

Customized Parts Catalog for Engine Model QSB6.7 CM850

CONSTRUCTION

Prepared Specifically for:

Engine Serial Number: 73099790

Cummins Inc.
Box 3005
Columbus, Indiana, U.S.A., 47202
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Cummins Inc.



Cummins Inc.

New Parts Warranty Midrange

COVERAGE

PRODUCTS WARRANTED

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

COVERAGE

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

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

CUMMINS RESPONSIBILITIES

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

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

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

OWNER RESPONSIBILITIES

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

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

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

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

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

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

LIMITATIONS

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

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

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

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

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

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



Customer Service Information

This Customized Parts Catalog contains parts information for the following Cummins Engine:

Engine Data

Model Number QSB6.7 CM850 Serial Number 73099790 Shop Order Number SO24151

Build Plant CONSOLIDATED DIESEL CO.

Build Date 01JUN10
Fuel Pump Part Number 5256608
Fuel Pump Calibration GY38

Engine Configuration Number D313013CC08
CPL Number CPL8610

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

This catalog was compiled using the most current information as of 16-FEB-11.

USER INFORMATION

- . Parts numbers appearing in () are for identification purposes only and should not be used when ordering service replacement parts.
- . The reference numbers appearing on the art pages is for publication use only.
- . Assembly content is shown by part number indentation.
- . Options are engineered production part groupings, specifically used for compiling engine orders.
- . Option numbers are for reference only and are not sold for service.
- . Use assembly and not option content to determine service parts replacement.
- . Always specify engine model and serial number when ordering parts from this catalog.
- . Continual product improvement causes the obsoletion and replacement of part numbers. Service Parts you receive may not be the part number as those listed in this parts catalog.

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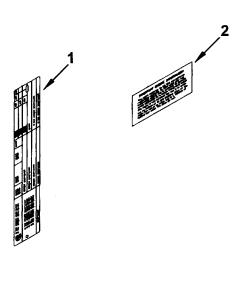
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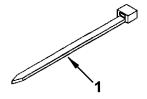
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AIR HEATER STARTING AID OPTION AH9161
Air Heater Starting Aid air heater type: Electric grid Voltage: 12volt Amperage: 125 A ground type: Earth return internal Control Provided: No Engine Family: "B" Series earth return only decal: Place the warning label on the round surface of air transfer pipe. The label should be placed after painting DEP will omit 4938740 tag instruction from u option to comply with European legislation. 1

ap950go

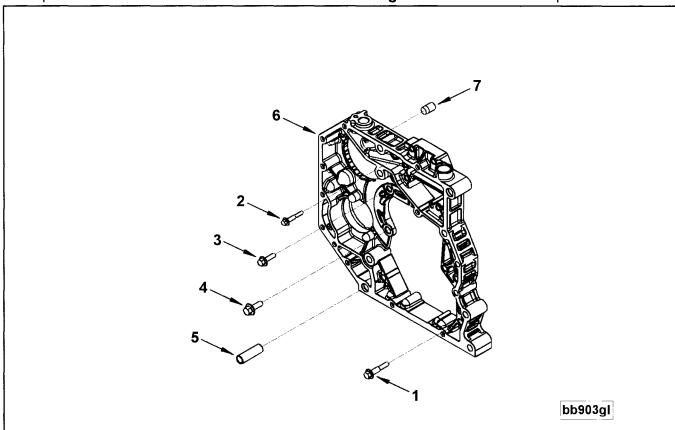


Ref Req **Part Number Part Name** Remarks No. **AGENCY APPROVAL OPTION AP9900** Agency Approval Certified By: Mep, EPA, CARB, Eu Application: Nonroad cert level: Stg II, tier 3, tier 3, stg iiia special variant dataplate content: In place of 4989273
DEP May Use: 4996959 kcec may use: 5253040 and 5258623 variant chinese nameplate content: In place of 5260014 DEP May Use: 5262967 kcec may use: 5260840 For engines with fuel pump to be mounted/ attached on the rear gear housing, dataplate and nameplate to be mounted and centered on valve cover in the sunken flat section. 5260014 Nameplate 1 4989273 Dataplate 1 2



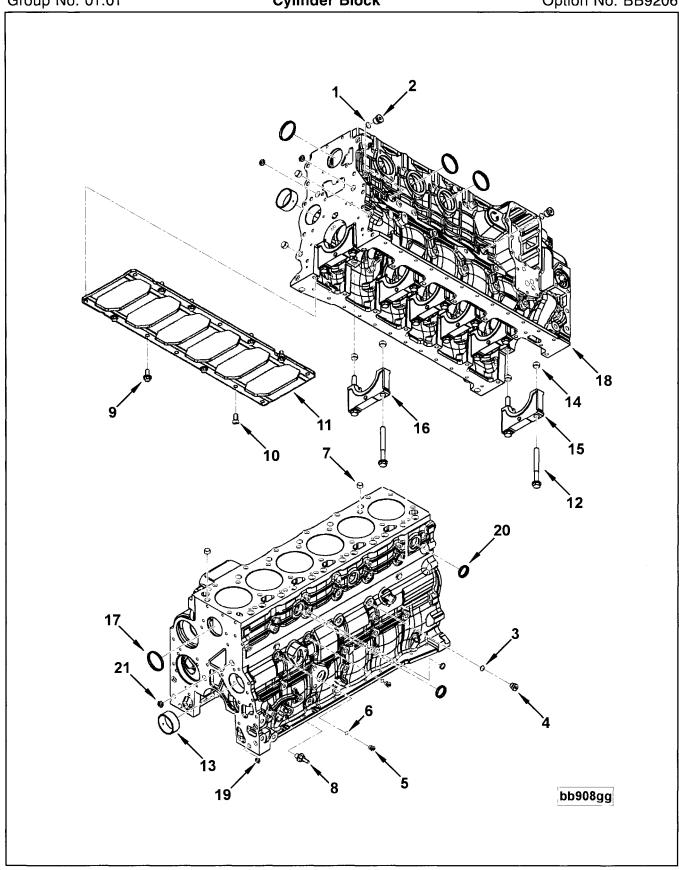
ap951gj

Ref No.	Part Number	Part Name	Req	Remarks
	Part Number	Part Name INCORPORATION DOCUMENTATIO OPTION AP9980 Clamp, Wire Tie	Req	Incorporation Documentation Certification Agency: European Commission directive: 2006/42/EC Additional Information: A letter of conformity is supplied with the engine stating this product meets the declaration of incorporation in accordance with e.C. Machinery directive 2006/42/EC. This engine meets the requirements of the directives for machines which are to be incorporated into a final product.
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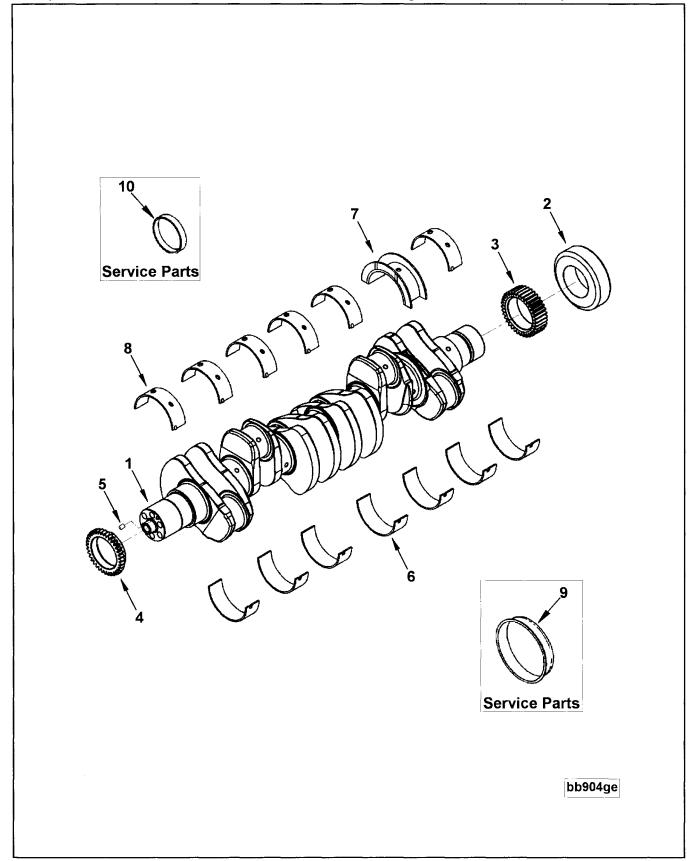
Ref	Part Number	Part Name	Req	Remarks
No.	Part Number	rait ivallie	neq	nemarks
		REAR GEAR HOUSING		
		OPTION BB9131	1	Rear Gear Housing
1 2 3 4 5 6 7	3918153 3901445 3903112 3910495 4936423 3954616 (4936420) (4929128)	Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Housing, Gear Dowel, Ring Housing, Gear Insert, Threaded	3 4 2 1 1 2 1 2	M10 X 1.50 X 50 M8 X 1.25 X 45 M10 X 1.50 X 30 M12 X 1.75 X 30

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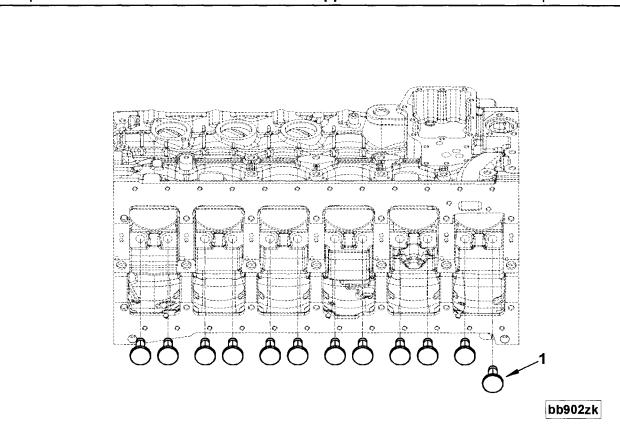


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Grou	up No. 01.01	Cylinder Block		Option No. BB9206
Ref No.	Part Number	Part Name	Req	Remarks
1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 18 19 20 21	3678873 3678786 (3678791) 3678921 3678922) 3678923 (3678922) 3678925 3902343 3936352 3902460 3949830 3965764 (4991099) 3927948 4983253 3974157 3900068 (3974156) 3974159 3900068 (3974158) 4938189 (4990447) 3900956 3905401 3914035	Plug, Threaded Seal, O Ring Plug, Threaded Plug, Threaded Plug, Threaded Seal, O Ring Plug, Threaded Seal, O Ring Plug, Threaded Plug, Threaded Plug, Threaded Seal, O Ring Dowel, Ring Screw, Hex Flange Head Cap Stiffener, Cylinder Block Block, Cylinder Screw, Hex Flange Head Cap Bushing Cap, Main Bearing Dowel, Ring Cap, Main Bearing Dowel, Ring Cap, Main Bearing Dowel, Ring Cap, Main Bearing Plug, Expansion Block, Cylinder Plug, Expansion Plug, Expansion Plug, Expansion Plug, Expansion Plug, Expansion	2111112201112141233	Cylinders: 6 High Speed Balancer: No water pump location: Low Crank Gear Material: Steel Fuel Type: Diesel premium block: No tapped fittings: Storm structural block: No thrust face: 180 degrees main bearing type: Standard valves per cylinder: 4 rear gear train provision: Yes front gear train provision: No Front PTO Provision: Yes tappet diameter: 30mm block oil pan flange bolt pattern spacing: 60mm block oil pan flange bolt pattern width: 299mm block oil pan flange bolt pattern quantity: 24 components included in oil pan flange bolt pattern block: Yes rear gear housing: Yes oil pump: No front gear cover: Yes cast rear drive provision: No Additional Rear Structural Member: No M14 X 1.50 M14 X 1.50 M10 X 1 X 13.5 M10 X 1.00 M10 X 1.50 X 25 Serviced as 4955412



