 1/2 in	0.19 in	0.44 in	2.75 in	3B-8695
1/4 - 20	3 3/4 in	0.19 in	0.44 in	3.00 in	8F-6302
1/4 - 20	4 in	0.19 in	0.44 in	3.25 in	8S-4710
1/4 - 20	4 1/2 in	0.19 in	0.44 in	3.75 in	8S-4711
1/4 - 20	4 3/4 in	0.19 in	0.44 in	4.00 in	4L-3776
1/4 - 20	5 in	0.19 in	0.44 in	4.25 in	1B-2716
1/4 - 20	5 1/2 in	0.19 in	0.44 in	4.50 in	1B-2717
1/4 - 20	6 in	0.19 in	0.44 in	5.25 in	1B-2718
1/4 - 20	6 1/2 in	0.19 in	0.44 in	5.50 in	4N-1761
1/4 - 20	Washer	--	--	--	5P-0537
1/4 - 20	Nut	--	--	--	9S-8750
<b>Thread Size (in - TPI) 5/16 - 18</b>					
5/16 - 18	1/2 in	0.24 in	0.50 in	0.06 in	1C-0569
5/16 - 18	1 1/2 in	0.24 in	0.50 in	0.09 in	1A-9579
5/16 - 18	5/8 in	0.24 in	0.50 in	0.13 in	2H-3755
5/16 - 18	3/4 in	0.24 in	0.50 in	0.13 in	OS-1617
5/16 - 18	7/8 in	0.24 in	0.50 in	0.13 in	2B-2695
5/16 - 18	1 in	0.24 in	0.50 in	0.13 in	OS-1618
5/16 - 18	1 1/8 in	0.24 in	0.50 in	0.25 in	4B-3388
5/16 - 18	1 1/4 in	0.24 in	0.50 in	0.37 in	1B-7182
5/16 - 18	1 3/8 in	0.24 in	0.50 in	0.50 in	1B-2790

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 5/16 - 18 (Continued)</b>					
5/16 - 18	1 5/8 in	0.24 in	0.50 in	0.75 in	1H-5514
5/16 - 18	1 3/4 in	0.24 in	0.50 in	0.87 in	1B-9575
5/16 - 18	2 in	0.24 in	0.50 in	1.13 in	2B-2694
5/16 - 18	2 1/4 in	0.24 in	0.50 in	1.37 in	1D-4538
5/16 - 18	2 1/2 in	0.24 in	0.50 in	1.63 in	1D-4539
5/16 - 18	2 3/4 in	0.24 in	0.50 in	1.87 in	1D-4540
5/16 - 18	3 in	0.24 in	0.50 in	2.13 in	1D-4541
5/16 - 18	3 1/4 in	0.24 in	0.50 in	2.25 in	1F-5842
5/16 - 18	3 1/2 in	0.24 in	0.50 in	2.63 in	1F-4111
5/16 - 18	3 3/4 in	0.24 in	0.50 in	2.75 in	4B-0831
5/16 - 18	4 in	0.24 in	0.50 in	3.00 in	4B-3903
5/16 - 18	4 1/4 in	0.24 in	0.50 in	3.37 in	8H-8769
5/16 - 18	4 1/2 in	0.24 in	0.50 in	3.63 in	3H-5932
5/16 - 18	4 3/4 in	0.24 in	0.50 in	3.87 in	3H-3243
5/16 - 18	5 in	0.24 in	0.50 in	4.13 in	1F-6296
5/16 - 18	5 1/2 in	0.24 in	0.50 in	4.63 in	5L-1761
5/16 - 18	5 3/4 in	0.24 in	0.50 in	4.87 in	8M-1865
5/16 - 18	6 in	0.24 in	0.50 in	5.13 in	5P-0059
5/16 - 18	6 1/2 in	0.24 in	0.50 in	5.37 in	4F-3508
1 - 8	8 1/2 in	0.71 in	1.50 in	6.00 in	1D-4645
5/16 - 18	Nut	--	--	--	5S-0003
5/16 - 18	Washer	--	--	--	9M-1974
<b>Thread Size (in - TPI) 3/8 - 16</b>					
3/8 - 16	5/8 in	0.29 in	0.56 in	0.09 in	0T-0102
3/8 - 16	1/2 in	0.29 in	0.56 in	0.09 in	4F-4879
3/8 - 16	3/4 in	0.29 in	0.56 in	0.13 in	OS-0509
3/8 - 16	7/8 in	0.29 in	0.56 in	0.13 in	0L-1351
3/8 - 16	1 in	0.29 in	0.56 in	0.13 in	OS-1594
3/8 - 16	1 1/4 in	0.29 in	0.56 in	0.25 in	OS-1588
3/8 - 16	1 1/8 in	0.29 in	0.56 in	0.31 in	1A-2029
3/8 - 16	1 3/8 in	0.29 in	0.56 in	0.37 in	3B-1915
3/8 - 16	1 1/2 in	0.29 in	0.56 in	0.37 in	OS-1591
3/8 - 16	1 3/4 in	0.29 in	0.56 in	0.75 in	OS-1571
3/8 - 16	1 5/8 in	0.29 in	0.56 in	0.87 in	2A-4639
3/8 - 16	2 in	0.29 in	0.56 in	1.00 in	OS-1590
3/8 - 16	1 7/8 in	0.29 in	0.56 in	1.06 in	1C-2251
3/8 - 16	2 1/4 in	0.29 in	0.56 in	1.25 in	0L-2070
3/8 - 16	2 1/2 in	0.29 in	0.56 in	1.50 in	0L-1143
3/8 - 16	2 3/4 in	0.29 in	0.56 in	1.75 in	0T-0573

Hardware

(Continued)

**Hex Head Bolts/Inch/Coarse Thread UNC/Phosphate & Oil Coated (Continued)**

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 3/8 - 16 (Continued)</b>					
3/8 - 16	12 in	0.29 in	0.56 in	11.00 in	7M-1202
3/8 - 16	3 in	0.29 in	0.56 in	2.00 in	OS-1619
3/8 - 16	3 1/4 in	0.29 in	0.56 in	2.25 in	OL-1352
3/8 - 16	3 3/4 in	0.29 in	0.56 in	2.50 in	OS-1608
3/8 - 16	3 1/2 in	0.29 in	0.56 in	2.50 in	OT-0065
3/8 - 16	4 in	0.29 in	0.56 in	3.00 in	8S-9191
3/8 - 16	4 1/4 in	0.29 in	0.56 in	3.25 in	OT-0055
3/8 - 16	4 1/2 in	0.29 in	0.56 in	3.25 in	1A-5964
3/8 - 16	4 3/4 in	0.29 in	0.56 in	3.75 in	1A-5183
3/8 - 16	5 in	0.29 in	0.56 in	4.00 in	5B-9603
3/8 - 16	5 1/4 in	0.29 in	0.56 in	4.25 in	5B-2638
3/8 - 16	5 1/2 in	0.29 in	0.56 in	4.50 in	5F-4899
3/8 - 16	5 3/4 in	0.29 in	0.56 in	4.75 in	7F-3425
3/8 - 16	6 1/4 in	0.29 in	0.56 in	4.75 in	8F-8544
3/8 - 16	6 in	0.29 in	0.56 in	4.87 in	1D-4706
3/8 - 16	6 1/2 in	0.29 in	0.56 in	5.25 in	4F-0411
3/8 - 16	7 in	0.29 in	0.56 in	5.75 in	9F-8999
3/8 - 16	7 1/2 in	0.29 in	0.56 in	6.25 in	6B-1557
3/8 - 16	8 in	0.29 in	0.56 in	6.75 in	8F-6350
3/8 - 16	8 1/2 in	0.29 in	0.56 in	7.25 in	9F-2773
3/8 - 16	9 in	0.29 in	0.56 in	7.75 in	5F-6044
3/8 - 16	9 1/2 in	0.29 in	0.56 in	8.25 in	4H-3283
3/8 - 16	11 in	0.29 in	0.56 in	9.75 in	5P-1415
3/8 - 16	Nut	--	--	--	9S-8752
3/8 - 16	Washer	--	--	--	5M-2894
<b>Thread Size (in - TPI) 7/16 - 14</b>					
7/16 - 14	1 in	0.34 in	0.69 in	0.13 in	OT-0318
7/16 - 14	1 1/8 in	0.34 in	0.69 in	0.13 in	4F-8965
7/16 - 14	1 1/4 in	0.34 in	0.69 in	0.13 in	OT-0320
7/16 - 14	7/8 in	0.34 in	0.69 in	0.13 in	3L-0526
7/16 - 14	3/4 in	0.34 in	0.69 in	0.19 in	5P-0060
7/16 - 14	1 3/8 in	0.34 in	0.69 in	0.25 in	3H-5368
7/16 - 14	1 1/2 in	0.34 in	0.69 in	0.37 in	OT-0772
7/16 - 14	1 3/4 in	0.34 in	0.69 in	0.63 in	OT-0768
7/16 - 14	2 in	0.34 in	0.69 in	0.87 in	OT-0319
7/16 - 14	2 1/4 in	0.34 in	0.69 in	1.13 in	1D-4707
7/16 - 14	2 1/2 in	0.34 in	0.69 in	1.37 in	1D-4703
7/16 - 14	2 3/4 in	0.34 in	0.69 in	1.63 in	1D-4556
7/16 - 14	3 in	0.34 in	0.69 in	1.87 in	4F-5192
7/16 - 14	3 1/4 in	0.34 in	0.69 in	2.13 in	3B-8428
7/16 - 14	3 1/2 in	0.34 in	0.69 in	2.37 in	7F-8698
7/16 - 14	3 3/4 in	0.34 in	0.69 in	2.63 in	9F-2491
7/16 - 14	4 in	0.34 in	0.69 in	2.87 in	4F-7226
7/16 - 14	4 1/4 in	0.34 in	0.69 in	3.13 in	2J-5907
7/16 - 14	4 1/2 in	0.34 in	0.69 in	3.25 in	4B-7220

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/16 - 14 (Continued)</b>					
7/16 - 14	4 3/4 in	0.34 in	0.69 in	3.63 in	7H-3472
7/16 - 14	5 in	0.34 in	0.69 in	3.75 in	5B-5059
7/16 - 14	5 1/2 in	0.34 in	0.69 in	4.37 in	8F-4197
7/16 - 14	6 in	0.34 in	0.69 in	4.87 in	8F-6419
7/16 - 14	6 1/2 in	0.34 in	0.69 in	5.13 in	3L-0742
7/16 - 14	7 in	0.34 in	0.69 in	5.63 in	7H-7209
7/16 - 14	7 1/2 in	0.34 in	0.69 in	6.13 in	2L-7442
7/16 - 14	8 in	0.34 in	0.69 in	6.62 in	4L-7925
7/16 - 14	9 in	0.34 in	0.69 in	7.63 in	4L-7926
7/16 - 14	11 in	0.34 in	0.69 in	9.63 in	3L-4317
7/16 - 14	Washer	--	--	--	5P-8244
7/16 - 14	Nut	--	--	--	3S-1546
<b>Thread Size (in - TPI) 1/2 - 13</b>					
1/2 - 13	1/2 in	0.39 in	0.75 in	0.06 in	1K-6705
1/2 - 13	3/4 in	0.39 in	0.75 in	0.13 in	OS-1620
1/2 - 13	1 1/8 in	0.39 in	0.75 in	0.13 in	6H-1717
1/2 - 13	1 in	0.39 in	0.75 in	0.13 in	OS-1621
1/2 - 13	1 1/2 in	0.39 in	0.75 in	0.25 in	OS-1585
1/2 - 13	7/8 in	0.39 in	0.75 in	0.28 in	2H-3855
1/2 - 13	1 1/4 in	0.39 in	0.75 in	0.31 in	OS-1595
1/2 - 13	1 3/4 in	0.39 in	0.75 in	0.44 in	OS-1587
1/2 - 13	1 3/8 in	0.39 in	0.75 in	0.44 in	7B-3235
1/2 - 13	2 in	0.39 in	0.75 in	0.75 in	1A-1460
1/2 - 13	2 1/4 in <sup>1</sup>	0.39 in	0.75 in	1.00 in	2B-0947
1/2 - 13	2 1/4 in	0.39 in	0.75 in	1.00 in	9X-8873
1/2 - 13	2 1/2 in	0.39 in	0.75 in	1.25 in	9S-1366
1/2 - 13	2 3/4 in	0.39 in	0.75 in	1.50 in	1A-5822
1/2 - 13	3 in <sup>1</sup>	0.39 in	0.75 in	1.75 in	OL-1329
1/2 - 13	3 in	0.39 in	0.75 in	1.75 in	9X-8874
1/2 - 13	11 1/2 in <sup>1</sup>	0.39 in	0.75 in	10.00 in	5P-5421
1/2 - 13	13 in <sup>1</sup>	0.39 in	0.75 in	11.50 in	8S-6212
1/2 - 13	14 in <sup>1</sup>	0.39 in	0.75 in	12.50 in	5M-7900
1/2 - 13	3 1/4 in	0.39 in	0.75 in	2.00 in	OV-0375
1/2 - 13	3 1/2 in <sup>1</sup>	0.39 in	0.75 in	2.25 in	1D-4566
1/2 - 13	3 1/2 in	0.39 in	0.75 in	2.25 in	9X-8875
1/2 - 13	3 3/4 in	0.39 in	0.75 in	2.50 in	1B-2886
1/2 - 13	4 in	0.39 in	0.75 in	2.75 in	OS-1573
1/2 - 13	4 1/4 in	0.39 in	0.75 in	3.00 in	1D-4569
1/2 - 13	4 1/2 in	0.39 in	0.75 in	3.25 in	8S-9089
1/2 - 13	4 3/4 in <sup>1</sup>	0.39 in	0.75 in	3.50 in	2B-2006
1/2 - 13	4 3/4 in	0.39 in	0.75 in	3.50 in	9X-8876
1/2 - 13	5 in <sup>1</sup>	0.39 in	0.75 in	3.75 in	2H-6488
1/2 - 13	5 in	0.39 in	0.75 in	3.75 in	9X-8877
1/2 - 13	5 1/4 in	0.39 in	0.75 in	4.00 in	9X-8878
1/2 - 13	5 1/4 in <sup>1</sup>	0.39 in	0.75 in	4.00 in	6F-5282

Hardware

(Continued)



# Bolts

## Hex Head Bolts/Inch/Coarse Thread UNC/Phosphate & Oil Coated (Continued)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1/2 - 13 (Continued)</b>					
1/2 - 13	5 1/2 in	0.39 in	0.75 in	4.25 in	9X-8879
1/2 - 13	5 1/2 in	0.39 in	0.75 in	4.25 in	1D-4572
1/2 - 13	5 3/4 in	0.39 in	0.75 in	4.50 in	8F-8804
1/2 - 13	6 in	0.39 in	0.75 in	4.75 in	1D-4574
1/2 - 13	6 1/4 in	0.39 in	0.75 in	4.75 in	9H-8260
1/2 - 13	6 1/2 in	0.39 in	0.75 in	5.00 in	2A-1531
1/2 - 13	7 in	0.39 in	0.75 in	5.50 in	1A-7669
1/2 - 13	7 1/2 in	0.39 in	0.75 in	6.00 in	1A-0168
1/2 - 13	8 in	0.39 in	0.75 in	6.50 in	9S-1374
1/2 - 13	8 1/2 in	0.39 in	0.75 in	7.00 in	1B-3573
1/2 - 13	9 in	0.39 in	0.75 in	7.50 in	6M-9613
1/2 - 13	10 in	0.39 in	0.75 in	8.50 in	6F-5281
1/2 - 13	10 1/2 in <sup>1</sup>	0.39 in	0.75 in	9.00 in	8M-0139
1/2 - 13	11 in	0.39 in	0.75 in	9.50 in	8S-3887
1/2 - 13	Nut	—	—	—	1F-7958
1/2 - 13	Washer	--	--	--	5P-8245
<b>Thread Size (in - TPI) 9/16 - 12</b>					
9/16 - 12	1 in	0.43 in	0.87 in	0.12 in	3K-3379
9/16 - 12	1 1/2 in	0.43 in	0.87 in	0.16 in	8S-4733
9/16 - 12	1 1/4 in	0.43 in	0.87 in	0.16 in	8S-4732
9/16 - 12	1 3/8 in	0.43 in	0.87 in	0.17 in	4B-8519
9/16 - 12	2 1/2 in	0.43 in	0.87 in	1.13 in	8S-4735
9/16 - 12	3 in	0.43 in	0.87 in	1.63 in	8S-4736
9/16 - 12	3 1/2 in	0.43 in	0.87 in	2.13 in	8S-4737
9/16 - 12	4 in	0.43 in	0.87 in	2.63 in	8S-4738
9/16 - 12	4 1/2 in	0.43 in	0.87 in	3.13 in	8S-4739
9/16 - 12	5 in	0.43 in	0.87 in	3.63 in	8S-4740
9/16 - 12	5 1/2 in	0.43 in	0.87 in	4.13 in	8S-4741
9/16 - 12	6 in	0.43 in	0.87 in	4.63 in	8S-4742
9/16 - 12	8 in	0.43 in	0.87 in	6.38 in	9H-9129
9/16 - 12	Nut	--	--	--	5P-0539
9/16 - 12	Washer	--	--	--	5P-8246
<b>Thread Size (in - TPI) 5/8 - 11</b>					
5/8 - 11	3/4 in	0.48 in	0.94 in	0.06 in	1H-9456
5/8 - 11	1 1/2 in	0.48 in	0.94 in	0.19 in	0S-1566
5/8 - 11	1 1/4 in	0.48 in	0.94 in	0.19 in	0S-1592
5/8 - 11	1 in	0.48 in	0.94 in	0.19 in	0S-1624
5/8 - 11	1 3/8 in	0.48 in	0.94 in	0.19 in	4B-4043
5/8 - 11	1 3/4 in	0.48 in	0.94 in	0.25 in	0S-1589
5/8 - 11	1 7/8 in	0.48 in	0.94 in	0.28 in	7S-9372
5/8 - 11	2 in <sup>1</sup>	0.48 in	0.94 in	0.50 in	1A-1135
5/8 - 11	2 in	0.48 in	0.94 in	0.50 in	9X-8880
5/8 - 11	2 1/2 in	0.48 in	0.94 in	0.63 in	9X-8882
5/8 - 11	2 1/2 in <sup>1</sup>	0.48 in	0.94 in	0.63 in	0S-1625
5/8 - 11	2 1/4 in	0.48 in	0.94 in	0.75 in	9X-8881

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 5/8 - 11 (Continued)</b>					
5/8 - 11	2 1/4 in <sup>1</sup>	0.48 in	0.94 in	0.75 in	8S-9092
5/8 - 11	2 3/4 in <sup>1</sup>	0.48 in	0.94 in	1.25 in	1A-8537
5/8 - 11	2 3/4 in	0.48 in	0.94 in	1.25 in	9X-8883
5/8 - 11	3 in	0.48 in	0.94 in	1.50 in	1B-4367
5/8 - 11	3 1/4 in	0.48 in	0.94 in	1.75 in	1D-4585
5/8 - 11	3 1/2 in	0.48 in	0.94 in	2.00 in	1D-4586
5/8 - 11	3 3/4 in	0.48 in	0.94 in	2.25 in	0L-1169
5/8 - 11	4 in	0.48 in	0.94 in	2.50 in	0S-1569
5/8 - 11	4 1/4 in	0.48 in	0.94 in	2.75 in	1D-4588
5/8 - 11	4 1/2 in	0.48 in	0.94 in	3.00 in	1A-8651
5/8 - 11	4 3/4 in	0.48 in	0.94 in	3.25 in	1D-4590
5/8 - 11	5 in	0.48 in	0.94 in	3.50 in	1A-5405
5/8 - 11	5 1/4 in <sup>1</sup>	0.48 in	0.94 in	3.75 in	7S-3224
5/8 - 11	5 1/4 in	0.48 in	0.94 in	3.75 in	9X-8884
5/8 - 11	5 1/2 in	0.48 in	0.94 in	4.00 in	1D-4593
5/8 - 11	6 1/4 in	0.48 in	0.94 in	4.50 in	5D-9514
5/8 - 11	6 in	0.48 in	0.94 in	4.50 in	1D-4595
5/8 - 11	6 1/2 in	0.48 in	0.94 in	4.75 in	1D-4597
5/8 - 11	7 in	0.48 in	0.94 in	5.25 in	1D-4599
5/8 - 11	7 1/2 in	0.48 in	0.94 in	5.75 in	1D-4600
5/8 - 11	8 in	0.48 in	0.94 in	6.25 in	1B-7709
5/8 - 11	8 1/2 in	0.48 in	0.94 in	6.75 in	1D-4601
5/8 - 11	9 in	0.48 in	0.94 in	7.25 in	2H-3756
5/8 - 11	9 1/2 in	0.48 in	0.94 in	7.75 in	1D-4602
5/8 - 11	11 1/2 in	0.48 in	0.94 in	9.75 in	5P-4624
5/8 - 11	Nut	--	--	--	4K-0367
5/8 - 11	Washer	--	--	--	5P-8247
<b>Thread Size (in - TPI) 3/4 - 10</b>					
3/4 - 10	1 1/2 in	0.58 in	1.13 in	0.31 in	0S-1626
3/4 - 10	1 1/4 in	0.58 in	1.13 in	0.31 in	0S-1583
3/4 - 10	1 3/4 in	0.58 in	1.13 in	0.31 in	1A-0458
3/4 - 10	1 in	0.58 in	1.13 in	0.31 in	7H-2069
3/4 - 10	2 in	0.58 in	1.13 in	0.31 in	0L-1178 <sup>2</sup>
3/4 - 10	2 1/4 in	0.58 in	1.13 in	0.50 in	9X-8885
3/4 - 10	2 1/4 in <sup>1</sup>	0.58 in	1.13 in	0.50 in	2A-1538
3/4 - 10	2 1/2 in	0.58 in	1.13 in	0.75 in	1A-8063
3/4 - 10	2 3/4 in	0.58 in	1.13 in	1.00 in	9X-8886
3/4 - 10	2 3/4 in <sup>1</sup>	0.58 in	1.13 in	1.00 in	1D-4608
3/4 - 10	3 in <sup>1</sup>	0.58 in	1.13 in	1.25 in	1D-4609
3/4 - 10	3 in	0.58 in	1.13 in	1.25 in	9X-8887
3/4 - 10	3 1/4 in	0.58 in	1.13 in	1.50 in	9X-8888
3/4 - 10	3 1/4 in <sup>1</sup>	0.58 in	1.13 in	1.50 in	1D-4610
3/4 - 10	3 1/2 in <sup>1</sup>	0.58 in	1.13 in	1.75 in	3B-2968
3/4 - 10	3 1/2 in	0.58 in	1.13 in	1.75 in	9X-8889
3/4 - 10	13 in	0.58 in	1.13 in	11.00 in	031-9099

Hardware

(Continued)

**Hex Head Bolts/Inch/Coarse Thread UNC/Phosphate & Oil Coated (Continued)**

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 3/4 - 10 (Continued)</b>					
3/4 - 10	3 3/4 in	0.58 in	1.13 in	2.00 in	7F-5227
3/4 - 10	4 in	0.58 in	1.13 in	2.25 in	1D-4612
3/4 - 10	4 1/4 in	0.58 in	1.13 in	2.50 in	OS-1756
3/4 - 10	4 1/2 in	0.58 in	1.13 in	2.75 in	OS-1627
3/4 - 10	4 3/4 in	0.58 in	1.13 in	3.00 in	3B-6753
3/4 - 10	5 in	0.58 in	1.13 in	3.25 in	1D-4614
3/4 - 10	5 1/4 in	0.58 in	1.13 in	3.50 in	6V-8199
3/4 - 10	5 1/2 in	0.58 in	1.13 in	3.75 in	1D-4615
3/4 - 10	5 3/4 in	0.58 in	1.13 in	4.00 in	6K-1330
3/4 - 10	6 1/4 in	0.58 in	1.13 in	4.25 in	1D-4617
3/4 - 10	6 in	0.58 in	1.13 in	4.25 in	1D-4616
3/4 - 10	6 1/2 in	0.58 in	1.13 in	4.50 in	2B-1015
3/4 - 10	7 in	0.58 in	1.13 in	5.00 in	1D-4620
3/4 - 10	7 1/2 in	0.58 in	1.13 in	5.50 in	1D-4621
3/4 - 10	8 in	0.58 in	1.13 in	6.00 in	1D-4622
3/4 - 10	8 1/2 in	0.58 in	1.13 in	6.50 in	1D-4623
3/4 - 10	9 in	0.58 in	1.13 in	7.00 in	1D-4624
3/4 - 10	9 1/2 in	0.58 in	1.13 in	7.50 in	5J-1702
3/4 - 10	10 in	0.58 in	1.13 in	8.00 in	8F-4225
3/4 - 10	11 1/2 in	0.58 in	1.13 in	9.50 in	4J-7945
3/4 - 10	Washer	--	--	--	5P-8248
3/4 - 10	Nut	--	--	--	2J-3506
<b>Thread Size (in - TPI) 7/8 - 9</b>					
7/8 - 9	1 1/2 in	0.67 in	1.31 in	0.25 in	OT-0690
7/8 - 9	1 3/4 in	0.67 in	1.31 in	0.37 in	2H-3757
7/8 - 9	2 in	0.67 in	1.31 in	0.37 in	9X-8890
7/8 - 9	2 1/4 in	0.67 in	1.31 in	0.37 in	9F-9522
7/8 - 9	2 in <sup>1</sup>	0.67 in	1.31 in	0.37 in	OS-1973
7/8 - 9	2 1/2 in	0.67 in	1.31 in	0.50 in	1D-4625
7/8 - 9	2 3/4 in <sup>1</sup>	0.67 in	1.31 in	0.75 in	1D-4626
7/8 - 9	2 3/4 in	0.67 in	1.31 in	0.75 in	9X-8891
7/8 - 9	3 in	0.67 in	1.31 in	1.00 in	1D-4627
7/8 - 9	3 1/4 in <sup>1</sup>	0.67 in	1.31 in	1.25 in	1D-4628
7/8 - 9	3 1/4 in	0.67 in	1.31 in	1.25 in	9X-8892
7/8 - 9	3 1/2 in	0.67 in	1.31 in	1.50 in	9X-8893
7/8 - 9	3 1/2 in <sup>1</sup>	0.67 in	1.31 in	1.50 in	1D-4629
7/8 - 9	3 3/4 in <sup>1</sup>	0.67 in	1.31 in	1.75 in	2H-3856
7/8 - 9	3 3/4 in	0.67 in	1.31 in	1.75 in	9X-8894
7/8 - 9	12 1/2 in	0.67 in	1.31 in	10.25 in	4D-8317
7/8 - 9	14 in	0.67 in	1.31 in	11.75 in	3K-0581
7/8 - 9	15 in	0.67 in	1.31 in	12.75 in	3K-3183
7/8 - 9	16 in	0.67 in	1.31 in	13.75 in	3K-6552
7/8 - 9	4 in <sup>1</sup>	0.67 in	1.31 in	2.00 in	1D-4630
7/8 - 9	4 in	0.67 in	1.31 in	2.00 in	9X-8895
7/8 - 9	4 1/4 in	0.67 in	1.31 in	2.25 in	1D-4631

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/8 - 9 (Continued)</b>					
7/8 - 9	4 1/2 in	0.67 in	1.31 in	2.50 in	1A-5576
7/8 - 9	4 3/4 in	0.67 in	1.31 in	2.75 in	4J-8622
7/8 - 9	5 in	0.67 in	1.31 in	3.00 in	9S-1351
7/8 - 9	5 1/2 in	0.67 in	1.31 in	3.50 in	1D-4634
7/8 - 9	6 in	0.67 in	1.31 in	3.75 in	9S-1322
7/8 - 9	6 1/2 in	0.67 in	1.31 in	4.25 in	6J-1536
7/8 - 9	7 in	0.67 in	1.31 in	4.75 in	1D-5976
7/8 - 9	7 1/2 in	0.67 in	1.31 in	5.25 in	1K-9422
7/8 - 9	8 in	0.67 in	1.31 in	5.75 in	1D-6259
7/8 - 9	8 1/2 in	0.67 in	1.31 in	6.25 in	3K-7127
7/8 - 9	9 in	0.67 in	1.31 in	6.75 in	6K-8739
7/8 - 9	9 1/2 in	0.67 in	1.31 in	7.25 in	1D-6260
7/8 - 9	10 in	0.67 in	1.31 in	7.75 in	2B-2391
7/8 - 9	11 in	0.67 in	1.31 in	8.75 in	3K-3112
7/8 - 9	Nut	--	--	--	2J-3505
7/8 - 9	Washer	--	--	--	5P-8249
<b>Thread Size (in - TPI) 1 - 8</b>					
1 - 8	2 1/4 in	0.71 in	1.50 in	0.25 in	8S-9093
1 - 8	1 1/4 in	0.71 in	1.50 in	0.31 in	8S-4767
1 - 8	1 1/2 in	0.71 in	1.50 in	0.31 in	0V-0450
1 - 8	1 3/4 in	0.71 in	1.50 in	0.37 in	1J-7370
1 - 8	2 1/2 in	0.71 in	1.50 in	0.50 in	1D-4635
1 - 8	2 3/4 in	0.71 in	1.50 in	0.50 in	9S-1363
1 - 8	3 in	0.71 in	1.50 in	0.75 in	1D-4709
1 - 8	2 in	0.71 in	1.50 in	0.75 in	1J-5257
1 - 8	3 1/4 in	0.71 in	1.50 in	1.00 in	1D-4637
1 - 8	3 1/2 in	0.71 in	1.50 in	1.25 in	1D-4638
1 - 8	3 3/4 in	0.71 in	1.50 in	1.50 in	8H-5772
1 - 8	4 in	0.71 in	1.50 in	1.75 in	9X-8896
1 - 8	4 in <sup>1</sup>	0.71 in	1.50 in	1.75 in	1D-4639
1 - 8	14 in	0.71 in	1.50 in	10.50 in	6M-2001
1 - 8	13 in	0.71 in	1.50 in	10.50 in	6J-4081
1 - 8	12 in	0.71 in	1.50 in	10.50 in	2H-4010
1 - 8	15 in	0.71 in	1.50 in	13.50 in	2H-4011
1 - 8	16 in	0.71 in	1.50 in	14.00 in	6M-1029
1 - 8	4 1/4 in	0.71 in	1.50 in	2.00 in	9X-8897
1 - 8	4 1/4 in <sup>1</sup>	0.71 in	1.50 in	2.00 in	1D-4640
1 - 8	4 1/2 in	0.71 in	1.50 in	2.25 in	1D-4641
1 - 8	4 3/4 in	0.71 in	1.50 in	2.50 in	2A-1420
1 - 8	5 in	0.71 in	1.50 in	2.75 in	9X-8898
1 - 8	5 in <sup>1</sup>	0.71 in	1.50 in	2.75 in	1D-4642
1 - 8	5 1/2 in	0.71 in	1.50 in	3.25 in	1D-4643
1 - 8	6 in	0.71 in	1.50 in	3.75 in	9F-6936
1 - 8	6 1/2 in	0.71 in	1.50 in	4 in	5B-5473
1 - 8	7 in	0.71 in	1.50 in	4.50 in	5F-9338

Hardware

(Continued)

**Hex Head Bolts/Inch/Coarse Thread UNC/Phosphate & Oil Coated (Continued)**

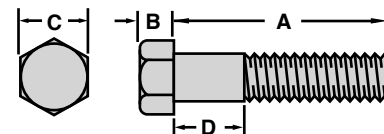
Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 - 8 (Continued)</b>					
1 - 8	7 ½ in	0.71 in	1.50 in	5.00 in	2B-7218
1 - 8	8 in	0.71 in	1.50 in	5.50 in	1D-4644
1 - 8	8 ½ in	0.71 in	1.50 in	6.00 in	1D-4645
1 - 8	9 in	0.71 in	1.50 in	6.50 in	1D-4646
1 - 8	9 ½ in	0.71 in	1.50 in	7.00 in	1D-4647
1 - 8	10 in	0.71 in	1.50 in	7.50 in	2J-8348
1 - 8	10 ½ in	0.71 in	1.50 in	8.00 in	8F-6453
1 - 8	11 in	0.71 in	1.50 in	8.50 in	8K-5130
1 - 8	11 ½ in	0.71 in	1.50 in	9.00 in	7K-4363
1 - 8	Nut	--	--	--	2J-3507
1 - 8	Washer	--	--	--	5P-8250
<b>Thread Size (in - TPI) 1 ⅛ - 7</b>					
1 ⅛ - 7	2 in	0.81 in	1.87 in	0.25 in	3J-8281
1 ⅛ - 7	2 ¾ in	0.72 in	1.69 in	0.44 in	2K-2037
1 ⅛ - 7	3 in	0.72 in	1.69 in	0.50 in	1J-2814
1 ⅛ - 7	4 in	0.72 in	1.69 in	0.63 in	3N-1614
1 ⅛ - 7	2 ½ in	0.72 in	1.69 in	1.00 in	7J-7222
1 ⅛ - 7	3 ½ in	0.72 in	1.69 in	1.00 in	1J-2175
1 ⅛ - 7	4 ¼ in	0.72 in	1.69 in	1.75 in	5J-1572
1 ⅛ - 7	4 ½ in	0.72 in	1.69 in	2.00 in	5M-0544
1 ⅛ - 7	5 ¼ in	0.72 in	1.69 in	3.00 in	6J-1551
1 ⅛ - 7	6 in	0.72 in	1.69 in	3.50 in	8H-5727
1 ⅛ - 7	6 ½ in	0.72 in	1.69 in	3.75 in	8F-4486
1 ⅛ - 7	Nut	--	--	--	4J-5977
1 ⅛ - 7	Washer	--	--	--	3S-1349
<b>Thread Size (in - TPI) 1 ¼ - 7</b>					
1 ¼ - 7	3 in	0.81 in	1.87 in	0.44 in	3R-2299
1 ¼ - 7	2 ½ in	0.81 in	1.87 in	0.44 in	3F-6353
1 ¼ - 7	3 ¼ in	0.81 in	1.87 in	0.50 in	1J-5484
1 ¼ - 7	3 ½ in	0.81 in	1.87 in	0.75 in	2B-1955
1 ¼ - 7	4 in	0.81 in	1.87 in	1.25 in	2H-3758
1 ¼ - 7	4 ¼ in	0.81 in	1.87 in	1.50 in	1S-6560

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 ¼ - 7 (Continued)</b>					
1 ¼ - 7	4 ½ in	0.81 in	1.87 in	1.75 in	3R-2300
1 ¼ - 7	13 in	0.81 in	1.87 in	10.50 in	1K-4378
1 ¼ - 7	14 in	0.81 in	1.87 in	11.00 in	6V-1734
1 ¼ - 7	15 in	0.81 in	1.87 in	12.00 in	031-0213
1 ¼ - 7	4 ¾ in	0.81 in	1.87 in	2.00 in	8F-1156
1 ¼ - 7	5 in	0.81 in	1.87 in	2.25 in	2H-1618
1 ¼ - 7	5 ½ in	0.81 in	1.87 in	2.75 in	1B-2721
1 ¼ - 7	6 in	0.81 in	1.87 in	3.25 in	2H-1537
1 ¼ - 7	6 ½ in	0.81 in	1.87 in	3.50 in	6H-1628
1 ¼ - 7	7 in	0.81 in	1.87 in	4.00 in	6V-2624
1 ¼ - 7	8 in	0.81 in	1.87 in	5.00 in	3F-9025
1 ¼ - 7	8 ½ in	0.81 in	1.87 in	5.50 in	1J-6775
1 ¼ - 7	9 in	0.81 in	1.87 in	6.00 in	1K-9418
1 ¼ - 7	9 ½ in	0.81 in	1.87 in	6.50 in	1K-9420
1 ¼ - 7	10 in	0.81 in	1.87 in	7.00 in	1D-4649
1 ¼ - 7	10 ½ in	0.81 in	1.87 in	7.50 in	6B-0388
1 ¼ - 7	11 in	0.81 in	1.87 in	8.25 in	1K-9415
1 ¼ - 7	Washer	--	--	--	4K-0684
1 ¼ - 7	Nut	--	--	--	3K-9770
<b>Thread Size (in - TPI) 1 ½ - 6</b>					
1 ½ - 6	3 ½ in	0.97 in	2.25 in	0.40 in	3J-1805
1 ½ - 6	4 in	0.97 in	2.25 in	0.50 in	6V-8970
1 ½ - 6	4 ½ in	0.97 in	2.25 in	1.00 in	6V-8536
1 ½ - 6	4 ½ in	0.97 in	2.25 in	1.25 in	138-8455
1 ½ - 6	5 in	0.97 in	2.25 in	1.75 in	1K-9414
1 ½ - 6	6 in	0.97 in	2.25 in	2.50 in	131-2627
1 ½ - 6	7 in	0.97 in	2.25 in	2.50 in	4R-9112
1 ½ - 6	9 in	0.97 in	2.25 in	5.50 in	6V-7977
1 ½ - 6	11 ½ in	0.97 in	2.25 in	7.50 in	6V-0659
1 ½ - 6	12 ½ in	0.97 in	2.25 in	9.00 in	127-4840
1 ½ - 6	Washer	--	--	--	3S-6162
1 ½ - 6	Nut	--	--	--	9S-8216

<sup>1</sup>High strength bolt.

<sup>2</sup>Discontinued, part of the 8F-2550 Engine Tilting Group

**Hex Head Bolts/Inch/Fine Thread UNF/Phosphate & Oil Coated**



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1/4 - 28</b>					
1/4 - 20	Washer	--	--	--	5P-0537
1/4 - 28	5/8 in	0.19 in	0.44 in	0.08 in	0S-1570
1/4 - 28	1 1/4 in	0.19 in	0.44 in	0.13 in	4B-2152
1/4 - 28	3/4 in	0.19 in	0.44 in	0.08 in	0T-0284
1/4 - 28	1 in	0.19 in	0.44 in	0.25 in	0S-1597
1/4 - 28	7/8 in	0.19 in	0.44 in	0.08 in	0L-1340
1/4 - 28	1 1/8 in	0.19 in	0.44 in	0.37 in	0L-1590
1/4 - 28	1 1/2 in	0.19 in	0.44 in	0.75 in	5F-4475
1/4 - 28	1 3/4 in	0.19 in	0.44 in	1.00 in	2D-7563
1/4 - 28	2 in	0.19 in	0.44 in	1.25 in	4B-8701
1/4 - 28	2 1/2 in	0.19 in	0.44 in	1.50 in	1A-9919
1/4 - 28	2 1/4 in	0.19 in	0.44 in	1.50 in	2B-8593
1/4 - 28	3 in	0.19 in	0.44 in	2.25 in	8S-4712
1/4 - 28	3 1/2 in	0.19 in	0.44 in	2.75 in	8S-4713
1/4 - 28	4 in	0.19 in	0.44 in	3.25 in	8S-4714
1/4 - 28	4 1/2 in	0.19 in	0.44 in	3.75 in	8S-4715
1/4 - 28	Nut	--	--	--	9S-8748
1/4 - 28	1/2 in	0.19 in	0.44 in	0.09 in	6F-7027
1/4 - 28	5 in	0.19 in	0.44 in	4.25 in	8S-4716
<b>Thread Size (in - TPI) 5/16 - 24</b>					
5/16 - 18	Washer	--	--	--	9M-1974
5/16 - 24	1/2 in	0.24 in	0.50 in	0.09 in	2F-2093
5/16 - 24	7/8 in	0.24 in	0.50 in	0.09 in	4B-9883
5/16 - 24	3/4 in	0.24 in	0.50 in	0.13 in	1A-2343
5/16 - 24	5/8 in	0.24 in	0.50 in	0.13 in	2H-3737
5/16 - 24	1 1/4 in	0.24 in	0.50 in	0.37 in	1B-1293
5/16 - 24	1 3/8 in	0.24 in	0.50 in	0.50 in	2A-1371
5/16 - 24	1 1/2 in	0.24 in	0.50 in	0.63 in	1B-0581
5/16 - 24	1 1/8 in	0.24 in	0.50 in	0.66 in	6H-0187
5/16 - 24	1 3/4 in	0.24 in	0.50 in	0.87 in	2H-3708
5/16 - 24	2 in	0.24 in	0.50 in	1.13 in	1H-5403
5/16 - 24	2 1/4 in	0.24 in	0.50 in	1.37 in	2H-3739
5/16 - 24	2 1/2 in	0.24 in	0.50 in	1.63 in	8S-4717
5/16 - 24	2 3/4 in	0.24 in	0.50 in	1.87 in	4B-1028
5/16 - 24	3 in	0.24 in	0.50 in	2.13 in	8S-4718
5/16 - 24	3 1/4 in	0.24 in	0.50 in	2.37 in	7F-0938
5/16 - 24	4 in	0.24 in	0.50 in	3.13 in	8S-4720
5/16 - 24	4 1/2 in	0.24 in	0.50 in	3.63 in	8S-4721
5/16 - 24	5 in	0.24 in	0.50 in	4.13 in	8S-4722
5/16 - 24	Nut	--	--	--	9S-8751

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 5/16 - 24 (Continued)</b>					
5/16 - 24	1 in	0.24 in	0.50 in	0.13 in	2H-3738
5/16 - 24	3 1/2 in	0.24 in	0.50 in	2.63 in	8S-4719
<b>Thread Size (in - TPI) 3/8 - 24</b>					
3/8 - 16	Washer	--	--	--	5M-2894
3/8 - 24	Nut	--	--	--	3S-2713
3/8 - 24	7/8 in	0.29 in	0.56 in	0.09 in	0T-0703
3/8 - 24	1 1/8 in	0.29 in	0.56 in	0.13 in	5B-2208
3/8 - 24	3/4 in	0.29 in	0.56 in	0.13 in	0L-0472
3/8 - 24	1 in	0.29 in	0.56 in	0.19 in	6F-7030
3/8 - 24	1 1/4 in	0.29 in	0.56 in	0.25 in	1A-2209
3/8 - 24	1 3/8 in	0.29 in	0.56 in	0.37 in	2A-4996
3/8 - 24	1 1/2 in	0.29 in	0.56 in	0.50 in	0T-0924
3/8 - 24	2 in	0.29 in	0.56 in	1.00 in	0S-1748
3/8 - 24	2 1/4 in	0.29 in	0.56 in	1.25 in	0L-0639
3/8 - 24	2 1/2 in	0.29 in	0.56 in	1.50 in	0L-1648
3/8 - 24	2 3/4 in	0.29 in	0.56 in	1.75 in	0L-0139
3/8 - 24	3 3/4 in	0.29 in	0.56 in	2.50 in	1B-3680
3/8 - 24	4 in	0.29 in	0.56 in	3.00 in	0T-0513
3/8 - 24	4 1/4 in	0.29 in	0.56 in	3.25 in	1B-5082
3/8 - 24	4 1/2 in	0.29 in	0.56 in	3.50 in	6F-8425
3/8 - 24	5 in	0.29 in	0.56 in	4.00 in	1A-2116
3/8 - 24	5 1/2 in	0.29 in	0.56 in	4.50 in	5B-6579
3/8 - 24	6 in	0.29 in	0.56 in	5.00 in	6F-4736
3/8 - 24	6 1/2 in	0.29 in	0.56 in	5.25 in	035-2353
3/8 - 24	8 in	0.29 in	0.56 in	6.75 in	4H-5883
3/8 - 24	1 3/4 in	0.29 in	0.56 in	0.75 in	0L-0478
3/8 - 24	3 in	0.29 in	0.56 in	2.00 in	6F-7031
3/8 - 24	3 1/4 in	0.29 in	0.56 in	2.25 in	0S-1605
3/8 - 24	1/2 in	0.29 in	0.56 in	0.09 in	0L-1138
3/8 - 24	5/8 in	0.29 in	0.56 in	0.09 in	0T-0642
<b>Thread Size (in - TPI) 7/8 - 20</b>					
7/8 - 14	Washer	--	--	--	5P-8244
7/8 - 20	1 1/4 in	0.34 in	0.69 in	0.13 in	0T-0244
7/8 - 20	1 1/2 in	0.34 in	0.69 in	0.37 in	8S-4723
7/8 - 20	1 3/4 in	0.34 in	0.69 in	0.63 in	1A-4350
7/8 - 20	2 in	0.34 in	0.69 in	0.87 in	0T-0489
7/8 - 20	2 1/4 in	0.34 in	0.69 in	1.13 in	8S-4724
7/8 - 20	3 1/4 in	0.34 in	0.69 in	1.75 in	5D-4085
7/8 - 20	3 in	0.34 in	0.69 in	1.87 in	8S-4726
7/8 - 20	2 3/4 in	0.34 in	0.69 in	1.63 in	8S-4725

Hardware

(Continued)

# Bolts

## Hex Head Bolts/Inch/Fine Thread UNF/Phosphate & Oil Coated (Continued)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/16 - 20 (Continued)</b>					
7/16 - 20	3 3/4 in	0.34 in	0.69 in	2.63 in	8S-4727
7/16 - 20	4 in	0.34 in	0.69 in	2.87 in	8S-4728
7/16 - 20	4 1/2 in	0.34 in	0.69 in	3.37 in	8S-4729
7/16 - 20	5 in	0.34 in	0.69 in	3.87 in	8S-4730
7/16 - 20	6 in	0.34 in	0.69 in	4.87 in	8S-4731
7/16 - 20	9 in	0.34 in	0.69 in	7.63 in	2L-4523
7/16 - 20	1 in	0.34 in	0.69 in	0.13 in	OT-0840
7/16 - 20	2 1/2 in	0.34 in	0.69 in	1.37 in	1B-0572
7/16 - 20	Nut	--	--	--	9S-8905
7/16 - 20	3 1/2 in	0.34 in	0.69 in	2.37 in	1J-6298
<b>Thread Size (in - TPI) 1/2 - 20</b>					
1/2 - 13	Washer	--	--	--	5P-8245
1/2 - 20	1 in	0.39 in	0.75 in	0.13 in	OS-1629
1/2 - 20	3/4 in	0.39 in	0.75 in	0.13 in	6F-7032
1/2 - 20	7/8 in	0.39 in	0.75 in	0.13 in	OT-0598
1/2 - 20	1 1/2 in	0.39 in	0.75 in	0.25 in	OS-1603
1/2 - 20	1 3/4 in	0.39 in	0.75 in	0.50 in	OS-1584
1/2 - 20	2 in	0.39 in	0.75 in	0.75 in	OS-1579
1/2 - 20	2 1/4 in	0.39 in	0.75 in	1.00 in	OS-0484
1/2 - 20	2 1/2 in	0.39 in	0.75 in	1.25 in	OS-1604
1/2 - 20	2 3/4 in	0.39 in	0.75 in	1.50 in	OS-1599
1/2 - 20	3 in	0.39 in	0.75 in	1.75 in	OL-1732
1/2 - 20	3 1/4 in	0.39 in	0.75 in	2.00 in	OL-1558
1/2 - 20	3 1/2 in	0.39 in	0.75 in	2.25 in	OL-2315
1/2 - 20	3 3/4 in	0.39 in	0.75 in	2.50 in	1A-1952
1/2 - 20	4 in	0.39 in	0.75 in	2.75 in	OL-1559
1/2 - 20	4 1/4 in	0.39 in	0.75 in	3.00 in	6F-7033
1/2 - 20	4 1/2 in	0.39 in	0.75 in	3.25 in	1A-3046
1/2 - 20	7 in	0.39 in	0.75 in	3.37 in	3H-1930
1/2 - 20	4 3/4 in	0.39 in	0.75 in	3.50 in	OL-0557
1/2 - 20	5 in	0.39 in	0.75 in	3.75 in	1B-1422
1/2 - 20	5 1/2 in	0.39 in	0.75 in	4.25 in	3H-1097
1/2 - 20	5 3/4 in	0.39 in	0.75 in	4.50 in	5M-9979
1/2 - 20	6 in	0.39 in	0.75 in	4.75 in	9F-1595
1/2 - 20	6 1/2 in	0.39 in	0.75 in	5.00 in	2H-3747
1/2 - 20	7 1/2 in	0.39 in	0.75 in	6.00 in	2H-3748
1/2 - 20	8 in	0.39 in	0.75 in	6.50 in	1A-3967
1/2 - 20	Nut	--	--	--	6B-6684
1/2 - 20	1 1/4 in	0.39 in	0.75 in	0.13 in	OS-1593
1/2 - 20	1 3/8 in	0.39 in	0.75 in	0.13 in	4K-7502
<b>Thread Size (in - TPI) 9/16 - 18</b>					
9/16 - 12	Washer	--	--	--	5P-8246
9/16 - 18	1 3/8 in	0.43 in	0.87 in	0.13 in	8S-4761
9/16 - 18	1 3/4 in	0.43 in	0.87 in	0.38 in	8S-4762
9/16 - 18	2 in	0.43 in	0.87 in	0.63 in	8S-4745

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 9/16 - 18 (Continued)</b>					
9/16 - 18	2 1/4 in	0.43 in	0.87 in	0.88 in	8S-4763
9/16 - 18	2 1/2 in	0.43 in	0.87 in	1.13 in	8S-4746
9/16 - 18	2 3/4 in	0.43 in	0.87 in	1.38 in	8S-4764
9/16 - 18	3 in	0.43 in	0.87 in	1.38 in	6S-0753
9/16 - 18	3 1/2 in	0.43 in	0.87 in	2.13 in	8S-4747
9/16 - 18	3 3/4 in	0.43 in	0.87 in	2.38 in	2S-1216
9/16 - 18	4 in	0.43 in	0.87 in	2.63 in	8S-4748
9/16 - 18	4 1/2 in	0.43 in	0.87 in	3.13 in	8S-4749
9/16 - 18	5 in	0.43 in	0.87 in	3.63 in	8S-4750
9/16 - 18	5 1/2 in	0.43 in	0.87 in	4.13 in	8S-4751
9/16 - 18	6 in	0.43 in	0.87 in	4.63 in	8S-4752
9/16 - 18	Nut	--	--	--	5P-0540
9/16 - 18	1 1/2 in	0.43 in	0.87 in	0.13 in	8S-4744
9/16 - 18	1 1/4 in	0.43 in	0.87 in	0.13 in	8S-4743
<b>Thread Size (in - TPI) 5/8 - 18</b>					
5/8 - 11	Washer	--	--	--	5P-8247
5/8 - 18	1 3/8 in	0.48 in	0.94 in	0.19 in	4H-4033
5/8 - 18	1 in	0.48 in	0.94 in	0.19 in	6F-7316
5/8 - 18	1 1/4 in	0.48 in	0.94 in	0.25 in	5B-0841
5/8 - 18	2 in	0.48 in	0.94 in	0.50 in	OS-1576
5/8 - 18	2 1/4 in	0.48 in	0.94 in	0.75 in	OS-1577
5/8 - 18	2 1/2 in	0.48 in	0.94 in	1.00 in	OS-1600
5/8 - 18	2 3/4 in	0.48 in	0.94 in	1.25 in	OS-1601
5/8 - 18	3 in	0.48 in	0.94 in	1.50 in	8B-5144
5/8 - 18	3 1/4 in	0.48 in	0.94 in	1.75 in	OS-2318
5/8 - 18	12 in	0.48 in	0.94 in	10.25 in	6K-0953
5/8 - 18	3 1/2 in	0.48 in	0.94 in	2.00 in	OS-1602
5/8 - 18	3 3/4 in	0.48 in	0.94 in	2.25 in	OS-2353
5/8 - 18	4 in	0.48 in	0.94 in	2.50 in	OV-0459
5/8 - 18	4 1/4 in	0.48 in	0.94 in	2.75 in	OV-0523
5/8 - 18	4 1/2 in	0.48 in	0.94 in	3.00 in	OT-0857
5/8 - 18	4 3/4 in	0.48 in	0.94 in	3.25 in	1A-3203
5/8 - 18	5 in	0.48 in	0.94 in	3.50 in	6F-7024
5/8 - 18	5 1/2 in	0.48 in	0.94 in	4.00 in	2A-2814
5/8 - 18	5 3/4 in	0.48 in	0.94 in	4.25 in	1B-7538
5/8 - 18	6 in	0.48 in	0.94 in	4.50 in	2B-6030
5/8 - 18	7 in	0.48 in	0.94 in	5.25 in	1B-3623
5/8 - 18	7 1/2 in	0.48 in	0.94 in	5.75 in	7H-5569
5/8 - 18	8 in	0.48 in	0.94 in	6.25 in	8S-4753
5/8 - 18	8 1/2 in	0.48 in	0.94 in	6.75 in	6V-1873
5/8 - 18	11 in	0.48 in	0.94 in	9.25 in	5K-7144
5/8 - 18	Nut	--	--	--	6B-6683
5/8 - 18	1 1/2 in	0.48 in	0.94 in	0.19 in	2L-1701
5/8 - 18	1 1/4 in	0.48 in	0.94 in	0.19 in	1A-4273

Hardware

(Continued)

**Hex Head Bolts/Inch/Fine Thread UNF/Phosphate & Oil Coated (Continued)**

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 3/4 - 16</b>					
3/4 - 10	Washer	--	--	--	5P-8248
3/4 - 16	3 in	0.58 in	1.13 in	1.25 in	0S-1575
3/4 - 16	3 1/4 in	0.58 in	1.13 in	1.50 in	6B-5310
3/4 - 16	3 1/2 in	0.58 in	1.13 in	1.75 in	9S-1364
3/4 - 16	3 3/4 in	0.58 in	1.13 in	2.00 in	1A-3103
3/4 - 16	4 in	0.58 in	1.13 in	2.25 in	0L-1328
3/4 - 16	4 1/4 in	0.58 in	1.13 in	2.50 in	1D-3419
3/4 - 16	4 3/4 in	0.58 in	1.13 in	3.00 in	7B-5163
3/4 - 16	5 in	0.58 in	1.13 in	3.25 in	0S-1607
3/4 - 16	5 1/2 in	0.58 in	1.13 in	3.75 in	8F-6123
3/4 - 16	6 in	0.58 in	1.13 in	4.25 in	7B-4436
3/4 - 16	6 1/2 in	0.58 in	1.13 in	4.50 in	6F-7901
3/4 - 16	7 in	0.58 in	1.13 in	5.00 in	2H-3749
3/4 - 16	8 in	0.58 in	1.13 in	6.00 in	4F-0925
3/4 - 16	8 1/2 in	0.58 in	1.13 in	6.50 in	8S-4766
3/4 - 16	9 in	0.58 in	1.13 in	7.00 in	7F-1926
3/4 - 16	9 1/2 in	0.58 in	1.13 in	7.50 in	8B-7943
3/4 - 16	10 in	0.58 in	1.13 in	8.00 in	2K-2813
3/4 - 16	11 in	0.58 in	1.13 in	9.00 in	5P-8288
3/4 - 16	11 1/2 in	0.58 in	1.13 in	9.50 in	2P-9845
3/4 - 16	1 1/2 in	0.58 in	1.13 in	0.19 in	2H-3725
3/4 - 16	1 1/4 in	0.58 in	1.13 in	0.19 in	2H-3740
3/4 - 16	1 3/4 in	0.58 in	1.13 in	0.19 in	1A-0075
3/4 - 16	2 in	0.58 in	1.13 in	0.25 in	9S-1362
3/4 - 16	2 1/4 in	0.58 in	1.13 in	0.50 in	0S-1897
3/4 - 16	7 1/2 in	0.58 in	1.13 in	5.50 in	2H-3750
3/4 - 16	Nut	--	--	--	6B-6682
3/4 - 16	2 1/2 in	0.58 in	1.13 in	0.75 in	0T-0856
3/4 - 16	2 3/4 in	0.58 in	1.13 in	1.00 in	8F-3152
<b>Thread Size (in - TPI) 7/8 - 14</b>					
7/8 - 14	2 1/4 in	0.67 in	1.31 in	0.25 in	6F-7035
7/8 - 14	Nut	--	--	--	1A-5666
7/8 - 14	2 1/2 in	0.67 in	1.31 in	0.50 in	1D-5873
7/8 - 14	2 3/4 in	0.67 in	1.31 in	0.75 in	0S-1596
7/8 - 14	3 in	0.67 in	1.31 in	1.00 in	6F-7036
7/8 - 14	3 1/4 in	0.67 in	1.31 in	1.25 in	2H-3741
7/8 - 14	3 1/2 in	0.67 in	1.31 in	1.50 in	1A-0224
7/8 - 14	3 3/4 in <sup>1</sup>	0.67 in	1.31 in	1.75 in	0L-2090
7/8 - 14	4 1/4 in	0.67 in	1.31 in	2.25 in	1D-3848
7/8 - 14	5 in	0.67 in	1.31 in	3.00 in	1D-6089
7/8 - 14	5 1/2 in	0.67 in	1.31 in	3.50 in	0S-1606
7/8 - 14	1 1/2 in	0.67 in	1.31 in	0.25 in	8S-4754
7/8 - 14	1 3/4 in	0.67 in	1.31 in	0.25 in	8F-7496
7/8 - 14	6 in	0.67 in	1.31 in	4.00 in	7F-6100
7/8 - 14	6 1/2 in	0.67 in	1.31 in	4.25 in	6F-4991

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/8 - 14 (Continued)</b>					
7/8 - 14	7 in	0.67 in	1.31 in	4.75 in	4F-6426
7/8 - 14	7 1/2 in	0.67 in	1.31 in	5.25 in	2K-1747
7/8 - 14	9 in	0.67 in	1.31 in	6.75 in	2L-1091
7/8 - 14	11 in	0.67 in	1.31 in	8.75 in	3B-4978
7/8 - 14	11 1/2 in	0.67 in	1.31 in	9.25 in	4B-7572
7/8 - 14	2 in	0.67 in	1.31 in	0.25 in	2H-3854
7/8 - 14	4 in	0.67 in	1.31 in	2.00 in	0T-0603
7/8 - 14	4 1/2 in	0.67 in	1.31 in	2.50 in	4H-8340
7/8 - 14	8 in	0.67 in	1.31 in	5.75 in	7F-0479
7/8 - 9	Washer	--	--	--	5P-8249
<b>Thread Size (in - TPI) 1 - 14</b>					
1 - 14	2 1/2 in	0.71 in	1.50 in	0.25 in	5B-9385
1 - 14	4 in <sup>1</sup>	0.71 in	1.50 in	1.75 in	1F-7464
1 - 14	2 in	0.71 in	1.50 in	0.25 in	2H-3743
1 - 14	2 3/4 in	0.71 in	1.50 in	0.50 in	2H-3745
1 - 14	3 in	0.71 in	1.50 in	0.75 in	6B-9194
1 - 14	3 1/4 in	0.71 in	1.50 in	1.00 in	6F-7037
1 - 14	1 1/2 in	0.71 in	1.50 in	0.13 in	8S-4755
1 - 14	1 3/4 in	0.71 in	1.50 in	0.13 in	8S-4756
1 - 14	3 1/2 in	0.71 in	1.50 in	1.25 in	9S-1368
1 - 14	3 3/4 in	0.71 in	1.50 in	1.50 in	9S-1367
1 - 14	4 1/2 in	0.71 in	1.50 in	2.25 in	0V-0269
1 - 14	4 3/4 in	0.71 in	1.50 in	2.50 in	7B-7181
1 - 14	5 in	0.71 in	1.50 in	2.75 in	2H-3746
1 - 14	5 1/2 in	0.71 in	1.50 in	3.25 in	8F-6124
1 - 14	6 in	0.71 in	1.50 in	3.75 in	3F-6645
1 - 14	6 1/2 in	0.71 in	1.50 in	4.00 in	7F-4283
1 - 14	7 in	0.71 in	1.50 in	4.50 in	5F-6932
1 - 14	7 1/2 in	0.71 in	1.50 in	5.00 in	2H-0637
1 - 14	8 in	0.71 in	1.50 in	5.50 in	8S-4757
1 - 14	8 1/2 in	0.71 in	1.50 in	6.00 in	3J-5981
1 - 14	9 in	0.71 in	1.50 in	6.50 in	9F-8122
1 - 14	9 1/2 in	1.50 in	0.39 in	7.00 in	5F-7136
1 - 14	10 in	0.71 in	1.50 in	7.50 in	1L-8586
1 - 14	Nut	--	--	--	1A-1935
1 - 14	2 1/4 in	0.71 in	1.50 in	0.25 in	2H-3744
1 - 8	Washer	--	--	--	5P-8250
<b>Thread Size (in - TPI) 1 1/8 - 12</b>					
1 1/8 - 12	2 1/4 in	0.72 in	1.69 in	0.31 in	1A-2208
1 1/8 - 12	6 1/2 in	0.72 in	1.69 in	3.75 in	3B-5752
1 1/8 - 12	4 in	0.72 in	1.69 in	1.50 in	8F-3895
1 1/8 - 12	3 1/4 in	0.72 in	1.69 in	2.00 in	8B-0477
1 1/8 - 12	4 1/2 in	0.72 in	1.69 in	2.00 in	8H-4040
1 1/8 - 12	5 in	0.72 in	1.69 in	2.50 in	7B-9215
1 1/8 - 12	5 1/2 in	0.72 in	1.69 in	3.00 in	4B-5219

Hardware

(Continued)

# Bolts

## Hex Head Bolts/Inch/Fine Thread UNF/Phosphate & Oil Coated (Continued)

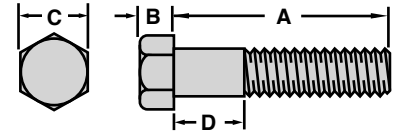
Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 1/8 - 12 (Continued)</b>					
1 1/8 - 12	6 in	0.72 in	1.69 in	3.50 in	2D-3424
1 1/8 - 12	7 in	0.72 in	1.69 in	4.25 in	2D-8930
1 1/8 - 12	7 1/2 in	0.72 in	1.69 in	4.75 in	9M-3742
1 1/8 - 12	8 in	0.72 in	1.69 in	5.25 in	1S-3647
1 1/8 - 12	9 in	0.72 in	1.69 in	6.25 in	2M-3530
1 1/8 - 12	Nut	--	--	--	3S-1356
1 1/8 - 12	2 1/2 in	0.72 in	1.69 in	0.50 in	2H-3751
1 1/8 - 7	Washer	--	--	--	3S-1349
<b>Thread Size (in - TPI) 1 1/4 - 12</b>					
1 1/4 - 12	2 1/4 in	0.81 in	1.87 in	0.25 in	7B-2289
1 1/4 - 12	3 in	0.81 in	1.87 in	0.25 in	7F-6112
1 1/4 - 12	3 1/2 in	0.81 in	1.87 in	0.75 in	2K-0439
1 1/4 - 12	4 in	0.81 in	1.87 in	1.25 in	5P-2663
1 1/4 - 12	13 in	0.81 in	1.87 in	10.88 in	4H-2400
1 1/4 - 12	4 3/4 in	0.81 in	1.87 in	2.00 in	7B-8791
1 1/4 - 12	5 1/2 in	0.81 in	1.87 in	2.75 in	2J-2555
1 1/4 - 12	6 in	0.81 in	1.87 in	3.25 in	5H-1649
1 1/4 - 12	6 1/2 in	0.81 in	1.87 in	3.50 in	4H-6511
1 1/4 - 12	7 1/2 in	0.81 in	1.87 in	4.50 in	7F-9464
1 1/4 - 12	8 in	0.81 in	1.87 in	5.00 in	4J-0924
1 1/4 - 12	8 1/2 in	0.81 in	1.87 in	5.50 in	5F-9339

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 1/4 - 12 (Continued)</b>					
1 1/4 - 12	9 1/2 in	0.81 in	1.87 in	6.50 in	3S-7079
1 1/4 - 12	10 in	0.81 in	1.87 in	7.00 in	4H-8009
1 1/4 - 12	11 1/2 in	0.81 in	1.87 in	8.38 in	6F-4438
1 1/4 - 12	12 in	0.81 in	1.87 in	9.00 in	7H-3579
1 1/4 - 12	Nut	--	--	--	7H-7539
1 1/4 - 7	Washer	--	--	--	4K-0684
<b>Thread Size (in - TPI) 1 1/2 - 12</b>					
1 1/2 - 12	3 in	0.97 in	2.25 in	0.25 in	7X-3305
1 1/2 - 12	3 3/4 in	0.97 in	2.25 in	0.50 in	1J-2921
1 1/2 - 12	4 in	0.97 in	2.25 in	0.75 in	8F-5535
1 1/2 - 12	4 1/2 in	0.97 in	2.25 in	1.25 in	1F-6762
1 1/2 - 12	5 in	0.97 in	2.25 in	1.75 in	5P-9402
1 1/2 - 12	6 in	0.97 in	2.25 in	2.75 in	5F-9891
1 1/2 - 12	7 in	0.97 in	2.25 in	3.50 in	8F-1692
1 1/2 - 12	8 in	0.97 in	2.25 in	4.50 in	2D-7687
1 1/2 - 12	9 in	0.97 in	2.25 in	5.50 in	5F-3492
1 1/2 - 12	10 in	0.97 in	2.25 in	7.48 in	5P-9384
1 1/2 - 12	Nut	--	--	--	8H-3390
1 1/2 - 6	Washer	--	--	--	3S-6162
<b>Thread Size (in - TPI) 2 - 12</b>					
2 - 12	8 in	0.97 in	3.00 in	1.75 in	5R-8907

<sup>1</sup> High strength bolt.



