

# NASON

## ENGINE PARTS

### HEAVY DUTY



1300 662 766



## VALVE SEAT INSERTS



S.B. International, Inc. is the exclusive marketer of J-LOY™ brand valve seat inserts. All J-LOY inserts are premium (hard) seats with a typical hardness range of 35-40 Rockwell "C" Scale. All valve seat inserts are individually cast to ensure proper material transfer and formation. Different alloys are utilized depending on the specific requirements of an engine or fuel delivery. The following information provides explanations for part number schema, materials, application usage and cutting procedures.

### PART NUMBER EXPLANATION

Basic Part Number:

4 Digits (Nominal or Actual Outside Diameter)

Suffix:

1 Thru 49 = Different I.D. & Depth Versions

50 & Up = Oversized Inserts for Aluminum Cylinder Heads

E = Factory Installed Insert & Basic Part Number Is Actual O.D.

N = Star Series Non-Magnetic Material

Examples:

SB1562-1N

Same as SB1562-1 except Star Series material.

SB2088E-1

Factory-installed insert with 2.088 actual O.D.

### HEAVY DUTY DIESEL INSERTS

J-LOY inserts for Heavy Duty Diesel Engines (Caterpillar, Cummins, Detroit Diesel, Mack, etc.) are supplied in materials that meet or exceed OEM specifications for the particular application. Standard size inserts are exact O.E. duplicates dimensionally and oversize inserts have been designed to meet particular requirements of the aftermarket.

### THE "STAR SERIES" STORY

A Super-Premium valve seat insert is available from SBI. This valve seat designated "STAR SERIES" is a true Nickel Based Non-Magnetic insert developed for automotive and light to medium duty exhaust applications operating on Propane Gas (LPG). Due to a variety of factors, certain exhaust valve seats require a higher hot hardness characteristic. The Star Series insert was developed to retain hardness beyond 1600° to combat these high temperature engines. As alternative fuel is becoming more commonly use, it became apparent cylinder heads were experiencing premature and severe exhaust valve seat erosion (recession). This erosion was noted on hi-chrome stainless seats as well as other manufacturer's nickel base material. Using the Star Series valve seat insert in these applications will eliminate common wear issues and provide a greater longevity.



## VALVES

In 1991, S.B. International entered the aftermarket valve arena with its famous E-LOY brand engine valves. SBI's valves quickly became as legendary as its J-LOY valve seat inserts; indeed, the legend lives on today.

All E-LOY engine valves are manufactured utilizing the latest processes, techniques and statistical methods available in the industry today. Materials used consist of Austenitic (Non-Magnetic) or Martensitic (Magnetic) Steels and Nickel Base Super Alloys along with other Cobalt, Iron and Nickel Base facing alloys which have been designed to run in modern unleaded fuel and Diesel engines. Chrome Plating is available where specific engine applications require it.



## CAM BEARING/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.



## Clevite / Mahle Original

Known as the high performance leader in internal engine bearings for years, Clevite continues their long standing commitment to building bearings that last longer and stand up to more abuse.



## Gaskets

Two world known brands in gasket manufacture, Trusted by engine builders around the world for quality , performance and reliability.

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## NASON SELLS THE FOLLOWING BRANDS IN OUR HEAVY DUTY RANGE



# CATERPILLAR

<b>ENGINE</b>	Caterpillar 3406E 893ci 14.6L 6c Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	893ci / 14.6L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC <b>VALVES</b> 4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.40" / 137mm	<b>STROKE</b>	6.50" / 165mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar 3408E 1099ci 18L V8 Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	1099ci 18L	<b>CYLINDERS</b>	V8	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>				
<b>BORE</b>	5.40" / 137mm		<b>STROKE</b>	6.00in / 152mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar 3412E 1649ci 27L V12 Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	1649ci / 27L	<b>CYLINDERS</b>	V12	<b>VALVE TRAIN</b>	<b>VALVES</b>
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.40" / 137mm	<b>STROKE</b>	6.00in / 152mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30