	up No. 01.02	Crankshaft and Bear	mgs	Option No. BB9206
Ref No.	Part Number	Part Name	Req	Remarks
		CRANKSHAFT AND BEARINGS OPTION BB9206		Crankshaft and Bearings
1 2 3 4 5	4934861 4934862 (3968164) (2831066) 4934418 (4934419) 3955030	Crankshaft, Engine Crankshaft, Engine Crankshaft, Engine Collar, Shaft Gear, Crankshaft Gear, Crankshaft Dowel, Pin	1 1 1 1 1 1	
6 7 8	3357480 3929021 3927772 3929016	PDC Kit Bearing, Main Bearing, Crankshaft Thrust Bearing, Main	A/R 7 1 6	Standard Standard Standard Standard
6 7 8	3802071 3929022 3283065 3929017	Set, Main Brg(.010) Bearing, Main Bearing, Crankshaft Thrust Bearing, Main	A/R 7 1 6	0.25 mm Oversize 0.25 mm Oversize 0.25 mm Oversize 0.25 mm Oversize
6 7 8	3802072 3929023 3283066 3929018	Set, Main Brg(.020) Bearing, Main Bearing, Crankshaft Thrust Bearing, Main	A/R 7 1 6	0.50 mm Oversize 0.50 mm Oversize 0.50 mm Oversize
6 7 8	3802073 3929024 3283067 3929019	Set, Main Brg(.030) Bearing, Main Bearing, Crankshaft Thrust Bearing, Main	A/R 7 1 6	0.75 mm Oversize 0.75 mm Oversize 0.75 mm Oversize 0.75 mm Oversize
6 7 8	3802074 3929024 3283068 3929019	Set, Main Brg(.040) Bearing, Main Bearing, Crankshaft Thrust Bearing, Main	A/R 7 1 6	1.00 mm Oversize 0.75 mm Oversize 1.00 mm Oversize 0.75 mm Oversize
6 7	3802702 3929023 3283066	Bearing, Crankshaft Thrust Bearing, Main Bearing, Crankshaft Thrust	A/R 1 1	0.50 mm Oversize 0.50 mm Oversize
6 7	3802704 3929025 3283068	Bearing, Crankshaft Thrust Bearing, Main Bearing, Crankshaft Thrust	A/R 1 1	1.00 mm Oversize 1.00 mm Oversize 1.00 mm Oversize
9 10	3926126 3802820	SERVICE PARTS Rear Seal, Wear Sleeve Kit Front Seal, Wearsleeve Kit		Rear Front
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Ref No.	Part Number	Part Name	Req	Remarks
		VALVE TAPPETS		
		OPTION BB9206		Valve Tappets
1	3947759	Tappet, Valve	12	
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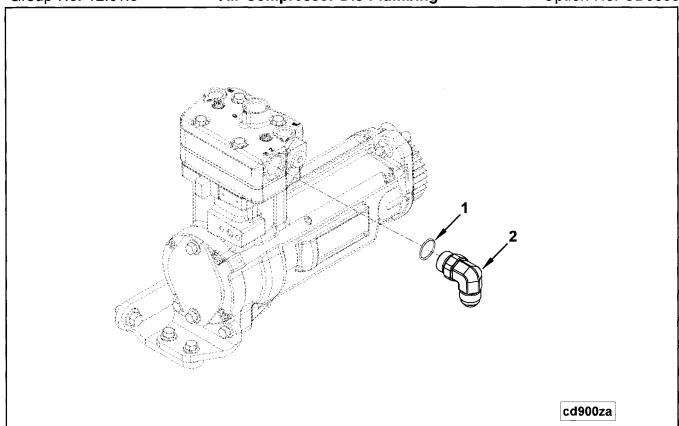
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Ref No. Part Number	Part Name	Req	Remarks
1 4930889 3931522 4930304 3954646 3979410 3955465 7 3955466	Part Name COMPRESSOR COOLANT PLUMBIN OPTION CC9232 Hose, Elbow Hose, Plain Clamp, Hose Coupling, Plain Hose Coupling, Elbow Hose Coupling, Elbow Hose Tube, Cpr Water Inlet Tube, Cpr Water Outlet	т	



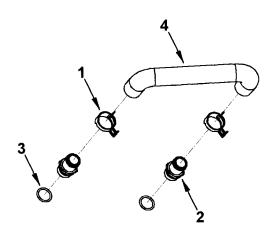
Ref No. Part Numbe	r Part Name	Req	Remarks
	AIR COMPRESSOR DIS PLUMBIN OPTION CD9003		CPR Air Discharge
3958561 1 3678606 2 (3958562)	Elbow, Male Adapter Seal, O Ring Elbow, Male Adapter	1 1 1	Plumbing Discharge Connection Type: 90 Degree Elbow Discharge Connection Customer Interface: 1 1/16-12 Discharge Connection CPR Interface: M27 > 2 M27 X 2.00

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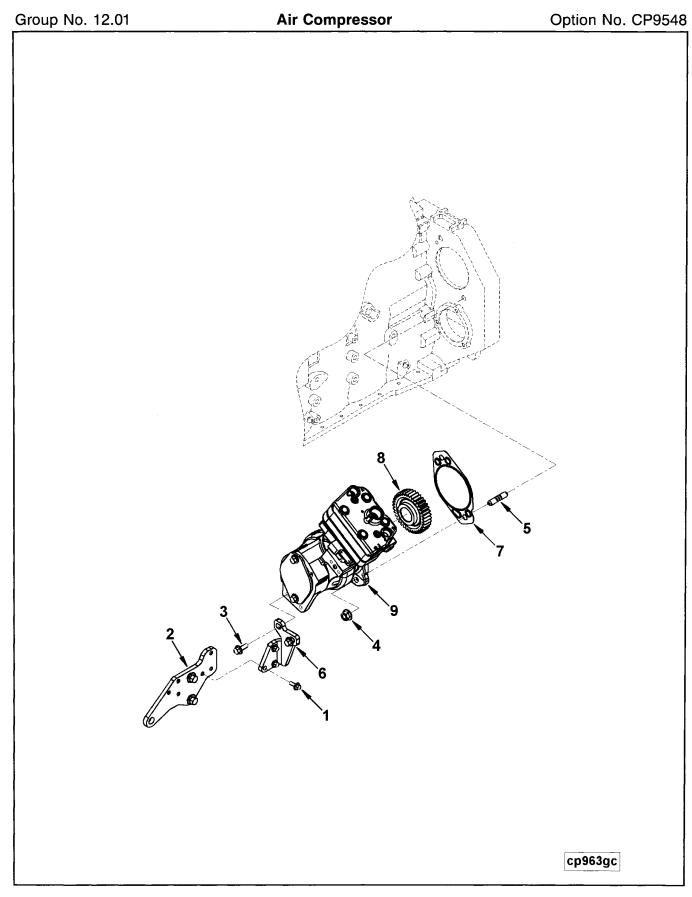
Ref	Part Number	Part Name	Req	
No.	Part Number	rari Name	neq	nemarks
		AID,COO HEATER STARTING OPTION CH9081		Mr - coo heater starting aid Voltage: 120 watt: 750 cord length: 72in. type:
				Water only male plug type: US plug type: 2 bolt operation type: Manual location from front face of block(mm): 254 supply method: Mounted cord provision: Yes Engine Family: "B" Series engine design phase: Echo.
3	4938189 3923050 4948145	Plug, Expansion Cable, Engine Heater Heater, Engine	1 1 1	
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ci953gs

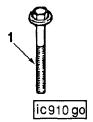
Ref No.	Part Number	Part Name	Req	Remarks
		CPR AIR INLET PLUMBING OPTION CI9190		CPR Air Inlet Blumbing errangement engine
		OFTION CISTSU		CPR Air Inlet Plumbing arrangement engine family: Tier 3 b air plumbing supplier: Cummins
1 2 3 4	3925089 3977696 (3977695) 3678606 4937961	Clamp, Spring Hose Union, Male Union, Male Seal, O Ring Hose, Molded	2 2 1 1 1 1	Air Supply Location: Plumbing Off Of Intake manifold air plumbing type: Molded hose CPR Air Inlet Location: Top Of CPR Head CPR Air Outlet Location: Side Of CPR Head compressor manufacturing/model: Wabco 250cc Accessory Drive Location: High vertical from crank centerline: 202.83mm horizontal from engine centerline: 190.63mm air compressor position: High.

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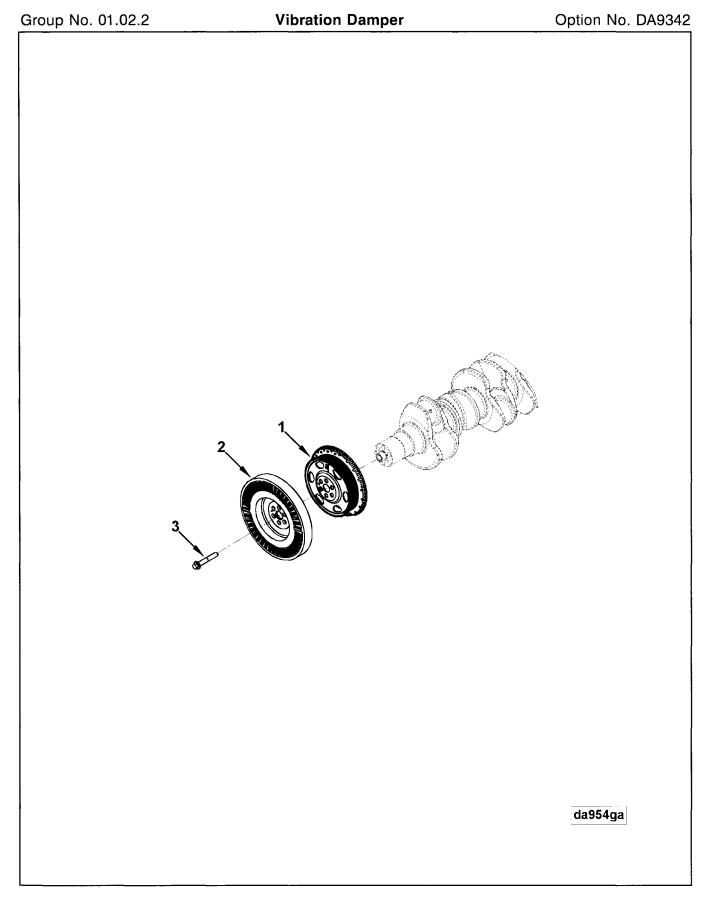
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Gro	up No. 12.01	Air Compressor		Option No. CP9548
Ref No.	Part Number	Part Name	Req	Remarks
	3900630 3959312 3902460 3903210 3905371 3955094 4896897 4946291 3954290 (4946485) 4089222 4089240 4089675 4089686	Screw, Hex Flange Head Cap Brace, Air Compressor Screw, Hex Flange Head Cap Brace, Air Compressor Screw, Hex Flange Head Cap Nut, Hexagon Flange Stud Brace, Air Compressor Gasket, Acc Drive Cover Compressor, Air Gear, Accessory Drive Compressor, Air COMPRESSOR SERVICE KITS Kit, Gskt & Seals 1 Cyl Plug, Solid Adapter, Spline Kit, Compressor Repair	Req	Air Compressor CPR Manufacturer/model: Wabco 250cc Cylinders: 1 Method Of Cooling: Water CFM: 15.2 CPR Rear Drive: Gear CPR Front Flange: SAE "B" (5.750in) CPR Rear Flange: 82-B (SAE A) CPR Rear Mount Thread: Metric air compressor location: High fuel pump location: Low Water Inlet: Top Water Outlet: Side Air Outlet Port Size: M27-2 Air Inlet: Top CPR SAE/din Standard Rear Drive: SAE 19-4 CPR Max Thru Torque: 105 FT LB Max CPR Speed (RPM): 3000 CPR Max Inlet Temp (deg F): 250 CPR Supplier: Cummins Rear Support Mounting Location: 588.74mm from front face of block compressor length (mm): 162.5 Design Phase: Echo oil return provision: Rear gear housing. Drive centerline from crank centerline (mm): 278.35 Engine Family: "B" Series. M8 X 1.25 X 20 M10 X 1.50 X 25 M12 X 1.75 Recon equivalent 4946291 RX Services 4933559 Gasket & Seal Set Kit 75mm Single Major Services 4933559 Spline Adapter, 11th LH/HM Head Repair Kit, Single 75mm US Ports
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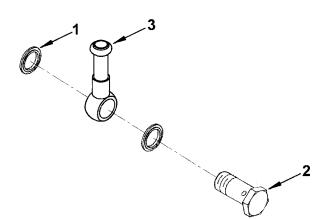


Ref No.	Part Number	Part Name	Req	Remarks
		AIR COMPRESSOR MOUNTING		
[OPTION CP9568		Air Compressor Mounting
1	3901249	Screw, Hex Flange Head Cap	1	CPR Manufacturer/model: Wabco 250cc mounting for compressor bracket when fuel filter is located on-engine M12 X 1.75 X 25
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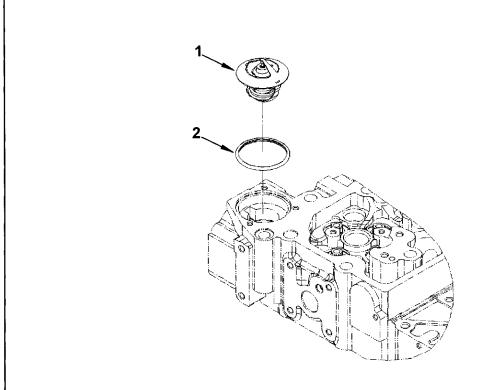
Group No. 01.02.2 Vibration Damper Option No.	DA9342
Ref No. Part Number Part Name Req Remarks	
Vibration Damper OPTION DA9342 Vibration Damper Structure Code: 03 EBM Crank Pulley Type: Cast 8 Groove Crank Pulley Groove Profile: Poly Ve Crank Pulley Diameter (mm): 77-5 balls: 2.5 engine speed sensing: Ves FVDB Cl. of First Crank Pulley Damper Type: Viscous damper diam degrees (): NIA Damper Type: Viscous damper diam 250 Damper RPM Limitation: 300 PS@2 PTD Provision: No customer mountil NIA customer mounting both circle (nm): NIA cove (nm): NIA FPDB (nm) to CL of First pulley groove: NIA A damper all info: Deac may use vibrat demicrated and the company of the comp	over (mm) to 78 Crank ncy (@ 40 eter (mm): 500 ng thread: nm): N/A (mm): auxilary balls auxilary



dl951gy

Ref No.	Part Number	Part Name	Req	Remarks
		LOCATION, DRAIN		
		OPTION DL9224		Mr - drain location cust interface: 10mm push on hose - single bead location from fob and centerline of crank(mm): X = 335.0 y = 373.0 z = -565.0 engine design phase: Echo
1 2 3	3963990 3957770 4929149	Washer, Sealing Screw, Banjo Connector Connector, Banjo	2 1 1	Engine Cylinders: 6 Engine Family: "B" Series Unique Characteristics: 10mm push-on banjo fitting supplied in kit 8mm quick- disconnect fitting per SAE j2044 supplied with engine.

