

CATALOGUES

Engine Spare Parts Catalogue

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Installation	PAXOCEAN C1318
Project	PaxOcean C1318
Product type	W8L32
Product number	PAAE251374, PAAE251375, PAAE251376, PAAE251377, PAAE251378, PAAE251379, PAAE251380, PAAE251381

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**Product number: PAAE251374, PAAE251375, PAAE251376,
PAAE251377, PAAE251378, PAAE251379, PAAE251380, PAAE251381**

000 Overhaul spare part sets

Section	Description
911-0001A	Set for connecting rod screws and shim
912-0001A	Cylinder unit overhaul set

100 Engine block, bearings, oil sump Covers

Section	Description
100-0007E	Hydraulic jack for main bearing cap
100-0021E	Cylinder liner with anti-polishing ring
100-0025G	Engine block
100-0027H	Engine block, TC in free end
100-0030B	Cylinder liner fastening equipment
100-0035C	Grounding equipment
100-0076A	Wet sump
100-0077A	Oil strainer for suction pipe
107-0013C	End cover
107-0066B	Side cover L32
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107-068A	Support for side cover
107-0079H	Pump cover assembly
107-0114B	Heat shield for indicator valve
107-0115B	Heat shield for indicator valve
107-0123J	Multi cover
107-0124B	Cover for camshaft
107-0163A	Covers in the free end
107-0226B	Cover for cylinder head

107-0227B	Covers 8L32
107-0237A	Cover for cylinder head
107-0238A	Cover for cylinder head
107-0239B	Cover for cylinder head
107-0334A	Side cover, lower part
107-0366B	Covers for crankcase and camshaft
107-0376A	Covers for air bottle

**110 Crankshaft, flywheel
Connecting rod, piston**

Section	Description
110-0001I	Crankshaft L32
111-003A	Connecting rod
113-001A	Piston
114-002B	Flywheel

120 Cylinder head with valves

Section	Description
120-0015E	Cylinder head
120-0030A	Cylinder head equipment
120-0054A	Cylinder head
121-001B	Exhaust valve assembly
121-002B	Inlet valve assembly
123-0005A	Starting valve
125-0001D	Cylinder head safety valves
125-0002C	Indicator valve

130 Intermediate gears

Section	Description
131-0007C	Intermediate gears for camshaft drive

140 Valve mechanism, camshaft

Section	Description
143-0004A	Rocker arms and bearing bracket
143-0012A	Yoke for exhaust valves
143-0013A	Yoke for inlet valves

145-0006B Guide block assembly

148-0033B Camshaft

150 Charge air system

Section	Description
156-0018H	Turbocharger
156-019B	Speed pickup for TC
156-0034C	Drain pipe from receiver
156-0056B	Vibration measurements points
156-0094B	Turbocharger support
156-0121C	Charge air system

160 Injection equipment Gas manifold

Section	Description
161-002C	Lifter for injection pump
165-0007E	Injection pump
167-0022A	Injection valve

180 Lubricating oil pumps, thermostatic valves

Section	Description
181-0010A	Regulating valve
181-0015B	Lubricating oil pump
181-0016A	Lubricating oil pump
182-0010A	Prelubricating pump
183-0006A	Thermostatic valve for lube oil
184-0011A	Oil dipstick

190 Cooling water pumps, thermostatic valves

Section	Description
191-0001I	Water pump
196-002B	Thermostatic valve for HT water
196-0005D	Connection piece for LT-water

200 Exhaust manifold

Section	Description

200-0063A	Multiduct
200-0065C	Exhaust system
200-0077A	Exhaust system, connection part
202-0034B	Wastegate system in free end
202-0038A	Wastegate pipe
205-0099C	Insulating box
205-0102A	Insulation addition to connection part
205-0117A	Insulation box, connection part
205-0190A	Insulation box
205-0191A	Insulation box, connection part
205-0192A	Insulation additional for insulation box.
207-0004F	Butterfly valve

210 Starting equipment

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211-0011A	Starting air distributor
213-0007B	Limit switch for stop lever
213-0018A	Shut-down mechanism
217-002A	Main starting valve
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220 Regulating mechanism

Section	Description
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223-0014D	Booster-motor
223-0035C	Governor drive
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224-0009A	Control shaft
228-001C	Overspeed trip device
228-016A	Overspeed trip device
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350 Manifold (fuel, lube oil, cooling water, starting air etc.)

Section	Description
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352-0078B	Lube oil pipes in flywheel end
352-0144B	Lube oil system
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353-0051B	Control air system for shut off valve
353-0137A	Control air system
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357-0041B	Starting air system
357-0087A	Control air pipes for turning device
357-0088A	Starting air pipes
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473-0004A	Centrifugal filter
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474-0015C	Fastening for lube oil module
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483-0015D	Equipment for turning device
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500 Transducers, instrument panel, thermometers

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811-0004A	Tools for connecting rod
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813-0001B	Tools for intermediate gear
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Description	Section
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1. Wärtsilä spare parts

By ordering spare parts from Wärtsilä, you receive latest-technology parts that have undergone extensive laboratory and field tests. Also, you can be sure that the parts you purchase comply with the classification your Wärtsilä product has to fulfil.

This document gives you instructions on how to order spare parts so that you receive the right parts fast and accurately.

2. Ordering spare parts

2.1 Where to order

You can order Wärtsilä spare parts through our network of companies around the world or directly via Wärtsilä Spares Online or Eldoc.

For more information, contact us or go to www.wartsila.com.

2.2 Information needed in the order

When ordering spare parts, include the following information in the order:

- Product type
- Product serial number(s)
- Spare part number
- Spare part description
- Spare part details (for example size or length)
- Quantity of parts
- Consignee
- Method of forwarding
- Purchaser

Spare parts are identified by the product type, product serial number and spare part number together, so make sure you give this information correctly in the order. You can find the spare part number, description and details in the spare parts catalogue sections.

2.2.1 Use the right spare parts catalogue

The spare parts catalogue (SPC) is unique for each product or product series you have purchased from Wärtsilä. You can find the serial numbers of the products that the SPC is valid for on the front page of the SPC.

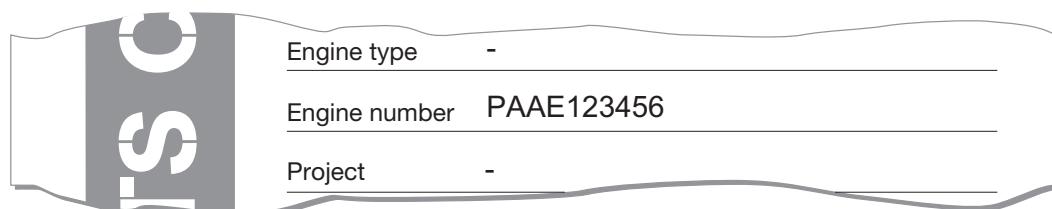


Fig 2-1 Serial number

To receive spare parts that are suitable for your product, make sure that you use the correct SPC and serial number when ordering spare parts.

2.2.2

Find the right spare part information

Spare part catalogue sections

One spare parts catalogue (SPC) can be valid for a series of products. In that case, some sections in the SPC can be valid only for some of the products.

If there are multiple serial numbers on the SPC's front page, check from the table of contents which sections are valid for the product you are ordering spare parts for. In the table of contents, sections that are product-specific are marked with the product serial number in the "Valid for Products" column. If there are no serial numbers in that column, the section is valid for all the product serial numbers mentioned on the cover page of the spare part catalogue.

470 Lubricating oil pumps, thermostatic valves		
Section	Description	Valid for Products
181-0006C	Lubricating oil pump	PAAE215035
181-0008A	Lubricating oil pump	PAAE215034
182-0008E	Prelubricating oil pump	
182-0011A	Electric motor for prelubricating oil pump	
182-0012E	Prelubricating pump assembly	
182-0014A	Turning tool for prelubricating pump	
183-0009B	Thermostatic valve for lubricating oil	

Fig 2-2 Table of contents

Spare part information in the sections

The sections contain illustrations, tables and spare parts lists with small illustrations of the parts and unit or assembly locations.

The spare parts list contains spare part numbers (Part No), part descriptions (Description) and quantity (Qty). The quantity does not indicate the total number used in your product but the number found in the displayed unit or assembly.

Spare part numbers can be arranged in layers. This means that you can have a complete spare part number that includes other parts that are available separately.

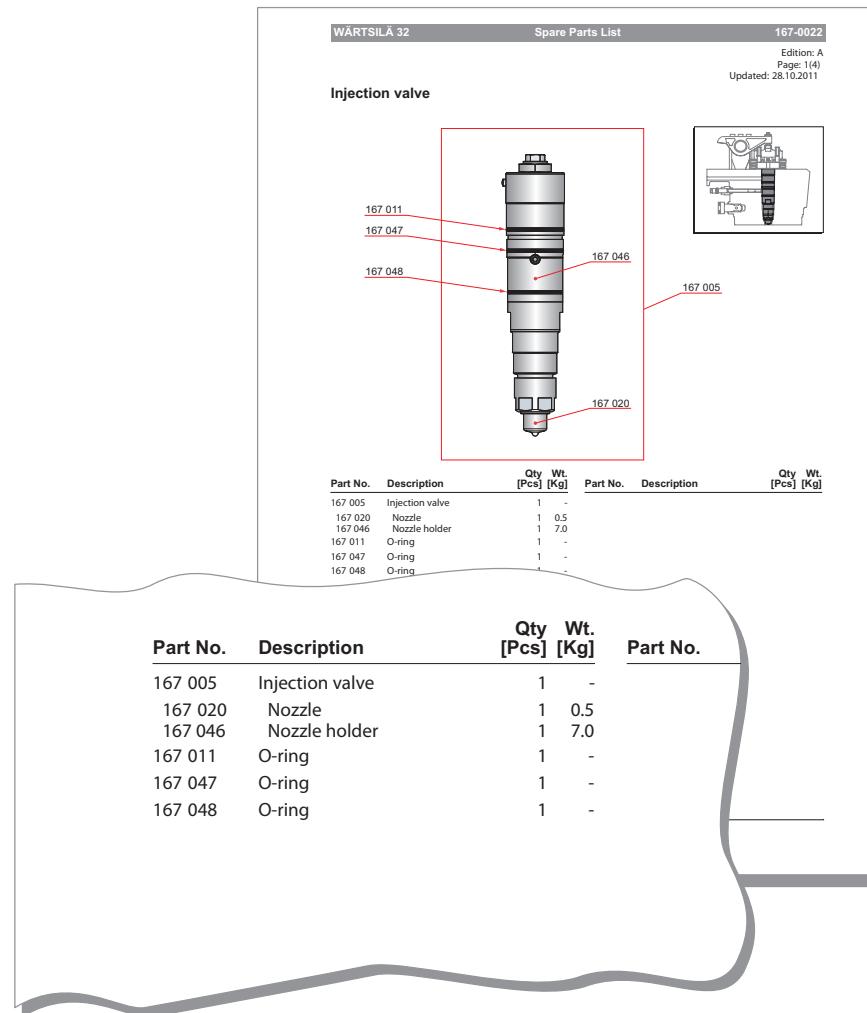


Fig 2-3 Spare part numbers

As shown in the figure, the spare part number 167 005 is for the complete injection valve inside the red rectangle. When ordering the complete injection valve 167 005, the spare parts 167 046 and 167 020 are included but you can also order them separately.

The parts numbers 167 011, 167 047 and 167 048 outside the red rectangle are not included when ordering the complete injection valve 167 005 or the spare parts 167 046 and 167 020.

NOTE



If the spare part section contains a note with additional information such as the length or size of the part, include this information in the order.

2. Ordering spare parts

3.

Spare parts identification

Wärtsilä marks the spare parts they deliver with details that help you identify which part goes to which product. This is useful especially if you have several Wärtsilä products of the same type but belonging to different series, design or generation and when you keep stock of the spare parts.

The spare parts identification information includes:

- Spare part name (Description)
- Spare part number (Code no.)
- Extended part number (EPN)
- Order number (Order no.)
- Product serial numbers (Engine type/no.)
- Quantity of the parts ordered (Quantity)

ORIGINAL PARTS	DESCRIPTION O-RING			LINE 0740 
	CODE NO.	EPN	PART NO.	
	123 456	0001		
	ORDER NO.	ORIGIN		
	3590088	FI		
ENGINE TYPE/NO. W18V50/PAAE072645			QUANTITY 54	

WÄRTSILÄ

Fig 3-1 Spare parts slip

Serial number

The serial numbers show which Wärtsilä products the part is compatible with.

Spare part number

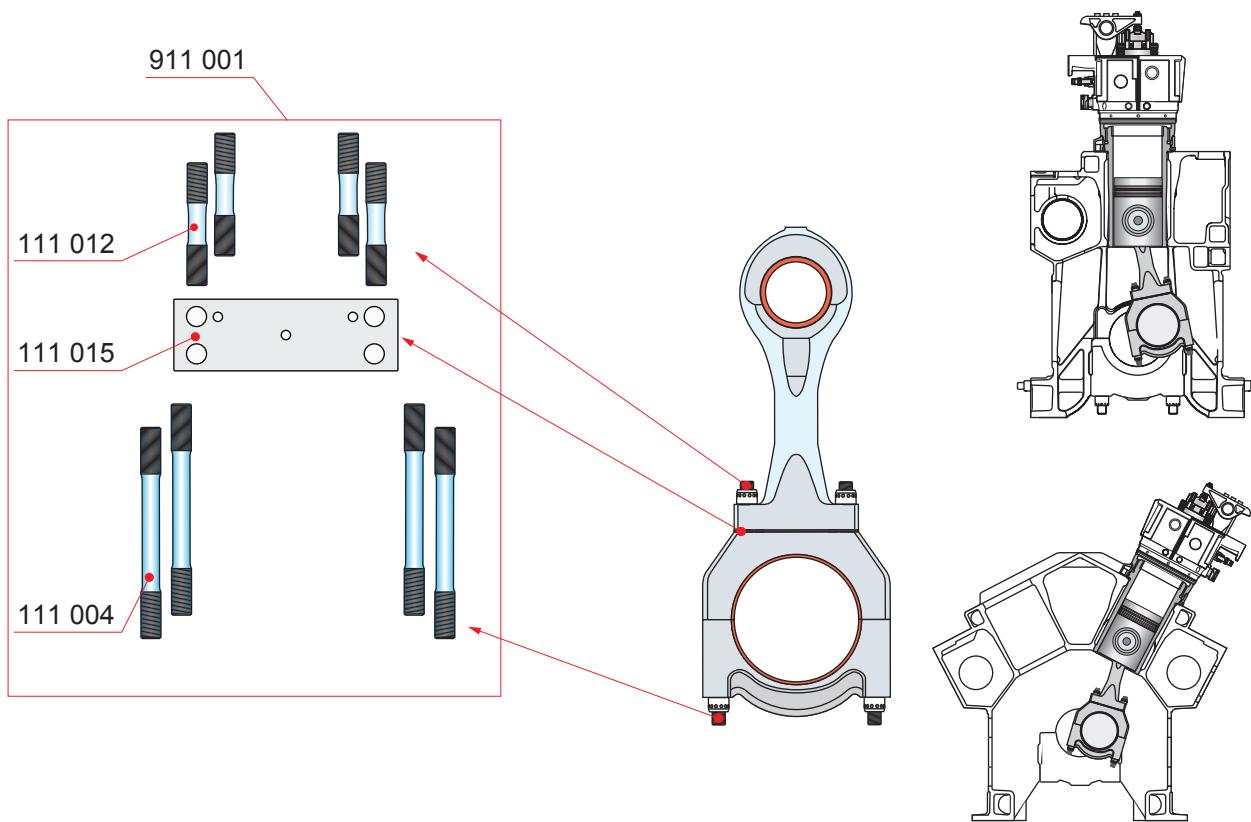
The spare part number identifies the type of the part and its location in the system.

Extended part number

The extended part numbers help you differentiate parts from each other if you have multiple Wärtsilä products that have similar parts with the same spare part code but are different in design or generation. This also includes situations where you have made modifications to Wärtsilä products that were originally identical.

3. Spare parts identification

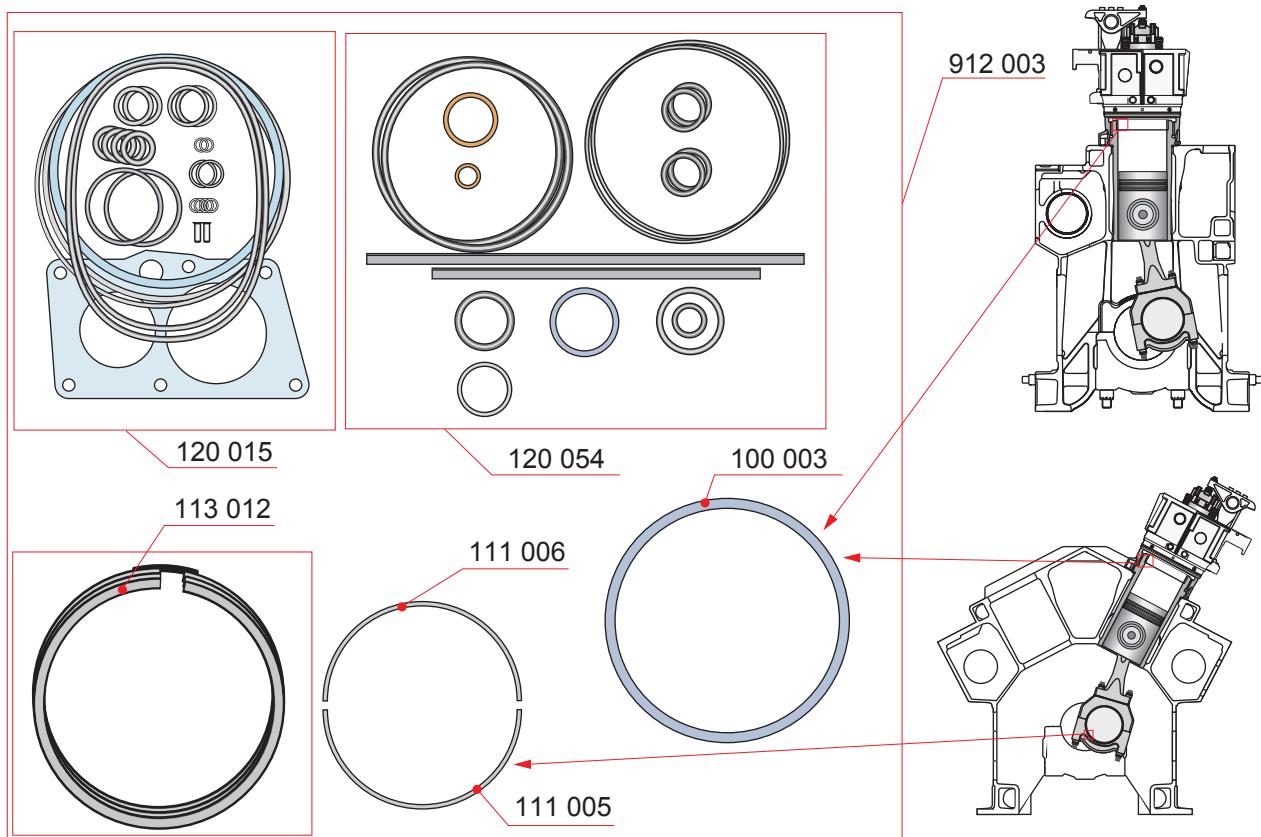
Set for connecting rod screws and shim



Part No.	Description	Qty [Pcs]	Wt. [Kg]
911 001	Set for connecting rod screws and shim	1	-
111 004	Screw	4	-
111 012	Screw	4	-
111 015	Shim	1	-

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Cylinder unit overhaul set

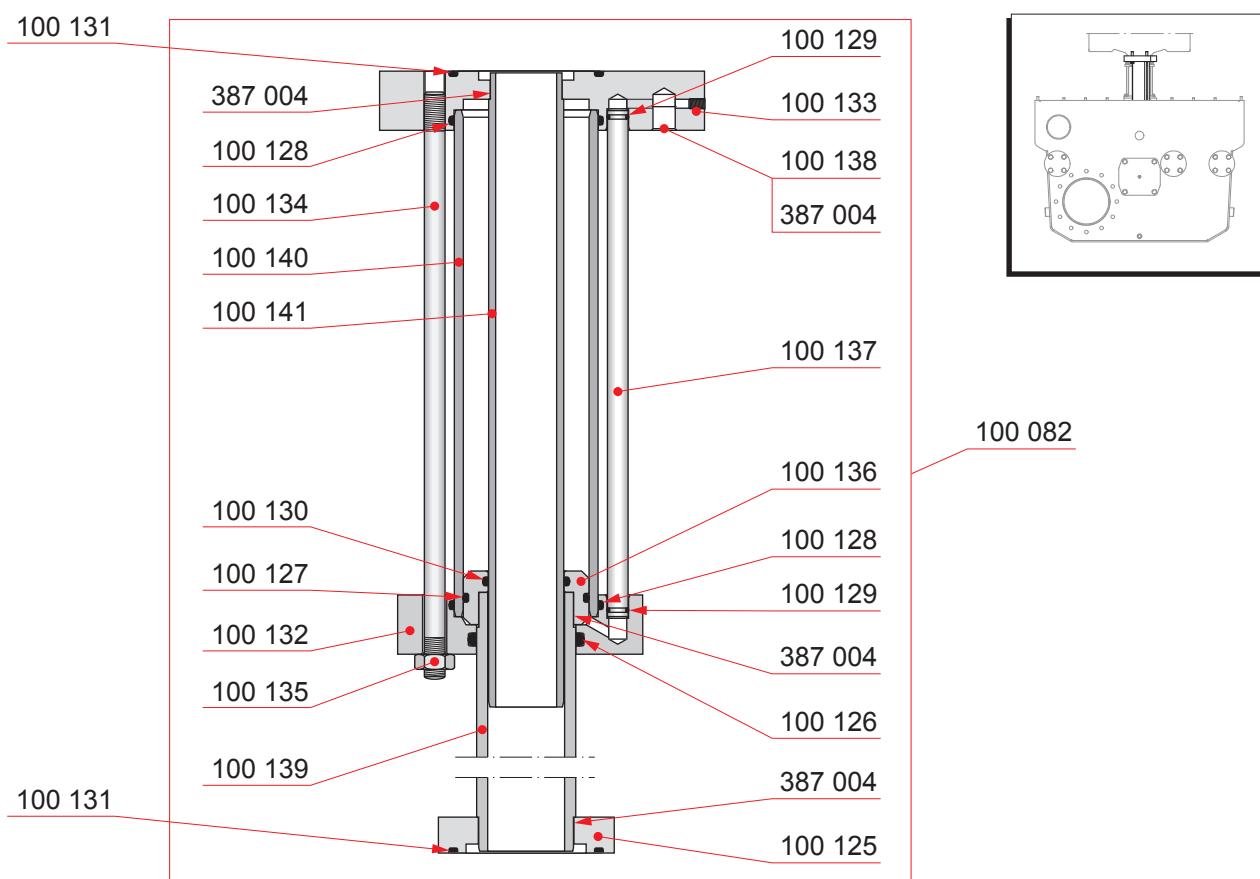


Part No.	Description	Qty [Pcs]	Wt. [Kg]
912 003	Cylinder unit overhaul set	1	-
100 003	Anti-polishing ring	1	-
111 005	Big end bearing shell, lower *	1	-
111 006	Big end bearing shell, upper *	1	-
113 012	Piston ring set	1	-
120 015	Sealing set for cylinder head replacement	1	-
120 054	Sealing set for cylinder head overhaul	1	-

NOTE! * Set contains standard size bearings.

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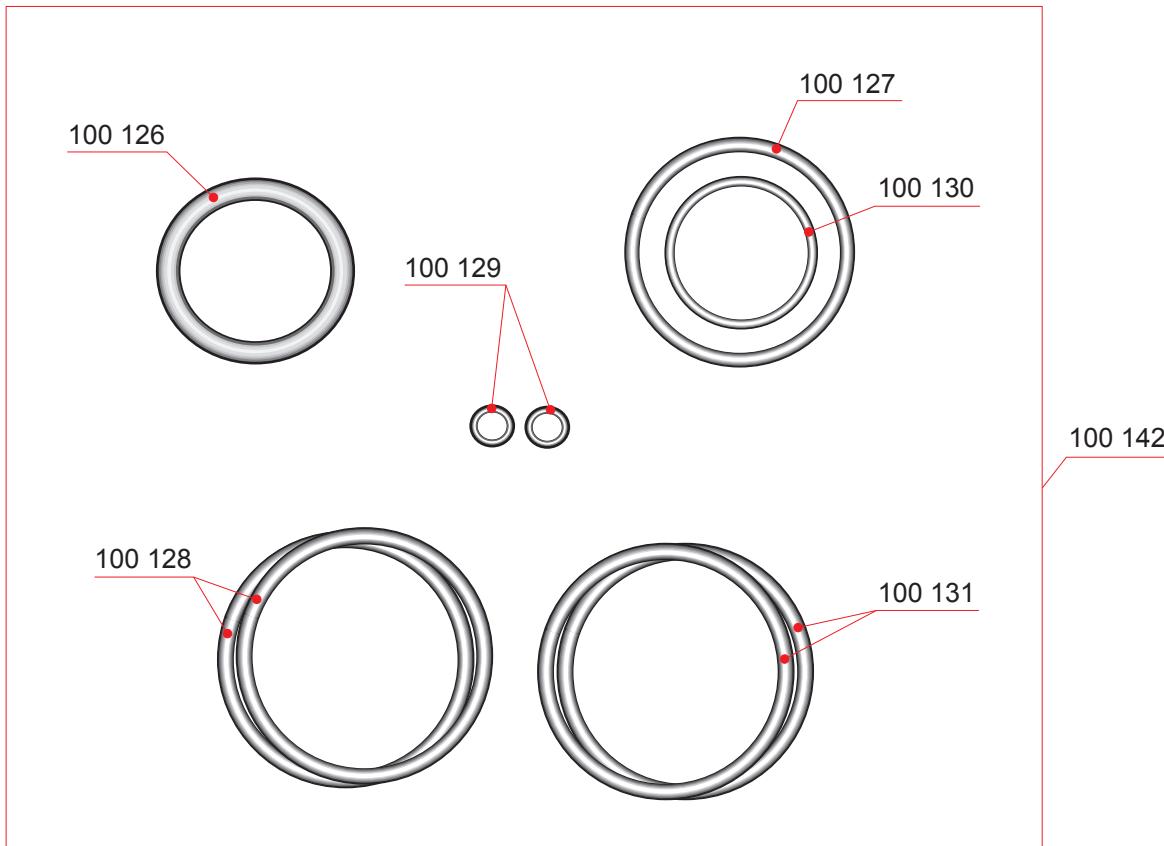
Hydraulic jack for main bearing cap



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 082	Hydraulic jack for main bearing cap	1	-
100 125	Flange	1	1.7
100 126	O-ring	1	-
100 127	O-ring	1	-
100 128	O-ring	2	-
100 129	O-ring	2	-
100 130	O-ring	1	-
100 132	Flange	1	2.0
100 133	Flange	1	4.2
100 134	Screw	2	0.3
100 135	Nut	2	-
100 136	Piston	1	0.4
100 137	Pipe	1	0.2
100 138	Quick coupling	2	-
100 139	Cylinder	1	2.3
100 140	Cylinder	1	2.6
100 141	Cylinder	1	1.3
387 004	Glue compound	1	-
100 131	O-ring	2	-

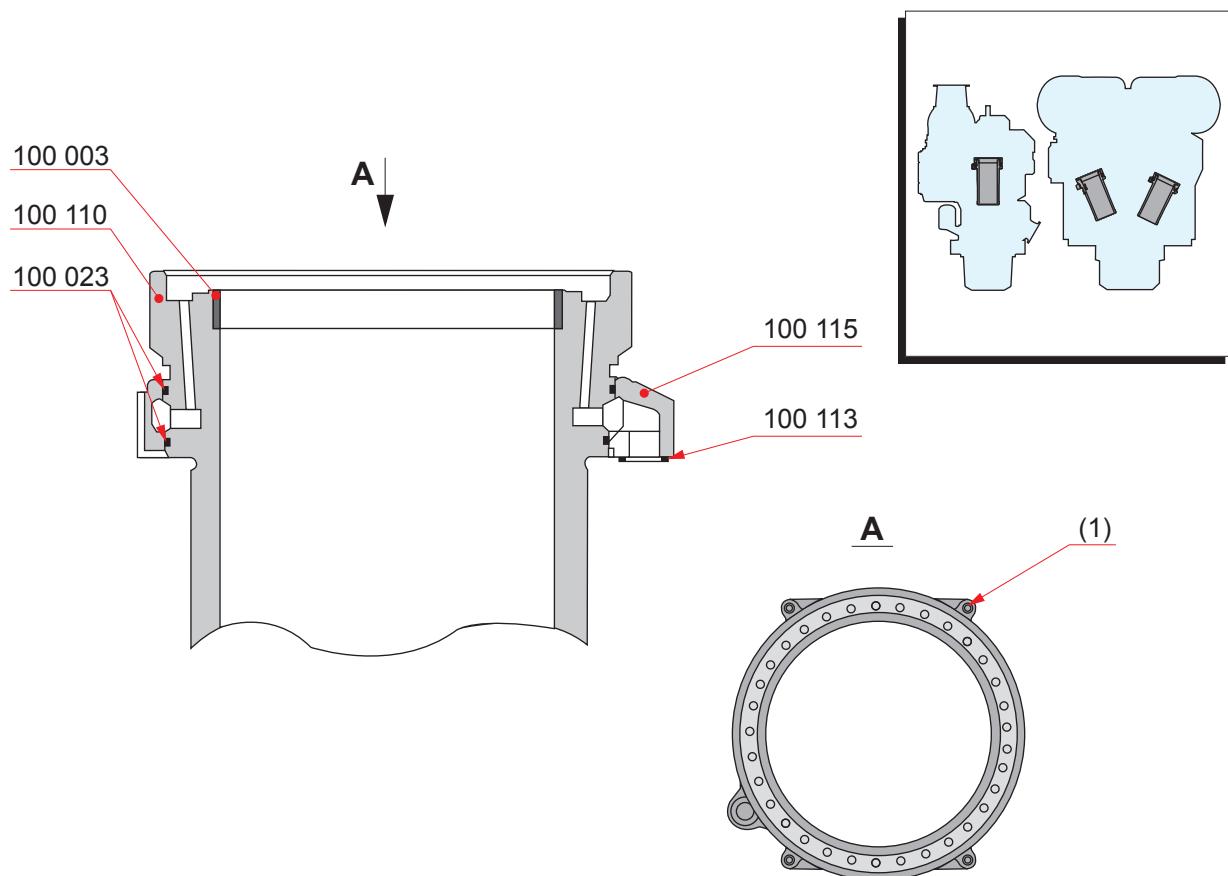
Edition: E
Page: 2(2)
Updated: 22.03.2013

Hydraulic jack for main bearing cap



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 142	Sealing set	1	-
100 126	O-ring	1	-
100 127	O-ring	1	-
100 128	O-ring	2	-
100 129	O-ring	2	-
100 130	O-ring	1	-
100 131	O-ring	2	-

Cylinder liner with anti-polishing ring

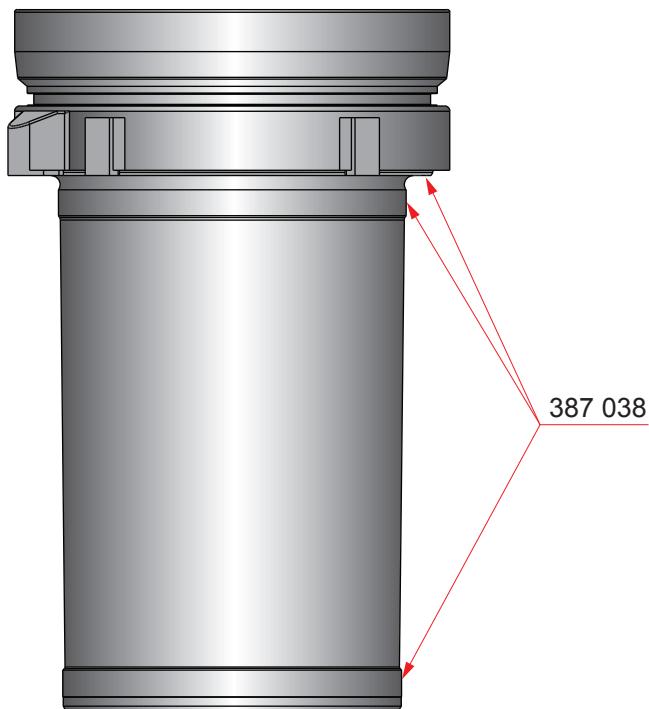


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 003	Anti-polishing ring	1	4.2
100 023	O-ring	2	-
100 110	Cylinder liner	1	277
100 113	O-ring	1	-
100 115	Water jacket	1	12.4

NOTE! (1) See section 100-

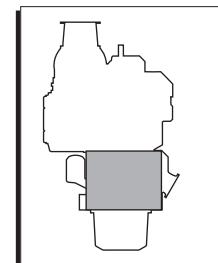
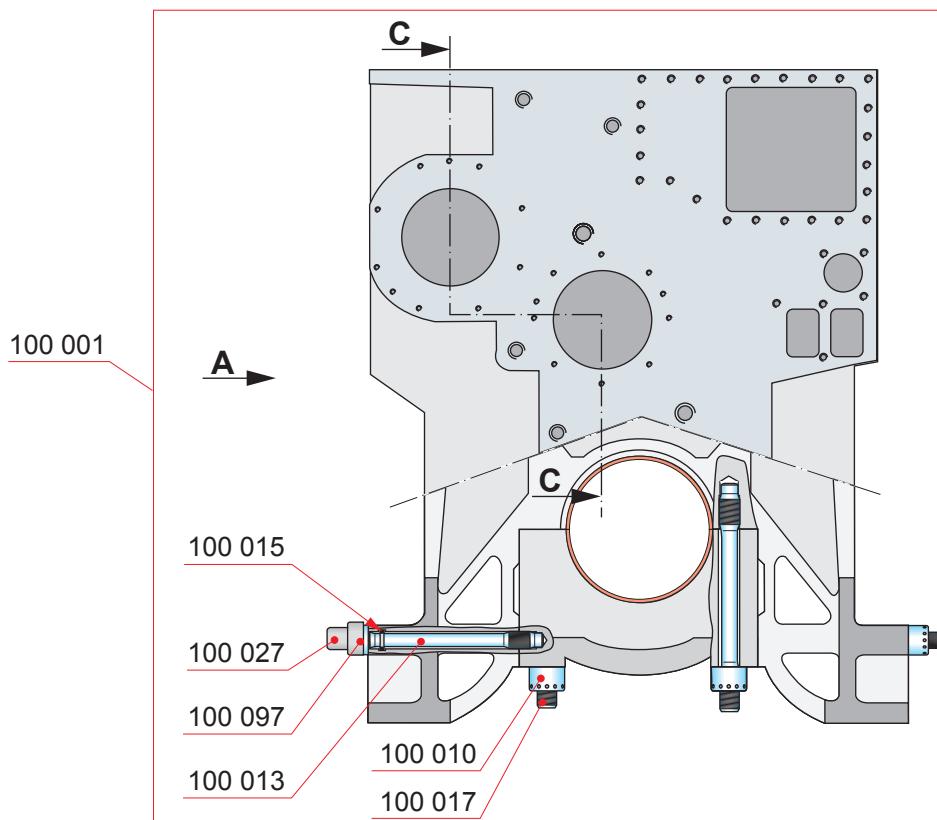
Edition: E
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Updated: 04.02.2014

Cylinder liner with anti-polishing ring



Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 038	Contact lubrication	1	-

Engine block

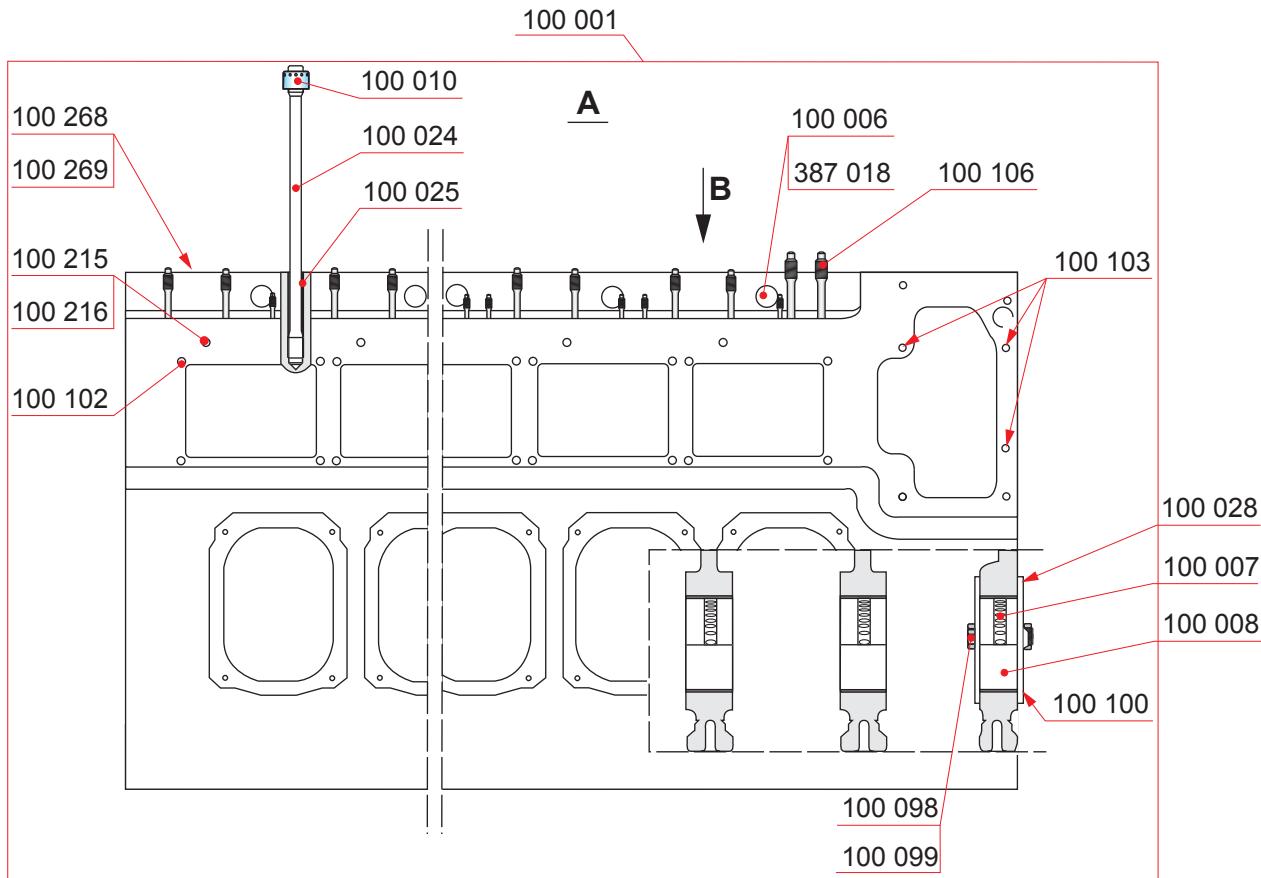


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 001	Engine block	1	-
100 010	Round nut	*	1.6
100 013	Side screw, long	*	4.2
100 015	O-ring	*	-
100 017	Main bearing screw	*	9.1
100 027	Cap	*	-
100 097	Round nut	*	0.7

NOTE! *) See page 4.

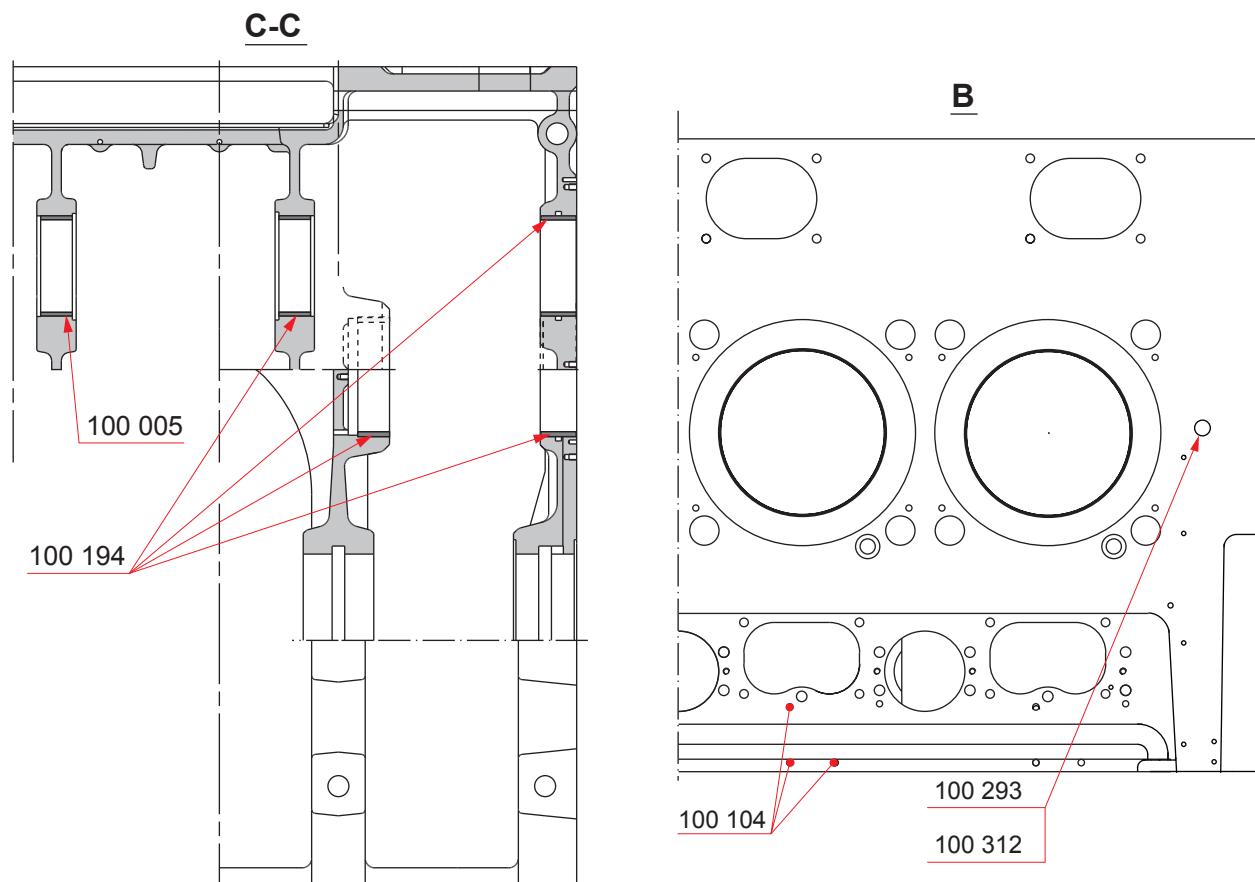
Edition: G
 Page: 2(4)
 Updated: 10.07.2013

Engine block



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 001	Engine block	1	-
100 006	Sealing push-in cap	*	0.1
100 010	Round nut	*	1.6
100 024	Cylinder head screw	*	11.3
100 025	O-ring	*	-
100 098	Screw	8	-
100 099	Washer	4	-
100 100	Pin	4	-
100 102	Screw	*	-
100 103	Screw	4	0.3
100 106	Screw	4	0.3
100 215	Plug	*	-
100 216	Sealing ring	*	-
100 268	Plug	1	-
100 269	Sealing ring	1	-
100 007	Main bearing shell, upper	*	-
100 008	Main bearing shell, lower	*	-
100 028	Thrust bearing	4	-
387 018	Glue compound	1	-

NOTE! *) See page 4.

Engine block

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 005	Camshaft bearing bush	*	-
100 104	Screw	*	0.1
100 194	Bearing bush	4	-
100 293	Plug	1	0.1
100 312	Sealing ring	1	-

NOTE! *) See page 4.

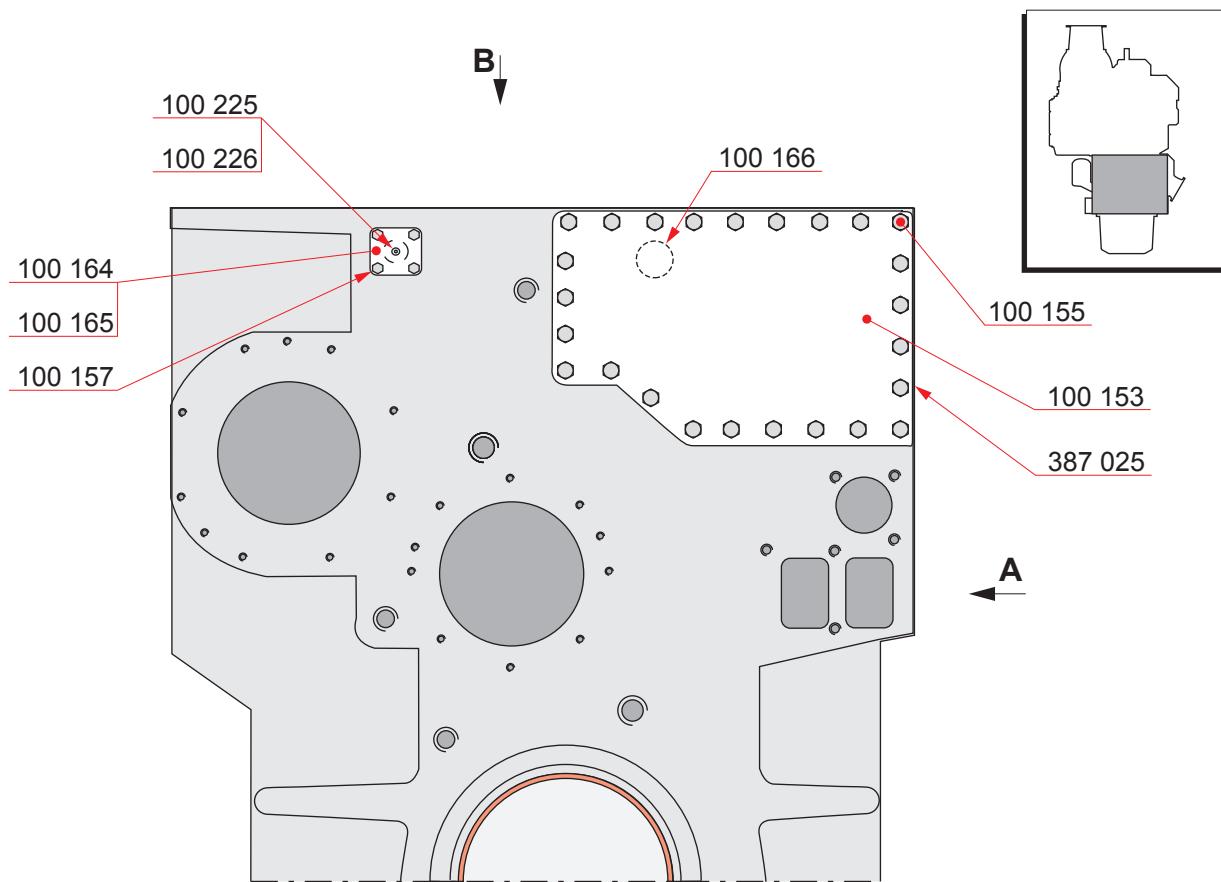
Edition: G
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Updated: 10.07.2013

Engine block

Quantity according to number of cylinders

Part No	Pieces		
	6L32	8L32	9L32
100 005	6	8	9
100 006	7	9	10
100 007	8	10	11
100 008	8	10	11
100 010	40	52	58
100 013	16	20	22
100 015	16	20	22
100 017	16	20	22
100 024	24	32	36
100 025	24	32	36
100 027	16	20	22
100 097	16	20	22
100 102	24	32	36
100 104	15	21	24
100 215	6	8	9
100 216	6	8	9

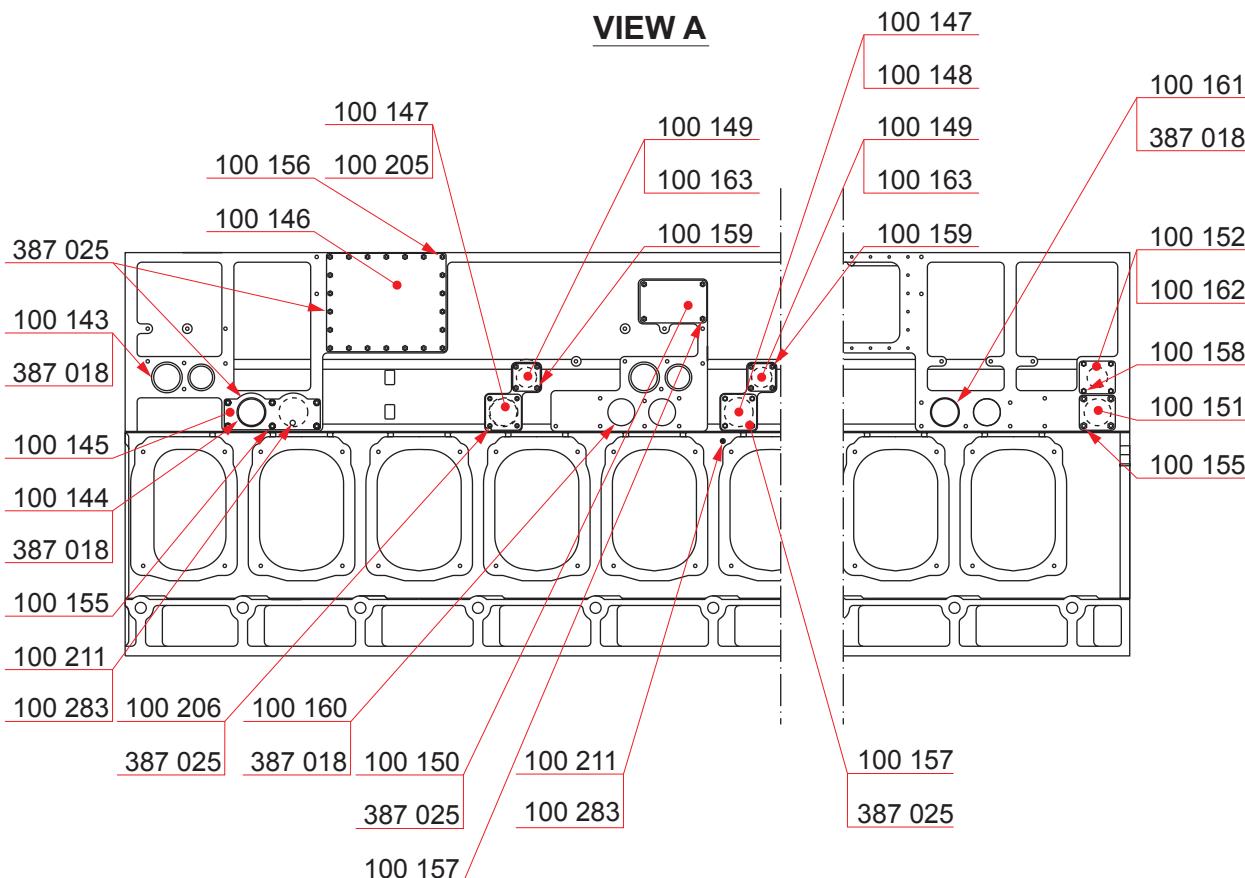
Engine block, TC in free end



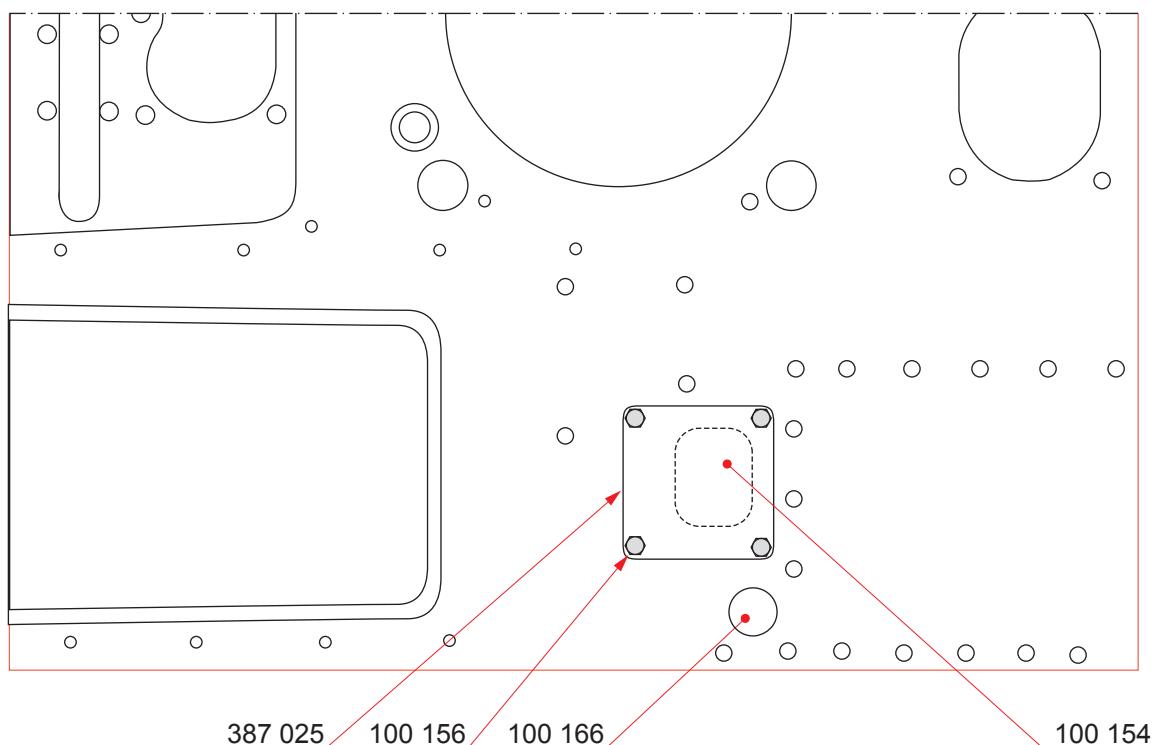
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 153	Flange	1	-
100 155	Screw	35	-
100 157	Screw	4	-
100 164	Gasket	1	-
100 165	Blind flange	1	-
100 166	Sealing push-in cap	2	-
100 225	Plug	1	-
100 226	Sealing ring	1	-
387 025	Glue compound	1	-

Edition: H
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 Updated: 09.02.2010

Engine block, TC in free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 143	Sleeve	1	-	387 018	Glue compound	1	-
100 144	Sleeve	1	-	387 025	Glue compound	1	-
100 145	Flange	1	-		NOTE! *) See page 4.		
100 146	Flange	1	-				
100 147	Flange	*	-				
100 148	Flange	*	-				
100 149	Flange	*	-				
100 150	Flange	*	-				
100 151	Flange	1	-				
100 152	Flange	1	-				
100 155	Screw	35	-				
100 156	Screw	26	-				
100 157	Screw	*	-				
100 158	Screw	4	-				
100 159	Screw	*	-				
100 160	Sleeve	1	-				
100 161	Sleeve	1	-				
100 162	O-ring	1	-				
100 163	O-ring	*	-				
100 205	Flange	*	-				
100 206	Screw	*	-				
100 211	Plug	2	-				
100 283	Sealing ring	2	-				

Engine block, TC in free end**VIEW B**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 154	Flange	1	-
100 156	Screw	26	-
100 166	Sealing push-in cap	2	-
387 025	Glue compound	1	-

Edition: H

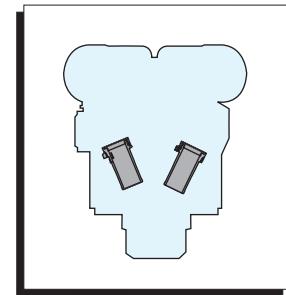
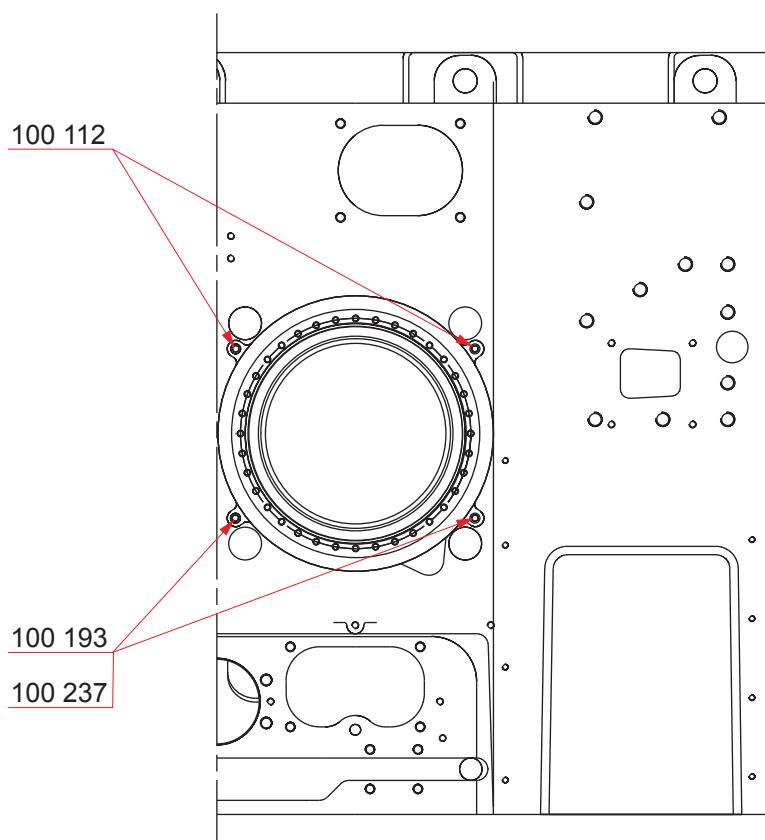
Page: 4(4)

Updated: 09.02.2010

Engine block, TC in free end**Quantity according to number of cylinders**

Part No. and Description	Quantity in pieces	
	6L	8L
100 147 Flange	-	2
100 148 Flange	-	1
100 149 Flange	-	2
100 150 Flange	-	1
100 157 Screw	4	12
100 159 Screw	-	8
100 163 O-ring	-	2
100 205 Flange	-	1
100 206 Screw	-	4

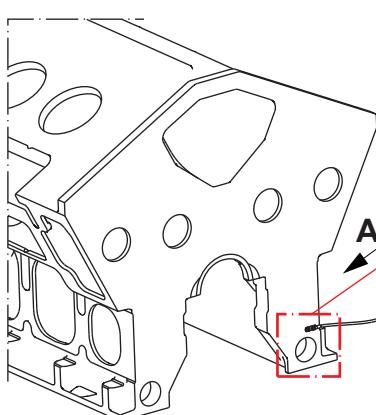
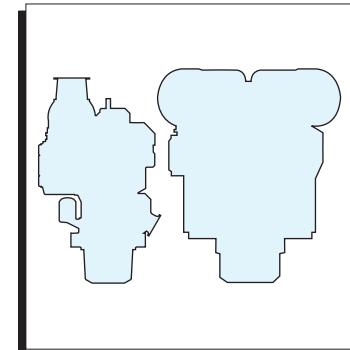
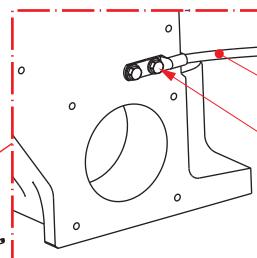
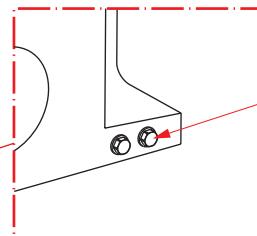
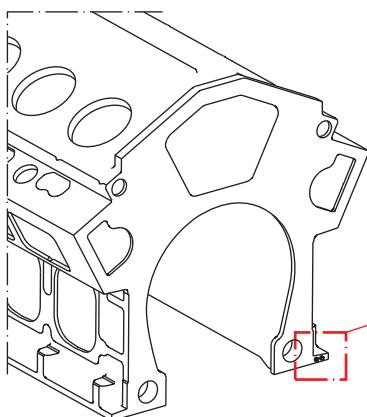
Cylinder liner fastening equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 112	Screw	2	-
100 193	Screw	2	0.1
100 237	Clamp	2	-

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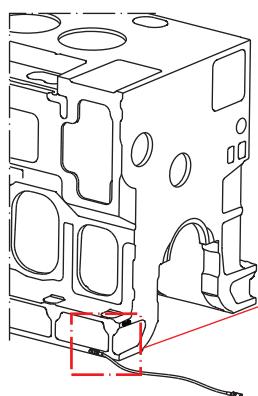
Grounding equipment

**V-Engine****Alternative location**

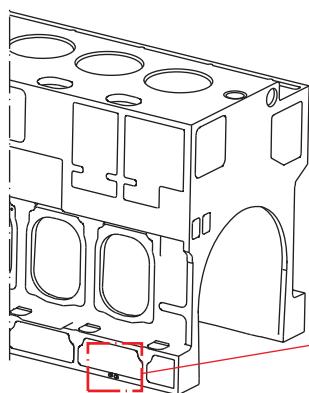
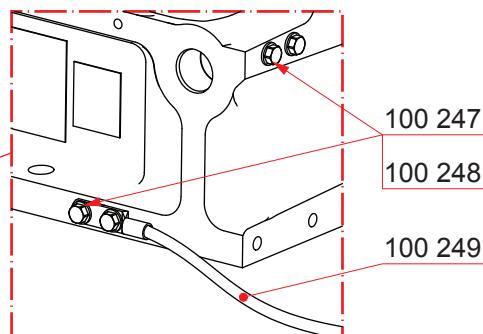
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 247	Screw	4	-
100 248	Washer	4	-
100 249	Cable set	1	-

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Updated: 15.04.2009

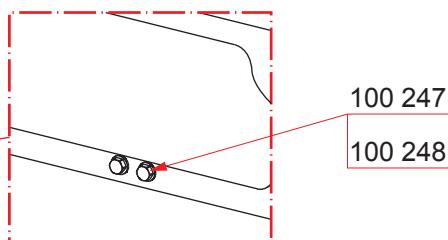
Grounding equipment



L-Engine

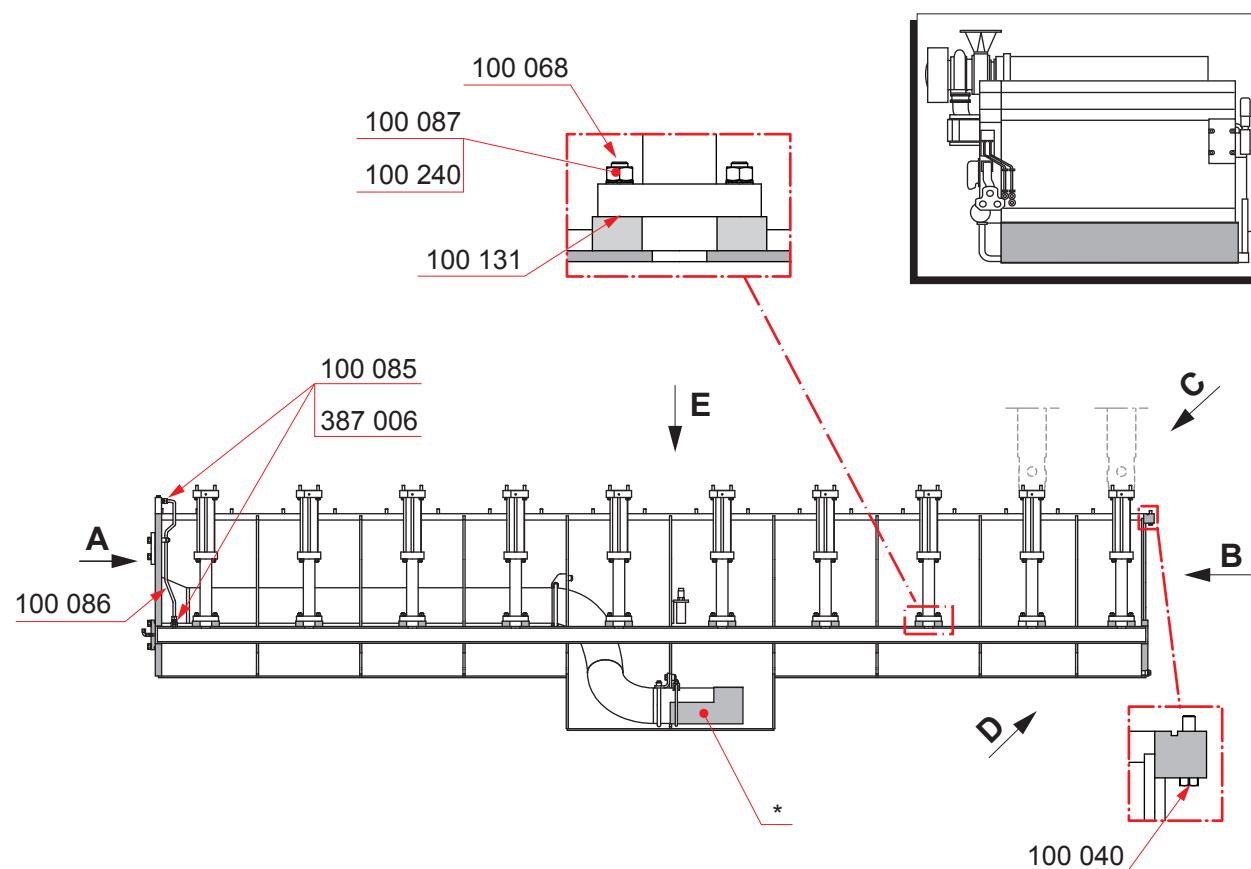


Alternative location



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 247	Screw	4	-
100 248	Washer	4	-
100 249	Cable set	1	-

Wet sump

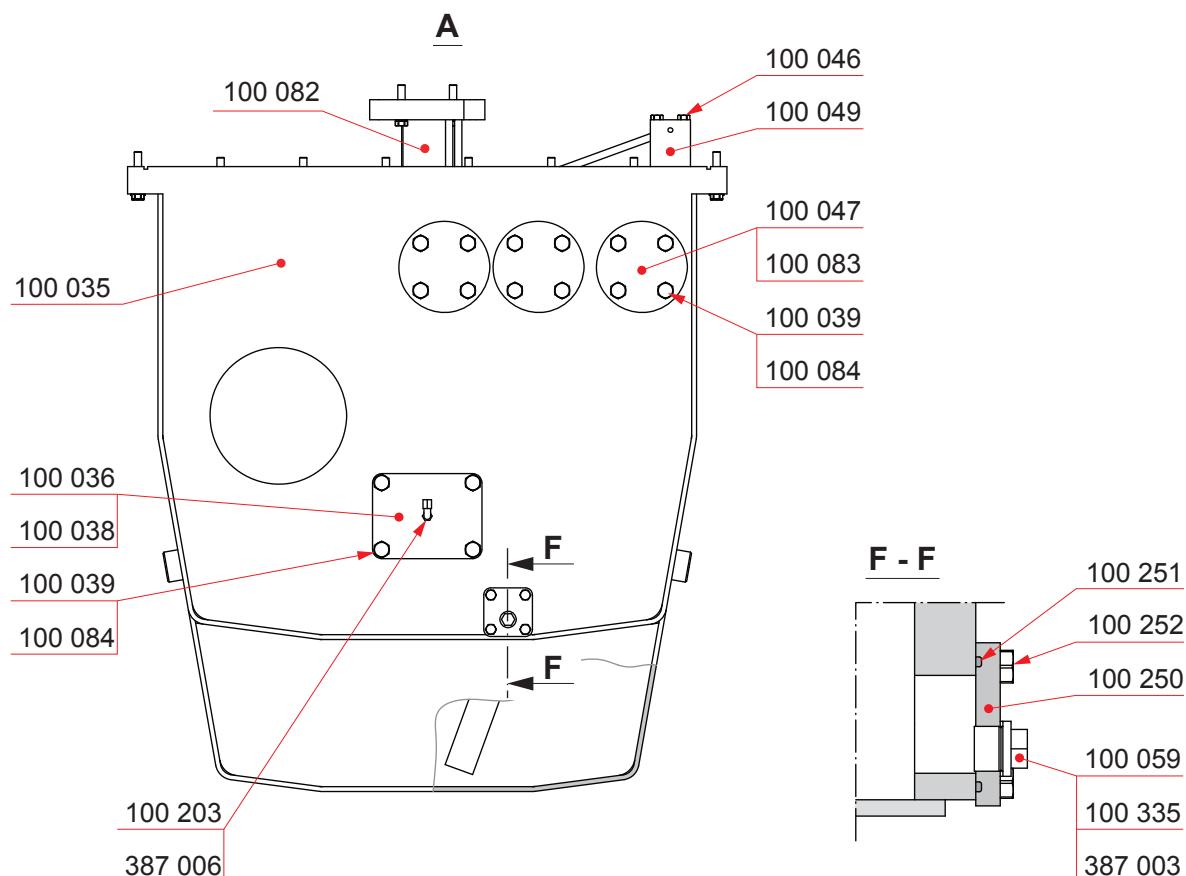


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 040	Screw	28	-
100 068	Screw	20	-
100 085	Pipe union	2	-
100 086	Pipe	1	0.4
100 087	Washer	52	-
100 131	O-ring	2	-
100 240	Nut	24	-
387 006	Glue compound	1	-

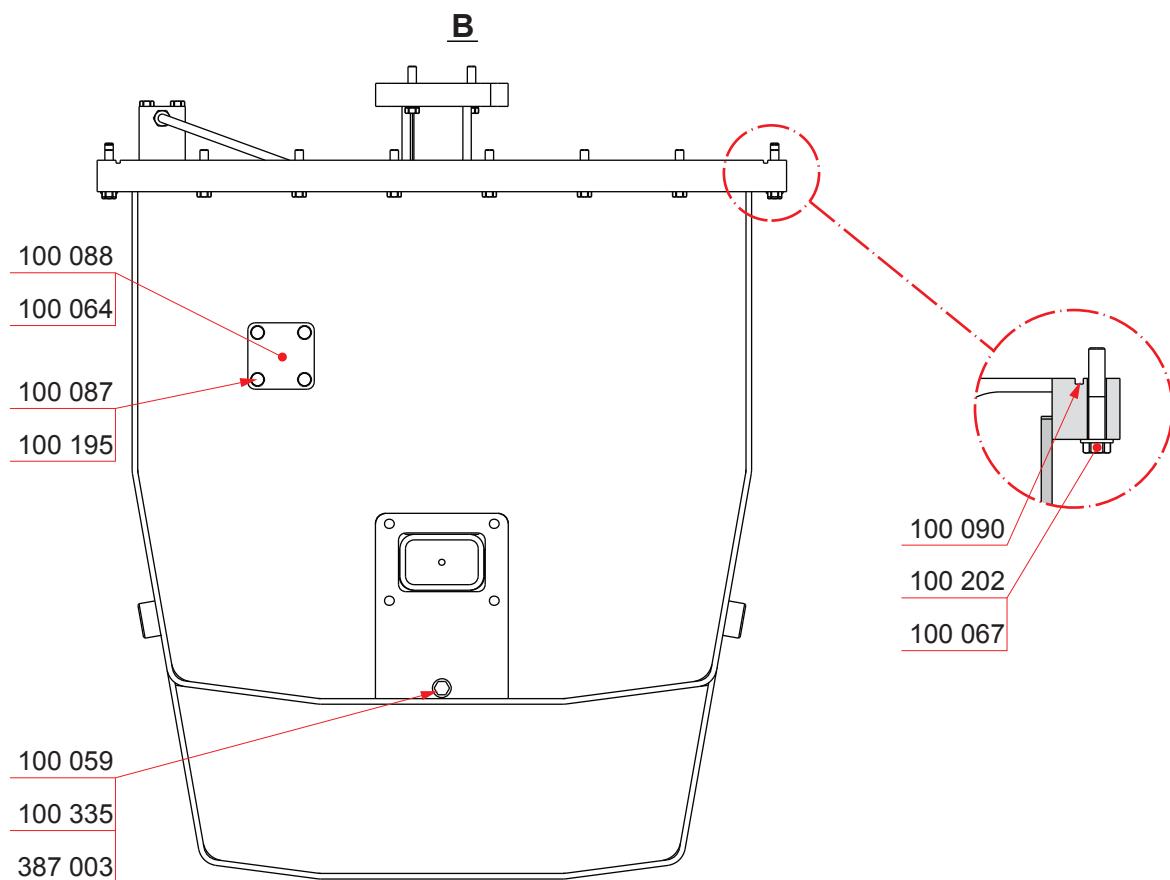
NOTE! * See section 100-

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 Updated: 04.12.2013

Wet sump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 035	Oil sump	1	1490
100 036	Flange	1	3.6
100 038	O-ring	1	-
100 039	Screw	16	-
100 046	Screw	2	-
100 047	Flange	3	2.4
100 049	Adapter piece	1	1.0
100 059	Plug	2	-
100 082	Hydraulic jack for main bearing cap	10	15.4
100 083	Gasket	3	-
100 084	Washer	16	-
100 203	Pipe union	1	-
100 250	Flange	1	0.6
100 251	O-ring	1	-
100 252	Screw	4	-
100 335	Sealing ring	2	-
387 003	Glue compound	1	-
387 006	Glue compound	1	-

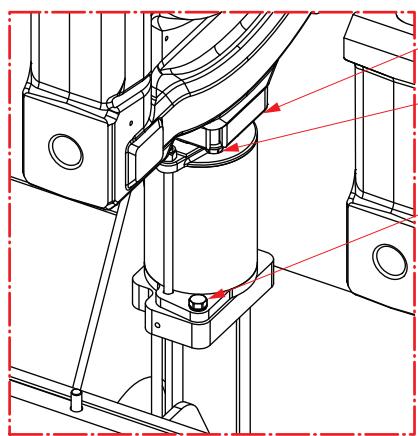
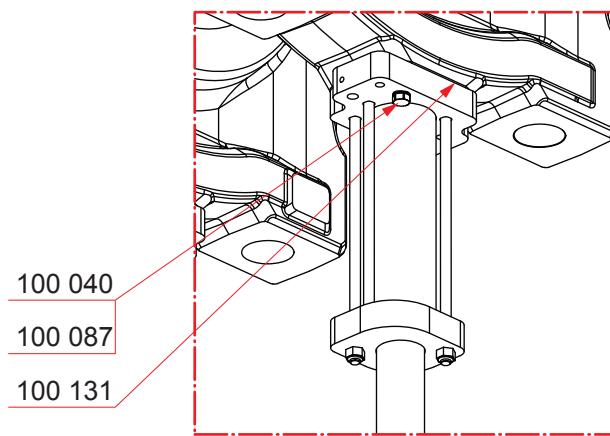
Wet sump

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 059	Plug	2	-
100 064	O-ring	1	-
100 067	Screw	42	-
100 087	Washer	52	-
100 088	Flange	1	0.9
100 090	Rubber band *	1	-
100 195	Screw	4	-
100 202	Washer	42	-
100 335	Sealing ring	2	-
387 003	Glue compound	1	-

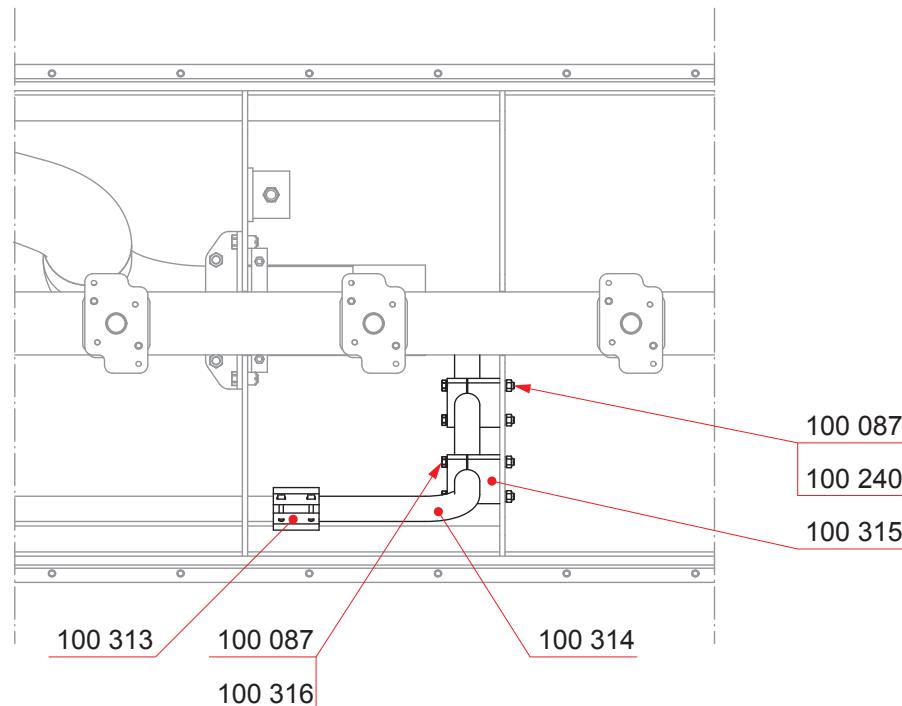
NOTE! *) Length needed when ordering.

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Wet sump

CD

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 040	Screw	28	-
100 087	Washer	52	-
100 131	O-ring	2	-
100 214	Washer	20	-
471 123	Screw	20	-

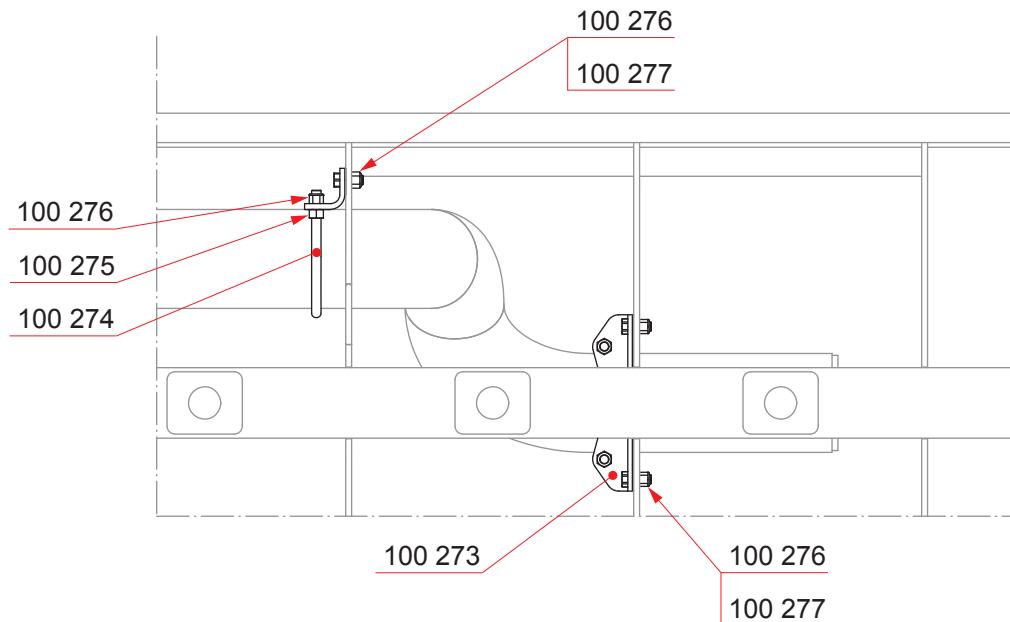
Wet sump**E**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 087	Washer	52	-
100 240	Nut	24	-
100 313	Flexible coupling	1	1.0
100 314	Pipe	1	3.9
100 315	Pipe clamp	2	-
100 316	Screw	4	0.1

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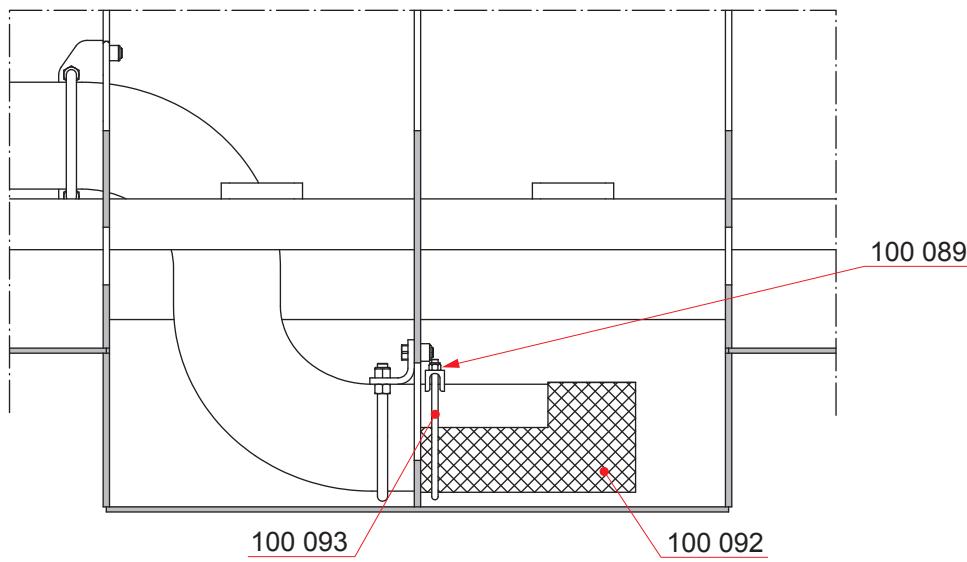
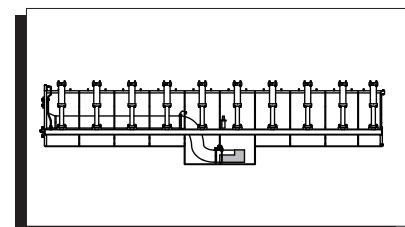
Wet sump

E



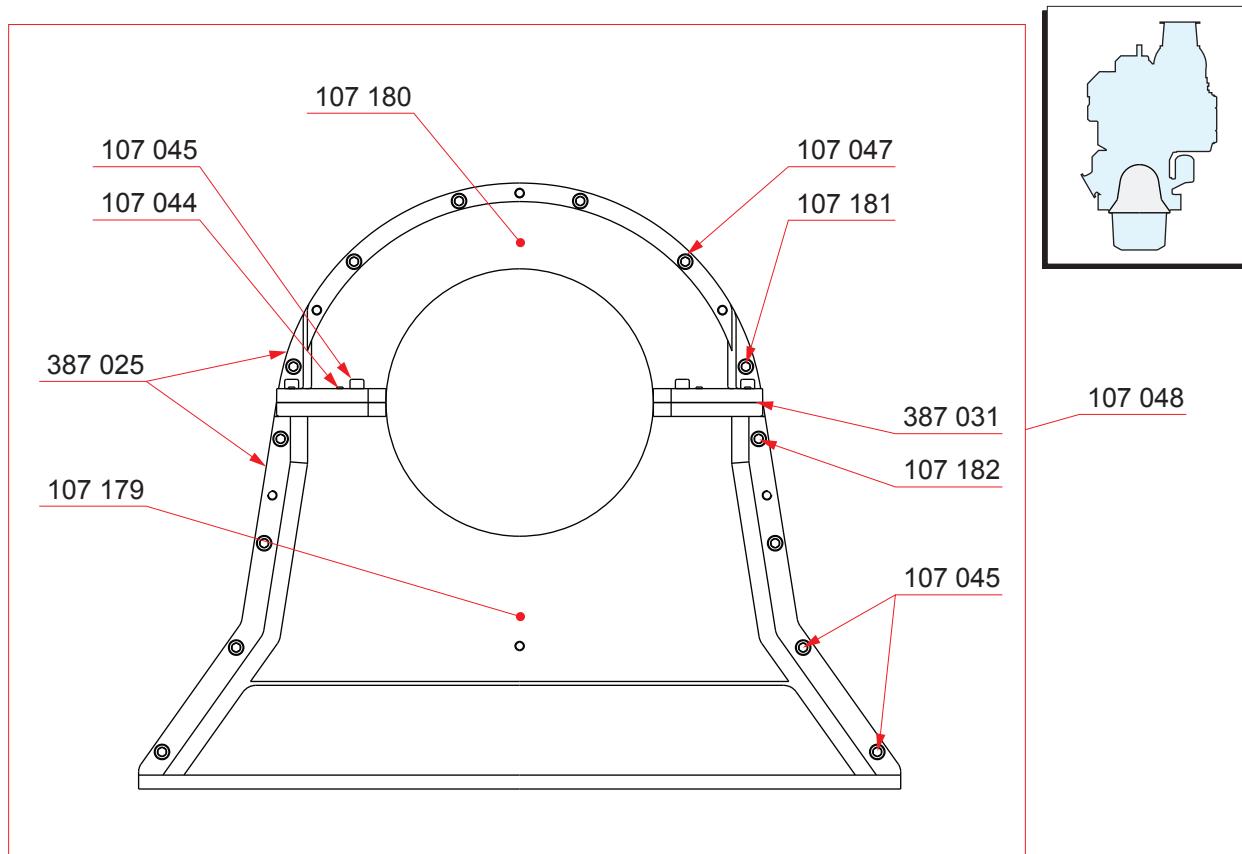
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 273	Bracket	2	2.6
100 274	U-strap	2	0.8
100 275	Nut	4	-
100 276	Nut	8	-
100 277	Screw	4	-

Oil strainer for suction pipe



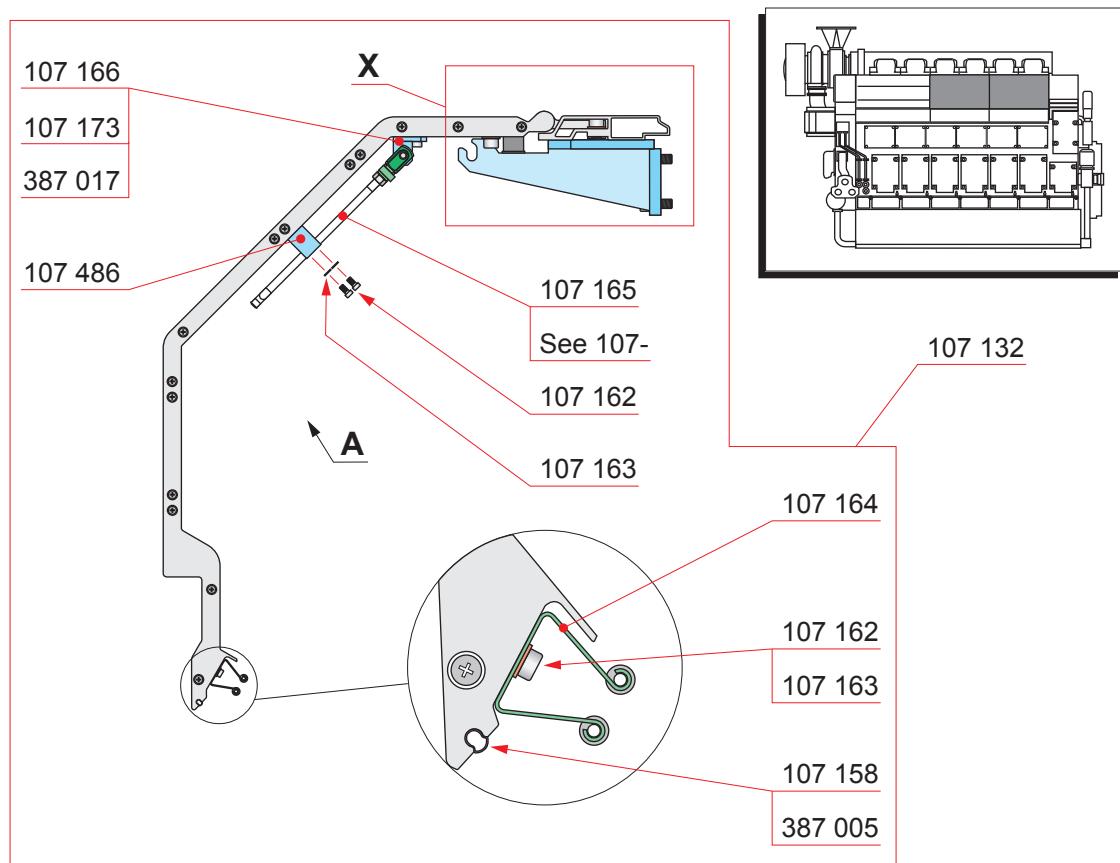
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 089	Nut	2	-
100 092	Plate	1	-
100 093	Clamp	1	1.3

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End cover

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 048	End cover, compl.	1	-
107 044	Pin	4	-
107 045	Screw	4	-
107 047	Screw	4	-
107 179	End cover	1	-
107 180	End cover	1	-
107 181	Screw	2	-
107 182	Screw	8	-
387 025	Glue compound	1	-
387 031	Glue compound	1	-

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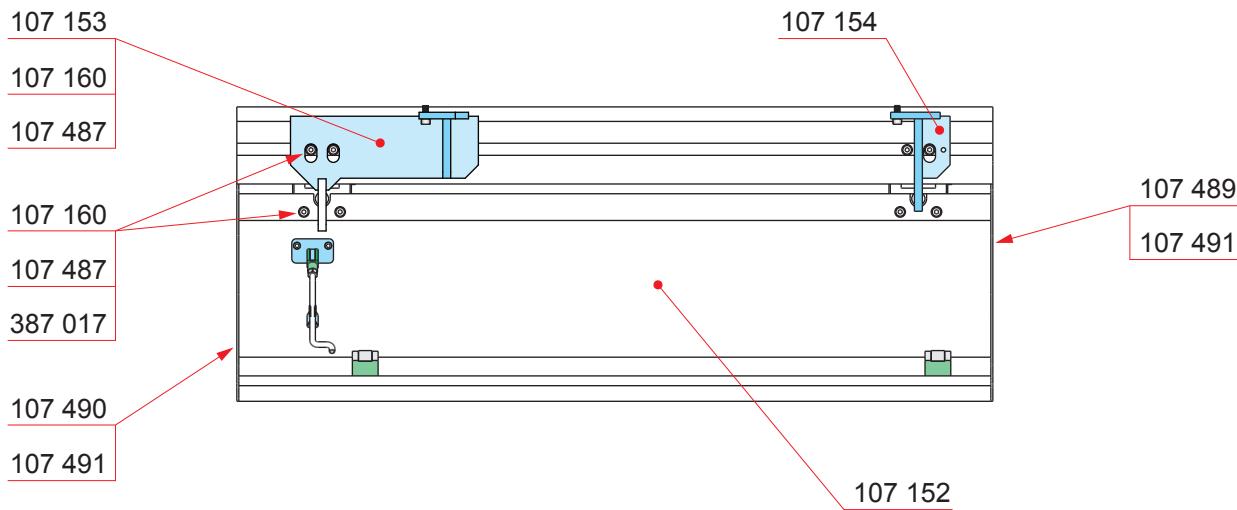
Side cover L32

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 132	Side cover, upper part	1	-
107 158	Hose gasket	1	-
107 162	Screw	6	-
107 163	Washer	6	-
107 164	Pressure plate	2	-
107 165	Support	1	-
107 166	Screw	2	-
107 173	Support	1	-
107 486	Pressure plate	1	-
387 005	Glue compound	1	-
387 017	Glue compound	1	-

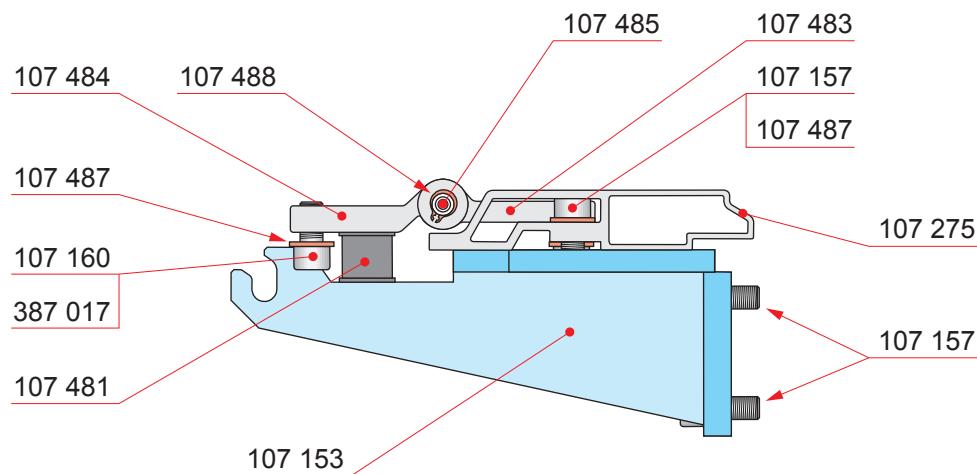
Edition: B
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Side cover L32

View A

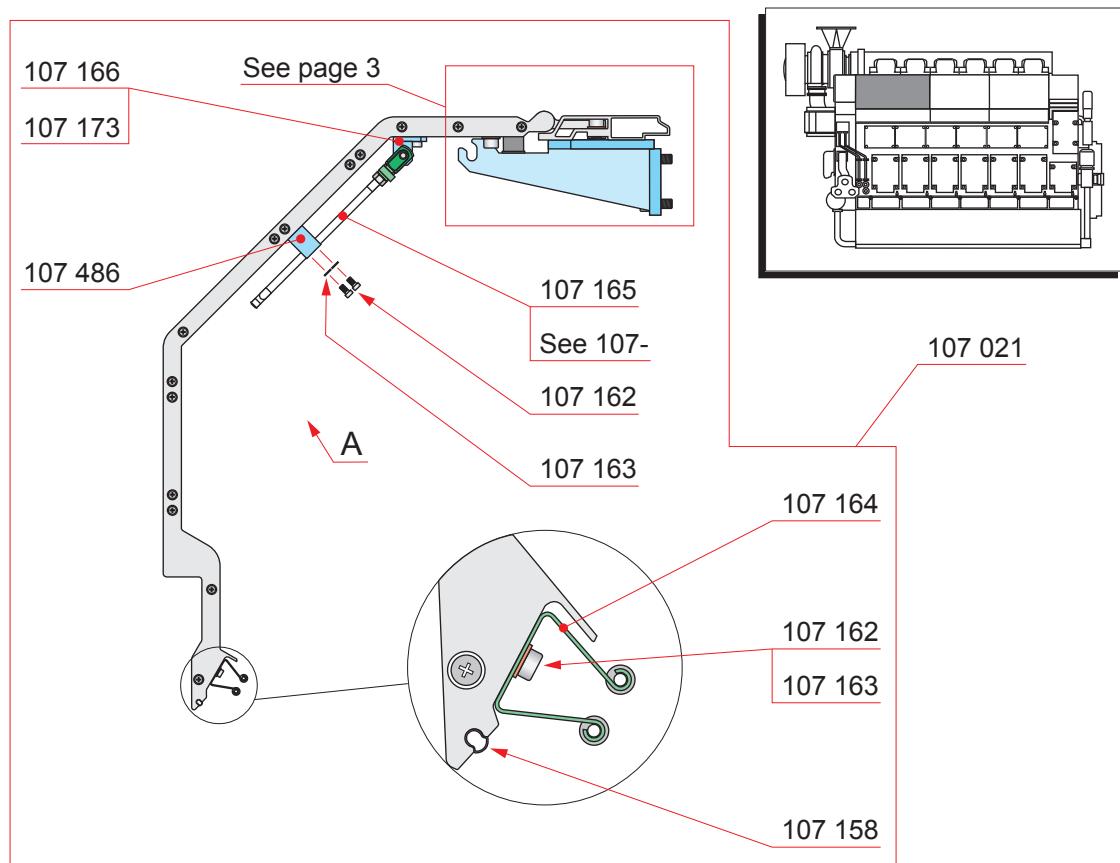


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 152	Cover	1	-
107 489	End plate	1	-
107 490	End plate	1	-
107 491	Screw	24	-
107 153	Bracket	1	-
107 154	Bracket	1	-
107 160	Screw	8	-
107 487	Washer	10	-
387 017	Glue compound	1	-

Side cover L32**Detail X**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 153	Bracket	1	-
107 157	Screw	6	-
107 160	Screw	8	-
107 275	Side cover, upper part	1	-
107 481	Rubber element	2	-
107 483	Hinge	2	-
107 484	Hinge	2	-
107 485	Hinge shaft	2	-
107 487	Washer	10	-
107 488	Retaining ring	2	-
387 017	Glue compound	1	-

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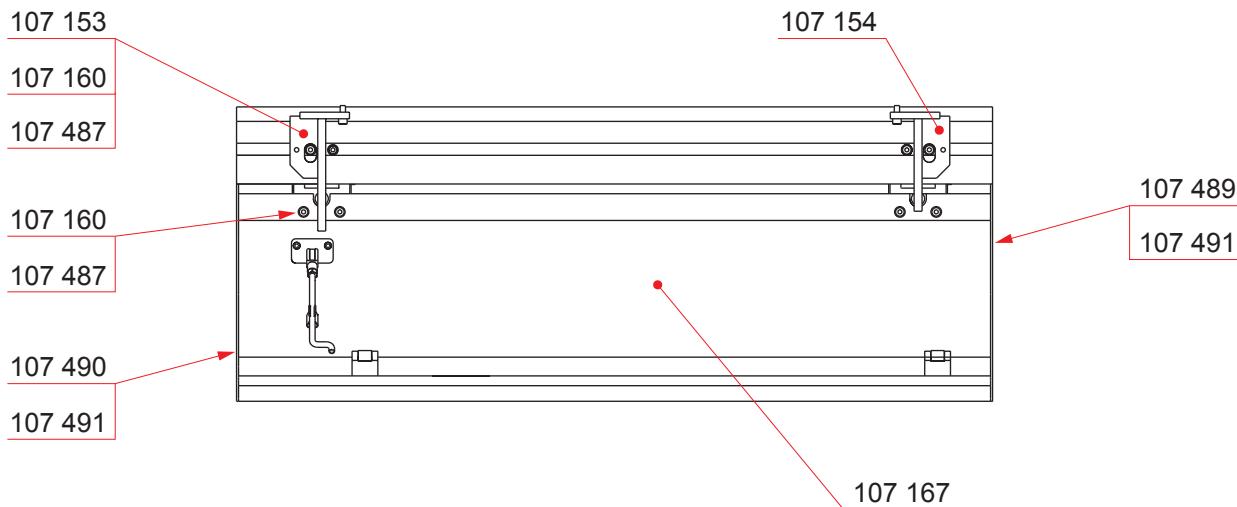
Side cover L32

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 021	Side cover, upper part	1	30.0
107 158	Hose gasket	1	-
107 162	Screw	6	-
107 163	Washer	6	-
107 164	Pressure plate	2	-
107 165	Support	1	-
107 166	Screw	2	-
107 173	Support	1	-
107 486	Pressure plate	1	-

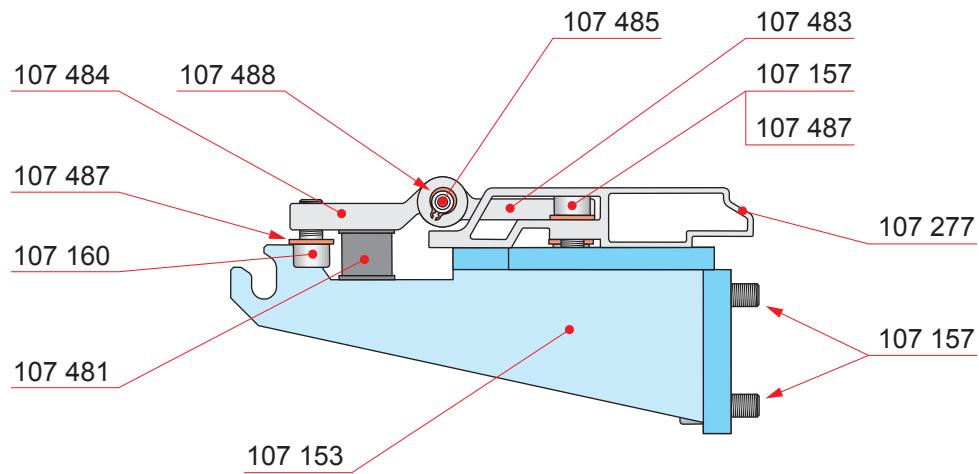
Edition: B
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Updated: 08.03.2001

Side cover L32

View A



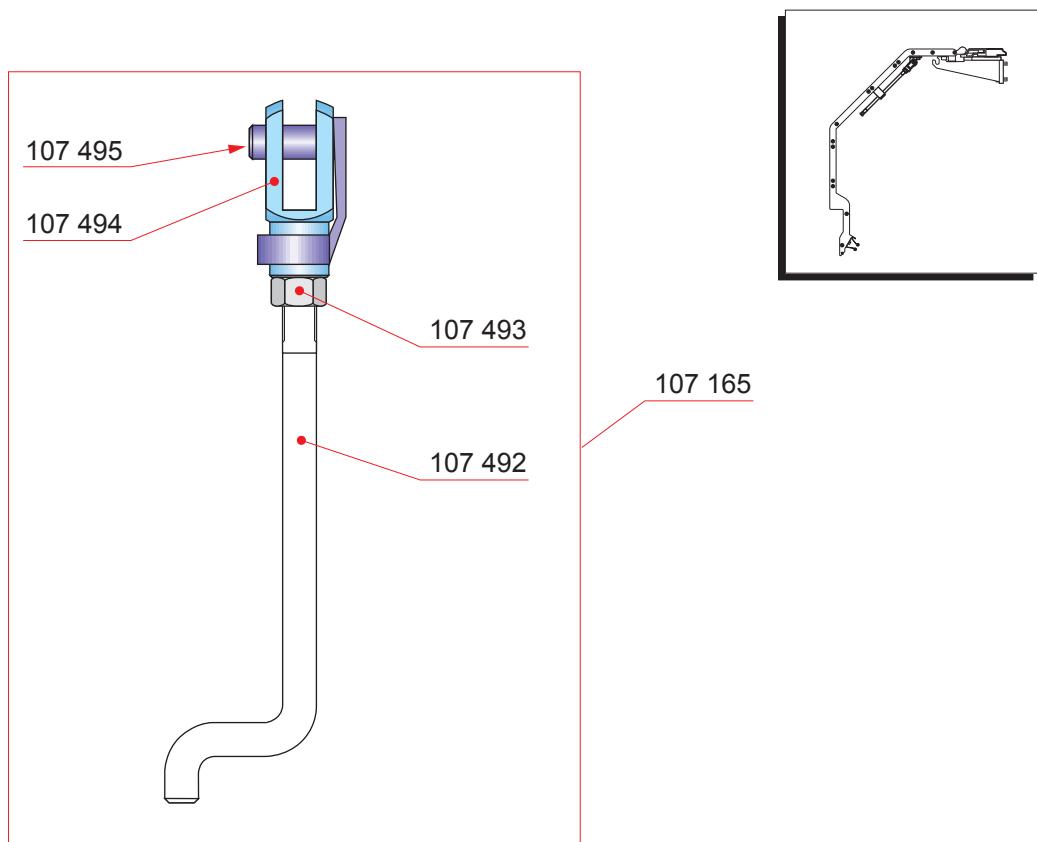
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 153	Bracket	1	1.1
107 154	Bracket	1	1.1
107 160	Screw	8	-
107 167	Cover	1	21.7
107 489	End plate	1	3.5
107 490	End plate	1	3.5
107 491	Screw	24	-
107 487	Washer	10	-

Side cover L32

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 153	Bracket	1	1.1
107 157	Screw	6	-
107 160	Screw	8	-
107 277	Side cover, upper part	1	-
107 481	Rubber element	2	-
107 483	Hinge	2	0.3
107 484	Hinge	2	0.2
107 485	Hinge shaft	2	-
107 487	Washer	10	-
107 488	Retaining ring	2	-

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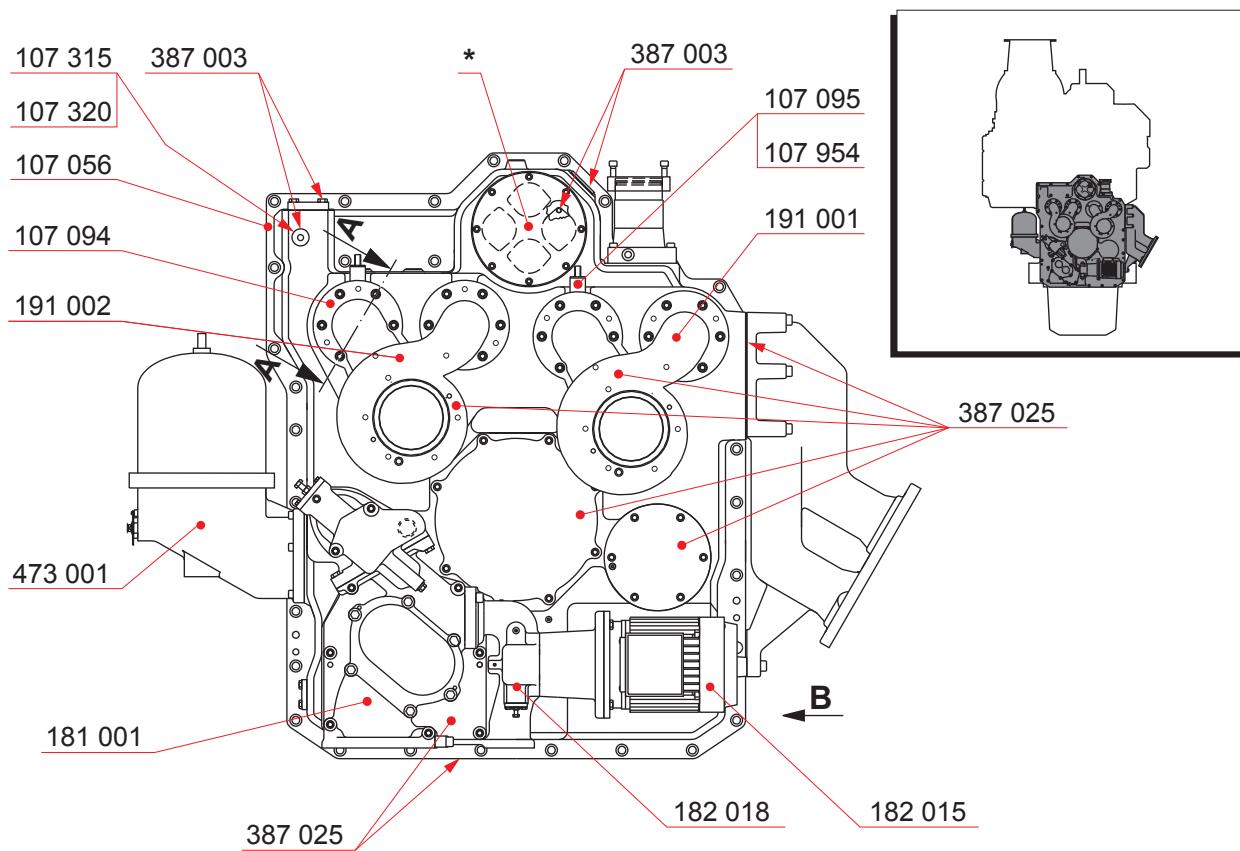
Support for side cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 165	Support	1	0.4
107 492	Round bar	1	-
107 493	Nut	1	-
107 494	Joint yoke	1	-
107 495	Securing pin	1	-

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Pump cover assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 056	Pump cover	1	-
107 094	Valve (1)	2	-
107 095	Valve	2	-
107 954	Sealing set	1	-
107 315	Plug	1	-
107 320	Sealing ring	1	-
181 001	Lubricating oil pump (2)	1	-
182 015	Electrical motor	1	-
182 018	Prelubricating oil pump (3)	1	-
191 001	HT water pump (4)	1	-
191 002	LT water pump (4)	1	-
473 001	Centrifugal filter (5)	1	-
387 003	Glue compound	1	-
387 025	Glue compound	1	-

NOTE! (1) See page 4.

