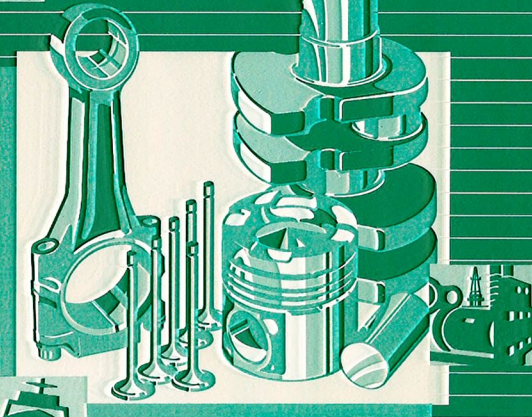
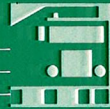




## Parts Catalog

### 4BT3.9

Automotive

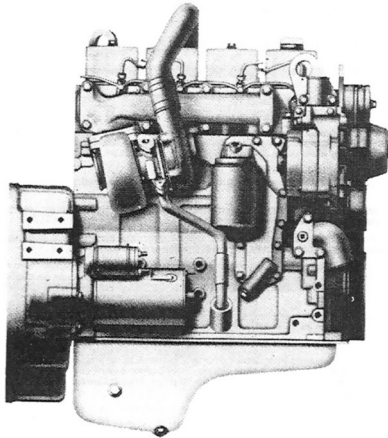




**Parts Catalog**

**4BT3.9**

Automotive





**Cummins Engine Co., Inc.**  
**New Parts Warranty**  
**Midrange**

**COVERAGE**

**PRODUCTS WARRANTED**

This warranty applies to New Parts marketed by Cummins for its A, B, and C Series engines. It applies anywhere in the world where service is available through a Cummins distributor or A, B, and C Series dealer.\*

**COVERAGE**

This warranty covers any failures of parts on or after December 1, 1986, which result, under normal use and service, from defects in workmanship or material (Warrantable Failures). The coverage extends six months from the date of first installation.

This warranty continues to all subsequent Owners until the end of the period of coverage.

**CUMMINS RESPONSIBILITIES**

Cummins will pay for all parts and labor needed to repair the damage to the engine resulting from the Warrantable Failure. All labor costs will be paid in accordance with Cummins published Standard Repair Time guidelines.

Cummins will pay for the lubricating oil, antifreeze, filter elements, and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay reasonable labor costs for engine removal and reinstallation when necessary to make the warranty repair.

**OWNER RESPONSIBILITIES**

At the time when the parts are installed, Owner is responsible for the preparation of a written record containing the following: (1) the date of installation of the parts; (2) the engine serial number; (3) the engine miles, hours or kilometers of operation; (4) the parts installed; and (5) the location of the parts in the engine. The purpose of this record is to protect Owner's interests and support any claim for a Warrantable Failure.

Owner is responsible for the operation and maintenance of the engine as specified in Cummins Operation and Maintenance Manuals.

Before expiration of the warranty, Owner must give notice to a Cummins distributor or A, B, and C Series dealer\* of a failure considered to be warrantable and deliver the engine to such facility for repair.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during warranty repairs except where such items are not reusable due to a Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred by Owner as a result of a Warrantable Failure. Owner is responsible for non-engine repairs and for "downtime" expenses, cargo damage and all business costs and losses resulting from a Warrantable Failure. **CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

(In the United States, some states do not allow the exclusion or limitation of incidental or consequential damages relating to Consumer Products, so the above limitation or exclusion may not apply to you.)

**LIMITATIONS**

Cummins is not responsible for failures resulting from Owner or Operator abuse or neglect, such as: operation without adequate coolant or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or air intake systems; improper storage, starting, warm-up, run-in or shutdown practices. Cummins is also not responsible for failures caused by incorrect fuel, or by water, dirt or other contaminants in the fuel.

Except for fuel pumps, Cummins does not warrant parts supplied by Cummins which bear the name of another company. These parts are warranted by their manufacturers and not by Cummins. This category of parts includes, but is not limited to: hydraulic pumps, alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, marine gears, air cleaners and non-Cummins air compressors, engine compression brakes, and steering pumps.

Parts used in warranty repairs may be new Cummins, Cummins approved rebuilt parts, or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

This warranty does not apply to parts furnished by Cummins at no charge to the Owner.


**THIS WARRANTY IS THE SOLE WARRANTY MADE BY CUMMINS IN REGARD TO THESE PARTS. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**INVEST IN THE BEST**

## Product Identification Information

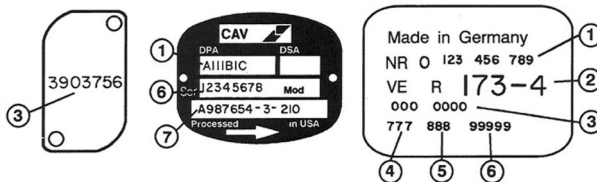
Data plates should be referred for parts identification.

### 1. ENGINE DATA PLATE

 <b>Cummins Engine Company, Inc.</b> Box 3005 Columbus, Indiana 47205-3005	Cert. I.D.	C.I.D./L	Series	CPL	Engine Serial No.	
					Injector P.N.	
	Timing-TDC			Cust. Spec.		
Warning: Injury May Result and Warranty is Voided if Fuel Rate RPM Or Altitude Exceed Published Maximum Values For This Model And Application	Valve lash cold	Int.	Exh.	Rated HP	at	RPM
	Firing Order	Fuel rate at rated HP			mm <sup>3</sup> /stroke	
Date of Mfg.	Low Idle RPM	E.C.S.	Model Name			

1. Shop order number
2. Model designation
3. Engine serial number
4. Control parts list

### 2. FUEL PUMP DATA PLATE



1. Supplier part number
2. Supplier alpha-numerica designation
3. Cummins part number
4. Factory code
5. Manufacturing date code
6. Serial number of pump
7. Pump setting code

This catalog was compiled by Rita Wheeler in Parts Communications.

### Customer Service Information

This standard Parts Catalog contains parts information for the following Cummins Engine Model(s):

4BT3.9                      D382008BX02                      CPL 858, 1268

Certain basic engine components have been matched to give optimum performance to your engine. The part numbers listed in this catalog for these components are for a standard engine configuration. When ordering any of the Control Parts List (CPL) components listed below, please order by part description and engine serial number. Reference to the CPL number stamped on the engine data (name) plate will also help identify the proper service parts for your engine.

#### Control Parts List (CPL) Components

<b>Pump, Injection</b>	Page 34-43	<b>Cylinder Head</b>	Page 67
<b>Injector</b>	Page 69-71	<b>Turbocharger</b>	Page 72-97
<b>Camshaft</b>	Page 64	<b>Exhaust Manifold</b>	Page 103-105
<b>Piston</b>	Page 63		

#### USER INFORMATION

- . Parts numbers appearing in ( ) are for identification purposes only and should not be used when ordering service replacement parts.
- . The reference numbers appearing on the art pages is for publication use only.
- . Assembly content is shown by part number indentation.
- . Options are engineered production part groupings, specifically used for compiling engine orders.
- . Option numbers are for reference only and are not sold for service.
- . Use assembly and not option content to determine service parts replacement.

#### ALWAYS SPECIFY ENGINE MODEL AND SERIAL NUMBER WHEN ORDERING PARTS FROM THIS CATALOG

Engine Model \_\_\_\_\_ Engine Serial No. \_\_\_\_\_

MFG Make \_\_\_\_\_ Model \_\_\_\_\_ Chassis No. \_\_\_\_\_

Fuel Pump Assembly No. \_\_\_\_\_ Injector No. \_\_\_\_\_

Belt, Fan \_\_\_\_\_ Belt, Water Pump \_\_\_\_\_ Belt, Gen. \_\_\_\_\_

Element, Fuel Filter \_\_\_\_\_ Full Flow Lub. Filter \_\_\_\_\_

Air Cleaner \_\_\_\_\_ By-Pass Lub. Filter \_\_\_\_\_

Special Equipment

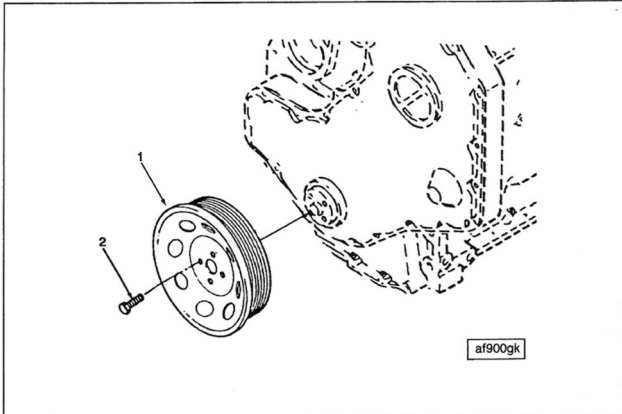
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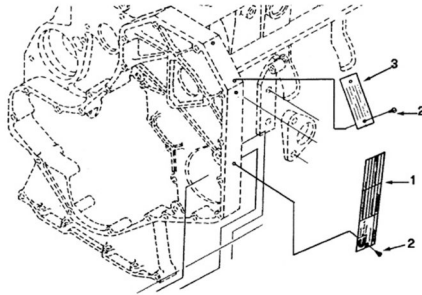


Ref No.	Part Number	Part Name	Req	Remarks
		<b>FRONT DRIVE ADAPTER OPTION AF9006</b>		
1	3914494	Pulley, Crankshaft	1	174mm dia. 8 groove drive pulley, mounted on front of crankshaft.
2	3903857	Screw, Hex Flange Head Cap	4	M12 x 1.25 x 36

Group No. 01.06.1

Dataplate

Option No. AP9040



ap900gl

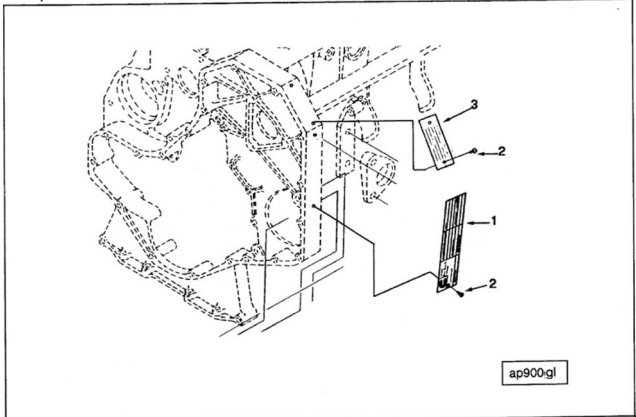
Ref No.	Part Number	Part Name	Req	Remarks
		<b>DATAPLATE OPTION AP9040</b>		
1	3916164	Dataplate	1	Certified EPA and California (ARB) dataplate for ( 1990 model year) engine classified as light heavy duty diesel engines. Includes dataplate for engines manufactured for Cummins Engine Company. Located on fuel pump side of engine on the outboard edge of gear housing, orientated 90 degrees counter-clockwise from vertical.
2	3908612	Screw, Drive	4	
3	3916006	Dataplate	1	



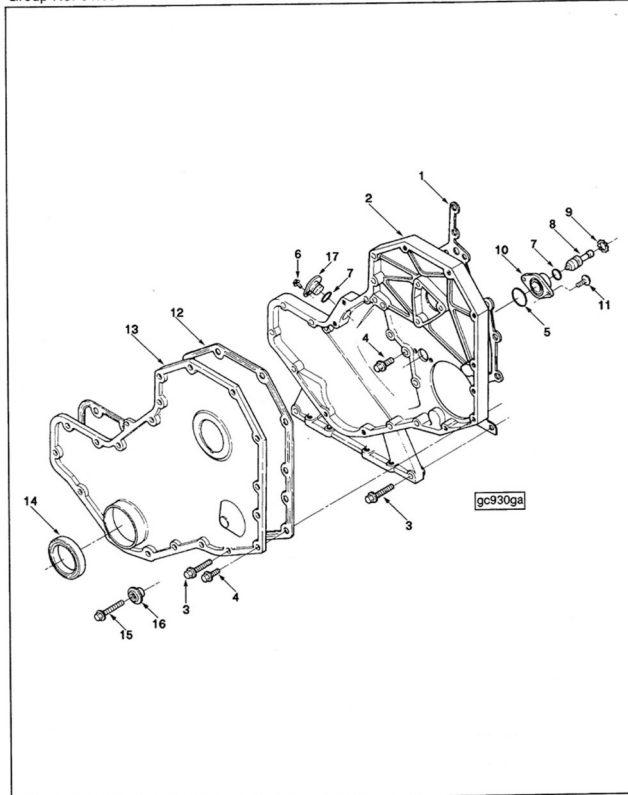
Group No. 01.06.1

**Dataplate**

Option No. AP9053



Ref No.	Part Number	Part Name	Req	Remarks
		<b>DATAPLATE OPTION AP9053</b>		Certified EPA and California (ARB) dataplate for (1990 model year) engine classified as medium heavy duty diesel engines. Includes dataplate for engines manufactured for Cummins Engine Company. Located on fuel pump side of engine on the outboard edge of gear housing, orientated 90 degrees counter-clockwise from horizontal.
1	3918974	Dataplate	1	
2	3908612	Screw, Drive	4	
3	3918007	Dataplate	1	

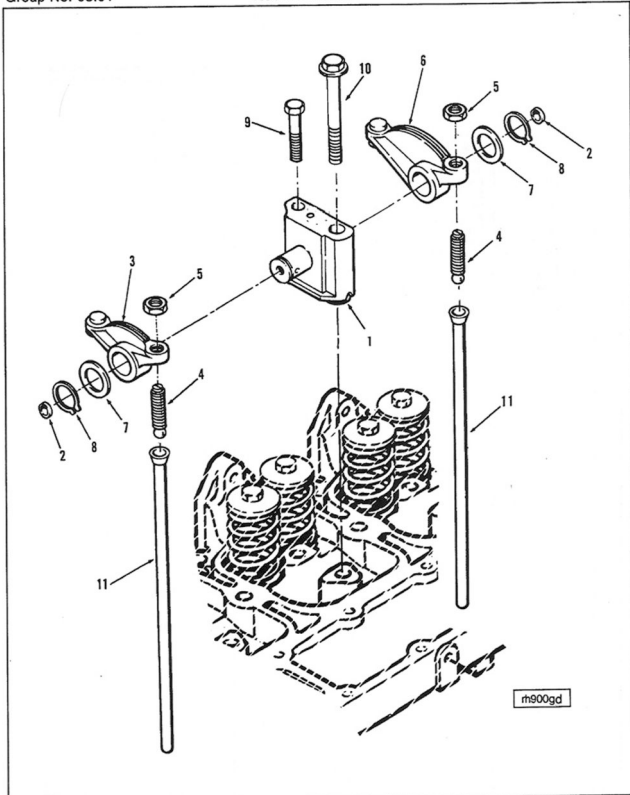


Group No. 01.09

## Front Gear Cover

Option No. BP9703

Ref No.	Part Number	Part Name	Req	Remarks
		<b>FRONT GEAR COVER</b>		
		<b>OPTION BP9703</b>		
				Front gear cover assembly. Includes access hole for electronic tachometer pickup.
1	3916131	Gasket, Gear Housing	1	
2	3918872	Housing, Gear	1	
3	3900633	Screw, Hex Flange Head Cap	10	M8 x 1.25 x 50
4	3900629	Screw, Hex Flange Head Cap	16	M8 x 1.25 x 16
5	3915772	Seal, Rectangular Ring	1	
6	3913638	Screw, Hex Flange Head Cap	1	M6 x 1.00 x 15
7	3913994	Seal, O Ring	1	
	3913995	Housing, Timing Pin	1	
7	3913994	Seal, O Ring	1	
8	3903924	Pin, Timing	1	
9	3904849	Ring, Retaining	1	
10	3905933	Housing, Timing Pin	1	
11	3907998	Screw, Round Head Cap	2	M5 x 0.80 x 17
12	3914385	Gasket, Gear Cover	1	
	3903663	Cover, Gear	1	
13	3903794	Cover, Gear	1	
14	3904353	Front Seal Service Kit	1	
15	3901446	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 60
16	3912772	Retainer, Belt	1	
17	3916179	Plate, Cover	1	



Group No. 03.01

## Rocker Levers

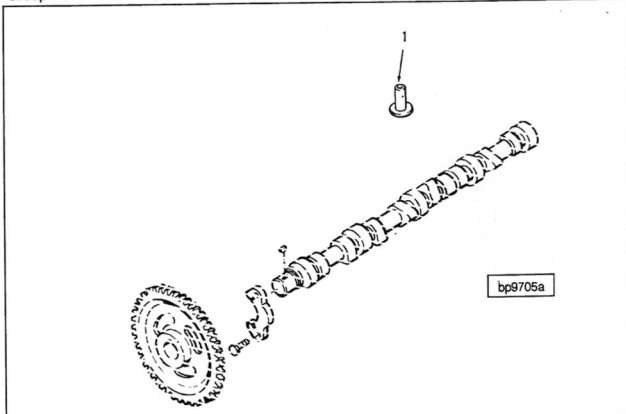
Option No. BP9704

Ref No.	Part Number	Part Name	Req	Remarks
		<b>ROCKER LEVERS</b>		
		<b>OPTION BP9704</b>		Engine rocker levers.
1	3910814 (3911423)	Support, Rocker Lever	4	
	(3910813)	Support, Rocker Lever	1	
2	3907555	Shaft, Rocker Lever	1	
3	3910811 (3910809)	Plug, Expansion Lever, Rocker	2	
4	3900706	Lever, Rocker	1	Intake
5	233131	Screw, Slotted Set	1	3/8 - 24 x 1 1/2 inch
6	3910810 (3910808)	Nut, Regular Hexagon Lever, Rocker	4	
4	3900706	Lever, Rocker	1	Exhaust
5	233131	Screw, Slotted Set	1	3/8 - 24 x 1 1/2 inch
7	3900245	Nut, Regular Hexagon	1	
8	3900242	Washer, Plain	8	
9	3901221	Ring, Retaining	8	
10	3817473	Screw, Hexagon Head Cap	4	M8 x 1.25 x 75
11	3904679	Screw, Hex Flange Head Cap Rod, Push	8	

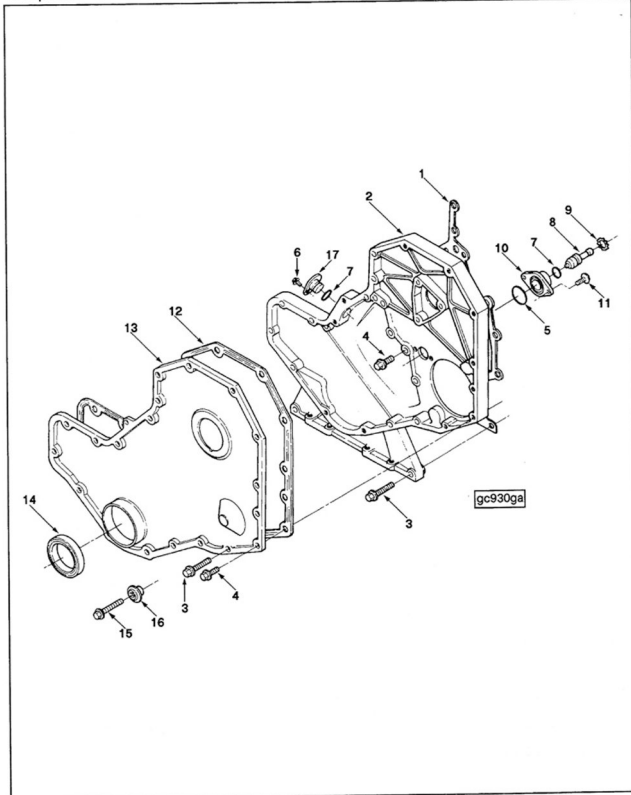
Group No. 04.01

Valve Tappet

Option No. BP9705



Ref No.	Part Number	Part Name	Req	Remarks
1	3907240	VALVE TAPPET OPTION BP9705 Tappet, Valve	8	Engine valve tappets.