arou	p No. 99.01	SOFTWARE, CUS INT	ERFAC	E Option No. DO9117
Ref No.	Part Number	Part Name	Req	Remarks
		SOFTWARE, CUS INTERFACE		
ŀ		OPTION DO91173		Customer software interface
				Customer software interface Engine Control System: E2 I Transmission: Generic Commun Support: J1939 cust/OEM name: Terex cust/OEM model: RT600 cust/OEM ap Rough terrain Crane Remote Throttle: No High Idle: 2710 RPM Low Idle: 950 RPM ISC enable: Yes ISC Validation: No switch speed input: No Torque Curve Selection: No Governor Type: ASG governor droop: 7% idle validation: No Multiple Unit Synchronization: N/A Output Driver Setup: Yes Calibration Voltage: 12 Throttle Type: Williams Pedal Or Equivalent comment: PWM7125 powermatch: No guid: N/A governor break: 2530 RPM engine brak provision: Yes electronic fan clutch: Yes Oil Pressure Sensor Type: Switch Engine Family: Qsb6(t3) applicable FR optio FR91597.
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ec900zf

Ref No.	Part Number	Part Name	Req	Remarks
		THERMOSTAT		
		OPTION EC9045		Thermostat Thermostat Opening Temperature: 83 C Number of Thermostats: 1 Thermostat Type: Non-Balanced or Poppet Vented Non-Vented: Vented With Jiggle-Pin By-Pass Type: Mechanical Plug Engine Family: "B" Series Required Housing Bore Diameter: 60.96 mm (2.4 in) Low Gain Thermostat: Yes Maximum Temperature Capability: 118.3 C (245 F) One Notch High Metal Weir D-Ring Seal. Material: Nitrile
1 2	3974823 3973834 3954829	Thermostat Thermostat Seal, Thermostat	1 1	

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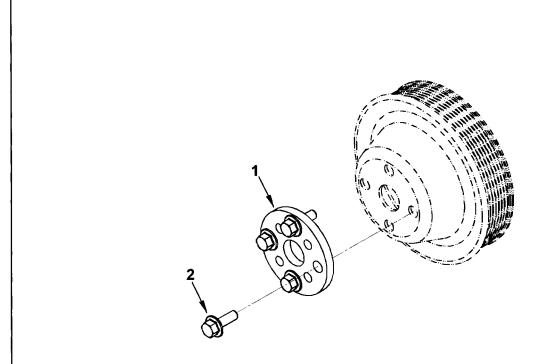
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Alternator

	up No. 13.02	Alternator		Option No. EE9245		
Ref No.	Part Number	Part Name	Req	Remarks		
No.	5260126	ALTERNATOR OPTION EE9245 Alternator	1	Alternator manufacturer/model: Delco 24si Voltage: 12 Amperage: 130 mounting type: Lugs, 101.1mm apart mounting to suit: 98.5mm spool alternator length (mm): 179.67 Cummins branded: Yes		

Alternator Mounting

	ль <u>ио. 08.03</u>	Fan Drive	Fan Drive	
Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE OPTION FA9336		Fan Drive Fan Drive Ratio: 1.1:1 Fan Drive CL to CCL
1 2 3 4 5 6 7 8	3975555 2830411 3285949 (3285946) 3035960 3907769 3923044 3910739 3911924	Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Support, Fan Support, Fan Ring, Retaining Screw, Hexagon Head Cap Retainer, Fan Hub Bearing, Ball Hub, Fan	1 3 1 1 2 1 1 1 1 1 1 1 1	(mm): 203.2 Fan Drive CL to Engine CL (mm): 49 Fan Pilot Diameter (mm): 25.4 Fan Mounting Bolt Circle (mm): 60 Fan Pulley Thickness (mm): 5 Fan Pulley Diameter Over 2.5mm Gage Balls (mm): 159.13 Crank Pulley Effective Diameter (mm): 173.76
9	3914462	Pulley, Fan	1	



fa901zi

Ref No.	Part Number	Part Name	Req	Remarks
		FAN DRIVE MOUNTING OPTION FA9734		Fan Drive Mounting
1 2	3915490 3902460	Plate, Clamping Screw, Hex Flange Head Cap	1 4	Thread Size: M10 X 1.5 Capscrew Length: 25 mm Clamping Plate Thickness: 8.4 mm Clamping Plate Bolt Circle: 4 X 60 mm M10 X 1.50 X 25
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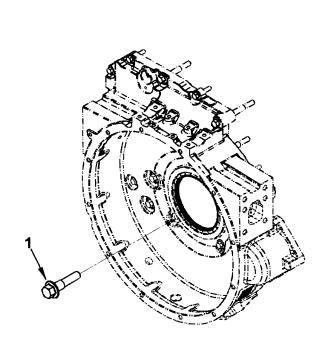
Gro	up No. 06.04	Fuel Filter Locatio	n	Option No. FF9541
Ref No.		Part Name	Req	Remarks
		Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Support, Filter Filter, Fuel Plug, Threaded Plug, Threaded Seal, O Ring Filter, Fuel Head, Fuel Filter Adapter, Filter Head Gasket, Filter	3 4 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fuel Filter Location Element Type: Single element style: Spin-on drain provision: No fuel heater provided: No fuel heater voltage: No water separator provision: No Location: Engine Mounted CCL to top of Canister (mm): 417 engine CL to Canister CL (mm): 324 filter length (mm): 191 filter diameter (mm): 93.5 fuel filter fuel inlet location: CCL to inlet CL (mm): 439 engine CL to inlet CL (mm): 316 FFOB to inlet CL (mm): 316 FFOB to outlet CL (mm): 371 absolute filtration (microns): 3 Engine Family: "B" Series. M8 X 1.25 X 35 M8 X 1.25 X 45 M10 X 1 X 13.5 M10 X 1 X 13.5 M10 X 1.00 Buy From Cummins Filtration Buy From Cummins Filtration Buy From Cummins Filtration
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	No. 06.04.1	Fuel Filter Plumbing		Option No. FF9573		
Ref No.	Part Number	Part Name	Req	Remarks		
1 36 2 36 4 4 5 6 3 7 44 8 38			<u> </u>			

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Group No. 16.01	No. 16.01 Flywheel Housing		Option No. FH948		
Ref No. Part Number	r Part Name	Req	Remarks		
1 3089188 2 3900679 3 3903464 4 3914177 5 4988952 (3973088) 6 3008469 7 3904181 8 3910248 9 3910260 10 3925234 11 3925883 12 3971631	Screw, Hex Flange Head Cap Scal, Oil Housing, Flywheel Plug, Pipe Plug, Threaded Plug, O Ring Seal, O Ring Plate, Cover Screw, Hex Flange Head Cap Housing, Flywheel	229611111121	Flywheel Housing Clutch Type: Dry Starter Bore Position: 55 FH to block pattern: 8 xm12 x1.75 + 2 xm10 x1.5 SAE size: 3 starter pilot bore diameter: 88.9 Starter bore location horiz from CCL: - 177.26 vert from CCL: 124.12 Starter mounting hole pattern angle: 0 Starter mounting hole pattern angle: 0 Starter mounting face offset from RFOB: 41.2 starter motor center distance(mm): 216.4 Tachometer sensor hole location: 3rd quadrant Tachometer sensor hole count: 1 Tachometer sensor hole count: 1 Tachometer sensor hole thread size: 3/4-16 UNF Material: Aluminum Engine Mount Type: Pad mounting pad hole description: 8 xm12 x 1.75 per side mounting pad top hole location from CCL (mm): 84.68 mounting pad angle from vertical (deg): 0 Transmission mounting hole count: 12 Transmission mounting hole thread size: M10X1.5-6 h Engine Family: "B" Series distance across mounting surface(mm): 490 Suitable for +/- 6 g vertical, +/- 4 g axial, and +/- 2 g laterial load with 409 kg transmission. M10 X 1.50 X 80 M10 X 1.75 X 80		



fh960gb

Part Number	Part Name	Req	Remarks
	FLYWHEEL HOUSING MOUNTING		
	OPTION FH9629		Flywheel Housing Mounting
3903464	Screw, Hex Flange Head Cap	1	1 x M10 x 1.5 40 long capscrew For use without engine balancer. M10 X 1.50 X 40
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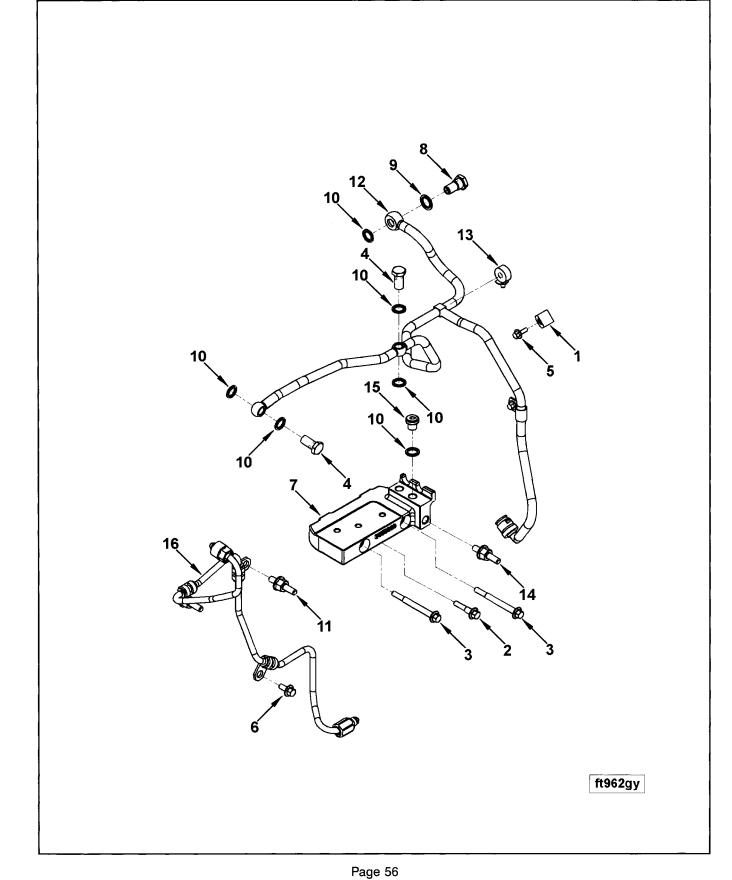
Group No. 05.01	No. 05.01 Fuel Pump		Option No. FP90312		
Ref No. Part Number	Part Name	Req			
1 3949419 2 3955153 3 3900589 4 3900630 5 3939258 6 3948083 4988593 7 3974765 8 2830977 9 4891385 10 4890634 11 4890635 12 (4988594) 13 5257595 14 3947269 15 3947270 16 4932790	FUEL PUMP OPTION FP90312 Stud Gear, Fuel Pump Nut, Hexagon Flange Screw, Hex Flange Head Cap Gasket, Cover Plate Plate, Cover Pump, Fuel Connector, Qck Disconnect Seal, O Ring Washer, Sealing Nut, Regular Hexagon Washer, Spring Pump, Fuel Actuator, Etr Fuel Control Seal, O Ring Seal, O Ring Screw, Socket Head Cap	3 1 3 2 1 1 1 4 1 1 1 1 1 1 3	Fuel Pump Structure Code: Mr 03 BM fuel pump manufacturer/model: Bosch common rail pressure capability: 1600 BAR SAE flange type: SAE j626 aug 93 non- standard type 2 pilot shaft diameter (mm): 80 fuel pump inlet: M12 x 1.5 fuel pump drain: SAE j2044 Location: Low engine design phase: Tier 3 DEP may substitute gear 4893389 for 3955153. M8 X 1.25 M8 X 1.25 X 20 Recon Equivalent 4988593 NX		

GIOC	up No. 99.01	RATING, FUEL		Option No. FR91597
Ref No.	Part Number	Part Name	Req	Remarks
		RATING,FUEL OPTION FR91597		Mr - fuel rating rated power: 215 BHP at 2500 RPM Peak torque: 655 lbs. FT at 1500 RPM Governed Power: 215 BHP At 2500 RPM CPL: 8610 Certified By: EPA,CARB,Eu cal. Restr: No Power Rating: No Engine Control System: E2 I Application: Non Road cert level: Tier 3,tier 3,stiiia Engine Family: "8" Series Cylinders: 6 engine design phase: Tier3 b Engine Aspiration: Charged Air Cooled fuel pump manufacturer/model: Bosch CP3.3 ECM version: CM850 manufac- turer of record: Cummins ambient air pressure sensor: Yes Fuel Type: Diesel FP gear timing (deg crank:) N/A Speed Sensor Location: Crank cylinder head valve seat inserts: Yes Turbocharger ID17 P/N: 3770571, 4039043, 4039630, 4039631, 4043956.