# CATERPILLAR

<b>ENGINE</b>	Caterpillar C15 893ci 14.6L 6 Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	893ci/ 14.6L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	<b>VALVES</b>
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.40" / 137mm	<b>STROKE</b>	6.50" / 165mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar C15 CERT 928ci 15.2L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	928ci 15.2L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>				
<b>BORE</b>	5.40" / 137mm		<b>STROKE</b>	6.75" / 171mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar C16 964ci 15.8L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	964ci / 15.8L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>				
<b>BORE</b>	5.50" / 140mm	<b>STROKE</b>	6.75" / 171mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar C18 1106ci 18.1L 6 Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	1106ci / 18.1L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC <b>VALVES</b> 4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.71" / 145mm	<b>STROKE</b>	7.12" / 183mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar C27 1650ci 27.03L V12 Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	1650ci / 27.03L	<b>CYLINDERS</b>	V12	<b>VALVE TRAIN</b>	OHC <b>VALVES</b>
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.40" / 137mm	<b>STROKE</b>	6.00in / 152mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CATERPILLAR

<b>ENGINE</b>	Caterpillar C32 1959ci 32.1L V12 Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	1959ci / 32.1L	<b>CYLINDERS</b>	V12	<b>VALVE TRAIN</b>	OHC <b>VALVES</b> 4
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>		
<b>BORE</b>	5.71" / 145mm	<b>STROKE</b>	6.38" / 162mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1979	7 REQ
INJECTOR TUBE	240-1006 240-1044	Stainless Steel . Use 240-1006RB x 1, 240-1006RM x 1 and 240-1006RT x 1 O-rings Stainless Steel Use 240-1006RM x 2 and 240-1006RB x 1 O-rings
INJECTOR TUBE SEAL	240-1006RB 240-1006RM 240-1006RT	Navy – Viton / SMALL Green – Aflas / MEDIUM Dark Blue – Viton / LARGE
VALVE EXHAUST	01912	Head Diam 1.646" Stem Diam 0.3717" Length 7.953" Seat Angle 44 Degree Tip Length 0.6040" Nickel Base Inconel Material
VALVE INLET	01911	Head Diam 1.850" Stem Diam 0.3717" Length 7.951" Seat Angle 28 Degree Tip Length 0.5622" Nickel Base Inconel Material
VALVE COLLETS	121-1000	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3007	I.D. 0.3745" O.D. 0.6298" Length 3.358"
VALVE STEM SEAL	122-1373	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1687E-1N  SB1693E-1N	O.D. Actual 1.6870" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Star Series O.D. Actual 1.6930" I.D. 1.4375" I.D. Top Taper 1.546" Depth 0.3650" Seat Angle 45 Degrees Star Series
VALVE SEAT INSERT INLET	SB1891E-1	O.D. Actual 1.8910" I.D. 1.615" I.D. Top Taper 1.637" Depth 0.3060" Seat Angle 30

# CHEVROLET

<b>ENGINE</b>	Chevrolet 6.5 FCWG L65 6481cc V8 OHV 16V T/Diesel			<b>YEAR</b>	1992 – 2002	
<b>CAPACITY</b>	6481cc / 396ci / 6.5L		V8	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b> 2
<b>FUEL TYPE</b>	TURBO DIESEL		<b>CAM DRIVE</b>	CHAIN		
<b>BORE</b>	4.060in / 103.1mm	<b>STROKE</b>	3.820in / 97.0mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
<b>COOLING</b>		
FAN CLUTCH	22154 22605 22606	4 Bolt Type Fan Clutch 6 Bolt Type Fan Clutch-M8 6 Bolt Type Fan Clutch-5/16"
THERMOSTAT	TH00182G1	82 Celsius/180 Fahrenheit
WATER PUMP	W9081	Single Thermostat Round Hub
<b>CYLINDER BLOCK</b>		
CON ROD BEARINGS	8CB1286P	CHECK CATALOGUE FOR VARIOUS SIZES
FLEXPLATE	FRA-142	
HARMONIC BALANCER	PB1490-N	Crank Bore : 40.65mm (1.6in) Ring Diameter : 201.65mm (7.94in) Nose Diameter : 59.29mm (2.334in) Weight : 12.35Lbs Overall Width : 62mm (2.44in)
MAIN BEARING SET	5M2091P 5M2091PN	Federal Mogul. CHECK CATALOGUE FOR VARIOUS SIZES Engine Pro CHECK CATALOGUE FOR VARIOUS SIZES
Mellings OIL PUMP	M-55I  M255-294S	6.2L All 6.5L Up to 1996 1997 ON, Includes screen
OIL PUMP DRIVE SHAFT	IS-55H	Mellings
SINGLE PISTON	RP7052-STDM	CHECK CATALOGUE FOR VARIOUS SIZES Bore Diameter : 4.054" / 102.97mm Piston Length : 3.62" / 91.94mm Piston Skirt Clearance : 0.0040" / 0.12mm Measure Skirt Clearance At : 0.630" from the bottom of skirt Piston Pin Diameter : 1.22" / 30.988mm Head Type Description : Ricardo Bowl Compression Height : Reduced .010" Top Ring : 3.00mm 2nd Ring : 2.0mm Oil Ring : 4.00mm Note 1 : Hard Anodized Head
HASTING RING SET	2M4744	CHECK CATALOGUE FOR VARIOUS SIZES Suits RP7052M Piston