NOTE! (2) See section 181-

NOTE! (3) See section 182-

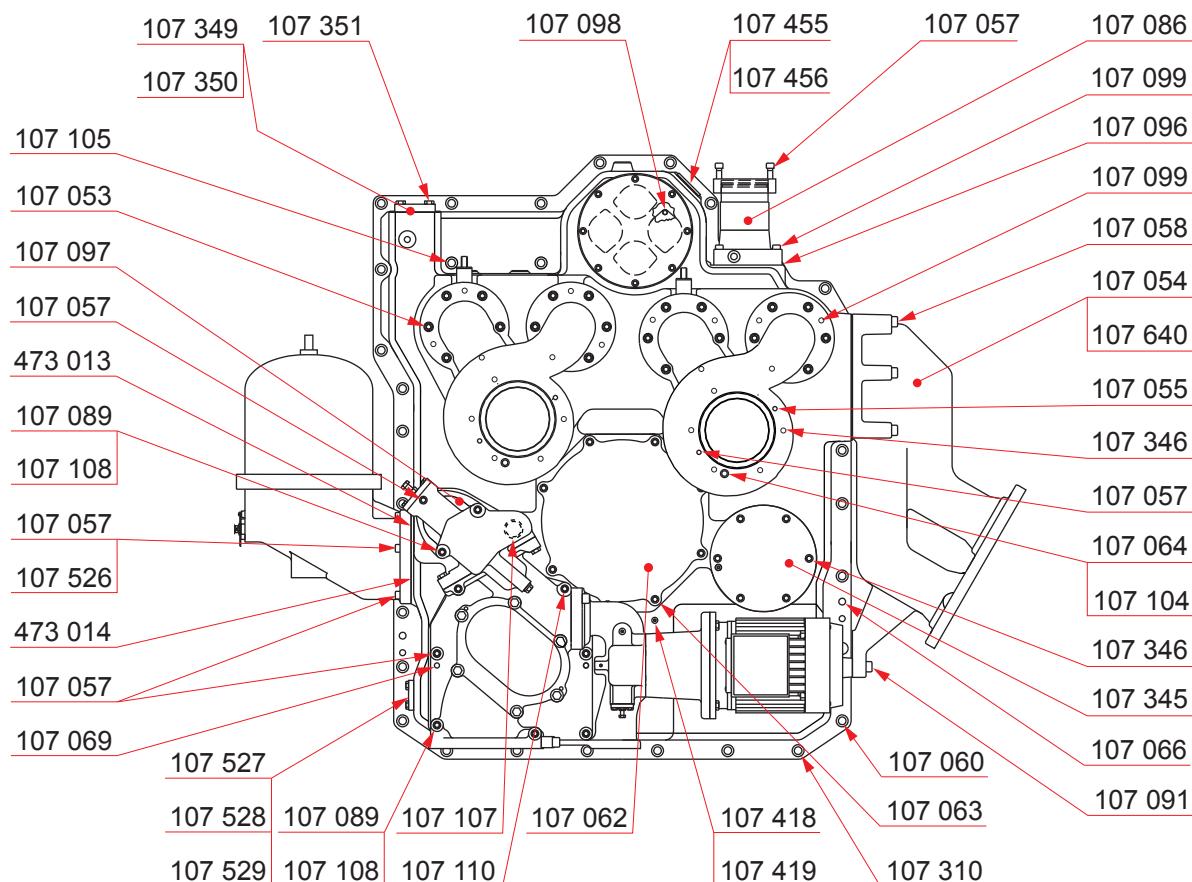
NOTE! (4) see section 191-

NOTE! (5) See section 473-

NOTE! *) See section 196-

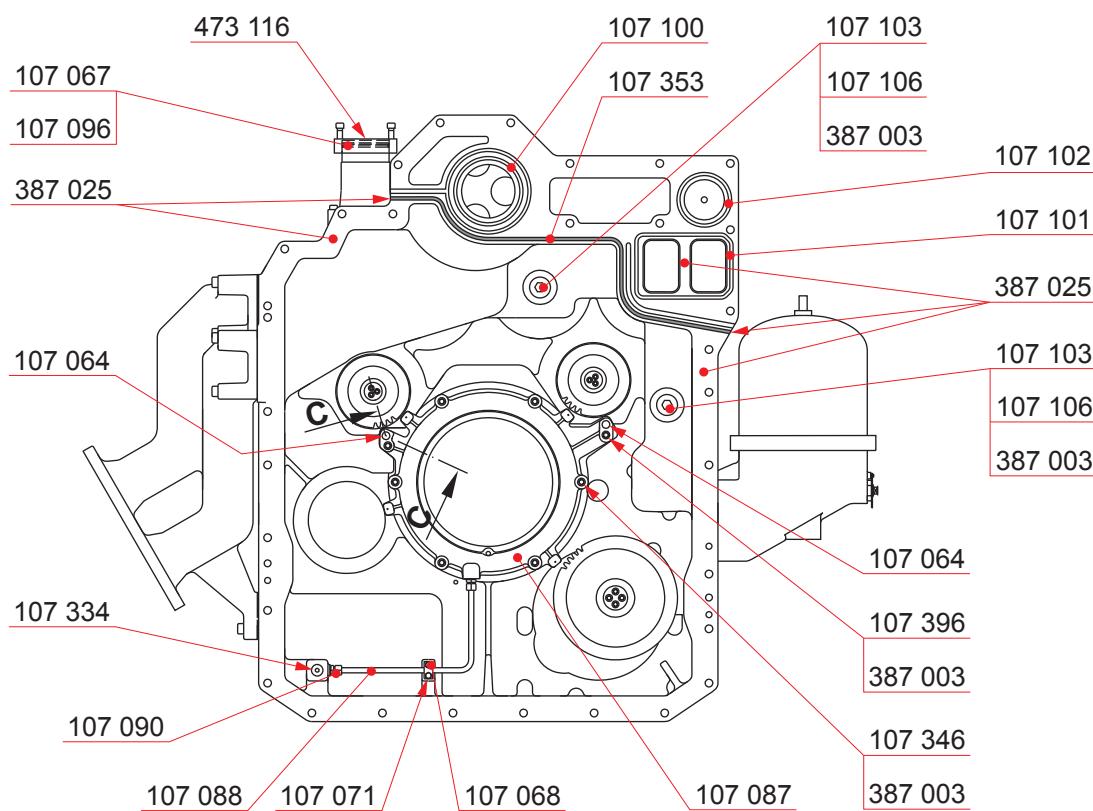
Edition: H
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 Updated: 15.08.2012

Pump cover assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 053	Screw	20	-	107 310	Screw	6	-
107 054	Water connection	1	-	107 345	Flange	1	-
107 055	Pin	4	-	107 346	Screw	22	-
107 057	Screw	18	-	107 349	Flange	1	-
107 058	Screw	7	-	107 350	O-ring	1	-
107 060	Screw	25	-	107 351	Screw	4	-
107 062	Cover	1	-	107 418	Plug	1	-
107 063	Screw	8	-	107 419	Sealing ring	1	-
107 064	O-ring	4	-	107 455	Plug	1	-
107 066	Pin	2	-	107 456	Sealing washer	1	-
107 069	Pin	2	-	107 526	Washer (2)	6	-
107 086	Distance piece	1	-	107 527	Blind flange	1	-
107 089	Screw	4	-	107 528	O-ring	1	-
107 091	Screw	2	-	107 529	Screw	4	-
107 096	O-ring	2	-	107 640	O-ring	3	-
107 097	O-ring	1	-	473 013	O-ring	1	-
107 098	Screw	8	-	473 014	O-ring	1	-
107 099	Screw	14	-				
107 104	Nipple	2	-		NOTE!		(2) Not used in all installations.
107 105	Screw	2	-				
107 107	O-ring	1	-				
107 108	Nut	4	-				
107 110	Screw	2	-				

Pump cover assembly



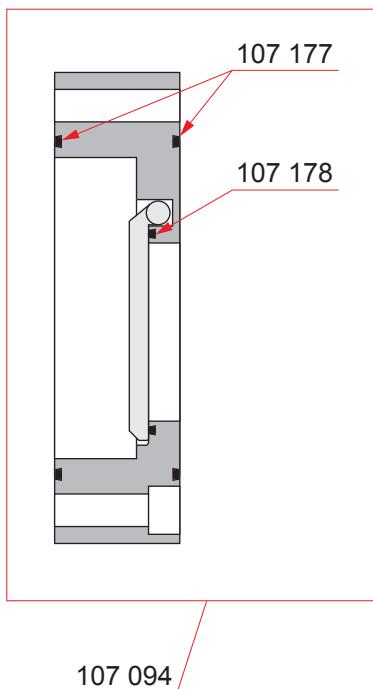
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 064	O-ring	4	-
107 067	Flange	1	-
107 068	Pipe clamp	1	-
107 071	Screw	2	-
107 087	Oil distributor	1	-
107 088	Pipe	1	-
107 090	Pipe union	1	-
107 096	O-ring	2	-
107 100	O-ring	1	-
107 101	O-ring	1	-
107 102	O-ring	1	-
107 103	Plug	2	-
107 106	Sealing ring	2	-
107 334	O-ring	1	-
107 346	Screw	22	-
107 353	Rubber band (3)	1	-
107 396	Screw	2	-
473 116	O-ring	1	-
387 003	Glue compound	1	-
387 025	Glue compound	1	-

NOTE! (3) L= 1000 mm

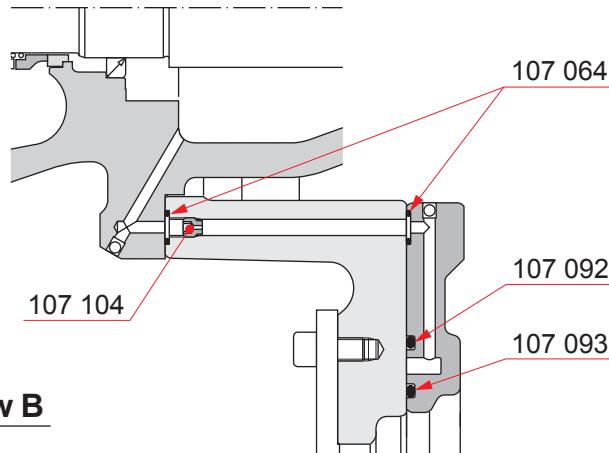
Edition: H
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 Updated: 15.08.2012

Pump cover assembly

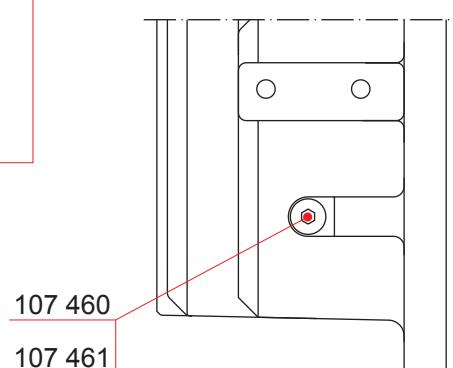
Section A - A



Section C - C

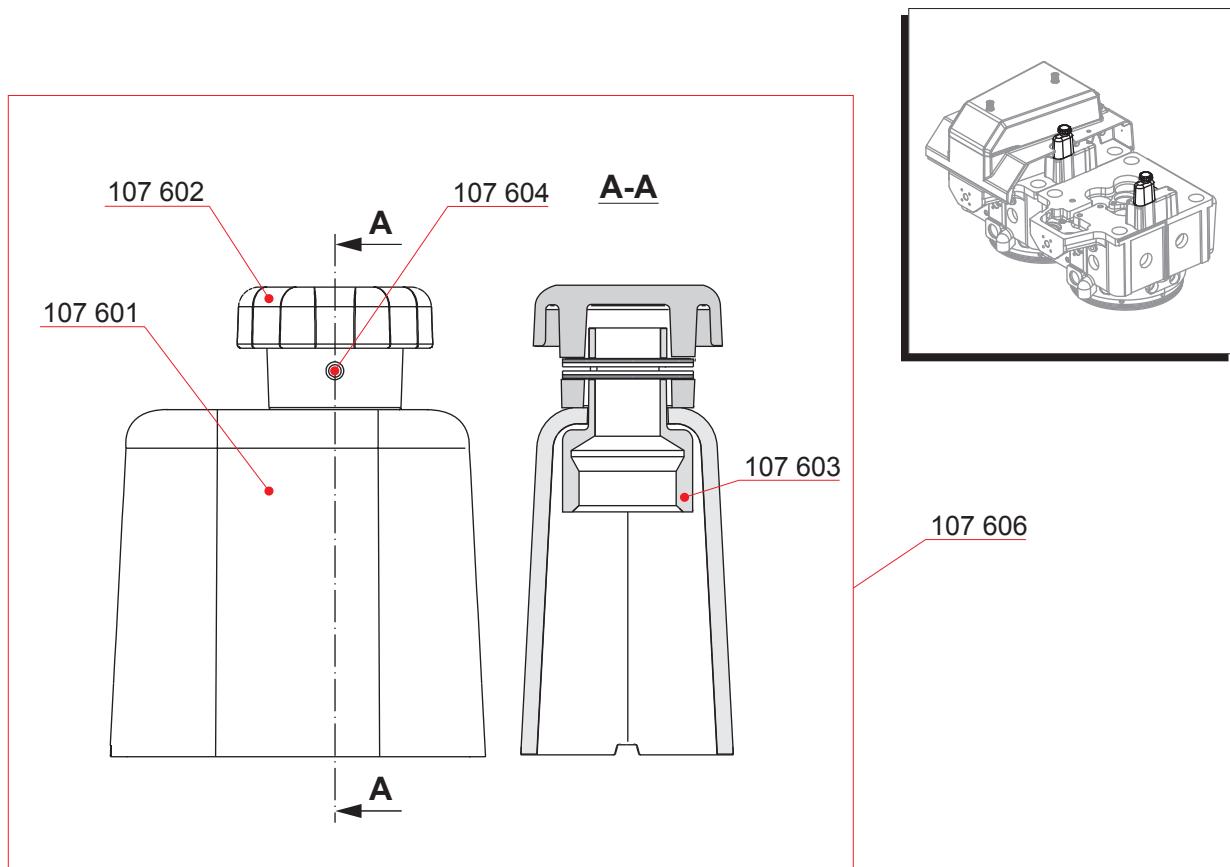


View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 064	O-ring	4	-
107 092	O-ring	1	-
107 093	O-ring	1	-
107 094	Valve	2	-
107 177	O-ring	2	-
107 178	O-ring	1	-
107 104	Nipple	2	-
107 460	Plug	1	-
107 461	Sealing ring	1	-

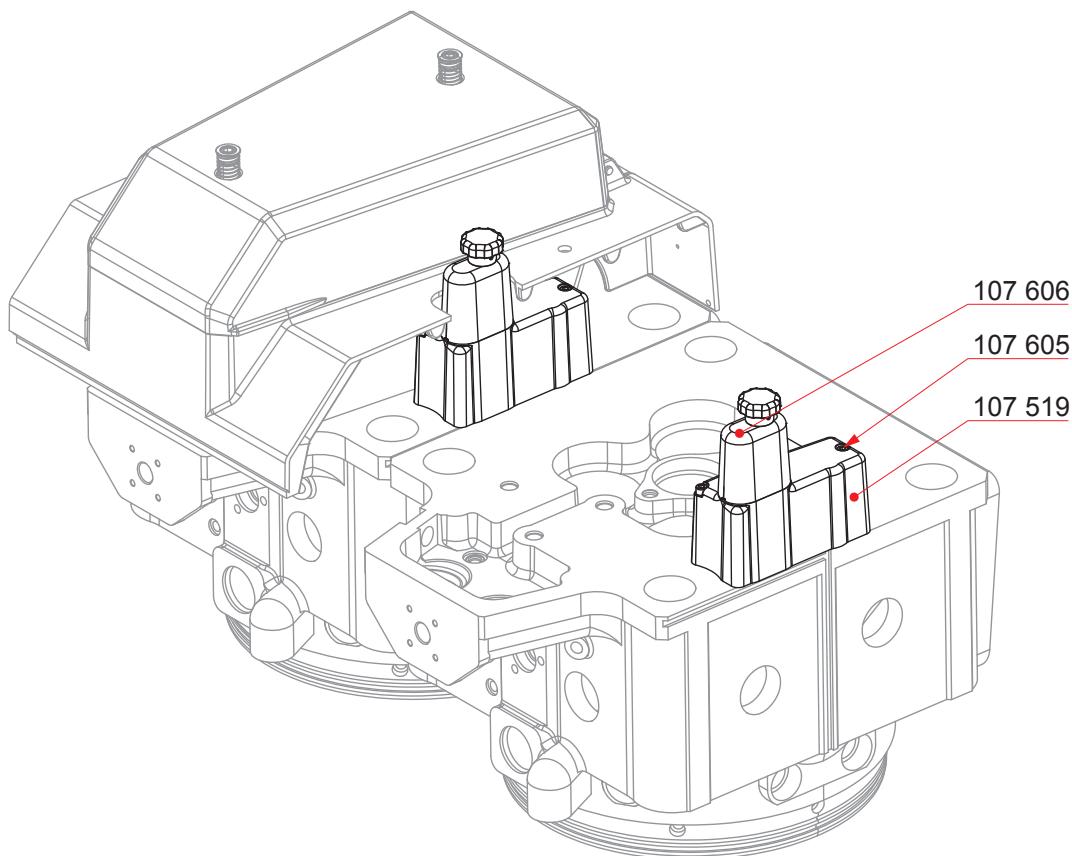
Heat shield for indicator valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 606	Heat shield	1	-
107 601	Cover	1	-
107 602	Cover	1	-
107 603	Support sleeve	1	-
107 604	Pin	1	-

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Heat shield for indicator valve

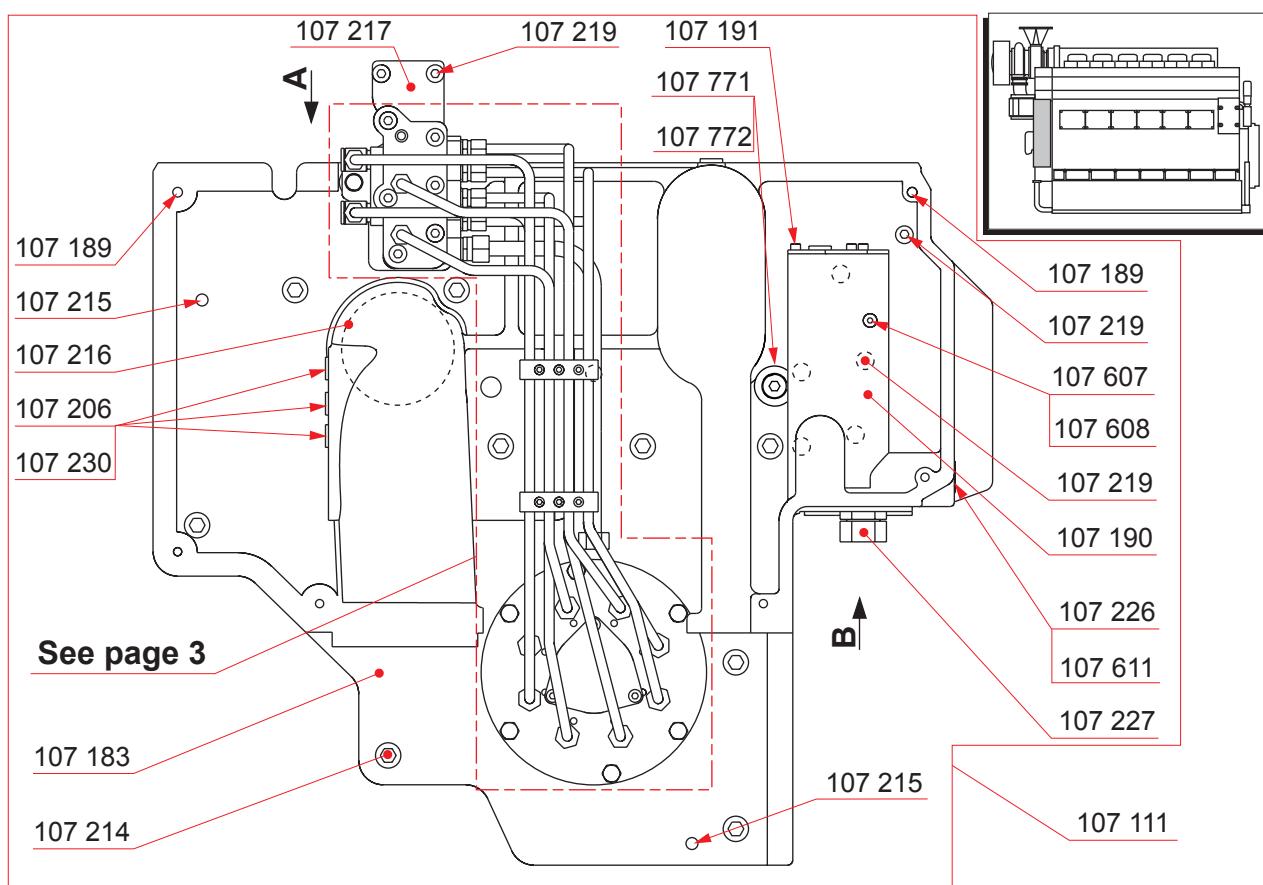


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 519	Cover for indicator valve	1	0.8
107 605	Screw	2	-
107 606	Heat shield (1)	1	0.3

NOTE! (1) See section 107-

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Multi cover

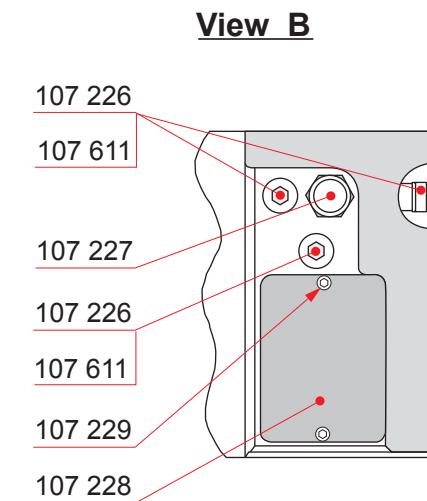
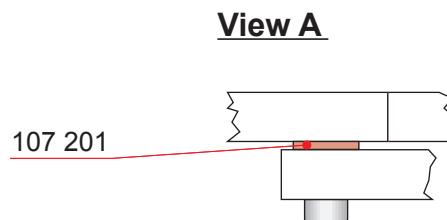
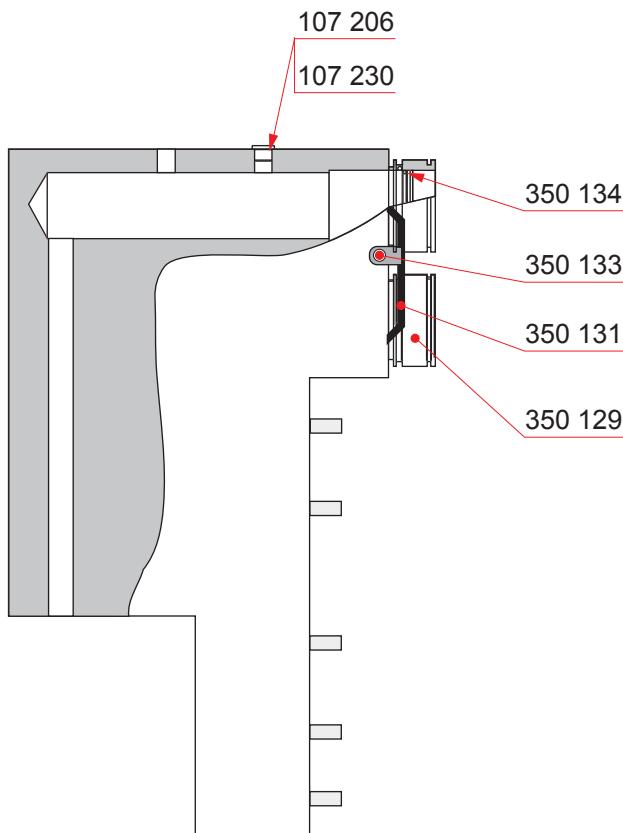


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 111	Cover	1	-
107 183	End cover	1	215
107 189	Screw	2	-
107 190	Cover	1	0.4
107 191	Screw	3	-
107 206	Plug	4	-
107 214	Screw	9	0.1
107 215	Pin	*	-
107 216	O-ring	1	-
107 217	Distribution piece	*	10.6
107 219	Screw	8	-
107 226	Plug	3	-
107 227	Pipe union	1	0.3
107 230	Sealing ring	4	-
107 607	Plug	1	-
107 608	Sealing ring	1	-
107 611	Sealing ring	3	-
107 771	Plug	1	-
107 772	O-ring	1	-

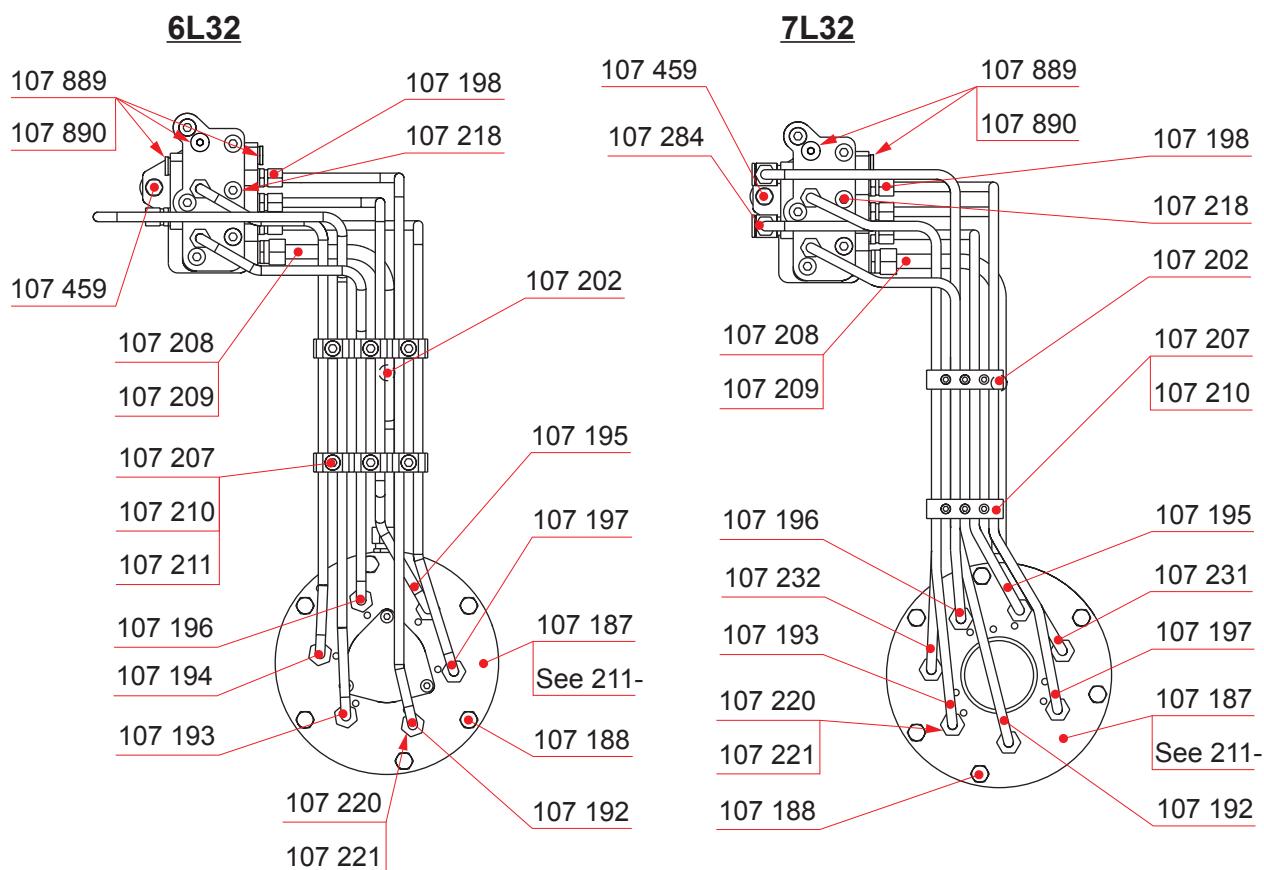
NOTE! * See page 5.

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 Updated: 16.10.2013

Multi cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 201	Washer	2	-
107 206	Plug	4	-
107 226	Plug	3	-
107 227	Pipe union	1	0.3
107 228	Cover	1	0.5
107 229	Screw	2	-
107 230	Sealing ring	4	-
107 611	Sealing ring	3	-
350 129	Sleeve	2	0.4
350 131	Locking plate	1	0.1
350 133	Screw	1	-
350 134	O-ring	2	-

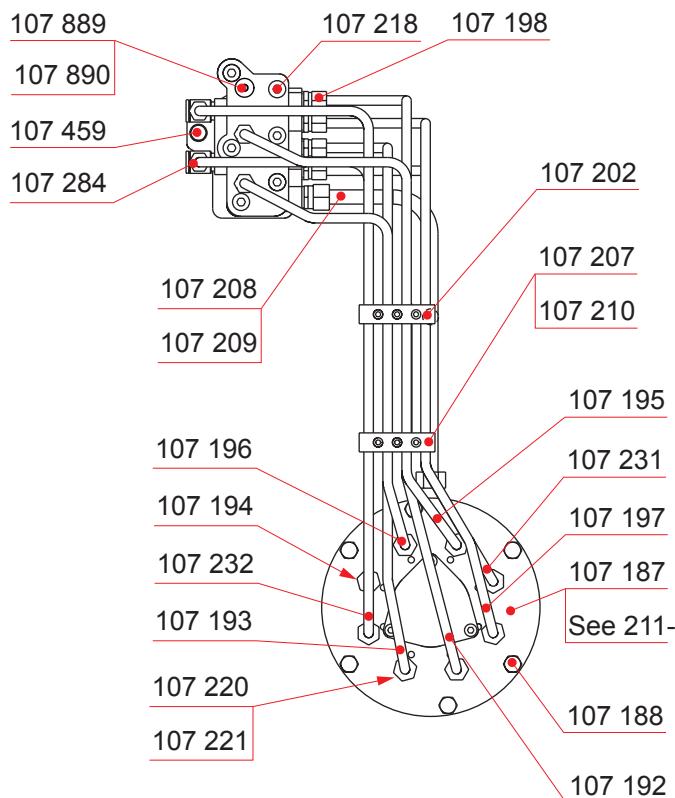
Multi cover

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 187	Distributor	1	15.9	107 890	Plug	*	-
107 188	Screw	6	-		NOTE!	*	See page 5.
107 192	Pipe	1	0.3				
107 193	Pipe	1	0.3				
107 194	Pipe	1	0.2				
107 195	Pipe	1	0.2				
107 196	Pipe	1	0.2				
107 197	Pipe	1	0.3				
107 198	Pipe union	6	-				
107 202	Plug	1	-				
107 207	Bracket	2	0.2				
107 210	Screw	*	-				
107 208	Pipe	1	0.2				
107 209	Pipe union	1	-				
107 211	Pipe clamp	*	-				
107 218	Screw	6	-				
107 220	Pipe union	*	-				
107 221	Sealing washer	*	-				
107 231	Pipe	*	-				
107 232	Pipe	*	-				
107 284	Pipe union	*	-				
107 459	Screw	2	-				
107 889	Sealing ring	*	-				

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 Updated: 16.10.2013

Multi cover

8L32



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 187	Distributor	1	15.9				
107 188	Screw	6	-	NOTE!	* See page 5.		
107 192	Pipe	1	0.3				
107 193	Pipe	1	0.3				
107 194	Pipe	1	0.2				
107 195	Pipe	1	0.2				
107 196	Pipe	1	0.2				
107 197	Pipe	1	0.3				
107 198	Pipe union	6	-				
107 202	Plug	1	-				
107 207	Bracket	2	0.2				
107 210	Screw	*	-				
107 208	Pipe	1	0.2				
107 209	Pipe union	1	-				
107 218	Screw	6	-				
107 220	Pipe union	*	-				
107 221	Sealing washer	*	-				
107 231	Pipe	*	-				
107 232	Pipe	*	-				
107 284	Pipe union	*	-				
107 459	Screw	2	-				
107 889	Sealing ring	*	-				
107 890	Plug	*	-				

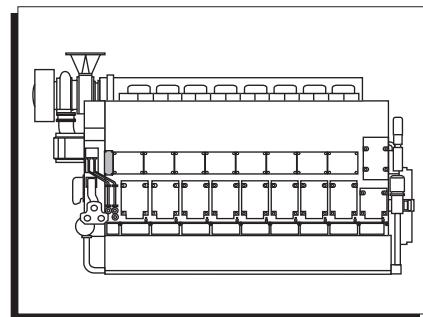
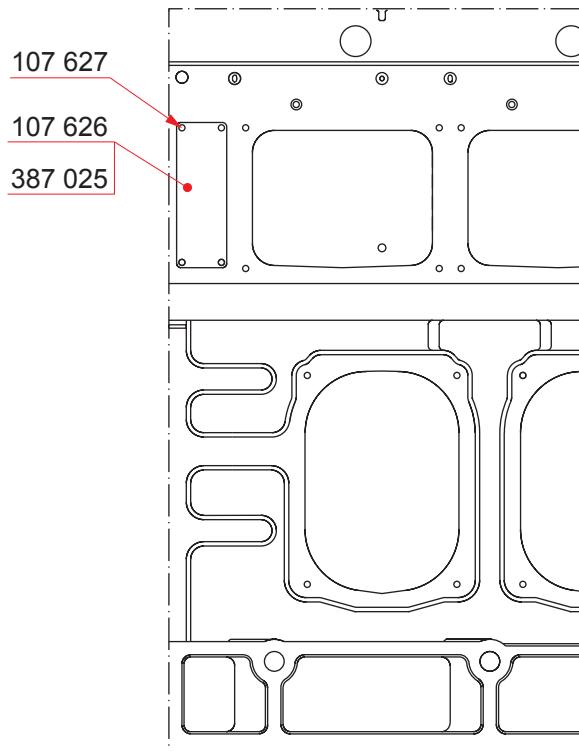
Multi cover

Quantity according to number of cylinders

Part No	Pieces		
	6L32	7L32	8L32
107 210	6	6	-
107 211	6	6	-
107 215	2	2	2
107 217	1	1	1
107 220	6	7	8
107 221	6	7	8
107 231	-	1	1
107 232	-	1	1
107 284	-	2	2
107 889	3	2	1
107 890	3	2	1

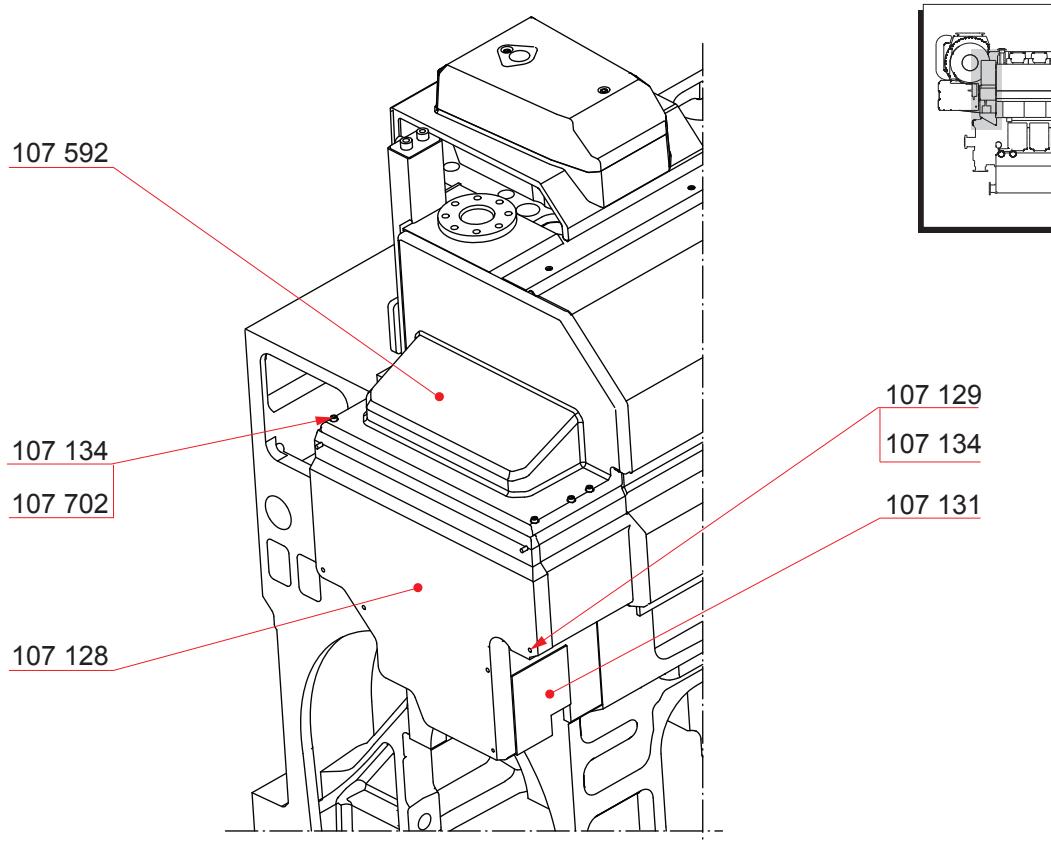
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Cover for camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 626	Cover	1	-
107 627	Screw	4	-
387 025	Glue compound	1	-

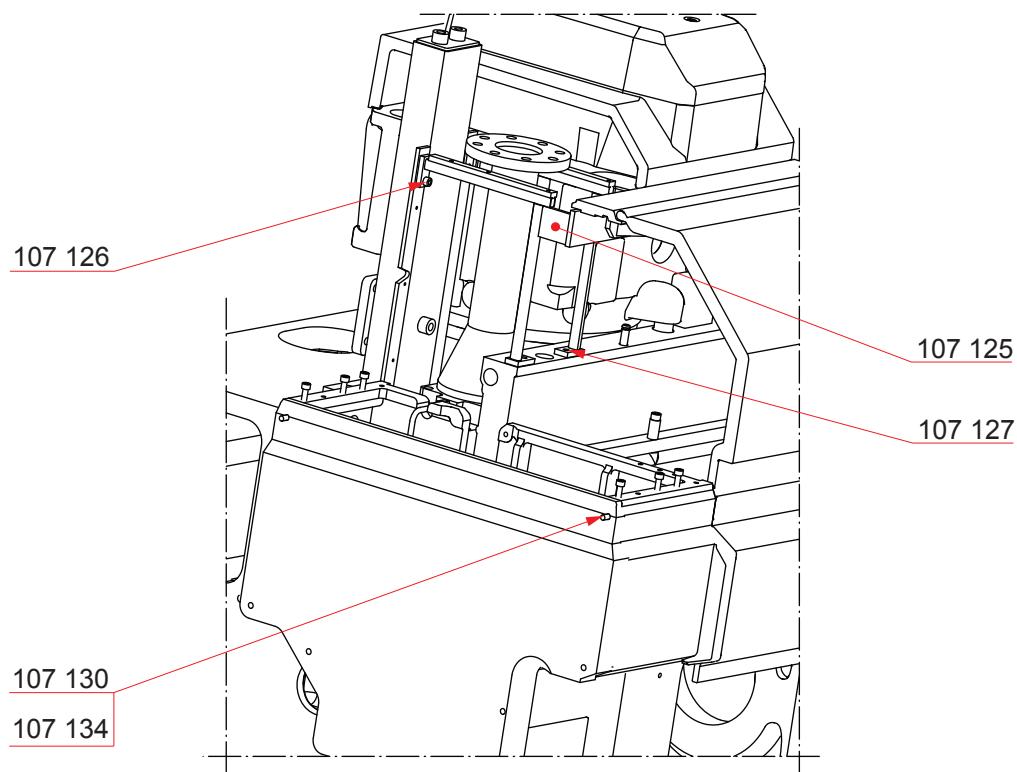
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Covers in the free end

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 128	Cover	1	-
107 129	Screw	4	-
107 131	Cover	1	-
107 134	Washer	12	-
107 592	Cover	1	-
107 702	Screw	6	-

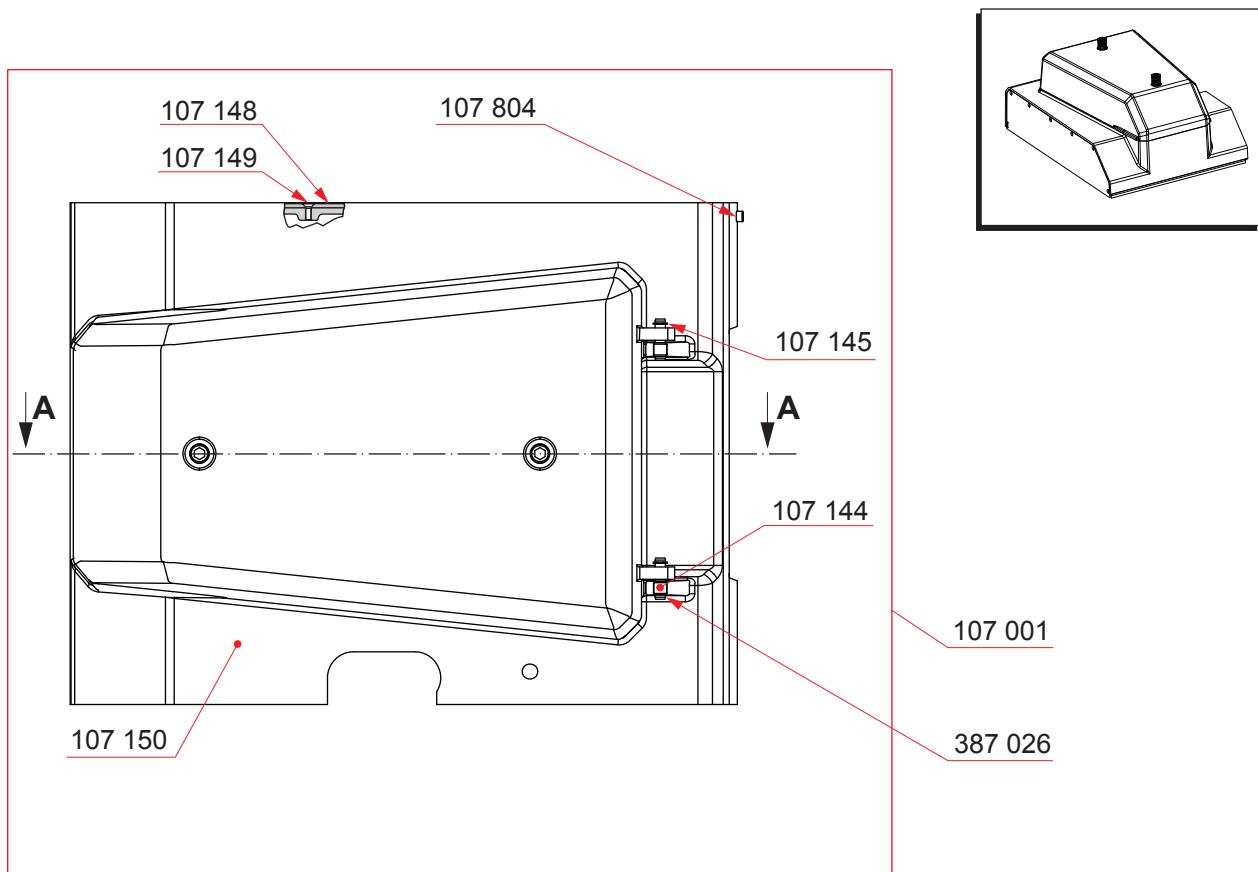
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Updated: 13.07.2007

Covers in the free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 125	Support	1	-
107 126	Screw	5	-
107 127	Screw	2	-
107 130	Nut	2	-
107 134	Washer	12	-

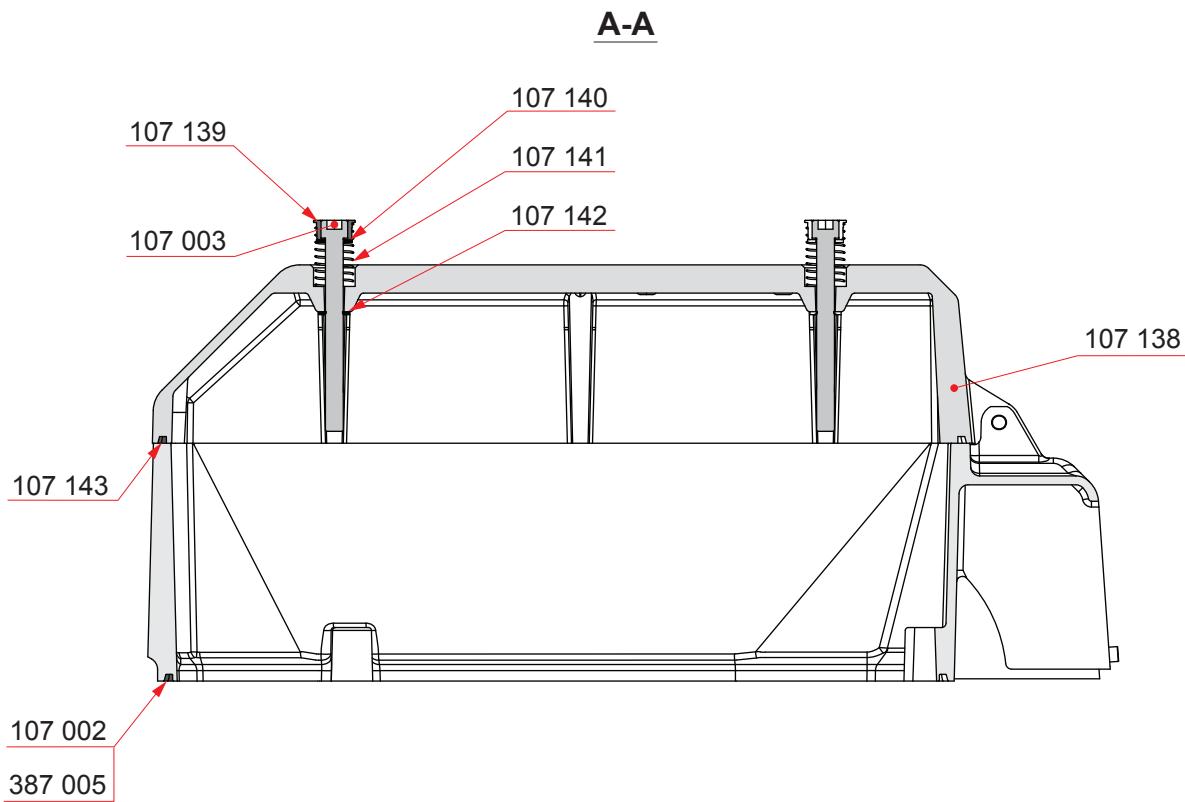
Cover for cylinder head



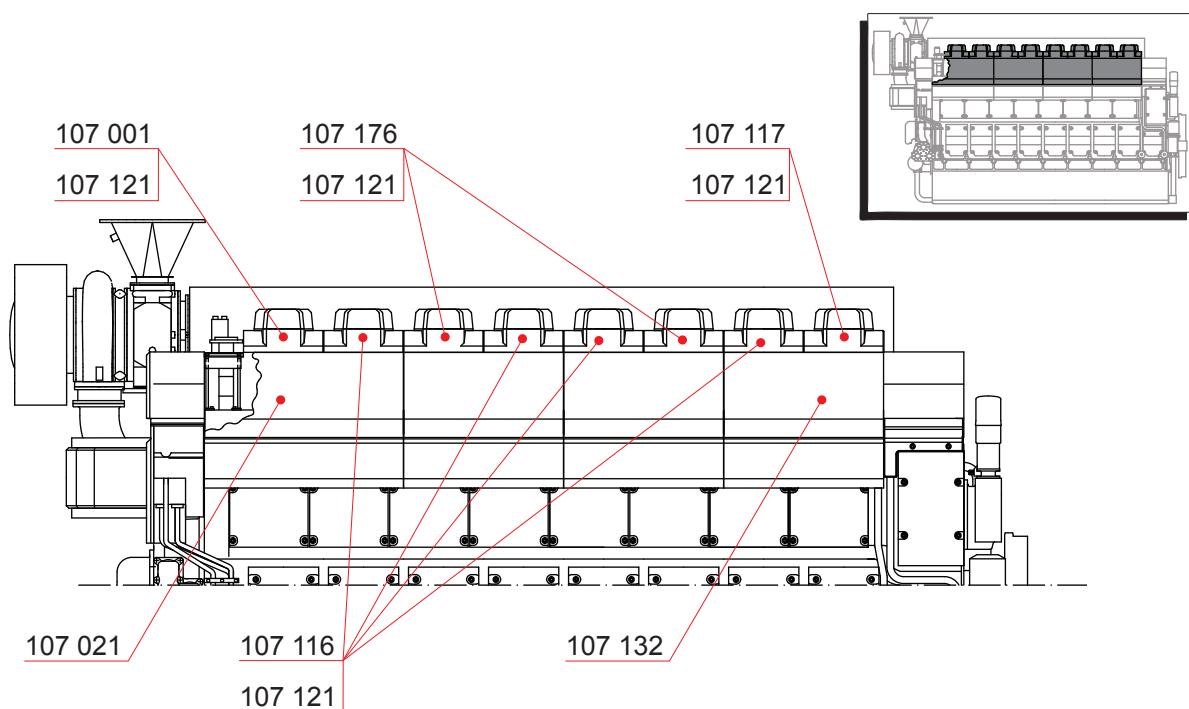
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 001	Cover for cyl. head	1	-
107 144	Pin	2	-
107 145	Retaining ring	2	-
107 148	Plate	1	1.0
107 149	Screw	6	-
107 150	Cover	1	10.6
107 804	Screw	1	-
387 026	Glue compound	1	-

Edition: B
Page: 2(2)
Updated: 14.06.2013

Cover for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 002	Hose gasket	1	-
107 003	Screw	2	0.1
107 138	Cover	1	6.0
107 139	Spring retainer	2	-
107 140	Sealing washer	2	-
107 141	Spring	2	-
107 142	Washer	2	-
107 143	Hose gasket	1	-
387 005	Glue compound	1	-

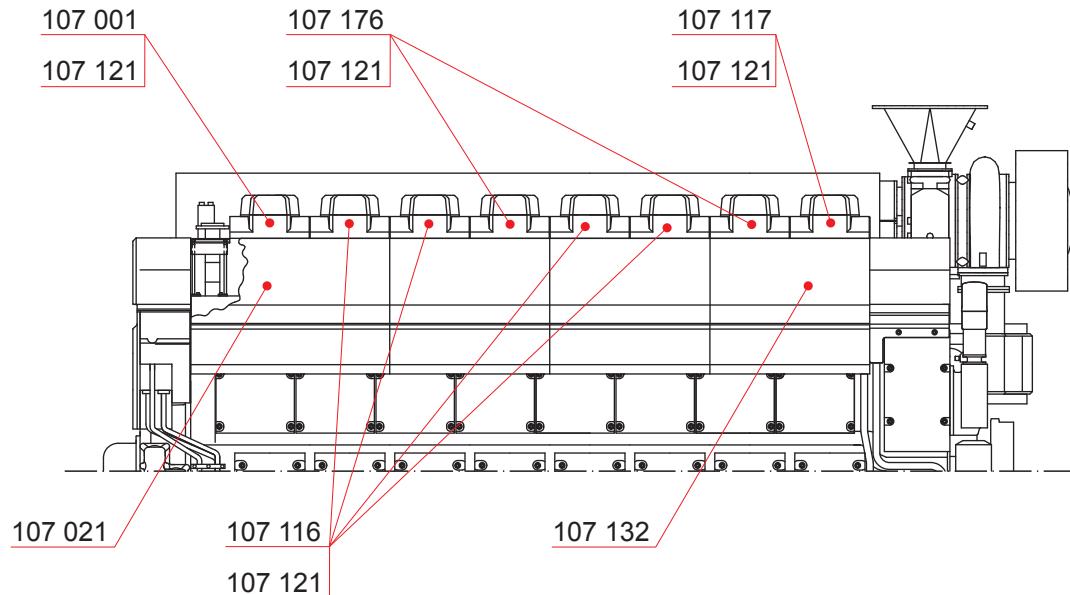
Covers 8L32

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 001	Cover for cyl. head	1	-
107 021	Side cover, upper part	1	-
107 116	Cover for cyl. head	4	-
107 117	Cover for cyl. head	1	-
107 121	Screw	24	-
107 132	Side cover, upper part	3	-
107 176	Cover	2	-

NOTE! TC in free end.

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 Updated: 23.03.2012

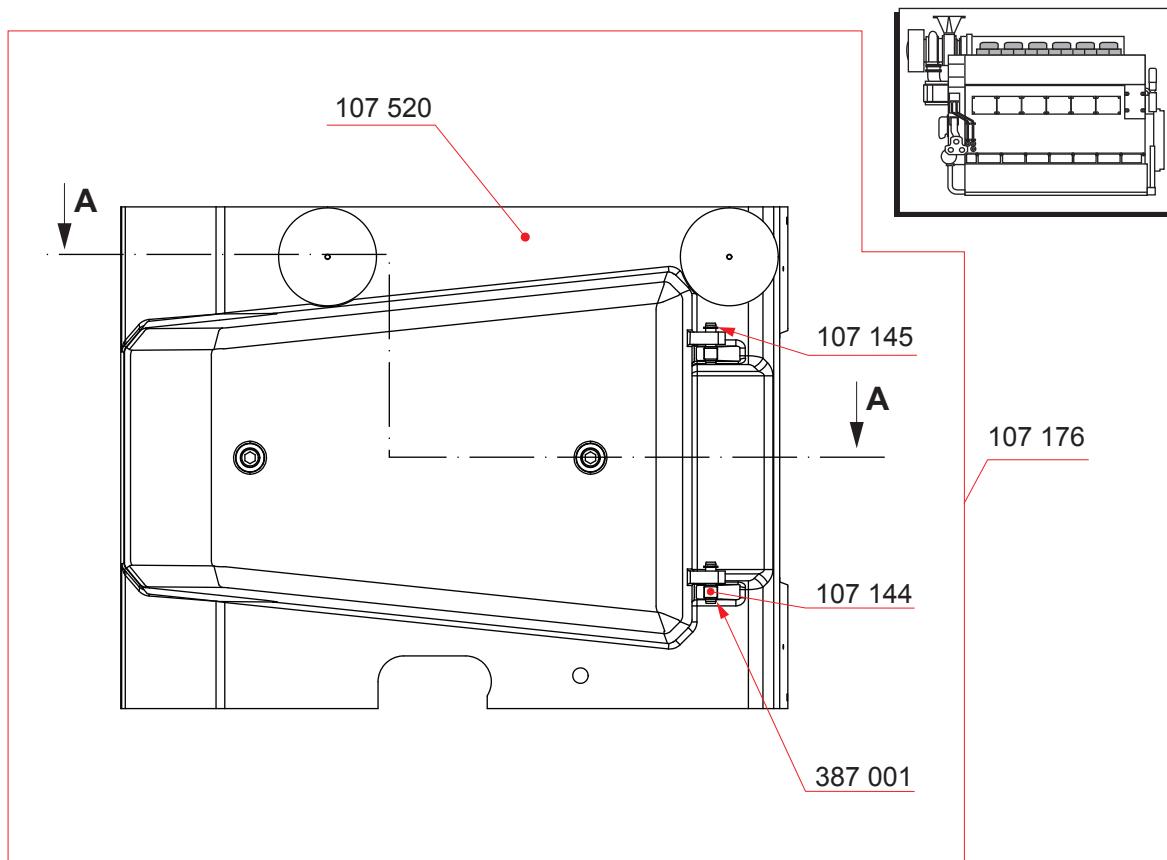
Covers 8L32



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 001	Cover for cyl. head	1	-
107 021	Side cover, upper part	1	-
107 116	Cover for cyl. head	4	-
107 117	Cover for cyl. head	1	-
107 121	Screw	24	-
107 132	Side cover, upper part	3	-
107 176	Cover	2	-

NOTE! TC in flywheel end.

Cover for cylinder head

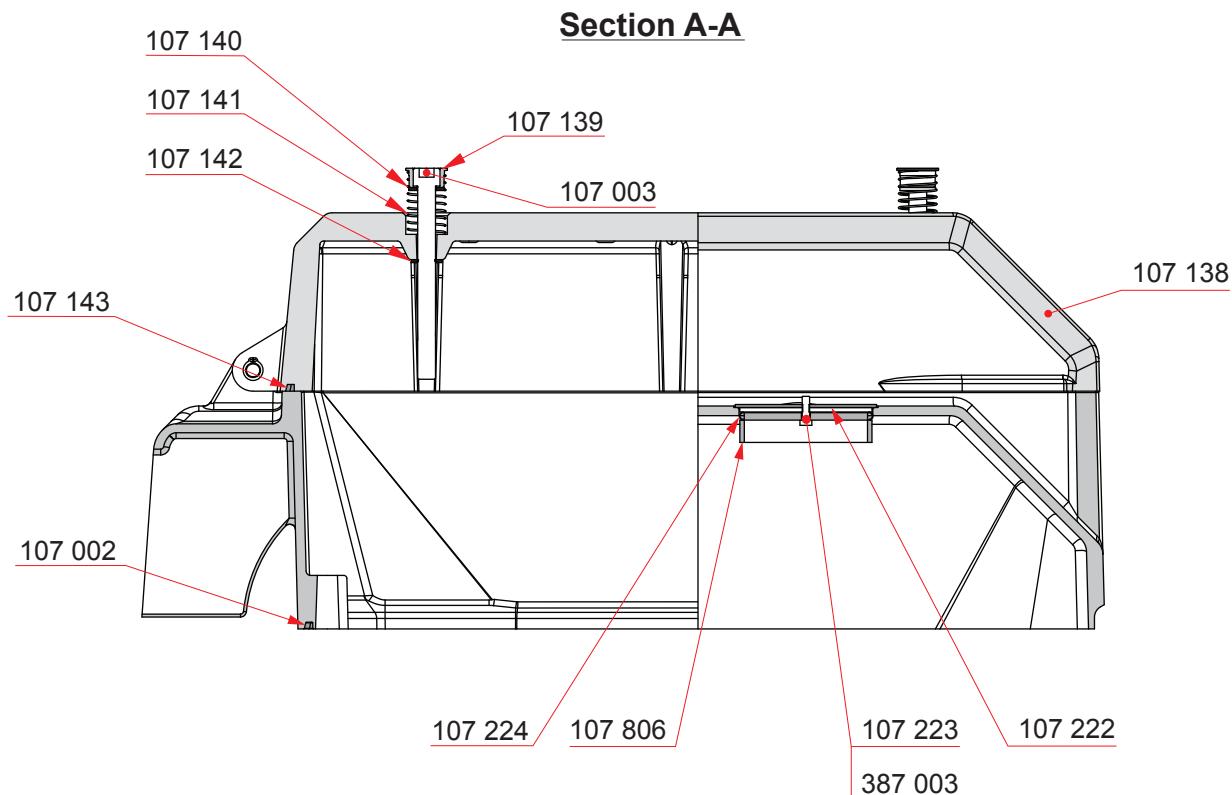


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 176	Cover	1	-
107 144	Pin	2	-
107 145	Retaining ring	2	-
107 520	Cover	1	-
387 001	Glue compound	1	-

Edition: A

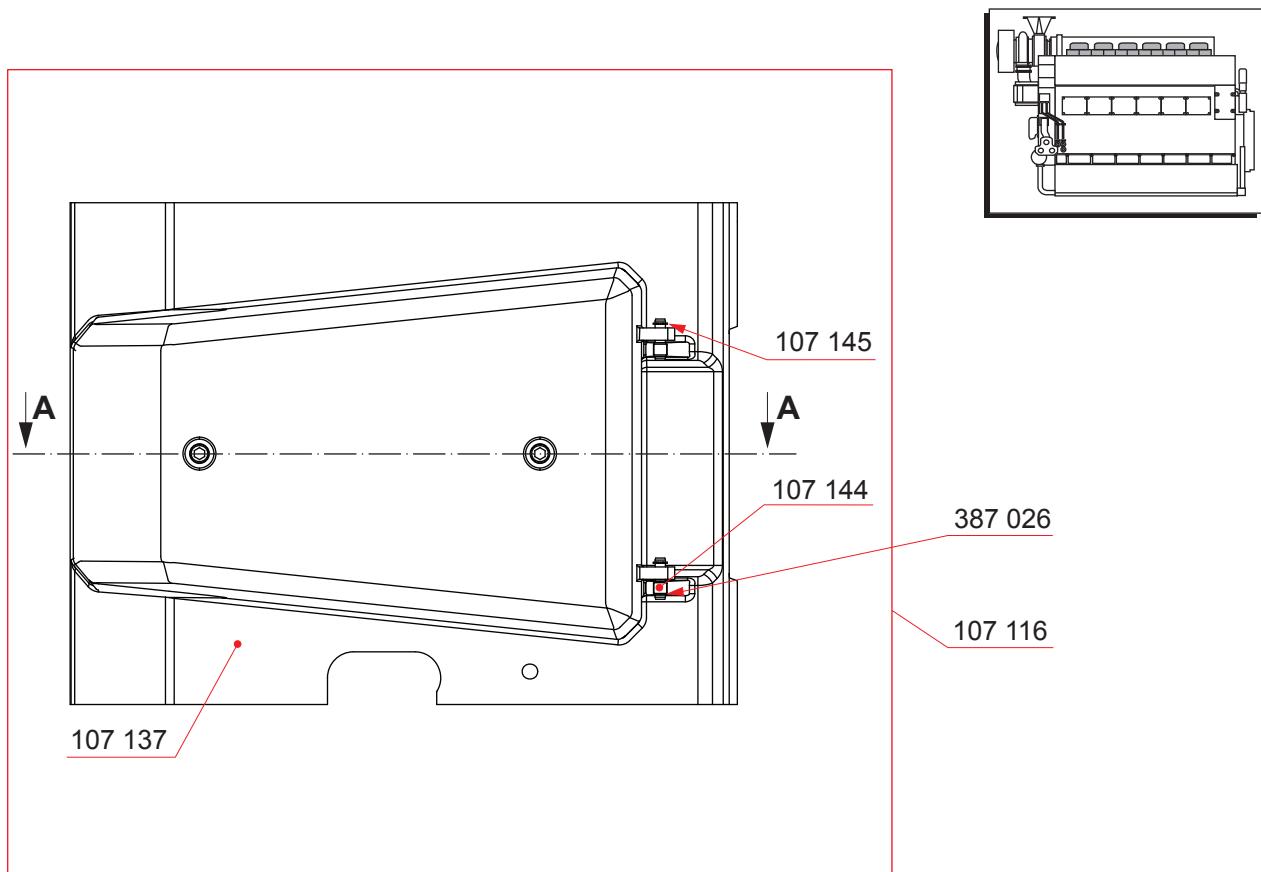
Page: 2(2)

Updated: 02.12.2009

Cover for cylinder head

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 002	Hose gasket	1	-
107 003	Screw	2	-
107 138	Cover	1	-
107 139	Spring retainer	2	-
107 140	Sealing washer	2	-
107 141	Spring	2	-
107 142	Washer	2	-
107 143	Hose gasket	1	-
107 222	Plate	2	-
107 223	Screw	2	-
107 224	Plate	2	-
107 806	Plate	2	-
387 003	Glue compound	1	-

Cover for cylinder head

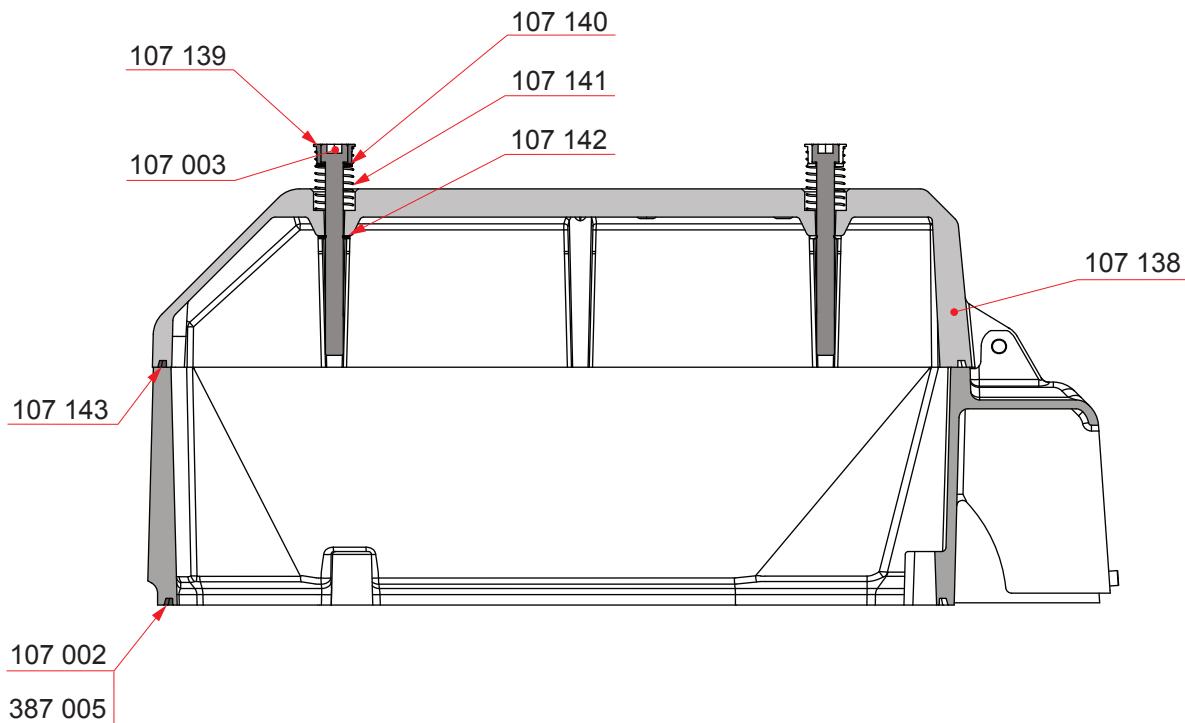


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 116	Cover for cyl. head	1	-
107 137	Cover	1	-
107 144	Pin	2	-
107 145	Retaining ring	2	-
387 026	Glue compound	1	-

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Page: 2(2)
Updated: 02.12.2009

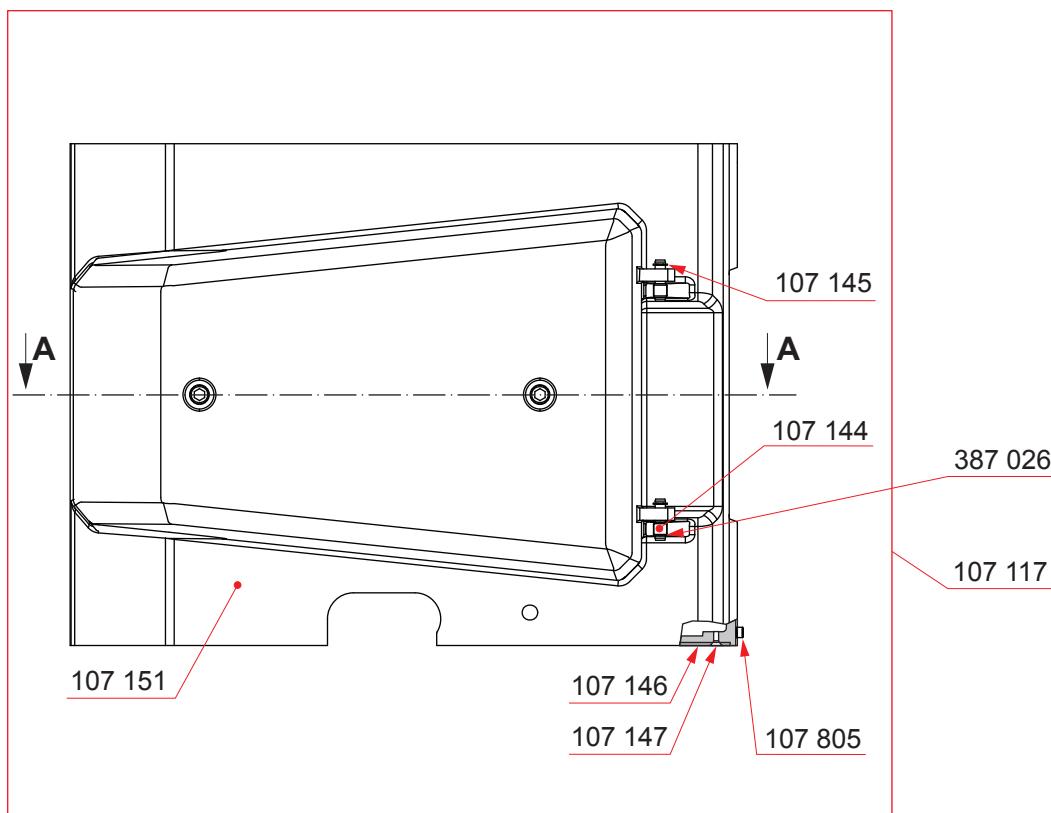
Cover for cylinder head

Section A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 002	Hose gasket	1	-
107 003	Screw	2	-
107 138	Cover	1	-
107 139	Spring retainer	2	-
107 140	Sealing washer	2	-
107 141	Spring	2	-
107 142	Washer	2	-
107 143	Hose gasket	1	-
387 005	Glue compound	1	-

Cover for cylinder head

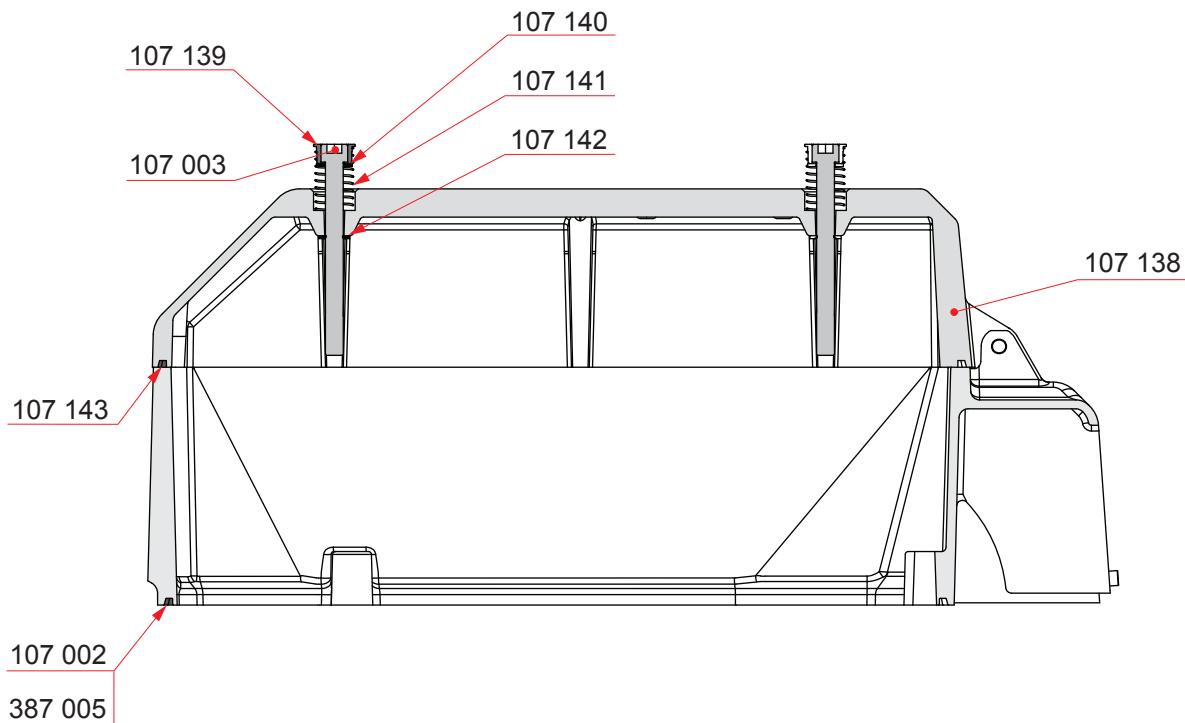


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 117	Cover for cyl. head	1	-
107 144	Pin	2	-
107 145	Retaining ring	2	-
107 146	Plate	1	1.1
107 147	Screw	6	-
107 151	Cover	1	10.6
107 805	Screw	1	-
387 026	Glue compound	1	-

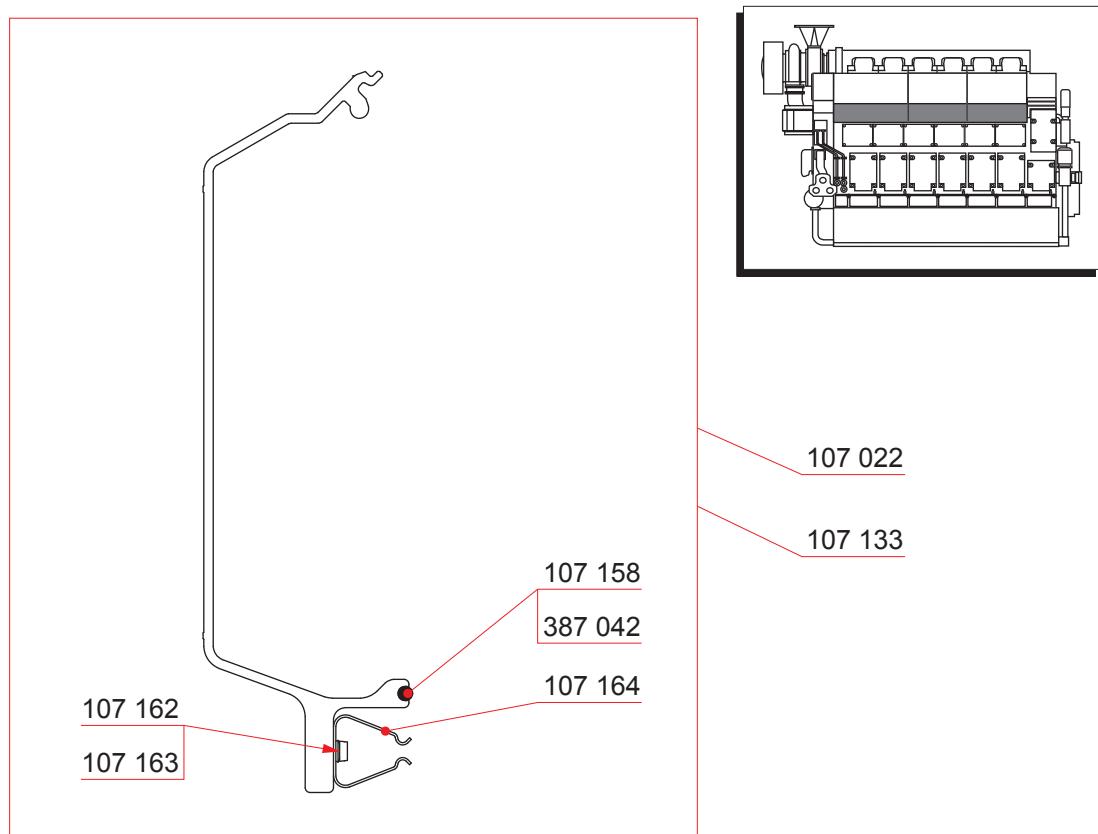
Edition: B
 Page: 2(2)
 Updated: 14.06.2013

Cover for cylinder head

A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 002	Hose gasket	1	-
107 003	Screw	2	0.1
107 138	Cover	1	6.0
107 139	Spring retainer	2	-
107 140	Sealing washer	2	-
107 141	Spring	2	-
107 142	Washer	2	-
107 143	Hose gasket	1	-
387 005	Glue compound	1	-

Side cover, lower part

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 022	Side cover, lower part	1	-
107 158	Hose gasket *	1	-
107 162	Screw	4	-
107 163	Washer	4	-
107 164	Pressure plate	2	-
107 133	Side cover, lower part	1	-
107 158	Hose gasket (1)	1	-
107 162	Screw	4	-
107 163	Washer	4	-
107 164	Pressure plate	2	-
387 042	Glue compound	1	-

NOTE! (1) L= 979mm

NOTE! *) See page 2.

Edition: A

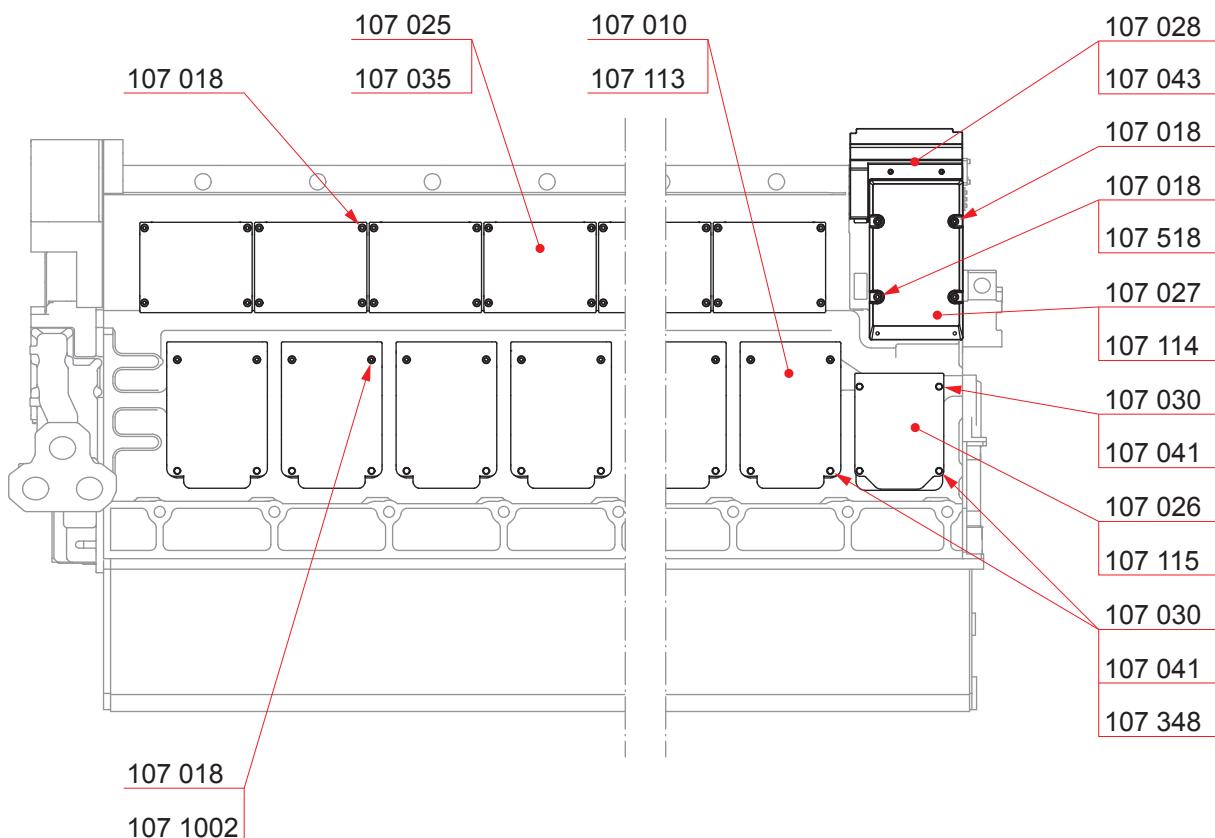
Page: 2(2)

Updated: 19.03.2012

Side cover, lower part**Length according to component size, related to number of cylinders**

Part No. and Description	Length in millimeters			
	6L	7L	8L	9L
107 158 Hose gasket	1219	729	1209	729

Covers for crankcase and camshaft

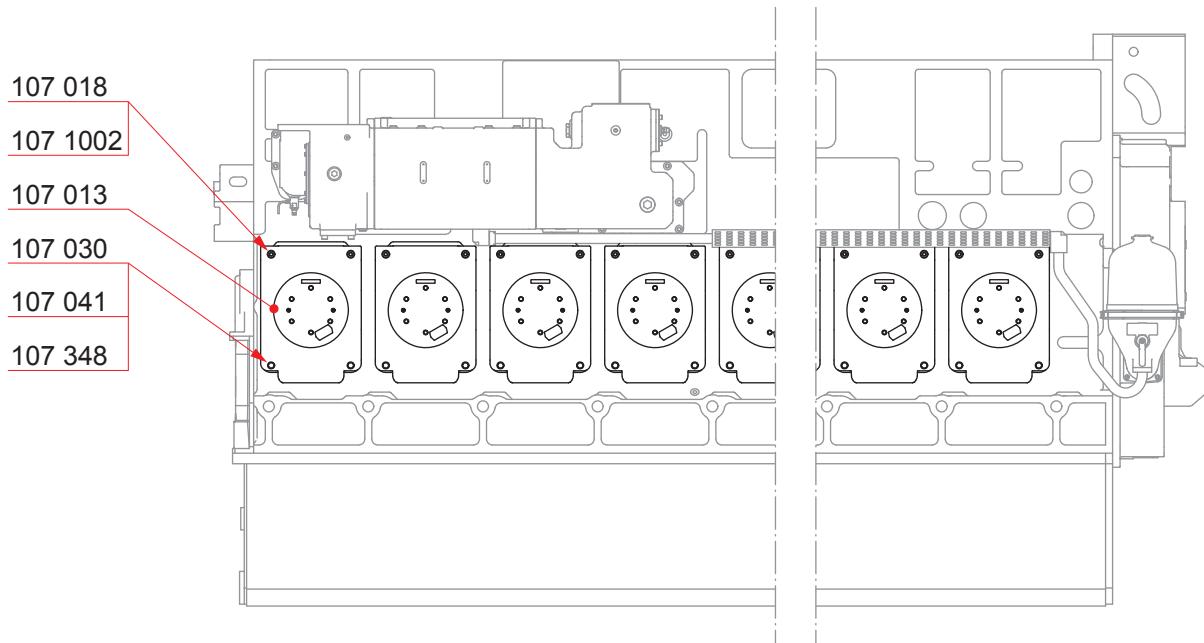


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 010	Crankcase cover	*	8.7
107 018	Nut	*	-
107 025	Cover for camshaft	*	5.8
107 026	Crankcase cover	1	7.0
107 027	Cover for camshaft gear	1	-
107 028	Cover	1	-
107 030	Washer	*	-
107 035	Hose gasket	*	-
107 041	Screw	*	0.1
107 043	Screw	2	-
107 113	Hose gasket	*	0.1
107 114	Hose gasket	1	-
107 115	Hose gasket	1	0.2
107 348	O-ring	*	-
107 518	Screw	1	-
107 1002	Screw	*	-

NOTE! *) See page 4.

Edition: B
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Updated: 10.07.2013

Covers for crankcase and camshaft

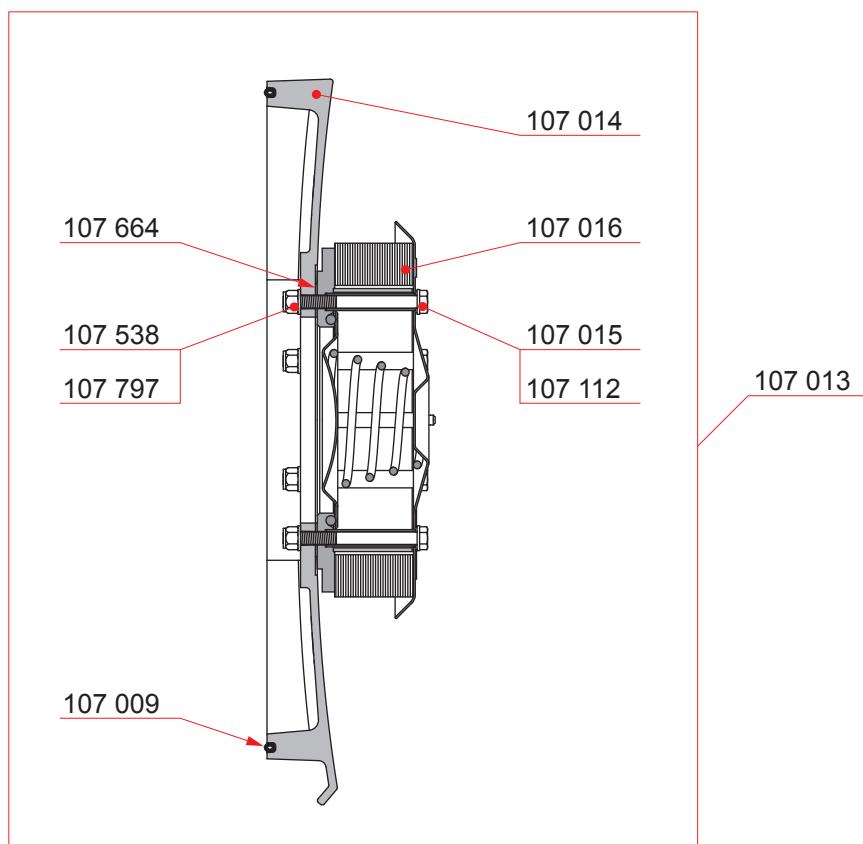


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 013	Crankcase cover with relief valve (1)	*	19.3
107 018	Nut	*	-
107 030	Washer	*	-
107 041	Screw	*	0.1
107 348	O-ring	*	-
107 1002	Screw	*	-

NOTE! (1) See page 3.

NOTE! *) See page 4.

Covers for crankcase and camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 013	Crankcase cover with relief valve	1	19.3
107 009	O-ring	1	0.1
107 014	Crankcase cover	1	8.7
107 015	Screw	6	-
107 016	Relief valve	1	10.2
107 112	Washer	6	-
107 538	Nut	6	-
107 664	Gasket	1	-
107 797	Washer	6	-

Edition: B

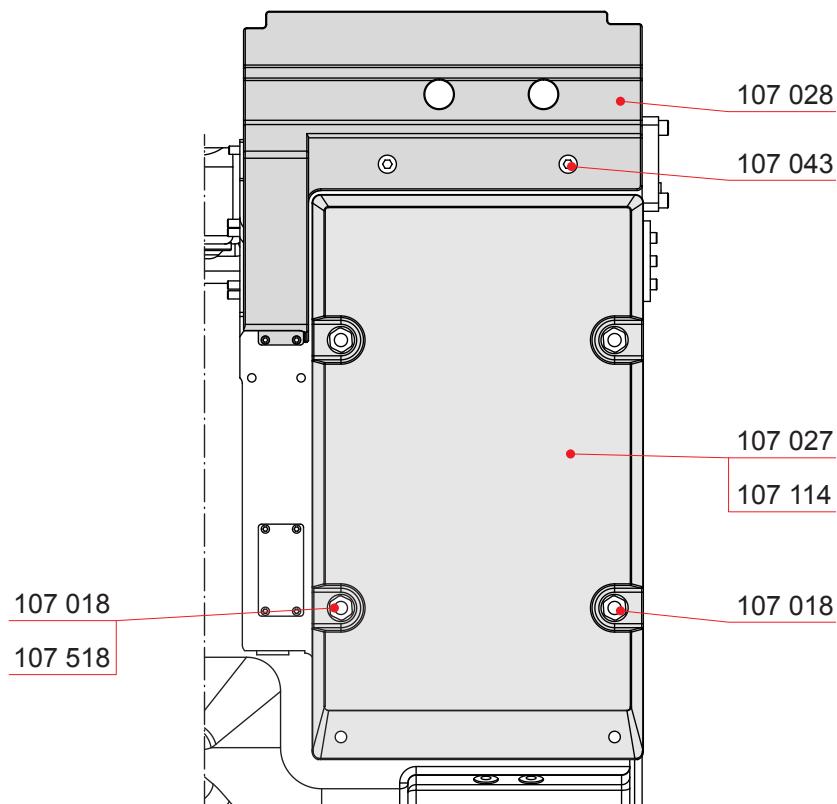
Page: 4(4)

Updated: 10.07.2013

Covers for crankcase and camshaft

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
107 010 Crankcase cover	6	7	8	9
107 013 Crankcase cover with relief valve	7	8	9	10
107 018 Nut	54	62	70	78
107 025 Cover for camshaft	6	7	8	9
107 030 Washer	30	34	38	42
107 035 Hose gasket	6	7	8	9
107 041 Screw	30	34	38	42
107 1002 Screw	26	30	34	38
107 113 Hose gasket	6	7	8	9
107 348 O-ring	28	32	36	40

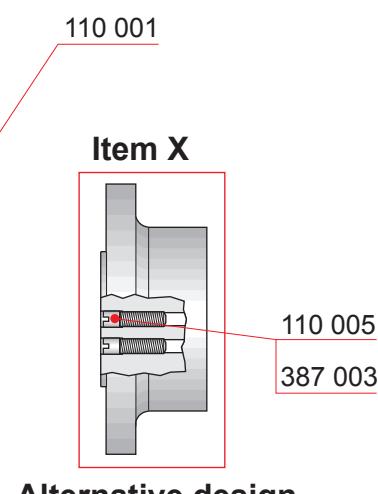
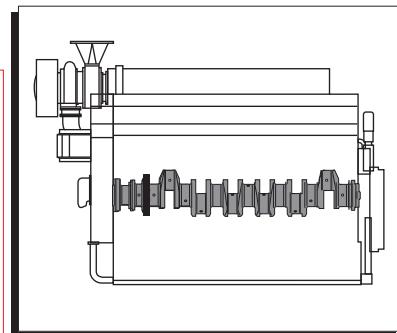
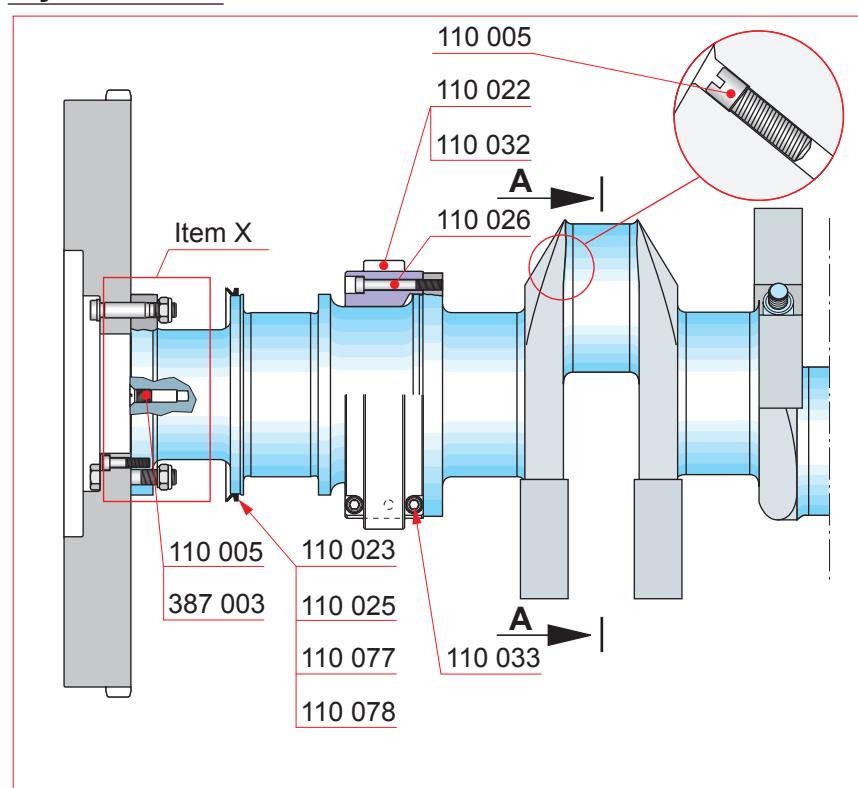
Covers for air bottle

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 018	Nut	4	-
107 027	Cover for camshaft gear	1	9.1
107 028	Cover	1	2.2
107 043	Screw	2	-
107 114	Hose gasket	1	0.2
107 518	Screw	1	-

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Crankshaft L32

Flywheel end

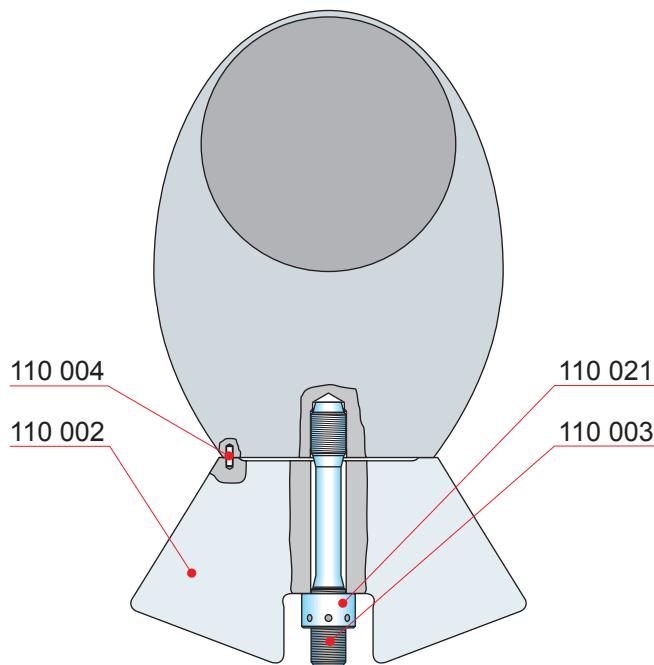


Alternative design

Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 001	Crankshaft	1	-
110 005	Plug	*	-
110 022	Split gear wheel	1	-
110 032	Pin	2	-
110 033	Screw	4	-
110 023	Sealing ring	1	-
110 026	Screw	14	-
110 025	Stretcher	8	-
110 077	Clamping band	*	-
110 078	Clamping screw	1	-
387 003	Glue compound	1	-

NOTE! * See page 5.

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Page: 2(4)
Updated: 15.09.2008
Crankshaft L32

Section A-A

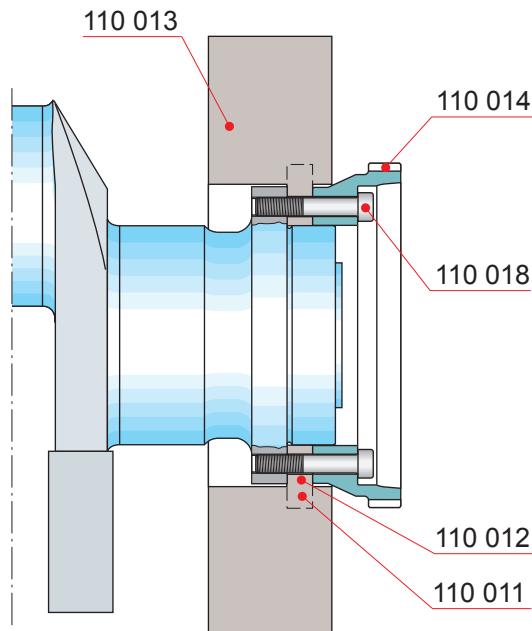
Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 002	Counterweight	*	-
110 003	Screw	*	-
110 004	Pin	*	-
110 021	Nut	*	-

NOTE! * See page 5.

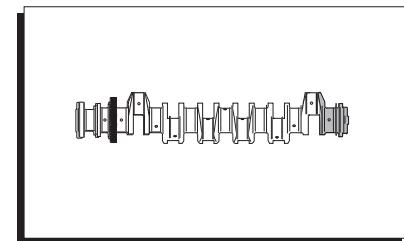
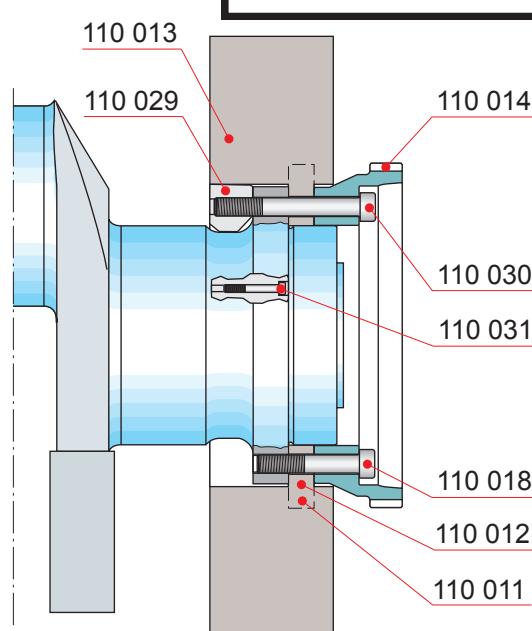
Crankshaft L32

Free end

6L32 and 8L32



7L32 and 9L32



Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 011	Tuning mass (1)	1	-
110 012	Distance ring (1)	1	-
110 013	Vibration damper (1)	1	-
110 014	Gear wheel	1	-
110 018	Screw	*	-
110 029	Counterweight	*	-
110 030	Screw	*	-
110 031	Screw	*	-

NOTE! (1) See installation specific documentation

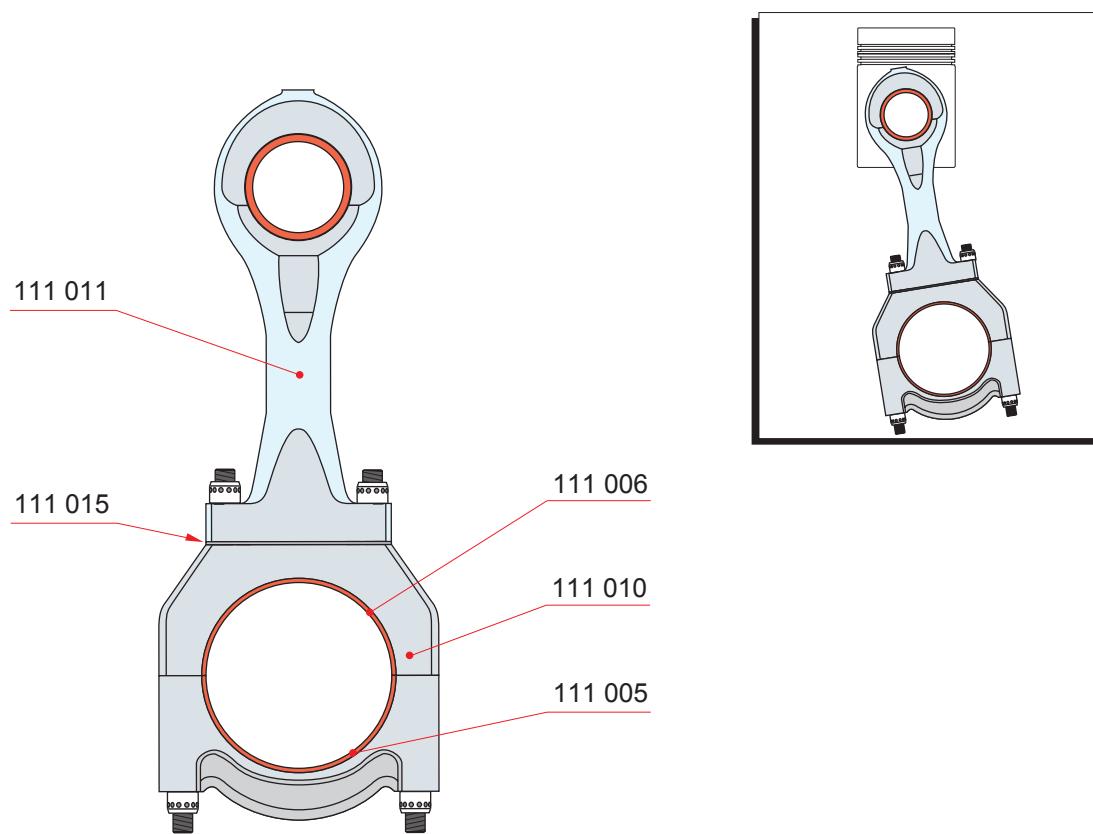
NOTE! * See page 5.

Edition: I
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Updated: 15.09.2008
Crankshaft L32

Quantity according to number of cylinders

Part No	Pieces			
	6L32	7L32	8L32	9L32
110 002	12	14	16	18
110 003	12	14	16	18
110 004	24	28	32	36
110 005	14	16	18	20
110 018	18	15	18	15
110 021	12	14	16	18
110 077	2,6 m	2,6 m	2,6 m	2,6 m
110 029	-	1	-	1
110 030	-	3	-	3
110 031	-	2	-	2

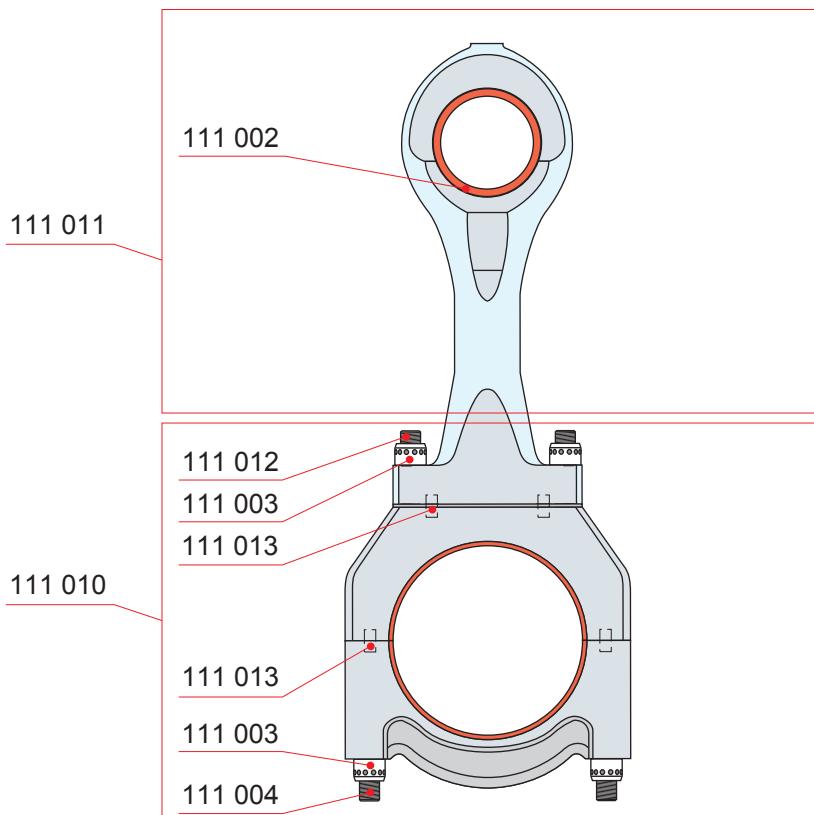
Connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 005	Big end bearing shell, lower	1	-
111 006	Big end bearing shell, upper	1	-
111 010	Connecting rod, lower part	1	64.0
111 011	Connecting rod, upper part	1	78.0
111 015	Shim	1	-

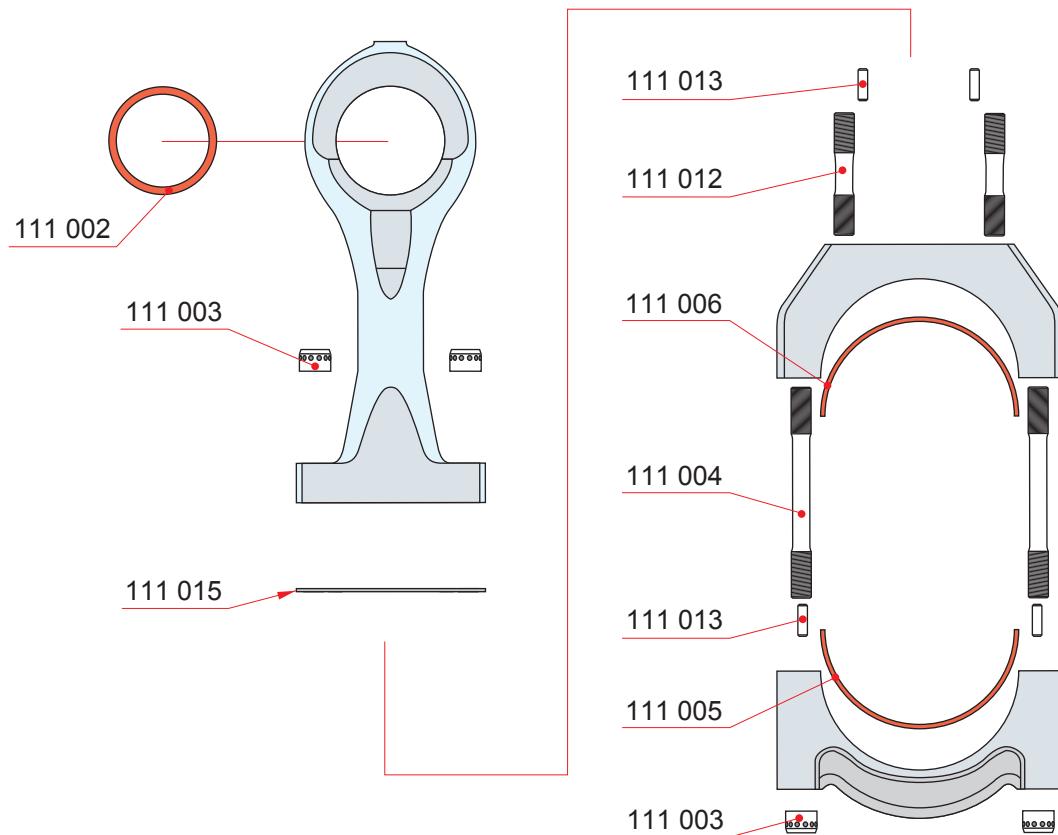
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Updated: 11.02.2004

Connecting rod

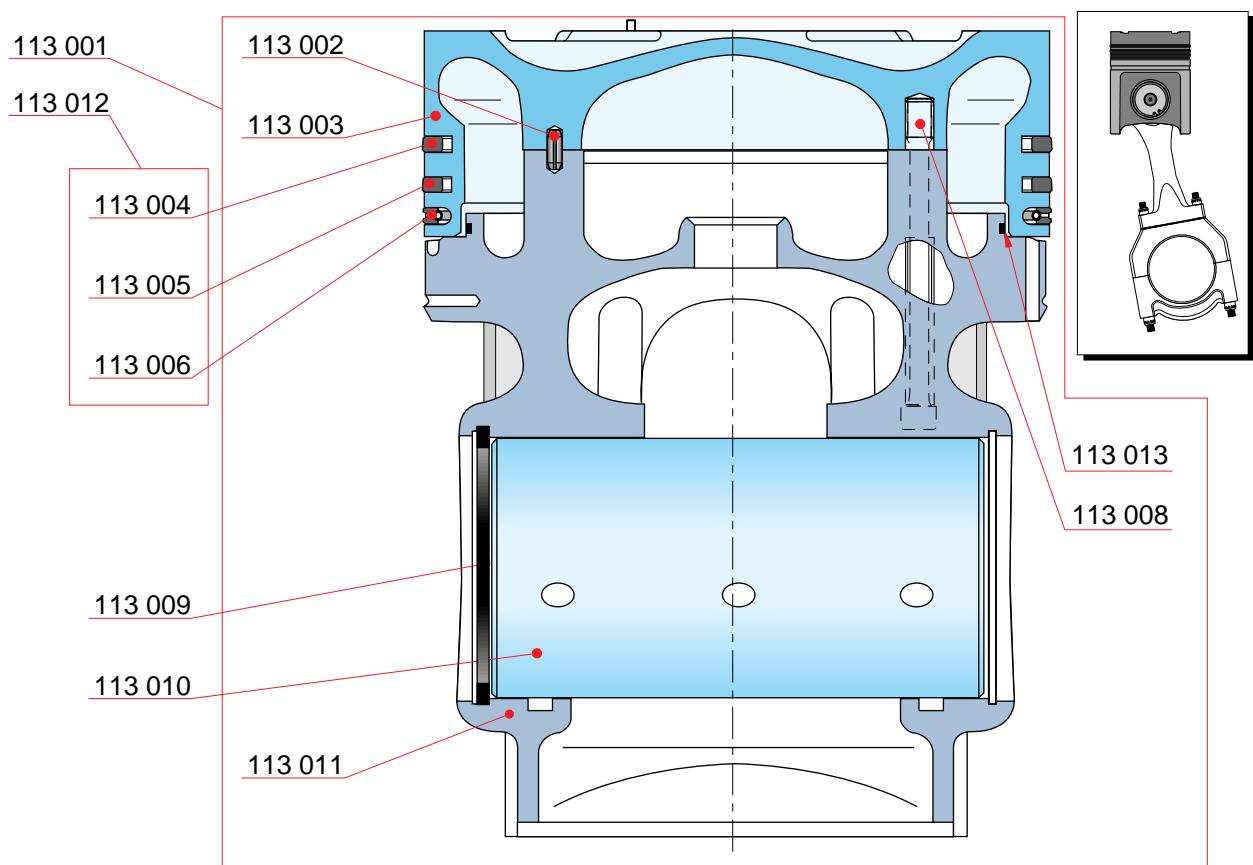


Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 010	Connecting rod, lower part	1	64.0
111 003	Nut	8	0.2
111 004	Screw	4	1.3
111 012	Screw	4	0.8
111 013	Pin	4	-
111 011	Connecting rod, upper part	1	78.0
111 002	Gudgeon pin bearing bush	1	3.8

Connecting rod



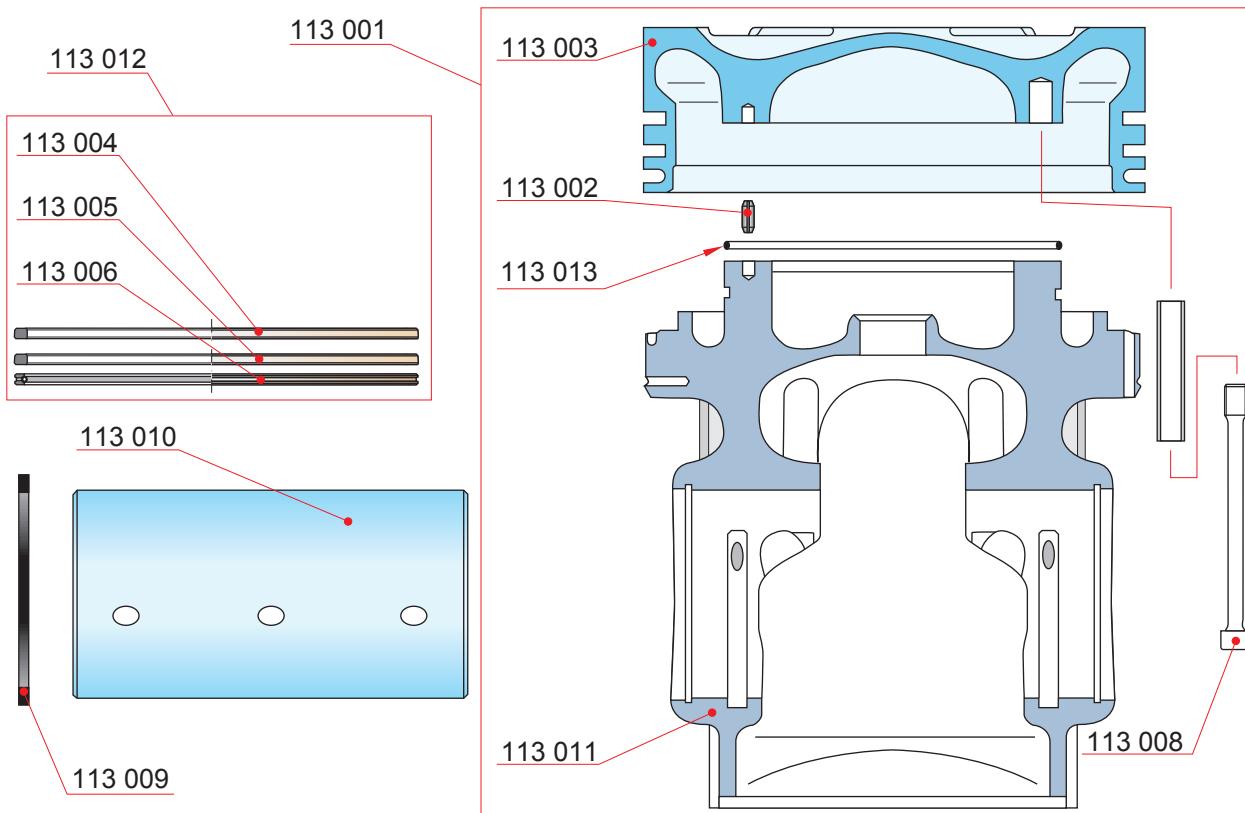
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Piston

Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 001	Piston	1	12.5
113 002	Pin	1	0.7
113 003	Piston crown	1	0.5
113 008	Screw	4	0.2
113 011	Piston skirt	1	43.0
113 013	O-ring	1	-
113 012	Piston ring set	1	-
113 004	Piston ring I	1	0.7
113 005	Piston ring II	1	-
113 006	Piston ring III	1	-
113 009	Securing ring	2	0.1
113 010	Gudgeon pin	1	0.1

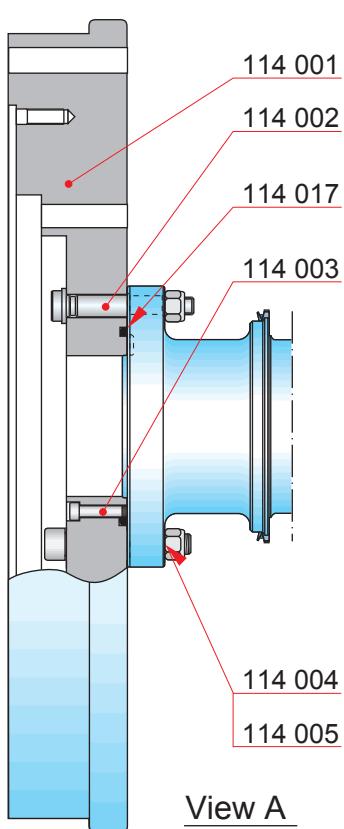
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 Updated: 01.10.1996

Piston

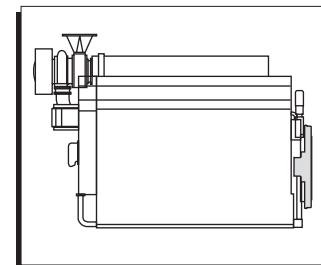
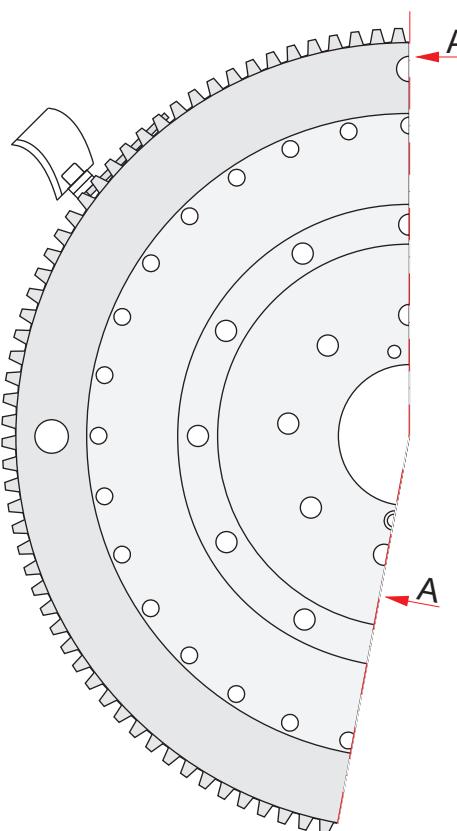


Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 001	Piston	1	12.5
113 002	Pin	1	0.7
113 003	Piston crown	1	0.5
113 008	Screw	4	0.2
113 011	Piston skirt	1	43.0
113 013	O-ring	1	-
113 012	Piston ring set	1	-
113 004	Piston ring I	1	0.7
113 005	Piston ring II	1	-
113 006	Piston ring III	1	-
113 009	Securing ring	2	0.1
113 010	Gudgeon pin	1	0.1

Flywheel



View A

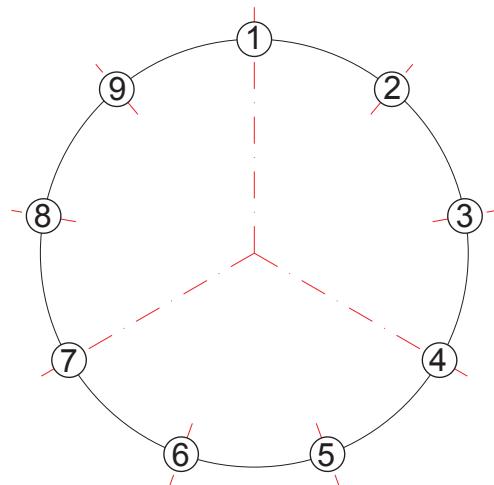


Part No.	Description	Qty [Pcs]	Wt. [Kg]
114 001	Flywheel	1	-
114 002	Fitting screw	*	1.1
114 003	Screw	2	0.2
114 004	Screw	*	1.1
114 005	Nut	9	0.2
114 017	O-ring (1)	1	-

NOTE! (1) Used only with specific type of flexible coupling.