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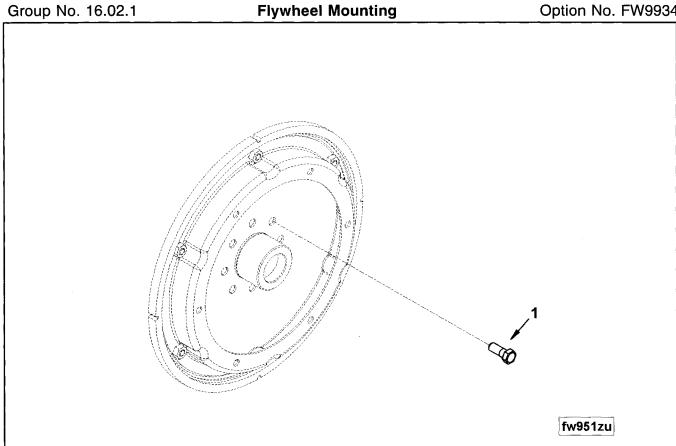
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	up No. 05.19	Fuel System Accessories		Option No. FS9996
Ref No.	Part Number	Part Name	Req	Remarks
Ref	Dowt Name on			

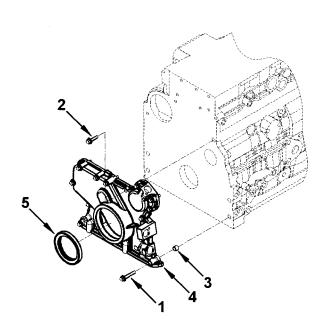


Full Number Part Name Req Remarks
Fuel Plumbing Structure Code: Mr 03 EBM Engine Cylinders: 6 fitting type: N/A 4 fitting supplier: Customer orientation: N/A OEM Attachment: M12 X 1.56 H Female OEM Drain Fitting Location: CL of engine (mm): 307.0 CL of engine (mm): 330.0 FCOB (mm): -532.0 Cylinder head Fuel Drain Loc.: CL of engine (mm): 16.0 CL of crank (mm): 391.5 FFOB (mm): -756.5 Common rail fuel Drain Loc.: CL of engine (mm): 216.0 CL of crank (mm): 291.5 CC of engine (mm): 55.0 FFOB (mm): -695.0 ECM fuel Manifold Drain Port: CL of engine (mm): N/A CL of crank (mm): N/A FFOB (mm): -695.0 ECM fuel Manifold Drain Port: CL of engine (mm): N/A Unique Characteristics: For Use With Low mount pump. 1 68152

Group No. 16.0	2 Fly	wheel	Option No. FW9885
Ref Part Numl	per Part Name	Req	Remarks
3973519 1 (3973518) 2 3905427	Flywheel Flywheel Gear, Flywheel Ring	1 1 1	Flywheel ring gear diametrical pitch: 8/10 ring gear tooth count: 127 ring gear outside diameter(mm): 407.85 supplier: Cummins type: Flywheel max full load rated speed(not to exceed): 2980 flywheel inertia: 0.35 flywheel mounting flange to ring gear leading edge (mm): 16.13 mounting web thickness (mm): 16 Pilot Bearing Bore Diameter (mm): 51.968 clutch/t. C.Mounting bolt circle count: Single clutch/t. C.Mounting hole count: 8 clutch/t. C.Mounting hole spacing: Equal clutch/t. C.Mounting hole size: 10.5mm thru 2 nd clutch/t. C.Mounting hole count: N/A 2 nd clutch/t. C.Mounting hole spacing: N/A 2 nd clutch/t. C.Mounting hole spacing: N/A 2 nd clutch/t. C.Mounting hole size: N/A Cummins material standard: 40001 Intended Drive Hardware: Clark 18000, 24000,hr 28000,32000,c270,c320.

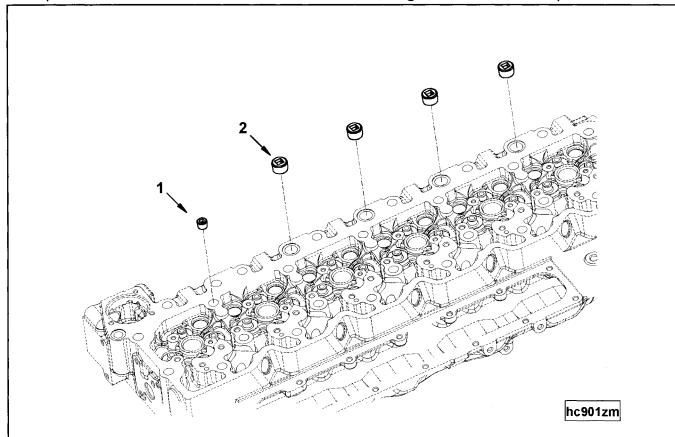


Ref No.	Part Number	Part Name	Req	Remarks
		FLYWHEEL MOUNTING OPTION FW9934		Flywheel Mounting
1	4894641	Screw, Captive Washer Cap	8	Bolt Length (mm): 31 Flywheel Web Thickness (mm): 16 To Suit REPTO: No
	!			



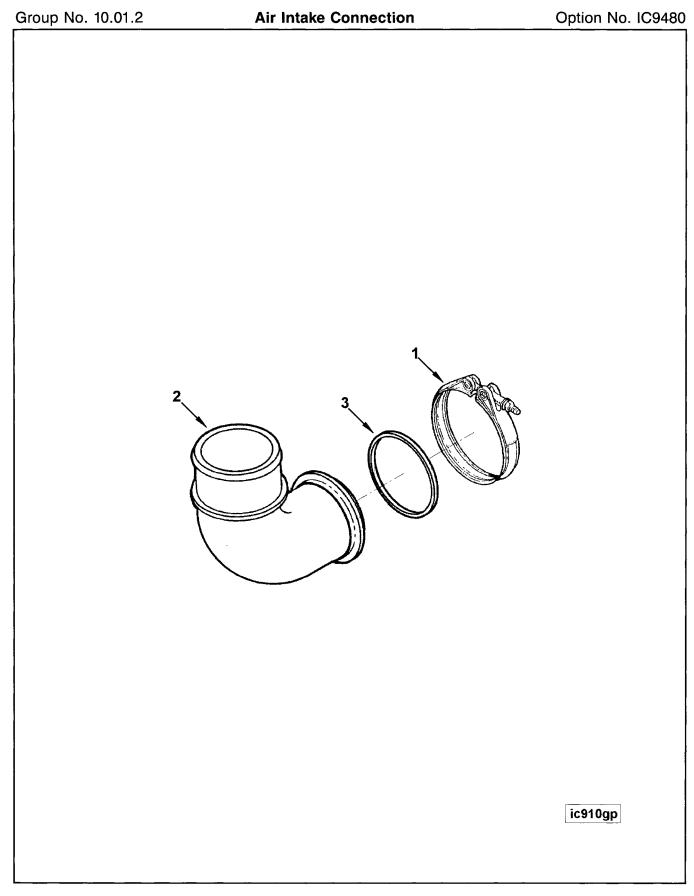
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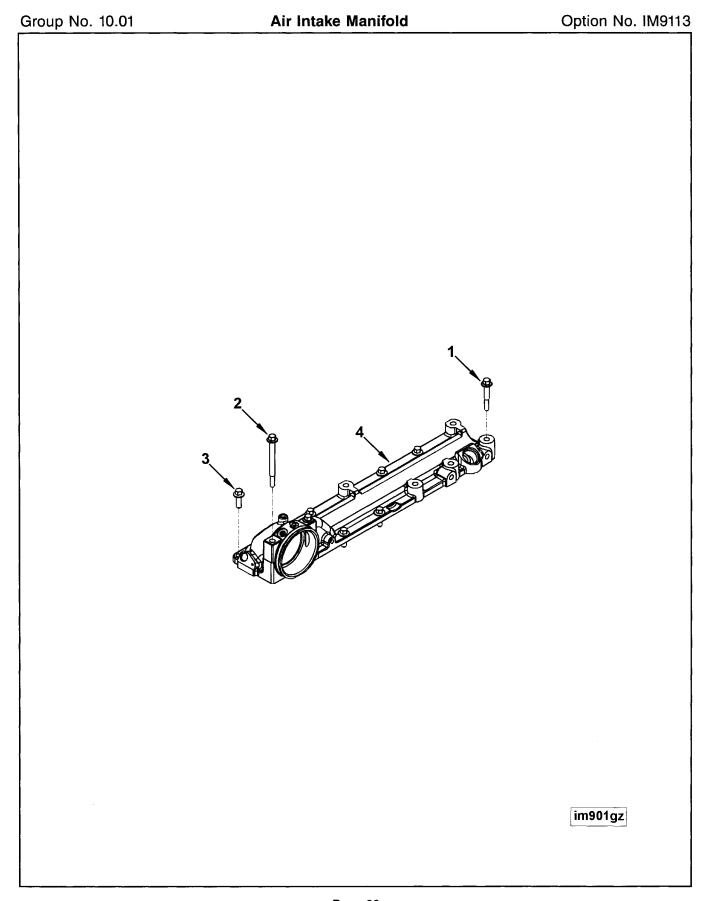
Ref No.	Part Number	Part Name	Req	Remarks
		FRONT GEAR COVER OPTION GG9836		Front Gear Cover
1 2 3 4 5	3901445 3902114 3949326 5258751 4890832	Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Dowel, Ring Cover, Front Seal, Oil	7 6 2 1 1	Structure Code: 03 EBM Engine Family: "B" Series Cylinders: 4/6 Design Phase: N/A Belt Retainer Provision: No Noise Panel Provision: No Material: Cast Aluminium Oil Pan/Front Gear Cover Mtg Holes: 2 Oil Pressure Switch Provision: Yes Oil Fill Provision: No M8 X 1.25 X 45 M8 X 1.25 X 30



Ref No.	Part Number	Part Name	Req	Remarks
		CABIN HEATER PLUMBING		
		OPTION HC9026		Cabin Heater Plumbing
1 2	4931643 4933532	Plug, Pipe Plug, Pipe	4	For use with customer supplied cab heater. 1/2 NPT 3/4 NPT

	ир мо. 99.01	MOUNTING, AUXILIARY	FUIV	Option No. HD9347
Ref No.	Part Number	Part Name	Req	Remarks
No.	Part Number	MOUNTING, AUXILIARY PUMP OPTION HD9347	Req	Mr - auxiliary pump mounting pump drive type: Gear compressor rear drive: N/A Engine Family: "B" Series No content option for no air compressor and no hydraulic drive engines.



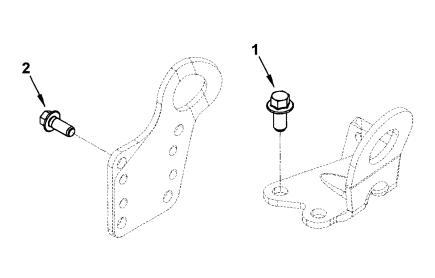


	up No. 10.01	U1 Air Intake Manifold		d Option No. IM9113		
Ref No.	Part Number	Part Name	Req	Remarks		
		AIR INTAKE MANIFOLD OPTION IM9113		Air Intake Manifold		
1 2	3900633 3919995	Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap	1 2	Design Phase: Current Product Engine Family: "B" Series Engine Cylinders: 6 Intake connection mounting provision: Yes Intake Connection Type/interface: Half Marmon flange Marmon flange diameter (mm): 88 Intake Connection Mounting Interface: From engine CL (mm): 221.75 from CCL (mm): 427.728 From FFOB (mm): -132 Air heater provision: Yes Integral Air Heater Voltage: 12/24 V fipg (fixed in place gasket) used in this opt air compres- sor air supply provision: Yes M8 X 1.25 X 50 M8 X 1.25 X 90		
3 4	3918109 4981333	Screw, Hex Flange Head Cap Manifold, Air Intake	7	M8 X 1.25 X 25		
4	4901333	Walliou, All Illiane				

AIR TRANS	Part Name SFER CONNECTION TION IT9039	Req	Air Transfer Connection Connection Supplier: Cummins Connection Type: 90 Degree Elbow orientation: Rotatable engine interface flange type: Half Marmon engine interface flange diameter(mm): 73.85 (3") engine interface flange thickness (mm): 3.5 OEM Interface Connection. Diameter (mm): 76.7 OEM Interface Connection. Clamping Surface(mm): 33.5 Turbocharger interface to CL OEM interface (mm): 95.2 OEM Interface To CL Turbocharger Interface(mm): 100 customer tapping: 1/8-27 NPTF s-2 supply method: Kit 1/8 NPT
Plug, Pipe Seal, O Ring Pipe, Air Transfer Nut, Lock	TION IT9039	1 1 1	Connection Supplier: Cummins Connection Type: 90 Degree Elbow orientation: Rotatable engine interface flange type: Half Marmon engine interface flange diameter(mm): 73.85 (3") engine interface flange thickness (mm): 3.5 OEM Interface Connection. Diameter (mm): 76.7 OEM Interface Connection. Clamping Surface(mm): 33.5 Turbocharger interface to CL OEM interface (mm): 95.2 OEM Interface To CL Turbocharger Interface(mm): 100 customer tapping: 1/8-27 NPTF s-2 supply method: Kit
		1	

Lifting Arrangeme	nt	Option No. LA9145
Part Name	Req	Remarks
		Remarks Lifting Arrangement Engine Family: "B" Series max lifting load(lbs): 3145 bracket(s) provided: Front and rear accommodates pad mount alternator bracket: Y accommodates spool, hinge and customer supplied mount alternator bracket: Y this bracket is designed for engine mounting on tier3 6B engines. Maximum allowable load for a single bracket is 2450 lbs. front bracket eyelet coordinates as viewed from the front, using front face of block and centerline of crank: X = -144.35; y = 455.73; z = 78.00 rear bracket eyelet coordinates as viewed from the front, using front face of block and centerline of crank: X = -
Bracket, Lifting Bracket, Lifting	1 1	123.75; y = 444.45; z = 785.58.
	Part Name LIFTING ARRANGEMENT OPTION LA9145 Bracket, Lifting	Part Name Req LIFTING ARRANGEMENT OPTION LA9145 Bracket, Lifting 1