**Hex Head Bolts/Inch/Coarse Thread UNC/Zinc Plated**



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1/4 - 20</b>					
1/4 - 20	7/8 in	0.19 in	0.44 in	0.13 in	1H-3337
1/4 - 20	3/4 in	0.19 in	0.44 in	0.13 in	4M-5281
1/4 - 20	1 1/2 in	0.19 in	0.44 in	0.25 in	4M-5282
1/4 - 20	1 3/4 in	0.19 in	0.44 in	1.00 in	5P-2675
1/4 - 20	1/2 in	0.19 in	0.44 in	0.06 in	5S-7349
1/4 - 20	1 1/8 in	0.19 in	0.44 in	0.37 in	6D-2928
1/4 - 20	Nut	--	--	--	6V-8185
1/4 - 20	2 1/2 in	0.19 in	0.44 in	1.75 in	7X-0264
1/4 - 20	2 3/4 in	0.19 in	0.44 in	2.00 in	7X-0265
1/4 - 20	3 in	0.19 in	0.44 in	2.00 in	7X-0266
1/4 - 20	3 1/4 in	0.19 in	0.44 in	2.50 in	7X-0267
1/4 - 20	3 1/2 in	0.19 in	0.44 in	2.75 in	7X-0268
1/4 - 20	4 in	0.19 in	0.44 in	3.25 in	7X-0269
1/4 - 20	5 1/2 in	0.19 in	0.44 in	4.50 in	7X-0271
1/4 - 20	1 1/4 in	0.19 in	0.44 in	0.13 in	7X-2501
1/4 - 20	3 3/4 in	0.19 in	0.44 in	3.00 in	8C-3793
1/4 - 20	Washer	--	--	--	8T-4205
1/4 - 20	1 in	0.19 in	0.44 in	0.13 in	8T-8908
1/4 - 20	5 in	0.19 in	0.44 in	4.25 in	8T-8909
1/4 - 20	5/8 in	0.19 in	0.44 in	0.13 in	8T-9364
1/4 - 20	2 in	0.19 in	0.44 in	1.13 in	8T-9367
1/4 - 20	2 1/4 in	0.19 in	0.44 in	1.37 in	8T-9368
<b>Thread Size (in - TPI) 5/16 - 18</b>					
5/16 - 18	3 in	0.24 in	0.50 in	2.13 in	4M-6424
5/16 - 18	1 in	0.24 in	0.50 in	0.13 in	4M-6425
5/16 - 18	5/8 in	0.24 in	0.50 in	0.13 in	5K-0906
5/16 - 18	2 1/2 in	0.24 in	0.50 in	1.63 in	5P-2955
5/16 - 18	1 1/8 in	0.24 in	0.50 in	0.25 in	6V-5782
5/16 - 18	Nut	--	--	--	6V-8189
5/16 - 18	1 1/4 in	0.24 in	0.50 in	0.37 in	6V-8918
5/16 - 18	2 3/4 in	0.24 in	0.50 in	1.87 in	7X-0274
5/16 - 18	3 1/4 in	0.24 in	0.50 in	2.25 in	7X-0275
5/16 - 18	3 1/2 in	0.24 in	0.50 in	2.63 in	7X-0276
5/16 - 18	3 3/4 in	0.24 in	0.50 in	2.75 in	7X-0277
5/16 - 18	4 in	0.24 in	0.50 in	3.00 in	7X-0278
5/16 - 18	4 3/4 in	0.24 in	0.50 in	3.87 in	7X-0279
5/16 - 18	5 in	0.24 in	0.50 in	4.13 in	7X-0280
5/16 - 18	5 1/2 in	0.24 in	0.50 in	4.63 in	7X-0281
5/16 - 18	6 1/2 in	0.24 in	0.50 in	5.37 in	7X-0282
5/16 - 18	1 3/4 in	0.24 in	0.50 in	0.87 in	7X-0440

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 5/16 - 18 (Continued)</b>					
5/16 - 18	1 1/2 in	0.24 in	0.50 in	0.09 in	8C-3121
5/16 - 18	Washer	--	--	--	8T-4224
5/16 - 18	1/2 in	0.24 in	0.50 in	0.06 in	8T-5391
5/16 - 18	2 in	0.24 in	0.50 in	1.13 in	8T-8911
5/16 - 18	3/4 in	0.24 in	0.50 in	0.13 in	4M-0061
5/16 - 18	2 1/4 in	0.24 in	0.50 in	1.37 in	8T-8912
5/16 - 18	7/8 in	0.24 in	0.50 in	0.13	8T-9043
<b>Thread Size (in - TPI) 3/8 - 16</b>					
3/8 - 16	5 3/4 in	0.29 in	0.56 in	4.75 in	7X-0297
3/8 - 16	9 1/2 in	0.29 in	0.56 in	8.25 in	4H-3283
3/8 - 16	1 in	0.29 in	0.56 in	0.13 in	4L-6454
3/8 - 16	2 1/2 in	0.29 in	0.56 in	1.50 in	4L-6459
3/8 - 16	1 1/2 in	0.29 in	0.56 in	0.37 in	4L-9337
3/8 - 16	3/4 in	0.29 in	0.56 in	0.13 in	5M-3062
3/8 - 16	5/8 in	0.29 in	0.56 in	0.09 in	5P-8167
3/8 - 16	3 1/2 in	0.29 in	0.56 in	2.50 in	7X-0290
3/8 - 16	7/8 in	0.29 in	0.56 in	0.13 in	5S-7379
3/8 - 16	1 3/4 in	0.29 in	0.56 in	0.75 in	5S-7383
3/8 - 16	Nut	--	--	--	6V-8801
3/8 - 16	3 3/4 in	0.29 in	0.56 in	2.50 in	7X-0291
3/8 - 16	4 1/2 in	0.29 in	0.56 in	3.25 in	7X-0292
3/8 - 16	4 3/4 in	0.29 in	0.56 in	3.75 in	7X-0293
3/8 - 16	5 in	0.29 in	0.56 in	4.00 in	7X-0294
3/8 - 16	5 1/4 in	0.29 in	0.56 in	4.25 in	7X-0295
3/8 - 16	5 1/2 in	0.29 in	0.56 in	4.50 in	7X-0296
3/8 - 16	6 1/2 in	0.29 in	0.56 in	5.25 in	7X-0300
3/8 - 16	7 in	0.29 in	0.56 in	5.75 in	7X-0301
3/8 - 16	7 1/2 in	0.29 in	0.56 in	6.25 in	7X-0302
3/8 - 16	8 in	0.29 in	0.56 in	6.75 in	7X-0303
3/8 - 16	8 1/2 in	0.29 in	0.56 in	7.25 in	7X-0304
3/8 - 16	1 1/8 in	0.29 in	0.56 in	0.31 in	8T-2502
3/8 - 16	9 in	0.29 in	0.56 in	7.75 in	7X-0305
3/8 - 16	6 in	0.29 in	0.56 in	4.87 in	8C-7323
3/8 - 16	2 in	0.29 in	0.56 in	1.00 in	8T-2501
3/8 - 16	Washer	--	--	--	8T-4896
3/8 - 16	3 in	0.29 in	0.56 in	2.00 in	8T-7008
3/8 - 16	3 1/4 in	0.29 in	0.56 in	2.25 in	8T-8915
3/8 - 16	2 3/4 in	0.29 in	0.56 in	1.75 in	8T-9101
3/8 - 16	1/2 in	0.29 in	0.56 in	0.09 in	8T-9371
3/8 - 16	2 1/4 in	0.29 in	0.56 in	1.25 in	8T-9377

Hardware

(Continued)



**Hex Head Bolts/Inch/Coarse Thread UNC/Zinc Plated (Continued)**

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 3/8 - 16 (Continued)</b>					
3/8 - 16	4 in	0.29 in	0.56 in	3.00 in	8T-9378
3/8 - 16	4 1/4 in	0.29 in	0.56 in	3.25 in	8T-9379
3/8 - 16	1 1/4 in	0.29 in	0.56 in	0.25 in	9B-7237
<b>Thread Size (in - TPI) 7/16 - 14</b>					
7/16 - 14	2 1/2 in	0.34 in	0.69 in	1.37 in	7X-0312
7/16 - 14	2 3/4 in	0.34 in	0.69 in	1.63 in	7X-0313
7/16 - 14	3 in	0.34 in	0.69 in	1.87 in	7X-0314
7/16 - 14	3 1/4 in	0.34 in	0.69 in	2.13 in	7X-0315
7/16 - 14	3 1/2 in	0.34 in	0.69 in	2.37 in	7X-0316
7/16 - 14	3 3/4 in	0.34 in	0.69 in	2.63 in	7X-0317
7/16 - 14	4 in	0.34 in	0.69 in	2.87 in	7X-0318
7/16 - 14	4 1/4 in	0.34 in	0.69 in	3.13 in	7X-0319
7/16 - 14	5 in	0.34 in	0.69 in	3.75 in	7X-0320
7/16 - 14	5 1/2 in	0.34 in	0.69 in	4.37 in	7X-0321
7/16 - 14	6 in	0.34 in	0.69 in	4.87 in	7X-0322
7/16 - 14	Nut	--	--	--	7X-0447
7/16 - 14	1 3/4 in	0.34 in	0.69 in	0.63 in	8C-6877
7/16 - 14	Washer	--	--	--	8T-5360
7/16 - 14	1 in	0.34 in	0.69 in	0.13 in	8T-9380
7/16 - 14	1 1/8 in	0.34 in	0.69 in	0.13 in	8T-6973
7/16 - 14	1 1/2 in	0.34 in	0.69 in	0.37 in	8T-8916
7/16 - 14	1 1/4 in	0.34 in	0.69 in	0.13 in	8T-9382
7/16 - 14	4 3/4 in	0.34 in	0.69 in	3.63 in	7H-3472
7/16 - 14	7/8 in	0.34 in	0.69 in	0.13 in	7X-0272
7/16 - 14	3/4 in	0.34 in	0.69 in	0.19 in	7X-0307
7/16 - 14	2 in	0.34 in	0.69 in	0.87 in	7X-0310
7/16 - 14	2 1/4 in	0.34 in	0.69 in	1.13 in	7X-0311
<b>Thread Size (in - TPI) 1/2 - 13</b>					
1/2 - 13	1 1/8 in	0.39 in	0.75 in	0.13 in	5C-6565
1/2 - 13	1 in	0.39 in	0.75 in	0.13 in	5P-2228
1/2 - 13	2 1/4 in	0.39 in	0.75 in	1.00 in	5P-2424
1/2 - 13	1 1/2 in	0.39 in	0.75 in	0.25 in	5P-2566
1/2 - 13	4 in	0.39 in	0.75 in	2.75 in	6V-4432
1/2 - 13	3 in	0.39 in	0.75 in	1.75 in	7X-0326
1/2 - 13	Nut	--	--	--	6V-8188
1/2 - 13	2 1/2 in	0.39 in	0.75 in	1.25 in	7X-0325
1/2 - 13	3 1/2 in	0.39 in	0.75 in	2.25 in	7X-0328
1/2 - 13	4 1/4 in	0.39 in	0.75 in	3.00 in	7X-0331
1/2 - 13	4 1/2 in	0.39 in	0.75 in	3.25 in	7X-0332
1/2 - 13	4 3/4 in	0.39 in	0.75 in	3.50 in	7X-0333
1/2 - 13	5 in	0.39 in	0.75 in	3.75 in	7X-0334
1/2 - 13	5 1/4 in	0.39 in	0.75 in	4.00 in	7X-0335
1/2 - 13	5 1/2 in	0.39 in	0.75 in	4.25 in	7X-0336
1/2 - 13	5 3/4 in	0.39 in	0.75 in	4.50 in	7X-0337
1/2 - 13	6 in	0.39 in	0.75 in	4.75 in	7X-0338

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1/2 - 13 (Continued)</b>					
1/2 - 13	6 1/2 in	0.39 in	0.75 in	5.00 in	7X-0340
1/2 - 13	8 1/2 in	0.39 in	0.75 in	7.00 in	7X-0471
1/2 - 13	Washer	--	--	--	8T-4223
1/2 - 13	2 in	0.39 in	0.75 in	0.75 in	8T-4835
1/2 - 13	1 1/4 in	0.39 in	0.75 in	0.31 in	8T-8917
1/2 - 13	1 3/4 in	0.39 in	0.75 in	0.44 in	8T-8919
1/2 - 13	3 1/4 in	0.39 in	0.75 in	2.00 in	8T-8920
1/2 - 13	3/4 in	0.39 in	0.75 in	0.13 in	8T-9383
1/2 - 13	7/8 in	0.39 in	0.75 in	0.28 in	8T-9384
1/2 - 13	2 3/4 in	0.39 in	0.75 in	1.50 in	8T-9389
1/2 - 13	3 3/4 in	0.39 in	0.75 in	2.50 in	8T-9391
1/2 - 13	7 1/2 in	0.39 in	0.75 in	6.00 in	8T-9392
<b>Thread Size (in - TPI) 9/16 - 12</b>					
9/16 - 12	2 in	0.43 in	0.87 in	0.63 in	8S-4734
<b>Thread Size (in - TPI) 5/8 - 11</b>					
5/8 - 11	2 1/4 in	0.48 in	0.94 in	0.75 in	7X-0347
5/8 - 11	1 in	0.48 in	0.94 in	0.19 in	5C-6266
5/8 - 11	1 1/4 in	0.48 in	0.94 in	0.19 in	7X-0343
5/8 - 11	1 3/4 in	0.48 in	0.94 in	0.25 in	7X-0345
5/8 - 11	3 in	0.48 in	0.94 in	1.50 in	7X-0349
5/8 - 11	3 1/2 in	0.48 in	0.94 in	2.00 in	7X-0350
5/8 - 11	4 in	0.48 in	0.94 in	2.50 in	7X-0352
5/8 - 11	4 1/4 in	0.48 in	0.94 in	2.75 in	7X-0353
5/8 - 11	4 1/2 in	0.48 in	0.94 in	3.00 in	7X-0354
5/8 - 11	4 3/4 in	0.48 in	0.94 in	3.25 in	7X-0355
5/8 - 11	5 in	0.48 in	0.94 in	3.50 in	7X-0356
5/8 - 11	5 1/4 in	0.48 in	0.94 in	3.75 in	7X-0357
5/8 - 11	5 1/2 in	0.48 in	0.94 in	4.00 in	7X-0358
5/8 - 11	6 in	0.48 in	0.94 in	4.50 in	7X-0359
5/8 - 11	6 1/2 in	0.48 in	0.94 in	4.75 in	7X-0361
5/8 - 11	7 in	0.48 in	0.94 in	5.25 in	7X-0362
5/8 - 11	8 in	0.48 in	0.94 in	6.25 in	7X-0363
5/8 - 11	8 1/2 in	0.48 in	0.94 in	6.75 in	7X-0364
5/8 - 11	Nut	--	--	--	7X-0448
5/8 - 11	9 1/2 in	0.48 in	0.94 in	7.75 in	7X-7890
5/8 - 11	2 3/4 in	0.48 in	0.94 in	1.25 in	8C-6362
5/8 - 11	Washer	--	--	--	8T-4122
5/8 - 11	2 1/2 in	0.48 in	0.94 in	0.63 in	8T-6871
5/8 - 11	1 1/2 in	0.48 in	0.94 in	0.19 in	8T-9393
5/8 - 11	3 1/4 in	0.48 in	0.94 in	1.75 in	8T-9396
5/8 - 11	3 3/4 in	0.48 in	0.94 in	2.25 in	7X-0351
<b>Thread Size (in - TPI) 3/4 - 10</b>					
3/4 - 10	9 in	0.58 in	1.13 in	7.00 in	7X-3179
3/4 - 10	7 1/2 in	0.58 in	1.13 in	5.50 in	1J-8930
3/4 - 10	8 in	0.58 in	1.13 in	6.00 in	5P-4135

Hardware

(Continued)

**Hex Head Bolts/Inch/Coarse Thread UNC/Zinc Plated (Continued)**

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 3/4 - 10 (Continued)</b>					
3/4 - 10	1 1/2 in	0.58 in	1.13 in	0.31 in	7X-0365
3/4 - 10	2 in	0.58 in	1.13 in	0.31 in	7X-0366
3/4 - 10	3 in	0.58 in	1.13 in	1.25 in	7X-0368
3/4 - 10	3 1/4 in	0.58 in	1.13 in	1.50 in	7X-0369
3/4 - 10	3 1/2 in	0.58 in	1.13 in	1.75 in	7X-0370
3/4 - 10	3 3/4 in	0.58 in	1.13 in	2.00 in	7X-0371
3/4 - 10	4 1/4 in	0.58 in	1.13 in	2.50 in	7X-0372
3/4 - 10	5 1/2 in	0.58 in	1.13 in	3.75 in	7X-0373
3/4 - 10	5 3/4 in	0.58 in	1.13 in	4.00 in	7X-0374
3/4 - 10	5 in	0.58 in	1.13 in	3.25 in	7X-0375
3/4 - 10	6 1/2 in	0.58 in	1.13 in	4.50 in	7X-0377
3/4 - 10	8 1/2 in	0.58 in	1.13 in	6.50 in	7X-0378
3/4 - 10	2 3/4 in	0.58 in	1.13 in	1.00 in	8C-6857
3/4 - 10	4 in	0.58 in	1.13 in	2.25 in	8C-8842
3/4 - 10	10 in	0.58 in	1.13 in	8.00 in	8F-4225
3/4 - 10	Washer	--	--	--	8T-4994
3/4 - 10	2 1/2 in	0.58 in	1.13 in	0.75 in	8T-8924
3/4 - 10	4 3/4 in	0.58 in	1.13 in	3.00 in	8T-8925
3/4 - 10	4 1/2 in	0.58 in	1.13 in	2.75 in	8T-9311
3/4 - 10	6 in	0.58 in	1.13 in	4.25 in	8T-9312
3/4 - 10	7 in	0.58 in	1.13 in	5.00 in	8T-9313
3/4 - 10	1 1/4 in	0.58 in	1.13 in	0.31 in	8T-9397
3/4 - 10	1 3/4 in	0.58 in	1.13 in	0.31 in	8T-9398
3/4 - 10	2 1/4 in	0.58 in	1.13 in	0.50 in	8T-9399
3/4 - 10	Nut	--	--	--	6V-8182
<b>Thread Size (in - TPI) 7/8 - 9</b>					
7/8 - 9	1 1/2 in	0.67 in	1.31 in	0.25 in	7X-0379
7/8 - 9	1 3/4 in	0.67 in	1.31 in	0.37 in	7X-0380
7/8 - 9	2 in	0.67 in	1.31 in	0.37 in	7X-0381
7/8 - 9	2 1/4 in	0.67 in	1.31 in	0.37 in	7X-0382
7/8 - 9	2 3/4 in	0.67 in	1.31 in	0.75 in	7X-0383
7/8 - 9	3 in	0.67 in	1.31 in	1.00 in	7X-0384
7/8 - 9	3 1/4 in	0.67 in	1.31 in	1.25 in	7X-0385
7/8 - 9	3 1/2 in	0.67 in	1.31 in	1.50 in	7X-0386
7/8 - 9	4 in	0.67 in	1.31 in	2.00 in	7X-0387
7/8 - 9	4 1/2 in	0.67 in	1.31 in	2.50 in	7X-0388
7/8 - 9	4 3/4 in	0.67 in	1.31 in	2.75 in	7X-0389
7/8 - 9	5 in	0.67 in	1.31 in	3.00 in	7X-0390
7/8 - 9	5 1/2 in	0.67 in	1.31 in	3.50 in	7X-0391
7/8 - 9	6 in	0.67 in	1.31 in	3.75 in	7X-0392
7/8 - 9	6 1/2 in	0.67 in	1.31 in	4.25 in	7X-0393
7/8 - 9	7 in	0.67 in	1.31 in	4.75 in	7X-0394
7/8 - 9	8 in	0.67 in	1.31 in	5.75 in	7X-0395
7/8 - 9	8 1/2 in	0.67 in	1.31 in	6.25 in	7X-0396
7/8 - 9	9 in	0.67 in	1.31 in	6.75 in	7X-0397

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/8 - 9 (Continued)</b>					
7/8 - 9	10 in	0.67 in	1.31 in	7.75 in	7X-0398
7/8 - 9	Nut	--	--	--	7X-0449
7/8 - 9	3 3/4 in	0.67 in	1.31 in	1.75 in	7X-0453
7/8 - 9	4 1/4 in	0.67 in	1.31 in	2.25 in	7X-0455
7/8 - 9	Washer	--	--	--	8C-6913
7/8 - 9	2 1/2 in	0.67 in	1.31 in	0.50 in	8T-9400
<b>Thread Size (in - TPI) 1 - 8</b>					
1 - 8	5 1/2 in	0.71 in	1.50 in	3.25 in	7X-0443
1 - 8	6 1/2 in	0.71 in	1.50 in	4.00 in	7X-0444
1 - 8	6 in	0.71 in	1.50 in	3.75 in	1J-5929
1 - 8	Nut	--	--	--	6V-8190
1 - 8	1 1/4 in	0.71 in	1.50 in	0.31 in	7X-0399
1 - 8	1 1/2 in	0.71 in	1.50 in	0.31 in	7X-0400
1 - 8	1 3/4 in	0.71 in	1.50 in	0.37 in	7X-0401
1 - 8	2 in	0.71 in	1.50 in	0.75 in	7X-0402
1 - 8	2 1/4 in	0.71 in	1.50 in	0.25 in	7X-0403
1 - 8	2 3/4 in	0.71 in	1.50 in	0.50 in	7X-0405
1 - 8	3 in	0.71 in	1.50 in	0.75 in	7X-0406
1 - 8	3 1/4 in	0.71 in	1.50 in	1.00 in	7X-0407
1 - 8	3 1/2 in	0.71 in	1.50 in	1.25 in	7X-0408
1 - 8	4 in	0.71 in	1.50 in	1.75 in	7X-0410
1 - 8	4 1/4 in	0.71 in	1.50 in	2.00 in	7X-0411
1 - 8	4 3/4 in	0.71 in	1.50 in	2.50 in	7X-0412
1 - 8	7 in	0.71 in	1.50 in	4.50 in	7X-0413
1 - 8	7 1/2 in	0.71 in	1.50 in	5.00 in	7X-0414
1 - 8	8 in	0.71 in	1.50 in	5.50 in	7X-0415
1 - 8	8 1/2 in	0.71 in	1.50 in	6.00 in	7X-0416
1 - 8	9 in	0.71 in	1.50 in	6.50 in	7X-0417
1 - 8	9 1/2 in	0.71 in	1.50 in	7.00 in	7X-0418
1 - 8	10 in	0.71 in	1.50 in	7.50 in	7X-0419
1 - 8	4 1/2 in	0.71 in	1.50 in	2.25 in	8C-8843
1 - 8	5 in	0.71 in	1.50 in	2.75 in	8C-8844
1 - 8	Washer	--	--	--	8T-5361
1 - 8	3 3/4 in	0.71 in	1.50 in	1.50 in	8T-8927
<b>Thread Size (in - TPI) 1 1/8 - 7</b>					
1 1/8 - 7	Washer	--	--	--	7X-0531
1 1/8 - 7	Nut	--	--	--	7X-0450
1 1/8 - 7	2 in	0.72 in	1.69 in	0.25 in	7X-0420
1 1/8 - 7	3 in	0.72 in	1.69 in	0.50 in	7X-0421
1 1/8 - 7	3 1/2 in	0.72 in	1.69 in	1.00 in	7X-0422
1 1/8 - 7	4 1/2 in	0.72 in	1.69 in	2.00 in	7X-0423
1 1/8 - 7	5 1/4 in	0.72 in	1.69 in	3.00 in	7X-0424
1 1/8 - 7	6 in	0.72 in	1.69 in	3.50 in	7X-0425
1 1/8 - 7	6 1/2 in	0.72 in	1.69 in	3.75 in	7X-0426

Hardware

(Continued)

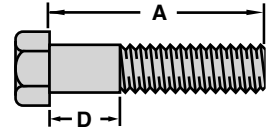
# Bolts

## Hex Head Bolts/Inch/Coarse Thread UNC/Zinc Plated (Continued)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 ¼ - 7</b>					
1 ¼ - 7	3 ½ in	0.81 in	1.87 in	0.75 in	7X-0427
1 ¼ - 7	4 in	0.81 in	1.87 in	1.25 in	7X-0428
1 ¼ - 7	4 ½ in	0.81 in	1.87 in	1.75 in	7X-0429
1 ¼ - 7	5 ½ in	0.81 in	1.87 in	2.75 in	7X-0430
1 ¼ - 7	6 in	0.81 in	1.87 in	3.25 in	7X-0431
1 ¼ - 7	6 ½ in	0.81 in	1.87 in	3.50 in	7X-0432
1 ¼ - 7	7 in	0.81 in	1.87 in	4.00 in	7X-0433
1 ¼ - 7	8 in	0.81 in	1.87 in	5.00 in	7X-0434
1 ¼ - 7	8 ½ in	0.81 in	1.87 in	5.50 in	7X-0435
1 ¼ - 7	9 in	0.81 in	1.87 in	6.00 in	7X-0436

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 ¼ - 7 (Continued)</b>					
1 ¼ - 7	9 ½ in	0.81 in	1.87 in	6.50 in	7X-0437
1 ¼ - 7	5 in	0.81 in	1.87 in	2.25 in	7X-0445
1 ¼ - 7	Nut	--	--	--	7X-0451
1 ¼ - 7	Washer	--	--	--	7X-0533
<b>Thread Size (in - TPI) 1 ½ - 6</b>					
1 ½ - 6	6 in	0.97 in	2.25 in	2.50 in	131-2627
1 ½ - 6	4 ½ in	0.97 in	2.25 in	1.25 in	138-8455
1 ½ - 6	3 ½ in	0.97 in	2.25 in	0.40 in	7X-0438
1 ½ - 6	5 in	0.97 in	2.25 in	1.75 in	7X-0439
1 ½ - 6	Nut	--	--	--	7X-0452

**Self-Locking Bolts/Inch/Coarse Thread UNC**

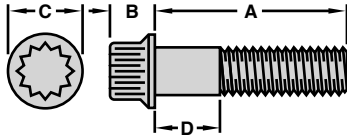


Thread Size (in - TPI)	A	D	Part Number
	Bolt Length	Grip Length	
<b>Thread Size (in - TPI) ¼ - 20</b>			
¼ - 20	½ in	0.06 in	031-0214
¼ - 20	⅝ in	0.13 in	031-0215
¼ - 20	¾ in	0.13 in	031-0216
¼ - 20	⅞ in	0.10 in	031-0217
¼ - 20	1 in	0.13 in	031-5085
¼ - 20	⅜ in	0.06 in	032-5691
¼ - 20	4 in	3.25 in	3J-8919
¼ - 20	1 ¼ in	0.13 in	6V-6845
¼ - 20	1 ⅝ in	0.37 in	6V-7634
<b>Thread Size (in - TPI) ⅕<sub>16</sub> - 18</b>			
⅕ <sub>16</sub> - 18	2 ¼ in	1.37 in	6V-2664
⅕ <sub>16</sub> - 18	⅝ in	0.13 in	030-2135
⅕ <sub>16</sub> - 18	1 ¼ in	0.37 in	031-2701
⅕ <sub>16</sub> - 18	¾ in	0.13 in	031-4630
⅕ <sub>16</sub> - 18	½ in	0.06 in	032-5473
⅕ <sub>16</sub> - 18	1 in	0.13 in	034-4160
⅕ <sub>16</sub> - 18	1 ⅝ in	0.87 in	1N-7543
⅕ <sub>16</sub> - 18	2 ½ in	1.63 in	6V-0825
⅕ <sub>16</sub> - 18	3 in	2.13 in	6V-3314
⅕ <sub>16</sub> - 18	1 ½ in	0.09 in	6V-4414
⅕ <sub>16</sub> - 18	2 in	1.13 in	6V-9665
<b>Thread Size (in - TPI) ⅜ - 16</b>			
⅜ - 16	⅞ in	0.13 in	030-8535
⅜ - 16	1 ½ in	0.50 in	030-8537
⅜ - 16	½ in	0.09 in	031-0218
⅜ - 16	1 ¾ in	0.75 in	031-0219
⅜ - 16	2 ½ in	1.50 in	031-0220
⅜ - 16	1 ⅝ in	0.31 in	034-3557
⅜ - 16	1 ¼ in	0.25 in	2J-3118
⅜ - 16	1 in	0.13 in	5D-0353
⅜ - 16	2 in	1.00 in	5D-9844
⅜ - 16	3 in	2.00 in	5K-5552
⅜ - 16	¾ in	0.13 in	5K-9107
⅜ - 16	2 ¼ in	1.25 in	5P-8048
⅜ - 16	⅝ in	0.13 in	6K-4936
⅜ - 16	3 ½ in	2.50 in	6V-8819
<b>Thread Size (in - TPI) ⅞<sub>16</sub> - 14</b>			
⅞ <sub>16</sub> - 14	1 in	0.13 in	034-0106
⅞ <sub>16</sub> - 14	1 ½ in	0.37 in	5P-8282
⅞ <sub>16</sub> - 14	2 in	0.87 in	5P-8864
⅞ <sub>16</sub> - 14	¾ in	0.13 in	7K-0734
⅞ <sub>16</sub> - 14	1 ¼ in	0.13 in	031-2523

Thread Size (in - TPI)	A	D	Part Number
	Bolt Length	Grip Length	
<b>Thread Size (in - TPI) ½ - 13</b>			
½ - 13	1 ¼ in	0.31 in	030-8538
½ - 13	2 ¼ in	1.00 in	030-9620
½ - 13	¾ in	0.13 in	031-0221
½ - 13	1 ¾ in	0.44 in	031-0223
½ - 13	2 ¾ in	1.50 in	034-0172
½ - 13	1 ½ in	0.25 in	5K-7143
½ - 13	1 ⅝ in	0.13 in	5K-8454
½ - 13	3 ¼ in	2.00 in	5P-8091
½ - 13	⅞ in	0.13 in	6K-5718
½ - 13	1 in	0.13 in	6K-7917
½ - 13	2 in	0.75 in	6V-0314
<b>Thread Size (in - TPI) ⅝ - 11</b>			
⅝ - 11	1 ½ in	0.19 in	030-7335
⅝ - 11	3 in	1.50 in	032-0676
⅝ - 11	1 in	0.19 in	5K-7138
⅝ - 11	2 ¼ in	0.75 in	5P-7034
⅝ - 11	3 ¾ in	2.25 in	5P-7782
⅝ - 11	2 ½ in	0.63 in	5P-9118
⅝ - 11	2 in	0.50 in	6K-0137
⅝ - 11	1 ¼ in	0.13 in	6K-0138
⅝ - 11	2 ¾ in	1.25 in	6V-1997
⅝ - 11	1 ¾ in	0.25 in	7K-4370
<b>Thread Size (in - TPI) ¾ - 10</b>			
¾ - 10	1 ¾ in	0.31 in	031-0224
¾ - 10	2 in	0.31 in	031-0225
¾ - 10	1 ¼ in	0.31 in	031-2712
¾ - 10	1 ½ in	0.31 in	031-9253
¾ - 10	4 ½ in	2.75 in	5P-1910
¾ - 10	2 ¼ in	0.50 in	5P-3882
¾ - 10	3 in	1.25 in	5P-6712
¾ - 10	2 ½ in	0.75 in	6K-1304
¾ - 10	3 ½ in	1.75 in	6V-1684
<b>Thread Size (in - TPI) ⅞ - 9</b>			
⅞ - 9	2 ½ in	0.50 in	5P-7688
<b>Thread Size (in - TPI) 1 - 8</b>			
1 - 8	5 ½ in	3.25 in	032-0679
1 - 8	2 ¾ in	0.50 in	5P-7783
1 - 8	3 ½ in	1.25 in	7K-9272
<b>Thread Size (in - TPI) 1 ⅛ - 7</b>			
1 ⅛ - 7	3 ½ in	1.00 in	7J-9897

Hardware

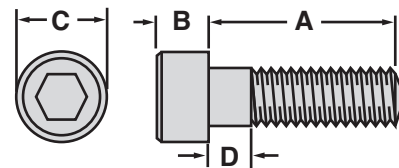
**12 Point Head Bolt/Inch/Coarse & Fine Thread**



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Coarse Thread</b>					
1/2 - 13	3 1/2 in	0.50 in	0.75 in	1.50 in	5J-5794
1/2 - 13	2 1/4 in	0.50 in	0.75 in	0.75 in	6J-2515
1/2 - 13	4 1/2 in	0.50 in	0.75 in	3.00 in	8D-0648
1/2 - 13	1 in	0.50 in	0.75 in	0.16 in	9M-6590
1/2 - 13	2 3/4 in	0.50 in	0.75 in	0.75 in	9S-9739
1/2 - 13	2 in	0.50 in	0.75 in	0.16 in	5J-5793
1/2 - 13	2 1/2 in	0.50 in	0.75 in	1.00 in	7K-6058
1/2 - 13	1 1/4 in	0.50 in	0.75 in	0.16 in	8M-2530
1/2 - 13	1 1/2 in	0.50 in	0.75 in	0.16 in	4K-5175
1/4 - 20	1/16 in	0.27 in	0.38 in	0.11 in	9S-5033
3/4 - 10	1 1/2 in	0.75 in	1.13 in	0.25 in	6J-3991
3/4 - 10	1 3/4 in	0.75 in	1.13 in	0.19 in	6M-8796
3/8 - 16	3 3/4 in	0.38 in	0.56 in	2.50 in	8M-2518
3/8 - 16	2 in	0.38 in	0.56 in	0.50 in	3S-1307
3/8 - 16	2 1/4 in	0.38 in	0.56 in	1.00 in	3S-0127
3/8 - 16	1 1/4 in	0.38 in	0.56 in	0.25 in	1T-0720
3/8 - 16	1 1/16 in	0.38 in	0.56 in	0.50 in	4D-5239
3/8 - 16	3 in	0.38 in	0.56 in	1.50 in	4S-9002
3/8 - 16	2 3/4 in	0.38 in	0.56 in	1.50 in	2S-3567
3/8 - 16	3/4 in	0.38 in	0.56 in	0.25 in	1T-0822
3/8 - 16	1 in	0.38 in	0.56 in	0.25 in	1T-0765
5/16 - 18	4 1/2 in	0.31 in	0.47 in	3.25 in	9M-4288
5/16 - 18	6 in	0.31 in	0.47 in	4.63 in	1S-9811
5/16 - 18	5 in	0.31 in	0.47 in	3.63 in	9M-4289
5/16 - 18	5 1/2 in	0.31 in	0.47 in	4.25 in	1S-9810
5/16 - 18	1 1/2 in	0.31 in	0.47 in	0.11 in	8M-8162
5/16 - 18	3 1/2 in	0.31 in	0.47 in	2.25 in	2S-0629
5/16 - 18	1 1/2 in	0.31 in	0.47 in	0.63 in	2N-7517
5/16 - 18	3/4 in	0.31 in	0.47 in	0.11 in	1T-0416
5/16 - 18	1 in	0.31 in	0.47 in	0.11 in	1T-0414
5/16 - 18	6 1/2 in	0.31 in	0.47 in	5.25 in	4S-5845

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Coarse Thread (Continued)</b>					
5/16 - 18	2 1/2 in	0.31 in	0.47 in	1.13 in	3S-4346
5/16 - 18	1 1/4 in	0.31 in	0.47 in	0.11 in	6L-4783
5/16 - 18	1 3/4 in	0.31 in	0.47 in	0.63 in	6L-4784
5/16 - 18	3 in	0.31 in	0.47 in	1.63 in	2S-5818
5/8 - 11	2 1/2 in	0.62 in	0.94 in	0.75 in	031-1382
5/8 - 11	1 3/4 in	0.62 in	0.94 in	0.19 in	8S-2332
5/8 - 11	2 in	0.62 in	0.94 in	0.19 in	8S-2331
5/8 - 11	3 1/2 in	0.62 in	0.94 in	1.50 in	7K-3116
5/8 - 11	2 1/4 in	0.62 in	0.94 in	0.50 in	6M-9149
5/8 - 11	1 in	0.62 in	0.94 in	0.19 in	9S-8889
5/8 - 11	7/8 in	0.62 in	0.94 in	0.19 in	1S-9808
5/8 - 11	3 1/4 in	0.62 in	0.94 in	1.50 in	6J-3913
5/8 - 11	3 in	0.62 in	0.94 in	1.25 in	031-3185
7/16 - 14	2 1/4 in	0.44 in	0.66 in	0.63 in	6K-3772
7/16 - 14	1 1/2 in	0.44 in	0.66 in	0.14 in	6K-3771
<b>Fine Thread</b>					
1 - 14	2 1/2 in	1.00 in	1.50 in	0.75 in	2N-5006
1 - 14	4 in	1.00 in	1.50 in	1.00 in	9S-8893
1/2 - 20	3 in	0.50 in	0.75 in	1.50 in	8S-0509
3/4 - 16	3 1/4 in	0.75 in	1.13 in	1.00 in	9S-8892
3/8 - 24	5/8 in	0.38 in	0.56 in	0.08 in	1T-0510
3/8 - 24	1 1/4 in	0.38 in	0.56 in	0.50 in	1T-0448
3/8 - 24	1 3/4 in	0.38 in	0.56 in	0.50 in	1T-0954
3/8 - 24	2 1/2 in	0.38 in	0.56 in	1.00 in	5K-4451
3/8 - 24	1 in	0.38 in	0.56 in	0.08 in	1T-0417
5/16 - 24	3/4 in	0.31 in	0.47 in	0.08 in	5D-8269
5/8 - 18	1 in	0.62 in	0.94 in	0.19 in	9S-8890
5/8 - 18	3 in	0.62 in	0.94 in	0.75 in	2P-1956
5/8 - 18	2 1/2 in	0.62 in	0.94 in	0.75 in	9S-8891
7/16 - 20	2 3/4 in	0.44 in	0.66 in	1.25 in	5J-7820
7/8 - 14	2 1/2 in	0.88 in	1.31 in	0.16 in	2N-5014

**Hex Socket Head Screw Bolts/Inch/Coarse & Fine Thread**



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Coarse Thread</b>					
1 - 8	3 in	1.00 in	1.50 in	0.25 in	7L-9198
1 - 8	5 in	1.00 in	1.50 in	2.00 in	8L-3745
1 - 8	2 ½ in	1.00 in	1.50 in	0.25 in	8L-6059
½ - 13	1 ¾ in	0.50 in	0.75 in	0.16 in	5S-2256
½ - 13	5 in	0.50 in	0.75 in	3.00 in	5S-2388
½ - 13	2 ¾ in	0.50 in	0.75 in	0.75 in	5S-2389
½ - 13	3 ¼ in	0.50 in	0.75 in	1.50 in	6D-0119
½ - 13	1 in	0.50 in	0.75 in	0.16 in	5H-4893
½ - 13	1 ¼ in	0.50 in	0.75 in	0.16 in	5F-8807
½ - 13	1 ½ in	0.50 in	0.75 in	0.16 in	3F-7147
½ - 13	3 in	0.50 in	0.75 in	1.50 in	4L-8515
½ - 13	2 ¼ in	0.50 in	0.75 in	0.75 in	2L-0041
½ - 13	¾ in	0.50 in	0.75 in	0.16 in	013-8289
½ - 13	½ in	0.50 in	0.75 in	0.16 in	021-7916
½ - 13	6 in	0.50 in	0.75 in	4.50 in	8L-4612
½ - 13	3 ½ in	0.50 in	0.75 in	1.50 in	8B-7998
½ - 13	2 in	0.50 in	0.75 in	0.19 in	8B-7997
½ - 13	2 ½ in	0.50 in	0.75 in	0.75 in	8B-7979
½ - 13	7 in	0.50 in	0.75 in	5.25 in	7L-0654
¼ - 20	1 ¼ in	0.25 in	0.38 in	0.09 in	4L-7124
¼ - 20	1 in	0.25 in	0.38 in	0.11 in	8H-0707
¼ - 20	½ in	0.25 in	0.38 in	0.11 in	8H-0708
¼ - 20	¾ in	0.25 in	0.38 in	0.11 in	8H-3127
¼ - 20	1 ½ in	0.25 in	0.38 in	0.50 in	2H-3764
¼ - 20	1 ¾ in	0.25 in	0.38 in	0.50 in	5L-9018
¼ - 20	2 ¾ in	0.25 in	0.25 in	1.50 in	6J-2819
¼ - 20	⅝ in	0.25 in	0.38 in	0.11 in	8H-3128
¼ - 20	⅜ in	0.25 in	0.38 in	0.11 in	7J-0637
¼ - 20	⅞ in	0.25 in	0.38 in	0.11 in	6L-5897
¼ - 20	2 ¼ in	0.25 in	0.38 in	1.00 in	6L-5551
¼ - 20	2 in	0.25 in	0.38 in	1.00 in	6L-1596
¼ - 20	2 ½ in	0.25 in	0.38 in	1.50 in	6H-3958
¾ - 10	2 ½ in	0.75 in	1.12 in	0.20 in	2N-6170
¾ - 10	3 ¼ in	0.75 in	1.12 in	1.00 in	2N-1746
¾ - 10	1 ¾ in	0.75 in	1.12 in	0.20 in	5F-5321
¾ - 10	1 ½ in	0.75 in	1.12 in	0.20 in	7L-9787
¾ - 10	3 ½ in	0.75 in	1.12 in	1.00 in	9S-4920
⅜ - 16	¾ in	0.38 in	0.56 in	0.25 in	1L-0509
⅜ - 16	2 in	0.38 in	0.56 in	0.50 in	1L-8793

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Coarse Thread (Continued)</b>					
¾ - 16	2 ½ in	0.38 in	0.56 in	1.00 in	1Y-7574
¾ - 16	1 in	0.38 in	0.56 in	0.25 in	2D-4534
¾ - 16	6 in	0.38 in	0.56 in	4.50 in	2D-8992
¾ - 16	1 ¼ in	0.38 in	0.56 in	0.25 in	2J-5245
¾ - 16	2 ¾ in	0.38 in	0.56 in	1.50 in	2K-6073
¾ - 16	2 ¼ in	0.38 in	0.56 in	1.00 in	2L-3793
¾ - 16	5 in	0.38 in	0.56 in	3.50 in	8L-3837
¾ - 16	1 ¾ in	0.38 in	0.56 in	0.50 in	5S-2586
¾ - 16	⅞ in	0.38 in	0.56 in	0.25 in	4S-5565
¾ - 16	4 in	0.38 in	0.56 in	2.50 in	3B-7614
¾ - 16	3 ¼ in	0.38 in	0.56 in	2.00 in	4B-3835
¾ - 16	1 ½ in	0.38 in	0.56 in	0.25 in	4D-3120
⅝ - 18	1 ¾ in	0.31 in	0.47 in	0.63 in	7S-6701
⅝ - 18	1 in	0.31 in	0.47 in	0.11 in	1T-0284
⅝ - 18	3 ½ in	0.31 in	0.47 in	2.25 in	9S-7382
⅝ - 18	2 in	0.31 in	0.47 in	0.63 in	9S-7381
⅝ - 18	1 ¼ in	0.31 in	0.47 in	0.11 in	9F-6641
⅝ - 18	¾ in	0.31 in	0.47 in	0.11 in	9F-5975
⅝ - 18	1 ½ in	0.31 in	0.47 in	0.11 in	5J-5314
⅝ - 18	2 ¾ in	0.31 in	0.47 in	1.63 in	2L-1352
⅝ - 11	5 ½ in	0.62 in	0.94 in	3.75 in	7L-8304
⅝ - 11	4 ½ in	0.62 in	0.94 in	2.25 in	6H-3959
⅝ - 11	2 in	0.62 in	0.94 in	0.19 in	5S-2457
⅝ - 11	1 ¼ in	0.62 in	0.94 in	0.19 in	5S-2201
⅝ - 11	4 in	0.62 in	0.94 in	2.25 in	8L-4743
⅝ - 11	3 in	0.62 in	0.94 in	0.75 in	4D-0242
⅞ - 14	⅞ in	0.44 in	0.66 in	0.14 in	4J-1096
⅞ - 14	1 ¼ in	0.44 in	0.66 in	0.14 in	7B-7525
⅞ - 14	2 in	0.44 in	0.66 in	0.63 in	2N-0412
⅞ - 14	2 ½ in	0.44 in	0.66 in	1.13 in	3J-4567
⅞ - 9	2 ½ in	0.88 in	1.31 in	0.22 in	8L-4638
⅞ - 9	4 in	0.88 in	1.31 in	1.00 in	8L-9299
⅞ - 9	4 ½ in	0.88 in	1.31 in	3.00 in	8L-4717
No. 10 - 24	1 ¾ in	0.19 in	0.31 in	0.88 in	2N-0402
No. 10 - 24	1 ½ in	0.19 in	0.31 in	0.38 in	5J-1714
No. 10 - 24	½ in	0.19 in	0.31 in	0.08 in	5S-2671
No. 10 - 24	⅞ in	0.19 in	0.31 in	0.08 in	9F-1707
No. 10 - 24	1 ¼ in	0.19 in	0.31 in	0.38 in	7L-0688
No. 10 - 24	⅝ in	0.19 in	0.31 in	0.08 in	2H-0191

Hardware

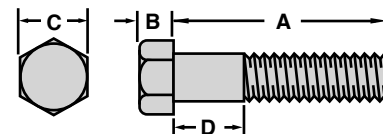
(Continued)

## Hex Socket Head Screw Bolts/Inch/Coarse & Fine Thread (Continued)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Coarse Thread (Continued)</b>					
No. 10 - 24	¾ in	0.19 in	0.31 in	0.08 in	3L-2540
No. 4 - 40	¾ in	0.11 in	0.19 in	0.05 in	2S-9255
No. 8 - 32	1 in	0.16 in	0.27 in	0.06 in	9M-4704
No. 8 - 32	¾ in	0.16 in	0.27 in	0.06 in	7D-5473
No. 8 - 32	½ in	0.16 in	0.27 in	0.06 in	6D-3897
<b>Fine Thread</b>					
½ - 20	3 in	0.50 in	0.75 in	1.50 in	013-8315
½ - 20	1 ¼ in	0.50 in	0.75 in	0.11 in	1F-1375
½ - 20	1 ¾ in	0.50 in	0.75 in	0.11 in	013-8310
½ - 20	2 ¼ in	0.50 in	0.75 in	0.75 in	013-8312
½ - 20	½ in	0.50 in	0.75 in	0.11 in	021-7956
½ - 20	1 in	0.50 in	0.75 in	0.11 in	013-8307
½ - 20	¾ in	0.50 in	0.75 in	0.11 in	013-8306
½ - 20	2 in	0.50 in	0.75 in	0.11 in	2H-3763
½ - 20	1 ½ in	0.50 in	0.75 in	0.11 in	8F-0069
¼ - 28	⅞ in	0.25 in	0.38 in	0.08 in	8S-1571
¼ - 28	¾ in	0.25 in	0.38 in	0.08 in	3H-1392
¼ - 28	⅝ in	0.25 in	0.38 in	0.08 in	021-7941

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Fine Thread (Continued)</b>					
¼ - 28	½ in	0.25 in	0.38 in	0.08 in	2K-8407
¾ - 16	2 in	0.75 in	1.12 in	0.13 in	061-8718
⅜ - 24	⅞ in	0.38 in	0.56 in	0.08 in	4L-1507
⅜ - 24	2 ¼ in	0.38 in	0.56 in	1.00 in	013-8259
⅜ - 24	5 ¾ in	0.38 in	0.56 in	4.75 in	8J-1582
⅜ - 24	1 ¼ in	0.38 in	0.56 in	0.08 in	1T-0131
⅜ - 24	¾ in	0.38 in	0.56 in	0.08 in	013-8253
⅜ - 24	1 in	0.38 in	0.56 in	0.08 in	5L-4183
⅜ - 24	1 ½ in	0.38 in	0.56 in	0.19 in	5L-8894
⅜ - 24	2 in	0.38 in	0.56 in	0.50 in	013-8258
⅜ - 24	1 ¾ in	0.38 in	0.56 in	0.50 in	013-8257
⅝ - 24	¾ in	0.31 in	0.31 in	0.08 in	3F-8156
⅝ - 18	2 ¼ in	0.62 in	0.94 in	0.11 in	9S-9078
⅞ - 20	½ in	0.44 in	0.66 in	0.11 in	8S-2696
⅞ - 20	1 ¾ in	0.44 in	0.66 in	0.11 in	8F-1948
No. 10 - 32	⅝ in	0.19 in	0.31 in	0.06 in	3K-6168
No. 10 - 32	⅞ in	0.19 in	0.31 in	0.06 in	8H-4959

**Hex Head Bolts/Metric/Coarse Thread UNC/Phosphate & Oil Coated**



Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M6 × 1.00</b>					
M6 × 1.00	40 mm	4 mm	10 mm	22 mm	2W-9499
M6 × 1.00	35 mm	4 mm	10 mm	17 mm	6V-2315
M6 × 1.00	45 mm	4 mm	10 mm	6 mm	6V-7728
M6 × 1.00	20 mm	4 mm	10 mm	3 mm	6V-8214
M6 × 1.00	Nut	--	--	--	6V-8225
M6 × 1.00	70 mm	4 mm	10 mm	52 mm	6V-8359
M6 × 1.00	25 mm	4 mm	10 mm	3 mm	6V-8490
M6 × 1.00	16 mm	4 mm	10 mm	3 mm	6V-8837
M6 × 1.00	80 mm	4 mm	10 mm	62 mm	6V-9798
M6 × 1.00	50 mm	4 mm	10 mm	33 mm	8T-0275
M6 × 1.00	12 mm	4 mm	10 mm	2 mm	8T-0639
M6 × 1.00	30 mm	4 mm	10 mm	12 mm	8T-0640
M6 × 1.00	60 mm	4 mm	10 mm	42 mm	8T-5066
M6 × 1.00	Washer	--	--	--	9X-8267
<b>Thread Size (dia × pitch) M8 × 1.25</b>					
M8 × 1.25	Nut	--	--	--	5P-7970
M8 × 1.25	70 mm	6 mm	13 mm	48 mm	5P-8347
M8 × 1.25	12 mm	6 mm	13 mm	3 mm	6V-2316
M8 × 1.25	30 mm	6 mm	13 mm	8 mm	6V-2317
M8 × 1.25	110 mm	6 mm	13 mm	88 mm	6V-3821
M8 × 1.25	50 mm	6 mm	13 mm	28 mm	6V-3918
M8 × 1.25	25 mm	6 mm	13 mm	3 mm	6V-3940
M8 × 1.25	16 mm	6 mm	13 mm	3 mm	6V-5215
M8 × 1.25	20 mm	6 mm	13 mm	3 mm	6V-5217
M8 × 1.25	35 mm	6 mm	13 mm	13 mm	6V-5218
M8 × 1.25	40 mm	6 mm	13 mm	18 mm	6V-5219
M8 × 1.25	80 mm	6 mm	13 mm	58 mm	6V-5221
M8 × 1.25	100 mm	6 mm	13 mm	78 mm	6V-5223
M8 × 1.25	120 mm	6 mm	13 mm	98 mm	6V-9607
M8 × 1.25	130 mm	6 mm	13 mm	108 mm	7X-0457
M8 × 1.25	140 mm	6 mm	13 mm	112 mm	7X-0870
M8 × 1.25	150 mm	6 mm	13 mm	122 mm	8C-4984
M8 × 1.25	60 mm	6 mm	13 mm	38 mm	8T-0100
M8 × 1.25	45 mm	6 mm	13 mm	23 mm	8T-0276
M8 × 1.25	90 mm	6 mm	13 mm	68 mm	8T-0292
M8 × 1.25	Washer	--	--	--	9M-1974
<b>Thread Size (dia × pitch) M10 × 1.50</b>					
M10 × 1.50	Nut	--	--	--	2Y-5829
M10 × 1.50	100 mm	7 mm	16 mm	74 mm	6V-1819
M10 × 1.50	30 mm	7 mm	16 mm	5 mm	6V-1820

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M10 × 1.50 (Continued)</b>					
M10 × 1.50	35 mm	7 mm	16 mm	5 mm	6V-3822
M10 × 1.50	25 mm	7 mm	16 mm	5 mm	6V-4248
M10 × 1.50	50 mm	7 mm	16 mm	24 mm	6V-4249
M10 × 1.50	60 mm	7 mm	16 mm	34 mm	6V-5230
M10 × 1.50	Washer	--	--	--	6V-5839
M10 × 1.50	40 mm	7 mm	16 mm	14 mm	6V-5842
M10 × 1.50	45 mm	7 mm	16 mm	19 mm	6V-5843
M10 × 1.50	20 mm	7 mm	16 mm	5 mm	6V-6317
M10 × 1.50	70 mm	7 mm	16 mm	44 mm	6V-7981
M10 × 1.50	12 mm	7 mm	16 mm	5 mm	6V-8084
M10 × 1.50	16 mm	7 mm	16 mm	3 mm	6V-8212
M10 × 1.50	140 mm	7 mm	16 mm	108 mm	8C-2926
M10 × 1.50	110 mm	7 mm	16 mm	78 mm	8T-0355
M10 × 1.50	160 mm	7 mm	16 mm	128 mm	8T-0356
M10 × 1.50	80 mm	7 mm	16 mm	54 mm	8T-0643
M10 × 1.50	90 mm	7 mm	16 mm	64 mm	8T-0644
M10 × 1.50	120 mm	7 mm	16 mm	94 mm	8T-5030
M10 × 1.50	200 mm	7 mm	16 mm	168 mm	8T-6854
M10 × 1.50	180 mm	7 mm	16 mm	148 mm	8T-7950
M10 × 1.50	150 mm	7 mm	16 mm	118 mm	8T-9085
<b>Thread Size (dia × pitch) M12 × 1.75</b>					
M12 × 1.75	Washer	--	--	--	5P-8245
M12 × 1.75	25 mm	8 mm	18 mm	5 mm	6A-5591
M12 × 1.75	30 mm	8 mm	18 mm	5 mm	6V-3668
M12 × 1.75	60 mm	8 mm	18 mm	30 mm	6V-3823
M12 × 1.75	45 mm	8 mm	18 mm	15 mm	6V-5684
M12 × 1.75	80 mm	8 mm	18 mm	50 mm	6V-5696
M12 × 1.75	50 mm	8 mm	18 mm	20 mm	6V-7673
M12 × 1.75	120 mm	8 mm	18 mm	90 mm	6V-8004
M12 × 1.75	Nut	--	--	--	6V-8149
M12 × 1.75	16 mm	8 mm	18 mm	5 mm	6V-8177
M12 × 1.75	40 mm	8 mm	18 mm	5 mm	6V-8197
M12 × 1.75	70 mm	8 mm	18 mm	40 mm	6V-8336
M12 × 1.75	35 mm	8 mm	18 mm	5 mm	6V-8675
M12 × 1.75	140 mm	8 mm	18 mm	104 mm	7X-0909
M12 × 1.75	200 mm	8 mm	18 mm	147 mm	8C-3226
M12 × 1.75	100 mm	8 mm	18 mm	70 mm	8T-0106
M12 × 1.75	160 mm	8 mm	18 mm	124 mm	8T-0162
M12 × 1.75	20 mm	8 mm	18 mm	5 mm	8T-0293
M12 × 1.75	90 mm	8 mm	18 mm	60 mm	8T-0372

Hardware

(Continued)



# Bolts

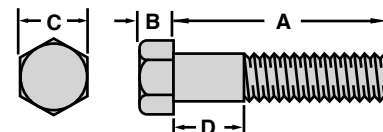
## Hex Head Bolts/Metric/Coarse Thread UNC/Phosphate & Oil Coated (Continued)

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M12 × 1.75 (Continued)</b>					
M12 × 1.75	110 mm	8 mm	18 mm	80 mm	8T-0646
M12 × 1.75	150 mm	8 mm	18 mm	114 mm	8T-5044
M12 × 1.75	180 mm	8 mm	18 mm	144 mm	8T-6991
<b>Thread Size (dia × pitch) M14 × 2.00</b>					
M14 × 2.00	Nut	--	--	--	139-6366
M14 × 2.00	50 mm	9 mm	21 mm	16 mm	6V-5685
M14 × 2.00	35 mm	9 mm	21 mm	6 mm	6V-8550
M14 × 2.00	90 mm	9 mm	21 mm	56 mm	8C-0537
M14 × 2.00	45 mm	9 mm	21 mm	6 mm	8T-0226
M14 × 2.00	25 mm	9 mm	21 mm	6 mm	8T-0296
M14 × 2.00	30 mm	9 mm	21 mm	6 mm	8T-0297
M14 × 2.00	100 mm	9 mm	21 mm	66 mm	8T-0298
M14 × 2.00	20 mm	9 mm	21 mm	6 mm	8T-0373
M14 × 2.00	80 mm	9 mm	21 mm	46 mm	8T-3653
M14 × 2.00	60 mm	9 mm	21 mm	26 mm	8T-3666
<b>Thread Size (dia × pitch) M16 × 2.00</b>					
M16 × 2.00	60 mm	10 mm	24 mm	22 mm	6V-3303
M16 × 2.00	40 mm	10 mm	24 mm	5 mm	6V-4429
M16 × 2.00	25 mm	10 mm	24 mm	4 mm	6V-5224
M16 × 2.00	50 mm	10 mm	24 mm	12 mm	6V-5686
M16 × 2.00	35 mm	10 mm	24 mm	4 mm	6V-5844
M16 × 2.00	140 mm	10 mm	24 mm	96 mm	6V-7675
M16 × 2.00	150 mm	10 mm	24 mm	106 mm	6V-8154
M16 × 2.00	100 mm	10 mm	24 mm	62 mm	8T-0207
M16 × 2.00	80 mm	10 mm	24 mm	42 mm	8T-0281
M16 × 2.00	120 mm	10 mm	24 mm	82 mm	8T-0282
M16 × 2.00	30 mm	10 mm	24 mm	3 mm	8T-0299
M16 × 2.00	70 mm	10 mm	24 mm	32 mm	8T-0357
M16 × 2.00	90 mm	10 mm	24 mm	52 mm	8T-0358
M16 × 2.00	130 mm	10 mm	24 mm	86 mm	8T-0359
M16 × 2.00	45 mm	10 mm	24 mm	5 mm	8T-0375
M16 × 2.00	110 mm	10 mm	24 mm	72 mm	8T-0649
M16 × 2.00	160 mm	10 mm	24 mm	116 mm	8T-0650
M16 × 2.00	Nut	--	--	--	8T-1757
M16 × 2.00	180 mm	10 mm	24 mm	136 mm	8T-5002
M16 × 2.00	Washer	--	--	--	9X-8268
<b>Thread Size (dia × pitch) M20 × 2.50</b>					
M20 × 2.50	50 mm	13 mm	30 mm	4 mm	6V-3531
M20 × 2.50	60 mm	13 mm	30 mm	14 mm	6V-3532
M20 × 2.50	80 mm	13 mm	30 mm	34 mm	6V-3669
M20 × 2.50	70 mm	13 mm	30 mm	24 mm	6V-5845
M20 × 2.50	40 mm	13 mm	30 mm	5 mm	6V-7729
M20 × 2.50	Nut	--	--	--	6V-7742
M20 × 2.50	200 mm	13 mm	30 mm	148 mm	6V-8569

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M20 × 2.50 (Continued)</b>					
M20 × 2.50	140 mm	13 mm	30 mm	88 mm	6V-9167
M20 × 2.50	100 mm	13 mm	30 mm	54 mm	6V-9667
M20 × 2.50	120 mm	13 mm	30 mm	74 mm	8T-0070
M20 × 2.50	35 mm	13 mm	30 mm	4 mm	8T-0300
M20 × 2.50	90 mm	13 mm	30 mm	44 mm	8T-0360
M20 × 2.50	110 mm	13 mm	30 mm	64 mm	8T-0362
M20 × 2.50	30 mm	13 mm	30 mm	4 mm	8T-0651
M20 × 2.50	45 mm	13 mm	30 mm	6 mm	8T-0652
M20 × 2.50	130 mm	13 mm	30 mm	78 mm	8T-0655
M20 × 2.50	150 mm	13 mm	30 mm	98 mm	8T-0656
M20 × 2.50	160 mm	13 mm	30 mm	108 mm	8T-0657
M20 × 2.50	180 mm	13 mm	30 mm	128 mm	8T-0658
M20 × 2.50	Washer	--	--	--	8T-3282
<b>Thread Size (dia × pitch) M24 × 3.00</b>					
M24 × 3.00	120 mm	15 mm	36 mm	66 mm	6V-8132
M24 × 3.00	80 mm	15 mm	36 mm	26 mm	6V-8133
M24 × 3.00	200 mm	15 mm	36 mm	140 mm	6V-8198
M24 × 3.00	Washer	--	--	--	6V-8237
M24 × 3.00	50 mm	15 mm	36 mm	8 mm	6V-9199
M24 × 3.00	Nut	--	--	--	7X-0851
M24 × 3.00	40 mm	15 mm	36 mm	8 mm	8T-0661
M24 × 3.00	35 mm	15 mm	36 mm	8 mm	8T-0662
M24 × 3.00	45 mm	15 mm	36 mm	8 mm	8T-0663
M24 × 3.00	70 mm	15 mm	36 mm	8 mm	8T-0664
M24 × 3.00	90 mm	15 mm	36 mm	36 mm	8T-0666
M24 × 3.00	100 mm	15 mm	36 mm	46 mm	8T-0667
M24 × 3.00	110 mm	15 mm	36 mm	56 mm	8T-0668
M24 × 3.00	130 mm	15 mm	36 mm	70 mm	8T-0669
M24 × 3.00	140 mm	15 mm	36 mm	80 mm	8T-0670
M24 × 3.00	150 mm	15 mm	36 mm	90 mm	8T-0671
M24 × 3.00	160 mm	15 mm	36 mm	100 mm	8T-0672
M24 × 3.00	180 mm	15 mm	36 mm	120 mm	8T-0674
<b>Thread Size (dia × pitch) M30 × 3.50</b>					
M30 × 3.50	Washer	--	--	--	9X-8399
M30 × 3.50	80 mm	19 mm	46 mm	14 mm	8C-3222
M30 × 3.50	160 mm	19 mm	46 mm	88 mm	8C-3236
M30 × 3.50	90 mm	19 mm	46 mm	24 mm	8C-3411
M30 × 3.50	110 mm	19 mm	46 mm	44 mm	8T-0283
M30 × 3.50	100 mm	19 mm	46 mm	34 mm	8T-0368
M30 × 3.50	120 mm	19 mm	46 mm	54 mm	8T-0369
M30 × 3.50	140 mm	19 mm	46 mm	68 mm	8T-0370
M30 × 3.50	Nut	--	--	--	8T-1583
M30 × 3.50	180 mm	19 mm	46 mm	108 mm	8T-6624

Hardware

**Hex Head Bolts/Metric/Coarse Thread UNC/Zinc Plated**



Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M6 × 1.00</b>					
M6 × 1.00	Washer	--	--	--	9X-8256
M6 × 1.00	Nut	--	--	--	5C-2890
M6 × 1.00	16 mm	4 mm	10 mm	3 mm	5C-9553
M6 × 1.00	25 mm	4 mm	10 mm	2 mm	6V-7357
M6 × 1.00	35 mm	4 mm	10 mm	17 mm	7X-2533
M6 × 1.00	50 mm	4 mm	10 mm	32 mm	7X-2534
M6 × 1.00	60 mm	4 mm	10 mm	42 mm	7X-2535
M6 × 1.00	40 mm	4 mm	10 mm	22 mm	8C-8451
M6 × 1.00	45 mm	4 mm	10 mm	6 mm	8T-2947
M6 × 1.00	70 mm	4 mm	10 mm	52 mm	8T-3844
M6 × 1.00	20 mm	4 mm	10 mm	3 mm	8T-4138
M6 × 1.00	12 mm	4 mm	10 mm	2 mm	8T-4171
M6 × 1.00	30 mm	4 mm	10 mm	12 mm	8T-4971
M6 × 1.00	80 mm	4 mm	10 mm	62 mm	8T-6974
<b>Thread Size (dia × pitch) M8 × 1.25</b>					
M30 × 3.50	160 mm	19 mm	46 mm	88 mm	7X-2585
M8 × 1.25	16 mm	6 mm	13 mm	3 mm	8T-4200
M8 × 1.25	25 mm	6 mm	13 mm	3 mm	8T-4908
M8 × 1.25	30 mm	6 mm	13 mm	8 mm	8T-7547
M8 × 1.25	40 mm	6 mm	13 mm	3 mm	8T-4197
M8 × 1.25	35 mm	6 mm	13 mm	13 mm	7X-2537
M8 × 1.25	45 mm	6 mm	13 mm	23 mm	7X-0818
M8 × 1.25	50 mm	6 mm	13 mm	28 mm	8T-6912
M8 × 1.25	60 mm	6 mm	13 mm	38 mm	8T-6869
M8 × 1.25	90 mm	6 mm	13 mm	68 mm	8T-4177
M8 × 1.25	70 mm	6 mm	13 mm	48 mm	8T-6870
M8 × 1.25	20 mm	6 mm	13 mm	3 mm	8T-4189
M8 × 1.25	Nut	--	--	--	5C-7261
M8 × 1.25	80 mm	6 mm	13 mm	58 mm	8T-3647
M8 × 1.25	100 mm	6 mm	13 mm	78 mm	7X-2538
M8 × 1.25	110 mm	6 mm	13 mm	88 mm	7X-2539
M8 × 1.25	120 mm	6 mm	13 mm	98 mm	7X-2540
M8 × 1.25	140 mm	6 mm	13 mm	112 mm	7X-2541
M8 × 1.25	150 mm	6 mm	13 mm	122 mm	7X-2542
M8 × 1.25	130 mm	6 mm	13 mm	108 mm	108-2989
M8 × 1.25	160 mm	6 mm	13 mm	128 mm	8T-7352
M8 × 1.25	Washer	--	--	--	8T-4224
M8 × 1.25	12 mm	6 mm	13 mm	3 mm	8T-4199
<b>Thread Size (dia × pitch) M10 × 1.50</b>					
M10 × 1.50	25 mm	7 mm	16 mm	5 mm	8T-4136

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M10 × 1.50 (Continued)</b>					
M10 × 1.50	160 mm	7 mm	16 mm	128 mm	8T-6408
M10 × 1.50	120 mm	7 mm	16 mm	94 mm	7X-2543
M10 × 1.50	140 mm	7 mm	16 mm	108 mm	7X-2544
M10 × 1.50	150 mm	7 mm	16 mm	118 mm	7X-2545
M10 × 1.50	180 mm	7 mm	16 mm	148 mm	7X-2546
M10 × 1.50	200 mm	7 mm	16 mm	168 mm	7X-2547
M10 × 1.50	Nut	--	--	--	8T-4133
M10 × 1.50	Washer	--	--	--	8T-4121
M10 × 1.50	16 mm	7 mm	16 mm	5 mm	8T-4191
M10 × 1.50	20 mm	7 mm	16 mm	5 mm	8T-4137
M10 × 1.50	30 mm	7 mm	16 mm	5 mm	8T-4195
M10 × 1.50	35 mm	7 mm	16 mm	5 mm	8T-4196
M10 × 1.50	40 mm	7 mm	16 mm	14 mm	8T-4186
M10 × 1.50	45 mm	7 mm	16 mm	19 mm	8T-4182
M10 × 1.50	50 mm	7 mm	16 mm	24 mm	8T-4185
M10 × 1.50	60 mm	7 mm	16 mm	34 mm	8T-6466
M10 × 1.50	70 mm	7 mm	16 mm	44 mm	8T-5005
M10 × 1.50	80 mm	7 mm	16 mm	54 mm	8T-4172
M10 × 1.50	90 mm	7 mm	16 mm	64 mm	8T-4178
M10 × 1.50	100 mm	7 mm	16 mm	74 mm	8T-4198
M10 × 1.50	110 mm	7 mm	16 mm	84 mm	8T-6685
M10 × 1.50	130 mm	7 mm	16 mm	98 mm	8T-5436
M10 × 1.50	12 mm	7 mm	16 mm	5 mm	7X-2621
<b>Thread Size (dia × pitch) M12 × 1.75</b>					
M12 × 1.75	25 mm	8 mm	18 mm	5 mm	8T-4192
M12 × 1.75	16 mm	8 mm	18 mm	5 mm	7X-2548
M12 × 1.75	180 mm	8 mm	18 mm	144 mm	8T-7929
M12 × 1.75	110 mm	8 mm	18 mm	80 mm	7X-2550
M12 × 1.75	200 mm	8 mm	18 mm	147 mm	7X-2551
M12 × 1.75	Washer	--	--	--	8T-4223
M12 × 1.75	30 mm	8 mm	18 mm	5 mm	8T-4139
M12 × 1.75	35 mm	8 mm	18 mm	5 mm	8T-4956
M12 × 1.75	40 mm	8 mm	18 mm	5 mm	8T-4183
M12 × 1.75	45 mm	8 mm	18 mm	15 mm	8T-4184
M12 × 1.75	50 mm	8 mm	18 mm	20 mm	8T-4194
M12 × 1.75	60 mm	8 mm	18 mm	30 mm	8T-4910
M12 × 1.75	70 mm	8 mm	18 mm	40 mm	8T-4648
M12 × 1.75	80 mm	8 mm	18 mm	50 mm	8T-6868
M12 × 1.75	90 mm	8 mm	18 mm	60 mm	8T-4176
M12 × 1.75	Nut	--	--	--	8T-4244

