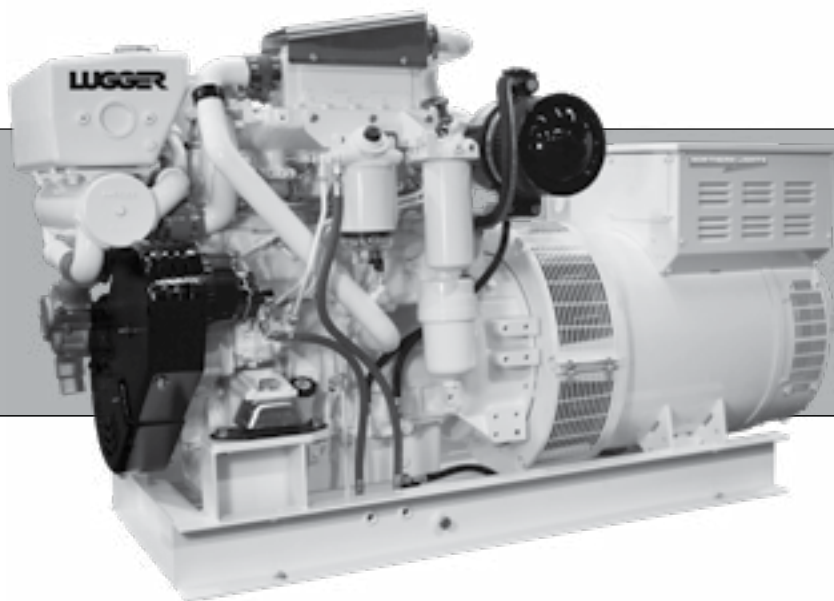




PARTS MANUAL

P6105

For Models: L6105A, L6105H, M6105A1, M6105A2,
M6105A3, M6105A4, M6105A5, M6105H1,
C6105A1, C6105A2, C6105A3, C6105A4, C6105A5



www.northern-lights.com



As of January 2011, U.S. EPA regulations require the application of a permanently applied label near the fuel tank fill port for diesel driven equipment. This label is to state:

ULTRA LOW SULFUR FUEL ONLY

Northern Lights is providing this label for application to the fuel inlet of the fuel supply tank for each engine or generator set. This is to be applied by the installer of the engine or gen set, or by the manufacturer of the equipment that the engine or gen set is installed in. The location of the label must be in clear site of personnel that refill the supply tank.



— CALIFORNIA —
Proposition 65 Warning:

Breathing Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

- * Always start and operate the engine in a well-ventilated area.
- * If in an enclosed area, vent the exhaust to the outside.
- * Do not modify or tamper with the exhaust system.
- * Do not idle the engine except as necessary.

For more information, go to www.P65warnings.ca.gov/diesel.

Northern Lights

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PART NO.: P6105 4/26



PARTS CATALOG

for Models

L6105A, L6105H, M6105A1, M6105A2, M6105A3,

M6105A4, M6105A5, M6105H1,

C6105A1, C6105A2, C6105A3, C6105A4, C6105A5

Please read thoroughly before attempting to use this manual:

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INTRODUCTION

MODEL DESIGNATION

Refer to the category designations below to find the correct parts pages for your model.

L, M

- L** - Lugger marine propulsion engine
- M** - Northern Lights marine generator set
- C** - Northern Lights Commercial series marine generator set

6105

Base Model #
105 mm bore
6 cylinders

A, H

- A** - Jacket Water After-cooler
- H** - Sea Water After-cooler

L6105A

Lugger jacket water after-cooled marine propulsion engine with an MWM base engine and an electronically controlled fuel system.

L6105H

Lugger sea water after-cooled marine propulsion engine with an MWM base engine and an electronically controlled fuel system.

M6105A

Northern Lights jacket water after-cooled marine diesel generator set with an MWM base engine and an electronically controlled fuel system.

M6105H

Northern Lights sea water after-cooled marine diesel generator set with an MWM base engine and an electronically controlled fuel system.

C6105A

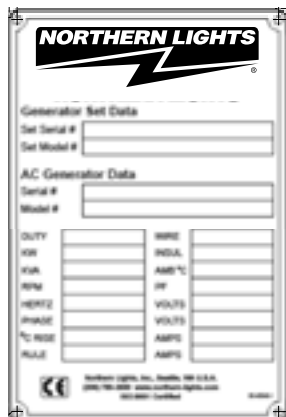
Northern Lights keel-cooled commercial series marine diesel generator set with an MWM base engine and an electronically controlled fuel system.

All model numbers in parentheses will indicate an MWM base engine. All variations requiring serial numbers for proper identification will be noted as Northern Lights or MWM.

SERIAL NUMBERS

NORTHERN LIGHTS

Your set has three serial numbers: ① an engine number stamped on the block, ② a generator plate, and ③ a generator set plate. Use the serial number on the generator set plate when ordering parts or in correspondence. The generator set plate is found on the service side of the generator and resembles one of the drawings below.



Generator Set Serial Number



Lugger Serial Number Plate

READING A PARTS PAGE

IMPORTANT:

Before selecting parts, be sure that you are choosing parts from the correct page.
Check the model designation at the page top.
Do not use this illustration for parts purchasing.

1 — ELECTRICAL SYSTEM

ALTERNATOR ASSEMBLY: M - NL668

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIALNUMBER
0	185046210	1	Alternator Assembly	-
1	185446219	1	Flywheel, complete	-
2	185446217	1	Plate, complete	-
3	185716200	1	Plate	-
4	185446218	1	Stator, complete	-
5	040126210	2	Bearing	-
6	020210010	1	Nut	-
7	027100010	1	Spring washer	-
8	026100010	1	Washer	-
9	185446220	1	Clamp	-
10	015140408	1	Screw	-
11	015140425	2	Screw	-
12	199236510	1	Collar	-

P668PT 08/00

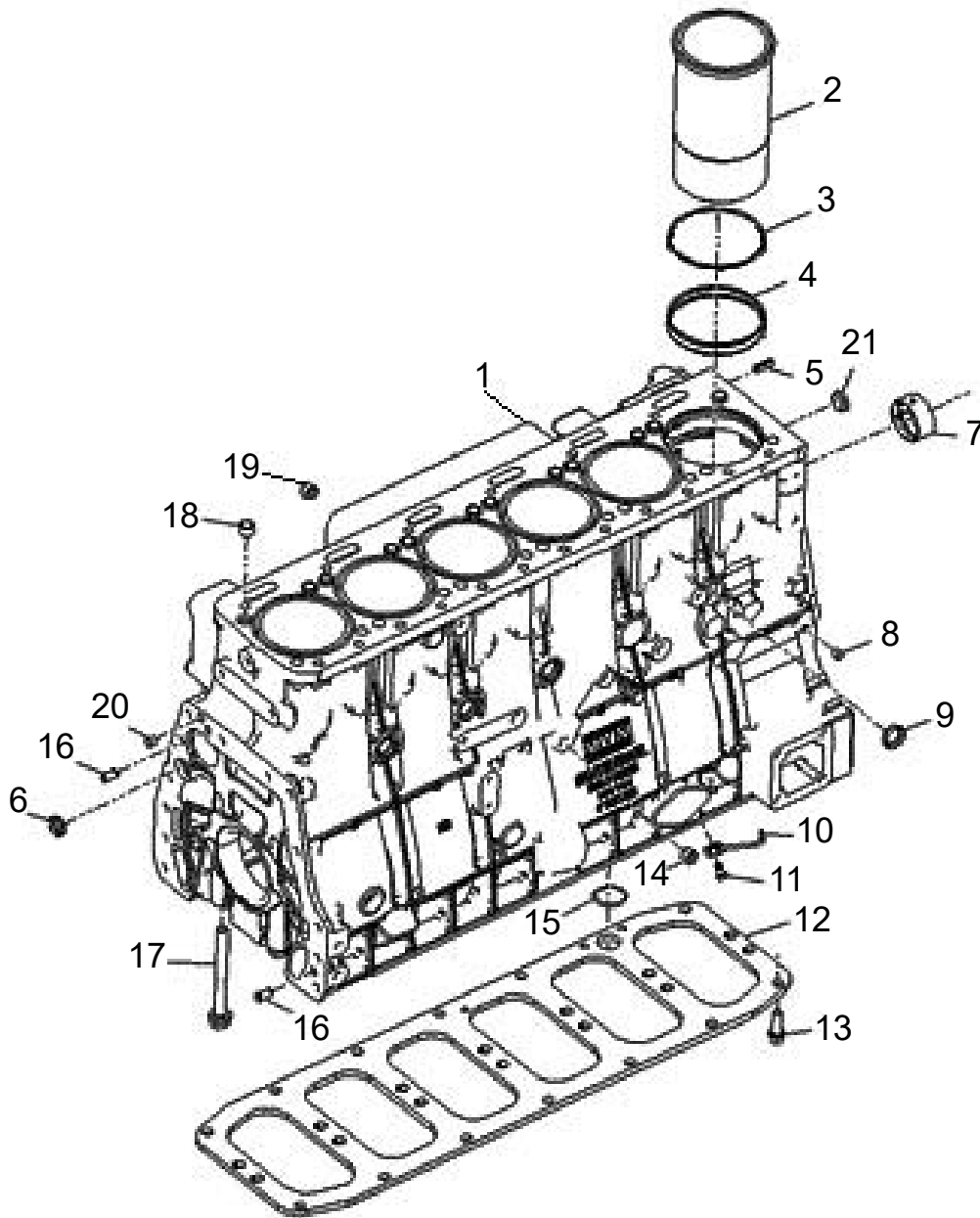
5-2

REFERENCES:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Grouping section title. 2. Model designation of equipment that uses parts listed on this page. 3. Title and description of assembly. 4. Drawing numbers that correspond to key column numbers for parts identification. 5. Key column for locating parts shown on drawing. 6. Part number. | <ol style="list-style-type: none"> 7. Quantity of parts used. 8. Description of each component part. 9. Serial number of unit the part fits. 10. Assembly or kit designated by Key 0 or ••/•. 11. Grouping index number. 12. Page number within the grouping index. 13. Manual title. 14. Page publication date. |
|--|--|

NOTE: ⇨ Arrows always point toward the front of the engine.

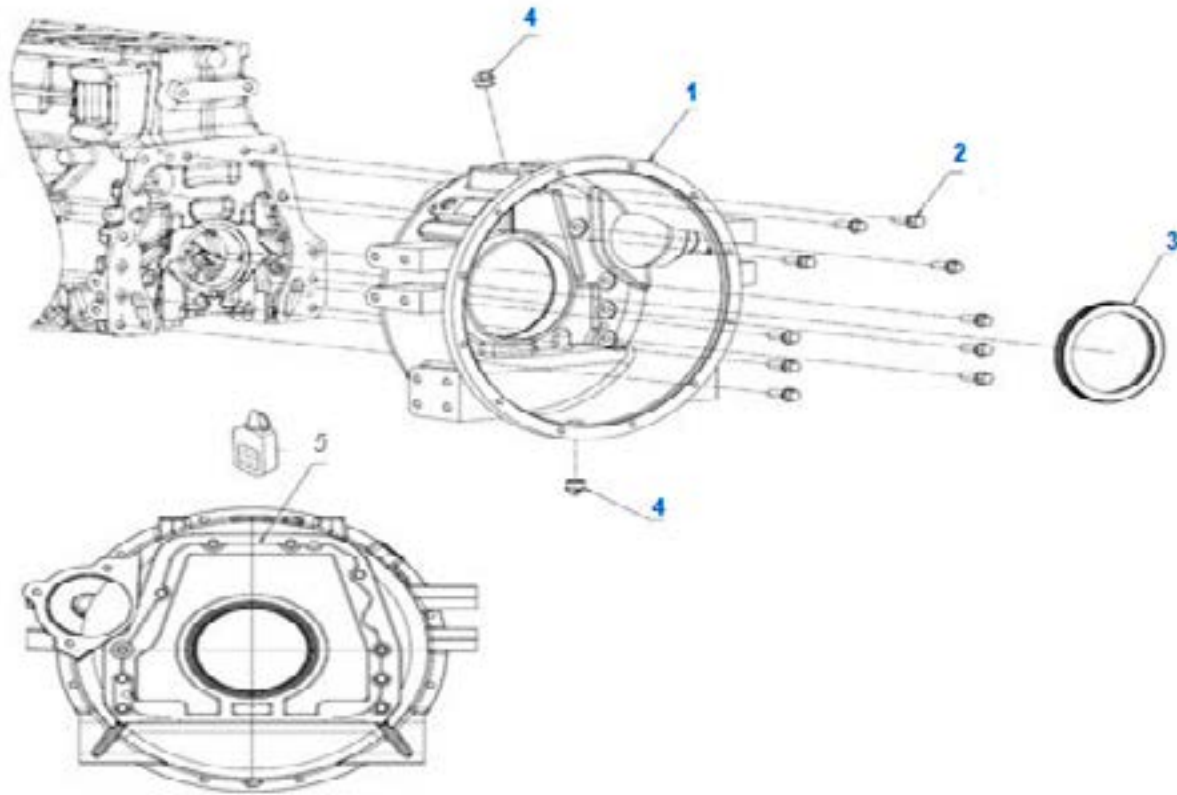
Cylinder Block



Cylinder Block

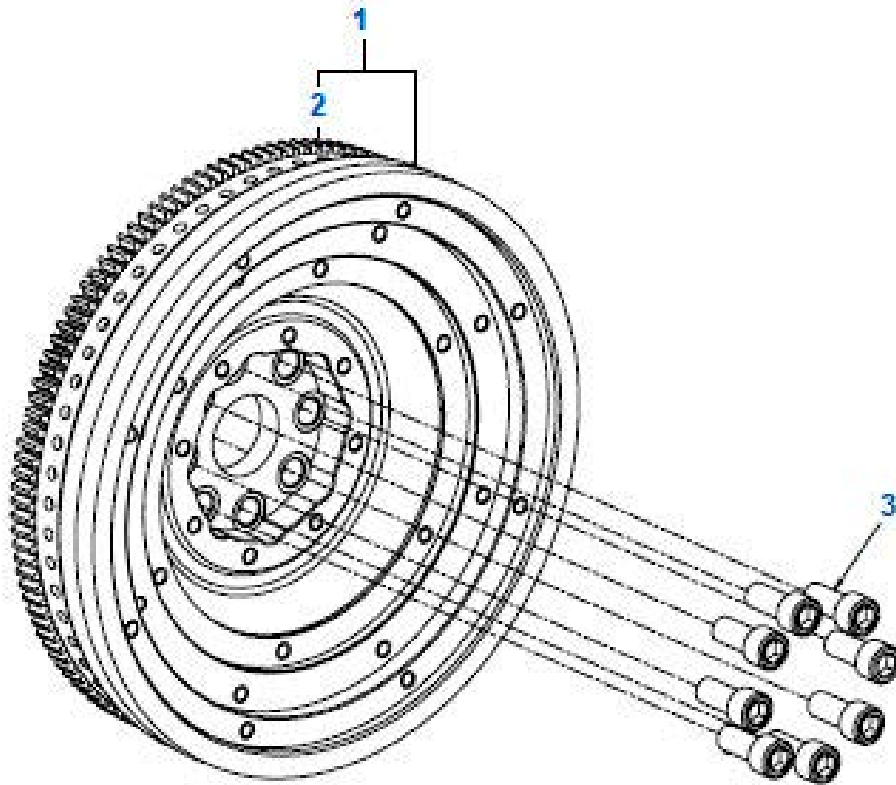
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961281100457	1	Cylinder block	
2	7004892C1E	6	Liner, engine block	
3	7002746C1E	6	O-ring	
4	7005018C1E	12	O-ring	
5	602201500824E	1	Expanding bushing	
6	602152250025E	4	Metallic seal	
7	7002258C1E	1	Camshaft bushing	
8	922903270044E	7	Plug	
9	602152250030E	4	Metallic seal	
10	7007085C1E	6	Lubricant oil ejector	
11	940703500024E	6	Hollow screw M8 x 15	
12	7004783C1E	1	Ladder frame	
13	7004120C1E	27	Bolt M12 x 30	
14	922903520054E	1	Plug 3/8"	
15	604931060353E	1	O-ring	
16	602201101020E	2	Cylindrical pin	
17	961203500014E	14	Bolt M14 x 132	
18	940703100064E	12	Guide pin	

Flywheel Housing



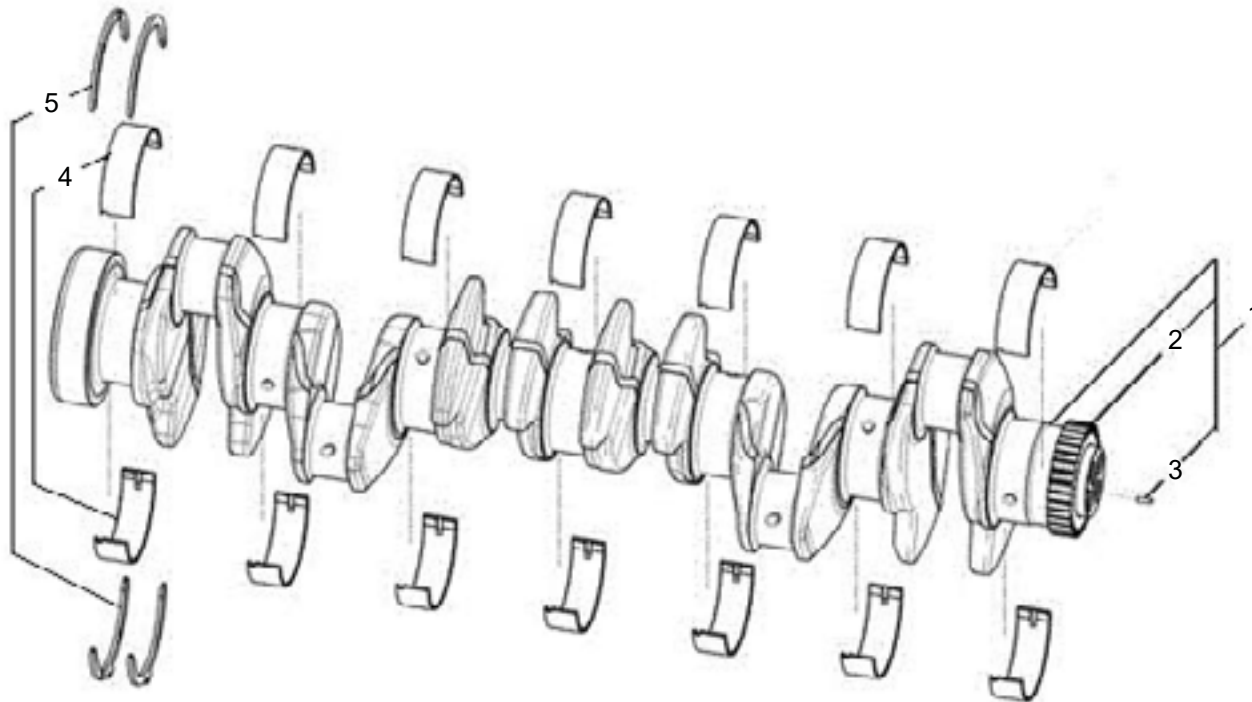
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961207010214E	1	Flywheel Housing	
2	902002421230E	10	Bolt M12 x 30	
3	961208560024E	1	Rear seal, crankshaft	
4	906702400101E	2	Protection cover	