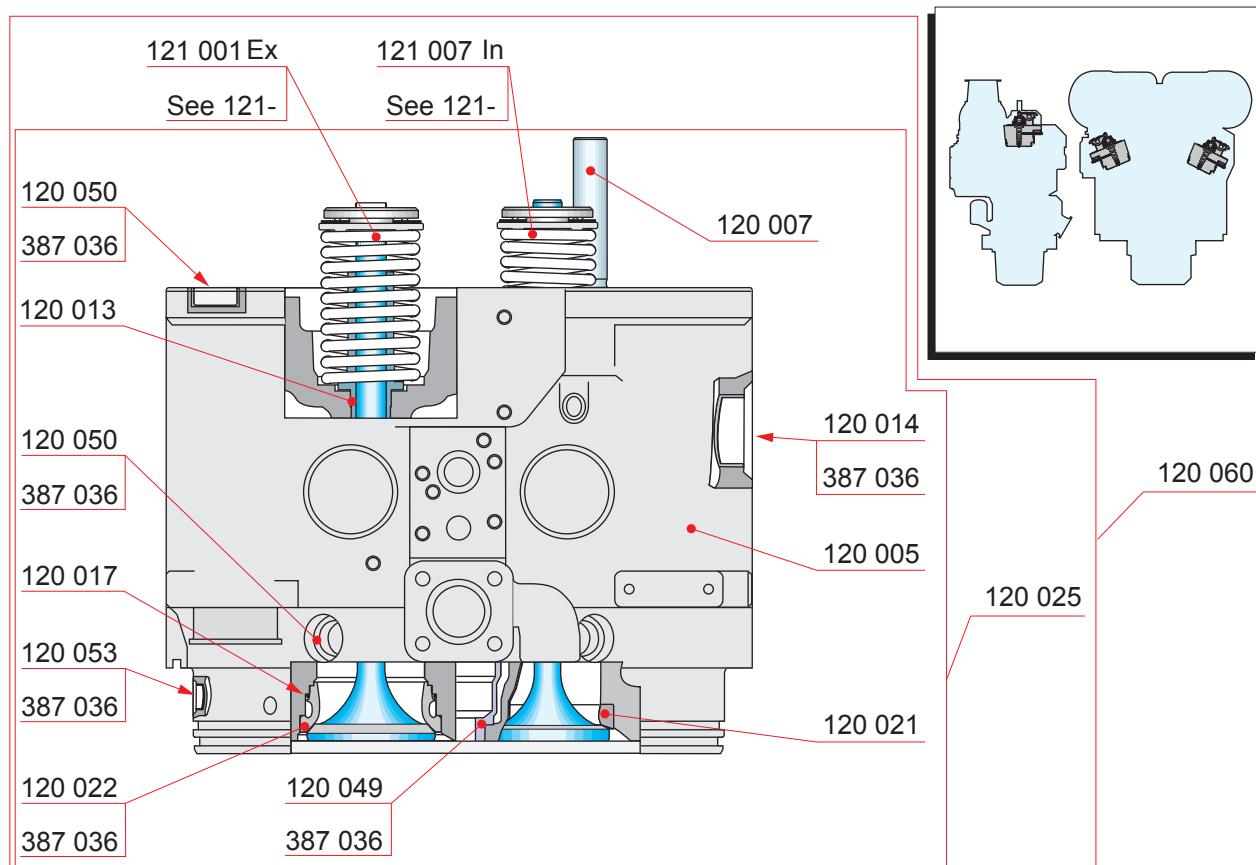
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Updated: 21.05.1998

Flywheel



Engine type	Location of fitted bolts	* 114 002 Number of fitted bolts	* 114 004 Number of normal screws
6L32	1, 3, 5, 7	4	5
8L32	1, 3, 5, 7, 9	5	4
9L32	1, 3, 4, 6, 7, 9	6	3

Cylinder head



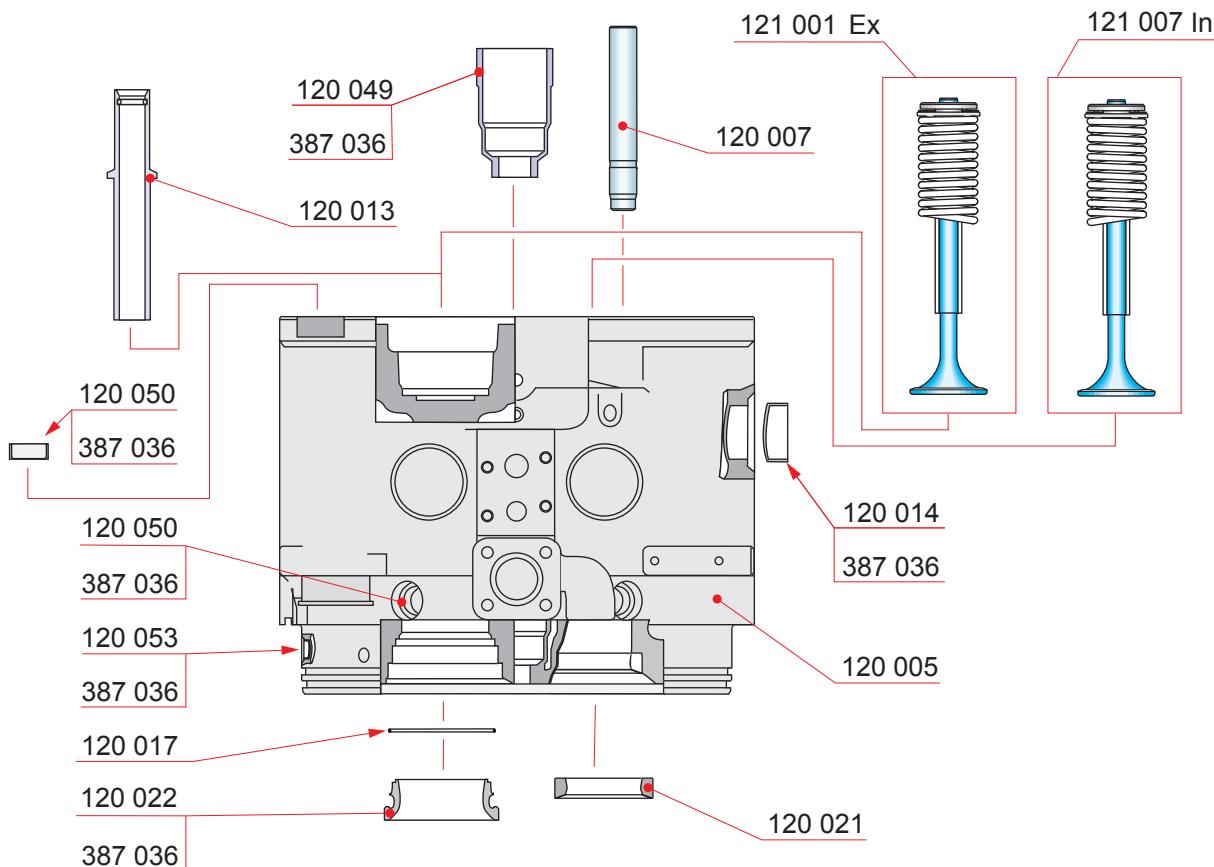
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 060	Cylinder head with inlet and exhaust valve (1)	1	-
121 001	Exhaust valve, compl.	2	-
121 007	Inlet valve, compl.	2	-
120 025	Cylinder head (2)	1	-
120 005	Cylinder head	1	-
120 007	Yoke pin	2	-
120 013	Valve guide	4	-
120 014	Sealing push-in cap	6	-
120 017	O-ring	2	-
120 021	Seat ring for inlet valve	2	-
120 022	Seat ring for outlet valve	2	-
120 049	Sleeve	1	-
120 050	Sealing push-in cap	13	-
120 053	Sealing push-in cap	8	-
387 036	Glue compound	1	-

NOTE! (1) With valves

NOTE! (2) Without valves

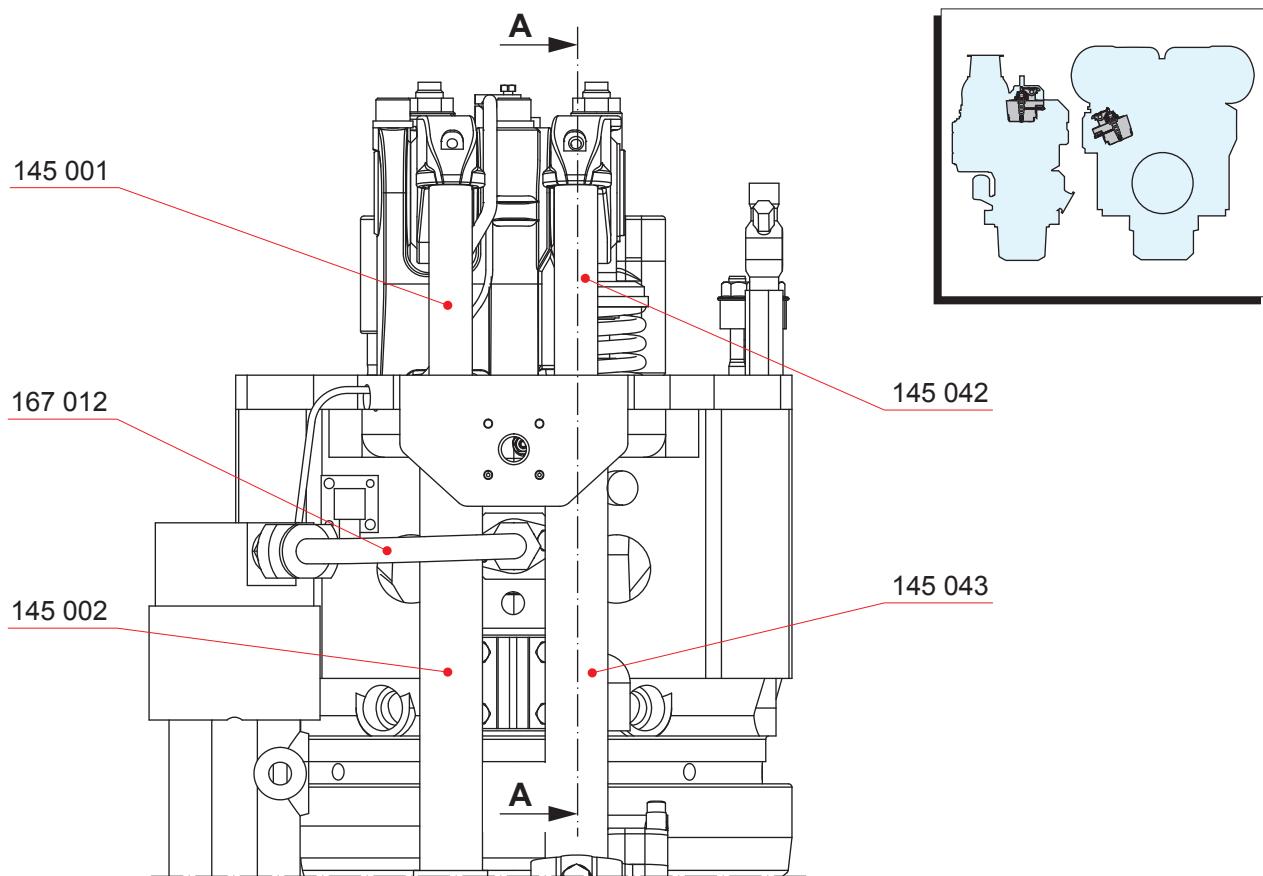
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 Updated: 10.10.2011

Cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 005	Cylinder head	1	-
120 007	Yoke pin	2	-
120 013	Valve guide	4	-
120 014	Sealing push-in cap	6	-
120 017	O-ring	2	-
120 021	Seat ring for inlet valve	2	-
120 022	Seat ring for outlet valve	2	-
120 049	Sleeve	1	-
120 050	Sealing push-in cap	13	-
120 053	Sealing push-in cap	8	-
121 001	Exhaust valve, compl.	2	-
121 007	Inlet valve, compl.	2	-
387 036	Glue compound	1	-

Cylinder head equipment

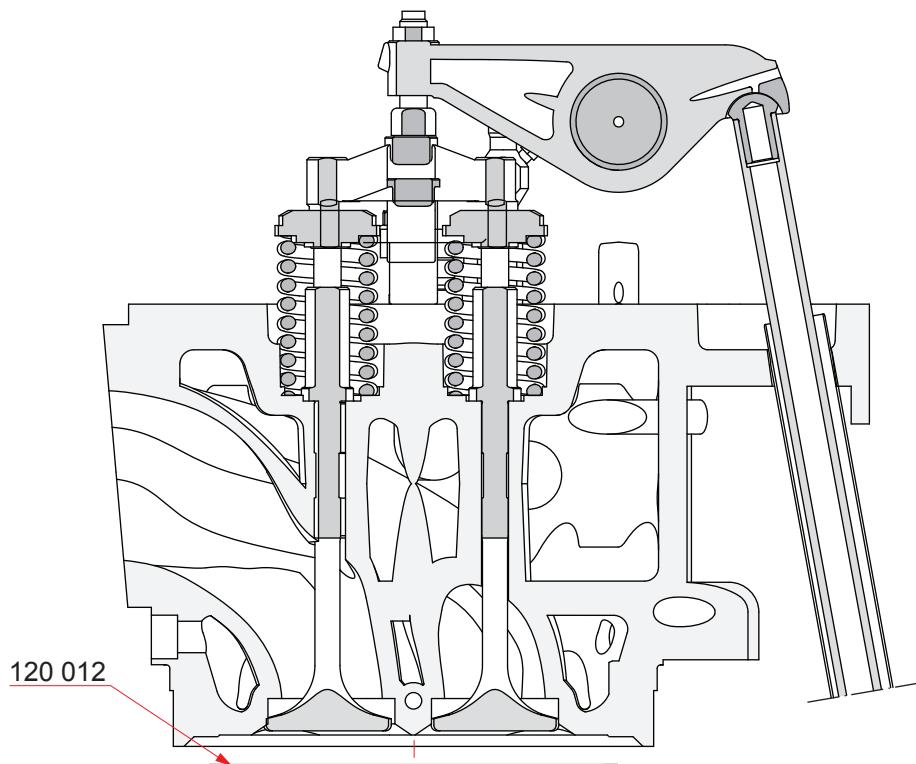


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 001	Push rod	1	-
145 002	Protecting pipe	1	-
145 042	Push rod	1	-
145 043	Protecting pipe	1	-
167 012	Injection pipe	1	-

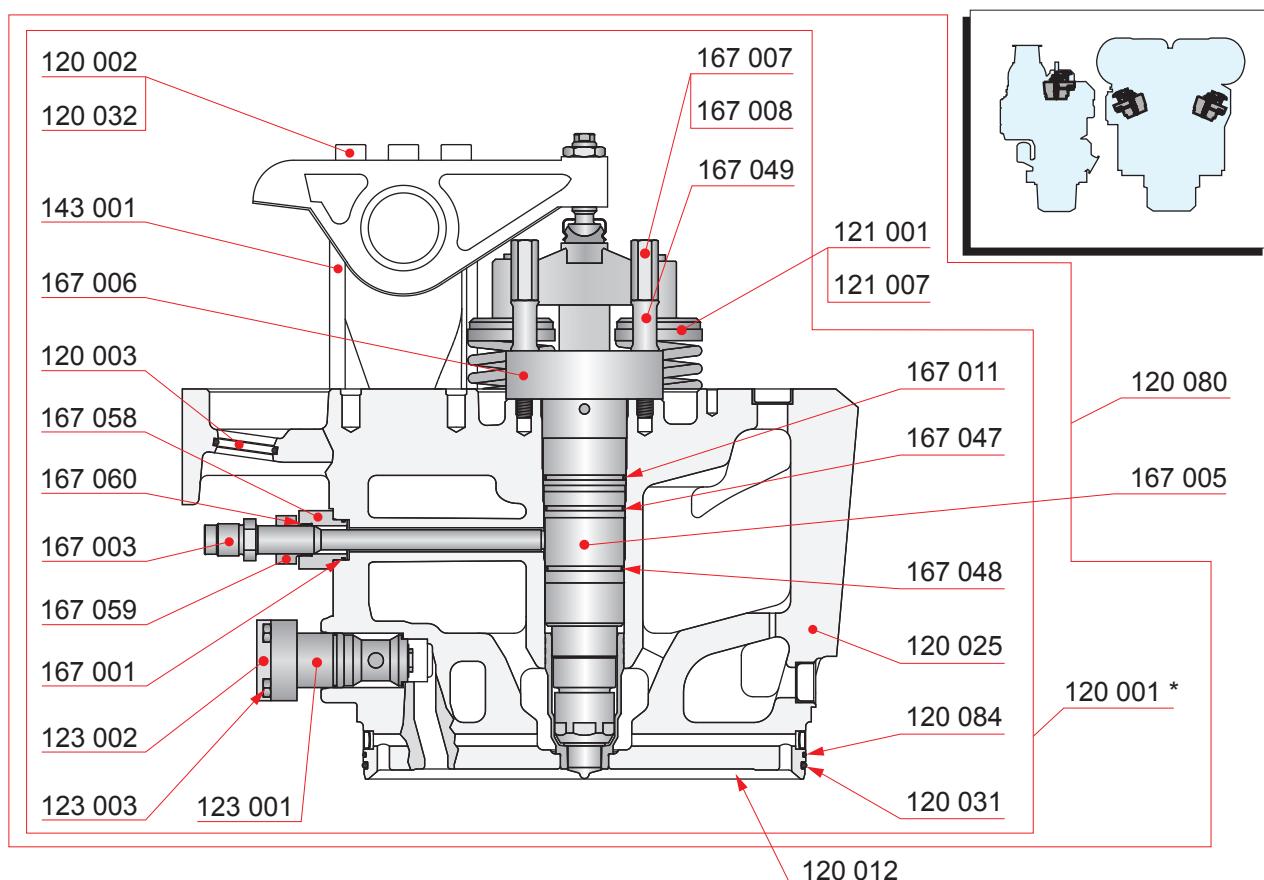
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Cylinder head equipment

Section A - A



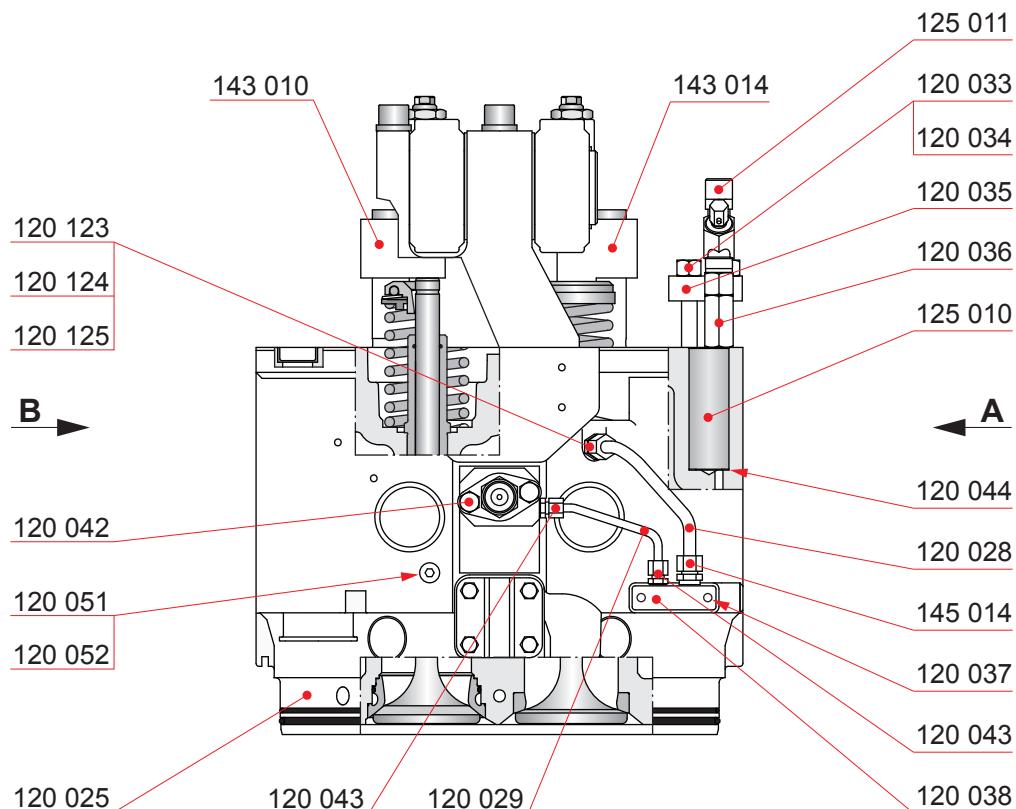
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 012	Gasket	1	-

Cylinder head

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 080	Cylinder head, complete (1)	1	-	121 007	Inlet valve, compl. (5)	2	-
120 001	Cylinder head (2) (*)	1	-	120 012	Gasket	1	-
120 002	Screw	3	0.7	167 005	Injection valve (7)	1	-
120 003	O-ring	2	-	NOTE! (*) Cannot be ordered, use 120 080.			
120 025	Cylinder head (3)	1	318	NOTE! (1) With valves			
120 031	O-ring	1	-	NOTE! (2) Without valves			
120 032	Washer	3	-	NOTE! (3) See section 120-			
120 084	O-ring	1	-	NOTE! (4) See section 123-			
123 001	Starting valve (4)	1	1.2	NOTE! (5) See section 121-			
123 002	Cover	1	1.3	NOTE! (6) See section 143-			
123 003	Screw	4	-	NOTE! (7) See section 167-			
143 001	Rocker arms with bracket (6)	1	33.0				
167 001	O-ring	1	-				
167 003	Connection piece	1	1.2				
167 006	Yoke	1	2.8				
167 007	Nut	2	0.1				
167 008	Screw	2	0.2				
167 011	O-ring	1	-				
167 047	O-ring	1	-				
167 048	O-ring	1	-				
167 049	Distance piece	2	-				
167 058	Flange	1	0.7				
167 059	Flange	1	0.3				
167 060	Pair of friction rings	2	-				
121 001	Exhaust valve, compl. (5)	2	-				

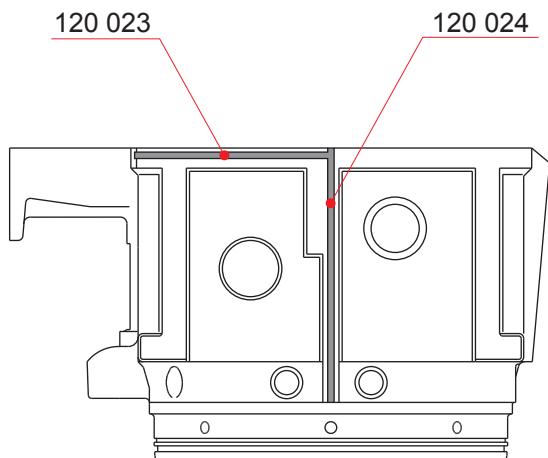
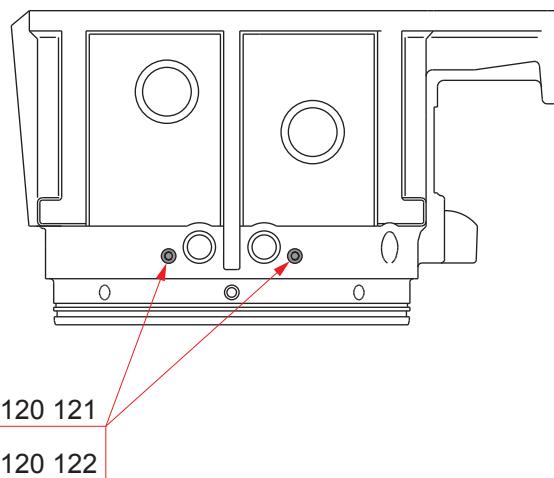
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Cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 025	Cylinder head (3)	1	318	145 014	Pipe union	1	-
120 028	Pipe	1	-				
120 029	Pipe	1	-	NOTE!	(3) See section 120-		
120 033	Screw	2	0.1	NOTE!	(6) See section 143-		
120 034	Nut	2	-	NOTE!	(8) See section 125-		
120 035	Yoke	1	0.5				
120 036	Connection piece	1	0.4				
120 037	Screw	2	-				
120 038	Connection piece	1	0.5				
120 042	Screw	2	-				
120 043	Pipe union	2	-				
120 044	Gasket	1	-				
120 051	Plug	1	-				
120 052	Sealing ring	1	-				
120 123	Nut	1	-				
120 124	Cutting ring	1	-				
120 125	Pipe union	1	-				
125 010	Cylinder head safety valve (8)	1	1.1				
125 011	Indicator valve, compl. (8)	1	0.5				
143 010	Yoke for exhaust valve, compl. (6)	1	2.5				
143 014	Yoke for inlet valve, compl. (6)	1	2.5				

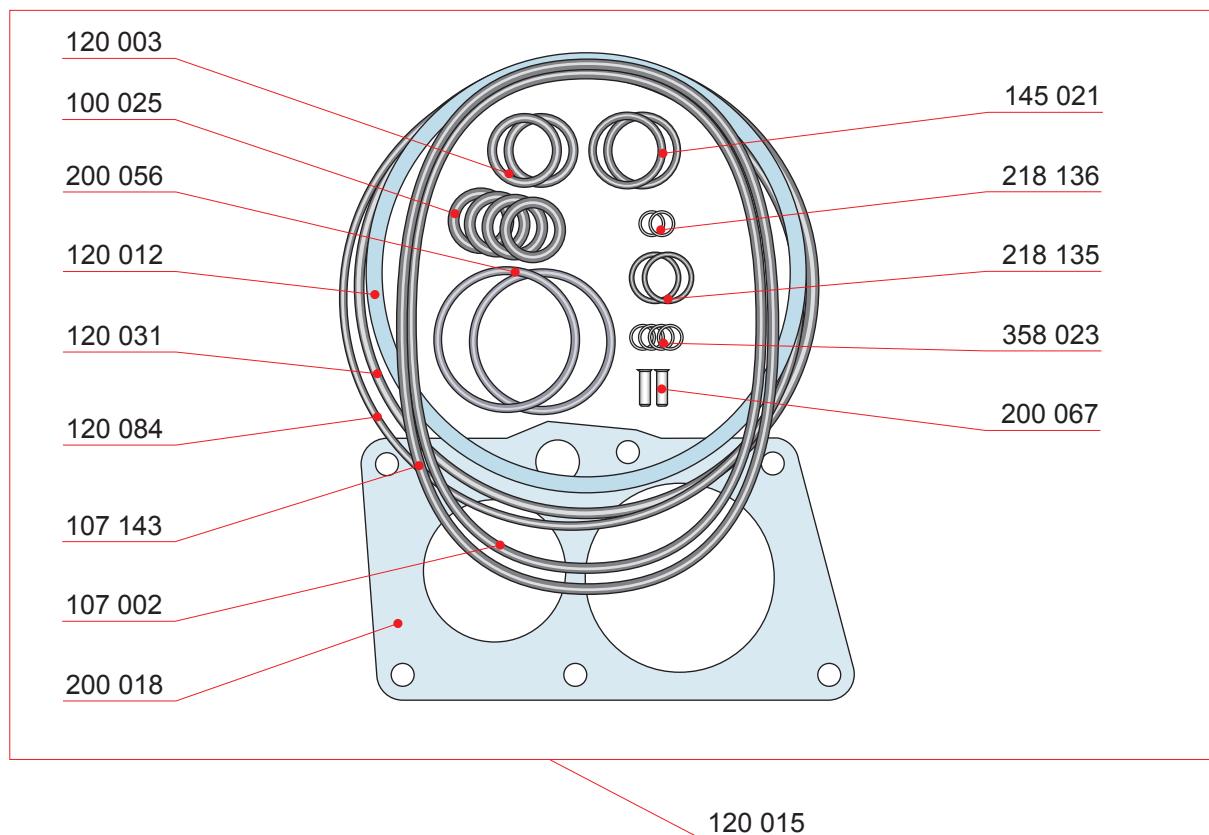
Cylinder head

View A**View B**

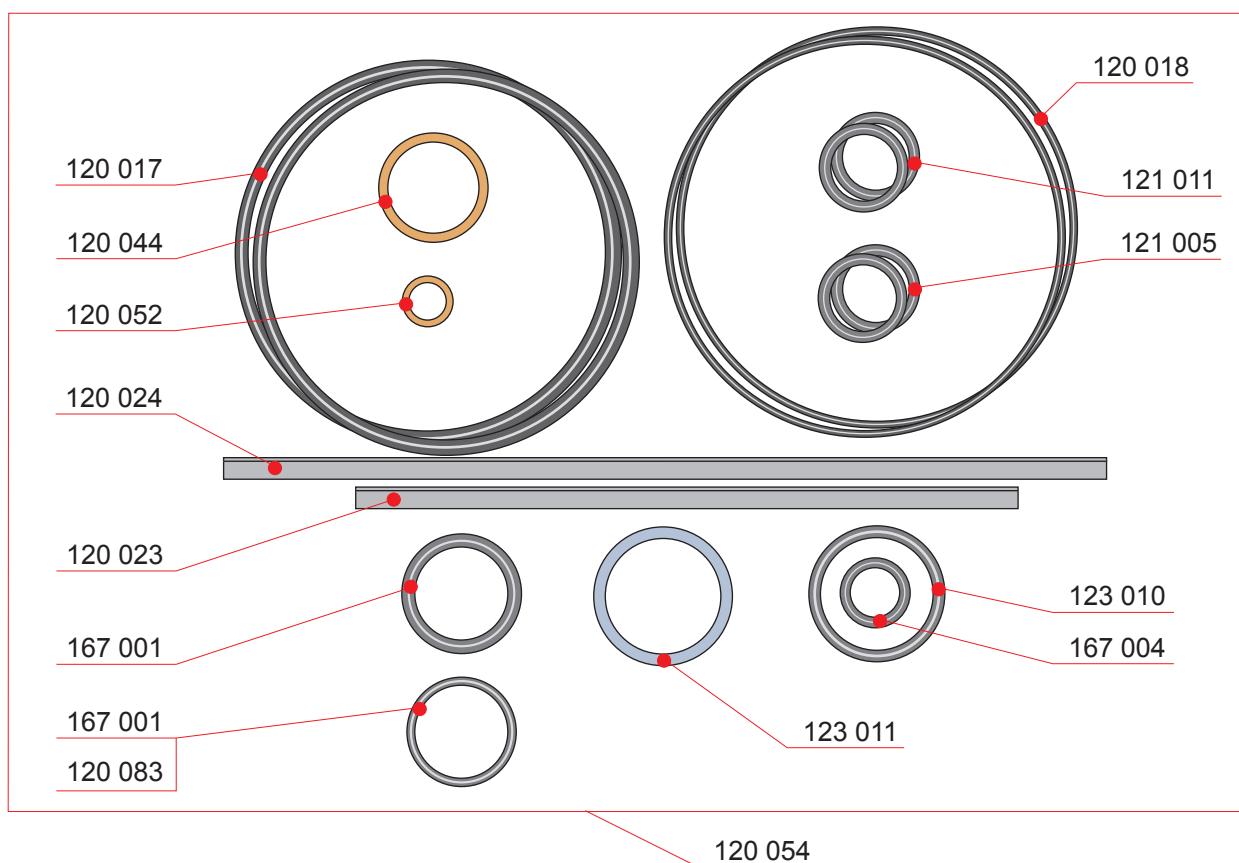
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 023	Gasket	1	-
120 024	Gasket	1	-
120 121	Plug	2	-
120 122	Sealing ring	2	-

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Cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 015	Sealing set for cylinder head replacement	1	-
100 025	O-ring	4	-
107 002	Hose gasket	1	-
107 143	Hose gasket	1	-
120 003	O-ring	2	-
120 012	Gasket	1	-
120 031	O-ring	1	-
120 084	O-ring	1	-
145 021	O-ring	2	-
200 018	Gasket	1	-
200 056	O-ring	2	-
200 067	Pin	2	-
218 135	O-ring	2	-
218 136	O-ring	2	-
358 023	O-ring	4	-

Cylinder head

Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 054	Sealing set for cylinder head overhaul	1	-
120 017	O-ring	2	-
120 018	O-ring (3)	2	-
120 023	Gasket	1	-
120 024	Gasket	1	-
120 044	Gasket	1	-
120 052	Sealing ring	1	-
120 083	O-ring (1)	1	-
121 005	O-ring	2	-
121 011	O-ring	2	-
123 010	O-ring	1	-
123 011	Sealing ring	1	-
167 001	O-ring (2)	1	-
167 004	O-ring (3)	1	-

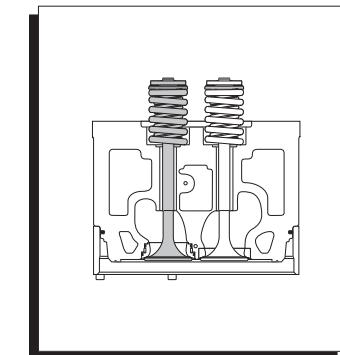
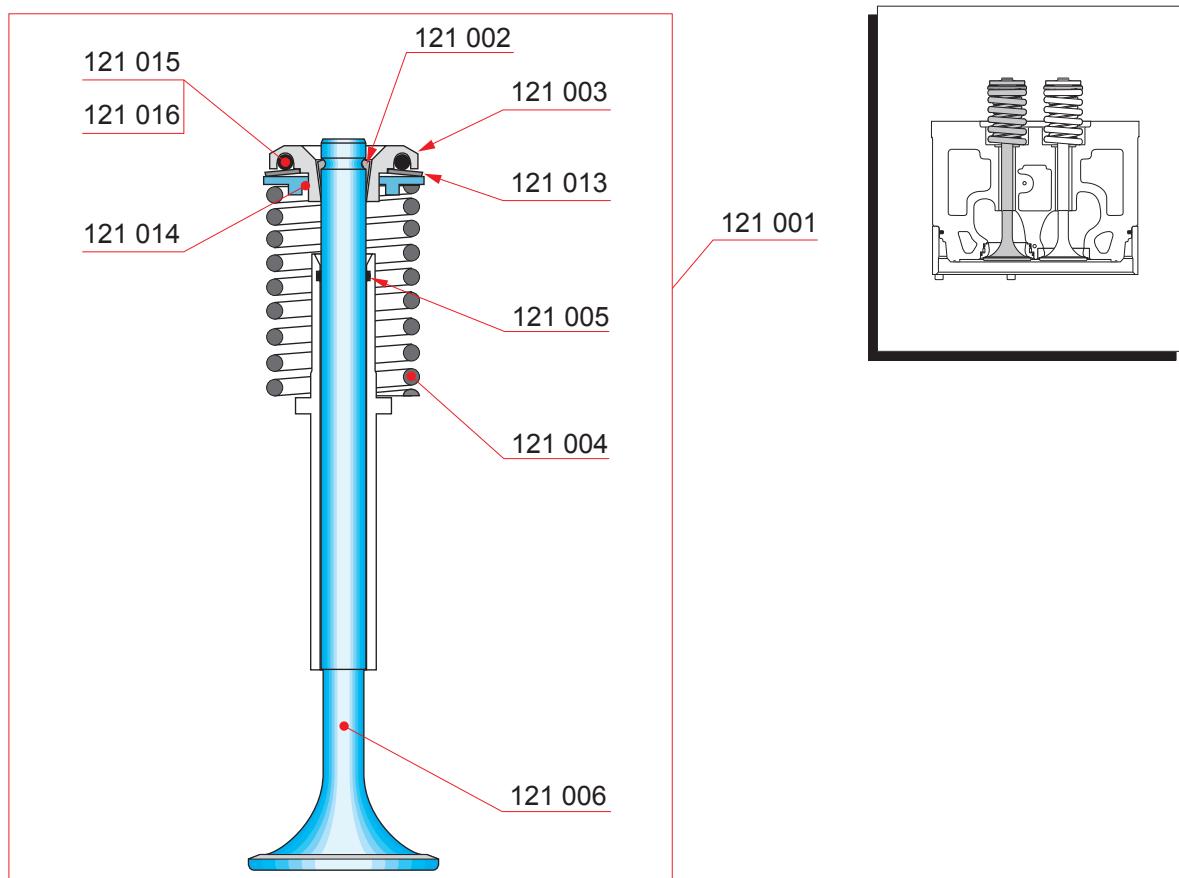
NOTE! (1) Part no 120 083 used with modified cyl.heads using a sleeve 120 082.

NOTE! (2) Part no 167 001 depends on the cyl.head type.

NOTE! (3) Not used in all cyl. heads

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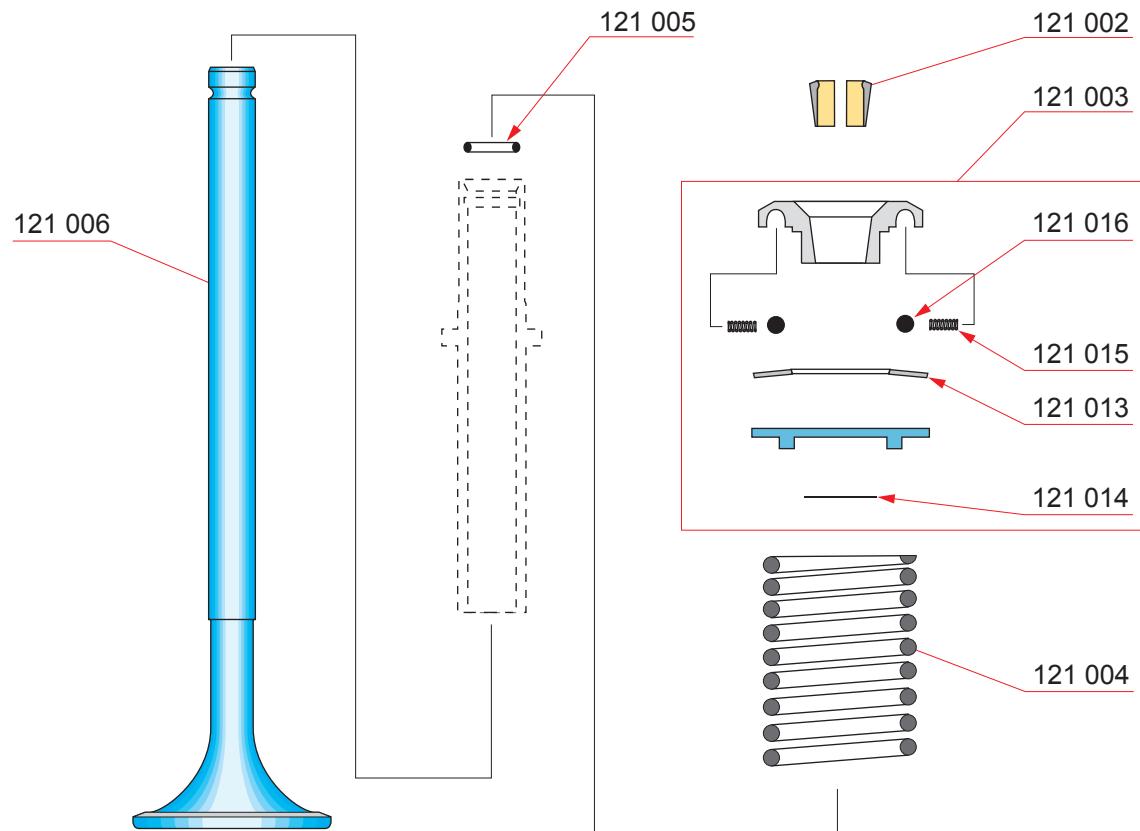
Exhaust valve assembly



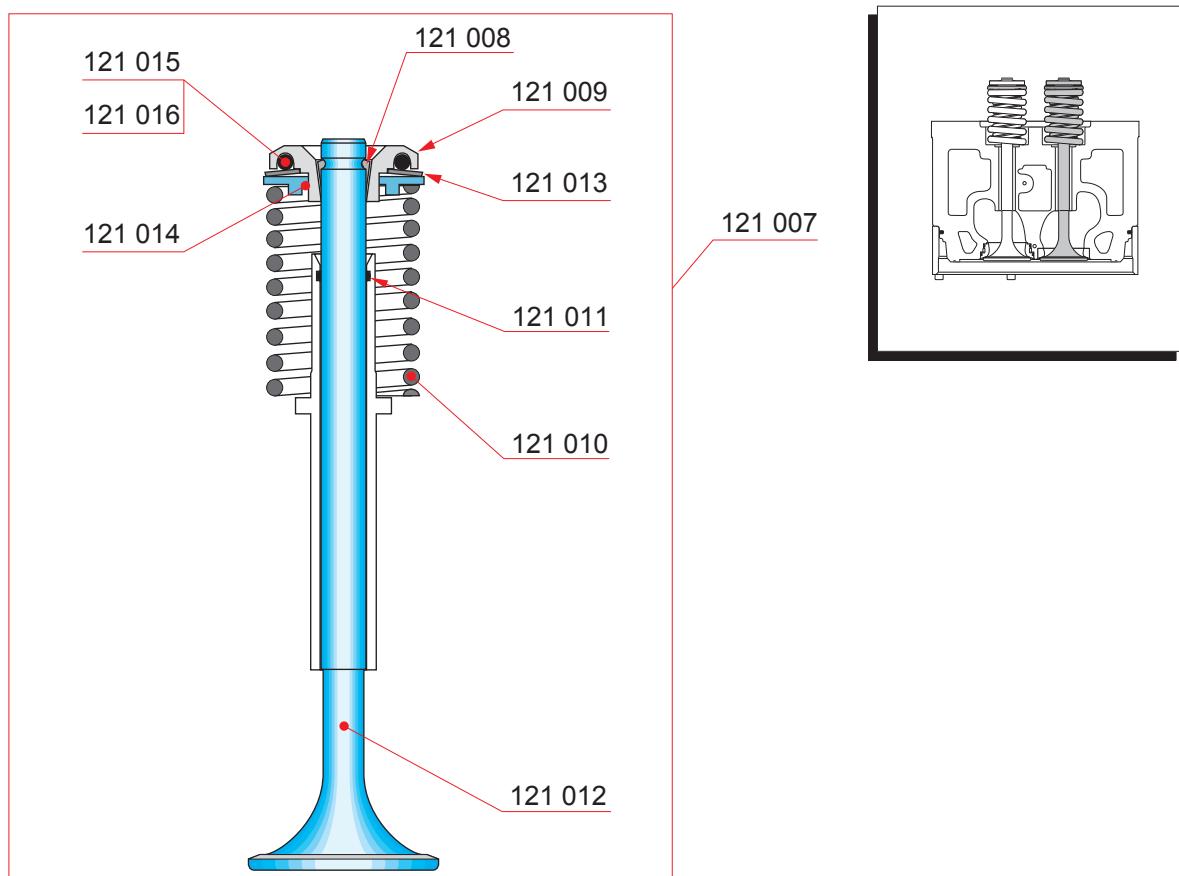
Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 001	Exhaust valve, compl.	1	5.3
121 002	Valve cotter pair	1	-
121 003	Rotocap	1	0.7
121 013	Spring plate	1	-
121 014	Retainer ring	1	-
121 015	Spring	7	-
121 016	Ball	7	-
121 004	Spring	1	1.5
121 005	O-ring	1	-
121 006	Exhaust valve	1	3.0

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Exhaust valve assembly



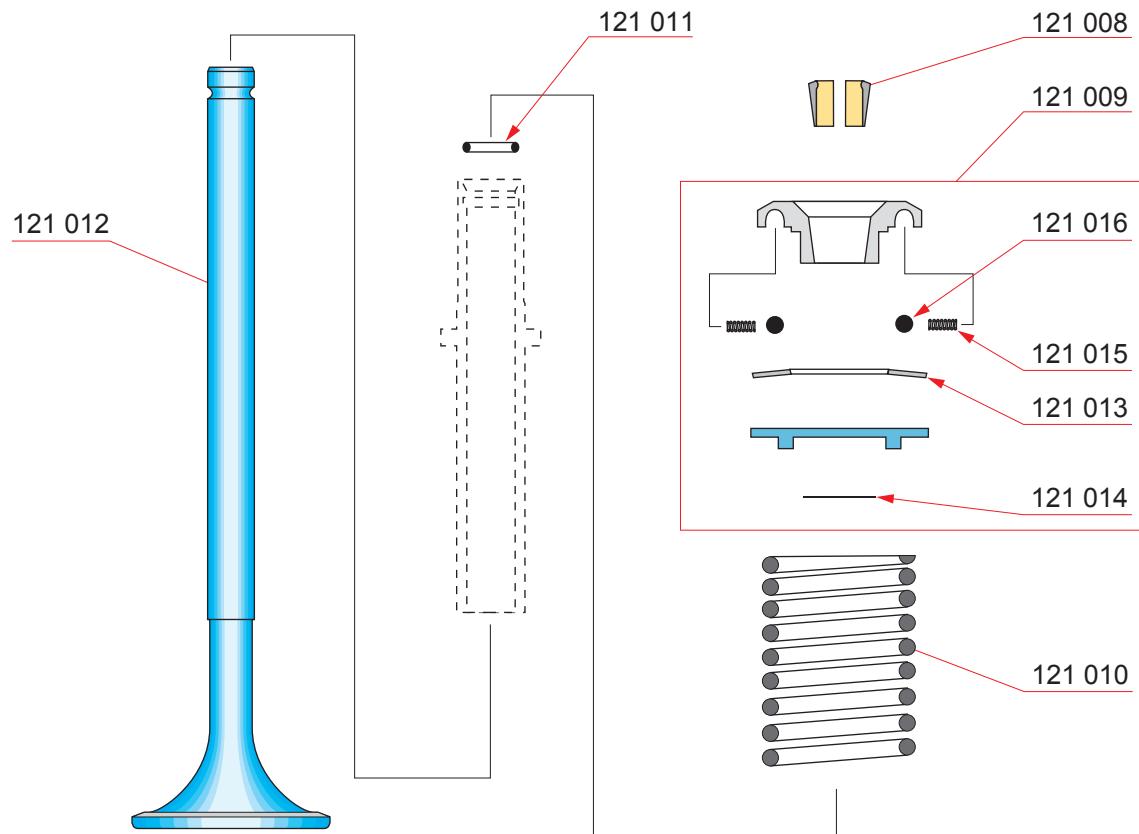
Inlet valve assembly



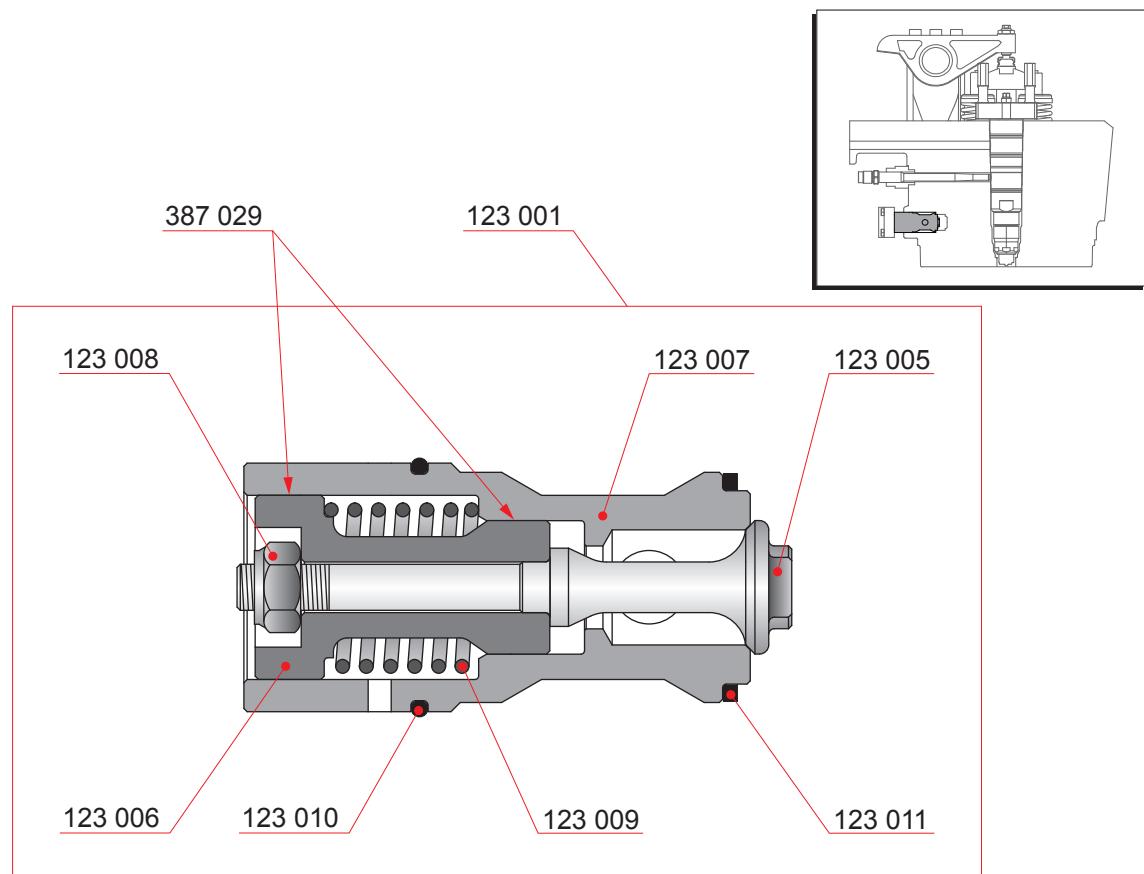
Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 007	Inlet valve, compl.	1	5.0
121 008	Valve cotted pair	1	-
121 009	Rotocap	1	0.7
121 013	Spring plate	1	-
121 014	Retainer ring	1	-
121 015	Spring	7	-
121 016	Ball	7	-
121 010	Spring	1	1.6
121 011	O-ring	1	-
121 012	Inlet valve	1	3.1

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Inlet valve assembly



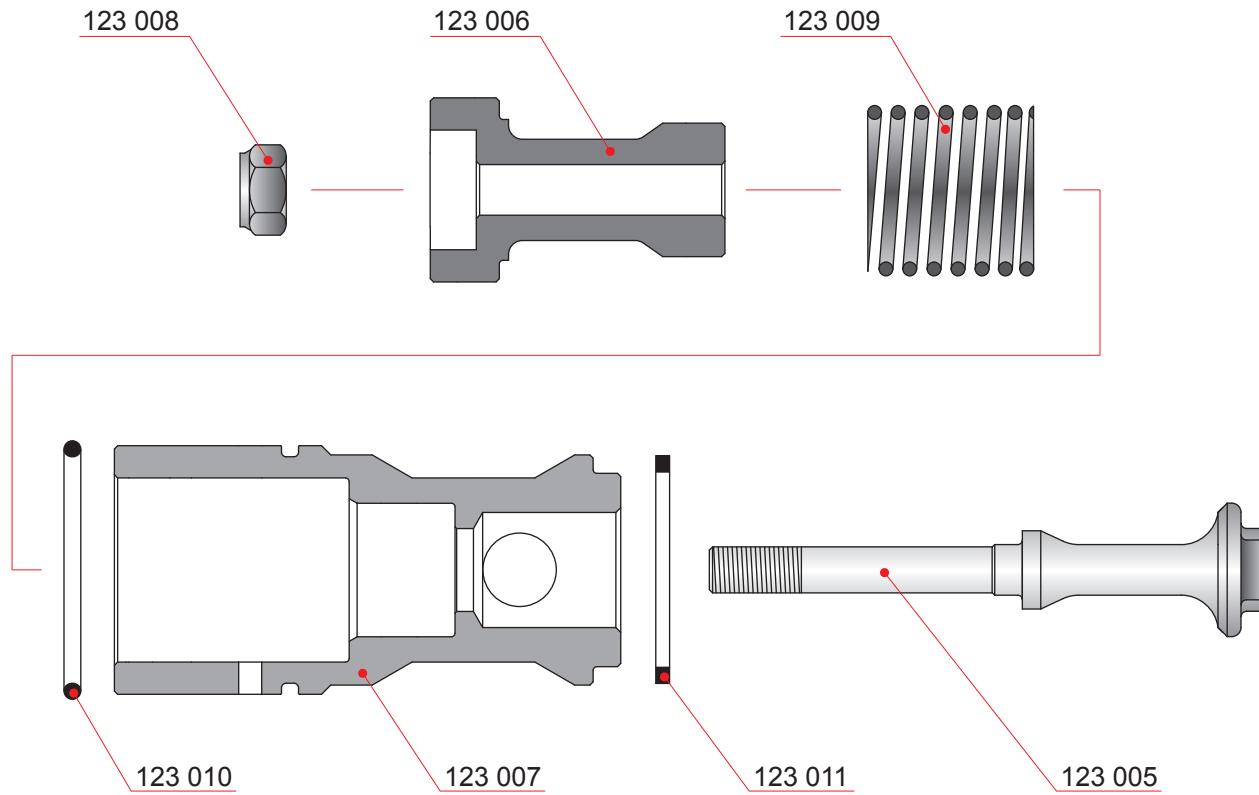
Starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
123 001	Starting valve	1	-
123 005	Spindle	1	-
123 006	Piston	1	-
123 007	Housing	1	-
123 008	Nut	1	-
123 009	Spring	1	-
123 010	O-ring	1	-
123 011	Sealing ring	1	-
387 029	Assembly compound	1	-

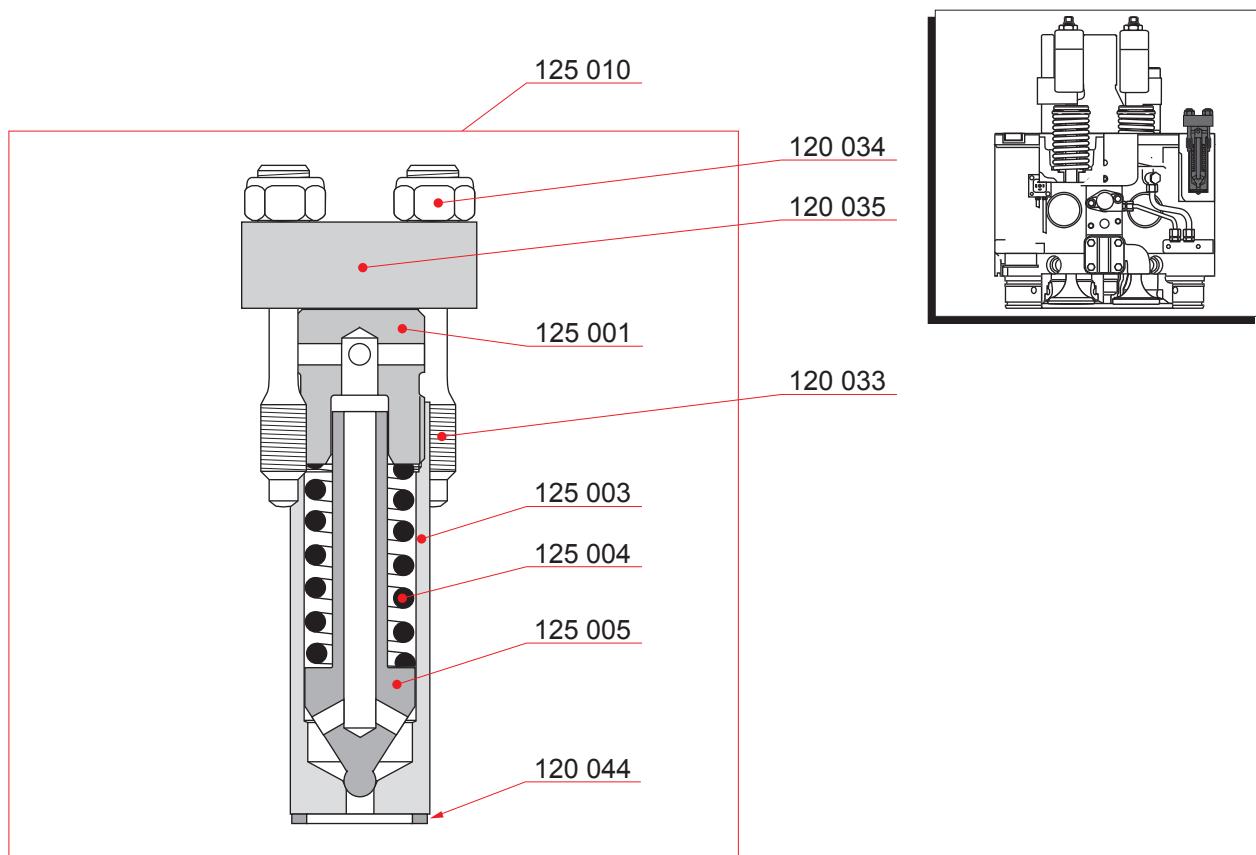
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Updated: 28.01.2009

Starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
123 005	Spindle	1	-
123 006	Piston	1	-
123 007	Housing	1	-
123 008	Nut	1	-
123 009	Spring	1	-
123 010	O-ring	1	-
123 011	Sealing ring	1	-

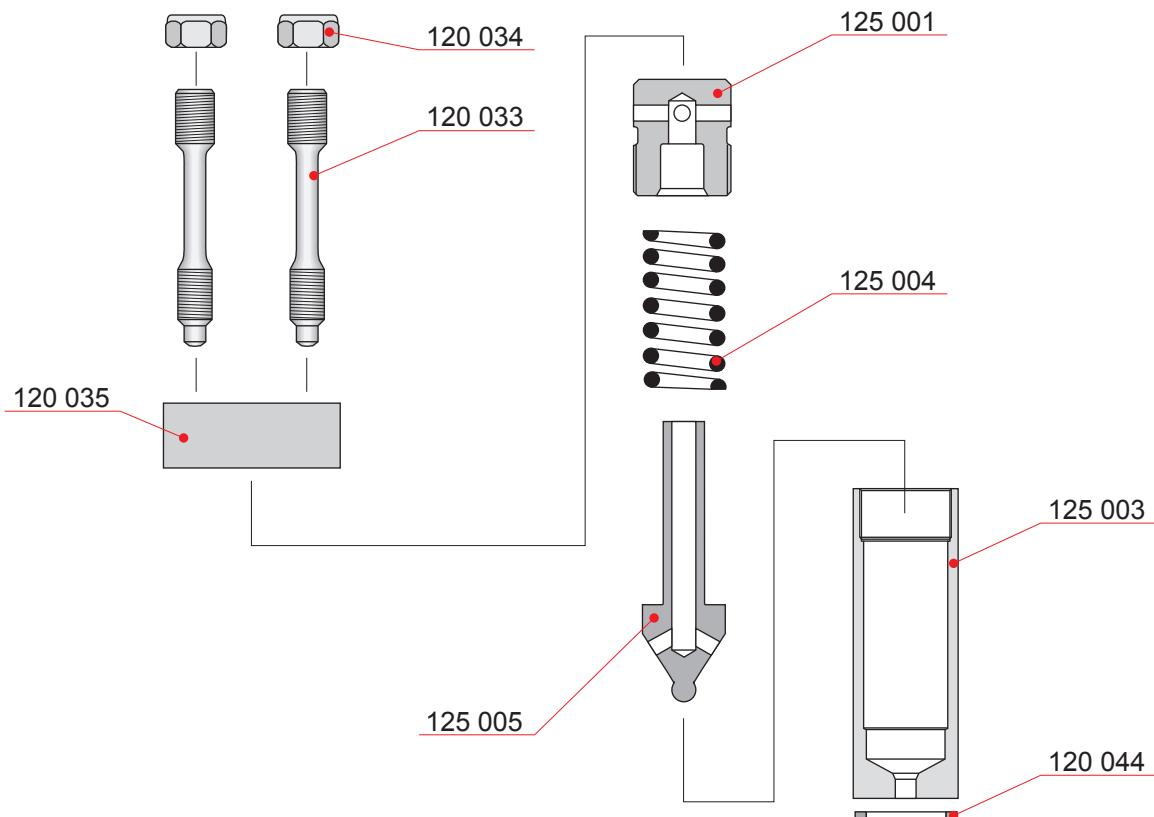
Cylinder head safety valves

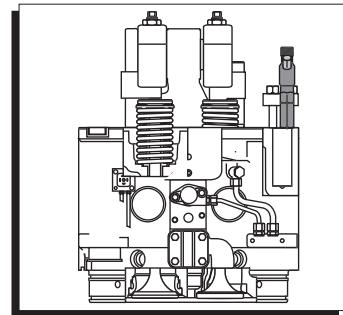
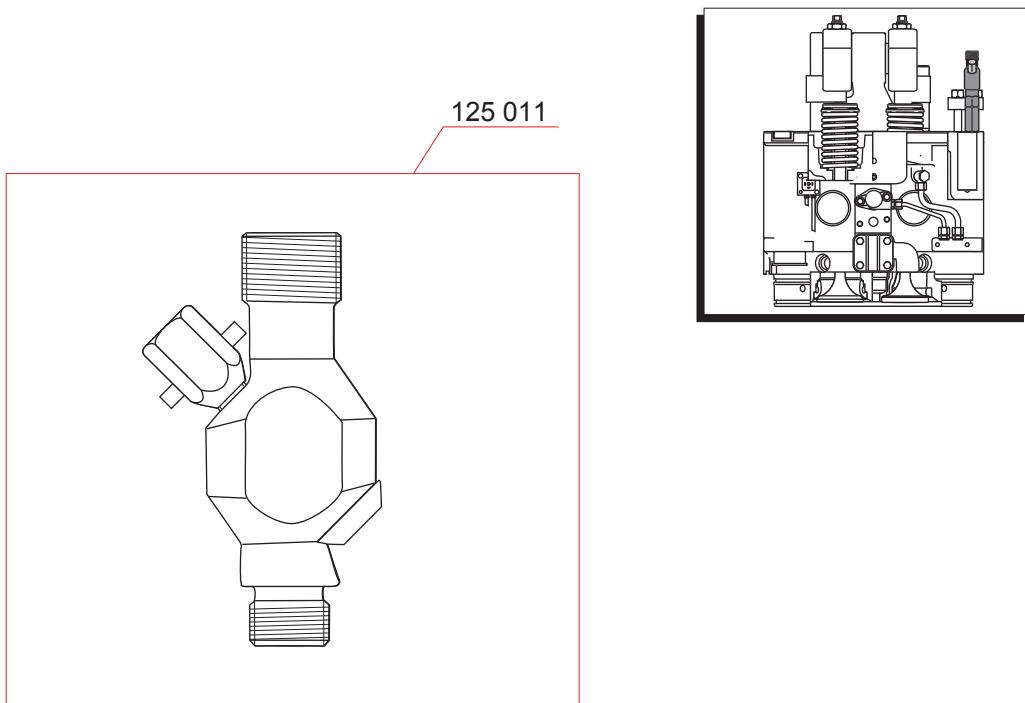


Part No.	Description	Qty [Pcs]	Wt. [Kg]
125 010	Cylinder head safety valve	1	-
125 001	Cover	1	0.3
125 003	Valve cone	1	0.4
125 004	Spring	1	0.2
125 005	Valve	1	0.2
120 044	Gasket	1	-
120 033	Screw	2	-
120 034	Nut	2	-
120 035	Yoke	1	-

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Updated: 23.10.2012

Cylinder head safety valves

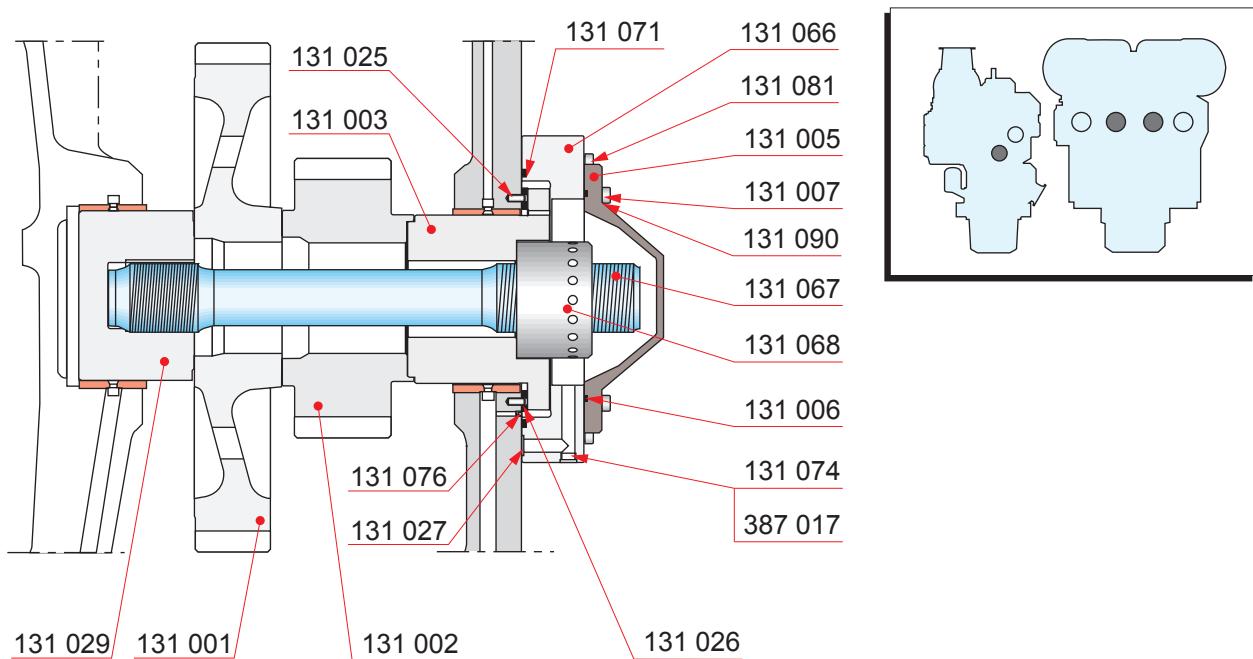


Indicator valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]
125 011	Indicator valve, compl.	1	-

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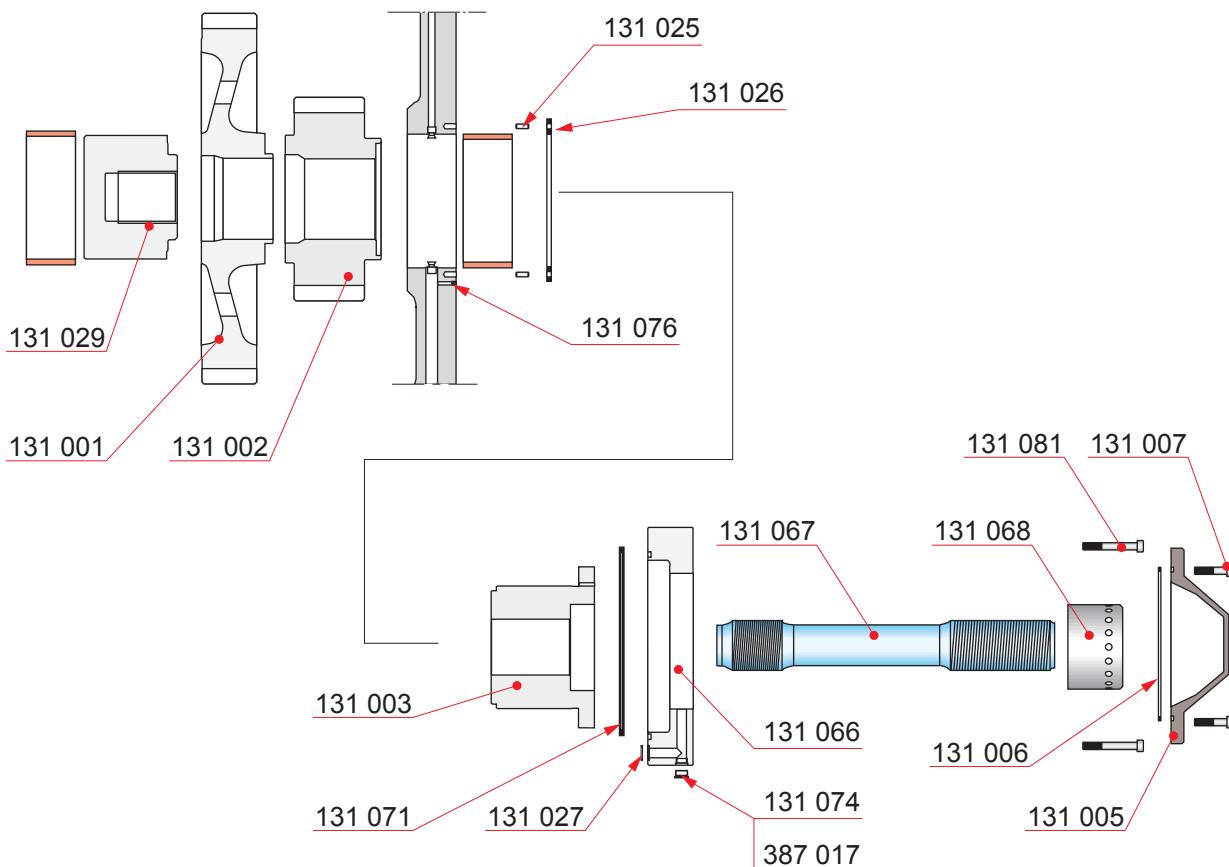
Intermediate gears for camshaft drive



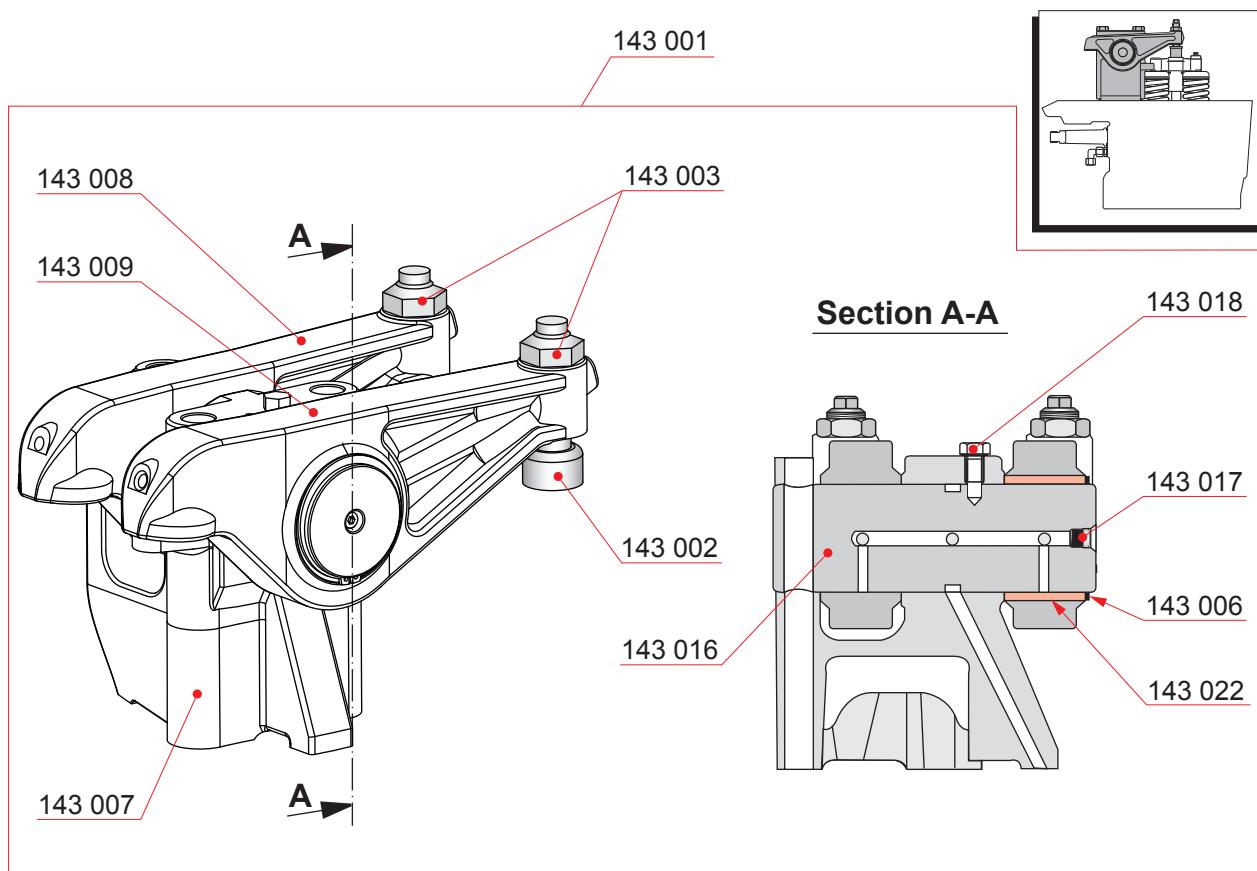
Part No.	Description	Qty [Pcs]	Wt. [Kg]
131 001	Bigger intermediate gear	1	-
131 002	Small intermediate gear	1	-
131 003	Bearing piece	1	-
131 005	Cover	1	-
131 006	O-ring	1	-
131 007	Screw	6	-
131 025	Pin	4	-
131 026	Thrust bearing bush	1	-
131 027	O-ring	1	-
131 029	Extension piece	1	-
131 066	Cover	1	-
131 067	Screw	1	-
131 068	Nut	1	-
131 071	O-ring	1	-
131 074	Plug	1	-
131 076	Reducing nipple	1	-
131 081	Screw	8	-
131 090	Washer	6	-
387 017	Glue compound	1	-

Edition: C
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Updated: 03.10.2008

Intermediate gears for camshaft drive



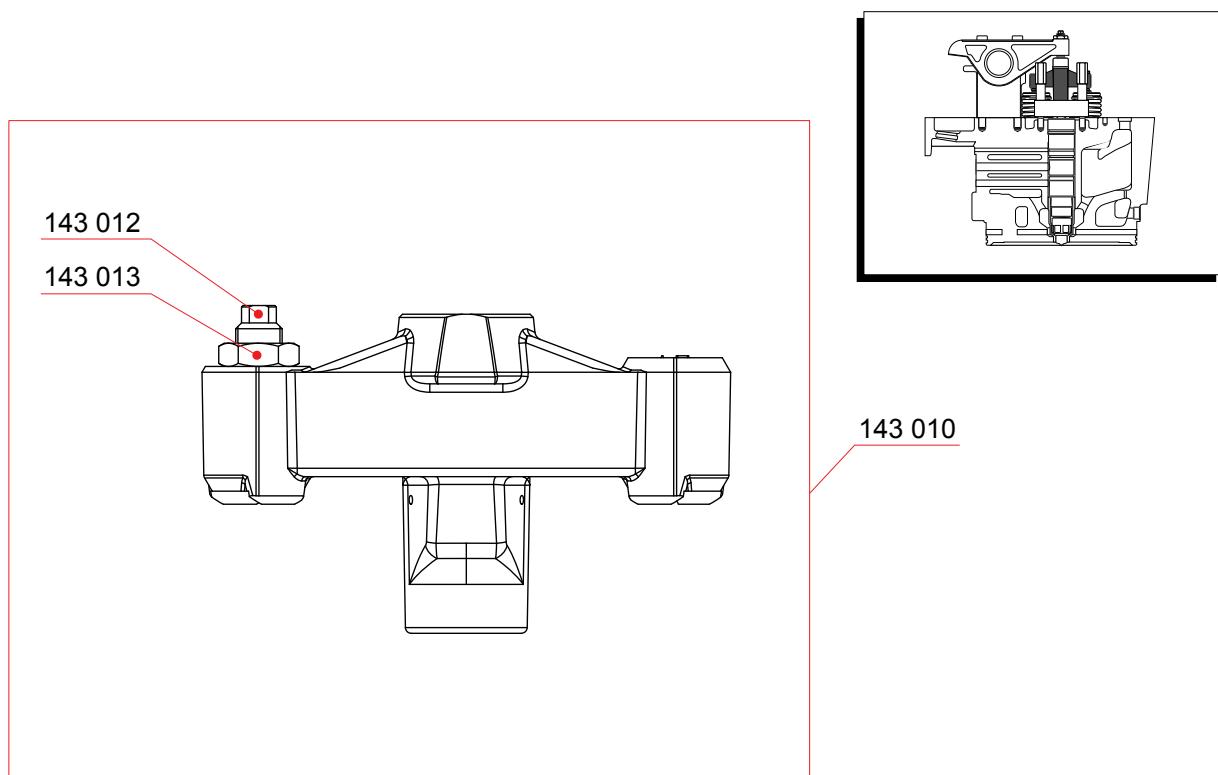
Rocker arms and bearing bracket



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 001	Rocker arms with bracket	1	-
143 002	Adjusting screw	2	-
143 003	Nut	2	-
143 006	Retainer ring	1	-
143 007	Bearing bracket	1	-
143 008	Rocker arm for exhaust valve	1	-
143 009	Rocker arm for inlet valve	1	-
143 016	Shaft	1	-
143 017	Plug	1	-
143 018	Screw	1	-
143 022	Bearing bush	1	-

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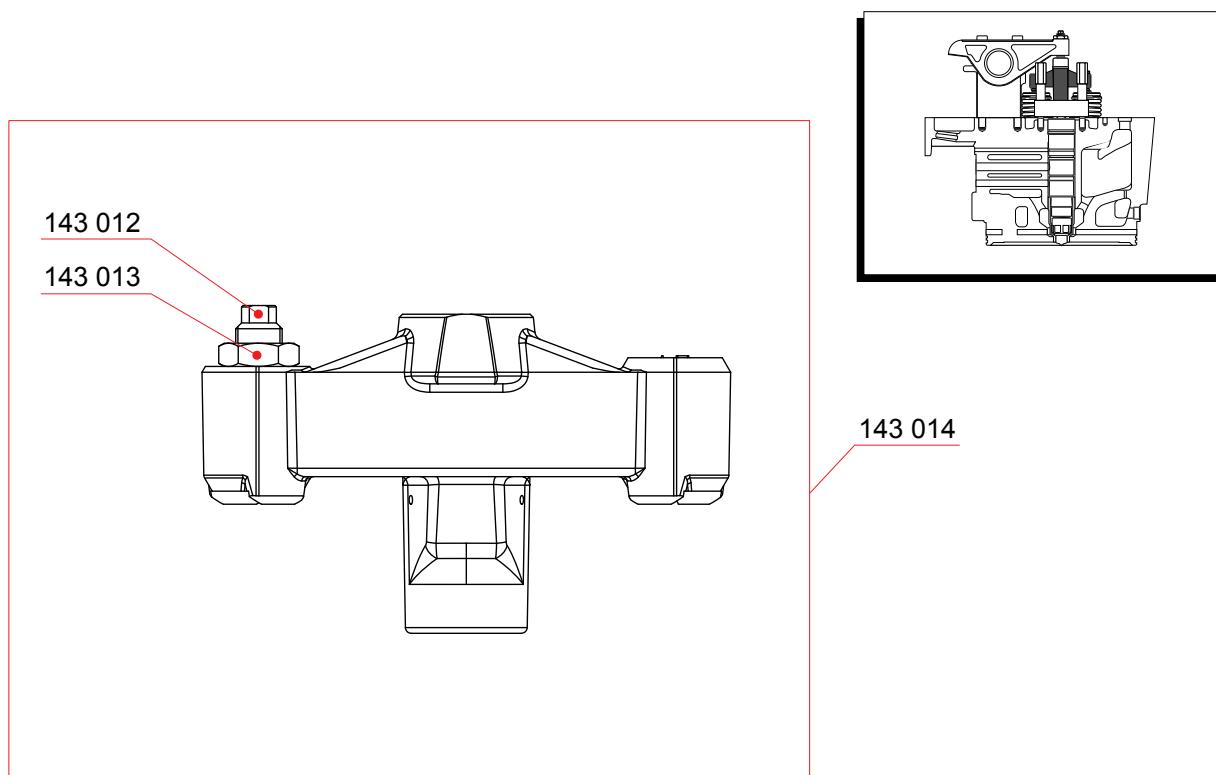
Yoke for exhaust valves



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 010	Yoke for exhaust valve, compl.	1	-
143 012	Adjustable pin	1	-
143 013	Nut	1	-

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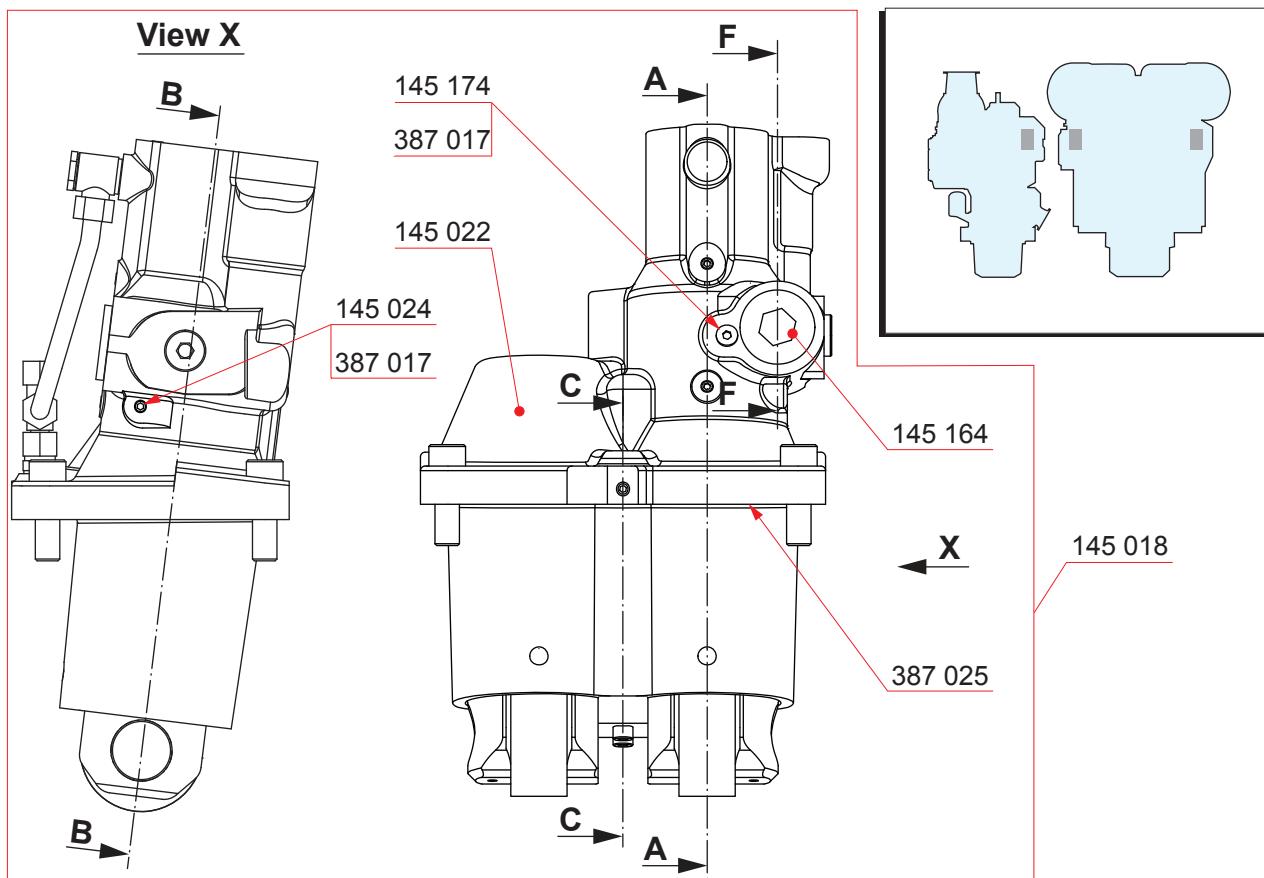
Yoke for inlet valves



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 014	Yoke for inlet valve, compl.	1	-
143 012	Adjustable pin	1	-
143 013	Nut	1	-

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Guide block assembly

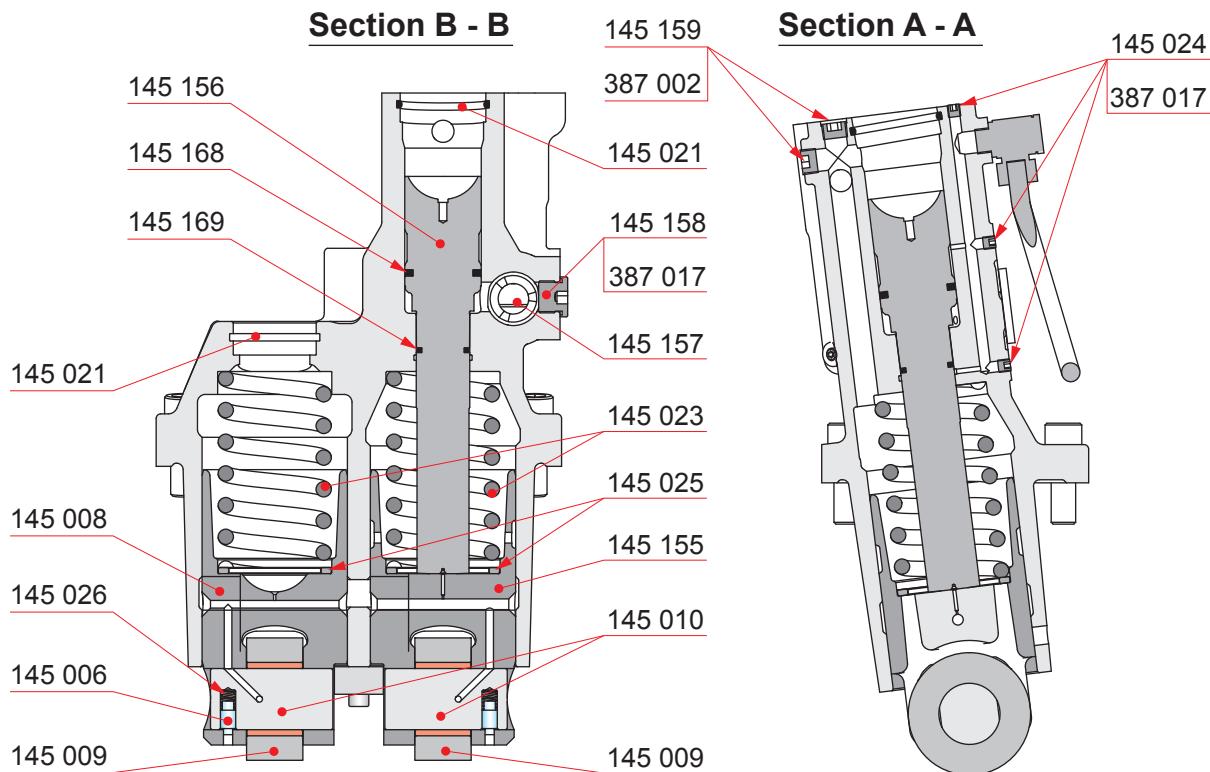


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 018	Valve tappet	1	-
145 022	Housing	1	-
145 024	Plug	6	-
145 164	Plug	1	-
145 174	Plug	4	-
387 017	Glue compound	1	-
387 025	Glue compound	1	-

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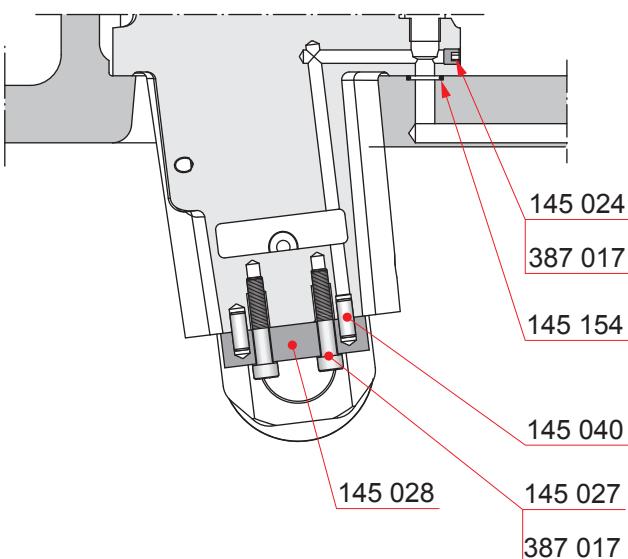
Updated: 23.09.2011

Guide block assembly

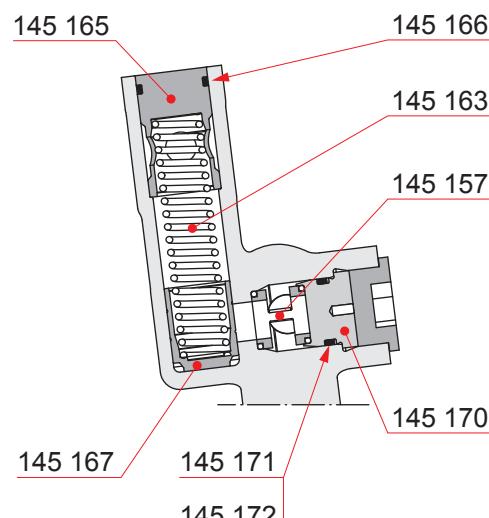
Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 006	Pin	2	-
145 008	Valve tappet	1	-
145 009	Tappet roller	2	-
145 010	Roller pin	2	-
145 021	O-ring	2	-
145 023	Spring	2	-
145 024	Plug	6	-
145 025	Washer	2	-
145 026	Spring	2	-
145 155	Valve tappet	1	-
145 156	Piston	1	-
145 157	Non-return valve	1	-
145 158	Plug	1	-
145 159	Plug	2	-
145 168	Sealing ring	1	-
145 169	Sealing ring	1	-
387 002	Glue compound	1	-
387 017	Glue compound	1	-

Guide block assembly

Section C - C



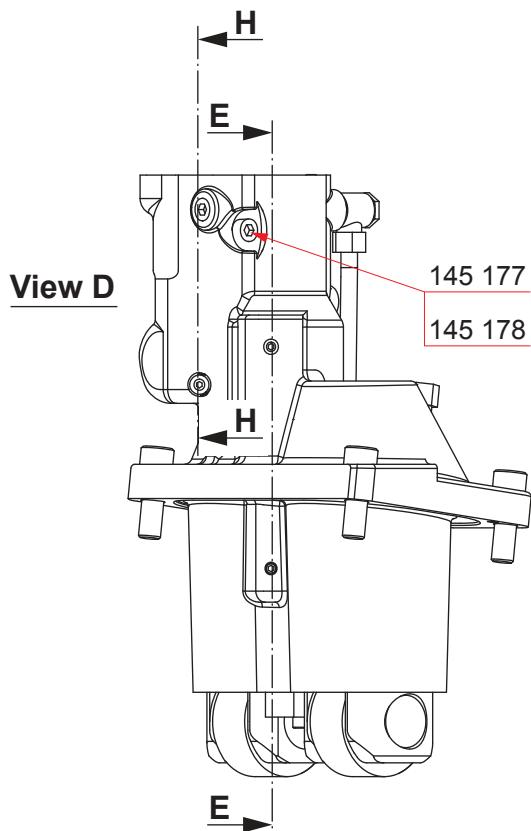
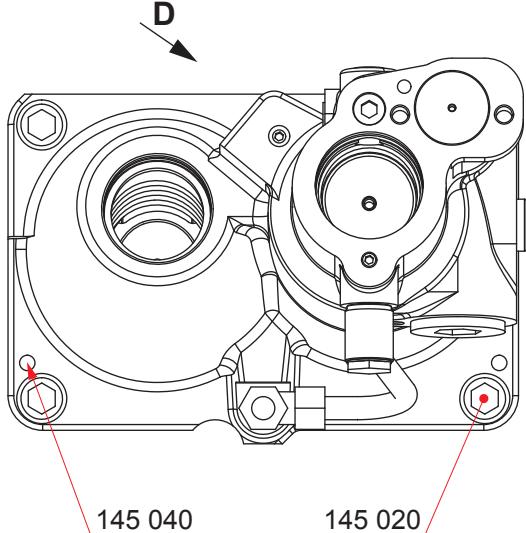
Section F - F



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 024	Plug	6	-
145 027	Screw	2	-
145 028	Guiding plate	1	-
145 040	Spring pin	4	-
145 154	O-ring	1	-
145 157	Non-return valve	1	-
145 163	Spring	1	-
145 165	Spring housing	1	-
145 166	O-ring	1	-
145 167	Piston	1	-
145 170	Guiding plug	1	-
145 171	O-ring	1	-
145 172	Support ring	1	-
387 017	Glue compound	1	-

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Guide block assembly

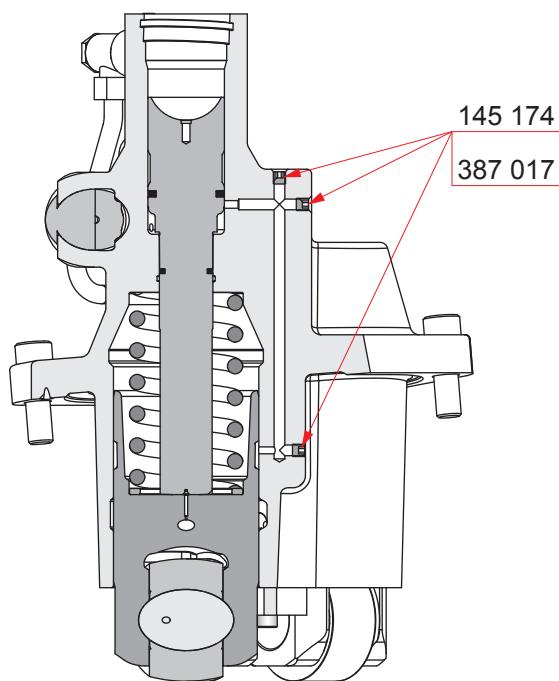
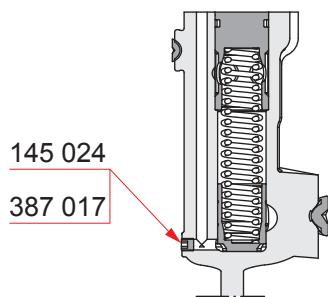


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 020	Screw	4	-
145 040	Spring pin	4	-
145 177	Sealing ring	1	-
145 178	Plug	1	-

Guide block assembly

Section E - E

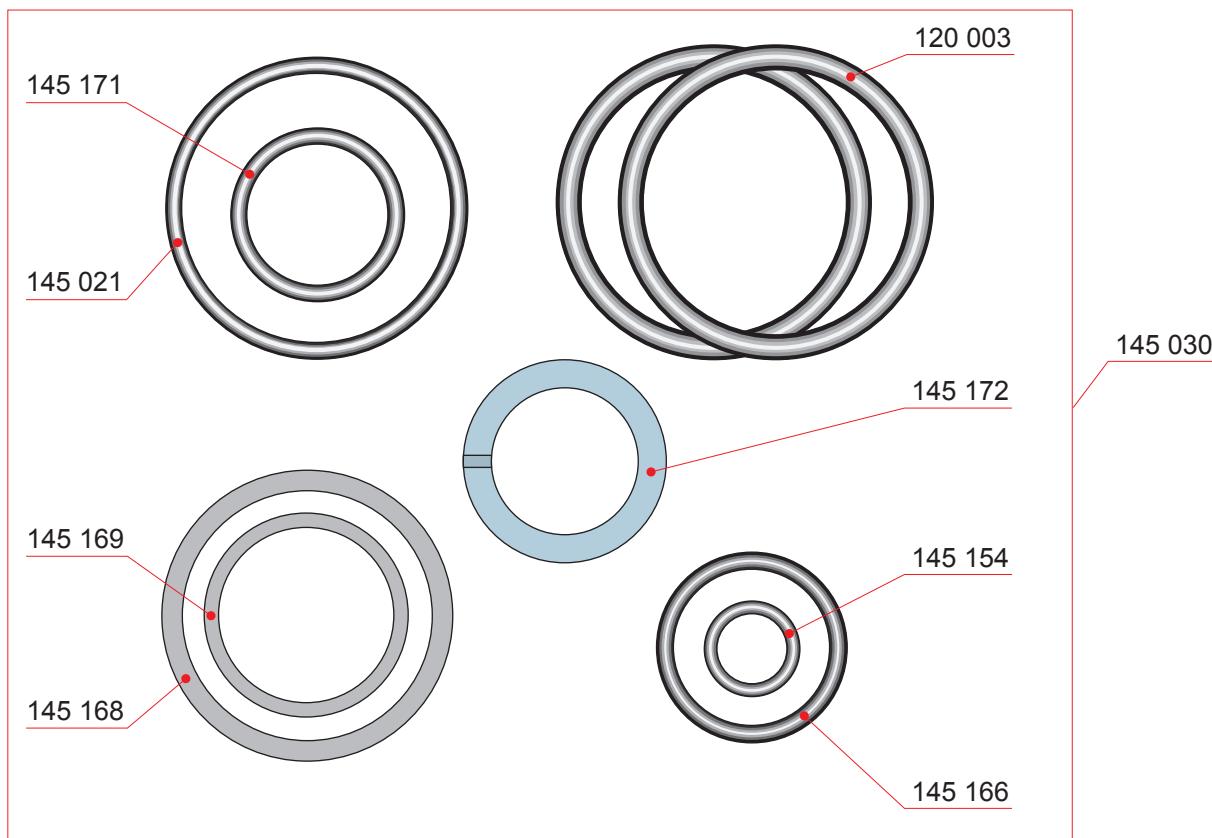
Section H - H



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 024	Plug	6	-
145 174	Plug	4	-
387 017	Glue compound	1	-

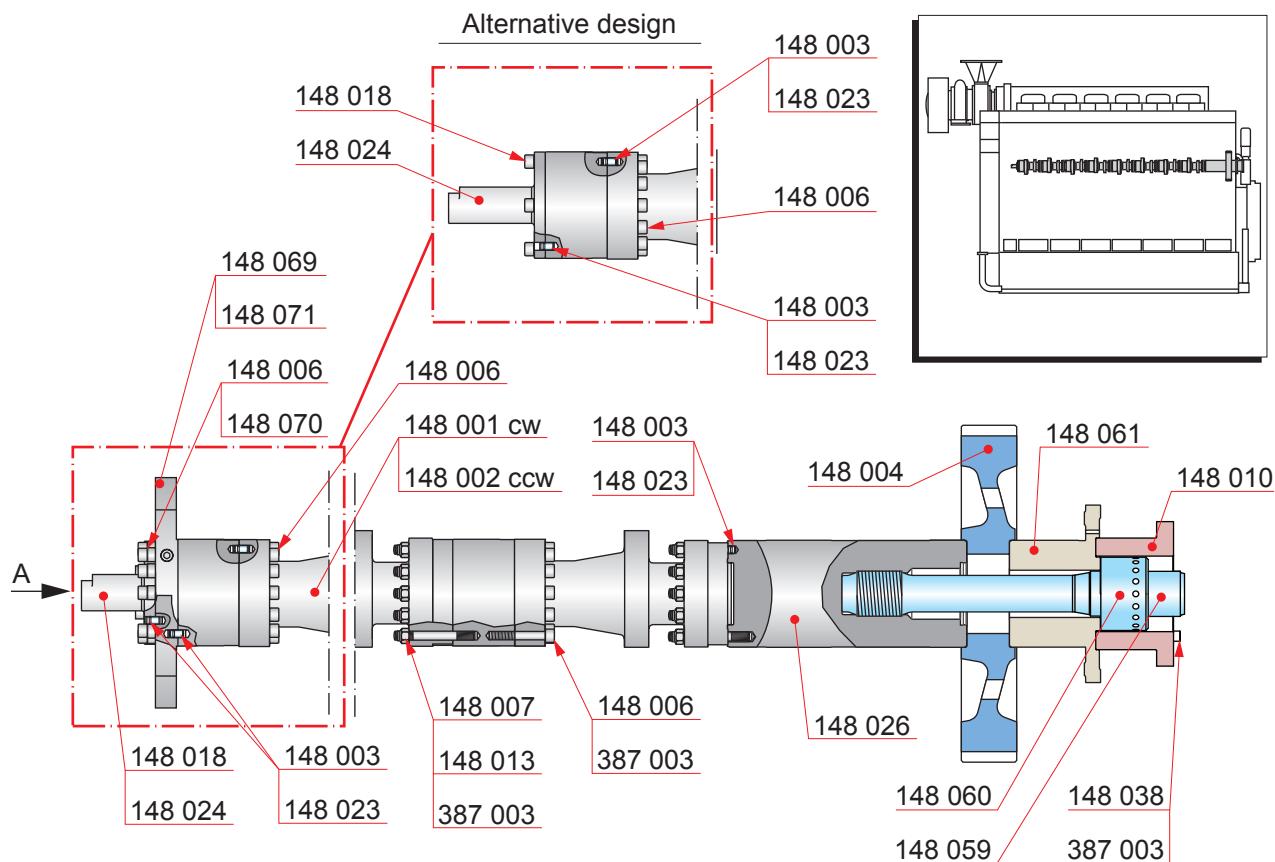
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Guide block assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 030	Spare part kit	1	-
120 003	O-ring	2	-
145 021	O-ring	2	-
145 154	O-ring	1	-
145 166	O-ring	1	-
145 168	Sealing ring	1	-
145 169	Sealing ring	1	-
145 171	O-ring	1	-
145 172	Support ring	1	-

Camshaft



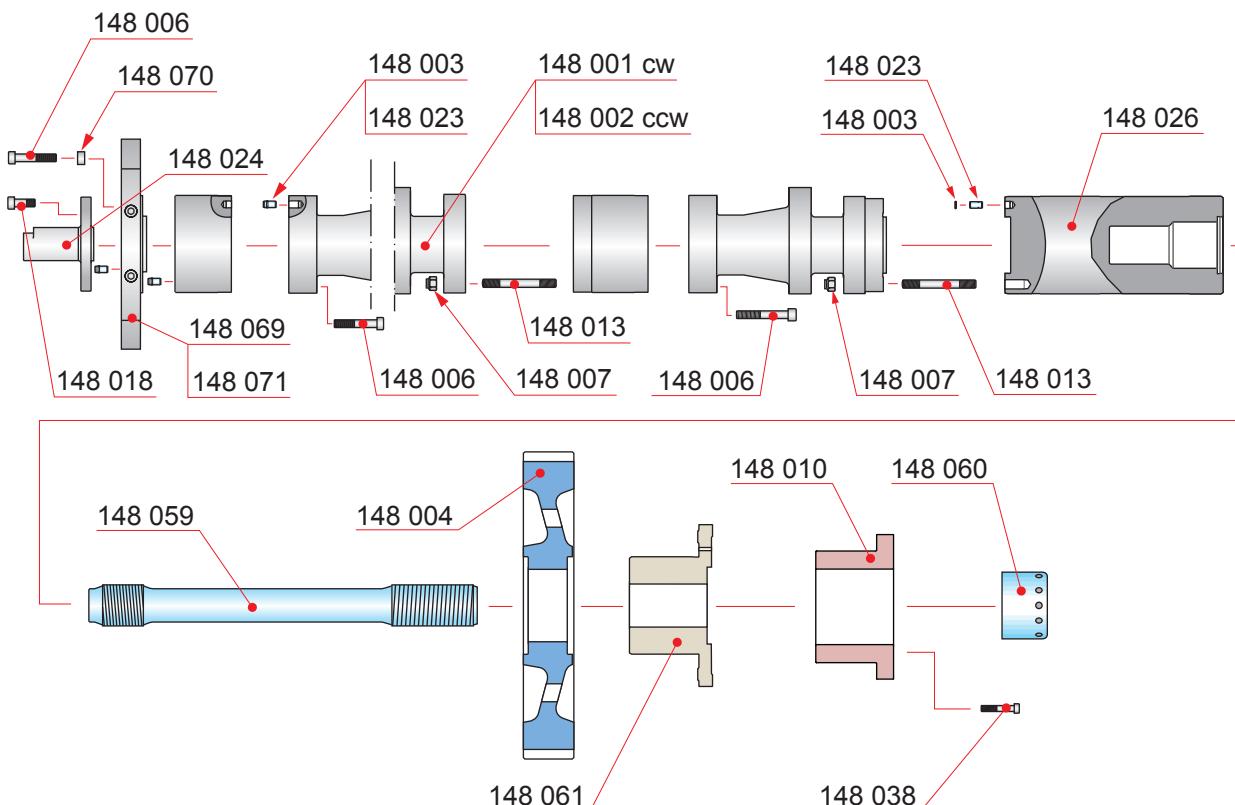
Part No.	Description	Qty [Pcs]	Wt. [Kg]
148 001	Camshaft piece (1)	*	59.8
148 002	Camshaft piece (2)	*	-
148 003	Snap ring	*	-
148 004	Drive gear	1	-
148 006	Screw	*	0.2
148 007	Nut	*	-
148 010	Gear	1	22.0
148 013	Screw	*	-
148 018	Screw	4	0.1
148 023	Guide pin	*	-
148 024	Starting air cam	1	8.6
148 026	Extension	1	82.0
148 038	Screw	4	-
148 059	Screw	1	19.3
148 060	Nut	1	5.6
148 061	Thrust bearing	1	37.0
148 069	Weight	*	-
148 070	Distance sleeve	*	-
148 071	Weight	*	-
387 003	Glue compound	1	-

NOTE! (1) cw. rot. engine (2) ccw. rot. engine

NOTE! *) See page 6.