# CHEVROLET cont

<b>ENGINE</b>	Chevrolet 6.5 FCWG L65 6481cc V8 OHV 16V T/Diesel			<b>YEAR</b>	1992 – 2002	
<b>CAPACITY</b>	6481cc / 396ci / 6.5L		V8	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b> 2
<b>FUEL TYPE</b>	TURBO DIESEL		<b>CAM DRIVE</b>	CHAIN		
<b>BORE</b>	4.060in / 103.1mm	<b>STROKE</b>	3.820in / 97.0mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
<b>CYLINDER HEAD</b>		
CAMSHAFT BEARINGS	GM-7	
HEAD BOLT SET	NHBS621	2 required per engine
CAM FOLLOWER	RHT2104	
VALVE EXHAUST	EX4491	Head Diam MM 38.98 Stem Diam MM 9.44 Length MM 129.84 Cotter Grove Type 1AB
VALVE GUIDE EXHAUST	VG9716	ID Dia 0.373" OD Dia 0.502" Length 2.188" Note Spiral I.D
VALVE GUIDE INLET	VG9715	ID Dia 0.343" OD Dia 0.502" Length 2.125" Note Spiral I.D
VALVE INLET	IN2287FM	Head Diam MM 46.00 Stem Diam MM 8.67 Length MM 129.74 Cotter Grove Type 1AB
<b>DRIVE BELT, DRIVE BELT TENSIONER &amp; IDLER</b>		
RIBBED BELT	6PK2565/ 6PK2565N	GATES / OPTIBELT BRAND
TENSIONER	38118	K8 6.5L V8 16V OHV EFI Diesel FCWG 1998-00
IDLER PULLEY	38006	Steel Smooth/Backside 76mm x 17mm x 30.5mm
<b>GASKETS</b>		
CONVERSION SET	CS3678A	Mahle Original
CRANKSHAFT REAR SEAL	BS40604	Fel-Pro
EXHAUST MANIFOLD	MS91587	
HEAD GASKET	9521PT 9701PT	010" Thicker For Refaced Blocks
INLET MANIFOLD	MS91585	



# CHEVROLET cont

<b>ENGINE</b>	Chevrolet 6.5 FCWG L65 6481cc V8 OHV 16V T/Diesel			<b>YEAR</b>	1992 – 2002	
<b>CAPACITY</b>	6481cc / 396ci / 6.5L		V8	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b> 2
<b>FUEL TYPE</b>	TURBO DIESEL		<b>CAM DRIVE</b>	CHAIN		
<b>BORE</b>	4.060in / 103.1mm	<b>STROKE</b>	3.820in / 97.0mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
<b>GASKETS cont</b>		
PLENUM GASKET SET	MS90176-1	
TIMING COVER SET	TCS45554	
VALVE REGRIND SET	HSU8726-1	Does Not Include Head Gaskets
<b>TIMING</b>		
CRANKSHAFT GEAR	S375	
TIMING CHAIN	222181	

# CUMMINS

<b>ENGINE</b>	Cummins ISC 8.3L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	505ci / 8.3L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Common Rail Diesel		<b>CAM DRIVE</b>				
<b>BORE</b>	4.49in / 114mm		<b>STROKE</b>	5.31in / 145mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CYLINDER HEAD BOLTS	FP-3960043	26 REQ
VALVE EXHAUST	13163	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 45 Degree Tip Length 0.3358* Inconel Material with Letter "O" or "X" Stamped on Head
VALVE INLET	13162	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 30 Degree Tip Length 0.3350 Inconel Material
VALVE COLLETS	121-1079	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8715	I.D. 0.3163" O.D. 0.5512" Length 1.949" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1439	Viton Material Positive Type Seal- Top Hat Style
VALVE SPRING	160-1526	Suits both Inlet & Exhaust. 160-1595 Suits Exhaust with Rotator
VALVE SEAT INSERT EXHAUST	SB1554E-2	O.D. Actual 1.5545" I.D. 1.3010" I.D. Top Taper 1.348" Depth 0.1900" Seat Angle 45
VALVE SEAT INSERT INLET	SB1554E-1	O.D. Actual 1.5545" I.D. 1.2800" I.D. Top Taper 1.324" Depth 0.2360" Seat Angle 30
GASKETS SET TOP END	FP-4089758 FP-4089958 FP-4955643	Suits 2002-2007 HCPR Engines Suits 1998-2002 CAPS Engines Suits 2007 On HCPR Engines