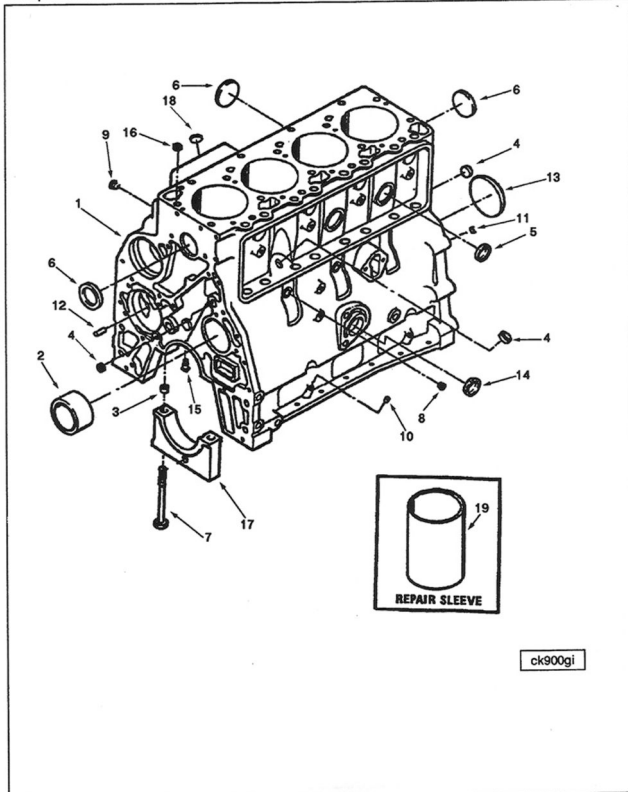
Group No. 01.09

## Front Gear Cover

Option No. BP9727

Ref No.	Part Number	Part Name	Req	Remarks
		<b>FRONT GEAR COVER OPTION BP9727</b>		Front gear cover assembly. Contains damping plate for noise reduction . Includes access hole for electronic tachometer pickup.
1	3916131	Gasket, Gear Housing	1	
2	3918872	Housing, Gear	1	
3	3900633	Screw, Hex Flange Head Cap	10	M8 x 1.25 x 50
4	3900629	Screw, Hex Flange Head Cap	16	M8 x 1.25 x 16
5	3915772	Seal, Rectangular Ring	1	
6	3913638	Screw, Hex Flange Head Cap	1	M6 x 1.00 x 15
7	3913994	Seal, O Ring	1	
	3913995	Housing, Timing Pin	1	
7	3913994	Seal, O Ring	1	
8	3903924	Pin, Timing	1	
9	3904849	Ring, Retaining	1	
10	3905933	Housing, Timing Pin	1	
11	3907998	Screw, Round Head Cap	2	M5 x 0.80 x 17
12	3914385	Gasket, Gear Cover	1	
	3905203	Cover, Gear	1	
13	3903794	Cover, Gear	1	
14	3904353	Front Seal Service Kit	1	
15	3901446	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 60
16	3912772	Retainer, Belt	1	
17	3916179	Plate, Cover	1	



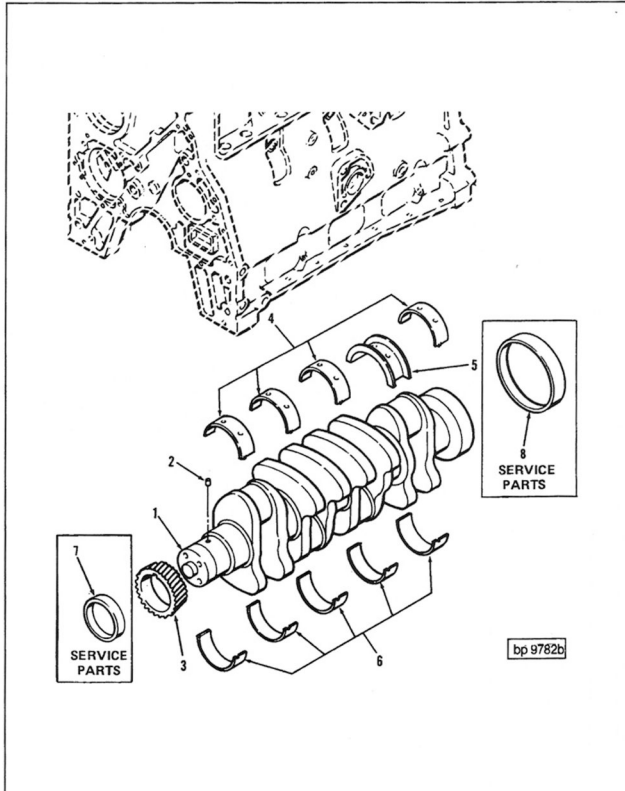


Group No. 01.01

## Cylinder Block

Option No. BP9782

Ref No.	Part Number	Part Name	Req	Remarks
		<b>CYLINDER BLOCK</b>		
		<b>OPTION BP9782</b>		
				Engine block assy. For turbocharged engines.
	3916254	Block, Service	1	
1	(3917611)	Block, Cylinder	1	
2	3901306	Bushing	1	
3	3900068	Dowel, Ring	10	M18 x 10
4	3900956	Plug, Expansion	3	17.73mm
5	3007635	Plug, Expansion	2	1 inch
6	3900965	Plug, Expansion	4	58.06mm
7	3904217	Screw, Hexagon Head Cap	10	M14 x 2.00 x 119
17	3900967	Cap, Main Bearing	5	Semi-Finished
	3904991	Kit, Block Hardware	1	
8	3906619	Plug, Pipe	2	1/8 NPT
9	3008468	Plug, Pipe	1	1/2 NPT
10	3900955	Plug, Expansion	1	Structured in LG option
11	3900068	Dowel, Ring	2	M18 x 10
12	3900257	Dowel, Pin	2	M10 x 16
13	3900687	Plug, Expansion	1	
14	3900958	Plug, Expansion	1	
15	3901020	Nozzle, Piston Cooling	4	
16	3902343	Dowel, Ring	2	M16 x 10
18	3027646	Plug, Expansion	1	Not used on turbocharged
		<b>SERVICE PARTS</b>		
2	3904369	Bushing	A/R	Oversize bushing for No. 1 bore.
2	3902342	Bushing	A/R	Oversize bushing for No. 2-5 bore.
17	3900967	Cap, Main Bearing	5	Semi-Finished
19	3904166	Sleeve, Salvage		Standard Bore. Use as required.



Group No. 01.02

## Crankshaft and Main Bearing

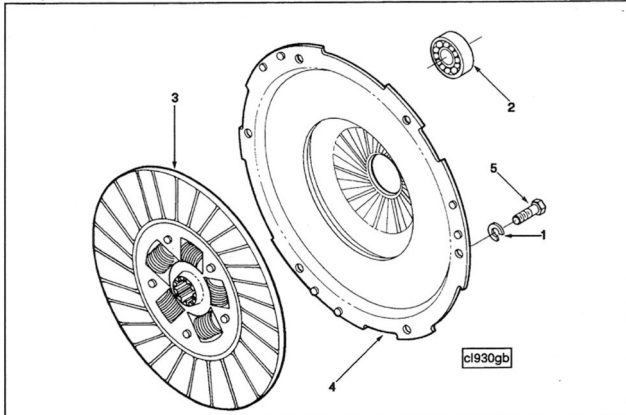
Option No. BP9782

Ref No.	Part Number	Part Name	Req	Remarks
		<b>CRANKSHAFT</b>		
		<b>OPTION BP9782</b>		
1	3908031 (3907803)	Crankshaft, Assembly	1	
2	3904483	Crankshaft, Engine	1	
3	3901258	Dowel, Pin	1	
		Gear, Crankshaft	1	
		<b>MAIN BEARING SETS</b>		
4	3902010 (3901090)	Set, Main Bearing	1	Standard
5	(3906230)	Bearing, Main	4	
6	(3901150)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	5	
4	3902011 (3901091)	Set, Main Bearing	1	0.25mm Oversize
5	(3906231)	Bearing, Main	4	
6	(3901151)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	5	
4	3902012 (3901092)	Set, Main Bearing	1	0.50mm Oversize
5	(3906232)	Bearing, Main	4	
6	(3901152)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	5	
4	3902013 (3901093)	Set, Main Bearing	1	0.75mm Oversize
5	(3906233)	Bearing, Main	4	
6	(3901153)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	5	
4	3902014 (3901094)	Set, Main Bearing	1	1.00mm Oversize
5	(3906234)	Bearing, Main	4	
6	(3901154)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	5	
5	3902082 (3906452)	Bearing, Crankshaft Thrust	1	.5mm Oversize Bore/.5mm Oversize Thrust
6	(3901152)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	1	
5	3902084 (3906454)	Bearing, Crankshaft Thrust	1	1.0mm Oversize Bore/1.0mm Oversize Thrust
6	(3901154)	Bearing, Crankshaft Thrust	1	
		Bearing, Main	1	
		<b>SERVICE PARTS</b>		
7	3906080	Sleeve, Wear	1	Front
8	3906081	Sleeve, Wear	1	Rear

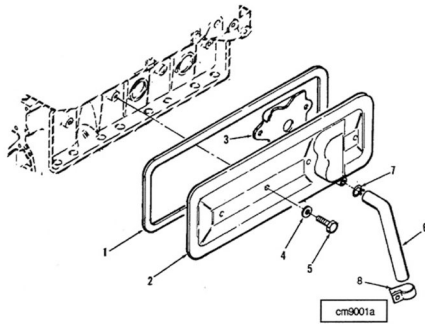
Group No. 16.05

Rear Clutch

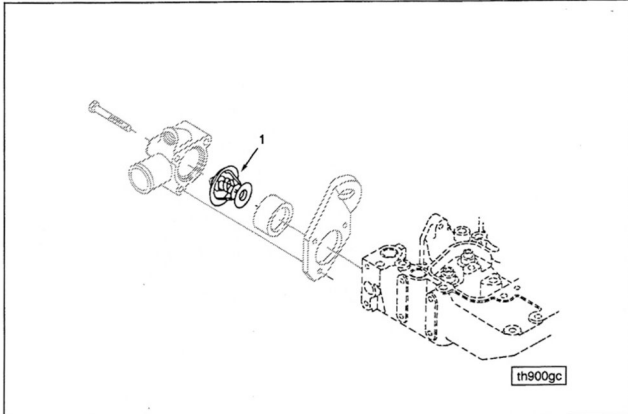
Option No. CL9018



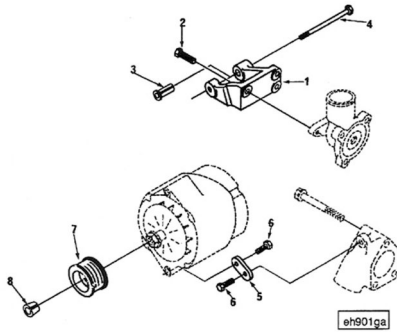
Ref No.	Part Number	Part Name	Req	Remarks
		<b>REAR CLUTCH OPTION CL9018</b>		Provides 11 inch (280mm) single plate luk clutch for use on 4BT and 4BTA.
1	S-004	Washer, Lock	6	3/8 inch
2	3906730	Bearing, Ball	1	
3	3915867	Disc, Clutch	1	
4	3915868	Plate, Clutch Pressure	1	
5	3915871	Screw, Hexagon Head Cap	6	3/8 - 16 x 1.12 inch



Ref No.	Part Number	Part Name	Req	Remarks
		<b>CAM FOLLOWER COVER</b>		
		<b>OPTION CM9001</b>		
				Engine cam follower covers. Remaining mounting parts are found in FT option. For 4 cylinder engines.
1	3904056	Gasket, Push Rod Cover	1	
2	3905023	Cover, Push Rod	1	
3	3907586	Baffle, Breather	1	
4	3900267	Seal, Grommet	2	
5	3905029	Screw, Hex Flange Head Cap	2	M8 x 1.25 x 16
6	3906593	Hose, Plain	1	
7	3904230	Clamp, Spring Hose	1	
8	3909670	Clip	1	

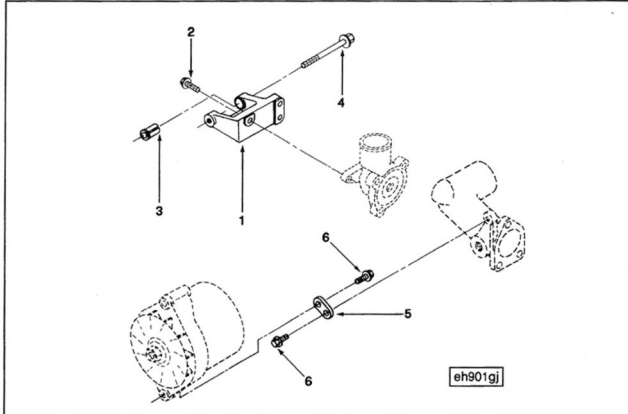


Ref No.	Part Number	Part Name	Req	Remarks
1	3917324	THERMOSTAT OPTION EC9001 Thermostat	1	Vented thermostat, opens at 83 degrees (C).

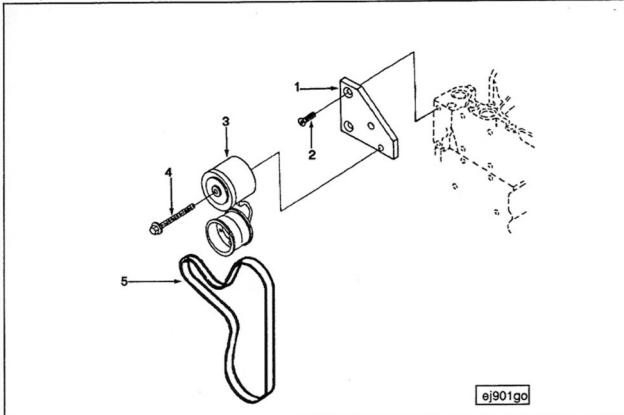


Ref No.	Part Number	Part Name	Req	Remarks
		<b>ALTERNATOR LOCATION OPTION EH9001</b>		
1	3910713	Support, Alternator	1	
2	390631	Screw, Hex Flange Head Cap	3	M8 x 1.25 x 25
3	3910715	Spacer, Mounting	1	M10 x 1.50 x 95
4	3908226	Screw, Hex Flange Head Cap	1	M10 x 1.50 x 95
5	3903089	Brace, Alternator	1	
6	390630	Screw, Hex Flange Head Cap	2	M8 x 1.25 x 20
7	3908560	Pulley, Alternator	1	60mm dia
8	3908563	Retainer, Pulley	1	

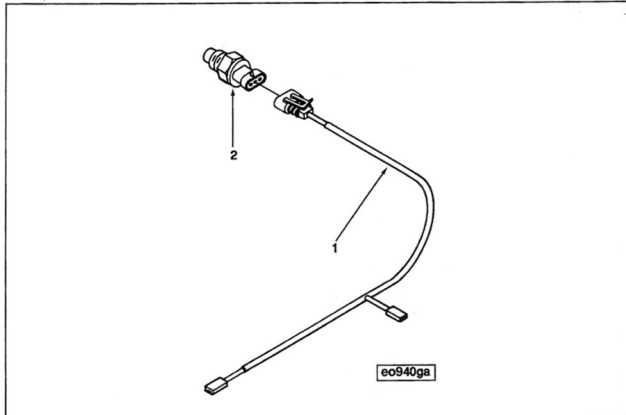




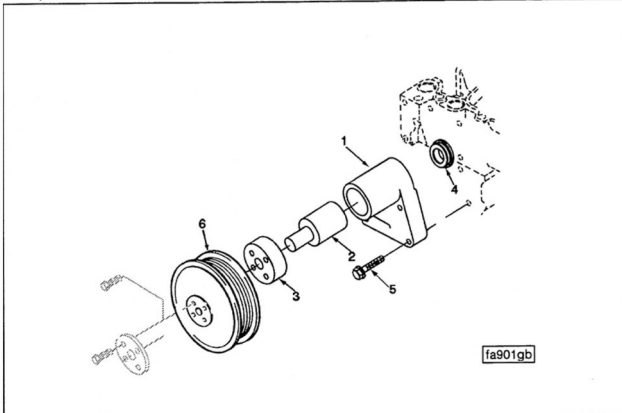
Ref No.	Part Number	Part Name	Req	Remarks
		<b>ALTERNATOR LOCATION OPTION EH9049</b>		
1	3910713	Support, Alternator	1	
2	3900631	Screw, Hex Flange Head Cap	3	M8 x 1.25 x 25
3	3910715	Spacer, Mounting	1	
4	3908226	Screw, Hex Flange Head Cap	1	M10 x 1.50 x 95
5	3903089	Brace, Alternator	1	
6	3900630	Screw, Hex Flange Head Cap	2	M8 x 1.25 x 20
				Alternator mounting for Bosch K1, Delco 12 St and Prestolitt 110-747, 110-749, BEM3001GA, BEM2008NA alternators. Does not include alternator pulley or pulley retainer.