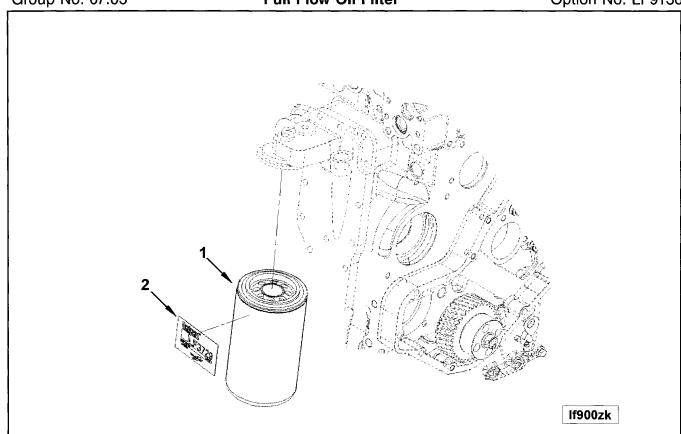
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Ref Req **Part Number Part Name** Remarks No. LIFTING BRACKET MOUNTING **OPTION LA9147** Lifting Bracket Mounting Engine Family: "B" Series rear bracket capscrew diameter: M12 rear bracket capscrew length: 25 rear bracket capscrew quantity: 2 front bracket capscrew diameter: M10 front bracket capscrew length: 25 accommodates spool, hinge and customer supplied mount alternator bracket. M10 X 1.50 X 20 M10 X 1.50 X 25 3903990 Screw, Hex Flange Head Cap 2 3902460 Screw, Hex Flange Head Cap 4

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Equal to	Remarks
OPTION LC9244 Engine O Advertise Equal to 3	
CL of Eng227.8 FFOB to Filter Thru Oil Press. Lube Flow Block Mtg. Hole BZL may and 3947 of 3901445 2 3906619 3 3946947 4 3947287 Plug, Pipe 7 3 3925009 Spring, Compression 6 3936365 Valve, Pressure Relief 7 3929457 8 3975818 3975818 3975818 Cooler, Oil 3955034 Head, Lub Oil Filter 9 (3965153) Head, Lub Oil Filter 10 (3942367) Head, Lub Oil Filter 11 (3942367) Head, Lub Oil Filter 11 (3942367) Adapter, Filter Head 11 Serviced	d HP Restriction: Less Than or 300 ad Loc: High gine to CL of Filter Head (mm): CL of Filter Head (mm): -185 read Size Provided: 1-16 UN - 2A rure Tap Size: 1/8- 27 NPTF w Cooling Capacity (GPM): 20.5 g Interface: 15-M8 X 1.25 Threaded use 3008465 Instead of 3906619 (206 (2X) and 3901445 (13X) Instead 45 (15X).



Ref No.	Part Number	Part Name	Req	Remarks
		FULL FLOW OIL FILTER		
	•	OPTION LF9136		Full Flow Oil Filter
1 2	3937736 (5259795)	Cartridge, Lub Oil Filter Decal	1 1	Purchase From Fleetguard
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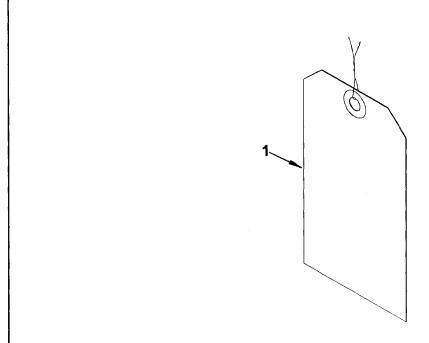
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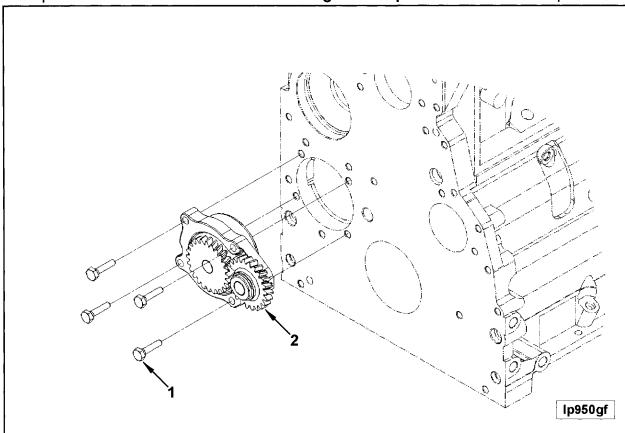
	<u> </u>	. 07.02 Oil Level Gauge		Option No. LG90117		
Ref No.	Part Number	Part Name	Req	Remarks		
1 23		OIL LEVEL GAUGE OPTION LG90117 Plug, Expansion Dipstick Tube, Oil Gauge Dipstick	4 1 1 1	Engine Family: B Engine Cylinders: 6 Oil Pan Sump Type: Standard Front/ Rear Dipstick Supplier: Cummins Dipstick Location: Fuel Pump Side tube entry location from FFOB (mm): 352 Dipstick Style: Locking, Free Hanging Dipstick Pull Location: Fuel Pump Side from engine CL: N/A from CCL: N/A from FFOB CL: N/A Dipstick Brace Attachment Location: N/A from engine CL: N/A from CCL: N/A from FFOB CL: N/A Oil Level High / Low (qt): 18.5 / 15.85 Dipstick Calibration: Bfob - full / low (mm): 50.5/63.6 Power Angle (deg): 0 Tilt Angle (deg): 0 effective tube length (mm): 800 tube bend angle (deg): N/A handle color: Yellow wire tie to engine for shipment.		

Lube Oil



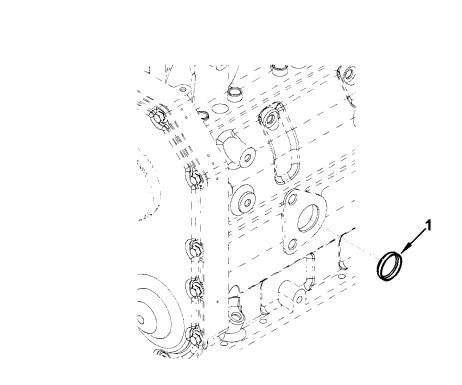
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Ref No.	Part Number	Part Name	Req	Remarks
		LUBE OIL		
		OPTION LO9701		
				Tag Identification: No Oil Tag Location: Front Lifting Bracket BZL Plant May Substitute P/N 3916103 for P/N 3352918 Instruction Tag
1	(3916103)	Tag, Instruction	1	



Ref No.	Part Number	Part Name	Req	Remarks
		LUBRICATING OIL PUMP OPTION LP9065		Lubricating Oil Pump
1 2	3900677 4939588	Screw, Hexagon Head Cap Pump, Lubricating Oil	4 1	pump drive: Non crank concentric max HP: 305 body material: Cast iron flow rate at pump speed (GPM at RPM): 3.2 at 750 gear type: Steel HCR gear piston cooling method: Saddle or j-jet Engine Cylinders: 6 Engine Aspiration: Charge Air Cooled block oil pump cavity (mm): 21.2 CDC may use lub oil pump 3971544 in place of lub oil pump 4939588 M8 X 1.25 X 30

ob901zb

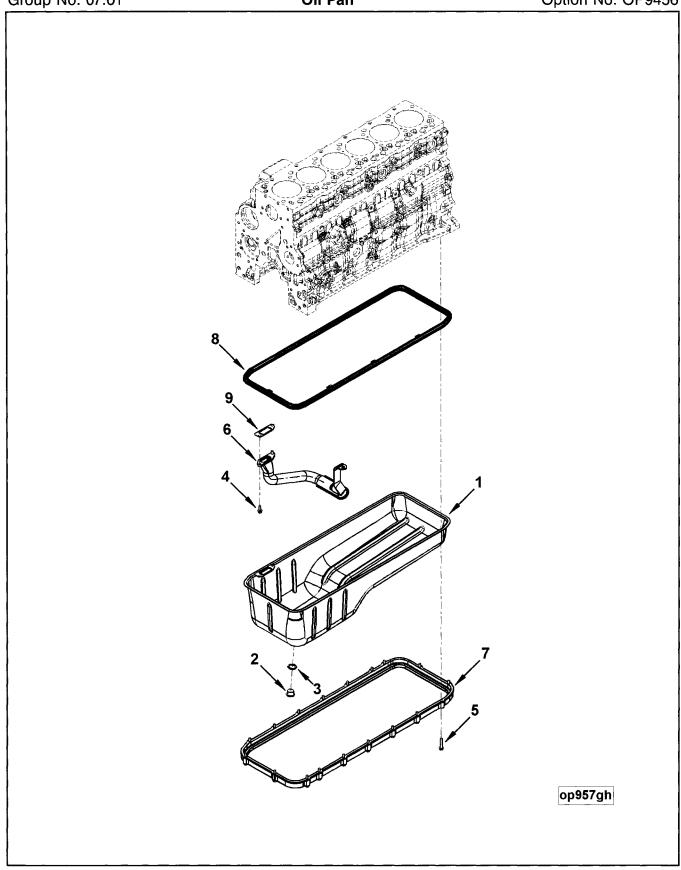


Ref No. Part Number

OIL FILLER ARRANGEMENT
OPTION OB9169

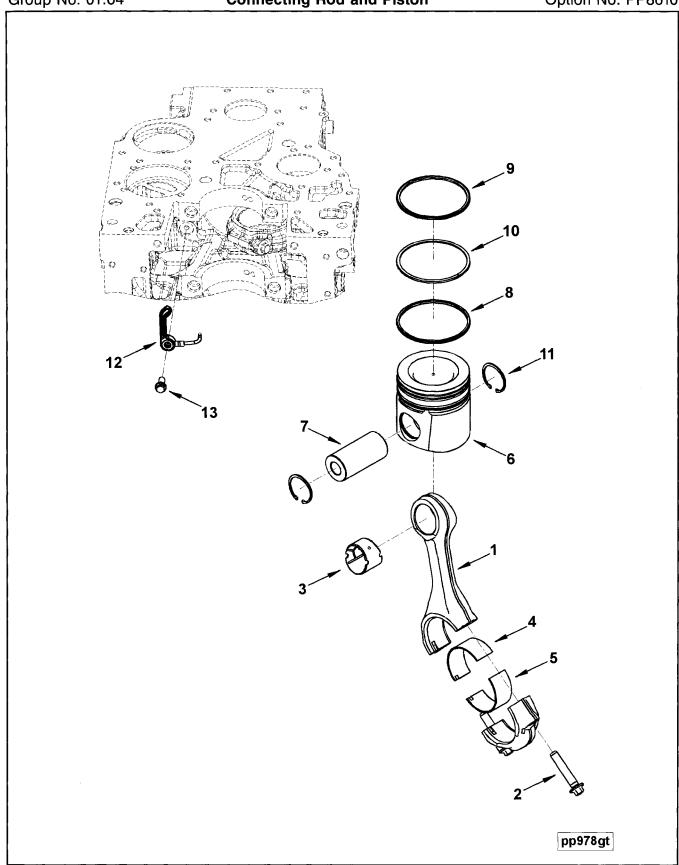
Oil Filler Arrangement
Engine Family: "B" Series fill tube supplier: No fill provided in block. Functional w/dual power ratings: Yes Restricted Breather Type: None Fuel Type: Diesel drain provision for 50 DN alternator: No Engine Aspiration: Charge Air Cooled engine cylinder count: 6
Fill Location: Valve Cover.