# CUMMINS

<b>ENGINE</b>	Cummins QSC 8.3L 6 Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	505ci / 8.3L	<b>CYLINDERS</b>	6 CYL	<b>VALVE TRAIN</b>	OHV <b>VALVES</b> 4
<b>FUEL TYPE</b>	Common Rail Diesel	<b>CAM DRIVE</b>			
<b>BORE</b>	4.49in / 114mm	<b>STROKE</b>	5.31in / 145mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CYLINDER HEAD BOLTS	FP-3960043	26 REQ
VALVE EXHAUST	13163	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 45 Degree Tip Length 0.3358* Inconel Material with Letter "O" or "X" Stamped on Head
VALVE INLET	13162	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 30 Degree Tip Length 0.3350 Inconel Material
VALVE COLLETS	121-1079	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8715	I.D. 0.3163" O.D. 0.5512" Length 1.949" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1439	Viton Material Positive Type Seal- Top Hat Style
VALVE SPRING	160-1526	Suits both Inlet & Exhaust. 160-1595 Suits Exhaust with Rotator
VALVE SEAT INSERT EXHAUST	SB1554E-2	O.D. Actual 1.5545" I.D. 1.3010" I.D. Top Taper 1.348" Depth 0.1900" Seat Angle 45
VALVE SEAT INSERT INLET	SB1554E-1	O.D. Actual 1.5545" I.D. 1.2800" I.D. Top Taper 1.324" Depth 0.2360" Seat Angle 30
GASKETS SET TOP END	FP-4089958 FP-4089978	Suits 1998-2002 CAPS Engines Suits HCPR Engines

# CUMMINS

<b>ENGINE</b>	Cummins ISL 8.9L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	541ci / 8.9L	<b>CYLINDERS</b>	6 CyL	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	
<b>FUEL TYPE</b>	Common Rail Turbo Charged		<b>CAM DRIVE</b>				
<b>BORE</b>	4.49in / 114mm		<b>STROKE</b>	5.69in / 145mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CYLINDER HEAD BOLTS	FP-3960043	26 REQ
VALVE EXHAUST	13163	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 45 Degree Tip Length 0.3358* Inconel Material with Letter "O" or "X" Stamped on Head
VALVE INLET	13162	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 30 Degree Tip Length 0.3350 Inconel Material
VALVE COLLETS	121-1079	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8715	I.D. 0.3163" O.D. 0.5512" Length 1.949" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1439	Viton Material Positive Type Seal- Top Hat Style
VALVE SPRING	160-1526	Suits both Inlet & Exhaust. 160-1595 Suits Exhaust with Rotator
VALVE SEAT INSERT EXHAUST	SB1554E-2	O.D. Actual 1.5545" I.D. 1.3010" I.D. Top Taper 1.348" Depth 0.1900" Seat Angle 45
VALVE SEAT INSERT INLET	SB1554E-1	O.D. Actual 1.5545" I.D. 1.2800" I.D. Top Taper 1.324" Depth 0.2360" Seat Angle 30
GASKETS SET TOP END	FP-4089758 FP-4089958 FP-4955643	Suits 2002-2007 HCPR Engines Suits 1998-2002 CAPS Engines Suits 2007 On HCPR Engines

# CUMMINS

<b>ENGINE</b>	Cummins QSL 8.9L 6 Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	541ci / 8.9L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHV <b>VALVES</b> 4
<b>FUEL TYPE</b>	Common Rail Turbo Charged		<b>CAM DRIVE</b>		
<b>BORE</b>	4.49in / 114mm	<b>STROKE</b>	5.69in / 145mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CYLINDER HEAD BOLTS	FP-3960043	26 REQ
VALVE EXHAUST	13163	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 45 Degree Tip Length 0.3358* Inconel Material with Letter "O" or "X" Stamped on Head
VALVE INLET	13162	Head Diam 1.496" Stem Diam 0.3138" Length 5.423" Seat Angle 30 Degree Tip Length 0.3350 Inconel Material
VALVE COLLETS	121-1079	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8715	I.D. 0.3163" O.D. 0.5512" Length 1.949" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1439	Viton Material Positive Type Seal- Top Hat Style
VALVE SPRING	160-1526	Suits both Inlet & Exhaust. 160-1595 Suits Exhaust with Rotator
VALVE SEAT INSERT EXHAUST	SB1554E-2	O.D. Actual 1.5545" I.D. 1.3010" I.D. Top Taper 1.348" Depth 0.1900" Seat Angle 45
VALVE SEAT INSERT INLET	SB1554E-1	O.D. Actual 1.5545" I.D. 1.2800" I.D. Top Taper 1.324" Depth 0.2360" Seat Angle 30
GASKETS SET TOP END	FP-4089958 FP-4089978	Suits 1998-2002 CAPS Engines Suits HCPR Engines

