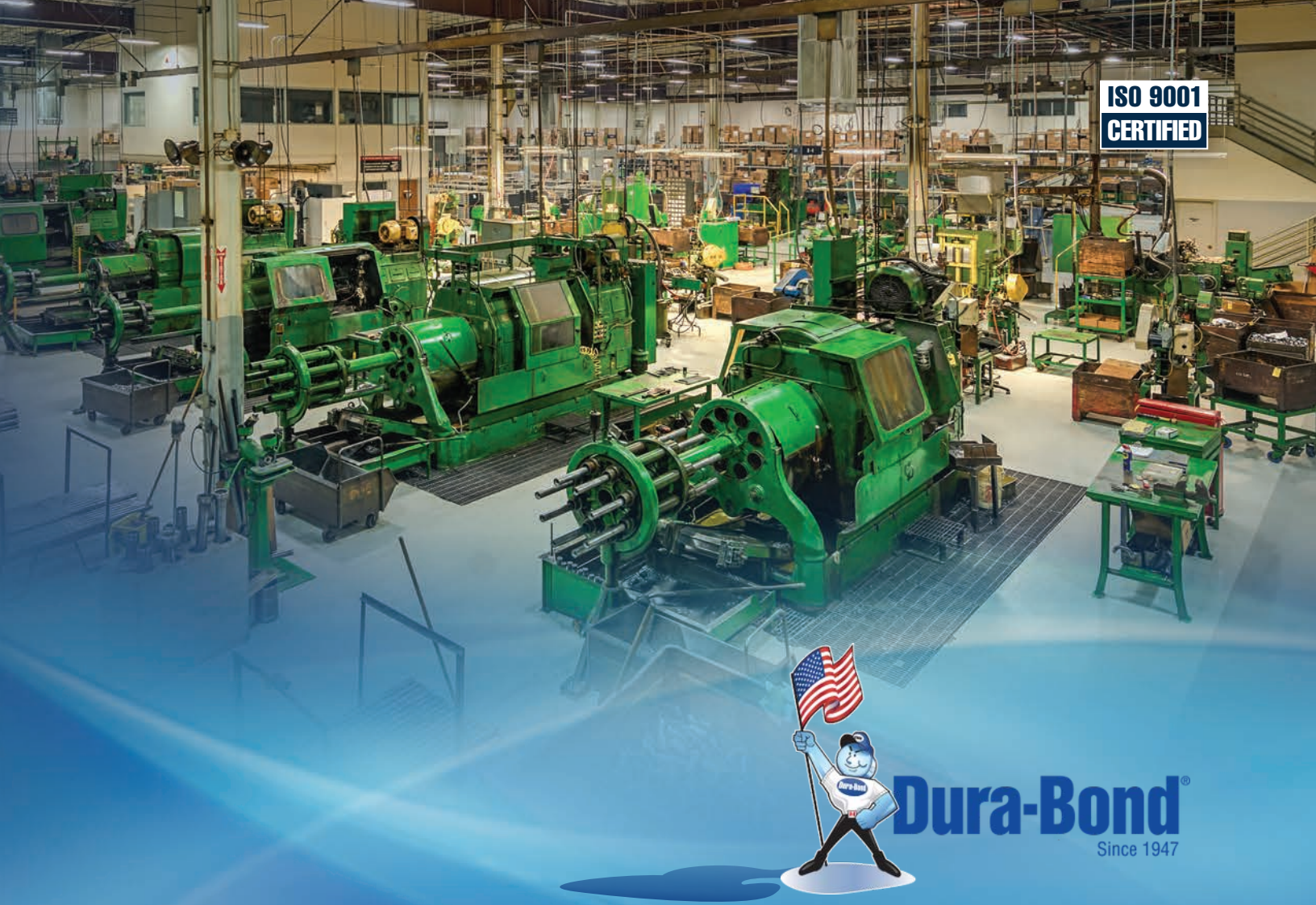

ISO 9001
CERTIFIED

Dura-Bond®

Since 1947

CAMSHAFT BEARINGS · FULL ROUND · O.H.C. HALF SHELL · HIGH PERFORMANCE · TOOLS · VALVE SEAT INSERTS · VALVE SPRING BOOSTER SHIMS · ENGINE HARDWARE · ENGINE HARDWARE FINISHING KITS

2014 CATALOG

Camshaft Bearing, Bushing, Valve Seat, Valve Spring Shim, Hardware *manufacturer.*

Engineering Solutions Partner.

Dura-Bond Bearing Company is a world leader in camshaft bearings, powder metal valve seats and valve spring shim design and manufacturing. This has been recognized by over 60 years of experience as the standard of the industry, and the internationally recognized ISO9001 and MRP – Oliver Wight Class "A" certifications.

The natural process of matching complimentary valve train components provides solutions that are designed as a system, not as only individual components.

CAM BEARINGS/BUSHINGS – The seamless, 100% machined surface design provides the tightest tolerances in the industry. The centerless ground OD, centerless bored ID results in wall variations of .0004 in., giving the customer increased system design flexibility. Discrete manufacturing lines can supply both high and low volumes economically. We can be a valued strategic partner with our design, development and manufacturing capabilities.

Dura-Bond bimetal bearings are constructed of seamless steel tube with a thin layer of lead based babbitt material. Seamless construction makes installation easy, eliminating breakage and bearing surface interruptions.

Lead based babbitt provides ideal properties for nearly all engine applications. Babbitt's superior embedability, conformability, and anti-seizure characteristics have proven to reduce engine failures that harder bearing materials can cause. Dura-Bond Bearing offers:

- **Oversize and undersize bearings for many applications:** Oversize ODs for line bored blocks. Undersized IDs for cam salvage.
- **Semi-finished IDs for line boring requirements:** Unbored IDs allow line boring after bearing installation.
- **OHC repair bearings:** Provides a method to repair aluminum OHC heads. Repairs scored or seized cam/housings and restores cam alignment.
- **High Performance line for racing applications:** Fatigue life of the bearing is nearly doubled with micro-babbit, chill cast, and burnished construction.
- **Coated High Performance bearings:** Fluoropolymer coated high performance for maximum fatigue life and improved surface properties.
- **Special small run bearings/bushings for prototype or block salvage**

VALVE SEAT INSERTS – Patented materials and processing of these powder metal valve seats offer excellent machinability, along with low wear and high heat resistance. These inserts have finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles to provide all the properties an application requires. Special compositions and processing have been developed to perform in the most extreme duty applications. Complete in-house capabilities, from development and tooling to testing, reduces lead time and cost.

SHIMS – Valve seat shims and other applications can be supplied in sizes ranging up to 3.00 in. diameter and .060 in. thick, in hardened or annealed condition. Unique tooling design provides short lead times and low economical run quantities.

HARDWARE – The engine tear down and cleaning process can lead to broken, bent, distorted, or lost service parts. These items can be troubling to any engine rebuilder, especially when they are difficult to obtain. That's why Dura-Bond offers many of the hard to find OEM service parts you need at substantially lower prices.

HARDWARE FINISHING KITS – Most rebuilders know the time and expense of trying to reclaim service parts. A recent study revealed that an average rebuilder could spend up to 15-20 minutes per engine searching for a reclaimed service part. That is why Dura-Bond has introduced a new line of engine hardware finishing kits. These kits include all of the necessary hardware and components needed to complete a rebuild such as dowel pins, cam bolts, seal housing components, woodruff keys, cam eccentrics, by-pass valves, etc. The engine hardware finishing kits allow rebuilders an easy way to inventory and recoup lost costs on these components. All this adds up to saving time and money.

Our customers have come to expect our diverse, high level of service. They know that beyond the manufacture of component parts we are a valued partner in solving problems. From engineering design, to prototype development, sourcing and assembly work…they depend on us as their partner. Our teams of Design, Materials, Application and Manufacturing Engineers are ready to be a part of your team in simultaneous engineering and integration. We would like to work with you, not just as a "production supplier", but as a strategic partner. If your requirements range from prototypes to high volume, let Dura-Bond Bearing Company be part of the solution.

TABLE OF CONTENTS

DISCLAIMER

This catalog contains parts information only. Before installing any part listed, consult the appropriate vehicle manufacturer's instructional manual for detailed installation instructions. Although the information in this catalog has been gathered from the best available sources and every possible effort has been made to ensure accuracy, we cannot accept responsibility for any errors or omissions. We would very much appreciate being advised of any inaccuracies which might come to your attention. Dura-Bond reserves the right to update and change product specifications at any time without notice.

WARRANTY

Dura-Bond Bearing Company products are warranted to be free from defects of materials or workmanship for one year from the date of purchase. Dura-Bond Bearing Company's responsibility is limited to the replacement value of the product if Dura-Bond determines the product to be defective under normal use and service. Claims for labor or related component cost will not be considered. No other warranty, either expressed or implied, is made.

NEW PART LISTING

PART NUMBER	PRODUCT DESCRIPTION	MAKE
CAM BEARINGS		
CAT-8	Cam Bearing Set	Caterpillar
CH-10X10	Cam Bearing Set	GM
CH-10X20	Cam Bearing Set	GM
CH-25	Cam Bearing Set	GM
CHP-25	HP Cam Bearing Set	GM
CHP-25T	HP Cam Bearing Set	GM
DT-1	HP Cam Bearing Set	Dart
F-23BX10	Cam Bearing Set	Ford
F-57	Cam Bearing Set	Ford
FA-13L	OHC Cam Bearing Set	Ford
FA-13LX10	OHC Cam Bearing Set	Ford
FA-13LX20	OHC Cam Bearing Set	Ford
FA-13R	OHC Cam Bearing Set	Ford
FA-13RX10	OHC Cam Bearing Set	Ford
FA-13RX20	OHC Cam Bearing Set	Ford
FA-14L	OHC Cam Bearing Set	Ford
FA-14R	OHC Cam Bearing Set	Ford
FA-3X20	OHC Cam Bearing Set	Ford
FA-6X10	OHC Cam Bearing Set	Ford
FA-6X20	OHC Cam Bearing Set	Ford
FP-01	HP Cam Bearing Set	Ford -Specialty Aftermarket Blocks
FP-01R1	HP Cam Bearing Set	Ford -Specialty Aftermarket Blocks
FP-30AT	HP Cam Bearing Set	Ford
GM-12	Cam Bearing Set	GM
GM-25	Cam Bearing Set	GM
GMP-25	HP Cam Bearing Set	GM
GMP-25T	HP Cam Bearing Set	GM
LR-1	Cam Bearing Set	Rover
MA-11	Cam Bearing Set	Mack
MAG-11	Auxiliary Shaft Set	Mack
N-7BW	Cam Bearing Set	American Motors, Eagle, IHC, Jeep
NIG-1	Auxiliary/Balance Shaft Set	Nissan
PD-28X20	Cam Bearing Set	Chrysler, Eagle
PD-28X30	Cam Bearing Set	Chrysler, Eagle
PD-31BW	Cam Bearing Set	Chrysler
PDA-4X10	OHC Cam Bearing Set	Chrysler
VWA-2X30	OHC Cam Bearing Set	Volkswagen
VWA-2X40	OHC Cam Bearing Set	Volkswagen
WA-12	Cam Bearing Set	Waukesha
ENGINE HARDWARE		
AD-013	Head Dowel	GM
AD-018	Head Dowel	GM
AD-026	Seal Housing Dowel	GM
AD-027	Block Mating Dowel	Subaru
AD-046	Timing Cover Dowel	GM
AD-394	Cam Cap/Tower Dowel	Toyota
AD-397A	Bellhousing Dowel	Ford
AD-605	Crankshaft Insert	GM
AK-166-P	Woodruff Key	GM
AP-018	Head Plug	Nissan
AP-019	Head Plug	Nissan
AP-020	Head Plug	Ford
AV-001-P	Bypass Valve	GM
AV-280-P	Bypass Valve	GM
AV-580-PHD	Bypass Valve	GM
DP-22-P	Expansion Plug	Waukesha

NEW PART LISTING

PART NUMBER	PRODUCT DESCRIPTION	MAKE
ENGINE HARDWARE (Cont'd)		
PIN-1-P	Retaining Linkage Shaft Pin	GM
SPT-1	Spark Plug Tube	Chrysler
SPT-2	Spark Plug Tube	Toyota
SPT-3	Spark Plug Tube	Toyota
SPT-4	Spark Plug Tube	GM
SPT-5	Spark Plug Tube	Toyota
SR-183	Spring Retainer	Ford
SR-366	Spring Retainer	GM
SR-627	Spring Retainer	Chrysler
SR-779	Spring Retainer	Caterpillar
SR-809	Spring Retainer	GM
TC-1-OO	Coolant Tube (O-Ring)	Ford
TC-5	Coolant Tube	Toyota
U140-190	Planetary Sleeve	Toyota
U140-250	Planetary Sleeve	Toyota
VALVE SEATS		
17563C	"Killer Bee" Copper-Infiltrated Seats	NA
17846C	"Killer Bee" Copper-Infiltrated Seats	NA
17904C	"Killer Bee" Copper-Infiltrated Seats	NA
20659C	"Killer Bee" Copper-Infiltrated Seats	NA
20907C	"Killer Bee" Copper-Infiltrated Seats	NA
22017C	"Killer Bee" Copper-Infiltrated Seats	NA
22018C	"Killer Bee" Copper-Infiltrated Seats	NA
22193C	"Killer Bee" Copper-Infiltrated Seats	NA
22194C	"Killer Bee" Copper-Infiltrated Seats	NA
22199C	"Killer Bee" Copper-Infiltrated Seats	NA
22228C	"Killer Bee" Copper-Infiltrated Seats	NA
22251C	"Killer Bee" Copper-Infiltrated Seats	NA
22252C	"Killer Bee" Copper-Infiltrated Seats	NA
22264C	"Killer Bee" Copper-Infiltrated Seats	NA
22365C	"Killer Bee" Copper-Infiltrated Seats	NA
30643C	"Killer Bee" Copper-Infiltrated Seats	NA
31091C	"Killer Bee" Copper-Infiltrated Seats	NA
31949C	"Killer Bee" Copper-Infiltrated Seats	NA
32130C	"Killer Bee" Copper-Infiltrated Seats	NA
32182C	"Killer Bee" Copper-Infiltrated Seats	NA
32210C	"Killer Bee" Copper-Infiltrated Seats	NA
32233C	"Killer Bee" Copper-Infiltrated Seats	NA
32366C	"Killer Bee" Copper-Infiltrated Seats	NA
72405C	"Killer Bee" Copper-Infiltrated Seats	NA
72419C	"Killer Bee" Copper-Infiltrated Seats	NA
72432C	"Killer Bee" Copper-Infiltrated Seats	NA

Note: For the NEW standard valve seats (30000, 70000, 90000 Series). Please refer to the valve seat section for the complete listing.

NEW PART LISTING

PART NUMBER	PRODUCT DESCRIPTION	MAKE
VALVE SPRING BOOSTER SHIMS		
1011	(.015 Thickness) Shim	NA
1126	(.015 Thickness) Shim	NA
1175	(.015 Thickness) Shim	NA
1176	(.015 Thickness) Shim	NA
1177	(.015 Thickness) Shim	NA
1178	(.015 Thickness) Shim	NA
3011	(.030 Thickness) Shim	NA
3126	(.030 Thickness) Shim	NA
3175	(.030 Thickness) Shim	NA
3176	(.030 Thickness) Shim	NA
3177	(.030 Thickness) Shim	NA
3178	(.030 Thickness) Shim	NA
6011	(.060 Thickness) Shim	NA
6126	(.060 Thickness) Shim	NA
6175	(.060 Thickness) Shim	NA
6176	(.060 Thickness) Shim	NA
6177	(.060 Thickness) Shim	NA
6178	(.060 Thickness) Shim	NA

TIME TESTED

[*Quality Camshaft Bearings Since 1947*]

Dura-Bond bimetal bearings are constructed of seamless steel tube with a thin layer of lead based babbitt material. Seamless construction makes installation easy, eliminating breakage and bearing surface interruptions.

Lead based babbitt provides ideal properties for nearly all engine applications. Babbitt's superior embedability, conformability, and anti-seizure characteristics have proven to reduce engine failures that harder bearing materials can cause.

The seamless, 100% machined surface design provides the tightest tolerances in the industry. The centerless ground OD, centerless bore ID results in wall variations of .0006 in., giving the customer increased system design flexibility.

Dura-Bond

A MELLING COMPANY

RACE PROVEN. TIME TESTED.

Performance Engines Deserve HIGH PERFORMANCE Cam Bearings.

If you want to match performance levels and get the most out of your engines, use **Dura-Bond "Red Box" High Performance Cam Bearings!**

HIGH PERFORMANCE CAM BEARINGS

- Precision Machined - Centerless Ground/Bored
- More Than Double the Fatigue Strength of Standard Bearings - Withstands Racing Spring Loads
- Micro-Babbitt/Grain-Controlled Babbitt/ Roller Burnished

"COATED" HIGH PERFORMANCE CAM BEARINGS

- Retains Engine Oil On the Surface, Even Under Extreme Heat and Pressure
- Secondary Lubrication In the Event Momentary Oil Starvation Occurs

Dura-Bond

A MELLING COMPANY

Quality Camshaft Bearings Since 1947

ENHANCED ENGINEERING SOLUTIONS

For the past 60 years our customers have come to expect our diverse, high level of service. They know that beyond the manufacture of component parts we are a valued partner in solving problems. From engineering design, to prototype development, sourcing and assembly work…they depend on us as their partner. Our team of Design, Materials, Application and Manufacturing Engineers are ready to be a part of your team in simultaneous engineering and integration.

Dura-Bond Provides the Rebuilder with Enhanced Engineering Solutions!

- Redesigned sets from O.E. to improve in the aftermarket (i.e. B-12B, CH-11B, CH-12B, CH-18A, F-47B and PD-28B)
- O.D. grooved to increase oil flow and optimize oil inlet locations
- Oversize O.D. Bearings for blue printing blocks
- Undersize I.D. sets for optimizing oil clearance
- Semi-Finished I.D. for line boring requirements

Dura-Bond®
A MELLING COMPANY

CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
ACURA (Also see Honda)								
4 cyl	- 2156cc	2.2L	3.346" 85mm	**1997**	SOHC Honda (V-TEC) Eng. F22B1 Series			**HA-3*** (1/2 Shell)
5 cyl	- 2451cc	2.5L	3.346" 85mm	**1992-98**	SOHC Honda Eng. G25A1, G25A4 Series			**HA-5*** (1/2 Shell)
ALLIS CHALMERS								
4 cyl	116ci	1.9L	3.250" 82.6mm	**1938-63**	Allis Chalmers Eng. B,1B, B15 Tractor (Thru. Serial #64500), 60H, RC, TL6 Harvester, 66 Combine	**A-1**		
4 cyl	125ci	2.0L	3.375" 85.7mm	**1957-63**	Allis Chalmers Eng. B15 Tractor (From Serial #64501), B125, Roto Baler	**A-1**		
4 cyl	149ci	2.4L	3.500" 88.9mm	**ALL**	Allis Chalmers Eng. 60H, 148, BE, G149 Series; D Series: TRactor, H3 Crawler, I-40 Dozer, RT40 Forklift	**A-6**		
4 cyl	153ci	2.5L	3.438" 87.3mm	**1956-69**	Allis Chalmers Eng. 153 Series (Includes B153, BD153, D153, DA153, G153); AT40, F, FD, FL, FP, FT, T, TD, TG Series Forklift; HD Series Tractor	**BU-2**		
4 cyl	175ci	2.9L	3.563" 90.5mm	**1960-70**	Buda Diesel Eng. D175, DA175 Series; AT, F Series Forklift; I Series Tractor	**BU-2**		
4 cyl	182ci	3.0L	3.750" 95.3mm	**1956-58**	Buda Eng. 4B, 4BD, 4DA, 182, B182, BD182 Series; FT50, FT50-24 Series Forklift	**BU-2**		
4 cyl	200ci	3.3L	3.875" 98.4mm	**ALL**	Allis Chalmers Diesel/Turbo-Diesel Eng. 433, 433T, 2200, D2200, G2200 Series; 860 Harvester. 940, 7000, HD4 Series Tractor	**A-3**		
4 cyl	201ci	3.3L	4.000" 101.6mm	**1958-70**	Allis Chalmers Eng. 100, 100SP, G201, W, WC (After W136655), WD-F, W25, W201 Series Combine/Tractor	**A-2**		
4 cyl	226ci	3.7L	4.000" 101.6mm	**1933-70**	Allis Chalmers Eng. G, G226, W, WD45, W226 Series; 100SP, 170, D, M, TL, W Series Combine/Tractor	**A-2**		
6 cyl	230ci	3.8L	3.438" 87.3mm	**1956-70**	Buda Eng. 6B, 6DA, B230, BD230, D230, DA230, G230, W230, WD45D, WD45EX Series	**BU-2**		
6 cyl	262ci	4.3L	3.563" 90.5mm	**1958-70**	Buda Eng. B262, D262, D262T, DA262, G262, 6B262, 6D262, 6D262T, 6G262 Series	**BU-2**		
6 cyl	265ci	4.3L	3.750" 95.3mm	**ALL**	Allis Chalmer Eng. G2500 Series	**A-4**		
6 cyl	273ci	4.5L	3.750" 95.3mm	**1956-60**	Allis Chalmers Eng. 6D273, 6DA273, 6DAMR273, 6G273, D273, G273 Series; TL14DA Tractor	**BU-2**		
6 cyl	301ci	4.9L	3.875" 98.4mm	**ALL**	Allis Chalmers Eng. 649, 649T, 2800, 2900, D2800, D2900, G2800, G2900 Series; 180-200, 545, 860, 7000-8010, L3, M-MH3, TL Tractor, Combine, Grader	**A-4**		
6 cyl	426ci	7.0L	4.250" 108mm	**ALL**	Allis Chalmers Eng. 3400, 3400 MKII, 3500, 3500 MKII, 3700, 3750, D Series	**A-5**		
AMERICAN MOTORS								
4 cyl	150ci	2.5L	3.875" 98.5mm	**1983-84**	OHV AMC Eng. Vin U	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
4 cyl	151ci	2.5L	4.000" 101.6mm	**1980-83**	OHV GMC/Pontiac Eng. Vin B	**CH-16**		
					(.001 Under ID)	**CH-16W**		
6 cyl	172ci	2.8L	3.125" 79.4mm	**1949-52**	AMC Eng.	**N-6**		
6 cyl	184ci	3.0L	3.125" 79.4mm	**1950-54**	Nash (L-Head) Eng.	**N-6**		
6 cyl	196ci	3.2L	3.125" 79.4mm	**1953-65**	OHV AMC (L-Head) Eng. Vin A, B, C	**N-6**		
6 cyl	199ci	3.3L	3.750" 95.3mm	**1965-70**	OHV AMC Eng. Vin A, B, E, J, P	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		

* Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information
** Denotes Auxiliary / Balance Shaft Bearing.
"und" Denotes Undersized ID

CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
AMERICAN MOTORS (Cont.)								
6 cyl	232ci	3.8L	3.750" 95.3mm	**1964-79**	OHV AMC (Hi-Torque) Eng. Vin B, C, E, F, G, L, M, P, Q, S, T, V, W	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
8 cyl	250ci	4.1L	3.500" 88.9mm	**1956-62**	OHV AMC Eng.	**H-5**		
6 cyl	258ci	4.2L	3.750" 95.3mm	**1971-88**	OHV AMC Eng. Vin A, B, C	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
8 cyl	287ci	4.7L	3.750" 95.3mm	**1963-67**	OHV AMC Eng. Vin H, N, T	**H-5**		
8 cyl	290ci	4.7L	3.750" 95.3mm	**1966-69**	OHV AMC Eng. Vin C, D, H, M, N, U	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	304ci	5.0L	3.750" 95.3mm	**1970-79**	OHV AMC Eng. Vin H, I, M	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	327ci	5.3L	4.000" 101.6mm	**1956-66**	OHV AMC (Vigilante) Eng. Vin J, K, P, Q, U, W	**H-5**		
8 cyl	343ci	5.6L	4.080" 103.6mm	**1967-69**	OHV AMC Eng. Vin J, K, Q, R, S, T, V, W, X, Z	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	360ci	5.9L	4.080" 103.6mm	**1970-78**	OHV AMC Eng. Vin H, N, P	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	390ci	6.4L	4.165" 105.9mm	**1968-70**	OHV AMC Eng. Vin W, X, Y	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	401ci	6.6L	4.165" 105.9mm	**1971-76**	OHV AMC Eng. Vin Z	**N-9**		
					(+.010 OD)	**N-9R1**		
AUDI								
4 cyl	- 1471cc	1.5L	3.012" 76.5mm	**1973-74**	SOHC VW Eng. XV, XW, XY, XZ, ZD, ZE Series			
					(Balance Shaft Set)	**VWG-1****		
4 cyl	97ci 1588cc	1.6L	3.012" 76.5mm	**1982-83**	SOHC VW Diesel/Turbo-Diesel Eng. CR, CY, JK Series, Vin G, H			
					(Balance Shaft Set)	**VWG-1****		
4 cyl	97ci 1588cc	1.6L	3.130" 79.5mm	**1975-80**	SOHC VW Eng. YG, YH, YK, Series			
					(Balance Shaft Set)	**VWG-1****		
4 cyl	104.7ci 1715cc	1.7L	3.130" 79.5mm	**1981-83**	SOHC VW Eng. WT Series, Vin A			
					(Balance Shaft Set)	**VWG-1****		
5 cyl	- 1986cc	2.0L	3.012" 76.5mm	**1979-85**	SOHC VW Diesel/Turbo-Diesel Eng. CN, DE Series, Vin G, H			**VWA-1*** (1/2 Shell)
5 cyl	- 2144cc	2.2L	3.130" 79.5mm	**1978-85**	SOHC VW Eng. KH, WD, WE, WK, WU Series (Includes Turbo), Vin A, B, C			**VWA-1*** (1/2 Shell)
5 cyl	- 2226cc	2.2L	3.189" 81mm	**1983-97**	SOHC & DOHC VW Eng. 3B, AAN, JT, KX, KZ, MC, WX Series, Vin A, B, C, D, E, P, R			**VWA-1*** (1/2 Shell)
5 cyl	- 2309cc	2.3L	3.248" 82.5mm	**1987-92**	SOHC & DOHC VW Eng. 7A, NF, NG Series, Vin B, C, D, E			**VWA-1*** (1/2 Shell)
AUSTIN (AUSTIN HEALEY)								
4 cyl	52ci 848cc	0.8L	2.480" 63mm	**1959-78**	OHV British Leyland Eng. 85H, 8AM, 8MB Series	**BL-1**		
4 cyl	58ci 948cc	0.9L	2.478" 62.9mm	**1956-62**	OHV British Leyland Eng. 9C, 9CG Series	**BL-1**		

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** Denotes Auxiliary / Balance Shaft Bearing.
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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
AUSTIN (AUSTIN HEALEY) (Cont.)								
4 cyl	59ci 970cc	1.0L	2.780" 70.6mm	**1964-69**	OHV British Leyland Eng.	**BL-1**		
4 cyl	61ci 997cc	1.0L	2.457" 62.4mm	**1961-69**	OHV British Leyland Eng.	**BL-1**		
4 cyl	61ci 998cc	1.0L	2.542" 64.6mm	**1961-78**	OHV British Leyland Eng. 99H, 9AG Series	**BL-1**		
4 cyl	65ci 1071cc	1.1L	2.780" 70.6mm	**1963-65**	OHV British Leyland Eng.	**BL-1**		
4 cyl	- 1098cc	1.1L	2.542" 64.6mm	**1962-78**	OHV British Leyland Eng. 10CC, 10CG Series	**BL-1**		
4 cyl	91ci 1489cc	1.5L	2.874" 73mm	**1955-61**	OHV British Leyland Eng. 14H Series	**DA-2**		
4 cyl	99ci 1622cc	1.6L	3.000" 76.2mm	**1962-64**	OHV British Leyland Eng.	**DA-2**		
4 cyl	- 1798cc	1.8L	3.160" 80.3mm	**1973-75**	OHV MG Eng. 18V Series	**DA-2**		
BMW								
4 cyl	107ci 1766cc	1.8L	3.504" 89mm	**1980-85**	SOHC BMW Eng. M10 Series			**BMA-4*** (Full Round)
4 cyl	121ci 1990cc	2.0L	3.504" 89mm	**1965-79**	SOHC BMW Eng. 121, M10, M10B20, M15 Series			**BMA-4*** (Full Round)
6 cyl	152ci 2494cc	2.5L	3.307" 84mm	**1987-93**	SOHC BMW Eng. M20 Series			**BMA-3*** (Full Round)
6 cyl	- 2693cc	2.7L	3.307" 84mm	**1982-88**	SOHC BMW Eng. M20 Series			**BMA-2*** (Full Round)
6 cyl	- 2788cc	2.8L	3.386" 86mm	**1968-81**	SOHC BMW Eng. M30, M30B28 Series			**BMA-1*** (Full Round)
6 cyl	- 2985cc	3.0L	3.504" 89mm	**1971-78**	SOHC BMW Eng. M30, M30B30 Series			**BMA-1*** (Full Round)
6 cyl	- 3210cc	3.2L	3.500" 88.9mm	**1978-84**	SOHC BMW Eng. M30 Series			**BMA-1*** (Full Round)
6 cyl	- 3430cc	3.5L	3.622" 92mm	**1985-93**	SOHC BMW Eng. M30 Series			**BMA-1*** (Full Round)
6 cyl	- 3453cc	3.5L	3.661" 93mm	**1987-88**	DOHC BMW Eng. S38 Series			**BMA-1*** (Full Round)
BUDA								
4 cyl	153ci	2.5L	3.438" 87.3mm	**ALL**	Diesel Eng. 4B127, 4B153, 4BD153, 4D153, 4DA153, 4B157, 4B158, 4G153 Series	**BU-2**		
4 cyl	175ci	2.9L	3.563" 90.5mm	**ALL**	Diesel Eng. 4BD175, 4D175, 4DA175 Series	**BU-2**		
4 cyl	182ci	3.0L	3.750" 95.3mm	**ALL**	4B182, 4BD182, 4DA182 Series	**BU-2**		
6 cyl	230ci	3.8L	3.438" 87.33mm	**ALL**	6B230, 6BD230, 6D230, 6DA230, 6G230 Series	**BU-2**		
6 cyl	262ci	4.3L	3.563" 90.5mm	**ALL**	Diesel Eng. 6B262, 6D262, 6D262T, 6DA262, 6DD262, 6G262 Series	**BU-2**		
6 cyl	273ci	4.5L	3.750" 95.3mm	**ALL**	Diesel Eng. 6B273, 6BD273, 6D273, 6DA273 Series	**BU-2**		
CASE TRACTOR								
4 cyl	95ci	1.6L	2.750" 69.9mm	**1936-40**	FC Series	**WA-3**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CASE TRACTOR (Cont.)								
4 cyl	106ci	1.7L	3.000" 76.2mm	**ALL**	W106 Series	**CA-3**		
4 cyl	123ci	2.0L	3.125" 79.4mm	**1936-40**	FK Series	**WA-3**		
4 cyl	124ci	2.0L	3.250" 82.6mm	**1942-58**	124, F124, VA124, VA, VAE Series	**CA-3**		
4 cyl	126ci	2.1L	3.125" 79.4mm	**1955-61**	126, G126 Series	**CA-3**		
4 cyl	148ci	2.4L	3.375" 85.7mm	**1955-70**	148, 148B, 148G, G148, G148B, G149 Series	**CA-3**		
4 cyl	159ci	2.6L	3.500" 88.9mm	**1961-70**	159, 159B, 159G, G159, G159B Series	**CA-3**		
4 cyl	164ci	2.7L	3.563" 90.5mm	**1957-64**	164, G164 Series	**CA-3**		
3 cyl	180ci	2.9L	4.016" 102mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. 3B, 3BT B Series (Used In No. 1 Position)	**CU-12**		
4 cyl	188ci	3.1L	3.813" 96.9mm	**1977-On**	188D, G188D Series (w/ Tach Drive)	**CA-9**		
4 cyl	188ci	3.1L	3.813" 96.9mm	**1977-On**	188D, G188D Series (Engines w/ 1.218" Length On No. 5 Positon, Without Tach Drive)	**CA-5**		
4 cyl	188ci	3.1L	3.813" 96.9mm	**1963-70**	188, 188B, 188S, G188 Series	**CA-8**		
4 cyl	188ci	3.1L	3.813" 96.9mm	**1963-70**	G188B Series	**CA-4**		
4 cyl	201ci	3.3L	3.938" 100mm	**ALL**	201 Series, 660 Combine	**CA-8**		
4 cyl	207ci	3.4L	4.000" 101.6mm	**1977-On**	Diesel Eng. 207, 207D, G-207D Series (w/ Tach Drive)	**CA-9**		
4 cyl	238ci	3.9L	4.016" 102mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. 4-390, 4T-390 B Series (Used In No. 1 Position)	**CU-12**		
4 cyl	251ci	4.1L	4.000" 101.6mm	**1957-69**	251, 251B, 251BG, 251D, A251, A251G, A251LP, A251S Series (Late Engs. w/ 2.250" Dia Journals)	**CA-6**		
4 cyl	267ci	4.4L	4.125" 104.8mm	**1955-70**	Diesel Eng. 267, 267B, 267BD, A267, A267D Series (Late Engs. w/ 2.250" Dia Journals)	**CA-6**		
4 cyl	284ci	4.7L	4.250" 108mm	**1961-69**	284, 284B, A284G, A284LP, A284S Series (Late Engs. w/ 2.250" Dia Journals)	**CA-6**		
4 cyl	301ci	5.0L	4.375" 111.1mm	**1961-69**	Diesel Eng. 301, 301B, 301BD, 301BG, A301, A301BD, A301D, A301DF Series (Late Engs. w/ 2.250" Dia Journals)	**CA-6**		
4 cyl	336ci	5.5L	4.625" 117.5mm	**ALL**	Diesel Eng. 336, 336B, 336BD, 336BDT Series (Late Engs. w/ 2.250" Dia Journals)	**CA-6**		
6 cyl	360ci	5.9L	4.016" 102mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. 6-590B, 6T-590 B Series (Used in No. 1 Position)	**CU-12**		
6 cyl	377ci	6.2L	4.000" 101.6mm	**1953-66**	377, 377A, 377BG, A377, A377D, A377G, A377LP, A377S Series (After Serial #2323001) (Late Engs. w/ 2.250" Dia Journals)	**CA-7**		
6 cyl	401ci	6.6L	4.125" 104.8mm	**1961-69**	Diesel/Turbo-Diesel Eng. 401, 401B, 401BD, 401BDT, 401D, A401, A401B, A401BD, A401D Series (Late Engs. w/ 2.250" Dia Journals)	**CA-7**		
6 cyl	451ci	7.4L	4.375" 111.1mm	**1965-69**	Diesel/Turbo-Diesel Eng. 451, 451B, 451BD, 451BDT, 451D, 451DT, A451BD, A451D Series (Late Engs. w/ 2.250" Dia Journals)	**CA-7**		
6 cyl	504ci	8.3L	4.625" 117.5mm	**ALL**	Diesel/Turbo-Diesel Eng. 504, 504B, 504BD, 504BDT, 504BDTI, 504D, 504DT, 504DTI, 504TC, A504BD, A504BDT Series	**CA-7**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CATERPILLAR								
4 cyl	269ci	4.4L	4.135" 105mm	**ALL**	Diesel Eng. 3114 Series	**CAT-8**		
4 cyl	350ci	5.7L	4.500" 114.3mm	**ALL**	Diesel Eng. 1670, D330 Series (No. 1 Position, OE#9M5477) (No. 2, 3 Position, OE#7M4046) (Balance Shaft Bearings: No. 1, 2, 5, 6 Position, OE#9M5239) (Balance Shaft Bearings: No. 3, 4 Position, OE#9M5238)	 **CAT-2-1** **CAT-2-2** **CAT-2-5** **CAT-2-6**		
6 cyl	403ci	6.6L	4.134" 105mm	**ALL**	Diesel Eng. 3116 Series	**CAT-5**		
4 cyl	425ci	7.0L	4.750" 120.7mm	**ALL**	Diesel Eng. 3304, D330 Series (No. 1 Position, OE#9M5477) (No. 2, 3 Position, OE#7M4046) (Balance Shaft Bearings: No. 1, 2, 5, 6 Position, OE#5S6419) (Balance Shaft Bearings: No. 3, 4 Position, OE#5S6420)	 **CAT-2-1** **CAT-2-2** **CAT-2-3** **CAT-2-4**		
8 cyl	522ci	8.5L	4.500" 114.3mm	**ALL**	Diesel Eng. 1140, 1145, 3145 Series	**CAT-2**		
6 cyl	525ci	8.6L	4.500" 114.3mm	**ALL**	Diesel Eng. D333, D333A, G333, 1673 Series (No. 1 Position, OE#9M5477) (No. 2, 3, 4, 5 Position, OE#7M4046) (Balance Shaft Bearings: No. 1, 2, 5, 6 Position, OE#9M5239) (Balance Shaft Bearings: No. 3, 4 Position, OE#9M5238)	 **CAT-2-1** **CAT-2-2** **CAT-2-5** **CAT-2-6**		
6 cyl	573ci	9.4L	4.500" 114.3mm	**ALL**	Diesel Eng. 1150, 3150 Series	**CAT-2**		
8 cyl	636ci	10.4L	4.500" 114.3mm	**ALL**	Diesel Eng. 1160, 3160, 3208, V150, V175, V200, V225 Series	**CAT-2**		
6 cyl	638ci	10.5L	4.750" 120.7mm	**ALL**	Diesel Eng. D333, D334, 1673, 1674, 3306 Series (Balance Shaft Set)	**CAT-6** **CAT-7****		
4 cyl	831ci	13.6L	5.750" 146.1mm	**ALL**	Diesel Eng. D339, D7700, D8800 Series (No. 1 Position, OE#4H9640, 8F8521) (No. 2 Position, OE#8F8523)	 **CAT-3-1** **CAT-3-2**		
6 cyl	1246ci	20.4L	5.750" 146.1mm	**ALL**	Diesel Eng. D342, D13000, G342 Series (No. 1 Position, OE#4H9640, 8F8521) (No. 2 Position, OE#8F8523)	 **CAT-3-1** **CAT-3-2**		
CHECKER MOTORS CORP.								
6 cyl	226ci	3.7L	3.312" 84.1mm	**1947-64**	OHV Continental (L-Head) Eng. F226 Series	**K-1**		
6 cyl	229ci	3.8L	3.736" 94.9mm	**1980-82**	OHV Chevrolet Eng. (.001 Under ID)	**CH-17** **CH-17X**	**CHP-17** or **CHP-17T** (Coated)	
6 cyl	230ci	3.8L	3.875" 98.4mm	**1964-68**	OHV Chevrolet Eng. HF, OK Series	**CH-7**		
6 cyl	250ci	4.1L	3.875" 98.4mm	**1969-70**	OHV Chevrolet Eng. (Early Models)	**CH-7**		
6 cyl	250ci	4.1L	3.875" 98.4mm	**1971-79**	OHV Chevrolet Eng. (Late Models), Vin D (Special Oil Control Set w/ OD Groove)	**CH-11** **CH-11B**		
8 cyl	267ci	4.4L	3.500" 88.9mm	**1980-82**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
8 cyl	283ci	4.6L	3.875" 98.4mm	**1964-67**	OHV Chevrolet Eng. C, GA Series	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CHECKER MOTORS CORP. (Cont.)								
8 cyl	305ci	5.0L	3.736" 94.9mm	**1977-82**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
8 cyl	307ci	5.0L	3.875" 98.4mm	**1968-70**	OHV Chevrolet Eng. CNC, CND, CNE, CNF, DA, DB, DC, DD, DE, DN Series	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
8 cyl	318ci 5212cc	5.2L	3.906" 99.2mm	**1959-66**	OHV Chrysler Eng. A318, MD2, P31, R31, S31, T31, V31 Series	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	327ci	5.3L	4.000" 101.6mm	**1964-69**	OHV Chevrolet Eng. EA, FJ, JQ, MA Series	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
8 cyl	350ci	5.7L	4.000" 101.6mm	**1969-79**	OHV Chevrolet Eng. Vin L	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
CHEVROLET (MARINE)								
4 cyl	181ci	3.0L	4.000" 101.6mm	**1982**	Marine/Industrial Eng.	**CH-6**		
CHRYSLER CORP. (DODGE, PLYMOUTH)								
4 cyl	- 1410cc	1.4L	2.913" 74mm	**1979-84**	SOHC Mitsubishi Eng. G12B Series, Vin 2, A, J			**MIA-3*** (Full Round)
4 cyl	90ci 1468cc	1.5L	2.972" 75.5mm	**1985-95**	SOHC Mitsubishi Eng. 4G15, G15B Series, Vin A, K, P, Q, X			**MIA-3*** (Full Round)
4 cyl	98ci 1597cc	1.6L	3.028" 76.9mm	**1971-88**	SOHC Mitsubishi Eng. G32B, G32B-T, 4G32 Series (Includes Turbo), Vin 3, B, F, K, Z (Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	105ci	1.7L	3.130" 79.5mm	**1978-83**	SOHC VW Eng. Vin A, B (Balance Shaft Set)	**VWG-1****		
4 cyl	122ci 1995cc	2.0L	3.307" 84mm	**1974-89**	SOHC (8 Valve) Mitsubishi Eng. 4G52, G52B Series, Vin 5, D, U (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	**MIG-2**** **MIG-2-1R** **MIG-2E****		
4 cyl	122ci 1997cc	2.0L	3.346" 85mm	**1984-94**	SOHC & DOHC Mitsubishi Eng. G63B, 4G63, 4G63-T Series (Includes Turbo), Vin D, E, F, R, U, V (Balance Shaft Set)	**MIG-3****		
4 cyl	122ci 1996cc	2.0L	3.445" 87.5mm	**1995-05**	SOHC (16 Valve) Chrysler Eng. ECB Series, Vin C, F			**PDA-3*** (Full Round)
4 cyl	135ci 2212cc	2.2L	3.445" 87.5mm	**1981-94**	SOHC Chrysler Eng. (Includes Turbo), Vin 8, A, B, C, D, E, F, P (.020 Oversize Bearing Set) (Balance Shaft Set)	**PDG-26****		**PDA-1*** (1/2 Shell) **PDA-2*** (1/2 Shell)
4 cyl	143ci 2346cc	2.3L	3.587" 91.1mm	**1983-85**	SOHC Mitsubishi Turbo-Diesel Eng. 4D55-T Series, Vin 9, J (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	**MIG-2**** **MIG-2-1R** **MIG-2E****		
4 cyl	143.4ci 2351cc	2.4L	3.405" 86.5mm	**1990-94**	SOHC (8 Valve) Mitsubishi Eng. 4G64 Series, Vin G, W (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Balance Shaft Set)	**MIG-3****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	153ci 2507cc	2.5L	3.445" 87.4mm	**1986-95**	SOHC Chrysler Eng. (Includes Turbo), Vin G, J, K, V (.020 Oversize Bearing Set) (Balance Shaft Set - Semi-Finished)	**PDG-29S****		**PDA-1*** (1/2 Shell) **PDA-2*** (1/2 Shell)

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CHRYSLER CORP. (DODGE, PLYMOUTH) (Cont.)								
4 cyl	156ci 2555cc	2.6L	3.587" 91.1mm	**1978-89**	SOHC Mitsubishi Eng. G54B, G54B-T Series (Includes Turbo), Vin 7, D, E, F, G, H, N, W (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
6 cyl	165.5ci	2.7L	-	**1937-89**	Chrysler Eng.	**PD-3**		
6 cyl	170ci 2786cc	2.8L	3.406" 86.5mm	**1960-71**	OHV Chrysler Eng. A170, P17, R17, S17, T17, V17 Series. Vin 6, A	**PD-18**		
6 cyl	181ci 2972cc	3.0L	3.587" 91.1mm	**1987-05**	SOHC & DOHC Mitsubishi Eng. 6G72, 6G72-T Series (Includes Turbo), Vin 3, B, C, H, J, K, S			**MIA-5*** (1/2 Shell)
6 cyl	198ci 3254cc	3.2L	3.406" 86.5mm	**1970-74**	OHV Chrysler Eng. Vin A, B	**PD-18**		
6 cyl	201ci 3301cc	3.3L	3.661" 93mm	**1990-10**	OHV Chrysler Eng. EGA, EGM, EGV Series. Vin 3, E, G, H, J, R, T, U (Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**PD-28** **PD-28B**		
6 cyl	218ci 3570cc	3.6L	3.250" 82.6mm	**1933-56**	Chrysler (L-Head) Eng.	**PD-1**		
6 cyl	218ci	3.6L	3.375" 85.7mm	**1938-54**	Chrysler (L-Head) Eng.	**PD-3**		
6 cyl	225ci 3687cc	3.7L	3.400" 86.4mm	**1960-78**	OHV Chrysler Eng. A225, P22, R22, S22, T22, V22 Series. Vin 6, B, C, D, E, X (Early Series w/ Forged Crankshaft)	**PD-18**		
6 cyl	225ci 3687cc	3.7L	3.400" 86.4mm	**1979-87**	OHV Chrysler Eng. Vin B, C, D, E, F, G, H, J, K, L, M, N, W (Late Series w/ Cast Crankshaft)	**PD-21**		
6 cyl	226ci 3704cc	3.7L	3.661" 93mm	**2002-11**	SOHC Chrysler Eng. Vin K (Balance Shaft Set)	 **PDG-30****		
6 cyl	228ci 3739cc	3.7L	3.374" 85.7mm	**1936-56**	Chrysler (L-Head) Eng.	**PD-3**		
6 cyl	230ci 3770cc	3.8L	3.248" 82.5mm	**1934-60**	Chrysler (L-Head) Eng. P23 Series	**PD-1**		
6 cyl	230ci	3.8L	3.780" 96mm	**1991-08**	OHV Chrysler Eng. EGH Series, Vin L, P (Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**PD-28** **PD-28B**		
6 cyl	231ci 3778cc	3.8L	3.780" 96mm	**2009-10**	OHV Chrysler Eng. Vin 1 (Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**PD-28** **PD-28B**		
6 cyl	237ci 3878cc	3.9L	3.438" 87.3mm	**1937-53**	Chrysler (L-Head) Eng.	**PD-3**		
6 cyl	239ci 3906cc	3.9L	3.910" 99.3mm	**1987-03**	OHV Chrysler Eng. Vin M, X	**PD-27**		
6 cyl	241.5ci	4.0L	3.375" 85.7mm	**1937-41**	Dodge (L-Head) Eng.	**PD-3**		
6 cyl	251ci 4114cc	4.1L	3.438" 87.3mm	**1942-68**	Chrysler (L-Head) Eng. A251, P25, R25, S25, T25, V25 Series, Vin 6	**PD-3**		
6 cyl	265ci 4343cc	4.3L	3.438" 87.3mm	**1952-68**	Chrysler (L-Head) Eng.	**PD-3**		
8 cyl	273ci 4473cc	4.5L	3.625" 92.1mm	**1964-69**	OHV Chrysler Eng. A273, V27 Series, Vin D	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	277ci 4540cc	4.5L	3.750" 95.3mm	**1956-57**	OHV Chrysler Eng.	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
CHRYSLER CORP. (DODGE, PLYMOUTH) (Cont.)								
8 cyl	285ci -	4.7L	3.661" 93mm	**2002-10**	SOHC Chrysler Eng. Vin J, N, P (Auxiliary Shaft Set)	**PDG-1**		**PDA-4*** (1/2 Shell)
8 cyl	287ci	4.7L	3.661" 93mm	**2000-04**	SOHC Chrysler Eng. Vin N, P (Auxiliary Shaft Set)	**PDG-1**		**PDA-4*** (1/2 Shell)
8 cyl	301ci 4933cc	4.9L	3.625" 92.1mm	**1955**	OHV Chrysler Eng.	**PD-8**		
8 cyl	303ci 4966cc	5.0L	3.811" 96.8mm	**1956**	OHV Chrysler Eng.	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	313ci 5130cc	5.1L	3.875" 98.4mm	**1957-64**	OHV Chrysler Eng.	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	318ci 5211cc	5.2L	3.910" 99.3mm	**1957-79**	OHV Chrysler Eng. A318, LD2, MD2, P31, R31, S31, T31, V31 Series, Vin 4, 8, E, F, G, H, P (.760" Length Center Bearing)	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	318ci 5211cc	5.2L	3.910" 99.3mm	**1980-03**	OHV Chrysler Eng. Vin 2, 4, E, G, H, J, K, L, M, N, P, R, S, T, U, Y, Z	**PD-25**	**PDP-25** or **PDP-25T** (Coated)	
8 cyl	326ci 5343cc	5.3L	3.953" 100.4mm	**1959**	OHV Chrysler Eng.	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	331ci 5425cc	5.4L	3.813" 96.9mm	**1951-56**	OHV Chrysler Eng.	**PD-8**		
8 cyl	340ci 5572cc	5.6L	4.040" 102.6mm	**1968-73**	OHV Chrysler Eng. Vin H, J, P	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	345ci 5654cc	5.7L	3.917" 99.6mm	**2003-08**	OHV Chrysler (Hemi) Eng. EZA, EZB Series. Vin 2, D, H (.001 Under ID)	**PD-31B** **PD-31BW**		
8 cyl	350ci 5737cc	5.7L	4.063" 103.2mm	**1958**	OHV Chrysler Eng. (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	354ci 5802cc	5.8L	3.938" 100mm	**1955-59**	OHV Chrysler Eng.	**PD-8**		
6 cyl	359ci	5.9L	4.016" 102mm	**1989-98**	OHV Cummins Turbo-Diesel Eng. ETA, ETB Series, Vin 8, C, D	**CU-12**		
6 cyl	359ci	5.9L	4.016" 102mm	**1998-09**	OHV Cummins (HO) Turbo-Diesel Eng. ETC, ETH Series, Vin 6, 7, C	**CU-14**		
8 cyl	360ci 5899cc	5.9L	4.000" 101.6mm	**1970-78**	OHV Chrysler Eng. Vin 8, F, J, K, L, T, Y (.760" Length Center Bearing)	**PD-16**	**PDP-16** or **PDP-16T** (Coated)	
8 cyl	360ci	5.9L	4.000" 101.6mm	**1979-03**	OHV Chrysler Eng. Vin 1, 5, F, J, K, L, S, T, U, W, Z	**PD-25**	**PDP-25** or **PDP-25T** (Coated)	
8 cyl	361ci 5917cc	5.9L	4.125" 104.8mm	**1958-77**	OHV Chrysler Eng. A361, D500, LD2S, LD3S, LS3S, MD3H, MD3L, MD3M, P36, R36, S36, T36, V36 Series, Vin F (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	370ci 6059cc	6.1L	4.055" 103mm	**2005-10**	OHV Chrysler (Hemi) Eng. ESF Series. Vin 3, W (.001 Under ID)	**PD-31B** **PD-31BW**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CHRYSLER CORP. (DODGE, PLYMOUTH) (Cont.)								
8 cyl	383ci 6286cc	6.3L	4.250" 108mm	**1959-71**	OHV Chrysler Eng. A383, D500, MC1L, MC2M, P38, PR38, R38, S38, T38, V38 Series, Vin 8, G, H, J, L, N (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	392ci 6425cc	6.4L	4.000" 101.6mm	**1957-58**	OHV Chrysler Eng.	**PD-8**		
8 cyl	400ci 6556cc	6.6L	4.342" 110.2mm	**1971-78**	OHV Chrysler Eng. Vin J, M, N, P (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	413ci 6769cc	6.8L	4.188" 106.4mm	**1959-77**	OHV Chrysler Eng. A413, MC3H, MC3S, MY1H, MY1L, MY1M, P41, R41, S41, T41, V41 Series (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	426ci 6981cc	7.0L	4.250" 108mm	**1963-71**	OHV Chrysler Eng. A426, T42, V42, V426 Series, Vin H, J, R (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	440ci 7211cc	7.2L	4.320" 109.7mm	**1966-79**	OHV Chrysler Eng. B440, C440, PT440 Series, Vin A, D, K, L, M, T, U, V (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
10 cyl	488ci 7990cc	8.0L	4.000" 101.6mm	**1992-03**	OHV Chrysler (Magnum) Iron Block Eng. EWB Series, Vin E, W	**PD-30**		
CHRYSLER (MARINE)								
4 cyl	121.2ci 1986cc	2.0L	3.500" 88.9mm	**ALL**	Volvo Eng. 115, 130 Series (Auxiliary / Balance Shaft Set)	**VO-2****		
6 cyl	182ci 2980cc	3.0L	3.500" 88.9mm	**ALL**	Volvo Eng. 165, 170 Series	**VO-3**		
CONTINENTAL								
4 cyl	69ci	1.1L	2.500" 63.5mm	**ALL**	LY69, PY69, Y4069, Y69 Series	**CO-3**		
4 cyl	91ci	1.5L	2.875" 73mm	**ALL**	LY91, P410, PY91, Y4091, Y91 Series	**CO-3**		
4 cyl	112ci	1.8L	3.188" 80.98mm	**ALL**	BY112, BY4112, PY112, PY4112, Y112, Y4112 Series	**CO-3**		
4 cyl	124ci	2.0L	3.000" 76.2mm	**ALL**	VAB124 Series	**CA-3**		
4 cyl	124ci	2.0L	3.000" 76.2mm	**ALL**	A4124, F124, F4124, LF124, PF124 Series	**CO-8**		
4 cyl	129ci	2.1L	3.250" 82.6mm	**ALL**	Z129 Series	**CA-3**		
4 cyl	134ci	2.2L	3.313" 84.1mm	**ALL**	Z134 Series	**CA-3**		
4 cyl	135ci	2.2L	3.125" 79.4mm	**ALL**	F135 Series	**CO-8**		
4 cyl	140ci	2.3L	3.188" 80.98mm	**ALL**	F140, F4140, LF140, PF140 Series	**CO-8**		
4 cyl	142ci	2.3L	3.000" 76.2mm	**ALL**	A4142, F4142 Series	**CO-8**		
4 cyl	145ci	2.4L	3.250" 82.6mm	**ALL**	FS145 Series	**CO-8**		
4 cyl	145ci	2.4L	3.375" 85.7mm	**ALL**	Z145 Series	**CA-3**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CONTINENTAL (Cont.)								
4 cyl	162ci	2.6L	3.438" 87.3mm	**ALL**	F162, F4162, F4162 Super, LF162, PF162 Series	**CO-8**		
4 cyl	163ci	2.7L	3.438" 87.3mm	**ALL**	F163, F4163, PF163 Series	**CO-8**		
4 cyl	168ci	2.8L	3.000" 76.2mm	**ALL**	F168 Series	**K-1**		
6 cyl	170ci	2.8L	3.250" 82.6mm	**ALL**	D6170, DS6170, F170, F6170, PD170, PF170 Series	**K-1**		
6 cyl	184ci	3.0L	3.125" 79.4mm	**ALL**	D6184, DS6184 Series	**K-1**		
6 cyl	186ci	3.0L	3.000" 76.2mm	**ALL**	F186, F6186, PF186 Series	**K-1**		
4 cyl	193ci	3.2L	3.750" 95.3mm	**ALL**	D193 Series	**CO-9**		
4 cyl	198ci	3.2L	3.438" 87.3mm	**ALL**	F198 Series	**CO-8**		
6 cyl	199ci	3.3L	3.250" 82.6mm	**ALL**	D6199, F199, F6199, PD199, PF199 Series	**K-1**		
6 cyl	202ci	3.3L	3.125" 79.4mm	**ALL**	D202, D6202, DS202, DS6202, OS202, PD202 Series	**K-1**		
6 cyl	209ci	3.4L	3.188" 80.98mm	**ALL**	F209, F6209, F6209 Dynatork, PF209 Series	**K-1**		
6 cyl	218ci	3.6L	3.250" 82.6mm	**ALL**	D6218, DS6218, F214, F218, F6218, FS218, PD218, PF218 Series	**K-1**		
6 cyl	226ci	3.7L	3.313" 84.1mm	**ALL**	6226, CF6226, F226, F6226, PF226 Series	**K-1**		
6 cyl	227ci	3.7L	3.313" 84.1mm	**ALL**	F227, F6227 Series	**K-1**		
6 cyl	242ci	4.0L	3.425" 87mm	**ALL**	F242, F6242 Series	**K-1**		
6 cyl	244ci	4.0L	3.438" 87.3mm	**ALL**	A244, A6244, F244, F6244, FS244 Series	**K-1**		
6 cyl	245ci	4.0L	3.438" 87.3mm	**ALL**	F245, F6245 Series	**K-1**		
6 cyl	253ci	4.2L	3.625" 92.1mm	**ALL**	M6253 Series	**CO-7**		
6 cyl	271ci	4.4L	3.625" 92.1mm	**ALL**	38B, 40B, K6271, M271, M6271 Series	**CO-7**		
6 cyl	290ci	4.8L	3.750" 95.3mm	**ALL**	K6290, M290, M6290 Series	**CO-7**		
6 cyl	330ci	5.4L	4.000" 101.6mm	**ALL**	40B, K6330, M330, M6300, M6330, M6338 Series	**CO-7**		
6 cyl	363ci	5.9L	4.000" 101.6mm	**ALL**	K6363, M363, M6363 Series	**CO-7**		
6 cyl	427ci	7.0L	4.313" 109.6mm	**ALL**	K6427 Series	**CO-7**		
CUMMINS								
3 cyl	180ci	2.9L	4.016" 102mm	**ALL**	Cummins Diese/Turbo-Diesel Eng. 3B, 3BT, B Series (Position Number 1)	**CU-12**		
4 cyl	238ci	3.9L	4.016" 102mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. 4-390, 4B, 4B3.9M, 4BT, 4BT3.9, 4BT3.9M, 4BTA, 4BTA3.9M, 4T-390, B Series (Position Number 1)	**CU-12**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
CUMMINS (Cont.)								
6 cyl	352ci	5.8L	4.625" 117.5mm	**ALL**	Cummins Diesel Eng. V6-140 Phase 5 Series F, Series D4 & D5, V352 Phase 3, 3.5, 3.5D, 5, 5F	**CU-11A**		
6 cyl	359ci	5.9L	4.016" 102mm	**1989-08**	Cummins Diesel/Turbo-Diesel Eng. 6-590, 6B, 6B5.9M, 6BT, 6BT5.9, 6BT5.9M, 6BTA, 6BTA5.9, 6BTA5.9M, 6T-590, B Series (Position Number 1) (2.253" Hsg.) (2.332" Hsg.)	 **CU-12** **CU-14**		
6 cyl	378ci	6.2L	4.625" 117.5mm	**ALL**	Cummins Diesel Eng. V378, VT378 Phase 5 Series F, V6-155 Phase 5 Series F	**CU-11A**		
4 cyl	448ci	7.3L	4.875" 123.8mm	**ALL**	Cummins Diesel Eng. GNHC-4, H135, HR, HR-4, HR160, HRC-4, H Series (From Serial Number 120911)	**CU-10**		
6 cyl	464ci	7.6L	4.437" 112.7mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. C160-C240, C, CS, CT, 464 Series, GNH 180	**CU-5A**		
8 cyl	470ci	7.7L	4.625" 117.5mm	**ALL**	Cummins Diesel Eng. V8-185 Phases 3, 3.5, 5 Series D, 4, 5 Series F, V470 Phases 3.5 Series D, 4, 5 Series F (2.187" Hsg.)	**CU-11**		
4 cyl	495ci	8.1L	5.125" 130.2mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. N495, N495C130, N495F, N495P130, N495PG130, NH-4, NHC-4, NT-4, NT-165, NT-180, NT-200, NT495, NTA495 Series	**CU-10**		
8 cyl	504ci	8.3L	4.625" 117.5mm	**ALL**	Cummins Diesel Eng. V8-210, V504, VT555 Phase 5 Series F (2.186" Housing Bore)	**CU-11**		
8 cyl	555ci	9.1L	4.625" 117.5mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. V555, V555C, VT225 Small Cam, VT555 Small Cam, VT555C Series (2.186" Housing Bore)	**CU-11**		
6 cyl	672ci	11.0L	4.875" 123.8mm	**ALL**	Cummins Diesel/Supercharged Diesel Eng. NH180, NH195, NHD180, NHH180, NHH195, NHH220 Series N, H, HR, HS, NH672 Small Cam Series	**CU-5A**		
6 cyl	672ci	11.0L	4.875" 123.8mm	**1977-On**	Cummins Diesel Eng. (2.500" Big Cam Series 3/32 (.0939) Wall)	**CU-9**		
6 cyl	743ci	12.2L	5.125" 130.2mm	**ALL**	Cummins Diesel/Turbocharged/Supercharged Diesel Eng. GNH220, H, HS, N, NH, NHC, NHCT, NHD, NHE, NHF NHHR, NHHT, NHR, NHS Series NS, NT, NTA, NTC, NTE, NTF, NTO Small Cam Series	**CU-5A**		
6 cyl	743ci	12.2L	5.125" 130.2mm	**1977-On**	Cummins Diesel/Turbocharged/Supercharged Diesel Eng. 230, 250, 290, 300, 350, GNH250, N14-330E, N14-330ESP, N14-350E, N14-370E, N14-370ESP, N14-410E, N14-435E, N14-435ESP, N14-460E, N14-485E, N14-525E Series (2.500" Big Cam Series, 3/32 (.0939) Wall)	**CU-9**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. H, HS, N, NH, NHC, NHCT, NHD, NHE, NHF, NHHR, NHHT, NHR, NHS, NT, NTA, NTC, NTE, NTF,NTO Series Power Torque 270, 300 & 330 Small Cam Series	**CU-5A**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**1977-On**	Cummins Diesel/Turbo-Diesel Eng. (2.500" Big Cam Series, 3/32 (.0939) Wall)	**CU-9**		
8 cyl	903ci	14.8L	5.500" 139.7mm	**ALL**	Cummins Diesel/Turbo-Diesel Eng. Formula 903, V903, VT903 Series	**CU-13**		
6 cyl	927ci	15.2L	5.500" 139.7mm	**ALL**	Cummins Diesel Eng. N927, Super 250, Super 270, Super 300, Super 330 Series	**CU-5A**		
DETROIT DIESEL								
2 cyl	106ci	1.7L	3.875" 98.4mm	**ALL**	Detroit Supercharged Diesel Eng. 2-53, 2-53N Series (Cam Bearing & Balance Shaft Set) (+.010 OD, Cam Bearing & Balance Shaft Set)	 **DE-2**** **DE-2R1**		
2 cyl	142ci	2.3L	4.250" 108mm	**ALL**	Detroit Diesel Eng. 2-71 Series, (For Engines After Serial # 2A-37623) (Cam Bearing & Balance Shaft Set)	 **DE-1**		
3 cyl	159ci	2.6L	3.875" 98.4mm	**ALL**	Detroit Supercharged Diesel Eng. 3-53, 3-53N Series (Cam Bearing & Balance Shaft Set) (+.010 OD, Cam Bearing & Balance Shaft Set)	 **DE-2A**** **DE-2AR1**		
4 cyl	212ci	3.5L	3.875" 98.4mm	**ALL**	Detroit Supercharged/Turbocharged Diesel Eng. 4-53, 4-53N, 4-53T Series (Cam Bearing & Balance Shaft Set)	 **DE-7****		
6 cyl	318ci	5.2L	3.875" 98.4mm	**ALL**	Detroit Supercharged Diesel Eng. 6V-53, 6V-53E-N, 6V53T, SE Series (Cam Bearing & Balance Shaft Set) (+.010 OD, Cam Bearing & Balance Shaft Set)	 **DE-5**** **DE-5R1****		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
DETROIT DIESEL (Cont.)								
8 cyl	500ci	8.2L	4.252" 108mm	**ALL**	OHV Detroit Fuel Pincher Diesel/Turbo-Diesel Eng. 8.2, 8.2N, 8.2T Series	**DE-4**		
EAGLE (Also see AMERICAN MOTORS / CHRYSLER)								
4 cyl	90ci 1468cc	1.5L	2.972" 75.5mm	**1988-96**	SOHC Mitsubishi Eng. Vin A, K, X			**MIA-3*** (Full Round)
4 cyl	98ci 1597cc	1.6L	3.240" 82.3mm	**1989-90**	DOHC Mitsubishi Eng. Vin Y			**MIA-1*** (1/2 Shell)
					(Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-2*** (1/2 Shell)
4 cyl	122ci 1997cc	2.0L	3.346" 85mm	**1989-98**	SOHC & DOHC Mitsubishi Eng. EBG, G63B Series (Includes Turbo) Vin E, F, R, U, V			
					(Balance Shaft Set)	**MIG-3****		
4 cyl	- 2351cc	2.4L	3.405" 86.5mm	**1992-96**	SOHC Mitsubishi Eng. Vin G, W			**MIA-1*** (1/2 Shell)
					(Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-2*** (1/2 Shell)
					(Balance Shaft Set)	**MIG-3****		
4 cyl	150ci 2460cc	2.5L	3.875" 98.5mm	**1988-89**	OHV AMC Eng. Vin H, Z	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
6 cyl	201ci 3301cc	3.3L	3.661" 93mm	**1993-97**	OHV Chrysler Eng. Vin T	**PD-28**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**PD-28B**		
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR)								
4 cyl	61ci 997cc	1.0L	3.189" 81mm	**1959-68**	OHV Ford Europe Eng. 105E, 106E, 107E Series	**F-28**		
4 cyl	67ci 1098cc	1.1L	3.189" 81mm	**1968-80**	German Eng.	**F-28**		
4 cyl	73ci 1198cc	1.2L	3.189" 81mm	**1961-68**	Ford Europe Eng. 113E, 114E, 123E, 308E Series	**F-28**		
4 cyl	79.2ci 1298cc	1.3L	3.189" 81mm	**1966-82**	German Eng. 2735E, 3014E, 711M Series	**F-28**		
4 cyl	82ci 1340cc	1.3L	3.189" 81mm	**1961-64**	Ford Europe Eng. 109E, 123E, 124E Series	**F-28**		
4 cyl	91.3ci 1497cc	1.5L	3.543" 90mm	**1959-72**	OHV German Eng. 12M, 15M, 17M Series	**F-42**		
4 cyl	92ci 1498cc	1.5L	3.189" 81mm	**1962-67**	OHV Ford Europe Eng. 116E, 118E, 120E, 122E, 3017E, 3034E Series	**F-28**		
4 cyl	96.5ci 1586cc	1.6L	3.071" 78mm	**1970-77**	Mazda Eng.			**F-41*** (1/2 Shell)
4 cyl	97ci 1599cc	1.6L	3.465" 88mm	**1970-84**	OHV British Eng.	**F-29**		
					(Auxiliary / Balance Shaft Set)	**FG-29****		
4 cyl	98ci 1598cc	1.6L	3.071" 78mm	**1987-94**	SOHC & DOHC Mazda Eng. (Includes Turbo) Vin 6, Z			**MZA-1*** (Full Round)
4 cyl	98ci 1598cc	1.6L	3.150" 80mm	**1981-85**	SOHC Ford Eng. HS Series (Includes Turbo), Vin 2, 4, 5, 8			**FA-2*** (Full Round)
4 cyl	98ci 1598cc	1.6L	3.188" 80.98mm	**1978-80**	OHV Ford Eng.	**F-28**		
					(Auxiliary / Balance Shaft Set)	**FG-29****		
4 cyl	98ci 1598cc	1.6L	3.189" 81mm	**1967-73**	Ford Europe (British) Eng. 711M, 2737E, 3036E Series, Vin L, W	**F-28**		
4 cyl	104ci 1699cc	1.7L	3.543" 90mm	**1962-75**	OHV Ford Europe Eng. PS5 Series	**F-42**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
4 cyl	110ci 1796cc	1.8L	3.071" 78mm	**1972-79**	SOHC Mazda Eng. VB, VC Series, Vin A, C			**F-41*** (1/2 Shell)
4 cyl	112ci 1839cc	1.8L	3.268" 83mm	**1991-96**	DOHC Mazda Eng. BP Series, Vin 8			**MZA-1*** (Full Round)
4 cyl	116ci	1.9L	3.226" 82mm	**1985-96**	SOHC Ford Eng. Vin 9, J			**FA-1*** (Full Round)
4 cyl	122ci 1970cc	2.0L	3.150" 80mm	**1979-82**	SOHC Mazda Eng. MA, MB Series, Vin 1, C			**F-41*** (1/2 Shell)
4 cyl	122ci 1989cc	2.0L	3.268" 83mm	**1993-97**	DOHC Mazda Eng. DE-FS Series, Vin A			**MZA-2*** (1/2 Shell)
4 cyl	122ci 1989cc	2.0L	3.386" 86mm	**1984-87**	SOHC Mazda Diesel Eng. Vin H			**MZA-2*** (1/2 Shell)
4 cyl	122ci 1989cc	2.0L	3.516" 89.4mm	**1983-88**	SOHC Ford Eng. Vin C (Special Oil Control Set w/ OD Groove) (Cam Bearing Set w/ .020 Oversize OD) (Auxiliary Shaft Set)	**F-34** **F-34B** **F-34S** **FG-34****		
4 cyl	122ci 1989cc	2.0L	3.578" 90.8mm	**1971-74**	SOHC Ford Eng. Vin X (Auxiliary Shaft Set)	**F-29** **FG-29****		
4 cyl	133ci 2184cc	2.2L	3.386" 86.1mm	**1989-92**	SOHC Mazda Eng. F2, F2-T Series (Includes Turbo), Vin C, L			**MZA-2*** (1/2 Shell)
4 cyl	140ci 2346cc	2.3L	3.587" 91.1mm	**1985-87**	SOHC Mitsubishi Turbo-Diesel Eng. 4D55-T Series, Vin E (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		
4 cyl	140ci 2300cc	2.3L	3.680" 94mm	**1984-94**	OHV Ford (HSC) Eng. Vin R, S, X	**F-46**		
4 cyl	140ci 2302cc	2.3L	3.780" 96mm	**1974-97**	SOHC Ford Eng. WB Series (Includes Turbo), Vin 6, A, M, R, T, W, X, Y (Special Oil Control Set w/ OD Groove) (Cam Bearing Set w/ .020 Oversize OD) (Auxiliary Shaft Set)	**F-34** **F-34B** **F-34S** **FG-34****		
6 cyl	144ci 2360cc	2.4L	3.500" 88.9mm	**1960-66**	OHV Ford Eng. Vin D, S	**F-32**		
4 cyl	153ci	2.5L	3.680" 93.5mm	**1986-91**	OHV Ford (HSC) Eng. Vin D, N	**F-46**		
6 cyl	156ci 2551cc	2.6L	3.543" 90mm	**1970-76**	OHV Ford (German) Eng. Vin U	**F-31**		
3 cyl	158ci 2590cc	2.6L	4200" 107mm	**1961-75**	Ford Gas/Diesel Eng. 2000 Series Tractors, Vin D, G	**F-43**		
6 cyl	170ci 2786cc	2.8L	3.500" 88.9mm	**1960-72**	OHV Ford Eng. Vin F, U	**F-32**		
6 cyl	171ci 2792cc	2.8L	3.661" 93mm	**1974-79**	OHV Ford Eng. Vin Z	**F-31**		
6 cyl	171ci 2800cc	2.8L	3.661" 93mm	**1983-86**	OHV Ford Eng. Vin S (Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**F-47** **F-47B**		
6 cyl	177ci 2935cc	2.9L	3.661" 93mm	**1986-92**	OHV Ford Eng. Vin T, V (Special Oil Control Set w/ OD Groove No. 2, 3 Position)	 **F-47B**		
3 cyl	175ci	2.9L	4.200" 107mm	**1961-75**	Ford Diesel Eng. 3000 Series Tractors, Vin D	**F-43**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
6 cyl	182ci 2960cc	3.0L	3.425" 87mm	**1993-98**	SOHC Nissan Eng. VG30E Series, Vin 1, W (Cam Bearing Set, Left Bank) (Cam Bearing Set, Right Bank)			**NIA-3L*** (Full Round) **NIA-3R*** (Full Round)
6 cyl	182ci 2982cc	3.0L	3.504" 89mm	**1986-08**	OHV Ford (Vulcan) Eng. Vin 1, 2, U, V (ID Groove No. 4 Position)	**F-48** **F-48A**		
3 cyl	192ci 3146cc	3.1L	4.402" 112mm	**1965-72**	Ford Gas/Diesel Eng. 4000 Series Tractors, Vin D, G	**F-43**		
6 cyl	200ci 3277cc	3.3L	3.680" 93.5mm	**1963-83**	OHV Ford Eng. Vin B, T, X	**F-32**		
3 cyl	201ci 3294cc	3.3L	4.402" 112mm	**1965-72**	Ford Gas/Diesel Eng. 333H, BSD333 Series Tractors	**F-43**		
6 cyl	215ci 3524cc	3.5L	3.563" 90.5mm	**1951-53**	OHV Ford Eng. Vin A	**F-7**		
8 cyl	221ci 3622cc	3.6L	3.063" 77.8mm	**1936-48**	Ford (L-Head) Eng.	**F-1**		
8 cyl	221ci 3622cc	3.6L	3.500" 88.9mm	**1962-63**	OHV Ford Eng. Vin L	**F-18**	**FP-18** or **FP-18T** (Coated)	
6 cyl	223ci 3655cc	3.6L	3.625" 92.1mm	**1954-64**	OHV Ford Eng. Vin A, J, V (Engs w/ Cross Drilled Camshaft Journals) (Engs w/o Cross Drilled Camshaft Journals)	 **F-22** **F-7**		
6 cyl	232ci 3797cc	3.8L	3.811" 96.8mm	**1982-87**	OHV Ford Eng. Vin 3, 4, C	**F-45**		
6 cyl	232ci 3797cc	3.8L	3.811" 96.8mm	**1988-04**	OHV Ford Eng. (Includes Supercharged), Vin 4, R (Auxiliary Shaft Set) (Cam Bearings & Aux. Shaft Kit)	**F-52** **FG-51**** **F-38**		
4 cyl	233ci 3819cc	3.8L	4.200" 107mm	**1965-68**	Ford Gas/Diesel Eng. 5000 Series Tractors	**F-44**		
8 cyl	239ci 3924cc	3.9L	3.188" 80.98mm	**1939-53**	Ford (L-Head) Eng. Vin B	**F-1**		
8 cyl	239ci 3917cc	3.9L	3.500" 88.9mm	**1954-55**	OHV Ford Eng. Vin U (Cam Bearing w/ Grooved No. 3 Journal) (Cam w/ Cross-Drilled No. 3 Journal)	 **F-9A** **F-9B**		
6 cyl	240ci 3933cc	3.9L	4.000" 101.6mm	**1965-76**	OHV Ford Eng. Vin 1, A, B, E, J, V	**F-23A**		
6 cyl	245ci 4015cc	4.0L	3.953" 100.4mm	**1990-00**	OHV Ford Eng. Vin X (Cam Bearing Set w/ Special Wide No. 4 Position)	**F-50** **F-50A**		
6 cyl	245ci 4015cc	4.0L	3.953" 100.4mm	**1997-11**	SOHC Ford Eng. Vin E, K (Auxiliary Shaft Set) (Balance Shaft Drive Gear Bushing)	 **FG-53**** **FG-1-1****		**FA-6*** (1/2 Shell)
6 cyl	250ci 4097cc	4.1L	3.680" 93.5mm	**1969-80**	OHV Ford Eng. Vin C, L	**F-32**		
8 cyl	255ci 4186cc	4.2L	3.188" 80.98mm	**1948-54**	Ford (L-Head) Eng.	**F-1**		
8 cyl	255ci	4.2L	3.680" 93.5mm	**1980-82**	OHV Ford Eng. Vin D	**F-18**	**FP-18** or **FP-18T** (Coated)	
4 cyl	256ci 4195cc	4.2L	4.400" 112mm	**1968-90**	Ford Gas/Diesel/Turbo Diesel Eng. 5000 Series Tractors, Vin D, G	**F-44**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
6 cyl	256ci 4196cc	4.2L	3.811" 96.8mm	**1997-08**	OHV Ford (Triton) Eng. Vin 2 (Auxiliary Shaft Set) (Cam Bearings & Aux. Shaft Kit)	**F-52** **FG-51**** **F-38**		
8 cyl	256ci 4196cc	4.2L	3.625" 92.1mm	**1954-55**	OHV Ford Eng. Vin P (Cam Bearing w/ Grooved No. 3 Journal) (Cam w/ Cross-Drilled No. 3 Journal)	**F-9A** **F-9B**		
8 cyl	260ci 4261cc	4.3L	3.800" 96.5mm	**1962-65**	OHV Ford Eng. Vin F	**F-18**	**FP-18** or **FP-18T** (Coated)	
6 cyl	262ci 4294cc	4.3L	3.719" 94.5mm	**1961-64**	OHV Ford Eng. Vin B (Engs w/ Cross Drilled Camshaft Journals) (Engs w/o Cross Drilled Camshaft Journals)	**F-22** **F-7**		
8 cyl	272ci 4458cc	4.4L	3.625" 92.1mm	**1955-58**	OHV Ford Eng. Vin B, M, U (Cam Bearing w/ Grooved No. 3 Journal) (Cam w/ Cross-Drilled No. 3 Journal)	**F-9A** **F-9B**		
8 cyl	281ci 4605cc	4.6L	3.551" 90.2mm	**1991-13**	SOHC Ford (Triton) Eng. Vin 6, 9, V, W, X (1 Cam Set Per Cylinder Head)			**FA-3*** (1/2 Shell)
8 cyl	281ci 4605cc	4.6L	3.551" 90.2mm	**1993-96**	DOHC Ford (InTech) Eng. Vin V (To Early 1996), (1 Cam Set Per Cylinder Head)			**FA-4*** (1/2 Shell)
8 cyl	281ci 4605cc	4.6L	3.551" 90.2mm	**1996-05**	DOHC Ford (InTech) Eng. Vin H, R, V, Y (From Late 1996), (1 Cam Set Per Cylinder Head)			**FA-5*** (1/2 Shell)
8 cyl	289ci 4727cc	4.7L	4.000" 101.6mm	**1963-69**	OHV Ford Eng. Vin A, C, D, K, N	**F-18**	**FP-18** or **FP-18T** (Coated)	
8 cyl	292ci 4786cc	4.8L	3.750" 95.3mm	**1955-65**	OHV Ford Eng. Vin C, D, M, P, W (Cam Bearing w/ Grooved No. 3 Journal) (Cam w/ Cross-Drilled No. 3 Journal)	**F-9A** **F-9B**		
6 cyl	300ci 4917cc	4.9L	4.000" 101.6mm	**1965-85**	OHV Ford Eng. Vin 9, B, E, K, Y (To Early 1985) (Special Oil Control Set w/ OD Groove)	**F-23A** **F-23B**		
6 cyl	300ci	4.9L	4.000" 101.6mm	**1985-96**	OHV Ford Eng. Vin 9, Y, Z (From Late 1985) (Special Oil Control Set w/ OD Groove)	**F-49** **F-49B**		
8 cyl	302ci	5.0L	3.625" 92.1mm	**1956-63**	OHV Ford Eng.	**F-12**		
8 cyl	302ci 4949cc	5.0L	4.000" 101.6mm	**1968-01**	OHV Ford Eng. Vin B, D, E, F, G, J, M, N, P, T	**F-18**	**FP-18** or **FP-18T** (Coated)	
8 cyl	302ci	5.0L	4.000" 101.6mm	**ALL**	SVO Ford (Performance) Eng. (2.204" Hsg., Stepped Cam) (+.010 OD) (R302 Block w/ 2.204" Hsg., Common Journal Size Cam)		**351HP** or **351HPT** (Coated) **351HP-R1** **351RHP** or **351RHPT** (Coated)	
8 cyl	312ci 5114cc	5.1L	3.800" 96.5mm	**1956-60**	OHV Ford Eng. Vin D, E, F, L, P (Cam Grooved in #3 Journal)	**F-9A**		
8 cyl	330ci	5.4L	3.875" 98.4mm	**1964-78**	OHV Ford (MD-HD) Eng.	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	330ci	5.4L	3.551" 90.2mm	**2004-13**	SOHC Ford (3 Valve Per Chamber) Eng. Vin 5, V (Cam Bearing Set, Left Bank) (Cam Bearing Set, Right Bank)			**FA-13L*** (1/2 Shell) **FA-13R*** (1/2 Shell)

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"und" Denotes Undersized ID

CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
8 cyl	332ci	5.4L	3.800" 96.5mm	**1956-64**	OHV Ford (MD-HD) Eng.	**F-12**		
8 cyl	332ci 5441cc	5.4L	4.000" 101.6mm	**1958-59**	OHV Ford Eng. Vin B, G	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	351ci 5752cc	5.8L	4.000" 101.6mm	**1969-97**	OHV Ford (Windsor) Eng. Vin C, G, H, M, R, W	**F-18**	**FP-18** or **FP-18T** (Coated)	
8 cyl	351ci 5752cc	5.8L	4.000" 101.6mm	**1970-82**	OHV Ford (Cleveland) Eng. Vin H, M, Q, R (70-74); OHV Ford (Modified) Eng. Vin G, H, (75-82)	**F-26**	**FP-26** or **FP-26T** (Coated)	
8 cyl	351ci	5.8L	4.000" 101.6mm	**ALL**	SVO Ford (Performance) Eng. (2.204" Cam Housings) (+.010 OD) (R302 Block w/ 2.204" Hsg., Common Journal Size Cam)		**351HP** or **351HPT** (Coated) **351HP-R1** **351RHP** or **351RHPT** (Coated)	
8 cyl	352ci 5769cc	5.8L	4.000" 101.6mm	**1957-67**	OHV Ford Eng. Vin D, H, R, X, Y	**F-33**	**FP-33** or **FP-33T** (Coated)	
6 cyl	359ci	5.9L	4.016" 102.1mm	**1993-99**	Cummins Diesel/Turbo-Diesel Eng. FD1060 Series, Vin C	**CU-12**		
8 cyl	360ci 5899cc	5.9L	4.050" 102.9mm	**1968-77**	OHV Ford Eng. Vin Y	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	361ci 5917cc	5.9L	4.050" 102.9mm	**1958-78**	OHV Ford Eng. Vin W	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	363ci	6.0L	3.740" 95mm	**2004-10**	OHV Ford/International (Power-Stroke)Turbo Diesel Eng. VT365 Series, Vin P	**IN-21**		
8 cyl	368ci 6032cc	6.0L	4.000" 101.6mm	**1956-57**	OHV Ford Eng.	**F-11**		
8 cyl	370ci	6.1L	4.046" 102.8mm	**1979-91**	OHV Ford Eng. Vin 7, C, H (Special Bearing Set w/ Wide No. 1-5 Position) (+.005 OD) (+.010 OD) (+.015 OD) (+.020 OD)	**F-30** **F-30R1** **F-57** **F-30R2**	**FP-30** or **FP-30T** (Coated) **FP-30AT** (Coated) **FP-30R**	
8 cyl	390ci 6391cc	6.4L	4.050" 102.9mm	**1961-77**	OHV Ford Eng. Vin 9, H, M, P, Q, R, S, X, Y, Z	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	391ci	6.4L	3.860" 98mm	**2008-10**	OHV Ford (Power-Stroke) Turbo Diesel Eng. Vin R	**IN-21**		
8 cyl	391ci	6.4L	4.050" 102.9mm	**1964-78**	OHV Ford (MD-HD) Eng.	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	400ci 6555cc	6.6L	4.000" 101.6mm	**1971-82**	OHV Ford Eng. Vin S, Z	**F-26**	**FP-26** or **FP-26T** (Coated)	
6 cyl	401ci	6.6L	4.400" 111.8mm	**1986-95**	Ford (Brazillian) Turbo-Diesel Eng.	**F-55**		
6 cyl	401ci	6.6L	4.400" 111.8mm	**1986-95**	OHV Ford Diesel/Turbo-Diesel Eng. 401D, 401TD Series, Vin P	**F-44**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
8 cyl	401ci	6.6L	4.125" 104.8mm	**1958-76**	OHV (HD) Ford Eng.	**F-16**		
8 cyl	406ci 6654cc	6.6L	4.130" 104.9mm	**1962-63**	OHV Ford Eng. Vin B, G	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	410ci 6720cc	6.7L	4.050" 102.9mm	**1966-67**	OHV Ford Eng. Vin M	**F-33**	**FP-33** or **FP-33T** (Coated)	
10 cyl	415ci 6760cc	6.8L	3.552" 90.2mm	**1997-13**	SOHC (2-Valve) Ford (Triton) Eng. Vin S (Cam Bearing Set, Left Bank) (Cam Bearing Set, Right Bank)			**FA-14L*** (1/2 Shell) **FA-14R*** (1/2 Shell)
8 cyl	420ci	6.9L	4.000" 101.6mm	**1983-87**	OHV IHC-Navistar Diesel Eng. Vin 1 (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
8 cyl	427ci 6997cc	7.0L	4.233" 107.5mm	**1963-65**	OHV Ford Eng. Vin L, M, Q, R	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	427ci 6997cc	7.0L	4.233" 107.5mm	**1966-69**	OHV (Side Oiler/Wedge-Head) Ford Eng. Vin L, M, R, W	**F-24**		
8 cyl	428ci 7014cc	7.0L	4.130" 104.9mm	**1965-70**	OHV Ford Eng. Vin P, Q, R	**F-33**	**FP-33** or **FP-33T** (Coated)	
8 cyl	429ci 7030cc	7.0L	4.360" 110.7mm	**1968-98**	OHV Ford Eng. Vin 8, C, J, K, N, P, R, Z (Special Bearing Set w/ Wide No. 1-5 Position) (+.005 OD) (+.010 OD) (+.015 OD) (+.020 OD)	**F-30** **F-30R1** **F-57** **F-30R2**	**FP-30** or **FP-30T** (Coated) **FP-30AT** (Coated) **FP-30R**	
8 cyl	430ci 7048cc	7.0L	4.300" 109.2mm	**1958-65**	OHV Ford Eng. Vin H, J, K, L, M, N	**F-19**		
8 cyl	445ci	7.3L	4.110" 104.4mm	**1988-03**	OHV (Direct/Indirect Injection) IHC-Navistar Diesel/Turbo-Diesel Eng. Vin C, F, K, M (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
8 cyl	460ci 7539cc	7.5L	4.360" 110.7mm	**1968-98**	OHV Ford Eng. Vin A, C, G, J, L (Special Bearing Set w/ Wide No. 1-5 Position) (+.005 OD) (+.010 OD) (+.015 OD) (+.020 OD)	**F-30** **F-30R1** **F-57** **F-30R2**	**FP-30** or **FP-30T** (Coated) **FP-30AT** (Coated) **FP-30R**	
8 cyl	462ci 7582cc	7.6L	4.380" 111.3mm	**1966-68**	OHV Ford Eng. Vin 7, G	**F-19**		
6 cyl	464ci	7.6L	4.438" 111.3mm	**ALL**	OHV Cummins Diesel/Turbo-Diesel Eng.	**CU-5A**		
6 cyl	474ci	7.8L	4.400" 112mm	**1986-95**	OHV Ford Turbo-Diesel Eng. Vin A	**F-44**		
6 cyl	474ci	7.8L	4.400" 111.8mm	**1987-95**	Ford (Brazillian) Turbo-Diesel Eng.	**F-55**		
8 cyl	475ci	7.8L	4.500" 114.3mm	**1973-79**	OHV (HD) Ford Eng.	**F-16**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD MOTOR CO. (BRITISH-GERMAN, EDSEL, LINCOLN, MERCURY, MERKUR) (Cont.)								
8 cyl	477ci	7.8L	4.500" 114.3mm	**1958-81**	OHV (HD) Ford Eng.	**F-16**		
8 cyl	501ci	8.2L	4.252" 108mm	**1980-87**	OHV (Fuel Pincher) Detroit Diesel/Turbo-Diesel Eng. Vin N	**DE-4**		
8 cyl	522ci	8.5L	4.500" 114.3mm	**1968-75**	OHV Caterpillar Diesel Eng.	**CAT-2**		
6 cyl	525ci	8.6L	4.500" 114.3mm	**1965-69**	OHV Caterpillar Turbo-Diesel Eng. (No. 1 Position, OE#9M5744) (No. 2, 3, 4, 5 Position, OE#7M4046) (Balance Shaft Bearings: No. 1, 2, 5, 6 Position, OE#9M5239) (Balance Shaft Bearings: No. 3, 4 Position, OE#9M5238)	 **CAT-2-1** **CAT-2-2** **CAT-2-5** **CAT-2-6**		
8 cyl	534ci	8.8L	4.500" 114.3mm	**1958-81**	OHV (HD) Ford Eng.	**F-16**		
8 cyl	555ci	9.1L	4.625" 117.5mm	**1973-79**	OHV Cummins Diesel Eng. V55C, V555 Series (2.186" Housing Bore)	**CU-11**		
8 cyl	573ci	9.4L	4.500" 114.3mm	**1968-75**	OHV Caterpillar Diesel Eng. V200 Series	**CAT-2**		
8 cyl	636ci	10.4L	4.500" 114.3mm	**1968-72**	OHV Caterpillar Diesel Eng. V225 Series	**CAT-2**		
6 cyl	638ci	10.5L	4.750" 120.7mm	**1988-89**	OHV Caterpillar Turbo-Diesel Eng. (Balance Shaft Set)	**CAT-6** **CAT-7****		
6 cyl	672ci	11.0L	4.875" 123.8mm	**1964-65**	OHV Cummins Diesel Eng.	**CU-5A**		
6 cyl	743ci	12.2L	5.125" 130.2mm	**1964-69**	OHV Cummins Diesel Eng.	**CU-5A**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**1964-72**	OHV Cummins Diesel Eng.	**CU-5A**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**1964-78**	OHV Cummins Turbo-Diesel Eng.	**CU-9**		
6 cyl	927ci	15.2L	5.500" 139.7mm	**1974-83**	OHV Cummins Diesel Eng.	**CU-5A**		
FORD TRACTOR CO. (Also see FORD MOTOR CO.)								
3 cyl	158ci 2590cc	2.6L	4.200" 106.7mm	**1965-90**	Gas/Diesel/LPG Eng.	**F-43**		
3 cyl	175ci	2.9L	4.200" 106.7mm	**1965-90**	Gas/Diesel/LPG Eng.	**F-43**		
3 cyl	183ci 2999cc	3.0L	4.200" 106.7mm	**1965-90**	Diesel Eng.	**F-43**		
3 cyl	192ci 3146cc	3.1L	4.406" 112mm	**1965-69**	Gas/Diesel/LPG Eng.	**F-43**		
3 cyl	201ci 3294cc	3.3L	4.406" 112mm	**1965-81**	Gas/Diesel/LPG Eng.	**F-43**		
6 cyl	223ci	3.7L	3.625" 92.1mm	**1961-66**	Gas/LPG Eng.	**F-7**		
4 cyl	233ci 3819cc	3.8L	4.200" 106.7mm	**1965-68**	Gas/Diesel/LPG Eng.	**F-44**		
6 cyl	242ci	4.0L	3.625" 92.1mm	**1961-66**	Diesel Eng.	**F-7**		
4 cyl	256ci 4195cc	4.2L	4.406" 112mm	**1968-90**	Gas/Diesel/Turbo-Diesel Eng.	**F-44**		
6 cyl	401ci	6.6L	4.406" 112mm	**1969-90**	Diesel/Turbo-Diesel Eng.	**F-44**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
FORD TRACTOR CO. (Also see FORD MOTOR CO.) (Cont.)								
6 cyl	474ci	7.8L	4.400" 111.8mm	**1987-97**	(Brazilian) Turbocharged Diesel Eng.	**F-55**		
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN)								
4 cyl	79ci 1295cc	1.3L	2.913" 74mm	**1992-01**	SOHC Suzuki Eng. G13A Series, Vin 2, 3, 9			**SA-1*** (Full Round)
4 cyl	92ci 1471cc	1.5L	3.031" 77mm	**1985-89**	SOHC Isuzu Eng. 4XC1, 4XC1-T Series (Includes Turbo), Vin 7, 9, K (Auxiliary Shaft Set)	**CHG-14****		
4 cyl	111ci 1817cc	1.8L	3.307" 84mm	**1972-82**	SOHC Isuzu Eng. G180Z Series, Vin N (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Auxiliary / Balance Shaft Set)	 **CHG-14****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	112ci 1835cc	1.8L	3.504" 89mm	**1982**	OHV Chevrolet Eng. Vin G (.002 Under ID)	**CH-19** **CH-19X2**		
4 cyl	116ci 1901cc	1.9L	3.230" 82mm	**1991-02**	SOHC Chevrolet (Saturn) Eng. Vin 8, 9			**GMA-1*** (Full Round)
4 cyl	116ci 1901cc	1.9L	3.230" 82mm	**1991-02**	DOHC Chevrolet (Saturn) Eng. Vin 7			**GMA-2*** (1/2 Shell)
4 cyl	119ci 1949cc	1.9L	3.425" 87mm	**1982-85**	SOHC Isuzu Eng. G200Z Series, Vin A (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Auxiliary / Balance Shaft Set)	 **CHG-14****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	121ci 1989cc	2.0L	3.504" 89mm	**1983-89**	OHV Chevrolet Eng. Vin 1, B, P, Y (.002 Under ID)	**CH-19** **CH-19X2**		
4 cyl	122ci 1999cc	2.0L	3.500" 89mm	**1975-76**	DOHC Chevrolet (Cosworth) Eng. Vin E, O	**CH-13**		
4 cyl	134ci 2198cc	2.2L	3.386" 86mm	**2000-11**	DOHC Chevrolet (Ecotec) Eng. LAP, LE8, L61 Series. Vin 5, 6, B, D, F, H, W (Balance Shaft Set)	**CHG-24****		
4 cyl	134ci 2238cc	2.2L	3.465" 88mm	**1981-82**	OHV Isuzu Diesel Eng. C223 Series, Vin S	**IZ-2**		
4 cyl	134ci 2238cc	2.2L	3.465" 88mm	**1983-85**	OHV Isuzu Diesel Eng. C223 Series, Vin S	**IZ-3**		
4 cyl	134ci 2189cc	2.2L	3.500" 89mm	**1990-03**	OHV Chevrolet (Vortec) Eng. Vin 4, 5, G, H (.002 Under ID)	**CH-19** **CH-19X2**		
4 cyl	140ci 2294cc	2.3L	3.500" 88.9mm	**1971-77**	SOHC Chevrolet Eng. Vin A, B	**CH-13**		
4 cyl	151ci 2474cc	2.5L	4.000" 101.6mm	**1977-93**	OHV Pontiac Eng. Vin 1, 2, 5, 9, A, E, F, R, V (.001 Under ID)	**CH-16** **CH-16W**		
4 cyl	151ci 2474cc	2.5L	4.000" 101.6mm	**1985-91**	OHV Pontiac Eng. Vin U	**CH-20**		
4 cyl	153ci 2507cc	2.5L	3.875" 98.4mm	**1962-70**	OHV Chevrolet Eng. Vin AA, CA, OH	**CH-6**		
4 cyl	169ci 2770cc	2.8L	3.661" 93mm	**2004-06**	DOHC Chevrolet (Vortec) Eng. Vin 8 (Balance Shaft Set)	**CHG-23****		
6 cyl	173ci 2835cc	2.8L	3.504" 89mm	**1980-93**	OHV Chevrolet Eng. Vin 1, 7, 9, B, L, R, S, W, X, Z (Special Bearing Set w/ Wide No. 2, 3 Position) (Oversize OD - See Set Contents) (Oversize OD)	**CH-18** **CH-18A** **CH-18RS** **CH-18R8**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
4 cyl	181ci	3.0L	4.000" 101.6mm	**1982**	OHV GMC Eng. (Marine & Industrial)	**CH-16**		
					(.001 Under ID)	**CH-16W**		
6 cyl	181ci	3.0L	3.800" 96.5mm	**1982-85**	OHV Buick Eng. (1st Design w/ 14 Bolt Oil Pan), Vin E	**B-12**		
					(Oil Control Set w/ Opt. Groove Design, #1 Position)	**B-12B**		
6 cyl	181ci	3.0L	3.800" 96.5mm	**1985-88**	OHV Buick Eng. (2nd Design w/ 20 Bolt Oil Pan), Vin L	**B-13**	**BP-13** or **BP-13T** (Coated)	
					(+.025 OD)	**B-13R**		
6 cyl	189ci 3136cc	3.1L	3.504" 89mm	**1988-05**	OHV Chevrolet Eng. (Includes Turbo), Vin D, J, M, T, V, W	**CH-18**		
					(Special Bearing Set w/ Wide No. 2, 3 Position)	**CH-18A**		
					(Oversize OD - See Set Contents)	**CH-18RS**		
					(Oversize OD)	**CH-18R8**		
6 cyl	194ci 3180cc	3.2L	3.563" 90.5mm	**1962-67**	OHV Chevrolet Eng.	**CH-7**		
4 cyl	195ci 3196cc	3.2L	4.063" 103.2mm	**1961-62**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
4 cyl	195ci 3196cc	3.2L	4.063" 103.2mm	**1963**	OHV Pontiac Eng.	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		
6 cyl	196ci	3.2L	3.500" 88.9mm	**1978-79**	OHV Buick Eng. Vin C	**B-12**		
					(Oil Control Set w/ Opt. Groove Design, #1 Position)	**B-12B**		
6 cyl	198ci 3245cc	3.2L	3.625" 92.1mm	**1962-63**	OHV Buick Eng. 6I, JL, JZ Series	**B-6**		
6 cyl	200ci	3.3L	3.500" 88.9mm	**1978-79**	OHV Chevrolet Eng. Vin M	**CH-17**	**CHP-17** or **CHP-17T** (Coated)	
					(.001 Under ID)	**CH-17X**		
6 cyl	204ci	3.3L	3.701" 94mm	**1989-93**	OHV Buick Eng. Vin N	**B-13**	**BP-13** or **BP-13T** (Coated)	
					(+.025 OD)	**B-13R**		
6 cyl	207ci 3393cc	3.4L	3.622" 92mm	**1991-97**	DOHC Chevrolet Eng. Vin X			
					(Auxiliary Shaft Set)	**CHG-22****		
6 cyl	207ci 3393cc	3.4L	3.622" 92mm	**1993-09**	OHV Chevrolet Eng. Vin E, F, S	**CH-18**		
					(Special Bearing Set w/ Wide No. 2, 3 Position)	**CH-18A**		
					(Oversize OD - See Set Contents)	**CH-18RS**		
					(Oversize OD)	**CH-18R8**		
5 cyl	211ci 3460cc	3.5L	3.661" 93mm	**2004-06**	DOHC Chevrolet (Vortec) Eng. Vin 6			
					(Balance Shaft Set)	**CHG-23****		
6 cyl	213ci	3.5L	3.700" 93.98mm	**2004-07**	OHV Chevrolet Eng. Vin 8, L	**CH-24**		
6 cyl	214ci 3473cc	3.5L	3.524" 89.5mm	**1999-02**	DOHC Oldsmobile Eng. Vin H			
					(Balance Shaft Set)	**OG-1****		
6 cyl	215ci 3524cc	3.5L	3.750" 95.3mm	**1964-65**	OHV Pontiac Eng.	**CH-7**		
8 cyl	215ci 3528cc	3.5L	3.500" 88.9mm	**1961-63**	OHV Buick Eng. (Includes Turbo)	**B-11**		
6 cyl	216ci 3548cc	3.5L	3.500" 88.9mm	**1937-53**	OHV Chevrolet Eng.	**CH-2**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
5 cyl	223ci 3654cc	3.7L	3.760" 95.5mm	**2007-12**	DOHC Chevrolet Eng. Vin E (Balance Shaft Set)	**CHG-23****		
6 cyl	224ci	3.7L	3.563" 90.5mm	**1940-47**	OHV Eng.	**CH-2**		
6 cyl	225ci 3687cc	3.7L	3.750" 95.3mm	**1964-67**	OHV Buick Eng.	**B-6**		
6 cyl	228ci 3737cc	3.7L	3.563" 90.5mm	**1939-53**	OHV GMC Eng.	**CH-2**		
6 cyl	229ci	3.8L	3.736" 95mm	**1980-84**	OHV Buick/Chevrolet Eng. Vin 9, K (.001 Under ID)	**CH-17** **CH-17X**	**CHP-17** or **CHP-17T** (Coated)	
6 cyl	230ci 3769cc	3.8L	3.875" 98.4mm	**1963-70**	OHV Chevrolet Eng. Vin S	**CH-7**		
6 cyl	231ci 3800cc	3.8L	3.800" 96.5mm	**1975-85**	OHV Buick Eng. (Includes Turbo), Vin 2, 3, 8, 9, A, C, G (1st Design w/ 14 Bolt Oil Pan) (Special Oil Control Set w/ OD Groove No. 1 Position)	**B-12** **B-12B**		
6 cyl	231ci 3800cc	3.8L	3.800" 96.5mm	**1985-95**	OHV Buick Eng. (Includes Supercharged), Vin 1, 3, 7, 9, A, B, C, L (2nd Design w/ 20 Bolt Oil Pan) (+.025 OD)	**B-13** **B-13R**	**BP-13** or **BP-13T** (Coated)	
6 cyl	231ci 3800cc	3.8L	3.800" 96.5mm	**1995-09**	OHV Buick Eng. (Includes Supercharged), Vin 1, 2, 4, K (+.025 OD)	**B-14** **B-14R**		
6 cyl	235ci 3852cc	3.8L	3.563" 90.5mm	**1949-54**	OHV Chevrolet Eng. (Early 1954 w/ 2.029" Diameter Number 1 Camshaft Journal, Small Journals)	**CH-2**		
6 cyl	235ci 3852cc	3.8L	3.563" 90.5mm	**1954-63**	OHV Chevrolet Eng. (Late 1954 w/ 2.154" Diameter Number 1 Camshaft Journal, Large Journals)	**CH-3**		
6 cyl	236ci	3.9L	3.625" 92.1mm	**1942-46**	OHV GMC Eng.	**CH-2**		
6 cyl	237ci 3880cc	3.9L	3.898" 99mm	**2006-11**	OHV Chevrolet Eng. LGD, LZG Series, Vin 1, 3, M, R, W	**CH-24**		
6 cyl	248ci 4065cc	4.1L	3.719" 94.5mm	**1939-55**	OHV GMC Eng.	**CH-2**		
6 cyl	250ci 4097cc	4.1L	3.875" 98.4mm	**1965-70**	OHV Chevrolet Eng. Vin N, P, S	**CH-7**		
6 cyl	250ci 4097cc	4.1L	3.875" 98.4mm	**1971-84**	OHV Chevrolet Eng. Vin C, D, L, N, Q, S (Special Oil Control Set w/ OD Groove)	**CH-11** **CH-11B**		
8 cyl	250ci 4097cc	4.1L	3.465" 88mm	**1982-88**	OHV Cadillac Eng. Vin 7, 8 (Special Bearing Set w/ Wide No. 5 Position)	**C-4** **C-4A**		
6 cyl	252ci	4.1L	3.965" 100.7mm	**1980-84**	OHV Buick Eng. Vin 4 (1st Design w/ 14 Bolt Oil Pan) (Special Oil Control Set w/ OD Groove No. 1 Position)	**B-12** **B-12B**		
6 cyl	256ci	4.2L	3.781" 96mm	**1940-46**	OHV Eng.	**CH-2**		
6 cyl	260ci	4.3L	4.057" 103mm	**1982-85**	OHV Oldsmobile Diesel Eng. Vin T, V	**O-8**		
8 cyl	260ci	4.3L	3.500" 88.9mm	**1975-76**	OHV Oldsmobile Eng. Vin F (Special Oil Control Set w/ OD Groove)	**O-6** **O-6B**		
8 cyl	260ci	4.3L	3.500" 88.9mm	**1977-82**	OHV Oldsmobile Gas/Diesel Eng. Vin 8, F, P	**O-7**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
6 cyl	261ci 4278cc	4.3L	3.750" 95.3mm	**1954**	OHV Chevrolet Eng. (Early 1954 w/ 2.029" Diameter Number 1 Camshaft Journal, Small Journals)	**CH-2**		
6 cyl	261ci 4278cc	4.3L	3.750" 95.3mm	**1954-62**	OHV Chevrolet Eng. (Late 1954 w/ 2.154" Diameter Number 1 Camshaft Journal, Large Journals)	**CH-3**		
6 cyl	262ci 4294cc	4.3L	4.000" 101.6mm	**1985-02**	OHV Chevrolet (Vortec) Eng. (Includes Turbo), Vin B, N, W, X, Z (Engines Stamped With Identification Number Located On Front Of Block Starting With W)	**CH-17**	**CHP-17** or **CHP-17T** (Coated)	
					(.001 Under ID)	**CH-17X**		
					(Balance Shaft Rear Bearing, Includes Tool)	**CHG-15A****		
					(Cam Bearing & Balance Shaft Kit)	**CH-17G**		
6 cyl	262ci 4294cc	4.3L	4.000" 101.6mm	**1992-10**	OHV Chevrolet (Vortec) Eng. (Includes Turbo), (Engines Stamped With Identification Number Located On Front Of Block Starting With T)	**CH-21**	**CHP-21** or **CHP-21T** (Coated)	
					(.001 Under ID)	**CH-21X**		
					(Balance Shaft Rear Bearing, Includes Tool)	**CHG-15A****		
					(Cam Bearing & Balance Shaft Kit)	**CH-21G**		
8 cyl	262ci	4.3L	3.670" 93.2mm	**1975-76**	OHV Chevrolet Eng. Vin G	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	265ci	4.3L	3.736" 93.2mm	**1994-96**	OHV Chevrolet (Vortec) Eng. Vin W	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	265ci 4343cc	4.3L	3.750" 95.3mm	**1955-57**	OHV Chevrolet Eng.	**CH-4**	**CHP-4** or **CHP-4T** (Coated)	
8 cyl	265ci	4.3L	3.750" 95.3mm	**1980-81**	OHV Pontiac Eng. Vin S	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	267ci	4.4L	3.500" 88.9mm	**1979-82**	OHV Chevrolet Eng. Vin J	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or **CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or **CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or **CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or **CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
6 cyl	270ci 4425cc	4.4L	3.781" 96mm	**1939-62**	OHV GMC Eng.	**CH-2**		
8 cyl	273ci 4474cc	4.5L	3.622" 92mm	**1988-92**	OHV Cadillac Eng. Vin 3, 5, 8	**C-4**		
					(Special Bearing Set w/ Wide No. 5 Position)	**C-4A**		
8 cyl	283ci 4638cc	4.6L	3.875" 98.4mm	**1957-63**	OHV Chevrolet Eng.	**CH-4**	**CHP-4** or **CHP-4T** (Coated)	
8 cyl	283ci 4638cc	4.6L	3.875" 98.4mm	**1964-67**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or **CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or **CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or **CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or **CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	287ci 4707cc	4.7L	3.750" 95.3mm	**1955**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	288ci 4720cc	4.7L	3.750" 95.3mm	**1955**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
6 cyl	292ci 4801cc	4.8L	3.875" 98.4mm	**1963-70**	OHV Chevrolet Eng. Vin S	**CH-7**		
6 cyl	292ci 4801cc	4.8L	3.875" 98.4mm	**1971-90**	OHV Chevrolet Eng. Vin S, T	**CH-11**		
					(Special Oil Control Set w/ OD Groove)	**CH-11B**		
8 cyl	294ci 4807cc	4.8L	3.780" 96mm	**1999-05**	OHV Chevrolet (Vortec) Eng. Vin V (1st Design; Positions 1 and 5 Housing Bore 2.3260"/2.3280")	**CH-10**	**CHP-10** or **CHP-10T** (Coated)	
8 cyl	294ci 4807cc	4.8L	3.780" 96mm	**2003-07**	OHV Chevrolet (Vortec) Eng. Vin C, V (2nd Design; Positions 1 and 5 Housing Bore 2.3460"/2.3480")	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8cyl	294ci 4807cc	4.8L	3.780" 96mm	**2007-13**	OHV Chevrolet (Vortec) Eng. L20 Series, Vin A, C, V (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
8 cyl	300ci 4884cc	4.9L	3.622" 92mm	**1991-95**	OHV Cadillac Eng. Vin B	**C-4**		
					(Special Bearing Set w/ Wide No. 5 Position)	**C-4A**		
8 cyl	300ci 4917cc	4.9L	3.750" 95.3mm	**1964-67**	OHV Buick Eng.	**B-11**		
8 cyl	301ci	4.9L	4.000" 101.6mm	**1977-81**	OHV Pontiac Eng. (Includes Turbo), Vin T, W, Y	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		
6 cyl	302ci	5.0L	4.000" 101.6mm	**1952-59**	OHV (HD) GMC Eng.	**CH-2**		
8 cyl	302ci 4949cc	5.0L	4.000" 101.6mm	**1967-69**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
6 cyl	305ci 5012cc	5.0L	4.250" 108mm	**1960-74**	OHV GMC Eng. 305, 305C, 305E Series	**GM-5**		
8 cyl	305ci	5.0L	3.736" 95mm	**1976-02**	OHV Chevrolet (Vortec) Eng. Vin 7, E, F, G, H, M, Q, S, U	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4**	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	307ci	5.0L	3.800" 96.5mm	**1980-90**	OHV Oldsmobile Eng. Vin 9, Y	**O-7**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	307ci 5031cc	5.0L	3.875" 98.4mm	**1968-73**	OHV Chevrolet Eng. Vin A, B, CA, DC, E, F, H, ME, ND, P, U, X	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	317ci	5.2L	3.937" 100mm	**1956**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	324ci 5310cc	5.3L	3.875" 98.4mm	**1954-56**	OHV Oldsmobile Eng.	**O-5**		
8 cyl	325ci 5328cc	5.3L	3.780" 96mm	**1999-05**	OHV Chevrolet (Vortec) Eng. Vin P, T, Z (1st Design; Positions 1 And 5 Housing Bore 2.3260"/2.3280")	**CH-10**	**CHP-10** or **CHP-10T** (Coated)	
8 cyl	325ci 5328cc	5.3L	3.780" 96mm	**2003-09**	OHV Chevrolet (Vortec) Eng. L59, LC9, LH8, LMF, LMG, LY5 Series, Vin 0, 3, 4, B, C, J, L, M, P, T, Z (2nd Design; Positions 1 And 5 Housing Bore 2.3460"/2.3480")	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	
8cyl	325ci 5328cc	5.3L	3.780" 96mm	**2007-13**	OHV Chevrolet (Vortec) Eng. L59, LC9, LH8, LMF, LMG, LY5 Series, Vin 0, 3, 4, 7, B, C, J, L, M, P, T, Z (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
8 cyl	326ci 5343cc	5.3L	3.719" 94.5mm	**1963-67**	OHV Pontiac Eng.	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		
8 cyl	327ci 5358cc	5.3L	4.000" 101.6mm	**1962-63**	OHV Chevrolet Eng.	**CH-4**	**CHP-4** or **CHP-4T** (Coated)	
8 cyl	327ci 5358cc	5.3L	4.000" 101.6mm	**1964-69**	OHV Chevrolet Eng. Vin E, FB, HJ	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	330ci 5409cc	5.4L	3.938" 100mm	**1964-67**	OHV Oldsmobile Eng.	**O-6**		
					(Special Oil Control Set w/ OD Groove)	**O-6B**		
8 cyl	331ci 5425cc	5.4L	3.813" 96.8mm	**1949-55**	OHV Cadillac Eng.	**C-2**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	336ci 5522cc	5.5L	3.875" 98.4mm	**1958-59**	OHV GMC Eng. Vin P	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	340ci 5573cc	5.6L	3.750" 95.3mm	**1966**	OHV Buick Eng.	**B-8**		
8 cyl	340ci 5573cc	5.6L	3.750" 95.3mm	**1967**	OHV Buick Eng.	**B-11**		
8 cyl	346ci 5665cc	5.7L	3.898" 99mm	**1998-04**	OHV Chevrolet (LS-1, LS-6) Eng. Vin G, S (1st Design; Positions 1 and 5 Housing Bore 2.3260"/2.3280")	**CH-10**	**CHP-10** or **CHP-10T** (Coated)	
8 cyl	346ci 5665cc	5.7L	3.898" 99mm	**2004-05**	OHV Chevrolet (LS-1, LS-6) Eng. Vin S (2nd Design; Positions 1 and 5 Housing Bore 2.3460"/2.3480")	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	
8 cyl	347ci 5687cc	5.7L	3.938" 100mm	**1957**	OHV GMC Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	348ci 5704cc	5.7L	4.125" 104.8mm	**1958-65**	OHV Chevrolet Eng.	**CH-5**		
8 cyl	350ci 5736cc	5.7L	3.800" 96.5mm	**1968-80**	OHV Buick Eng. Vin B, H, J, K, X	**B-9**	**BP-9** or **BP-9T** (Coated)	
8 cyl	350ci 5733cc	5.7L	3.875" 98.4mm	**1968-77**	OHV Pontiac Eng. Vin A, B, E, H, J, K, M, N, P, S	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		
8 cyl	350ci 5736cc	5.7L	4.000" 101.6mm	**1967-03**	OHV Chevrolet (Vortec) Eng. Vin 4, 5, 6, 7, 8, A, B, E, G, H, J, K, L, M, N, P, R, T, V, W, X, Y	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or	
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
8 cyl	350ci	5.7L	4.000" 101.6mm	**1967-03**	Chevrolet (Bowtie Bock) Eng. (2.000" Hsg Bores)		**GMP-8** or **GMP-8T** (Coated)	
8 cyl	350ci	5.7L	4.000" 101.6mm	**ALL**	Chevrolet (Hi-Perf Block) Eng. (55mm/2.282" Camshaft Journal O.D.)		**GMP-55** or **GMP-55T** (Coated)	
8 cyl	350ci 5733cc	5.7L	4.057" 103mm	**1968-76**	OHV Oldsmobile Eng. Vin H, K, M, R	**O-6**		
					(Special Oil Control Set w/ OD Groove)	**O-6B**		
8 cyl	350ci	5.7L	4.057" 103mm	**1977-85**	OHV Oldsmobile Eng. (Includes Diesel) Vin 8, B, N, R, Z	**O-7**		
8 cyl	350ci	5.7L	4.057" 103mm	**ALL**	OHV Oldsmobile (Rocket Hi-Perf) Eng. (2.120" Hsg Bore, 1.95" Cam Journal)		**GMP-1** or **GMP-1T** (Coated)	
6 cyl	351ci 5753cc	5.7L	4.563" 115.9mm	**1960-73**	OHV GMC Eng. 351, 351C, 351E, 351M, D351 Series (Includes Diesel)	**GM-5**		

