

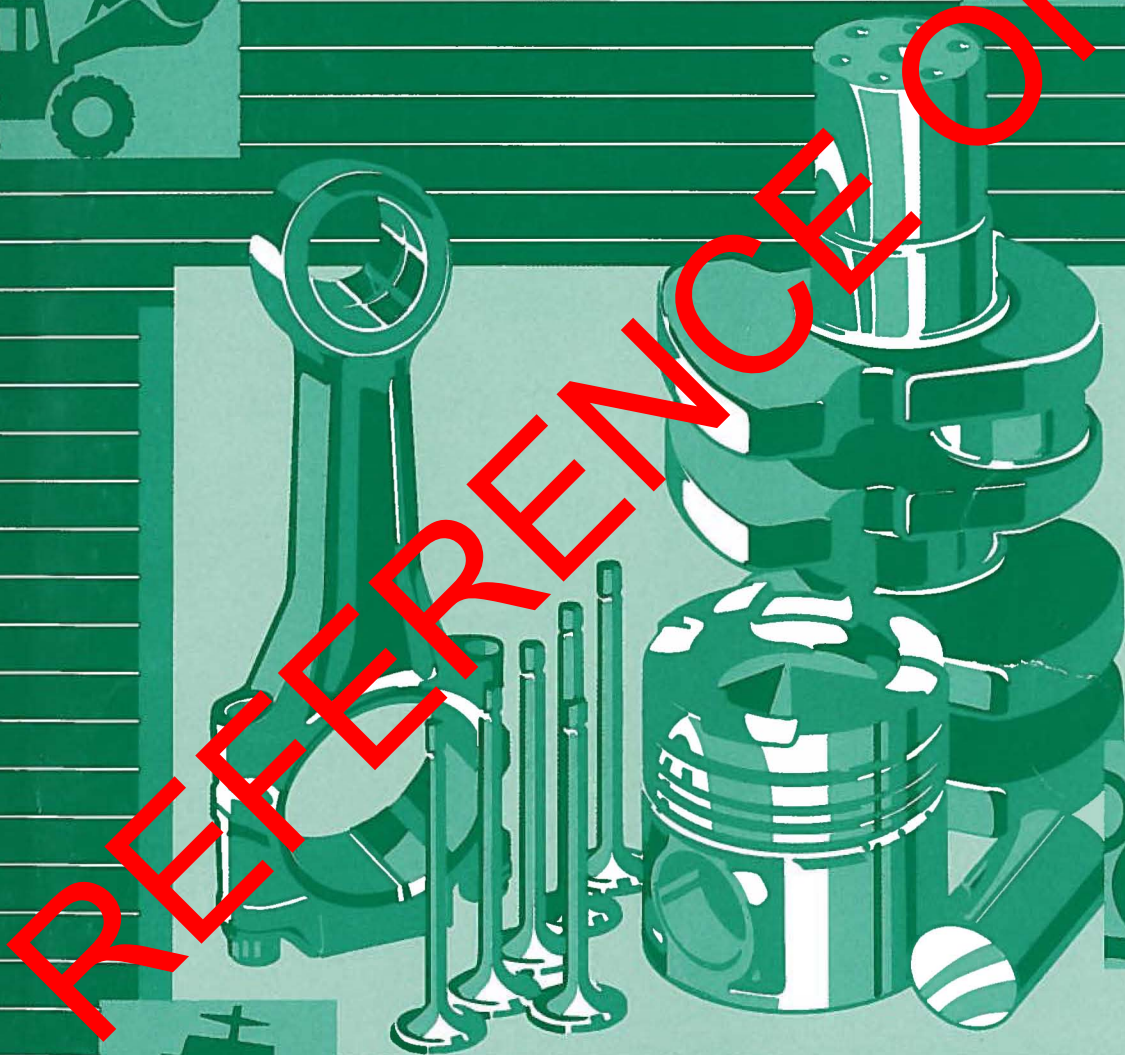
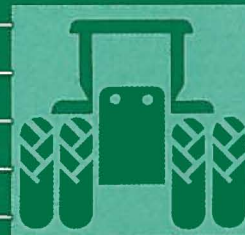
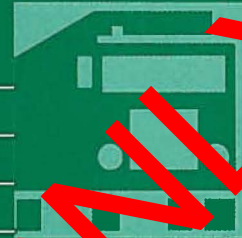


Parts Catalog

4B, 4BT, 4BTA3.9

1998 Construction

237945



REFERENCE ONLY



Parts Catalog

4B, 4BT, 4BTA3.9

1998 Construction

REFERENCE ONLY



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 the 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 exclusion or limitation of incidental or consequential damages relating to Consumer Products, so the above limitation of 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 practice. 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 manufacturer 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 repair 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

 Cummins Engine Company, Inc. Columbus, Indiana 47202-3005 Made in U.S.A. 3920701	Engine Cert. I.D. Certificat d'identité	C.I.D./L. Pouce Cube/L.	Family Famille	CPL	Model Modele	FEL	EPA	CARB
	WARNING: Injury may result and warranty is voided if fuel rate rpm or altitudes exceed published maximum values for this model and application. AVERTISSEMENT: Danger de blessures et d'annula- tion de la garantie si débit de combustible tr/min ou altitude dépassent les valeurs maximum annoncées pour ce modèle et son utilisation.				Timing—T.D.C. Colage—P.M.H. Valve lash cold Jeux Soup. à Froid Firing Order Order d'Allumage	Engine No. Moteur No. Ref. No.	NDX PM	
Date of Mfg. Date of Fabrication	Idle Speed (rpm) Vitesse Lentille	E.C.S.	Fuel rate at adv. HP Débit combust. à puls. indiquée			mm ³ stroke		
			Advertised HP Puiss. Indiquée (ch)			at s		

2. FUEL PUMP DATA PLATE

BOSCH
65128530
 9 400 230 097
PES6A100D320/3RS2691
Made in USA (927)

BOSCH
 16/RSV425 1100A0C2190-8R
 CDC-NO 390 354
Made in USA (927)

RAV TO SPEED
CONV. RATE
CDC NO.
SPEC. NO.

This catalog was compiled by Robert Cloney.

Customer Service Information

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

4B	D381051CX02	CPL 2599
4BT	D382043CX02	CPL 2302
4BTA	D383047CX02	CPL 2109

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

Control Parts List (CPL) Components

Injector	Page 133, 137, 143	Exhaust Manifold	Page
Camshaft	Page 132, 136, 142	Engine Piston	Page 129,
Cylinder Head	Page 145, 153, 157	Turbocharger	Page
Pump, Injection	Page 85, 87, 88		

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 identification.
- 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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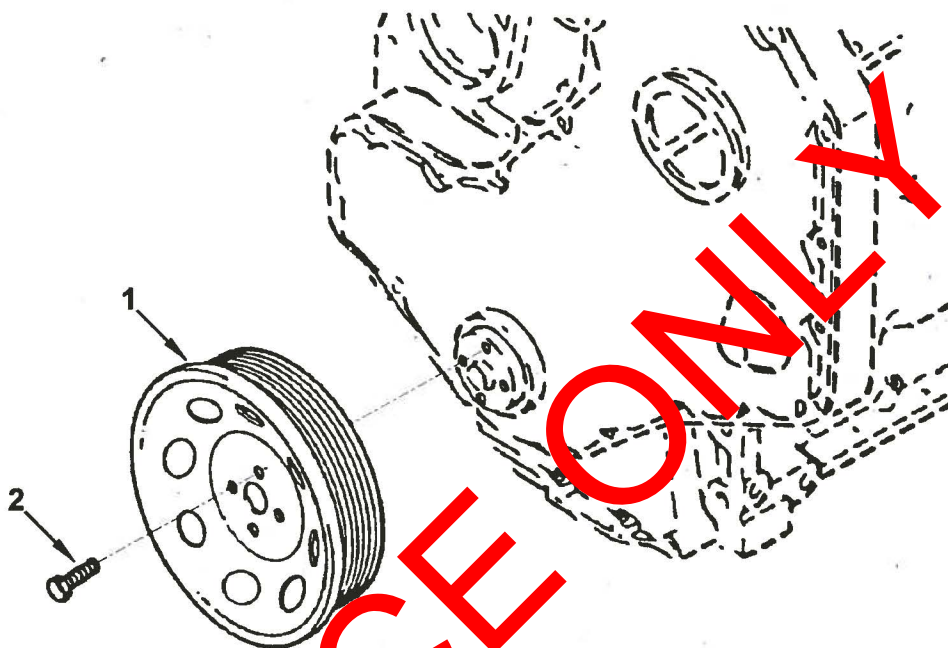
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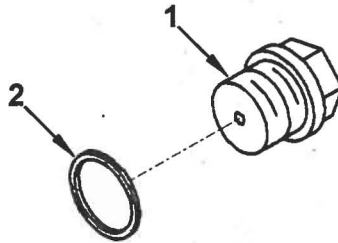
Front Drive Adapter

Option No. AF9



af900gk

Ref No.	Part Number	Part Name	Req	Remarks
		FRONT DRIVE ADAPTER OPTION AF9006		Front Drive Adapter Adaptable to a PTO: No Pulley Type: 8 Groove Torque Limit (lbs.ft): 210 Location From FFOB (mm): 93.32 Pulley Effective Diameter (mm): 173.76 Attachment Provision: Mounted Restricted Cylinders: 4 6
1	3914494	Pulley, Crankshaft	1	
2	303857	Screw, Hex Flange Head Cap	4	M12 X 1.25 X 36



ah950gj

Ref No.	Part Number	Part Name	Req	Remarks
		BURNER AIR HEATER OPTION AH9007		Burner Air Heater Type: Burner - Glow Plug Burner Quantity: Single Required Tap: 7/8 - 14 NPTF Element Provided: No Connects To Fuel Filter: No Aspiration: Naturally Aspirated 7/8 - 14 UNF
1	3907185	Plug, Unthreaded	1	
2	3906773	Washer, Sealing	1	

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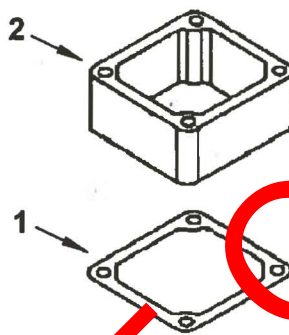
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Grid Air Heater

Option No. AH

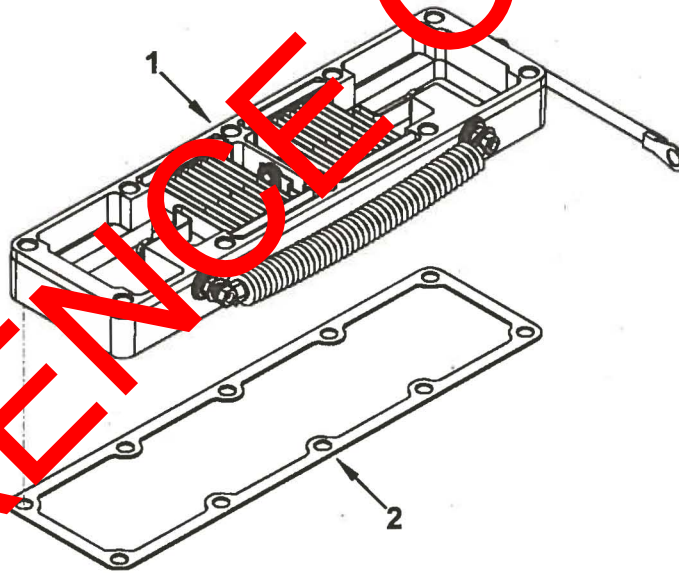


ah910gd

Ref No.	Part Number	Part Name	Req	Remarks
		GRID AIR HEATER OPTION AH9021		Grid Air Heater Component Provided: Spacer Controls Provided: No Heater/Spacer Thickness (mm): 41.1 Heater/Spacer Bolt Pattern (mm): 75 X 6 Engine Aspiration: Charge Air Cooled Naturally Aspirated Turbocharged
2	3969988 3922484	Gasket, Connection Connection, Spacer	1 1	

NOTES

REFERENCE ONLY



ah955gn

Ref No.	Part Number	Part Name	Req	Remarks
		GRID AIR HEATER OPTION AH9060		Grid Air Heater Component Provided: Heater Heater Voltage: 12 Heater Amperage: 190 Controls Provided: No Heater/Spacer Bolt Pattern (mm) X 320 Engine Aspiration: Jacket Water Aftercooled Note 2: Mounting Location for WARNING Label for Jacket Water Aftercooled Engines, the Warning Label to be Attached to the Outboard Side of the Aftercooler. Terminal Orientation: 4 Cylinder - Rear Mounting Location for WARNING Label for Turbo-charged and Charge Air Cooled Engines, the Warning Label to be Attached to the Outboard Side of the Heater. For Jacket Water Aftercooled Engines the WARNING Label to be Attached to the Outboard Side of the Aftercooler. DEP Will Omit P/N 3927335, Instruction Tag From UK Option to Comply With European Legislation.
1	3929336	Heater, Intake Air		
2	3938153	Gasket, Int Manifold Cover	1	

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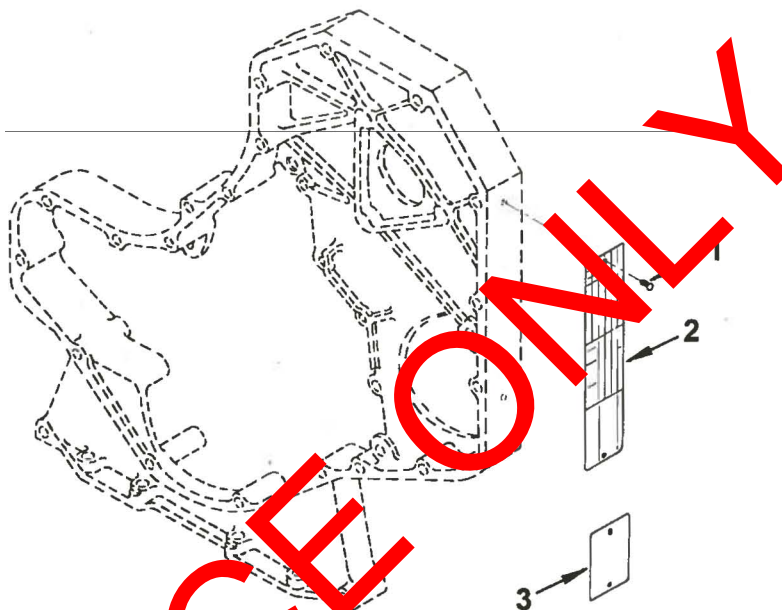
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Agency Approval

Option No. A

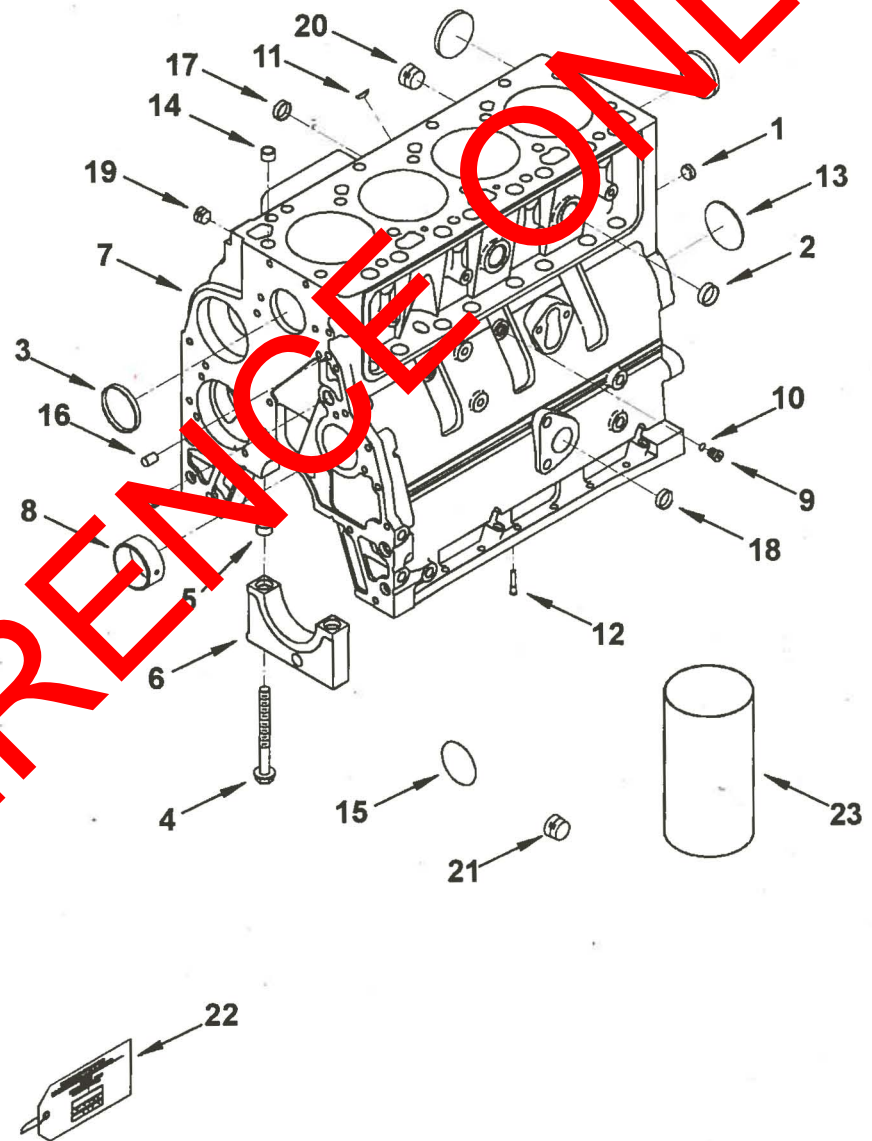


ap950gh

Ref No.	Part Number	Part Name	Req	Remarks
		AGENCY APPROVAL OPTION AP9353		Agency Approval Certified by: EPA,CARB Application: Nonroad Certification Level: Tier 1, Tier 1 Special Allowance: TPEM Certification Agent: EPA, EPA Manufacturer of Record: Cummins Language: English
1	908612	Screw, Drive	2	
2	3284906	Dataplate	1	
3	(4945699)	Decal	1	

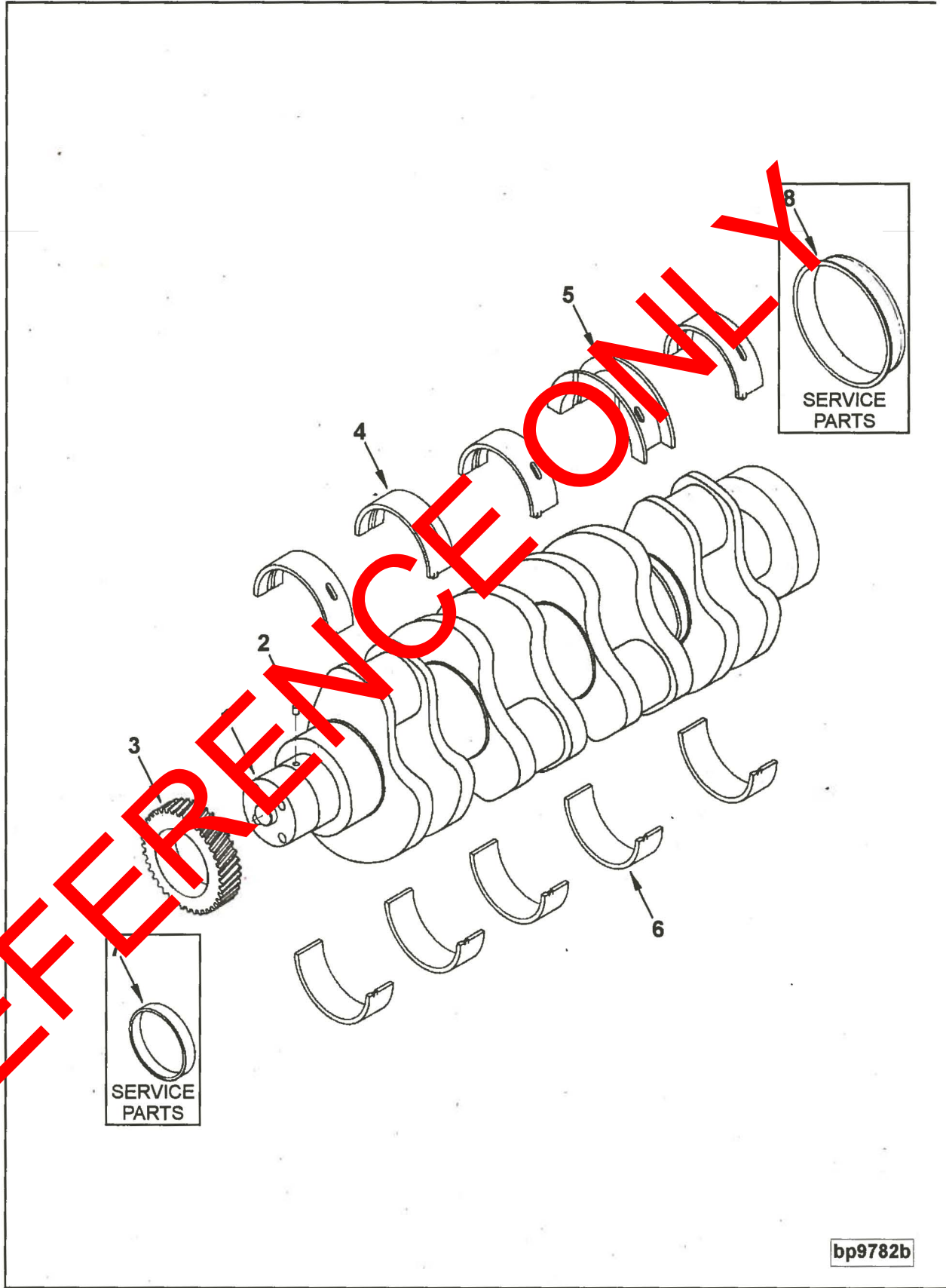
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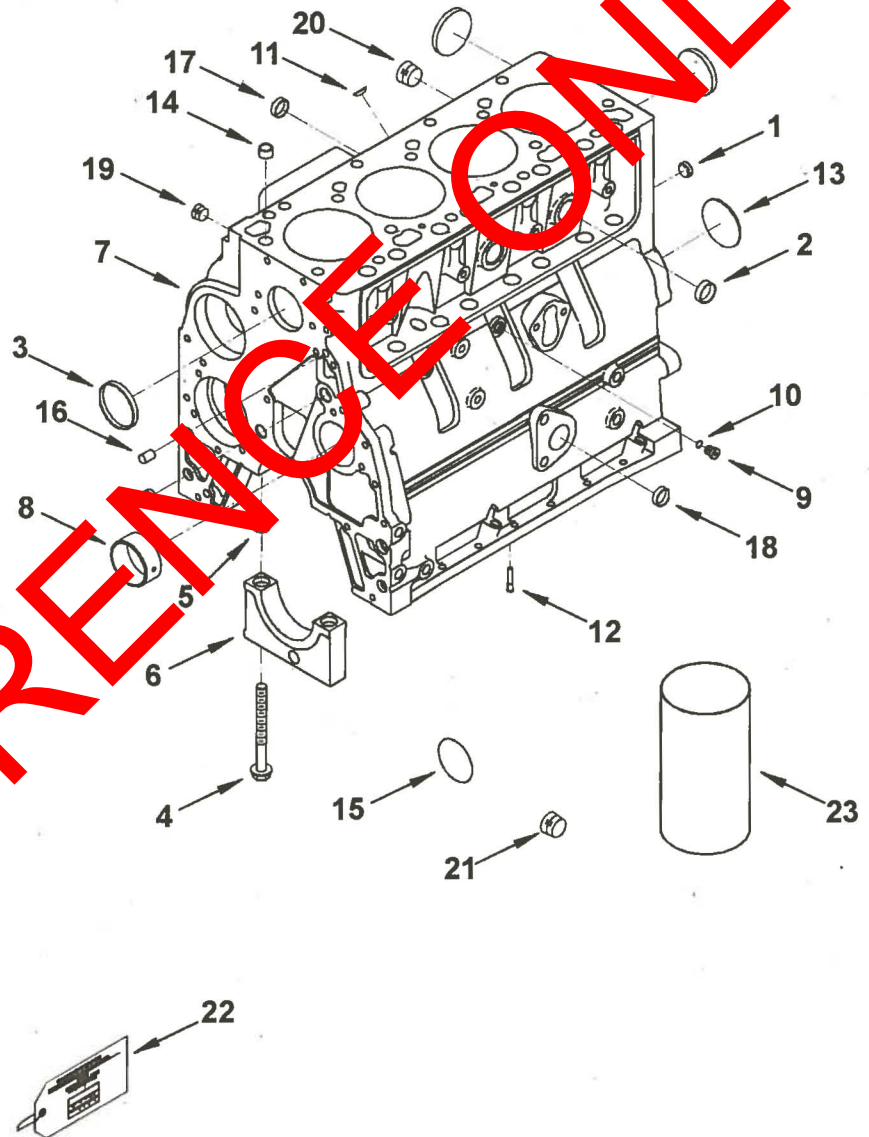
bp955gl

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK OPTION BP9079		Cylinder Block Aspiration: Turbocharged High Speed Balancer: No Tapped Fittings: STORM Structural Block: No Crankshaft Material: Forged Steel BZL may use Expansion Plug P/N 3007635 in Place of P/N 3914035 BZL may use Expansion Plug P/N 3900965 in Place of P/N 3922002, in Block P/N 3932012. CNS may use Expansion Plug P/N 3900965 in Place of P/N 3922072. Contains Encoded Like Block, use in Place of BP9782
	4089546	Kit, Cylinder Block	1	
	(3938366)	Block, Cylinder	1	Serviced as 4089546
1	3900956	Plug, Expansion	3	
2	3007635	Plug, Expansion	2	
3	4938189	Plug, Expansion	1	
4	3927948	Screw, Hex Flange Head Cap	10	
	3974157	Cap, Main Bearing	5	
5	3900068	Dowel, Ring	1	
6	(3974156)	Cap, Main Bearing	1	
7	(3938364)	Block, Cylinder	1	
8	3940059	Bushing	1	
	3933224	Kit, Cyl Block Hardware	1	For 1991 and Later 4B Engines
5	3900068	Dowel, Ring	2	
	3678923	Plug, Threaded	2	M10 X 1.00 X 9.5
9	(3678924)	Plug, Threaded	1	M10 X 1.00 X 9.5
10	3678925	Seal, O Ring	1	M10 X 1.00
10	3678925	Seal, O Ring	1	M10 X 1.00
11	3920706	Plug, Expansion	2	
12	3937214	Nozzle, Piston Cooling	6	
13	3900687	Plug, Expansion	1	
14	3902343	Dowel, Ring	2	
15	3926047	Seal, O Ring	1	
16	3900257	Dowel, Pin	2	
17	3900955	Plug, Expansion	2	
18	3900958	Plug, Expansion	1	
19	3008468	Plug, Pipe	1	1/2 NPT
20	3008469	Plug, Pipe	1	3/4 NPT
21	4931643	Plug, Pipe	1	
22	(3933613)	Tag, Instruction	1	
		SERVICE PARTS		
23	3904166	Sleeve, Salvage	A/R	



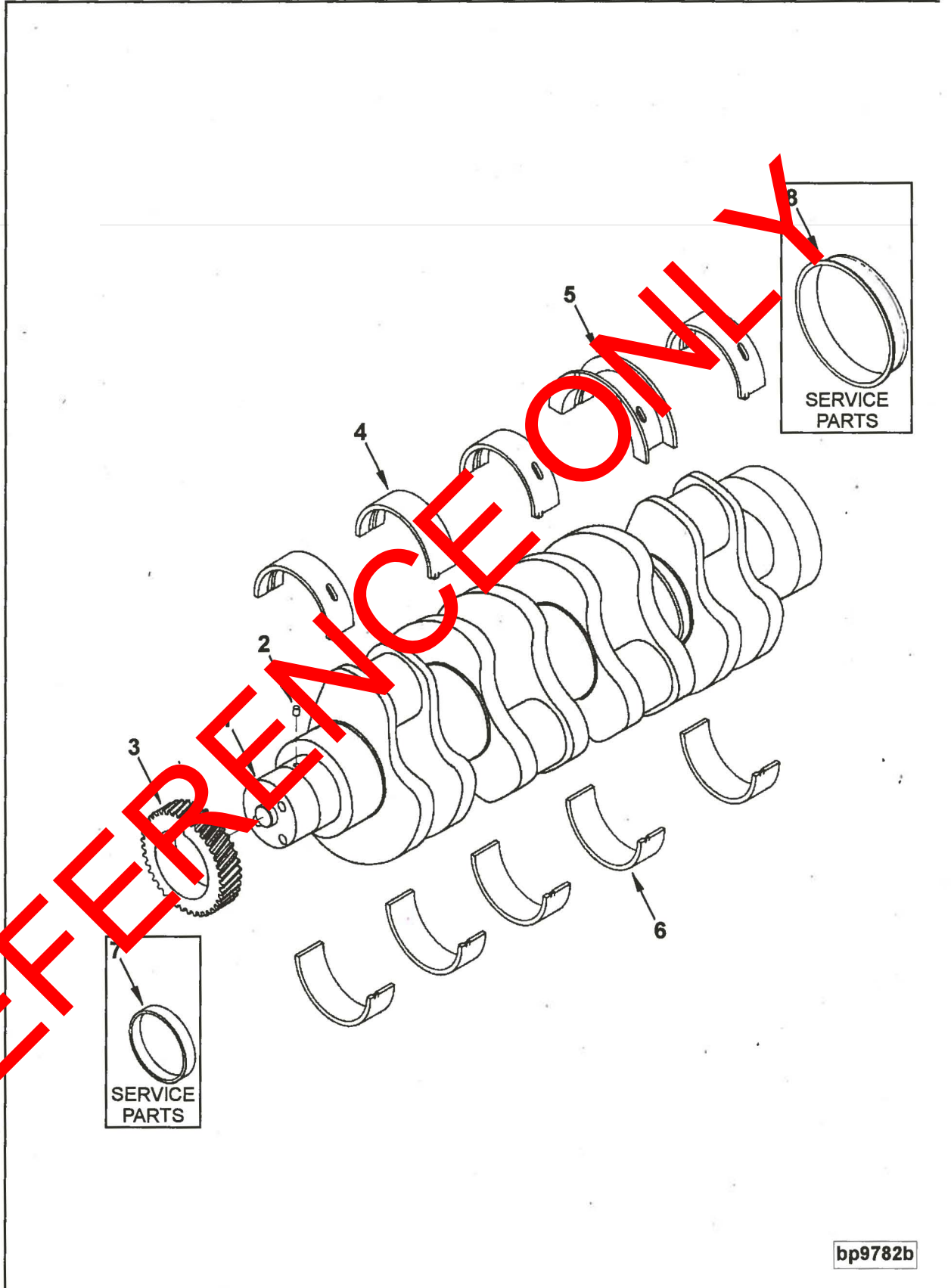
bp9782b

Ref No.	Part Number	Part Name	Req	Remarks
CRANKSHAFT AND BEARINGS				
OPTION BP9079				Crankshaft and Bearings
1	3968066	Crankshaft, Engine	1	
2	3904483	Dowel, Pin	1	
3	3929027	Gear, Crankshaft	1	
4	3929016	Bearing, Main	4	
5	3927772	Bearing, Crankshaft Thrust	1	
6	3929021	Bearing, Main	5	
4	3929017	Bearing, Main	A/R	0.25 mm Oversize
4	3929018	Bearing, Main	A/R	0.50 mm Oversize
4	3929019	Bearing, Main	A/R	0.75 mm Oversize
4	3929020	Bearing, Main	A/R	1.00 mm Oversize
6	(3929022)	Bearing, Main	A/R	0.25 mm Oversize
6	(3929023)	Bearing, Main	A/R	0.50 mm Oversize
6	(3929024)	Bearing, Main	A/R	0.75 mm Oversize
6	(3929025)	Bearing, Main	A/R	1.00 mm Oversize
SERVICE PARTS				
	3933224	Kit, Cyl Block Hardware	A/R	For 1991 and Later 4B Engines
2	3904483	Dowel, Pin	1	
7	3802820	Front Seal, Wearsleeve Kit	A/R	
8	3926126	Rear Seal, Wearsleeve Kit	A/R	



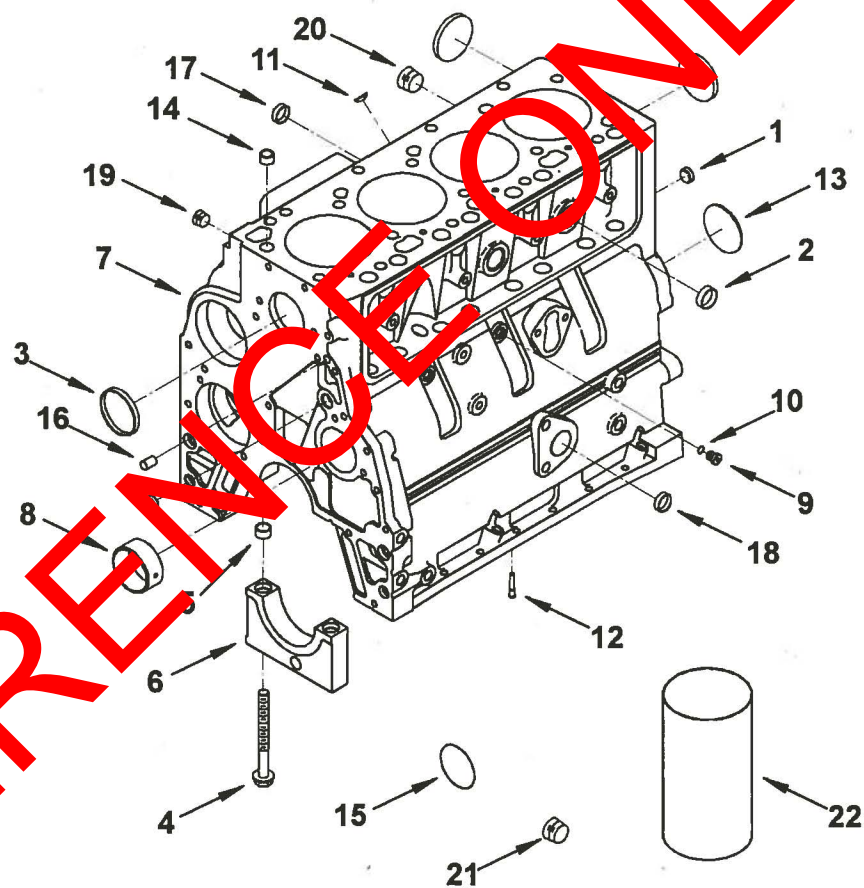
bp955gl

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK OPTION BP9081		Cylinder Block Aspiration: Jacket Water Aftercooled High Speed Balancer: No Tapped Fittings: STORM Structural Block: No Crankshaft Material: Forged Steel BZL may use Expansion Plug P/N 3000935 in Place of P/N 3914035 CNS may use Expansion Plug P/N 3900965 in Place of P/N 3922075 Contains Encore Like Block, use in Place of BP9785.
	4089546	Kit, Cylinder Block	1	
	(3938366)	Block, Cylinder	1	Serviced as 4089546
1	3900956	Plug, Expansion	3	
2	3007635	Plug, Expansion	2	
3	4938189	Plug, Expansion	3	
4	3927948	Screw, Hex Flange Head Cap	10	
	3974157	Cap, Main Bearing	5	
5	3900068	Dowel, Ring	2	
6	(3974156)	Cap, Main Bearing	1	
7	(3938364)	Block, Cylinder	1	
8	3940059	Bushing	1	
	3933224	Kit, Cyl Block Hardware	1	For 1991 and Later 4B Engines
5	3900068	Dowel, Ring	2	
	3678923	Plug, Threaded	2	M10 X 1.00 X 9.5
9	(3678924)	Plug, Threaded	1	M10 X 1.00 X 9.5
10	3678925	Seal, O Ring	1	M10 X 1.00
10	3678925	Seal, O Ring	1	M10 X 1.00
11	3920706	Plug, Expansion	2	
12	3937214	Nozzle, Piston Cooling	6	
13	3900687	Plug, Expansion	1	
14	3902343	Dowel, Ring	2	
15	3926047	Seal, O Ring	1	
16	3900257	Dowel, Pin	2	
17	3900955	Plug, Expansion	2	
18	3900958	Plug, Expansion	1	
19	3008468	Plug, Pipe	1	1/2 NPT
20	3008469	Plug, Pipe	1	3/4 NPT
21	4933532	Plug, Pipe	1	
22	(3933613)	g, Instruction	1	
		SERVICE PARTS		
23	3900966	Sleeve, Salvage	A/R	

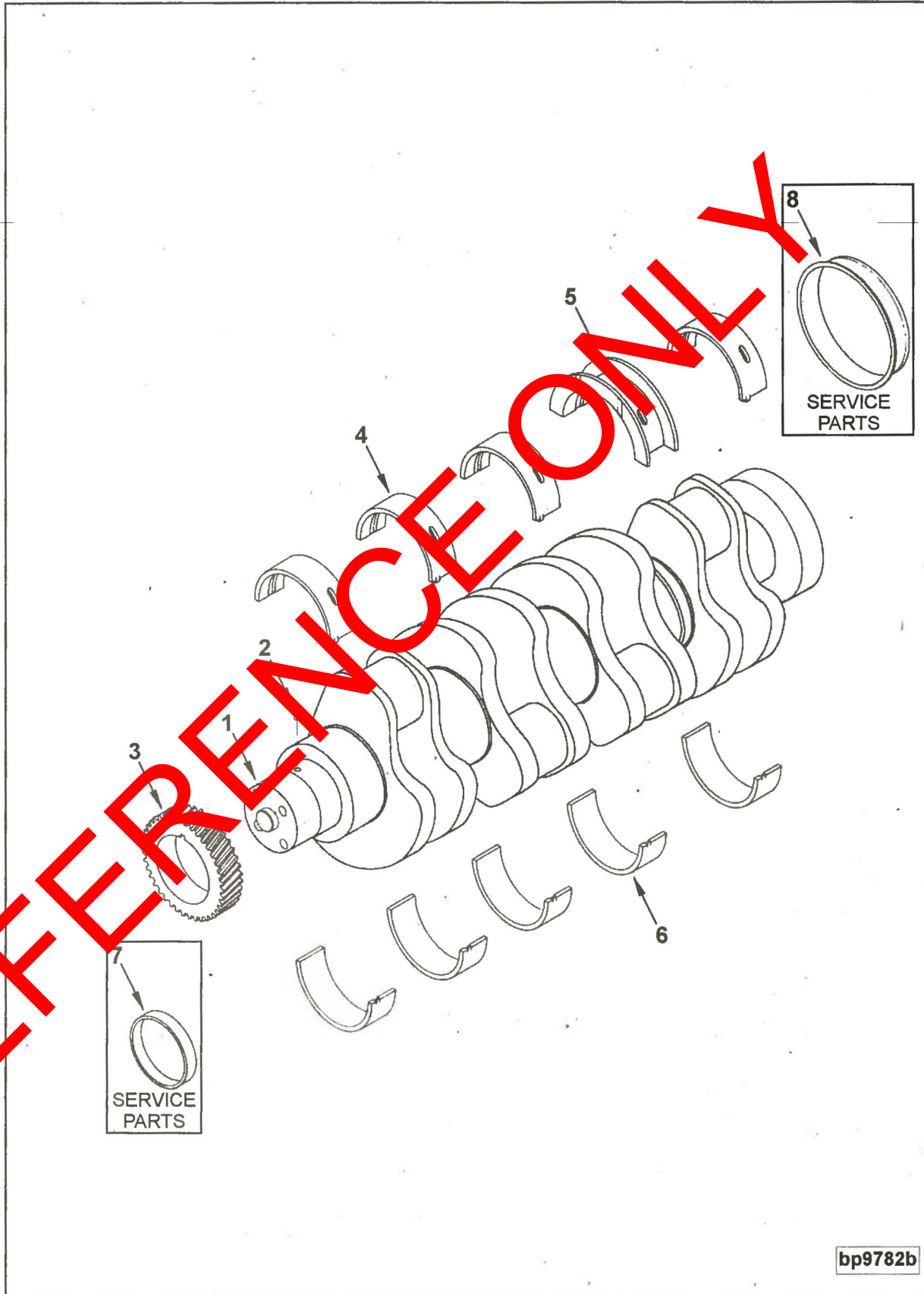


bp9782b

Ref No.	Part Number	Part Name	Req	Remarks
		CRANKSHAFT AND BEARINGS		
		OPTION BP9081		Crankshaft and Bearings
1	3968066	Crankshaft, Engine	1	
2	3904483	Dowel, Pin	1	
3	3929027	Gear, Crankshaft	1	
4	3929016	Bearing, Main	4	Standard
5	3927772	Bearing, Crankshaft Thrust	1	Standard
6	3929021	Bearing, Main	5	Standard
4	3929017	Bearing, Main	A/R	0.25 mm Oversize
4	3929018	Bearing, Main	A/R	0.50 mm Oversize
4	3929019	Bearing, Main	A/R	0.75 mm Oversize
4	3929020	Bearing, Main	A/R	1.00 mm Oversize
6	(3929022)	Bearing, Main	A/R	0.25 mm Oversize
6	(3929023)	Bearing, Main	A/R	0.50 mm Oversize
6	(3929024)	Bearing, Main	A/R	0.75 mm Oversize
6	(3929025)	Bearing, Main	A/R	1.00 mm Oversize
		SERVICE PARTS		
	3933224	Kit, Cyl Block Hardware	A/R	For 1991 and Later 4B Engines
2	3904483	Dowel, Pin	1	
7	3802820	Front Seal, Wearsleeve Kit	A/R	
8	3926126	Rear Seal, Wearsleeve Kit	A/R	