# CUMMINS

<b>ENGINE</b>	Cummins ISX 915ci 15.0L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	915ci / 15.0L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo Charged		<b>CAM DRIVE</b>				
<b>BORE</b>	5.39in / 137mm		<b>STROKE</b>	6.65in / 169mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAMSHAFT BEARINGS	SH2138	7 REQ
INJECTOR SHAFT BEARINGS	SH2136 SH2137	4 REQ 3 REQ
VALVE EXHAUST	02263S  13309S	Head Diam 1.790" Stem Diam 0.3789" Length 8.810" Seat Angle 45 Degree Tip Length 0.7579" Includes Stellite Face & Chrome Plating Head 1.790" Stem 0.3789" Length 8.810" Inconel Includes stellite face
VALVE INLET	02262  13308	Head Diam 1.870" Stem Diam 0.3789" Length 8.502" Seat Angle 20 Degree Tip Length 0.4669" Includes Chrome Plating Head Diam 1.870" Stem Diam 0.3789" Length 8.503" Seat Angle 20 Degree Tip Length 0.4669 Inconel Material
VALVE COLLETS	121-1091	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3061	I.D. 0.3819" O.D. 0.6506" Length 4.105" Suits both Inlet & Exhaust guides- with seal groove in chimney Replaces early guide without seal groove on chimney

# CUMMINS cont.

<b>ENGINE</b>	Cummins ISX 915ci 15.0L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	915ci / 15.0L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo Charged		<b>CAM DRIVE</b>				
<b>BORE</b>	5.39in / 137mm		<b>STROKE</b>	6.65in / 169mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE STEM SEAL	122-1448	Metal Clad Viton Positive Type Seal Use with valve guide 140-3061 (includes groove in chimney) SBI part number 122-1379 supersede to 122-1448
VALVE SPRING		
VALVE SEAT INSERT EXHAUST	SB1874E-2	O.D. Actual 1.8740" I.D. 1.5550" I.D. Top Taper 1.725" Depth 0.2375" Seat Angle 45
VALVE SEAT INSERT INLET	SB1953E-4	O.D. Actual 1.9535" I.D. 1.6400" I.D. Top Taper 1.819" Depth 0.1950" Seat Angle 20
GASKETS SET TOP END	FP-2881767 FP-4955595 FP-4955596	Suits HPCR Engines Suits Non-EGR Engines Suits EGR Engines

# CUMMINS

<b>ENGINE</b>	Cummins QSX 915ci 15.0L 6 Cyl Diesel			<b>YEAR</b>	
<b>CAPACITY</b>	915ci / 15.0L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHC
<b>FUEL TYPE</b>	Direct Injection Turbo Charged		<b>CAM DRIVE</b>		
<b>BORE</b>	5.39in / 137mm	<b>STROKE</b>	6.65in / 169mm		

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAMSHAFT BEARINGS	SH2138	7 REQ
INJECTOR SHAFT BEARINGS	SH2136 SH2137	4 REQ 3 REQ
VALVE EXHAUST	02263S  13309S	Head Diam 1.790" Stem Diam 0.3789" Length 8.810" Seat Angle 45 Degree Tip Length 0.7579" Includes Stellite Face & Chrome Plating Head 1.790" Stem 0.3789" Length 8.810" Inconel Includes stellite face
VALVE INLET	02262  13308	Head Diam 1.870" Stem Diam 0.3789" Length 8.502" Seat Angle 20 Degree Tip Length 0.4669" Includes Chrome Plating Head Diam 1.870" Stem Diam 0.3789" Length 8.503" Seat Angle 20 Degree Tip Length 0.4669 Inconel Material
VALVE COLLETS	121-1091	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-3061	I.D. 0.3819" O.D. 0.6506" Length 4.105" Suits both Inlet & Exhaust guides- with seal groove in chimney Replaces early guide without seal groove on chimney