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CAMSHAFT BEARINGS

CYL.	DISPLACEMENT CI./CC.	L	BORE	YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	364ci 5697cc	6.0L	4.000" 101.6mm	**1999-06**	OHV Chevrolet (Vortec) Eng. Vin H, N, U (1st Design; Positions 1 and 5 Housing Bore 2.3260"/2.3280")	**CH-10**	**CHP-10** or **CHP-10T** (Coated)	
8 cyl	364ci 5967cc	6.0L	4.000" 101.6mm	**2003-09**	OHV Chevrolet (Vortec) Eng. L76, LFA Series, Vin 5, H, K, N, U, Y (2nd Design; Positions 1 and 5 Housing Bore 2.3460"/2.3480")	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	
8 cyl	364ci 5967cc	6.0L	4.000" 101.6mm	**2007-13**	OHV Chevrolet (Vortec) Eng. L76, L77, L96, LC8, LFA, LZ1 Series, Vin 2, 5, 8, B, G, H, J, K, N, U, Y (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
8 cyl	364ci 5967cc	6.0L	4.125" 104.8mm	**1957-61**	OHV Buick Eng.	**B-8**		
8 cyl	365ci 5972cc	6.0L	4.000" 101.6mm	**1956-58**	OHV Cadillac Eng.	**C-2**		
8 cyl	366ci 5999cc	6.0L	3.938" 100mm	**1966**	OHV Chevrolet Eng. (Bearing Set Requires Cam to Be Grooved)	 **CH-9A**		
8 cyl	366ci 5999cc	6.0L	3.938" 100mm	**1967-98**	OHV Chevrolet Eng. L86, LS0 Series, Vin B, P (Special Oil Control Set w/ OD Groove) (+.010 OD, 2.150" Hsg.) (+.020 OD, 2.160" Hsg.)	**CH-12** **CH-12B**	**CHP-12** or **CHP-12T** (Coated) **CHP-12R1** **CHP-12R2**	
8 cyl	368ci	6.0L	3.800" 96.5mm	**1980-84**	OHV Cadillac Eng. Vin 6, 9	**C-3**		
8 cyl	370ci 6064cc	6.1L	4.063" 103.2mm	**1958**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	371ci 6081cc	6.1L	4.000" 101.6mm	**1957-60**	OHV Oldsmobile Eng.	**O-5**		
8 cyl	376ci	6.2L	4.06" 103.3mm	**2008-13**	OHV Chevrolet (Vortec) Eng. Vin 2, F, J, P, R, T, W (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
8 cyl	378ci 6199cc	6.2L	4.063" 103.2mm	**2007-08**	OHV Chevrolet (Vortec) Eng. L92 Series, Vin 8	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	
8 cyl	378ci 6199cc	6.2L	4.063" 103.2mm	**2007-08**	OHV Chevrolet (Vortec) Eng. L92 Series, Vin 8 (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
6 cyl	379ci	6.2L	4.563" 115.9mm	**1973-74**	OHV GMC Eng.	**GM-5**		
8 cyl	379ci 6211cc	6.2L	3.976" 101mm	**1982-93**	OHV Chevrolet Diesel Eng. Vin C, J (+.020 OD)	**GM-7** **GM-7R2**		
8 cyl	389ci 6376cc	6.4L	4.063" 103.2mm	**1959-62**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	389ci 6376cc	6.4L	4.063" 103.2mm	**1963-66**	OHV Pontiac Eng. (+.010 OD)	**P-4** **P-4R1**	**PP-4** or **PP-4T** (Coated)	
8 cyl	390ci 6392cc	6.4L	4.000" 101.6mm	**1959-62**	OHV Cadillac Eng.	**C-2**		
8 cyl	390ci 6392cc	6.4L	4.000" 101.6mm	**1963**	OHV Cadillac Eng.	**C-3**		
8 cyl	394ci 6458cc	6.5L	4.125" 104.8mm	**1959-64**	OHV Oldsmobile Eng.	**O-5**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	395ci 6468cc	6.5L	4.055" 103mm	**1992-02**	OHV GMC Diesel/Turbo Diesel Eng. L65 Series, Vin F, P, S, Y	**GM-7**		
					(+.020 OD)	**GM-7R2**		
8 cyl	396ci 6489cc	6.5L	4.094" 104mm	**1965-66**	OHV Chevrolet Eng.	**CH-9A**		
8 cyl	396ci 6489cc	6.5L	4.094" 104mm	**1967-71**	OHV Chevrolet Eng. Vin E, Y	**CH-12**	**CHP-12** or **CHP-12T** (Coated)	
					(Special Oil Control Set w/ OD Groove)	**CH-12B**		
					(+.010 OD, 2.150" Hsg.)		**CHP-12R1**	
					(+.020 OD, 2.160" Hsg.)		**CHP-12R2**	
8 cyl	400ci 6555cc	6.6L	3.870" 98.4mm	**1968-69**	OHV Oldsmobile Eng.	**O-6**		
					(Special Oil Control Set w/ OD Groove)	**O-6B**		
8 cyl	400ci	6.6L	3.870" 98.4mm	**ALL**	OHV Oldsmobile (Rocket Hi-Perf.) Eng. (2.186" Housing Bore)		**GMP-1** or **GMP-1T** (Coated)	
8 cyl	400ci 6555cc	6.6L	4.000" 101.6mm	**1965-67**	OHV Oldsmobile Eng.	**O-6**		
					(Special Oil Control Set w/ OD Groove)	**O-6B**		
8 cyl	400ci	6.6L	4.000" 101.6mm	**ALL**	OHV Oldsmobile (Rocket Hi-Perf.) Eng. (2.186" Housing Bore)		**GMP-1** or **GMP-1T** (Coated)	
8 cyl	400ci 6555cc	6.6L	4.040" 102.6mm	**1967-69**	OHV Buick Eng.	**B-9**	**BP-9** or **BP-9T** (Coated)	
8 cyl	400ci 6555cc	6.6L	4.120" 104.6mm	**1967-79**	OHV Pontiac Eng. Vin N, P, R, S, T, U, X, Y, Z	**P-4**	**PP-4** or **PP-4T** (Coated)	
					(+.010 OD)	**P-4R1**		
8 cyl	400ci 6555cc	6.6L	4.125" 104.8mm	**1970-80**	OHV Chevrolet Eng. Vin E, K, M, R, U, X	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
					(+.010 Oversize, 2.030 Hsg, .0795 Wall)	**CH-4A**		
					(+.010 OD, 2.030" Hsg.)		**CHP-8R1** or **CHP-8R1T** (Coated)	
					(+.020 OD, 2.040" Hsg.)		**CHP-8R2** or **CHP-8R2T** (Coated)	
					(+.030 OD, 2.050" Hsg.)		**CHP-8R3** or **CHP-8R3T** (Coated)	
					(+.040 OD, 2.060" Hsg.)		**CHP-8R4** or **CHP-8R4T** (Coated)	
					(.001 Under ID)	**CH-8W**		
6 cyl	401ci	6.6L	4.875" 123.8mm	**1960-72**	OHV GMC Eng. Vin M	**GM-5**		
8 cyl	401ci 6572cc	6.6L	4.188" 106.4mm	**1959-66**	OHV Buick Eng.	**B-8**		
8 cyl	402ci 6588cc	6.6L	4.125" 104.8mm	**1970-72**	OHV Chevrolet Eng. Vin E, K, S, U	**CH-12**	**CHP-12** or **CHP-12T** (Coated)	
					(Special Oil Control Set w/ OD Groove)	**CH-12B**		
					(+.010 OD, 2.150" Hsg.)		**CHP-12R1**	
					(+.020 OD, 2.160" Hsg.)		**CHP-12R2**	
8 cyl	403ci 6599cc	6.6L	4.055" 103mm	**2001-09**	OHV GMC (Duramax) Turbo-Diesel Eng. LB7, LLY, LMM Series. Vin 1, 2, 3, 6, 9, D	**GM-8**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	403ci	6.6L	4.351" 110.5mm	**1977-79**	OHV Oldsmobile Eng. Vin K	**O-7**		
8 cyl	409ci 6704cc	6.7L	4.313" 109.6mm	**1961-65**	OHV Chevrolet Eng.	**CH-5**		
8 cyl	421ci 6900cc	6.9L	4.094" 104mm	**1961-62**	OHV Pontiac Eng.	**P-3**	**PP-3** or **PP-3T** (Coated)	
8 cyl	421ci 6900cc	6.9L	4.094" 104mm	**1963-66**	OHV Pontiac Eng. (+.010 OD)	**P-4** **P-4R1**	**PP-4** or **PP-4T** (Coated)	
8 cyl	425ci	7.0L	4.082" 103.7mm	**1977-79**	OHV Cadillac Eng. Vin S, T	**C-3**		
8 cyl	425ci 6966cc	7.0L	4.125" 104.8mm	**1965-67**	OHV Oldsmobile Eng. (Special Oil Control Set w/ OD Groove)	**O-6** **O-6B**		
8 cyl	425ci 6966cc	7.0L	4.313" 109.6mm	**1963-66**	OHV Buick Eng.	**B-8**		
8 cyl	427ci 6998cc	7.0L	4.250" 108mm	**1966**	OHV Chevrolet Eng.	**CH-9A**		
8 cyl	427ci 6998cc	7.0L	4.250" 108mm	**1967-98**	OHV Chevrolet Eng. LR0, L43 Series, Vin E, M (Special Oil Control Set w/ OD Groove) (+.010 OD, 2.150" Hsg.) (+.020 OD, 2.160" Hsg.)	**CH-12** **CH-12B**	**CHP-12** or **CHP-12T** (Coated) **CHP-12R1** **CHP-12R2**	
8 cyl	427ci 7011cc	7.0L	4.125" 104.8mm	**2006-10**	OHV Chevrolet Eng. LS-7 Series, Vin E	**CH-23**	**CHP-23** or **CHP-23T** (Coated)	
8 cyl	427ci 7011cc	7.0L	4.125" 104.8mm	**2006-13**	OHV Chevrolet Eng. LS-7 Series, Vin E (.775" Wide No.1-5 Position)	**CH-25**	**CHP-25** or **CHP-25T** (Coated)	
8 cyl	428ci 7014cc	7.0L	4.120" 104.6mm	**1967-69**	OHV Pontiac Eng. (+.010 OD)	**P-4** **P-4R1**	**PP-4** or **PP-4T** (Coated)	
8 cyl	429ci 7031cc	7.0L	4.129" 104.9mm	**1964-67**	OHV Cadillac Eng. Vin 5, 6, 7	**C-3**		
8 cyl	430ci 7047cc	7.0L	4.188" 106.4mm	**1967-69**	OHV Buick Eng.	**B-9**	**BP-9** or **BP-9T** (Coated)	
6 cyl	432ci	7.1L	4.875" 123.8mm	**1973-74**	OHV (HD) GMC Eng.	**GM-5**		
8 cyl	454ci 7439cc	7.4L	4.250" 108mm	**1970-00**	OHV Chevrolet (Vortec) Eng. Vin B, D, E, J, L, N, S, V, W, X, Y, Z (Special Oil Control Set w/ OD Groove) (+.010 OD, 2.150" Hsg.) (+.020 OD, 2.160" Hsg.)	**CH-12** **CH-12B**	**CHP-12** or **CHP-12T** (Coated) **CHP-12R1** **CHP-12R2**	
8 cyl	455ci 7456cc	7.5L	4.125" 104.8mm	**1968-76**	OHV Oldsmobile Eng. Vin R, S, T, U, V, W, X (Special Oil Control Set w/ OD Groove)	**O-6** **O-6B**		
8 cyl	455ci 7456cc	7.5L	4.151" 105.4mm	**1970-76**	OHV Pontiac Eng. Vin T, U, V, W, X, Y (+.010 OD)	**P-4** **P-4R1**	**PP-4** or **PP-4T** (Coated)	

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
GENERAL MOTORS (BUICK, CADILLAC, CHEVROLET, GEO, GMC, OLDSMOBILE, PONTIAC, SATURN) (Cont.)								
8 cyl	455ci 7456cc	7.5L	4.313" 109.6mm	**1970-76**	OHV Buick Eng. Vin P, R, T, U, V, W	**B-9**	**BP-9** or **BP-9T** (Coated)	
8 cyl	472ci 7735cc	7.7L	4.300" 109.2mm	**1968-74**	OHV Cadillac Eng. Vin 0, 1, 8, 9. R	**C-3**		
6 cyl	478ci	7.8L	5.125" 130.2mm	**1962-75**	OHV GMC Eng. 478M, D478, DH478 Series (Includes Diesel)	**GM-5**		
8 cyl	496ci	8.1L	4.252" 108mm	**2001-09**	OHV Chevrolet (Vortec) Eng. L18 Series, Vin E, G	**CH-12**	**CHP-12** or **CHP-12T** (Coated)	
					(Special Oil Control Set w/ OD Groove)	**CH-12B**		
					(+.010 OD, 2.150" Hsg.)		**CHP-12R1**	
					(+.020 OD, 2.160" Hsg.)		**CHP-12R2**	
8 cyl	500ci 8193cc	8.2L	4.300" 109.2mm	**1970-76**	OHV Cadillac Eng. Vin 0, 1, S	**C-3**		
8 cyl	502ci	8.2L	4.466" 113.4mm	**ALL**	OHV Chevrolet (Bowtie Block) Eng. (Std. Hsg Bore)	**CH-12**	**CHP-12** or **CHP-12T** (Coated)	
					(Special Oil Control Set w/ OD Groove)	**CH-12B**		
					(+.010 OD, 2.150" Hsg.)		**CHP-12R1**	
					(+.020 OD, 2.160" Hsg.)		**CHP-12R2**	
8 cyl	502ci	8.2L	4.466" 113.4mm	**ALL**	OHV Chevrolet (Bowtie Block) Eng. (2.120" Hsg Bore)	**GM-12**	**GMP-12** or **GMP-12T** (Coated)	
8 cyl	636ci	10.4L	4.500" 114.3mm	**1975-79**	GMC Diesel Eng. (HD Truck/Industrial)	**CAT-2**		
8 cyl	855ci	14.0L	5.500" 139.7mm	**1970-87**	GMC Diesel/Turbo Diesel Eng. 230, 250, 270, 270E, 290, 300, 350, 400 Series (HD Truck/Industrial)	**CU-5A**		
8 cyl	855ci	14.0L	5.500" 139.7mm	**1977-87**	(2.500" Big Cam Series, 3/32 (.0939") Wall)	**CU-9**		
HERCULES								
3 cyl	130ci 2127cc	2.1L	3.500" 88.9mm	**ALL**	DD130, GO130 Series	**HE-7**		
3 cyl	149ci 2435cc	2.4L	3.750" 95.3mm	**ALL**	DD149, D1500, G1500, GO149, GO1500 Series	**HE-7**		
4 cyl	163ci	2.7L	4.000" 101.6mm	**ALL**	G-1600, J4XL-D3 Series	**HE-1**		
4 cyl	164ci	2.7L	3.500" 88.9mm	**ALL**	JX4E2 Series	**HE-1**		
3 cyl	169ci	2.8L	4.000" 101.6mm	**ALL**	D1700, DD169, G1700, GO169 Series	**HE-7**		
4 cyl	173ci	2.8L	3.500" 88.9mm	**ALL**	DD173, GO173 Series	**HE-8**		
4 cyl	188ci	3.1L	3.750" 95.3mm	**ALL**	JX4C2, JX4C3, JX4C5, JX4E3 Series	**HE-1**		
6 cyl	191ci	3.1L	3.125" 79.4mm	**ALL**	QXA, QXA3, QXA5 Series	**HE-5**		
4 cyl	198ci	3.3L	3.750" 95.3mm	**ALL**	D2000, DD198, DOOB Series	**HE-1**		
4 cyl	199ci	3.3L	3.750" 95.3mm	**ALL**	DD198, D2000, D2120, G2000, G2120, GO198 Series	**HE-8**		
6 cyl	205ci	3.4L	3.250" 82.6mm	**ALL**	QXB, QXB3, QXB5 Series	**HE-5**		
4 cyl	214ci	3.5L	4.000" 101.6mm	**ALL**	JX4D, JX4D2, JX4D3, JX4D5, JX4E5 Series	**HE-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
HERCULES (Cont.)								
6 cyl	222ci	3.6L	3.375" 85.7mm	**ALL**	QXC, QXC3, QXC5 Series	**HE-5**		
4 cyl	226ci	3.7L	4.000" 101.6mm	**ALL**	D2300, DD226, G2300, GO226 Series	**HE-1**		
6 cyl	228ci	3.7L	3.375" 85.7mm	**ALL**	JXA Series	**HE-1**		
6 cyl	230ci	3.8L	3.438" 87.3mm	**ALL**	QXD, QXD3, QXD5 Series	**HE-5**		
6 cyl	232ci	3.8L	3.406" 86.5mm	**ALL**	JX, JXF Series	**HE-1**		
6 cyl	237ci	3.9L	3.438" 87.3mm	**ALL**	QXLD, QXLD3, QXLD5 Series	**HE-5**		
6 cyl	245ci	4.0L	3.500" 88.9mm	**ALL**	JXE, JXG Series	**HE-1**		
6 cyl	260ci	4.3L	3.500" 88.9mm	**ALL**	DD260, G0260 Series	**HE-8**		
6 cyl	263ci	4.3L	3.625" 92.1mm	**ALL**	JXB Series	**HE-1**		
6 cyl	282ci	4.6L	3.750" 95.3mm	**ALL**	JXC, JXC3, JXCF Series	**HE-1**		
6 cyl	298ci	4.9L	3.750" 95.3mm	**ALL**	298, D298H, DD298, G298H, GO298 Series	**HE-8**		
6 cyl	298ci	4.9L	3.750" 95.3mm	**ALL**	3000, D300, D300T, D3000, G3000 Series	**HE-8A**		
6 cyl	320ci	5.2L	4.000" 101.6mm	**ALL**	JXD, JXDT Series	**HE-1**		
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	JXLD Series	**HE-1**		
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	339, 339H, D339, D339H, DD339, DD339H, G0339 Series	**HE-8**		
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	D3400, G3400 Series	**HE-8A**		
HOLDEN								
6 cyl	132.67ci 2174cc	2.174L	3.000" 76.2mm	**1948-59**	Holden Eng. 132 Grey Series	**HO-3**		
6 cyl	138ci 2261.42cc	2.261L	3.063" 77.8mm	**1960-63**	Holden Eng. 138 Grey Series	**HO-3**		
6 cyl	138.06ci	-	3.125" 79.4mm	**1971-73**	Holden Eng. 138 Red (2250) Series	**HO-1**		
6 cyl	149.32ci	-	3.250" 82.6mm	**1963-66**	Holden Eng. 149 Red Series	**HO-1**		
6 cyl	161.03ci	-	3.375" 85.7mm	**1966-71**	Holden Eng. 161 Red (2650) Series	**HO-1**		
6 cyl	173.18ci	-	3.500" 88.9mm	**1971-80**	Holden Eng. 173 Blue/Black (2850), 173 Red (2850) Series	**HO-1**		
6 cyl	179.42ci	-	3.563" 90.5mm	**1963-66**	Holden Eng. 179 Red Series	**HO-1**		
6 cyl	185.77ci	-	3.625" 92.1mm	**1966-71**	Holden Eng. 186 Red Series	**HO-1**		
6 cyl	201.25ci	-	3.625" 92.1mm	**1971-86**	Holden Eng. 202 Blue/Black (3300), 202 Red (3300) Series	**HO-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
HOLDEN (Cont.)								
8 cyl	252.86ci	-	3.625" 92.1mm	**1980-85**	Holden Eng. 253 Blue (4.2) Series	**HO-2**		
					(+.002 OD, No. 5 Position)	**HO-2S**	**HOP-2S** or **HOP-2ST** (Coated)	
8 cyl	307.88ci	-	4.000" 101.6mm	**1969-80**	Holden Eng. 308 Red Series	**HO-2**		
					(+.002 OD, No. 5 Position)	**HO-2S**	**HOP-2S** or **HOP-2ST** (Coated)	
HONDA								
4 cyl	82ci 1342cc	1.3L	2.913" 74mm	**1984-87**	SOHC (16 Valve) Honda Eng. D13A1, D13A2, EV1, EV2 Series			**HA-2*** (1/2 Shell)
4 cyl	91ci 1488cc	1.5L	2.913" 74mm	**1984-87**	SOHC Honda Eng. D15A2, EW1 Series			**HA-2*** (1/2 Shell)
4 cyl	91ci 1493cc	1.5L	2.953" 75mm	**1988-91**	SOHC (16 Valve) Honda Eng. D15B1, D15B2, D15B7, D15Z1 Series (1.100" Camshaft Journal Diameter)			**HA-3*** (1/2 Shell)
4 cyl	97ci 1590cc	1.6L	2.953" 75mm	**1992-95**	SOHC (16 Valve) Honda (VTEC) Eng. D16Z6 Series			**HA-4*** (1/2 Shell)
4 cyl	- 1829cc	1.8L	3.150" 80.7mm	**1983-87**	SOHC Honda Eng. A18A1, A18A2, ES1, ES2, ES3, ET1, ET2 Series			**HA-1*** (1/2 Shell)
4 cyl	- 1955cc	2.0L	3.258" 82.7mm	**1985-89**	SOHC Honda Eng. A20A1, A20A2, A20A3, A20A4, BS1, BS2, BT1, BT2 Series			**HA-1*** (1/2 Shell)
4 cyl	131.6ci 2156cc	2.2L	3.346" 85mm	**1990-97**	SOHC Honda Eng. F22A1, F22A4, F22A6, F22B1, F22B2, F22B6 Series (1.100" Camshaft Journal Diameter)			**HA-3*** (1/2 Shell)
HYUNDAI								
4 cyl	89.6ci 1468cc	1.5L	2.972" 75.5mm	**1986-94**	SOHC (8 Valve) Mitsubishi Eng. 4G15, G4AJ, G4DJ Series, Vin J, K			**MIA-3*** (Full Round)
4 cyl	- 1596cc	1.6L	3.028" 76.9mm	**1985-90**	SOHC (8 Valve) Mitsubishi Eng. 4G32, G32B Series, Vin K			**MIA-1*** (1/2 Shell)
					(Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-2*** (1/2 Shell)
4 cyl	122ci 1997cc	2.0L	3.346" 85mm	**1981-98**	SOHC (8 Valve)/DOHC (16 Valve) Mitsubishi Eng. 4G63, G4CP, G63B Series (Includes Turbo), Vin F			
					(Balance Shaft Set)	**MIG-3****		
4 cyl	143.4ci 2351cc	2.4L	3.406" 86.5mm	**1989-91**	SOHC (8 Valve) Mitsubishi Eng. G4CS Series, Vin S			**MIA-1*** (1/2 Shell)
					(Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-2*** (1/2 Shell)
					(Balance Shaft Set)	**MIG-3****		
IHC (NAVISTAR) TRUCK								
4 cyl	73.1ci 1198cc	1.2L	2.578" 65.5mm	**ALL**	IHC Eng. A55, AM80 Series	**DA-2**		
4 cyl	91ci 1489cc	1.5L	2.874" 73mm	**1957-63**	IHC Eng. A55, AM80 Series	**DA-2**		
4 cyl	132ci	2.2L	3.250" 82.6mm	**ALL**	OHV IHC Eng. FC, FC132, FK132 Series	**WA-3**		
4 cyl	152ci 2491cc	2.5L	3.875" 98.4mm	**1961-71**	OHV IHC Eng. 4-152, 4-152T, B-152 Series	**IN-11**		
6 cyl	175ci	2.9L	3.000" 76.2mm	**ALL**	IHC/Navistar (L-Head) Eng. GRD175, GRD175A, HD174 Series	**J-1**		
6 cyl	193ci	3.2L	3.250" 82.6mm	**ALL**	IHC/Navistar (L-Head) Eng.	**J-1**		
4 cyl	196ci 3203cc	3.2L	4.125" 104.8mm	**1966-80**	OHV IHC/Navistar Eng. 4-196, 4-196E Series	**IN-11**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
IHC (NAVISTAR) TRUCK (Cont.)								
6 cyl	198ci 3246cc	3.2L	3.268" 83mm	**1976-80**	OHV Nissan Diesel/Turbo Diesel Eng. 6-33, 6-33T, IN633, SD33 Series	**DA-5**		
6 cyl	214ci	3.5L	3.313" 84.2mm	**1937-49**	IHC (L-Head) Eng. HD3, HD4 Series	**J-1**		
6 cyl	220ci 3608cc	3.6L	3.563" 90.5mm	**1950-68**	OHV IHC Eng. BD220, BG220, SD220, U220 Series	**IN-14**		
6 cyl	232ci 3802cc	3.8L	3.750" 95.3mm	**1969-72**	OHV AMC Eng. 6-232 Series	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
6 cyl	233ci	3.8L	3.313" 84.2mm	**ALL**	IHC (L-Head) Eng. GRD233, GRD233A, HD232, HD232A Series	**J-1**		
6 cyl	240ci 3933cc	3.9L	3.563" 90.5mm	**1956-70**	OHV IHC Eng. BD240, BG241, SD240 Series	**IN-14**		
6 cyl	241ci	3.9L	3.375" 85.7mm	**1937-40**	IHC Eng. BG241 Series	**IN-14**		
6 cyl	242ci	4.0L	3.375" 85.7mm	**ALL**	OHV IHC Eng.	**J-1**		
6 cyl	258ci 4228cc	4.2L	3.750" 95.3mm	**1972-74**	OHV AMC Eng. 6-258 Series, Vin A	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
6 cyl	259ci	4.3L	3.500" 88.9mm	**ALL**	OHV IHC Eng. FAB259 Series	**J-1**		
6 cyl	264ci 4335cc	4.3L	3.688" 93.7mm	**1957-70**	OHV IHC Eng. BD264, BG264, BG265, SD264 Series	**IN-14**		
8 cyl	266ci 4360cc	4.3L	3.625" 92.1mm	**1959-72**	OHV IHC Eng. V266 Series	**IN-11**		
6 cyl	301ci	4.9L	3.813" 96.9mm	**1963-70**	IHC Diesel/Turbo-Diesel Eng. D301, DT301 Series	**IN-14**		
8 cyl	304ci 4982cc	5.0L	3.875" 98.4mm	**1961-80**	OHV IHC Eng. V304, V304E Series	**IN-11**		
6 cyl	318ci	5.2L	3.875" 98.4mm	**1944-47**	IHC Eng. RED318, RED318A Series	**IN-3**		
8 cyl	345ci 5654cc	5.6L	3.875" 98.4mm	**1961-82**	OHV IHC Eng. V345, V345A, V345E Series	**IN-11**		
6 cyl	360ci	5.9L	3.875" 98.4mm	**1987-94**	IHC Diesel/Turbo-Diesel Eng. DT360, DTA360 Series	**IN-19**		
6 cyl	361ci	5.9L	4.125" 104.8mm	**1938-49**	IHC Diesel/Turbo-Dieses Eng. D361, DT361, FBB361, FBC361, RED361, RED361A Series	**IN-3**		
8 cyl	365ci	6.0L	3.740" 94.99mm	**2002-12**	International Turbo-Diesel Eng. VT365 Series, Vin AF	**IN-21**		
6 cyl	372ci	6.1L	4.375" 111.1mm	**1954-69**	IHC Eng. RD372, RED372 Series	**IN-3**		
8 cyl	392ci 6424cc	6.4L	4.125" 104.8mm	**1966-85**	OHV IHC Eng. V392, V392E, UV392 Series.	**IN-11**		
8 cyl	400ci 6571cc	6.6L	4.165" 105.8mm	**1974**	OHV AMC Eng. V400 Series	**N-9**		
					(+.010 OD)	**N-9R1**		
6 cyl	401ci	6.6L	4.125" 104.8mm	**1949-74**	OHV IHC Eng. 1FBC401, RED401, RED401A, RED401B Series	**IN-3**		
8 cyl	401ci	6.6L	4.125" 104.8mm	**1960-74**	OHV IHC Eng. V401, VS401, UV401 Series	**IN-10A**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
IHC (NAVISTAR) TRUCK (Cont.)								
8 cyl	404ci	6.6L	4.125" 104.8mm	**1975-82**	OHV IHC Eng. MV404 Series (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
6 cyl	406ci	6.7L	4.375" 111.1mm	**1954-74**	IHC Eng. R406, RD406, RED406, U406 Series	**IN-3**		
6 cyl	414ci	6.8L	4.300" 109.2mm	**ALL**	IHC Diesel Eng. D414, DT414 Series	**IN-19**		
8 cyl	420ci	6.9L	4.000" 101.6mm	**1982-88**	Navistar Diesel/Turbo-Diesel Eng. D421 Series (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
6 cyl	436ci	7.1L	4.300" 109.2mm	**ALL**	IHC Diesel/Turbo-Diesel Eng. D436, DT436, DT436B Series	**IN-19**		
8 cyl	444ci	7.3L	4.110" 104.4mm	**1988-05**	OHV IHC (IDI) Diesel/Turbo-Diesel Eng. T444E Series (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
8 cyl	446ci	7.3L	4.125" 104.8mm	**1975-81**	IHC Eng. MV446 Series (+.020 OD, -.005 Journal)	**IN-17** **IN-17R2**		
6 cyl	450ci	7.4L	4.375" 111.1mm	**1954-74**	IHC Eng. RD450, RED450, RED450A, RED450B, RED450C, RED450D, RED450U Series	**IN-3**		
8 cyl	461ci	7.6L	4.125" 104.8mm	**1960-73**	IHC Gas/Diesel Eng. DV462, DV462B, UV461, V461, VS461 Series	**IN-10A**		
6 cyl	464ci	7.6L	4.437" 112.7mm	**1968-71**	OHV Cummins Diesel/Turbo-Diesel Eng. C160-C180 Series	**CU-5A**		
6 cyl	466ci	7.6L	4.300" 109.2mm	**1975-12**	IHC Diesel/Turbo-Diesel Eng. D466, DT466, DT466B, DT466C, DTA466C, DTI466B, DTI466C Series	**IN-19**		
8 cyl	478ci	7.8L	4.500" 114.3mm	**1965-77**	IHC Eng. V478, VS478 Series	**IN-10A**		
6 cyl	501ci	8.2L	4.500" 114.3mm	**1960-74**	IHC Eng. R501, RD501, RED501, U501 Series	**IN-3**		
8 cyl	522ci	8.6L	4.500" 114.3mm	**1974**	OHV Caterpillar Diesel Eng. 1140, 1145, 3145 Series	**CAT-2**		
8 cyl	537ci	8.8L	4.625" 117.5mm	**1977-81**	IHC Eng. V537, VS537 Series	**IN-10A**		
8 cyl	549ci	9.0L	4.500" 114.3mm	**1961-79**	IHC Diesel Eng. FTV549, FTVS549, V549, VS549, VT549, UV549 Series	**IN-10A**		
8 cyl	551ci	9.0L	4.510" 114.6mm	**1980-88**	IHC Diesel/Turbo-Diesel Eng. DV550, DV-B550, D551 Series	**IN-10A**		
8 cyl	573ci	9.4L	4.500" 114.3mm	**1974**	OHV Caterpillar Diesel Eng. 1150, 3150 Series	**CAT-2**		
8 cyl	605ci	9.9L	4.625" 117.5mm	**ALL**	IHC Eng. C605, V605 Series	**IN-10A**		
8 cyl	636ci	10.4L	4.500" 114.3mm	**1973-81**	OHV Caterpillar Diesel/Turbo-Diesel Eng. 1160, 3160, 3208, 3208T Series	**CAT-2**		
6 cyl	743ci	12.2L	5.125" 130.2mm	**1968-71**	OHV Cummins Diesel Eng. NH-NHE180, NHE195, NH220 Series (Small Cam Series)	**CU-5A**		
6 cyl	743ci	12.2L	5.125" 130.2mm	**ALL**	OHV Cummins Diesel Eng. HRF6B Series (2.500" Big Cam Series, 3/32 Wall)	**CU-9**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**1968-83**	OHV Cummins Diesel Eng. NH-NHC230, NH-NHC250, NHCT-CT, NHCT270, NTA370, NTC270-NTC400, PT270 Series (Small Cam Series)	**CU-5A**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**1977-83**	OHV Cummins Diesel Eng. NH-NHC230, NH-NHC250, NHCT-CT, NHCT270, NTA370, NTC270-NTC400, PT270 (2.500" Big Cam Series, 3/32 Wall)	**CU-9**		

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CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
IHC (NAVISTAR) TRUCK (Cont.)								
6 cyl	927ci	15.2L	5.500" 139.7mm	**1973-74**	OHV Cummins Diesel Eng. N927, Super 250, Super 270, Super 300, Super 330 Series	**CU-5A**		
IHC TRACTOR & INDUSTRIAL								
4 cyl	69ci	1.1L	2.500" 63.5mm	**ALL**	Continental (L-Head) Eng. LY69, PY69, Y4069, Y69 Series	**CO-3**		
4 cyl	112ci	1.8L	3.187" 80.95mm	**ALL**	Continental (L-Head) Eng. Y112 Series	**CO-3**		
4 cyl	132ci	2.2L	3.250" 82.6mm	**ALL**	OHV IHC Eng. CK, FC, FC132, FG132, FK132, FL Series	**WA-3**		
4 cyl	144ci	2.4L	3.375" 85.7mm	**ALL**	IHC Gas/Diesel Eng. BC144, BD144, BD144C Series	**IN-18**		
4 cyl	152ci	2.5L	3.375" 85.7mm	**ALL**	IHC Eng. C152, U-4 Series	**IN-15**		
4 cyl	153ci	2.5L	3.375" 85.7mm	**ALL**	IHC Eng. UC153 Series (Early)	**IN-15**		
4 cyl	154ci	2.5L	3.500" 88.9mm	**ALL**	IHC Gas/Diesel Eng. BD154, BD154T Series	**IN-18**		
4 cyl	164ci	2.7L	3.500" 88.9mm	**ALL**	IHC Eng. C164, U164 Series	**IN-15**		
4 cyl	166ci	2.7L	3.688" 93.7mm	**ALL**	IHC Diesel Eng. D166 Series	**IN-12**		
4 cyl	169ci	2.8L	3.563" 90.5mm	**ALL**	IHC Eng. C169, U169 Series	**IN-15**		
6 cyl	174ci	2.8L	3.000" 76.2mm	**ALL**	IHC Eng. HD174 Series	**IN-15**		
4 cyl	175ci	2.8L	3.625" 92.1mm	**ALL**	IHC Eng. C175, U175 Series (Early)	**IN-15**		
4 cyl	175ci	2.9L	3.563" 90.5mm	**ALL**	IHC Eng. C175 Series (Late)	**IN-15**		
4 cyl	188ci	3.1L	3.688" 93.7mm	**ALL**	IHC Diesel Eng. D188 Series	**IN-12**		
4 cyl	193ci	3.2L	3.750" 95.3mm	**ALL**	Continental Diesel Eng. D193 Series	**CO-9**		
6 cyl	193ci	3.2L	3.250" 82.6mm	**ALL**	IHC Eng. 193 Series	**J-1**		
6 cyl	213ci	3.5L	3.313" 84.2mm	**ALL**	IHC Eng. HD213 Series	**J-1**		
6 cyl	214ci	3.5L	3.313" 84.2mm	**ALL**	IHC Eng. 214 Series	**J-1**		
6 cyl	220ci	3.6L	3.563" 90.5mm	**ALL**	IHC Eng. BD220, C220, UC220 Series	**IN-14**		
6 cyl	221ci	3.6L	3.563" 90.5mm	**ALL**	IHC Eng. C221, UC221 Series	**IN-14**		
6 cyl	232ci	3.8L	3.313" 84.2mm	**ALL**	IHC Eng. HD232 Series	**J-1**		
6 cyl	232ci	3.8L	3.750" 95.3mm	**ALL**	OHV AMC (Hi-Torque) Eng. C232 Series (Special Oil Control Set w/ OD Groove No. 2, 3 Position) (Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7** **N-7B** **N-7BW**		
6 cyl	233ci	3.8L	3.375" 95.3mm	**ALL**	IHC Eng. GRD233 Series	**J-1**		

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CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
IHC TRACTOR & INDUSTRIAL (Cont.)								
6 cyl	236ci	3.9L	3.688" 93.7mm	**ALL**	IHC Diesel Eng. C236, D236, UD236 Series	**IN-14**		
4 cyl	248ci	4.1L	3.875" 98.4mm	**ALL**	IHC Eng. C248, U6 Series	**IN-5**		
6 cyl	263ci	4.3L	3.563" 90.5mm	**ALL**	IHC Eng. C263, U263, UC263 Series	**IN-14**		
4 cyl	264ci	4.3L	4.000" 101.6mm	**ALL**	IHC Gas Eng. C264, D264, U264, UD264, UD264A Series	**IN-5**		
6 cyl	264ci	4.3L	3.688" 93.7mm	**ALL**	OHV IHC Eng. BD264 Series	**IN-14**		
4 cyl	281ci	4.6L	4.125" 104.8mm	**ALL**	IHC Gas Eng. C281, D281, U281 Series	**IN-5**		
6 cyl	282ci	4.6L	3.688" 93.7mm	**ALL**	IHC Gas/Diesel Eng. C282, D282, D282H, DT282, UDT282 Series	**IN-14**		
6 cyl	291ci	4.8L	3.750" 95.3mm	**ALL**	IHC Eng. C291 Series	**IN-14**		
6 cyl	301ci	4.9L	3.813" 96.9mm	**ALL**	IHC Gas/Diesel Eng. C301, D301, DT301, UC301 Series	**IN-14**		
8 cyl	304ci	5.0L	3.875" 98.4mm	**ALL**	OHV IHC Eng. V304 Series	**IN-11**		
6 cyl	312ci	5.1L	3.875" 98.4mm	**ALL**	IHC Diesel Eng. D312, DT312, UD312 Series	**IN-19**		
8 cyl	345ci	5.6L	3.875" 98.4mm	**ALL**	OHV IHC Eng. V345 Series	**IN-11**		
6 cyl	360ci	5.9L	3.875" 98.4mm	**ALL**	IHC Diesel Eng. D360, DT360, UD360 Series	**IN-19**		
6 cyl	361ci	5.9L	4.125" 104.8mm	**ALL**	IHC Diesel/Turbo-Diesel Eng. D361, DT361, UD361 Series	**IN-16**		
6 cyl	372ci	6.1L	4.375" 111.1mm	**ALL**	IHC Eng. R372, RD372, RED372, U372, UR372 Series	**IN-3**		
8 cyl	392ci	6.4L	4.125" 104.8mm	**ALL**	OHV IHC Eng. V392 Series	**IN-11**		
6 cyl	406ci	6.7L	4.375" 111.1mm	**ALL**	IHC Eng. R406, RD406, RED406, U406 Series	**IN-3**		
6 cyl	407ci	6.7L	4.321" 109.7mm	**ALL**	IHC Diesel/Turbo-Diesel Eng. D407, DT407 Series	**IN-16**		
6 cyl	414ci	6.8L	4.300" 109.2mm	**ALL**	IHC Diesel Eng. D414, DT414, UD414 Series	**IN-19**		
6 cyl	436ci	7.1L	4.300" 109.2mm	**ALL**	IHC Diesel/Turbo-Diesel Eng. D436, DT436, DT436B Series	**IN-19**		
6 cyl	450ci	7.4L	4.375" 111.1mm	**ALL**	IHC Eng. R450, U450, UR450 Series	**IN-3**		
6 cyl	466ci	7.6L	4.300" 109.2mm	**ALL**	IHC Diesel/Turbo-Diesel Eng. D466, DT466, DT466B, DT466C, DTA466C, DTI466B, DTI466C, UD466 Series	**IN-19**		
6 cyl	501ci	8.2L	4.500" 114.3mm	**ALL**	IHC Eng. U501, UR501 Series	**IN-3**		
8 cyl	551ci	9.0L	4.510" 114.6mm	**ALL**	IHC Diesel Eng. DV550, DV551 Series	**IN-10A**		
8 cyl	605ci	9.9L	4.625" 117.5mm	**ALL**	IHC Eng. C605 Series	**IN-10A**		
8 cyl	743ci	12.2L	5.125" 130.2mm	**ALL**	OHV Cummins Diesel Eng. NRT, NTO Series (Small Cam Series)	**CU-5A**		

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** Denotes Auxiliary / Balance Shaft Bearing.
"und" Denotes Undersized ID

CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
IHC TRACTOR & INDUSTRIAL (Cont.)								
8 cyl	743ci	12.2L	5.125" 130.2mm	**1977-On**	OHV Cummins Diesel Eng. HRB Series (2.500" Big Cam Series, 3/32 Wall)	**CU-9**		
8 cyl	855ci	14.0L	5.500" 139.7mm	**ALL**	OHV Cummins Diesel Eng. NT, NTA, NTC, NTE, NTF, NTO Series (2.500" Big Cam Series, 3/32 Wall)	**CU-5A**		
8 cyl	855ci	14.0L	5.500" 139.7mm	**1977-On**	OHV Cummins Diesel Eng. NT, NTA, NTC, NTE, NTF, NTO Series	**CU-9**		
ISUZU (Also see GENERAL MOTORS)								
4 cyl	80.8ci 1325cc	1.3L	2.953" 75mm	**1966-72**	SOHC Isuzu Eng. G130 Series (Auxiliary Shaft Set)	**CHG-14****		
4 cyl	89.7ci 1471cc	1.5L	3.031" 77mm	**1969-70**	SOHC Isuzu Eng. 4XC1, 4XC1T Series (Includes Turbo) (Auxiliary Shaft Set)	**CHG-14****		
4 cyl	96.6ci 1584cc	1.6L	3.228" 82mm	**1966-79**	OHV Isuzu Eng. G161 Series (Auxiliary Shaft Set)	**CHG-14****		
4 cyl	- 1817cc	1.8L	3.307" 84mm	**1981-85**	SOHC Isuzu Gas/Diesel Eng. G180, G180S, G180SS, G180Z Series, Vin B, N, P (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Auxiliary Shaft Set)	**CHG-14****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 1949cc	1.9L	3.425" 87mm	**1983-87**	SOHC Isuzu Eng. G200, G200W, G200Z Series, Vin A (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Auxiliary Shaft Set)	**CHG-14****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	119ci 1951cc	2.0L	3.385" 86mm	**1968-79**	OHV Isuzu Eng. G201 Series	**IZ-2**		
4 cyl	119ci 1951cc	2.0L	3.385" 86mm	**1972-88**	OHV Isuzu Diesel Eng. C190 Series	**IZ-3**		
4 cyl	134ci 2180cc	2.2L	3.504" 89mm	**1996-00**	OHV Chevrolet Eng. LN2 Series, Vin 4 (.002 Under ID)	**CH-19** **CH-19X2**		
4 cyl	- 2207cc	2.2L	3.268" 83mm	**1964-79**	OHV Isuzu Diesel Eng. C220, C221 Series	**IZ-2**		
4 cyl	- 2238cc	2.2L	3.465" 88mm	**1981-82**	OHV Isuzu Diesel Eng. C223 Series, Vin S	**IZ-2**		
4 cyl	- 2238cc	2.2L	3.465" 88mm	**1983-87**	OHV/SOHC Isuzu Diesel/Turbo-Diesel Eng. C223, C223T, LQ7, LW7 Series, Vin S, U	**IZ-3**		
4 cyl	- 2254cc	2.3L	3.516" 89.3mm	**1986-95**	SOHC Isuzu Eng. 4ZD1, LW3 Series, Vin L (Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	144.6ci 2369cc	2.4L	3.386" 86mm	**1969-88**	OHV Isuzu Diesel Eng. C240 Series	**IZ-2**		
4 cyl	- 2499cc	2.5L	3.661" 93mm	**1985-90**	OHV Isuzu Diesel Eng. 4JA1 Series	**IZ-5**		
4 cyl	- 2559cc	2.6L	3.646" 92.6mm	**1988-97**	SOHC Isuzu Eng. 4ZE1, RLJ Series, Vin E (Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 2772cc	2.8L	3.661" 93mm	**1985-90**	OHV Isuzu Diesel/Turbo-Diesel Eng. 4JB1, 4JB1T Series	**IZ-5**		
4 cyl	- 2775cc	2.8L	3.858" 98mm	**1973-76**	OHV Isuzu Diesel Eng. 4BA1 Series	**IZ-6**		
4 cyl	- 2775cc	2.8L	3.858" 98mm	**1977-90**	OHV Isuzu Diesel Eng. 4BA1 Series	**IZ-7**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
ISUZU (Also see GENERAL MOTORS) (Cont.)								
6 cyl	- 2827cc	2.8L	3.500" 88.9mm	**1989-91**	OHV Chevrolet Eng. LL2 Series, Vin R	**CH-18**		
					(Special Bearing Set w/ Wide No. 2, 3 Position)	**CH-18A**		
					(Oversize OD - See Set Contents)	**CH-18RS**		
					(Oversize OD)	**CH-18R8**		
6 cyl	- 3137cc	3.1L	3.504" 89mm	**1991-94**	OHV Chevrolet Eng. CPC, LG6 Series, Vin Z	**CH-18**		
					(Special Bearing Set w/ Wide No. 2, 3 Position)	**CH-18A**		
					(Oversize OD - See Set Contents)	**CH-18RS**		
					(Oversize OD)	**CH-18R8**		
4 cyl	- 3268cc	3.3L	4.016" 102mm	**1979-88**	OHV Isuzu Diesel Eng. 4BC1, 4BC2 Series	**IZ-7**		
4 cyl	- 3595cc	3.6L	4.016" 102mm	**1973-76**	OHV Isuzu Diesel Eng. 4BB1 Series	**IZ-6**		
4 cyl	- 3595cc	3.6L	4.016" 102mm	**1977-90**	OHV Isuzu Diesel Eng. 4BB1 Series	**IZ-7**		
4 cyl	236ci 3856cc	3.9L	4.016" 102mm	**1985-98**	OHV Isuzu Diesel/Turbo-Diesel/Turbo-Intercooled Diesel Eng. 4BD1, 4BD1N, 4BD1T, 4BD2TC Series	**IZ-7**		
6 cyl	262ci 4294cc	4.3L	4.000" 101.6mm	**1997-00**	OHV Chevrolet (Vortec H.O.) Eng. LB4, LF6 Series, Vin X, W (Except Engines Stamped With Identification Numbers Located On Front Of Block Starting With T)	**CH-17**	**CHP-17** or **CHP-17T** (Coated)	
					(.001 Under ID)	**CH-17X**		
					(Balance Shaft Rear Bearing, Includes Tool)	**CHG-15A****		
					(Cam Bearing & Balance Shaft Kit)	**CH-17G**		
6 cyl	262ci 4294cc	4.3L	4.000" 101.6mm	**1997-00**	OHV Chevrolet (Vortec H.O.) Eng. LB4, LF6 Series, Vin X, W (Engines Stamped With Identification Number On Front Of Block Starting With T)	**CH-21**	**CHP-21** or **CHP-21T** (Coated)	
					(.001 Under ID)	**CH-21X**		
					(Balance Shaft Rear Bearing, Includes Tool)	**CHG-15A****		
					(Cam Bearing & Balance Shaft Kit)	**CH-21G**		
6 cyl	- 4978cc	5.0L	3.858" 98mm	**1970-88**	OHV Isuzu Diesel Eng. D500 Series	**IZ-8**		
6 cyl	- 5393cc	5.4L	4.016" 102mm	**1972-90**	OHV Isuzu Diesel Eng. 6BB1 Series	**IZ-8**		
8 cyl	350ci 5736cc	5.7L	4.000" 101.6mm	**1992-02**	OHV Chevrolet (Vortec) Eng. CPC Series, Vin A, R	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
6 cyl	353ci 5785cc	5.8L	4.016" 102mm	**1976-91**	OHV Isuzu Diesel/Turbo-Diesel Eng. 6BD1, 6BD1T Series, Vin N	**IZ-8**		
6 cyl	- 6130cc	6.1L	4.016" 102mm	**1979-90**	OHV Isuzu Diesel Eng. 6BF1 Series	**IZ-8**		
6 cyl	396ci 6494cc	6.5L	4.134" 105mm	**1984-94**	OHV Isuzu Diesel/Turbo-Diesel Eng. 6BG1 Series	**IZ-8**		
JEEP (WILLYS) (Also see AMERICAN MOTORS & CHRYSLER)								
4 cyl	134ci 2197cc	2.2L	3.125" 79.4mm	**1941-73**	Jeep/Willys (F-Head, Hurricane)/(L-Head, Lightning) Eng. Vin 4, F, J, R, T	**J-1**		
4 cyl	141.5ci	2.3L	3.875" 98.4mm	**ALL**	Jeep/Willys (L-Head) Eng.	**F-25**		
4 cyl	144.6ci 2369cc	2.4L	3.386" 86mm	**1981-86**	OHV Isuzu Diesel Eng. C240 Series	**IZ-2**		
4 cyl	150ci	2.5L	3.313" 84.1mm	**1966-67**	Continental Eng.	**CO-3**		
4 cyl	150ci	2.5L	3.875" 98.4mm	**1983-02**	OHV AMC/Chrysler Eng. Vin E, H, P, U	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
JEEP (WILLYS) (Also see AMERICAN MOTORS & CHRYSLER) (Cont.)								
4 cyl	151ci	2.5L	4.000" 101.6mm	**1980-83**	OHV Pontiac Eng. Vin B	**CH-16**		
					(.001 Under ID)	**CH-16W**		
6 cyl	173ci 2835cc	2.8L	3.504" 89mm	**1984-86**	OHV Chevrolet Eng. Vin W	**CH-18**		
					(Special Bearing Set w/ Wide No. 2, 3 Position)	**CH-18A**		
					(Oversize OD - See Set Contents)	**CH-18RS**		
					(Oversize OD)	**CH-18R8**		
6 cyl	225ci 3687cc	3.7L	3.750" 95.3mm	**1966-71**	OHV Buick Eng.	**B-6**		
6 cyl	226ci 3704cc	3.7L	3.313" 84.1mm	**1947-66**	OHV Continental (F-Head)/(L-Head) Eng. Vin T	**K-1**		
6 cyl	232ci 3802cc	3.8L	3.750" 95.3mm	**1964-78**	OHV AMC (Hi-Torque) Eng. 1L, 3L, 7L, 8L, 9L Series, Vin E	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
6 cyl	242ci	4.0L	3.875" 98.4mm	**1987-01**	OHV AMC/Chrysler Eng. Vin L, M, S	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
6 cyl	242ci	4.0L	3.875" 98.4mm	**2002-06**	OHV Chrysler Eng. Vin S	**N-10**		
6 cyl	258ci 4228cc	4.2L	3.750" 95.3mm	**1971-90**	OHV AMC Eng. Vin A, C, M, T	**N-7**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position)	**N-7B**		
					(Special Oil Control Set w/ OD Groove No. 2, 3 Position), (.001 Under ID)	**N-7BW**		
8 cyl	304ci 4982cc	5.0L	3.750" 95.3mm	**1971-81**	OHV AMC Eng. Vin H	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	318ci 5211cc	5.2L	3.910" 99.3mm	**1993-98**	OHV Chrysler Eng. Vin Y	**PD-25**	**PDP-25** or **PDP-25T** (Coated)	
8 cyl	327ci 5358cc	5.3L	4.000" 101.6mm	**1965-70**	OHV AMC (Vigilante) Eng. Vin E	**H-5**		
8 cyl	350ci 5736cc	5.7L	3.800" 96.5mm	**1968-71**	OHV Buick Eng. Vin 9, K	**B-9**	**BP-9** or **BP-9T** (Coated)	
8 cyl	360ci	5.9L	4.000" 101.6mm	**1998**	OHV Chrysler Eng. Vin Z	**PD-25**	**PDP-25** or **PDP-25T** (Coated)	
8 cyl	360ci 5899cc	5.9L	4.080" 103.6mm	**1970-91**	OHV AMC Eng. Vin 7, N, P	**N-9**		
					(+.010 OD)	**N-9R1**		
8 cyl	401ci 6571cc	6.6L	4.165" 105.8mm	**1974-78**	OHV AMC Eng. Vin Z	**N-9**		
					(+.010 OD)	**N-9R1**		
JOHN DEERE								
2 cyl	100ci	1.6L	4.000" 101.6mm	**ALL**	John Deere Eng. 40, 320, 330, 435, M Series, Crawler-Tractor: 40-40U, M, MC, MCT, MI, MT Series	**JD-5**		
2 cyl	113ci	1.9L	4.250" 108mm	**1956-60**	John Deere Eng. 113 Series, Crawler-Tractor: 420, 430, 430c, 440 Series	**JD-5**		
4 cyl	115ci	1.9L	3.500" 88.9mm	**1961-71**	John Deere Eng. 1010, 115, JD115 Series, Combine-Tractor: EA, 115G, HA 115G, HB 115, 115G, GH, NA 115G	**JD-1**		
4 cyl	145ci	2.4L	3.625" 92.1mm	**1961-71**	John Deere Gas/Diesel Eng. 145, 2010 Series, Combine-Tractor: EA 145G, HA 145, 145G, HB145, 145G, HC 145G, L, TA 145G, L	**JD-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE			STD.	HI-PERF.	OHC
JOHN DEERE (Cont.)								
4 cyl	155ci	2.5L	3.750" 95.3mm	**ALL**	John Deere Diesel Eng. 155, HA155D Series, Combine-Tractor, Power Unit: 45, 155	**JD-1**		
4 cyl	162ci	2.6L	3.438" 87.3mm	**ALL**	Continental Eng. F162 Series, Combine: No. 8	**CO-8**		
4 cyl	165ci	2.7L	3.875" 98.4mm	**1961-71**	John Deere Gas/Diesel Eng. 165, 2010 Series, Combine-Tractor: 40, 45, HA 165G, HB 165D, HB 165G	**JD-1**		
4 cyl	188ci	3.1L	3.750" 95.3mm	**ALL**	Hercules Eng. JX4C3 Series, Combine-Tractor: 45	**HE-1**		
4 cyl	198ci	3.3L	3.750" 95.3mm	**ALL**	OHV Hercules Eng. DD-198, DOOB, D2000 Series, Combine: No. 5, 10-12 Cut	**HE-1**		
4 cyl	201ci	3.3L	4.000" 101.6mm	**ALL**	John Deere Eng. 201, 3010 Series 201G Loader/Tractor: 500C, 510, JD500	**JD-3**		
4 cyl	202ci	3.3L	3.858" 98mm	**1966-75**	John Deere Gas/Diesel/LPG Eng. 202, 4-202D, 4-202G Series, 45, 3300, 4400 Series Combine; JD480A Series Forklift; 310, 401, 410 Series Loader; 499 Series Picker/ Stripper; 202 Series Power Unit; 400-2520 Series Tractor; 880, 2270, 2280 Series Windrower (Balance Shaft Set)	**JDG-7****		
6 cyl	217ci	3.6L	3.625" 92.1mm	**ALL**	John Deere Eng. EA, HA217G & L, HB217L, HC217, G, L, HD217, G, L, HG217G, NA217G, NA217L, NB217G, NB217L, TA217G, L, N, 217 Gas Eng. & Power Unit. Combine: 55, 55R, 65, 67R, 90, 95, 95H, 95R Forage Harvester: 12 Series	**JD-2**		
4 cyl	219ci	3.6L	4.020" 102.1mm	**1966-75**	John Deere Diesel/Turbo-Diesel Eng. 4-219D, 4-219T Series, 3300, 4400 Series Combine; JD 310, 401, 410 Series Loader; 219 Series Power Unit; 440-2420 Series Tractor (Balance Shaft Set)	**JDG-7****		
4 cyl	222ci	3.6L	3.375" 85.7mm	**ALL**	Hercules Eng. QXC Series, Combine: No. 5A, No. 9 Prairie, No.35 Hillside, 55, 55R, 65	**HE-5**		
4 cyl	225ci	3.7L	3.400" 86.4mm	**1960-78**	OHV Chrysler (Slant 6) Eng. (Early Series With Forged Crankshaft)	**PD-18**		
4 cyl	225ci	3.7L	3.400" 86.4mm	**1979-87**	OHV Chrysler (Slant 6) Eng. (Late Series With Cast Crankshaft)	**PD-21**		
4 cyl	226ci	3.7L	4.000" 101.6mm	**ALL**	Hercules Eng. DOOC, DD-G0226, D-G2300 Series, No. 5A, No.35 Hillside	**HE-1**		
4 cyl	227ci	3.7L	4.250" 108mm	**ALL**	John Deere Gas/LPG Eng. 3020, 4227G, 4227LP Series, Tractor: JD500, JD500B, JD510	**JD-3**		
6 cyl	230ci	3.8L	3.438" 87.3mm	**ALL**	Hercules Eng. QXD-3 Series Power Unit. Combine: No. 5A, No. 9 Prairie, No.35 Hillside, 55, 55R, 65	**HE-5**		
6 cyl	232ci	3.8L	3.875" 98.4mm	**ALL**	John Deere Diesel Eng. HA232D Series, Combine 95, 95H	**JD-2**		
4 cyl	239ci	3.9L	4.188" 106.4mm	**1966-75**	John Deere Diesel/Turbo-Diesel Eng. 4-239D, 4-239T, 4039, 4239D Series; 4239 Series Tractor (Balance Shaft Set)	**JDG-7****		
4 cyl	241ci	3.9L	4.125" 104.8mm	**ALL**	John Deere Eng. 4241G Series; Loader: 500C, 510, 3010, 3020, JD500	**JD-3**		
6 cyl	248ci	4.1L	3.875" 98.4mm	**ALL**	John Deere Eng. BA248G, HA 248G, HB248G, L, NA 248G, 248 Series Power Unit/Diesel Eng. Combine: 95, 95H	**JD-2**		
4 cyl	254ci	4.2L	4.125" 104.8mm	**ALL**	John Deere Diesel Eng. 4254D Series; Loader: 500C, 510 Tractor: JD500A, 3010	**JD-3**		
4 cyl	270ci	4.4L	4.250" 108mm	**ALL**	John Deere Diesel Eng. 4270D Series; Loader: JD500, JD500A, B, C, JD510 Series. Tractor: 3020 Series	**JD-3**		
4 cyl	276ci	4.5L	4.188" 106.4mm	**ALL**	John Deere Diesel/Turbo-Diesel Eng. 4045D, T, 276D, 4276D, 4276T, JD550 Series Crawler; 440C, 540, 555 Series Loader; 4276D, T Series Power Unit; 2630, 2640, JD440C, JD540 Series Tractor (Balance Shaft Set)	**JDG-7****		

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CAMSHAFT BEARINGS

CYL.	DISPLACEMENT CI./CC.	L	BORE	YEAR	GENERAL APPLICATION DATA (ENGINE SERIES/MAKE/MODEL)	CAMSHAFT BEARING SET STD.	HI-PERF.	OHC
JOHN DEERE (Cont.)								
6 cyl	282ci	4.6L	3.750" 95.3mm	**ALL**	Hercules Eng. JXC, JXCT Series; No. 17, 12-20 Cut, No.36- 36A-36B-36H-36P all 12-20 Cut	**HE-1**		
6 cyl	302ci	4.9L	4.000" 101.6mm	**ALL**	John Deere Eng. Series 4010; Combine: 105, Wheel Tractor: 4000, 4010, 4020, 4230	**JD-4**		
6 cyl	329ci	5.4L	4.020" 102.1mm	**ALL**	John Deere Diesel/Turbo-Diesel Eng. HF329G, NB329 Series, 329DH-GH-GN- LN, 6329D, 6329G, 6329T	**JD-4**		
6 cyl	340ci	5.6L	4.250" 108mm	**ALL**	John Deere Gas/LPG Eng. 340, 341, HA341G, HG341G Series; Combine: 105, 105R; Tractor: JD600, 4020	**JD-4**		
6 cyl	359ci	5.9L	4.188" 106.4mm	**ALL**	John Deere Gas/Diesel Eng. 6359D, 6359G, Series; Tractor: 2940 Series	**JD-4**		
6 cyl	360ci	5.9L	4.250" 108mm	**ALL**	John Deere Gas/Diesel Eng. M21HA, 362GH-01, 02; 362GHA, 720, 730 Series	**JD-4**		
6 cyl	381ci	6.2L	4.125" 104.8mm	**ALL**	John Deere Diesel Eng. 6381D Series; Power Unit: 4010; Tractor: JD600-690, 4010 Series	**JD-4**		
6 cyl	404ci	6.6L	4.250" 108mm	**ALL**	John Deere Diesel Eng. M23HA, 404D, 404DH-01, 02; 404DHA, 6404D, DH, TH Series; Combine: 105-7700 Series Loader/Tractor: 4000-4520 Series; JD600-JD690A Series	**JD-4**		
6 cyl	466ci	7.6L	4.563" 115.9mm	**ALL**	John Deere Diesel/Turbo-Diesel Eng. 466, 6466A, 6466D, 6466T, 6466TA, 6466TH Series; Combine: 6602- 8820; Tractor: 790-4850 Series	**JD-4**		
6 cyl	531ci	8.7L	4.750" 120.7mm	**ALL**	John Deere Diesel/Turbo-Diesel Eng. 531, 6531D Series; Harvester: 5010-5460; Tractor: JD644C-JD772A	**JD-4**		
6 cyl	619ci	10.1L	5.125" 130.2mm	**ALL**	John Deere Diesel/Turbo (Intercooled) Diesel Eng. 619, 6619A, 6619TA Series; Tractor: JD850-890; 5440-8650	**JD-4**		
KOMATSU								
6 cyl	743ci	12.2L	5.125" 130.2mm	**ALL**	Cummins/Komatsu Diesel Eng. NH220 Series (Small Cam Series); Komatsu Machine Models D60, D65, D75, D80A-12, D85A-12	**CU-5A**		
6 cyl	855ci	14.0L	5.500" 139.7mm	**ALL**	Cummins/Komatsu Diesel Eng. NT855 Series (Small Cam Series); Komatsu Machine Models D80A-18, D85A-18, D95S-2	**CU-5A**		
LE ROI								
4 cyl	176ci	2.9L	3.750" 95.3mm	**ALL**	Le Roi (Early D Model) Eng. D176 Series	**A-2**		
4 cyl	201ci	3.3L	4.000" 101.6mm	**ALL**	Le Roi (Early D Model) Eng. D201 Series	**A-2**		
4 cyl	226ci	3.7L	4.000" 101.6mm	**ALL**	Le Roi (Early D Model) Eng. D226 Series	**A-2**		
6 cyl	382ci	6.2L	4.500" 114.3mm	**ALL**	Le Roi Eng. 60 G1 Series	**A-2**		
MACK TRUCK								
4 cyl	98ci	1.6L	3.125" 79.4mm	**ALL**	Continental Eng.	**CO-8**		
4 cyl	113ci	1.9L	3.000" 76.2mm	**ALL**	Continental Eng.	**CO-8**		
4 cyl	123ci	2.0L	3.125" 79.4mm	**ALL**	Continental Eng.	**CO-8**		
4 cyl	133ci	2.2L	3.250" 82.6mm	**ALL**	Continental Eng.	**CO-8**		
4 cyl	140ci	2.3L	3.188" 80.98mm	**ALL**	Continental (L-Head) Eng.	**CO-8**		
4 cyl	145ci	2.4L	3.250" 82.6mm	**ALL**	Continental Eng.	**CO-8**		
6 cyl	209ci	3.4L	3.188" 80.98mm	**1936-48**	Continental Eng. EN-11 Series	**K-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
MACK TRUCK (Cont.)								
6 cyl	226ci	3.7L	3.313" 84.1mm	**1939-42**	Continental Eng. EN-12, EN226 Series	**K-1**		
6 cyl	253ci	4.1L	3.500" 88.9mm	**1950-55**	Continental Eng. EN-253, FO Series	**CO-7**		
6 cyl	271ci	4.4L	3.625" 92.1mm	**ALL**	Continental Eng. EN-271, FK, FM Series	**CO-7**		
6 cyl	290ci	4.8L	3.750" 95.3mm	**ALL**	Continental Eng. EN-290, FK, FM Series.	**CO-7**		
6 cyl	330ci	5.4L	4.000" 101.6mm	**ALL**	Continental Eng. EN-330, EN-331 Series	**CO-7**		
8 cyl	413ci	6.7L	4.188" 106.4mm	**ALL**	OHV Chrysler/Mack Eng. EN-414, EN414A Series (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
6 cyl	672ci	11.0L	4.875" 123.8mm	**ALL**	Cummins/Mack Eng. EN-END-ENDS672, END673, ENDT673 Series (Early Design, Slotted Bearings In Position 2 And 5) (Auxiliary Shaft Set)	**MA-5** **MAG-10****		
6 cyl	672ci	11.0L	4.875" 123.8mm	**ALL**	Cummins/Mack Eng. END673, END675, END676, ENDL-ENDLT, ENDT673 (Engs. After Serial# ENDT-673-62-63), END675, ENDT-ENDTB676, ENTAZ675, ETAB673, ETAB675, ETAB676, ETAY-ETAZ673, ETB-ETC-ETS673, ETSZ676, ETSZB676, ETSZ677, ETSZB677, ETY-ETZ673, ETZB673 (Auxiliary Shaft Set)	**MA-6** **MAG-10****		
6 cyl	672ci	11.0L	4.875" 123.8mm	**ALL**	Cummins/Mack Eng. (Late Design After 4/84 With #7 Journal Of 2.440" Diameter) (Auxiliary Shaft Set)	**MA-7** **MAG-10****		
6 cyl	680ci	11.0L	4.875" 123.8mm	**ALL**	Mack Eng. E6, EM6 Series (Early Design, Slotted Bearings In Position 2 And 5) (Auxiliary Shaft Set)	**MA-5** **MAG-10****		
6 cyl	680ci	11.0L	4.875" 123.8mm	**ALL**	Mack Eng. (Early Design, Before 4/84 With #7 Journal of 2.250" Diameter, With 1.500" Groove Bearing on Position 2-6) (Auxiliary Shaft Set)	**MA-6** **MAG-10****		
6 cyl	680ci	11.0L	4.875" 123.8mm	**ALL**	Mack Eng. (Late Design After 4/84 With #7 Journal Of 2.440" Diameter) (Auxiliary Shaft Set)	**MA-7** **MAG-10****		
6 cyl	707ci	11.6L	5.000" 127mm	**ALL**	Mack Eng. END707, ENG-ENDD-ENDDL711, ENDL707, ENDL-ENDLT711, ENF707 Series (Early Design, Slotted Bearings In Position 2 And 5) (Auxiliary Shaft Set)	**MA-5** **MAG-10****		
6 cyl	707ci	11.6L	5.000" 127mm	**ALL**	Mack Eng. (Early Design, Before 4/84 With #7 Journal of 2.250" Diameter, With 1.500" Groove Bearing on Position 2-6) (Auxiliary Shaft Set)	**MA-6** **MAG-10****		
6 cyl	707ci	11.6L	5.000" 127mm	**ALL**	Mack Eng. (Late Design After 4/84 With #7 Journal Of 2.440" Diameter) (Auxiliary Shaft Set)	**MA-7** **MAG-10****		
6 cyl	728ci	11.9L	4.875" 123.8mm	**ALL**	Mack Eng. E7, EM7 Series (Auxiliary Shaft Set)	**MA-11** **MAG-11**		
6 cyl	761ci	12.5L	4.875" 123.8mm	**ALL**	Mack Eng. E7, E7-350, E7-400 Series	**MA-8**		
MAZDA								
4 cyl	71.3ci 1169cc	1.2L	2.756" 70mm	**1968-73**	OHV Mazda Eng. TA, TB Series			**F-41*** (1/2 Shell)
4 cyl	- 1290cc	1.3L	3.071" 78mm	**1990-92**	DOHC Mazda Eng. BJ Series (1 Cam Set Per Cylinder Head)			**MZA-1*** (Full Round)
4 cyl	90.6ci 1490cc	1.5L	3.071" 78mm	**1966-74**	SOHC Mazda Eng. UB Series			**F-41*** (1/2 Shell)

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
MAZDA (Cont.)								
4 cyl	96.8ci 1586cc	1.6L	3.071" 78mm	**1970-77**	SOHC Mazda Eng. NA Series			**F-41*** (1/2 Shell)
4 cyl	- 1597cc	1.6L	3.071" 78mm	**1986-95**	SOHC Mazda Eng. B6, B6B Series			**MZA-1*** (Full Round)
4 cyl	- 1587cc	1.6L	3.189" 81mm	**1982-88**	SOHC Mazda Eng. F6 Series			**MZA-2*** (1/2 Shell)
4 cyl	110ci 1796cc	1.8L	3.071" 78mm	**1970-78**	SOHC Mazda Eng. VB Series			**F-41*** (1/2 Shell)
4 cyl	107.9ci 1769cc	1.8L	3.150" 80mm	**1973-88**	SOHC Mazda Eng. VC Series			**F-41*** (1/2 Shell)
4 cyl	- 1839cc	1.8L	3.268" 83mm	**1990-94**	SOHC Mazda Eng. BP, BP012 Series			**MZA-1*** (Full Round)
4 cyl	- 1789cc	1.8L	3.386" 86mm	**1982-89**	SOHC Mazda Eng. F8 Series			**MZA-2*** (1/2 Shell)
6 cyl	- 1845cc	1.8L	2.953" 75mm	**1992-95**	DOHC Mazda Eng. K8, K8ZE Series (1 Cam Set Per Cylinder Head)			**MZA-1*** (Full Round)
4 cyl	- 1970cc	2.0L	3.150" 80mm	**1979-84**	SOHC Mazda Eng. MA Series			**F-41*** (1/2 Shell)
4 cyl	122ci 1998cc	2.0L	3.386" 86mm	**1984-87**	SOHC Mazda Eng. FE, FEH1, FEH5, FE-T Series (IncludesTurbo)			**MZA-2*** (1/2 Shell)
4 cyl	- 2184cc	2.2L	3.386" 86mm	**1987-93**	SOHC Mazda Eng. F2, F2G, F2L, F2-T Series (Includes Turbo)			**MZA-2*** (1/2 Shell)
4 cyl	140ci 2302cc	2.3L	3.780" 96mm	**1994-97**	SOHC Ford Eng. 8A Series, Vin A (Special Oil Control Set w/ OD Groove) (Cam Bearing Set w/ .020 Oversize OD) (Auxiliary Shaft Set)	**F-34** **F-34B** **F-34S** **FG-34****		
4 cyl	- 2555cc	2.6L	3.587" 91.1mm	**1987-88**	SOHC (8 Valve) Mitsubishi Eng. AM1, G54B Series (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 2606cc	2.6L	3.622" 92mm	**1989-94**	SOHC (12 Valve) Mazda Eng. G6 Series (Balance Shaft Set)	 **MZG-3****		**MZA-4*** (1/2 Shell)
6 cyl	183ci 2954cc	3.0L	3.504" 89mm	**1994-08**	OHV (12 Valve) Ford (Vulcan) Eng. 8U Series, Vin U, V	**F-48**		
6 cyl	244ci 4016cc	4.0L	3.953" 100.4mm	**1991-00**	OHV Ford Eng. 8X, ZZL Series, Vin X (Cam Bearing Set w/ Special Wide No. 4 Position)	**F-50** **F-50A**		
METROPOLITAN-NASH								
4 cyl	91ci 1489cc	1.5L	-	**1954-62**	OHV Metropolitan-Nash Eng. Series 1-4	**DA-2**		
MG (BRITISH LEYLAND LTD.)								
4 cyl	67ci 1098cc	1.1L	2.539" 64.5mm	**1962-67**	OHV MG Eng. 10CC, 10CG, 10GR Series	**BL-1**		
4 cyl	78ci 1275cc	1.3L	2.780" 70.6mm	**1967-74**	OHV MG Eng. 12CC, 12CD, 12CE, 12CJ, 12G, 12H Series	**BL-1**		
4 cyl	91ci 1489cc	1.5L	2.874" 73mm	**1954-62**	OHV MG Eng.	**DA-2**		
4 cyl	97ci 1588cc	1.6L	2.968" 75.4mm	**1958-62**	OHV MG Eng.	**DA-2**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
MG (BRITISH LEYLAND LTD.) (Cont.)								
4 cyl	99ci 1622cc	1.6L	3.000" 76.2mm	**1961-68**	OHV MG Eng.	**DA-2**		
4 cyl	108.9ci 1798cc	1.8L	3.159" 80.3mm	**1962-81**	OHV MG Eng. 18G, 18GA, 18GB, 18GF, 18GH, 18GJ, 18GK, 18V Series	**DA-2**		
8 cyl	215.4ci 3528cc	3.5L	3.500" 88.9mm	**1974-77**	OHV Buick Eng. Vin 1	**B-11**		
MILITARY STANDARD								
4 cyl	124ci	2.0L	3.250" 82.6mm	**ALL**	J.I. Case (MOB) Eng. VAE Series	**CA-3**		
4 cyl	125ci	2.0L	3.250" 82.6mm	**ALL**	Waukesha Eng. 180GB Series	**WA-4**		
4 cyl	133ci	2.2L	3.250" 82.6mm	**ALL**	Waukesha Eng. FCB-4 Series	**WA-4**		
4 cyl	133ci	2.2L	3.250" 82.6mm	**ALL**	Hercules Eng. IXB-ER Series	**WA-3**		
4 cyl	134ci	2.2L	3.125" 79.4mm	**ALL**	Willys/Jeep (F-Head)/(L-Head) Eng.	**J-1**		
4 cyl	139ci	2.3L	3.438" 87.3mm	**ALL**	Waukesha Eng. 180GM Series	**WA-4**		
4 cyl	142ci	2.3L	3.875" 98.4mm	**ALL**	Ford (Mutt) Eng. M151 Series	**F-25**		
4 cyl	145ci	2.4L	3.250" 82.6mm	**ALL**	OHV Continental Eng. FS45, FS145 Series	**CO-8**		
4 cyl	152ci	2.5L	3.875" 98.4mm	**ALL**	IHC Eng. 4-152, 4-152T, B-152 Series	**IN-11**		
4 cyl	153ci	2.5L	3.438" 87.3mm	**ALL**	Buda Eng. 4MB-153 Series	**BU-2**		
3 cyl	159ci	2.6L	3.875" 98.4mm	**ALL**	Detroit Supercharged Diesel Eng. 3-53, 3-53N Series (Cam Bearing & Balance Shaft Set) (+.010 OD, Cam Bearing & Balance Shaft Set)	 **DE-2A**** **DE-2AR1**		
4 cyl	162ci	2.7L	3.438" 87.3mm	**ALL**	Continental (L-Head) Eng. FS162 Series	**CO-8**		
6 cyl	186ci	3.1L	3.250" 82.6mm	**ALL**	Waukesha Eng. 185GB Series	**WA-4**		
6 cyl	209ci	3.4L	3.438" 87.3mm	**ALL**	Waukesha Eng. 185GM Series	**WA-4**		
6 cyl	217.8ci	3.6L	3.250" 82.6mm	**ALL**	Chrysler (L-Head) Eng.	**PD-1**		
6 cyl	218ci	3.6L	3.250" 82.6mm	**ALL**	Continental Eng. FS218 Series	**K-1**		
6 cyl	218ci	3.6L	3.375" 85.7mm	**ALL**	OHV Chrysler Eng. 905A Series	**PD-3**		
4 cyl	226ci	3.7L	4.000" 101.6mm	**ALL**	Hercules Eng. JX4LD-ER Series	**HE-1**		
6 cyl	230ci	3.8L	3.250" 82.6mm	**ALL**	OHV Chrysler Eng. IND-931 Series	**PD-1**		
6 cyl	230ci	3.8L	3.438" 87.3mm	**ALL**	Buda Eng. 6MB-230 Series	**BU-2**		
6 cyl	237ci	3.9L	3.438" 87.3mm	**ALL**	Hercules Eng. QXLD-ER Series	**BU-2**		
8 cyl	239ci	3.9L	3.188" 80.98mm	**ALL**	Ford (Flathead)/(L-Head) Eng.	**F-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
MILITARY STANDARD (Cont.)								
6 cyl	244ci 3996cc	4.0L	3.438" 87.3mm	**ALL**	Continental Eng. 6-244-MS, 6-2444-S, FS244 Series	**K-1**		
6 cyl	251ci	4.1L	3.438" 87.3mm	**ALL**	Chrysler Eng. IND-908A, JXAL2-ER, U225 Series	**PD-3**		
8 cyl	283ci	4.6L	3.875" 98.4mm	**ALL**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
6 cyl	302ci	5.0L	4.000" 101.6mm	**ALL**	OHV GMC Eng.	**CH-2**		
8 cyl	302ci	5.0L	4.000" 101.6mm	**ALL**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	Hercules Eng. JXLD-ER Series	**HE-1**		
8 cyl	361ci	5.9L	4.125" 104.8mm	**ALL**	OHV Chrysler Eng. (+.010 OD)	**PD-17**	**PDP-17** or **PDP-17T** (Coated) **PDP-17R1**	
8 cyl	534ci	8.8L	4.500" 114.3mm	**ALL**	OHV Ford Eng.	**F-16**		
MITSUBISHI								
4 cyl	- 1198cc	1.2L	2.685" 68.2mm	**1984-88**	SOHC Mitsubishi Eng. 4G16, G16B Series			**MIA-3*** (Full Round)
4 cyl	- 1244cc	1.2L	2.736" 69.5mm	**1983-88**	OHV Mitsubishi Eng. 4G11, G11B Series			**MIA-3*** (Full Round)
4 cyl	- 1298cc	1.3L	2.795" 71mm	**1984-88**	SOHC Mitsubishi Eng. 4G13, G13B Series			**MIA-3*** (Full Round)
4 cyl	86ci 1410cc	1.4L	2.913" 74mm	**1983-88**	SOHC Mitsubishi Eng. 4G12, G12B Series			**MIA-3*** (Full Round)
4 cyl	90ci 1468cc	1.5L	2.972" 75.5mm	**1985-94**	SOHC (8 Valve) Mitsubishi Eng. 4G15, G4AJ, G4DJ, G15B Series, Vin J, K, X			**MIA-3*** (Full Round)
4 cyl	98ci 1597cc	1.6L	3.028" 76.9mm	**1985-88**	SOHC (8 Valve) Mitsubishi Turbo Eng. G32B-T Series, Vin F (Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 1795cc	1.8L	3.173" 80.6mm	**1983-88**	SOHC (8 Valve) Mitsubishi Eng. G62B, G62B-T Series (Includes Turbo), Vin 4, G (Cam Bearing Set w/ Heavy Wall, +.020 OD)			**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 1855cc	1.9L	3.1890" 81mm	**1973-78**	SOHC Mitsubishi Eng. 4G51, G51B Series (Auxiliary Shaft Set)	**MIG-2****		
4 cyl	- 1995cc	2.0L	3.307" 84mm	**1973-88**	SOHC Mitsubishi Eng. 4G52, G52B Series (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	**MIG-2** **MIG-2-1R** **MIG-2E****		**MIA-4*** (1/2 Shell)
4 cyl	122ci 1997cc	2.0L	3.346" 85mm	**1983-93**	SOHC (8 Valve) Mitsubishi Eng. 4G63, G63B Series, Vin 5, D, V (Balance Shaft Set)	**MIG-3****		
4 cyl	122ci 1997cc	2.0L	3.346" 85mm	**1989-99**	DOHC (16 Valve) Mitsubishi Eng. 4G63, 4G63T, G63B, G63BT Series (Includes Turbo), Vin E, F, R, U (Balance Shaft Set)	**MIG-3****		
4 cyl	143ci 2346cc	2.3L	3.587" 91.1mm	**1983-85**	SOHC Mitsubishi Diesel/Turbo-Diesel Eng. 4D55, 4D55T Series, Vin 9, J (Auxiliary Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	**MIG-2** **MIG-2-1R** **MIG-2E****		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
MITSUBISHI (Cont.)								
4 cyl	- 2351cc	2.4L	3.406" 86.5mm	**1985-96**	SOHC (8 Valve) Mitsubishi Eng. 4G64, G64B Series, Vin G, L, W (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Balance Shaft Set)	 **MIG-3****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
4 cyl	- 2351cc	2.4L	3.406" 86.5mm	**1993-05**	SOHC/DOHC (16 Valve) Mitsubishi Eng. 4G64, G64B Series, Vin G (Balance Shaft Set)	 **MIG-3****		
4 cyl	- 2384cc	2.4L	3.465" 88mm	**1975-81**	OHV Mitsubishi Eng. 4G53 Series (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		
4 cyl	- 2477cc	2.5L	3.587" 91.1mm	**1985-88**	OHV Mitsubishi Turbo Diesel Eng. 4D56 Series (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		
4 cyl	156ci 2555cc	2.6L	3.587" 91.1mm	**1983-89**	SOHC (8 Valve) Mitsubishi Eng. 4G54, G54B, G54T, G54B-T Series (Includes Turbo), Vin 7, E, H, N (Cam Bearing Set w/ Heavy Wall, +.020 OD) (Balance Shaft Set) (Balance Shaft Bearing w/ .173 Oversize OD) (Balance Shaft Elim)	 **MIG-2**** **MIG-2-1R** **MIG-2E****		**MIA-1*** (1/2 Shell) **MIA-2*** (1/2 Shell)
6 cyl	181ci 2972cc	3.0L	3.587" 91.1mm	**1988-05**	SOHC Mitsubishi Eng. 6G72, 6G72T Series (Includes Turbo), Vin F, H, L, P, S (1 Cam Set Per Cyl. Head)			**MIA-5*** (1/2 Shell)
MORRIS (BRITISH LEYLAND LTD.)								
4 cyl	67ci 1098cc	1.1L	2.542" 64.6mm	**1963-74**	OHV Morris/British Leyland Eng.	**BL-1**		
4 cyl	73.3ci 1198cc	1.2L	2.539" 64.5mm	**1954-61**	Morris/British Leyland Eng.	**DA-2**		
4 cyl	91ci 1489cc	1.5L	2.874" 73mm	**1954-62**	OHV Morris/British Leyland Eng.	**DA-2**		
4 cyl	91.6ci 1500cc	1.5L	2.874" 73mm	**1962**	Morris/British Leyland Eng.	**DA-2**		
4 cyl	99ci 1622cc	1.6L	3.000" 76.2mm	**1962-71**	OHV Morris/British Leyland Eng.	**DA-2**		
4 cyl	109.8ci 1798cc	1.8L	3.160" 80.3mm	**1963-66**	Morris/British Leyland Eng.	**DA-2**		
NISSAN (INFINITI, DATSUN)								
4 cyl	60ci 988cc	1.0L	2.874" 73mm	**1965-71**	OHV Nissan Eng. A10 Series	**DA-1**		
4 cyl	72ci 1171cc	1.2L	2.874" 73mm	**1970-73**	OHV Nissan Eng. A12 Series	**DA-1**		
4 cyl	73ci 1189cc	1.2L	2.874" 73mm	**1959-65**	OHV Nissan Eng. E1 Series	**DA-2**		
4 cyl	75.4ci 1237cc	1.2L	2.953" 75mm	**1979-82**	OHV Nissan Eng. A12A Series, Vin C	**DA-1**		
4 cyl	79ci 1288cc	1.3L	2.874" 73mm	**1972-74**	OHV Nissan Eng. A13 Series, Vin H	**DA-1**		
4 cyl	79ci 1299cc	1.3L	2.874" 73mm	**1963-69**	OHV Nissan Eng. J13 Series	**DA-2**		
4 cyl	- 1270cc	1.3L	2.992" 76mm	**1981-90**	SOHC Nissan Eng. E13 Series			**NIA-4*** (Full Round)
4 cyl	85ci 1397cc	1.4L	2.992" 76mm	**1975-82**	OHV Nissan Eng. A14 Series, Vin H, P	**DA-1**		

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"und" Denotes Undersized ID

CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
NISSAN (INFINITI, DATSUN) (Cont.)								
4 cyl	90.5ci 1483cc	1.5L	3.071" 78mm	**1971-90**	OHV Nissan Eng. J15 Series	**DA-2**		
4 cyl	90.8ci 1488cc	1.5L	2.992" 76mm	**1979-82**	OHV Nissan Eng. A15 Series, Vin P	**DA-1**		
4 cyl	- 1488cc	1.5L	2.992" 76mm	**1982-84**	SOHC Nissan Eng. E15, E15S, E15T Series (Includes Turbo), Vin H, M			**NIA-4*** (Full Round)
4 cyl	90.8ci 1488cc	1.5L	3.071" 78mm	**1960-65**	OHV Datsun Eng. G15 Series	**DA-3A**		
4 cyl	95.6ci 1567cc	1.6L	3.071" 78mm	**1972-82**	OHV Nissan Eng. J16 Series	**DA-2**		
4 cyl	97ci 1597cc	1.6L	2.992" 76mm	**1983-88**	SOHC (8 Valve) Nissan Eng. E16, E16I, E16S Series, Vin M, P			**NIA-4*** (Full Round)
4 cyl	97ci 1597cc	1.6L	2.992" 76mm	**1989-90**	SOHC (12 Valve) Nissan Eng. GA16I Series, Vin G			**NIA-1*** (Full Round)
4 cyl	97ci 1595cc	1.6L	3.433" 87.2mm	**1966-70**	OHV Nissan Eng. R, R16 Series	**DA-3A**		
4 cyl	- 1751cc	1.8L	3.169" 80.5mm	**1978-91**	OHV Nissan Eng. J18 Series	**DA-2**		
4 cyl	- 1809cc	1.8L	3.268" 83mm	**1984-87**	SOHC (8 Valve) Nissan Turbo Eng. CA18ET Series, Vin C			**NIA-5*** (Full Round)
4 cyl	- 1809cc	1.8L	3.268" 83mm	**1988-89**	DOHC (16 Valve) Nissan Eng. CA18DE Series, Vin C (1 Cam Set Per Cyl. Head)			**NIA-5*** (Full Round)
4 cyl	114.9ci 1883cc	1.9L	3.346" 85mm	**1960-65**	Nissan/Datsun Eng. H Series	**DA-3A**		
4 cyl	119ci 1952cc	2.0L	3.346" 85mm	**1974-86**	SOHC Nissan Eng. L20B, Z20, Z20E, Z20S Series, Vin F, H, P			**NIA-6*** (1/2 Shell)
4 cyl	121ci 1982cc	2.0L	3.433" 87.2mm	**1967-92**	OHV Nissan Eng. H20, U20 Series	**DA-3A**		
4 cyl	121.5ci 1991cc	2.0L	3.270" 83mm	**1963-83**	OHV Nissan Diesel Eng. SD20 Series	**DA-3A**		
4 cyl	122ci 1974cc	2.0L	3.327" 84.5mm	**1982-89**	SOHC Nissan Eng. CA20E, CA20S Series, Vin H, P			**NIA-5*** (Full Round)
4 cyl	- 2164cc	2.2L	3.268" 83mm	**1963-88**	OHV Nissan Diesel Eng. SD22 Series, Vin S	**DA-3A**		
4 cyl	- 2187cc	2.2L	3.425" 87mm	**1981-83**	SOHC Nissan Eng. Z22, Z22E, Z22S Series, Vin M, R			**NIA-6*** (1/2 Shell)
4 cyl	- 2289cc	2.3L	3.504" 89mm	**1981-90**	OHV Nissan Diesel Eng. SD23, TD23 Series	**DA-3A**		
4 cyl	- 2389cc	2.4L	3.504" 89mm	**1983-89**	SOHC (8 Valve) Nissan Eng. Z24, Z24I, Z24S Series, Vin N, S			**NIA-6*** (1/2 Shell)
4 cyl	- 2488cc	2.5L	3.504" 89mm	**1983-86**	OHV Nissan Diesel Eng. SD25 Series, Vin J	**DA-3A**		
4 cyl	152ci 2494cc	2.5L	3.504" 89mm	**1986-90**	Nissan Diesel Eng. TD25 Series	**DA-3A**		
4 cyl	163ci 2663cc	2.7L	3.780" 96mm	**1986-90**	OHV Nissan Diesel Eng. TD27 Series	**DA-3A**		
4 cyl	180ci 2953cc	3.0L	3.780" 96mm	**ALL**	DOHC (16 Valve) Nissan Eng. ZD30DDT (Turbo Non Intercooled) ZD30DDTI (Turbo Intercooled) Series (Auxiliary / Balance Shaft Set)	**NIG-1****		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
NISSAN (INFINITI, DATSUN) (Cont.)								
6 cyl	181ci 2960cc	3.0L	3.425" 87mm	**1984-86**	SOHC Nissan Eng. VG30, VG30E, VG30T Series (Includes Turbo), Vin C, H (Cam Bearing Set, Left Bank) (Cam Bearing Set, Right Bank)			**NIA-2L*** (Full Round) **NIA-2R*** (Full Round)
6 cyl	181ci 2960cc	3.0L	3.425" 87mm	**1987-01**	SOHC/DOHC Nissan Eng. VE30DE, VG30, VG30DE, VG30DETT, VG30E, VG30I, VG30T Series (Includes Turbo/Twin Turbo), Vin 1, A, C, E, H, R, W (Cam Bearing Set, Left Bank) (Cam Bearing Set, Right Bank)			**NIA-3L*** (Full Round) **NIA-2R*** (Full Round)
6 cyl	198.1ci 3246cc	3.2L	3.268" 83mm	**1966-90**	OHV Nissan Diesel/Turbo-Diesel Eng. CN6-33, SD33, SD33T Series	**DA-5**		
NUFFIELD TRACTOR (Also see BRITISH LEYLAND LTD.)								
4 cyl	99ci 1622cc	1.6L	3.000" 76.2mm	**1961-71**	Gas/Diesel Eng. 154 Series	**DA-2**		
OLIVER TRACTOR & POWER UNITS								
4 cyl	91ci	1.5L	2.875" 73mm	**ALL**	Continental (L-Head) Eng. 91, PY91, Y4091 Series	**CO-3**		
4 cyl	129ci	2.1L	3.313" 84.1mm	**1955-59**	Oliver Gas/Diesel Eng. 166HC, 166HC Super, 550DSL, 550HC, 660DSL, 66OHC Series	**WA-4**		
4 cyl	140ci	2.3L	3.188" 80.98mm	**ALL**	Continental (L-Head) Eng. F140 Series	**CO-8**		
4 cyl	144ci	2.4L	3.500" 88.9mm	**1955-62**	Oliver Gas/Diesel Eng. 166HC, 166HC Super, 550DSL, 550HC, 660DSL, 66OHC Series	**WA-4**		
4 cyl	155ci	2.5L	3.625" 92.1mm	**1959-70**	Oliver Gas/Diesel Eng. 166HC, 166HC Super, 550DSL, 550HC, 660DSL, 66OHC Series	**WA-4**		
6 cyl	194ci	3.2L	3.313" 84.2mm	**1955-59**	Waukesha Eng. 177HC, 177LP Series	**WA-4**		
4 cyl	198ci	3.3L	3.750" 95.3mm	**ALL**	Hercules Diesel Eng. DD198, D2120 Series	**HE-8**		
4 cyl	205ci	3.4L	3.250" 82.6mm	**ALL**	Hercules Eng. QXB3 Series	**HE-5**		
6 cyl	209ci	3.4L	3.188" 80.98mm	**ALL**	Continental (L-Head) Eng. F209 Series	**K-1**		
6 cyl	216ci	3.5L	3.500" 88.9mm	**1959-69**	Waukesha Eng. 177HC, 177LP Series	**WA-4**		
6 cyl	226ci	3.7L	3.313" 84.1mm	**ALL**	OHV Continental (Flex) Eng. F226 Series	**K-1**		
6 cyl	228ci	3.7L	3.375" 85.7mm	**ALL**	Hercules Eng. JXA, JXC, JXD Series	**HE-1**		
6 cyl	231ci	3.8L	3.500" 88.9mm	**1955-62**	Waukesha Gas/Diesel Eng. 188HC, 188HC Super Series (Early, One Bearing)	**WA-4**		
6 cyl	231ci	3.8L	3.500" 88.9mm	**1955-62**	Waukesha Eng. 188HC, 188HC Super Series (Late, Four Bearings)	**WA-7**		
6 cyl	232ci	3.8L	3.625" 92.1mm	**1955-70**	Waukesha Gas/Diesel Eng. 1550, 1555, 177D, 177D Super, 177HC Series	**WA-4**		
6 cyl	244ci	4.0L	3.438" 87.3mm	**ALL**	Continental (L-Head) Eng. F244 Series	**K-1**		
6 cyl	251.6ci	4.1L	3.438" 87.3mm	**ALL**	Chrysler (L-Head) Eng. 430, 431, 525, 535, 545 Series	**PD-3**		
6 cyl	263ci	4.3L	3.625" 92.1mm	**ALL**	Hercules Eng. JXA, JXC, JXD Series	**HE-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
OLIVER TRACTOR & POWER UNITS (Cont.)								
6 cyl	265ci	4.3L	3.750" 95.3mm	**1955-59**	Waukesha Eng. 188HC, 188HC Super, 188LP Series (Early, One Bearing)	**WA-4**		
6 cyl	265ci	4.3L	3.750" 95.3mm	**1955-59**	Waukesha Eng. 188HC, 188HC Super, 188LP Series (Late, Four Bearings)	**WA-7**		
6 cyl	283ci	4.6L	3.875" 98.4mm	**ALL**	Oliver/Waukesha Gas/Diesel Eng. 185GB, 185GM Series (Early, One Bearing)	**WA-4**		
6 cyl	283ci	4.6L	3.875" 98.4mm	**ALL**	Oliver/Waukesha Gas/Diesel Eng. 185GB, 185GM Series (Late, Four Bearing)	**WA-7**		
6 cyl	302ci	5.0L	4.000" 101.6mm	**1955-59**	Oliver/Waukesha Diesel Eng. 199D, 199D Super, 950D, 950DSL, 99D Series (Early, One Bearing)	**WA-4**		
6 cyl	302ci	5.0L	4.000" 101.6mm	**1955-59**	Oliver/Waukesha Gas/Diesel Eng. 99HC, 199HC Super, 950HC Series (Late, Four Bearing)	**WA-7**		
6 cyl	310ci	5.1L	3.875" 98.4mm	**ALL**	Oliver/Waukesha Gas/Diesel Eng. 185GB, 185GM Series (Early, One Bearing)	**WA-4**		
6 cyl	310ci	5.1L	3.875" 98.4mm	**ALL**	Oliver/Waukesha Gas/Diesel Eng. 185GB, 185GM Series (Late, Four Bearing)	**WA-7**		
6 cyl	320ci	5.2L	4.000" 101.6mm	**ALL**	Hercules Eng. JXA, JXC, JXD Series	**HE-1**		
6 cyl	322ci	5.3L	4.125" 104.8mm	**1955-62**	Oliver/Waukesha Diesel Eng. 199D, 199D Super, 950D, 950DSL, 99D Series	**WA-4**		
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	Hercules Eng. JXLD Series (1.057" Length On No. 1 And 4 Positions)	**HE-8**		
6 cyl	339ci	5.6L	4.000" 101.6mm	**ALL**	Hercules Eng. JXLD Series (1.125" Length On No. 1 And 4 Positions)	**HE-1**		
8 cyl	573ci	9.4L	4.500" 114.3mm	**ALL**	Caterpillar Eng. 3150 Series	**CAT-2**		
ONAN								
2 cyl	50ci 820cc	0.8L	3.250" 82.6mm	**ALL**	CCK, CCK-MSV-106F, CCKB, Super CCK Series	**ON-1**		
OPEL								
4 cyl	91ci 1491cc	1.5L	3.248" 82.5mm	**1967-68**	SOHC Opel Eng. 1.5, 1.5S Series (Triangle Mark On Left Side Of Head)	**OP-3**		
4 cyl	96.6ci 1584cc	1.6L	3.346" 85mm	**1970-81**	SOHC Opel Eng. 1.6S Series (Triangle Mark On Left Side Of Head)	**OP-3**		
4 cyl	103.4ci 1698cc	1.7L	3.465" 88mm	**1965-81**	SOHC Opel Eng. 1.7S Series (Triangle Mark On Left Side Of Head)	**OP-3**		
4 cyl	110ci 1796cc	1.8L	3.339" 84.8mm	**1976-82**	SOHC Opel Eng. 1.8E, N, S Series (Auxiliary Shaft Set)	**CHG-14****		
4 cyl	116ci 1897cc	1.9L	3.661" 93mm	**1965-75**	SOHC Opel Eng. 1.9S Series, Vin N (Triangle Mark On Left Side Of Head, Three Bearing)	**OP-3**		
4 cyl	116ci 1897cc	1.9L	3.661" 93mm	**1971-75**	SOHC Opel Eng. 1.9S Series, Vin N (Four Bearing)	**OP-5**		
REO MOTOR TRUCK								
6 cyl	255ci	4.2L	3.625" 92.1mm	**ALL**	Reo Eng. OA110, OA123, OA130, OA145, OA255 Series	**R-1**		
6 cyl	292ci	4.8L	3.875" 98.4mm	**ALL**	Reo Eng. OA255 Series	**R-1**		
6 cyl	331ci	5.4L	4.125" 104.8mm	**ALL**	Reo Eng. OA331, OH160, OH170 Series	**R-1**		
6 cyl	362ci	5.9L	4.250" 108mm	**ALL**	Reo Eng. 6-186, OH185, OH186 Series	**R-1**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
REO MOTOR TRUCK (Cont.)								
6 cyl	400ci	6.6L	4.250" 108mm	**ALL**	Reo Eng. 6-190, 6-200, OH200 Series	**R-1**		
RILEY								
4 cyl	91ci 1489cc	1.5L	2.874" 73mm	**1958-63**	OHV British Leyland Eng. 14H Series	**DA-2**		
4 cyl	99ci 1622cc	1.6L	3.000" 76.2mm	**1961-69**	OHV British Leyland Eng.	**DA-2**		
ROVER (LAND ROVER)								
8 cyl	215ci 3528cc	3.5L	3.500" 88.9mm	**1969-80**	OHV Rover Eng.	**B-11**		
8 cyl	- 3950cc	4.0L	3.701" 94mm	**1995-02**	OHV Rover Eng. Vin 2, 5	**LR-1**		
8 cyl	278ci 4554cc	4.6L	3.701" 94mm	**1996-04**	OHV Rover Eng. Vin 4, 6, 9	**LR-1**		
SAAB								
4 cyl	91ci 1498cc	1.5L	3.701" 94mm	**1967-70**	OHV Ford Europe Eng. 95, 96 Series	**F-42**		
4 cyl	104ci 1698cc	1.7L	3.543" 90mm	**1969-74**	OHV Ford Europe Eng. 95, 96 Series	**F-42**		
STUDEBAKER								
6 cyl	194ci 3180cc	3.2L	3.563" 90.5mm	**1965-66**	OHV Chevrolet Eng.	**CH-7**		
6 cyl	230ci 3769cc	3.8L	3.875" 98.4mm	**1966**	OHV Chevrolet Eng.	**CH-7**		
8 cyl	283ci 4638cc	4.7L	3.875" 98.4mm	**1965-66**	OHV Chevrolet Eng.	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
SUZUKI								
4 cyl	81ci 1325cc	1.3L	2.913" 74mm	**1985-97**	SOHC (8 Valve) Subaru Eng. G13A Series, Vin 2, 3, 5			**SA-1*** (Full Round)
TOYOTA								
4 cyl	- 933cc	0.9L	2.835" 72mm	**1970-86**	OHV Toyota Eng. 2K Series	**TO-3**		
4 cyl	66ci 1077cc	1.1L	2.953" 75mm	**1968-69**	OHV Toyota Eng. KC Series	**TO-3**		
4 cyl	71ci 1166cc	1.2L	2.953" 75mm	**1969-79**	OHV Toyota Eng. 3KC Series, Vin K	**TO-3**		
4 cyl	- 1290cc	1.3L	2.953" 75mm	**1981-84**	OHV Toyota Eng. 4KC, 4KE Series, Vin K	**TO-3**		
4 cyl	85.9ci 1407cc	1.4L	3.149" 80mm	**1970-79**	OHV Toyota Eng. T, TJ, TU Series	**TO-7**		
4 cyl	- 1490cc	1.5L	3.071" 78mm	**1964-71**	OHV Toyota Eng. 2R Series	**TO-2**		
4 cyl	- 1468cc	1.5L	3.169" 80.5mm	**1984-88**	OHV Toyota Eng. 5K Series	**TO-3**		
4 cyl	- 1587cc	1.6L	3.169" 80.5mm	**1965-85**	OHV Toyota Eng. 4R, 9R, 12J Series (Export Series)	**TO-2**		
4 cyl	97ci 1588cc	1.6L	3.346" 85mm	**1970-85**	SOHC Toyota Eng. 2T, 2TC, 2TJ, 2TU, 12T, 12TJ, 12TU Series, Vin T	**TO-7**		
4 cyl	97.2ci 1591cc	1.6L	3.386" 86mm	**1968-72**	OHV Toyota Eng. 7R, 7RB Series (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-8****		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
TOYOTA (Cont.)								
4 cyl	- 1626cc	1.6L	3.386" 86mm	**1983-88**	OHV Toyota Eng. 1Y Series	**TO-12**		
4 cyl	104.2ci 1707cc	1.7L	3.386" 86mm	**1970-73**	OHV Toyota Eng. 6R, 6RB Series	**TO-8**		
4 cyl	- 1770cc	1.8L	3.346" 85mm	**1980-86**	OHV Toyota Eng. 3T, 3TC, 3TEU, 3TU, 13TJ, 13TU Series, Vin T	**TO-7**		
4 cyl	- 1812cc	1.8L	3.386" 86mm	**1983-88**	OHV Toyota Eng. 2Y Series	**TO-12**		
4 cyl	110.8ci 1808cc	1.8L	3.484" 88.5mm	**1971-79**	OHV Toyota Eng. 16R, RB, RJ, RU Series (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-8****		
4 cyl	113ci 1858cc	1.9L	3.386" 86mm	**1967-71**	SOHC Toyota Eng. 8R, 8RC Series (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-8****		
4 cyl	116ci 1897cc	1.9L	3.465" 88mm	**1961-70**	OHV Toyota Eng. 3RB, 3RC Series	**TO-11**		
4 cyl	120ci 1968cc	2.0L	3.484" 88.5mm	**1972-74**	SOHC Toyota Eng. 18RC Series, Vin R (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-8****		
6 cyl	121ci 1988cc	2.0L	3.386" 86.1mm	**1965-84**	DOHC (24 Valve) Toyota Eng. 1M, 3M, M, MB, MC, MJ, MU Series	**TO-8**		
4 cyl	122ci 1998cc	2.0L	3.386" 86mm	**1984-85**	OHV Toyota Eng. 3YEC Series, Vin Y	**TO-12**		
4 cyl	121.7ci 1994cc	2.0L	3.465" 88mm	**1967-88**	OHV Toyota Eng. 5R Series	**TO-11**		
4 cyl	- 2164cc	2.2L	3.425" 87mm	**1990-94**	DOHC Toyota Eng. 5SFE Series (32 Tooth Gear), Vin S (Balance Shaft Set) (Balance Shaft Kit: Combines TOG-11 & TOG-11A)	 **TOG-11**** **TOG-11C****		
4 cyl	- 2164cc	2.2L	3.425" 87mm	**1995-01**	DOHC Toyota Eng. 5SFE Series (22 Tooth Gear), Vin G, S (Balance Shaft Set) (Balance Shaft Kit: Combines TOG-11 & TOG-11A)	 **TOG-11A**** **TOG-11C****		
4 cyl	- 2189cc	2.2L	3.484" 88.5mm	**1975-80**	SOHC Toyota Eng. 20R Series, Vin R (Auxiliary / Balance Shaft Set)	 **TOG-8****		**TOA-1*** (1/2 Shell)
4 cyl	- 2237cc	2.2L	3.583" 91mm	**1986-90**	OHV Toyota Eng. 4YEC Series, Vin Y	**TO-12**		
6 cyl	138ci 2253cc	2.3L	2.952" 74.9mm	**1967-72**	SOHC Toyota Eng. 2M Series (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-9****		
4 cyl	- 2366cc	2.4L	3.622" 92mm	**1981-95**	SOHC Toyota Eng. 22R, 22RE, 22REC, 22RTEC Series (Includes Turbo), Vin R			**TOA-1*** (1/2 Shell)
6 cyl	156ci 2563cc	2.6L	3.150" 80mm	**1971-80**	SOHC Toyota Eng. 4M, 4ME Series, Vin M (Auxiliary / Balance Shaft Set)	**TO-8** **TOG-9****		
4 cyl	- 2694cc	2.7L	3.740" 95mm	**1994-04**	DOHC Toyota Eng. 3RZFE Series, Vin M, U (Auxiliary / Balance Shaft Set)	 **TOG-10****		
6 cyl	- 2759cc	2.8L	3.268" 83mm	**1981-88**	SOHC/DOHC Toyota Eng. 5ME, 5MGE Series, Vin M (Auxiliary / Balance Shaft Set)	 **TOG-9****		
4 cyl	- 2977cc	3.0L	3.740" 95mm	**1986-90**	OHV Toyota Diesel Eng. 11B, B Series	**TO-15**		
4 cyl	209ci 3431cc	3.4L	4.016" 102mm	**1984-90**	OHV Toyota Diesel/Turbo Diesel Eng. 3B, 13B, 13BT Series	**TO-15**		
4 cyl	- 3660cc	3.7L	4.016" 102mm	**1988**	OHV Toyota Diesel Eng. 14B, B Series	**TO-15**		