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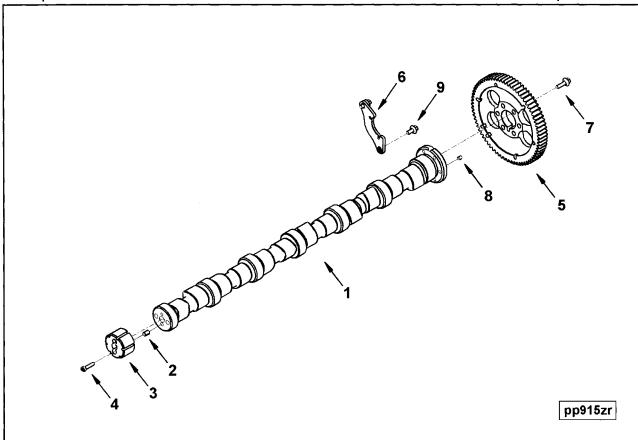
in Place of the 3957849 SHCS. KOM may us		up No. 05.06.1	Engine Control Module		Option No. PH9114		
Page		Part Number	Part Name	Req	Remarks		
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	3609867 2872277 4928599 3901445 3906391 3920854 3947206 4899791 3957849 4921776 3977357 4076493 4076930 4921574 4993966 4921322 4903482 4932211 4954905 4010519	Screw, Hex Flange Head Cap Dataplate Sensor, Position Seal, O Ring Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Screw, Gaptive Washer Cap Screw, Captive Washer Cap Screw, Studded Flange Cap Isolator, Vibration Screw, Socket Head Cap Module, Electronic Control Wire, Ground Sensor, Pressure Switch, Pressure Switch, Pressure Seal, O Ring Bracket, Etr Cnt Module Sensor, Prs Temperature Seal, O Ring Clip Sensor, Temperature Seal, O Ring	1 2 1 6 2 1 2 3 1 1 1 1 1 1 1 1 1	ECM Version: CM850 PV ECM Location: On-Engine Manufacturer of Record: Cummins Boot Software Type: BL 4504 Ambient Air Pressure Sensor: Yes Intake Manifold Pressure Sensor: Absolute Oil Pressure Sensor: Switch Speed Sensor Location: Damper Pulley Engine Design Phase: ISBE EURO4 Beta Build Engine Family: B Series ECM Hardware Level: PV Turbo Type: Wgt/Vgt Coolant Temp Sensor: Standard Tolerance Intake Connection Type: Rount Rotatable Unique Characteristics: Oil Pressure SW. In Frt. Gear CVR. KOM may use 4936491 SHCS in Place of the 3957849 SHCS. KOM may use 3609867 in Place of 3958748. DCEC may use Dataplate 5267513 in Place of 3958748. M8 X 1.25 X 12 Cam or Crank M8 X 1.25 X 45 M6 X 1.00 X 16 M5 X 0.80 X 20 Recon Equiv. 4921776 NX/RX Ambient Air Oil Intake Manifold		



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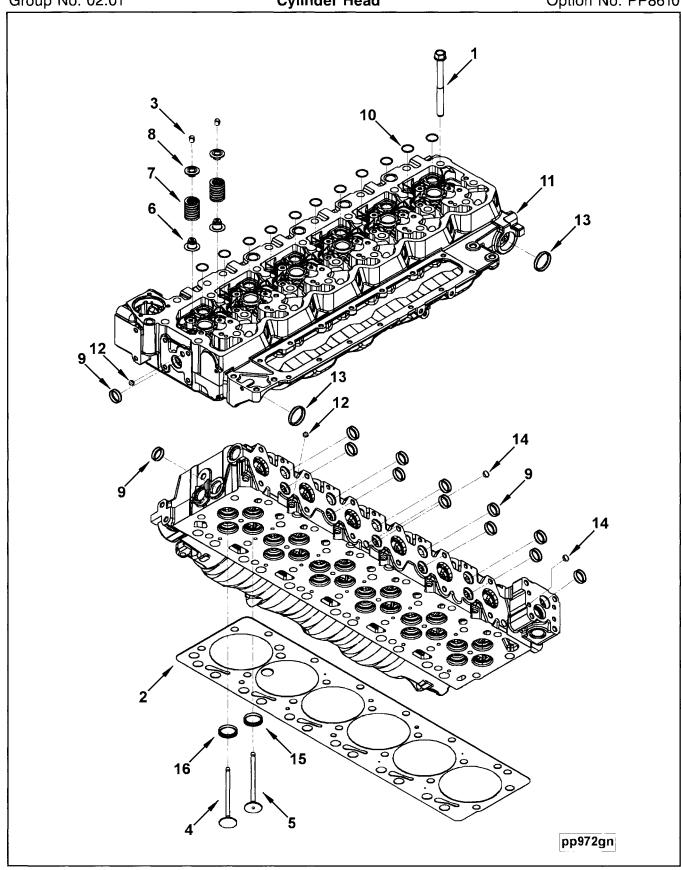
Connecting Rod and Piston

Grou	up No. 01.04	Connecting Rod and F	'ISTOI	n Option No. PP8610
Ref No.	Part Number	Part Name	Req	Remarks
		CONNECTING ROD AND PISTON OPTION PP8610		Connecting Rod and Piston
1 2 3 4 5 6 7 8 9 10 11 12 13	(3971212) (3971211) 4891179 4891178 3969562 4893693 4955160 (4934860) 4931041 4955251 (3976339) (4932587) 4932801 3920691 3968877 3964817	Rod, Engine Connecting Rod, Engine Connecting Screw, Connecting Rod Cap Bushing Bearing, Connecting Rod Bearing, Connecting Rod Kit, Engine Piston Piston, Engine Pin, Piston Set, Piston Ring Ring, Compression Piston Ring, Compression Piston Ring, Oil Piston Ring, Retaining Nozzle, Piston Cooling Screw, Banjo Connector	6 1 2 1 6 6 6 6 1 1 1 1 1 1 2 6 6 6	Recon Equivalent 3971212 RX Standard Standard Serviced as 4955160
6	4955481 (4934816) 4955480	Kit, Engine Piston .50 mm Piston, Engine Set, Piston Ring .50 mm	A/R 1 1	0.50 mm Oversize Serviced as 4955481 0.50 mm Oversize
4 4 4 4	3901171 3901172 3901173 3901174	Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod	A/R A/R A/R A/R	0.25 mm Oversize 0.50 mm Oversize 0.75 mm Oversize 1.00 mm Oversize
5 5 5 5	4892795 4892796 4892797 4892798	Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod	A/R A/R A/R A/R	0.25 mm Oversize 0.50 mm Oversize 0.75 mm Oversize 1.00 mm Oversize



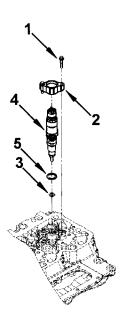
Ref No.	Part Number	Part Name	Req	Remarks
Ref No. 1 22 3 4 5 6 6 7 8 9	3954100 (3954099) 3954111 3955069 4895877 4896380 4897457 3093730 3904483 3925883	CAMSHAFT OPTION PP8610 Camshaft Camshaft Dowel, Ring Ring, Speed Indicator Screw, Socket Head Cap Gear, Camshaft Support, Camshaft Thrust Screw, Hex Flange Head Cap Dowel, Pin Screw, Hex Flange Head Cap	1 1 1 1 2 1 1 6 1 2	Remarks Camshaft Customer to Purchase 3979506 M8 X 1.25 X 25 M8 X 1.25 X 16

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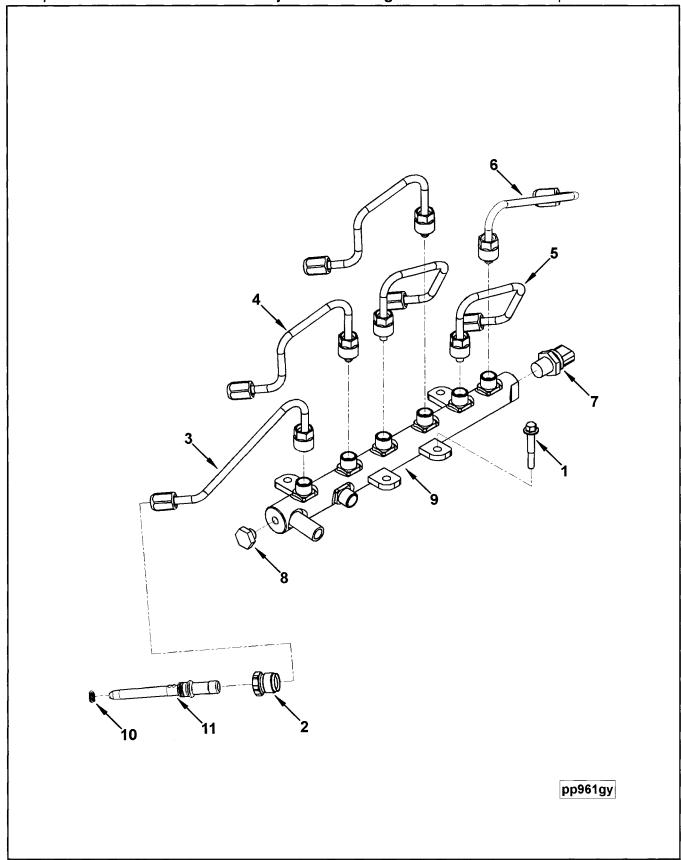
iroر	up No. 02.01	Cylinder Head		Option No. PP8610		
Ref No.	Part Number	Part Name	Req	Remarks		
	<u> </u>	CYLINDER HEAD				
		OPTION PP8610		Cylinder Head		
	2027062	Saraw Hay Flange Hand Con	000			
1 2	3927063 4932210	Screw, Hex Flange Head Cap Gasket, Cylinder Head	26 1			
	4936081 3802967	Head, Cylinder Kit, Exhaust Valve	1 12	Recon Equivalent 4936081 NX		
3	3940123	Collet, Valve	2			
4	(3940734) 3802924	Valve, Exhaust Kit, Intake Valve	12	Serviced as 3802967		
3	3940123 (3940735)	Collet, Valve Valve, Intake	2	Serviced as 3802924		
5 6	3955393	Seal, Valve Stem	2	Serviceu as 3002924		
7 8	3943161 3943198	Spring, Valve Retainer, Valve Spring	24 24			
Į	3977226	Head, Cylinder	1			
9 10	3914035 3920706	Plug, Expansion Plug, Expansion	13 11			
11 12	(3977222) 3007632	Head, Cylinder Plug, Expansion	7			
13	3945094	Plug, Expansion	2			
14 15	3945095 3943449	Plug, Expansion Insert, Valve	2 12	Standard		
16	3943450	Insert, Valve	12	Standard		
		SERVICE PARTS				
15	3939719	Insert, Valve	A/R	0.127 mm Oversize		
15 15	3939720 3939721	Insert, Valve Insert, Valve	A/R A/R	0.254 mm Oversize 0.508 mm Oversize		
16	3939723	Insert, Valve	A/R	0.127 mm Oversize		
16	3939724	Insert, Valve	A/R	0.254 mm Oversize		
16	3939725	Insert, Valve	A/R	0.508 mm Oversize		
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pp968gk

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Ref No.	Part Number	Part Name	Req	Remarks
		INJECTOR OPTION PP8610		Injector
1 2 4 3 5	3900628 3976370 3976372 3976371 3977393	Screw, Hex Flange Head Cap Clamp, Injector Injector Seal, Injector Seal, O Ring	12 6 6 1 1	M6 X 1.00 X 30 Recon Equivalent 3976372 NX

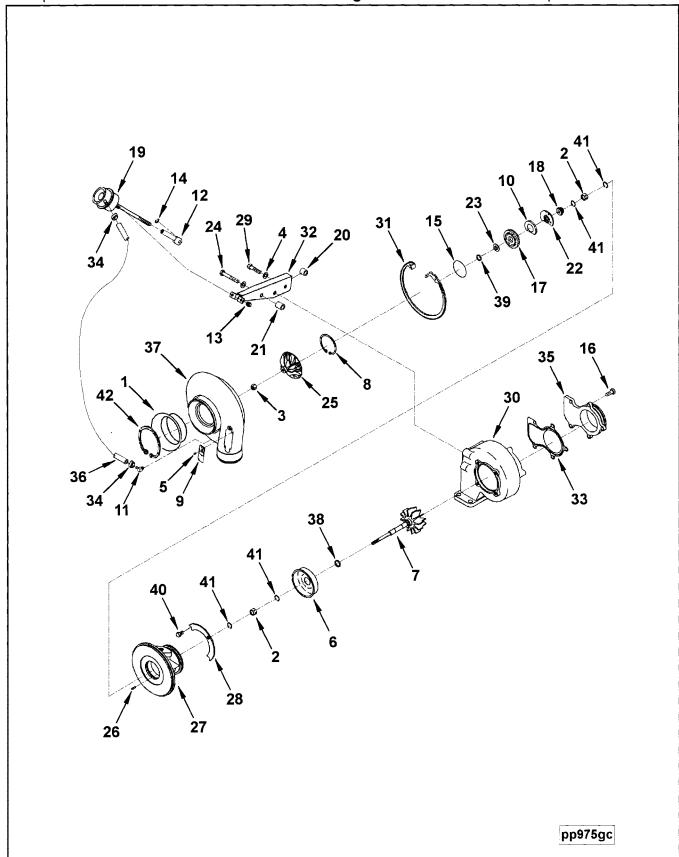
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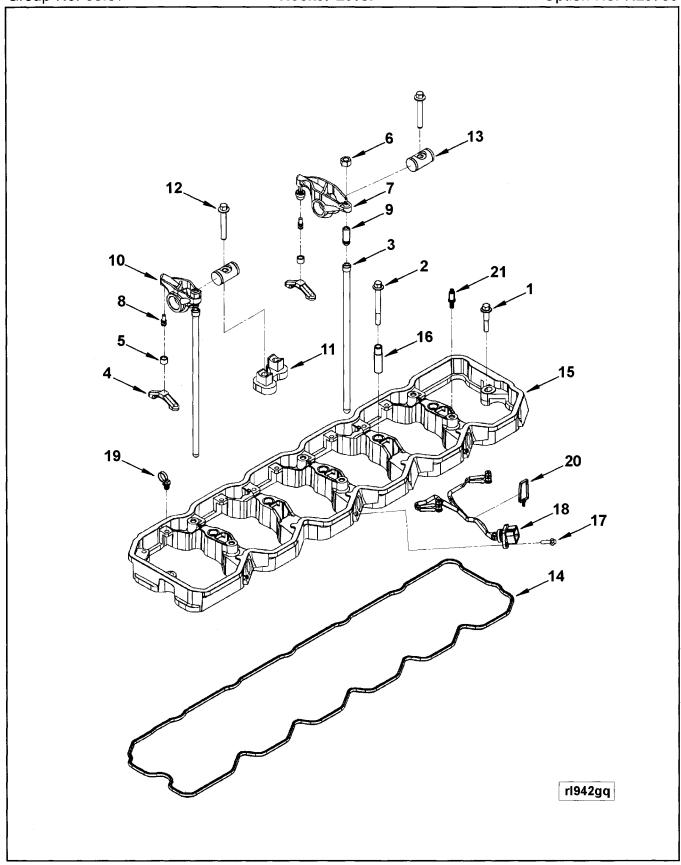
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	up No. 06.01.2	injector Plumbing	·	<u> </u>
No.	Part Number	Part Name	Req	Remarks
Ref	930837 5264181 3978031 3978032 3978036 3977530 5260246 3974093 (3978448) 3975703 3972753 (3975702)	Part Name INJECTOR PLUMBING OPTION PP8610 Screw, Hex Flange Head Cap Retainer, Inj Ful Sup Cnr Tube, Injector Fuel Supply Tube, Injector Fuel Supply Tube, Injector Fuel Supply Tube, Injector Fuel Supply Manifold, Fuel Sensor, Pressure Valve, Pressure Relief Manifold, Fuel Connector, Inj Fuel Supply Seal, O Ring Connector, Inj Fuel Supply	Req 4 6 1 2 2 1 1 1 1 6 1 1 1 1 6 1 1	Remarks Injector Plumbing #1 Cylinder #2 and #3 Cylinder #4 and #5 Cylinder #6 Cylinder Fuel