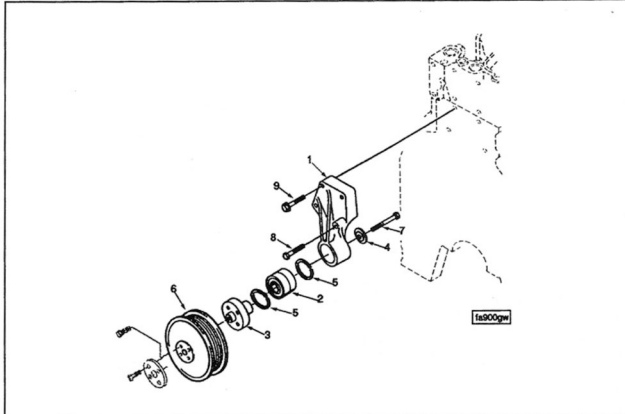
Ref No.	Part Number	Part Name	Req	Remarks
<b>ALTERNATOR LOCATION OPTION EH9760</b>				
1	3918766	Bracket, Belt Tensioner	1	Alternator drive belt and items required to adjust belt. Used with 10/15 SI Delco-Remy, Lucas A-127, Motorola 10-747/ 10-749 and Bosch K1 and Motorcraft 12V 60 AMP alternators and 1.1:1 fan drive ratio at 203.2mm center arrangement. Tensioner mounts near centerline of engine.
2	3903095	Screw, Flat Head Cap	2	
3	3914096	Tensioner, Belt	1	
4	3904446	Screw, Hex Flange Head Cap	1	
5	3911567	Belt, V Ribbed	1	



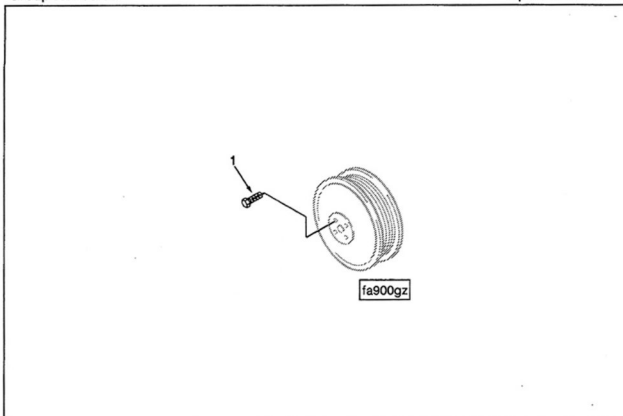
Ref No.	Part Number	Part Name	Req	Remarks
		TEMPERATURE SENSOR OPTION EO9703		Thermo switch for use on certified engines using fuel pumps equipped with KSB cold start device. Switch installs in the fuel pump side of the cylinder head in the front 1/2 inch pipe thread hole. Includes wiring harness to connect the KSB device thermostatic switch and the fuel pump shutdown solenoid.
1	3918364	Harness, Wiring	1	
2	3915945	Switch, Thermo	1	



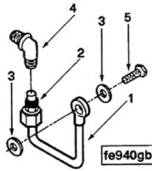
Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE OPTION FA9003		1.1 to 1 drive ratio fan arrangement at 345mm above centerline of crankshaft and on engine centerline. Fan mounting holes are on a 50mm bolt circle.
1	3909889 (3902349)	Support, Fan	1	
2	(3908164)	Support, Fan	1	
3	(3901364)	Shaft, Fan Drive	1	
4	3909887	Hub, Fan	1	
5	3900678	Retainer, Shaft	1	
6	3914463	Screw, Hex Flange Head Cap Pulley, Fan	4 1	M8 x 1.25 x 40



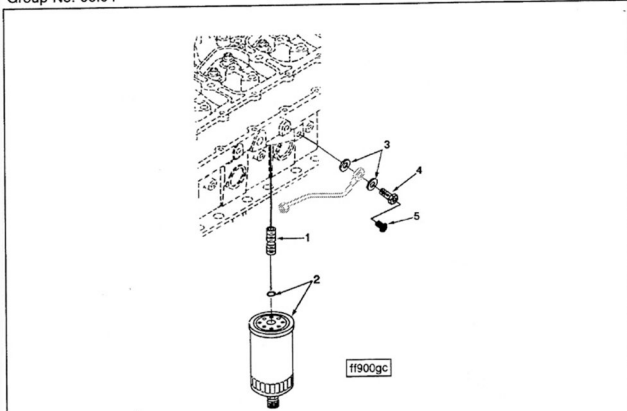
Ref No.	Part Number	Part Name	Req	Remarks
		<b>FAN DRIVE</b> <b>OPTION FA9062</b>		1.1 to 1 drive ratio fan arrangement at 203.3mm above centerline of crankshaft and offset 49.0mm to the fuel pump side of engine. Has increased fan weight capability hub with 4 holes M8 x 1.25 equally spaced on a 50mm B.C.
	3911202	Support, Fan	1	
1	3908802	Support, Fan	1	
2	3910739	Bearing, Ball	1	
3	3910622	Hub, Fan	1	
4	3910410	Retainer, Fan Hub	1	
5	3035960	Ring, Retaining	2	
6	3914463	Pulley, Fan	1	
7	3907769	Screw, Hexagon Head Cap	1	M10 x 1.75 x 70
8	3901447	Screw, Hexagon Head Cap	1	M8 x 1.25 x 75
9	3902114	Screw, Hex Flange Head Cap	3	M8 x 1.25 x 30



Ref No.	Part Number	Part Name	Req	Remarks
		<b>FAN DRIVE</b> <b>OPTION FA9702</b>		
1	3900630	Screw, Hex Flange Head Cap	4	Fan pulley mounting for testing and shipping engines. Fan/fan spacers to be installed by customers. For 50mm bolt circle fan hubs

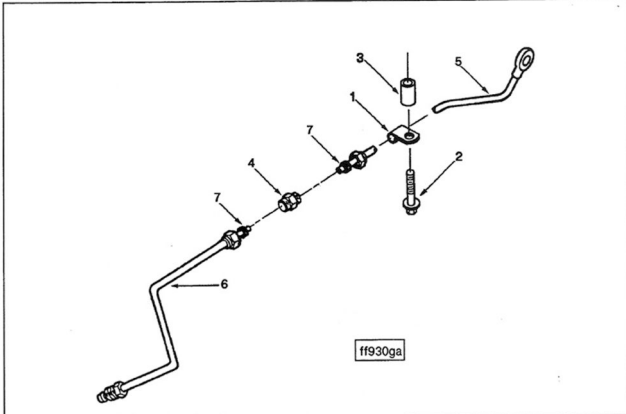


Ref No.	Part Number	Part Name	Req	Remarks
		<b>AIR FUEL CONTROL PLUMBING OPTION FE9701</b>		Air/fuel control tube, used on turbocharged "B" series engine with Bosch's "VE" or "VP" type fuel pumps with boost control.
1	3910004	Tube, Air Fuel Control	1	
2	3905391	Seal, Grommet	1	
3	3903728	Washer, Sealing	2	
4	3910265	Elbow, Male Adapter	1	
5	3903729	Screw, Banjo Connector	1	M12 x 1.00 x 20

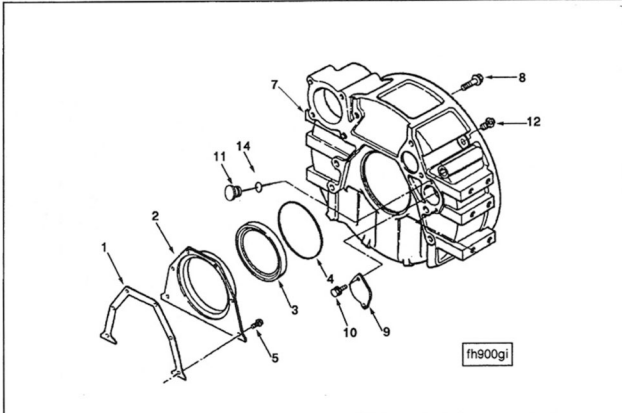


Ref No.	Part Number	Part Name	Req	Remarks
		<b>FUEL FILTER OPTION FF9003</b>		
1	3903845	Adapter, Filter Head	1	Single element fuel filter arrangement having water separator and drain, B series
2	3903202	Filter, Fuel	1	
3	3918191	Washer, Sealing	2	
4	3911446	Screw, Banjo Connector	1	
5	3905403	Screw, Captive Washer Cap	1	

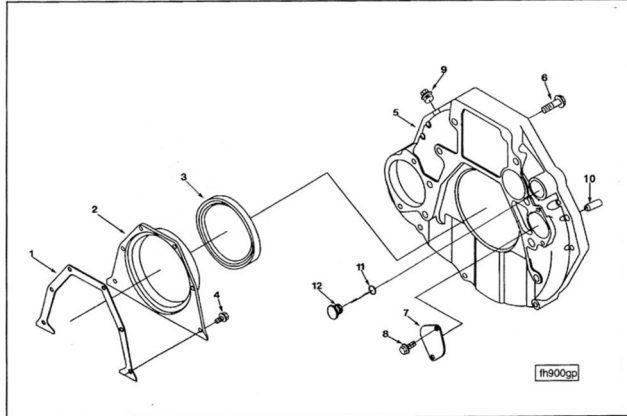




Ref No.	Part Number	Part Name	Req	Remarks
<b>FUEL FILTER PLUMBING</b>				
<b>OPTION FF9736</b>				
				Fuel supply tube from fuel filter head to Bosch VE or VP type fuel injector pump For 4-cylinder engines rated 2500 RPM or above.
1	180372	Clip	1	
2	3900678	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 40
3	3910590	Spacer, Mounting	1	
4	3908985	Union, Male	1	
5	3908988	Tube, Fuel Supply	1	
7	3905351	Seal, Grommet	2	
6	3917565	Tube, Fuel Supply	1	
7	3905351	Seal, Grommet	2	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>FLYWHEEL HOUSING</b>		
		<b>OPTION FH9002</b>		
				SAE #3 aluminum flywheel housing. Dry pad type with SAE #1 starter flange at 216mm center distance high on exhaust side.
1	3914386	Gasket, Rear Cover	1	
2	3913447	Cover, Rear	1	
3	3909410 (3904067)	Rear Crank Seal Serv. Kit	1	Includes Installation Tools
4	3912473	Seal, Oil	1	
5	3913638	Seal, Rectangular Ring	1	
6	3903292	Screw, Hex Flange Head Cap	6	M6 x 1.00 x 15
7	3903292	Housing, Flywheel	1	
8	3910540	Screw, Hex Flange Head Cap	8	M12 x 1.75 x 40
9	3908095	Plate, Cover	1	
10	3902735	Screw, Self Tapping Metal	1	M8 x 1.25 x 21
11	3910246	Plug, O Ring	2	
12	3904181	Plug, Threaded	1	3/4 - 16 UNF
14	3910260	Seal, O Ring	1	

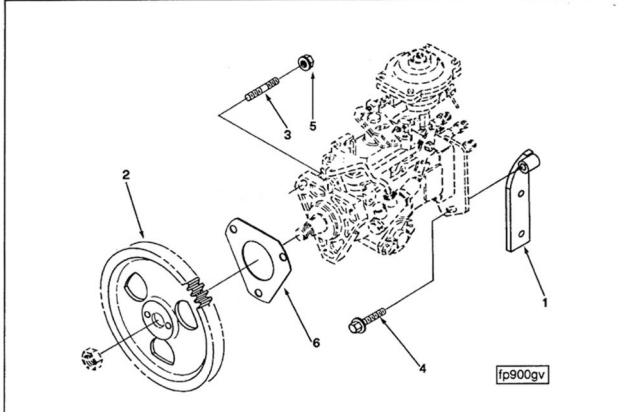


Ref No.	Part Number	Part Name	Req	Remarks
		<b>FLYWHEEL HOUSING OPTION FH9043</b>		
				Aluminum flywheel hsg. Dry type with starter at 202.42mm center distance low on exhaust side used with Ford four speed manual or automatic transmission.
1	3914396	Gasket, Rear Cover	1	
2	3913447	Cover, Rear	1	
	3909410	Rear Crank Seal Serv. Kit	1	Includes Installation Tools
3	(3904087)	Seal, Oil	1	
4	3913638	Screw, Hex Flange Head Cap	6	M6 x 1.00 x 15
5	3912601	Adapter, Transmission	1	
6	3910540	Screw, Hex Flange Head Cap	8	M12 x 1.75 x 40
7	3908095	Plate, Cover	1	
8	3902735	Screw, Self Tapping Metal	2	M8 x 1.25 x 21
9	3904181	Plug, Threaded	1	3/4 - 16 UNF
10	148582	Dowel, Pin	2	
11	3910260	Seal, O Ring	1	
12	3910248	Plug, O Ring	1	

Group No. 09.01

Fuel Pump Coupling

Option No. FP9702,  
FP9764

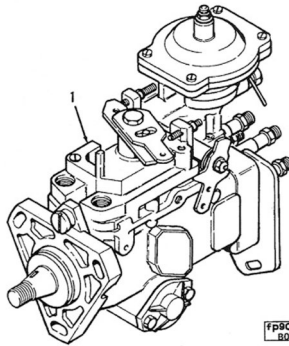


Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PUMP COUPLING		
		OPTION FP9702		Fuel pump coupling assembly for use on turbocharged engines using Bosch injector pumps without air compressor.
		OPTION FP9764		Fuel pump coupling assembly for use on turbocharged engines using Bosch injector pumps with air compressor.
1	3905313	Brace, Fuel Pump	1	
2	3914912	Gear, Fuel Pump	1	
3	3902501	Stud	3	
4	3900630	Screw, Hex Flange Head Cap	3	M8 x 1.25 x 20
5	3900589	Nut, Hexagon Flange	3	M8 x 1.25
6	3914389	Gasket, Fuel Pump	1	

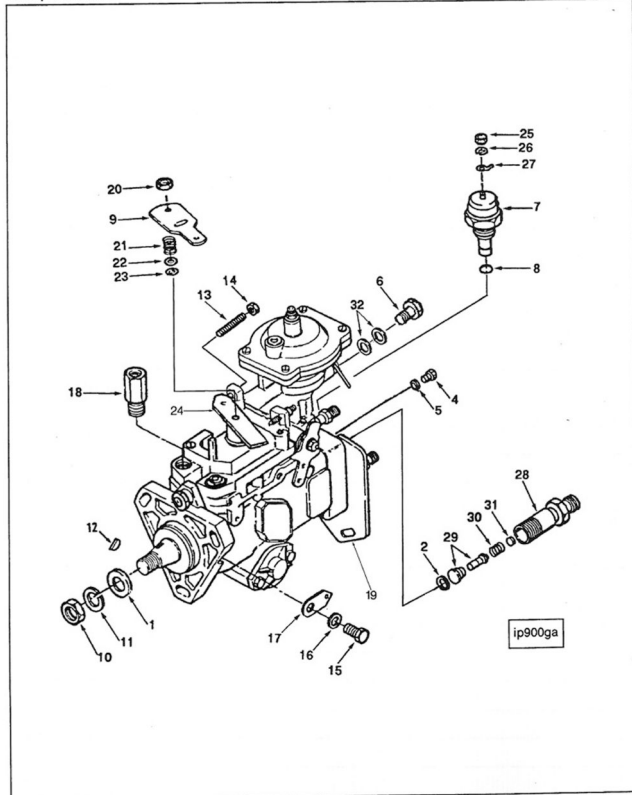
Group No. 05.21

**Bosch Injection Pump**

Option No. FP97098,  
FP97099



Ref No.	Part Number	Part Name	Req	Remarks
		<b>BOSCH INJECTION PUMP OPTION FP97098</b>		
1	3917016	Pump, Fuel Injection <b>OPTION FP97099</b>	1	CPL#1268 "VE" type (Non Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine 2800 RPM with a peak torque of 270 lbs. ft. at 1600 RPM. Has 12 volt air fuel solenoid and 2.0mm tubing. With FR9230 and FE9701.
1	3917018	Pump, Fuel Injection	1	CPL#1268 "VE" type (Non Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine 2800 RPM with a peak torque of 270 lbs. ft. at 1600 RPM. Has 24 volt air fuel solenoid and 2.0mm tubing. With FR9230 and FE9701.



Group No. 05.21

## Injection Pump Bosch

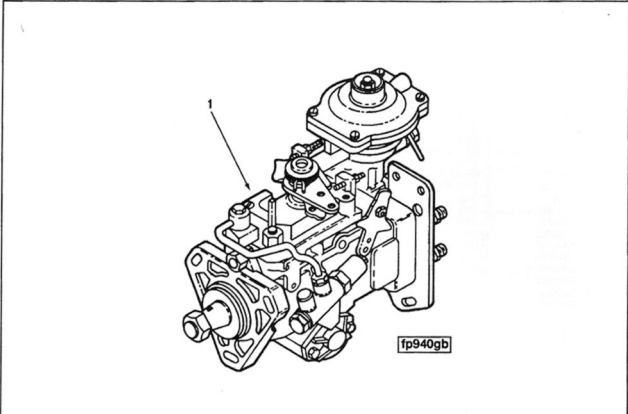
Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
<b>BOSCH VE PUMP SERVICE PARTS</b>				
1	3903569	Seal, Shaft	1	
2	3903570	Gasket, Delivery Valve	4	
4	3903572	Screw, Vent	1	
5	3903573	Gasket, Vent Screw	1	
6	3905465	Screw, Banjo Connector	1	
7	3903575	Kit, Solenoid	1	12V actuate to run
8	3903577	O'Ring, Solenoid	1	
7	3903576	Kit, Solenoid	1	24V actuate to run
8	3903577	O'Ring, Solenoid	1	
9	3908765	Lever, Control	1	
10	3903738	Nut, Regular Hexagon	1	
11	S-609	Washer, Lock	1	9/16 inch
12	3902332	Key, Plain Woodruff	1	
13	3904782	Screw, Low Idle Stop	1	
14	3904783	Nut, Idle Screw Hex	1	
15	3904784	Screw, Timing Lock	1	
16	3904785	O'Ring Timing Lock	1	
17	3904786	Plate, Timing Lock	1	
18	3903382	Adapter, Reducing	1	For 4 cylinder pump
19	3905686	Bracket (4VE)	1	
20	3907475	Nut	1	
21	3907476	Spring	1	
22	3907477	Shim	1	
23	3907478	Lockwasher	1	
24	3907479	Lever, Splined	1	
25	3907480	Nut	1	
26	3907481	Lockwasher	1	
27	3907482	Blade Terminal	1	
32	3903037	Washer, Sealing	2	
	3802047	Kit, Delivery Bypass Valve	1	
2	3903570	Gasket, Delivery Valve	1	
28	3910794	Fitting, Bypass Valve	1	
29	3910785	Valve, Bypass	1	
30	3910796	Spring	1	
31	3910797	Shim	1	

Group No. 05.21

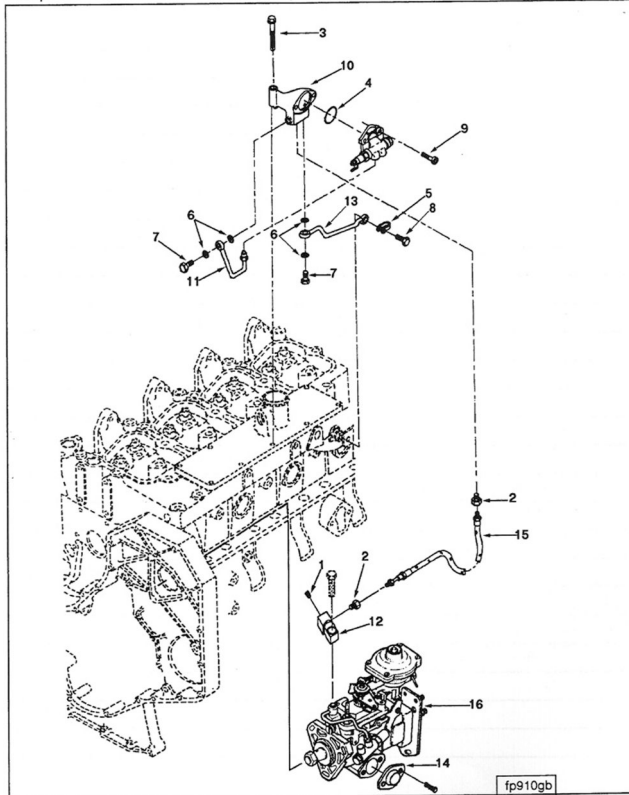
**Bosch Injection Pump**

Option No. FP97135,  
FP97136



Ref No.	Part Number	Part Name	Req	Remarks
		<b>BOSCH INJECTION PUMP</b>		
		<b>OPTION FP97135</b>		
1	3917530	Pump, Fuel Injection	1	CPL#0858 "VP-14" type (EPA/CARB Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine at 2500 RPM with a peak torque of 265 lbs ft at 1700 RPM. Has 12 volt atr fuel solenoid and 2.0mm tubing. This pump is also equipped with KSB. With FR9273 and FE9701.
		<b>OPTION FP97136</b>		
1	3917531	Pump, Fuel Injection	1	CPL#0858 "VP-14" type (EPA/CARB Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine at 2500 RPM with a peak torque of 265 lbs ft at 1700 RPM. Has 24 volt atr fuel solenoid and 2.0mm tubing. This pump is also equipped with KSB. With FR9273 and FE9701.