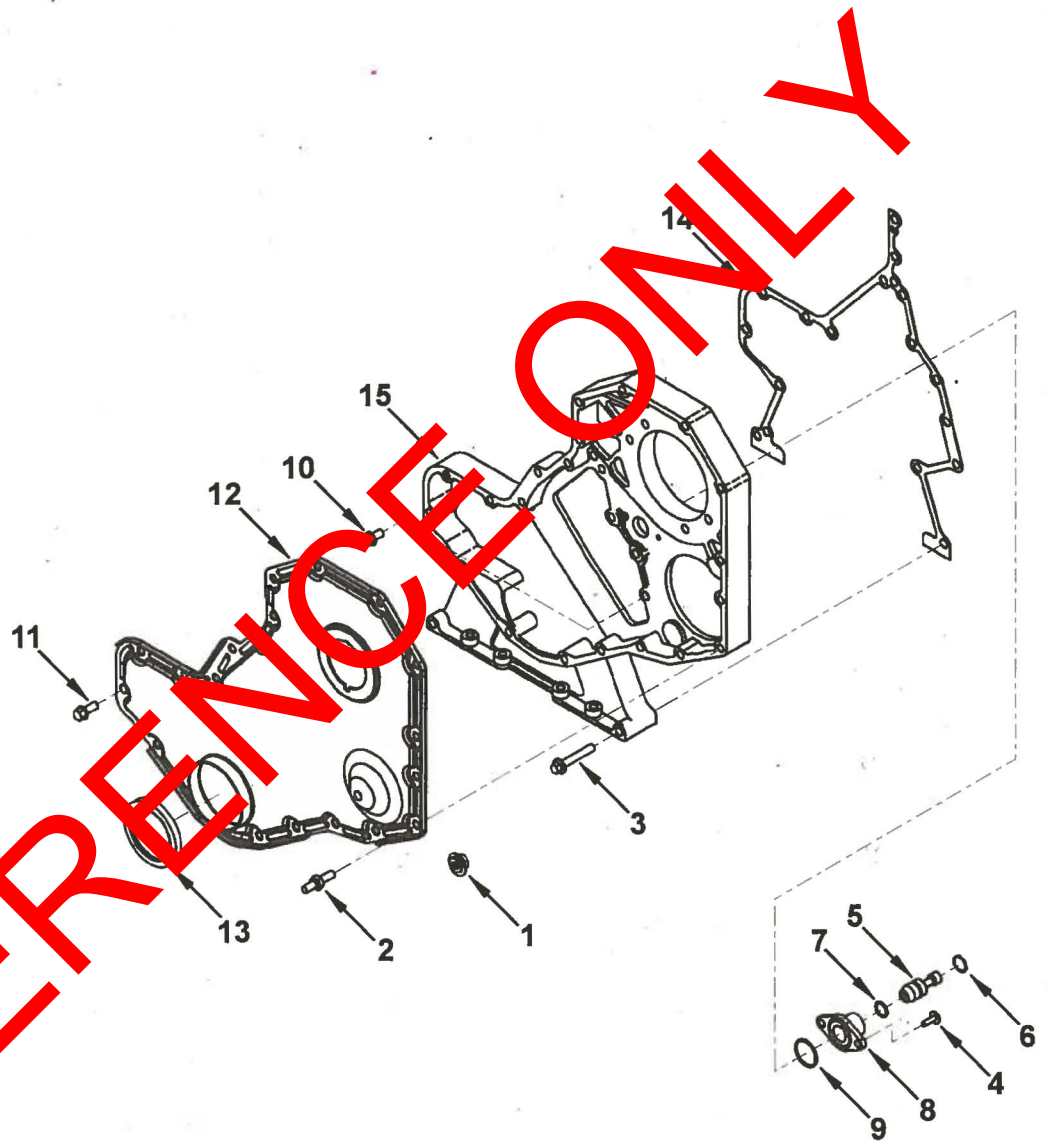


Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK OPTION BP9082		Cylinder Block Aspiration: Naturally Aspirated Tapped Fittings: STORM Structural Block: No Crankshaft Material: Forged Restricted Fuel Pump Manufacturing Model: Bosch A Bosch VE CEC may use Carburized Crank Gear P/N 3929027 in Place of P/N 3900965 Reduced Width Main Bearing BZL may use Expansion Plug P/N 3900965 in Place of P/N 392090. CNS may use Expansion Plug P/N 3900965 in Place of P/N 392090.
	4089546	Kit, Cylinder Block	1	
	(3938366)	Block, Cylinder	1	Serviced as 4089546
1	3900956	Plug, Expansion	3	
2	3007635	Plug, Expansion	2	
3	4938189	Plug, Expansion	3	
4	3927948	Screw, Hex Flange Head Cap	10	
	3974157	Cap, Main Bearing	1	
5	3900068	Dowel, Ring	1	
6	(3974156)	Cap, Main Bearing	1	
7	(3938364)	Block, Cylinder	1	
8	3940059	Bushing	1	
	3933224	Kit, Cyl Block Hardware	1	For 1991 and Later 4B Engines
5	3900068	Dowel, Ring	2	
	3678923	Plug, Threaded	2	M10 X 1.00 X 9.5
9	(3678924)	Plug, Threaded	1	M10 X 1.00 X 9.5
10	3678925	Seal, O Ring	1	M10 X 1.00
10	3678925	Seal, O Ring	1	M10 X 1.00
11	3920706	Plug, Expansion	2	
12	3937214	Nozzle, Pin Cooling	6	
13	3900687	Plug, Expansion	1	
14	3902343	Dowel, Ring	2	
15	3926047	Seal, O Ring	1	
16	3900257	Dowel, Pin	2	
17	3900955	Plug, Expansion	2	
18	3900958	Plug, Expansion	1	
19	3008468	Plug, Pipe	1	1/2 NPT
20	3008469	Plug, Pipe	1	3/4 NPT
21	4931643	Plug, Pipe	1	
		SERVICE PARTS		
22	3904166	Sleeve, Salvage	A/R	



bp9782b

Ref No.	Part Number	Part Name	Req	Remarks
		CRANKSHAFT AND BEARINGS		
		OPTION BP9082		Crankshaft and Bearings
1	3968066	Crankshaft, Engine	1	
2	3904483	Dowel, Pin	1	
3	3929027	Gear, Crankshaft	1	
4	3929016	Bearing, Main	4	Standard
5	3927772	Bearing, Crankshaft Thrust	1	Standard
6	3932451	Bearing, Main	5	Standard
4	3929017	Bearing, Main	A/R	0.25 mm Oversize
4	3929018	Bearing, Main	A/R	0.50 mm Oversize
4	3929019	Bearing, Main	A/R	0.75 mm Oversize
4	3929020	Bearing, Main	A/R	1.00 mm Oversize
6	(3929022)	Bearing, Main	A/R	0.25 mm Oversize
6	(3929023)	Bearing, Main	A/R	0.50 mm Oversize
6	(3929025)	Bearing, Main	A/R	1.00 mm Oversize
6	(3929024)	Bearing, Main	A/R	0.75 mm Oversize
		SERVICE PARTS		
	3933224	Kit, Cyl Block Hardware	A/R	For 1991 and Later 4B Engines
2	3904483	Dowel, Pin	A/R	
7	3802820	Front Seal, Wearsleeve Kit	A/R	
8	3926126	Rear Seal, Wearsleeve Kit	A/R	



bp953go

Ref No.	Part Number	Part Name	Req	Remarks
		FRONT GEAR COVER OPTION BP9703		Front Gear Cover Belt Retainer Included: Yes Noise Dampening Panel Provision: No Access for Tachometer Drive: Yes Gear Housing Material: Cast Aluminum Fuel Pump Mounted Angle (Deg): 35 Additional Clearance for Engine Mount: No Compatible With Oil Pan Corner Stiffener: No Fuel Pump: Bosch VE Bosch VP14 CAV DPA CAV DPS Stanadyne DB3 Stanadyne R4 DEP may use Gear Housing P/N 3920518 in Place of P/N 3920758. DEP may Omit Belt Retainer P/N 3912772 and Cap screw P/N 3901445 and add Cap screw P/N 3900633. BZL may use Gear Cover P/N 3969976 in Place of P/N 3287075.
1	3912772	Retainer, Belt		
2	3966976	Screw, Hex Flange Head Cap		
3	3967746	Screw, Hex Flange Head Cap	10	
4	3907998	Screw, Round Head Cap	2	M5 X 0.80 X 17
	(3913995)	Housing, Timing Pin	1	
5	3903924	Pin, Timing	1	
6	3904849	Ring, Retaining	1	
7	3913994	Seal, O Ring	1	
8	3919683	Housing, Timing Pin	1	
9	3915772	Seal, Rectangular Ring	1	
10	3924962	Screw, Hex Flange Head Cap	11	
11	3926846	Screw, Hex Flange Head Cap	5	
	3287075	Cover, Gear	1	
12	(3286312)	Cover, Gear	1	
13	(3935959)	Seal, O Ring	1	
14	3938156	Gasket, Gear Housing	1	
15	3920758	Housing, Gear	1	
		SERVICE PARTS		
	3937111	Front Seal Service Kit	A/R	
13	(3935959)	Seal, O Ring	1	
	(3904351)	Tool, Seal Installation	1	
	(3904352)	Tool, Seal Installation	1	

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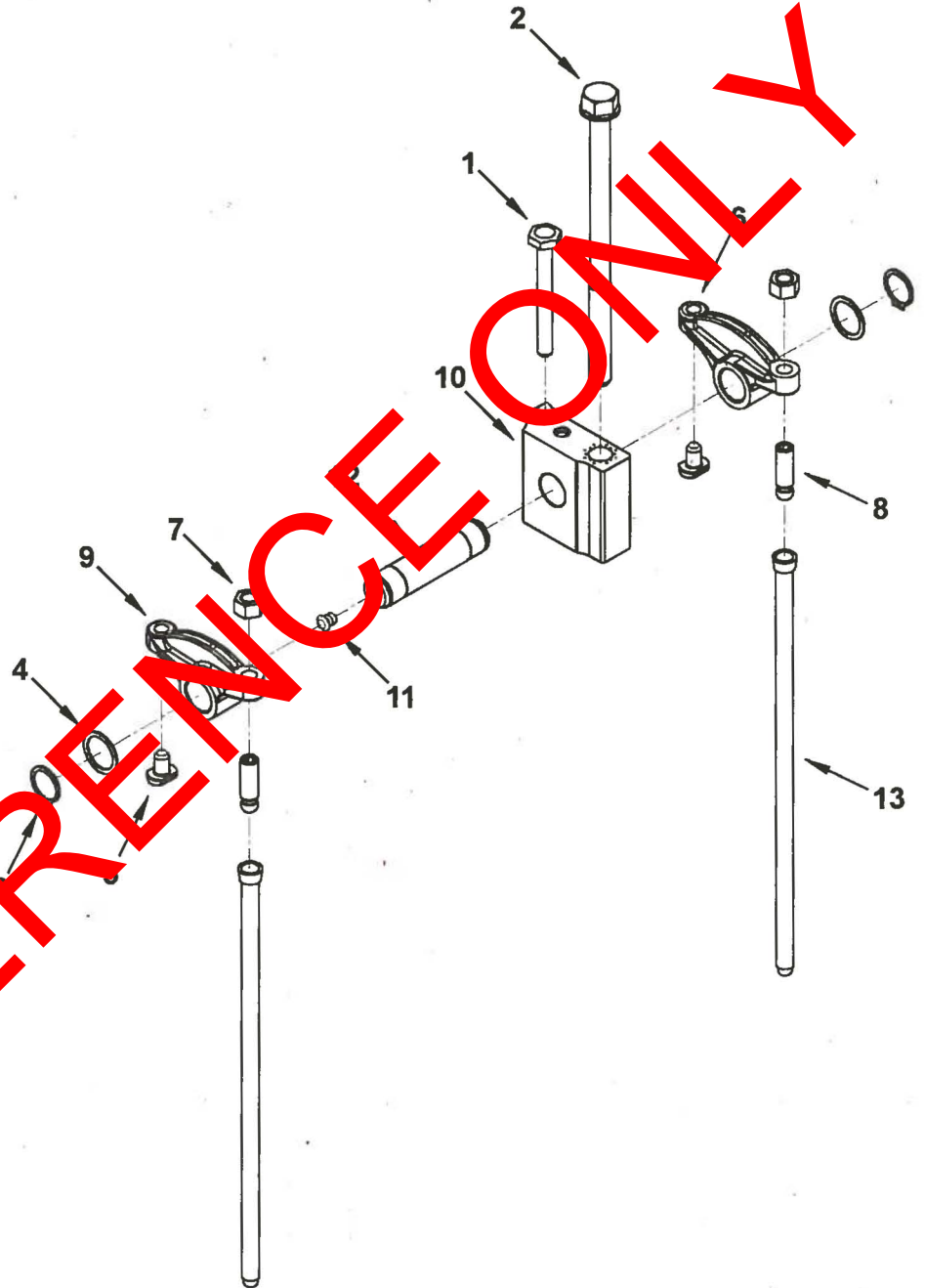
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Group No. 10. BP9703

Rocker Lever

Option No. E



bp953gd

Bullet
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Ref No.	Part Number	Part Name	Req	Remarks
		ROCKER LEVER		
		OPTION BP9704		
				Rocker Lever
				P/N 3910815 can be Used in Place of 3939420.
				M8 X 1.25 X 75
1	3901221	Screw, Hexagon Head Cap	4	
2	3920781	Screw, Hex Flange Head Cap	4	
	3934920	Support, Rocker Lever	4	
3	3900242	Ring, Retaining	2	
4	3900245	Washer, Plain	2	M19
	3910810	Lever, Rocker	1	
5	(3900705)	Insert, Rocker Lever	1	
6	(3910808)	Lever, Rocker	1	
7	3927692	Nut, Heavy Hexagon	1	
8	3937438	Screw, Rkr Lever Adjusting	1	
	3910811	Lever, Rocker	1	
5	(3900705)	Insert, Rocker Lever	1	
7	3927692	Nut, Heavy Hexagon	1	
8	3937438	Screw, Rkr Lever Adjusting	1	
9	(3910809)	Lever, Rocker	1	
	3922488	Shaft, Rocker Lever	1	
10	3911423	Support, Rocker Lever	1	
	(3922487)	Shaft, Rocker Lever	1	
11	3919434	Rivet	1	
12	(3922486)	Shaft, Rocker Lever	1	
13	3284377	Rod, Push		

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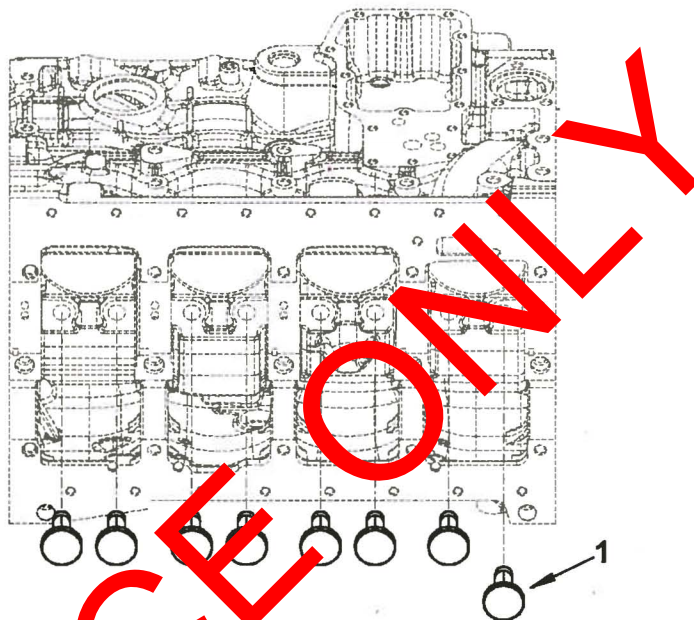
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Group No. 04.01

Valve Tappet

Option No.

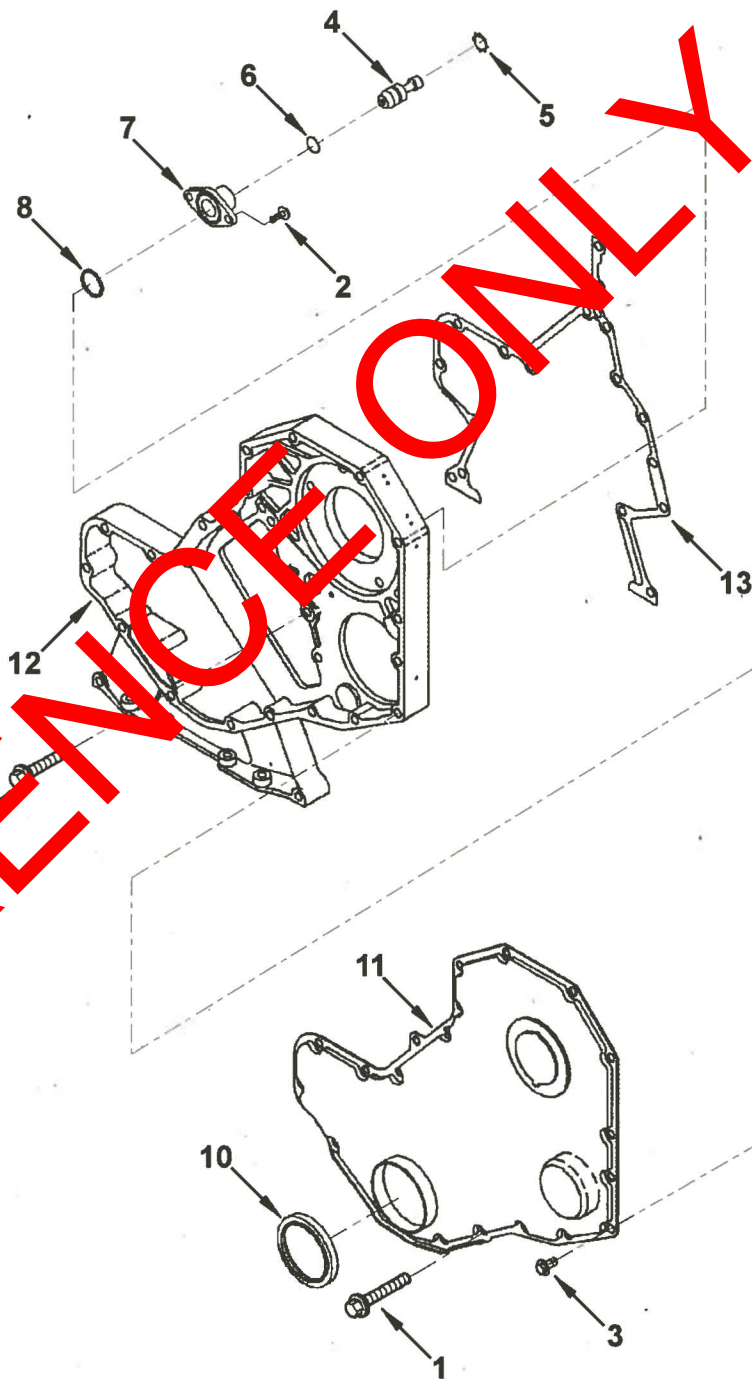


bp952gh

Ref No.	Part Number	Part Name	Req	Remarks
1	393162	Valve Tappet OPTION BP9705 Tappet, Valve	8	Valve Tappet

NOTES

REFERENCE ONLY



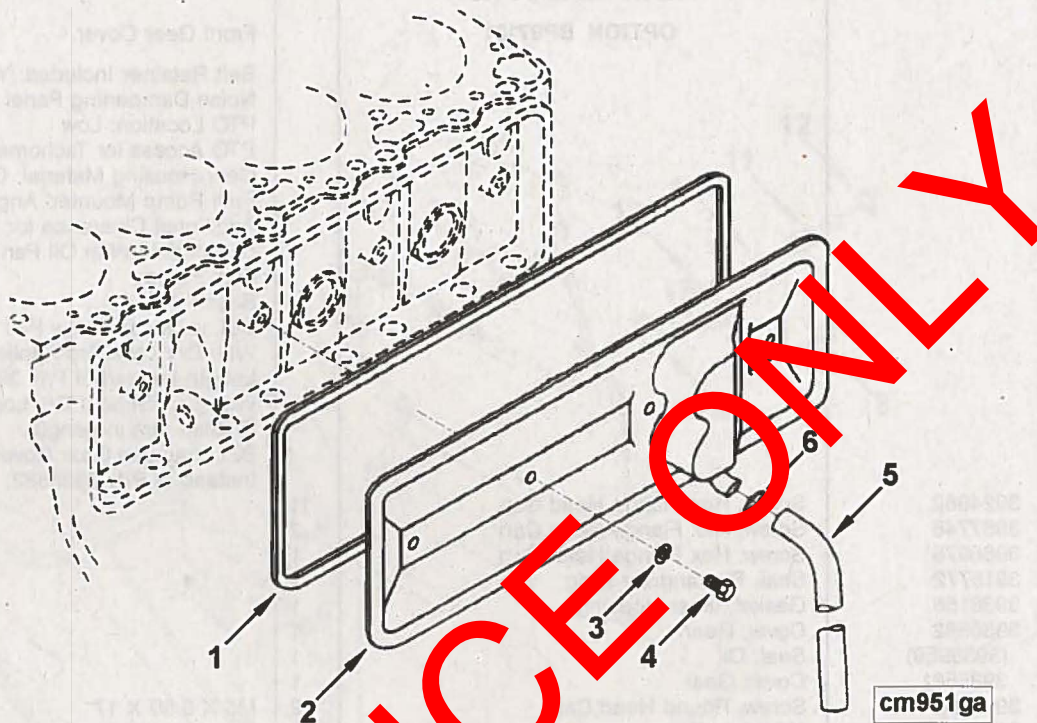
bp952go

Ref No.	Part Number	Part Name	Req	Remarks
		FRONT GEAR COVER		
		OPTION BP97034		
				Front Gear Cover
				Belt Retainer Included: No
				Noise Dampening Panel Provision: No
				Access for Tach Drive: Yes
				Gear Housing Material: Cast Aluminum
				Fuel Pump Mounted Angle (°): 25
				Additional Clearance for Engine Mount: No
				Compatible With Oil Pan Corner Stiffener: Yes
				Fuel Pump:
				Bosch A
				BZL may use Gear Cover P/N 3909980 in Place of P/N 3935582.
1	3924962	Screw, Hex Flange Head Cap	11	
2	3907998	Screw, Round Head Cap	2	
3	3967746	Screw, Hex Flange Head Cap	11	
	(3913995)	Housing, Timing Pin	1	
4	3903924	Pin, Timing	1	
5	3904849	Ring, Retaining	1	
6	3913994	Seal, O Ring	1	
7	3919683	Housing, Timing Pin	1	
8	3915772	Seal, Rectangular Ring	1	
9	3926846	Screw, Hex Flange Head Cap	5	
	3935582	Cover, Gear		
10	(3935959)	Seal, Oil		
11	3935581	Cover, Gear	1	
12	3964422	Housing, Gear	1	
13	3938156	Gasket, Gear Housing	1	
		SERVICE PARTS		
	3937111	Front Seal Service Kit	A/R	
10	(3935959)	Seal, Oil	1	
	3904351	Tool, Seal Installation	1	
	(3904352)	Tool, Seal Installation	1	

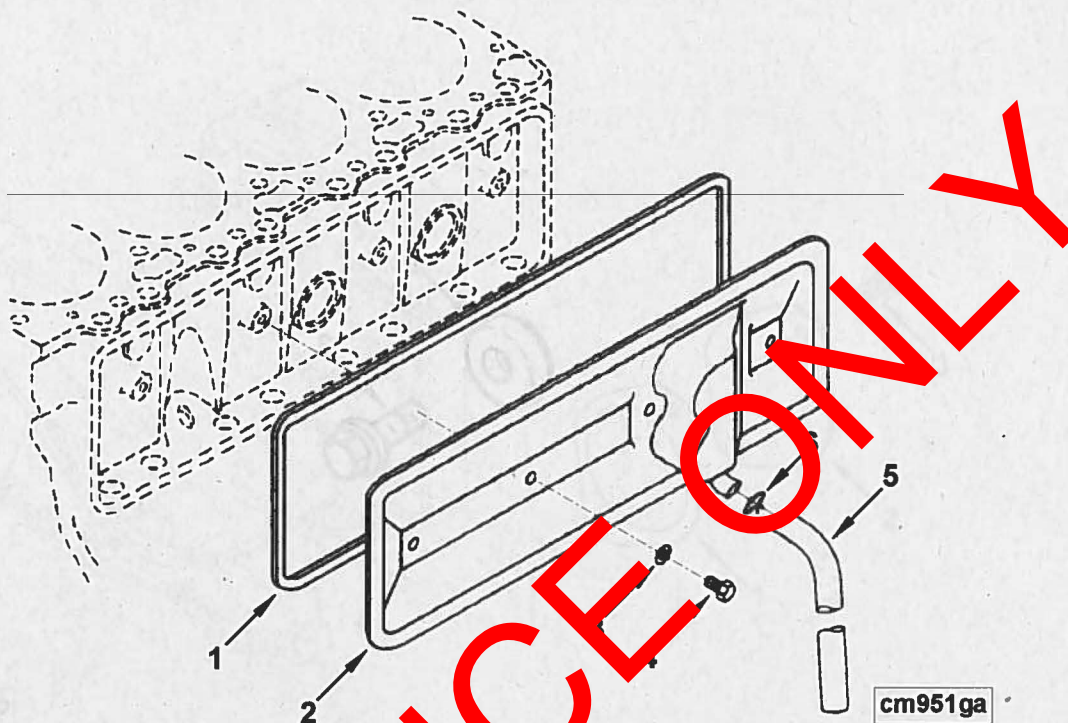


bp953gq

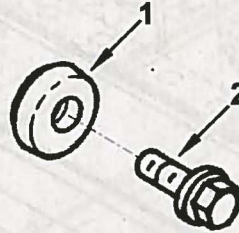
Ref No.	Part Number	Part Name	Req	Remarks
		FRONT GEAR COVER		
		OPTION BP97101		
				Front Gear Cover
				Belt Retainer Included: Yes
				Noise Dampening Panel Provision: No
				PTO Location: Low
				PTO Access for Tachometer Drive: Yes
				Gear Housing Material: Cast Aluminum
				Fuel Pump Mounted Angle (Deg): 35
				Additional Clearance for Engine Mount: No
				Compatible With Oil Pan Corner Stiffener: Yes
				Fuel Pump:
				Bosch "A"
				BZL is Using Screw P/N 392496, Quantity 5
				With Dry Lock Pre-Applied and Twenty mm
				Length Instead of P/N 3925883, Quantity 5
				With Dry Lock Pre-Applied and
				Sixteen mm in length.
				BZL may use Gear Cover P/N 3969980
				Instead of P/N 3935582.
1	3924962	Screw, Hex Flange Head Cap	11	
2	3967746	Screw, Hex Flange Head Cap	2	
3	3966976	Screw, Hex Flange Head Cap	1	
4	3915772	Seal, Rectangular Ring	1	
5	3938156	Gasket, Gear Housing	1	
	3935582	Cover, Gear	1	
6	(3935959)	Seal, Oil	1	
7	3935581	Cover, Gear	1	
8	3907998	Screw, Round Head Cap	2	M5 X 0.80 X 17
9	3964422	Housing, Gear	1	
10	3912772	Retainer, Belt	1	
	(3913995)	Housing, Timing Pin	1	
11	3903924	Pin, Timing	1	
12	3904849	Ring, Retaining	1	
13	3919683	Housing, Timing Pin	1	
14	3913994	Seal, O Ring	1	
		SERVICE PARTS		
	3937111	Front Seal Service Kit	A/R	
6	(3935959)	Seal, Oil	1	
	(3904351)	Tool, Seal Installation	1	
	(3904352)	Tool, Seal Installation	1	



Ref No.	Part Number	Part Name	Req	Remarks
		CAM FOLLOWER COVER OPTION CM9001		Cam Follower Cover Hose Angle Off Breather (Deg): 45 Hose Location on Baffle: Bottom Noise Panel Provision: None Double Baffle: No Baffle Location on Engine: Number 3 Cylinder Hose and Clamp Provided: Yes Drain Hose Length (mm): 360 Fuel Pump Type: Rotary Breather Provision: Yes Noise Isolator Provision: No
1	283767	Gasket, Push Rod Cover	1	
2	936158	Cover, Push Rod	1	
3	391759	Seal, Grommet	2	
4	390629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16
5	391861	Hose, Plain	1	
6	1930	Clamp, Spring Hose	1	

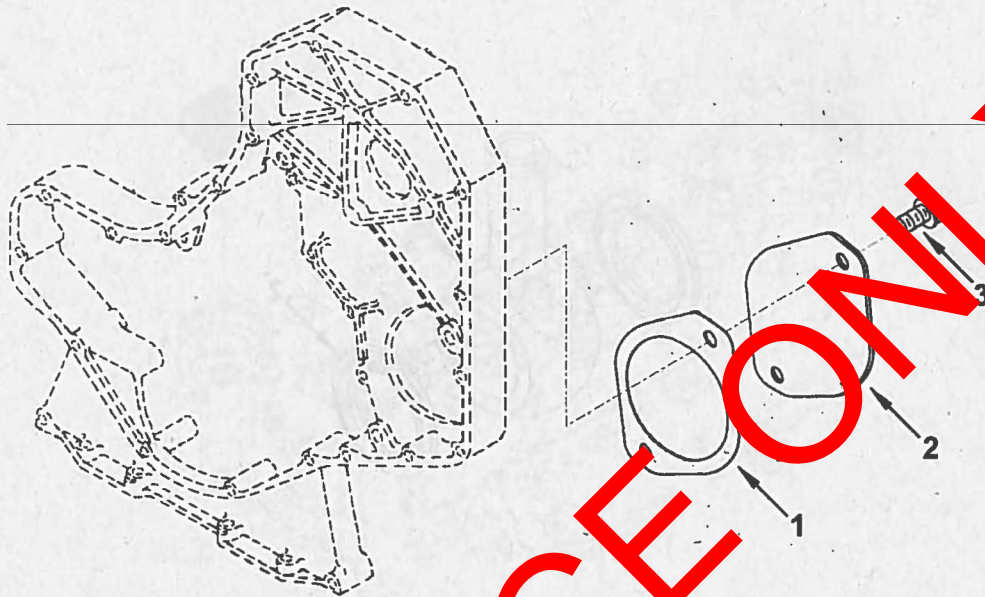


Ref No.	Part Number	Part Name	Req	Remarks
		CAM FOLLOWER COVER OPTION CM9040		Cam Follower Cover Hose Angle Off Breather (Deg): 45 Hose Location on Baffle: Bottom Noise Panel Provision: No Double Baffle: No Baffle Location on Engine: Number 3 Cylinder Hose and Clamp Provided: Yes Drain Hose Length (mm): 360 Fuel Pump Type: Inline Breather Provision: Yes Noise Isolator Provision: No
1	328167	Gasket, Push Rod Cover	1	
2	351188	Cover, Push Rod	1	
3	392815	Seal, Grommet	2	
4	30062	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16
5	318612	Hose, Plain	1	
6	30062	Clamp, Spring Hose	1	



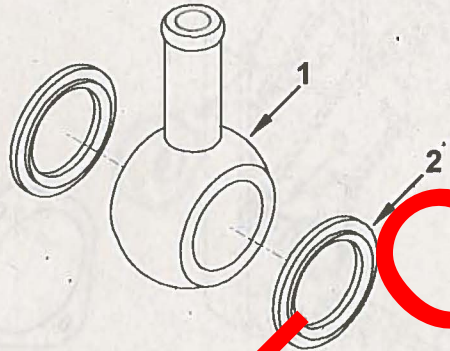
cm950ga

Ref No.	Part Number	Part Name	Req	Remarks
		CAM FOLLOWER COVER MTG OPTION CM9701		Cam Follower Cover MTG For Inline Fuel Pumps.
1	3928759	Seal, O-Ring	2	
2	3900629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16



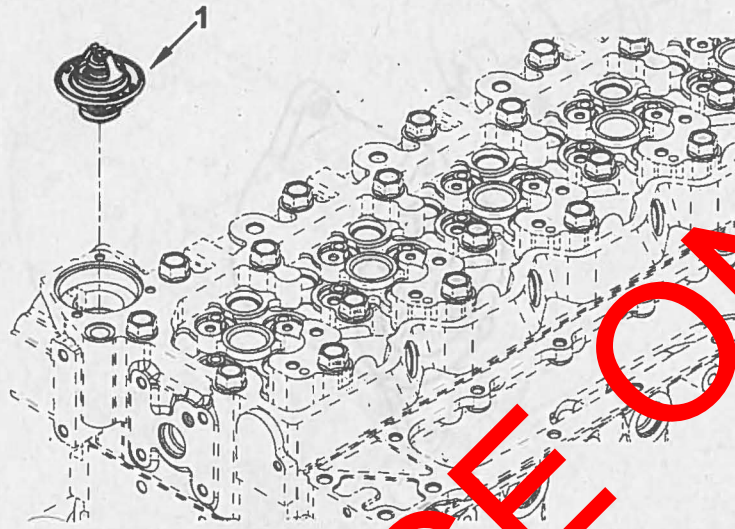
df900ga

Ref No.	Part Number	Part Name	Req	Remarks
		FRONT GEAR TRAIN ACC DRIVE OPTION DF9051		Front Gear Train Acc Drive Cover Plate Provided: Yes To be Selected When There is no Air Compressor, Raw Water Pump or Gear Driven Vacuum Pump Selected.
1	3929751	Gasket, Acc Drive Cover	1	
2	3914868	Plate, Cover	1	
3	3901249	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 25



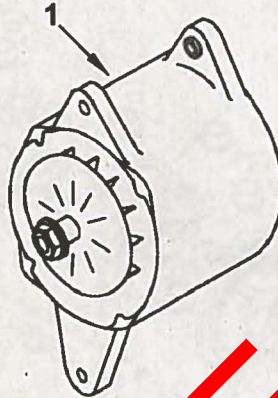
dl950gc

Ref No.	Part Number	Part Name	Req	Remarks
		Drain Location OPTION DL9028		Drain Location Drain Tube OD (mm): 7.90 Connection Type: Beadless Customer Connect Location: Fuel Pump - Outboard Restricted Fuel Pump Manufacturing/Model: Bosch A Nippondenso EP9 Zexel Hybrid A Attaches to Outboard Side of Pump. BZL may use Banjo Connector P/N 3355095 in Place of P/N 3911447.
1	3911447	Connector, Banjo	1	
2	3863915	Washer, Sealing	2	



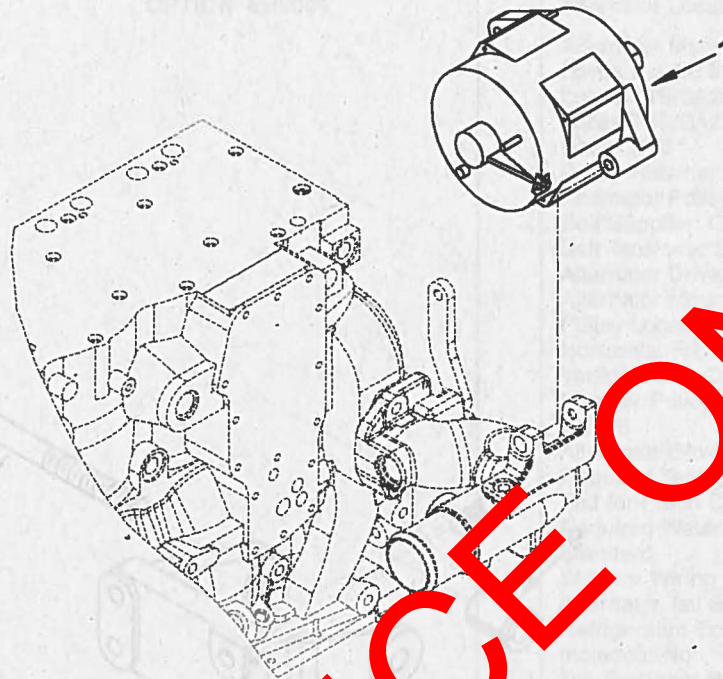
ec900za

Ref No.	Part Number	Part Name	Req	Remarks
1	3972071	Thermostat	1	Thermostat Deg C Thermostat Opens: 82 Number of Thermostats: 1 Thermostat Type: Jiggle-Pin Vented Non-Vented: Vented Requires By-Pass Housing: No Required Housing Bore Diameter (mm): 54.10 Low Gain Thermostat: No Thermostat Seat Type: Hard



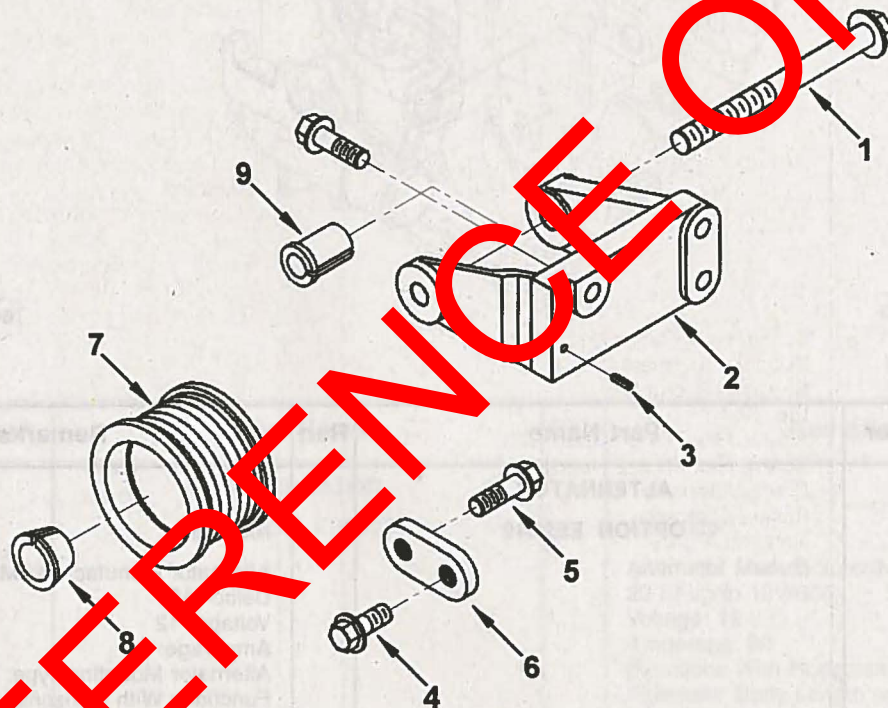
ee900gc

Ref No.	Part Number	Part Name	Req	Remarks
1	3016625	ALTERNATOR OPTION EE9002 Alternator	1	Alternator Alternator Manufacturer/Model: Delco Remy 20 SI up to 12V/60A Voltage: 12 Amperage: 60 Functions With Horizontal Oil Filter: No Alternator Body Length (mm): 143



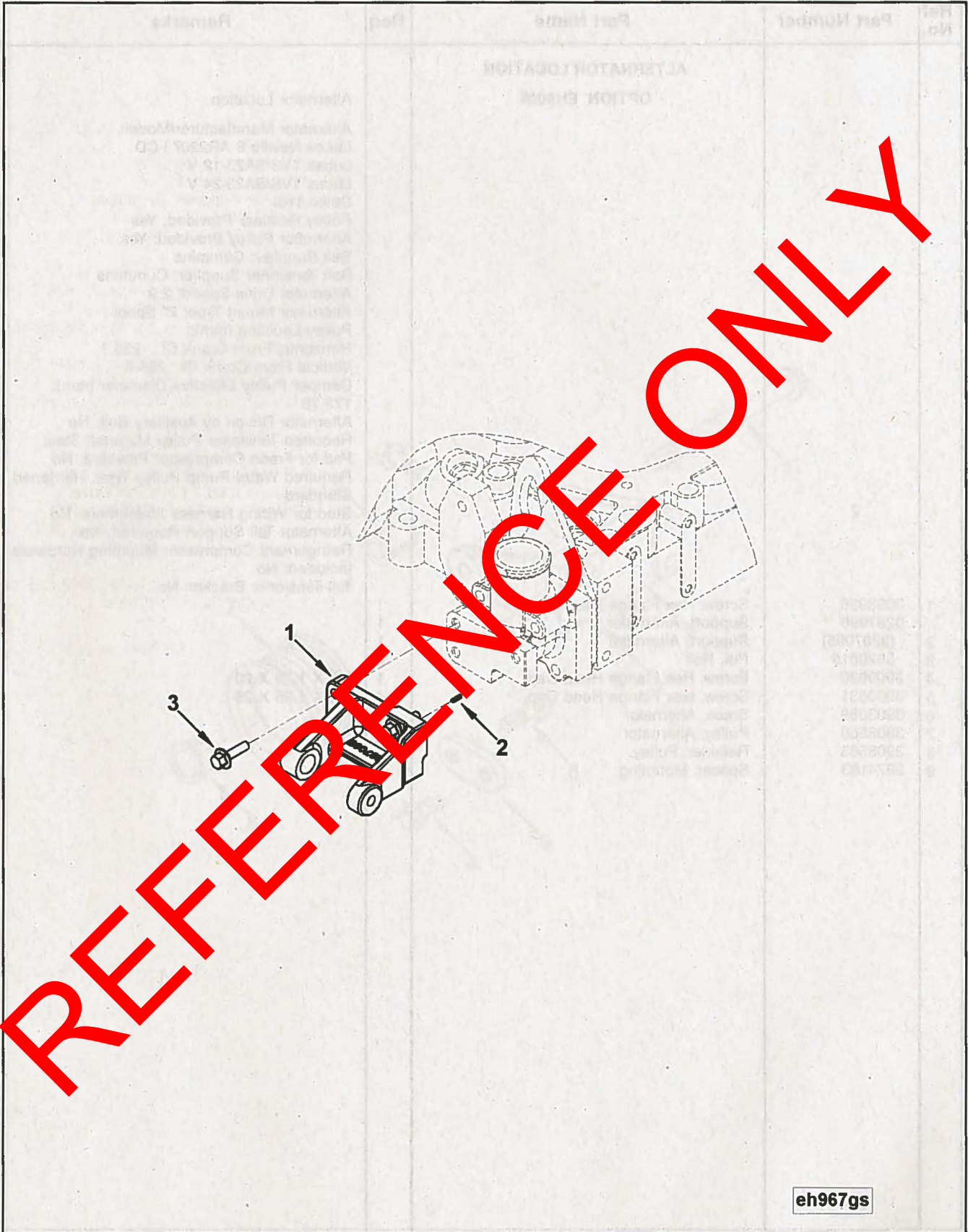
ee900zq

Ref No.	Part Number	Part Name	Req	Remarks
1	2972100	Alternator	1	Alternator Alternator Manufacturer/Model: Delco 11SI Voltage: 12 Amperage: 95 Alternator Mounting Type: 50.8 mm Spool Functions With Horizontal Oil Filter: Yes Alternator Length (mm): 151.9 Wire Harness Connection Description: M8 - Bat + M6 - GND Delphi Metripack Accessory Name Plate Brand: Cummins



eh963gl

Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR LOCATION OPTION EH9001		Alternator Location Alternator Manufacturer/Model: Leece Neville 8 AR2207 I-CD Lucas TVS/SA23-12 V Lucas TVS/SA23-24 V Delco 11SI Pulley Retainer Provided: Yes Alternator Pulley Provided: Yes Belt Supplier: Cummins Belt Tensioner Supplier: Cummins Alternator Drive Speed: 2.3 Alternator Mount Type: Sp Pulley Location: Horizontal From Crank CL: 236.1 Vertical From Crank CL: 256.6 Damper Pulley Effective Diameter (mm): 173.6 Alternator Driven by Auxiliary Belt: No Required Tensioner Pulley Material: Steel Pad for Freon Compressor Provided: No Required Water Pump Pulley Type: Hardened, Standard Stud for Wiring Harness Attachment: No Alternator Tail Support Required: No Refrigerant Compressor Mounting Hardware Included: No Tail Tensioner Bracket: No
1	3093936	Screw, Hex Flange Head Cap	1	
	3287096	Support, Alternator	1	
2	(3287095)	Support, Alternator	1	
3	3520815	Pin, Roll	2	
4	3900630	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 20
5	3900631	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 25
6	3903089	Brace, Alternator	1	
7	3908560	Pulley, Alternator	1	
8	3908563	Retainer, Pulley	1	
9	3974163	Space Mounting	1	



eh967gs

Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR LOCATION OPTION EH9012		Alternator Location Alternator Manufacturer/Model: Delco 11SI Pulley Retainer Provided: No Alternator Pulley Provided: No Belt Supplier: Customer Belt Tensioner Supplier: Cummins Alternator Mount Type: 2" Spool Damper Pulley Effective Diameter (mm): 173.76 Alternator Driven by Auxiliary Belt: No Required Tensioner Pulley Material: Steel Pad for Freon Compressor Mounted: No Required Water Pump Pulley Type: Hardened, Standard Stud for Mounting Harness Attachment: No Alternator Tail Support Required: No Refrigerant Compressor Mounting Hardware Included: No Tail Tensioner Bracket: No Brace Length for a Bosch K1/Delco 11SI Equals 71.76 mm With a no Offset (ref 3910924) for a 0.96:1 Ratio Fan Drive. Brace Length for a Bosch K1/Delco 11SI Equals 71.76 mm With a 23.73 Offset (Ref. none) for a 0.87:1 Ratio Fan Drive. Brace Length for a Bosch K1/Delco 11SI Equals 27.06 mm No Offset (Ref. 3903089) for a 1.1:1 or 1.35:1 Ratio Fan Drive.
1	3287096	Support, Alternator	1	
2	(3287095)	Support, Alternator	1	
2	3520815	Pin, Roll	2	
3	3900631	Screw, Hex Flange Head Cap	3	M8 X 1.25 X 25