Gro	up No. 10.05	Turbocharger		Option No. PP99127
Ref No.	Part Number	Part Name	Req	Remarks
Ref	3818823 3818824 4955479 3678603 3949530 3922794 4891288		4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

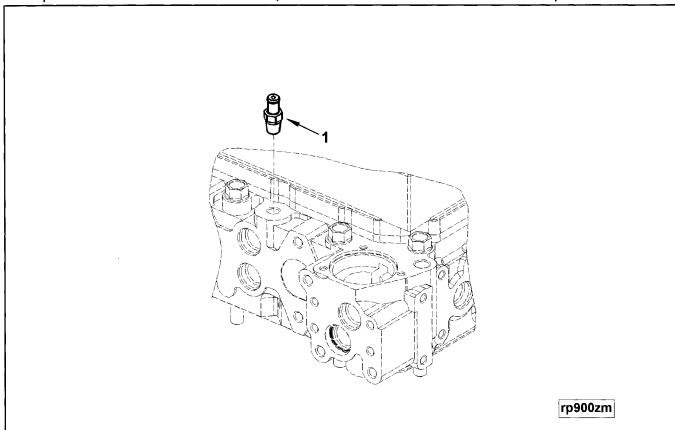


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Ref Part Number	Part Name	Req	Option No. HL976s
D-4	ROCKER LEVER OPTION RL9765 Screw, Hex Flange Head Cap Screw, Hex Flange Head Cap Rod, Push Crosshead, Valve Assembly, Rocker Lever Lever, Rocker Socket, Rocker Lever Lever, Rocker Ball, Rocker Lever Screw, Rkr Lever Adjusting Lever, Rocker Nut, Heavy Hexagon Ball, Rocker Lever Screw, Rkr Lever Adjusting Lever, Rocker Support, Rocker Lever Screw, Hex Flange Head Cap Shaft, Rocker Lever Housing, Rocker Lever Gasket, Rkr Lever Housing Housing, Rocker Lever Housing, Rocker Lever Screw, Hex Flange Head Cap Harness, Wiring Clip, Wire Retaining Clip, Wire Retaining Stud	Req 251261111111111533636	•

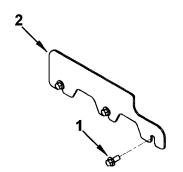


type: Threaded engine interface: 1/4in. NPTF orifice size (mm): 3.18 OEM Interface Thread Size: 7/16in 20 UNF OEM Interface Flare Angle: 45 Degrees Centerline of engine to OEM interface (mm): -76 Centerline of crank to OEM interface (mm):	Ref No.	Part Number	Part Name	Req	Remarks
	1		VENT,ENGINE COOLANT OPTION RP9094		Mr - rad plumbing, connection vent provision type: Threaded engine interface: 1/4in. NPTF orifice size (mm): 3.18 OEM Interface Thread Size: 7/16in 20 UNF OEM Interface Flare Angle: 45 Degrees Centerline of engine to OEM interface (mm): -76 Centerline of crank to OEM interface (mm): 429 front face of block to OEM interface (mm): -156.5 This is an orificed fitting (1/8in. orifice) For use with a positive deaeration

SOFTWARE, CALIBRATION

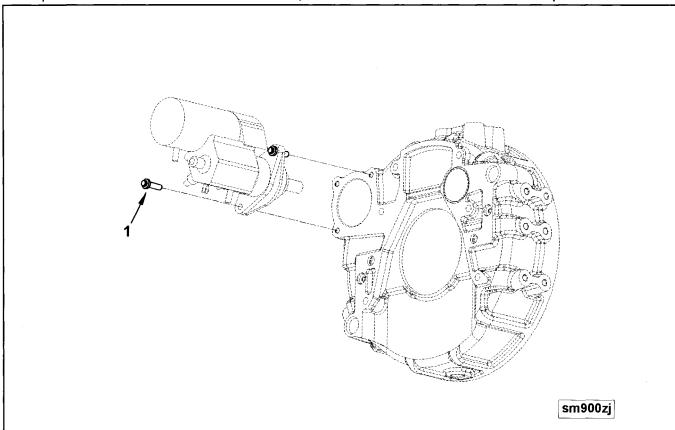
Option No. SC9462

Ref Part Number Part Name Req Remarks	
No. Part Number Part Name Red Remarks	
SOFTWARE, CALIBRATION OPTION SC9462 Mr - software calibration CPL: 8610 Engine Control System: E2 I rated is BHP at 2500 RPM Peak torque: 655 lbs. FT at 1500 R Governed Power: 215 BHP At 250 Governed Torque: 452 lbs. FT Certified By: EPA, CARB, Eu Application: Non Road cal restr: No Power Rating: Yes Calibration Voltage: 12 Or 24 speec comment: None cart level: Tier 3 into used: ECM controlled start aid: Engine Family: "B' Series ambient sure sensor: "Yes software privace." history: N/A manufacturer of record mins.	PM RPM input: N/A er 3,stiiia Yes air pres- 111016 SC



sh950gw

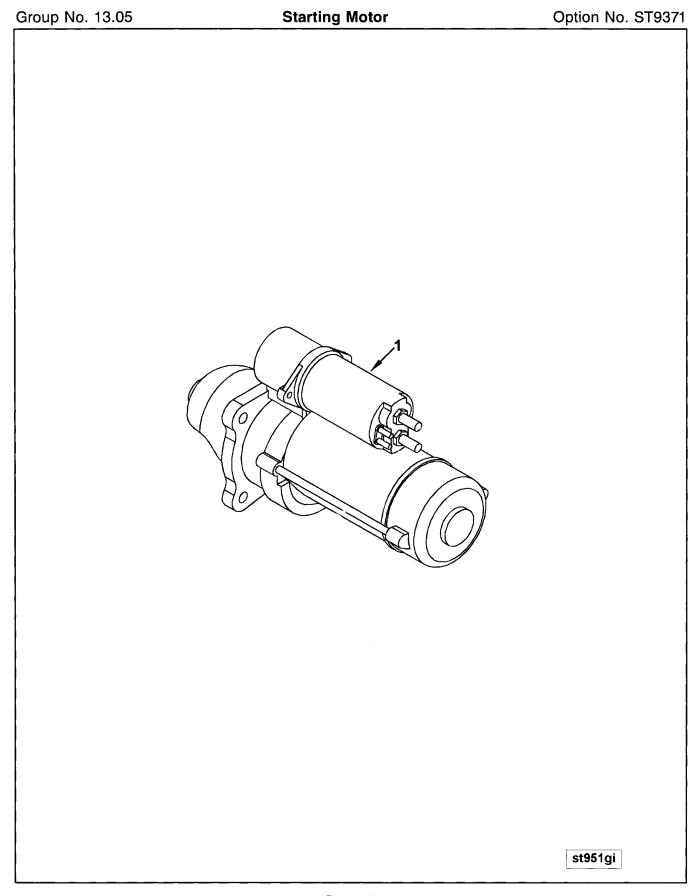
Ref No.	Part Number	Part Name	Req	Remarks
		HEAT SHIELD OPTION SH9047		Heat Shield
1 2	3926846 4931529	Screw, Hex Flange Head Cap Shield, Heat	3 1	M8 X 1.25 X 20



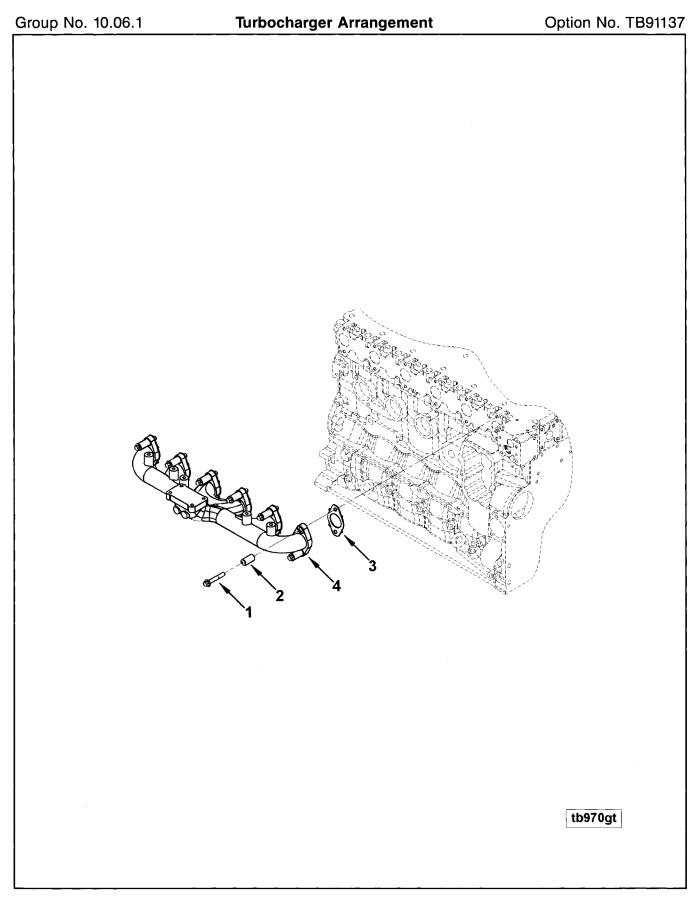
Ref No.	Part Number	Part Name	Req	Remarks
		MOUNTING, STARTING MOTOR		
		OPTION SM9790		Mr - starting motor mounting thread size: M10 x 1.5 - 6 h items supplied: Spacer thickness thickness (mm): 0 spacer mounting flange SAE type: N/A spacer included: Spacer male pilot diameter (mm): 0 spacer female pilot diameter (mm): 0 mounting hardware supplied: 2 capscrews mounting hardware supplier: Cummins.
1	3968470	Screw, Twelve Point Cap	2	

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	ир ио. 13.05	Starting Motor		Option No. \$19371
Ref No.	Part Number	Part Name	Req	Remarks
		STARTING MOTOR OPTION ST9371		Starting Motor pinion diametral pitch: 8/10 Pinion Gear OD (mm): 40.5 Pinion gear Offset (mm): 3.2
				Pinion Drive Type: Offset Mtg flange type: SAE #1 2 bolt 180 frame size diameter: 100mm pilot diameter: 88.9mm starter motor length: 244mm starter motor engine mounted angle (deg): 40.5 (+/- 15) Sealing Provision: Not Sealed supply method: Mounted removal length: 74.5 manufacturer: Denso Model: R4.0 Voltage: 12 kilowatt rating: 4.8 nameplate
1	3971603	Motor, Starting	1	brand: Cummins jump start protection: Yes.
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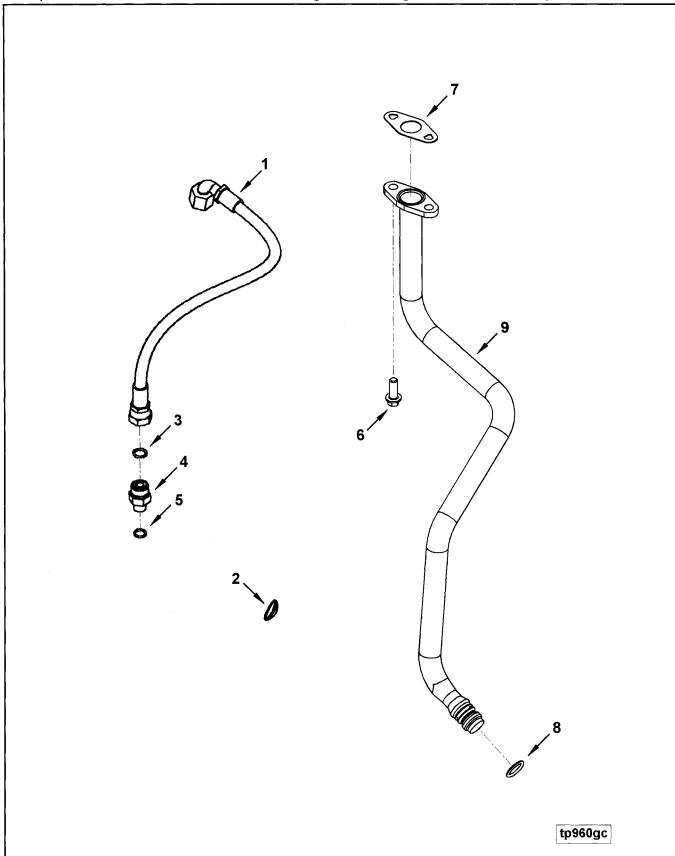