Flywheel



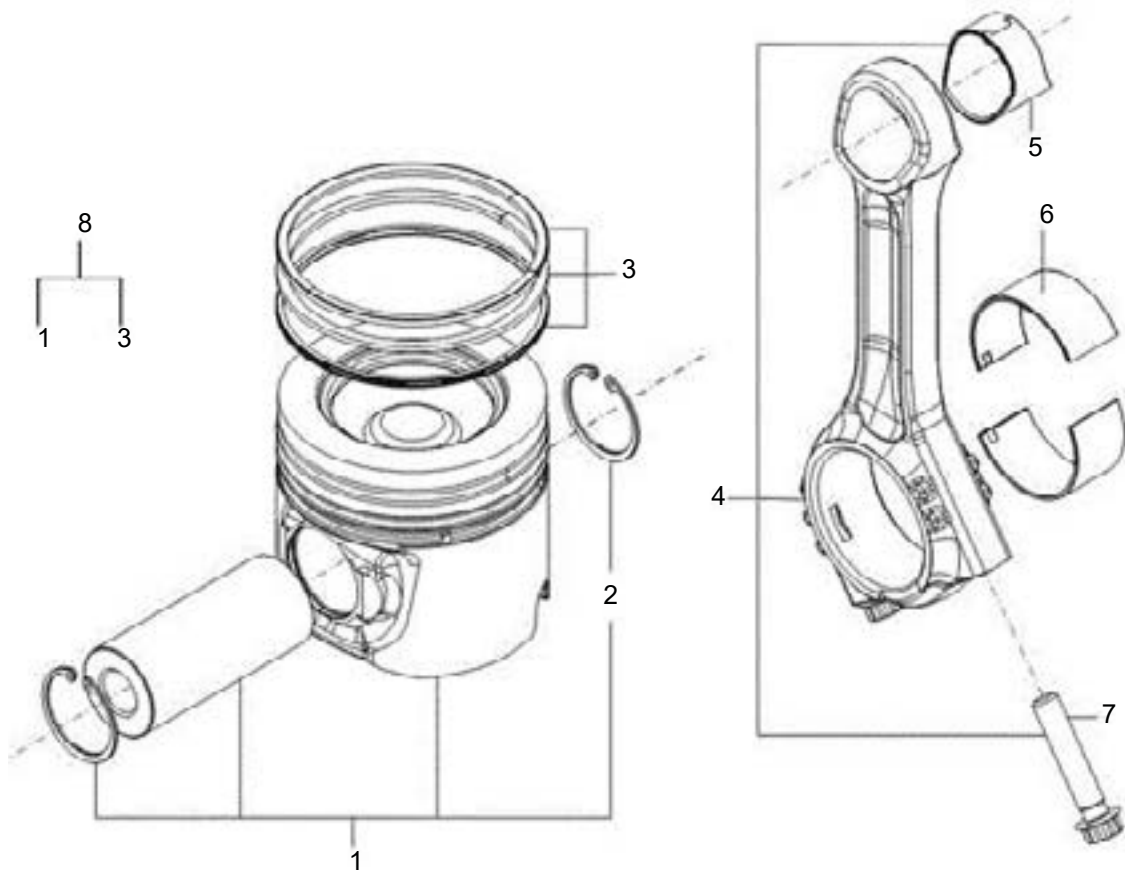
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961201450245E	1	Flywheel	
2	922503750024E	1	Gear ring	
3	602007001635E	8	Cylindrical bolt M16 x 40	

Crankshaft



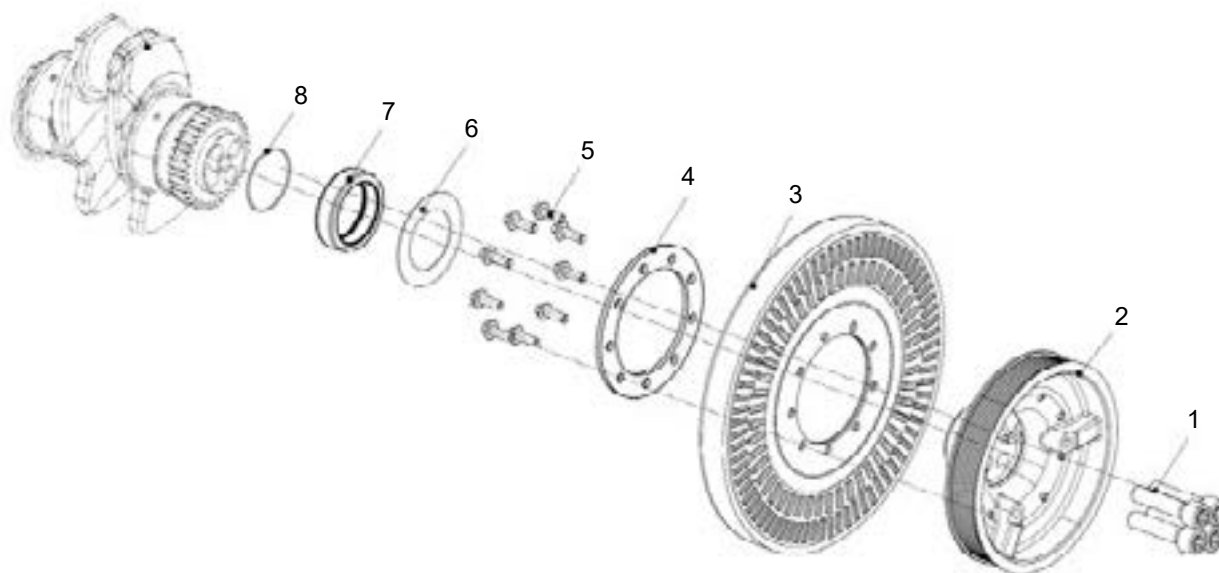
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7007083C91	1	Crankshaft	
2	961203710014E	1	Crankshaft gear	
3	602201500414E	1	Roll pin	
4	961284300387	7	Main bearing 1.00	
	961284300377	7	Main bearing 0.75	
	961284300367	7	Main bearing 0.50	
	961284300357	7	Main bearing 0.25	
	961284300187	7	Main bearing, standard	
5	961283400164	2	Thrust washer set, 0.25 mm	
	961283400154	2	Thrust washer set, standard	

Piston and Connecting Rod

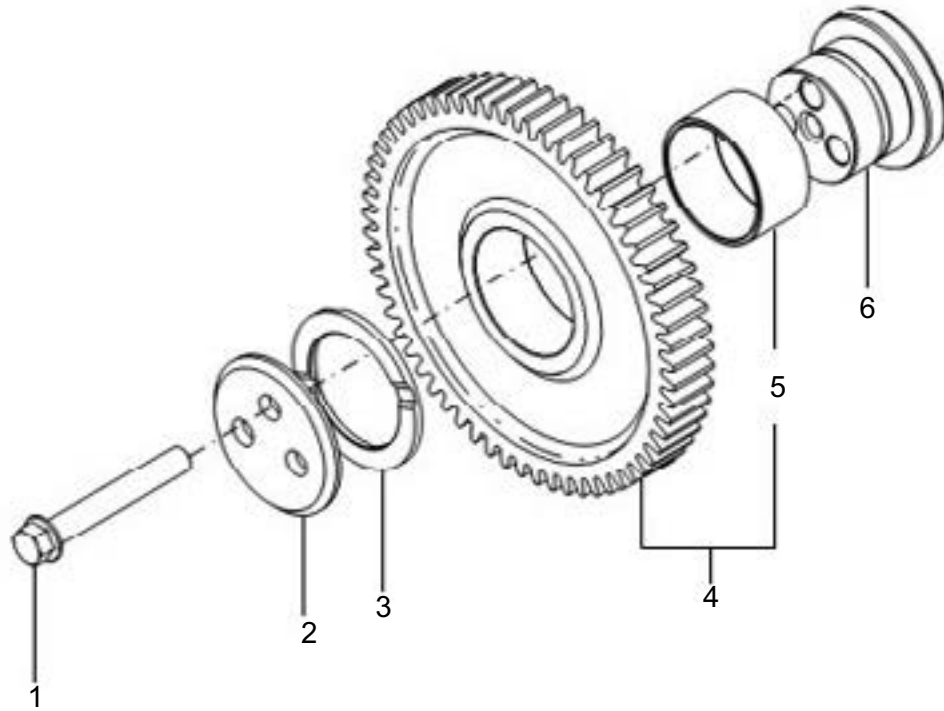


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7005923R91E	4	Piston, set	7
2	961203470014E	8	Circlip	
3	961280190688	4	Piston rings, set	
4	7006525C91E	4	Connecting rod	
5	7001468C1E	4	Connecting rod bushing	
6	961284300447	4	Kit, Connecting rod bearing 0,25 mm	
6	961284300437	4	Kit, Connecting rod bearing (std)	
6	R7004220C91	4	Connecting rod bearing 0.75 mm	
6	R7004219C91	4	Connecting rod bearing 0.50 mm	
7	7006576C1E	8	Bolt M12 x 58	
8	96121600128	1	Piston and rings, set	

Damper

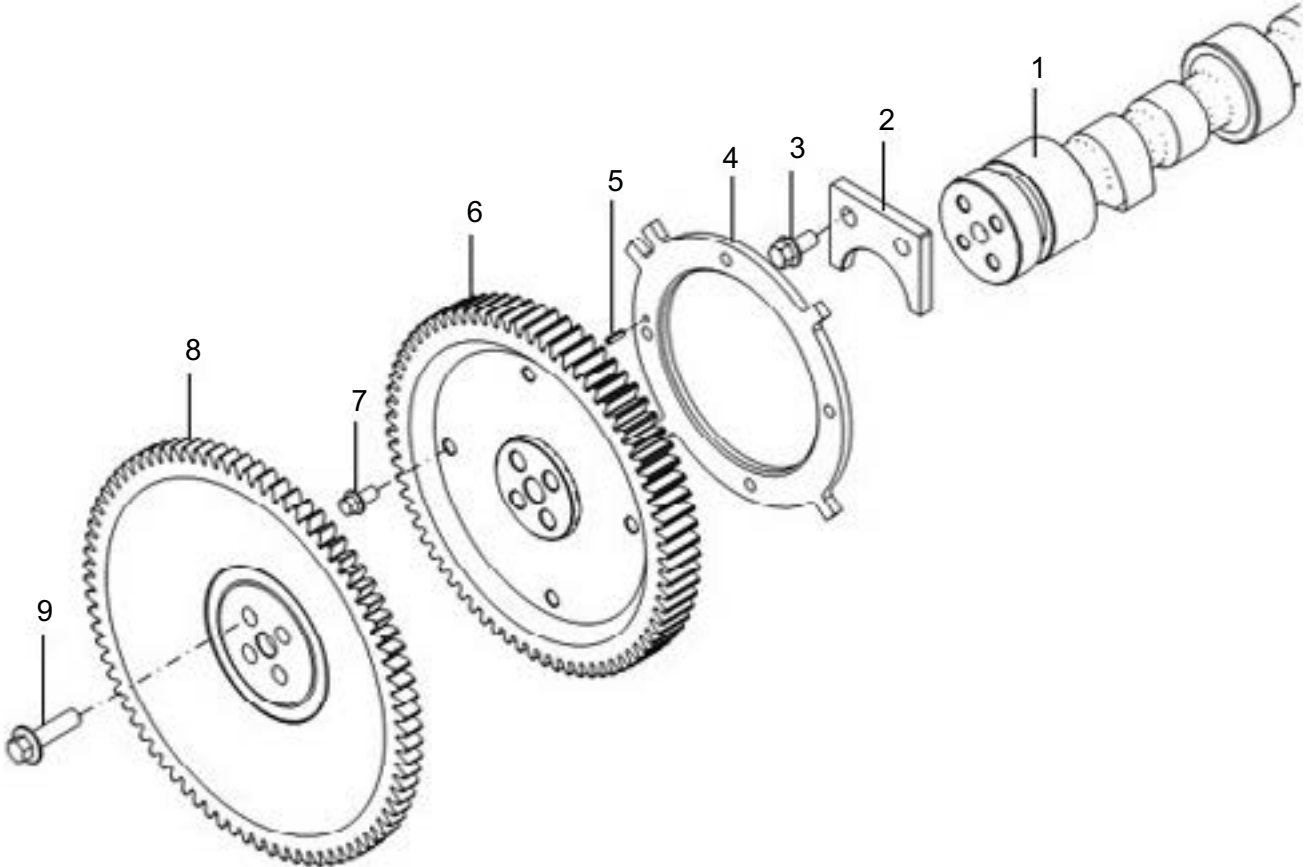


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7001443C1E	4	Cylindrical bolt	
2	961203810094E	1	Pulley	
3	961207030014E	1	Damper	
4	961204120114E	1	Ring	
5	602002720825E	9	Bolt	
6	961209730024E	1	Protection washer	
7	7002849C1E	1	Crankshaft bushing	
8	7002851C1E	1	Sealing ring	

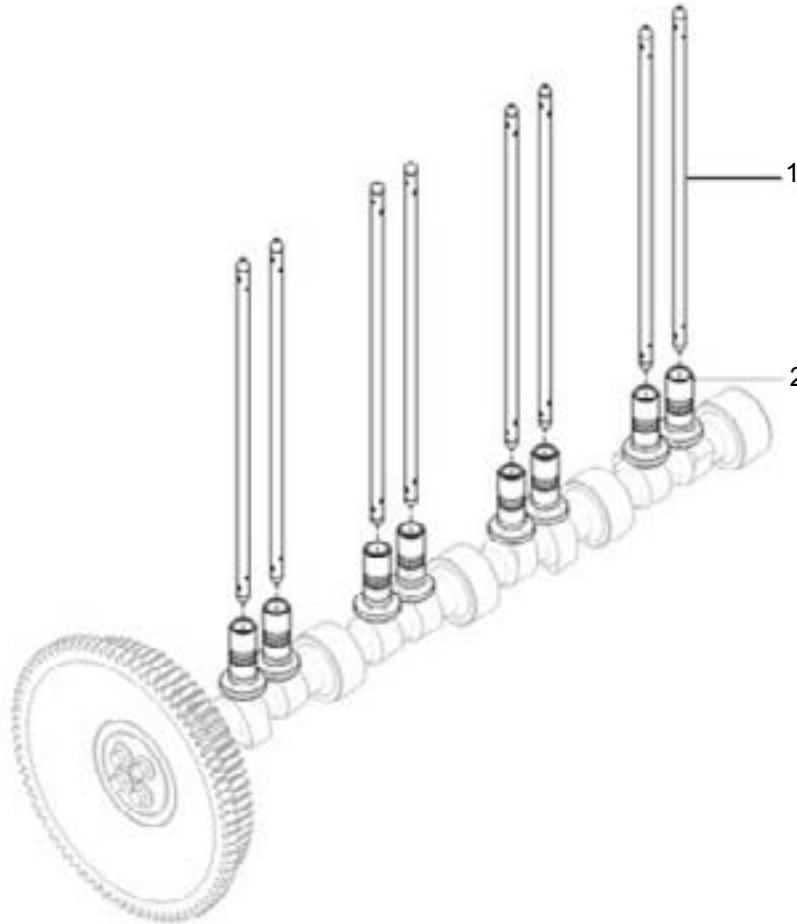


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	902002421070E	3	Bolt M10 x 70	
2	961003400014E	1	Intermediate bearing disc	
3	961004330104E	1	Optional Thrust bearing (3.54 mm)	
3	961004330094E	1	Optional Thrust bearing (3.48 mm)	
3	961004330084E	1	Thrust bearing (3.43 mm)	
4	961203710025E	1	Intermediate gear	
5	961004320014E	1	Intermediate gear bushing	
6	961004210014E	1	Intermediate bearing	

Camshaft

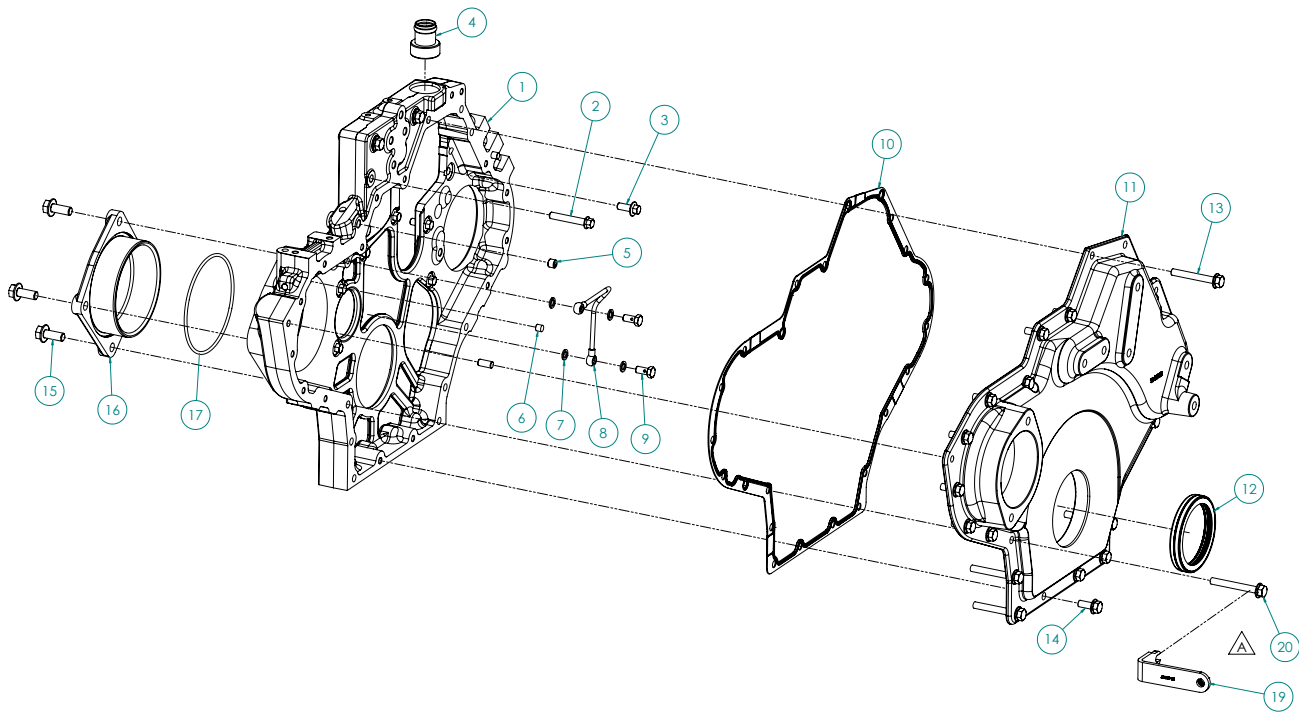


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7004000C91E	1	Camshaft, Assembly	
2	7003026C1E	1	Lock	
3	602002600820E	2	Bolt M8 x 20	
4	961203780014E	1	Pulse wheel	
5	602201500310E	1	Expanding bushing	
6	7000475C1E	1	Camshaft gear	
7	7002017C1E	4	Bolt M6 x 12	
8	7004043C2E	1	Camshaft gear	
9	602002720830E	4	Bolt M8 x 30	