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
TOYOTA (Cont.)								
6 cyl	237ci 3878cc	3.9L	3.543" 90mm	**1954-74**	OHV Toyota Eng. F Series, Vin F	**TO-10**		
6 cyl	- 3956cc	4.0L	3.701" 94mm	**1988-92**	OHV Toyota Eng. 3F, 3FE Series, Vin F	**TO-10**		
6 cyl	- 4227cc	4.2L	3.701" 94mm	**1975-87**	OHV Toyota Eng. 2F Series, Vin F	**TO-10**		
TRIUMPH								
8 cyl	- 3528cc	3.5L	3.500" 88.9mm	**1980-82**	OHV Rover (K-Series) Eng. Vin 5, V	**B-11**		
VOLKSWAGEN								
4 cyl	73ci 1192cc	1.2L	3.031" 77mm	**1954-66**	OHV VW Eng. (Air Cooled)	**VW-1**		
4 cyl	78ci 1285cc	1.3L	3.031" 77mm	**1966**	OHV VW Eng. F Series (Air Cooled)	**VW-1**		
4 cyl	79.1ci 1297cc	1.3L	2.952" 75mm	**1973-81**	SOHC VW Eng. 1300ZF Series (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	88.8ci 1457cc	1.5L	3.130" 79.5mm	**1978-80**	SOHC VW Eng. EH, FX Series (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	90ci 1471cc	1.5L	3.012" 76.5mm	**1974-80**	SOHC VW Gas/Diesel Eng. CK, FC, FG, XR, XS, XV, XW, XY, XZ Series (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	91ci 1493cc	1.5L	3.268" 83mm	**1963-69**	OHV VW Eng. H Series (Air Cooled)	**VW-1**		
4 cyl	97ci 1584cc	1.6L	3.366" 85.5mm	**1966-80**	OHV VW Eng. AD, AE, AF, AG, AH, AJ, AK, AL, AM, AS, B, C, P, T, U, X Series (Air Cooled)	**VW-1**		
4 cyl	97ci 1588cc	1.6L	3.130" 79.5mm	**1976-80**	SOHC VW Eng. EE, EJ, FN, YG, YH, YK Series (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	97ci 1588cc	1.6L	3.130" 79.5mm	**1981-92**	SOHC VW Diesel/Turbo-Diesel Eng. CR, CS, CY, IV, JK, MD, ME, MF Series, Vin G, H (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	104.6ci 1715cc	1.7L	3.130" 79.5mm	**1981-84**	SOHC VW Eng. EN, JF, WT Series, Vin A, B (Auxiliary / Balance Shaft Set)	**VWG-1****		
4 cyl	109ci 1780cc	1.8L	3.189" 81mm	**1983-98**	SOHC VW Eng. 2H, ABG, ACC, GX, HT, JH, JN, MZ, PF, PG, RD, UM Series (Includes Supercharged), Vin A, B, C, E, G, K, N (Auxiliary / Balance Shaft Set)	**VWG-1****		**VWA-2*** (1/2 Shell)
4 cyl	- 1780cc	1.8L	3.189" 81mm	**1986-89**	DOHC (16 Valve) VW Eng. PL Series, Vin B, C (Auxiliary / Balance Shaft Set)	**VWG-1****		
5 cyl	- 2144cc	2.2L	3.130" 79.5mm	**1983-84**	SOHC VW Eng. KM, WE Series, Vin B			**VWA-1*** (1/2 Shell)
5 cyl	- 2226cc	2.2L	3.189" 81mm	**1985-88**	SOHC VW Eng. JT, KX Series, Vin B, E			**VWA-1*** (1/2 Shell)
VOLVO								
4 cyl	109ci 1780cc	1.8L	3.313" 84.1mm	**1961-68**	OHV Volvo Eng. B18A, B18B, B18D Series (Auxiliary / Balance Shaft Set)	**VO-2****		
4 cyl	121ci 1986cc	2.0L	3.500" 88.9mm	**1969-75**	OHV Volvo Eng. B20A, B20B, B20E, B20F Series (Auxiliary / Balance Shaft Set)	**VO-2****		
4 cyl	- 2127cc	2.1L	3.622" 92mm	**1976-85**	SOHC Volvo Eng. B21A, B21E, B21F, B21FT Series (Includes Turbo), Vin 1, 4, 41, 45 (1.265" Cam Housing w/ Cap & Saddle Design) (Auxiliary / Balance Shaft Set)	**VO-2****		**VOA-1*** (1/2 Shell)
4 cyl	- 2316cc	2.3L	3.780" 96mm	**1981-95**	SOHC Volvo Eng. B23E, B23F, B23FT, B230F, B230FD, B230FS, B230FT Series (Includes Turbo), Vin 8, 88 (1.265" Cam Housing w/ Cap & Saddle Design)			**VOA-1*** (1/2 Shell)
6 cyl	182ci 2980cc	3.0L	3.500" 88.9mm	**1969-75**	OHV Volvo Eng. B30A, B30E, B30F Series	**VO-3**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
VOLVO-PENTA (MARINE)								
8 cyl	305ci 5012cc	5.0L	3.736" 95mm	**ALL**	OHV Chevrolet Eng. AQ200D, AQ225D, BB225A, BB225AV Series (Marine)	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
8 cyl	350ci 5736cc	5.7L	4.000" 101.6mm	**ALL**	OHV Chevrole Eng. AQ260A, AQ290D, BB260A, BB260AV Series (Marine)	**CH-8**	**CHP-8** or **CHP-8T** (Coated)	
WAUKESHA								
4 cyl	113ci	1.9L	3.000" 76.2mm	**ALL**	Waukesha Eng. 132, F, FC, FCK, FCL, FCS, FCX, FK, FKJ, FKL, FL, FLJ, FLS, FS FWJ Series	**WA-3**		
4 cyl	121ci	2.0L	3.313" 84.2mm	**ALL**	Waukesha Eng. 160 Series	**WA-4**		
4 cyl	125ci	2.0L	3.250" 82.6mm	**ALL**	Waukesha Eng. 180GB Series (Military Standard)	**WA-4**		
4 cyl	129ci	2.1L	3.313" 84.2mm	**ALL**	Waukesha Gas/Diesel Eng. 180DAB, 180DAC, 180DL, 180DLB, 180DLC, 180DLCU, 180GA, 180GB, 180GK, 180GS, 180KL, 180SB Series	**WA-4**		
4 cyl	133ci	2.2L	3.250" 82.6mm	**ALL**	Waukesha Eng. 132, FC, FCB-4, FCL, FCS, FCX, FK, FL, FLJ, FLS, FS, FWJ Series (Military Standard)	**WA-3**		
4 cyl	139ci	2.3L	3.438" 87.3mm	**ALL**	Waukesha Eng. 180GM Series (Military Standard)	**WA-4**		
4 cyl	144ci	2.4L	3.500" 88.9mm	**ALL**	Waukesha Gas/Diesel Eng. 180D, 180DKB, 180DLC, 180DLCU, 180GA, 180GK, 180GL, 180GLB, 180GLC, 180GS, 180KL Series	**WA-4**		
4 cyl	155ci	2.5L	3.625" 92.1mm	**ALL**	Waukesha Gas/Diesel Eng. 180DKB, 180G, 180GKB, 180GKBC, 180GKBU, D155, D155D, D155G, D155GA, D176, D176G, G155, G176, VRD155, VRG155, VRG176 Series	**WA-4**		
4 cyl	176ci	2.9L	3.625" 92.1mm	**ALL**	Waukesha Eng. D176, D176G, G176, VRG176 Series	**WA-4**		
6 cyl	186ci	3.0L	3.250" 82.6mm	**ALL**	Waukesha Eng. 185GB, 185GM Series (Military Standard)	**WA-4**		
6 cyl	194ci	3.2L	3.313" 84.2mm	**ALL**	Waukesha Gas/Diesel Eng. 185DAB, 185DAC, 185DLB, 185DLC, 185DLCU, 185DSB, 185DY, 185GA, 185GB Series	**WA-4**		
6 cyl	209ci	3.4L	3.438" 87.3mm	**ALL**	Waukesha Eng. 209, 185GB, 185GM Series (Military Standard)	**WA-4**		
6 cyl	216ci	3.5L	3.500" 88.9mm	**ALL**	Waukesha Gas/Diesel Eng. 185GL, 185GLB, 185GM, 185GS, 185KL, 185DLC, 185DLCU Series	**WA-4**		
4 cyl	220ci 3560cc	3.6L	3.858" 98mm	**ALL**	Waukesha Gas/Diesel/Turbocharged Diesel Eng. VRD220, VRD220S VRG220 Series (Except Engines With Hydraulic Pump) (Cam Bearing Set w/Expansion Plug DP-22-P)	**WA-12**		
6 cyl	232ci	3.8L	3.625" 92.1mm	**ALL**	Waukesha Gas/Diesel Eng. F232G, VRD232, VRG232 Series	**WA-4**		
6 cyl	263ci	4.3L	3.625" 92.1mm	**ALL**	Waukesha Eng. B Series	**WA-4**		
6 cyl	265ci	4.3L	3.750" 95.3mm	**ALL**	Waukesha Gas/Diesel/LPG Eng. 190DKB, 190KL, 190DLA, 190DLB, 190DLC, 190DLK, 190DLCA, 190DLCR, 190DLCU, 190DSB, 190GL, 190GLB, 190GLBU, 190GLC, 190GS, F265G, VRG265 Series	**WA-4**		
6 cyl	283ci	4.6L	3.875" 98.4mm	**ALL**	Waukesha Gas/Diesel/LPG Eng. F283G, VRD283, VRG283, VRD310, VRG310 Series	**WA-7**		
6 cyl	299ci	4.9L	3.313" 84.2mm	**ALL**	Waukesha Eng. 185DAB, 185DAC, 185DLB Series	**WA-4**		
6 cyl	302ci	5.0L	4.000" 101.6mm	**ALL**	Waukesha Gas/Diesel Eng. 190GK, 190KL, 195DLC, 195DLCA, 195DLCU, 195GL, 197DLC, 197DLCA, 197DLCS Series	**WA-4**		
6 cyl	310ci	5.1L	3.875" 98.4mm	**ALL**	Waukesha Gas/Diesel/LPG Eng. F310G, VRD310, VRD310S, VRG310 Series (Includes Turbo)	**WA-7**		
6 cyl	320ci	5.2L	4.125" 104.8mm	**ALL**	Waukesha Eng. 195GK, 195GKA, 195GKU Series	**WA-4**		

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CAMSHAFT BEARINGS

DISPLACEMENT					GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE	YEAR	(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
WAUKESHA (Cont.)								
6 cyl	330ci	5.3L	3.858" 98.4mm	**ALL**	Waukesha Eng. VRG330 CNG Series	**WA-8**		
6 cyl	330ci 5340cc	5.3L	3.875" 98.4mm	**ALL**	Waukesha Diesel/Turbocharged Diesel Eng. VRD330, VRD330S Series	**WA-8**		
6 cyl	468ci	7.6L	4.250" 108mm	**ALL**	Waukesha Eng. 140HL, 140HS Series	**WA-10**		
6 cyl	501ci	8.2L	4.500" 114.3mm	**ALL**	Waukesha Eng. V Series	**WA-11**		
6 cyl	525ci	8.6L	4.500" 114.3mm	**ALL**	Waukesha Eng. 140GK, 140GS, 140GKB, 140HK Series	**WA-10**		
6 cyl	554ci	9.1L	4.625" 117.5mm	**ALL**	Waukesha Eng. 140GZ, 140GZB, 140GZC, 140GZU, F554G Series	**WA-10**		
6 cyl	638ci	10.5L	4.750" 120.7mm	**ALL**	Waukesha Eng. 145GS, 145HS Series	**WA-11**		
6cyl	779ci	12.8L	5.250" 133.4mm	**ALL**	Waukesha Eng. 145GK, 145GKB, 145GKU, 145HK Series	**WA-11**		
6 cyl	817ci	13.4L	5.375" 136.5mm	**ALL**	Waukesha Eng. 145GZ, 145GZB, 145GZU, F817G Series	**WA-11**		
6 cyl	1013ci	16.6L	5.750" 146.1mm	**ALL**	Waukesha Eng. 6WAL, 6WALH Series	**WA-9**		
6 cyl	1196ci	19.6L	6.250" 158.8mm	**ALL**	Waukesha Eng. 6WAK, 6WAKB, 6WAKC, 6WAKD, 6WAKDB, 6WAKDBS, 6WAKDS, 6WAKH, 6WAKM, F1197G, F1197GR Series	**WA-9**		
SPECIALTY AFTERMARKET BLOCKS								
8 cyl	-	-	-	**ALL**	Dart Eng. Little "M" Block (2.000" Hsg., OD Grove w/ 3 Hole, 120 Degree Spacing) (+.010 OD)		**DT-1** or **DT-1T** (Coated) **DT-1TR1** (Coated)	
8 cyl	-	-	-	**ALL**	Dart Eng. GMC SHP Block (2.000" Hsg., OD Grove w/ 3 Hole, 120 Degree Spacing) (+.010 OD)		**DT-1** or **DT-1T** (Coated) **DT-1TR1** (Coated)	
8 cyl	-	-	-	**ALL**	Dart Eng. Iron Eagle (2.120" Hsg., OD Grove w/ 3 Hole, 120 Degree Spacing)		**GMP-2T** (Coated)	
8 cyl	-	-	-	**ALL**	Dart Eng. Big "M" Block (2.120" Hsg., OD Groove w/ 3 Hole, 120 Degree Spacing)		**GMP-12LT** (Coated)	
8 cyl	-	-	-	**ALL**	Dart Eng. Ford SHP Block (2.204" Hsg., OD Grove w/ 3 Hole, 120 Degree Spacing) (+.010 OD)		**SBF-1T** (Coated) **SBF-1R1T** (Coated)	
8 cyl	-	-	-	**ALL**	Dart Eng. Ford SVO Block (2.204" Hsg., OD Grove w/ 3 Hole, 120 Degree Spacing) (+.010 OD)		**SBF-1T** (Coated) **SBF-1R1T** (Coated)	
8 cly	-	-	-	**ALL**	Ford Eng. Genesis (2.0395 Hsg.) (+.010 OD)		**FP-01** **FP-01R1**	
8 cyl	-	-	-	**ALL**	GMC Block (2.125" Cam Journal)		**GMP-3** or **GMP-3T** (Coated)	
8 cyl	-	-	-	**ALL**	GMC LSX Block (.700" Wide No. 1-5 Position)	**GM-9**	**GMP-9** or **GMP-9T** (Coated)	
8 cyl	-	-	-	**ALL**	GMC LSX Block (.775" Wide No. 1-5 Position)	**GM-25**	**GMP-25** or **GMP-25T** (Coated)	

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CAMSHAFT BEARINGS

DISPLACEMENT				YEAR	GENERAL APPLICATION DATA	CAMSHAFT BEARING SET		
CYL.	CI./CC.	L	BORE		(ENGINE SERIES/MAKE/MODEL)	STD.	HI-PERF.	OHC
SPECIALTY AFTERMARKET BLOCKS (Cont.)								
8 cyl	-	-	-	**ALL**	Merlin Block	**CH-12**	**CHP-12** or **CHP-12T** (Coated)	
8 cyl	-	-	-	**ALL**	Rodeck Eng.	**RDC-1**	**RDCP-1** or **RDCP-1T** (Coated)	

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
351HP	Ford - HP Cam Bearing Set (Stepped Cam)	351HP-1	1	2.2040	0.660	.0602
		351HP-2	2	2.2040	0.660	.0677
		351HP-3	3	2.2040	0.660	.0752
		351HP-4	4	2.2040	0.660	.0827
		351HP-5	5	2.2040	0.660	.0902
351HPT	Ford - HP Cam Bearing Set (Coated), (Stepped Cam)	351HP-1T	1	2.2040	0.660	.0602
		351HP-2T	2	2.2040	0.660	.0677
		351HP-3T	3	2.2040	0.660	.0752
		351HP-4T	4	2.2040	0.660	.0827
		351HP-5T	5	2.2040	0.660	.0902
351HP-R1	Ford - HP Cam Bearing Set w/ .010 Oversize OD	351HP-1R1	1	2.2140	0.660	.0652
	(Stepped Cam)	351HP-2R1	2	2.2140	0.660	.0727
		351HP-3R1	3	2.2140	0.660	.0802
		351HP-4R1	4	2.2140	0.660	.0877
		351HP-5R1	5	2.2140	0.660	.0952
351RHP	Ford - HP Cam Bearing Set	351HP-1	1,2,3,4,5	2.2040	0.660	.0602
	(2.081" Journals, No.1-5 Position)					
351RHPT	Ford - HP Cam Bearing Set (Coated)	351HP-1T	1,2,3,4,5	2.2040	0.660	.0602
	(2.081" Journals, No.1-5 Position)					
A-1	Allis Chalmers - Cam Bearing Set	A-1-1	1,2,3	1.8805	1.125	.0642
.010 und						
A-2	Allis Chalmers, Le Roi - Cam Bearing Set	A-2-1	1,2,3	2.0055	1.308	.0643
A-3	Allis Chalmers - Cam Bearing Set	A-3-1	1	2.2595	1.385	.0630
		A-3-2	2,3	2.2595	1.000	.0630
A-4	Allis Chalmers - Cam Bearing Set	A-3-1	1	2.2595	1.385	.0630
		A-3-2	2,3,4	2.2595	1.000	.0630
A-5	Allis Chalmers - Cam Bearing Set	A-3-1	1	2.2595	1.385	.0630
		A-3-2	2,3,4,5,6	2.2595	1.000	.0630
A-6	Allis Chalmers - Cam Bearing Set	A-1-1	1,3	1.8805	1.125	.0642
		A-6-1	2	1.8805	1.125	.0642
B-6	American Mototrs, General Motors, Jeep - Cam Bearing	B-6-1	1	1.8865	0.750	.0642
.010 und	Set	B-4-3	2	1.8565	0.750	.0643
		B-4-4	3	1.8265	0.750	.0643
		B-4-5	4	1.7965	0.750	.0643
B-8	General Motors - Cam Bearing Set	B-4-1	1	1.9165	0.750	.0643
.010 und		B-6-1	2	1.8865	0.750	.0642
.020 und		B-4-3	3	1.8565	0.750	.0643
		B-4-4	4	1.8265	0.750	.0643
		B-4-5	5	1.7965	0.750	.0643
B-9	General Motors, Jeep - Cam Bearing Set	B-11-1	1	1.9165	0.750	.0642
.010 und		B-9-2	2,3,4,5	1.9165	0.620	.0642
.020 und						
.030 und						
B-11	General Motors, MG, Rover, Triumph - Cam Bearing Set	B-11-1	1	1.9165	0.750	.0642
.010 und		B-6-1	2	1.8865	0.750	.0642
.020 und		B-4-3	3	1.8565	0.750	.0643
		B-4-4	4	1.8265	0.750	.0643
		B-4-5	5	1.7965	0.750	.0643
B-12	General Motors - Cam Bearing Set	B-11-1	1	1.9165	0.750	.0642
.010 und		B-9-2	2,3,4	1.9165	0.620	.0642
.020 und						
B-12B	General Motors - Special Oil Control Cam Bearing Set	B-11-1B	1	1.9165	0.750	.0642
.010 und	w/ OD Groove No.1 Position	B-9-2	2,3,4	1.9165	0.620	.0642

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
B-13	General Motors - Cam Bearing Set	B-13-1	1,4	1.9365	0.750	.0743
.010 und		B-9-2	2,3	1.9165	0.620	.0642
B-13R	General Motors - Cam Bearing Set w/ .025 Oversize OD	B-13-1R	1,4	1.9625	0.750	.0743
		B-9-2R	2,3	1.9625	0.620	.0642
B-14	General Motors - Cam Bearing Set	B-14-1	1,4	1.9965	0.745	.0741
.010 und		B-14-2	2,3	1.9765	0.630	.0641
.020 und						
B-14R	General Motors - Cam Bearing Set w/ .025 Oversize OD	B-14-1R	1,4	2.0207	0.745	.0741
		B-14-2R	2,3	2.0207	0.630	.0641
BL-1	Austin, MG, Morris - Cam Bearing Set	BL-1-1	1	1.7960	1.125	.0644
		BL-1-2	2	1.7539	0.755	.0644
		BL-1-3	3	1.5039	0.533	.0644
BMA-1*	BMW - OHC Cam Bearing Set (Full Round)	BMA-1-1	1	1.8918	0.800	.0403
		BMA-1-2	2	1.8524	0.800	.0403
		BMA-1-3	3	1.8131	0.800	.0403
		BMA-1-4	4	1.4587	1.390	.0403
BMA-2*	BMW - OHC Cam Bearing Set (Full Round)	BMA-1-1	1	1.8918	0.800	.0403
		BMA-1-2	2	1.8524	0.800	.0403
		BMA-1-3	3	1.8131	0.800	.0403
		BMA-1-10	4	1.5772	0.800	.0403
BMA-3*	BMW - OHC Cam Bearing Set (Full Round)	BMA-1-1	1	1.8918	0.800	.0403
		BMA-1-5	2	1.8918	0.800	.0500
		BMA-1-2	3	1.8524	0.800	.0403
		BMA-1-6	4	1.8524	0.995	.0500
		BMA-1-3	5	1.8131	0.800	.0403
		BMA-1-7	6	1.8131	0.800	.0500
		BMA-1-10	7	1.5772	0.800	.0403
BMA-4*	BMW - OHC Cam Bearing Set (Full Round)	BMA-1-8	1	1.7741	1.115	.0403
		BMA-1-9	2	1.7340	1.085	.0400
		BMA-4-3	3	1.4587	1.000	.0398
BP-9	General Motors, Jeep - HP Cam Bearing Set	BP-11-1	1	1.9165	0.750	.0642
		BP-9-2	2,3,4,5	1.9165	0.620	.0642
BP-9T	General Motors, Jeep - HP Cam Bearing Set (Coated)	BP-11-1T	1	1.9165	0.750	.0642
		BP-9-2T	2,3,4,5	1.9165	0.620	.0642
BP-13	General Motors - HP Cam Bearing Set	BP-13-1	1,4	1.9365	0.750	.0743
		BP-9-2	2,3	1.9165	0.620	.0642
BP-13T	General Motors - HP Cam Bearing Set (Coated)	BP-13-1T	1,4	1.9365	0.750	.0743
		BP-9-2T	2,3	1.9165	0.620	.0642
BU-2	Allis Chalmers, Buda, Military Standard - Cam Bearing	BU-1-1	1	2.1245	1.125	.0615
.010 und	Set	BU-1-2	2,3	2.1245	0.875	.0615
		BU-1-3	4	1.3745	1.000	.0615
C-2	General Motors - Cam Bearing Set	C-2-1	1,2,3,4	1.8797	0.750	.0641
.010 und		C-2-2	5	1.5682	0.875	.0642
C-3	General Motors - Cam Bearing Set	C-3-1	1,2,3,4,5	1.8797	0.620	.0637
.010 und						
.020 und						
.030 und						
C-4	General Motors - Cam Bearing Set	C-4-1	1	2.1687	0.591	.0652
.010 und		C-4-2	2	2.1487	0.591	.0652
.030 und		C-4-3	3	2.1287	0.591	.0652
		C-4-4	4	2.1087	0.591	.0652
		C-4-5	5	2.0887	0.591	.0652

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
C-4A	General Motors - Cam Bearing Set w/ Wide No. 5 Position	C-4-1	1	2.1687	0.591	.0652
		C-4-2	2	2.1487	0.591	.0652
		C-4-3	3	2.1287	0.591	.0652
		C-4-4	4	2.1087	0.591	.0652
		C-4-5A	5	2.0887	0.685	.0652
CA-3	Case Tractor, Continental, Military Standard - Cam	CA-3-1	1	1.8805	1.312	.0642
.010 und	Bearing Set	CA-3-2	2	1.8805	0.718	.0642
		CA-3-3	3	1.8805	1.187	.0642
CA-4	Case Tractor - Cam Bearing Set	CA-4-1	1,3	1.8805	1.218	.0643
.010 und		CA-4-2	2	1.8805	0.495	.0642
CA-5	Case Tractor - Cam Bearing Set	CA-4-1	1,5	1.8805	1.218	.0643
		CA-4-2	2,4	1.8805	0.495	.0642
		CA-5-3	3	1.8805	0.718	.0642
CA-6	Case Tractor - Cam Bearing Set	CA-6-1	1	2.3745	1.656	.0625
		CA-6-2	2,3	2.3745	1.437	.0625
		CA-6-3	4	2.3745	1.156	.0625
CA-7	Case Tractor - Cam Bearing Set	CA-6-1	1	2.3745	1.656	.0625
		CA-6-2	2,3,4	2.3745	1.437	.0625
		CA-6-3	5	2.3745	1.156	.0625
CA-8	Case Tractor - Cam Bearing Set	CA-4-1	1,3	1.8805	1.218	.0643
		CA-4-2	2,4	1.8805	0.495	.0642
CA-9	Case Tractor - Cam Bearing Set	CA-4-1	1	1.8805	1.218	.0643
		CA-4-2	2,3,4	1.8805	0.495	.0642
		CA-9-1	5	1.8805	0.970	.0640
CAT-2	Caterpillar, Ford, General Motors, IHC, Oliver Tractor - Cam Bearing Set	CAT-1-2	1,2,3,4,5	2.6525	0.755	.0750
CAT-2-1	Caterpillar, Ford - Multi-Engine Application (Bearings Sold Separately)	CAT-2-1		2.5630	1.125	.1243
CAT-2-2	Caterpillar, Ford - Multi-Engine Application (Bearings Sold Separately)	CAT-2-2		2.5630	1.004	.1243
CAT-2-3	Caterpillar - Multi-Engine Application (Bearings Sold Separately)	CAT-2-3		2.2776	1.185	.0946
CAT-2-4	Caterpillar - Multi-Engine Application (Bearings Sold Separately)	CAT-2-4		2.2776	2.000	.0946
CAT-2-5	Caterpillar, Ford - Multi-Engine Application (Bearings Sold Separately)	CAT-2-5		2.1880	1.180	.1052
CAT-2-6	Caterpillar, Ford - Multi-Engine Application (Bearings Sold Separately)	CAT-2-6		2.1880	2.000	.1052
CAT-3-1	Caterpillar - Multi-Engine Application (Bearings Sold Separately)	CAT-3-1		2.8745	1.185	.1258
CAT-3-2	Caterpillar - Multi-Engine Application (Bearings Sold Separately)	CAT-3-2		2.8745	1.995	.1256
CAT-5	Caterpillar - Cam Bearing Set	CAT-5-0	1	2.7559	1.340	.0945
		CAT-5-1	2,3,4,5,6,7	2.7165	0.750	.0748
CAT-6	Caterpillar - Cam Bearing Set	CAT-2-1	1	2.5630	1.125	.1243
		CAT-2-2	2,3,4,5	2.5630	1.004	.1243
CAT-7**	Caterpillar - Balance Shaft Bearing Set	CAT-2-1	Center	2.5630	1.125	.1243
		CAT-2-2	Front, Rear	2.5630	1.004	.1243
CAT-8	Caterpillar - Cam Bearing Set	CAT-5-0	1	2.7559	1.340	.0945
		CAT-5-1	2,3,4,5	2.7165	0.750	.0748
CH-2	General Motors, Military Standard - Cam Bearing Set	CH-2-1	1	2.1599	1.125	.0644
.010 und		CH-2-2	2	2.0975	0.937	.0644
.020 und		CH-2-3	3	2.0350	0.937	.0644
.030 und		CH-2-4	4	1.9725	0.937	.0644

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
CH-3	General Motors - Cam Bearing Set	CH-3-1	1	2.2850	1.125	.0641
.010 und		CH-3-2	2	2.2225	0.937	.0641
.020 und		CH-3-3	3	2.1600	0.937	.0641
.030 und		CH-3-4	4	2.0975	0.937	.0642
CH-4	General Motors - Cam Bearing Set	CH-4-1	1	2.0200	0.740	.0744
.010 und		CH-4-2	2	2.0100	0.740	.0694
.020 und		CH-4-3	3,4	2.0000	0.740	.0644
.030 und		CH-4-4	5	2.0100	0.940	.0694
CH-4A	General Motors - Cam Bearing Set w/ .010 Oversize OD	CH-4-1S	1,2,3,4,5	2.0300	0.740	.0795
CH-5	General Motors - Cam Bearing Set	CH-5-1	1	2.0200	0.860	.0744
		CH-5-2	2	2.0100	0.860	.0694
		CH-5-3	3,4	2.0000	0.860	.0644
		CH-5-4	5	2.0100	0.940	.0694
CH-6	Chevrolet Marine, General Motors - Cam Bearing Set	CH-5-2	3	2.0100	0.860	.0694
.010 und		CH-5-3	1,2	2.0000	0.860	.0644
CH-7	Checker, General Motors, Studebaker - Cam Bearing Set	CH-5-2	1,4	2.0100	0.860	.0694
.010 und		CH-5-3	2,3	2.0000	0.860	.0644
.020 und						
.030 und						
CH-8	Checker, General Motors, Isuzu, Military Standard,	CH-4-1	1	2.0200	0.740	.0744
.010 und	Studebaker, Volvo-Penta - Cam Bearing Set	CH-4-2	2,5	2.0100	0.740	.0694
.020 und		CH-4-3	3,4	2.0000	0.740	.0644
.030 und						
CH-8W	General Motors - Cam Bearing Set w/ .001 Under ID	CH-4-1W	1	2.0200	0.740	.0749
		CH-4-2W	2,5	2.0100	0.740	.0699
		CH-4-3W	3,4	2.0000	0.740	.0649
CH-9A	General Motors - Cam Bearing Set	CH-12-1	1	2.1400	0.860	.0941
.010 und	(Bearing Set Requires Cam to Be Grooved)	CH-12-2	2	2.1300	0.980	.0891
		CH-12-3	3,4	2.1200	0.980	.0841
		CH-9-4	5	2.1300	0.980	.0894
CH-10	General Motors - Cam Bearing Set	CH-10-1	1,5	2.3270	0.630	.0790
.010 und		CH-10-2	2,4	2.3171	0.630	.0740
.020 und		CH-10-3	3	2.3088	0.630	.0700
CH-11	Checker, General Motors - Cam Bearing Set	CH-5-3	1,2,3,4	2.0000	0.860	.0644
.010 und						
.020 und						
.030 und						
CH-11B	Checker, General Motors - Special Oil Control Cam Bearing Set w/ OD Groove	CH-5-3B	1,2,3,4	2.0000	0.860	.0644
CH-12	General Motors - Cam Bearing Set	CH-12-1	1	2.1400	0.860	.0941
.010 und		CH-12-2	2,5	2.1300	0.980	.0891
.020 und		CH-12-3	3,4	2.1200	0.980	.0841
.030 und						
CH-12B	General Motors - Special Oil Control Cam Bearing Set	CH-12-1B	1	2.1400	0.860	.0941
	w/ OD Groove	CH-12-2B	2,5	2.1300	0.980	.0891
		CH-12-3B	3,4	2.1200	0.980	.0841
CH-13	General Motors - Cam Bearing Set	CH-13-1	1	2.4125	0.680	.0643
.010 und		CH-13-2	2,3,4,5	2.4125	0.680	.0643
CH-16	American Motors, General Motors, Jeep - Cam Bearing	CH-5-3	1,2,3	2.0000	0.860	.0644
.010 und	Set					
.020 und						
CH-16W	American Motors, General Motors, Jeep - Cam Bearing Set w/ .001 Under ID	CH-5-3W	1,2,3	2.0000	0.860	.0649

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
CH-17	Checker, General Motors, Isuzu - Cam Bearing Set	CH-4-1	1	2.0200	0.740	.0744
.010 und		CH-4-2	2,4	2.0100	0.740	.0694
.020 und		CH-4-3	3	2.0000	0.740	.0644
CH-17X	Checker, General Motors, Isuzu - Cam Bearing Set	CH-4-1W	1	2.0200	0.740	.0749
	w/ .001 Under ID	CH-4-2W	2,4	2.0100	0.740	.0699
		CH-4-3W	3	2.0000	0.740	.0649
CH-17G	General Motors, Isuzu - Cam Bearing & Balance Shaft	CH-4-1	1	2.0200	0.740	.0744
	Bearing Kit (Combines CH-17 & CHG-15A**)	CH-4-2	2,4	2.0100	0.740	.0694
		CH-4-3	3	2.0000	0.740	.0644
		CHG-15-1	1	1.8740	0.835	.1860
		SH-1798T	(Tool)			
CH-18	General Motors, Isuzu, Jeep - Cam Bearing Set	CH-18-1A	1	2.0100	0.625	.0691
.010 und		CH-18-2	2,3	1.9995	0.630	.0640
.020 und		CH-18-4	4	2.0095	0.625	.0691
CH-18A	General Motors, Isuzu, Jeep - Cam Bearing Set	CH-18-1A	1	2.0100	0.625	.0691
.010 und	w/ Wide No. 2, 3 Position	CH-18-2A	2,3	1.9995	0.720	.0640
		CH-18-4	4	2.0095	0.625	.0691
CH-18R8	General Motors, Isuzu, Jeep - Cam Bearing Set	CH-18-1R8	1	2.0900	0.625	.1091
	w/ Oversize OD	CH-18-2R8	2,3	2.0800	0.720	.1040
		CH-18-4R8	4	2.0900	0.625	.1091
CH-18RS	General Motors, Isuzu, Jeep - Cam Bearing Set	CH-18-1R3	1	2.0400	0.625	.0848
	w/ Oversize OD	CH-18-2R2	2,3	2.0300	0.720	.0798
		CH-18-4R4	4	2.0400	0.625	.0847
CH-19	General Motors, Isuzu - Cam Bearing Set	CH-19-1	1	2.0199	0.625	.0741
.010 und		CH-18-4	2,5	2.0095	0.625	.0691
		CH-18-2	3,4	1.9995	0.630	.0640
CH-19X2	General Motors, Isuzu - Cam Bearing Set w/ .002 Under ID	CH-19-1X2	1	2.0199	0.625	.0751
		CH-18-4X2	2,5	2.0095	0.625	.0701
		CH-18-2X2	3,4	1.9995	0.630	.0650
CH-20	General Motors - Cam Bearing Set	CH-20-1	1,2,3	2.0000	0.710	.0644
CH-21	General Motors, Isuzu - Cam Bearing Set	CH-4-1	1,4	2.0200	0.740	.0744
.010 und		CH-4-2	3	2.0100	0.740	.0694
.020 und		CH-4-3	2	2.0000	0.740	.0644
CH-21G	General Motors, Isuzu - Cam Bearing & Balance Shaft	CH-4-1	1,4	2.0200	0.740	.0744
	Bearing Kit (Combines CH-21 & CHG-15A**)	CH-4-2	3	2.0100	0.740	.0694
		CH-4-3	2	2.0000	0.740	.0644
		CHG-15-1	1	1.8740	0.835	.1860
		SH-1798T	(Tool)			
CH-21X	General Motors, Isuzu - Cam Bearing Set w/ .001 Under ID	CH-4-1W	1,4	2.0200	0.740	.0749
		CH-4-2W	3	2.0100	0.740	.0699
		CH-4-3W	2	2.0000	0.740	.0649
CH-23	General Motors - Cam Bearing Set	CH-10-1	2,4	2.3270	0.630	.0790
.010 und		CH-23-1	1,5	2.3470	0.630	.0890
.020 und		CH-10-3	3	2.3088	0.630	.0700
CH-24	General Motors - Cam Bearing Set	CH-24-1	1	2.1766	0.905	.0747
		CH-24-2	2,3	2.1565	0.630	.0646
		CH-24-3	4	2.1766	0.620	.0747
CH-25	General Motors - Cam Bearing Set	CH-25-1	1,5	2.3482	0.775	.0890
.030 und		CH-25-2	2,4	2.3285	0.775	.0799
		CH-25-3	3	2.3088	0.775	.0700
CHG-14**	General Motors, Isuzu, Opel - Balance Shaft Bearing Set	AGB-14-1	1,2,3	1.8895	0.984	.0586
CHG-15A**	General Motors, Isuzu - Balance Shaft Bearing Set	CHG-15-1	1	1.8740	0.835	.1860
	(Rear Bearing)	SH-1798T	(Tool)			

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
CHG-22**	General Motors - Auxiliary Shaft Bearing Set	CHG-22-1	1	2.0100	1.172	.0691
		CH-18-2	2,3	1.9995	0.630	.0640
		CH-18-4	4	2.0095	0.625	.0691
CHG-23**	General Motors - Balance Shaft Bearing Set	CHG-23-1	Right Rear	1.6253	0.865	.0808
		CHG-23-2	Right Front	1.5969	0.865	.0808
		CHG-23-3	Left Front	1.8672	0.862	.0808
		CHG-23-4	Left Rear	1.8955	0.862	.0808
CHG-24**	General Motors - Balance Shaft Bearing Set	CHG-24-1	1,2 (2 pcs.)	1.6050	1.020	.0786
CHP-4	General Motors - HP Cam Bearing Set	CHP-4-1	1	2.0200	0.740	.0744
		CHP-4-2	2	2.0100	0.740	.0694
		CHP-4-3	3,4	2.0000	0.740	.0644
		CHP-4-4	5	2.0100	0.940	.0694
CHP-4T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-1T	1	2.0200	0.740	.0744
		CHP-4-2T	2	2.0100	0.740	.0694
		CHP-4-3T	3,4	2.0000	0.740	.0644
		CHP-4-4T	5	2.0100	0.940	.0694
CHP-8	Checker, General Motors, Isuzu, Military Standard,	CHP-4-1	1	2.0200	0.740	.0744
	Studebaker, Volvo-Penta - HP Cam Bearing Set	CHP-4-2	2,5	2.0100	0.740	.0694
		CHP-4-3	3,4	2.0000	0.740	.0644
CHP-8T	Checker, General Motors, Isuzu, Military Standard,	CHP-4-1T	1	2.0200	0.740	.0744
	Studebaker, Volvo-Penta - HP Cam Bearing Set (Coated)	CHP-4-2T	2,5	2.0100	0.740	.0694
		CHP-4-3T	3,4	2.0000	0.740	.0644
CHP-8R1	General Motors - HP Cam Bearing Set	CHP-4-11	1,2,3,4,5	2.0300	0.740	.0794
	w/ .010 Oversize OD					
CHP-8R1T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-11T	1,2,3,4,5	2.0300	0.740	.0794
	w/ .010 Oversize OD					
CHP-8R2	General Motors - HP Cam Bearing Set	CHP-4-12	1,2,3,4,5	2.0400	0.740	.0844
	w/ .020 Oversize OD					
CHP-8R2T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-12T	1,2,3,4,5	2.0400	0.740	.0844
	w/ .020 Oversize OD					
CHP-8R3	General Motors - HP Cam Bearing Set	CHP-4-13	1,2,3,4,5	2.0500	0.740	.0894
	w/ .030 Oversize OD					
CHP-8R3T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-13T	1,2,3,4,5	2.0500	0.740	.0894
	w/ .030 Oversize OD					
CHP-8R4	General Motors - HP Cam Bearing Set	CHP-4-14	1,2,3,4,5	2.0600	0.740	.0944
	w/ .040 Oversize OD					
CHP-8R4T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-14T	1,2,3,4,5	2.0600	0.740	.0944
	w/ .040 Oversize OD					
CHP-10	General Motors - HP Cam Bearing Set	CHP-10-1	1,5	2.3270	0.630	.0790
		CHP-10-2	2,4	2.3171	0.630	.0740
		CHP-10-3	3	2.3088	0.630	.0700
CHP-10T	General Motors - HP Cam Bearing Set (Coated)	CHP-10-1T	1,5	2.3270	0.630	.0790
		CHP-10-2T	2,4	2.3171	0.630	.0740
		CHP-10-3T	3	2.3088	0.630	.0700
CHP-12	General Motors - HP Cam Bearing Set	CHP-12-1	1	2.1400	0.860	.0941
		CHP-12-2	2,5	2.1300	0.980	.0891
		CHP-12-3	3,4	2.1200	0.980	.0841
CHP-12T	General Motors - HP Cam Bearing Set (Coated)	CHP-12-1T	1	2.1400	0.860	.0941
		CHP-12-2T	2,5	2.1300	0.980	.0891
		CHP-12-3T	3,4	2.1200	0.980	.0841
CHP-12R1	General Motors - HP Cam Bearing Set	CHP-12-11	1	2.1500	0.860	.0991
	w/ .010 Oversize OD	CHP-12-21	2,3,4,5	2.1500	0.980	.0991
CHP-12R2	General Motors - HP Cam Bearing Set	CHP-12-12	1	2.1600	0.860	.1041
	w/ .020 Oversize OD	CHP-12-22	2,3,4,5	2.1600	0.980	.1041

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
CHP-17	Checker, General Motors, Isuzu - HP Cam Bearing Set	CHP-4-1	1	2.0200	0.740	.0744
		CHP-4-2	2,4	2.0100	0.740	.0694
		CHP-4-3	3	2.0000	0.740	.0644
CHP-17T	General Motors, Isuzu - HP Cam Bearing Set (Coated)	CHP-4-1T	1	2.0200	0.740	.0744
		CHP-4-2T	2,4	2.0100	0.740	.0694
		CHP-4-3T	3	2.0000	0.740	.0644
CHP-21	General Motors, Isuzu - HP Cam Bearing Set	CHP-4-1	1,4	2.0200	0.740	.0744
		CHP-4-2	3	2.0100	0.740	.0694
		CHP-4-3	2	2.0000	0.740	.0644
CHP-21T	General Motors, Isuzu - HP Cam Bearing Set (Coated)	CHP-4-1T	1,4	2.0200	0.740	.0744
		CHP-4-2T	3	2.0100	0.740	.0694
		CHP-4-3T	2	2.0000	0.740	.0644
CHP-23	General Motors - HP Cam Bearing Set	CHP-10-1	2,4	2.3270	0.630	.0790
		CHP-23-1	1,5	2.3470	0.630	.0890
		CHP-10-3	3	2.3088	0.630	.0700
CHP-23T	General Motors - HP Cam Bearing Set	CHP-10-1T	2,4	2.3270	0.630	.0790
		CHP-23-1T	1,5	2.3470	0.630	.0890
		CHP-10-3T	3	2.3088	0.630	.0700
CHP-25	General Motors - HP Cam Bearing Set	CHP-25-1	1,5	2.3482	0.775	.0890
		CHP-25-2	2,4	2.3285	0.775	.0799
		CHP-25-3	3	2.3088	0.775	.0700
CHP-25T	General Motors - HP Cam Bearing Set	CHP-25-1T	1,5	2.3482	0.775	.0890
		CHP-25-2T	2,4	2.3285	0.775	.0799
		CHP-25-3T	3	2.3088	0.775	.0700
CO-3	Continental, IHC, Jeep, Oliver Tractor - Cam Bearing Set	K-1-2	1	1.9375	0.937	.0630
.010 und		K-1-3	2	1.8750	1.620	.0628
.020 und		K-1-4	3	1.3748	1.156	.0628
.030 und						
CO-7	Continental, Mack - Cam Bearing Set	CO-7-1	1	2.3743	1.094	.0940
		CO-7-2	2	2.3120	1.000	.0940
		CO-7-3	3	2.2495	1.000	.0940
		CO-7-4	4	1.9370	1.250	.0940
CO-8	Continental, John Deere, Mack, Military Standard,	K-1-1	1	2.0000	0.875	.0628
.010 und	Oliver Tractor - Cam Bearing Set	K-1-3	2	1.8810	1.620	.0628
.020 und		K-1-4	3	1.3748	1.156	.0628
.030 und						
CO-9	Continental, IHC - Cam Bearing Set	CO-9-1	1	1.9375	1.323	.0626
		CO-9-2	2	1.8750	0.573	.0626
		CO-9-3	3	1.8125	1.135	.0626
CU-5A	Cummins, Ford, General Motors, IHC, Komatsu - Cam	CU-1-1	1	2.1290	2.250	.0644
	Bearing Set	CU-5-2A	2,3,4,5,6,7	2.1250	1.685	.0644
CU-9	Cummins, Ford, General Motors, IHC - Cam Bearing Set	CU-9-1	1,2,4,6	2.6870	1.685	.0939
		CU-9-2	3,5	2.6870	2.185	.0939
		CU-8-1	7	2.6870	1.685	.0939
CU-10	Cummins - Cam Bearing Set	CU-1-1	1	2.1290	2.250	.0644
		CU-5-2A	2,3,4,5	2.1250	1.685	.0644
CU-11	Cummins, Ford - Cam Bearing Set	CU-11-1	1,5	2.1870	1.905	.0932
		CU-11-2	2,3,4	2.1870	0.905	.0932
CU-11A	Cummins - Cam Bearing Set	CU-11-1	1,4	2.1870	1.905	.0932
		CU-11-2	2,3	2.1870	0.905	.0932
CU-12	Case Tractor, Chrysler, Cummins, Ford - Cam Bearing Set	CU-12-1	1	2.2535	1.005	.0620
CU-13	Cummins - Cam Bearing Set	CU-13-1	1,5	2.6870	1.810	.0937
		CU-13-2	2,3,4	2.6870	1.070	.0937

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
CU-14	Chrysler, Cummins - Cam Bearing Set	CU-14-1	1	2.3323	1.005	.1010
DA-1	Nissan - Cam Bearing Set	DA-1-1	1	1.8509	0.930	.0625
		DA-1-2	2	1.8312	0.555	.0625
		DA-1-3	3	1.8115	0.555	.0625
		DA-1-4	4	1.7918	0.555	.0625
		DA-1-5	5	1.7495	0.555	.0625
DA-2	Astin, Audi, IHC, Metropolitan-Nash, MG, Morris, Nissan,	DA-2-1	1	1.9155	1.455	.0624
.010 und	Nuffield Tractor, Riley - Cam Bearing Set	DA-2-2	2	1.8555	1.070	.0624
.020 und		DA-2-3	3	1.7495	0.812	.0624
DA-3A	Nissan - Cam Bearing Set	DA-3-1	1	1.9155	0.945	.0625
		DA-3-2	2	1.8555	0.865	.0625
		DA-3-3A	3	1.7495	0.947	.0625
DA-5	IHC, Nissan - Cam Bearing Set	DA-3-1	1	1.9155	0.945	.0625
		DA-3-2	2,3	1.8555	0.865	.0625
		DA-3-3A	4	1.7495	0.947	.0625
DE-1	Detroit Diesel - Cam Bearing & Balance Shaft Bearing Set	DE-1-1	1,2,3,4,5	2.2505	1.545	.0925
DE-2	Detroit Diesel - Cam Bearing & Balance Shaft Bearing Set	DE-2-1	1,3 (4 pcs.)	2.3755	1.505	.0943
		DE-2-2	2 (1 pcs.)	2.3655	1.505	.0900
DE-2A	Detroit Diesel, Military Standard - Cam Bearing &	DE-2-1	1,3 (4 pcs.)	2.3755	1.505	.0943
	Balance Shaft Bearing Set	DE-2-2	2 (2 pcs.)	2.3655	1.505	.0900
DE-2R1	Detroit Diesel - Cam Bearing & Balance Shaft Bearing	DE-2-1R1	1,3 (4 pcs.)	2.3855	1.505	.0993
	Set w/ .010 Oversize OD	DE-2-2R1	2 (1 pcs.)	2.3755	1.505	.0943
DE-2AR1	Detroit Diesel, Military Standard - Cam Bearing &	DE-2-1R1	1,3 (4 pcs.)	2.3855	1.505	.0993
	Balance Shaft Bearing Set w/ .010 Oversize OD	DE-2-2R1	2 (2 pcs.)	2.3755	1.505	.0943
DE-4	Detroit Diesel, Ford - Cam Bearing Set	DE-4-1	1,2,3,4,5	2.7216	0.705	.0774
DE-5	Detroit Diesel - Cam Bearing & Balance Shaft Bearing Set	DE-2-1	1,4	2.3755	1.505	.0943
		DE-2-2	2,3	2.3655	1.505	.0900
DE-5R1	Detroit Diesel - Cam Bearing & Balance Shaft Bearing	DE-2-1R1	1,4	2.3855	1.505	.0993
	Set w/ .010 Oversize OD	DE-2-2R1	2,3	2.3755	1.505	.0943
DE-7	Detroit Diesel - Cam Bearing & Balance Shaft Bearing Set	DE-2-1	1,5 (4 pcs.)	2.3755	1.505	.0943
		DE-2-2	2,4 (2 pcs.)	2.3655	1.505	.0900
		DE-2-3	3 (1 pcs.)	2.3555	1.505	.0844
DT-1	Specialty Aftermarket Blocks - HP Cam Bearing Set	DT-1-1	1,2,3,4,5	2.0000	0.740	.0644
	(OD Grove w/ 3 Hole, 120 Degree Spacing)					
DT-1T	Specialty Aftermarket Blocks - HP Cam Bearing Set	DT-1-1T	1,2,3,4,5	2.0000	0.740	.0644
	(Coated), (OD Grove w/ 3 Hole, 120 Degree Spacing)					
DT-1TR1	Specialty Aftermarket Blocks - HP Cam Bearing Set	DT-1-11T	1,2,3,4,5	2.0100	0.740	.0694
	(Coated) w/ .010 Oversize OD					
	(OD Grove w/ 3 Hole, 120 Degree Spacing)					
F-1	Ford, Military Standard - Cam Bearing Set	F-1-1	1,3	1.9280	1.600	.0648
.010 und		F-1-2	2	1.9280	1.312	.0648
.020 und						
.030 und						
F-7	Ford - Cam Bearing Set	F-22-1	1,2,4	2.0580	0.875	.0649
.010 und		F-7-2	3	2.0580	0.875	.0649
.020 und						
.030 und						
F-9A	Ford - Cam Bearing Set (Cams w/ Grooved No. 3 Journal)	F-9-1	1	2.0580	0.875	.0648
.010 und		F-9-3	2,3,4,5	2.0580	0.620	.0648
.020 und						
.030 und						

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SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
F-9B	Ford - Cam Bearing Set	F-9-1	1	2.0580	0.875	.0648
.010 und	(Cams w/ Cross-Drilled No.3 Journal)	F-9-2B	2,3,4,5	2.0580	0.620	.0648
.020 und						
.030 und						
F-11	Ford - Cam Bearing Set	F-8-1	1,5	2.2500	0.875	.0618
.020 und		F-11-2	2,3,4	2.2500	0.755	.0618
.030 und						
F-12	Ford - Cam Bearing Set	F-12-1	1	2.6000	0.755	.0617
.010 und		F-11-2	2,3,4	2.2500	0.755	.0618
		F-8-1	5	2.2500	0.875	.0618
F-16	Ford, Military Standard - Cam Bearing Set	F-16-1	1	2.6025	0.670	.0629
.010 und		F-16-2	2,3,4,5	2.4985	0.670	.0629
F-18	Ford - Cam Bearing Set	F-18-1	1	2.2040	0.660	.0602
.010 und		F-18-2	2	2.1890	0.660	.0602
.020 und		F-18-3	3	2.1740	0.660	.0602
.030 und		F-18-4	4	2.1590	0.660	.0602
		F-18-5	5	2.1440	0.660	.0602
F-19	Ford - Cam Bearing Set	F-19-1	1	2.4480	0.710	.0609
.020 und		F-19-2	2	2.4330	0.710	.0609
.030 und		F-19-3	3	2.4180	0.710	.0609
		F-19-4	4	2.4030	0.710	.0609
		F-14-5	5	2.3880	0.710	.0610
F-22	Ford - Cam Bearing Set	F-22-1	1,2,3,4	2.0580	0.875	.0649
.010 und						
.020 und						
.030 und						
F-23A	Ford - Cam Bearing Set	F-23-1A	1,2,3,4	2.1445	0.860	.0624
.010 und						
.020 und						
.030 und						
F-23B	Ford - Special Oil Control Cam Bearing Set w/ OD Groove	F-23-1B	1,2,3,4	2.1445	0.860	.0624
.010 und						
F-24	Ford - Cam Bearing Set	F-33-1	1	2.3100	0.620	.0912
		F-24-2	2	2.2950	0.620	.0844
		F-24-3	3	2.2800	0.620	.0769
		F-24-4	4	2.2650	0.620	.0694
		F-24-5	5	2.2500	0.560	.0619
F-25	Jeep, Military Standard - Cam Bearing Set	F-25-1	1,2,3	2.1365	1.000	.0624
F-26	Ford - Cam Bearing Set	F-26-1	1	2.2500	0.660	.0616
.010 und		F-18-2	2	2.1890	0.660	.0602
.020 und		F-18-3	3	2.1740	0.660	.0602
.030 und		F-18-4	4	2.1590	0.660	.0602
		F-18-5	5	2.1440	0.660	.0602
F-28	Ford - Cam Bearing Set	F-28-1	1	1.6890	0.790	.0633
.010 und		F-28-2	2	1.6890	0.685	.0633
.020 und		F-28-3	3	1.6890	0.790	.0633
F-29	Ford - Cam Bearing Set	F-29-1	1	1.7755	0.785	.0600
.020 und		F-29-2	2	1.8785	0.665	.0600
		F-29-3A	3	1.8935	0.625	.0600
F-30	Ford - Cam Bearing Set	F-30-1	1,2,3,4,5	2.2500	0.580	.0618
.010 und						
.020 und						
.030 und						

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
F-30R1	Ford - Cam Bearing Set w/ .010 Oversize OD	F-30-1R1	1,2,3,4,5	2.2600	0.580	.0668
F-30R2	Ford - Cam Bearing Set w/ .020 Oversize OD	F-30-1R2	1,2,3,4,5	2.2700	0.580	.0718
F-31	Ford - Cam Bearing Set	F-31-1	1	1.7734	0.775	.0604
.010 und		F-31-2	2	1.7585	0.700	.0604
		F-31-3	3	1.7435	0.700	.0604
		F-31-4	4	1.7285	0.595	.0604
F-32	Ford - Cam Bearing Set	F-32-1	1	1.9785	0.720	.0832
.010 und		F-17-2	2	1.9635	0.720	.0757
.020 und		F-17-3	3	1.9485	0.720	.0682
.030 und		F-17-4	4	1.9335	0.720	.0607
F-33	Ford - Cam Bearing Set	F-33-1	1	2.3100	0.620	.0912
.010 und		F-15-2	2	2.2950	0.620	.0841
.020 und		F-15-3	3	2.2800	0.620	.0766
.030 und		F-15-4	4	2.2650	0.620	.0691
		F-15-5	5	2.2500	0.560	.0616
F-34	Ford, Mazda - Cam Bearing Set	F-34-1	1,2,3,4	1.9011	0.693	.0638
.010 und						
.030 und						
F-34B	Ford - Special Oil Control Cam Bearing Set w/ OD Groove	F-34-1B	1,2,3,4	1.9011	0.693	.0638
.010 und						
F-34S	Ford, Mazda - Cam Bearing Set w/ .020 Oversize OD	F-34-1S	1,2,3,4	1.9203	0.693	.0738
F-38	Ford - Cam Bearing & Auxiliary Shaft Bearing Kit	AGB-51-1	1,2	2.1920	0.635	.0694
	(Combines F-52 & FG-51**)	F-52-1	1,4	2.1920	0.635	.0694
		F-51-2	2,3	2.1770	0.555	.0619
F-38X	Ford - Cam Bearing & Auxiliary Shaft Bearing Kit	AGB-51-1	1,2	2.1920	0.635	.0694
	w/ Special Wide No. 2, 3 Position	F-52-1X	1,4	2.1920	0.635	.0688
	(Combines F-52X & FG-51**)	F-51-2X	2,3	2.1770	0.595	.0613
F-41*	Ford, Mazda - OHC Cam Bearing Set (Half Shell)	F-41-1	1	1.9299	0.949	.0794
		F-41-2	2,3	1.9299	0.714	.0794
F-42	Ford, Saab - Cam Bearing Set	F-42-1	1	1.7585	0.775	.0604
		F-42-2	2	1.7435	0.700	.0604
		F-31-4	3	1.7285	0.595	.0604
F-43	Ford - Cam Bearing Set	F-43-1	1,2,3,4	2.5345	0.765	.0708
F-44	Ford - Cam Bearing Set	F-43-1	1,2,3,4,5	2.5345	0.765	.0708
F-45	Ford - Cam Bearing Set	F-45-1	1,4	2.1920	0.635	.0694
.010 und		F-45-2	2,3	2.1770	0.555	.0619
F-46	Ford - Cam Bearing Set	F-46-1	1	2.2047	0.723	.0973
.010 und		F-46-2	2,3	2.1890	0.723	.0894
		F-46-3	4	2.2047	0.503	.0973
F-47	Ford - Cam Bearing Set	F-47-1	1	1.8521	0.780	.0605
.010 und		F-47-2	2	1.8371	0.700	.0605
		F-47-3	3	1.8222	0.700	.0605
		F-47-4	4	1.8072	0.595	.0605
F-47B	Ford - Special Oil Control Cam Bearing Set	F-47-1	1	1.8521	0.780	.0605
.010 und	w/ OD Groove No. 2,3 Position	F-47-2B	2	1.8371	0.700	.0605
		F-47-3B	3	1.8222	0.700	.0605
		F-47-4	4	1.8072	0.595	.0605
F-48	Ford, Mazda - Cam Bearing Set	F-48-1	1	2.1536	0.955	.0719
.010 und		F-48-2	2,3	2.1339	0.537	.0620
.030 und		F-48-4	4	2.1536	0.537	.0719

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SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
F-48A	Ford - Cam Bearing Set w/ ID Groove No. 4 Position	F-48-1	1	2.1536	0.955	.0719
.010 und		F-48-2	2,3	2.1339	0.537	.0620
		F-48-4A	4	2.1536	0.537	.0719
F-49	Ford - Cam Bearing Set	F-49-1	1,4	2.1590	0.860	.0695
.010 und		F-49-2	2,3	2.1445	0.860	.0624
F-49B	Ford - Special Oil Control Cam Bearing Set w/ OD Groove	F-49-1B	1,4	2.1590	0.860	.0695
.010 und		F-23-1B	2,3	2.1445	0.860	.0624
F-50	Ford, Mazda - Cam Bearing Set	F-50-1	1	2.0776	0.775	.0617
.010 und		F-50-2	2	2.0626	0.700	.0614
		F-50-3	3	2.0476	0.700	.0614
		F-50-4	4	2.0327	0.585	.0615
F-50A	Ford, Mazda - Cam Bearing Set	F-50-1	1	2.0776	0.775	.0617
.010 und	w/ Special Wide No. 4 Position	F-50-2	2	2.0626	0.700	.0614
.020 und		F-50-3	3	2.0476	0.700	.0614
.030 und		F-50-4A	4	2.0327	0.825	.0615
F-52	Ford - Cam Bearing Set	F-52-1	1,4	2.1920	0.635	.0694
.010 und		F-51-2	2,3	2.1770	0.555	.0619
F-55	Ford - Cam Bearing Set	F-43-1	1,2,3,4,5,6,7	2.5345	0.765	.0708
F-57	Ford - Cam Bearing Set	F-30-1S	1,2,3,4,5	2.2650	0.625	.0694
FA-1*	Ford - OHC Cam Bearing Set (Full Round)	FA-1-1	1	1.9035	0.925	.0503
		FA-1-2	2	1.8985	0.925	.0478
		FA-1-3	3	1.8935	0.925	.0453
		FA-1-4	4	1.8885	0.925	.0428
		FA-1-5	5	1.8835	0.925	.0403
FA-2*	Ford - OHC Cam Bearing Set (Full Round)	FA-2-1	1	1.8435	0.845	.0403
		FA-2-2	2	1.8535	0.845	.0403
		FA-2-3	3	1.8635	0.845	.0403
		FA-2-4	4	1.8735	0.845	.0403
		FA-2-5	5	1.8835	0.845	.0403
FA-3*	Ford - OHC Cam Bearing Set (Half Shell)	FA-3-2(U)	1,2,3,4,5,6	1.1469	0.570	.0422
.010 und	(One Set Per Head)	FA-3-1(L)	1,2,3,4,5,6	1.1469	0.570	.0422
.020 und						
FA-4*	Ford - OHC Cam Bearing Set (Half Shell)	FA-4-3(U)	1,6,7,12	1.1469	0.570	.0420
	(One Set Per Head)	FA-4-4(U)	2,3,4,5,8,9,10,11	1.1469	0.455	.0420
		FA-3-2(L)	1,6,7,12	1.1469	0.570	.0422
		FA-4-1(L)	2,3,4,5	1.1469	0.455	.0420
		FA-4-2(L)	8,9,10,11	1.1469	0.455	.0420
FA-5*	Ford - OHC Cam Bearing Set (Half Shell)	FA-4-3(U)	1,6,7,12	1.1469	0.570	.0420
	(One Set Per Head)	FA-4-4(U)	2,3,4,5,8,9,10,11	1.1469	0.455	.0420
		FA-5-1(L)	1,6,7,12	1.1469	0.570	.0422
		FA-4-1(L)	2,3,4,5	1.1469	0.455	.0420
		FA-4-2(L)	8,9,10,11	1.1469	0.455	.0420
FA-6*	Ford - OHC Cam Bearing Set (Half Shell)	FA-6-2(U)	1	1.1875	0.960	.0422
.010 und		FA-6-4(U)	2,3,4	1.1875	0.680	.0422
.020 und		FA-6-1(L)	1	1.1875	0.960	.0422
		FA-6-3(L)	2,3,4	1.1875	0.680	.0422
FA-13L*	Ford - OHC Cam Bearing Set (Half Shell)	FA-13-1(L)	1	1.2132	1.215	.0422
.010 und		FA-13-2(U)	1	1.2132	1.215	.0422
.020 und		FA-13-3(L)	2,3,4,5	1.2132	0.700	.0422
		FA-13-4(U)	2,3,4,5	1.2132	0.700	.0422

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FA-13R*	Ford - OHC Cam Bearing Set (Half Shell)	FA-13-2(U)	1	1.2132	1.215	.0422
.010 und		FA-13-5(L)	1	1.2132	1.215	.0422
.020 und		FA-13-3(L)	2,3,4,5	1.2132	0.700	.0422
		FA-13-4(U)	2,3,4,5	1.2132	0.700	.0422
FA-14L*	Ford - OHC Cam Bearing Set (Half Shell)	FA-3-2(U)	1,3,4,5,7	1.1469	0.570	.0422
		FA-3-1S(U)	2,6	1.1469	0.570	.0422
		FA-3-1(L)	1,2,3,4,5,6,7	1.1469	0.570	.0422
FA-14R*	Ford - OHC Cam Bearing Set (Half Shell)	FA-3-2(U)	1,2,3,4,5,6,7	1.1469	0.570	.0422
		FA-3-1(L)	1,2,3,4,5,6,7	1.1469	0.570	.0422
FG-1-1**	Ford - Balance Shaft Drive Gear Bushing (Bearings Sold Separately)	FG-1-1		2.1430	0.815	.0701
FG-29**	Ford - Balance Shaft Bearing Set	AGB-29-1	1	1.7750	0.500	.0606
FG-34**	Ford, Mazda - Balance Shaft Bearing Set	AGB-34-1	1	1.7975	0.500	.0714
		AGB-34-2	2	1.7775	0.500	.0614
FG-51**	Ford - Balance Shaft Bearing Set	AGB-51-1	1,2	2.1920	0.635	.0694
.010 und						
FG-53**	Ford - Auxiliary Shaft Bearing Set	FG-53-1	Front	1.8522	1.142	.0610
		FG-53-2	Rear	1.8072	0.905	.0610
FP-01	Ford - HP Cam Bearing Set	FP-01-1	1	2.3095	0.760	.0912
		FP-01-2	3,5	2.3095	0.760	.0912
		FP-01-4	2,4	2.3095	0.760	.0912
FP-01R1	Ford - HP Cam Bearing Set	FP-01-1R1	1	2.3200	0.760	.0962
	w/ .010 Oversize OD	FP-01-2R1	3,5	2.3200	0.760	.0962
		FP-01-4R1	2,4	2.3200	0.760	.0962
FP-18	Ford - HP Cam Bearing Set	FP-18-1	1	2.2040	0.660	.0602
		FP-18-2	2	2.1890	0.660	.0602
		FP-18-3	3	2.1740	0.660	.0602
		FP-18-4	4	2.1590	0.660	.0602
		FP-18-5	5	2.1440	0.660	.0602
FP-18T	Ford - HP Cam Bearing Set (Coated)	FP-18-1T	1	2.2040	0.660	.0602
		FP-18-2T	2	2.1890	0.660	.0602
		FP-18-3T	3	2.1740	0.660	.0602
		FP-18-4T	4	2.1590	0.660	.0602
		FP-18-5T	5	2.1440	0.660	.0602
FP-26	Ford - HP Cam Bearing Set	FP-26-1	1	2.2500	0.660	.0616
		FP-18-2	2	2.1890	0.660	.0602
		FP-18-3	3	2.1740	0.660	.0602
		FP-18-4	4	2.1590	0.660	.0602
		FP-18-5	5	2.1440	0.660	.0602
FP-26T	Ford - HP Cam Bearing Set (Coated)	FP-26-1T	1	2.2500	0.660	.0616
		FP-18-2T	2	2.1890	0.660	.0602
		FP-18-3T	3	2.1740	0.660	.0602
		FP-18-4T	4	2.1590	0.660	.0602
		FP-18-5T	5	2.1440	0.660	.0602
FP-30	Ford - HP Cam Bearing Set	FP-30-1	1,2,3,4,5	2.2500	0.580	.0618
FP-30AT	Ford - HP Cam Bearing Set (Coated) w/ Wide No. 1-5 Position	FP-26-1T	1,2,3,4,5	2.2500	0.660	.0616
FP-30R	Ford - HP Cam Bearing Set w/ .005 Oversize OD	FP-30-1R	1,2,3,4,5	2.2550	0.580	.0645
FP-30T	Ford - HP Cam Bearing Set (Coated)	FP-30-1T	1,2,3,4,5	2.2500	0.580	.0618

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
FP-33	Ford - HP Cam Bearing Set	FP-33-1	1	1.7734	0.775	.0604
		FP-15-2	2	2.2950	0.620	.0841
		FP-15-3	3	2.2800	0.620	.0766
		FP-15-4	4	2.2650	0.620	.0691
		FP-15-5	5	2.2500	0.560	.0616
FP-33T	Ford - HP Cam Bearing Set (Coated)	FP-33-1T	1	1.7734	0.775	.0604
		FP-15-2T	2	2.2950	0.620	.0841
		FP-15-3T	3	2.2800	0.620	.0766
		FP-15-4T	4	2.2650	0.620	.0691
		FP-15-5T	5	2.2500	0.560	.0616
GM-5	General Motors - Cam Bearing Set	GM-5-1	1	2.1875	1.680	.0641
.030 und		GM-5-2	2	2.1562	0.880	.0641
		GM-5-3	3	2.1250	0.880	.0641
		GM-5-4	4	1.9725	1.150	.0641
GM-7	General Motors - Cam Bearing Set	GM-7-1	1	2.3280	0.895	.0798
.010 und		GM-7-2	2	2.3190	0.775	.0753
		GM-7-3	3	2.3090	0.775	.0703
		GM-7-4	4	2.2990	0.775	.0653
		GM-7-5	5	2.1420	0.775	.0655
GM-7R2	General Motors - Cam Bearing Set w/ .020 Oversize OD	GM-7-1R2	1	2.3480	0.895	.0898
		GM-7-2R2	2,3,4	2.3480	0.775	.0898
		GM-7-5	5	2.1420	0.775	.0655
GM-8	General Motors - Cam Bearing Set	GM-8-1	1	2.5598	1.120	.0790
		GM-8-2	2,3,4,5	2.5598	0.705	.0790
GM-9	General Motors - Cam Bearing Set	CH-10-3	1,2,3,4,5	2.3088	0.630	.0700
.010 und						
.020 und						
GM-12	General Motors - Cam Bearing Set	CH-12-3	1,2,3,4,5	2.1200	0.980	.0841
.010 und						
.020 und						
.030 und						
GM-25	General Motors - Cam Bearing Set	CH-25-3	1,2,3,4,5	2.3088	0.775	.0700
GMA-1*	General Motors - OHC Cam Bearing Set (Full Round)	GMA-1-1	1	1.8607	0.817	.0550
.020 und		GMA-1-2	2,3,4,5	1.8607	0.661	.0550
GMA-2*	General Motors - OHC Cam Bearing Set (Half Shell)	GMA-2-1(U)	1,6	1.2655	0.665	.0617
		GMA-2-3(U)	2,3,4,5,7,8,9,10	1.2655	0.665	.0617
		GMA-2-2(L)	1,6	1.2655	0.665	.0617
		GMA-2-1(L)	2,3,4,5,7,8,9,10	1.2655	0.665	.0617
GMP-1	General Motors - HP Cam Bearing Set	GMP-1-1	1,2,3,4,5	2.1200	0.755	.0841
GMP-1T	General Motors - HP Cam Bearing Set (Coated)	GMP-1-1T	1,2,3,4,5	2.1200	0.755	.0841
GMP-2T	Specialty Aftermarket Blocks - HP Cam Bearing Set (Coated), (OD Grove w/ 3 Hole, 120 Degree Spacing)	GMP-2-1T	1,2,3,4,5	2.1200	0.755	.0841
GMP-3	Specialty Aftermarket Blocks - HP Cam Bearing Set	GM2125-1	1	2.2500	0.855	.0620
		GM2125-4	2,3,4,5	2.2500	0.980	.0620
GMP-3T	Specialty Aftermarket Blocks - HP Cam Bearing Set (Coated)	GM2125-1T	1	2.2500	0.855	.0620
		GM2125-4T	2,3,4,5	2.2500	0.980	.0620
GMP-8	General Motors - HP Cam Bearing Set	CHP-4-3	1,2,3,4,5	2.0000	0.740	.0644
GMP-8T	General Motors - HP Cam Bearing Set (Coated)	CHP-4-3T	1,2,3,4,5	2.0000	0.740	.0644
GMP-9	Specialty Aftermarket Blocks - HP Cam Bearing Set	CHP-10-3	1,2,3,4,5	2.3088	0.630	.0700

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
GMP-9T	Specialty Aftermarket Blocks - HP Cam Bearing Set (Coated)	CHP-10-3T	1,2,3,4,5	2.3088	0.630	.0700
GMP-12	General Motors - HP Cam Bearing Set	CHP-12-3	1,2,3,4,5	2.1200	0.980	.0841
GMP-12T	General Motors - HP Cam Bearing Set (Coated)	CHP-12-3T	1,2,3,4,5	2.1200	0.980	.0841
GMP-12LT	Specialty Aftermarket Blocks - HP Cam Bearing Set (Coated), (OD Grove w/ 3 Hole, 120 Degree Spacing)	CH-12-3LT	1,2,3,4,5	2.1200	0.980	.0841
GMP-25	General Motors - HP Cam Bearing Set	CHP-25-3	1,2,3,4,5	2.3088	0.775	.0700
GMP-25T	General Motors - HP Cam Bearing Set (Coated)	CHP-25-3T	1,2,3,4,5	2.3088	0.775	.0700
GMP-55	General Motors - HP Cam Bearing Set (OD Grove w/ 3 Hole, 120 Degree Spacing)	GMP-55-1	1,2,3,4,5	2.282	0.785	0.0569
GMP-55T	General Motors - HP Cam Bearing Set (Coated) (OD Grove w/ 3 Hole, 120 Degree Spacing)	GMP-55-1T	1,2,3,4,5	2.282	0.785	0.0569
H-5	American Motors, Honda, Jeep - Cam Bearing Set	H-5-1	1	2.1560	0.750	.0620
		H-5-2	2	2.1460	0.750	.0620
		H-5-3	3	2.1360	0.750	.0620
		H-5-4	4	2.1260	0.750	.0620
		H-5-5	5	1.6260	1.060	.0620
HA-1*	Honda - OHC Cam Bearing Set (Half Shell)	HA-1-1(U)	1,2,3,4,5	1.2655	0.700	.0622
		HA-1-5(L)	1,2,3,4,5	1.2655	0.700	.0622
HA-2*	Honda - OHC Cam Bearing Set (Half Shell)	HA-1-2(U)	1	1.2655	0.830	.0618
.020 und		HA-1-4(U)	2,4,5	1.2655	0.700	.0622
		HA-1-4A(U)	3	1.2655	0.700	.0622
		HA-1-5(U)	6	1.2655	0.700	.0622
		HA-1-3(L)	1	1.2655	0.830	.0618
		HA-1-5(L)	2,3,4,5,6	1.2655	0.700	.0622
HA-3*	Acura, Honda - OHC Cam Bearing Set (Half Shell)	HA-3-2(U)	1	1.1875	0.735	.0422
.010 und		HA-3-4(U)	2,3,4,5,6	1.1875	0.535	.0422
.020 und		HA-3-1(L)	1	1.1875	0.735	.0422
		HA-3-3(L)	2,3,4,5,6	1.1875	0.535	.0422
HA-4*	Honda - OHC Cam Bearing Set (Half Shell)	HA-4-1(U)	1	1.2655	1.242	.0618
		HA-4-3(U)	2,3,4,5	1.2655	0.530	.0618
		HA-4-2(L)	1	1.2655	1.242	.0618
		HA-4-4(L)	2,3,4,5	1.2655	0.530	.0618
HA-5*	Acura, Honda - OHC Cam Bearing Set (Half Shell)	HA-5-2(U)	1	1.2655	0.788	.0618
		HA-3-4(U)	2,3,4,5,6,7	1.1875	0.535	.0422
		HA-5-1(L)	1	1.2655	0.788	.0618
		HA-3-3(L)	2,3,4,5,6,7	1.1875	0.535	.0422
HE-1	Hercules, John Deere, Military Standard, Oliver Tractor - Cam Bearing Set	HE-1-1	1,4	2.1875	1.125	.0660
		HE-1-2	2,3	2.1875	0.812	.0660
HE-5	Hercules, John Deere, Oliver Tractor - Cam Bearing Set	HE-5-1	1,4	1.8753	1.020	.0617
		HE-5-2	2,3	1.8753	0.550	.0617
HE-7	Hercules, Oliver Tractor - Cam Bearing Set	HE-7-1	1,3	2.1875	1.057	.0658
		HE-1-2	2	2.1875	0.812	.0660
HE-8	Hercules, Oliver Tractor - Cam Bearing Set	HE-7-1	1,4	2.1875	1.057	.0658
		HE-1-2	2,3	2.1875	0.812	.0660
HE-8A	Hercules - Cam Bearing Set	HE-7-1A	1,4	2.1862	1.057	.0653
		HE-1-2A	2,3	2.1862	0.812	.0653
HO-1	Holden - Cam Bearing Set	HO-1-1	1,2,3,4	1.8968	0.815	.0643

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
HO-2	Holden - Cam Bearing Set	HO-2-1	1	2.0300	0.785	.0694
.020 und		HO-2-2	2	2.0200	0.785	.0644
		HO-2-3	3	2.0100	0.785	.0694
		HO-2-4	4	2.0000	0.785	.0644
		HO-2-5	5	1.7108	0.785	.0644
HO-2S	Holden - Cam Bearing Set w/ +.002 OD No. 5 Position	HO-2-1	1	2.0300	0.785	.0694
.020 und		HO-2-2	2	2.0200	0.785	.0644
		HO-2-3	3	2.0100	0.785	.0694
		HO-2-4	4	2.0000	0.785	.0644
		HO-2-5S	5	1.7128	0.785	.0644
HO-3	Holden - Cam Bearing Set	HO-3-1	1	1.9730	1.000	.0637
.005 und		HO-3-2	2	1.9410	0.875	.0637
.010 und		HO-3-3	3	1.9100	0.875	.0637
		HO-3-4	4	1.3790	0.875	.0637
HOP-2S	Holden - HP Cam Bearing Set	HOP-2-1	1	2.0300	0.785	.0694
.020 und	w/ +.002 OD No. 5 Position	HOP-2-2	2	2.0200	0.785	.0644
		HOP-2-3	3	2.0100	0.785	.0694
		HOP-2-4	4	2.0000	0.785	.0644
		HOP-2-5S	5	1.7128	0.785	.0644
HOP-2ST	Holden - HP Cam Bearing Set (Coated)	HOP-2-1T	1	2.0300	0.785	.0694
.020 und	w/ +.002 OD No. 5 Position	HOP-2-2T	2	2.0200	0.785	.0644
		HOP-2-3T	3	2.0100	0.785	.0694
		HOP-2-4T	4	2.0000	0.785	.0644
		HOP-2-5ST	5	1.7128	0.785	.0644
IN-3	IHC - Cam Bearing Set	IN-3A-1	1	2.2408	1.125	.0647
		IN-8-2	2	2.2207	1.062	.0647
		IN-2-3	3	2.2008	1.062	.0645
		IN-2-4	4	1.6313	1.530	.0645
IN-5	IHC - Cam Bearing Set	IN-5-1	1	2.3748	1.438	.0644
		IN-5-2	2	2.2493	1.469	.0642
		IN-5-3	3	1.9993	1.063	.0643
IN-10A	IHC - Cam Bearing Set	IN-10-1A	1	2.4748	1.187	.0618
		IN-10-2	2	2.4438	1.000	.0625
		IN-10-3	3	2.4153	1.000	.0613
		IN-10-4A	4	2.3748	1.000	.0618
IN-11	IHC, Military Standard - Cam Bearing Set	IN-11-1	1	2.2313	0.710	.0647
.010 und		IN-11-2	2	2.2213	0.645	.0647
.020 und		IN-11-3	3	2.2113	0.645	.0647
.030 und		IN-11-4	4	2.2013	0.645	.0647
		IN-11-5	5	2.1913	0.750	.0647
IN-12	IHC - Cam Bearing Set	IN-3A-1	1	2.2408	1.125	.0647
		IN-8-2	2	2.2207	1.062	.0647
		IN-8-3	3	2.2007	1.062	.0647
IN-14	IHC - Cam Bearing Set	IN-3A-1	1	2.2408	1.125	.0647
.010 und		IN-8-2	2	2.2207	1.062	.0647
.020 und		IN-8-3	3	2.2007	1.062	.0647
.030 und		IN-8-4	4	1.6313	1.312	.0645
IN-15	IHC - Cam Bearing Set	IN-15-1	1	2.0618	1.000	.0643
		IN-15-2	2	1.9368	1.375	.0643
		IN-15-3	3	1.4993	1.000	.0643
IN-16	IHC - Cam Bearing Set	IN-16-1	1	2.5610	1.125	.0645
		IN-8-2	2	2.2207	1.062	.0647
		IN-16-3	3	2.2010	1.060	.0645
		IN-2-4	4	1.6313	1.530	.0645

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
IN-17	Ford, IHC - Cam Bearing Set	IN-17-1	1	2.2313	0.785	.0647
.010 und		IN-17-2	2,3,4,5	2.2313	0.650	.0647
IN-17R2	Ford, IHC - Cam Bearing Set w/ .020 Oversize OD	IN-17-1S	1	2.2513	0.785	.0768
	(.005 Undersize Cam Journal)	IN-17-2S	2,3,4,5	2.2513	0.650	.0768
IN-18	IHC - Cam Bearing Set	IN-18-1	1	1.9430	1.095	.0645
		IN-18-2	2	1.7083	1.005	.0641
		IN-18-3	3	1.6303	0.790	.0641
IN-19	IHC - Cam Bearing Set	IN-19-1	1	2.5013	1.010	.1078
		IN-19-2	2	2.4813	0.709	.0980
		IN-19-3	3	2.4613	0.709	.0880
		IN-19-4	4	2.4413	0.710	.0780
IN-21	Ford, IHC - Cam Bearing Set	IN-21-1	1,2,3,4,5	2.5984	0.740	.0778
IZ-2	General Motors, Isuzu, Jeep - Cam Bearing Set	IZ-2-1	1	2.0479	0.984	.0790
		IZ-2-2	2	2.0480	0.984	.0790
		IZ-2-3	3	2.0480	0.984	.0790
IZ-3	General Motors, Isuzu - Cam Bearing Set	IZ-3-1	1	2.0486	0.866	.0797
		IZ-3-2	2	2.0486	0.866	.0797
		IZ-3-3	3	2.0486	0.866	.0797
IZ-5	Isuzu - Cam Bearing Set	IZ-5-1	2	2.1274	0.984	.0797
		IZ-5-2	2,3	2.1274	0.866	.0797
IZ-6	Isuzu - Cam Bearing Set	IZ-6-1	1	2.3637	0.787	.0785
		IZ-6-2	2,3,4	2.3637	0.787	.0785
IZ-7	Isuzu - Cam Bearing Set	IZ-6-1	1	2.3637	0.787	.0785
		IZ-6-2	2,3	2.3637	0.787	.0785
IZ-8	Isuzu - Cam Bearing Set	IZ-6-1	1	2.3637	0.787	.0785
		IZ-6-2	2,3,4,5,6	2.3637	0.787	.0785
J-1	IHC, Jeep, Military Standard - Cam Bearing Set	J-1-1	1	2.3165	1.125	.0645
.010 und						
.020 und						
.030 und						
JD-1	John Deere - Cam Bearing Set	JD-1-1	1	1.9280	1.181	.0579
		JD-1-2	2,3	1.9280	0.938	.0579
JD-2	John Deere - Cam Bearing Set	JD-1-1	1	1.9280	1.181	.0579
		JD-1-2	2,3,4	1.9280	0.938	.0579
JD-3	John Deere - Cam Bearing Set	JD-3-1	1,2,3	2.5000	1.000	.0614
JD-4	John Deere - Cam Bearing Set	JD-3-1	1,2,3,4	2.5000	1.000	.0614
JD-5	John Deere - Cam Bearing Set	JD-5-1	1	1.9280	1.598	.0577
		JD-5-2	2	1.9280	1.220	.0577
JDG-7**	John Deere - Balance Shaft Bearing Set	JDG-7-1	1,2,3,4,5,6	1.6250	1.090	.0608
K-1	Checker, Continental, Jeep, Mack, Military Standard,	K-1-1	1	2.0000	0.875	.0628
.010 und	Oliver Tractor - Cam Bearing Set	K-1-2	2	1.9375	0.937	.0630
.020 und		K-1-3	3	1.8810	1.620	.0628
.030 und		K-1-4	4	1.3748	1.156	.0628
LR-1	Rover - Cam Bearing Set	LR-1-1	1	1.9165	0.750	.0642
		B-6-1	2	1.8865	0.750	.0642
		B-4-3	3	1.8565	0.750	.0643
		B-4-4	4	1.8265	0.750	.0643
		B-4-5	5	1.7965	0.750	.0643

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
MA-5	Mack - Cam Bearing Set	MA-5-1	1	2.6235	1.385	.0910
		MA-5-2	2,5	2.6235	1.010	.0905
		MA-5-3	3,4,6	2.6235	1.010	.0910
		MA-5-4	7	2.6235	1.380	.1853
MA-6	Mack - Cam Bearing Set	MA-5-1	1	2.6235	1.385	.0910
		MA-5-3	2,3,4,5,6	2.6235	1.010	.0910
		MA-3A-1	7	2.6235	1.380	.1852
MA-7	Mack - Cam Bearing Set	MA-5-1	1	2.6235	1.385	.0910
		MA-5-3	2,3,4,5,6,7	2.6235	1.010	.0910
MA-8	Mack - Cam Bearing Set	MA-8-1	1	2.6235	1.385	.0905
		MA-5-3	2,3,4,5,6,7	2.6235	1.010	.0910
MA-11	Mack - Cam Bearing Set	MA-11-1	(5 pcs.)	2.8735	1.000	.0908
		MA-11-2	(2 pcs.)	2.8735	1.181	.0908
MAG-10**	Mack - Auxiliary Shaft Bearing Set	MAG-10-1	Front	2.3115	1.760	.1237
		MAG-10-2	Rear	2.2495	1.760	.1243
MAG-11**	Mack - Auxiliary Shaft Bearing Set	MAG-11-1	(2 pcs.)	2.3115	1.750	.1235
MIA-1*	Chrysler, Eagle, General Motors, Hyundai, Isuzu,	MIA-1-3(U)	1	1.4225	0.795	.0422
.010 und	Mazda, Mitsubishi - OHC Cam Bearing Set (Half Shell)	MIA-1-1(U)	2,3,4,5	1.4225	0.795	.0422
.020 und		MIA-1-4(L)	1,2,3,4,5	1.4225	0.795	.0422
MIA-2*	Chrysler, Eagle, General Motors, Hyundai, Isuzu,	MIA-1-7(U)	1	1.4971	0.793	.0792
.020 und	Mazda, Mitsubishi - OHC Cam Bearing Set (Half Shell)	MIA-1-5(U)	2,3,4,5	1.4971	0.793	.0792
	w/ Heavy Wall .020 Oversize OD	MIA-1-6(L)	1,2,3,4,5	1.4971	0.793	.0792
MIA-3*	Chrysler, Eagle, Hyundai, Mitsubishi - OHC Cam	MIA-3-1	1,2,3	1.8918	0.685	.0403
	Bearing Set (Full Round)					
MIA-4*	Mitsubishi - OHC Cam Bearing Set (Half Shell)	MIA-1-8(U)	1,5	1.4225	0.795	.0422
		MIA-1-1(U)	2,3,4	1.4225	0.795	.0422
		MIA-1-4(L)	1,2,3,4,5	1.4225	0.795	.0422
MIA-5*	Chrysler, Mitsubishi - OHC Cam Bearing Set (Half Shell)	MIA-5-1(U)	1	1.4225	0.793	.0422
	(One Set Per Head)	MIA-5-2(U)	2	1.4225	0.710	.0422
		MIA-5-3(U)	3	1.4225	0.760	.0422
		MIA-5-8(U)	4	1.4225	0.980	.0422
		MIA-5-5(L)	1	1.4225	0.793	.0422
		MIA-5-6(L)	2	1.4225	0.710	.0422
		MIA-5-7(L)	3	1.4225	0.760	.0422
		MIA-5-9(L)	4	1.4225	0.980	.0422
MIG-2**	Chrysler, Ford, Mazda, Mitsubishi - Auxiliary Shaft	MIG-2-1	1,2	1.8126	0.785	.0587
.010 und	Bearing Set	MIG-2-2	3	1.0240	0.703	.0589
.020 und						
MIG-2E**	Chrysler, Ford, Mazda, Mitsubishi - Balance Shaft	MIG-1-EL		1.8126	0.930	NA
	Eliminator	MIG-2-EL		0.6330	0.875	NA
MIG-2-1R**	Chrysler, Ford, Mazda, Mitsubishi - Balance Shaft	MIG-2-1R	1	1.9855	0.788	.1450
	Bearing w/ .173 Oversize OD (Bearings Sold Separately)					
MIG-3**	Chrysler, Eagle, Mitsubishi - Balance Shaft Bearing Set	MIG-3-1	1	1.7721	0.745	.0590
		MIG-3-2	2,3	1.7328	0.825	.0592
MZA-1*	Ford, Mazda - OHC Cam Bearing Set (Full Round)	MZA-1-1	1	1.7931	0.730	.0403
.020 und		MZA-1-2	2	1.7931	0.730	.0403
		MZA-1-3	3	1.7931	0.730	.0403
MZA-2*	Ford, Mazda - OHC Cam Bearing Set (Half Shell)	MZA-2-3(U)	1,5	1.3439	0.830	.0422
.020 und		MZA-2-1(U)	2,3,4	1.3439	0.700	.0422
		MZA-2-2(L)	1,2,3,4,5	1.3439	0.830	.0422
MZA-4*	Mazda - OHC Cam Bearing Set (Half Shell)	MZA-4-1(U)	1,2,3,4,5	1.2655	0.700	.0422
		VHA-1-2(L)	1,2,3,4,5	1.2655	0.700	.0422

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
MZG-3**	Mazda - Balance Shaft Bearing Set	MZG-3-1	Front (2 pcs.)	1.8114	0.910	.0781
.010 und		MZG-3-2	Middle (2 pcs.)	1.7326	1.030	.0780
		MZG-3-3	Rear (2 pcs.)	0.9453	0.635	.0585
N-6	American Motors - Cam Bearing Set	N-6-1	1	1.9470	0.940	.0647
		N-5-2	2	1.9370	0.780	.0647
		N-5-3	3	1.9270	0.780	.0647
		N-5-4	4	1.9170	0.810	.0647
N-7	American Motors, Eagle, IHC, Jeep - Cam Bearing Set	N-7-1	1	2.1560	0.690	.0620
.010 und		N-7-2	2	2.1460	0.690	.0620
.020 und		N-7-3	3	2.1360	0.690	.0620
.030 und		N-7-4	4	2.1260	0.690	.0620
.040 und						
N-7B	American Motors, Eagle, IHC, Jeep - Special Oil	N-7-1	1	2.1560	0.690	.0620
	Control Cam Bearing Set w/ OD Groove No. 2, 3 Position	N-7-2B	2	2.1460	0.690	.0620
		N-7-3B	3	2.1360	0.690	.0620
		N-7-4	4	2.1260	0.690	.0620
N-7BW	American Motors, Eagle, IHC, Jeep - Special Oil	N-7-1X001	1	2.1560	0.690	.0625
	Control Cam Bearing Set w/ OD Groove No. 2, 3 Position	N-7-2BX001	2	2.1460	0.690	.0625
	w/ .001 Undersize ID	N-7-3BX001	3	2.1360	0.690	.0625
		N-7-4X001	4	2.1260	0.690	.0625
N-9	American Motors, IHC, Jeep - Cam Bearing Set	N-9-1	1	2.2460	0.920	.0620
.010 und		N-8-2	2	2.2160	0.625	.0620
.020 und		N-8-3	3	2.1860	0.625	.0620
.030 und		N-8-4	4	2.1560	0.625	.0620
		N-8-5	5	2.1260	0.625	.0620
N-9R1	American Motors, IHC, Jeep - Cam Bearing Set	N-9-11	1	2.2560	0.920	.0670
	w/ .010 Oversize OD	N-8-21	2	2.2260	0.625	.0670
		N-8-31	3	2.1960	0.625	.0670
		N-8-41	4	2.1660	0.625	.0670
		N-8-51	5	2.1360	0.625	.0670
N-10	Jeep - Cam Bearing Set	N-10-1	1	2.1560	0.690	.0620
		N-7-2	2	2.1460	0.690	.0620
		N-7-3	3	2.1360	0.690	.0620
		N-7-4	4	2.1260	0.690	.0620
NIA-1*	Nissan - OHC Cam Bearing Set (Full Round)	NIA-1-1	1,2,3,4,5	1.7340	0.805	.0403
NIA-2L*	Nissan - OHC Cam Bearing Set (Full Round)	NIA-2-1	1,2,3,4	1.9309	0.735	.0403
	(Left Bank)					
NIA-2R*	Nissan - OHC Cam Bearing Set (Full Round)	NIA-2-1	1,2,3,4,5	1.9309	0.735	.0403
	(Right Bank)					
NIA-3L*	Ford, Nissan - OHC Cam Bearing Set (Full Round)	NIA-2-1	1,2,3	1.9309	0.735	.0403
	(Left Bank)	NIA-3-2	4	1.7538	0.735	.0403
NIA-3R*	Ford, Nissan - OHC Cam Bearing Set (Full Round)	NIA-3-1	1	1.9702	1.235	.0403
	(Right Bank)	NIA-2-1	2,3,4	1.9309	0.735	.0403
		NIA-3-2	5	1.7538	0.735	.0403
NIA-4*	Nissan - OHC Cam Bearing Set (Full Round)	NIA-1-1	1,2,4	1.7340	0.805	.0403
.020 und		NIA-1-2	3	1.7340	0.805	.0403
		NIA-1-3	5	1.7340	1.120	.0403
NIA-5*	Nissan - OHC Cam Bearing Set (Full Round)	NIA-4-1	1,2,3,5	1.8914	0.805	.0403
		NIA-4-2	4	1.8914	0.805	.0403
NIA-6*	Nissan - OHC Cam Bearing Set (Half Shell)	TOA-1-1(U)	1,2,3,4,5	1.3841	0.800	.0422
.020 und		TOA-1-2(L)	1,2,3,4,5	1.3841	0.800	.0422
NIG-1**	Nissan - Balance Shaft Bearing Set	NIG-1-1	Front (2 pcs.)	2.1255	0.628	.0595
		NIG-1-2	Rear (2 pcs.)	2.1183	0.825	.0595

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
O-5	General Motors - Cam Bearing Set	O-5-1	1,2,3,4,5	2.1288	0.688	.0641
O-6	General Motors - Cam Bearing Set	O-6-1	1	2.1688	0.688	.0646
.010 und		O-6-2	2	2.1488	0.688	.0646
		O-6-3	3	2.1288	0.688	.0646
		O-6-4	4	2.1088	0.688	.0646
		O-6-5	5	2.0888	0.688	.0646
O-6B	General Motors - Special Oil Control Cam Bearing Set	O-6-1B	1	2.1688	0.688	.0646
	w/ OD Groove	O-6-2B	2	2.1488	0.688	.0646
		O-6-3B	3	2.1288	0.688	.0646
		O-6-4B	4	2.1088	0.688	.0646
		O-6-5B	5	2.0888	0.688	.0646
O-7	General Motors - Cam Bearing Set	O-7-1	1	2.1688	0.688	.0646
.010 und		O-6-2	2	2.1488	0.688	.0646
		O-6-3	3	2.1288	0.688	.0646
		O-6-4	4	2.1088	0.688	.0646
		O-6-5	5	2.0888	0.688	.0646
O-8	General Motors - Cam Bearing Set	O-7-1	1	2.1688	0.688	.0646
		O-6-2	2	2.1488	0.688	.0646
		O-6-3	3	2.1288	0.688	.0646
		O-6-4	4	2.1088	0.688	.0646
OG-1**	General Motors - Balance Shaft Bearing Set	OG-1-1	1,2	2.1408	0.740	.0695
ON-1	Onan - Cam Bearing Set	ON-1-1	1,2	1.5000	0.697	.0619
OP-3	Opel - Cam Bearing Set	OP-3-1	1	2.1069	0.950	.0889
		OP-3-2	2	2.0970	0.723	.0889
		OP-3-3	3	2.0773	0.723	.0840
OP-5	Opel - Cam Bearing Set	OP-3-1	1	2.1069	0.950	.0889
		OP-3-2	2	2.0970	0.723	.0889
		OP-5-3	3	2.0872	0.723	.0865
		OP-3-3	4	2.0773	0.723	.0840
P-3	General Motors - Cam Bearing Set	P-3-1	1	2.0307	1.060	.0644
.010 und		P-3-2	2,3,4,5	2.0307	0.680	.0644
.020 und						
.030 und						
P-4	General Motors - Cam Bearing Set	P-3-2	1,2,3,4,5	2.0307	0.680	.0644
.010 und						
.020 und						
.030 und						
P-4R1	General Motors - Cam Bearing Set w/ .010 Oversize OD	P-3-21	1,2,3,4,5	2.0407	0.680	.0694
PD-1	Chrysler, Military Standard - Cam Bearing Set	PD-1-1	1	2.1295	1.093	.0645
.010 und		PD-1-2	2	2.0990	0.875	.0649
.020 und		PD-1-3	3	2.0675	0.875	.0650
PD-3	Chrysler, Military Standard, Oliver Tractor - Cam Bearing	PD-1-1	1	2.1295	1.093	.0645
.010 und	Set	PD-3-2	2	2.0990	1.062	.0650
.020 und		PD-3-3	3	2.0675	1.062	.0650
.030 und						
PD-8	Chrysler - Cam Bearing Set	PD-8-1	1	2.1300	0.938	.0647
.010 und		PD-8-2	2,3,4	2.1300	0.813	.0647
.020 und		PD-8-3	5	1.5675	0.875	.0647
.030 und						

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
PD-16	Chrysler - Cam Bearing Set	PD-16-1	1	2.1300	0.875	.0645
.010 und		PD-9-2	2	2.1140	0.760	.0645
.020 und		PD-9-3	3	2.0990	0.760	.0645
.030 und		PD-9-4	4	2.0830	0.760	.0645
		PD-9-5	5	1.6925	0.940	.0645
PD-17	Chrysler, Mack, Military Standard - Cam Bearing Set	PD-17-1	1	2.1300	0.750	.0645
.010 und		PD-12-2	2	2.1140	0.750	.0645
.020 und		PD-12-3	3	2.0990	0.669	.0645
.030 und		PD-12-4	4	2.0830	0.750	.0645
		PD-12-5	5	1.8800	0.750	.0645
PD-18	Chrysler, John Deere - Cam Bearing Set	PD-18-1	1	2.1300	0.920	.0645
.010 und		PD-12-2	2	2.1140	0.750	.0645
.020 und		PD-13-3	3	2.0990	0.750	.0645
.030 und		PD-13-4	4	2.0830	0.750	.0645
PD-21	Chrysler, John Deere - Cam Bearing Set	PD-21-1	1	2.1300	0.780	.0640
.010 und		PD-21-2	2	2.1140	0.625	.0640
.020 und		PD-21-3	3	2.0990	0.625	.0640
		PD-13-4	4	2.0830	0.750	.0645
PD-25	Chrysler, Jeep - Cam Bearing Set	PD-16-1	1	2.1300	0.875	.0645
.010 und		PD-25-2	2	2.1140	0.625	.0645
.020 und		PD-25-3	3	2.0990	0.615	.0645
		PD-25-4	4	2.0830	0.615	.0645
		PD-9-5	5	1.6925	0.940	.0645
PD-27	Chrysler - Cam Bearing Set	PD-16-1	1	2.1300	0.875	.0645
.010 und		PD-25-2	2	2.1140	0.625	.0645
		PD-25-4	3	2.0830	0.615	.0645
		PD-9-5	4	1.6925	0.940	.0645
PD-28	Chrysler, Eagle - Cam Bearing Set	PD-28-1	1	2.1300	0.930	.0647
.010 und		PD-28-2	2	2.1140	0.610	.0653
.020 und		PD-28-3	3	2.0990	0.610	.0653
.030 und		PD-28-4	4	2.0830	0.610	.0647
PD-28B	Chrysler, Eagle - Special Oil Control Cam Bearing Set	PD-28-1	1	2.1300	0.930	.0647
.010 und	w/ OD Groove No. 2, 3 Position	PD-28-2B	2	2.1140	0.610	.0653
		PD-28-3B	3	2.0990	0.610	.0653
		PD-28-4	4	2.0830	0.610	.0647
PD-30	Chrysler - Cam Bearing Set	PD-30-1	1	2.2235	0.885	.0650
		PD-30-2	2	2.2075	0.625	.0652
		PD-30-3	3	2.1915	0.625	.0650
		PD-30-4	4	2.1755	0.625	.0650
		PD-30-5	5	2.1595	0.625	.0650
		PD-30-6	6	2.0495	0.885	.0650
PD-31B	Chrysler - Cam Bearing Set	PD-31-1B	1	2.4231	0.665	.0650
		PD-31-2B	2	2.4073	0.587	.0650
		PD-31-3B	3	2.3916	0.587	.0650
		PD-31-4B	4	2.3758	0.587	.0650
		PD-31-5B	5	1.8499	0.587	.0650
PD-31BW	Chrysler - Cam Bearing Set w/ .001 Undersize ID	PD-31-1W	1	2.4231	0.665	.0655
		PD-31-2W	2	2.4073	0.587	.0655
		PD-31-3W	3	2.3916	0.587	.0655
		PD-31-4W	4	2.3758	0.587	.0655
		PD-31-5W	5	1.8499	0.587	.0655
PDA-1*	Chrysler - OHC Cam Bearing Set (Half Shell)	PDA-1-2(U)	1,2,3,4,5	1.4819	0.625	.0522
		PDA-1-1(L)	1,2,3,4,5	1.4819	0.625	.0522
PDA-2*	Chrysler - OHC Cam Bearing Set (Half Shell)	PDA-2-2(U)	1,2,3,4,5	1.4819	0.625	.0422
		PDA-2-1(L)	1,2,3,4,5	1.4819	0.625	.0422

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
PDA-3*	Chrysler - OHC Cam Bearing Set (Full Round)	PDA-3-1	1	1.7035	0.815	.0404
		PDA-3-2	2	1.7195	0.775	.0406
		PDA-3-3	3	1.7345	0.775	.0402
		PDA-3-4	4	1.7505	0.775	.0404
		PDA-3-5	5	1.7665	0.745	.0404
PDA-4*	Chrysler - OHC Cam Bearing Set (Half Shell)	PDA-4-2 (U)	1,2,3,4,5	1.1085	0.585	.0418
.010 und		PDA-4-1 (L)	1,2,3,4,5	1.1085	0.585	.0418
PDG-1**	Chrysler - Auxiliary Shaft Bearing Set	PDG-1-1	1,2	1.3390	0.785	.0789
PDG-26**	Chrysler, Mitsubishi - Balance Shaft Bearing Set	PDG-26-1	1	1.8110	0.745	.0640
		PDG-26-2	2	0.9055	0.825	.0640
PDG-29S**	Chrysler - Balance Shaft Bearing Set (Semi-Fnished)	PDG-29-1	Both	1.7866	0.865	.08 Semi
.020 und						
PDG-30**	Chrysler - Balance Shaft Bearing Set	PDG-30-1	1	2.3533	0.710	.0728
		PDG-30-2	2	1.2903	0.710	.0728
PDP-16	Chrysler - HP Cam Bearing Set	PDP-16-1	1	2.1300	0.875	.0645
		PDP-9-2	2	2.1140	0.760	.0645
		PDP-9-3	3	2.0990	0.760	.0645
		PDP-9-4	4	2.0830	0.760	.0645
		PDP-9-5	5	1.6925	0.940	.0645
PDP-16T	Chrysler - HP Cam Bearing Set (Coated)	PDP-16-1T	1	2.1300	0.875	.0645
		PDP-9-2T	2	2.1140	0.760	.0645
		PDP-9-3T	3	2.0990	0.760	.0645
		PDP-9-4T	4	2.0830	0.760	.0645
		PDP-9-5T	5	1.6925	0.940	.0645
PDP-17	Chrysler, Mack, Military Standard - HP Cam Bearing Set	PDP-17-1	1	2.1300	0.750	.0645
		PDP-12-2	2	2.1140	0.750	.0645
		PDP-12-3	3	2.0990	0.669	.0645
		PDP-12-4	4	2.0830	0.750	.0645
		PDP-12-5	5	1.8800	0.750	.0645
PDP-17R1	Chrysler, Mack, Military Standard - HP Cam Bearing Set	PDP-17-1R1	1	2.1400	0.750	.0695
	w/ .010 Oversize OD	PDP-12-2R1	2	2.1240	0.750	.0695
		PDP-12-3R1	3	2.1090	0.669	.0695
		PDP-12-4R1	4	2.0930	0.750	.0695
		PDP-12-5R1	5	1.8900	0.750	.0695
PDP-17T	Chrysler, Mack, Military Standard - HP Cam Bearing Set	PDP-17-1T	1	2.1300	0.750	.0645
	(Coated)	PDP-12-2T	2	2.1140	0.750	.0645
		PDP-12-3T	3	2.0990	0.669	.0645
		PDP-12-4T	4	2.0830	0.750	.0645
		PDP-12-5T	5	1.8800	0.750	.0645
PDP-25	Chrysler, Jeep - HP Cam Bearing Set	PDP-16-1	1	2.1300	0.875	.0645
		PDP-25-2	2	2.1140	0.625	.0645
		PDP-25-3	3	2.0990	0.615	.0645
		PDP-25-4	4	2.0830	0.615	.0645
		PDP-9-5	5	1.6925	0.940	.0645
PDP-25T	Chrysler, Jeep - HP Cam Bearing Set (Coated)	PDP-16-1T	1	2.1300	0.875	.0645
		PDP-25-2T	2	2.1140	0.625	.0645
		PDP-25-3T	3	2.0990	0.615	.0645
		PDP-25-4T	4	2.0830	0.615	.0645
		PDP-9-5T	5	1.6925	0.940	.0645
PP-3	General Motors - HP Cam Bearing Set	PP-3-1	1	2.0307	1.060	.0644
		PP-3-2	2,3,4,5	2.0307	0.680	.0644
PP-3T	General Motors - HP Cam Bearing Set (Coated)	PP-3-1T	1	2.0307	1.060	.0644
		PP-3-2T	2,3,4,5	2.0307	0.680	.0644

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
PP-4	General Motors - HP Cam Bearing Set	PP-3-2	1,2,3,4,5	2.0307	0.680	.0644
PP-4T	General Motors - HP Cam Bearing Set (Coated)	PP-3-2T	1,2,3,4,5	2.0307	0.680	.0644
R-1	Reo Motor Truck - Cam Bearing Set	R-1-1	1	2.5620	1.625	.0610
		R-1-2	2	2.4370	1.250	.0610
		R-1-3	3	2.3120	1.250	.0610
		R-1-4	4	1.7500	1.187	.0613
RDC-1	Rodeck - Cam Bearing Set	CH-4-3	1	2.0000	0.740	.0644
		CH-5-3	2,3,4,5	2.0000	0.860	.0644
RDCP-1	Rodeck - HP Cam Bearing Set	CHP-4-3	1	2.0000	0.740	.0644
		CHP-5-3	2,3,4,5	2.0000	0.860	.0644
RDCP-1T	Rodeck - HP Cam Bearing Set (Coated)	CHP-4-3T	1	2.0000	0.740	.0644
		CHP-5-3T	2,3,4,5	2.0000	0.860	.0644
SA-1*	General Motors, Suzuki - OHC Cam Bearing Set	SA-1-1	1	1.8215	0.940	.0407
	(Full Round)	SA-1-2	2	1.8295	0.485	.0407
		SA-1-3	3	1.8375	0.485	.0407
		SA-1-4	4	1.8455	0.485	.0407
		SA-1-5	5	1.8535	0.485	.0407
SBF-1T	Specialty Aftermarket Blocks - HP Cam Bearing Set	351-HPB-1T	1	2.2040	0.660	.0602
	(Coated), (OD Grove w/ 3 Hole, 120 Degree Spacing)	351-HPB-2T	2	2.2040	0.660	.0677
		351-HPB-3T	3	2.2040	0.660	.0752
		351-HPB-4T	4	2.2040	0.660	.0827
		351-HPB-5T	5	2.2040	0.660	.0902
SBF-1R1T	Specialty Aftermarket Blocks - HP Cam Bearing Set	351-HPB-1R1T	1	2.2140	0.660	.0652
	(Coated) w/ .010 Oversize OD	351-HPB-2R1T	2	2.2140	0.660	.0727
	(OD Grove w/ 3 Hole, 120 Degree Spacing)	351-HPB-3R1T	3	2.2140	0.660	.0802
		351-HPB-4R1T	4	2.2140	0.660	.0877
		351-HPB-5R1T	5	2.2140	0.660	.0952
TO-2	Toyota - Cam Bearing Set	TO-2-1	1	1.9685	1.095	.0685
		TO-2-2	2	1.9685	1.654	.0735
		TO-2-3	3	1.9685	0.985	.0785
TO-3	Toyota - Cam Bearing Set	TO-3-1	1	1.8895	0.715	.0929
		TO-3-2	2	1.8705	0.715	.0885
		TO-3-3	3	1.8510	0.715	.0835
		TO-3-4	4	1.8311	0.715	.0786
TO-7	Toyota - Cam Bearing Set	TO-7-1	1	1.9691	0.705	.0687
		TO-7-2	2	1.9593	0.625	.0687
		TO-7-3	3	1.9297	0.705	.0588
		TO-7-4	4	1.9400	0.625	.0687
		TO-7-5	5	1.9494	0.705	.0785
TO-8	Toyota - Cam Bearing Set	TO-8-1	1	1.4971	1.103	.0591
		TO-8-2	2,3,4	1.4971	0.793	.0591
TO-10	Toyota - Cam Bearing Set	TO-1-1	1	2.0475	1.143	.0785
		TO-1-2	2	1.9885	0.943	.0785
		TO-10-3	3	1.9295	0.943	.0785
		TO-1-4	4	1.8705	0.984	.0785
TO-11	Toyota - Cam Bearing Set	TO-5-1	1	1.9688	1.142	.0686
		TO-5-2	2	1.9688	0.790	.0735
		TO-11-3	3	1.9688	1.810	.0785
		TO-5-4	4	1.9688	0.750	.0835
		TO-5-5	5	1.9688	1.105	.0884

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**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
TO-12	Toyota - Cam Bearing Set	TO-12-1	1	1.9697	0.709	.0689
		TO-12-2	2	1.9598	0.630	.0689
		TO-12-3	3	1.9303	0.709	.0591
		TO-12-4	4	1.9402	0.630	.0689
		TO-12-5	5	1.9500	0.709	.0788
TO-15	Toyota - Cam Bearing Set	TO-15-1	1	2.2638	0.787	.0791
		TO-15-2	2	2.2539	0.787	.0791
		TO-15-3	3	2.2047	0.787	.0594
		TO-15-4	4	2.2047	0.787	.0644
		TO-15-5	5	2.2146	0.787	.0742
TOA-1*	Toyota - OHC Cam Bearing Set (Half Shell)	TOA-2-2(U)	1,2,3	1.3841	0.800	.0418
		TOA-2-1(L)	1,2,3	1.3841	0.800	.0418
TOG-8**	Toyota - Balance Shaft Bearing Set	TOG-8-1	1	1.9682	0.975	.0784
		TOG-8-2	2	1.7714	0.785	.0784
TOG-9**	Toyota - Auxiliary Shaft Bearing Set	TOG-9-1	1	1.7719	0.640	.0788
		TOG-9-2	2	1.4569	0.640	.0788
TOG-10**	Toyota - Balance Shaft Bearing Set	TOG-10-1	Front (2 pcs.)	1.6541	0.800	.0783
		TOG-10-2	Rear (2 pcs.)	1.6350	0.895	.0790
TOG-11**	Toyota - Balance Shaft Bearing Set	TOG-11-1	(4 pcs.)	1.2615	0.765	.0597
.005 und		TOG-11-2	(4 pcs.)	1.2615	0.765	.0597
.010 und		TOG-11-3	(4 pcs.)	1.2615	0.765	.0597
TOG-11A**	Toyota - Balance Shaft Bearing Set	TOG-11-1	(8 pcs.)	1.2615	0.765	.0597
.005 und		TOG-11-3	(4 pcs.)	1.2615	0.765	.0597
.010 und						
TOG-11C**	Toyota - Balance Shaft Bearing Kit	TOG-11-1	(8 pcs.)	1.2615	0.765	.0597
.005 und	(Combines TOG-11 & TOG-11A)	TOG-11-2	(4 pcs.)	1.2615	0.765	.0597
.010 und		TOG-11-3	(4 pcs.)	1.2615	0.765	.0597
VO-2**	Chrysler Marine, Volvo - Balance Shaft Bearing Set	VO-2-1	1	1.9655	1.060	.0570
		VO-2-2	2	1.8081	1.025	.0570
		VO-2-3	3	1.5724	1.100	.0573
VO-3	Chrysler Marine, Volvo - Cam Bearing Set	VO-2-1	1,2,3,4	1.9655	1.060	.0570
.010 und						
VOA-1*	Volvo - OHC Cam Bearing Set (Half Shell)	VHA-1-2(U)	1,2,3,4,5	1.2655	0.700	.0422
		VOA-1-1(L)	1,2,3,4,5	1.2655	0.700	.0422
VW-1	Volkswagen - Cam Bearing Set	VW-1-1	1	1.0831	0.787	.0490
		VW-1-2	2	1.0831	0.906	.0490
		VW-1-3(U)	3	1.0831	1.102	.0490
		VW-1-3(L)	3	1.0831	1.102	.0490
VWA-1*	Audi - OHC Cam Bearing Set (Half Shell)	VWA-1-1(U)	1	1.3439	0.830	.0422
		VWA-1-2(U)	2,3	1.2655	0.830	.0422
		VWA-1-4(U)	4	1.2655	0.630	.0422
		MZA-2-3(L)	1	1.3439	0.830	.0422
		VWA-1-5(L)	2,3	1.2655	0.700	.0422
		VWA-1-3(L)	4	1.2655	0.630	.0422
VWA-2*	Volkswagen - OHC Cam Bearing Set (Half Shell)	VWA-2-2(U)	1,2,3,4,5	1.1085	0.680	.0422
.010 und		VWA-2-1(L)	1,2,3,4,5	1.1085	0.680	.0422
.020 und						
.030 und						
.040 und						
VWG-1**	Audi, Chrysler, Volkswagen - Auxiliary Shaft Bearing Set	VWG-1-1	1	1.8115	0.585	.0590
		VWG-1-2	2	1.7721	0.585	.0590
WA-3	Case Tractor, IHC, Military Standard, Waukesha - Cam	WA-3-1	1	2.2540	1.125	.0643
	Bearing Set	WA-3-2	2	2.0040	1.312	.0645
		WA-3-3	3	1.6290	1.500	.0645