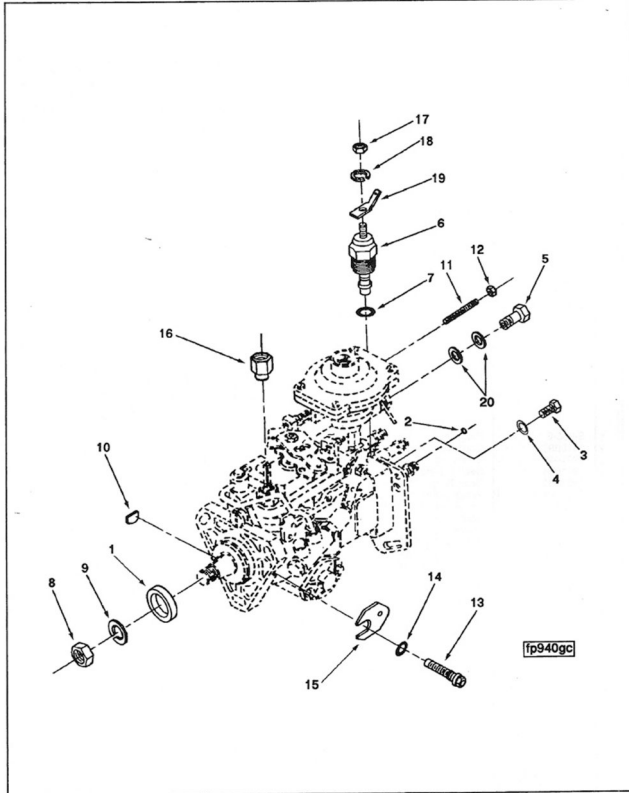


Group No. 05.21

## Bosch Injection Pump

Option No. FP97137,  
FP97138

Ref No.	Part Number	Part Name	Req	Remarks
<b>BOSCH INJECTION PUMP</b>				
<b>OPTION FP97137</b>				
				CPL#0858 "VP-14" type (EPA/CARB Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine 2500 RPM with a peak torque of 265 lbs. ft. at 1700 RPM. Has 12 volt atr fuel solenoid and 2.0mm tubing. For use when a remote mounted KSB is required. With FR9273 and FE9701.
1	S-995-E	Plug, Pipe	1	1/16 NPT
2	301888	Connector, Female	2	
3	3901446	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 60
4	3901836	Seal, O Ring	1	
5	3903380	Seal, Banjo Connector	1	
6	3903728	Washer, Sealing	4	
7	3903729	Screw, Banjo Connector	2	M12 x 1.00 x 20
8	3905307	Screw, Banjo Connector	1	M6 x 1.00 x 14
9	3906391	Screw, Socket Head Cap	2	M6 x 1.00 x 16
10	3914897	Support, Timing Advance	1	
11	3914898	Tube, Fuel Supply	1	
12	3914902	Adapter, Timing Advance	1	
13	3914903	Tube, Fuel Transfer	1	
14	3914908	Plate, Cover	1	
15	3915451	Hose, Flexible	1	
16	3917532	Pump, Fuel Injection	1	
<b>OPTION FP97138</b>				
				CPL#0858 "VP-14" type (EPA/CARB Certified) fuel pump for 105 BHP turbocharged "B" series 4 cylinder engine 2500 RPM with a peak torque of 265 lbs. ft. at 1700 RPM. Has 24 volt atr fuel solenoid and 2.0mm tubing. For use when a remote mounted KSB is required. With FR9273 and FE9701.
1	S-995-E	Plug, Pipe	1	1/16 NPT
2	301888	Connector, Female	2	
3	3901446	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 60
4	3901836	Seal, O Ring	1	
5	3903380	Seal, Banjo Connector	1	
6	3903728	Washer, Sealing	4	
7	3903729	Screw, Banjo Connector	2	M12 x 1.00 x 20
8	3905307	Screw, Banjo Connector	1	M6 x 1.00 x 14
9	3906391	Screw, Socket Head Cap	2	M6 x 1.00 x 16
10	3914897	Support, Timing Advance	1	
11	3914898	Tube, Fuel Supply	1	
12	3914902	Adapter, Timing Advance	1	
13	3914903	Tube, Fuel Transfer	1	
14	3914908	Plate, Cover	1	
15	3915451	Hose, Flexible	1	
16	3917533	Pump, Fuel Injection	1	

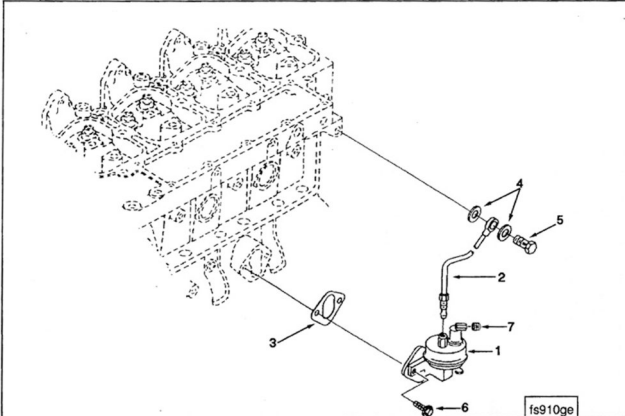


Group No. 05.21

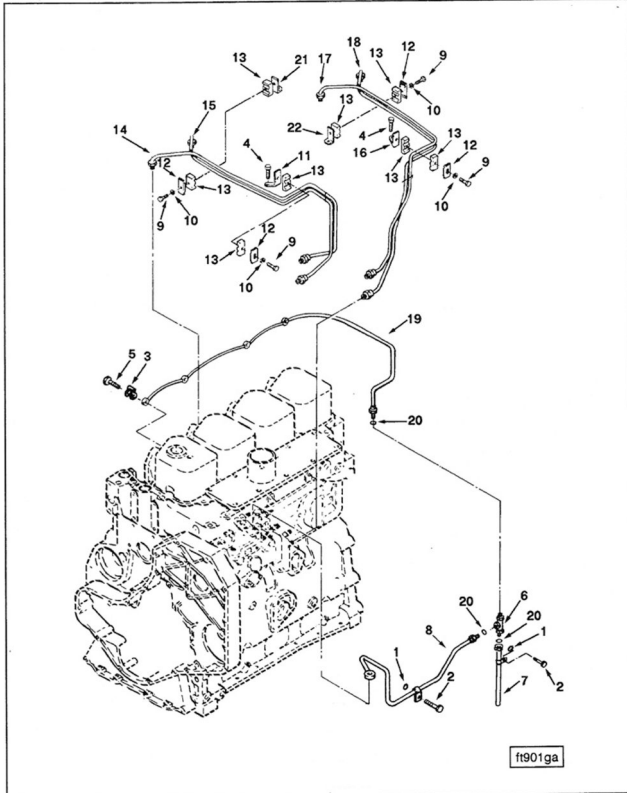
## Injection Pump Bosch

Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
<b>BOSCH VE PUMP SERVICE PARTS</b>				
1	3903569	Seal, Shaft	1	
2	3903570	Gasket, Delivery Valve	4	
3	3903572	Screw, Vent	1	
4	3903573	Gasket, Vent Screw	1	
5	3905465	Screw, Banjo Connector	1	
6	3903575	Kit, Solenoid	1	12V actuate to run
7	3903577	O'Ring, Solenoid	1	
6	3903785	Kit, Solenoid	1	24V actuate to run
7	3903577	O'Ring, Solenoid	1	
8	3903738	Nut, Regular Hexagon	1	
9	S-409	Washer, Lock	1	9/16 inch
10	3902332	Key, Plain Woodruff	1	4.0 mm
11	3904782	Screw, Low Idle Stop	1	
12	3904783	Nut, Idle Screw Hex	1	
13	3904784	Screw, Timing Lock	1	
14	3904785	O'Ring Timing Lock	1	
15	3904786	Plate, Timing Lock	1	
16	3903382	Adapter, Reducing	1	For 4 cylinder pump
17	3907490	Nut	1	
18	3907481	Lockwasher	1	
19	3907482	Blade, Terminal	2	
20	3903037	Washer, Plain	2	1/2 inch



Ref No.	Part Number	Part Name	Req	Remarks
<b>FUEL SYSTEM ACCESSORIES</b>				
<b>OPTION FS9002</b>				
1	3904374	Pump, Fuel Transfer	1	Lift pump required when fuel supply tank is below regular fuel pump. For 3 and 4 cylinder engines.
2	3905649	Tube, Fuel Supply	1	1/4 NPT In/M14 -1.5 Out
3	3914304	Gasket, Cover Plate	1	
4	3918191	Washer, Sealing	2	1/2 inch
5	3903035	Screw, Banjo Connector	1	M12 x 1.50 x 24
6	3900631	Screw, Hex Flange Head Cap	2	M8 x 1.25 x 25
7	3008466	Plug, Pipe	1	

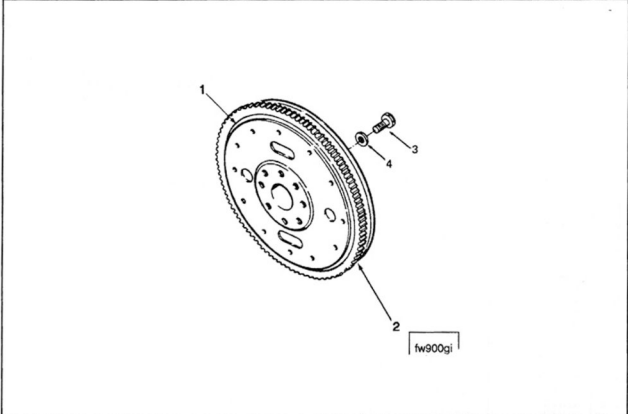


Group No. 06.03

## Plumbing, Fuel

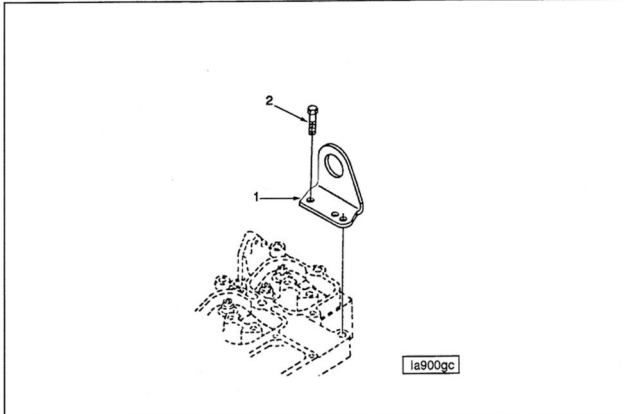
Option No. FT9823

Ref No.	Part Number	Part Name	Req	Remarks
		PLUMBING, FUEL OPTION FT9823		2.0mm I.D. Fuel manifold supply and drain tubing for 4 cylinder turbocharged engines using Bosch VE or VP injection pump with boost control 2500 RPM or above. Contains dual bead fuel drain tube for 1/4 inch I.D. hose connection.
1	3900267	Seal, Grommet	2	
2	3900630	Screw, Hex Flange Head Cap	2	M8 x 1.25 x 20
3	3903380	Seal, Banjo Connector	4	
4	3918109	Screw, Hex Flange Head Cap	2	
5	3905307	Screw, Banjo Connector	4	M6 x 1.00 x 14
6	3905388	Tee, Male Union	1	
7	3912137	Tube, Fuel Drain	1	
20	3905391	Seal, Grommet	1	
8	3905701	Tube, Fuel Drain	1	
20	3905391	Seal, Grommet	1	
9	3903609	Screw, Hexagon Head Cap	4	M5 x 0.80 x 20
10	3903723	Washer, Plain	4	
11	3904344	Brace, Tube	1	
12	3904711	Brace, Tube	4	
13	3914338	Isolator, Vibration	8	
14	3903480	Tube, Injector Fuel Supply	1	No. 1 Cylinder
15	3903481	Tube, Injector Fuel Supply	1	No. 2 Cylinder
16	3904345	Brace, Tube	1	
17	3903482	Tube, Injector Fuel Supply	1	No. 4 Cylinder
18	3903483	Tube, Injector Fuel Supply	1	No. 3 Cylinder
19	3906955	Manifold, Fuel	1	
20	3905391	Seal, Grommet	1	
21	3910588	Brace, Tube	1	
22	3910589	Brace, Tube	1	

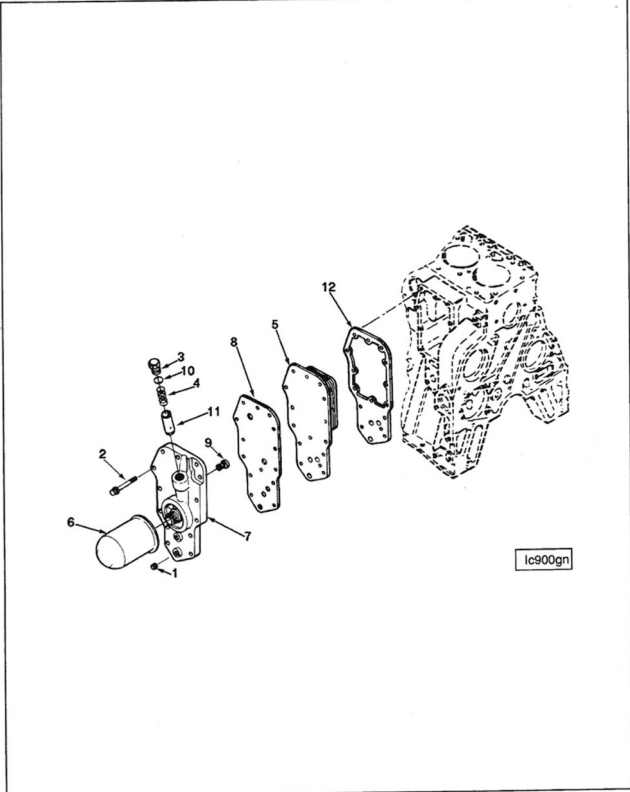


Ref No.	Part Number	Part Name	Req	Remarks
		<b>FLYWHEEL</b>		
		<b>OPTION FW9007</b>		
	3908570	Flywheel	1	
1	(3908569)	Flywheel	1	
2	3901774	Gear, Flywheel Ring	1	
3	3901395	Screw, Hexagon Head Cap	8	M12 x 1.25 x 32
4	3900269	Washer, Plain	8	1.65 thick
		<b>OPTION FW9048</b>		
	3906634	Flywheel	1	
1	(3906613)	Flywheel	1	
2	3905909	Gear, Flywheel Ring	1	
3	3900269	Washer, Plain	8	1.65 thick
4	3901395	Screw, Hexagon Head Cap	8	M12 x 1.25 x 32
				Flywheel for 12" dia. and 13" dia. 12- <i>DPB</i> and 13- <i>DLB</i> Includes 159 tooth, 10/12 pitch ring gear. For use with SAE#3 flywheel housing.
				Flywheel for 11 inch dia. clutch. Includes 146 tooth 10/12 pitch ring gear. Use only with option FH9043.





Ref No.	Part Number	Part Name	Req	Remarks
		<b>LIFTING BRACKET OPTION LA9007</b>		
1	3908118	Bracket, Lifting	1	Rear engine lifting arrangement. Front lifting is provided with thermostat housing option.
2	3901249	Screw, Hexagon Head Cap	2	M12 x 1.75 x 25

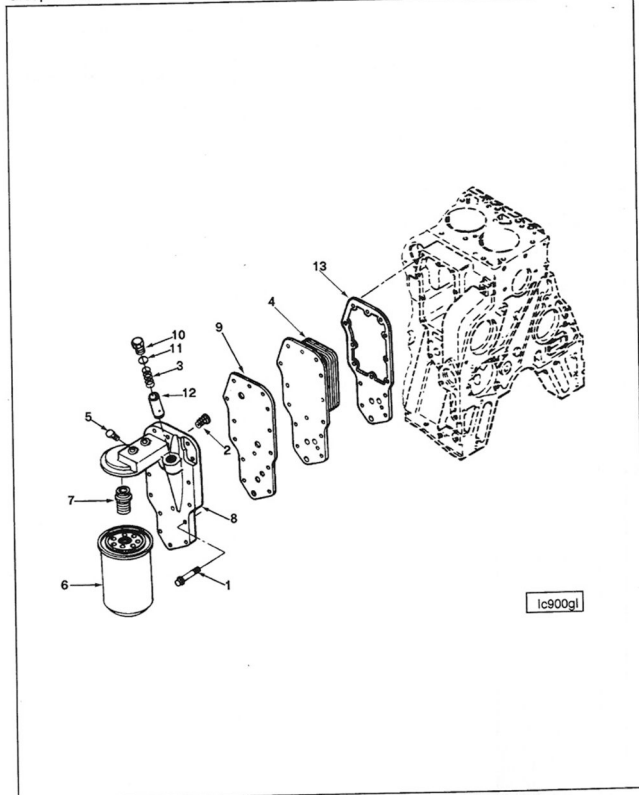


Group No. 07.05

Lubricating Oil Cooler

Option No. LC9014

Ref No.	Part Number	Part Name	Req	Remarks
		<b>LUBRICATING OIL COOLER OPTION LC9014</b>		Engine oil cooler assembly for use on turbocharged engines with horizontal filter.
1	3008465	Plug, Pipe	1	
2	3900632	Screw, Hex Flange Head Cap	14	M8 x 1.25 x 35
3	3915787	Plug, Threaded	1	
4	3918427	Spring, Compression	1	
5	3918292	Core, Cooler	1	
6	3908616	Cartridge, Lub Oil Filter	1	
7	3918287	Head, Lub Oil Filter	1	
8	3918257	Gasket, Filter Head	1	
9	3902338	Valve, Bypass	1	
10	3909397	Seal, O Ring	1	
11	3918428	Plunger, Prs Regulator	1	
12	3918256	Gasket, Oil Cooler Core	1	