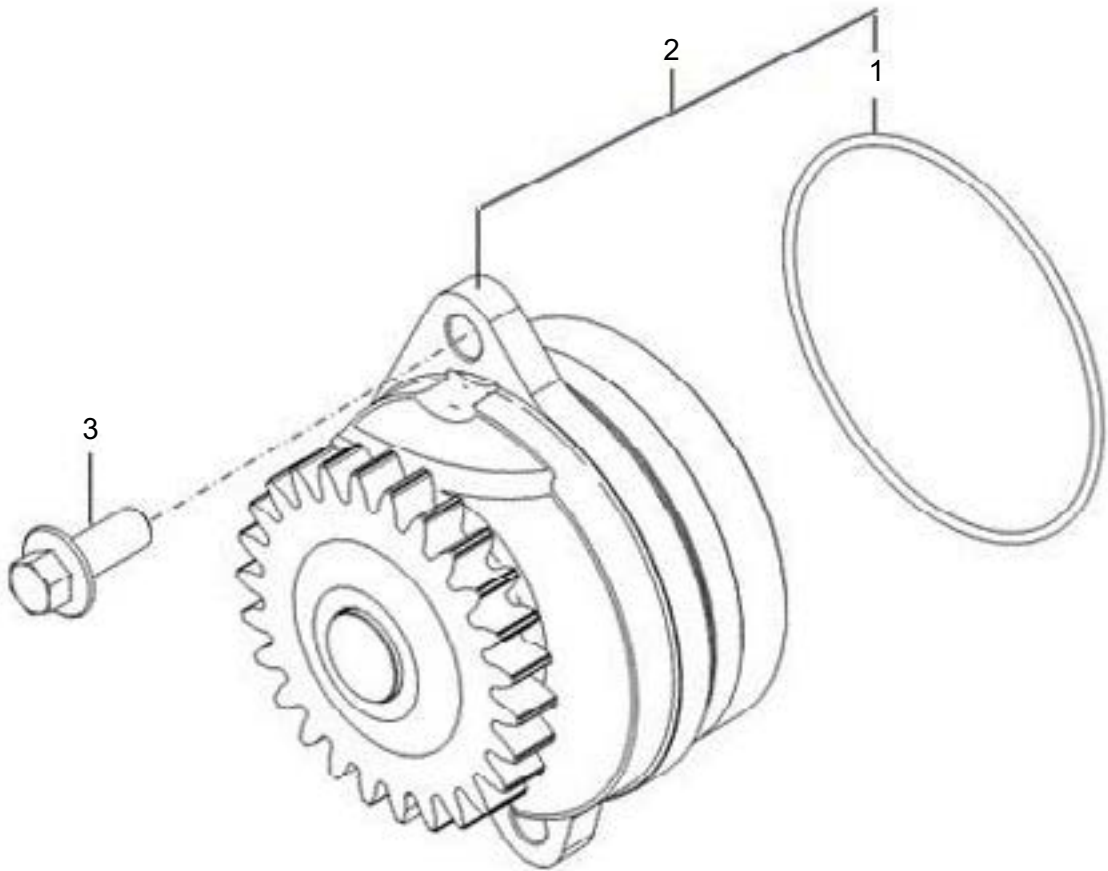
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7000861C1E	8	Push rod	
2	7001604C1E	8	Tappet - STD	

Timing Case and Cover

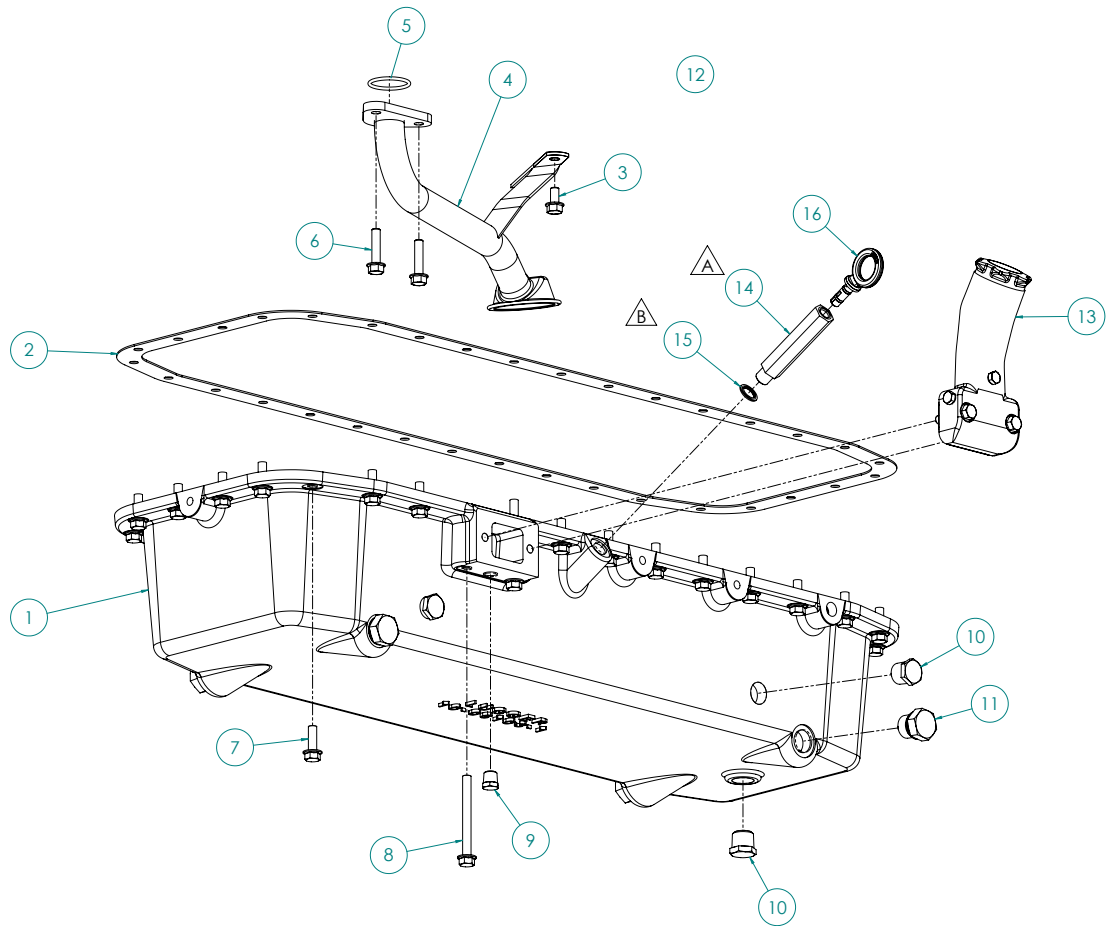


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7003043C1E	1	Gear housing	
2	902002420850E	1	Bolt M8 x 50 mm	
3	602002720820E	10	Bolt 8m x 20	
4	941009420124E	1	Thermostat pipe connection	
5	602062101010E	1	Plug M10 x 1	
6	961003270044E	4	Metallic seal	
7	904921100814E	4	Sealing washer M8 x 2 mm	
8	961209010035E	1	Pipe	
9	604043400005E	2	Hollow screw M8 x 17 mm	
10	7002390C1E	1	Gear housing cover gasket	
11	10-06102	1	Timing gear cover	
12	7002801C1E	1	Retainer (rear main seal)	
14	19M7801	8	Capscrew HX HD flanged M8 x 1.25 x 60 mm	
15	7001320C1E	3	Hexagonal flanged bolt M10 x 25	
16	7004808C1	1	Cover	
17	7004980C1	1	O-ring	
19	23-06107	1	Bracket, belt guard, L.H. lower	
20	19N7802	1	Capscrew HX HD flanged M8 x 1.25 x 65 mm	

Lubricating Oil Pump



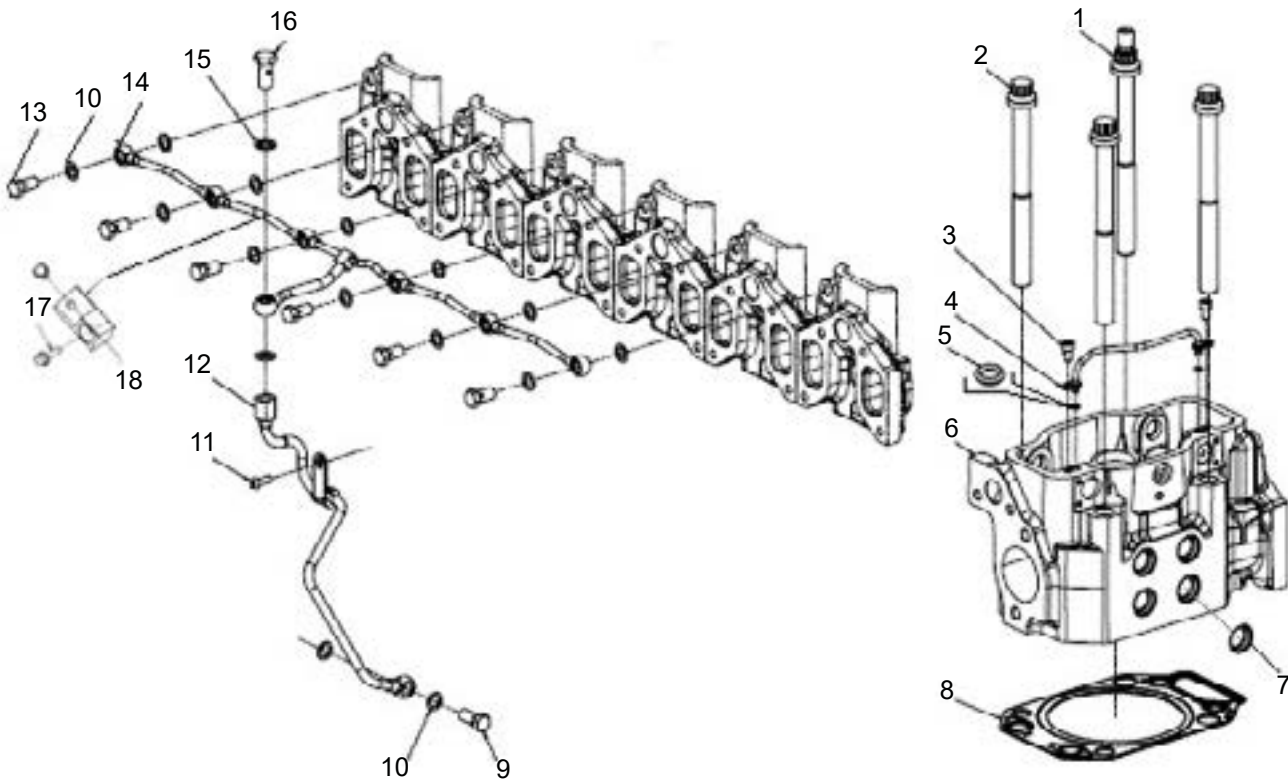
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	904931360781E	1	O-ring	
2	7005478R91	1	Oil pump, kit	
3	602002720820E	2	Bolt M8 x 20	



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-06103	1	Oil pan	
2	7004252C1E	1	Oil pan gasket	
3	7002026C1E	1	Bolt M8 x 16 mm	
4	7004169C91E	1	Lubrication oil suction tube	
5	604931060353E	1	O-ring	
6	7004144C1E	2	Bolt M8 x 20 mm	
7	19M7867	32	Capscrew HX HD flanged	
8	19M8039	2	Capscrew HX HD flanged	
9	21-31624	2	Plug HX HD, brass 1/4 NPT	
10	21-00530	5	Plug HX HD, brass 1/2 NPT	
11	RE46687	4	Plug HX HD, steel M22 x 1.5	
12	21-29502	1	Plug, SKT HD, steel M14 x 1.5 *	*
13	36-79500	1	Kit, oil fill	
14	31-06105	1	Adapter, oil pan dipstick	
15	07005-01412	1	Sealing washer, bonded	
16	36-06101	1	Oil dipstick	

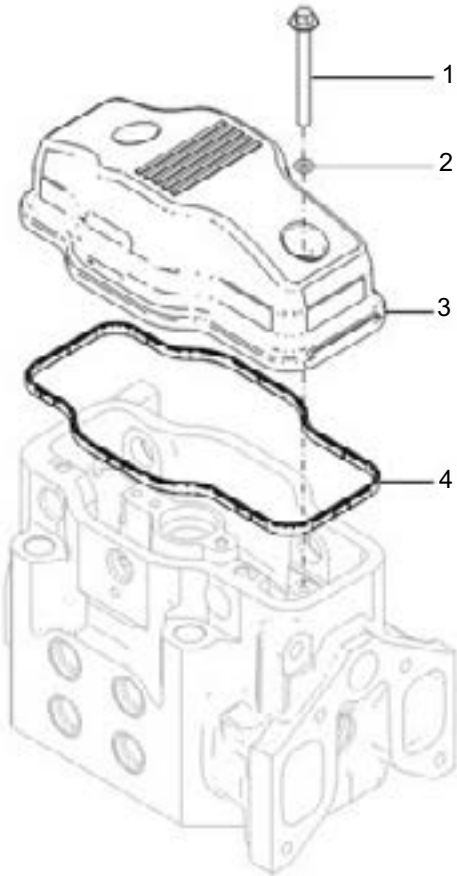
* NOTE: Plug (Item 12) to be installed similar to adapter (Item 14) on opposite side

Cylinder Head



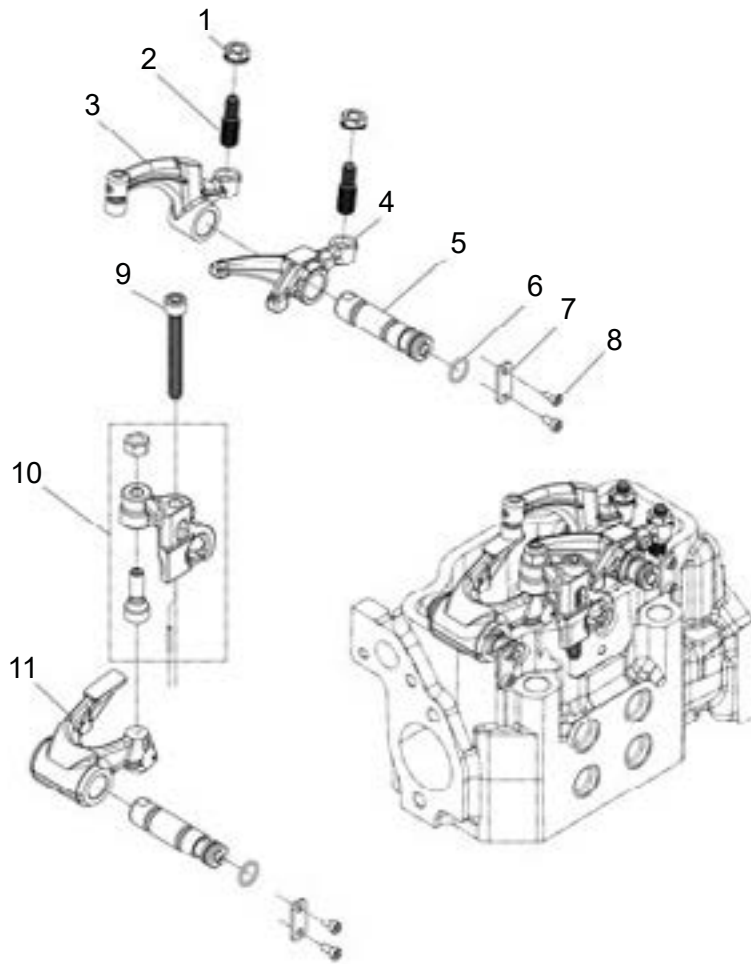
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7001661C1E	24	Bolt M14 x 157	
3	602007300510E	12	Cylindrical bolt M5 x 10	
4	7002549C1E	6	Rocker shaft lubrication assembly	
5	7002285C1E	12	O-ring 4 x 1.5	
6	7005216C93E	6	Cylinder head assembly	
7	602152250022E	54	Metallic seal	
8	7002797C1E	6	Cylinder head gasket 1.4mm	
9	7001257C1E	1	Hollow screw M10 x 1 x 23	
10	904921101016E	14	Sealing washer	
11	7002025C1E	1	Bolt M8 x 12	
12	7004406C91E	1	Lubrication pipe assembly	
13	7002085C1E	6	Hollow screw	
14	7006662C91	1	Tube assembly, valve drive lubrication	
15	904921101218E	2	Sealing washer	
16	7002086C1E	1	Hollow screw M12 x 1.5 x 24	
17	7002019C1E	2	Bolt M6 x 20	
18	7005277C1	1	Bracket	

Valve Cover



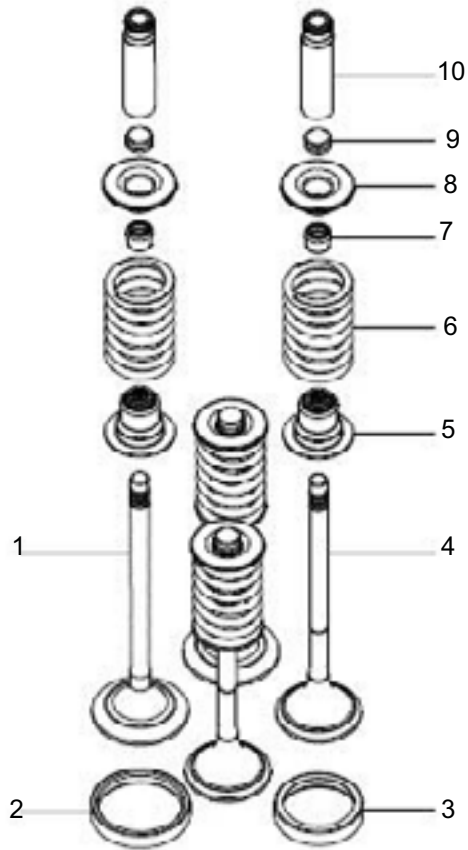
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	602002720660E	8	Bolt	
2	904931070051E	8	O-ring	
3	7003172C1E	4	Valve cover	
4	961208530104E	4	Valve cover gasket	