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BEARING SET CONTENTS

SET NO.	ENGINE MFG. / DESCRIPTION	CONTENTS	POSITION	HOUSING BORE	LENGTH	MAX WALL
WA-4	Military Standard, Oliver Tractor, Waukesha - Cam Bearing Set	WA-1-1	1	1.8750	1.000	.0617
WA-7	Oliver Tractor, Waukesha - Cam Bearing Set	WA-1-1	1,2,3,4	1.8750	1.000	.0617
WA-8	Waukesha - Cam Bearing Set	WA-8-1	1	2.1250	1.067	.0605
		WA-8-2	2,3,4	2.1250	0.880	.0605
WA-9	Waukesha - Cam Bearing Set	WA-9-1	1	2.8750	1.880	.0645
		WA-9-2	2,3	2.8750	1.505	.0645
		WA-9-3	4	2.1870	2.255	.0643
WA-10	Waukesha - Cam Bearing Set	WA-2-1	1,2,3,4	2.2500	1.250	.0614
WA-11	Waukesha - Cam Bearing Set	WA-11-1	1,2,3,4	2.6250	1.500	.0618
WA-12	Waukesha - Cam Bearing Set	WA-8-1	1	2.1250	1.067	.0605
	w/Expansion Plug (DP-22-P)	WA-8-2	2,3	2.1250	0.880	.0605
		DP-22-P	(Expansion Plug)			

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
351HP-1	351HP, 351RHP	2.2040	0.660	.0602
351HP-1R1	351HP-R1	2.2140	0.660	.0652
351HP-1T	351HPT, 351RHPT	2.2040	0.660	.0602
351HP-2	351HP	2.2040	0.660	.0677
351HP-2R1	351HP-R1	2.2140	0.660	.0727
351HP-2T	351HPT	2.2040	0.660	.0677
351HP-3	351HP	2.2040	0.660	.0752
351HP-3R1	351HP-R1	2.2140	0.660	.0802
351HP-3T	351HPT	2.2040	0.660	.0752
351HP-4	351HP	2.2040	0.660	.0827
351HP-4R1	351HP-R1	2.2140	0.660	.0877
351HP-4T	351HPT	2.2040	0.660	.0827
351HP-5	351HP	2.2040	0.660	.0902
351HP-5R1	351HP-R1	2.2140	0.660	.0952
351HP-5T	351HPT	2.2040	0.660	.0902
351-HPB-1R1T	SBF-1R1T	2.2140	0.660	.0652
351-HPB-1T	SBF-1T	2.2040	0.660	.0602
351-HPB-2R1T	SBF-1R1T	2.2140	0.660	.0727
351-HPB-2T	SBF-1T	2.2040	0.660	.0677
351-HPB-3R1T	SBF-1R1T	2.2140	0.660	.0802
351-HPB-3T	SBF-1T	2.2040	0.660	.0752
351-HPB-4R1T	SBF-1R1T	2.2140	0.660	.0877
351-HPB-4T	SBF-1T	2.2040	0.660	.0827
351-HPB-5R1T	SBF-1R1T	2.2140	0.660	.0952
351-HPB-5T	SBF-1T	2.2040	0.660	.0902
A-1-1	A-1, A-6	1.8805	1.125	.0642
A-2-1	A-2	2.0055	1.308	.0643
A-3-1	A-3, A-4, A-5	2.2595	1.385	.0630
A-3-2	A-3, A-4, A-5	2.2595	1.000	.0630
A-6-1	A-6	1.8805	1.125	.0642
AGB-14-1	CHG-14**	1.8895	0.984	.0586
AGB-29-1	FG-29**	1.7750	0.500	.0606
AGB-34-1	FG-34**	1.7975	0.500	.0714
AGB-34-2	FG-34**	1.7775	0.500	.0614
AGB-51-1	F-38, F-38X, FG-51**	2.1920	0.635	.0694
B-4-1	B-8	1.9165	0.750	.0643
B-4-3	B-6, B-8, B-11	1.8565	0.750	.0643
B-4-4	B-6, B-8, B-11	1.8265	0.750	.0643
B-4-5	B-6, B-8, B-11	1.7965	0.750	.0643
B-6-1	B-6, B-8, B-11	1.8865	0.750	.0642
B-9-2	B-9, B-12, B-12B, B-13	1.9165	0.620	.0642
B-9-2R	B-13R	1.9625	0.620	.0642
B-11-1	B-9, B-11, B-12	1.9165	0.750	.0642
B-11-1B	B-12B	1.9165	0.750	.0642
B-13-1	B-13	1.9365	0.750	.0743
B-13-1R	B-13R	1.9625	0.750	.0743
B-14-1	B-14	1.9965	0.745	.0741
B-14-1R	B-14R	2.0207	0.745	.0741
B-14-2	B-14	1.9765	0.630	.0641
B-14-2R	B-14R	2.0207	0.630	.0641
BL-1-1	BL-1	1.7960	1.125	.0644
BL-1-2	BL-1	1.7539	0.755	.0644
BL-1-3	BL-1	1.5039	0.533	.0644
BMA-1-1	BMA-1*, BMA-2*, BMA-3*	1.8918	0.800	.0403
BMA-1-2	BMA-1*, BMA-2*, BMA-3*	1.8524	0.800	.0403

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
BMA-1-3	BMA-1*, BMA-2*, BMA-3*	1.8131	0.800	.0403
BMA-1-4	BMA-1*	1.4587	1.390	.0403
BMA-1-5	BMA-3*	1.8918	0.800	.0500
BMA-1-6	BMA-3*	1.8524	0.995	.0500
BMA-1-7	BMA-3*	1.8131	0.800	.0500
BMA-1-8	BMA-4*	1.7741	1.115	.0403
BMA-1-9	BMA-4*	1.7340	1.085	.0400
BMA-1-10	BMA-2*, BMA-3*	1.5772	0.800	.0403
BMA-4-3	BMA-4*	1.4587	1.000	.0398
BP-9-2	BP-9, BP-13	1.9165	0.620	.0642
BP-9-2T	BP-9T, BP-13T	1.9165	0.620	.0642
BP-11-1	BP-9	1.9165	0.750	.0642
BP-11-1T	BP-9T	1.9165	0.750	.0642
BP-13-1	BP-13	1.9365	0.750	.0743
BP-13-1T	BP-13T	1.9365	0.750	.0743
BU-1-1	BU-2	2.1245	1.125	.0615
BU-1-2	BU-2	2.1245	0.875	.0615
BU-1-3	BU-2	1.3745	1.000	.0615
C-2-1	C-2	1.8797	0.750	.0641
C-2-2	C-2	1.5682	0.875	.0642
C-3-1	C-3	1.8797	0.620	.0637
C-4-1	C-4, C-4A	2.1687	0.591	.0652
C-4-2	C-4, C-4A	2.1487	0.591	.0652
C-4-3	C-4, C-4A	2.1287	0.591	.0652
C-4-4	C-4, C-4A	2.1087	0.591	.0652
C-4-5	C-4	2.0887	0.591	.0652
C-4-5A	C-4A	2.0887	0.685	.0652
CA-3-1	CA-3	1.8805	1.312	.0642
CA-3-2	CA-3	1.8805	0.718	.0642
CA-3-3	CA-3	1.8805	1.187	.0642
CA-4-1	CA-4, CA-5, CA-8, CA-9	1.8805	1.218	.0643
CA-4-2	CA-4, CA-5, CA-8, CA-9	1.8805	0.495	.0642
CA-5-3	CA-5	1.8805	0.718	.0642
CA-6-1	CA-6, CA-7	2.3745	1.656	.0625
CA-6-2	CA-6, CA-7	2.3745	1.437	.0625
CA-6-3	CA-6, CA-7	2.3745	1.156	.0625
CA-9-1	CA-9	1.8805	0.970	.0640
CAT-1-2	CAT-2	2.6525	0.755	.0750
CAT-2-1	CAT-6, CAT-7	2.5630	1.125	.1243
CAT-2-2	CAT-6, CAT-7	2.5630	1.004	.1243
CAT-2-3	CAT-2-3	2.2776	1.185	.0946
CAT-2-4	CAT-2-4	2.2776	2.000	.0946
CAT-2-5	CAT-2-5	2.1880	1.180	.1052
CAT-2-6	CAT-2-6	2.1880	2.000	.1052
CAT-3-1	CAT-3-1	2.8745	1.185	.1258
CAT-3-2	CAT-3-2	2.8745	1.995	.1256
CAT-5-0	CAT-5, CAT-8	2.7559	1.340	.0945
CAT-5-1	CAT-5, CAT-8	2.7165	0.750	.0748
CH-2-1	CH-2	2.1599	1.125	.0644
CH-2-2	CH-2	2.0975	0.937	.0644
CH-2-3	CH-2	2.0350	0.937	.0644
CH-2-4	CH-2	1.9725	0.937	.0644
CH-3-1	CH-3	2.2850	1.125	.0641
CH-3-2	CH-3	2.2225	0.937	.0641
CH-3-3	CH-3	2.1600	0.937	.0641

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
CH-3-4	CH-3	2.0975	0.937	.0642
CH-4-1	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G	2.0200	0.740	.0744
CH-4-1S	CH-4A	2.0300	0.740	.0795
CH-4-1W	CH-8W, CH-17X, CH-21X	2.0200	0.740	.0749
CH-4-2	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G	2.0100	0.740	.0694
CH-4-2W	CH-8W, CH-17X, CH-21X	2.0100	0.740	.0699
CH-4-3	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G, RDC-1	2.0000	0.740	.0644
CH-4-3W	CH-8W, CH-17X, CH-21X	2.0000	0.740	.0649
CH-4-4	CH-4	2.0100	0.940	.0694
CH-5-1	CH-5	2.0200	0.860	.0744
CH-5-2	CH-5, CH-6, CH-7	2.0100	0.860	.0694
CH-5-3	CH-5, CH-6, CH-7, CH-11, CH-16, RDC-1	2.0000	0.860	.0644
CH-5-3B	CH-11B	2.0000	0.860	.0644
CH-5-3W	CH-16W	2.0000	0.860	.0649
CH-5-4	CH-5	2.0100	0.940	.0694
CH-9-4	CH-9A	2.1300	0.980	.0894
CH-10-1	CH-10, CH-23	2.3270	0.630	.0790
CH-10-2	CH-10	2.3171	0.630	.0740
CH-10-3	CH-10, CH-23, GM-9	2.3088	0.630	.0700
CH-12-1	CH-9A, CH-12	2.1400	0.860	.0941
CH-12-1B	CH-12B	2.1400	0.860	.0941
CH-12-2	CH-9A, CH-12	2.1300	0.980	.0891
CH-12-2B	CH-12B	2.1300	0.980	.0891
CH-12-3	CH-9A, CH-12, GM-12	2.1200	0.980	.0841
CH-12-3B	CH-12B	2.1200	0.980	.0841
CH-12-3LT	GMP-12LT	2.1200	0.980	.0841
CH-13-1	CH-13	2.4125	0.680	.0643
CH-13-2	CH-13	2.4125	0.680	.0643
CH-18-1A	CH-18, CH-18A	2.0100	0.625	.0691
CH-18-1R3	CH-18RS	2.0400	0.625	.0848
CH-18-1R8	CH-18R8	2.0900	0.625	.1091
CH-18-2	CH-18, CH-19, CHG-22**	1.9995	0.630	.0640
CH-18-2A	CH-18A	1.9995	0.720	.0640
CH-18-2R2	CH-18RS	2.0300	0.720	.0798
CH-18-2R8	CH-18R8	2.0800	0.720	.1040
CH-18-2X2	CH-19X2	1.9995	0.630	.0650
CH-18-4	CH-18, CH-18A, CH-19, CHG-22**	2.0095	0.625	.0691
CH-18-4R4	CH-18RS	2.0400	0.625	.0847
CH-18-4R8	CH-18R8	2.0900	0.625	.1091
CH-18-4X2	CH-19X2	2.0095	0.625	.0701
CH-19-1	CH-19	2.0199	0.625	.0741
CH-19-1X2	CH-19X2	2.0199	0.625	.0751
CH-20-1	CH-20	2.0000	0.710	.0644
CH-23-1	CH-23	2.3470	0.630	.0890
CH-24-1	CH-24	2.1766	0.905	.0747
CH-24-2	CH-24	2.1565	0.630	.0646
CH-24-3	CH-24	2.1766	0.620	.0747
CH-25-1	CH-25	2.3482	0.775	.0890
CH-25-2	CH-25	2.3285	0.775	.0799
CH-25-3	CH-25, GM-25	2.3088	0.775	.0700
CHG-15-1	CH-17G, CH-21G, CHG-15A**	1.8740	0.835	.1860
CHG-22-1	CHG-22**	2.0100	1.172	.0691
CHG-23-1	CHG-23**	1.6253	0.865	.0808
CHG-23-2	CHG-23**	1.5969	0.865	.0808
CHG-23-3	CHG-23**	1.8672	0.862	.0808

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
CHG-23-4	CHG-23**	1.8955	0.862	.0808
CHG-24-1	CHG-24**	1.6050	1.020	.0786
CHP-4-1	CHP-4, CHP-8, CHP-17, CHP-21	2.0200	0.740	.0744
CHP-4-1T	CHP-4T, CHP-8T, CHP-17T, CHP-21T	2.0200	0.740	.0744
CHP-4-2	CHP-4, CHP-8, CHP-17, CHP-21	2.0100	0.740	.0694
CHP-4-2T	CHP-4T, CHP-8T, CHP-17T, CHP-21T	2.0100	0.740	.0694
CHP-4-3	CHP-4, CHP-8, CHP-17, CHP-21, GMP-8, RDCP-1	2.0000	0.740	.0644
CHP-4-3T	CHP-4T, CHP-8T, CHP-17T, CHP-21T, GMP-8T, RDCP-1T	2.0000	0.740	.0644
CHP-4-4	CHP-4	2.0100	0.940	.0694
CHP-4-4T	CHP-4T	2.0100	0.940	.0694
CHP-4-11	CHP-8R1	2.0300	0.740	.0794
CHP-4-11T	CHP-8R1T	2.0300	0.740	.0794
CHP-4-12	CHP-8R2	2.0400	0.740	.0844
CHP-4-12T	CHP-8R2T	2.0400	0.740	.0844
CHP-4-13	CHP-8R3	2.0500	0.740	.0894
CHP-4-13T	CHP-8R3T	2.0500	0.740	.0894
CHP-4-14	CHP-8R4	2.0600	0.740	.0944
CHP-4-14T	CHP-8R4T	2.0600	0.740	.0944
CHP-5-3	RDCP-1	2.0000	0.860	.0644
CHP-5-3T	RDCP-1T	2.0000	0.860	.0644
CHP-10-1	CHP-10, CHP-23	2.3270	0.630	.0790
CHP-10-1T	CHP-10T, CHP-23T	2.3270	0.630	.0790
CHP-10-2	CHP-10	2.3171	0.630	.0740
CHP-10-2T	CHP-10T	2.3171	0.630	.0740
CHP-10-3	CHP-10, CHP-23, GMP-9	2.3088	0.630	.0700
CHP-10-3T	CHP-10T, CHP-23T, GMP-9T	2.3088	0.630	.0700
CHP-12-1	CHP-12	2.1400	0.860	.0941
CHP-12-1T	CHP-12T	2.1400	0.860	.0941
CHP-12-2	CHP-12	2.1300	0.980	.0891
CHP-12-2T	CHP-12T	2.1300	0.980	.0891
CHP-12-3	CHP-12, GMP-12	2.1200	0.980	.0841
CHP-12-3T	CHP-12T, GMP-12T	2.1200	0.980	.0841
CHP-12-11	CHP-12R1	2.1500	0.860	.0991
CHP-12-12	CHP-12R2	2.1600	0.860	.1041
CHP-12-21	CHP-12R1	2.1500	0.980	.0991
CHP-12-22	CHP-12R2	2.1600	0.980	.1041
CHP-23-1	CHP-23	2.3470	0.630	.0890
CHP-23-1T	CHP-23T	2.3470	0.630	.0890
CHP-25-1	CHP-25	2.3482	0.775	.0890
CHP-25-2	CHP-25	2.3285	0.775	.0799
CHP-25-3	CHP-25, GMP-25	2.3088	0.775	.0700
CHP-25-1T	CHP-25T	2.3482	0.775	.0890
CHP-25-2T	CHP-25T	2.3285	0.775	.0799
CHP-25-3T	CHP-25T, GMP-25T	2.3088	0.775	.0700
CO-7-1	CO-7	2.3743	1.094	.0940
CO-7-2	CO-7	2.3120	1.000	.0940
CO-7-3	CO-7	2.2495	1.000	.0940
CO-7-4	CO-7	1.9370	1.250	.0940
CO-9-1	CO-9	1.9375	1.323	.0626
CO-9-2	CO-9	1.8750	0.573	.0626
CO-9-3	CO-9	1.8125	1.135	.0626
CU-1-1	CU-5A, CU-10	2.1290	2.250	.0644
CU-5-2A	CU-5A, CU-10	2.1250	1.685	.0644
CU-8-1	CU-9	2.6870	1.685	.0939
CU-9-1	CU-9	2.6870	1.685	.0939

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
CU-9-2	CU-9	2.6870	2.185	.0939
CU-11-1	CU-11, CU-11A	2.1870	1.905	.0932
CU-11-2	CU-11, CU-11A	2.1870	0.905	.0932
CU-12-1	CU-12	2.2535	1.005	.0620
CU-13-1	CU-13	2.6870	1.810	.0937
CU-13-2	CU-13	2.6870	1.070	.0937
CU-14-1	CU-14	2.3323	1.005	.1010
DA-1-1	DA-1	1.8509	0.930	.0625
DA-1-2	DA-1	1.8312	0.555	.0625
DA-1-3	DA-1	1.8115	0.555	.0625
DA-1-4	DA-1	1.7918	0.555	.0625
DA-1-5	DA-1	1.7495	0.555	.0625
DA-2-1	DA-2	1.9155	1.455	.0624
DA-2-2	DA-2	1.8555	1.070	.0624
DA-2-3	DA-2	1.7495	0.812	.0624
DA-3-1	DA-3A, DA-5	1.9155	0.945	.0625
DA-3-2	DA-3A, DA-5	1.8555	0.865	.0625
DA-3-3A	DA-3A, DA-5	1.7495	0.947	.0625
DE-1-1	DE-1	2.2505	1.545	.0925
DE-2-1	DE-2, DE-2A, DE-5, DE-7	2.3755	1.505	.0943
DE-2-1R1	DE-2R1, DE-2AR1, DE-5R1	2.3855	1.505	.0993
DE-2-2	DE-2, DE-2A, DE-5, DE-7	2.3655	1.505	.0900
DE-2-2R1	DE-2R1, DE-2AR1, DE-5R1	2.3755	1.505	.0943
DE-2-3	DE-7	2.3555	1.505	.0844
DE-4-1	DE-4	2.7216	0.705	.0774
DT-1-1	DT-1	2.0000	0.740	.0644
DT-1-1T	DT-1T	2.0000	0.740	.0644
DT-1-11T	DT-1TR1	2.0100	0.740	.0694
F-1-1	F-1	1.9280	1.600	.0648
F-1-2	F-1	1.9280	1.312	.0648
F-7-2	F-7	2.0580	0.875	.0649
F-8-1	F-11, F-12	2.2500	0.875	.0618
F-9-1	F-9A, F-9B	2.0580	0.875	.0648
F-9-2B	F-9B	2.0580	0.620	.0648
F-9-3	F-9A	2.0580	0.620	.0648
F-11-2	F-11, F-12	2.2500	0.755	.0618
F-12-1	F-12	2.6000	0.755	.0617
F-14-5	F-19	2.3880	0.710	.0610
F-15-2	F-33	2.2950	0.620	.0841
F-15-3	F-33	2.2800	0.620	.0766
F-15-4	F-33	2.2650	0.620	.0691
F-15-5	F-33	2.2500	0.560	.0616
F-16-1	F-16	2.6025	0.670	.0629
F-16-2	F-16	2.4985	0.670	.0629
F-17-2	F-32	1.9635	0.720	.0757
F-17-3	F-32	1.9485	0.720	.0682
F-17-4	F-32	1.9335	0.720	.0607
F-18-1	F-18	2.2040	0.660	.0602
F-18-2	F-18, F-26	2.1890	0.660	.0602
F-18-3	F-18, F-26	2.1740	0.660	.0602
F-18-4	F-18, F-26	2.1590	0.660	.0602
F-18-5	F-18, F-26	2.1440	0.660	.0602
F-19-1	F-19	2.4480	0.710	.0609
F-19-2	F-19	2.4330	0.710	.0609
F-19-3	F-19	2.4180	0.710	.0609

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CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
F-19-4	F-19	2.4030	0.710	.0609
F-22-1	F-7, F-22	2.0580	0.875	.0649
F-23-1A	F-23A	2.1445	0.860	.0624
F-23-1B	F-23B, F-49B	2.1445	0.860	.0624
F-24-2	F-24	2.2950	0.620	.0844
F-24-3	F-24	2.2800	0.620	.0769
F-24-4	F-24	2.2650	0.620	.0694
F-24-5	F-24	2.2500	0.560	.0619
F-25-1	F-25	2.1365	1.000	.0624
F-26-1	F-26	2.2500	0.660	.0616
F-28-1	F-28	1.6890	0.790	.0633
F-28-2	F-28	1.6890	0.685	.0633
F-28-3	F-28	1.6890	0.790	.0633
F-29-1	F-29	1.7755	0.785	.0600
F-29-2	F-29	1.8785	0.665	.0600
F-29-3A	F-29	1.8935	0.625	.0600
F-30-1	F-30	2.2500	0.580	.0618
F-30-1R1	F-30R1	2.2600	0.580	.0668
F-30-1R2	F-30R2	2.2700	0.580	.0718
F-30-1S	F-57	2.2650	0.625	.0694
F-31-1	F-31	1.7734	0.775	.0604
F-31-2	F-31	1.7585	0.700	.0604
F-31-3	F-31	1.7435	0.700	.0604
F-31-4	F-31, F-42	1.7285	0.595	.0604
F-32-1	F-32	1.9785	0.720	.0832
F-33-1	F-24, F-33	2.3100	0.620	.0912
F-34-1	F-34	1.9011	0.693	.0638
F-34-1B	F-34B	1.9011	0.693	.0638
F-34-1S	F-34S	1.9203	0.693	.0738
F-41-1	F-41*	1.9299	0.949	.0794
F-41-2	F-41*	1.9299	0.714	.0794
F-42-1	F-42	1.7585	0.775	.0604
F-42-2	F-42	1.7435	0.700	.0604
F-43-1	F-43, F-44, F-55	2.5345	0.765	.0708
F-45-1	F-45	2.1920	0.635	.0694
F-45-2	F-45	2.1770	0.555	.0619
F-46-1	F-46	2.2047	0.723	.0973
F-46-2	F-46	2.1890	0.723	.0894
F-46-3	F-46	2.2047	0.503	.0973
F-47-1	F-47, F-47B	1.8521	0.780	.0605
F-47-2	F-47	1.8371	0.700	.0605
F-47-2B	F-47B	1.8371	0.700	.0605
F-47-3	F-47	1.8222	0.700	.0605
F-47-3B	F-47B	1.8222	0.700	.0605
F-47-4	F-47, F-47B	1.8072	0.595	.0605
F-48-1	F-48, F-48A	2.1536	0.955	.0719
F-48-2	F-48, F-48A	2.1339	0.537	.0620
F-48-4	F-48	2.1536	0.537	.0719
F-48-4A	F-48A	2.1536	0.537	.0719
F-49-1	F-49	2.1590	0.860	.0695
F-49-1B	F-49B	2.1590	0.860	.0695
F-49-2	F-49	2.1445	0.860	.0624
F-50-1	F-50, F-50A	2.0776	0.775	.0617
F-50-2	F-50, F-50A	2.0626	0.700	.0614
F-50-3	F-50, F-50A	2.0476	0.700	.0614

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CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
F-50-4	F-50	2.0327	0.585	.0615
F-50-4A	F-50A	2.0327	0.825	.0615
F-51-2	F-38, F-52	2.1770	0.555	.0619
F-51-2X	F-38X	2.1770	0.595	.0613
F-52-1	F-38, F-52	2.1920	0.635	.0694
F-52-1X	F-38X	2.1920	0.635	.0688
FA-1-1	FA-1*	1.9035	0.925	.0503
FA-1-2	FA-1*	1.8985	0.925	.0478
FA-1-3	FA-1*	1.8935	0.925	.0453
FA-1-4	FA-1*	1.8885	0.925	.0428
FA-1-5	FA-1*	1.8835	0.925	.0403
FA-2-1	FA-2*	1.8435	0.845	.0403
FA-2-2	FA-2*	1.8535	0.845	.0403
FA-2-3	FA-2*	1.8635	0.845	.0403
FA-2-4	FA-2*	1.8735	0.845	.0403
FA-2-5	FA-2*	1.8835	0.845	.0403
FA-3-1(L)	FA-3*, FA-14L*, FA-14R*	1.1469	0.570	.0422
FA-3-1S(U)	FA-14L*	1.1469	0.570	.0422
FA-3-2(L)	FA-4*	1.1469	0.570	.0422
FA-3-2(U)	FA-3*, FA-14L*, FA-14R*	1.1469	0.570	.0422
FA-4-1(L)	FA-4*, FA-5*	1.1469	0.455	.0420
FA-4-2(L)	FA-4*, FA-5*	1.1469	0.455	.0420
FA-4-3(U)	FA-4*, FA-5*	1.1469	0.570	.0420
FA-4-4(U)	FA-4*, FA-5*	1.1469	0.455	.0420
FA-5-1(L)	FA-5*	1.1469	0.570	.0422
FA-6-1(L)	FA-6*	1.1875	0.960	.0422
FA-6-2(U)	FA-6*	1.1875	0.960	.0422
FA-6-3(L)	FA-6*	1.1875	0.680	.0422
FA-6-4(U)	FA-6*	1.1875	0.680	.0422
FA-13-1(L)	FA-13L*	1.2132	1.215	.0422
FA-13-2(U)	FA-13L*, FA-13R*	1.2132	1.215	.0422
FA-13-3(L)	FA-13L*, FA-13R*	1.2132	0.700	.0422
FA-13-4(U)	FA-13L*, FA-13R*	1.2132	0.700	.0422
FA-13-5(L)	FA-13R*	1.2132	1.215	.0422
FG-1-1	FG-1-1**	2.1430	0.815	.0701
FG-53-1	FG-53**	1.8522	1.142	.0610
FG-53-2	FG-53**	1.8072	0.905	.0610
FP-01-1	FP-01	2.3095	0.760	.0912
FP-01-1R1	FP-01R1	2.3200	0.760	.0962
FP-01-2	FP-01	2.3095	0.760	.0912
FP-01-2R1	FP-01R1	2.3200	0.760	.0962
FP-01-4	FP-01	2.3095	0.760	.0912
FP-01-4R1	FP-01R1	2.3200	0.760	.0962
FP-15-2	FP-33	2.2950	0.620	.0841
FP-15-2T	FP-33T	2.2950	0.620	.0841
FP-15-3	FP-33	2.2800	0.620	.0766
FP-15-3T	FP-33T	2.2800	0.620	.0766
FP-15-4	FP-33	2.2650	0.620	.0691
FP-15-4T	FP-33T	2.2650	0.620	.0691
FP-15-5	FP-33	2.2500	0.560	.0616
FP-15-5T	FP-33T	2.2500	0.560	.0616
FP-18-1	FP-18	2.2040	0.660	.0602
FP-18-1T	FP-18T	2.2040	0.660	.0602
FP-18-2	FP-18, FP-26	2.1890	0.660	.0602
FP-18-2T	FP-18T, FP-26T	2.1890	0.660	.0602

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CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
FP-18-3	FP-18, FP-26	2.1740	0.660	.0602
FP-18-3T	FP-18T, FP-26T	2.1740	0.660	.0602
FP-18-4	FP-18, FP-26	2.1590	0.660	.0602
FP-18-4T	FP-18T, FP-26T	2.1590	0.660	.0602
FP-18-5	FP-18, FP-26	2.1440	0.660	.0602
FP-18-5T	FP-18T, FP-26T	2.1440	0.660	.0602
FP-26-1	FP-26	2.2500	0.660	.0616
FP-26-1T	FP-26T, FP-30AT	2.2500	0.660	.0616
FP-30-1	FP-30	2.2500	0.580	.0618
FP-30-1R	FP-30R	2.2550	0.580	.0645
FP-30-1T	FP-30T	2.2500	0.580	.0618
FP-33-1	FP-33	1.7734	0.775	.0604
FP-33-1T	FP-33T	1.7734	0.775	.0604
GM-5-1	GM-5	2.1875	1.680	.0641
GM-5-2	GM-5	2.1562	0.880	.0641
GM-5-3	GM-5	2.1250	0.880	.0641
GM-5-4	GM-5	1.9725	1.150	.0641
GM-7-1	GM-7	2.3280	0.895	.0798
GM-7-1R2	GM-7R2	2.3480	0.895	.0898
GM-7-2	GM-7	2.3190	0.775	.0753
GM-7-2R2	GM-7R2	2.3480	0.775	.0898
GM-7-3	GM-7	2.3090	0.775	.0703
GM-7-4	GM-7	2.2990	0.775	.0653
GM-7-5	GM-7, GM-7R2	2.1420	0.775	.0655
GM-8-1	GM-8	2.5598	1.120	.0790
GM-8-2	GM-8	2.5598	0.705	.0790
GM2125-1	GMP-3	2.2500	0.855	.0620
GM2125-1T	GMP-3T	2.2500	0.855	.0620
GM2125-4	GMP-3	2.2500	0.980	.0620
GM2125-4T	GMP-3T	2.2500	0.980	.0620
GMA-1-1	GMA-1*	1.8607	0.817	.0550
GMA-1-2	GMA-1*	1.8607	0.661	.0550
GMA-2-1(L)	GMA-2*	1.2655	0.665	.0617
GMA-2-1(U)	GMA-2*	1.2655	0.665	.0617
GMA-2-2(L)	GMA-2*	1.2655	0.665	.0617
GMA-2-3(U)	GMA-2*	1.2655	0.665	.0617
GMP-1-1	GMP-1	2.1200	0.755	.0841
GMP-1-1T	GMP-1T	2.1200	0.755	.0841
GMP-2-1T	GMP-2T	2.1200	0.755	.0841
GMP-55-1	GMP-55	2.2820	0.785	.0569
GMP-55-1T	GMP-55T	2.2820	0.785	.0569
H-5-1	H-5	2.1560	0.750	.0620
H-5-2	H-5	2.1460	0.750	.0620
H-5-3	H-5	2.1360	0.750	.0620
H-5-4	H-5	2.1260	0.750	.0620
H-5-5	H-5	1.6260	1.060	.0620
HA-1-1(U)	HA-1*	1.2655	0.700	.0622
HA-1-2(U)	HA-2*	1.2655	0.830	.0618
HA-1-3(L)	HA-2*	1.2655	0.830	.0618
HA-1-4(U)	HA-2*	1.2655	0.700	.0622
HA-1-4A(U)	HA-2*	1.2655	0.700	.0622
HA-1-5(L)	HA-1*, HA-2*	1.2655	0.700	.0622
HA-1-5(U)	HA-2*	1.2655	0.700	.0622
HA-3-1(L)	HA-3*	1.1875	0.735	.0422
HA-3-2(U)	HA-3*	1.1875	0.735	.0422

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HA-3-3(L)	HA-3*, HA-5*	1.1875	0.535	.0422
HA-3-4(U)	HA-3*, HA-5*	1.1875	0.535	.0422
HA-4-1(U)	HA-4*	1.2655	1.242	.0618
HA-4-2(L)	HA-4*	1.2655	1.242	.0618
HA-4-3(U)	HA-4*	1.2655	0.530	.0618
HA-4-4(L)	HA-4*	1.2655	0.530	.0618
HA-5-1(L)	HA-5*	1.2655	0.788	.0618
HA-5-2(U)	HA-5*	1.2655	0.788	.0618
HE-1-1	HE-1	2.1875	1.125	.0660
HE-1-2	HE-1, HE-7, HE-8	2.1875	0.812	.0660
HE-1-2A	HE-8A	2.1862	0.812	.0653
HE-5-1	HE-5	1.8753	1.020	.0617
HE-5-2	HE-5	1.8753	0.550	.0617
HE-7-1	HE-7, HE-8	2.1875	1.057	.0658
HE-7-1A	HE-8A	2.1862	1.057	.0653
HO-1-1	HO-1	1.8968	0.815	.0643
HO-2-1	HO-2, HO-2S	2.0300	0.785	.0694
HO-2-2	HO-2, HO-2S	2.0200	0.785	.0644
HO-2-3	HO-2, HO-2S	2.0100	0.785	.0694
HO-2-4	HO-2, HO-2S	2.0000	0.785	.0644
HO-2-5	HO-2	1.7108	0.785	.0644
HO-2-5S	HO-2S	1.7128	0.785	.0644
HO-3-1	HO-3	1.9730	1.000	.0637
HO-3-2	HO-3	1.9410	0.875	.0637
HO-3-3	HO-3	1.9100	0.875	.0637
HO-3-4	HO-3	1.3790	0.875	.0637
HOP-2-1	HOP-2S	2.0300	0.785	.0694
HOP-2-2	HOP-2S	2.0200	0.785	.0644
HOP-2-3	HOP-2S	2.0100	0.785	.0694
HOP-2-4	HOP-2S	2.0000	0.785	.0644
HOP-2-5S	HOP-2S	1.7128	0.785	.0644
HOP-2-1T	HOP-2ST	2.0300	0.785	.0694
HOP-2-2T	HOP-2ST	2.0200	0.785	.0644
HOP-2-3T	HOP-2ST	2.0100	0.785	.0694
HOP-2-4T	HOP-2ST	2.0000	0.785	.0644
HOP-2-5ST	HOP-2ST	1.7128	0.785	.0644
IN-2-3	IN-3	2.2008	1.062	.0645
IN-2-4	IN-3, IN-16	1.6313	1.530	.0645
IN-3A-1	IN-3, IN-12, IN-14	2.2408	1.125	.0647
IN-5-1	IN-5	2.3748	1.438	.0644
IN-5-2	IN-5	2.2493	1.469	.0642
IN-5-3	IN-5	1.9993	1.063	.0643
IN-8-2	IN-3, IN-12, IN-14, IN-16	2.2207	1.062	.0647
IN-8-3	IN-12, IN-14	2.2007	1.062	.0647
IN-8-4	IN-14	1.6313	1.312	.0645
IN-10-1A	IN-10A	2.4748	1.187	.0618
IN-10-2	IN-10A	2.4438	1.000	.0625
IN-10-3	IN-10A	2.4153	1.000	.0613
IN-10-4A	IN-10A	2.3748	1.000	.0618
IN-11-1	IN-11	2.2313	0.710	.0647
IN-11-2	IN-11	2.2213	0.645	.0647
IN-11-3	IN-11	2.2113	0.645	.0647
IN-11-4	IN-11	2.2013	0.645	.0647
IN-11-5	IN-11	2.1913	0.750	.0647
IN-15-1	IN-15	2.0618	1.000	.0643

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CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
IN-15-2	IN-15	1.9368	1.375	.0643
IN-15-3	IN-15	1.4993	1.000	.0643
IN-16-1	IN-16	2.5610	1.125	.0645
IN-16-3	IN-16	2.2010	1.060	.0645
IN-17-1	IN-17	2.2313	0.785	.0647
IN-17-1S	IN-17R2	2.2513	0.785	.0768
IN-17-2	IN-17	2.2313	0.650	.0647
IN-17-2S	IN-17R2	2.2513	0.650	.0768
IN-18-1	IN-18	1.9430	1.095	.0645
IN-18-2	IN-18	1.7083	1.005	.0641
IN-18-3	IN-18	1.6303	0.790	.0641
IN-19-1	IN-19	2.5013	1.010	.1078
IN-19-2	IN-19	2.4813	0.709	.0980
IN-19-3	IN-19	2.4613	0.709	.0880
IN-19-4	IN-19	2.4413	0.710	.0780
IN-21-1	IN-21	2.5984	0.740	.0778
IZ-2-1	IZ-2	2.0479	0.984	.0790
IZ-2-2	IZ-2	2.0480	0.984	.0790
IZ-2-3	IZ-2	2.0480	0.984	.0790
IZ-3-1	IZ-3	2.0486	0.866	.0797
IZ-3-2	IZ-3	2.0486	0.866	.0797
IZ-3-3	IZ-3	2.0486	0.866	.0797
IZ-5-1	IZ-5	2.1274	0.984	.0797
IZ-5-2	IZ-5	2.1274	0.866	.0797
IZ-6-1	IZ-6, IZ-7, IZ-8	2.3637	0.787	.0785
IZ-6-2	IZ-6, IZ-7, IZ-8	2.3637	0.787	.0785
J-1-1	J-1	2.3165	1.125	.0645
JD-1-1	JD-1, JD-2	1.9280	1.181	.0579
JD-1-2	JD-1, JD-2	1.9280	0.938	.0579
JD-3-1	JD-3, JD-4	2.5000	1.000	.0614
JD-5-1	JD-5	1.9280	1.598	.0577
JD-5-2	JD-5	1.9280	1.220	.0577
JDG-7-1	JDG-7**	1.6250	1.090	.0608
K-1-1	CO-8, K-1	2.0000	0.875	.0628
K-1-2	CO-3, K-1	1.9375	0.937	.0630
K-1-3	CO-3, CO-8, K-1	1.8750	1.620	.0628
K-1-4	CO-3, CO-8, K-1	1.3748	1.156	.0628
LR-1-1	LR-1	1.9165	0.750	.0642
MA-3A-1	MA-6	2.6235	1.380	.1852
MA-5-1	MA-5, MA-6, MA-7	2.6235	1.385	.0910
MA-5-2	MA-5	2.6235	1.010	.0905
MA-5-3	MA-5, MA-6, MA-7, MA-8	2.6235	1.010	.0910
MA-5-4	MA-5	2.6235	1.380	.1853
MA-8-1	MA-8	2.6235	1.385	.0905
MA-11-1	MA-11	2.8735	1.000	.0908
MA-11-2	MA-11	2.8735	1.181	.0908
MAG-10-1	MAG-10**	2.3115	1.760	.1237
MAG-10-2	MAG-10**	2.2495	1.760	.1243
MAG-11-1	MAG-11**	2.3115	1.750	.1235
MIA-1-1(U)	MIA-1*, MIA-4*	1.4225	0.795	.0422
MIA-1-3(U)	MIA-1*	1.4225	0.795	.0422
MIA-1-4(L)	MIA-1*, MIA-4*	1.4225	0.795	.0422
MIA-1-5(U)	MIA-2*	1.4971	0.793	.0792
MIA-1-6(L)	MIA-2*	1.4971	0.793	.0792
MIA-1-7(U)	MIA-2*	1.4971	0.793	.0792

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MIA-1-8(U)	MIA-4*	1.4225	0.795	.0422
MIA-3-1	MIA-3*	1.8918	0.685	.0403
MIA-5-1(U)	MIA-5*	1.4225	0.793	.0422
MIA-5-2(U)	MIA-5*	1.4225	0.710	.0422
MIA-5-3(U)	MIA-5*	1.4225	0.760	.0422
MIA-5-5(L)	MIA-5*	1.4225	0.793	.0422
MIA-5-6(L)	MIA-5*	1.4225	0.710	.0422
MIA-5-7(L)	MIA-5*	1.4225	0.760	.0422
MIA-5-8(U)	MIA-5*	1.4225	0.980	.0422
MIA-5-9(L)	MIA-5*	1.4225	0.980	.0422
MIG-1-EL	MIG-2E**	1.8126	0.930	NA
MIG-2-1	MIG-2**	1.8126	0.785	.0587
MIG-2-1R	MIG-2-1R**	1.9855	0.788	.1450
MIG-2-2	MIG-2**	1.0240	0.703	.0589
MIG-2-EL	MIG-2E**	0.6330	0.875	NA
MIG-3-1	MIG-3**	1.7721	0.745	.0590
MIG-3-2	MIG-3**	1.7328	0.825	.0592
MZA-1-1	MZA-1*	1.7931	0.730	.0403
MZA-1-2	MZA-1*	1.7931	0.730	.0403
MZA-1-3	MZA-1*	1.7931	0.730	.0403
MZA-2-1(U)	MZA-2*	1.3439	0.700	.0422
MZA-2-2(L)	MZA-2*	1.3439	0.830	.0422
MZA-2-3(L)	VWA-1*	1.3439	0.830	.0422
MZA-2-3(U)	MZA-2*	1.3439	0.830	.0422
MZA-4-1(U)	MZA-4*	1.2655	0.700	.0422
MZG-3-1	MZG-3**	1.8114	0.910	.0781
MZG-3-2	MZG-3**	1.7326	1.030	.0780
MZG-3-3	MZG-3**	0.9453	0.635	.0585
N-5-2	N-6	1.9370	0.780	.0647
N-5-3	N-6	1.9270	0.780	.0647
N-5-4	N-6	1.9170	0.810	.0647
N-6-1	N-6	1.9470	0.940	.0647
N-7-1	N-7, N-7B	2.1560	0.690	.0620
N-7-1X001	N-7BW	2.1560	0.690	.0625
N-7-2	N-7, N-10	2.1460	0.690	.0620
N-7-2B	N-7B	2.1460	0.690	.0620
N-7-2BX001	N-7BW	2.1460	0.690	.0625
N-7-3	N-7, N-10	2.1360	0.690	.0620
N-7-3B	N-7B	2.1360	0.690	.0620
N-7-3BX001	N-7BW	2.1360	0.690	.0625
N-7-4	N-7, N-7B, N-10	2.1260	0.690	.0620
N-7-4X001	N-7BW	2.1260	0.690	.0625
N-8-2	N-9	2.2160	0.625	.0620
N-8-3	N-9	2.1860	0.625	.0620
N-8-4	N-9	2.1560	0.625	.0620
N-8-5	N-9	2.1260	0.625	.0620
N-8-21	N-9R1	2.2260	0.625	.0670
N-8-31	N-9R1	2.1960	0.625	.0670
N-8-41	N-9R1	2.1660	0.625	.0670
N-8-51	N-9R1	2.1360	0.625	.0670
N-9-1	N-9	2.2460	0.920	.0620
N-9-11	N-9R1	2.2560	0.920	.0670
N-10-1	N-10	2.1560	0.690	.0620
NIA-1-1	NIA-1*, NIA-4*	1.7340	0.805	.0403
NIA-1-2	NIA-4*	1.7340	0.805	.0403

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NIA-1-3	NIA-4*	1.7340	1.120	.0403
NIA-2-1	NIA-2L*, NIA-2R*, NIA-3L*, NIA-3R*	1.9309	0.735	.0403
NIA-3-1	NIA-3R*	1.9702	1.235	.0403
NIA-3-2	NIA-3L*, NIA-3R*	1.7538	0.735	.0403
NIA-4-1	NIA-5*	1.8914	0.805	.0403
NIA-4-2	NIA-5*	1.8914	0.805	.0403
NIG-1-1	NIG-1**	2.1255	0.628	.0595
NIG-1-2	NIG-1**	2.1183	0.825	.0595
O-5-1	O-5	2.1288	0.688	.0641
O-6-1	O-6	2.1688	0.688	.0646
O-6-1B	O-6B	2.1688	0.688	.0646
O-6-2	O-6, O-7, O-8	2.1488	0.688	.0646
O-6-2B	O-6B	2.1488	0.688	.0646
O-6-3	O-6, O-7, O-8	2.1288	0.688	.0646
O-6-3B	O-6B	2.1288	0.688	.0646
O-6-4	O-6, O-7, O-8	2.1088	0.688	.0646
O-6-4B	O-6B	2.1088	0.688	.0646
O-6-5	O-6, O-7	2.0888	0.688	.0646
O-6-5B	O-6B	2.0888	0.688	.0646
O-7-1	O-7, O-8	2.1688	0.688	.0646
OG-1-1	OG-1**	2.1408	0.740	.0695
ON-1-1	ON-1	1.5000	0.697	.0619
OP-3-1	OP-3, OP-5	2.1069	0.950	.0889
OP-3-2	OP-3, OP-5	2.0970	0.723	.0889
OP-3-3	OP-3, OP-5	2.0773	0.723	.0840
OP-5-3	OP-5	2.0872	0.723	.0865
P-3-1	P-3	2.0307	1.060	.0644
P-3-2	P-3, P-4	2.0307	0.680	.0644
P-3-21	P-4R1	2.0407	0.680	.0694
PD-1-1	PD-1, PD-3	2.1295	1.093	.0645
PD-1-2	PD-1	2.0990	0.875	.0649
PD-1-3	PD-1	2.0675	0.875	.0650
PD-3-2	PD-3	2.0990	1.062	.0650
PD-3-3	PD-3	2.0675	1.062	.0650
PD-8-1	PD-8	2.1300	0.938	.0647
PD-8-2	PD-8	2.1300	0.813	.0647
PD-8-3	PD-8	1.5675	0.875	.0647
PD-9-2	PD-16	2.1140	0.760	.0645
PD-9-3	PD-16	2.0990	0.760	.0645
PD-9-4	PD-16	2.0830	0.760	.0645
PD-9-5	PD-16, PD-25, PD-27	1.6925	0.940	.0645
PD-12-2	PD-17, PD-18	2.1140	0.750	.0645
PD-12-3	PD-17	2.0990	0.669	.0645
PD-12-4	PD-17	2.0830	0.750	.0645
PD-12-5	PD-17	1.8800	0.750	.0645
PD-13-3	PD-18	2.0990	0.750	.0645
PD-13-4	PD-18, PD-21	2.0830	0.750	.0645
PD-16-1	PD-16, PD-25, PD-27	2.1300	0.875	.0645
PD-17-1	PD-17	2.1300	0.750	.0645
PD-18-1	PD-18	2.1300	0.920	.0645
PD-21-1	PD-21	2.1300	0.780	.0640
PD-21-2	PD-21	2.1140	0.625	.0640
PD-21-3	PD-21	2.0990	0.625	.0640
PD-25-2	PD-25, PD-27	2.1140	0.625	.0645
PD-25-3	PD-25	2.0990	0.615	.0645

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PD-25-4	PD-25, PD-27	2.0830	0.615	.0645
PD-28-1	PD-28, PD-28B	2.1300	0.930	.0647
PD-28-2	PD-28	2.1140	0.610	.0653
PD-28-2B	PD-28B	2.1140	0.610	.0653
PD-28-3	PD-28	2.0990	0.610	.0653
PD-28-3B	PD-28B	2.0990	0.610	.0653
PD-28-4	PD-28, PD-28B	2.0830	0.610	.0647
PD-30-1	PD-30	2.2235	0.885	.0650
PD-30-2	PD-30	2.2075	0.625	.0652
PD-30-3	PD-30	2.1915	0.625	.0650
PD-30-4	PD-30	2.1755	0.625	.0650
PD-30-5	PD-30	2.1595	0.625	.0650
PD-30-6	PD-30	2.0495	0.885	.0650
PD-31-1B	PD-31B	2.4231	0.665	.0650
PD-31-2B	PD-31B	2.4073	0.587	.0650
PD-31-3B	PD-31B	2.3916	0.587	.0650
PD-31-4B	PD-31B	2.3758	0.587	.0650
PD-31-5B	PD-31B	1.8499	0.587	.0650
PD-31-1W	PD-31BW	2.4231	0.665	.0655
PD-31-2W	PD-31BW	2.4073	0.587	.0655
PD-31-3W	PD-31BW	2.3916	0.587	.0655
PD-31-4W	PD-31BW	2.3758	0.587	.0655
PD-31-5W	PD-31BW	1.8499	0.587	.0655
PDA-1-1(L)	PDA-1*	1.4819	0.625	.0522
PDA-1-2(U)	PDA-1*	1.4819	0.625	.0522
PDA-2-1(L)	PDA-2*	1.4819	0.625	.0422
PDA-2-2(U)	PDA-2*	1.4819	0.625	.0422
PDA-3-1	PDA-3*	1.7035	0.815	.0404
PDA-3-2	PDA-3*	1.7195	0.775	.0406
PDA-3-3	PDA-3*	1.7345	0.775	.0402
PDA-3-4	PDA-3*	1.7505	0.775	.0404
PDA-3-5	PDA-3*	1.7665	0.745	.0404
PDA-4-1 (L)	PDA-4*	1.1085	0.585	.0418
PDA-4-2 (U)	PDA-4*	1.1085	0.585	.0418
PDG-1-1	PDG-1**	1.3390	0.785	.0789
PDG-26-1	PDG-26**	1.8110	0.745	.0640
PDG-26-2	PDG-26**	0.9055	0.825	.0640
PDG-29-1	PDG-29S**	1.7866	0.865	.08 Semi
PDG-30-1	PDG-30**	2.3533	0.710	.0728
PDG-30-2	PDG-30**	1.2903	0.710	.0728
PDP-9-2	PDP-16	2.1140	0.760	.0645
PDP-9-2T	PDP-16T	2.1140	0.760	.0645
PDP-9-3	PDP-16	2.0990	0.760	.0645
PDP-9-3T	PDP-16T	2.0990	0.760	.0645
PDP-9-4	PDP-16	2.0830	0.760	.0645
PDP-9-4T	PDP-16T	2.0830	0.760	.0645
PDP-9-5	PDP-16, PDP-25	1.6925	0.940	.0645
PDP-9-5T	PDP-16T, PDP-25T	1.6925	0.940	.0645
PDP-12-2	PDP-17	2.1140	0.750	.0645
PDP-12-2R1	PDP-17R1	2.1240	0.750	.0695
PDP-12-2T	PDP-17T	2.1140	0.750	.0645
PDP-12-3	PDP-17	2.0990	0.669	.0645
PDP-12-3R1	PDP-17R1	2.1090	0.669	.0695
PDP-12-3T	PDP-17T	2.0990	0.669	.0645
PDP-12-4	PDP-17	2.0830	0.750	.0645

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PDP-12-4R1	PDP-17R1	2.0930	0.750	.0695
PDP-12-4T	PDP-17T	2.0830	0.750	.0645
PDP-12-5	PDP-17	1.8800	0.750	.0645
PDP-12-5R1	PDP-17R1	1.8900	0.750	.0695
PDP-12-5T	PDP-17T	1.8800	0.750	.0645
PDP-16-1	PDP-16, PDP-25	2.1300	0.875	.0645
PDP-16-1T	PDP-16T, PDP-25T	2.1300	0.875	.0645
PDP-17-1	PDP-17	2.1300	0.750	.0645
PDP-17-1R1	PDP-17R1	2.1400	0.750	.0695
PDP-17-1T	PDP-17T	2.1300	0.750	.0645
PDP-25-2	PDP-25	2.1140	0.625	.0645
PDP-25-2T	PDP-25T	2.1140	0.625	.0645
PDP-25-3	PDP-25	2.0990	0.615	.0645
PDP-25-3T	PDP-25T	2.0990	0.615	.0645
PDP-25-4	PDP-25	2.0830	0.615	.0645
PDP-25-4T	PDP-25T	2.0830	0.615	.0645
PP-3-1	PP-3	2.0307	1.060	.0644
PP-3-1T	PP-3T	2.0307	1.060	.0644
PP-3-2	PP-3, PP-4	2.0307	0.680	.0644
PP-3-2T	PP-3T, PP-4T	2.0307	0.680	.0644
R-1-1	R-1	2.5620	1.625	.0610
R-1-2	R-1	2.4370	1.250	.0610
R-1-3	R-1	2.3120	1.250	.0610
R-1-4	R-1	1.7500	1.187	.0613
SA-1-1	SA-1*	1.8215	0.940	.0407
SA-1-2	SA-1*	1.8295	0.485	.0407
SA-1-3	SA-1*	1.8375	0.485	.0407
SA-1-4	SA-1*	1.8455	0.485	.0407
SA-1-5	SA-1*	1.8535	0.485	.0407
SH-1798T	CH-17G, CH-21G, CHG-15A**	NA	NA	NA
TO-1-1	TO-10	2.0475	1.143	.0785
TO-1-2	TO-10	1.9885	0.943	.0785
TO-1-4	TO-10	1.8705	0.984	.0785
TO-2-1	TO-2	1.9685	1.095	.0685
TO-2-2	TO-2	1.9685	1.654	.0735
TO-2-3	TO-2	1.9685	0.985	.0785
TO-3-1	TO-3	1.8895	0.715	.0929
TO-3-2	TO-3	1.8705	0.715	.0885
TO-3-3	TO-3	1.8510	0.715	.0835
TO-3-4	TO-3	1.8311	0.715	.0786
TO-5-1	TO-11	1.9688	1.142	.0686
TO-5-2	TO-11	1.9688	0.790	.0735
TO-5-4	TO-11	1.9688	0.750	.0835
TO-5-5	TO-11	1.9688	1.105	.0884
TO-7-1	TO-7	1.9691	0.705	.0687
TO-7-2	TO-7	1.9593	0.625	.0687
TO-7-3	TO-7	1.9297	0.705	.0588
TO-7-4	TO-7	1.9400	0.625	.0687
TO-7-5	TO-7	1.9494	0.705	.0785
TO-8-1	TO-8	1.4971	1.103	.0591
TO-8-2	TO-8	1.4971	0.793	.0591
TO-10-3	TO-10	1.9295	0.943	.0785
TO-11-3	TO-11	1.9688	1.810	.0785
TO-12-1	TO-12	1.9697	0.709	.0689
TO-12-2	TO-12	1.9598	0.630	.0689

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BEARING COMPONENT LISTING

CONTENTS	IN SET(S)	HOUSING BORE	LENGTH	MAX WALL
TO-12-3	TO-12	1.9303	0.709	.0591
TO-12-4	TO-12	1.9402	0.630	.0689
TO-12-5	TO-12	1.9500	0.709	.0788
TO-15-1	TO-15	2.2638	0.787	.0791
TO-15-2	TO-15	2.2539	0.787	.0791
TO-15-3	TO-15	2.2047	0.787	.0594
TO-15-4	TO-15	2.2047	0.787	.0644
TO-15-5	TO-15	2.2146	0.787	.0742
TOA-1-1(U)	NIA-6*	1.3841	0.800	.0422
TOA-1-2(L)	NIA-6*	1.3841	0.800	.0422
TOA-2-1(L)	TOA-1*	1.3841	0.800	.0418
TOA-2-2(U)	TOA-1*	1.3841	0.800	.0418
TOG-8-1	TOG-8**	1.9682	0.975	.0784
TOG-8-2	TOG-8**	1.7714	0.785	.0784
TOG-9-1	TOG-9**	1.7719	0.640	.0788
TOG-9-2	TOG-9**	1.4569	0.640	.0788
TOG-10-1	TOG-10**	1.6541	0.800	.0783
TOG-10-2	TOG-10**	1.6350	0.895	.0790
TOG-11-1	TOG-11**, TOG-11A**, TOG-11C**	1.2615	0.765	.0597
TOG-11-2	TOG-11**, TOG-11C**	1.2615	0.765	.0597
TOG-11-3	TOG-11**, TOG-11A**, TOG-11C**	1.2615	0.765	.0597
VHA-1-2(L)	MZA-4*	1.2655	0.700	.0422
VHA-1-2(U)	VOA-1*	1.2655	0.700	.0422
VO-2-1	VO-2**, VO-3	1.9655	1.060	.0570
VO-2-2	VO-2**	1.8081	1.025	.0570
VO-2-3	VO-2**	1.5724	1.100	.0573
VOA-1-1(L)	VOA-1*	1.2655	0.700	.0422
VW-1-1	VW-1	1.0831	0.787	.0490
VW-1-2	VW-1	1.0831	0.906	.0490
VW-1-3(L)	VW-1	1.0831	1.102	.0490
VW-1-3(U)	VW-1	1.0831	1.102	.0490
VWA-1-1(U)	VWA-1*	1.3439	0.830	.0422
VWA-1-2(U)	VWA-1*	1.2655	0.830	.0422
VWA-1-3(L)	VWA-1*	1.2655	0.630	.0422
VWA-1-4(U)	VWA-1*	1.2655	0.630	.0422
VWA-1-5(L)	VWA-1*	1.2655	0.700	.0422
VWA-2-1(L)	VWA-2*	1.1085	0.680	.0422
VWA-2-2(U)	VWA-2*	1.1085	0.680	.0422
VWG-1-1	VWG-1**	1.8115	0.585	.0590
VWG-1-2	VWG-1**	1.7721	0.585	.0590
WA-1-1	WA-4, WA-7	1.8750	1.000	.0617
WA-2-1	WA-10	2.2500	1.250	.0614
WA-3-1	WA-3	2.2540	1.125	.0643
WA-3-2	WA-3	2.0040	1.312	.0645
WA-3-3	WA-3	1.6290	1.500	.0645
WA-8-1	WA-8, WA-12	2.1250	1.067	.0605
WA-8-2	WA-8, WA-12	2.1250	0.880	.0605
WA-9-1	WA-9	2.8750	1.880	.0645
WA-9-2	WA-9	2.8750	1.505	.0645
WA-9-3	WA-9	2.1870	2.255	.0643
WA-11-1	WA-11	2.6250	1.500	.0618

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BEARING COMPONENT PROGRESSIVE LISTING BY HOUSING BORE

HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
0.6330	0.875	NA	**MIG-2-EL**	MIG-2E**
0.9055	0.825	.0640	**PDG-26-2**	PDG-26**
0.9453	0.635	.0585	**MZG-3-3**	MZG-3**
1.0240	0.703	.0589	**MIG-2-2**	MIG-2**
1.0831	0.787	.0490	**VW-1-1**	VW-1
1.0831	0.906	.0490	**VW-1-2**	VW-1
1.0831	1.102	.0490	**VW-1-3(L)**	VW-1
1.0831	1.102	.0490	**VW-1-3(U)**	VW-1
1.1085	0.585	.0418	**PDA-4-1 (L)**	PDA-4*
1.1085	0.585	.0418	**PDA-4-2 (U)**	PDA-4*
1.1085	0.680	.0422	**VWA-2-1(L)**	VWA-2*
1.1085	0.680	.0422	**VWA-2-2(U)**	VWA-2*
1.1469	0.455	.0420	**FA-4-1(L)**	FA-4*, FA-5*
1.1469	0.455	.0420	**FA-4-2(L)**	FA-4*, FA-5*
1.1469	0.455	.0420	**FA-4-4(U)**	FA-4*, FA-5*
1.1469	0.570	.0420	**FA-4-3(U)**	FA-4*, FA-5*
1.1469	0.570	.0422	**FA-3-1(L)**	FA-3*, FA-14L*, FA-14R*
1.1469	0.570	.0422	**FA-3-1S(U)**	FA-14L*
1.1469	0.570	.0422	**FA-3-2(L)**	FA-4*
1.1469	0.570	.0422	**FA-3-2(U)**	FA-3*, FA-14L*, FA-14R*
1.1469	0.570	.0422	**FA-5-1(L)**	FA-5*
1.1875	0.535	.0422	**HA-3-3(L)**	HA-3*, HA-5*
1.1875	0.535	.0422	**HA-3-4(U)**	HA-3*, HA-5*
1.1875	0.680	.0422	**FA-6-3(L)**	FA-6*
1.1875	0.680	.0422	**FA-6-4(U)**	FA-6*
1.1875	0.735	.0422	**HA-3-1(L)**	HA-3*
1.1875	0.735	.0422	**HA-3-2(U)**	HA-3*
1.1875	0.960	.0422	**FA-6-1(L)**	FA-6*
1.1875	0.960	.0422	**FA-6-2(U)**	FA-6*
1.2132	0.700	.0422	**FA-13-3(L)**	FA-13L*, FA-13R*
1.2132	0.700	.0422	**FA-13-4(U)**	FA-13L*, FA-13R*
1.2132	1.215	.0422	**FA-13-1(L)**	FA-13L*
1.2132	1.215	.0422	**FA-13-2(U)**	FA-13L*, FA-13R*
1.2132	1.215	.0422	**FA-13-5(L)**	FA-13R*
1.2615	0.765	.0597	**TOG-11-1**	TOG-11**, TOG-11A**, TOG-11C**
1.2615	0.765	.0597	**TOG-11-2**	TOG-11**, TOG-11C**
1.2615	0.765	.0597	**TOG-11-3**	TOG-11**, TOG-11A**, TOG-11C**
1.2655	0.530	.0618	**HA-4-3(U)**	HA-4*
1.2655	0.530	.0618	**HA-4-4(L)**	HA-4*
1.2655	0.630	.0422	**VWA-1-3(L)**	VWA-1*
1.2655	0.630	.0422	**VWA-1-4(U)**	VWA-1*
1.2655	0.665	.0617	**GMA-2-1(L)**	GMA-2*
1.2655	0.665	.0617	**GMA-2-1(U)**	GMA-2*
1.2655	0.665	.0617	**GMA-2-2(L)**	GMA-2*
1.2655	0.665	.0617	**GMA-2-3(U)**	GMA-2*
1.2655	0.700	.0422	**MZA-4-1(U)**	MZA-4*
1.2655	0.700	.0422	**VHA-1-2(L)**	MZA-4*
1.2655	0.700	.0422	**VHA-1-2(U)**	VOA-1*
1.2655	0.700	.0422	**VOA-1-1(L)**	VOA-1*
1.2655	0.700	.0422	**VWA-1-5(L)**	VWA-1*
1.2655	0.700	.0622	**HA-1-1(U)**	HA-1*
1.2655	0.700	.0622	**HA-1-4(U)**	HA-2*
1.2655	0.700	.0622	**HA-1-4A(U)**	HA-2*
1.2655	0.700	.0622	**HA-1-5(L)**	HA-1*, HA-2*
1.2655	0.700	.0622	**HA-1-5(U)**	HA-2*

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
1.2655	0.788	.0618	**HA-5-1(L)**	HA-5*
1.2655	0.788	.0618	**HA-5-2(U)**	HA-5*
1.2655	0.830	.0422	**VWA-1-2(U)**	VWA-1*
1.2655	0.830	.0618	**HA-1-2(U)**	HA-2*
1.2655	0.830	.0618	**HA-1-3(L)**	HA-2*
1.2655	1.242	.0618	**HA-4-1(U)**	HA-4*
1.2655	1.242	.0618	**HA-4-2(L)**	HA-4*
1.2903	0.710	.0728	**PDG-30-2**	PDG-30**
1.3390	0.785	.0789	**PDG-1-1**	PDG-1**
1.3439	0.700	.0422	**MZA-2-1(U)**	MZA-2*
1.3439	0.830	.0422	**MZA-2-2(L)**	MZA-2*
1.3439	0.830	.0422	**MZA-2-3(L)**	VWA-1*
1.3439	0.830	.0422	**MZA-2-3(U)**	MZA-2*
1.3439	0.830	.0422	**VWA-1-1(U)**	VWA-1*
1.3745	1.000	.0615	**BU-1-3**	BU-2
1.3748	1.156	.0628	**K-1-4**	CO-3, CO-8, K-1
1.3790	0.875	.0637	**HO-3-4**	HO-3
1.3841	0.800	.0418	**TOA-2-1(L)**	TOA-1*
1.3841	0.800	.0418	**TOA-2-2(U)**	TOA-1*
1.3841	0.800	.0422	**TOA-1-1(U)**	NIA-6*
1.3841	0.800	.0422	**TOA-1-2(L)**	NIA-6*
1.4225	0.710	.0422	**MIA-5-2(U)**	MIA-5*
1.4225	0.710	.0422	**MIA-5-6(L)**	MIA-5*
1.4225	0.760	.0422	**MIA-5-3(U)**	MIA-5*
1.4225	0.760	.0422	**MIA-5-7(L)**	MIA-5*
1.4225	0.793	.0422	**MIA-5-1(U)**	MIA-5*
1.4225	0.793	.0422	**MIA-5-5(L)**	MIA-5*
1.4225	0.795	.0422	**MIA-1-1(U)**	MIA-1*, MIA-4*
1.4225	0.795	.0422	**MIA-1-3(U)**	MIA-1*
1.4225	0.795	.0422	**MIA-1-4(L)**	MIA-1*, MIA-4*
1.4225	0.795	.0422	**MIA-1-8(U)**	MIA-4*
1.4225	0.980	.0422	**MIA-5-8(U)**	MIA-5*
1.4225	0.980	.0422	**MIA-5-9(L)**	MIA-5*
1.4569	0.640	.0788	**TOG-9-2**	TOG-9**
1.4587	1.000	.0398	**BMA-4-3**	BMA-4*
1.4587	1.390	.0403	**BMA-1-4**	BMA-1*
1.4819	0.625	.0422	**PDA-2-1(L)**	PDA-2*
1.4819	0.625	.0422	**PDA-2-2(U)**	PDA-2*
1.4819	0.625	.0522	**PDA-1-1(L)**	PDA-1*
1.4819	0.625	.0522	**PDA-1-2(U)**	PDA-1*
1.4971	0.793	.0591	**TO-8-2**	TO-8
1.4971	0.793	.0792	**MIA-1-5(U)**	MIA-2*
1.4971	0.793	.0792	**MIA-1-6(L)**	MIA-2*
1.4971	0.793	.0792	**MIA-1-7(U)**	MIA-2*
1.4971	1.103	.0591	**TO-8-1**	TO-8
1.4993	1.000	.0643	**IN-15-3**	IN-15
1.5000	0.697	.0619	**ON-1-1**	ON-1
1.5039	0.533	.0644	**BL-1-3**	BL-1
1.5675	0.875	.0647	**PD-8-3**	PD-8
1.5682	0.875	.0642	**C-2-2**	C-2
1.5724	1.100	.0573	**VO-2-3**	VO-2**
1.5772	0.800	.0403	**BMA-1-10**	BMA-2*, BMA-3*
1.5969	0.865	.0808	**CHG-23-2**	CHG-23**
1.6050	1.020	.0786	**CHG-24-1**	CHG-24**
1.6250	1.090	.0608	**JDG-7-1**	JDG-7**

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1.6253	0.865	.0808	**CHG-23-1**	CHG-23**
1.6260	1.060	.0620	**H-5-5**	H-5
1.6290	1.500	.0645	**WA-3-3**	WA-3
1.6303	0.790	.0641	**IN-18-3**	IN-18
1.6313	1.312	.0645	**IN-8-4**	IN-14
1.6313	1.530	.0645	**IN-2-4**	IN-3, IN-16
1.6350	0.895	.0790	**TOG-10-2**	TOG-10**
1.6541	0.800	.0783	**TOG-10-1**	TOG-10**
1.6890	0.685	.0633	**F-28-2**	F-28
1.6890	0.790	.0633	**F-28-1**	F-28
1.6890	0.790	.0633	**F-28-3**	F-28
1.6925	0.940	.0645	**PD-9-5**	PD-16, PD-25, PD-27
1.6925	0.940	.0645	**PDP-9-5**	PDP-16, PDP-25
1.6925	0.940	.0645	**PDP-9-5T**	PDP-16T, PDP-25T
1.7035	0.815	.0404	**PDA-3-1**	PDA-3*
1.7083	1.005	.0641	**IN-18-2**	IN-18
1.7108	0.785	.0644	**HO-2-5**	HO-2
1.7128	0.785	.0644	**HO-2-5S**	HO-2S
1.7128	0.785	.0644	**HOP-2-5S**	HOP-2S
1.7128	0.785	.0644	**HOP-2-5ST**	HOP-2ST
1.7195	0.775	.0406	**PDA-3-2**	PDA-3*
1.7285	0.595	.0604	**F-31-4**	F-31, F-42
1.7326	1.030	.0780	**MZG-3-2**	MZG-3**
1.7328	0.825	.0592	**MIG-3-2**	MIG-3**
1.7340	0.805	.0403	**NIA-1-1**	NIA-1*, NIA-4*
1.7340	0.805	.0403	**NIA-1-2**	NIA-4*
1.7340	1.085	.0400	**BMA-1-9**	BMA-4*
1.7340	1.120	.0403	**NIA-1-3**	NIA-4*
1.7345	0.775	.0402	**PDA-3-3**	PDA-3*
1.7435	0.700	.0604	**F-31-3**	F-31
1.7435	0.700	.0604	**F-42-2**	F-42
1.7495	0.555	.0625	**DA-1-5**	DA-1
1.7495	0.812	.0624	**DA-2-3**	DA-2
1.7495	0.947	.0625	**DA-3-3A**	DA-3A, DA-5
1.7500	1.187	.0613	**R-1-4**	R-1
1.7505	0.775	.0404	**PDA-3-4**	PDA-3*
1.7538	0.735	.0403	**NIA-3-2**	NIA-3L*, NIA-3R*
1.7539	0.755	.0644	**BL-1-2**	BL-1
1.7585	0.700	.0604	**F-31-2**	F-31
1.7585	0.775	.0604	**F-42-1**	F-42
1.7665	0.745	.0404	**PDA-3-5**	PDA-3*
1.7714	0.785	.0784	**TOG-8-2**	TOG-8**
1.7719	0.640	.0788	**TOG-9-1**	TOG-9**
1.7721	0.585	.0590	**VWG-1-2**	VWG-1**
1.7721	0.745	.0590	**MIG-3-1**	MIG-3**
1.7734	0.775	.0604	**F-31-1**	F-31
1.7734	0.775	.0604	**FP-33-1**	FP-33
1.7734	0.775	.0604	**FP-33-1T**	FP-33T
1.7741	1.115	.0403	**BMA-1-8**	BMA-4*
1.7750	0.500	.0606	**AGB-29-1**	FG-29**
1.7755	0.785	.0600	**F-29-1**	F-29
1.7775	0.500	.0614	**AGB-34-2**	FG-34**
1.7866	0.865	.08 Semi	**PDG-29-1**	PDG-29S**
1.7918	0.555	.0625	**DA-1-4**	DA-1
1.7931	0.730	.0403	**MZA-1-1**	MZA-1*

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1.7931	0.730	.0403	**MZA-1-2**	MZA-1*
1.7931	0.730	.0403	**MZA-1-3**	MZA-1*
1.7960	1.125	.0644	**BL-1-1**	BL-1
1.7965	0.750	.0643	**B-4-5**	B-6, B-8, B-11
1.7975	0.500	.0714	**AGB-34-1**	FG-34**
1.8072	0.595	.0605	**F-47-4**	F-47, F-47B
1.8072	0.905	.0610	**FG-53-2**	FG-53**
1.8081	1.025	.0570	**VO-2-2**	VO-2**
1.8110	0.745	.0640	**PDG-26-1**	PDG-26**
1.8114	0.910	.0781	**MZG-3-1**	MZG-3**
1.8115	0.555	.0625	**DA-1-3**	DA-1
1.8115	0.585	.0590	**VWG-1-1**	VWG-1**
1.8125	1.135	.0626	**CO-9-3**	CO-9
1.8126	0.785	.0587	**MIG-2-1**	MIG-2**
1.8126	0.930	NA	**MIG-1-EL**	MIG-2E**
1.8131	0.800	.0403	**BMA-1-3**	BMA-1*, BMA-2*, BMA-3*
1.8131	0.800	.0500	**BMA-1-7**	BMA-3*
1.8215	0.940	.0407	**SA-1-1**	SA-1*
1.8222	0.700	.0605	**F-47-3**	F-47
1.8222	0.700	.0605	**F-47-3B**	F-47B
1.8265	0.750	.0643	**B-4-4**	B-6, B-8, B-11
1.8295	0.485	.0407	**SA-1-2**	SA-1*
1.8311	0.715	.0786	**TO-3-4**	TO-3
1.8312	0.555	.0625	**DA-1-2**	DA-1
1.8371	0.700	.0605	**F-47-2**	F-47
1.8371	0.700	.0605	**F-47-2B**	F-47B
1.8375	0.485	.0407	**SA-1-3**	SA-1*
1.8435	0.845	.0403	**FA-2-1**	FA-2*
1.8455	0.485	.0407	**SA-1-4**	SA-1*
1.8499	0.587	.0650	**PD-31-5B**	PD-31B
1.8499	0.587	.0655	**PD-31-5W**	PD-31BW
1.8509	0.930	.0625	**DA-1-1**	DA-1
1.8510	0.715	.0835	**TO-3-3**	TO-3
1.8521	0.780	.0605	**F-47-1**	F-47, F-47B
1.8522	1.142	.0610	**FG-53-1**	FG-53**
1.8524	0.800	.0403	**BMA-1-2**	BMA-1*, BMA-2*, BMA-3*
1.8524	0.995	.0500	**BMA-1-6**	BMA-3*
1.8535	0.485	.0407	**SA-1-5**	SA-1*
1.8535	0.845	.0403	**FA-2-2**	FA-2*
1.8555	0.865	.0625	**DA-3-2**	DA-3A, DA-5
1.8555	1.070	.0624	**DA-2-2**	DA-2
1.8565	0.750	.0643	**B-4-3**	B-6, B-8, B-11
1.8607	0.661	.0550	**GMA-1-2**	GMA-1*
1.8607	0.817	.0550	**GMA-1-1**	GMA-1*
1.8635	0.845	.0403	**FA-2-3**	FA-2*
1.8672	0.862	.0808	**CHG-23-3**	CHG-23**
1.8705	0.715	.0885	**TO-3-2**	TO-3
1.8705	0.984	.0785	**TO-1-4**	TO-10
1.8735	0.845	.0403	**FA-2-4**	FA-2*
1.8740	0.835	.1860	**CHG-15-1**	CH-17G, CH-21G, CHG-15A**
1.8750	0.573	.0626	**CO-9-2**	CO-9
1.8750	1.000	.0617	**WA-1-1**	WA-4, WA-7
1.8750	1.620	.0628	**K-1-3**	CO-3, CO-8, K-1
1.8753	0.550	.0617	**HE-5-2**	HE-5
1.8753	1.020	.0617	**HE-5-1**	HE-5

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
1.8785	0.665	.0600	**F-29-2**	F-29
1.8797	0.620	.0637	**C-3-1**	C-3
1.8797	0.750	.0641	**C-2-1**	C-2
1.8800	0.750	.0645	**PD-12-5**	PD-17
1.8800	0.750	.0645	**PDP-12-5**	PDP-17
1.8800	0.750	.0645	**PDP-12-5T**	PDP-17T
1.8805	0.495	.0642	**CA-4-2**	CA-4, CA-5, CA-8, CA-9
1.8805	0.718	.0642	**CA-3-2**	CA-3
1.8805	0.718	.0642	**CA-5-3**	CA-5
1.8805	0.970	.0640	**CA-9-1**	CA-9
1.8805	1.125	.0642	**A-1-1**	A-1, A-6
1.8805	1.125	.0642	**A-6-1**	A-6
1.8805	1.187	.0642	**CA-3-3**	CA-3
1.8805	1.218	.0643	**CA-4-1**	CA-4, CA-5, CA-8, CA-9
1.8805	1.312	.0642	**CA-3-1**	CA-3
1.8835	0.845	.0403	**FA-2-5**	FA-2*
1.8835	0.925	.0403	**FA-1-5**	FA-1*
1.8865	0.750	.0642	**B-6-1**	B-6, B-8, B-11
1.8885	0.925	.0428	**FA-1-4**	FA-1*
1.8895	0.715	.0929	**TO-3-1**	TO-3
1.8895	0.984	.0586	**AGB-14-1**	CHG-14**
1.8900	0.750	.0695	**PDP-12-5R1**	PDP-17R1
1.8914	0.805	.0403	**NIA-4-1**	NIA-5*
1.8914	0.805	.0403	**NIA-4-2**	NIA-5*
1.8918	0.685	.0403	**MIA-3-1**	MIA-3*
1.8918	0.800	.0403	**BMA-1-1**	BMA-1*, BMA-2*, BMA-3*
1.8918	0.800	.0500	**BMA-1-5**	BMA-3*
1.8935	0.625	.0600	**F-29-3A**	F-29
1.8935	0.925	.0453	**FA-1-3**	FA-1*
1.8955	0.862	.0808	**CHG-23-4**	CHG-23**
1.8968	0.815	.0643	**HO-1-1**	HO-1
1.8985	0.925	.0478	**FA-1-2**	FA-1*
1.9011	0.693	.0638	**F-34-1**	F-34
1.9011	0.693	.0638	**F-34-1B**	F-34B
1.9035	0.925	.0503	**FA-1-1**	FA-1*
1.9100	0.875	.0637	**HO-3-3**	HO-3
1.9155	0.945	.0625	**DA-3-1**	DA-3A, DA-5
1.9155	1.455	.0624	**DA-2-1**	DA-2
1.9165	0.620	.0642	**B-9-2**	B-9, B-12, B-12B, B-13
1.9165	0.620	.0642	**BP-9-2**	BP-9, BP-13
1.9165	0.620	.0642	**BP-9-2T**	BP-9T, BP-13T
1.9165	0.750	.0642	**B-11-1**	B-9, B-11, B-12
1.9165	0.750	.0642	**B-11-1B**	B-12B
1.9165	0.750	.0642	**BP-11-1**	BP-9
1.9165	0.750	.0642	**BP-11-1T**	BP-9T
1.9165	0.750	.0642	**LR-1-1**	LR-1
1.9165	0.750	.0643	**B-4-1**	B-8
1.9170	0.810	.0647	**N-5-4**	N-6
1.9203	0.693	.0738	**F-34-1S**	F-34S
1.9270	0.780	.0647	**N-5-3**	N-6
1.9280	0.938	.0579	**JD-1-2**	JD-1, JD-2
1.9280	1.181	.0579	**JD-1-1**	JD-1, JD-2
1.9280	1.220	.0577	**JD-5-2**	JD-5
1.9280	1.312	.0648	**F-1-2**	F-1
1.9280	1.598	.0577	**JD-5-1**	JD-5

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
1.9280	1.600	.0648	**F-1-1**	F-1
1.9295	0.943	.0785	**TO-10-3**	TO-10
1.9297	0.705	.0588	**TO-7-3**	TO-7
1.9299	0.714	.0794	**F-41-2**	F-41*
1.9299	0.949	.0794	**F-41-1**	F-41*
1.9303	0.709	.0591	**TO-12-3**	TO-12
1.9309	0.735	.0403	**NIA-2-1**	NIA-2L*, NIA-2R*, NIA-3L*, NIA-3R*
1.9335	0.720	.0607	**F-17-4**	F-32
1.9365	0.750	.0743	**B-13-1**	B-13
1.9365	0.750	.0743	**BP-13-1**	BP-13
1.9365	0.750	.0743	**BP-13-1T**	BP-13T
1.9368	1.375	.0643	**IN-15-2**	IN-15
1.9370	0.780	.0647	**N-5-2**	N-6
1.9370	1.250	.0940	**CO-7-4**	CO-7
1.9375	0.937	.0630	**K-1-2**	CO-3, K-1
1.9375	1.323	.0626	**CO-9-1**	CO-9
1.9400	0.625	.0687	**TO-7-4**	TO-7
1.9402	0.630	.0689	**TO-12-4**	TO-12
1.9410	0.875	.0637	**HO-3-2**	HO-3
1.9430	1.095	.0645	**IN-18-1**	IN-18
1.9470	0.940	.0647	**N-6-1**	N-6
1.9485	0.720	.0682	**F-17-3**	F-32
1.9494	0.705	.0785	**TO-7-5**	TO-7
1.9500	0.709	.0788	**TO-12-5**	TO-12
1.9593	0.625	.0687	**TO-7-2**	TO-7
1.9598	0.630	.0689	**TO-12-2**	TO-12
1.9625	0.620	.0642	**B-9-2R**	B-13R
1.9625	0.750	.0743	**B-13-1R**	B-13R
1.9635	0.720	.0757	**F-17-2**	F-32
1.9655	1.060	.0570	**VO-2-1**	VO-2**, VO-3
1.9682	0.975	.0784	**TOG-8-1**	TOG-8**
1.9685	0.985	.0785	**TO-2-3**	TO-2
1.9685	1.095	.0685	**TO-2-1**	TO-2
1.9685	1.654	.0735	**TO-2-2**	TO-2
1.9688	0.750	.0835	**TO-5-4**	TO-11
1.9688	0.790	.0735	**TO-5-2**	TO-11
1.9688	1.105	.0884	**TO-5-5**	TO-11
1.9688	1.142	.0686	**TO-5-1**	TO-11
1.9688	1.810	.0785	**TO-11-3**	TO-11
1.9691	0.705	.0687	**TO-7-1**	TO-7
1.9697	0.709	.0689	**TO-12-1**	TO-12
1.9702	1.235	.0403	**NIA-3-1**	NIA-3R*
1.9725	0.937	.0644	**CH-2-4**	CH-2
1.9725	1.150	.0641	**GM-5-4**	GM-5
1.9730	1.000	.0637	**HO-3-1**	HO-3
1.9765	0.630	.0641	**B-14-2**	B-14
1.9785	0.720	.0832	**F-32-1**	F-32
1.9855	0.788	.1450	**MIG-2-1R**	MIG-2-1R**
1.9885	0.943	.0785	**TO-1-2**	TO-10
1.9965	0.745	.0741	**B-14-1**	B-14
1.9993	1.063	.0643	**IN-5-3**	IN-5
1.9995	0.630	.0640	**CH-18-2**	CH-18, CH-19, CHG-22**
1.9995	0.630	.0650	**CH-18-2X2**	CH-19X2
1.9995	0.720	.0640	**CH-18-2A**	CH-18A
2.0000	0.710	.0644	**CH-20-1**	CH-20

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2.0000	0.740	.0644	**CH-4-3**	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G, RDC-1
2.0000	0.740	.0644	**CHP-4-3**	CHP-4, CHP-8, CHP-17, CHP-21, GMP-8, RDCP-1
2.0000	0.740	.0644	**CHP-4-3T**	CHP-4T, CHP-8T, CHP-17T, CHP-21T, GMP-8T, RDCP-1T
2.0000	0.740	.0644	**DT-1-1**	DT-1
2.0000	0.740	.0644	**DT-1-1T**	DT-1T
2.0000	0.740	.0649	**CH-4-3W**	CH-8W, CH-17X, CH-21X
2.0000	0.785	.0644	**HO-2-4**	HO-2, HO-2S
2.0000	0.785	.0644	**HOP-2-4**	HOP-2S
2.0000	0.785	.0644	**HOP-2-4T**	HOP-2ST
2.0000	0.860	.0644	**CH-5-3**	CH-5, CH-6, CH-7, CH-11, CH-16, RDC-1
2.0000	0.860	.0644	**CH-5-3B**	CH-11B
2.0000	0.860	.0644	**CHP-5-3**	RDCP-1
2.0000	0.860	.0644	**CHP-5-3T**	RDCP-1T
2.0000	0.860	.0649	**CH-5-3W**	CH-16W
2.0000	0.875	.0628	**K-1-1**	CO-8, K-1
2.0040	1.312	.0645	**WA-3-2**	WA-3
2.0055	1.308	.0643	**A-2-1**	A-2
2.0095	0.625	.0691	**CH-18-4**	CH-18, CH-18A, CH-19, CHG-22**
2.0095	0.625	.0701	**CH-18-4X2**	CH-19X2
2.0100	0.625	.0691	**CH-18-1A**	CH-18, CH-18A
2.0100	0.740	.0694	**CH-4-2**	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G
2.0100	0.740	.0694	**CHP-4-2**	CHP-4, CHP-8, CHP-17, CHP-21
2.0100	0.740	.0694	**CHP-4-2T**	CHP-4T, CHP-8T, CHP-17T, CHP-21T
2.0100	0.740	.0694	**DT-1-11T**	DT-1TR1
2.0100	0.740	.0699	**CH-4-2W**	CH-8W, CH-17X, CH-21X
2.0100	0.785	.0694	**HO-2-3**	HO-2, HO-2S
2.0100	0.785	.0694	**HOP-2-3**	HOP-2S
2.0100	0.785	.0694	**HOP-2-3T**	HOP-2ST
2.0100	0.860	.0694	**CH-5-2**	CH-5, CH-6, CH-7
2.0100	0.940	.0694	**CH-4-4**	CH-4
2.0100	0.940	.0694	**CH-5-4**	CH-5
2.0100	0.940	.0694	**CHP-4-4**	CHP-4
2.0100	0.940	.0694	**CHP-4-4T**	CHP-4T
2.0100	1.172	.0691	**CHG-22-1**	CHG-22**
2.0199	0.625	.0741	**CH-19-1**	CH-19
2.0199	0.625	.0751	**CH-19-1X2**	CH-19X2
2.0200	0.740	.0744	**CH-4-1**	CH-4, CH-8, CH-17, CH-17G, CH-21, CH-21G
2.0200	0.740	.0744	**CHP-4-1**	CHP-4, CHP-8, CHP-17, CHP-21
2.0200	0.740	.0744	**CHP-4-1T**	CHP-4T, CHP-8T, CHP-17T, CHP-21T
2.0200	0.740	.0749	**CH-4-1W**	CH-8W, CH-17X, CH-21X
2.0200	0.785	.0644	**HO-2-2**	HO-2, HO-2S
2.0200	0.785	.0644	**HOP-2-2**	HOP-2S
2.0200	0.785	.0644	**HOP-2-2T**	HOP-2ST
2.0200	0.860	.0744	**CH-5-1**	CH-5
2.0207	0.630	.0641	**B-14-2R**	B-14R
2.0207	0.745	.0741	**B-14-1R**	B-14R
2.0300	0.720	.0798	**CH-18-2R2**	CH-18RS
2.0300	0.740	.0794	**CHP-4-11**	CHP-8R1
2.0300	0.740	.0794	**CHP-4-11T**	CHP-8R1T
2.0300	0.740	.0795	**CH-4-1S**	CH-4A
2.0300	0.785	.0694	**HO-2-1**	HO-2, HO-2S
2.0300	0.785	.0694	**HOP-2-1**	HOP-2S
2.0300	0.785	.0694	**HOP-2-1T**	HOP-2ST
2.0307	0.680	.0644	**P-3-2**	P-3, P-4
2.0307	0.680	.0644	**PP-3-2**	PP-3, PP-4

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2.0307	0.680	.0644	**PP-3-2T**	PP-3T, PP-4T
2.0307	1.060	.0644	**P-3-1**	P-3
2.0307	1.060	.0644	**PP-3-1**	PP-3
2.0307	1.060	.0644	**PP-3-1T**	PP-3T
2.0327	0.585	.0615	**F-50-4**	F-50
2.0327	0.825	.0615	**F-50-4A**	F-50A
2.0350	0.937	.0644	**CH-2-3**	CH-2
2.0400	0.625	.0847	**CH-18-4R4**	CH-18RS
2.0400	0.625	.0848	**CH-18-1R3**	CH-18RS
2.0400	0.740	.0844	**CHP-4-12**	CHP-8R2
2.0400	0.740	.0844	**CHP-4-12T**	CHP-8R2T
2.0407	0.680	.0694	**P-3-21**	P-4R1
2.0475	1.143	.0785	**TO-1-1**	TO-10
2.0476	0.700	.0614	**F-50-3**	F-50, F-50A
2.0479	0.984	.0790	**IZ-2-1**	IZ-2
2.0480	0.984	.0790	**IZ-2-2**	IZ-2
2.0480	0.984	.0790	**IZ-2-3**	IZ-2
2.0486	0.866	.0797	**IZ-3-1**	IZ-3
2.0486	0.866	.0797	**IZ-3-2**	IZ-3
2.0486	0.866	.0797	**IZ-3-3**	IZ-3
2.0495	0.885	.0650	**PD-30-6**	PD-30
2.0500	0.740	.0894	**CHP-4-13**	CHP-8R3
2.0500	0.740	.0894	**CHP-4-13T**	CHP-8R3T
2.0580	0.620	.0648	**F-9-2B**	F-9B
2.0580	0.620	.0648	**F-9-3**	F-9A
2.0580	0.875	.0648	**F-9-1**	F-9A, F-9B
2.0580	0.875	.0649	**F-7-2**	F-7
2.0580	0.875	.0649	**F-22-1**	F-7, F-22
2.0600	0.740	.0944	**CHP-4-14**	CHP-8R4
2.0600	0.740	.0944	**CHP-4-14T**	CHP-8R4T
2.0618	1.000	.0643	**IN-15-1**	IN-15
2.0626	0.700	.0614	**F-50-2**	F-50, F-50A
2.0675	0.875	.0650	**PD-1-3**	PD-1
2.0675	1.062	.0650	**PD-3-3**	PD-3
2.0773	0.723	.0840	**OP-3-3**	OP-3, OP-5
2.0776	0.775	.0617	**F-50-1**	F-50, F-50A
2.0800	0.720	.1040	**CH-18-2R8**	CH-18R8
2.0830	0.610	.0647	**PD-28-4**	PD-28, PD-28B
2.0830	0.615	.0645	**PD-25-4**	PD-25, PD-27
2.0830	0.615	.0645	**PDP-25-4**	PDP-25
2.0830	0.615	.0645	**PDP-25-4T**	PDP-25T
2.0830	0.750	.0645	**PD-12-4**	PD-17
2.0830	0.750	.0645	**PD-13-4**	PD-18, PD-21
2.0830	0.750	.0645	**PDP-12-4**	PDP-17
2.0830	0.750	.0645	**PDP-12-4T**	PDP-17T
2.0830	0.760	.0645	**PD-9-4**	PD-16
2.0830	0.760	.0645	**PDP-9-4**	PDP-16
2.0830	0.760	.0645	**PDP-9-4T**	PDP-16T
2.0872	0.723	.0865	**OP-5-3**	OP-5
2.0887	0.591	.0652	**C-4-5**	C-4
2.0887	0.685	.0652	**C-4-5A**	C-4A
2.0888	0.688	.0646	**O-6-5**	O-6, O-7
2.0888	0.688	.0646	**O-6-5B**	O-6B
2.0900	0.625	.1091	**CH-18-1R8**	CH-18R8
2.0900	0.625	.1091	**CH-18-4R8**	CH-18R8

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2.0930	0.750	.0695	**PDP-12-4R1**	PDP-17R1
2.0970	0.723	.0889	**OP-3-2**	OP-3, OP-5
2.0975	0.937	.0642	**CH-3-4**	CH-3
2.0975	0.937	.0644	**CH-2-2**	CH-2
2.0990	0.610	.0653	**PD-28-3**	PD-28
2.0990	0.610	.0653	**PD-28-3B**	PD-28B
2.0990	0.615	.0645	**PD-25-3**	PD-25
2.0990	0.615	.0645	**PDP-25-3**	PDP-25
2.0990	0.615	.0645	**PDP-25-3T**	PDP-25T
2.0990	0.625	.0640	**PD-21-3**	PD-21
2.0990	0.669	.0645	**PD-12-3**	PD-17
2.0990	0.669	.0645	**PDP-12-3**	PDP-17
2.0990	0.669	.0645	**PDP-12-3T**	PDP-17T
2.0990	0.750	.0645	**PD-13-3**	PD-18
2.0990	0.760	.0645	**PD-9-3**	PD-16
2.0990	0.760	.0645	**PDP-9-3**	PDP-16
2.0990	0.760	.0645	**PDP-9-3T**	PDP-16T
2.0990	0.875	.0649	**PD-1-2**	PD-1
2.0990	1.062	.0650	**PD-3-2**	PD-3
2.1069	0.950	.0889	**OP-3-1**	OP-3, OP-5
2.1087	0.591	.0652	**C-4-4**	C-4, C-4A
2.1088	0.688	.0646	**O-6-4**	O-6, O-7, O-8
2.1088	0.688	.0646	**O-6-4B**	O-6B
2.1090	0.669	.0695	**PDP-12-3R1**	PDP-17R1
2.1140	0.610	.0653	**PD-28-2**	PD-28
2.1140	0.610	.0653	**PD-28-2B**	PD-28B
2.1140	0.625	.0640	**PD-21-2**	PD-21
2.1140	0.625	.0645	**PD-25-2**	PD-25, PD-27
2.1140	0.625	.0645	**PDP-25-2**	PDP-25
2.1140	0.625	.0645	**PDP-25-2T**	PDP-25T
2.1140	0.750	.0645	**PD-12-2**	PD-17, PD-18
2.1140	0.750	.0645	**PDP-12-2**	PDP-17
2.1140	0.750	.0645	**PDP-12-2T**	PDP-17T
2.1140	0.760	.0645	**PD-9-2**	PD-16
2.1140	0.760	.0645	**PDP-9-2**	PDP-16
2.1140	0.760	.0645	**PDP-9-2T**	PDP-16T
2.1183	0.825	.0595	**NIG-1-2**	NIG-1**
2.1200	0.755	.0841	**GMP-1-1**	GMP-1
2.1200	0.755	.0841	**GMP-1-1T**	GMP-1T
2.1200	0.755	.0841	**GMP-2-1T**	GMP-2T
2.1200	0.980	.0841	**CH-12-3**	CH-9A, CH-12, GM-12
2.1200	0.980	.0841	**CH-12-3B**	CH-12B
2.1200	0.980	.0841	**CH-12-3LT**	GMP-12LT
2.1200	0.980	.0841	**CHP-12-3**	CHP-12, GMP-12
2.1200	0.980	.0841	**CHP-12-3T**	CHP-12T, GMP-12T
2.1240	0.750	.0695	**PDP-12-2R1**	PDP-17R1
2.1245	0.875	.0615	**BU-1-2**	BU-2
2.1245	1.125	.0615	**BU-1-1**	BU-2
2.1250	0.880	.0605	**WA-8-2**	WA-8, WA-12
2.1250	0.880	.0641	**GM-5-3**	GM-5
2.1250	1.067	.0605	**WA-8-1**	WA-8, WA-12
2.1250	1.685	.0644	**CU-5-2A**	CU-5A, CU-10
2.1255	0.628	.0595	**NIG-1-1**	NIG-1**
2.1260	0.625	.0620	**N-8-5**	N-9
2.1260	0.690	.0620	**N-7-4**	N-7, N-7B, N-10

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**Denotes Auxiliary / Balance Shaft Bearing

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BEARING COMPONENT PROGRESSIVE LISTING BY HOUSING BORE

HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
2.1260	0.690	.0625	**N-7-4X001**	N-7BW
2.1260	0.750	.0620	**H-5-4**	H-5
2.1274	0.866	.0797	**IZ-5-2**	IZ-5
2.1274	0.984	.0797	**IZ-5-1**	IZ-5
2.1287	0.591	.0652	**C-4-3**	C-4, C-4A
2.1288	0.688	.0641	**O-5-1**	O-5
2.1288	0.688	.0646	**O-6-3**	O-6, O-7, O-8
2.1288	0.688	.0646	**O-6-3B**	O-6B
2.1290	2.250	.0644	**CU-1-1**	CU-5A, CU-10
2.1295	1.093	.0645	**PD-1-1**	PD-1, PD-3
2.1300	0.750	.0645	**PD-17-1**	PD-17
2.1300	0.750	.0645	**PDP-17-1**	PDP-17
2.1300	0.750	.0645	**PDP-17-1T**	PDP-17T
2.1300	0.780	.0640	**PD-21-1**	PD-21
2.1300	0.813	.0647	**PD-8-2**	PD-8
2.1300	0.875	.0645	**PD-16-1**	PD-16, PD-25, PD-27
2.1300	0.875	.0645	**PDP-16-1**	PDP-16, PDP-25
2.1300	0.875	.0645	**PDP-16-1T**	PDP-16T, PDP-25T
2.1300	0.920	.0645	**PD-18-1**	PD-18
2.1300	0.930	.0647	**PD-28-1**	PD-28, PD-28B
2.1300	0.938	.0647	**PD-8-1**	PD-8
2.1300	0.980	.0891	**CH-12-2**	CH-9A, CH-12
2.1300	0.980	.0891	**CH-12-2B**	CH-12B
2.1300	0.980	.0891	**CHP-12-2**	CHP-12
2.1300	0.980	.0891	**CHP-12-2T**	CHP-12T
2.1300	0.980	.0894	**CH-9-4**	CH-9A
2.1339	0.537	.0620	**F-48-2**	F-48, F-48A
2.1360	0.625	.0670	**N-8-51**	N-9R1
2.1360	0.690	.0620	**N-7-3**	N-7, N-10
2.1360	0.690	.0620	**N-7-3B**	N-7B
2.1360	0.690	.0625	**N-7-3BX001**	N-7BW
2.1360	0.750	.0620	**H-5-3**	H-5
2.1365	1.000	.0624	**F-25-1**	F-25
2.1400	0.750	.0695	**PDP-17-1R1**	PDP-17R1
2.1400	0.860	.0941	**CH-12-1**	CH-9A, CH-12
2.1400	0.860	.0941	**CH-12-1B**	CH-12B
2.1400	0.860	.0941	**CHP-12-1**	CHP-12
2.1400	0.860	.0941	**CHP-12-1T**	CHP-12T
2.1408	0.740	.0695	**OG-1-1**	OG-1**
2.1420	0.775	.0655	**GM-7-5**	GM-7, GM-7R2
2.1430	0.815	.0701	**FG-1-1**	FG-1-1**
2.1440	0.660	.0602	**F-18-5**	F-18, F-26
2.1440	0.660	.0602	**FP-18-5**	FP-18, FP-26
2.1440	0.660	.0602	**FP-18-5T**	FP-18T, FP-26T
2.1445	0.860	.0624	**F-23-1A**	F-23A
2.1445	0.860	.0624	**F-23-1B**	F-23B, F-49B
2.1445	0.860	.0624	**F-49-2**	F-49
2.1460	0.690	.0620	**N-7-2**	N-7, N-10
2.1460	0.690	.0620	**N-7-2B**	N-7B
2.1460	0.690	.0625	**N-7-2BX001**	N-7BW
2.1460	0.750	.0620	**H-5-2**	H-5
2.1487	0.591	.0652	**C-4-2**	C-4, C-4A
2.1488	0.688	.0646	**O-6-2**	O-6, O-7, O-8
2.1488	0.688	.0646	**O-6-2B**	O-6B
2.1500	0.860	.0991	**CHP-12-11**	CHP-12R1

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
2.1500	0.980	.0991	**CHP-12-21**	CHP-12R1
2.1536	0.537	.0719	**F-48-4**	F-48
2.1536	0.537	.0719	**F-48-4A**	F-48A
2.1536	0.955	.0719	**F-48-1**	F-48, F-48A
2.1560	0.625	.0620	**N-8-4**	N-9
2.1560	0.690	.0620	**N-7-1**	N-7, N-7B
2.1560	0.690	.0620	**N-10-1**	N-10
2.1560	0.690	.0625	**N-7-1X001**	N-7BW
2.1560	0.750	.0620	**H-5-1**	H-5
2.1562	0.880	.0641	**GM-5-2**	GM-5
2.1565	0.630	.0646	**CH-24-2**	CH-24
2.1590	0.660	.0602	**F-18-4**	F-18, F-26
2.1590	0.660	.0602	**FP-18-4**	FP-18, FP-26
2.1590	0.660	.0602	**FP-18-4T**	FP-18T, FP-26T
2.1590	0.860	.0695	**F-49-1**	F-49
2.1590	0.860	.0695	**F-49-1B**	F-49B
2.1595	0.625	.0650	**PD-30-5**	PD-30
2.1599	1.125	.0644	**CH-2-1**	CH-2
2.1600	0.860	.1041	**CHP-12-12**	CHP-12R2
2.1600	0.937	.0641	**CH-3-3**	CH-3
2.1600	0.980	.1041	**CHP-12-22**	CHP-12R2
2.1660	0.625	.0670	**N-8-41**	N-9R1
2.1687	0.591	.0652	**C-4-1**	C-4, C-4A
2.1688	0.688	.0646	**O-6-1**	O-6
2.1688	0.688	.0646	**O-6-1B**	O-6B
2.1688	0.688	.0646	**O-7-1**	O-7, O-8
2.1740	0.660	.0602	**F-18-3**	F-18, F-26
2.1740	0.660	.0602	**FP-18-3**	FP-18, FP-26
2.1740	0.660	.0602	**FP-18-3T**	FP-18T, FP-26T
2.1755	0.625	.0650	**PD-30-4**	PD-30
2.1766	0.620	.0747	**CH-24-3**	CH-24
2.1766	0.905	.0747	**CH-24-1**	CH-24
2.1770	0.555	.0619	**F-45-2**	F-45
2.1770	0.555	.0619	**F-51-2**	F-38, F-52
2.1770	0.595	.0613	**F-51-2X**	F-38X
2.1860	0.625	.0620	**N-8-3**	N-9
2.1862	0.812	.0653	**HE-1-2A**	HE-8A
2.1862	1.057	.0653	**HE-7-1A**	HE-8A
2.1870	0.905	.0932	**CU-11-2**	CU-11, CU-11A
2.1870	1.905	.0932	**CU-11-1**	CU-11, CU-11A
2.1870	2.255	.0643	**WA-9-3**	WA-9
2.1875	0.812	.0660	**HE-1-2**	HE-1, HE-7, HE-8
2.1875	1.057	.0658	**HE-7-1**	HE-7, HE-8
2.1875	1.125	.0660	**HE-1-1**	HE-1
2.1875	1.680	.0641	**GM-5-1**	GM-5
2.1880	1.180	.1052	**CAT-2-5**	CAT-2-5
2.1880	2.000	.1052	**CAT-2-6**	CAT-2-6
2.1890	0.660	.0602	**F-18-2**	F-18, F-26
2.1890	0.660	.0602	**FP-18-2**	FP-18, FP-26
2.1890	0.660	.0602	**FP-18-2T**	FP-18T, FP-26T
2.1890	0.723	.0894	**F-46-2**	F-46
2.1913	0.750	.0647	**IN-11-5**	IN-11
2.1915	0.625	.0650	**PD-30-3**	PD-30
2.1920	0.635	.0688	**F-52-1X**	F-38X
2.1920	0.635	.0694	**AGB-51-1**	F-38, F-38X, FG-51**

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
2.1920	0.635	.0694	**F-45-1**	F-45
2.1920	0.635	.0694	**F-52-1**	F-38, F-52
2.1960	0.625	.0670	**N-8-31**	N-9R1
2.2007	1.062	.0647	**IN-8-3**	IN-12, IN-14
2.2008	1.062	.0645	**IN-2-3**	IN-3
2.2010	1.060	.0645	**IN-16-3**	IN-16
2.2013	0.645	.0647	**IN-11-4**	IN-11
2.2040	0.660	.0602	**351HP-1**	351HP, 351RHP
2.2040	0.660	.0602	**351HP-1T**	351HPT, 351RHPT
2.2040	0.660	.0602	**351-HPB-1T**	SBF-1T
2.2040	0.660	.0602	**F-18-1**	F-18
2.2040	0.660	.0602	**FP-18-1**	FP-18
2.2040	0.660	.0602	**FP-18-1T**	FP-18T
2.2040	0.660	.0677	**351HP-2**	351HP
2.2040	0.660	.0677	**351HP-2T**	351HPT
2.2040	0.660	.0677	**351-HPB-2T**	SBF-1T
2.2040	0.660	.0752	**351HP-3**	351HP
2.2040	0.660	.0752	**351HP-3T**	351HPT
2.2040	0.660	.0752	**351-HPB-3T**	SBF-1T
2.2040	0.660	.0827	**351HP-4**	351HP
2.2040	0.660	.0827	**351HP-4T**	351HPT
2.2040	0.660	.0827	**351-HPB-4T**	SBF-1T
2.2040	0.660	.0902	**351HP-5**	351HP
2.2040	0.660	.0902	**351HP-5T**	351HPT
2.2040	0.660	.0902	**351-HPB-5T**	SBF-1T
2.2047	0.503	.0973	**F-46-3**	F-46
2.2047	0.723	.0973	**F-46-1**	F-46
2.2047	0.787	.0594	**TO-15-3**	TO-15
2.2047	0.787	.0644	**TO-15-4**	TO-15
2.2075	0.625	.0652	**PD-30-2**	PD-30
2.2113	0.645	.0647	**IN-11-3**	IN-11
2.2140	0.660	.0652	**351HP-1R1**	351HP-R1
2.2140	0.660	.0652	**351-HPB-1R1T**	SBF-1R1T
2.2140	0.660	.0727	**351HP-2R1**	351HP-R1
2.2140	0.660	.0727	**351-HPB-2R1T**	SBF-1R1T
2.2140	0.660	.0802	**351HP-3R1**	351HP-R1
2.2140	0.660	.0802	**351-HPB-3R1T**	SBF-1R1T
2.2140	0.660	.0877	**351HP-4R1**	351HP-R1
2.2140	0.660	.0877	**351-HPB-4R1T**	SBF-1R1T
2.2140	0.660	.0952	**351HP-5R1**	351HP-R1
2.2140	0.660	.0952	**351-HPB-5R1T**	SBF-1R1T
2.2146	0.787	.0742	**TO-15-5**	TO-15
2.2160	0.625	.0620	**N-8-2**	N-9
2.2207	1.062	.0647	**IN-8-2**	IN-3, IN-12, IN-14, IN-16
2.2213	0.645	.0647	**IN-11-2**	IN-11
2.2225	0.937	.0641	**CH-3-2**	CH-3
2.2235	0.885	.0650	**PD-30-1**	PD-30
2.2260	0.625	.0670	**N-8-21**	N-9R1
2.2313	0.650	.0647	**IN-17-2**	IN-17
2.2313	0.710	.0647	**IN-11-1**	IN-11
2.2313	0.785	.0647	**IN-17-1**	IN-17
2.2408	1.125	.0647	**IN-3A-1**	IN-3, IN-12, IN-14
2.2460	0.920	.0620	**N-9-1**	N-9
2.2493	1.469	.0642	**IN-5-2**	IN-5
2.2495	1.000	.0940	**CO-7-3**	CO-7

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HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
2.2495	1.760	.1243	**MAG-10-2**	MAG-10**
2.2500	0.560	.0616	**F-15-5**	F-33
2.2500	0.560	.0616	**FP-15-5**	FP-33
2.2500	0.560	.0616	**FP-15-5T**	FP-33T
2.2500	0.560	.0619	**F-24-5**	F-24
2.2500	0.580	.0618	**F-30-1**	F-30
2.2500	0.580	.0618	**FP-30-1**	FP-30
2.2500	0.580	.0618	**FP-30-1T**	FP-30T
2.2500	0.660	.0616	**F-26-1**	F-26
2.2500	0.660	.0616	**FP-26-1**	FP-26
2.2500	0.660	.0616	**FP-26-1T**	FP-26T, FP-30AT
2.2500	0.755	.0618	**F-11-2**	F-11, F-12
2.2500	0.855	.0620	**GM2125-1**	GMP-3
2.2500	0.855	.0620	**GM2125-1T**	GMP-3T
2.2500	0.875	.0618	**F-8-1**	F-11, F-12
2.2500	0.980	.0620	**GM2125-4**	GMP-3
2.2500	0.980	.0620	**GM2125-4T**	GMP-3T
2.2500	1.250	.0614	**WA-2-1**	WA-10
2.2505	1.545	.0925	**DE-1-1**	DE-1
2.2513	0.650	.0768	**IN-17-2S**	IN-17R2
2.2513	0.785	.0768	**IN-17-1S**	IN-17R2
2.2535	1.005	.0620	**CU-12-1**	CU-12
2.2539	0.787	.0791	**TO-15-2**	TO-15
2.2540	1.125	.0643	**WA-3-1**	WA-3
2.2550	0.580	.0645	**FP-30-1R**	FP-30R
2.2560	0.920	.0670	**N-9-11**	N-9R1
2.2595	1.000	.0630	**A-3-2**	A-3, A-4, A-5
2.2595	1.385	.0630	**A-3-1**	A-3, A-4, A-5
2.2600	0.580	.0668	**F-30-1R1**	F-30R1
2.2638	0.787	.0791	**TO-15-1**	TO-15
2.2650	0.620	.0691	**F-15-4**	F-33
2.2650	0.620	.0691	**FP-15-4**	FP-33
2.2650	0.620	.0691	**FP-15-4T**	FP-33T
2.2650	0.620	.0694	**F-24-4**	F-24
2.2650	0.625	.0694	**F-30-1S**	F-57
2.2700	0.580	.0718	**F-30-1R2**	F-30R2
2.2776	1.185	.0946	**CAT-2-3**	CAT-2-3
2.2776	2.000	.0946	**CAT-2-4**	CAT-2-4
2.2800	0.620	.0766	**F-15-3**	F-33
2.2800	0.620	.0766	**FP-15-3**	FP-33
2.2800	0.620	.0766	**FP-15-3T**	FP-33T
2.2800	0.620	.0769	**F-24-3**	F-24
2.2820	0.785	.0569	**GMP-55-1**	GMP-55
2.2820	0.785	.0569	**GMP-55-1T**	GMP-55T
2.2850	1.125	.0641	**CH-3-1**	CH-3
2.2950	0.620	.0841	**F-15-2**	F-33
2.2950	0.620	.0841	**FP-15-2**	FP-33
2.2950	0.620	.0841	**FP-15-2T**	FP-33T
2.2950	0.620	.0844	**F-24-2**	F-24
2.2990	0.775	.0653	**GM-7-4**	GM-7
2.3088	0.630	.0700	**CH-10-3**	CH-10, CH-23, GM-9
2.3088	0.630	.0700	**CHP-10-3**	CHP-10, CHP-23, GMP-9
2.3088	0.630	.0700	**CHP-10-3T**	CHP-10T, CHP-23T, GMP-9T
2.3088	0.775	.0700	**CH-25-3**	CH-25, GM-25
2.3088	0.775	.0700	**CHP-25-3**	CHP-25, GMP-25

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2.3088	0.775	.0700	**CHP-25-3T**	CHP-25T, GMP-25T
2.3090	0.775	.0703	**GM-7-3**	GM-7
2.3095	0.760	.0912	**FP-01-1**	FP-01
2.3095	0.760	.0912	**FP-01-2**	FP-01
2.3095	0.760	.0912	**FP-01-4**	FP-01
2.3100	0.620	.0912	**F-33-1**	F-24, F-33
2.3115	1.750	.1235	**MAG-11-1**	MAG-11**
2.3115	1.760	.1237	**MAG-10-1**	MAG-10**
2.3120	1.000	.0940	**CO-7-2**	CO-7
2.3120	1.250	.0610	**R-1-3**	R-1
2.3165	1.125	.0645	**J-1-1**	J-1
2.3171	0.630	.0740	**CH-10-2**	CH-10
2.3171	0.630	.0740	**CHP-10-2**	CHP-10
2.3171	0.630	.0740	**CHP-10-2T**	CHP-10T
2.3190	0.775	.0753	**GM-7-2**	GM-7
2.3200	0.760	.0962	**FP-01-1R1**	FP-01R1
2.3200	0.760	.0962	**FP-01-2R1**	FP-01R1
2.3200	0.760	.0962	**FP-01-4R1**	FP-01R1
2.3270	0.630	.0790	**CH-10-1**	CH-10, CH-23
2.3270	0.630	.0790	**CHP-10-1**	CHP-10, CHP-23
2.3270	0.630	.0790	**CHP-10-1T**	CHP-10T, CHP-23T
2.3280	0.895	.0798	**GM-7-1**	GM-7
2.3285	0.775	.0799	**CH-25-2**	CH-25
2.3285	0.775	.0799	**CHP-25-2**	CHP-25
2.3285	0.775	.0799	**CHP-25-2T**	CHP-25T
2.3323	1.005	.1010	**CU-14-1**	CU-14
2.3470	0.630	.0890	**CH-23-1**	CH-23
2.3470	0.630	.0890	**CHP-23-1**	CHP-23
2.3470	0.630	.0890	**CHP-23-1T**	CHP-23T
2.3480	0.775	.0898	**GM-7-2R2**	GM-7R2
2.3480	0.895	.0898	**GM-7-1R2**	GM-7R2
2.3482	0.775	.0890	**CH-25-1**	CH-25
2.3482	0.775	.0890	**CHP-25-1**	CHP-25
2.3482	0.775	.0890	**CHP-25-1T**	CHP-25T
2.3533	0.710	.0728	**PDG-30-1**	PDG-30**
2.3555	1.505	.0844	**DE-2-3**	DE-7
2.3637	0.787	.0785	**IZ-6-1**	IZ-6, IZ-7, IZ-8
2.3637	0.787	.0785	**IZ-6-2**	IZ-6, IZ-7, IZ-8
2.3655	1.505	.0900	**DE-2-2**	DE-2, DE-2A, DE-5, DE-7
2.3743	1.094	.0940	**CO-7-1**	CO-7
2.3745	1.156	.0625	**CA-6-3**	CA-6, CA-7
2.3745	1.437	.0625	**CA-6-2**	CA-6, CA-7
2.3745	1.656	.0625	**CA-6-1**	CA-6, CA-7
2.3748	1.000	.0618	**IN-10-4A**	IN-10A
2.3748	1.438	.0644	**IN-5-1**	IN-5
2.3755	1.505	.0943	**DE-2-1**	DE-2, DE-2A, DE-5, DE-7
2.3755	1.505	.0943	**DE-2-2R1**	DE-2R1, DE-2AR1, DE-5R1
2.3758	0.587	.0650	**PD-31-4B**	PD-31B
2.3758	0.587	.0655	**PD-31-4W**	PD-31BW
2.3855	1.505	.0993	**DE-2-1R1**	DE-2R1, DE-2AR1, DE-5R1
2.3880	0.710	.0610	**F-14-5**	F-19
2.3916	0.587	.0650	**PD-31-3B**	PD-31B
2.3916	0.587	.0655	**PD-31-3W**	PD-31BW
2.4030	0.710	.0609	**F-19-4**	F-19
2.4073	0.587	.0650	**PD-31-2B**	PD-31B

*Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information

**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

BEARING COMPONENT PROGRESSIVE LISTING BY HOUSING BORE

HOUSING BORE	LENGTH	MAX WALL	CONTENTS	IN SET(S)
2.4073	0.587	.0655	**PD-31-2W**	PD-31BW
2.4125	0.680	.0643	**CH-13-1**	CH-13
2.4125	0.680	.0643	**CH-13-2**	CH-13
2.4153	1.000	.0613	**IN-10-3**	IN-10A
2.4180	0.710	.0609	**F-19-3**	F-19
2.4231	0.665	.0650	**PD-31-1B**	PD-31B
2.4231	0.665	.0655	**PD-31-1W**	PD-31BW
2.4330	0.710	.0609	**F-19-2**	F-19
2.4370	1.250	.0610	**R-1-2**	R-1
2.4413	0.710	.0780	**IN-19-4**	IN-19
2.4438	1.000	.0625	**IN-10-2**	IN-10A
2.4480	0.710	.0609	**F-19-1**	F-19
2.4613	0.709	.0880	**IN-19-3**	IN-19
2.4748	1.187	.0618	**IN-10-1A**	IN-10A
2.4813	0.709	.0980	**IN-19-2**	IN-19
2.4985	0.670	.0629	**F-16-2**	F-16
2.5000	1.000	.0614	**JD-3-1**	JD-3, JD-4
2.5013	1.010	.1078	**IN-19-1**	IN-19
2.5345	0.765	.0708	**F-43-1**	F-43, F-44, F-55
2.5598	0.705	.0790	**GM-8-2**	GM-8
2.5598	1.120	.0790	**GM-8-1**	GM-8
2.5610	1.125	.0645	**IN-16-1**	IN-16
2.5620	1.625	.0610	**R-1-1**	R-1
2.5630	1.004	.1243	**CAT-2-2**	CAT-6, CAT-7
2.5630	1.125	.1243	**CAT-2-1**	CAT-6, CAT-7
2.5984	0.740	.0778	**IN-21-1**	IN-21
2.6000	0.755	.0617	**F-12-1**	F-12
2.6025	0.670	.0629	**F-16-1**	F-16
2.6235	1.010	.0905	**MA-5-2**	MA-5
2.6235	1.010	.0910	**MA-5-3**	MA-5, MA-6, MA-7, MA-8
2.6235	1.380	.1852	**MA-3A-1**	MA-6
2.6235	1.380	.1853	**MA-5-4**	MA-5
2.6235	1.385	.0905	**MA-8-1**	MA-8
2.6235	1.385	.0910	**MA-5-1**	MA-5, MA-6, MA-7
2.6250	1.500	.0618	**WA-11-1**	WA-11
2.6525	0.755	.0750	**CAT-1-2**	CAT-2
2.6870	1.070	.0937	**CU-13-2**	CU-13
2.6870	1.685	.0939	**CU-8-1**	CU-9
2.6870	1.685	.0939	**CU-9-1**	CU-9
2.6870	1.810	.0937	**CU-13-1**	CU-13
2.6870	2.185	.0939	**CU-9-2**	CU-9
2.7165	0.750	.0748	**CAT-5-1**	CAT-5, CAT-8
2.7216	0.705	.0774	**DE-4-1**	DE-4
2.7559	1.340	.0945	**CAT-5-0**	CAT-5, CAT-8
2.8735	1.000	.0908	**MA-11-1**	MA-11
2.8735	1.181	.0908	**MA-11-2**	MA-11
2.8745	1.185	.1258	**CAT-3-1**	CAT-3-1
2.8745	1.995	.1256	**CAT-3-2**	CAT-3-2
2.8750	1.505	.0645	**WA-9-2**	WA-9
2.8750	1.880	.0645	**WA-9-1**	WA-9
NA	NA	NA	**SH-1798T**	CH-17G, CH-21G, CHG-15A**

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**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

SPECIALTY BEARING COMPONENT PROGRESSIVE LISTING BY HOUSING BORE

COMPONENT	MINIMUM HOUSING BORE	LENGTH	MAX. WALL	CAM JOURNAL DIAMETER	COMMENTS
19502L	1.9990	0.740	.0644	1.8692	OD Groove, 3 Oil Holes
19502LT	1.9990	0.740	.0644	1.8692	OD Groove, 3 Oil Holes
BRO-5-3	1.9990	0.860	.0644	1.8692	1 Oil Hole, 1 Pin Hole
19500L	2.1190	0.775	.0841	1.9498	
19501L	2.1190	0.755	.0841	1.9498	OD Groove, 3 Oil Holes
19501LT	2.1190	0.755	.0841	1.9498	OD Groove, 3 Oil Holes
CH-12-3L	2.1190	0.980	.0841	1.9498	OD Groove, 3 Oil Holes
GMP-2-1	2.1190	0.765	.0743	1.9498	
19500LR1	2.1290	0.755	.0891	1.9498	
19501LR1	2.1290	0.755	.0891	1.9498	OD Groove, 3 Oil Holes
CH-12-3LR1	2.1290	0.980	.0891	1.9498	OD Groove, 3 Oil Holes
19500LR2	2.1390	0.755	.0941	1.9498	
19501LR2	2.1390	0.755	.0941	1.9498	OD Groove, 3 Oil Holes
CH-12-3LR2	2.1390	0.980	.0941	1.9498	OD Groove, 3 Oil Holes
19501LR3	2.1490	0.755	.0991	1.9498	OD Groove, 3 Oil Holes
CH-12-3LR3	2.1490	0.980	.0991	1.9498	OD Groove, 3 Oil Holes
GM2125-2	2.2495	0.630	.0620	2.1245	
GM2125-3	2.2495	0.530	.0620	2.1245	
GM2125-11	2.2595	0.855	.0670	2.1245	
GM2125-21	2.2595	0.630	.0670	2.1245	
GM2125-31	2.2595	0.530	.0670	2.1245	
GM2125-41	2.2595	0.980	.0670	2.1245	
GM2125-12	2.2695	0.855	.0720	2.1245	
GM2125-22	2.2695	0.630	.0720	2.1245	
GM2125-32	2.2695	0.530	.0720	2.1245	
GM2125-42	2.2695	0.980	.0720	2.1245	
19500L14	2.2795	0.755	.1644	1.9497	
GM2125-13	2.2795	0.855	.0770	2.1245	
GM2125-43	2.2795	0.980	.0770	2.1245	
GM2132-1	2.2814	0.925	.0739	2.1326	No Oil Hole
GM2132-2	2.2814	1.075	.0739	2.1326	No Oil Hole
60215-P	2.2830	0.775	.0569	2.1663	OD Groove, 3 Oil Holes
GM-55-1	2.2830	0.785	.0575	2.1665	OD Groove, 3 Oil Holes
BRG60115	2.2980	1.000	.0653	2.1664	OD Groove, 3 Oil Holes
GM2300-1	2.2980	0.775	.0653	2.1664	OD Groove, 3 Oil Holes
GM2300-1T	2.2980	0.775	.0653	2.1664	OD Groove, 3 Oil Holes
GM2300-1R1	2.3080	0.775	.0703	2.1663	OD Groove, 3 Oil Holes
GM2300-1R2	2.3180	0.775	.0753	2.1663	OD Groove, 3 Oil Holes
GM2319-1	2.3180	0.775	.0753	2.1664	OD Groove, 3 Oil Holes
PN2250-1	2.4790	0.750	.0575	2.3630	OD Groove, No Oil Hole
GM-60-1	2.4791	0.750	.0572	2.3620	OD Groove, 3 Oil Holes
GM-60-1A	2.4791	0.750	.0577	2.3620	
GM-60-1W	2.4791	0.750	.0567	2.3620	
60040	2.5000	0.775	.0675	2.3620	
CN-1-1	2.5020	0.780	.0704	2.3622	60mm
60220	2.6745	0.805	.0557	2.5595	

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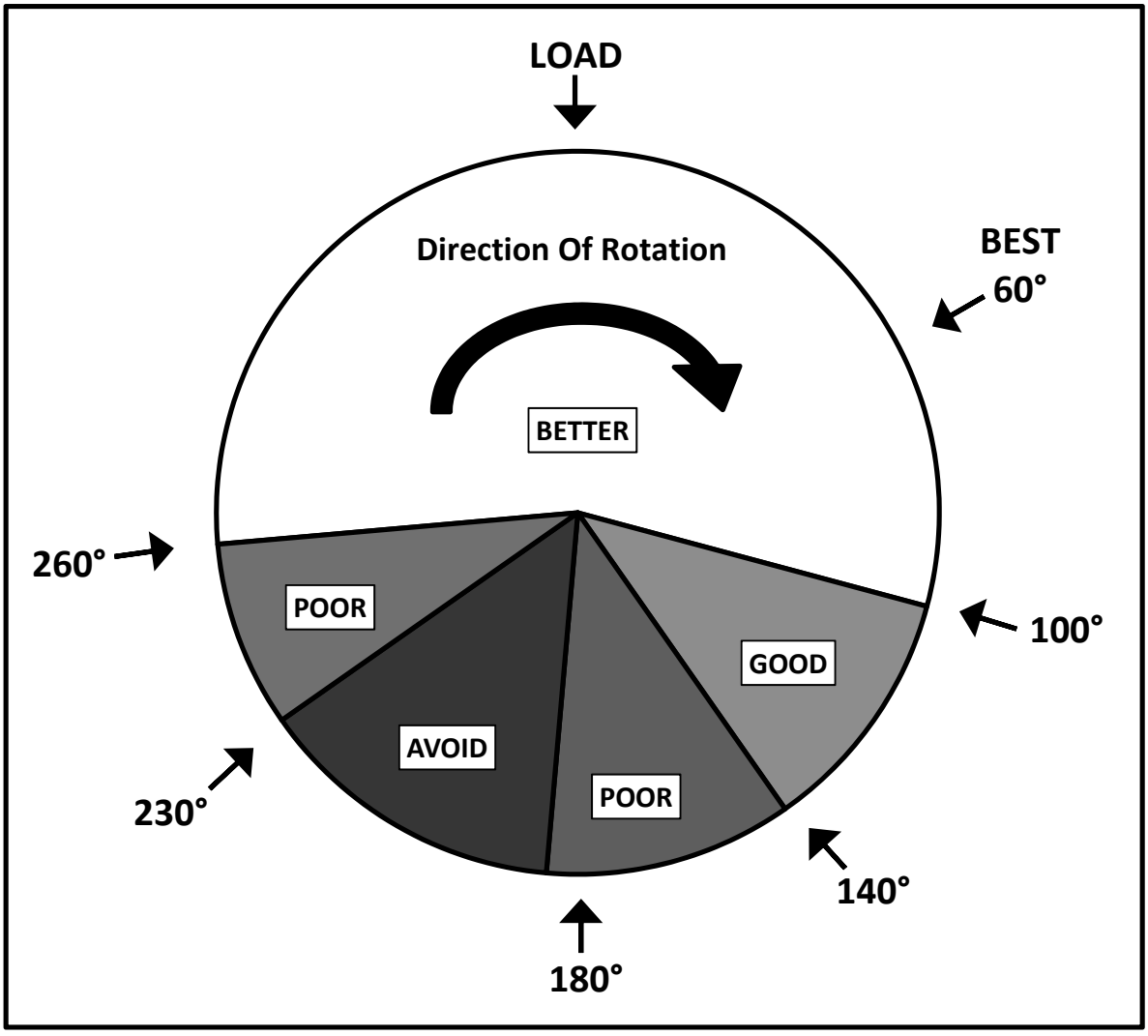
OPTIMUM PLACEMENT OF CAMSHAFT BEARING OIL FEED HOLE LOCATION

Maximum camshaft support will be realized by installing the cam bearing oil feed hole to the optimum clock location. Blocks and heads using a 360˚˚oil groove located behind the bearing oil feed, allow one to move the clock position of the cam bearing oil feed hole. This way you can adjust the clock position during cam bearing installation to make sure that the optimum location for the best hydrodynamic wedge is selected. Locating and installing the cam bearing to take advantage of this hydrodynamic wedge will supply the maximum support for the camshaft during engine operation. The direction of camshaft rotation and the engine oil entry point into the bearing control the placement of the hydrodynamic wedge.