Hardware

(Continued)

# Bolts

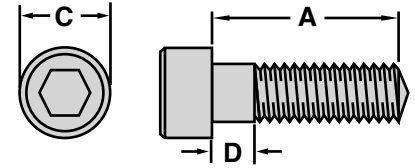
## Hex Head Bolts/Metric/Coarse Thread UNC/Zinc Plated (Continued)

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M12 × 1.75 (Continued)</b>					
M12 × 1.75	20 mm	8 mm	18 mm	5 mm	8T-4179
M12 × 1.75	120 mm	8 mm	18 mm	90 mm	8T-5041
M12 × 1.75	130 mm	8 mm	18 mm	94 mm	8T-5001
M12 × 1.75	140 mm	8 mm	18 mm	104 mm	8T-5412
M12 × 1.75	150 mm	8 mm	18 mm	114 mm	8T-5092
M12 × 1.75	160 mm	8 mm	18 mm	124 mm	8T-7930
M12 × 1.75	100 mm	8 mm	18 mm	70 mm	7X-2549
<b>Thread Size (dia × pitch) M16 × 2.00</b>					
M16 × 2.00	45 mm	10 mm	24 mm	5 mm	8T-7338
M16 × 2.00	120 mm	10 mm	24 mm	82 mm	8T-4174
M16 × 2.00	50 mm	10 mm	24 mm	12 mm	8T-4193
M16 × 2.00	60 mm	10 mm	24 mm	22 mm	8T-4140
M16 × 2.00	90 mm	10 mm	24 mm	52 mm	8T-4175
M16 × 2.00	130 mm	10 mm	24 mm	86 mm	7X-2475
M16 × 2.00	140 mm	10 mm	24 mm	96 mm	7X-2557
M16 × 2.00	150 mm	10 mm	24 mm	106 mm	7X-2558
M16 × 2.00	160 mm	10 mm	24 mm	116 mm	7X-2559
M16 × 2.00	180 mm	10 mm	24 mm	136 mm	8T-6385
M16 × 2.00	200 mm	10 mm	24 mm	156 mm	8T-6383
M16 × 2.00	Nut	--	--	--	8T-4132
M16 × 2.00	Washer	--	--	--	8T-4122
M16 × 2.00	30 mm	10 mm	24 mm	3 mm	7X-2552
M16 × 2.00	40 mm	10 mm	24 mm	5 mm	7X-2553
M16 × 2.00	70 mm	10 mm	24 mm	32 mm	7X-2554
M16 × 2.00	80 mm	10 mm	24 mm	42 mm	7X-2555
M16 × 2.00	100 mm	10 mm	24 mm	56 mm	7X-2556
M16 × 2.00	25 mm	10 mm	24 mm	4 mm	8T-4190
M16 × 2.00	35 mm	10 mm	24 mm	4 mm	8T-4779
M16 × 2.00	110 mm	10 mm	24 mm	72 mm	8T-4173
<b>Thread Size (dia × pitch) M20 × 2.50</b>					
M20 × 2.50	35 mm	13 mm	30 mm	4 mm	7X-2561
M20 × 2.50	140 mm	13 mm	30 mm	88 mm	8C-8478
M20 × 2.50	60 mm	13 mm	30 mm	14 mm	7X-2563
M20 × 2.50	90 mm	13 mm	30 mm	44 mm	7X-2564
M20 × 2.50	100 mm	13 mm	30 mm	54 mm	7X-2565
M20 × 2.50	110 mm	13 mm	30 mm	64 mm	7X-2566
M20 × 2.50	130 mm	13 mm	30 mm	78 mm	7X-2532
M20 × 2.50	160 mm	13 mm	30 mm	108 mm	7X-2488
M20 × 2.50	180 mm	13 mm	30 mm	128 mm	7X-2568
M20 × 2.50	200 mm	13 mm	30 mm	148 mm	7X-2569
M20 × 2.50	Nut	--	--	--	8T-4131

Thread Size (dia × pitch)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M20 × 2.50 (Continued)</b>					
M20 × 2.50	Washer	--	--	--	8T-4123
M20 × 2.50	30 mm	13 mm	30 mm	4 mm	8T-4780
M20 × 2.50	40 mm	13 mm	30 mm	5 mm	8T-5460
M20 × 2.50	50 mm	13 mm	30 mm	4 mm	8T-6430
M20 × 2.50	70 mm	13 mm	30 mm	24 mm	8T-4141
M20 × 2.50	80 mm	13 mm	30 mm	34 mm	8T-4187
M20 × 2.50	120 mm	13 mm	30 mm	74 mm	8T-6381
M20 × 2.50	150 mm	13 mm	30 mm	98 mm	8T-4170
M20 × 2.50	45 mm	13 mm	30 mm	6 mm	7X-2562
<b>Thread Size (dia × pitch) M24 × 3.00</b>					
M24 × 3.00	100 mm	15 mm	36 mm	46 mm	7X-2489
M24 × 3.00	70 mm	15 mm	36 mm	8 mm	7X-2576
M24 × 3.00	90 mm	15 mm	36 mm	36 mm	7X-2577
M24 × 3.00	110 mm	15 mm	36 mm	56 mm	7X-2454
M24 × 3.00	160 mm	15 mm	36 mm	100 mm	7X-2567
M24 × 3.00	180 mm	15 mm	36 mm	120 mm	7X-2465
M24 × 3.00	200 mm	15 mm	36 mm	140 mm	7X-2578
M24 × 3.00	Nut	--	--	--	8T-4001
M24 × 3.00	50 mm	15 mm	36 mm	8 mm	8T-5379
M24 × 3.00	120 mm	15 mm	36 mm	66 mm	8T-0363
M24 × 3.00	130 mm	15 mm	36 mm	70 mm	8T-6380
M24 × 3.00	140 mm	15 mm	36 mm	80 mm	8T-4649
M24 × 3.00	40 mm	15 mm	36 mm	8 mm	7X-2573
M24 × 3.00	Washer	--	--	--	8T-4167
M24 × 3.00	35 mm	15 mm	36 mm	8 mm	7X-2572
M24 × 3.00	150 mm	15 mm	36 mm	90 mm	8C-3290
M24 × 3.00	45 mm	15 mm	36 mm	8 mm	7X-2574
M24 × 3.00	60 mm	15 mm	36 mm	8 mm	7X-2575
M24 × 3.00	80 mm	15 mm	36 mm	26 mm	8T-5878
<b>Thread Size (dia × pitch) M30 × 3.50</b>					
M30 × 3.50	50 mm	19 mm	46 mm	9 mm	9X-2199
M30 × 3.50	Nut	--	--	--	8C-8722
M30 × 3.50	Washer	--	--	--	9X-8258
M30 × 3.50	90 mm	19 mm	46 mm	24 mm	7X-2580
M30 × 3.50	180 mm	19 mm	46 mm	108 mm	7X-2586
M30 × 3.50	120 mm	19 mm	46 mm	54 mm	7X-2583
M30 × 3.50	140 mm	19 mm	46 mm	68 mm	7X-2584
M30 × 3.50	160 mm	19 mm	46 mm	88 mm	7X-2585
M30 × 3.50	100 mm	19 mm	46 mm	34 mm	7X-2581
M30 × 3.50	80 mm	19 mm	46 mm	14 mm	8C-8723
M30 × 3.50	110 mm	19 mm	46 mm	44 mm	7X-2582

Hardware

**Hex Socket Head Bolts/Metric/Coarse Thread UNC**



Thread Size (dia × pitch)	A	C	D	Part Number
	Bolt Length	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M3 × 0.50</b>				
M3 × 0.50	6 mm	6 mm	2 mm	8C-6365
M3 × 0.50	20 mm	6 mm	2 mm	8T-9006
<b>Thread Size (dia × pitch) M4 × 0.70</b>				
M4 × 0.70	16 mm	7 mm	1 mm	8T-9405
M4 × 0.70	65 mm	7 mm	51 mm	107-3198
M4 × 0.70	6 mm	7 mm	2 mm	095-0640
M4 × 0.70	10 mm	7 mm	2 mm	095-0641
M4 × 0.70	20 mm	7 mm	1 mm	8C-4982
M4 × 0.70	45 mm	7 mm	25 mm	101-4306
<b>Thread Size (dia × pitch) M5 × 0.80</b>				
M5 × 0.80	20 mm	9 mm	2 mm	096-4833
M5 × 0.80	8 mm	9 mm	2 mm	096-5968
M5 × 0.80	25 mm	9 mm	2 mm	096-5969
M5 × 0.80	10 mm	9 mm	2 mm	099-0822
M5 × 0.80	70 mm	9 mm	48 mm	9X-2536
M5 × 0.80	14 mm	9 mm	2 mm	8C-6364
M5 × 0.80	16 mm	9 mm	2 mm	8C-8580
M5 × 0.80	40 mm	9 mm	18 mm	8T-0266
M5 × 0.80	45 mm	9 mm	23 mm	8T-3283
M5 × 0.80	35 mm	9 mm	13 mm	8T-6699
M5 × 0.80	12 mm	9 mm	2 mm	099-2374
M5 × 0.80	50 mm	9 mm	28 mm	095-0642
<b>Thread Size (dia × pitch) M6 × 1.00</b>				
M6 × 1.00	55 mm	10 mm	37 mm	095-0645
M6 × 1.00	80 mm	10 mm	56 mm	102-7364
M6 × 1.00	35 mm	10 mm	11 mm	1R-5396
M6 × 1.00	25 mm	10 mm	3 mm	3T-0849
M6 × 1.00	16 mm	10 mm	3 mm	6V-5683
M6 × 1.00	40 mm	10 mm	16 mm	6V-8653
M6 × 1.00	45 mm	10 mm	21 mm	8C-6965
M6 × 1.00	12 mm	10 mm	3 mm	8T-0267
M6 × 1.00	20 mm	10 mm	3 mm	8T-0269
M6 × 1.00	60 mm	10 mm	36 mm	8T-2396
M6 × 1.00	90 mm	10 mm	66 mm	8T-2397
M6 × 1.00	65 mm	10 mm	41 mm	8T-2922
M6 × 1.00	30 mm	10 mm	3 mm	8T-8442
M6 × 1.00	50 mm	10 mm	32 mm	8T-9534
M6 × 1.00	70 mm	10 mm	46 mm	9X-2537
M6 × 1.00	10 mm	10 mm	5 mm	9X-6153

Thread Size (dia × pitch)	A	C	D	Part Number
	Bolt Length	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M8 × 1.25</b>				
M8 × 1.25	65 mm	13 mm	37 mm	096-0187
M8 × 1.25	100 mm	13 mm	72 mm	102-7365
M8 × 1.25	130 mm	13 mm	102 mm	3E-8006
M8 × 1.25	50 mm	13 mm	22 mm	3E-8025
M8 × 1.25	25 mm	13 mm	4 mm	5A-3604
M8 × 1.25	30 mm	13 mm	4 mm	6V-5192
M8 × 1.25	80 mm	13 mm	58 mm	6V-5196
M8 × 1.25	16 mm	13 mm	4 mm	6V-8202
M8 × 1.25	70 mm	13 mm	42 mm	6V-8213
M8 × 1.25	35 mm	13 mm	4 mm	6V-8337
M8 × 1.25	45 mm	13 mm	17 mm	8T-0338
M8 × 1.25	110 mm	13 mm	82 mm	8T-0339
M8 × 1.25	20 mm	13 mm	4 mm	8T-1158
M8 × 1.25	90 mm	13 mm	62 mm	8T-2394
M8 × 1.25	60 mm	13 mm	38 mm	8T-9535
M8 × 1.25	55 mm	13 mm	33 mm	9X-6154
M8 × 1.25	200 mm	13 mm	172 mm	9X-8269
<b>Thread Size (dia × pitch) M10 × 1.50</b>				
M10 × 1.50	130 mm	16 mm	98 mm	086-2369
M10 × 1.50	55 mm	16 mm	29 mm	095-0655
M10 × 1.50	70 mm	16 mm	38 mm	095-0658
M10 × 1.50	220 mm	16 mm	194 mm	095-0665
M10 × 1.50	120 mm	16 mm	88 mm	096-1331
M10 × 1.50	16 mm	16 mm	5 mm	096-4835
M10 × 1.50	150 mm	16 mm	118 mm	3E-8028
M10 × 1.50	20 mm	16 mm	5 mm	6V-3938
M10 × 1.50	35 mm	16 mm	5 mm	8T-0271
M10 × 1.50	110 mm	16 mm	78 mm	8T-0272
M10 × 1.50	60 mm	16 mm	28 mm	8T-0341
M10 × 1.50	80 mm	16 mm	48 mm	8T-0342
M10 × 1.50	25 mm	16 mm	5 mm	8T-1159
M10 × 1.50	50 mm	16 mm	18 mm	8T-1160
M10 × 1.50	45 mm	16 mm	13 mm	8T-2223
M10 × 1.50	65 mm	16 mm	33 mm	8T-2392
M10 × 1.50	100 mm	16 mm	68 mm	8T-7586
M10 × 1.50	40 mm	16 mm	8 mm	8T-9515
M10 × 1.50	90 mm	16 mm	58 mm	9X-2158
M10 × 1.50	30 mm	16 mm	3 mm	9X-6032

Hardware

(Continued)

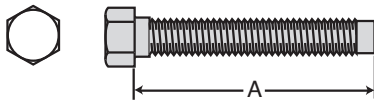
# Bolts

## Hex Socket Head Bolts/Metric/Coarse Thread UNC (Continued)

Thread Size (dia × pitch)	A	C	D	Part Number
	Bolt Length	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M12 × 1.75</b>				
M12 × 1.75	60 mm	18 mm	24 mm	095-0673
M12 × 1.75	45 mm	18 mm	5 mm	095-0670
M12 × 1.75	65 mm	18 mm	35 mm	095-0674
M12 × 1.75	110 mm	18 mm	74 mm	095-9804
M12 × 1.75	70 mm	18 mm	34 mm	3E-6910
M12 × 1.75	180 mm	18 mm	144 mm	3E-6911
M12 × 1.75	90 mm	18 mm	54 mm	3E-8007
M12 × 1.75	35 mm	18 mm	5 mm	6V-8200
M12 × 1.75	100 mm	18 mm	64 mm	7X-2436
M12 × 1.75	130 mm	18 mm	94 mm	7X-2607
M12 × 1.75	120 mm	18 mm	84 mm	8C-3413
M12 × 1.75	220 mm	18 mm	184 mm	8C-4980
M12 × 1.75	80 mm	18 mm	44 mm	8C-8729
M12 × 1.75	40 mm	18 mm	5 mm	8T-0273
M12 × 1.75	55 mm	18 mm	19 mm	8T-0343
M12 × 1.75	30 mm	18 mm	5 mm	8T-3957
M12 × 1.75	140 mm	18 mm	104 mm	8T-7058
M12 × 1.75	50 mm	18 mm	5 mm	8T-7811
M12 × 1.75	25 mm	18 mm	5 mm	8T-8441
M12 × 1.75	20 mm	18 mm	5 mm	8T-9080
<b>Thread Size (dia × pitch) M16 × 2.00</b>				
M16 × 2.00	55 mm	24 mm	17 mm	095-0700
M16 × 2.00	100 mm	24 mm	56 mm	095-0705
M16 × 2.00	110 mm	24 mm	66 mm	095-0706
M16 × 2.00	120 mm	24 mm	76 mm	095-0707
M16 × 2.00	80 mm	24 mm	36 mm	095-9806
M16 × 2.00	140 mm	24 mm	96 mm	096-0008
M16 × 2.00	180 mm	24 mm	136 mm	102-2562
M16 × 2.00	25 mm	24 mm	6 mm	3E-6923

Thread Size (dia × pitch)	A	C	D	Part Number
	Bolt Length	Head Width	Grip Length	
<b>Thread Size (dia × pitch) M16 × 2.00 (Continued)</b>				
M16 × 2.00	90 mm	24 mm	46 mm	3E-8008
M16 × 2.00	45 mm	24 mm	6 mm	6V-8201
M16 × 2.00	200 mm	24 mm	156 mm	7Y-5243
M16 × 2.00	260 mm	24 mm	216 mm	7Y-5244
M16 × 2.00	160 mm	24 mm	116 mm	8C-7587
M16 × 2.00	50 mm	24 mm	6 mm	8T-0348
M16 × 2.00	65 mm	24 mm	21 mm	8T-0349
M16 × 2.00	30 mm	24 mm	6 mm	8T-0439
M16 × 2.00	70 mm	24 mm	26 mm	8T-1447
M16 × 2.00	60 mm	24 mm	6 mm	8T-2393
M16 × 2.00	40 mm	24 mm	6 mm	8T-4944
M16 × 2.00	35 mm	24 mm	6 mm	8T-6594
<b>Thread Size (dia × pitch) M20 × 2.50</b>				
M20 × 2.50	240 mm	30 mm	196 mm	102-2563
M20 × 2.50	300 mm	30 mm	256 mm	102-2564
M20 × 2.50	150 mm	30 mm	98 mm	113-7430
M20 × 2.50	80 mm	30 mm	28 mm	7Y-5216
M20 × 2.50	70 mm	30 mm	8 mm	7Y-5217
M20 × 2.50	45 mm	30 mm	8 mm	7Y-5221
M20 × 2.50	60 mm	30 mm	8 mm	7Y-5241
M20 × 2.50	50 mm	30 mm	8 mm	8T-5042
M20 × 2.50	55 mm	30 mm	8 mm	8T-6593
M20 × 2.50	90 mm	30 mm	38 mm	9X-2404
<b>Thread Size (dia × pitch) M24 × 3.00</b>				
M24 × 3.00	100 mm	36 mm	40 mm	7Y-5239
M24 × 3.00	110 mm	36 mm	50 mm	9X-8480
M24 × 3.00	130 mm	36 mm	70 mm	9X-8915
M24 × 3.00	90 mm	36 mm	30 mm	7Y-5215

## Forcing Bolts/Inch/Fine Thread UNF

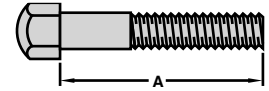


Thread Size (in - TPI)	A	Grip Length	Part Number
	Length		
1 - 14	6 <sup>15</sup> / <sub>16</sub> in	0.97 in	5P-8715
1 ½ - 12	4 <sup>3</sup> / <sub>4</sub> in	0.33 in	5P-5264
1 ½ - 12	2 <sup>7</sup> / <sub>8</sub> in	0.33 in	6V-0187
¾ - 14	5 <sup>3</sup> / <sub>8</sub> in	0.33 in	5P-5265

## Forcing Bolts/Metric/Coarse Thread UNC

Thread Size (dia × pitch)	A	Grip Length	Part Number
	Length		
M24 × 3.0	190 mm	13 mm	136-1978

## Track Bolts/Inch



Model	Thread Size (in - TPI)	A	
		Bolt Length	Part Number
307, E70, E70B	½ - 20	35 mm (1.38 in)	102-8072
307, PM465	½ - 20	38.1 mm (1.50 in)	3A-9605
D3, D4, 931	½ - 20	38.1 mm (1.50 in)	8H-7504
931C, 933C, 935C, 941, D3, D4, D4B, D3C, D4C, D3G, D4G, 215, TR225B, AP1050, PR450, SF350	⅝ - 18	41.4 mm (1.63 in)	4K-7038
AP650B, BG225C, AP1050B, BG245C	⅝ - 18	50.8 mm (2 in)	8S-4745
D5C, 561, D4, D5, D6, 941, 943, 951, 953, 955, 977, 205, 211, 213, 215, 215SA, 219, 225, PR750, PR1000, PM565, SF500, TR500 <sup>1</sup>	⅝ - 18	51 mm (2.01 in)	7H-3597
D6, D7, 572, 955, 963, 977, 215SA, 219, 225, 225SA, 229, 231, 235, FB227	¾ - 16	54.8 mm (2.16 in)	1S-1859
D5N, D5M, D5C, D5H, D4H, 953, 939, 939C	⅝ - 18	55.1 mm (2.17 in)	9G-3110

Model	Thread Size (in - TPI)	A	
		Bolt Length	Part Number
D6N, D7N, D6R, D6H, D6M, D5H, 517, 257, FB227, D6HD	¾ - 16	60.9 mm (2.40 in)	6V-1792
D7, D8, 571, 572, 973, 977, 235, 583	¾ - 16	61.2 mm (2.41 in)	7H-3598
D7R, D7H, D8, 973, 983, 235	⅞ - 14	67.5 mm (2.66 in)	7H-3599
235	⅞ - 14	71.1 mm (2.80 in)	5P-4028
D9, 594, 245 <sup>2</sup>	1 - 14	74.6 mm (2.94 in)	2M-5657
245	1 - 14	78.9 mm (3.11 in)	3T-6308
D8T/R/N, D8L, 583R, 578	⅞ - 14	87.1 mm (3.43 in)	6V-1723
D9T/R/N	1 - 14	89.9 mm (3.54 in)	6T-2638
D10T/R/N	1 ½ - 12	96 mm (3.78 in)	7T-1000
D9L, 589	1 - 14	96.7 mm (3.81 in)	6V-1726
D10	1 ½ - 12	106.9 mm (4.21 in)	5P-3868
D11RN, 5130	1 ¾ - 12	109.2 mm (4.30 in)	6T-8853
5130	1 ¾ - 12	120.1 mm (4.73 in)	6I-8648

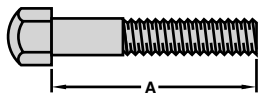
<sup>1</sup> Use model D5C with 9K links<sup>2</sup> Use model 245 with 8K links

# Bolts

## Track Bolts/Inch/Self Cleaning Shoes

Model	Thread Size (in - TPI)	A	
		Bolt Length	Part Number
D6N, D6M, D5H	3/4 - 16	91.9 mm (3.62 in)	107-0718
D7R/H	7/8 - 14	109.9 mm (4.33 in)	116-8145
D6	3/4 - 16	54.8 mm (2.16 in)	1S-1859
D5H, D5N, D5M, D4H	5/8 - 18	89.9 mm (3.54 in)	3T-3884
D3G, D4G, D3C, D4	9/16 - 18	41.4 mm (1.63 in)	4K-7038
D3G, D4G, D3C, D4	9/16 - 18	76.2 mm (3 in)	5A-3187
D4, D5	5/8 - 18	84 mm (3.31 in)	5A-4104
D6	3/4 - 16	99 mm (3.90 in)	5A-7524
D7	3/4 - 16	104.1 mm (4.10 in)	5P-1028
D7H, D6R, D6H	3/4 - 16	104.9 mm (4.13 in)	6T-2162
D7H, D6R, D6H, D6N, D6M, D5H	3/4 - 16	60.9 mm (2.40 in)	6V-1792
D4, D5	5/8 - 18	51 mm (2.01 in)	7H-3597
D7	3/4 - 16	61.2 mm (2.41 in)	7H-3598
D7R/H	7/8 - 14	67.5 mm (2.66 in)	7H-3599
D5H, D5N, D5M, D4H	5/8 - 18	55.1 mm (2.17 in)	9G-3110

## Track Bolts/Metric



Model	Thread Size (dia × pitch)	A	
		Bolt Length	Part Number
E180	M18 × 1.50	58 mm	093-0262
E300B, EL300	M20 × 1.50	70 mm	093-0265
E240, E300	M20 × 1.50	63 mm	093-0266
E450	M22 × 1.50	78 mm	093-0268
E650	M24 × 1.50	81 mm	093-0271
E140	M16 × 1.50	55 mm	096-1043
308, 307B	M14 × 1.50	35 mm	136-2401
350	M22 × 1.50	73 mm	143-4891
365B	M27 × 2.00	78 mm	144-0805
345B	M24 × 1.50	67 mm	150-4741
385B, 5090	M30 × 2.00	90 mm	174-0221
311, 312, 313, 314, E110, E110B, E120, E120B	M16 × 1.50	46 mm	4I-7538
317, 318, 319, 320, 321, 322, 320S, 325	M20 × 1.50	63 mm	6Y-0846
375, 5080	M27 × 2.00	90 mm	6Y-7432
330, 345, 350 D6R SystemOne™	M22 × 1.50	67 mm	6Y-9024
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 × 1.50	55 mm	9W-3619

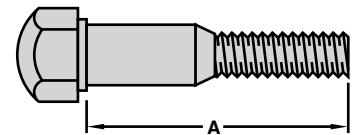


## Track Bolts/Metric/Self Cleaning Shoes

Model	Thread Size (dia × pitch)	A	Part Number
		Bolt Length	
311, 312, 313, 314, E110, E110B, E120, E120B, E140	M16 × 1.50	68 mm	093-0259
311, 312, 313, 314, E110, E110B, E120, E120B, E140	M16 × 1.50	108 mm	093-0261
E180 <sup>1</sup>	M18 × 1.50	90 mm	093-0264
E240 <sup>1</sup>	M20 × 1.50	108 mm	096-0551
325	M20 × 1.50	63 mm	6Y-0846
325	M20 × 1.50	110 mm	6Y-5686
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 × 1.50	80 mm	8E-9349
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 × 1.50	55 mm	9W-3619
330	M22 × 1.50	110 mm	5Q-3253
330	M22 × 1.50	67 mm	6Y-0924

<sup>1</sup> Only one bolt length used.

## Split Master Link Bolts/Inch



Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D6R/H, D6, D7	¾ - 16	105 mm (4.13 in)	9S-1838
D7R/H	⅞ - 14	116 mm (4.57 in)	9W-9058
AP650B, BG225C, AP1050B, BG245C	⅞ - 18	88.9 mm (3.50 in)	8S-4747
D5N, D5M, D4H, D5H, D5G, D5C, 939C, 953	⅝ - 18	67 mm (2.64 in)	3T-8601
D3G, D4G, D3C, D4C	⅞ - 18	76.2 mm (3 in)	5A-3187
D5N, D5M, D4H	⅝ - 18	83 mm (3.27 in)	9G-8592
D6N, D6M, D5H, 517	¾ - 16	74 mm (2.91 in)	106-1642
D6N, D6M, D5H	¾ - 16	99 mm (3.90 in)	107-0719
D7, 571, 572, 973, 977	¾ - 16	113 mm (4.45 in)	2P-9670
D7H	¾ - 16	80 mm (3.15 in)	6V-1793
D10	1 ⅜ - 12	168 mm (6.61 in)	5P-8222
D11R/N	1 ⅜ - 12	183 mm (7.20 in)	6T-8520

<sup>1</sup> Use model D5C with 9K links

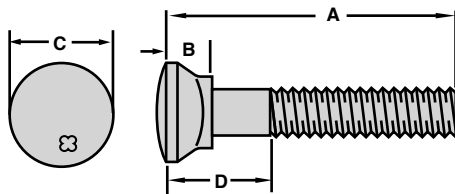
Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D11R/N	1 ⅜ - 12	153 mm (6.02 in)	6T-8521
D7R/H	⅞ - 14	87.1 mm (3.43 in)	6V-1723
D8T/R/N, D8L, 583R, 578	⅞ - 14	96 mm (3.78 in)	6V-1724
D7R/H	⅞ - 14	129 mm (5.08 in)	6V-1725
D10T/R/N	1 ⅜ - 12	164 mm (6.46 in)	7T-0998
D9T/R/N, D9L, 589	1 - 14	123 mm (4.84 in)	7T-2283
D8, 983, 583	⅞ - 14	123 mm (4.84 in)	8S-0395
D9, 594	1 - 14	87 mm (3.43 in)	8S-1723
D9T/R/N, D9L, 589	1 - 14	148 mm (5.83 in)	6V-1728
D10T/R/N	1 ⅜ - 12	134 mm (5.28 in)	7T-0999
D5C, D4, D5, D6, 561, 941, 943, 951, 953, 955, 977 <sup>1</sup>	⅝ - 18	88.9 mm (3.50 in)	3P-2274
D5H	⅝ - 18	91 mm (3.58 in)	3T-8580



## Split Master Link Bolts/Inch/Self Cleaning Shoes

Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D4,D5	5/8 - 18	88.9 mm (3.50 in)	3P-2274
D6N, D6M, D5H	3/4 - 16	109 mm (4.29 in)	107-0717
D6N, D6M, D5H	3/4 - 16	99 mm (3.90 in)	107-0719
D5N, D5M, D4H, D5H	5/8 - 18	102 mm (4.02 in)	3T-3889
D5H	5/8 - 18	91 mm (3.58 in)	3T-8580
D3G, D4G, D3C, D4C	9/16 - 18	76.2 mm (3 in)	5A-3187
D4, D5	5/8 - 18	117.5 mm (4.63 in)	5P-0569
D3G, D4G, D3C, D4C	9/16 - 18	109 mm (4.29 in)	5P-4683
D5N, D5M, D4H	5/8 - 18	83 mm (3.27 in)	9G-8592
D7H	3/4 - 16	125 mm (4.92 in)	6T-1441
D6R/H, D6, D7	3/4 - 16	139 mm (5.47 in)	3P-1111
D7R/H	7/8 - 14	129 mm (5.08 in)	6V-1725
D6R/H, D6, D7	3/4 - 16	105 mm (4.13 in)	9S-1838
D7R/H	7/8 - 14	116 mm (4.57 in)	9W-9058
D7H, D7	3/4 - 16	113 mm (4.45 in)	2P-9670

## Cutting Edge Bolts/Inch/Coarse Thread



Thread Size (in - TPI)	A Bolt Length	B Head Height	C Head Width	D Grip Length	Part Number
<b>Thread Size (in - TPI) 3/8 - 16</b>					
3/8 - 16	Nut	--	--	--	9S-8752
3/8 - 16	2 in	0.31 in	0.67 in	1.00 in	4F-4048
<b>Thread Size (in - TPI) 1/2 - 13</b>					
1/2 - 13	Nut	—	—	—	1F-7958
1/2 - 13	1 1/2 in	0.44 in	0.89 in	0.63 in	4F-3646
1/2 - 13	1 1/4 in	0.44 in	0.89 in	0.50 in	4F-3647
1/2 - 13	1 3/4 in	0.44 in	0.89 in	0.63 in	4F-3648
1/2 - 13	2 in	0.44 in	0.89 in	0.75 in	4F-3649
1/2 - 13	2 1/4 in	0.44 in	0.89 in	1.00 in	4F-3650
1/2 - 13	2 1/2 in	0.44 in	0.89 in	1.25 in	4F-3651
1/2 - 13	2 3/4 in	0.44 in	0.89 in	1.50 in	4F-3652
1/2 - 13	3 in	0.44 in	0.89 in	1.75 in	4F-3662
1/2 - 13	3 1/2 in	0.45 in	0.89 in	2.25 in	4F-3663
1/2 - 13	5 in	0.44 in	0.89 in	3.75 in	4F-4043
<b>Thread Size (in - TPI) 5/8 - 11</b>					
5/8 - 11	2 1/4 in	0.54 in	1.04 in	1.25 in	3F-5108
5/8 - 11	3 in	0.54 in	1.04 in	1.50 in	4F-3658
5/8 - 11	1 1/2 in	0.54 in	1.04 in	0.63 in	4F-3664

Thread Size (in - TPI)	A Bolt Length	B Head Height	C Head Width	D Grip Length	Part Number
<b>Thread Size (in - TPI) 5/8 - 11 (Continued)</b>					
5/8 - 11	3 1/2 in	0.54 in	1.04 in	2.00 in	4F-3665
5/8 - 11	4 in	0.54 in	1.04 in	2.50 in	4F-3671
5/8 - 11	3 3/4 in	0.54 in	1.04 in	2.25 in	4F-0391
5/8 - 11	1 3/4 in	0.54 in	1.04 in	0.63 in	4F-3653
5/8 - 11	2 in	0.54 in	1.04 in	0.75 in	4F-3654
5/8 - 11	2 1/2 in	0.54 in	1.04 in	1.00 in	4F-3656
5/8 - 11	2 3/4 in	0.54 in	1.04 in	1.25 in	4F-3657
5/8 - 11	Nut	--	--	--	4K-0367
<b>Thread Size (in - TPI) 3/4 - 10</b>					
3/4 - 10	4 1/4 in	0.63 in	1.20 in	2.50 in	1J-0962
3/4 - 10	4 5/8 in	0.63 in	1.20 in	2.88 in	1J-6761
3/4 - 10	3 5/8 in	0.63 in	1.20 in	1.38 in	1J-6762
3/4 - 10	2 in	0.63 in	1.20 in	0.75 in	4F-3672
3/4 - 10	Nut	--	--	--	2J-3506
3/4 - 10	2 1/4 in	0.63 in	1.20 in	1.00 in	4F-7827
3/4 - 10	3 3/4 in	0.63 in	1.20 in	2.00 in	5F-8933
3/4 - 10	2 3/4 in	—	—	1.50 in	5J-4771
3/4 - 10	2 1/2 in	0.63 in	1.20 in	1.19 in	5J-4773

Hardware

(Continued)

## Cutting Edge Bolts/Inch/Coarse Thread (Continued)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 7/8 - 9</b>					
7/8 - 9	4 5/8 in	0.74 in	1.41 in	2.63 in	1J-0849
7/8 - 9	3 1/2 in	0.74 in	1.41 in	1.75 in	2J-2548
7/8 - 9	4 1/4 in	0.74 in	1.41 in	2.50 in	2J-5458
7/8 - 9	3 in	0.74 in	1.41 in	1.25 in	5J-2409
7/8 - 9	2 1/2 in	0.74 in	1.41 in	1.36 in	5J-4772
7/8 - 9	2 3/4 in	0.74 in	1.41 in	1.50 in	6F-0196
7/8 - 9	3 1/4 in	0.74 in	1.41 in	2.44 in	8J-2935
7/8 - 9	Nut	--	--	--	2J-3505
<b>Thread Size (in - TPI) 1 - 8</b>					
1 - 8	4 1/2 in	0.81 in	1.60 in	2.25 in	1J-3527
1 - 8	5 1/4 in	0.81 in	1.60 in	3.00 in	1J-4947
1 - 8	3 3/4 in	0.81 in	1.60 in	1.50 in	1J-4948
1 - 8	4 in	0.81 in	1.60 in	2.95 in	5P-8136
1 - 8	Nut	--	--	--	2J-3507

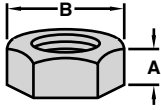
Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
<b>Thread Size (in - TPI) 1 - 8 (Continued)</b>					
1 - 8	2 3/4 in	0.81 in	1.60 in	1.50 in	1J-5607
1 - 8	2 1/2 in	0.81 in	1.60 in	1.31 in	3J-2801
1 - 8	3 in	0.81 in	1.60 in	1.75 in	4F-4042
1 - 8	3 1/4 in	0.81 in	1.60 in	1.91 in	4J-9058
1 - 8	3 1/2 in	0.81 in	1.60 in	2.19 in	4J-9208
1 - 8	3 3/4 in	0.81 in	1.60 in	2.69 in	8J-2928
<b>Thread Size (in - TPI) 1 1/4 - 7</b>					
1 1/4 - 7	4 15/16 in	1.06 in	2.03 in	2.28 in	5P-8361
1 1/4 - 7	4 1/8 in	1.02 in	2.01 in	2.28 in	5P-8823
1 1/4 - 7	Nut	--	--	--	3K-9770
1 1/4 - 7	3 3/4 in	1.06 in	2.03 in	2.28 in	6V-6535
1 1/4 - 7	4 1/2 in	1.06 in	2.03 in	2.28 in	6V-8360
1 1/4 - 7	3 3/8 in	1.06 in	2.03 in	1.65 in	8T-9079

## Maintenance Tips For Cutting Edge Hardware

1. Clean all surfaces of rust, paint, nicks, and burrs.
2. Install bolts first in the center and work out toward the edge.
3. Tighten all bolts to the specified torque (see chart below for specifications).
4. Set bolt heads firmly into the edge countersink using a heavy hammer. Safety glasses MUST be worn when striking bolt heads.
5. Tighten all bolts again to the specified torque.

Thread Size (in - TPI)	(ft lb)	Torque (N-m)	Size
5/8	200 ± 30	270 ± 40	16 mm
3/4	350 ± 45	475 ± 60	19 mm
7/8	550 ± 65	750 ± 90	22 mm
1	825 ± 110	1125 ± 150	25 mm
1 1/4	1350 ± 220	1850 ± 300	31 mm

## Nuts/Hex/ Head/Inch



- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a tensile strength comparable to SAE Grade 8 bolt.
- Hardened nuts marked with 6 lines, dashes, or dots for identification.

## Coarse Thread UNC/Phosphate &amp; Oil Coated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.22 in	7/16 in	9S-8750
5/16 - 18	0.27 in	1/2 in	5S-0003
3/8 - 16	0.33 in	9/16 in	9S-8752
7/16 - 14	0.38 in	11/16 in	3S-1546
1/2 - 13	0.44 in	3/4 in	1F-7958
9/16 - 12	0.48 in	7/8 in	5P-0539
5/8 - 11	0.55 in	15/16 in	4K-0367

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 10	0.64 in	1 1/8 in	2J-3506
7/8 - 9	0.75 in	1 5/16 in	2J-3505
1 - 8	0.86 in	1 1/2 in	2J-3507
1 1/8 - 7	0.97 in	1 11/16 in	4J-5977
1 1/4 - 7	1.06 in	1 7/8 in	3K-9770
1 3/8 - 6	1.17 in	2 1/16 in	9M-3770
1 1/2 - 6	1.28 in	2 1/4 in	9S-8216

## Coarse Thread UNC/Zinc Plated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.22 in	7/16 in	6V-8185
5/16 - 18	0.27 in	1/2 in	6V-8189
3/8 - 16	0.33 in	9/16 in	6V-8801
7/16 - 14	0.37 in	11/16 in	7X-0447
1/2 - 13	0.44 in	3/4 in	6V-8188
5/8 - 11	0.55 in	15/16 in	7X-0448

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1 1/8 - 7	0.61	1 11/16	2H-3787
3/4 - 10	0.64 in	1 1/8 in	6V-8182
7/8 - 9	0.75 in	1 5/16 in	7X-0449
1-8	0.86 in	1 1/2 in	6V-8190
1 1/4 - 7	1.06 in	1 7/8 in	7X-0451
1 1/2 - 6	1.28 in	2 1/4 in	7X-0452

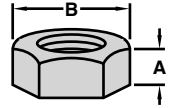
## Fine Thread UNF/Phosphate &amp; Oil Coated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.22 in	7/16 in	9S-8748
5/16 - 24	0.27 in	1/2 in	9S-8751
3/8 - 24	0.33 in	9/16 in	3S-2713
7/16 - 20	0.38 in	11/16 in	9S-8905
1/2 - 20	0.44 in	3/4 in	6B-6684
9/16 - 18	0.48 in	7/8 in	5P-0540
5/8 - 18	0.55 in	15/16 in	6B-6683

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 16	0.64 in	1 1/8 in	6B-6682
7/8 - 14	0.75 in	1 5/16 in	1A-5666
1 - 14	0.86 in	1 1/2 in	1A-1935
1 1/8 - 12	0.97 in	1 11/16 in	3S-1356
1 1/4 - 12	1.06 in	1 7/8 in	7H-7539
1 3/8 - 12	1.17 in	2 in	2M-0400
1 1/2 - 12	1.28 in	2 1/4 in	8H-3390

## Self Locking Nuts/Hex Head/Inch

- Made of fine grain steel.
- Resist loosening under vibration.
- Provides a tensile strength comparable with SAE Grade 8 bolts.
- Resist loosening under vibration.



## Coarse Thread UNC/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.23 in	7/16 in	2D-6235
5/16 - 18	0.27 in	1/2 in	031-4155
3/8 - 16	0.33 in	9/16 in	2K-4973
7/16 - 14	0.38 in	11/16 in	6V-5729
1/2 - 13	0.44 in	3/4 in	1K-6872
9/16 - 12	0.50 in	7/8 in	034-9954

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
5/8 - 11	0.55 in	15/16 in	3K-2889
3/4 - 10	0.64 in	1 1/8 in	1K-6870
7/8 - 9	0.75 in	1 5/16 in	6K-0545
1-8	0.86 in	1 1/2 in	6K-3632
1 1/8 - 7	0.97 in	1 11/16 in	8D-9513
1 1/4 - 7	1.06 in	1 7/8 in	2J-5997

## Fine Thread UNF/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.23 in	7/16 in	2L-9038
5/16 - 24	0.27 in	1/2 in	3D-8752
1/2 - 20	0.44 in	3/4 in	2K-0564
9/16 - 18	0.50 in	7/8 in	054-5448
5/8 - 18	0.55 in	15/16 in	2K-4821

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 16	0.64 in	1 1/8 in	2K-0337
7/8 - 14	0.75 in	1 5/16 in	5D-1986
1 - 14	0.86 in	1 1/2 in	2K-7471
1 1/8 - 12	0.97 in	1 11/16 in	3D-4904
1 1/4 - 12	1.06 in	1 7/8 in	2K-7468
1 1/2 - 12	1.28 in	2 1/4 in	5M-6667

## Self-Locking Nuts/Hex Head/Inch/Plastic Insert



- Resist loosening under vibration.

## Coarse Thread/UNC/Zinc Plated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
$\frac{5}{16}$ - 18	0.34 in	$\frac{1}{2}$ in	3E-9860
$\frac{5}{8}$ - 11	0.75 in	$1\frac{15}{16}$ in	3E-9861
$\frac{3}{4}$ - 10	0.88 in	$1\frac{1}{16}$ in	3E-9862

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
$\frac{1}{4}$ - 20	0.31 in	$\frac{7}{16}$ in	3E-9865
$\frac{3}{8}$ - 16	0.45 in	$\frac{9}{16}$ in	3K-6060
$\frac{1}{2}$ - 13	0.59 in	$\frac{3}{4}$ in	9X-0941
$\frac{7}{8}$ - 9	0.98 in	$1\frac{1}{4}$ in	3E-9863

## Coarse Thread/UNC/Zinc Plated/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
No. 6-32	0.18 in	$\frac{5}{16}$ in	7D-6922
No. 8-32	0.23 in	$1\frac{11}{32}$ in	6D-5801
No. 10-24	0.25 in	$\frac{3}{8}$ in	031-0249
$\frac{1}{4}$ - 20	0.31 in	$\frac{7}{16}$ in	7H-8909

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
$\frac{5}{16}$ - 18	0.34 in	$\frac{1}{2}$ in	2R-0504
$\frac{3}{8}$ - 16	0.37 in	$1\frac{11}{16}$ in	9T-2730
$\frac{1}{2}$ - 13	0.59 in	$\frac{3}{4}$ in	2H-3788
$\frac{5}{8}$ - 11	0.75 in	$1\frac{15}{16}$ in	2H-3789
$\frac{3}{4}$ - 10	0.88 in	$1\frac{1}{16}$ in	2H-3790

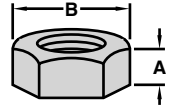
## Fine Thread/UNF/Zinc Plated/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
$\frac{3}{8}$ - 24	0.18 in	$\frac{9}{16}$ in	2F-8616
No. 10-32	0.25 in	$\frac{3}{8}$ in	4L-1250
$\frac{1}{4}$ - 28	0.31 in	$\frac{7}{16}$ in	3F-7674

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
$\frac{5}{16}$ - 24	0.34 in	$\frac{1}{2}$ in	3F-2617
$\frac{7}{16}$ - 20	0.45 in	$1\frac{11}{16}$ in	139-4187
$\frac{1}{2}$ - 20	0.59 in	$\frac{3}{4}$ in	2M-2570

## Hex Jam Nuts/Hex Head/Inch

- Designed with a chamfered and washer-faced surface.
- For use in locking other nuts to prevent loosening.



## Coarse Thread UNC/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.16 in	7/16 in	1B-4427
5/16 - 18	0.19 in	1/2 in	5B-3180
3/8 - 16	0.22 in	9/16 in	1B-2578
7/16 - 14	0.25 in	1 1/16 in	1L-9048
9/16 - 12	0.31 in	7/8 in	8S-5151

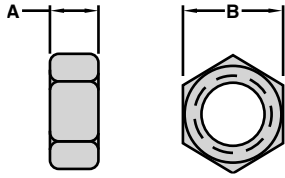
Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/2 - 13	0.31 in	3/4 in	3H-3680
5/8 - 11	0.38 in	15/16 in	1D-5118
3/4 - 10	0.42 in	1 1/8 in	1D-5119
7/8 - 9	0.48 in	1 5/16 in	5P-0541
1 - 8	0.55 in	1 1/2 in	1D-6306

## Fine Thread UNF/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.16 in	7/16 in	9M-1311
5/16 - 24	0.19 in	1/2 in	4F-2294
3/8 - 24	0.22 in	9/16 in	2A-5351

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
7/16 - 20	0.25 in	1 1/16 in	5B-3254
3/4 - 16	0.42 in	1 1/8 in	1D-5120
7/8 - 14	0.48 in	1 5/16 in	1D-5121
1 - 14	0.55 in	1 1/2 in	2H-3786

## Nuts/Hex Head/Metric



- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a proof load comparable to 10.9 metric bolt.

## Coarse Thread UNC/Phosphate &amp; Oil Coated/Hardened

Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M6 × 1.00	5.20 mm	10 mm	6V-8225
M8 × 1.25	6.80 mm	13 mm	5P-7970
M10 × 1.50	8.40 mm	16 mm	2Y-5829
M12 × 1.75	10.80 mm	18 mm	6V-8149

Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M16 × 2.00	14.80 mm	24 mm	8T-1757
M20 × 2.50	18.00 mm	30 mm	6V-7742
M24 × 3.00	21.50 mm	36 mm	7X-0851
M30 × 3.50	25.60 mm	46 mm	8T-1583
M36 × 4.00	31.00 mm	55 mm	8C-4032

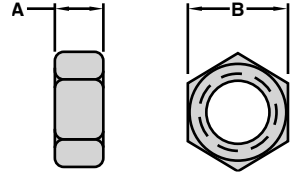
## Coarse Thread UNC/Zinc Plated/Hardened

Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M6 × 1.00	5.20 mm	10 mm	5C-2890
M8 × 1.25	6.80 mm	13 mm	5C-7261
M10 × 1.50	8.40 mm	16 mm	8T-4133
M12 × 1.75	10.80 mm	18 mm	8T-4244
M16 × 2.00	14.80 mm	24 mm	8T-4132

Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M20 × 2.50	18.00 mm	30 mm	8T-4131
M24 × 3.00	21.50 mm	36 mm	8T-4001
M30 × 3.50	25.60 mm	46 mm	8C-8722
M3 × 0.50	2.40 mm	5.5 mm	3C-6969
M36 × 4.00	31.00 mm	55 mm	8T-4955

**Self-Locking Nuts/Hex Head/Metric**

- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a proof load comparable to 10.9 metric bolt.
- Resists loosening under vibration.



**Coarse Thread UNC/Hardened**

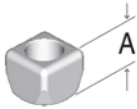
Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M6 × 1.00	5.90 mm	10 mm	6V-7743
M8 × 1.25	7.10 mm	13 mm	6V-9189
M10 × 1.50	9.00 mm	16 mm	6V-7744
M12 × 1.75	11.60 mm	18 mm	6V-7687

Thread Size (dia × pitch)	A	B	Part Number
	Nut Height	Nut Width	
M16 × 2.00	15.20 mm	24 mm	8T-4778
M20 × 2.50	22.15 mm	30 mm	6V-7688
M24 × 3.00	26.35 mm	36 mm	6V-7676
M30 × 3.50	30.00 mm	46 mm	8T-5065



## Track Nuts

Inch

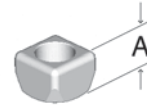


Model	Thread Size (in - TPI)	A	
		Nut Height	Part Number
307, E70, E70B	½ - 20	12.9 mm (0.51 in)	102-8073
307, PM465	½ - 20	16 mm (0.63 in)	117-8885
D5N, D5M, D5G, D5C, D4, D5, D6, 561, 939, 941, 943, 951, 953, 955, 977, 205, 211, 213, 215, 215SA, 219, 225, 215SA, 219, 225, PR750, PR1000, SF500, TR500	⅝ - 18	18.2 mm (0.72 in)	1M-1408
D6N, D6M, D5H, D6R/H, D7H, 517, 527, D6, D7, D8, 955, 936, 973, 977, 571, 572, 583, 215SA, 219, 225, 225SA, FB227, 229, 231, 235	¾ - 16	18.2 mm (0.72 in)	1S-1860
D9, 594, 245	1 - 14	25.4 mm (1 in)	1S-6421
D7R/H D8, 983, 583	⅞ - 14	23.6 mm (0.93 in)	2S-2140
245 <sup>1</sup>	1 - 14	25.4 mm (1 in)	2V-0250
D3, 931	½ - 20	15.2 mm (0.60 in)	6S-3419
D4, 941	⅞ - 18	15.4 mm (0.61 in)	7H-3606
D3, D3B, D3C, D4C, D4B, D4, D3G, D4G, 215, 931, 933, 935, 941, PR450, PM 565, AP650B, AP1050, BG225C, BG245C, SF350, TR225B	⅞ - 18	18.2 mm (0.72 in)	7K-2017
973, 235	⅞ - 14	23.8 mm (0.94 in)	7T-9825
D4	½ - 20	14.2 mm (0.56 in)	8H-5724

<sup>1</sup> Use with 8K links

(Continued)

## Metric



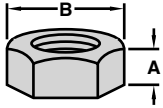
Model	Thread Size (dia × pitch)	A	Part Number
		Nut Height	
308, 307B	M14 × 1.50	14 mm	136-2404
E140	M16 × 1.50	22 mm	093-0319
E180, EL180	M18 × 1.50	22 mm	093-0320
E240, EL240, E300B, E300, EL300, EL300B	M20 × 1.50	27 mm	093-0321
E650	M24 × 1.50	29 mm	093-0323
E450	M22 × 1.50	29 mm	096-0586
365B	M27 × 2.00	27 mm	144-0806
345B	M24 × 1.50	24 mm	150-4742
385B, 5090B	M30 × 2.00	38.5 mm	174-0222
311, 312, 313, 314, E110, E110B, E120B, E120	M16 × 1.50	16 mm	5I-6125
375, 5080	M27 × 2.00	38.5 mm	6Y-7433
315, 317, 318, 319, 320, 321, 322, 325, 320S, E200B, EL200B, E240B, EL240B, E240C, EL240C	M20 × 1.50	21 mm	9W-3361
330, 345, 350, D6R SystemOne™	M22 × 1.50	22 mm	9W-4381

## Inch



Model	Thread Size (in - TPI)	A	Part Number
		Nut Height	
D8T/R/N, D8L, 583R, 578	$\frac{7}{8}$ - 14	35 mm (1.38 in)	7G-6442
D9T/R/N	1 - 14	39.8 mm (1.57 in)	7G-0434
D10, D10T/R/N, 5110B	1 $\frac{3}{8}$ - 12	43.6 mm (1.72 in)	5P-8221
D11R/N, 5130	1 $\frac{3}{8}$ - 12	45.9 mm (1.81 in)	3T-6292

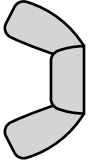
## Cutting Edge Nuts



Thread Size (in - TPI)	A	B	Part Number
	Height	Width	
$\frac{1}{2}$ - 20	0.44 in	$\frac{3}{4}$ in	6B-6684
$\frac{5}{8}$ - 11	0.55 in	$1\frac{5}{16}$ in	1D-4720
$\frac{5}{8}$ - 11	0.55 in	$1\frac{5}{16}$ in	4K-0367
$\frac{3}{4}$ - 10	0.64 in	$1\frac{1}{8}$ in	2J-3506
$\frac{3}{4}$ - 16	0.64 in	$1\frac{1}{8}$ in	6B-6682
$\frac{7}{8}$ - 9	0.75 in	$1\frac{5}{16}$ in	2J-3505
1 - 8	0.86 in	$1\frac{1}{2}$ in	2J-3507
$1\frac{1}{4}$ - 7	1.06 in	$1\frac{7}{8}$ in	3K-9770

**Wing Nuts/Inch/Coarse Thread UNC/Zinc Plated**

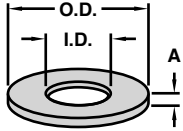
- Install and remove by hand.



Thread Size (in - TPI)	Part Number
10 - 32	033-3658
1/4 - 20	1F-1739
3/8 - 16	2B-9498
5/16 - 18	3B-0723
10 - 24	6F-6898
3/8 - 24	7B-8839

# Washers

## Washers/Flat/Inch



- Compatible with SAE Grade 5/Grade 8 and above bolts.

### Phosphate and Oil Coated/Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
¼ in	0.28 in	0.56 in	0.08 in	5P-0537
⅝ in	0.34 in	0.62 in	0.08 in	9M-1974
⅜ in	0.39 in	0.72 in	0.09 in	5M-2894
7/16 in	0.50 in	0.88 in	0.09 in	5P-8244
½ in	0.53 in	1.00 in	0.12 in	5P-8245
⅝ in	0.62 in	1.14 in	0.12 in	5P-8246

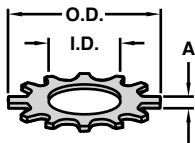
Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
⅝ in	0.67 in	1.26 in	0.14 in	5P-8247
¾ in	0.79 in	1.44 in	0.14 in	5P-8248
7/8 in	0.94 in	1.62 in	0.16 in	5P-8249
1 in	1.09 in	1.94 in	0.20 in	5P-8250
1 ⅛ in	1.19 in	2.06 in	0.25 in	3S-1349
1 ¼ in	1.31 in	2.12 in	0.25 in	4K-0684
1 ½ in	1.59 in	2.62 in	0.25 in	3S-6162

### Zinc Plated/Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
¼ in	0.28 in	0.56 in	0.08 in	8T-4205
⅝ in	0.34 in	0.62 in	0.08 in	8T-4224
⅜ in	0.41 in	0.72 in	0.09 in	8T-4896
7/16 in	0.47 in	0.88 in	0.09 in	8T-5360
½ in	0.53 in	1.00 in	0.12 in	8T-4223
⅝ in	0.66 in	1.25 in	0.14 in	8T-4122

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
¾ in	0.78 in	1.44 in	0.14 in	8T-4994
7/8 in	0.94 in	1.62 in	0.16 in	8C-6913
1 in	1.09 in	1.94 in	0.20 in	8T-5361
1 ⅛ in	1.22 in	2.06 in	0.25 in	7X-0531
1 ¼ in	1.34 in	2.19 in	0.25 in	7X-0533
1 ½ in	1.59 in	2.64 in	0.25 in	7X-0537

### Lock Washers/External Tooth/Inch



- Provides "spring" action to keep assembly under tension.
- Resists corrosion due to zinc plated finish.

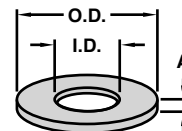
### Zinc Plated/Non-Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
No. 6	0.15 in	0.31 in	0.02 in	5H-6555
No. 8	0.17 in	0.38 in	0.02 in	1H-4393
No. 10	0.20 in	0.40 in	0.02 in	9F-8125
¼ in	0.26 in	0.50 in	0.03 in	1H-3338

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
⅝ in	0.33 in	0.59 in	0.03 in	7H-3937
⅜ in	0.39 in	0.69 in	0.04 in	4D-1326
7/16 in	0.46 in	0.75 in	0.04 in	7F-6998
½ in	0.52 in	0.89 in	0.04 in	3J-4818

**Washers/Flat/Metric**

- Compatible with ISO property class 8.8, 10.9, 11.9, 12.9.

**Phosphate and Oil Coated/Hardened**

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M12	13.50 mm	25.50 mm	3.00 mm	5P-8245
M14	15.50 mm	29.00 mm	3.00 mm	5P-8246
M10	11.00 mm	21.00 mm	2.50 mm	6V-5839
M24	26.00 mm	44.00 mm	4.00 mm	6V-8237

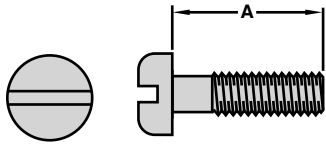
Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M20	22.00 mm	35.00 mm	3.50 mm	8T-3282
M8	8.80 mm	16.00 mm	2.00 mm	9M-1974
M6	6.60 mm	12.00 mm	2.00 mm	9X-8267
M16	17.50 mm	30.00 mm	3.50 mm	9X-8268
M30	33.00 mm	56.00 mm	6.00 mm	9X-8399

**Zinc Plated/Hardened**

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M10	11.00 mm	21.00 mm	2.50 mm	8T-4121
M20	22.00 mm	35.00 mm	3.50 mm	8T-4123
M24	26.00 mm	44.00 mm	4.00 mm	8T-4167
M12	13.50 mm	25.50 mm	3.00 mm	8T-4223

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M8	8.80 mm	16.00 mm	2.00 mm	8T-4224
M6	6.60 mm	12.00 mm	2.00 mm	9X-8256
M16	17.50 mm	30.00 mm	3.50 mm	9X-8257
M30	33.00 mm	56.00 mm	6.00 mm	9X-8258

**Pan Head/Machine Screws/Inch**

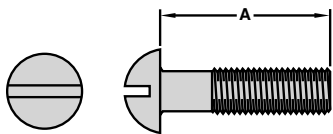


- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
¼ - 20	⅝ in	3K-6881
¼ - 20	¾ in	2Y-1020
¼ - 20	⅞ in	030-9614
¼ - 20	1 in	7H-1246
No. 10 - 24	¾ in	2N-3480
No. 10 - 24	1 ½ in	2N-7456
No. 10 - 24	½ in	2N-3479
No. 10 - 24	⅞ in	2N-3478
No. 10 - 24	1 ¼ in	2N-3162

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 6 - 32	1 ¼ in	2N-3477
No. 6 - 32	½ in	2N-3475
No. 6 - 32	⅜ in	2N-3474
No. 6 - 32	1 in	030-8838
No. 6 - 32	¾ in	2N-3476
No. 6 - 32	1 ½ in	033-4815
No. 8 - 32	¾ in	7S-4338
No. 8 - 32	1 ¼ in	6V-7697
No. 8 - 32	2 in	5S-9105
No. 8 - 32	1 ½ in	7S-1198

**Round Head/Machine Screws/Inch**

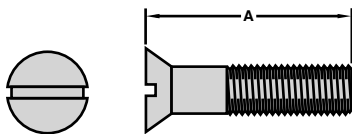


- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 6 - 32	1 ½ in	010-0746
No. 6 - 32	1 ¼ in	010-0744
No. 6 - 32	¼ in	4B-1218
No. 6 - 32	½ in	4B-9762
No. 6 - 32	⅞ in	5S-7348
No. 8 - 32	1 in	3K-8106
No. 8 - 32	⅞ in	4B-1220
No. 8 - 32	½ in	4B-1221

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 8 - 32	¾ in	5M-6668
No. 8 - 32	¼ in	9B-7242
No. 10 - 24	1 ½ in	011-0508
No. 10 - 24	2 in	032-8924
No. 10 - 24	¼ in	4B-1226
No. 10 - 24	⅜ in	4B-1227
No. 10 - 24	½ in	4B-1229
No. 10 - 24	¾ in	4B-1232
No. 10 - 24	1 ¼ in	4B-1234

**Flat Head/Machine Screws/Inch/Coarse Thread**



- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
½ - 13	1 in	Int Hex	107-2783
⅝ - 18	1 ¾ in	Int Hex	034-3101
½ - 13	1 in	Int Hex	4K-1493

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
¾ - 10	2 in	Int Hex	061-6666
⅝ - 18	1 ¼ in	Slotted	1H-8293
⅝ - 18	1 ½ in	Slotted	1H-8658

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
⅝ - 18	½ in	Slotted	4B-1286
⅝ - 18	1 ¾ in	Slotted	5P-0399
⅜ - 16	¾ in	Slotted	1H-8296

(Continued)

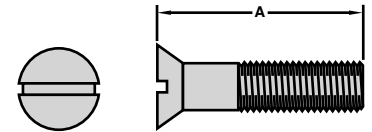
## Flat Head/Machine Screws/Inch/Coarse Thread (Continued)

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
3/8 - 16	1 in	Slotted	4B-1291
3/8 - 16	1 1/2 in	Slotted	8F-6987
3/8 - 16	1 3/4 in	Slotted	8H-9579
No. 8 - 32	3/4 in	Slotted	4B-1270
1/4 - 20	1 1/2 in	Slotted	1H-8294
1/4 - 20	1 3/4 in	Slotted	1H-8298
1/4 - 20	3/8 in	Slotted	2M-5139
1/4 - 20	1 in	Slotted	4B-1284
1/4 - 20	1 1/4 in	Slotted	4B-1285
No. 10 - 24	3/8 in	Slotted	4B-1293
No. 10 - 24	1/2 in	Slotted	4B-1273
No. 10 - 24	1 in	Slotted	1H-8456
No. 10 - 24	3/4 in	Slotted	2H-6120
No. 10 - 24	5/8 in	Int Hex	4B-1274
No. 10 - 24	1 3/4 in	Slotted	5P-5582

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
No. 10 - 24	1 1/4 in	Slotted	5P-5583
No. 6 - 32	3/4 in	Slotted	2D-6327
No. 6 - 32	3/8 in	Slotted	5D-0853
No. 6 - 32	1/2 in	Phillips	7K-3435
No. 10 - 24	1/2 in	Int Hex	8T-7922
No. 6 - 32	3/8 in	Int Hex	6V-7178
1/4 - 20	1/2 in	Slotted	4M-0190
1/4 - 20	5/8 in	Slotted	4B-1281
No. 8 - 32	1/2 in	Phillips	8T-3427
1/4 - 20	5/8 in	Int Hex	9M-2750
1/4 - 20	5/8 in	Int Hex	033-0695
1/4 - 20	3/4 in	Int Hex	6D-5799
1/4 - 20	1 in	Int Hex	8M-6802
1/4 - 20	1 in	Int Hex	7D-6921
1/4 - 20	3 3/4 in	Int Hex	107-5011

Thread Size (in - TPI)	A		Part Number
	Screw Length	Drive Type	
5/16 - 18	5/8 in	Int Hex	034-3223
5/16 - 18	3/4 in	Int Hex	077-2907
5/16 - 18	7/8 in	Torx	119-0036
5/16 - 18	2 1/4 in	Slotted	6N-0768
5/16 - 18	4 in	Int Hex	107-5012
3/8 - 16	3/4 in	Int Hex	108-4311
3/8 - 16	1 in	Int Hex	030-9621
3/8 - 16	1 in	Int Hex	030-7571
3/8 - 16	2 in	Int Hex	032-0682
1/2 - 13	1 1/2 in	Int Hex	107-2784
1/2 - 13	1 3/4 in	Int Hex	2J-0996
5/8 - 18	1 1/2 in	Int Hex	8T-4110
3/4 - 10	1 3/4 in	Int Hex	105-3517
3/4 - 10	2 3/4 in	Int Hex	053-1426

## Flat Head/Machine Screws/Metric/Coarse Thread



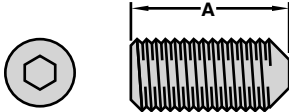
Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M10 x 1.50	20 mm	Int Hex	127-2909
M10 x 1.50	25 mm	Int Hex	6V-7726
M10 x 1.50	25 mm	Int Hex	157-0949
M10 x 1.50	30 mm	Int Hex	3E-4310
M10 x 1.50	40 mm	Int Hex	191-9739
M12 x 1.75	35 mm	Int Hex	123-0354
M12 x 1.75	40 mm	Int Hex	145-1893
M12 x 1.75	45 mm	Int Hex	160-0018
M12 x 1.75	80 mm	Int Hex	172-4014
M12 x 1.75	60 mm	Int Hex	173-8341
M16 x 2.00	60 mm	Int Hex	159-8839
M16 x 2.00	55 mm	Int Hex	246-4349
M16 x 2.00	70 mm	Int Hex	144-2531
M16 x 2.00	50 mm	Int Hex	159-2953
M16 x 2.00	80 mm	Int Hex	135-3241
M16 x 2.00	30 mm	Int Hex	8C-6789
M2.5 x 0.45	10 mm	Phillips	6V-9668
M20 x 2.50	120 mm	Int Hex	144-3087
M20 x 2.50	110 mm	Int Hex	144-2687
M20 x 2.50	100 mm	Int Hex	144-2715

Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M20 x 2.50	75 mm	Int Hex	145-4075
M20 x 2.50	70 mm	Int Hex	169-6065
M20 x 2.50	80 mm	Int Hex	170-3524
M20 x 2.50	90 mm	Int Hex	144-2698
M20 x 2.50	150 mm	Int Hex	174-6943
M20 x 2.50	160 mm	Int Hex	175-0335
M24 x 3.00	120 mm	Int Hex	144-6589
M24 x 3.00	90 mm	Int Hex	170-4740
M24 x 3.00	160 mm	Int Hex	144-5966
M24 x 3.00	140 mm	Int Hex	144-7425
M3 x 0.50	12 mm	Slotted	081-6373
M4 x 0.70	20 mm	Phillips	167-4063
M4 x 0.70	20 mm	Slotted	8T-7585
M4 x 0.70	10 mm	Int Hex	3E-4302
M4 x 0.70	10 mm	Phillips	8T-0309
M5 x 0.80	40 mm	Phillips	8C-6429
M5 x 0.80	35 mm	Slotted	8T-0386
M5 x 0.80	25 mm	Int Hex	8T-1573
M5 x 0.80	30 mm	Phillips	8C-6428
M5 x 0.80	12 mm	Int Hex	205-2941

Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M6 x 1.00	40 mm	Phillips	7X-0847
M6 x 1.00	20 mm	Int Hex	9X-6155
M6 x 1.00	16 mm	Torx	127-1960
M6 x 1.00	16 mm	Int Hex	5C-7423
M6 x 1.00	20 mm	Phillips	8C-8454
M6 x 1.00	30 mm	Int Hex	205-5149
M6 x 1.00	25 mm	Int Hex	119-5025
M6 x 1.00	25 mm	Int Hex	260-6695
M6 x 1.00	30 mm	Phillips	8C-6430
M6 x 1.00	30 mm	Int Hex	8C-6802
M8 x 1.00	40 mm	Phillips	8C-6431
M8 x 1.25	14 mm	Slotted	6V-8973
M8 x 1.25	16 mm	Int Hex	171-9455
M8 x 1.25	20 mm	Int Hex	8C-7562
M8 x 1.25	20 mm	Int Hex	8C-7505
M8 x 1.25	25 mm	Int Hex	131-6454
M8 x 1.25	30 mm	Int Hex	131-3539
M8 x 1.25	80 mm	Slotted	133-8831
M8 x 1.25	30 mm	Phillips	117-6952
M8 x 1.25	60 mm	Int Hex	114-3350



## Cup Point/Set Screws/Inch/Coarse Thread UNC



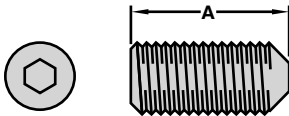
- Heat treated with a black oxide finish.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 10 - 24	¼ in	5B-9324
No. 10 - 24	⅜ in	8C-8430
No. 10 - 24	½ in	4B-3627
¼ - 20	⅜ in	010-2570
¼ - 20	¾ in	010-2573
¼ - 20	⅝ in	1K-6979
¼ - 20	¼ in	4B-9806
¼ - 20	½ in	4B-9808
⅝ <sub>16</sub> - 18	¼ in	010-2580
⅝ <sub>16</sub> - 18	¾ in	5P-2556
⅝ <sub>16</sub> - 18	⅜ in	8B-7179

Thread Size (in - TPI)	A	
	Screw Length	Part Number
⅜ - 16	¼ in	010-2591
⅜ - 16	⅝ in	2F-5325
⅜ - 16	¾ in	2F-5326
⅜ - 16	½ in	3B-8601
⅜ - 16	¾ in	3H-8430
⅜ - 16	1 in	010-2597
½ - 13	½ in	010-2615
½ - 13	⅝ in	010-2616
½ - 13	1 in	2H-3906
½ - 13	¾ in	4B-1771
8 - 32	¼ in	9L-9596

Thread Size (in - TPI)	A	
	Screw Length	Part Number
¼ - 20	⅝ <sub>16</sub> in	010-2571
¼ - 20	½ in	173-5787
¼ - 20	1 in	8C-3996
⅝ <sub>16</sub> - 18	¾ in	1T-0241
⅝ <sub>16</sub> - 18	27/32 in	144-0691
⅝ <sub>16</sub> - 18	1 ⅜ in	4D-5253
⅝ <sub>16</sub> - 18	1 ½ in	5N-2882
⅝ <sub>16</sub> - 18	1 ½ in	1N-3887
⅜ - 16	1 ⅝ in	4L-4155
½ - 13	½ in	031-8610
¼ - 20	¼ in	8T-3601
½ - 13	½ in	8J-5912

## Cup Point/Set Screws/Metric/Coarse Thread UNC



- Heat treated with a black oxide finish.