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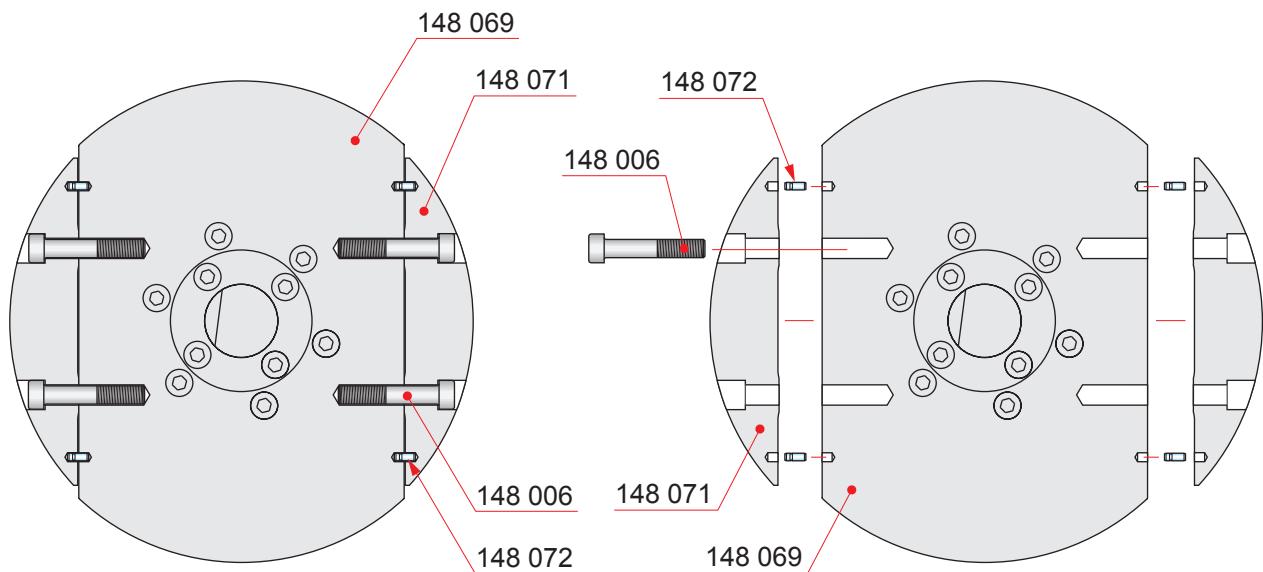
Camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
148 001	Camshaft piece (1)	*	59.8
148 002	Camshaft piece (2)	*	-
148 003	Snap ring	*	-
148 004	Drive gear	1	-
148 006	Screw	*	0.2
148 007	Nut	*	-
148 010	Gear	1	22.0
148 013	Screw	*	-
148 018	Screw	4	0.1
148 023	Guide pin	*	-
148 024	Starting air cam	1	8.6
148 026	Extension	1	82.0
148 038	Screw	4	-
148 059	Screw	1	19.3
148 060	Nut	1	5.6
148 061	Thrust bearing	1	37.0
148 069	Weight	*	-
148 070	Distance sleeve	*	-
148 071	Weight	*	-

NOTE! (1) cw. rot. engine (2) ccw. rot. engine

NOTE! *) See page 6.

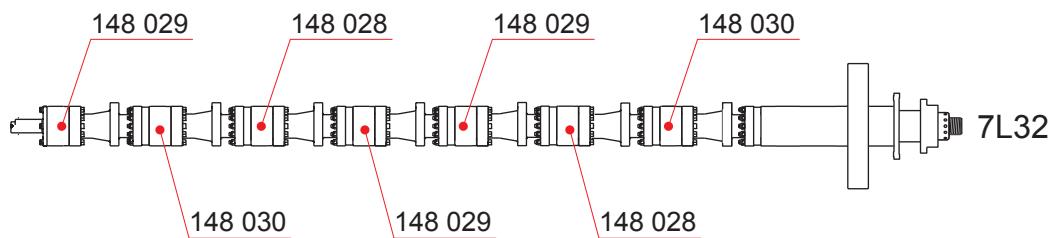
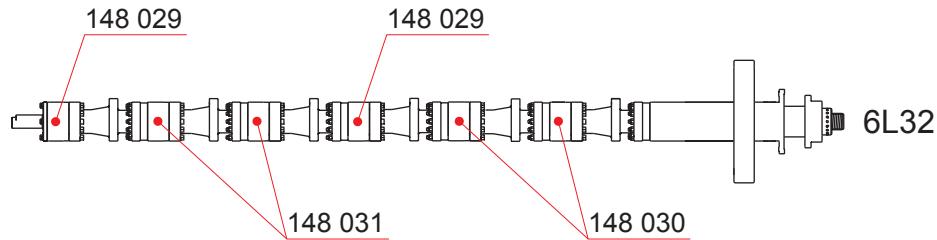
CamshaftView A

Part No.	Description	Qty [Pcs]	Wt. [Kg]
148 006	Screw	*	0.2
148 069	Weight	*	-
148 071	Weight	*	-
148 072	Pin	*	-

NOTE! *) See page 6.

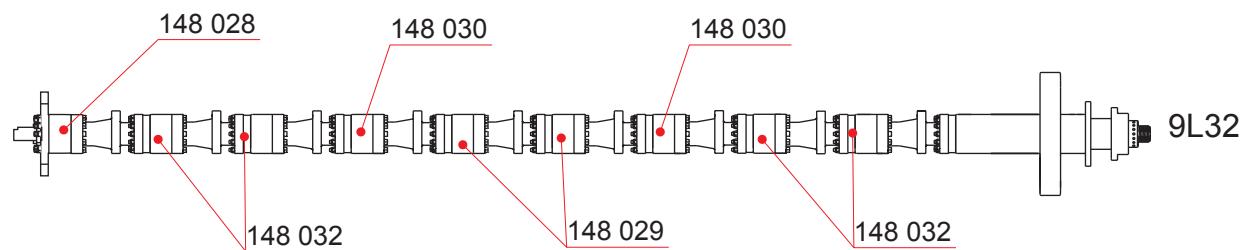
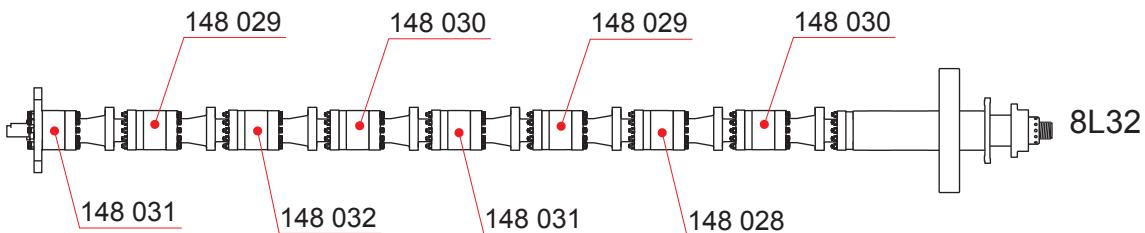
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Camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
148 028	Bearing journal	*	-
148 029	Bearing journal	*	16.0
148 030	Bearing journal	2	16.0
148 031	Bearing journal	*	16.0

NOTE! *) See page 6.

Camshaft

Part No.	Description	Qty [Pcs]	Wt. [Kg]
148 028	Bearing journal	*	-
148 029	Bearing journal	*	16.0
148 030	Bearing journal	2	16.0
148 031	Bearing journal	*	16.0
148 032	Bearing journal	*	-

NOTE! *) See page 6.

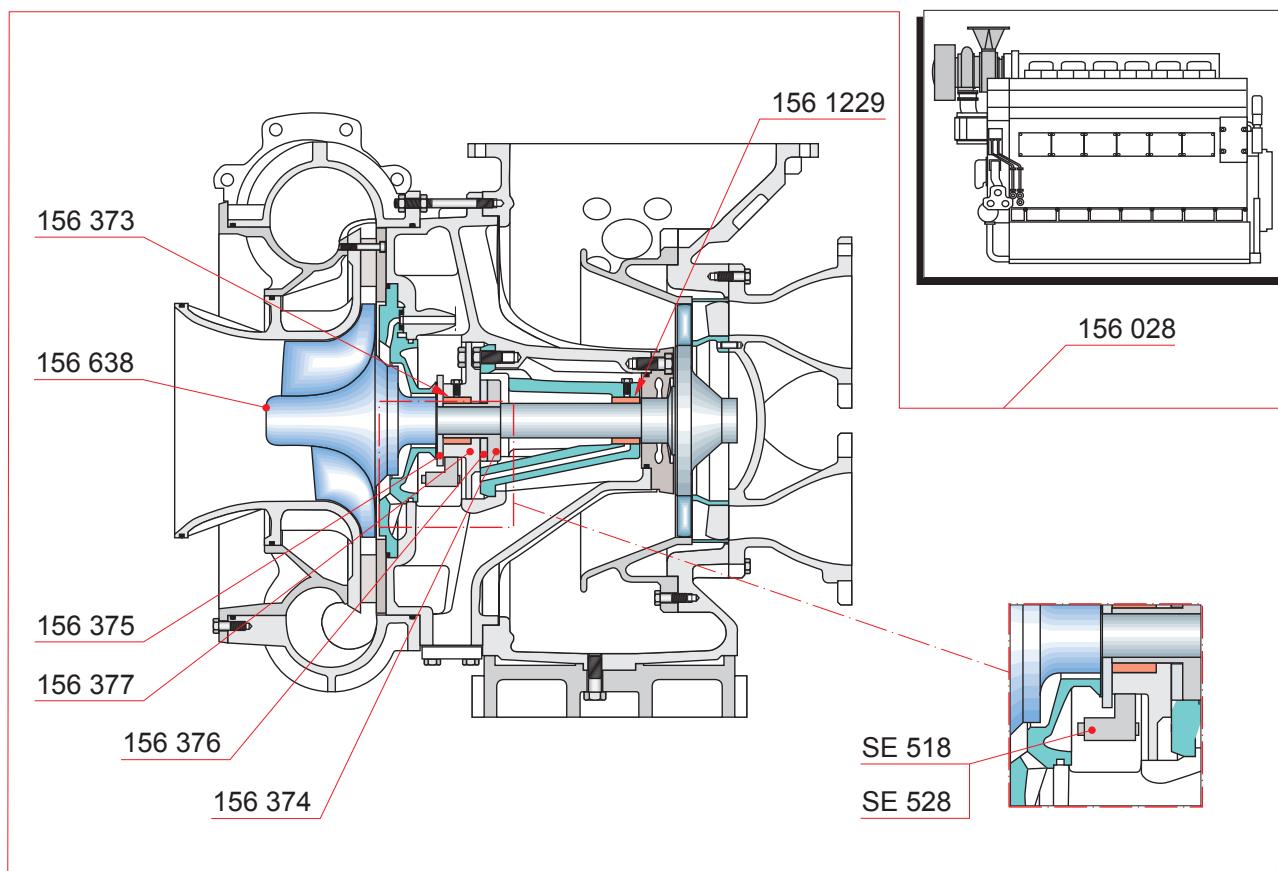
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Camshaft

Quantity according to number of cylinders

Part No	Pieces			
	6L32	7L32	8L32	9L32
148 001	6	7	8	9
148 002	6	7	8	9
148 003	13	15	18	19
148 006	72	84	106	108
148 007	72	84	96	108
148 013	72	84	96	108
148 023	13	15	18	19
148 028	-	2	1	1
148 029	2	3	2	2
148 031	2	-	2	-
148 032	-	-	1	4
148 069	-	-	1	-
148 070	-	-	6	-
148 071	-	-	2	-
148 072	-	-	4	-

Turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 028	Turbocharger	1	-
156 373	Bearing (1)	1	-
156 374	Thrust bearing (2)	1	-
156 375	Thrust bearing (1)	1	-
156 376	Disc (2)	1	-
156 377	Bearing (2)	1	-
156 638	Cartridge **	1	-
156 1229	Bearing (1)	1	-
SE518	Speed pick-up *	1	-
SE528	Speed pick-up *	1	-

NOTE! (1) Spare part set 156 1071 includes items marked with (1).

NOTE! (2) Spare part set 156 1072 includes items marked with (2).

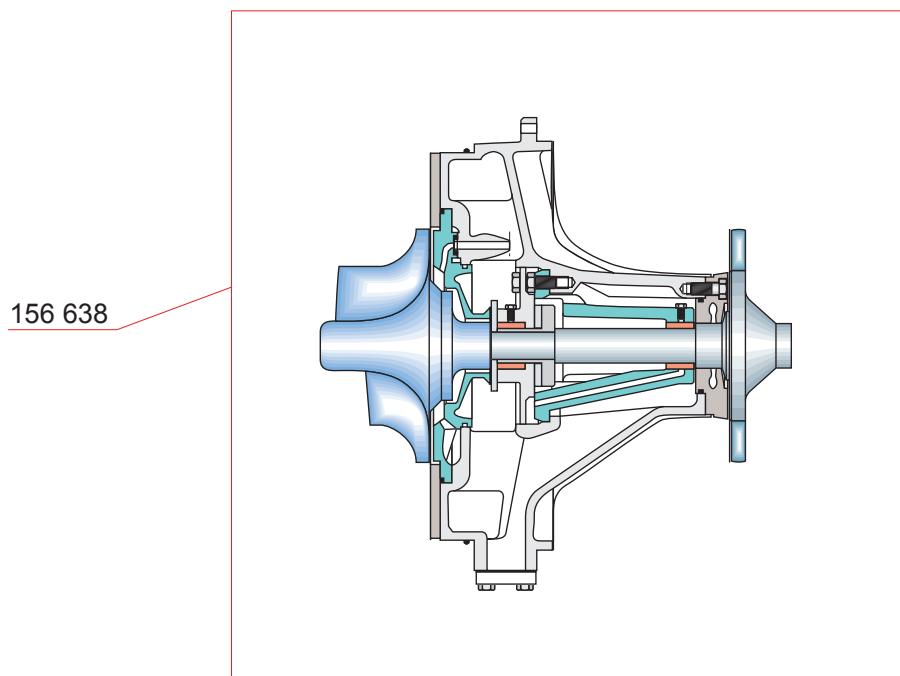
NOTE! *) SE 518 used in L-engine and turbocharger A. SE 528 used in turbocharger B.

NOTE! **) See page 2.

NOTE! When ordering spare parts, turbocharger serial number and specification must be given.

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Turbocharger

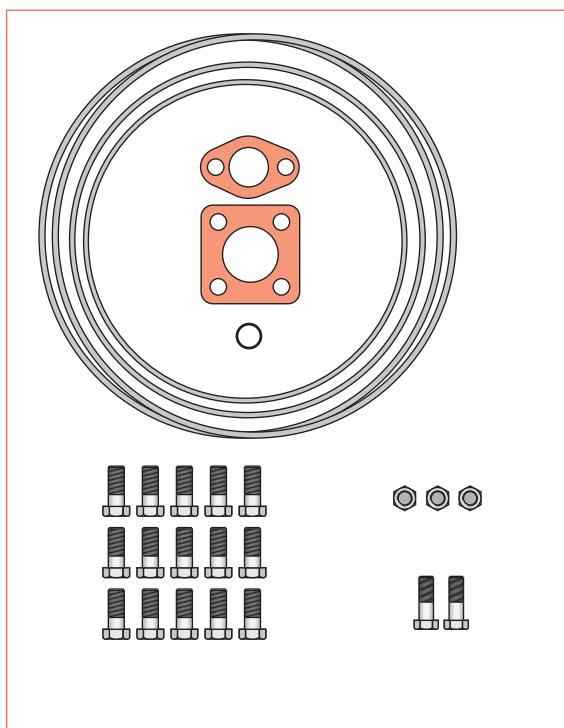


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 638	Cartridge	1	-

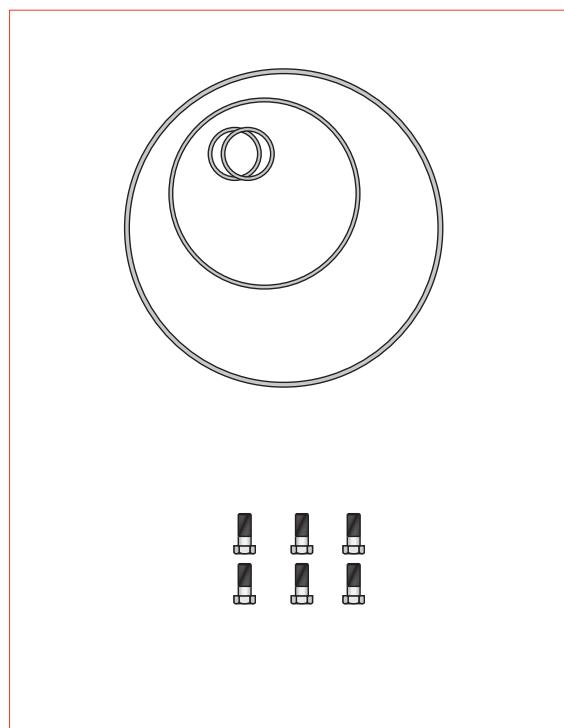
NOTE! Only spare part sets (156 379, 156 380, 156 1071, 156 1072), cartridge (156 638) and speed pick-ups (SE 518, SE 528) for turbocharger can be ordered.

NOTE! When ordering spare parts, turbocharger serial number and specification must be given.

Turbocharger



156 379



156 380

Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 379	Spare part kit (1)*	1	-
156 380	Spare part kit (2)*	1	-

NOTE! (1) Spare part set for turbine/compressor check.

NOTE! (2) Spare part set for bearing inspection.

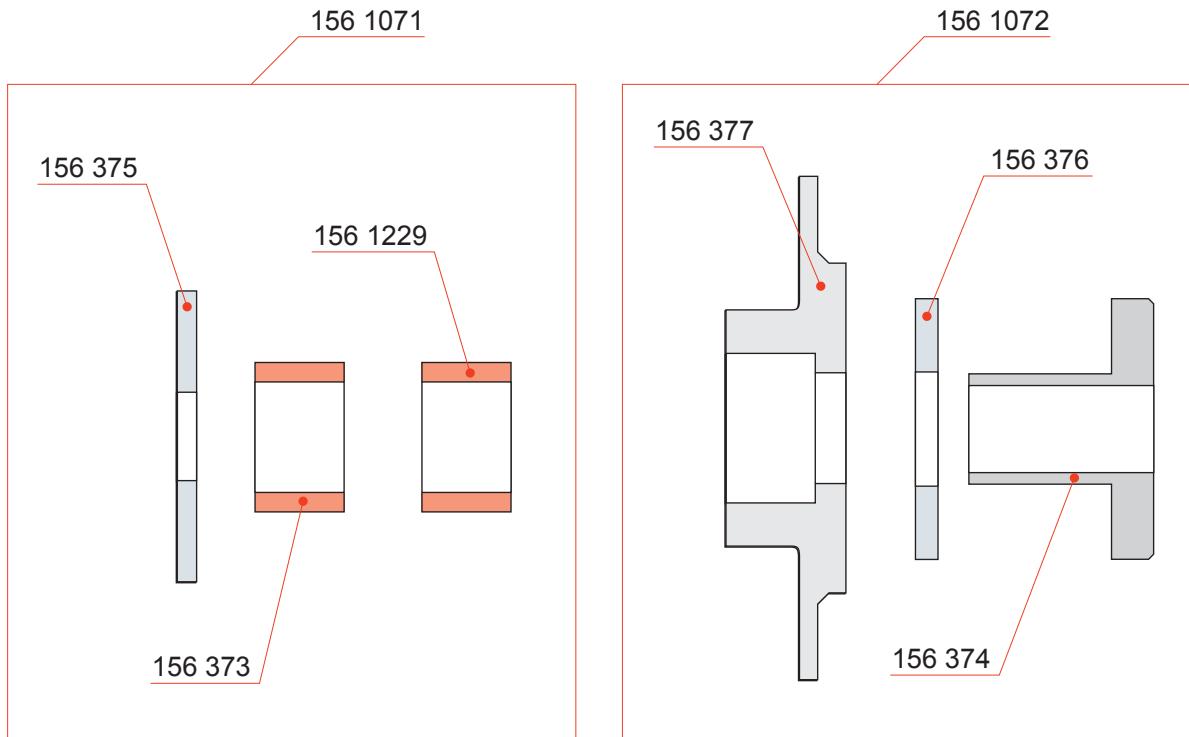
NOTE! *) Content of the set depends on turbocharger type.

NOTE! Only spare part sets (156 379, 156 380, 156 1071, 156 1072), cartridge (156 638) and speed pick-ups (SE 518, SE 528) for turbocharger can be ordered.

NOTE! When ordering spare parts, turbocharger serial number and specification must be given.

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Turbocharger



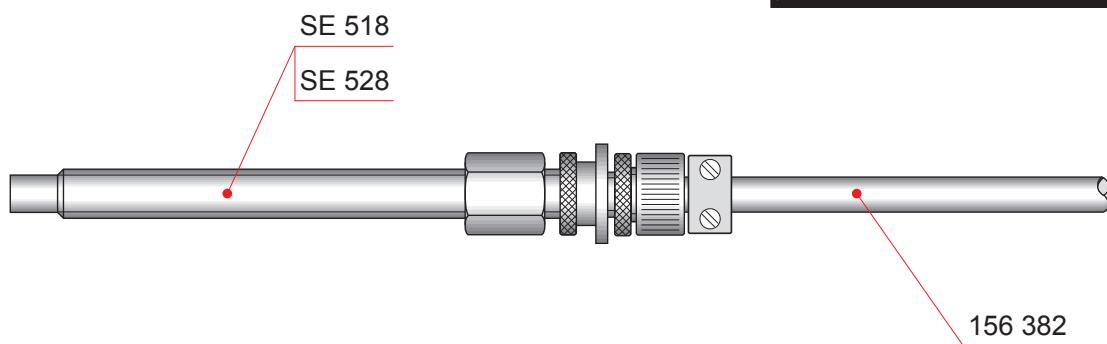
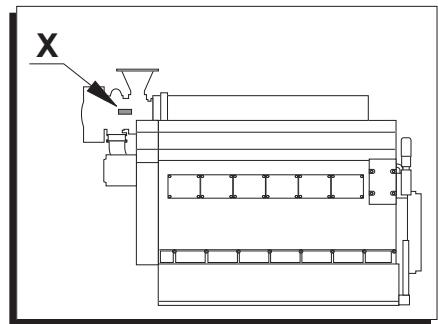
Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 1071	Spare part kit	1	-
156 373	Bearing	1	-
156 375	Thrust bearing	1	-
156 1229	Bearing	1	-
156 1072	Spare part kit	1	-
156 374	Thrust bearing	1	-
156 376	Disc	1	-
156 377	Bearing	1	-

NOTE! Only spare part sets (156 379, 156 380, 156 1071, 156 1072), cartridge (156 638) and speed pick-ups (SE 518, SE 528) for turbocharger can be ordered.

NOTE! When ordering spare parts, turbocharger serial number and specification must be given.

Speed pickup for TC

ITEM X

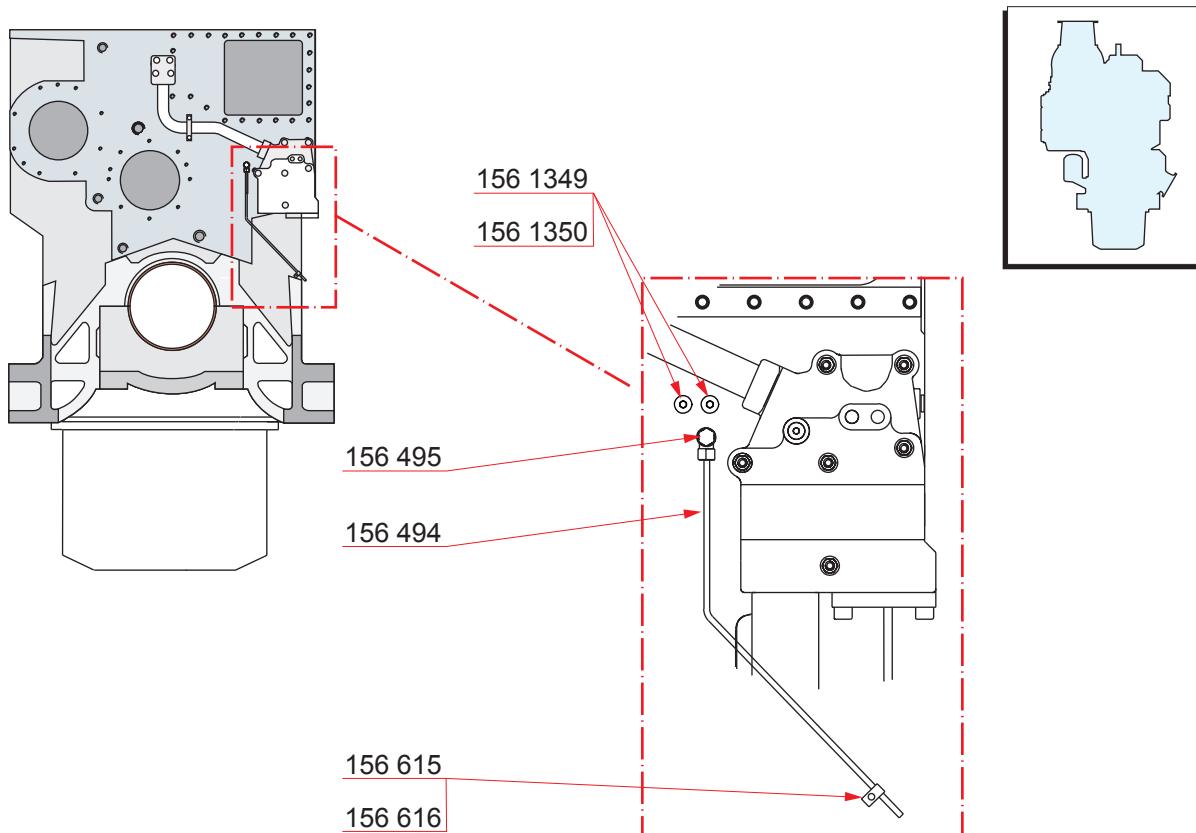


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 382	Cable	1	0.8
SE518	Speed pick-up for engine (1)	1	0.4
SE528	Speed pick-up for engine (1)	1	0.4

NOTE! (1) SE 518 used in turbocharger A, SE 528 used in turbocharger B

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Drain pipe from receiver

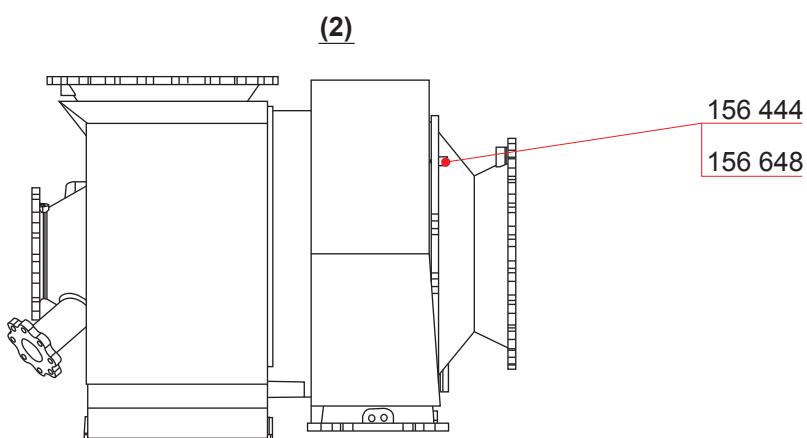
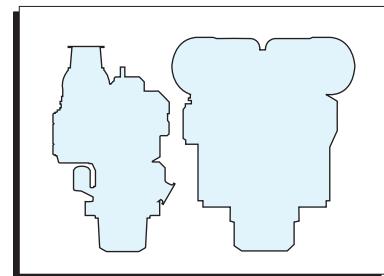
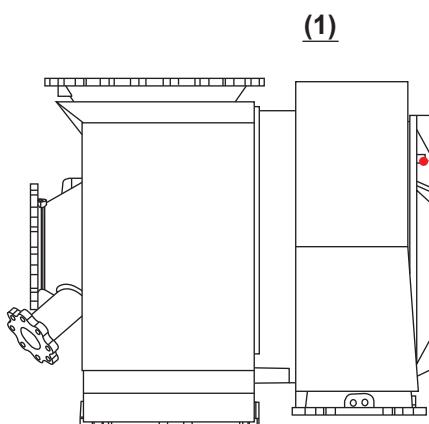


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 494	Pipe	1	0.1
156 495	Pipe union	1	0.1
156 615	Pipe clamp	1	-
156 616	Screw	1	0.1
156 1349	Plug *	2	-
156 1350	Sealing ring *	2	-

NOTE! *) Not used in all installations.

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Vibration measurements points



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 444	Measuring cube	*	-
156 648	Screw	*	-

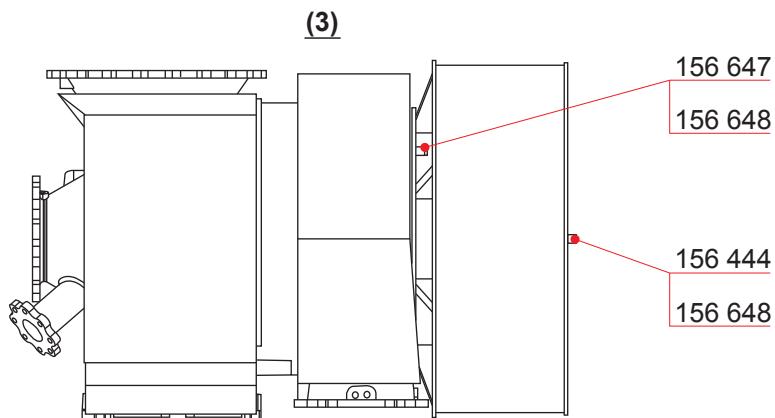
NOTE! (1) With air suction branch

NOTE! (2) With axial air housing

NOTE! * See page 3.

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Vibration measurements points



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 444	Measuring cube	*	-
156 647	Measuring cube	*	-
156 648	Screw	*	-

NOTE! (3) With silencer

NOTE! * See page 3.

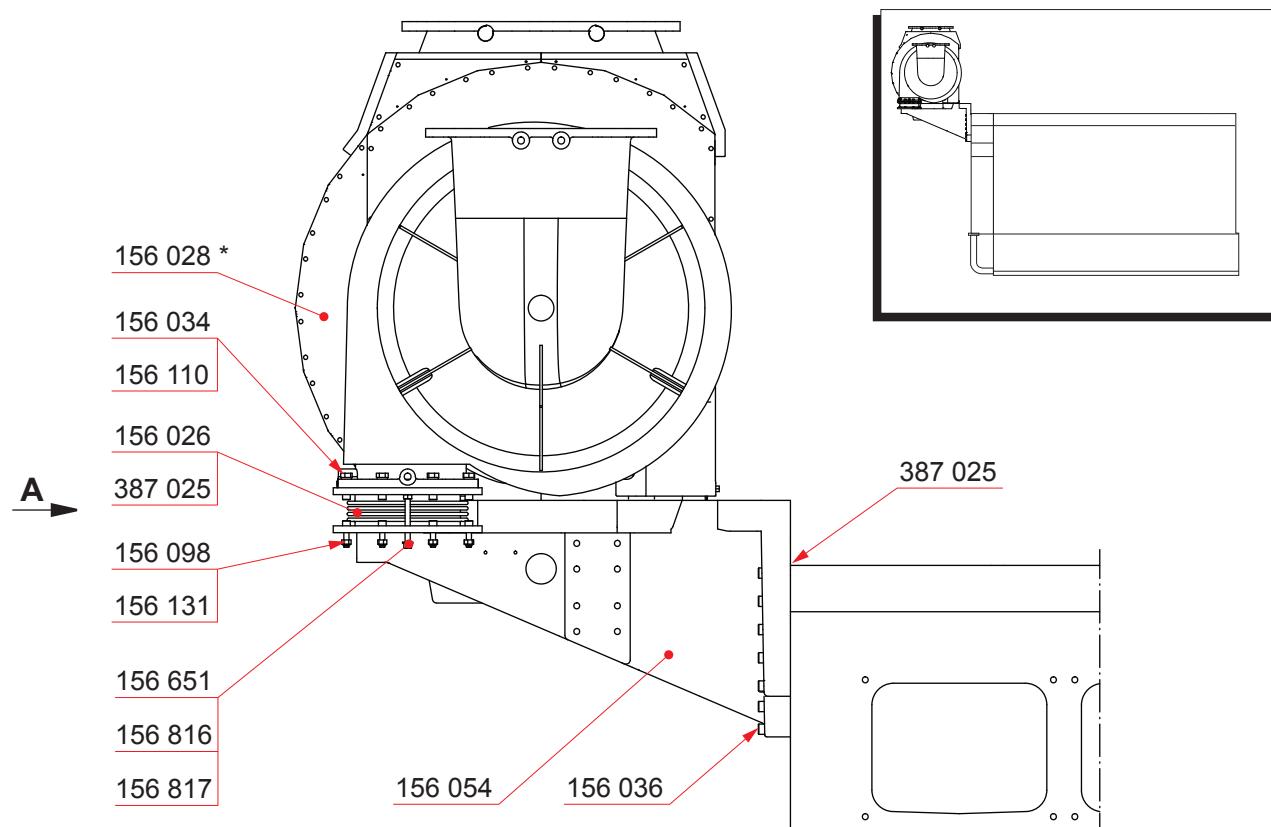
Vibration measurements points

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces		
	Air suction branch	Axial air housing	With silencer
156 444 Measuring cube	2	1	1
156 647 Measuring cube	-	-	1
156 648 Screw	2	1	2

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Turbocharger support



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 026	Bellows	1	13.1
156 028	Turbocharger *	1	-
156 034	Screw	8	-
156 036	Screw	25	0.2
156 054	Support	1	937
156 098	Screw	8	-
156 110	Nut	8	-
156 131	Nut	8	-
156 651	Washer	1	-
156 816	Screw	1	0.1
156 817	Nut	1	-
387 025	Glue compound	1	-

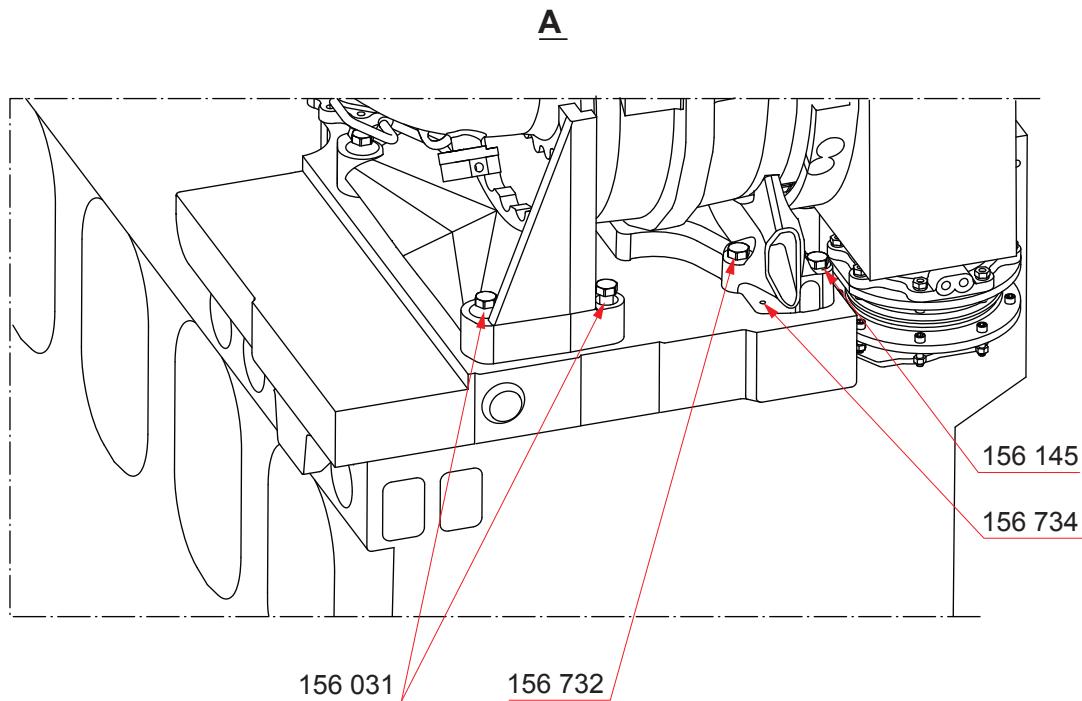
NOTE! * See section 156-

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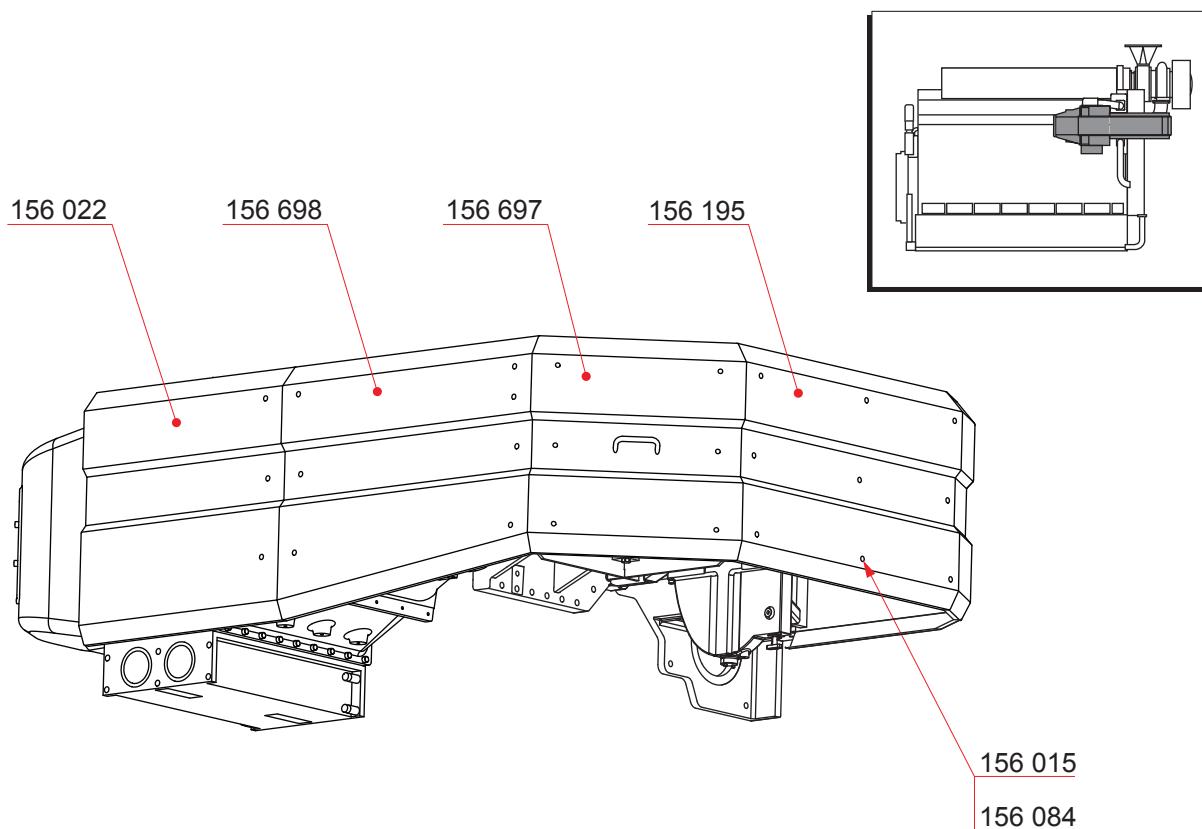
Updated: 13.11.2013

Turbocharger support



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 031	Screw	4	0.6
156 145	Screw	2	0.5
156 732	Screw	2	0.4
156 734	Cylindrical pin	2	-

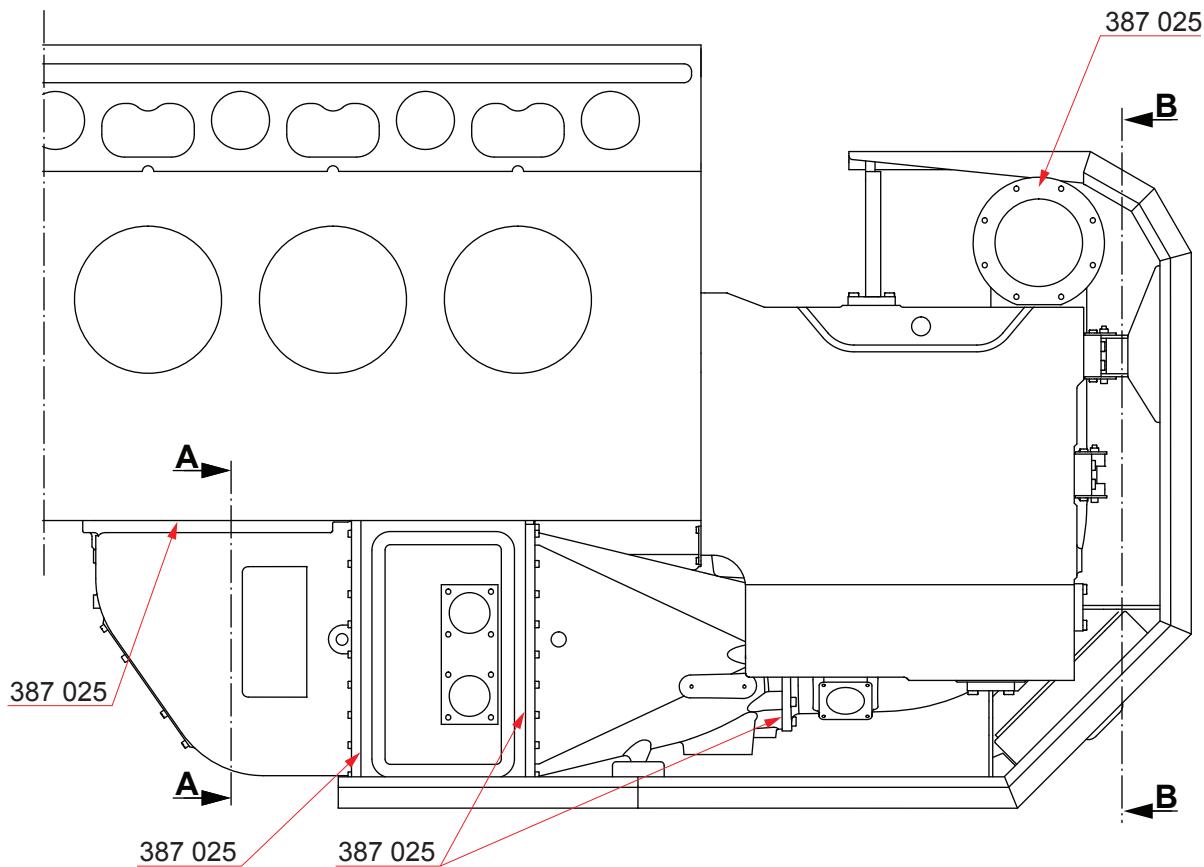
Charge air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 015	Screw	27	-
156 022	Protecting plate	1	18.4
156 084	Washer	30	-
156 195	Protecting plate	1	36.9
156 697	Cover plate	1	11.4
156 698	Cover plate	1	19.3

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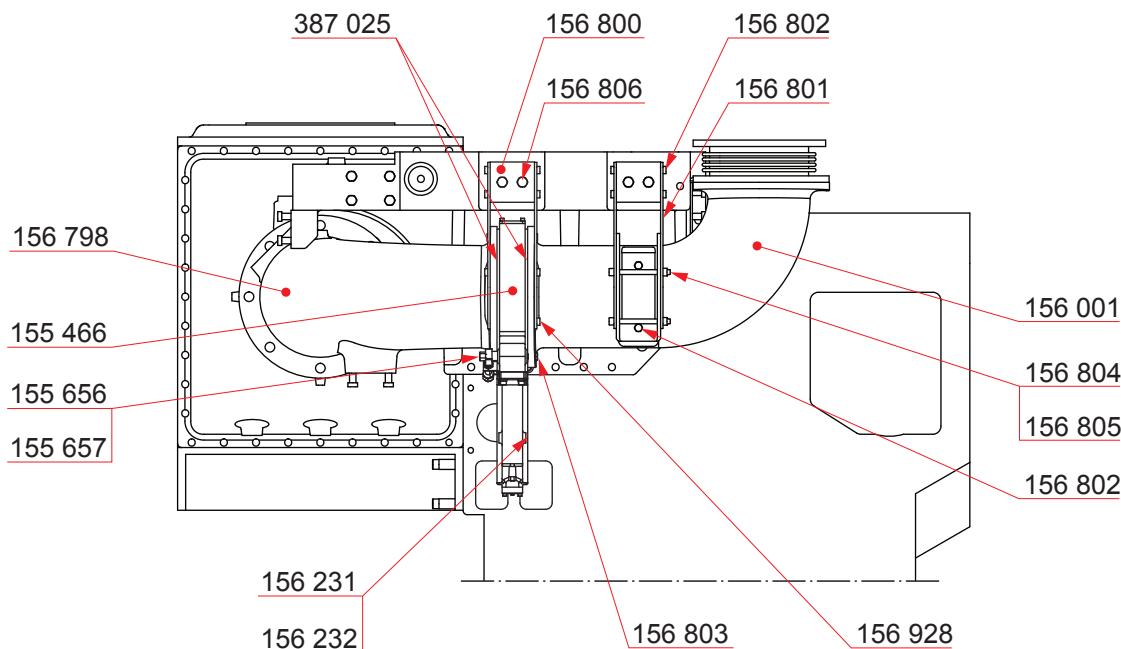
Charge air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 025	Glue compound	1	-

Charge air system

B-B

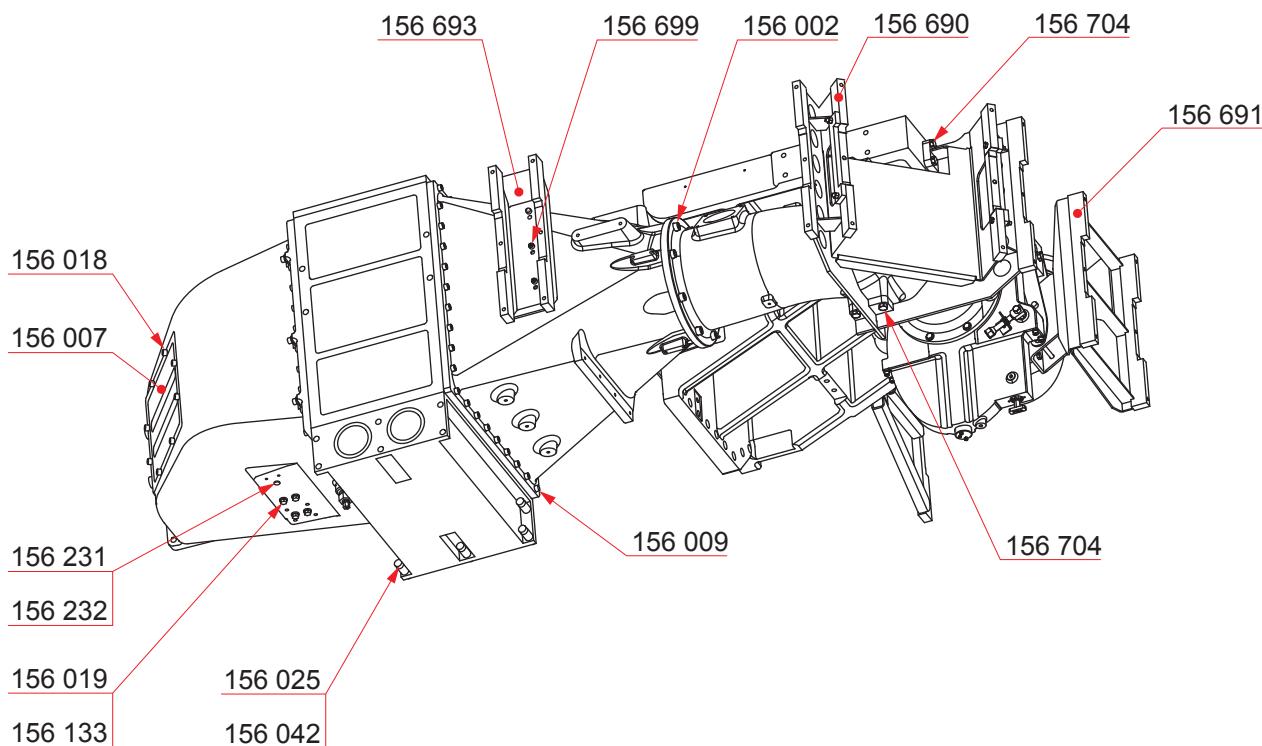


Part No.	Description	Qty [Pcs]	Wt. [Kg]
155 466	Shut-off valve (1)	1	31.2
155 656	Connection piece	1	0.1
155 657	Bracket	1	0.1
156 001	Air bend	1	66.0
156 231	Plug	2	-
156 232	Sealing ring	2	-
156 798	Pipe	1	94.0
156 800	Bracket	2	3.6
156 801	Bracket	12	0.3
156 802	Screw	10	-
156 803	Screw	12	-
156 804	Nut	2	-
156 805	Screw	2	0.1
156 806	Screw	4	0.1
156 928	Screw	3	-
387 025	Glue compound	1	-

NOTE! (1) See section 155-

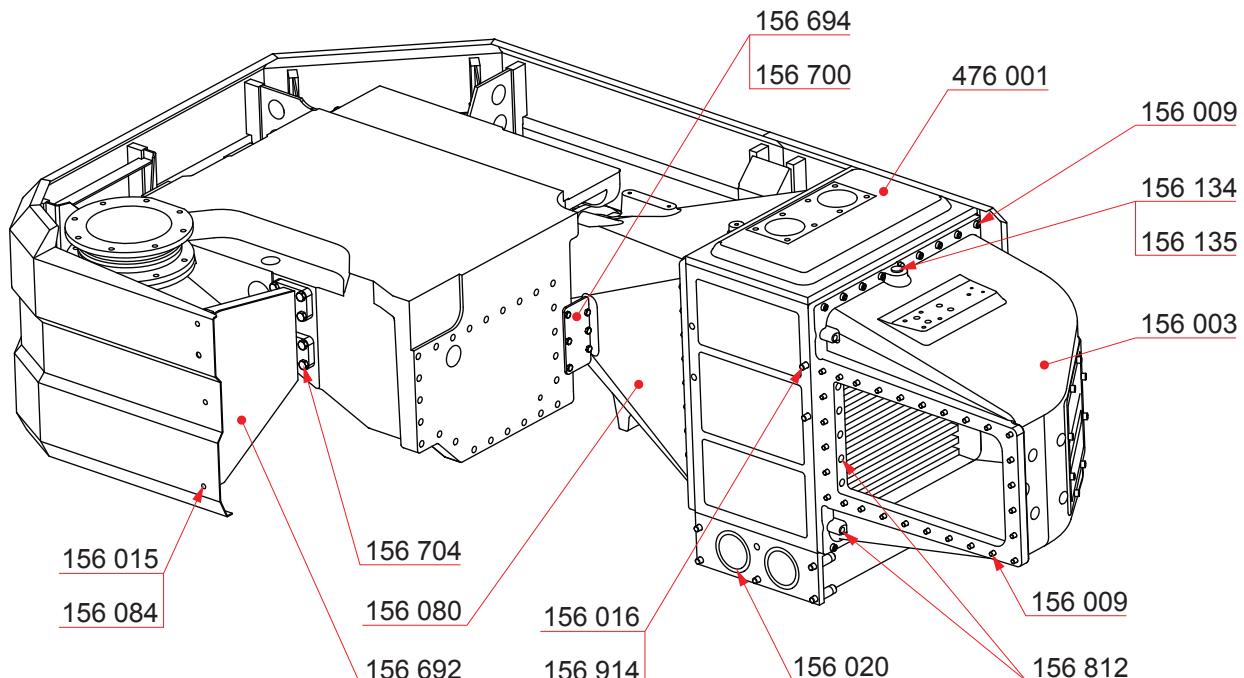
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Charge air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 002	Screw	8	0.1
156 007	Cover	1	6.0
156 009	Screw	94	-
156 018	Screw	8	-
156 019	Plug	4	-
156 025	Screw	5	-
156 042	Distance sleeve	5	-
156 133	Sealing ring	4	-
156 231	Plug	2	-
156 232	Sealing ring	2	-
156 690	Bracket	1	62.2
156 691	Bracket	1	23.1
156 693	Bracket	1	13.8
156 699	Screw	3	-
156 704	Screw	20	-

Charge air system



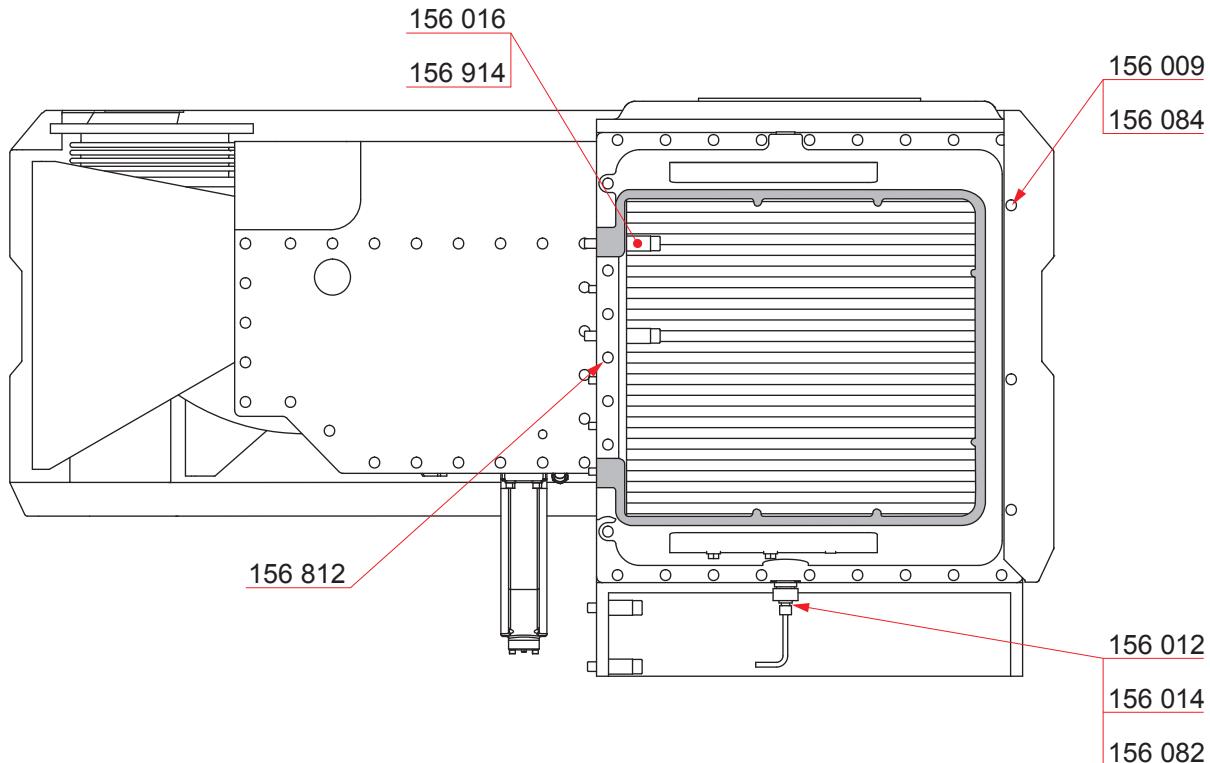
Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 003	Cooler housing	1	198
156 009	Screw	94	-
156 015	Screw	27	-
156 016	Screw	2	0.2
156 020	O-ring	2	-
156 080	Cooler housing	1	-
156 084	Washer	30	-
156 134	Plug	1	-
156 135	Sealing ring	1	-
156 692	Bracket	1	18.9
156 694	Support	1	-
156 700	Screw	6	-
156 704	Screw	20	-
156 812	Screw	7	-
156 914	Distance sleeve (1)	2	-
476 001	Charge air cooler (1)	1	-

NOTE! (1) See section 476-

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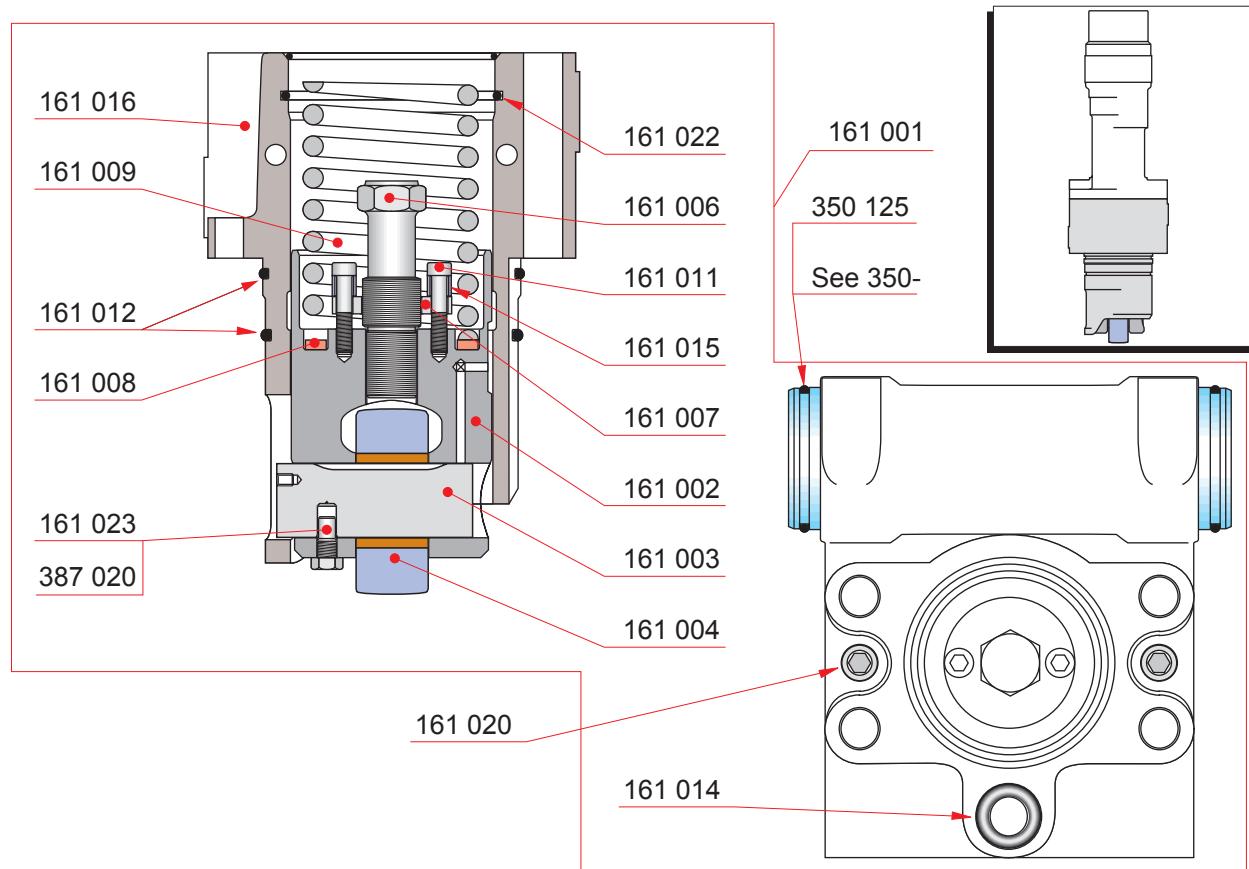
Charge air system

A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 009	Screw	94	-
156 012	Pipe	1	-
156 014	Pipe union	1	0.2
156 016	Screw	2	0.2
156 082	Pipe union	1	0.2
156 084	Washer	30	-
156 812	Screw	7	-
156 914	Distance sleeve	2	-

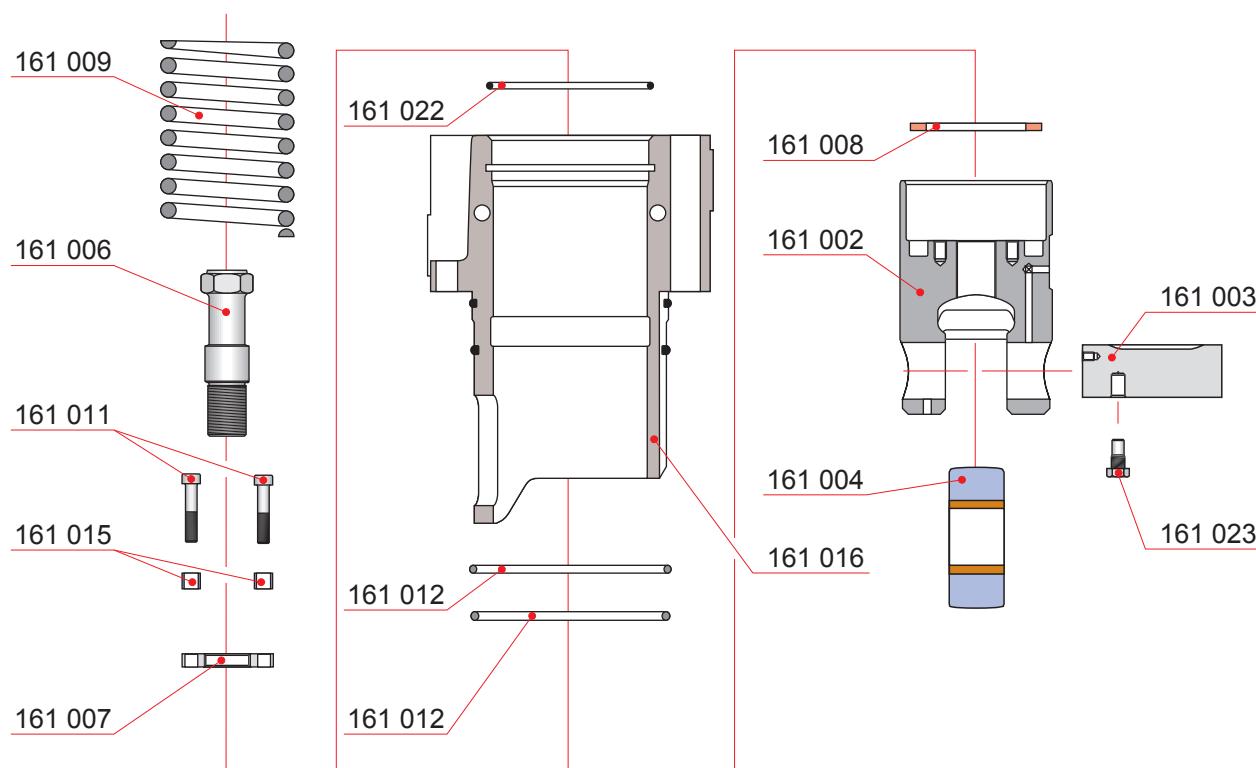
Lifter for injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
161 001	Lifter, compl.	1	41.0
161 002	Tappet	1	5.6
161 003	Roller pin	1	0.8
161 004	Tappet roller	1	2.2
161 006	Screw	1	0.7
161 007	Securing plate	1	0.3
161 008	Washer	1	0.1
161 009	Spring	1	1.6
161 011	Screw	2	-
161 012	O-ring	2	0.1
161 014	O-ring	1	-
161 015	Sleeve	2	-
161 016	Housing	1	-
161 022	O-ring	1	0.1
161 023	Screw	1	-
387 020	Glue compound	1	-
161 020	Screw	2	-
350 125	O-ring	2	-

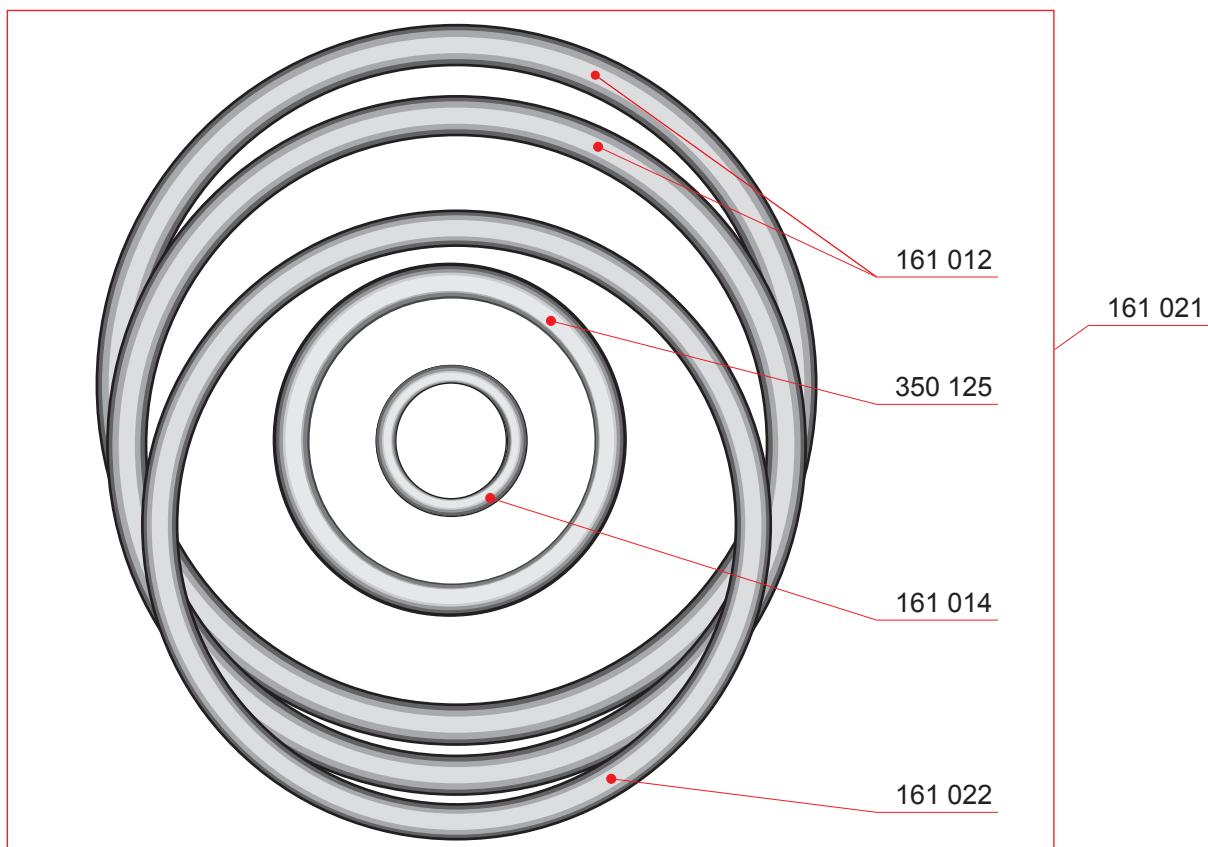
Edition: C
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 Updated: 28.05.2002

Lifter for injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
161 002	Tappet	1	5.6
161 003	Roller pin	1	0.8
161 004	Tappet roller	1	2.2
161 006	Screw	1	0.7
161 007	Securing plate	1	0.3
161 008	Washer	1	0.1
161 009	Spring	1	1.6
161 011	Screw	2	-
161 012	O-ring	2	0.1
161 015	Sleeve	2	-
161 016	Housing	1	-
161 022	O-ring	1	0.1
161 023	Screw	1	-

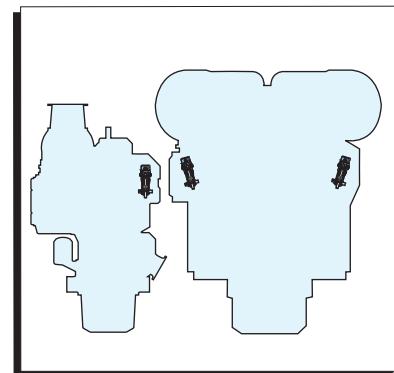
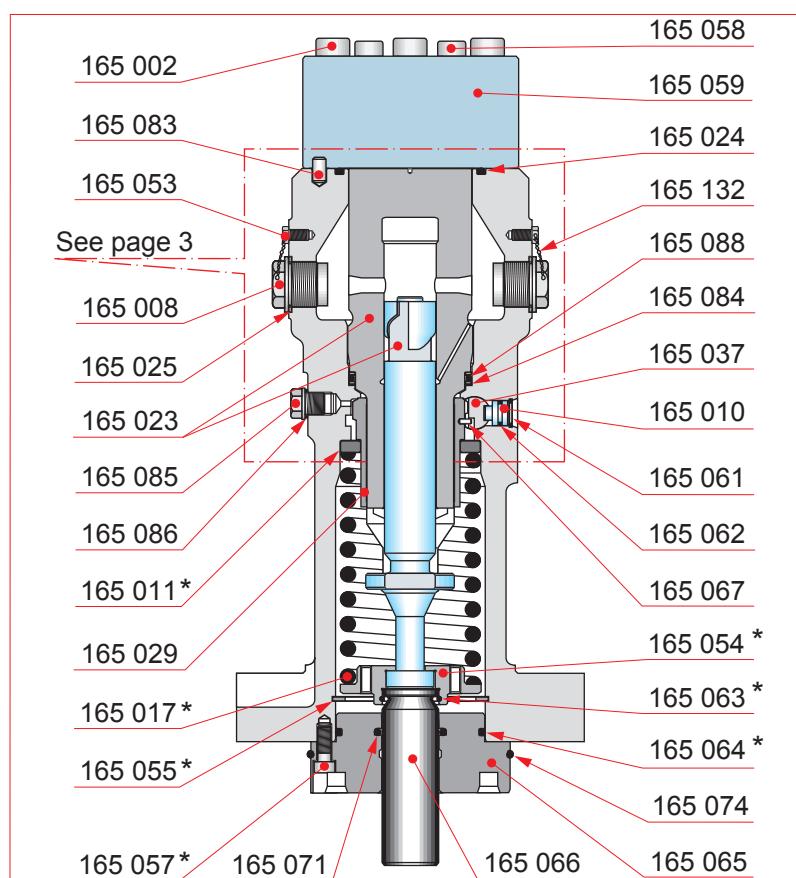
Lifter for injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
161 021	Sealing set	1	-
161 012	O-ring	2	0.1
161 014	O-ring	1	-
161 022	O-ring	1	0.1
350 125	O-ring	2	-

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Injection pump

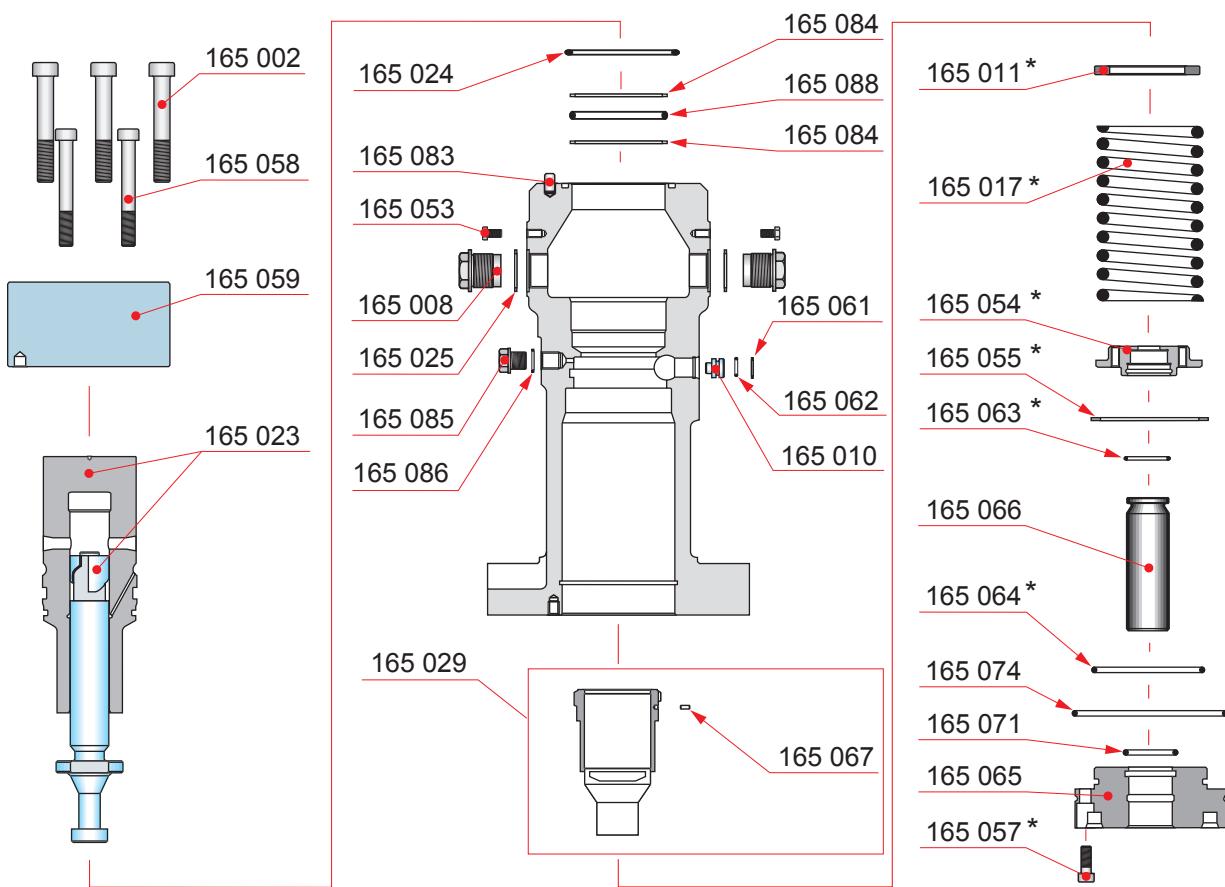


165 001

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 001	Injection pump	1	-	165 084	Support ring (1)	2	-
165 002	Screw	6	-	165 085	Plug	1	-
165 008	Erosion plug	2	-	165 086	Sealing ring	1	-
165 010	Plug	1	-	165 088	Seal (1)	1	-
165 011	Spring plate *	1	-	165 132	Steel wire	2	-
165 017	Spring *	1	-	NOTE! * See page 7.			
165 023	Pump element	1	-	NOTE! Spare parts marked (1) cannot be ordered separately.			
165 024	Sealing ring	1	-	NOTE! Spare parts marked * cannot be ordered separately. Only as a set 165 119.			
165 025	Sealing ring	2	-				
165 029	Control sleeve	1	-				
165 067	Pin	1	-				
165 037	Fuel rack	1	-				
165 053	Screw	2	-				
165 054	Holder *	1	-				
165 055	Retaining ring *	1	-				
165 057	Screw *	6	-				
165 058	Screw	8	-				
165 059	Pump cover	1	-				
165 061	Retaining ring	1	-				
165 062	O-ring	1	-				
165 063	Snap ring *	1	-				
165 064	O-ring *	1	-				
165 065	Flange	1	-				
165 066	Push rod	1	-				
165 071	Sealing ring	1	-				
165 074	O-ring	1	-				
165 083	Pin	1	-				

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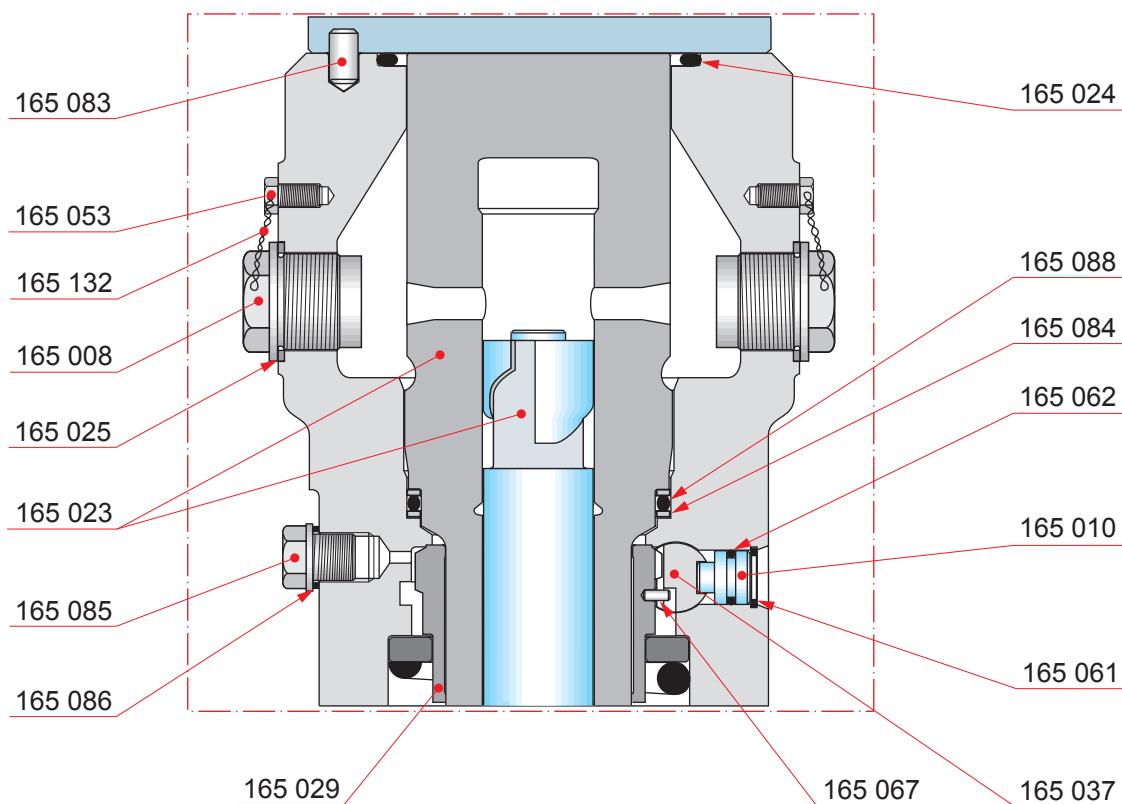
Injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 002	Screw	6	-	165 074	O-ring	1	-
165 008	Erosion plug	2	-	165 083	Pin	1	-
165 010	Plug	1	-	165 084	Support ring (1)	2	-
165 011	Spring plate *	1	-	165 085	Plug	1	-
165 017	Spring *	1	-	165 086	Sealing ring	1	-
165 023	Pump element	1	-	165 088	Seal (1)	1	-
165 024	Sealing ring	1	-				
165 025	Sealing ring	2	-				
165 029	Control sleeve	1	-				
165 067	Pin	1	-				
165 053	Screw	2	-				
165 054	Holder *	1	-				
165 055	Retaining ring *	1	-				
165 057	Screw *	6	-				
165 058	Screw	8	-				
165 059	Pump cover	1	-				
165 061	Retaining ring	1	-				
165 062	O-ring	1	-				
165 063	Snap ring *	1	-				
165 064	O-ring *	1	-				
165 065	Flange	1	-				
165 066	Push rod	1	-				
165 071	Sealing ring	1	-				

* See page 7.
 Spare parts marked (1) cannot be ordered separately.
 Spare parts marked * cannot be ordered separately. Only as a set 165 119.

Injection pump

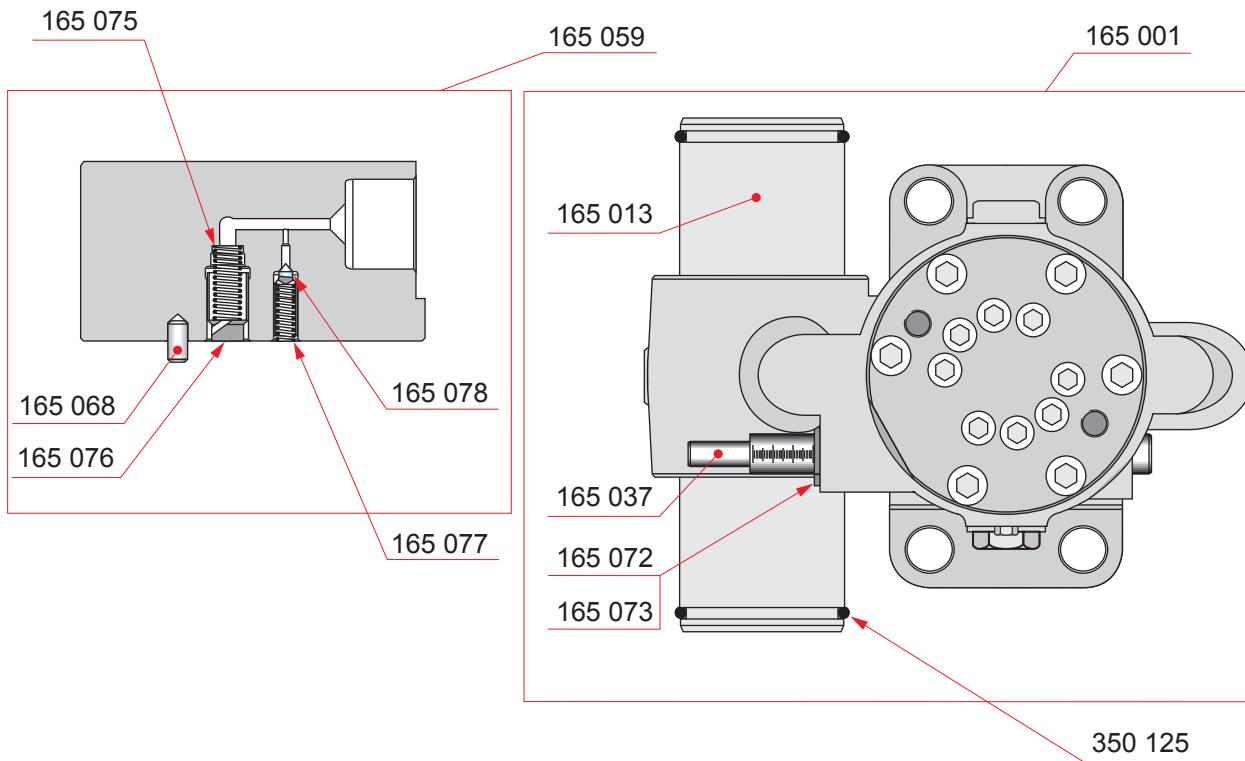


Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 008	Erosion plug	2	-
165 010	Plug	1	-
165 023	Pump element	1	-
165 024	Sealing ring	1	-
165 025	Sealing ring	2	-
165 029	Control sleeve	1	-
165 067	Pin	1	-
165 037	Fuel rack	1	-
165 053	Screw	2	-
165 061	Retaining ring	1	-
165 062	O-ring	1	-
165 083	Pin	1	-
165 084	Support ring (1)	2	-
165 085	Plug	1	-
165 086	Sealing ring	1	-
165 088	Seal (1)	1	-
165 132	Steel wire	2	-

NOTE! Spare parts marked (1) cannot be ordered separately.

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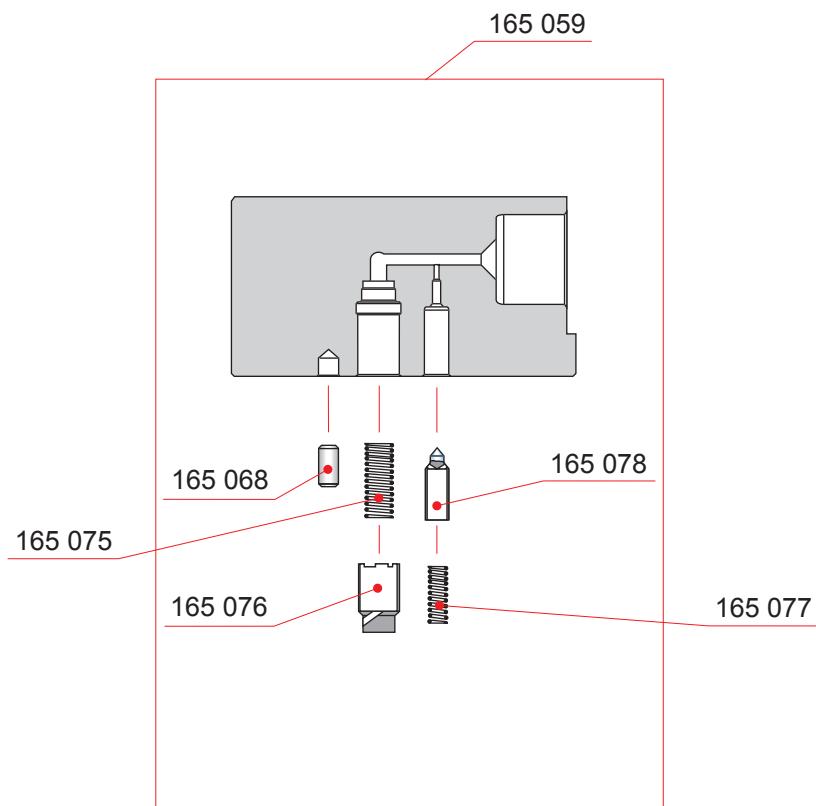
Injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 001	Injection pump	1	-
165 013	Sleeve	2	-
165 037	Fuel rack	1	-
165 072	Plate	1	-
165 073	Screw	2	-
165 059	Pump cover	1	-
165 068	Pin	1	-
165 076	Valve *)	1	-
165 078	Valve cone *)	1	-
165 075	Spring	1	-
165 077	Spring	1	-
350 125	O-ring	4	-

NOTE! *) 165 076 and 165 078 are delivered only with complete pump cover 165 059

Injection pump

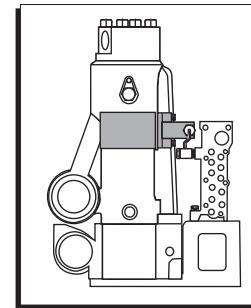
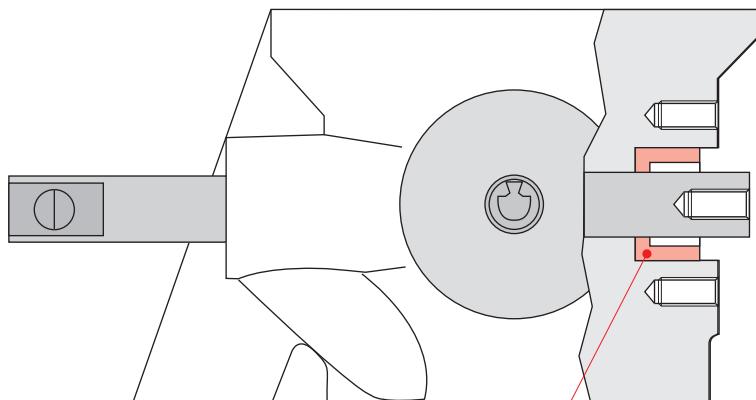


Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 059	Pump cover	1	-
165 068	Pin	1	-
165 076	Valve *)	1	-
165 078	Valve cone *)	1	-
165 075	Spring	1	-
165 077	Spring	1	-

NOTE! *) 165 076 and 165 078 are delivered only with complete pump cover 165 059

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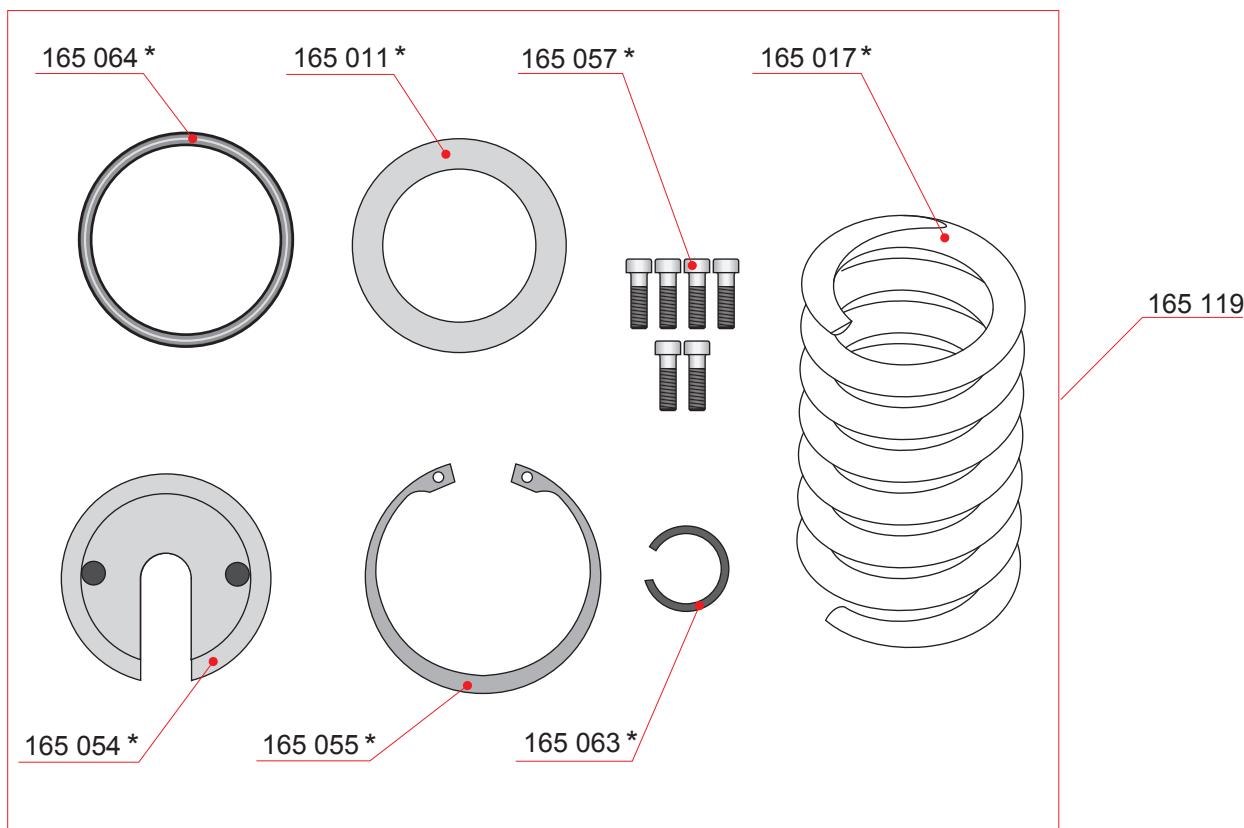
Injection pump



228 011

Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 011	Sleeve	1	-

Injection pump

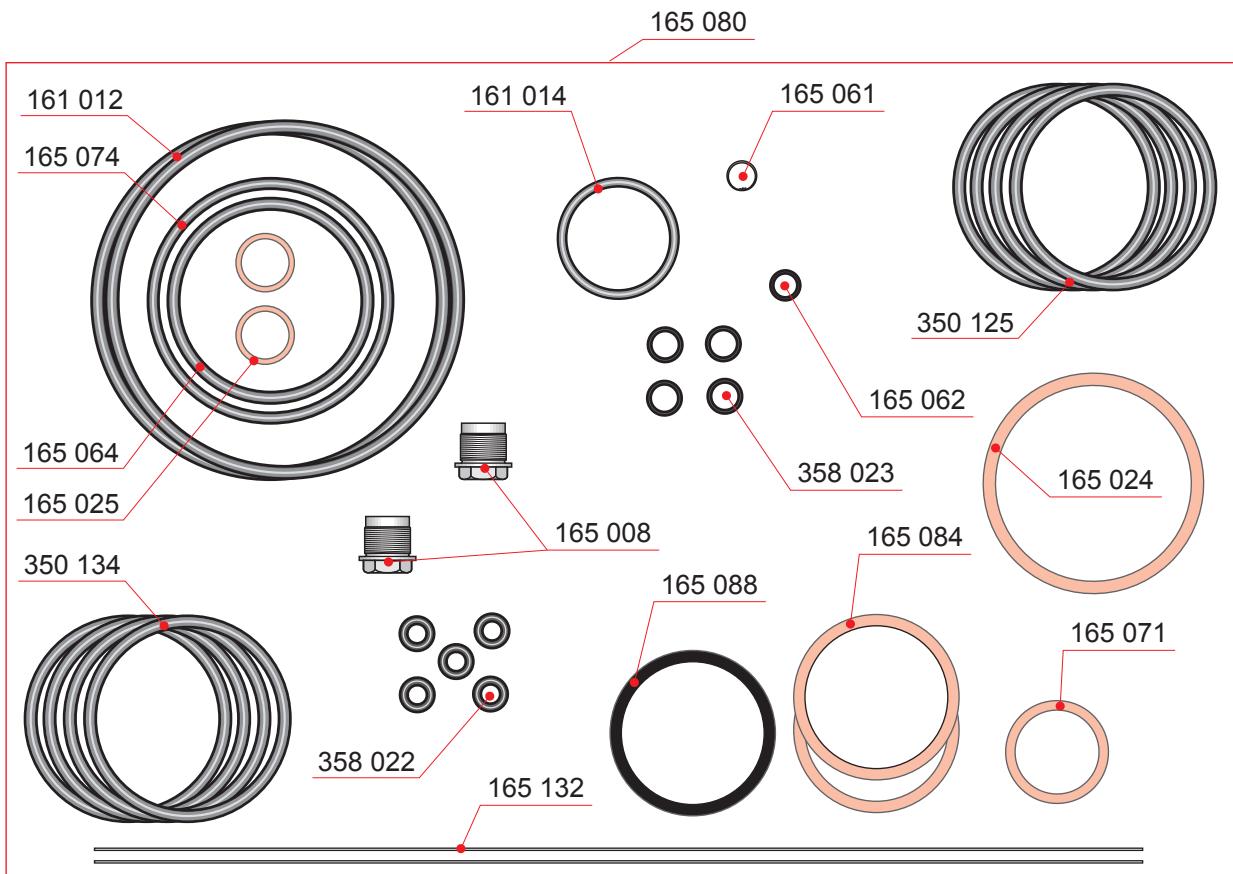


Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 119	Spring assembly	1	-
165 011	Spring plate *	1	-
165 017	Spring *	1	-
165 054	Holder *	1	-
165 055	Retaining ring *	1	-
165 057	Screw *	6	-
165 063	Snap ring *	1	-
165 064	O-ring *	1	-

NOTE! Spare parts marked * cannot be ordered separately. Only as a set 165 119.

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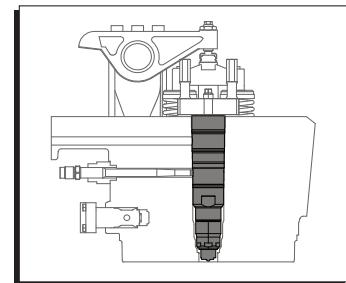
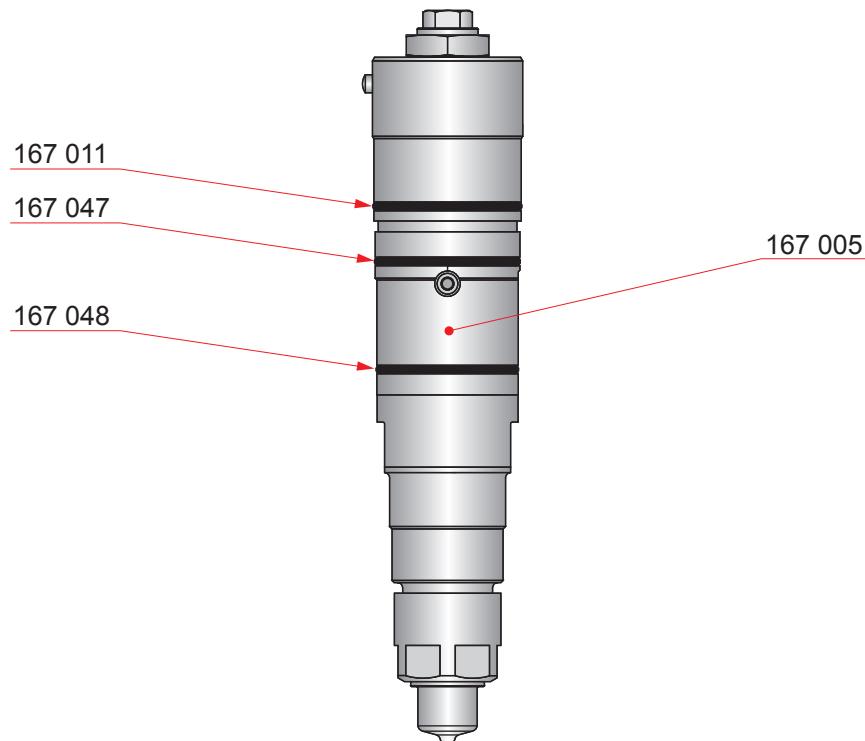
Injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 080	Sealing set	1	-
161 012	O-ring	2	-
161 014	O-ring	1	-
165 008	Erosion plug	2	-
165 024	Sealing ring	1	-
165 025	Sealing ring	2	-
165 061	Retaining ring	1	-
165 062	O-ring	1	-
165 064	O-ring	1	-
165 071	Sealing ring	1	-
165 074	O-ring	1	-
165 084	Support ring (1)	2	-
165 088	Seal (1)	1	-
165 132	Steel wire	2	-
350 125	O-ring	4	-
350 134	O-ring	4	-
358 022	O-ring	5	-
358 023	O-ring	4	-

NOTE! Spare parts marked (1) cannot be ordered separately.

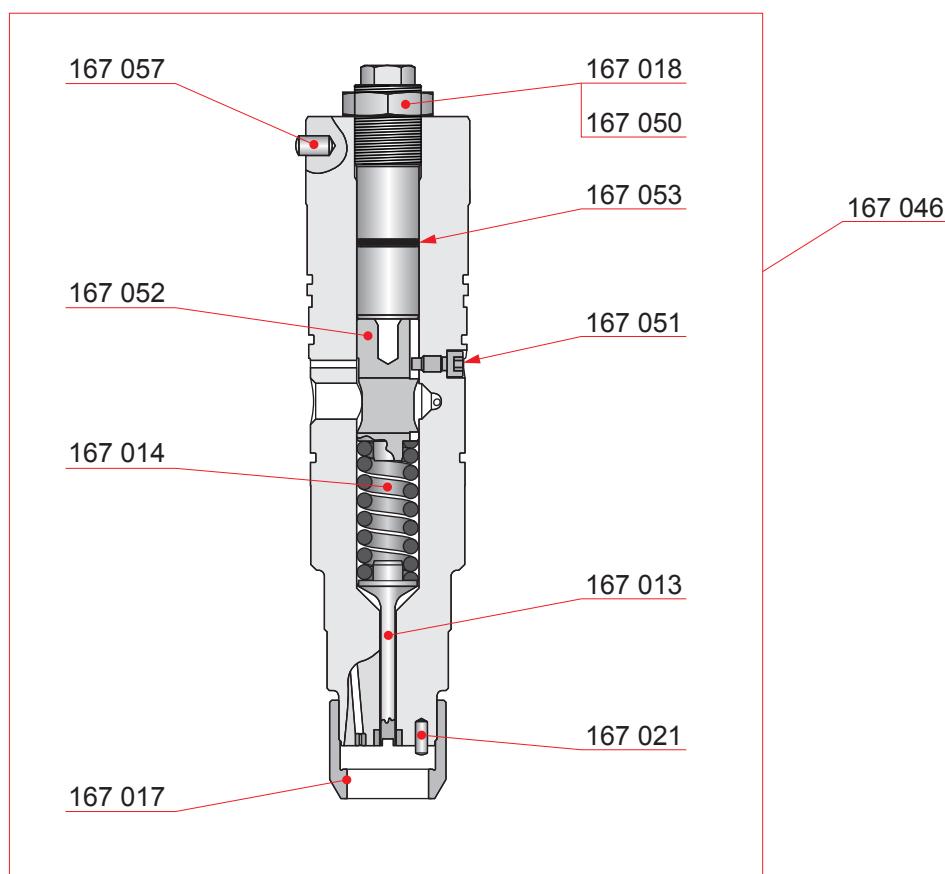
Injection valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 005	Injection valve	1	-
167 020	Nozzle	1	0.5
167 046	Nozzle holder	1	7.0
167 011	O-ring	1	-
167 047	O-ring	1	-
167 048	O-ring	1	-

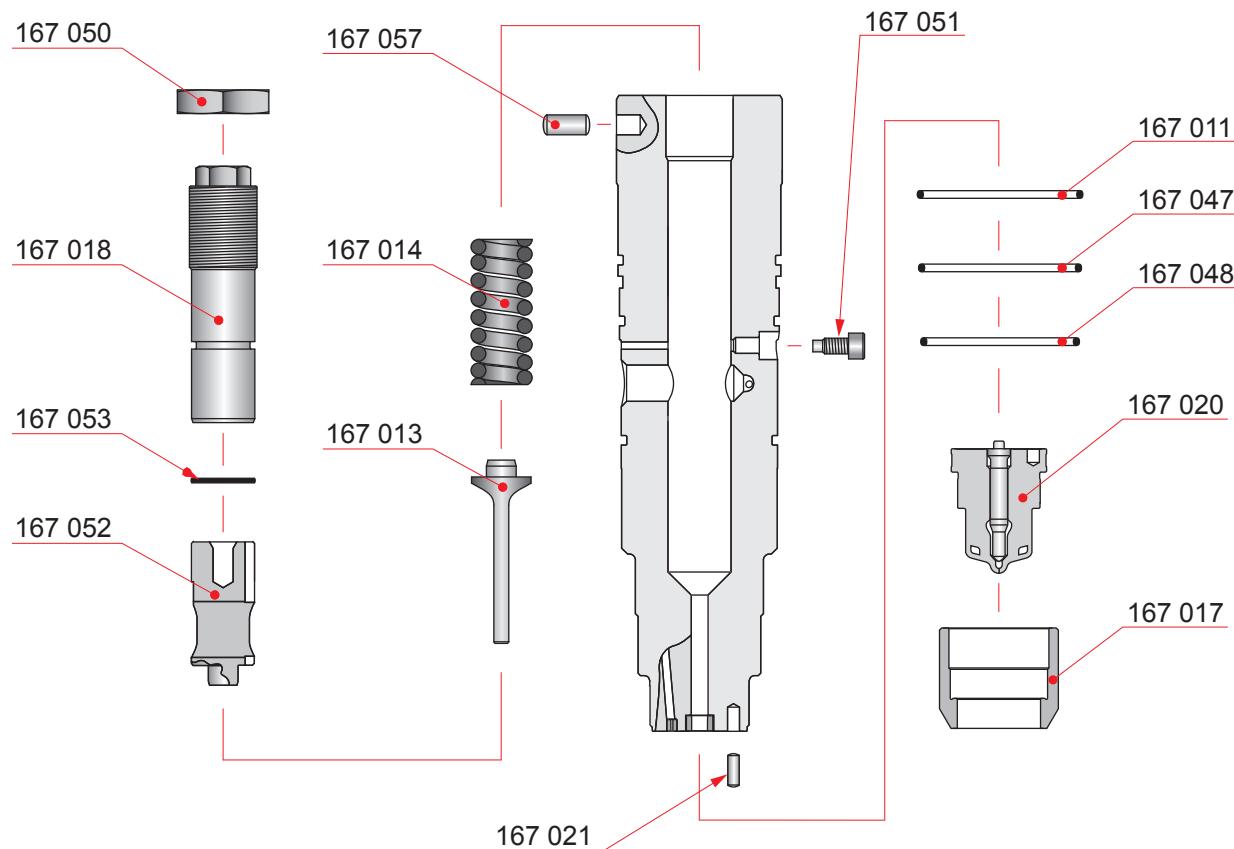
Edition: A
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Updated: 28.10.2011

Injection valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 046	Nozzle holder	1	7.0
167 013	Push rod	1	-
167 014	Spring	1	0.2
167 017	Nozzle nut	1	0.3
167 018	Adjusting screw	1	0.8
167 021	Pin	2	-
167 050	Nut	1	-
167 051	Screw	1	-
167 052	Spring retainer	1	0.3
167 053	O-ring	1	-
167 057	Pin	1	-

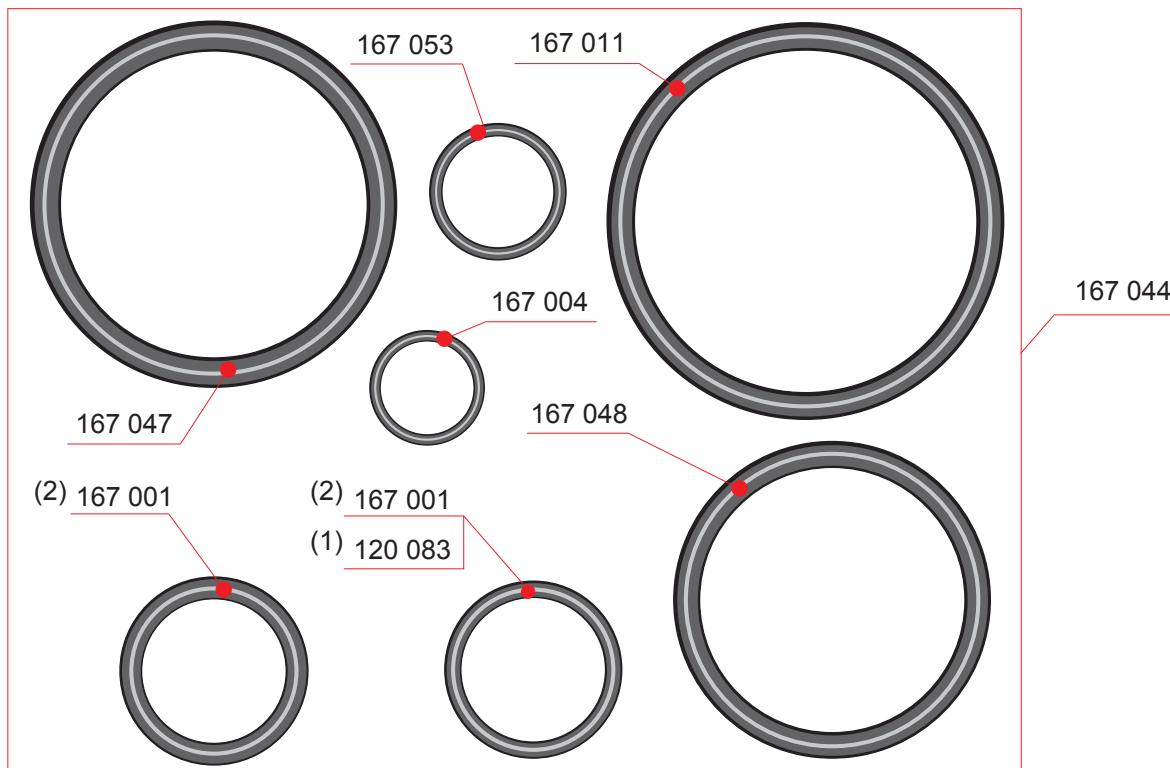
Injection valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 011	O-ring	1	-
167 013	Push rod	1	-
167 014	Spring	1	0.2
167 017	Nozzle nut	1	0.3
167 018	Adjusting screw	1	0.8
167 020	Nozzle	1	0.5
167 021	Pin	2	-
167 047	O-ring	1	-
167 048	O-ring	1	-
167 050	Nut	1	-
167 051	Screw	1	-
167 052	Spring retainer	1	0.3
167 053	O-ring	1	-
167 057	Pin	1	-

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Injection valve

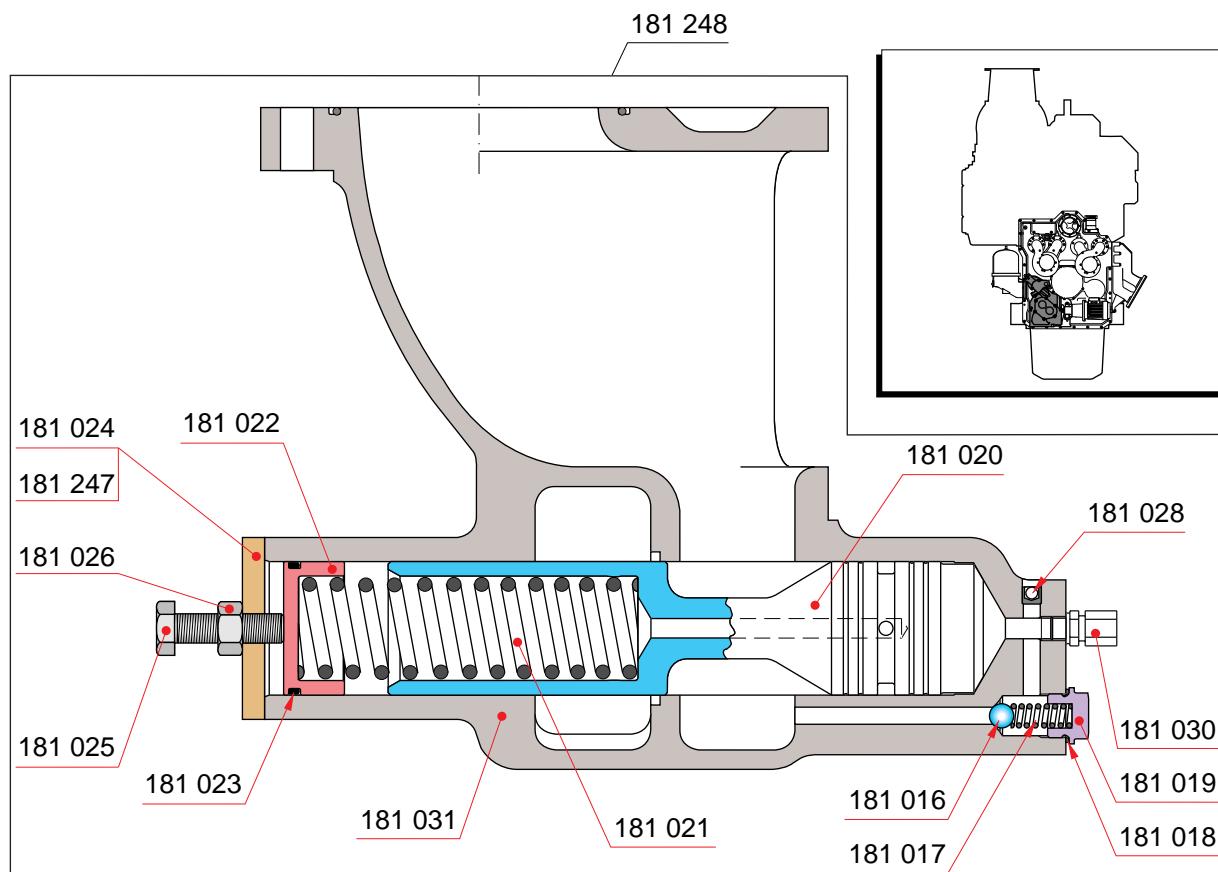


Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 044	Sealing set for injection valve	1	-
120 083	O-ring (1)	1	-
167 001	O-ring (2)	1	-
167 004	O-ring	1	-
167 011	O-ring	1	-
167 047	O-ring	1	-
167 048	O-ring	1	-
167 053	O-ring	1	-

NOTE! (1) Code 120 083 used with modified cyl.heads using a sleeve 120 082.