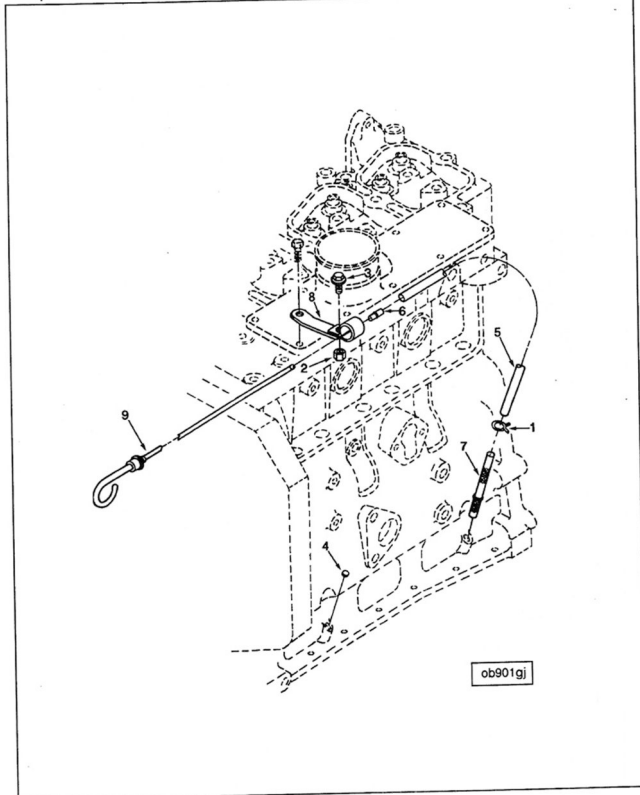


Group No. 07.05

## Lubricating Oil Cooler

Option No. LC9018

Ref No.	Part Number	Part Name	Req	Remarks
		<b>LUBRICATING OIL COOLER</b>		
		<b>OPTION LC9018</b>		
				Engine oil cooler assembly for use on turbocharged engines.
1	3900632	Screw, Hex Flange Head Cap	14	M8 x 1.25 x 35
2	3902339	Valve, Bypass	1	
3	3918427	Spring, Compression	1	
4	3918292	Core, Cooler	1	
5	3906619	Plug, Pipe	1	1/8 NPT
6	3908616	Cartridge, Lub Oil Filter	1	
	3918954	Head, Lub Oil Filter	1	
7	3909355	Adapter, Filter Head	1	
8	3918328	Head, Lub Oil Filter	1	
9	3918257	Gasket, Filter Head	1	
10	3915787	Plug, Threaded	1	
11	3909397	Seal, O Ring	1	
12	3918428	Plunger, Prs Regulator	1	
13	3918256	Gasket, Oil Cooler Core	1	

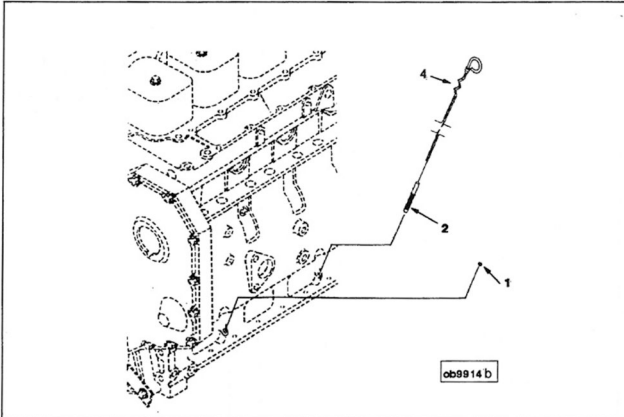


Group No. 07.02

## Oil level Gauge

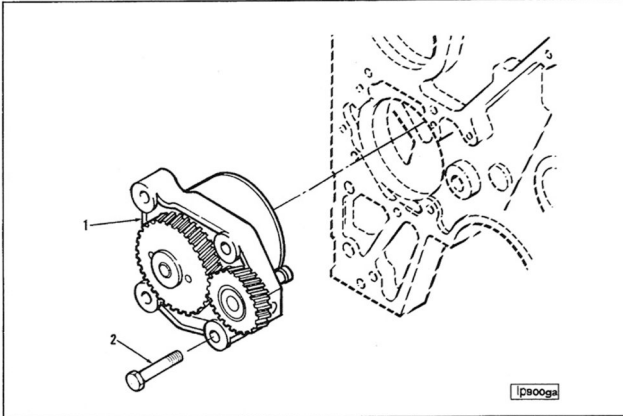
Option No. LG9002

Ref No.	Part Number	Part Name	Req	Remarks
		OIL LEVEL GAUGE OPTION LG9002		762mm flexible oil gauge tube with 65mm dipstick handle located on fuel pump side of engine at front valve cover for front removal for use with rear sump oil pan. Tube enters block at 408mm from frob. Dipstick is calibrated for "0" degree power angle and "0" degree tilt.
1	3909395	Clamp, Spring Hose	1	
2	3900240	Nut, Regular Hexagon	1	
3	3900629	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 16
4	3900955	Plug, Expansion	1	
5	3905800	Tube, Oil Gauge	1	
6	3905802	End, Oil Gauge Tube	1	
7	3279104	Tube, Oil Gauge	1	
8	3905803	Brace, Tube	1	
9	3907679	Dipstick	1	

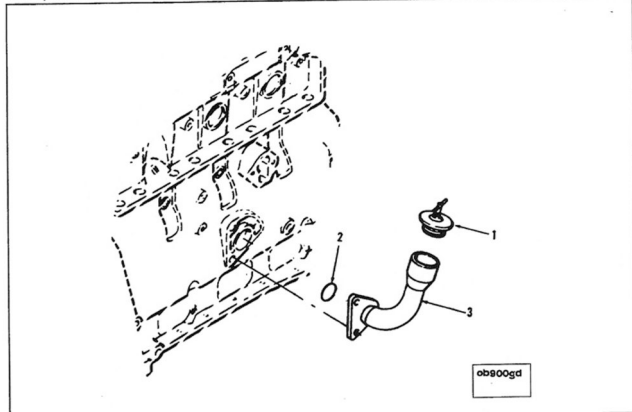


Ref No.	Part Number	Part Name	Req	Remarks
		<b>OIL LEVEL GAUGE</b> <b>OPTION LG9051</b>		
1	3900955	Plug, Expansion	1	65mm straight tube 408mm fob on fuel pump side of engine. Power angle 0 degree for rear sump oil pan. 65mm handle length.
2	3905425	Tube, Oil Gauge	1	
4	3905782	Dipstick	1	

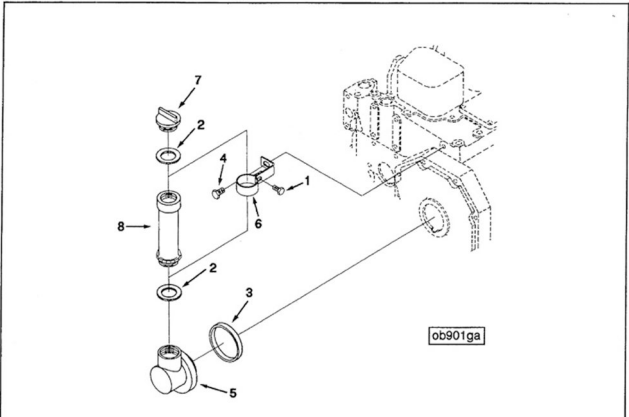




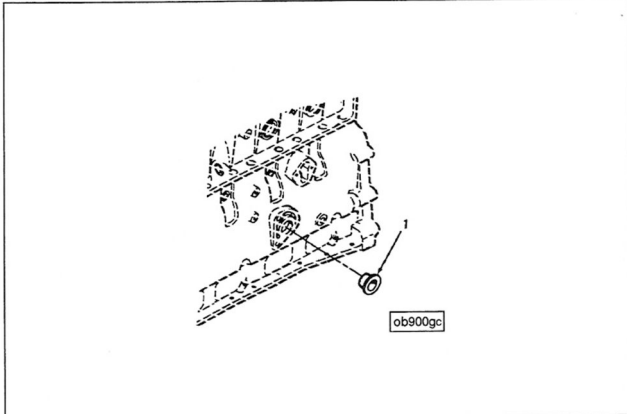
Ref No.	Part Number	Part Name	Req	Remarks
		<b>LUBRICATING OIL PUMP OPTION LP9001</b>		
1	3280510	Pump, Lubricating Oil	1	Engine lubricating oil pump.
2	3900677	Screw, Hexagon Head Cap	4	M8 x 1.25 x 30



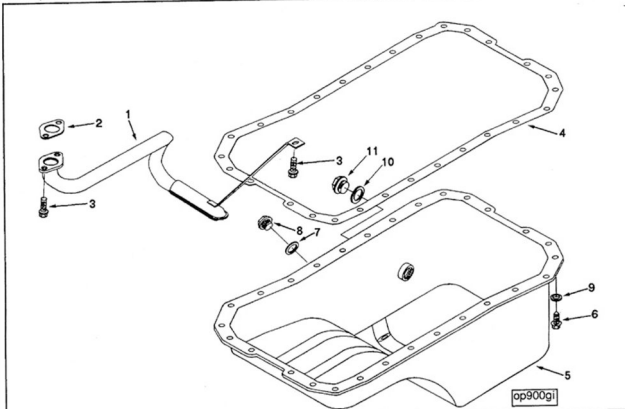
Ref No.	Part Number	Part Name	Req	Remarks
		<b>CYLINDER BLOCK COVER</b> <b>OPTION OB9005</b>		
1	101322	Cap, Filler	1	
2	3906696	Seal, Rectangular Ring	1	
3	3905440	Tube, Oil Filler	1	
				Oil tube located on left hand side of block 252.6mm from flob P/N 3906704 seal, o ring is interchangeable with P/N 3906696.



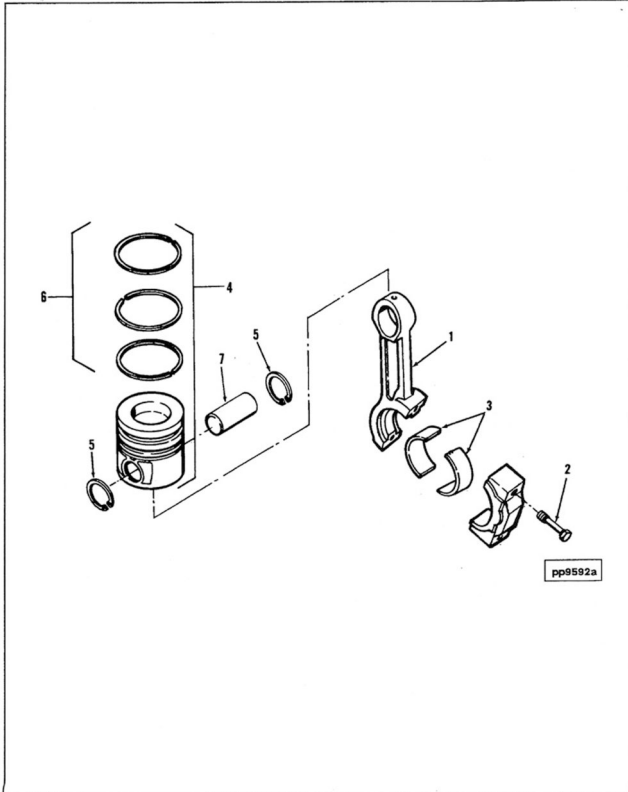
Ref No.	Part Number	Part Name	Req	Remarks
		<b>CYLINDER BLOCK COVER</b>		
		<b>OPTION OB9017</b>		
1	3913638	Screw, Hex Flange Head Cap	1	
2	3902363	Seal, Rectangular Ring	2	3.0 thick
3	3903475	Seal, Rectangular Ring	1	
4	3905582	Screw, Hexagon Head Cap	1	M10 x 1.50 x 16
5	3911679	Connection, Oil Filler	1	
6	3913303	Brace, Tube	1	
7	3914136	Cap, Filler	1	
8	3914738	Tube, Oil Filler	1	



Ref No.	Part Number	Part Name	Req	Remarks
1	3900958	CYLINDER BLOCK COVER OPTION OB9704  Plug, Expansion	1	Cylinder block cover for use without side oil fill and without air compressor.



Ref No.	Part Number	Part Name	Req	Remarks
		<b>OIL PAN</b>		
		<b>OPTION OP9004</b>		
				Rear sump oil pan with 22mm hole for immersion type oil heater. Capacity is high level 10 quarts, low level 8 quarts.
1	3905206	Connection, Oil Suction	1	
2	3914383	Gasket, Flange	1	
3	3900629	Screw, Hex Flange Head Cap	3	M8 x 1.25 x 16
4	3911535	Gasket, Oil Pan	1	
5	3901049	Pan, Oil	28	M8 x 1.25 x 25
6	3907860	Screw, Hex Flange Head Cap	1	
7	3900216	Washer, Sealing	1	
8	3911638	Plug, Threaded	1	
9	3907537	Washer, Spring	28	
10	3902425	Washer, Sealing	1	
11	3904386	Plug, Threaded	1	M22 x 1.50 x 14



Group No. 01.04

## Connecting Rod and Piston

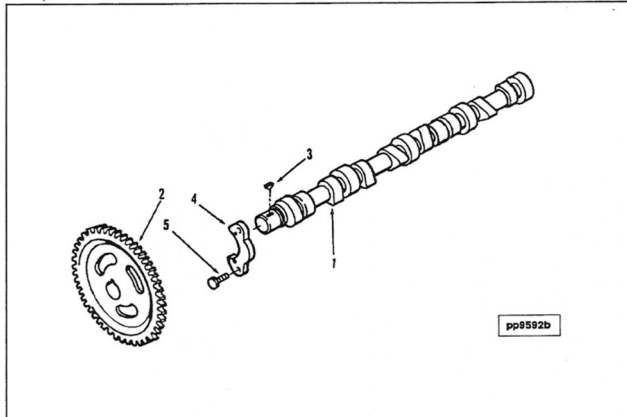
Option No. PP858,  
PP1268

Ref No.	Part Number	Part Name	Req	Remarks
		<b>CONNECTING ROD AND PISTON</b>		
		<b>OPTION PP858</b>		CPL858.
		<b>OPTION PP1268</b>		CPL1268
1	3901569	Rod, Engine Connecting	4	
	(3901568)	Rod, Engine Connecting	1	
2	3900919	Screw, Connecting Rod Cap	2	MJ11 x 1.25 x 59
3	3901170	Bearing, Connecting Rod	2	Standard
4	3802160	Kit, Engine Piston	4	Standard, Comp Ratio 17.5
	(3907163)	Piston, Engine	1	
5	3901706	Ring, Retaining	2	
6	3802050	Set, Piston Ring	1	Standard
7	3901793	Pin, Piston	4	
3	3901171	Bearing, Connecting Rod	A/R	0.25mm Oversize
3	3901172	Bearing, Connecting Rod	A/R	0.50mm Oversize
3	3901173	Bearing, Connecting Rod	A/R	0.75mm Oversize
3	3901174	Bearing, Connecting Rod	A/R	1.00mm Oversize
4	3802132	Kit, Engine Piston	4	0.50mm Oversize
	(3908815)	Piston, Engine	1	.5mm Oversize
5	3901706	Ring, Retaining	2	
6	3802052	Set, Piston Ring	1	0.50mm Oversize
4	3802134	Kit, Engine Piston	4	1.00mm Oversize
	(3908816)	Piston, Engine	1	1.0mm Oversize
5	3901706	Ring, Retaining	2	
6	3802054	Set, Piston Ring	1	1.00mm Oversize

Group No. 01.07

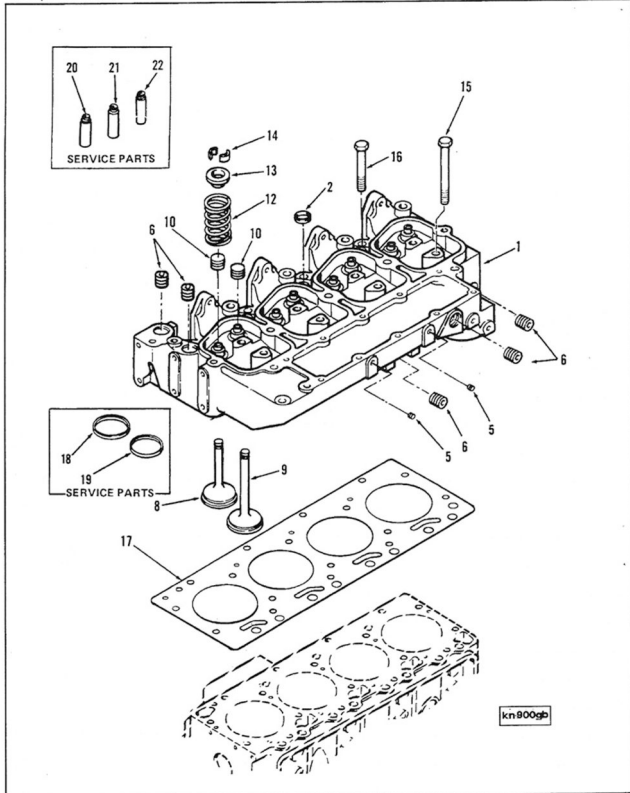
**Camshaft**

Option No. PP858,  
PP1268



Ref No.	Part Number	Part Name	Req	Remarks
		<b>CAMSHAFT</b>		
		<b>OPTION PP858</b>		CPL858
		<b>OPTION PP1268</b>		CPL1268
1	3914638 (3912842)	Camshaft	1	
		Camshaft	1	
2	3907431	Gear, Camshaft	1	
3	3902332	Key, Plain Woodruff	1	4.0 mm
4	3914641	Support, Cam Thrust	1	
5	3900227	Screw, Hexagon Head Cap	2	M8 x 1.25 x 22





Group No. 02.01

## Cylinder Head

Option No. PP858,  
PP1268

Ref No.	Part Number	Part Name	Req	Remarks
		<b>CYLINDER HEAD</b>		
		<b>OPTION PP858</b>		
		<b>OPTION PP1268</b>		
				CPL858
				CPL1268 Cylinder head, intake and exhaust valves. To be used with dry exhaust.
	3910275	Head, Cylinder	1	
	(3913389)	Head, Cylinder	1	
1	(3913386)	Head, Cylinder	1	
2	3902606	Plug, Expansion	3	
5	3008465	Plug, Pipe	2	
6	3008468	Plug, Pipe	5	1/2 NPT
	3802005	Valve, Intake	4	
8	(3901117)	Valve, Intake	4	
14	3900250	Collet, Valve	8	
	3902006	Valve, Exhaust	4	
'9	(3901607)	Valve, Exhaust	4	
	3900250	Collet, Valve	8	
12	3900276	Spring, Valve	8	
13	3900299	Retainer, Valve Spring	8	
10	3901097	Seal, Valve Stem	8	
15	3903939	Screw, Hex Flange Head Cap	10	M12 x 1.75 x 120
16	3903938	Screw, Hex Flange Head Cap	4	M12 x 1.75 x 70
17	3917353	Gasket, Cylinder Head	1	Standard
17	3915720	Gasket, Cylinder Head	A/R	.15mm Oversize
17	3915721	Gasket, Cylinder Head	A/R	.50mm Oversize
		<b>SERVICE PARTS</b>		
18	3904105	Insert, Valve		Exhaust
19	3906854	Insert, Valve		Intake
20	3904408	Guide, Valve Stem		Thick wall 60.50mm Long Intake
21	3904409	Guide, Valve Stem		Thick wall 51.75mm Long Exhaust
22	3906206	Guide, Valve Stem		Thin wall can be used on both Intake and Exhaust