Rocker Arm



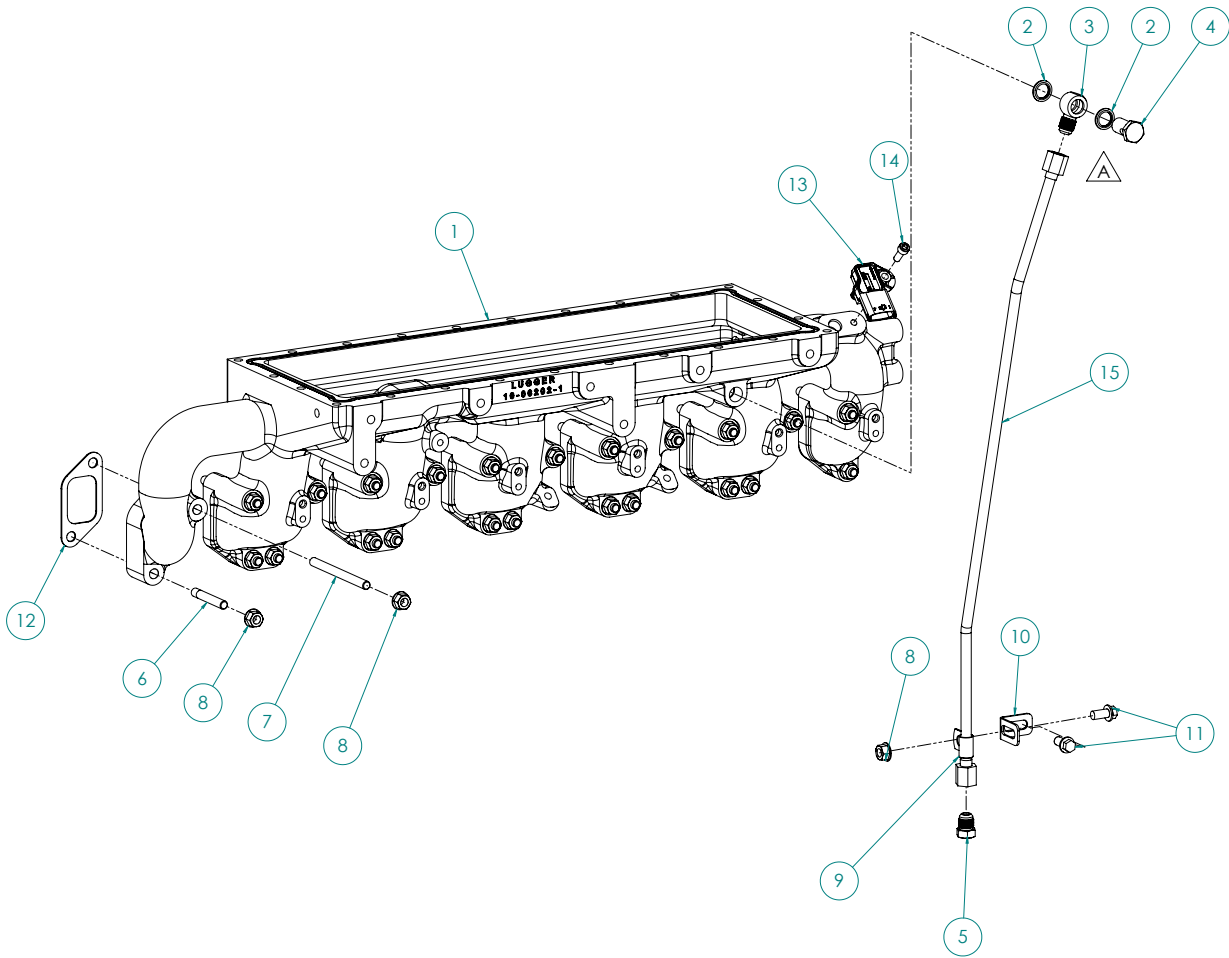
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7002676C1E	8	Nut M8 special	
2	7001817C3E	8	Bolt - valve clearance adjustment	
3	7001820C91E	4	Rocker arm assembly - intermediate	
4	7001818C1E	4	Rocker arm - intake	
5	7005217C1E	4	Shaft rocker arm	
6	904931370121E	8	O-ring	
7	7005214C1E	8	Lock plate, shaft	
8	7005219C1E	16	Bolt, cylindrical hexagonal socket	
11	961206450034E	4	Rocker arm - exhaust	

Exhaust and Intake Valve



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7006680C1	8	Valve - intake	
2	7005589C1E	8	Valve seal - intake	
3	961203450043E	8	Valve seal - exhaust	
4	7006681C1E	8	Valve - exhaust	
5	7006205C1E	16	Seal, valve steam	
6	7001904C1E	16	Spring	
7	940704620024E	32	Valve keepers	
8	940703420044E	16	Valve spring retainer	
9	7005076C1E	16	Stem valve cap - 1.6 mm	
9	7005075C1E	16	Stem valve cap - 1.4 mm	
9	7001941C1E	16	Stem valve cap - 1.5 mm	
10	961203320023E	16	Valve guide (semi-finished)	

Intake Manifold

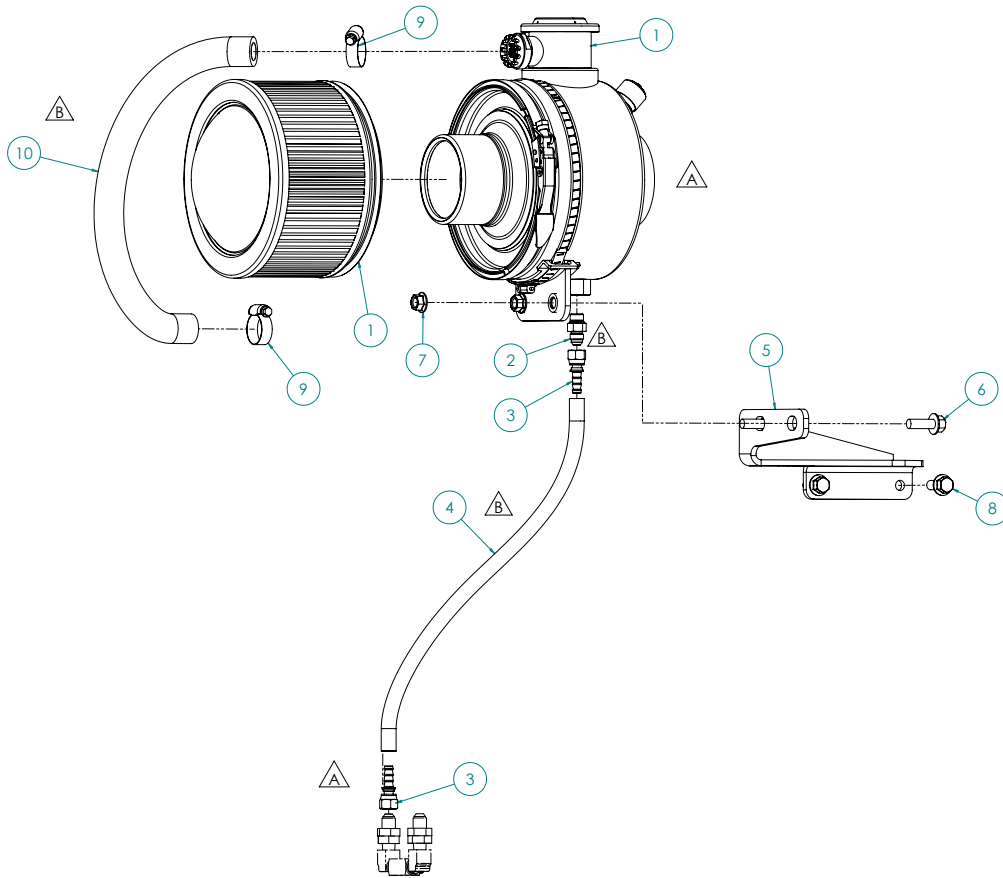


Intake Manifold

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-06202	1	Intake manifold	
2	07005-01412	2	Sealer washer, bonded M14	
3	21-06105	1	Banjo fitting M14	
4	07206-11014	1	Banjo bolt M14 x 1.5 x 25 mm	
5	21-29504	1	Drain, aftercooler condensate	
6	13-06102	12	Stud, M8 x 1.25 x 45 mm	
7	13-06103	12	Stud, all threaded M8 x 1.25 x 100	
8	14M7298	25	Hex nut, flanged M8 x 1.25	
9	19-72252	1	Adelle clamp	
10	23-06208	1	Bracket, condensation tube	
11	12-80709	2	Capscrew, HX HD flanged, M8 x 1.25 x 12mm	
12	961208530134E	12	Intake manifold gasket	
13	7007005C1E	1	Sensor, pressure and temperature	
14	7001998C1E	1	Bolt M6 x 12mm	
15	27-06113	1	Aftercooler condensation drain tube	

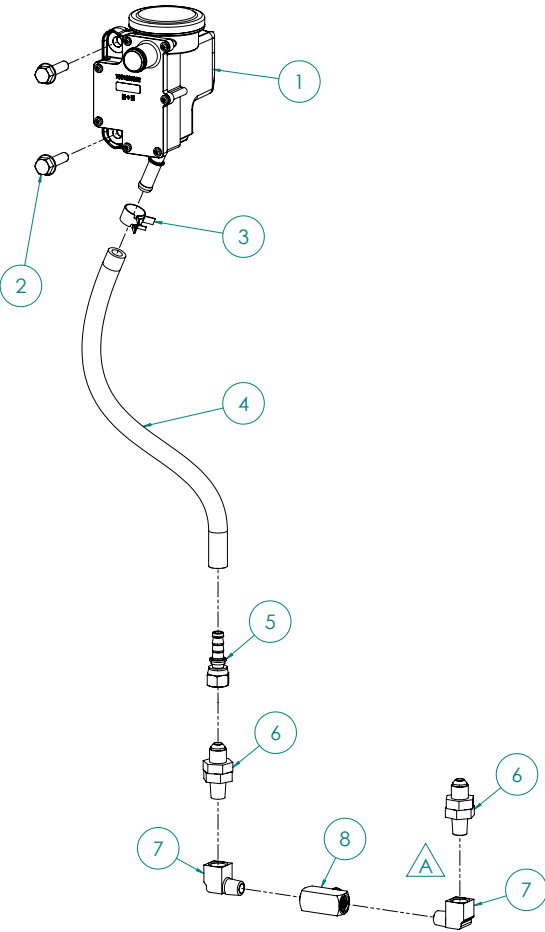
GROUP 2 - INTAKE AND EXHAUST SYSTEMS

Air Filter and Mounting



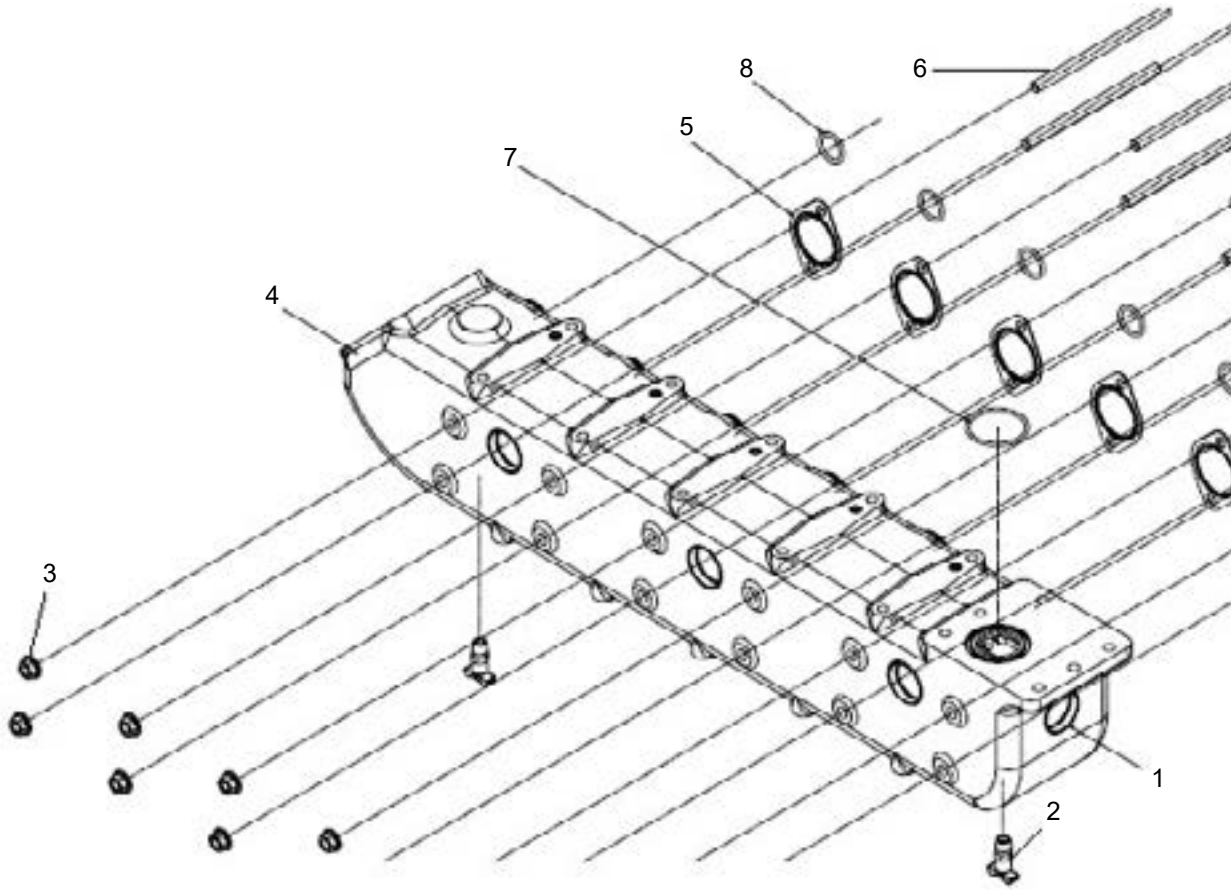
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-06202	1	Air Filter Assembly - 8" QT Series AIRSEP	
2	23-06109	1	Male Connector, steel 3/8 - 37T x 3/8 O-ring port	
3	21-71034	2	Female swivel, brass 3/8 HB x 3/8 - 37T push-on	
4	41-01020	22	Hose 3/8" ID	
5	23-06209	1	Bracket, air intake filter	
6	12-80832	2	Capscrew HX HD flanged M10 x 1.5 x 30 mm	
7	14-80811	2	Hex nut, flanged M10 x 1.5	
8	19M7785	2	Capscrew, HX HD flanged M10 x 1.5 x 25 mm	
9	19-00012	2	Hose clamp #12 S/S	
10	41-01050	18	Hose 3/4" ID	

Crankcase Breather



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7001385C92E	1	Lube oil separator	
2	7001328C1E	2	Bolt M8 x 30 mm	
3	904015500017E	1	Hose clamp 5/8" ID	
4	41-01020	13	Hose 3/8" ID 1-ply fibre	
5	21-71034	1	Female swivel, brass 3/8 HB x 3/8 - 37T push-on	
6	21-20002	2	One way valve, brass 1/4 NPT x 3/8 - 37T	
7	21-51098	2	Street Elbow 90° brass 1/4 NPT	
8	21-21006	1	Male branch tee, brass 1/4 NPT	

Exhaust Manifold



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961208780114	8	Sealing cap	
2	961207560035	1	Drain valve 1/4	
3	602101710010	12	Flanged nut M10 x 1.5	
4	961209300074	1	Exhaust manifold gasket	
5	961208530144E	6	Exhaust manifold gasket	
6	961203510024	12	M10 x 170 stud	
7	961208550074	1	O-ring	
8	904931060241E	6	O-ring	