NOTE! (2) Code 167 001 depends on the cyl.head type.

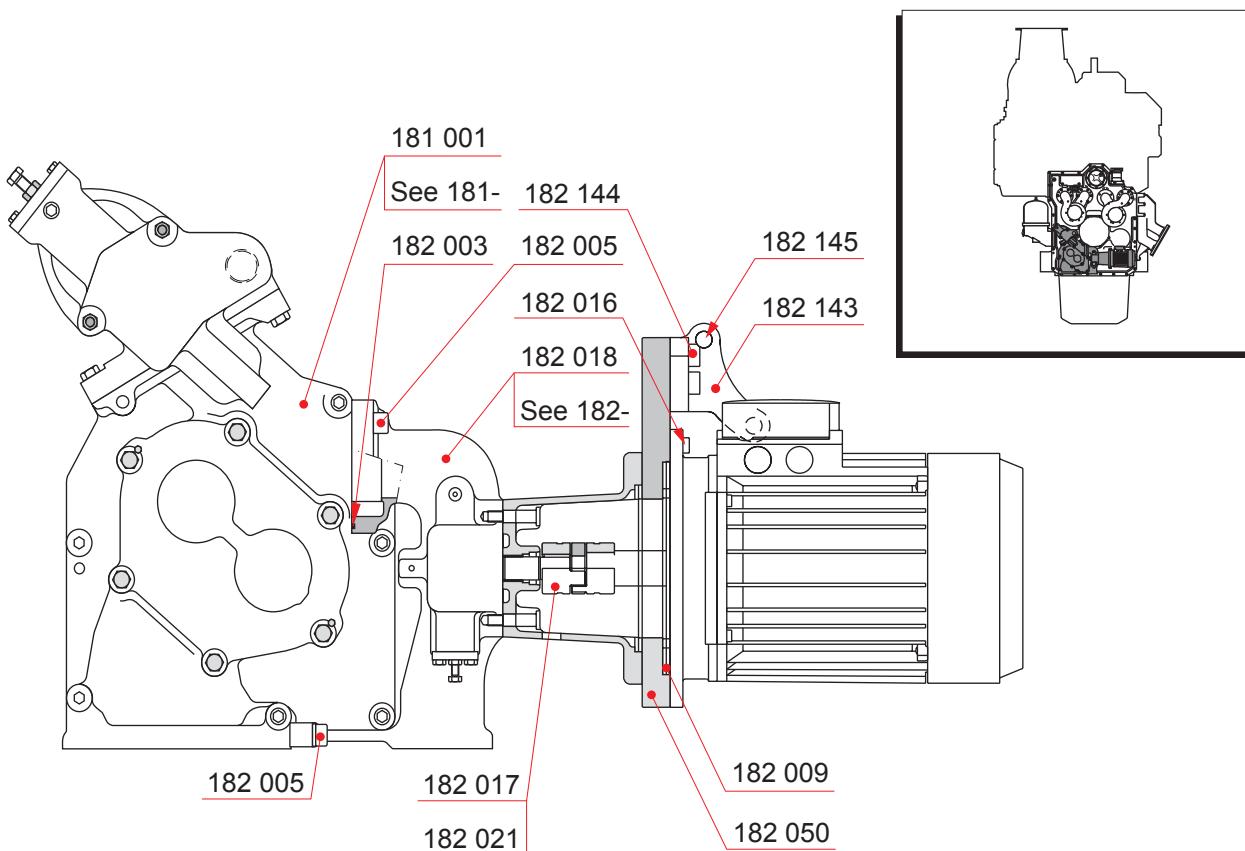
Regulating valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 248	Regulating valve	1	169
181 016	Ball	1	-
181 017	Compression spring	1	-
181 018	Gasket	1	-
181 019	Plug	1	-
181 020	Piston	1	-
181 021	Compression spring	1	-
181 022	Spring holder	1	-
181 023	O-ring	1	-
181 024	Cover	1	-
181 025	Screw	1	-
181 026	Nut	1	-
181 028	Plug	1	-
181 030	Pipe union	1	-
181 031	Housing	1	-
181 247	Screw	2	-

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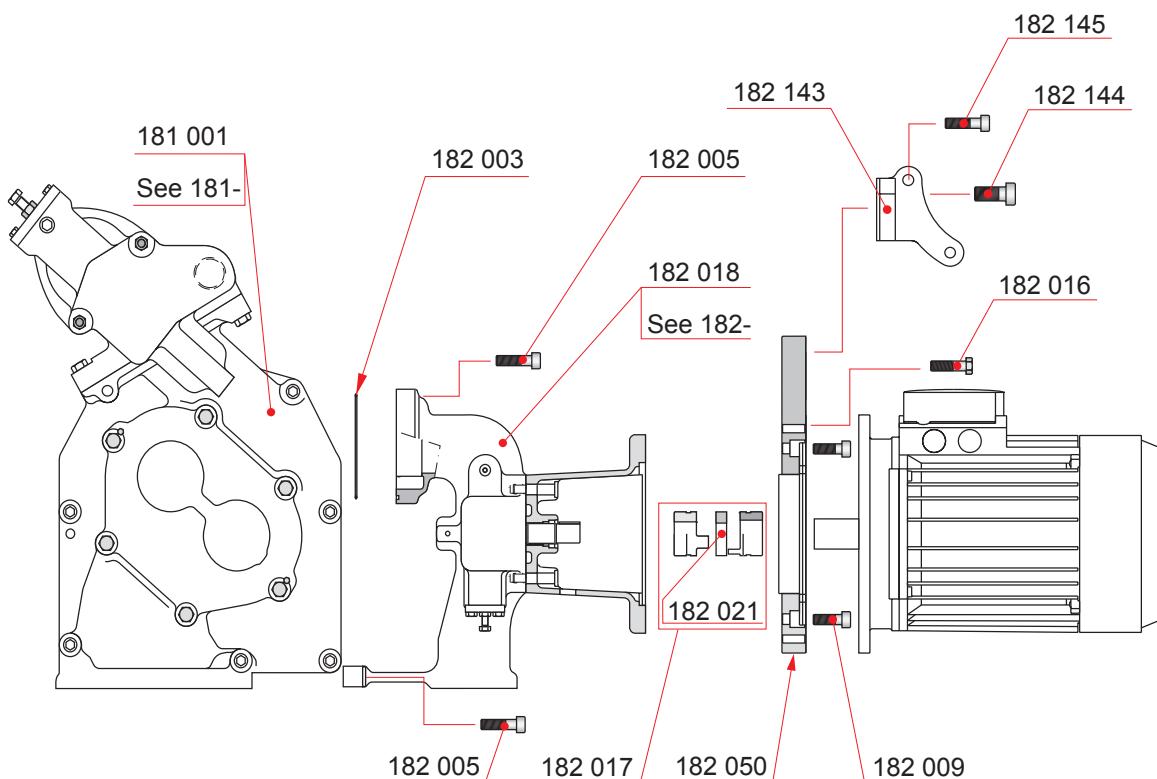
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	-
182 003	O-ring	1	-
182 005	Screw	6	-
182 009	Screw	4	-
182 016	Screw	4	-
182 017	Flexible coupling	1	-
182 021	Flexible coupling rubber	1	-
182 018	Prelubricating oil pump	1	-
182 050	Distance flange	1	-
182 143	Bracket	1	-
182 144	Screw	2	-
182 145	Screw	2	-

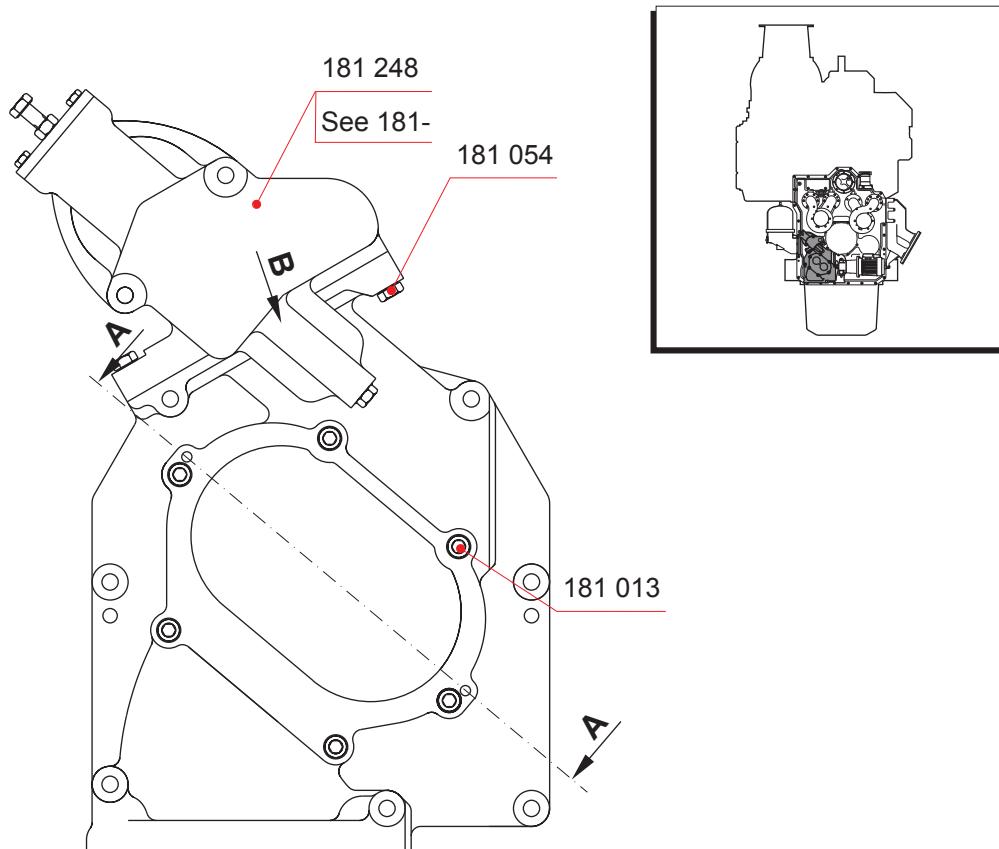
Edition: B
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 Updated: 23.04.2007

Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	-
182 003	O-ring	1	-
182 005	Screw	6	-
182 009	Screw	4	-
182 016	Screw	4	-
182 017	Flexible coupling	1	-
182 021	Flexible coupling rubber	1	-
182 018	Prelubricating oil pump	1	-
182 050	Distance flange	1	-
182 143	Bracket	1	-
182 144	Screw	2	-
182 145	Screw	2	-

Lubricating oil pump

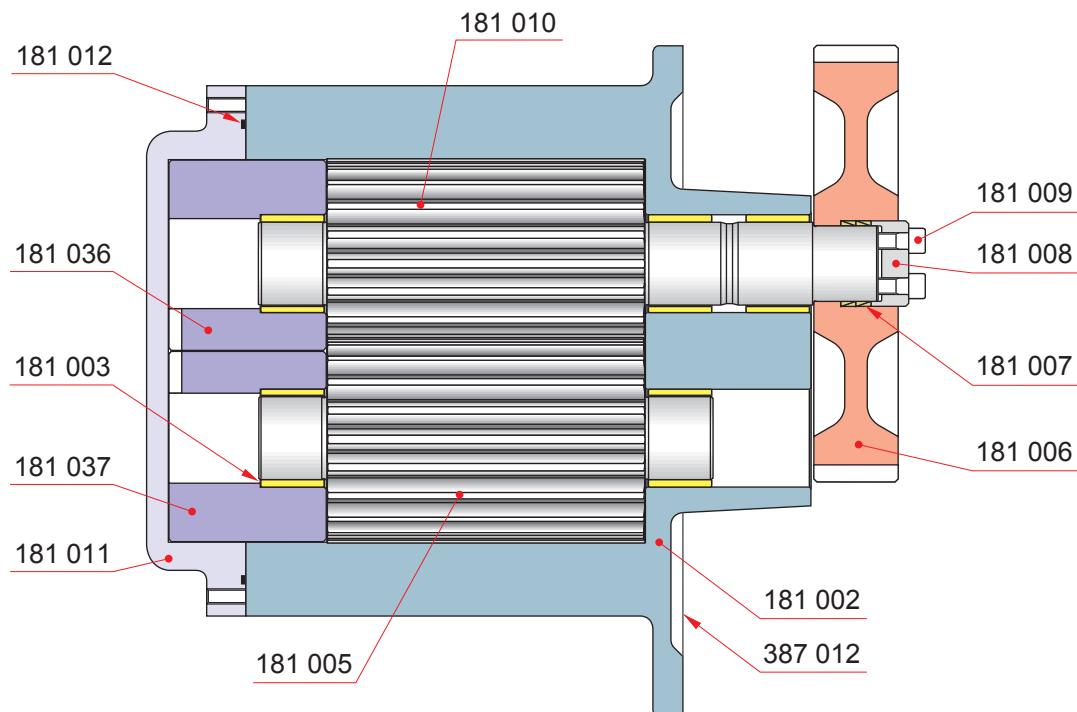


Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 013	Screw	6	-
181 054	Screw	4	-
181 248	Regulating valve	1	-

Edition: A

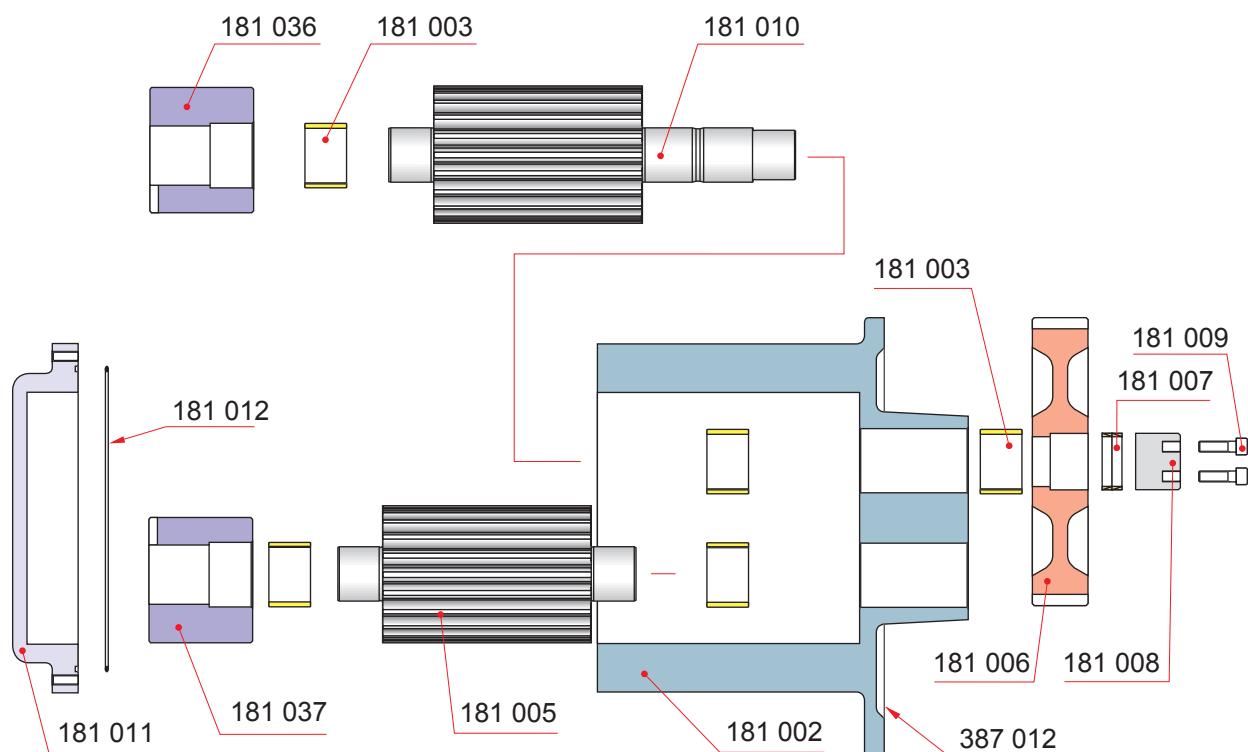
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Updated: 06.11.2006

Lubricating oil pump**SECTION A-A**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 002	Housing	1	-
181 003	Bearing bush	5	-
181 005	Drive shaft	1	-
181 006	Drive gear	1	-
181 007	Pair of friction rings	2	-
181 008	Pressure plate	1	-
181 009	Screw	4	-
181 010	Drive shaft	1	-
181 011	Cover	1	-
181 012	O-ring	1	-
181 036	Sleeve	1	-
181 037	Sleeve	1	-
387 012	Glue compound	1	-

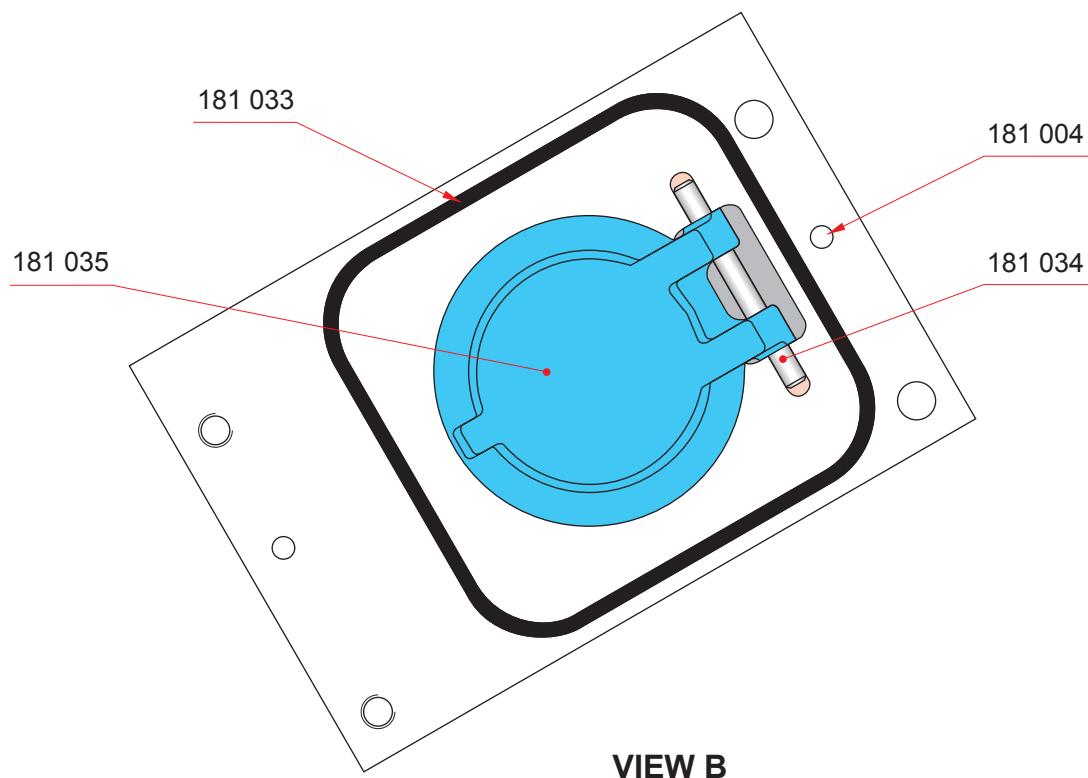
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 002	Housing	1	-
181 003	Bearing bush	5	-
181 005	Drive shaft	1	-
181 006	Drive gear	1	-
181 007	Pair of friction rings	2	-
181 008	Pressure plate	1	-
181 009	Screw	4	-
181 010	Drive shaft	1	-
181 011	Cover	1	-
181 012	O-ring	1	-
181 036	Sleeve	1	-
181 037	Sleeve	1	-
387 012	Glue compound	1	-

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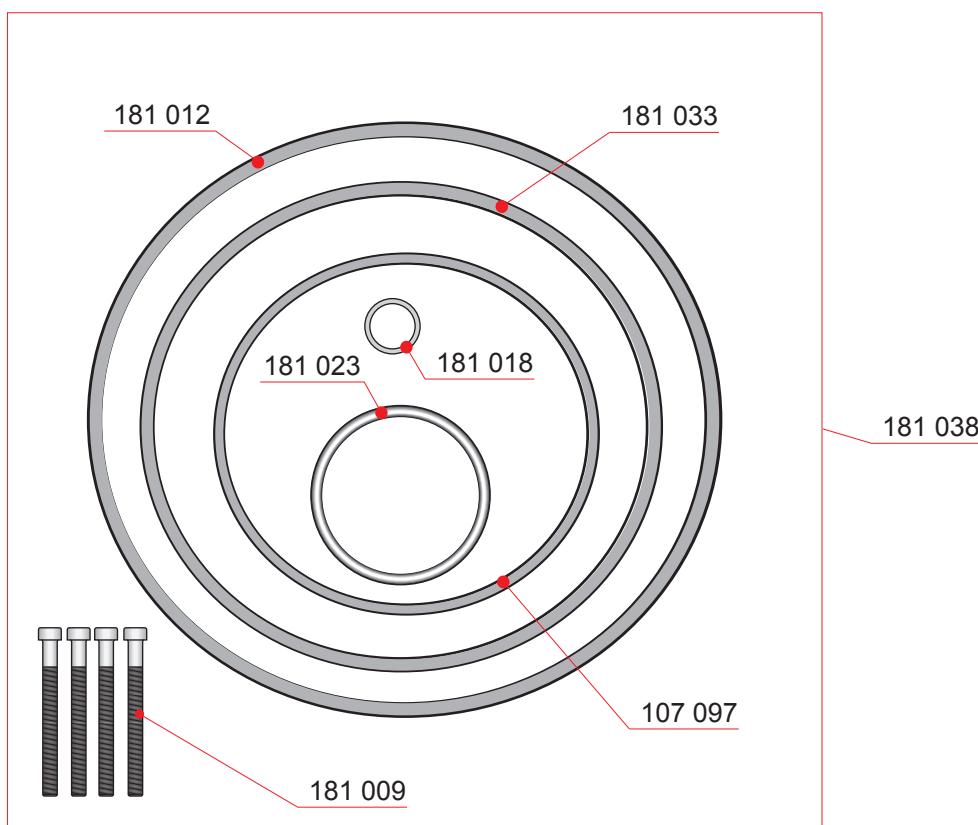
Lubricating oil pump



VIEW B

Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 004	Pin	2	-
181 033	O-ring	1	-
181 034	Pin	1	-
181 035	Non-return valve	1	-

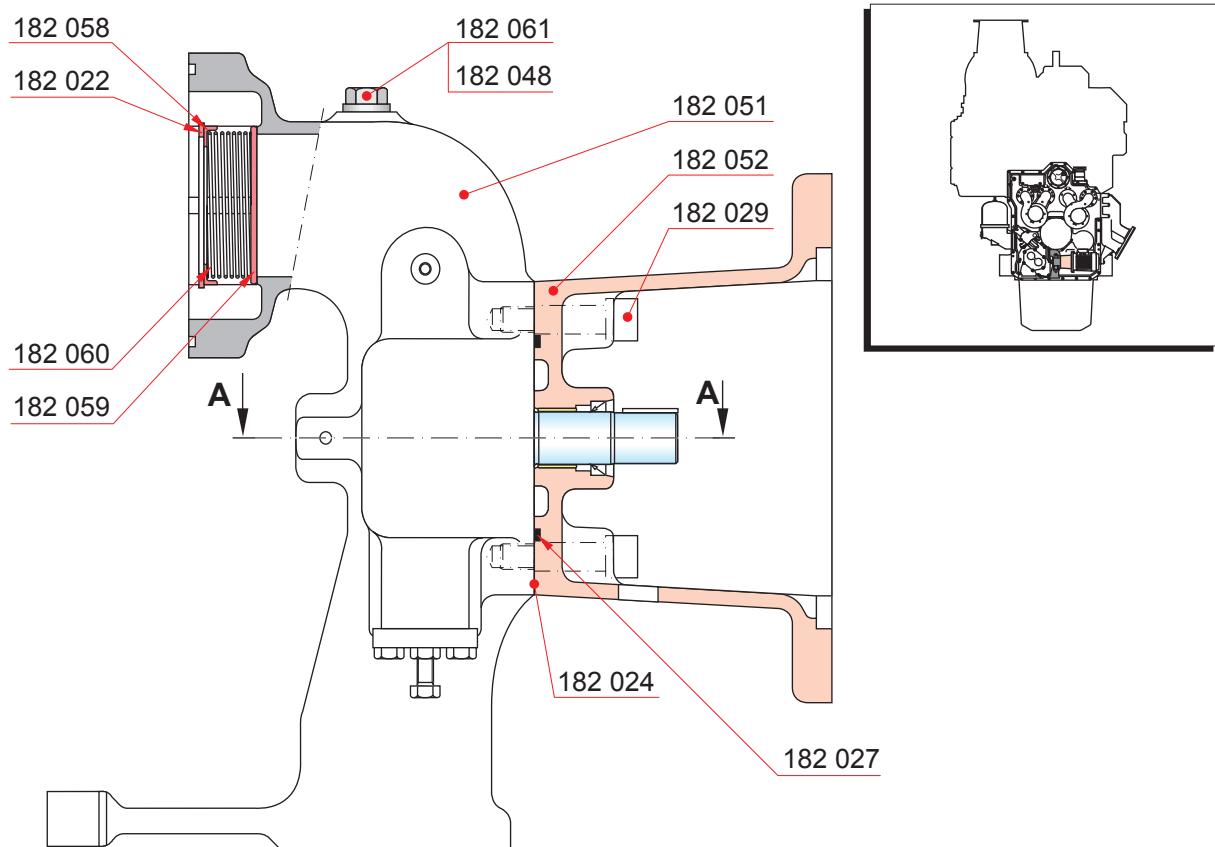
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 038	Sealing set	1	-
107 097	O-ring	1	-
181 009	Screw	4	-
181 012	O-ring	1	-
181 018	Gasket	1	-
181 023	O-ring	1	-
181 033	O-ring	1	-

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Prelubricating pump

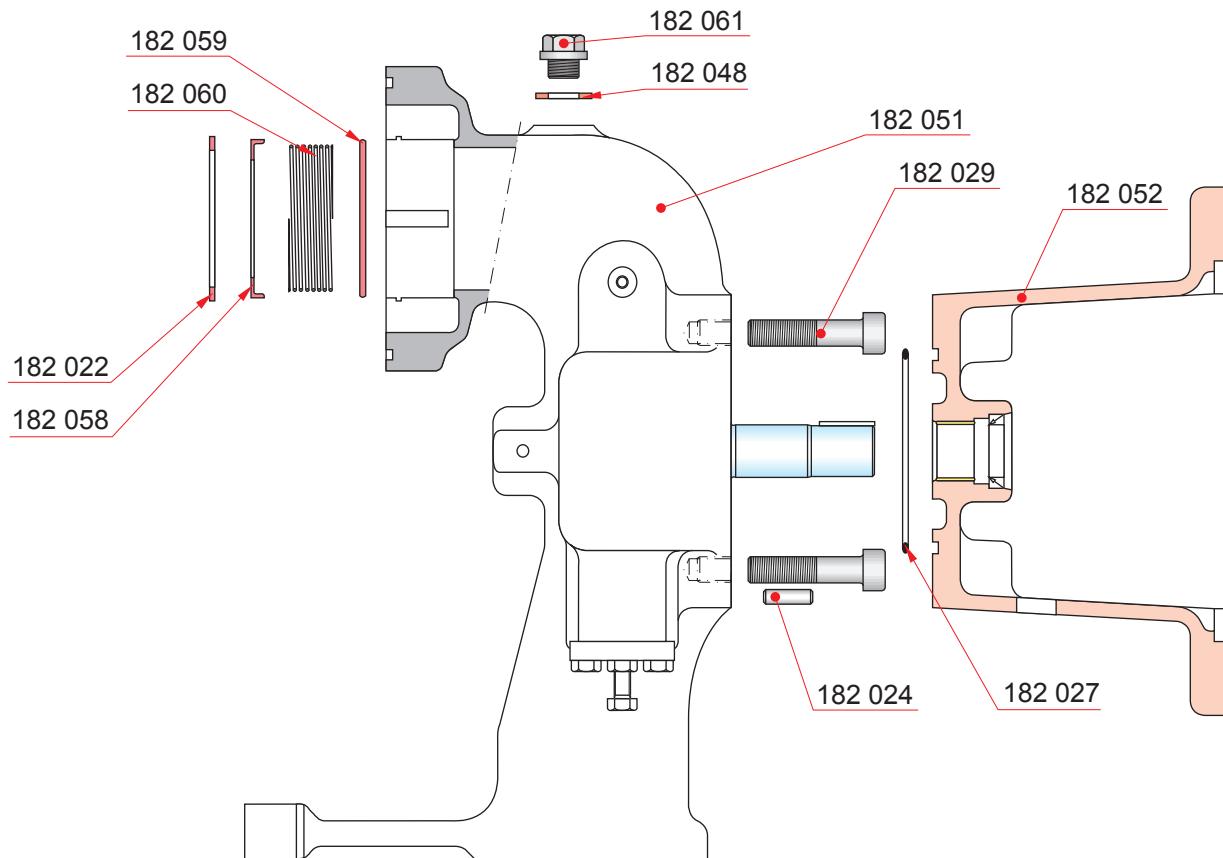


Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 022	Retainer ring	1	-
182 024	Pin	2	-
182 027	O-ring	1	-
182 029	Screw	4	-
182 048	Sealing ring	1	-
182 051	Housing	1	14.3
182 052	Bracket	1	9.5
182 058	Spring holder	1	-
182 059	Valve disc	1	0.1
182 060	Compression spring	1	-
182 061	Plug	1	-

Edition: A

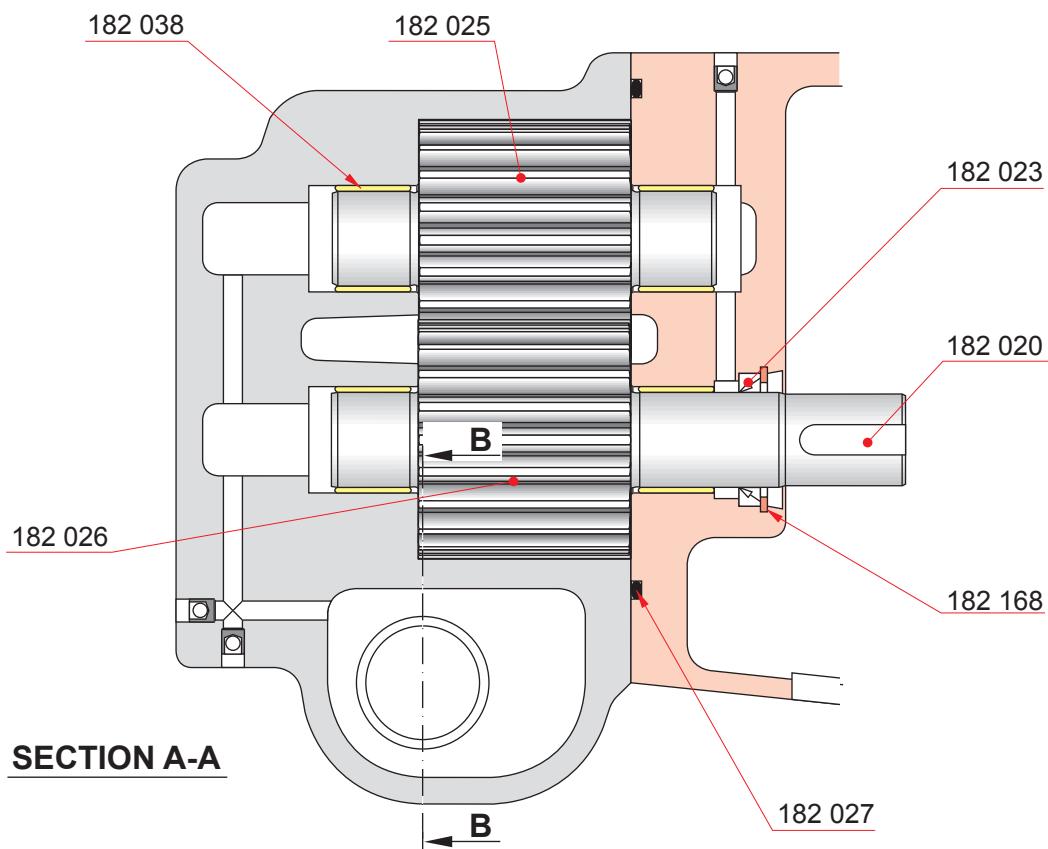
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Updated: 09.12.2012

Prelubricating pump

Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 022	Retainer ring	1	-
182 024	Pin	2	-
182 027	O-ring	1	-
182 029	Screw	4	-
182 048	Sealing ring	1	-
182 051	Housing	1	14.3
182 052	Bracket	1	9.5
182 058	Spring holder	1	-
182 059	Valve disc	1	0.1
182 060	Compression spring	1	-
182 061	Plug	1	-

Prelubricating pump

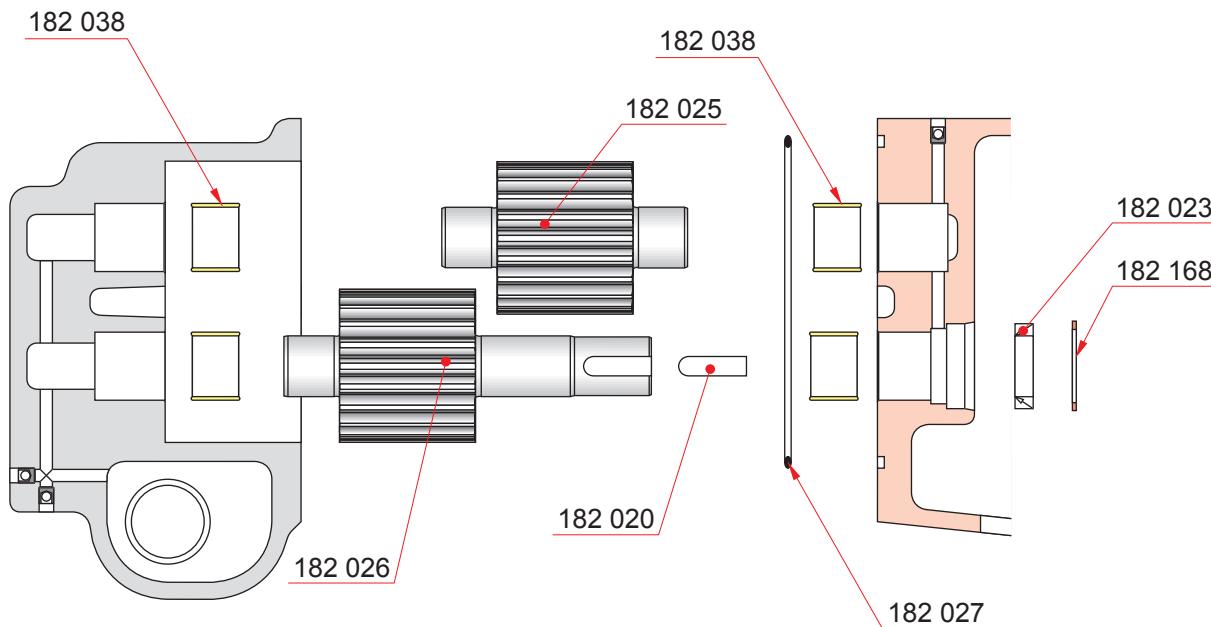


SECTION A-A

Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 020	Key	1	-
182 023	Seal	1	-
182 025	Gear shaft	1	2.0
182 026	Drive gear shaft	1	2.2
182 027	O-ring	1	-
182 038	Bearing bush	4	-
182 168	Retainer ring	1	-

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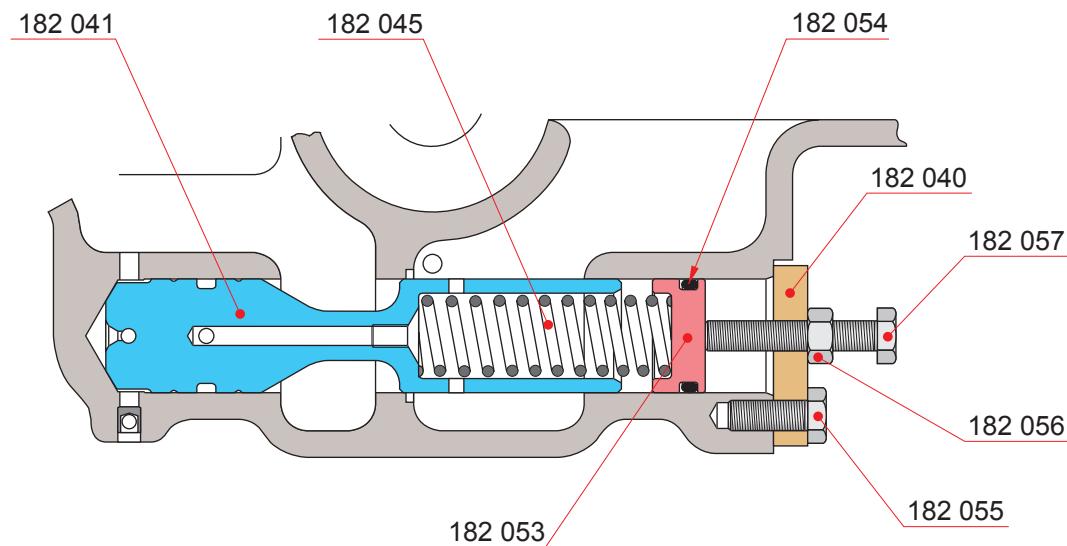
Prelubricating pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 020	Key	1	-
182 023	Seal	1	-
182 025	Gear shaft	1	2.0
182 026	Drive gear shaft	1	2.2
182 027	O-ring	1	-
182 038	Bearing bush	4	-
182 168	Retainer ring	1	-

Prelubricating pump

SECTION B-B



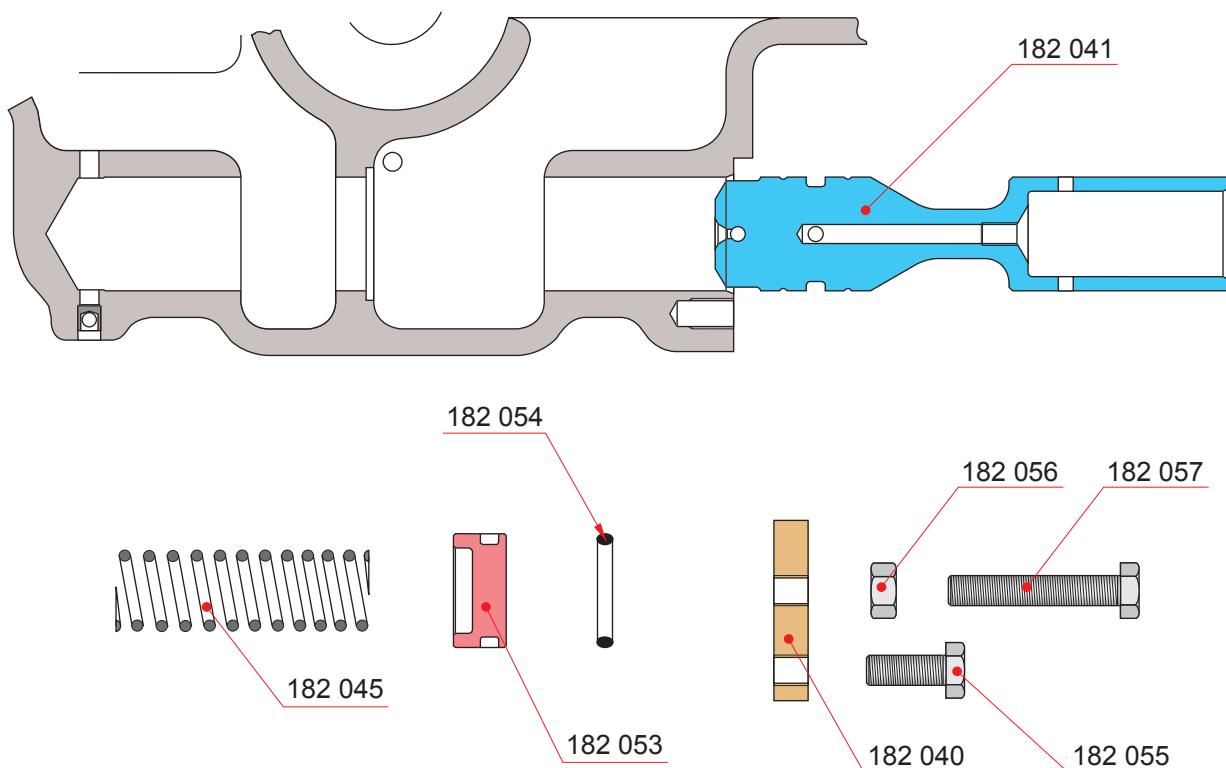
Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 040	End cover	1	0.1
182 041	Piston	1	0.4
182 045	Spring	1	-
182 053	Spring holder	1	-
182 054	O-ring	1	-
182 055	Screw	3	-
182 056	Nut	1	-
182 057	Screw	1	-

Edition: A

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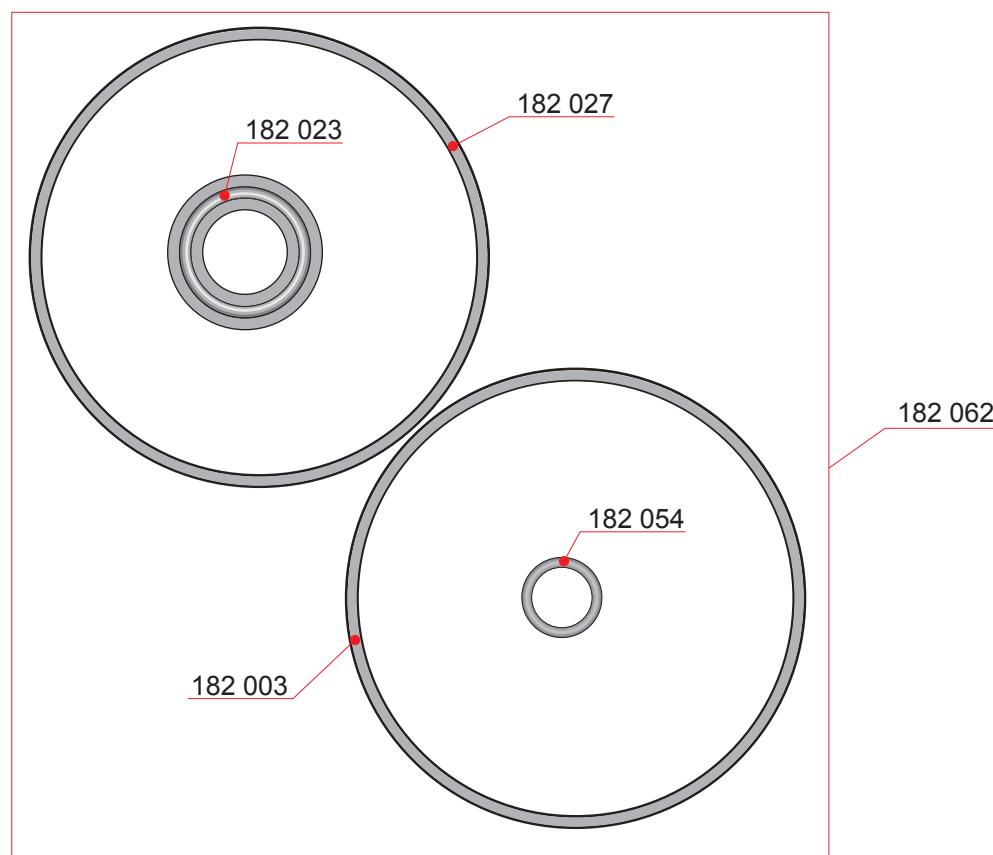
Updated: 09.12.2012

Prelubricating pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 040	End cover	1	0.1
182 041	Piston	1	0.4
182 045	Spring	1	-
182 053	Spring holder	1	-
182 054	O-ring	1	-
182 055	Screw	3	-
182 056	Nut	1	-
182 057	Screw	1	-

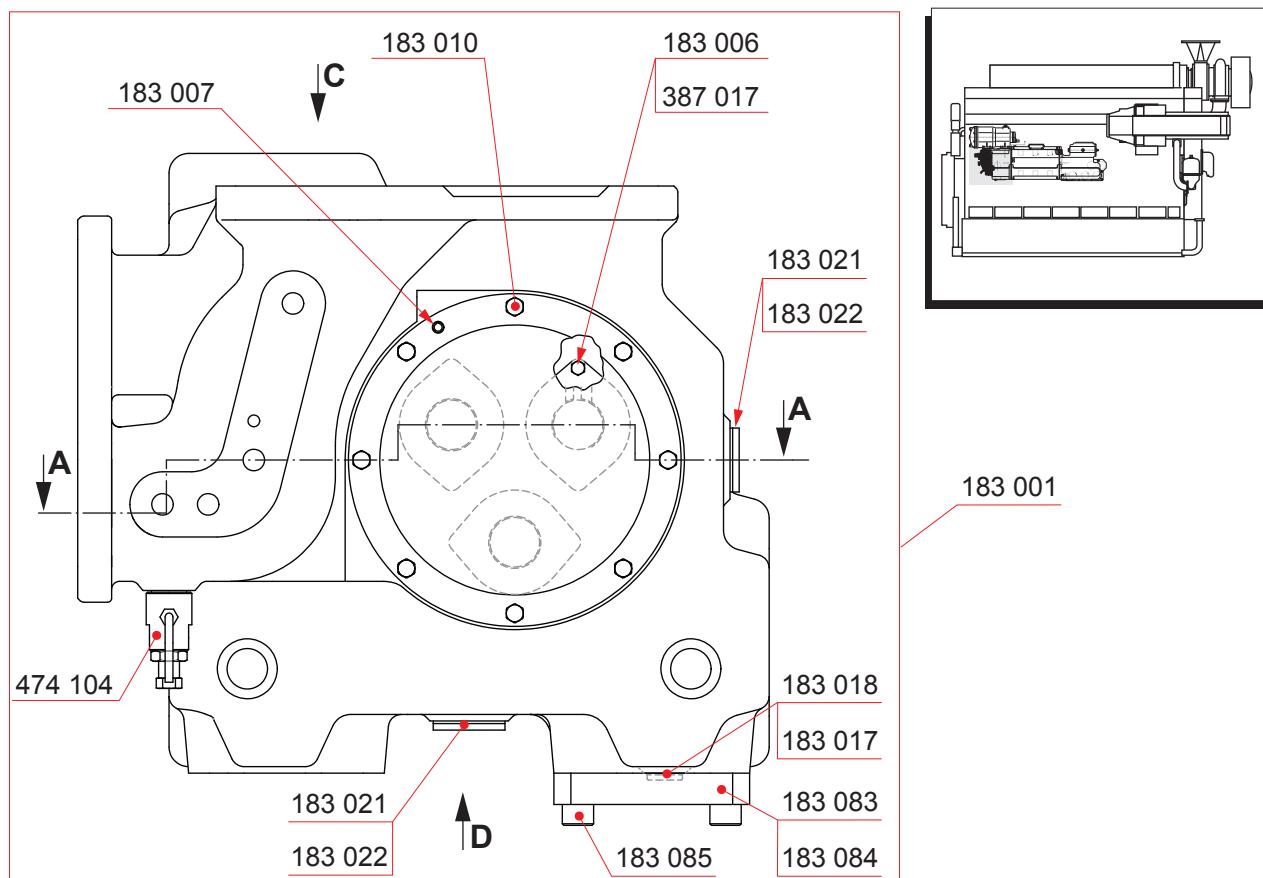
Prelubricating pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 062	Sealing set	1	-
182 003	O-ring	1	-
182 023	Seal	1	-
182 027	O-ring	1	-
182 054	O-ring	1	-

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Thermostatic valve for lube oil

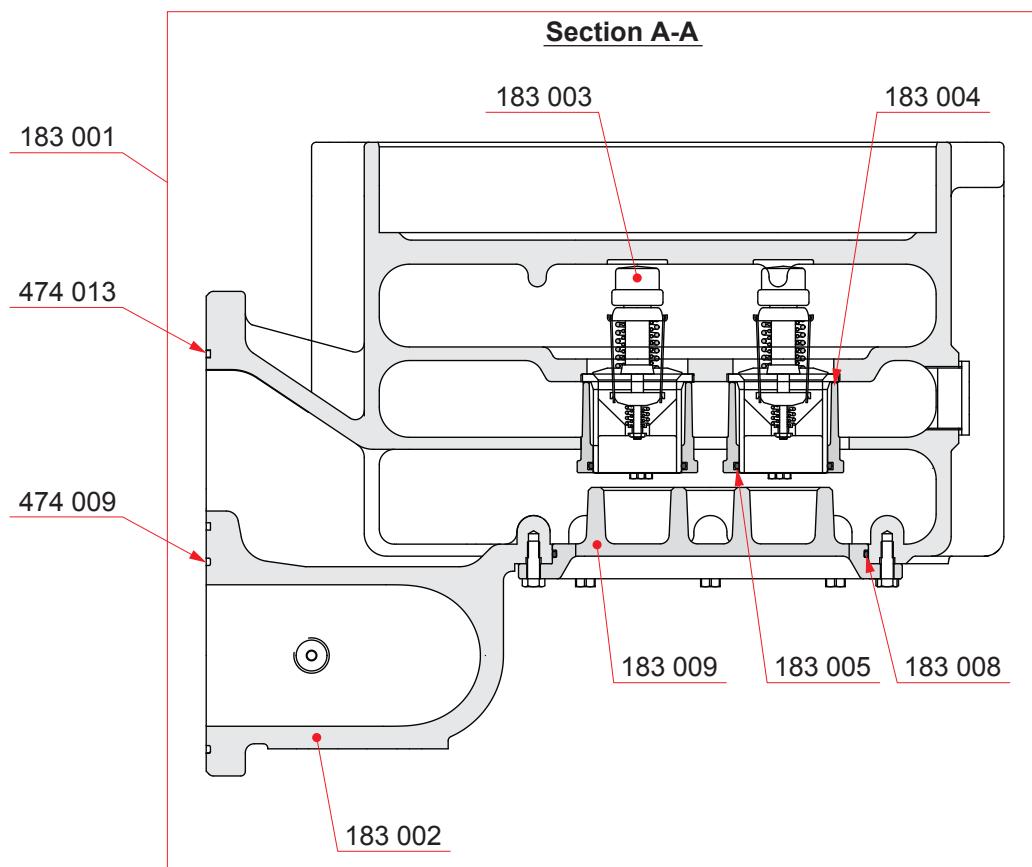


Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 001	Thermostatic valve for lube oil	1	-
183 006	Screw	6	-
183 007	Pin	1	-
183 010	Screw	8	-
183 017	Sealing ring	1	-
183 018	Plug	1	-
183 021	Sealing ring	2	-
183 022	Plug	2	0.2
183 083	Flange	1	4.2
183 084	O-ring	1	-
183 085	Screw	4	-
474 104	Valve	1	0.4
387 017	Glue compound	1	-

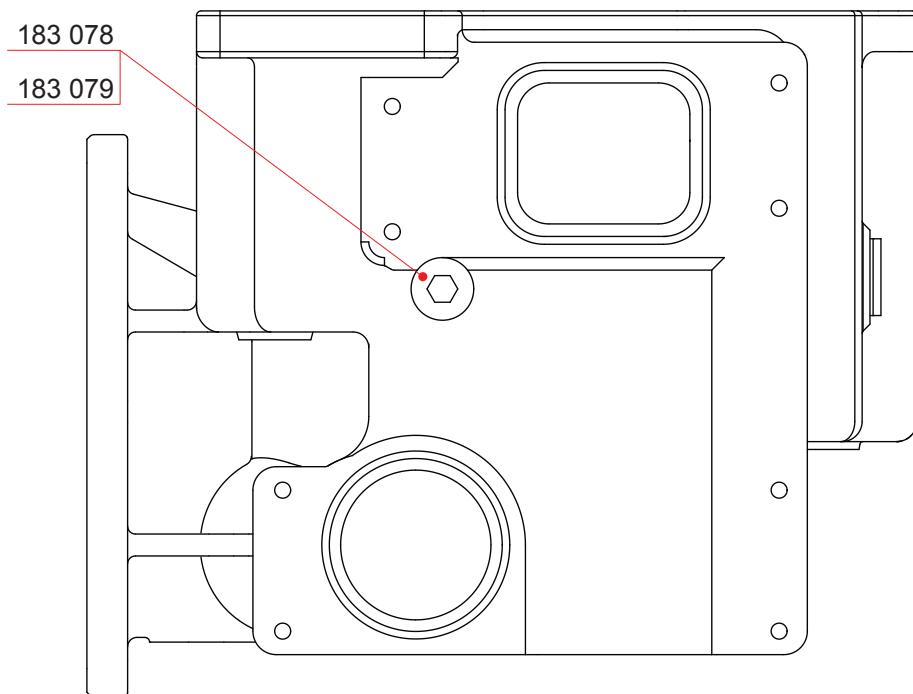
Edition: A

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Updated: 14.12.2011

Thermostatic valve for lube oil

Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 001	Thermostatic valve for lube oil	1	-
183 002	Housing	1	133
183 003	Thermostatic element	3	0.7
183 004	Holder	3	0.5
183 005	O-ring	3	-
183 008	O-ring	1	-
183 009	Cover	1	2.1
474 009	O-ring	1	-
474 013	O-ring	1	-

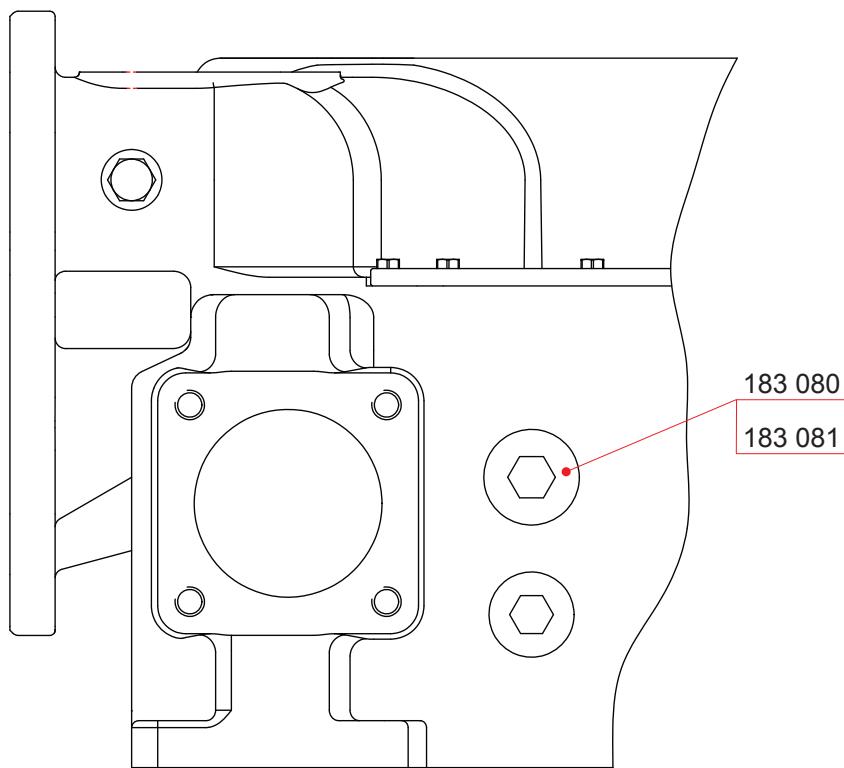
Thermostatic valve for lube oil**View C**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 078	Plug	1	0.1
183 079	Sealing ring	1	-

Edition: A

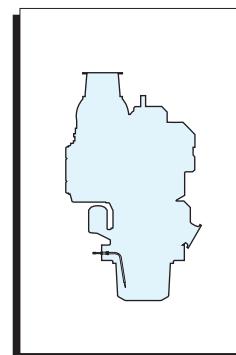
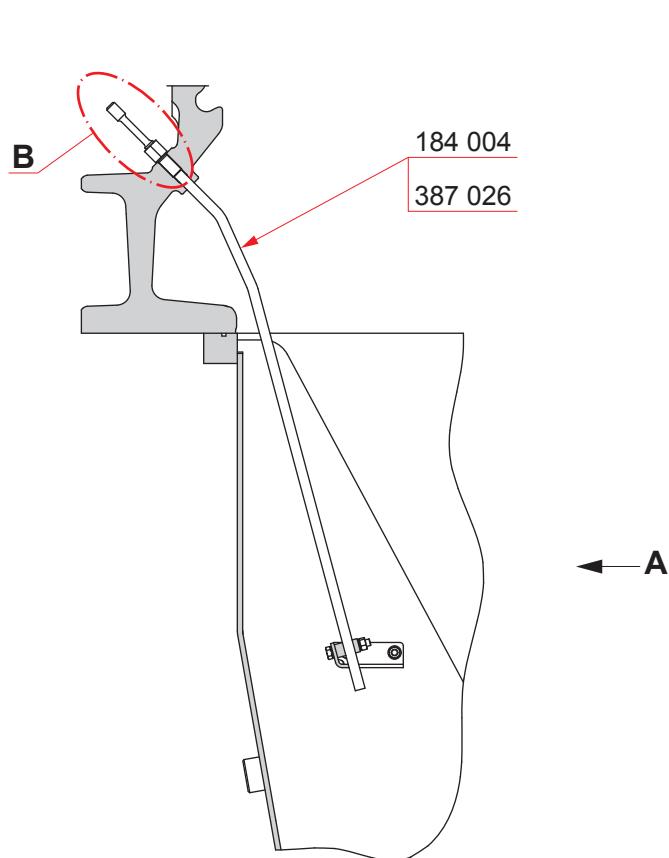
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Updated: 14.12.2011

Thermostatic valve for lube oil

Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 080	Plug	1	0.3
183 081	Sealing ring	1	-

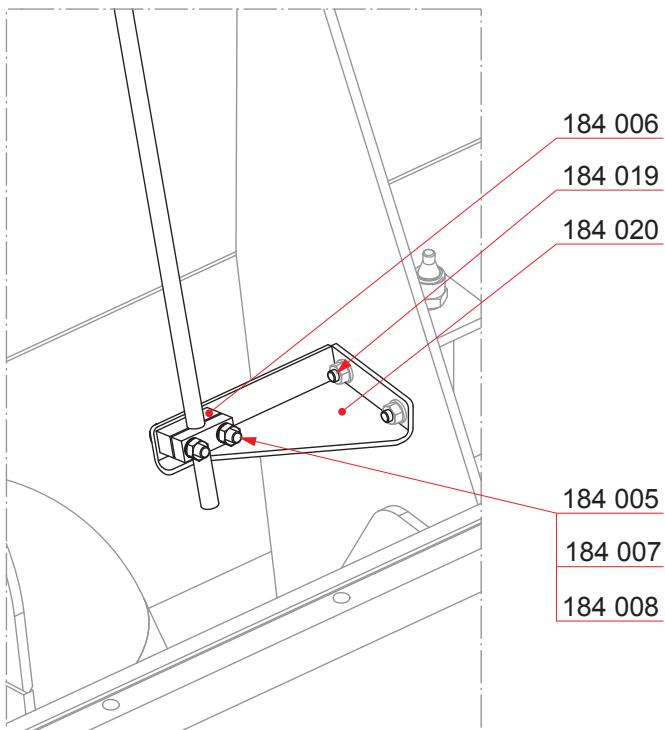
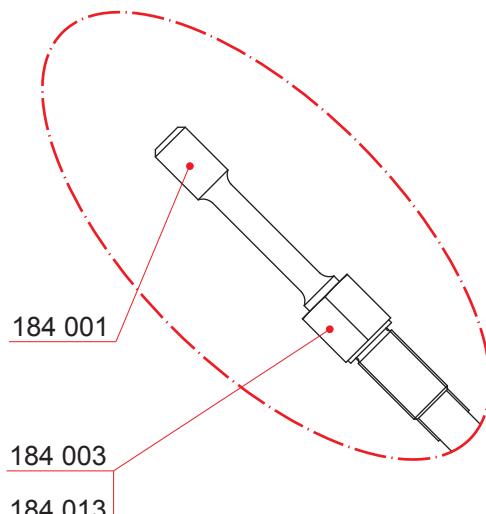
Oil dipstick



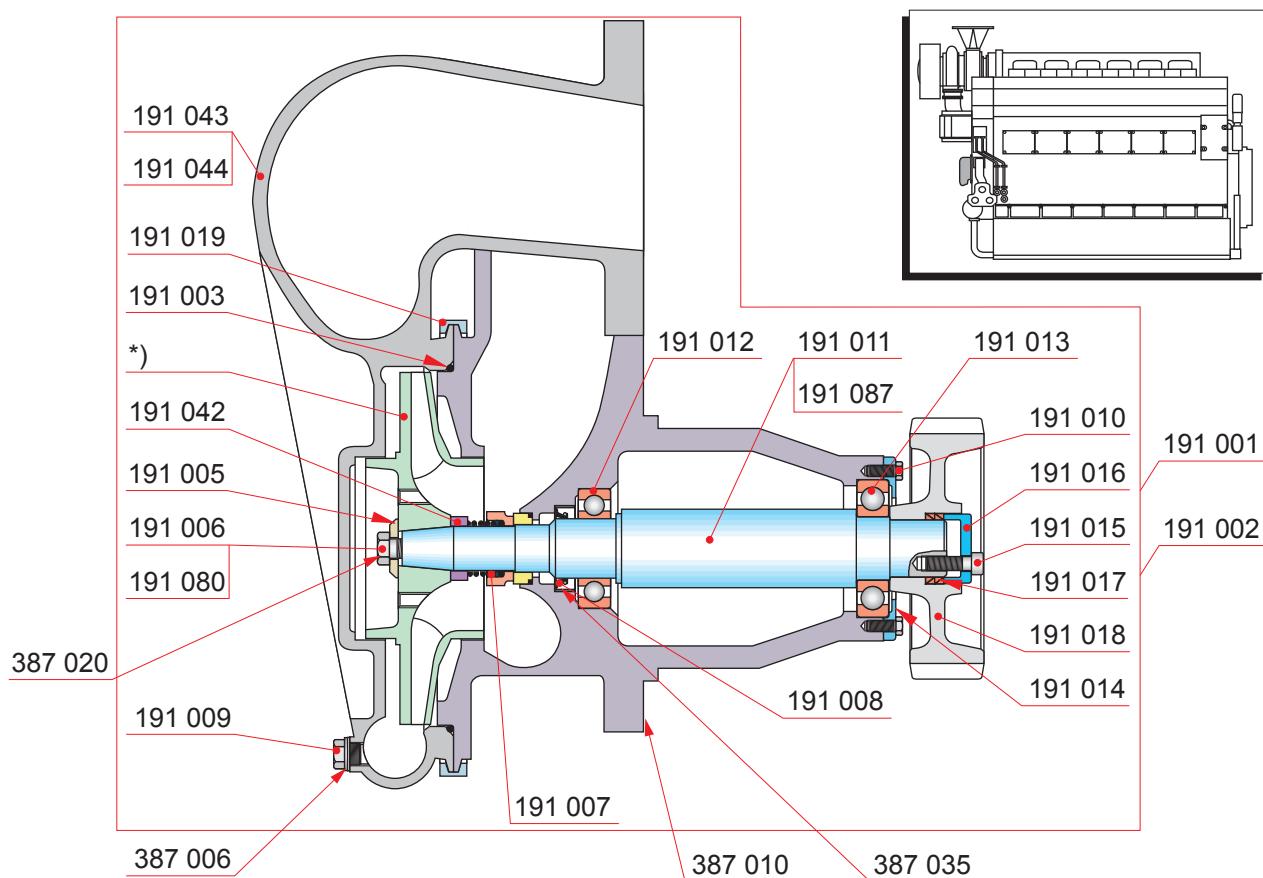
Part No.	Description	Qty [Pcs]	Wt. [Kg]
184 004	Protecting pipe	1	0.4
387 026	Glue compound	1	-

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Oil dipstick

A**B**

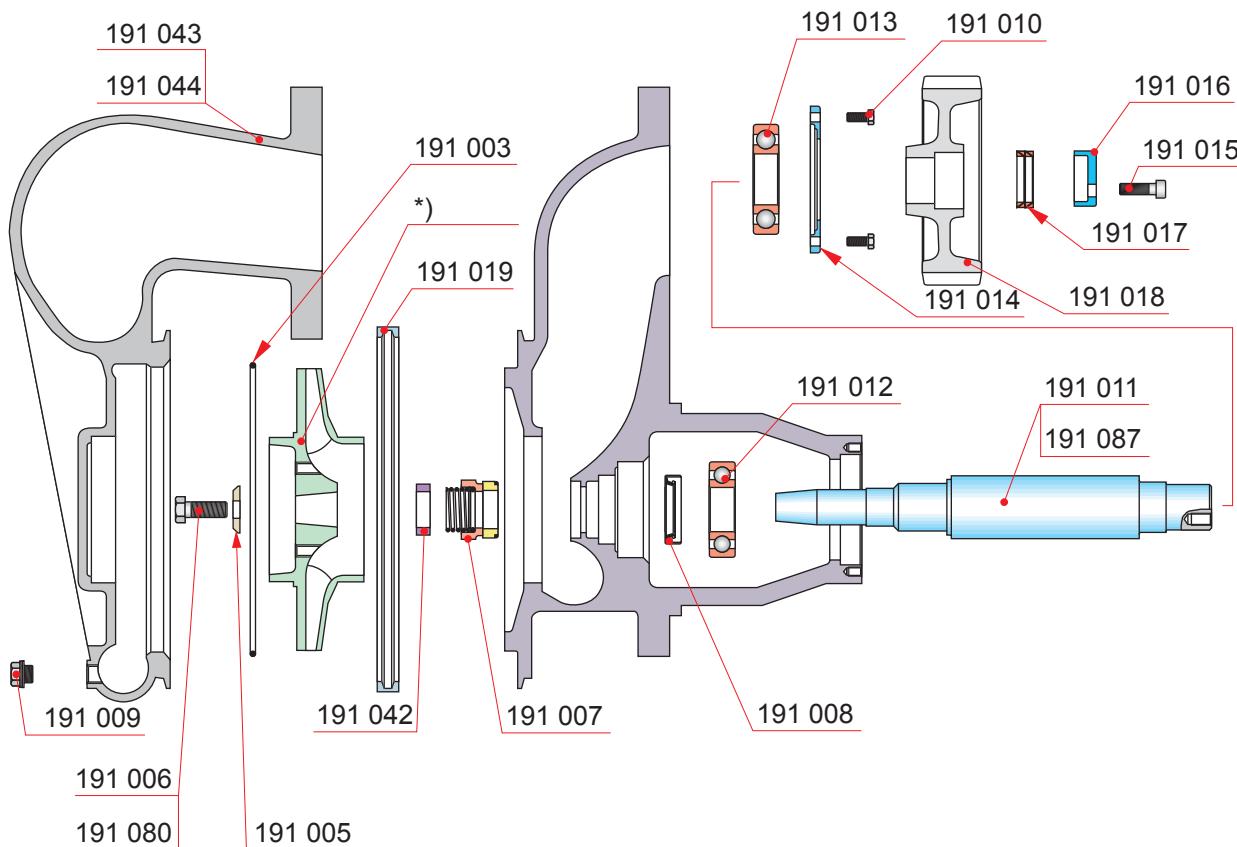
Part No.	Description	Qty [Pcs]	Wt. [Kg]
184 001	Dipstick	1	0.1
184 003	Sealing ring	1	-
184 005	Screw	2	-
184 006	Pipe clamp	1	0.2
184 007	Nut	2	-
184 008	Washer	4	-
184 013	Connection piece	1	0.1
184 019	Screw	2	-
184 020	Support	1	0.8

Water pump

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 001	HT water pump	1	-	387 035	Glue compound	1	-
191 002	LT water pump	1	-		NOTE! (1) For pump WD-90L.		
191 003	O-ring	1	-		NOTE! (2) For pump WD-90R.		
191 005	Washer	1	-		NOTE! (3) For pump WD-90.		
191 006	Screw	1	-		NOTE! (4) For pump WD-91.		
191 007	Shaft seal	1	-		NOTE! *) Impeller, see page 3.		
191 008	Gamma ring	1	-				
191 009	Plug	1	-				
191 010	Screw	4	-				
191 011	Shaft (3)	1	-				
191 012	Bearing	1	-				
191 013	Bearing	1	-				
191 014	Bearing housing cover	1	-				
191 015	Screw	3	-				
191 016	Pressure plate	1	-				
191 017	Pair of friction rings	2	-				
191 018	Drive gear wheel	1	-				
191 019	Clamp ring	1	-				
191 042	Ring	1	-				
191 043	Chamber (1)	1	-				
191 044	Chamber (2)	1	-				
191 080	Screw (4)	1	-				
191 087	Shaft (4)	1	-				
387 006	Glue compound	1	-				
387 010	Glue compound	1	-				
387 020	Glue compound	1	-				

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Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 003	O-ring	1	-	NOTE!	(2) For pump WD-90R.		
191 005	Washer	1	-	NOTE!	(3) For pump WD-90.		
191 006	Screw	1	-	NOTE!	(4) For pump WD-91.		
191 007	Shaft seal	1	-	NOTE!	*) Impeller, see page 3.		
191 008	Gamma ring	1	-				
191 009	Plug	1	-				
191 010	Screw	4	-				
191 011	Shaft (3)	1	-				
191 012	Bearing	1	-				
191 013	Bearing	1	-				
191 014	Bearing housing cover	1	-				
191 015	Screw	3	-				
191 016	Pressure plate	1	-				
191 017	Pair of friction rings	2	-				
191 018	Drive gear wheel	1	-				
191 019	Clamp ring	1	-				
191 042	Ring	1	-				
191 043	Chamber (1)	1	-				
191 044	Chamber (2)	1	-				
191 080	Screw (4)	1	-				
191 087	Shaft (4)	1	-				

NOTE! (1) For pump WD-90L.

Water pump

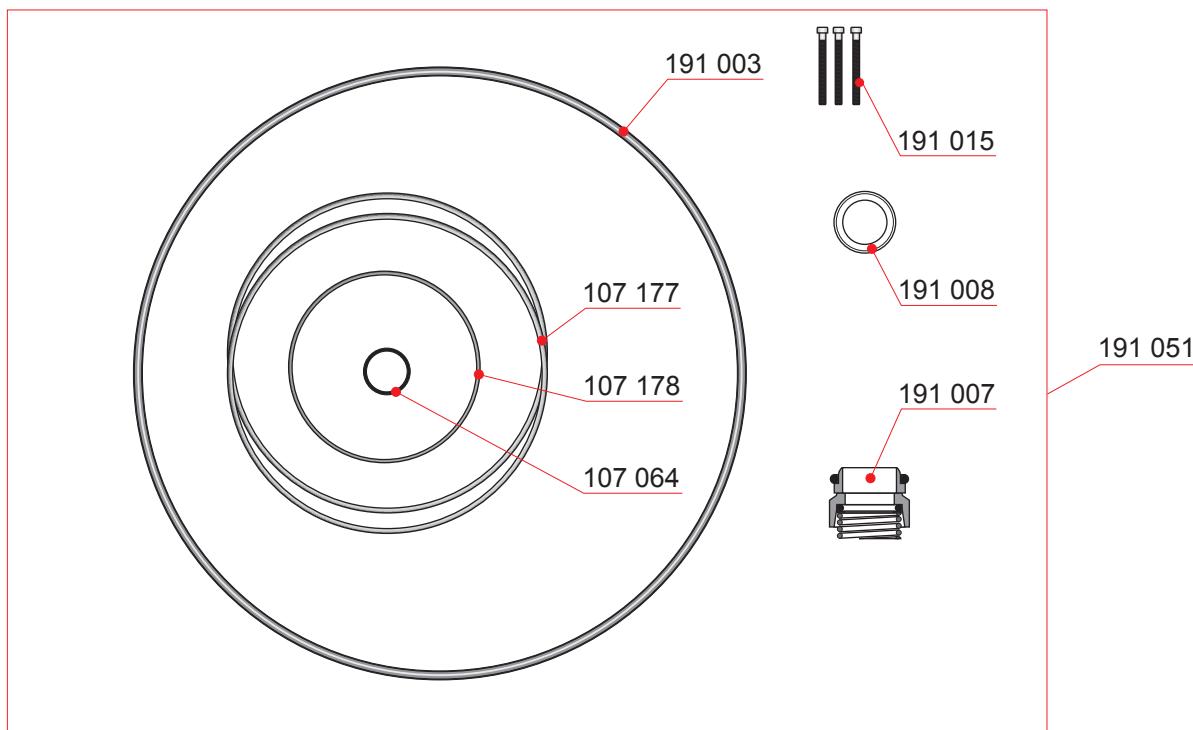
PART NUMBER SELECTION TABLE FOR IMPELLER

When ordering impeller, choose the right part number for the pump type (found from the type plate on the pump) according to the table below.

Part No	Pump type No	Ø/mm	Qty
191 045	WD-90L215	215	1
191 046	WD-90R215	215	1
191 047	WD-90L230	230	1
191 048	WD-90R230	230	1
191 049	WD-90L240	240	1
191 050	WD-90R240	240	1
191 074	WD-91VL_220	220	1
191 075	WD-91VR_220	220	1

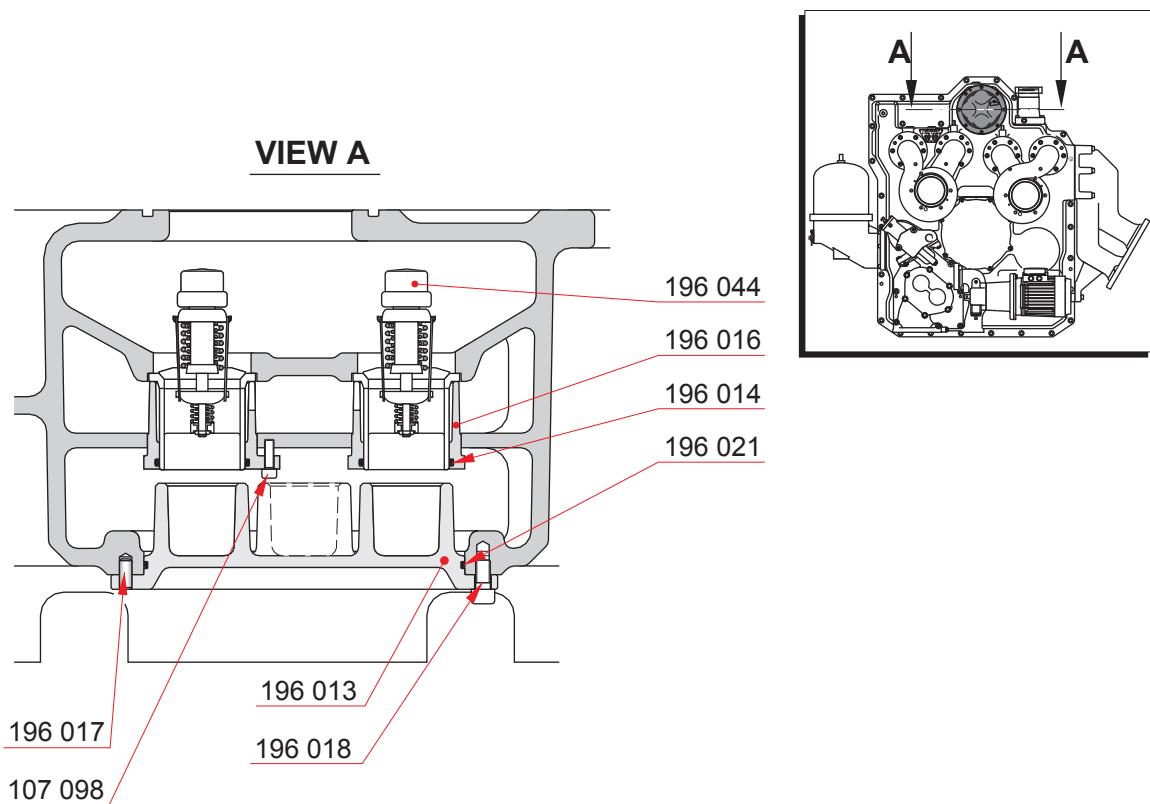
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Updated: 09.11.2010

Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 051	Sealing set	1	-
107 064	O-ring	1	-
107 177	O-ring	2	-
107 178	O-ring	1	-
191 003	O-ring	1	-
191 007	Shaft seal	1	-
191 008	Gamma ring	1	-
191 015	Screw	3	-

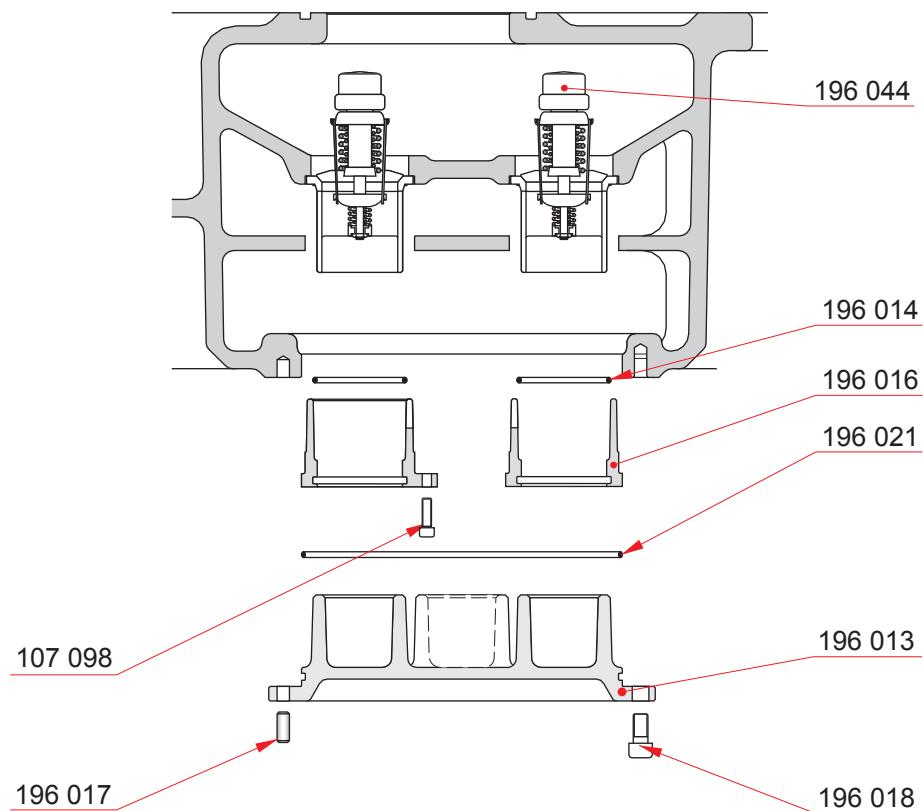
Thermostatic valve for HT water



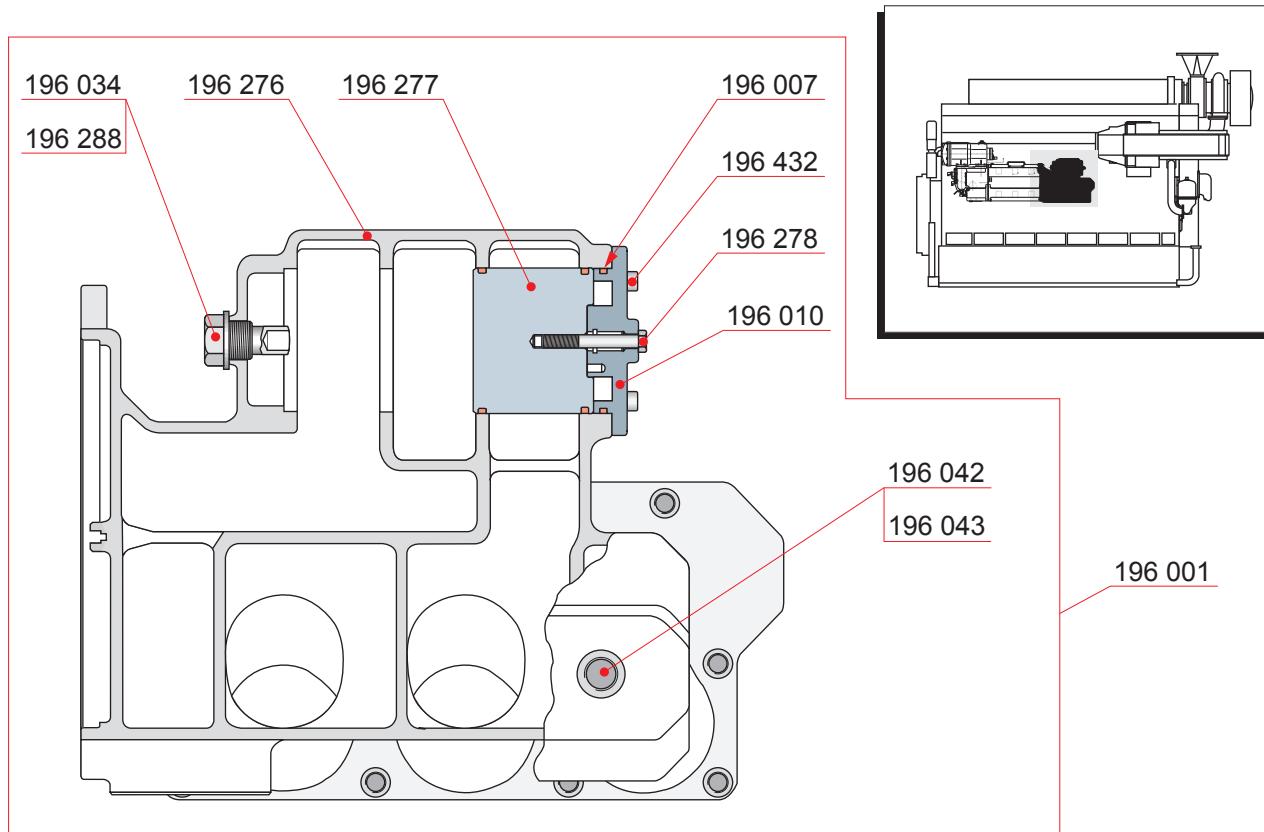
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 098	Screw	8	-
196 013	Cover	1	7.0
196 014	O-ring	4	-
196 016	Holder	4	0.5
196 017	Pin	1	-
196 018	Screw	8	-
196 021	O-ring	1	-
196 044	Thermostatic element	4	0.7

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Thermostatic valve for HT water

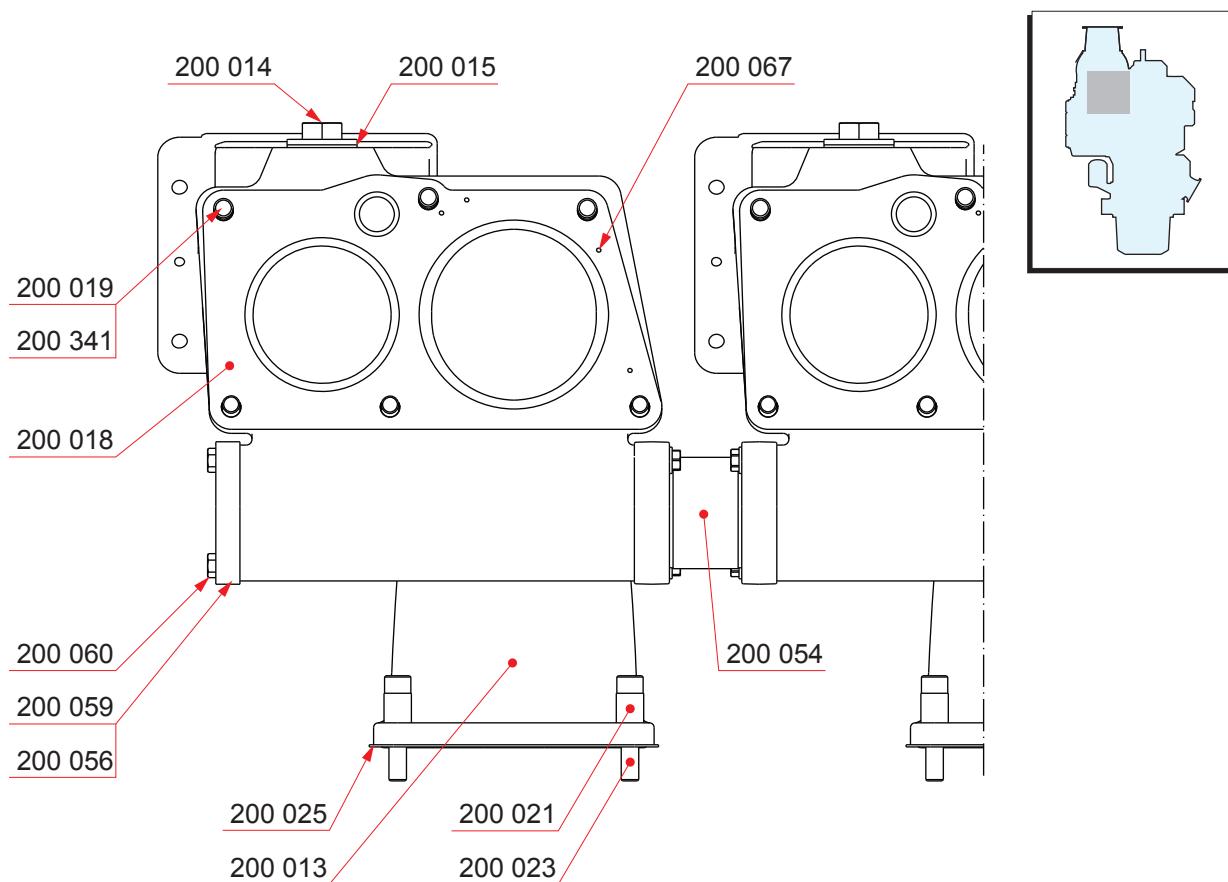


Connection piece for LT-water



Part No.	Description	Qty [Pcs]	Wt. [Kg]
196 001	Thermostatic valve for LT	1	-
196 007	O-ring	3	-
196 010	End flange	1	-
196 034	Plug	1	-
196 042	Plug	1	-
196 043	Sealing ring	1	-
196 276	Housing	1	-
196 277	Sleeve	1	-
196 278	Screw	1	-
196 288	Sealing ring	1	-
196 432	Screw	4	-

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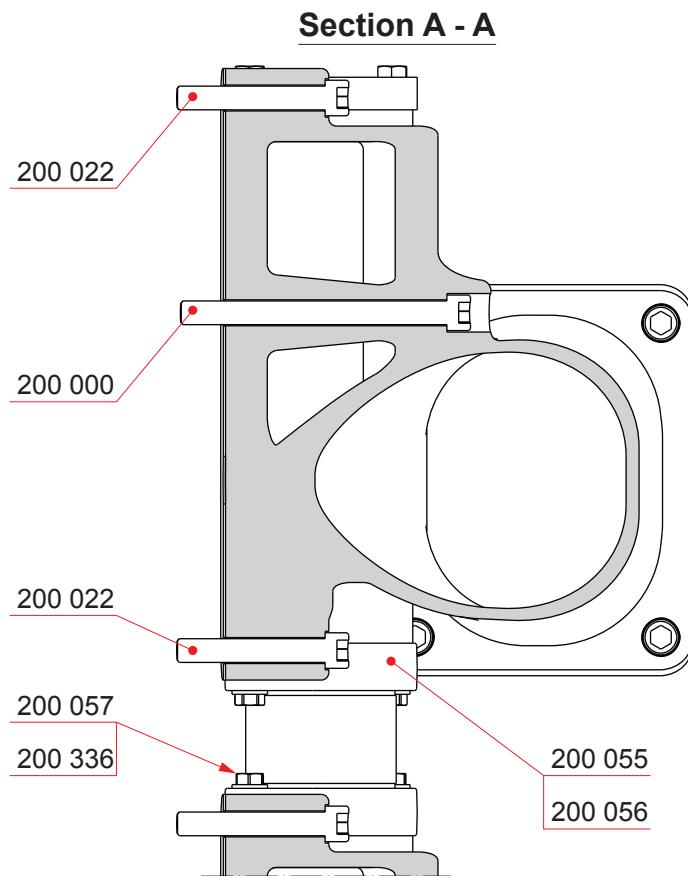
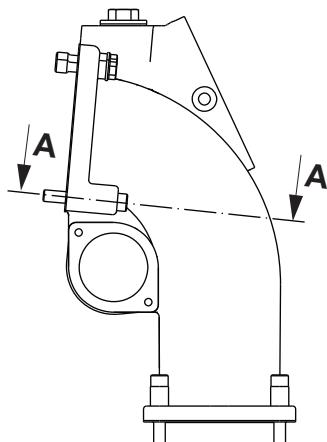
Multiduct

Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 013	Multiduct	*	-
200 014	Adapter	*	-
200 015	Sealing ring	*	-
200 018	Gasket	*	-
200 019	Screw	*	-
200 021	Distance piece	*	-
200 023	Screw	*	-
200 025	Gasket	*	-
200 054	Pipe	*	-
200 056	O-ring	*	-
200 059	Blind flange	1	-
200 060	Screw	2	-
200 067	Pin	*	-
200 341	Distance piece	*	-

NOTE! *) See page 3.

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 Updated: 18.11.2010

Multiduct



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 022	Screw	*	-
200 055	Flange	*	-
200 056	O-ring	*	-
200 057	Screw	*	-
200 092	Screw	*	-
200 336	Washer	*	-

NOTE! *) See page 3.