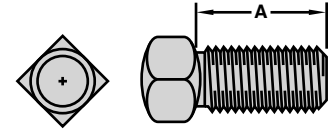
Thread Size (in - TPI)	A	
	Screw Length	Part Number
M4 × 0.70	20 mm	7X-7889
M5 × 0.80	20 mm	106-5472
M5 × 0.80	25 mm	8T-5434
M5 × 0.80	30 mm	8T-6702
M6 × 1.00	6 mm	095-1260
M6 × 1.00	8 mm	9X-6608
M5 × 0.70	12 mm	9Y-9846
M6 × 1.00	8 mm	6V-9327
M6 × 1.00	10 mm	6V-8932
M6 × 1.00	12 mm	8C-7531
M6 × 1.00	16 mm	095-1274
M6 × 1.00	16 mm	8T-0723
M6 × 1.00	30 mm	099-5742
M6 × 1.00	40 mm	087-4759
M6 × 1.00	60 mm	109-5550
M8 × 1.25	16 mm	8T-0351

Thread Size (in - TPI)	A	
	Screw Length	Part Number
M8 × 1.25	20 mm	8T-2997
M8 × 1.25	30 mm	123-0368
M8 × 1.25	31.3 mm	6E-5583
M8 × 1.25	45 mm	9X-8914
M10 × 1.50	12 mm	095-1267
M10 × 1.50	16 mm	9X-6611
M10 × 1.50	21 mm	087-4710
M10 × 1.50	30 mm	096-2966
M10 × 1.50	44.3 mm	260-7524
M10 × 1.50	120 mm	274-9987
M12 × 1.75	10 mm	8T-9533
M12 × 1.75	12 mm	096-3216
M12 × 1.75	20 mm	095-1277
M12 × 1.75	30 mm	095-1270
M12 × 1.75	50 mm	9X-2403
M12 × 1.25	50 mm	9T-6779

Thread Size (in - TPI)	A	
	Screw Length	Part Number
M12 × 1.75	70 mm	9X-8482
M12 × 1.75	80 mm	9X-8483
M12 × 1.75	90 mm	125-1379
M12 × 1.75	110 mm	195-3834
M14 × 2.00	14 mm	096-6210
M16 × 2.00	22 mm	7Y-0466
M16 × 2.00	30 mm	095-1271
M16 × 2.00	130 mm	136-8416
M20 × 2.50	25 mm	099-8112
M20 × 2.50	45 mm	225-4607
M20 × 2.50	50 mm	096-5400
M20 × 2.50	60 mm	8T-5064
M20 × 2.50	80 mm	129-2220
M20 × 2.50	100 mm	8T-8555
M24 × 3.00	25 mm	157-2235
M27 × 2.00	27 mm	7Y-8436
M6 × 1.00	25 mm	178-7877

**Square Head/Set Screws/Inch/Coarse Thread UNC**

- Made of case-hardened steel with a full square head.



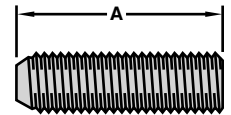
Thread Size (in - TPI)	A	
	Screw Length	Part Number
1 - 8	3 1/4 in	292-5889
3/8 - 16	1 3/4 in	2H-3881
1 - 8	2 3/4 in	2K-3229
1/4 - 20	3/8 in	4B-3565
1/4 - 20	1/2 in	4B-3566
1/4 - 20	1 in	4B-3569
5/16 - 18	1/2 in	4B-3570
5/16 - 18	5/8 in	4B-3571
3/8 - 16	1/2 in	4B-3572
3/8 - 16	5/8 in	4B-3573
3/8 - 16	3/4 in	4B-3574
3/8 - 16	1 in	4B-3575

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 1/4 in	4B-3576
3/8 - 16	1 1/2 in	4B-3577
1/2 - 13	3/4 in	4B-3580
1/2 - 13	7/8 in	4B-3581
1/2 - 13	1 1/4 in	4B-3583
1/2 - 13	1 1/2 in	4B-3584
1/2 - 13	1 3/4 in	4B-3585
1/2 - 13	2 in	4B-3586
5/8 - 11	1 1/2 in	4B-3594
5/8 - 11	1 3/4 in	4B-3595
5/8 - 11	2 in	4B-3596
5/8 - 11	3 in	4B-3599

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/4 - 10	1 1/2 in	4B-3601
3/4 - 10	1 3/4 in	4B-3602
3/4 - 10	2 in	4B-3603
3/4 - 10	2 1/2 in	4B-3604
3/4 - 10	2 27/32 in	4B-3605
5/8 - 11	2 in	4B-3619
1/2 - 13	5 in	4B-3626
3/8 - 16	7/8 in	4B-4994
1 - 8	3 1/4 in	4D-8318
1 - 14	3 7/8 in	4L-6665
1 1/2 - 12	7 1/2 in	6V-5137
3/4 - 10	4 1/2 in	8T-4162

**Taper Lock/Studs/Inch/Coarse Thread UNC**

- Heat treated with a direct-hardening process.
- Hardened to Rockwell C33-39
- Designed with a taper point for a plug tap.
- Meet SAE grade 8 strength requirements.



Thread Size (in - TPI)	A	
	Screw Length	Part Number
1 - 8	3 15/16 in	229-4975
1 - 8	3 15/16 in	139-4775
1 - 8	3 15/16 in	5D-3118
1 - 8	4 15/16 in	6D-0419
1 - 8	4 3/16 in	9M-5854
1 - 8	4 7/16 in	9M-3948
1 - 8	5 1/8 in	5D-0600
1 1/2 - 16	2 5/16 in	2W-8225
1 1/2 - 16	39 5/8 in	2P-4304
1/2 - 13	1 3/4 in	2D-8153
1/2 - 13	1 9/16 in	8M-8778
1/2 - 13	2 13/16 in	3D-0472
1/2 - 13	2 3/16 in	5M-1932
1/2 - 13	2 3/8 in	2D-8154
1/2 - 13	2 9/16 in	4J-6925
1/2 - 13	2 in	3D-0490
1/2 - 13	3 1/8 in	2D-8426
1/2 - 13	3 13/16 in	3D-0473

Thread Size (in - TPI)	A	
	Screw Length	Part Number
1/2 - 13	3 3/8 in	9H-1288
1/2 - 13	3 9/16 in	2D-8155
1/2 - 13	3 in	3D-6627
1/2 - 13	4 1/2 in	5P-7071
3/4 - 10	2 15/16 in	4D-6578
3/4 - 10	2 3/4 in	2D-8369
3/4 - 10	2 9/16 in	4D-6579
3/4 - 10	3 1/8 in	4D-7246
3/4 - 10	3 13/16 in	6D-1915
3/4 - 10	3 3/8 in	7D-3504
3/4 - 10	3 9/16 in	5J-6796
3/4 - 10	4 3/16 in	2P-1303
3/8 - 16	1 11/16 in	2N-9288
3/8 - 16	1 3/4 in	2M-4779
3/8 - 16	1 3/4 in	6L-8562
3/8 - 16	1 3/8 in	9M-2151
3/8 - 16	1 31/32 in	1J-8668
3/8 - 16	1 9/16 in	5P-2603

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 9/16 in	2M-1538
3/8 - 16	2 13/16 in	7S-6719
3/8 - 16	2 15/16 in	9M-3296
3/8 - 16	2 3/16 in	4M-2743
3/8 - 16	2 3/16 in	6V-1525
3/8 - 16	2 3/4 in	6V-1426
3/8 - 16	2 3/8 in	8M-1871
3/8 - 16	2 3/8 in	106-1793
3/8 - 16	2 5/32 in	313-9550
3/8 - 16	2 5/8 in	3M-0496
3/8 - 16	2 5/8 in	9L-1658
3/8 - 16	2 in	7L-0520
3/8 - 16	3 1/16 in	9L-1657
3/8 - 16	3 1/8 in	2M-8411
3/8 - 16	3 11/32 in	9X-2840
3/8 - 16	3 15/16 in	106-1792
3/8 - 16	3 3/16 in	4S-6137
3/8 - 16	3 35/64 in	6V-1427

Hardware

(Continued)

# Screws

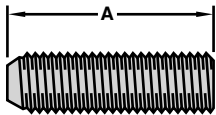
## Taper Lock/Studs/Inch/Coarse Thread UNC (Continued)

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	3 3/16 in	2M-2488
3/8 - 16	4 1/2 in	101-8917
3/8 - 16	4 3/16 in	2P-1974
3/8 - 16	4 in	6L-4428
5/8 - 11	2 15/16 in	6L-7655
5/8 - 11	2 3/16 in	3D-4639

Thread Size (in - TPI)	A	
	Screw Length	Part Number
5/8 - 11	2 3/4 in	4D-4823
5/8 - 11	2 5/8 in	2D-8822
5/8 - 11	2 9/16 in	2D-5238
5/8 - 11	3 3/16 in	3J-8154
5/8 - 11	3 3/8 in	3D-8439
5/8 - 11	3 9/16 in	3D-5963

Thread Size (in - TPI)	A	
	Screw Length	Part Number
5/8 - 11	4 3/16 in	5D-4809
5/8 - 11	4 in	5P-3887
7/8 - 9	3 1/8 in	7D-2838
7/8 - 9	3 3/4 in	139-4774
7/8 - 9	3 9/16 in	4D-6589
7/8 - 9	4 3/16 in	4D-7259
7/8 - 9	4 7/16 in	5P-2098

## Taper Lock/Studs/Metric/Coarse Thread UNC



- Heat treated with a direct-hardening process.
- Hardened to Rockwell C33-39
- Designed with a taper point for a plug tap.
- Meet SAE grade 8 strength requirements.

Thread Size (dia × pitch)	A	
	Screw Length	Part Number
M10 × 1.50	100 mm	335-2395
M10 × 1.50	100 mm	309-1905
M10 × 1.50	100 mm	274-6085
M10 × 1.50	35 mm	8T-7004
M10 × 1.50	35 mm	250-0485
M10 × 1.50	40 mm	8T-7044
M10 × 1.50	45 mm	133-7810
M10 × 1.50	45 mm	186-0870
M10 × 1.50	45 mm	351-9434
M10 × 1.50	45 mm	9X-8281
M10 × 1.50	50 mm	264-0168
M10 × 1.50	50 mm	245-9750
M10 × 1.50	50 mm	281-2592
M10 × 1.50	55 mm	309-1906
M10 × 1.50	60 mm	288-4402
M10 × 1.50	65 mm	109-3001

Thread Size (dia × pitch)	A	
	Screw Length	Part Number
M10 × 1.50	70 mm	231-0336
M10 × 1.50	75 mm	224-5445
M10 × 1.50	80 mm	259-7140
M10 × 1.50	85 mm	116-3715
M10 × 1.50	85 mm	288-4403
M10 × 1.50	95 mm	268-4779
M12 × 1.75	45 mm	141-9481
M12 × 1.75	50 mm	8T-5414
M12 × 1.75	55 mm	3E-4319
M12 × 1.75	55 mm	124-8101
M12 × 1.75	65 mm	246-5451
M12 × 1.75	70 mm	310-1945
M12 × 1.75	80 mm	272-1882
M16 × 2.0	130 mm	8C-6709
M16 × 2.00	120 mm	342-9452
M16 × 2.00	70 mm	8C-0623

Thread Size (dia × pitch)	A	
	Screw Length	Part Number
M16 × 2.00	85 mm	296-5175
M16 × 2.00	85 mm	151-6286
M16 × 2.00	90 mm	341-3770
M20 × 2.50	75 mm	116-3719
M20 × 2.50	85 mm	286-2631
M20 × 2.50	85 mm	160-0011
M24 × 3.00	105 mm	116-3720
M24 × 3.00	140 mm	292-4252
M36 × 4.00	135 mm	151-6288
M8 × 1.25	30 mm	329-8793
M8 × 1.25	40 mm	191-6301
M8 × 1.25	45 mm	232-5849
M8 × 1.25	50 mm	295-4142
M8 × 1.25	55 mm	328-0826
M8 × 1.25	65 mm	9X-8496
M8 × 1.25	95 mm	192-7207

## Standard/Studs/Inch/Coarse Thread UNC

Thread Size (in - TPI)	Screw Length	Part Number
1/4 - 20	1 3/4 in	037-6874
1/4 - 28	1 3/8 in	4V-0151
1/4 - 28	1 7/16 in	8Y-2952
1/4 - 28	2 1/4 in	8L-9315
5/16 - 24	1 3/8 in	3N-7824
5/16 - 24	1 3/4 in	3N-2775
5/16 - 24	2 3/8 in	6B-0607
5/16 - 24	3 in	061-7284
6/16 - 16	1 in	133-5261
6/16 - 16	1 3/4 in	5P-9263
6/16 - 24	1 3/4 in	4K-2877
6/16 - 16	2 in	9L-4023
6/16 - 24	2 in	031-2666
6/16 - 24	2 1/2 in	4D-9589
6/16 - 24	3 1/4 in	9W-9687
6/16 - 16	3 3/8 in	5F-6849
1/2 - 20	2 3/8 in	4D-7235
1/2 - 13	4 in	193-1450
1/2 - 13	4 1/64 in	3D-0471
1/2 - 13	5 in	262-4377
5/8 - 11	3 5/8 in	7U-5270
5/8 - 18	8 1/2 in	8B-7552
5/8 - 18	8 7/8 in	6W-8509
5/8 - 18	12 in	8K-8466
No. 1 - 14	13 1/2 in	344-4705
No. 1 - 14	14 in	6V-2078
No. 1 - 14	14 15/16 in	252-9971
No. 1 - 5	17 17/32 in	266-8994
No. 1 - 14	18 in	5P-4776
1 1/8 - 12	20 in	1U-7758
1 1/4 - 12	18 in	5P-4184
1 1/4 - 5	24 in	264-5774
1 1/2 - 12	23 5/8 in	5P-7273
1 1/2 - 12	32 3/32 in	6V-2074
No. 1 - 14	16 3/8 in	252-9951
3/4 - 10	9 5/8 in	1U-9597

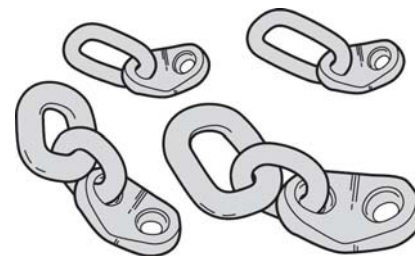
# Screws

## Standard/Studs/Metric/Coarse Thread UNC

Thread Size (dia × pitch)	Screw Length	Part Number
M5 × 0.80	40 mm	240-6577
M6 × 1.00	25 mm	8T-3982
M6 × 1.00	40 mm	6R-7651
M6 × 1.00	108 mm	320-9318
M8 × 1.25	31 mm	216-1035
M8 × 1.25	33 mm	216-1036
M8 × 1.25	35 mm	157-8861
M8 × 1.25	50 mm	166-0599
M8 × 1.25	60 mm	121-0483
M8 × 1.25	82 mm	111-9897
M8 × 1.25	225 mm	217-6670
M10 × 1.50	43 mm	172-2663
M10 × 1.50	46 mm	172-2718
M10 × 1.50	48 mm	331-4350
M10 × 1.50	55 mm	180-3998
M10 × 1.50	60 mm	357-0351
M10 × 1.50	60 mm	7Y-8710
M10 × 1.50	65 mm	9R-4764
M10 × 1.50	75 mm	164-1525
M10 × 1.50	80 mm	115-1958
M10 × 1.50	83 mm	164-1438
M10 × 1.50	105 mm	9R-2753
M10 × 1.50	110 mm	356-2419
M10 × 1.50	125 mm	288-7158
M10 × 1.25	516 mm	334-7396
M12 × 1.75	60 mm	7X-3342
M12 × 1.75	60 mm	7X-3149
M12 × 1.75	85 mm	358-3156
M12 × 1.75	200 mm	152-2489
M14 × 2.00	65 mm	285-6325
M14 × 2.00	85 mm	242-2911
M16 × 2.00	60 mm	9X-2209
M16 × 2.00	127 mm	338-3116
M16 × 2.00	150 mm	332-0035
M24 × 3.00	140 mm	212-8687
M10 × 1.50	95 mm	9R-3579
M10 × 1.50	100 mm	338-4549
M10 × 1.50	55 mm	376-3408
M16 × 2.00	165 mm	215-3965

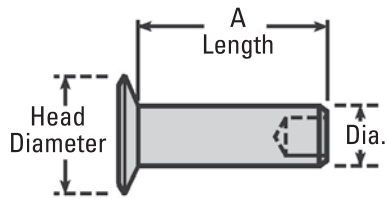
**Link Brackets**

- Used to remove or install large components such as excavator swing gears (provides acceptable method of attaching hoist to component).
- 9U-6502 Link Bracket is used specifically to remove and install swing gear and bearing assembly on 5130 and 5230 Mining Excavators.
- All link brackets meet ANSI Standards for lifting devices.
- Bolts directly onto swing bearing/gear or other component (always use Grade 8 bolts to attach link bracket to component).
- Requires less clearance than standard eye bolt and makes placement/alignment of swing gear/bearing much faster and simpler.
- Used for any general purpose lifting where bracket can be attached to component.
- These link brackets are 100% proof tested at two times the working load limit. They comply with the requirements of ANSI/ASME B30.9.1984 as noted on the Certificate of Proof Test contained with each piece.



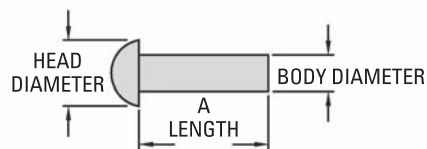
Part Number	Bolt Size	Working Load Limit	Minimum Bolt Torque
138-7573	3/8 in	1000 kg (2,205 lb)	43 N·m (32 lb ft)
138-7575	1/2 in	1800 kg (3,968 lb)	95 N·m (70 lb ft)
138-7574	3/4 in	4000 kg (8,818 lb)	360 N·m (266 lb ft)
138-7576	30 mm (1 1/4 in)	4000 kg (8,818 lb)	1300 N·m (959 lb ft)
163-6455	36 mm	5448 kg (12,011 lb)	2700 N·m (1,991 lb ft)

## Rivets/Flat Head/Countersunk Shank/Inch



Body Diameter	A	Head Diameter	Part Number	Material
	Length			
3/16 in	3/4 in	3/8 in	6B-1369	Steel
3/16 in	17/32 in	3/8 in	6B-1985	Steel
5/32 in	5/16 in	3/8 in	6B-4284	Steel
3/16 in	19/32 in	3/8 in	6B-4594	Steel
3/16 in	9/32 in	3/8 in	7B-5048	Brass
3/16 in	5/16 in	3/8 in	7B-5050	Brass
3/16 in	3/8 in	3/8 in	7B-5054	Brass
3/16 in	13/32 in	3/8 in	7B-5056	Brass
3/16 in	15/32 in	3/8 in	7B-5060	Brass
3/16 in	1/2 in	3/8 in	7B-5062	Brass
3/16 in	17/32 in	3/8 in	7B-5064	Brass
3/16 in	19/32 in	3/8 in	7B-5068	Brass

## Rivets/Button Head/Solid Shank/Inch



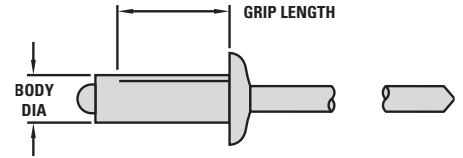
- Made of cold-formed steel.
- Meets ANSI B18.1.1 requirements.

Body Diameter	A	Head Diameter	Part Number
	Length		
1/4 in	7/8 in	0.56 in	1F-3577
1/4 in	1 1/8 in	0.45 in	4B-4325
1/4 in	3/4 in	0.45 in	4B-4322
1/4 in	5/8 in	0.45 in	4B-4321
1/4 in	1/2 in	0.45 in	4B-4320
1/4 in	3/8 in	0.45 in	4B-4319
1/8 in	1/4 in	0.23 in	4B-4304
1/8 in	1/2 in	0.23 in	4B-4307
1/8 in	3/8 in	0.23 in	4B-4306
3/16 in	5/8 in	0.34 in	4B-4312
3/16 in	3/4 in	0.34 in	4B-4314
3/16 in	1/2 in	0.34 in	4B-4311
3/16 in	1 in	0.34 in	4B-4315
3/16 in	3/8 in	0.34 in	4B-4310
3/16 in	7/8 in	0.34 in	1J-6280
3/8 in	1 in	0.67 in	4B-4345
3/8 in	7/8 in	0.67 in	4B-4344
3/8 in	3/4 in	0.67 in	4B-4343
3/8 in	1 1/8 in	0.67 in	4B-4346
3/8 in	1 1/4 in	0.67 in	4B-4347
5/16 in	5/8 in	0.56 in	4B-4334
5/16 in	1 in	0.56 in	4B-4337
5/16 in	3/4 in	0.56 in	4B-4335
5/16 in	7/8 in	0.56 in	4B-4336

**Rivets/Blind/Inch**

- Contains an open-end and a steel mandrel.

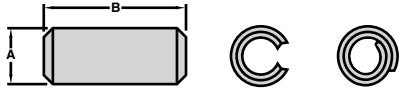
Body Diameter	Grip Length	Part Number
$\frac{3}{16}$ in	$\frac{3}{8}$ - $\frac{1}{2}$ in	033-9412
$\frac{5}{32}$ in	$\frac{1}{4}$ - $\frac{3}{8}$ in	034-7044
$\frac{5}{32}$ in	$\frac{1}{8}$ - $\frac{1}{4}$ in	2N-2258
$\frac{3}{16}$ in	$\frac{1}{2}$ - $\frac{5}{8}$ in	4D-6716
$\frac{1}{8}$ in	$\frac{3}{8}$ - $\frac{1}{2}$ in	6K-3273
$\frac{1}{8}$ in	$\frac{1}{8}$ - $\frac{3}{16}$ in	7K-6536
$\frac{1}{8}$ in	$\frac{1}{16}$ - $\frac{1}{8}$ in	8L-7905
$\frac{1}{8}$ in	$\frac{5}{16}$ - $\frac{3}{8}$ in	9M-5731
$\frac{3}{16}$ in	$\frac{1}{4}$ - $\frac{3}{8}$ in	9M-5732
$\frac{3}{16}$ in	$\frac{1}{8}$ - $\frac{1}{4}$ in	9M-5733





# Pins

## Spring Pins/Roll Pin/Inch



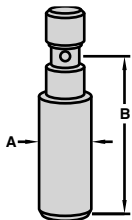
- Contains a chamfered end for easy installation.
- Made of heat-treated steel.

A	B	Part Number
Diameter	Pin Length	
1/16 in	3/4 in	2L-4911
1/16 in	3/8 in	1L-5316
1/16 in	1/4 in	8S-7499
1/16 in	1/2 in	8S-3157
1/2 in	1 in	1N-5981
1/2 in	4 in	8C-8513
1/2 in	3 in	027-3873
1/2 in	2 1/2 in	2K-8078
1/2 in	1 1/4 in	2K-9062
1/2 in	1 1/2 in	5H-4905
1/2 in	3/4 in	7K-6820
1/2 in	3 1/2 in	031-0255
1/4 in	3/4 in	7M-5130
1/4 in	1/2 in	6B-6863
1/4 in	1 1/4 in	5H-3193
1/4 in	1 in	5H-3182
1/4 in	2 in	4H-6996
1/4 in	1 3/4 in	4H-4737
1/4 in	5/8 in	3H-2617
1/4 in	1 1/2 in	2L-1699
1/4 in	2 1/2 in	1J-5353
1/4 in	7/8 in	3S-2708
1/4 in	45/64 in	095-0884

A	B	Part Number
Diameter	Pin Length	
1/8 in	1 1/4 in	2K-8467
1/8 in	1/2 in	3H-9675
1/8 in	3/4 in	3K-4897
1/8 in	5/8 in	4H-1641
1/8 in	3/8 in	8L-6565
1/8 in	7/8 in	8T-0277
13/16 in	1 37/64 in	3Q-7864
13/16 in	2 3/4 in	9X-2617
15/32 in	1 3/16 in	195-6754
21/32 in	5 1/8 in	6Y-8029
25/64 in	1 31/32 in	238-3200
3/16 in	1/2 in	5H-8985
3/16 in	1 1/4 in	138-1645
3/16 in	1 in	6H-3956
3/16 in	5/8 in	2K-5986
3/16 in	5/8 in	3S-8109
3/16 in	1 1/2 in	4H-3119
3/16 in	3/4 in	4H-8380
3/16 in	1 3/4 in	1J-5799
3/16 in	1 1/4 in	1H-1200
3/32 in	5/8 in	2K-3455
3/32 in	1/2 in	3H-1118
3/32 in	1 1/8 in	032-8870

A	B	Part Number
Diameter	Pin Length	
3/32 in	3/4 in	2L-5894
3/32 in	1 in	5M-8009
3/8 in	3/4 in	8T-5089
3/8 in	2 1/2 in	053-1720
3/8 in	1 3/4 in	5L-5711
3/8 in	1 1/4 in	5J-3941
3/8 in	1 in	2L-3650
3/8 in	1 1/2 in	2J-5850
3/8 in	5/8 in	1T-0068
3/8 in	2 in	1J-8136
3/8 in	3 in	045-7012
37/64 in	4 21/64 in	9W-9455
5/16 in	1 31/32 in	2M-3521
5/16 in	1 1/2 in	2H-9445
5/16 in	3/4 in	4H-1440
5/16 in	3 in	2K-1594
5/16 in	1 13/32 in	095-0891
5/16 in	1 3/4 in	5M-1179
5/16 in	1 1/4 in	8T-2925
5/16 in	1 in	1T-0550
5/32 in	1/2 in	1T-0099
5/32 in	1 in	5H-9839
5/32 in	1 1/2 in	6V-3259
5/32 in	3/4 in	2L-5893

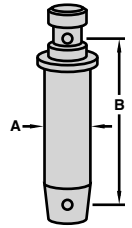
## Drawbar and Clevis Pins/Type I



A	Pin Hole Diameter	B	Part Number
Diameter		Length	
1 1/2 in	25/64 in	9 7/8 in	5H-8812
2 15/64 in	25/64 in	10 3/8 in	1H-4106
2 in	25/64 in	8 3/8 in	9S-8184
2 in	25/64 in	9 3/8 in	2R-0179

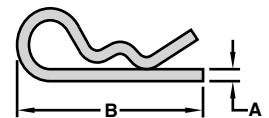
**Drawbar and Clevis Pins/Type II**

A		B		Part Number
Diameter	Pin Hole Diameter	Length		
1 1/2 in	25/64 in	7 in		7F-9549
1 1/2 in	25/64 in	8 in		7F-9544
1 3/4 in	25/64 in	12 in		5H-2209
1 3/4 in	25/64 in	8 in		7F-9547
1 35/64 in	25/64 in	9 in		7F-9541
2 in	25/64 in	10 1/2 in		2M-0093

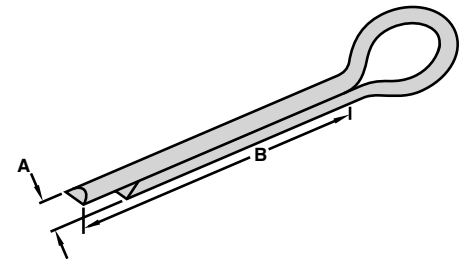


**Locking Pins/Inch/Steel**

A		B		Part Number
Diameter	Pin Hole Diameter	Length		
3/32 in	1/2 in	2.00 in		008-3843
5/32 in	5/8 - 7/8 in	3.00 in		5P-0370
3/32 in	1/4 - 1/2 in	1.62 in		5P-0372
3/16 in	3/4 - 11/16 in	3.75 in		5P-8837
1/8 in	1/2 - 3/4 in	1.75 in		6S-6646
1/8 in	5/8 - 7/8 in	2.50 in		8S-6377



**Cotter Pins/Inch/Zinc Plated Steel**



A	B	Cotter End Type	Part Number
Diameter	Pin Length		
1/16 in	1 1/2 in	Mitered End	010-3365
1/16 in	1 1/4 in	Mitered End	3B-4606
1/16 in	3/4 in	Mitered End	3B-4605
1/2 in	2 1/2 in	Mitered End	3B-5324
1/2 in	2 3/4 in	Mitered End	3B-5325
1/2 in	2 in	Mitered End	3B-5323
1/2 in	3 1/2 in	Mitered End	3B-5326
1/2 in	3 in	Mitered End	2H-3775

A	B	Cotter End Type	Part Number
Diameter	Pin Length		
1/2 in	4 1/4 in	Square End	1J-2919
1/2 in	4 23/32 in	Mitered End	095-0872
1/2 in	5 1/2 in	Square End	3J-2985
1/4 in	1 1/2 in	Mitered End	3B-5313
1/4 in	1 1/4 in	Mitered End	3B-4637
1/4 in	1 3/4 in	Mitered End	3B-4639
1/4 in	1 in	Mitered End	2H-3769
1/4 in	2 1/2 in	Mitered End	3B-4641

A	B	Cotter End Type	Part Number
Diameter	Pin Length		
1/4 in	2 1/4 in	Mitered End	3B-5303
1/4 in	2 in	Mitered End	3B-4640
1/4 in	3 1/2 in	Mitered End	3B-4643
1/4 in	3 in	Mitered End	3B-5328
1/4 in	4 1/2 in	Mitered End	4D-8002
1/8 in	1 1/4 in	Square End	3B-4618
1/8 in	1 in	Mitered End	3S-0515
1/8 in	1 in	Mitered End	3B-4617

Hardware

(Continued)

# Pins

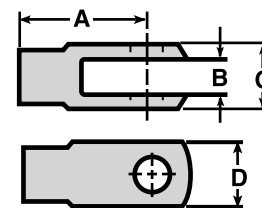
## Cotter Pins/Inch/Zinc Plated Steel (Continued)

A	B	Cotter End Type	Part Number
Diameter	Pin Length		
1/8 in	1/2 in	Mitered End	3B-4613
1/8 in	1/2 in	Square End	3B-4607
1/8 in	15/32 in	Chisel End	6L-3960
1/8 in	2 1/2 in	Mitered End	8B-9264
1/8 in	2 1/4 in	Mitered End	3B-4622
13/32 in	2 1/2 in	Mitered End	095-7944
13/32 in	3 11/32 in	Mitered End	095-0868
13/32 in	5 1/2 in	Mitered End	096-1820
3/16 in	1 1/2 in	Mitered End	3B-4629
3/16 in	1 1/4 in	Square End	3B-4628
3/16 in	1 in	Mitered End	3B-4627
3/16 in	2 1/2 in	Mitered End	3B-4632
3/16 in	2 1/4 in	Mitered End	3B-5302
3/16 in	2 3/4 in	Mitered End	3B-4633
3/16 in	2 in	Square End	3B-4631
3/16 in	3 in	Mitered End	3B-4634

A	B	Cotter End Type	Part Number
Diameter	Pin Length		
3/16 in	4 in	Mitered End	3B-4636
3/32 in	1 1/4 in	Mitered End	3B-4612
3/32 in	1 3/4 in	Chisel End	2H-3862
3/32 in	1 in	Mitered End	3B-4611
3/32 in	2 in	Mitered End	010-3378
3/8 in	1 1/2 in	Mitered End	3B-4644
3/8 in	2 1/2 in	Mitered End	3B-4647
3/8 in	2 3/4 in	Mitered End	3B-5319
3/8 in	2 in	Mitered End	3B-4646
3/8 in	3 1/2 in	Mitered End	3B-5322
3/8 in	3 in	Mitered End	3B-5320
3/8 in	4 1/2 in	Mitered End	4J-1888
3/8 in	4 in	Mitered End	3B-5329
5/16 in	1 1/2 in	Mitered End	2H-3771
5/16 in	1 1/4 in	Mitered End	2H-3770
5/16 in	1 in	Mitered End	3B-6705

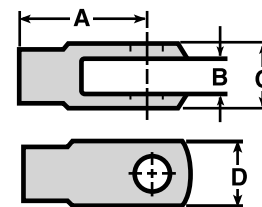
A	B	Cotter End Type	Part Number
Diameter	Pin Length		
5/16 in	2 1/2 in	Mitered End	3B-5316
5/16 in	2 1/4 in	Mitered End	3B-5315
5/16 in	2 in	Mitered End	3B-5314
5/16 in	2 in	Mitered End	095-0863
5/16 in	3 1/2 in	Mitered End	2H-3772
5/16 in	3 in	Mitered End	3B-5317
5/16 in	4 1/2 in	Mitered End	3F-8357
5/16 in	4 in	Mitered End	2H-3773
5/16 in	5 in	Mitered End	2H-3774
5/32 in	1 1/2 in	Square End	3B-5301
5/32 in	2 1/4 in	Mitered End	010-3401
5/32 in	2 3/4 in	Mitered End	3B-4625
5/32 in	2 in	Mitered End	2H-3768
5/8 in	3 in	Mitered End	3B-5327

Yoke-Type Rod End/Inch



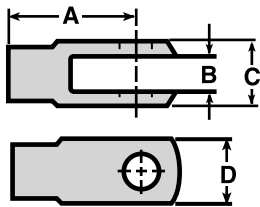
Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
¼ in	50.8 in	7.10 in	15.90 in	12.70 in	8B-3768	5L-4426	--	4B-3057	--	--	3B-4607
¼ in	26.2 in	7.10 in	15.90 in	12.70 in	2M-4036	5L-4426	--	4B-3057	--	--	3B-4607
5/16 in	30.2 in	8.70 in	19.00 in	15.00 in	3D-9609	1B-4202	--	1A-2457	--	--	3B-4609
5/16 in	57.0 in	8.70 in	18.00 in	15.00 in	010-4037	1B-4202	--	1A-2457	--	--	3B-4609
¾ in	34.9 in	11.10 in	22.20 in	17.50 in	1M-1341	1B-4203	8T-8932	1B-0676	--	--	3B-4615
¾ in	63.5 in	11.10 in	22.20 in	17.50 in	1A-9252	1B-4203	--	1B-0676	--	--	3B-4617
½ in	46.0 in	14.30 in	28.60 in	23.90 in	2M-8340	9S-5585	--	8B-1419	--	6S-6646	3B-4617
½ in	76.2 in	14.30 in	28.60 in	23.90 in	6F-7010	9S-5585	--	8B-1419	--	6S-6646	3B-4617
5/8 in	57.9 in	17.50 in	34.90 in	30.20 in	4M-7930	5D-3183	--	9S-1315	--	--	3B-4617
5/8 in	125.4 in	17.50 in	34.90 in	30.20 in	9S-1314	5D-3183	--	9S-1315	--	--	3B-4617

Yoke-Type Rod End/Metric



Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M12-LH	72.0 mm	12.0 mm	24.0 mm	24.0 mm	7X-0858	8T-4244	8T-5382	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615
M12	72.0 mm	12.0 mm	24.0 mm	24.0 mm	8T-4650	8T-4244	8T-5382	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615
M6	36.0 mm	6.0 mm	12.0 mm	12.0 mm	8T-4742	5C-2890	8T-4744	8T-6904	8T-6902	--	--
M10	40.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-4815	8T-4133	8T-4743	9R-2806	9R-2807	--	--
M10-LH	60.0 mm	10.0 mm	20.0 mm	20.0 mm	8C-6955	9X-2065	8T-5381	9R-2806	9R-2807	--	--
M10	60.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-5063	8T-4133	9T-5381	9R-2806	9R-2807	--	--
M12	48.0 mm	12.2 mm	24.0 mm	24.0 mm	8C-3393	8T-4244	8C-3394	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615

## Yoke-Type Rod End/Jump Sizes/Metric

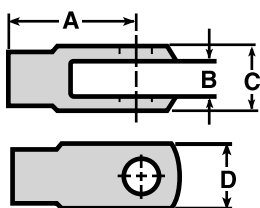


Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M10 <sup>1</sup>	40.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-5921	8T-4133	--	--	--	--	--
M10 <sup>2</sup>	40.0 mm	10.0 mm	20.0 mm	20.0 mm	3E-3826	8T-4133	--	1B-0676	--	6S-6646	3B-4615

<sup>1</sup>6.0 mm bore.

<sup>2</sup>9.5 mm bore.

## Yoke-Type Rod End/Forged/Metric



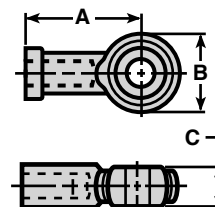
Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M6 <sup>1</sup>	45.0 mm	7.1 mm	15.9 mm	13.0 mm	7X-2496	5C-2890	--	7X-2618	--	--	3B-4607
M10 <sup>2</sup>	34.9 mm	11.1 mm	22.2 mm	17.5 mm	8T-4968	8T-4133	--	1B-0676	--	6S-6646	3B-7615
M10 <sup>2</sup>	63.5 mm	11.1 mm	22.2 mm	17.5 mm	8T-3988	8T-4133	--	1B-0676	--	6S-6646	3B-7615
M12 <sup>3</sup>	46.4 mm	14.3 mm	28.6 mm	23.9 mm	7X-7660	8T-4244	--	8B-1419	--	--	3B-4617

<sup>1</sup>External thread.

<sup>2</sup>9.5 mm bore.

<sup>3</sup>12.7 mm bore.

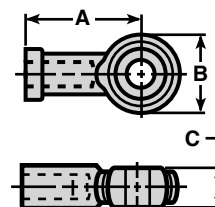
Spherical Rod End/Inch



Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
1/4 in	1.33 in	0.89 in	0.37 in	6L-7751
5/16 in	1.40 in	1.02 in	0.44 in	5P-6672
5/16 in	1.37 in	1.02 in	0.44 in	7H-3641
5/16 in	1.90 in	1.02 in	0.44 in	7E-9748
5/16 in	1.90 in	1.02 in	0.44 in	6V-8955
5/16 in	1.90 in	1.02 in	0.44 in	6V-9163
5/16 in	1.40 in	1.02 in	0.44 in	7L-4186
5/16 in	1.90 in	1.02 in	0.44 in	6L-3353
3/8 in	1.64 in	1.13 in	0.50 in	7X-7875
3/8 in	1.64 in	1.13 in	0.50 in	7X-7874

Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
3/8 in	1.63 in	1.00 in	0.50 in	225-3770
3/8 in	1.63 in	1.00 in	0.50 in	225-3769
3/8 in	1.64 in	1.13 in	0.50 in	4D-4064
3/8 in	1.96 in	1.13 in	0.50 in	8C-6971
3/8 in	1.64 in	1.13 in	0.50 in	8C-7321
3/8 in	1.64 in	1.13 in	0.50 in	8C-7315
1/2 in	2.14 in	1.39 in	0.63 in	4D-4065
1/2 in	2.63 in	1.50 in	0.63 in	212-6854
5/8 in	2.52 in	1.57 in	0.75 in	2K-5804
5/8 in	2.63 in	1.50 in	0.75 in	125-6857
1 1/4 in	4.13 in	2.76 in	1.37 in	8C-1457

Spherical Rod End/Metric



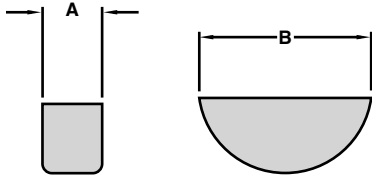
Diameter (mm)	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
M10	42.0 mm	30.0 mm	14.0 mm	132-0994
M10	42.0 mm	30.0 mm	14.0 mm	8T-6431
M10	47.0 mm	30.0 mm	14.0 mm	8C-5057
M12	50.0 mm	31.0 mm	16.0 mm	240-9815
M12	54.0 mm	30.0 mm	16.0 mm	102-8245
M12	49.0 mm	34.0 mm	16.0 mm	240-9816
M12	54.0 mm	34.0 mm	10.0 mm	279-0963
M12	49.0 mm	34.0 mm	19.0 mm	8C-3392
M14	63.0 mm	40.0 mm	14.0 mm	309-4481
M14	63.0 mm	40.0 mm	12.0 mm	309-4480
M14	50.0 mm	30.0 mm	16.0 mm	095-6591
M16	66.7 mm	37.9 mm	21.0 mm	098-5653
M16	63.0 mm	42.0 mm	21.0 mm	9R-4760
M20	77.0 mm	53.0 mm	25.0 mm	254-3355

Diameter (mm)	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
M20	78.0 mm	53.0 mm	16.0 mm	260-3418
M20	78.0 mm	53.0 mm	16.0 mm	260-3417
M20	133.0 mm	50.8 mm	25.4 mm	366-6668
M20	77.0 mm	54.0 mm	16.0 mm	293-6590
M24	94.0 mm	65.0 mm	20.0 mm	253-3745
M24	94.0 mm	65.0 mm	20.0 mm	253-3746
M42	300.0 mm	108.0 mm	51.0 mm	180-7336
M42	270.0 mm	108.0 mm	51.0 mm	180-6758
M6	29.0 mm	22.0 mm	9.0 mm	8C-3111
M6	29.0 mm	22.0 mm	9.0 mm	7U-2713
M6	30.0 mm	18.0 mm	9.0 mm	208-8479
M8	36.0 mm	24.0 mm	13.0 mm	381-2885
M8	36.0 mm	24.0 mm	13.0 mm	381-2911
M8	36.0 mm	22.0 mm	12.0 mm	7X-7915

Hardware

# Woodruff Keys

## Woodruff Keys



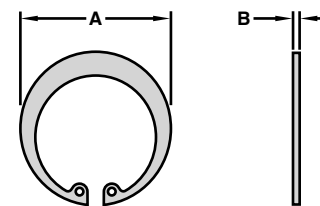
- Made of medium carbon steel and machined to a smooth finish.

A	B	MFG Number	Part Number
Thickness	Diameter		
1/16 in	5/16 in	206	4F-2291
1/16 in	3/8 in	211	3B-2098
1/2 in	2 3/4 in	V	1B-8745
1/4 in	1 in	14	3K-4723
1/4 in	1 in	15	1B-8714
1/4 in	1 1/8 in	18	1B-8716
1/4 in	1 1/4 in	21	1B-8719
1/4 in	1 3/8 in	22	1B-8720
1/4 in	1 1/2 in	24	1B-8722
1/4 in	3/4 in	91	2B-9373
1/4 in	7/8 in	A	1B-8736
1/4 in	7/8 in	--	094-4628
1/8 in	1/2 in	2	1B-8701
1/8 in	1/2 in	2	8L-4000
1/8 in	1/2 in	2	3H-1489
1/8 in	3/8 in	212	1B-8735
1/8 in	3/8 in	213	5H-2532
1/8 in	1/2 in	3	1B-8702
1/8 in	5/8 in	4	1B-8703
1/8 in	5/8 in	5	1B-8704

A	B	MFG Number	Part Number
Thickness	Diameter		
1/8 in	3/4 in	7	1B-8706
3/16 in	7/8 in	10	1B-8709
3/16 in	7/8 in	11	1B-8710
3/16 in	1 in	13	1B-8712
3/16 in	1 1/8 in	16	1B-8715
3/16 in	5/8 in	6	1B-8705
3/16 in	3/4 in	8	1B-8707
3/16 in	3/4 in	9	1B-8708
3/16 in	3/4 in	9	5H-2671
3/16 in	8/13 in	--	8M-5599
3/8 in	1 1/4 in	E	1B-8739
3/8 in	1 3/8 in	F	1B-8740
3/8 in	1 1/2 in	G	1B-8741
3/8 in	2 3/4 in	T	1B-8743
3/8 in	2 3/4 in	TX	1B-8744
5/16 in	1 3/8 in	23	1B-8721
5/16 in	1 1/2 in	25	1B-8723
5/16 in	1 in	B	1H-6627
5/16 in	1 1/8 in	C	1B-8737
5/16 in	1 1/4 in	D	1B-8738
5/16 in	2 3/4 in	SX	1B-8742

## Snap Rings/Internal/Inch

- Made of tempered carbon steel.



Bore Diameter	A		Part Number
	Free Diameter	Thickness	
<b>Tempered Basic</b>			
0.44 in	0.48 in	0.025 in	3D-8358
0.50 in	0.55 in	0.035 in	1S-1638
0.56 in	0.62 in	0.035 in	2R-1256
0.69 in	0.76 in	0.035 in	1H-4142
0.75 in	0.83 in	0.035 in	2M-8191
0.81 in	0.90 in	0.042 in	5S-4455
0.88 in	0.97 in	0.042 in	2L-6726
0.90 in	1.00 in	0.042 in	4L-1466
1.00 in	1.11 in	0.042 in	4D-1322
1.12 in	1.25 in	0.050 in	5S-1522
1.25 in	1.39 in	0.050 in	2D-6398
1.38 in	1.53 in	0.050 in	1L-3768
1.44 in	1.60 in	0.050 in	2H-1142
1.50 in	1.66 in	0.062 in	8N-7294
1.56 in	1.73 in	0.062 in	3K-9879
1.65 in	1.83 in	0.062 in	2R-1230
1.81 in	2.01 in	0.062 in	2D-5826
1.81 in	1.95 in	0.069 in	7X-2908
1.85 in	2.05 in	0.078 in	1L-8490
2.05 in	2.28 in	0.078 in	6J-7855
--	2.35 in	0.078 in	3J-8500
2.31 in	2.54 in	0.078 in	2D-6648
2.44 in	2.70 in	0.078 in	6L-8797
2.50 in	2.77 in	0.078 in	4D-1736
--	2.53 in	0.079 in	250-2940
2.44 in	2.61 in	0.079 in	8T-9598
--	2.91 in	0.093 in	216-6148
2.75 in	3.05 in	0.093 in	6K-3531
2.83 in	3.12 in	0.093 in	2H-5549
--	3.32 in	0.093 in	253-1238
3.00 in	3.33 in	0.093 in	2R-1236
--	3.05 in	0.094 in	8N-7296
2.83 in	3.01 in	0.098 in	095-0942
3.15 in	3.37 in	0.098 in	2W-1145
3.16 in	3.52 in	0.109 in	1K-6985
3.25 in	3.62 in	0.109 in	8J-7636
3.50 in	3.89 in	0.109 in	3D-8341
3.56 in	3.94 in	0.109 in	1J-6472

Bore Diameter	A		Part Number
	Free Diameter	Thickness	
<b>Tempered Basic (Continued)</b>			
3.88 in	4.29 in	0.109 in	1S-3311
3.88 in	4.29 in	0.109 in	9M-9935
3.94 in	4.36 in	0.109 in	5J-3964
4.00 in	4.42 in	0.109 in	7M-2275
4.33 in	4.76 in	0.109 in	5L-4751
4.72 in	5.21 in	0.109 in	067-3161
5.12 in	5.39 in	0.109 in	8T-9044
5.00 in	5.49 in	0.109 in	2L-0043
3.35 in	3.56 in	0.118 in	6V-5590
3.54 in	3.76 in	0.118 in	8T-0707
5.50 in	6.07 in	0.125 in	8D-2258
6.00 in	6.62 in	0.125 in	5L-4756
--	5.19 in	0.156 in	7C-1413
6.25 in	6.89 in	0.156 in	8J-8905
6.63 in	7.31 in	0.156 in	6V-4495
7.00 in	7.72 in	0.156 in	1L-7388
4.13 in	4.41 in	0.157 in	8T-7567
4.53 in	4.80 in	0.157 in	9T-2584
4.92 in	5.20 in	0.157 in	3E-4334
5.91 in	6.22 in	0.157 in	109-0119
7.25 in	7.99 in	0.187 in	1U-4022
8.00 in	8.82 in	0.187 in	8T-5380
8.25 in	9.09 in	0.187 in	9X-1802
10.24 in	10.82 in	0.197 in	3E-9401
11.02 in	11.61 in	0.197 in	192-7145
11.42 in	12.01 in	0.197 in	103-8096
8.27 in	8.74 in	0.197 in	3E-9400
9.06 in	9.53 in	0.197 in	101-2860
13.39 in	14.06 in	0.236 in	117-9750
<b>Rectangular</b>			
0.69 in	0.73 in	0.035 in	3P-8485
3.75 in	3.90 in	0.062 in	6V-0835
4.75 in	4.97 in	0.062 in	6V-0473
10.00 in	10.35 in	0.076 in	261-3121
16.75 in	17.09 in	0.078 in	183-6233
--	2.39 in	0.078 in	4M-8010
2.31 in	2.48 in	0.078 in	7X-2495
5.00 in	5.19 in	0.078 in	132-1183

Hardware

(Continued)



# Snap Rings

## Snap Rings/Internal/Inch (Continued)

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
<b>Rectangular (Continued)</b>			
7.50 in	7.89 in	0.086 in	185-2888
--	4.83 in	0.093 in	5T-6667
6.25 in	6.52 in	0.093 in	6V-0836
6.30 in	6.57 in	0.093 in	7X-7608
6.51 in	6.84 in	0.093 in	9W-3136
--	3.56 in	0.095 in	8F-1145
5.32 in	5.44 in	0.098 in	8T-2151
3.54 in	3.81 in	0.109 in	8C-3229
4.00 in	4.30 in	0.109 in	6V-6768
4.25 in	4.56 in	0.109 in	121-1257
4.63 in	4.94 in	0.109 in	121-1258
--	12.76 in	0.118 in	108-2736
--	2.29 in	0.120 in	4D-1186
--	6.13 in	0.120 in	3P-8218
7.87 in	8.27 in	0.120 in	313-4918
3.08 in	3.41 in	0.124 in	290-9849
--	12.13 in	0.125 in	7G-1596
--	13.78 in	0.125 in	3T-0007
--	14.87 in	0.125 in	1T-0896
2.17 in	2.38 in	0.125 in	6V-2832
--	2.50 in	0.125 in	1T-0895
--	3.75 in	0.125 in	5H-0793
3.75 in	3.93 in	0.125 in	6V-5837
4.45 in	4.66 in	0.125 in	4J-4968
4.72 in	4.94 in	0.125 in	5P-6414
4.82 in	5.08 in	0.125 in	5P-7074
--	5.37 in	0.125 in	7J-3296
6.48 in	6.83 in	0.125 in	236-2541
--	7.07 in	0.125 in	1T-1232
--	8.19 in	0.125 in	5P-6047
7.75 in	8.24 in	0.125 in	6V-1586
7.90 in	8.31 in	0.125 in	188-0751
--	3.00 in	0.126 in	234-0743
--	4.19 in	0.127 in	1H-9106
--	4.81 in	0.138 in	7Y-4672
--	5.80 in	0.138 in	087-5393
--	15.51 in	0.156 in	115-0764
5.12 in	5.36 in	0.156 in	3P-7313
5.51 in	5.75 in	0.156 in	5P-9957
6.50 in	6.83 in	0.156 in	8T-1742
6.50 in	6.83 in	0.156 in	8C-4400
6.25 in	7.25 in	0.156 in	5P-7151
--	10.63 in	0.157 in	144-4284
12.60 in	12.92 in	0.157 in	241-0163
7.64 in	7.97 in	0.172 in	6V-2833
10.00 in	10.46 in	0.187 in	5P-8194

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
<b>Rectangular (Continued)</b>			
7.09 in	7.38 in	0.187 in	3E-3212
7.48 in	7.89 in	0.187 in	1Q-3332
8.00 in	8.51 in	0.187 in	8C-6799
8.50 in	9.04 in	0.187 in	3E-4371
9.06 in	9.62 in	0.187 in	117-8806
--	4.31 in	0.188 in	1P-9646
--	1.34 in	0.197 in	6Y-2875
--	1.34 in	0.197 in	6Y-2115
--	8.94 in	0.197 in	091-5224
17.72 in	20.08 in	0.210 in	7G-5831
27.68 in	31.65 in	0.210 in	5P-7989
35.12 in	39.37 in	0.210 in	8X-0559
40.55 in	49.21 in	0.210 in	139-7645
5.50 in	5.69 in	0.210 in	8W-3074
--	7.77 in	0.210 in	8X-0563
31.48 in	9.00 in	0.210 in	5T-4024
--	1.71 in	0.252 in	8N-6739
--	5.91 in	0.333 in	6T-0364
<b>Spiral</b>			
1.25 in	1.33 in	0.050 in	8H-1037
3.13 in	3.25 in	0.061 in	2J-7761
4.13 in	4.28 in	0.061 in	9M-6166
2.00 in	2.13 in	0.062 in	2D-0592
5.75 in	5.95 in	0.072 in	9H-3452
2.06 in	2.19 in	0.078 in	2K-6091
2.13 in	2.26 in	0.078 in	6H-9361
2.44 in	2.59 in	0.078 in	2D-1523
9.76 in	10.07 in	0.086 in	6P-8309
10.75 in	11.09 in	0.086 in	9M-1976
9.25 in	9.56 in	0.086 in	6V-7979
2.63 in	2.79 in	0.093 in	5S-7779
14.29 in	14.76 in	0.111 in	9W-3301
14.96 in	15.52 in	0.111 in	8E-2827
15.43 in	15.92 in	0.111 in	7T-8004
17.09 in	17.65 in	0.111 in	7X-2627
19.53 in	20.15 in	0.111 in	7X-2628
3.35 in	3.55 in	0.111 in	4M-8910
3.56 in	3.78 in	0.111 in	066-5816
3.94 in	4.18 in	0.111 in	8S-9104
4.33 in	4.59 in	0.111 in	5M-4480
4.50 in	4.77 in	0.111 in	3K-2556
4.75 in	5.03 in	0.111 in	3K-2559
5.00 in	5.30 in	0.111 in	1M-8649
5.12 in	5.44 in	0.127 in	5J-9454
5.25 in	5.56 in	0.127 in	2S-0613
6.00 in	6.31 in	0.127 in	7S-3004

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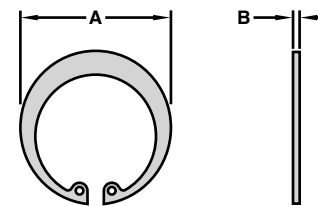
## Snap Rings/Internal/Inch (Continued)

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
<b>Spiral (Continued)</b>			
5.12 in	5.31 in	0.153 in	340-2367
7.00 in	7.37 in	0.156 in	340-2375
10.59 in	11.13 in	0.165 in	3W-2025
9.33 in	9.87 in	0.165 in	3W-2421
10.25 in	10.79 in	0.187 in	5P-9362
11.02 in	11.42 in	0.187 in	340-2381
--	12.76 in	0.187 in	5P-4256

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
<b>Spiral (Continued)</b>			
13.52 in	14.07 in	0.187 in	5P-6651
18.61 in	19.30 in	0.187 in	5P-4041
7.37 in	7.76 in	0.187 in	340-2382
8.25 in	8.68 in	0.187 in	340-2377
9.05 in	9.47 in	0.187 in	340-2378

## Snap Rings/External/Inch

- Made of tempered carbon steel.