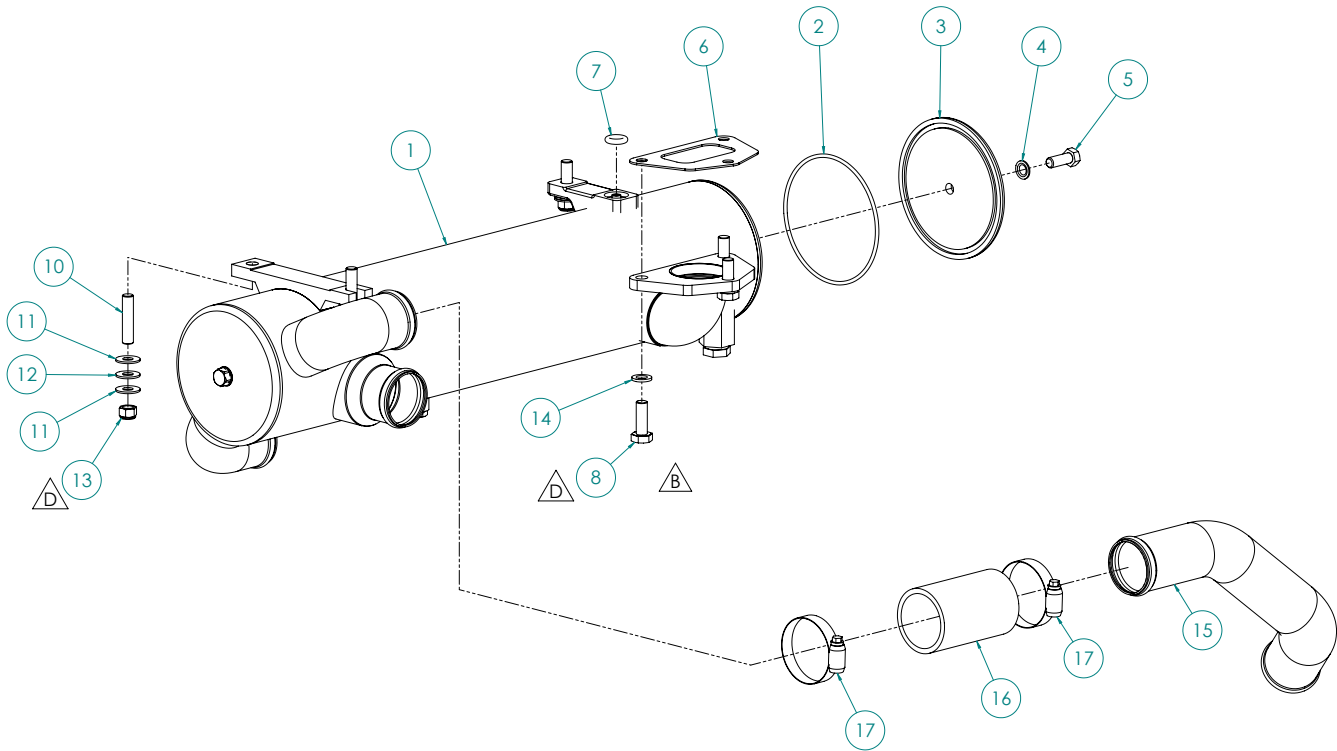
Exhaust Elbow

PLEASE CONSULT FACTORY FOR LATEST DRAWING AND PARTS LIST

Expansion Tank and Thermostat

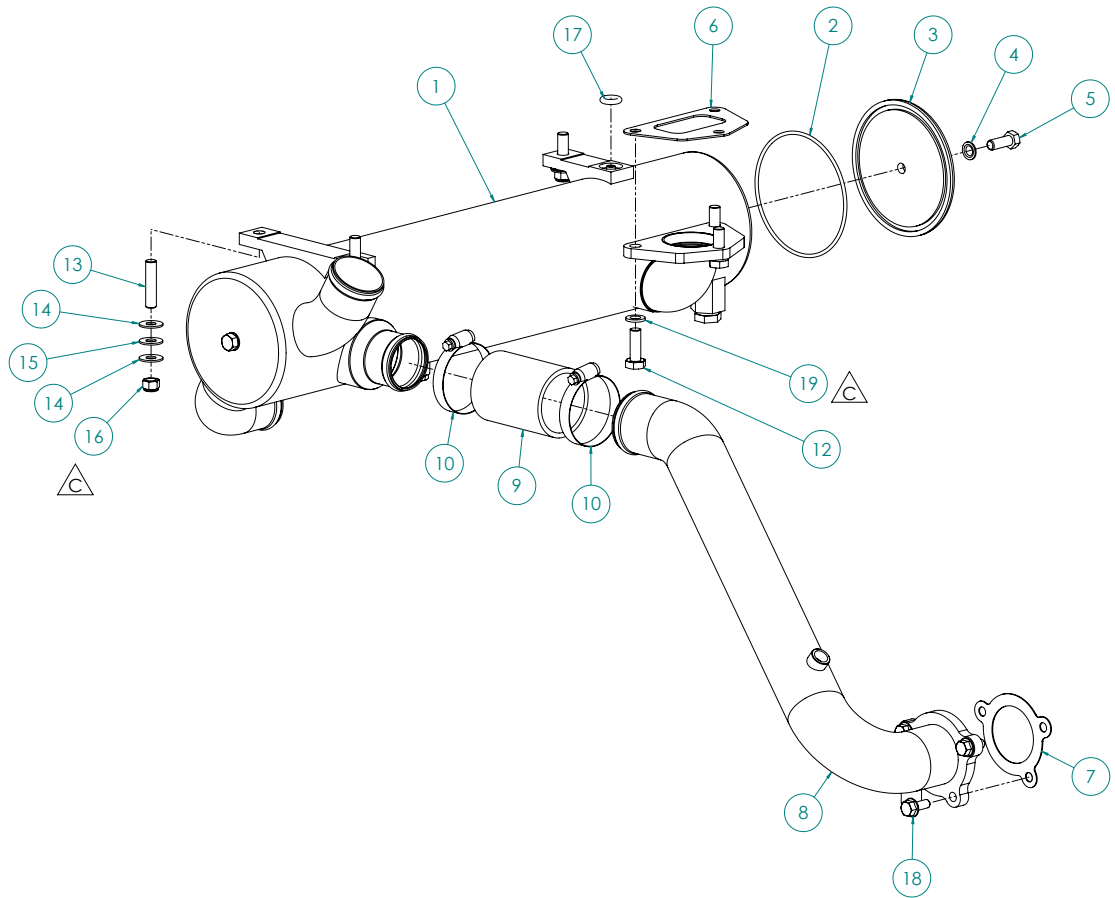
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-06104	1	Expansion tank	
2	10-06109	1	Housing, thermostat	
3	35-11000	1	Thermostat 180°F / 82°C 52mm OD S/S	
4	35-12500	1	Thermostat 169°F / 76°C 52mm OD S/S	
5	11-10015	2	Sealing ring, thermostat	
6	35-11004	1	Clamp, dual thermostat retainer	
7	11-11013	1	Cover, thermostat cover mounting	
8	10-11024	1	Cover, thermostat housing	
9	11-06101	1	Gasket, thermostat housing	
10	11-11022	1	Gasket, filler neck mounting	
11	10-11203	1	Filler neck assembly	
12	21-19510	1	Filler cap - 10 PSI single seal	
13	21-64901	1	Male elbow 90° steel	
14	27-06100	1	Tube, coolant bypass	
15	18-12801	1	Hose 1" ID x 2-1/4"	
16	19-04016	2	Hose clamp #16 embossed band 316 SS	
17	23-06104	1	Bracket, expansion tank support	
18	21-00012	3	Plug, HX HD brass, 1/8 NPT	
19	21-31624	6	Plug, HX HD brass, 1/4 NPT	
20	21-00530	2	Plug, HX HD, brass 1/2 NPT	
21	21-10001	1	Drain cock, brass 1/8 NPT	
22	17-10002	2	Expansion plug, brass 1" shallow cup	
23	17-14901	4	Expansion plug, steel 2-9/64"	
24	19M7785	12	Capscrew, HX HD, flanged M10 x 1.5 x 25 mm	
25	19M7866	6	Capscrew, HX HD, flanged M8 x 1.25 x 20 mm	
26	19M7867	4	Capscrew, HX HD, flanged M8 x 1.25 x 25 mm	
27	19M7775	6	Capscrew, HX HD flanged M6 x 1.0 x 16 mm	
28	41-01013	30	Hose	
29	00-00006	1	Nameplate "Northern Lights" 196 mm x 55 mm	
30	961200690034E	1	Temperature sensor	

Heat Exchanger - M6105A



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-06107	1	Heat Exchanger	
2	16-19501	2	O-ring	
3	20-19502	2	End cover, heat exchanger	
4	07005-01012	2	Sealing washer	
5	12-09312	2	Capscrew, HX HD 3/8-16 x 1"	
6	11-11043	1	Gasket, heat exchanger / keel cooler outlet connection	
7	16-19502	1	O-ring	
8	12-00832	3	Capscrew, HX HD M10 x 1.5 x 30 mm	
10	13-06104	3	Stud	
11	15-00301	6	Flat washer 3/8"	
12	15-19504	3	Washer	
13	14-00812	3	Hex nut, Nylock M10 x 1.5	
14	15-00802	3	Lock washer	
15	27-06109	1	Tube, raw water pump outlet	
16	18-26002	1	Hose 2" ID x 3-3/4"	
17	19-04032	2	Hose clamp	

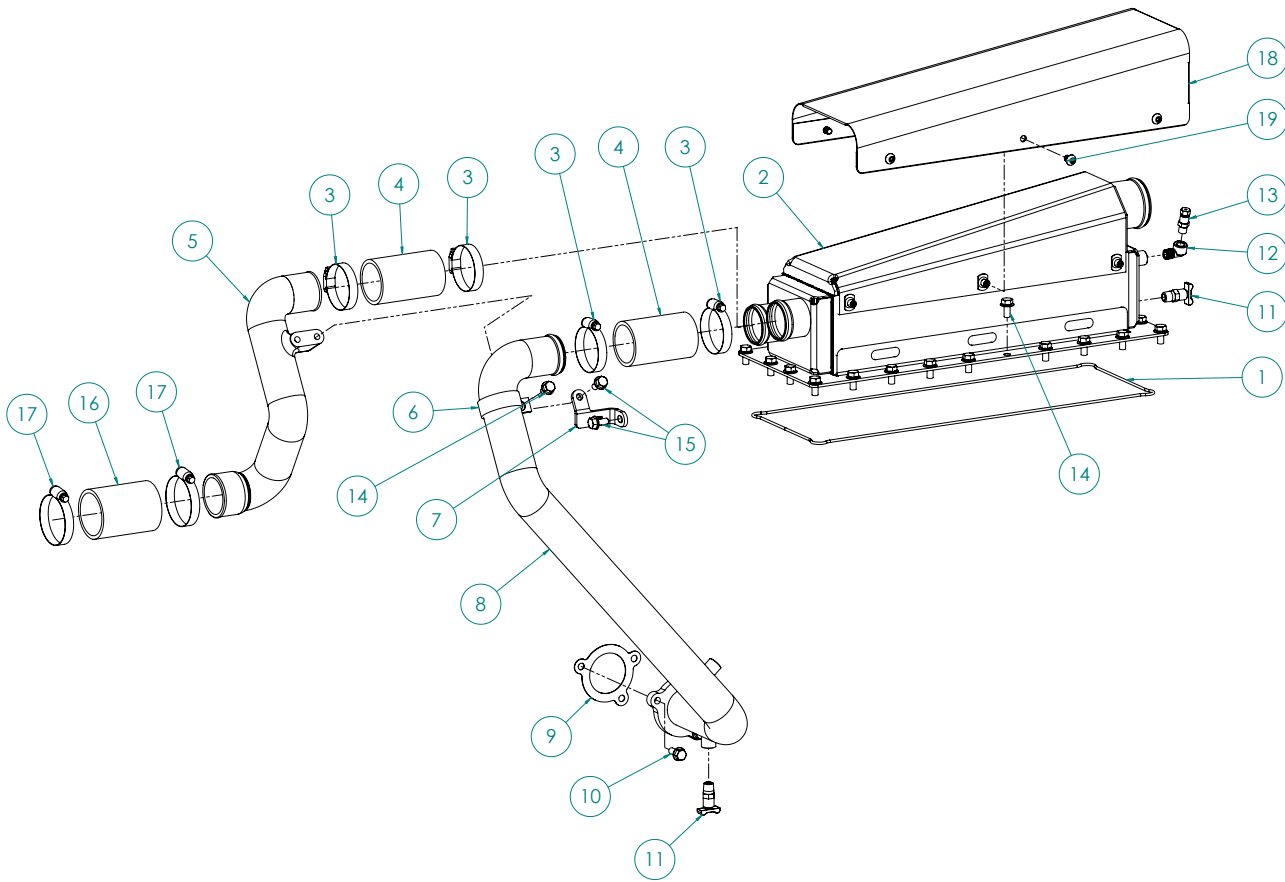
Heat Exchanger - M6105H



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-06106	1	Heat Exchanger	
2	16-19501	2	O-ring	
3	20-19502	2	End cover, heat exchanger	
4	07005-01012	2	Sealing washer	
5	12-09312	2	Capscrew, HX HD 3/8-16 x 1"	
6	11-11043	1	Gasket, heat exchanger / keel cooler outlet connection	
7	16-16100	1	Gasket, engine coolant inlet	
8	27-06103	1	Tube, engine coolant inlet	
9	18-19409	1	Hose 2-1/4" ID x 3-1/2"	
10	19-01036	2	Hose clamp #36 extended bend S/S	
12	12-00832	3	Capscrew, HX HD M10 x 1.5 x 30 mm	
13	13-06104	3	Stud	
14	15-00301	6	Flat washer 3/8"	
15	15-19504	3	Washer	
16	14-00812	3	Hex nut, Nylock M10 x 1.5	
17	16-19502	1	O-ring	
18	12-00712	3	Capscrew, HX HD M8 x 1.25 x 25 mm	
19	15-00802	3	Lock washer	

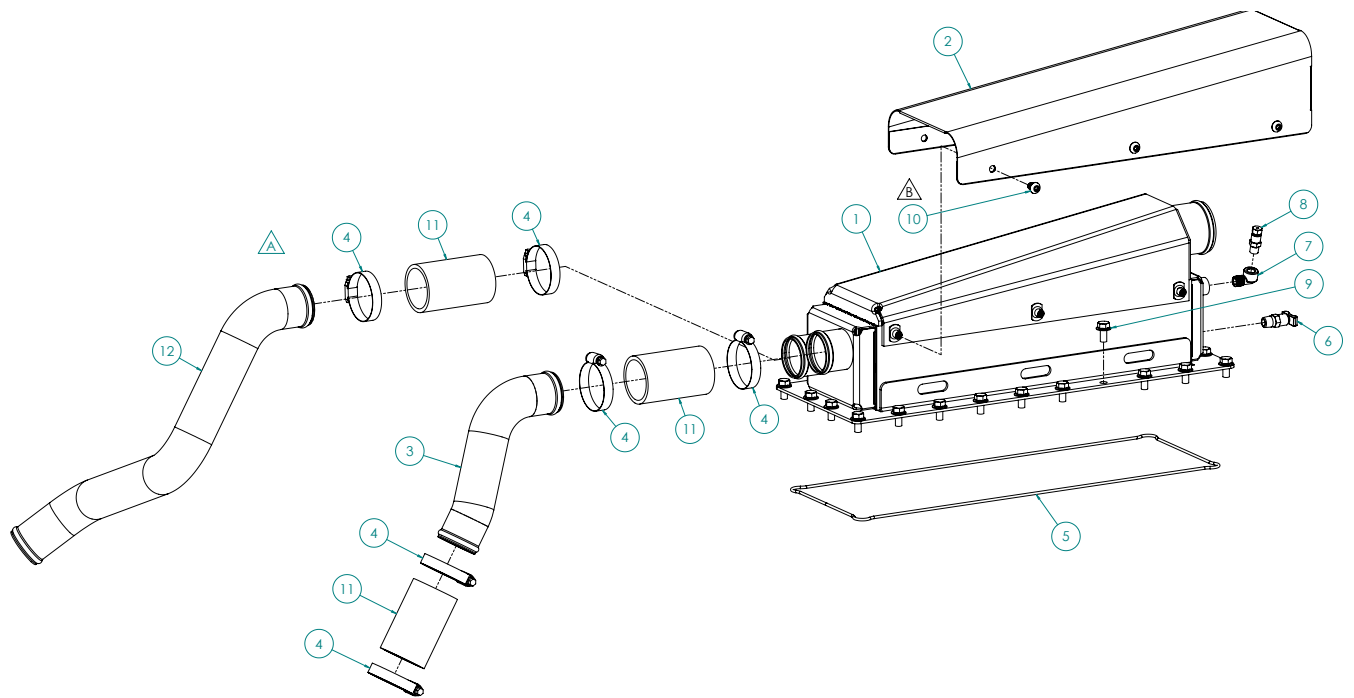
GROUP 3 - COOLING SYSTEMS

Aftercooler, Jacket water



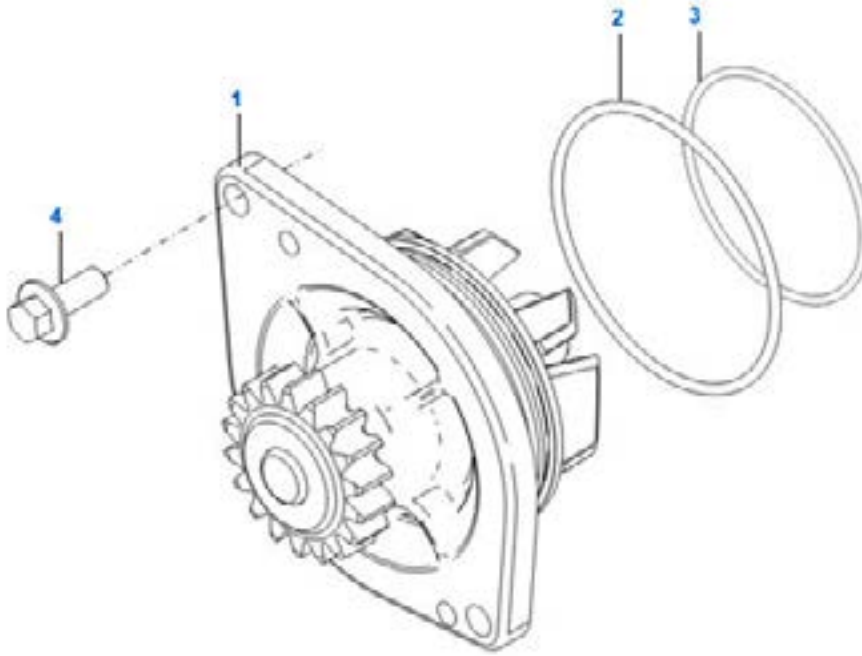
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	16-09601	1	O-ring	
2	20-06201	1	Jacket water aftercooler	
3	19-04032	4	Hose clamp #32 embossed band	
4	18-16100	2	Hose 2"ID x 3-3/4"	
5	27-06107	1	Connector, jacket water aftercooled inlet	
6	19-60000	1	Adelle clamp	
7	23-06105	1	Bracket, coolant inlet tube support	
8	27-06108	1	Tube, engine coolant inlet	
9	11-16100	1	Gasket, engine coolant inlet	
10	12-00712	3	Capscrew, HX HD M8 x 1.25 x 25 mm	
11	21-10002	2	Drain cock	
12	21-04817	1	Street elbow 90° brass	
13	21-10001	1	Drain cock	
14	19M7865	25	Capscrew HX HD flanged M8 x 1.25 x 16 mm	
15	19M7866	2	Capscrew HX HD flanged M8 x 1.25 x 20 mm	
16	18-19409	1	Hose 2-1/4" ID x 3-1/2"	
17	19-01036	2	Hose clamp	
18	00-06200	1	Heat shield	
19	12-70013	6	Button head hex drive M8 x 1.25 x 12	

Aftercooler, Seawater



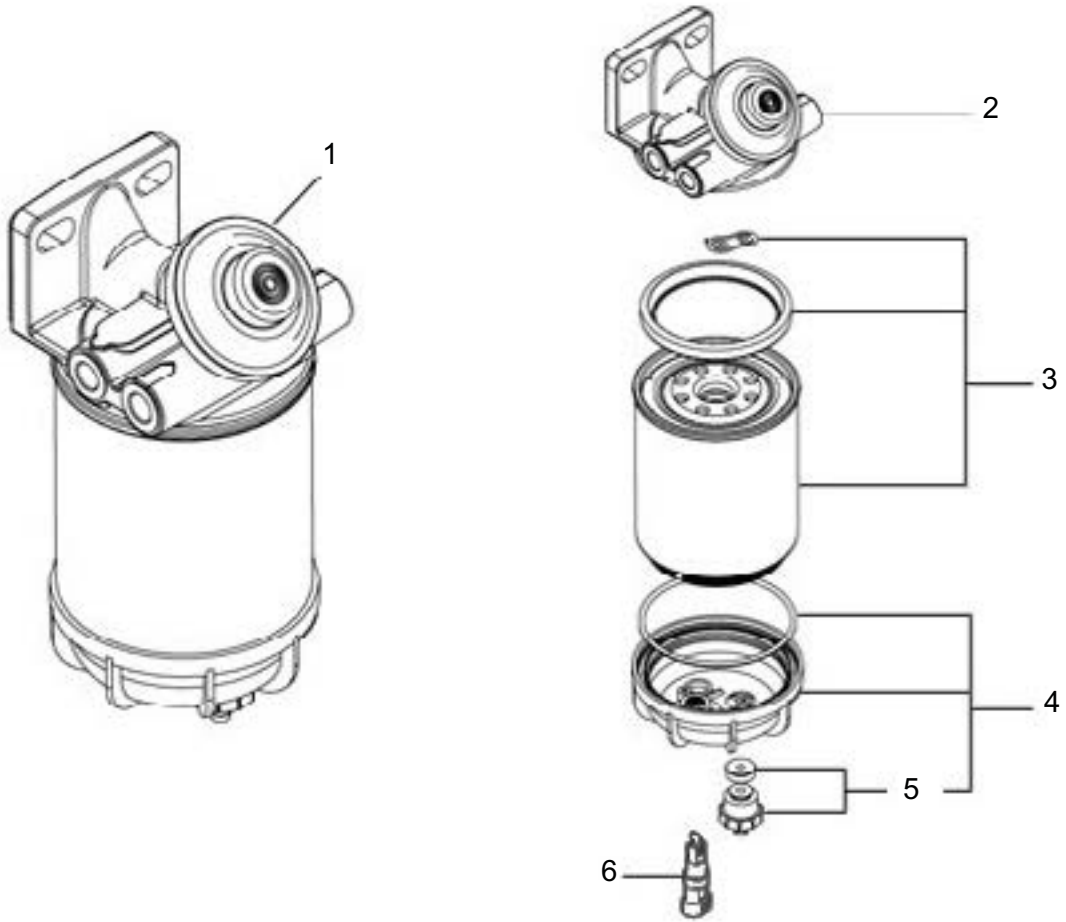
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-06203	1	Integrated sea water aftercooler	
2	00-06200	1	Heat shield, aftercooler	
3	27-06110	1	Tube, integrated SWAC outlet	
4	19-04032	6	Hose clamp #32 embossed band	
5	16-09601	1	O-ring	
6	21-10002	1	Drain cock	
7	21-04817	1	Street elbow 90° brass	
8	21-10001	1	Drain cock	
9	19M7865	24	Capscrew HX HD flanged M8 x 1.25 x 16 mm	
10	12-70013	6	Button head hex drive M8 x 1.25 x 12	
11	18-16100	3	Hose 2" ID x 3-3/4"	
12	27-06111	1	Tube, integrated SWAC inlet	

Water Pump



1	7005440R91	1	Water pump assembly
2	7004117C1E	1	O-ring
3	7004118C1E	1	O-ring
4	602002720820E	2	Bolt M8 x 20