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	up No. 10.06.1	Turbocharger Arrange	emen	t Option No. TB91137
Ref No.	Part Number	Part Name	Req	Remarks
		TURBOCHARGER ARRANGEMENT OPTION TB91137		Turbocharger Arrangement Engine Config: 6B Exh Outlet Loc: HMRO Exh Horiz CCL (mm): -177 Exh Vert CCL (mm): 528 Turbo Exh Loc FFOB (mm): -504 Engine Aspiration: Charged Air Cooled Turbo Type: Wastegate CPR Outlet Config: Half Marmon CPR Outlet Angle on Engine (deg): 5 Exh Outlet Config: Half Marmon Exh Manifold Studs: None
1 2 3 4	3944593 3945252 5266422 3973422	Screw, Hex Flange Head Cap Spacer, Mounting Gasket, Exhaust Manifold Manifold, Exhaust	12 12 6 1	Block Drain Boss: Front Base Turbo ID 17: 4038289, 4039630, 4039636 M10 X 1.5 X 65

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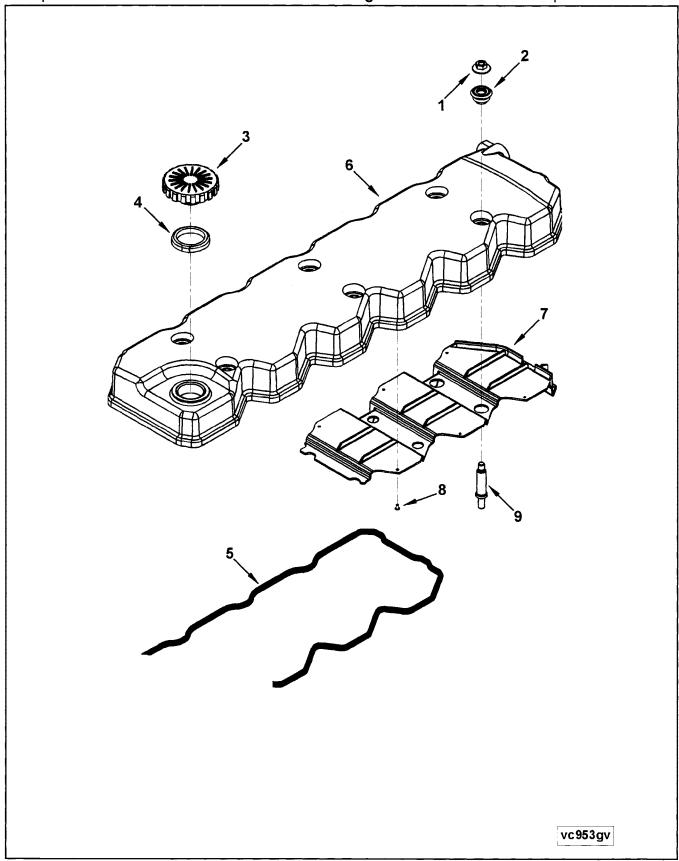
	up No. 08.09	COOLER, IOR CONVERT		T
Ref No.	Part Number	Part Name	Req	Remarks
1 23	4933532 3089238 (3089239) 3089240	COOLER, TOR CONVERTER OIL OPTION TK9036 Plug, Pipe Plug, Threaded Plug, Threaded Seal, O Ring		Mr - tor converter oil cooler For use when no torque converter is required. Pipe plug 3008469 may be used in place of 4933532. 3/4 NPT M22 X 1.50 X 15.5 M22 X 1.50 X 15.5



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Turbocharger Plumbing

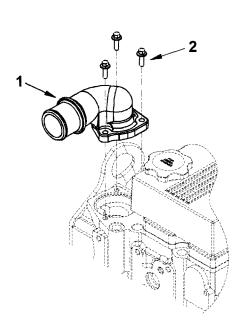
Ref No. Part Number Part Name Req Remarks
Turbocharger Plumbing engine design phase: Echo Engine Cylinders: 6 Engine Family: "B" Series Turbocharger exhaust location (mm): HMRO x = TBD y = TBD z = TBD Turbocharger Type: Wgt Oil Filter Mounted Location: Vertical Turbocharger supply line routing: Inboard exhaust brake capable: ? Block drain location Front drain required exhaust manifold type: Dry bearing housing manufacturer: Holset Turbocharger Drain Line Type: Flexible bearing housing cooling provision: Oil cooled 1 3920706 4940183 Union, Male 2 3678603 Seal, O Ring 3 (4940182) Connector, Male 4 3922794 Seal, O Ring 1 5 3900630 Screw, Hex Flange Head Cap 4 4931365 Gasket, Oil Drain 5 3975076 Connection, Tur Oil Drain 7 3928624 Seal, O Ring (3975077) Connection, Tur Oil Drain 1 1



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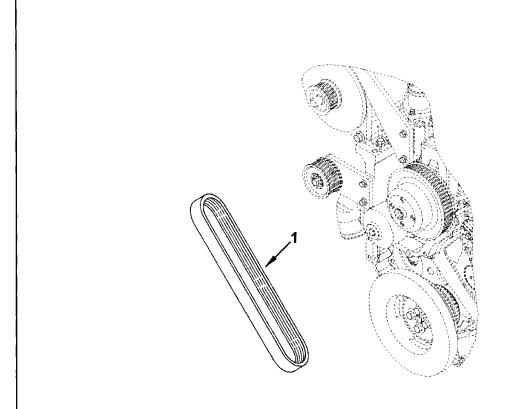
	up No. 03.01.1	valve Cover Arranger		· · · · · · · · · · · · · · · · · · ·
No.	Part Number	Part Name	Req	Remarks
Ref	•	Part Name VALVE COVER ARRANGEMENT OPTION VC9305 Nut, Hexagon Flange Isolator, Noise Cover, Valve Cap, Filler Cap, Filler Gasket, Filler Cap Gasket, Valve Cover Cover, Valve Cover, Valve Self Tapping Metal Stud	Req 6 6 1 1 1 1 1 1 1 8 6	· · · · · · · · · · · · · · · · · · ·
4 5 6 7 8	4895461 4899226 3976172 (3976173) (2830882) 3931532	Gasket, Filler Cap Gasket, Valve Cover Cover, Valve Cover, Valve Baffle, Breather Screw, Self Tapping Metal	1 1 1 1 1 8	

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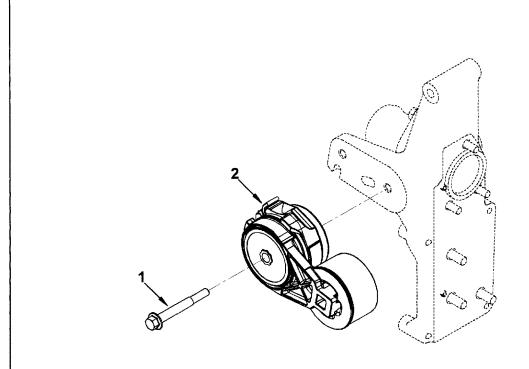
wo900ze

Ref No.	Part Number	Part Name	Req	Remarks
		WATER OUTLET CONNECTION OPTION WO9068		Water Outlet Connection
1 2	3943133 3901865	Connection, Water Outlet Screw, Hex Flange Head Cap	1 3	Connection Orientation: Horizontal, Forward Connection Outlet Diameter (mm): 44.4 Connection Outlet Location From Coord. Sys. (mm): X = 125 Y = 468 Z = 145 M6 X 1.00 X 20



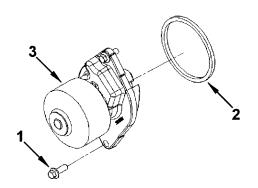
wp901zo

Ref No.	Part Number	Part Name	Req	Remarks
		WATER PUMP DRIVE OPTION WP9300		Water Pump Drive Engine Family: "B" Series Tensioner Mounting
1	3979344	Belt, V Ribbed	1	Location (mm): X: -227.0 Y: 195.0 Alternator Center (mm): X: -287.99 Y: 339.15 Alternator Pulley Diameter (mm): 61.13 Engine Fan Center (mm): X: 49 Y: 202.0 Fan Pulley Diameter (mm): 159.13 Belt Length (mm): 1732.0 Damper Pulley Effective Diameter (mm): 173.76.



wp900zc

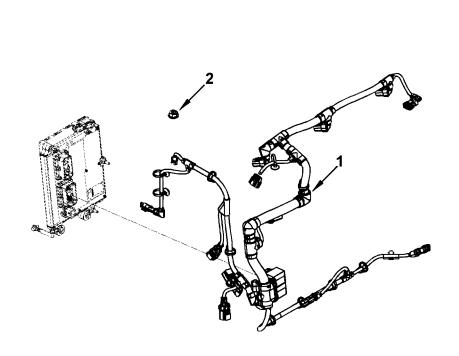
Ref	Part Number	Part Name	Req	Remarks
No.			1.04	Tiomao
1 1		BELT TENSIONER		
		OPTION WP97056		Belt Tensioner
1 2	3900679 3976834	Screw, Hex Flange Head Cap Tensioner, Belt	1	Tensioner mounting location(mm): X: -227.0 y: 195.0. M10 X 1.50 X 80



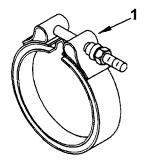
wp952ga

Ref No.	Part Number	Part Name	Req	Remarks
		WATER PUMP OPTION WP9757		Water Pump
1 2 3	2881804 3906698 (5260263) 3941981	Kit, Water Pump Seal, Rectangular Ring Pump, Water Screw, Hex Flange Head Cap	1 1 1 2	Pulley Type: Standard Pulley Diameter: 88 Pulley Hardness: HRC 50 Water Pump Location From CL of Crank: -108 CL of Engine: 80 FFOB: 103.3 Recon Equivalent 2881804 NX Serviced as 2881804

wr961gt



Ref Req **Part Number Part Name** Remarks No. **ENGINE CONTROL WRG HARNESS OPTION WR9359** Engine Control Wrg Harness Engine Cylinders: 6 harness supplier: Cummins bracket supplier: Cummins Customer: Various Connection Type: 90 Degree OEM Connector Location: Not Mounted J1939 connector location: Front ECM location: On Speed Sensor Location: Front Cover Voltage: 12 or 24 real time clock battery: No to suit oil pressure switch located in front gear Suitable for tier3 applications only. 4988598 Harness, Wiring 1 3900589 Nut, Hexagon Flange M8 X 1.25



xs950gp

Ref No.	Part Number	Part Name	Req	Remarks
		EXHAUST OUTLET CONNECTION		
		OPTION XS9254		Exhaust Outlet Connection
1	3903652	Clamp, V Band	1	Engine Configuration: "B" Series Connection Configuration: None Connection Outside Diameter (mm): N/A Turbine Outlet Flange Type: Half Marmon Supported on Exhaust Manifold: No Groove Width (mm): 6.65 Clamp ID (mm): 76.2 Includes Vee Band Clamp Only

Group No. 17.01

Set, Upper Engine Gasket

Ref	Part Number	Set, Upper Engine Ga	Req	
No.	i ait Hullibel		1104	Hemans
	4955229 2830409 3678603 3678925 3867646 3906698 (3919869) 3922794 3928624 3947530 3949530 3954829 3955339 3963988 3963990 3969988 3976371 3977393 4010643 4891288 4896897 4898372 4899226 4899231 4931365 4932210	Set, Upper Engine Gasket Seal, O Ring Seal, O Ring Seal, O Ring Seal, O Ring Seal, Rectangular Ring Gear, Idler Seal, O Ring Seal, O Ring Seal, O Ring Seal, O Ring Gasket, Int Manifold Cover Gasket, Turbocharger Seal, Thermostat Gasket, Exhaust Manifold Washer, Sealing Washer, Sealing Washer, Sealing Gasket, Connection Seal, Injector Seal, O Ring Seal, O Ring Gasket, Oil Drain Gasket, Valve Cover Gasket, Ning Gasket, Valve Cover Gasket, Oil Drain Gasket, Oil Drain Gasket, Oil Drain Gasket, Oil Drain Gasket, Cylinder Head	1211122111651726622111111	M10 X 1.00

Group No. 17.01

Set,Lower Engine Gasket

Ref	Part Number	Set,Lower Engine Ga	Т	T and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second
No.	Part Number	Part Name	Req	Remarks
	4955230 2830409 2830559 2831077 3902425 3906697 3906698 3929457 3939258 3939357 3949562 3959797 3963988 3963990 3974127 4890832 4895710 4898301 4898372 4934344 4955372 (3904325) (3909409) (4936646)	Set, Lower Engine Gasket Seal, O Ring Gasket, Oil Cooler Core Gasket, Filter Head Washer, Sealing Seal, Rectangular Ring Seal, Rectangular Ring Seal, O Ring Gasket, Cover Plate Gasket, Cover Plate Gasket, Flange Gasket, Flange Gasket, Filter Head Seal, Oil Pan Washer, Sealing Gasket, Filter Head Seal, Oil Seal, O Ring Gasket, Oil Suc Connection Seal, O Ring Gasket, Oil Pan Kit, Rear Crank Seal Tool, Seal Installation Tool, Seal Installation Seal, Oil	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Serviced as 3977913 Serviced as 4955372

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