Shaft Diameter	A	B	Part Number
	Free Diameter	Thickness	
3.27 in	2.97 in	0.142 in	6Y-5790
--	4.25 in	0.188 in	2M-4480
--	7.75 in	0.250 in	8K-2691
--	4.78 in	0.250 in	8P-4608
3.11 in	2.85 in	0.157 in	9W-5925
--	0.78 in	0.105 in	4H-8158
--	6.30 in	0.187 in	155-4881
--	0.62 in	0.038 in	4T-0933
--	0.52 in	0.035 in	7N-6825
--	7.76 in	0.156 in	6P-7983
--	3.15 in	0.187 in	4M-1708
--	2.16 in	0.207 in	6K-0468
--	2.16 in	0.125 in	5M-4443
--	2.69 in	0.187 in	6Y-1890
--	3.94 in	0.118 in	177-5241
3.74 in	3.58 in	0.126 in	315-6224
2.83 in	2.62 in	0.197 in	9W-5915
1.89 in	1.77 in	0.098 in	3E-3891
2.56 in	2.32 in	0.120 in	9W-6927
--	1.86 in	0.125 in	6S-3172
--	5.98 in	0.125 in	6P-3964
--	1.53 in	0.120 in	2B-9747
--	1.34 in	0.090 in	1A-4590
--	8.86 in	0.125 in	1W-2824
--	2.41 in	0.120 in	4B-1135
--	1.90 in	0.207 in	3K-9263
--	4.21 in	0.250 in	7P-6552

Shaft Diameter	A	B	Part Number
	Free Diameter	Thickness	
0.44 in	0.43 in	0.035 in	8C-5061
--	2.31 in	0.120 in	4H-6195
--	0.72 in	0.062 in	4F-3544
--	2.01 in	0.126 in	197-0087
3.55 in	3.35 in	0.157 in	9W-6278
--	1.88 in	0.157 in	213-4227
--	1.52 in	0.062 in	7S-4439
--	1.64 in	0.207 in	3K-9269
--	2.87 in	0.177 in	104-7336
1.50 in	1.38 in	0.098 in	145-0909
1.85 in	1.69 in	0.120 in	253-3262
--	1.81 in	0.120 in	4B-1136
--	0.91 in	0.060 in	6H-3455
--	6.04 in	0.250 in	7P-4796
--	5.32 in	0.138 in	155-9189
--	3.98 in	0.250 in	8G-1259
2.74 in	2.68 in	0.142 in	8E-2144
--	0.33 in	0.026 in	4N-2953
--	3.38 in	0.207 in	5K-7989
--	0.91 in	0.060 in	1A-6235
10.07 in	9.91 in	0.120 in	151-5729
--	5.12 in	0.179 in	4F-2198
--	1.62 in	0.120 in	4B-1127
--	2.37 in	0.120 in	1M-1655
--	6.75 in	0.177 in	3V-9541

**Hardware**

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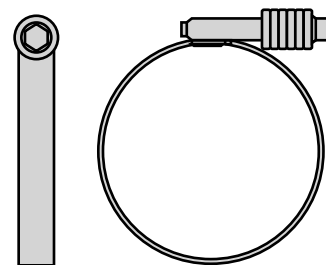
# Snap Rings

## Snap Rings/External/Inch (Continued)

Shaft Diameter	A	B	Part Number
	Free Diameter	Thickness	
3.02 in	2.79 in	0.126 in	147-5764
--	0.62 in	0.031 in	5I-9311
--	1.06 in	0.630 in	234-8962
--	3.88 in	0.207 in	7S-2020
--	6.00 in	0.244 in	2B-7862
--	2.26 in	0.188 in	3S-2619
--	2.28 in	0.095 in	3K-6701
--	1.56 in	0.118 in	3T-2405
--	1.37 in	0.120 in	2A-4758
--	4.86 in	0.250 in	7P-2781
--	0.67 in	0.102 in	4N-7521
--	2.31 in	0.125 in	6H-6237
--	0.61 in	0.060 in	3J-6008
--	2.64 in	0.138 in	099-6975
--	0.62 in	0.083 in	096-4032
--	1.81 in	0.120 in	9W-6904
3.35 in	3.15 in	0.157 in	9W-6277
--	2.12 in	0.120 in	9H-6425
2.56 in	2.39 in	0.102 in	7Y-4955
--	2.33 in	0.188 in	4S-6712
3.03 in	2.75 in	0.120 in	5P-9863
0.50 in	0.46 in	0.059 in	6P-1037
--	2.02 in	0.063 in	096-7380
4.02 in	3.78 in	0.207 in	6V-2835
--	4.44 in	0.188 in	2P-3421
--	0.21 in	0.020 in	7N-8821
--	0.40 in	0.059 in	2S-1387
--	1.06 in	0.236 in	243-2101
--	8.75 in	0.187 in	1J-6269
--	6.46 in	0.079 in	136-2444
--	3.09 in	0.207 in	7K-4520
--	1.61 in	0.120 in	9W-6926
0.98 in	0.89 in	0.079 in	3E-4332
--	2.14 in	0.135 in	4M-1709
1.93 in	1.76 in	0.120 in	7T-7162
--	1.75 in	0.105 in	4K-1240
--	1.65 in	0.098 in	274-8635
--	0.78 in	0.079 in	130-8150
--	6.88 in	0.177 in	9C-7368
--	2.36 in	0.126 in	195-6899
--	2.71 in	0.188 in	8S-6328
--	0.39 in	0.062 in	5B-6161
--	3.19 in	0.120 in	165-0512
--	2.25 in	0.125 in	6H-2953
--	3.12 in	0.187 in	2M-4479

Shaft Diameter	A	B	Part Number
	Free Diameter	Thickness	
2.80 in	2.50 in	0.120 in	5P-9862
--	0.16 in	0.020 in	1W-0565
--	1.44 in	0.091 in	191-2164
2.24 in	2.07 in	0.063 in	094-1399
1.00 in	0.93 in	0.042 in	001-5600
1.38 in	1.27 in	0.050 in	1J-6474
2.12 in	1.96 in	0.078 in	1K-6984
0.98 in	0.91 in	0.042 in	1L-8497
4.25 in	3.99 in	0.109 in	1N-5410
3.16 in	2.92 in	0.093 in	1N-8620
0.75 in	0.69 in	0.042 in	2J-6356
1.77 in	1.64 in	0.062 in	2J-7550
6.25 in	5.87 in	0.156 in	2L-0044
4.75 in	4.46 in	0.109 in	2L-0049
1.56 in	1.45 in	0.062 in	2L-6965
0.59 in	0.55 in	0.035 in	2L-8509
1.25 in	1.16 in	0.050 in	2M-4287
0.56 in	0.52 in	0.035 in	3D-2975
1.06 in	0.98 in	0.050 in	3K-8276
1.31 in	1.21 in	0.050 in	4D-8309
0.44 in	0.40 in	0.025 in	4H-0094
2.16 in	1.99 in	0.078 in	4K-4284
1.19 in	1.10 in	0.050 in	4M-5285
4.38 in	4.11 in	0.109 in	5H-5012
2.75 in	2.54 in	0.093 in	5J-3864
2.50 in	2.31 in	0.078 in	5K-4627
1.81 in	1.68 in	0.062 in	5K-9106
1.69 in	1.56 in	0.062 in	5L-2931
1.12 in	1.04 in	0.050 in	5L-4019
3.50 in	3.24 in	0.109 in	5L-4753
5.75 in	5.40 in	0.125 in	5L-8579
0.25 in	0.22 in	0.025 in	6H-5829
0.94 in	0.87 in	0.042 in	6H-6109
0.47 in	0.43 in	0.025 in	6L-3801
2.56 in	2.38 in	0.078 in	6S-1753
3.62 in	3.35 in	0.109 in	7J-6525
2.94 in	2.72 in	0.093 in	7J-6580
4.00 in	3.70 in	0.109 in	8F-1959
0.62 in	0.58 in	0.035 in	8F-4610
0.81 in	0.75 in	0.042 in	9F-5444
1.62 in	1.50 in	0.062 in	9L-2336
0.38 in	0.34 in	0.025 in	9M-7611
3.35 in	3.09 in	0.093 in	9S-4368
1.97 in	1.82 in	0.062 in	077-9687
2.62 in	2.43 in	0.078 in	1K-6992
1.88 in	1.74 in	0.062 in	1K-6995

## Hose Clamps/Wave Seal



Working Diameter	Part Number
<b>Belleville</b>	
108 - 130 mm (4 1/4 - 5 1/8 in)	8T-4986
121 - 143 mm (4 3/4 - 5 5/8 in)	9X-6654
133 - 156 mm (5 1/4 - 6 1/8 in)	8T-4987
146 - 168 mm (5 3/4 - 6 5/8 in)	3E-7424
149 - 307 mm (5 7/8 - 12 1/8 in)	366-5879
159 - 181 mm (6 1/4 - 7 1/8 in)	8T-4988
17 - 32 mm (5/8 - 1 1/4 in)	159-1503
172 - 194 mm (6 3/4 - 7 3/4 in)	124-2732
184 - 206 mm (7 1/4 - 8 1/8 in)	8T-4989
21 - 27 mm (7/8 - 1 1/16 in)	9X-2488
210 - 232 mm (8 1/4 - 9 1/8 in)	8T-4990
248 - 270 mm (9 3/4 - 10 5/8 in)	116-8535
25 - 44 mm (1 - 1 3/4 in)	7X-7958
32 - 54 mm (1 1/4 - 2 1/8 in)	8T-4983
335 - 381 mm (13 1/4 - 15 in)	301-0402
45 - 67 mm (1 3/4 - 2 5/8 in)	8T-6703
57 - 79 mm (2 1/4 - 3 1/8 in)	8T-4984
83 - 105 mm (3 1/4 - 4 1/8 in)	8T-4985
95 - 118 mm (3 5/8 - 4 5/8 in)	9X-2201
<b>T-Bolt Spring</b>	
100 - 106.1 mm (4 - 4 1/8 in)	216-6947
103.12 - 111 mm (4 1/16 - 4 3/8 in)	307-9917
104.6 - 112.9 mm (4 1/8 - 4 7/16 in)	135-6259
104.65 - 112.78 mm (4 1/8 - 4 7/16 in)	208-7448
106.43 - 114.3 mm (4 3/16 - 4 1/2 in)	212-6932
109.5 - 115.6 mm (4 5/16 - 4 9/16 in)	209-4590
109.5 - 115.6 mm (4 5/16 - 4 9/16 in)	216-6946
112.7 - 120.6 mm (4 7/16 - 4 3/4 in)	230-3671
117.6 - 125.5 mm (4 5/8 - 5 in)	224-0807
120.65 - 128.52 mm (4 3/4 - 5 1/16 in)	250-2953
122.2 - 130 mm (4 13/16 - 5 1/8 in)	221-9208
128.5 - 136.4 mm (5 1/16 - 5 3/8 in)	222-2277
130.2 - 142.9 mm (5 1/8 - 5 5/8 in)	135-6260
130.3 - 138.2 mm (5 1/8 - 5 1/16 in)	219-0314
131.82 - 139.7 mm (5 3/16 - 5 1/2 in)	256-4448
133.35 - 141.22 mm (5 1/4 - 5 5/16 in)	247-1925
134.87 - 142.75 mm (5 5/16 - 5 5/8 in)	239-5609

Working Diameter	Part Number
<b>T-Bolt Spring (Continued)</b>	
135 - 147 mm (5 5/16 - 5 13/16 in)	147-1685
136.22 - 144.53 mm (5 3/8 - 5 11/16 in)	246-8026
136.65 - 144.53 mm (5 3/8 - 5 11/16 in)	226-0087
141.22 - 149.09 mm (5 9/16 - 5 7/8 in)	237-0226
143 - 150.88 mm (5 5/8 - 5 15/16 in)	220-4125
150.11 - 155.45 mm (5 29/32 - 6 1/8 in)	220-4126
152.42 - 160.32 mm (6 - 6 5/16 in)	240-2651
155.7 - 163.6 mm (6 1/8 - 6 7/16 in)	219-0313
155.7 - 168.4 mm (6 1/8 - 6 1/2 in)	135-6261
158.7 - 164.9 mm (6 1/4 - 6 1/2 in)	214-0584
158.75 - 171.45 mm (6 1/4 - 6 3/4 in)	233-8350
160.3 - 168.1 mm (6 5/16 - 6 5/8 in)	216-2212
160.3 - 168.1 mm (6 5/16 - 6 5/8 in)	216-2211
163.6 - 176.3 mm (6 7/16 - 6 15/16 in)	231-3264
165.1 - 171.2 mm (6 1/2 - 6 3/4 in)	224-0808
169.93 - 182.63 mm (6 3/4 - 7 3/16 in)	233-8351
181.1 - 188.99 mm (7 1/8 - 7 7/16 in)	230-2536
184.15 - 192.02 mm (7 1/4 - 7 9/16 in)	251-4184
185.67 - 198.37 mm (7 1/4 - 7 13/16 in)	233-8482
187.45 - 195.33 mm (7 3/8 - 7 11/16 in)	231-5210
188.98 - 201.68 mm (7 7/16 - 7 15/16 in)	233-8483
196.85 - 209.55 mm (7 3/4 - 8 1/4 in)	233-8354
206.38 - 214.25 mm (8 1/8 - 8 7/16 in)	289-4013
208 - 220.7 mm (8 3/16 - 8 11/16 in)	323-3315
211.07 - 223.77 mm (8 5/16 - 8 13/16 in)	233-8484
215.9 - 228.6 mm (8 1/2 - 9 in)	254-0816
216.78 - 224.65 mm (8 17/32 - 8 27/32 in)	230-2535
222.25 - 234.95 mm (8 3/4 - 9 1/4 in)	233-8356
254 - 266.7 mm (10 - 10 1/2 in)	230-2534
265.18 - 277.88 mm (10 7/16 - 10 15/16 in)	233-8485
268.22 - 280.92 mm (10 1/2 - 11 1/16 in)	251-0039
287.66 - 307.98 mm (11 21/64 - 12 1/8 in)	232-1779
35.05 - 39.12 mm (1 3/8 - 1 1/2 in)	250-2952
36.5 - 39.6 mm (1 1/16 - 1 9/16 in)	222-6962
42.9 - 47.4 mm (1 11/16 - 1 7/8 in)	220-3246
44.5 - 49 mm (1 3/4 - 1 15/16 in)	216-1649
46 - 52.4 mm (1 13/16 - 2 1/16 in)	232-4901

Hardware

(Continued)

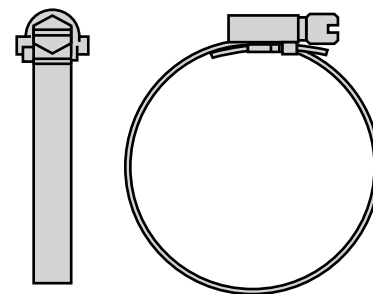
# Hose Clamps

## Hose Clamps/Wave Seal (Continued)

Working Diameter	Part Number
<b>T-Bolt Spring (Continued)</b>	
47.6 - 53.7 mm (1 7/8 - 2 1/4 in)	222-1178
49.28 - 57.15 mm (1 15/16 - 2 1/4 in)	296-5807
52.4 - 58.5 mm (2 1/16 - 2 5/16 in)	221-5252
54.1 - 62 mm (2 1/8 - 2 7/16 in)	215-4012
55.6 - 63.5 mm (2 3/16 - 2 1/2 in)	263-9020
55.65 - 63.45 mm (2 3/16 - 2 1/2 in)	215-4011
57.2 - 65 mm (2 1/4 - 2 9/16 in)	212-6933
57.2 - 65 mm (2 1/4 - 2 9/16 in)	214-7457
58.6 - 66.6 mm (2 9/16 - 2 5/8 in)	212-6934
58.7 - 66.5 mm (2 9/16 - 2 5/8 in)	214-7458
60.4 - 68.4 mm (2 3/8 - 2 3/4 in)	217-6885
61.9 - 69.9 mm (2 7/16 - 2 3/4 in)	223-9985
61.9 - 69.9 mm (2 7/16 - 2 3/4 in)	216-6944
63.45 - 71.45 mm (2 1/2 - 2 13/16 in)	221-8571
63.5 - 71.4 mm (3 - 2 13/16 in)	215-4013
635 - 647 mm (25 - 25 1/2 in)	313-5058
65.1 - 71.2 mm (2 9/16 - 2 13/16 in)	216-6945
68.25 - 76.25 mm (2 11/16 - 3 in)	226-0449
68.25 - 76.25 mm (2 11/16 - 3 in)	216-4983
68.3 - 78 mm (2 11/16 - 3 1/16 in)	324-3210
69.9 - 75.9 mm (2 3/4 - 3 in)	208-6054
69.9 - 77.7 mm (2 3/4 - 3 1/16 in)	320-0635
71.4 - 79.2 mm (2 13/16 - 3 1/8 in)	295-5550
71.4 - 79.2 mm (2 13/16 - 3 1/8 in)	209-4573
73.2 - 81 mm (2 7/8 - 3 3/16 in)	209-4574
74.6 - 82.5 mm (2 15/16 - 3 1/4 in)	209-4575
77.7 - 85.6 mm (3 1/16 - 3 3/8 in)	209-4577
79.5 - 87.4 mm (3 1/8 - 3 7/16 in)	208-6055
81 - 88.9 mm (3 3/16 - 3 1/2 in)	209-4578

Working Diameter	Part Number
<b>T-Bolt Spring (Continued)</b>	
82.55 - 90.45 mm (3 1/4 - 3 9/16 in)	209-4579
84.1 - 91.9 mm (3 5/16 - 3 5/8 in)	209-4580
85.9 - 93.7 mm (3 3/8 - 3 11/16 in)	209-4581
87.3 - 95.2 mm (3 7/16 - 3 3/4 in)	209-4582
90.5 - 98.4 mm (3 9/16 - 3 7/8 in)	254-5633
92.2 - 100 mm (3 5/8 - 3 15/16 in)	166-1153
93.7 - 101.6 mm (3 11/16 - 4 in)	209-4586
96.8 - 102.9 mm (3 13/16 - 4 3/64 in)	209-4588
98.4 - 104.5 mm (3 7/8 - 4 7/64 in)	209-4589
<b>Wave Liner</b>	
102 - 152 mm (4 - 6 in)	346-4792
124 - 173 mm (4 7/8 - 6 13/16 in)	342-9511
25 - 38 mm (1 - 1 1/2 in)	289-9139
27 - 35 mm (1 1/16 - 1 3/8 in)	284-3502
33 - 48 mm (1 1/4 - 1 7/8 in)	335-8254
35 - 51 mm (1 3/8 - 2 in)	280-8911
39 - 57 mm (1 1/2 - 2 1/4 in)	300-6036
39 - 59 mm (1 1/2 - 2 5/16 in)	347-3148
46 - 67 mm (1 13/16 - 2 5/8 in)	347-4163
48 - 70 mm (1 7/8 - 2 3/4 in)	314-7599
51 - 76 mm (2 - 3 in)	335-9214
56 - 83 mm (2 3/16 - 3 1/4 in)	343-6821
60 - 89 mm (2 3/8 - 3 1/2 in)	347-4165
60 - 91 mm (2 3/8 - 3 9/16 in)	346-9043
69 - 102 mm (2 11/16 - 4 in)	343-1820
73 - 108 mm (2 7/8 - 4 1/4 in)	346-4789
76 - 114 mm (3 - 4 1/2 in)	346-4790
86 - 127 mm (3 3/8 - 5 in)	346-4791
94 - 140 mm (3 11/16 - 5 1/2 in)	346-4788

## Standard Hose Clamps



Working Diameter	Part Number
133 - 156 mm (5 1/4 - 6 1/8 in)	5P-0599
156 - 229 mm (6 1/8 - 9 in)	5P-0600
16 - 27 mm (5/8 - 1 1/16 in)	5D-1026
22 - 44 mm (7/8 - 1 3/4 in)	9M-7958
32 - 51 mm (1 1/4 - 2 in)	5P-2230

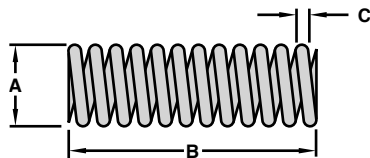
Working Diameter	Part Number
43 - 64 mm (1 11/16 - 2 1/2 in)	9M-0164
45 - 67 mm (1 3/4 - 2 5/8 in)	5P-0597
54 - 105 mm (2 1/8 - 4 1/8 in)	5P-0598
6 - 16 mm (1/4 - 5/8 in)	1P-4278
65 - 89 mm (2 9/16 - 3 1/2 in)	9M-7959
89 - 108 mm (3 1/2 - 4 1/4 in)	9M-6738

### Clamp Style Recommendations

- For low pressure joints, up to 7 PSI, a standard worm drive clamp is recommended.
- For joints with higher pressure, which does not exceed 50 PSI, a constant pressure style clamp is recommended (T-Bolt, Belleville, and Wave Liner).
- For pressure lines exceeding 50 PSI, a T-Bolt style clamp or hose assembly with crimped fittings should be used.

# Springs

## Springs/Compression



A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
<b>1/4 Inch</b>			
1/4 in	5/16 in	0.031 in	9N-1747
1/4 in	3/8 in	0.031 in	9L-9522
1/4 in	1/2 in	0.031 in	091-7106
1/4 in	9/16 in	0.031 in	3G-0670
1/4 in	3/4 in	0.031 in	7V-3827
1/4 in	13/16 in	0.031 in	090-5957
1/4 in	1 in	0.063 in	4T-7794
1/4 in	1 1/16 in	0.063 in	1V-8784
1/4 in	1 1/2 in	0.031 in	9N-4049
1/4 in	2 1/4 in	0.031 in	9N-1622
1/4 in	2 13/16 in	0.063 in	8J-9273
<b>3/8 Inch</b>			
3/8 in	1/2 in	0.031 in	6B-3364
3/8 in	9/16 in	0.063 in	7M-3801
3/8 in	5/8 in	0.031 in	7M-7446
3/8 in	3/4 in	0.031 in	3K-7217
3/8 in	1 1/4 in	0.031 in	3N-6233
3/8 in	7/8 in	0.063 in	4K-8350
3/8 in	15/16 in	0.031 in	9S-1347
3/8 in	1 1/8 in	0.031 in	9L-6422
3/8 in	1 1/2 in	0.031 in	5B-1890
3/8 in	1 5/8 in	0.031 in	6N-8793
3/8 in	1 3/4 in	0.031 in	2V-3457
3/8 in	1 7/8 in	0.063 in	6P-4993
3/8 in	2 3/16 in	0.063 in	7N-0426
3/8 in	2 1/4 in	0.031 in	2L-4403
3/8 in	2 1/2 in	0.031 in	7F-7276
3/8 in	2 5/8 in	0.094 in	2H-5062
3/8 in	3 1/8 in	0.094 in	1P-9602
3/8 in	3 3/8 in	0.094 in	7B-9411
3/8 in	3 5/8 in	0.094 in	4M-5912
3/8 in	4 in	0.031 in	034-3705
3/8 in	1 in	0.031 in	1V-9969
<b>1/2 Inch</b>			
1/2 in	5/8 in	0.031 in	6F-0967
1/2 in	1 in	0.031 in	5K-3918
1/2 in	1 1/4 in	0.031 in	5F-7464
1/2 in	1 1/2 in	0.063 in	6Y-0172

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
<b>1/2 Inch (Continued)</b>			
1/2 in	1 5/8 in	0.031 in	3C-0585
1/2 in	1 3/4 in	0.125 in	3G-7402
1/2 in	1 7/8 in	0.063 in	9M-1986
1/2 in	2 in	0.031 in	7M-7244
1/2 in	2 1/4 in	0.063 in	0L-1466
1/2 in	2 1/2 in	0.063 in	6P-7701
1/2 in	2 5/8 in	0.031 in	3N-5738
1/2 in	3 1/4 in	0.031 in	0L-1142
1/2 in	3 3/4 in	0.063 in	5B-1952
1/2 in	3 7/8 in	0.094 in	5J-9605
1/2 in	4 1/4 in	0.063 in	5B-8858
1/2 in	4 3/4 in	0.063 in	5M-6110
1/2 in	4 7/8 in	0.094 in	3T-7584
1/2 in	5 3/8 in	0.094 in	6T-1318
1/2 in	5 7/8 in	0.094 in	9S-9876
<b>5/8 Inch</b>			
5/8 in	3/8 in	0.094 in	1K-7039
5/8 in	1/2 in	0.063 in	6T-8234
5/8 in	5/8 in	0.031 in	9N-6249
5/8 in	1 in	0.188 in	6B-3416
5/8 in	1 1/8 in	0.094 in	6S-8736
5/8 in	1 1/4 in	0.094 in	9M-3091
5/8 in	1 1/2 in	0.063 in	5B-3754
5/8 in	1 13/16 in	0.063 in	3F-8845
5/8 in	1 7/8 in	0.094 in	4F-9503
5/8 in	2 in	0.094 in	9W-1467
5/8 in	2 1/8 in	0.063 in	2P-5700
5/8 in	2 1/2 in	0.063 in	2F-5889
5/8 in	2 3/4 in	0.063 in	4F-6145
5/8 in	3 1/8 in	0.094 in	4J-4051
5/8 in	3 1/4 in	0.063 in	1W-6077
5/8 in	3 3/8 in	0.125 in	3P-7566
5/8 in	3 1/2 in	0.063 in	6P-9784
5/8 in	3 3/4 in	0.125 in	4T-4033
5/8 in	4 3/8 in	0.094 in	2P-4498
5/8 in	4 1/2 in	0.125 in	9T-1676
5/8 in	2 1/4 in	0.063 in	5J-1787

## Springs/Compression (Continued)

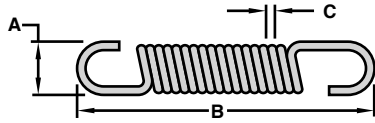
A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
<b>3/4 Inch</b>			
3/4 in	7/8 in	0.031 in	4T-2684
3/4 in	1 in	0.125 in	6F-4294
3/4 in	1 3/8 in	0.031 in	3N-7848
3/4 in	1 1/2 in	0.094 in	7M-3496
3/4 in	1 5/8 in	0.125 in	5F-2201
3/4 in	2 in	0.063 in	5F-9035
3/4 in	2 1/4 in	0.094 in	7G-5378
3/4 in	2 3/8 in	0.125 in	9S-8237
3/4 in	2 1/2 in	0.125 in	1K-4476
3/4 in	2 5/8 in	0.125 in	3D-2777
3/4 in	2 7/8 in	0.063 in	8F-3398
3/4 in	3 in	0.156 in	1K-9105
3/4 in	3 1/8 in	0.094 in	6H-1649
3/4 in	3 3/8 in	0.094 in	5H-7473
3/4 in	3 5/8 in	0.094 in	1U-1067
3/4 in	3 7/8 in	0.063 in	2H-6117
3/4 in	4 in	0.125 in	1S-5646
3/4 in	4 1/4 in	0.094 in	9F-6092
3/4 in	4 1/2 in	0.031 in	9T-8208
3/4 in	4 7/8 in	0.094 in	2S-6538
<b>7/8 Inch</b>			
7/8 in	7/16 in	0.063 in	3P-8042
7/8 in	15/16 in	0.063 in	9P-9211
7/8 in	1 3/16 in	0.094 in	8J-6080
7/8 in	2 in	0.094 in	9S-8632
7/8 in	2 3/16 in	0.094 in	9H-4204
7/8 in	2 1/8 in	0.125 in	4M-6012
7/8 in	2 3/8 in	0.125 in	1W-9860
7/8 in	3 in	0.125 in	5N-3015
7/8 in	3 1/8 in	0.125 in	3P-0246
7/8 in	3 3/8 in	0.125 in	1W-2208
7/8 in	3 1/2 in	0.125 in	9L-9243
7/8 in	4 3/8 in	0.063 in	5M-6111
7/8 in	4 1/2 in	0.094 in	6K-4302
7/8 in	4 5/8 in	0.125 in	6B-8809
7/8 in	5 3/8 in	0.156 in	4D-7637
7/8 in	5 1/2 in	0.094 in	7M-1405
7/8 in	5 5/8 in	0.156 in	5D-6293
7/8 in	5 15/16 in	0.094 in	4H-1221
7/8 in	6 1/16 in	0.125 in	4D-9469
7/8 in	7 1/4 in	0.125 in	7D-6198

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
<b>1 Inch</b>			
1 in	5/8 in	0.063 in	9T-1699
1 in	7/8 in	0.125 in	7W-2110
1 in	1 in	0.094 in	7V-0444
1 in	1 1/8 in	0.094 in	9P-8308
1 in	1 1/4 in	0.094 in	6T-7221
1 in	1 3/8 in	0.094 in	7J-0736
1 in	1 1/2 in	0.125 in	1P-0620
1 in	1 5/8 in	0.063 in	4N-5663
1 in	1 3/4 in	0.125 in	1S-7592
1 in	1 7/8 in	0.063 in	9F-1993
1 in	2 in	0.094 in	2S-8398
1 in	2 1/8 in	0.125 in	9T-2168
1 in	2 1/4 in	0.156 in	8H-9488
1 in	2 3/8 in	0.094 in	2J-0075
1 in	2 1/2 in	0.125 in	7W-7700
1 in	2 5/8 in	0.125 in	3V-5498
1 in	2 3/4 in	0.094 in	8J-3819
1 in	2 7/8 in	0.125 in	6L-2084
1 in	3 in	0.094 in	4J-7066
1 in	3 1/8 in	0.094 in	5J-3719
1 in	3 1/4 in	0.094 in	8J-1705
1 in	3 3/8 in	0.188 in	039-8820
1 in	3 1/2 in	0.156 in	9T-1848
1 in	3 3/4 in	0.094 in	5J-3419
1 in	4 in	0.063 in	4B-4910
1 in	4 1/8 in	0.063 in	1L-1098
1 in	4 1/4 in	0.156 in	6L-4173
1 in	4 1/2 in	0.156 in	9J-5002
1 in	4 3/4 in	0.094 in	8J-6728
1 in	4 7/8 in	0.125 in	5M-5526
1 in	5 in	0.063 in	3L-4521
1 in	5 1/4 in	0.094 in	8J-5839
1 in	5 3/8 in	0.188 in	8M-1955
1 in	5 1/2 in	0.188 in	6N-1320
1 in	5 5/8 in	0.156 in	4M-0804
1 in	6 1/8 in	0.156 in	2S-2760
1 in	6 1/4 in	0.094 in	4F-6446
1 in	6 1/2 in	0.125 in	6D-0314
1 in	6 7/8 in	0.125 in	5M-7884



# Springs

## Springs/Extension



A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
<b><math>\frac{5}{16}</math> Inch</b>			
$\frac{5}{16}$ in	$2 \frac{13}{32}$ in	0.031 in	038-8415
$\frac{5}{16}$ in	1 in	0.094 in	039-9138
$\frac{5}{16}$ in	$1 \frac{7}{16}$ in	0.031 in	1A-3540
$\frac{5}{16}$ in	$1 \frac{11}{16}$ in	0.031 in	3C-0481
$\frac{5}{16}$ in	$1 \frac{1}{4}$ in	0.035 in	7F-7613
<b><math>\frac{3}{8}</math> Inch</b>			
$\frac{3}{8}$ in	$1 \frac{1}{2}$ in	0.063 in	1A-1376
$\frac{3}{8}$ in	$4 \frac{9}{32}$ in	0.047 in	5H-4291
$\frac{3}{8}$ in	$1 \frac{5}{8}$ in	0.063 in	7L-4563
<b><math>\frac{1}{2}</math> Inch</b>			
$\frac{1}{2}$ in	$1 \frac{1}{2}$ in	0.063 in	090-3006
$\frac{1}{2}$ in	2 in	0.063 in	1A-0302
$\frac{1}{2}$ in	$1 \frac{1}{4}$ in	0.063 in	8L-8491
<b><math>\frac{9}{16}</math> Inch</b>			
$\frac{9}{16}$ in	$4 \frac{1}{4}$ in	0.063 in	2R-0416
$\frac{9}{16}$ in	$1 \frac{5}{8}$ in	0.063 in	5M-9708
<b><math>\frac{5}{8}</math> Inch</b>			
$\frac{5}{8}$ in	$2 \frac{1}{8}$ in	0.063 in	001-2809
$\frac{5}{8}$ in	$2 \frac{7}{8}$ in	0.031 in	001-2810
$\frac{5}{8}$ in	4 in	0.063 in	001-2811
$\frac{5}{8}$ in	$1 \frac{3}{8}$ in	0.063 in	9F-0965
<b><math>\frac{11}{16}</math> Inch</b>			
$\frac{11}{16}$ in	4 in	0.094 in	1D-1313
$\frac{11}{16}$ in	6 in	0.094 in	7D-5289
<b><math>\frac{3}{4}</math> Inch</b>			
$\frac{3}{4}$ in	$2 \frac{5}{32}$ in	0.063 in	1A-8189
<b><math>\frac{25}{32}</math> Inch</b>			
$\frac{25}{32}$ in	$3 \frac{3}{4}$ in	0.094 in	1F-4449
<b><math>\frac{7}{8}</math> Inch</b>			
$\frac{7}{8}$ in	2 in	0.094 in	2D-9871
$\frac{7}{8}$ in	$3 \frac{1}{8}$ in	0.125 in	5G-1684
$\frac{7}{8}$ in	4 in	0.125 in	7G-1251
$\frac{7}{8}$ in	$2 \frac{1}{4}$ in	0.125 in	8L-5917
$\frac{7}{8}$ in	$3 \frac{1}{4}$ in	0.094 in	8Y-4581
$\frac{7}{8}$ in	$3 \frac{13}{16}$ in	0.094 in	9S-1312
<b>1 Inch</b>			
1 in	4 in	0.094 in	009-2445
1 in	$5 \frac{1}{8}$ in	0.094 in	035-7877
1 in	$5 \frac{3}{8}$ in	0.156 in	038-2805
<b><math>1 \frac{3}{16}</math> Inch</b>			
$1 \frac{3}{16}$ in	$6 \frac{1}{2}$ in	0.156 in	091-7881
$1 \frac{3}{16}$ in	$5 \frac{3}{8}$ in	0.125 in	091-7882
$1 \frac{3}{16}$ in	$5 \frac{5}{32}$ in	0.156 in	9P-9185

## Springs Extension/Crossover Loop

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
1 1/16 in	8 3/4 in	0.105 in	Crossover Loop	360	9H-6700
1 3/32 in	5 13/32 in	0.091 in	Crossover Loop	360	5K-5697
49/64 in	8 29/64 in	0.091 in	Crossover Loop	180	4M-4014
1 in	7 1/2 in	0.120 in	Crossover Loop	90	4B-6493
3/4 in	4 17/64 in	0.091 in	Crossover Loop	360	1M-0437
1 1/2 in	7 in	0.148 in	Crossover Loop	360	119-0952

## Springs Extension/Machine Hook

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
1 1/4 in	5 1/2 in	0.162 in	Machine Hook	180	149-2065
15/32 in	2 5/8 in	0.048 in	Machine Hook	90	4F-6123
15/32 in	2 1/16 in	0.047 in	Machine Hook	180	9D-1058
31/64 in	1 1/4 in	0.059 in	Machine Hook	180	8L-8491
1/2 in	2 61/64 in	0.072 in	Machine Hook	360	1S-6889
1/2 in	5 29/64 in	0.058 in	Machine Hook	360	9L-6626
1/2 in	2 3/4 in	0.048 in	Machine Hook	90	3W-6485
17/32 in	1 9/16 in	0.047 in	Machine Hook	90	8P-2290
9/16 in	1 5/8 in	0.072 in	Machine Hook	180	5M-9708
9/16 in	3 7/8 in	0.055 in	Machine Hook	180	203-7559
1 5/8 in	5 27/32 in	0.207 in	Machine Hook	360	4E-8340
25/32 in	3 13/64 in	0.024 in	Machine Hook	180	8Y-4581
51/64 in	3 7/64 in	0.207 in	Machine Hook	180	8W-2823
3/4 in	3 15/32 in	0.079 in	Machine Hook	180	159-9875
13/16 in	2 23/64 in	0.069 in	Machine Hook	180	176-2447
7/8 in	4 1/8 in	0.120 in	Machine Hook	180	7G-1251
7/8 in	2 61/64 in	0.135 in	Machine Hook	360	318-9461
7/8 in	5 1/4 in	0.120 in	Machine Hook	360	1H-2348
1 in	5 17/64 in	0.120 in	Machine Hook	360	9R-1587
1 in	5 1/2 in	0.115 in	Machine Hook	180	141-6343
1 3/32 in	3 in	0.091 in	Machine Hook	180	6K-1898
1 3/32 in	3 1/8 in	0.160 in	Machine Hook	360	194-7034
1 1/8 in	4 7/8 in	0.148 in	Machine Hook	360	9D-2641
1 1/8 in	11 in	0.135 in	Machine Hook	90	6K-1961
1 5/32 in	4 59/64 in	0.157 in	Machine Hook	90	090-8612
1 5/32 in	5 5/32 in	0.162 in	Machine Hook	180	9P-9185
1 3/16 in	5 11/32 in	0.138 in	Machine Hook	180	296-5446
1 1/4 in	6 5/16 in	0.162 in	Machine Hook	360	2J-2664
1 19/64 in	6 1/64 in	0.234 in	Machine Hook	360	103-4867
1 19/64 in	2 25/32 in	0.156 in	Machine Hook	360	111-3780
1 11/32 in	6 3/4 in	0.162 in	Machine Hook	360	7B-5594
1 13/32 in	12 1/2 in	0.156 in	Machine Hook	90	5H-6044
1 5/8 in	10 3/16 in	0.187 in	Machine Hook	90	4F-2943
9/16 in	2 1/8 in	0.076 in	Machine Hook	90	2G-3765
9/16 in	2 11/32 in	0.072 in	Machine Hook	360	2P-3682
37/64 in	2 9/16 in	0.098 in	Machine Hook	360	4M-8799
5/8 in	2 19/64 in	0.091 in	Machine Hook	180	2S-1381
21/32 in	3 5/16 in	0.120 in	Machine Hook	90	6W-5817

(Continued)

# Springs

## Springs Extension/Machine Hook (Continued)

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
$1\frac{1}{16}$ in	$1\frac{43}{64}$ in	0.062 in	Machine Hook	180	3B-9762
$1\frac{1}{16}$ in	$3\frac{15}{16}$ in	0.091 in	Machine Hook	180	1D-1313
$1\frac{1}{16}$ in	2 in	0.076 in	Machine Hook	360	8M-1019
$1\frac{1}{16}$ in	2 in	0.078 in	Machine Hook	360	8C-3442
$1\frac{1}{16}$ in	$4\frac{3}{4}$ in	0.091 in	Machine Hook	90	8D-8456
$1\frac{1}{16}$ in	6 in	0.091 in	Machine Hook	180	7D-5289
$\frac{45}{64}$ in	$1\frac{29}{32}$ in	0.063 in	Machine Hook	90	3Y-2806
$\frac{23}{32}$ in	$2\frac{9}{32}$ in	0.080 in	Machine Hook	90	1U-1648
$\frac{3}{4}$ in	$7\frac{1}{2}$ in	0.331 in	Machine Hook	90	7G-6942
$\frac{15}{16}$ in	$3\frac{27}{32}$ in	0.438 in	Machine Hook	360	3W-4324
2 in	$11\frac{33}{64}$ in	0.263 in	Machine Hook	360	125-5071
$2\frac{1}{8}$ in	13 in	0.283 in	Machine Hook	180	344-6306
$2\frac{1}{2}$ in	$9\frac{1}{16}$ in	0.225 in	Machine Hook	180	6G-0254
3 in	$19\frac{11}{16}$ in	0.394 in	Machine Hook	90	229-0108
$\frac{9}{16}$ in	3 in	0.062 in	Machine Hook	90	9L-7372
$\frac{9}{16}$ in	$4\frac{1}{4}$ in	0.063 in	Machine Hook	180	106-0070

## Springs Extension/Machine Loop

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
$\frac{3}{4}$ in	$5\frac{1}{4}$ in	0.080 in	Machine Loop	90	7D-9722
$\frac{1}{2}$ in	$1\frac{39}{64}$ in	0.062 in	Machine Loop	90	4H-3521
$\frac{1}{2}$ in	2 in	0.062 in	Machine Loop	180	1A-0302
$\frac{5}{8}$ in	$3\frac{3}{4}$ in	0.080 in	Machine Loop	360	4M-1768
$\frac{5}{8}$ in	$4\frac{1}{16}$ in	0.080 in	Machine Loop	360	4S-8569
$\frac{21}{32}$ in	$5\frac{13}{32}$ in	0.072 in	Machine Loop	360	5N-5291
$1\frac{5}{32}$ in	$4\frac{29}{32}$ in	0.157 in	Machine Loop	90	300-0541

## Hardware Bin Kits

Thirteen different Hardware Bin Kits are available for customers who want to stock hardware bins for their service departments and/or service vehicles with various quantities of popular sizes of Cat bolts, nuts and washers. Kits available:

Part Number	Thread	Coating	Contains	Pieces	Bolt Head
222-9996	Inch - Coarse	Phosphate and Oil	38 Part Numbers	1420	12-Point
222-9997	Inch - Fine	Phosphate and Oil	40 Part Numbers	1570	12-Point
222-9998	Inch - Coarse	Zinc Dichromate	59 Part Numbers	2175	Hex
222-9999	Inch - Coarse	Zinc Dichromate	38 Part Numbers	1520	Hex
223-0000	Metric - Coarse	Phosphate and Oil	56 Part Numbers	1965	Hex
223-0001	Metric - Coarse	Zinc Dichromate	56 Part Numbers	1985	Hex
223-0002	Metric - Coarse	Zinc Dichromate	38 Part Numbers	1510	Hex
223-0003	Inch - Coarse	Phosphate and Oil	38 Part Numbers	1420	Socket
223-0004	Metric - Coarse	Phosphate and Oil	38 Part Numbers	1420	Socket
3E-6640	Inch - Coarse	Phosphate and Oil	59 Part Numbers	1735	Hex
3E-9420	Inch - Coarse	Phosphate and Oil	38 Part Numbers	1975	Hex
3E-9421	Inch - Fine	Phosphate and Oil	38 Part Numbers	1650	Hex
3E-9422	Metric - Coarse	Phosphate and Oil	38 Part Numbers	1580	Hex

## Hardware Shop and Field Kits

Five different Hardware Shop/Field Kits are available for small repair shops or field service vehicles. Kits contain assortments of popular sizes of Cat bolts with matching washers and nuts, in phosphate and oil coatings. The hardware is packaged in a rugged metal box with hinged metal cover and latch. Inch Hardware Kits come in two sizes, small and large, depending on the quantity of hardware in the kit. Kits available:

Part Number	Thread	Coating	Size	Contains	Pieces
178-2207	Inch - Fine	Phosphate and oil	Large	24 Part Numbers	476
178-2208	Inch - Fine	Phosphate and oil	Small	29 Part Numbers	894
178-2209	Inch - Coarse	Phosphate and oil	Small	27 Part Numbers	502
178-2210	Inch - Coarse	Phosphate and oil	Large	34 Part Numbers	936
178-2211	Metric - Coarse	Phosphate and oil	Small	32 Part Numbers	630

# Convenient Hardware Packages

## Convenient Hardware Packages



- Hardware packaged in resealable plastic clamshell packages
- Product includes inch and metric bolts, nuts, washers, hose clamps, cable ties, electrical fuses, and cotter pins
- Smaller easy-to-use packages offer convenience for the service technician

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0188	¼ -20 × ½ in Hex Head Bolt	50	0S-1614
247-0189	¼ -20 × ¾ in Hex Head Bolt	50	0S-1615
247-0190	¼ -20 × 1 in Hex Head Bolt	50	0S-1616
247-0191	¼ -20 × 1 ¼ in Hex Head Bolt	50	7B-2742
247-0192	¼ -20 × 1 ½ in Hex Head Bolt	25	9F-7022
247-0193	¼ -20 × 1 ¾ in Hex Head Bolt	25	1B-2713
247-0194	¼ -20 × 2 in Hex Head Bolt	25	8B-2377
247-0195	¼ -20 × 2 ¼ in Hex Head Bolt	25	1D-4533
247-0196	¼ -20 × 2 ½ in Hex Head Bolt	25	1B-2714
247-0197	¼ -20 × 2 ¾ in Hex Head Bolt	25	2A-4781
247-0198	¼ -20 × 3 in Hex Head Bolt	25	4B-9365
247-0199	¼ in Hard Washer	25	5P-0537
247-0200	¼ in Lock Washer	100	3B-4504
247-0201	¼ -20 Full Nut	50	9S-8750
247-0202	⅝ <sub>16</sub> -18 × ½ in Hex Head Bolt	50	1C-0569
247-0203	⅝ <sub>16</sub> -18 × ¾ in Hex Head Bolt	50	0S-1617
247-0204	⅝ <sub>16</sub> -18 × 1 in Hex Head Bolt	25	0S-1618
247-0205	⅝ <sub>16</sub> -18 × 1 ¼ in Hex Head Bolt	25	1B-7182
247-0206	⅝ <sub>16</sub> -18 × 1 ½ in Hex Head Bolt	25	1A-9579

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0207	⅝ <sub>16</sub> -18 × 1 ¾ in Hex Head Bolt	25	1B-9575
247-0208	⅝ <sub>16</sub> -18 × 2 in Hex Head Bolt	25	2B-2694
247-0209	⅝ <sub>16</sub> -18 × 2 ¼ in Hex Head Bolt	25	1D-4538
247-0210	⅝ <sub>16</sub> -18 × 2 ½ in Hex Head Bolt	25	1D-4539
247-0211 <sup>1</sup>	⅝ <sub>16</sub> -18 × 2 ¾ in Hex Head Bolt	25	1D-4540
247-0212	⅝ <sub>16</sub> -18 × 3 in Hex Head Bolt	10	1D-4541
247-0213	⅝ <sub>16</sub> in Hard Washer	25	9M-1974
247-0214	⅝ <sub>16</sub> in Lock Washer	100	3B-4505
247-0215	⅝ <sub>16</sub> -18 Full Nut	50	5S-0003
247-0216	⅜ -16 × ½ in Hex Head Bolt	50	4F-4879
247-0217 <sup>1</sup>	⅜ -16 × ¾ in Hex Head Bolt	25	0S-0509
247-0218	⅜ -16 × 1 in Hex Head Bolt	25	0S-1594
247-0219 <sup>1</sup>	⅜ -16 × 1 ¼ in Hex Head Bolt	25	0S-1588
247-0220	⅜ -16 × 1 ½ in Hex Head Bolt	25	0S-1591
247-0221	⅜ -16 × 1 ¾ in Hex Head Bolt	25	0S-1571
247-0222	⅜ -16 × 2 in Hex Head Bolt	25	0S-1590
247-0223 <sup>1</sup>	⅜ -16 × 2 ¼ in Hex Head Bolt	10	0L-2070
247-0224	⅜ -16 × 2 ½ in Hex Head Bolt	10	0L-1143
247-0225	⅜ -16 × 2 ¾ in Hex Head Bolt	10	0T-0573

Convenient Hardware Packages (Continued)

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0226	3/8 -16 x 3 in Hex Head Bolt	10	0S-1619
247-0227	3/8 in Hard Washer	25	5M-2894
247-0228 <sup>1</sup>	3/8 in Lock Washer	100	3B-4506
247-0229 <sup>1</sup>	3/8 -16 Full Nut	50	9S-8752
247-0230	1/2 -13 x 1/2 in Hex Head Bolt	25	1K-6705
247-0231	1/2 -13 x 3/4 in Hex Head Bolt	25	0S-1620
247-0232	1/2 -13 x 1 in Hex Head Bolt	25	0S-1621
247-0233	1/2 -13 x 1 1/4 in Hex Head Bolt	10	0S-1595
247-0234	1/2 -13 x 1 1/2 in Hex Head Bolt	10	0S-1585
247-0235	1/2 -13 x 1 3/4 in Hex Head Bolt	10	0S-1587
247-0236	1/2 -13 x 2 in Hex Head Bolt	10	1A-1460
247-0237	1/2 -13 x 2 1/4 in Hex Head Bolt	5	2B-0947
247-0238	1/2 -13 x 2 1/2 in Hex Head Bolt	5	9S-1366
247-0239	1/2 -13 x 2 3/4 in Hex Head Bolt	5	1A-5822
247-0240	1/2 -13 x 3 in Hex Head Bolt	5	0L-1329
247-0241	1/2 in Hard Washer	25	5P-8245
247-0242	1/2 in Lock Washer	50	3B-4508
247-0243	1/2 -13 Full Nut	25	1F-7958
247-0244 <sup>1</sup>	5/8 -11 x 3/4 in Hex Head Bolt	10	1H-9456
247-0245	5/8 -11 x 1 in Hex Head Bolt	10	0S-1624
247-0246	5/8 -11 x 1 1/4 in Hex Head Bolt	10	0S-1592
247-0247 <sup>1</sup>	5/8 -11 x 1 1/2 in Hex Head Bolt	5	0S-1566
247-0248	5/8 -11 x 1 3/4 in Hex Head Bolt	5	0S-1589
247-0249	5/8 -11 x 2 in Hex Head Bolt	5	1A-1135
247-0250 <sup>1</sup>	5/8 -11 x 2 1/4 in Hex Head Bolt	5	8S-9092
247-0251	5/8 -11 x 2 1/2 in Hex Head Bolt	5	0S-1625

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0252 <sup>1</sup>	5/8 -11 x 2 3/4 in Hex Head Bolt	5	1A-8537
247-0253 <sup>1</sup>	5/8 -11 x 3 in Hex Head Bolt	5	1B-4367
247-0254 <sup>1</sup>	5/8 in Hard Washer	10	5P-8247
247-0255 <sup>1</sup>	5/8 in Lock Washer	25	3B-4510
247-0256 <sup>1</sup>	5/8 -11 Full Nut	10	4K-0367
247-0583 <sup>1</sup>	M6 x 1, 12 mm, Hex Head Bolt	50	8T-0639
247-0584	M6 x 1, 16 mm, Hex Head Bolt	50	6V-8837
247-0585 <sup>1</sup>	M6 x 1, 20 mm, Hex Head Bolt	50	6V-8214
247-0586 <sup>1</sup>	M6 x 1, 25 mm, Hex Head Bolt	50	6V-8490
247-0587 <sup>1</sup>	M6 x 1, 30 mm, Hex Head Bolt	25	8T-0640
247-0588 <sup>1</sup>	M6 x 1, 35 mm, Hex Head Bolt	50	6V-2315
247-0589 <sup>1</sup>	M6 x 1, 40 mm, Hex Head Bolt	25	2W-9499
247-0590 <sup>1</sup>	M6 x 1, 45 mm, Hex Head Bolt	25	6V-7728
247-0591 <sup>1</sup>	M6 x 1, 50 mm, Hex Head Bolt	25	8T-0275
247-0592	M6 Washer, Hex Head Bolt	50	9X-8267
247-0593 <sup>1</sup>	M6 x 1, Hex Nut	50	6V-8225
247-0594 <sup>1</sup>	M8 x 1.25, 16 mm, Hex Head Bolt	50	6V-5215
247-0595 <sup>1</sup>	M8 x 1.25, 20 mm, Hex Head Bolt	50	6V-5217
247-0596	M8 x 1.25, 25 mm, Hex Head Bolt	25	6V-3940
247-0597 <sup>1</sup>	M8 x 1.25, 30 mm, Hex Head Bolt	25	6V-2317
247-0598	M8 x 1.25, 35 mm, Hex Head Bolt	25	6V-5218
247-0599 <sup>1</sup>	M8 x 1.25, 40 mm, Hex Head Bolt	25	6V-5219
247-0600 <sup>1</sup>	M8 x 1.25, 45 mm, Hex Head Bolt	25	8T-0276
247-0601 <sup>1</sup>	M8 x 1.25, 50 mm, Hex Head Bolt	25	6V-3918
247-0602 <sup>1</sup>	M8 x 1.25, 60 mm, Hex Head Bolt	10	8T-0100

(Continued)

# Convenient Hardware Packages

## Convenient Hardware Packages (Continued)

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0603 <sup>1</sup>	M8 × 1.25, 70 mm, Hex Head Bolt	10	5P-8347
247-0604 <sup>1</sup>	M8 Washer	25	9M-1974
247-0605 <sup>1</sup>	M8 × 1.25, Hex Nut	50	5P-7970
247-0606 <sup>1</sup>	M10 × 1.5, 20 mm, Hex Head Bolt	25	6V-6317
247-0607 <sup>1</sup>	M10 × 1.5, 25 mm, Hex Head Bolt	25	6V-4248
247-0608	M10 × 1.5, 30 mm, Hex Head Bolt	25	6V-1820
247-0609 <sup>1</sup>	M10 × 1.5, 35 mm, Hex Head Bolt	25	6V-3822
247-0610	M10 × 1.5, 40 mm, Hex Head Bolt	10	6V-5842
247-0611	M10 × 1.5, 45 mm, Hex Head Bolt	10	6V-5843
247-0612	M10 × 1.5, 50 mm, Hex Head Bolt	10	6V-4249
247-0613 <sup>1</sup>	M10 × 1.5, 60 mm, Hex Head Bolt	10	6V-5230
247-0614 <sup>1</sup>	M10 × 1.5, 65 mm, Hex Head Bolt	10	8T-5035
247-0615 <sup>1</sup>	M10 × 1.5, 70 mm, Hex Head Bolt	10	6V-7981
247-0616	M10 Washer	25	6V-5839
247-0617	M10 × 1.50, Hex Nut	25	2Y-5829
247-0618 <sup>1</sup>	M12 × 1.75, 20 mm, Hex Head Bolt	10	8T-0293
247-0619 <sup>1</sup>	M12 × 1.75, 25 mm, Hex Head Bolt	25	6A-5591
247-0620 <sup>1</sup>	M12 × 1.75, 30 mm, Hex Head Bolt	10	6V-3668
247-0621 <sup>1</sup>	M12 × 1.75, 35 mm, Hex Head Bolt	10	6V-8675
247-0622	M12 × 1.75, 40 mm, Hex Head Bolt	10	6V-8197
247-0623	M12 × 1.75, 45 mm, Hex Head Bolt	10	6V-5684
247-0624	M12 × 1.75, 50 mm, Hex Head Bolt	10	6V-7673

Retail Package Part No.	Description	Consists of:	
		Retail Pkg. Qty.	Bulk Part No.
247-0625 <sup>1</sup>	M12 × 1.75, 60 mm, Hex Head Bolt	5	6V-3823
247-0626	M12 Washer	25	5P-8245
247-0627 <sup>1</sup>	M12 × 1.75, Hex Nut	25	6V-8149
247-0698 <sup>1</sup>	Hose Clamp 54 mm — 105 mm	2	5P-0598
247-0699 <sup>1</sup>	Hose Clamp 60 mm — 82 mm	2	5P-4868
247-0700 <sup>1</sup>	Hose Clamp 45 mm — 67 mm	2	5P-0597
247-0701 <sup>1</sup>	Hose Clamp 16 mm — 27 mm	5	5D-1026
247-0702	Hose Clamp 6 mm — 16 mm	6	1P-4278
247-0703 <sup>1</sup>	Hose Clamp 108 mm — 130 mm	2	5P-1717
247-0717	Cotter Pin ½ in × 1 in Lg	50	3B-4617
247-0718 <sup>1</sup>	Cotter Pin ½ in × ¾ in Lg	50	3B-4615
247-0719 <sup>1</sup>	Cotter Pin ⅜ in × ½ in Lg	50	3B-4607
247-0720 <sup>1</sup>	Cotter Pin ½ in × 2 in Lg	50	3B-4621
247-0721 <sup>1</sup>	Cotter Pin ½ in × 1 ¼ in Lg	50	3B-4618
247-0749 <sup>1</sup>	Fuse (10 Amp)	5	3K-8782
247-0750 <sup>1</sup>	Fuse (15 Amp)	5	8M-8948
247-0751	Fuse (20 Amp)	5	8M-0456
247-0752	Mini Fuse (10 Amp)	5	113-8490
247-0753 <sup>1</sup>	Mini Fuse (15 Amp)	5	113-8491
247-0754	Mini Fuse (20 Amp)	5	113-8492
247-0755 <sup>1</sup>	Mini Fuse (25 Amp)	5	113-8493
247-0762	Cable Strap 170.2 mm (6.7 in) long 4.9 mm (0.194 in) wide	20	3S-2093
247-0763 <sup>1</sup>	Cable Strap 355.6 mm (14 in) long 4.9 mm (0.194 in) wide	10	6K-0806
247-0764 <sup>1</sup>	Cable Strap 355.6 mm (14 in) long 7.9 mm (0.310 in) wide	10	7K-1181

<sup>1</sup>Not available for individual sale

**Check-a-Thread**

- Quickly identifies hardware thread diameter and pitch
- Four holes on mounting base for easy attachment to retail parts counter, service shop tool crib, or field service truck

Dimensions (L x H x W)	609 m (24 in) x 101 mm (4 in) x 76 mm (3 in)
Metric:	
Media literature number	250-6866
Range	16 mm-2.0 to 4 mm-0.7
No. of bolt sizes	15
Inch:	
Media literature number	250-6865
Range	3/4-16 to #6-32
No. of bolt sizes	21
Sheet metal/wood screw sizes	5









**OPERATOR ENVIRONMENT**

## Cat® Self-Adjusting Back-Up Alarm; Additional Tonal Alarms Available

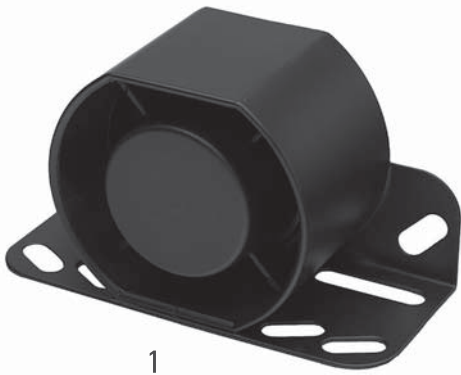
Caterpillar offers a versatile Self-Adjusting Back-Up Alarm for changing work environments. The Self-Adjusting alarm uses the ambient sound pressure level as an input and produce 5 dB(A) increased sound pressure output, the decibel range is 87 dB(A) to 112 dB(A). Additionally, the Three-in-One Back-Up Alarm is a manual adjustment to be used in various environments utilizing 97, 107, and 112 dB(A) settings.

Cat® Back-Up Tonal Alarms are available for use in all applications as a way to warn and alert others of reverse vehicle movement. The tonal alarm is a customer preferred type of alarm, versus other non-tonal alarms, to be used in extreme working conditions. These tonal alarms alert individuals near the reverse moving vehicle as well as operators in adjacent machines. Workers with ear protection tend to respond better to tonal type alarms while in the vicinity on the job site.

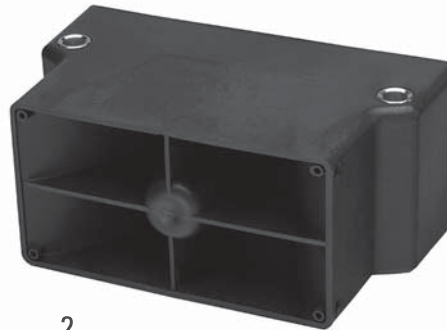
Cat® Back-Up Alarms are rugged and provide rear moving vehicle awareness to immediate workers and individuals nearby to the job sites as a way to reduce risk of injury or incidents.

Caterpillar's complete line of Alarms is approved by MSHA and has passed Caterpillar engineering testing.

The voltage range for the alarms is 12 to 24 VDC.



1



2

### Back-Up Alarm Part Numbers

Back-Up Alarms							
Item	Part Number	Decibel dB(A)	Light Duty	Medium Duty	Heavy Duty	Mounting Hole Distance	Connection Type
1	267-2145	87-112	--	--	X	79-159 mm <sup>1</sup>	Deutsche
2	244-1090	97, 107, 112	--	--	X	152.4 mm <sup>2</sup>	Deutsche
--	213-9100	112	--	--	X	79-159 mm	Deutsche
--	220-0229	107	--	--	X	79-159 mm	Deutsche
--	300-9546	107	X	--	--	76.2-82.6 mm	Deutsche
--	170-0950	97	X	--	--	76.2-82.6 mm	Studs
--	154-5428	97	--	X	--	96-112.8 mm	Deutsche
--	161-2539	102	X	--	--	76.2-82.6 mm	Studs
--	220-0230	97	--	--	X	79-159 mm	Deutsche

<sup>1</sup> Self-Adjusting alarm, reverse mounted speaker

<sup>2</sup> Three optional alarm settings in one alarm

## Back-Up Alarm Features

- Multiple decibel offerings, 87 dB(A) up to and including 112 dB(A)
- Alarms are reverse polarity protected
- Alarms are protected against voltage transients
- SAE J994 approved
- Sealed electronics are protected from dust, vibration, and moisture
- Easy installation and secure mounting
- Designed for all commercial applications
- Current draw less than 1.0 Amp

## Cat® Work Lights

When you're working against the clock, Cat® Work Lights help turn night into day and increase productivity of both machines and operators in a wide range of applications. Premium Cat Work Lights are designed to meet the demanding vibration levels of both large and small machines, offering long life and low maintenance costs. Well-lit work areas also increase operator safety and well...all at prices designed to fit any operating budget. Count on highly reliable Cat Work Lights to light up your job site — and make time work for you.

## High Intensity Gas Discharge (HID) Lights

High Intensity Gas Discharge Work Lights from Caterpillar increase productivity of both machines and operators in high-hour (6,000 to 10,000 hr.), around-the-clock or extended night operations. Cat HID Work Lights are built to handle tough jobs efficiently, producing the equivalent of several halogen lights with the same wattage for exterior floodlighting. HID lights generate less heat, resist vibration and shock better, use less power consumption, and last longer than halogen lights. Your operators will work more safely and efficiently in a work area widely illuminated by the "daylight" color that Cat HID Work Lights produce. Mounting and electrical connections are the same as halogens.

- Life expectancy six to ten times that of halogen lamp
- Two times more light than a halogen lamp
- Bulb can be serviced
- Light color close to true daylight
- Safety of internal ballast



Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
<b>5" x 5" HID Bright Lights<sup>1</sup></b>							
359-3428	Low Beam	290-8160	Vertical	229-9970	24	319-7384	Integral DT
359-3429	Low Beam	290-8160	Suspended	229-9970	24	319-7384	Integral DT
359-3427	High Beam	290-8160	Vertical	229-9971	24	319-7384	Integral DT
359-3430	High Beam	290-8160	Suspended	229-9971	24	319-7384	Integral DT
332-9402	Flood	290-8160	Suspended	277-3082	24	319-7384	Integral DT
347-9427	Flood	290-8160	Vertical	277-3082	24	319-7384	Integral DT
359-3425	Flood	290-8160	Suspended	277-3082	12	319-7383	Integral DT
359-3426	Flood	290-8160	Vertical	277-3082	12	319-7383	Integral DT
<b>3" x 3" HID Lights</b>							
319-7381	Long Range	290-8160	Suspended	291-2941	24	319-7384	Integral DT
319-7382	Trapezoid	290-8160	Suspended	291-2942	24	319-7384	Integral DT
319-7377	Flood	290-8160	Vertical	291-2943	12	319-7383	Integral DT
319-7378	Flood	290-8160	Suspended	291-2943	12	319-7383	Integral DT
319-7379	Flood	290-8160	Suspended	291-2943	24	319-7384	Integral DT
319-7380	Flood	290-8160	Vertical	291-2943	24	319-7384	Integral DT

<sup>1</sup> These new lights have the same light output as their 70-watt counterparts, but have half the amperage draw which reduces alternator loading. A new reflector design and higher temperature arc increase light output.

(Continued)

## High Intensity Gas Discharge (HID) Lights (Continued)

Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
<b>70 mm Round HID Lights</b>							
324-3740	Flood	290-8160	Suspended	352-8986	24	319-7384	Integral DT
334-6198	Flood	290-8160	Vertical	352-8986	24	319-7384	Integral DT

## HID Bulbs

<b>HID Bulbs</b>			
Part Number	Voltage	Bulb Type	Wattage
209-6638	12/24	D2S	35W
290-8160	12/24	D1S	35W

## Shock-Resistant Halogen Lights



Versatile Cat Shock-Resistant Halogen Lights offer up to ten times improvement in bulb life versus non shock-resistant lights, contributing to lower operation costs in applications with high vibration where current bulb life is short. These lights are environmentally sealed and meet Caterpillar design specifications for resistance to water spray, water dunk and vibration.

Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Connector	Mounting Bracket
<b>5" x 5" Shock-resistant Halogen Lights</b>							
147-0319	Flood	9X-3463	Suspended	--	24	Integral DT	No
153-2073	Flood	9X-3463	Vertical	--	24	Integral DT	No
157-0305	High Beam	9X-3463	Suspended	--	24	Integral DT	No
161-0908	Low Beam	9X-3463	Suspended	--	24	Integral DT	No
161-3509	Low Beam	9X-3463	Vertical	--	24	Integral DT	No
162-3294	Flood	9X-3463	Vertical	--	24	Pigtail DT	No
164-7600	Flood	351-9918	Vertical	--	24	Integral DT	Yes
168-1953	Low Beam	9X-3463	Vertical	--	24	Pigtail DT	No
168-1960	High Beam	9X-3463	Suspended	--	24	Pigtail DT	No
171-2065	Flood	9X-3463	Suspended	--	24	Pigtail DT	No
171-2066	Low Beam	9X-3463	Suspended	--	24	Pigtail DT	No
171-2067	High Beam	9X-3463	Vertical	--	24	Pigtail DT	No
180-1300	High Beam	9X-3463	Vertical	--	24	Integral DT	No
227-5978	Flood	9X-3463	Suspended	--	24	Integral DT	Yes
227-5979	High Beam	9X-3463	Suspended	--	24	Integral DT	Yes
257-3168	Flood, Red	9X-3463	Vertical	--	24	Integral DT	No
257-3171	Flood, Amber	9X-3463	Vertical	--	24	Integral DT	No

(Continued)

## Shock-Resistant Halogen Lights (Continued)

Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Connector	Mounting Bracket
<b>3" x 3" Shock-resistant Halogen Lights</b>							
212-9347	Wide-range Flood	9W-0607	Vertical	202-6614	12	Integral DT	--
214-2968	Wide-range Flood	9W-0607	Suspended	202-6614	12	Integral DT	--
214-2969	Long-range Flood	9W-0607	Suspended	202-6611	12	Integral DT	--
219-6482	Long-range Flood	9W-0607	Vertical	202-6611	12	Integral DT	--
219-6485	Wide-range Flood	351-9918	Vertical	202-6614	24	Integral DT	--
219-6486	Long-range Flood	351-9918	Vertical	202-6611	24	Integral DT	--
254-8155	Wide-range Flood	351-9918	Suspended	202-6614	24	Integral DT	--
272-6641	Wide-range Flood	351-9918	Vertical	202-6614	24	Integral DT	--
290-5749	High Beam	351-9918	Vertical	--	24	Integral DT	--
346-9593	Long-range Flood	351-9918	Suspended	202-6614	24	Integral DT	--
384-9610	Low Beam	351-9918	Vertical	--	24	Integral DT	--
<b>Shock-resistant 70 mm Round Halogen Lights</b>							
325-4471	Wide-range Flood	351-9918	Vertical	--	24	Integral DT	--
325-4472	Wide-range Flood	351-9918	Right Hand	--	24	Integral DT	--
339-3505	Wide-range Flood	351-9918	Suspended	--	24	Integral DT	--

Operator Environment

## Halogen Bulbs

<b>Halogen Bulbs</b>			
Part Number	Voltage	Type	Wattage
290-7057	12	H7	55W
9W-0607	12	H3	55W
351-9918	24	H3	70W
9W-3324	12	H4	60/55W
9X-3465	24	H4	75/70W
9X-8118	12	H1	68W
9X-7849	24	H1	70W
113-8886	12	H11	50W
314-5728	24	H7	70W



## Cat® LED Work Lights



The Cat® LED work lights are designed for applications where high service life and durability is important. Upgrade to LED work lights to reduce owning and operating costs.

LED lights have an extremely long life, low power consumption with no in-rush current, multi voltage use (9V to 32V, 18V to 32V), high vibration resistance, water-proof, environmentally safe, and contains no bulbs. This makes the Cat LED work lights ideal for all applications.

Lumens	
3" x 3"	570 lm
4" x 4"	1900 lm
5" x 5"	2700 lm

Part Number	Lens Pattern	Mounting	Volts	Connector
<b>LED 3" x 3" Lights</b>				
386-1722	Flood Beam	Vertical/Suspend	9-32	Integral DT
386-1723	High Beam	Vertical/Suspend	9-32	Integral DT
386-1724	Reverse	Vertical/Suspend	9-32	Integral DT
<b>LED 4" x 4" Lights</b>				
383-8634	Flood Beam	Vertical/Suspend	9-32	Integral DT
386-1717	High Beam	Vertical/Suspend	9-32	Integral DT
386-1718	Low Beam	Vertical/Suspend	9-32	Integral DT
<b>LED 5" x 5" Lights</b>				
353-9420	Flood Beam	Vertical/Suspend	18-32	Integral DT
366-7803	High Beam	Vertical/Suspend	18-32	Integral DT
381-8979	Low Beam	Vertical/Suspend	18-32	Integral DT

## Light Emitting Diode (LED) Signal Lights



Designed for long life and lower maintenance costs than incandescent signal light bulbs, Cat® LED Signal Lights have a demonstrated life of 25,000 hours — that's 500 times the life of an incandescent signal bulb. LED signal lights use no filaments, so they resist high vibration, and they can be retrofitted to any (12/24 Volt) application. LED signal lights meet Cat® design specifications for resistance to water spray, water dunk and vibration, and are permanently sealed with sonic welded lenses and potted circuitry.

LED Signal Lights					
Part Number	Lens Color	Description	Mounting	Volts	Connector
334-5409	Amber	Front Turn and Park	Rectangular	12/24	Pigtail DT
135-0428	Amber	Front Turn and Park	Round	24	Pigtail DT
334-5410	Amber	Turn	Rectangular	12/24	Pigtail DT
375-0305	Blue	Speciality	Rectangular	24	Pigtail DT
252-7165	Clear	Stop/Tail/ Turn	Rectangular	12/24	Pigtail DT
321-7871	Green	Speciality	Rectangular	24	Pigtail DT
143-2014	Red	Stop and Tail	Round	24	Pigtail DT

(Continued)

## Light Emitting Diode (LED) Signal Lights (Continued)

LED Signal Lights					
Part Number	Lens Color	Description	Mounting	Volts	Connector
334-8049	Red	Stop and Tail	Rectangular	12/24	Pigtail DT
351-5587	Red/Amber	Stop/Tail/Turn	Round	24	Pigtail DT
232-6136	Red/Amber	Stop/Tail/Turn	Rectangular	24	Pigtail DT

## Value Priced Flood Lights (Non-Machine Applications)

Environmentally sealed and meets Cat® design specifications for resistance to water spray, water dunk, and vibration.



3" x 3" Value Priced Halogen Lights — Not Recommended for High Vibration Application						
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Connector
201-1422	Long-range Flood	351-9918	Suspended	202-6611	24	Integral DT
201-1423	Wide-range Flood	9W-0607	Suspended	202-6614	12	Pigtail DT
234-4323	Wide-range Flood	351-9918	Vertical	202-6614	24	Integral DT
234-4324	Long-range Flood	351-9918	Vertical	202-6611	24	Integral DT
234-4325	Wide-range Flood	351-9918	Suspended	202-6614	24	Integral DT
234-4326	Long-range Flood	351-9918	Suspended	202-6611	24	Integral DT
234-4327	Wide-range Flood	9W-0607	Vertical	202-6614	12	Integral DT
234-4328	Wide-range Flood	9W-0607	Suspended	202-6614	12	Integral DT
234-4329	Long-range Flood	9W-0607	Suspended	202-6611	12	Integral DT

## Combo Halogen/Turn Light

This is ECE approved headlight and turn signal combination light. This light provides high beam, low beam, position light and turn-signal in one package with easy one bolt mounting. This light meets Cat vibration and sealing requirements and approved for use in US, Europe, India, and Japan.



Part Number	Volts	Description	Traffic Side	Machine Side	Connector	Approval
<b>Combination Headlights: Shock Resistant</b>						
344-3455	24	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
344-3456	24	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
344-3457	24	Combination Head/Turn	LH	RH	DT rect. (6)	ECE
344-3458	24	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
344-3459	24	Combination Head/LED Turn	RH	RH	DT rect. (6)	ECE
344-3460	24	Combination Head/LED Turn	RH	LH	DT rect. (6)	ECE
<b>Combination Headlights: Non-Shock Resistant</b>						
238-2797	24	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
238-2798	24	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
243-4274	24	Combination Head/Turn	LH	RH	DT rect. (6)	ECE

(Continued)



## Combo Halogen/Turn Light (Continued)

Part Number	Volts	Description	Traffic Side	Machine Side	Connector	Approval
<b>Combination Headlights: Non-Shock Resistant (Continued)</b>						
243-4275	24	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
195-0189	12	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
195-0190	12	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
195-0191	12	Combination Head/Turn	LH	RH	DT rect. (6)	ECE
195-0192	12	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
259-9287	24	Combination Head/LED Turn	RH	LH	DT rect. (6)	ECE
259-9288	24	Combination Head/LED Turn	RH	RH	DT rect. (6)	ECE

## Rotating Beacons and Strobes



Cat® Rotating Beacons use a halogen bulb on a rotating base. Strobes are warning beacons, which use electronics to emit light using a gas tube. As with other Cat® lights, the beacons and strobes are designed to withstand high-vibration conditions and increase safety on any job site.