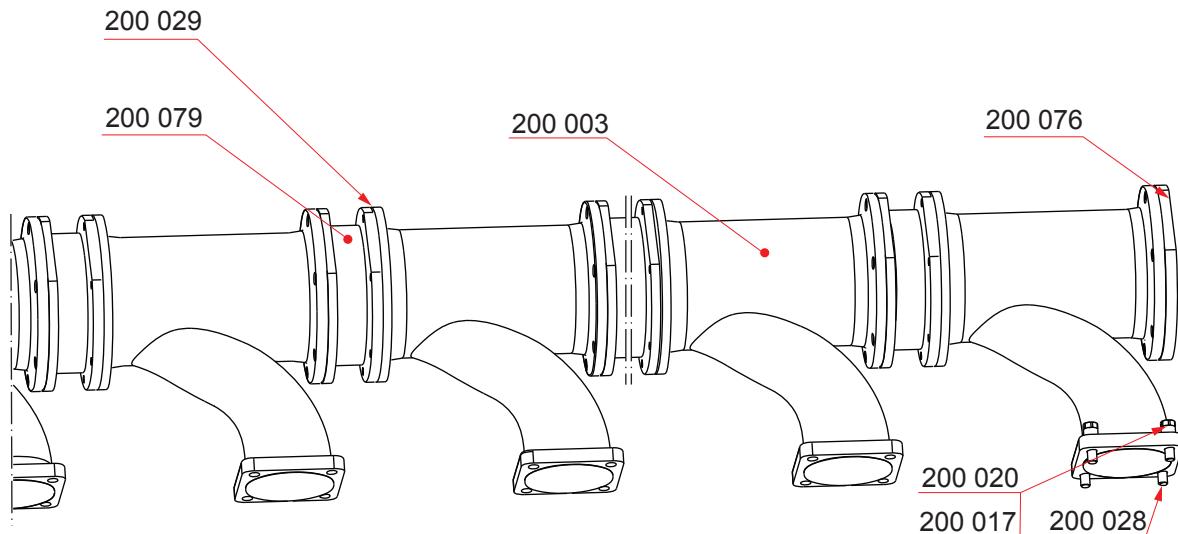
Multiduct

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
200 013 Multiduct	6	7	8	9
200 014 Adapter	6	7	8	9
200 015 Sealing ring	6	7	8	9
200 018 Gasket	6	7	8	9
200 019 Screw	18	21	24	27
200 021 Distance piece	24	28	32	36
200 022 Screw	12	14	16	18
200 023 Screw	24	28	32	36
200 025 Gasket	6	7	8	9
200 054 Pipe	5	6	7	8
200 055 Flange	10	12	14	16
200 056 O-ring	11	13	15	17
200 057 Screw	20	24	28	32
200 067 Pin	12	14	16	18
200 092 Screw	6	7	8	9
200 336 Washer	20	24	28	32
200 341 Distance piece	18	21	24	27

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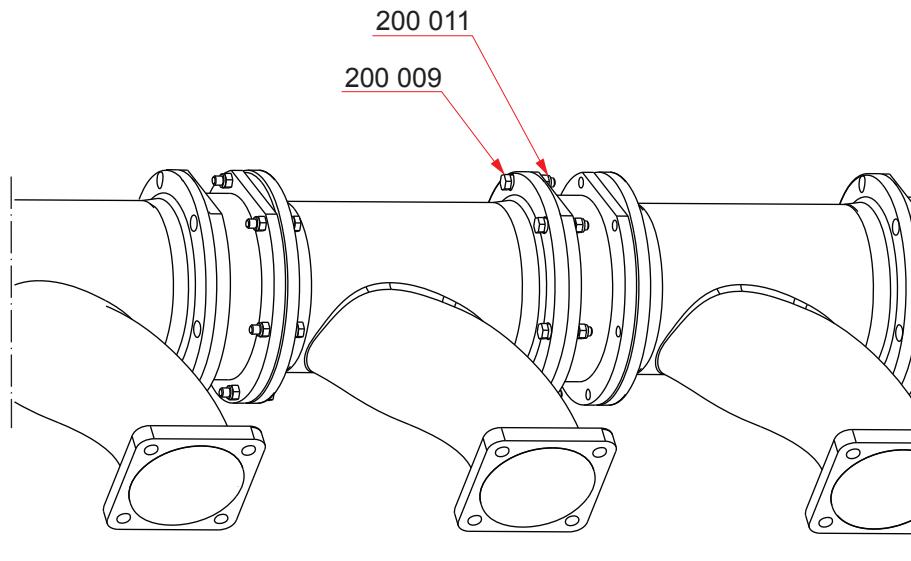
Exhaust system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 003	Exhaust pipe	*	-
200 017	Screw	*	-
200 020	Distance piece	*	-
200 028	Sealing ring	*	-
200 029	Gasket	*	-
200 076	End flange	1	-
200 079	Bellows	*	-

NOTE! (*) See page 3

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Updated: 22.11.2012
Exhaust system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 009	Screw	*	-
200 011	Nut	*	-

NOTE! (*) See page 3

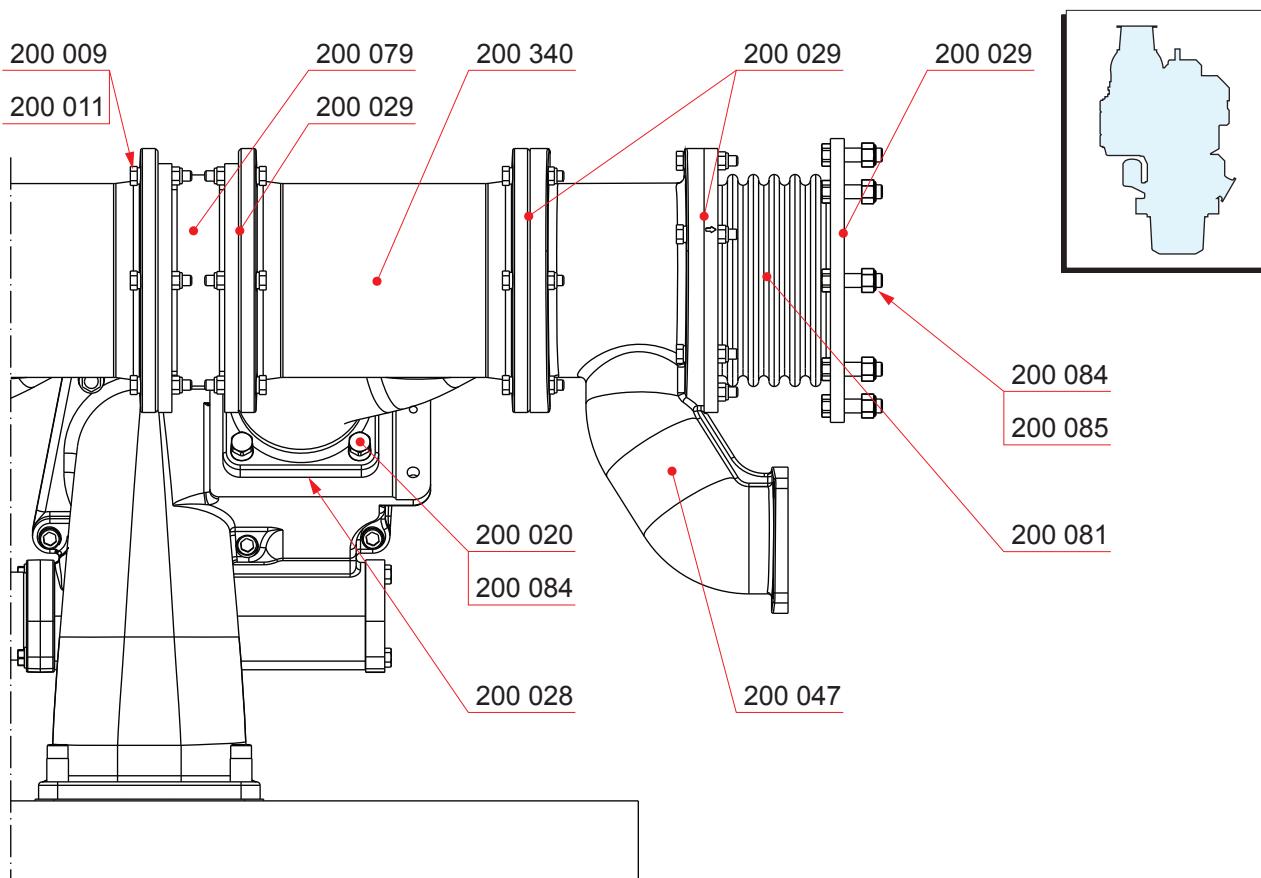
Exhaust system

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
200 003 Exhaust pipe	5	7	8	8
200 009 Screw	54	78	90	90
200 011 Nut	54	78	90	90
200 017 Screw	20	28	32	32
200 020 Distance piece	20	28	32	32
200 028 Sealing ring	5	7	8	8
200 029 Gasket	10	14	16	16
200 079 Bellows	4	6	7	7

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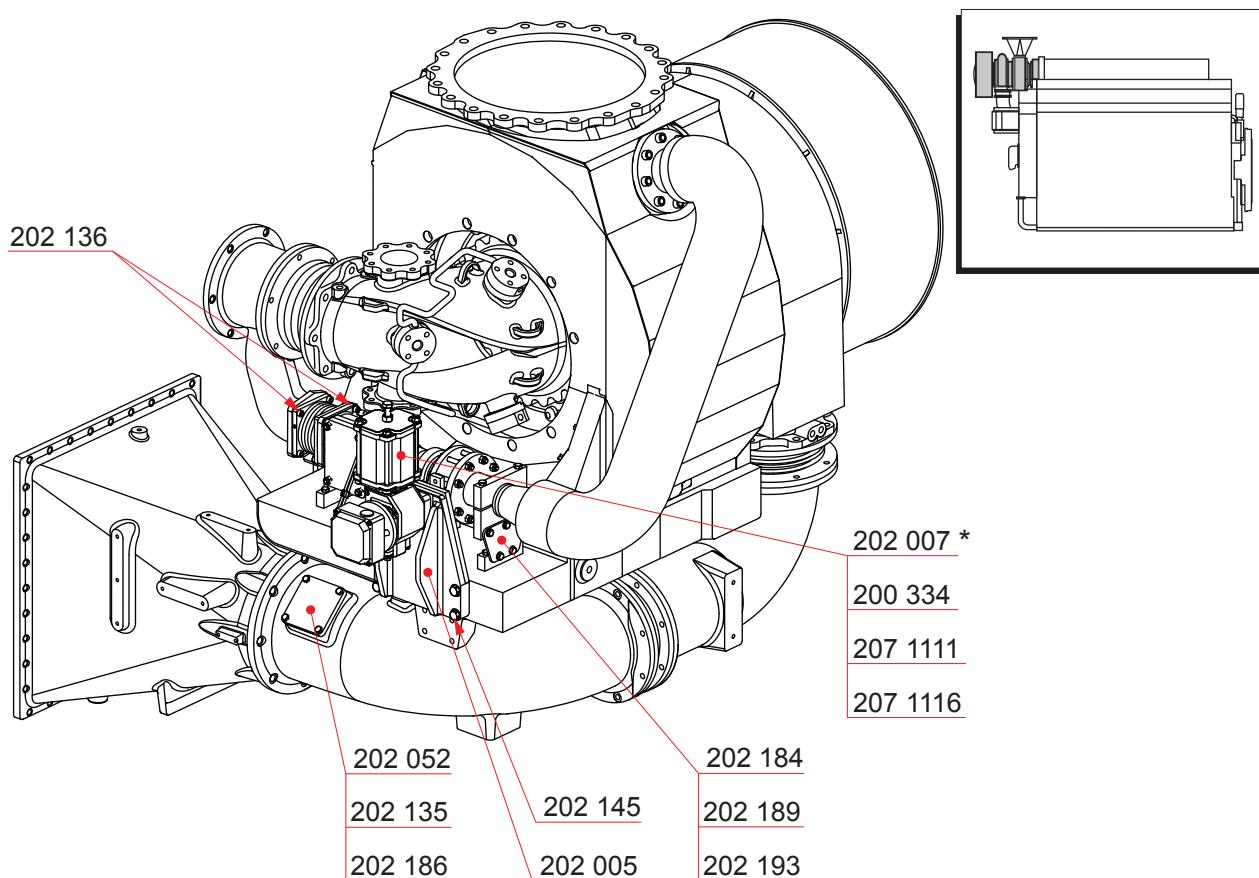
Exhaust system, connection part



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 009	Screw	24	-
200 011	Nut	24	-
200 020	Distance piece	4	-
200 028	Sealing ring	1	-
200 029	Gasket	4	-
200 047	Exhaust pipe	1	-
200 079	Bellows	1	-
200 081	Bellows	1	-
200 084	Screw	12	-
200 085	Nut	8	-
200 340	Exhaust pipe	1	-

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Wastegate system in free end

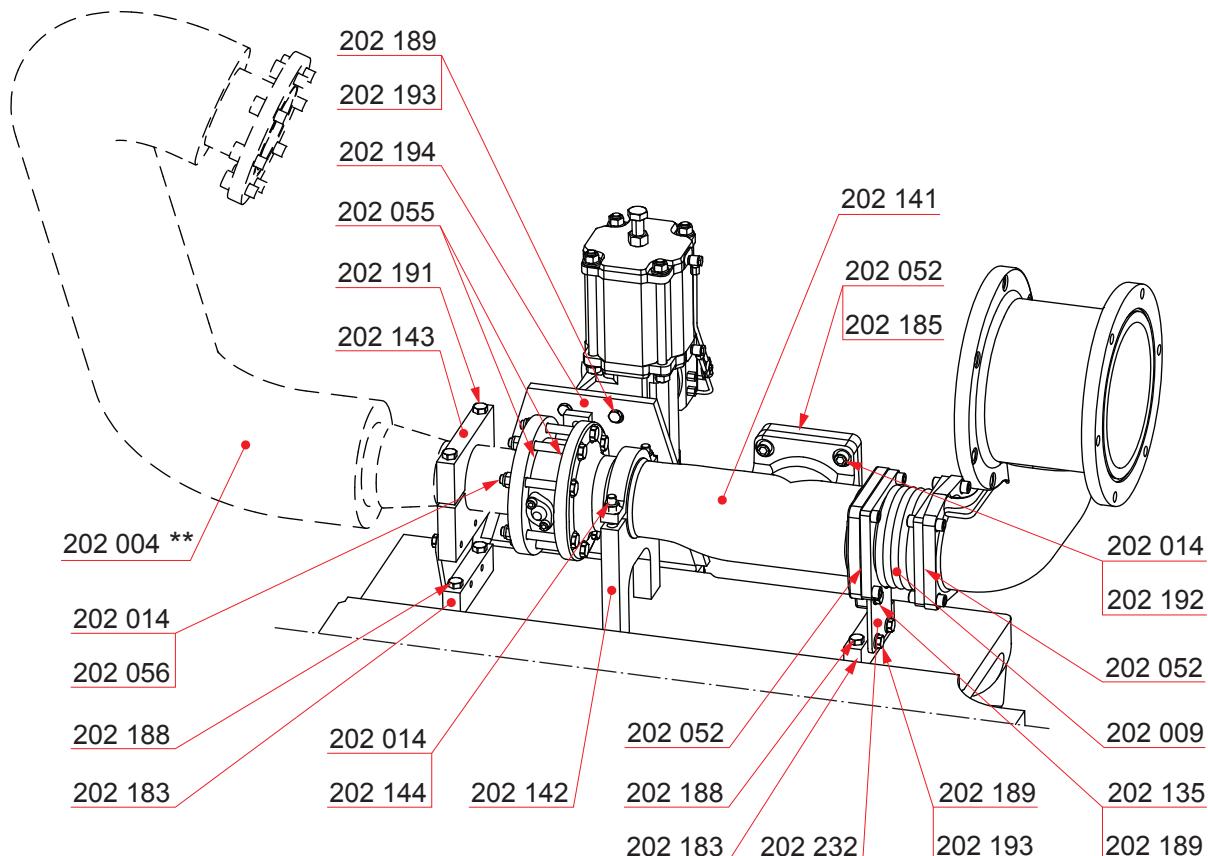


Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 005	Bracket	1	-
202 007	Valve *	1	-
200 334	Positioner	1	-
207 1111	Actuator	1	-
207 1116	Butterfly valve	1	-
202 052	Sealing ring	4	-
202 135	Screw	6	-
202 136	Screw	8	-
202 145	Screw	4	-
202 184	Support	4	-
202 186	Flange	1	-
202 189	Washer	13	-
202 193	Screw	11	-

NOTE! * See 207-

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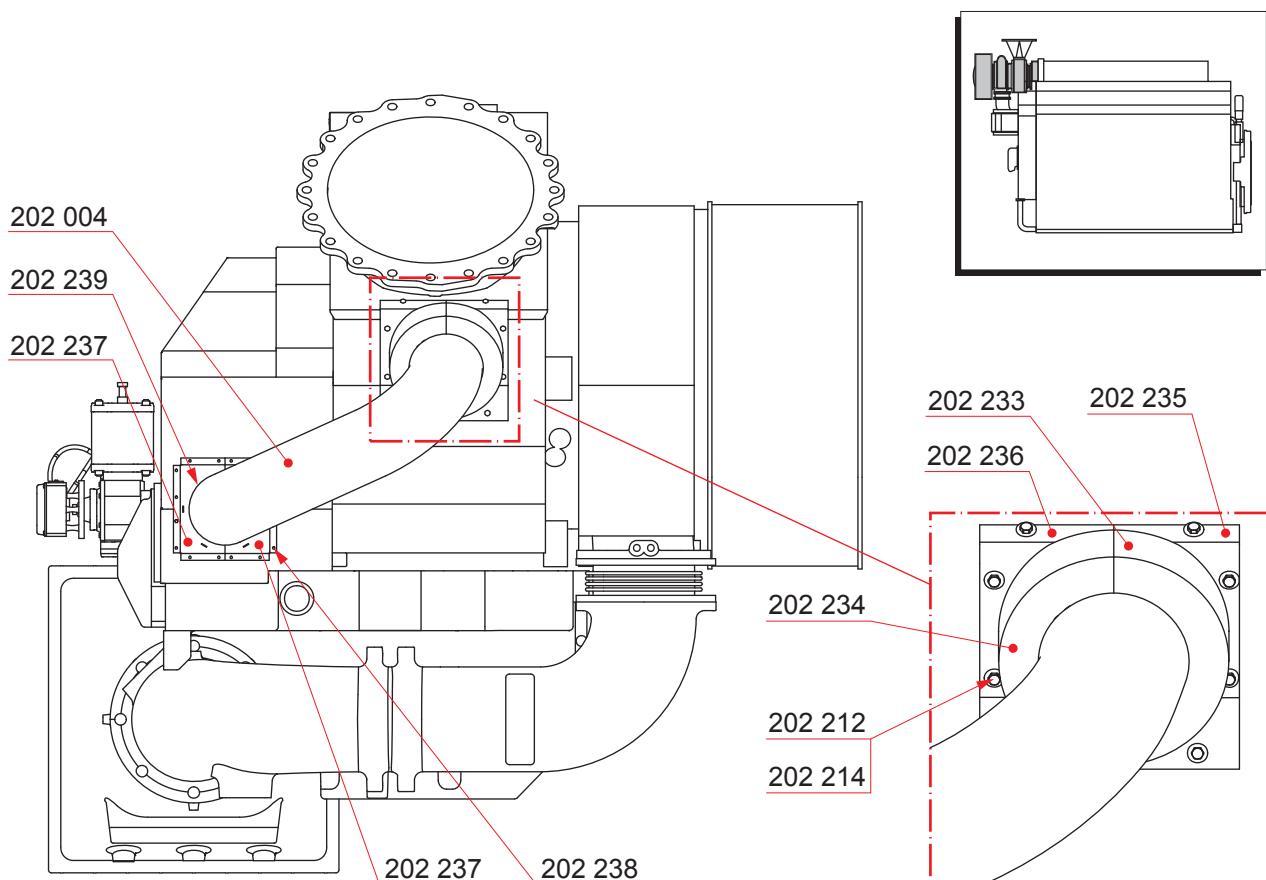
Wastegate system in free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 004	Pipe **	1	-
202 009	Bellows	1	-
202 014	Nut	14	-
202 052	Sealing ring	4	-
202 055	Sealing ring	2	-
202 056	Screw	8	-
202 135	Screw	6	-
202 141	Pipe	1	-
202 142	Pipe clamp	1	-
202 143	Pipe clamp	1	-
202 144	Stud	2	-
202 183	Bracket	2	-
202 185	Blind flange	1	-
202 188	Screw	4	-
202 189	Washer	13	-
202 191	Screw	2	-
202 192	Screw	4	-
202 193	Screw	11	-
202 194	Insulation plate	1	-
202 232	Support	4	-

NOTE! ** See 202-

Wastegate pipe

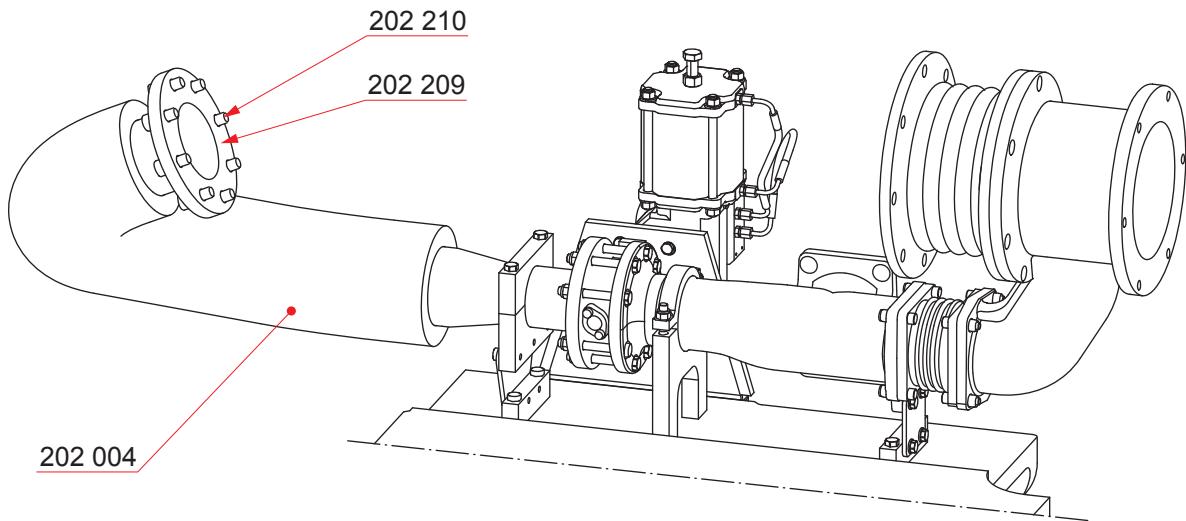


Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 004	Pipe	1	-
202 212	Washer	8	-
202 214	Screw	8	-
202 233	Insulation plate	1	-
202 234	Insulation plate	1	-
202 235	Insulation plate	1	-
202 236	Insulation plate	1	-
202 237	Insulation plate	2	-
202 238	Screw	16	-
202 239	Ceramic fibre tape (1)	1	-

NOTE! (1) L = 1000 mm

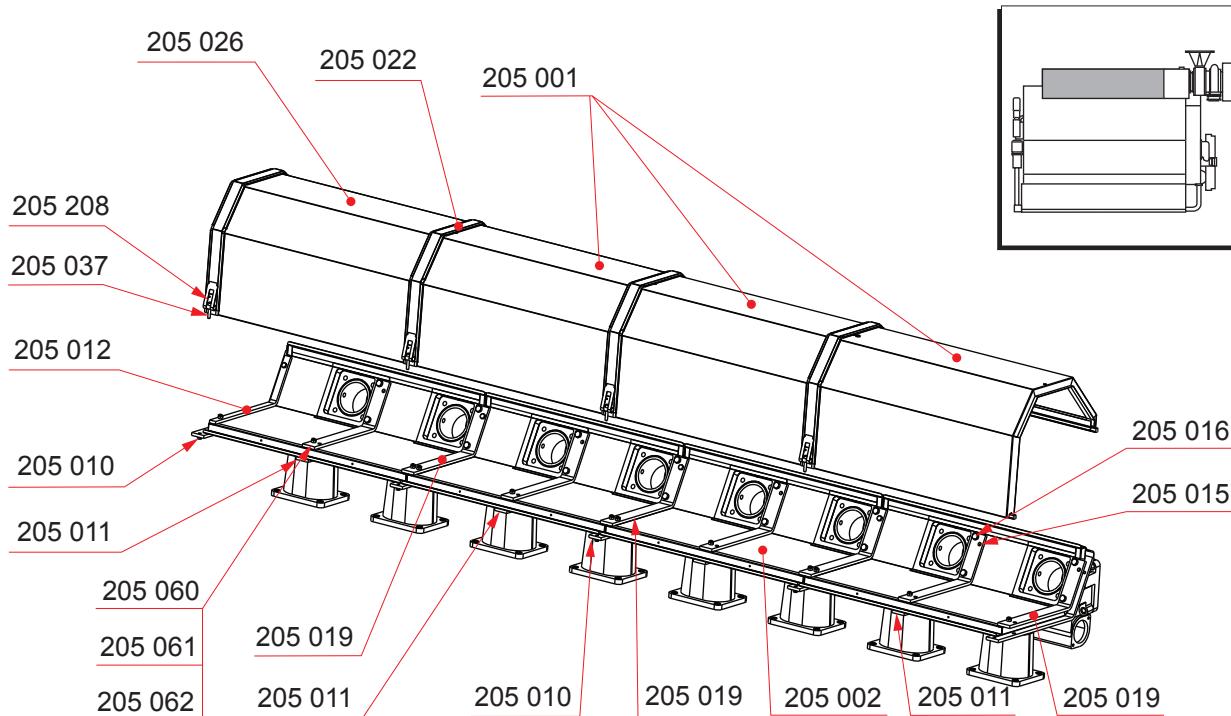
Edition: A
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Updated: 06.07.2007

Wastegate pipe



Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 004	Pipe	1	-
202 209	Sealing ring	1	-
202 210	Screw	8	-

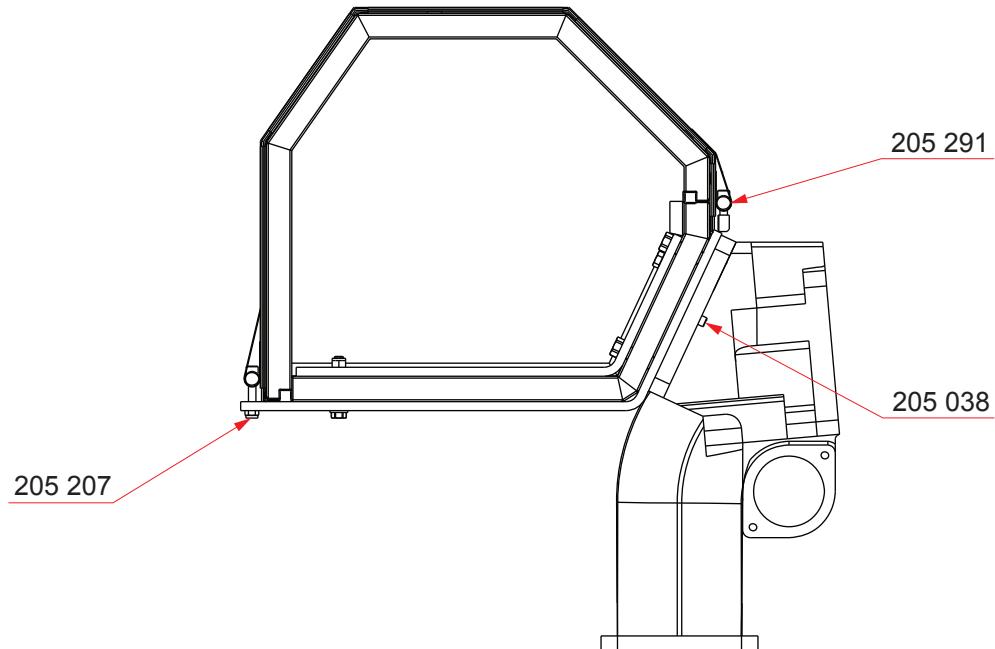
Insulating box



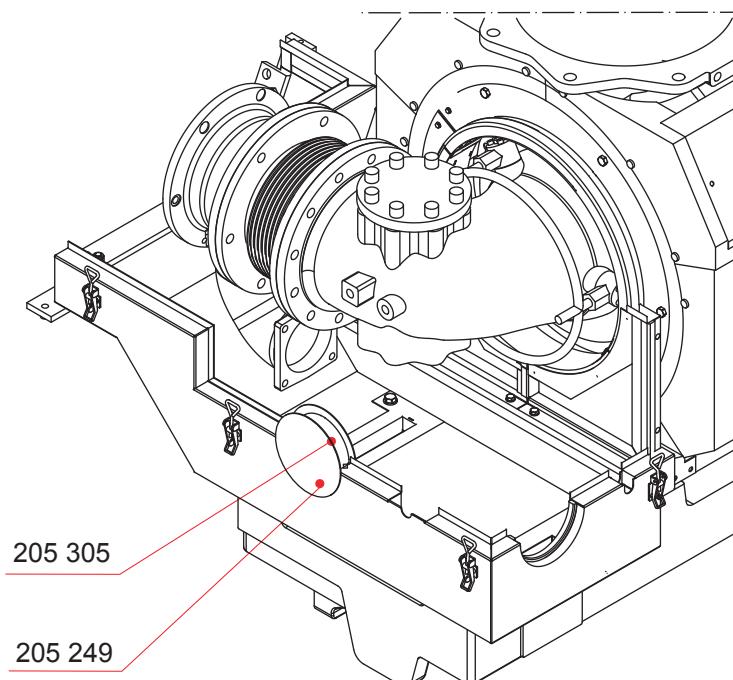
Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 001	Upper protecting panel	3	-
205 002	Lower protecting panel	4	-
205 010	Bracket	5	-
205 011	Bracket	4	-
205 012	Bracket	1	-
205 015	Screw	4	-
205 016	Screw	16	-
205 019	Bracket	8	-
205 022	Cover profile	4	-
205 026	Upper protecting panel	1	-
205 037	Screw	4	-
205 060	Screw	12	-
205 061	Nut	12	-
205 062	Washer	12	-
205 208	Pin	8	-

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Updated: 31.08.2011

Insulating box



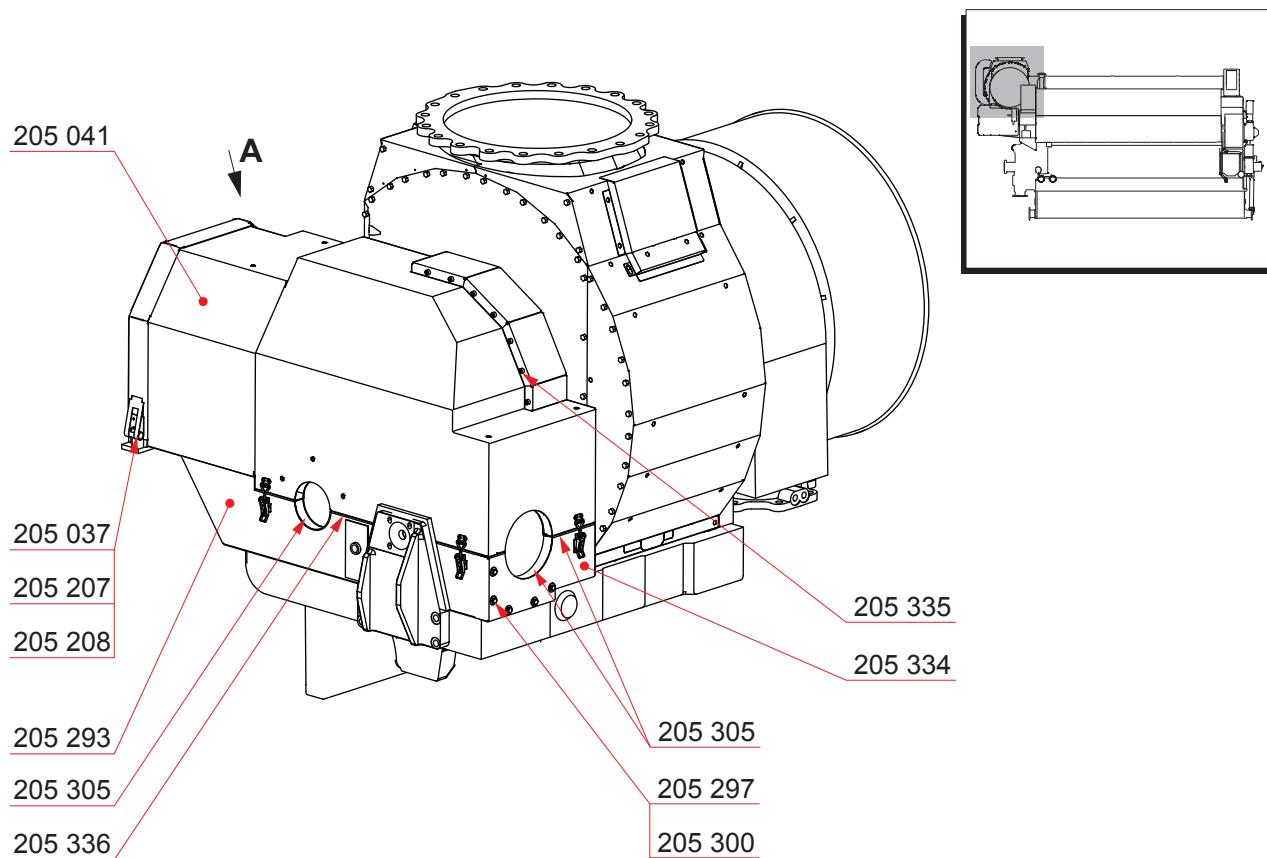
Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 038	Screw	8	-
205 207	Nut	4	-
205 291	Screw	4	-

Insulation addition to connection part

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 249	Insulating sheet	1	-
205 305	Ceramic fibre tape	1	-

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Insulation box, connection part



Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 037	Screw	1	-
205 041	Upper protecting panel	1	-
205 207	Nut	2	-
205 208	Pin	2	-
205 293	Lower protecting panel	1	-
205 297	Screw	5	-
205 300	Washer	5	-
205 305	Ceramic fibre tape (1)	1	-
205 334	Lower protecting panel	1	-
205 335	Screw	7	-
205 336	Ceramic fibre rope (2)	1	-

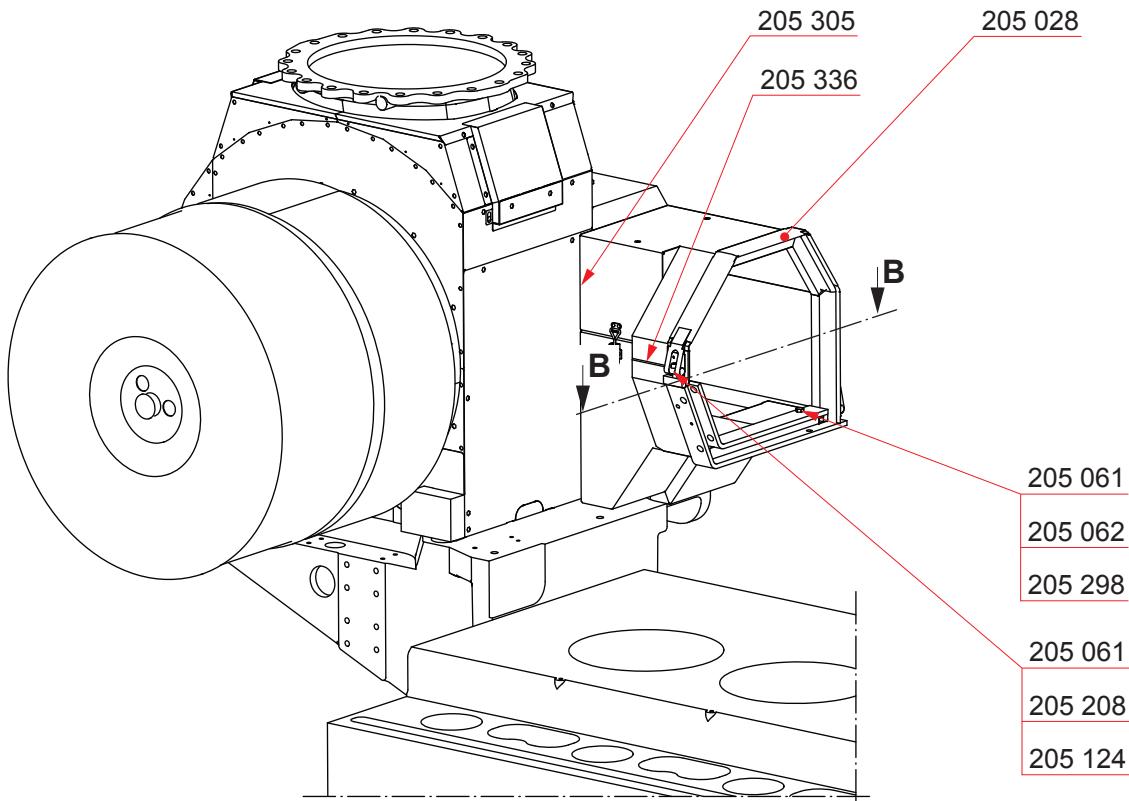
NOTE! (1) L= 3000mm

NOTE! (2) L= 2000mm

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Insulation box, connection part

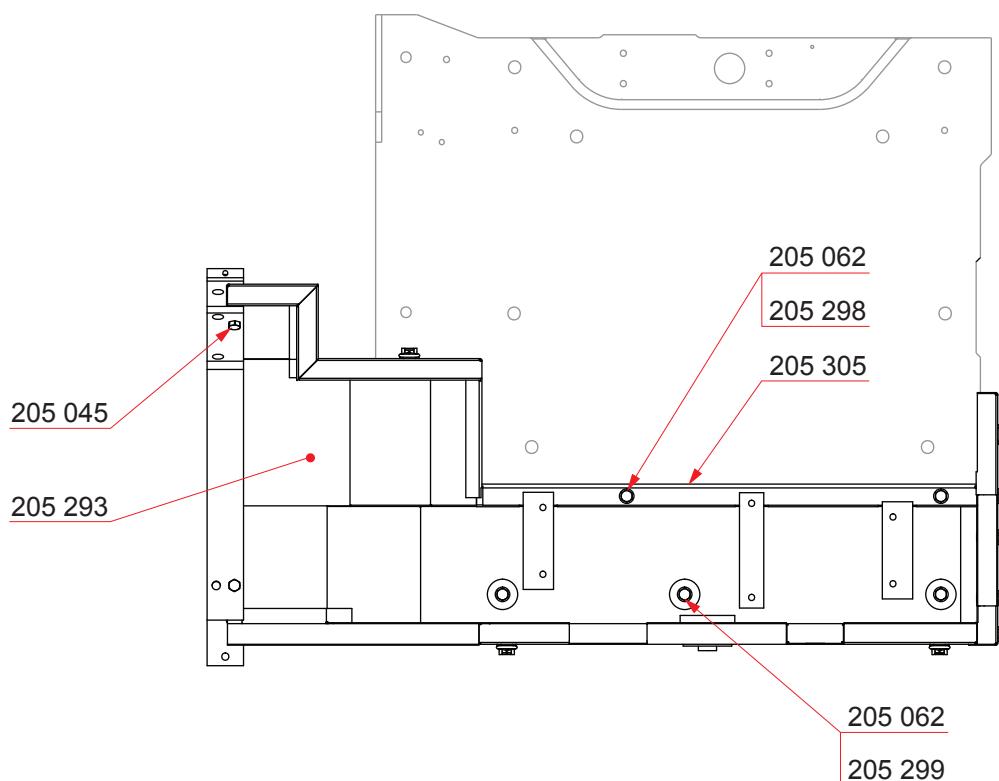
View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 028	Cover profile	1	-
205 061	Nut	1	-
205 062	Washer	6	-
205 124	Screw	1	-
205 208	Pin	2	-
205 298	Screw	3	-
205 305	Ceramic fibre tape (1)	1	-
205 336	Ceramic fibre rope (2)	1	-

NOTE! (1) L= 3000mm

NOTE! (2) L= 2000mm

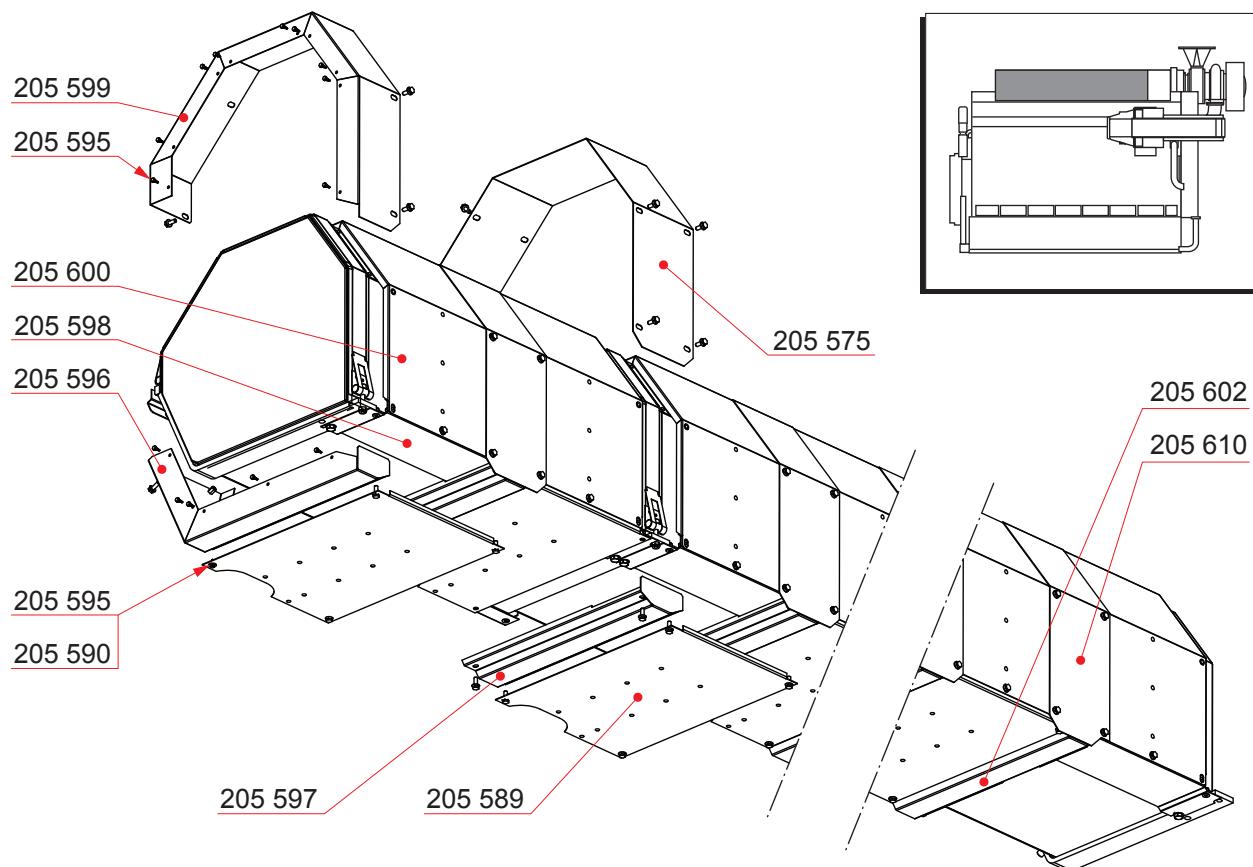
Insulation box, connection part**Section B-B**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 045	Screw	1	-
205 062	Washer	6	-
205 293	Lower protecting panel	1	-
205 298	Screw	3	-
205 299	Screw	3	-
205 305	Ceramic fibre tape (1)	1	-

NOTE! (1) L=3000mm

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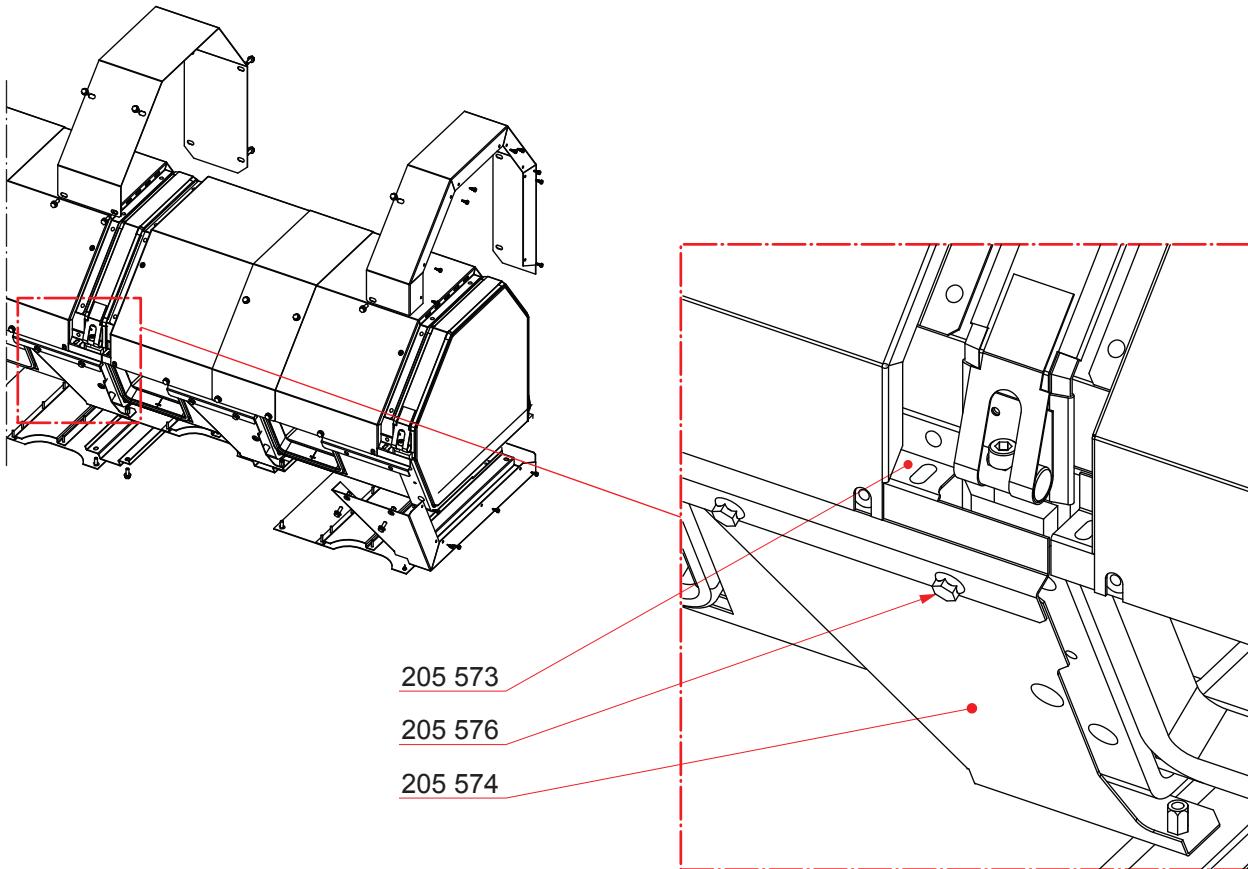
Insulation box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 575	Cover plate	6	-
205 589	Lower protecting panel	7	-
205 590	Washer	1	-
205 595	Screw	15	-
205 596	Bracket	1	-
205 597	Bracket	6	-
205 598	Cover plate	4	-
205 599	Cover plate	1	-
205 600	Cover plate	8	-
205 602	Cover plate	1	-
205 610	Cover plate	1	-

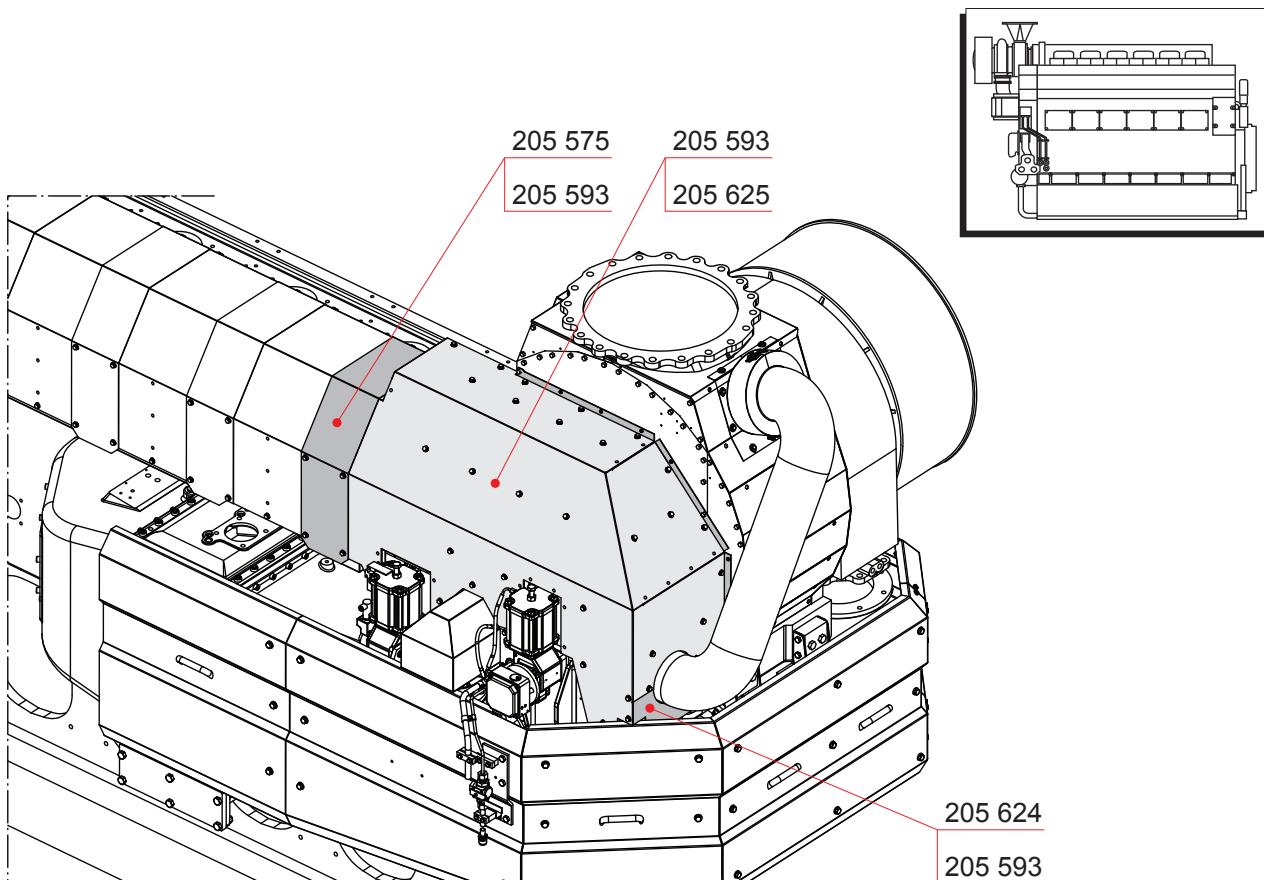
Edition: A
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Updated: 01.02.2012

Insulation box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 573	Fixing plate	8	-
205 574	Cover plate	7	-
205 576	Screw	122	-

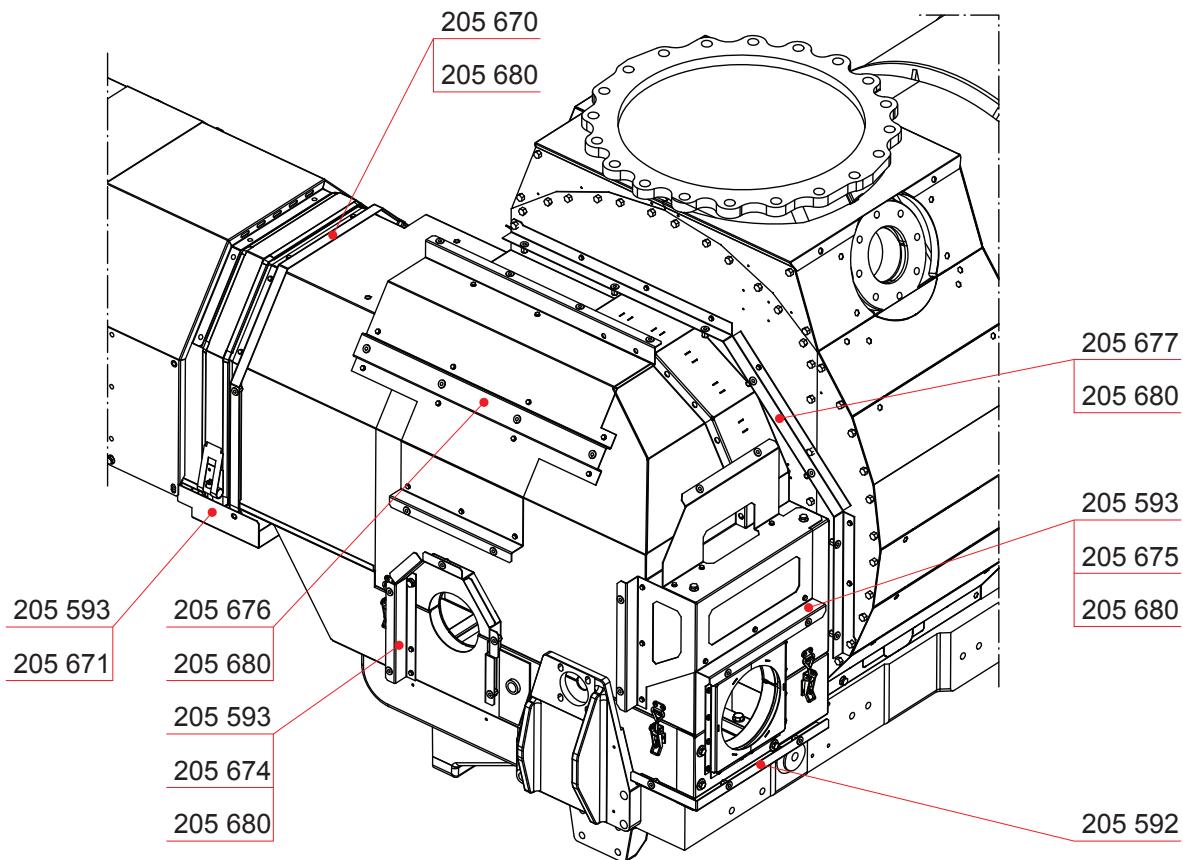
Insulation box, connection part



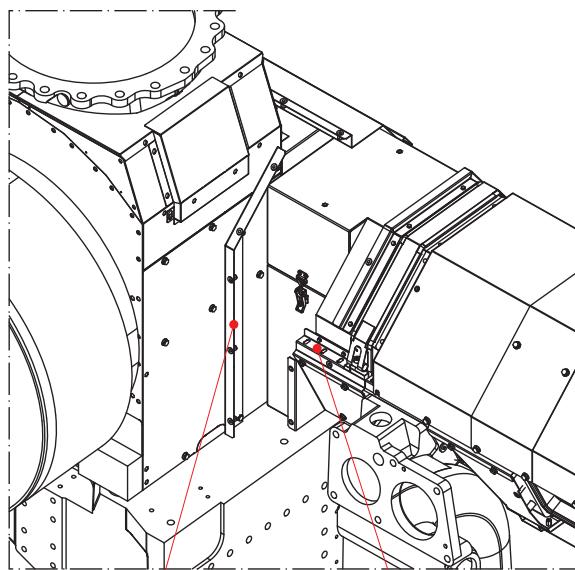
Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 575	Cover plate	1	-
205 593	Screw	63	-
205 624	Cover	1	-
205 625	Cover	1	-

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Insulation box, connection part



Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 592	Bracket	1	-
205 593	Screw	63	-
205 670	Bracket	1	-
205 671	Cover plate	1	-
205 674	Bracket	1	-
205 675	Bracket	1	-
205 676	Bracket	1	-
205 677	Bracket	1	-
205 680	Screw	44	-

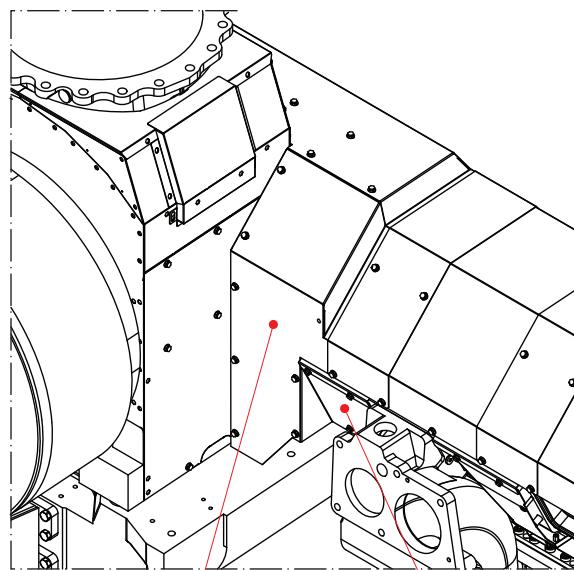
Insulation box, connection part

205 678

205 680

205 672

205 680



205 593

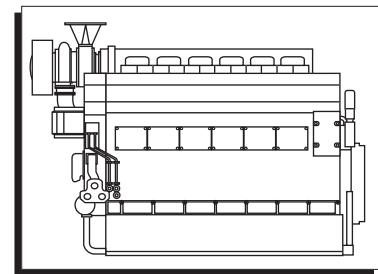
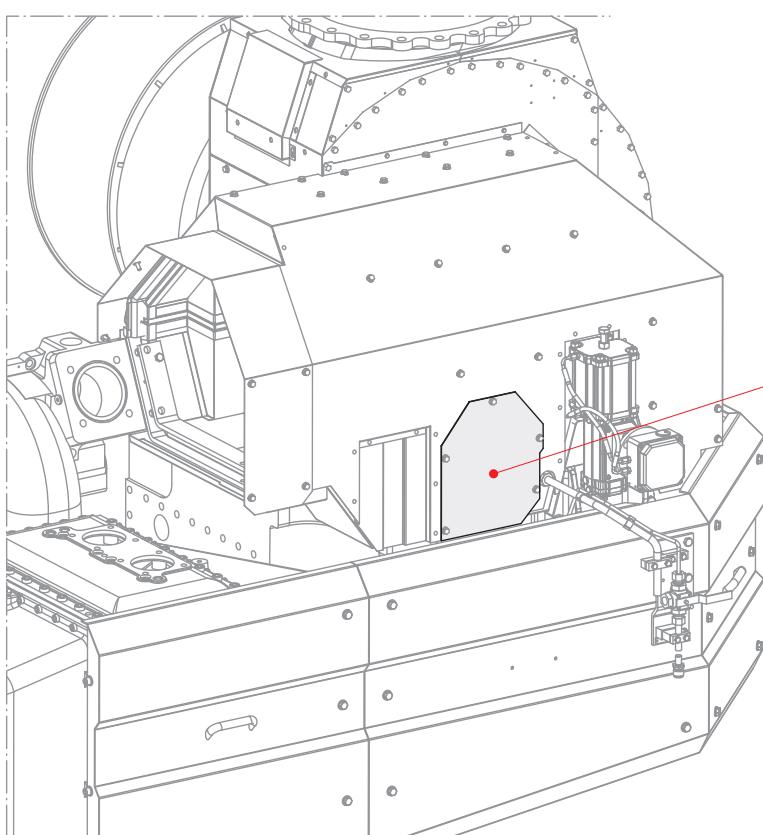
205 679

205 593

205 673

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 593	Screw	63	-
205 672	Fixing plate	1	-
205 673	Cover plate	1	-
205 678	Bracket	1	-
205 679	Cover	1	-
205 680	Screw	44	-

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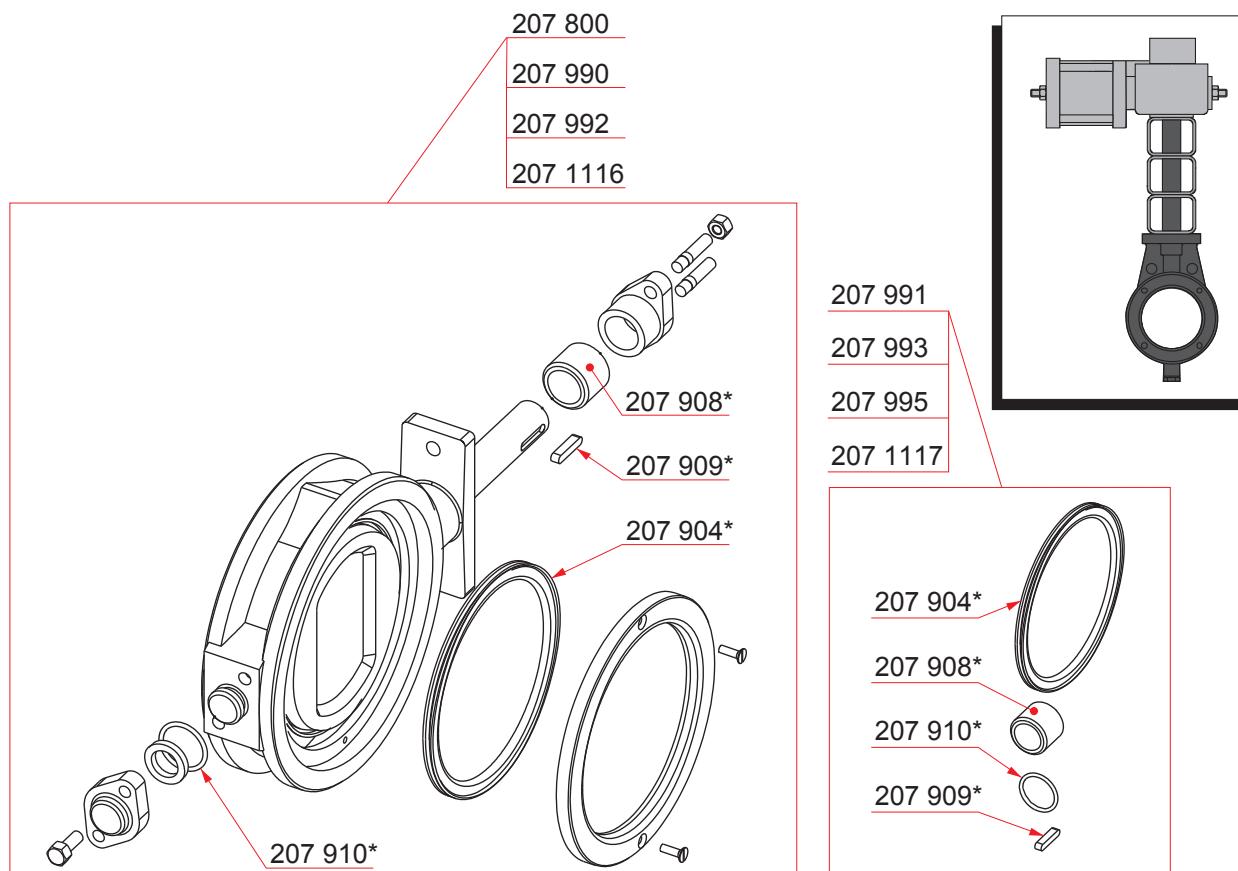
Insulation additional for insulation box.

205 577

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 577	Cover plate	1	-

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Butterfly valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
207 800	Butterfly valve (1)	1	-
207 990	Butterfly valve (1)	1	-
207 992	Butterfly valve (1)	1	-
207 1116	Butterfly valve (1)	1	-
207 904	Seat *)	1	-
207 908	Stuffing box *)	1	-
207 909	Key *)	1	-
207 910	Gasket *)	1	-
207 991	Sealing set (1)	1	-
207 993	Sealing set (1)	1	-
207 995	Sealing set (1)	1	-
207 1117	Sealing set (1)	1	-
207 904	Seat *)	1	-
207 908	Stuffing box *)	1	-
207 909	Key *)	1	-
207 910	Gasket *)	1	-

NOTE! (1) See page 2.

NOTE! *) Components are not available as single parts. When ordering spare parts give butterfly valve type number.

Edition: F

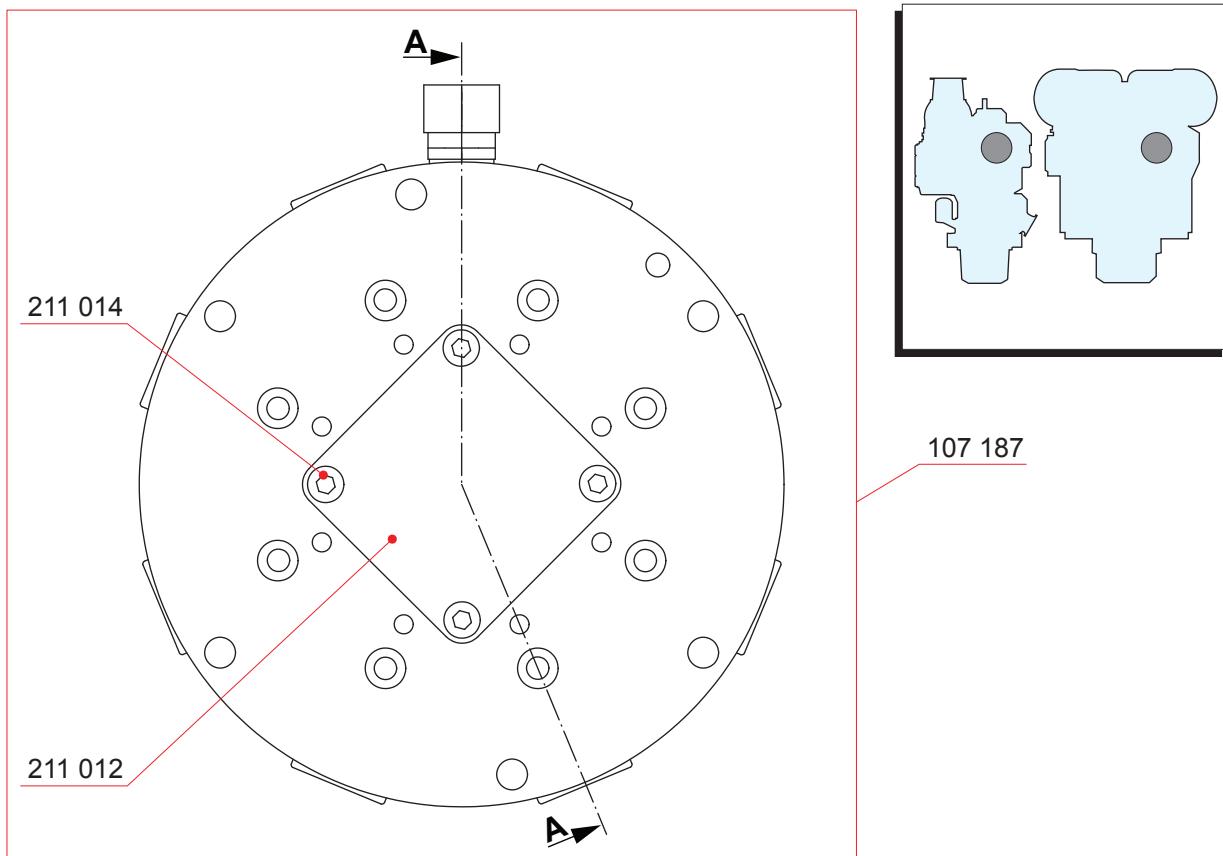
Page: 2(2)

Updated: 05.12.2012

Butterfly valve

Type	Code	Code for sealing set
DN 80	207 1116	207 1117
DN 100	207 990	207 991
DN 125	207 992	207 993
DN 150	207 800	207 995

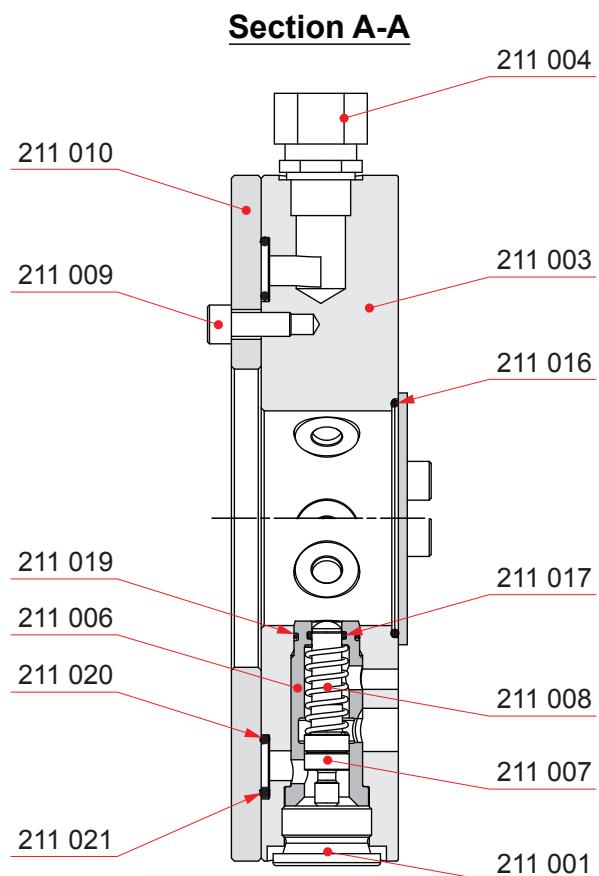
Starting air distributor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 187	Distributor	1	-
211 012	Cover	1	0.2
211 014	Screw	4	-

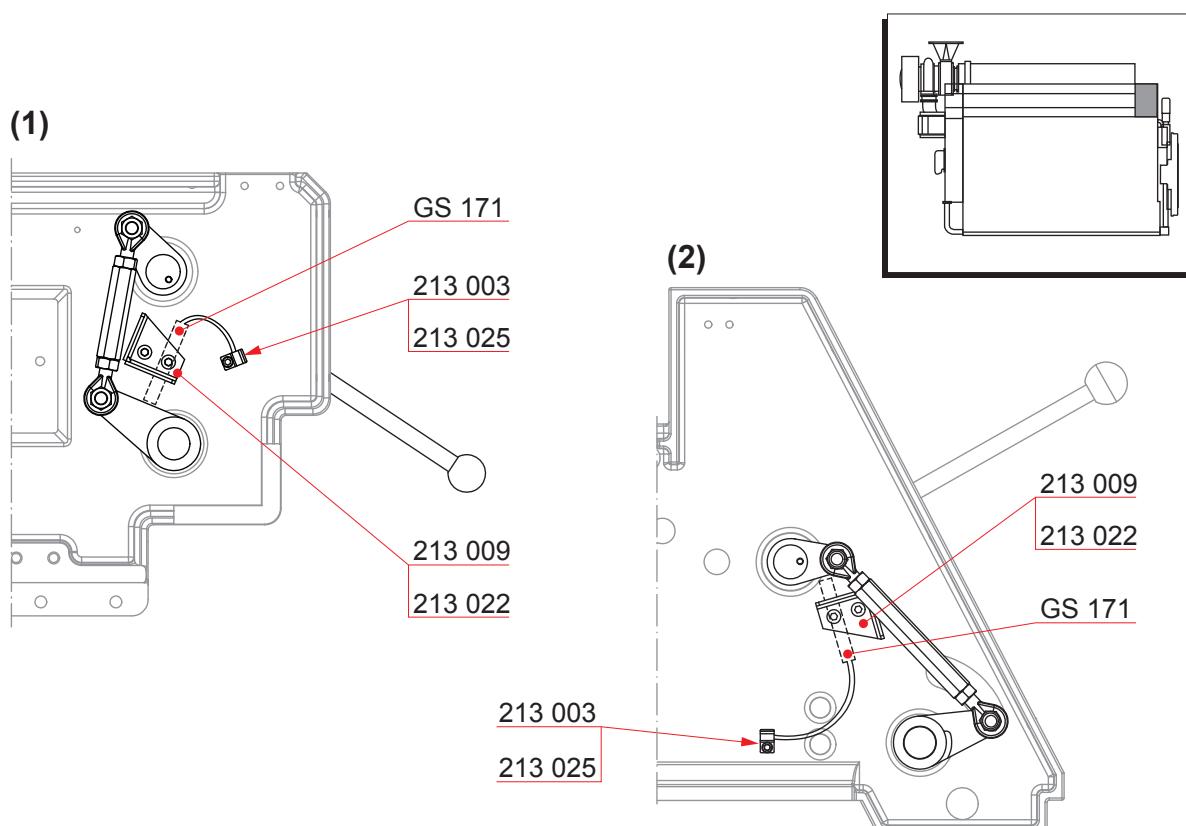
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 Updated: 14.02.2012

Starting air distributor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
211 001	Plug	8	-
211 003	Housing	1	10.3
211 004	Pipe union	1	-
211 006	Bush	8	0.1
211 007	Slide	8	-
211 008	Spring	8	-
211 009	Screw	2	-
211 010	Plate	1	2.5
211 016	O-ring	1	-
211 017	O-ring	8	0.2
211 019	O-ring	8	-
211 020	O-ring	1	0.1
211 021	O-ring	1	-

Limit switch for stop lever



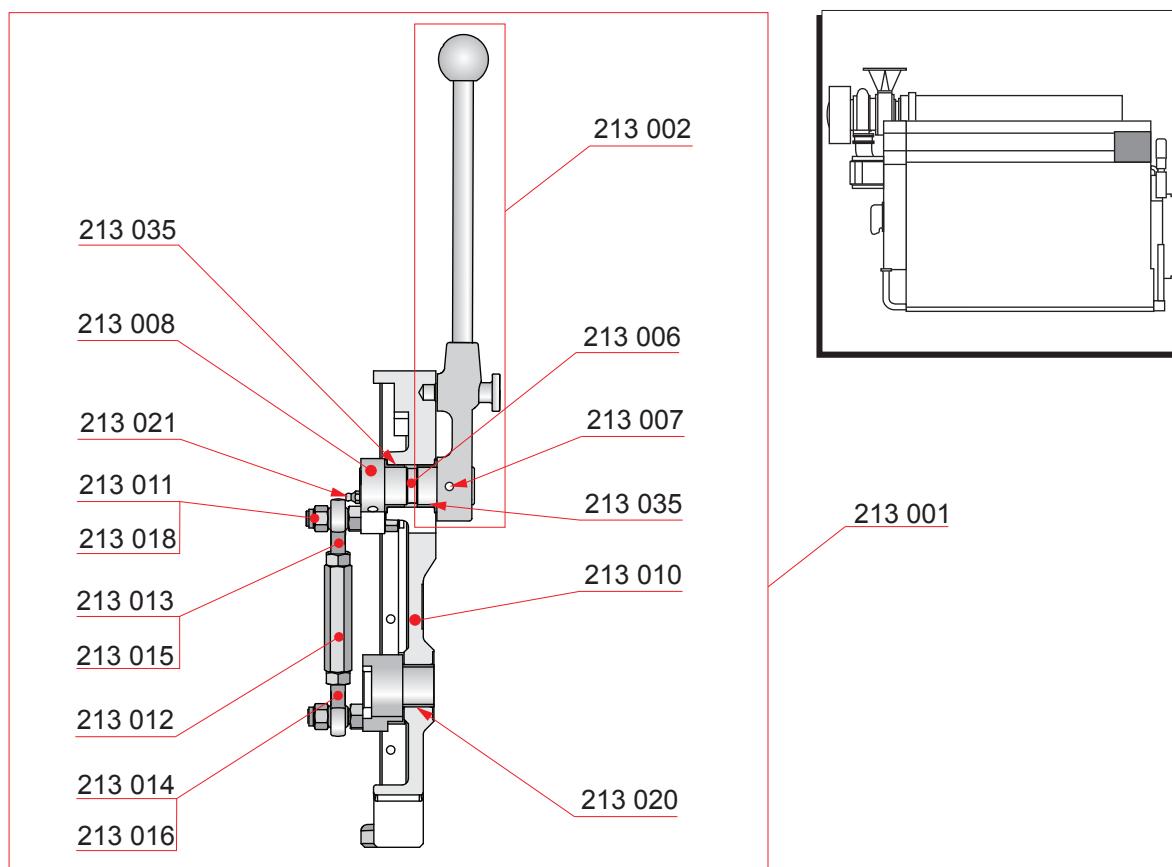
Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 003	Screw	1	-
213 009	Screw	2	-
213 022	Bracket	1	-
213 025	Clamp	1	-
GS171	Limit switch	1	-

NOTE! (1) L-engine

NOTE! (2) V-engine

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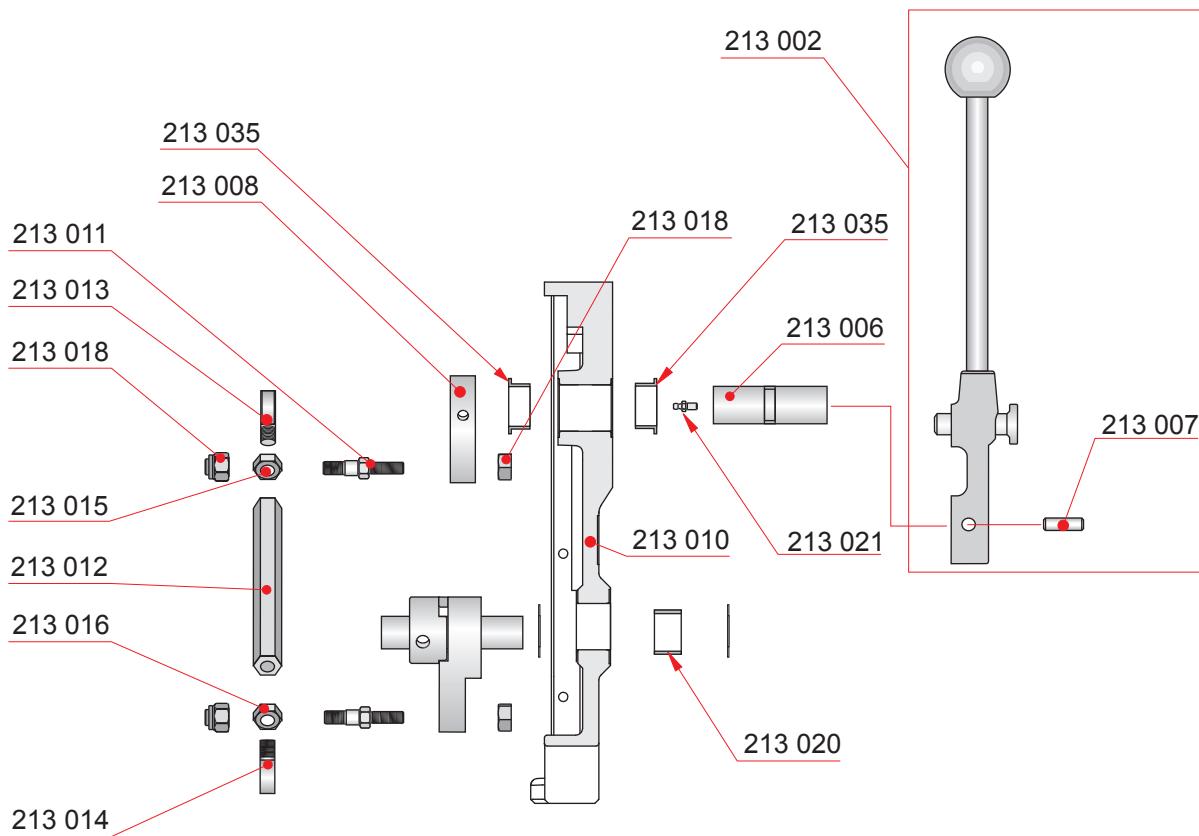
Shut-down mechanism



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 001	Shut-down mechanism	1	-
213 002	Stop lever	1	1.2
213 006	Shaft	1	0.5
213 007	Pin	2	-
213 008	Lever	1	0.3
213 010	End cover	1	33.0
213 011	Shaft	1	-
213 012	Connecting lever	1	-
213 013	Ball joint	1	-
213 014	Ball joint	1	-
213 015	Nut	1	-
213 016	Nut	1	-
213 018	Nut	1	-
213 020	Bearing bush	1	-
213 021	Lubricating nipple	1	-
213 035	Bearing bush	2	-

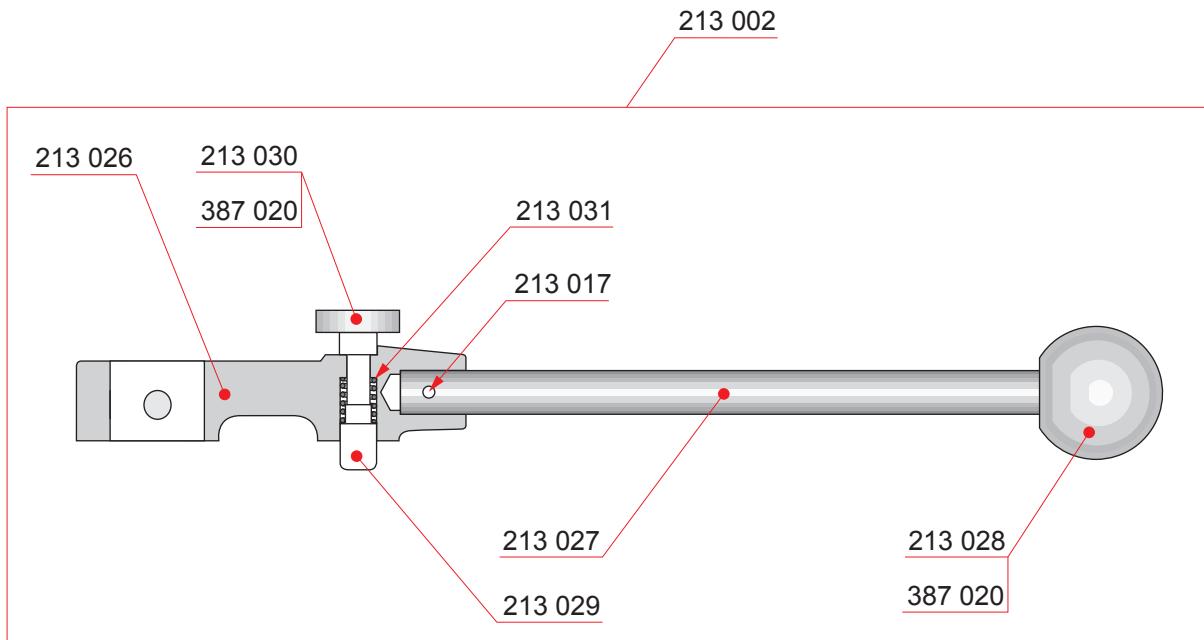
Edition: A
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 Updated: 14.02.2014

Shut-down mechanism



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 002	Stop lever	1	1.2
213 006	Shaft	1	0.5
213 007	Pin	2	-
213 008	Lever	1	0.3
213 010	End cover	1	33.0
213 011	Shaft	1	-
213 012	Connecting lever	1	-
213 013	Ball joint	1	-
213 014	Ball joint	1	-
213 015	Nut	1	-
213 016	Nut	1	-
213 018	Nut	1	-
213 020	Bearing bush	1	-
213 021	Lubricating nipple	1	-
213 035	Bearing bush	2	-

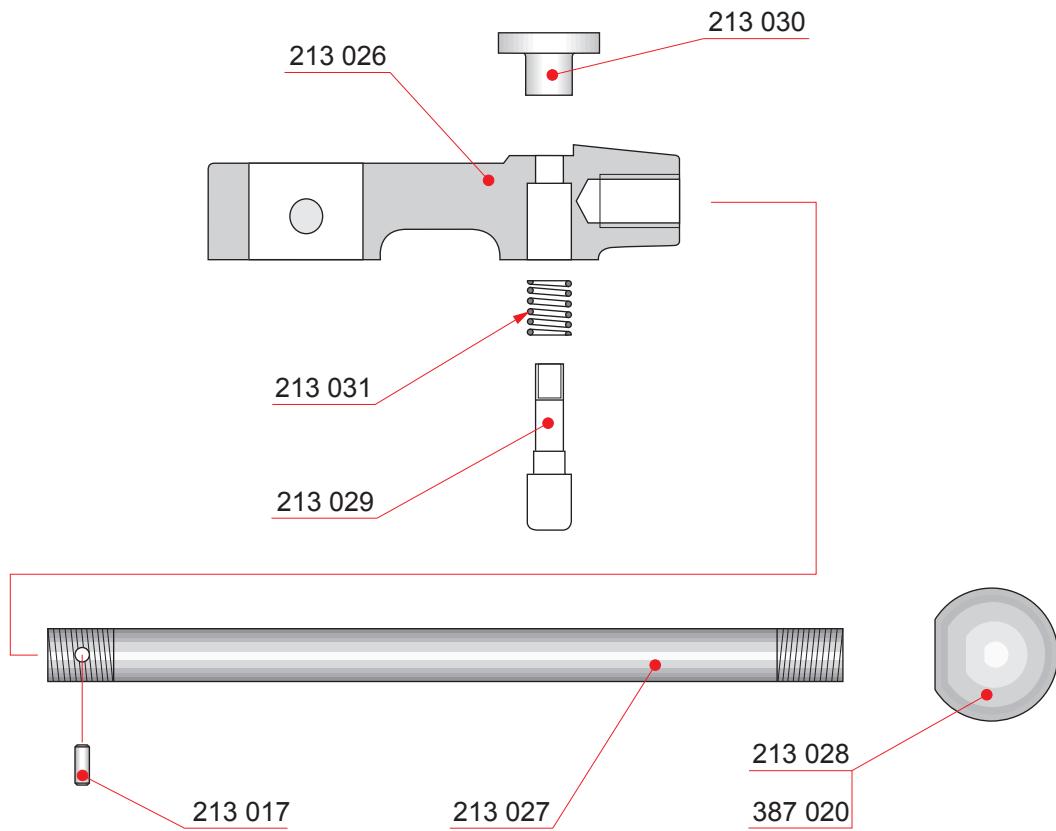
Shut-down mechanism



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 002	Stop lever	1	1.2
213 017	Pin	1	-
213 026	Stop lever	1	0.7
213 027	Shaft	1	0.4
213 028	Knob	1	-
213 029	Lever	1	-
213 030	Nut	1	-
213 031	Spring	1	-
387 020	Glue compound	1	-

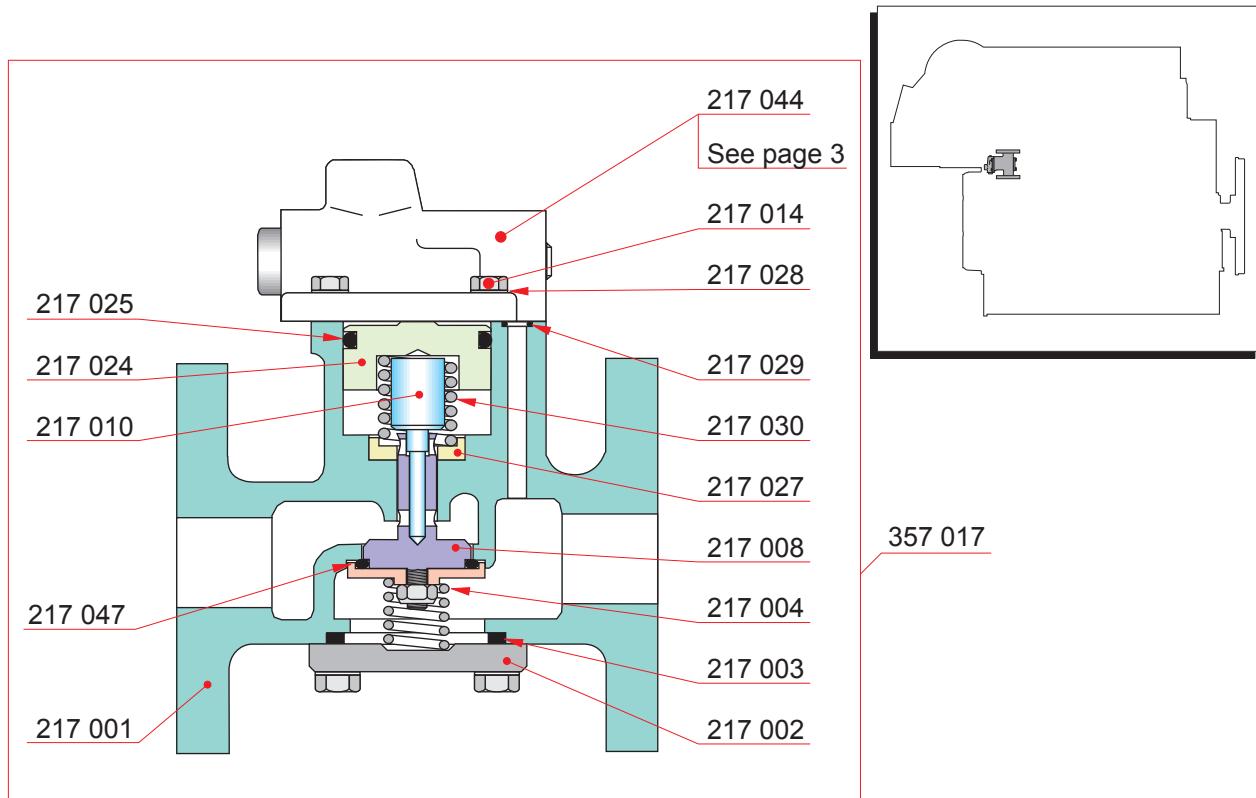
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Updated: 14.02.2014

Shut-down mechanism



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 017	Pin	1	-
213 026	Stop lever	1	0.7
213 027	Shaft	1	0.4
213 028	Knob	1	-
213 029	Lever	1	-
213 030	Nut	1	-
213 031	Spring	1	-
387 020	Glue compound	1	-

Main starting valve

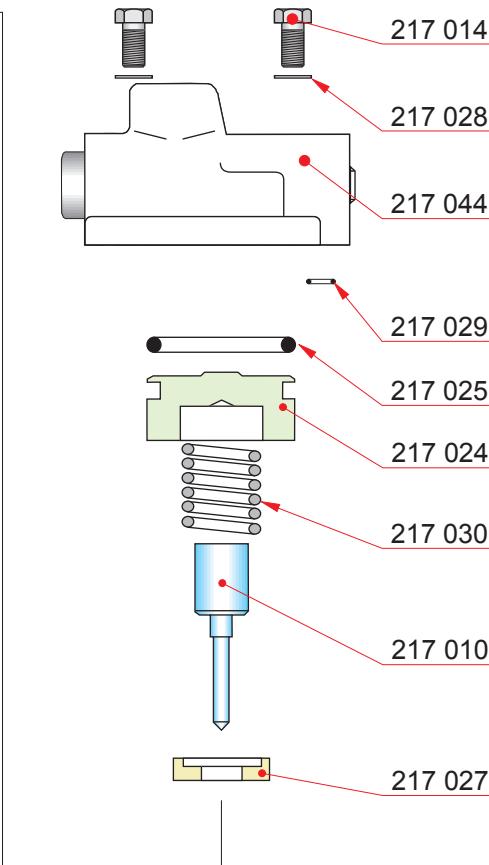
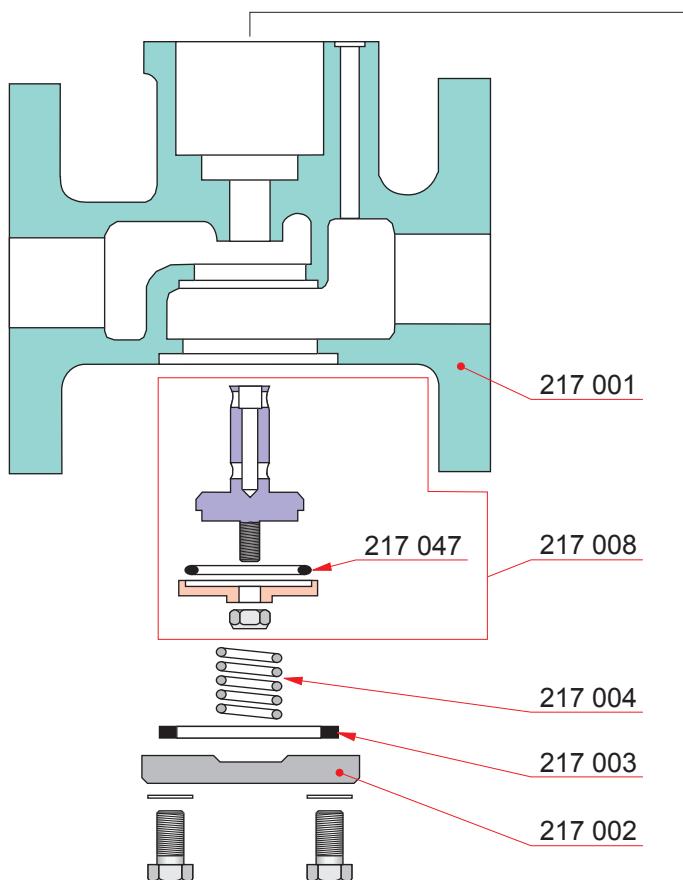


Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 017	Main starting valve	1	7.1
217 001	Body	1	5.6
217 002	Cover	1	0.3
217 003	Gasket	1	-
217 004	Valve spring	1	-
217 008	Spool assembly	1	-
217 047	O-ring	1	-
217 010	Push rod	1	-
217 014	Screw	4	-
217 024	Piston	1	0.2
217 025	O-ring	1	-
217 027	Valve seat	1	-
217 028	Spring washer	8	-
217 029	O-ring	2	-
217 030	Spring	1	-
217 044	Bonnet assembly	1	0.9

Edition: A

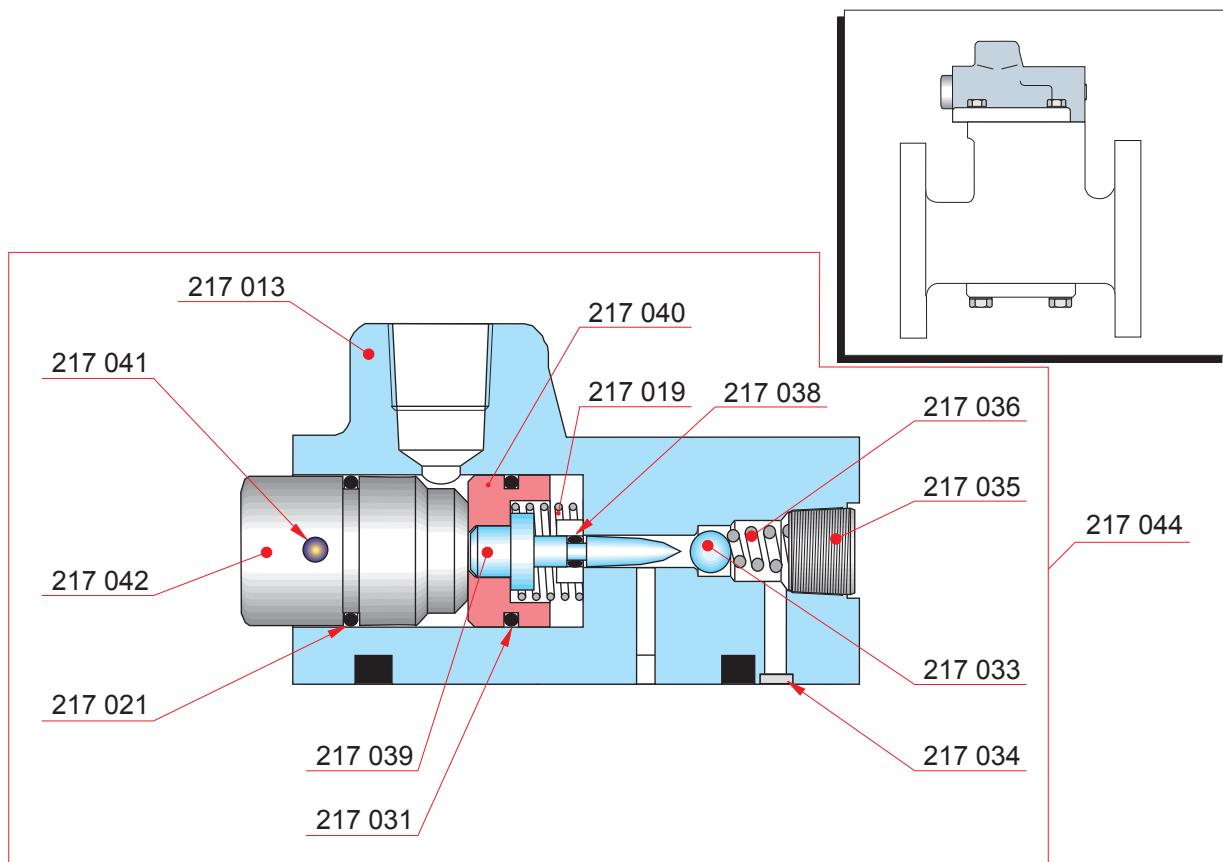
Page: 2(6)

Updated: 21.09.1998

Main starting valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 001	Body	1	5.6
217 002	Cover	1	0.3
217 003	Gasket	1	-
217 004	Valve spring	1	-
217 008	Spool assembly	1	-
217 010	Push rod	1	-
217 014	Screw	4	-
217 024	Piston	1	0.2
217 025	O-ring	1	-
217 027	Valve seat	1	-
217 028	Spring washer	8	-
217 029	O-ring	2	-
217 030	Spring	1	-
217 044	Bonnet assembly	1	0.9
217 047	O-ring	1	-

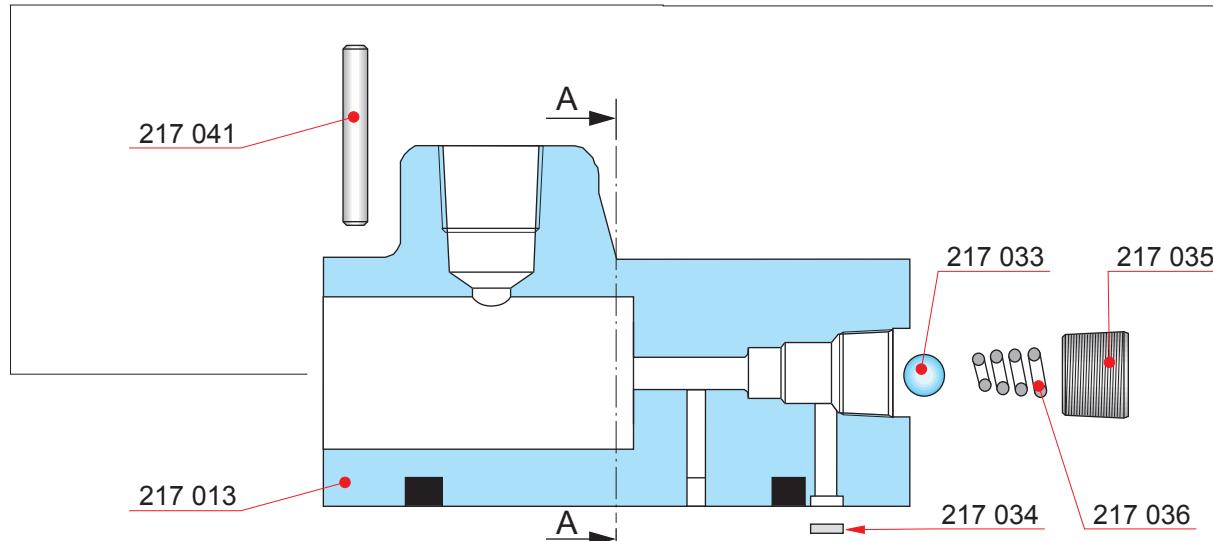
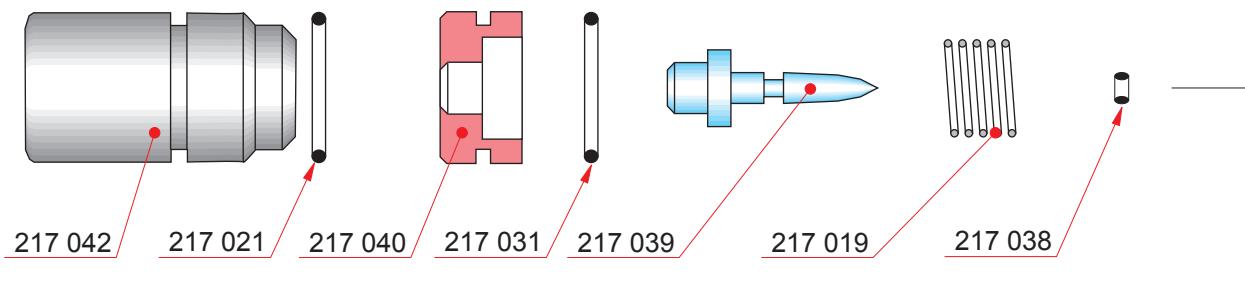
Main starting valve



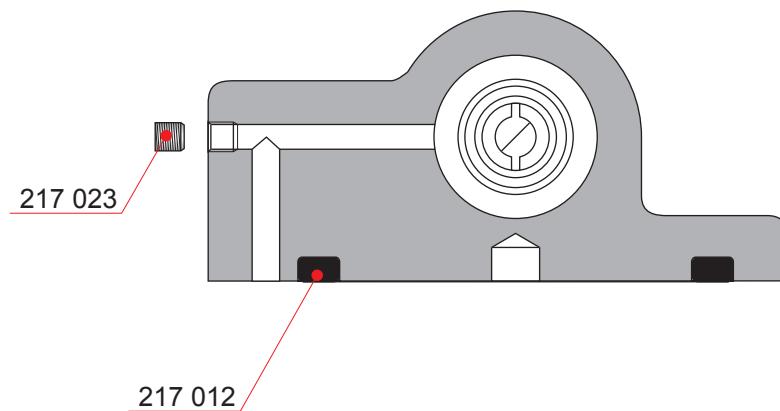
Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 044	Bonnet assembly	1	0.9
217 013	Bonnet	1	0.4
217 019	Spring	1	-
217 021	O-ring	1	-
217 031	O-ring	1	-
217 033	Ball	1	-
217 034	Filter	1	-
217 035	Plug	1	-
217 036	Spring	1	-
217 038	O-ring	1	-
217 039	Push rod	1	-
217 040	Piston	1	-
217 041	Pin	1	-
217 042	Push button	1	-

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Main starting valve



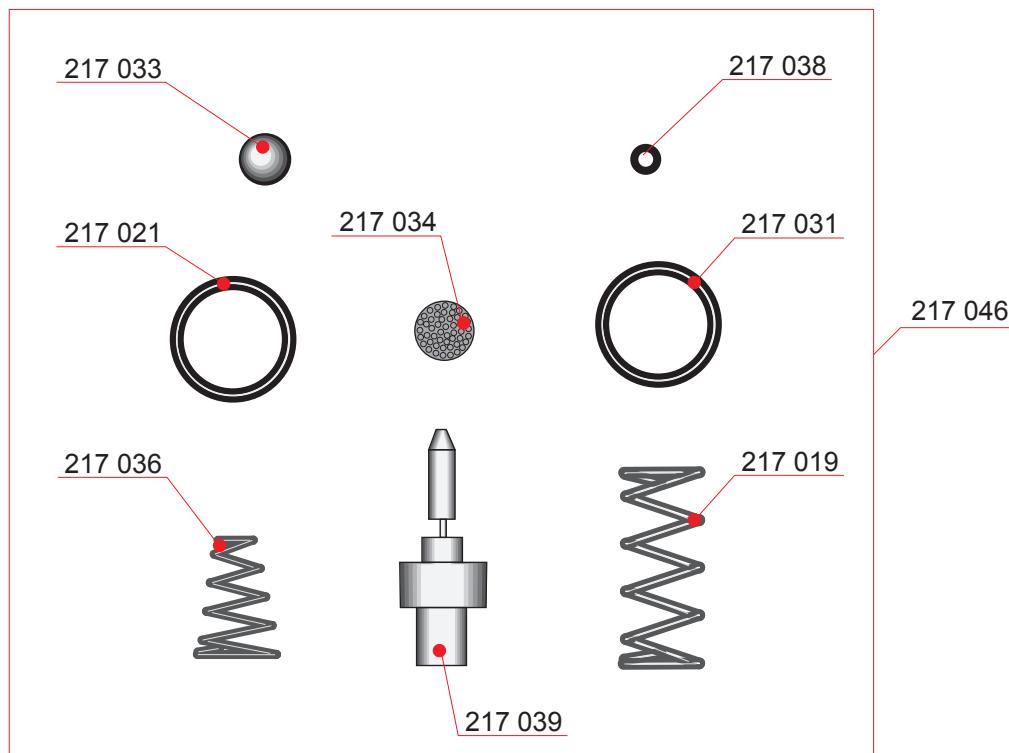
Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 013	Bonnet	1	0.4
217 019	Spring	1	-
217 021	O-ring	1	-
217 031	O-ring	1	-
217 033	Ball	1	-
217 034	Filter	1	-
217 035	Plug	1	-
217 036	Spring	1	-
217 038	O-ring	1	-
217 039	Push rod	1	-
217 040	Piston	1	-
217 041	Pin	1	-
217 042	Push button	1	-

Main starting valveSECTION A-A

Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 012	Seal	1	-
217 023	Set screw	1	-

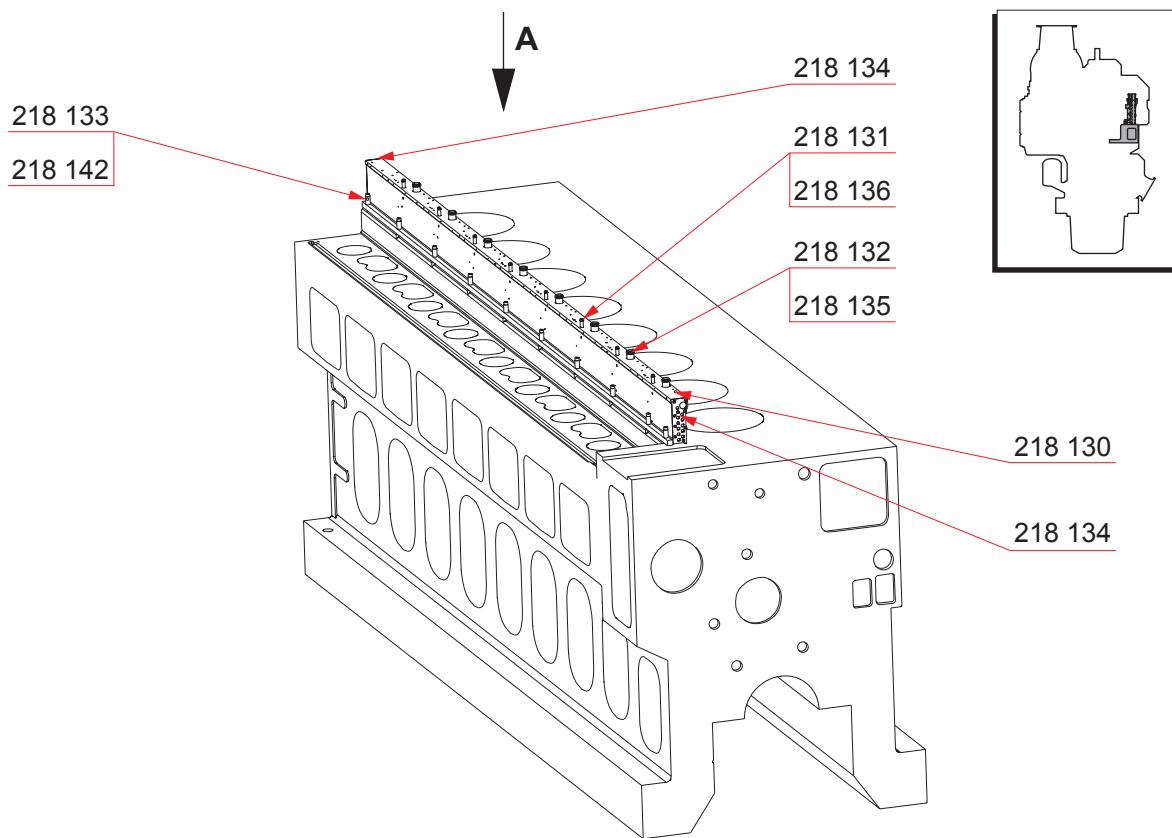
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Main starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 046	Spare parts and sealing set	1	-
217 019	Spring	1	-
217 021	O-ring	1	-
217 031	O-ring	1	-
217 033	Ball	1	-
217 034	Filter	1	-
217 036	Spring	1	-
217 038	O-ring	1	-
217 039	Push rod	1	-

Air block



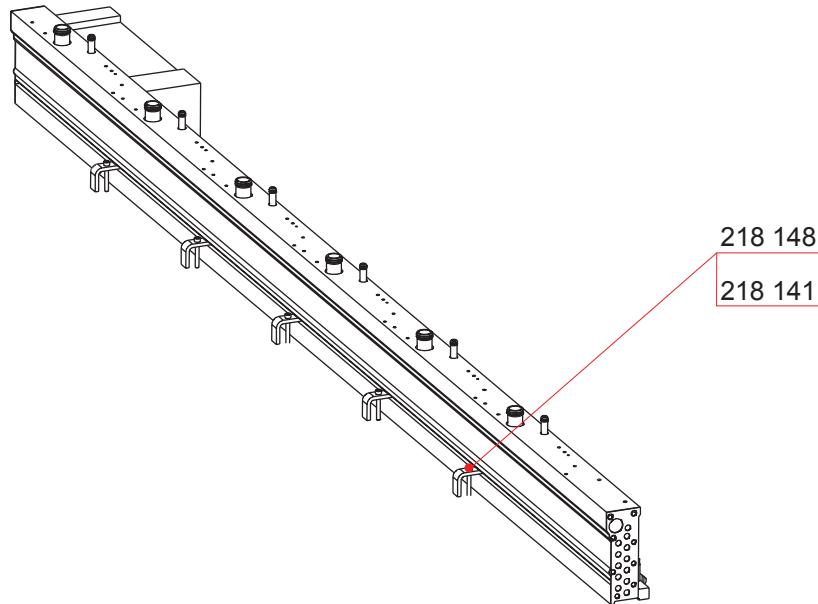
Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 130	Air block	1	137
218 131	Connection piece	*	-
218 132	Connection piece	*	0.1
218 133	Screw	*	-
218 134	Gasket	2	-
218 135	O-ring	*	-
218 136	O-ring	*	-
218 142	Distance sleeve	*	-

NOTE! * See page 3.

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Updated: 31.01.2003

Air block

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 141	Screw	*	-
218 148	Bracket	*	0.2

NOTE! * See page 3.

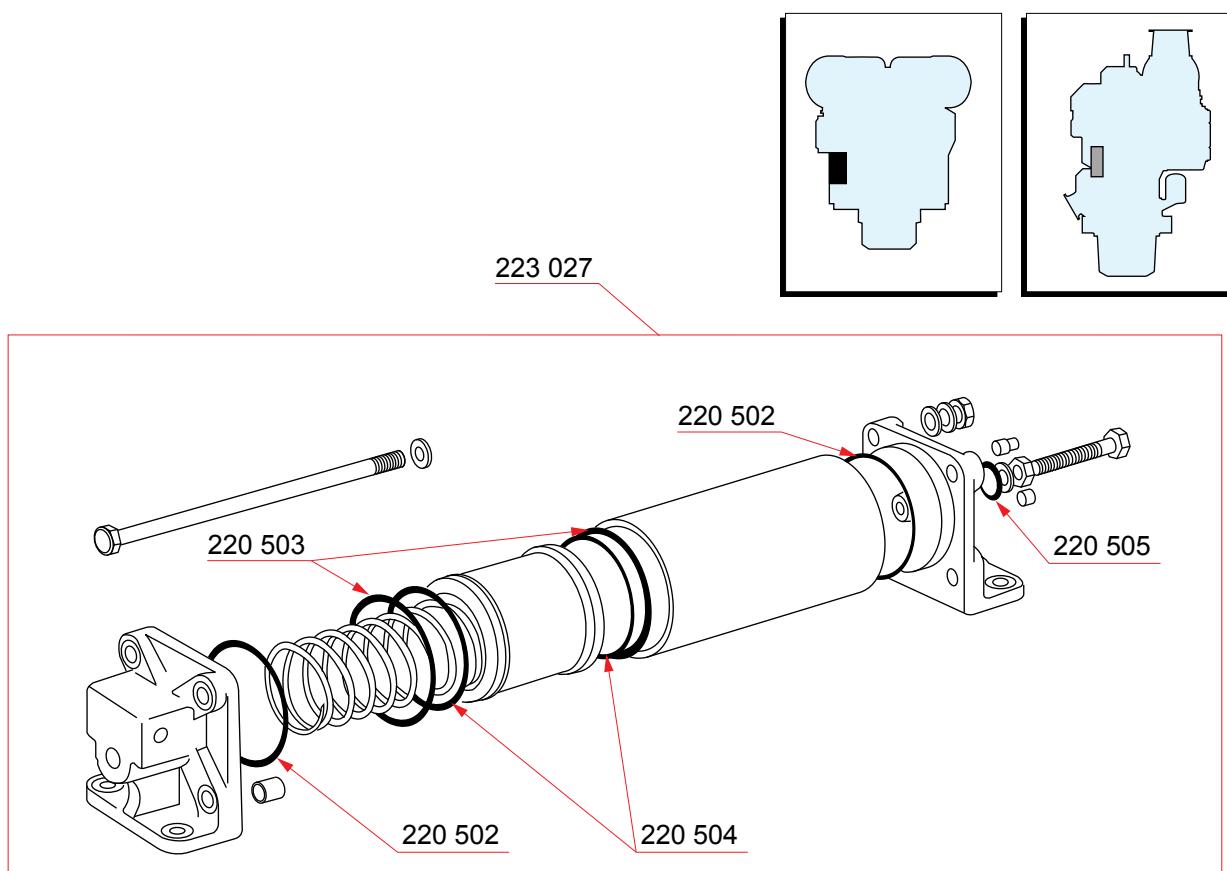
Air block

Quantity according to number of cylinders

Part No	Pieces		
	6L32	8L32	9L32
218 131	6	8	9
218 132	6	8	9
218 133	8	10	11
218 135	12	16	18
218 136	12	16	18
218 141	5	7	8
218 142	5	7	8
218 148	5	7	8

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Booster servomotor



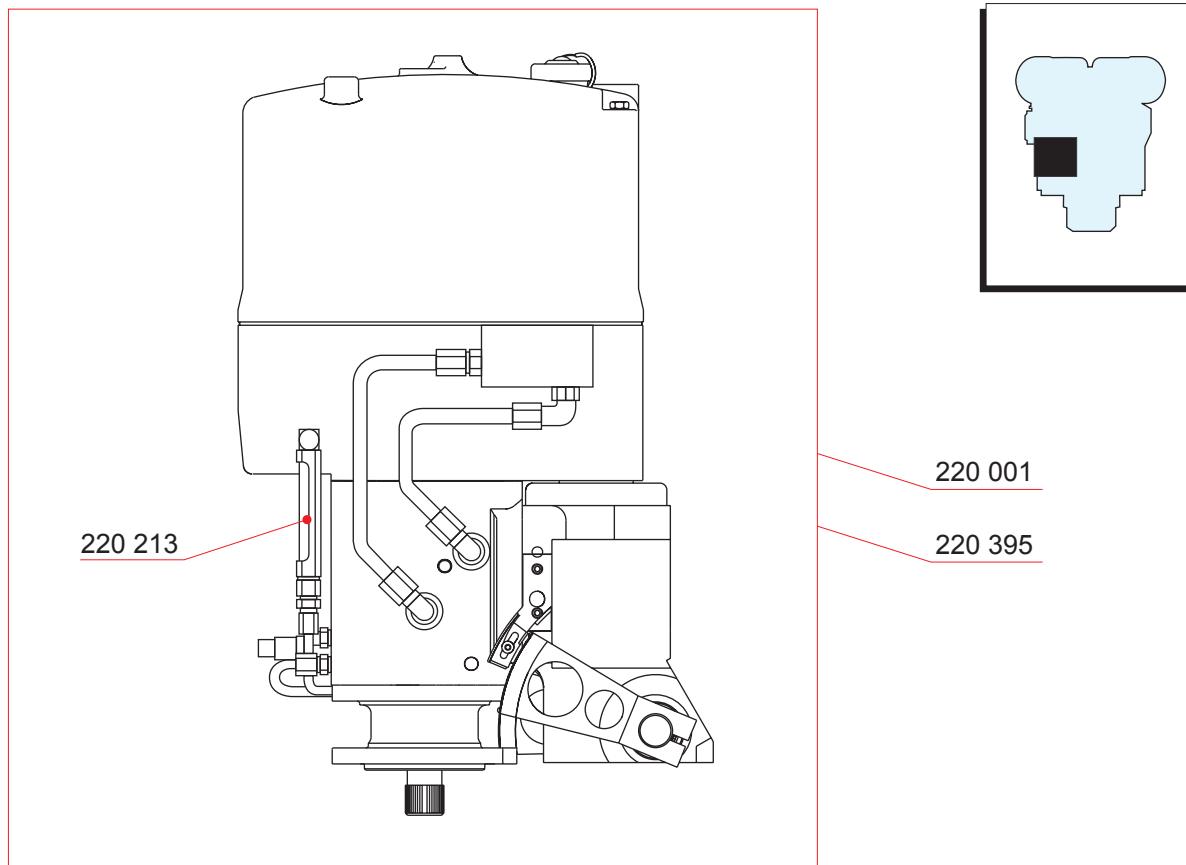
Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 027	Booster motor	1	-
220 396	Spare part kit	1	-
220 502	O-ring (1)	2	-
220 503	Slide ring (1)	2	-
220 504	O-ring (1)	2	-
220 505	Washer (1)	1	-

NOTE! Parts included in a set or a kit cannot be ordered separately.

NOTE! Spare part kit 220 396 includes items marked (1).

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Governor



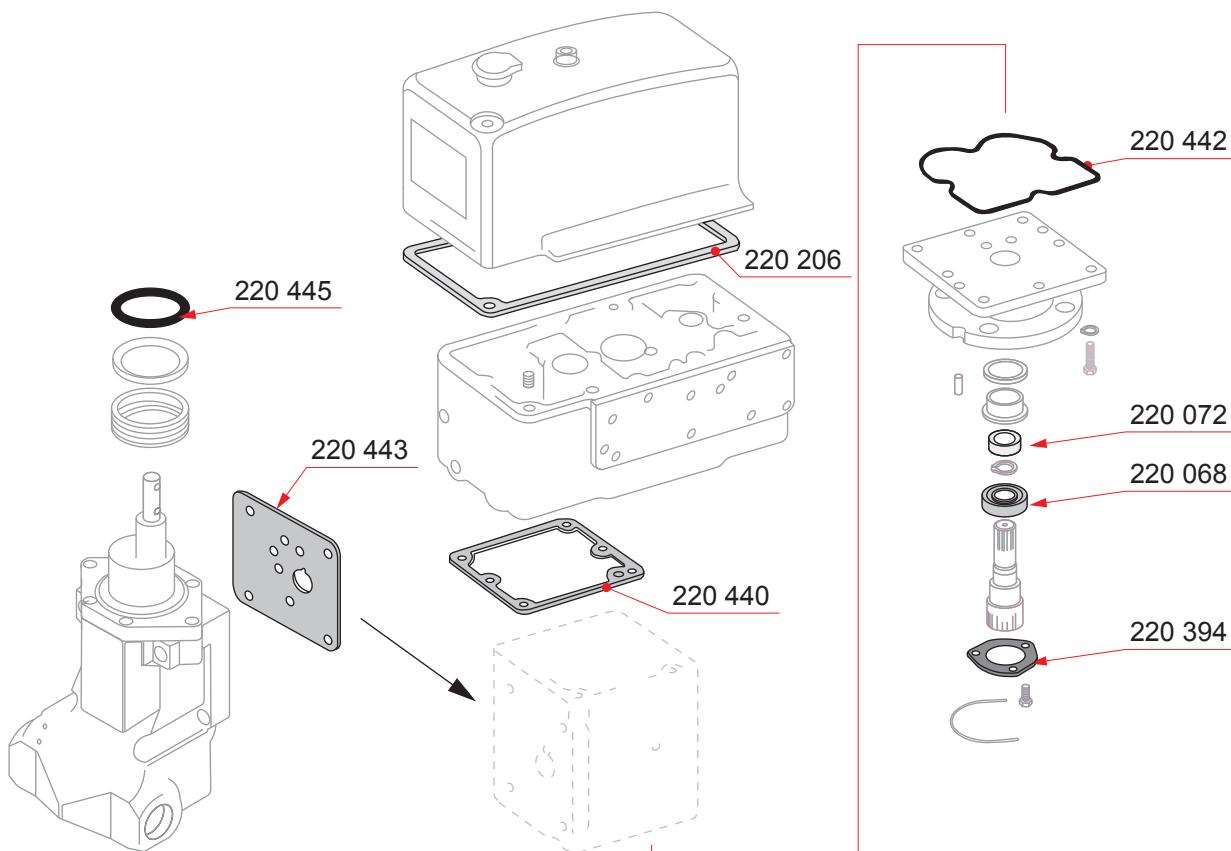
Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 001	Governor	1	-
220 213	Oil sight glass	1	-
220 395	Spare part kit (1)	1	0.2

NOTE! (1) Basic overhaul kit.

NOTE! Parts included in a set or a kit cannot be ordered separately.

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Governor

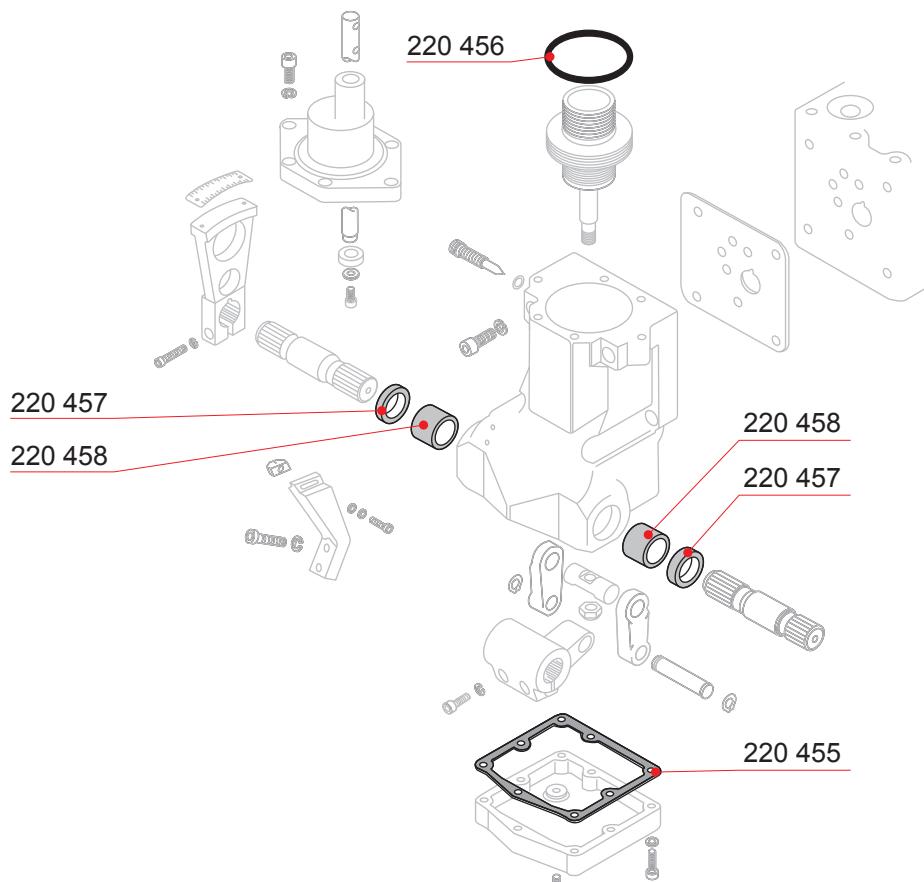


Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 395	Spare part kit	1	0.2
220 068	Ball bearing (1)	1	-
220 072	Oil seal (1)	1	-
220 206	Gasket (1)	1	-
220 394	Locking plate (1)	1	-
220 440	Gasket (1)	1	-
220 442	Oil seal (1)	1	-
220 443	Gasket (1)	1	-
220 445	O-ring (1)	1	-

NOTE! (1) Basic overhaul kit.