If the oil feed passage in the block or head is just a hole without a 360˚˚groove, the bearing oil hole must line up with the oil feed passage in the block or head. In some instances, the bearing oil feed hole in the cam bearing also lines up with a groove cut in the camshaft journal. In those instances, the location of the bearing oil feed hole in the bearing is also very critical fore and aft and may not match up 100% with the hole in the block or head.

If the camshaft being used is driven with a gear-to-gear arrangement, or is a reverse rotation engine with a chain drive, the cam bearing oil feed hole will require repositioning to the opposite lower side. This is due to the fact that the camshaft is turning in the opposite direction.



(The illustration shows the optimum engine oil feed hole location for a camshaft that is turning clockwise as viewed from the front of the engine.)

This information was provided by AERA - Engine Builders Association.

CONVERSION SIZE CHART

INCHES		MILLIMETERS
(FRACTION)	(DECIMAL)	(MM)
1/64	0.0156	0.3969
1/32	0.0313	0.7938
3/64	0.0469	1.1906
1/16	0.0625	1.5875
5/64	0.0781	1.9844
3/32	0.0938	2.3813
7/64	0.1094	2.7781
1/8	0.1250	3.1750
9/64	0.1406	3.5719
5/32	0.1563	3.9688
11/64	0.1719	4.3656
3/16	0.1875	4.7625
13/64	0.2031	5.1594
7/32	0.2188	5.5563
15/64	0.2344	5.9531
1/4	0.2500	6.3500
17/64	0.2656	6.7469
9/32	0.2813	7.1438
19/64	0.2969	7.5406
5/16	0.3125	7.9375
21/64	0.3218	8.3344
11/32	0.3438	8.7313
23/64	0.3594	9.1281
3/8	0.3750	9.5250
25/64	0.3906	9.9219
13/32	0.4063	10.3188
27/64	0.4219	10.7156
7/16	0.4375	11.1125
29/64	0.4531	11.5094
15/32	0.4688	11.9063
31/64	0.4844	12.3031
1/2	0.5000	12.7000

INCHES		MILLIMETERS
(FRACTION)	(DECIMAL)	(MM)
33/64	0.5156	13.0969
17/32	0.5313	13.4938
35/64	0.5469	13.8906
9/16	0.5625	14.2875
37/64	0.5781	14.6844
19/32	0.5938	15.0813
39/64	0.6094	15.4781
5/8	0.6250	15.8750
41/64	0.6406	16.2719
21/32	0.6563	16.6688
43/64	0.6719	17.0656
11/16	0.6875	17.4625
45/64	0.7031	17.8594
23/32	0.7188	18.2563
47/64	0.7344	18.6531
3/4	0.7500	19.0500
49/64	0.7656	19.4469
25/32	0.7813	19.8438
51/64	0.7969	20.2406
13/16	0.8125	20.6375
53/64	0.8281	21.0344
27/32	0.8438	21.4313
55/64	0.8594	21.8281
7/8	0.8750	22.2250
57/64	0.8906	22.6219
29/32	0.9063	23.0188
59/64	0.9219	23.4156
15/16	0.9375	23.8125
61/64	0.9531	24.2094
31/32	0.9688	24.6063
63/64	0.9844	25.0031
1	1.0000	25.4000

CONVERSION FORMULA

INCHES X 25.4 = MM

MM / 25.4 = INCHES

BEARING COMPETITIVE INTERCHANGES

ACL - DURA-BOND BEARING SETS

ACL	DURA-BOND	ACL	DURA-BOND	ACL	DURA-BOND	ACL	DURA-BOND
10SC6005S	**GMA-2**	4C1002BS	**F-47B**	4C652S	**F-43**	5C369S	**F-16**
1BS1400S	**CHG-15A**	4C1002S	**F-47**	4C654S	**F-31**	5C4146	**DA-1**
1C069S	**J-1**	4C1031BS	**B-12B**	4C690S	**CA-8**	5C426S	**IN-11**
1C1094S	**FG-29**	4C1031S	**B-12**	4C703S	**F-32**	5C510S	**F-18**
1C330S	**WA-4**	4C1089S	**CH-17**	4C718S	**CH-11**	5C514S	**HO-2**
1C4096	**BL-1**	4C1102S	**CH-18**	4C777BS	**F-34B**	5C530S	**C-3**
2BS1403S	**PDG-29S**	4C1102SW	**CH-18A**	4C777S	**F-34**	5C559S	**F-9A**
2BS1445S	**FG-51**	4C1114S	**PD-27**	4C7936	**VO-3**	5C6003S	**FA-1**
2BS8078	**TOG-9**	4C1115S	**PD-21**	4C7979	**TO-10**	5C6004S	**GMA-1**
2BS8286	**TOG-8**	4C1197S	**F-45**	4C8066	**TO-3**	5C615S	**CH-9A**
2C026S	**PDG-26**	4C1246C	**BP-13**	4C8076	**TO-8**	5C616S	**CH-12**
2C1095S	**FG-34**	4C1246S	**B-13**	4C874S	**PD-18**	5C638S	**O-6**
2C1209S	**VWG-1**	4C1247S	**O-8**	5C004AS	**CH-4A**	5C643S	**F-24**
2C6002S	**FG-53**	4C1251S	**F-46**	5C1000S	**CH-10**	5C653S	**F-44**
3BS8387	**MIG-3**	4C1254BS	**F-49B**	5C1001S	**CH-23**	5C671S	**N-9**
3C021S	**F-1**	4C1254S	**F-49**	5C1004S	**PDA-3**	5C679S	**B-11**
3C023S	**PD-1**	4C1351S	**CH-21**	5C1088S	**O-7**	5C680S	**B-9**
3C056S	**CO-8**	4C1405BS	**PD-28B**	5C1092S	**IN-17**	5C710C	**FP-26**
3C1030S	**CH-16**	4C1405S	**PD-28**	5C1111S	**F-30**	5C710S	**F-26**
3C1190S	**CHG-14**	4C1441AS	**F-50A**	5C1112S	**PD-25**	5C716S	**CH-13**
3C1305S	**CH-20**	4C1441S	**F-50**	5C1191S	**CA-9**	5C781S	**F-33**
3C191S	**CO-3**	4C1447S	**F-52**	5C1195S	**CH-19**	5C7969	**TO-11**
3C400S	**CH-6**	4C1812S	**B-14**	5C1199S	**GM-7**	5C8045	**TO-12**
3C4018	**DA-2**	4C190S	**K-1**	5C1300S	**C-4**	5C8186	**TO-7**
3C4036	**DA-3A**	4C209S	**CH-2**	5C1300SW	**C-4A**	5C8217	**TO-15**
3C502S	**CA-3**	4C220S	**IN-14**	5C1319S	**F-9B**	5C875S	**PD-16**
3C507S	**IN-18**	4C3088	**HO-3**	5C1321S	**FP-18**	5C876S	**PD-17**
3C6007	**VO-2**	4C383S	**CH-3**	5C1763S	**351RHP**	5SC6006	**MZA-4**
3C711S	**F-28**	4C399S	**CH-7**	5C277S	**C-2**	5SC761	**MIA-1**
3C733S	**F-29**	4C4036S	**DA-5**	5C287S	**CH-4**	6BS8033	**MZG-3**
3C8071	**TO-14**	4C506S	**B-6**	5C290S	**CH-8**	6C1100S	**FA-3**
3C8074	**TO-13**	4C533S	**F-22**	5C291S	**P-3**	6C1200S	**FA-4**
3C8127	**IZ-3**	4C534S	**F-7**	5C292S	**P-4**	6C1201S	**FA-5**
3C8276S	**F-41**	4C549BS	**N-7B**	5C324S	**O-5**	6C1300S	**PD-30**
3C8288S	**MIG-2**	4C549S	**N-7**	5C3346C	**GMP-8**	6C8454	**IZ-8**
4BS8000	**TOG-10**	4C567BS	**F-23B**	5C3349C	**CHP-8**		
4C048AS	**F-48A**	4C567S	**F-23A**	5C343S	**F-12**		
4C048S	**F-48**	4C6001S	**CHG-22**	5C361S	**B-8**		

MAHLE / CLEVITE - DURA-BOND BEARING SETS

CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND
SH1006S	**F-54**	SH1115S	**PD-21**	SH1254S	**F-49**	SH1360S	**B-11**
SH1011S	**DB-1**	SH1119S	**NI-1**	SH1305S	**CH-20**	SH1361S	**B-9**
SH1017S	**F-53**	SH1131S	**MZ-1**	SH1321S	**FP-18**	SH1364S	**CH-18**
SH1030S	**CH-16**	SH1155S	**MI-1**	SH1326S	**PDG-26**	SH1364S80	**CH-18R8**
SH1060S	**TO-10**	SH116S	**IN-5**	SH1328S	**WA-12**	SH1365S	**CH-19**
SH1065S	**TO-11**	SH1190S	**CHG-14**	SH1329S	**WA-8**	SH1366S	**GM-7**
SH1066S	**F-41**	SH1191S	**CA-9**	SH1349S	**CHP-8**	SH1371S	**C-4**
SH1092S	**IN-17**	SH1193S	**OP-5**	SH1350S	**CH-17**	SH1382S	**CU-13**
SH1094S	**FG-29**	SH1197S	**F-45**	SH1351S	**CH-21**	SH1385S	**B-12**
SH1095S	**FG-34**	SH1209S	**VWG-1**	SH1352S	**CH-4A**	SH1386S	**F-31**
SH1111S	**F-30**	SH1245S	**CAT-2**	SH1354S	**O-6**	SH1390S	**F-47**
SH1112S	**PD-25**	SH1248S	**TO-13**	SH1355S	**O-7**	SH1394S	**CU-11**
SH1114S	**PD-27**	SH1251S	**F-46**	SH1356S	**O-8**	SH1395S	**CU-11A**

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

MAHLE / CLEVITE - DURA-BOND BEARING SETS (Cont.)

CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND
SH1396S	TO-12	SH2144S	CHP-12	SH567S	F-23A	SH994S	IN-19
SH1401S	CHP-8R2	SH2147S	351HP	SH568S	CU-5A	**INDIVIDUAL CAMSHAFT BEARINGS**	
SH1403S	PDG-29S	SH2152S	PDP-17	SH56S	CO-8		
SH1405S	PD-28	SH2157S	CHP-25	SH590S	F-42	SH-1001	BL-1-1
SH1429S	MIG-2	SH2160S	CHP-10	SH614S	WA-7	SH-1002	BL-1-2
SH142S	WA-11	SH2181S	DE-4	SH615S	CH-9A	SH-1003	BL-1-3
SH1430S	TO-14	SH21S	F-1	SH616S	CH-12	SH-1062	TO-10-3
SH1431S	IZ-7	SH220S	IN-14	SH617S	GM-12	SH-1063	TO-1-4
SH1441S	F-50	SH23S	PD-1	SH628S	A-5	SH-1065	TO-11-3
SH1447S	F-52	SH277S	C-2	SH629S	A-4	SH-1067	F-41-1
SH1448S	B-13	SH287S	CH-4	SH643S	F-24	SH-1092	IN-17-1
SH1450S	MA-8	SH290S	CH-8	SH652S	F-43	SH-1093	IN-17-2
SH1455S	DI-2	SH291S	P-3	SH671S	N-9	SH-1094	AGB-29-1
SH1457S	IZ-3	SH292S	P-4	SH676S	MA-7	SH-1095	AGB-34-1
SH1462S	IZ-1	SH313S	PD-8	SH681S	IN-10A	SH-1096	AGB-34-2
SH1463S	IZ-5	SH322S	HE-5	SH690S	CA-8	SH-1111	F-30-1
SH1469S	MIG-3	SH330S	WA-4	SH693S	MA-5	SH-1112	PD-25-2
SH1481S	TO-15	SH343S	F-12	SH698S	DE-2	SH-1113	PD-25-3
SH1526S	FG-51	SH344S	F-11	SH699S	DE-2A	SH-1114	PD-25-4
SH1529S	CU-9	SH354S	IN-15	SH69S	J-1	SH-1115	PD-21-1
SH1762S	CAT-1	SH361S	B-8	SH700S	DE-7	SH-1116	PD-21-2
SH1764S	CAT-5	SH369S	F-16	SH701S	DE-5	SH-1117	PD-21-3
SH1765S	CAT-8	SH37S	PD-3	SH703S	F-32	SH-1131	MZ-1-1
SH1766S	F-57	SH383S	CH-3	SH704S	CA-6	SH-1132	MZ-1-2
SH1772S	RDCP-1	SH384S	A-1	SH705S	CA-7	SH-116	IN-5-1
SH1780S	CHG-22	SH385S	A-2	SH710S	F-26	SH-117	IN-5-2
SH1789S	F-48A	SH386S	BU-2	SH711S	F-28	SH-118	IN-5-3
SH1796S	GMP-8	SH398S	CH-5	SH716S	CH-13	SH-1190	AGB-14-1
SH1798S	CHG-15A	SH399S	CH-7	SH718S	CH-11	SH-1191	CA-9-1
SH1812S	B-14	SH400S	CH-6	SH719S	A-3	SH-1197	F-45-1
SH1814S	CH-10	SH426S	IN-11	SH720S	TO-3	SH-1198	F-45-2
SH1816S	GM-9	SH439S	WA-9	SH725S	TO-7	SH-1209	VWG-1-1
SH186S	CO-7	SH464S	F-19	SH730S	TO-8	SH-1210	VWG-1-2
SH190S	K-1	SH481S	DA-2	SH732S	F-25	SH-1211	K-1-1
SH191S	CO-3	SH493S	IN-3	SH733S	F-29	SH-1245	CAT-1-2
SH1977S	FG-53	SH500S	JD-1	SH735S	VW-1	SH-1251	F-46-1
SH1980S	N-10	SH501S	JD-2	SH767S	DA-1	SH-1252	F-46-2
SH198S	HE-1	SH502S	CA-3	SH772S	DA-3A	SH-1253	F-46-3
SH1990S	PD-31B	SH506S	B-6	SH777S	F-34	SH-1254	F-49-1
SH1995S	CH-23	SH507S	IN-18	SH781S	F-33	SH-1256	PDG-26-2
SH1996S	IN-21	SH510S	F-18	SH785S	JD-4	SH-1269	TOG-8-1
SH1997S	PDG-30	SH-527S	DE-1	SH786S	JD-3	SH-1270	TOG-8-2
SH1999S	GM-8	SH529S	N-6	SH791S	VO-2	SH-128	F-29-1
SH2002S	CHG-24	SH530S	C-3	SH796S	OP-3	SH-129	F-29-2
SH2012ST	DT-1T	SH531S	JD-5	SH84S	BL-1	SH-130	F-29-3A
SH2013ST	GMP-12LT	SH533S	F-22	SH874S	PD-18	SH-1305	CH-20-1
SH2014ST	GMP-2T	SH534S	F-7	SH875S	PD-16	SH-1321	FP-18-1
SH2015ST	SBF-1T	SH538S	IN-16	SH876S	PD-17	SH-1322	FP-18-2
SH209S	CH-2	SH543S	IN-20	SH905S	IZ-8	SH-1323	FP-18-3
SH2121S	CH-24	SH549S	N-7	SH906S	IZ-6	SH-1324	FP-18-4
SH2125S	CH-25	SH558S	IN-12	SH907S	IZ-2	SH-1325	FP-18-5
SH2140S	JDG-7	SH559S	F-9B	SH951S	NI-2	SH-1326	PDG-26-1
SH2141S	MA-11	SH561S	HE-7	SH952S	DA-5	SH-1328	WA-8-1
SH2142S	GMP-25	SH562S	HE-8	SH978S	TO-2	SH-1329	WA-8-2
SH2143S	MAG-11	SH563S	MAG-10	SH993S	MA-6	SH-133	VW-1-1

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

MAHLE / CLEVITE - DURA-BOND INDIVIDUAL BEARINGS (Cont.)

CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND	CLEVITE	DURA-BOND
SH-1334	**F-48-1**	SH-1406	**PD-28-2**	SH-1997	**PDG-30-1**	SH-24	**PD-1-2**
SH-1335	**F-48-2**	SH-1407	**PD-28-3**	SH-1998	**PDG-30-2**	SH-249	**F-7-2**
SH-1336	**F-48-4**	SH-1408	**PD-28-4**	SH-1999	**GM-8-1**	SH-25	**PD-1-3**
SH-134	**VW-1-2**	SH-142	**WA-11-1**	SH-2002	**CHG-24-1**	SH-250	**F-8-1**
SH-1349	**CHP-4-1**	SH-1429	**MIG-2-1**	SH-2006	**GM-8-2**	SH-252	**R-1-1**
SH-1350	**CHP-4-2**	SH-1441	**F-50-1**	SH-2011	**JD-6-1**	SH-253	**R-1-2**
SH-1351	**CHP-4-3**	SH-1442	**F-50-2**	SH-2012	**DT-1-1T**	SH-254	**R-1-3**
SH-1352	**CH-4-1S1**	SH-1443	**F-50-3**	SH-2013	**CH-12-3LT**	SH-255	**R-1-4**
SH-1354	**O-6-1**	SH-1444	**F-50-4**	SH-2014	**GMP-2-1T**	SH-263	**CH-3-1**
SH-1355	**O-6-2**	SH-1446	**F-51-2**	SH-2015	**351-HPB-1T**	SH-264	**CH-3-2**
SH-1356	**O-6-3**	SH-1447	**F-52-1**	SH-2016	**351-HPB-2T**	SH-265	**CH-3-3**
SH-1357	**O-6-4**	SH-1448	**B-13-1**	SH-2017	**351-HPB-3T**	SH-277	**C-2-1**
SH-1358	**O-6-5**	SH-1450	**MA-8-1**	SH-2018	**351-HPB-4T**	SH-278	**C-2-2**
SH-1359	**O-7-1**	SH-1463	**IZ-5-1**	SH-2019	**351-HPB-5T**	SH-285	**F-9-1**
SH-1360	**B-11-1**	SH-1464	**IZ-5-2**	SH-2020L	**PDA-4-1**	SH-287	**CH-4-3**
SH-1361	**B-9-2**	SH-1487	**CAT-4-2**	SH-2020U	**PDA-4-2**	SH-288	**CH-4-2**
SH-1362	**CH-18-1A**	SH-1488	**CAT-4-1**	SH-209	**CH-2-4**	SH-289	**CH-4-4**
SH-1362-80	**CH-18-1R8**	SH-1526	**AGB-51-1**	SH-21	**F-1-1**	SH-290	**CH-4-1**
SH-1363	**CH-18-2**	SH-1529	**CU-9-1**	SH-2121	**CH-24-1**	SH-291	**P-3-1**
SH-1363-80	**CH-18-2R8**	SH-1762	**CAT-1-1**	SH-2122	**CH-24-2**	SH-292	**P-3-2**
SH-1364	**CH-18-4**	SH-1764	**CAT-5-0**	SH-2123	**CH-24-3**	SH-313	**PD-8-1**
SH-1364-80	**CH-18-4R8**	SH-1765	**CAT-5-1**	SH-2124	**CH-25-2**	SH-314	**PD-8-2**
SH-1365	**CH-19-1**	SH-1766	**F-30-1S**	SH-2125	**CH-25-3**	SH-315	**PD-8-3**
SH-1366	**GM-7-1**	SH-1789	**F-48-4A**	SH-2140	**JDG-7-1**	SH-318	**CU-1-1**
SH-1367	**GM-7-2**	SH-1798	**CHG-15-1**	SH-2141	**MA-11-1**	SH-322	**HE-5-1**
SH-1368	**GM-7-3**	SH-1798T	**SH-1798T**	SH-2142	**MA-11-2**	SH-323	**HE-5-2**
SH-1369	**GM-7-4**	SH-1812	**B-14-1**	SH-2143	**MAG-11-1**	SH-324	**O-5-1**
SH-1370	**GM-7-5**	SH-1813	**B-14-2**	SH-2144	**CHP-12-1**	SH-326	**PD-9-2**
SH-1371	**C-4-1**	SH-1814	**CH-10-1**	SH-2145	**CHP-12-2**	SH-327	**PD-9-3**
SH-1372	**C-4-2**	SH-1815	**CH-10-2**	SH-2146	**CHP-12-3**	SH-328	**PD-9-4**
SH-1373	**C-4-3**	SH-1816	**CH-10-3**	SH-2147	**351HP-1**	SH-329	**PD-9-5**
SH-1374	**C-4-4**	SH-186	**CO-7-1**	SH-2148	**351HP-2**	SH-33	**CH-2-1**
SH-1375	**C-4-5**	SH-187	**CO-7-2**	SH-2149	**351HP-3**	SH-330	**WA-1-1**
SH-1377	**CU-8-1**	SH-188	**CO-7-3**	SH-2150	**351HP-4**	SH-331	**WA-3-1**
SH-1378	**CU-9-2**	SH-189	**CO-7-4**	SH-2151	**351HP-5**	SH-332	**WA-3-2**
SH-1386	**F-31-1**	SH-191	**K-1-2**	SH-2152	**PDP-17-1**	SH-333	**WA-3-3**
SH-1387	**F-31-2**	SH-197	**HE-1-1**	SH-2153	**PDP-12-2**	SH-338	**H-5-1**
SH-1388	**F-31-3**	SH-1977	**FG-53-1**	SH-2154	**PDP-12-3**	SH-339	**H-5-2**
SH-1389	**F-31-4**	SH-1978	**FG-53-2**	SH-2155	**PDP-12-4**	SH-34	**CH-2-2**
SH-1390	**F-47-1**	SH-198	**HE-1-2**	SH-2156	**PDP-12-5**	SH-340	**H-5-3**
SH-1391	**F-47-2**	SH-1980	**N-10-1**	SH-2157	**CHP-25-1**	SH-341	**H-5-4**
SH-1392	**F-47-3**	SH-1981	**CU-14-1**	SH-2158	**CHP-25-2**	SH-342	**H-5-5**
SH-1393	**F-47-4**	SH-1990	**PD-31-1**	SH-2159	**CHP-25-3**	SH-343	**F-12-1**
SH-1394	**CU-11-1**	SH-1990A	**PD-31-1B**	SH-2160	**CHP-10-1**	SH-344	**F-11-2**
SH-1395	**CU-11-2**	SH-1991	**PD-31-2**	SH-2161	**CHP-10-2**	SH-35	**CH-2-3**
SH-1396	**TO-12-1**	SH-1991A	**PD-31-2B**	SH-2162	**CHP-10-3**	SH-351	**IN-10-2**
SH-1397	**TO-12-2**	SH-1992	**PD-31-3**	SH-2164	**JD-7-1**	SH-352	**IN-10-3**
SH-1398	**TO-12-3**	SH-1992A	**PD-31-3B**	SH-2181	**DE-4-1**	SH-354	**IN-15-1**
SH-1399	**TO-12-4**	SH-1993	**PD-31-4**	SH-2185	**CHP-5-3**	SH-355	**IN-15-2**
SH-1400	**TO-12-5**	SH-1993A	**PD-31-4B**	SH-22	**F-1-2**	SH-356	**IN-15-3**
SH-1402	**CA-11-1**	SH-1994	**PD-31-5**	SH-220	**IN-8-2**	SH-357	**MA-3A-1**
SH-1403	**PDG-29-1**	SH-1994A	**PD-31-5B**	SH-221	**IN-2-3**	SH-361	**B-4-1**
SH-1403-S	**PDG-29-1SR1**	SH-1995	**CH-23-1**	SH-222	**IN-2-4**	SH-363	**B-4-3**
SH-1404	**CU-12-1**	SH-1995A	**CH-25-1**	SH-224	**IN-8-4**	SH-364	**B-4-4**
SH-1405	**PD-28-1**	SH-1996	**IN-21-1**	SH-23	**PD-1-1**	SH-365	**B-4-5**

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

MAHLE / CLEVITE - DURA-BOND INDIVIDUAL BEARINGS (Cont.)							
CLEVITE	**DURA-BOND**	**CLEVITE**	**DURA-BOND**	**CLEVITE**	**DURA-BOND**	**CLEVITE**	**DURA-BOND**
SH-369	**F-16-1**	SH-493	**IN-3A-1**	SH-618	**CH-9-4**	SH-727	**TO-7-3**
SH-37	**PD-3-2**	SH-500	**JD-1-1**	SH-628	**A-3-1**	SH-728	**TO-7-4**
SH-370	**F-16-2**	SH-501	**JD-1-2**	SH-629	**A-3-2**	SH-729	**TO-7-5**
SH-375	**F-14-5**	SH-502	**CA-3-1**	SH-643	**F-24-2**	SH-730	**TO-8-1**
SH-377	**F-15-2**	SH-503	**CA-3-2**	SH-644	**F-24-3**	SH-731	**TO-8-2**
SH-378	**F-15-3**	SH-504	**CA-3-3**	SH-645	**F-24-4**	SH-732	**F-25-1**
SH-379	**F-15-4**	SH-506	**B-6-1**	SH-646	**F-24-5**	SH-759	**TO-5-1**
SH-38	**PD-3-3**	SH-507	**IN-18-1**	SH-652	**F-43-1**	SH-760	**TO-5-2**
SH-380	**F-15-5**	SH-508	**IN-18-2**	SH-671	**N-9-1**	SH-762	**TO-5-4**
SH-383	**CH-3-4**	SH-509	**IN-18-3**	SH-672	**N-8-2**	SH-763	**TO-5-5**
SH-384	**A-1-1**	SH-510	**F-18-1**	SH-673	**N-8-3**	SH-767	**DA-1-1**
SH-385	**A-2-1**	SH-511	**F-18-2**	SH-674	**N-8-4**	SH-768	**DA-1-2**
SH-386	**BU-1-1**	SH-512	**F-18-3**	SH-675	**N-8-5**	SH-769	**DA-1-3**
SH-387	**BU-1-2**	SH-513	**F-18-4**	SH-676	**MA-5-3**	SH-770	**DA-1-4**
SH-388	**BU-1-3**	SH-514	**F-18-5**	SH-681	**IN-10-1A**	SH-771	**DA-1-5**
SH-398	**CH-5-1**	SH-518	**CA-4-2**	SH-682	**IN-10-4A**	SH-772	**DA-3-1**
SH-399	**CH-5-2**	SH-529	**N-6-1**	SH-686	**DE-2-1**	SH-774	**DA-3-3A**
SH-400	**CH-5-3**	SH-530	**C-3-1**	SH-687	**DE-2-2**	SH-777	**F-34-1**
SH-401	**CH-5-4**	SH-531	**JD-5-1**	SH-688	**DE-2-3**	SH-781	**F-33-1**
SH-403	**PD-12-2**	SH-532	**JD-5-2**	SH-689	**CA-4-1**	SH-786	**JD-3-1**
SH-404	**PD-12-3**	SH-533	**F-22-1**	SH-69	**J-1-1**	SH-796	**VO-2-1**
SH-405	**PD-12-4**	SH-538	**IN-16-1**	SH-693	**MA-5-2**	SH-797	**VO-2-2**
SH-406	**PD-12-5**	SH-539	**IN-16-3**	SH-694	**FT-3-1**	SH-798	**VO-2-3**
SH-412	**F-17-2**	SH-549	**N-7-1**	SH-695	**FT-3-2**	SH-813	**OP-3-1**
SH-413	**F-17-3**	SH-550	**N-7-2**	SH-696	**FT-3-3**	SH-814	**OP-3-2**
SH-414	**F-17-4**	SH-551	**N-7-3**	SH-703	**F-32-1**	SH-815	**OP-5-3**
SH-424	**PD-13-3**	SH-552	**N-7-4**	SH-704	**CA-6-1**	SH-816	**OP-3-3**
SH-425	**PD-13-4**	SH-559	**F-9-2B**	SH-705	**CA-6-2**	SH-874	**PD-18-1**
SH-426	**IN-11-1**	SH-56	**K-1-3**	SH-706	**CA-6-3**	SH-875	**PD-16-1**
SH-427	**IN-11-2**	SH-560	**MA-5-1**	SH-710	**F-26-1**	SH-876	**PD-17-1**
SH-428	**IN-11-3**	SH-561	**HE-7-1**	SH-711	**F-28-1**	SH-907	**IZ-2-1**
SH-429	**IN-11-4**	SH-563	**MAG-10-1**	SH-712	**F-28-2**	SH-908	**IZ-2-2**
SH-430	**IN-11-5**	SH-564	**MAG-10-2**	SH-713	**F-28-3**	SH-909	**IZ-2-3**
SH-455	**IN-8-3**	SH-567	**F-23-1A**	SH-716	**CH-13-1**	SH-914	**MZ-1-3**
SH-464	**F-19-1**	SH-568	**CU-5-2A**	SH-717	**CH-13-2**	SH-978	**TO-2-1**
SH-465	**F-19-2**	SH-57	**K-1-4**	SH-720	**TO-3-1**	SH-979	**TO-2-2**
SH-466	**F-19-3**	SH-580	**FT-1-3**	SH-721	**TO-3-2**	SH-980	**TO-2-3**
SH-467	**F-19-4**	SH-581	**FT-1-2**	SH-722	**TO-3-3**	SH-994A	**IN-19-1**
SH-470	**N-5-2**	SH-615	**CH-12-1**	SH-723	**TO-3-4**	SH-995A	**IN-19-2**
SH-471	**N-5-3**	SH-616	**CH-12-2**	SH-725	**TO-7-1**	SH-996A	**IN-19-3**
SH-472	**N-5-4**	SH-617	**CH-12-3**	SH-726	**TO-7-2**	SH-997A	**IN-19-4**

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

ENGINETECH - DURA-BOND BEARING SETS

ENGINETECH	DURA-BOND	ENGINETECH	DURA-BOND	ENGINETECH	DURA-BOND	ENGINETECH	DURA-BOND
CC1061	**F-41**	CC411	**CH-12**	CC443	**F-32**	CC456	**F-34B**
CC1407	**TO-12**	CC412	**B-12B**	CC444	**F-31**	CC470	**PD-16**
CC400	**CH-8**	CC413	**C-4A**	CC445G	**F-23B**	CC471	**PD-18**
CC401	**CH-19**	CC414	**CH-4**	CC446G	**F-49B**	CC472	**PD-21**
CC402	**CH-16**	CC415	**CH-21**	CC447	**F-45**	CC473	**PD-27**
CC403	**CH-20**	CC416	**P-4**	CC448	**F-26**	CC474	**PD-25**
CC404B	**CH-18A**	CC417	**C-3**	CC449	**F-33**	CC475	**PD-28**
CC405	**CH-7**	CC418	**O-6**	CC450	**F-30**	CC476	**PD-17**
CC406	**CH-11**	CC419	**B-9**	CC451	**F-48**	CC480	**N-7**
CC407	**CH-17**	CC420	**GM-7**	CC452	**F-52**	CC481	**N-9**
CC408	**B-12**	CC440	**F-18**	CC453	**F-47B**	CC482	**IN-11**
CC409	**B-13**	CC441	**F-34**	CC454	**F-50A**	CC483	**IN-17**
CC410	**O-7**	CC442	**F-46**	CC455	**FG-51**		

FEDERAL-MOGUL - DURA-BOND BEARING SETS

F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND
1005M	**F-1**	1216M	**C-3**	1426M	**CA-6**	1489M	**O-8**
1010M	**PD-1**	1218M	**IN-11**	1427M	**CA-7**	1490M	**JDG-7**
1011M	**PD-3**	1220M	**P-4**	1428M	**A-5**	1491M	**CA-8**
1017M	**A-2**	1222M	**F-22**	1438M	**CAT-2**	1492M	**CH-18**
1088M	**K-1**	1223M	**F-9B**	1439M	**F-32**	1493M	**F-45**
1089M	**F-5**	1226M	**HE-8**	1441M	**F-31**	1494M	**F-46**
1090M	**HE-1**	1227M	**CA-3**	1442M	**F-41**	1496M	**GM-7**
1091M	**J-1**	1228M	**IN-15**	1443M	**F-34**	1497M	**CA-9**
1093M	**CO-3**	1229M	**IN-3**	1444M	**CHG-14**	1543M	**BL-1**
1094M	**CH-2**	1230M	**IN-12**	1445M	**F-33**	1557M	**CH-11**
1106M	**IN-5**	1234M	**O-6**	1447M	**F-25**	1561M	**VO-2**
1115M	**C-2**	1235M	**CH-8**	1449M	**CU-13**	1565M	**TO-3**
1119M	**A-1**	1235M1	**CH-8W**	1450M	**F-23A**	1566M	**TO-2**
1133M	**F-7**	1244M	**N-7**	1451M	**PD-16**	1569M	**TO-8**
1136M	**WA-3**	1246M	**CU-5A**	1453M	**PD-17**	1570M	**DA-3A**
1137M	**WA-4**	1251M	**JD-1**	1454M	**PD-18**	1591M	**IN-18**
1142M	**HE-5**	1253M	**CA-5**	1458M	**CU-14**	1592M	**DA-1**
1145M	**CH-4**	1255M	**CH-9A**	1459M	**F-28**	1672M	**TO-11**
1146M	**P-3**	1259M	**JD-3**	1460M	**FG-34**	1697M	**VO-3**
1149M	**PD-8**	1260M	**JD-4**	1461M	**CH-16**	1713M	**VW-1**
1151M	**BU-2**	1267M	**F-24**	1462M	**B-12**	1726M	**VWG-1**
1158M	**CO-8**	1269M	**B-8**	1463M	**CH-17**	1729M	**TOG-8**
1159M	**F-12**	1274M	**MA-6**	1463M1	**CH-17X**	1731M	**FG-29**
1160M	**F-9A**	1275M	**WA-7**	1466M	**O-7**	1735M	**TO-10**
1164M	**O-5**	1325M	**DA-2**	1467M	**IN-17**	1737M	**OP-5**
1170M	**CH-3**	1394M	**HO-3**	1470M	**IN-19**	1738M	**DA-5**
1176M	**H-5**	1401M	**N-9**	1473M	**PD-21**	1746M	**IZ-3**
1177M	**CH-5**	1402M	**IN-16**	1474M	**CO-9**	1750M	**CH-4A**
1179M	**F-16**	1403M	**F-26**	1475M	**JD-5**	1752M	**CU-11A**
1198M	**GM-5**	1404M	**CH-12**	1477M	**F-43**	1753M	**CU-11**
1202M	**CH-6**	1406M	**MA-5**	1478M	**F-44**	1755M	**B-13**
1203M	**CH-7**	1409M	**MA-7**	1479M	**IN-10A**	1756M	**CH-20**
1204M	**F-18**	1412M	**F-29**	1481M	**ON-1**	1757M	**C-4**
1205M	**B-6**	1414M	**F-30**	1484M	**PD-25**	1758M	**TO-14**
1209M	**IN-14**	1417M	**MAG-10**	1485M	**CH-19**	1760M	**NI-2**
1211M	**DE-2**	1421M	**B-11**	1486M	**DE-4**	1762M	**DB-1**
1213M	**DE-5**	1422M	**B-9**	1487M	**PDG-26**	1771M	**TO-12**
1214M	**A-6**	1424M	**A-4**	1488M	**CU-9**	1774M	**TO-13**

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

FEDERAL-MOGUL - DURA-BOND BEARING SETS (Cont.)

F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND
1776M	NI-3	1921M	N-10	FPR57160S	JDG-7	1741-DR	R-1-1
1777M	F-48	1922M	CH-24	**INDIVIDUAL CAMSHAFT BEARINGS**		1742-DR	R-1-2
1781M	F-49	1923M	CH-25			1743-DR	R-1-3
1782M	B-12B	1924M	CHG-23	1058-DRL	MZA-2-3	1744-DR	R-1-4
1784M	F-55	1925M	TOG-9	1059-DRL	MZA-2-2	1832-DR	F-7-2
1790M	PD-27	1926M	TOG-10	1059-DRU	MZA-2-1	1833-DR	F-22-1
1792MSEMI	PDG-29S	1927M	TOG-11A	1071-DR	NI-2-1	1836-DR	F-8-1
1793M	F-47	1928M	TOG-11	1072-DR	NI-2-2	1838-DR	F-12-1
1794M	TO-7	1929M	MIA-4	1073-DR	NI-2-3	1839-DR	F-11-2
1803M	MI-3	1930M	MIA-5	1074-DR	NI-2-4	1841-DRI	PD-16-1
1804M	IZ-8	1931M	MZA-4	1086-DRI	DE-6-1S	1846-DR	NIA-2-1
1805M	MIG-2	1932M	SA-1	1088-DR	DE-6-2	1847-DR	NIA-3-1
1807M	FG-51	2100M	CHP-8	1091-DRL	HA-1-3	1848-DR	NIA-3-2
1808M	IZ-4	2101M	CHP-12	1091-DRU	HA-1-2	1852-DR	MA-3A-1
1809M	PD-28	2102M	FP-18	1092-DRU	HA-1-4	1866-DR	WA-1-1
1810M	MIG-3	2103M	FP-26	1093-DRU	HA-1-4A	1921-DR	PD-28-1
1828M	CHG-22	2104M	FP-30	1101-DR	IN-5-1	1922-DR	PD-28-2
1838M	F-47B	2105M	GMP-1	1102-DR	IN-5-2	1922-DRB	PD-28-2B
1839M	NIA-4	2106M	GMP-8	1103-DR	IN-5-3	1923-DR	PD-28-3
1840M	PDA-1	2107M	GMP-12	1121-DR	BMA-1-1	1923-DRB	PD-28-3B
1841M	VWA-2	2108M	351HP	1122-DR	BMA-1-2	1924-DR	PD-28-4
1842M	F-34B	2110M	PDP-16	1123-DR	BMA-1-3	1951-DR	CH-3-1
1843M	F-48A	2111M	PDP-17	1124-DR	BMA-1-4	1952-DR	CH-3-2
1844M	F-50	2112M	PDP-25T	1206-DR	K-1-1	1953-DR	CH-3-3
1845M	351RHP	3204DR	CHG-15A	1207-DR	K-1-2	1961-DR	CU-1-1
1847M	FA-2	FP1017M	A-2	1208-DR	K-1-3	1962-DRI	CU-5-2A
1848M	FA-1	FP1090M	HE-1	1209-DR	K-1-4	2003-DR	F-9-1
1855M	CH-21	FP1093M	CO-3	1221-DR	F-48-1	2004-DRI	F-9-2B
1855M1	CH-21X	FP1106M	IN-5	1221-DRA	F-48-1	2021-DR	CH-4-1
1856M	MZA-1	FP1119M	A-1	1222-DR	F-48-2	2021-DR1	CH-4-1W
1857M	NIA-1	FP1137M	WA-4	1222-DRA	F-48-2	2022-DR	CH-4-2
1858M	MIA-1	FP1142M	HE-5	1223-DRA	F-48-4A	2023-DR	CH-4-3
1859M	TOA-1	FP1151M	BU-2	1246-DR	NIA-4-1	2024-DR	CH-4-4
1860M	MIA-3	FP1158M	CO-8	1247-DR	NIA-4-2	2046-DR	PD-8-1
1861M	HA-1	FP1214M	A-6	1401-DR	FA-1-1	2047-DR	PD-8-2
1862M	HA-2	FP1226M	HE-8	1402-DR	FA-1-2	2048-DR	PD-8-3
1863M	MZA-2	FP1227M	CA-3	1403-DR	FA-1-3	2054-DR	F-9-3
1865M	NIA-6	FP1228M	IN-15	1404-DR	FA-1-4	2101-DR	B-4-1
1869M	NIA-3R	FP1251M	JD-1	1404-DRI	FA-1-5	2103-DR	B-4-3
1871M	VOA-1	FP1274M	MA-6	1419-DR	CH-2-4	2103-DRI	B-4-4
1874M	GM-12	FP1275M	WA-7	1421-DR	HE-5-1	2104-DR	B-4-5
1881M	FG-53	FP1402M	IN-16	1422-DR	HE-5-2	2106-DR	IN-15-1
1886M	F-52	FP1406M	MA-5	1496-DRL	HA-1-5	2107-DR	IN-15-2
1888M	CH-10	FP1409M	MA-7	1497-DRU	HA-1-1	2108-DR	IN-15-3
1889M	B-14	FP1424M	A-4	1557-DR	P-3-1	2132-DR	PD-9-2
1891M	WA-8	FP1428M	A-5	1558-DR	O-5-1	2133-DR	PD-9-4
1894M	PD-28B	FP1474M	CO-9	1559-DR	P-3-2	2133-DRI	PD-9-3
1895M	PDG-30	FP1475M	JD-5	1561-DR	C-2-1	2134-DR	PD-9-5
1896M	PD-30	FP1479M	IN-10A	1563-DR	C-2-2	2136-DR	PD-30-1
1898M	CH-23	FP1481M	ON-1	1577-DR	IN-8-2	2137-DR	PD-30-2
1900M	FA-3R	FP1591M	IN-18	1578-DR	IN-8-3	2138-DR	PD-30-3
1901M	FA-11	FP1753M	CU-11	1579-DR	IN-8-4	2139-DR	PD-30-4
1907M	FA-9	FP448139	IN-10A	1616-DR	BU-1-1	2141-DR	PD-30-5
1918M	PDA-7	FP92750	WA-12	1617-DR	BU-1-2	2142-DR	PD-30-6
1920M	PD-31B	FP92752	WA-8	1618-DR	BU-1-3	2154-DR	CH-3-4

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

FEDERAL-MOGUL - DURA-BOND INDIVIDUAL BEARINGS (Cont.)

F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND
2197-DR	**IN-10-2**	2528-DR	**N-5-3**	3082-DR	**CA-4-2**	3517-DR	**CAT-3-2**
2198-DR	**IN-10-3**	2529-DR	**N-5-4**	3083-DR	**CA-5-3**	3547-DR	**F-34-1**
2207-DR	**JD-5-2**	2531-DR	**CAT-2-1**	3086-DR	**CA-9-1**	3547-DRA	**F-34-1B**
2231-DR	**H-5-1**	2532-DR	**CAT-2-2**	3088-DR	**HO-3-1**	3548-DR	**AGB-34-1**
2232-DR	**H-5-2**	2533-DR	**CAT-2-5**	3089-DR	**HO-3-2**	3549-DR	**AGB-34-2**
2233-DR	**H-5-3**	2533-DRI	**CAT-2-3**	3090-DR	**HO-3-3**	3571-DR	**AGB-14-1**
2233-DRI	**H-5-4**	2534-DR	**CAT-2-6**	3091-DR	**HO-3-4**	3586-DR	**F-19-1**
2234-DR	**H-5-5**	2534-DRI	**CAT-2-4**	3106-DR	**F-43-1**	3591-DR	**CU-13-1**
2286-DR	**CH-5-1**	2556-DR	**CH-20-1**	3126-DR	**JD-3-1**	3592-DR	**CU-13-2**
2287-DR	**CH-5-2**	2587-DR	**F-19-2**	3151-DRA	**F-23-1A**	3596-DR	**IN-10-1A**
2288-DR	**CH-5-3**	2588-DR	**F-19-3**	3152-DR	**F-49-1**	3597-DR	**IN-10-4A**
2289-DR	**CH-5-4**	2588-DRI	**F-19-4**	3153-DR	**F-49-2**	3671-DR	**JDG-7-1**
2301-DRA	**F-33-1**	2596-DR	**JD-1-1**	3181-DR	**ON-1-1**	3681-DR	**CAT-4-1**
2302-DR	**F-15-2**	2597-DR	**JD-1-2**	3191-DRI	**CH-12-1**	3682-DR	**CAT-4-2**
2303-DR	**F-15-3**	2601-DR	**F-18-1**	3192-DRI	**CH-12-2**	3731-DR	**IN-17-1**
2303-DRI	**F-15-4**	2601-DRI	**F-26-1**	3193-DRI	**CH-12-3**	3732-DR	**IN-17-2**
2304-DR	**F-15-5**	2602-DR	**F-18-2**	3194-DR	**CH-9-4**	3766-DRI	**CH-18-1A**
2309-DR	**F-14-5**	2603-DR	**F-18-3**	3204-DR	**CHG-15-1**	3767-DR	**CH-18-2**
2316-DR	**F-16-1**	2603-DRI	**F-18-4**	3216-DR	**F-24-2**	3768-DR	**CH-18-4**
2317-DR	**F-16-2**	2604-DR	**F-18-5**	3217-DR	**F-24-3**	3796-DR	**CH-19-1**
2321-DRI	**PD-17-1**	2631-DR	**MA-5-1**	3218-DR	**F-24-4**	3801-DR	**PDG-26-1**
2322-DR	**PD-12-2**	2632-DR	**MA-5-2**	3219-DR	**F-24-5**	3802-DR	**PDG-26-2**
2322-DRA	**PD-21-2**	2636-DR	**CA-3-1**	3311-DRI	**N-9-1**	3803-DR	**PDG-29-1**
2323-DR	**PD-12-3**	2637-DR	**CA-3-2**	3312-DR	**N-8-2**	3806-DR	**FA-2-1**
2323-DRI	**PD-12-4**	2638-DR	**CA-3-3**	3313-DR	**N-8-3**	3808-DR	**FA-2-3**
2324-DR	**PD-12-5**	2684-DR	**N-10-1**	3313-DRI	**N-8-4**	3809-DR	**FA-2-4**
2376-DRA	**PD-21-1**	2686-DR	**N-7-1**	3314-DR	**N-8-5**	3809-DRI	**FA-2-5**
2376-DRI	**PD-18-1**	2687-DR	**N-7-2**	3321-DRI	**B-11-1**	3826-DR	**CU-9-1**
2378-DR	**PD-13-3**	2688-DR	**N-7-3**	3322-DR	**B-9-2**	3827-DR	**CU-9-2**
2378-DRA	**PD-21-3**	2689-DR	**N-7-4**	3322-DRI	**B-14-2**	3828-DR	**CU-8-1**
2379-DR	**PD-13-4**	2727-DR	**DB-1-2**	3323-DR	**B-13-1**	3831-DR	**F-45-1**
2381-DRA	**F-32-1**	2728-DR	**DB-1-3**	3323-DRI	**B-14-1**	3832-DR	**F-45-2**
2381-DRB	**F-46-1**	2729-DRI	**DB-1-4**	3324-DR	**B-11-1B**	3834-DR	**AGB-51-1**
2382-DR	**F-17-2**	2786-DRA	**F-28-1**	3336-DR	**IN-16-1**	3861-DR	**GM-7-1**
2382-DRA	**F-46-2**	2787-DRA	**F-28-2**	3338-DR	**IN-16-3**	3862-DR	**GM-7-2**
2383-DR	**F-17-3**	2788-DRA	**F-28-3**	3357-DRC	**F-47-2B**	3863-DR	**GM-7-3**
2383-DRA	**F-46-3**	2849-DR	**FT-1-2**	3358-DRC	**F-47-3B**	3864-DR	**GM-7-4**
2384-DR	**F-17-4**	2926-DR	**CO-9-1**	3359-DRC	**F-47-4**	3866-DR	**GM-7-5**
2401-DR	**GM-5-1**	2927-DR	**CO-9-2**	3361-DRI	**F-30-1**	3871-DR	**C-4-1**
2402-DR	**GM-5-2**	2928-DR	**CO-9-3**	3366-DR	**F-29-1**	3872-DR	**C-4-2**
2403-DR	**GM-5-3**	2941-DR	**C-3-1**	3367-DR	**F-29-2**	3873-DR	**C-4-3**
2404-DR	**GM-5-4**	3031-DR	**HE-7-1**	3368-DRA	**F-29-3A**	3874-DR	**C-4-4**
2411-DR	**IN-11-1**	3046-DR	**O-6-1**	3369-DR	**AGB-29-1**	3876-DR	**C-4-5**
2412-DR	**IN-11-2**	3046-DRI	**O-7-1**	3426-DR	**CH-4-1S**	3961-DRL	**TOA-2-1**
2413-DR	**IN-11-3**	3047-DR	**O-6-2**	3451-DR	**PD-25-2**	3961-DRU	**TOA-2-2**
2413-DRI	**IN-11-4**	3048-DR	**O-6-3**	3452-DR	**PD-25-3**	3962-DRL	**TOA-1-2**
2414-DR	**IN-11-5**	3048-DRI	**O-6-4**	3453-DR	**PD-25-4**	3962-DRU	**TOA-1-1**
2421-DR	**IN-3A-1**	3049-DR	**O-6-5**	3456-DR	**CH-13-1**	3981-DR	**TO-12-1**
2431-DRI	**CA-6-1**	3056-DRI	**F-31-1**	3457-DR	**CH-13-2**	3982-DR	**TO-12-2**
2432-DRI	**CA-6-2**	3057-DRA	**F-47-2**	3466-DR	**A-3-1**	3983-DR	**TO-12-3**
2433-DR	**CA-6-3**	3057-DRI	**F-31-2**	3467-DR	**A-3-2**	3984-DR	**TO-12-4**
2502-DR	**B-6-1**	3058-DRA	**F-47-3**	3489-DR	**MIA-3-1**	3986-DR	**TO-12-5**
2521-DR	**A-6-1**	3058-DRI	**F-31-3**	3506-DR	**CU-11-1**	3996-DRB	**F-52-4**
2526-DR	**N-6-1**	3059-DRI	**F-31-4**	3507-DR	**CU-11-2**	3996-DRI	**F-52-1**
2527-DR	**N-5-2**	3081-DR	**CA-4-1**	3516-DR	**CAT-3-1**	3997-DRB	**F-51-2**

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

FEDERAL-MOGUL - DURA-BOND INDIVIDUAL BEARINGS (Cont.)

F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND	F-M	DURA-BOND
4176-DR	**MZA-1-1**	65328-DR	**VO-2-3**	68096-DR	**VWG-1-1**	9023-DR	**F-1-2**
4177-DR	**MZA-1-2**	65896-DRA	**OP-3-1**	68097-DR	**VWG-1-2**	9076-DR	**PD-1-1**
4178-DR	**MZA-1-3**	65897-DRA	**OP-3-2**	68276-DR	**TO-7-1**	9207-DR	**PD-1-2**
4206-DR	**CU-12-1**	65898-DRA	**OP-3-3**	68277-DR	**TO-7-2**	9208-DR	**PD-1-3**
4207-DR	**CU-14-1**	65899-DR	**OP-5-3**	68279-DR	**TO-7-4**	9216-DR	**J-1-1**
4226-DR	**NIA-1-1**	66621-DRL	**VOA-1-1**	68279-DRI	**TO-7-5**	9386-DR	**HE-1-1**
4227-DR	**NIA-1-2**	66621-DRU	**VHA-1-2**	68311-DR	**IZ-6-1**	9387-DR	**HE-1-2**
4228-DR	**NIA-1-3**	66781-DR	**NI-3-2**	68312-DR	**IZ-6-2**	9391-DR	**A-2-1**
4231-DRL	**PDA-1-1**	66782-DR	**NI-3-1**	68313-DR	**MIG-2-2**	9531-DR	**F-3-1**
4231-DRU	**PDA-1-2**	67016-DR	**DA-3-1**	68314-DR	**MIG-2-1**	9532-DR	**F-3-2**
4261-DR	**MI-1-1**	67017-DR	**DA-3-2**	7100-DR	**351HP-1**	9533-DR	**F-3-3**
4262-DR	**MI-1-2**	67018-DR	**DA-3-3A**	7101-DR	**351HP-2**	9561-DR	**PD-3-2**
4263-DR	**MI-1-3**	67021-DR	**DA-2-1**	7102-DR	**351HP-3**	9563-DR	**PD-3-3**
4264-DR	**MI-1-4**	67022-DR	**DA-2-2**	7103-DR	**351HP-4**	9626-DR	**WA-3-1**
4291-DR	**F-50-1**	67023-DR	**DA-2-3**	7104-DR	**351HP-5**	9627-DR	**WA-3-2**
4292-DR	**F-50-2**	67031-DR	**TO-5-1**	7105-DR	**CHP-4-1**	9628-DR	**WA-3-3**
4293-DR	**F-50-3**	67032-DR	**TO-5-2**	7106-DR	**CHP-4-2**	9696-DR	**CH-2-1**
4294-DR	**F-50-4**	67034-DR	**TO-5-4**	7107-DR	**CHP-4-3**	9697-DR	**CH-2-2**
4366-DRU	**VWA-1-1**	67034-DRI	**TO-5-5**	7108-DR	**CHP-12-1**	9698-DR	**CH-2-3**
4367-DRL	**VWA-1-5**	67036-DR	**TO-1-1**	7109-DR	**CHP-12-2**	9746-DR	**A-1-1**
4367-DRU	**VWA-1-2**	67037-DR	**TO-1-2**	7110-DR	**CHP-12-3**	9906-DR	**CO-7-1**
4368-DRL	**VWA-1-3**	67038-DRI	**TO-10-3**	7111-DR	**FP-26-1**	9907-DR	**CO-7-2**
4368-DRU	**VWA-1-4**	67039-DR	**TO-1-4**	7112-DR	**FP-18-2**	9908-DR	**CO-7-3**
4486-DR	**FG-53-1**	67041-DR	**TO-2-1**	7113-DR	**FP-18-3**	9909-DR	**CO-7-4**
4487-DR	**FG-53-2**	67042-DR	**TO-2-2**	7114-DR	**FP-18-4**	FP100670	**CU-1-1**
4509-DR	**CH-23-1**	67043-DR	**TO-2-3**	7115-DR	**FP-18-5**	FP3031037	**CU-11-2**
4511-DR	**CH-10-1**	67271-DR	**TO-3-1**	7116-DR	**FP-30-1**	FP3278345	**CU-11-1**
4512-DR	**CH-10-2**	67272-DR	**TO-3-2**	7117-DR	**GMP-1-1**	FP4026423	**CU-15-1**
4513-DR	**CH-10-3**	67273-DR	**TO-3-3**	7118-DR	**FP-18-1**	FP5194609	**DE-1-1**
4516-DR	**CH-25-1**	67274-DR	**TO-3-4**	7120-DR	**PDP-16-1**	FP5197922	**DE-2-2**
4517-DR	**CH-25-2**	67278-DR	**TO-7-3**	7121-DR	**PDP-9-2**	FP59GB217	**MA-11-1**
4518-DR	**CH-25-3**	67283-DR	**TOG-8-1**	7122-DR	**PDP-9-3**	FP59GB218	**MA-11-2**
4962-DR	**PD-31-1B**	67284-DR	**TOG-8-2**	7123-DR	**PDP-9-4**	FP61GB33	**MAG-11-1**
4963-DR	**PD-31-2B**	67293-DR	**TO-11-3**	7124-DR	**PDP-9-5**	FP6206211420	**KO-1-1**
4964-DR	**PD-31-3B**	67321-DR	**DA-1-1**	7125-DR	**PDP-25-2**	FP6206211430	**KO-1-2**
4966-DR	**PD-31-4B**	67322-DR	**DA-1-2**	7126-DR	**PDP-25-3**	FP7M4046	**CAT-2-2**
4967-DR	**PD-31-5B**	67323-DR	**DA-1-3**	7127-DR	**PDP-25-4**	FP92750-1	**WA-8-2**
4991-DR	**CH-24-1**	67324-DR	**DA-1-4**	7128-DR	**PDP-17-1**	FP92750-2	**WA-8-1**
4992-DR	**CH-24-2**	67324-DRI	**DA-1-5**	7129-DR	**PDP-12-2**	FP9M5238	**CAT-2-6**
4993-DR	**CH-24-3**	67326-DR	**IZ-3-1**	7130-DR	**PDP-12-3**	FP9M5239	**CAT-2-5**
60151-DR	**IN-18-1**	67327-DR	**IZ-3-2**	7131-DR	**PDP-12-4**	FP9N5246	**CAT-1-2**
60152-DR	**IN-18-2**	67328-DR	**IZ-3-3**	7132-DR	**PDP-12-5**	FP9Y2991	**CAT-2-3**
60153-DR	**IN-18-3**	67381-DRL	**MIA-1-4**	8778-DR	**IN-2-3**	FP9Y2992	**CAT-2-4**
65326-DR	**VO-2-1**	67381-DRU	**MIA-1-3**	8779-DR	**IN-2-4**	FPR46903	**JD-3-1**
65327-DR	**VO-2-2**	67382-DRU	**MIA-1-1**	9021-DR	**F-1-1**		

Reference interchange only. Check manufacture specifications prior to installation.

BEARING COMPETITIVE INTERCHANGES

KING BEARING - DURA-BOND BEARING SETS							
KING	**DURA-BOND**	**KING**	**DURA-BOND**	**KING**	**DURA-BOND**	**KING**	**DURA-BOND**
CBS324	**O-5**	CS412BB	**TO-3**	CS504BB	**TO-7**	CS534HPT	**CHP-4T**
CS101BB	**J-1**	CS414BB	**CH-17**	CS507BB	**CH-8**	CS535BB	**C-4**
CS1101BB	**CHG-15A**	CS415BB	**B-12**	CS507HP	**CHP-8**	CS536BB	**GM-7**
CS111BB	**FG-29**	CS416BB	**PD-21**	CS507HPT	**CHP-8T**	CS537BB	**C-3**
CS2101BB	**PDG-30**	CS417BB	**F-34**	CS508BB	**B-9**	CS538BB	**P-3**
CS2102BB	**CHG-24**	CS417BBX	**F-34B**	CS509BB	**O-6**	CS539BB	**F-9A**
CS228BB	**PDG-26**	CS418BB	**F-32**	CS510BB	**O-7**	CS540BB	**F-16**
CS230BB	**VWG-1**	CS419BB	**F-23A**	CS511BB	**P-4**	CS542BB	**CH-5**
CS231BB	**FG-51**	CS420BB	**B-12B**	CS512BB	**PD-16**	CS5501BB	**CH-4A**
CS232BB	**FG-53**	CS421BB	**B-13**	CS512HP	**PDP-16**	CS5502BB	**B-11**
CS304BB	**DA-2**	CS422BB	**N-7**	CS514BB	**F-18**	CS5503BB	**CH-10**
CS305BB	**DA-3A**	CS423BB	**F-46**	CS514HP	**FP-18**	CS5503HP	**CHP-10**
CS317BB	**VO-2**	CS424BB	**F-47B**	CS514HPT	**FP-18T**	CS5503HPT	**CHP-10T**
CS325BB	**CH-16**	CS425BB	**F-48**	CS515BB	**F-33**	CS5504HPT	**DT-1T**
CS326BB	**CH-20**	CS426BB	**F-45**	CS516BB	**F-26**	CS5505HPT	**GMP-2T**
CS327BB	**MIG-2**	CS427BB	**F-49**	CS516HP	**FP-26**	CS5506HPT	**GMP-12LT**
CS328BB	**FG-34**	CS428BB	**CH-18A**	CS517BB	**F-30**	CS5507BB	**PDA-4**
CS329BB	**CHG-14**	CS429BB	**CH-18**	CS517HP	**FP-30**	CS5509BB	**C-2**
CS3301BB	**TOA-1**	CS430BB	**PD-27**	CS517HPT	**FP-30T**	CS5510BB	**CH-23**
CS3302BB	**CO-3**	CS431BB	**PD-28**	CS524BB	**CH-12**	CS5510HP	**CHP-23**
CS3303BB	**CH-6**	CS432BB	**F-52**	CS524GMP	**GMP-12**	CS5510HPT	**CHP-23T**
CS3304BB	**CA-3**	CS433BB	**K-1**	CS524HP	**CHP-12**	CS5512BB	**PD-31B**
CS3305BB	**MIG-3**	CS434BB	**CH-3**	CS524HPT	**CHP-12T**	CS604BB	**FA-3**
CS330BB	**F-41**	CS435BB	**CH-21**	CS525BB	**C-4A**	CS605BB	**FA-4**
CS331BB	**F-29**	CS4401BB	**B-14**	CS526BB	**N-9**	CS606BB	**FA-5**
CS332BB	**F-28**	CS4402BB	**F-49B**	CS527BB	**PD-25**	CS6601BB	**PD-30**
CS333BB	**PD-1**	CS4403BB	**F-50A**	CS528BB	**CH-19**	CS6602BB	**TOG-11**
CS334BB	**CO-8**	CS4404BB	**CH-9A**	CS529BB	**DA-1**	CSGMP1	**GMP-1**
CS351HP	**351HP**	CS4405BB	**F-1**	CS530BB	**IN-11**	CSGMP12T	**GMP-12T**
CS351HPT	**351HPT**	CS4406BB	**F-48A**	CS531BB	**CH-13**	CSGMP1T	**GMP-1T**
CS351RHP	**351RHP**	CS4407BB	**GM-5**	CS532BB	**IN-17**	CSGMP8	**GMP-8**
CS401BB	**PD-18**	CS4408BB	**CH-2**	CS533BB	**PD-17**	CSGMP8T	**GMP-8T**
CS402BB	**CH-7**	CS4409BB	**F-50**	CS533HP	**PDP-17**		
CS405BB	**CH-11**	CS4410BB	**F-23B**	CS534BB	**CH-4**		
CS410BB	**F-31**	CS4411BB	**CHG-23**	CS534HP	**CHP-4**		

Reference interchange only. Check manufacture specifications prior to installation.

Dura-Bond®

Cam Bearing Tool

Here's the fast, simple, economical cam tool that eliminates hundreds of separate, costly driving plugs with four expanding mandrels. The Dura-Bond Cam Bearing Tool adjusts instantly to undersize cam bearings; lets you put them in and take them out of any engine. Be smart, Do it all—fast—with one tool from Dura-Bond.

CT-1 KIT

Part No.	Description	Part No.	Description
1-B	5" Driver	8-NS	2.250 Mandrel Sleeve
3-B	36" Driver	5-M	1.370 Mandrel
1-C	Guide Cone	6-M	1.682 Mandrel
3-E	17/32 Expander	7-M	1.875 Mandrel
4-E	15/8 Expander	8-M	2.250 Mandrel
1-S	Replacement Thread Stud for Expanders	5-W	1.370 Metal Washer
		6-W	1.682 Metal Washer
5-NS	1.370 Mandrel Sleeve	7-W	1.875 Metal Washer
6-NS	1.682 Mandrel Sleeve	8-W	2.2500 Metal Washer
7-NS	1.875 Mandrel Sleeve		

1 Replacement Bar Cap only for 24" and 36" Drivers

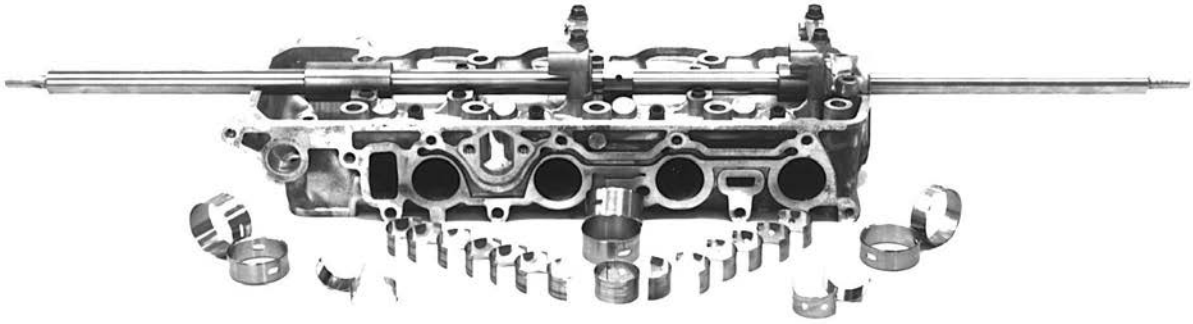
Optional *(not included with kit):*

2-B	24" Driver

THE REVOLUTIONARY NEW WAY TO REBUILD ALUMINUM HEADS with the

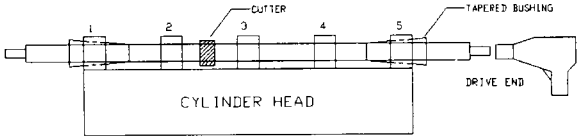
Dura-Bond® Boring System

O.H.C. Cutter System & Bearings for Aluminum Cylinder Heads



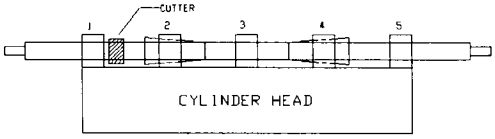
Features: Tapered bushings provide self alignment • No lengthy set up time • Bar is driven by a $^{1}/_{2}$" electric or air drill motor • "No chatter." Cutters cut and ream to a factory finish in one operation.

Our **Quick Bore System** enables you to bore a complete cylinder head and install new repair bearings in approximately 25 minutes rather than 45 minutes or longer required by other systems.



FIRST BORING PASS

RECOMMENDED BUSHING PLACEMENT IN THIS CONFIGURATION TO BORE #2, #3, AND #4.



SECOND BORING PASS

RECOMMENDED BUSHING PLACEMENT IN THIS CONFIGURATION TO BORE OUTER HOUSINGS. UTILIZE RING BUSHINGS TO SUPPORT DRIVE BAR BUSHINGS.

- Cylinder heads that are warped extensively should be straightened before line boring.
- Extra long Drive Bar allows cutting of Multi-Housings.
- Electric drill with 1/2" chuck is used to drive the bar (500 - 600 RPM).
- Tapered bushings (.005 Taper) provide self alignment and eliminate hours of set up time and expensive fixtures. Use ring bushings around drive bar bushings to mount in bored housings.
- Cutters are designed to cut and ream in one operation. New three angle cutter design requires only light pressure to feed cutter through bore and because there is no chatter, cutter leaves a factory finish.
- Our system enables a complete cylinder head to be bored and five new bearings installed in under 20 minutes rather than 45 minutes or longer required by other systems.*
- Cutter locks on Drive Bar with two set screws.
- Push cutter through one time. DO NOT REAM TWICE. DO NOT PULL CUTTER BACK THROUGH FINISHED BORED HOUSING.
- Use a constant flow of penetrating oil when cutting. This is a must to wash away cutting chips and achieve a finish necessary to install the bearing set.
- If cutter binds or stops in bore loosen the cap, do not reverse cutter rotation, this will cause breakage of carbide. Lightly work out by hand or tap straight back on bar with mallet.

Refer to our data sheet for bearing, application, cutter, and bushing sizes.
*As tested and time studied at Dura-Bond Bearing Company.

ALUMINUM OVERHEAD CAM (OHC) ACCESSORIES
DURA-BOND QUICK BORE: BARS, BUSHINGS, AND CUTTERS

SET NO.	ENGINE MFG.	CONTENTS	POSITION	TOOLS		
				CUTTER	BUSHING / QTY	BAR
BMA-1*	BMW	BMA-1-1	1	DBC18918	DBB18119 / 1	DB 78 (7/8")
(Full Round)		BMA-1-2	2	DBC18524	DBB18524 / 1	
		BMA-1-3	3	DBC18131	DBB18131 / 1	
		BMA-1-4	4	DBC14587	DBB13788 / 1	
BMA-2*	BMW	BMA-1-1	1	DBC18918	DBB18119 / 1	DB 78 (7/8")
(Full Round)		BMA-1-2	2	DBC18524	DBB18524 / 1	
		BMA-1-3	3	DBC18131	DBB18131 / 1	
		BMA-1-10	4	DBC15772	DBB14969 / 1	
BMA-3*	BMW	BMA-1-1	1	DBC18918	DBB18119 / 1	DB 78 (7/8")
(Full Round)		BMA-1-5	2			
		BMA-1-2	3	DBC18524	DBB18524 / 1	
		BMA-1-6	4			
		BMA-1-3	5	DBC18131	DBB18131 / 1	
		BMA-1-7	6			
		BMA-1-10	7	DBC15772	DBB14969 / 1	
BMA-4*	BMW	BMA-1-8	1	DBC17741	DBB16937 / 1	DB 78 (7/8")
(Full Round)		BMA-1-9	2	DBC17340	DBB17340 / 1	
		BMA-4-3	3	DBC14587	DBB13787 / 1	
					DBB14587 / 1	
F-41*	FORD	F-41-1	1	N/A	N/A	N/A
(Half Shell)	MAZDA	F-41-2	1,2			
FA-1*	FORD	FA-1-1	1	DBC19035	DBB18870 / 1	DB 78 (7/8")
(Full Round)		FA-1-2	2	DBC18985	DBB18020 / 1	
		FA-1-3	3	DBC18935	DBB22055 / 1	
		FA-1-4	4	DBC18885		
		FA-1-5	5	DBC18835		
FA-2*	FORD	FA-2-1	1	DBC18435	DBB22055 / 1	DB 78 (7/8")
(Full Round)		FA-2-2	2	DBC18535	DBB1792 / 1	
		FA-2-3	3	DBC18635	DBB1883 / 1	
		FA-2-4	4	DBC18735		
		FA-2-5	5	DBC18835	DBB18025 / 1	
FA-3*	FORD	FA-3-1 (L)	1,2,3,4,5,6	DBC11474	DBB1063 / 2	DB 58 (5/8")
(Half Shell)		FA-3-2 (U)	1,2,3,4,5,6			
.010 und						
.020 und						
FA-4*	FORD	FA-3-2 (L)	1,6,7,12	DBC11474	DBB1063 / 2	DB 58 (5/8")
(Half Shell)		FA-4-1 (L)	2,3,4,5			
		FA-4-2 (L)	8,9,10,11			
		FA-4-3 (U)	1,6,7,12			
		FA-4-4 (U)	2,3,4,5,8,9,10,11			
FA-5*	FORD	FA-5-1 (L)	1,6,7,12	DBC11474	DBB1063 / 2	DB 58 (5/8")
(Half Shell)		FA-4-1 (L)	2,3,4,5			
		FA-4-2 (L)	8,9,10,11			
		FA-4-3 (U)	1,6,7,12			
		FA-4-4 (U)	2,3,4,5,8,9,10,11			
FA-6*	FORD	FA-6-2 (U)	1	DBC11875	DBB11003 / 2	DB 58 (5/8")
(Half Shell)		FA-6-4 (U)	2,3,4			
.010 und		FA-6-1 (L)	1			
.020 und		FA-6-3 (L)	2,3,4			
FA-13L*	FORD	FA-13-1(L)	1	DBC12137	DBB1128 / 2	DB 58 (5/8")
(Half Shell)		FA-13-2(U)	1			
.010 und		FA-13-3(L)	2,3,4,5			
.020 und		FA-13-4(U)	2,3,4,5			

*Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information

**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

ALUMINUM OVERHEAD CAM (OHC) ACCESSORIES
DURA-BOND QUICK BORE: BARS, BUSHINGS, AND CUTTERS

SET NO.	ENGINE MFG.	CONTENTS	POSITION	TOOLS		
				CUTTER	BUSHING / QTY	BAR
FA-13R*	FORD	FA-13-2(U)	1	DBC12137	DBB1128 / 2	DB 58 (5/8")
(Half Shell)		FA-13-5(L)	1			
.010 und		FA-13-3(L)	2,3,4,5			
.020 und		FA-13-4(U)	2,3,4,5			
FA-14L*	FORD	FA-3-2(U)	1,3,4,5,7	DBC11474	DBB1063 / 2	DB 58 (5/8")
(Half Shell)		FA-3-1S(U)	2,6			
		FA-3-1(L)	1,2,3,4,5,6,7			
FA-14R*	FORD	FA-3-2(U)	1,2,3,4,5,6,7	DBC11474	DBB1063 / 2	DB 58 (5/8")
(Half Shell)		FA-3-1(L)	1,2,3,4,5,6,7			
GMA-1*	GENERAL MOTORS	GMA-1-1	1	(LINE BORE MACHINING REQUIRED)		
(Full Round)		GMA-1-2	2,3,4,5			
.020 und						
GMA-2*	GENERAL MOTORS	GMA-2-1 (U)	1,6	DBC12655	DBB11415 / 2	DB 78 (7/8")
(Half Shell)		GMA-2-3 (U)	2,3,4,5,7,8, 9,10			
		GMA-2-2 (L)	1,6			
		GMA-2-1 (L)	2,3,4,5,7,8,9,10			
HA-1*	HONDA	HA-1-1 (U)	1,2,3,4,5	DBC12655	DBB11415 / 2	DB 78 (7/8")
(Half Shell)		HA-1-5 (L)	1,2,3,4,5			
HA-2*	HONDA	HA-1-2 (U)	1	DBC12655	DBB11415 /2	DB 78 (7/8")
(Half Shell)		HA-1-4 (U)	2,4,5			
.020 und		HA-1-4A (U)	3			
		HA-1-5 (U)	6			
		HA-1-3 (L)	1			
		HA-1-5 (L)	2,3,4,5,6			
HA-3*	HONDA	HA-3-2 (U)	1	DBC11855	DBB1102 / 2	DB 58 (5/8")
(Half Shell)		HA-3-4 (U)	2,3,4,5,6			
.010 und		HA-3-1 (L)	1			
.020 und		HA-3-3 (L)	2,3,4,5,6			
HA-4*	HONDA	HA-4-1 (U)	1	DBC12655	DBB11415 /2	DB 78 (7/8")
(Half Shell)		HA-4-3 (U)	2,3,4,5			
		HA-4-2 (L)	1			
		HA-4-4 (L)	2,3,4,5			
HA-5*	HONDA	HA-5-2 (U)	1	DBC12655	DBB11415 /2	DB 78 (7/8")
(Half Shell)		HA-3-4 (U)	2,3,4,5,6,7	DBC11855	DBB1102 / 2	DB 58 (5/8")
		HA-5-1 (L)	1			
		HA-3-3 (L)	2,3,4,5,6,7			
MIA-1*	HYUNDAI	MIA-1-3 (U)	1	DBC14225	DBB13385 / 2	DB 78 (7/8")
(Half Shell)	ISUZU	MIA-1-1 (U)	2,3,4,5			
.010 und	MITSUBISHI	MIA-1-4 (L)	1,2,3,4,5			
.020 und						
MIA-2*	HYUNDAI	MIA-1-7 (U)	1	DBC14971	DBB13385 / 2	DB 78 (7/8")
(Half Shell)	ISUZU	MIA-1-5 (U)	2,3,4,5			
.020 und	MITSUBISHI	MIA-1-6 (L)	1,2,3,4,5			
MIA-3*	HYUNDAI	MIA-3-1	1,2,3	DBC18918	DBB18118 / 2	DB 78 (7/8")
(Full Round)	MITSUBISHI					
MIA-4*	MITSUBISHI	MIA-1-8 (U)	1,5	DBC14225	DBB13385 / 2	DB 78 (7/8")
(Half Shell)		MIA-1-1 (U)	2,3,4,			
		MIA-1-4 (L)	1,2,3,4,5			

*Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information

**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

ALUMINUM OVERHEAD CAM (OHC) ACCESSORIES
DURA-BOND QUICK BORE: BARS, BUSHINGS, AND CUTTERS

SET NO.	ENGINE MFG.	CONTENTS	POSITION	TOOLS		
				CUTTER	BUSHING / QTY	BAR
MIA-5*	MITSUBISHI	MIA-5-1 (U)	1	DBC14225	DBB13385 / 2	DB 78 (7/8")
(Half Shell)		MIA-5-2 (U)	2			
		MIA-5-3 (U)	3			
		MIA-5-8 (U)	4			
		MIA-5-5 (L)	1			
		MIA-5-6 (L)	2			
		MIA-5-7 (L)	3			
		MIA-5-9 (L)	4			
MZA-1*	MAZDA	MZA-1-1	1	DBC17931	DBB17131 / 2	DB 78 (7/8")
(Full Round)		MZA-1-2	2			
.020 und		MZA-1-3	3			
MZA-2*	MAZDA	MZA-2-3 (U)	1,5	DBC13439	DBB12599 / 2	DB 78 (7/8")
(Half Shell)		MZA-2-1 (U)	2,3,4			
.020 und						
MZA-4*	MAZDA	MZA-4-1 (U)	1,2,3,4,5	DBC12655	DBB11815 / 2	DB 78 (7/8")
(Half Shell)		VHA-1-2 (L)	1,2,3,4,5			
NIA-1*	NISSAN	NIA-1-1	1,2,3,4,5	DBC17340	DBB16540 / 2	DB 78 (7/8")
(Full Round)						
NIA-2L*	NISSAN	NIA-2-1	1,2,3,4	DBC19309	DBB18509 / 2	DB 78 (7/8")
(Full Round)						
NIA-2R*	NISSAN	NIA-2-1	1,2,3,4,5	DBC19309	DBB18509 / 2	DB 78 (7/8")
(Full Round)						
NIA-3L*	NISSAN	NIA-2-1	1,2,3	DBC19309	DBB18509 / 2	DB 78 (7/8")
(Full Round)		NIA-3-2	4	DBC17538	DBB16737 / 1	
NIA-3R*	NISSAN	NIA-3-1	1	DBC19702	DBB18903 / 1	DB 78 (7/8")
(Full Round)		NIA-2-1	2,3,4	DBC19309	DBB18509 / 2	
		NIA-3-2	5	DBC17538	DBB16737 / 1	
NIA-4*	NISSAN	NIA-1-1	1,2,4	DBC17340	DBB16540 / 2	DB 78 (7/8")
(Full Round)		NIA-1-2	3			
.020 und		NIA-1-3	5			
NIA-5*	NISSAN	NIA-4-1	1,2,3,5	DBC18914	DBB18113 / 2	DB 78 (7/8")
(Full Round)		NIA-4-2	4			
NIA-6*	NISSAN	TOA-1-1 (U)	1,2,3,4,5	DBC13841	DBB13001 / 2	DB 78 (7/8")
(Half Shell)		TOA-1-2 (L)	1,2,3,4,5			
.020 und						
PDA-1*	CHRYSLER	PDA-1-2 (U)	1,2,3,4,5	DBC14819	DBB13779 / 2	DB 78 (7/8")
(Half Shell)		PDA-1-1 (L)	1,2,3,4,5			
PDA-2*	CHRYSLER	PDA-2-2 (U)	1,2,3,4,5	DBC14819	DBB13979 / 2	DB 78 (7/8")
(Half Shell)		PDA-2-1 (L)	1,2,3,4,5			
PDA-3*	CHRYSLER	PDA-3-1	1	(LINE BORE MACHINING REQUIRED)		
(Full Round)		PDA-3-2	2			
		PDA-3-3	3			
		PDA-3-4	4			
		PDA-3-5	5			

*Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information

**Denotes Auxiliary / Balance Shaft Bearing

"und" Denotes Undersized ID

ALUMINUM OVERHEAD CAM (OHC) ACCESSORIES
DURA-BOND QUICK BORE: BARS, BUSHINGS, AND CUTTERS

SET NO.	ENGINE MFG.	CONTENTS	POSITION	TOOLS		
				CUTTER	BUSHING / QTY	BAR
PDA-4*	CHRYSLER	PDA-4-2 (U)	1,2,3,4,5	DBC11085	DBB10225 / 2	DB 58 (5/8")
(Half Shell)		PDA-4-1 (L)	1,2,3,4,5			
.010 und						
SA-1*	SUZUKI	SA-1-1	1	(LINE BORE MACHINING REQUIRED)		
(Full Round)		SA-1-2	2			
		SA-1-3	3			
		SA-1-4	4			
		SA-1-5	5			
TOA-1*	TOYOTA	TOA-2-2 (U)	1,2,3	DBC13841	DBB13001 / 2	DB 78 (7/8")
(Half Shell)		TOA-2-1 (L)	1,2,3			
VOA-1*	VOLVO	VHA-1-2 (U)	1,2,3,4,5	DBC12655	DBB11815 / 2	DB 78 (7/8")
(Half Shell)		VOA-1-1 (L)	1,2,3,4,5			
VWA-1*	AUDI	VWA-1-1 (U)	1	DBC13439	DBB12599 / 1	DB 78 (7/8")
(Half Shell)		VWA-1-2 (U)	2,3	DBC12655	DBB11815 / 2	
		VWA-1-4 (U)	4			
		MZA-2-3 (L)	1			
		VWA-1-5 (L)	2,3			
		VWA-1-3 (L)	4			
VWA-2*	VOLKSWAGEN	VWA-2-1 (U)	1,2,3,4,5	DBC11085	DBB10225 / 2	DB 58 (5/8")
(Half Shell)		VWA-2-2 (L)	1,2,3,4,5			
.010 und						
.020 und						
.030 und						
.040 und						

*Denotes (OHC) Repair Bearing, Check "Aluminum Overhead Cam Accessories" Section For Tool Information
**Denotes Auxiliary / Balance Shaft Bearing
"und" Denotes Undersized ID

Valve Seat Technology Has Changed.

Modern engines put much higher levels of thermal and mechanical stress on valve seat inserts. To handle the more severe conditions within this new generation of engines, the OEM is equipping them with high tech sintered valve seats. The normal cast chrome and other alloy iron seats will not adequately withstand the demands of this new engine environment.

Dura-Bond's patented material and processing of these powder metal valve seats offer excellent machinability, along with low wear and high heat resistance. These inserts have finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles to provide all the properties an application requires. Special compositions and processing have been developed to perform in the most extreme duty applications. Complete in-house capabilities, from development and tooling to testing, reduces lead time and cost.

If your requirements range from prototypes to high volume, let Dura-Bond Bearing Company be part of the solution.

Dura-Bond®
A MELLING COMPANY

30000 (GOLD) SERIES VALVE SEAT INSERTS

DESCRIPTION and APPLICATION

Superior Machinability

The 30000 (Gold) series is the newest and most machinable of our valve seat materials. It is a sintered valve seat insert which offers a blend of finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles. The superior machinability is the result of adding our proprietary ingredients and solid dry lubricants to this blend, and by using our special processing techniques during manufacture.

Designed for Unleaded Fuels

This very machinable exhaust seat material is designed for unleaded fuels. The 30000 (Gold) series is intended for the light to medium duty range. (For the heavy duty or extreme duty range we recommend our 70000 (Diamond) series valve seat inserts.)

New Powder Metal Technology

Dura-Bond/Snyder has taken full advantage of the new powder metal technology to produce a "hard" valve seat which will machine almost like cast iron. The greatly enlarged picture (the 4 black squares are .0015" across) tells the story.

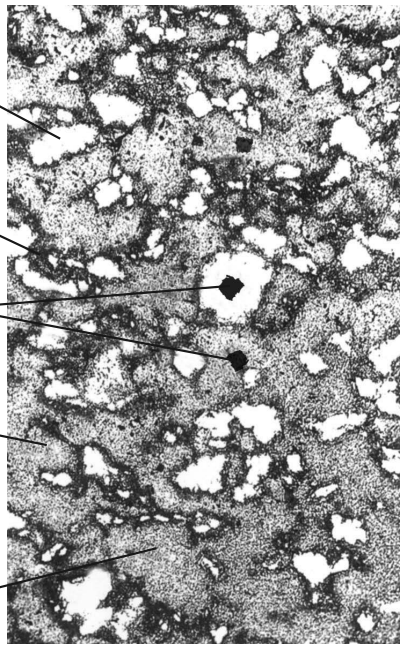
- Powder metal technology allows us to place a special high grade alloy iron (with its natural, tool lubricating graphite rich properties) within a tempered tool steel matrix.
- Because of our special processing, we are able to get very fine, spheroidalized, tungsten carbide particles to evenly disperse within the tool steel.
- These sphereoidalized (round shaped) carbides are easier to machine because the tool bit can wedge in-between, with less cutting force and less friction.
- The smaller these "balls" of carbide, the easier it is on your cutting tool, because it will not be hitting any big irregular shaped "iceberg chunks" of carbide.

CHEMICAL COMPOSITION

Tungsten	3.8
Molybdenum	3.5
Chromium	2.0
Vanadium	1.0
Carbon	0.9
Cobalt	0.3
Nickel	0.4
Manganese	0.3
Silicon	0.2
Copper	0.1
(proprietary)	4.5
Iron	rem.

PHYSICAL PROPERTIES

Apparent hardness	20 HRC (approx.)
Micro hardness	20-43 HRC
Thermal expansion (at 1000˚ F)	.0000075"/F



Dura-Bond reserves the right to revise composition and specifications without notice.

70000 (Diamond) 90000*(Platinum) SERIES VALVE SEAT INSERTS

DESCRIPTION and APPLICATION

This is a sintered, high speed (tungsten carbide) tool steel, valve seat insert. This material has special additives blended into the matrix which impart high temperature lubrication properties to the valve seat. These lubrication properties are "built-in" throughout, and are not affected by extreme heat or machining. These solid lubricants enable this material to be used in "dry" fuel applications such as propane, LPG, and natural gas. They prevent the "micro-welding" of the valve seat material to the valve face, therefore eliminating the primary cause of valve seat erosion. They also improve the machinability. Your tools last longer and you can cut faster.

Because of the special high temperature sintering and post heat treat processing, this valve seat material has cermet style metal alloy oxides. This gives it superior wear resistance to both pounding and abrasive wear at elevated temperatures. These** are called "cer-met" style because they are similar to **cer**amic (they do not soften at elevated temperature), but retain the machinability of **met**al. It is this high tech, new generation processing that allows us to achieve such high, hot hardness without having to put in massive amounts of expensive alloys, which would be required, to achieve equal performance. Normal foundry techniques do not allow this type of structure. You get superior wear resistance and high hot hardness at a very favorable price.

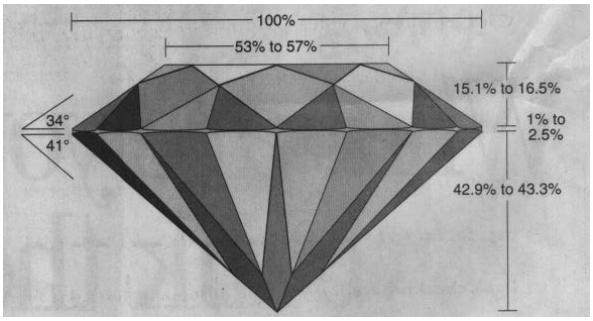
This valve seat insert is, therefore, used in engines using diesel, unleaded gasoline, and propane. We have been setting new longevity records in propane and natural gas applications using this seat.

The micro structure of this valve seat insert is a very fine evenly dispersed mixture of spheroidal refractory alloy carbides, cermet style metal alloy oxides and solid lubricant residing in a tempered martensitic matrix.

CHEMICAL COMPOSITION

	70000	90000*
Tungsten	5.3	6.5
Molybdenum	4.4	6.0
Chromium	3.5	4.0
Vanadium	1.5	2.0
Carbon	0.8	0.9
Cobalt	0.4	0.4
Nickel	0.3	0.4
Manganese	0.3	0.3
Silicon	0.2	0.2
Copper	0.1	0.1
(proprietary)	3.5	3.5
Iron	rem.	rem.

PHYSICAL PROPERTIES	70000	90000*
Apparent hardness	30 HRC (approx.)	35 HRC (approx.)
Micro Hardness	25-43 HRC	35-43 HRC
Thermal expansion (at 1000° F)	.0000078"/degree F	.0000078"/degree F



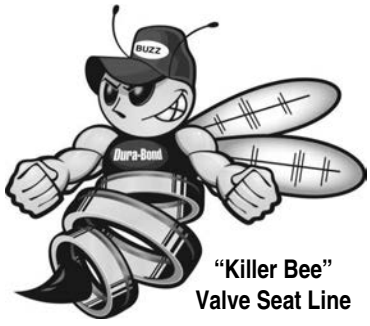
***Metal Alloy Oxides*
** 90000 series available for extreme duty applications, special order only.*
Dura-Bond reserves the right to revise composition and specifications without notice.

"KILLER BEE" COPPER INFILTRATED VALVE SEAT INSERTS

DESCRIPTION and APPLICATION

GM is equipping the LS3 heads with high tech sintered copper-infiltrated valve seats. High-Performance European engines like BMW and Mercedes also use this technology. This is a powder metal valve seat with a copper wafer that is infiltrated into the valve seat. This creates a unique product of 15% free copper in the microstructure of the seat. Allowing heat to be quickly transferred and performance greatly improved.

-Offers superior thermal conductivity
-Excellent machining characteristics
-Lowest wear - Improved reliability/durability
-High thermal expansion
-Superior surface finishes
-Suitable for HD intake and exhaust seats, gas and diesel
-Compatible with most valve materials



"Killer Bee" Valve Seat Line

CHEMICAL COMPOSITION	**"Killer Bee"**	**GM LS-3**
Tungsten	3.0	3.68
Molybdenum	3.375	2.5
Chromium	2.0	1.84
Vanadiun	1.0	1.44
Carbon	1.0	0.84
Cobalt	0.28	0.24
Nickel	0.205	0.13
Manganese	0.35	0.58
Silicon	0.2	NA
Copper	15	14.45
(proprietary)	4.5	NA
Iron	bal.	bal.

PHYSICAL PROPERTIES	
Apparent Hardness	35 HRC (approx.)
Micro Hardness	50-56 HRC
Thermal Expansion	

Dura-Bond reserves the right to revise composition and specifications without notice.