# CUMMINS cont.

<b>ENGINE</b>	Cummins ISX 915ci 15.0L 6 Cyl Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	915ci / 15.0L	<b>CYLINDERS</b>	6 Cyl	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo Charged		<b>CAM DRIVE</b>				
<b>BORE</b>	5.39in / 137mm	<b>STROKE</b>	6.65in / 169mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE STEM SEAL	122-1448	Metal Clad Viton Positive Type Seal Use with valve guide 140-3061 (includes groove in chimney) SBI part number 122-1379 supersede to 122-1448
VALVE SPRING		
VALVE SEAT INSERT EXHAUST	SB1874E-2	O.D. Actual 1.8740" I.D. 1.5550" I.D. Top Taper 1.725" Depth 0.2375" Seat Angle 45
VALVE SEAT INSERT INLET	SB1953E-4	O.D. Actual 1.9535" I.D. 1.6400" I.D. Top Taper 1.819" Depth 0.1950" Seat Angle 20
GASKETS SET TOP END	FP-2881767 FP-4955595 FP-4955596	Suits HPCR Engines Suits Non-EGR Engines Suits EGR Engines

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 50 Series 519ci 8.5L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	519ci / 8.5L	<b>CYLINDERS</b>	4	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.12in / 130mm	<b>STROKE</b>	5.47in / 139mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE EXHAUST	13001	Head Diam 1.556" Stem Diam 0.3429" Length 8.497" Seat Angle 30 Degree Tip Length 0.6150" Inconel Material Engines With EGR From 2003 (Inconel)
VALVE INLET	13000  13083S	Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Chrome Plating Engines With EGR From 2003 Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Inconel with Stellite Face <b>Marine Engines (Inconel)</b>
VALVE COLLETS	121-1080	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8591	ID 0.3453" OD 0.5635" Length 4.006" Suits both Inlet & Exhaust guides Guide Bore Reaming Required
VALVE STEM SEAL	122-1242	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1628E-3	O.D. Actual 1.6285" I.D. 1.3571" I.D. Top Taper 1.414" Depth 0.2490" Seat Angle 30
VALVE SEAT INSERT INLET	SB1819E-1	O.D. Actual 1.8195" I.D. 1.5571" Depth 0.2830" Seat Angle 30

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 53 Series 4 Valve Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	53ci x No Cylinders	<b>CYLINDERS</b>		<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	
<b>FUEL TYPE</b>			<b>CAM DRIVE</b>				
<b>BORE</b>	3.875in / 98.425mm	<b>STROKE</b>	4.500in / 114.000mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
INJECTOR TUBE	240-1012 240-1013	Copper - Thin Nose Copper - Thick Nose
INJECTOR TUBE SEAL	240-1013R	Black - Viton
VALVE EXHAUST	00759  01018	Engines With Out Turbo Head Diam     1.090" Stem Diam     0.2484" Length         5.552" Seat Angle     30 Degree Tip Length     0.3100" Engines With Turbo Head Diam     1.090" Stem Diam     0.2484" Length         5.552" Seat Angle     30 Degree Tip Length     0.3100" Inconel Material
VALVE INLET		
VALVE COLLETS	121-1017	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-6254	ID             0.2510" OD             0.4998" Length         2.360"
VALVE STEM SEAL	122-1224	Teflon Material Metal Clad
VALVE SEAT INSERT EXHAUST	SB1161E-1	O.D. Actual    1.1610" I.D.            0.9750" Depth         0.2220" Seat Angle     30
VALVE SEAT INSERT INLET		
WATER DIRECTOR	240-1016	Steel

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 60 Series 677ci 11.1L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	677ci / 11.1L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.12in / 130mm	<b>STROKE</b>	5.47in / 139mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1986	7 REQ
INJECTOR TUBE	240-1017 240-1028 240-1035	Copper Copper Thick Nose Early Threaded Stainless Steel
INJECTOR TUBE SEAL	240-1017R 240-1035R	Green – Viton Brown – Viton
INJECTOR TUBE SHIM	240-1035SH+007 240-1035SH+012 240-1035SH+018	0.007" Stainless Steel 0.012" Stainless Steel 0.018" Stainless Steel
VALVE EXHAUST	01566  13001	Engines With Out EGR Head Diam 1.556" Stem Diam 0.3430" Length 8.497" Seat Angle 30 Degree Tip Length 0.6149" Chrome Plating Engines With EGR From 2003 (Inconel) Head Diam 1.556" Stem Diam 0.3429" Length 8.497" Seat Angle 30 Degree Tip Length 0.6150" Inconel Material
VALVE INLET	01567  13000  13083S	Engines With Out EGR Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Chrome Plating Engines With EGR From 2003 Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Chrome Plating Marine Engines (Inconel) Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Inconel with Stellite Face