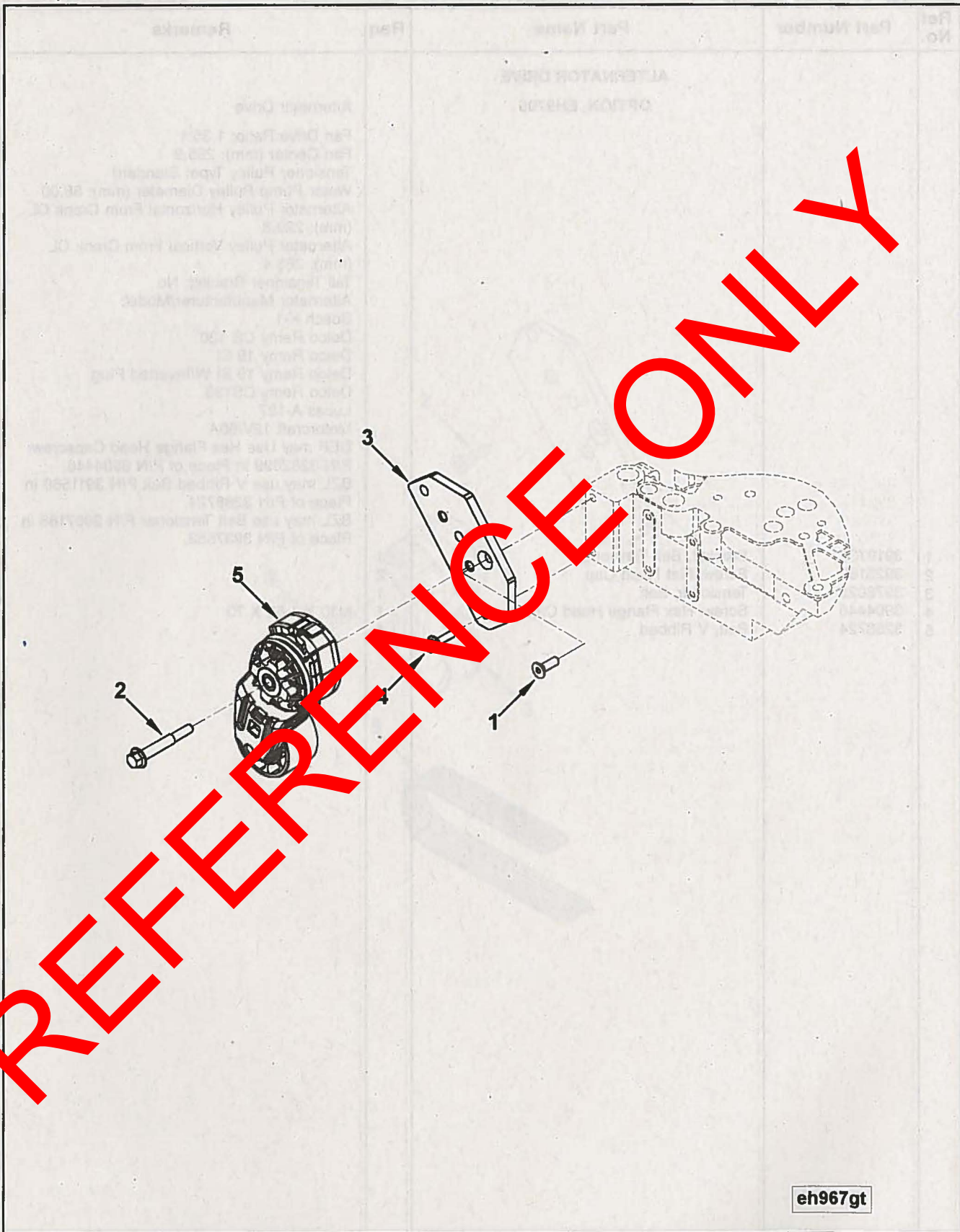
eh951gf

Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR LOCATION OPTION EH9029		Alternator Location Alternator Manufacturer/Model: Bosch N-1 up to 14V/110A Bosch N-1 up to 28V/80A Delco Remy 20 SI up to 12V/60A Delco Remy 20 SI up to 24V/50A Delco Remy 20 SI up to 24V/60A Delco Remy 22 SI12V/100A Delco Remy 22 SI12V/130A Delco Remy 22 SI12V/150A Delco Remy 22 SI24V/50A Pulley Retainer Provided: Yes Alternator Pulley Provided: Yes Belt Supplier: Cummins Belt Tensioner Supplier: Cummins Alternator Drive Speed: 2.9 Alternator Mount Type: 4" Hinge Damp Pulley Effective Diameter (mm): 173.76 Alternator Driven by Auxiliary Belt: No Required Tensioner Pulley Material: Steel Pad for Freon Compressor Provided: No Required Water Pump Pulley Type: Hardened, Standard Stud for Wiring Harness Attachment: No Alternator Tail Support Required: No Refrigerant Compressor Mounting Hardware Included: No Tail Tensioner Bracket: No DEP may use Alternator Pulley P/N 3284474 in Place of P/N 3918275. DEP may use Alternator Support P/N 3284120 in Place of P/N 3910923.
1	3052061	Screw, Hexagon Head Cap	1	1/2 - 13 X 1"
2	3900630	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 20
3	3900631	Screw, Hex Flange Head Cap	3	M8 X 1.25 X 25
4	3903105	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 150
5	3903210	Nut, Hexagon Flange	1	M12 X 1.75
6	3910923	Support, Alternator	1	
7	3910924	Bracket, Alternator	1	
8	3918275	Pulley, Alternator	1	



eh961go

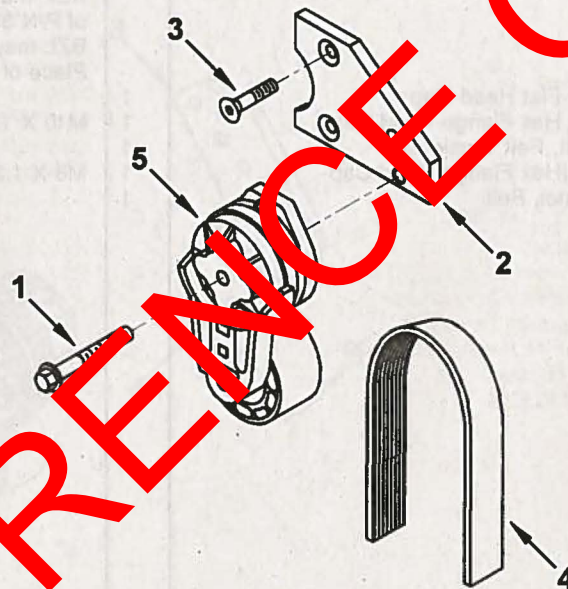
Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR DRIVE OPTION EH9705		Alternator Drive Fan Drive Ratio: 1.35:1 Fan Center (mm): 295.9 Tensioner Pulley Type: Standard Water Pump Pulley Diameter (mm): 83.00 Alternator Pulley Horizontal From Crank CL (mm): 229.8 Alternator Pulley Vertical From Crank CL (mm): 263.4 Tall Tensioner Bracket: No Alternator Manufacturer/Model: Bosch K-1 Delco Remy CS-130 Delco Remy 19-1 Delco Remy 19-1 S/W Inverted Plug Delco Remy CS-130 Lucas A-127 Motorcraft 12V/60A DEP may Use Hex Flange Head Capscrew P/N 3282699 in Place of P/N 3904446. BZL may use V Ribbed Belt P/N 3911560 in Place of P/N 3288724. BZL may use Belt Tensioner P/N 3967188 in Place of P/N 3937553.
1	3919736	Bracket, Belt Tensioner	1	
2	3925186	Screw, Flat Head Cap	2	
3	3978022	Tensioner, Belt	1	
4	3904446	Screw, Hex Flange Head Cap	1	
5	3288724	Belt, V Ribbed	1	M10 X 1.50 X 70



eh967gt

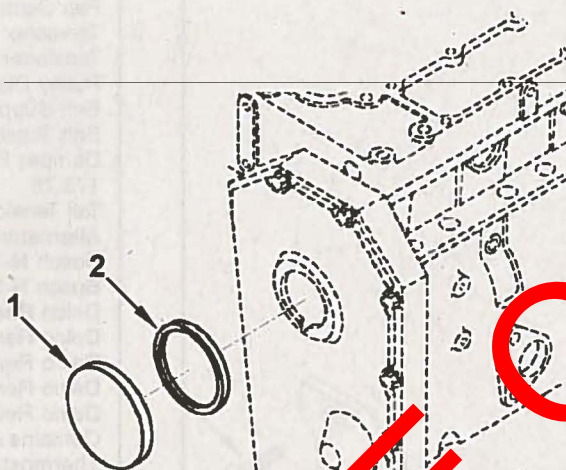
Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR DRIVE OPTION EH9731		Alternator Drive Fan Drive Ratio: 1.10:1 Fan Center (mm): 295.9 Tensioner Position On Bracket: Low Tensioner Pulley Type: Standard Water Pump Pulley Diameter (mm): 8.00 Belt Supplier: Customer Belt Tensioner Supplier: Cummins Damper Pulley Effective Diameter (mm): 173.76 Tall Tensioner Bracket No Alternator Manufacturer Model Bosch K-1 Delco Remy CS-30 Delco Remy 9SI Lucas A-127 DE may use Capscrew P/N 3282699 in place of P/N 390444 BZL may use Belt Tensioner P/N 3967188 in Place of P/N 3978022.
1	3925186	Screw, Flat Head Cap	1	
2	3904446	Screw, Hex Flange Head Cap	1	M10 X 1.50 X 70
3	3925207	Bracket, Belt Tensioner	1	
4	3900631	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 25
5	3978022	Tensioner, Belt	1	

REFERENCE ONLY



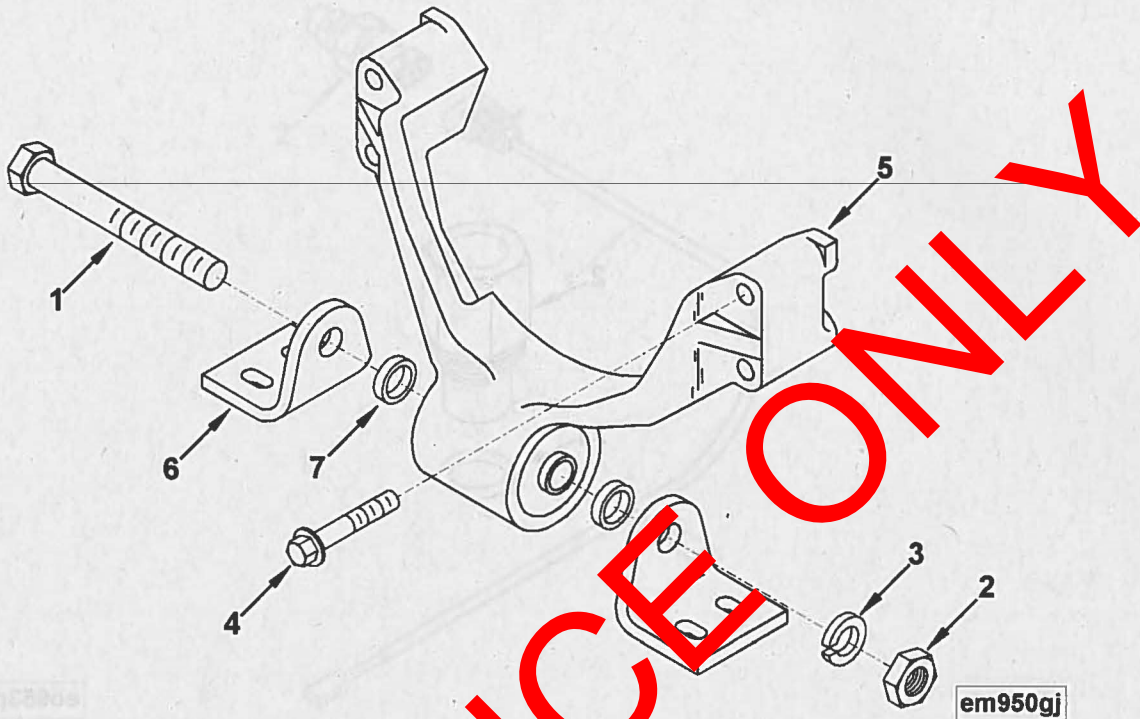
eh963ge

Ref No.	Part Number	Part Name	Req	Remarks
		ALTERNATOR DRIVE OPTION EH97030		Alternator Drive Fan Drive Ratio: 1.10:1 Fan Center (mm): 203.2 Tensioner Mounting Holes: Single S Tensioner Pulley Type: Standard Pulley Diameter (mm): 88.00 Belt Supplier: Cummins Belt Tensioner Supplier: Cummins Damper Pulley Effective Diameter (mm): 173.76 Tall Tensioner Bracket, No Alternator Manufacturer Model: Bosch N-1 Up To 12V/60A Bosch N-1 Up To 28V/80A Delco Remy 22 SI Up To 12V/60A Delco Remy 20 SI Up To 24V/60A Delco Remy 22 SI 12V/100A Delco Remy 22 SI 12V/130A Delco Remy 22 SI 24V/70A Contains Alignment Features for Vertical Thermostat Housings in TH 9001, TH 9037, and TH 9048. Can be Used With but not Align to Other Thermostat Housings. BZL may use V Ribbed Belt P/N 3921753 in Place of P/N 3288746. BZL may use Belt Tensioner P/N 3967188 in Place of P/N 3937553. M10 X 1.50 X 75
1	3282081	Screw, Hex Flange Head Cap	1	
2	3286908	Bracket, Belt Tensioner	1	
3	3925186	Screw, Flat Head Cap	2	
4	3288746	Belt, V Ribbed	1	
5	3978022	Tensioner, Belt	1	

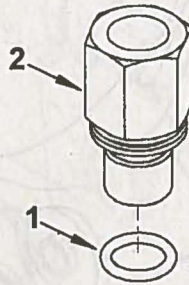


ei930gb

Ref No.	Part Number	Part Name	Req	Remarks
		TACHOMETER DRIVE OPTION EI9701		Tachometer Drive Mechanical Tachometer Drive Cover Mechanical Tachometer Drive Provision: No Oil Fill Location: Fuel Pump Side Exhaust Side Valve Cover None BZL may use Access Hole Cover P/N 3968355 in Place of P/N 3903463.
1	3903463	Cover, Access Hole	1	
2	3903475	Seal, Rectangular Ring	1	

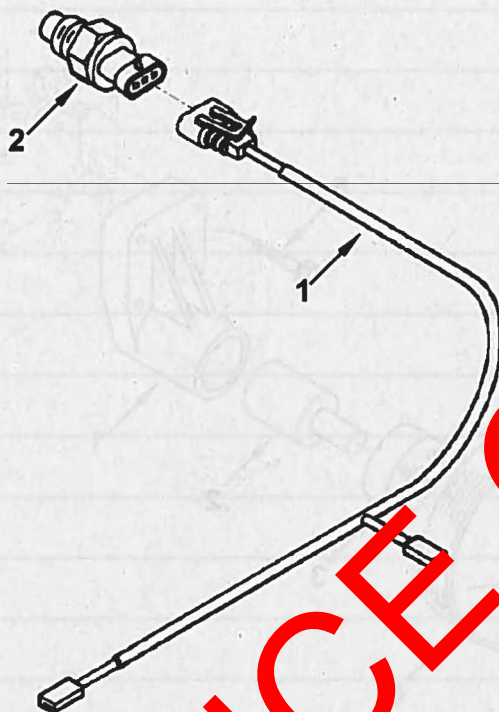


Ref No.	Part Number	Part Name	Req	Remarks
		FRONT ENGINE SUPPORT OPTION EM9108		Front Engine Support Required Block Mounting Pattern: 320 mm Spread Support Location: Front Mount Type: Double Threaded Mounting Holes: No Mounting Hole Size (mm): 11.89 X 22.23 Slot Max Damper Diameter (MM): 209.00 (8.23") Engine Mount Material: 30,175 Isolator Load Rating (lbs): 800
1	S 157 A	Screw, Hexagon Head Cap	1	3/4 - 10 X 6"
2	S 179	Nut, Heavy Hexagon Jam	1	3/4 - 10"
3	S 181	Washer, Lock	1	3/4"
4	368105	Screw, Hex Flange Head Cap	4	
5	1866	Support, Front Engine	1	
6	330675	Support, Front Engine	2	
7	391002	Spacer, Mounting	2	



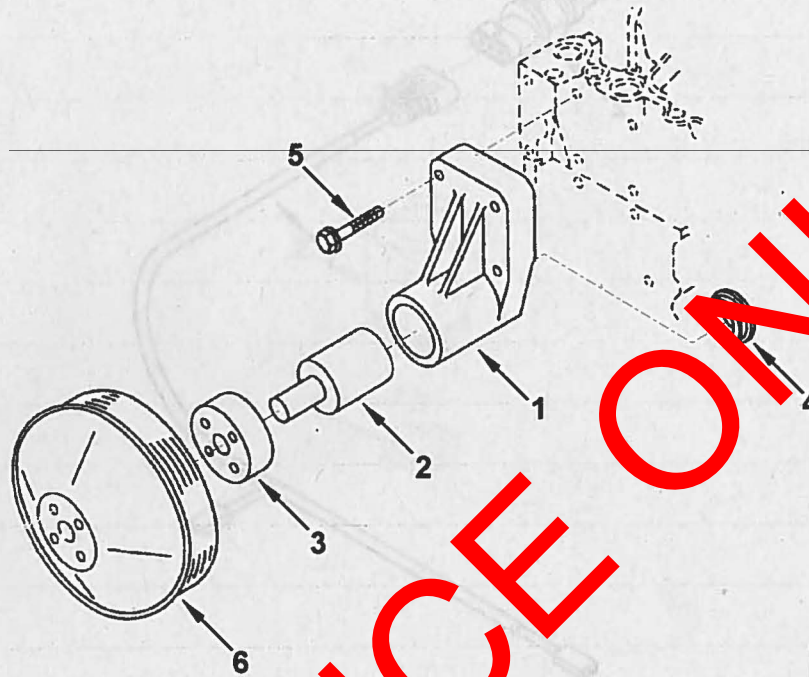
eo953gc

Ref No.	Part Number	Part Name	Req	Remarks
		OIL PRESSURE SENSOR OPTION EO9055		Oil Pressure Sensor Sensor Thread: 10 mm STORM Sensor Connection: Customer Supplied
1	3932302	Connector, Female	2	
	3678925	Seal O Ring	1	
2	(3932301)	Connector, Female	1	M10 X 1.00



eo940ga

Ref No.	Part Number	Part Name	Req	Remarks
		Thermo Switch OPTION EO 9703		Thermo Switch Thermo Dependent Switch Certification: 1991 Sensor Connection Type: Packard Fuel Pump To KSB: 75 mm Mounting tap Size: 1/2 - 14 NPTF KSB Harness Supplier: Cummins Temperature Sensor Mounting Location: Cylinder Head Front 1/2" Tapped Hole DEP may use Thermostat Switch P/N 3281988 in Place of P/N 3915945.
1	3918364	Harness, Wiring	1	
2	391864	Switch, Temperature	1	



fa901ga

Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE OPTION FA9012		Fan Drive Drive Hardware Supplier: Cummins Fan Drive Ratio: 1.35:1 Mounting Bolt Circle (mm): 50 Engine Fan Center (mm): 295.9 (11.65") Horizontal Offset: 0.0 Fan Hub Pulley Material: Spun Steel Required Damper Pulley Diameter (mm): 173.76 Bearing Design: Single Double Row Bearings Additional Fan Drive Type: Serpentine Fan Drive Pulley Diameter (mm): 128.71 Fan Clutch Type: Mechanical
1	390318	Support, Fan	1	
2	390218	Support, Fan	1	
3	390816	Shaft, Fan Drive	1	
4	390334	Hub, Fan	1	
5	3909887	Retainer, Shaft	1	
6	3928873	Screw, Hex Flange Head Cap	4	
7	3914458	Pulley, Fan	1	

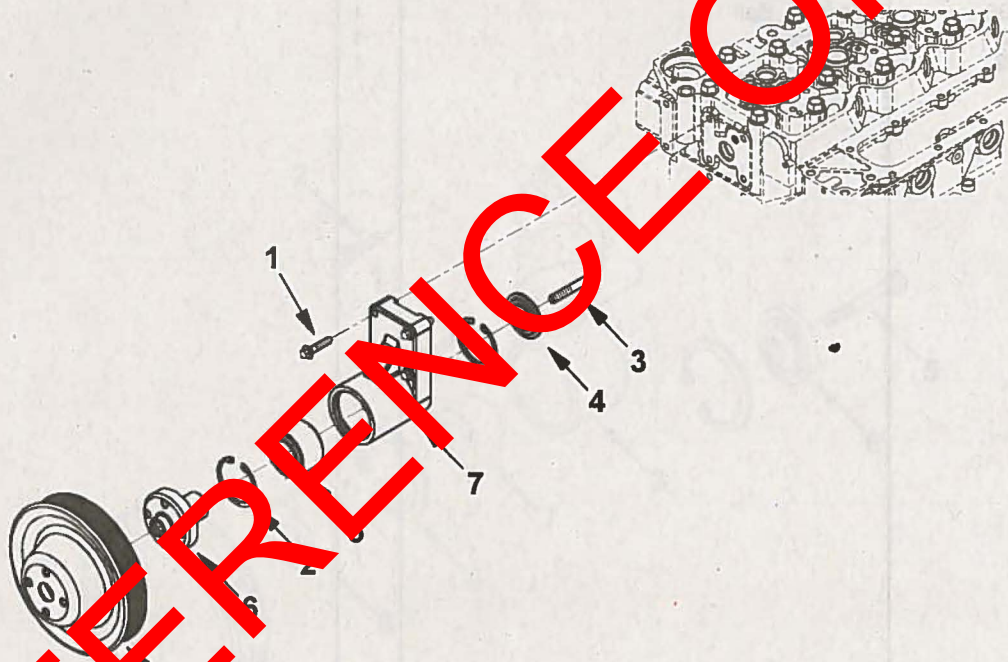
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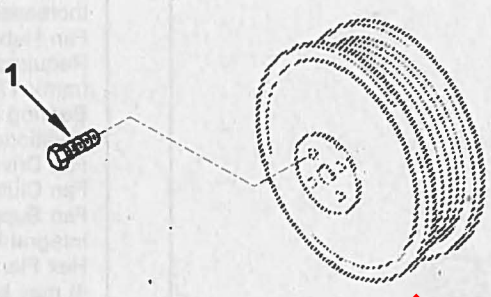
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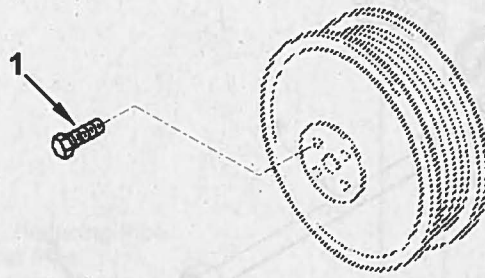
Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE OPTION FA9044		Fan Drive Component Supplier: Cummins Fan Drive Ratio: 1.10:1 Mounting Bolt Circle (mm): 60 Engine Fan Center (mm): 203.2 (8") Horizontal Offset: 49.0 Unique Characteristics: Increased Fan Weight Capability
1	3975555	Screw, Hex Flange Head Cap	1	
2	2830411	Screw, Hex Flange Head Cap	3	
	3285949	Support, Fan	1	
3	(3285946)	Support, Fan	1	
4	3035960	Ring, Retaining	2	
5	3907769	Screw, Hexagon Head Cap	1	M10 X 1.75 X 70
6	3923044	Retainer, Fan Hub	1	
7	3910739	Bearing, Ball	1	
8	3911924	Hub, Fan	1	
9	3914462	Pulley, Fan	1	



fa900za

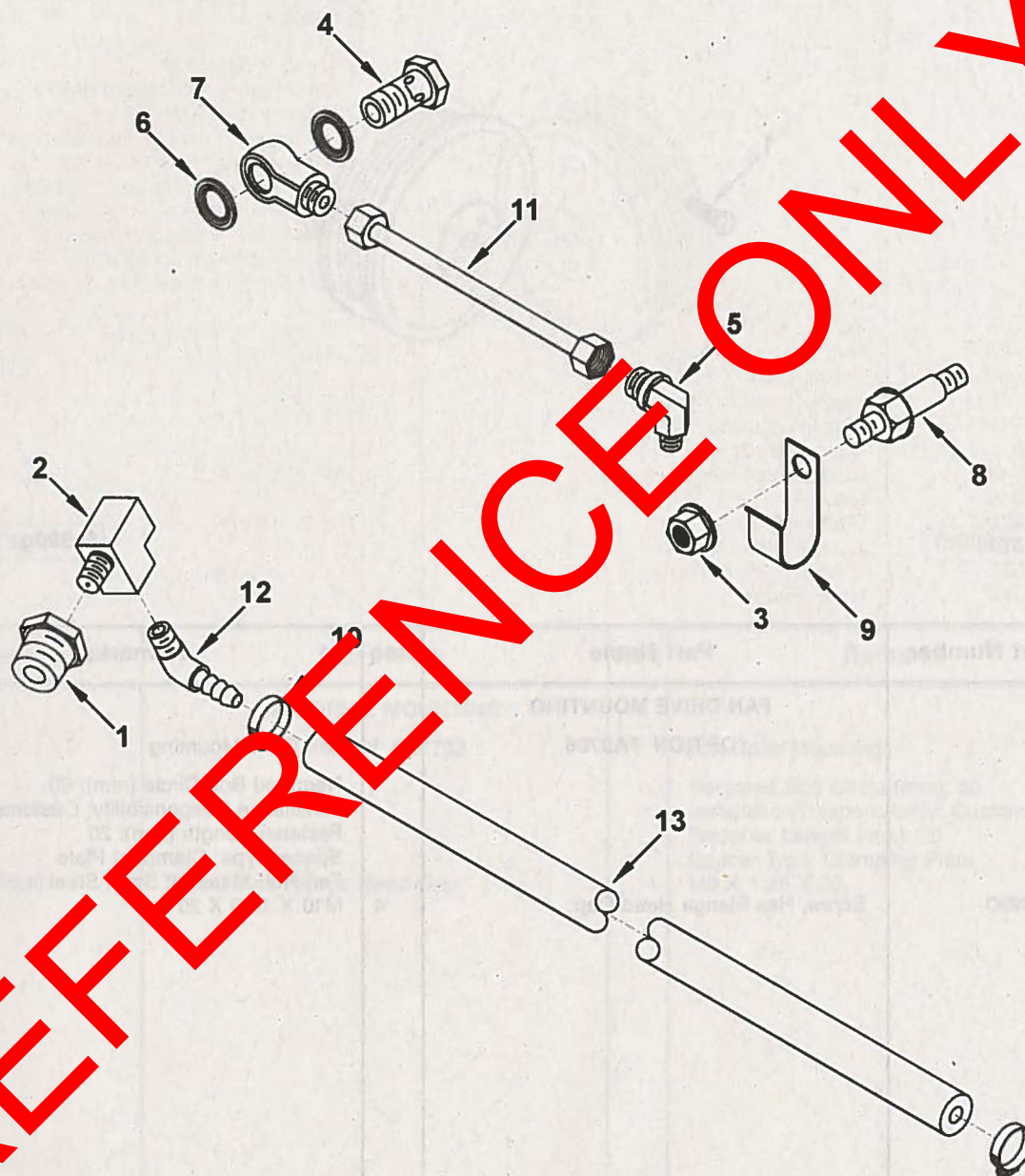
Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE OPTION FA9076		Fan Drive Drive Hardware Supplier: Cummins Fan Drive Ratio: 1.10:1 Mounting Bolt Circle (mm): 60 Engine Fan Center (mm): 295.9 (11.6") Horizontal Offset: 0.0 Unique Characteristics: Increased Fan Weight Capability Fan Hub Pulley Material: Spun Steel Required Damper Pulley Effective Diameter (mm): 173.76 Bearing Design: Single Double Row Bearings Additional Fan Drive Feature: Serpentine Fan Drive Pulley Diameter (mm): 157.96 Fan Clutch Type: Mechanical Fan Support Mounted Location: Low Head Integral Refrigerant Compressor Mounting: No Hex Flange Head Capscrew P/N 3912141 (qty 4) may be substituted for P/N 3928873.
1	3928873	Screw, Hex Flange Head Cap	1	
	3913433	Support, Fan	1	
2	3035960	Ring, Retaining	2	
3	3907769	Screw, Hexagon Head Cap	1	M10 X 1.75 X 70
4	3923044	Retainer, Fan Hub	1	
5	3910739	Bearing, Ball	1	
6	3911924	Hub, Fan	1	
7	(3913434)	Support, Fan	1	
8	3914462	Pulley, Fan	1	

				
fa900gz				
Ref No.	Part Number	Part Name	Req	Remarks
1	3900630	FAN DRIVE MOUNTING OPTION FA9702 Screw, Hex Flange Head Cap	4	Fan Drive Mounting Required Bolt Circle (mm): 50 Installation Responsibility: Customer Fastener Length (mm): 20 Spacer Type: Clamping Plate M8 X 1.25 X 20



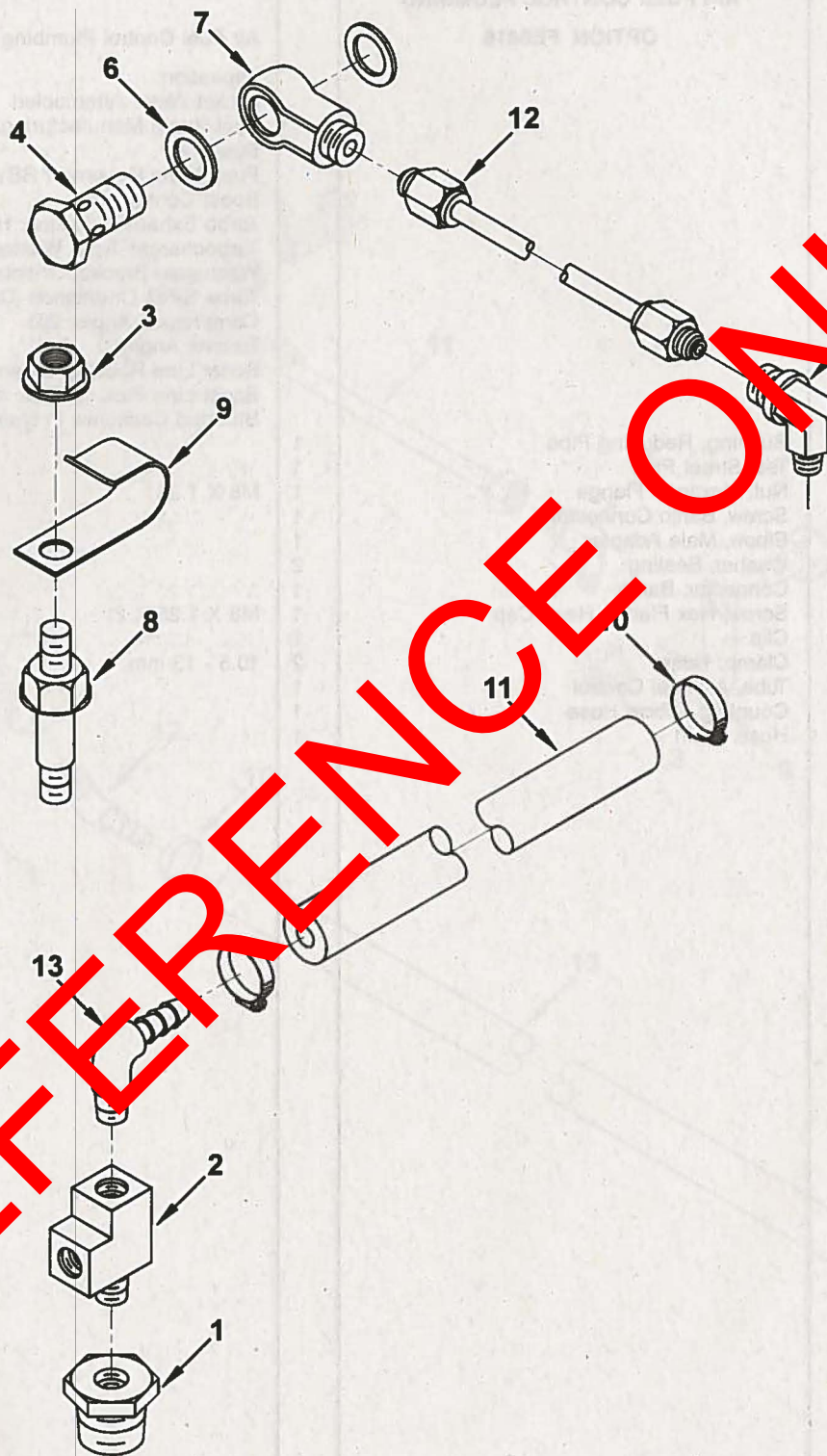
fa900gz

Ref No.	Part Number	Part Name	Req	Remarks
1	3903990	FAN DRIVE MOUNTING OPTION FA9706 New, Hex Flange Head Cap	4	Fan Drive Mounting Required Bolt Circle (mm): 60 Installation Responsibility: Customer Fastener Length (mm): 20 Spacer Type: Clamping Plate Fan Hub Material: Spun Steel M10 X 1.50 X 20



fe952gn

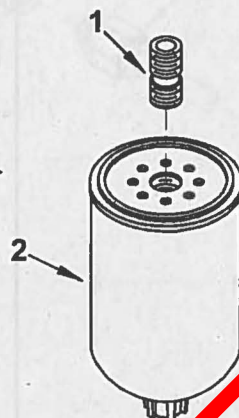
Ref No.	Part Number	Part Name	Req	Remarks
		AIR FUEL CONTROL PLUMBING OPTION FE9816		Air Fuel Control Plumbing Aspiration: Jacket Water Aftercooled Fuel Pump Manufacturing/Model: Bosch A Fuel Pump Governor: RSV Boost Control: Yes Turbo Exhaust Location: HMFO Turbocharger Type: Wastegate Wastegate Bracket Orientation: 30 Deg up Turbo SPIG Orientation: (Deg) 180 Compressor Angle: 201 Turbine Angle: Boost Line Routing: External Boost Line Fitting size: 1/2" NPTF Studded Capscrew in Number 4 Valve Cover.
1	S 931 C	Bushing, Reducing Pipe	1	
2	3282406	Tee, Street Pipe	1	
3	3900589	Nut, Hexagon Flange	1	M8 X 1.25
4	3903035	Screw, Banjo Connector	1	
5	3910265	Elbow, Male Adapter	1	
6	3963983	Washer, Sealing	2	
7	3990881	Connector, Banjo	1	
8	3920344	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 21
9	3920348	Clip	1	
10	3914420	Clamp, Hose	1	10.5 - 13 mm
11	3991512	Tube, Air Fuel Control	1	
12	3927317	Coupling, Elbow Hose	1	
13	3991042	Hose, Plain	1	



REFERENCE ONLY

fe954gi

Ref No.	Part Number	Part Name	Req	Remarks
		AIR FUEL CONTROL PLUMBING		
		OPTION FE9819		
				Air Fuel Control Plumbing
				Aspiration:
				Charge Air Cooled
				Turbocharged
				Fuel Pump Manufacturing/Model: Bosch A
				Fuel Pump Governor: RSV
				Boost Control: Yes
				Turbo Exhaust Location: HMFO
				Turbocharger Type: Wastegate
				Wastegate Bracket Orientation: 30 Deg up
				Turbo SPIG Orientation (Deg): 180
				Compressor Angle: 201
				Turbine Angle:
				Boost Line Routing: External
				Boost Line Pipe up size: 1/2" NPTF
1	S 931 C	Bushing, Reducing Pipe	1	
2	3282406	Tee, Street Pipe	1	
3	3900589	Nut, Hexagon Flange	1	M8 X 1.25
4	3903035	Screw, Banjo Connector	1	
5	3910265	Elbow, Male Adapter	1	
6	3963983	Washer, Sealing	2	
7	3990881	Connector, Banjo	1	
8	3920344	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 21
9	3920348	Clip	1	
10	3914420	Clamp, Hose	2	0.5 - 13 mm
11	3991032	Hose, Plain	1	
12	3991512	Tube, Air Fuel Control	1	
13	3927317	Coupling, Elbow Hose	1	

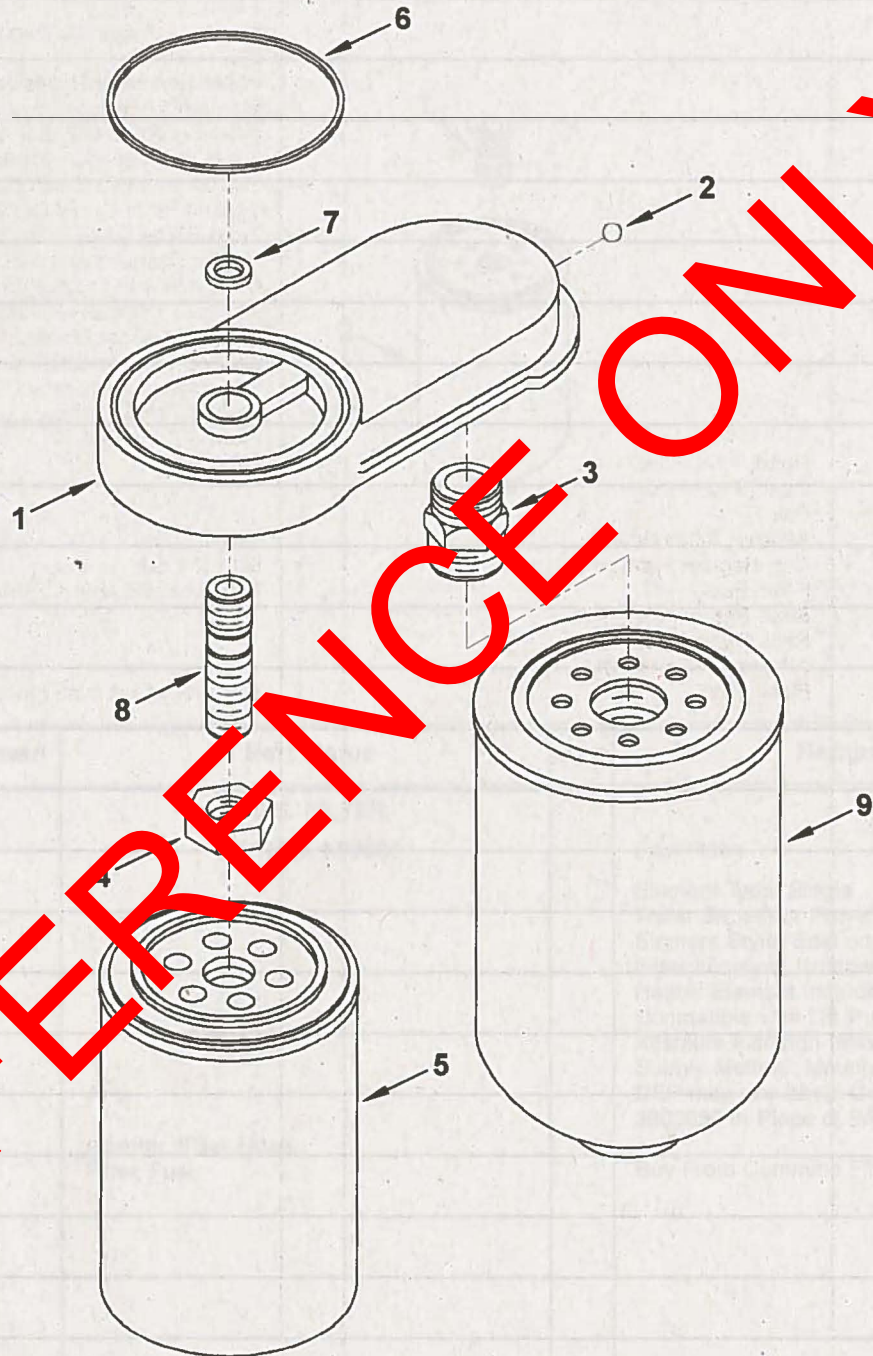


ff954gu

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL FILTER OPTION FF 003		Fuel Filter Element Type: Single Water Separator Provision: Yes Element Style: Spin on Filter Location: Number 4 Cylinder Heater Element Included: No Compatible with Lift Pump: Yes Absolute Filtration (microns): 25 Supply Method: Mounted DEP may use Banjo Connector Screw P/N 3903035 in Place of P/N 3905860.
1	3925954	Adapter, Filter Head	1	
2	(3986583)	Filter, Fuel	1	Buy From Cummins Filtration