NOTE! Parts included in a set or a kit cannot be ordered separately.

NOTE! Spare part kit 220 395 includes items marked (1).

Governor

Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 455	Gasket (1)	1	-
220 456	O-ring (1)	1	-
220 457	Oil seal (1)	2	-
220 458	Bushing (1)	2	-

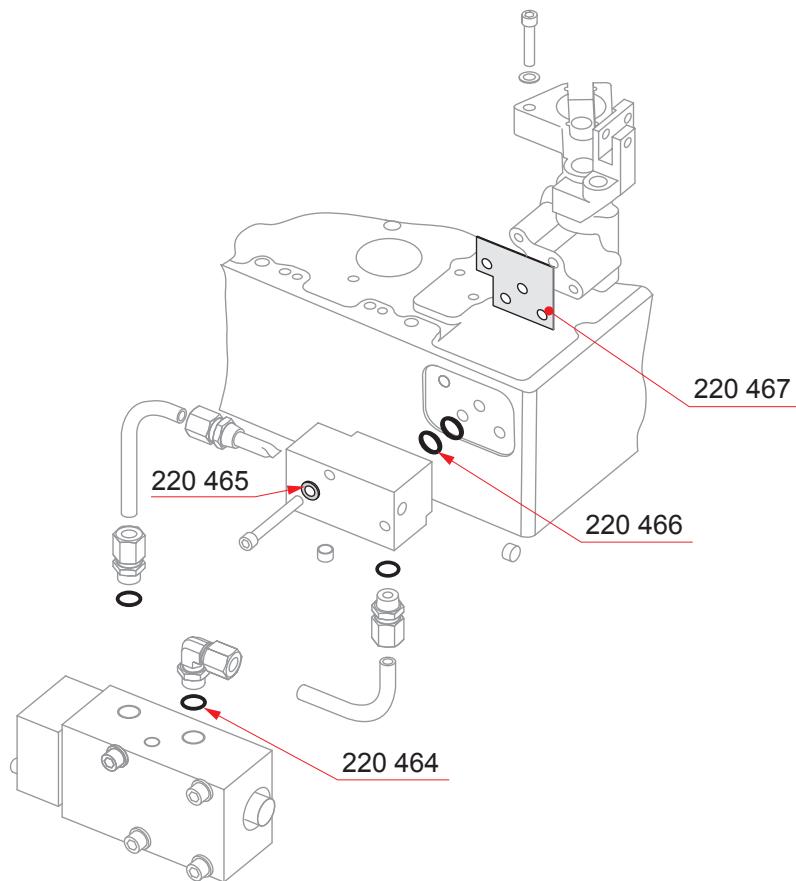
NOTE! (1) Basic overhaul kit.

NOTE! Parts included in a set or a kit cannot be ordered separately.

NOTE! Spare part kit 220 395 includes items marked (1).

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 Updated: 13.12.2011

Governor

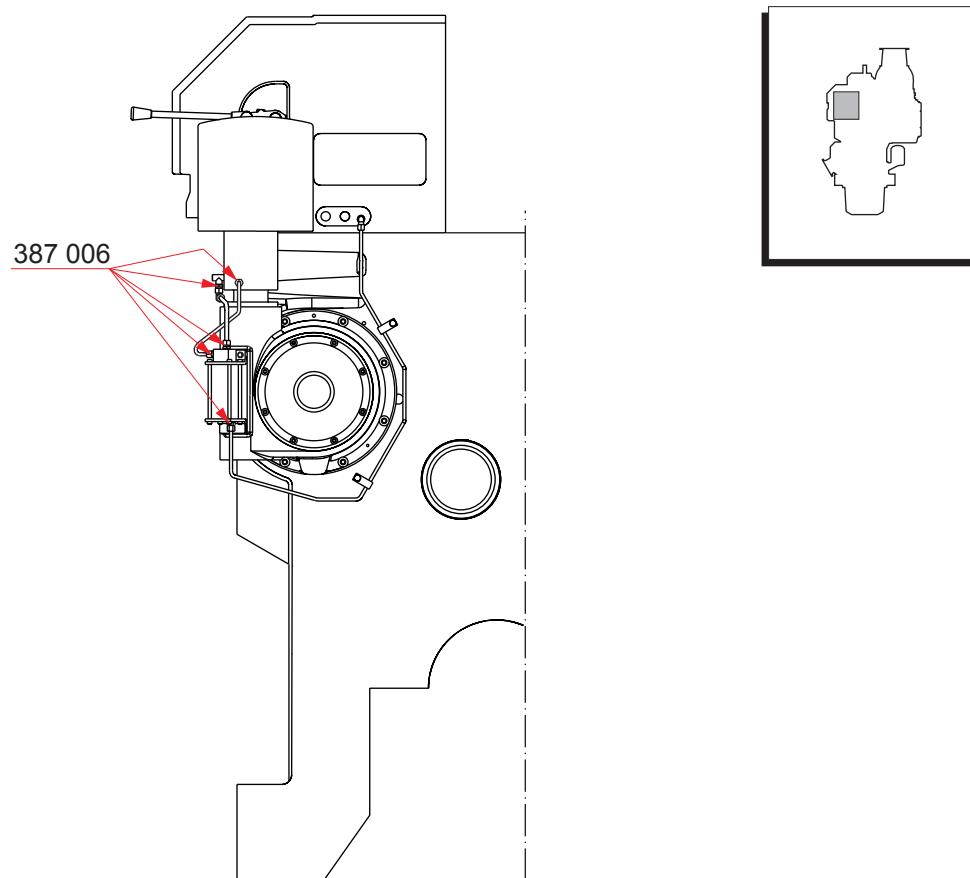


Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 464	O-ring (1)	4	-
220 465	Washer (1)	2	-
220 466	O-ring (1)	2	-
220 467	Gasket (1)	1	-

NOTE! (1) Basic overhaul kit.

NOTE! Parts included in a set or a kit cannot be ordered separately.

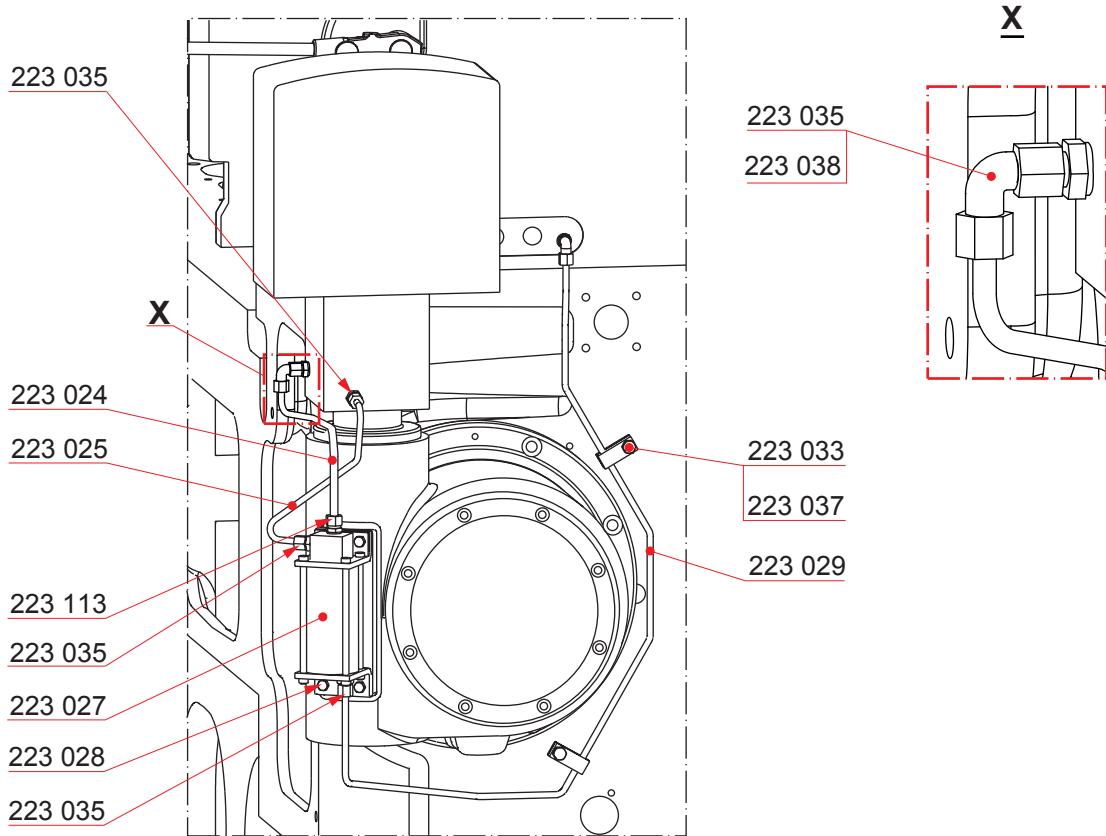
NOTE! Spare part kit 220 395 includes items marked (1).

Booster-motor

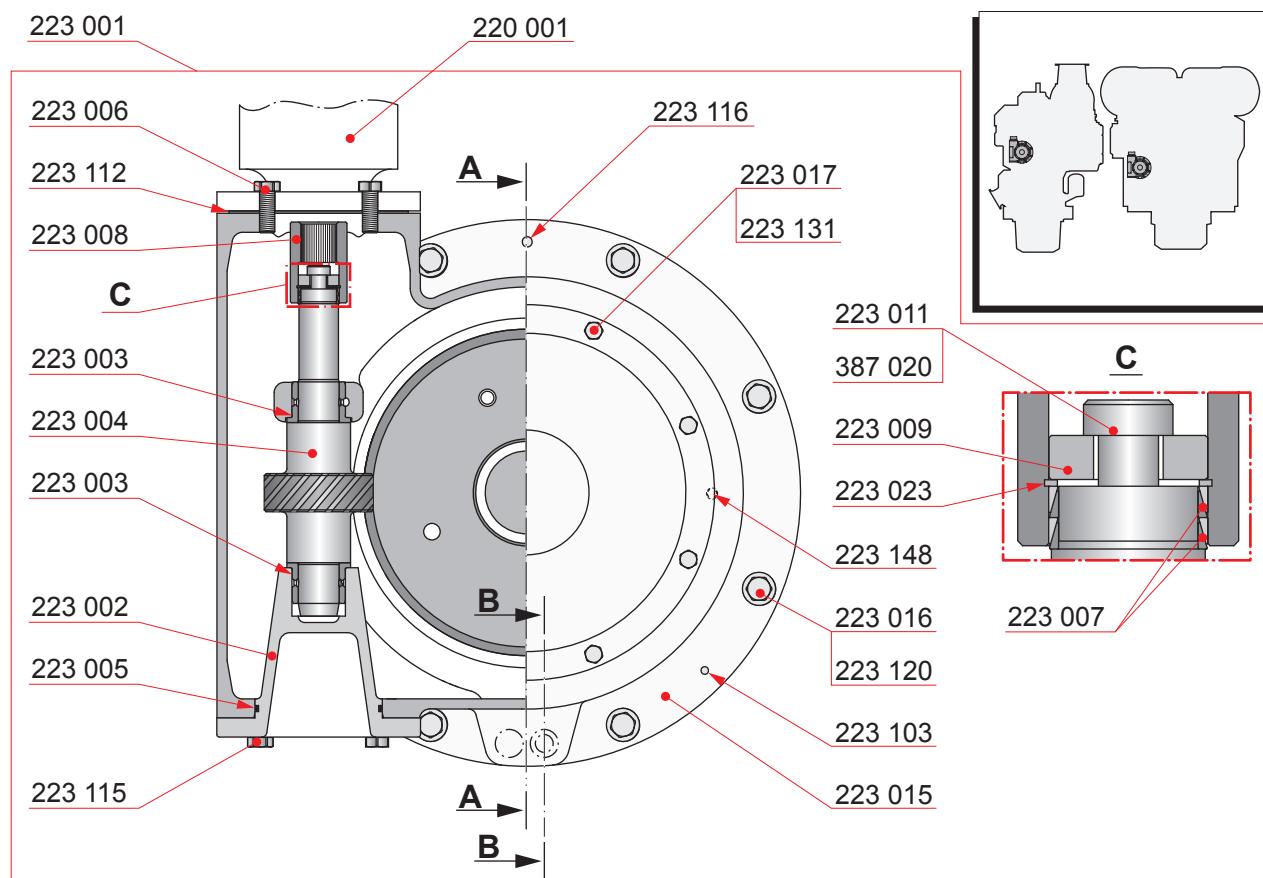
Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 006	Glue compound	1	-

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Booster-motor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 024	Pipe	1	-
223 025	Pipe	1	-
223 027	Booster motor	1	2.2
223 028	Screw	4	-
223 029	Pipe	1	0.2
223 033	Pipe clamp	2	0.1
223 035	Pipe union	4	-
223 037	Screw	2	-
223 038	Pipe union	1	-
223 113	Pipe union	1	-

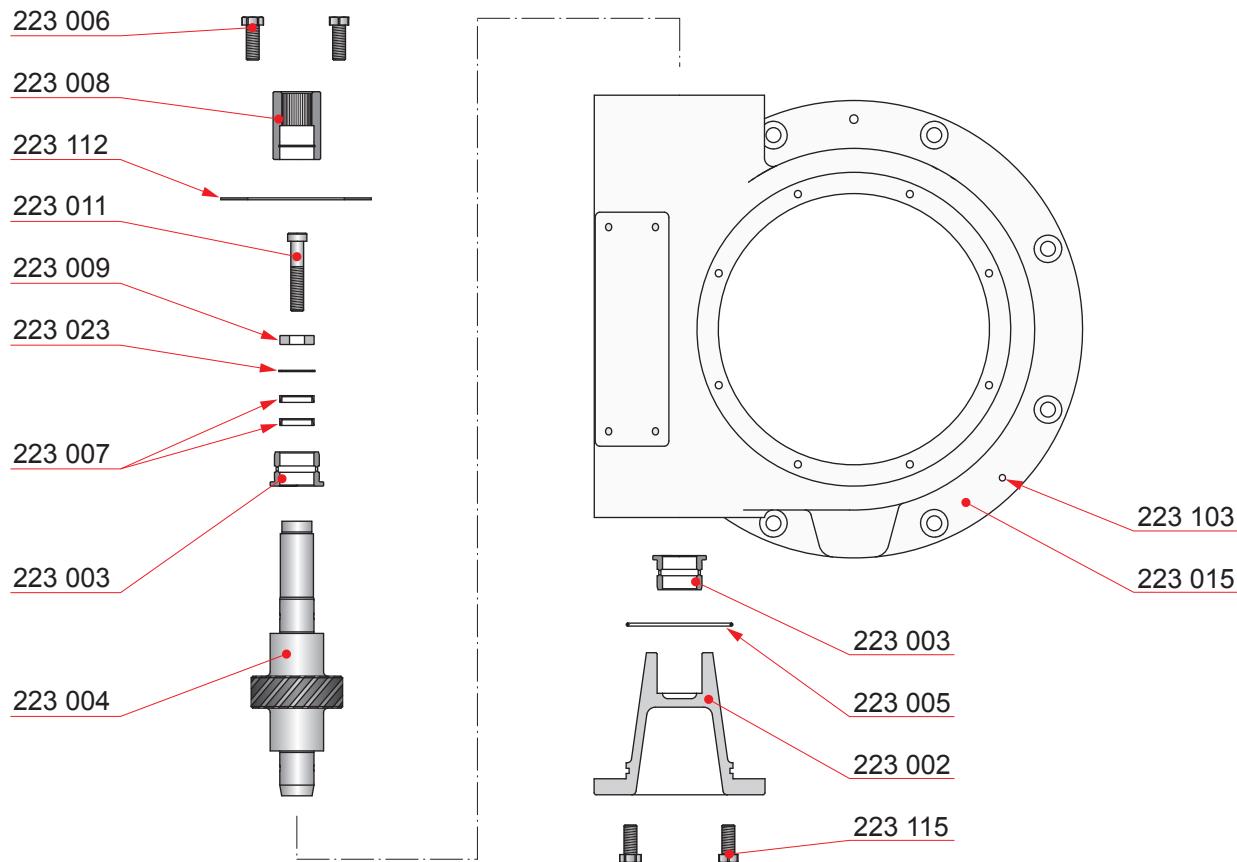
Governor drive

Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 001	Governor (1)	1	-
223 001	Governor drive	1	-
223 002	Bearing housing	1	3.6
223 003	Bearing bush	2	0.2
223 004	Shaft	1	3.0
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.4
223 009	Washer	1	-
223 011	Screw	1	-
223 015	Bracket	1	45.0
223 016	Screw	8	-
223 017	Screw	8	-
223 023	Retaining ring	1	-
223 103	Cylindrical pin	1	-
223 112	Gasket	1	-
223 115	Screw	4	-
223 116	Pin	1	-
223 120	Washer	8	-
223 131	Washer	8	-
223 148	Pin	2	-
387 020	Glue compound	1	-

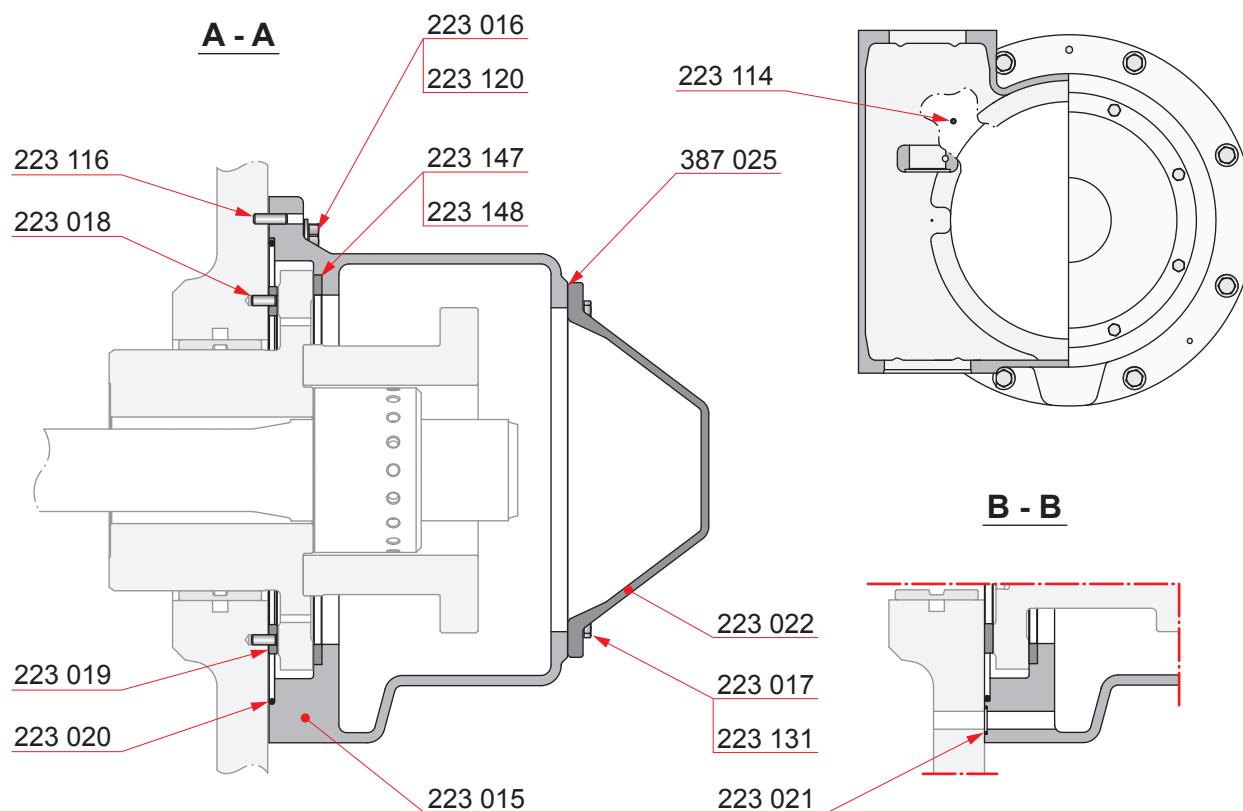
NOTE! (1) See section 220-

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 Updated: 29.05.2013

Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 002	Bearing housing	1	3.6
223 003	Bearing bush	2	0.2
223 004	Shaft	1	3.0
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.4
223 009	Washer	1	-
223 011	Screw	1	-
223 015	Bracket	1	45.0
223 023	Retaining ring	1	-
223 103	Cylindrical pin	1	-
223 112	Gasket	1	-
223 115	Screw	4	-

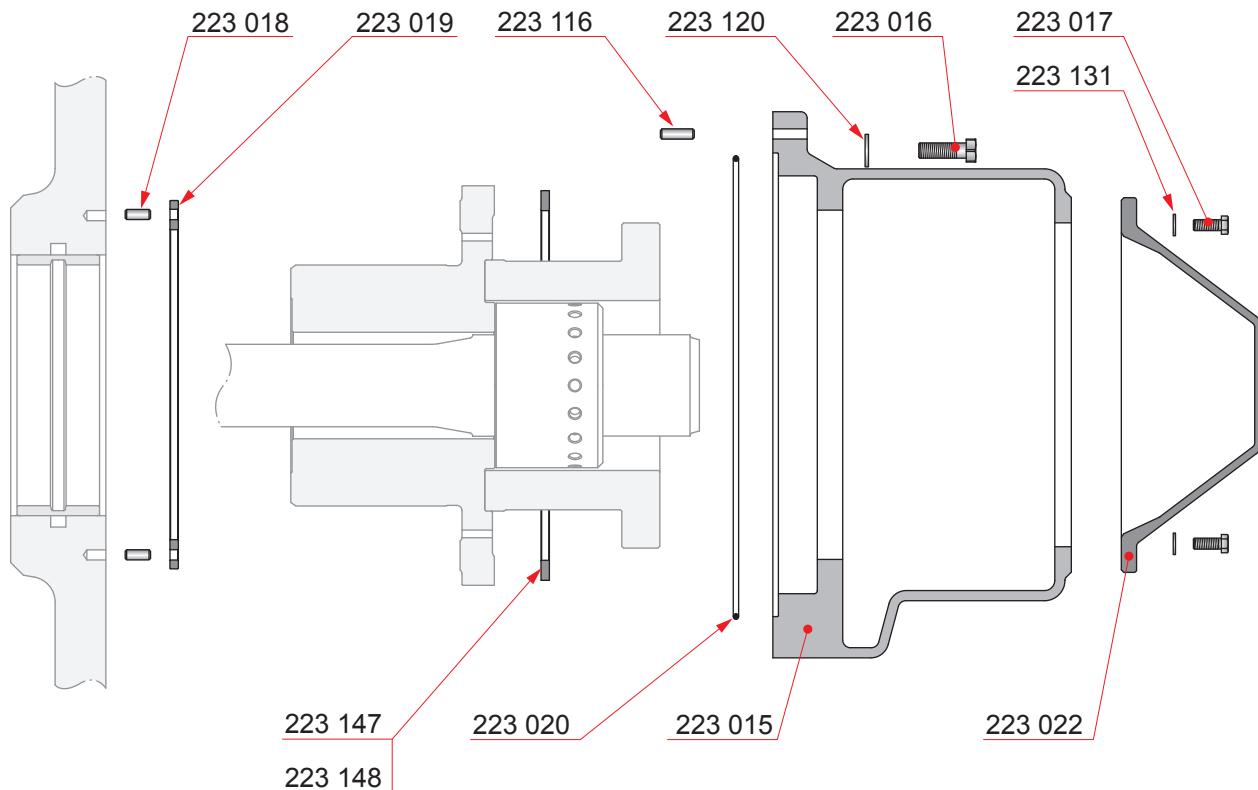
Governor drive

Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 015	Bracket	1	45.0
223 016	Screw	8	-
223 017	Screw	8	-
223 018	Pin	2	-
223 019	Bearing	1	1.0
223 020	O-ring	1	-
223 021	O-ring	2	-
223 022	Cover	1	2.0
223 114	Nipple (1)	1	-
223 116	Pin	1	-
223 120	Washer	8	-
223 131	Washer	8	-
223 147	Bearing	1	0.8
223 148	Pin	2	-
387 025	Glue compound	1	-

NOTE! (1) Reduction nipple in engine block.

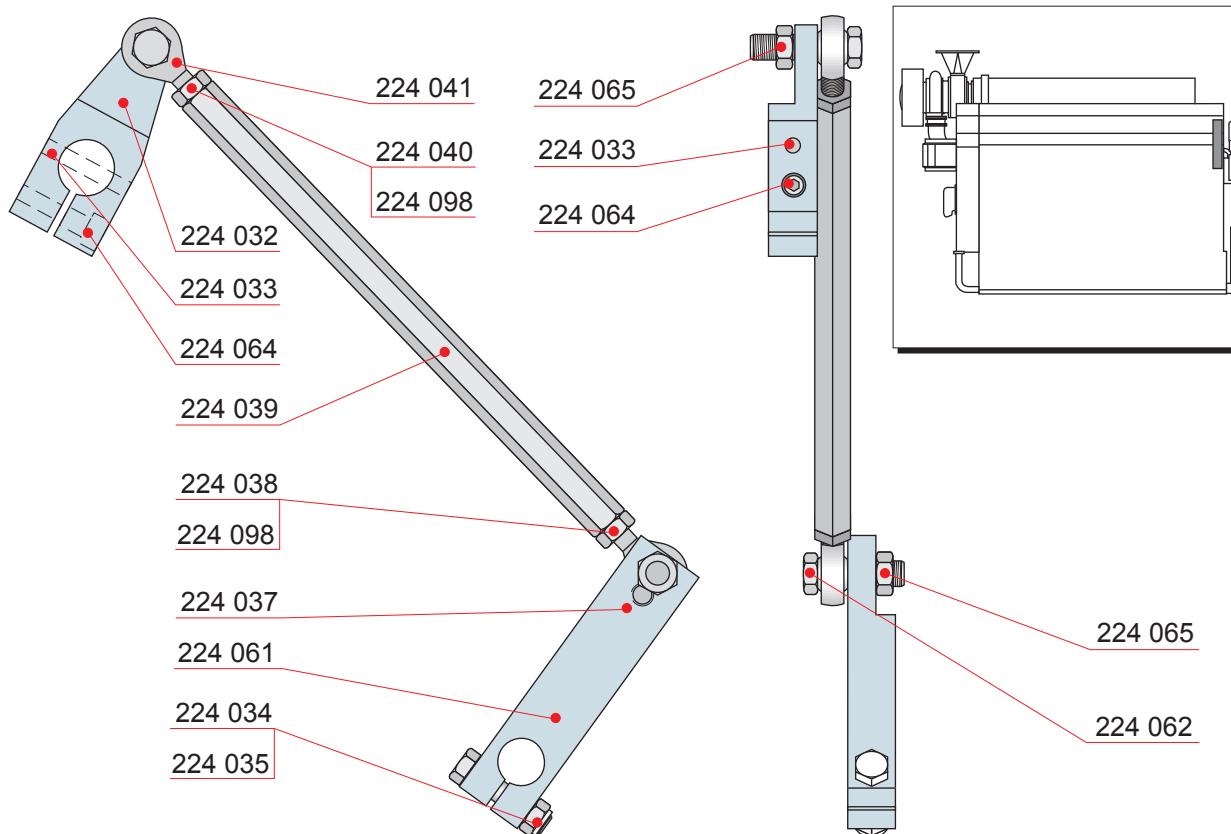
Edition: C
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Updated: 29.05.2013

Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 015	Bracket	1	45.0
223 016	Screw	8	-
223 017	Screw	8	-
223 018	Pin	2	-
223 019	Bearing	1	1.0
223 020	O-ring	1	-
223 022	Cover	1	2.0
223 116	Pin	1	-
223 120	Washer	8	-
223 131	Washer	8	-
223 147	Bearing	1	0.8
223 148	Pin	2	-

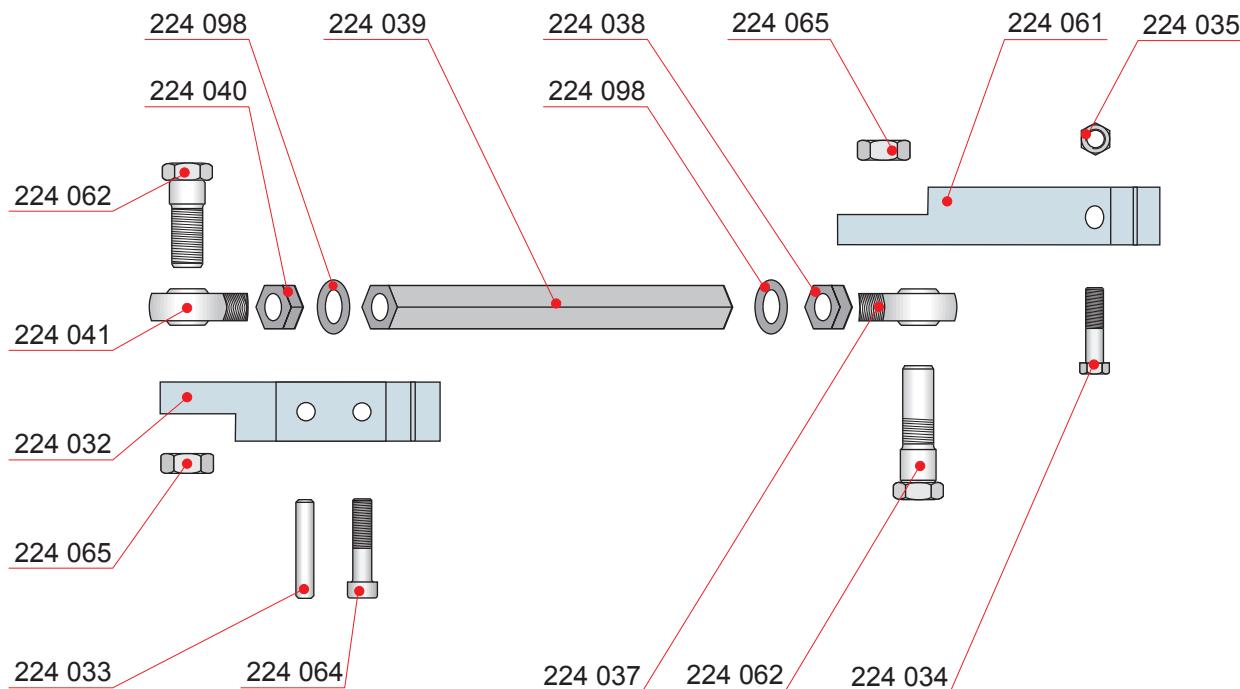
Levers for governor



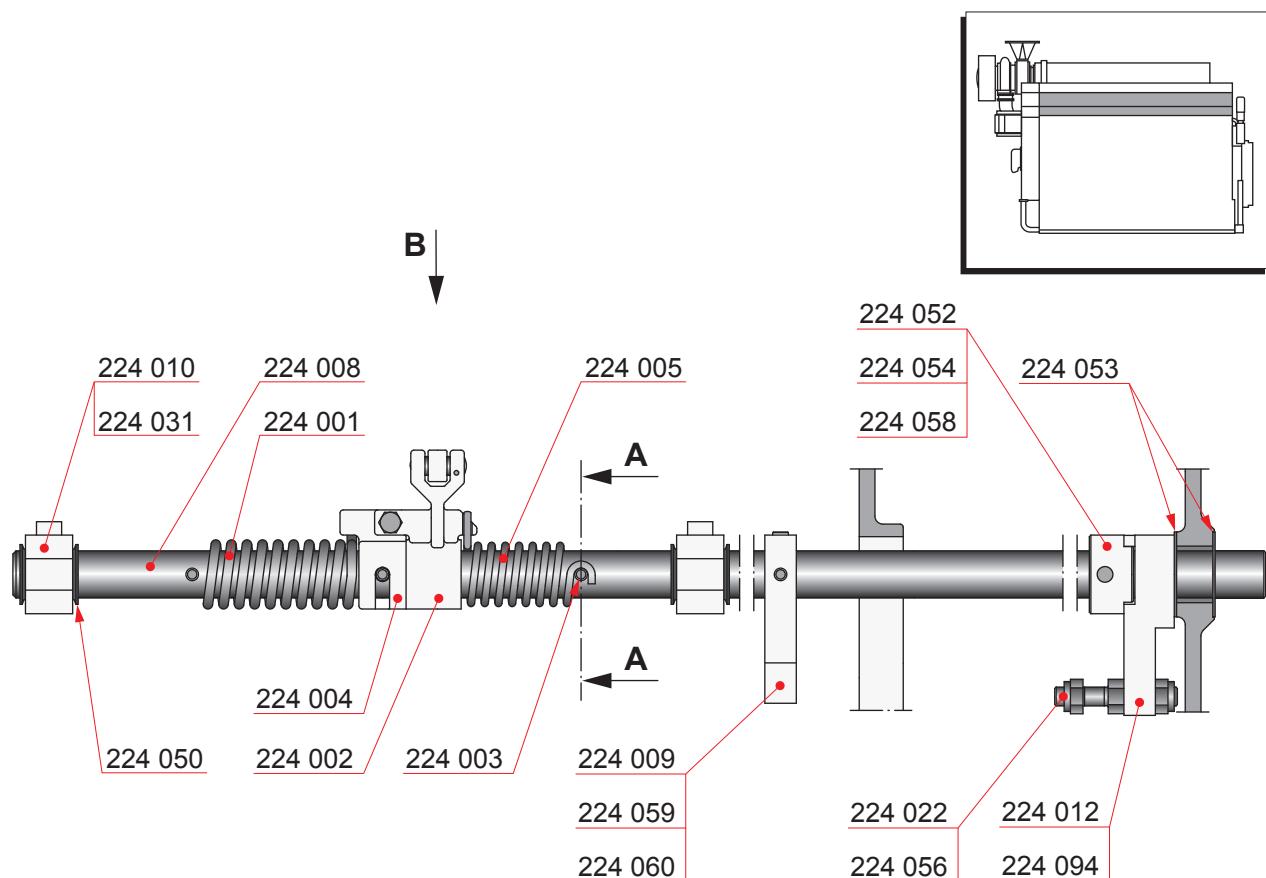
Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 032	Lever	1	-
224 033	Pin	1	-
224 034	Screw	1	-
224 035	Nut	1	-
224 037	Ball joint, right	1	-
224 038	Nut, right-hand	1	-
224 039	Adjustable rod	1	-
224 040	Nut, left-hand	1	-
224 041	Ball joint, left	1	-
224 061	Lever	1	-
224 062	Shaft	2	-
224 064	Screw	1	-
224 065	Nut	2	-
224 098	Washer	2	-

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Levers for governor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 032	Lever	1	-
224 033	Pin	1	-
224 034	Screw	1	-
224 035	Nut	1	-
224 037	Ball joint, right	1	-
224 038	Nut, right-hand	1	-
224 039	Adjustable rod	1	-
224 040	Nut, left-hand	1	-
224 041	Ball joint, left	1	-
224 061	Lever	1	-
224 062	Shaft	2	-
224 064	Screw	1	-
224 065	Nut	2	-
224 098	Washer	2	-

Control shaft

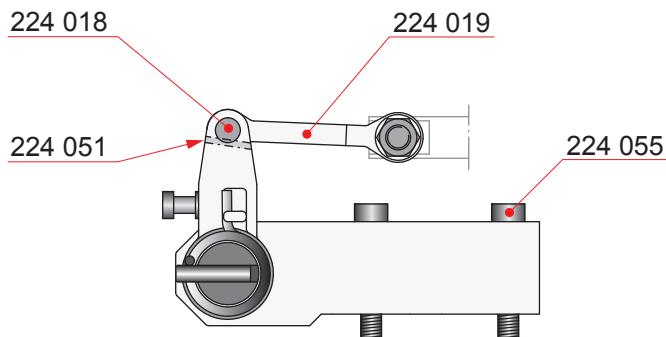
Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 001	Torsional spring	*	-
224 002	Lever	*	-
224 003	Pin	*	-
224 004	Follower	*	-
224 005	Torsional spring	*	-
224 008	Control shaft	1	-
224 009	Lever	1	-
224 010	Bearing housing	*	-
224 031	Bearing bush	1	-
224 012	Lever	1	-
224 094	Bearing bush	1	-
224 022	Nut	*	-
224 050	Gasket	*	-
224 052	Follower	1	-
224 053	Thrust bearing	2	-
224 054	Pin	1	-
224 056	Shaft	1	-
224 058	Screw	1	-
224 059	Pin	1	-
224 060	Screw	1	-

NOTE! (*) See page 3

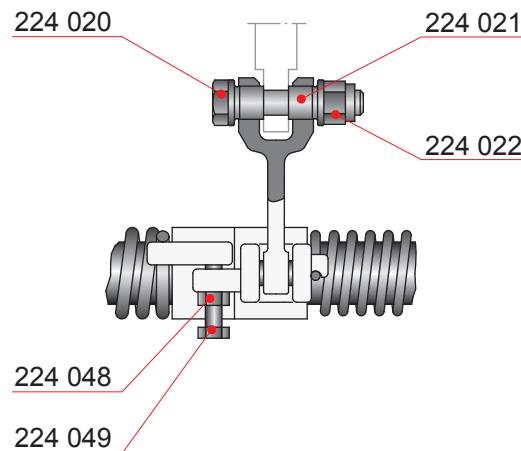
Edition: A
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 Updated: 01.06.2009

Control shaft

Section A - A



View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 018	Shaft for lever	*	-
224 019	Lever	*	-
224 020	Screw	*	-
224 021	Sleeve for injection pump	*	-
224 022	Nut	*	-
224 048	Nut	*	-
224 049	Screw	*	-
224 051	Pin	*	-
224 055	Screw	*	-

NOTE! (*) See page 3

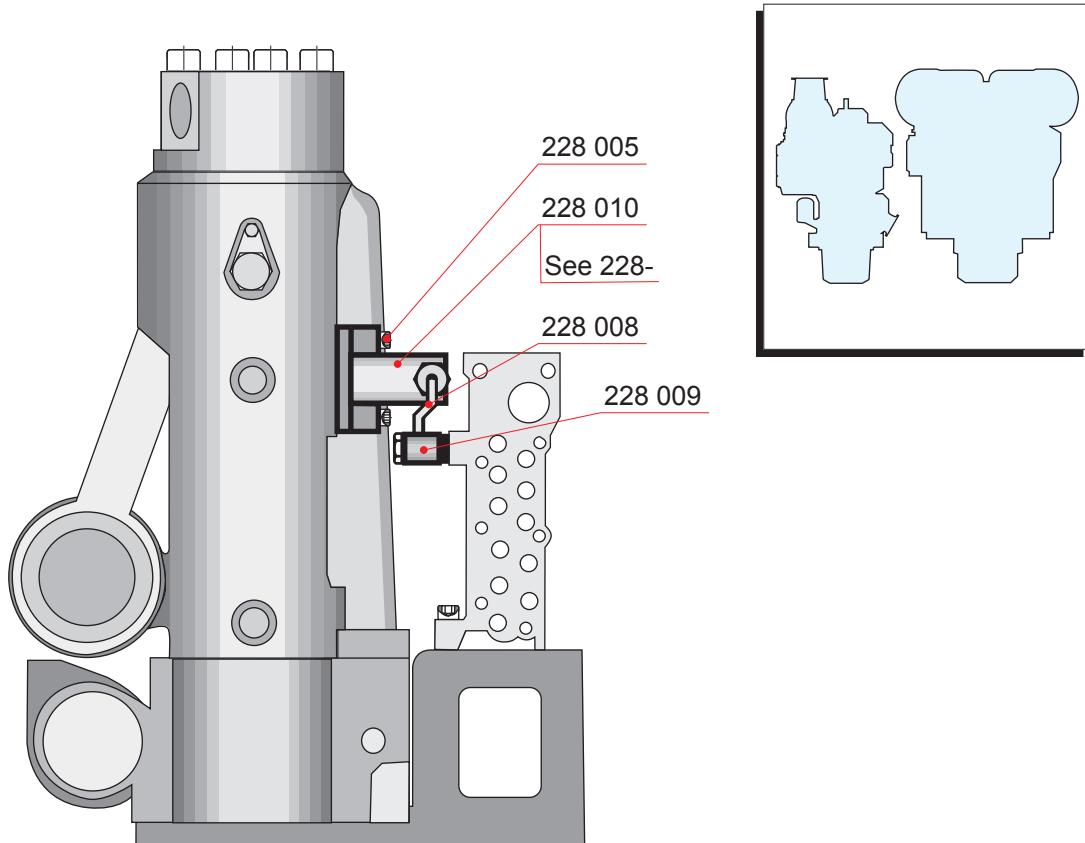
Control shaft

Quantity according to number of cylinders

Part No	Pieces			
	6L32	7L32	8L32	9L32
224 001	6	7	8	9
224 002	6	7	8	9
224 003	18	21	24	27
224 004	6	7	8	9
224 005	6	7	8	9
224 010	7	8	9	10
224 018	6	7	8	9
224 019	6	7	8	9
224 020	6	7	8	9
224 021	12	14	16	18
224 022	8	8	10	12
224 048	6	7	8	9
224 049	6	7	8	9
224 050	14	16	18	20
224 051	6	7	8	9
224 055	14	16	18	20

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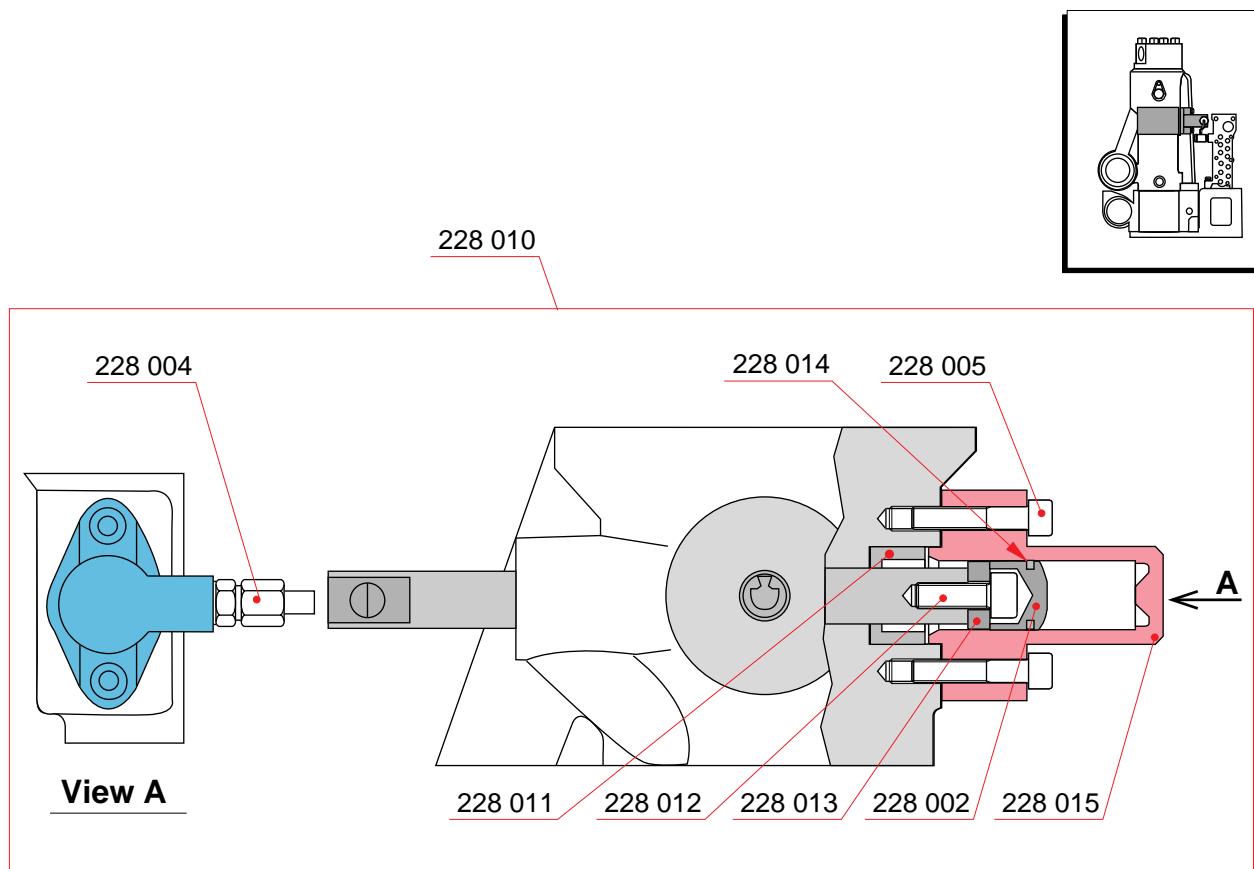
Overspeed trip device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 005	Screw	2	-
228 008	Pipe	1	-
228 009	Pipe union	1	-
228 010	Overspeed trip device	1	0.7

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Overspeed trip device



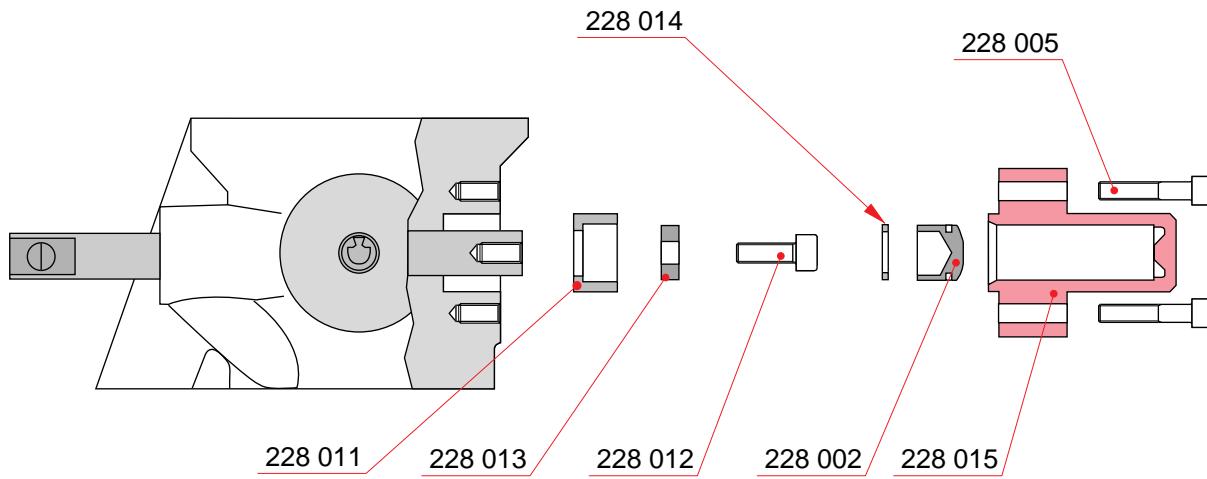
Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 010	Overspeed trip device	1	0.7
228 002	Piston	1	-
228 004	Pipe union	1	-
228 005	Screw	2	-
228 011	Sleeve	1	-
228 012	Screw	1	-
228 013	Washer	1	-
228 014	O-ring	1	-
228 015	Cylinder	1	0.5

Edition: A

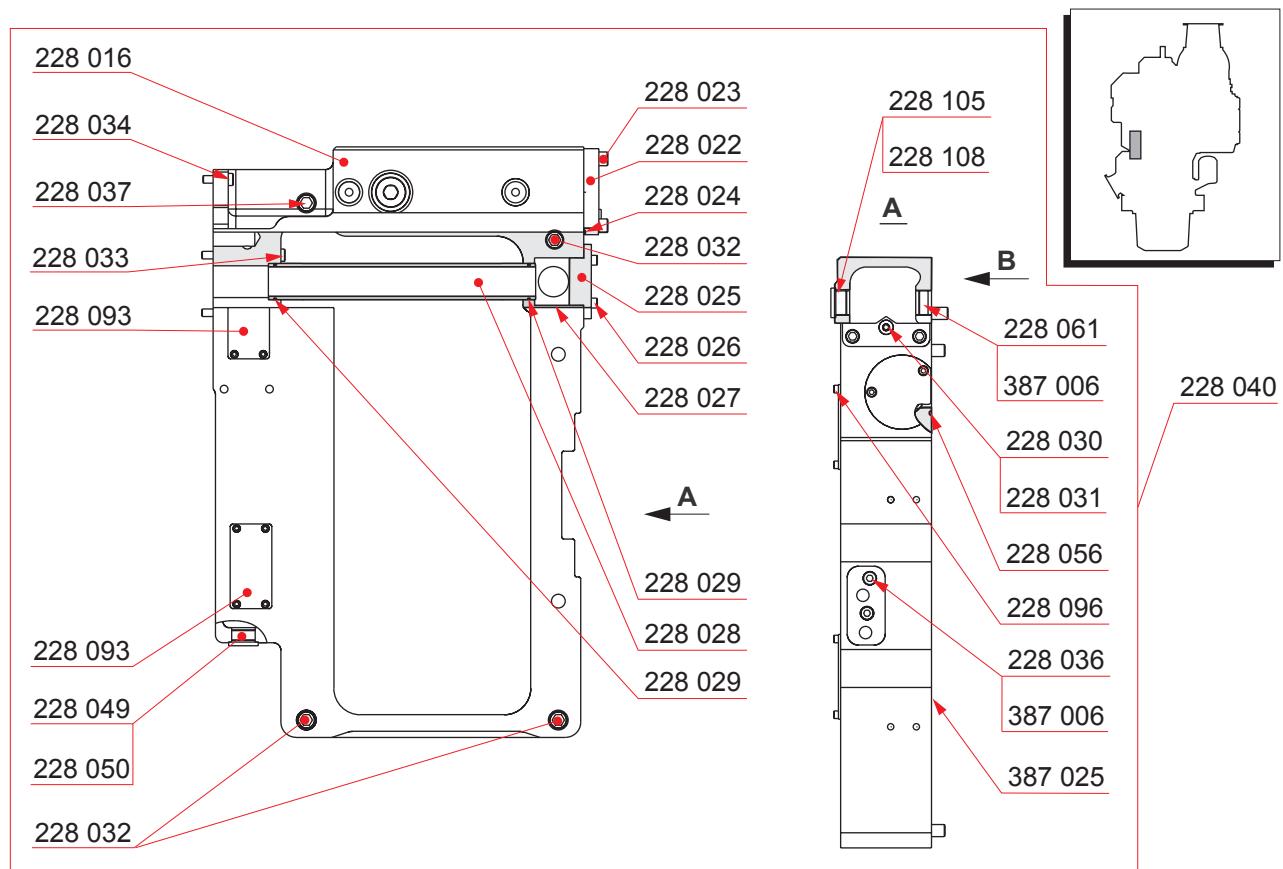
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Updated: 09.06.2003

Overspeed trip device



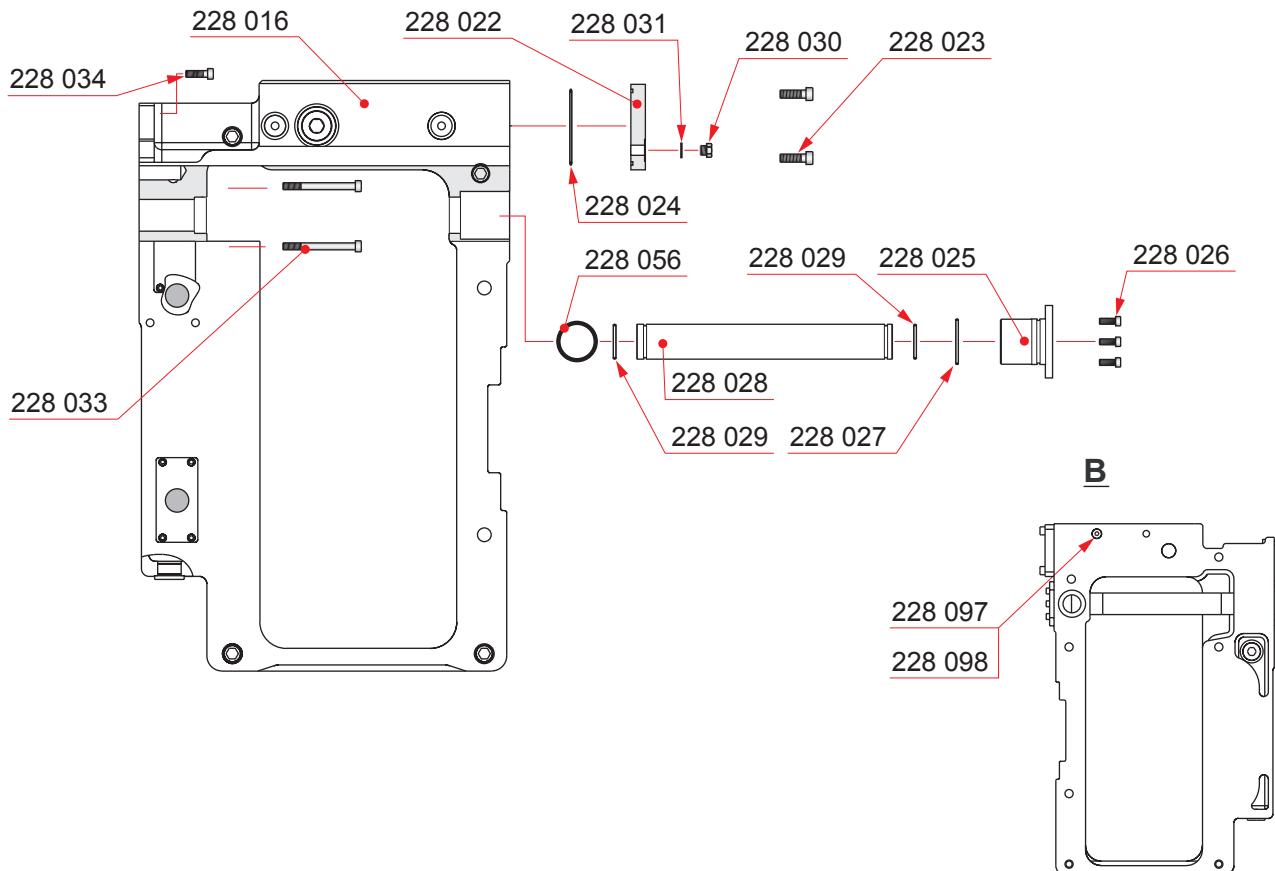
Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 002	Piston	1	-
228 005	Screw	2	-
228 011	Sleeve	1	-
228 012	Screw	1	-
228 013	Washer	1	-
228 014	O-ring	1	-
228 015	Cylinder	1	0.5

Air bottle

Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 040	Air bottle assembly	1	-
228 016	Air bottle	1	70.0
228 022	Flange	1	1.9
228 023	Screw	4	-
228 024	O-ring	1	-
228 025	Sleeve	1	1.2
228 026	Screw	3	-
228 027	O-ring	1	-
228 028	Pipe	1	1.8
228 029	O-ring	2	-
228 030	Plug	1	-
228 031	Sealing ring	1	-
228 032	Screw	3	0.2
228 033	Screw	4	-
228 034	Screw	1	-
228 036	Screw	4	-
228 037	Screw	1	-
228 049	Sealing ring	1	-
228 050	Plug	1	0.1
228 056	O-ring	1	-
228 061	Plug	1	-
228 093	Cover plate	2	0.1
228 096	Screw	8	-
228 105	Sealing ring	1	-
228 108	Plug	1	0.1
387 006	Glue compound	1	-
387 025	Glue compound	1	-

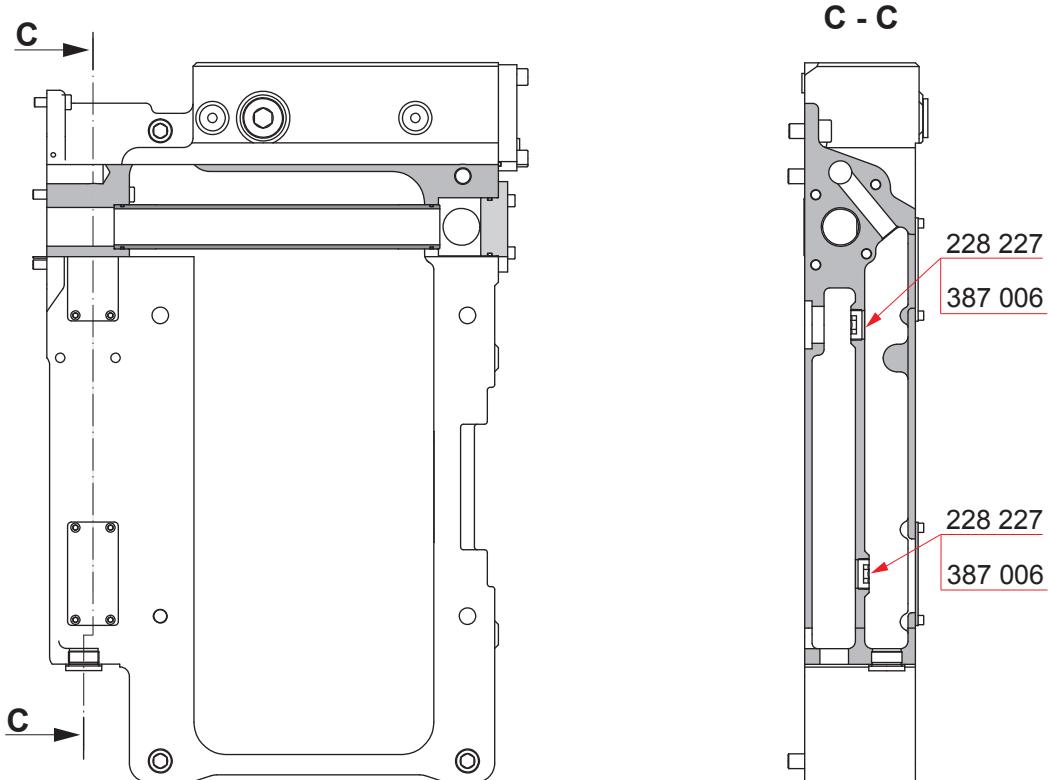
Edition: F
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 Updated: 04.07.2013

Air bottle



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 016	Air bottle	1	70.0
228 022	Flange	1	1.9
228 023	Screw	4	-
228 024	O-ring	1	-
228 025	Sleeve	1	1.2
228 026	Screw	3	-
228 027	O-ring	1	-
228 028	Pipe	1	1.8
228 029	O-ring	2	-
228 030	Plug	1	-
228 031	Sealing ring	1	-
228 033	Screw	4	-
228 034	Screw	1	-
228 056	O-ring	1	-
228 097	Plug	1	-
228 098	Sealing ring	1	-

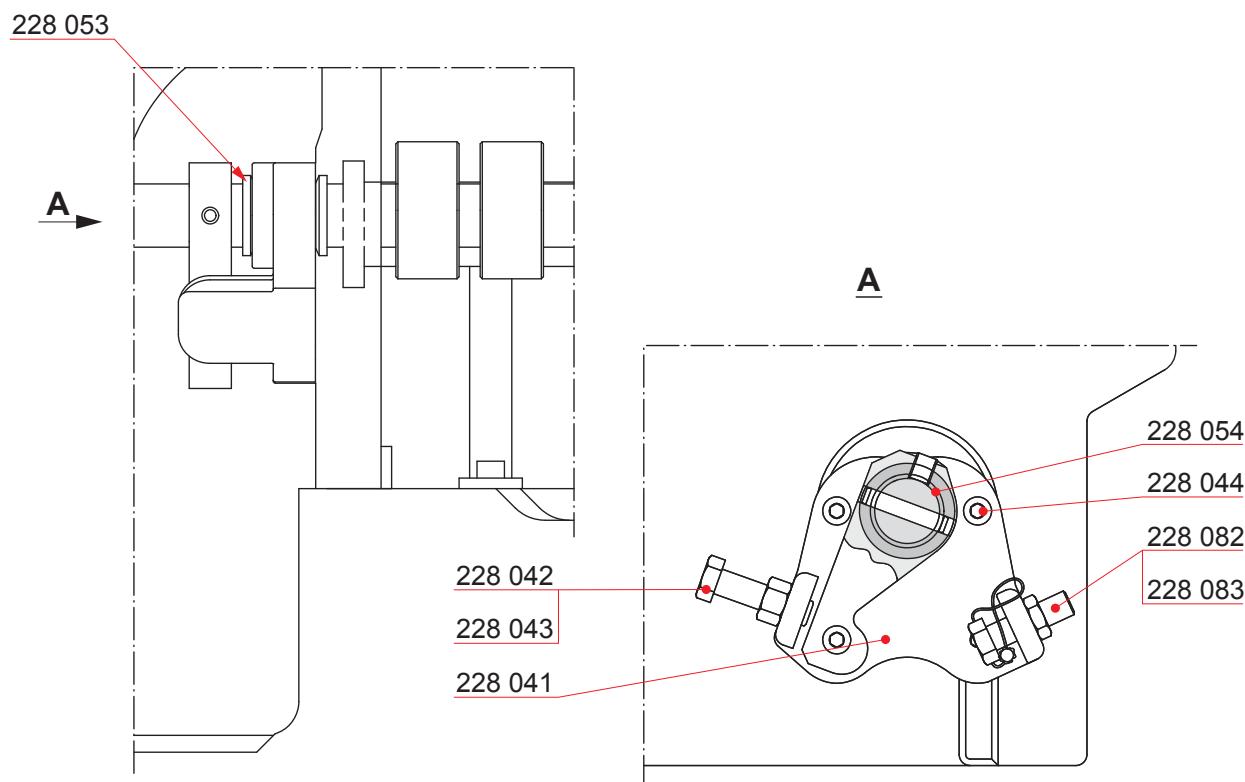
Air bottle



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 227	Plug	2	-
387 006	Glue compound	1	-

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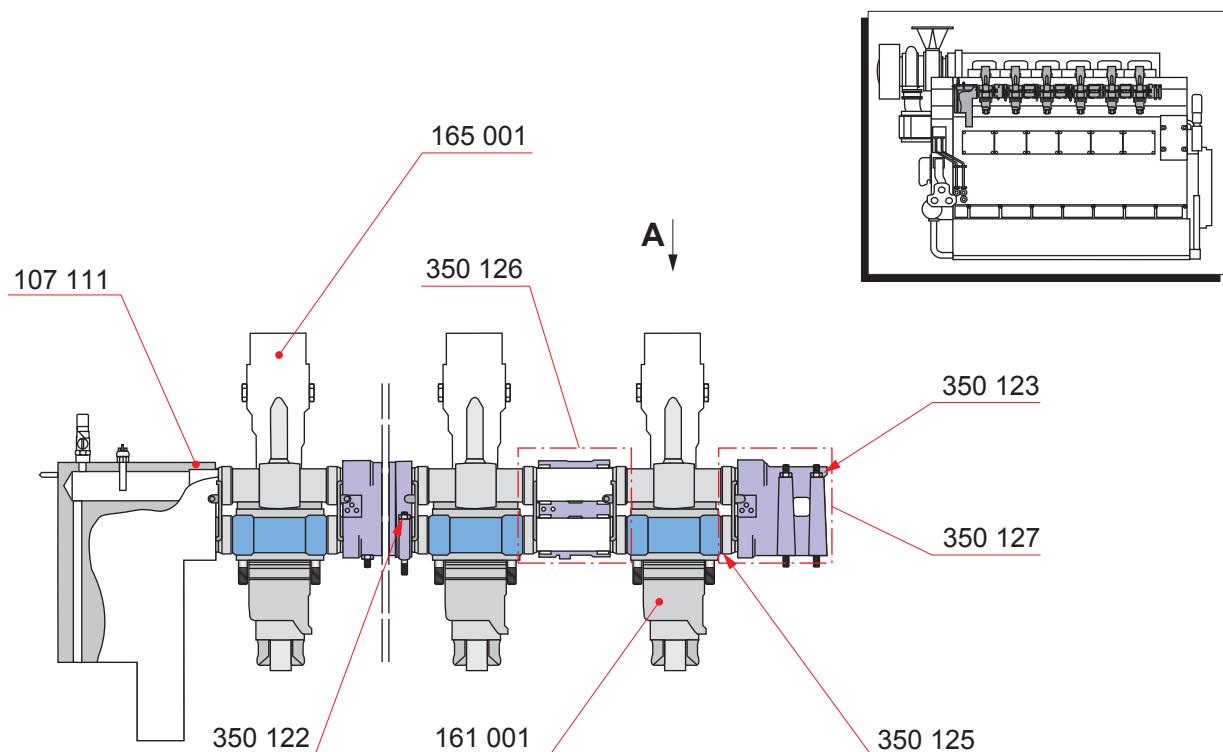
Load limiter assembly, hot box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 041	Bracket	1	1.6
228 042	Screw	1	-
228 043	Nut	1	-
228 044	Screw	4	-
228 053	V-ring	2	-
228 054	Bearing bush	1	-
228 082	Screw	1	-
228 083	Nut	1	-

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Fuel system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 111	Cover (1)	1	-
161 001	Lifter, compl. (3)	*	-
165 001	Injection pump (2)	*	-
350 122	Nut	*	-
350 123	Nut	4	-
350 125	O-ring	*	-
350 126	Pipe	*	-
350 127	Bracket	1	-

NOTE! (1) See section 107-

NOTE! (2) See section 165-

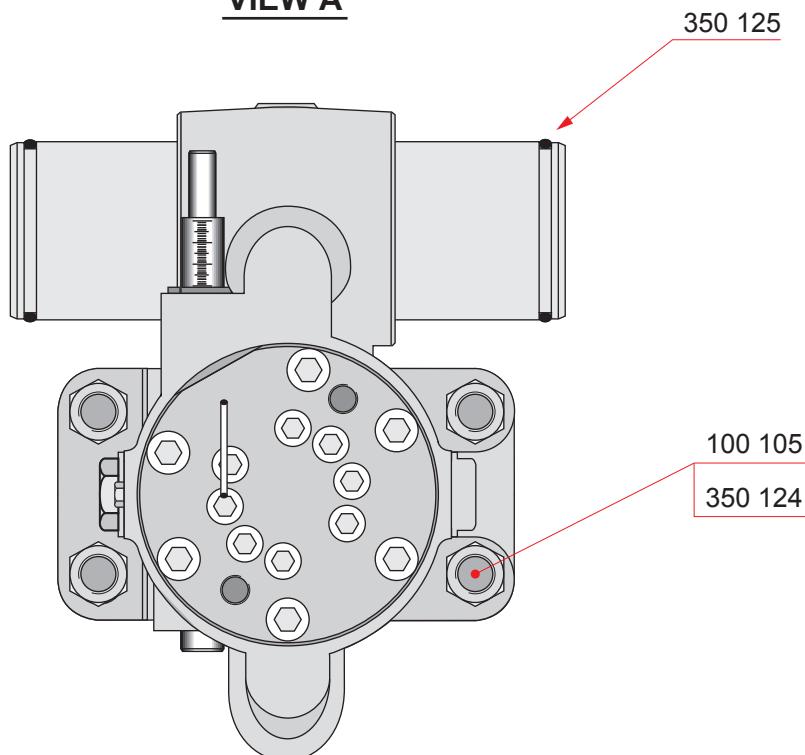
NOTE! (3) See section 161-

NOTE! * See page 5.

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Fuel system

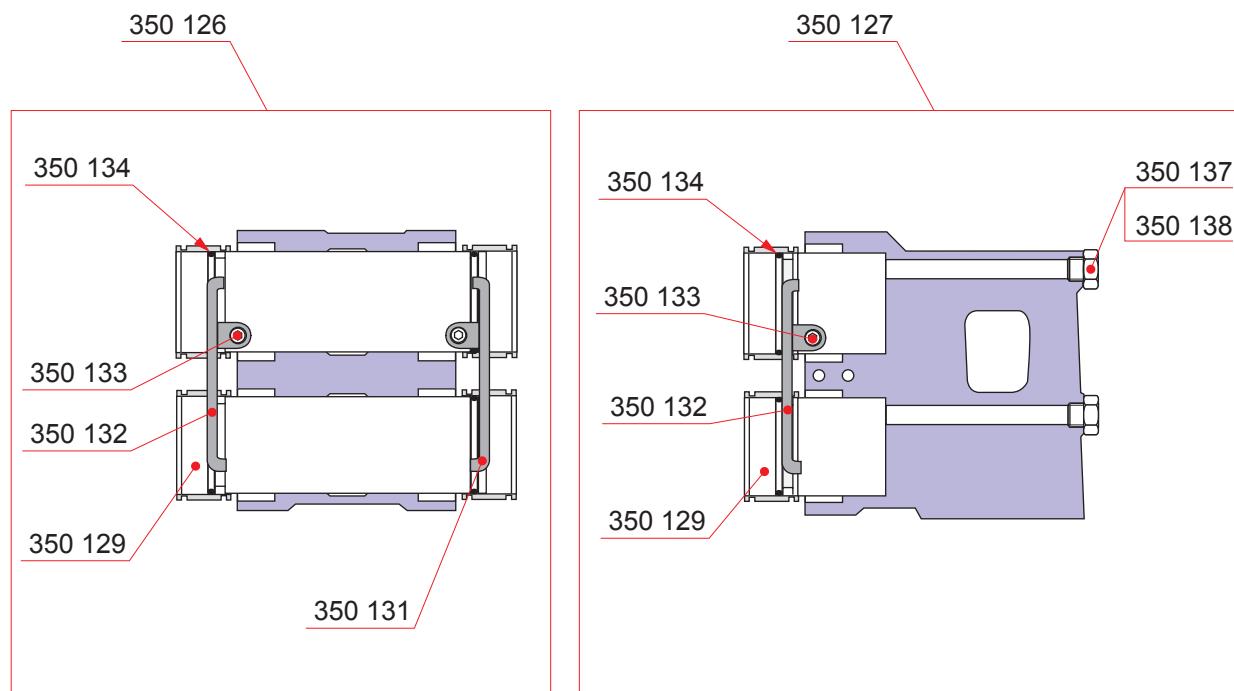
VIEW A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 105	Screw	*	-
350 124	Nut	*	-
350 125	O-ring	*	-

NOTE! * See page 5.

Fuel system

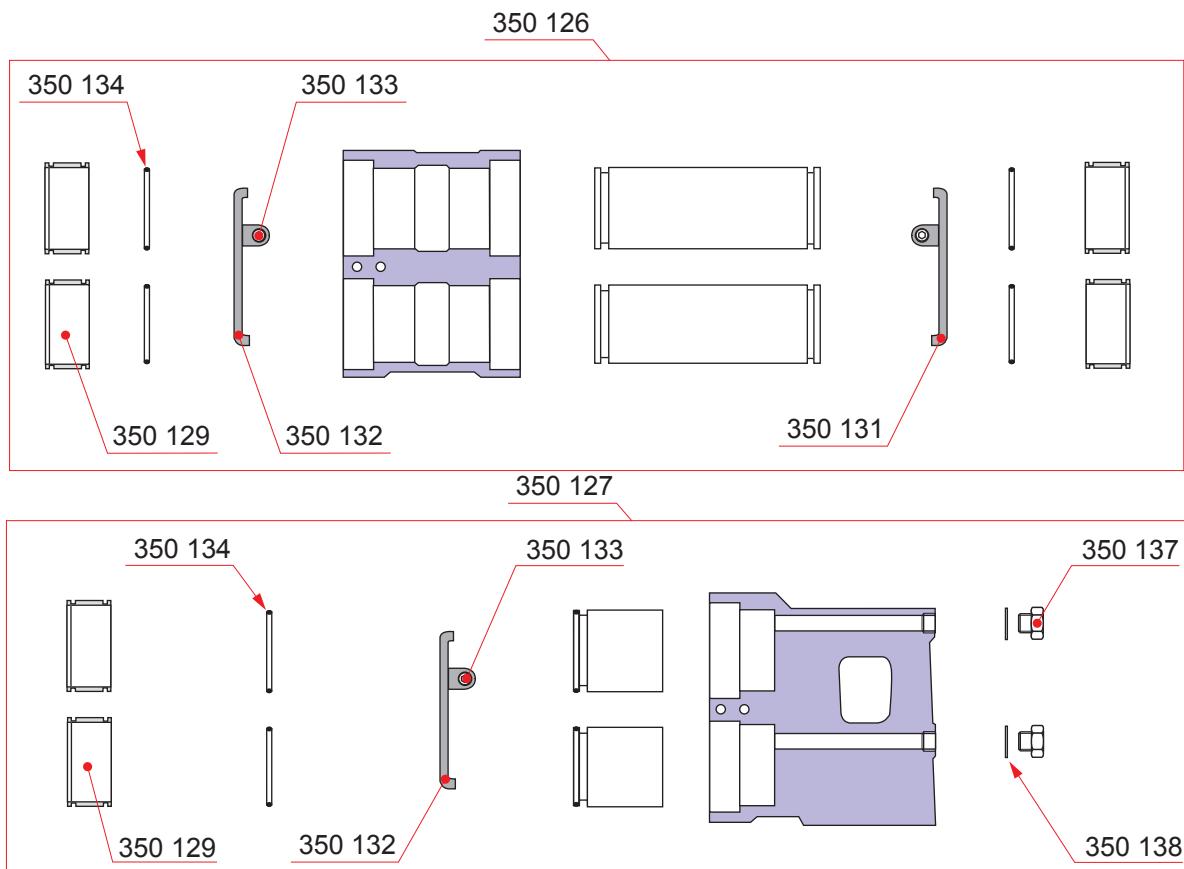


Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 126	Pipe	*	-
350 129	Sleeve	2	-
350 131	Locking plate	1	-
350 132	Locking plate	1	-
350 133	Screw	2	-
350 134	O-ring	4	-
350 127	Bracket	1	-
350 129	Sleeve	2	-
350 132	Locking plate	1	-
350 133	Screw	2	-
350 134	O-ring	4	-
350 137	Plug	2	-
350 138	Sealing ring	2	-

NOTE! * See page 5.

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 Updated: 17.03.2010

Fuel system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 126	Pipe	*	-
350 129	Sleeve	2	-
350 131	Locking plate	1	-
350 132	Locking plate	1	-
350 133	Screw	2	-
350 134	O-ring	4	-
350 127	Bracket	1	-
350 129	Sleeve	2	-
350 132	Locking plate	1	-
350 133	Screw	2	-
350 134	O-ring	4	-
350 137	Plug	2	-
350 138	Sealing ring	2	-

NOTE! * See page 5.

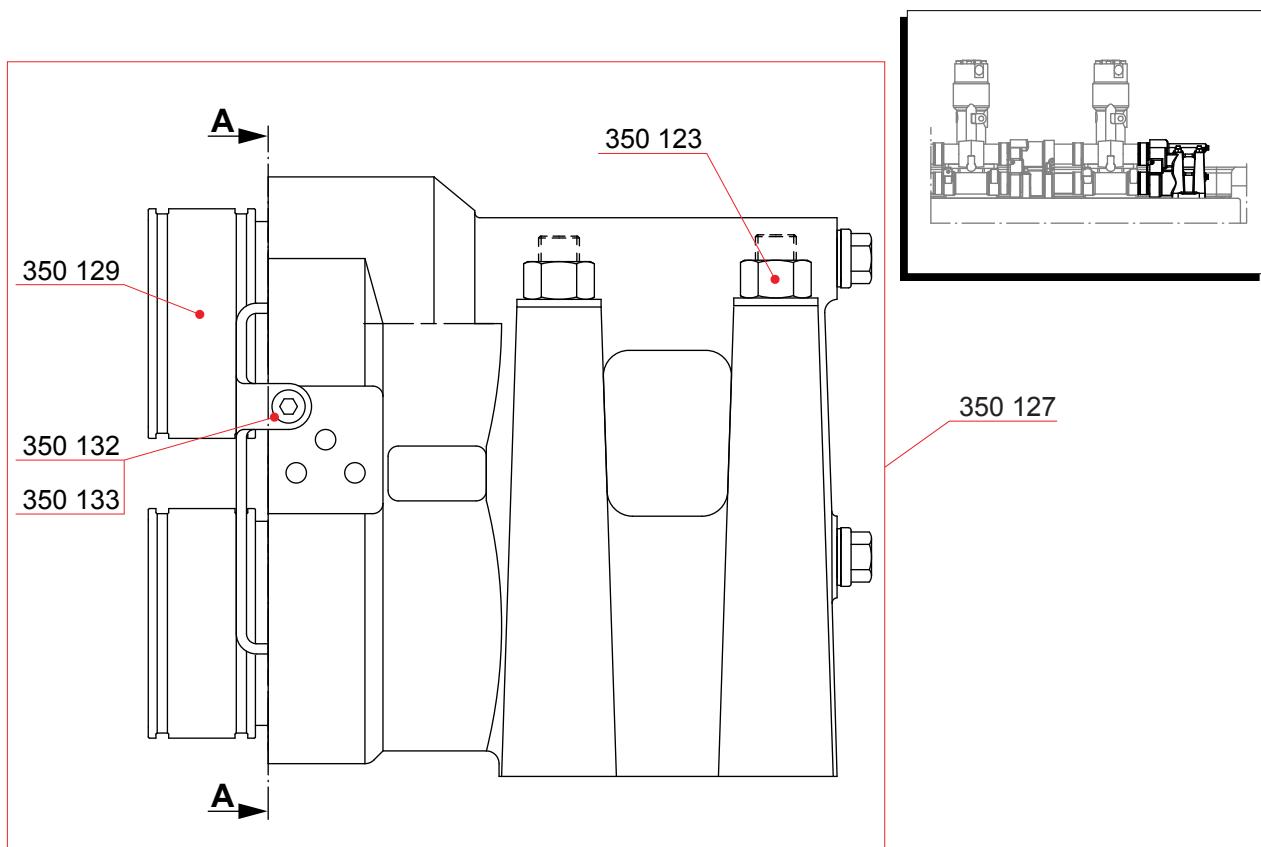
Fuel system

Quantity according to number of cylinders

Part No	Pieces		
	6L32	8L32	9L32
100 105	24	32	36
161 001	6	8	9
165 001	6	8	9
350 122	15	21	24
350 124	24	32	36
350 125	24	32	36
350 126	5	7	8

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Bracket for fuel system

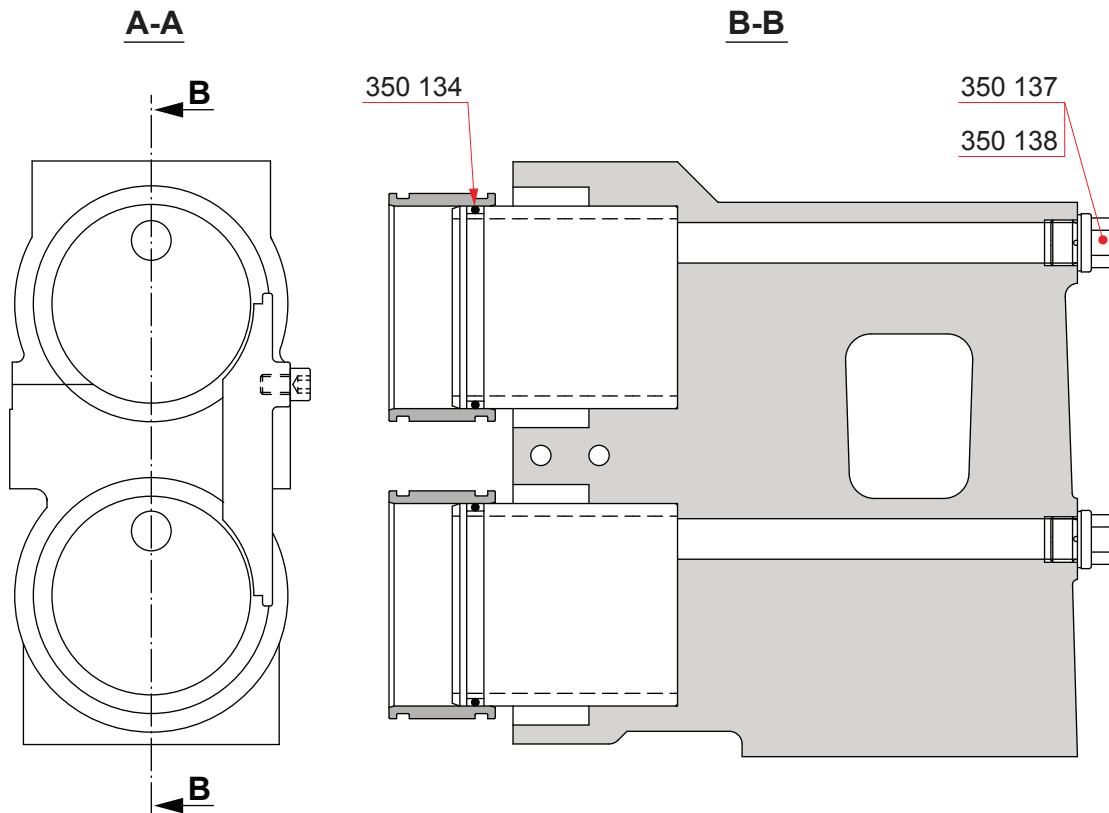


Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 127	Bracket *	1	-
350 123	Nut	4	-
350 129	Sleeve	2	0.4
350 132	Locking plate	1	0.1
350 133	Screw	1	-

NOTE! *) See fuel system.

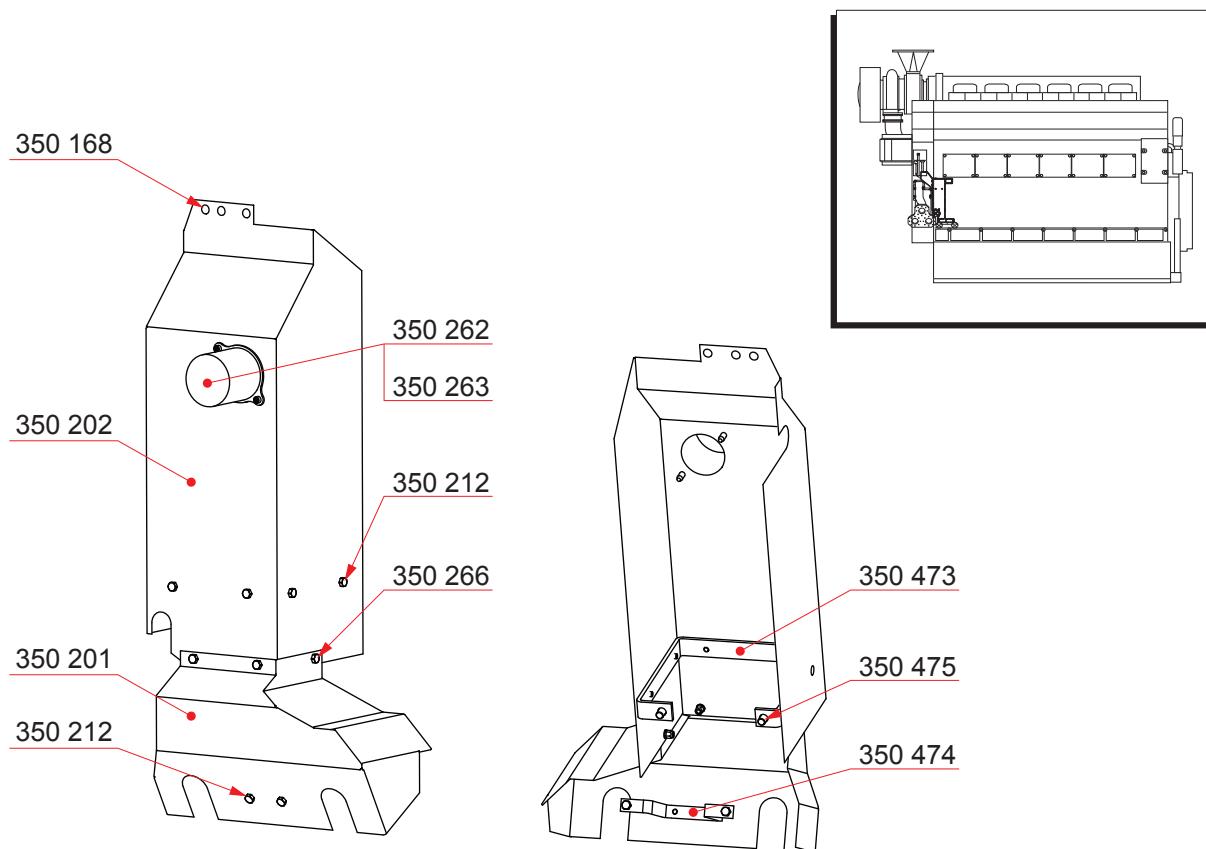
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Updated: 21.05.2013

Bracket for fuel system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 134	O-ring	2	-
350 137	Plug	2	-
350 138	Sealing ring	2	-

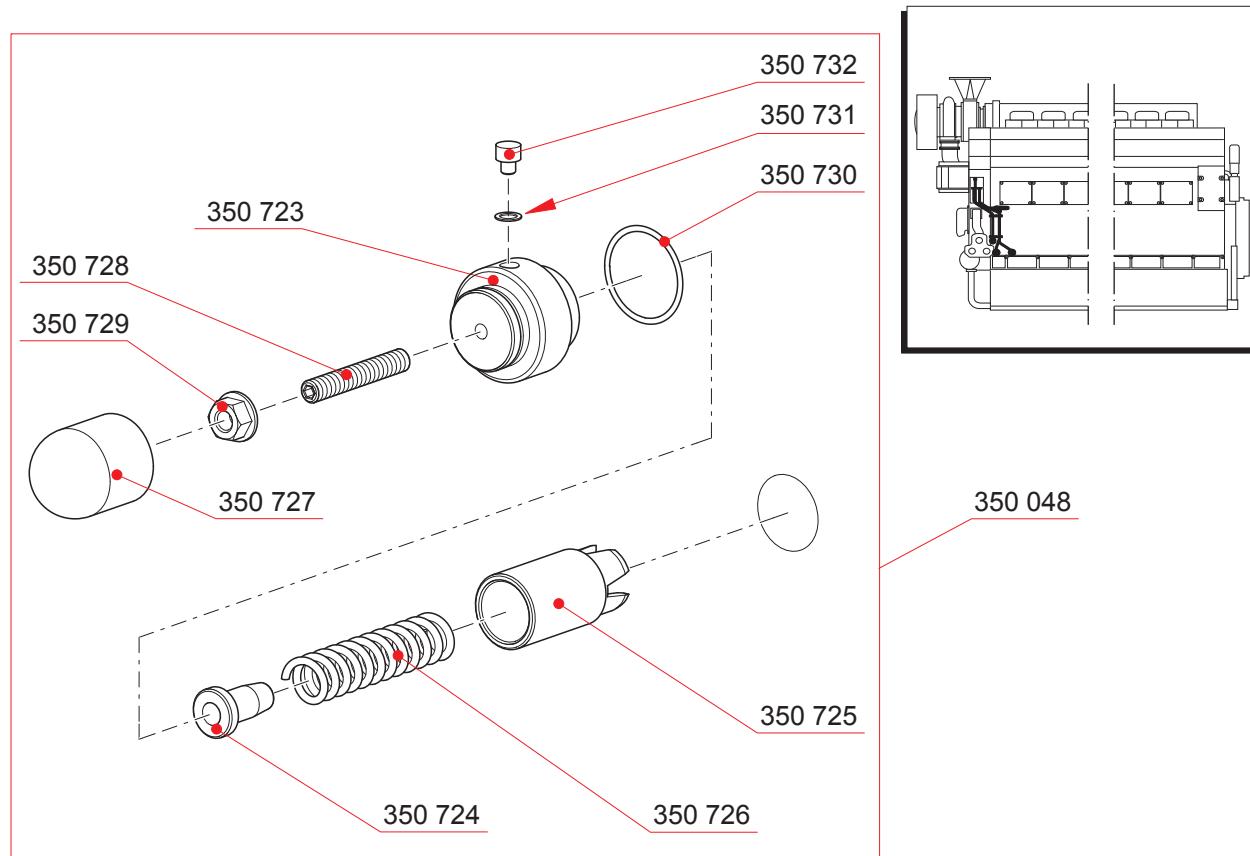
Covers for fuel pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 168	Screw	3	-
350 201	Cover	1	-
350 202	Cover	1	-
350 212	Screw	8	-
350 262	Cover	1	-
350 263	Screw	2	-
350 266	Screw	3	-
350 473	Support	1	-
350 474	Support	1	-
350 475	Screw	2	-

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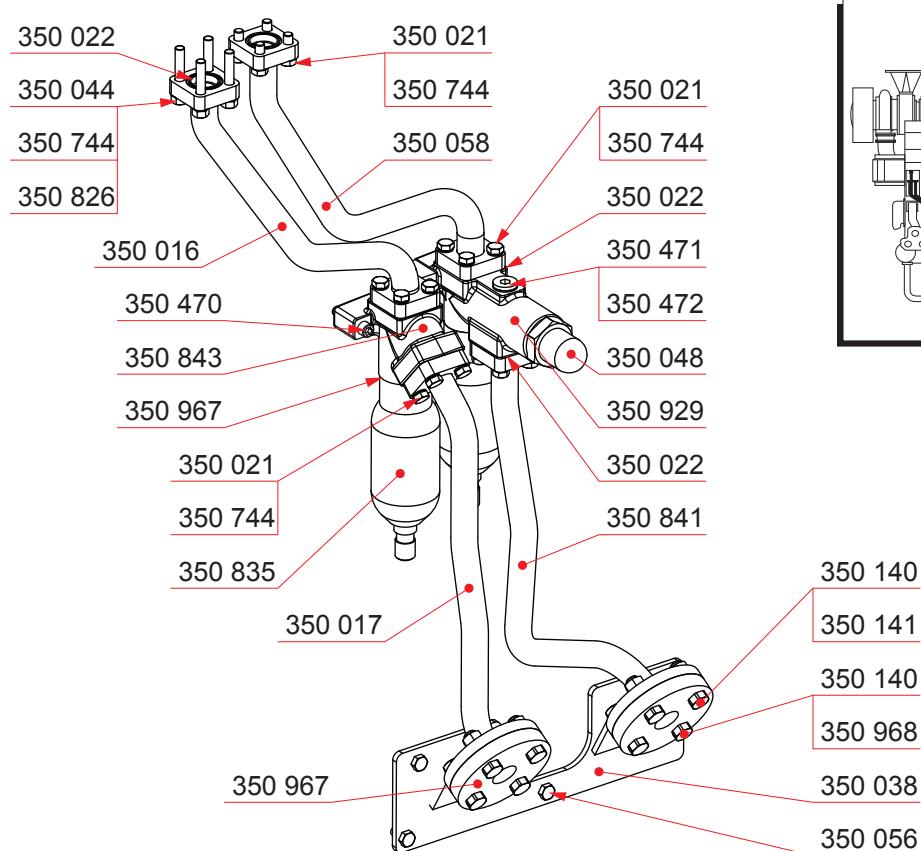
Pressure valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 048	Control valve	1	-
350 723	Plug	1	-
350 724	Spindle	1	-
350 725	Piston	1	-
350 726	Spring	1	-
350 727	Cap	1	-
350 728	Screw	1	-
350 729	Nut	1	-
350 730	O-ring	1	-
350 731	Seal	1	-
350 732	Screw	1	-

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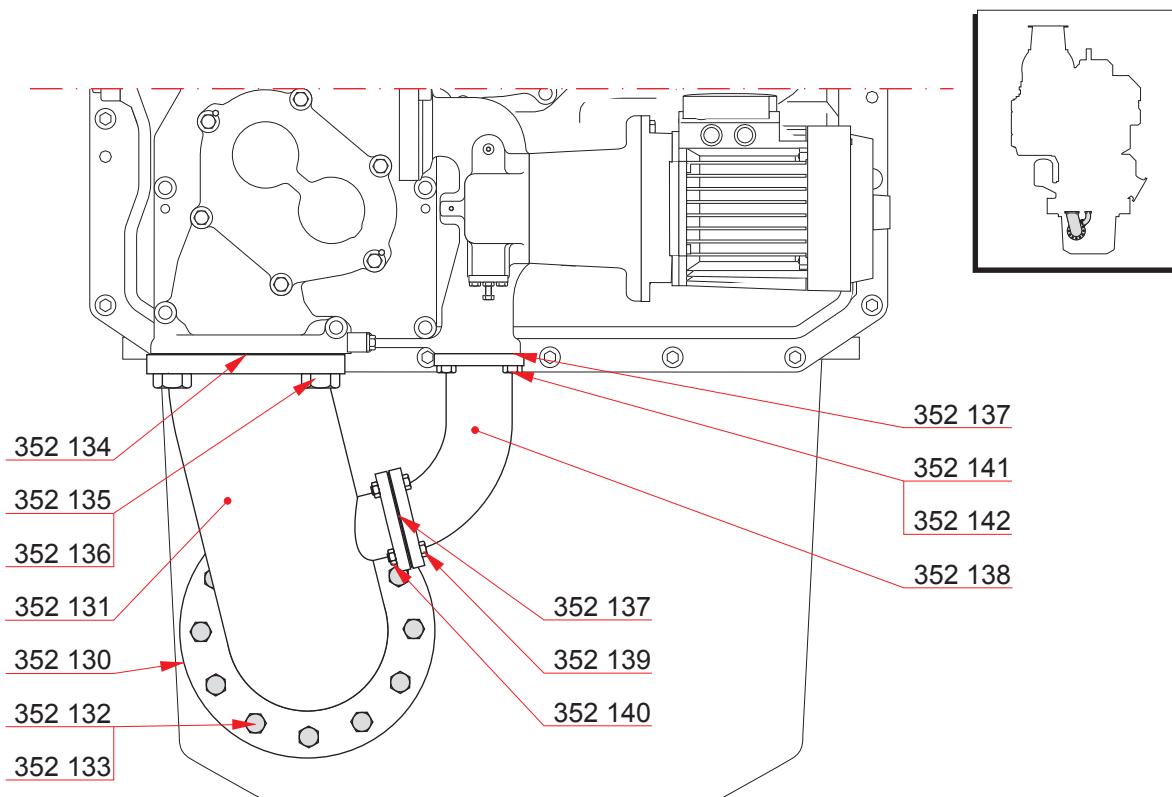
Fuel pipes in free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 016	Pipe	1	2.5
350 017	Pipe	1	3.5
350 021	Screw	20	-
350 022	O-ring	6	-
350 038	Support	1	4.7
350 044	Nut	4	-
350 056	Screw	4	-
350 058	Pipe	1	2.5
350 140	Nut	8	-
350 141	Screw	4	0.1
350 470	Screw	4	-
350 744	Washer	24	-
350 826	Screw	4	-
350 835	Damper	2	2.9
350 841	Pipe	1	3.8
350 843	Connection piece	1	4.5
350 929	Connection piece	1	7.4
350 048	Control valve	1	1.0
350 471	Plug	1	-
350 472	Sealing ring	1	-
350 967	O-ring	4	-
350 968	Screw	4	0.1

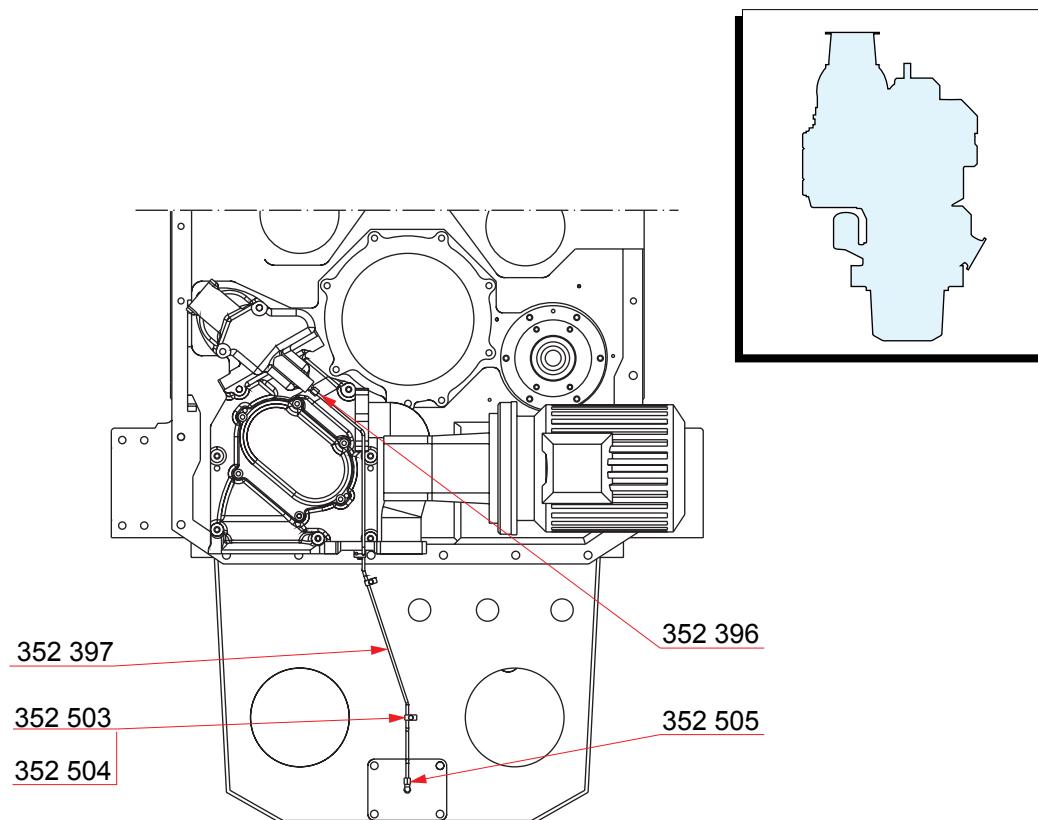
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Oil suction pipe



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 130	O-ring	1	-
352 131	Pipe	1	31.0
352 132	Screw	12	-
352 133	Washer	12	-
352 134	O-ring	1	-
352 135	Screw	4	0.2
352 136	Washer	4	-
352 137	O-ring	2	-
352 138	Pipe	1	4.0
352 139	Screw	4	-
352 140	Nut	4	-
352 141	Screw	4	-
352 142	Washer	4	-

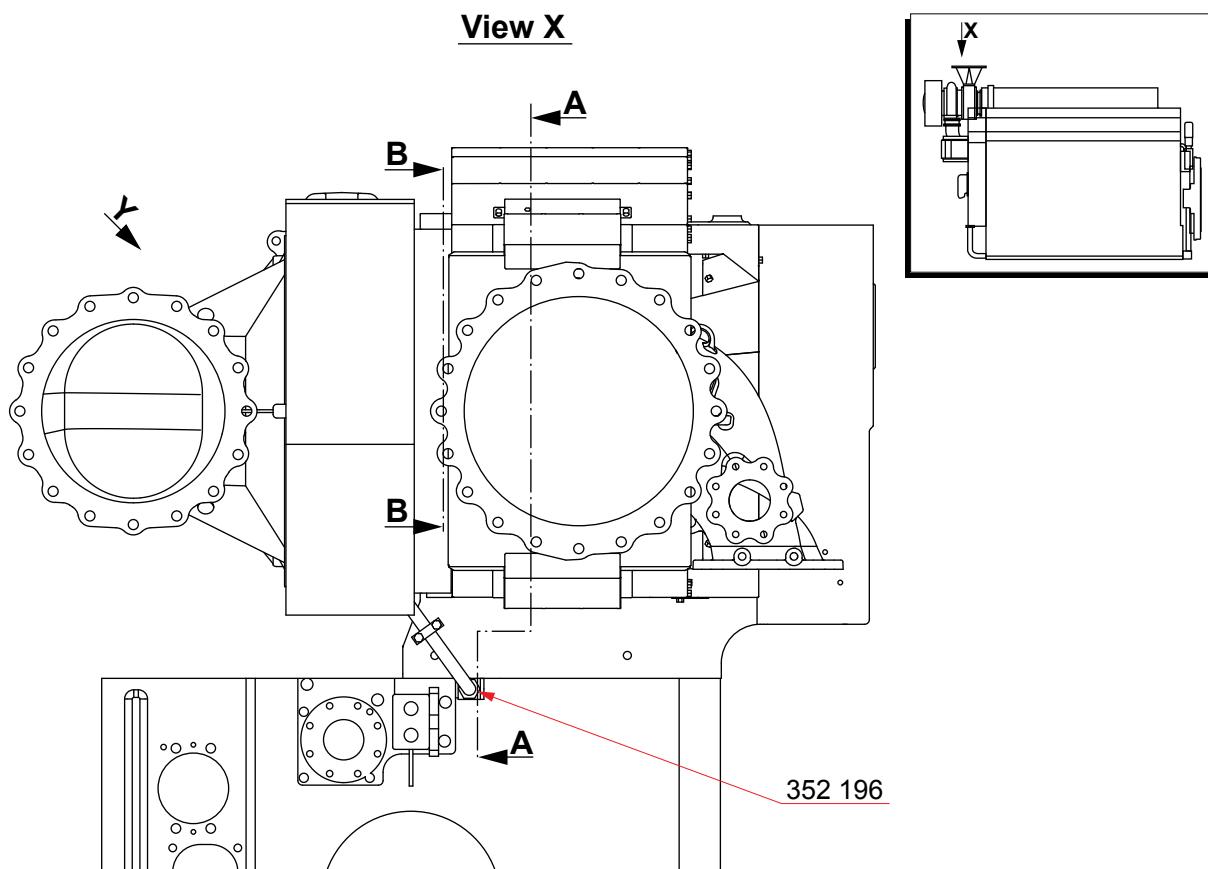
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Oil pipe

Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 396	Pipe union	1	-
352 397	Pipe	1	-
352 503	Screw	3	-
352 504	Pipe clamp	6	-
352 505	Angle union	1	-

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Lube oil pipes for turbocharger

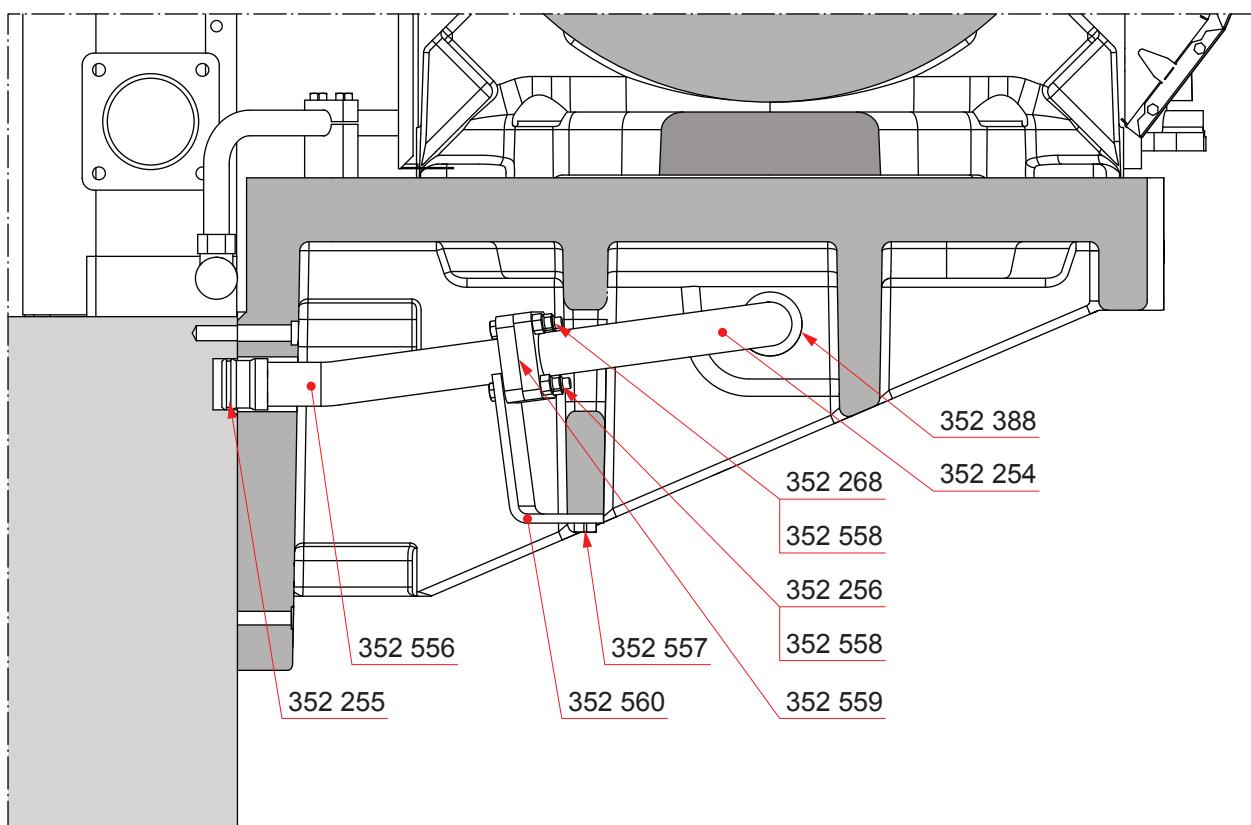


Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 196	Pipe union	1	-

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 Updated: 08.06.2007

Lube oil pipes for turbocharger

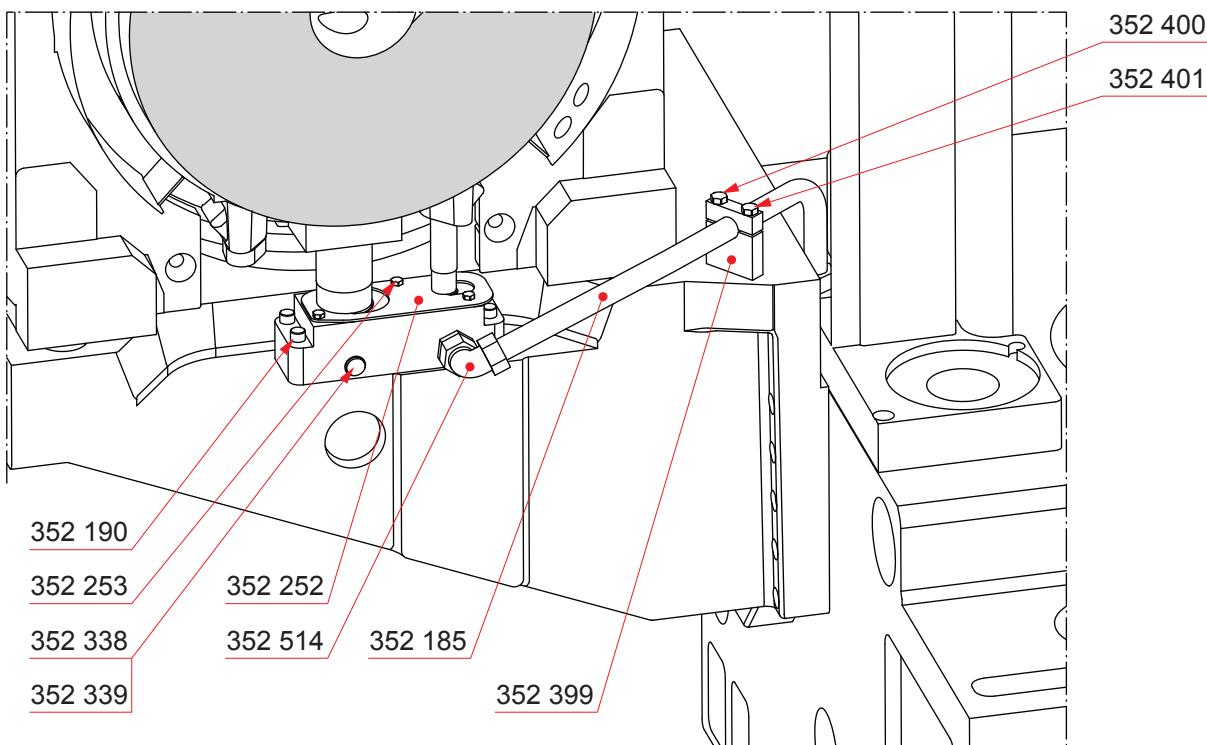
Section B-B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 254	Pipe	1	-
352 255	O-ring	1	-
352 256	Screw	2	-
352 268	Screw	2	-
352 388	O-ring	1	-
352 556	Pipe	1	-
352 557	Screw	2	-
352 558	Nut	4	-
352 559	O-ring	1	-
352 560	Bracket	1	-

Lube oil pipes for turbocharger

View Y



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 185	Pipe	1	-
352 190	Screw	4	-
352 252	Fastening plate	1	-
352 253	Screw	3	-
352 338	Sealing ring	1	-
352 339	Plug	1	-
352 399	Pipe clamp	1	-
352 400	Screw	1	-
352 401	Screw	1	-
352 514	Pipe union	1	-

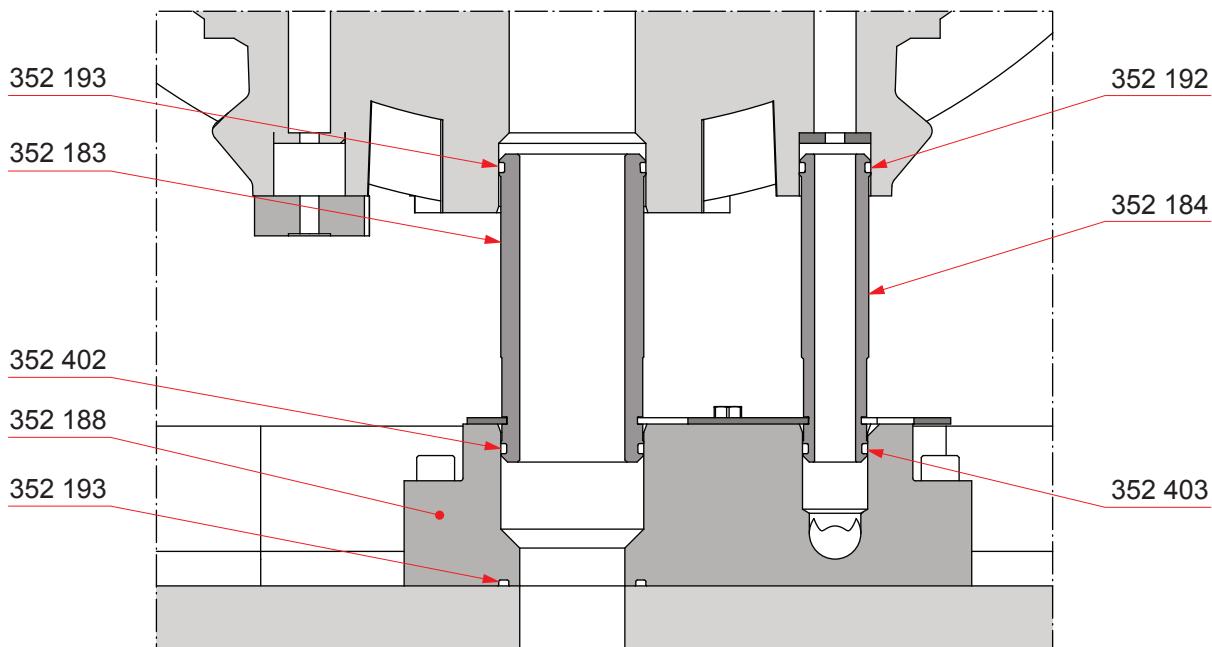
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Updated: 08.06.2007

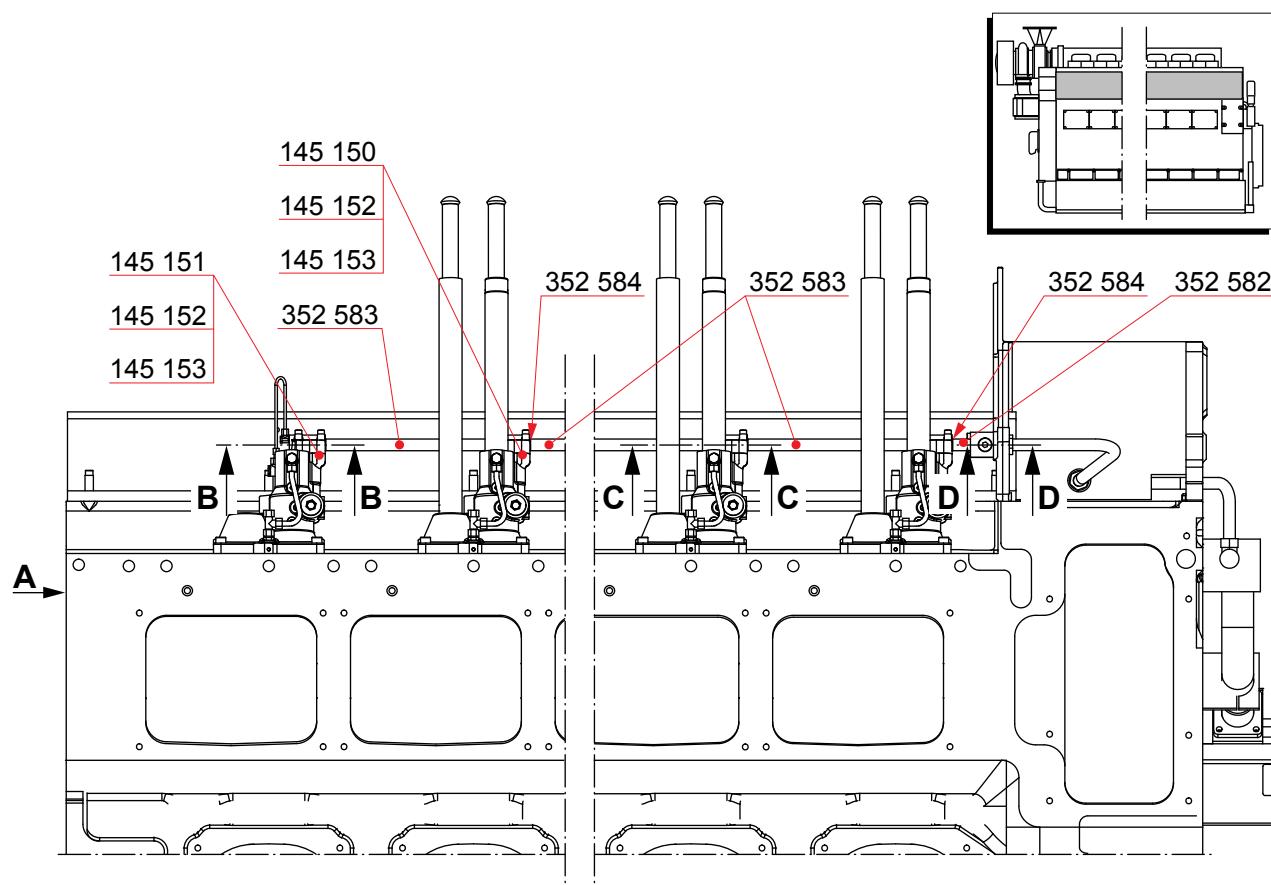
Lube oil pipes for turbocharger

Section A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 183	Pipe	1	-
352 184	Pipe	1	-
352 188	Connection piece	1	-
352 192	O-ring	1	-
352 193	O-ring	2	-
352 402	O-ring	1	-
352 403	O-ring	1	-

Lubricating oil pipes in Hot-box

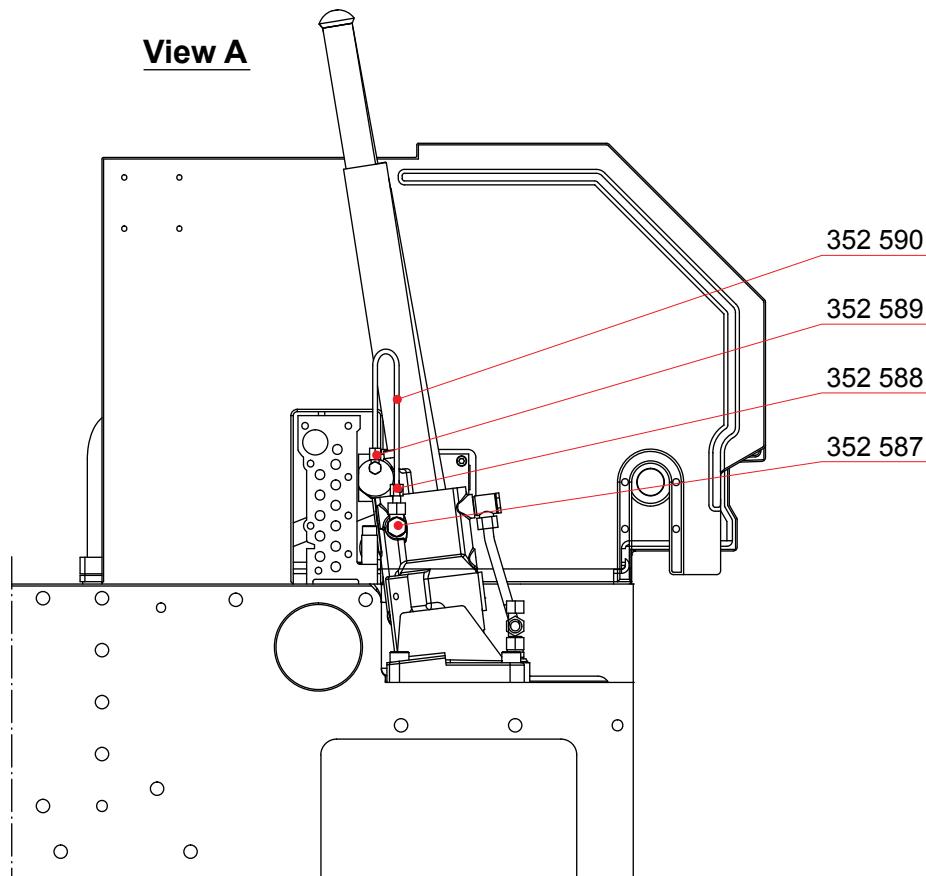


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 150	Flange	*	-
145 151	End flange	1	-
145 152	Screw	*	-
145 153	O-ring	*	-
352 582	Pipe	1	-
352 583	Pipe	*	-
352 584	Locking ring	*	-

NOTE! *) See page 4.