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
30015				1.5050	1.215	1.275	.280	45°
30024				1.5050	1.250	1.390	.240	45°
30030				1.8190	1.490	1.600	.305	45°
30031				1.5070	1.180	1.318	.305	45°
30045				1.5050	1.100	1.225	.316	45°
30105	70105			1.5050	1.140	1.250	.325	45°
	70127			1.7570	1.385	1.559	.380	45°
	70138			1.8820	1.505	1.689	.380	45°
30165				1.7570	1.410	1.560	.315	45°
30190				1.6940	1.385	1.520	.305	45°
30230				1.2570	0.905	1.000	.230	45°
30238	70238			1.3820	1.102	1.160	.260	45°
30297				1.9800	1.694		.250	45°
30503	70503			1.5680	1.312	1.390	.250	45°
30509	70509			1.8800	1.562		.250	45°
30530	70530			1.8180	1.500	1.625	.219	45°
30537	70537			2.1300	1.875		.250	45°
30541	70541			1.5680	1.312	1.390	.219	45°
	70542			1.8170	1.562	1.655	.365	45°
30556	70556			1.4440	1.250		.219	45°
30557	70557			2.1300	1.812		.250	45°
30558	70558			1.3800	1.125		.219	45°
30559	70559			1.6925	1.344		.313	45°
30560	70560			1.9440	1.688		.250	45°
30562				1.3190	1.085		.305	45°
	70563			1.3190	1.045		.316	45°
30640	70640			1.5680	1.250		.219	45°
	70642			1.6300	1.334		.313	45°
30643	70643	90643	30643C	1.5680	1.312		.219	45°
30643+5	70643+5			1.5730	1.312		.219	45°
30644	70644			1.5680	1.312		.250	45°
30644+10				1.5780	1.313		.250	45°
30645	70645			1.5680	1.250		.250	45°
30646	70646			1.6300	1.375		.250	45°
30647	70647			1.5680	1.250		.313	45°
30648	70648			1.6300	1.375		.219	45°
30648+5				1.6350	1.375		.219	45°
30649	70649	90649		1.6300	1.313		.219	45°
30650	70650			1.6300	1.313		.250	45°
30651	70651			1.6300	1.313		.313	45°
30652	70652			1.7550	1.375		.219	45°
30653	70653			1.7550	1.375		.250	45°
30654	70654			1.7550	1.375		.313	45°
30655	70655			1.7550	1.438		.219	45°
30656	70656			1.7550	1.438		.250	45°
30657	70657			1.7550	1.438		.313	45°
30658	70658			1.7550	1.500		.219	45°
30659	70659	90659	20659C	1.7550	1.500		.250	45°
	70660			1.7550	1.500		.313	45°
30661	70661			1.6300	1.250		.219	45°
30662	70662			1.6300	1.250		.250	45°
30663	70663			1.6300	1.250		.313	45°
30664	70664			1.6920	1.438		.219	45°
	70664+5			1.6970	1.438		.219	45°
30667	70667			1.8180	1.563		.219	45°
30668	70668			1.8180	1.500		.219	45°
30670	70670			1.6920	1.406		.250	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
30671	70671			1.8180	1.563		.250	45°
30672	70672			1.8180	1.500		.250	45°
30673	70673			1.6920	1.438		.250	45°
30674	70674			1.6920	1.312		.219	45°
30675	70675			1.6920	1.312		.250	45°
30676	70676			1.6920	1.312		.313	45°
30677	70677			1.6920	1.375		.219	45°
30678	70678			1.6920	1.375		.250	45°
30679	70679			1.6920	1.375		.313	45°
30680	70680	90680		1.8180	1.468		.313	45°
30681	70681			1.8810	1.625		.219	45°
30682	70682			1.8810	1.625		.250	45°
30683				1.8810	1.625		.281	45°
30684	70684			1.8810	1.625		.313	45°
	70686			1.8810	1.625		.453	45°
30687	70687			1.8810	1.594		.250	45°
30688	70688			1.8810	1.594		.313	45°
30690	70690			2.0060	1.750		.188	45°
30691	70691			2.0060	1.750		.219	45°
30692	70692			2.0060	1.750		.250	45°
30694				2.0060	1.750		.313	45°
30698	70698			2.0060	1.688		.219	45°
30699	70699			2.0060	1.688		.250	45°
30700	70700			2.0060	1.688		.282	45°
30701				2.0060	1.688		.313	45°
30702				2.0060	1.688		.375	45°
30703				2.0060	1.688		.438	45°
30705	70705			1.5050	1.215	1.344	.219	45°
30706	70706			1.5050	1.125		.188	45°
30707	70707			1.5050	1.125		.219	45°
30708				1.5050	1.125		.250	45°
30709	70709			1.5050	1.125		.313	45°
	70710			1.5050	1.250		.188	45°
30711	70711			1.5050	1.250		.219	45°
30712	70712			1.5050	1.250		.250	45°
30714	70714			1.5050	1.250		.313	45°
30715				1.5050	1.250		.375	45°
30716				1.5050	1.215		.310	45°
	70717			1.5050	1.215		.318	45°
30721				1.5050	1.215		.305	45°
30722	70722			1.5050	1.215		.250	45°
30723				2.0060	1.625		.219	45°
30724	70724			2.0060	1.625		.250	45°
30725		90725		2.0060	1.625		.281	45°
		90725+5		2.0110	1.625		.281	45°
		90725+10		2.0160	1.625		.281	45°
		90725+20		2.0260	1.625		.281	45°
		90725+30		2.0360	1.625		.281	45°
	70726			2.0060	1.625		.297	45°
30727	70727			2.0060	1.625		.313	45°
30728				2.0060	1.625		.344	45°
30729	70729			2.0060	1.625		.375	45°
30730				2.0060	1.625		.438	45°
30731				1.5680	1.312		.313	45°
30732	70732			1.6300	1.375		.313	45°
30733	70733			1.6920	1.438		.313	45°
30735				1.3170	1.046		.219	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
30736				1.3170	1.046		.250	45°
30737				1.3170	1.046		.313	45°
30738				1.4850	1.260		.237	45°
30739				1.3050	1.048		.227	45°
30740	70740			1.5680	1.250		.281	45°
30741				1.8180	1.500		.281	45°
30754				1.1300	0.875		.219	45°
30764	70764			1.2550	1.000		.250	45°
30775				1.3190	1.062		.188	45°
30779	70779			1.3190	1.042		.238	45°
30786	70786			1.3800	1.063		.188	45°
30787	70787			1.3800	1.063		.313	45°
30788	70788			1.3800	1.063		.250	45°
30790	70790			1.3800	1.125		.188	45°
30791	70791			1.3800	1.125		.250	45°
	70792			1.3800	1.125		.375	45°
30801	70801			1.4425	1.126		.219	45°
30802	70802			1.4425	1.125		.250	45°
30803	70803			1.4425	1.125		.313	45°
30806				1.4440	1.105		.322	45°
30809				1.4440	1.135	1.250	.316	45°
30818				1.4440	1.200		.297	45°
30822	70822			1.5050	1.188		.250	45°
30823				1.5050	1.188		.218	45°
	70838			1.5680	1.313		.219	30°
30839	70839			1.5680	1.188		.313	45°
30840	70840			1.5680	1.313		.188	45°
30841				1.5680	1.375		.218	45°
30853	70853			1.6300	1.250		.375	45°
30854	70854			1.6300	1.313		.395	45°
	70855			1.6245	1.322		.375	45°
30857				1.6300	1.348		.218	45°
30860	70860			1.6320	1.329		.280	45°
30864	70864			1.6450	1.375		.250	45°
30868				1.6690	1.372	1.429	.272	37°
30871	70871			1.6920	1.375		.375	45°
30872				1.6920	1.438		.156	45°
30873	70873			1.6920	1.438		.188	45°
30881				1.6940	1.450		.297	45°
30889				1.7550	1.313		.250	45°
	70903			1.8170	1.375		.313	45°
30904				1.8180	1.438		.250	45°
30905	70905			1.8170	1.438		.313	45°
30907	70907	90907	20907C	1.8180	1.500		.312	45°
30919	70919			1.8800	1.500		.250	45°
30920	70920			1.8810	1.500		.313	45°
30923	70923			1.8800	1.562		.312	45°
30932	70932			1.9430	1.563		.250	45°
30933	70933			1.9430	1.563		.219	45°
30935				1.9430	1.688		.188	45°
30936				1.9430	1.688		.219	45°
30952	70952			2.0050	1.813		.219	45°
30963	70963			2.0680	1.812		.250	45°
30964				2.0680	1.813	1.875	.250	45°
30974				2.1300	1.875		.219	45°
30984	70984			2.1935	1.875		.281	45°
30989	70989			2.2555	1.938		.188	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
30991	70991	90991		2.3180	2.000		.250	45°
31000	71000			1.8180	1.563		.313	45°
31002	71002			0.9890	0.787		.236	45°
31003	71003			1.0512	0.787		.224	45°
	71004			1.1858	0.984		.248	45°
31005	71005			1.1870	0.984		.248	45°
31006	71006			1.2854	1.004		.315	45°
31007	71007			1.2854	1.024		.335	45°
	71008	91008		1.3051	1.102		.276	45°
31009	71009			1.3268	1.063		.315	45°
31010	71010	91010		1.3268	1.126		.250	45°
	71011			1.3484	1.126		.250	45°
31012	71012			1.4016	1.142		.315	45°
31013	71013			1.4421	1.126		.315	45°
31014				1.4823	1.220		.276	45°
31015	71015			1.4843	1.220		.315	45°
31016	71016			1.5335	1.221		.335	45°
	71017			1.5827	1.339		.295	45°
	71018			1.5984	1.339		.276	45°
31019	71019			1.6386	1.339		.315	45°
	71020			1.6417	1.339		.250	45°
31021	71021			1.7028	1.417		.315	45°
31030	71030			1.4425	1.188		.219	45°
31031	71031			1.4425	1.219		.219	45°
31032				1.5045	1.188		.313	45°
31033				1.5670	1.344		.219	45°
31034	71034			1.8820	1.575	1.692	.317	45°
31035	71035			1.3634	0.984		.394	45°
	71036			1.5248	1.183		.394	45°
31038	71038			1.4961	1.181		.276	45°
31039	71039			1.6142	1.339		.295	45°
31042				1.6920	1.375		.188	45°
31043	71043			1.2550	1.028		.227	45°
31044	71044			1.4750	1.240		.227	0°
31045				1.7560	1.438	1.500	.188	45°
31046	71046			1.6310	1.375		.188	45°
31047	71047			1.0690	0.790		.260	45°
31048	71048			1.1320	0.825		.285	45°
31049	71049			1.1819	0.925		.244	45°
31051	71051			1.2008	0.984		.256	45°
31052				1.2550	1.055		.250	45°
31054	71054			1.2570	0.910		.285	45°
31056				1.3175	1.000		.250	45°
31058				1.3190	0.975		.280	45°
31060	71060			1.3484	1.063		.315	45°
31061	71061			1.3661	1.114		.295	45°
31063				1.3820	1.000		.410	45°
31064				1.3820	1.000		.280	45°
31065	71065			1.3878	1.102		.315	45°
31066	71066			1.4220	1.152		.315	45°
31067				1.4440	1.230		.250	45°
31068	71068			1.4567	1.102		.354	45°
31069	71069			1.4567	1.181		.315	45°
31070	71070			1.4646	1.181		.276	45°
31071				1.4764	1.220		.335	45°
31073	71073			1.5051	1.220		.315	45°
31074				1.5070	1.100		.315	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
31075	71075			1.5472	1.260		.315	45°
31076	71076			1.5551	1.299		.335	45°
31077				1.5673	1.250		.253	45°
31078				1.5690	1.230		.310	45°
31079				1.5690	1.180		.305	45°
31081	71081			1.5823	1.180		.413	45°
31082	71082			1.6614	1.319		.413	45°
31083				1.6940	1.300		.360	45°
31084	71084			1.7059	1.384		.354	45°
	71085			1.7059	1.384		.250	45°
31086	71086			1.7421	1.457		.315	45°
31087	71087			1.7863	1.406		.288	45°
31088	71088			1.7969	1.418		.390	45°
31089				1.8170	1.484		.250	45°
31090	71090			1.8303	1.437		.375	45°
31091	71091		31091C	1.8800	1.500		.375	45°
31092	71092			1.8820	1.600		.252	45°
31093	71093			2.1098	1.697		.402	45°
31096				1.0681	0.871		.254	45°
31097				1.1299	0.871		.191	45°
31098				1.1933	0.871		.254	45°
31099				1.1933	0.933		.254	45°
31100				1.2559	0.996		.254	45°
31101	71101			1.3181	1.059		.254	45°
31102				1.3807	1.059		.254	45°
31103				1.3807	1.121		.254	45°
31104				1.5681	1.183		.254	45°
31105	71105			1.2559	0.933		.254	45°
31107				1.4433	1.059		.254	45°
31108				1.5059	1.183		.254	45°
31109	71109			1.5059	1.246		.254	45°
31110				1.7333	1.335		.372	45°
31111	71111			1.4405	1.186		.313	45°
31112	71112			1.5657	1.186		.376	45°
31113				1.4577	1.098		.352	45°
31117				1.7550	1.438	1.500	.302	45°
	71121			1.4252	1.220		.295	45°
	71123			1.3071	1.083		.276	45°
31124				2.1300	1.813		.313	45°
31125	71125			1.3800	1.062		.219	45°
	71128			1.7550	1.250		.250	45°
31129	71129			1.7570	1.375		.375	45°
31131	71131			1.8170	1.500		.375	45°
31134	71134			1.9430	1.625		.312	45°
31135				2.1940	1.812		.250	45°
31137	71137			1.8190	1.405		.315	45°
31139	71139			1.3820	1.100		.300	45°
31141	71141			2.1654	1.732		.472	45°
	71142			1.0690	0.781		.250	45°
31143	71143			1.1310	0.750		.250	45°
	71144			1.1940	0.875		.250	45°
31145	71145			1.1940	0.938		.250	45°
31146	71146			1.1940	0.905		.257	45°
31147	71147			1.2560	1.000		.219	45°
	71148			1.2560	1.000		.313	45°
31149	71149			1.2560	0.906		.313	45°
	71150	91150		1.2560	1.000		.250	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
31151	71151			1.2560	0.875		.250	45°
31152	71152			1.2560	0.938		.188	45°
31153	71153			1.3190	1.063		.313	45°
	71154			1.3190	1.000		.250	45°
31155	71155			1.3190	1.000		.313	45°
	71156			1.3810	0.938		.313	45°
31157	71157			1.3810	1.125		.266	45°
	71159			1.4440	1.188		.219	45°
31160	71160			1.4440	1.250		.313	45°
31161	71161			1.4440	1.188		.250	45°
31162	71162			1.5060	1.188		.313	45°
	71163			1.5690	1.125		.313	45°
31164	71164			1.6310	1.344		.313	45°
	71165			1.7560	1.313		.313	45°
31166	71166			1.9440	1.500		.313	45°
	71167			0.9449	0.709		.256	45°
	71168			1.1024	0.787		.315	45°
	71169			1.1417	0.827		.335	45°
31170	71170			1.1811	0.866		.335	45°
31171	71171			1.2205	0.906		.335	45°
	71172			1.2598	0.945		.335	45°
31173	71173			1.2992	0.984		.335	45°
31174	71174			1.3386	1.024		.335	45°
	71175			1.3780	1.024		.354	45°
	71176			1.4173	1.063		.354	45°
	71178			1.4961	1.142		.354	45°
	71179			1.5354	1.181		.354	45°
	71180			1.5354	1.220		.335	45°
	71181			1.5748	1.181		.374	45°
	71182			1.6142	1.220		.335	45°
31183	71183			1.6535	1.260		.374	45°
	71184			1.6535	1.299		.335	45°
	71185			1.6929	1.339		.325	45°
31186	71186	91186		1.6929	1.299		.335	45°
31187	71187			1.7323	1.339		.374	45°
	71188			1.8110	1.398		.394	45°
	71189			1.8890	1.476		.394	45°
	71190			1.9291	1.516		.394	45°
	71191			1.9291	1.654		.315	45°
	71192			1.9685	1.535		.394	45°
	71193			2.0079	1.575		.413	45°
31194	71194			2.0472	1.614		.413	45°
31195	71195	91195		2.0866	1.654		.413	45°
31196				1.6250	1.313		.250	45°
31198				1.5000	1.188		.250	45°
31199	71199			1.5685	1.255	1.372	.319	45°
	71207			1.5060	1.180	1.280	.214	45°
31209				1.7560	1.594		.278	45°
31214				1.5060	1.210		.345	45°
31215				1.7560	1.445	1.617	.310	45°
31217				1.8810	1.575		.317	45°
31218				1.6310	1.298		.317	45°
	71221			1.7560	1.437		.302	45°
31223				1.6310	1.320		.300	45°
31225	71225			1.4425	1.126		.188	45°
31226				1.6460	1.312		.350	45°
	71227			1.7717	1.358		.394	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
31228	71228			1.8504	1.437		.394	45°
	71230			1.7840	1.469		.290	45°
31232				1.7550	1.312		.395	45°
31236				1.6320	1.298	1.422	.317	45°
31238	71238			1.8810	1.563		.219	45°
31240	71240			2.1310	1.813		.219	45°
31244				1.5060	1.230		.278	45°
31249	71249			2.0685	1.750		.219	45°
	71257	91257		1.7810	1.476		.311	45°
31258	71258			1.5060	1.180	1.345	.307	45°
	71261			2.2560	1.938		.219	45°
31262				1.9435	1.625		.219	45°
	71267			1.5680	1.313		.280	45°
	71268			1.8560	1.635		.280	45°
31269	71269			1.8180	1.438		.219	45°
31270				1.6920	1.312		.375	45°
31272				1.6560	1.313		.375	45°
31273	71273	91273		1.3386	1.063		.394	45°
31274	71274			1.3976	1.142		.394	45°
31275				1.4567	1.220		.394	45°
31276	71276	91276		1.4961	1.220		.394	45°
31278				1.5827	1.319		.374	45°
31279				1.6560	1.350	1.626*	.375	45°
31281				1.9435	1.573		.379	45°
31282				2.1930	1.937		.250	45°
31283				1.8175	1.625		.219	45°
31284				1.8195	1.440	1.515	.315	45°
31285				1.8195	1.500	1.555	.278	45°
31286				1.5695	1.265	1.320	.280	45°
31287	71287			1.5695	1.219		.317	45°
31288				1.6945	1.390	1.480	.305	45°
31289	71289			1.3170	1.063		.219	45°
31291				1.5070	1.210	1.276	.345	45°
31292				1.5695	1.220	1.356	.344	45°
31293				1.3189	1.063		.354	45°
31294				1.3976	1.161		.374	45°
31295				1.5591	1.319		.374	45°
31296				1.5748	1.319		.354	45°
	71305			1.4777	1.213		.154	45°
	71306			1.3387	1.102		.177	45°
31307				1.8190	1.496		.157	45°
31308				1.6694	1.339		.177	45°
31310				2.1050	1.765		.375	45°
	71311	91311		1.2598	0.945		.354	45°
31313				1.2670	0.982	1.065	.320	45°
31316				1.8820	1.575		.320	45°
31317				1.7570	1.457		.312	45°
31318				1.5700	1.243		.354	45°
31319				1.8200	1.435	1.505	.314	45°
31320	71320			1.3190	1.123		.300	45°
31323				1.6340	1.260	1.340	.394	45°
31326				1.5060	1.195		.315	45°
31327				1.8190	1.440	1.508	.316	45°
31329				1.4440	1.100		.315	45°
31332				1.6320	1.250		.312	45°
31333				1.2560	0.910	1.070	.281	45°
	71338	91338		2.1339	1.693		.339	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71339			1.8567	1.457		.339	45°
31340				1.3190	0.977		.300	45°
31341				2.0276	1.726		.217	45°
	71342			1.5043	1.188		.313	45°
	71343			1.5043	1.250		.281	45°
	71344			1.5669	1.250		.313	45°
	71345			1.1850	0.984		.248	45°
	71346			0.9882	0.787		.236	45°
	71347			1.2724	1.024		.236	45°
	71348	91348		1.2992	1.024		.256	45°
	71349			0.9902	0.787		.236	45°
	71350			1.0559	0.807		.224	45°
	71352			1.1921	0.875		.250	45°
	71353			1.4791	1.187		.313	45°
	71354			1.2252	0.910		.283	45°
	71355			1.8161	1.505		.280	45°
	71356			1.3504	1.063		.315	45°
	71357			0.9252	0.709		.236	45°
	71358			1.1661	0.809		.280	45°
	71359			1.2551	1.000		.250	45°
	71360			1.2854	0.984		.236	45°
	71361			1.3433	1.025		.299	45°
	71362			1.3701	1.142		.283	45°
	71363			1.3803	1.093		.250	45°
	71364			1.4421	1.125		.354	45°
	71365			1.4685	1.142		.315	45°
	71366			1.5008	1.148		.283	45°
	71367			1.5051	1.122		.343	45°
	71368			1.5157	1.220		.343	45°
	71369			1.5354	1.181		.276	45°
	71370			1.5354	1.299		.315	45°
	71371			1.6000	1.282		.299	45°
	71372			1.6260	1.320		.375	45°
	71373			1.6772	1.417		.315	45°
	71374			1.6921	1.312		.315	45°
	71375			1.7323	1.417		.276	45°
	71376			1.8150	1.392		.297	45°
	71377			1.8661	1.535		.315	45°
	71378			1.8740	1.435		.382	45°
	71379			1.4803	1.287		.283	45°
	71380			1.4421	1.125		.250	45°
	71381			1.7559	1.378		.295	45°
	71382			1.0472	0.827		.236	45°
	71383			1.0689	0.787		.236	45°
	71384			1.2441	1.024		.236	45°
	71385			1.3425	1.083		.236	45°
	71386			1.4764	1.240		.335	45°
	71387			1.4862	1.220		.335	45°
	71388			1.5157	1.220		.335	45°
	71389			1.5256	1.220		.335	45°
	71390			1.6831	1.469		.295	45°
	71391			1.6929	1.385		.315	45°
	71392			1.7618	1.457		.335	45°
	71393			1.7717	1.457		.335	45°
	71394			1.8819	1.575		.315	45°
	71395			1.0551	0.827		.244	45°
	71396			1.1083	0.866		.256	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71397			1.3228	1.082		.287	45°
	71398			1.0335	0.827		.177	45°
	71399			1.4114	1.181		.244	45°
	71400			1.4803	1.200		.276	45°
31401	71401			2.0673	1.693		.354	45°
31402	71402			1.4421	1.188		.250	45°
	71403			1.2827	1.063		.236	45°
	71404			1.7815	1.496		.315	45°
	71406			1.6929	1.350		.315	45°
	71407			1.4429	1.130		.315	45°
	71408			1.3780	1.102		.197	45°
	71409			1.2480	1.024		.256	45°
	71410	91410		1.1496	0.906		.256	45°
	71411			1.1811	0.945		.335	45°
	71412			1.4236	1.152		.250	45°
	71413			1.6201	1.374		.256	45°
	71414			1.2303	0.984		.315	45°
	71415			2.0079	1.575		.217	45°
	71416			1.5410	1.327		.256	45°
	71417			2.1339	1.752		.287	45°
	71418			1.5846	1.358		.287	45°
	71419			1.5059	1.280		.295	45°
	71420			1.4272	1.142		.315	45°
	71421			1.6634	1.378		.315	45°
	71422			1.5630	1.299		.339	45°
	71423			1.4055	1.181		.339	45°
31424	71424			2.0906	1.693		.394	45°
	71425			1.2992	0.905		.315	45°
	71426			1.5413	1.366		.232	45°
	71427			1.7874	1.409		.297	45°
	71428			1.1024	0.807		.256	45°
	71429			1.0898	0.874		.250	45°
	71430			2.0906	1.693		.354	45°
	71431			1.1516	0.874		.250	45°
	71432			1.5209	1.220		.285	45°
31433	71433			1.8358	1.496		.285	45°
	71434			1.2407	0.941		.335	45°
	71435			1.1933	0.929		.256	45°
	71436			1.1870	0.945		.354	45°
	71437			1.6220	1.319		.260	45°
	71438			1.3307	1.126		.250	45°
	71439			1.4449	1.142		.315	45°
	71440			1.4449	1.220		.295	45°
	71441			2.1102	1.693		.394	45°
	71442			1.5630	1.299		.354	45°
	71444			1.1732	0.945		.236	45°
	71445			1.1870	0.984		.200	45°
	71446			0.9843	0.787		.276	45°
	71447			2.1102	1.693		.354	45°
	71448			1.2205	0.984		.237	45°
		91449		1.3445	1.102		.236	45°
		91450		1.2736	0.906	1.024	.248	45°
31454				2.1200	1.812		.375	45°
31456				2.3500	1.970	2.290*	.375	53°
31459				1.8175	1.438		.375	45°
	71470			2.2555	1.875		.313	45°
31471				1.9430	1.625		.375	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71472			1.7815	1.535		.295	45°
	71473			2.1300	1.906		.234	45°
31475				2.0902	1.697		.382	45°
31476				2.3657	2.011		.350	45°
31478				1.6565	1.246	1.546*	.375	55°
31482				1.6300	1.406		.250	45°
31488	71488			1.6300	1.313		.281	45°
31489	71489			1.6300	1.344		.250	45°
31490				1.6925	1.406		.313	45°
	71496			1.9430	1.563		.313	45°
31497	71497			1.9430	1.625		.250	45°
31498	71498			2.1305	1.906		.250	45°
31501				1.5060	1.195		.360	45°
	71502			1.2820	0.975		.250	45°
	71503			1.7140	1.313		.313	45°
	71504			2.1370	1.700		.400	45°
	71600			1.0045	0.750		.188	45°
31612				1.2570	0.930		.325	45°
31613				1.2570	0.970		.270	45°
	71621			1.2620	0.975		.250	30°
31628	71628			1.3195	1.060		.275	45°
	71633+5			1.3530	1.087		.200	45°
	71635			1.3820	1.120		.325	45°
31646				1.4440	1.181		.280	45°
31656				1.4445	1.140		.237	45°
31658				1.4445	1.142		.336	45°
31659				1.4445	1.150		.257	45°
	71671			1.5365	1.255		.359	45°
31674				1.5695	1.180		.316	45°
31690				1.6320	1.333		.237	45°
	71697			1.6570	1.312		.395	45°
	71701+5			1.6950	1.250		.375	45°
31707	71707			1.6945	1.375		.295	45°
31709	71709	91709		1.7220	1.358		.265	45°
31715				1.7570	1.468		.276	45°
31726				1.8170	1.540		.365	30°
31734	71734			1.8530	1.500		.273	30°
	71739			1.8800	1.563		.438	30°
31746	71746			1.9120	1.625		.281	45°
31749				1.9430	1.625		.281	45°
31756	71756			2.0010	1.712		.385	30°
31756+10				2.0110	1.712		.385	30°
31758				2.0035	1.688		.438	45°
	71765			2.0180	1.594		.281	45°
31766				2.0485	1.781		.344	30°
31768	71768			2.0680	1.688		.281	45°
31769				2.0680	1.750		.281	45°
	71770			2.0680	1.813		.188	45°
31771				2.0880	1.692		.299	45°
	71776			2.1305	1.750		.250	45°
	71777			2.1305	1.750		.219	45°
31779		91779		2.1305	1.813		.188	45°
	71783+5			2.1700	1.732		.433	45°
31787	71787			2.2550	1.875		.375	45°
	71800			1.2835	1.083		.354	45°
	71801			1.7913	1.440		.374	45°
	71802			1.5650	1.299		.335	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71803			1.5827	1.368		.272	45°
	71804			1.0984	0.906		.256	45°
	71805			1.3839	1.181		.291	45°
	71807			1.1102	0.890		.236	45°
31808	71808			1.2602	0.984		.315	45°
	71809			1.3701	1.142		.256	45°
	71810			1.6614	1.398		.315	45°
31811	71811			1.6811	1.398		.335	45°
	71812			1.1122	0.890		.236	45°
	71813			1.6201	1.398		.256	45°
	71814			1.7205	1.457		.335	45°
	71815			2.3819	2.000		.394	45°
	71816			2.0508	1.575		.364	45°
31825				1.8045	1.375	1.610*	.375	45°
31827		91827		1.8125	1.540		.365	60°
		91828		1.6875	1.410		.365	20°
31829		91829		2.0060	1.630		.280	0°
		91829+5		2.0110	1.630		.280	0°
31830				2.1400	1.812		.375	45°
	71838			1.4010	1.125		.266	45°
	71839			1.4210	1.125		.266	45°
	71840			1.5260	1.250		.250	45°
	71841			1.6090	1.313		.219	45°
31843				1.8120	1.450		.197	30°
31845				2.3810	2.030		.323	60°
	71851			1.5669	1.313		.177	45°
	71852			1.6535	1.313		.250	45°
	71853			1.5059	1.181		.157	45°
	71854			1.4803	1.181		.281	45°
31856				1.6937	1.394		.305	45°
31857				1.7035	1.394		.315	45°
	71858			1.4764	1.236		.335	45°
31859				1.6299	1.398		.197	45°
31860				1.9232	1.634		.177	45°
31862				1.7524	1.437		.157	45°
31863				1.7559	1.476		.281	45°
	71864			1.4862	1.219		.344	45°
	71866			1.4425	1.189		.217	45°
31868				1.1945	0.935		.235	45°
31870	71870			1.5670	1.250		.188	45°
31872				1.0240	0.709		.355	45°
31874				1.1020	0.787		.355	45°
31875				1.1420	0.827		.375	45°
31876				1.1810	0.866		.375	45°
31880				1.3390	1.024		.375	45°
31894				1.8900	1.476		.434	45°
31895				1.9290	1.516		.434	45°
31897				2.1320	1.690		.450	45°
31898				1.9450	1.500		.450	45°
31900				1.7570	1.375		.450	45°
	71901			1.3020	0.975		.250	45°
	71903			1.4840	1.125		.219	45°
	71904			1.5890	1.250		.250	45°
	71905			1.6090	1.250		.250	45°
	71906			1.5060	1.000		.406	45°
31907				1.7420	1.487		.268	45°
	71908			1.4630	1.220		.354	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
31909				1.5060	1.205		.322	45°
31910				1.8180	1.520		.300	45°
	71913			1.8917	1.575		.315	45°
		91914		1.2795	1.063		.217	45°
	71918			1.4016	1.126		.158	45°
	71924			1.6285	1.348	1.524	.365	45°
	71925			1.7330	1.455	1.620	.365	45°
	71930			1.8800	1.562	1.740	.187	45°
	71931			1.6535	1.299		.374	45°
		91933		1.8060	1.417		.292	45°
	71937			1.2047	0.945		.226	45°
31945				1.9181	1.703		.197	45°
	71946			1.6220	1.344		.197	45°
	71947			1.6930	1.437	1.625*	.250	30°
			31949C	2.2555	1.820		.375	45°
	71951			1.8180	1.520		.334	45°
	71954			1.8180	1.414		.334	45°
	71955			1.8800	1.625	1.775	.219	45°
31957	**71957**			2.0060	1.688	1.900*	.219	30°
		91959		2.0150	1.670		.282	0°
	71960			1.6920	1.372	1.492	.281	53°
	71961			1.8180	1.520		.177	45°
31972				1.5510	1.180	1.450	.320	45°
31979				1.6500	1.408	1.580*	.375	45°
31981				2.3500	1.970		.375	45°
31983				2.2560	1.938		.375	45°
	71988			2.0060	1.600		.375	45°
	71990			2.1310	1.810		.375	45°
31992				1.5285	1.250		.265	45°
31994				1.7648	1.511		.265	45°
	71995			2.2590	1.960		.250	45°
	71996			1.6450	1.406		.187	45°
32001				1.4571	1.260		.240	45°
	72002			1.7863	1.500		.288	45°
32003				2.1300	1.906		.177	45°
32004	**72004**			2.0270	1.772		.177	45°
32008				1.8179	1.500		.256	45°
	72009			1.5649	1.272		.256	45°
	72011			1.8195	1.570		.284	60°
32017	**72017**		**22017C**	2.0005	1.602		.377	45°
			22018C	2.4505	2.000		.377	45°
		92022		2.1600	1.750		.375	45°
		92026		1.8810	1.594		.375	45°
		92027		1.0722	0.864		.276	45°
		92028		1.2593	1.061		.276	45°
	72031			2.0906	1.693	1.990	.374	70°
		92032		1.3638	1.166		.276	45°
		92033		1.2063	0.989		.276	45°
32034		**92034**		2.0441	1.732		.406	45°
		92035		1.5953	1.181		.394	45°
	72038			1.3190	1.024		.313	45°
	72039			1.1811	1.024		.374	45°
	72040	**92040**		1.9685	1.693		.295	45°
32041				2.1701	1.751		.336	80°
		92042		1.2677	0.906	1.024	.248	45°
	72043			1.1280	0.906		.303	45°
	72044			2.1701	1.751		.336	80°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
		92047		1.1358	0.925		.217	45°
		92048		2.0709	1.752		.236	45°
		92049		1.6260	1.319		.236	45°
		92050		1.8307	1.575		.276	45°
		92051		1.4803	1.181		.260	45°
		92052		1.5953	1.319		.394	45°
	72065			1.9685	1.614		.315	45°
	72066			0.9547	0.709		.276	45°
32069				1.6500	1.340		.350	45°
32071				2.1000	1.818		.431	45°
32072				1.6000	1.300		.409	45°
		92074		1.6339	1.378		.315	45°
		92075		1.3583	1.142		.295	45°
32076	72076			1.6500	1.280	1.500*	.350	45°
32078				2.0000	1.600	1.870*	.375	45°
	72085			1.3750	1.100	1.200	.227	60°
	72086			1.2250	0.825		.350	45°
32087				2.2000	1.830	1.983	.312	45°
32088				1.6500	1.400	1.566	.375	45°
32089				1.6000	1.345	1.444	.400	45°
32090				2.0000	1.745	1.844	.400	45°
32091				1.6500	1.390	1.489	.400	45°
32093				2.2000	1.720	1.863	.312	45°
		92100		1.4650	1.181		.218	45°
		92101		1.7327	1.417		.238	45°
		92102		1.4965	1.181		.238	45°
		92103		1.7425	1.457		.250	45°
		92104		1.5161	1.260		.250	45°
		92105		1.4138	1.220		.238	45°
		92106		1.2169	0.984		.250	45°
32108				2.3120	1.937		.312	45°
32109				1.7550	1.468		.312	45°
32111				1.8180	1.438		.312	45°
32113				1.5680	1.250		.343	45°
32115				1.9420	1.563		.375	45°
32118				2.3180	2.000		.375	45°
32119				1.8800	1.594		.375	45°
		92124		1.6023	1.398		.315	45°
		92125		1.3268	1.142		.295	45°
	72126			1.5400	1.240		.275	45°
	72128			1.3450	1.083		.236	45°
	72129			1.6470	1.300		.325	45°
			32130C	1.0490	0.825		.298	45°
32131				0.9500	0.765		.250	45°
32132				1.3450	1.050		.290	45°
32133				1.5400	1.300		.315	45°
32138				1.6500	1.340		.425	45°
32139		92139		2.1300	1.812	2.030	.437	45°
	72148			1.6090	1.313		.414	45°
		92156		2.2560	1.960		.250	60°
32163				2.0000	1.580		.375	45°
	72171			2.1360	1.652	1.978*	.310	52°
	72172			2.1360	1.705	1.978*	.295	60°
32173				1.6370	1.437		.350	45°
32174				1.4830	1.260		.350	45°
	72177			1.3190	1.063		.250	45°
	72178			1.6600	1.412		.256	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
			32182C	1.1980	0.960		.295	45°
32183				1.3920	1.141		.318	45°
		92186		2.1250	1.800		.437	45°
32187				1.6500	1.367		.380	45°
32188				2.0485	1.765	1.809	.250	45°
32189	72189			1.6050	1.310	1.428	.250	45°
			22193C	2.2500	1.850		.320	45°
			22194C	1.6700	1.350		.375	45°
	72195			1.2992	1.063		.217	45°
32196				1.9570	1.665		.280	45°
32197				1.4100	1.142		.275	45°
32198				1.1700	0.906		.275	45°
			22199C	1.7570	1.380	1.717*	.400	58°
32208				2.0600	1.562		.450	45°
32209				2.1640	1.750		.450	45°
			32210C	1.1450	0.835		.295	45°
32212				2.0680	1.770	2.016*	.250	45°
32213				1.6300	1.323	1.580*	.240	45°
	72215			1.7374	1.417		.354	45°
	72216			2.1340	1.693		.394	45°
	72217			1.8540	1.499	1.619*	.273	60°
	72218			1.7210	1.360	1.565*	.264	45°
	72221			1.8976	1.457		.284	45°
		92222		1.3248	1.157		.260	45°
	72223			2.0675	1.748	2.026*	.392	45°
	72224			1.6300	1.321	1.549*	.393	60°
	72226			1.2402	1.016		.276	45°
			22228C	2.3800	1.904		.375	45°
	72232			1.8545	1.576	1.788*	.230	45°
			32233C	1.7500	1.375	*	.550	-
32237				2.0000	1.665	1.837	.375	60°
32238				1.8134	1.567	1.714*	.282	44°
32239				1.4665	1.181	1.350*	.282	44°
32240				1.7421	1.480	1.642*	.282	44°
	72241			1.9620	1.597	1.597*	.365	R.178
	72242			1.7320	1.457	1.457*	.365	R.212
	72246			2.2590	1.960	2.135*	.250	45°
	72250			1.1614	0.906		.275	45°
			22251C	2.5000	2.040		.375	45°
			22252C	1.9600	1.625		.375	45°
		92255		1.1921	0.787		.315	45°
		92256		1.3386	0.945		.335	45°
		92257		1.4429	1.024		.335	45°
		92258		1.5051	1.102		.335	45°
		92259		1.6000	1.181		.315	45°
		92260		1.7362	1.280		.315	45°
		92261		1.8898	1.417		.335	45°
		92262		1.2402	0.965		.315	45°
		92263		1.5157	1.240		.295	45°
			22264C	1.6900	1.370		.500	R.125
32265				1.3615	1.142		.220	60°
	72266			1.1640	0.925		.220	45°
	72269			2.0669	1.750		.413	45°
	72270			1.6260	1.319		.413	45°
	72271			1.6142	1.260		.413	45°
32272				2.3120	1.937		.220	45°
32273				1.7550	1.468		.220	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	72276			2.1940	1.812		.375	45°
	72278			1.2531	1.079		.335	45°
	72279	92279		1.1886	0.949		.319	45°
32280				1.5000	1.273		.180	60°
	72281			1.2840	1.078		.160	45°
		92282		1.9685	1.500		.335	45°
		92283		1.0236	0.709		.276	45°
	72286			1.3860	1.181		.260	45°
32287				1.6344	1.375		.256	45°
		92289		1.2598	0.866		.335	45°
		92290		1.1024	0.709		.236	45°
	72298			2.0060	1.750	1.880	.219	45°
	72301			1.2728	1.079		.335	45°
	72302			1.2925	1.079		.335	45°
		92303		1.1831	0.933		.197	45°
	72305			1.6289	1.359	1.500*	.250	30°
	72306			1.8203	1.570	1.660*	.282	30°
	72307			1.8785	1.565	1.725*	.438	30°
32324				1.9510	1.691	1.860*	.262	R.187
32327				1.7856	1.514	1.680*	.275	R.159
	72328			2.3665	2.008		.350	45°
	72329			2.3744	2.008		.358	45°
	72330			2.3823	2.008		.366	45°
	72331			1.9728	1.693		.394	45°
	72332			1.9807	1.693		.402	45°
	72333			1.9886	1.693		.409	45°
	72334	92334		0.9449	0.709		.315	45°
	72335	92335		0.9843	0.748		.315	45°
	72336			1.0236	0.787		.315	45°
	72337			1.0630	0.827		.394	45°
	72338			1.1417	0.709		.394	45°
	72339			1.1339	0.945		.339	45°
	72340			1.2913	1.122		.346	45°
	72341			1.4764	1.228		.274	45°
	72342			1.7374	1.398		.274	45°
	72343			1.6535	1.365	1.487	.250	40°
	72344			2.0060	1.688		.188	45°
32346				1.4852	1.238	1.380	.315	45°
	72347			2.1600	1.750		.350	45°
32348				1.5040	1.215	1.405	.255	45°
32349				2.1925	1.875		.375	45°
32350				1.7550	1.437		.375	45°
32351				1.5110	1.220	1.405	.275	45°
32354				2.1700	1.800		.375	45°
32356				1.7200	1.280		.350	45°
32357				2.2500	1.947	2.120	.312	45°
32358				2.0000	1.593	1.790	.375	45°
	72359			1.8120	1.540	1.650*	.365	30°
	72360			2.3810	1.927	2.140*	.319	30°
	72361			2.0485	1.771	1.928*	.339	30°
		92362		2.0030	1.690	*	.280	30°
	72363			2.0080	1.700	*	.280	30°
	72364			1.8535	1.500	*	.272	30°
			22365C	2.4600	2.040		.375	45°
			32366C	1.9600	1.655		.375	45°
		92369		1.2205	0.709		.295	45°
32370				2.4430	2.125		.375	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	72371			1.4110	1.094		.219	45°
	72372			1.1925	0.875		.219	45°
		92373		1.8500	1.500		.281	60°
		92373+5		1.8550	1.500		.281	60°
		92373+10		1.8600	1.500		.281	60°
		92373+20		1.8700	1.500		.281	60°
	72374			1.5555	1.281	1.398*	.236	30°
	72375			1.5555	1.300	1.385*	.189	45°
	72376			1.8545	1.570	1.711*	.249	45°
32378				1.9430	1.688		.281	45°
32379				1.8180	1.563		.280	45°
	72381			1.2598	0.945		.260	45°
			17563C	2.4074	1.956	2.287*	.284	30°
			17846C	2.0906	1.693	1.990	.303	70°
			17904C	2.4094	1.890		.354	45°
	72382			2.0933	1.693		.354	45°
		92383		2.0835	1.732		.406	45°
		92384		1.6346	1.319		.394	45°
	72389			1.6980	1.419	1.598*	.264	45°
	72390			1.4618	1.183	1.362*	.264	45°
		92391		1.8898	1.417	1.668*	.360	35°
	72392			1.8100	1.535	1.731*	.364	30°
	72393			1.5980	1.438		.188	45°
	72394			1.6100	1.438		.188	45°
	72395			1.7800	1.620		.188	45°
32396				1.9550	1.695		.270	45°
32397				2.0500	1.750		.270	45°
		92399		2.1140	1.693		.394	45°
		92400		2.0905	1.693	1.929	.327	20°
	72401			2.0006	1.730	1.906	.264	49°
		92402		2.1516	1.720		.394	45°
		92404		1.0630	0.787		.315	45°
			72405C	1.5020	1.219	1.408*	.255	33°
32408				2.0060	1.688	1.949*	.282	35°
32409				1.5680	1.250	1.450*	.281	35°
	72416			1.7725	1.433		.270	45°
			72419C	1.1990	0.960	1.076	.322	45°
	72420			1.4724	1.250	1.372	.310	45°
	72424			2.0695	1.750		.420	45°
32425				1.6310	1.187		.450	45°
32426				1.8190	1.375		.450	45°
32427				1.8810	1.437		.450	45°
32428				2.0680	1.687		.450	45°
32429				2.1940	1.800		.450	45°
32430				2.2560	1.870		.450	45°
	72431			2.1856	1.820	*	.338	36.8°
			72432C	1.6020	1.322	*	.276	36.3°
		92434		1.5803	1.299		.315	45°
		92435		1.6591	1.299		.315	45°
32437				1.4960	1.142		.434	45°
		97999		2.0945	1.693		.276	45°
	78000			1.2260	0.945		.204	45°
39006	79006	99006		1.1024	0.866		.394	45°
39007	79007	99007		1.1220	0.866		.394	45°
39008	79008	99008		1.1417	0.906		.394	45°
39009	79009	99009		1.1614	0.906		.394	45°
39010	79010	99010		1.1811	0.906		.394	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
39011	79011	99011		1.1811	0.787		.394	45°
39012	79012	99012		1.2008	0.906		.394	45°
39013	79013	99013		1.2205	0.945		.394	45°
39014	79014	99014		1.2205	0.827		.394	45°
39015	79015	99015		1.2402	0.945		.394	45°
39016	79016	99016		1.2598	0.984		.394	45°
39017	79017	99017		1.2598	0.866		.394	45°
39018	79018	99018		1.2795	0.984		.394	45°
39019	79019	99019		1.2992	1.023		.394	45°
39020	79020	99020		1.2992	0.906		.394	45°
39021	79021	99021		1.3189	1.023		.394	45°
39023	79023	99023		1.3386	0.945		.394	45°
39024	79024	99024		1.3583	1.063		.394	45°
39025	79025	99025		1.3780	1.102		.394	45°
39026	79026	99026		1.3780	0.984		.394	45°
39027	79027			1.3976	1.102		.394	45°
39028	79028	99028		1.4173	1.142		.394	45°
39029	79029	99029		1.4173	1.024		.394	45°
39030	79030	99030		1.4370	1.141		.394	45°
39031	79031	99031		1.4567	1.181		.394	45°
39033	79033			1.4764	1.181		.394	45°
39035	79035	99035		1.4961	1.102		.394	45°
39036	79036			1.5157	1.220		.394	45°
39037	79037	99037		1.5354	1.260		.394	45°
39038	79038			1.5354	1.141		.394	45°
39039	79039			1.5551	1.260		.394	45°
39040	79040			1.5748	1.260		.394	45°
39041	79041	99041		1.5748	1.141		.394	45°
39042	79042			1.5945	1.260		.394	45°
39043	79043	99043		1.6142	1.299		.394	45°
39044	79044			1.6142	1.181		.394	45°
39045	79045	99045		1.6339	1.299		.394	45°
39046	79046			1.6535	1.338		.394	45°
39047	79047			1.6535	1.220		.394	45°
39048	79048			1.6732	1.338		.394	45°
39049	79049			1.6929	1.378		.394	45°
39050	79050			1.6929	1.260		.394	45°
39051	79051			1.7126	1.378		.394	45°
39052				1.7323	1.417		.394	45°
39053	79053	99053		1.7323	1.299		.394	45°
39055	79055			1.7520	1.417		.433	45°
39056	79056			1.7520	1.181		.394	45°
39057	79057	99057		1.7717	1.457		.472	45°
39058	79058	99058		1.7717	1.339		.472	45°
39059	79059			1.7913	1.457		.472	45°
39060	79060			1.8110	1.496		.472	45°
39061	79061			1.8110	1.339		.472	45°
39062	79062			1.8307	1.496		.472	45°
39063				1.8504	1.535		.472	45°
39065	79065	99065		1.8504	1.417		.472	45°
39066	79066			1.8701	1.535		.472	45°
39067	79067			1.8898	1.575		.472	45°
39068	79068			1.8898	1.496		.433	45°
39069	79069			1.8898	1.457		.472	45°
39071	79071			1.7520	1.417		.394	45°
	79072			1.2992	0.984		.315	45°
	79073			1.3386	1.102		.315	45°

* Special ID Features

VALVE SEAT NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	79074			1.3780	1.102		.315	45°
	79075			1.4173	1.181		.315	45°
	79076			1.4961	1.181		.315	45°
	79077			1.5354	1.181		.315	45°
	79078			1.5748	1.299		.315	45°
	79079			1.6142	1.260		.315	45°
	79080			1.6535	1.299		.315	45°
	79081			1.6929	1.378		.315	45°
	79082			1.7323	1.417		.315	45°
	79083			1.7717	1.417		.315	45°
	79084			1.8110	1.496		.315	45°

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES			
					30000	70000	90000	"Killer Bee"
0.9252	0.709		.236	45°		71357		
0.9449	0.709		.256	45°		71167		
0.9449	0.709		.315	45°		72334	92334	
0.9500	0.765		.250	45°	32131			
0.9547	0.709		.276	45°		72066		
0.9843	0.748		.315	45°		72335	92335	
0.9843	0.787		.276	45°		71446		
0.9882	0.787		.236	45°		71346		
0.9890	0.787		.236	45°	31002	71002		
0.9902	0.787		.236	45°		71349		
1.0045	0.750		.188	45°		71600		
1.0236	0.709		.276	45°			92283	
1.0236	0.787		.315	45°		72336		
1.0240	0.709		.355	45°	31872			
1.0335	0.827		.177	45°		71398		
1.0472	0.827		.236	45°		71382		
1.0490	0.825		.298	45°				32130C
1.0512	0.787		.224	45°	31003	71003		
1.0551	0.827		.244	45°		71395		
1.0559	0.807		.224	45°		71350		
1.0630	0.787		.315	45°			92404	
1.0630	0.827		.394	45°		72337		
1.0681	0.871		.254	45°	31096			
1.0689	0.787		.236	45°		71383		
1.0690	0.781		.250	45°		71142		
1.0690	0.790		.260	45°	31047	71047		
1.0722	0.864		.276	45°			92027	
1.0898	0.874		.250	45°		71429		
1.0984	0.906		.256	45°		71804		
1.1020	0.787		.355	45°	31874			
1.1024	0.709		.236	45°			92290	
1.1024	0.787		.315	45°		71168		
1.1024	0.807		.256	45°		71428		
1.1024	0.866		.394	45°	39006	79006	99006	
1.1083	0.866		.256	45°		71396		
1.1102	0.890		.236	45°		71807		
1.1122	0.890		.236	45°		71812		
1.1220	0.866		.394	45°	39007	79007	99007	
1.1280	0.906		.303	45°		72043		
1.1299	0.871		.191	45°	31097			
1.1300	0.875		.219	45°	30754			
1.1310	0.750		.250	45°	31143	71143		
1.1320	0.825		.285	45°	31048	71048		
1.1339	0.945		.339	45°		72339		
1.1358	0.925		.217	45°			92047	
1.1417	0.709		.394	45°		72338		
1.1417	0.827		.335	45°		71169		
1.1417	0.906		.394	45°	39008	79008	99008	
1.1420	0.827		.375	45°	31875			
1.1450	0.835		.295	45°				32210C
1.1496	0.906		.256	45°		71410	91410	
1.1516	0.874		.250	45°		71431		
1.1614	0.906		.275	45°		72250		
1.1614	0.906		.394	45°	39009	79009	99009	
1.1640	0.925		.220	45°		72266		
1.1661	0.809		.280	45°		71358		
1.1700	0.906		.275	45°	32198			

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.1732	0.945		.236	45°		71444		
1.1810	0.866		.375	45°	31876			
1.1811	0.787		.394	45°	39011	79011	99011	
1.1811	0.866		.335	45°	31170	71170		
1.1811	0.906		.394	45°	39010	79010	99010	
1.1811	0.945		.335	45°		71411		
1.1811	1.024		.374	45°		72039		
1.1819	0.925		.244	45°	31049	71049		
1.1831	0.933		.197	45°			92303	
1.1850	0.984		.248	45°		71345		
1.1858	0.984		.248	45°		71004		
1.1870	0.945		.354	45°		71436		
1.1870	0.984		.200	45°		71445		
1.1870	0.984		.248	45°	31005	71005		
1.1886	0.949		.319	45°		72279	92279	
1.1921	0.875		.250	45°		71352		
1.1921	0.787		.315	45°			92255	
1.1925	0.875		.219	45°		72372		
1.1933	0.871		.254	45°	31098			
1.1933	0.929		.256	45°		71435		
1.1933	0.933		.254	45°	31099			
1.1940	0.875		.250	45°		71144		
1.1940	0.905		.257	45°	31146	71146		
1.1940	0.938		.250	45°	31145	71145		
1.1945	0.935		.235	45°	31868			
1.1980	0.960		.295	45°				32182C
1.1990	0.960	1.076	.322	45°				72419C
1.2008	0.906		.394	45°	39012	79012	99012	
1.2008	0.984		.256	45°	31051	71051		
1.2047	0.945		.226	45°		71937		
1.2063	0.989		.276	45°			92033	
1.2169	0.984		.250	45°			92106	
1.2205	0.709		.295	45°			92369	
1.2205	0.827		.394	45°	39014	79014	99014	
1.2205	0.906		.335	45°	31171	71171		
1.2205	0.945		.394	45°	39013	79013	99013	
1.2205	0.984		.237	45°		71448		
1.2250	0.825		.350	45°		72086		
1.2252	0.910		.283	45°		71354		
1.2260	0.945		.204	45°		78000		
1.2303	0.984		.315	45°		71414		
1.2402	0.965		.315	45°			92262	
1.2402	0.945		.394	45°	39015	79015	99015	
1.2402	1.016		.276	45°		72226		
1.2407	0.941		.335	45°		71434		
1.2441	1.024		.236	45°		71384		
1.2480	1.024		.256	45°		71409		
1.2531	1.079		.335	45°		72278		
1.2550	1.000		.250	45°	30764	70764		
1.2550	1.028		.227	45°	31043	71043		
1.2550	1.055		.250	45°	31052			
1.2551	1.000		.250	45°		71359		
1.2559	0.933		.254	45°	31105	71105		
1.2559	0.996		.254	45°	31100			
1.2560	0.875		.250	45°	31151	71151		
1.2560	0.906		.313	45°	31149	71149		
1.2560	0.910	1.070	.281	45°	31333			

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.2560	0.938		.188	45°	**31152**	**71152**		
1.2560	1.000		.219	45°	**31147**	**71147**		
1.2560	1.000		.250	45°		**71150**	**91150**	
1.2560	1.000		.313	45°		**71148**		
1.2570	0.905	1.000	.230	45°	**30230**			
1.2570	0.910		.285	45°	**31054**	**71054**		
1.2570	0.930		.325	45°	**31612**			
1.2570	0.970		.270	45°	**31613**			
1.2593	1.061		.276	45°			**92028**	
1.2598	0.866		.335	45°			**92289**	
1.2598	0.866		.394	45°	**39017**	**79017**	**99017**	
1.2598	0.945		.260	45°		**72381**		
1.2598	0.945		.335	45°		**71172**		
1.2598	0.945		.354	45°		**71311**	**91311**	
1.2598	0.984		.394	45°	**39016**	**79016**	**99016**	
1.2602	0.984		.315	45°	**31808**	**71808**		
1.2620	0.975		.250	30°		**71621**		
1.2670	0.982	1.065	.320	45°	**31313**			
1.2677	0.906	1.024	.248	45°			**92042**	
1.2724	1.024		.236	45°		**71347**		
1.2728	1.079		.335	45°		**72301**		
1.2736	0.906	1.024	.248	45°			**91450**	
1.2795	0.984		.394	45°	**39018**	**79018**	**99018**	
1.2795	1.063		.217	45°			**91914**	
1.2820	0.975		.250	45°		**71502**		
1.2827	1.063		.236	45°		**71403**		
1.2835	1.083		.354	45°		**71800**		
1.2840	1.078		.160	45°		**72281**		
1.2854	0.984		.236	45°		**71360**		
1.2854	1.004		.315	45°	**31006**	**71006**		
1.2854	1.024		.335	45°	**31007**	**71007**		
1.2913	1.122		.346	45°		**72340**		
1.2925	1.079		.335	45°		**72302**		
1.2992	0.905		.315	45°		**71425**		
1.2992	0.906		.394	45°	**39020**	**79020**	**99020**	
1.2992	0.984		.315	45°		**79072**		
1.2992	0.984		.335	45°	**31173**	**71173**		
1.2992	1.023		.394	45°	**39019**	**79019**	**99019**	
1.2992	1.024		.256	45°		**71348**	**91348**	
1.2992	1.063		.217	45°		**72195**		
1.3020	0.975		.250	45°		**71901**		
1.3050	1.048		.227	45°	**30739**			
1.3051	1.102		.276	45°		**71008**	**91008**	
1.3071	1.083		.276	45°		**71123**		
1.3170	1.046		.219	45°	**30735**			
1.3170	1.046		.250	45°	**30736**			
1.3170	1.046		.313	45°	**30737**			
1.3170	1.063		.219	45°	**31289**	**71289**		
1.3175	1.000		.250	45°	**31056**			
1.3181	1.059		.254	45°	**31101**	**71101**		
1.3189	1.023		.394	45°	**39021**	**79021**	**99021**	
1.3189	1.063		.354	45°	**31293**			
1.3190	0.975		.280	45°	**31058**			
1.3190	0.977		.300	45°	**31340**			
1.3190	1.000		.250	45°		**71154**		
1.3190	1.000		.313	45°	**31155**	**71155**		
1.3190	1.024		.313	45°		**72038**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.3190	1.042		.238	45°	**30779**	**70779**		
1.3190	1.045		.316	45°		**70563**		
1.3190	1.062		.188	45°	**30775**			
1.3190	1.063		.250	45°		**72177**		
1.3190	1.063		.313	45°	**31153**	**71153**		
1.3190	1.085		.305	45°	**30562**			
1.3190	1.123		.300	45°	**31320**	**71320**		
1.3195	1.060		.275	45°	**31628**	**71628**		
1.3228	1.082		.287	45°		**71397**		
1.3248	1.157		.260	45°			**92222**	
1.3268	1.063		.315	45°	**31009**	**71009**		
1.3268	1.126		.250	45°	**31010**	**71010**	**91010**	
1.3268	1.142		.295	45°			**92125**	
1.3307	1.126		.250	45°		**71438**		
1.3386	0.945		.335	45°			**92256**	
1.3386	0.945		.394	45°	**39023**	**79023**	**99023**	
1.3386	1.024		.335	45°	**31174**	**71174**		
1.3386	1.063		.394	45°	**31273**	**71273**	**91273**	
1.3386	1.102		.315	45°		**79073**		
1.3387	1.102		.177	45°		**71306**		
1.3390	1.024		.375	45°	**31880**			
1.3425	1.083		.236	45°		**71385**		
1.3433	1.025		.299	45°		**71361**		
1.3445	1.102		.236	45°			**91449**	
1.3450	1.050		.290	45°	**32132**			
1.3450	1.083		.236	45°		**72128**		
1.3484	1.063		.315	45°	**31060**	**71060**		
1.3484	1.126		.250	45°		**71011**		
1.3504	1.063		.315	45°		**71356**		
1.3530	1.087		.200	45°		**71633+5**		
1.3583	1.063		.394	45°	**39024**	**79024**	**99024**	
1.3583	1.142		.295	45°			**92075**	
1.3615	1.142		.220	60°	**32265**			
1.3634	0.984		.394	45°	**31035**	**71035**		
1.3638	1.166		.276	45°			**92032**	
1.3661	1.114		.295	45°	**31061**	**71061**		
1.3701	1.142		.256	45°		**71809**		
1.3701	1.142		.283	45°		**71362**		
1.3750	1.100	1.200	.227	60°		**72085**		
1.3780	0.984		.394	45°	**39026**	**79026**	**99026**	
1.3780	1.024		.354	45°		**71175**		
1.3780	1.102		.197	45°		**71408**		
1.3780	1.102		.315	45°		**79074**		
1.3780	1.102		.394	45°	**39025**	**79025**	**99025**	
1.3800	1.062		.219	45°	**31125**	**71125**		
1.3800	1.063		.188	45°	**30786**	**70786**		
1.3800	1.063		.250	45°	**30788**	**70788**		
1.3800	1.063		.313	45°	**30787**	**70787**		
1.3800	1.125		.188	45°	**30790**	**70790**		
1.3800	1.125		.219	45°	**30558**	**70558**		
1.3800	1.125		.250	45°	**30791**	**70791**		
1.3800	1.125		.375	45°		**70792**		
1.3803	1.093		.250	45°		**71363**		
1.3807	1.059		.254	45°	**31102**			
1.3807	1.121		.254	45°	**31103**			
1.3810	0.938		.313	45°		**71156**		
1.3810	1.125		.266	45°	**31157**	**71157**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.3820	1.000		.280	45°	**31064**			
1.3820	1.000		.410	45°	**31063**			
1.3820	1.100		.300	45°	**31139**	**71139**		
1.3820	1.102	1.160	.260	45°	**30238**	**70238**		
1.3820	1.120		.325	45°		**71635**		
1.3839	1.181		.291	45°		**71805**		
1.3860	1.181		.260	45°		**72286**		
1.3878	1.102		.315	45°	**31065**	**71065**		
1.3920	1.141		.318	45°	**32183**			
1.3976	1.102		.394	45°	**39027**	**79027**		
1.3976	1.142		.394	45°	**31274**	**71274**		
1.3976	1.161		.374	45°	**31294**			
1.4010	1.125		.266	45°		**71838**		
1.4016	1.126		.158	45°		**71918**		
1.4016	1.142		.315	45°	**31012**	**71012**		
1.4055	1.181		.339	45°		**71423**		
1.4100	1.142		.275	45°	**32197**			
1.4110	1.094		.219	45°		**72371**		
1.4114	1.181		.244	45°		**71399**		
1.4138	1.220		.238	45°			**92105**	
1.4173	1.024		.394	45°	**39029**	**79029**	**99029**	
1.4173	1.063		.354	45°		**71176**		
1.4173	1.142		.394	45°	**39028**	**79028**	**99028**	
1.4173	1.181		.315	45°		**79075**		
1.4210	1.125		.266	45°		**71839**		
1.4220	1.152		.315	45°	**31066**	**71066**		
1.4236	1.152		.250	45°		**71412**		
1.4252	1.220		.295	45°		**71121**		
1.4272	1.142		.315	45°		**71420**		
1.4370	1.141		.394	45°	**39030**	**79030**	**99030**	
1.4405	1.186		.313	45°	**31111**	**71111**		
1.4421	1.125		.250	45°		**71380**		
1.4421	1.125		.354	45°		**71364**		
1.4421	1.126		.315	45°	**31013**	**71013**		
1.4421	1.188		.250	45°	**31402**	**71402**		
1.4425	1.125		.250	45°	**30802**	**70802**		
1.4425	1.125		.313	45°	**30803**	**70803**		
1.4425	1.126		.188	45°	**31225**	**71225**		
1.4425	1.126		.219	45°	**30801**	**70801**		
1.4425	1.188		.219	45°	**31030**	**71030**		
1.4425	1.189		.217	45°		**71866**		
1.4425	1.219		.219	45°	**31031**	**71031**		
1.4429	1.130		.315	45°		**71407**		
1.4429	1.024		.335	45°			**92257**	
1.4433	1.059		.254	45°	**31107**			
1.4440	1.100		.315	45°	**31329**			
1.4440	1.105		.322	45°	**30806**			
1.4440	1.135	1.250	.316	45°	**30809**			
1.4440	1.181		.280	45°	**31646**			
1.4440	1.188		.219	45°		**71159**		
1.4440	1.188		.250	45°	**31161**	**71161**		
1.4440	1.200		.297	45°	**30818**			
1.4440	1.230		.250	45°	**31067**			
1.4440	1.250		.219	45°	**30556**	**70556**		
1.4440	1.250		.313	45°	**31160**	**71160**		
1.4445	1.140		.237	45°	**31656**			
1.4445	1.142		.336	45°	**31658**			

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.4445	1.150		.257	45°	**31659**			
1.4449	1.142		.315	45°		**71439**		
1.4449	1.220		.295	45°		**71440**		
1.4567	1.102		.354	45°	**31068**	**71068**		
1.4567	1.181		.315	45°	**31069**	**71069**		
1.4567	1.181		.394	45°	**39031**	**79031**	**99031**	
1.4567	1.220		.394	45°	**31275**			
1.4571	1.260		.240	45°	**32001**			
1.4577	1.098		.352	45°	**31113**			
1.4618	1.183	1.362*	.264	45°		**72390**		
1.4630	1.220		.354	45°		**71908**		
1.4646	1.181		.276	45°	**31070**	**71070**		
1.4650	1.181		.218	45°			**92100**	
1.4665	1.181	1.350*	.282	44°	**32239**			
1.4685	1.142		.315	45°		**71365**		
1.4724	1.250	1.372	.310	45°		**72420**		
1.4750	1.240		.227	0°	**31044**	**71044**		
1.4764	1.181		.394	45°	**39033**	**79033**		
1.4764	1.220		.335	45°	**31071**			
1.4764	1.228		.274	45°		**72341**		
1.4764	1.236		.335	45°		**71858**		
1.4764	1.240		.335	45°		**71386**		
1.4777	1.213		.154	45°		**71305**		
1.4791	1.187		.313	45°		**71353**		
1.4803	1.181		.260	45°			**92051**	
1.4803	1.181		.281	45°		**71854**		
1.4803	1.200		.276	45°		**71400**		
1.4803	1.287		.283	45°		**71379**		
1.4823	1.220		.276	45°	**31014**			
1.4830	1.260		.350	45°	**32174**			
1.4840	1.125		.219	45°		**71903**		
1.4843	1.220		.315	45°	**31015**	**71015**		
1.4850	1.260		.237	45°	**30738**			
1.4852	1.238	1.380	.315	45°	**32346**			
1.4862	1.219		.344	45°		**71864**		
1.4862	1.220		.335	45°		**71387**		
1.4960	1.142		.434	45°	**32437**			
1.4961	1.102		.394	45°	**39035**	**79035**	**99035**	
1.4961	1.142		.354	45°		**71178**		
1.4961	1.181		.276	45°	**31038**	**71038**		
1.4961	1.181		.315	45°		**79076**		
1.4961	1.220		.394	45°	**31276**	**71276**	**91276**	
1.4965	1.181		.238	45°			**92102**	
1.5000	1.188		.250	45°	**31198**			
1.5000	1.273		.180	60°	**32280**			
1.5008	1.148		.283	45°		**71366**		
1.5020	1.219	1.408*	.255	33°				**72405C**
1.5040	1.215	1.405	.255	45°	**32348**			
1.5043	1.188		.313	45°		**71342**		
1.5043	1.250		.281	45°		**71343**		
1.5045	1.188		.313	45°	**31032**			
1.5050	1.100	1.225	.316	45°	**30045**			
1.5050	1.125		.188	45°	**30706**	**70706**		
1.5050	1.125		.219	45°	**30707**	**70707**		
1.5050	1.125		.250	45°	**30708**			
1.5050	1.125		.313	45°	**30709**	**70709**		
1.5050	1.140	1.250	.325	45°	**30105**	**70105**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.5050	1.188		.218	45°	**30823**			
1.5050	1.188		.250	45°	**30822**	**70822**		
1.5050	1.215	1.344	.219	45°	**30705**	**70705**		
1.5050	1.215		.250	45°	**30722**	**70722**		
1.5050	1.215	1.275	.280	45°	**30015**			
1.5050	1.215		.305	45°	**30721**			
1.5050	1.215		.310	45°	**30716**			
1.5050	1.215		.318	45°		**70717**		
1.5050	1.250		.188	45°		**70710**		
1.5050	1.250		.219	45°	**30711**	**70711**		
1.5050	1.250	1.390	.240	45°	**30024**			
1.5050	1.250		.250	45°	**30712**	**70712**		
1.5050	1.250		.313	45°	**30714**	**70714**		
1.5050	1.250		.375	45°	**30715**			
1.5051	1.122		.343	45°		**71367**		
1.5051	1.220		.315	45°	**31073**	**71073**		
1.5051	1.102		.335	45°			**92258**	
1.5059	1.181		.157	45°		**71853**		
1.5059	1.183		.254	45°	**31108**			
1.5059	1.246		.254	45°	**31109**	**71109**		
1.5059	1.280		.295	45°		**71419**		
1.5060	1.000		.406	45°		**71906**		
1.5060	1.180	1.280	.214	45°		**71207**		
1.5060	1.180	1.345	.307	45°	**31258**	**71258**		
1.5060	1.188		.313	45°	**31162**	**71162**		
1.5060	1.195		.315	45°	**31326**			
1.5060	1.195		.360	45°	**31501**			
1.5060	1.205		.322	45°	**31909**			
1.5060	1.210		.345	45°	**31214**			
1.5060	1.230		.278	45°	**31244**			
1.5070	1.100		.315	45°	**31074**			
1.5070	1.180	1.318	.305	45°	**30031**			
1.5070	1.210	1.276	.345	45°	**31291**			
1.5110	1.220	1.405	.275	45°	**32351**			
1.5157	1.220		.335	45°		**71388**		
1.5157	1.220		.343	45°		**71368**		
1.5157	1.220		.394	45°	**39036**	**79036**		
1.5157	1.240		.295	45°			**92263**	
1.5161	1.260		.250	45°			**92104**	
1.5209	1.220		.285	45°		**71432**		
1.5248	1.183		.394	45°		**71036**		
1.5256	1.220		.335	45°		**71389**		
1.5260	1.250		.250	45°		**71840**		
1.5285	1.250		.265	45°	**31992**			
1.5335	1.221		.335	45°	**31016**	**71016**		
1.5354	1.141		.394	45°	**39038**	**79038**		
1.5354	1.181		.276	45°		**71369**		
1.5354	1.181		.315	45°		**79077**		
1.5354	1.181		.354	45°		**71179**		
1.5354	1.220		.335	45°		**71180**		
1.5354	1.260		.394	45°	**39037**	**79037**	**99037**	
1.5354	1.299		.315	45°		**71370**		
1.5365	1.255		.359	45°		**71671**		
1.5400	1.240		.275	45°		**72126**		
1.5400	1.300		.315	45°	**32133**			
1.5410	1.327		.256	45°		**71416**		
1.5413	1.366		.232	45°		**71426**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.5472	1.260		.315	45°	**31075**	**71075**		
1.5510	1.180	1.450	.320	45°	**31972**			
1.5551	1.260		.394	45°	**39039**	**79039**		
1.5551	1.299		.335	45°	**31076**	**71076**		
1.5555	1.281	1.398*	.236	30°		**72374**		
1.5555	1.300	1.385*	.189	45°		**72375**		
1.5591	1.319		.374	45°	**31295**			
1.5630	1.299		.339	45°		**71422**		
1.5630	1.299		.354	45°		**71442**		
1.5649	1.272		.256	45°		**72009**		
1.5650	1.299		.335	45°		**71802**		
1.5657	1.186		.376	45°	**31112**	**71112**		
1.5669	1.250		.313	45°		**71344**		
1.5669	1.313		.177	45°		**71851**		
1.5670	1.250		.188	45°	**31870**	**71870**		
1.5670	1.344		.219	45°	**31033**			
1.5673	1.250		.253	45°	**31077**			
1.5680	1.188		.313	45°	**30839**	**70839**		
1.5680	1.250		.219	45°	**30640**	**70640**		
1.5680	1.250		.250	45°	**30645**	**70645**		
1.5680	1.250		.281	45°	**30740**	**70740**		
1.5680	1.250	1.450*	.281	35°	**32409**			
1.5680	1.250		.313	45°	**30647**	**70647**		
1.5680	1.250		.343	45°	**32113**			
1.5680	1.312	1.390	.219	45°	**30541**	**70541**		
1.5680	1.312		.219	45°	**30643**	**70643**	**90643**	**30643C**
1.5680	1.312	1.390	.250	45°	**30503**	**70503**		
1.5680	1.312		.250	45°	**30644**	**70644**		
1.5680	1.312		.313	45°	**30731**			
1.5680	1.313		.188	45°	**30840**	**70840**		
1.5680	1.313		.219	30°		**70838**		
1.5680	1.313		.280	45°		**71267**		
1.5680	1.375		.218	45°	**30841**			
1.5681	1.183		.254	45°	**31104**			
1.5685	1.255	1.372	.319	45°	**31199**	**71199**		
1.5690	1.125		.313	45°		**71163**		
1.5690	1.180		.305	45°	**31079**			
1.5690	1.230		.310	45°	**31078**			
1.5695	1.180		.316	45°	**31674**			
1.5695	1.219		.317	45°	**31287**	**71287**		
1.5695	1.220	1.356	.344	45°	**31292**			
1.5695	1.265	1.320	.280	45°	**31286**			
1.5700	1.243		.354	45°	**31318**			
1.5730	1.312		.219	45°	**30643+5**	**70643+5**		
1.5748	1.141		.394	45°	**39041**	**79041**	**99041**	
1.5748	1.181		.374	45°		**71181**		
1.5748	1.260		.394	45°	**39040**	**79040**		
1.5748	1.299		.315	45°		**79078**		
1.5748	1.319		.354	45°	**31296**			
1.5780	1.313		.250	45°	**30644+10**			
1.5803	1.299		.315	45°			**92434**	
1.5823	1.180		.413	45°	**31081**	**71081**		
1.5827	1.319		.374	45°	**31278**			
1.5827	1.339		.295	45°		**71017**		
1.5827	1.368		.272	45°		**71803**		
1.5846	1.358		.287	45°		**71418**		
1.5890	1.250		.250	45°		**71904**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.5945	1.260		.394	45°	**39042**	**79042**		
1.5953	1.181		.394	45°			**92035**	
1.5953	1.319		.394	45°			**92052**	
1.5980	1.438		.188	45°		**72393**		
1.5984	1.339		.276	45°		**71018**		
1.6000	1.181		.315	45°			**92259**	
1.6000	1.282		.299	45°		**71371**		
1.6000	1.300		.409	45°	**32072**			
1.6000	1.345	1.444	.400	45°	**32089**			
1.6020	1.322	*	.276	36.3°				**72432C**
1.6023	1.398		.315	45°			**92124**	
1.6050	1.310	1.428	.250	45°	**32189**	**72189**		
1.6090	1.250		.250	45°		**71905**		
1.6090	1.313		.219	45°		**71841**		
1.6090	1.313		.414	45°		**72148**		
1.6100	1.438		.188	45°		**72394**		
1.6142	1.181		.394	45°	**39044**	**79044**		
1.6142	1.220		.335	45°		**71182**		
1.6142	1.260		.315	45°		**79079**		
1.6142	1.260		.413	45°		**72271**		
1.6142	1.299		.394	45°	**39043**	**79043**	**99043**	
1.6142	1.339		.295	45°	**31039**	**71039**		
1.6201	1.374		.256	45°		**71413**		
1.6201	1.398		.256	45°		**71813**		
1.6220	1.319		.260	45°		**71437**		
1.6220	1.344		.197	45°		**71946**		
1.6245	1.322		.375	45°		**70855**		
1.6250	1.313		.250	45°	**31196**			
1.6260	1.319		.236	45°			**92049**	
1.6260	1.319		.413	45°		**72270**		
1.6260	1.320		.375	45°		**71372**		
1.6285	1.348	1.524	.365	45°		**71924**		
1.6289	1.359	1.500*	.250	30°		**72305**		
1.6299	1.398		.197	45°	**31859**			
1.6300	1.250		.219	45°	**30661**	**70661**		
1.6300	1.250		.250	45°	**30662**	**70662**		
1.6300	1.250		.313	45°	**30663**	**70663**		
1.6300	1.250		.375	45°	**30853**	**70853**		
1.6300	1.313		.219	45°	**30649**	**70649**	**90649**	
1.6300	1.313		.250	45°	**30650**	**70650**		
1.6300	1.313		.281	45°	**31488**	**71488**		
1.6300	1.313		.313	45°	**30651**	**70651**		
1.6300	1.313		.395	45°	**30854**	**70854**		
1.6300	1.321	1.549*	.393	60°		**72224**		
1.6300	1.323	1.580*	.240	45°	**32213**			
1.6300	1.334		.313	45°		**70642**		
1.6300	1.344		.250	45°	**31489**	**71489**		
1.6300	1.348		.218	45°	**30857**			
1.6300	1.375		.219	45°	**30648**	**70648**		
1.6300	1.375		.250	45°	**30646**	**70646**		
1.6300	1.375		.313	45°	**30732**	**70732**		
1.6300	1.406		.250	45°	**31482**			
1.6310	1.187		.450	45°	**32425**			
1.6310	1.298		.317	45°	**31218**			
1.6310	1.320		.300	45°	**31223**			
1.6310	1.344		.313	45°	**31164**	**71164**		
1.6310	1.375		.188	45°	**31046**	**71046**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.6320	1.250		.312	45°	**31332**			
1.6320	1.298	1.422	.317	45°	**31236**			
1.6320	1.329		.280	45°	**30860**	**70860**		
1.6320	1.333		.237	45°	**31690**			
1.6339	1.299		.394	45°	**39045**	**79045**	**99045**	
1.6339	1.378		.315	45°			**92074**	
1.6340	1.260	1.340	.394	45°	**31323**			
1.6344	1.375		.256	45°	**32287**			
1.6346	1.319		.394	45°			**92384**	
1.6350	1.375		.219	45°	**30648+5**			
1.6370	1.437		.350	45°	**32173**			
1.6386	1.339		.315	45°	**31019**	**71019**		
1.6417	1.339		.250	45°		**71020**		
1.6450	1.375		.250	45°	**30864**	**70864**		
1.6450	1.406		.187	45°		**71996**		
1.6460	1.312		.350	45°	**31226**			
1.6470	1.300		.325	45°		**72129**		
1.6500	1.280	1.500*	.350	45°	**32076**	**72076**		
1.6500	1.340		.350	45°	**32069**			
1.6500	1.340		.425	45°	**32138**			
1.6500	1.367		.380	45°	**32187**			
1.6500	1.390	1.489	.400	45°	**32091**			
1.6500	1.400	1.566	.375	45°	**32088**			
1.6500	1.408	1.580*	.375	45°	**31979**			
1.6535	1.220		.394	45°	**39047**	**79047**		
1.6535	1.260		.374	45°	**31183**	**71183**		
1.6535	1.299		.315	45°		**79080**		
1.6535	1.299		.335	45°		**71184**		
1.6535	1.299		.374	45°		**71931**		
1.6535	1.313		.250	45°		**71852**		
1.6535	1.338		.394	45°	**39046**	**79046**		
1.6535	1.365	1.487	.250	40°		**72343**		
1.6560	1.313		.375	45°	**31272**			
1.6560	1.350	1.626*	.375	45°	**31279**			
1.6565	1.246	1.546*	.375	55°	**31478**			
1.6570	1.312		.395	45°		**71697**		
1.6591	1.299		.315	45°			**92435**	
1.6600	1.412		.256	45°		**72178**		
1.6614	1.319		.413	45°	**31082**	**71082**		
1.6614	1.398		.315	45°		**71810**		
1.6634	1.378		.315	45°		**71421**		
1.6690	1.372	1.429	.272	37°	**30868**			
1.6694	1.339		.177	45°	**31308**			
1.6700	1.350		.375	45°				**22194C**
1.6732	1.338		.394	45°	**39048**	**79048**		
1.6772	1.417		.315	45°		**71373**		
1.6811	1.398		.335	45°	**31811**	**71811**		
1.6831	1.469		.295	45°		**71390**		
1.6875	1.410		.365	20°			**91828**	
1.6900	1.370		.500	R.125				**22264C**
1.6920	1.312		.219	45°	**30674**	**70674**		
1.6920	1.312		.250	45°	**30675**	**70675**		
1.6920	1.312		.313	45°	**30676**	**70676**		
1.6920	1.312		.375	45°	**31270**			
1.6920	1.372	1.492	.281	53°		**71960**		
1.6920	1.375		.188	45°	**31042**			
1.6920	1.375		.219	45°	**30677**	**70677**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.6920	1.375		.250	45°	**30678**	**70678**		
1.6920	1.375		.313	45°	**30679**	**70679**		
1.6920	1.375		.375	45°	**30871**	**70871**		
1.6920	1.406		.250	45°	**30670**	**70670**		
1.6920	1.438		.156	45°	**30872**			
1.6920	1.438		.188	45°	**30873**	**70873**		
1.6920	1.438		.219	45°	**30664**	**70664**		
1.6920	1.438		.250	45°	**30673**	**70673**		
1.6920	1.438		.313	45°	**30733**	**70733**		
1.6921	1.312		.315	45°		**71374**		
1.6925	1.344		.313	45°	**30559**	**70559**		
1.6925	1.406		.313	45°	**31490**			
1.6929	1.260		.394	45°	**39050**	**79050**		
1.6929	1.299		.335	45°	**31186**	**71186**	**91186**	
1.6929	1.339		.325	45°		**71185**		
1.6929	1.350		.315	45°		**71406**		
1.6929	1.378		.315	45°		**79081**		
1.6929	1.378		.394	45°	**39049**	**79049**		
1.6929	1.385		.315	45°		**71391**		
1.6930	1.437	1.625*	.250	30°		**71947**		
1.6937	1.394		.305	45°	**31856**			
1.6940	1.300		.360	45°	**31083**			
1.6940	1.385	1.520	.305	45°	**30190**			
1.6940	1.450		.297	45°	**30881**			
1.6945	1.375		.295	45°	**31707**	**71707**		
1.6945	1.390	1.480	.305	45°	**31288**			
1.6950	1.250		.375	45°		**71701+5**		
1.6970	1.438		.219	45°		**70664+5**		
1.6980	1.419	1.598*	.264	45°		**72389**		
1.7028	1.417		.315	45°	**31021**	**71021**		
1.7035	1.394		.315	45°	**31857**			
1.7059	1.384		.250	45°		**71085**		
1.7059	1.384		.354	45°	**31084**	**71084**		
1.7126	1.378		.394	45°	**39051**	**79051**		
1.7140	1.313		.313	45°		**71503**		
1.7200	1.280		.350	45°	**32356**			
1.7205	1.457		.335	45°		**71814**		
1.7210	1.360	1.565*	.264	45°		**72218**		
1.7220	1.358		.265	45°	**31709**	**71709**	**91709**	
1.7320	1.457	1.457*	.365	R.212		**72242**		
1.7323	1.299		.394	45°	**39053**	**79053**	**99053**	
1.7323	1.339		.374	45°	**31187**	**71187**		
1.7323	1.417		.276	45°		**71375**		
1.7323	1.417		.315	45°		**79082**		
1.7323	1.417		.394	45°	**39052**			
1.7327	1.417		.238	45°			**92101**	
1.7330	1.455	1.620	.365	45°		**71925**		
1.7333	1.335		.372	45°	**31110**			
1.7362	1.280		.315	45°			**92260**	
1.7374	1.398		.274	45°		**72342**		
1.7374	1.417		.354	45°		**72215**		
1.7420	1.487		.268	45°	**31907**			
1.7421	1.457		.315	45°	**31086**	**71086**		
1.7421	1.480	1.642*	.282	44°	**32240**			
1.7425	1.457		.250	45°			**92103**	
1.7500	1.375	*	.550	-				**32233C**
1.7520	1.181		.394	45°	**39056**	**79056**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.7520	1.417		.394	45°	**39071**	**79071**		
1.7520	1.417		.433	45°	**39055**	**79055**		
1.7524	1.437		.157	45°	**31862**			
1.7550	1.250		.250	45°		**71128**		
1.7550	1.312		.395	45°	**31232**			
1.7550	1.313		.250	45°	**30889**			
1.7550	1.375		.219	45°	**30652**	**70652**		
1.7550	1.375		.250	45°	**30653**	**70653**		
1.7550	1.375		.313	45°	**30654**	**70654**		
1.7550	1.437		.375	45°	**32350**			
1.7550	1.438		.219	45°	**30655**	**70655**		
1.7550	1.438		.250	45°	**30656**	**70656**		
1.7550	1.438	1.500	.302	45°	**31117**			
1.7550	1.438		.313	45°	**30657**	**70657**		
1.7550	1.468		.220	45°	**32273**			
1.7550	1.468		.312	45°	**32109**			
1.7550	1.500		.219	45°	**30658**	**70658**		
1.7550	1.500		.250	45°	**30659**	**70659**	**90659**	**20659C**
1.7550	1.500		.313	45°		**70660**		
1.7559	1.378		.295	45°		**71381**		
1.7559	1.476		.281	45°	**31863**			
1.7560	1.313		.313	45°		**71165**		
1.7560	1.437		.302	45°		**71221**		
1.7560	1.438	1.500	.188	45°	**31045**			
1.7560	1.445	1.617	.310	45°	**31215**			
1.7560	1.594		.278	45°	**31209**			
1.7570	1.375		.375	45°	**31129**	**71129**		
1.7570	1.375		.450	45°	**31900**			
1.7570	1.380	1.717*	.400	58°				**22199C**
1.7570	1.385	1.559	.380	45°		**70127**		
1.7570	1.410	1.560	.315	45°	**30165**			
1.7570	1.457		.312	45°	**31317**			
1.7570	1.468		.276	45°	**31715**			
1.7618	1.457		.335	45°		**71392**		
1.7648	1.511		.265	45°	**31994**			
1.7717	1.339		.472	45°	**39058**	**79058**	**99058**	
1.7717	1.358		.394	45°		**71227**		
1.7717	1.417		.315	45°		**79083**		
1.7717	1.457		.335	45°		**71393**		
1.7717	1.457		.472	45°	**39057**	**79057**	**99057**	
1.7725	1.433		.270	45°		**72416**		
1.7800	1.620		.188	45°		**72395**		
1.7810	1.476		.311	45°		**71257**	**91257**	
1.7815	1.496		.315	45°		**71404**		
1.7815	1.535		.295	45°		**71472**		
1.7840	1.469		.290	45°		**71230**		
1.7856	1.514	1.680*	.275	R.159	**32327**			
1.7863	1.406		.288	45°	**31087**	**71087**		
1.7863	1.500		.288	45°		**72002**		
1.7874	1.409		.297	45°		**71427**		
1.7913	1.440		.374	45°		**71801**		
1.7913	1.457		.472	45°	**39059**	**79059**		
1.7969	1.418		.390	45°	**31088**	**71088**		
1.8045	1.375	1.610*	.375	45°	**31825**			
1.8060	1.417		.292	45°			**91933**	
1.8100	1.535	1.731*	.364	30°		**72392**		
1.8110	1.339		.472	45°	**39061**	**79061**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.8110	1.398		.394	45°		71188		
1.8110	1.496		.315	45°		79084		
1.8110	1.496		.472	45°	39060	79060		
1.8120	1.450		.197	30°	31843			
1.8120	1.540	1.650*	.365	30°		72359		
1.8125	1.540		.365	60°	31827		91827	
1.8134	1.567	1.714*	.282	44°	32238			
1.8150	1.392		.297	45°		71376		
1.8161	1.505		.280	45°		71355		
1.8170	1.375		.313	45°		70903		
1.8170	1.438		.313	45°	30905	70905		
1.8170	1.484		.250	45°	31089			
1.8170	1.500		.375	45°	31131	71131		
1.8170	1.540		.365	30°	31726			
1.8170	1.562	1.655	.365	45°		70542		
1.8175	1.438		.375	45°	31459			
1.8175	1.625		.219	45°	31283			
1.8179	1.500		.256	45°	32008			
1.8180	1.414		.334	45°		71954		
1.8180	1.438		.219	45°	31269	71269		
1.8180	1.438		.250	45°	30904			
1.8180	1.438		.312	45°	32111			
1.8180	1.468		.313	45°	30680	70680	90680	
1.8180	1.500	1.625	.219	45°	30530	70530		
1.8180	1.500		.219	45°	30668	70668		
1.8180	1.500		.250	45°	30672	70672		
1.8180	1.500		.281	45°	30741			
1.8180	1.500		.312	45°	30907	70907	90907	20907C
1.8180	1.520		.177	45°		71961		
1.8180	1.520		.300	45°	31910			
1.8180	1.520		.334	45°		71951		
1.8180	1.563		.219	45°	30667	70667		
1.8180	1.563		.250	45°	30671	70671		
1.8180	1.563		.280	45°	32379			
1.8180	1.563		.313	45°	31000	71000		
1.8190	1.375		.450	45°	32426			
1.8190	1.405		.315	45°	31137	71137		
1.8190	1.440	1.508	.316	45°	31327			
1.8190	1.490	1.600	.305	45°	30030			
1.8190	1.496		.157	45°	31307			
1.8195	1.440	1.515	.315	45°	31284			
1.8195	1.500	1.555	.278	45°	31285			
1.8195	1.570		.284	60°		72011		
1.8200	1.435	1.505	.314	45°	31319			
1.8203	1.570	1.660*	.282	30°		72306		
1.8303	1.437		.375	45°	31090	71090		
1.8307	1.496		.472	45°	39062	79062		
1.8307	1.575		.276	45°			92050	
1.8358	1.496		.285	45°	31433	71433		
1.8500	1.500		.281	60°			92373	
1.8504	1.417		.472	45°	39065	79065	99065	
1.8504	1.437		.394	45°	31228	71228		
1.8504	1.535		.472	45°	39063			
1.8530	1.500		.273	30°	31734	71734		
1.8535	1.500	*	.272	30°		72364		
1.8540	1.499	1.619*	.273	60°		72217		
1.8545	1.570	1.711*	.249	45°		72376		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.8545	1.576	1.788*	.230	45°		72232		
1.8550	1.500		.281	60°			92373+5	
1.8560	1.635		.280	45°		71268		
1.8567	1.457		.339	45°		71339		
1.8600	1.500		.281	60°			92373+10	
1.8661	1.535		.315	45°		71377		
1.8700	1.500		.281	60°			92373+20	
1.8701	1.535		.472	45°	39066	79066		
1.8740	1.435		.382	45°		71378		
1.8785	1.565	1.725*	.438	30°		72307		
1.8800	1.500		.250	45°	30919	70919		
1.8800	1.500		.375	45°	31091	71091		31091C
1.8800	1.562	1.740	.187	45°		71930		
1.8800	1.562		.250	45°	30509	70509		
1.8800	1.562		.312	45°	30923	70923		
1.8800	1.563		.438	30°		71739		
1.8800	1.594		.375	45°	32119			
1.8800	1.625	1.775	.219	45°		71955		
1.8810	1.437		.450	45°	32427			
1.8810	1.500		.313	45°	30920	70920		
1.8810	1.563		.219	45°	31238	71238		
1.8810	1.575		.317	45°	31217			
1.8810	1.594		.250	45°	30687	70687		
1.8810	1.594		.313	45°	30688	70688		
1.8810	1.594		.375	45°			92026	
1.8810	1.625		.219	45°	30681	70681		
1.8810	1.625		.250	45°	30682	70682		
1.8810	1.625		.281	45°	30683			
1.8810	1.625		.313	45°	30684	70684		
1.8810	1.625		.453	45°		70686		
1.8819	1.575		.315	45°		71394		
1.8820	1.505	1.689	.380	45°		70138		
1.8820	1.575	1.692	.317	45°	31034	71034		
1.8820	1.575		.320	45°	31316			
1.8820	1.600		.252	45°	31092	71092		
1.8890	1.476		.394	45°		71189		
1.8898	1.417		.335	45°			92261	
1.8898	1.417	1.668*	.360	35°			92391	
1.8898	1.457		.472	45°	39069	79069		
1.8898	1.496		.433	45°	39068	79068		
1.8898	1.575		.472	45°	39067	79067		
1.8900	1.476		.434	45°	31894			
1.8917	1.575		.315	45°		71913		
1.8976	1.457		.284	45°		72221		
1.9120	1.625		.281	45°	31746	71746		
1.9181	1.703		.197	45°	31945			
1.9232	1.634		.177	45°	31860			
1.9290	1.516		.434	45°	31895			
1.9291	1.516		.394	45°		71190		
1.9291	1.654		.315	45°		71191		
1.9420	1.563		.375	45°	32115			
1.9430	1.563		.219	45°	30933	70933		
1.9430	1.563		.250	45°	30932	70932		
1.9430	1.563		.313	45°		71496		
1.9430	1.625		.250	45°	31497	71497		
1.9430	1.625		.281	45°	31749			
1.9430	1.625		.312	45°	31134	71134		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.9430	1.625		.375	45°	**31471**			
1.9430	1.688		.188	45°	**30935**			
1.9430	1.688		.219	45°	**30936**			
1.9430	1.688		.281	45°	**32378**			
1.9435	1.573		.379	45°	**31281**			
1.9435	1.625		.219	45°	**31262**			
1.9440	1.500		.313	45°	**31166**	**71166**		
1.9440	1.688		.250	45°	**30560**	**70560**		
1.9450	1.500		.450	45°	**31898**			
1.9510	1.691	1.860*	.262	R.187	**32324**			
1.9550	1.695		.270	45°	**32396**			
1.9570	1.665		.280	45°	**32196**			
1.9600	1.625		.375	45°				**22252C**
1.9600	1.655		.375	45°				**32366C**
1.9620	1.597	1.597*	.365	R.178		**72241**		
1.9685	1.500		.335	45°			**92282**	
1.9685	1.535		.394	45°		**71192**		
1.9685	1.614		.315	45°		**72065**		
1.9685	1.693		.295	45°		**72040**	**92040**	
1.9728	1.693		.394	45°		**72331**		
1.9800	1.694		.250	45°	**30297**			
1.9807	1.693		.402	45°		**72332**		
1.9886	1.693		.409	45°		**72333**		
2.0000	1.580		.375	45°	**32163**			
2.0000	1.593	1.790	.375	45°	**32358**			
2.0000	1.600	1.870*	.375	45°	**32078**			
2.0000	1.665	1.837	.375	60°	**32237**			
2.0000	1.745	1.844	.400	45°	**32090**			
2.0005	1.602		.377	45°	**32017**	**72017**		**22017C**
2.0006	1.730	1.906	.264	49°		**72401**		
2.0010	1.712		.385	30°	**31756**	**71756**		
2.0030	1.690	*	.280	30°			**92362**	
2.0035	1.688		.438	45°	**31758**			
2.0050	1.813		.219	45°	**30952**	**70952**		
2.0060	1.600		.375	45°		**71988**		
2.0060	1.625		.219	45°	**30723**			
2.0060	1.625		.250	45°	**30724**	**70724**		
2.0060	1.625		.281	45°	**30725**		**90725**	
2.0060	1.625		.297	45°		**70726**		
2.0060	1.625		.313	45°	**30727**	**70727**		
2.0060	1.625		.344	45°	**30728**			
2.0060	1.625		.375	45°	**30729**	**70729**		
2.0060	1.625		.438	45°	**30730**			
2.0060	1.630		.280	0°	**31829**		**91829**	
2.0060	1.688		.188	45°		**72344**		
2.0060	1.688		.219	45°	**30698**	**70698**		
2.0060	1.688	1.900*	.219	30°	**31957**	**71957**		
2.0060	1.688		.250	45°	**30699**	**70699**		
2.0060	1.688		.282	45°	**30700**	**70700**		
2.0060	1.688	1.949*	.282	35°	**32408**			
2.0060	1.688		.313	45°	**30701**			
2.0060	1.688		.375	45°	**30702**			
2.0060	1.688		.438	45°	**30703**			
2.0060	1.750		.188	45°	**30690**	**70690**		
2.0060	1.750		.219	45°	**30691**	**70691**		
2.0060	1.750	1.880	.219	45°		**72298**		
2.0060	1.750		.250	45°	**30692**	**70692**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
2.0060	1.750		.313	45°	**30694**			
2.0079	1.575		.217	45°		**71415**		
2.0079	1.575		.413	45°		**71193**		
2.0080	1.700	*	.280	30°		**72363**		
2.0110	1.625		.281	45°			**90725+5**	
2.0110	1.630		.280	0°			**91829+5**	
2.0110	1.712		.385	30°	**31756+10**			
2.0150	1.670		.282	0°			**91959**	
2.0160	1.625		.281	45°			**90725+10**	
2.0180	1.594		.281	45°		**71765**		
2.0260	1.625		.281	45°			**90725+20**	
2.0270	1.772		.177	45°	**32004**	**72004**		
2.0276	1.726		.217	45°	**31341**			
2.0360	1.625		.281	45°			**90725+30**	
2.0441	1.732		.406	45°	**32034**		**92034**	
2.0472	1.614		.413	45°	**31194**	**71194**		
2.0485	1.765	1.809	.250	45°	**32188**			
2.0485	1.771	1.928*	.339	30°		**72361**		
2.0485	1.781		.344	30°	**31766**			
2.0500	1.750		.270	45°	**32397**			
2.0508	1.575		.364	45°		**71816**		
2.0600	1.562		.450	45°	**32208**			
2.0669	1.750		.413	45°		**72269**		
2.0673	1.693		.354	45°	**31401**	**71401**		
2.0675	1.748	2.026*	.392	45°		**72223**		
2.0680	1.687		.450	45°	**32428**			
2.0680	1.688		.281	45°	**31768**	**71768**		
2.0680	1.750		.281	45°	**31769**			
2.0680	1.770	2.016*	.250	45°	**32212**			
2.0680	1.812		.250	45°	**30963**	**70963**		
2.0680	1.813		.188	45°		**71770**		
2.0680	1.813	1.875	.250	45°	**30964**			
2.0685	1.750		.219	45°	**31249**	**71249**		
2.0695	1.750		.420	45°		**72424**		
2.0709	1.752		.236	45°			**92048**	
2.0835	1.732		.406	45°			**92383**	
2.0866	1.654		.413	45°	**31195**	**71195**	**91195**	
2.0880	1.692		.299	45°	**31771**			
2.0902	1.697		.382	45°	**31475**			
2.0905	1.693	1.929	.327	20°			**92400**	
2.0906	1.693	1.990	.303	70°				**17846C**
2.0906	1.693		.354	45°		**71430**		
2.0906	1.693	1.990	.374	70°		**72031**		
2.0906	1.693		.394	45°	**31424**	**71424**		
2.0933	1.693		.354	45°		**72382**		
2.0945	1.693		.276	45°			**97999**	
2.1000	1.818		.431	45°	**32071**			
2.1050	1.765		.375	45°	**31310**			
2.1098	1.697		.402	45°	**31093**	**71093**		
2.1102	1.693		.354	45°		**71447**		
2.1102	1.693		.394	45°		**71441**		
2.1140	1.693		.394	45°			**92399**	
2.1200	1.812		.375	45°	**31454**			
2.1250	1.800		.437	45°			**92186**	
2.1300	1.812		.250	45°	**30557**	**70557**		
2.1300	1.812	2.030	.437	45°	**32139**		**92139**	
2.1300	1.813		.313	45°	**31124**			

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
2.1300	1.875		.219	45°	**30974**			
2.1300	1.875		.250	45°	**30537**	**70537**		
2.1300	1.906		.177	45°	**32003**			
2.1300	1.906		.234	45°		**71473**		
2.1305	1.750		.219	45°		**71777**		
2.1305	1.750		.250	45°		**71776**		
2.1305	1.813		.188	45°	**31779**		**91779**	
2.1305	1.906		.250	45°	**31498**	**71498**		
2.1310	1.810		.375	45°		**71990**		
2.1310	1.813		.219	45°	**31240**	**71240**		
2.1320	1.690		.450	45°	**31897**			
2.1339	1.693		.339	45°		**71338**	**91338**	
2.1339	1.752		.287	45°		**71417**		
2.1340	1.693		.394	45°		**72216**		
2.1360	1.652	1.978*	.310	52°		**72171**		
2.1360	1.705	1.978*	.295	60°		**72172**		
2.1370	1.700		.400	45°		**71504**		
2.1400	1.812		.375	45°	**31830**			
2.1516	1.720		.394	45°			**92402**	
2.1600	1.750		.350	45°		**72347**		
2.1600	1.750		.375	45°			**92022**	
2.1640	1.750		.450	45°	**32209**			
2.1654	1.732		.472	45°	**31141**	**71141**		
2.1700	1.732		.433	45°		**71783+5**		
2.1700	1.800		.375	45°	**32354**			
2.1701	1.751		.336	80°	**32041**			
2.1701	1.751		.336	80°		**72044**		
2.1856	1.820	*	.338	36.8°		**72431**		
2.1925	1.875		.375	45°	**32349**			
2.1930	1.937		.250	45°	**31282**			
2.1935	1.875		.281	45°	**30984**	**70984**		
2.1940	1.800		.450	45°	**32429**			
2.1940	1.812		.250	45°	**31135**			
2.1940	1.812		.375	45°		**72276**		
2.2000	1.720	1.863	.312	45°	**32093**			
2.2000	1.830	1.983	.312	45°	**32087**			
2.2500	1.850		.320	45°				**22193C**
2.2500	1.947	2.120	.312	45°	**32357**			
2.2550	1.875		.375	45°	**31787**	**71787**		
2.2555	1.820		.375	45°				**31949C**
2.2555	1.875		.313	45°		**71470**		
2.2555	1.938		.188	45°	**30989**	**70989**		
2.2560	1.870		.450	45°	**32430**			
2.2560	1.938		.219	45°		**71261**		
2.2560	1.938		.375	45°	**31983**			
2.2560	1.960		.250	60°			**92156**	
2.2590	1.960		.250	45°		**71995**		
2.2590	1.960	2.135*	.250	45°		**72246**		
2.3120	1.937		.220	45°	**32272**			
2.3120	1.937		.312	45°	**32108**			
2.3180	2.000		.250	45°	**30991**	**70991**	**90991**	
2.3180	2.000		.375	45°	**32118**			
2.3500	1.970	2.290*	.375	53°	**31456**			
2.3500	1.970		.375	45°	**31981**			
2.3657	2.011		.350	45°	**31476**			
2.3665	2.008		.350	45°		**72328**		
2.3744	2.008		.358	45°		**72329**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL OD	ID	ID TOP TAPER	DEPTH	SEAT ANGLE	PART NUMBER SERIES			
					30000	70000	90000	"Killer Bee"
2.3800	1.904		.375	45°				**22228C**
2.3810	1.927	2.140*	.319	30°		**72360**		
2.3810	2.030		.323	60°	**31845**			
2.3819	2.000		.394	45°		**71815**		
2.3823	2.008		.366	45°		**72330**		
2.4074	1.956	2.287*	.284	30°				**17563C**
2.4094	1.890		.354	45°				**17904C**
2.4430	2.125		.375	45°	**32370**			
2.4505	2.000		.377	45°				**22018C**
2.4600	2.040		.375	45°				**22365C**
2.5000	2.040		.375	45°				**22251C**

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
0.709		0.9252	.236	45°		71357		
0.709		0.9449	.256	45°		71167		
0.709		0.9449	.315	45°		72334	92334	
0.709		0.9547	.276	45°		72066		
0.709		1.0236	.276	45°			92283	
0.709		1.0240	.355	45°	31872			
0.709		1.1024	.236	45°			92290	
0.709		1.1417	.394	45°		72338		
0.709		1.2205	.295	45°			92369	
0.748		0.9843	.315	45°		72335	92335	
0.750		1.0045	.188	45°		71600		
0.750		1.1310	.250	45°	31143	71143		
0.765		0.9500	.250	45°	32131			
0.781		1.0690	.250	45°		71142		
0.787		0.9843	.276	45°		71446		
0.787		0.9882	.236	45°		71346		
0.787		0.9890	.236	45°	31002	71002		
0.787		0.9902	.236	45°		71349		
0.787		1.0236	.315	45°		72336		
0.787		1.0512	.224	45°	31003	71003		
0.787		1.0630	.315	45°			92404	
0.787		1.0689	.236	45°		71383		
0.787		1.1020	.355	45°	31874			
0.787		1.1024	.315	45°		71168		
0.787		1.1811	.394	45°	39011	79011	99011	
0.787		1.1921	.315	45°			92255	
0.790		1.0690	.260	45°	31047	71047		
0.807		1.0559	.224	45°		71350		
0.807		1.1024	.256	45°		71428		
0.809		1.1661	.280	45°		71358		
0.825		1.0490	.298	45°				32130C
0.825		1.1320	.285	45°	31048	71048		
0.825		1.2250	.350	45°		72086		
0.827		1.0335	.177	45°		71398		
0.827		1.0472	.236	45°		71382		
0.827		1.0551	.244	45°		71395		
0.827		1.0630	.394	45°		72337		
0.827		1.1417	.335	45°		71169		
0.827		1.1420	.375	45°	31875			
0.827		1.2205	.394	45°	39014	79014	99014	
0.835		1.1450	.295	45°				32210C
0.864		1.0722	.276	45°			92027	
0.866		1.1024	.394	45°	39006	79006	99006	
0.866		1.1083	.256	45°		71396		
0.866		1.1220	.394	45°	39007	79007	99007	
0.866		1.1810	.375	45°	31876			
0.866		1.1811	.335	45°	31170	71170		
0.866		1.2598	.335	45°			92289	
0.866		1.2598	.394	45°	39017	79017	99017	
0.871		1.0681	.254	45°	31096			
0.871		1.1299	.191	45°	31097			
0.871		1.1933	.254	45°	31098			
0.874		1.0898	.250	45°		71429		
0.874		1.1516	.250	45°		71431		
0.875		1.1300	.219	45°	30754			
0.875		1.1921	.250	45°		71352		
0.875		1.1925	.219	45°		72372		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
0.875		1.1940	.250	45°		71144		
0.875		1.2560	.250	45°	31151	71151		
0.890		1.1102	.236	45°		71807		
0.890		1.1122	.236	45°		71812		
0.905		1.1940	.257	45°	31146	71146		
0.905	1.000	1.2570	.230	45°	30230			
0.905		1.2992	.315	45°		71425		
0.906		1.0984	.256	45°		71804		
0.906		1.1280	.303	45°		72043		
0.906		1.1417	.394	45°	39008	79008	99008	
0.906		1.1496	.256	45°		71410	91410	
0.906		1.1614	.275	45°		72250		
0.906		1.1614	.394	45°	39009	79009	99009	
0.906		1.1700	.275	45°	32198			
0.906		1.1811	.394	45°	39010	79010	99010	
0.906		1.2008	.394	45°	39012	79012	99012	
0.906		1.2205	.335	45°	31171	71171		
0.906		1.2560	.313	45°	31149	71149		
0.906	1.024	1.2677	.248	45°			92042	
0.906	1.024	1.2736	.248	45°			91450	
0.906		1.2992	.394	45°	39020	79020	99020	
0.910		1.2252	.283	45°		71354		
0.910	1.070	1.2560	.281	45°	31333			
0.910		1.2570	.285	45°	31054	71054		
0.925		1.1358	.217	45°			92047	
0.925		1.1640	.220	45°		72266		
0.925		1.1819	.244	45°	31049	71049		
0.929		1.1933	.256	45°		71435		
0.930		1.2570	.325	45°	31612			
0.933		1.1831	.197	45°			92303	
0.933		1.1933	.254	45°	31099			
0.933		1.2559	.254	45°	31105	71105		
0.935		1.1945	.235	45°	31868			
0.938		1.1940	.250	45°	31145	71145		
0.938		1.2560	.188	45°	31152	71152		
0.938		1.3810	.313	45°		71156		
0.941		1.2407	.335	45°		71434		
0.945		1.3386	.335	45°			92256	
0.945		1.1339	.339	45°		72339		
0.945		1.1732	.236	45°		71444		
0.945		1.1811	.335	45°		71411		
0.945		1.1870	.354	45°		71436		
0.945		1.2047	.226	45°		71937		
0.945		1.2205	.394	45°	39013	79013	99013	
0.945		1.2260	.204	45°		78000		
0.945		1.2402	.394	45°	39015	79015	99015	
0.945		1.2598	.260	45°		72381		
0.945		1.2598	.335	45°		71172		
0.945		1.2598	.354	45°		71311	91311	
0.945		1.3386	.394	45°	39023	79023	99023	
0.949		1.1886	.319	45°		72279	92279	
0.960		1.1980	.295	45°				32182C
0.960	1.076	1.1990	.322	45°				72419C
0.965		1.2402	.315	45°			92262	
0.970		1.2570	.270	45°	31613			
0.975		1.2620	.250	30°		71621		
0.975		1.2820	.250	45°		71502		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
0.975		1.3020	.250	45°		71901		
0.975		1.3190	.280	45°	31058			
0.977		1.3190	.300	45°	31340			
0.982	1.065	1.2670	.320	45°	31313			
0.984		1.1850	.248	45°		71345		
0.984		1.1858	.248	45°		71004		
0.984		1.1870	.200	45°		71445		
0.984		1.1870	.248	45°	31005	71005		
0.984		1.2008	.256	45°	31051	71051		
0.984		1.2169	.250	45°			92106	
0.984		1.2205	.237	45°		71448		
0.984		1.2303	.315	45°		71414		
0.984		1.2598	.394	45°	39016	79016	99016	
0.984		1.2602	.315	45°	31808	71808		
0.984		1.2795	.394	45°	39018	79018	99018	
0.984		1.2854	.236	45°		71360		
0.984		1.2992	.315	45°		79072		
0.984		1.2992	.335	45°	31173	71173		
0.984		1.3634	.394	45°	31035	71035		
0.984		1.3780	.394	45°	39026	79026	99026	
0.989		1.2063	.276	45°			92033	
0.996		1.2559	.254	45°	31100			
1.000		1.2550	.250	45°	30764	70764		
1.000		1.2551	.250	45°		71359		
1.000		1.2560	.219	45°	31147	71147		
1.000		1.2560	.250	45°		71150	91150	
1.000		1.2560	.313	45°		71148		
1.000		1.3175	.250	45°	31056			
1.000		1.3190	.250	45°		71154		
1.000		1.3190	.313	45°	31155	71155		
1.000		1.3820	.280	45°	31064			
1.000		1.3820	.410	45°	31063			
1.000		1.5060	.406	45°		71906		
1.004		1.2854	.315	45°	31006	71006		
1.016		1.2402	.276	45°		72226		
1.023		1.2992	.394	45°	39019	79019	99019	
1.023		1.3189	.394	45°	39021	79021	99021	
1.024		1.4429	.335	45°			92257	
1.024		1.1811	.374	45°		72039		
1.024		1.2441	.236	45°		71384		
1.024		1.2480	.256	45°		71409		
1.024		1.2724	.236	45°		71347		
1.024		1.2854	.335	45°	31007	71007		
1.024		1.2992	.256	45°		71348	91348	
1.024		1.3190	.313	45°		72038		
1.024		1.3386	.335	45°	31174	71174		
1.024		1.3390	.375	45°	31880			
1.024		1.3780	.354	45°		71175		
1.024		1.4173	.394	45°	39029	79029	99029	
1.025		1.3433	.299	45°		71361		
1.028		1.2550	.227	45°	31043	71043		
1.042		1.3190	.238	45°	30779	70779		
1.045		1.3190	.316	45°		70563		
1.046		1.3170	.219	45°	30735			
1.046		1.3170	.250	45°	30736			
1.046		1.3170	.313	45°	30737			
1.048		1.3050	.227	45°	30739			

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.050		1.3450	.290	45°	**32132**			
1.055		1.2550	.250	45°	**31052**			
1.059		1.3181	.254	45°	**31101**	**71101**		
1.059		1.3807	.254	45°	**31102**			
1.059		1.4433	.254	45°	**31107**			
1.060		1.3195	.275	45°	**31628**	**71628**		
1.061		1.2593	.276	45°			**92028**	
1.062		1.3190	.188	45°	**30775**			
1.062		1.3800	.219	45°	**31125**	**71125**		
1.063		1.2795	.217	45°			**91914**	
1.063		1.2827	.236	45°		**71403**		
1.063		1.2992	.217	45°		**72195**		
1.063		1.3170	.219	45°	**31289**	**71289**		
1.063		1.3189	.354	45°	**31293**			
1.063		1.3190	.250	45°		**72177**		
1.063		1.3190	.313	45°	**31153**	**71153**		
1.063		1.3268	.315	45°	**31009**	**71009**		
1.063		1.3386	.394	45°	**31273**	**71273**	**91273**	
1.063		1.3484	.315	45°	**31060**	**71060**		
1.063		1.3504	.315	45°		**71356**		
1.063		1.3583	.394	45°	**39024**	**79024**	**99024**	
1.063		1.3800	.188	45°	**30786**	**70786**		
1.063		1.3800	.250	45°	**30788**	**70788**		
1.063		1.3800	.313	45°	**30787**	**70787**		
1.063		1.4173	.354	45°		**71176**		
1.078		1.2840	.160	45°		**72281**		
1.079		1.2531	.335	45°		**72278**		
1.079		1.2728	.335	45°		**72301**		
1.079		1.2925	.335	45°		**72302**		
1.082		1.3228	.287	45°		**71397**		
1.083		1.2835	.354	45°		**71800**		
1.083		1.3071	.276	45°		**71123**		
1.083		1.3425	.236	45°		**71385**		
1.083		1.3450	.236	45°		**72128**		
1.085		1.3190	.305	45°	**30562**			
1.087		1.3530	.200	45°		**71633+5**		
1.093		1.3803	.250	45°		**71363**		
1.094		1.4110	.219	45°		**72371**		
1.098		1.4577	.352	45°	**31113**			
1.100	1.200	1.3750	.227	60°		**72085**		
1.100		1.3820	.300	45°	**31139**	**71139**		
1.100		1.4440	.315	45°	**31329**			
1.100	1.225	1.5050	.316	45°	**30045**			
1.100		1.5070	.315	45°	**31074**			
1.102		1.3051	.276	45°		**71008**	**91008**	
1.102		1.3386	.315	45°		**79073**		
1.102		1.3387	.177	45°		**71306**		
1.102		1.3445	.236	45°			**91449**	
1.102		1.3780	.197	45°		**71408**		
1.102		1.3780	.315	45°		**79074**		
1.102		1.3780	.394	45°	**39025**	**79025**	**99025**	
1.102	1.160	1.3820	.260	45°	**30238**	**70238**		
1.102		1.3878	.315	45°	**31065**	**71065**		
1.102		1.3976	.394	45°	**39027**	**79027**		
1.102		1.4567	.354	45°	**31068**	**71068**		
1.102		1.4961	.394	45°	**39035**	**79035**	**99035**	
1.102		1.5051	.335	45°			**92258**	