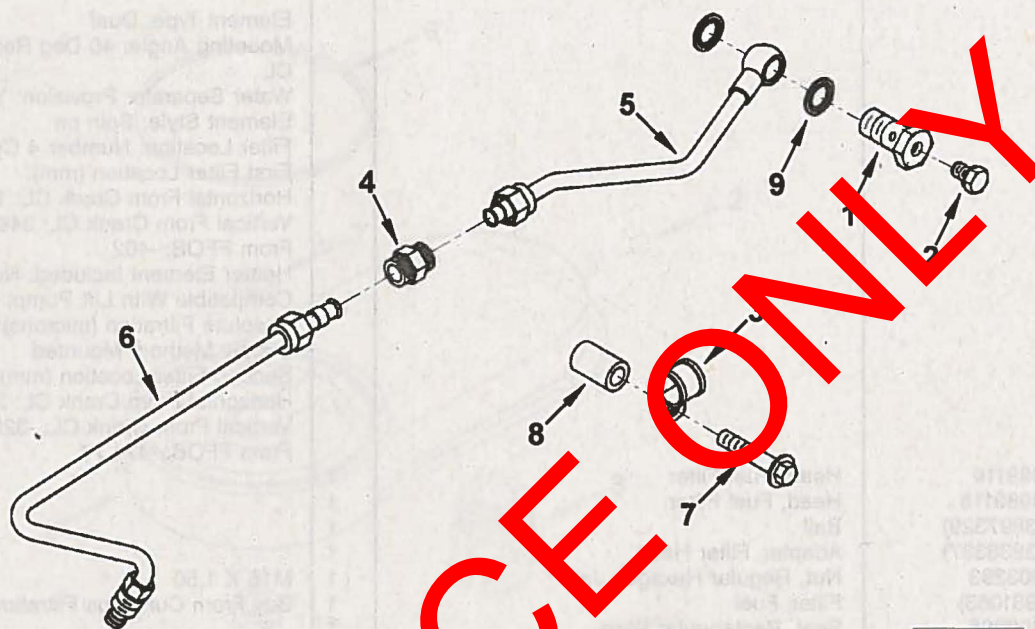
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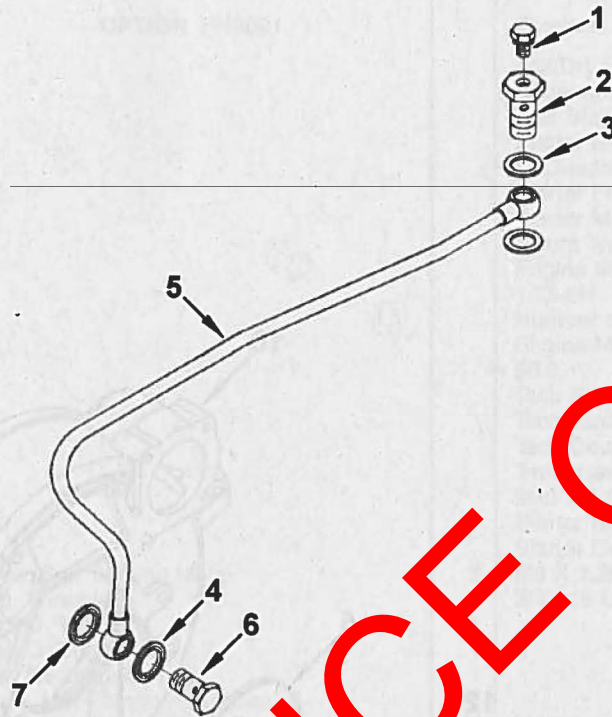
ff958gp

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL FILTER OPTION FF9007		Fuel Filter Element Type: Dual Mounting Angle: 40 Deg Rearward of Crank CL Water Separator Provision: Yes Element Style: Spin on Filter Location: Number 4 Cylinder First Filter Location (mm): Horizontal From Crank CL: 158 Vertical From Crank CL: -18.75 From FFOB: -402 Heater Element Included: No Compatible With E-Num: Yes Absolute Filtration (microns): 25 Supply Method: Mounted Second Filter Location (mm): Horizontal From Crank CL: 219.07 Vertical From Crank CL: -328.25 From FFOB: -14.77
	4989116	Head, Fuel Filter	1	
1	4989115	Head, Fuel Filter	1	
2	(3897329)	Ball	1	
3	(3936337)	Adapter, Filter Head	1	
4	3903293	Nut, Regular Hexagon Jam	1	M 6 X 1.50
5	(3931063)	Filter, Fuel	1	Buy From Cummins Filtration
6	4980085	Seal, Rectangular Ring	1	
7	3906695	Seal, Rectangular Ring	1	
8	3925955	Adapter, Filter Head	1	
9	(3930942)	Filter, Fuel	1	Buy From Cummins Filtration



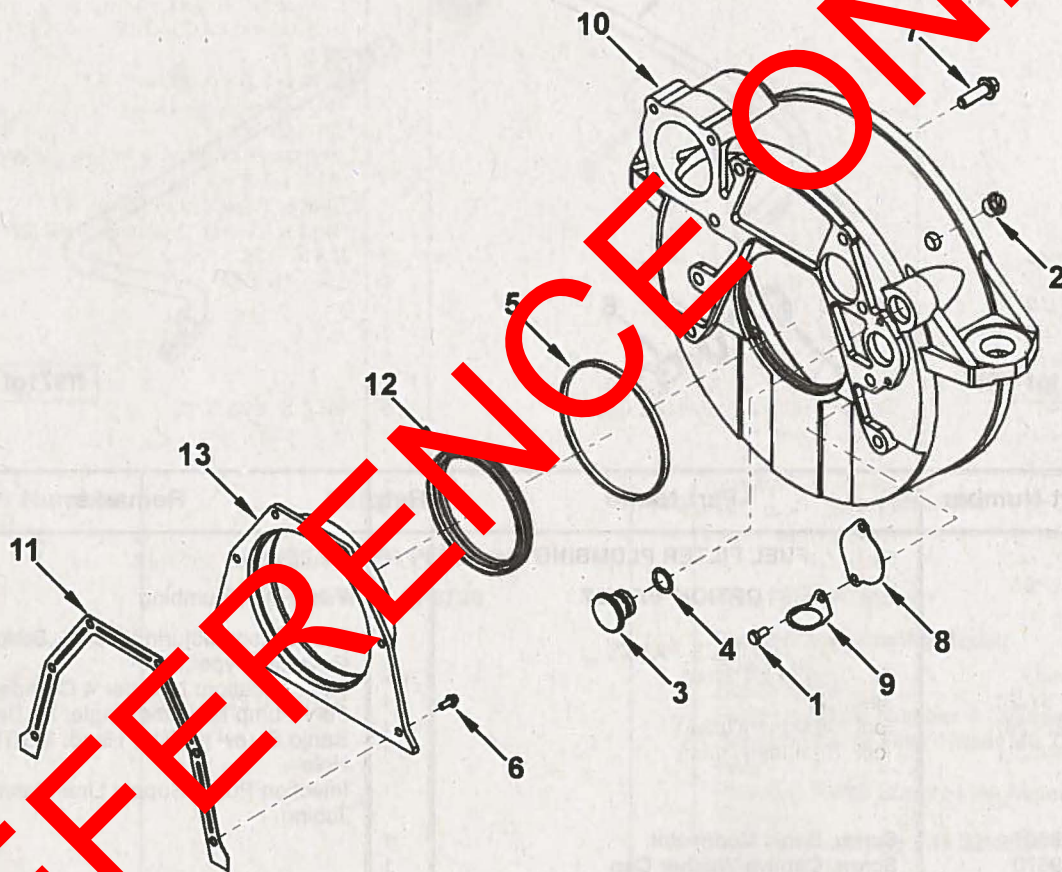
ff971gj

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL FILTER PLUMBING OPTION FF9736		Fuel Filter Plumbing Pump Manufacturing/Model: Bosch VE Bosch VP14 Filter Location: Number 4 Cylinder Banjo Screw to Filter Head: M6 Threaded Hole Injection Pump Supply Line Material: Steel Tubing DEP may use Clip P/N 3282059 in Place of P/N 3914711.
1	3905160	Screw, Banjo Connector	1	
2	3911446	Screw, Banjo Connector	1	
3	393957	Screw, Captive Washer Cap	1	
4	3282059	Clip	1	
5	(3918640)	Tube, Fuel Supply	1	
6	3908985	Union, Male	1	
7	3908988	Tube, Fuel Supply	1	
8	3918641	Tube, Fuel Supply	1	
9	3928873	Screw, Hex Flange Head Cap	1	
	3929526	Spacer, Mounting	1	
	3963983	Washer, Sealing	2	



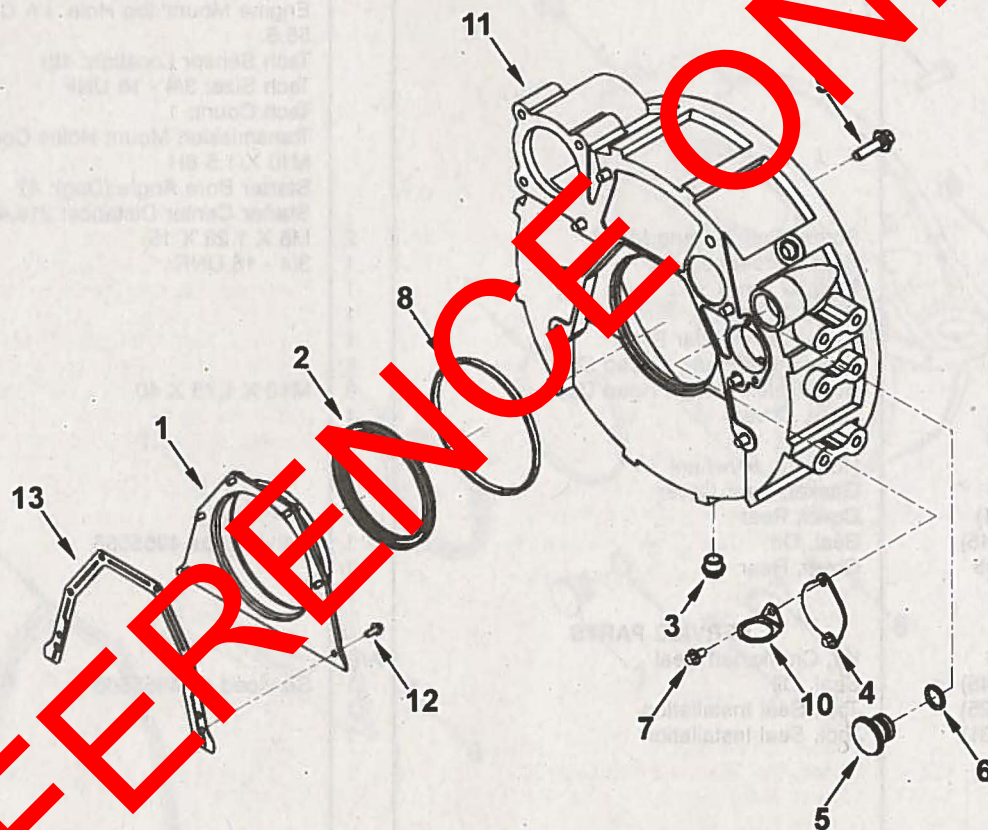
ff971gi

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL FILTER PLUMBING OPTION FF9797		
				Fuel Filter Plumbing Pump Manufacturing/Model: Bosch A Governor Type: RSV Filter Location: Number 4 Cylinder Fuel Pump Mounted Angle: 35 Deg Banjo Screw to Filter Head: M6 Threaded Hole Injection Pump Supply Line Material: Steel Tubing
1	3905860	Screw, Banjo Connector	1	
2	3930570	Screw, Captive Washer Cap	1	
3	311446	Screw, Banjo Connector	1	
4	333982	Washer, Sealing	2	
5	386358	Washer, Sealing	1	
6	0363	Tube, Fuel Supply	1	
7	024725	Screw, Banjo Connector	1	
		Washer, Sealing	1	



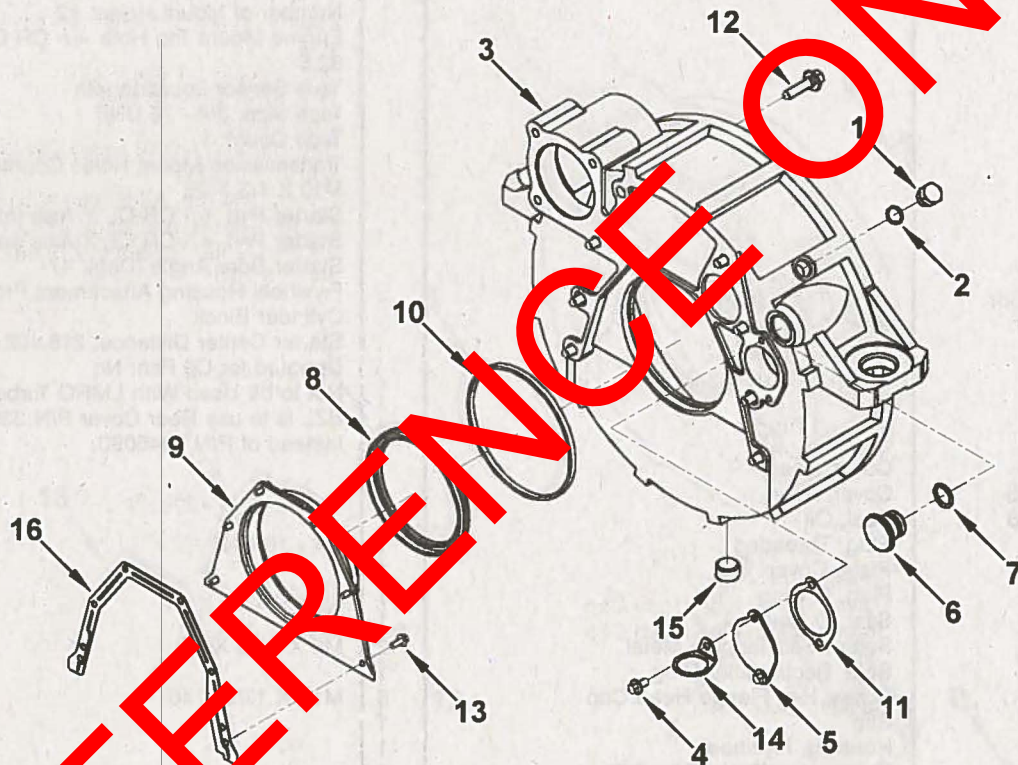
fh954gb

Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL HOUSING OPTION FH9001		Flywheel Housing Wet/Dry Clutch: Dry Housing Material: Aluminum SAE Size or Type: SAE 3 Starter Mount SAE: SAE #1 - 3 Bol 90 Deg St Quadrant: 1st Starter Pad Offset from RFOB (mm): 0.00 Starter Mounting Hole Diameter (mm): 28.9 Mount Type: Arm Engine Mounting Hole Dimension: M12 X 1.75-6H Number of Mount Holes: 2 Engine Mounting Hole +/- CR CL (mm): 56.8 Tach Sensor Location: 4th Tach Size: 3/4 - 16 UNF Tach Count: 1 Transmission Mount Holes Count/Thread: 12 - M10 - 1.5 6H Starter Bolt Angle (Deg): 47 Starter Center Distance: 216.407
1	3912072	Screw, Self Tapping Metal	2	M8 X 1.25 X 15
2	3904181	Plug, Threaded	1	3/4 - 16 UNF
3	3910248	Plug, O Ring	1	
4	3910260	Seal, O Ring	1	
5	3912473	Seal, Rectangular Ring	1	
6	3991306	Screw, Hex Flange Head Cap	6	
7	3920447	Screw, Hex Flange Head Cap	8	M12 X 1.75 X 40
8	3925234	Plate, Cover	1	
9	3928989	Clip	1	
10	3931714	Housing, Flywheel	1	
11	3938159	Gasket, Rear Cover	1	
	(4989121)	Cover, Rear	1	
12	(3973745)	Seal, Oil	1	Serviced as 4955566
13	3936895	Cover, Rear	1	
		SERVICE PARTS		
	4955566	Kr, Crank Shaft Seal	A/R	
12	(3973745)	Seal, Oil	1	Serviced as 4955566
	(4089425)	Tool, Seal Installation	1	
	(4940231)	Tool, Seal Installation	1	



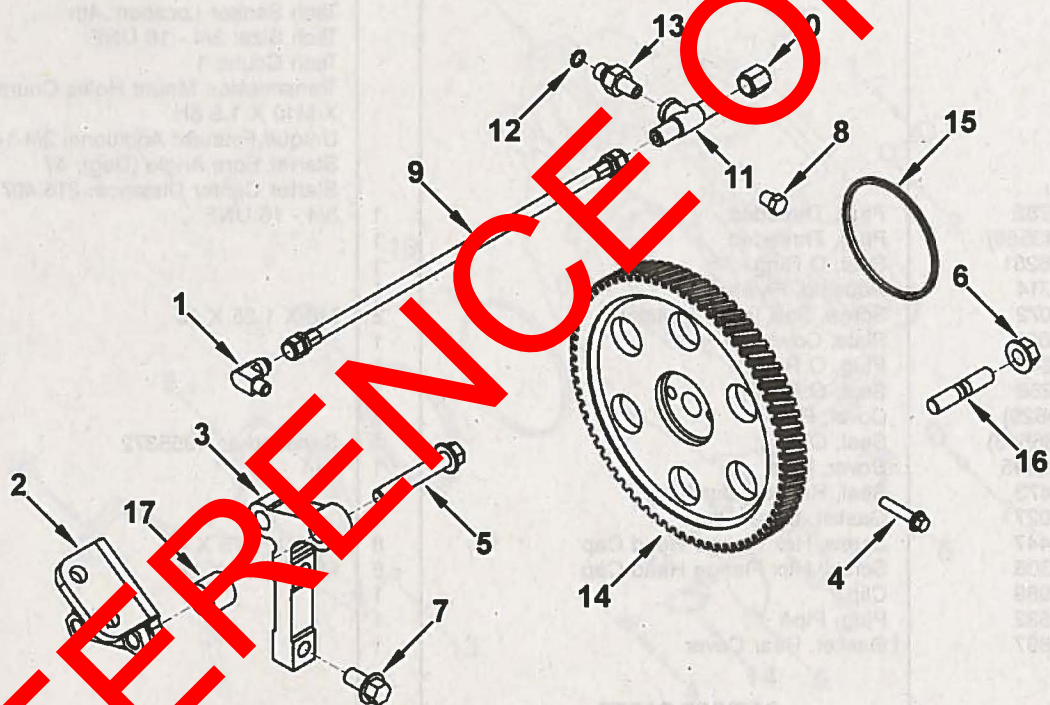
fh959gi

Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL HOUSING OPTION FH9002		Flywheel Housing Wet/Dry Clutch: Dry Housing Material: Aluminum SAE Size or Type: SAE 3 Starter Mount SAE: SAE #1 - 3 Bolt 90 Deg Starter Mount Thread Type: Metric St Quadrant: 1st Starter Pad Offset from RFOB (mm): 0.0 Starter Mounting Hole Diameter (mm): 88.90 Mount Type: Pad Engine Mounting Hole Dimension M12 X 1.75-6H Number of Mounting Holes: 2 Engine Mounting Hole +/- CR CL (mm): 82.5 Tach Sensor Location: 4th Tach Size: 3/4 - 16 UNF Tach Count: 1 Transmission Mount Holes Count/Thread: 12 - M10 X 1.5 X 25 Starter Pad +/- CR CL Y Axis (mm): 147.31 Starter Pad +/- CR CL X Axis (mm): 158.53 Starter Bore Angle (Deg): 47 Flywheel Housing Attachment Provision: Cylinder Block Starter Center Distance: 216.407 Doweled for Oil Pan: No Not to be Used With LMRO Turbo Locations. BZL is to use Rear Cover P/N 3357844 Instead of P/N 3946090.
1	3357844	Cover, Rear	1	
2	3936895	Cover, Rear	1	
3	3970548	Seal, Oil	1	
4	3904181	Plug, Threaded	1	3/4 - 16 UNF
5	3908095	Plate, Cover	1	
6	3910248	Plug, O Ring	1	
7	3910260	Seal, O Ring	1	
8	3912072	Screw, Self Tapping Metal	2	M8 X 1.25 X 15
9	3912473	Seal, Rectangular Ring	1	
10	3920447	Screw, Hex Flange Head Cap	8	M12 X 1.75 X 40
11	3928989	Clip	1	
12	3937426	Housing, Flywheel	1	
13	3991306	Screw, Hex Flange Head Cap	6	
	4947667	Gasket, Rear Cover	1	
		SERVICE PARTS		
4	9342	Kit, Crankshaft Seal	A/R	
2	3908098	Seal, Oil	1	
	(3908099)	Tool, Seal Installation	1	
	108942	Tool, Seal Installation	1	
	(1089431)	Tool, Seal Installation	1	



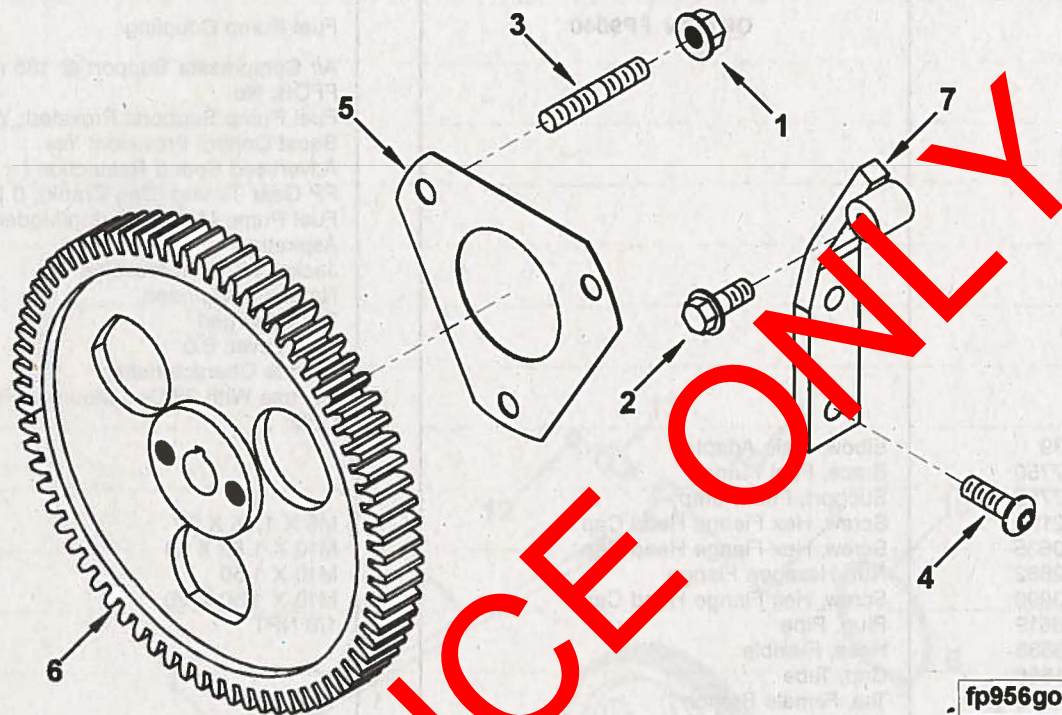
fh959gj

Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL HOUSING		
		OPTION FH9009		
				Flywheel Housing
				Wet/Dry Clutch: Wet
				Housing Material: Aluminum
				SAE Size or Type: SAE 3
				Starter Mount SAE: SAE #1 - 3 Bolt 90 Deg
				St Quadrant: 1st
				Starter Pad Offset From RFOB (mm): 0.00
				Starter Mounting Hole Diameter (mm): 8.9
				Mount Type: Arm
				Engine Mounting Hole Dimension: M12 X 1.75-6H
				# Mount Holes: 2
				Engine Mounting Hole CR CL (mm): 56.8
				Tach Sensor Location: 4th
				Tach Size: 3/4-16 UNF
				Tach Count: 1
				Transmission Mount Holes Count/Thread: 12 X M10 X 1.5 UNF
				Unique Feature: Additional 3/4-14 Teflon Plug
				Starter Bore Angle (Deg): 47
				Starter Center Distance: 216.407
				3/4-16 UNF
1	3045782 (3043556)	Plug, Threaded	1	
2	3046201	Plug, Threaded	1	
3	3931714	Seal, O Ring	1	
4	3912072	Housing, Flywheel	1	
5	3908095	Screw, Self Tapping Metal	2	M8 X 1.25 X 15
6	3910248	Plate, Cover	1	
7	3910260	Plug, O Ring	1	
	3910260	Seal, O Ring	1	
	(3910620)	Cover, Rear	1	
8	(4936646)	Seal, Oil	1	Serviced as 4955372
9	3936895	Cover, Rear	1	
10	3912473	Seal, Rectangular Plug	1	
11	3936027	Gasket, Cover Plate	1	
12	3920447	Screw, Hex Flange Head Cap	8	M12 X 1.75 X 40
13	3991306	Screw, Hex Flange Head Cap	6	M6 X 1.00 X 16
14	3928989	Clamp	1	
15	4933532	Plug, Pipe	1	
16	4947667	Gasket, Rear Cover	1	
		SERVICE PARTS		
8	4955372 (4936646)	Kit, Rear Crank Seal	A/R	
	(3914325)	Seal, Oil	1	Serviced as 4955372
	(3909400)	Tool, Seal Installation	1	
		Tool, Seal Installation	1	



fp957gr

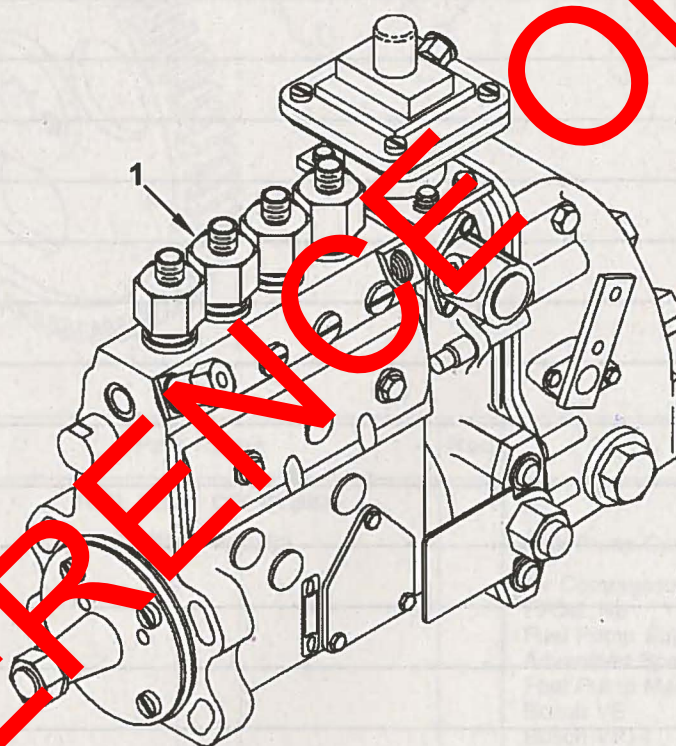
Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PUMP COUPLING OPTION FP9040		Fuel Pump Coupling Air Compressor Support @ 185 mm From FFOB: No Fuel Pump Supports Provided: Yes Boost Control Provision: Yes Advertised Speed Restriction (RPM): None FP Gear Timing (Deg Crank): 0 Deg Retarded Fuel Pump Manufacturing/Model: Bosch A Aspiration: Jacket Water Aftercooled Naturally Aspirated Turbocharged NOx Level: 6.0 Unique Characteristics: For use With 35 deg Mounted Fuel Pumps Only.
1	68139	Elbow, Male Adapter	1	
2	3287750	Brace, Fuel Pump	1	
3	3287752	Support, Fuel Pump	1	
4	3902114	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 30
5	3900635	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 60
6	3902662	Nut, Hexagon Flange	4	M10 X 1.50
7	3903990	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 20
8	3906619	Plug, Pipe	1	1/8" NPT
9	3918536	Hose, Flexible	1	
10	3921556	Cap, Tube	1	
11	3924346	Tee, Female Branch	1	
	3932321	Connector, Male	1	
12	3678925	Seal, O Ring	1	M10 X 1.00
13	(3932320)	Connector, Male	1	
14	3934636	Gear, Fuel Pump	1	
15	3969697	Seal, O Ring	1	
16	3937123	Stud	4	
17	3962431	Spacer, Mounting	2	



Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PUMP COUPLING OPTION FP9702		Fuel Pump Coupling Air Compressor Support @ 185 mm From FFOB: No Fuel Pump Supports Provided: Yes Advertised Speed Restriction (< RPM): None Fuel Pump Manufacturing/Model: Bosch VE Bosch VP14 Aspiration: Turbocharged Jacket Water Aftercooled Charge Air Cooled NOx Level: 6.0 M8 X 1.25 M8 X 1.25 X 20
1	3900139	Nut, Hexagon Flange	3	
2	390630	Screw, Hex Flange Head Cap	1	
	3902501	Stud	3	
4	3928231	Screw, Round Head Cap	2	
5	3939355	Gasket, Fuel Pump	1	
6	4932713	Gear, Fuel Pump	1	
7	3905313	Brace, Fuel Pump	1	

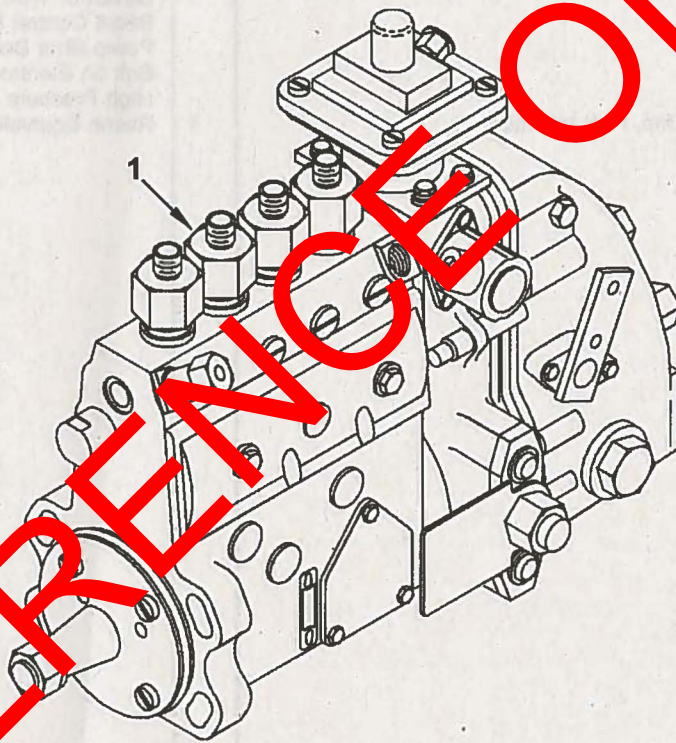
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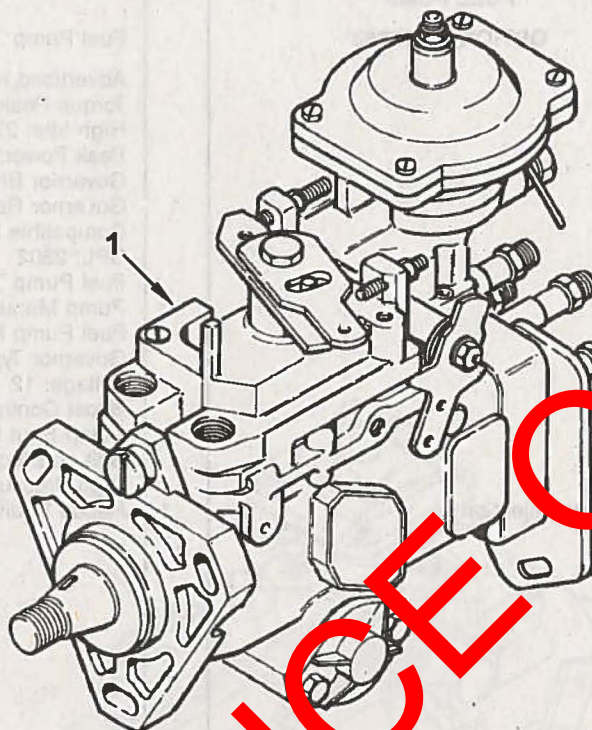
fp951gk

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PUMP OPTION FP97756		Fuel Pump Advertised HP: 116 @ 2500 Torque Peak (lb-ft): 306 @ 1500 High Idle: 2781 Peak Power: 116 Governor Break RPM: 2575 Governor Regulation (%): 8 Compatible Fuel Rating: FR90023 CLP: 2109 Fuel Pump Type: In-line Pump Manufacturing Model: Bosch A Fuel Pump Mounting Angle: 35 Deg Governor Type: VSV Boost Control Provided: Yes Pump Shut Down Lever Design: P/N 3934019 Bolton Electronic Governor Capable: No High Pressure Tube ID (mm): 1.8 Recon Equipment 3928602 RX
1	3928602	Pump, Fuel Injection	1	



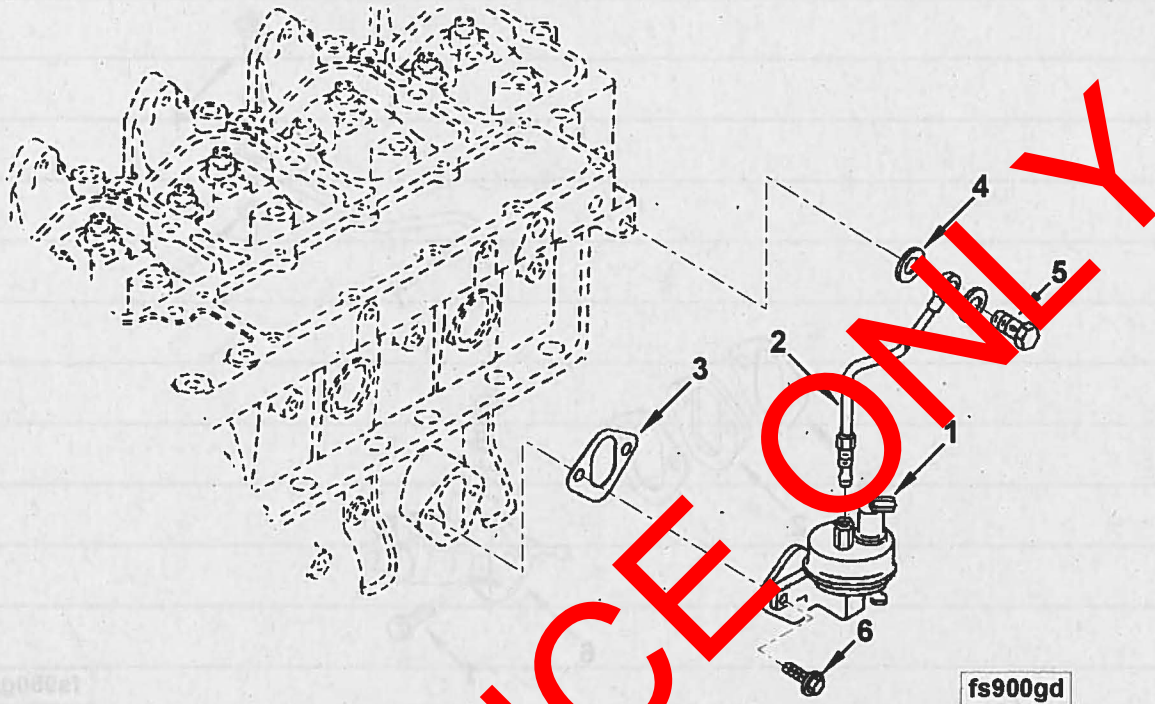
fp951gk

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PUMP OPTION FP97763		Fuel Pump Advertised HP: 110 @ 2500 Torque Peak (lb-ft): 278 @ 1500 High Idle: 2790 Peak Power: 110 Governor Break RPM: 2575 Governor Regulation (%): 8.3 Compatible Fuel Rating: FR90029 CPL: 2302 Fuel Pump Type: In-line Pump Manufacturer/Model: Bosch A Fuel Pump Mounted Angle: 30 deg Governor Type: Mechanical Voltage: 12 Boost Control Provided: Yes Pump Shut Down Lever Design: P/N 3934019 Bolt on Electronic Governor Capable: No High Pressure Tube ID (mm): 1.8 Recommended Fuel: 3928665 RX
1	3928665	Pump, Fuel Injection	1	

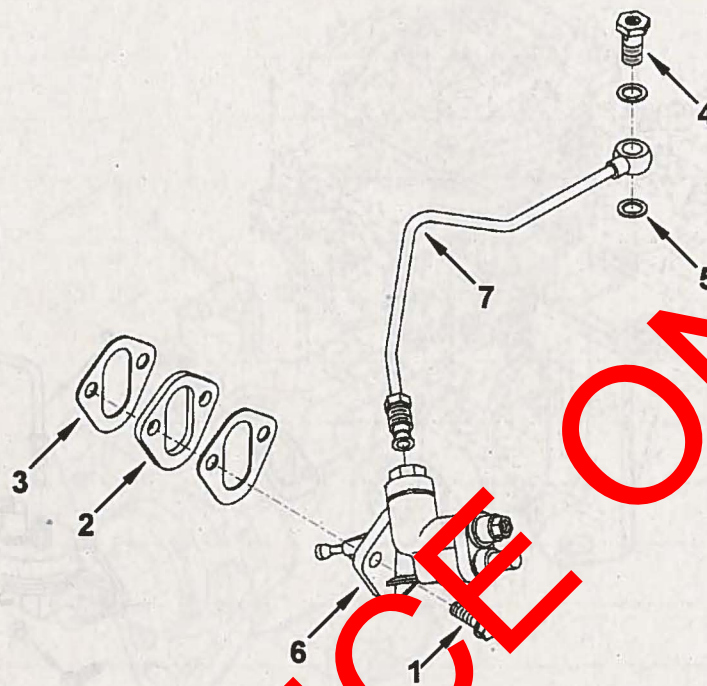


fp900gc

Ref No.	Part Number	Part Name	Req	Remarks
1	3991604	FUEL PUMP OPTION FP98966 Pump, Fuel Injection	1	Fuel Pump Advertised HP: 67 @ 2200 Torque Peak (lb-ft): 188 @ 1200 High Idle: 2425 Peak Power: 67 Governor Break RPM: 2275 Governor Regulation (%): 6.6 Compatible Fuel Rating FR: 90880 CPL: 2599 Fuel Pump Type: Rotary Pump Manufacturer/Model: Bosch VE Fuel Pump Mounted Angle: 35 Deg Fuel Pump Mounted Location: Front Solenoid Activation: ATR Voltage: 12 Shutdown Device: Electrical KSB Mounting Location: Pump Mounted Bolt on Electronic Governor Capable: No High Pressure Tube ID (mm): 1.8



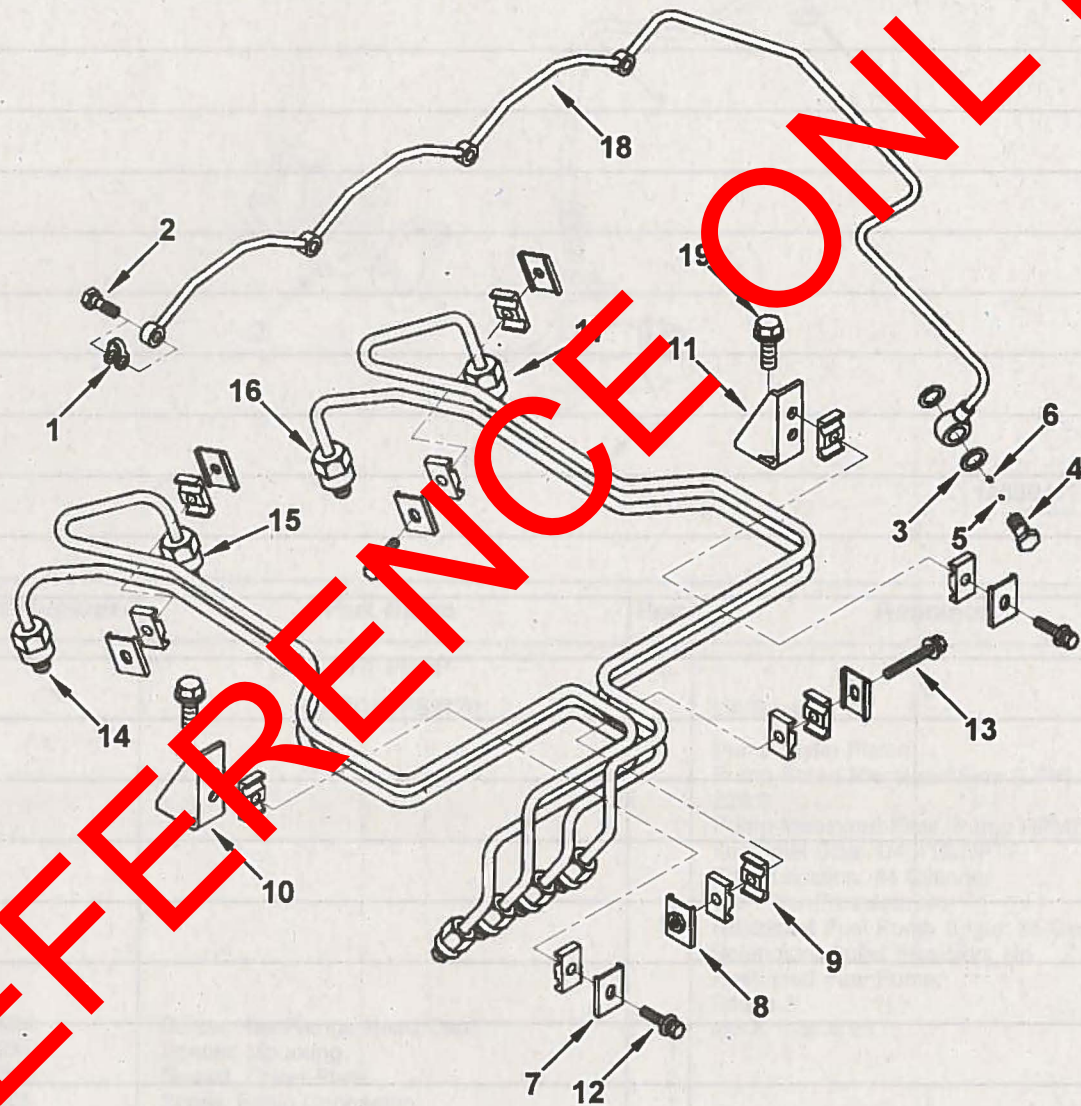
Ref No.	Part Number	Part Name	Req	Remarks
		LIFT PUMP OPTION FS9002		Lift Pump Pump Style: Lever Pump Manufacturer: Federal Mogul Pump Stand Measured Flow (LPH): 191.5 Pump Measured Flow (Pump RPM): 1800 Fuel Inlet Size: 1/4 - 18 NPTF Filter Location: #4 Cylinder Pre Filter Provided: No Solenoid Bracket Provision: No Restricted Fuel Pump: Bosch VE Bosch VP14 CAV DPA Stanadyne DB4
1	3070880	Pump, Fuel Transfer	1	
2	3005649	Tube, Fuel Supply	1	
3	3000000	Gasket, Cover Plate	1	
4	3963983	Washer, Sealing	2	
5	3903035	Screw, Banjo Connector	1	
6	3000631	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 25