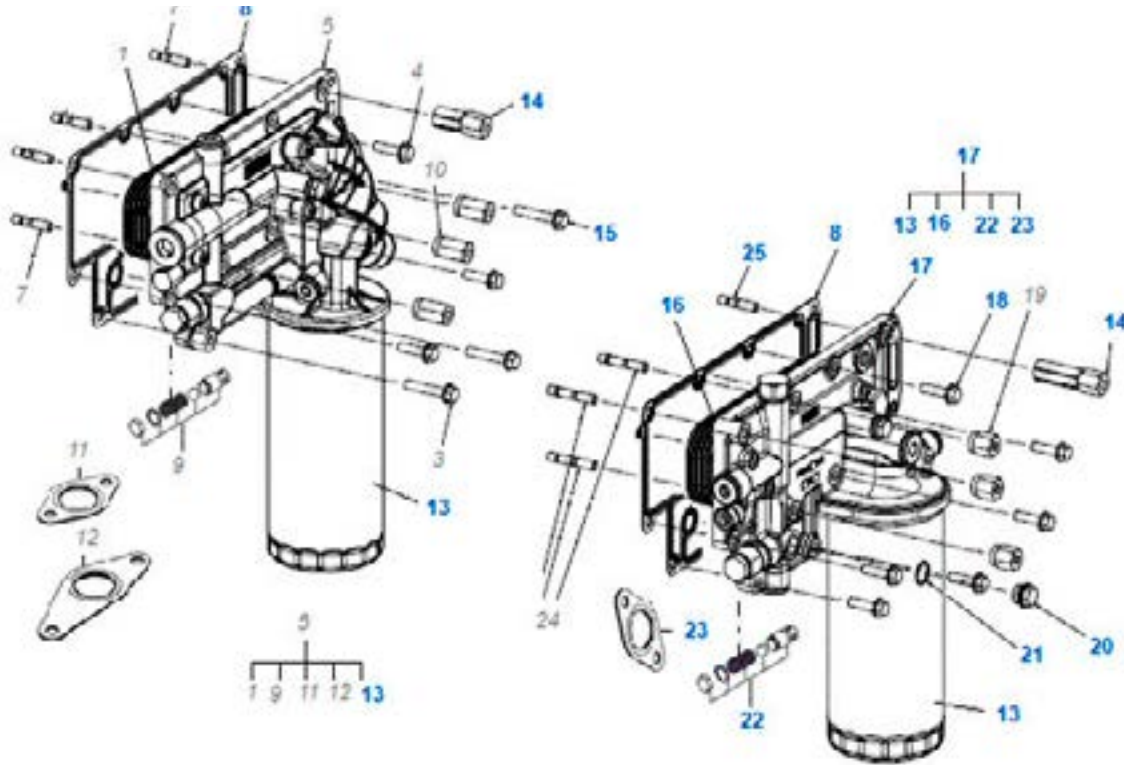
Water Separator Filter



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7006650C3E	1	Fuel filter	
2	961080190074E	1	Head filter kit	
3	905411510043	1	Fuel filter, element	
4	961080190084E	1	Cup kit	
5	961080190126E	1	Drain, kit	
6	7006667R1	1	Water in fuel sensor	

GROUP 3 - COOLING SYSTEM

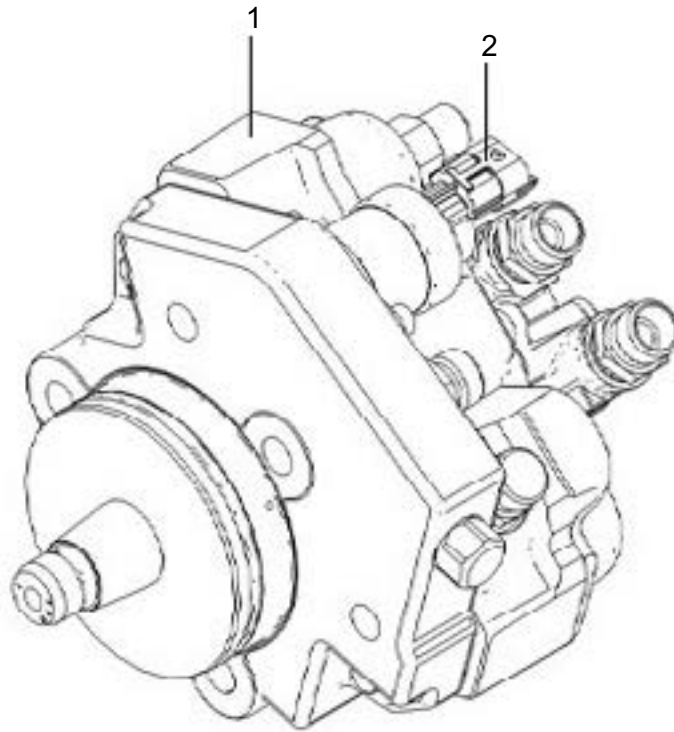
Filter and Oil Cooler



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7006655C91E	1	Cooler assembly, lubricant oil	
2	941208530054E	1	Oil cooler gasket	
3	7006661C1E	2	Oil cooler gasket	
4	7001328C1E	7	Bolt M8 x 30	
5	961004120084E	1	Spacer	
9	MM101517	1	Element, lubricant oil filter	
10	604920101620E	1	Sealing washer	
10	904921102227E	1	Sealing washer	
12	7006666C91E	1	Pressure regulating valve	
12	606908740025E	1	Transfer valve	
13	7002470C1E	1	Plug	
14	904921101822E	1	Sealing washer	
15	7002027C1E	3	Bolt M8 x 40	
16	7006658C1	1	Oil cooler	
17	604920101620E	1	Sealing washer	

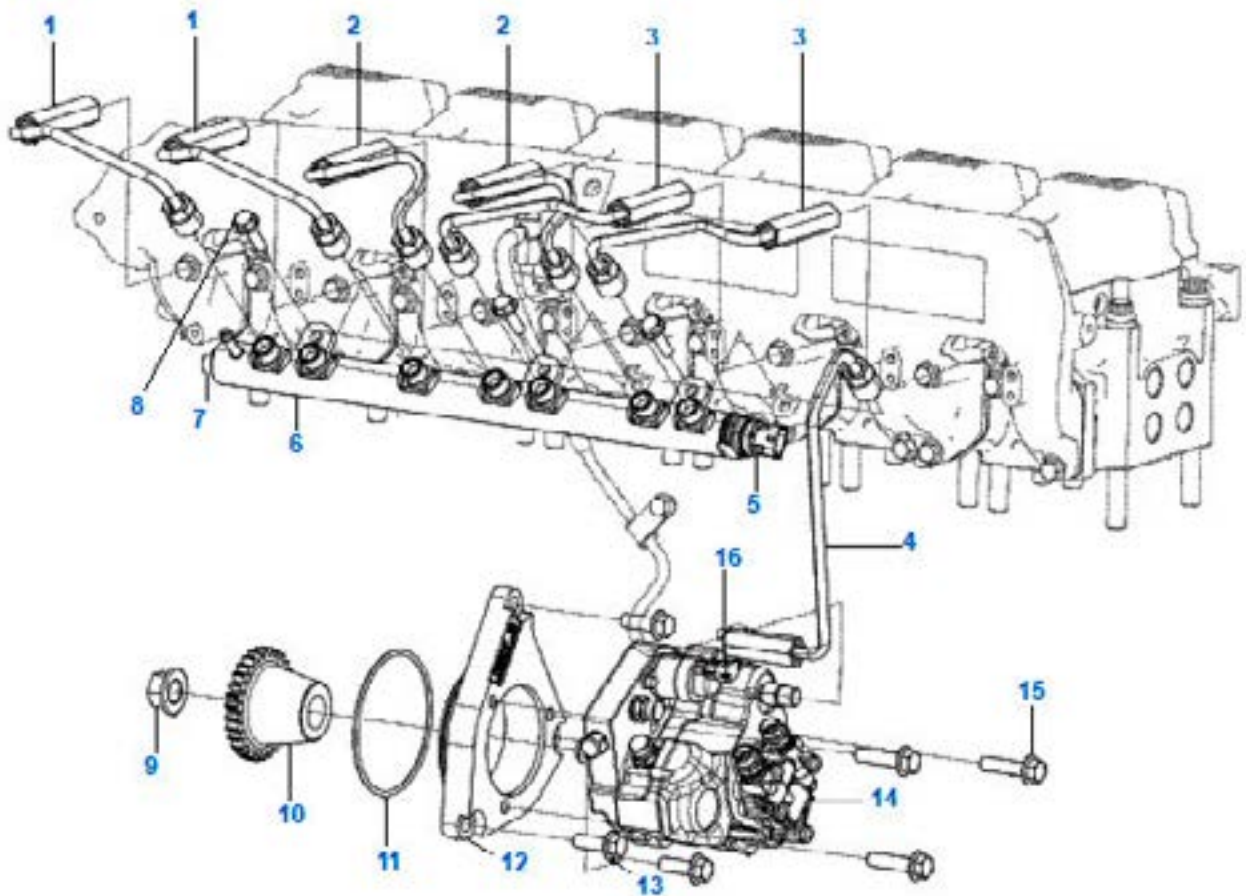
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High Pressure Fuel Pump



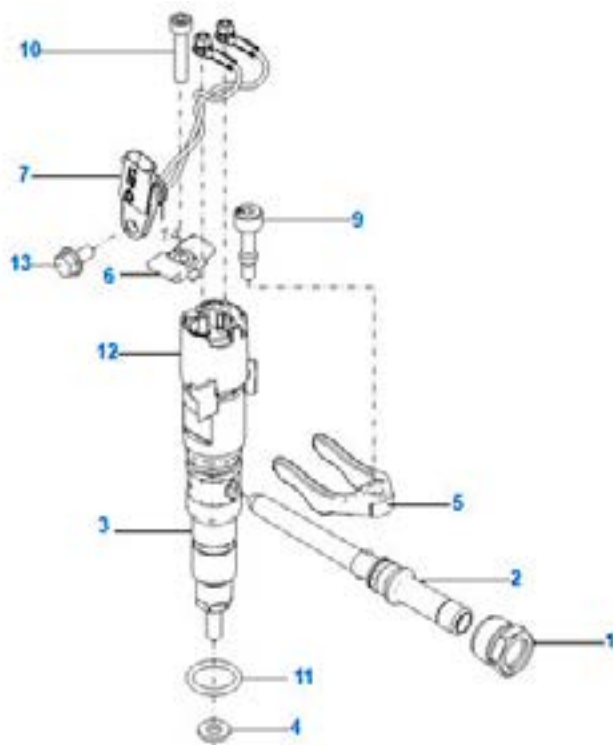
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961207270034E	1	High pressure fuel pump	
2	961287670054E	1	Valve m-prop	

High Pressure Injection Piping



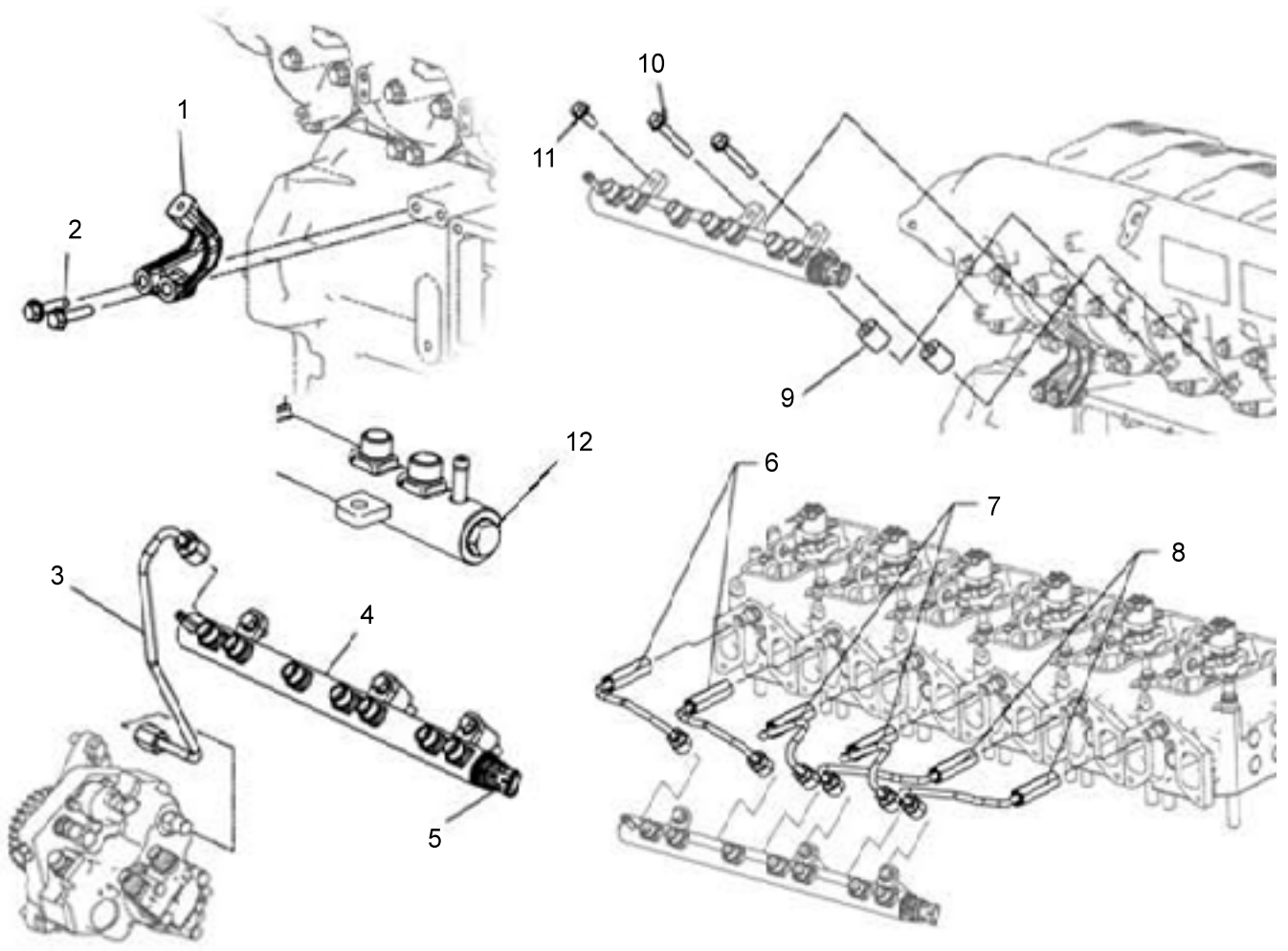
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7002451C91E	2	High pressure fuel pipe	
2	7002450C91	2	High pressure fuel pipe - cylinders 3 and 4	
3	7002449C91	2	High pressure fuel pipe - cylinders 1 and 2	
4	7002452C91	1	High pressure fuel pipe	
5	961287670034E	1	RDS sensor	
6	961209070034E	1	Rail	
7	961287670044E	1	Pressure relief valve	
8	7001324C1E	1	Bolt M8 x 20	
9	940703600054E	1	Special nut M18	
10	961203710124E	1	High pressure fuel pump gear	
11	961208550014E	1	O-ring	
12	7003093C1E	1	Adapter flange (high pressure pump)	
13	7002042C1E	3	Hexagonal flanged bolt M10 x 30	
14	961207270034E	1	High pressure fuel pump	
15	7002044C1E	3	Bolt M10 x 40	
16	961287670054E	1	Valve m-prop	

Fuel Injection System



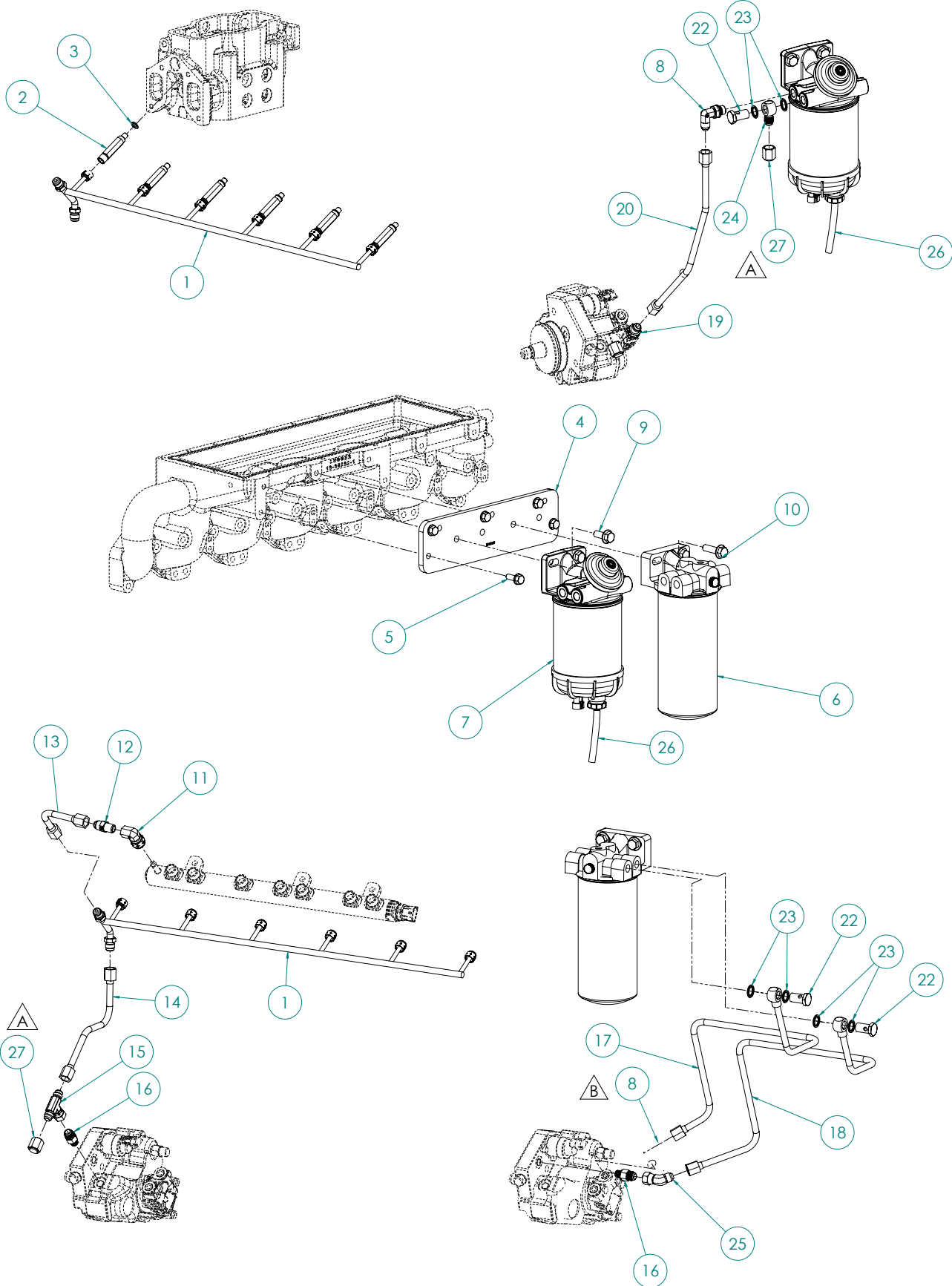
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7002000C1E	6	Cylindrical bolt M6 x 30	
2	961206530044E	6	Fixation bridge	
3	961203500044E	6	Bolt M6	
4	961206530034E	6	Injector holder fixing clamp	
5	7006188C1E	6	Fuel injector	
6	7002604C1E	6	O-ring	
7	940703400394E	6	Sealing washer (h = 2mm)	
8	961209060905E	6	High pressure fuel connector	
9	961203600114E	6	Nut m22	
10	7002017C1E	6	Bolt M6 x 12	
12	7001957C1E	6	Wiring harness	
13	7000700C1E	6	Cover, injector	