## DETROIT DIESEL Cont.

<b>ENGINE</b>	Detroit Diesel 60 Series 677ci 11.1L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	677ci / 11.1L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.12in / 130mm		<b>STROKE</b>	5.47in / 139mm			

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE COLLETS	121-1080	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8591	ID           0.3453" OD           0.5635" Length       4.006" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1242	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1628E-3	O.D. Actual   1.6285" I.D.           1.3571" I.D. Top Taper 1.414" Depth        0.2490" Seat Angle    30
VALVE SEAT INSERT INLET	SB1819E-1	O.D. Actual   1.8195" I.D.           1.5571" Depth        0.2830" Seat Angle    30

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 60 Series 775ci 12.7L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	775ci / 12.7L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.12in / 130mm	<b>STROKE</b>	6.30in / 160mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1986	7 REQ
INJECTOR TUBE	240-1017 240-1028 240-1035	Copper Copper Thick Nose Early Threaded Stainless Steel
INJECTOR TUBE SEAL	240-1017R 240-1035R	Green – Viton Brown – Viton
INJECTOR TUBE SHIM	240-1035SH+007 240-1035SH+012 240-1035SH+018	0.007" Stainless Steel 0.012" Stainless Steel 0.018" Stainless Steel
VALVE EXHAUST	01566          13001	Engines With Out EGR Head Diam 1.556" Stem Diam 0.3430" Length 8.497" Seat Angle 30 Degree Tip Length 0.6149" Chrome Plating Engines With EGR From 2003 (Inconel) Head Diam 1.556" Stem Diam 0.3429" Length 8.497" Seat Angle 30 Degree Tip Length 0.6150" Inconel Material
VALVE INLET	01567          13000          13083S	Engines With Out EGR Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Chrome Plating Engines With EGR From 2003 Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Chrome Plating Marine Engines (Inconel) Head Diam 1.732" Stem Diam 0.3435" Length 8.498" Seat Angle 30 Degree Tip Length 0.5949" Inconel with Stellite Face

## DETROIT DIESEL Cont.

<b>ENGINE</b>	Detroit Diesel 60 Series 775ci 12.7L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	775ci / 12.7L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.12in / 130mm	<b>STROKE</b>	6.30in / 160mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE COLLETS	121-1080	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8591	ID                   0.3453" OD                   0.5635" Length             4.006" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1242	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1628E-3	O.D. Actual       1.6285" I.D.                1.3571" I.D. Top Taper 1.414" Depth             0.2490" Seat Angle        30
VALVE SEAT INSERT INLET	SB1819E-1	O.D. Actual       1.8195" I.D.                1.5571" Depth             0.2830" Seat Angle        30

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 60 Series 858ci 14.0L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	858ci / 14.0L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.24in / 133mm	<b>STROKE</b>	6.62in / 168mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
CAM BEARINGS	SH1986	7 REQ
INJECTOR TUBE	240-1017 240-1028 240-1035	Copper Copper Thick Nose Early Threaded Stainless Steel
INJECTOR TUBE SEAL	240-1017R 240-1035R	Green – Viton Brown – Viton
INJECTOR TUBE SHIM	240-1035SH+007 240-1035SH+012 240-1035SH+018	0.007" Stainless Steel 0.012" Stainless Steel 0.018" Stainless Steel
VALVE EXHAUST	01566          13001	Engines With Out EGR Head Diam     1.556" Stem Diam     0.3430" Length         8.497" Seat Angle     30 Degree Tip Length     0.6149" Chrome Plating Engines With EGR From 2003 (Inconel) Head Diam     1.556" Stem Diam     0.3429" Length         8.497" Seat Angle     30 Degree Tip Length     0.6150" Inconel Material
VALVE INLET	01567          13000          13083S	Engines With Out EGR Head Diam     1.732" Stem Diam     0.3435" Length         8.498" Seat Angle     30 Degree Tip Length     0.5949" Chrome Plating Engines With EGR From 2003 Head Diam     1.732" Stem Diam     0.3435" Length         8.498" Seat Angle     30 Degree Tip Length     0.5949" Chrome Plating Marine Engines (Inconel) Head Diam     1.732" Stem Diam     0.3435" Length         8.498" Seat Angle     30 Degree Tip Length     0.5949" Inconel with Stellite Face