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.105		1.4440	.322	45°	**30806**			
1.114		1.3661	.295	45°	**31061**	**71061**		
1.120		1.3820	.325	45°		**71635**		
1.121		1.3807	.254	45°	**31103**			
1.122		1.2913	.346	45°		**72340**		
1.122		1.5051	.343	45°		**71367**		
1.123		1.3190	.300	45°	**31320**	**71320**		
1.125		1.3800	.188	45°	**30790**	**70790**		
1.125		1.3800	.219	45°	**30558**	**70558**		
1.125		1.3800	.250	45°	**30791**	**70791**		
1.125		1.3800	.375	45°		**70792**		
1.125		1.3810	.266	45°	**31157**	**71157**		
1.125		1.4010	.266	45°		**71838**		
1.125		1.4210	.266	45°		**71839**		
1.125		1.4421	.250	45°		**71380**		
1.125		1.4421	.354	45°		**71364**		
1.125		1.4425	.250	45°	**30802**	**70802**		
1.125		1.4425	.313	45°	**30803**	**70803**		
1.125		1.4840	.219	45°		**71903**		
1.125		1.5050	.188	45°	**30706**	**70706**		
1.125		1.5050	.219	45°	**30707**	**70707**		
1.125		1.5050	.250	45°	**30708**			
1.125		1.5050	.313	45°	**30709**	**70709**		
1.125		1.5690	.313	45°		**71163**		
1.126		1.3268	.250	45°	**31010**	**71010**	**91010**	
1.126		1.3307	.250	45°		**71438**		
1.126		1.3484	.250	45°		**71011**		
1.126		1.4016	.158	45°		**71918**		
1.126		1.4421	.315	45°	**31013**	**71013**		
1.126		1.4425	.188	45°	**31225**	**71225**		
1.126		1.4425	.219	45°	**30801**	**70801**		
1.130		1.4429	.315	45°		**71407**		
1.135	1.250	1.4440	.316	45°	**30809**			
1.140		1.4445	.237	45°	**31656**			
1.140	1.250	1.5050	.325	45°	**30105**	**70105**		
1.141		1.3920	.318	45°	**32183**			
1.141		1.4370	.394	45°	**39030**	**79030**	**99030**	
1.141		1.5354	.394	45°	**39038**	**79038**		
1.141		1.5748	.394	45°	**39041**	**79041**	**99041**	
1.142		1.3583	.295	45°			**92075**	
1.142		1.4272	.315	45°		**71420**		
1.142		1.3268	.295	45°			**92125**	
1.142		1.3615	.220	60°	**32265**			
1.142		1.3701	.256	45°		**71809**		
1.142		1.3701	.283	45°		**71362**		
1.142		1.3976	.394	45°	**31274**	**71274**		
1.142		1.4016	.315	45°	**31012**	**71012**		
1.142		1.4100	.275	45°	**32197**			
1.142		1.4173	.394	45°	**39028**	**79028**	**99028**	
1.142		1.4445	.336	45°	**31658**			
1.142		1.4449	.315	45°		**71439**		
1.142		1.4685	.315	45°		**71365**		
1.142		1.4960	.434	45°	**32437**			
1.142		1.4961	.354	45°		**71178**		
1.148		1.5008	.283	45°		**71366**		
1.150		1.4445	.257	45°	**31659**			
1.152		1.4220	.315	45°	**31066**	**71066**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.152		1.4236	.250	45°		71412		
1.157		1.3248	.260	45°			92222	
1.161		1.3976	.374	45°	31294			
1.166		1.3638	.276	45°			92032	
1.180	1.280	1.5060	.214	45°		71207		
1.180	1.345	1.5060	.307	45°	31258	71258		
1.180	1.318	1.5070	.305	45°	30031			
1.180	1.450	1.5510	.320	45°	31972			
1.180		1.5690	.305	45°	31079			
1.180		1.5695	.316	45°	31674			
1.180		1.5823	.413	45°	31081	71081		
1.181		1.3839	.291	45°		71805		
1.181		1.3860	.260	45°		72286		
1.181		1.4055	.339	45°		71423		
1.181		1.4173	.315	45°		79075		
1.181		1.4440	.280	45°	31646			
1.181		1.4567	.315	45°	31069	71069		
1.181		1.4567	.394	45°	39031	79031	99031	
1.181		1.4646	.276	45°	31070	71070		
1.181		1.4650	.218	45°			92100	
1.181	1.350*	1.4665	.282	44°	32239			
1.181		1.4764	.394	45°	39033	79033		
1.181		1.4803	.260	45°			92051	
1.181		1.4803	.281	45°		71854		
1.181		1.4961	.276	45°	31038	71038		
1.181		1.4961	.315	45°		79076		
1.181		1.4965	.238	45°			92102	
1.181		1.5059	.157	45°		71853		
1.181		1.5354	.276	45°		71369		
1.181		1.5354	.315	45°		79077		
1.181		1.5354	.354	45°		71179		
1.181		1.5748	.374	45°		71181		
1.181		1.5953	.394	45°			92035	
1.181		1.6142	.394	45°	39044	79044		
1.181		1.7520	.394	45°	39056	79056		
1.181		1.4114	.244	45°		71399		
1.181		1.6000	.315	45°			92259	
1.183	1.362*	1.4618	.264	45°		72390		
1.183		1.5059	.254	45°	31108			
1.183		1.5248	.394	45°		71036		
1.183		1.5681	.254	45°	31104			
1.186		1.4405	.313	45°	31111	71111		
1.186		1.5657	.376	45°	31112	71112		
1.187		1.4791	.313	45°		71353		
1.187		1.6310	.450	45°	32425			
1.188		1.5000	.250	45°	31198			
1.188		1.4421	.250	45°	31402	71402		
1.188		1.4425	.219	45°	31030	71030		
1.188		1.4440	.219	45°		71159		
1.188		1.4440	.250	45°	31161	71161		
1.188		1.5043	.313	45°		71342		
1.188		1.5045	.313	45°	31032			
1.188		1.5050	.218	45°	30823			
1.188		1.5050	.250	45°	30822	70822		
1.188		1.5060	.313	45°	31162	71162		
1.188		1.5680	.313	45°	30839	70839		
1.189		1.4425	.217	45°		71866		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.195		1.5060	.315	45°	**31326**			
1.195		1.5060	.360	45°	**31501**			
1.200		1.4440	.297	45°	**30818**			
1.200		1.4803	.276	45°		**71400**		
1.205		1.5060	.322	45°	**31909**			
1.210		1.5060	.345	45°	**31214**			
1.210	1.276	1.5070	.345	45°	**31291**			
1.213		1.4777	.154	45°		**71305**		
1.215	1.405	1.5040	.255	45°	**32348**			
1.215	1.344	1.5050	.219	45°	**30705**	**70705**		
1.215		1.5050	.250	45°	**30722**	**70722**		
1.215	1.275	1.5050	.280	45°	**30015**			
1.215		1.5050	.305	45°	**30721**			
1.215		1.5050	.310	45°	**30716**			
1.215		1.5050	.318	45°		**70717**		
1.219		1.4425	.219	45°	**31031**	**71031**		
1.219		1.4862	.344	45°		**71864**		
1.219	1.408*	1.5020	.255	33°				**72405C**
1.219		1.5695	.317	45°	**31287**	**71287**		
1.220		1.4138	.238	45°			**92105**	
1.220		1.4252	.295	45°		**71121**		
1.220		1.4449	.295	45°		**71440**		
1.220		1.4567	.394	45°	**31275**			
1.220		1.4630	.354	45°		**71908**		
1.220		1.4764	.335	45°	**31071**			
1.220		1.4823	.276	45°	**31014**			
1.220		1.4843	.315	45°	**31015**	**71015**		
1.220		1.4862	.335	45°		**71387**		
1.220		1.4961	.394	45°	**31276**	**71276**	**91276**	
1.220		1.5051	.315	45°	**31073**	**71073**		
1.220	1.405	1.5110	.275	45°	**32351**			
1.220		1.5157	.335	45°		**71388**		
1.220		1.5157	.343	45°		**71368**		
1.220		1.5157	.394	45°	**39036**	**79036**		
1.220		1.5209	.285	45°		**71432**		
1.220		1.5256	.335	45°		**71389**		
1.220		1.5354	.335	45°		**71180**		
1.220	1.356	1.5695	.344	45°	**31292**			
1.220		1.6142	.335	45°		**71182**		
1.220		1.6535	.394	45°	**39047**	**79047**		
1.221		1.5335	.335	45°	**31016**	**71016**		
1.228		1.4764	.274	45°		**72341**		
1.230		1.4440	.250	45°	**31067**			
1.230		1.5060	.278	45°	**31244**			
1.230		1.5690	.310	45°	**31078**			
1.236		1.4764	.335	45°		**71858**		
1.238	1.380	1.4852	.315	45°	**32346**			
1.240		1.4750	.227	0°	**31044**	**71044**		
1.240		1.4764	.335	45°		**71386**		
1.240		1.5400	.275	45°		**72126**		
1.240		1.5157	.295	45°			**92263**	
1.243		1.5700	.354	45°	**31318**			
1.246		1.5059	.254	45°	**31109**	**71109**		
1.246	1.546*	1.6565	.375	55°	**31478**			
1.250		1.4440	.219	45°	**30556**	**70556**		
1.250		1.4440	.313	45°	**31160**	**71160**		
1.250	1.372	1.4724	.310	45°		**72420**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.250		1.5043	.281	45°		71343		
1.250		1.5050	.188	45°		70710		
1.250		1.5050	.219	45°	30711	70711		
1.250	1.390	1.5050	.240	45°	30024			
1.250		1.5050	.250	45°	30712	70712		
1.250		1.5050	.313	45°	30714	70714		
1.250		1.5050	.375	45°	30715			
1.250		1.5260	.250	45°		71840		
1.250		1.5285	.265	45°	31992			
1.250		1.5669	.313	45°		71344		
1.250		1.5670	.188	45°	31870	71870		
1.250		1.5673	.253	45°	31077			
1.250		1.5680	.219	45°	30640	70640		
1.250		1.5680	.250	45°	30645	70645		
1.250		1.5680	.281	45°	30740	70740		
1.250	1.450*	1.5680	.281	35°	32409			
1.250		1.5680	.313	45°	30647	70647		
1.250		1.5680	.343	45°	32113			
1.250		1.5890	.250	45°		71904		
1.250		1.6090	.250	45°		71905		
1.250		1.6300	.219	45°	30661	70661		
1.250		1.6300	.250	45°	30662	70662		
1.250		1.6300	.313	45°	30663	70663		
1.250		1.6300	.375	45°	30853	70853		
1.250		1.6320	.312	45°	31332			
1.250		1.6950	.375	45°		71701+5		
1.250		1.7550	.250	45°		71128		
1.255		1.5365	.359	45°		71671		
1.255	1.372	1.5685	.319	45°	31199	71199		
1.260		1.4571	.240	45°	32001			
1.260		1.4830	.350	45°	32174			
1.260		1.4850	.237	45°	30738			
1.260		1.5161	.250	45°			92104	
1.260		1.5354	.394	45°	39037	79037	99037	
1.260		1.5472	.315	45°	31075	71075		
1.260		1.5551	.394	45°	39039	79039		
1.260		1.5748	.394	45°	39040	79040		
1.260		1.5945	.394	45°	39042	79042		
1.260		1.6142	.315	45°		79079		
1.260		1.6142	.413	45°		72271		
1.260	1.340	1.6340	.394	45°	31323			
1.260		1.6535	.374	45°	31183	71183		
1.260		1.6929	.394	45°	39050	79050		
1.265	1.320	1.5695	.280	45°	31286			
1.272		1.5649	.256	45°		72009		
1.273		1.5000	.180	60°	32280			
1.280		1.5059	.295	45°		71419		
1.280		1.7362	.315	45°			92260	
1.280	1.500*	1.6500	.350	45°	32076	72076		
1.280		1.7200	.350	45°	32356			
1.281	1.398*	1.5555	.236	30°		72374		
1.282		1.6000	.299	45°		71371		
1.287		1.4803	.283	45°		71379		
1.298		1.6310	.317	45°	31218			
1.298	1.422	1.6320	.317	45°	31236			
1.299		1.5354	.315	45°		71370		
1.299		1.5551	.335	45°	31076	71076		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.299		1.5630	.339	45°		71422		
1.299		1.5630	.354	45°		71442		
1.299		1.5650	.335	45°		71802		
1.299		1.5748	.315	45°		79078		
1.299		1.5803	.315	45°			92434	
1.299		1.6142	.394	45°	39043	79043	99043	
1.299		1.6339	.394	45°	39045	79045	99045	
1.299		1.6535	.315	45°		79080		
1.299		1.6535	.335	45°		71184		
1.299		1.6535	.374	45°		71931		
1.299		1.6591	.315	45°			92435	
1.299		1.6929	.335	45°	31186	71186	91186	
1.299		1.7323	.394	45°	39053	79053	99053	
1.300		1.5400	.315	45°	32133			
1.300	1.385*	1.5555	.189	45°		72375		
1.300		1.6000	.409	45°	32072			
1.300		1.6470	.325	45°		72129		
1.300		1.6940	.360	45°	31083			
1.310	1.428	1.6050	.250	45°	32189	72189		
1.312	1.390	1.5680	.219	45°	30541	70541		
1.312		1.5680	.219	45°	30643	70643	90643	30643C
1.312	1.390	1.5680	.250	45°	30503	70503		
1.312		1.5680	.250	45°	30644	70644		
1.312		1.5680	.313	45°	30731			
1.312		1.5730	.219	45°	30643+5	70643+5		
1.312		1.6460	.350	45°	31226			
1.312		1.6570	.395	45°		71697		
1.312		1.6920	.219	45°	30674	70674		
1.312		1.6920	.250	45°	30675	70675		
1.312		1.6920	.313	45°	30676	70676		
1.312		1.6920	.375	45°	31270			
1.312		1.6921	.315	45°		71374		
1.312		1.7550	.395	45°	31232			
1.313		1.5669	.177	45°		71851		
1.313		1.5680	.188	45°	30840	70840		
1.313		1.5680	.219	30°		70838		
1.313		1.5680	.280	45°		71267		
1.313		1.5780	.250	45°	30644+10			
1.313		1.6090	.219	45°		71841		
1.313		1.6090	.414	45°		72148		
1.313		1.6250	.250	45°	31196			
1.313		1.6300	.219	45°	30649	70649	90649	
1.313		1.6300	.250	45°	30650	70650		
1.313		1.6300	.281	45°	31488	71488		
1.313		1.6300	.313	45°	30651	70651		
1.313		1.6300	.395	45°	30854	70854		
1.313		1.6535	.250	45°		71852		
1.313		1.6560	.375	45°	31272			
1.313		1.7140	.313	45°		71503		
1.313		1.7550	.250	45°	30889			
1.313		1.7560	.313	45°		71165		
1.319		1.5591	.374	45°	31295			
1.319		1.5748	.354	45°	31296			
1.319		1.5827	.374	45°	31278			
1.319		1.5953	.394	45°			92052	
1.319		1.6220	.260	45°		71437		
1.319		1.6260	.236	45°			92049	

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.319		1.6260	.413	45°		72270		
1.319		1.6346	.394	45°			92384	
1.319		1.6614	.413	45°	31082	71082		
1.320		1.6260	.375	45°		71372		
1.320		1.6310	.300	45°	31223			
1.321	1.549*	1.6300	.393	60°		72224		
1.322	*	1.6020	.276	36.3°				72432C
1.322		1.6245	.375	45°		70855		
1.323	1.580*	1.6300	.240	45°	32213			
1.327		1.5410	.256	45°		71416		
1.329		1.6320	.280	45°	30860	70860		
1.333		1.6320	.237	45°	31690			
1.334		1.6300	.313	45°		70642		
1.335		1.7333	.372	45°	31110			
1.338		1.6535	.394	45°	39046	79046		
1.338		1.6732	.394	45°	39048	79048		
1.339		1.5827	.295	45°		71017		
1.339		1.5984	.276	45°		71018		
1.339		1.6142	.295	45°	31039	71039		
1.339		1.6386	.315	45°	31019	71019		
1.339		1.6417	.250	45°		71020		
1.339		1.6694	.177	45°	31308			
1.339		1.6929	.325	45°		71185		
1.339		1.7323	.374	45°	31187	71187		
1.339		1.7717	.472	45°	39058	79058	99058	
1.339		1.8110	.472	45°	39061	79061		
1.340		1.6500	.350	45°	32069			
1.340		1.6500	.425	45°	32138			
1.344		1.5670	.219	45°	31033			
1.344		1.6220	.197	45°		71946		
1.344		1.6300	.250	45°	31489	71489		
1.344		1.6310	.313	45°	31164	71164		
1.344		1.6925	.313	45°	30559	70559		
1.345	1.444	1.6000	.400	45°	32089			
1.348	1.524	1.6285	.365	45°		71924		
1.348		1.6300	.218	45°	30857			
1.350	1.626*	1.6560	.375	45°	31279			
1.350		1.6700	.375	45°				22194C
1.350		1.6929	.315	45°		71406		
1.358		1.7220	.265	45°	31709	71709	91709	
1.358		1.7717	.394	45°		71227		
1.358		1.5846	.287	45°		71418		
1.359	1.500*	1.6289	.250	30°		72305		
1.360	1.565*	1.7210	.264	45°		72218		
1.365	1.487	1.6535	.250	40°		72343		
1.366		1.5413	.232	45°		71426		
1.367		1.6500	.380	45°	32187			
1.368		1.5827	.272	45°		71803		
1.370		1.6900	.500	R.125				22264C
1.372	1.429	1.6690	.272	37°	30868			
1.372	1.492	1.6920	.281	53°		71960		
1.374		1.6201	.256	45°		71413		
1.375		1.5680	.218	45°	30841			
1.375		1.6300	.219	45°	30648	70648		
1.375		1.6300	.250	45°	30646	70646		
1.375		1.6300	.313	45°	30732	70732		
1.375		1.6310	.188	45°	31046	71046		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.375		1.6344	.256	45°	**32287**			
1.375		1.6350	.219	45°	**30648+5**			
1.375		1.6450	.250	45°	**30864**	**70864**		
1.375		1.6920	.188	45°	**31042**			
1.375		1.6920	.219	45°	**30677**	**70677**		
1.375		1.6920	.250	45°	**30678**	**70678**		
1.375		1.6920	.313	45°	**30679**	**70679**		
1.375		1.6920	.375	45°	**30871**	**70871**		
1.375		1.6945	.295	45°	**31707**	**71707**		
1.375	*	1.7500	.550	-				**32233C**
1.375		1.7550	.219	45°	**30652**	**70652**		
1.375		1.7550	.250	45°	**30653**	**70653**		
1.375		1.7550	.313	45°	**30654**	**70654**		
1.375		1.7570	.375	45°	**31129**	**71129**		
1.375		1.7570	.450	45°	**31900**			
1.375	1.610*	1.8045	.375	45°	**31825**			
1.375		1.8170	.313	45°		**70903**		
1.375		1.8190	.450	45°	**32426**			
1.378		1.6339	.315	45°			**92074**	
1.378		1.6634	.315	45°		**71421**		
1.378		1.6929	.315	45°		**79081**		
1.378		1.6929	.394	45°	**39049**	**79049**		
1.378		1.7126	.394	45°	**39051**	**79051**		
1.378		1.7559	.295	45°		**71381**		
1.380	1.717*	1.7570	.400	58°				**22199C**
1.384		1.7059	.250	45°		**71085**		
1.384		1.7059	.354	45°	**31084**	**71084**		
1.385		1.6929	.315	45°		**71391**		
1.385	1.520	1.6940	.305	45°	**30190**			
1.385	1.559	1.7570	.380	45°		**70127**		
1.390	1.489	1.6500	.400	45°	**32091**			
1.390	1.480	1.6945	.305	45°	**31288**			
1.392		1.8150	.297	45°		**71376**		
1.394		1.6937	.305	45°	**31856**			
1.394		1.7035	.315	45°	**31857**			
1.398		1.6023	.315	45°			**92124**	
1.398		1.6201	.256	45°		**71813**		
1.398		1.6299	.197	45°	**31859**			
1.398		1.6614	.315	45°		**71810**		
1.398		1.6811	.335	45°	**31811**	**71811**		
1.398		1.7374	.274	45°		**72342**		
1.398		1.8110	.394	45°		**71188**		
1.400	1.566	1.6500	.375	45°	**32088**			
1.405		1.8190	.315	45°	**31137**	**71137**		
1.406		1.6300	.250	45°	**31482**			
1.406		1.6450	.187	45°		**71996**		
1.406		1.6920	.250	45°	**30670**	**70670**		
1.406		1.6925	.313	45°	**31490**			
1.406		1.7863	.288	45°	**31087**	**71087**		
1.408	1.580*	1.6500	.375	45°	**31979**			
1.409		1.7874	.297	45°		**71427**		
1.410		1.6875	.365	20°			**91828**	
1.410	1.560	1.7570	.315	45°	**30165**			
1.412		1.6600	.256	45°		**72178**		
1.414		1.8180	.334	45°		**71954**		
1.417		1.6772	.315	45°		**71373**		
1.417		1.7028	.315	45°	**31021**	**71021**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.417		1.7323	.276	45°		71375		
1.417		1.7323	.315	45°		79082		
1.417		1.7323	.394	45°	39052			
1.417		1.7327	.238	45°			92101	
1.417		1.7374	.354	45°		72215		
1.417		1.7520	.394	45°	39071	79071		
1.417		1.7520	.433	45°	39055	79055		
1.417		1.7717	.315	45°		79083		
1.417		1.8060	.292	45°			91933	
1.417		1.8504	.472	45°	39065	79065	99065	
1.417	1.668*	1.8898	.360	35°			92391	
1.417		1.8898	.335	45°			92261	
1.418		1.7969	.390	45°	31088	71088		
1.419	1.598*	1.6980	.264	45°		72389		
1.433		1.7725	.270	45°		72416		
1.435	1.505	1.8200	.314	45°	31319			
1.435		1.8740	.382	45°		71378		
1.437		1.6370	.350	45°	32173			
1.437	1.625*	1.6930	.250	30°		71947		
1.437		1.7524	.157	45°	31862			
1.437		1.7550	.375	45°	32350			
1.437		1.7560	.302	45°		71221		
1.437		1.8303	.375	45°	31090	71090		
1.437		1.8504	.394	45°	31228	71228		
1.437		1.8810	.450	45°	32427			
1.438		1.5980	.188	45°		72393		
1.438		1.6100	.188	45°		72394		
1.438		1.6920	.156	45°	30872			
1.438		1.6920	.188	45°	30873	70873		
1.438		1.6920	.219	45°	30664	70664		
1.438		1.6920	.250	45°	30673	70673		
1.438		1.6920	.313	45°	30733	70733		
1.438		1.6970	.219	45°		70664+5		
1.438		1.7550	.219	45°	30655	70655		
1.438		1.7550	.250	45°	30656	70656		
1.438	1.500	1.7550	.302	45°	31117			
1.438		1.7550	.313	45°	30657	70657		
1.438	1.500	1.7560	.188	45°	31045			
1.438		1.8170	.313	45°	30905	70905		
1.438		1.8175	.375	45°	31459			
1.438		1.8180	.219	45°	31269	71269		
1.438		1.8180	.250	45°	30904			
1.438		1.8180	.312	45°	32111			
1.440		1.7913	.374	45°		71801		
1.440	1.508	1.8190	.316	45°	31327			
1.440	1.515	1.8195	.315	45°	31284			
1.445	1.617	1.7560	.310	45°	31215			
1.450		1.6940	.297	45°	30881			
1.450		1.8120	.197	30°	31843			
1.455	1.620	1.7330	.365	45°		71925		
1.457		1.7205	.335	45°		71814		
1.457	1.457*	1.7320	.365	R.212		72242		
1.457		1.7421	.315	45°	31086	71086		
1.457		1.7425	.250	45°			92103	
1.457		1.7570	.312	45°	31317			
1.457		1.7618	.335	45°		71392		
1.457		1.7717	.335	45°		71393		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.457		1.7717	.472	45°	**39057**	**79057**	**99057**	
1.457		1.7913	.472	45°	**39059**	**79059**		
1.457		1.8567	.339	45°		**71339**		
1.457		1.8898	.472	45°	**39069**	**79069**		
1.457		1.8976	.284	45°		**72221**		
1.468		1.7550	.220	45°	**32273**			
1.468		1.7550	.312	45°	**32109**			
1.468		1.7570	.276	45°	**31715**			
1.468		1.8180	.313	45°	**30680**	**70680**	**90680**	
1.469		1.6831	.295	45°		**71390**		
1.469		1.7840	.290	45°		**71230**		
1.476		1.7559	.281	45°	**31863**			
1.476		1.7810	.311	45°		**71257**	**91257**	
1.476		1.8890	.394	45°		**71189**		
1.476		1.8900	.434	45°	**31894**			
1.480	1.642*	1.7421	.282	44°	**32240**			
1.484		1.8170	.250	45°	**31089**			
1.487		1.7420	.268	45°	**31907**			
1.490	1.600	1.8190	.305	45°	**30030**			
1.496		1.7815	.315	45°		**71404**		
1.496		1.8110	.315	45°		**79084**		
1.496		1.8110	.472	45°	**39060**	**79060**		
1.496		1.8190	.157	45°	**31307**			
1.496		1.8307	.472	45°	**39062**	**79062**		
1.496		1.8358	.285	45°	**31433**	**71433**		
1.496		1.8898	.433	45°	**39068**	**79068**		
1.499	1.619*	1.8540	.273	60°		**72217**		
1.500		1.7550	.219	45°	**30658**	**70658**		
1.500		1.7550	.250	45°	**30659**	**70659**	**90659**	**20659C**
1.500		1.7550	.313	45°		**70660**		
1.500		1.7863	.288	45°		**72002**		
1.500		1.8170	.375	45°	**31131**	**71131**		
1.500		1.8179	.256	45°	**32008**			
1.500	1.625	1.8180	.219	45°	**30530**	**70530**		
1.500		1.8180	.219	45°	**30668**	**70668**		
1.500		1.8180	.250	45°	**30672**	**70672**		
1.500		1.8180	.281	45°	**30741**			
1.500		1.8180	.312	45°	**30907**	**70907**	**90907**	**20907C**
1.500	1.555	1.8195	.278	45°	**31285**			
1.500		1.8500	.281	60°			**92373**	
1.500		1.8530	.273	30°	**31734**	**71734**		
1.500	*	1.8535	.272	30°		**72364**		
1.500		1.8550	.281	60°			**92373+5**	
1.500		1.8600	.281	60°			**92373+10**	
1.500		1.8700	.281	60°			**92373+20**	
1.500		1.8800	.250	45°	**30919**	**70919**		
1.500		1.8800	.375	45°	**31091**	**71091**		**31091C**
1.500		1.8810	.313	45°	**30920**	**70920**		
1.500		1.9440	.313	45°	**31166**	**71166**		
1.500		1.9450	.450	45°	**31898**			
1.500		1.9685	.335	45°			**92282**	
1.505		1.8161	.280	45°		**71355**		
1.505	1.689	1.8820	.380	45°		**70138**		
1.511		1.7648	.265	45°	**31994**			
1.514	1.680*	1.7856	.275	R.159	**32327**			
1.516		1.9290	.434	45°	**31895**			
1.516		1.9291	.394	45°		**71190**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.520		1.8180	.177	45°		71961		
1.520		1.8180	.300	45°	31910			
1.520		1.8180	.334	45°		71951		
1.535		1.7815	.295	45°		71472		
1.535	1.731*	1.8100	.364	30°		72392		
1.535		1.8504	.472	45°	39063			
1.535		1.8661	.315	45°		71377		
1.535		1.8701	.472	45°	39066	79066		
1.535		1.9685	.394	45°		71192		
1.540	1.650*	1.8120	.365	30°		72359		
1.540		1.8125	.365	60°	31827		91827	
1.540		1.8170	.365	30°	31726			
1.562	1.655	1.8170	.365	45°		70542		
1.562	1.740	1.8800	.187	45°		71930		
1.562		1.8800	.250	45°	30509	70509		
1.562		1.8800	.312	45°	30923	70923		
1.562		2.0600	.450	45°	32208			
1.563		1.8180	.219	45°	30667	70667		
1.563		1.8180	.250	45°	30671	70671		
1.563		1.8180	.280	45°	32379			
1.563		1.8180	.313	45°	31000	71000		
1.563		1.8800	.438	30°		71739		
1.563		1.8810	.219	45°	31238	71238		
1.563		1.9420	.375	45°	32115			
1.563		1.9430	.219	45°	30933	70933		
1.563		1.9430	.250	45°	30932	70932		
1.563		1.9430	.313	45°		71496		
1.565	1.725*	1.8785	.438	30°		72307		
1.567	1.714*	1.8134	.282	44°	32238			
1.570		1.8195	.284	60°		72011		
1.570	1.660*	1.8203	.282	30°		72306		
1.570	1.711*	1.8545	.249	45°		72376		
1.573		1.9435	.379	45°	31281			
1.575		1.8307	.276	45°			92050	
1.575		1.8810	.317	45°	31217			
1.575		1.8819	.315	45°		71394		
1.575	1.692	1.8820	.317	45°	31034	71034		
1.575		1.8820	.320	45°	31316			
1.575		1.8898	.472	45°	39067	79067		
1.575		1.8917	.315	45°		71913		
1.575		2.0079	.217	45°		71415		
1.575		2.0079	.413	45°		71193		
1.575		2.0508	.364	45°		71816		
1.576	1.788*	1.8545	.230	45°		72232		
1.580		2.0000	.375	45°	32163			
1.593	1.790	2.0000	.375	45°	32358			
1.594		1.7560	.278	45°	31209			
1.594		1.8800	.375	45°	32119			
1.594		1.8810	.250	45°	30687	70687		
1.594		1.8810	.313	45°	30688	70688		
1.594		1.8810	.375	45°			92026	
1.594		2.0180	.281	45°		71765		
1.597	1.597*	1.9620	.365	R.178		72241		
1.600		1.8820	.252	45°	31092	71092		
1.600	1.870*	2.0000	.375	45°	32078			
1.600		2.0060	.375	45°		71988		
1.602		2.0005	.377	45°	32017	72017		22017C

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.614		1.9685	.315	45°		72065		
1.614		2.0472	.413	45°	31194	71194		
1.620		1.7800	.188	45°		72395		
1.625		1.8175	.219	45°	31283			
1.625	1.775	1.8800	.219	45°		71955		
1.625		1.8810	.219	45°	30681	70681		
1.625		1.8810	.250	45°	30682	70682		
1.625		1.8810	.281	45°	30683			
1.625		1.8810	.313	45°	30684	70684		
1.625		1.8810	.453	45°		70686		
1.625		1.9120	.281	45°	31746	71746		
1.625		1.9430	.250	45°	31497	71497		
1.625		1.9430	.281	45°	31749			
1.625		1.9430	.312	45°	31134	71134		
1.625		1.9430	.375	45°	31471			
1.625		1.9435	.219	45°	31262			
1.625		1.9600	.375	45°				22252C
1.625		2.0060	.219	45°	30723			
1.625		2.0060	.250	45°	30724	70724		
1.625		2.0060	.281	45°	30725		90725	
1.625		2.0060	.297	45°		70726		
1.625		2.0060	.313	45°	30727	70727		
1.625		2.0060	.344	45°	30728			
1.625		2.0060	.375	45°	30729	70729		
1.625		2.0060	.438	45°	30730			
1.625		2.0110	.281	45°			90725+5	
1.625		2.0160	.281	45°			90725+10	
1.625		2.0260	.281	45°			90725+20	
1.625		2.0360	.281	45°			90725+30	
1.630		2.0060	.280	0°	31829		91829	
1.630		2.0110	.280	0°			91829+5	
1.634		1.9232	.177	45°	31860			
1.635		1.8560	.280	45°		71268		
1.652	1.978*	2.1360	.310	52°		72171		
1.654		1.9291	.315	45°		71191		
1.654		2.0866	.413	45°	31195	71195	91195	
1.655		1.9600	.375	45°				32366C
1.665		1.9570	.280	45°	32196			
1.665	1.837	2.0000	.375	60°	32237			
1.670		2.0150	.282	0°			91959	
1.687		2.0680	.450	45°	32428			
1.688		2.0680	.281	45°	31768	71768		
1.688		1.9430	.188	45°	30935			
1.688		1.9430	.219	45°	30936			
1.688		1.9430	.281	45°	32378			
1.688		1.9440	.250	45°	30560	70560		
1.688		2.0035	.438	45°	31758			
1.688		2.0060	.188	45°		72344		
1.688		2.0060	.219	45°	30698	70698		
1.688	1.900*	2.0060	.219	30°	31957	71957		
1.688		2.0060	.250	45°	30699	70699		
1.688		2.0060	.282	45°	30700	70700		
1.688	1.949*	2.0060	.282	35°	32408			
1.688		2.0060	.313	45°	30701			
1.688		2.0060	.375	45°	30702			
1.688		2.0060	.438	45°	30703			
1.690	*	2.0030	.280	30°			92362	

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.690		2.1320	.450	45°	**31897**			
1.691	1.860*	1.9510	.262	R.187	**32324**			
1.692		2.0880	.299	45°	**31771**			
1.693		1.9685	.295	45°		**72040**	**92040**	
1.693		1.9728	.394	45°		**72331**		
1.693		1.9807	.402	45°		**72332**		
1.693		1.9886	.409	45°		**72333**		
1.693		2.0673	.354	45°	**31401**	**71401**		
1.693	1.929	2.0905	.327	20°			**92400**	
1.693	1.990	2.0906	.303	70°				**17846C**
1.693		2.0906	.354	45°		**71430**		
1.693	1.990	2.0906	.374	70°		**72031**		
1.693		2.0906	.394	45°	**31424**	**71424**		
1.693		2.0933	.354	45°		**72382**		
1.693		2.0945	.276	45°			**97999**	
1.693		2.1102	.354	45°		**71447**		
1.693		2.1102	.394	45°		**71441**		
1.693		2.1140	.394	45°			**92399**	
1.693		2.1339	.339	45°		**71338**	**91338**	
1.693		2.1340	.394	45°		**72216**		
1.694		1.9800	.250	45°	**30297**			
1.695		1.9550	.270	45°	**32396**			
1.697		2.0902	.382	45°	**31475**			
1.697		2.1098	.402	45°	**31093**	**71093**		
1.700	*	2.0080	.280	30°		**72363**		
1.700		2.1370	.400	45°		**71504**		
1.703		1.9181	.197	45°	**31945**			
1.705	1.978*	2.1360	.295	60°		**72172**		
1.712		2.0010	.385	30°	**31756**	**71756**		
1.712		2.0110	.385	30°	**31756+10**			
1.720		2.1516	.394	45°			**92402**	
1.720	1.863	2.2000	.312	45°	**32093**			
1.726		2.0276	.217	45°	**31341**			
1.730	1.906	2.0006	.264	49°		**72401**		
1.732		2.0441	.406	45°	**32034**		**92034**	
1.732		2.0835	.406	45°			**92383**	
1.732		2.1654	.472	45°	**31141**	**71141**		
1.732		2.1700	.433	45°		**71783+5**		
1.745	1.844	2.0000	.400	45°	**32090**			
1.748	2.026*	2.0675	.392	45°		**72223**		
1.750		2.0060	.188	45°	**30690**	**70690**		
1.750		2.0060	.219	45°	**30691**	**70691**		
1.750	1.880	2.0060	.219	45°		**72298**		
1.750		2.0060	.250	45°	**30692**	**70692**		
1.750		2.0060	.313	45°	**30694**			
1.750		2.0500	.270	45°	**32397**			
1.750		2.0669	.413	45°		**72269**		
1.750		2.0680	.281	45°	**31769**			
1.750		2.0685	.219	45°	**31249**	**71249**		
1.750		2.0695	.420	45°		**72424**		
1.750		2.1305	.219	45°		**71777**		
1.750		2.1305	.250	45°		**71776**		
1.750		2.1600	.350	45°		**72347**		
1.750		2.1600	.375	45°			**92022**	
1.750		2.1640	.450	45°	**32209**			
1.751		2.1701	.336	80°	**32041**			
1.751		2.1701	.336	80°		**72044**		

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
1.752		2.0709	.236	45°			92048	
1.752		2.1339	.287	45°		71417		
1.765	1.809	2.0485	.250	45°	32188			
1.765		2.1050	.375	45°	31310			
1.770	2.016*	2.0680	.250	45°	32212			
1.771	1.928*	2.0485	.339	30°		72361		
1.772		2.0270	.177	45°	32004	72004		
1.781		2.0485	.344	30°	31766			
1.800		2.1250	.437	45°			92186	
1.800		2.1700	.375	45°	32354			
1.800		2.1940	.450	45°	32429			
1.810		2.1310	.375	45°		71990		
1.812		2.0680	.250	45°	30963	70963		
1.812		2.1200	.375	45°	31454			
1.812		2.1300	.250	45°	30557	70557		
1.812	2.030	2.1300	.437	45°	32139		92139	
1.812		2.1400	.375	45°	31830			
1.812		2.1940	.250	45°	31135			
1.812		2.1940	.375	45°		72276		
1.813		2.0680	.188	45°		71770		
1.813		2.1305	.188	45°	31779		91779	
1.813		2.0050	.219	45°	30952	70952		
1.813	1.875	2.0680	.250	45°	30964			
1.813		2.1300	.313	45°	31124			
1.813		2.1310	.219	45°	31240	71240		
1.818		2.1000	.431	45°	32071			
1.820	*	2.1856	.338	36.8°		72431		
1.820		2.2555	.375	45°				31949C
1.830	1.983	2.2000	.312	45°	32087			
1.850		2.2500	.320	45°				22193C
1.870		2.2560	.450	45°	32430			
1.875		2.1300	.219	45°	30974			
1.875		2.1300	.250	45°	30537	70537		
1.875		2.1925	.375	45°	32349			
1.875		2.1935	.281	45°	30984	70984		
1.875		2.2550	.375	45°	31787	71787		
1.875		2.2555	.313	45°		71470		
1.890		2.4094	.354	45°				17904C
1.904		2.3800	.375	45°				22228C
1.906		2.1300	.177	45°	32003			
1.906		2.1300	.234	45°		71473		
1.906		2.1305	.250	45°	31498	71498		
1.927	2.140*	2.3810	.319	30°		72360		
1.937		2.1930	.250	45°	31282			
1.937		2.3120	.220	45°	32272			
1.937		2.3120	.312	45°	32108			
1.938		2.2555	.188	45°	30989	70989		
1.938		2.2560	.219	45°		71261		
1.938		2.2560	.375	45°	31983			
1.947	2.120	2.2500	.312	45°	32357			
1.956	2.287*	2.4074	.284	30°				17563C
1.960		2.2560	.250	60°			92156	
1.960		2.2590	.250	45°		71995		
1.960	2.135*	2.2590	.250	45°		72246		
1.970	2.290*	2.3500	.375	53°	31456			
1.970		2.3500	.375	45°	31981			
2.000		2.3180	.250	45°	30991	70991	90991	

* Special ID Features

VALVE SEAT PROGRESSIVE LISTING BY INSIDE DIAMETER

ID	ID TOP TAPER	ACTUAL OD	DEPTH	SEAT ANGLE	PART NUMBER SERIES 30000	70000	90000	"Killer Bee"
2.000		2.3180	.375	45°	**32118**			
2.000		2.3819	.394	45°		**71815**		
2.000		2.4505	.377	45°				**22018C**
2.008		2.3665	.350	45°		**72328**		
2.008		2.3744	.358	45°		**72329**		
2.008		2.3823	.366	45°		**72330**		
2.011		2.3657	.350	45°	**31476**			
2.030		2.3810	.323	60°	**31845**			
2.040		2.4600	.375	45°				**22365C**
2.040		2.5000	.375	45°				**22251C**
2.125		2.4430	.375	45°	**32370**			

* Special ID Features

VALVE SEAT TECHNOLOGY HAS CHANGED

GM is equipping the LS3 heads with high tech sintered copper-infiltrated valve seats. High-Performance European engines like BMW and Mercedes also use this technology. This is a powder metal valve seat with a copper wafer that is infiltrated into the valve seat. This creates a unique product of 15% free copper in the microstructure of the seat. Allowing heat to be quickly transferred and performance greatly improved.

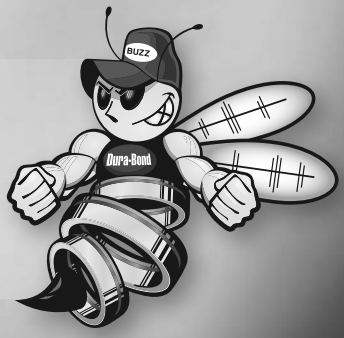
GOOD NEWS!

Dura-Bond has developed this technology and it is now available for the aftermarket in our **"KILLER BEE" Valve Seat Line**. Initially offered for the GM LS-Series engines with more applications to come.

- **Offers Superior Thermal Conductivity**
- **Excellent Machining Characteristics**
- **High Thermal Expansion**
- **Lowest Wear – Improved Reliability/Durability**
- **Superior Surface Finishes**
- **Suitable for HD Intake and Exhaust Seats, Gas and Diesel**
- **Compatible with Most Valve Materials**

"This is a Killer, LS3, Copper-Infiltrated exhaust valve seat."

Lou Oniga, Powertrain Engineer - GM



Dura-Bond®
A MELLING COMPANY

Quality Camshaft Bearings Since 1947

"KILLER BEE" COPPER INFILTRATED VALVE SEAT
PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
			32130C	1.0490	0.825		.298	45°
			32210C	1.1450	0.835		.295	45°
			32182C	1.1980	0.960		.295	45°
			72419C	1.1990	0.960	1.076	.322	45°
			72405C	1.5020	1.219	1.408*	.255	33°
30643	**70643**	**90643**	**30643C**	1.5680	1.312		.219	45°
			72432C	1.6020	1.322	*	.276	36.3°
			22194C	1.6700	1.350		.375	45°
			22264C	1.6900	1.370		.500	R.125
			32233C	1.7500	1.375	*	.550	-
30659	**70659**	**90659**	**20659C**	1.7550	1.500		.250	45°
			22199C	1.7570	1.380	1.717*	.400	58°
30907	**70907**	**90907**	**20907C**	1.8180	1.500		.312	45°
31091	**71091**		**31091C**	1.8800	1.500		.375	45°
			22252C	1.9600	1.625		.375	45°
			32366C	1.9600	1.655		.375	45°
32017	**72017**		**22017C**	2.0005	1.602		.377	45°
			17846C	2.0906	1.693	1.990	.303	70°
			22193C	2.2500	1.850		.320	45°
			31949C	2.2555	1.820		.375	45°
			22228C	2.3800	1.904		.375	45°
			17563C	2.4074	1.956	2.287*	.284	30°
			17904C	2.4094	1.890		.354	45°
			22018C	2.4505	2.000		.377	45°
			22365C	2.4600	2.040		.375	45°
			22251C	2.5000	2.040		.375	45°

* Special ID Features

UNIVERSAL VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

DECIMAL

PART NUMBER SERIES			ACTUAL			SEAT
30000	70000	90000	OD	ID	DEPTH	ANGLE
39006	79006	99006	1.1024	0.866	.394	45°
39007	79007	99007	1.1220	0.866	.394	45°
39008	79008	99008	1.1417	0.906	.394	45°
39009	79009	99009	1.1614	0.906	.394	45°
39011	79011	99011	1.1811	0.787	.394	45°
39010	79010	99010	1.1811	0.906	.394	45°
39012	79012	99012	1.2008	0.906	.394	45°
39014	79014	99014	1.2205	0.827	.394	45°
39013	79013	99013	1.2205	0.945	.394	45°
39015	79015	99015	1.2402	0.945	.394	45°
39017	79017	99017	1.2598	0.866	.394	45°
39016	79016	99016	1.2598	0.984	.394	45°
39018	79018	99018	1.2795	0.984	.394	45°
39020	79020	99020	1.2992	0.906	.394	45°
39019	79019	99019	1.2992	1.023	.394	45°
39021	79021	99021	1.3189	1.023	.394	45°
39023	79023	99023	1.3386	0.945	.394	45°
39024	79024	99024	1.3583	1.063	.394	45°
39026	79026	99026	1.3780	0.984	.394	45°
39025	79025	99025	1.3780	1.102	.394	45°
39027	79027		1.3976	1.102	.394	45°
39029	79029	99029	1.4173	1.024	.394	45°
39028	79028	99028	1.4173	1.142	.394	45°
39030	79030	99030	1.4370	1.141	.394	45°
39031	79031	99031	1.4567	1.181	.394	45°
39033	79033		1.4764	1.181	.394	45°
39035	79035	99035	1.4961	1.102	.394	45°
39036	79036		1.5157	1.220	.394	45°
39038	79038		1.5354	1.141	.394	45°
39037	79037	99037	1.5354	1.260	.394	45°
39039	79039		1.5551	1.260	.394	45°
39041	79041	99041	1.5748	1.141	.394	45°
39040	79040		1.5748	1.260	.394	45°
39042	79042		1.5945	1.260	.394	45°
39044	79044		1.6142	1.181	.394	45°
39043	79043	99043	1.6142	1.299	.394	45°
39045	79045	99045	1.6339	1.299	.394	45°
39047	79047		1.6535	1.220	.394	45°
39046	79046		1.6535	1.338	.394	45°
39048	79048		1.6732	1.338	.394	45°
39050	79050		1.6929	1.260	.394	45°
39049	79049		1.6929	1.378	.394	45°
39051	79051		1.7126	1.378	.394	45°
39053	79053	99053	1.7323	1.299	.394	45°
39052			1.7323	1.417	.394	45°
39056	79056		1.7520	1.181	.394	45°
39071	79071		1.7520	1.417	.394	45°
39055	79055		1.7520	1.417	.433	45°
39058	79058	99058	1.7717	1.339	.472	45°
39057	79057	99057	1.7717	1.457	.472	45°
39059	79059		1.7913	1.457	.472	45°
39061	79061		1.8110	1.339	.472	45°
39060	79060		1.8110	1.496	.472	45°
39062	79062		1.8307	1.496	.472	45°
39065	79065	99065	1.8504	1.417	.472	45°
39063			1.8504	1.535	.472	45°
39066	79066		1.8701	1.535	.472	45°
39069	79069		1.8898	1.457	.472	45°
39068	79068		1.8898	1.496	.433	45°
39067	79067		1.8898	1.575	.472	45°

METRIC

PART NUMBER SERIES			ACTUAL			SEAT
30000	70000	90000	OD	ID	DEPTH	ANGLE
39006	79006	99006	28.00	22.00	10.00	45°
39007	79007	99007	28.50	22.00	10.00	45°
39008	79008	99008	29.00	23.00	10.00	45°
39009	79009	99009	29.50	23.00	10.00	45°
39011	79011	99011	30.00	20.00	10.00	45°
39010	79010	99010	30.00	23.00	10.00	45°
39012	79012	99012	30.50	23.00	10.00	45°
39014	79014	99014	31.00	21.00	10.00	45°
39013	79013	99013	31.00	24.00	10.00	45°
39015	79015	99015	31.50	24.00	10.00	45°
39017	79017	99017	32.00	22.00	10.00	45°
39016	79016	99016	32.00	25.00	10.00	45°
39018	79018	99018	32.50	25.00	10.00	45°
39020	79020	99020	33.00	23.00	10.00	45°
39019	79019	99019	33.00	26.00	10.00	45°
39021	79021	99021	33.50	26.00	10.00	45°
39023	79023	99023	34.00	24.00	10.00	45°
39024	79024	99024	34.50	27.00	10.00	45°
39026	79026	99026	35.00	25.00	10.00	45°
39025	79025	99025	35.00	28.00	10.00	45°
39027	79027		35.50	28.00	10.00	45°
39029	79029	99029	36.00	26.00	10.00	45°
39028	79028	99028	36.00	29.00	10.00	45°
39030	79030	99030	36.50	29.00	10.00	45°
39031	79031	99031	37.00	30.00	10.00	45°
39033	79033		37.50	30.00	10.00	45°
39035	79035	99035	38.00	28.00	10.00	45°
39036	79036		38.50	31.00	10.00	45°
39038	79038		39.00	29.00	10.00	45°
39037	79037	99037	39.00	32.00	10.00	45°
39039	79039		39.50	32.00	10.00	45°
39041	79041	99041	40.00	29.00	10.00	45°
39040	79040		40.00	32.00	10.00	45°
39042	79042		40.50	32.00	10.00	45°
39044	79044		41.00	30.00	10.00	45°
39043	79043	99043	41.00	33.00	10.00	45°
39045	79045	99045	41.50	33.00	10.00	45°
39047	79047		42.00	31.00	10.00	45°
39046	79046		42.00	34.00	10.00	45°
39048	79048		42.50	34.00	10.00	45°
39050	79050		43.00	32.00	10.00	45°
39049	79049		43.00	35.00	10.00	45°
39051	79051		43.50	35.00	10.00	45°
39053	79053	99053	44.00	33.00	10.00	45°
39052			44.00	36.00	10.00	45°
39056	79056		44.50	30.00	10.00	45°
39071	79071		44.50	36.00	10.00	45°
39055	79055		44.50	36.00	11.00	45°
39058	79058	99058	45.00	34.00	12.00	45°
39057	79057	99057	45.00	37.00	12.00	45°
39059	79059		45.50	37.00	12.00	45°
39061	79061		46.00	34.00	12.00	45°
39060	79060		46.00	38.00	12.00	45°
39062	79062		46.50	38.00	12.00	45°
39065	79065	99065	47.00	36.00	12.00	45°
39063			47.00	39.00	12.00	45°
39066	79066		47.50	39.00	12.00	45°
39069	79069		48.00	37.00	12.00	45°
39068	79068		48.00	38.00	11.00	45°
39067	79067		48.00	40.00	12.00	45°

METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71357			23.50	18.0		6.0	45°
	71167			24.00	18.0		6.5	45°
	72334	92334		24.00	18.0		8.0	45°
	72066			24.25	18.0		7.0	45°
	72335	92335		25.00	19.0		8.0	45°
	71446			25.00	20.0		7.0	45°
	71346			25.10	20.0		6.0	45°
31002	71002			25.12	20.0		6.0	45°
	71349			25.15	20.0		6.0	45°
		92283		26.00	18.0		7.0	45°
	72336			26.00	20.0		8.0	45°
	71398			26.25	21.0		4.5	45°
	71382			26.60	21.0		6.0	45°
31003	71003			26.70	20.0		5.7	45°
	71395			26.80	21.0		6.2	45°
	71350			26.82	20.5		5.7	45°
		92404		27.00	20.0		8.0	45°
	72337			27.00	21.0		10.0	45°
31096				27.13	22.1		6.5	45°
	71383			27.15	20.0		6.0	45°
31047	71047			27.15	20.1		6.6	45°
		92027		27.23	21.9		7.0	45°
	71429			27.68	22.2		6.4	45°
	71804			27.90	23.0		6.5	45°
		92290		28.00	18.0		6.0	45°
	71168			28.00	20.0		8.0	45°
	71428			28.00	20.5		6.5	45°
39006	79006	99006		28.00	22.0		10.0	45°
	71396			28.15	22.0		6.5	45°
	71807			28.20	22.6		6.0	45°
	71812			28.25	22.6		6.0	45°
39007	79007	99007		28.50	22.0		10.0	45°
	72043			28.65	23.0		7.7	45°
31097				28.70	22.1		4.9	45°
31048	71048			28.75	21.0		7.2	45°
	72339			28.80	24.0		8.6	45°
		92047		28.85	23.5		5.5	45°
	72338			29.00	18.0		10.0	45°
	71169			29.00	21.0		8.5	45°
39008	79008	99008		29.00	23.0		10.0	45°
	71410	91410		29.20	23.0		6.5	45°
	71431			29.25	22.2		6.4	45°
39009	79009	99009		29.50	23.0		10.0	45°
	71358			29.62	20.5		7.1	45°
	71444			29.80	24.0		6.0	45°
39011	79011	99011		30.00	20.0		10.0	45°
31170	71170			30.00	22.0		8.5	45°
39010	79010	99010		30.00	23.0		10.0	45°
	71411			30.00	24.0		8.5	45°
	72039			30.00	26.0		9.5	45°
31049	71049			30.02	23.5		6.2	45°
		92303		30.05	23.7		5.0	45°
	71345			30.10	25.0		6.3	45°
	71004			30.12	25.0		6.3	45°
	71436			30.15	24.0		9.0	45°
	71445			30.15	25.0		5.1	45°
31005	71005			30.15	25.0		6.3	45°

CONVERSION FORMULA
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METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	72279	92279		30.19	24.1		8.1	45°
	71352			30.28	22.2		6.4	45°
		92255		30.28	20.0		8.0	45°
31098				30.31	22.1		6.5	45°
	71435			30.31	23.6		6.5	45°
31099				30.31	23.7		6.5	45°
39012	79012	99012		30.50	23.0		10.0	45°
31051	71051			30.50	25.0		6.5	45°
		92033		30.64	25.1		7.0	45°
		92106		30.91	25.0		6.4	45°
		92369		31.00	18.0		7.5	45°
39014	79014	99014		31.00	21.0		10.0	45°
31171	71171			31.00	23.0		8.5	45°
39013	79013	99013		31.00	24.0		10.0	45°
	71448			31.00	25.0		6.0	45°
	71354			31.12	23.1		7.2	45°
	78000			31.14	24.0		5.2	45°
	71414			31.25	25.0		8.0	45°
		92262		31.50	24.5		8.0	45°
39015	79015	99015		31.50	24.0		10.0	45°
	72226			31.50	25.8		7.0	45°
	71434			31.51	23.9		8.5	45°
	71384			31.60	26.0		6.0	45°
	71409			31.70	26.0		6.5	45°
	72278			31.83	27.4		8.5	45°
30764	70764			31.88	25.4		6.4	45°
31052				31.88	26.8		6.4	45°
	71359			31.88	25.4		6.4	45°
31105	71105			31.90	23.7		6.5	45°
31100				31.90	25.3		6.5	45°
31054	71054			31.93	23.1		7.2	45°
		92028		31.99	26.9		7.0	45°
		92289		32.00	22.0		8.5	45°
39017	79017	99017		32.00	22.0		10.0	45°
	71172			32.00	24.0		8.5	45°
	71311	91311		32.00	24.0		9.0	45°
39016	79016	99016		32.00	25.0		10.0	45°
31808	71808			32.01	25.0		8.0	45°
		92042		32.20	23.0	26.0	6.3	45°
	71347			32.32	26.0		6.0	45°
	72301			32.33	27.4		8.5	45°
		91450		32.35	23.0	26.0	6.3	45°
39018	79018	99018		32.50	25.0		10.0	45°
		91914		32.50	27.0		5.5	45°
	71403			32.58	27.0		6.0	45°
	71800			32.60	27.5		9.0	45°
	71360			32.65	25.0		6.0	45°
31006	71006			32.65	25.5		8.0	45°
31007	71007			32.65	26.0		8.5	45°
	72340			32.80	28.5		8.8	45°
	72302			32.83	27.4		8.5	45°
	71425			33.00	23.0		8.0	45°
39020	79020	99020		33.00	23.0		10.0	45°
31173	71173			33.00	25.0		8.5	45°
39019	79019	99019		33.00	26.0		10.0	45°
	71348	91348		33.00	26.0		6.5	45°
	71008	91008		33.15	28.0		7.0	45°

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METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71123			33.20	27.5		7.0	45°
31056				33.46	25.4		6.4	45°
31101	71101			33.48	26.9		6.5	45°
39021	79021	99021		33.50	26.0		10.0	45°
31293				33.50	27.0		9.0	45°
31058				33.50	24.8		7.1	45°
	72038			33.50	26.0		8.0	45°
	70563			33.50	26.5		8.0	45°
	71397			33.60	27.5		7.3	45°
		92222		33.65	29.4		6.6	45°
31009	71009			33.70	27.0		8.0	45°
31010	71010	91010		33.70	28.6		6.4	45°
		92125		33.70	29.0		7.5	45°
	71438			33.80	28.6		6.4	45°
		92256		34.00	24.0		8.5	45°
39023	79023	99023		34.00	24.0		10.0	45°
31174	71174			34.00	26.0		8.5	45°
31273	71273	91273		34.00	27.0		10.0	45°
	71306			34.00	28.0		4.5	45°
	71385			34.10	27.5		6.0	45°
	71361			34.12	26.0		7.6	45°
		91449		34.15	28.0		6.0	45°
31060	71060			34.25	27.0		8.0	45°
	71011			34.25	28.6		6.4	45°
	71356			34.30	27.0		8.0	45°
39024	79024	99024		34.50	27.0		10.0	45°
		92075		34.50	29.0		7.5	45°
31035	71035			34.63	25.0		10.0	45°
		92032		34.64	29.6		7.0	45°
31061	71061			34.70	28.3		7.5	45°
	71809			34.80	29.0		6.5	45°
	71362			34.80	29.0		7.2	45°
39026	79026	99026		35.00	25.0		10.0	45°
	71175			35.00	26.0		9.0	45°
	71408			35.00	28.0		5.0	45°
39025	79025	99025		35.00	28.0		10.0	45°
	71363			35.06	27.8		6.4	45°
31102				35.07	26.9		6.5	45°
31103				35.07	28.5		6.5	45°
31064				35.10	25.4		7.1	45°
31063				35.10	25.4		10.4	45°
	71805			35.15	30.0		7.4	45°
31065	71065			35.25	28.0		8.0	45°
39027	79027			35.50	28.0		10.0	45°
31274	71274			35.50	29.0		10.0	45°
31294				35.50	29.5		9.5	45°
31012	71012			35.60	29.0		8.0	45°
	71423			35.70	30.0		8.6	45°
	71399			35.85	30.0		6.2	45°
		92105		35.91	31.0		6.0	45°
39029	79029	99029		36.00	26.0		10.0	45°
	71176			36.00	27.0		9.0	45°
39028	79028	99028		36.00	29.0		10.0	45°
31066	71066			36.12	29.3		8.0	45°
	71412			36.16	29.3		6.4	45°
	71121			36.20	31.0		7.5	45°
	71420			36.25	29.0		8.0	45°

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METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
39030	79030	99030		36.50	29.0		10.0	45°
31111	71111			36.59	30.1		8.0	45°
	71380			36.63	28.6		6.4	45°
	71364			36.63	28.6		9.0	45°
31013	71013			36.63	28.6		8.0	45°
31402	71402			36.63	30.2		6.4	45°
30802	70802			36.64	28.6		6.4	45°
30803	70803			36.64	28.6		8.0	45°
	71407			36.65	28.7		8.0	45°
		92257		36.65	26.0		8.5	45°
31107				36.66	26.9		6.5	45°
31067				36.68	31.2		6.4	45°
	71439			36.70	29.0		8.0	45°
	71440			36.70	31.0		7.5	45°
31068	71068			37.00	28.0		9.0	45°
31069	71069			37.00	30.0		8.0	45°
39031	79031	99031		37.00	30.0		10.0	45°
31275				37.00	31.0		10.0	45°
31113				37.03	27.9		8.9	45°
	71908			37.16	31.0		9.0	45°
31070	71070			37.20	30.0		7.0	45°
		92100		37.21	30.0		5.5	45°
	71365			37.30	29.0		8.0	45°
39033	79033			37.50	30.0		10.0	45°
31071				37.50	31.0		8.5	45°
	72341			37.50	31.2		7.0	45°
	71386			37.50	31.5		8.5	45°
	71353			37.57	30.1		8.0	45°
		92051		37.60	30.0		6.6	45°
	71400			37.60	30.5		7.0	45°
	71379			37.60	32.7		7.2	45°
31014				37.65	31.0		7.0	45°
31015	71015			37.70	31.0		8.0	45°
	71387			37.75	31.0		8.5	45°
39035	79035	99035		38.00	28.0		10.0	45°
	71178			38.00	29.0		9.0	45°
31038	71038			38.00	30.0		7.0	45°
31276	71276	91276		38.00	31.0		10.0	45°
		92102		38.01	30.0		6.0	45°
31198				38.10	30.2		6.4	45°
	71366			38.12	29.2		7.2	45°
	71342			38.21	30.2		8.0	45°
	71343			38.21	31.8		7.1	45°
30708				38.23	28.6		6.4	45°
30715				38.23	31.8		9.5	45°
	71367			38.23	28.5		8.7	45°
31073	71073			38.23	31.0		8.0	45°
		92258		38.23	28.0		8.5	45°
31108				38.25	30.0		6.5	45°
31109	71109			38.25	31.6		6.5	45°
	71419			38.25	32.5		7.5	45°
31074				38.28	27.9		8.0	45°
	71388			38.50	31.0		8.5	45°
	71368			38.50	31.0		8.7	45°
39036	79036			38.50	31.0		10.0	45°
		92263		38.50	31.5		7.5	45°
		92104		38.51	32.0		6.4	45°

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METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71432			38.63	31.0		7.2	45°
	71036			38.73	30.0		10.0	45°
	71389			38.75	31.0		8.5	45°
31016	71016			38.95	31.0		8.5	45°
39038	79038			39.00	29.0		10.0	45°
	71369			39.00	30.0		7.0	45°
	71179			39.00	30.0		9.0	45°
	71180			39.00	31.0		8.5	45°
39037	79037	99037		39.00	32.0		10.0	45°
	71370			39.00	33.0		8.0	45°
	71416			39.14	33.7		6.5	45°
	71426			39.15	34.7		5.9	45°
31075	71075			39.30	32.0		8.0	45°
39039	79039			39.50	32.0		10.0	45°
31076	71076			39.50	33.0		8.5	45°
31295				39.60	33.5		9.5	45°
	71422			39.70	33.0		8.6	45°
	71442			39.70	33.0		9.0	45°
	71802			39.75	33.0		8.5	45°
31112	71112			39.77	30.1		9.6	45°
	71344			39.80	31.8		8.0	45°
31077				39.81	31.8		6.4	45°
30645	70645			39.83	31.8		6.4	45°
31104				39.83	30.0		6.5	45°
31079				39.85	30.0		7.7	45°
31078				39.85	31.2		7.9	45°
39041	79041	99041		40.00	29.0		10.0	45°
	71181			40.00	30.0		9.5	45°
39040	79040			40.00	32.0		10.0	45°
31296				40.00	33.5		9.0	45°
		92434		40.14	33.0		8.0	45°
31081	71081			40.19	30.0		10.5	45°
31278				40.20	33.5		9.5	45°
	71017			40.20	34.0		7.5	45°
	71803			40.20	34.7		6.9	45°
	71418			40.25	34.5		7.3	45°
39042	79042			40.50	32.0		10.0	45°
		92035		40.52	30.0		10.0	45°
		92052		40.52	33.5		10.0	45°
	71018			40.60	34.0		7.0	45°
		92259		40.64	30.0		8.0	45°
	71371			40.64	32.6		7.6	45°
		92124		40.70	35.5		8.0	45°
39044	79044			41.00	30.0		10.0	45°
	71182			41.00	31.0		8.5	45°
39043	79043	99043		41.00	33.0		10.0	45°
31039	71039			41.00	34.0		7.5	45°
	71413			41.15	34.9		6.5	45°
	71813			41.15	35.5		6.5	45°
	71437			41.20	33.5		6.6	45°
31196				41.28	33.4		6.4	45°
		92049		41.30	33.5		6.0	45°
	72270			41.30	33.5		10.5	45°
	71372			41.30	33.5		9.5	45°
30662	70662			41.40	31.8		6.4	45°
30853	70853			41.40	31.8		9.5	45°
39045	79045	99045		41.50	33.0		10.0	45°

CONVERSION FORMULA
INCHES X 25.4 = MM
MM / 25.4 = INCHES

METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
		92074		41.50	35.0		8.0	45°
31323				41.50	32.0		10.0	45°
		92384		41.52	33.5		10.0	45°
31019	71019			41.62	34.0		8.0	45°
	71020			41.70	34.0		6.4	45°
39047	79047			42.00	31.0		10.0	45°
31183	71183			42.00	32.0		9.5	45°
	71184			42.00	33.0		8.5	45°
39046	79046			42.00	34.0		10.0	45°
		92435		42.14	33.0		8.0	45°
31082	71082			42.20	33.5		10.5	45°
	71810			42.20	35.5		8.0	45°
	71421			42.25	35.0		8.0	45°
31308				42.40	34.0		4.5	45°
39048	79048			42.50	34.0		10.0	45°
	71373			42.60	36.0		8.0	45°
31811	71811			42.70	35.5		8.5	45°
	71390			42.75	37.3		7.5	45°
30675	70675			42.98	33.3		6.4	45°
30676	70676			42.98	33.3		8.0	45°
	71374			42.98	33.3		8.0	45°
39050	79050			43.00	32.0		10.0	45°
31186	71186	91186		43.00	33.0		8.5	45°
	71406			43.00	34.3		8.0	45°
39049	79049			43.00	35.0		10.0	45°
	71391			43.00	35.2		8.0	45°
31083				43.03	33.0		9.1	45°
31021	71021			43.25	36.0		8.0	45°
	71085			43.33	35.2		6.4	45°
31084	71084			43.33	35.2		9.0	45°
39051	79051			43.50	35.0		10.0	45°
	71814			43.70	37.0		8.5	45°
39053	79053	99053		44.00	33.0		10.0	45°
31187	71187			44.00	34.0		9.5	45°
	71375			44.00	36.0		7.0	45°
39052				44.00	36.0		10.0	45°
		92101		44.01	36.0		6.0	45°
31110				44.03	33.9		9.4	45°
		92260		44.10	32.5		8.0	45°
	72342			44.13	35.5		7.0	45°
	72215			44.13	36.0		9.0	45°
31086	71086			44.25	37.0		8.0	45°
		92103		44.26	37.0		6.4	45°
39056	79056			44.50	30.0		10.0	45°
39071	79071			44.50	36.0		10.0	45°
39055	79055			44.50	36.0		11.0	45°
30653	70653			44.58	34.9		6.4	45°
30654	70654			44.58	34.9		8.0	45°
	71381			44.60	35.0		7.5	45°
	71392			44.75	37.0		8.5	45°
39058	79058	99058		45.00	34.0		12.0	45°
	71227			45.00	34.5		10.0	45°
	71393			45.00	37.0		8.5	45°
39057	79057	99057		45.00	37.0		12.0	45°
	71404			45.25	38.0		8.0	45°
	71472			45.25	39.0		7.5	45°
31087	71087			45.37	35.7		7.3	45°

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PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71427			45.40	35.8		7.5	45°
	71801			45.50	36.6		9.5	45°
39059	79059			45.50	37.0		12.0	45°
31088	71088			45.64	36.0		9.9	45°
39061	79061			46.00	34.0		12.0	45°
	71188			46.00	35.5		10.0	45°
39060	79060			46.00	38.0		12.0	45°
	71376			46.10	35.4		7.5	45°
	71355			46.13	38.2		7.1	45°
31089				46.15	37.7		6.4	45°
31307				46.20	38.0		4.0	45°
31090	71090			46.49	36.5		9.5	45°
39062	79062			46.50	38.0		12.0	45°
		92050		46.50	40.0		7.0	45°
31433	71433			46.63	38.0		7.2	45°
39065	79065	99065		47.00	36.0		12.0	45°
31228	71228			47.00	36.5		10.0	45°
39063				47.00	39.0		12.0	45°
	71339			47.16	37.0		8.6	45°
	71377			47.40	39.0		8.0	45°
39066	79066			47.50	39.0		12.0	45°
	71378			47.60	36.4		9.7	45°
30919	70919			47.75	38.1		6.4	45°
31091	71091		31091C	47.75	38.1		9.5	45°
		92026		47.78	40.5		9.5	45°
30682	70682			47.78	41.3		6.4	45°
	71394			47.80	40.0		8.0	45°
31092	71092			47.80	40.6		6.4	45°
	71189			47.98	37.5		10.0	45°
		92261		48.00	36.0		8.5	45°
39069	79069			48.00	37.0		12.0	45°
39068	79068			48.00	38.0		11.0	45°
39067	79067			48.00	40.0		12.0	45°
	71913			48.05	40.0		8.0	45°
	72221			48.20	37.0		7.2	45°
	71190			49.00	38.5		10.0	45°
	71191			49.00	42.0		8.0	45°
		92282		50.00	38.1		8.5	45°
	71192			50.00	39.0		10.0	45°
	72040	92040		50.00	43.0		7.5	45°
	72331			50.11	43.0		10.0	45°
	72332			50.31	43.0		10.2	45°
	72333			50.51	43.0		10.4	45°
30724	70724			50.95	41.3		6.4	45°
30727	70727			50.95	41.3		8.0	45°
	71415			51.00	40.0		5.5	45°
	71193			51.00	40.0		10.5	45°
32034		92034		51.92	44.0		10.3	45°
31194	71194			52.00	41.0		10.5	45°
	71816			52.09	40.0		9.2	45°
	72269			52.50	44.5		10.5	45°
31401	71401			52.51	43.0		9.0	45°
		92048		52.60	44.5		6.0	45°
		92383		52.92	44.0		10.3	45°
31195	71195	91195		53.00	42.0		10.5	45°
31475				53.09	43.1		9.7	45°
		92400		53.10	43.0	49.0	8.3	20°

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METRIC VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

PART NUMBER SERIES				ACTUAL		ID TOP		SEAT
30000	70000	90000	"Killer Bee"	OD	ID	TAPER	DEPTH	ANGLE
	71430			53.10	43.0		9.0	45°
	72031			53.10	43.0	50.5	9.5	70°
31424	71424			53.10	43.0		10.0	45°
	72382			53.17	43.0		9.0	45°
		97999		53.20	43.0		7.0	45°
31093	71093			53.59	43.1		10.2	45°
	71447			53.60	43.0		9.0	45°
	71441			53.60	43.0		10.0	45°
		92399		53.70	43.0		10.0	45°
	71338	91338		54.20	43.0		8.6	45°
	71417			54.20	44.5		7.3	45°
	72216			54.20	43.0		10.0	45°
		92402		54.65	43.7		10.0	45°
31141	71141			55.00	44.0		12.0	45°
	71783+5			55.12	44.0		11.0	45°
32041				55.12	44.5		8.5	80°
	72044			55.12	44.5		8.5	80°
31476				60.09	51.1		8.9	45°
	72328			60.11	51.0		8.9	45°
	72329			60.31	51.0		9.1	45°
	71815			60.50	50.8		10.0	45°
	72330			60.51	51.0		9.3	45°

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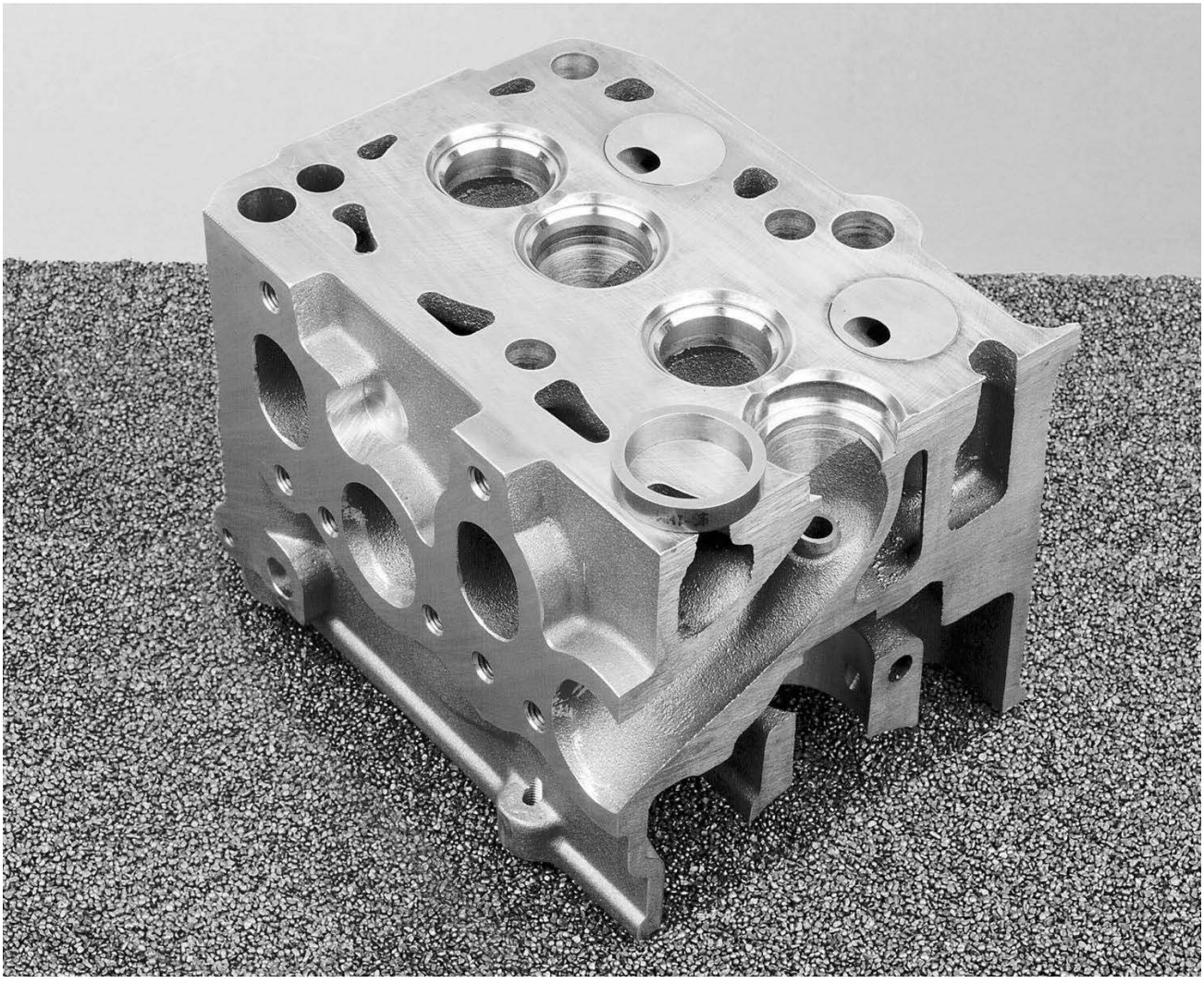
Dura-Bond®

Valve seat inserts

Technical Information and Installation Instructions



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Chapter 1: Introduction

1.1 Valve seat installation

Valve seat installation and refitting is only one of many operations necessary for the professional rebuilding or reconditioning of a cylinder head. Successful cylinder head remanufacturing requires that these reconditioning operations be done in the correct sequence.

Valve seat installation and refitting can only be successfully accomplished after the following operations have been completed.

- Through cleaning, inspection and any failure analysis
- Measure and record each assembled valve stem height and valve head protrusion
- Straightening of the cylinder head and milling/grinding of the firing deck and all other mating surfaces
- All valve guides must be renewed or refitted and be within original factory specifications

The cylinder head must be dimensionally and geometrically within original factory specifications. The cylinder head thickness, valve guide clearances, concentricity, and perpendicularity must be correct. There should be no warping, twisting, or any type of misalignment of any part of the cylinder head.

Sometimes you may lightly touch up the valve face and valve seat mating surface without putting the valve geometry out of factory specification but most of the modern multi-valve aluminum cylinder heads will require new inserts be installed to maintain correct valve train geometry.

Only new valves or valves which have been reconditioned and are within original factory specification must be used. All valve springs must be inspected and must meet all original factory specifications or be replaced.

As it relates to valve seats, there are three types of cylinder heads:

- Cast iron cylinder heads with removable valve seat inserts
- Cast iron cylinder heads with integral hardened valve seat areas
- Aluminum cylinder heads with removable valve seat inserts

You must replace the old valve seat insert or refit the integral hardened valve seat area with a new valve seat insert if:

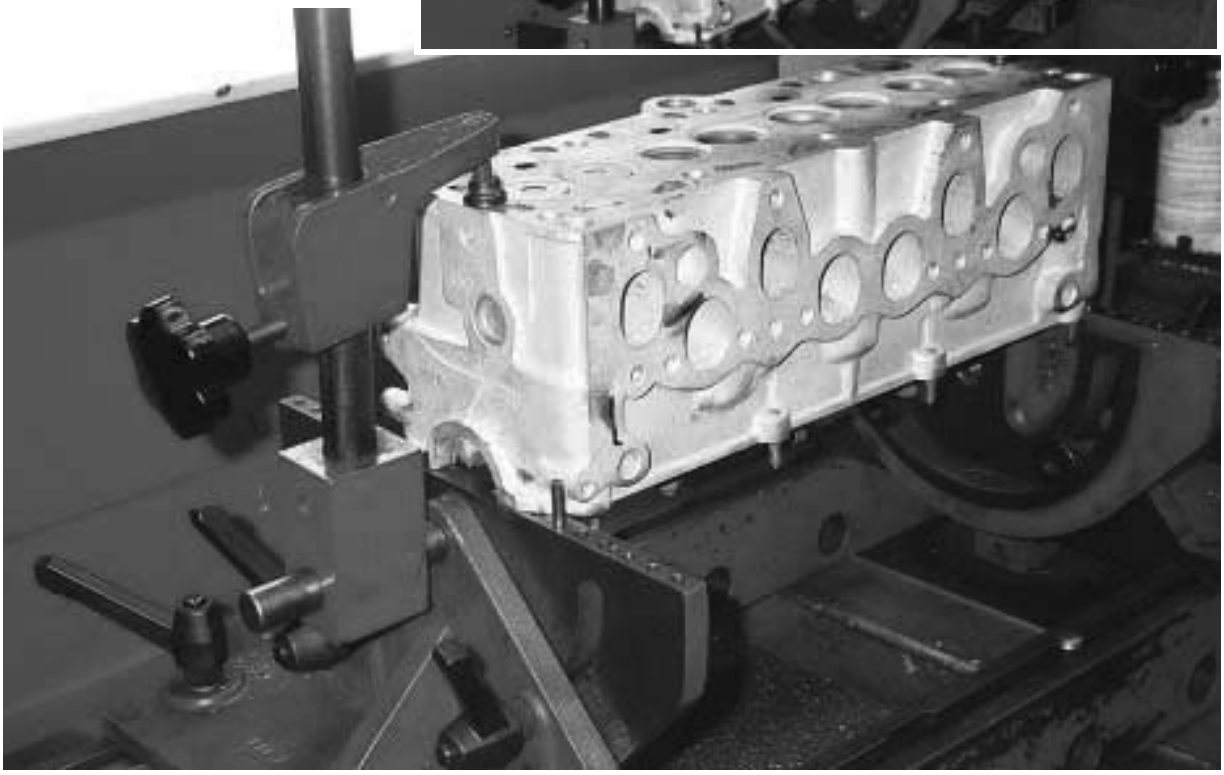
- The cylinder head required straightening before resurfacing.
- Any welding had to be done on the cylinder head.
- The cylinder head is aluminum and was cleaned in a heating oven.
- The valve seating (mating) surface has receded beyond factory specifications.
- The valve seating (mating) surface is too wide and recutting or regrinding would lower the seat beyond factory specifications.
- The integral seat of a cast iron head has been ground before. (The depth of the hardened cylinder head material used for the seating area will be too shallow to allow a second grinding)
- There is any evidence that the valve seat insert is loose in the counter bore pocket, or does not have adequate interference fit.
- There is any evidence of corrosion of the cylinder head material around the outside diameter of the valve seat insert.
- There is any evidence that the seat has any cracking, burning, pitting or fissures.
- The fuel type being used is going to be changed. This will require a higher duty range valve seat for better durability.

1.2 Machining practices

Although many factors contribute to the successful machining of valve seats. Here are several key conditions that are required to achieve good results.

- By far the most important is to have properly sharpened tools and properly dressed grinding stones.
- Keep your tooling setup as ”short and tight” as possible to assure rigidity (Picture 1). The less deflection in the tooling the more accurate the dimensions of the cut and the greater concentricity.
- Keep your clamping arms and fixtures in good repair for correct gripping.
- Make sure not to distort or put a twist into the cylinder head when clamping to a fixed rail cylinder head holding fixture (Picture 2).
- Use the correct size pilots, which must be straight.
- Use the correct spindle speeds and feeds.

Picture 1



Picture 2

Chapter 2: Cutting valve seat inserts and counter bores

2.1 Removal of valve seats and cutting of seat pocket counter bores

Replacing valve seats in heads with removable seat inserts can be done in several ways, but the method we recommend is to use a cutter slightly smaller than the outside diameter of the existing valve seat insert and cut the old seat out (Picture 3). Stop cutting just as the old seat insert begins to rotate. The thin wall of the old valve seat insert can now be easily removed (Picture 4).

Some machinist will install a new insert in the existing seat pocket without recutting the counter bore. Although this method can be used on some large cast iron cylinder heads which are thick walled, it is not a recommended procedure for most automotive or "light pattern" cylinder heads. It is much better to cut a new seat insert counter bore for better valve life and valve seat insert retention in the cylinder head (Picture 5). This will also insure concentricity and perpendicularity with the valve guide and will provide a fresh metal surface for better heat transfer (see our recommended interference fit chart for the correct outside diameter).

Picture 3 - Cutting valve seat inserts

Picture 4 - Removing the thin wall of the old valve seat insert

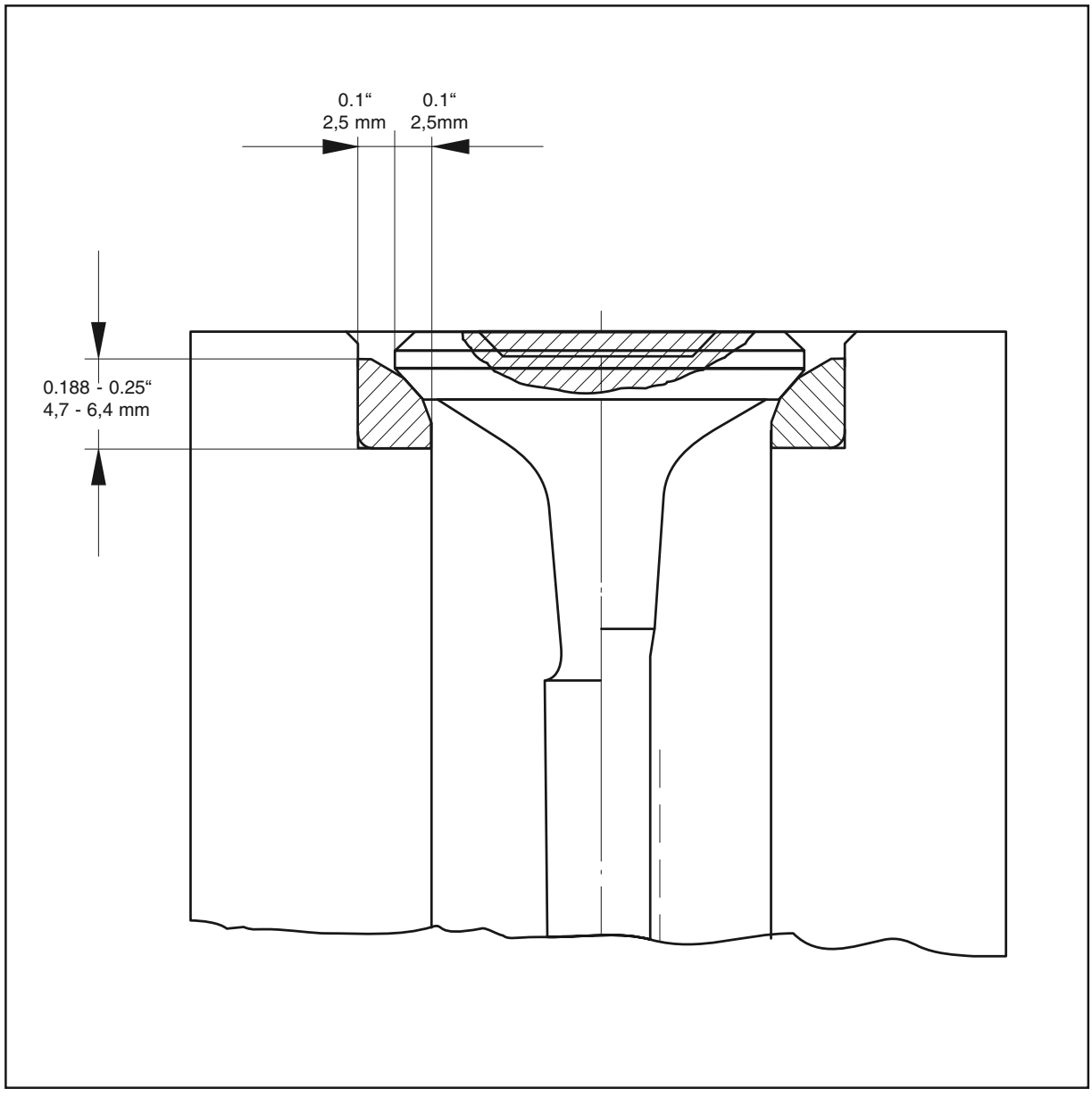
Picture 5 - Cutting the counter bore

When machining the seat pocket counter bore in a **cast iron cylinder head** we recommend a cutting speed of **100 to 250 RPM** with no cutting oil. When cutting a seat pocket counter bore in **aluminum cylinder heads** we recommend using a cutting oil and a spindle speed of **400 to 600 RPM**.

DuraBond recommends the following press fittings:

Outer diameter valve seats inserts		Material cylinder head cast iron		Material cylinder head aluminium	
[inch]	[mm]	[inch]	[mm]	[inch]	[mm]
0.7874 - 1.1811	20 - 30	0.0031	0,08	0.0047	0,12
1.1811 - 1.5748	30 - 40	0.0043	0,11	0.0059	0,15
1.5748 - 1.9685	40 - 50	0.0051	0,13	0.0071	0,18
1.9685 - 2.3622	50 - 60	0.0063	0,16	0.0079	0,20
2.3622 - 2.7559	60 - 70	0.0071	0,18	0.0087	0,22

Replacing valve seats in cylinder heads with integral seats will require a new seat pocket counter bore to be cut. The approximate outside diameter for the replacement seat is .100" (2,5 mm) larger than the valve head diameter. The inside diameter of the replacement seat is approximately .100" (2,5 mm) smaller than the valve head diameter. The depth is usually .188" to .250" (4,7 – 6,4 mm). These sizes are guidelines only.



Many of the newer cylinders do not have the room to install seats with OD's larger than the OD of the valve (see our recommended interference fit chart for the correct outside diameter).

All counter bores must be concentric with the valve guide, have a straight wall, flat bottom and be within .0005" (0,013 mm) of correct size and be round.

Chapter 3: Installation

3.1 Inserting the valve seats

Before pressing in the new valve seat insert please be sure:

- Verify that the valve seat dimensional measurements are correct
- Verify the counter bore measurements are correct
- Make sure there are no chips or debris in the counter bore
- Use a seat installation tool to insure that the valve seat is inserted squarely into the counter bore pocket (Picture 6).
- Use a flat and square seat driver tool whose size is just slightly smaller than the outside diameter of the valve seat insert (Picture 7).
- Use a correct size pilot for the valve guide, when using this valve seat driving tool.

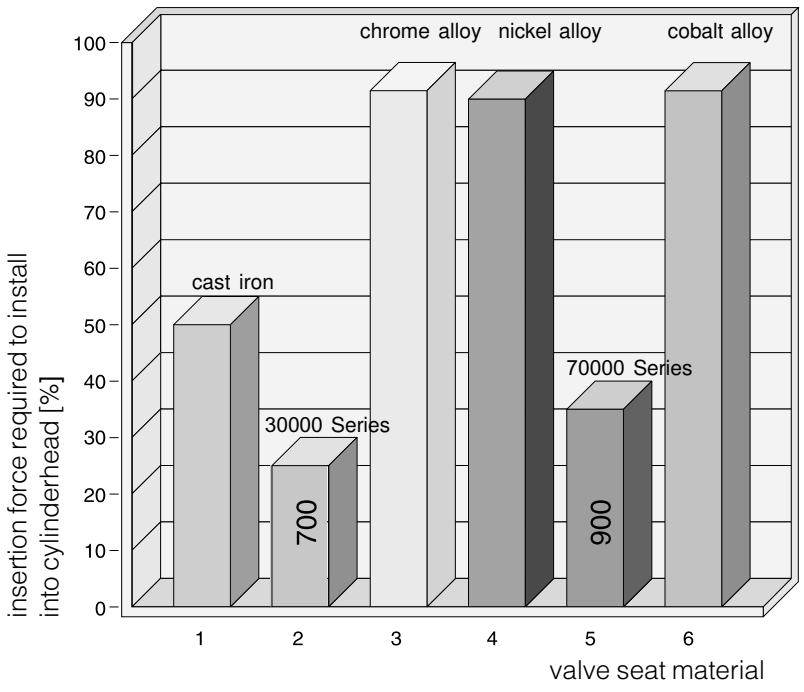
For Dura-Bond valve seat inserts:

- **Insert the valve seat with the radius side down.**
- **Because of the smooth radius on the bottom outside edge and the compressive "spring action" of the material, shrinking of the seat using liquid nitrogen and heating the cylinder head is not necessary prior to insertion the cylinder head.**

Picture 7

Picture 6

Less force required - less chance of damaging seat counter bore.



3.2 Cutting the seating surface

Check the engine specification manual for the correct assembled valve height, valve protrusion, seat angles, seat widths and any other special seat requirements. These factory specifications are important to maintain the correct valve lash, compression ratios, clearances between valves and pistons, and the general overall valve train geometry. Machining and assembling the cylinder head to the original manufactures specifications is critical for the correct operation of the engine.

3.3 Using a cutting machine (Picture 8)

- Select a cutter profile matching the original factory valve seat. The top and bottom relief angles, and the seating surface width and angle must match the design called for by the original engine manufacture for the valve train geometry to be correct.
- Select the type and grade of carbide best suited for the hardness of the valve seat being machined.
- Make sure that the tool is sharp and has the correct rake angles and relief angles.
- A 5-degree cutting rake angle with an 11-degree relief or clearance angle is generally found to be best for valve seats up to 1.250" (31,8 mm) in diameter.
- A 3-degree cutting rake angle with a 7-degree relief or clearance angle is generally found to be best for cutting valve seats larger than 1.250" (31,8 mm) in diameter.
- Select the correct spindle speed for the type of seat being cut.
- A spindle speed of 150 to 450 RPM is generally a good speed for cutting the valve seat insert less than 1.500" (38,0 mm) in diameter.
- A spindle speed of 100 to 250 RPM works best for seats larger than 1.500" (38,0 mm) in diameter.
- **Dura-Bond finds that most people who have the drill press style of machine, like the 50 - 100 RPM**
- Set the cutter bit to the correct size for the valve being used according to the factory repair manual.
- Cut the seat depth to match the correct assembled valve height.

Outer Diameter valve seat insert [inch]	[mm]	Tool relief angle	cutting angle	RPM [1/min]
< 1.250	< 31,8	11°	5 °	150 - 450
> 1.250	> 31,8	7 °	3 °	150 - 450
< 1.500	< 38,0	7 °	3 °	150 - 450
> 1.500	> 38,0	7 °	3 °	100 - 250

Picture 8

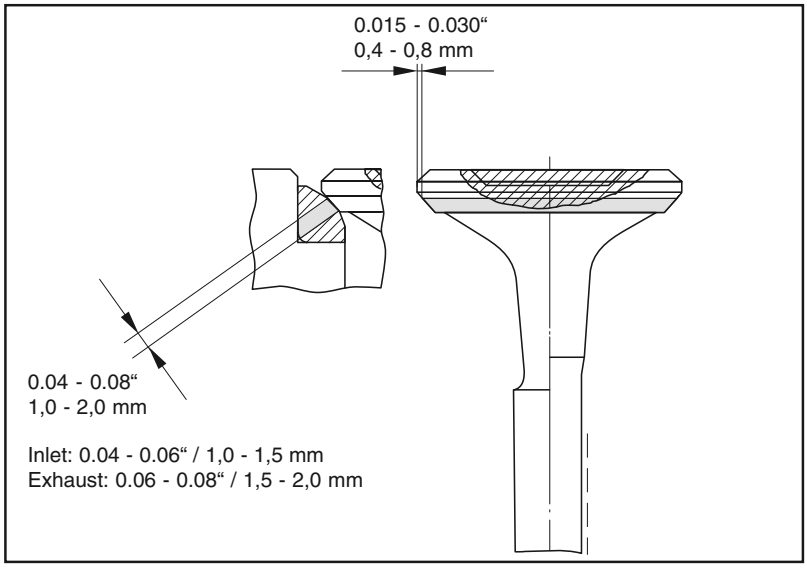
3.4 Using a grinding machine

- Select the correct size of stone for the valve being used.
- Select the correct type of stone for the hardness level of valve seat.
- Dress the stones as needed to the angles specified in the repair manual.
- Grind the seating angle first
- Grind the top relief angle to adjust seat height
- Grind the bottom relief to adjust the seat width.

Adjustments to these grinds will be necessary to achieve the correct assembled valve height and seat width.

In general, if no factory specifications are available, remember to keep the valve face and valve seat contact area to the outer limits of the valve head diameter. Depending on the valve head diameter this contact area will be .015" to .030" (0,4 – 0,8 mm) in from the outside diameter of the valve head. If the seating contact area is too close to the valve steam you will impede the gas flows and build up heat on the exhaust side and possibly restricted power due to less air and fuel getting into the combustion chamber on the intake side. You will get better heat transfer away from the exhaust valve and into the water jacket if you keep the contact area to the outside diameter of the valve head. But you must not take it to the extreme outside diameter or you will "burn" the valve and seat prematurely, because there will be too much heat concentrated at the very edge of the valve.

Also, in general, for valve seats in the 1.375" to 2.125" (35,0 – 54,0 mm) diameter range, if no specific factory specifications are available, a general guideline is to make the valve face to valve seat contact area width between .040"-.060" (1,0 – 1,5 mm) for the intake and .060"-.080" (1,5 – 2,0 mm) for the exhaust. For valve seats smaller than 1.250" (31,8 mm) the seat widths will be reduced by one half the values listed above. For engines using LPG, the exhaust seating width should be .100" (2,5 mm).



Wider seating widths will give a greater area of surface contact which will give better cooling rates but the larger contact area will reduce the pounds per square inch sealing pressure, so too large of a contact area will cause seats to "burn" due to gas leakage. Too thin an area will cause high mechanical abrasion forces and high operating temperatures and will "wear" the seating area faster than normal.

3.5 Checking the final product

- Check the sealing by using a vacuum check
- Check the seating position by using Prussian blue on the valve and seat
- Check for the correct assembled valve stem height and valve head protrusion

Chapter 4: Dura-Bond® Valve Seat Inserts

4.1 Valve seat inserts

Materials

Modern engines put much higher levels of thermal and mechanical stress on valve seat inserts. To handle the more severe conditions within these new generations of engines, the OE-Manufacture is equiping them with high tech sintered valve seat inserts. The normal cast iron valve seat will not adequately withstand the demands of this new engine environment.

This is the reason why Dura-Bond offers high tech sintered valve seats in two specifications to be used for the complete range of today's engines and the engines of the past and of the future.

4.2 30000 / 70000 Series

• 30000 (Gold) Series
High Machinability

This sintered insert offers a blend of finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles. With this blend, the 30000 series represents a superb combination of good hardness and good machinability. The machinability is comparable to cast iron, and this 30000 series shows good wear and heat resistance.

This very machinable material is designed for naturally aspirated and turbocharged engines in the light to upper duty range.

• 70000 (Diamond) Series
High Temperature Resistance

This specification has very high heat resistance which will remain even at very high temperatures. The sintered insert is made out of a high speed tool steel (tungsten carbide). This insert also has ceramic like characteristics, which give it very high temperature resistance. It has special additives blended into the matrix which impart high temperature lubricant properties to the valve seat. This solid lubricant enables this material to be used in dry fuel applications, such as propane, LPG and natural gas. They prevent the microwelding of the valve seat material to the valve face.

This eliminates the primary cause of valve seat erosion and failure. This very high heat and wear resistant seat is designed for propane, LPG and natural gas engines, as well as for high performance engines, heavy duty and extremely duty applications.

4.3 Overview

	30000 Series (High Machinability)	70000 Series (High Temperature Resistance)
Fuel type	petrol (unleaded), diesel	propane, LPG, natural gas, petrol (unleaded), diesel
Cylinder head Material	aluminium, cast iron	aluminium, cast iron
Applications	turbocharged engines, aspirated engines, lower to upper duty range	heavy and extreme duty range high performance engines, all gas engines (propane, LPG)

Dimensional specifications must be evaluated in order to assure correct selection of valve seat whenever engine parts are being selected. Heavy duty or extreme service applications should be considered to assure that the individual engine rebuilder's standards are met and are the responsibility of rebuilder to determine suitability.

VALVE SEAT COMPETITIVE INTERCHANGES

SBI - DURA-BOND VALVE SEATS							
SBI	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**
SB 1000-1N	**71600**	SB 1312-67	**30779**	SB 1437-56	**31329**	SB 1536E-2N	**71671**
SB 1062-50	**31047**	SB 1312-67PM	**30779**	SB 1437-6	**30803**	SB 1562-0	**31112**
SB 1062-50PM	**31047**	SB 1312-68	**31058**	SB 1437-62	**30818**	SB 1562-0PM	**31112**
SB 1102E-1N	**71168**	SB 1312-6PM	**31289**	SB 1437-62PM	**30818**	SB 1562-1	**30643**
SB 1125-1	**30754**	SB 1312-7	**30775**	SB 1437-63	**31646**	SB 1562-1+.005	**30643+5**
SB 1125-10	**31143**	SB 1312-9	**30736**	SB 1437-65	**30806**	SB 1562-11	**30839**
SB 1125-2	**31097**	SB 1339E-2	**31174**	SB 1437-65PM	**30806**	SB 1562-12	**30841**
SB 1125-4	**31143**	SB 1339E-2N	**71174**	SB 1437-68	**30809**	SB 1562-12PM	**30841**
SB 1125-5	**31097**	SB 1348E-1N+.005	**71633+5**	SB 1437-69	**31656**	SB 1562-16	**31870**
SB 1125-52	**31048**	SB 1375-1	**30558**	SB 1437-6PM	**30803**	SB 1562-16N	**71870**
SB 1125-52N	**71048**	SB 1375-18	**30787**	SB 1437-72	**31659**	SB 1562-17	**30647**
SB 1125-6	**31097**	SB 1375-1N	**70558**	SB 1437-73	**31658**	SB 1562-17PM	**30647**
SB 1125-8	**30754**	SB 1375-1PM	**30558**	SB 1437-8	**30802**	SB 1562-18	**30731**
SB 1125-9	**31143**	SB 1375-2	**30791**	SB 1437-8PM	**30802**	SB 1562-1N	**70643**
SB 1142E-2N	**71169**	SB 1375-26	**31064**	SB 1437-9	**31225**	SB 1562-1N+.005	**70643+5**
SB 1181E-1	**31170**	SB 1375-3	**30786**	SB 1457E-2	**31068**	SB 1562-1PM	**30643**
SB 1181E-1N	**71170**	SB 1375-3N	**70786**	SB 1457E-2N	**71068**	SB 1562-2	**30503**
SB 1187-5	**31145**	SB 1375-4	**30790**	SB 1496E-1N	**71178**	SB 1562-2N	**70503**
SB 1187-51	**31146**	SB 1375-4N	**70790**	SB 1500-0	**30715**	SB 1562-2PM	**30503**
SB 1187-53	**31868**	SB 1375-4PM	**30790**	SB 1500-1	**30711**	SB 1562-3	**31033**
SB 1187-6	**31145**	SB 1375-5	**31157**	SB 1500-10	**31032**	SB 1562-31	**31104**
SB 1221E-2	**31171**	SB 1375-50	**31102**	SB 1500-10PM	**31032**	SB 1562-34	**30839**
SB 1221E-2N	**71171**	SB 1375-51	**31064**	SB 1500-11	**30722**	SB 1562-36	**30840**
SB 1250-1	**31147**	SB 1375-52	**31063**	SB 1500-12	**30714**	SB 1562-36N	**70840**
SB 1250-1PM	**31147**	SB 1375-55N	**71635**	SB 1500-1N	**70711**	SB 1562-36PM	**30840**
SB 1250-2	**31152**	SB 1375-56	**30238**	SB 1500-1PM	**30711**	SB 1562-4	**30644**
SB 1250-3	**30764**	SB 1375-5N	**71157**	SB 1500-2	**30823**	SB 1562-4+.010	**30644+10**
SB 1250-3PM	**30764**	SB 1375-6	**31125**	SB 1500-25	**30708**	SB 1562-46	**30740**
SB 1250-4	**31152**	SB 1375-61	**31139**	SB 1500-2PM	**30823**	SB 1562-46N	**70740**
SB 1250-50	**31151**	SB 1375-62	**31139**	SB 1500-3	**30712**	SB 1562-4PM	**30644**
SB 1250-52	**31054**	SB 1375-64	**31064**	SB 1500-3PM	**30712**	SB 1562-50	**30740**
SB 1250-55	**31100**	SB 1375-65	**30787**	SB 1500-4	**30705**	SB 1562-51	**31318**
SB 1250-56	**30230**	SB 1375-7	**30788**	SB 1500-4PM	**30705**	SB 1562-52	**30839**
SB 1250-56PM	**30230**	SB 1375-8	**30786**	SB 1500-5	**30706**	SB 1562-54	**31292**
SB 1250-58	**31105**	SB 1378E-1N	**71175**	SB 1500-50	**30015**	SB 1562-54PM	**31292**
SB 1250-63	**31612**	SB 1417E-1N	**71176**	SB 1500-52	**30024**	SB 1562-6	**30640**
SB 1250-64	**31613**	SB 1437-1	**30556**	SB 1500-53	**31258**	SB 1562-66	**31286**
SB 1250-65	**31147**	SB 1437-10	**31225**	SB 1500-53PM	**31258**	SB 1562-66PM	**31286**
SB 1260E-1N	**71172**	SB 1437-14	**31402**	SB 1500-54	**30031**	SB 1562-67	**31199**
SB 1262E-1N	**71621**	SB 1437-1N	**70556**	SB 1500-54PM	**30031**	SB 1562-67PM	**31199**
SB 1299E-1	**31173**	SB 1437-1PM	**30556**	SB 1500-56	**30712**	SB 1562-69	**31287**
SB 1299E-1N	**71173**	SB 1437-2	**31031**	SB 1500-57	**30045**	SB 1562-69N	**71287**
SB 1312-1	**30775**	SB 1437-24	**31225**	SB 1500-57PM	**30045**	SB 1562-69PM	**31287**
SB 1312-10	**31153**	SB 1437-25	**31111**	SB 1500-59	**30105**	SB 1562-6N	**70640**
SB 1312-11	**31289**	SB 1437-2N	**71031**	SB 1500-6	**30822**	SB 1562-6PM	**30640**
SB 1312-4	**31056**	SB 1437-2PM	**31031**	SB 1500-63	**31291**	SB 1562-7	**30645**
SB 1312-5	**31155**	SB 1437-3	**31030**	SB 1500-63PM	**31291**	SB 1562-70	**31079**
SB 1312-50	**30562**	SB 1437-30	**31160**	SB 1500-64	**30105**	SB 1562-72	**31674**
SB 1312-52	**30779**	SB 1437-3N	**71030**	SB 1500-65	**30105**	SB 1562-7PM	**30645**
SB 1312-56	**30562**	SB 1437-3PM	**31030**	SB 1500-6PM	**30822**	SB 1562-9	**30541**
SB 1312-56PM	**30562**	SB 1437-4	**30801**	SB 1500-73	**31244**	SB 1562-9N	**70541**
SB 1312-57	**31058**	SB 1437-4PM	**30801**	SB 1500-8	**30707**	SB 1562-9PM	**30541**
SB 1312-6	**31289**	SB 1437-5	**31161**	SB 1500-9	**30709**	SB 1575E-3N	**71181**
SB 1312-61	**31628**	SB 1437-51	**30802**	SB 1500-9PM	**30709**	SB 1614E-1N	**71182**
SB 1312-61N	**71628**	SB 1437-54	**31067**	SB 1535E-1N	**71179**	SB 1624E-1N	**70855**

CAUTION: These interchanged valve seats are close dimensionally. They are not necessarily exact duplicates. The suitablity for a particular application must be determined by the installer.

VALVE SEAT COMPETITIVE INTERCHANGES

SBI - DURA-BOND VALVE SEATS (Cont.)							
SBI	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**
SB 1625-1	**30648**	SB 1687-13PM	**30733**	SB 1744E-1N	**71086**	SB 1812-21N	**70680**
SB 1625-1+.005	**30648+5**	SB 1687-15	**30872**	SB 1750-0	**31129**	SB 1812-2PM	**30668**
SB 1625-10	**30651**	SB 1687-15PM	**30872**	SB 1750-1	**30659**	SB 1812-3	**30530**
SB 1625-10PM	**30651**	SB 1687-16	**30873**	SB 1750-11	**31045**	SB 1812-38	**30671**
SB 1625-11	**30857**	SB 1687-17	**30664**	SB 1750-1N	**70659**	SB 1812-39	**31000**
SB 1625-14	**30732**	SB 1687-1N	**70670**	SB 1750-1PM	**30659**	SB 1812-3PM	**30530**
SB 1625-18	**31488**	SB 1687-1PM	**30670**	SB 1750-2	**30658**	SB 1812-4	**30667**
SB 1625-18PM	**31488**	SB 1687-2	**30664**	SB 1750-2N	**70658**	SB 1812-4N	**70667**
SB 1625-1N	**70648**	SB 1687-22	**30674**	SB 1750-2PM	**30658**	SB 1812-4PM	**30667**
SB 1625-1PM	**30648**	SB 1687-23	**30676**	SB 1750-3	**30655**	SB 1812-5	**30672**
SB 1625-2	**30646**	SB 1687-24	**31042**	SB 1750-30	**30652**	SB 1812-52	**31327**
SB 1625-20	**30854**	SB 1687-26	**31042**	SB 1750-32	**31129**	SB 1812-52PM	**31327**
SB 1625-29	**30853**	SB 1687-27	**30674**	SB 1750-34	**31045**	SB 1812-54	**31137**
SB 1625-2N	**70646**	SB 1687-28	**30675**	SB 1750-38	**30658**	SB 1812-54PM	**31137**
SB 1625-2PM	**30646**	SB 1687-29	**31042**	SB 1750-39	**30659**	SB 1812-55	**31285**
SB 1625-3	**30650**	SB 1687-2N	**70664**	SB 1750-3N	**70655**	SB 1812-55PM	**31285**
SB 1625-33	**31046**	SB 1687-2PM	**30664**	SB 1750-3PM	**30655**	SB 1812-59	**30672**
SB 1625-35	**31046**	SB 1687-3	**30673**	SB 1750-4	**30656**	SB 1812-5N	**70672**
SB 1625-39	**31482**	SB 1687-32	**30873**	SB 1750-4N	**70656**	SB 1812-5PM	**30672**
SB 1625-3N	**70650**	SB 1687-34	**30677**	SB 1750-4PM	**30656**	SB 1812-6	**31089**
SB 1625-3PM	**30650**	SB 1687-3N	**70673**	SB 1750-5	**30657**	SB 1812-7	**30904**
SB 1625-4	**30649**	SB 1687-3PM	**30673**	SB 1750-54	**30165**	SB 1812-7PM	**30904**
SB 1625-40	**30661**	SB 1687-4	**30559**	SB 1750-5PM	**30657**	SB 1812-8	**30668**
SB 1625-4N	**70649**	SB 1687-40	**31490**	SB 1750-6	**30889**	SB 1812-9	**30907**
SB 1625-4PM	**30649**	SB 1687-41	**30733**	SB 1750-60	**31117**	SB 1812-9N	**70907**
SB 1625-5	**31489**	SB 1687-4N	**70559**	SB 1750-60PM	**31117**	SB 1812-9PM	**30907**
SB 1625-52	**30663**	SB 1687-4PM	**30559**	SB 1750-61	**31215**	SB 1812E-3	**31827**
SB 1625-54	**30860**	SB 1687-5	**30677**	SB 1750-61PM	**31215**	SB 1812E-4	**31843**
SB 1625-54PM	**30860**	SB 1687-51	**31288**	SB 1750-65	**31715**	SB 1817E-3	**31726**
SB 1625-55	**31690**	SB 1687-51PM	**31288**	SB 1750-68	**30165**	SB 1818E-1N	**70542**
SB 1625-56	**31218**	SB 1687-52	**31083**	SB 1750-68PM	**30165**	SB 1828E-1	**31090**
SB 1625-56PM	**31218**	SB 1687-54	**30881**	SB 1750-69	**31117**	SB 1828E-1N	**71090**
SB 1625-5PM	**31489**	SB 1687-54PM	**30881**	SB 1750-7	**30652**	SB 1850E-2	**31228**
SB 1625-6	**30662**	SB 1687-55	**30559**	SB 1750-8	**30653**	SB 1850E-2N	**71228**
SB 1625-62	**31223**	SB 1687-56	**31707**	SB 1750-8N	**70653**	SB 1853E-1	**31734**
SB 1625-62PM	**31223**	SB 1687-56N	**71707**	SB 1750-9	**30654**	SB 1853E-1N	**71734**
SB 1625-6PM	**30662**	SB 1687-5N	**70677**	SB 1750-9PM	**30654**	SB 1875-0	**31091**
SB 1625-7	**30663**	SB 1687-5PM	**30677**	SB 1772E-2N	**71227**	SB 1875-1	**30682**
SB 1625-7PM	**30663**	SB 1687-6	**30675**	SB 1781E-1N	**71257**	SB 1875-11	**30923**
SB 1625-9	**30661**	SB 1687-6PM	**30675**	SB 1784E-1	**31087**	SB 1875-14	**30920**
SB 1625-9PM	**30661**	SB 1687-7	**30678**	SB 1784E-1N	**71087**	SB 1875-14PM	**30920**
SB 1630E-1N	**70642**	SB 1687-7PM	**30678**	SB 1811E-1N	**71188**	SB 1875-15	**30688**
SB 1654E-3	**31183**	SB 1687-8	**30679**	SB 1812-0	**31459**	SB 1875-17	**30684**
SB 1654E-3N	**71183**	SB 1687-8PM	**30679**	SB 1812-1	**30671**	SB 1875-19	**31238**
SB 1657E-1N	**71697**	SB 1687-9	**30674**	SB 1812-10	**31000**	SB 1875-19PM	**31238**
SB 1669E-1	**30868**	SB 1687-9N	**70674**	SB 1812-11	**30905**	SB 1875-1N	**70682**
SB 1687-0	**31270**	SB 1687-9PM	**30674**	SB 1812-12	**31283**	SB 1875-1PM	**30682**
SB 1687-0PM	**31270**	SB 1690E-1N+.005	**71701+5**	SB 1812-12PM	**31283**	SB 1875-2	**30509**
SB 1687-1	**30670**	SB 1693E-4	**31186**	SB 1812-17	**31269**	SB 1875-20	**30681**
SB 1687-10	**30679**	SB 1693E-4N	**71186**	SB 1812-18	**31131**	SB 1875-2PM	**30509**
SB 1687-10N	**70679**	SB 1722E-1	**31709**	SB 1812-19	**31131**	SB 1875-35	**30682**
SB 1687-11	**30676**	SB 1722E-1N	**71709**	SB 1812-1N	**70671**	SB 1875-36	**30684**
SB 1687-11PM	**30676**	SB 1732E-1	**31187**	SB 1812-1PM	**30671**	SB 1875-4	**30683**
SB 1687-12	**30871**	SB 1732E-1N	**71187**	SB 1812-2	**30668**	SB 1875-51	**31034**
SB 1687-13	**30733**	SB 1744E-1	**31086**	SB 1812-21	**30680**	SB 1875-51PM	**31034**

CAUTION: These interchanged valve seats are close dimensionally. They are not necessarily exact duplicates. The suitablity for a particular application must be determined by the installer.