<b>Rotating Beacon and Strobe Lights (Amber)</b>					
Part Number	Description	Bulb	Volts	Base	Connector
108-1029	Rotating	9X-7849	24	Magnetic	Pigtail DT
118-1227	Rotating	9X-8118	12	Rubber — Pole Mnt	Single Pole Plug
130-7580	Rotating	9X-8118	12	3-Bolt	Cigarette Lighter
140-3668	Strobe	--	12-24	Magnetic	Cigarette Lighter
180-3664	Rotating	9X-8118	12	Magnetic	Pigtail DT
185-7016	Rotating	9X-8118	12	Magnetic	Pigtail DT
235-3937	Rotating	9X-7849	24	3-Bolt	Pigtail DT
275-8737	Strobe	--	10.8-32	Magnetic	Pigtail DT
284-3757	Strobe	--	12-24	3-Bolt	Pigtail DT
289-6268	Mini LED Strobe	--	9-32	2-Bolt	Pigtail DT
309-1325	Rotating	9X-8118	12	Magnetic	Cigarette Lighter
338-1132	LED Strobe — non ECE	--	9-32	3 Bolt	Pigtail DT
371-2241	LED Strobe — ECE	--	9-32	3-Bolt	Pigtail DT
378-6901	LED Strobe — ECE	--	9-32	Magnetic	Pigtail DT
382-2746	LED Strobe — Blue	--	9-32	3-Bolt	Pigtail DT

## Sealed Beam Electrical Lamps



<b>Sealed Beam Electrical Lamps</b>				
Part Number	Item	Voltage	ANSI Number	Wattage
069-2999	Spot Lamp	12	4416	30
110-3239	Flood Lamp	24	4490 A	50
1H-7027	Hi/Lo Lamp	12	4431	45/35
1M-5896	Flood Lamp	6	4078	50
1M-5897	Hi/Lo Lamp	6	4031	45/35
1M-5899	Dual Head Lamp	24	4579	80/60
1M-5928	Head Lamp	24	4880	60

(Continued)

**Sealed Beam Electrical Lamps (Continued)**

Sealed Beam Electrical Lamps				
Part Number	Item	Voltage	ANSI Number	Wattage
2M-4168	Flood Lamp	12	4478	60
2P-7469	Flood Lamp (Screw Terminal)	12	4410	35
5S-5149	High Head Lamp	24	4814	90
6N-7982	Stop Lamp	24	4825R	50/18
6N-7987	Flood Lamp (Screw Terminal)	24	4752	60
7G-9319	Fog Lamp	24	4402A	50
7N-7682	Head Lamp (Screw Terminal)	24	4750	60
7T-1371	Spot Lamp	24	4505	50
8T-8752	Low Head Lamp (Halogen)	24	H4813	90
9W-1281	Flood Lamp (Halogen)	24	H4578	60

**Signal Lights — Incandescent**

Stop/Tail Lamps				
Item	Voltage	Body Assy.	Style	Lens Color
Compartment	24	171-5672	Rectangle	Clear
Payload	24	227-9531	Round	Green
Payload	24	227-9530	Round	Red
Position	24	162-5402	Rectangle	Clear
Stop/Tail	24	7M-7147	Round	Red
Stop/Tail	24	107-4401	Rectangle	Red
Stop/Tail	12	092-2992	Rectangle	Red
Stop/Tail	24	9G-4358	Round	Red
Turn	12	3E-9346	Rectangle	Amber
Turn	24	3E-6466	Rectangle	Amber
Turn	24	107-4402	Rectangle	Amber
Turn	24	231-5144	Round	Amber
Turn	24	162-2073	Rectangle	Amber



## Miniature Electrical Lamps



Miniature Electrical Lamps			
Item	Voltage	ANSI Number	Part Number
1	24	459	9D-4185
2	12	1895	5D-0284
3	14	194A	118-5075
4	24	1873	7N-5876
5	12	53	8M-6176
5	24	265	7X-2058
6	12	1156	5M-8034
6	12	93	1S-4168
6	24	13498	9X-4493
6	24	307	8J-4863
7	24	13499	9X-4492
7	24	1638	8T-9749
7	24	1662	034-2535
8	12	631	7M-9957
9	24	1683	7H-2976
10	28	311	7D-8855
11	24	2232	7N-9943
12	24	1495	9W-2111
13	12	P21W	3C-4883
14	12	1157	7S-1800
15	24	1309	9K-9140
16	12	7528	084-4348
17	24	1251	3H-2691
17	24	623	2D-1959
17	24	624	7N-1996
17	6	63	9B-3117
18	12	N/A	084-4375
19	12	161	7X-9065
19	24	657	110-2079

(Continued)

## Miniature Electrical Lamps (Continued)

Miniature Electrical Lamps			
Item	Voltage	ANSI Number	Part Number
20	12	1816	8L-9801
20	28	757	123-9294
21	24	2661	100-3245
Not Shown			
--	24	28MB	7N-9967
--	24	356	5D-0019
--	24	456	5D-1708
--	24	623R	9S-3335
--	24	7839B	3E-8825
--	6	1154	8M-7119

## LED Bulbs

Care has to be taken when selecting LED indicators as a replacement for incandescent bulbs. LEDs do not operate like incandescent bulbs and will not work with diagnostic drivers and can possibly glow when powered by electronic controls due to leakage current. LED indicators do not have over-voltage protection circuitry so care has to be taken when used with other electrical devices (i.e. solenoids).



LED Bulbs								
Part Number	Volts	Base Type	Base Size	Bulb Size	Color	MSCD	Polarity	Notes
125-9955	24	Slide Base	T5.5	--	Red	--	Bi-Polar	Single
125-9956	24	Slide Base	T5.5	--	Amber	--	Bi-Polar	Single
125-9957	24	Slide Base	T5.5	--	Green	--	Bi-Polar	Single
163-1876	24	Wedge	W-2	T-3 1/4	Red	2500	Bi-Polar	Single/ Diffuser
163-1878	24	Wedge	W-2	T-3 1/4	Amber	2000	Bi-Polar	7-Cluster
163-1879	24	Wedge	W-2	T-3 1/4	Green	2000	Bi-Polar	Single/ Diffuser
163-1882	24	Bayonet	A-1	T-3 1/4	Red	2500	Bi-Polar	Single/ Diffuser
163-1883	24	Bayonet	A-1	T-3 1/4	Amber	2000	Bi-Polar	7-Cluster
163-1884	24	Bayonet	A-1	T-3 1/4	Green	2000	Bi-Polar	Single/ Diffuser
163-1885	24	Bayonet	A-1	T-3 1/4	Blue	150	Bi-Polar	Single/ Diffuser
163-6509	24	Bayonet	A-1	T-3 1/4	White	3000	Bi-Polar	7-Cluster
165-5674	24	Bi-Pin	--	T-3 1/4	White	900	Polar	Single
171-1033	24	Bayonet	B-2	G-6	Red	5000	Bi-Polar	7-Cluster
188-3447	8	Wedge	W-2	T-3 1/4	White	1560	Bi-Polar	Single
336-0067	24	Wedge	W-2	T-3 1/4	White	3000	Bi-Polar	7-Cluster

## Dash Lamps

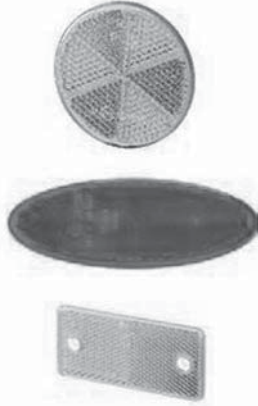


- Allow operators to read gauges at night.
- For use with miniature electrical lamps.

Dash Lamp — 6N-8355 Replacement Bulbs	
Bulb	Voltage
9B-3117	6
7M-9957	12
3H-2691	24

Dash Lamps			
Body Assy.	Voltage	Wire Length	Replacement Bulb
316-6409	10-32	142 mm (5.59 in)	None — LED
6N-8355	6/12/24	610 mm (24 in)	9B-3117/7M-9957/3H-2691

## Reflectors



Reflectors				
Part Number	Description	Color	Shape	Size
252-6645	Reflector	Yellow	Oval	100 × 45 × 5 mm
252-6646	Reflector	Red	Oval	100 × 45 × 5 mm
9R-1499	Reflector	Red	Rectangle	108 × 44 × 9 mm
9R-2404	Reflector	Amber	Rectangle	108 × 44 × 9 mm
129-9547	Reflector	Amber	Rectangle	45 × 73 mm
227-9859	Reflector	Red	Rectangle	70 × 31.5 × 5 mm
116-9621	Reflector	Yellow	Rectangle	94 × 44 × 7 mm
116-9622	Reflector	Red	Rectangle	94 × 44 × 7 mm
237-5174	Reflector	White	Rectangle	94 × 44 mm
6C-5712	Reflector	Orange	Rectangle	55 × 115 × 7 mm
313-5271	Reflector	Red	Round	60 mm
313-5270	Reflector	Amber	Round	60 mm
6C-5736	Reflector	Red	Round	85 mm
156-5431	Reflector	Red	Rectangle	76 × 44 × 8 mm

## Lighting Reference

### Mount Type



Suspended Mount  
(Hanging type mounting)

Vertical Mount  
(Pedestal type mounting)

### Light Patterns

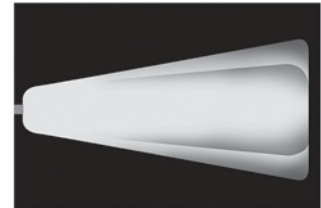
#### Light Patterns



Flood Beam Pattern  
General & Work Lighting



Spot Beam Pattern  
Concentrated Beam



Trapezoid Beam Pattern  
Forward Illumination

## Cat® Radio and Accessories



### Built Tough for the Most Rugged Environments

Just as you do with any other part or component, you should consider the durability of a radio. A car radio isn't going to be durable enough to withstand the vibrations and other extremes where you work. Instead, select one that is designed to take abuse.

Cat® offers a line of rugged radios and accessories that can withstand the toughest applications in machines, on-highway trucks, boats or private sector use. Cat® radios and accessories also are designed to withstand both hot and cold temperature extremes.

You can choose from five models, from a robust receiver to a unit that includes a CD, and an integrated satellite tuner.

All models provide the following features and benefits:

- Exceeds shock and vibration standard SAE J1455
- Withstand temperatures from -40° to 85° C (-40° to 185° F)
- Weather band
- Worldwide frequency compatible tuner

## AM/FM Receiver



Cat® offers five models, beginning with the basic AM/FM receiver.

### Features:

- Total Power (RMS) 72 (18×4)
- LED lighted display
- Quartz clock
- 6 AM and 18 FM presets
- Auto preset memory with preset scan
- Scan
- Seek Up/Down
- Worldwide frequency compatible tuner
- Weather band
- Front auxiliary input (MP3 Player or I-Pod®)

Part Number	Description
331-5292	AM/FM Receiver

## AM/FM Receiver with CD



### This model has the following radio and CD features:

- Total Power (RMS) 72 (18×4)
- LED lighted display
- Quartz clock
- 6 AM and 18 FM presets
- Auto preset memory with preset scan
- Scan
- Seek Up/Down
- Worldwide frequency compatible tuner
- Weather band
- Displays elapsed time and track
- Next/previous track
- Fast forward/reverse
- Anti-shock floating mechanism
- Track, scan, search and repeat
- Auto-loading mechanism
- Front auxiliary input (MP3 Player or I-Pod®)

Part Number	Description
331-5291	AM/FM Receiver with CD

## Deluxe AM/FM Receiver with CD and Satellite Radio



### In addition to the integrated satellite radio, this model also has the following features:

- Total Power (RMS) 68 (17×4)
- MP3 playback (USB and Auxiliary port only)
- LED backlighting
- 6 AM presets and 12 FM presets
- Auto-store memory
- Seek/Scan tuning
- Preset scan
- Alarm Clock
- Worldwide frequency compatible tuner
- Weather band
- Anti-shock floating mechanism
- Track, scan, search and repeat

(Continued)

## Deluxe AM/FM Receiver with CD and Satellite Radio (Continued)

- Track pause
- Random track play
- Fast forward/reverse
- Next/previous track
- Ignition off load and eject
- XM or Sirius

Part Number	Description
366-8411	Sirius Deluxe AM/FM Receiver with CD and SAT
366-8412	XM Deluxe AM/FM Receiver with CD and SAT

## Deluxe AM/FM Receiver with CD and Bluetooth capability

This model has the following radio and CD features:

- Total Power (RMS) 68 (17×4)
- MP3 playback (USB and Auxiliary port only)
- LED backlighting
- 6 AM presets and 12 FM presets
- Auto-store memory
- Seek/Scan tuning
- Preset scan
- Alarm Clock
- Worldwide frequency compatible tuner
- Weather band
- Anti-shock floating mechanism
- Track, scan, search and repeat
- Track pause
- Random track play
- Fast forward/reverse
- Next/previous track
- Ignition off load and eject
- USB port faceplate
- ID3 Tag
- Front and rear Auxiliary input



**Taking advantage of the Bluetooth capability requires an external microphone (Cat part 349-8642), and an external microphone harness (Cat part 353-1634) that plugs into the back of the radio.**

Part Number	Description
377-7215	Deluxe AM/FM Receiver (Bluetooth) with CD

## Deluxe AM/FM Receiver with CD, Satellite Radio, and Bluetooth capability

In addition to the integrated satellite radio, this model also has the following features:

- Total Power (RMS) 68 (17×4)
- MP3 playback (USB, Auxiliary port and CD)
- LED backlighting
- 6 AM presets and 12 FM presets
- Auto-store memory
- Seek/Scan tuning
- Preset scan
- Alarm Clock
- Worldwide frequency compatible tuner
- Weather band
- Anti-shock floating mechanism



(Continued)



## Deluxe AM/FM Receiver with CD, Satellite Radio, and Bluetooth capability (Continued)

- Track, scan, search and repeat
- Track pause
- Random track play
- Fast forward/reverse
- Next/previous track
- Ignition off load and eject
- XM or Sirius
- Bluetooth

Taking advantage of the Bluetooth capability requires an external microphone (Cat part 349-8642), and an external microphone harness (Cat part 353-1634) that plugs into the back of the radio.

Part Number	Description
366-8413	Sirius Deluxe AM/FM Receiver (Bluetooth) with CD and SAT
366-8414	XM Deluxe AM/FM Receiver (Bluetooth) with CD and SAT

### Bluetooth® Microphone for Cat® Radios

- The Bluetooth function allows hands free usage of your cell phone through the radio.  
-- This is not a voice-activated device.
- Bluetooth capability is available in Cat® radio part numbers 366-8413, 366-8414, and 377-7215.
- There is an expanded feature for Bluetooth on Cat radio part number 377-7215 that also allows streaming of music from your cell phone through the radio.
- This microphone is used in conjunction with Bluetooth Harness (353-1634).

Part Number	Description
349-8642	Bluetooth Microphone

### Bluetooth® Harness for Cat® Radios

- This harness is used in conjunction with Bluetooth Microphone (353-1634).

Part Number	Description
353-1634	Bluetooth Harness

### Auxiliary Port for Cat® Radios

- The auxiliary port allows the operator to plug in an MP3 player (I-Pod®) for use through the radio.
- The auxiliary port comes in two pieces:
  1. a stereo jack to be mounted in the dash board and
  2. a wiring harness to connect the stereo jack to the plug in at the back of the radio.
- Available for use with Cat® radio part numbers 366-8411, 366-8412, 366-8413, 366-8414 and 377-7215.
- Cannot be used with 366-8413, 366-8414 and 377-7215 radios if the wiring harness for Bluetooth capability has already been installed.

Part Number	Description
344-5594	Auxiliary Port

## Radio Installation Kits

### Mounting Kit — Cat radio ready machines

Cat radio ready machines come with speakers, antenna, radio mounting, harness connector and 24 volt to 12 volt connector. The following parts are needed to complete the install:

- 200-5728 harness
- 4E-1411 bushing 20 mm (0.79 in ) or 241-4939 bushing 28 mm (1.1 in)

### Mounting Kit — Non-radio ready Cat competitive machines

Part Number 136-3643



Part Number	Description	Qty.
136-3643	Mounting Kit	1
<b>Kit Includes:</b>		
100-2881	Screws	4
106-8142	Mounting Shell	1
106-8153	Harness	1
106-8154	Rectangular Speaker (75 Watts)	2
200-5728	Harness	1
241-4939	Bushing	1
275-2138	Bracket	1
3B-4503	Lock Washers	4
3S-2093	Cable Straps	4
4E-1411	Rubber Bushing	1
4M-8478	Machine Screw	1
6V-7699	Washers	4
8E-1118	Flexible Antenna — Rubber Mast	1
8R-6111	Coax Cable — 1525 mm (60 in)	1

## Adapter Harnesses



Part Number	Manufacturer	Model
200-5728	Radio ready machines — Cat®	This harness adapts the radio to the harness in Cat® radio ready machines
106-8153	Non-radio ready machine — Cat® or competitor	Plugs into the Deutsch connector end of the 200-5728 harness. This is a Deutsch connector to wire harness that can be used in wiring in a Cat® radio into a non-radio ready Cat or competitive machine.
279-9662	Freightliner On-highway trucks	Freightliner — All medium duty COE June 1986-2003, Columbia and Century class to 2003.
279-9663	Kenworth and Peterbilt On-highway trucks	Kenworth: COE K100E series. All conventional models built after March 1988 — February 2005. Peterbilt: All medium duty COE Midranger, all medium duty conventional 330, COE models built after October 1986, conventional models built after October 1986, conventional model, premium sound, from February 2000.

(Continued)

## Adapter Harnesses (Continued)

Part Number	Manufacturer	Model
279-9664	Kenworth and Peterbilt On-highway trucks	Kenworth: All medium duty convention T300 and T2000. Peterbilt: 387 (except concert Class).
279-9665	International On-highway trucks	International: 2600-8300 series medium duty, 9000 series conventional Pro Sleeper from June 1994.
279-9666	Mack On-highway truck	Mack: COE model MH, RD, RM and DMM models built after November 1992. Mack: CH and CL series Vision.
279-9667	Volvo and White/ GMC On-highway trucks	Volvo: FE models built after February 1993. White/GMC: models built after September 1992.
279-9668	Sterling On-highway trucks	Sterling: 1999-2001 models
279-9669	Western Star On-highway trucks	Western Star: Conventional models built after December 1991.
279-9767	Western Star On-highway trucks	Western Star: Constellation series models built after June 1997.

## Antennas — Flexible



### Flexible rubber mast

- Antenna mast length is 355 mm (14 in) with 1/2-20 connector. Antenna can be adjusted from 0 to 90 degrees in mounting base.

Part Number	Description
8E-1118	Flexible Antenna — Rubber Mast

## Antennas — Sealed



- Antenna mast length is 0.21 m (8.3 in).
- Antenna can be adjusted from 0 to 90 degrees in mounting base.

Part Number	Description
374-0752	Sealed Antenna

## Antennas — Wire Whip

### Wire whip with spring

- Antenna mast length is 668 mm (26 in) with 1/2-20 connector. Antenna can be adjusted from 0 to 90 degrees in mounting base.



Part Number	Description
9W-3072	Wire Whip Antenna

## Antennas — Satellite

### Mirror Mount

- Needed with 284-8954 XM or 284-8955 SIRIUS radios

### Rooftop Mount

- Needed with 284-8954 XM or 284-8955 SIRIUS radios

Part Number	Description	Cable Length
284-9055	Satellite Antenna — Mirror Mount	8 ft (2.4 m)
307-2245	Satellite Antenna — Rooftop Mount	12 ft (3.6 m)

## Speakers — Round

### 5.25 inch (133 mm) coaxial

- Mounting: Recessed opening
- Impedance: 4 Ohms
- Power: 80 Watts
- Frequency response: 40 Hz to 22 KHz
- Speaker cover included

### 5.25 inch (133 mm) coaxial

- Mounting: Recessed opening
- Impedance: 4 Ohms
- Power: 60 Watts
- Frequency response: 75 Hz to 20 KHz
- Speaker cover 101-3055 required



Part Number	Description
168-8772	Round Speaker (60 Watts)
174-3722	Round Speaker (80 Watts)

## Speakers — Rectangular



### 7.32 inch (186 mm) two speaker with internal crossover

- Impedance: 6 Ohms
- Power: 75 Watts
- Frequency response: 90 Hz to 20 KHz

Part Number	Description
106-8154	Rectangular Speaker (75 Watts)

## Radio Sleeve

- Sleeve is used to hold radio into dash



Part Number	Description
192-7054	Radio Sleeve

## Coax Cable



Part Number	Length	Connector
<b>Radio Connector to Antenna Connector</b>		
101-2640	1000 mm (39.4 in)	1/2-20
109-8981	1200 mm (47.2 in)	1/2-20
8R-6111	1525 mm (60 in)	1/2-20
199-3387	1800 mm (70.9 in)	1/2-20
9W-3073	2670 mm (105.1 in)	1/2-20
162-7264	3500 mm (137.8 in)	1/2-20
117-2932	4080 mm (160.6 in)	1/2-20
110-6391	4280 mm (168.5 in)	1/2-20
<b>Radio Connector to 90 Degree Antenna Connector</b>		
9U-8746	500 mm (19.7 in)	1/2-20
146-3722	650 mm (25.6 in)	1/2-20

## Converters — 24 Volts to 12 Volts

### 5 Amp Continuous

- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.



Part Number	Description
340-7160	Converter — 5 Amp Continuous

### 10 Amp Continuous

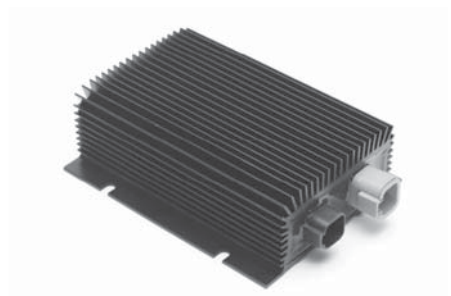
- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.



Part Number	Description
340-7161	10 Amp Continuous

### 15 Amp Continuous/20 Amp Intermittent

- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.



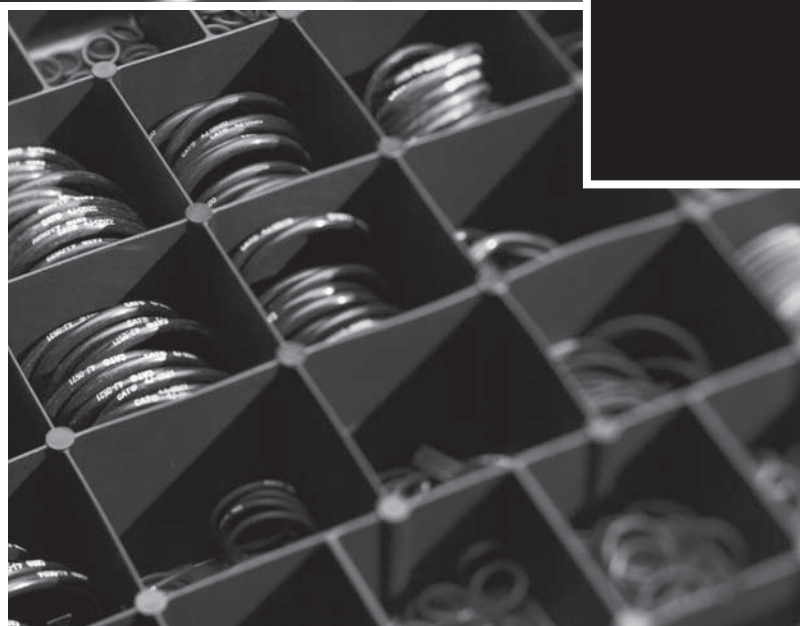
Part Number	Description
239-3902	Converter — 15 Amp Continuous/20 Amp Intermittent







# O-RINGS





## Cat® O-Rings — Deliver Long, Leak-Free Performance



### Prevent fluid contamination and deliver long, leak-free performance

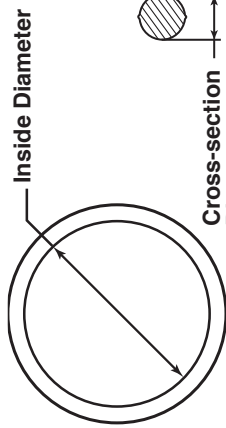
- Meet or exceed SAE standards
- Specifically matched to your Cat system's different fluid types, temperatures, and pressures
- Provide superior resistance to compression set
- Feature special dimensional tolerances and O-Ring coatings for improved installation and performance
- Marked with the Cat logo and part number for easy identification and protection against counterfeit seals
- Available in time- and money-saving kits

Don't risk expensive components with inexpensive after-market O-Rings. Rely on genuine Cat O-Rings.

### Ten O-Ring Tips

1. Keep O-Rings packaged until installation.
2. Don't store O-Rings near heat.
3. Protect O-Rings from UV rays.
4. Remove old O-Rings with brass or plastic picks to prevent groove damage.
5. Don't reuse O-Rings.
6. Clean the seal groove before installation.
7. Don't soak O-Rings.
8. Don't twist or cut O-Rings during installation.
9. Don't select O-Rings based on material color. There is no universal color standard.
10. Maintain your cooling system. High fluid temperatures are the number-one cause of shortened seal life.

# O-Ring



Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
1.00	3.00											8U-7383		
1.00	6.00				107-7642									
1.00	8.00									139-8420				
1.02	10.03											6V-3693		
1.17	10.41				189-3769									
1.20	11.00													
1.30	11.00				192-7115									
1.30	13.00										8U-1402			
1.35	11.63										1P-8116			
1.40	4.50							273-5308						
1.40	6.70										085-8219			
1.40	25.63					9X-7430								
1.42	3.99				5P-9262									
1.42	4.47							9X-7379						
1.42	4.70										5P-6458			
1.50	4.00						213-9243				7M-0105		3S-2912	
1.50	4.50					213-9246						263-3320		
1.50	5.00				8C-3131							3E-4288		
1.50	5.50													
1.50	6.00											263-3319		
1.50	6.20						228-7099					316-6564		
1.50	6.50													
1.50	7.00										8U-1766	3E-4289		
1.50	7.50										8U-3899	192-7512		
1.50	8.00										177-2645	192-7513		
1.50	8.20		262-9990		192-7116	8C-3076					192-7514	3E-4296		
1.50	8.50				192-7111					279-4705		8T-7876		
1.50	9.00										123-2341	8U-0598		
1.50	9.50										147-4214			
1.50	10.00				8U-5942							3E-4297		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
1.50	10.50											8U-0599		
1.50	11.00													
1.50	12.00			9X-7377						279-4703				
1.50	13.50										4I-0754			
1.50	15.00										192-7510			
1.50	15.50										136-0152			
1.50	16.00			242-4313										
1.50	17.00					8C-3106								
1.50	17.50										112-0034			
1.50	19.50										122-7776			
1.50	21.50										279-8671			
1.50	28.00													
1.50	30.00											8U-3189		
1.50	38.00												326-0772	
1.50	52.00			175-0054										
1.57	12.70										5D-0834			
1.57	15.88										4M-6582			
1.59	63.50									133-5188				
1.59	34.99											280-5038		
1.60	6.50							71-6601						
1.60	7.10								323-6115					
1.60	8.10					196-6803								
1.60	9.50			81-4285										
1.60	11.10			81-4284								251-9585		
1.60	12.10					107-7640				216-8994				
1.60	12.50					8C-3133								
1.60	13.10										8C-3097			
1.60	14.00			8C-3132								201-0255		
1.60	14.30			202-2074										
1.60	16.10									6E-0410				
1.60	22.10										8C-3099			
1.60	22.20			81-4581										
1.60	25.10										8C-3102			
1.60	27.10									318-2575	8C-3101			
1.60	29.10											186-0128		
1.63	7.65	903								119-2189				
1.63	6.07		8T-9587					109-0093						
1.63	6.07	902		163-4565		109-9685								
1.63	6.07											4J-7533		

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
1.63	7.65		8K-0001											
1.63	7.65	903		5P-7813	108-5803							7J-0204		
1.65	14.50				117-8804									
1.68	21.62									5E-8923				
1.70	24.00									212-4114				
1.77	53.70	034		151-8670										
1.78	4.47	008										2Y-2271		
1.78	20.35	019								270-5269				
1.78	126.72	049										8C-0737		
1.78	1.78	004										085-7537		
1.78	2.57	005			8C-3095									
1.78	2.90	006			9N-1749						6H-9691			
1.78	3.68	007				168-0268		150-4651			3H-0442			
1.78	4.47	008		150-8698		221-3491					8F-7219	6V-5722	8M-8468	
1.78	5.28	009			192-7117	107-3116					8F-9538	3G-1209	8M-5250	
1.78	6.07	010		150-8701	9N-1756						2D-6392	6V-5586	3L-6768	
1.78	6.40											147-6603		
1.78	6.75											209-4526		
1.78	7.65	011			061-7538	9X-7680		283-0266			5F-9144	3E-6760		
1.78	8.73										172-0938			
1.78	9.25	012	6D-7128		8L-2779	033-6039					1H-1023	161-6154	5H-8853	
1.78	9.70				149-2090									
1.78	10.82	013	121-4344		033-5879	3E-6780	113-6303	9X-7381			6M-5062	095-1750		
1.78	12.42	014	180-8424		033-6033	6V-5758		9X-7408		214-7654	4K-2039	161-6149		
1.78	13.34				317-0810			117-2983						
1.78	14.00	015	121-4342		149-2091	033-6043		9X-7382			5L-4758	095-1751	5P-6620	
1.78	15.60	016	6V-5138		148-8136	6V-5142					4D-2297	382-5800		
1.78	17.17	017	121-4801		2P-2975	135-2652		283-0267			1S-8947	6V-9399		
1.78	18.77	018	250-2343		9X-7386	9X-7681				234-6137	8M-8997	9X-7454		
1.78	20.35	019		363-5174	033-6044	5E-9816					2Y-2272	6V-5580		
1.78	21.95	020			5P-5599						030-4605	8J-2413		
1.78	23.52	021			106-9586	8C-3093					8C-3098			
1.78	25.12	022		150-8700	6V-9178	310-7258					5L-4759	8U-7381	310-7259	
1.78	26.70	023			033-6032	136-3377		9X-7384			077-3241	005-8592		
1.78	28.30	024			5P-5600						003-8137	4K-4986		
1.78	29.87	025			9X-7734						6V-0894	2Y-2347	5P-6436	
1.78	31.47	026				310-7255				197-3698	8F-0212	085-7538		310-7257
1.78	33.05	027									5D-6539	8T-4827		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
1.78	34.65	028			5P-9658						5D-6543	5K-5221	5P-4932	166-3718
1.78	36.55										188-2042			
1.78	37.82	029		150-8699	7X-4782							187-9630		
1.78	41.00	030									3J-9015	5K-6526		
1.78	44.17	031			5E-8767						3P-1979	5K-0227	5P-7914	
1.78	47.35	032			5E-8768						6V-0895	5K-0216	5P-8907	
1.78	50.52	033			180-3927							279-4701		
1.78	53.70	034											3P-5859	
1.78	56.87	035									219-1897			
1.78	60.05	036									077-5843	095-1753		
1.78	60.43				311-6130									
1.78	63.22	037			7X-4745								3P-0815	
1.78	66.40	038				195-2987								
1.78	69.57	039												
1.78	72.75	040									077-3548	113-7820	2P-5820	
1.78	75.46													
1.78	75.92	041			6V-3865								5P-3114	
1.78	78.56													
1.78	79.00										142-6218			
1.78	82.27	042			6V-5778						5P-2931	208-0926		
1.78	88.60	043	8T-2944		8T-6717									
1.78	88.62	043									5P-3881	5E-9838		
1.78	94.97	044			5E-8769						7X-9372			
1.78	101.32	045			6V-1320						7X-5494			
1.78	107.67	046										9X-7357		
1.78	120.37	048			133-5909						8C-5237		199-9240	
1.78	124.40				9X-7365									
1.78	126.72	049			3E-6799									
1.78	133.07	050			6V-1934							131-3716	5P-4969	
1.78	139.89											199-8392		
1.78	142.34												5P-9650	
1.78	170.69										172-8144			
1.78	193.37												9S-6929	
1.78	228.83												1S-7390	
1.80	7.00										8U-1400	124-0623		
1.80	9.51											9N-7894		
1.80	10.80	013						105-9410						
1.80	12.30	014			215-2422									

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
1.80	14.50				128-4004									
1.80	25.40									105-9843				
1.80	72.14													
1.83	8.92	904	6V-9027		6V-5048	033-5853		9X-7378				3J-7354		
1.83	10.52	905	291-8144		5P-7814	109-3206						1J-9671		
1.85	13.30							105-9409						
1.88	7.98											6V-5324		
1.90	2.80										095-1508	095-1571		
1.90	3.80					206-9288					095-1509	7Y-5280		
1.90	4.80										095-1510	095-1572		
1.90	5.80					249-6658					3T-7528	095-1573		
1.90	6.80				207-4849	199-0518					095-1511	095-1574		
1.90	7.80				103-8254	206-9290					095-1512	095-1575		
1.90	8.80	904				295-9575					095-1513	095-1576		
1.90	8.90	904												
1.90	9.80					206-9291					095-1514	095-1578		
1.90	10.80					249-6661								
1.90	14.80										146-5297			
1.90	17.00					198-0077								
1.90	27.70										146-5283			
1.93	10.82									127-9479				
1.98	11.89				190-7634									
1.98	11.89	906	6V-3250			153-4906						3J-1907		
2.00	5.00										192-7506			
2.00	6.00				9X-4626	213-9244				5W-4878	147-4538			
2.00	7.00											187-1979		
2.00	7.50					8T-9528								
2.00	8.00											319-7001		
2.00	9.00				9X-4617					5W-5494		5W-9411		
2.00	9.50									8U-5928				
2.00	10.00				187-8567						236-5189	309-0720		
2.00	10.50					135-3437								
2.00	10.80											251-9587		
2.00	11.00										192-7515			
2.00	11.50					213-9247								
2.00	11.52										151-7517			
2.00	11.90	906										382-4825		
2.00	12.00	906			216-8581						123-2342	3E-4298		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
2.00	13.00					213-9250						8U-6457		
2.00	14.00									5W-4842	8T-0116	5W-1749		
2.00	15.00				3E-6749							122-9250		
2.00	16.00				173-8277	203-0213								
2.00	17.00					3E-6769				121-8112				
2.00	18.00									8U-6013		8U-5943		
2.00	19.00									8U-5951		165-0129		
2.00	20.00											3E-6761		
2.00	21.00											5W-5488		
2.00	22.00										198-8564			
2.00	23.00									8U-5952				
2.00	23.50										218-0457			
2.00	24.50										111-9986			
2.00	26.00											092-2304		
2.00	27.50											310-0420		
2.00	28.00												326-0773	
2.00	30.00				9X-4618					5W-5490				
2.00	32.00									8U-4125				
2.00	35.00										242-9574			
2.00	35.80											71-7204		
2.00	36.00					192-7121								
2.00	39.00													
2.00	45.00									5W-4856		243-3149		
2.00	47.00				8U-2064									
2.00	50.00									117-1495				
2.00	57.00				125-3193									
2.00	66.50									130-7114				
2.00	68.70													
2.00	70.00													
2.00	70.50													
2.00	74.50										132-7641			
2.00	78.00										116-3682			
2.00	80.00				192-7120					233-2601				
2.00	84.00				8T-9525							8U-0580		
2.00	84.50										107-6279			
2.00	86.00										165-9448			
2.00	103.00										8U-4781			
2.00	105.00				5W-1865					8U-4774				

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
2.00	116.00					143-5975								
2.00	149.50										177-2553			
2.00	160.00				8U-5019									
2.10	9.40		219-0669		199-9267	228-7100						6V-9028		
2.10	11.40		216-8579			228-7101						6V-6560	199-9252	
2.10	13.40											8T-6850		
2.10	13.40	907				214-7565								
2.10	15.40		199-9751			216-0881						8T-7524		
2.10	17.40					228-7104						8T-7877		
2.10	19.40		216-7485			228-7105						6V-7970		
2.20	8.00					269-4676								
2.20	33.00										203-0215			
2.21	16.36													
2.21	16.36	908	6V-6609		8L-2786	033-6028		112-5282				3K-0360		
2.30	16.60					202-2073								
2.38	15.88									133-5186				
2.38	133.15													
2.39	9.53								202-2121					
2.40	5.30									5W-4881				
2.40	6.30									8U-1981				
2.40	7.30										194-5158			
2.40	8.30											280-1953		
2.40	8.60													
2.40	9.30													
2.40	9.80													
2.40	10.80										112-0033	095-1577		
2.40	11.00										095-1515	095-1579		
2.40	11.30											297-0607		
2.40	11.80									8U-2233				
2.40	12.30										095-1516	095-1580		
2.40	12.60					8T-9522	249-6660				185-0550	095-1581		
2.40	13.20										2U-1570			
2.40	13.30											3E-6706		
2.40	13.80									8U-6058				
2.40	14.30									095-1517		095-1582		
2.40	14.80											3E-6708		
2.40	15.30					327-7241	206-9293				095-1518	095-1583		
2.40	15.60					8U-3473								
2.40	15.60											322-6179		

(Continued)



O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
2.40	15.80					206-9294					095-1519	095-1584		
2.40	16.30			7U-2937		117-8766				5W-4849	123-2343	3E-4299		
2.40	17.30			209-3940								8U-2685		
2.40	17.60									8T-0211	2U-1571			
2.40	17.80											095-1585		
2.40	17.80	909				206-9295								
2.40	18.30			8T-9523		117-8764						8U-6850		
2.40	19.30	910		9X-4619								095-1586		
2.40	19.80					206-9296					095-1521	3E-6762		
2.40	20.30			5W-4815							095-1522	095-1587		
2.40	20.80					109-1294					192-7505			
2.40	21.30										095-1524	095-1590		
2.40	21.80					206-9297		229-4896			216-8997			
2.40	22.30									8U-5959				
2.40	23.30													
2.40	25.30			5W-8507							123-2345	3E-6763		
2.40	27.30			9X-4625										
2.40	47.60			195-7657								189-2624		
2.40	52.60											237-5000		
2.40	55.20													
2.40	67.60										8T-6716			
2.42	31.42					110-1873								
2.44	17.50			351-1904										
2.46	19.18			136-7227										
2.46	19.18	910	6V-3251	6V-4589		152-2939		114-4427				2M-9780		
2.50	5.00											170-5716		
2.50	7.00					174-5057								
2.50	8.00					174-5056								
2.50	10.00											192-7509		
2.50	12.00			369-4631										
2.50	12.00	906	295-8143											
2.50	12.50			133-6291										
2.50	13.00										236-5193			
2.50	14.00		295-8142											
2.50	15.00									5W-9533				
2.50	16.00											192-7508		
2.50	17.00					213-9242								
2.50	18.00									8U-0216				

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
2.50	18.00	909										316-6565		
2.50	19.00	910									217-3875			
2.50	20.00								379-2553					
2.50	23.00			5W-1752		308-1511								
2.50	24.00									8U-0215				
2.50	25.00									217-1987		118-2725		
2.50	26.00											113-0308		
2.50	30.00											242-3562		
2.50	31.00										8U-1759			
2.50	32.00											9X-7447		
2.50	32.30			215-5520										
2.50	33.00										203-0214	3E-6764		
2.50	35.00													
2.50	38.00										190-8676			
2.50	40.00			204-0728						8U-4122				
2.50	44.20									104-4310				
2.50	45.00													
2.50	55.00			215-9117										
2.50	60.00									217-1990				
2.50	75.00			201-0880										
2.50	84.00					241-1019								
2.50	86.00					117-8765								
2.50	90.00			192-5166										
2.50	100.00										267-8984			
2.50	107.00					8C-3083								
2.50	110.00					231-4707								
2.50	125.00									192-7470				
2.50	130.00			169-7442										
2.50	135.00			242-9575								5W-1763		
2.50	140.00										8C-3057			
2.50	148.00					213-9248								
2.50	167.00										190-3009			
2.50	195.00					3E-6770								
2.50	225.00										9X-0617			
2.50	277.00									098-2996				
2.50	360.00									367-0576				
2.62	168.80										9X-0876			
2.62	4.42	106										8J-1699		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
2.62	5.23	107										5P-4933		
2.62	6.02	108	235-5678		9X-7676							196-1804		
2.62	7.59	109			032-8970							4J-2506		
2.62	8.10											356-2456		
2.62	9.19	110			330-8196	107-3118						6F-5559	8M-8157	
2.62	9.80											7W-3983		
2.62	10.77	111			8L-2777	109-3204						5H-6005	8M-5127	
2.62	12.37	112			032-9313	126-7524						8F-9206	8M-5251	
2.62	13.94	113			228-4947	6V-8350		117-1385				6F-4855	8M-4437	
2.62	15.54	114			061-8639	107-3117		118-5068		210-6634		8F-3469	8M-5260	
2.62	17.12	115			323-7347	6V-8351						6F-6672	8M-4438	
2.62	17.86					7U-2834								
2.62	17.96											6V-5325		
2.62	18.72	116			7L-9061	109-3203				195-2139	7F-8607	6V-3922	8M-5253	
2.62	20.29	117				033-6041					4M-8303		8M-4389	
2.62	20.30	117			5P-9186							5P-3108	283-2446	
2.62	21.89	118			5P-8356	3E-6786						9H-6761	8M-8283	
2.62	23.47	119			033-6034	6V-8352						4D-9986	9X-4609	
2.62	25.07	120			241-4288	6V-6339						3D-4245	1S-7462	
2.62	26.64	121	205-4831		6V-6228							3D-2992	8M-4431	
2.62	28.24	122			5P-7530	6V-4591						2K-8199	8M-8514	
2.62	29.82	123	243-2646		188-0171							3S-9233	8M-1112	
2.62	31.42	124	297-4854		9X-3979	3E-6787						2S-4663		
2.62	32.99					230-3728								
2.62	32.99	125	264-0601		250-0466	6V-3550						2K-8198	8M-8515	
2.62	34.59	126	9X-7545		6V-4367	166-2903						5M-2057	166-2904	
2.62	36.17	127			5P-8085			107-9570				6J-2419		
2.62	36.54					131-3719								
2.62	37.30				258-6526									
2.62	37.77	128	8T-5917		210-9246	6V-7323						4D-3107	6F-0249	
2.62	39.34	129	359-7607		269-7847	6V-1250						5P-8215	247-1074	
2.62	40.94	130			3E-6788			219-7000				9X-7684		
2.62	42.52	131			9X-7432	6E-5414						4L-7711	217-4521	
2.62	44.12	132			330-8195							2D-0598		
2.62	45.69	133	204-7844		8C-3078	6E-5413						7D-9749		
2.62	47.29	134			225-6948									
2.62	47.30	134								194-7224	032-9882			
2.62	48.90	135			6V-8676						3D-2898			

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
2.62	50.47	136		8C-3079							8C-3080			
2.62	52.07	137			6E-5412						005-8593			
2.62	53.64	138	8C-5196	272-2563							3D-7805	127-8586		
2.62	55.24	139		6V-3832	135-2655				5J-1808		004-1963			
2.62	55.25	139	231-4708									256-2212		
2.62	56.82	140		144-7338				144-7339				7V-5269		
2.62	58.42	141		5P-5756							7J-2036	119-7843	3S-4489	
2.62	59.99	142									8I-7000			
2.62	60.00	142		009-2061										
2.62	61.59	143									8S-0768			
2.62	61.60	143	227-5903	334-2932										
2.62	63.17	144		009-2062							8C-3081	195-2862		
2.62	63.20	144	8T-2929											
2.62	64.77	145		5P-5757	180-2391				117-7273			279-0169	5S-4548	
2.62	66.34	146		378-0746							5M-6509	131-3715		
2.62	67.94	147									107-4057		129-5701	
2.62	69.52	148		4W-7356							004-1964	190-3750		
2.62	71.12	149									3K-4025			
2.62	72.69	150		8C-5197							5P-0908			
2.62	75.87	151		5E-8770							7R-8872	119-7844		
2.62	79.38							107-5769			1P-8362			
2.62	82.22	152		8C-3089	6V-3551						5P-3863	5P-2569		
2.62	85.29			351-8955										
2.62	88.57	153	8T-6340	6V-3834	136-3378						6V-2483			
2.62	92.41			185-3241										
2.62	93.12											140-7969		
2.62	94.92	154	7X-4752		107-3119			185-3503			4F-4097			
2.62	97.80			7X-4804										
2.62	101.27	155		6D-7146	107-3120						3K-0715	8T-5049		
2.62	102.38										147-2525			
2.62	104.30											8C-9332		
2.62	107.62	156	9X-7549	122-1874	133-6578							1T-1068		
2.62	113.97	157		6V-7350							6S-3002			
2.62	120.32	158	117-3036	5E-8771								9X-7566		
2.62	120.65										098-0321			
2.62	122.72													
2.62	126.67	159	9X-7697	117-8801	270-0603						7J-6285	199-8393		
2.62	127.76									351-1768		323-2282		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
2.62	131.20											133-0128		
2.62	133.02	160									2P-1692			
2.62	139.37	161			346-8576						5J-3886	117-7282		
2.62	145.72	162			176-1378	146-4263					1W-9312	9X-7358		
2.62	148.00	148			360-2963									
2.62	152.07	163			9X-4576						5P-3864			
2.62	158.42	164			9X-7286						8T-6404	119-7845		
2.62	160.90											199-8391		
2.62	164.77	165										096-2789		
2.62	164.80	165	4S-7762									9X-7391		
2.62	171.12	166									9D-8042			
2.62	177.47	167			311-0827	209-0033					5P-5397			
2.62	183.82	168									9X-7725			
2.62	190.17	169			9X-7295						9X-7683		7X-4799	
2.62	202.87	171			223-8512	9X-7410								
2.62	209.22	172			316-9962						162-9997			
2.62	215.57	173									161-4102			
2.62	221.92	174			261-3307									
2.62	228.27	175										192-4486		
2.62	234.62	176			107-3114									
2.62	240.97	177												
2.62	247.32	178			154-8741						190-8501			
2.62	249.50										110-8715			
2.62	260.00										8C-5175			
2.62	269.40										8C-5177			
2.62	287.91				292-6378						8C-5176			
2.62	323.93										201-3321			
2.62	330.89		194-3087					300-0477						
2.62	375.82							269-9157						
2.63	72.69	150												
2.65	88.57	153										8U-2522		
2.65	145.72	162			8U-2543									
2.65	183.80	168										125-4189		
2.66	9.87											173-5549		
2.69	127.55										087-0359			
2.70	13.60										8T-0117			
2.70	16.00				215-5513									
2.74	23.84									166-0345				

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
2.80	22.70											8T-7878		
2.80	23.70		216-8578			228-7106		217-5207				8T-7525		
2.80	26.70					228-7107								
2.80	29.70					215-4639						8T-7526		
2.80	38.70				8U-2588	228-7108						8C-5193		
2.80	56.70					209-5798								
2.88	120.32				207-2813									
2.88	158.42				207-2814									
2.90	29.60	916		337-8725								252-8073		
2.90	38.60					241-5790					9X-7692			
2.95	21.92	911												
2.95	23.47					189-9377								
2.95	23.47	912	6V-5063		6V-5050	033-6036						3D-2824		
2.95	25.00	913										382-5765		
2.95	26.59	914			6V-1903	033-6038		119-5155				4K-1388		
2.95	26.62	392												
2.95	26.62	914	291-8145			238-5083								
2.95	29.74	916	6V-5064		5P-7701	238-5084				9X-7744		7M-8485		
2.95	34.42	918				238-5085				5W-4857		230-5935		
3.00	8.00													
3.00	9.00				132-4240									
3.00	11.00				121-8080									
3.00	12.50													
3.00	15.00													
3.00	16.00									5W-4871				
3.00	19.00				2T-2695									
3.00	19.20													
3.00	19.50				150-7732							3E-6713		
3.00	20.20											3E-6714		
3.00	20.60	914										382-5856		
3.00	22.00	911										5W-8024		
3.00	22.20				7U-2939									
3.00	23.00					215-4638						5W-9413		
3.00	24.00									133-4771				
3.00	24.20											372-5909		
3.00	26.00				8U-2503									
3.00	26.20											118-3131		
3.00	27.00				192-7112									

(Continued)



O-Rings

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
3.00	28.00										224-7262			
3.00	29.00			192-7113							5W-9436			
3.00	30.00	916										5W-1754		
3.00	30.20											9C-6251		
3.00	32.00											5W-8039		
3.00	32.20									9C-6250		3E-6722		
3.00	33.00											5W-9437		
3.00	34.00											179-9013		
3.00	34.20	918										3E-6723		
3.00	36.00											242-3561		
3.00	36.50				9X-4621									
3.00	37.46	920			5P-7815									
3.00	37.47					183-2317								
3.00	37.47	920	6V-5065			228-7096						2S-4078		
3.00	38.00										8U-0766	3E-6724		
3.00	39.20													
3.00	40.00													
3.00	41.00									2T-2692		195-9771		
3.00	43.69	924	8C-0562		5P-7816	108-5806						6K-6307		
3.00	44.20											3E-6725		
3.00	45.00										238-5087			
3.00	46.00											123-0373		
3.00	46.20											356-3294		
3.00	46.80				215-5514									
3.00	49.00										121-8117			
3.00	49.20													
3.00	49.50									3E-6738		3E-6742		
3.00	50.00				9X-4616									
3.00	50.20									5W-4850				
3.00	53.10		8T-2928									8T-4945		
3.00	53.10	928			9X-3978									
3.00	54.00					174-5055								
3.00	54.50											352-3914		
3.00	56.00											122-9251		
3.00	57.20											3E-6727		
3.00	59.36	932			5P-7817	228-7097						030-4606		
3.00	59.50	932										3E-6729		
3.00	60.00				8U-2276							118-3128		

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
3.00	62.00								379-2775	261-3559				
3.00	64.00								367-0579			122-9252		
3.00	64.50													
3.00	65.00											5W-1876		
3.00	67.68											179-4274		
3.00	70.00			128-4005								5W-6388		
3.00	74.00													
3.00	74.50									8U-4061				
3.00	75.00													
3.00	80.00													
3.00	82.00									5W-5485				
3.00	84.00								125-7005					
3.00	84.50			9X-4622							6U-9599	3E-6734		
3.00	85.00					177-0344				5W-4819				
3.00	86.00									5W-5481				
3.00	88.00									5W-1772				
3.00	89.50									194-7151		3E-6744		
3.00	90.00			8U-4675										
3.00	92.00										109-5698			
3.00	94.00											3E-6736		
3.00	96.00								113-7822					
3.00	97.00													
3.00	98.00			121-9907							121-8094			
3.00	99.00											3E-6737		
3.00	100.00											195-9770		
3.00	102.00										179-3560			
3.00	104.00			227-5904						118-3122				
3.00	104.50											3E-6702		
3.00	105.00			8T-9526		230-8891								
3.00	106.00			5W-5487										
3.00	108.00									8U-2401				
3.00	108.86											138-2676		
3.00	115.00									125-9701				
3.00	119.50											3E-6704		
3.00	120.00			8U-2058							5W-5486	140-0226		
3.00	122.00			5W-5497										
3.00	124.00											8U-2552		
3.00	124.50									131-0074		3E-6740		

(Continued)



O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
3.00	125.00				276-3188	320-9731					222-5792			
3.00	128.00									118-2720				
3.00	130.00									135-7935				
3.00	132.00					377-6087								
3.00	134.00									367-0569				
3.00	134.50										2U-5342			
3.00	140.00									5W-3061				
3.00	144.50			192-5167								195-3443		
3.00	149.00													
3.00	150.00										109-5700			
3.00	154.50										2U-5345			
3.00	160.00			237-5815						5W-5491	242-3563	8U-2538		
3.00	164.00				8U-5030									
3.00	164.50										7U-1277			
3.00	175.00										201-7396			
3.00	179.00				192-5168					3E-6712				
3.00	179.50										107-5665			
3.00	185.00										270-6871			
3.00	186.00													
3.00	189.50										2U-5346			
3.00	190.00			132-4423										
3.00	192.00			167-1829										
3.00	200.00										109-5693			
3.00	203.00									5W-5475				
3.00	205.00									8U-5927				
3.00	210.00										109-5694			
3.00	214.00										222-5793			
3.00	220.00										109-5701			
3.00	224.00									8U-6079				
3.00	240.00										270-4969			
3.00	280.00										109-5706			
3.00	300.00										242-9573			
3.00	315.00										109-5705			
3.00	335.00										133-4769			
3.00	342.00									367-0575				
3.00	360.00										109-5695			
3.00	379.00													
3.00	420.00										145-5935			

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
3.00	604.00													
3.10	24.40					249-6659					095-1657	095-1696		
3.10	29.40					206-9298					095-1658	095-1698		
3.10	34.40					206-9299					095-1659	095-1700		
3.10	39.40					109-1296						095-1701		
3.10	44.40					206-9285						095-1703		
3.10	49.40										095-1662	095-1704		
3.10	54.40										095-1663	095-1705		
3.10	59.40	932										095-1706		
3.10	64.40					206-9286						095-1707		
3.10	65.00											192-0680		
3.10	69.40											095-1708		
3.10	74.40					206-9300						095-1709		
3.10	75.00											192-0626		
3.10	79.40				193-1736							095-1710		
3.10	84.40				273-8315	246-9867					8T-3338	095-1711		
3.10	89.40											095-1712		
3.10	94.40				096-3944	249-6657					095-1671	095-1713		
3.10	99.40										6V-8467	095-1714		
3.10	104.40					236-6919					095-1673	095-1715		
3.10	109.40				274-1262	292-3264					095-1674	095-1716		
3.10	114.40										095-1675	095-1717		
3.10	119.40										095-1676	095-1718		
3.10	124.40					206-9287						095-1719		
3.10	129.40										095-1678	095-1720		
3.10	134.40										095-1679	095-1721		
3.10	139.40					367-9300					095-1680	095-1722		
3.10	144.40										095-1681	095-1723		
3.10	150.00											165-5819		
3.10	152.50											107-6986		
3.10	154.30											307-4802		
3.10	160.00											095-7384		
3.10	164.00											165-5823		
3.10	174.00											095-7383		
3.10	179.00											165-5821		
3.10	179.30											139-8195		
3.10	181.90					210-0834								
3.10	190.00											096-4377		

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
3.10	191.30					210-0835								
3.15	30.00			8T-9524										
3.18	19.05									6I-1948				
3.18	76.20									133-5187				
3.18	95.25											257-2890		
3.18	104.75											8C-9330		
3.18	120.65									1G-6408				
3.18	34.11										4D-5256			
3.18	49.23										4F-2709			
3.20	42.00										5W-5474			
3.25	114.00											140-0180		
3.25	168.74											140-0236		
3.30	31.75										4F-2928			
3.30	66.68										3F-3759			
3.30	74.63										4F-3408			
3.30	106.38										4F-9174			
3.30	195.28										4F-2410			
3.40	285.60			273-8314							177-8740			
3.50	21.70													
3.50	21.70	212										095-1589		
3.50	22.10										095-1525	095-1591		
3.50	23.40											391-4635		
3.50	23.70					190-7674					095-1526	095-1592		
3.50	24.70			273-8317							095-1527	095-1593		
3.50	25.70			273-8319		206-9301					095-1528	095-1594		
3.50	27.70											095-1595		
3.50	28.70										095-1530	095-1596		
3.50	29.70	217									095-1531	095-1597		
3.50	30.70										095-1532	095-1598		
3.50	31.70										095-1533	095-1599		
3.50	33.70										095-1534	095-1600		
3.50	34.70										8T-2148	095-1601		
3.50	35.70										095-1536	095-1602		
3.50	37.69	222				190-7673				123-4598				
3.50	37.70	222									095-1537	095-1603		
3.50	38.70			273-8318							095-1538	096-5572		
3.50	39.70										095-1539	095-1604		
3.50	40.70										095-1540	095-1605		

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
3.50	41.70			0951652							095-1541	095-1606		
3.50	43.40							248-7172						
3.50	43.70									6V-7657		095-1607		
3.50	44.40			215-5515										
3.50	44.70										095-1543	095-1608		
3.50	45.70										095-1544	095-1609		
3.50	47.70											095-1610		
3.50	48.00					177-0343								
3.50	48.70										095-1545	095-1611		
3.50	49.70										095-1547	095-1613		
3.50	53.00									217-1988				
3.50	70.60										146-5272			
3.50	84.60												8C-5212	
3.50	98.50					5W-5480								
3.50	101.19	242										310-2186		
3.50	107.54	244										310-2184		
3.50	117.07											310-2187		
3.50	120.24	248										310-2189		
3.50	195.00													
3.50	367.00				238-5088									
3.53	5.94	202			6V-4366	189-0190					239-8433			
3.53	7.52	203			137-8101						2H-5001	9J-6491	8M-8281	
3.53	9.12	204			7X-4805	6V-3548					2J-6274	6V-5555		
3.53	10.69	205			119-9443					149-9907	230-5936	6V-0913		
3.53	12.29	206			5P-0840			147-0182			2M-4453	5P-6300	8M-4447	
3.53	13.21												5M-1868	
3.53	13.87	207			125-1372	219-7001					3H-3385	8M-8282		
3.53	15.47	208	8C-0504		5P-5598						2J-0157	6J-1038	8M-4448	
3.53	17.04	209			5P-8119									
3.53	18.64								6E-0151					
3.53	18.64	210	5P-3148		269-7846	189-0193		169-7487		194-7158	5F-7054	4J-5140	8M-4435	289-9732
3.53	18.66	210									8U-6426			
3.53	20.22	211			061-7539			9X-7385			1H-8171	008-2103		
3.53	21.82	212			3P-1156			112-3132			3H-0107	4J-8996	8M-4445	
3.53	23.39	213			6V-3683	109-3207					5H-2767		8M-4446	
3.53	24.99	214			117-8803	109-3205					5F-1678	4J-5267	8M-4988	
3.53	25.00	214								8U-5490		382-5795		
3.53	25.86											241-6200		

(Continued)

O-Rings

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
3.53	26.57	215			5P-8118	208-1464					4F-8946	180-8722	8M-4432	
3.53	28.17	216	227-2519		061-9458	279-2252		121-0145			2H-3932	4J-8997	8M-5248	
3.53	29.74	217			165-4854						4F-9029	6V-0357	8M-4433	
3.53	31.34	218			5P-8210		148-2903			210-6633	6F-6673	4J-0519	8M-5254	
3.53	32.92	219			295-5609	170-5715					4F-7391	4J-0520	8M-4987	
3.53	34.52	220	7L-4774		330-3517	3E-6766					3H-1461	4J-0521	8M-5249	
3.53	36.07	221									6V-8544			
3.53	36.09	221			6V-5266						5F-9657	4J-8998	1S-9799	
3.53	37.69	222			061-7540	191-2962		118-7214			4F-7952	4J-0522	8M-4986	
3.53	39.27										2J-1826			
3.53	40.87	223	226-3571		061-8561	194-9584		118-8586			099-0187	4J-5573	8M-4992	
3.53	42.86										193-4726			
3.53	44.04	224	8T-9588		8J-4351	5P-1480		129-1653			1H-9696	4J-0523	8M-4443	272-7018
3.53	47.22	225			061-9455	234-3544					7F-8267	4J-0524	8M-5661	
3.53	50.39	226			5P-8211						5F-8000	4J-0525	8M-4436	
3.53	53.57	227			061-9456	8C-3077					7F-8268	4J-0526	8M-5010	
3.53	55.60										137-3623			
3.53	56.74	228	8T-1703		6V-4368	6V-4590		112-1577		149-7726	8F-6711	4J-0527	8M-4390	
3.53	58.50											311-0823		
3.53	58.74									248-5877				
3.53	59.92	229			5P-4892						175-7894	4J-0528	1S-2174	
3.53	63.09	230			061-9457						1H-5728	3P-0439	8M-4395	
3.53	65.07										5B-4399			
3.53	66.27	231			6J-2244			118-8706			8F-8882	3E-6730	8M-5252	
3.53	69.44	232	167-4407		033-6031	8T-0568		112-1574			175-7895	6J-2680	9M-7539	
3.53	72.62	233			6V-1179						6H-3977	149-0231		
3.53	73.03				242-2815									
3.53	75.79	234	205-4832		5P-4889						175-7896		5M-3038	
3.53	75.80	234								194-7227				
3.53	78.97	235			153-1157	170-7098					175-7897	3E-6732	273-7325	
3.53	82.14	236	8C-3073		6V-1196	170-4821					2H-3931	6V-6707	6L-9965	
3.53	85.32	237	8C-3072		124-1859						2H-6338	117-1266	2P-3538	
3.53	88.49	238	200-6410		6V-8002			224-6079			175-7898	6R-0365	3S-1427	
3.53	91.67	239			131-3718			258-8738			8H-7521	3E-6735	2M-2561	
3.53	94.84	240			3E-6773						1H-8128	5P-6302	5K-1770	
3.53	98.02	241			6V-1197						175-7900	9X-4611	9M-9936	
3.53	100.00													
3.53	101.19	242			6V-6353						1H-6227		2S-2182	

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
3.53	104.37	243			5D-5957						4M-0189		7M-9909	
3.53	107.54	244	213-9397		3E-6785						175-7901		8S-5654	
3.53	110.72	245			8T-9627						175-7902	3E-6703	9M-9729	
3.53	113.89	246	8C-5208		9X-7287			271-4928			5H-6734	190-3011		
3.53	117.07	247			5D-5958						2J-8163	331-2496		
3.53	117.10	247											5P-1705	
3.53	120.24	248	213-9396		12S-9794						5F-3144	175-7903	8M-5255	
3.53	123.42	249			6V-8260	180-2393					5F-3999	331-2487	7M-6637	
3.53	126.59	250			9X-7371						175-7904	031-4392	4S-5898	
3.53	129.77	251			130-0229						3F-5792	104-4948	5P-3457	
3.53	132.94	252			6V-7351						175-7905	316-2516	9N-1619	
3.53	136.12	253			6V-1195						2H-3935	316-2517	9N-2693	
3.53	139.29	254									8F-9516	190-3010	8M-5007	
3.53	142.47	255			161-8068			129-1609			2D-8009		6V-1904	
3.53	145.64	256	6V-3428		243-2737	6V-3549					5H-3252	6J-5541		
3.53	148.82	257	8T-5918		161-8069			129-1610			2K-8257	188-4053	3S-5135	
3.53	149.23													
3.53	151.99	258			285-4470						8F-8733	7D-9014		
3.53	152.00	258				170-7106							5D-4311	
3.53	158.34	259			6V-3319			135-2654			2K-4472	188-4056	8M-4704	
3.53	164.69	260			298-6387						6F-4718		1S-4974	
3.53	164.70	260				175-5077								
3.53	170.00				331-3521									
3.53	171.04	261	213-9395		5P-8428	170-4825		311-0828			9F-1399		2S-4071	
3.53	177.39	262			6V-1902						2K-2939		5S-4554	
3.53	179.42											170-1616		
3.53	183.74	263			6V-3907	175-5088					4H-6520		1S-6119	
3.53	190.09	264	6V-5098					149-5461			3J-0634	5J-2363		
3.53	196.44	265	8T-2921					149-5462			1H-8278	126-4003		
3.53	202.79	266			227-5538						1J-2176	7V-4277	9M-9545	
3.53	202.80	266				271-5027								
3.53	209.14	267			238-6646	224-6081		122-3771			9M-5024	7V-4294	9N-2694	
3.53	212.78											158-8978		
3.53	214.30										2M-0340			
3.53	215.49	268			156-5198	199-0759		122-3772			4K-6804			
3.53	217.29											170-1612		
3.53	221.84	269			186-3075						8F-5900			
3.53	226.00										116-7830			

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
3.53	228.19	270			6V-3684						8F-6230			
3.53	230.67												146-7311	
3.53	234.54	271			235-3546						1T-0132		8L-3017	
3.53	238.23												146-7312	
3.53	240.89	272	71-7553		170-5942	199-0700					2D-9572	126-4002	9N-1609	
3.53	245.00										174-4454			
3.53	247.24	273									5S-3676	5W-7415		
3.53	253.59	274			234-9503			185-3502			5H-4909	243-4572	7D-1979	
3.53	266.29	275						205-6051			8J-8879			
3.53	269.88										9H-5548			
3.53	278.99	276			180-4365						2R-0239	5W-7393		
3.53	282.37										6V-7991			
3.53	291.69	277			213-9833						273-8320	196-6102	9N-1520	
3.53	298.45										9X-7686			
3.53	304.39	278			165-4852						2D-6533			
3.53	307.57				5P-9035									
3.53	316.87										5P-2861			
3.53	317.91												6V-2406	
3.53	323.44													
3.53	326.14													
3.53	329.79	279												
3.53	340.99													
3.53	342.90													
3.53	345.00													
3.53	351.00													
3.53	355.19	280			5D-5959								9N-1562	
3.53	367.89													
3.53	380.59	281						135-2653						
3.53	385.34													
3.53	386.94				6V-5058									
3.53	399.80													
3.53	405.26	282												
3.53	412.34													
3.53	421.84													
3.53	430.66	283												
3.53	434.00							269-9158						
3.53	448.40							304-2218						
3.53	454.91										7X-1548			

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
3.53	456.06	284										184-0842		
3.53	470.00				297-1217						8C-5240			
3.53	480.00				9X-7723									
3.53	481.46										2D-6507			
3.53	484.86										6W-4310			
3.53	500.74										136-2967			
3.53	523.47										7D-7519			
3.53	535.50										6V-6204			
3.53	552.04										4D-0449			
3.53	570.00												9X-7550	
3.53	576.48										7Y-0640			
3.53	579.40			261-3394										
3.53	606.02										7D-5868			
3.53	669.00										129-9124			
3.53	698.09										6D-1355			
3.53	749.00										5P-4076		359-0854	
3.53	785.57			261-3395										
3.53	911.50												6V-2772	
3.53	985.00												202-7482	
3.53	1108.00												150-8791	
3.53	107.54				158-5998									
3.53	202.79	266								119-1590				
3.55	155.00					129-5426								
3.55	160.00										283-6090			
3.55	185.00										123-2003			
3.60	24.60				3E-6775									
3.60	150.00											129-7294		
3.63	20.22													
3.96	11.13										4F-5675			
3.96	22.22										4F-5676			
3.96	25.40									8B-6015				
3.96	88.04												7H-0538	
3.96	117.48										7F-6268			
4.00	18.00										5W-8547			
4.00	26.00									317-8516				
4.00	35.00				207-2755									
4.00	38.00									121-7687				
4.00	43.00				121-8116									

(Continued)



O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
4.00	48.00									5W-8040				
4.00	64.00									317-8518				
4.00	65.00											114-8837		
4.00	75.00											112-6921		
4.00	76.00										5W-4816	125-7001		
4.00	80.00									5W-3043		135-7940		
4.00	83.00					230-8879								
4.00	88.00										267-8985			
4.00	92.00											8U-1958		
4.00	102.00											112-6920		
4.00	112.00				8U-2359	320-9728						118-2718		
4.00	117.00					230-8903								
4.00	120.00											8U-4080		
4.00	126.00										1G-8054			
4.00	132.00										5W-3040			
4.00	140.00										9X-7440			
4.00	150.00				111-7052									
4.00	160.00										109-5704			
4.00	165.00										141-0749			
4.00	171.00										287-8400			
4.00	172.00										8C-3058			
4.00	180.00				1C-7069									
4.00	192.00				193-2218									
4.00	225.00			291-1895						357-6319				
4.00	270.00									373-3052				
4.00	305.00													
4.00	330.00										109-5707			
4.00	375.00										109-5703			
4.00	380.00										242-9572			
4.00	395.00										239-8434			
4.00	530.00										133-4767			
4.00	545.00													
4.00	595.00				282-2935									
4.00	595.00				317-4372						109-5692			
4.29	9.52										7B-0305			
4.30	9.53												3S-5496	
4.31	140.20		142-7072		142-6217									
4.31	141.00							110-2220						
4.39	42.88										7B-6868			

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
4.39	101.60										7B-2125			
4.39	113.80		3S-3977											
4.39	117.10		5S-6670											
4.76	718.85			373-6317										
4.76	941.19			373-6318										
4.76	1013.96			323-1731										
4.78	7.92										2A-3307			
4.78	25.40										2A-3854			
4.78	73.02										3F-9141			
4.78	76.20										5B-3323			
4.78	107.92										1Y-6637			
4.78	193.68										7F-7151			
4.78	219.08										7B-5716			
4.78	249.22										9F-3384			
4.78	320.68										7F-2093			
4.78	469.90										4F-2411			
4.88	84.07										6F-8509			
4.88	112.73										4F-7471			
4.88	133.80		6H-6998											
4.88	139.80		3S-3978											
4.88	152.40		6L-7812											
4.88	165.10		6L-7815											
4.88	175.00		7N-2046											
5.00	70.00										267-8986			
5.00	80.00										242-6281			
5.00	90.00										5W-1757			
5.00	100.00											5W-1775		
5.00	112.00											123-7724		
5.00	120.00											135-7933		
5.00	130.00											206-0511		
5.00	140.00													
5.00	205.00										8C-3059			
5.00	210.00									5W-4841				
5.00	230.00													
5.00	235.00											195-9769		
5.00	248.00										133-4768			
5.00	780.00										109-5699			
5.00	820.00										272-9540			