Ref No.	Part Number	Part Name	Req	Remarks
		LIFT PUMP OPTION FS9170		Lift Pump Pump Style: Piston Pump Stand Measured Flow (LPH): 117.0 - 229.9 Pump Measured Flow (Pump RPM): 1250 Fuel Inlet Size: 1/4 - 18 NPTF Filter Location: #4 Cylinder Pre Filter Provided: No Restricted Fuel Pump Angle: 35 Deg Solenoid Bracket Provision: No Restricted Fuel Pump: Bosch A M8 X 1.25 X 25
1	3900601	Screw, Hex Flange Head Cap	2	
2	3917284	Spacer, Mounting	1	
3	3939258	Gasket, Cover Plate	2	
4	3916361	Screw, Banjo Connector	1	
5	3939283	Washer, Sealing	2	
6	4944712	Pump, Fuel Transfer	1	
7	3917280	Tube, Fuel Supply	1	

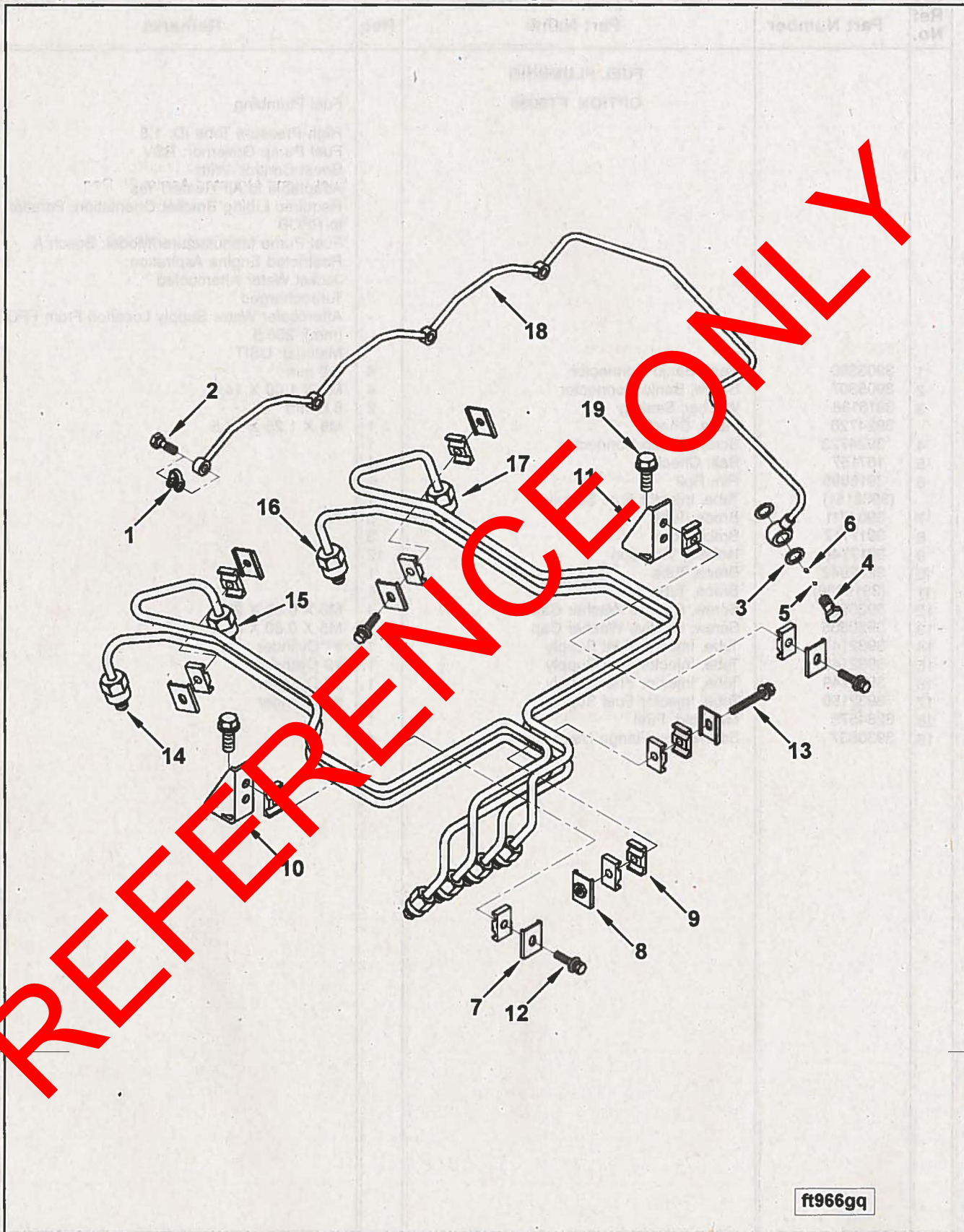
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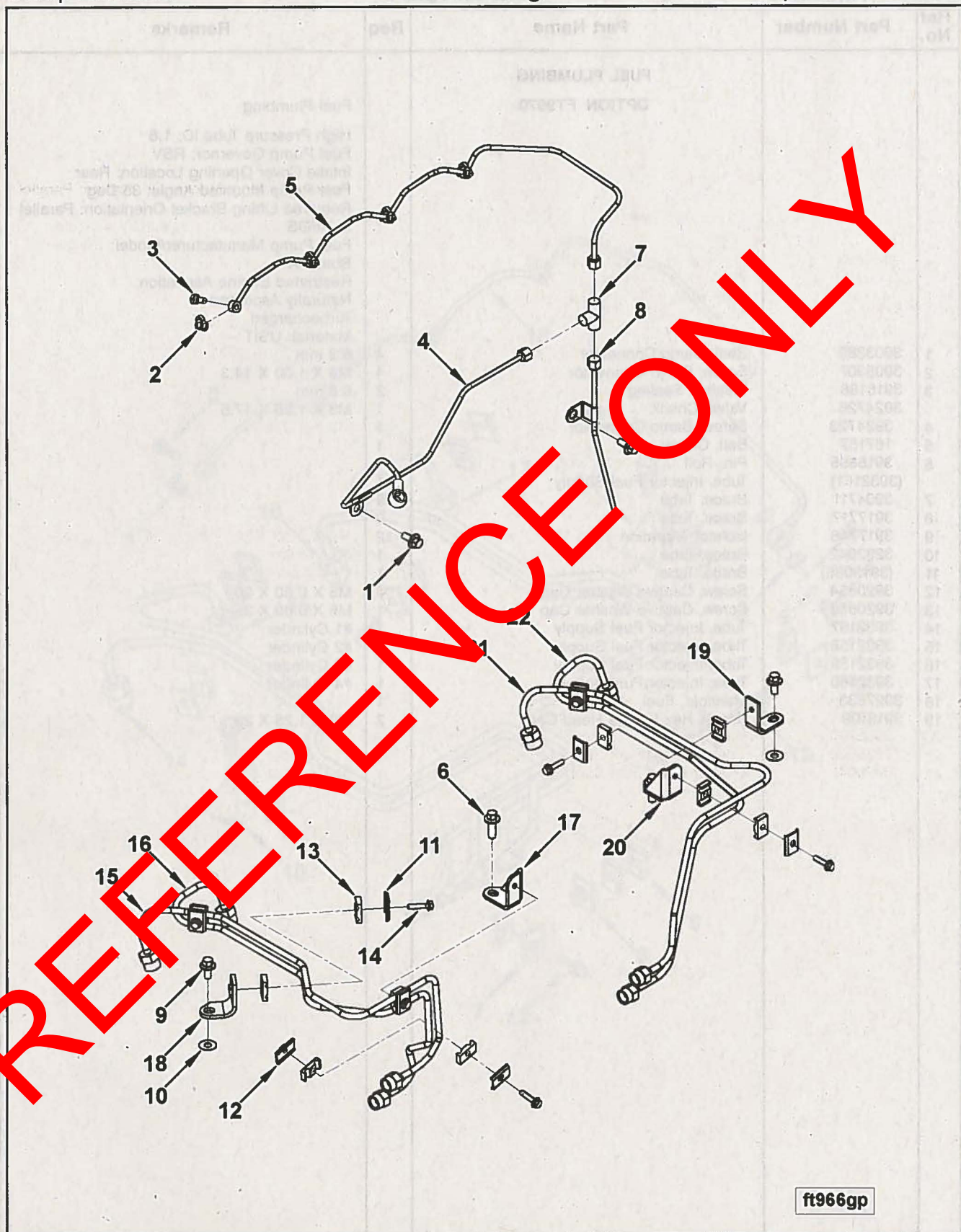
ft966gq

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PLUMBING		
		OPTION FT9969		
				Fuel Plumbing
				High Pressure Tube ID: 1.8
				Fuel Pump Governor: RSV
				Boost Control: With
				Adaptable to Air Heater: Yes
				Required Lifting Bracket Orientation: Parallel to RFOB
				Fuel Pump Manufacturer/Model: Bosch
				Restricted Engine Aspiration:
				Jacket Water Aftercooled
				Turbocharged
				Aftercooler Water Supply Location From FFOB (mm): 256.5
				Material: USIT
1	3903380	Seal, Banjo Connector	4	6.2 mm
2	3905307	Screw, Banjo Connector	4	M6 X 1.00 X 14.3
3	3918188	Washer, Sealing	2	8.0 mm
	3924726	Valve, Check	1	M8 X 1.25 X 17.0
4	3924723	Screw, Banjo Connector	1	
5	167157	Ball, Check	1	
6	3916895	Pin, Roll	1	
	(3932151)	Tube, Injector Fuel Supply	1	
7	3904711	Brace, Tube	1	
8	3917717	Brace, Tube	1	
9	3917746	Isolator, Vibration	12	
10	3282942	Brace, Tube	1	
11	(3919086)	Brace, Tube	1	
12	3920854	Screw, Captive Washer Cap	4	M5 X 0.80 X 20
13	3920855	Screw, Captive Washer Cap	1	M5 X 0.80 X 35
14	3932147	Tube, Injector Fuel Supply	1	#1 Cylinder
15	3932148	Tube, Injector Fuel Supply	1	#2 Cylinder
16	3932149	Tube, Injector Fuel Supply	1	#3 Cylinder
17	3932150	Tube, Injector Fuel Supply	1	#4 Cylinder
18	3284575	Manifold, Fuel	1	
19	3930837	Screw, Hex Flange Head Cap	4	

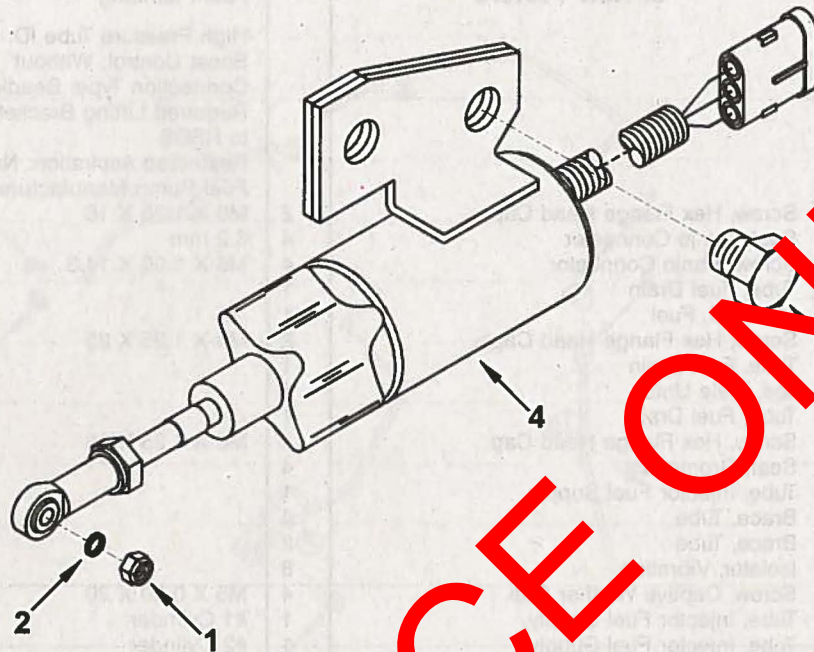


ft966gq

Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PLUMBING		
		OPTION FT9970		
				Fuel Plumbing
				High Pressure Tube ID: 1.8
				Fuel Pump Governor: RSV
				Intake Cover Opening Location: Rear
				Fuel Pump Mounted Angle: 35 Deg
				Required Lifting Bracket Orientation: Parallel to RFOB
				Fuel Pump Manufacturer/Model: Bosch A
				Restricted Engine Aspiration: Naturally Aspirated
				Turbocharged
				Material: US1
1	3903380	Seal, Banjo Connector	4	6.2 mm
2	3905307	Screw, Banjo Connector	4	M6 X 1.25 X 14.3
3	3918188	Washer, Sealing	2	8.0 mm
	3924726	Valve, Check	1	M8 X 1.25 X 17.3
4	3924723	Screw, Banjo Connector	1	
5	167157	Ball, Check	1	
6	3916895	Pin, Roll	1	
	(3932161)	Tube, Injector Fuel Supply	1	
7	3904711	Brace, Tube	5	
8	3917717	Brace, Tube	2	
9	3917746	Isolator, Vibration	1	
10	3282942	Brace, Tube	1	
11	(3919086)	Brace, Tube	1	
12	3920854	Screw, Captive Washer Cap	4	M5 X 0.80 X 20
13	3920855	Screw, Captive Washer Cap	1	M5 X 0.80 X 35
14	3932157	Tube, Injector Fuel Supply	1	#1 Cylinder
15	3932158	Tube, Injector Fuel Supply	1	#2 Cylinder
16	3932159	Tube, Injector Fuel Supply	1	#3 Cylinder
17	3932160	Tube, Injector Fuel Supply	1	#4 Cylinder
18	3927633	Manifold, Fuel	1	
19	3918109	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 25



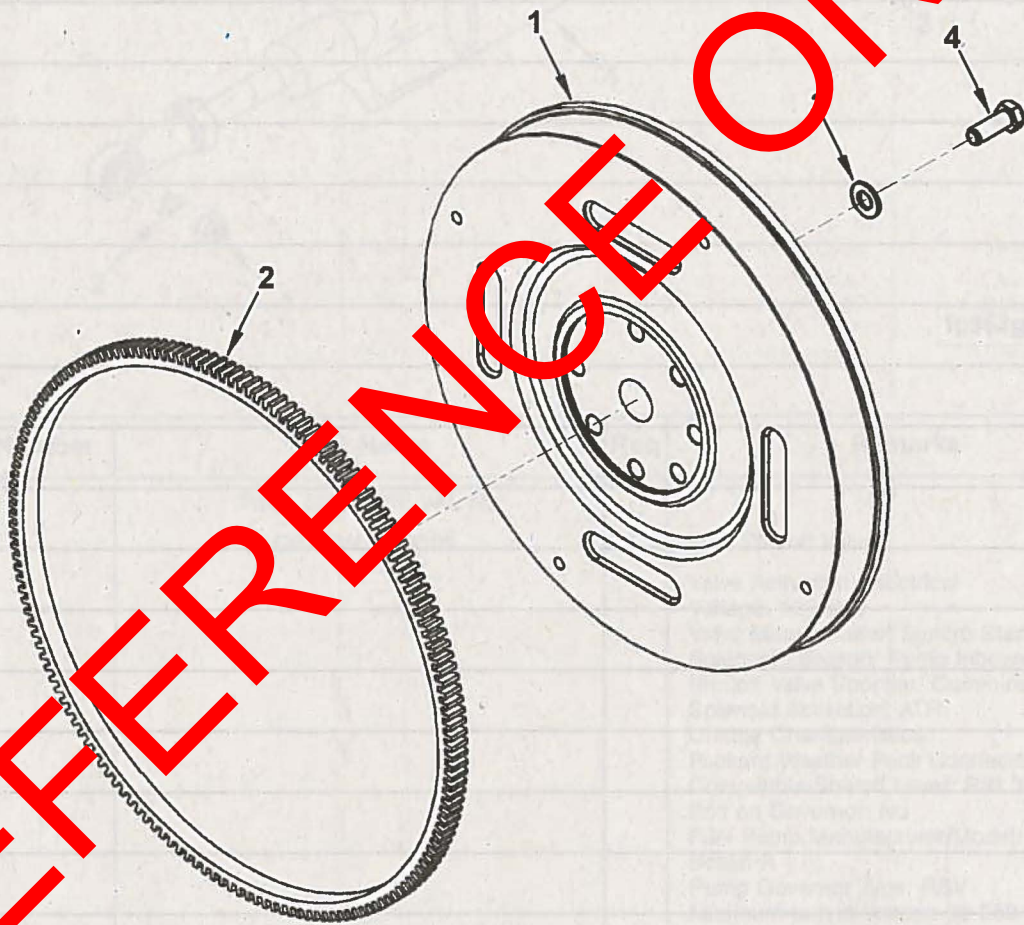
Ref No.	Part Number	Part Name	Req	Remarks
		FUEL PLUMBING		
		OPTION FT97075		
				Fuel Plumbing
				High Pressure Tube ID: 1.8
				Boost Control: Without
				Connection Type: Beadless
				Required Lifting Bracket Orientation: Parallel to RFOB
				Restricted Aspiration: Naturally Aspirated
				Fuel Pump Manufacturer/Model: Bosch
1	3900629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16
2	3903380	Seal, Banjo Connector	4	6.2 mm
3	3905307	Screw, Banjo Connector	4	M6 X 1.00 X 14.3
4	3905699	Tube, Fuel Drain	1	
5	3909695	Manifold, Fuel	1	
6	3918109	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 25
	3922064	Tube, Fuel Drain	1	
7	3905388	Tee, Male Union	1	
8	3905692	Tube, Fuel Drain	1	
9	3925883	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16
10	3928759	Seal, Grommet	4	
	(3935690)	Tube, Injector Fuel Supply	1	
11	3904711	Brace, Tube	4	
12	3917717	Brace, Tube	2	
13	3917746	Isolator, Vibration	6	
14	3920854	Screw, Captive Washer Cap	3	M5 X 0.80 X 20
15	3935691	Tube, Injector Fuel Supply	1	#1 Cylinder
16	3935693	Tube, Injector Fuel Supply	1	#2 Cylinder
17	3935748	Brace, Tube	1	
18	3975557	Brace, Tube	1	
	(3938038)	Tube, Injector Fuel Supply	1	
11	3904711	Brace, Tube	3	
12	3917717	Brace, Tube	1	
13	3917746	Isolator, Vibration	6	
14	3920854	Screw, Captive Washer Cap	3	M5 X 0.80 X 20
19	3919381	Brace, Tube	1	
20	3935700	Brace, Tube	1	
21	3938039	Tube, Injector Fuel Supply	1	#3 Cylinder
22	3938041	Tube, Injector Fuel Supply	1	#4 Cylinder



Ref No.	Part Number	Part Name	Req	Remarks
		FUEL SHUTOFF VALVE OPTION FV9305		Fuel Shutoff Valve Valve Activation: Electrical Voltage: 12 Valve Valve Manufacturer: Syncro Start Solenoid Location: Pump Inboard Shutoff Valve Supplier: Cummins Solenoid Activation: ATR Unique Characteristics: Packard Weather Pack Connector 14 GA Compatible Shutoff Lever: P/N 3934019 Bolt on Governor: No Fuel Pump Manufacturer/Model: Bosch A Pump Governor Type: RSV Minimum pull in Voltage (@ 250 Deg): 8.0 VDC M6 X 1.00
1	39959	Nut, Lock	1	
2	3934022	Washer, Plain	1	
3	3991132	Screw, Hexagon Head Cap	2	
4	3991167	Solenoid, Fuel Pump	1	

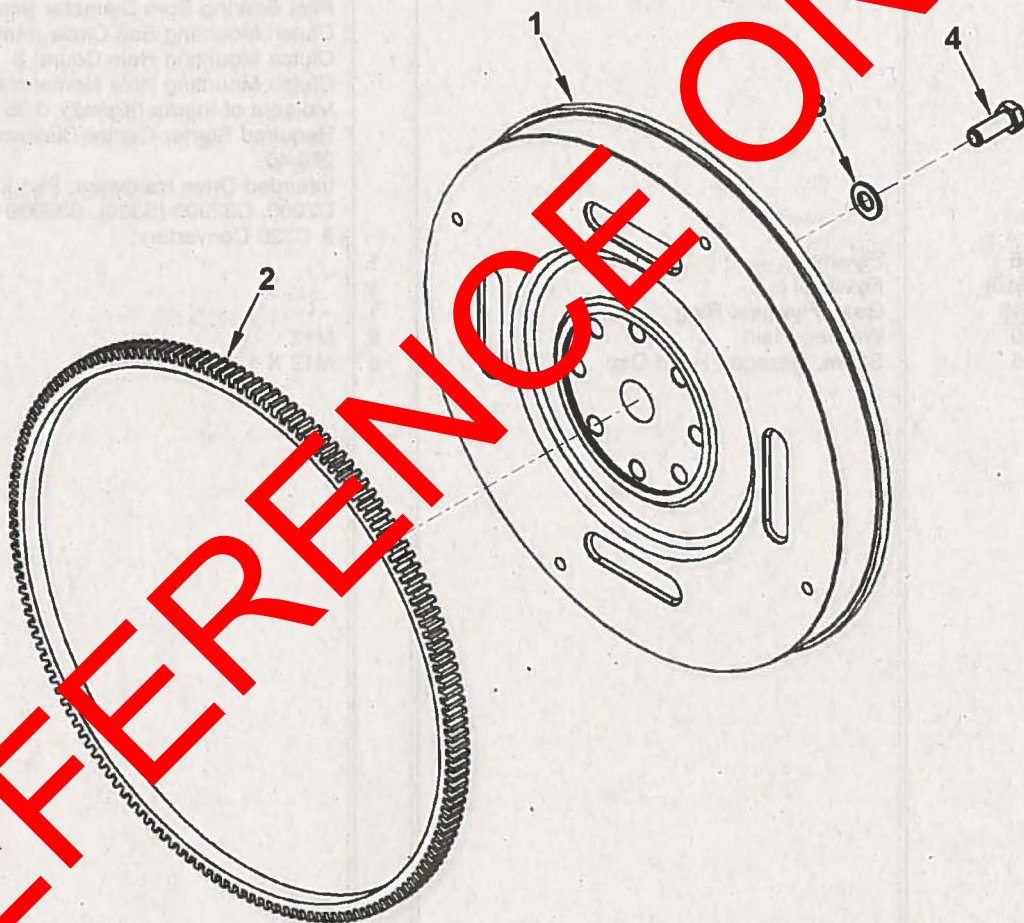
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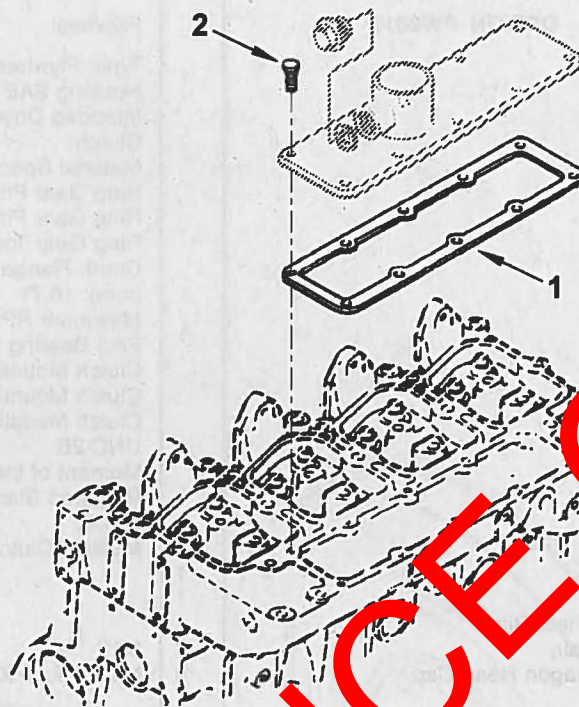
fw958gt

Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL OPTION FW9003		Flywheel Type: Flywheel Housing SAE Size or Type: SAE 3 Intended Drive Hardware: Clark 18000, 24000, 28000, 32000 Material Specification: 40,001 Ring Gear Pitch: 10/12 Ring Gear Pitch Diameter (mm): 403.86 (15.9") Ring Gear Tooth Count: 59 Crank Flange to Ring Gear Leading Edge (mm): 16.13 Maximum RPM: 3280 Pilot Bearing Bore Diameter (mm): 51.968 Clutch Mounting Bolt Circle (mm): 342.90 Clutch Mounting Hole Count: 8 Clutch Mounting Hole Nomenclature: 10.5 mm Moment of Inertia (Kg/m2): 0.35 Required Start Center Distance (mm): 216.40 Intended Drive Hardware: Part II C2000, C32000 (S300), S33000 (S400), C270 & C280 Converters.
1	4933356 (3973518)	Flywheel	1	
2	3978313	Flywheel	1	
3	3900269	Gear, Flywheel Ring	8	M12
4	3901395	Washer, Plain	8	M12 X 1.25 X 32
		Screw, Hexagon Head Cap	8	

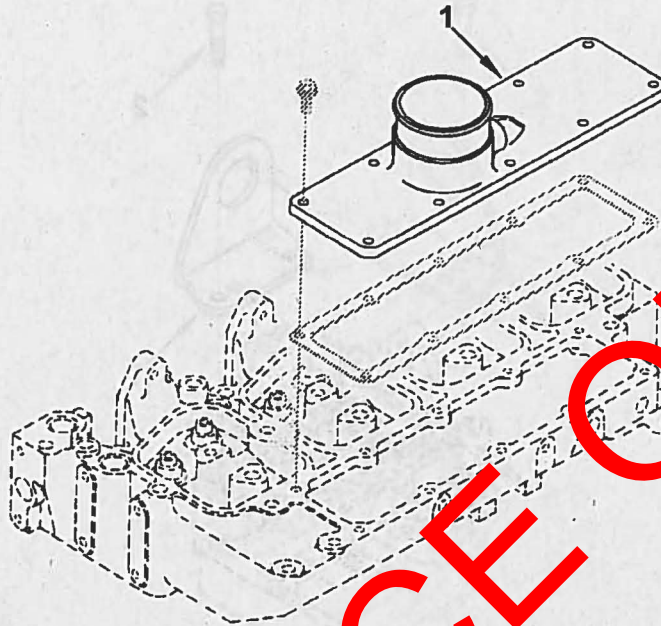


fw958gt

Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL OPTION FW9017		Flywheel Type: Flywheel Housing SAE Size or Type: SAE 3 Intended Drive Hardware: 10" & 11" 12" OC Clutch Material Specification: 40,000 Ring Gear Pitch: 10/12 Ring Gear Pitch Diameter: 403.86 mm (15.9") Ring Gear Tooth Count: 159 Crank Flange To Ring Gear Leading Edge (mm): 16.71 Maximum RPM: 2940 Pilot Bearing Dia. (mm): 71.973 Clutch Mounting Bolt Circle (mm): 333.38 Clutch Mounting Hole Count: 16 Clutch Mounting Hole Nomenclature: 3/8 - 16 UNC 2B Moment of Inertia (KG/M2): 0.56 Required Starter Center Distance (mm): 216.40 Multiple Clutch Face Bolt Circle
1	4933355	Flywheel	1	
2	(3972704)	Flywheel		
3	3978313	Gear, Flywheel Ring		
3	3900269	Washer, Plain	8	M12
4	3901395	Screw, Hexagon Head Cap	8	M12 X 1.25 X 32

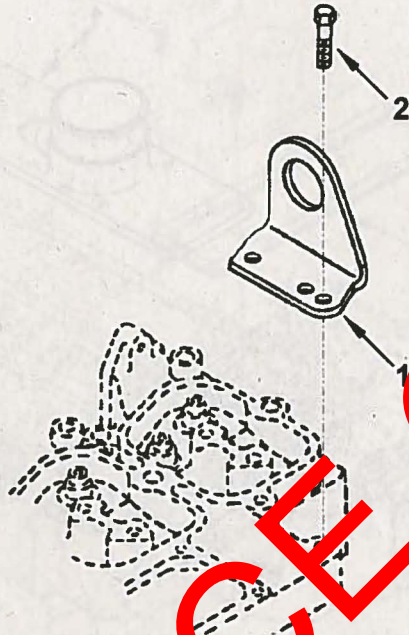


Ref No.	Part Number	Part Name	Req	Remarks
		AIR INTAKE CONNECTION OPTION IC9001		Air Intake Connection Naturally Aspirated Intake Connection Connection Orientation: Front Vertical Connection Location From FFOB: 8.3" (212 mm) Inlet OD: 3.0" (76.2 mm)
1	3938153	Cover, In. Manifold Cover	1	
2	3918109	Screw Hex Flange Head Cap	8	M8 X 1.25 X 25



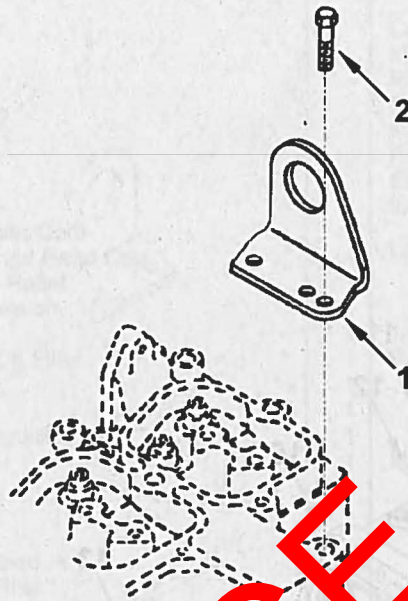
ic954gc

Ref No.	Part Number	Part Name	Req	Remarks
1	3904340	AIR INTAKE CONNECTION OPTION IC9703 Cover, Intake Manifold	1	Air Intake Connection Naturally Aspirated Intake Connection Mounting Connection ID: 3.0" (76.2 mm) Glow Plug Heater Provision: Yes Glow Plug Tap: 7/8 - 14 NPTF Inlet Orientation: Front Vertical



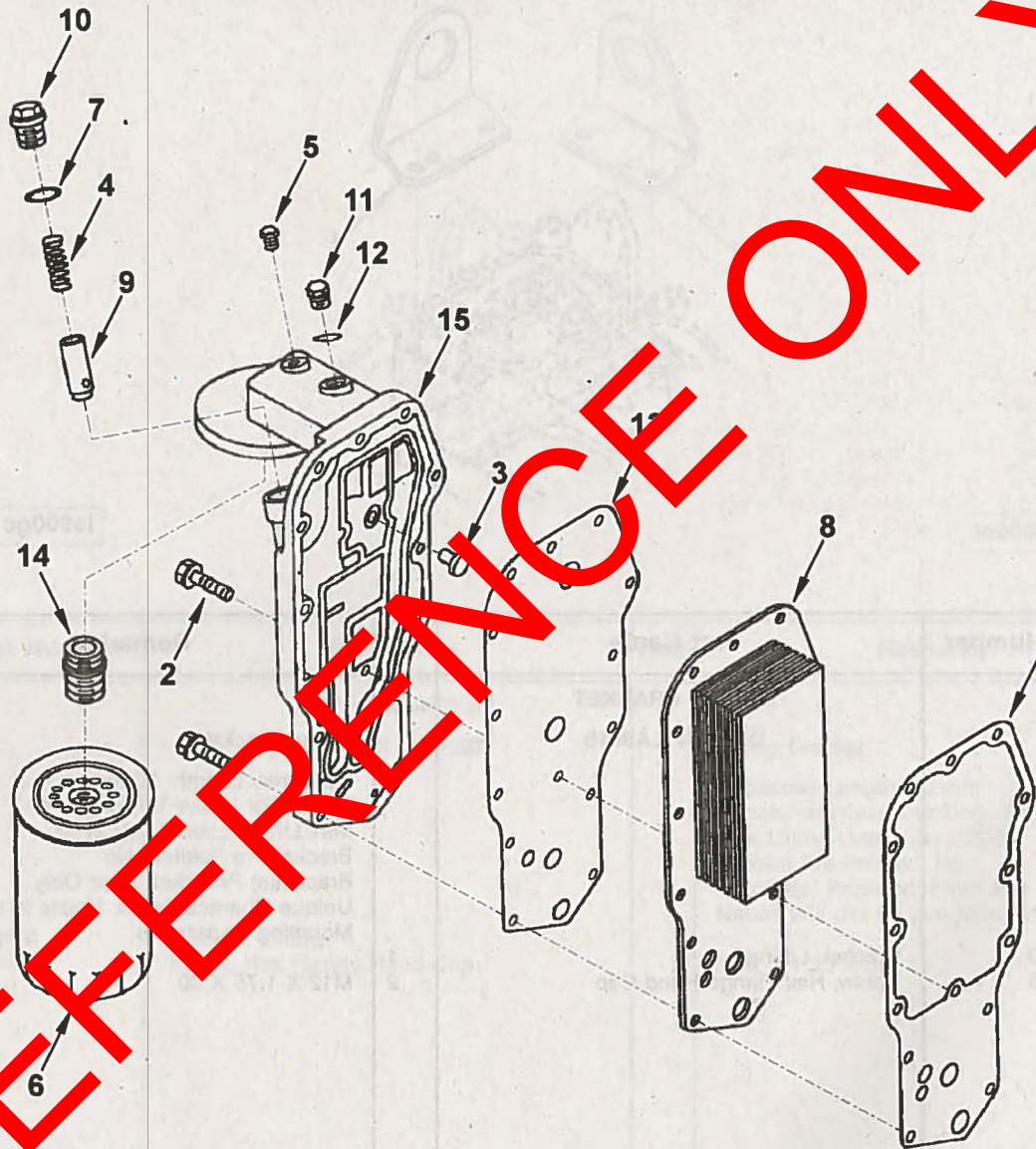
la900gc

Ref No.	Part Number	Part Name	Req	Remarks
		LIFTING BRACKET OPTION LA9007		Lifting Bracket Capscrew Length: 30 mm Allows For Intake Trunking: No Max Lifting Load (Lbs.): 2000 Bracket Pre Painted: No Bracket(s) Provided: Front and Rear Neuss Will use 25 mm Mounting Capscrews.
1	3908118	Bracket, Lifting	1	
2	3910495	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 30



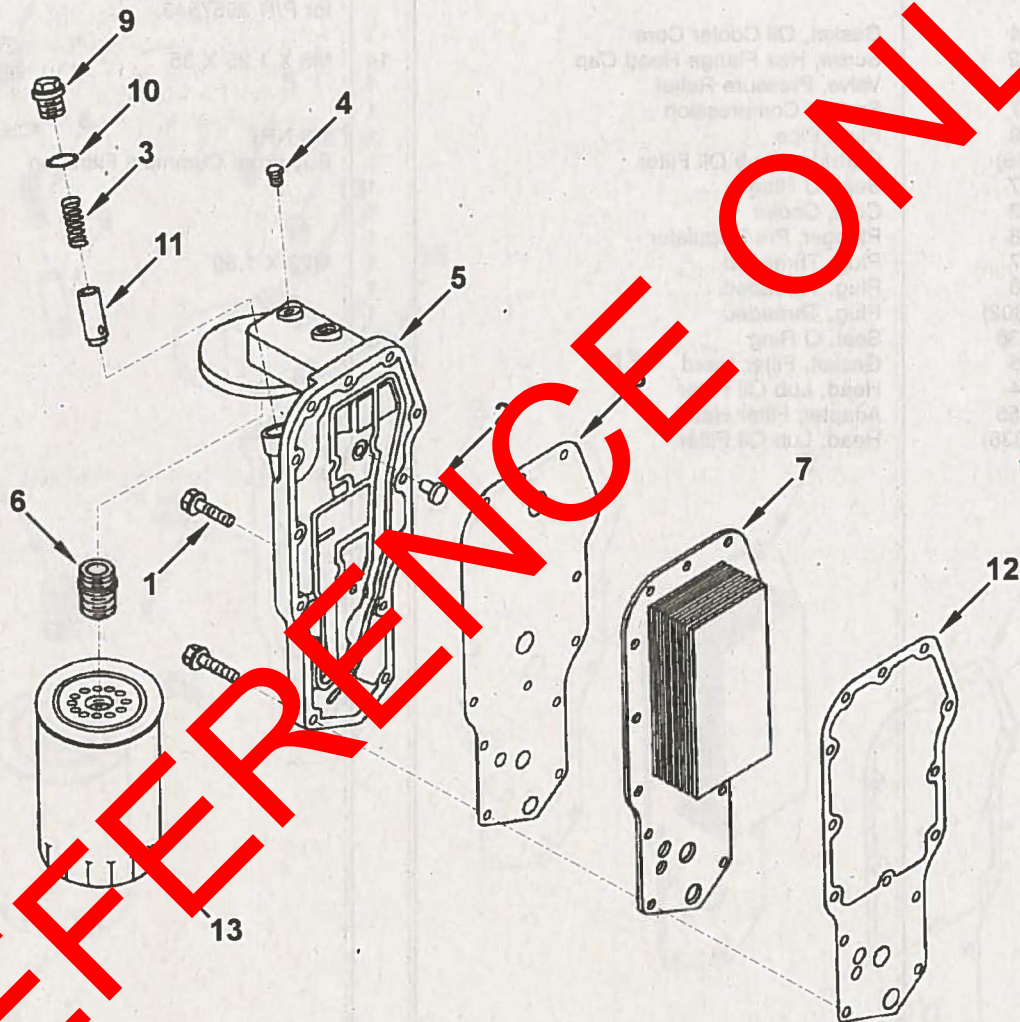
la900gc

Ref No.	Part Number	Part Name	Req	Remarks
		LIFTING BRACKET OPTION LA9016		Lifting Bracket Capscrew Length: 30 mm Allows For Intake Trunking: No Max Lifting Load (Lbs): 2750 Bracket Pre Painted: No Bracket(s) Provided: Rear Only Unique Characteristics: Neuss to use 25 mm Mounting Capscrews
1	3917599	Bracket, Lifting	1	
2	3910495	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 30



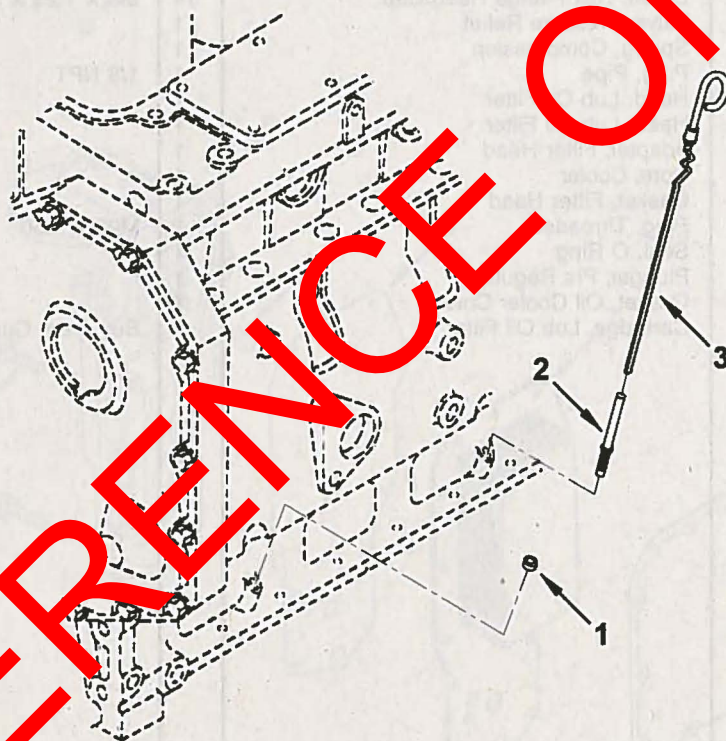
lc930ga

Ref No.	Part Number	Part Name	Req	Remarks
		LUBE OIL COOLER OPTION LC9017		Lube Oil Cooler Cooler Type: Plate Mounting Position/Location: Vertical Filter Material: Cellulose Restricted Aspiration: Naturally Aspirated Pressure Relief Set 65 PSI CLA may Substitute Cooler Core P/N 3921557 for P/N 3957543.
1	4932124	Gasket, Oil Cooler Core	1	
2	3900632	Screw, Hex Flange Head Cap	14	M8 X 1.25 X 35
3	3936365	Valve, Pressure Relief	1	
4	3918427	Spring, Compression	1	
5	3906619	Plug, Pipe	1	1/8 NPT
6	(3908616)	Cartridge, Lub Oil Filter	1	Buy From Summers Filtration
7	3929457	Seal, O Ring	1	
8	3957543	Core, Cooler	1	
9	3918428	Plunger, Prs Regulator	1	
10	3915787	Plug, Threaded	1	M22 X 1.50
	3919686	Plug, Threaded	1	
11	(3920802)	Plug, Threaded	1	
12	3037236	Seal, O Ring	1	
13	3942915	Gasket, Filter Head	1	
	3918954	Head, Lub Oil Filter	1	
14	3909355	Adapter, Filter Head	1	
15	(3924338)	Head, Lub Oil Filter	1	



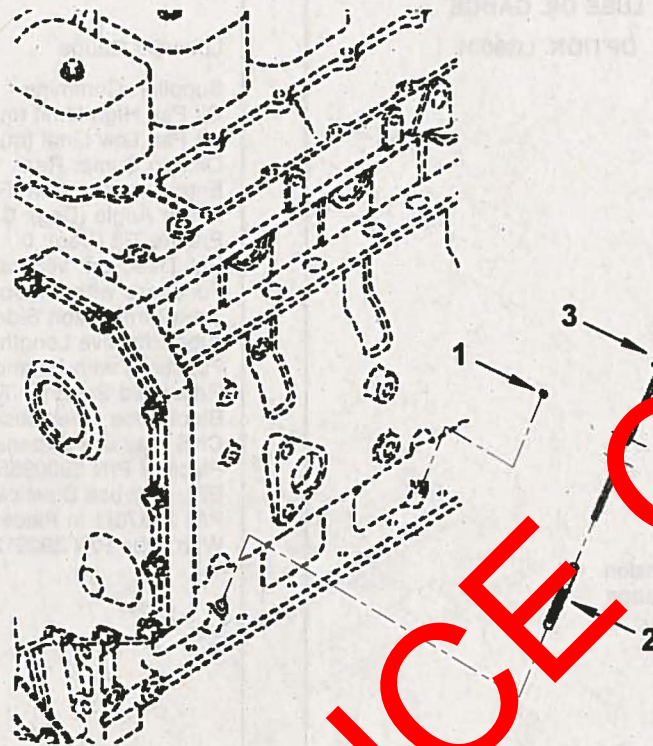
lc900gk

Ref No.	Part Number	Part Name	Req	Remarks
		ENGINE OIL COOLER OPTION LC9018		Engine Oil Cooler Cooler Type: Plate Plate Mounting Position/Location: Vertical Filter Material: Cellulose Restricted Aspiration: Turbocharged Jacket Water Aftercooled Charged Air Cooled Pressure Relief Set 6 PSI. This Option Does not Provide Adequate Clearance for a non Return Valve Which Provides Oil Starvation Protection for Turbo-charger Bearings during Engine Start up.
1	3900632	Screw, Hex Flange Head Cap	14	M8 X 1.25 X 3
2	3936365	Valve, Pressure Relief	1	
3	3918427	Spring, Compression	1	
4	3906619	Plug, Pipe	1	1/8" NPT
	3918954	Head, Lub Oil Filter	1	
5	(3924338)	Head, Lub Oil Filter	1	
6	3909355	Adapter, Filter Head	1	
7	3957543	Core, Cooler	1	
8	3942915	Gasket, Filter Head	1	
9	3915787	Plug, Threaded	1	M20 X 1.50
10	3929457	Seal, O Ring	1	
11	3918428	Plunger, Prs Regulator	1	
12	4932124	Gasket, Oil Cooler Core	1	
13	(3908616)	Cartridge, Lub Oil Filter	1	Buy From Cummins Filtration