High Pressure Fuel System



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	7004081C1E	1	Bracket, rail	
2	7001325C1E	2	Bolt M8 x 35	
3	7002452C91E	1	High pressure fuel pipe	
4	961209070034E	1	Rail	
5	961287670034E	1	Rds sensor	
6	7002451C91E	2	High pressure fuel pipe	
7	7002451C91E	2	High pressure fuel pipe - cylinders 3 and 4	
8	7002449C91E	2	High pressure fuel pipe - cylinders 1 and 2	
9	7002446C3E	2	Spacer	
10	7002029C1E	2	Bolt M8 x 50	
11	7001324C1E	1	Bolt M8 x 20	
12	961287670044E	1	Pressure Relief Valve	

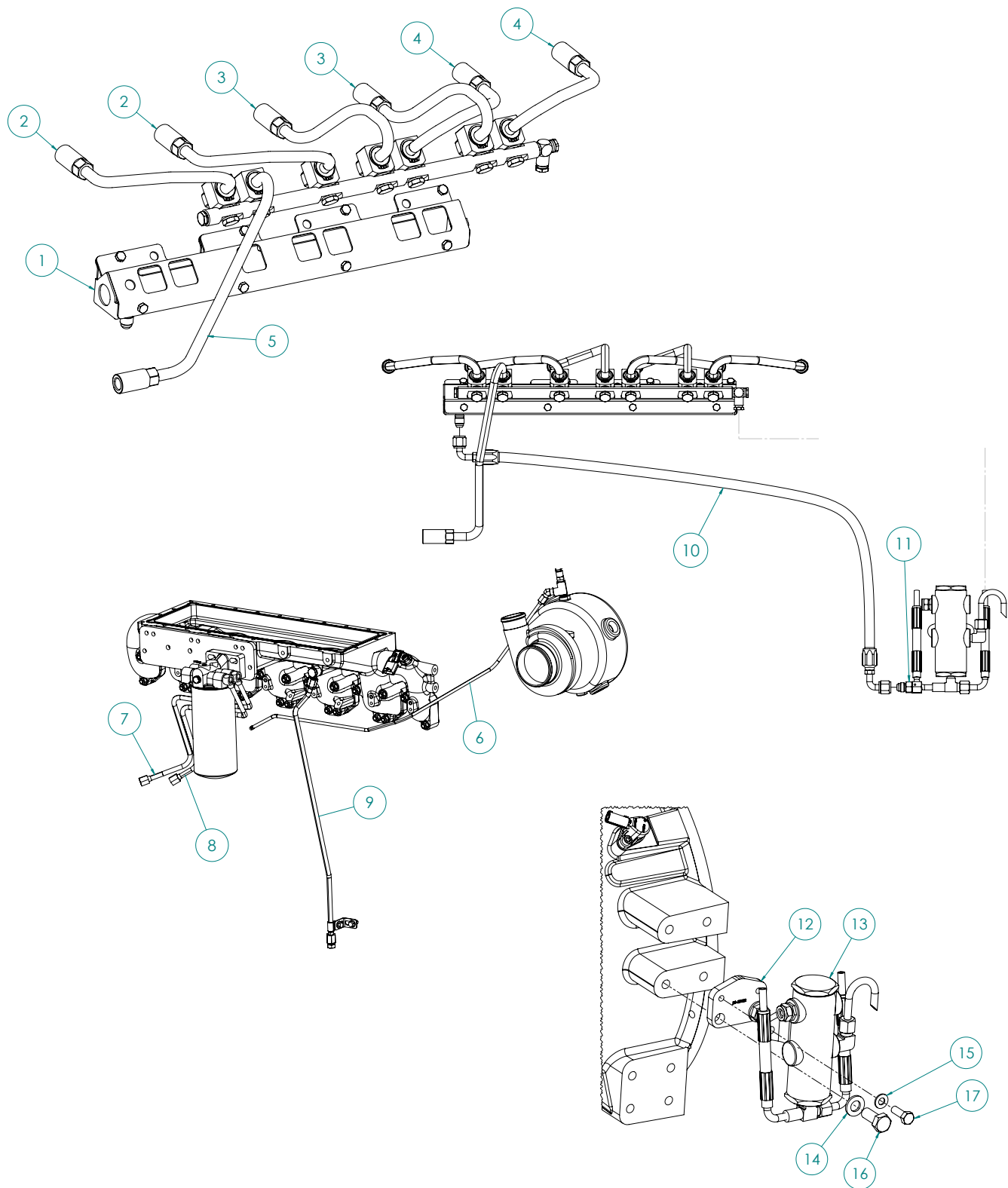
Low Pressure Fuel System



Low Pressure Fuel System

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-56207	1	Tube assembly, fuel return	
2	21-56201	6	Fuel return fitting to cylinder head	
3	904921100814E	6	Sealing washer	
4	23-06100	1	Bracket, fuel filters mounting	
5	19M7867	5	Capscrew, HX HD flanged M8 x 1.25 x 25 mm	
6	7003994C1E	1	Fuel filter assembly	
	7005404R1	1	Filtering element, final fuel	
7	7006650C2E	1	Water/fuel separator assembly	
8	21-54901	2	Male elbow, 90°, steel, M14 x 1.5 x 3/8 - 37T	
9	7001320C1E	2	Hexagonal flanged bolt M10 x 25 mm	
10	7002043C1E	2	Hexagonal flanged bolt M10 x 35 mm	
11	21-06106	1	Male elbow, 90°, brass, 1/4 FNPT x 5/16	
12	21-00612	1	Male connector, steel 1/4 NPT x 3/8 - 37T	
13	27-56208	1	Tube, common rail bypass (low pressure)	
14	27-56201	1	Tube, fuel pump overflow (low pressure)	
15	21-09506	1	Female swivel branch tee, steel 3/8 - 37T x 3/8 - 37T	
16	21-06102	2	Male connector, steel 3/8 -37T x M12 x 1.5	
17	27-56102	1	Tube assembly, fuel pump to fuel filter	
18	27-56103	1	Tube assembly, fuel filter to fuel pump	
19	21-56802	1	Male connector, steel 3/8-37T x M12 x 1.5	
20	27-56101	1	Tube assembly, fuel/water separator to fuel pump	
21	27-71212	1	Male elbow 90° steel 3/8-37T	
22	07206-11014	3	Banjo bolt M14 x 1.5 x 25mm	
23	07005-01412	6	Sealing washer, bonded M14	
24	21-06105	1	Banjo fitting M14 x 3/8 - 37T	
26	961008610254E	1	Drain hose	
27	21-50074	2	Cap, hex steel 3/8 - 37T	

Double Wall Fuel Lines



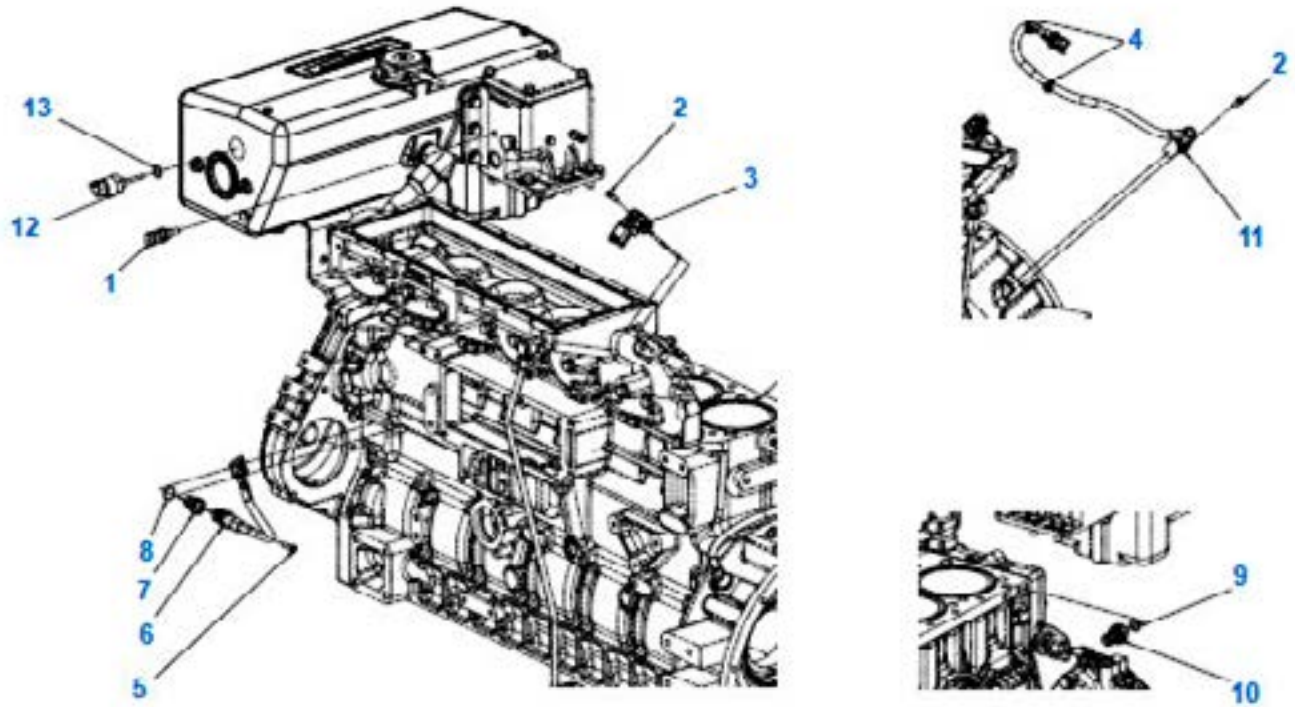
Double Wall Fuel Lines

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	26-76205	1	Kit,spray shield and leak detection (HPCR)	
2	27-56210	2	Injection line #1, 2	
3	27-56211	2	Injection line #3, 4	
4	27-56212	2	Injection line #5, 6	
5	27-56213	1	HPCR supply line	
6	27-06221	1	Tube, turbocharger coolant bypass	
7	27-56104	1	Tube assembly, fuel pump to fuel filter	
8	27-56105	1	Tube assembly, fuel filter to fuel pump	
9	27-06118	1	Aftercooler condensate drain tube	
10	18-56001	1	Hose assembly 3/8" ID x 32"	
11	21-00160	1	Adapter, 3/8-37T (M) x 8 mm	
12	23-56102	1	Bracket, alarm tank mounting	
13	10-50002	1	Alarm tank with inlet hose assembly	
14	15-00007	2	Flat washer M12	
15	15-00701	2	Flat washer M8	
16	12-00903	2	Capscrew, HX HD M12 x 1.75 x 30 mm	
17	12-00712	2	Capscrew. HX HD M8 x 1.25 x 25 mm	

Electrical Harness

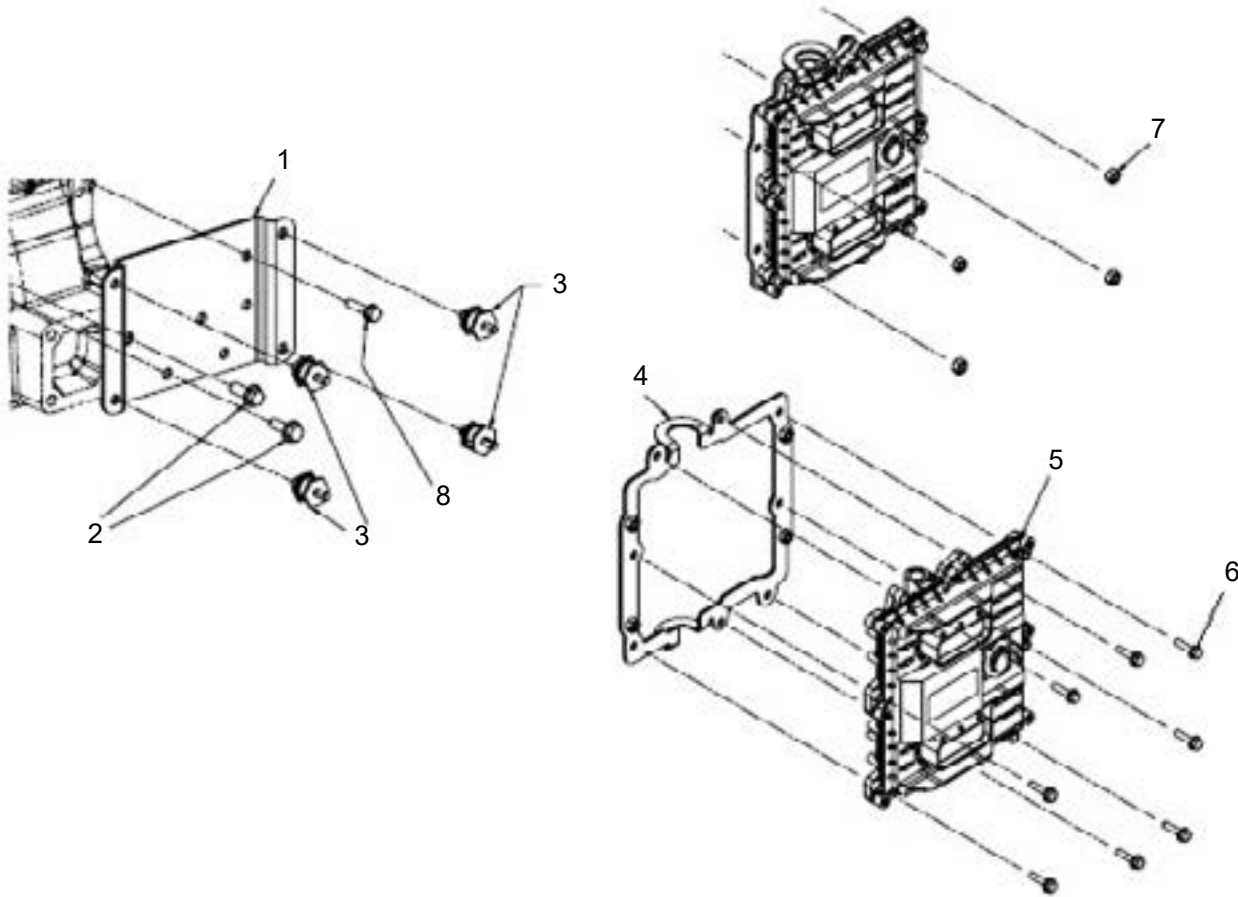
PLEASE CONSULT FACTORY FOR LATEST DRAWING AND PARTS LIST

Sensors



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961200690034E	1	Temperature sensor	
2	7001998C1E	1	Oil pressure sensor	
3	7007005C1E	1	Sensor, pressure and temperature	
4	904012440037E	2	Insulok clamp	
5	7001998C1E	2	Bolt M6 x 12	
6	7004041C1E	1	Camshaft position sensor	
7	7003092C1E	1	Spacer	
8	604931070172E	1	O-ring (applied to nozzle)	
9	904921101218E	1	Sealing washer	
10	7001482C1E	1	Pressure oil sensor	
11	7004042C1E	1	Crankshaft position sensor	
12	904921101418E	1	Sealing washer	

Electrical Control Unit (ECU) and Mounting

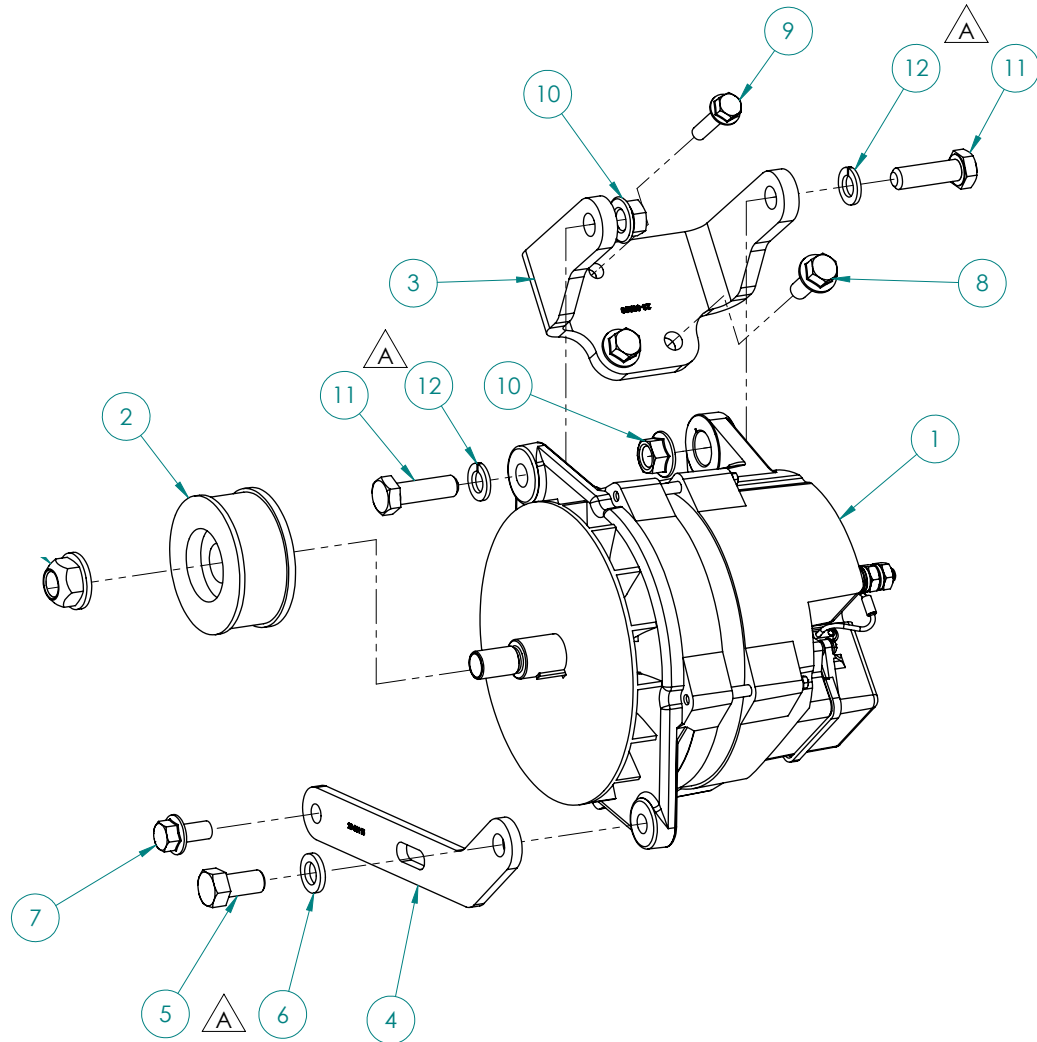


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	941206370175E	1	Electronic control module support	
2	7002042C1E	2	Hexagonal flanged bolt M10 x 30	
3	961200850014	4	Rubber mount 50 shore	
4	941206370185E	1	Electronic control module support	
5	922900760014	1	Electronic control unit (must be factory programmed before shipping)	
6	7001383C1E	8	Bolt M6 x 24 mm	
7	7002139C1E	4	Hexagonal nut M8	
8	7001325C1E	1	Bolt M8 x 35 mm	