VALVE SEAT COMPETITIVE INTERCHANGES

SBI - DURA-BOND VALVE SEATS (Cont.)							
SBI	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**	**SBI**	**DURA-BOND**
SB 1875-56	**31092**	SB 1937-5	**31749**	SB 2000-38	**30692**	SB 2087E-2	**31195**
SB 1875-6	**30681**	SB 1937-52	**31281**	SB 2000-3N	**70726**	SB 2087E-2N	**71195**
SB 1875-6PM	**30681**	SB 1937-52PM	**31281**	SB 2000-4	**30702**	SB 2088E-1	**31771**
SB 1875-7	**30687**	SB 1937-54	**31134**	SB 2000-6	**30725**	SB 2125-1	**30557**
SB 1875-7PM	**30687**	SB 1937-6	**31262**	SB 2000-7	**30952**	SB 2125-11N	**71777**
SB 1875-9	**30919**	SB 1937-7	**31134**	SB 2000-7PM	**30952**	SB 2125-1N	**70557**
SB 1875-9PM	**30919**	SB 1937-8	**31471**	SB 2001E-1	**31756**	SB 2125-1PM	**30557**
SB 1880E-2N	**71739**	SB 2000-0	**30729**	SB 2001E-1+.010	**31756+10**	SB 2125-2	**31498**
SB 1890E-2N	**71189**	SB 2000-1	**30691**	SB 2001E-1N	**71756**	SB 2125-2PM	**31498**
SB 1912E-1	**31746**	SB 2000-12	**30723**	SB 2004E-2	**31758**	SB 2125-31	**31240**
SB 1912E-1N	**71746**	SB 2000-13	**30724**	SB 2006E-1	**30700**	SB 2125-32	**31124**
SB 1929E-1N	**71190**	SB 2000-13N	**70724**	SB 2006E-1N	**70700**	SB 2125-34	**30974**
SB 1937-1	**30560**	SB 2000-14	**30727**	SB 2006E-2	**30703**	SB 2125-38	**31779**
SB 1937-17	**30936**	SB 2000-15	**30698**	SB 2006E-6C	**91829**	SB 2125-4	**30537**
SB 1937-17PM	**30936**	SB 2000-15PM	**30698**	SB 2008E-2N	**71193**	SB 2125-7N	**71776**
SB 1937-1PM	**30560**	SB 2000-16	**30699**	SB 2018E-1N	**71765**	SB 2165E-1N.005	**71783+5**
SB 1937-2	**31497**	SB 2000-17	**30692**	SB 2047E-1	**31194**	SB 2187-1	**31135**
SB 1937-20	**31166**	SB 2000-18	**30694**	SB 2047E-1N	**71194**	SB 2187-27	**31282**
SB 1937-23	**30935**	SB 2000-1N	**70691**	SB 2049E-1	**31766**	SB 2187-4	**30984**
SB 1937-23PM	**30935**	SB 2000-1PM	**30691**	SB 2062-1	**30964**	SB 2250-1	**30989**
SB 1937-27	**30933**	SB 2000-2	**30700**	SB 2062-1PM	**30964**	SB 2250-13	**31787**
SB 1937-30	**31134**	SB 2000-21	**30728**	SB 2062-2	**31769**	SB 2250-13N	**71787**
SB 1937-33	**30560**	SB 2000-23	**30724**	SB 2062-25	**31249**	SB 2312-9	**30991**
SB 1937-34	**30936**	SB 2000-27	**30730**	SB 2062-3	**30963**	SB 2381E-2	**31845**
SB 1937-4	**30932**	SB 2000-29	**30701**	SB 2062-30N	**71770**		
SB 1937-4N	**70932**	SB 2000-35	**30703**	SB 2062-8	**31768**		
SB 1937-4PM	**30932**	SB 2000-36	**30690**	SB 2062-8N	**71768**		

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VALVE SEAT COMPETITIVE INTERCHANGES

SERDI - DURA-BOND VALVE SEATS

SERDI	DURA-BOND	SERDI	DURA-BOND	SERDI	DURA-BOND	SERDI	DURA-BOND
005999	**39006**	006023	**39040**	010488	**39026**	SS1006B	**31174**
006000	**39007**	006024	**39042**	010489	**39029**	SS1007A	**71175**
006001	**39008**	006025	**39043**	010491	**39035**	SS1008A	**71176**
006002	**39009**	006026	**39045**	010492	**39038**	SS1009A	**71068**
006003	**39010**	006027	**39046**	010493	**39041**	SS1009B	**31068**
006004	**39012**	006028	**39048**	010494	**39044**	SS1010A	**71178**
006005	**39013**	006029	**39049**	010495	**39047**	SS1011A	**71179**
006006	**39015**	006030	**39051**	010496	**39050**	SS1012A	**71181**
006007	**39016**	006031	**39052**	010497	**39053**	SS1014A	**71183**
006008	**39018**	006033	**39057**	010498	**39056**	SS1014B	**31183**
006009	**39019**	006034	**39059**	010499	**39058**	SS1016A	**71187**
006010	**39021**	006035	**39060**	010500	**39061**	SS1016B	**31187**
006011	**31273**	006036	**39062**	010501	**39065**	SS1017A	**71227**
006012	**39024**	006037	**39063**	010502	**39069**	SS1018A	**71188**
006013	**39025**	006038	**39066**	SS1001A	**71168**	SS1019A	**71228**
006014	**39027**	006039	**39067**	SS1001SA	**71169**	SS1019B	**31228**
006015	**39028**	009802	**39055**	SS1002A	**71170**	SS1020A	**71189**
006016	**39030**	009803	**39068**	SS1002B	**31170**	SS1021A	**71190**
006017	**39031**	010346	**31141**	SS1003A	**71171**	SS1023A	**71193**
006018	**39033**	010483	**39011**	SS1003B	**31171**	SS1024A	**71194**
006019	**31276**	010484	**39014**	SS1004A	**71172**	SS1024B	**31194**
006020	**39036**	010485	**39017**	SS1005A	**71173**	SS1025A	**71195**
006021	**39037**	010486	**39020**	SS1005B	**31173**	SS1025B	**31195**
006022	**39039**	010487	**39023**	SS1006A	**71174**		

TUCKER - DURA-BOND VALVE SEATS

TUCKER	DURA-BOND	TUCKER	DURA-BOND	TUCKER	DURA-BOND	TUCKER	DURA-BOND
T1019	**71381**	T1582	**71257**	T1657	**71111**	T1825	**70657**
T1021	**70659**	T1601	**71269**	T1658	**70667**	T1829	**70903**
T1022	**70740**	T1609	**70668**	T1660	**70905**	T1833	**71019**
T1045	**70732**	T1610	**70672**	T1663	**70671**	T1835	**70733**
T1047	**71488**	T1613	**70919**	T1668	**71134**	T1840	**71372**
T110	**71600**	T1614	**70932**	T1685	**71161**	T1842	**70559**
T116	**71156**	T1616	**70667**	T1712	**70729**	T1845	**71131**
T120	**71143**	T1617	**70671**	T1718	**71739**	T1846	**70871**
T136	**71047**	T1620	**70509**	T1756	**71787**	T1854	**70905**
T137	**71435**	T1621	**70932**	T1759	**70989**	T1860	**71131**
T1509	**70651**	T1624	**70687**	T1767	**71470**	T1861	**70871**
T1511	**71090**	T1626	**70681**	T1771	**70989**	T1864	**71373**
T1512	**70854**	T1627	**70682**	T1772	**70726**	T1865	**70871**
T1513	**70658**	T1628	**70873**	T1773	**71261**	T1866	**71131**
T1517	**70733**	T1629	**70681**	T1781	**71497**	T1872	**70923**
T1518	**70989**	T1630	**71497**	T1785	**70714**	T1873	**70679**
T1519	**70664**	T1633	**70560**	T1801	**70871**	T1874	**71165**
T1525	**70660**	T1634	**71269**	T1803	**70654**	T1884	**70646**
T1526	**70651**	T1635	**70668**	T1805	**71129**	T1893	**71756**
T1530	**70732**	T1637	**71238**	T1809	**70907**	T1900	**70673**
T1536	**70682**	T1641	**70919**	T1810	**71131**	T1901	**70923**
T1537	**70684**	T1643	**71000**	T1811	**70920**	T1903	**71496**
T1540	**71261**	T1645	**70671**	T1815	**71091**	T1911	**70932**
T1566	**71353**	T1646	**70658**	T1820	**71091**	T1912	**70688**
T1569	**71365**	T1647	**70684**	T1821	**71164**	T1914	**71268**
T1570	**71765**	T1650	**71092**	T1822	**70679**	T1915	**71765**
T1580	**70673**	T1652	**70682**	T1824	**70657**	T1921	**70724**

CAUTION: These interchanged valve seats are close dimensionally. They are not necessarily exact duplicates. The suitablity for a particular application must be determined by the installer.

VALVE SEAT COMPETITIVE INTERCHANGES

TUCKER - DURA-BOND VALVE SEATS (Cont.)

TUCKER	DURA-BOND	TUCKER	DURA-BOND	TUCKER	DURA-BOND	TUCKER	DURA-BOND
T1923	**70726**	T229	**70803**	T321	**70537**	T7000	**71621**
T1924	**70727**	T229+1/16	**70709**	T322	**70984**	T7002	**71380**
T1926	**70724**	T230	**70706**	T329	**71770**	T801	**70991**
T1929	**70853**	T2302	**71143**	T348	**70711**	T832	**70989**
T193	**71112**	T2308	**71143**	T354	**70740**	T879	**71697**
T1936	**70682**	T231	**70707**	T358	**70705**	T883	**71372**
T1940	**70699**	T2340	**71144**	T360	**70779**	T885	**71183**
T1941	**70700**	T2342	**71145**	T362	**70779**	T900	**70840**
T1942	**70698**	T2351	**71054**	T365	**71496**	T904	**70675**
T1946	**71768**	T2357	**71101**	T370	**71031**	T909	**71344**
T1955	**70698**	T237	**71225**	T372	**70700**	T910	**70647**
T1958	**70952**	T238	**71030**	T389	**71240**	T911	**70661**
T196	**71145**	T239	**71030**	T393	**70656**	T912	**70662**
T1963	**71249**	T240	**71402**	T395	**70667**	T913	**70663**
T1965	**70700**	T244	**70822**	T397	**70677**	T915	**71128**
T1967	**70681**	T245	**71154**	T398	**70558**	T919	**70651**
T1968	**71238**	T247	**70839**	T400	**70705**	T921	**70640**
T197	**71155**	T2523	**71364**	T417	**71137**	T922	**71488**
T1971	**71166**	T253	**70706**	T419	**71221**	T923	**70663**
T1972	**70655**	T2531	**71163**	T429	**70712**	T924	**70640**
T1975	**71021**	T2545	**70802**	T438	**70653**	T925	**70676**
T1979	**71746**	T256	**70722**	T439	**70712**	T928	**70838**
T1986	**71148**	T2560	**70712**	T449	**70105**	T929	**70643**
T199	**70653**	T2561	**70712**	T453	**71756**	T929LP	**70643**
T1991	**70654**	T257	**70786**	T468	**71185**	T934	**70649**
T1993	**70542**	T264	**70556**	T469	**70105**	T935	**70650**
T1995	**70787**	T270	**70710**	T470	**71105**	T936	**71488**
T1996	**71419**	T271	**70711**	T475	**71137**	T937	**70674**
T2017	**71091**	T2716	**71776**	T476	**71073**	T938	**70675**
T2018	**70542**	T272	**70712**	T478	**70839**	T939	**70644**
T2024	**71427**	T2720	**71498**	T489	**71746**	T945	**71489**
T2026	**70905**	T2721	**71498**	T495	**70658**	T947	**71489**
T2028	**70658**	T2742	**71498**	T496	**71776**	T951	**70648**
T2034	**70680**	T2748	**70675**	T499	**70788**	T952	**70648**
T2035	**71503**	T2750	**70698**	T521	**70802**	T953	**70646**
T2037	**71091**	T277	**70640**	T526	**70860**	T957	**70864**
T2038	**71129**	T278	**70645**	T540	**71221**	T960	**70677**
T204	**71152**	T279	**71161**	T542	**71287**	T961	**70678**
T2048	**71707**	T2812	**71134**	T551	**71289**	T962	**70678**
T205	**71147**	T2813	**70686**	T559	**71289**	T964	**70541**
T2053	**70675**	T283	**71621**	T565	**70803**	T966	**70652**
T206	**70764**	T2848	**70672**	T571	**70656**	T967	**70653**
T2081	**70839**	T2849	**71166**	T580	**71153**	T968	**70653**
T2087	**70654**	T2852	**71249**	T585	**71178**	T976	**70670**
T213	**71289**	T288	**70711**	T586	**71175**	T981	**70664**
T217	**70786**	T295	**70712**	T598	**71776**	T982	**70673**
T219	**71125**	T298	**71125**	T599	**70802**	T983	**70655**
T221	**71011**	T299	**70801**	T606	**70675**	T984	**70656**
T222	**70790**	T300	**70690**	T617	**71165**	T986	**70658**
T223	**70558**	T301	**70691**	T625	**70238**	T987	**70659**
T224	**71157**	T302	**70692**	T634	**70673**	T990	**70644**
T225	**70791**	T305	**71777**	T635	**71380**	T995	**70659**
T226	**71225**	T306	**71776**	T638	**70791**		
T227	**70801**	T316	**70963**	T646	**71367**		
T228	**70802**	T318	**70557**	T647	**71087**		

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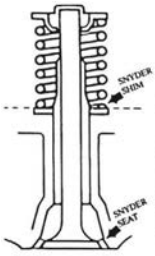
Dura-Bond

VALVE SPRING BOOSTER SHIMS

Available in both case hardened High Performance and regular series

All Dura-Bond shims meet or exceed OEM specifications.
Only prime quality cold rolled steel is used.



Avoid loss of power due to weak spring tension —
INSTALL BOOSTER SHIMS

Refacing valves and the grinding of valve seats causes loss of metal. This loss of metal results in the loss of proper spring pressure. To restore the proper spring tension, one must replace the lost material by installing a Valve Spring Booster Shim under the valve spring.

1000 SERIES

.015"

3000 SERIES

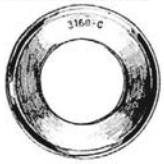
.030"

6000 SERIES

.060"

Cupped Shims are necessary when the spring base pad area is too shallow to hold the regular shim and the spring in the proper position.

3000 SERIES CUPPED SHIM



.030"

6000 SERIES CUPPED SHIM

.060"

part number	thickness	application
3110-C 6110-C	.030" .060"	American motors, Chrysler, DeSoto, Dodge, Dodge Truck, Ford, Lincoln, Mercury, Plymouth, Hercules, John Deere
3153-C 6153-C	.030" .060"	Chevrolet (remachined pad), Chrysler (remachined pad), Ford (remachined pad), Oldsmobile (remachined pad)
3160-C 6160-C	.030" .060"	American Motors, Chevrolet, Ford, Lincoln, Mercury, Pontiac, Minneapolis-Moline
3060-C 6060-C	.030" .060"	Allis Chalmers, Chrysler, General Motors, International Tractor, John Deere, Mazda, Mercury Marine

STANDARD REBUILDERS PACK: 500 Pieces per Box • Cupped, Industrial, or HP • 250 Pieces per Box

STANDARD PACKAGE: 100 Pieces per Box • Cupped, Industrial, or HP • 50 Pieces per Box

DESIGN FEATURES

Both sides are flat and without serrations or marks of any kind.

- All OEM specifications call for non-serrated shims.
- Non-serrated shims do not damage the spring pad area on today's aluminum cylinder heads.
- Non-serrated shims lay flat so as not to set up any harmonics in the spring.
- Non-serrated shims lay flat so as not to introduce any lateral loads on the spring, valve or guide.

VALVE SPRING BOOSTER SHIMS
NUMERICAL LISTING BY PART NUMBER

PART NUMBER SERIES						ACTUAL	
.015 THICKNESS		.030 THICKNESS		.060 THICKNESS		O.D.	I.D.
1003	(C204S)	**3003**	(B204S)	**6003**	(A204S)	0.760	0.578
1005	(C204)	**3005**	(B204)	**6005**	(A204)	0.796	0.515
1010	(C202)	**3010**	(B202)	**6010**	(A202)	0.915	0.643
1011	(C802)	**3011**	(B802)	**6011**	(A802)	0.920	0.520
1012	-	**3012**	-	**6012**	-	0.960	0.515
1015	-	**3015**	-	**6015**	-	0.960	0.625
1020	(C101)	**3020**	(B101)	**6020**	(A101)	1.000	0.688
1022	-	**3022**	-	**6022**	-	1.000	0.515
1025	(C104)	**3025**	(B104)	**6025**	(A104)	1.002	0.766
1030	(C106)	**3030**	(B106)	**6030**	(A106)	1.100	0.721
1040	(C300)	**3040**	(B300)	**6040**	(A300)	1.124	0.721
1043	(C408)	**3043**	(B408)	**6043**	(A408)	1.140	0.570
-	-	**3045-I**	(B407)	**6045-I**	(A407)	1.162	0.825
1048	-	**3048**	-	**6048**	-	1.215	0.515
1050	(C105)	**3050**	(B105)	**6050**	(A105)	1.215	0.876
1052	-	**3052**	-	**6052**	-	1.247	0.518
1055	(C107)	**3055**	(B107)	**6055**	(A107)	1.250	0.625
1060	(C203)	**3060**	(B203)	**6060**	(A203)	1.246	0.814
-	-	**3060-C**	(B505)	**6060-C**	(A505)	1.399	0.819
1065	(C107S)	**3065**	(B107S)	**6065**	(A107S)	1.250	0.688
1070	(C201)	**3070**	(B201)	**6070**	(A201)	1.247	0.877
1080	(C302)	**3080**	(B302)	**6080**	(A302)	1.311	0.766
1085	-	**3085**	-	**6085**	-	1.311	0.840
1087	-	**3087**	-	**6087**	-	1.311	0.890
1090	(C100)	**3090**	(B100)	**6090**	(A100)	1.311	0.955
1095	-	**3095**	-	**6095**	-	1.330	0.600
1100	(C200)	**3100**	(B200)	**6100**	(A200)	1.356	0.642
1110	(C102)	**3110**	(B102)	**6110**	(A102)	1.358	1.000
-	-	**3110-C**	(B502)	**6110-C**	(A502)	1.544	1.025
1120	(C301)	**3120**	(B301)	**6120**	(A301)	1.375	0.766
1125	-	**3125**	-	**6125**	-	1.375	1.000
1126	-	**3126**	-	**6126**	-	1.375	1.030
1127	-	**3127**	-	**6127**	-	1.384	1.018
-	-	**3130-I**	(B403)	**6130-I**	(A403)	1.374	0.782
1135	(C306)	**3135**	(B306)	**6135**	(A306)	1.438	0.645
1140	(C305)	**3140**	(B305)	**6140**	(A305)	1.438	0.766
1145	(C109)	**3145**	(B109)	**6145**	(A109)	1.438	1.059
1150	(C303)	**3150**	(B303)	**6150**	(A303)	1.476	0.705
1152	(C602)	**3152**	(B602)	**6152**	(A602)	1.477	0.765
1153	(C306S)	**3153**	(B306S)	**6153**	(A306S)	1.500	0.645
-	-	**3153-C**	(B506)	**6153-C**	(A506)	1.633	0.645
1156-I	(C404)	**3156-I**	(B404)	**6156-I**	(A404)	1.502	0.874
1160	(C103)	**3160**	(B103)	**6160**	(A103)	1.500	1.030
-	-	**3160-C**	(B503)	**6160-C**	(A503)	1.633	1.055
1170	(C304)	**3170**	(B304)	**6170**	(A304)	1.503	1.155
1175	-	**3175**	-	**6175**	-	1.270	0.570
1176	-	**3176**	-	**6176**	-	1.400	0.570
1177	-	**3177**	-	**6177**	-	1.500	0.570
1178	-	**3178**	-	**6178**	-	1.600	0.570
-	-	**3180-I**	(B401)	**6180-I**	(A401)	1.604	0.820
1185-S-HP	(C601)	**3185-S-HP**	(B601)	**6185-S-HP**	(A601)	1.634	0.643
-	-	**3190-I**	(B402)	**6190-I**	(A402)	1.689	1.280
-	-	**3200-I**	(B400)	**6200-I**	(A400)	1.751	0.818
-	-	**3210-I**	(B405)	**6210-I**	(A405)	1.750	0.890
-	-	**3220-I**	(B406)	**6220-I**	(A406)	1.751	1.328

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Use the same part number - just add "hp" to the end.

VALVE SPRING BOOSTER SHIMS
PROGRESSIVE LISTING BY OUTSIDE DIAMETER

ACTUAL O.D.	I.D.	PART NUMBER SERIES .015 Thickness		.030 Thickness		.060 Thickness	
0.760	0.578	**1003**	(C204S)	**3003**	(B204S)	**6003**	(A204S)
0.796	0.515	**1005**	(C204)	**3005**	(B204)	**6005**	(A204)
0.915	0.643	**1010**	(C202)	**3010**	(B202)	**6010**	(A202)
0.920	0.520	**1011**	(C802)	**3011**	(B802)	**6011**	(A802)
0.960	0.515	**1012**	-	**3012**	-	**6012**	-
0.960	0.625	**1015**	-	**3015**	-	**6015**	-
1.000	0.515	**1022**	-	**3022**	-	**6022**	-
1.000	0.688	**1020**	(C101)	**3020**	(B101)	**6020**	(A101)
1.002	0.766	**1025**	(C104)	**3025**	(B104)	**6025**	(A104)
1.100	0.721	**1030**	(C106)	**3030**	(B106)	**6030**	(A106)
1.124	0.721	**1040**	(C300)	**3040**	(B300)	**6040**	(A300)
1.140	0.570	**1043**	(C408)	**3043**	(B408)	**6043**	(A408)
1.162	0.825	**-**	-	**3045-I**	(B407)	**6045-I**	(A407)
1.215	0.515	**1048**	-	**3048**	-	**6048**	-
1.215	0.876	**1050**	(C105)	**3050**	(B105)	**6050**	(A105)
1.246	0.814	**1060**	(C203)	**3060**	(B203)	**6060**	(A203)
1.247	0.518	**1052**	-	**3052**	-	**6052**	-
1.247	0.877	**1070**	(C201)	**3070**	(B201)	**6070**	(A201)
1.250	0.625	**1055**	(C107)	**3055**	(B107)	**6055**	(A107)
1.250	0.688	**1065**	(C107S)	**3065**	(B107S)	**6065**	(A107S)
1.270	0.570	**1175**	-	**3175**	-	**6175**	-
1.311	0.766	**1080**	(C302)	**3080**	(B302)	**6080**	(A302)
1.311	0.840	**1085**	-	**3085**	-	**6085**	-
1.311	0.890	**1087**	-	**3087**	-	**6087**	-
1.311	0.955	**1090**	(C100)	**3090**	(B100)	**6090**	(A100)
1.330	0.600	**1095**	-	**3095**	-	**6095**	-
1.356	0.642	**1100**	(C200)	**3100**	(B200)	**6100**	(A200)
1.358	1.000	**1110**	(C102)	**3110**	(B102)	**6110**	(A102)
1.374	0.782	**-**	-	**3130-I**	(B403)	**6130-I**	(A403)
1.375	0.766	**1120**	(C301)	**3120**	(B301)	**6120**	(A301)
1.375	1.000	**1125**	-	**3125**	-	**6125**	-
1.375	1.030	**1126**	-	**3126**	-	**6126**	-
1.384	1.018	**1127**	-	**3127**	-	**6127**	-
1.399	0.819	**-**	-	**3060-C**	(B505)	**6060-C**	(A505)
1.400	0.570	**1176**	-	**3176**	-	**6176**	-
1.438	0.645	**1135**	(C306)	**3135**	(B306)	**6135**	(A306)
1.438	0.766	**1140**	(C305)	**3140**	(B305)	**6140**	(A305)
1.438	1.059	**1145**	-	**3145**	-	**6145**	-
1.476	0.705	**1150**	(C303)	**3150**	(B303)	**6150**	(A303)
1.477	0.765	**1152**	(C602)	**3152**	(B602)	**6152**	(A602)
1.500	0.570	**1177**	-	**3177**	-	**6177**	-
1.500	0.645	**1153**	(C306S)	**3153**	(B306S)	**6153**	(A306S)
1.500	1.030	**1160**	(C103)	**3160**	(B103)	**6160**	(A103)
1.502	0.874	**1156-I**	(C404)	**3156-I**	(B404)	**6156-I**	(A404)
1.503	1.155	**1170**	(C304)	**3170**	(B304)	**6170**	(A304)
1.544	1.025	**-**	-	**3110-C**	(B502)	**6110-C**	(A502)
1.600	0.570	**1178**	-	**3178**	-	**6178**	-
1.604	0.820	**-**	-	**3180-I**	(B401)	**6180-I**	(A401)
1.633	0.645	**-**	-	**3153-C**	(B506)	**6153-C**	(A506)
1.633	1.055	**-**	-	**3160-C**	(B503)	**6160-C**	(A503)
1.634	0.643	**1185-S-HP**	(C601)	**3185-S-HP**	(B601)	**6185-S-HP**	(A601)
1.689	1.280	**-**	-	**3190-I**	(B402)	**6190-I**	(A402)
1.750	0.890	**-**	-	**3210-I**	(B405)	**6210-I**	(A405)
1.751	0.818	**-**	-	**3200-I**	(B400)	**6200-I**	(A400)
1.751	1.328	**-**	-	**3220-I**	(B406)	**6220-I**	(A406)

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VALVE SPRING BOOSTER SHIMS
PROGRESSIVE LISTING BY INSIDE DIAMETER

I.D.	ACTUAL O.D.	PART NUMBER SERIES .015 Thickness		.030 Thickness		.060 Thickness	
0.515	0.796	**1005**	(C204)	**3005**	(B204)	**6005**	(A204)
0.515	0.960	**1012**	-	**3012**	-	**6012**	-
0.515	1.000	**1022**	-	**3022**	-	**6022**	-
0.515	1.215	**1048**	-	**3048**	-	**6048**	-
0.518	1.247	**1052**	-	**3052**	-	**6052**	-
0.520	0.920	**1011**	(C802)	**3011**	(B802)	**6011**	(A802)
0.570	1.140	**1043**	(C408)	**3043**	(B408)	**6043**	(A408)
0.570	1.270	**1175**	-	**3175**	-	**6175**	-
0.570	1.400	**1176**	-	**3176**	-	**6176**	-
0.570	1.500	**1177**	-	**3177**	-	**6177**	-
0.570	1.600	**1178**	-	**3178**	-	**6178**	-
0.578	0.760	**1003**	(C204S)	**3003**	(B204S)	**6003**	(A204S)
0.600	1.330	**1095**	-	**3095**	-	**6095**	-
0.625	0.960	**1015**	-	**3015**	-	**6015**	-
0.625	1.250	**1055**	(C107)	**3055**	(B107)	**6055**	(A107)
0.642	1.356	**1100**	(C200)	**3100**	(B200)	**6100**	(A200)
0.643	0.915	**1010**	(C202)	**3010**	(B202)	**6010**	(A202)
0.643	1.634	**1185-S-HP**	(C601)	**3185-S-HP**	(B601)	**6185-S-HP**	(A601)
0.645	1.438	**1135**	(C306)	**3135**	(B306)	**6135**	(A306)
0.645	1.500	**1153**	(C306S)	**3153**	(B306S)	**6153**	(A306S)
0.645	1.633	**-**	-	**3153-C**	(B506)	**6153-C**	(A506)
0.688	1.000	**1020**	(C101)	**3020**	(B101)	**6020**	(A101)
0.688	1.250	**1065**	(C107S)	**3065**	(B107S)	**6065**	(A107S)
0.705	1.476	**1150**	(C303)	**3150**	(B303)	**6150**	(A303)
0.721	1.100	**1030**	(C106)	**3030**	(B106)	**6030**	(A106)
0.721	1.124	**1040**	(C300)	**3040**	(B300)	**6040**	(A300)
0.765	1.477	**1152**	(C602)	**3152**	(B602)	**6152**	(A602)
0.766	1.002	**1025**	(C104)	**3025**	(B104)	**6025**	(A104)
0.766	1.311	**1080**	(C302)	**3080**	(B302)	**6080**	(A302)
0.766	1.375	**1120**	(C301)	**3120**	(B301)	**6120**	(A301)
0.766	1.438	**1140**	(C305)	**3140**	(B305)	**6140**	(A305)
0.782	1.374	**-**	-	**3130-I**	(B403)	**6130-I**	(A403)
0.814	1.246	**1060**	(C203)	**3060**	(B203)	**6060**	(A203)
0.818	1.751	**-**	-	**3200-I**	(B400)	**6200-I**	(A400)
0.819	1.399	**-**	-	**3060-C**	(B505)	**6060-C**	(A505)
0.820	1.604	**-**	-	**3180-I**	(B401)	**6180-I**	(A401)
0.825	1.162	**-**	-	**3045-I**	(B407)	**6045-I**	(A407)
0.840	1.311	**1085**	-	**3085**	-	**6085**	-
0.874	1.502	**1156-I**	(C404)	**3156-I**	(B404)	**6156-I**	(A404)
0.876	1.215	**1050**	(C105)	**3050**	(B105)	**6050**	(A105)
0.877	1.247	**1070**	(C201)	**3070**	(B201)	**6070**	(A201)
0.890	1.311	**1087**	-	**3087**	-	**6087**	-
0.890	1.750	**-**	-	**3210-I**	(B405)	**6210-I**	(A405)
0.955	1.311	**1090**	(C100)	**3090**	(B100)	**6090**	(A100)
1.000	1.358	**1110**	(C102)	**3110**	(B102)	**6110**	(A102)
1.000	1.375	**1125**	-	**3125**	-	**6125**	-
1.018	1.384	**1127**	-	**3127**	-	**6127**	-
1.025	1.544	**-**	-	**3110-C**	(B502)	**6110-C**	(A502)
1.030	1.375	**1126**	-	**3126**	-	**6126**	-
1.030	1.500	**1160**	(C103)	**3160**	(B103)	**6160**	(A103)
1.055	1.633	**-**	-	**3160-C**	(B503)	**6160-C**	(A503)
1.059	1.438	**1145**	(C109)	**3145**	(B109)	**6145**	(A109)
1.155	1.503	**1170**	(C304)	**3170**	(B304)	**6170**	(A304)
1.280	1.689	**-**	-	**3190-I**	(B402)	**6190-I**	(A402)
1.328	1.751	**-**	-	**3220-I**	(B406)	**6220-I**	(A406)

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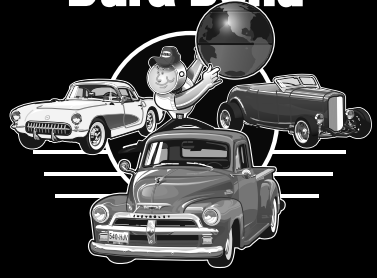

A MELLING COMPANY

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
AMC					
		CAM BOLTS & WASHERS			
AB-030-P	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Bolt	1/2-20 x 1-1/4 Hex		
AW-011-P	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Washer	2-1/16 x 1/2 x 3/16 Washer		
		HEAD DOWELS			
AD-258	2.5L (150ci), 4.0L (242ci), 4.2L (258ci), 5.0L (304ci), 5.9L (360ci), 5.6L (390ci 1970 Only), 6.6L (401ci)	Hollow Dowel	0.6250	0.523	0.500
AD-927-P	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Solid Dowel	0.3125	Solid	0.565
AD-0112	1966-69 (290ci), (343ci), (390ci) w/1970-Later Heads	Stepped Hollow Dowel	0.6250 / 0.5620	0.450	0.500
		OIL FILTER PIN			
AD-007-P	(199ci-258ci)	Roll Pin	1/4 x 1-1/2		
		OIL PUMP DOWELS			
AD-148	3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Hollow Dowel	0.5615	0.454	0.812
		TRANSMISSION DOWELS			
AD-148	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci), (290ci), (304ci), (343ci), (360ci), (390ci), (401ci)	Hollow Dowel	0.5615	0.454	0.812
		WOODRUFF KEYS			
AK-002-P	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Woodruff Key	3/16 x 3/4		
AK-010-P	3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)	Woodruff Key	3/16 x 7/8		
CATERPILLAR					
		SPRING RETAINERS			
SR-779	Caterpillar 3116 Series	Spring Retainer	Valve Stem Diameter 0.315		
		VALVE SPRING SPACER			
SP-7488	Caterpillar 3304, 3306 Series	Spacer	1.3750	0.675	1.083
CHRYSLER					
		CAM BOLTS & WASHERS			
AB-012-P	(273ci-360ci) "LA" V8	Bolt	7/16-14 x 1-1/4 Hex		
AW-002-P	(273ci-360ci) "LA" V8	Cupped Washer	1-1/2 x 7/16 x 5/16 Washer		
AW-005-P	5.2L (318ci), 5.9L (360ci) w/Rller Cam	Cupped Washer	1-1/2 x 7/16 x 7/16 Washer		
AW-006-P	5.2L (318ci), 5.9L (360ci) w/Roller Cam, (361ci-440ci) V8	Tapered (Bellville) Washer	1-1/2 x 7/16 x 1/8 Washer		
AB-040-P	(361ci-440ci) V8	Bolt	7/16-14 x 1 Hex		
AB-042-P	(361ci-440ci) V8	Bolt	3/8-16 x 3/4 Hex		
		CAM CHAIN OIL TABS			
AS-001-P	(273ci-360ci) "LA" V8	Chain Oil Tab	N/A	N/A	N/A
		CAM SPROCKET DOWELS			
AD-402	2.2L, 2.5L Mitsubishi SOHC Vin A-E, J, K.	Solid Dowel	0.2318	Solid	0.630
		CAM TRAY BOLTS			
AB-005-P	5.2L (318ci), 5.9L (360ci) w/Roller Cam	Bolt	5/16-18 x 5/8 Flanged Hex		
		DISTRIBUTOR TOWER SHAFT BUSHINGS			
AD-584	(318ci-440ci) "LA" V8	Distributor Tower Shaft Bushing	N/A	N/A	N/A

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
CHRYSLER (Cont'd)					
		HEAD DOWELS			
AD-111	2.0L, 2.4L, 2.6L Includes Mitsubishi Eng.	Hollow Dowel	0.6300	0.500	0.505
AD-402	2.2L, 2.5L Mitsubishi SOHC Vin A-E, J, K.	Solid Dowel	0.2318	Solid	0.630
AD-849	2.4L, 2.6L G54B 2.7L Includes Mitsubishi Eng.	Hollow Dowel	0.6310	0.500	0.485
AD-856	3.3L (202ci)	Hollow Dowel	0.5913	0.452	0.488
AD-927-P	(273ci-360ci) "LA" V8	Solid Dowel	0.3125	Solid	0.565
AD-1284-P	(361ci-440ci) V8	Solid Dowel	0.2466	Solid	0.630
		SPARK PLUG TUBES			
SPT-1	2.0L, 3.2L, 3.5L	Spark Plug Tube	1.0275	0.965	5.035
		SPRING RETAINERS			
SR-627	2.5L (150ci) (1998-2002), 4.0L (243ci) (1999-2006)	Spring Retainer	Valve Stem Diameter 0.311/0.312		
SR-570	4.7L (287ci)	Spring Retainer	Valve Stem Diameter 0.272/0.273		
SR-318	5.2L (318ci), 5.9L (360ci) (Early)	Spring Retainer	Valve Stem Diameter 0.370/0.373		
SR-626	5.2L (318ci), 5.9L (360ci) (Late)	Spring Retainer	Valve Stem Diameter 0.311/0.312		
		THRUST PLATE BOLTS			
AB-001-P	(318ci-360ci) "LA" V8	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
		TIMING COVER DOWELS			
AD-1284-P	(361ci-440ci) V8	Solid Dowel	0.2466	Solid	0.630
		TRANSMISSION DOWELS			
AD-849	2.4L, 2.6L G54B 2.7L Includes Mitsubishi Eng.	Hollow Dowel	0.6310	0.500	0.485
AD-021	2.4L, 2.7L, 3.3L Includes Mitsubishi Eng.	Hollow Dowel	11mm	8.5mm	8.3mm
AD-270	2.7L	Hollow Dowel	0.5510	0.410	0.485
AD-532	3.9L V6, (318ci-440ci) "LA" V8	Solid Dowel	0.4960	Solid	0.740
		WOODRUFF KEYS			
AK-002-P	(273ci-360ci) "LA" V8	Woodruff Key	3/16 x 3/4		
AK-005-P	(273ci-440ci) "LA" V8	Woodruff Key	3/16 x 1-13/16		
FORD					
		BELLHOUSING DOWELS			
AD-397A	5.4L	Hollow Dowel	0.6305	0.469	0.984
		CAM BOLTS & WASHERS			
AB-032-P	3.8L (232ci)	Bolt & Washer	10mm-1.5 x 34mm Hex, 35mm Integral Washer		
AB-009-P	(221ci-351ci) Windsor V8, (370ci-460ci) "Lima" V8	Bolt	3/8-16 x 1-1/2 Hex		
AW-001-P	(221ci-351ci) Windsor V8, (370ci-460ci) "Lima" V8	Washer	1-1/4 x 3/8 x 1/4 Washer		
AB-013-P	(332ci-428ci) "FE" V8	Bolt	7/16-14 x 1-3/4 Hex		
AW-003-P	(332ci-428ci) "FE" V8	Washer	1-1/4 x 7/16 x 1/4 Washer		
AB-014-P	(460ci) V8 w/Fuel Injection	Bolt	3/8-16 x 1-3/8 Hex		
		CAM ECCENTRIC			
AE-001-P	(255ci-351ci) Windsor V8 (1968-later), 351M, 400M, (460ci) V8	Cam Eccentric - Inner	N/A	N/A	N/A
AE-002-P	(255ci-351ci) Windsor V8 (1968-later), 351M, 400M, (460ci) V8, (332ci-428ci) "FE" V8	Cam Eccentric - Outer	N/A	N/A	N/A
AE-003-P	5.0L (302ci), 5.8L (351ci) w/Fuel Injection	Cam Eccentric (FI)	N/A	N/A	N/A
AE-004-P	(332ci-428ci) "FE" V8	Cam Eccentric - Inner	N/A	N/A	N/A

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
FORD (Cont'd)					
		CAM SPROCKET DOWELS			
AD-005-P	(302ci) 351W w/Two Piece Eccentric, 351C/M, 400M, (429ci, 460ci)	Solid Dowel	0.3115	Solid	1.125
AD-004-P	(221ci-351ci) Windsor V8 w/One Piece Eccentric	Solid Dowel	0.3115	Solid	1.375
AD-006-P	(332ci-428ci) "FE" V8	Solid Dowel	0.3090	Solid	1.500
		CAM TRAY BOLTS			
AB-011-P	5.0L (302ci), 5.8L (351ci) w/Roller Cam	Cam Tray Bolt	1/4-20 x 1/2 Place Bolt, Hex		
		COOLANT TUBES			
TC-1	4.6L, 5.4L	Coolant Tube (O-Ring)	0.8750	0.437	1.915
TC-1-OO	4.6L, 5.4L	O-Ring For TC-1	N/A	N/A	N/A
TC-2	4.6L, 5.4L	Coolant Tube (Slip-Fit)	0.9800	0.500	2.438
		FLYWHEEL DOWELS			
AD-6397	4.6L, 5.0L (302ci)	Stepped Solid Dowel	0.2485 / 0.3140	Solid	0.700
		HEAD DOWELS			
AD-849	1.8L (110ci), 2.0L (121ci) Courier Eng.	Hollow Dowel	0.6310	0.500	0.485
AD-300	2.3L	Hollow Dowel	0.5555	0.468	0.470
AD-600	3.0L	Hollow Dowel	0.6050	0.475	0.550
AD-011-P	3.8L (232ci)	Hollow Dowel (Split)	17mm	15mm	19mm
AD-008-P	4.9L (300ci), 3.6L (221ci), 4.2L (255ci), 4.3L (260ci), 4.5L (272ci), 4.7L (289ci), 5.0L (302ci), 5.8L (351ci), 6.6L (400ci)	Hollow Dowel	0.6745	0.552	0.435
AD-008A-P	(332ci-428ci) "FE" V8, (370ci-460ci) "Lima" V8	Hollow Dowel (Split)	0.7400	0.625	0.445
		HEAD PLUGS			
AP-020	MZR Eng.	Aluminum Plug	0.3645	Solid	0.360
		MANIFOLD DOWELS			
AD-025-P	(400ci) 351C, 351M	Solid Dowel	0.2500	Solid	0.500
		OIL PUMP DOWELS			
AD-230	2.0L, 2.3L Escort, Pinto	Hollow Dowel	0.7200	0.615	0.395
		OIL GALLEY PLUGS			
AP-001-P	4.9L (300ci)	Oil Galley Plug	1/16-27 x 1/4 Internal Hex		
		PEDESTAL SHIMS			
S-100	(302ci, 351ci) W, C, M, 400ci, (370ci-429ci-460ci) w/Pedestal Mount Rocker Arms	Pedestal Shim	.020" Thickness		
		SPACER			
SP-6265	4.6L	Spacer	1.8500	1.446	0..441
AS-002	4.9L (300ci)	Spacer	1.5160	1.255	0.194
		SPRING RETAINERS			
SR-183	1.6L (98ci), 1.9L (116ci), 3.0L (183ci)	Spring Retainer	Valve Stem Diameter 0.316		
SR-536	2.8L, 2.9L, 4.0L	Spring Retainer	Valve Stem Diameter 0.315/0.316		
SR-502	4.7L (289ci) Hi Perf.	Spring Retainer	Valve Stem Diameter 0.342		
		TENSIONER BOLTS			
AB-034-P	3.8L (232ci)	Bolt	6mm-1.0 x 14mm Hex		

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
FORD (Cont'd)					
		THRUST PLATE BOLTS			
AB-033-P	3.8L (232ci)	Cam Thrust Plate Bolt	6mm-1.0 x 19mm Flat Head Torx		
AB-033-P	3.8L (232ci)	Balance Shaft Thrust Plate Bolt	6mm-1.0 x 19mm Flat Head Torx		
AB-010-P	4.7L (289ci), 5.0L (302ci), 5.8L (351ci)	Cam Thrust Plate Bolt	1/4-20 x 5/8 Hex		
AB-001-P	4.9L (300ci)	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
AB-015-P	(332ci-428ci) "FE" V8	Cam Thrust Plate Bolt	7/16-14 x 5/8 Hex		
AB-011-P	7.5L (460ci)	Cam Thrust Plate Bolt	1/4-20 x 1/2 Place Bolt, Hex		
		TIMING COVER DOWELS			
AD-015	2.3L	Hollow Dowel	0.3140	0.261	0.455
AD-520	3.8L (232ci), 4.2L	Hollow Dowel	0.4881	0.400	0.670
AD-967	4.7L (289ci), 5.0L (302ci), 5.8L (351ci)	Hollow Dowel	0.4820	0.385	0.550
		TRANSMISSION DOWELS			
AD-E7RY	2.0L	Hollow Dowel	0.5010	0.406	0.650
AD-521	3.0L, 3.8L (232ci), 4.2L (255ci)	Hollow Dowel	0.6074	0.510	0.800
AD-397	3.8L (232ci), 4.2L (255ci), 4.7L (289ci), 4.9L (300ci), 5.0L (302ci), 5.8L (351ci), 5.9L (360ci), 6.7L (390ci), 6.6L (400ci), 7.5L (460ci)	Solid Dowel Pin	0.5000	Solid	1.000
		WATER PUMP DOWELS			
FD-1-1	2.8L (171ci)	Hollow Dowel	0.9395	0.834	0.572
		WOODRUFF KEYS			
AK-003-P	3.8L (232ci), 4.7L (289ci), 5.0L (302ci), 5.8L (351ci)	Woodruff Key	3/16 x 1-13/32		
AK-004-P	4.7L (289ci), 4.9L (300ci), 5.0L (302ci), 5.8L (351ci)	Woodruff Key	3/16 x 1-3/4		
AK-002-P	4.9L (300ci)	Woodruff Key	3/16 x 3/4		
AK-006-P	(332ci-428ci) "FE" V8	Woodruff Key	3/16 x 1-13/32		
AK-007-P	351C, 351M, (400ci), 7.5L (460ci)	Woodruff Key	3/16 x 1-3/4		
AK-008-P	7.5L (460ci)	Woodruff Key	1/4 x 7/8		
GENERAL MOTORS					
		BALANCE SHAFT GEAR BOLTS & WASHERS			
AB-026-P	4.3L (262ci)	Bolt	3/8-16 x 1-1/4 Bolt, Hex		
AW-007-P	4.3L (262ci)	Flat Washer	3/8 Washer		
AW-006-P	4.3L (262ci)	Tapered Washer	1-1/2 x 7/16 x 1/8 Washer		
		BYPASS VALVES			
AV-001-P	1.4L (85ci), 1.6L (97ci), 1.8L (110ci), 2.0L (122ci), 2.8L (173ci), 3.8L (229ci), 4.3L (262ci), 4.9L (301ci) 11 psi	Bypass Valve	N/A	N/A	N/A
AV-580-PHD	1.4L (85ci), 1.6L (97ci), 1.8L (110ci), 2.0L (122ci), 2.8L (173ci), 3.8L (229ci), 4.3L (262ci), 4.9L (301ci) 21 psi	Bypass Valve	N/A	N/A	N/A
AV-280-P	2.3L (140ci), 2.5L (151ci), 3.2L (194ci), 3.8L (230ci), 4.1L, (250ci), 4.8L (292ci)	Bypass Valve	N/A	N/A	N/A
		CAM BOLTS & WASHERS			
AB-007-P	4.3L (262ci)	Bolt	5/16-18 x 1-3/8 Cap Screw, Hex		
AB-019-P	4.3L (262ci)	Bolt	5/16-18 x 1-1/2 Hex		
AW-009-P	4.3L (262ci)	Washer	5/16 Star Washer		
AB-001-P	(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8	Bolt	5/16-18 x 3/4 Hex		
AB-031-P	(265ci-455ci) Pontiac V8	Bolt	1/2-20 x 1 Hex		
AW-010-P	(265ci-455ci) Pontiac V8	Washer	1-3/8 x 1/2 x 3/16 Washer		
		CAM BOX DOWELS			
AD-022	3.4L (207ci)	Hollow Dowel	0.4350	0.343	0.500

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
GENERAL MOTORS (Cont'd)					
		CAM BOX DOWELS			
AD-024	2.2L Ecotech	Hollow Dowel	0.3937	0.328	0.627
		CAM LOCK PLATE			
AW-013-P	All Other GM V6 / V8 Hi Perf.	Cam Lock Plate	N/A	N/A	N/A
		CAM SPACER			
SP-230	3.8L (230ci)	Cam Spacer	1.5050	1.288	0.139
		CAM TRAY BOLTS			
AB-005-P	4.3L (262ci), 5.0L (305ci), 5.7L (350ci) w/Roller Cam	Bolt	5/16-18 x 5/8 Flanged Hex		
		CRANK PINS			
AD-679	(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8	Solid Dowel	0.4386	Solid	0.813
		CRANKSHAFT INSERTS			
AD-699	2.5L w/Automatic Trans.	Crankshaft Insert	1.4985	0.830	0.924
AD-605	2.5L w/Manual Trans.	Crankshaft Insert	1.4985	1.092	1.075
		FLAT LIFTER PLUG BOLTS			
AB-027-P	5.7L (350ci)	Bolt	15/16-18 x 1/2 Hex		
		FUEL PUMP BOLTS & WASHERS			
AB-021-P	(262ci-400ci) Small Block V8	Bolt	3/8-16 x 5/8 Hex		
AW-007-P	(262ci-400ci) Small Block V8	Flat Washer	3/8 Washer		
		HEAD DOWELS			
AD-189	Geo 1.3L, 1.6L, Suzuki G13, G16 Eng.	Hollow Dowel	0.5113	0.406	0.700
AD-050	2.3L (138ci), 2.4L (146ci)	Hollow Dowel	0.5562	0.500	0.745
AD-927-P	(262ci-400ci) Small Block V8, (265ci-455ci) Pontiac V8	Solid Dowel	0.3125	Solid	0.565
AD-013	4.1L Cadillac (FWD)	Hollow Dowel	0.5820	0.484	0.945
AD-018	4.1L Cadillac (RWD)	Hollow Dowel (Stepped)	0.5820 / 0.5910	0.484	0.945
AD-352	4.6L Cadillac Northstar	Hollow Dowel	0.6165	0.500	1.100
AD-326	4.8L, 5.3L, 6.0L	Hollow Dowel	0.6420	0.516	0.500
AD-8081-P	(366ci-454ci) Big Block V8	Hollow Dowel	0.6400	0.500	0.500
AD-347	Geo, Suzuki Eng.	Hollow Dowel	0.3900	0.281	0.272
		OIL DIPSTICK PLUGS			
AP-013	5.0L (305ci), 5.7L (350ci) Marine	Oil Dipstick Plug	N/A	N/A	N/A
AP-014	4.3L (262ci)	Oil Dipstick Plug	N/A	N/A	N/A
		OIL FILTER ADAPTER BOLTS			
AB-039-P	All Other GM V6 / V8 Hi Perf.	Bolt	5/16-18 x 1-1/16		
		OIL GALLEY PLUGS			
AP-003-P	4.3L (262ci)	Oil Galley Plug	3/8-18 x .46 Internal Hex, w/Sealant		
CB-001-P	4.3L (262ci), 5.7L (350ci), 6.6L (400ci)	Oil Galley Rear Main Plug	12MM Check Ball		
AP-002-P	(262ci-400ci) Small Block V8	Oil Galley Plug	1/4-18 x .33 Internal Hex, w/Sealant		
		OIL PAN BOLTS			
AB-020-P	4.3L (262ci)	Oil Pan Bolt (Aluminum Pan)	5/16-18 x 7/8 Frame Bolt, Hex		
AB-016-P	4.3L (262ci)	Oil Pan Bolt (Steel Pan)	1/4-20 x 3/4 Frame Bolt, Hex		
AB-023-P	(262ci-400ci) Small Block V8	Oil Pan Bolt	5/16-18 x 5/8 Sims Bolt, Hex		
AB-010-P	(262ci-400ci) Small Block V8	Oil Pan Bolt (With Rails)	1/4-20 x 5/8 Hex		
AB-024-P	(262ci-400ci) Small Block V8	Oil Pan Bolt (Without Rails)	1/4-20 x 1/2 Sims Bolt, Hex		
AB-016-P	(262ci-400ci) Small Block V8	Oil Pan Bolt (Steel Pan w/ Rails)	1/4-20 x 3/4 Frame Bolt, Hex		

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
GENERAL MOTORS (Cont'd)					
		OIL PAN DRAIN PLUG WASHERS			
AW-008-P	(262ci-400ci) Small Block V8	Nylon Washer	1/2 x .900 x .078 Washer		
		OIL PAN STUDS & NUTS			
ST-002-P	4.3L (262ci)	Oil Pan Stud (Aluminum Pan)	Stud 5/16-18 x 2-1/2		
ST-001-P	(262ci-400ci) Small Block V8	Oil Pan Stud (Steel Pan)	Stud 5/16-18 x 1-9/16 Torx		
AN-002-P	(262ci-400ci) Small Block V8	Oil Pan Stud Nut	5/16 Flange Nut, Hex		
		OIL PUMP BOLTS			
AB-022-P	(262ci-400ci) Small Block V8	Oil Pump Bolt (Short Version)	7/16-14 x 2 Bolt, Hex		
AB-018-P	(262ci-400ci) Small Block V8	Oil Pump Bolt (Long Version)	7/16-14 x 2-1/4 Bolt, Hex		
		OIL PUMP DOWELS			
AD-SS	1.3L	Hollow Dowel	0.3546	0.266	0.390
AD-250	4.1L (250ci), 4.8L (292ci)	Hollow Dowel	0.7600	0.640	0.635
AD-1284-P	(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8	Solid Dowel	0.2466	Solid	0.630
		OIL PUMP DRIVE ROD BUSHINGS			
AD-842	2.5L	Drive Rod Bushing	0.7570	0.491	1.160
		OIL PUMP SLEEVES			
AD-010-P	4.3L (262ci), 4.6L (283ci), 5.3L (327ci), 5.7L (350ci), 6.6L (400ci)	Nylon Sleeve	0.6120	0.466	0.600
		PEDESTAL SHIMS			
S-220-10-P	2.2L (134ci)	Pedestal Shim	.010" Thickness		
S-220-20-P	2.2L (134ci)	Pedestal Shim	.020" Thickness		
S-006-10-P	3.1L (189ci), 3.4L (207ci)	Pedestal Shim	.010" Thickness		
S-006-20-P	3.1L (189ci), 3.4L (207ci)	Pedestal Shim	.020" Thickness		
S-006-30-P	3.1L (189ci), 3.4L (207ci)	Pedestal Shim	.030" Thickness		
		REAR MAIN DOWELS			
AD-SS	2.2L	Hollow Dowel	0.3546	0.266	0.390
		RETAINING LINKAGE SHAFT PIN			
PIN-1-P	4L80 Transmission	Retaining Linkage Shaft Pin	N/A	N/A	1.120
		ROTATOR ELIMINATORS			
RE200	7.4L (454ci) Also LPG	Rotator Eliminator	1.7400	0.640	0.350
RE200I	7.4L (454ci) Also LPG	Rotator Eliminator	1.7400	0.640	0.180
RE250	7.4L (454ci) Also LPG	Rotator Eliminator	1.7400	0.640	0.250
RE200HP	7.4L (454ci) Hi Perf.	Rotator Eliminator (Cupped)	1.7400	0.640	0.300
		SPRING RETAINERS			
SR-220	2.2L (134ci)	Spring Retainer	Valve Stem Diameter 0.234/0.235		
SR-500	5.7L (350ci) Hi Perf.	Spring Retainer	Valve Stem Diameter 0.341/0.342		
SR-366	7.4L (454ci)	Spring Retainer	Valve Stem Diameter 0.372		
		SEAL HOUSING BOLTS			
AB-002-P	4.3L (262ci), 5.0L (305ci), 5.7L (350ci)	Bolt	1/4-20 x 1-3/4 Machine Screw, Torx		
AB-003-P	4.3L (262ci), 5.0L (305ci), 5.7L (350ci)	Bolt	1/4-20 x 7/8 Machine Screw, Torx		
		SEAL HOUSING DOWELS			
AD-026	3.8L	Hollow Dowel	0.4325	0.343	0.240
AD-003-P	4.3L (262ci), 5.0L (305ci), 5.7L (350ci)	Hollow Dowel	0.4445	0.297	0.562

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
GENERAL MOTORS (Cont'd)					
		SPARK PLUG TUBES			
SPT-4	3.6L (High Feature Eng.)	Spark Plug Tube	N/A	N/A	4.370
		THRUST PLATE BOLTS			
AB-004-P	4.3L (262ci)	Balance Shaft Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
AB-006-P	4.3L (262ci)	Cam Thrust Plate Bolt	1/4-20 x 5/8 Machine Screw, Torx		
AB-004-P	4.3L (262ci), 5.0L (305ci), 5.7L (350ci) w/Roller Cam	Cam Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
AB-004-P	5.0L (305ci), 5.7L (350ci) w/Roller Cam	Water Pump Shaft Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
AB-001-P	(265ci-455ci) Pontiac V8	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
		TIMING COVER BOLTS			
AB-017-P	(262ci-400ci) Small Block V8	Timing Cover Bolt (Steel Cover)	1/4-20 x 1/2 Frame Bolt, Hex		
		TIMING COVER DOWELS			
AD-016-P	2.2L (134ci)	Solid Dowel	0.2326	Solid	0.645
AD-046	4.3L (1996-2003) w/Plastic Timing Cover	Solid Dowel (Middle Stepped)	0.2483 / .3435	Solid	0.945
AD-1284-P	(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8	Solid Dowel	0.2466	Solid	0.630
AD-012-P	6.2L, 6.5L Diesel	Solid Dowel	9mm	Solid	22mm
		TIMING GEAR OILER			
TC-4	2.5L (151ci), 3.8L (230ci), 4.1L (250ci), 4.8L (292ci)	Timing Gear Oiler (Press in Type)	N/A	N/A	N/A
		TIMING STUDS & NUTS			
ST-045-P	4.3L (262ci)	Timing Stud	5/16-18 x 1-3/4		
AN-001-P	4.3L (262ci)	Timing Stud Nut	5/16-18 Top Lock Nut, Hex		
		TRANSMISSION DOWELS			
AD-076	2.5L, 2.8L, 3.0L, 3.1L, 3.8L	Hollow Dowel	0.7275	0.500	0.750
AD-009-P	All Other GM V6 / V8	Solid Dowel	0.6210	Solid	1.150
AD-023	All Other GM V6 / V8 Hi Perf.	Solid Dowel	0.6210	Solid	1.550
		WOODRUFF KEYS			
AK-003-P	4.3L (262ci)	Woodruff Key	3/16 x 1-13/32		
AK-002-P	(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8 (265ci-455ci) Pontiac V8	Woodruff Key	3/16 x 3/4		
AK-001-P	(262ci-400ci) Small Block V8, (265ci-455ci) Pontiac V8	Woodruff Key	3/16 x 1-3/8		
AK-032-P	4.8L, 5.3L, 6.0L Gen III	Woodruff Key	3/16 x 1-31/64		
AK-166-P	7.4L (454ci)	Woodruff Key	3/16 x 2.367		
ISUZU					
		HEAD DOWELS			
AD-002	2.3L	Hollow Dowel	0.5825	0.500	0.355
AD-021	Isuzu	Hollow Dowel	11mm	8.5mm	8.3mm
JEEP					
		MANIFOLD DOWELS			
AD-242	4.0L	Solid Dowel	0.4250	Solid	0.685
MAZDA					
		HEAD PLUGS			
AP-020	MZR Eng.	Aluminum Plug	0.3645	Solid	0.360
		REAR MAIN DOWELS			
AD-SS	2.2L	Hollow Dowel	0.3546	0.266	0.390

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
MITSUBISHI					
		CAM SPROCKET DOWELS			
AD-402	SOHC 2.2L, 2.5L Vin A-E, J, K.	Solid Dowel	0.2318	Solid	0.630
		HEAD DOWELS			
AD-111	2.0L, 2.4L, 2.6L	Hollow Dowel	0.6300	0.500	0.505
AD-402	2.2L, 2.5L SOHC Vin A-E, J, K.	Solid Dowel	0.2318	Solid	0.630
AD-849	2.4L, 2.6L G54B 2.7L	Hollow Dowel	0.6310	0.500	0.485
AD-856	3.3L (202ci) Chrysler	Hollow Dowel	0.5913	0.452	0.488
		HEAD PLUGS			
AP-019	Multiple Engines	Aluminum Plug	0.3250	Solid	0.240
		TRANSMISSION DOWELS			
AD-849	2.4L, 2.6L G54B 2.7L	Hollow Dowel	0.6310	0.500	0.485
AD-021	2.4L, 2.7L, 3.3L	Hollow Dowel	11mm	8.5mm	8.3mm
NISSAN					
		CAM TOWER DOWELS			
AD-100	Nissan	Hollow Dowel	0.4320	0.336	0.432
		HEAD DOWELS			
AD-M00	1.6L, E16 Eng.	Hollow Dowel	0.5320	0.469	0.442
AD-400	1.6L (L16), 1.8L (L18), 2.0L (L20 & Z20), 2.2L (9Z22), 2.4L (L24 & Z24), 2.6L (L26), 2.8L (L28) L, Z Series	Hollow Dowel	0.5540	0.437	0.412
AD-V00	3.0L VG30 Eng.	Solid Dowel Pin	0.3750	Solid	0.570
		HEAD PLUGS			
AP-018	QR25DE Eng.	Aluminum Plug	0.2200	Solid	0.180
AP-019	Multiple Engines	Aluminum Plug	0.3250	Solid	0.240
		SPRING RETAINERS			
SR-809	2.5L QR25	Spring Retainer	Valve Stem Diameter 0.235		
SATURN					
		HEAD DOWELS			
AD-634	1.9L	Hollow Dowel	0.5155	0.437	0.665
		TRANSMISSION DOWELS			
AD-635	1.9L	Hollow Dowel	0.6080	0.500	0.905
SUBARU					
		BLOCK MATING DOWELS			
AD-027	2.5L EJ25 Eng.	Hollow Dowel	0.4723	0.348	1.030
SUZUKI					
		HEAD DOWELS			
AD-189	1.3L, 1.6L G13, G16 Eng.	Hollow Dowel	0.5113	0.406	0.700
AD-347	Suzuki	Hollow Dowel	0.3900	0.281	0.272
		OIL PUMP DOWELS			
AD-SS	1.3L	Hollow Dowel	0.3546	0.266	0.390
		REAR MAIN DOWELS			
AD-SS	1.3L	Hollow Dowel	0.3546	0.266	0.390

ENGINE HARDWARE

PART NO.	MAKE & APPLICATION	PRODUCT TYPE	DIMENSION O.D.	I.D.	LENGTH
TOYOTA					
		CAM CAP/TOWER DOWELS			
AD-021	1.8L, 2.0L, 2.2L, 18R, 20R, 22R Blocks	Hollow Dowel	11mm	8.5mm	8.3mm
AD-394	1MZ-FE/3MZ-FE Eng.	Hollow Dowel	0.3940	0.294	0.322
		COOLANT TUBES			
TC-5	1MZ Eng.	Coolant Tube	0.8725	0.777	3.490
		HEAD DOWELS			
AD-017	1.6L (1587cc) SOHC 4AC Eng.	Hollow Dowel	0.5113	0.422	0.470
AD-8120-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Solid Dowel	0.3150	Solid	0.705
AD-001	3.0L (2958cc) SOHC 3VZE Eng.	Hollow Dowel	0.6290	0.453	0.785
		OIL GALLEY PLUGS			
AP-004-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Oil Galley Plug	1/8-28 x .56 External Hex, w/Sealant		
AP-005-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Oil Galley Plug	1/4-19 x .39 Internal Hex, w/Sealant		
AP-006-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Oil Galley Plug	3/8-19 x .39 Internal Hex, w/Sealant		
		PLANETARY SLEEVES			
U140-190	All U Series Transmissions	Planetary Sleeve	0.5620	0.3780/0.3785	0.190
U140-250	All U Series Transmissions	Planetary Sleeve	0.5620	0.3780/0.3785	0.250
		REAR MAIN DOWELS			
AD-021	1.8L, 2.0L, 2.2L, 18R, 20R, 22R Blocks	Hollow Dowel	11mm	8.5mm	8.3mm
		ROCKER ASSEMBLY DOWELS			
AD-020	2.4L (2366cc) SOHC Toyota 22RE, REC Eng.	Hollow Dowel	0.6095	0.484	0.636
		SPARK PLUG TUBES			
SPT-2	1MZ Eng.	Spark Plug Tube	1.0275	0.965	3.755
SPT-3	5VZ Eng.	Spark Plug Tube	1.0275	0.965	4.025
SPT-5	5SFE Eng.	Spark Plug Tube	1.1040	0.950	4.325
		TENSIONER BOLTS & WASHERS			
AW-012-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Lock Washer	8mm Lock Washer		
		TIMING COVER DOWELS			
AD-021	1.8L, 2.0L, 2.2L, 2.4L, 18R, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Hollow Dowel	11mm	8.5mm	8.3mm
		TRANSMISSION DOWELS			
AD-0113	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Solid Dowel	10mm	Solid	22mm
		WATER PLUGS			
AP-006-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Water Plug	3/8-19 x .39 Internal Hex, w/Sealant		
		WATER PUMP DOWELS			
AD-021	1.8L, 2.0L, 2.2L, 18R, 20R, 22R Blocks	Hollow Dowel	11mm	8.5mm	8.3mm
		WOODRUFF KEYS			
AK-011-P	2.4L, 20R, 22R, 22RE, 22REC, 22RTEC Blocks	Woodruff Key	5mm x 18mm		
WAUKESHA					
		EXPANSION PLUGS			
DP-22-P	3.6L (220ci) VRD220, VRD220S, VRG220	Expansion Plug	2-1/4 Disc Plug		
		SPRING RETAINERS			
SR-014	VGF F18/H24GL/GLD LCR/HCR, L36/P48GL/GLD HCR	Spring Retainer	Valve Stem Diameter 0.430/0.431		

ENGINE HARDWARE COMPONENT LISTING

Bolt - Specifications

Size	
PART #	DIMENSION
AB-017-P	1/4-20 x 1/2 Frame Bolt, Hex
AB-004-P	1/4-20 x 1/2 Machine Screw, Torx
AB-011-P	1/4-20 x 1/2 Place Bolt, Hex
AB-024-P	1/4-20 x 1/2 Sims Bolt, Hex
AB-010-P	1/4-20 x 5/8 Hex
AB-006-P	1/4-20 x 5/8 Machine Screw, Torx
AB-016-P	1/4-20 x 3/4 Frame Bolt, Hex
AB-003-P	1/4-20 x 7/8 Machine Screw, Torx
AB-002-P	1/4-20 x 1-3/4 Machine Screw, Torx
AB-005-P	5/16-18 x 5/8 Flanged Hex
AB-023-P	5/16-18 x 5/8 Sims Bolt, Hex
AB-001-P	5/16-18 x 3/4 Hex
AB-020-P	5/16-18 x 7/8 Frame Bolt, Hex
AB-039-P	5/16-18 x 1-1/16
AB-007-P	5/16-18 x 1-3/8 Cap Screw, Hex
AB-019-P	5/16-18 x 1-1/2 Hex
AB-042-P	3/8-16 x 3/4 Hex
AB-021-P	3/8-16 x 5/8 Hex
AB-026-P	3/8-16 x 1-1/4 Bolt, Hex
AB-014-P	3/8-16 x 1-3/8 Hex
AB-009-P	3/8-16 x 1-1/2 Hex
AB-015-P	7/16-14 x 5/8 Hex
AB-040-P	7/16-14 x 1 Hex
AB-012-P	7/16-14 x 1-1/4 Hex
AB-013-P	7/16-14 x 1-3/4 Hex
AB-022-P	7/16-14 x 2 Bolt, Hex
AB-018-P	7/16-14 x 2-1/4 Bolt, Hex
AB-031-P	1/2-20 x 1 Hex
AB-030-P	1/2-20 x 1-1/4 Hex
AB-027-P	15/16-18 x 1/2 Hex
AB-034-P	6mm-1.0 x 14mm Hex
AB-033-P	6mm-1.0 x 19mm Flat Head Torx
AB-032-P	10mm-1.5 x 34mm Hex, 35mm Integral Washer

Numerical	
PART #	DIMENSION
AB-001-P	5/16-18 x 3/4 Hex
AB-002-P	1/4-20 x 1-3/4 Machine Screw, Torx
AB-003-P	1/4-20 x 7/8 Machine Screw, Torx
AB-004-P	1/4-20 x 1/2 Machine Screw, Torx
AB-005-P	5/16-18 x 5/8 Flanged Hex
AB-006-P	1/4-20 x 5/8 Machine Screw, Torx
AB-007-P	5/16-18 x 1-3/8 Cap Screw, Hex
AB-009-P	3/8-16 x 1-1/2 Hex
AB-010-P	1/4-20 x 5/8 Hex
AB-011-P	1/4-20 x 1/2 Place Bolt, Hex
AB-012-P	7/16-14 x 1-1/4 Hex
AB-013-P	7/16-14 x 1-3/4 Hex
AB-014-P	3/8-16 x 1-3/8 Hex
AB-015-P	7/16-14 x 5/8 Hex
AB-016-P	1/4-20 x 3/4 Frame Bolt, Hex
AB-017-P	1/4-20 x 1/2 Frame Bolt, Hex
AB-018-P	7/16-14 x 2-1/4 Bolt, Hex
AB-019-P	5/16-18 x 1-1/2 Hex
AB-020-P	5/16-18 x 7/8 Frame Bolt, Hex
AB-021-P	3/8-16 x 5/8 Hex
AB-022-P	7/16-14 x 2 Bolt, Hex
AB-023-P	5/16-18 x 5/8 Sims Bolt, Hex
AB-024-P	1/4-20 x 1/2 Sims Bolt, Hex
AB-026-P	3/8-16 x 1-1/4 Bolt, Hex
AB-027-P	15/16-18 x 1/2 Hex
AB-030-P	1/2-20 x 1-1/4 Hex
AB-031-P	1/2-20 x 1 Hex
AB-032-P	10mm-1.5 x 34mm Hex, 35mm Integral Washer
AB-033-P	6mm-1.0 x 19mm Flat Head Torx
AB-034-P	6mm-1.0 x 14mm Hex
AB-039-P	5/16-18 x 1-1/16
AB-040-P	7/16-14 x 1 Hex
AB-042-P	3/8-16 x 3/4 Hex

Dowel Pin - Specifications

Size			
PART #	O.D.	I.D.	LENGTH
AD-402	0.2318	Solid	0.630
AD-016-P	0.2326	Solid	0.645
AD-1284-P	0.2466	Solid	0.630
AD-046	0.2483 / 0.3435	Solid	0.945
AD-6397	0.2485 / 0.3140	Solid	0.700
AD-025-P	0.2500	Solid	0.500
AD-006-P	0.3090	Solid	1.500
AD-005-P	0.3115	Solid	1.125
AD-004-P	0.3115	Solid	1.375
AD-927-P	0.3125	Solid	0.565
AD-015	0.3140	0.261	0.455
AD-8120-P	0.3150	Solid	0.705
AD-SS	0.3546	0.266	0.390
AD-V00	0.3750	Solid	0.570
AD-347	0.3900	0.281	0.272
AD-024	0.3937	0.328	0.627
AD-394	0.3940	0.294	0.322

Numerical			
PART #	O.D.	I.D.	LENGTH
AD-001	0.6290	0.453	0.785
AD-002	0.5825	0.500	0.355
AD-003-P	0.4445	0.297	0.562
AD-004-P	0.3115	Solid	1.375
AD-005-P	0.3115	Solid	1.125
AD-006-P	0.3090	Solid	1.500
AD-008-P	0.6745	0.552	0.435
AD-008A-P	0.7400	0.625	0.445
AD-009-P	0.6210	Solid	1.150
AD-010-P	0.6120	0.466	0.600
AD-011-P	17mm	15mm	19mm
AD-0112	0.6250 / 0.5620	0.450	0.500
AD-0113	10mm	Solid	22mm
AD-012-P	9mm	Solid	22mm
AD-013	0.5820	0.484	0.945
AD-015	0.3140	0.261	0.455
AD-016-P	0.2326	Solid	0.645

ENGINE HARDWARE COMPONENT LISTING

Dowel Pin - Specifications (Cont'd)

Size			
PART #	O.D.	I.D.	LENGTH
AD-242	0.4250	Solid	0.685
AD-100	0.4320	0.336	0.432
AD-026	0.4325	0.343	0.240
AD-022	0.4350	0.343	0.500
AD-679	0.4386	Solid	0.813
AD-003-P	0.4445	0.297	0.562
AD-027	0.4723	0.348	1.030
AD-967	0.4820	0.385	0.550
AD-520	0.4881	0.400	0.670
AD-532	0.4960	Solid	0.740
AD-397	0.5000	Solid	1.000
AD-E7RY	0.5010	0.406	0.650
AD-189	0.5113	0.406	0.700
AD-017	0.5113	0.422	0.470
AD-634	0.5155	0.437	0.665
AD-M00	0.5320	0.469	0.442
AD-270	0.5510	0.410	0.485
AD-400	0.5540	0.437	0.412
AD-300	0.5555	0.468	0.470
AD-050	0.5562	0.500	0.745
AD-148	0.5615	0.454	0.812
AD-013	0.5820	0.484	0.945
AD-018	0.5820 / 0.5910	0.484	0.945
AD-002	0.5825	0.500	0.355
AD-856	0.5913	0.452	0.488
AD-600	0.6050	0.475	0.550
AD-521	0.6074	0.510	0.800
AD-635	0.6080	0.500	0.905
AD-020	0.6095	0.484	0.636
AD-010-P	0.6120	0.466	0.600
AD-352	0.6165	0.500	1.100
AD-009-P	0.6210	Solid	1.150
AD-023	0.6210	Solid	1.550
AD-258	0.6250	0.523	0.500
AD-0112	0.6250 / 0.5620	0.450	0.500
AD-001	0.6290	0.453	0.785
AD-111	0.6300	0.500	0.505
AD-397A	0.6305	0.469	0.984
AD-849	0.6310	0.500	0.485
AD-8081-P	0.6400	0.500	0.500
AD-326	0.6420	0.516	0.500
AD-008-P	0.6745	0.552	0.435
AD-230	0.7200	0.615	0.395
AD-076	0.7275	0.500	0.750
AD-008A-P	0.7400	0.625	0.445
AD-842	0.7570	0.491	1.160
AD-250	0.7600	0.640	0.635
FD-1-1	0.9395	0.834	0.572
AD-699	1.4985	0.830	0.924
AD-605	1.4985	1.092	1.075
AD-012-P	9mm	Solid	22mm
AD-0113	10mm	Solid	22mm
AD-021	11mm	8.5mm	8.3mm
AD-011-P	17mm	15mm	19mm

Numerical			
PART #	O.D.	I.D.	LENGTH
AD-017	0.5113	0.422	0.470
AD-018	0.5820 / 0.5910	0.484	0.945
AD-020	0.6095	0.484	0.636
AD-021	11mm	8.5mm	8.3mm
AD-022	0.4350	0.343	0.500
AD-023	0.6210	Solid	1.550
AD-024	0.3937	0.328	0.627
AD-025-P	0.2500	Solid	0.500
AD-026	0.4325	0.343	0.240
AD-027	0.4723	0.348	1.030
AD-046	0.2483 / 0.3435	Solid	0.945
AD-050	0.5562	0.500	0.745
AD-076	0.7275	0.500	0.750
AD-100	0.4320	0.336	0.432
AD-111	0.6300	0.500	0.505
AD-148	0.5615	0.454	0.812
AD-189	0.5113	0.406	0.700
AD-230	0.7200	0.615	0.395
AD-242	0.4250	Solid	0.685
AD-250	0.7600	0.640	0.635
AD-258	0.6250	0.523	0.500
AD-270	0.5510	0.410	0.485
AD-300	0.5555	0.468	0.470
AD-326	0.6420	0.516	0.500
AD-347	0.3900	0.281	0.272
AD-352	0.6165	0.500	1.100
AD-394	0.3940	0.294	0.322
AD-397	0.5000	Solid	1.000
AD-397A	0.6305	0.469	0.984
AD-400	0.5540	0.437	0.412
AD-402	0.2318	Solid	0.630
AD-520	0.4881	0.400	0.670
AD-521	0.6074	0.510	0.800
AD-532	0.4960	Solid	0.740
AD-600	0.6050	0.475	0.550
AD-605	1.4985	1.092	1.075
AD-634	0.5155	0.437	0.665
AD-635	0.6080	0.500	0.905
AD-6397	0.2485 / 0.3140	Solid	0.700
AD-679	0.4386	Solid	0.813
AD-699	1.4985	0.830	0.924
AD-842	0.7570	0.491	1.160
AD-849	0.6310	0.500	0.485
AD-856	0.5913	0.452	0.488
AD-927-P	0.3125	Solid	0.565
AD-967	0.4820	0.385	0.550
AD-1284-P	0.2466	Solid	0.630
AD-8081-P	0.6400	0.500	0.500
AD-8120-P	0.3150	Solid	0.705
AD-E7RY	0.5010	0.406	0.650
AD-M00	0.5320	0.469	0.442
AD-SS	0.3546	0.266	0.390
AD-V00	0.3750	Solid	0.570
FD-1-1	0.9395	0.834	0.572

ENGINE HARDWARE COMPONENT LISTING

Pipe Plug - Specifications

Size

PART #	DIMENSION
AP-001-P	1/16-27 x 1/4 Internal Hex
AP-004-P	1/8-28 x .56 External Hex, w/Sealant
AP-002-P	1/4-18 x .33 Internal Hex, w/Sealant
AP-017-P	1/4-18 x .33 Internal Hex
AP-016-P	1/4-18 x .37 Internal Hex
AP-005-P	1/4-19 x .39 Internal Hex, w/Sealant
AP-003-P	3/8-18 x .46 Internal Hex, w/Sealant
AP-006-P	3/8-19 x .39 Internal Hex, w/Sealant

Numerical

PART #	DIMENSION
AP-001-P	1/16-27 x 1/4 Internal Hex
AP-002-P	1/4-18 x .33 Internal Hex, w/Sealant
AP-003-P	3/8-18 x .46 Internal Hex, w/Sealant
AP-004-P	1/8-28 x .56 External Hex, w/Sealant
AP-005-P	1/4-19 x .39 Internal Hex, w/Sealant
AP-006-P	3/8-19 x .39 Internal Hex, w/Sealant
AP-016-P	1/4-18 x .37 Internal Hex
AP-017-P	1/4-18 x .33 Internal Hex

Valve Spring ID Locators - Specifications

Size

PART #	O.D.	I.D.	THICKNESS
4785HP	1.550	.570 / Spring(.810)	0.060

Numerical

PART #	O.D.	I.D.	THICKNESS
4785HP	1.550	.570 / Spring(.810)	0.060

Valve Spring Retainers - Specifications

Size

PART #	VALVE STEM DIAMETER	DIMENSION OUTSIDE/STEPS
SR-220	0.234/0.235	0.982/0.590/0.484
SR-809	0.235	0.962/0.697/0.491
SR-570	0.272/0.273	0.897/0.594/0.544
SR-626	0.311/0.312	1.144/0.830/0.562
SR-627	0.311/0.312	1.144/0.828/0.572
SR-779	0.315	1.080/0.750/0.612
SR-536	0.315/0.316	1.275/0.958/0.570
SR-183	0.316	1.310/0.873/0.760
SR-500	0.341/0.342	1.236/0.862/0.675
SR-502	0.342	1.370/1.056/0.665
SR-318	0.370/0.373	1.330/1.000/0.600
SR-366	0.372	1.407/1.058/0.900
SR-014	0.430/0.431	1.570/1.207/0.840

Numerical

PART #	VALVE STEM DIAMETER	DIMENSION OUTSIDE/STEPS
SR-014	0.430/0.431	1.570/1.207/0.840
SR-183	0.316	1.310/0.873/0.760
SR-220	0.234/0.235	0.982/0.590/0.484
SR-318	0.370/0.373	1.330/1.000/0.600
SR-366	0.372	1.407/1.058/0.900
SR-500	0.341/0.342	1.236/0.862/0.675
SR-502	0.342	1.370/1.056/0.665
SR-536	0.315/0.316	1.275/0.958/0.570
SR-570	0.272/0.273	0.897/0.594/0.544
SR-626	0.311/0.312	1.144/0.830/0.562
SR-627	0.311/0.312	1.144/0.828/0.572
SR-779	0.315	1.080/0.750/0.612
SR-809	0.235	0.962/0.697/0.491

ENGINE HARDWARE COMPONENT LISTING

Washer - Specifications

Size	
PART #	DIMENSION
AW-009-P	5/16 Star Washer
AW-007-P	3/8 Washer
AW-008-P	1/2 x .900 x .078 Nylon Washer
AW-001-P	1-1/4 x 3/8 x 1/4 Washer
AW-003-P	1-1/4 x 7/16 x 1/4 Washer
AW-010-P	1-3/8 x 1/2 x 3/16 Washer
AW-006-P	1-1/2 x 7/16 x 1/8 Washer
AW-002-P	1-1/2 x 7/16 x 5/16 Washer
AW-005-P	1-1/2 x 7/16 x 7/16 Washer
AW-011-P	2-1/16 x 1/2 x 3/16 Washer
AW-012-P	8mm Lock Washer

Numerical	
PART #	DIMENSION
AW-001-P	1-1/4 x 3/8 x 1/4 Washer
AW-002-P	1-1/2 x 7/16 x 5/16 Washer
AW-003-P	1-1/4 x 7/16 x 1/4 Washer
AW-005-P	1-1/2 x 7/16 x 7/16 Washer
AW-006-P	1-1/2 x 7/16 x 1/8 Washer
AW-007-P	3/8 Washer
AW-008-P	1/2 x .900 x .078 Nylon Washer
AW-009-P	5/16 Star Washer
AW-010-P	1-3/8 x 1/2 x 3/16 Washer
AW-011-P	2-1/16 x 1/2 x 3/16 Washer
AW-012-P	8mm Lock Washer

Woodruff Key - Specifications

Size		
PART #	WIDTH X LENGTH	PIONEER #
AK-024-P	3/32 x 1/2	PK-2
AK-019-P	3/32 x 5/8	PK-4
AK-017-P	1/8 x 3/4	PK-7
AK-015-P	5/32 x 5/8	PK-6
AK-018-P	5/32 x 3/4	PK-8
AK-025-P	5/32 x 7/8	PK-10
AK-031-P	3/16 x 19/32	PK-187
AK-002-P	3/16 x 3/4	PK-9
AK-010-P	3/16 x 7/8	PK-11
AK-026-P	3/16 x 1	PK-13
AK-028-P	3/16 x 1-3/64	PK-179
AK-001-P	3/16 x 1-3/8	PK-126
AK-003-P	3/16 x 1-13/32	PK-131
AK-006-P	3/16 x 1-13/32	PK-134
AK-032-P	3/16 x 1-31/64	NA
AK-004-P	3/16 x 1-3/4	PK-130
AK-007-P	3/16 x 1-3/4	PK-135
AK-005-P	3/16 x 1-13/16	PK-178, 192
AK-166-P	3/16 X 2.367	NA
AK-029-P	13/64 x 39/64	PK-188
AK-030-P	13/64 x 45/64	PK-189
AK-012-P	15/64 x 23/32	PK-171
AK-022-P	1/4 x 3/4	PK-91
AK-008-P	1/4 x 55/64	PK-174
AK-027-P	1/4 x 1	PK-15
AK-020-P	1/4 x 1-1/4	PK-21
AK-014-P	1/4 x 1-3/8	PK-127
AK-016-P	5/16 x 31/32	PK-173
AK-013-P	5/16 x 1-7/64	PK-175
AK-023-P	5/16 x 1-1/4	PK-D
AK-021-P	3/8 x 2-1/8	PK-29
AK-011-P	5mm x 18mm	NA

Numerical		
PART #	WIDTH X LENGTH	PIONEER #
AK-001-P	3/16 x 1-3/8	PK-126
AK-002-P	3/16 x 3/4	PK-9
AK-003-P	3/16 x 1-13/32	PK-131
AK-004-P	3/16 x 1-3/4	PK-130
AK-005-P	3/16 x 1-13/16	PK-178, 192
AK-006-P	3/16 x 1-13/32	PK-134
AK-007-P	3/16 x 1-3/4	PK-135
AK-008-P	1/4 x 55/64	PK-174
AK-010-P	3/16 x 7/8	PK-11
AK-011-P	5mm x 18mm	NA
AK-012-P	15/64 x 23/32	PK-171
AK-013-P	5/16 x 1-7/64	PK-175
AK-014-P	1/4 x 1-3/8	PK-127
AK-015-P	5/32 x 5/8	PK-6
AK-016-P	5/16 x 31/32	PK-173
AK-017-P	1/8 x 3/4	PK-7
AK-018-P	5/32 x 3/4	PK-8
AK-019-P	3/32 x 5/8	PK-4
AK-020-P	1/4 x 1-1/4	PK-21
AK-021-P	3/8 x 2-1/8	PK-29
AK-022-P	1/4 x 3/4	PK-91
AK-023-P	5/16 x 1-1/4	PK-D
AK-024-P	3/32 x 1/2	PK-2
AK-025-P	5/32 x 7/8	PK-10
AK-026-P	3/16 x 1	PK-13
AK-027-P	1/4 x 1	PK-15
AK-028-P	3/16 x 1-3/64	PK-179
AK-029-P	13/64 x 39/64	PK-188
AK-030-P	13/64 x 45/64	PK-189
AK-031-P	3/16 x 19/32	PK-187
AK-032-P	3/16 x 1-31/64	NA
AK-166-P	3/16 X 2.367	NA

Does This Look Familiar?

Well, Dura-Bond Has The Solution For You.

Save time and money with the new line of Dura-Bond engine hardware finishing kits.

Most rebuilders know the time and expense of trying to reclaim service parts. A recent study revealed that an average rebuilder could spend up to 15-20 minutes per engine searching for a reclaimed service part. That is why Dura-Bond has introduced a new line of engine hardware finishing kits. These kits include all of the necessary hardware and components needed to complete a rebuild such as dowel pins, cam bolts, seal housing components, woodruff keys, cam eccentrics, by-pass valves, etc. The engine hardware finishing kits allow rebuilders an easy way to inventory and recoup lost costs on these components. All this adds up to saving time and money.

- No need for expensive OEM parts or the time to reclaim used parts
- Easy to inventory
- Maximize lost costs and profits on these components by adding one part number into the bill of materials
- New parts vs. reclaimed parts presents a more professional looking product
- All kit components are manufactured to precise OEM dimensions for exact fit
- Extensive product coverage

Dura-Bond®

A MELLING COMPANY

ENGINE HARDWARE FINISHING KITS

KIT NO.	YEAR	MAKE & APPLICATION	CONTENTS	QTY.	DESCRIPTION	DIMENSION O.D.	I.D.	LENGTH
AMC								
FKA-1	1964-1996	(199ci-258ci) AMC I6	AD-927-P	2	Head Dowel	0.3125	Solid	0.565
			AB-030-P	1	Cam Bolt	1/2-20 x 1-1/4 Hex		
			AW-011-P	1	Cam Bolt Washer	2-1/16 x 1/2 x 3/16 Washer		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AK-010-P	1	Woodruff Key	3/16 x 7/8		
			AD-007-P	1	Oil Filter Pin (Roll Pin)	1/4 x 1-1/2		
					Optional parts not included in kit.			
			AD-148	2	Transmission Dowel	0.5615	0.454	0.812
CHRYSLER								
FKP-1	1964-2005	(273ci-360ci) Dodge/Chrysler/	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
		Plymouth SB V8	AB-012-P	1	Cam Bolt	7/16-14 x 1-1/4 Hex		
			AW-002-P	1	Cam Bolt Washer (Cupped)	1-1/2 x 7/16 x 5/16 Washer		
			AK-005-P	1	Woodruff Key	3/16 x 1-13/16		
			AK-002-P	1	Cam Key	3/16 x 3/4		
			AB-001-P	3	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
			AS-001-P	1	Chain Oil Tab	N/A	N/A	N/A
			AD-584	1	Distributor Tower Shaft Bushing	N/A	N/A	N/A
					ROLLER BLOCK			
			AB-005-P	3	Cam Tray Bolt	5/16-18 x 5/8 Flanged Hex		
			AW-006-P	1	Cam Bolt Washer (Tapered)	1-1/2 x 7/16 x 1/8 Washer		
			AW-005-P	1	Cam Bolt Washer (Cupped)	1-1/2 x 7/16 x 7/16 Washer		
					Optional parts not included in kit.			
			AD-532	2	Transmission Dowel	0.4960	Solid	0.740
FKP-2		(361ci-440ci) Dodge/Chrysler/	AD-1284-P	4	Head Dowel	0.2466	Solid	0.630
		Plymouth SB V8	AD-1284-P	2	Timing Cover	0.2466	Solid	0.630
			AB-040-P	1	Cam Bolt	7/16-14 x 1 Hex		
			AW-006-P	1	Cam Bolt Washer (Tapered)	1-1/2 x 7/16 x 1/8 Washer		
			AD-584	1	Distributor Tower Shaft Bushing	N/A	N/A	N/A
			AK-005-P	1	Woodruff Key	3/16 x 1-13/16		
					Optional parts not included in kit.			
			AD-532	2	Transmission Dowel	0.4960	Solid	0.740
FKP-2HP		(361ci-440ci) Dodge/Chrysler/	AD-1284-P	4	Head Dowel	0.2466	Solid	0.630
		Plymouth SB V8 (High Performance)	AD-1284-P	2	Timing Cover	0.2466	Solid	0.630
			AB-040-P	1	Cam Bolt	7/16-14 x 1 Hex		
			AW-006-P	1	Cam Bolt Washer (Tapered)	1-1/2 x 7/16 x 1/8 Washer		
			AB-042-P	3	Cam Bolt	3/8-16 x 3/4 Hex		
			AD-584	1	Distributor Tower Shaft Bushing	N/A	N/A	N/A
			AK-005-P	1	Woodruff Key	3/16 x 1-13/16		
			AD-532	2	Transmission Dowel	0.4960	Solid	0.740
FORD								
FKF-5	1989-1993	3.8L (232ci) Ford V6	AD-011-P	4	Head Dowel (Split)	17mm	15mm	19mm
			AD-520	2	Timing Cover Dowel	0.4881	0.400	0.670
			AB-032-P	1	Cam Bolt & Washer	10mm-1.5 x 34mm Hex, 35mm Integral Washer		
			AB-033-P	2	Cam Thrust Plate Bolt	6mm-1.0 x 19mm Flat Head Torx		
			AB-034-P	3	Tensioner Bolt	6mm-1.0 x 14mm Hex		
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
					BALANCE SHAFT			
			AB-033-P	2	Balance Shaft Thrust Plate Bolt	6mm-1.0 x 19mm Flat Head Torx		
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel RWD	0.5000	Solid	1.000
			AD-521	2	Transmission Dowel FWD	0.6074	0.510	0.800
FKF-4	1965-1996	(240ci, 300ci) Ford I6	AD-008-P	2	Head Dowel	0.6745	0.552	0.435
			AB-001-P	2	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
			AK-004-P	1	Woodruff Key	3/16 x 1-3/4		
			AK-002-P	1	Cam Key	3/16 x 3/4		
			AS-002	1	Spacer	1.5160	1.255	0.194
			AP-001-P	1	Oil Galley Plug	1/16-27 x 1/4 Internal Hex		
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000

ENGINE HARDWARE FINISHING KITS

KIT NO.	YEAR	MAKE & APPLICATION	CONTENTS	QTY.	DESCRIPTION	DIMENSION O.D.	I.D.	LENGTH
FORD (Cont'd)								
FKF-1	1962-1985	(255ci-351ci) Ford SB V8 (Windsor)	AD-008-P	4	Head Dowel	0.6745	0.552	0.435
			AD-967-P	2	Timing Cover Dowel	0.4820	0.385	0.550
			AB-009-P	1	Cam Bolt	3/8-16 x 1-1/2 Hex		
			AW-001-P	1	Cam Bolt Washer	1-1/4 x 3/8 x 1/4 Washer		
			AB-010-P	2	Cam Thrust Plate Bolt	1/4-20 x 5/8 Hex		
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
			AK-004-P	1	Woodruff Key	3/16 x 1-3/4		
			AE-001-P	1	Cam Eccentric - Inner	N/A	N/A	N/A
			AE-002-P	1	Cam Eccentric - Outer	N/A	N/A	N/A
			AD-005-P	1	Cam Sprocket Dowel	0.3115	Solid	1.125
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000
FKF-1A	1986-2000	5.0L, 5.8L Ford SB V8	AD-008-P	4	Head Dowel	0.6745	0.552	0.435
			AD-967-P	2	Timing Cover Dowel	0.4820	0.385	0.550
			AB-009-P	1	Cam Bolt	3/8-16 x 1-1/2 Hex		
			AW-001-P	1	Cam Bolt Washer	1-1/4 x 3/8 x 1/4 Washer		
			AB-010-P	2	Cam Thrust Plate Bolt	1/4-20 x 5/8 Hex		
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
			AK-004-P	1	Woodruff Key	3/16 x 1-3/4		
			AE-003-P	1	Cam Eccentric	N/A	N/A	N/A
			AD-004-P	1	Cam Sprocket Dowel	0.3115	Solid	1.375
					ROLLER BLOCK			
			AB-011-P	2	Cam Tray Bolt	1/4-20 x 1/2 Place Bolt, Hex		
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000
FKF-2	1958-1976	(332ci-428ci) Ford FE V8	AD-008A-P	4	Head Dowel (Split)	0.7400	0.625	0.445
			AB-013-P	1	Cam Bolt	7/16-14 x 1-3/4 Hex		
			AW-003-P	1	Cam Bolt Washer	1-1/4 x 7/16 x 1/4 Washer		
			AB-015-P	2	Cam Thrust Plate Bolt	7/16-14 x 5/8 Hex		
			AK-006-P	1	Woodruff Key	3/16 x 1-13/32		
			AE-004-P	1	Cam Eccentric - Inner	N/A	N/A	N/A
			AE-002-P	1	Cam Eccentric - Outer	N/A	N/A	N/A
			AD-006-P	1	Cam Sprocket Dowel	0.3090	Solid	1.500
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000
FKF-6	1970-1982	(351ci, 400ci) Ford (Cleveland/Modified)	AD-008-P	4	Head Dowel	0.6745	0.552	0.435
			AD-967-P	2	Timing Cover Dowel	0.4820	0.385	0.550
			AB-009-P	1	Cam Bolt	3/8-16 x 1-1/2 Hex		
			AW-001-P	1	Cam Bolt Washer	1-1/4 x 3/8 x 1/4 Washer		
			AB-010-P	2	Cam Thrust Plate Bolt	1/4-20 x 5/8 Hex		
			AK-007-P	1	Woodruff Key	3/16 x 1-3/4		
			AE-001-P	1	Cam Eccentric - Inner	N/A	N/A	N/A
			AE-002-P	1	Cam Eccentric - Outer	N/A	N/A	N/A
			AD-005-P	1	Cam Sprocket Dowel	0.3115	Solid	1.125
			AD-025-P	2	Manifold Dowel	0.2500	Solid	0.500
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000
FKF-3	1968-1987	(370ci-460ci) Ford BB V8	AD-008A-P	4	Head Dowel (Split)	0.7400	0.625	0.445
			AB-009-P	1	Cam Bolt	3/8-16 x 1-1/2 Hex		
			AW-001-P	1	Cam Bolt Washer	1-1/4 x 3/8 x 1/4 Washer		
			AB-011-P	2	Cam Thrust Plate Bolt	1/4-20 x 1/2 Place Bolt, Hex		
			AK-007-P	1	Woodruff Key	3/16 x 1-3/4		
			AK-008-P	1	Woodruff Key	1/4 x 7/8		
			AE-001-P	1	Cam Eccentric - Inner	N/A	N/A	N/A
			AE-002-P	1	Cam Eccentric - Outer	N/A	N/A	N/A
			AD-005-P	1	Cam Sprocket Dowel	0.3115	Solid	1.125
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000

ENGINE HARDWARE FINISHING KITS

KIT NO.	YEAR	MAKE & APPLICATION	CONTENTS	QTY.	DESCRIPTION	DIMENSION O.D.	I.D.	LENGTH
FORD (Cont'd)								
FKF-3A	1988-1997	7.5L (460ci) Ford BB V8	AD-008A-P	4	Head Dowel (Split)	0.7400	0.625	0.445
			AB-014-P	1	Cam Bolt	3/8-16 x 1-3/8 Hex		
			AW-001-P	1	Cam Bolt Washer	1-1/4 x 3/8 x 1/4 Washer		
			AB-011-P	2	Cam Thrust Plate Bolt	1/4-20 x 1/2 Place Bolt, Hex		
			AK-007-P	1	Woodruff Key	3/16 x 1-3/4		
			AK-008-P	1	Woodruff Key	1/4 x 7/8		
			AD-005-P	1	Cam Sprocket Dowel	0.3115	Solid	1.125
					Optional parts not included in kit.			
			AD-397	2	Transmission Dowel	0.5000	Solid	1.000
GENERAL MOTORS								
FKC-2	1985-1986	4.3L (262ci) Chevy V6	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
			AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AV-001-P	1	Bypass Valve	N/A	N/A	N/A
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-2A	1987-1994	4.3L (262ci) Chevy V6	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
			AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AV-001-P	1	Bypass Valve	N/A	N/A	N/A
			AB-004-P	2	Cam Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
					SEAL HOUSING			
			AD-003-P	1	Seal Housing Dowel	0.4445	0.297	0.562
			AB-002-P	2	Seal Housing Bolt	1/4-20 x 1-3/4 Machine Screw, Torx		
			AB-003-P	2	Seal Housing Bolt	1/4-20 x 7/8 Machine Screw, Torx		
					ROLLER BLOCK			
			AB-005-P	2	Cam Tray Bolt	5/16-18 x 5/8 Flanged Hex		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-2B	1992-2001	4.3L (262ci) Chevy V6	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
		w/Balance Shaft	AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AK-003-P	1	Woodruff Key	3/16 x 1-13/32		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AV-001-P	1	Bypass Valve	N/A	N/A	N/A
			AB-006-P	2	Cam Thrust Plate Bolt	1/4-20 x 5/8 Machine Screw, Torx		
					SEAL HOUSING			
			AD-003-P	1	Seal Housing Dowel	0.4445	0.297	0.562
			AB-002-P	2	Seal Housing Bolt	1/4-20 x 1-3/4 Machine Screw, Torx		
			AB-003-P	2	Seal Housing Bolt	1/4-20 x 7/8 Machine Screw, Torx		
					BALANCE SHAFT			
			AB-004-P	2	Balance Shaft Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
			AB-007-P	2	Cam Bolt	5/16-18 x 1-3/8 Cap Screw, Hex		
			ST-045-P	1	Timing Stud	5/16-18 x 1-3/4		
			AN-001-P	1	Timing Stud Nut	5/16-18 Top Lock Nut, Hex		
					ROLLER BLOCK			
			AB-005-P	4	Cam Tray Bolt	5/16-18 x 5/8 Flanged Hex		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-1	1957-1986	(262ci-400ci) Chevy SB V8	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
			AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-001-P	1	Woodruff Key	3/16 x 1-3/8		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150

ENGINE HARDWARE FINISHING KITS

KIT NO.	YEAR	MAKE & APPLICATION	CONTENTS	QTY.	DESCRIPTION	DIMENSION O.D.	I.D.	LENGTH
GENERAL MOTORS (Cont'd)								
FKC-1HP	1957-1986	(262ci-400ci) GM SB V8	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
		(High Performance)	AD-1284-P	4	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AW-013-P	1	Cam Lock Plate	N/A	N/A	N/A
			AB-039-P	2	Oil Filter Adapter Bolts	5/16-18 x 1-1/16		
			AK-001-P	1	Woodruff Key	3/16 x 1-3/8		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AD-023	2	Transmission Dowel	0.6210	Solid	1.550
FKC-4	1955-1981	(265ci-455ci) Pontiac V8	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
			AB-031-P	1	Cam Bolt	1/2-20 x 1 Hex		
			AW-010-P	1	Cam Bolt Washer	1-3/8 x 1/2 x 3/16 Washer		
			AB-001-P	2	Cam Thrust Plate Bolt	5/16-18 x 3/4 Hex		
			AK-002-P	1	Woodruff Key	3/16 x 3/4		
			AK-001-P	1	Woodruff Key	3/16 x 1-3/8		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-1A	1987-2005	5.0L, 5.7L (305ci, 350ci) Chevy SB V8	AD-927-P	4	Head Dowel	0.3125	Solid	0.565
			AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
					SEAL HOUSING			
			AD-003-P	1	Seal Housing Dowel	0.4445	0.297	0.562
			AB-002-P	2	Seal Housing Bolt	1/4-20 x 1-3/4 Machine Screw, Torx		
			AB-003-P	2	Seal Housing Bolt	1/4-20 x 7/8 Machine Screw, Torx		
					ROLLER BLOCK			
			AB-004-P	2	Cam Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
			AB-004-P	2	Water Pump Shaft Thrust Plate Bolt	1/4-20 x 1/2 Machine Screw, Torx		
			AB-005-P	3	Cam Tray Bolt	5/16-18 x 5/8 Flanged Hex		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-3	1967-1991	(366ci-454ci) Chevy BB V8	AD-8081-P	4	Head Dowel	0.6400	0.500	0.500
			AD-1284-P	2	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
					Optional parts not included in kit.			
			AD-009-P	2	Transmission Dowel	0.6210	Solid	1.150
FKC-3HP	1967-1991	(366ci-454ci) GM BB V8	AD-8081-P	4	Head Dowel	0.6400	0.500	0.500
		(High Performance)	AD-1284-P	4	Timing Cover / Oil Pump Dowel	0.2466	Solid	0.630
			AW-013-P	1	Cam Lock Plate	N/A	N/A	N/A
			AB-039-P	2	Oil Filter Adapter Bolts	5/16-18 x 1-1/16		
			AB-001-P	3	Cam Bolt	5/16-18 x 3/4 Hex		
			AK-002-P	2	Woodruff Key	3/16 x 3/4		
			AD-023	2	Transmission Dowel	0.6210	Solid	1.550

ENGINE HARDWARE PHOTOS


AB-001-P


AB-002-P


AB-003-P


AB-004-P


AB-005-P


AB-006-P


AB-007-P


AB-009-P


AB-010-P


AB-011-P


AB-012-P


AB-013-P


AB-014-P


AB-015-P


AB-016-P


AB-017-P


AB-018-P


AB-019-P


AB-020-P


AB-021-P


AB-022-P


AB-023-P


AB-024-P


AB-026-P

ENGINE HARDWARE PHOTOS


AB-027-P


AB-030-P


AB-031-P


AB-032-P


AB-033-P


AB-034-P


AB-039-P


AB-040-P


AB-042-P


AD-001


AD-002


AD-003-P


AD-004-P


AD-005-P


AD-006-P


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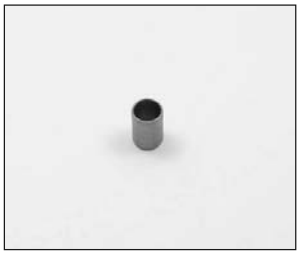
AD-009-P


AD-010-P


AD-011-P


AD-012-P


AD-013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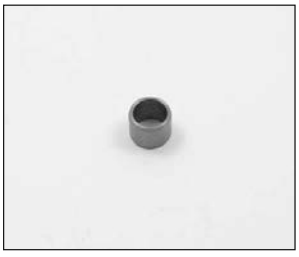
ENGINE HARDWARE PHOTOS


AD-016-P


AD-017


AD-018


AD-020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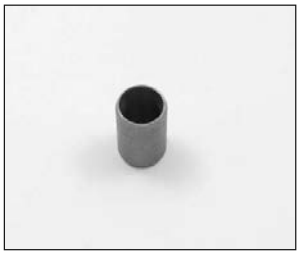
AD-022


AD-023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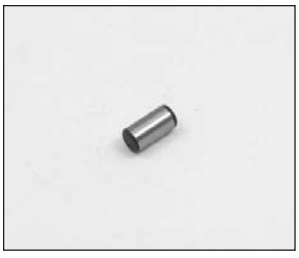
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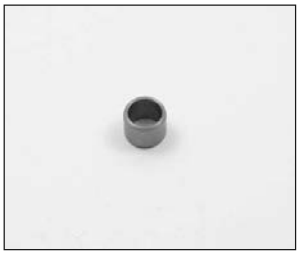
AD-026


AD-027


AD-046


AD-050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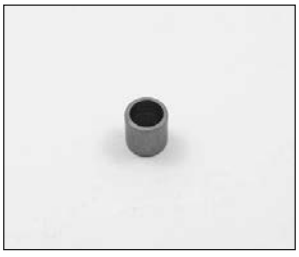
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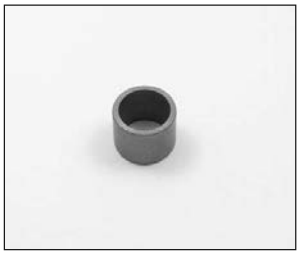
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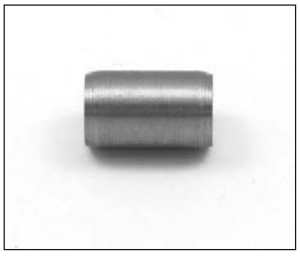
AD-0112


AD-0113


AD-148


AD-189


AD-230


AD-242


AD-250


AD-258

ENGINE HARDWARE PHOTOS


AD-270


AD-300


AD-326


AD-347


AD-352


AD-394


AD-397


AD-397A


AD-400


AD-402


AD-520


AD-521


AD-532


AD-584


AD-600


AD-605


AD-634


AD-635


AD-679


AD-699


AD-842


AD-849


AD-856


AD-927-P

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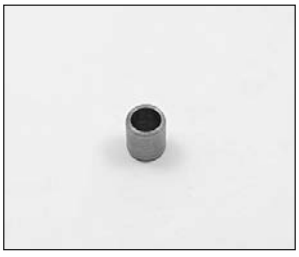
AD-8081-P


AD-8120-P


AD-E7RY


AD-M00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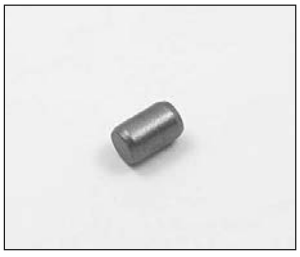

AD-V00


AE-001-P

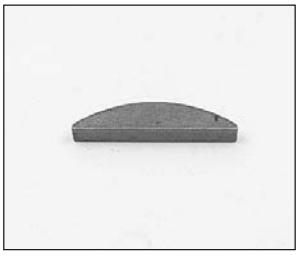

AE-002-P


AE-003-P


AE-004-P


AK-001-P


AK-002-P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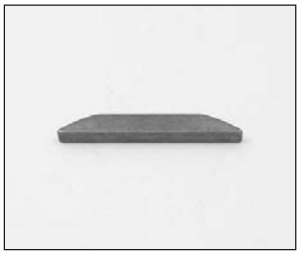
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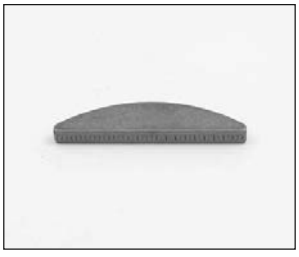
AK-005-P


AK-006-P


AK-007-P


AK-008-P


AK-010-P


AK-011-P


AK-012-P


AK-013-P

ENGINE HARDWARE PHOTOS


AK-014-P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AK-017-P

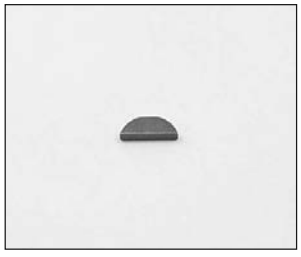

AK-018-P


AK-019-P


AK-020-P


AK-022-P


AK-023-P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AK-025-P


AK-026-P

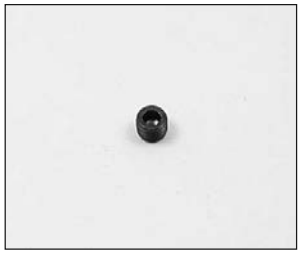

AK-027-P


AK-030-P


AK-031-P


AN-001-P


AN-002-P


AP-001-P


AP-002-P


AP-003-P


AP-004-P


AP-005-P


AP-006-P


AP-013

ENGINE HARDWARE PHOTOS


AP-014


AP-016-P


AP-017-P


AP-018


AP-019


AS-001-P


AS-002


AV-001-P


AV-280-P


AV-580-PHD

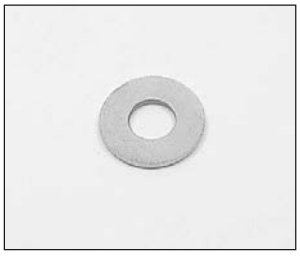

AW-001-P


AW-002-P


AW-003-P


AW-005-P


AW-006-P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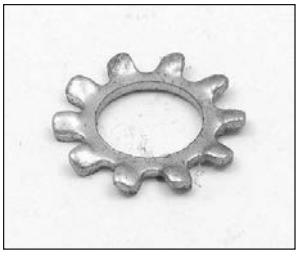
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AW-010-P


AW-011-P


AW-012-P


AW-013-P


CB-001-P


DP-22-P


FD-1-1

ENGINE HARDWARE PHOTOS


FKA-1


FKC-1


FKC-1A


FKC-1HP


FKC-2


FKC-2A


FKC-2B


FKC-3


FKC-3HP


FKC-4


FKF-1


FKF-1A


FKF-2


FKF-3


FKF-3A


FKF-4


FKF-5


FKF-6


FKP-1


FKP-2


FKP-2HP


PIN-1-P

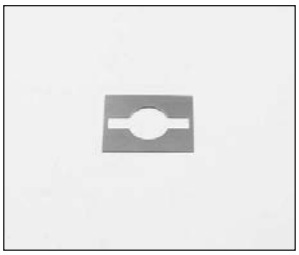

RE200

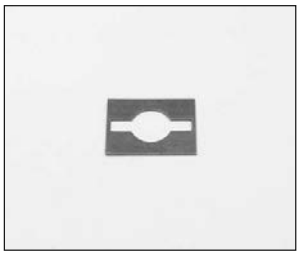

RE200HP

ENGINE HARDWARE PHOTOS


RE200I


RE250


S-006-10-P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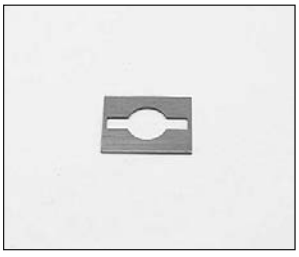
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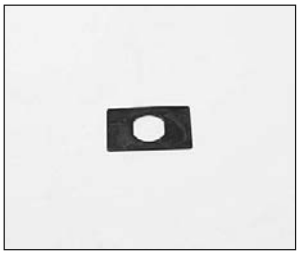
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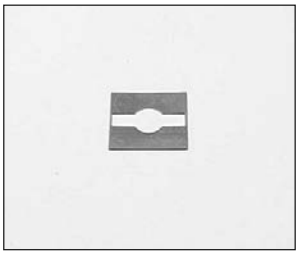
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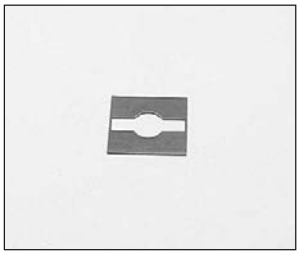
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SP-230


SP-6265


SP-7488


SPT-1


SPT-2


SPT-3


SPT-4


SPT-5


SR-183


SR-220


SR-318


SR-366


SR-500


SR-502


SR-536


SR-570

ENGINE HARDWARE PHOTOS


SR-626


SR-627


SR-779


SR-809


ST-001-P


ST-002-P


ST-045-P


TC-1-OO


TC-1


TC-2


TC-4


TC-5


U140-190


U140-250


TIME TESTED...
LOAFING AGAIN! -JUST LOOK AT HIM!!
BOSS
-HE'S NOT WORTH A DIME!!
OH, I SEE YOU -I SEE YOU!
LOOK, BOSS, YOU'LL HAVE TO GET MORE JOBS IN THIS SHOP IF YOU EXPECT TO KEEP ME BUSY -THOSE DURA-BOND CAM BEARINGS ARE SO EASY TO INSTALL I'VE GOT TIME TO KILL.
ME TOO.
QUALITY CAMSHAFT BEARINGS SINCE 1947!
Dura-Bond
Precision Camshaft Bearings
Dura-Bond
A MELLING COMPANY


TIME TESTED...
IMAGINE THE BOSS GIVING ME THE AFTERNOON OFF TO PLAY GOLF WITH YOU!
IT WAS MY IDEA, HOMER, TO SHOW MY GRATITUDE.
FOR WHAT?
FOR PUTTING ME WISE TO DURA-BOND CAM BEARINGS —THEY REALLY INSTALL IN A HURRY!
I CERTAINLY OWE YOU SOMETHING! ANYTIME YOU WANT A FAVOR — ANYTHING AT ALL —
DO YOU GIVE ME THIS PUTT?
LET'S NOT GO OVERBOARD.
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