## DETROIT DIESEL Cont.

<b>ENGINE</b>	Detroit Diesel 60 Series 858ci 14.0L Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	858ci / 14.0L	<b>CYLINDERS</b>	6	<b>VALVE TRAIN</b>	OHC	<b>VALVES</b>	4
<b>FUEL TYPE</b>	Direct Injection Turbo		<b>CAM DRIVE</b>				
<b>BORE</b>	5.24in / 133mm	<b>STROKE</b>	6.62in / 168mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
VALVE COLLETS	121-1080	Sold as Single Collet 2 Required Per Valve
VALVE GUIDE	140-8591	ID           0.3453" OD           0.5635" Length       4.006" Suits both Inlet & Exhaust guides
VALVE STEM SEAL	122-1242	Viton Material Positive Type Seal
VALVE SEAT INSERT EXHAUST	SB1628E-3	O.D. Actual   1.6285" I.D.           1.3571" I.D. Top Taper 1.414" Depth        0.2490" Seat Angle    30
VALVE SEAT INSERT INLET	SB1819E-1	O.D. Actual   1.8195" I.D.           1.5571" Depth        0.2830" Seat Angle    30

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 71 Series 4 Valve Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	71ci x No Cylinders	<b>CYLINDERS</b>		<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	4
<b>FUEL TYPE</b>			<b>CAM DRIVE</b>				
<b>BORE</b>	4.125in / 104.78mm	<b>STROKE</b>	5.000in / 127.00mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
INJECTOR TUBE	240-1012 240-1013	Copper - Thin Nose Copper - Thick Nose
INJECTOR TUBE SEAL	240-1013R	Black – Viton

# DETROIT DIESEL

<b>ENGINE</b>	Detroit Diesel 92 Series 4 Valve Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	92ci x No Cylinders	<b>CYLINDERS</b>		<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	4
<b>FUEL TYPE</b>			<b>CAM DRIVE</b>				
<b>BORE</b>	4.840in / 123.00mm	<b>STROKE</b>	5.000in / 127.00mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
INJECTOR TUBE	240-1012 240-1013	Copper - Thin Nose Copper - Thick Nose
INJECTOR TUBE SEAL	240-1013R	Black – Viton

# FORD NAVISTAR DIESEL

<b>ENGINE</b>	Ford 7.3L IDI Navistar 7300cc V8 OHV 16V T/Diesel			<b>YEAR</b>			
<b>CAPACITY</b>	445.47ci / 7.3L	<b>CYLINDERS</b>	V8	<b>VALVE TRAIN</b>	OHV	<b>VALVES</b>	2
<b>FUEL TYPE</b>	Direct Injection		<b>CAM DRIVE</b>				
<b>BORE</b>	4.1102in / 104.4mm	<b>STROKE</b>	4.1811in / 106.2mm				

<b>ITEM</b>	<b>PART NUMBER</b>	<b>NOTES</b>
<b>COOLING</b>		
WATER PUMP	W8186	
<b>CYLINDER HEAD</b>		
HEAD BOLT SET	NHBS550	
CAM FOLLOWER	RHT2104	
<b>DRIVE BELT, DRIVE BELT TENSIONER &amp; IDLER</b>		
DRIVE BELT SOLUTION KIT	22434K	Ford F-Series 7.3L V8 Turbo Diesel 7.4JU2N 1999-April 28, 2001 Kit includes upper & lower hose Fleet Runner long-life fleet-rated belt
	22690K	Ford F-Series 7.3L V8 Turbo Diesel 7.4JU2N April 29, 2001-2003 Kit includes upper & lower hose Fleet Runner long-life fleet-rated belt
IDLER PULLEY	38028	Steel Smooth/Backside 76mm x 17mm x 37mm
TENSIONER	38191	
<b>GASKETS</b>		
Exhaust Manifold	MS3859	Ford F250 7.3 Ltr V8 OHV 16V 2001 - 2007 Ford F350 7.3 Ltr V8 OHV 16V 2001 - 2007
Rocker Cover	RC3383	Ford F250 7.3 Ltr V8 OHV 16V 2001 - 2007 Ford F350 7.3 Ltr V8 OHV 16V 2001 - 2007

# NOTES

A series of horizontal lines for taking notes. The page begins with a solid black header bar. Below it are 21 horizontal lines, each defining a row for writing. The lines are evenly spaced and extend across the width of the page.