PLEASE CONSULT FACTORY FOR LATEST DRAWING AND PARTS LIST

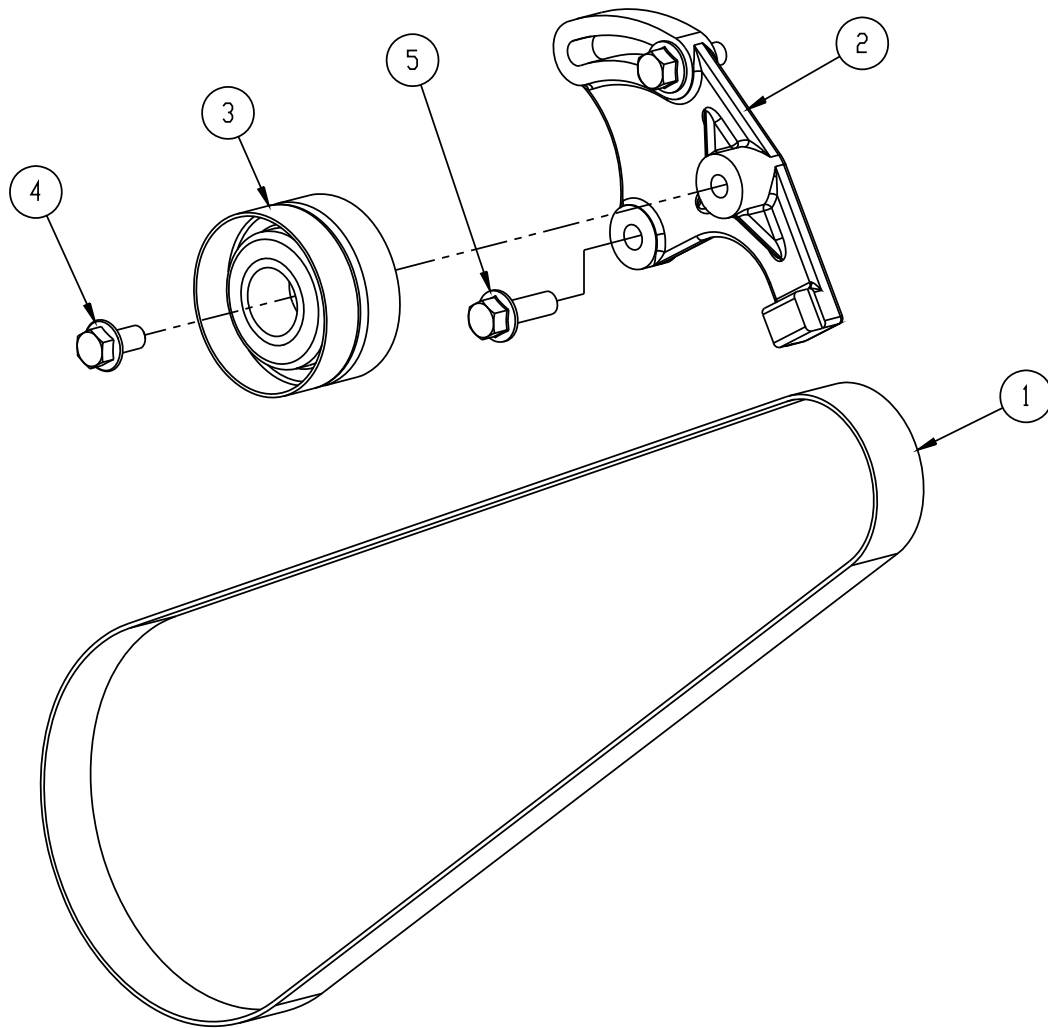
Alternator

Large Frame Alternator
PN



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40277	1	Alternator 24V/75A Isolated ground, large frame	
2	34-49503	1	Pulley 8-Groove Poly-V	
3	23-06206	1	Main bracket	
4	23-06115	1	Bracket	
5	12-00512	1	Capscrew, HX HD 1/2-13 x 1"	
6	15-00502	1	Lock washer, helical 1/2"	
7	19M7784	1	Capscrew, HX HD flanged M10 x 1.5 x 20 mm	
8	19M7785	2	Capscrew, HX HD flanged M10 x 1.5 x 25 mm	
9	19M8291	1	Capscrew, HX HD flanged M8 x 1.25 x 34 mm	
10	14M7299	2	Hex nut, flanged M12 x 1.75	
11	12-00905	2	Capscrew, HX HD M12 x 1.75 x 40 mm	
12	15-00912	2	Lock washer, helical M12	

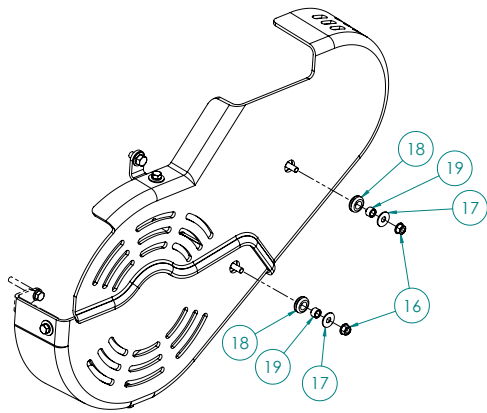
Manual Belt Tensioner



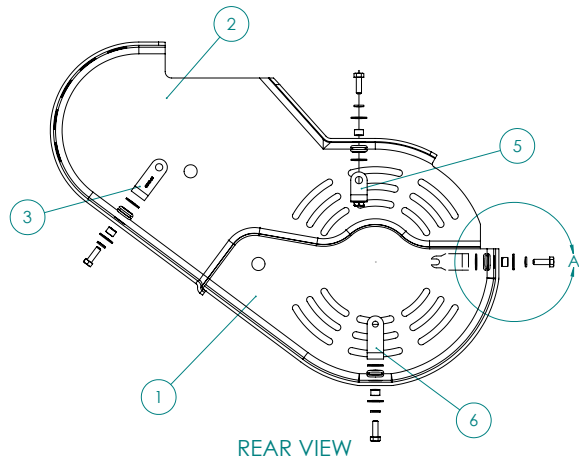
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	40-06102	1	Drive belt, micro-V, large frame	
2	941206400014E	1	Tensioner lever	
3	961003800014E	1	Flat pulley (80 mm OD)	
4	602002601020E	1	Bolt M10 x 20 mm	
5	12-80832	2	Capscrew, HX HD flanged M10 x 1.5 x 30mm	

Belt Guard

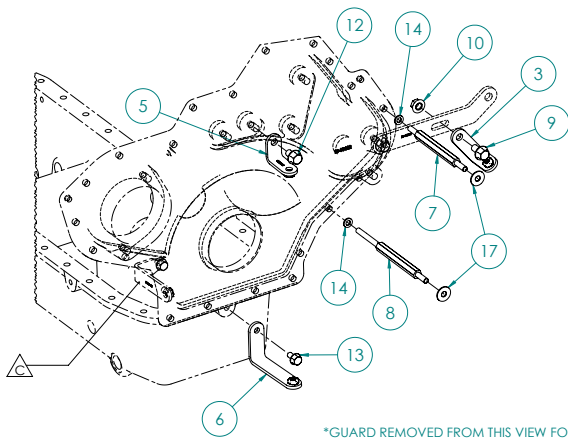
Large Frame Alternator



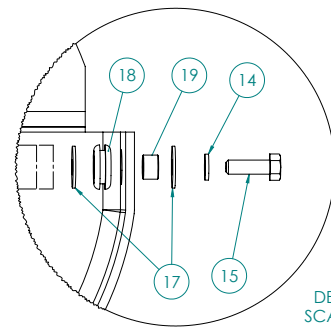
GROMMET (ITEM #18) INSTALLED INTO GUARD,
THEN SPACER (ITEM #19) INSTALLED INTO GROMMET.



REAR VIEW



*GUARD REMOVED FROM THIS VIEW FOR
CLARITY*



DETAIL A
SCALE 2 : 3

Belt Guard

Large Frame Alternator

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-06101	1	Belt Guard, lower 1/2	
2	00-06102	1	Belt Guard, upper 1/2	
3	23-06106	1	Bracket, belt guard, R.H. upper 1/2 mounting	
5	23-06108	1	Bracket, belt guard, top, upper 1/2 mounting	
6	23-06109	1	Bracket, belt guard, bottom, lower 1/2 mounting	
7	13-06106	1	Stud, belt guard mounting, upper, M8 x 1.25 x 158 mm	
8	13-06107	1	Stud, belt guard mounting, lower, M8 x 1.25 x 195 mm	
9	19M7784	1	Capscrew, HX HD flanged M10 x 1.5 x 22 mm	
10	14-80811	1	Hex nut, flanged M10 x 1.5	
12	19M7783	1	Capscrew, HX HD flanged M10 x 1.5 x 16 mm	
13	19M7865	1	Capscrew, HX HD flanged M8 x 1.25 x 16 mm	
14	15-00705	6	Lock washer, helical M8 S/S	
15	12-09712	4	Capscrew, HX HD M8 x 1.25 x 22 mm	
16	14M7298	2	Hex nut, flanged M8 x 1.25	
17	15-70004	12	Snubbing washer S/S	
18	00-00017	6	Grommet 1/2"ID x 1" OD	
19	21-05002	6	Spacer	

GROUP 6 - GASKET SETS**Gasket Sets**

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	11-16100	1	Gasket, engine coolant inlet	
2	11-06101	1	Gasket, thermostat housing	
3	11-11013	1	Gasket, thermostat housing	
4	11-11043	1	Gasket, heat exchanger / keel cooler outlet connection	
5	11-11022	1	Gasket, filler neck mounting	
6	16-14804	1	O-ring	
7	16-19502	1	O-ring	

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Base Frame - M Series

Consult Factory (image not available at time of publication)

Consult Factory (image not available at time of publication)

Base Frame - C Series

C6105A1 & A2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-86202	1	Steel base frame	
2	33-81021	4	Flex, mount, captive (Neoprene) 500-750 lbs.	
3	12-00514	4	Capscrew, hex head 1/2-13 x 1-1/2"	
4	12-00513	4	Capscrew, hex head 1/2-13 x 1-1/4"	
5	15-00504	8	Flat washer 1/2" SAE	
6	15-00502	4	Lock washer, helical 1/2"	
7	14-00511	4	Hex nut 1-2-13	
8	15-00901	4	Flat washer 5/8"	
9	12-00914	2	Capscrew, hex head 5/8"-11 x 2"	

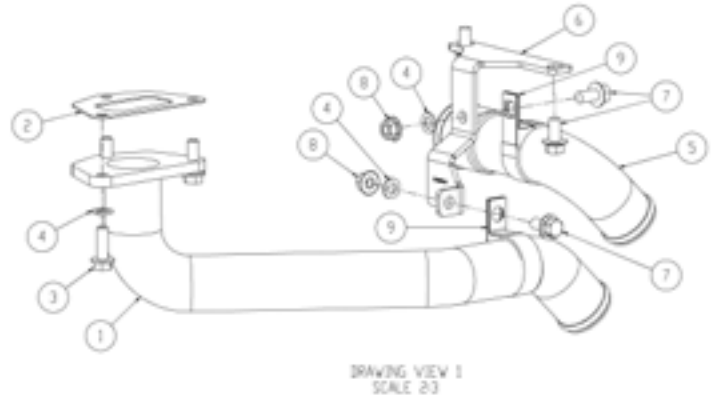
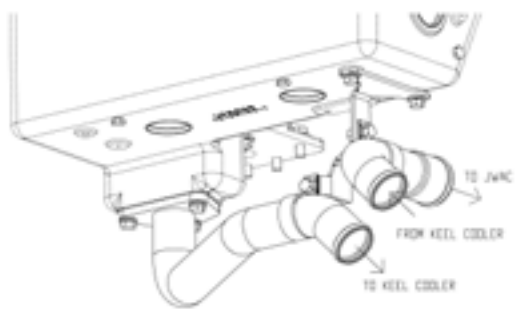
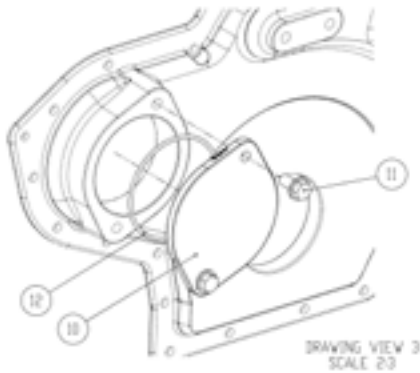
GROUP 8 - BASE FRAME AND MOUNTING

Base Frame - C Series

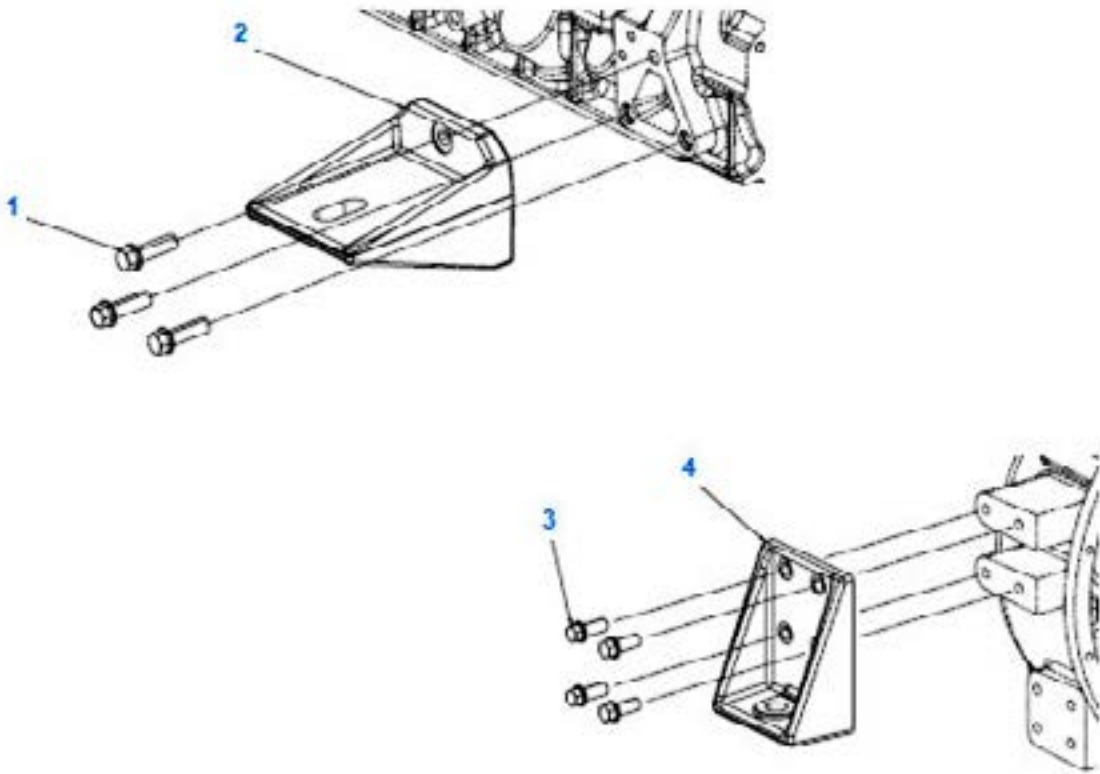
C6105A3,A4 & A5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-86202	1	Steel base frame	
2	33-81021	2	Flex, mount, captive (Neoprene) 500-750 lbs.	
3	12-00514	4	Capscrew, hex head 1/2-13 x 1-1/2"	
4	15-00504	8	Flat washer 1/2" SAE	
5	15-00502	4	Lock washer, helical 1/2"	
6	14-00511	4	Hex nut 1-2-13	
7	15-00901	4	Flat washer 5/8"	
8	12-00914	2	Capscrew, hex head 5/8-11 x 1-3/4"	
9	33-81022	2	Flex mount, captive 750-1000 lbs.	
10	12-00513	4	Capscrew, hex head 1/2-13 x 1-3/4"	
11	12-00916	2	Capscrew, hex head 5/8-11 x 2"	

Keel Cooling Mounting Kit

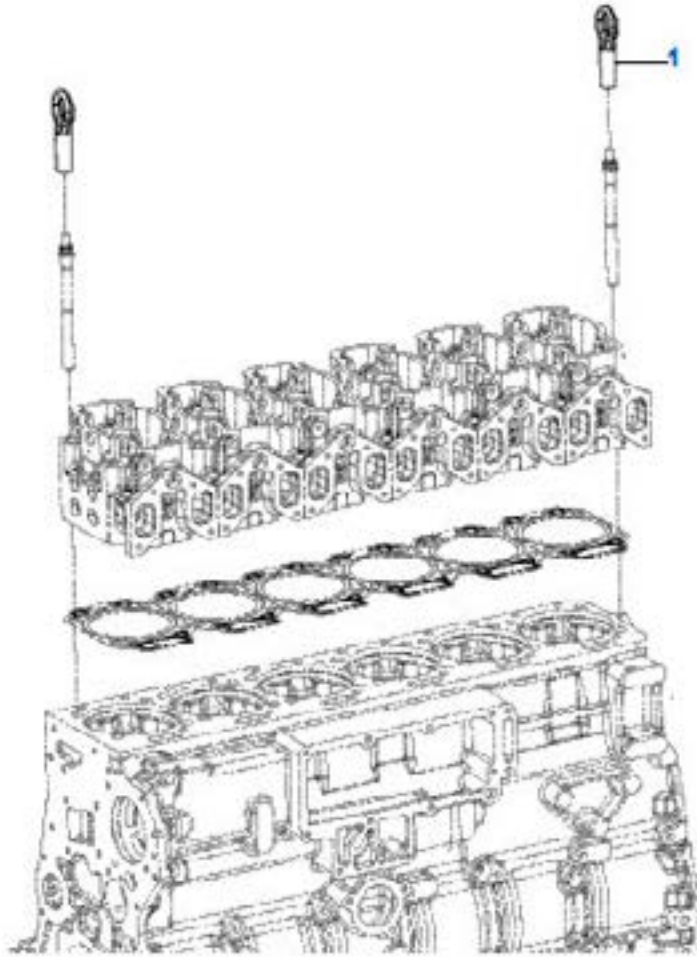


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-16103	1	Tube, Keel Cooler Supply	
2	11-11043	1	Gasket	
3	12-80832	3	Capscrew, hex head flanged M10 x 1.5 x 30 mm	
4	15-00808	5	Lock washer, helical M10	
5	27-16104	1	Tube, keel cooler return	
6	23-06116	1	Bracket, keel cooling tube support	
7	19M7784	4	Capscrew, hex head flanged M10 x 1.5 x 20 mm	
8	14-80811	2	Hex nut, flanged M10 x 1.5	
9	19-71001	2	Adelle clamp 2" ID x 1/2" stud	
10	28-06101	1	Plate, raw water pump block off	
11	19M7785	2	Capscrew, hex head flanged M10 x 1.5 x 25 mm	
12	25-19714	1	O-ring	
13	00-06109	1	Belt guard	



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	941203500144	6	Hex screw M12	
2	941206010015	2	Front engine mount	
3	902002421230E	8	Bolt M12 x 30	
4	961206010404	2	Engine rear bracket	

Engine Lifting Eyes



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	961206200014E	2	Engine lifting hook	

PLEASE CONSULT FACTORY FOR LATEST DRAWING AND PARTS LIST



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