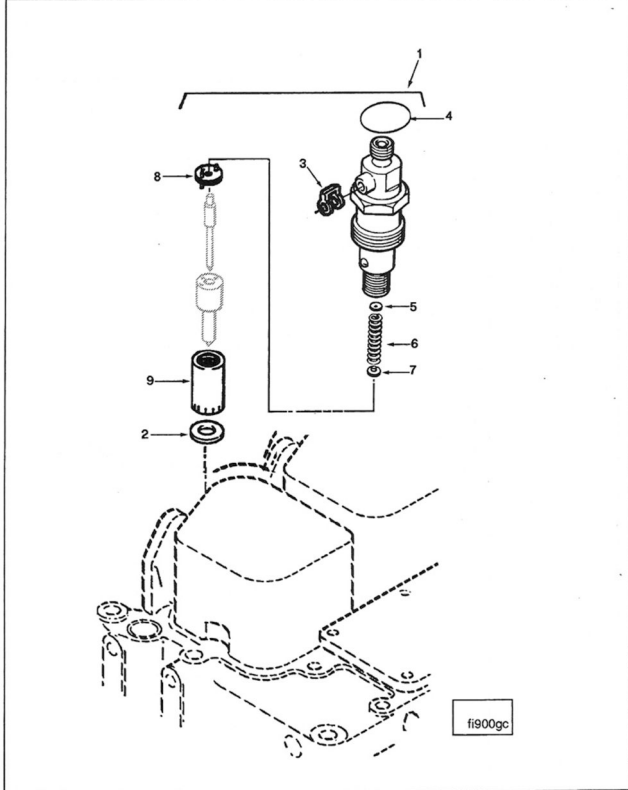


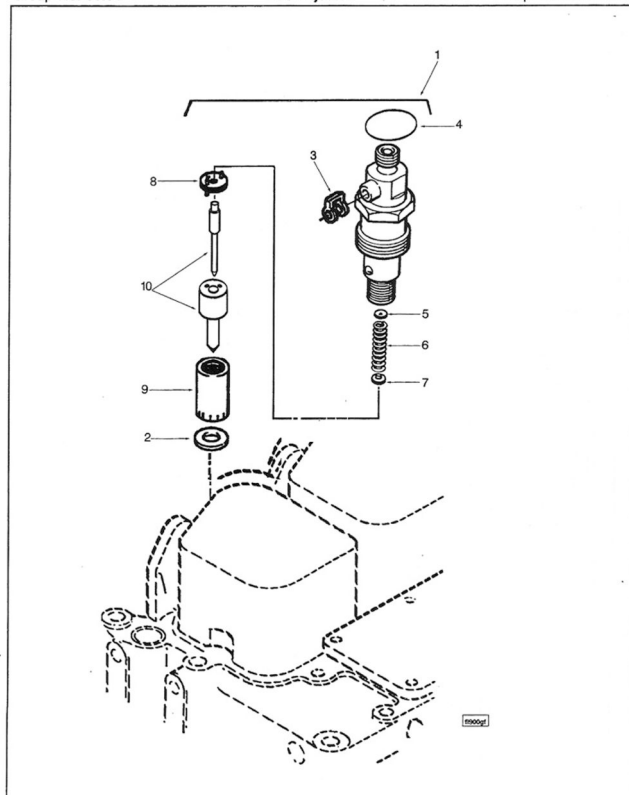
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Group No. 06.01

## Fuel Injector

Option No. PP858

Ref No.	Part Number	Part Name	Req	Remarks
		<b>FUEL INJECTOR</b>		
		<b>OPTION PP858</b>		
1	3902131 (3912468)	Injector	4	CPL858
2	3900808	Injector	1	
3	3903380	Seal, Injector	1	
4	3909356	Seal, Banjo Connector	1	
		Seal, Rectangular Ring	1	
5	3905156	Shim	A/R	1.00 mm Thick
5	3905157	Shim	A/R	1.04 mm Thick
5	3905158	Shim	A/R	1.08 mm Thick
5	3905159	Shim	A/R	1.10 mm Thick
5	3905160	Shim	A/R	1.14 mm Thick
5	3905161	Shim	A/R	1.18 mm Thick
5	3905162	Shim	A/R	1.20 mm Thick
5	3905163	Shim	A/R	1.24 mm Thick
5	3905164	Shim	A/R	1.28 mm Thick
5	3905165	Shim	A/R	1.30 mm Thick
5	3905166	Shim	A/R	1.34 mm Thick
5	3905167	Shim	A/R	1.38 mm Thick
5	3905168	Shim	A/R	1.40 mm Thick
5	3905169	Shim	A/R	1.44 mm Thick
5	3905170	Shim	A/R	1.48 mm Thick
5	3905171	Shim	A/R	1.50 mm Thick
5	3905172	Shim	A/R	1.54 mm Thick
5	3905173	Shim	A/R	1.58 mm Thick
5	3905174	Shim	A/R	1.60 mm Thick
5	3905175	Shim	A/R	1.64 mm Thick
5	3905176	Shim	A/R	1.68 mm Thick
5	3905177	Shim	A/R	1.70 mm Thick
5	3905178	Shim	A/R	1.74 mm Thick
5	3905179	Shim	A/R	1.76 mm Thick
5	3905180	Shim	A/R	1.78 mm Thick
5	3905181	Shim	A/R	1.80 mm Thick
5	3905182	Shim	A/R	1.84 mm Thick
5	3905183	Shim	A/R	1.88 mm Thick
5	3905184	Shim	A/R	1.90 mm Thick
5	3905185	Shim	A/R	1.94 mm Thick
5	3905186	Shim	A/R	1.98 mm Thick
6	3905152	Spring, Compression	1	
7	3905153	Spindle, Injector	1	
8	3905154	Disc, Intermediate	1	
9	3905155	Retainer, Injector Nozzle	1	

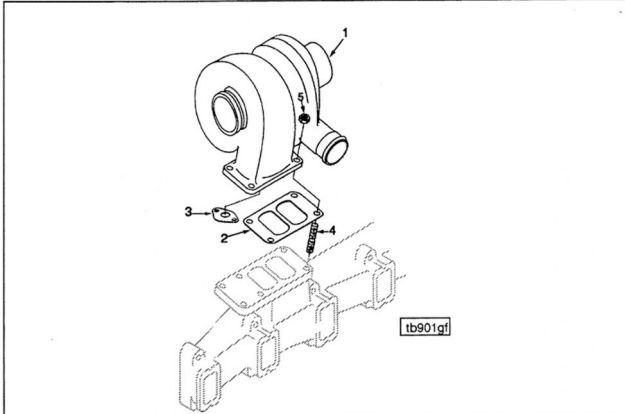


Group No. 06.01

## Fuel Injector

Option No. PP1268

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL INJECTOR		
		OPTION PP1268		CPL1268
1	3902048 (3909533)	Kit, Fuel Injector	4	
		Injector	1	
2	3900808	Seal, Injector	1	
3	3903380	Seal, Banjo Connector	1	
4	3909356	Seal, Rectangular Ring	1	
5	3905156	Shim	A/R	1.00 mm Thick
5	3905157	Shim	A/R	1.04 mm Thick
5	3905158	Shim	A/R	1.08 mm Thick
5	3905159	Shim	A/R	1.10 mm Thick
5	3905160	Shim	A/R	1.14 mm Thick
5	3905161	Shim	A/R	1.18 mm Thick
5	3905162	Shim	A/R	1.20 mm Thick
5	3905163	Shim	A/R	1.24 mm Thick
5	3905164	Shim	A/R	1.28 mm Thick
5	3905165	Shim	A/R	1.30 mm Thick
5	3905166	Shim	A/R	1.34 mm Thick
5	3905167	Shim	A/R	1.38 mm Thick
5	3905168	Shim	A/R	1.40 mm Thick
5	3905169	Shim	A/R	1.44 mm Thick
5	3905170	Shim	A/R	1.48 mm Thick
5	3905171	Shim	A/R	1.50 mm Thick
5	3905172	Shim	A/R	1.54 mm Thick
5	3905173	Shim	A/R	1.58 mm Thick
5	3905174	Shim	A/R	1.60 mm Thick
5	3905175	Shim	A/R	1.64 mm Thick
5	3905176	Shim	A/R	1.68 mm Thick
5	3905177	Shim	A/R	1.70 mm Thick
5	3905178	Shim	A/R	1.74 mm Thick
5	3905179	Shim	A/R	1.76 mm Thick
5	3905180	Shim	A/R	1.78 mm Thick
5	3905181	Shim	A/R	1.80 mm Thick
5	3905182	Shim	A/R	1.84 mm Thick
5	3905183	Shim	A/R	1.88 mm Thick
5	3905184	Shim	A/R	1.90 mm Thick
5	3905185	Shim	A/R	1.94 mm Thick
5	3905186	Shim	A/R	1.98 mm Thick
6	3905152	Spring, Compression	1	
7	3905153	Spindle, Injector	1	
8	3905154	Die, Intermediate	1	
9	3905155	Retainer, Injector Nozzle	1	
10	3908446	Nozzle, Injector	1	

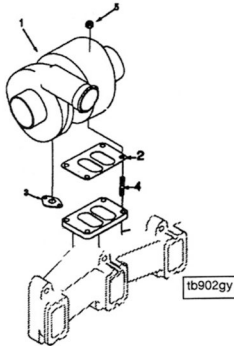


Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9751</b>		
	3802113	Turbocharger	1	Turbocharger for high front out exhaust.
1	(3522900)	Turbocharger	1	H1C Dry 4BT
2	3901356	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3914388	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

Group No. 10.06

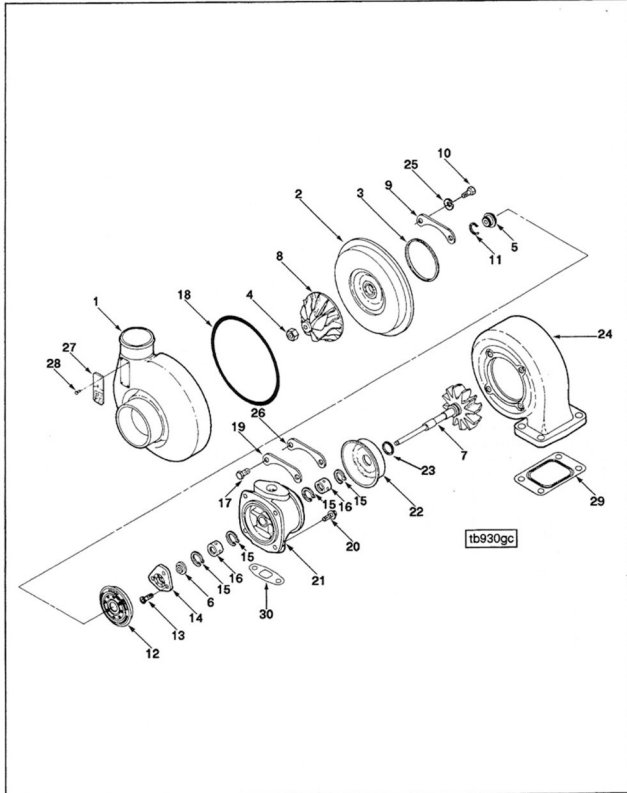
Turbocharger

Option No. PP9752



Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9752</b>		
1	3802113 (3522900)	Turbocharger	1	Turbocharger for high rear out exhaust.
2	3901356	Turbocharger	1	H1C Dry 4BT
3	3914398	Gasket, Turbocharger	1	Equivalent to 3709861.
4	3818823	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

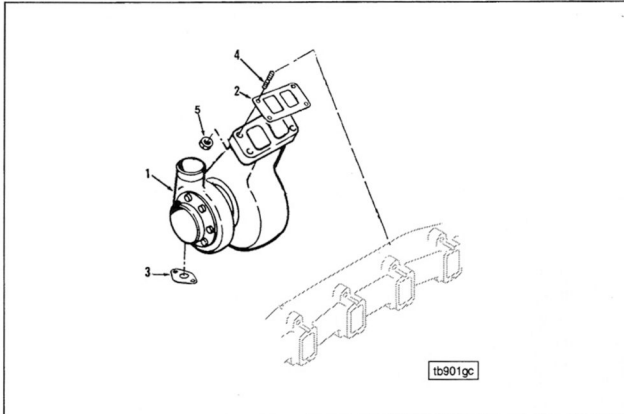




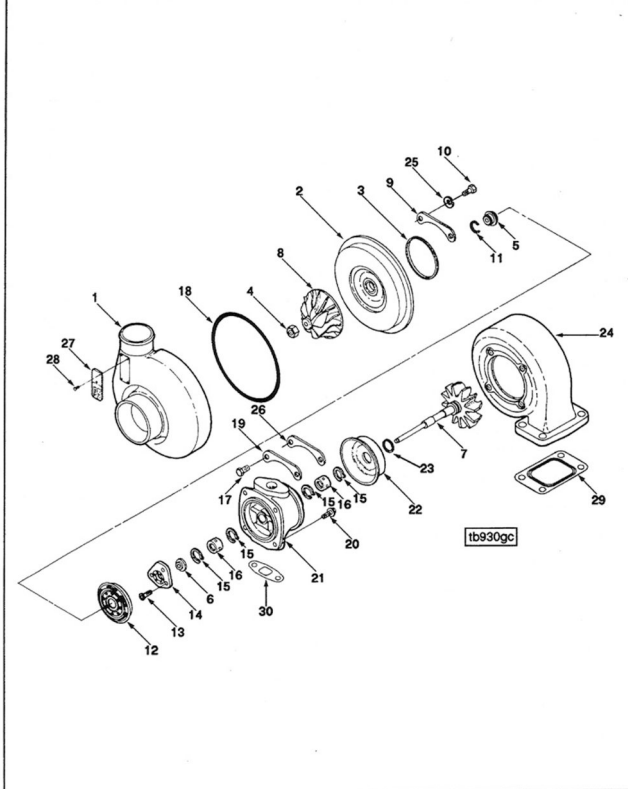
Group No. 10.06

**Turbocharger**

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9751</b>		
		<b>OPTION PP9752</b>		
	3802113	Turbocharger	1	H1C Dry 4BT
	(3522900)	Turbocharger	1	
1	3521848	Housing, Compressor	1	
2	3521121	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3523323	Rotor Assembly	1	
4	3503962	Nut, Lock	1	
5	(3503962)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3521863)	Impeller, Tur Compressor	1	
9	3502734	Plate, Clamping	3	
10	3759626	Screw, Hexagon Head Set	6	M6 x 1.00 x 12
11	3758848	Seal, Split Ring	1	
12	3503668	Baffle, Oil	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
19	3501188	Plate, Clamping	2	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3520702	Housing, Tur Bearing	1	
22	3519302	Shield, Turbocharger Heat	1	
23	3756754	Seal, Split Ring	1	
24	3521927	Housing, Turbine	1	
25	3518004	Washer, Lock	6	
27	3527619	Dataplate	1	
28	3519163	Screw, Drive	2	
	3523176	Seal, Rectangular Ring	1	
29	3709861	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C-H2
3	3502449	Seal, Rectangular Ring	1	
11	3758848	Seal, Split Ring	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3523958	Seal, O Ring	1	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
23	3756754	Seal, Split Ring	1	
25	3518004	Washer, Lock	6	
26	3501102	Lockplate	2	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Gasket	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9761</b>		
				Turbocharger for low mount rear out exhaust.
	3802119	Turbocharger	1	H1C Dry 4BT
1	(3523743)	Turbocharger	1	
2	3901356	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3914388	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

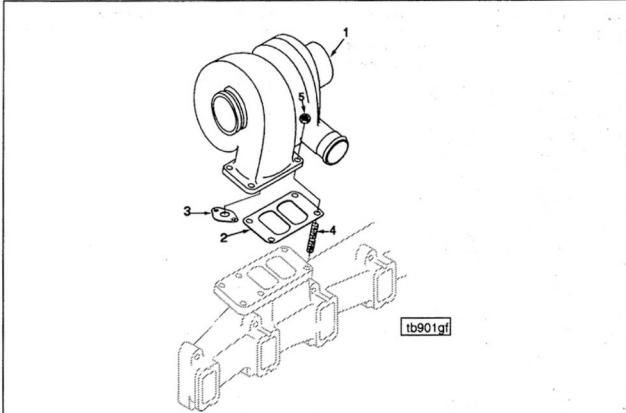


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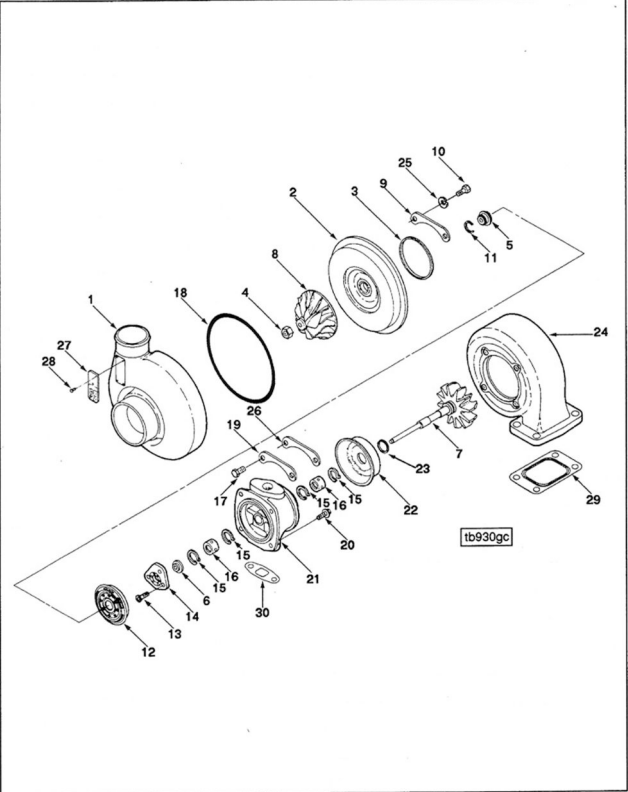
## Turbocharger

Option No. PP9761

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9761</b>		
	3802119	Turbocharger	1	H1C Dry 4BT
	(3523743)	Turbocharger	1	
1	3523775	Housing, Compressor	1	
2	3521121	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3523323	Rotor Assembly	1	
4	3503562	Nut, Lock	1	
5	(3503662)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3521863)	Impeller, Tur Compressor	1	
9	3502734	Plate, Clamping	3	
10	3759526	Screw, Hexagon Head Set	6	M6 x 1.00 x 12
11	3758848	Seal, Split Ring	1	
12	3503668	Baffle, Oil	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
19	3501186	Plate, Clamping	2	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3520702	Housing, Tur Bearing	1	
22	3519302	Shield, Turbocharger Heat	1	
23	3756754	Seal, Split Ring	1	
24	3521927	Housing, Turbine	1	
25	3518004	Washer, Lock	6	
27	3527619	Dataplate	1	
28	3519163	Screw, Drive	2	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C-H2
3	3502449	Seal, Rectangular Ring	1	
11	3758848	Seal, Split Ring	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3523958	Seal, O Ring	1	
20	3527184	Screw, Hex Flange Head Cap	4	
23	3756754	Seal, Split Ring Ring	1	
25	3518004	Washer, Lock	8	
26	3501102	Lockplate	2	
	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Gasket	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9762</b>		
	3802124	Turbocharger	1	Turbocharger for carb certified 4BT3.9 with high front out exhaust.
1	(3524121)	Turbocharger	1	H1C Dry 4BT
2	3901355	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3914388	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50