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
5.29	841.30												1Z-9347	
5.30	45.00										283-6089			
5.33	7.14				4G-4972								3H-2388	
5.33	12.06	310			8S-5011									
5.33	12.07	310					247-0708				3H-4970		1S-7104	
5.33	15.24	312			6V-3955						5H-8038		8M-4990	
5.33	18.42	314	6V-5061		6V-3348						3B-8453		1S-0004	
5.33	19.30												9M-4618	
5.33	19.99	315									9H-4557			
5.33	21.59	316	6V-5062		2N-3350						6H-5672		9H-6067	170-8690
5.33	23.16	317	7L-4773		112-3540			114-2687			8F-4994		9M-4849	
5.33	24.77	318	8T-0280		6V-4430						8B-4967		8M-5266	
5.33	26.34	319			8C-3104									
5.33	27.94	320			293-7589						5H-7370		8M-4991	
5.33	31.12	322	305-4484		6V-5134						4F-5607		5H-7153	
5.33	32.69	323									5M-7423			
5.33	34.29	324	5P-7204		6V-3830						5M-5860		1S-9544	
5.33	37.46	325												
5.33	37.47	325			5P-8088			109-0078	3S-6538		4F-7389		9M-7002	
5.33	37.74	325	6V-9769											
5.33	40.64	326	6L-7817		5P-5846			109-0072			2H-3927	8S-5953	9M-9647	
5.33	43.82	327	2N-5749		8C-5230			109-0073			4F-8824		2S-2251	
5.33	46.20												9M-2610	
5.33	46.99	328	6V-1585		8C-3107			112-3258			4F-9653	9S-8307	6L-1648	
5.33	50.17	329	171-4358		113-5304			109-0076	2H-3088		5K-5959		6L-1651	
5.33	53.34	330	2N-5243		6V-3831			112-3260			4F-7390			
5.33	56.52	331	2N-0475		109-2332			110-7752			3H-2652	7S-4001	6L-1650	
5.33	59.69	332			3P-0651			112-3259			6F-8146	099-4780	6L-9284	
5.33	62.86	333			237-7623									
5.33	62.87		8T-1919											
5.33	62.87	333						112-1102			2H-2665	2R-0039	6L-1649	
5.33	66.04	334			3P-0656						2H-3933		8H-1607	
5.33	69.22	335			3P-0653			109-0075			7F-2122	006-8352	8M-4989	
5.33	72.39	336	6V-1454		269-7885			110-7753			5F-3092		9M-4218	
5.33	75.57	337			6V-5051			109-0092			7H-2444			
5.33	78.74	338			6V-3833			109-0079			9F-4446		1M-6036	
5.33	81.92	339			287-5812						4L-9564	5D-1597	6L-5359	
5.33	85.09	340	6V-5066		3P-0654			259-4597			8H-2046		9M-4217	

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
5.33	88.26	341						112-8186			1H-0474			
5.33	88.27	341			6V-0973									
5.33	91.44	342			5P-7818			109-0074			5F-0149		9X-7727	
5.33	94.62	343			6V-4315						5H-8624			
5.33	97.79	344	6V-5139		5S-9134			109-0080			9M-2092	371-0442	6V-5188	
5.33	100.96	345												
5.33	100.97	345			6V-3908			109-0077			4F-7387	9X-7458	4H-3243	
5.33	104.14	346			6V-5052						1J-2859	356-3287		
5.33	107.32	347	6V-5504		6V-5101						9F-7283		1S-1225	
5.33	110.49	348			7D-7111						1S-7408	356-3289		
5.33	113.66	349			5P-8872			112-1580			5H-5672		8S-5655	
5.33	113.67	349	6V-5140											
5.33	116.84	350	6V-5067		8C-3103						5P-4326			
5.33	120.02	351			270-1820						1P-9005	331-2485		
5.33	123.19	352	8T-2903		7X-1547			109-0081			2S-8439		107-3185	
5.33	126.36	353						258-8734			068-9002			
5.33	129.54	354	6V-5068		6V-4314	170-7103		258-8733			8J-1688	371-0443		
5.33	132.72	355									5P-1979			211-8113
5.33	135.88	356				170-7105								
5.33	135.89	356			9X-7562							141-1774		
5.33	139.06	357			6V-5054						9M-3786		3S-1219	
5.33	139.07	357	6V-6809									356-3291		
5.33	142.24	358	225-7003		6V-3835						6D-9157			
5.33	145.42	359									3S-1223			
5.33	148.49											242-3564		
5.33	148.59	360									6V-5657			
5.33	151.76	361			375-6182									
5.33	151.77	361			6V-5055	170-4823					7J-8956	315-7986		
5.33	158.12	362			6V-4297						8T-6444		8C-3091	
5.33	164.46	363			258-6947						8J-1665	356-3286	7S-8758	
5.33	164.47	363				170-4824								
5.33	170.82	364			258-8736							5P-7593		
5.33	177.17	365			109-7411			107-6280			8T-7568	230-4560	9X-7704	
5.33	183.52	366			6V-5102						5K-1787			
5.33	189.86	367									3F-1547			
5.33	196.22	368	197-8006		6V-3349						5M-7142	356-3288		
5.33	199.39											8J-4386		
5.33	202.56	369			375-6181						9M-5894			

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
5.33	202.57	369	6V-7703		177-6911									
5.33	208.92	370			5P-8429			259-4596			4N-1230			
5.33	211.19							134-5958					4W-1596	
5.33	215.26	371	253-9950											
5.33	215.27	371												
5.33	221.62	372						134-5959			5P-3092	356-3290		
5.33	227.96	373			6V-5141	271-5029					5H-4081	1U-3174		
5.33	227.97	373										5P-5374	5D-9344	
5.33	234.32	374			6V-5375									
5.33	240.66	375										5P-2235		
5.33	240.67	375			6V-7701							5P-8105		
5.33	253.36	377									8L-9241	320-6169		
5.33	266.06	378			174-3357						3S-3074	109-5702		
5.33	266.07	378				275-8521							5P-5819	
5.33	270.21												2W-2073	
5.33	278.76	379										5P-2236		
5.33	278.77	379			6V-5554	292-9201								
5.33	287.00				8C-9023									
5.33	291.46	380									2M-1309			
5.33	291.47	380			6V-5057									
5.33	300.42											130-9108		
5.33	304.17	381			159-8802			158-6563				6V-3263		
5.33	310.13										5H-4082			
5.33	317.24				6V-7702									
5.33	324.00											312-6124		
5.33	325.00	279	1W-0115											
5.33	329.56	382									7S-8554			
5.33	329.57	382			9X-7688									
5.33	335.00				6V-3602									
5.33	342.90										2M-3818	320-2510		
5.33	350.42											130-9109		
5.33	354.97	383			8C-3828						6V-1175	130-9110		
5.33	371.42													
5.33	372.00				8T-0098									
5.33	380.36	384									2M-3340			
5.33	380.37	384			118-7536									
5.33	383.60				9X-7428									
5.33	390.00				6V-4244									

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
5.33	399.42										7S-4571			
5.33	405.30	385									5M-6200	223-5519		
5.33	411.48										5M-7329			
5.33	415.00				6V-9670									
5.33	421.70				8T-8883									
5.33	422.00										144-8299			
5.33	430.66	386									5P-9806		9L-5650	
5.33	440.69										6M-5218			
5.33	456.06	387			6V-5059						2R-0098			
5.33	470.00												317-2403	
5.33	481.41										8D-4771			
5.33	488.00				179-4551									
5.33	494.66				6V-5043						9H-0846			
5.33	514.65										9M-5892			
5.33	532.21	390									4H-6730		380-1397	
5.33	548.64												8S-6251	
5.33	557.61	391									9H-3360			
5.33	576.00		156-5197											
5.33	582.68	392									3D-8422			
5.33	598.20				228-7098									
5.33	608.10	393									8T-3013			
5.33	610.38			207-8824										
5.33	621.00		154-9416											
5.33	633.48	394									9H-6832			
5.33	643.38										8D-5096		381-8975	
5.33	684.28										5D-7523			
5.33	728.40				303-1541									
5.33	736.60				159-8752						2D-6506			
5.33	760.00										5P-4057			
5.33	786.76										3D-3295			
5.33	795.00												186-3712	
5.33	811.52			218-3759										
5.33	843.00												5P-9519	
5.33	870.00												143-8729	
5.33	920.00												111-1503	
5.33	940.00												6V-6557	
5.33	985.00												7X-4801	
5.33	1000.00												7X-4778	

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
5.33	1038.00			145-8984										
5.33	1075.00												7X-4781	
5.33	1146.00												113-1700	
5.33	1180.00												152-0985	
5.33	1275.00												152-7039	
5.33	29.52	321		156-3881										
5.33	94.62	343								119-1547				
5.34	97.80	344		221-2506						8U-5059				
5.34	136.50												164-5039	
5.34	574.00											290-2685		
5.50	31.80										121-8140			
5.50	32.00									5W-1855				
5.50	80.00											140-7651		
5.60	130.00											5W-5482		
5.70	39.20													
5.70	49.30				248-7173									
5.70	49.60										095-1546	095-1612		
5.70	51.60										096-0121	095-1614		
5.70	52.30										2U-1574			
5.70	52.60											095-1615		
5.70	54.60										8T-6346	095-1616		
5.70	55.60											095-1617		
5.70	57.60											095-1618		
5.70	59.20							248-7174						
5.70	59.60										095-1549	095-1619		
5.70	61.60											095-1620		
5.70	64.20													
5.70	64.60											095-1550	095-1621	
5.70	66.60											270-6438		
5.70	69.10													
5.70	69.60													
5.70	74.60											095-1551	095-1622	
5.70	79.00											095-1552		
5.70	79.60				248-7177									
5.70	79.60											095-1553	095-1623	
5.70	84.60											095-1554	095-1624	
5.70	88.90													
5.70	89.60											095-1555	095-1625	
5.70	94.60											095-1556	095-1626	

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HINBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
5.70	99.20									3E-6728				
5.70	99.60										095-1557	095-1627		
5.70	104.60										096-7041	095-8859		
5.70	109.60										095-1558	095-1628		
5.70	111.60										132-3056	095-1629		
5.70	114.60										095-1560	095-1630		
5.70	118.70							248-7179						
5.70	119.60											095-1631		
5.70	124.60											096-5382		
5.70	129.20									3E-6705				
5.70	129.60										095-1562	095-1632		
5.70	139.20									3E-6707				
5.70	139.30									352-3916				
5.70	139.60				095-8010						095-1563	095-1633		
5.70	144.30									352-3917				
5.70	149.30										095-1682	095-1724		
5.70	149.60			095-1655								095-1635		
5.70	150.00											140-7663		
5.70	154.30										096-4921	095-1725		
5.70	159.30							249-6671			095-1683	095-1726		
5.70	164.30											095-1727		
5.70	169.30							081-4674			095-1684	095-1728		
5.70	174.30										2U-5353	095-1729		
5.70	179.30										095-1685	095-1730		
5.70	184.30										095-1686			
5.70	189.30										095-1687	095-1731		
5.70	194.30										095-1688			
5.70	199.30										095-1689	095-1732		
5.70	204.30										148-4642			
5.70	209.30										7U-3263	095-1733		
5.70	219.30										095-1691	095-1734		
5.70	226.00							162-7473						
5.70	229.30										095-1692	095-1735		
5.70	239.30									3E-6717				
5.70	249.30										095-1693	095-1736		
5.70	259.30									352-3918		095-1737		
5.70	279.30										095-1694	095-1738		
5.70	289.30				9X-4623					136-2942		352-3919		

(Continued)



O-Rings





**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
6.99	63.00										294-5738			
6.99	64.26										1T-0136			
6.99	69.22										1M-0556	4M-0141		
6.99	75.56										5H-2824	5H-9205		
6.99	81.00							125-4641				4L-8337		
6.99	81.92		7L-7459		310-3953									
6.99	85.09										2A-3676			
6.99	88.26				130-5694			125-4642			6K-9149	5S-1188		
6.99	91.44										5S-0982			
6.99	94.61											5H-7704		
6.99	94.62		7L-7460		6V-3917									
6.99	100.96				6V-2695							5H-1039		
6.99	107.31				6V-5166							6H-1871		
6.99	113.66	425										7S-1156		
6.99	113.67	425									114-9275			
6.99	116.84	426			170-5941						9S-3888	107-6259		
6.99	120.02	427	7L-2031											
6.99	123.19	428			5S-6760							6F-0671		
6.99	126.36	429			6V-5103						8F-4469			
6.99	126.37	429	6L-9405											
6.99	132.72	431									5H-9524			
6.99	135.89	432			3E-6751						4F-7507			
6.99	139.07	433			6V-5167						5H-6733	143-4637		
6.99	148.59	436			5P-8861						5P-3620	003-2770		
6.99	151.76	437			5P-8862						8H-0273			
6.99	151.77	437										6H-4162		
6.99	158.12	438						112-1579			5L-5032			
6.99	164.46	439			135-6950						2H-6124			
6.99	164.47	439				170-7100								
6.99	170.82	440	5P-6619					192-4309			2D-1692	006-8350		
6.99	177.16	441			6V-5095						4F-9652	370-6664		
6.99	177.17	441										5D-7665		
6.99	183.52	442			7X-4810						2D-1690			
6.99	189.86	443									5F-6222			
6.99	189.87	443	201-9701											
6.99	199.26	444									2M-0338			
6.99	202.56	445			3P-0658						2D-1691	365-9196		
6.99	208.90				170-4822									

(Continued)

O-Ring (Continued)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
6.99	210.90										161-4511			
6.99	215.26	446	279-3397								4F-7388			
6.99	218.50			6V-3603										
6.99	224.79										4D-6548			
6.99	227.96	447									1J-2890			
6.99	240.66	448									1M-9015			
6.99	253.36	449												
6.99	253.37	449									3E-6794			
6.99	266.06	450									8F-8861			
6.99	266.07	450				175-5086								
6.99	268.44			9X-7442							5P-3487			
6.99	278.76	451									2H-6340			
6.99	278.77	451										160-5266		
6.99	287.41										129-3719			
6.99	291.46	452									8H-8257			
6.99	291.47	452							112-4062			160-5267		
6.99	304.16	453									4M-0661			
6.99	304.17	453				200-2017								
6.99	304.20	453	1W-0118											
6.99	310.13										4M-0737			
6.99	316.86	454	8T-9047	6V-3967							4D-4508			
6.99	329.56	455									5M-4454			
6.99	329.57	455											1Z-6392	
6.99	342.26	456									5P-9217			
6.99	342.27	456		6V-6638	271-5031									
6.99	354.96	457									4J-1253			
6.99	367.67	458									6V-5862			
6.99	369.19	458		353-3210										
6.99	380.36	459									8F-9960			
6.99	386.24			137-4349										
6.99	393.07	460									5P-4342			
6.99	405.26	461									8F-6498	160-5260		
6.99	417.96	462		137-4350							4D-4503			
6.99	428.92			241-6948										
6.99	430.66	463		353-3211							3S-9896	160-5261		
6.99	443.36	464												
6.99	446.88										149-2695			
6.99	460.00												289-2270	

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
6.99	488.76	466									8T-4811			
6.99	481.46	467									5D-1071			
6.99	494.16	468			6V-5060						2D-8363			
6.99	520.07										5P-2587			
6.99	532.26	470			353-3213						3D-8241		380-6914	
6.99	564.50												143-6387	
6.99	582.68	472									2D-8364			
6.99	608.08	473									5D-6428			
6.99	659.00	475			185-7080									
6.99	747.00				241-3294									
6.99	955.00				180-2923									
6.99	975.00				145-9032									
6.99	1091.00				172-5635									
7.00	79.00									118-3125				
7.00	89.00									125-9697				
7.00	90.00									3E-6745		140-0178		
7.00	97.50									118-2722				
7.00	99.00													
7.00	106.00										135-7937			
7.00	145.40	435									2Y-8252			
7.00	158.12	438										140-0240		
7.00	234.30					175-5075								
7.16	18.47				139-6123								5P-2428	
7.50	56.00										175-6176			
7.90	73.00								093-1364					
7.98	76.96													
8.00	216.20										8T-6690			
8.00	273.00									7C-9404				
8.00	285.10										293-4374			
8.40	149.50									113-2073				
8.40	154.50											095-1636		
8.40	164.50											095-1637		
8.40	174.50											095-1638		
8.40	179.50											095-1639		
8.40	189.50										095-1565			
8.40	199.50										095-1566			
8.40	214.50										095-1567			
8.40	239.50											096-2163		

(Continued)

O-Rings

O-Ring (Continued)

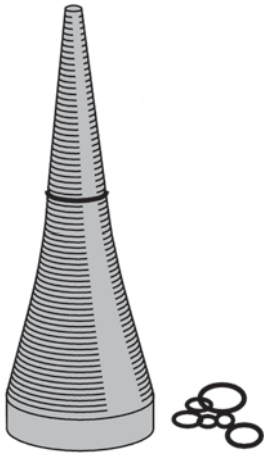
Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TEEP (80)
8.40	249.50									095-1568	095-1643		
8.40	264.50										096-0037		
8.40	289.50									095-1569			
8.40	384.50									095-1570			
8.79	28.17									5H-4196			
8.79	37.34									8F-2691			
9.00	80.00								093-1341				
9.00	96.00					367-8465							
9.47	48.34							8P-7003					
9.47	60.34							6P-8912					
9.47	61.18								161-7249				
9.47	66.09							1M-3097					
9.47	70.34							8P-0021					
9.47	76.34							8H-2262	162-2166				
9.47	78.50							099-0194					
9.47	84.97								162-2167				
9.47	88.50							099-0160					
9.47	92.28							8H-2265	162-2168				
9.47	94.00							096-4295					
9.47	102.34							6H-1309	171-5713				
9.47	113.61							6Y-2270	160-6631				
9.47	127.74							5P-9120					
9.47	152.30							6Y-8134					
9.52	196.85									3K-1516			
9.53	70.10									1H-7683			
10.00	124.70						367-8466						
10.00	140.00						367-8467						
10.00	155.00						367-8468						
10.00	175.00						367-8469						
10.00	200.00						367-8470						
10.00	210.00						367-8471						
10.00	230.00						367-8472						
10.00	250.00						367-8473						
10.00	259.00			317-4373									
11.43	300.61							9M-6097					
11.43	326.00							4V-4884					
12.70	147.47							4K-0173					
12.70	166.47							7M-0475					

(Continued)

**O-Ring (Continued)**

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Dash Size	EPDM (70)	FKM (70)	FKM (75)	FKM (90)	FKM (95)	HNBR (78)	NBR (60)	NBR (70)	NBR (75)	NBR (90)	Silicone (70)	TFEP (80)
12.70	184.95								2M-0344					
12.70	224.90								1M-9011					
12.70	265.00								4M-0660					
12.70	280.03								7T-2457					
12.70	317.13								4M-0736	163-7373				
12.70	364.03								5P-4858					
12.70	424.65								5P-4946					
12.70	498.63								5P-4062					
12.70	660.39													
12.70	764.00													
14.28	650.00								9J-0818					
15.88	751.84								8J-3699					
15.88	600.00								6A-4503					
15.88	660.40								5P-3228					
16.00	888.21													

## O-Ring Measuring Cone



- Designed to measure SAE industry standard O-Ring dimensions by cross section and dash size.
- Made of high impact, yellow plastic with 65 steps indicating the varying inside diameters.
- Contains a round base with five industry standard O-Ring cross section diameters cut into the edge.
- Makes finding the correct O-Ring replacement easier and faster.

Item	Part Number
O-Ring Measuring Cone	9U-5155

## O-Ring Seal Kits 270-1528



- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1528	O-Ring Seal Kits	O-Ring Seal	32 Sizes, 570 Seals Nitrile, 90 Duro	SAE STOR Fittings, SAE ORFS Fittings, SAE Code 61 Flanges, SAE Code 62 Flanges
<b>O-Ring Seal Kit Consists of:</b>				
030-4606	O-Ring Seal	--	--	--
1J-9671	Seal	--	--	--
2M-9780	Seal — O-Ring — STOR (SAE 7/8 — 14)	--	--	--
2S-4078	O-Ring Seal for 9T-6865 Adapter Plug	--	--	--
3D-2824	Seal — O-Ring — STOR (SAE 1 1/16 — 12)	--	--	--
3J-1907	O-Ring Seal for 5P-9617 Adapter	--	--	--
3J-7354	Seal — O-Ring — STOR for 8C-3446 (not pictured)	--	--	--
3K-0360	Seal — O-Ring — STOR (SAE 3/4 — 16)	--	--	--

(Continued)

## O-Ring Seal Kits 270-1528 (Continued)

Part Number	Description	Seal Type	Contents	Application(s)
<b>O-Ring Seal Kit Consists of: (Continued)</b>				
4J-0519	Buna, Neoprene and Nitrile O-Ring seals	--	--	--
4J-0520	Seal	--	--	--
4J-0521	Buna, Neoprene and Nitrile O-Ring seals	--	--	--
4J-0522	Seal (not shown)	--	--	--
4J-0523	Buna, Neoprene and Nitrile O-Ring seals	--	--	--
4J-0524	Seal	--	--	--
4J-0525	Buna, Neoprene and Nitrile O-Ring seals	--	--	--
4J-0526	Buna, Neoprene and Nitrile O-Ring seals	--	--	--
4J-0527	SAE Code 61/62 Flange Seal	--	--	--
4J-5140	Seal	--	--	--
4J-5267	Seal	--	--	--
4J-5477	O-Ring Seal	--	--	--
4J-7533	Seal	--	--	--
4K-1388	SAE Straight Thread O-Ring Seal	--	--	--
5K-9090	O-Ring Seal (not serviced)	--	--	--
6K-6307	O-Ring	--	--	--
6V-8397	O-Ring Seal	--	--	--
6V-8398	O-Ring Seal	--	--	--
6V-8400	SAE O-Ring Face Seal	--	--	--
6V-9746	O-Ring Seal	--	--	--
7J-0204	O-Ring Seal	--	--	--
7J-9108	O-Ring Seal	--	--	--
7M-8485	O-Ring Seal	--	--	--
8T-0315	O-Ring Face Seal	--	--	--



## O-Ring Seal Kits 270-1533



- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1533	O-Ring Seal Kit	O-Ring Seal	32 Sizes, 149 Seals Silicone, 70 Duro	Low-Pressure, High-Temperature Applications
<b>O-Ring Seal Kit Consists of:</b>				
1S-0004	O-Ring Seal	--	--	--
2S-2251	Silicone Rubber O-Ring	--	--	--
6L-1651	Silicone Rubber O-Ring	--	--	--
8M-4389	Silicone Rubber O-Ring	--	--	--
8M-4390	Silicone Rubber O-Ring	--	--	--
8M-4432	Silicone Rubber O-Ring	--	--	--
8M-4435	Silicone Rubber O-Ring	--	--	--
8M-4436	Silicone Rubber O-Ring	--	--	--
8M-4437	Silicone Rubber O-Ring	--	--	--
8M-4438	Silicone Rubber O-Ring	--	--	--
8M-4443	Silicone Rubber O-Ring	--	--	--
8M-4445	Silicone Rubber O-Ring	--	--	--
8M-4446	Silicone Rubber O-Ring	--	--	--
8M-4986	Silicone Rubber O-Ring	--	--	--
8M-4987	Silicone Rubber O-Ring	--	--	--
8M-4988	Silicone Rubber O-Ring	--	--	--
8M-4990	Silicone Rubber O-Ring	--	--	--
8M-4991	Silicone Rubber O-Ring	--	--	--
8M-4992	Silicone Rubber O-Ring	--	--	--
8M-5010	Silicone Rubber O-Ring	--	--	--
8M-5248	Silicone Rubber O-Ring	--	--	--
8M-5249	Silicone Rubber O-Ring	--	--	--
8M-5252	Silicone Rubber O-Ring	--	--	--
8M-5254	Silicone Rubber O-Ring	--	--	--
8M-5661	Silicone Rubber O-Ring	--	--	--
8M-8157	Silicone Rubber O-Ring	--	--	--
8M-8283	Silicone Rubber O-Ring	--	--	--
8M-8515	Silicone Rubber O-Ring	--	--	--
9H-6067	O-Ring Seal	--	--	--
9M-4849	O-Ring Seal	--	--	--
9M-7002	O-Ring Seal	--	--	--
9M-9647	O-Ring Seal	--	--	--

## O-Ring Seal Kits 270-1535

- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.



Part Number	Description	Seal Type	Contents	Application(s)
270-1535	O-Ring Seal Kit	O-Ring Seal	9 Sizes, 80 Seals Nitrile, 90 Duro	Cat Flanges
<b>O-Ring Seal Kit Consists of:</b>				
1P-3700	D-Ring Seal	--	--	--
1P-3702	Seal	--	--	--
1P-3703	Seal, 38.66 mm (1.52 in) outside diameter	--	--	--
1P-3704	Seal, 44.75 mm (1.76 in) outside diameter	--	--	--
1P-3705	Seal	--	--	--
1P-3706	D-Ring Seals	--	--	--
1P-3707	D-Ring Seals	--	--	--
1P-3708	Seal, 64.2 mm (2.52 in) outside diameter	--	--	--
1P-3709	D-Ring Seals	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup> Not available for individual sale

## O-Ring Seal Kits 270-1537

- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.



(Continued)

## O-Ring Seal Kits 270-1537 (Continued)

Part Number	Description	Seal Type	Contents	Application(s)
270-1537	O-Ring Seal Kit	Rectangular Seal	10 Sizes, 125 Seals Nitrile, 90 Duro	Metric STOR (ISO 6149)
<b>O-Ring Seal Kit Consists of:</b>				
6V-6560	O-Ring	--	--	--
6V-7970	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
6V-9028	O-Ring	--	--	--
8T-6850	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
8T-7524	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
8T-7525	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
8T-7526	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
8T-7876	O-Ring Seal for 8C-3345 (not pictured)	--	--	--
8T-7877	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
8T-7878	ISO (Metric) Straight Thread O-Ring Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup> Not available for individual sale

## O-Ring Seal Kits 270-1539



- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1539	O-Ring Seal Kits	O-Ring Seal	8 Sizes, 120 Seals Nitrile, 90 Duro	SAE ORFS Fittings
<b>O-Ring Seal Kit Consists of:</b>				
5K-9090	O-Ring Seal (not serviced)	--	--	--
6V-8397	O-Ring Seal	--	--	--
4J-5477	O-Ring Seal	--	--	--
6V-8398	O-Ring Seal	--	--	--
6V-8400	SAE O-Ring Face Seal	--	--	--
6V-9746	O-Ring Seal	--	--	--
7J-9108	O-Ring Seal	--	--	--
8T-0315	O-Ring Face Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup> Not available for individual sale

## O-Ring Seal Kits 270-1540

- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.



Part Number	Description	Seal Type	Contents	Application(s)
270-1540	O-Ring Seal Kit	O-Ring Seal	12 Sizes, 150 Seals	Air-Conditioning Fittings (R134 Compatible)
<b>O-Ring Seal Kit Consists of:</b>				
121-7136	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
121-7137	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
121-7138	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
229-4896	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7378	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7379	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7380	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7381	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7382	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7383	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7384	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
9X-7385	Buna, Neoprene and Nitrile O-Ring Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup>Not available for individual sale

## O-Ring Seal Kits 270-1545



- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1545	O-Ring Seal Kit	O-Ring Seal	6 Sizes, 60 Seals Nitrile, 90 Duro	SAE Code 61 Flanges, SAE Code 62 Flanges
<b>O-Ring Seal Kit Consists of:</b>				
4J-0527	SAE Code 61/62 Flange Seal	--	--	--
4J-0520	Seal	--	--	--
4J-0524	Seal	--	--	--
4J-5140	Seal	--	--	--
4J-5267	Seal	--	--	--
4J-0522	Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup>Not available for individual sale

## O-Ring Seal Kits 271-0459



- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
271-0459	O-Ring Seal Kits	O-Ring Seal	8 Sizes, 40 Seals FRM, 90 Duro	SAE ORFS Fittings
<b>O-Ring Seal Kit Consists of:</b>				
228-7088	SAE O-Ring Face Seal	--	--	--
228-7089	SAE O-Ring Face Seal	--	--	--
228-7090	SAE O-Ring Face Seal	--	--	--
228-7091	SAE O-Ring Face Seal	--	--	--
228-7092	SAE O-Ring Face Seal	--	--	--
228-7093	SAE O-Ring Face Seal	--	--	--
228-7094	SAE O-Ring Face Seal	--	--	--
228-7095	SAE O-Ring Face Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup>Not available for individual sale

## O-Ring Seal Kits 271-0460

- Include frequently used O-Ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.



Part Number	Description	Seal Type	Contents	Application(s)
271-0460	O-Ring Seal Kit	O-Ring Seal	13 Sizes, 65 Seals FKM, 90 Duro	SAE ORFS Fittings
<b>O-Ring Seal Kit Consists of:</b>				
214-7567	SAE Straight Thread O-Ring Seal	--	--	--
214-7568	SAE Straight Thread O-Ring Seal	--	--	--
214-7566	SAE Straight Thread O-Ring Seal	--	--	--
228-7096	SAE Straight Thread O-Ring Seal	--	--	--
228-7097	SAE Straight Thread O-Ring Seal	--	--	--
238-5078	SAE Straight Thread O-Ring Seal	--	--	--
238-5079	SAE Straight Thread O-Ring Seal	--	--	--
238-5080	SAE Straight Thread O-Ring Seal	--	--	--
238-5081	SAE Straight Thread O-Ring Seal	--	--	--
238-5082	SAE Straight Thread O-Ring Seal	--	--	--
238-5083	SAE Straight Thread O-Ring Seal	--	--	--
238-5084	SAE Straight Thread O-Ring Seal	--	--	--
238-5086	SAE Straight Thread O-Ring Seal	--	--	--
276-9578 <sup>1</sup>	Utility Boxes	--	--	--

<sup>1</sup> Not available for individual sale

## Cat® Resealable O-Ring Packaging



- 67 different O-Ring packages to match the most common types of hydraulic adapters and hose fittings.
- Convenient, contamination-free poly bag that is resealable.
- Cat seals exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Individual O-Ring Part Number	Adapter/Hose Fitting Size	Description	Material <sup>1</sup>	Package Part Number	Package Quantity
4J-7533	Dash 02	SAE Straight Thread O-Ring Seal	NBR	275-1082	10
7J-0204	Dash 03, 4 and 5	SAE Straight Thread O-Ring Seal	NBR	275-1080	10
3J-7354	Dash 04	SAE Straight Thread O-Ring Seal	NBR	275-1079	10
1J-9671	Dash 05	SAE Straight Thread O-Ring Seal	NBR	275-1097	10
3J-1907	Dash 06	SAE Straight Thread O-Ring Seal	NBR	275-1094	10
3K-0360	Dash 08	SAE Straight Thread O-Ring Seal	NBR	275-1089	10
2M-9780	Dash 10	SAE Straight Thread O-Ring Seal	NBR	275-1088	10
3D-2824	Dash 12	SAE Straight Thread O-Ring Seal	NBR	275-1102	8
4K-1388	Dash 14	SAE Straight Thread O-Ring Seal	NBR	275-1101	8
7M-8485	Dash 16	SAE Straight Thread O-Ring Seal	NBR	275-1104	7
2S-4078	Dash 20	SAE Straight Thread O-Ring Seal	NBR	275-1107	6
6K-6307	Dash 24	SAE Straight Thread O-Ring Seal	NBR	275-1093	5
030-4606	Dash 32	SAE Straight Thread O-Ring Seal	NBR	275-1096	4
1P-3702	--	D-Ring Seal	NBR	275-1110	6
1P-3703	--	D-Ring Seal	NBR	275-1114	5
1P-3704	--	D-Ring Seal	NBR	275-1123	4
1P-3705	--	D-Ring Seal	NBR	275-1120	4
1P-3706	--	D-Ring Seal	NBR	275-1126	3
1P-3707	--	D-Ring Seal	NBR	275-1125	3
1P-3700	--	D-Ring Seal	NBR	275-1078	7
1P-3708	--	D-Ring Seal	NBR	275-1081	3
1P-3709	--	D-Ring Seal	NBR	275-1086	2
4J-5140	Dash 08	SAE Code 61/62 Flange Seal	NBR	275-1103	8
4J-5267	Dash 12	SAE Code 61/62 Flange Seal	NBR	275-1105	7
4J-0520	Dash 16	SAE Code 61/62 Flange Seal	NBR	275-1109	6
4J-0522	Dash 20	SAE Code 61/62 Flange Seal	NBR	275-1115	5
4J-0524	Dash 24	SAE Code 61/62 Flange Seal	NBR	275-1122	4

(Continued)

## Cat® Resealable O-Ring Packaging (Continued)

Individual O-Ring Part Number	Adapter/Hose Fitting Size	Description	Material <sup>1</sup>	Package Part Number	Package Quantity
4J-0527	Dash 32	SAE Code 61/62 Flange Seal	NBR	275-1118	4
4J-5477	Dash 03, 4 and 5	SAE O-Ring Face Seal	NBR	275-1095	10
6V-8397	Dash 06	SAE O-Ring Face Seal	NBR	275-1092	10
6V-8398	Dash 08	SAE O-Ring Face Seal	NBR	275-1090	10
7J-9108	Dash 10	SAE O-Ring Face Seal	NBR	275-1087	10
6V-9746	Dash 12 and 14	SAE O-Ring Face Seal	NBR	275-1085	10
5K-9090	Dash 16	SAE O-Ring Face Seal	NBR	275-1084	10
6V-8400	Dash 20	SAE O-Ring Face Seal	NBR	275-1083	10
8T-0315	Dash 24	SAE O-Ring Face Seal	NBR	275-1091	8
8T-7876	M10	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1098	10
6V-9028	M12	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1099	10
6V-6560	M14	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1100	10
8T-6850	M16	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1106	10
8T-7524	M18	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1108	10
8T-7877	M20	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1111	10
6V-7970	M22	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1112	10
8T-7878	M26	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1113	8
8T-7525	M27	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1116	8
8T-7526	M33	ISO (Metric) Straight Thread O-Ring Seal	NBR	275-1117	7
228-7088	Dash 03, 4 and 5	SAE O-Ring Face Seal	FKM	275-1119	7
228-7089	Dash 06	SAE O-Ring Face Seal	FKM	275-1121	6
228-7090	Dash 08	SAE O-Ring Face Seal	FKM	275-1124	6
228-7091	Dash 10	SAE O-Ring Face Seal	FKM	275-1127	5
228-7092	Dash 12 and 14	SAE O-Ring Face Seal	FKM	275-8954	5
228-7093	Dash 16	SAE O-Ring Face Seal	FKM	275-8955	4
228-7094	Dash 20	SAE O-Ring Face Seal	FKM	275-8956	4
228-7095	Dash 24	SAE O-Ring Face Seal	FKM	275-8957	3
238-5078	Dash 02	SAE Straight Thread O-Ring Seal	FKM	275-8958	7
238-5079	Dash 03	SAE Straight Thread O-Ring Seal	FKM	275-8959	7
214-7566	Dash 04	SAE Straight Thread O-Ring Seal	FKM	275-8960	6
214-7567	Dash 05	SAE Straight Thread O-Ring Seal	FKM	275-8961	6
214-7568	Dash 06	SAE Straight Thread O-Ring Seal	FKM	276-3625	6
238-5080	Dash 8	SAE Straight Thread O-Ring Seal	FKM	276-3626	5
238-5081	Dash 10	SAE Straight Thread O-Ring Seal	FKM	276-3627	4
238-5082	Dash 12	SAE Straight Thread O-Ring Seal	FKM	276-3628	3
238-5083	Dash 14	SAE Straight Thread O-Ring Seal	FKM	276-3629	3
238-5084	Dash 16	SAE Straight Thread O-Ring Seal	FKM	276-3630	3
228-7096	Dash 20	SAE Straight Thread O-Ring Seal	FKM	276-3631	3
238-5086	Dash 24	SAE Straight Thread O-Ring Seal	FKM	276-3632	2
228-7097	Dash 32	SAE Straight Thread O-Ring Seal	FKM	276-3633	2

<sup>1</sup>NBR = Standard Nitrile  
FKM = Fluorocarbon



# O-Rings

Material	Hardness	Temp.	Compatible With	Applications	Not Compatible With
Ethylene Propylene Diene Modified (70) (EPDM)	70 Durometer	-55° – 135° C -67° – 275° F	Alcohols Automotive brake fluids Hot, cold water Ketones Ozone and sunlight Phosphate ester fluids Silicone fluids Some dilute acids Steam (200 Degree C max) Steam (400 Degree F max)	Ebullient cooled engine cooling systems	Aromatic fuels Diester lubricants Petroleum fluids
Fluorocarbon (75) (FKM)	75 Durometer	-40° – 175° C -40° – 350° F	Diester lubricants Halogenated hydrocarbons (above 100 Deg. C) Highly resistant to compression set Petroleum fluids Phosphate ester fluids Silicone fluids Some acids	High temperature applications requiring resistance to air, fuels, lubricants and hydraulic fluids	Amines Brake fluids Engine Coolant Fire Resistant Fluids Ketones Steam Water
Fluorocarbon (90) (FKM)	90 Durometer	-40° – 175° C -40° – 350° F	Diester lubricants Halogenated hydrocarbons (above 100 Deg. C) Highly resistant to compression set Petroleum fluids Phosphate ester fluids Silicone fluids Some acids	High pressure, high temperature applications requiring resistance to air, fuels, lubricants and hydraulic fluids ORFS, STORS seals	Amines Brake fluids Engine Coolant Fire Resistant Fluids Ketones Steam Water
Highly Saturated Nitrile (78) (HNBR)	78 Durometer	-40° – 121° C -40° – 275° F	Abrasion resistant Diesel fuels Diester lubricants Ozone Petroleum oils, greases Refrigerant HFC — 134a (Non-Freon) Silicone fluids Steam Water base engine coolants	Automotive air conditioner seals High temperature flex boot seals High temperature power steering seals Higher temperature hydraulic seals Middle cylinder liner seals	Aromatic and oxygenated gasolines Automotive and aircraft brake fluids Chlorinated hydrocarbons Ethers Ketones Phosphate ester fluids
Nitrile (60)	60 Durometer	-40° – 100° C -40° – 212° F	Alpha-Olefin base synthetic lubricants Ethylene Glycol Petroleum base lubricants Silicone oils and greases Water, water base engine coolants	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids Power steering seals Radiator thermostat seals	Automotive and aircraft brake fluids High levels of ozone Ketones Phosphate ester fluids UV Light

(Continued)

Material	Hardness	Temp.	Compatible With	Applications	Not Compatible With
Nitrile (70)	70 Durometer	-40° – 100° C -40° – 212° F	Alpha-Olefin base synthetic lubricants Ethylene Glycol Hydrocarbon fuels Petroleum base lubricants Silicone oils and greases Water, water base engine coolants	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids Power steering seals Radiator thermostat seals	Acetone Automotive and aircraft brake fluids Chlorinated hydrocarbons High levels of ozone Ketones Nitro hydrocarbons Phosphate ester fluids Strong acids UV light
Nitrile (90)	90 Durometer	-40° – 100° C -40° – 212° F	Abrasion resistant Alpha-Olefin base synthetic lubricants Ethylene Glycol Hydrocarbon fuels Petroleum base lubricants Silicone oils and greases Water, water base engine coolants ORFS, STORS seals	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids (to 10,335 kPa/1,500 psi) Power steering seals Radiator thermostat seals	Automotive and aircraft brake fluids High levels of ozone Ketones Phosphate ester fluids Strong acids UV light
Polyacrylic (75) (ACM)	75 Durometer	-12° – 135° C +10° – 275° F	Excellent resistance to oxidation Excellent resistance to ozone Excellent resistance to sunlight & UV light Petroleum base fluids Transmission fluids Type "R" power steering fluid	Power steering seals Transmissions	Aromatic hydrocarbons Brake fluids Chlorinated hydrocarbons Ethylene Glycol Methanol Other alcohols Phosphate ester fluids Water or steam
Silicone (70)	70 Durometer	-46° – 150° C -50° – 300° F	Air Diacetone alcohol Ethylene glycol Extreme high/low temperatures High aniline point oil Iso-butyl alcohol Ozone & UV light Polyglycol	Electrical system seals High temperature air seals High temperature static grease seals	Acetone Aromatic hydrocarbons EP oil Fuel oil Gasoline Ketones Low aniline point oils Petroleum oils Steam & hot water
Urethane (90)	90 Durometer	-40° – 93° C -40° – 200° F	Ozone Petroleum base lubricants and hydraulic fluids/fuels UV light	Brake seals Hydraulic cylinder seals	Water Water base hydraulic fluids





**SHOP SUPPLIES**

**Thread File Group — 154-9315**

Warranty: Cat® Standard Warranty, 6 Months



Model: 311, 312, 312B, 315B, and 318B Excavators (Grenoble Version)

SMCS Code: 4050-006, 0671

**Reference**

REN1113 Service Manual, 312B Excavators Machine Systems Disassembly and Assembly

- Used to renew damaged external threads on any diameter shaft (right or left handed)
- Cross-cut and thread proportional to thread pitch (helps eliminate file skipping or jumping out of fine pitches)
- Each file has eight separate pitches
- Makes thread repairs without using a thread die
- Red plastic handle protects hands
- Each file is individually packaged in a plastic tube
- Carrying pouch keeps files together
- Files can also be ordered separately

Part Number	Description	Pitch
154-9315	Complete Thread File Group	9, 10, 12, 16, 20, 27, 28, and 32 tpi
<b>Thread File Group Consists of:</b>		
154-9316	Metric Thread File	0.75, 1.00, 1.25, 1.50, 1.75, 2.00, and 3.00
154-9317	Inch Thread File	11, 12, 13, 14, 16, 18, 20, and 24 tpi
154-9318	Inch Thread File	9, 10, 12, 16, 20, 27, 28, and 32 tpi
154-9319	Pipe Thread File	8, 10, 11 1/2 , 14, 16, 18, 24, and 27 tpi
160-1749	Roll-up Pouch	--

**Cap and Plug Kit — 276-7018**

Warranty: Cat® Standard Warranty, 6 Months

- Protects against damage, dirt, moisture and corrosion during storage, shipping and repair
- Tapered caps/plugs are designed to plug multiple inner diameters and cap multiple outside diameters
- Three individual plastic boxes all found in one kit to keep caps/plugs organized and clean



Part Number	Index Description
276-7018	Cap and Plug Complete Kit
<b>Cap and Plug Kit Consists of:</b>	
9U-7090	Cap/Plug — Tapered
9U-7091	Cap/Plug — Tapered
9U-7067	Cap/Plug — Tapered
9U-7068	Cap/Plug — Tapered
9U-7069	Cap/Plug — Tapered
9U-7070	Cap/Plug — Tapered
9U-7071	Cap/Plug — Tapered
9U-7073	Cap/Plug — Tapered
276-0748	Cap — Plug
276-0749	Cap — Plug
9U-7074	Cap/Plug — Tapered
9U-7075	Cap/Plug — Tapered

Part Number	Index Description
<b>Cap and Plug Kit Consists of: (Continued)</b>	
9U-7076	Cap/Plug — Tapered
9U-7077	Cap/Plug — Tapered
9U-7078	Cap/Plug — Tapered
9U-7079	Cap/Plug — Tapered
9U-7080	Cap/Plug — Tapered
9U-7081	Cap/Plug — Tapered
276-0750	Cap — Plug
276-0751	Cap — Plug
9U-7082	Cap/Plug — Tapered
9U-7085	Cap/Plug — Tapered
9U-7087	Cap/Plug — Tapered
9U-7088	Cap/Plug — Tapered
9U-7089	Cap/Plug — Tapered

Part Number	Index Description
<b>Cap and Plug Kit Consists of: (Continued)</b>	
276-0747	Cap — Plug
276-0752	Cap — Plug
276-0753	Cap — Plug
276-0754	Cap — Plug
276-0755	Cap — Plug
276-0756	Cap — Plug
276-0757	Cap — Plug
276-0731	Cap — Plug
276-0740	Cap — Plug
276-0741	Cap — Plug
276-0742	Cap — Plug
276-0743	Cap — Plug
276-0744	Cap — Plug
276-0745	Cap — Plug
276-0746	Cap — Plug

**Inspection Light**

Warranty: Manufacturer, Lifetime



- Molded in Lexan®, designed to stand up to almost any punishment
- Lightweight, super compact light source
- Water-tight to 609.6 m (2,000 ft)
- Shock proof, corrosion proof
- Economical, 30-hour long life lamp module
- Handy shirt clip
- Includes two AA batteries
- Includes 90° light bender

Part Number	Description
141-1655	Inspection Light
Service Part	
4C-6741	Lamp Module (Qty. 12) <sup>1</sup>

<sup>1</sup>Warranty: Manufacturer's, Lifetime

**Pen Light**

Warranty: Manufacturer, 120 Day



**European Union Compliant, CE marked**

- Made from tempered aircraft aluminum
- 100,00 hour lifetime, hi-intensity light emitting diode (LED) bulb
- Batteries last up to 60 hours
- Includes 3 AAAA batteries
- Handy shirt clip
- Push end of pen light to momentarily illuminate or twist end clockwise for constant "on"
- Waterproof

Part Number	Description
238-8244	Pen Light, White LED
269-3123	Pen Light, Blue LED
Replacement Batteries	
245-3224	AAAA-Cell Alkaline Battery <sup>1</sup>

<sup>1</sup>Warranty: Manufacturer's, 120-Day



**Industrial Batteries**

Warranty: Cat® Standard Warranty, 6 Months

**Alkaline**

- Top-of-the-line for maximum service life
- Best for use in high-drain, continuous use situations

**Heavy-Duty**

- Ideally suited for normal industrial use



Part Number	Description	Voltage	Package Quantity
1U-9532	D-Cell Alkaline Battery	1.5	72
1U-9531	C-Cell Alkaline Battery	1.5	72
1U-9533	AA Alkaline Battery, non-rechargeable, package qty 96 (5 required to power Indicator III)	1.5	96
1U-9534	Battery — 9V Size (not shown)	9	72
1U-9535	AAA-Cell Alkaline Battery	1.5	96
1U-9536	C-Cell Heavy-Duty Battery	1.5	72
1U-9537	D-Cell Heavy-Duty Battery	1.5	72
1U-9538	AA-Cell Heavy-Duty Battery	1.5	96
1U-9539	9 Volt Heavy-Duty Battery	9	72
245-3224	AAAA-Cell Alkaline Battery <sup>1</sup>	1.5	6

<sup>1</sup>Warranty: Manufacturer's, 120-Day**Lantern Battery**

Warranty: Cat® Standard Warranty, 6 Months

- Offers dependable high performance for portable lighting uses
- Recommended for all industrial lanterns

Part Number	Description	Package Quantity
1U-9547	Lantern Battery, Spring Terminal, 6 Volt	12





**Triple-Tap Extension Cord**

Warranty: Cat® Standard Warranty, 6 Months



- 120 Volt/60 Hz reel extension cord is 15.2 m (50 ft) long, made from 16/3 wire with a built-in 10 amp circuit breaker
- Case is made from shatter resistant ABS plastic
- Two year warranty on workmanship and material defects
- UL Approved

Part Number	Description
179-7053	Triple-Tap Extension Cord

**Heavy-duty Contractor and Industrial Application Extension Cords**

Warranty: Cat® Standard Warranty, 6 Months



- Designed for heavy-duty use by contractors and industrial applications
- Outer jacket protects against rough handling and extreme weather conditions
- Provides superior resistance to sunlight, ozone, cracking, oils chemicals, and moisture
- All cords have Cat® logo printed on cord
- All extension cords are UL (Underwriters Laboratory) listed and meet OSHA (Office of Safety and Health Administration) requirements
- All plugs and outlets are NEMA (National Electrical Manufacturers Association) designated — 5-15P plug and 5-15R outlet

Part Number	Length	Material	Outlet	Wire Size	Rating <sup>1</sup>	Voltage Rating	Operating Temperature
241-8522	25.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
241-8529	50.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
241-8530	100.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1874	25.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1875	50.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1876	100.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1877	25.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1878	50.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)
243-1879	100.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60° C (-31 to 140° F)

<sup>1</sup>(S) Hard Surface, Flexible Cord, General Use; (J) 300 Volt cord or smaller; (W) Watertight Cord; (O) Oil Resistant; (T) Thermo Grade Plastic

**Utility Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- Help protect from heat, cold, nicks, cuts, and bruises
- Split-palm design ensures long life in high-wear areas
- Hidden seam design eliminates snagging
- Tough spandex top material resists snags
- Snug, comfort fit assures greater dexterity
- NOT flame-proof or fire retardant
- Machine washable, air dry (Do NOT machine dry)



Part Number	Size	Qty.
276-0492	Large	Bulk — 6 pair
276-0491	Medium	Bulk — 6 pair
276-0493	Extra Large	Bulk — 6 pair
276-0494	XX Large	Bulk — 6 pair

**Impact Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- Design features improved dexterity and glove life
- Compression-molded Airprene knuckle and index finger protection
- Seamless index finger for great fingertip control
- Streamlined thermal plastic rubber (TPR) hook and loop fastening on cuff
- Split palm design puts 1 mm material in all high wear areas
- 3 mm gel palm padding reduces vibrations
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)



Part Number	Size	Qty.
276-0499	Medium	Bulk — 6 pair
276-0500	Large	Bulk — 6 pair
276-0501	Extra Large	Bulk — 6 pair
276-0502	XX Large	Bulk — 6 pair

**Insulated Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- Improved thermal protection
- Waterproof glove insert to keep hands dry
- Unique combination of Velboa and micro fleece layer closest to skin for warmth
- Neoprene cuff design with streamlined thermal plastic rubber (TPR) hook and loop fastening
- Compression-molded neoprene knuckle and index finger protection
- Durable synthetic leather palm
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)



Part Number	Size	Qty.
276-0495	Medium	Bulk — 6 pair
276-0496	Large	Bulk — 6 pair
276-0497	Extra Large	Bulk — 6 pair
276-0498	XX Large	Bulk — 6 pair

**Fingerless Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- Protect hands while having full fingertip access
- Palm padding of 3 mm shock-absorbing gel
- Hidden seam design eliminates snagging
- Tough spandex top material resists snags
- Snug, comfort fit assures greater dexterity
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)

Part Number	Size	Qty.
276-0487	Medium	Bulk — 6 pair
276-0488	Large	Bulk — 6 pair
276-0489	Extra Large	Bulk — 6 pair
276-0490	XX Large	Bulk — 6 pair

**Unlined Grain Leather Driver's Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- For drivers, utility, and warehouse workers
- Gunn cut pattern
- Keystone thumb
- Pull-strap closure
- CE marked, meets EN388
- Package of 12

Part Number	Size
282-9529	Large
282-9530	Extra Large

**Lined Leather Driver's Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For drivers, utility and warehouse workers
- Extra warmth
- Elastic shirred back holds glove securely to hand
- Gunn cut pattern

Part Number	Size	Qty.
246-5151	Medium	12 Pair with Hang Tags
246-5149	Large	12 Pair with Hang Tags
246-5147	Extra Large	12 Pair with Hang Tags
246-5152	Medium	Bulk — 12 Pair
246-5150	Large	Bulk — 12 Pair
246-5148	Extra Large	Bulk — 12 Pair



**Split Leather Driver's Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For drivers, utility and warehouse workers; light welding
- Elastic shirred back holds glove securely to hand
- Gunn cut pattern

Part Number	Size	Qty.
246-5153	Large	12 Pair with Hang Tags
246-5154	Large	Bulk — 12 pair



**Split Leather Palm Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For tough rugged jobs
- Full leather index finger
- Lined palm and leather tips
- Gauntlet cuff style
- Elastic on back with knuckle strap

Part Number	Size	Qty.
246-5155	Large	12 Pair with Hang Tags
246-5156	Large	Bulk — 12 Pair



**Split Leather Palm Gloves — 268-8795**

Warranty: Cat® Standard Warranty, 6 Months



- Grain leather palm with palm patch
- Gunn cut
- Waterproof safety cuff
- Wing thumb
- Full leather index finger and tips with elastic

Part Number	Size	Qty.
268-8795	Men's Large	12

**Split Cowhide Palm Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- For medium- to heavy-duty work
- Gunn cut pattern
- Full leather index finger
- Wing thumb

Part Number	Size	Qty.
282-9531	Medium	Bulk — 12 Pair
282-9532	Large	Bulk — 12 Pair
282-9533	Extra Large	Bulk — 12 Pair

**Traditional All-purpose Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- For general work
- Cotton blend
- Knit wrist cuff
- Plastic dots on inner side and back of index finger

Part Number	Size	Qty.
246-5163	Large	Bulk — 12 Pair

**Jersey Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For general purpose use
- Soft knit fabric
- Stretch to provide excellent fit

Part Number	Size	Qty.
246-5165	Large	12 Pair with Hang Tags
246-5166	Large	Bulk — 12 Pair



**Fleeced Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For outside work
- Knit wrist cuff
- Double layer of fabric
- Added warmth

Part Number	Size	Qty.
246-5167	Large	Single Pair
246-5168	Large	Bulk — 12 Pair



**Reversible Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For work where grip is important
- String knit glove
- Black dots on both sides
- Knit wrist

Part Number	Size	Qty.
246-5169	Large	Bulk — 12 Pair



**Leather Welding Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- One piece back fully welted
- Color: gold

Part Number	Size	Qty.
185-0153	Large	Single Pair
247-4447	Large	Single Pair
247-6410	Large	Bulk — 12 Pair

**Chemical-resistant Nitrile Gloves**

Warranty: Cat® Standard Warranty, 6 Months



NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

- Protect against cuts, abrasions, punctures, and snags
- Embossed texture improves grip
- Will not swell or weaken like rubber or neoprene in solvents and fats

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5522	9	Bulk — 12 Pair	Chemical Handling Acids, Solvents, Caustics, Oils, Grease, Degreasing Machine operations using cutting oil, metal fabrication	Sodium Hydroxide, Freon, Xylene, Hydro-chloric Acid, Stoddard Solvent, Potassium Hydroxide, Perchloroethylene, Phosphoric Acid
4C-5523	10	Bulk — 12 Pair	Chemical Handling Acids, Solvents, Caustics, Oils, Grease, Degreasing Better protection than 4C-5522 due to thickness	Sodium Hydroxide, Freon, Xylene, Hydro-chloric Acid, Stoddard Solvent, Potassium Hydroxide, Perchloroethylene, Phosphoric Acid



**Neoprene-coated Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For working with acids, solvents, oils, caustics and greases
- High cut resistance compared to rubber and vinyl
- Good from 46° C to 149° C (-50° F to 300° F)

Part Number	Size	Qty.
246-5164	Large	12 Pair



**Nitrile-coated Knit-lined Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For dry and light oil applications
- Resistance to cuts and abrasions
- Porous coating is soft and flexible
- Excellent grip
- CE Cat. 11

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.



Part Number	Size	Qty.	Application	Chemical Resistance
4C-5526	Large	12 pair per package	Light to medium duty, general purpose, fabrication, assembly, maintenance, shipping, and receiving. Excellent grip in light oil applications.	Oil, Grease

**Neox Gloves with Neoprene Coating**

Warranty: Cat® Standard Warranty, 6 Months

- Resistance to cuts, abrasions, and chemicals
- Interlock knit lining enhances puncture and snag resistance
- Two-piece lining eliminates irritating seams

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.



Part Number	Size	Qty.	Application	Chemical Resistance
4C-5527	One size fits most	12 pair per package	Resists Heat, Cutting, Use in Plating, Galvanizing, Degreasing, Petrochemicals	Acids, Solvents, (Ex.: Glycol Ether), Oils, Caustics, Soaps, Alcohols



**Neoprene-coated Knit-lined Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- For full-arm protection when using chemicals
- Broad protection against cuts and abrasions
- Resist oils, caustics, acids, alcohol, and solvents
- Fabric lining enhances puncture and snag resistance
- CE marked, EN388:3222, EN511:121, EN374, EN374:AKL, EN407:43XXXX

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5529	One size fits most	Single Pair	Resists Heat, Cutting, Use in Plating, Galvanizing, Sandblasting Cabinet	Acids, Solvents, (Ex.: Glycol Ether), Oils, Caustics, Soaps, Alcohols

**Disposable Powder-Free Nitrile Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- Superior resistance to abrasives, chemicals, and punctures
- Contains no latex
- 5 mil thick
- CE marked, meets EN 388:1994 and EN 374-3:1994

Part Number	Description	Size	Qty.
260-1802	Powder-Free	Small	100 per box
259-7007	Powder-Free	Medium	100 per box
246-5180	Powder-Free	Large	100 per box
259-7008	Powder-Free	Extra Large	100 per box

**Disposable Powdered Nitrile Gloves**

Warranty: Cat® Standard Warranty, 6 Months



- Superior resistance to abrasives, chemicals, and punctures
- Contains no latex
- 5 mil thick
- CE marked, meets EN 388:1994 and EN 374-3:1994

Part Number	Description	Size	Qty.
260-1776	Powdered	Small	100 per box
259-7005	Powdered	Medium	100 per box
246-5179	Powdered	Large	100 per box
259-7006	Powdered	Extra Large	100 per box

**Disposable Latex Gloves**

Warranty: Cat® Standard Warranty, 6 Months

- For working with chemicals
- Extra stretch for best fit
- Excellent sensitivity touch
- Seamless construction
- Rubber latex
- 5 mil thick, 10 in long
- CE marked, meets EN388:1994 and EN374-3:1994



Part Number	Size	Qty.
260-1777	Small	100 per box
260-1778	Medium	100 per box
246-5181	Large	100 per box
260-1779	Extra Large	100 per box

**Nylon Gloves with Nitrile Coating**

Warranty: Cat® Standard Warranty, 6 Months

- For maintenance/assembly and shipping/receiving
- Excellent cut and abrasion resistances
- Good alternative to heavy cotton-coated gloves



Part Number	Size	Qty.
247-6412	Large	12 Pair with Hang Tags
247-6413	Extra Large	12 Pair with Hang Tags
247-4449	Large	Bulk — 12 Pair
247-4450	Extra Large	Bulk — 12 Pair

**Safety Vests**

Warranty: Cat® Standard Warranty, 6 Months



**262-9301 Lime Green Mesh Safety Vest**

- Non-reflective, lime green color
- Front hook and loop closure with black cloth binding
- One size fits all
- Material: 100% polyester mesh

**262-9176 Orange Mesh Safety Vest**

- Non-reflective, dayglow orange color
- Front hook and loop closure
- Elastic side straps
- One size fits all
- Material: 100% polyester mesh

Part Number	Description	Color	Material
262-9176	Safety Vest <sup>1</sup>	Orange	Polyester Mesh
262-9301	Safety Vest <sup>1</sup>	Lime Green	Polyester Mesh

<sup>1</sup>Non-Reflective

**Wraparound Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Visitor disposable safety glasses
- Can be worn over prescription glasses
- 99.9% UVA and UVB protection
- Meets or exceeds all ANSI, CSA, and CE specifications

Part Number	Description	Package Quantity
239-1085	Wraparound Safety Glasses	1



**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Polycarbonate lens
- Universal bridge, plastic frame
- Meets ANSI Z87.1-1979 and CE specifications

Part Number	Package Quantity	Lens Type	Frame Color	Size	Lens Features
4C-8093	10	Clear	Mocha	54	Eyebrow and side shield
4C-8351	10	Gray	Mocha	58	Eyebrow and side shield



**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Sporty wraparound look
- Soft non-slip rubber nosepiece
- Adjustable temple length
- Full UVA and UVB protection
- Meets or exceeds all ANSI, CUL and CE specifications

Part Number	Lens Type	Package Quantity
233-8576	Clear (packaged for retail)	1
233-8577	Clear	1
233-8578	Gray (packaged for retail)	1
233-8579	Gray	1



Shop Supplies

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months



- 5-position ratchet and 4-position telescoping temples
- Soft non-slip rubber nosepiece
- Anti-scratch hard-coated lenses
- 99.9% UVA and UVB protection
- Ventilation between lens and frame
- Meets or exceeds all ANSI and CUL specifications

Part Number	Lens Type	Package Quantity
233-8580	Gray (packaged for retail)	1
249-7265	Clear (packaged for industrial; 12 per package)	1

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months



**European Union Compliant, CE marked**

- 5-position ratchet and 4-position telescoping temples
- Stylish one-piece lens with shields
- Hard-coated lenses
- 99.9% UVA and UVB protection
- Meets or exceeds all ANSI, CSA, and CE specifications

Part Number	Lens Type	Frame	Package Quantity
239-1079	Clear	Black	1
239-1082	Clear	Yellow/black	1
239-1083	Gray	Black	1
239-1084	Gray	Yellow/black	1
233-8581	Blue	Mirror-black	1
233-8582	Blue	Mirror-yellow/black	1

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- 9.75 base lens provide excellent optics and protection
- Gel nosepiece allows for all day comfort
- 4-position telescoping temples for superior fit
- All lens are hard coated for scratch resistance
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Lens Tint	Package Quantity
<b>Industrial Packaging</b>		
307-3013	Clear	12 per package
307-3014	Smoke	12 per package
307-3015	Indoor/Outdoor Use	12 per package
307-3016	Amber	12 per package

Part Number	Lens Tint	Package Quantity
<b>Retail Packaging (Clamshell)</b>		
308-6368	Clear	Clamshell
308-6369	Smoke	Clamshell
308-6370	Indoor/Outdoor Use	Clamshell
308-6372	Amber	Clamshell

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Polarized lens provides superior glare control
- 5 position ratchet plus 4-position telescoping temples for superior fit
- Ventilation channel between lens and frame helps reduce fogging
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Type
<b>Industrial Packaging</b>		
309-4932	12 per package	Polarized
<b>Retail Packaging (Clamshell)</b>		
309-4934	Clamshell	Polarized

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Rubber tipped temples for comfortable fit
- Soft rubber nosepiece
- Tough polycarbonate lens provides superior protection
- Meets ANSI Z87.1 + and CUL standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
307-3017	12 per package	Clear
307-3018	12 per package	Smoke
307-3019	12 per package	Indoor/Outdoor Use
<b>Retail Packaging (Clamshell)</b>		
308-6373	Clamshell	Clear
308-6374	Clamshell	Smoke
308-6376	Clamshell	Indoor/Outdoor Use

Shop Supplies

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months



- Rubber tipped temples for comfortable fit
- Lightweight, popular style frame
- Tough, polycarbonate lens provides superior protection
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Package Quantity	Lens Tint
<b>Retail Packaging (Clamshell)</b>		
308-6377	Clamshell	Clear
308-6378	Clamshell	Smoke
308-6379	Clamshell	Indoor/Outdoor Use
308-6380	Clamshell	Amber

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months



- Sleek, sporty style frame
- Soft, rubber temples provide superior comfort
- Rubber nosepiece allows for all day comfort
- Comes standard with neck cord
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
308-6389	12 Per Package	Indoor/Outdoor Use
308-6385	12 Per Package	Smoke
307-3028	12 Per Package	Clear
<b>Retail Packaging (Clamshell)</b>		
308-6384	Clamshell	Clear
308-6386	Clamshell	Smoke
308-6390	Clamshell	Indoor/Outdoor Use

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months



**Bi Focal Safety Glass**

- Magnification diopter molded into lens
- Soft, rubber nosepiece
- Cushioned, non-slip rubber temple pads
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Package Quantity	Lens Type
<b>Industrial Packaging</b>		
309-2458	12 Per Package	Clear 3.0
309-2456	12 Per Package	Clear 2.5
308-6391	12 Per Package	Clear 1.0
308-6393	12 Per Package	Clear 1.5
309-2454	12 Per Package	Clear 2.0

Part Number	Package Quantity	Lens Type
<b>Retail Packaging (Clamshell)</b>		
308-6392	Clamshell	Clear 1.0
309-2455	Clamshell	Clear 2.0
309-2457	Clamshell	Clear 2.5
309-2459	Clamshell	Clear 3.0
310-4016	Clamshell	Clear 1.5

Shop Supplies

**Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Sleek, sporty, lightweight wraparound frame
- Gel nosepiece allows for all day comfort
- High gloss painted frame
- Comes standard with neck cord
- Cushioned, non-slip rubber temple pads
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
307-3024	12 Per Package	Clear
307-3025	12 Per Package	Smoke
307-3027	12 Per Package	Indoor/Outdoor Use
<b>Retail Packaging (Clamshell)</b>		
308-6381	Clamshell	Clear
308-6382	Clamshell	Smoke
308-6383	Clamshell	Indoor/Outdoor Use

**Zircon-Style Safety Glasses**

Warranty: Cat® Standard Warranty, 6 Months

- Zircon-style safety glasses feature a contoured impact resistant polycarbonate lens
- Dark green tinted lens absorbs 99% of harmful UV rays
- Meets ANSI Z87.1-2003 impact standards



Part Number	Description	Package Quantity
263-0866	Zircon-Style Safety Glasses	1 Pair

**Safety Goggles**

Warranty: Cat® Standard Warranty, 6 Months

- Provides excellent ventilation and indirect protection
- Fits over most prescription eyewear
- Clear optical-grade polycarbonate lens
- Adjustable headband
- Meets or exceeds all ANSI specifications



Part Number	Description	Package Quantity
233-8584	Safety Goggles	1 Pair

Shop Supplies



### Safety Goggles

Warranty: Cat® Standard Warranty, 6 Months



- Perforated goggle with excellent ventilation and protection
- Fits over most prescription eyewear
- Clear optical-grade polycarbonate lens
- Adjustable headband
- CE marked, ANSI 287.1, CUL, EN166

Part Number	Description	Package Quantity
233-8583	Vented Safety Goggles	1 Pair

### All-purpose Wipers

Warranty: Cat® Standard Warranty, 6 Months



- Cleaning tissues for safety glasses
- Pop-up style box

Part Number	Description	Qty.	Size
263-0867	All-purpose Wipers	300 tissues per box, 60 boxes per case	127 mm × 203 mm (5 in × 8 in) wipers <sup>1</sup>

<sup>1</sup> Box size not tissue size

### Lens Cleaning Towelettes

Warranty: Cat® Standard Warranty, 6 Months



#### European Union Compliant, CE marked

- Excellent disposable moisturized towels for lens cleaning
- Can be used on plastic, glass and polycarbonate lenses, face shields, and goggles
- Towelettes are pre-moistened with anti-fog, anti-static formula
- Individually foil wrapped towelettes are great for service trucks and tool boxes
- Dispenser features pull out bottom for easy dispensing and built in tab for hanging
- Each dispenser contains (100) 127 mm × 203 mm (5 in × 8 in) towelettes

Part Number	Description
239-1086	Lens Cleaning Towelettes (Individually Wrapped with Dispenser Box)

**Disposable Ear Plugs**

Warranty: Cat® Standard Warranty, 6 Months

**European Union Compliant, CE marked**

- Tapered disposable plug for excellent fit
- Light comfortable foam
- Smooth surface to repel dirt
- Excellent protection at NRR29



Part Number	Package Quantity
239-1090	1

**Reusable Uncorded Ear Plugs**

Warranty: Cat® Standard Warranty, 6 Months

**European Union Compliant, CE marked**

- Super-soft washable reusable plugs
- Flip-top case included
- Non-toxic FDA-approved material
- Excellent protection at NRR28



Part Number	Package Quantity
239-1089	1

**Disposable Foam Ear Plugs**

Warranty: Cat® Standard Warranty, 6 Months

**European Union Compliant, CE marked**

- Bell-shaped polyurethane foam for maximum comfort
- Smooth soil-resistant skin
- Noise reduction rating: 33 dB
- NRR33, Canada Class A(L), SNR 37, SLL{80}26, Class 5, CA 14.114, EN352
- Color: neon



Part Number	Description	Qty.
260-4783	Uncorded Disposable Plugs	10 pc
260-4785	Corded Disposable Plugs	25 pc

**Corded Disposable Foam Ear Plugs**

Warranty: Cat® Standard Warranty, 6 Months



**European Union Compliant, CE marked**

- Tapered disposable plug for excellent fit
- Light comfortable foam
- Smooth surface to repel dirt
- Corded for long wear and cost savings
- Excellent protection at NRR29

Part Number	Package Quantity
237-8092	1

**Band Ear Plugs**

Warranty: Cat® Standard Warranty, 6 Months



**European Union Compliant, CE marked**

- High-density construction, lightweight and durable
- Non-toxic FDA approved material earplugs
- Comfortable and cool on hot days
- Noise reduction rating: 23 dB
- Engineered angled earplug for maximum sound protection and comfort

Part Number	Description
233-8585	Rad Band
233-8586	Replacement Plugs

**Silencer Ear Muffs**

Warranty: Cat® Standard Warranty, 6 Months



**European Union Compliant, CE marked**

- Comfortable adjustable padded headband
- Soft foam padded ear cups — comfortable when wearing with glasses
- Rugged and lightweight
- Dielectric
- Excellent protection at NRR26

Part Number	Description
233-8587	Silencer Ear Muffs

**Multipositional Ear Muff**

Warranty: Cat® Standard Warranty, 6 Months

**European Union Compliant, CE marked**

- Adjustable steel headband
- Foam filled ear cushions with a soft breathable surface
- NRR at various positions:
  - NRR26 over-the-head
  - NRR26 behind-the-head
  - NRR23 under-the-chin

Part Number	Description	Package Quantity
239-1088	Multi-purpose Ear Muff	1



**Ear Muffs**

Warranty: Cat® Standard Warranty, 6 Months

**European Union Compliant, CE marked**

- Hard hat-mounted ear muffs feature large, lightweight ear cups that attach to a variety of hard hats for convenience
- Recommended for moderately high noise situations (up to 95 dBA TWA)
- Noise reduction rating: 23 dB

Part Number	Description	Package Quantity
4C-6581	Ear Muffs	2 pair



**Hard Hats**

Warranty: Cat® Standard Warranty, 6 Months



- Replaces canceled 173-1941 Protective Hard Hat, White and 173-1942 Protective Hard Hat, Yellow
- High density, polyethylene protective hard hats with Cat® logo
- Self-sizing, four-point suspension with brow pad
- Rain trough brim provides extra protection against snow, rain, dust, and dirt
- Accessory slots provide attachment points for earmuffs, face shields, flashlights, etc.
- 239-4964 and 239-4966 meets or exceeds ANSI Z89.1-1997 Standard for Industrial Head Protection, Type 1, Class E, helmet requirements
- 239-4965 and 239-4967 meets or exceeds EN 397:1995 Amendment (A1 2000 Standard) for Industrial Safety Helmets, Optional Classes -20° C, 440 VAC requirements

Part Number	Description	Color
239-4964	Hard Hat, U.S. Version (ANSI standard)	White
239-4965	Hard Hat, European Version (EN standard)	White
239-4966	Hard Hat, U.S. Version (ANSI standard)	Yellow
239-4967	Hard Hat, European Version (EN standard)	Yellow

**Hard Hat Winter Liner**

Warranty: Cat® Standard Warranty, 6 Months



**European Union Compliant, CE marked**

- Wear with 239-4964, 239-4965, 239-4966, and 239-4967 Hard Hats
- Dark blue cotton twill with fleece lining
- Comes with a hook and loop chin strap fastener
- Will work with other similar hard hats

Part Number	Description
1U-8091	Hard Hat Winter Liner

**First Aid Kit — 150-1578**

Warranty: Cat® Standard Warranty, 6 Months

- Small, portable kit for service trucks, tool boxes, or for personal use in family home, car, camper, or boat
- Soft shell case made of water resistant nylon
- Uses “Book Style” construction with zippered internal compartments (makes it easy to access items)



150-1578 Consists of:		
Description	Size	Quantity
Water resistant nylon container	190.5 × 38.1 × 107.95 mm (7.5 × 1.5 × 4.25 in)	1
Scissors	102 mm (4.0 in)	1
Tweezers	76.2 mm (3 in)	1
First aid booklet		1
Band-aids	19.05 × 76.2 mm (0.75 × 3 in)	20
Alcohol swabs		4
Wet wipes		4
Sting stop swabs		2
Antiseptic swabs		12
Adhesive tape	2.3 m × 12.7 mm (2.5 yd × 0.5 in)	1
Sterile gauze pads	50.8 × 50.8 mm (2 × 2 in)	4
Sterile gauze pads	101.6 × 101.6 mm (4 × 4 in)	2
Sterile abdominal pad	127 × 228.6 mm (5 × 9 in)	1
Sterile pressure bandage	50.8 mm (2 in)	1
Conform gauze roll	4.57 m × 50.8 mm (5 yd × 2 in)	1
Triangular bandage		1
Safety pins		6
Vinyl gloves		1 pair
Acetaminophen		1 (2 per pack)

Part Number	Description
150-1578	First Aid Kit

**First Aid Kit — 150-1579**

Warranty: Cat® Standard Warranty, 6 Months



- Small, portable kit for service trucks, tool boxes, or for personal use in family home, car, camper, or boat
- Soft shell case made of water resistant nylon
- Uses “Book Style” construction with zippered internal compartments (makes it easy to access items)

150-1579 Consists of:		
Description	Size	Quantity
Water resistant nylon container	228.6 × 76.2 × 127 mm (9 × 3 × 5 in)	1
Scissors	152.4 mm (6 in)	1
Stainless steel splinter forceps	114 mm (4.5 in)	1
First aid booklet		1
Cloth bandaids	22.2 × 76.2 mm (0.87 × 3 in)	10
Finger tip bandaids		5
Knuckle bandaids		5
Alcohol swabs		18
Wet wipes		6
Sting stop swabs		6
Antiseptic swabs		16
Adhesive tape	4.6 m × 25.4 mm (5 yd × 1 in)	1
Sterile gauze pads	50.8 × 50.8 mm (2 × 2 in)	8
Sterile gauze pads	101.6 × 101.6 mm (4 × 4 in)	2
Sterile abdominal pad	127 × 228.6 mm (5 × 9 in)	2
Sterile pressure bandage	101.6 mm (4 in)	1
Conform gauze roll	4.57 m × 50.8 mm (5 yd × 2 in)	2
Triangular bandage		1
Safety pins		6
Vinyl gloves		1 pair
Multi-purpose pad	431.8 × 609.6 mm (17 × 24 in)	1
Tensor bandage	50.8 mm (2 in)	1
Instant cold pack (in box)	1016 × 152.4 mm (4 × 6 in)	1
Emergency mylar blanket		1

Part Number	Description
150-1579	First Aid Kit

**First Aid Kits, 25 and 50-person**

Warranty: Cat® Standard Warranty, 6 Months

- Kits for your safety and first aid requirements
- Comply with OSHA 1910.151 for industry, and OSHA 1926.50 for construction
- 163-0798 contains supplies for 25 people; 163-0799 contains supplies for 50 people
- Soft shell case

<b>Contents</b>	<b>163-0798 25-person</b>	<b>163-0799 50-person</b>
Adhesive Strips, 3/4 in × 3 in	50	100
Adhesive Tape Roll, 1/2 in × 5 yd	1	1
Alcohol Wipes	10	20
Ammonia Inhalants	3	3
Instant Cold Pack	1	1
Combine Pad, 5 in × 9 in	1	1
Sterile Cotton, 1/2 oz roll	1	1
Disposable Gloves	1 pair	2 pair
Eye Irrigate Solution, 1 oz bottle	1	1
Eye Pads, oval, 1.75 in × 2.5 in	2	4
Gauze Pads, 4 in	2	4
Gauze Pads, 3 in	4	8
First Aid Cream, 1/8 oz	1	2
Sting Relief Pads	3	3
Triangular Bandage	1	1
Gauze Bandage, 2 in × 5 yd	2	2
Gauze Bandage, 4 in × 5 yd	--	1
Elastic Bandage, 2 in	--	1
Scissors	1	1
Tweezers	1	1

<b>Part Number</b>	<b>Description</b>
163-0798	25-Person First Aid Kit
163-0799	50-Person First Aid Kit



# Contamination Control

## Engine Cover

Warranty: Manufacturer's

- Protects engine from dirt and debris
- Can be used as drop cloth or dust cover
- Affordable and disposable



Part Number	Size	Qty.
1U-7427	122 × 183 cm (48 × 72 in)	50 sheets per case

## Seat Covers

Warranty: Cat® Standard Warranty, 6 Months



- These seat covers drape over the seats and are disposable when the job is finished
- They are produced from a specially formulated resin that has a built-in stretch to help prevent tool punctures and rips. These covers are made of a clear non-slip surface on both sides that helps hold it in place while providing safe usage.