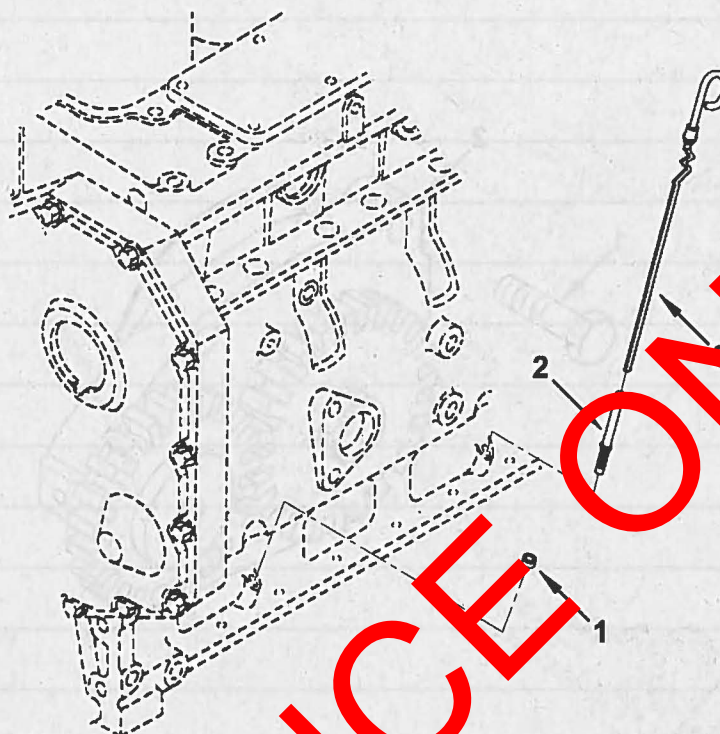
lg963ge

Ref No.	Part Number	Part Name	Req	Remarks
		LUBE OIL GAUGE OPTION LG9001		Lube Oil Gauge Supplier: Cummins Oil Pan High Limit (qt): 10 Oil Pan Low Limit (qt): 8 Oil Pan Sump: Rear Entry Location from FFOB (mm): 1080 Power Angle (Deg): 0 Engine Tilt (Deg): 0 Pull Direction: Vertical Functions with Air Compressor: Yes Tube Termination Side: Fuel Pump Side Tube Effective Length (mm): 100 Functions with Baffle: No Restricted Breather Type: Open Block Tube Orientation: 12 Deg Vertical CNS may use Expansion Plug P/N 3905368 in Place of P/N 3900955. BZL may use Dipstick P/N 3357054 With Tube P/N 3904287 in Place of Dipstick P/N 3904287 With Tube P/N 3905127.
1	3900955	Plug, Expansion	1	
2	3280886	Tube, Oil Gauge	1	
3	3904287	Dipstick	1	



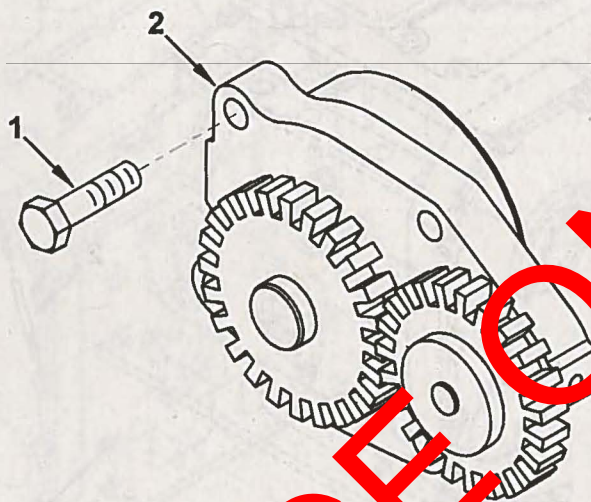
ob901gk

Ref No.	Part Number	Part Name	Req	Remarks
		LUBE OIL GAUGE OPTION LG9004		Lube Oil Gauge Supplier: Cummins Oil Pan High Limit (qt): 10 Oil Pan Low Limit (qt): 8 Oil Pan Sump: Front Entry Location From FFOB (mm): 168.0 Tube Block Entry Side: Fuel Pump Side Pull Direction: Vertical Functions With Air Compressor: No Tube Termination Side: Fuel Pump side Tube Effective Length (mm): 155 Functions with Balancer: No Restricted Breather Type: Open CNS may use Expansion Plug P/N 3905368 in Place of P/N 3900955. BZL may use Dipstick P/N 3357054 With Tube P/N 3357071 in Place of Dipstick P/N 3904287 With Tube P/N 3905127.
2	3900955	Plug, Expansion	1	
2	3280886	Tube, Oil Gauge	1	
3	3904287	Dipstick	1	



ob900gs

Ref No.	Part Number	Part Name	Req	Remarks
		LUBE OIL GAUGE OPTION LG9051		Lube Oil Gauge Supplier: Cummins Oil Pan High Limit (qt): 10 Oil Pan Low Limit (qt): 8 Oil Pan Sump: Rear Entry Location From FFOB (mm): 408.0 Power Angle (Deg): 0 Engine Tilt (Deg): 0 Pull Direction: Vertical Functions With Air Compressor: Yes Tube Termination Side: Fuel Pump Side Tube Effective Length (mm): 65 Functions With Balancer: No Restricted Breather Type: Open Block Tube Orientation: 45 Deg Forward CNS may use Expansion Plug P/N 3905368 in Place of P/N 3900955.
1	3900955	Plug, Expansion	1	
2	3280885	Tube, Oil Gauge	1	
3	3905782	Dipstick	1	



lp950gf

Ref No.	Part Number	Part Name	Req	Remarks
		LUBRICATION OIL PUMP OPTION LP9062		Lubrication Oil Pump Pump Drive: Non Crank Concentric Body Material: Cast Iron Flow Rate @ Pump Speed (GPM @ RPM) 2.7 @ 750 Gear Type: Steel HCR Gear Piston Cooling Method: Saddle Jet Engine Aspiration: Charge Air Cooled Jacket Water Aftercooled Sea Water Aftercooled Turbocharged CEC may use Lubrication Oil Pump P/N 4937408 in Place of P/N 4939585. CDC may use Lubrication Oil Pump P/N 3937027 in Place of P/N 4939585.
1	3900677	Screw, Hexagon Head Cap	4	
2	4939585	Pump, Lubricating Oil	1	

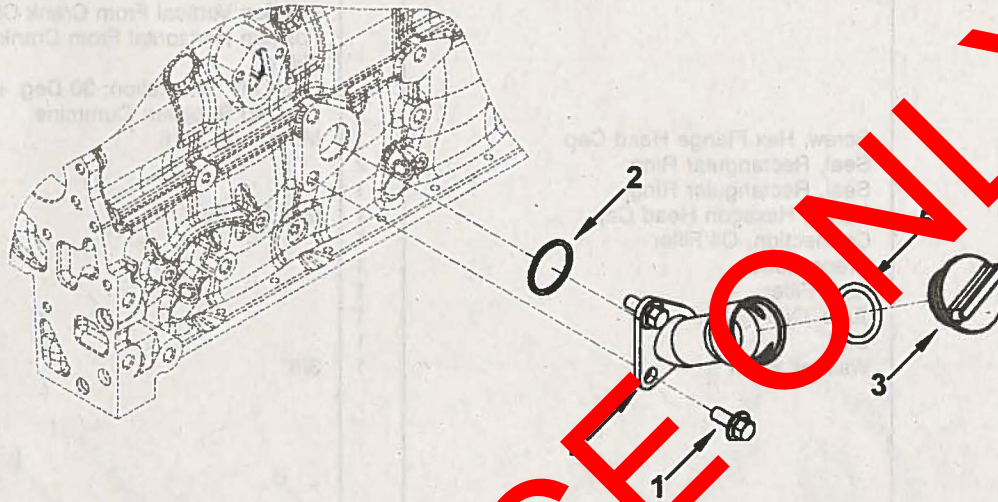
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ob959gz

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK COVER OPTION OB9022		Cylinder Block Cover Fill Tube Supplier: Cummins Oil Fill Location: Front Gear Cover Fill Position From FFOB (mm): -73.7 Position Vertical From Crank CL (mm): 390.7 Position Horizontal From Crank CL (mm): 250.4 Front Fill Orientation: 30 Deg +/-5 Outboard Fill Cap Supplier: Cummins M6 X 1.00 X 16
1	3913638	Screw, Hex Flange Head Cap	1	
2	3936876	Seal, Rectangular Ring	2	
3	3903475	Seal, Rectangular Ring	1	
4	3909582	Screw, Hexagon Head Cap	1	M10 X 1.50 X
5	3921644	Connection, Oil Filler	1	
6	3914497	Brace, Tube	1	
7	3901895	Cap, Filler	1	
8	3914738	Tube, Oil Filler	1	
9	3914940	Clip	1	
10	S 602	Washer, Plain	1	3/8"



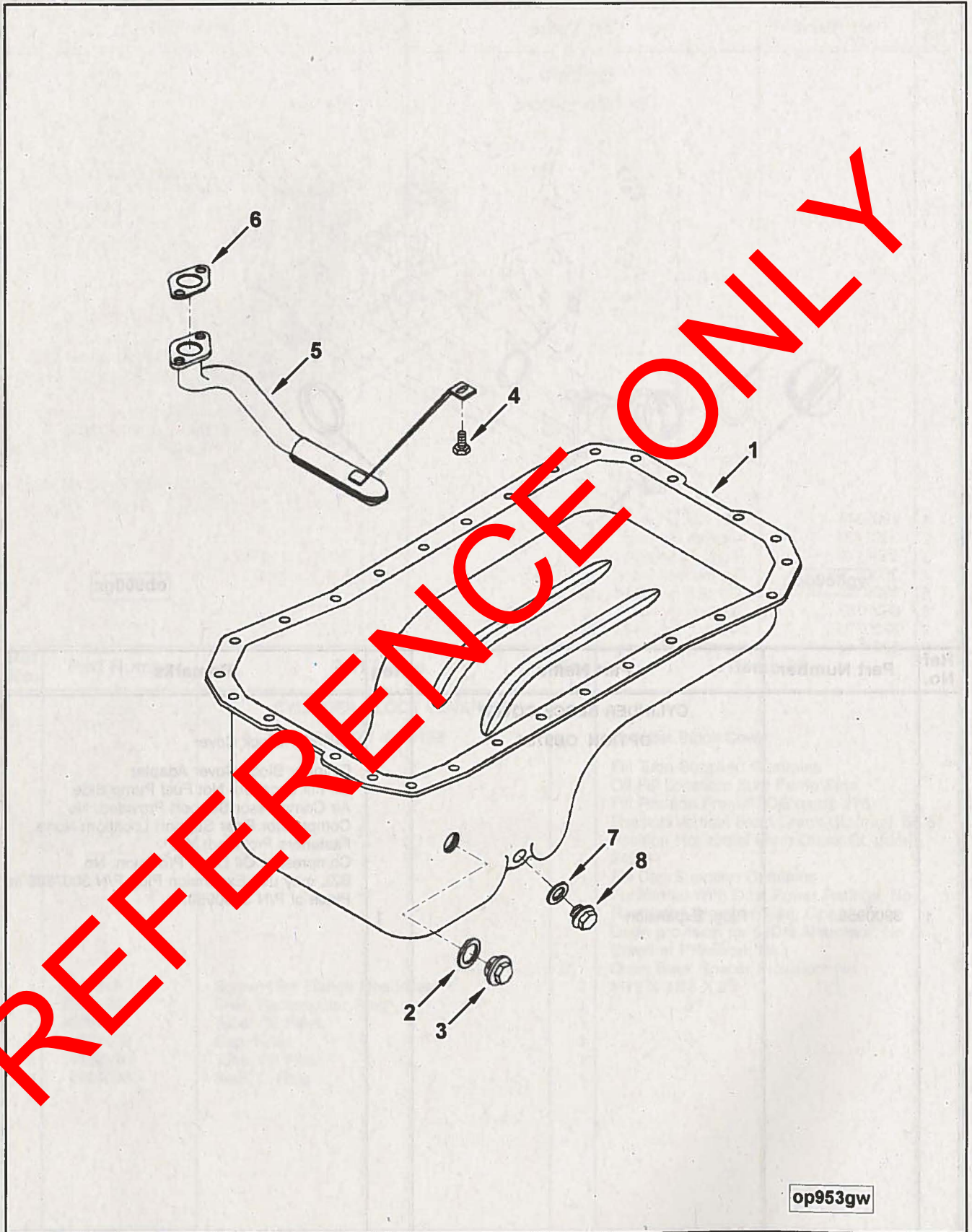
ob958gy

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK COVER OPTION OF 138		Cylinder Block Cover Fill Tube Supplier: Cummins Oil Fill Location: Fuel Pump Side Fill Position From FFOB (mm): 278 Position Vertical From Crank CL (mm): 56.5 Position Horizontal From Crank CL (mm): 242.9 Fill Cap Supplier: Cummins Functional With Dual Power Ratings: No Restricted Breather Type: Open Drain provision for 50DN Alternator: No Breather Provision: No Drain Back Spacer Provision: No M12 X 1.75 X 25
1	3934049	Screw, Hex Flange Head Cap	2	
2	3906006	Seal, Rectangular Ring	1	
	493841	Tube, Oil Filler	1	
3	4932468	Cap, Filler	1	
	4932666	Tube, Oil Filler	1	
	4934085	Seal, O Ring	1	



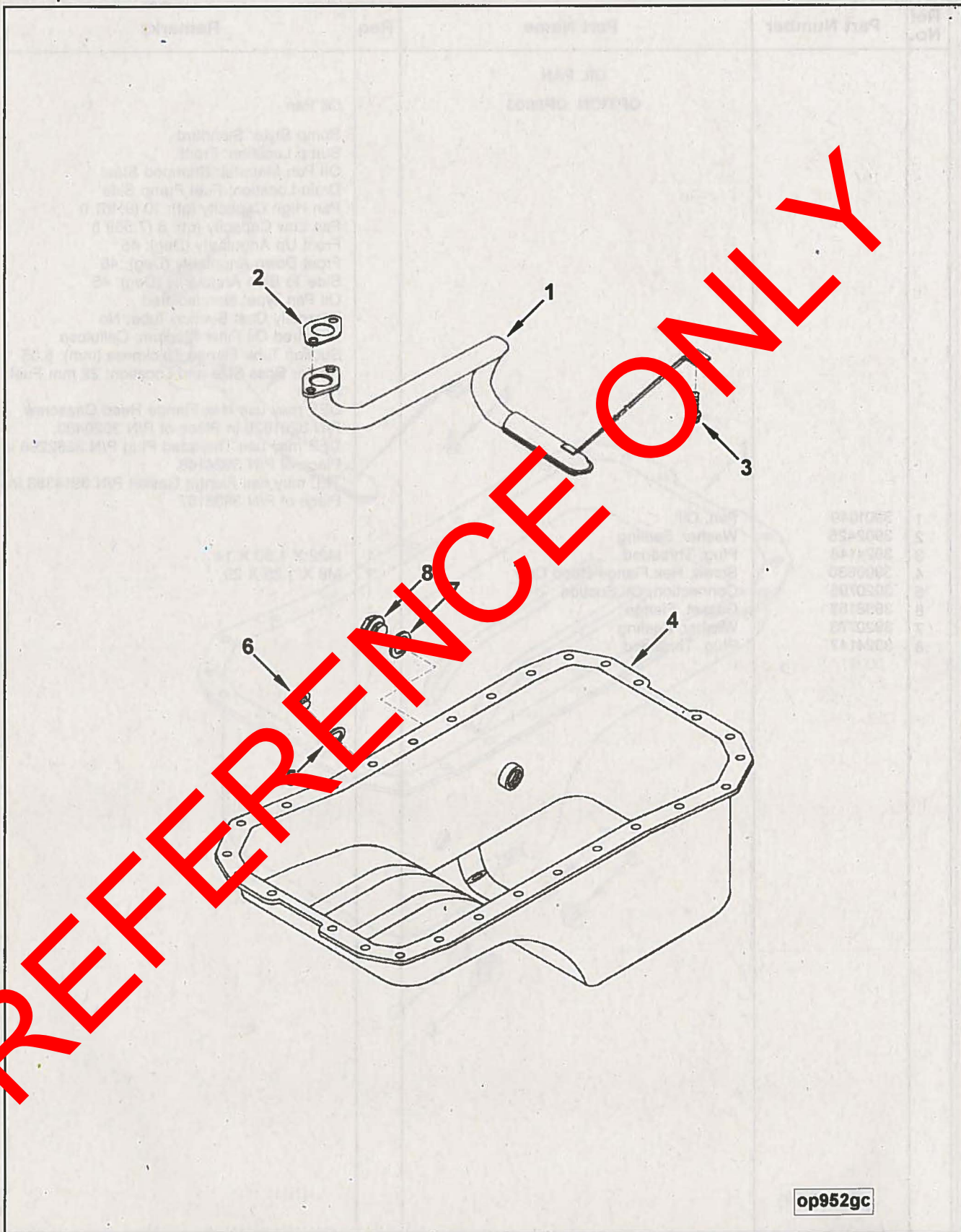
ob900gc

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER BLOCK COVER OPTION OB9704		Cylinder Block Cover Cylinder Block Cover Adapter Oil Fill Location: Not Fuel Pump Side Air Compressor Support Provided: No Compressor Rear Support Location: None Fasteners Provided: Yes Compressor Oil Drain Provision: No BZL may use Expansion Plug P/N 3007636 in Place of P/N 3900958.
1	3900958	Plug, Expansion	1	



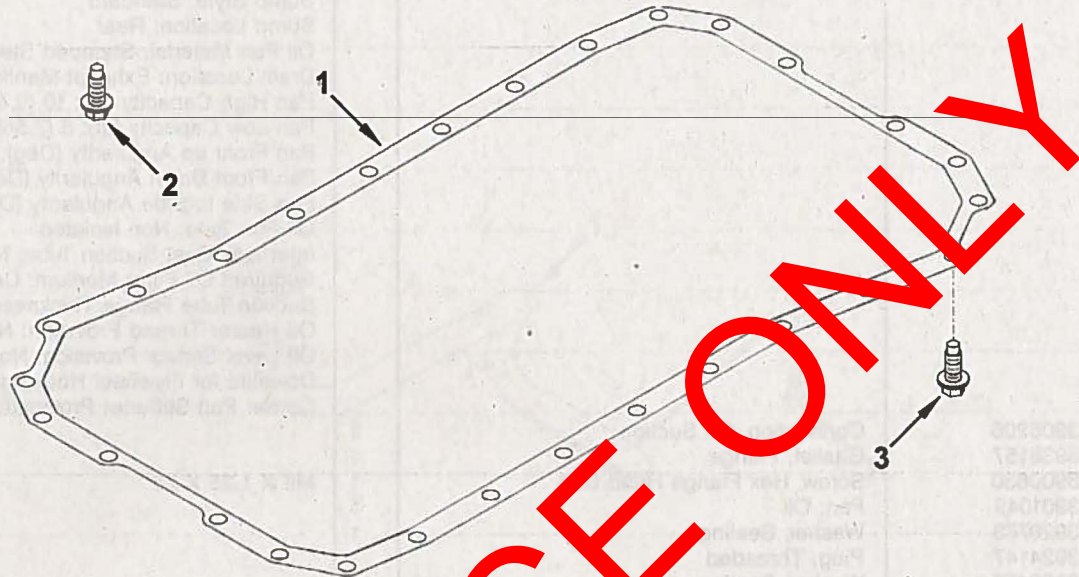
op953gw

Ref No.	Part Number	Part Name	Req	Remarks
		OIL PAN OPTION OP9003		Oil Pan Sump Style: Standard Sump Location: Front Oil Pan Material: Stamped Steel Drain Location: Fuel Pump Side Pan High Capacity (qt): 10 (9.46 l) Pan Low Capacity (qt): 8 (7.569 l) Front Up Angularity (Deg): 45 Front Down Angularity (Deg): 45 Side To Side Angularity (Deg): 45 Oil Pan Type: Non Isolated Internally Cast Suction Line: N Required Oil Filter Media: Cellulose Suction Tube Flange Thickness (mm): 6.35 Heater Boss Size and Location: 22 mm Fuel Pump DEP may use Hex Flange Head Capscrew P/N 3921626 in place of P/N 3920400. DEP may use Unthreaded Plug P/N 3282266 in Place of P/N 3924148. TEL may use Flange Gasket P/N 3914383 in Place of P/N 3938157.
1	3901049	Pan, Oil		
2	3902425	Washer, Sealing		
3	3924148	Plug, Threaded		
4	3900630	Screw, Hex Flange Head Cap		
5	3920795	Connection, Oil Suction		
6	3938157	Gasket, Flange		
7	3920773	Washer, Sealing		
8	3924147	Plug, Threaded		
			1	M22 X 1.50 X 14
			1	M8 X 1.25 X 20



op952gc

Ref No.	Part Number	Part Name	Req	Remarks
		OIL PAN OPTION OP9004		Oil Pan Sump Style: Standard Sump Location: Rear Oil Pan Material: Stamped Steel Drain Location: Exhaust Manifold Side Pan High Capacity (qt): 10 (9.46 L) Pan Low Capacity (qt): 8 (7.569 L) Pan Front up Angularity (Deg): 45 Pan Front Down Angularity (Deg): 45 Pan Side to Side Angularity (Deg): 45 Oil Pan Type: Non Isolated Internally Cast Suction Tube: No Required Oil Pan Mounting: Cellulose Suction Tube Flange Thickness (mm): 5.16 Oil Head Thread Provision: No Oil Level Sensor Provision: No Dowel for Flywheel Housing: No Corner Pan Stiffener Provided: No
1	3905206	Connection, Oil Suction	1	
2	3938157	Gasket, Flange	1	
3	3900630	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 20
4	3901049	Pan, Oil	1	
5	3920773	Washer, Sealing	1	
6	3924147	Plug, Threaded	1	
7	3902425	Washer, Sealing	1	
8	3924148	Plug, Threaded	1	M22 X 1.50 X 14

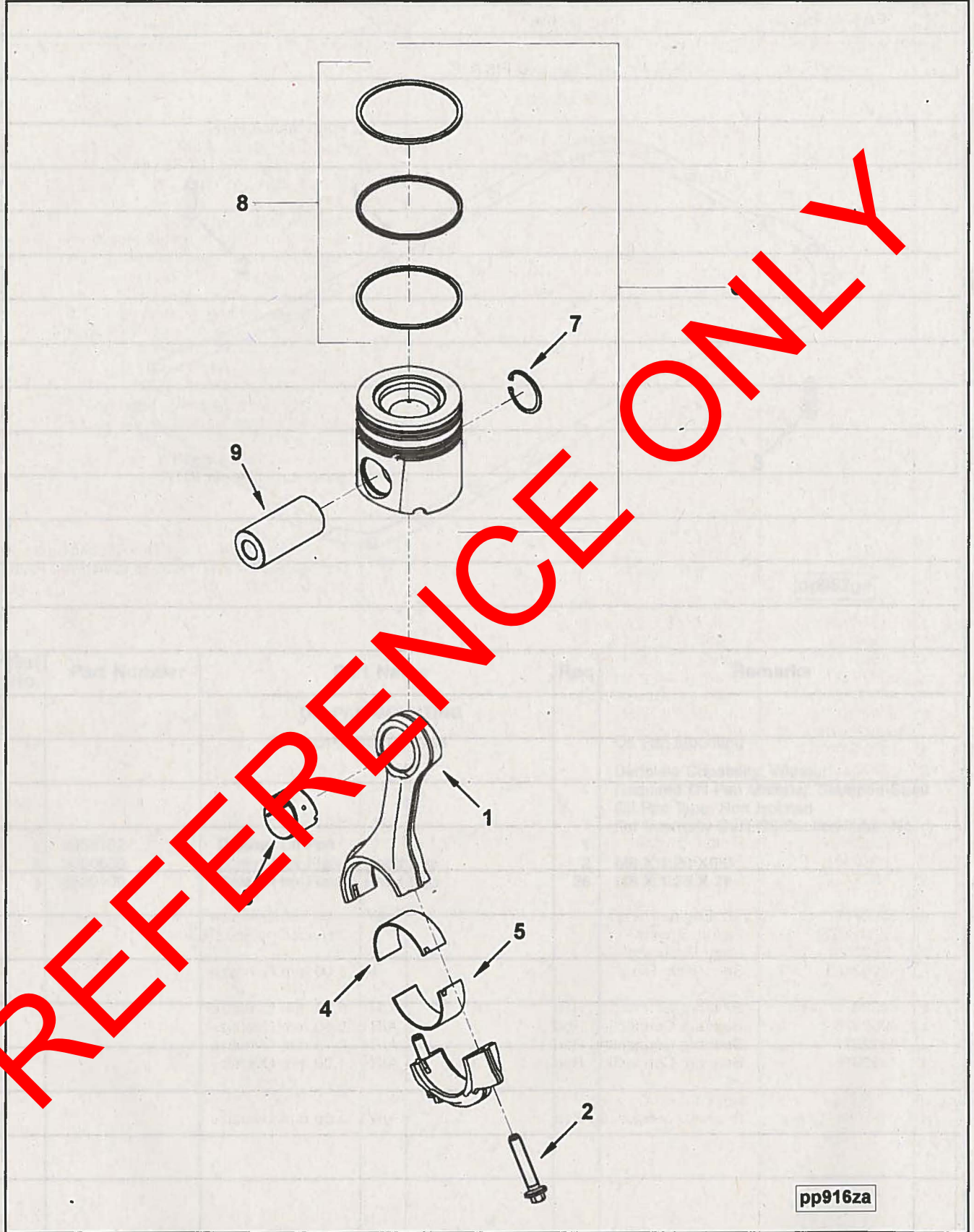


op952ge

Ref No.	Part Number	Part Name	Req	Remarks
		OIL PAN MOUNTING OPTION OP9704		Oil Pan Mounting Bedplate Capability: Without Required Oil Pan Material: Stamped Steel Oil Pan Type: Non Isolated For Internally Cast Oil Suction Tube: No
1	3938162	Gasket, Oil Pan	1	
2	3900630	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 20
3	3920400	Screw, Hex Flange Head Cap	28	M8 X 1.25 X 21

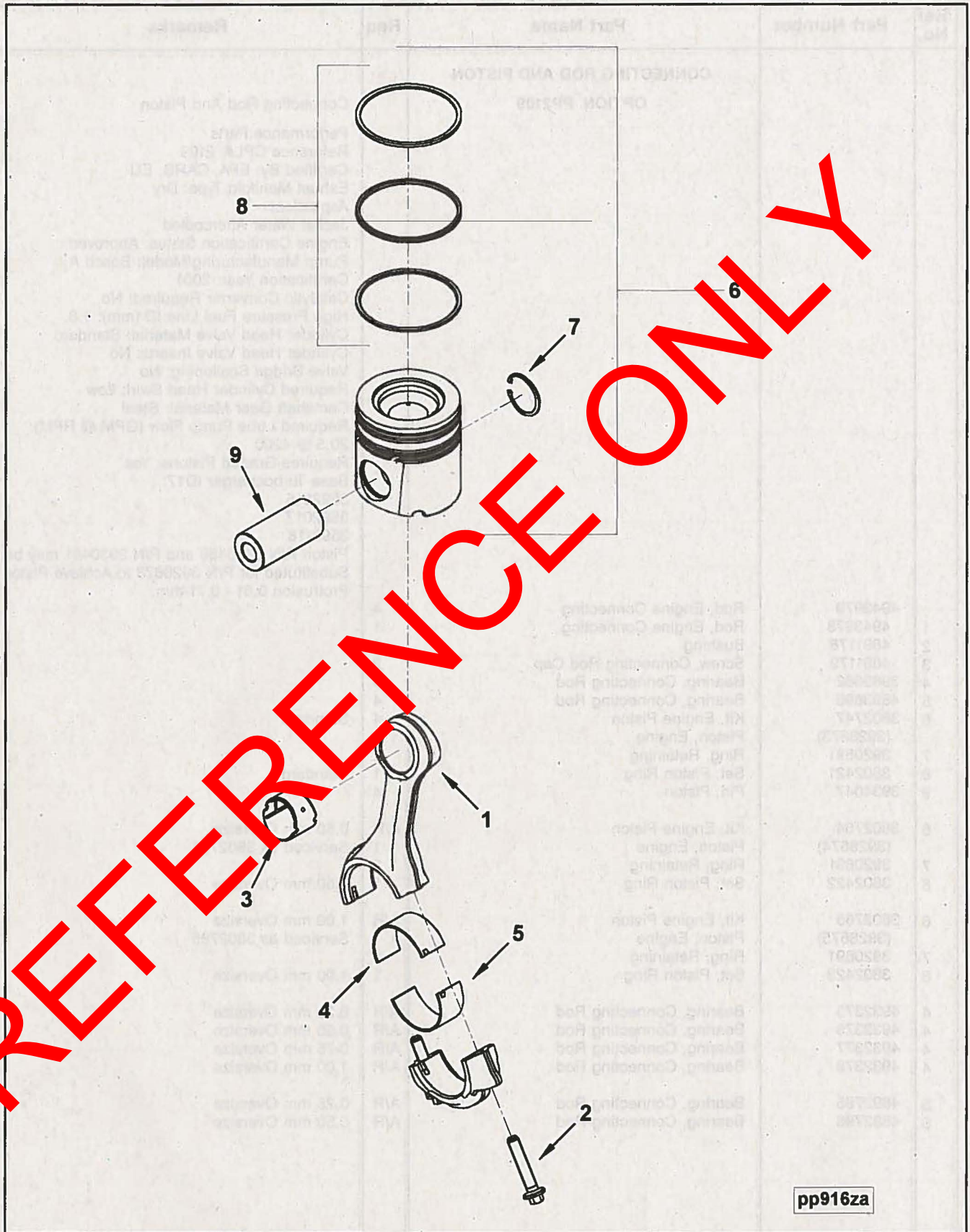
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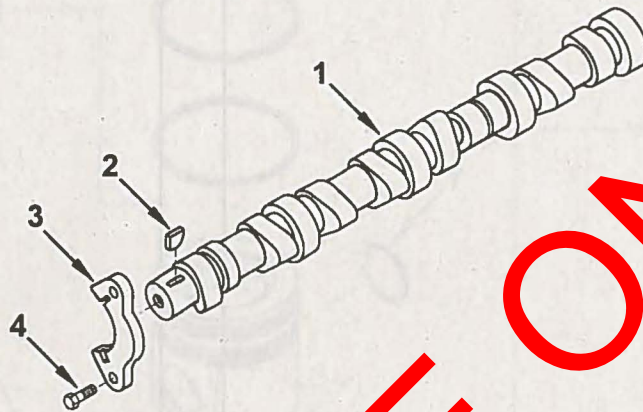


pp916za

Ref No.	Part Number	Part Name	Req	Remarks
		CONNECTING ROD AND PISTON OPTION PP2109		Connecting Rod And Piston Performance Parts Reference CPL#: 2109 Certified By: EPA, CARB, EU Exhaust Manifold Type: Dry Aspiration: Jacket Water Aftercooled Engine Certification Status: Approved Pump Manufacturing/Model: Bosch A Certification Year: 2001 Catalytic Converter Required: No High Pressure Fuel Line ID (inch): 1.8 Cylinder Head Gasket Material: Standard Cylinder Head Valve Insert: No Valve Bridge Scampering: No Required Cylinder Head Swirl: Low Camshaft Gear Material: Steel Required Lube Pump Flow (GPM @ RPM): 20.5 @ 1200 Requires Graded Pistons: Yes Base Turbocharger ID17: 3592015 3592017 3592118 Piston P/N 3930450 and P/N 3930451 may be Substituted for P/N 3928673 to Achieve Piston Protrusion 0.61 - 0.71 mm.
	4943979	Rod, Engine Connecting	4	
1	4943978	Rod, Engine Connecting	1	
2	4891178	Bushing	1	
3	4891179	Screw, Connecting Rod Cap	2	
4	3969562	Bearing, Connecting Rod	4	
5	4893693	Bearing, Connecting Rod	4	
6	3802747	Kit, Engine Piston	4	Standard
	(3928673)	Piston, Engine	1	
7	3920691	Ring, Retaining	2	
8	3802421	Set, Piston Ring	1	Standard
9	3934047	Pin, Piston	4	
6	3802764	Kit, Engine Piston	A/R	0.50 mm Oversize
	(3928674)	Piston, Engine	1	Serviced as 3802764
7	3920691	Ring, Retaining	2	
8	3802422	Set, Piston Ring	1	0.50 mm Oversize
6	3802765	Kit, Engine Piston	A/R	1.00 mm Oversize
	(3928675)	Piston, Engine	1	Serviced as 3802765
7	3920691	Ring, Retaining	2	
8	3802422	Set, Piston Ring	1	1.00 mm Oversize
4	4932377	Bearing, Connecting Rod	A/R	0.25 mm Oversize
4	4932376	Bearing, Connecting Rod	A/R	0.50 mm Oversize
4	4932377	Bearing, Connecting Rod	A/R	0.75 mm Oversize
4	4932378	Bearing, Connecting Rod	A/R	1.00 mm Oversize
5	492795	Bearing, Connecting Rod	A/R	0.25 mm Oversize
5	4892796	Bearing, Connecting Rod	A/R	0.50 mm Oversize

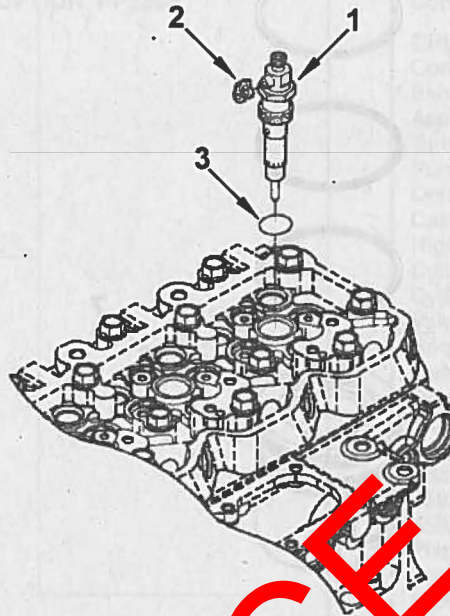


Ref No.	Part Number	Part Name	Req	Remarks
5	4892797	Bearing, Connecting Rod	A/R	0.75 mm Oversize
5	4892798	Bearing, Connecting Rod	A/R	1.00 mm Oversize



pp954gx

Ref No.	Part Number	Part Name	Req	Remarks
		CAMSHAFT OPTION PP2109		Camshaft
1	(3926806) 3929885	Camshaft	1	
2	3902332	Key, Plain Woodruff	1	
3	3927155	Support, Camshaft Thrust	1	
4	3900227	Screw, Hexagon Head Cap	2	M8 X 1.25 X 22



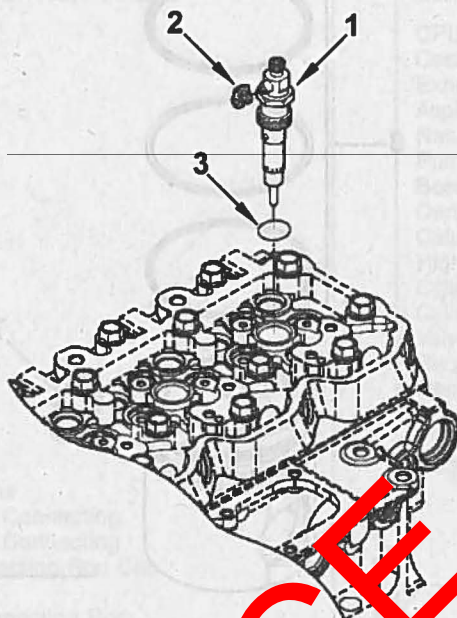
pp957go

Ref No.	Part Number	Part Name	Req	Remarks
		INJECTOR OPTION PP2109		Injector
1	3802677 (3929490)	Kit, Injector	4	Recon Equivalent 3802677 RX
2	3903380	Seal, Banjo connector	1	Serviced as 3802677
3	3909356	Seal, Rectangular Ring	1	6.2 mm



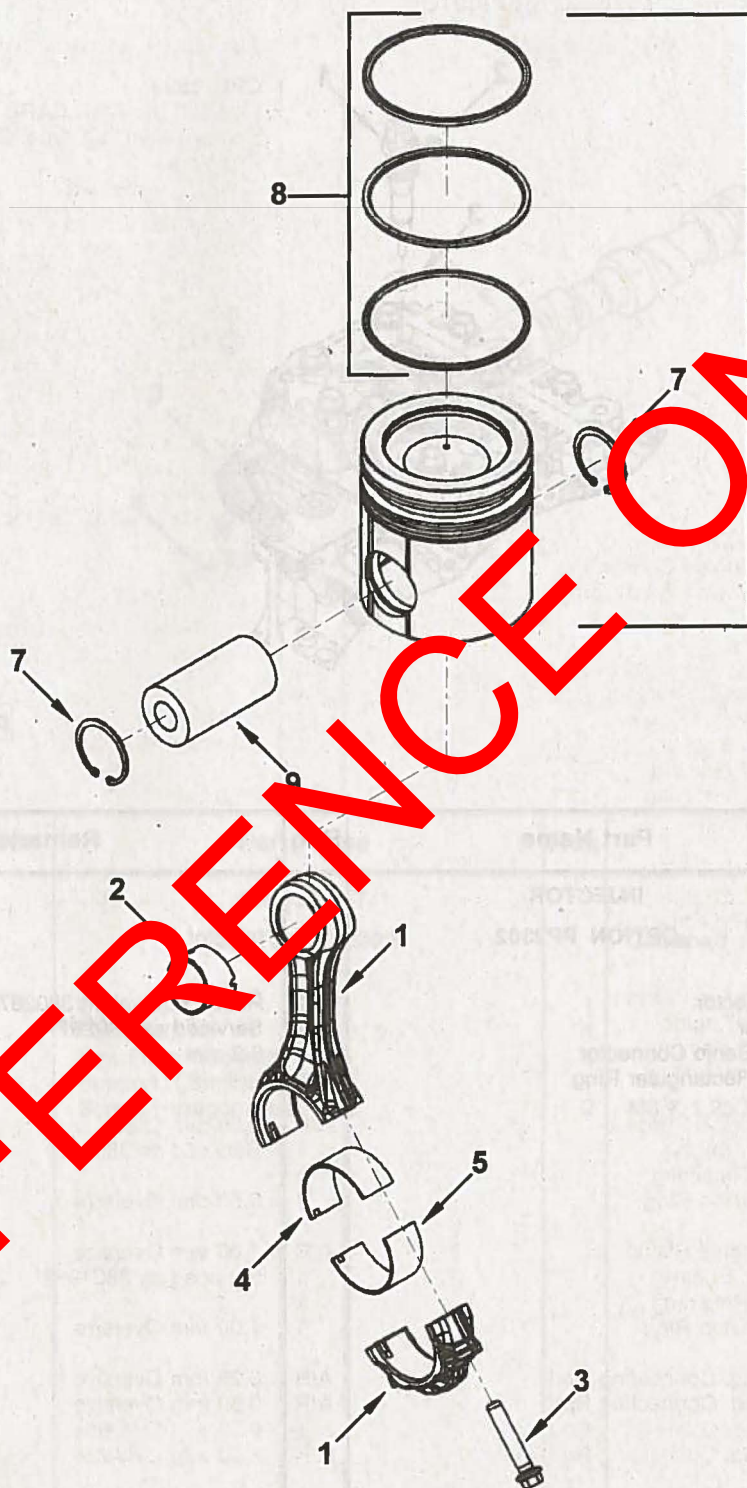
Ref No.	Part Number	Part Name	Req	Remarks
		CONNECTING ROD AND PISTON		
		OPTION PP2302		
				Connecting Rod And Piston
				CPL: 2302
				Certified by: EPA, CARB, EU
				Exhaust Manifold Type: Dry
				Aspiration:
				Turbocharged
				Pump Manufacturing/Model: Bosch A
				Certification Year: 2002
				Catalytic Converter Required: No
				High Pressure Fuel Line (mm): 8
				Cylinder Head Valve Material: Standard
				Cylinder Head Valve Inserts: No
				Valve Bridge Material: Standard
				Required Cylinder Head Swirl: Low
				Camshaft Gear Material: Steel
				Required Lubricant Pump Flow (GPM @ RPM):
				20.5 @ 4200
				Requires Grade 1 Pistons: Yes
				Base Lubricant Chargers:
				3592015
				3592118
				Piston P/N 3930450 and P/N 3930451 may be
				Substituted for P/N 3928673 to Achieve Piston
				Rotation 0.61 - 0.71 mm.
1	4943979	Rod, Engine Connecting	4	
2	4943978	Rod, Engine Connecting	1	
3	4891178	Bushing	1	
4	4891179	Screw, Connecting Rod Cap	2	
5	3969562	Bearing, Connecting Rod	4	
6	4893693	Bearing, Connecting Rod	4	Lower
7	3802747	Kit, Engine Piston	4	Standard
8	(3928673)	Piston, Engine	1	Standard
9	3920691	Ring, Retaining	2	
10	3802421	Set, Piston Ring	1	Standard
11	3934047	Pin, Piston	4	
12	3802764	Kit, Engine Piston	A/R	0.50 mm Oversize
13	(3928674)	Piston, Engine	1	Serviced as 3802764
14	3920691	Ring, Retaining	2	
15	3802422	Set, Piston Ring	1	0.50 mm Oversize
16	3802765	Kit, Engine Piston	A/R	1.00 mm Oversize
17	(3928675)	Piston, Engine	1	Serviced as 3802765
18	3920691	Ring, Retaining	2	
19	3802423	Set, Piston Ring	1	1.00 mm Oversize
20	4932375	Bearing, Connecting Rod	A/R	0.25 mm Oversize
21	4932376	Bearing, Connecting Rod	A/R	0.50 mm Oversize
22	4932377	Bearing, Connecting Rod	A/R	0.75 mm Oversize
23	4932378	Bearing, Connecting Rod	A/R	1.00 mm Oversize
24	4892795	Bearing, Connecting Rod	A/R	0.25 mm Oversize
25	4892796	Bearing, Connecting Rod	A/R	0.50 mm Oversize
26	4892797	Bearing, Connecting Rod	A/R	0.75 mm Oversize
27	4892798	Bearing, Connecting Rod	A/R	1.00 mm Oversize