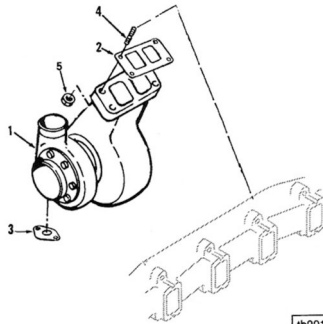
Group No. 10.06

Turbocharger

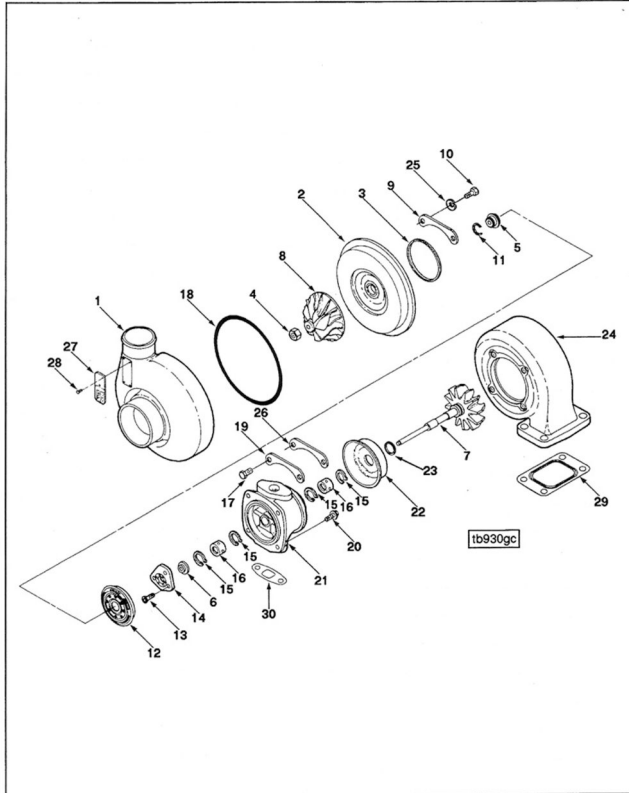
Option No. PP9762

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9762</b>		
	3802124	Turbocharger	1	H1C Dry 4BT
	(3524121)	Turbocharger	1	
1	3521848	Housing, Compressor	1	
2	3521121	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3523323	Rotor Assembly	1	
4	3503562	Nut, Lock	1	
5	(3503662)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3521863)	Impeller, Tur Compressor	1	
9	3502734	Plate, Clamping	3	
10	3759526	Screw, Hexagon Head Set	6	M6 x 1.00 x 12
11	3758848	Seal, Split Ring	1	
12	3503668	Shaft & Wheel	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
19	3501188	Plate, Clamping	2	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3520702	Housing, Tur Bearing	1	
22	3519302	Shield, Turbocharger Heat	1	
23	3756754	Seal, Split Ring	1	
24	3524123	Housing, Turbine	1	
25	3518004	Washer, Lock	6	
27	3527619	Dataplate	1	
28	3519163	Screw, Drive	2	
	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C-H2
3	3502449	Seal, Rectangular Ring	1	
11	3758848	Seal, Split Ring	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3523958	Seal, O Ring	1	
20	3527184	Screw, Hex Flange Head Cap	4	
23	3756754	Seal, Split Ring	1	
25	3518004	Washer, Lock	6	
26	3501102	Lockplate	2	
	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	





Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9764</b>		
	3802125	Turbocharger	1	Turbocharger for low rear out exhaust.
1	(3524125)	Turbocharger	1	H1C Dry 4BT
2	3901355	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3914388	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

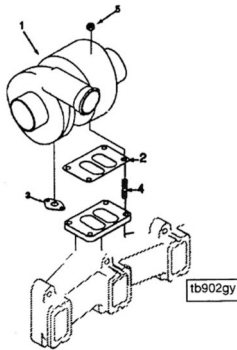


Group No. 10.06

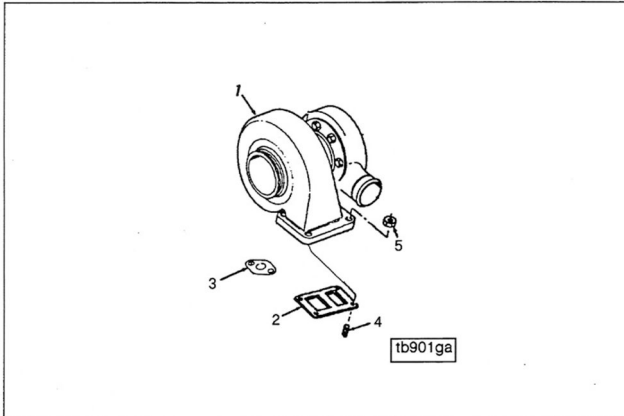
## Turbocharger

Option No. PP9764

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9764</b>		
	3802125	Turbocharger	1	H1C Dry 4BT
	(3524125)	Turbocharger	1	
1	3523775	Housing, Compressor	1	
2	3521121	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3523323	Rotor Assembly	1	
4	3503562	Nut, Lock	1	
5	(3503662)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3521863)	Impeller, Tur Compressor	1	
9	3502734	Plate, Clamping	3	
10	3759526	Screw, Hexagon Head Set	6	M6 x 1.00 x 12
11	3759848	Seal, Split Ring	1	
12	3503668	Baffle, Oil	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	4	
15	3762259	Ring, Retaining	2	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
19	3501188	Plate, Clamping	4	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3520702	Housing, Tur Bearing	1	
22	3519302	Shield, Turbocharger Heat	1	
23	3756754	Seal, Split Ring	1	
24	3524123	Housing, Turbine	1	
25	3518004	Washer, Lock	6	
27	3527619	Dataplate	1	
28	3519163	Screw, Drive	2	
29	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C-H2
3	3502449	Seal, Rectangular Ring	1	
11	3768848	Seal, Split Ring	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3523958	Seal, O'Ring	1	
20	3527184	Screw, Hex Flange Head Cap	4	
23	3756754	Seal, Split Ring	1	
25	3518004	Washer, Lock	6	
26	3501102	Lockplate	2	
29	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Gasket	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9778</b>		
	3802137 (3525699)	Turbocharger	1	Turbocharger for engines with high mount rear out exhaust arrangement.
1	3901356	Turbocharger	1	H1C Dry 4BT
2	3914388	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3818823	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

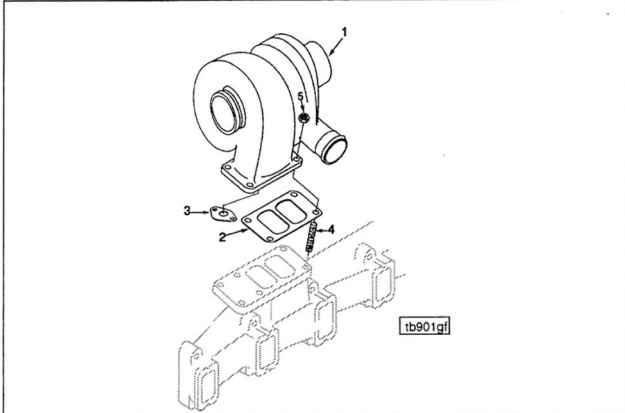


Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9780</b>		
				Turbocharger for aftercooler engines with low mount rear out exhaust arrangement.
1	3802137 (3525699)	Turbocharger	1	H1C Dry 4BT
2	3901356	Gasket, Turbocharger	1	
3	3914388	Gasket, Oil Drain	1	Equivalent to 3709861.
4	3818823	Stud	4	Equivalent to 3765575.
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

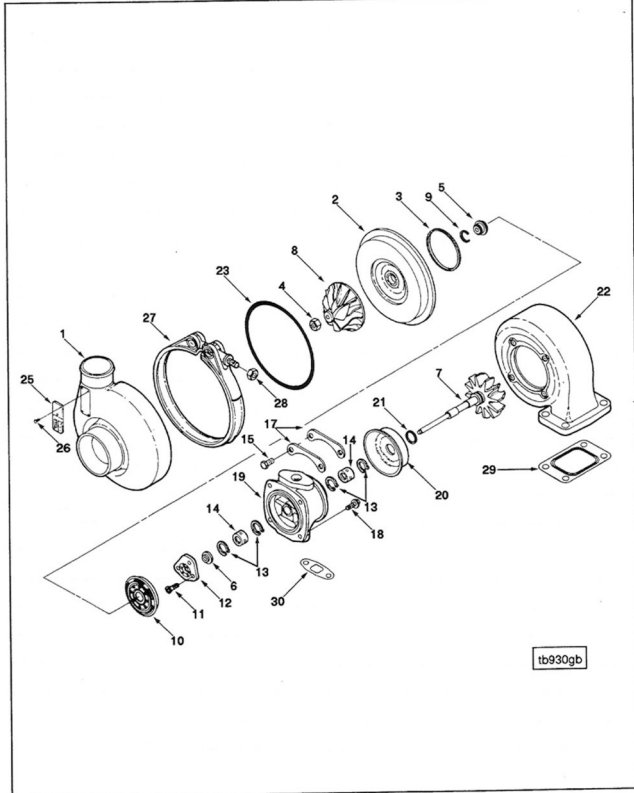
Group No. 10.06

**Turbocharger**

Option No. PP9790

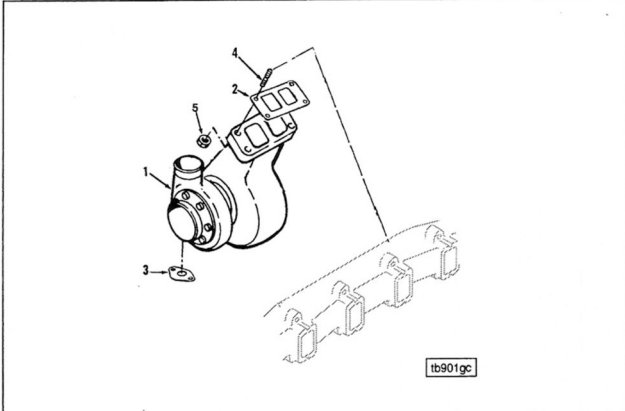


Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9790</b>		
		Turbocharger	1	Turbocharger for engines with high mount front out exhaust arrangement.
1	3802137 (3525699)	Turbocharger	1	H1C Dry 4BT
2	3901356	Gasket, Turbocharger	1	
3	3914388	Gasket, Oil Drain	1	Equivalent to 3709861.
4	3818823	Stud	4	Equivalent to 3765575.
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50



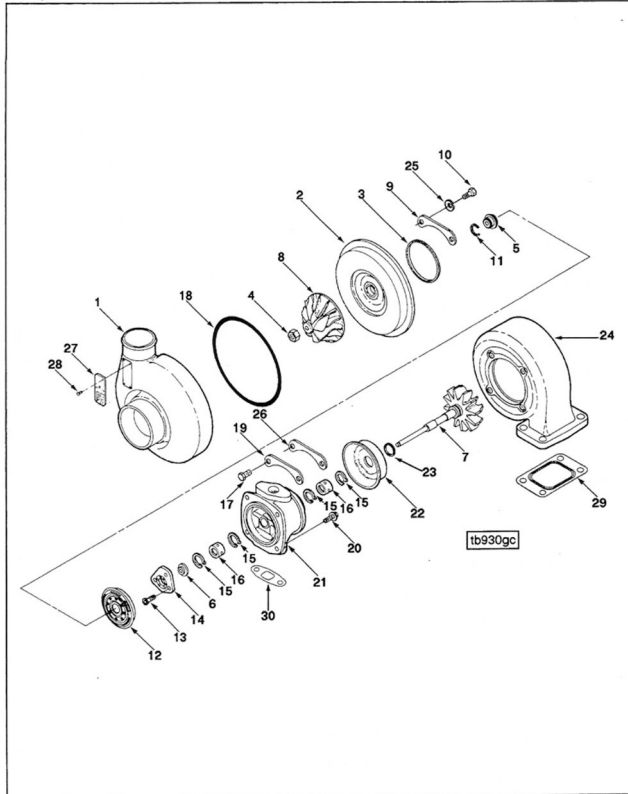
Group No. 10.06		Turbocharger		
Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER		
		OPTION PP9778		
		OPTION PP9780		
		OPTION PP9790		
	3802137	Turbocharger	1	H1C Dry 4BT
	(3525699)	Turbocharger	1	
1	3524376	Housing, Compressor	1	
2	3522801	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3545721	Rotor Assembly	1	
4	3503562	Nut, Lock	1	
5	(3503662)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3522824)	Impeller, Tur Compressor	1	
9	3758848	Seal, Split Ring	1	
10	3503958	Baffle, Oil	1	
11	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
12	3525739	Bearing, Tur Thrust	1	
13	3762259	Ring, Retaining	4	
14	3503100	Bearing, Turbocharger	2	
15	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
17	3501188	Plate, Clamping	1	
18	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
19	3520702	Housing, Tur Bearing	1	
20	3519302	Shield, Turbocharger Heat	1	
21	3756754	Seal, Split Ring	1	
22	3521927	Housing, Turbine	1	
23	3523958	Seal, O Ring	1	
25	3527619	Dataplate	1	
26	3519163	Screw, Drive	2	
27	3521832	Clamp, V Band	1	
28	3503335	Nut, Regular Hexagon	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
23	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C H2
9	3502449	Seal, Rectangular Ring	1	
9	3758848	Seal, Split Ring	1	
11	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
12	3525739	Bearing, Tur Thrust	1	
13	3762259	Ring, Retaining	4	
14	3503100	Bearing, Turbocharger	2	
15	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3756754	Seal, Split Ring	1	
23	3523958	Seal, O'Ring	1	
	3501102	Lockplate	2	
	3518004	Washer, Lock	8	
	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	





tb901gc

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER OPTION PP9816</b>		
				Turbocharger for low mount rear out exhaust.
	3802113	Turbocharger	1	H1C Dry 4BT
1	(3522900)	Turbocharger	1	
2	3901356	Gasket, Turbocharger	1	Equivalent to 3709861.
3	3914388	Gasket, Oil Drain	1	Equivalent to 3765575.
4	3818823	Stud	4	
5	3818824	Nut, Hexagon Flange	4	M10 x 1.50

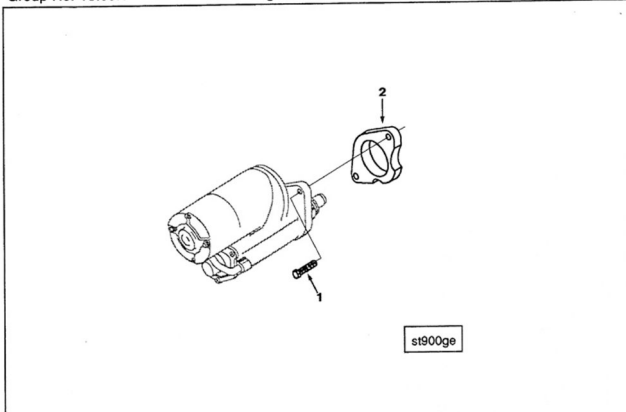


Group No. 10.06

## Turbocharger

Option No. PP9816

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER</b>		
		<b>OPTION PP9816</b>		
	3802113	Turbocharger	1	H1C Dry 4BT
	(3522900)	Turbocharger	1	
1	3521848	Housing, Compressor	1	
2	3521121	Diffuser, Turbocharger	1	
3	3502449	Seal, Rectangular Ring	1	
	3523323	Rotor Assembly	1	
4	3503562	Nut, Lock	1	
5	(3503662)	Slinger, Oil	1	
6	(3518980)	Collar, Thrust	1	
7	(3519336)	Shaft & Wheel	1	
8	(3521863)	Impeller, Tur Compressor	1	
9	3502734	Plate, Clamping	3	
10	3759526	Screw, Hexagon Head Set	6	M6 x 1.00 x 12
11	3758648	Seal, Split Ring	1	
12	3503668	Baffle, Oil	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
15	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
19	3501188	Plate, Clamping	2	
20	3527184	Screw, Hex Flange Head Cap	4	M6 x 1.00 x 16
21	3520702	Housing, Tur Bearing	1	
22	3519302	Shield, Turbocharger Heat	1	
23	3756754	Seal, Split Ring	1	
24	3521927	Housing, Turbine	1	
25	3518004	Washer, Lock	6	
27	3527619	Dataplate	1	
28	3519163	Screw Drive	2	
29	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	
	3802147	Kit, Turbo Repair	1	
	3523958	Seal, O Ring	1	
	3545652	Kit, Turbo Repair	1	H1C-H2
3	3502449	Seal, Rectangular Ring	1	
11	3758648	Seal, Split Ring	1	
13	3503347	Screw, Flat Head Cap	3	M5 x 0.80 x 16
14	3525739	Bearing, Tur Thrust	1	
16	3762259	Ring, Retaining	4	
16	3503100	Bearing, Turbocharger	2	
17	3759917	Screw, Hexagon Head Set	4	M8 x 1.25 x 12
18	3523958	Seal, O'Ring	1	
20	3527184	Screw, Hex Flange Head Cap	4	
23	3756754	Seal, Split Ring	1	
25	3518004	Washer, Lock	6	
26	3501102	Lockplate	2	
29	3523176	Seal, Rectangular Ring	1	
29	3901356	Gasket, Turbocharger	1	
30	3914388	Gasket, Oil Drain	1	

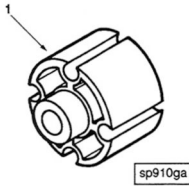


Ref No.	Part Number	Part Name	Req	Remarks
		<b>STARTING MOTOR MOUNTING OPTION SM9006</b>		
1	3910901	Screw, Hex Flange Head Cap Spacer, Starting Motor	2	Mounting for 2-bolt Nippondenso engine cranking motor. This option also used with GM Transmission adapter in FH 9022 or with FH 9043.
2	3906647		1	

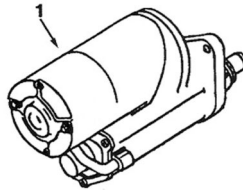
Group No. 08.05

Fan Pilot Spacer

Option No. SP9004

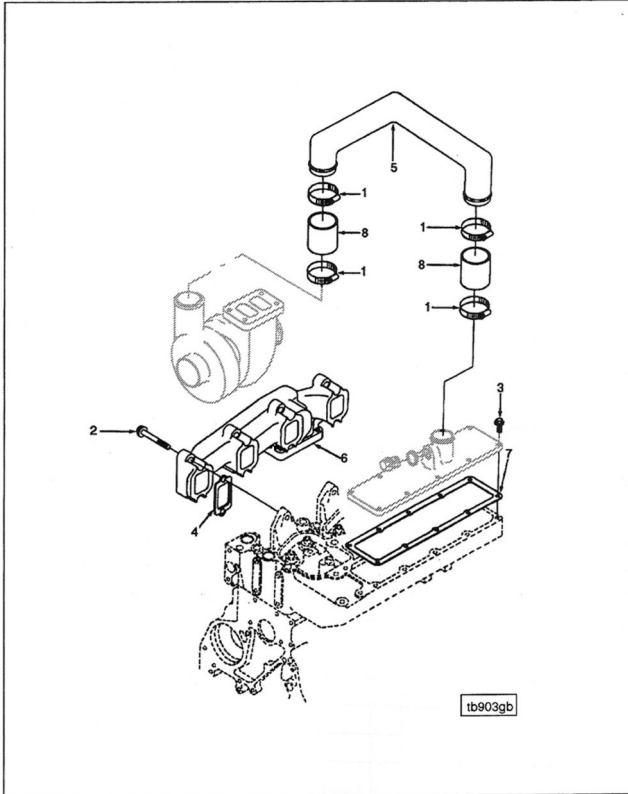


Ref No.	Part Number	Part Name	Req	Remarks
1	3903818	FAN PILOT SPACER OPTION SP9004 Spacer, Fan	1	50.8mm fan spacer 50mm B.C.



st900gh

Ref No.	Part Number	Part Name	Req	Remarks
1	3904466	STARTING MOTOR OPTION ST9007 Motor, Starting	1	12 volt, 2.5 KW Nippondenso cranking motor. For use with 10/12 pitch ring gear.