Part Number	Description
274-7454	Roll of 250 seat covers
274-7455	Case of 250 seat covers

## Wall Mount Dispenser

Warranty: Cat® Standard Warranty, 6 Months



- Space saver wall dispenser mounts with ease to accommodate seat cover rolls
- This dispenser will help keep your interior protection products clean and easy to reach

Part Number	Description
274-7458	Seat cover roll dispenser

**Floor Cover**

Warranty: Cat® Standard Warranty, 6 Months

- Interior service soils are the single most frequent complaint by service customers. Help keep the inside clean with these floor covers that stay in place. These covers have a high absorption paper on top and a plastic bottom that won't soak through.

Part Number	Description
274-7456	Case of 500 floor covers



**Steering Wheel Covers**

Warranty: Cat® Standard Warranty, 6 Months

- The see-thru steering wheel cover protects your customer's steering wheel from oily prints. It is elasticized on both sides providing protection for the wheel and the customer's hands. Impervious to grease, these afford maximum protection for the wheel.

Part Number	Description
274-7457	Case of 500 covers

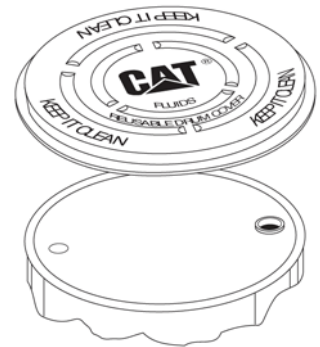


**Barrel Cover**

Warranty: Cat® Standard Warranty, 6 Months

- Used to cover open or closed top drums — cover snaps onto top of drum
- Supports the Caterpillar® contamination control efforts
- Protects drum contents from water induction when stored outside
- Keeps drum top clean and contents ready for use
- Made of long lasting, low density polyethylene — resistant to petroleum-based fluids and ultraviolet rays
- 10 covers per package

Part Number	Material Thickness	I.D.	Color
1U-6156	1.5 mm (0.06 in)	571 mm (22.48 in)	Yellow



Shop Supplies

## Fluid Sampling Extraction Tools for Pressurized Compartments

Warranty: Cat® Standard Warranty, 6 Months

- Valve locations provide oil sample confidence and continuity — comparative data of pressurized oil samples is more reliable because the sample is taken from a continuous flow of oil at a known location.
- A probe is provided that allows the valve to be quickly flushed prior to taking the oil sample
- The sample bottle group is packaged, and sealed in a plastic bag to insure cleanliness
- Pressurized oil sampling is a fast, economical and clean method of obtaining oil samples from pressurized systems
- Better represents oil condition because the oil is continually mixed and circulated
- 10 to 20 times faster than sampling oil from non-pressurized systems
- Mailing container is available so the oil sample can be conveniently mailed to the testing laboratory

### **169-8373 Bottle Group (Package Qty. — 300)**

This bottle group is sealed in a plastic bag with sampling instructions included. The bottle group is ready to use when it is removed from the bag after the valve has been purged and the sample is ready to be taken. The bottle included in this group (169-7372) has the capacity to provide a 114 g (4 oz) sample. The 169-7372 can also be ordered by itself, 200 per case. After the sample is obtained, the probe and tube are removed from the bottle cap and holder, and discarded, and the cap-cover seals the bottle. Labels for identifying the sample (obtained locally) can then be attached to send the oil for identification purposes. The 4C-4600 mail tube is available to send the oil sample to the laboratory. The laboratory also provides a mailing label.

### **177-9343 Probe and Cap Group (Package Qty. — 500)**

The probe and cap group provides the same probe and cap that are used in the 169-8373 Bottle Group, however, without the bottle. This group is also sealed in a plastic bag with sampling instructions included. This group allows the dealer the flexibility to use other bottles such as the smaller 71 g (2 1/2 oz) 169-7373 bottle assembly (which must be ordered separately). (The cap requires that the bottles have a 38 M thread).

### **169-7373 Bottle Assembly (Package Qty. — 200)**

This smaller bottle assembly (169-7373) can be used with the 177-9343 Probe and Cap Group and reduces mailing expense by approximately one-half for dealers whose oil sample labs can provide effective full service analysis with 71 g (2 1/2 oz) or less of oil. These bottles can be used for engine samples since particle count is not used for engine samples. This bottle can also be used with the 1U-5718 Vacuum Pump used for non-pressurized oil sampling.

### **8T-9208 Probe Assembly (Package Qty. — 1)**

The 8T-9208 Probe Assembly can be attached to a 6.35 mm (1/4 in) I.D. rubber hose (6K-0713 Hose — 228.6 mm (9 in) long or any desired length cut from bulk 5P-6442 hose or equivalent 100R6 type high temperature — low pressure hose). The 8T-9208 Probe and hose connected to a locally obtained waste container provide a method to purge or flush the 8C-3446, 8C-3345, or 7X-3387 sample valves prior to obtaining the desired oil sample using either the 169-7373 Bottle Group or 177-9343 Probe and Cap Group with the desired bottle. Approximately 14.8 cm to 29.6 cm (1/2 to 1 ounce) of expelled fluid purges the valves.

Pressurized systems on many Cat® products are equipped with sampling valves to quickly extract oil samples with the above tools. Special Instruction SEHS9043 details retrofitting some earlier models with oil sampling valves, as well as pointing out the respective valve locations on models currently factory equipped with the oil sample valves.

The following valves, fittings and adapters are required or are commonly used for retrofitting the sampling valves to pressurized systems:

### **321-0659 8 oz (240 ml) Bottle and Cap (Package Qty. — 1)**

The 321-0659 Bottle and Cap can be used with the 293-8413 Hydac Contamination Monitor and the 202-2301 Portable Contamination Instrumental Kit.

(Continued)

## Fluid Sampling Extraction Tools for Pressurized Compartments (Continued)

Warranty: Cat® Standard Warranty, 6 Months



Item	Part Number	Description	Package Quantity
1	169-8373	Bottle Group, 300 per box	300 per box
2	162-8873	Probe, Holder	--
3	177-9343	Probe and Cap Group, 500 per box	500 per box
4	4C-4600	Mailer Container — reusable Tube — 30.5 m (100 ft) rolls	--
5	1U-8757	6.35 mm OD × 30.5 m rolls (¼ in OD × 100 ft) 5 rolls per box	5 rolls per box
6	4C-4056	7.9 mm OD × 30.5 m rolls (⅝ in OD × 100 ft) 5 rolls per box, not pictured	5 rolls per box
7	169-7373	Clear Bottle, 71 g (2.5 oz), 200 per box	200 per box
8	169-7372	Clear Bottle, 114 g (4 oz), 200 per box	200 per box
9	1U-5718	Vacuum Pump	--
--	1U-5719	Seal Kit for 1U-5718 Pump (not pictured)	--
10	8T-9208	Purging Probe <sup>1</sup>	--
11	1U-7648	Tube Cutter	--
--	1U-8589	Replacement Blades (not pictured)	--
--	8C-8456	Sealed Cap	--
--	8C-3446	Oil Sampling Valve (⅞ in-20 — ext. thd)	--
12	3J-7354	Seal — O-ring — STOR for 8C-3446 (not pictured)	--
--	7X-3387	S-O-S Sampling Valve	--
--	8C-3345	Oil Sampling Valve (M10 × 1 — ext. thd)	--
--	8T-7876	O-ring Seal for 8C-3345 (not pictured)	--
--	8C-3445	Dust Cap (Engine)	--
--	8C-3447	Dust Cap (Transmission) (not pictured)	--
--	8C-3451	Dust Cap (not pictured)	--
11	6V-0852	Dust Cap (Blank) (not pictured)	--
<b>Not shown</b>			
--	4C-4055	6.35 mm OD × 2.1 m (¼ in OD × 7 ft), 250 pieces per box	250 per box
--	4C-4057	7.9 mm OD × 2.1 m (⅝ in OD × 7 ft), 240 pieces per box	250 per box
--	321-0659	Bottle and Cap (8 oz/240 ml)	1

Shop Supplies

(Continued)

# Fluid Sampling Equipment

## Fluid Sampling Extraction Tools for Pressurized Compartments (Continued)

Warranty: Cat® Standard Warranty, 6 Months

Item	Part Number	Description	Package Quantity
<b>Oil Sampling Valves and O-Ring Seals</b>			
--	8C-3446	Oil Sampling Valve (7/16 in-20 — ext. thd)	--
12	3J-7354	Seal — O-ring — STOR for 8C-3446 (not pictured)	--
--	8C-3345	Oil Sampling Valve (M10 × 1 — ext. thd)	--
--	8T-7876	O-ring Seal for 8C-3345 (not pictured)	--
--	7X-3387	S-O-S Sampling Valve	--
<b>Protective Dust Caps for Oil Sampling Valves (These are rubber caps with embossed symbols to indicate system being sampled.)</b>			
--	8C-3445	Dust Cap (Engine)	--
--	8C-3447	Dust Cap (Transmission) (not pictured)	--
--	8C-3451	Dust Cap (not pictured)	--
11	6V-0852	Dust Cap (Blank) (not pictured)	--
--	8C-8456	Sealed Cap	--
<b>Miscellaneous fittings and adapters commonly used for oil sampling valve retrofit installations</b>			
3	3B-7722	Bushing-Pipe-Reducing 3/8 in-18 NPTF to 1/4 in-18 NPTF	--
--	8C-6427	Adapter, 1/4 in-18 NPTF external to 7/16 in-20 SAE internal	--
--	6V-7529	Adapter, 1/8 in-27 NPTF external to 7/16 in-20 SAE internal	--
(not shown)	7J-8611	Elbow-90°-Pipe 1/4 in-18 NPTF	--
--	5P-9617	Adapter Reducer, 9/16 in-18 SAE external to 7/16 in-20 SAE internal	--
--	3J-1907	O-ring Seal for 5P-9617 Adapter	--
2	3J-5390	Plug — NPTF (Ext Hex) 3/8 in-18 NPTF external to 1/8 in-27 NPTF internal	--
--	9T-6865	Adapter Plug, 5/8 in-12 SAE external to 7/16 in-20 SAE internal	--
4	2S-4078	O-ring Seal for 9T-6865 Adapter Plug	--
--	5P-3501	Adapter, 9/16 in-18 SAE external to 1/4 in-18 NPTF internal	--
--	3L-6521	Adapter Tee, 1/4 in-18 NPT (2 internal and 1 external)	--
13	6V-3966	Pressure Test Valve, 1/4 in-18 NPTF external	--
4	7M-8489	Adapter Assembly, 90° elbow 9/16 in-18 SAE external to 1/4 in-18 internal	--
--	5P-3413	Pipe Sealant, 47.25 g (1 2/3 oz) tube	--

<sup>1</sup>Warranty: Manufacturer's, 30-Day

## All-Purpose Wipers

Warranty: Manufacturer's

- Highly absorbent — cleans up oil, grease, water and other messy fluids
- Strong and abrasion resistant — great wet-strength for scrubbing
- Pliable for reaching into tight places
- Soft for personal cleaning
- Low lint and won't leave a residue
- Economical alternative to shop rags or towels



Part Number	Size	Color	Qty.
265-2255	30.5 × 33 cm (12 × 13 in) quarter-folded	blue	56 wipers per pack, 18 packs per case

## Wipers

Warranty: Cat® Standard Warranty, 6 Months

- Designed to outperform rags with Hydroknit technology in lightweight wiper
- Reinforced for extra scrubbing and cleaning power
- Leaves no residue
- Good on grease and oil, adhesive cleaning and cable lubricant removal
- Good for applying thinners and solvents

Part Number	Size	Color	Qty.
254-3422	23.1 × 42.7 cm (9.1 × 16.8 in)	white	126 wipers per box, 10 boxes per case

## Low Lint Task Wipers

Warranty: Cat® Standard Warranty, 6 Months

- For lab environments where clean rooms require low lint
- Excellent for surface wiping in clean manufacturing environments — fuel systems, hydraulics, diagnostic equipment and precision instruments
- Continuous filament rayon/polyester spun-like blend for cloth-like feel
- Excellent absorption rate and capacity
- Solvent resistant
- Double wrapped in anti-stat packaging



Part Number	Size	Color	Qty.
265-2256	20.3 × 20.3 cm (8 × 8 in)	white	100 wipers per pack, 5 packs per case

## Manufactured Rags

Warranty: Cat® Standard Warranty, 6 Months



- HydroKnit fast-absorbing material — highly absorbent
- Cleans up oil, grime, and solvents
- Good for applying thinner and solvents
- Pound for pound absorbs more oil and water than shop rags
- Use with 1U-5432 Paper Wiper Dispenser

Part Number	Size	Color	Qty.
267-6532	31.8 × 36.6 cm (12.5 × 14.4 in)	white	76 wipers per bundle, 12 bundles per case

## Manufactured Pop-up Rags

Warranty: Cat® Standard Warranty, 6 Months



- HydroKnit fast-absorbing material — highly absorbent
- Reinforced for heavy maintenance cleaning and long-lasting performance that also reduces waste
- Cleans up oil, grime, and solvents
- Good for applying thinner and solvents
- Pound for pound absorbs more oil and water than shop rags
- Packaged in sturdy corrugated pop-up dispenser cartons
- Can also use with 269-3368 Dispenser

Part Number	Wiper Size	Color	Qty.
267-6535	23.1 × 42.7 cm (9.1 × 16.8 in)	white	100 rags per carton, 10 cartons per case
267-6536	23.1 × 42.7 cm (9.1 × 16.8 in)	blue	100 rags per carton, 10 cartons per case

## Hard Roll Towels

Warranty: Cat® Standard Warranty, 6 Months

- Towels compressed on roll so more towels fit in same space — no sacrifice in performance, change roll less often
- Material: paper

Part Number	Description	Size	Color	Package Quantity
263-0892	Hard Roll Towels	20.3 cm × 304.8 m (8 in × 1,000 ft) roll	White	12 rolls



## Shop Towel

Warranty: Cat® Standard Warranty, 6 Months

- Excellent absorbency
- Perfect to use on grease or oil
- Low-lint, 100% polypropylene construction
- Good for cleaning and disinfecting surface
- Stands up well to spirits and solvents

Part Number	Size	Qty.
162-5791	30.7 × 42.7 cm (12.1 × 16.8 in)	180 per box





**Oil Absorbent Pads**

Warranty: Cat® Standard Warranty, 6 Months



- Exclusive “micro-webs” absorbs up to 100% more oil than other leading melt-blown oil absorbents
- Improved absorbency means more liquid pickup, with less product, which can result in lower costs for the user
- Very little lint to minimize contamination
- Supplier-branded product

Part Number	Description	Size	Absorption/Pad	Qty.
245-5836	Oil Absorbent Pads	43.2 × 48.3 cm (17 × 19 in)	25 gallons of oil	50

**Absorbent Socks**

Warranty: Manufacturer’s



- Tubular absorbent socks absorb and contain leaks and spills around machinery (hydraulic oil, coolants, non-aggressive fluids, water, and even hazardous fluids, such as PCB oils and solvents)
- Superior diking and damming capability (hugs the floor, creating an effective barrier or dike that holds back fluids, in emergency situations, even after total absorption)
- Used primarily for everyday housekeeping around machines that leak, seep, or spill fluids
- Fits snugly against machine bases and wrap-around corners, keeping work area safe and dry
- Fine-grade vermiculite filler (non-biodegradable) quickly soaks up leaks and drips
- Durable, stitch-bonded polypropylene skin improves strength
- Self-contained, no messy cleanup (no loose absorbents to spread, sweep, scatter, shovel, or track around)
- Reusable for water spills only
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

**Reference**  
NELG5036

Part Number	Quantity/Box	Absorption/Box	Absorption/Sock	Size	Shipping Weight
235-0844	40	113 L (30 gal)	2.8 L (0.7 gal)	8 cm × 122 cm (3 in × 48 in)	23 kg (50.71 lb)
254-3969	8	57 L (15 gal)	6.8 L (1.8 gal)	75 mm (3 in) diameter × 3 m (10 ft) long	11 kg (24.25 lb)

## Absorbent Pillows

Warranty: Manufacturer's

- Absorbent pillow soaks up small to medium-size spills of oil and other non-aggressive fluids (works best once a spill has been contained)
- Fast, effective way to control leaks
- Use only as many as required (pillow's large surface area and superior wicking ability speeds cleanup time)
- High absorption/fast-wicking cellulose fibers begin to work when pillow contacts liquid and continue until fully saturated
- Strong, polypropylene cover will not tear when handling
- Easy cleanup (simply pick up and place into proper disposal container)
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product



### Reference

NELG5036

Part Number	Quantity/Box	Absorption/Box	Absorption/Sock	Size	Shipping Weight
235-0845	40	76 L (20 gal)	1.9 L (64 oz)	25 × 25 × 5 cm (10 × 10 × 2 in)	10 kg (23 lb)
193-0768	14	53 L (14 gal)	3.7 L (1 gal)	51 × 20 × 3.8 cm (20 × 8 × 1.5 in)	6.8 L (15 lb)

## Heavyweight Absorbent Material for Most Oil, Water-Based Fluids and Chemicals

Warranty: Manufacturer's

Absorbs the following fluids and chemicals:

Acetone, Acetonitrile, Aluminum Salts, Ammonium Hydroxide, Barium Salts, Benzyl Alcohol, Boric Acid, Butanol, Calcium Chlorite, Carbon Disulfide, Carbon Tetrachloride, Chloroform, Cupric Chloride, Cyclohexanone, Dichloromethane, Diethylamine, Dimethylformamide, Ethyl Acetate, Formaldehyde, Gasoline, Glycol Ether, Hexane, Hydrazine, Anhydrous, Hydrochloric Acid (37%), Hydrogen Peroxide (30%), Hydrofluoric Acid (48%), Isopropanol, Jet Fuel (JP-5), Kerosene, Methanol, Methyl Ethyl, Ketone, Mineral Oil, Mineral Spirits, Naphtha, Nitric Acid (70%), Nitric Acid fuming (90%), Nitrobenzene, Perchloroethylene, Phenol, Potassium Hydroxide 50%, Propylene Glycol, Sodium Hydroxide (50%), Styrene, Sulfuric Acid (50%), Sulfuric Acid (98%), Tetrachloroethylene, Tetrahydrofuran, Thionyl Chloride, Toluene, 1, 1, 1-Trichloroethane, Trichloroethylene, Triethylamine, Turpentine, Water

- Heavyweight, gray, absorbent material designed to absorb chemicals, solvents, oils, coolants, petroleum products, water, water-based fluids, and even acids and bases
- Multiple uses in maintenance, repair, and operating (MRO) areas; cover areas prone to overspray and spills, leaving a cleaner, safer work area; ideal for heavy, concentrated machine leaks and large, spreading spills; keep floors and walk areas safer by absorbing leaks, spills, drips, and overspray
- Dark gray color hides dirt and grime of foot traffic
- Thin profile slides into hard-to-reach areas
- Made from flame-resistant material which can be used around spark-prone areas, such as welding or grinding equipment
- Material will not degrade or have a chemical reaction to a wide variety of chemicals and strong solvents
- Absorbs 10 times its weight, reducing material purchase and disposal costs
- Dimple design helps absorb more liquid in less time (material retains liquid, even when fully saturated)
- Roll material cuts easily with scissors or razor knife — easily shaped to fit virtually any area
- Material: 100% polypropylene
- Multiple layers are held together with thermal bond points for added strength and durability — will not fall apart or leave behind residue, even when fully saturated
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product unless otherwise indicated

(Continued)

## Heavyweight Absorbent Material for Most Oil, Water-Based Fluids and Chemicals (Continued)

Warranty: Manufacturer's

**261-0114**

Part Number	Description	Quantity/ Box	Absorption/ Box/Roll	Absorption/ Pad	Size	Ply	Shipping Weight
235-0847	Absorbent Roll	1 roll	155 L (41 gal)	--	76 cm (30 in) wide 46 m (150 ft) long perforated to 25 cm (10 in) × 38 cm (15 in)	8	14 kg (30.86 lb)
261-0114	Absorbent Mat	1 roll	53.06 L (14 gal)	--	76.2 cm (30 in) wide 15.25 m (50 ft) long	8	5 kg (11.02 lb)
307-9927	Absorbent Roll	1 roll	163 L (43 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	3	15 kg (33.07 lb)
307-9925	Absorbent Roll	1 roll	163 L (43 gal)	--	76 cm (30 in) wide 46 m (150 ft) long perforated every 25 cm (10 in)	3	15 kg (33.07 lb)
307-9919	Absorbent Pad	100 pads	80 L (21 gal)	798 ml (27 oz)	38 × 48 cm (15 × 19 in)	3	8 kg (17.64 lb)
307-9920	Absorbent Pad	100 pads	91 L (24 gal)	917 ml (31 oz)	38 × 51 cm (15 × 20 in)	8	9 kg (19.84 lb)
307-9922	Absorbent Pad	100 pads	80 L (21 gal)	798 ml (27 oz)	38 × 48 cm (15 × 19 in)	3	8 kg (17.64 lb)

### High-Visibility Absorbent Mat

Warranty: Manufacturer's

- Absorbs oils, coolants, solvents and water
- Ideal for any leak-, spill-, or drip-prone areas
- Absorbs a wide range of chemicals without degrading or causing a dangerous chemical reaction
- High-visibility yellow color alerts workers to potential dangers where work or repairs are taking place
- Flame-resistant — safe for spark-prone areas such as welding robots
- Comes with a variety of socks and pillows along with a roll of universal mat
- Low profile — slides into hard-to-reach areas
- Supplier-branded product



Part Number	Absorbent Capacity	Length	Width	Weight	Material	Ply
261-0115	125 L (33 gal) per bag	46 m (151 ft)	61 cm (24 in)	11 kg (24 lb)	100% polypropylene	8

### Oil-Only Absorbent Material

Warranty: Manufacturer's

- Heavyweight, white, absorbent material used for spill cleanup and everyday maintenance absorption of non-flammable petroleum products and petroleum-based fluids, such as oil, gasoline, kerosene, diesel fuel, solvents, etc.
- Absorbs petroleum-based fluids only — ideal for situations where water absorption is not necessary
- Roll material works great for factory floors saturated with oils or other petroleum-based fluids
- Less expensive than a universal absorbent (ideal for oil-only spills or drips)
- Material will not degrade or have a chemical reaction to petroleum-based fluids
- Absorbs 10 times its weight, reducing material purchase and disposal costs
- Dimple design helps absorb more liquid in less time (material retains liquid even when fully saturated)
- Roll material cuts easily with scissors or razor knife — easily shaped to fit virtually any area
- Material: 100% polypropylene
- Multiple layers are held together with thermal bond points for added strength and durability — will not fall apart or leave behind residue, even when fully saturated
- Material can be incinerated with less than 0.1% ash while producing 21,000 Btu/lb
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product unless otherwise indicated



(Continued)

**Oil-Only Absorbent Material (Continued)**

Warranty: Manufacturer's

Part Number	Description	Quantity/Box	Absorption/Box/Roll	Absorption/Pad	Size	Shipping Weight	Ply	Color
235-0850	Oil-Only Absorbent Roll	1 roll	155 L (41 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	14 kg (30.86 lb)	8	White
307-9923	Oil-Only Absorbent Pad	100 pads	76 L (20 gal)	739 ml (25 oz)	38 × 48 cm (15 × 19 in)	8 kg (17.64 lb)	3	White
307-9921	Oil-Only Absorbent Pad	50 pads	45 L (12 gal)	917 ml (31 oz)	38 × 51 cm (15 × 20 in)	4 kg (8.82 lb)	8	White
307-9924	Oil-Only Absorbent Roll	1 roll	151 L (40 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	15 kg (33.07 lb)	3	White
307-9926	Oil-Only Absorbent Roll	1 roll	151 L (40 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	15 kg (33.07 lb)	3	White
307-9928	Oil-Only Absorbent Pad	100 pads	76 L (20 gal)	739 ml (25 oz)	38 × 48 cm (15 × 19 in)	8 kg (17.64 lb)	3	White

**Lightweight Absorbent Roll**

Warranty: Manufacturer's



- Lightweight, gray, absorbent mat designed to cover areas prone to overspray and spills, leaving a cleaner, safer work area
- Ideal for light machine overspray and small, annoying leaks of oils, coolants, solvents, and water
- Great for day-to-day housekeeping and repair work
- Cross roll perforations — easily and quickly tear to any size sheet, as small as 25 × 61 cm (10 × 24 in)
- Works well in narrow walkways
- Multiple layers are held together with thermal bond points for added strength and durability — will not fall apart or leave behind residue
- Absorbs 10 times its weight, reducing purchase and disposal costs
- Dark gray color hides dirt and grime
- Dimple design absorbs more liquid in less time and greater liquid retention holds liquid even when roll is saturated
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

Part Number	Quantity/Box	Absorption/Box	Size	Material	Ply	Shipping Weight
235-0849	1 roll	125 L (33 gal)	61 cm (24 in) wide by 91 m (300 ft) long	100% polypropylene	8	11 kg (24.25 lb)

**Combination Padlock — 285-1145**

Warranty: Manufacturer, Two Years

- Cat® part number engraved on side of padlock



Part Number	Combination Type	Lock Mechanism	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1145	Resettable	4-digit dialing	50.8 mm (2 in)	7.9 mm (5/16 in)	25.4 mm (1 in)	25.4 mm (1 in)

**Combination Padlock — 285-1146**

Warranty: Manufacturer, Two Years

- Cat® part number engraved on back of padlock



Part Number	Combination Type	Lock Mechanism	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1146	Fixed	3-digit dialing	47.6 mm (1 7/8 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	19.0 mm (3/4 in)

**High Security Brass Padlock — 285-1147**

Warranty: Manufacturer, Two Years

- Lock body and shackle black with Cat® logo on both sides of bumper, Cat® part number on side of bumper



Part Number	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1147	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	22.3 mm (7/8 in)

Shop Supplies

**High Security Brass Padlock — 285-1148**

Warranty: Manufacturer, Two Years



- Lock body and shackle black with Cat® logo on both sides of bumper, Cat® part number on side of bumper

Part Number	Package Quantity	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1148	2	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	22.3 mm (7/8 in)

**High Security Brass Padlock — 285-1149**

Warranty: Manufacturer, Two Years



- Lock body and shackle black with Cat® logo on both sides of bumper, Cat® part number on side of bumper

Part Number	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1149	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	63.5 mm (2 1/2 in)

**High Security Brass Padlock — 285-1150**

Warranty: Manufacturer, Two Years



- Lock body and shackle black with Cat® logo on both sides of bumper, Cat® part number on side of bumper

Part Number	Package Quantity	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1150	4	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	63.5 mm (2 1/2 in)

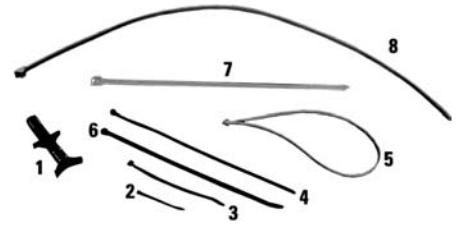


**Cable Ties and Applicators**

Warranty: Six Months (applicators)

- Used to secure wires, cables, tubes, etc.

Item	Installer Part Number	for Part Number (below)
1	1U-5228	1S-9593, 8L-8413, 3S-2093, & 6K-0806
1	1U-5227	7K-1181



Item	Part Number	Bundle Diameter Range	Strap Width	Package Quantity	Installer
2	1S-9593	1.5 mm to 15.7 mm (0.06 in to 0.62 in)	2.5 mm (0.10 in)	100	1U-5228
2	8L-8413	1.5 mm to 28.4 mm (0.06 in to 1.12 in)	3.8 mm (0.15 in)	200	1U-5228
3	3S-2093	1.5 mm to 44.5 mm (0.06 in to 1.75 in)	4.9 mm (0.19 in)	500	1U-5228
4	6K-0806	1.5 mm to 101.6 mm (0.06 in to 4.00 in)	4.9 mm (0.19 in)	250	1U-5228
5	034-1432	1.5 mm to 203 mm (0.06 in to 8.00 in)	--	1	--
6	7K-1181	4.8 mm to 101.6 mm (0.19 in to 4.00 in)	7.9 mm (0.31 in)	100	1U-5227
7	5P-5148	44.5 mm to 120.6 mm (1.75 in to 4.75 in)	12.7 mm (0.50 in)	100	--
8	6V-7555	44.5 mm to 305 mm (1.75 in to 12.00 in)	12.7 mm (0.50 in)	1	--
Not shown	240-1678	12.7 mm to 79.4 mm (0.5 in to 3.125 in)	4.8 mm (0.19 in)	1000	--

**Tyvek Coveralls**

Warranty: Cat® Standard Warranty, 6 Months

- White coveralls with zipper front
- For general maintenance work, fiberglass handling, spray painting, and sand blasting
- Offers splash protection against many liquids
- Lightweight and soft
- Strong, whether wet or dry
- Resistant to abrasion, tears, and punctures
- 100% Polyethylene construction
- Unaffected by most chemicals
- Blocks out 99.9% of all dry particulate down to 0.5 microns



Part Number	Size	Qty.
267-8539	Large	25
267-8540	Medium	25
267-8541	Small	25
267-8542	X Large	25
267-8543	XX Large	25
267-8544	XXX Large	25
267-8545	XXXX Large	25



**Rain Jackets and Pants**

Warranty: Manufacturer's



- Made with a 0.35 mm (0.014 in) PVC exterior laminated to a polyester interior [PVC is a synthetic thermoplastic elastomer (TPE) which provides excellent ozone and weather resistance]
- Double-lapped heat-welded construction
- Non-conductive hardware
- Meets California Proposition 65

**Rain Jacket**

- Yellow rain jacket with a detachable hood and two patch pockets
- Full snap front
- Inner storm fly prevents rain and debris from penetrating front opening
- Corduroy collar
- Raglan sleeves for maximum mobility (a raglan sleeve is attached to a garment body at a 45 degree angle helping it to stretch from neckline to underarm)
- Take-up snaps at cuff
- Back yoke ventilation

**Rain Pants**

- Yellow rain pants with fly front overall and pockets with flaps
- Fabric/elastic suspender and elastic waist band
- Take-up snaps at ankle

Part Number	Chest Size	Waist Size	Size
<b>Rain Jacket</b>			
311-2983	Medium, 101.6-106.68 cm (40-42 in)	--	--
311-2984	Large, 111.76-116.84 cm (44-46 in)	--	--
311-2985	X Large, 121.92-127 cm (48-50 in)	--	--
<b>Rain Pants</b>			
311-2986	--	Medium, 91.44-96.52 cm (36-38 in)	--
311-2987	--	Large, 101.6-106.68 cm (40-42 in)	--
311-2988	--	X Large, 111.76-116.84 cm (44-46 in)	--
<b>2 Pc Suits</b>			
311-2979	--	--	Medium
311-2980	--	--	Large
311-2981	--	--	X Large

**Paper Cups**

Warranty: Cat® Standard Warranty, 6 Months

- Two-piece construction with tightly rolled rim
- Fully wax coated inside and out with a satin finish

Part Number	Description	Capacity	Qty.
263-0884	Paper Cups	238.8 ml (8 oz)	2,000 per case







**TIRES**

## Cat® Tires

As a Cat machine owner, you understand the importance of tires to the performance of every machine you operate. That's why we focus on offering a tire line that allows you to work efficiently in almost every application.

## Cat Quality

The renowned Cat quality is achieved by ensuring the performance and durability of every component in every piece of equipment. Tires are no exception. You understand the challenging conditions and work requirements facing your skid steer loaders, backhoe loaders, telehandlers, and wheel loaders. As the interface between the unpredictable terrain and the machine, you know that tires play a key role in overall productivity.

They must be stable, yet agile; and durable, yet economical. This section details Caterpillar's expanded line of tires which reflects extensive research and engineering expertise that only Caterpillar and your dealer can deliver to you.

## Cat® Flexport Tires

For Skid Steer Loaders and Wheel Loaders



**COMFORTABLE. STABLE. DURABLE.**

Created with operator comfort in mind, Flexport Tires use a series of elliptical-shaped ports molded through the outer ring of the sidewalls. The ports increase tire flexibility to produce a smoother, more cushioned ride on any surface — from waste and scrap to quarry and glass. The ports won't crush under the weight of a full bucket, and the innovative design also improves machine stability when lifting and carrying.

**Features & Benefits**

- Patented sidewall ports make the ride more comfortable for operators.
- Elliptical ports won't collapse under heavy loads, reducing stress points for longer wear life.
- Greater machine stability when carrying maximum loads.
- Deep tread delivers long wear life and excellent traction — on any surface.
- Tread pattern handles tough terrain, and allows easy, smooth transitions from unimproved to improved surfaces.
- Highest quality rubber compound manufactured to Caterpillar® specifications means durability for longer wear life and a consistent product.
- Puncture-proof design puts an end to fixing flats.
- One-piece tire-and-rim design reduces tire-servicing costs.

**The Cat® Flexport™ Tires are designed specifically for your wheel loaders and skid steer loaders. Available in three different tread patterns — construction, smooth-tread and OTR (off the road).**

**Construction Tread**

Flexport Tires' construction tread design is the right choice for maximum performance in your toughest environments. It is designed for smaller machine applications where better traction is required.



Tires





## Smooth — Tread

Tires



Cat® Flexport Tires Smooth-Tread design is ideal for special applications where debris is an issue like scrap yards, recycling centers and some waste transfer stations.

## Off the Road (OTR)



The OTR design has a block pattern that provides a degree of traction in applications where debris is not an issue.

Applications	Flexport™ Construction	Flexport™ Smooth-Tread	Flexport™ OTR
Building & Framing	X		X
Demolition	X	X	X
Hammering	X		X
Industrial & Waste	X	X	
Landscaping	X		X
Loading	X		X
Pavement Profiling	X		
Quarry Cleanup		X	X
Recycling		X	X
Scrap Yard		X	X
Transfer Station		X	X

## Cat® Flexport Tires for Skid Steer Loaders



Cat® Flexport tires for Skid Steer Loaders are a 1-piece tire/rim design and are available in directional construction, smooth and OTR tread patterns.

For most applications, the machine width can be customized by altering the placement of the rim on the machine.

Cat Flexport tires are available on both new machines and from your Cat® dealer as service parts.

(Continued)

**Flexport Tire & Rim Assemblies for Skid Steer Loaders**

Machine Application	Flexport Tire Assembly Part Number	Tread Design	Flexport Size	Pneumatic Size Equivalent	Tire Assembly Weight (kg)
216B3, 226B3, 242B3	329-6989*	Construction	31 × 6 × 10	10 × 16.5	107
216B3, 226B3, 242B3	329-6990*	Construction	31 × 6 × 10	10 × 16.5	107
216B3, 226B3, 242B3	345-7585	Smooth	31 × 6 × 10	10 × 16.5	102
236B3, 246C, 252B3, 262C2, 272D	329-6783*	Construction	33 × 6 × 11	12 × 16.5	125
236B3, 246C, 252B3, 262C2, 272D	329-6784*	Construction	33 × 6 × 11	12 × 16.5	125
236B3, 246C, 252B3, 262C2, 272D	329-6785	Smooth	33 × 6 × 11	12 × 16.5	154
236B3, 246C, 252B3, 262C2, 272D	324-3427	OTR	33 × 6 × 11	12 × 16.5	141
272D	324-3428*	Construction	36 × 7 × 11.5	14 × 17.5	158
272D	324-3429*	Construction	36 × 7 × 11.5	14 × 17.5	158
272D	345-7586	Smooth	36 × 7 × 11.5	14 × 17.5	178

**Flexport Rims for Skid Steer Loaders**

Flexport Tire Assembly Part Number	Rim Part Number	Rim Bolt Pattern (No. of Holes, Hole Dia., Bolt Circle)	Rim Pilot Diameter (mm)	Tire & Rim Assembly to Axle Torque (N-m)	Tire & Rim Assembly Offset (mm)
329-6989, 329-6990, 345-7585	324-3422	8, 17, 203.2	152.5	163 ± 7	32
329-6783, 329-6784, 329-6785, 324-3437	324-3423	8, 17, 203.2	152.5	163 ± 7	45
324-3428, 324-3429, 345-7586	324-3424	8, 17, 203.2	152.5	163 ± 7	74

**\*Note:**

Construction tread tires are directional and require different part numbers on the left and right side of the machine to maintain proper tire rotation direction and rim offset. Tire installation will vary according to bucket width. Please verify part numbers before ordering.

**Cat® Flexport Tires for Compact Wheel Loaders**

Cat® Flexport tires for Compact Wheel Loaders are a 1-piece tire/rim design and are available in directional construction, smooth and OTR tread patterns.

Cat Flexport tires are available on both new machines and from your Cat® dealer as service parts.





## Flexport Tire & Rim Assemblies for Compact Wheel Loaders

Machine Application	Flexport Tire Assembly Part Number	Tread Design	Flexport Size	Pneumatic Size Equivalent	Tire Assembly Weight (kg)
904B	329-7296*	Construction	33 × 6 × 11	12 × 16.5	125
904B	329-7297*	Construction	33 × 6 × 11	12 × 16.5	125
904B	329-7298	Smooth	33 × 6 × 11	12 × 16.5	154
904H	329-6091*	Construction	33 × 6 × 11	12 × 16.5	125
904H	329-6092*	Construction	33 × 6 × 11	12 × 16.5	125
904H	327-8482	OTR	33 × 6 × 11	12 × 16.5	140
906H2, 907H2	315-8629*	Construction	38 × 7 × 13.5	12.5/80 × 18	220
906H2, 907H2	315-7844*	Construction	38 × 7 × 13.5	12.5/80 × 18	220
906H2, 907H2	315-7843	OTR	38 × 7 × 13.5	12.5/80 × 18	231
908H	316-0014*	Construction	40 × 7.5 × 13.5	12.5 × 20	246
908H	316-0012*	Construction	40 × 7.5 × 13.5	12.5 × 20	246
908H	316-0016	OTR	40 × 7.5 × 13.5	12.5 × 20	255
914G	353-7103	OTR	53.5 × 9 × 16.5	15.5/17.5 × 25	557

## Flexport Rims for Compact Wheel Loaders

Flexport Tire Assembly Part Number	Rim Part Number	Rim Bolt Pattern (No. of Holes, Hole Dia., Bolt Circle)	Rim Pilot Diameter (mm)	Tire & Rim Assembly to Axle Torque (N-m)	Tire & Rim Assembly Offset (mm)
329-7296, 329-7297, 329-7298	324-3425	6, 22, 203.2	152.4	520 ± 70	55
329-6091, 329-6092, 327-8482	327-8481	6, 21.5, 205	161.8	300	16
315-8629, 315-7844, 315-7843	324-0025	8, 21, 275	221	360 ± 25	48
316-0014, 316-0012, 316-0016	324-0026	8, 21, 275	221	360 ± 25	40
353-7103	353-7104	8, 26, 200	144	300 ± 40 & additional 60 ± 5 degrees	53

### \*Note:

Construction tread tires are directional and require different part numbers on the left and right side of the machine to maintain proper tire rotation direction and rim offset. Please verify part numbers before ordering.

## Cat® Flexport Tires for Small Wheel Loaders

Cat® Flexport tires for Small Wheel Loaders are a 2-piece tire/rim design and are available in smooth and OTR tread patterns.

Fitment of a Cat Flexport tire on a Small Wheel Loader requires the use of an adapter plate and hardware as shown.

Cat Flexport tires are available on both new machines and from your Cat® dealer as service parts.



Tires

## Flexport Tire & Rim Assemblies for Small Wheel Loaders

Machine Application*	Flexport Tire Assembly Part Number	Tread Design	Flexport Size	Pneumatic Size Equivalent	Tire, Rim, Adapter and Hardware Assembly Weight (kg)
IT18F, 928F, IT28F, 928G, IT28G, 924F, IT24F, 924GZ, 924G, 928GZ, IT28G, 924G, 928H, 924H, 930G, 924HZ, 924H, 928GZ, 930H, 924K, 930K	329-7949	OTR	59 × 9.5 × 21	20.5 × 25 LP	871
IT18F, 928F, IT28F, 928G, IT28G, 924F, IT24F, 924GZ, 924G, 928GZ, IT28G, 924G, 928H, 924H, 930G, 924HZ, 924H, 928GZ, 930H, 924K, 930K	324-3430	SMO	59 × 9.5 × 21	20.5 × 25 LP	899
IT18F, 928F, IT28F, 928G, IT28G, 924F, IT24F, 924GZ, 924G, 928GZ, IT28G, 924G, 928H, 924H, 930G, 924HZ, 924H, 928GZ, 930H, 924K, 930K	324-3436	OTR	60.5 × 10.5 × 21	20.5 × 25	918
IT18F, 928F, IT28F, 928G, IT28G, 924F, IT24F, 924GZ, 924G, 928GZ, IT28G, 924G, 928H, 924H, 930G, 924HZ, 924H, 928GZ, 930H, 924K, 930K	324-3437	SMO	60.5 × 10.5 × 21	20.5 × 25	956
938K	324-3436	OTR	60.5 × 10.5 × 21	20.5 × 25	905
938K	324-3437	SMO	60.5 × 10.5 × 21	20.5 × 25	943

## Flexport Rims and Adapter Discs for Small Wheel Loaders

Machine Application*	Flexport Tire Assembly Part Number	Rim/Adapter Part Number	Adapter Bolt Pattern (No. of Holes, Hole Dia., Bolt Circle)	Adapter Pilot Diameter (mm)	Adapter to Rim Torque (N-m)	Axle Torque (N-m)
IT18F, 928F, IT28F, 928G, IT28G, 924F, IT24F, 924GZ, 924G, 928GZ, IT28G, 924G, 928H, 924H, 930G, 924HZ, 924H, 928GZ, 930H, 924K, 930K	329-7949, 324-3430, 324-3436, 324-3437	329-7948/ 336-8289	16, 26, 250	201	800 ± 100	300 ± 40 & additional 60 ± 5 degrees
938K	324-3436, 324-3437	329-7948/ 369-4675	20, 26, 673	597	900 ± 100	750 ± 50

**\*Note:**

Machine applications are based on common bolt pattern and pilot dimensions between machine models. The machine must be weighed to verify ROPS compliance before installing Flexport tires.

## Cat® Adapter Disc

Flexport Tire Part Number	Cat Adapter Disc	Blank Adapter Disc	Adapter Mounting Instructions	Adapter Hardware			Adapter Torque	Adapter Outer Bolt Pattern (No. of Holes/Hole Dia./ Bolt Circle — mm)
				Bolt (×80)	Washer (×160)	Nut (×80)		
<b>Machine Application 925Hz, 928H, 930H</b>								
329-7949, 324-3430, 324-3436, 324-3437	336-8289	364-1287	Assemble to Deep Side of Rim	8T-5878	8T-1482	8T-4001	900 ± 100 N·m	20/26/673.2
<b>Machine Application 938G</b>								
329-7949, 324-3430	336-8291	364-1287	Assemble to Deep Side of Rim	8T-5878	8T-1482	8T-4001	900 ± 100 N·m	20/26/673.2
<b>Machine Application 938K</b>								
324-3438, 324-3437	369-4675	N/A	Assemble to Deep Side of Rim	8T-5878	8T-1482	8T-4001	900 ± 100 N·m	20/26/673.2

**\*Note:**

In certain machine configurations, Cat® Flexport tires may cause the machine to exceed ROPS capacity. To be certain that the machine does not exceed ROPS, the machine should be weighed to verify that the ROPS limits would not be exceeded with Flexport Tires. The ROPS capacity can be found on the cab of the machine.

## Cat® Flexport Tires for Medium Wheel Loaders



Cat® Flexport tires for Medium Wheel Loaders are a 2-piece tire/rim design and are available in smooth and OTR tread patterns.

Fitment of a Cat Flexport tire on a Medium Wheel Loader requires the use of an adapter plate and hardware as shown.

Cat Flexport tires are available on both new machines and from your Cat® dealer as service parts.

Flexport Part Number	Available for First Fit	First Fit Part Number	Available for Aftermarket	Thread	Flexport Size	Pneumatic Size Equivalent	Tire Assembly Weight (kg)
<b>Machine Application 950 H/K, 962 H/K</b>							
324-3431	3Q-2011	365-3746	Yes	Smooth	65 × 13 × 25	23.5 × 25	1320
332-5712	3Q-2011	365-3745	Yes	OTR	65 × 13 × 25	23.5 × 25	1241
<b>Machine Application 966 H/K, 972 H/K</b>							
316-0529	3Q-2011	365-3747	Yes	OTR	70 × 14 × 28	26.5 × 25	1532
322-9596	3Q-2011	365-3744	Yes	Smooth	70 × 14 × 28	26.5 × 25	1654

(Continued)

## Flexport Tire &amp; Rim Assemblies for Medium Wheel Loaders

Machine Application*	Flexport Tire Assembly Part Number	Tread Design	Flexport Size	Pneumatic Size Equivalent	Tire, Rim, Adapter and Hardware Assembly Weight (kg)
950G, 950H, 962G, 962G, 962H, IT62G, 950K, 962K	332-5712	OTR	65 × 13 × 25	23.5 × 25	1241
950G, 950H, 962G, 962G, 962H, IT62G, 950K, 962K	324-3431	SMO	65 × 13 × 25	23.5 × 25	1320
966, 814F, 966G II, 966H, 972G, 972G II, 972H, 966K, 972K	316-0529	OTR	70 × 14 × 28	26.5 × 25	1534
966, 814F, 966G II, 966H, 972G, 972G II, 972H, 966K, 972K	322-9596	SMO	70 × 14 × 28	26.5 × 25	1654
824G, 824G II, 824H, 825G, 834G, 834H, 980G, 980G II, 980H, 980H II, 980K	324-3432	OTR	74.5 × 14 × 31.5	29.5 × 25	1951
824G, 824G II, 824H, 825G, 834G, 834H, 980G, 980G II, 980H, 980H II, 980K	324-3433	SMO	74.5 × 14 × 31.5	29.5 × 25	2088

## Flexport Rims and Adapter Discs for Medium Wheel Loaders

Machine Application*	Flexport Tire Assembly Part Number	Rim/Adapter Part Number	Adapter Bolt Pattern (No. of Holes, Hole Dia., Bolt Circle)	Adapter Pilot Diameter (mm)	Adapter to Rim Torque (N-m)	Axle Torque (N-m)
950G, 950H, 962G, 962G, 962H, IT62G, 950K, 962K	332-5712, 324-3431	323-1707, 364-1289	20, 26, 310	262	800 ± 100	570 ± 80 additional 60 ± 5 degrees
966, 814F, 966G II, 966H, 972G, 972G II, 972H, 966K, 972K	316-0529, 322-9596	316-0527, 364-1290	20, 26, 375	327	900 ± 100	
824G, 824G II, 824H, 825G, 834G, 834H, 980G, 980G II, 980H, 980H II, 980K	324-3422, 324-3433	323-1708	NA	NA	NA	570 ± 80 additional 60 ± 5 degrees

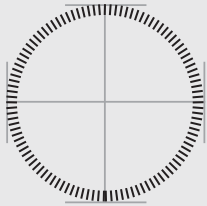
**\*Note:**

Machine applications are based on common bolt pattern and pilot dimensions between machine models. The machine must be weighed to verify ROPS compliance before installing Flexport tires.

## Head-to-Head Comparison Results

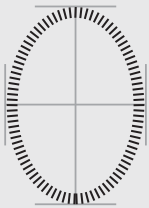
Flexport elliptical design for superior to round design

Tires



### ***Other tire companies manufacture tires with round holes.***

- The round design easily collapses into a flat shape under a load, which creates corners that cause “pinch” or “stress” points.
- Stress point damage will typically result in cracking and chunking of a tire.



### ***Caterpillar designed Flexport Tires with elliptical-shaped ports.***

- Flexport’s elliptical ports are designed not to crush when compressed by heavy weight.
- Because the ports don’t crush, this reduces stress points — and increases wear life.

### Premium Conventional Tires

Cat® Premium Conventional tires are engineered to deliver the trademark Cat durability — which says a lot. Skid steer sizes are equipped with the industry's deepest tread depth, thickest side wall (on a premium conventional model), and heaviest rim guard. Cat tires outperform the competition.

#### Advantages

- Self-cleaning, open tread design for reduced maintenance time
- Extra large, tapered lugs for traction in slippery conditions and maximum wear life
- Dual side wall construction for puncture and tear protection
- An advanced blend of natural and synthetic rubber and a reinforced bead area for maximum wear life
- Heavy rim guard reduces potential for damage to tire bead and wheel flange

#### Applications: Highly Recommended

- Dry Soil
- Snow

#### Applications: Recommended

- Rock & Shale
- Quarries
- Rocky Soil
- Wet Soil
- Sandy Soil



Tires

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimensions			Load Specifications @ 5 mph			Tire Weight	Tread Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Maximum Load		
<b>Skid Steer Loaders</b>											
185-9932	254 mm (10 in)	419 mm (16.5 in)	8	209 mm (8.2 in)	271 mm (10.7 in)	784 mm (30.9 in)	413 kPa (60 psi)	310 kPa (45 psi)	1880 kg (4,145 lb)	24 kg (52 lb)	19 mm (24/32 in)
185-9933	304 mm (12 in)	419 mm (16.5 in)	10	247 mm (9.7 in)	312 mm (12.3 in)	838 mm (33 in)	448 kPa (65 psi)	310 kPa (45 psi)	2542 kg (5,604 lb)	35 kg (77 lb)	21 mm (26/32 in)
238-7740	177 mm (7 in)	381 mm (15 in)	6	139 mm (5.5 in)	203 mm (8 in)	759 mm (29.9 in)	413 kPa (60 psi)	--	15 kg (34 lb)	15 kg (34 lb)	14 mm (18/32 in)
<b>Backhoe Loaders</b>											
357-1994	317 mm (12.5 in)	457 mm (18 in)	10	228 mm (9 in)	304 mm (12 in)	985 mm (38.8 in)	317 kPa (46 psi)	275 kPa (40 psi)	38 kg (85 lb)	38 kg (85 lb)	25 mm (1 in)
357-1995	467 mm (18.4 in)	660 mm (26 in)	12	406 mm (16 in)	477 mm (18.8 in)	1417 mm (55.8 in)	220 kPa (32 psi)	193 kPa (28 psi)	98 kg (217 lb)	98 kg (217 lb)	28 mm (34/32 in)
357-1996	429 mm (16.9 in)	711 mm (28 in)	12	381 mm (15 in)	442 mm (17.4 in)	1386 mm (54.6 in)	262 kPa (38 psi)	227 kPa (33 psi)	85 kg (187 lb)	85 kg (187 lb)	27 mm (35/32 in)
<b>Telehandlers</b>											
208-8512	394 mm (15.5 in)	635 mm (25 in)	--	304 mm (12 in)	425 mm (16.7 in)	1316 mm (51.8 in)	399 kPa (58 psi)	372 kPa (54 psi)	88 kg (195 lb)	88 kg (195 lb)	28 mm (34/32 in)
281-6590	330 mm (13 in)	609 mm (24 in)	12	203 mm (8 in)	360 mm (14.2 in)	1392 mm (54.8 in)	448 kPa (65 psi)	399 kPa (58 psi)	2721 kg (6,000 lb)	73 kg (161 lb)	23 mm (29/32 in)
281-6591	355 mm (14 in)	609 mm (24 in)	12	254 mm (10 in)	390 mm (15.4 in)	1392 mm (54.8 in)	427 kPa (62 psi)	372 kPa (54 psi)	3084 kg (6,800 lb)	92 kg (203 lb)	25 mm (1 in)

## XD Tires

Tires



The XD design is tough through and through. From the deep tread and ultra heavy side walls to the extra large rim guard, the XD equips your skid steer to maneuver effectively in the most extreme applications. In fact, the features that make the XD so tough also make it 26 percent heavier. Concrete and demolition, quarries, and asphalt recycling jobs are just some of the rigorous environments where the XD is the clear choice.

### Advantages

- 14 ply rating enhances tear and puncture resistance
- 40 percent deeper tread depth than Premium Conventional model ensures long tire life on rough terrain
- Less void between the tread lugs reduces wear by spreading it across a larger surface area
- Superior carcass strength allows the tire to bear up to 1,300 lb more than competitive models

### Applications: Highly Recommended

- Asphalt
- Bricks
- Sand Stone
- Rock & Shale
- Quarries
- Rocky Soil

### Applications: Recommended

- Concrete
- Scrap Yard
- Gravel
- Dry Soil
- Wet Soil

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimensions			Load Specifications @ 5 mph			Tire Weight	Tire Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Maximum Load		
222-3962	254 mm (10 in)	419 mm (16.5 in)	10	209 mm (8.25 in)	264 mm (10.4 in)	777 mm (30.6 in)	517 kPa (75 psi)	275 kPa (40 psi)	1968 kg (4,340 lb)	37 kg (81 lb)	35 mm (44/32 in)
222-3963	304 mm (12 in)	419 mm (16.5 in)	14	247 mm (9.74 in)	312 mm (12.3 in)	830 mm (32.7 in)	621 kPa (90 psi)	345 kPa (50 psi)	2540 kg (5,600 lb)	48 kg (105 lb)	35 mm (44/32 in)

### Premium Conventional Flotation Tires

For work in soft terrain, such as at a nursery, in sand, or some landscape sites, use Cat® Premium Conventional Flotation tires. A new industry trend, the flotation design can replace the use of tracks in some applications. Cat Premium Conventional Flotation tires are constructed with the same rugged durability as Cat Premium Conventional tires, but are engineered specifically to create less ground pressure.

The flotation tire design incorporates the traditional lug pattern with a wider footprint to provide a lower ground pressure.

Tire assembly diameter is either 31 or 33 inches, depending on the machine model. The wheel bolt holes are an eight hole pattern on an eight inch bolt circle. This wheel design has an outset of 1.75 inches.

The flotation tires are designed to stay within the larger bucket widths of the Cat® machines (66 inch bucket use for 216, 226, 228, 232, and 242 Models or 72 inch bucket use for 236, 246, 248, 252, 262, 268, and 272 Models). The 33-inch flotation tire is also compatible with the 904.

The Cat flotation tire is made like the premium conventional tire, except the tire width is 15.5 inches instead of 10 or 12 inches.

#### Advantages

- Self-cleaning, open tread design for reduced maintenance time
- Extra large, tapered lugs for traction in slippery conditions and maximum wear life
- Dual side wall construction for puncture and tear protection
- An advanced blend of natural and synthetic rubber and a reinforced bead area for maximum wear life
- Heavy rim guard reduces potential for damage to tie bead and wheel flange
- Wider footprint for better load distribution
- Stable ride in soft terrain without sinking
- Heavier, 12-ply rating for greater load carrying capacity

#### Applications: Highly Recommended

- Wet Soil
- Sandy Soil
- Mud

#### Applications: Recommended

- Rocky Soil
- Dry Soil
- Snow



Tires

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimensions			Load Specifications @ 5 mph			Tire Weight	Tread Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Maximum Load		
199-5436	393 mm (15.5 in)	419 mm (16.5 in)	8	304 mm (12 in)	381 mm (15 in)	787 mm (31 in)	241 kPa (35 psi)	206 kPa (30 psi)	2032 kg (4,480 lb)	28 kg (62 lb)	19 mm (24/32 in)
199-5440	393 mm (15.5 in)	419 mm (16.5 in)	12	304 mm (12 in)	381 mm (15 in)	838 mm (33 in)	379 kPa (55 psi)	310 kPa (45 psi)	2944 kg (6,490 lb)	38 kg (85 lb)	21 mm (26/32 in)







LITERATURE

## Catalog Reference

Didn't find what you were looking for? Contact your local Cat® dealer and request one of the catalogs listed below. The One Safe Source contains only the most commonly used maintenance and repair parts. The catalogs below are comprehensive guides related to a single parts product.

Interested in learning more? Need a part for your engine, drive train, hydraulic system, or undercarriage? Contact your Cat dealer. We have the full lineup of parts for Cat machines and engines. We also have the experts to make sure you get the right parts and service solutions when and where you need them.

Catalog Title	Description	Media Number
Batteries Cross Reference Guide	This cross reference guide shows Cat® battery part numbers for Cat machines, cars, trucks and many other applications which require an automotive type battery. 230 pages	PEGP7801
Classic Parts Product Book	Cat® Classic™ Parts provide owners of older Cat products with competitively-priced repair alternatives that minimize the risk associated with non-genuine parts. This reference guide provides part numbers and marketing information for the complete Cat Classic Parts product line to help customers choose the optimal parts options for the machines and engines. 382 pages	PECJ0051
Filter & Fluid & Application Guide	Catalog of filter and fluid part numbers and information to help customers decide which Cat® Fluids and Filters are the best choice for their machine and application. 898 pages	PEWJ0074
Hand Tools and Shop Supplies	The Hand Tools and Shop Supplies catalog contains hand tools and shop supplies to effectively run your service shop and for personal use needs. 354 pages	PECJ0003
Tire Product Guide	This revised cross reference guide is an important tool to help sell Skid Steer, Wheel Loader and Backhoe Loader Tires for both Caterpillar and competitive models (including CASE, John Deere, Mustang, New Holland, Melroe Bobcat and more). The guide contains tire reference information, tire specifications and wheel specifications. It is an easy to use guide that will ensure you select the right wheel and tire for each machine. 74 pages	PECP9064



## Cat® Reman Products

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When you need a high-quality, lower-cost repair option, look no further than Cat® Reman products. They're built tough to deliver the same quality you expect from new Cat parts — but priced at just a fraction of the cost.

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