Ref No.	Part Number	Part Name	Req	Remarks
		CAMSHAFT OPTION PP2302		Camshaft
1	(3926806)	Camshaft	1	
2	3929885	Camshaft	1	
3	3902332	Key, Plain Woodruff	1	
4	3927155	Support, Camshaft Thrust	1	
	3900222	Screw, Hexagon Head Cap	2	M8 X 1.25 X 22



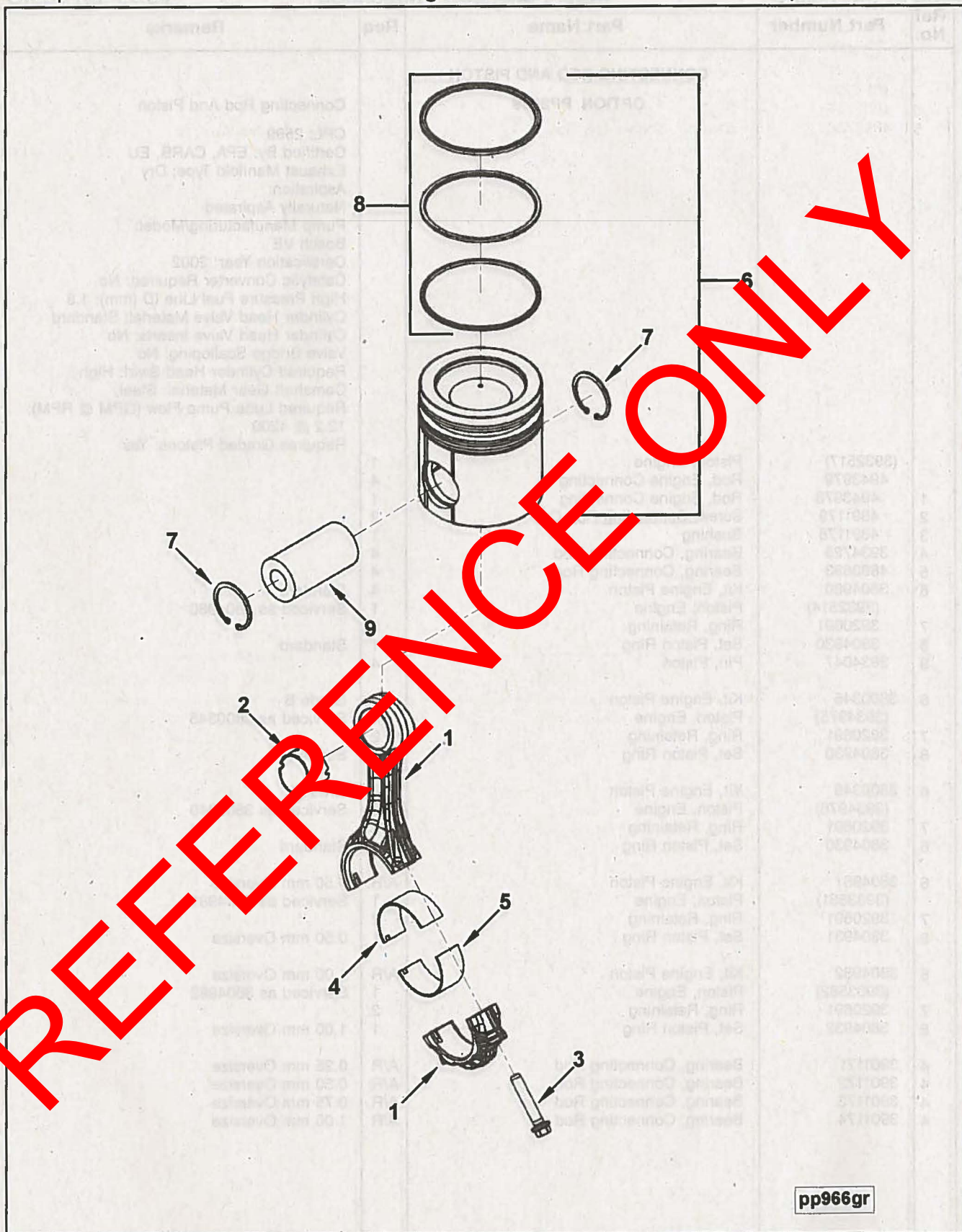
pp957go

Ref No.	Part Number	Part Name	Req	Remarks
		INJECTOR OPTION PP2302		Injector
1	3802677 (3929490)	Kit, Injector	4	Recon Equivalent 3802677 RX
2	3903380	Seal, Banjo Connector	1	Serviced as 3802677
3	3909356	Seal, Rectangular Ring	1	6.2 mm

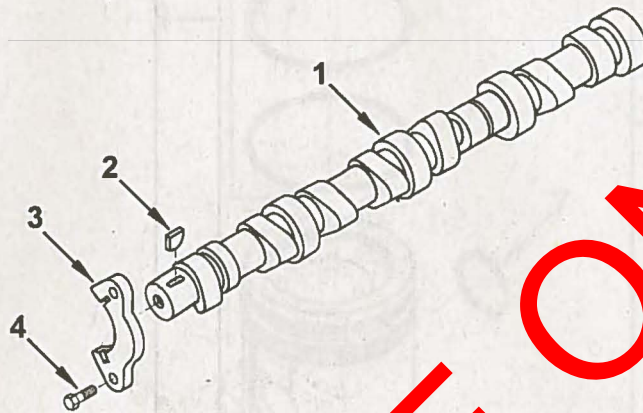


pp966gr

Ref No.	Part Number	Part Name	Req	Remarks
		CONNECTING ROD AND PISTON		
		OPTION PP2599		
				Connecting Rod And Piston
				CPL: 2599
				Certified By: EPA, CARB, EU
				Exhaust Manifold Type: Dry
				Aspiration:
				Naturally Aspirated
				Pump Manufacturing/Model:
				Bosch VE
				Certification Year: 2002
				Catalytic Converter Required: No
				High Pressure Fuel Line ID (mm): 8
				Cylinder Head Valve Material: Standard
				Cylinder Head Valve Inset: No
				Valve Bridge Staggering: No
				Required Cylinder Head Swirl: High
				Cams Shaft Gear Material: Steel
				Required Lube Pump Flow (GPM @ RPM):
				12.2 @ 4200
				Required Grade Pistons: Yes
	(3932517)	Piston, Engine	1	
	4943979	Rod, Engine Connecting	4	
1	4943978	Rod, Engine Connecting	1	
2	4891179	Screw, Connecting Rod Cap	2	
3	4891178	Bushing	4	
4	3934725	Bearing, Connecting Rod	4	
5	4893693	Bearing, Connecting Rod	4	
6	3804980	Kit, Engine Piston	1	Standard
	(3932514)	Piston, Engine	1	Serviced as 3804980
7	3920691	Ring, Retaining	2	
8	3804930	Set, Piston Ring	1	Standard
9	3934047	Pin, Piston	4	
6	3800345	Kit, Engine Piston	A/R	Grade B
	(3934975)	Piston, Engine	1	Serviced as 3800345
7	3920691	Ring, Retaining	2	
8	3804930	Set, Piston Ring	1	Standard
6	3800349	Kit, Engine Piston	A/R	Grade C
	(3934976)	Piston, Engine	1	Serviced as 3800349
7	3920691	Ring, Retaining	2	
8	3804930	Set, Piston Ring	1	Standard
6	3804981	Kit, Engine Piston	A/R	0.50 mm Oversize
	(3933581)	Piston, Engine	1	Serviced as 3804981
7	3920691	Ring, Retaining	2	
8	3804931	Set, Piston Ring	1	0.50 mm Oversize
6	3804982	Kit, Engine Piston	A/R	1.00 mm Oversize
	(3933582)	Piston, Engine	1	Serviced as 3804982
7	3920691	Ring, Retaining	2	
8	3804932	Set, Piston Ring	1	1.00 mm Oversize
	3901171	Bearing, Connecting Rod	A/R	0.25 mm Oversize
4	3901172	Bearing, Connecting Rod	A/R	0.50 mm Oversize
4	3901173	Bearing, Connecting Rod	A/R	0.75 mm Oversize
4	3901174	Bearing, Connecting Rod	A/R	1.00 mm Oversize

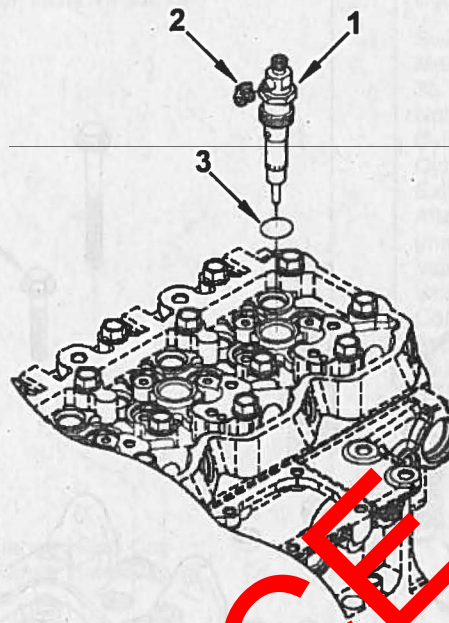


Ref No.	Part Number	Part Name	Req	Remarks
5	4892795	Bearing, Connecting Rod	A/R	0.25 mm Oversize
5	4892796	Bearing, Connecting Rod	A/R	0.50 mm Oversize
5	4892797	Bearing, Connecting Rod	A/R	0.75 mm Oversize
5	4892798	Bearing, Connecting Rod	A/R	1.00 mm Oversize



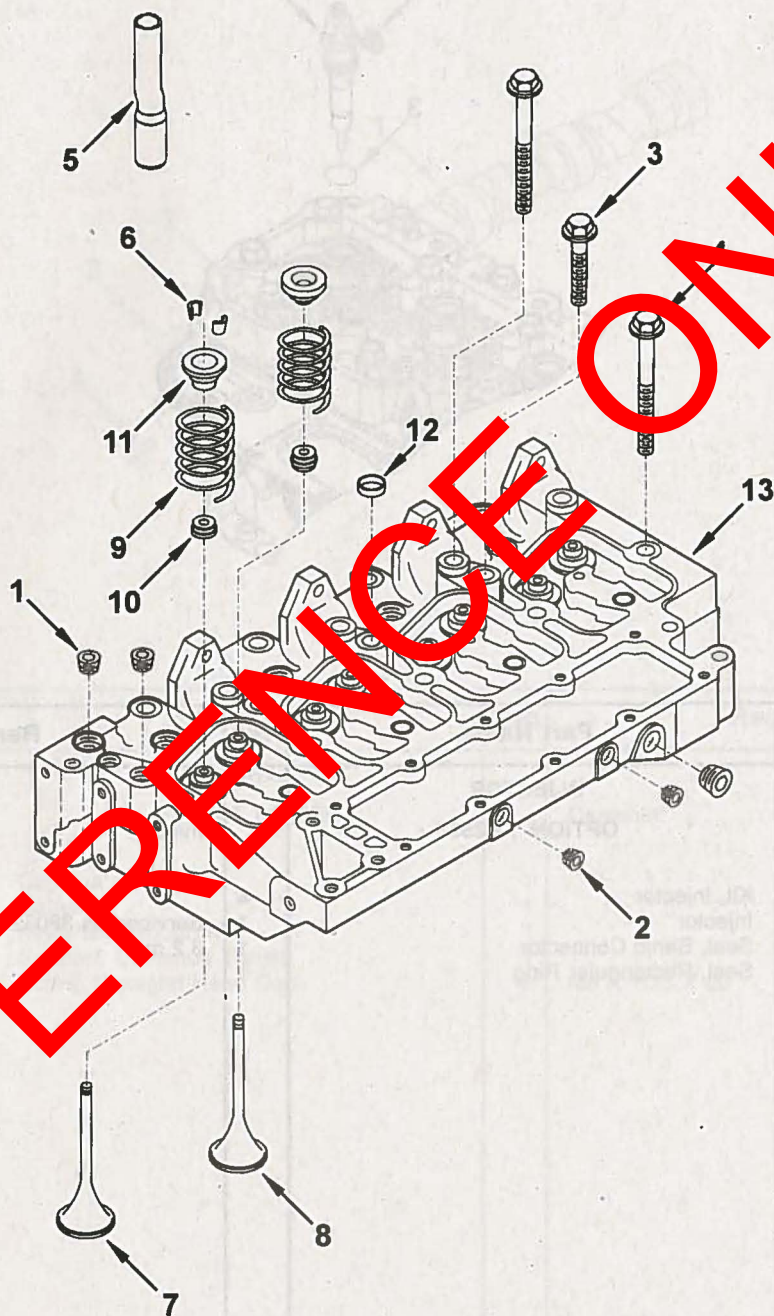
pp954gx

Ref No.	Part Number	Part Name	Req	Remarks
		CAMSHAFT OPTION PP2599		Camshaft
1	(3912842)	Camshaft	1	
2	3929039	Camshaft	1	
3	3902332	Key, Plain Woodruff	1	
4	3927155	Support, Camshaft Thrust	1	
4	3900227	Screw, Hexagon Head Cap	2	M8 X 1.25 X 22



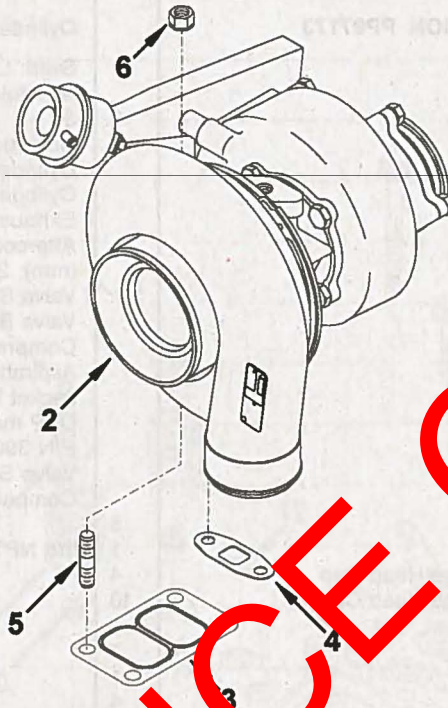
pp957go

Ref No.	Part Number	Part Name	Req	Remarks
		INJECTOR OPTION PP2599		Injector
1	3806248 (3930573)	Kit Injector	4	
2	3903380	Seal Banjo Connector	1	Serviced as 3806248
3	3909356	Seal Rectangular Ring	1	6.2 mm



pp960gv

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER HEAD		
		OPTION PP97173		
				Cylinder Head
				Swirl: Low
				Manifold Pressure to Lift Exhaust Valve (PSI): 36
				Notched Head: No
				Cylinder Head Material: Cast Iron
				Cylinder Head Valve Material: Standard
				Exhaust Manifold Type: Dry
				Aftercooler Water Supply Tap From FFOB (mm): 256.5 Forward
				Valve Seat Inserts: No
				Valve Bridge Scallop: No
				Compression Locking Hardware: No
				Aspiration:
				Jacket Water Cooled
				DEP may Substitute Valve Spring Retainer P/N 3900299 for P/N 3935038.
				Valve Spring Retainer P/N 3900299 is NOT Compatible With CDC Manufacturing.
1	4931643	Plug, Pipe	1	
2	3906619	Plug, Pipe	1	
3	3920779	Screw, Hex Flange Head Cap	4	
4	3920780	Screw, Hex Flange Head Cap	4	
	(3967486)	Head, Cylinder	1	
5	3934712	Tube, Aftercooler	1	
	3967460	Head, Cylinder	1	
	3802355	Valve, Intake	4	
6	3900250	Collet, Valve	2	
7	3920867	Valve, Intake	1	
	3802356	Valve, Exhaust	4	
6	3900250	Collet, Valve	2	
8	3920868	Valve, Exhaust	1	
9	3932453	Spring, Valve	8	
10	3957912	Seal, Valve Stem	8	
11	3957913	Retainer, Valve Spring	8	
	3966448	Head, Cylinder	1	
12	(3812092)	Plug, Expansion	3	
13	(3966447)	Head, Cylinder	1	

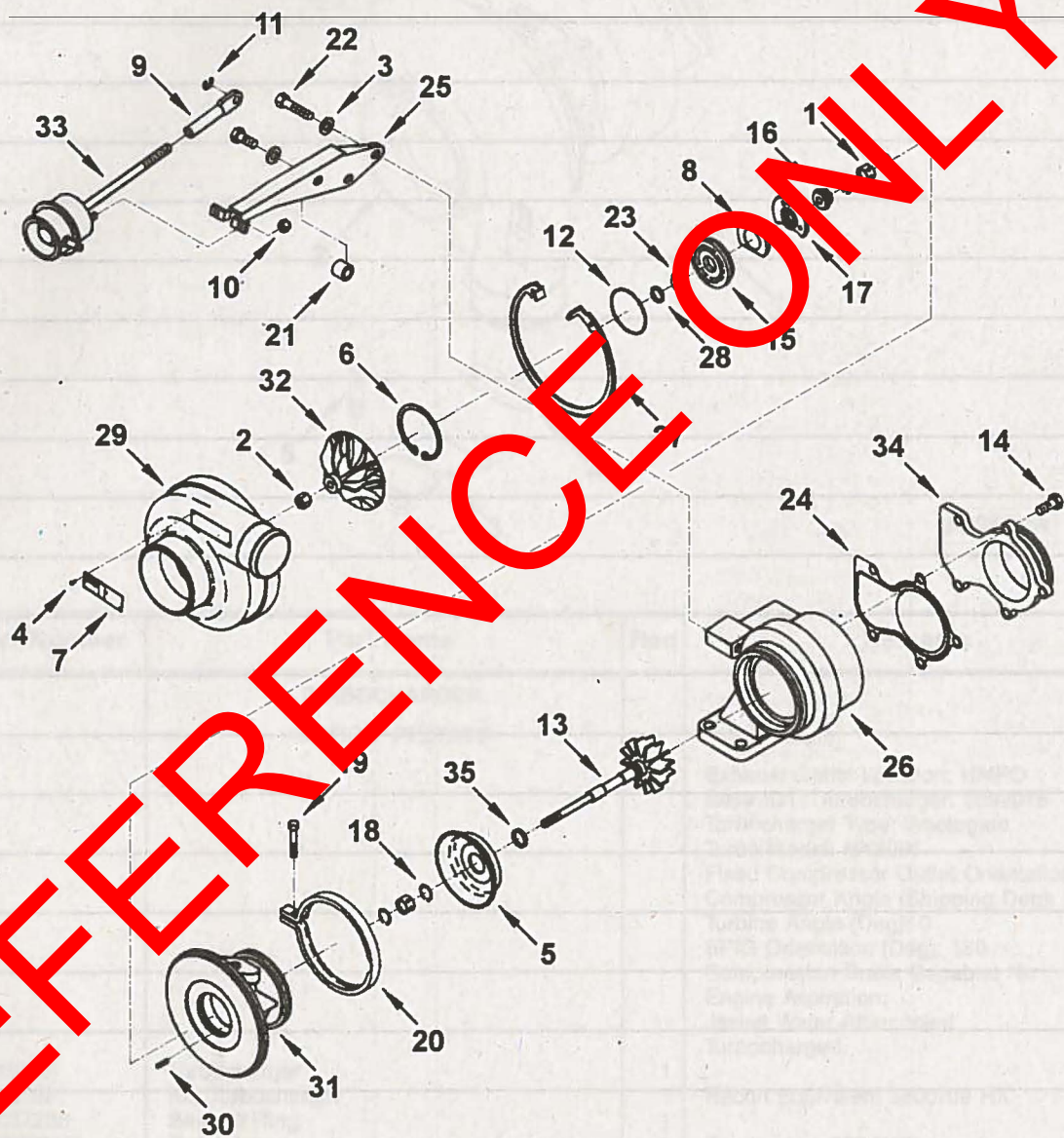


pp960gw

Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER OPTION PP97225		Turbocharger Exhaust Outlet Location: HMFO Base ID17 Turbocharger: 3592015 Turbocharger Type: Wastegate Turbo Model: HX30W Fixed Compressor Outlet Orientation (Deg): 11 Compressor Angle (Shipping Deg): 201 Turbine Angle (Deg): 0 SPIG Orientation (Deg): 180 Compression Brake Capable: No Engine Aspiration: Jacket Water Aftercooled Turbocharged.
1	3593007	Turbocharger	1	
1	3800709	Kit, Turbocharger	1	Recon Equivalent 3800709 RX
1	3337236	Seal, O Ring	1	Serviced as 3800709
2	(3592015)	Turbocharger	1	
3	3919369	Gasket, Turbocharger	1	
4	3937706	Gasket, Oil Drain	1	Holset P/N 3519807
5	3818823	Stud	4	
6	3818824	Nut, Hexagon Flange	4	M10 X 1.50

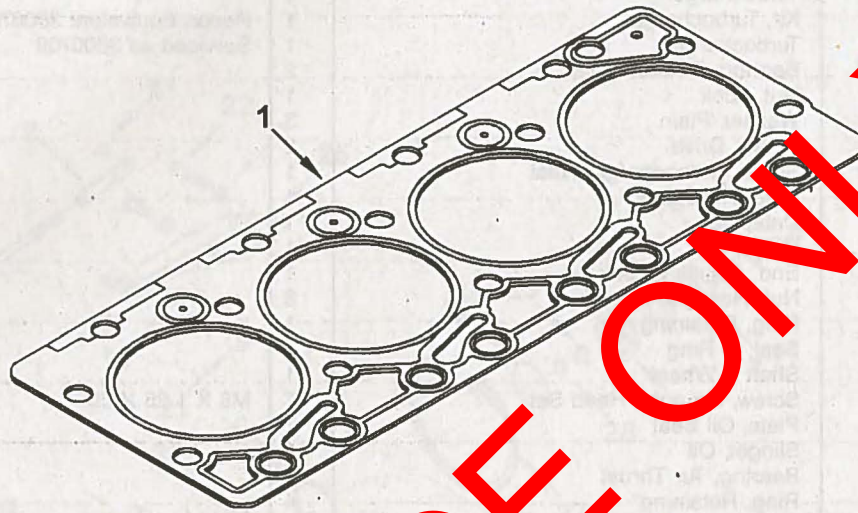
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pp975gn

Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER		
		OPTION PP97225		Turbocharger
	(3593089)	Turbocharger	1	
	3800709	Kit, Turbocharger	1	Recon Equivalent 3800709 RX
	(3592015)	Turbocharger	1	Serviced as 3800709
1	3503100	Bearing, Turbocharger	2	
2	3596402	Nut, Lock	1	
3	3504967	Washer, Plain	3	
4	3519163	Screw, Drive	2	
5	3519304	Shield, Turbocharger Heat	1	
6	3527566	Ring, Retaining	1	
7	3525562	Dataplate	1	
8	3528104	Baffle, Oil	1	
9	(3528177)	End, Adjusting Link	1	
10	3592050	Nut, Hexagon Flange	3	
11	3528221	Ring, Retaining	1	
12	3528933	Seal, O Ring	1	
13	3539805	Shaft & Wheel	1	
14	3530556	Screw, Hexagon Head Set	7	M8 X 1.2 X 20
15	3530923	Plate, Oil Seal	1	
16	3530924	Slinger, Oil	1	
17	3531419	Bearing, Tur Thrust	1	
18	3762259	Ring, Retaining	1	
19	3590296	Bolt, T	1	
20	3590606	Clamp, V Band	1	
21	3532195	Spacer, Mounting	1	
22	3532940	Screw, Hexagon Head Set	1	
23	3534451	Collar, Thrust	1	
24	3535001	Gasket, Adapter	1	
25	3535203	Bracket, Actuator	1	
26	(3535656)	Housing, Turbine	1	
27	3535800	Ring, Retaining	1	
28	3758848	Seal, Split Ring	1	
29	3539806	Housing, Compressor	1	
30	3522597	Pin, Roll	2	
31	(4038779)	Housing, Tur Bearing	1	
32	(3599693)	Impeller, Tur Compressor	1	
33	(3594347)	Actuator, Turbocharger	1	
34	3527759	Connection, Adapter	1	
35	3756754	Seal, Split Ring	1	

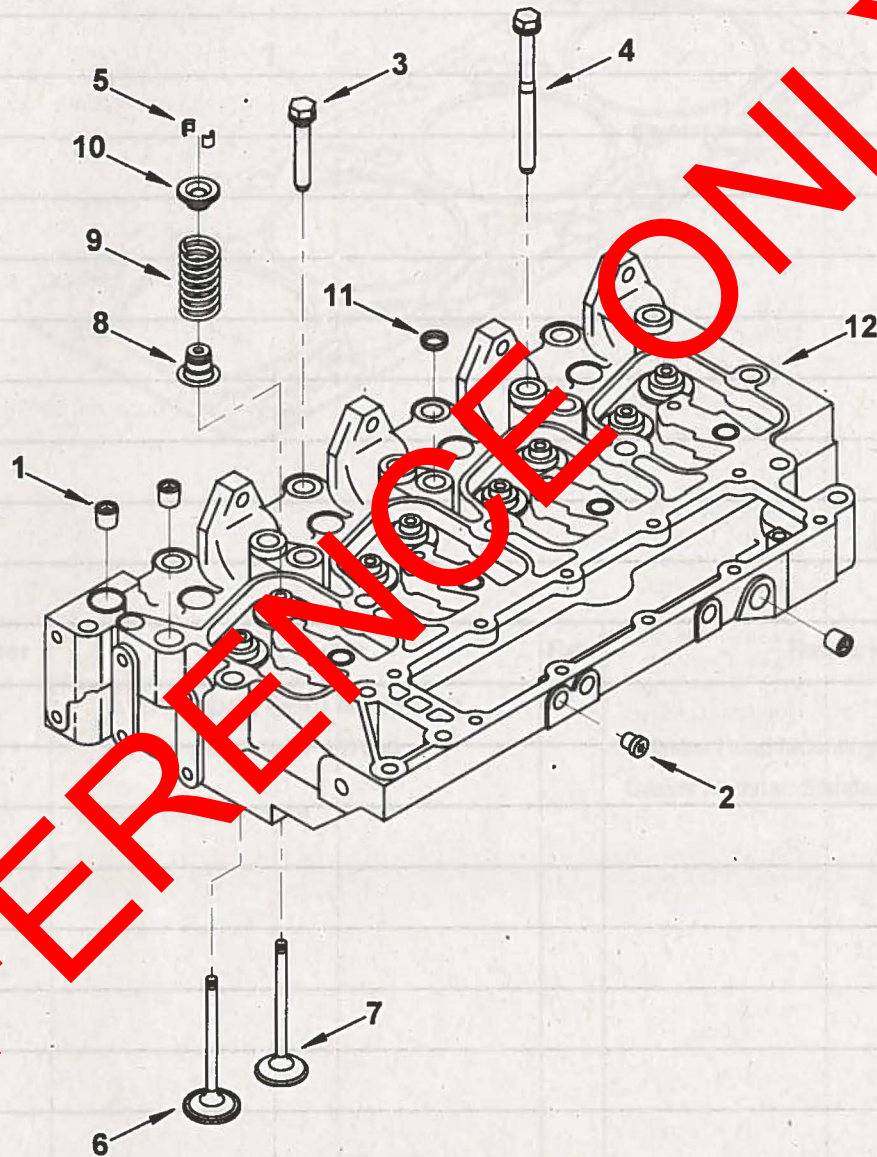


pp951gf

Ref No.	Part Number	Part Name	Req	Remarks
1	3283333	CYLINDER HEAD MOUNTING OPTION PP97300 Gasket Cylinder Head	1	Cylinder Head Mounting Gasket Material: Standard

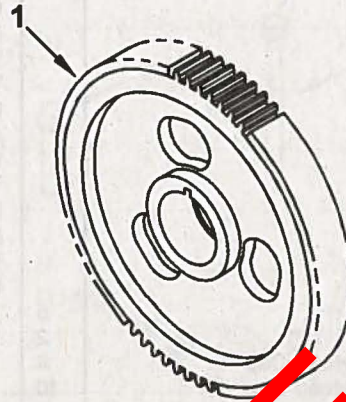
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REFERENCE ONLY



pp974ga

Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER HEAD OPTION PP97442		Cylinder Head Swirl: High Manifold Pressure to Lift Exhaust Valve (PSI): 20 Cylinder Head Material: Cast Iron Cylinder Head Valve Material: Standard Exhaust Manifold Type: Dry Valve Seat Inserts: No Valve Bridge Scallop: No Compression Brake Mounting Hardware: No Aspiration: Naturally Aspirated Turbocharged: No DEP may Substitute Valve Spring Retainer P/N 3900299 for P/N 3935038. Valve Spring Retainer P/N 3900299 is NOT Compatible With CDC Manufacturing.
1	4931643	Plug, Pipe	5	
2	3906619	Plug, Pipe	2	1/8 NF
3	3920779	Screw, Hex Flange Head Cap	10	
4	3920780	Screw, Hex Flange Head Cap	1	Recon Equivalent 3967451 RX
	3967451	Head, Cylinder	1	
	3802355	Valve, Intake	1	
5	3900250	Collet, Valve	4	
6	3920867	Valve, Intake	2	
	3802356	Valve, Exhaust	1	
5	3900250	Collet, Valve	8	
7	3920868	Valve, Exhaust	8	
8	3957912	Seal, Valve Stem	8	
9	3932453	Spring, Valve	8	
10	3957913	Retainer, Valve Spring	1	
	3966450	Head, Cylinder	3	
11	3922073	Plug, Expansion	1	
12	(3966449)	Head, Cylinder		

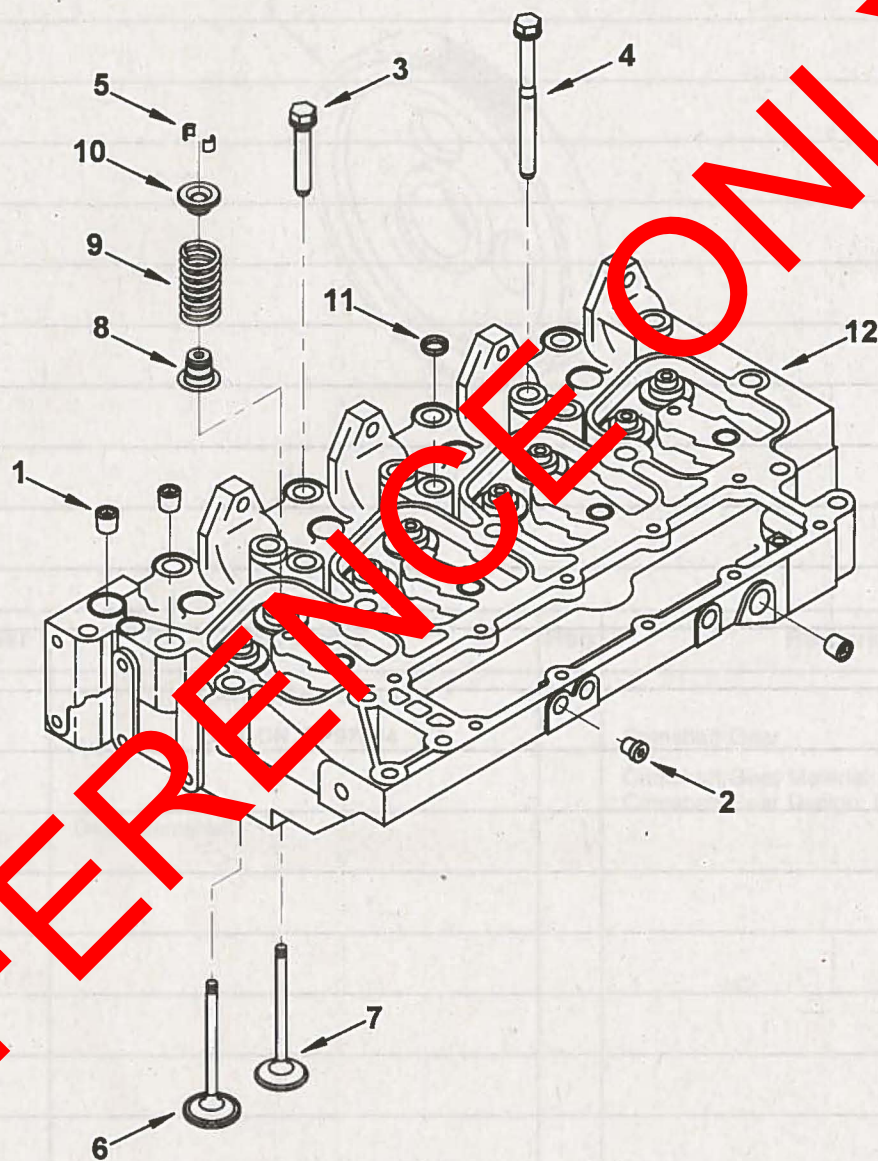


pp954gr

Ref No.	Part Number	Part Name	Req	Remarks
1	3929028	CAMSHAFT GEAR OPTION PP97634 Gear, Camshaft	1	Camshaft Gear Camshaft Gear Material: Steel Camshaft Gear Design: One Piece

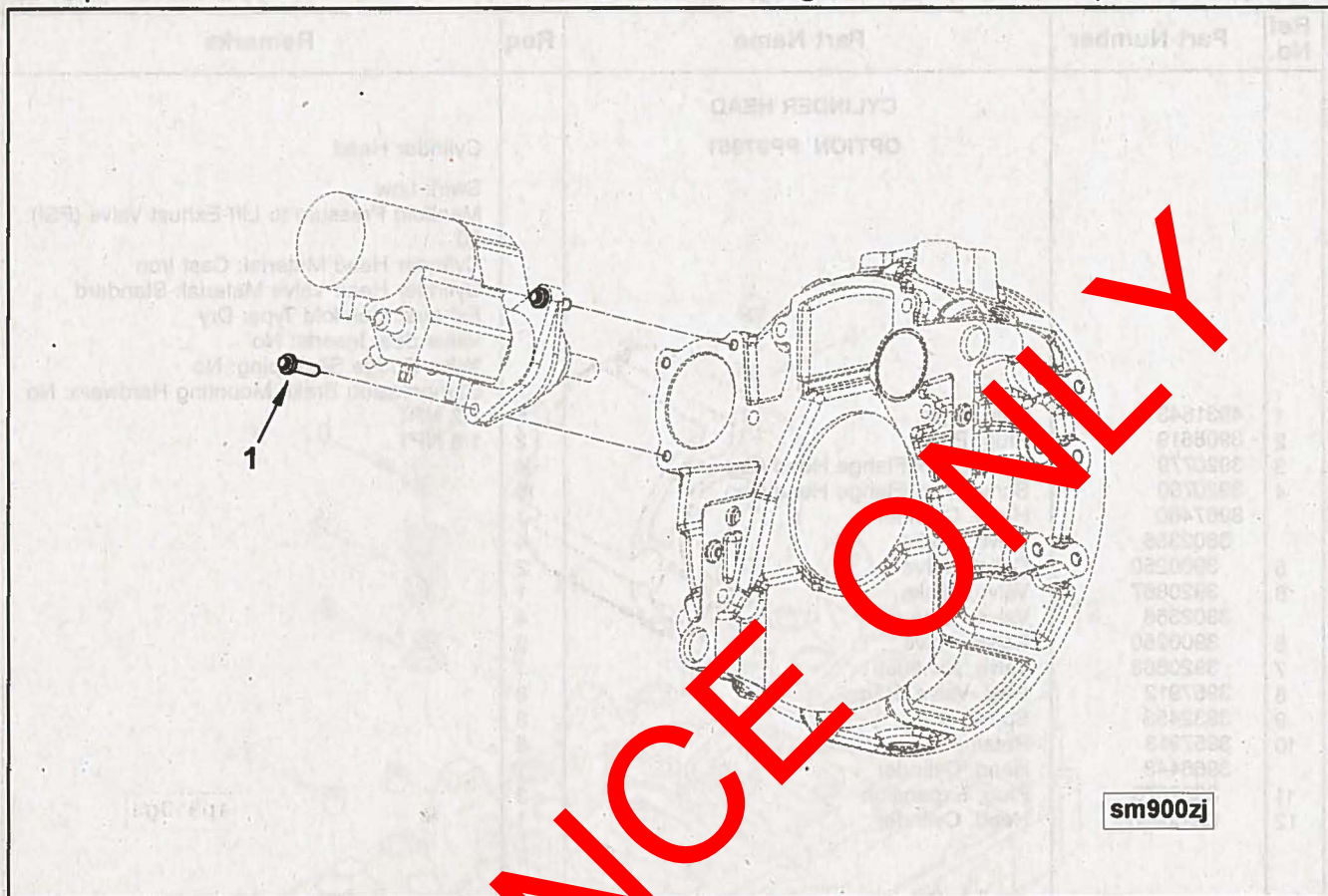
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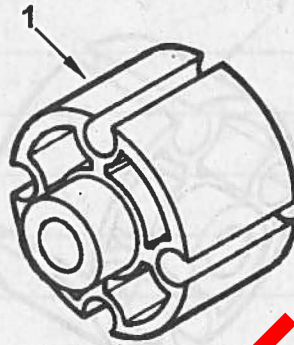
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pp974ga

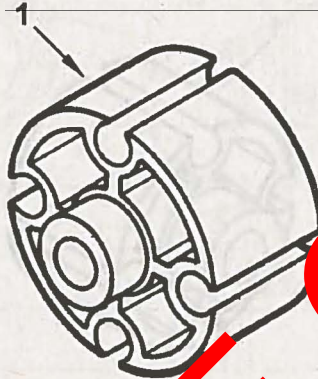
Ref No.	Part Number	Part Name	Req	Remarks
		CYLINDER HEAD OPTION PP97951		Cylinder Head Swirl: Low Manifold Pressure to Lift Exhaust Valve (PSI): 20 Cylinder Head Material: Cast Iron Cylinder Head Valve Material: Cast Iron Exhaust Manifold Type: Dry Valve Seat Inserts: No Valve Bridge Scallop: No Compression Brake Mounting Hardware: No
1	4931643	Plug, Pipe	5	1/2 NPT
2	3906619	Plug, Pipe	2	1/8 NPT
3	3920779	Screw, Hex Flange Head Cap	4	
4	3920780	Screw, Hex Flange Head Cap	10	
	3967460	Head, Cylinder	1	
	3802355	Valve, Intake	4	
5	3900250	Collet, Valve	2	
6	3920867	Valve, Intake	1	
	3802356	Valve, Exhaust	4	
5	3900250	Collet, Valve	2	
7	3920868	Valve, Exhaust	1	
8	3957912	Seal, Valve Stem	8	
9	3932453	Spring, Valve	3	
10	3957913	Retainer, Valve Spring	1	
	3966448	Head, Cylinder	1	
11	3922073	Plug, Expansion	3	
12	(3966447)	Head, Cylinder	1	

				
Ref No.	Part Number	Part Name	Req	Remarks
		STARTER MOTOR MOUNTING OPTION SM9701		Starter Motor Mounting Clutch Type: Dry Mounting Capscrew or Nut Size: M10 Required Pilot Bore (mm): 88.9 Spacer Thickness (mm): 0.0 Mount Component: Non Oil Seal Starter Mount SAE: SAE #1 - 2 Bolt 180 Deg
1	396847	Screw, Twelve Point Cap	2	



sp910ga

Ref No.	Part Number	Part Name	Req	Remarks
1	3903816	FAN PILOT SPACER OPTION SP 003 Spacer, Fan	1	Fan Pilot Spacer Spacer Thickness (mm): 25.40 Spacer Type: Spacer Fan Pilot Diameter (mm): 25.4 Mounting Bolt Circle (mm): 50

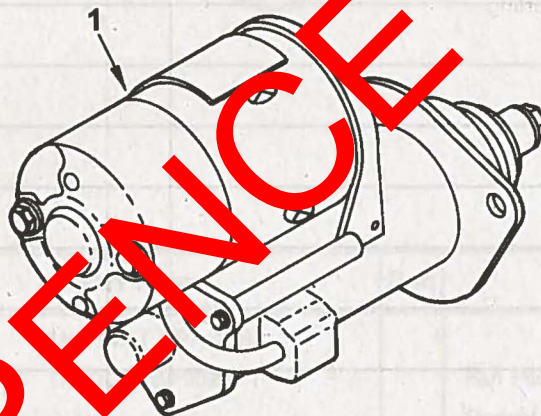


sp910gb

Ref No.	Part Number	Part Name	Req	Remarks
1	3910131	Spacer, Fan Pilot	1	Fan Pilot Spacer Spacer Thickness (mm): 63.5 Spacer Type: Spacer Fan Pilot Diameter (mm): 25.4 Mounting Bolt Circle (mm): 60

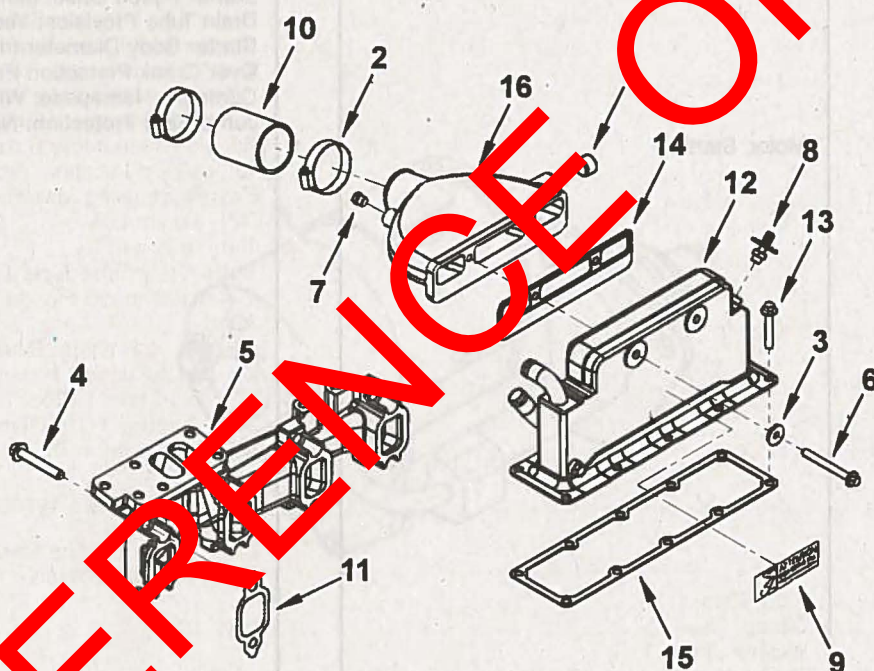
NOTES

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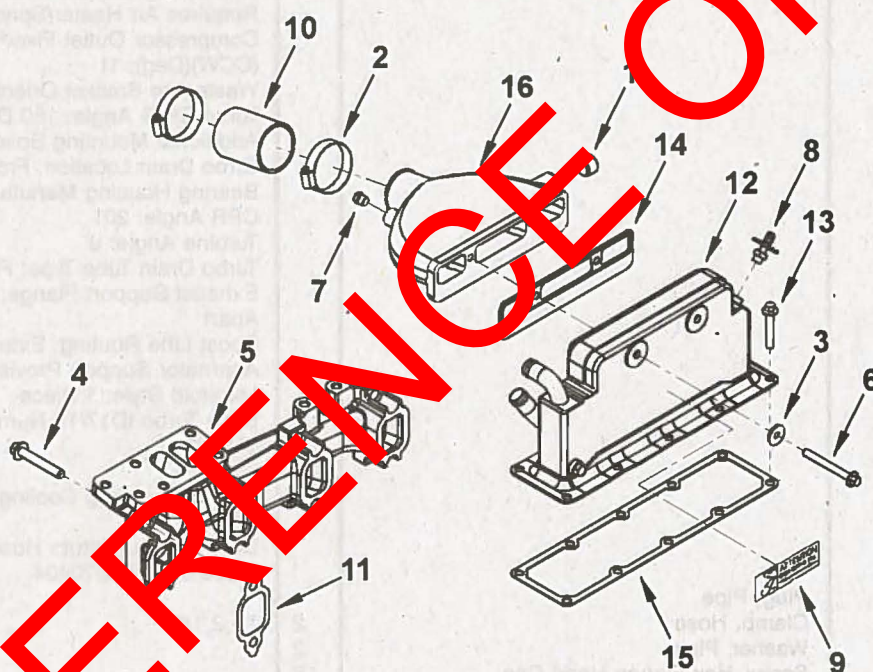
st951gh