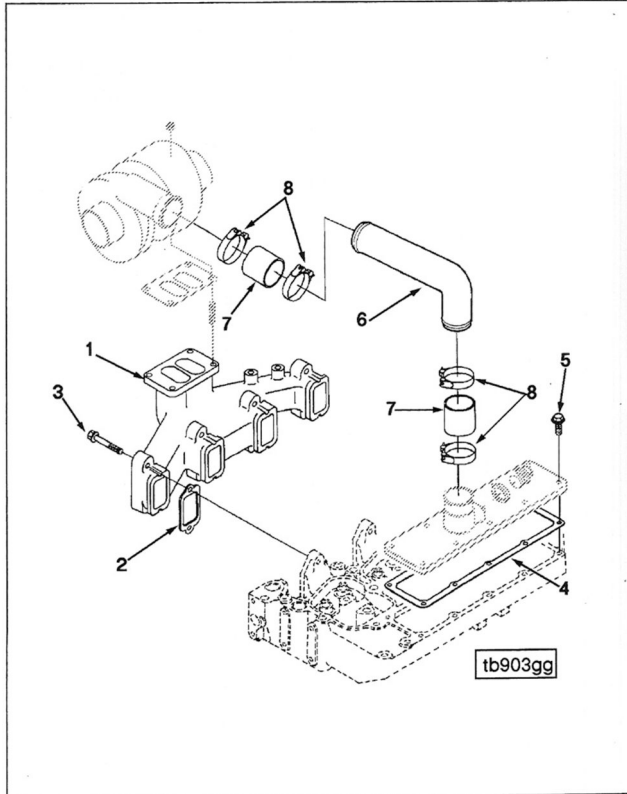
Group No. 10.06.1

**Turbocharger Location**

Option No. TB9084

Ref No.	Part Number	Part Name	Req	Remarks
<b>TURBOCHARGER LOCATION</b>				
<b>OPTION TB9084</b>				
				For low mount rear out turbocharger exhaust. Turbine outlet is 472.7 from flob and 219.0 above crankshaft centerline. The 3279245 hose may be used to replace the 3916166 hose.
1	3033033	Clamp, Hose	4	
2	3901448	Screw, Hex Flange Head Cap	8	M10 x 1.50 x 65
3	3918109	Screw, Hex Flange Head Cap	8	M8 x 1.25 x 26
4	3905443	Gasket, Exhaust Manifold	4	
5	3912589	Tube, Air	1	
6	3912600	Manifold, Exhaust	1	
7	3914028	Gasket, Int Manifold Cover	1	
8	3916166	Hose, Plain	2	



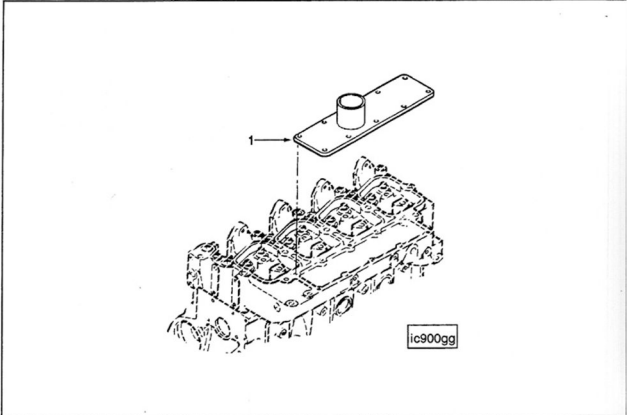


Group No. 10.06.01

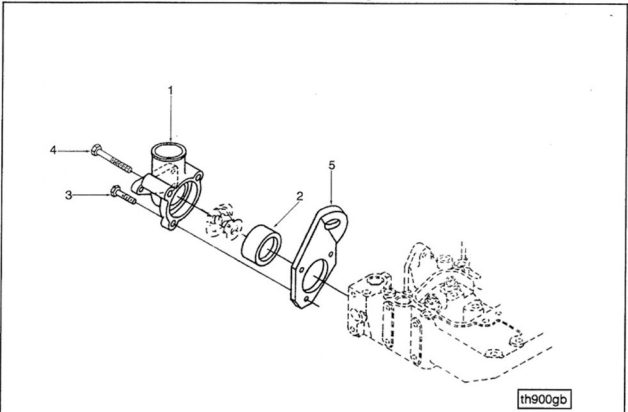
**Turbocharger Location**

Option No. TB9115

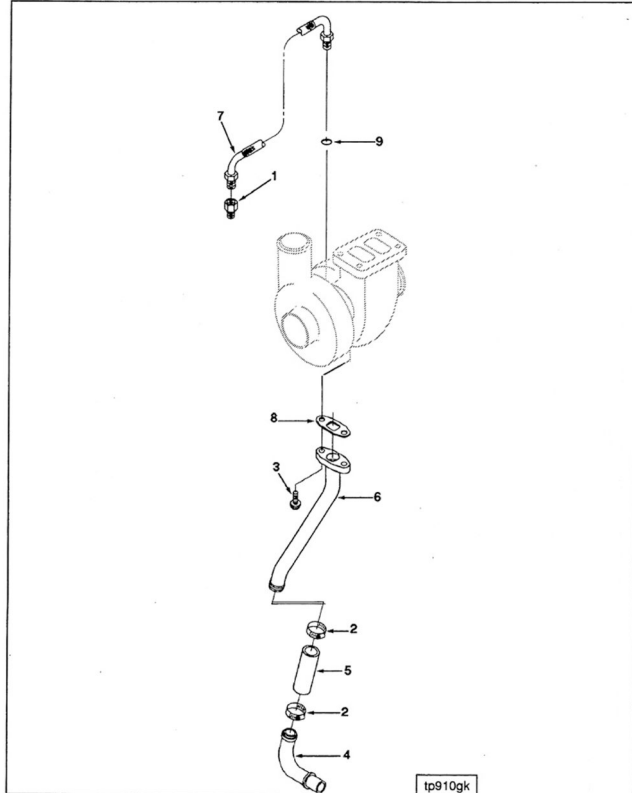
Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER LOCATION</b> <b>OPTION TB9115</b>		
				Turbocharger location for high mounted turbocharger with exhaust outlet to rear. Turbine outlet is 363.0mm from front face of block, 612.0mm above the crankshaft centerline and 154.0mm out from the engine centerline.
1	3901635	Manifold, Exhaust	1	
2	3905443	Gasket, Exhaust Manifold	4	
3	3901448	Screw, Hex Flange Head Cap	8	
4	3914028	Gasket, Int Manifold Cover	1	
5	3916109	Screw, Hex Flange Head Cap	8	
6	3916576	Tube, Air	1	
7	3916166	Hose, Plain	2	
8	3008690	Clamp, Hose	4	



Ref No.	Part Number	Part Name	Req	Remarks
1	3908082	<b>TURBOCHARGER LOCATION</b> <b>OPTION TB9704</b>  Cover, Intake Manifold	1	2.0 inch dia. die cast air intake connection. No provision for air heater. 4 cylinder turbo-charged.



Ref No.	Part Number	Part Name	Req	Remarks
		<b>THERMOSTAT HOUSING OPTION TH9001</b>		
1	3914409	Housing, Thermostat	1	Thermostat housing with a cast on water outlet connection 45mm dia. positioned pointing up. Includes front engine lifting bracket.
2	3903301	Gasket, Thm Housing Cover	1	
3	3900632	Screw, Hex Flange Head Cap	1	
4	3903096	Screw, Hex Flange Head Cap	2	
5	3903757	Bracket, Lifting	1	
				M8 x 1.25 x 35
				M8 x 1.25 x 70
				.250 inch thick

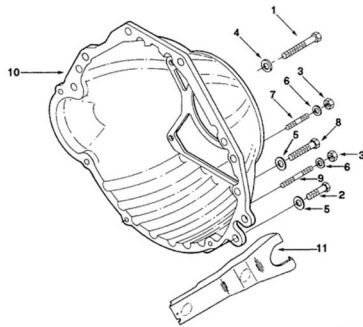


Group No. 10.06.1

**Turbocharger Plumbing**

Option No. TP9723

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TURBOCHARGER PLUMBING</b>		
		<b>OPTION TP9723</b>		
				Turbocharger plumbing for low rear out exhaust arrangement with engine mounted full flow filter.
1	3916857	Connector, Female	1	
2	43628-A	Clamp, Hose	2	
3	3900630	Screw, Hex Flange Head Cap	2	13/16 - 1 1/2 inch
4	3903744	Tube, Tur Oil Drain	1	M8 x 1.25 x 20
5	3903745	Hose, Plain	1	
6	3918670	Connection, Tur Oil Drain	1	
7	3912599	Hose, Flexible	1	
8	3914388	Gasket, Oil Drain	1	
9	3037236	Seal, O'Ring	2	



tr910gb

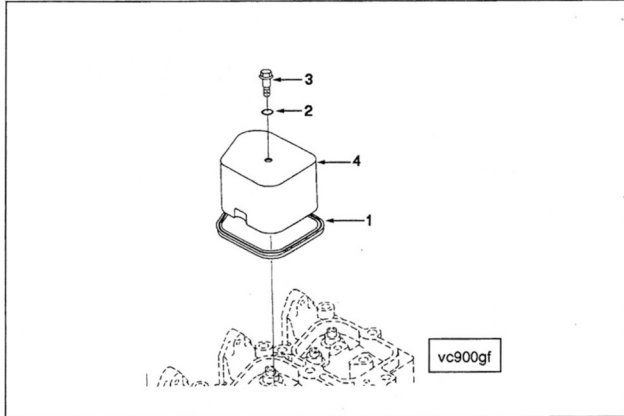
Group No. 16.05

Transmission

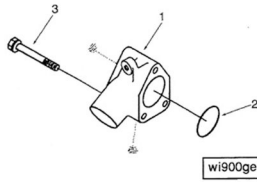
Option No. TR9026

Ref No.	Part Number	Part Name	Req	Remarks
		<b>TRANSMISSION OPTION TR9026</b>		Provides clutch housing to adapt Warner T-19 series transmission for use on 4BT and 4BTA.
1	S-102-D	Screw, Hexagon Head Cap	1	3/8 - 16 x 3 inch
2	S-155	Screw, Hexagon Head Cap	2	7/16 - 14 x 1.50 inch
3	S-221	Nut, Heavy Hexagon	2	5/16 - 18
4	S-602	Washer, Plain	1	
5	S-622	Washer, Plain	6	
6	S-626	Washer, Plain	2	
7	65445-B	Stud	1	
8	102020	Screw, Hexagon Head Cap	4	7/16 - 14 x 2.25 inch
9	166471	Stud	1	
10	3915869	Housing, Clutch	1	
11	3919277	Lever, Clutch	1	





Ref No.	Part Number	Part Name	Req	Remarks
		<b>VALVE COVER OPTION VC9008</b>		
1	3902666	Gasket, Valve Cover	4	
2	3910824	Seal, O Ring	4	
3	3907049	Screw, Hex Flange Head Cap	4	9.25 dia x 1.78 thick
4	3902604	Cover, Valve	4	M8 x 1.25 x 25

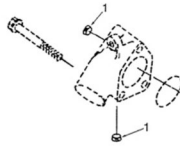


Ref No.	Part Number	Part Name	Req	Remarks
		<b>WATER INLET CONNECTION OPTION WI9001</b>		58mm Water inlet connection pointing 30 degrees down.
1	3903102	Connection, Water Inlet	1	
2	3906697	Seal, Rectangular Ring	1	
3	3901757	Screw, Hex Flange Head Cap	3	M10 x 1.50 x 75

Group No. 08.07.1

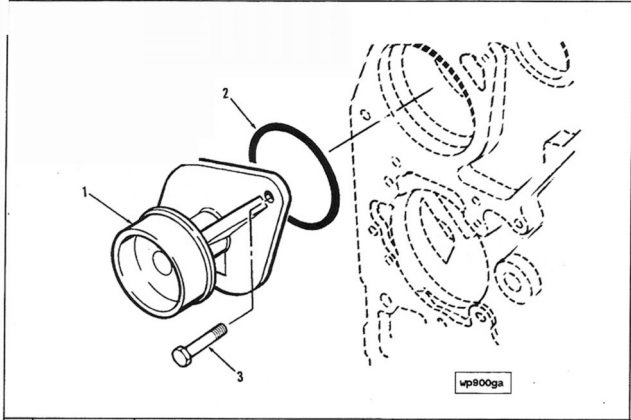
**Water Inlet Connection**

Option No. WI9701



wi900gg

Ref No.	Part Number	Part Name	Req	Remarks
1	3008468	WATER INLET CONNECTION OPTION WI9701 Plug, Pipe	2	Plugs for use in water inlet connection To be used without water cooled exhaust manifold 1/2 NPT



Ref No.	Part Number	Part Name	Req	Remarks
		<b>PUMP WATER</b> <b>OPTION WP9001</b>		
				Engine water pump component assembly with standard pulleys. P/N 3903297, o-ring seal, is interchangeable with P/N 3906698.
1	3802004 (3913432)	Pump, Water	1	
2	3906698	Pump, Water	1	
3	3900227	Seal, Rectangular Flng Screw, Hexagon Head Cap	1 2	M8 x 1.25 x 22

Group No. 17.01

## Service Gasket Set

Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
		<b>STANDARD THICKNESS</b>		
	3802216	Set, Upper Engine Gasket	1	
	3900808	Seal, Injector	4	
	3901097	Seal, Valve Stem	8	
	3901356	Gasket, Turbocharger	1	
	3902363	Seal, Rectangular Ring	1	3.0 thick
	3902425	Washer, Sealing	1	
	3902666	Gasket, Valve Cover	4	
	3903301	Gasket, Thm Housing Cover	1	
	3903380	Seal, Banjo Connector	4	
	3903846	Seal, O Ring	1	
	3905443	Gasket, Exhaust Manifold	4	
	3906694	Seal, Rectangular Ring	1	
	3906773	Washer, Sealing	1	
	3910824	Seal, O Ring	4	9.25 dia x 1.78 thick
	3912220	Gasket, Exh Out Connection	1	
	3914028	Gasket, Int Manifold Cover	1	
	3914388	Gasket, Oil Drain	1	
	3917354	Gasket, Cylinder Head	1	

Group No. 17.01

## Service Gasket Set

Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
		<b>SERVICE GASKET SET UPPER ENGINE SET</b>		
		<b>.15MM OVER THICKNESS</b>		
	3802217	Set, Upper Engine Gasket	1	
	3900808	Seal, Injector	4	
	3901097	Seal, Valve Stem	8	
	3901356	Gasket, Turbocharger	1	
	3902363	Seal, Rectangular Ring	1	3.0 thick
	3902425	Washer, Sealing	1	
	3902666	Gasket, Valve Cover	4	
	3903301	Gasket, Thm Housing Cover	1	
	3903380	Seal, Banjo Connector	4	
	3905443	Gasket, Exhaust Manifold	4	
	3906694	Seal, Rectangular Ring	1	
	3906773	Washer, Sealing	1	
	3910824	Seal, O Ring	4	9.25 dia x 1.78 thick
	3912220	Gasket, Exh Out Connection	1	
	3914028	Gasket, Int Manifold Cover	1	
	3914388	Gasket, Oil Drain	1	
	3915720	Gasket, Cylinder Head	1	
		<b>UPPER ENGINE SET</b>		
		<b>.50MM OVER THICKNESS</b>		
	3802218	Set, Upper Engine Gasket	1	
	3900808	Seal, Injector	4	
	3901097	Seal, Valve Stem	8	
	3901356	Gasket, Turbocharger	1	
	3902363	Seal, Rectangular Ring	1	3.0 thick
	3902425	Washer, Sealing	1	
	3902666	Gasket, Valve Cover	4	
	3903301	Gasket, Thm Housing Cover	1	
	3903380	Seal, Banjo Connector	4	
	3905443	Gasket, Exhaust Manifold	4	
	3906694	Seal, Rectangular Ring	1	
	3906773	Washer, Sealing	1	
	3910824	Seal, O Ring	4	9.25 dia x 1.78 thick
	3912220	Gasket, Exh Out Connection	1	
	3914028	Gasket, Int Manifold Cover	1	
	3914388	Gasket, Oil Drain	1	
	3915721	Gasket, Cylinder Head	1	

Group No. 17.01

## Service Gasket Set

Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
		LOWER ENGINE SET		
	3902019	Set, Lower Engine Gasket	1	
	154916	Gasket, Hydraulic Pump	1	
	3008400	Gasket, Hydraulic Pump	1	
	3900216	Washer, Sealing	1	
	3900267	Seal, Grommet	4	
	3901020	Nozzle, Piston Cooling	4	
	3902425	Washer, Sealing	2	
	3903475	Seal, Rectangular Ring	1	
	3904056	Gasket, Push Rod Cover	1	
	3904353	Front Seal Service Kit	1	
	3905595	Gasket, Timing Pin Housing	1	
	3906696	Seal, Rectangular Ring	1	
	3906697	Seal, Rectangular Ring	1	
	3906698	Seal, O Ring	1	Interchangeable with 3903297.
	3908096	Gasket, Cover Plate	1	
	3909410	Rear Crank Seal Serv. Kit	1	
	3911535	Gasket, Oil Pan	1	
	3912473	Seal, Rectangular Ring	1	
	3918257	Gasket, Filter Head	1	
	3913994	Seal, O Ring	1	
	3914304	Gasket, Cover Plate	1	
	3914363	Gasket, Flange	1	
	3914385	Gasket, Gear Cover	1	
	3914386	Gasket, Rear Cover	1	
	3916256	Gasket, Oil Cooler Core	1	
	3914389	Gasket, Fuel Pump	1	
	3915772	Seal, Rectangular Ring	1	
	3915800	Seal, Rectangular Ring	1	
	3916131	Gasket, Gear Housing	1	

Group No. 17.01

## Service Repair Kits

Option No. 0000

Ref No.	Part Number	Part Name	Req	Remarks
<b>MAIN BEARING KITS</b>				
	3802010	Set, Main Bearing	1	Standard
	3802011	Set, Main Bearing	1	0.25 mm Oversize
	3802012	Set, Main Bearing	1	0.50 mm Oversize
	3802013	Set, Main Bearing	1	0.75 mm Oversize
	3802014	Set, Main Bearing	1	1.00 mm Oversize
	3802082	Bearing, Crankshaft Thrust	1	.5mm Oversize Bore/5mm Oversize Thrust
	3802094	Bearing, Crankshaft Thrust	1	1.0mm Oversize Bore/1.0mm Oversize Thrust
<b>PISTON RING SETS</b>				
	3802050	Set, Piston Ring	4	Standard
	3802052	Set, Piston Ring	4	0.50 mm Oversize
	3802054	Set, Piston Ring	4	1.00 mm Oversize
<b>PISTON KITS</b>				
	3802160	Kit, Engine Piston	4	Standard, Comp Ratio 17.2
	3802132	Kit, Engine Piston	4	0.50 mm Oversize
	3802134	Kit, Engine Piston	4	1.00 mm Oversize
<b>TURBO REPAIR KITS</b>				
	3802147	Kit, Turbo Repair	1	



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