Ref No.	Part Number	Part Name	Req	Remarks
		STARTING MOTOR OPTION ST9312		Starting Motor Manufacturer: Nippondenso Volt: 12 Model/Type: R2.7 Diameter Pitch: 10/12 Mount SAE: SAE #1 - 2 Bolt Wet/Dry: Dry Starter Style: Reduction Pilot Bore Diameter (mm): 88.90 Mounting Flange Thickness (mm): 16.5 Angle Limitation High (Deg): 92 Angle Limitation Low (Deg): 62 Supply Method: Wire Exposed Starter Length (mm): 221 Starter Inlet Offset (mm): 3.8 Drain Tube Provision: Yes Starter Body Diameter (mm): 99 Over Crank Protection Provided: No Cummins Nameplate: With Jump Start Protection: No
1	3964428	Motor, Starting	1	



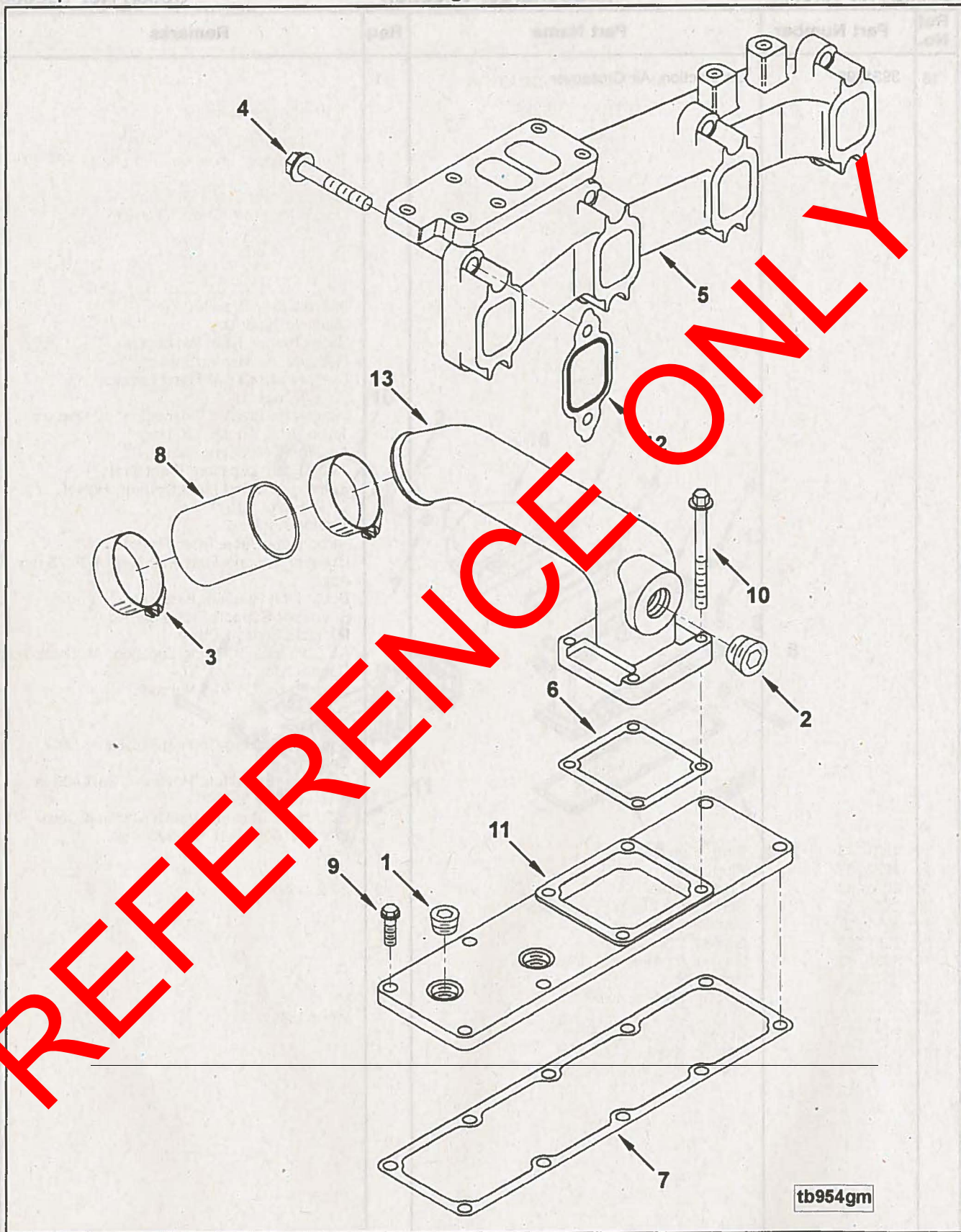
tb972gp

Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER LOCATION OPTION TB9396		Turbocharger Location Exhaust Outlet Location: HMFO Turbo Exhaust Location (mm): From FFOB: 111 Vertical From Crank CL: 550.3 Horizontal From Crank CL: 194.1 Aspiration: Jacket Water Aftercooled Oil Supply Routing: Onboard Boost Line Pick up Size: 1/2" NPTF Aftercooler Water Supply Location: from FFOB (mm): 256.5 Intake Cover: Not Used: Yes Manifold Type: 1 Piece Turbocharger Type: Wastegate Requires Air Filter: No Compressor Outlet Fixed Location (CCV) (Deg): 11 Wastegate Bracket Orientation: 30 Deg up Turbo SPIN Angle: 180 Deg Additional Mounting Bosses: 0 Turbo Drain Location: Front Drain Bearing Housing Manufacturer: Holset CFR Angle: 201 Turbine Angle: 0 Turbo Drain Tube Type: Flexible Exhaust Support Flange: 2 X M14 38.75 mm Apart Boost Line Routing: External Alternator Support Provision: No Manifold Style: 1 Piece Base Turbo ID17/15 Number: 3592015 3592121 Bearing Housing Cooling Provision: Oil Cooled DEP may Substitute Hose P/N 3970400 in Place of P/N 3970404.
1	4931643	Plug, Pipe	1	
2	3033033	Clamp, Hose	2	2 - 2, 1/2"
3	3278499	Washer, Plain	2	
4	3944593	Screw, Hex Flange Head Cap	8	
5	3901919	Manifold, Exhaust	1	
6	3901447	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 75
7	3906619	Plug, Pipe	1	1/8 NPT
8	3909204	Draincock	1	
9	3910778	Decal	1	
10	3902404	Hose, Plain	1	
11	3927000	Gasket, Exhaust Manifold	4	
12	3947100	Aftercooler	1	
13	3908837	Screw, Hex Flange Head Cap	6	
14	3908837	Gasket, Connection	1	
15	3938153	Gasket, Int Manifold Cover	1	



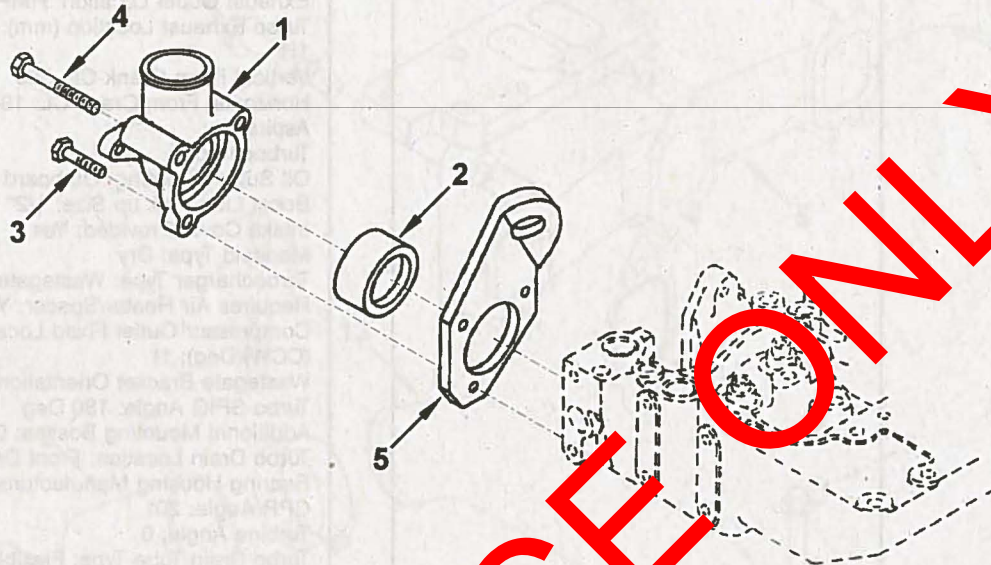
tb972gp

Ref No.	Part Number	Part Name	Req	Remarks
16	3931998	Connection, Air Crossover	1	



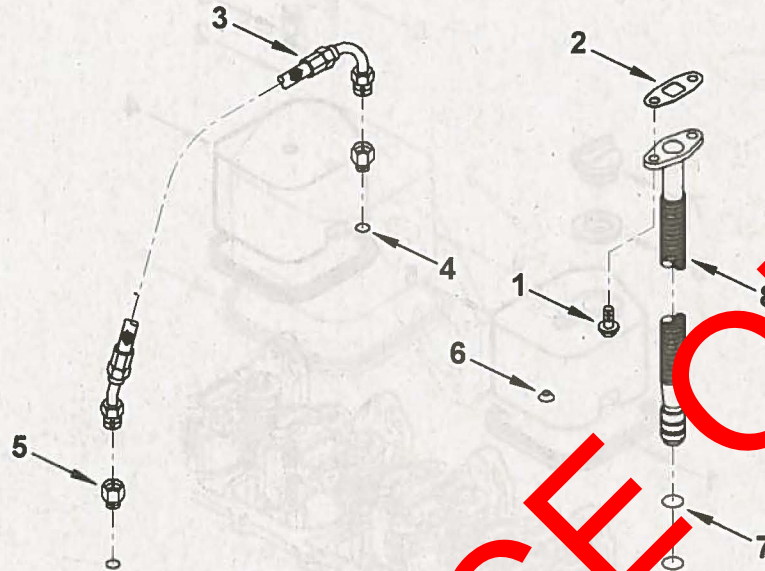
tb954gm

Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER LOCATION		
		OPTION TB9399		Turbocharger Location Exhaust Outlet Location: HMFO Turbo Exhaust Location (mm): From FFOB: 111 Vertical From Crank CL: 550 Horizontal From Crank CL: 194 Aspiration: Turbocharged Oil Supply Routing: Outboard Boost Line Pick up Size: 1/2" NPTF Intake Cover Provided: Yes Manifold Type: Dry Turbocharger Type: Variable Requires Air Heater/Spacer: Yes Compressor Outlet Fitted Location (CCW) Deg: 11 Waste Gate Bracket Orientation: 30 Deg up Turbo SIG Angle: 180 Deg Additional Mounting Bosses: 0 Turbo Drain Location: Front Drain Bearing Housing Manufacturer: Holset CPR Angle: 201 Turbine Angle: 0 Turbo Drain Tube Type: Flexible Exhaust Support Flange: 2 X M14 38.75 mm Apart Boost Line Routing: External Alternator Support Provision: No Manifold Style: 1 Piece Air Compressor Fitting Location: Air Crossover Connection Base Turbo ID17/15 Number: 3592015 3592206 Bearing Housing Cooling Provision: Oil Cooled DEP may Substitute Hose P/N 3970400 in Place of P/N 3970404. BZL may Substitute Intake Manifold Cover P/N 3921500 With P/N 3966469.
1	4931643	Plug, Pipe	2	
2	4933532	Plug, Pipe	1	
3	3033033	Clamp, Hose	8	2 - 2 1/2"
4	3944593	Screw, Hex Flange Head Cap	2	
5	3901919	Manifold, Exhaust	1	
6	3969908	Gasket, Connection	1	
7	3921153	Gasket, Int Manifold Cover	1	
8	3970004	Hose, Plain	1	
9	3918100	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 25
10	3909995	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 90
11	3921500	Cover, Intake Manifold	1	
12	3927154	Gasket, Exhaust Manifold	4	
13	3929742	Connection, Air Crossover	1	



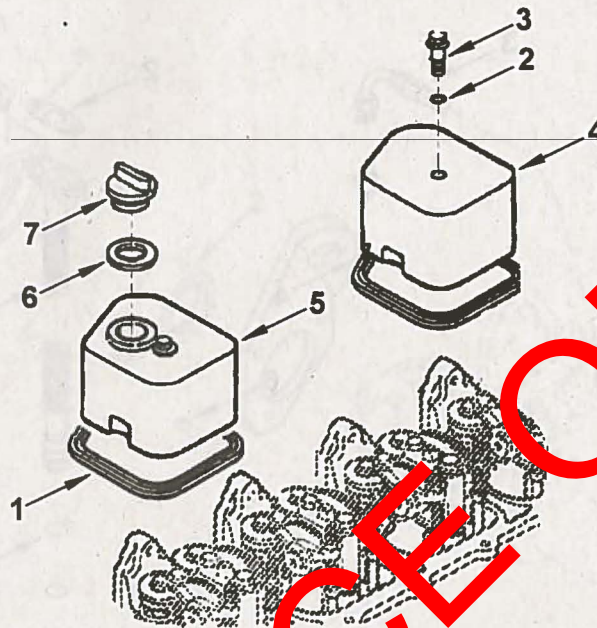
th900gb

Ref No.	Part Number	Part Name	Req	Remarks
		THE THERMOSTAT HOUSING OPTION TH9001		Thermostat Housing Thermostat Bore: 54.10 Outlet Type/OD (mm): 45.0 Outlet Direction: Vertical Bracket Direction: Vertical/Forward Airation Method: Non Vented Tappings for Belt Tensioner: No TEL may use Lifting Bracket P/N 3281246 in Place of P/N 3903757. Option Contains Assembly Note P/N 3290776.
1	328102	Housing, Thermostat	1	
2	323331	Gasket, Thm Housing Cover	1	
3	390002	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 35
4	390972	Screw, Hex Flange Head Cap	2	
5	3903757	Bracket, Lifting	1	



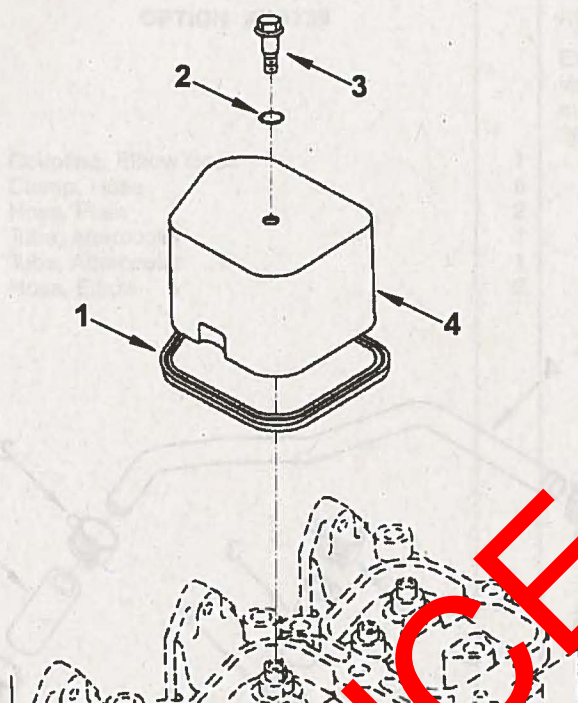
tp950gm

Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER PLUMBING		
		OPTION TP9701		
1	3900630	Screw, Hex Flange Head Cap	2	Turbocharger Plumbing
2	3937706	Gasket, Oil Drain	1	Turbo Exhaust Location: HMFO
3	3913753	Hose, Flexible	1	Oil Filter Mounted Location: Vertical
4	3913587	Connector, Female	2	Manifold Type: Dry
5	3907236	Seal, O Ring	1	Turbo Supply Line Routing: Outboard
6	3928444	Connector, Female	1	Block Drain Location: Front Drain
7	3904389	Washer, Sealing	2	Bearing Housing Manufacturer: Holset
8	3904085	Connection, Tur Oil Drain	1	Turbo Drain Line Type: Flexible
	3928444	Seal, O Ring	2	
	3934092	Connection, Tur Oil Drain	1	



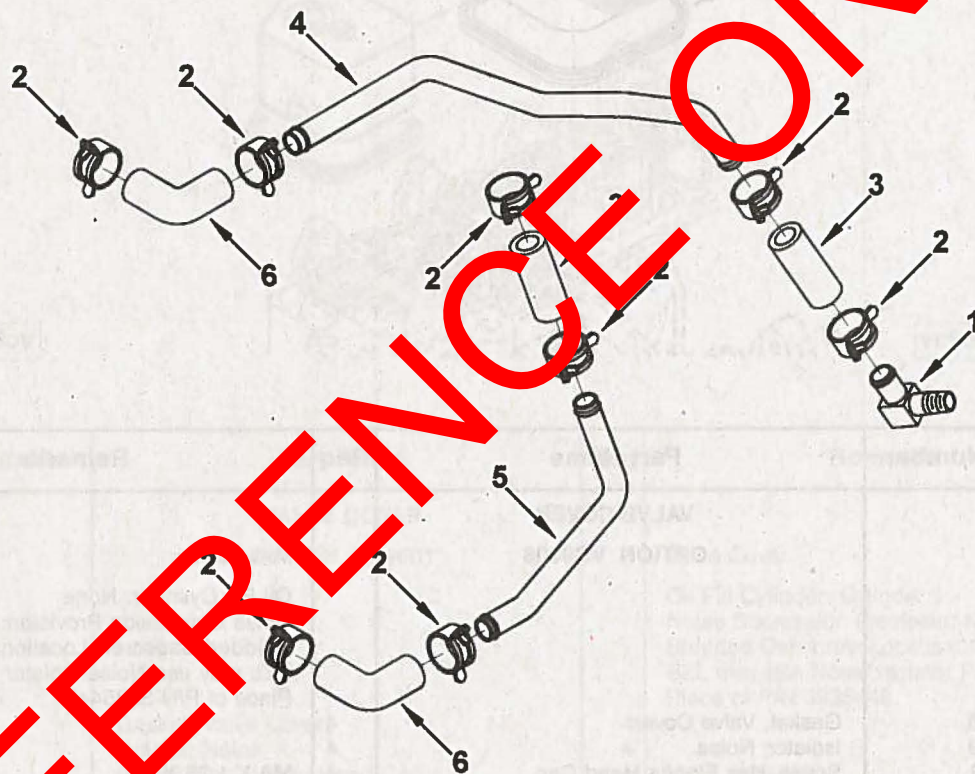
vc900gh

Ref No.	Part Number	Part Name	Req	Remarks
		VALVE COVER OPTION VC9001		Valve Cover Oil Fill Cylinder: Cylinder 1 Noise Supression Provision: No Studded Capscrew Location: None BZL may use Noise Isolator P/N 3967202 in Place of P/N 3935449.
1	3930906	Gasket, Valve Cover	4	
2	3935449	Isolator, Noise	4	
3	390704	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 21
4	3928404	Cover, Valve	3	
5	3928405	Cover, Valve	1	
6	393687	Seal, Rectangular Ring	1	
7	3901805	Cap, Filler	1	



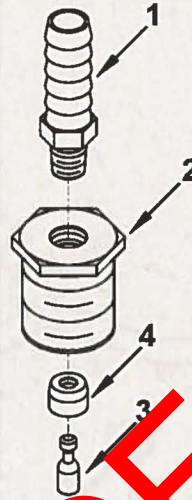
vc900gf

Ref No.	Part Number	Part Name	Req	Remarks
		VALVE COVER OPTION VC9008		Valve Cover Oil Fill Cylinder: None Noise Supression Provision: No Studded Capscrew Location: None BZL may use Noise Isolator P/N 3967202 in Place of P/N 3935449.
1	3930906	Gasket, Valve Cover	4	
2	3935449	Isolator, Noise	4	
3	3907049	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 21
4	3928404	Cover, Valve	4	



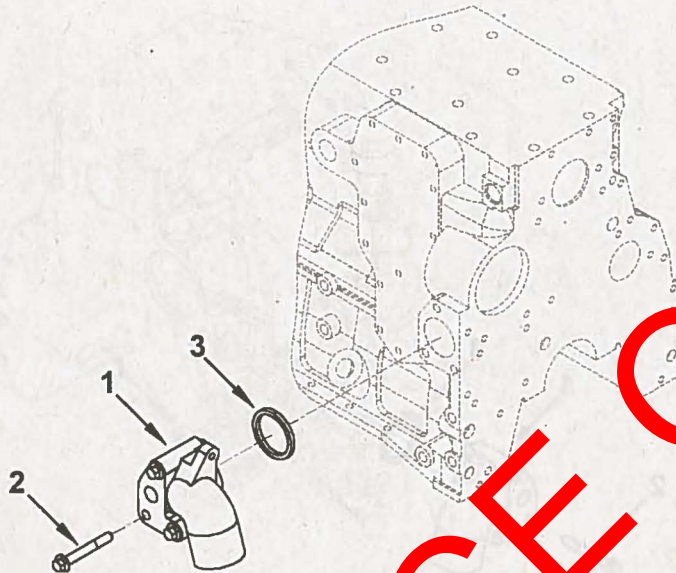
wa951gd

Ref No.	Part Number	Part Name	Req	Remarks
		AFTERCOOLER WATER PLUMBING OPTION WA9739		Aftercooler Water Plumbing Exhaust Manifold Type: Dry Variant Content: 2 X Elbow Hose P/N 3356444 may be Used in Place of 2 X Plain Hose P/N 3918611.
1	3282444	Coupling, Elbow Hose	1	
2	3937613	Clamp, Hose	8	
3	4940670	Hose, Plain	2	
4	4947110	Tube, Aftercooler	1	
5	3933606	Tube, Aftercooler	1	
6	3356444	Hose, Elbow	2	



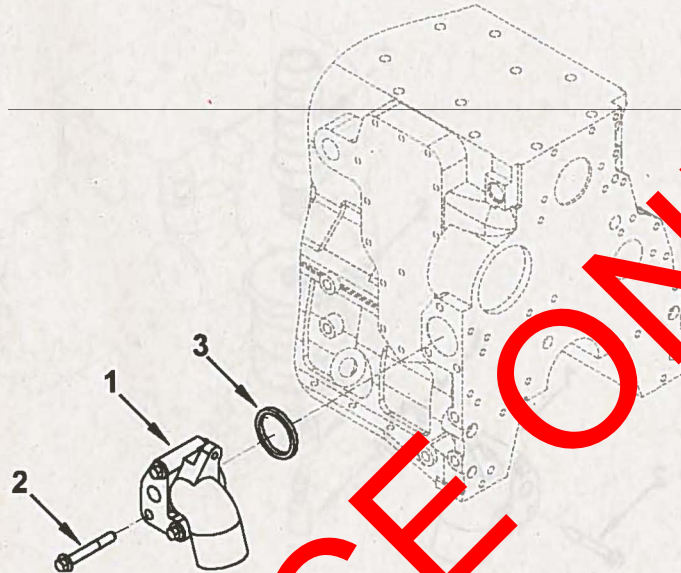
wh951gw

Ref No.	Part Number	Part Name	Req	Remarks
		ENGINE COOLANT VENT OPTION WH9010		Engine Coolant Vent Option Type: Engine Vent Water Supply Tap Location: Cylinder Head Top Front, Inboard Size: 1/2 - 14 NPTF Straight Customers Hose Connection: 3/8" ID Cooling System Vent Arrangement With Check Valve for Plumbing to Radiator Top Tank.
1	3935182	Valve, Check	1	
1	392250	Coupling, Plain Hose	1	
1	3935153	Bushing, Reducing Pipe	1	
1	3935182	Plunger, Check Valve	1	
4	(3935153)	Bushing	1	



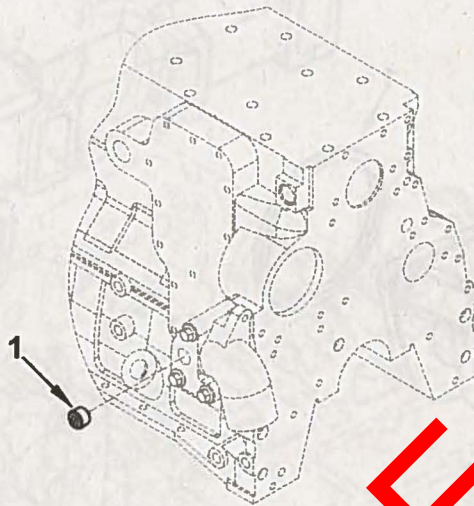
wi900ge

Ref No.	Part Number	Part Name	Req	Remarks
		WATER INLET CONNECTION OPTION WI9001		Water Inlet Connection Inlet Connection OD (mm): 58.00 Connection Type: Beaded Connection Orientation: 30 Deg Down Contains Mounting Pad for Refrigerant Compressor: No Tensioner Mounting Provision: None Alternator Mounting Provision: None Attachment for Alternator Brace: Yes Compatible With Front Side Engine Mounts: Yes
1	393487	Connection, Water Inlet	1	
2	390175	Screw, Hex Flange Head Cap	3	
3	390697	Seal, Rectangular Ring	1	M10 X 1.50 X 75



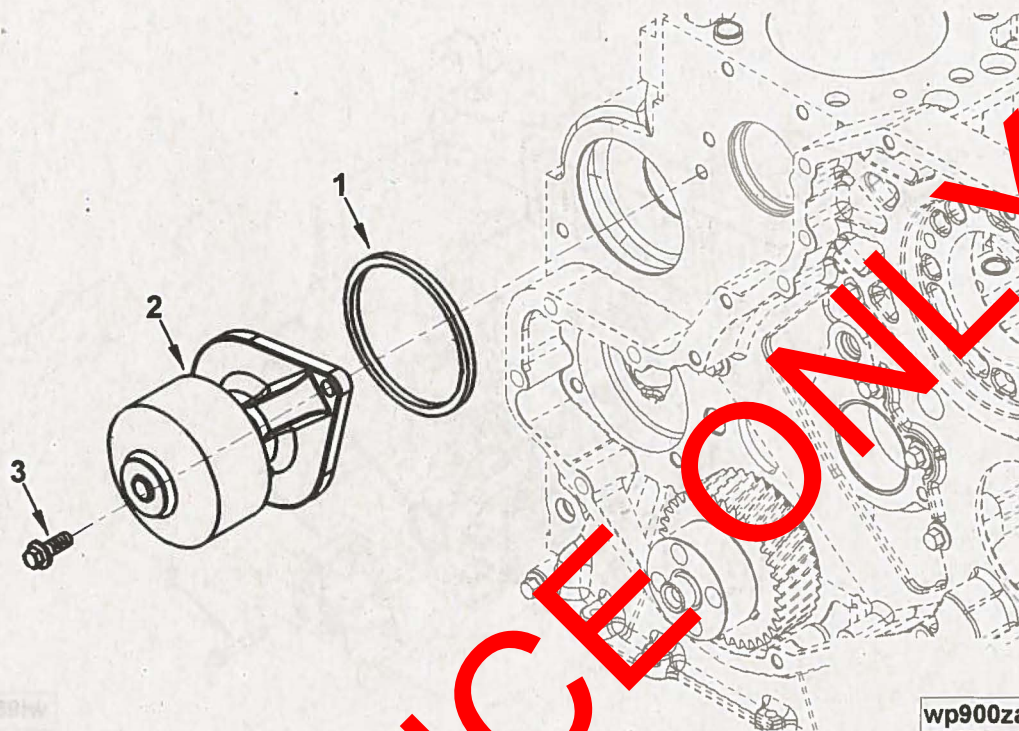
wi900ge

Ref No.	Part Number	Part Name	Req	Remarks
		WATER INLET CONNECTION OPTION WI9002		Water Inlet Connection Inlet Connection OD (mm): 58.00 Connection Type: Beaded Connection Orientation: 73 Deg Down Contains Mounting Pad for Refrigerent Compressor: No Tensioner Mounting Provision: None Alternator Mounting Provision: None Attachment for Alternator Brace: Yes Compatible With Front Side Engine Mounts: Yes
	3923878	Connection, Water Inlet	1	
	2001757	Screw, Hex Flange Head Cap	3	M10 X 1.50 X 75
	390660	Seal, Rectangular Ring	1	

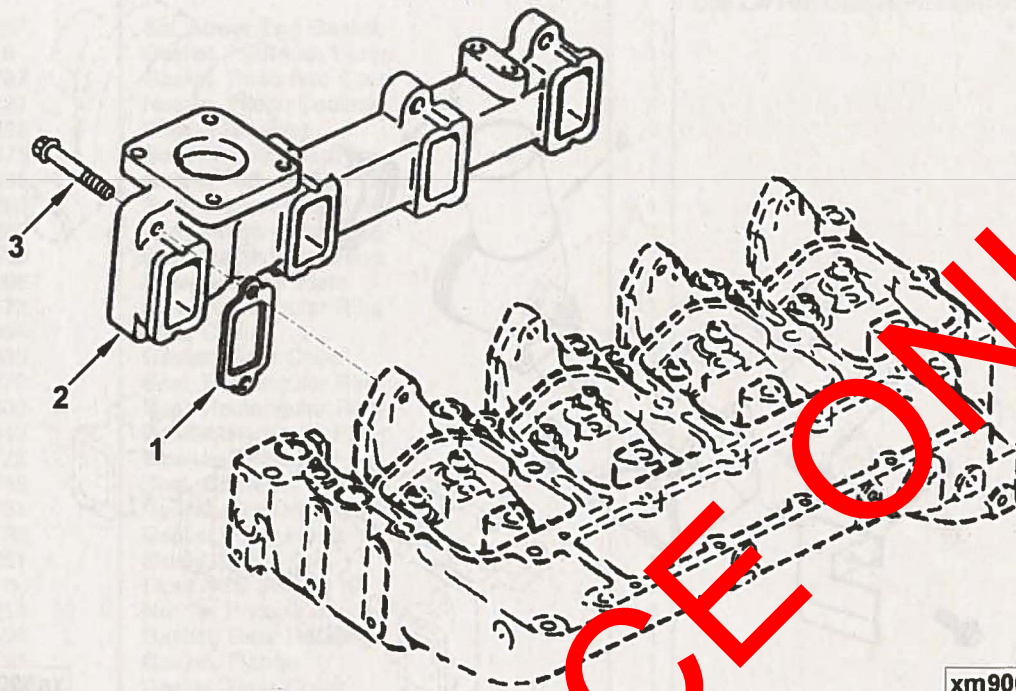


wi950gi

Ref No.	Part Number	Part Name	Req	Remarks
1	4931643	WATER INLET CONNECTION OPTION WI 701 Plug, Pipe	2	Water Inlet Connection Plugs for use in Water Inlet Connection. To be Used Without Water Cooled Exhaust Manifold. TEL may use Pipe Plug P/N 3936641 in Place of P/N 3008468.

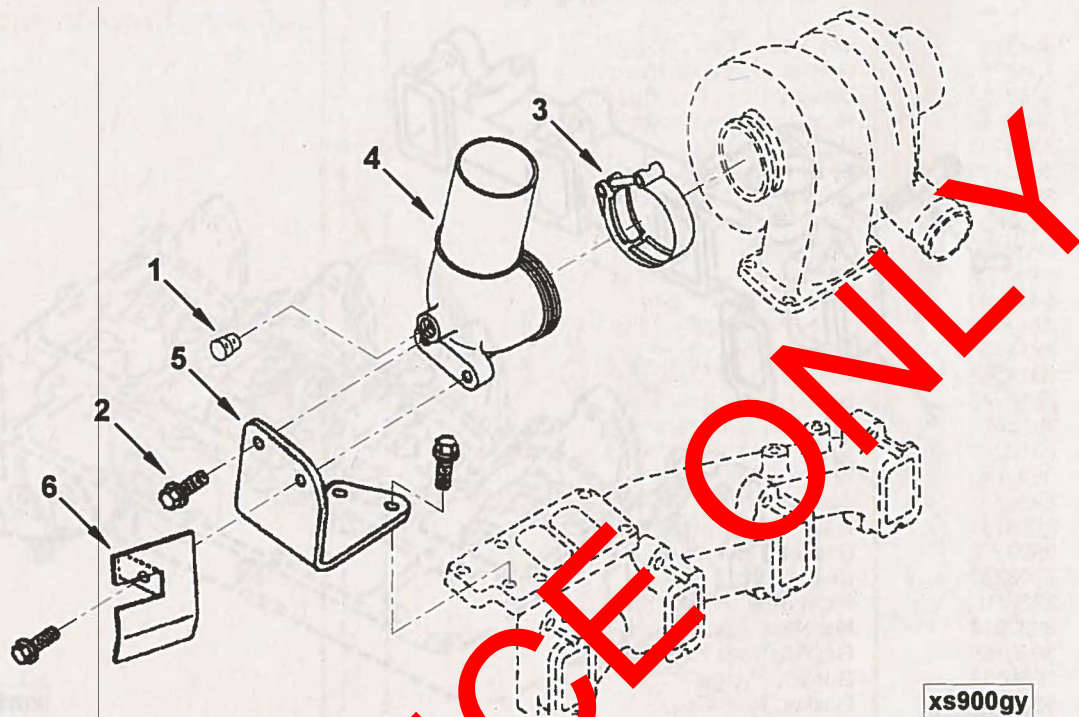


Ref No.	Part Number	Part Name	Req	Remarks
		WATER PUMP OPTION WP9617		Water Pump Pulley Type: Standard Pulley Diameter (mm): 88.00 Unique Characteristics: Useable With all Belt Tensioners O-Ring Seal P/N 3903297 is Interchangeable With P/N 3906698. TCL may use Hexagon Head Cap Screw P/N 3906698 in Place of P/N 3941981. CEC may use Water Pump P/N 3283603 in Place of P/N 3285414.
1	3286278	Kit, Water Pump	1	
2	3906698	Seal, Rectangular Ring	1	
3	3941981	Pump, Water	1	Serviced as 3286278
		Screw, Hex Flange Head Cap	2	



xm900gi

Ref No.	Part Number	Part Name	Req	Remarks
		EXHAUST MANIFOLD OPTION XM9001		Exhaust Manifold Manifold Type: Dry Exhaust Manifold Location: Front up CL to FFOB (mm): 183.5 Crankshaft to CL Right (mm): 141.8 CL Above Crankshaft (mm): 440.5 Manifold Material: CMS 41,050 Mounting Flange Pattern (mm): 70.6 X 70.6 For BZL Only: Use Hex Flange Head Capscrew P/N 3930249 in Place of P/N 3901448.
1	3927154	Cranket, Exhaust Manifold	4	
2	390122	Manifold, Exhaust	1	
3	3944593	crew, Hex Flange Head Cap	8	



Ref No.	Part Number	Part Name	Req	Remarks
		EXHAUST CONNECTION OPTION XS9168		Exhaust Connection Support Flange Bolt Pattern: 2 X M14 38.75 mm Apart Exhaust Manifold Type: Dry Connection Orientation: 90 Deg vertical Mounting Flange to Turbo: 1/2 Marmon Turbocharger Type: Wastegate Maximum Moment Load (in-lbs): 0 Turbo Connection: 78.86 mm Restricted Turbocharger Location: HMFO Restricted Turbo Model: HX30
1	39310 B	Plug, Pipe	1	1/4 NPT
2	39024	Screw, Hex Flange Head Cap	4	M10 X 1.50 X 25
3	390352	Clamp, V Band	1	
4	391992	Pipe, Exhaust Outlet	1	
5	39310	Brace, Exh Out Connection	1	
6	3934100	Shield, Heat	1	

Group No. 17.01

Lower Engine Gasket Set

Ref No.	Part Number	Part Name	Req	Remarks
		LOWER ENGINE GASKET SET		Use Oil Pan Gasket P/N 3911535.
	3802375	Set, Lower Eng Gasket	1	
	154916	Gasket, Hydraulic Pump	1	
	3283767	Gasket, Push Rod Cover	1	
	3901020	Nozzle, Piston Cooling	4	
	3902425	Washer, Sealing	2	
	3903475	Seal, Rectangular Ring	1	
	3905595	Gasket, Timing Pin Housing	1	
	3906696	Seal, Rectangular Ring	1	
	3906697	Seal, Rectangular Ring	1	
	3906698	Seal, Rectangular Ring	1	
	3908096	Gasket, Cover Plate	1	
	3912473	Seal, Rectangular Ring	1	
	3913994	Seal, O Ring	1	
	3914385	Gasket, Gear Cover	1	
	3915772	Seal, Rectangular Ring	1	
	3915800	Seal, Rectangular Ring	1	
	3916042	Gasket, Hydraulic Pump	1	
	3920773	Washer, Sealing	1	
	3928759	Seal, Grommet	6	
	3929751	Gasket, Acc Drive Cover	1	
	3929792	Gasket, Filter Head	1	
	3933261	Shield, Dust	1	
	3937111	Front Seal Service Kit	1	
	3937214	Nozzle, Piston Cooling	1	
	3938156	Gasket, Gear Housing	1	
	3938157	Gasket, Flange	1	
	3938159	Gasket, Rear Cover	1	
	3938162	Gasket, Oil Pan	1	
	3939258	Gasket, Cover Plate	1	
	3939355	Gasket, Fuel Pump	1	
	3942915	Gasket, Filter Head	1	
	4089354	Kit, Cyl Blk Stiffnr Plugs	1	
	4932124	Gasket, Oil Cooler Core	1	

Ref No.	Part Number	Part Name	Req	Remarks
		SERVICE PARTS		
	4089648	Set, Upper Engine Gasket	A/R	
	3802375	Set, Lower Eng Gasket	A/R	
	4089546	Kit, Cylinder Block	A/R	
	3933224	Kit, Cyl Block Hardware	A/R	For 1991 and Later 4B Engines
	3802820	Front Seal, Wearsleeve Kit	A/R	
	3926126	Rear Seal, Wearsleeve Kit	A/R	
	3937111	Front Seal Service Kit	A/R	
	4955566	Kit, Crankshaft Seal	A/R	
	4089342	Kit, Crankshaft Seal	A/R	
	4955372	Kit, Rear Crank Seal	A/R	
	3802355	Valve, Intake	A/R	
	3802356	Valve, Exhaust	A/R	
	3800709	Kit, Turbocharger	A/R	Recon Equivalent 3800709 RX
	3802677	Kit, Injector	A/R	Recon Equivalent 3802677 RX
	3806248	Kit, Injector	A/R	
	3286278	Kit, Water Pump	A/R	
		PISTON KIT SETS		
	3804980	Kit, Engine Piston	A/R	Standard
	3800345	Kit, Engine Piston	A/R	Grade B
	3800349	Kit, Engine Piston	A/R	Grade C
	3804981	Kit, Engine Piston	A/R	0.50 mm Oversize
	3804982	Kit, Engine Piston	A/R	1.00 mm Oversize
	3802747	Kit, Engine Piston	A/R	Standard
	3802764	Kit, Engine Piston	A/R	0.50 mm Oversize
	3802765	Kit, Engine Piston	A/R	1.00 mm Oversize
		PISTON RING SETS		
	3804930	Set, Piston Ring	A/R	Standard
	3804930	Set, Piston Ring	A/R	Standard
	3804930	Set, Piston Ring	A/R	Standard
	3804931	Set, Piston Ring	A/R	0.50 mm Oversize
	3804932	Set, Piston Ring	A/R	1.00 mm Oversize
	3802421	Set, Piston Ring	A/R	Standard
	3802422	Set, Piston Ring	A/R	0.50 mm Oversize
	3802423	Set, Piston Ring	A/R	1.00 mm Oversize
		SERVICE ITEMS PURCHASED FROM CUMMINS FILTRATION		
	(3908603)	Filter, Fuel	A/R	Buy From Cummins Filtration
	(3908063)	Filter, Fuel	A/R	Buy From Cummins Filtration
	(3930115)	Filter, Fuel	A/R	Buy From Cummins Filtration
	(3908615)	Cartridge, Lub Oil Filter	A/R	Buy From Cummins Filtration

Ref No.	Part Number	Part Name	Req	Remarks
		UPPER ENGINE GASKET SET		Engines Built Prior to April 2003 Must Replace/Purchase Valve Spring Retainers P/N 3957913 or Valve Rotators P/N 3957914 as Needed for the Engine Being Serviced. Valve Stem Seal P/N is Not Compatible With Rotators or Retainers Prior to 3957913 and 3957913.
	4089648	Set, Upper Engine Gasket	1	
	3283333	Gasket, Cylinder Head	1	
	3900808	Seal, Injector	4	
	3901356	Gasket, Turbocharger	1	
	3902425	Washer, Sealing	1	
	3903380	Seal, Banjo Connector	4	6.2 mm
	3906694	Seal, Rectangular Ring	1	
	3906773	Washer, Sealing	1	
	3910824	Seal, O Ring	4	
	3912220	Gasket, Exh Out Connection	1	
	3918188	Washer, Sealing	2	8.0 mm
	3919358	Sleeve, Injector	4	
	3923261	Seal, Injector	4	
	3923331	Gasket, Thm Housing Cover	1	
	3927154	Gasket, Exhaust Manifold	1	
	3930906	Gasket, Valve Cover	4	
	3935449	Isolator, Noise	4	
	3936876	Seal, Rectangular Ring	4	
	3937142	Seal, Injector	4	
	3937706	Gasket, Oil Drain	1	Holset P/N 3519807
	3938153	Gasket, Int Manifold Cover	1	
	3957912	Seal, Valve Stem	8	

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