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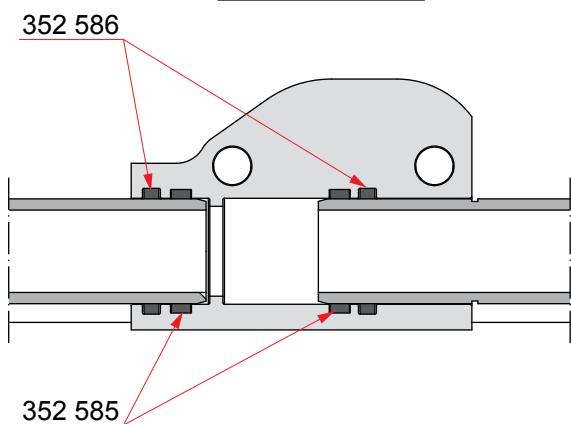
Lubricating oil pipes in Hot-box



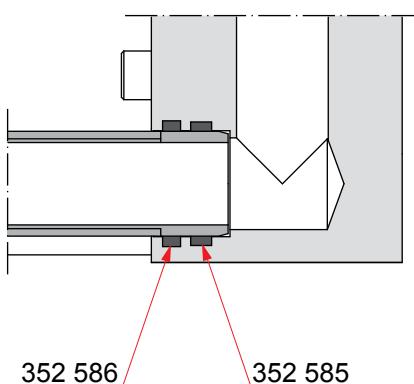
Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 587	Pipe union	1	-
352 588	Reduction union	1	-
352 589	Pipe union	1	-
352 590	Pipe	1	-

Lubricating oil pipes in Hot-box

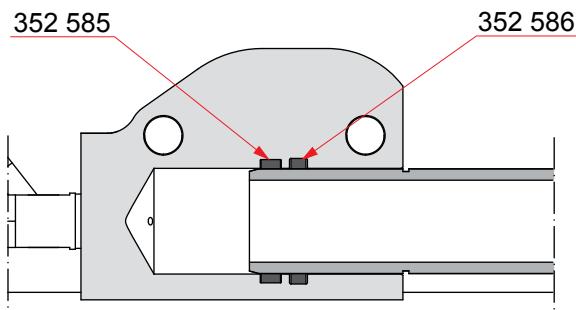
Section C - C



Section D - D



Section B - B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 585	Guide ring	*	-
352 586	O-ring	*	-

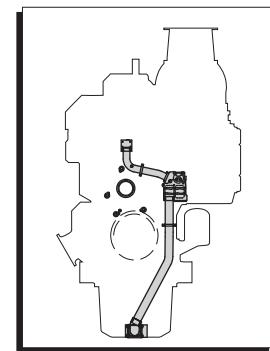
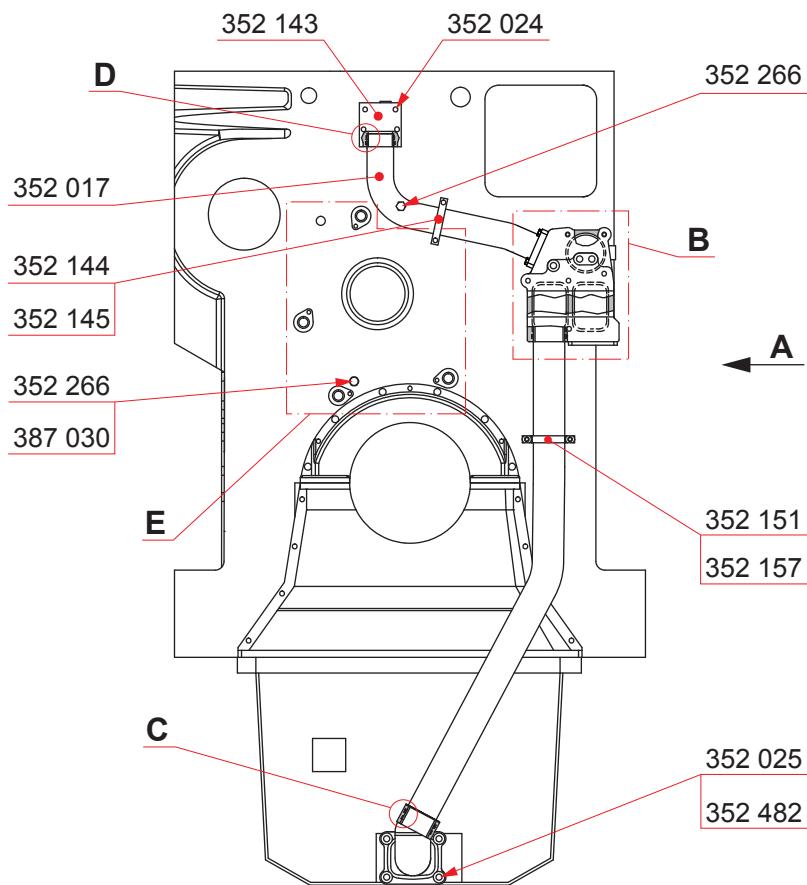
Edition: C
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Lubricating oil pipes in Hot-box

Quantity according to number of cylinders

Part No	Pieces			
	6L32	7L32	8L32	9L32
145 150	5	6	7	8
145 152	12	14	16	18
145 153	6	7	8	9
352 583	5	6	7	8
352 584	6	7	8	9
352 585	12	14	16	18
352 586	12	14	16	18

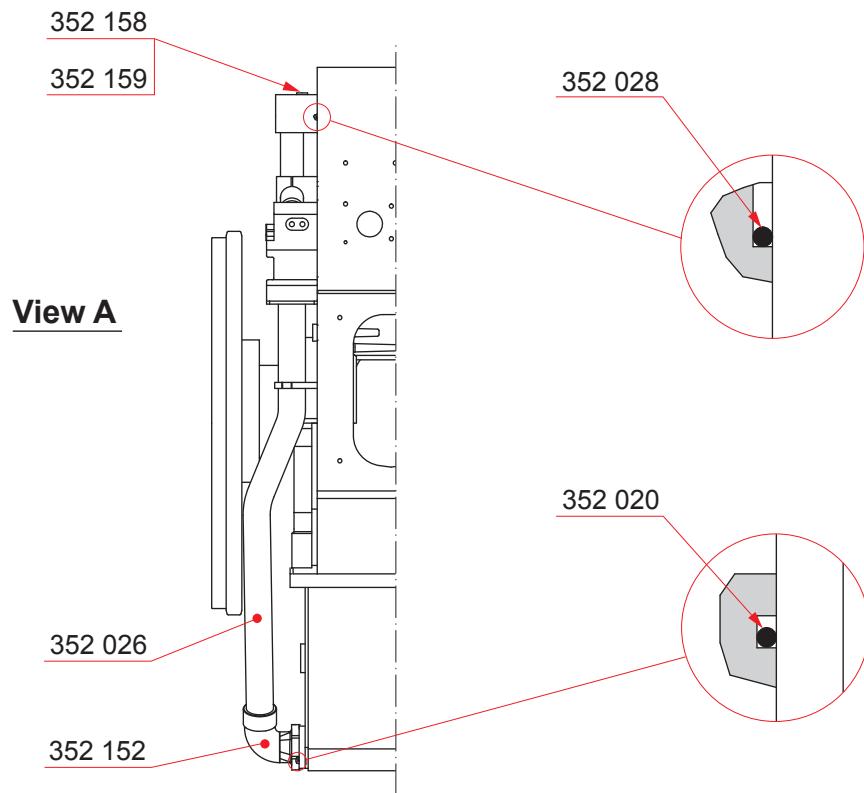
Lube oil pipes in flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 017	Pipe	1	-
352 024	Screw	4	-
352 025	Screw	4	-
352 143	Distance piece	1	-
352 144	Screw	2	-
352 145	Clamp	1	-
352 151	Clamp	1	-
352 157	Screw	2	-
352 266	Screw	2	-
352 482	Washer	4	-
387 030	Glue compound	1	-

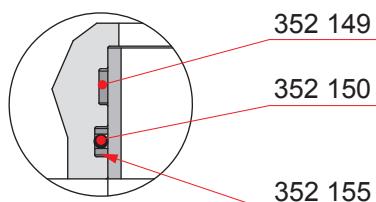
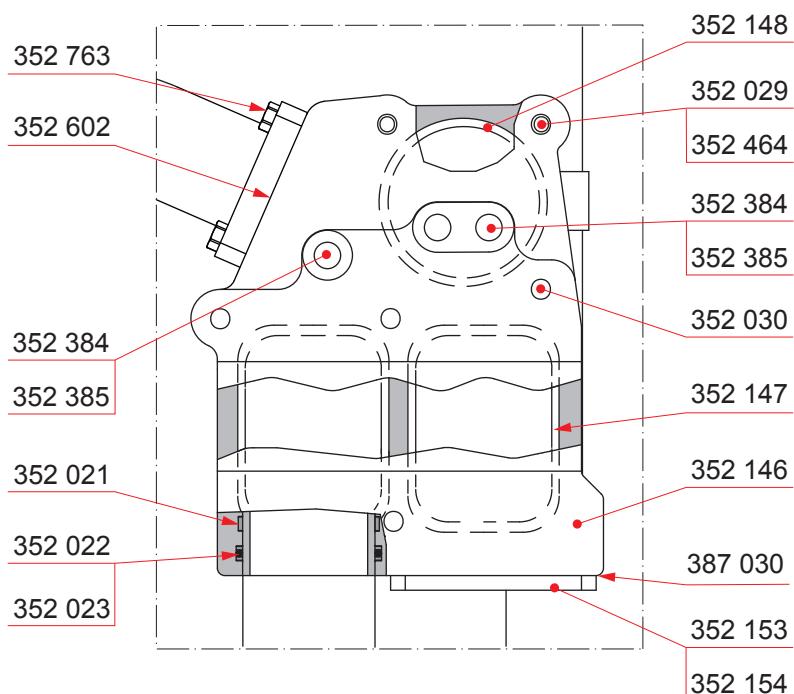
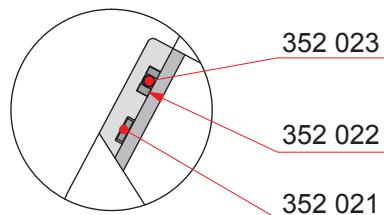
Edition: B
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Updated: 30.04.2009

Lube oil pipes in flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 020	O-ring	1	-
352 026	Pipe	1	-
352 028	O-ring	1	-
352 152	Pipe	1	-
352 158	Plug	1	-
352 159	Gasket	1	-

Lube oil pipes in flywheel end

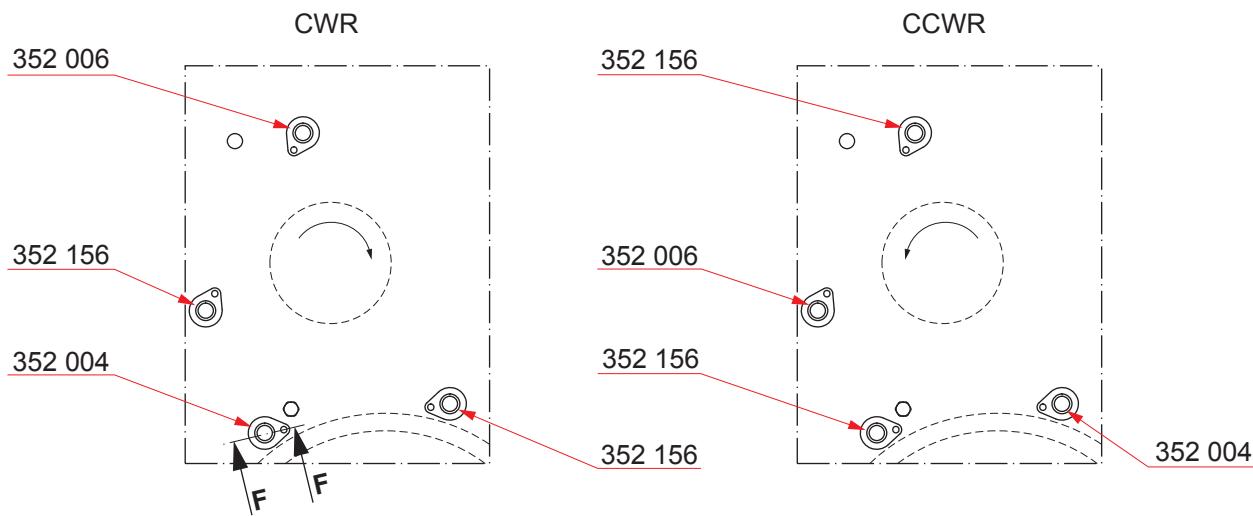
Detail D**Detail B****Detail C**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 021	Guide ring	2	-
352 022	Support ring	4	-
352 023	O-ring	2	-
352 029	Screw	2	-
352 030	Screw	4	-
352 146	Distance piece	1	-
352 147	O-ring	2	-
352 148	O-ring	1	-
352 149	Guide ring	1	-
352 150	O-ring	1	-
352 153	Flange	1	-
352 154	Screw	4	-
352 155	Support ring	2	-
352 384	Plug	3	-
352 385	Sealing ring	3	-
352 464	Washer	2	-
352 602	O-ring	1	-
352 763	Screw	4	-
387 030	Glue compound	1	-

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Lube oil pipes in flywheel end

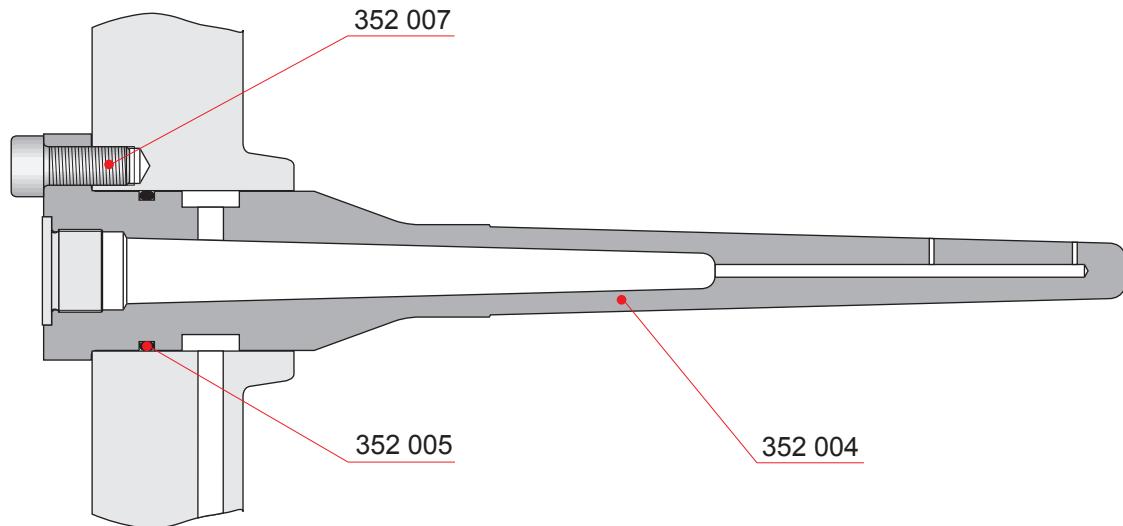
Detail E



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 004	Oil nozzle	1	-
352 006	Oil nozzle	1	-
352 156	Oil nozzle	2	-

Lube oil pipes in flywheel end

Section F-F

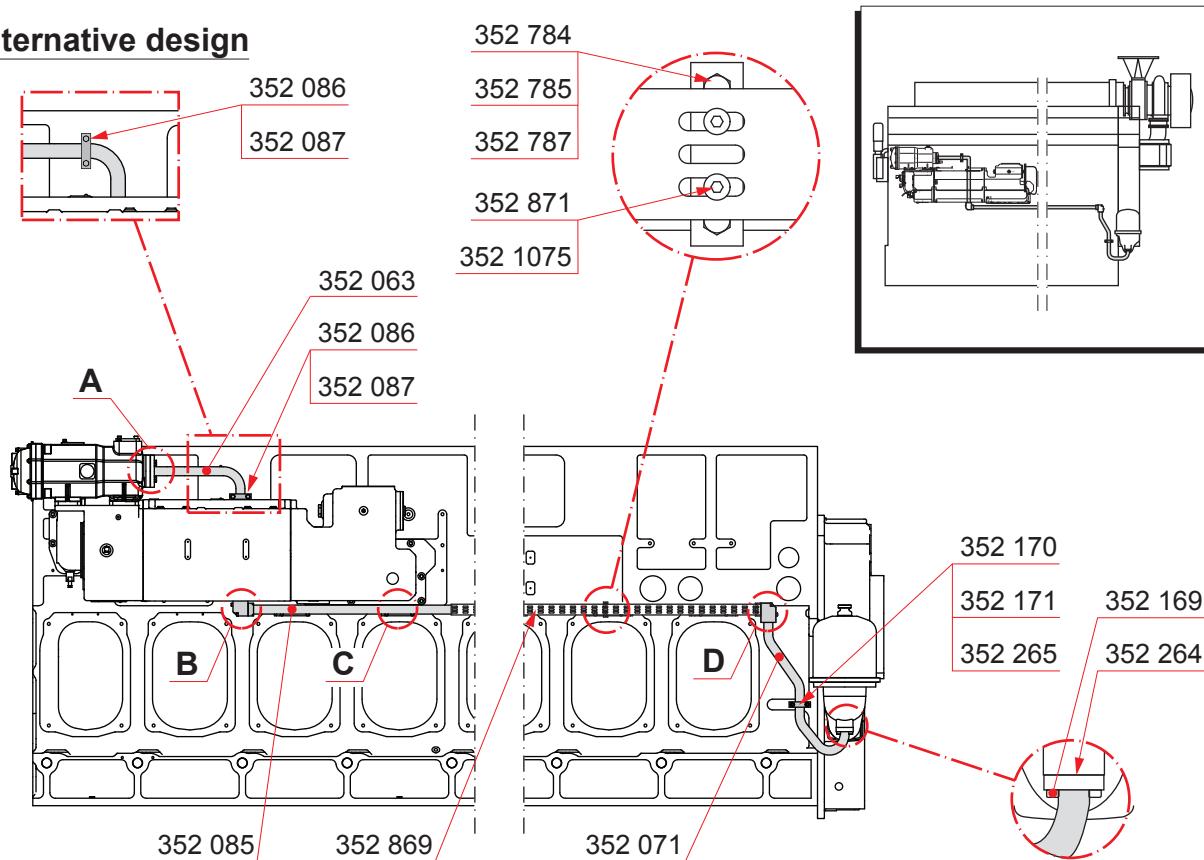


Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 004	Oil nozzle	1	-
352 005	O-ring	8	-
352 007	Screw	4	-

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Lube oil system

Alternative design

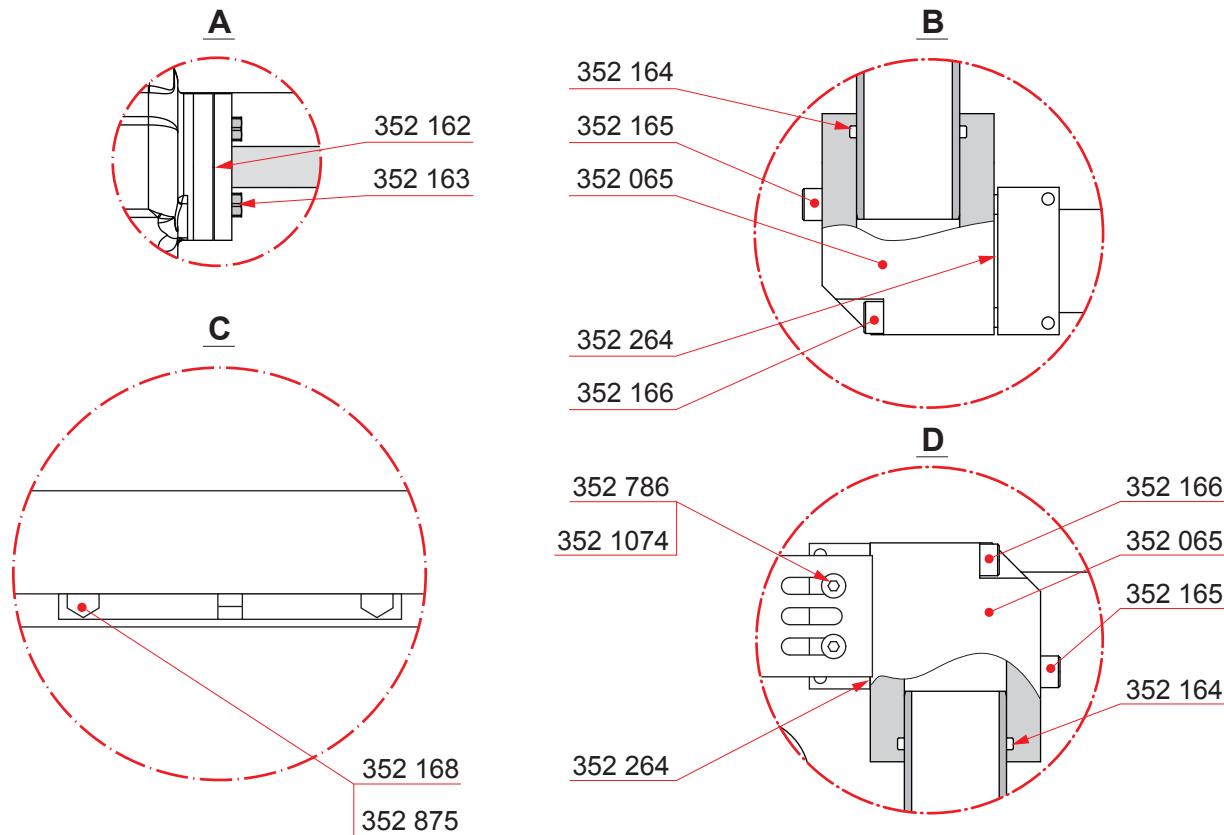


Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 063	Pipe	1	-
352 071	Pipe	1	-
352 085	Pipe	1	-
352 086	Pipe clamp	1	-
352 087	Screw	2	-
352 169	Screw	4	-
352 170	Clamp	1	-
352 171	Screw	2	-
352 264	O-ring	3	-
352 265	Nut	2	-
352 784	Pipe clamp	2	-
352 785	Washer	4	-
352 787	Screw	4	-
352 869	Cable rail **)	1	-
352 871	Screw	4	-
352 1075	Distance sleeve	4	-

NOTE! **) Length needed when ordering

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Lube oil system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 065	Pipe union	2	-
352 162	Gasket	1	-
352 163	Screw	4	-
352 164	O-ring	2	-
352 165	Screw	4	-
352 166	Screw	4	-
352 168	Screw	*	-
352 264	O-ring	3	-
352 786	Screw	2	-
352 875	Washer	*	-
352 1074	Distance sleeve	2	-

NOTE! * See page 3.

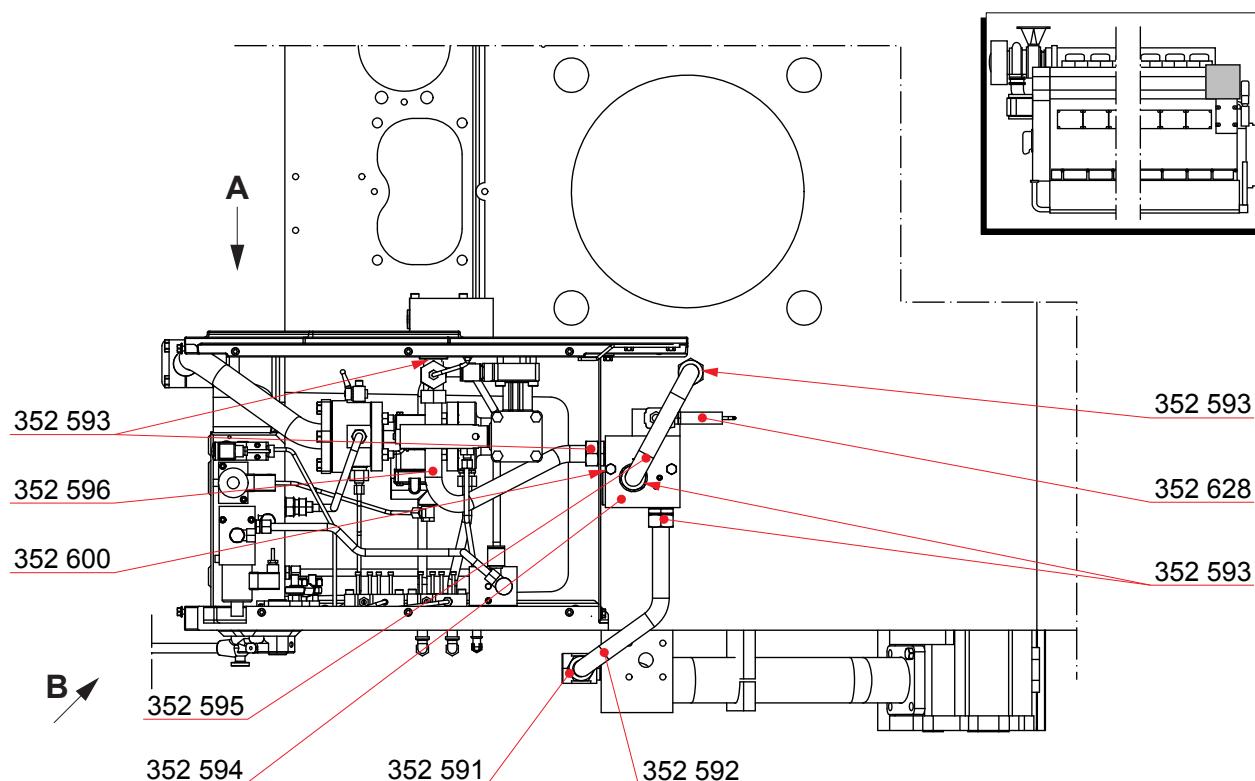
Lube oil system

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
352 168 Screw	10	12	12	14
352 875 Washer	10	12	12	14

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Lubricating oil pipes with control valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 591	Pipe union	1	-
352 592	Pipe	1	-
352 593	Pipe union	4	-
352 594	Control valve	1	-
352 595	Pipe	1	-
352 596	Pipe	1	-
352 600	Screw	2	-
352 628	Solenoid	1	-

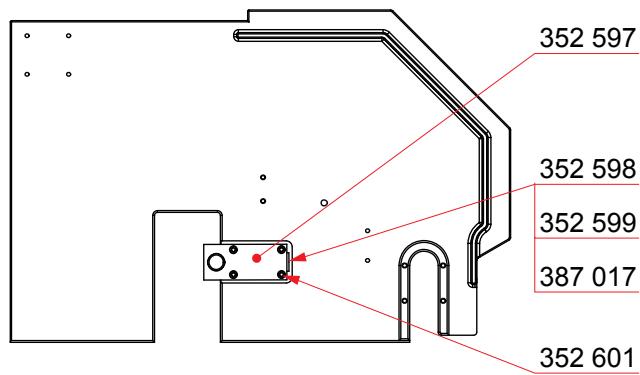
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Updated: 25.01.2013

Lubricating oil pipes with control valve

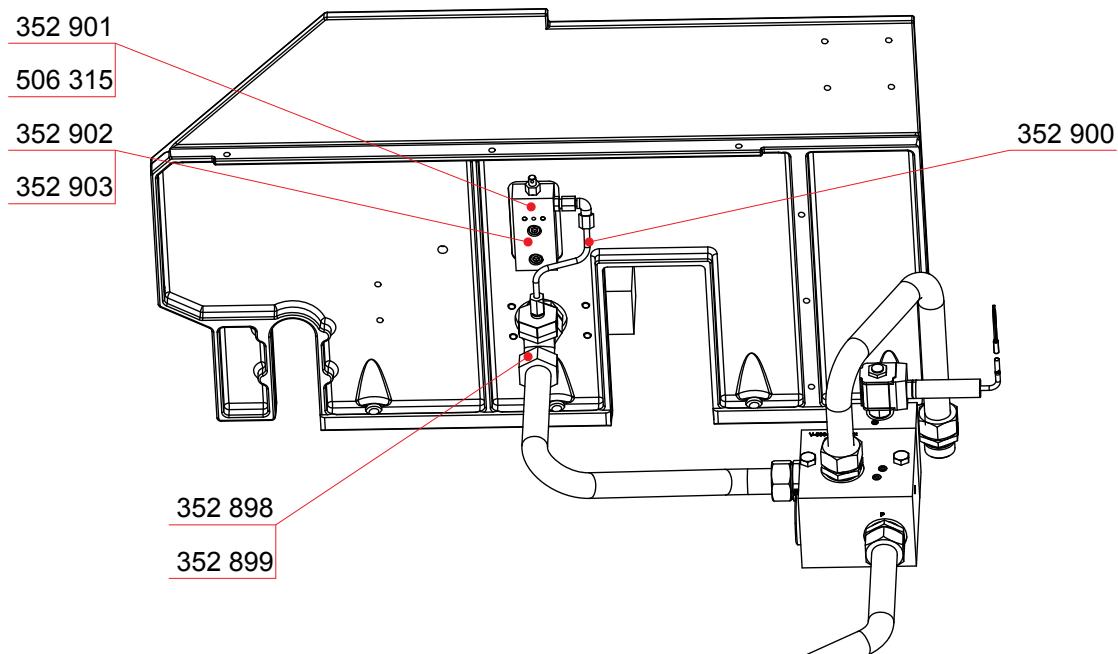
View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 597	Connection piece	1	-
352 598	Plug	1	-
352 599	Sealing ring	1	-
352 601	Screw	4	-
387 017	Glue compound	1	-

Lubricating oil pipes with control valve

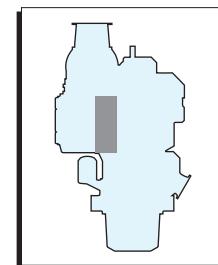
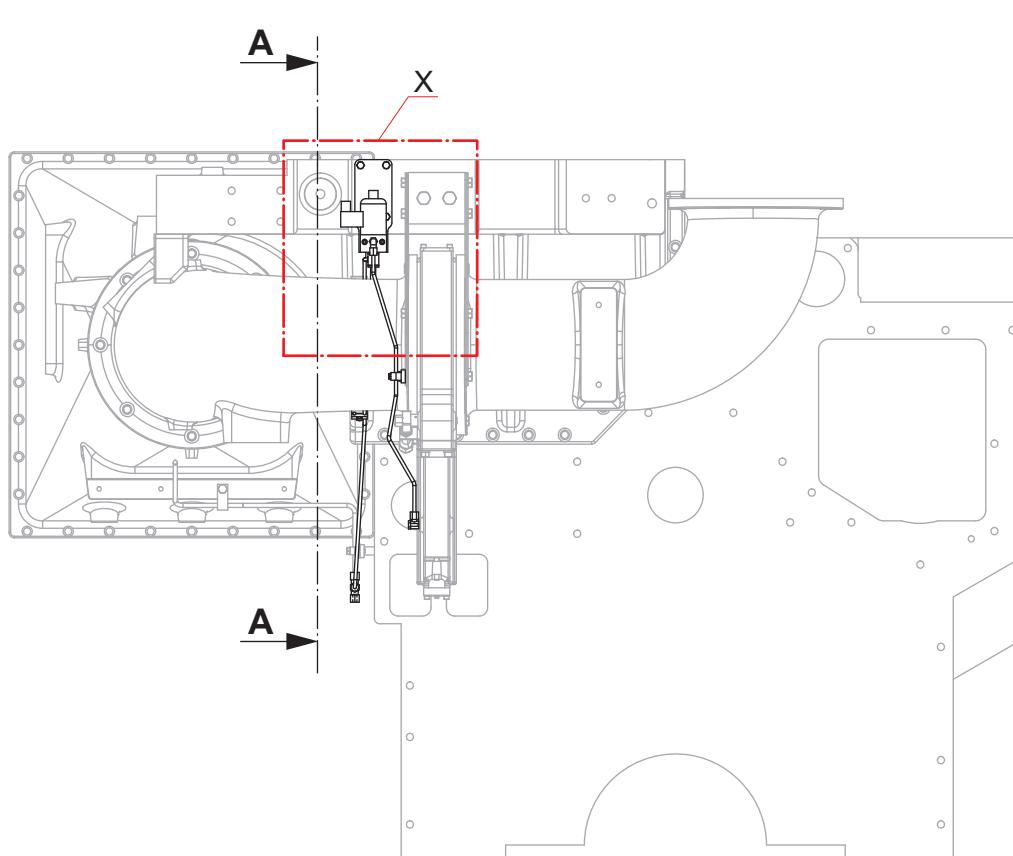
View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 898	Pipe union	1	-
352 899	Reduction union	1	-
352 900	Pipe	1	-
352 901	Adapter and test valve	1	-
506 315	Valve	1	-
352 902	Pipe union	1	-
352 903	Screw	2	-

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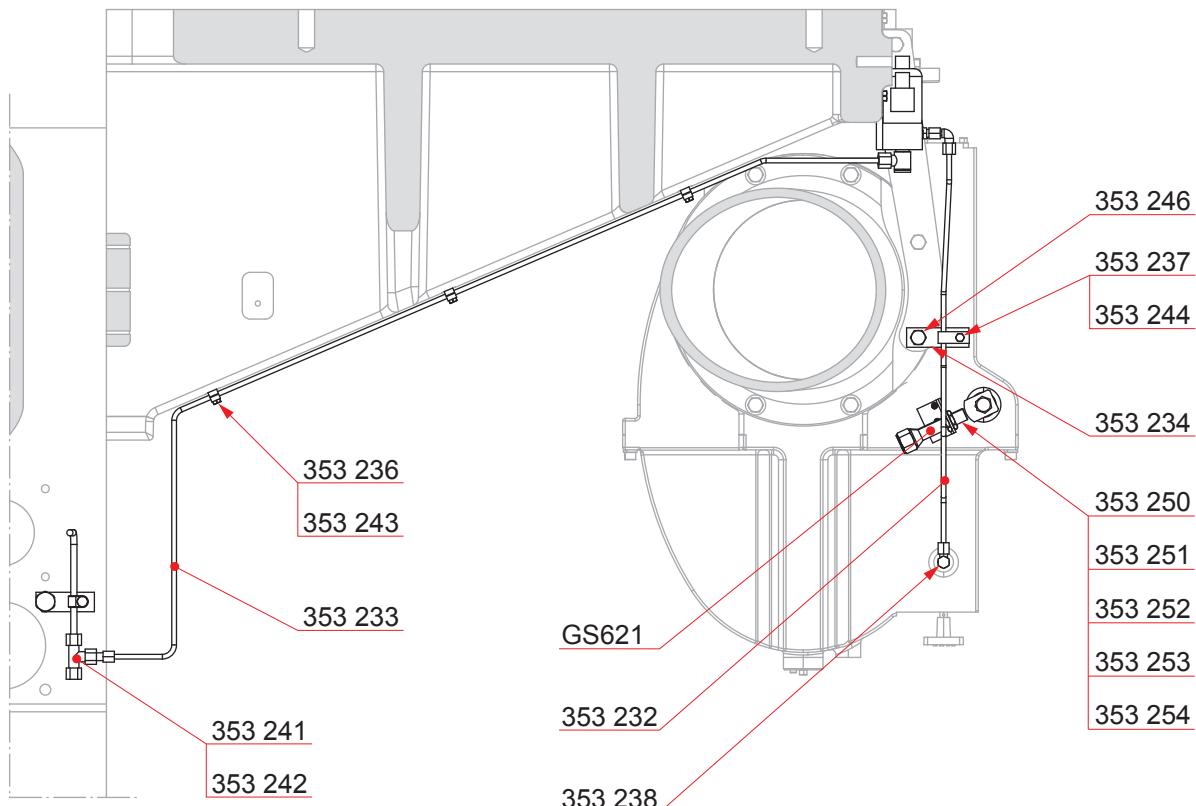
Control air system for shut off valve



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Control air system for shut off valve

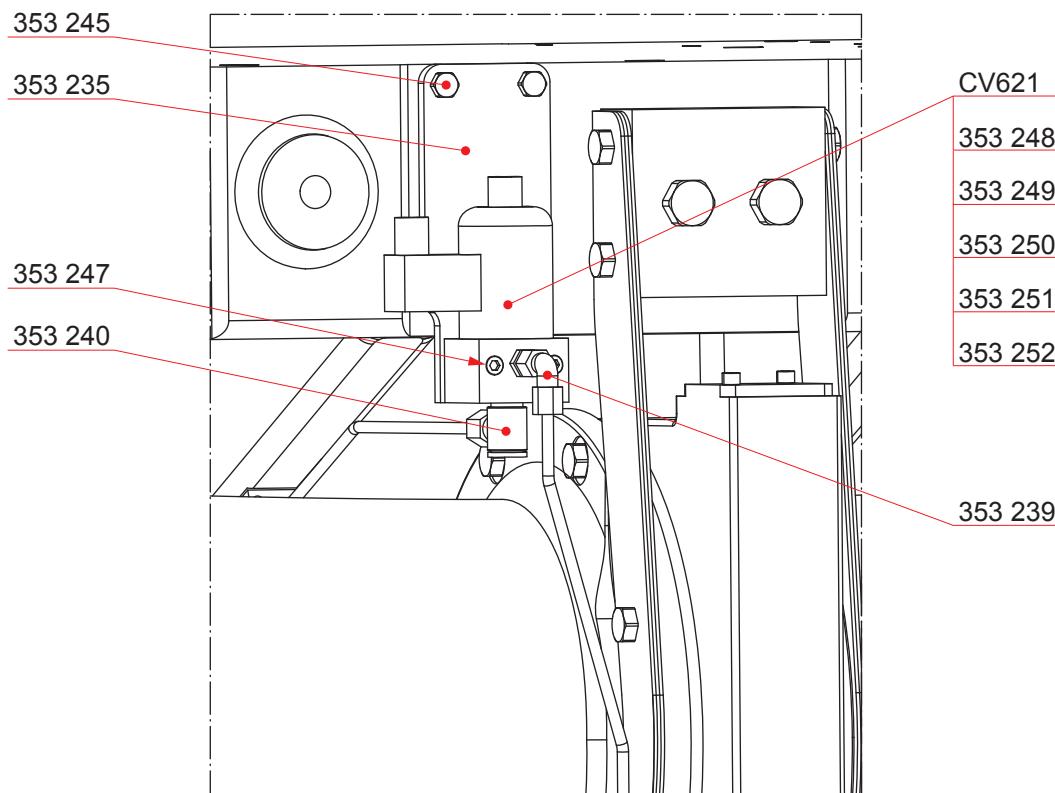
Section A - A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 232	Air pipe	1	-
353 233	Air pipe	1	-
353 234	Bracket	1	-
353 236	Pipe clamp	6	-
353 237	Pipe clamp	1	-
353 238	Angle union	1	-
353 241	T-union	1	-
353 242	Reduction union	1	-
353 243	Screw	3	-
353 244	Screw	1	-
353 246	Screw	1	-
353 250	Cable clamp	6	-
353 251	Steel strip	6	-
353 252	Screw	6	-
353 253	Cable gland	1	-
353 254	Armoured hose	1	-
GS621	Sensor	1	-

Control air system for shut off valve

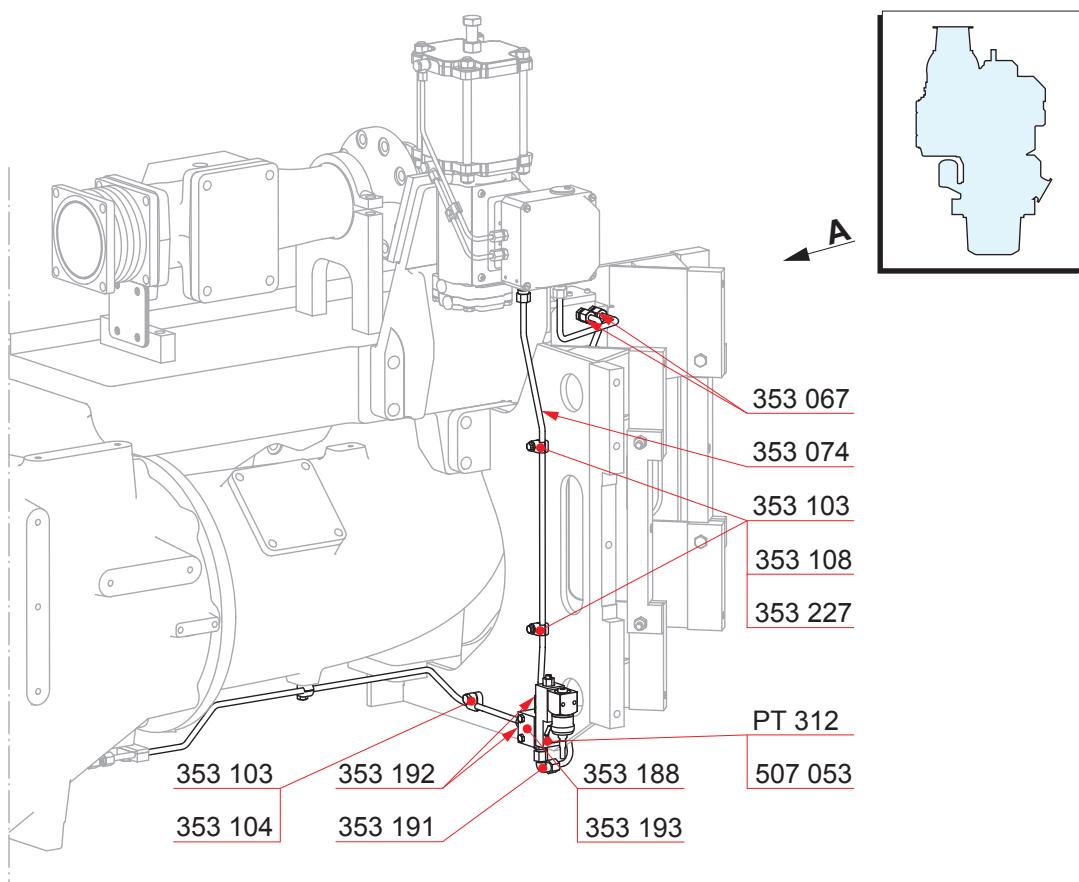
Detail X



Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 235	Clamp	1	-
353 239	Angle union	1	-
353 240	Angle union	1	-
353 245	Screw	4	-
353 247	Screw	2	-
353 248	Valve	1	-
353 249	Plug	1	-
353 250	Cable clamp	6	-
353 251	Steel strip	6	-
353 252	Screw	6	-
CV621	Solenoid valve	1	-

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Control air system

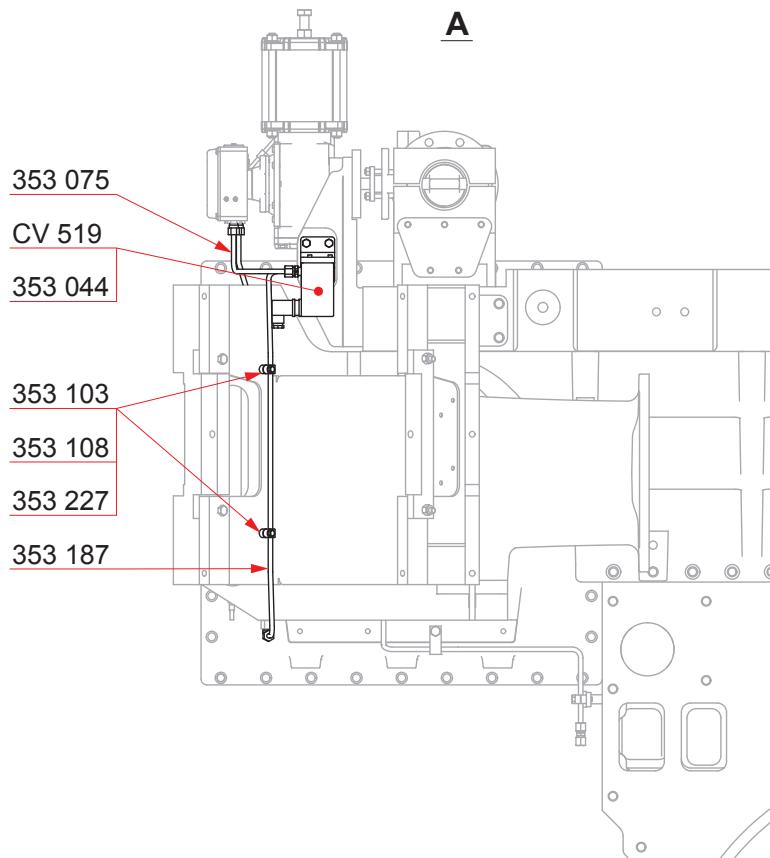


Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 067	Pipe union	2	-
353 074	Pipe	1	0.1
353 103	Pipe clamp	7	-
353 104	Screw	3	0.1
353 108	Screw	4	-
353 188	Connection part	1	0.4
353 191	Pipe union	1	-
353 192	Pipe union	2	-
353 193	Screw	2	-
353 227	Washer	4	-
507 053	Pressure gauge valve *)	1	0.6
PT312	Pressure sensor	1	0.8

NOTE! *) See 507-

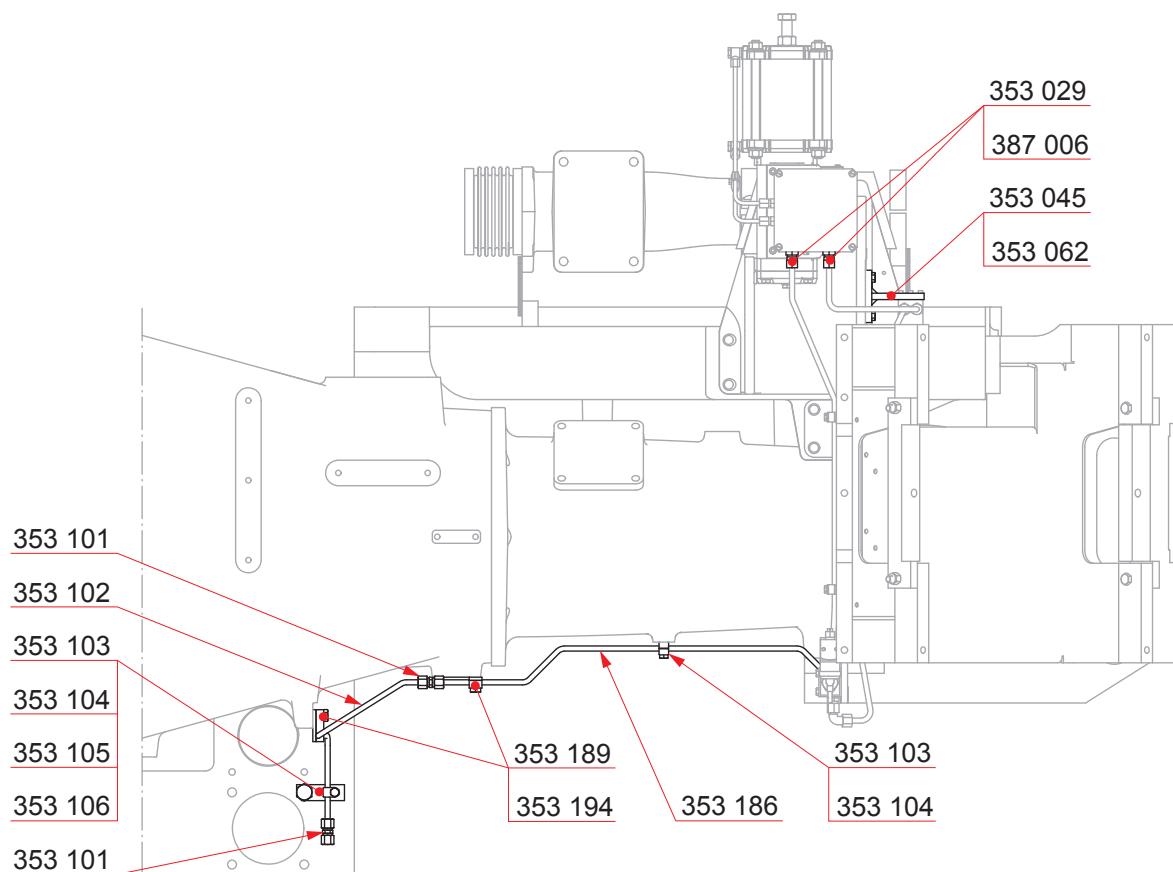
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Control air system



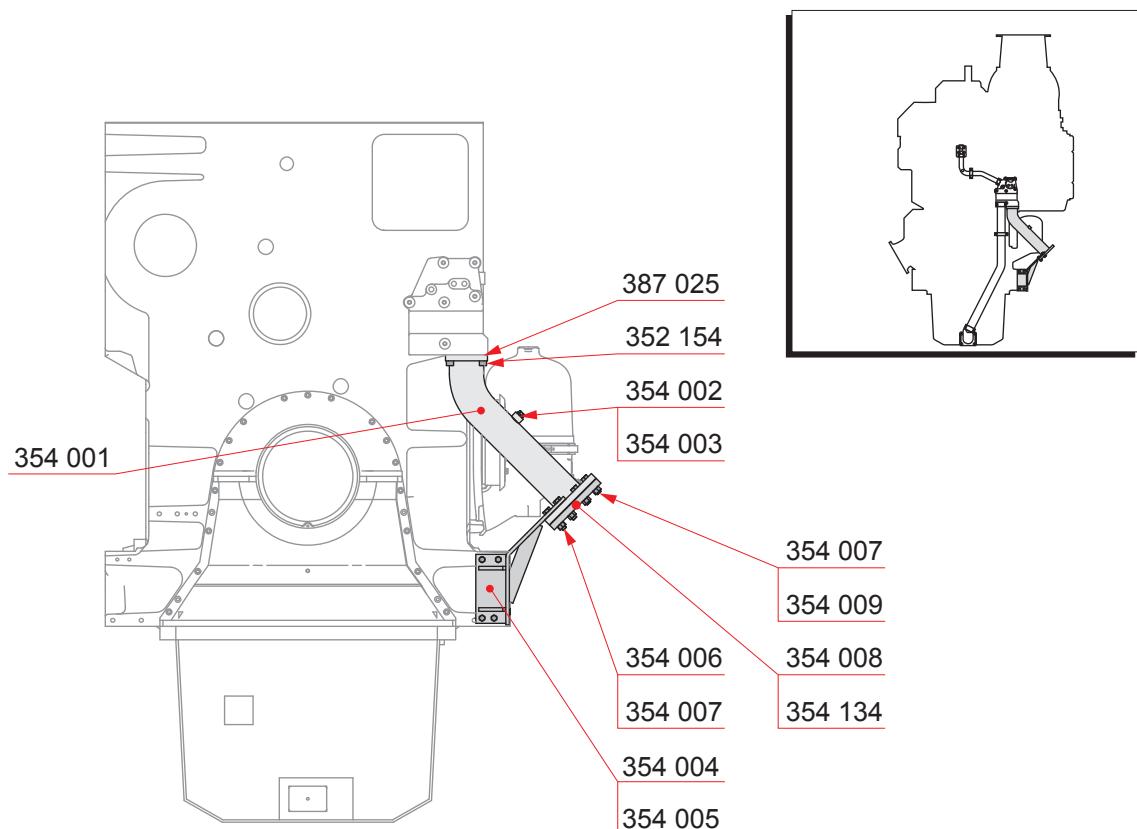
Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 044	Screw	3	-
353 075	Pipe	1	-
353 103	Pipe clamp	7	-
353 108	Screw	4	-
353 187	Pipe	1	0.1
353 227	Washer	4	-
CV519	I/P converter	1	0.6

Control air system



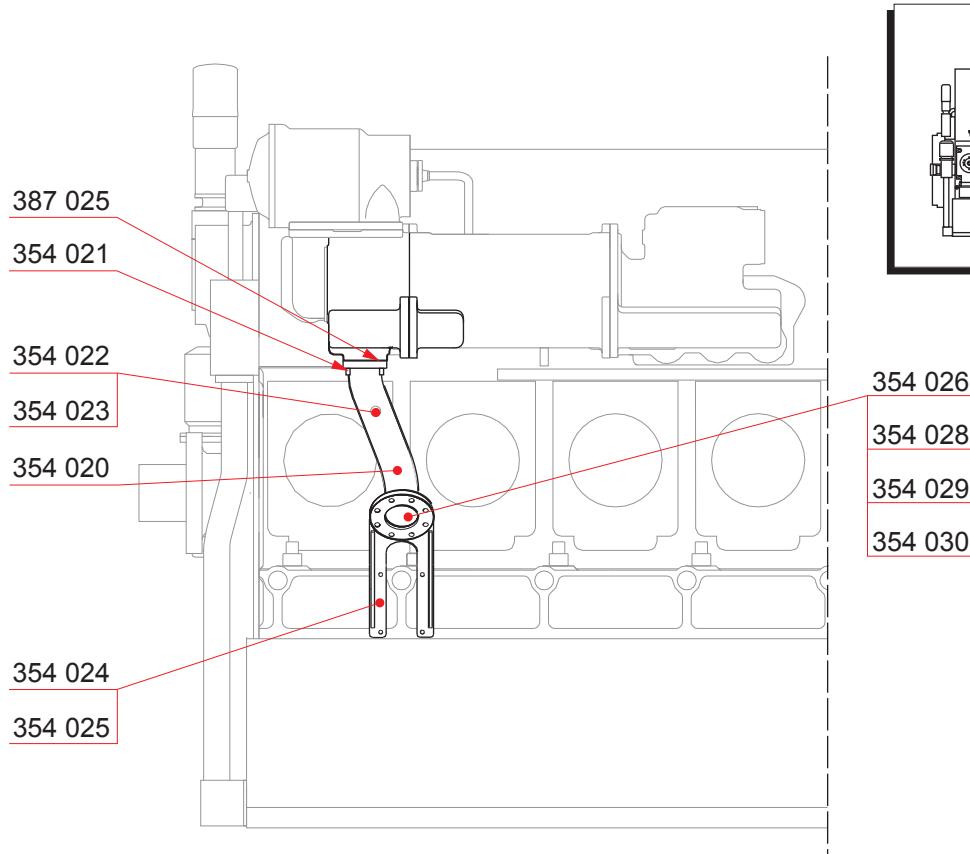
Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 029	Pipe union	2	-
353 045	Bracket	1	0.8
353 062	Screw	3	-
353 101	Pipe union	2	-
353 102	Pipe	1	0.1
353 103	Pipe clamp	7	-
353 104	Screw	3	0.1
353 105	Bracket	1	0.1
353 106	Screw	1	-
353 186	Pipe	1	0.1
353 189	Pipe clamp	2	0.1
353 194	Screw	2	-
387 006	Glue compound	1	-

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LT-water pipe

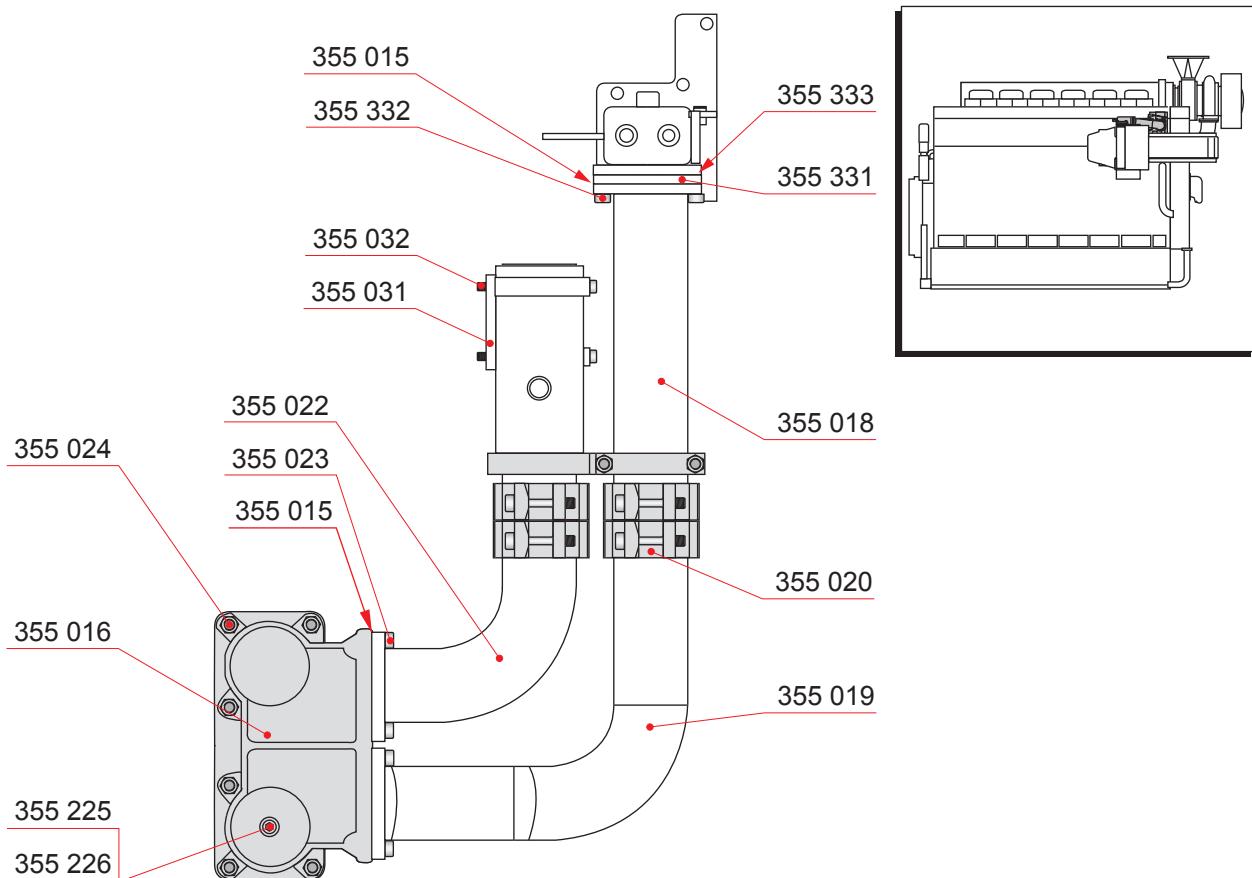
Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 154	Screw	4	-
354 001	Pipe	1	-
354 002	Plug	1	-
354 003	Sealing ring	1	-
354 004	Bracket	1	-
354 005	Screw	4	-
354 006	Screw	4	-
354 007	Nut	8	-
354 008	Gasket	1	-
354 009	Screw	4	-
354 134	Flange	1	-
387 025	Glue compound	1	-

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LT-water pipe

Part No.	Description	Qty [Pcs]	Wt. [Kg]
354 020	Pipe	1	12.1
354 021	Screw	4	-
354 022	Plug	1	-
354 023	Sealing ring	1	-
354 024	Bracket	1	8.7
354 025	Screw	4	-
354 026	Screw	4	0.1
354 028	Gasket	1	-
354 029	Screw	4	0.1
354 030	Nut	8	-
387 025	Glue compound	1	-

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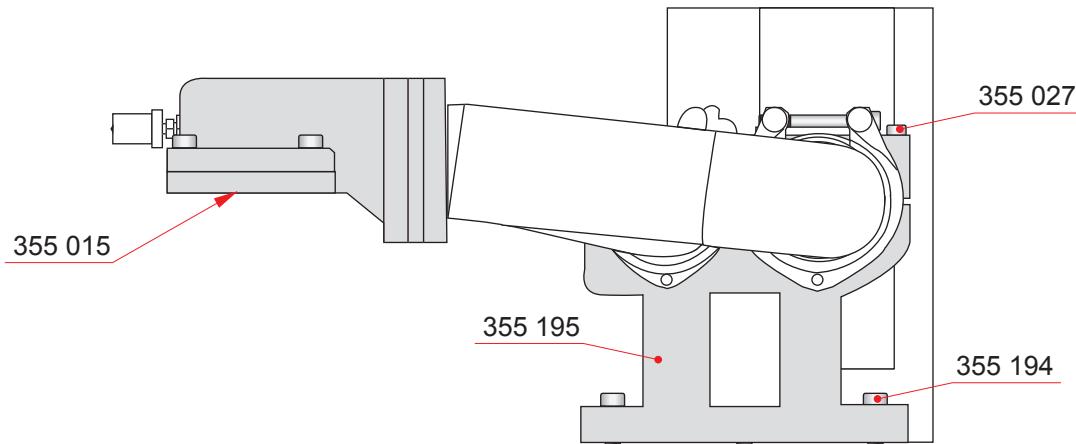
HT-water pipes

Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 015	O-ring	5	-
355 016	Pipe	1	-
355 018	Pipe	1	-
355 019	Pipe	1	-
355 020	Flexible coupling	2	1.1
355 022	Pipe	1	-
355 023	Screw	8	-
355 024	Screw	6	0.1
355 031	O-ring	1	-
355 032	Screw	2	0.1
355 225	Plug	1	-
355 226	Gasket	1	-
355 331	Flange	1	1.3
355 332	Screw	4	0.1
355 333	O-ring	1	-

Edition: B

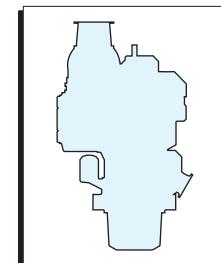
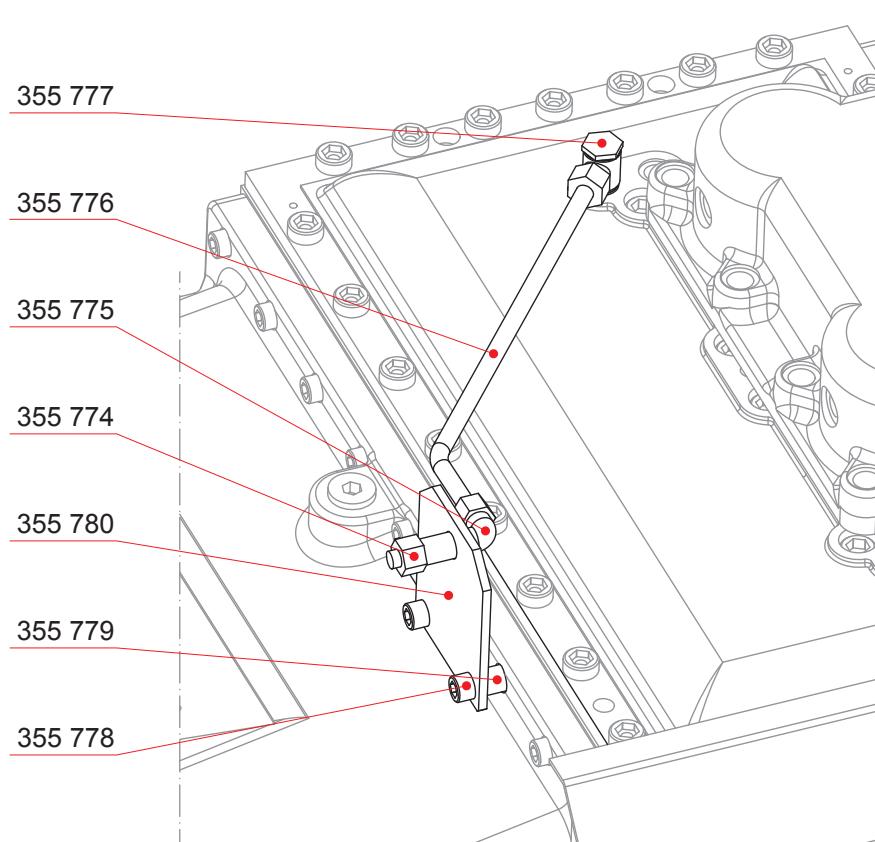
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Updated: 19.03.2003

HT-water pipes

Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 015	O-ring	5	-
355 027	Screw	2	-
355 194	Screw	3	-
355 195	Support	1	20.0

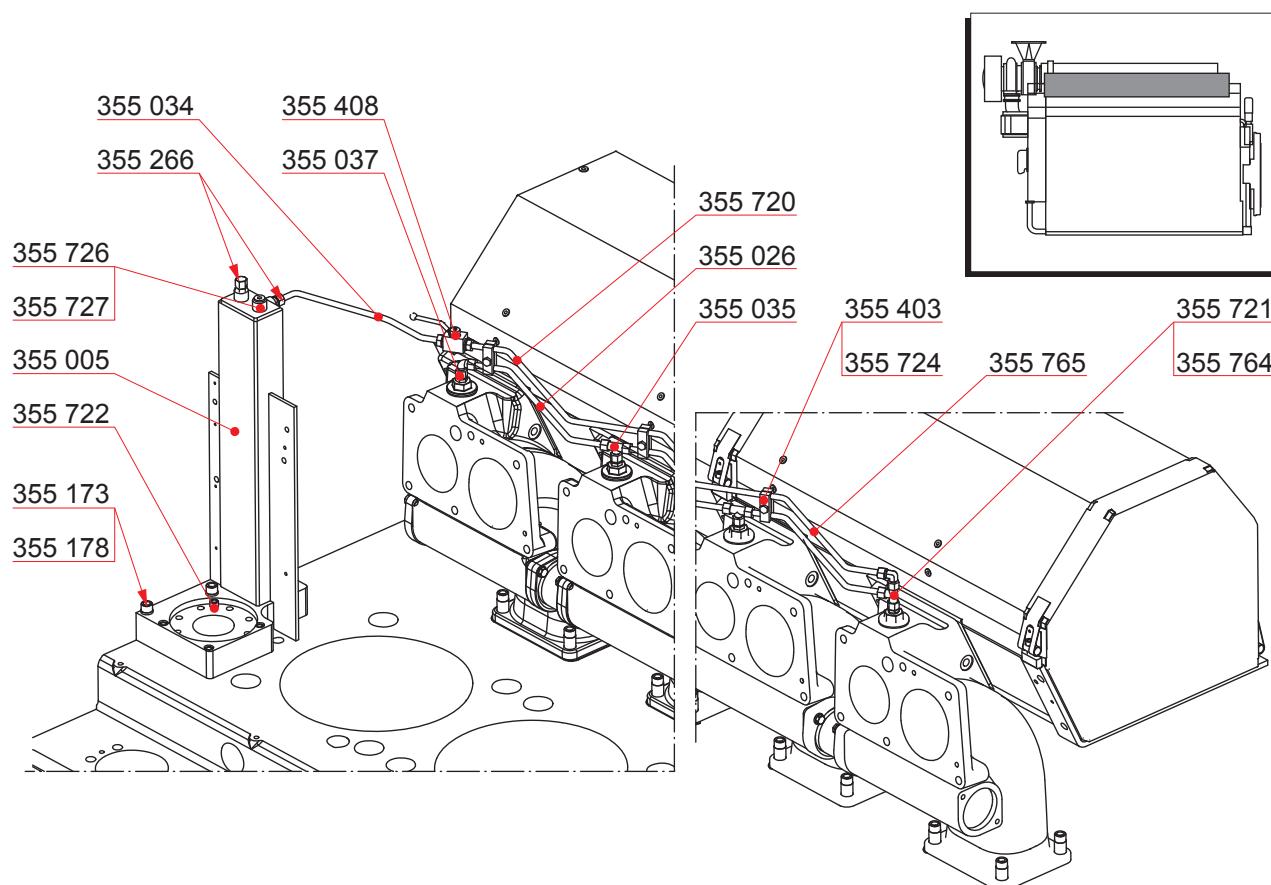
Air vent pipe



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 774	Plug	1	-
355 775	Pipe union	1	-
355 776	Pipe	1	-
355 777	Pipe union	1	-
355 778	Screw	2	-
355 779	Distance sleeve	2	-
355 780	Bracket	1	-

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Air vent system from multiducts

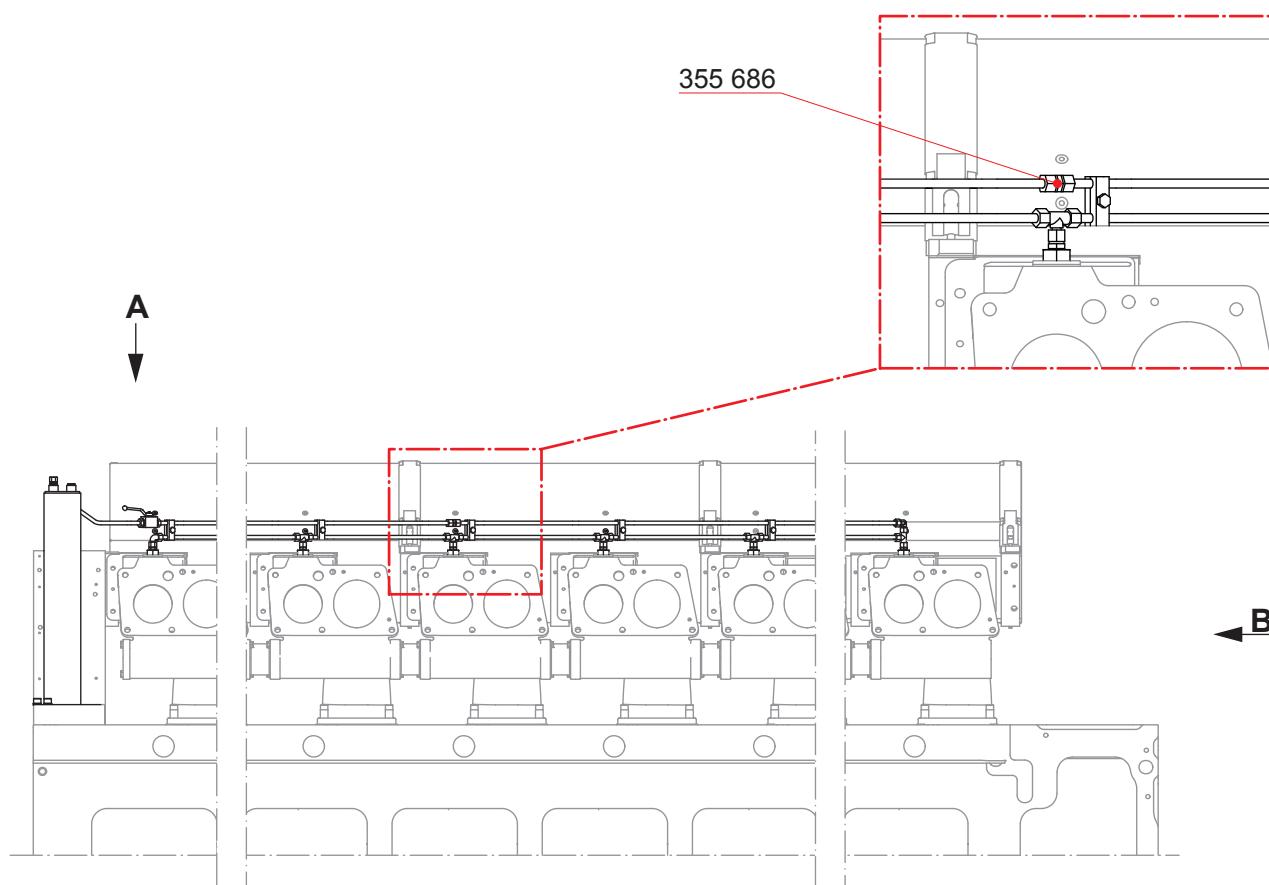


Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 005	Connecting water box	1	-
355 026	Pipe	*	-
355 034	Pipe	1	-
355 035	Pipe union	*	-
355 037	Pipe union	1	-
355 173	Washer	4	-
355 178	Screw	4	-
355 266	Pipe union	2	-
355 403	Pipe clamp	*	-
355 408	Ball valve	1	-
355 720	Pipe	1	-
355 721	Pipe union	1	-
355 722	Screw	4	-
355 724	Screw	*	-
355 726	Plug	2	-
355 727	Sealing ring	2	-
355 764	Pipe union	1	-
355 765	Pipe	2	-

NOTE! *) See page 4.

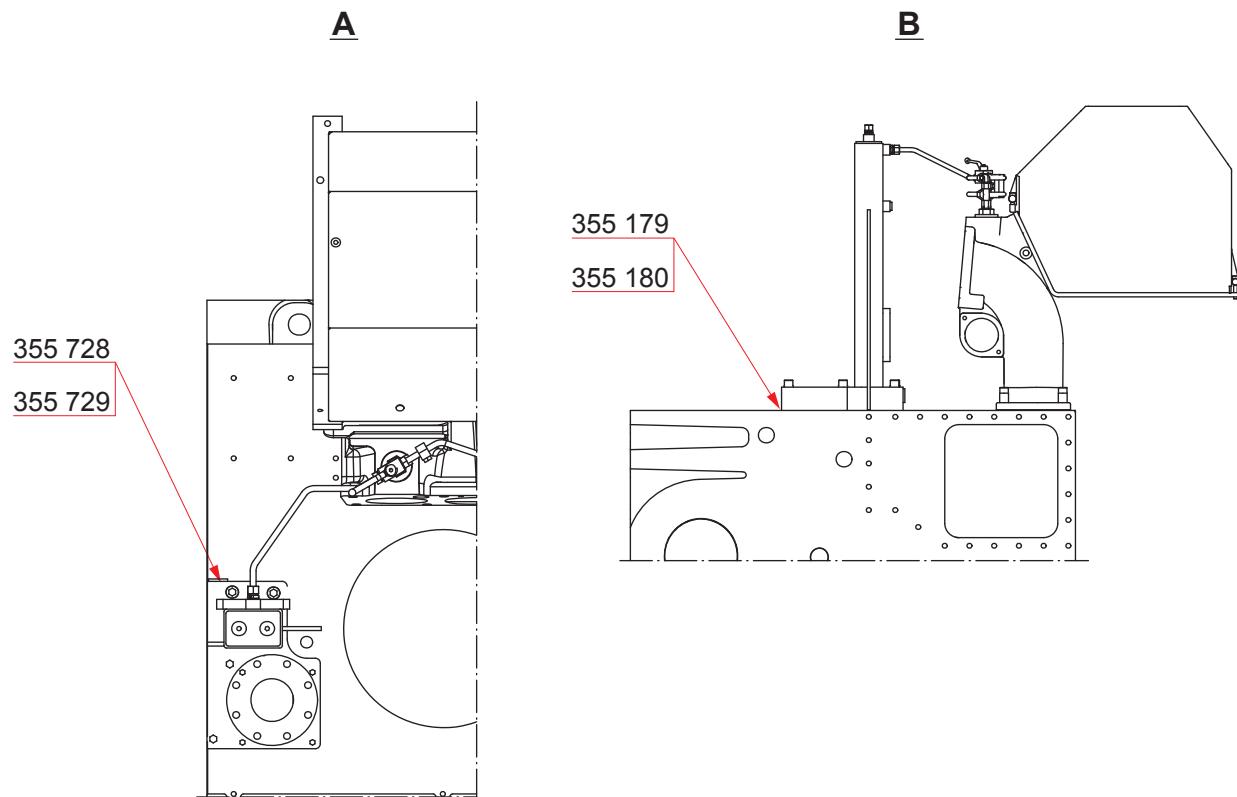
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Air vent system from multiducts



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 686	Pipe union	2	-

Air vent system from multiducts



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 179	O-ring	1	-
355 180	O-ring	1	-
355 728	Plug (1)	1	-
355 729	Sealing ring	1	-

NOTE! (1) To be plugged if TC in FWE

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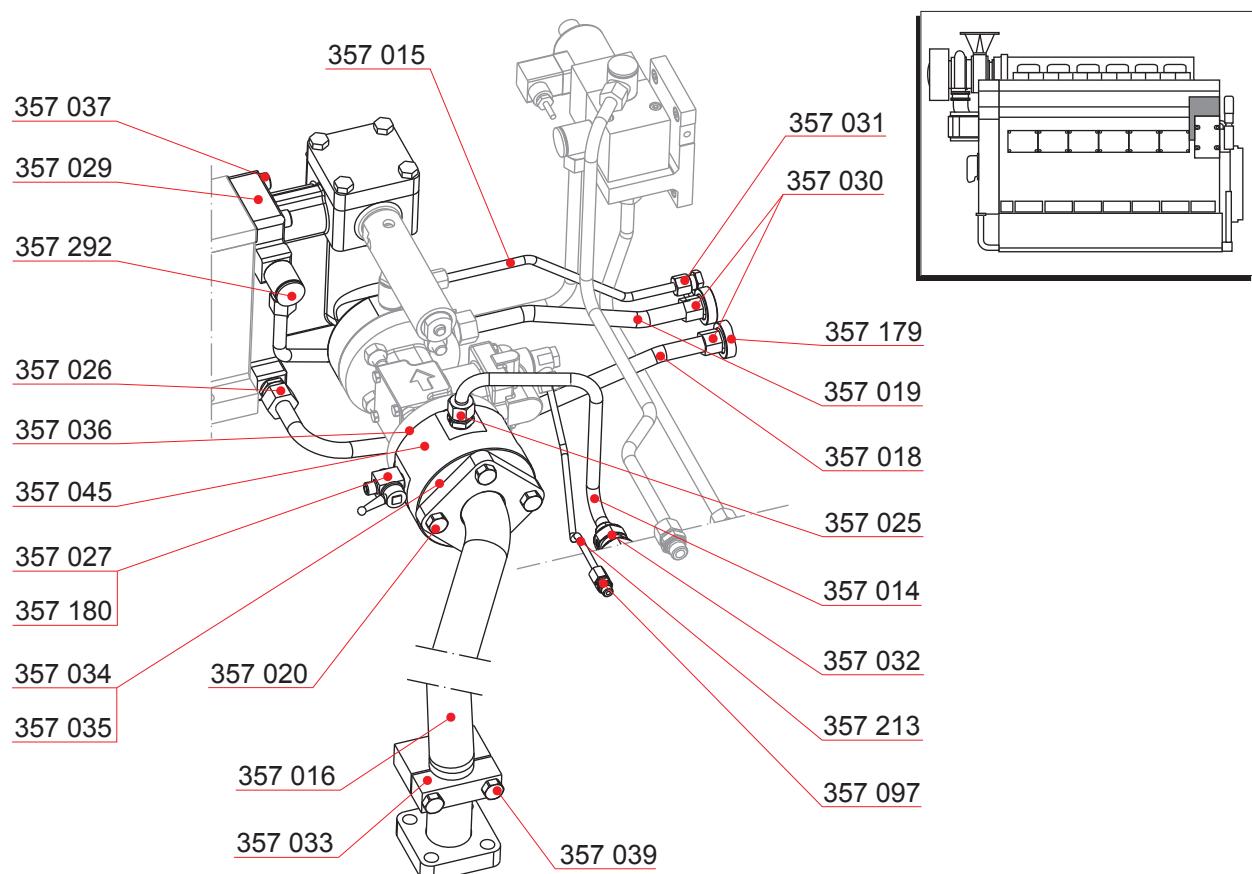
Updated: 06.02.2012

Air vent system from multiducts

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces	
	8L	9L
355 026 Pipe	7	8
355 035 Pipe union	6	7
355 403 Pipe clamp	7	8
355 724 Screw	7	8

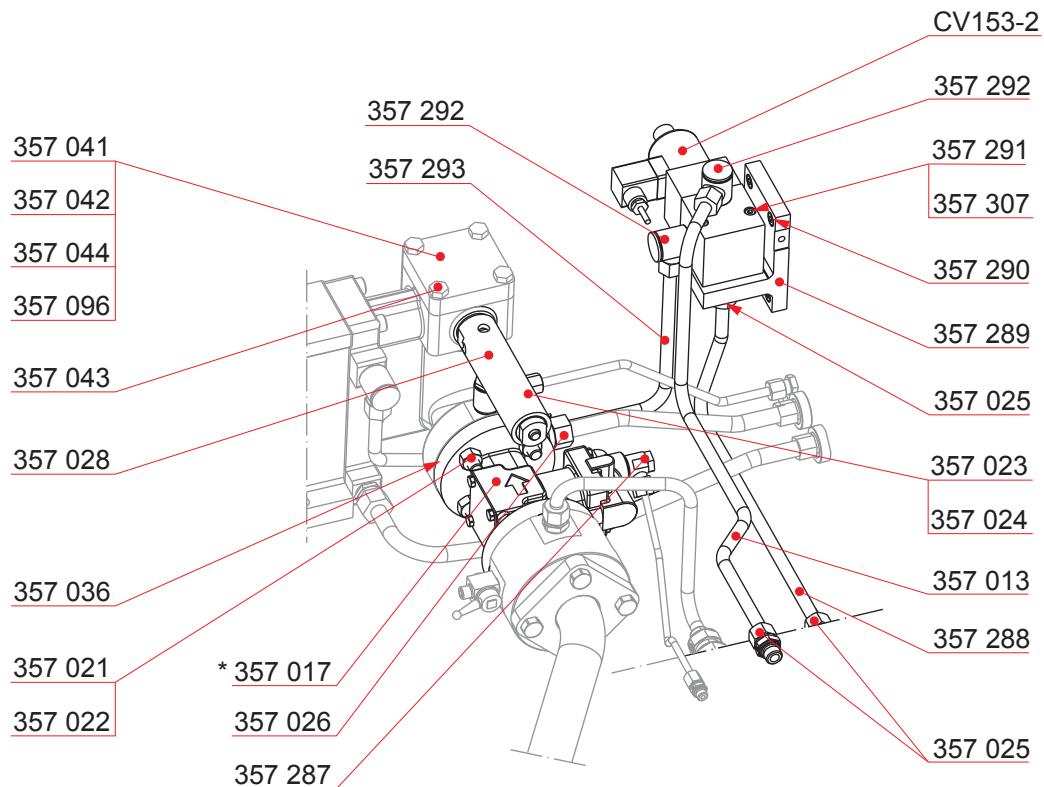
Starting air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 014	Pipe	1	-	357 213	Pipe	1	-
357 015	Pipe	1	-	357 292	Pipe union	3	-
357 016	Pipe	1	-				
357 018	Pipe	1	-				
357 019	Pipe	1	-				
357 020	Screw	4	-				
357 025	Pipe union	4	-				
357 026	Pipe union	2	-				
357 027	Valve	1	-				
357 029	Connection piece	1	-				
357 030	Pipe union	2	-				
357 031	Pipe union	1	-				
357 032	Non-return valve	1	-				
357 033	Clamp	1	-				
357 034	Non-return valve	1	-				
357 035	O-ring	2	-				
357 036	Gasket	2	-				
357 037	Screw	8	-				
357 039	Screw	2	-				
357 045	Connection piece	1	-				
357 097	Pipe union	1	-				
357 179	Distance sleeve	2	-				
357 180	Sealing ring	1	-				

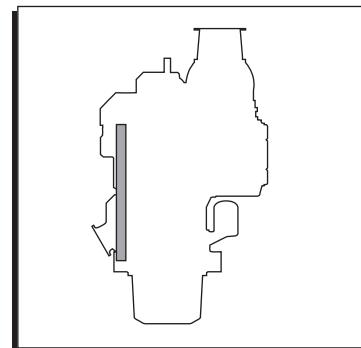
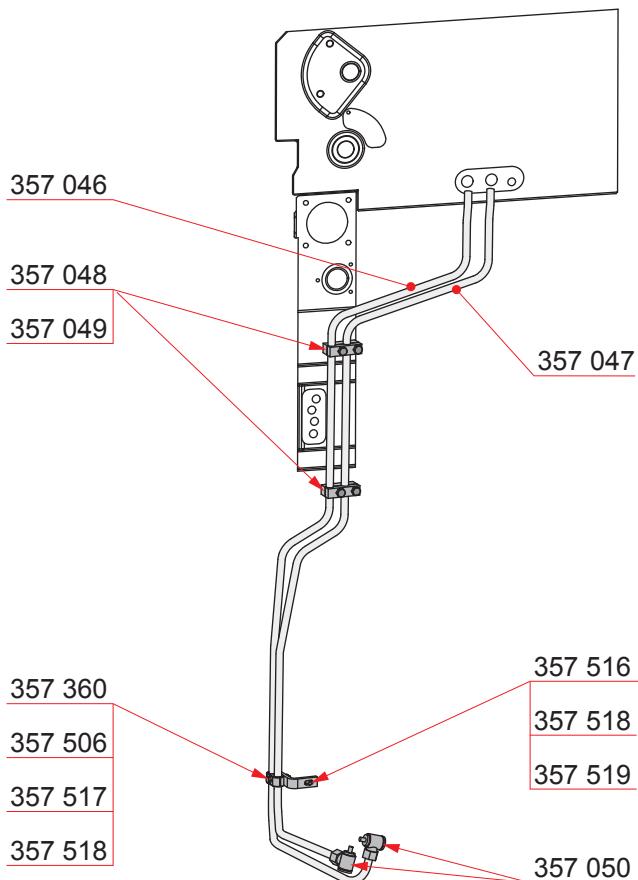
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 Updated: 28.09.2011

Starting air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 013	Pipe	1	-	CV153-2	Solenoid valve, stop	1	-
357 017	Main starting valve *	1	-		NOTE! * See 217-		
357 021	Nut	8	-				
357 022	Screw	8	-				
357 023	Pipe union	1	-				
357 024	Pipe union	1	-				
357 025	Pipe union	4	-				
357 026	Pipe union	2	-				
357 028	Valve	1	-				
357 036	Gasket	2	-				
357 041	Flame arrester	1	-				
357 042	Flange	1	-				
357 043	Screw	4	-				
357 044	Retaining ring	1	-				
357 096	O-ring	1	-				
357 287	Pipe union	1	-				
357 288	Pipe	1	-				
357 289	Bracket	1	-				
357 290	Screw	4	-				
357 291	Screw	2	-				
357 292	Pipe union	3	-				
357 293	Pipe	1	-				
357 307	O-ring	1	-				

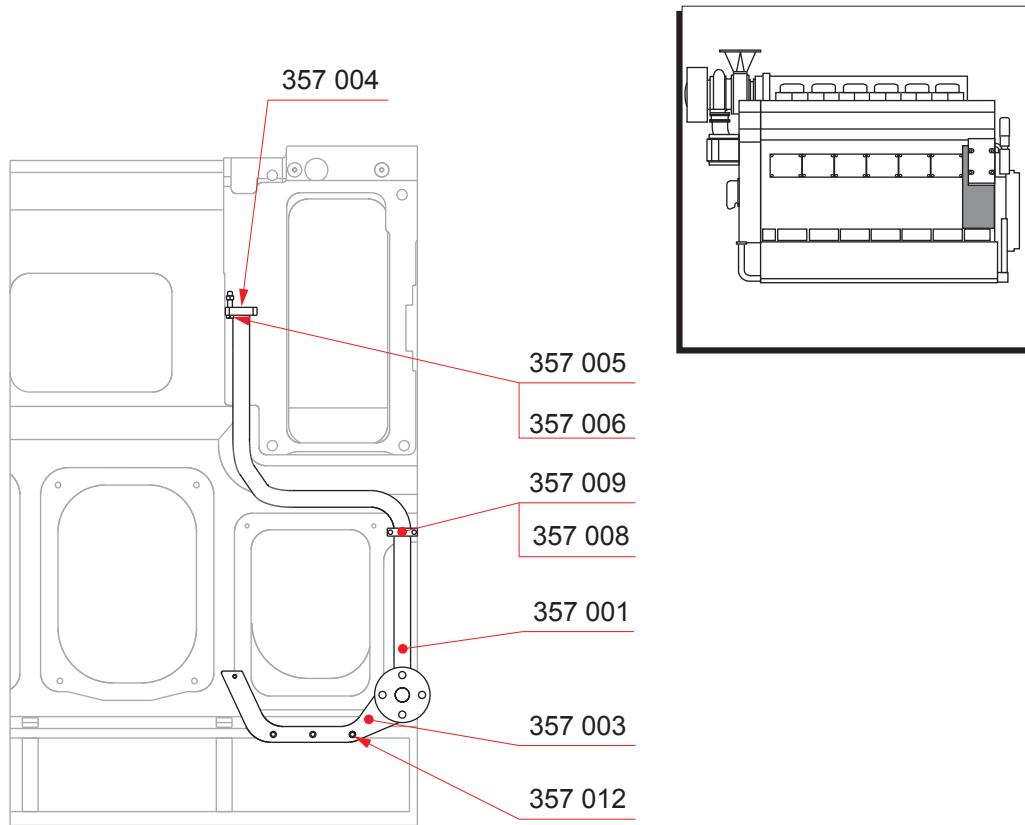
Control air pipes for turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 046	Pipe	1	-
357 047	Pipe	1	-
357 048	Pipe clamp	2	-
357 049	Screw	4	-
357 050	Pipe union	2	-
357 360	Pipe clamp	1	-
357 506	Nut	1	-
357 516	Bracket	1	-
357 517	Screw	1	-
357 518	Washer	2	-
357 519	Screw	1	-

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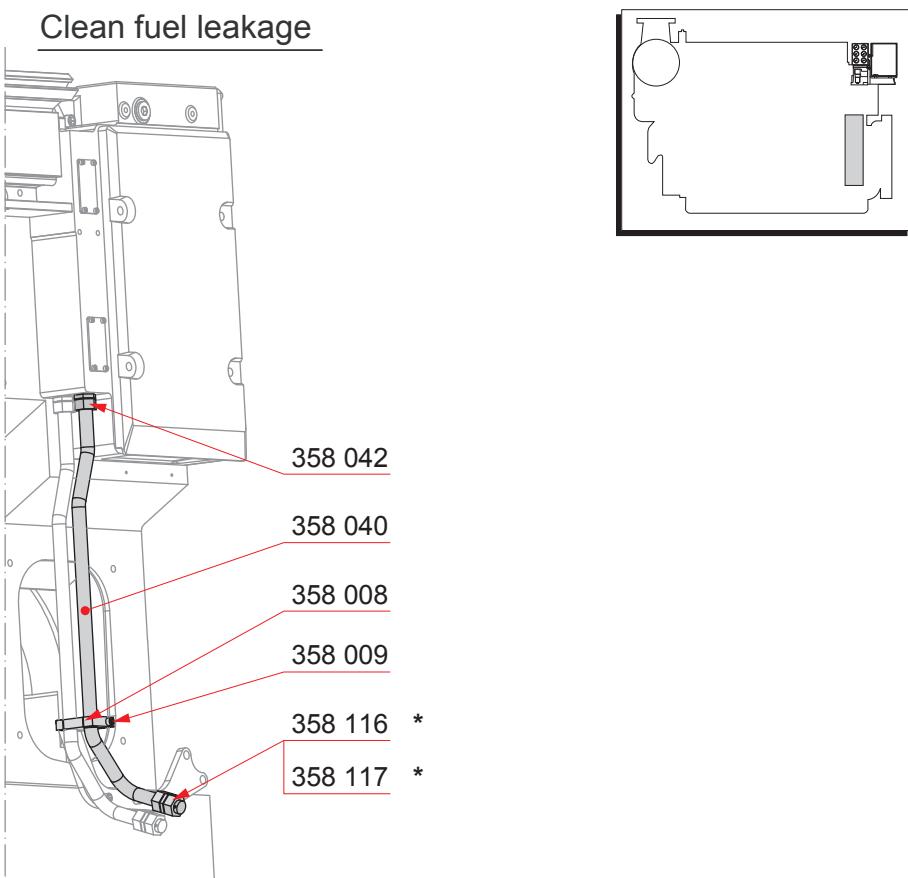
Starting air pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 001	Pipe	1	6.6
357 003	Bracket	1	-
357 004	O-ring	1	-
357 005	Screw	4	-
357 006	Nut	4	-
357 008	Screw	2	-
357 009	Clamp	1	0.9
357 012	Screw	3	-

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Leak fuel system



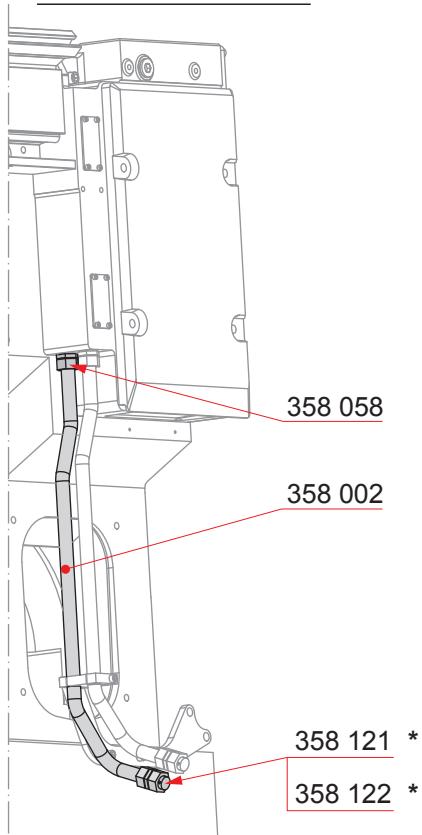
Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 008	Pipe clamp	1	-
358 009	Screw	1	-
358 040	Pipe	1	-
358 042	Pipe union	1	-
358 116	Pipe union	2	-
358 117	Plug	2	-

NOTE! (*) Optional.

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Updated: 11.01.2009

Leak fuel system

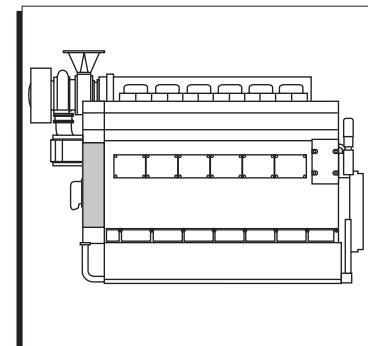
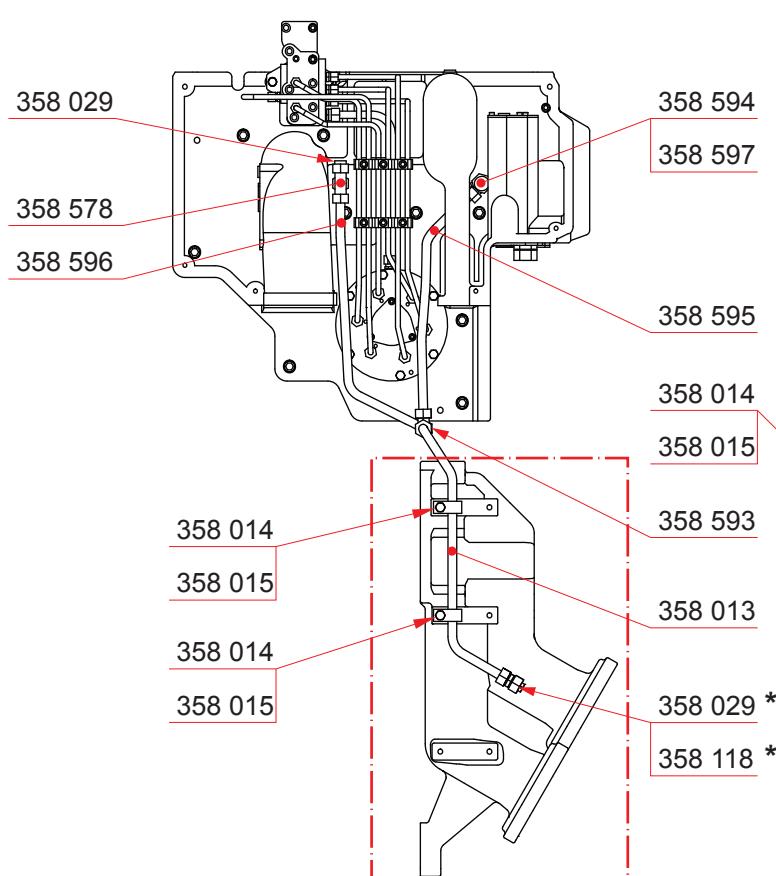
Dirty fuel leakage



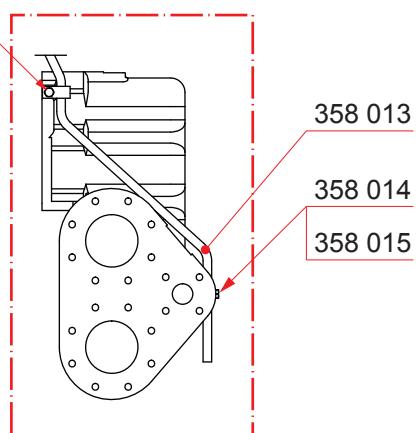
Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 002	Leak oil pipe	1	-
358 058	Pipe union	1	-
358 121	Plug	2	-
358 122	Pipe union	2	-

NOTE! (*) Optional.

Leak oil pipe, dirty, free end



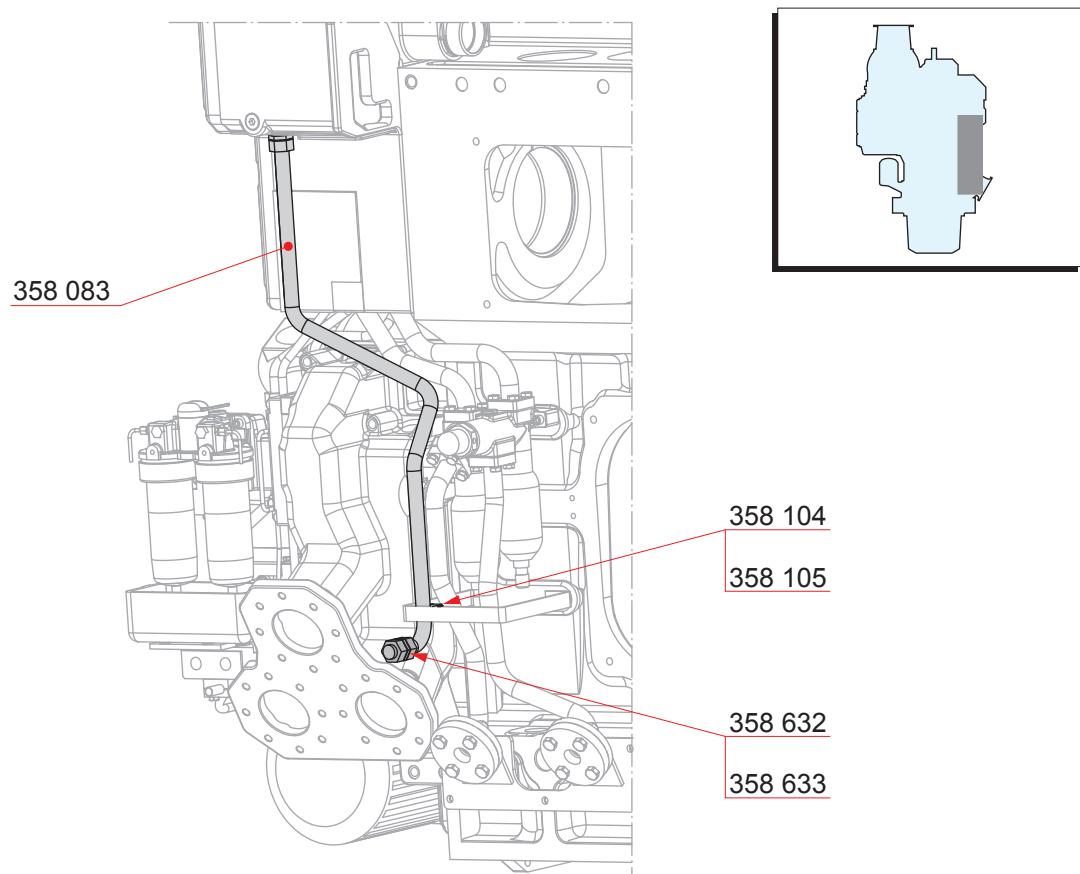
Alternative design



Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 013	Leak oil pipe	1	-
358 014	Pipe clamp	2	-
358 015	Screw	2	-
358 029	Plug	2	-
358 118	Pipe union	1	-
358 578	Pipe union	1	-
358 593	Pipe union	1	-
358 594	Pipe union	1	-
358 595	Leak oil pipe	1	-
358 596	Leak oil pipe	1	-
358 597	Sealing ring	1	-

NOTE! (*) Optional.

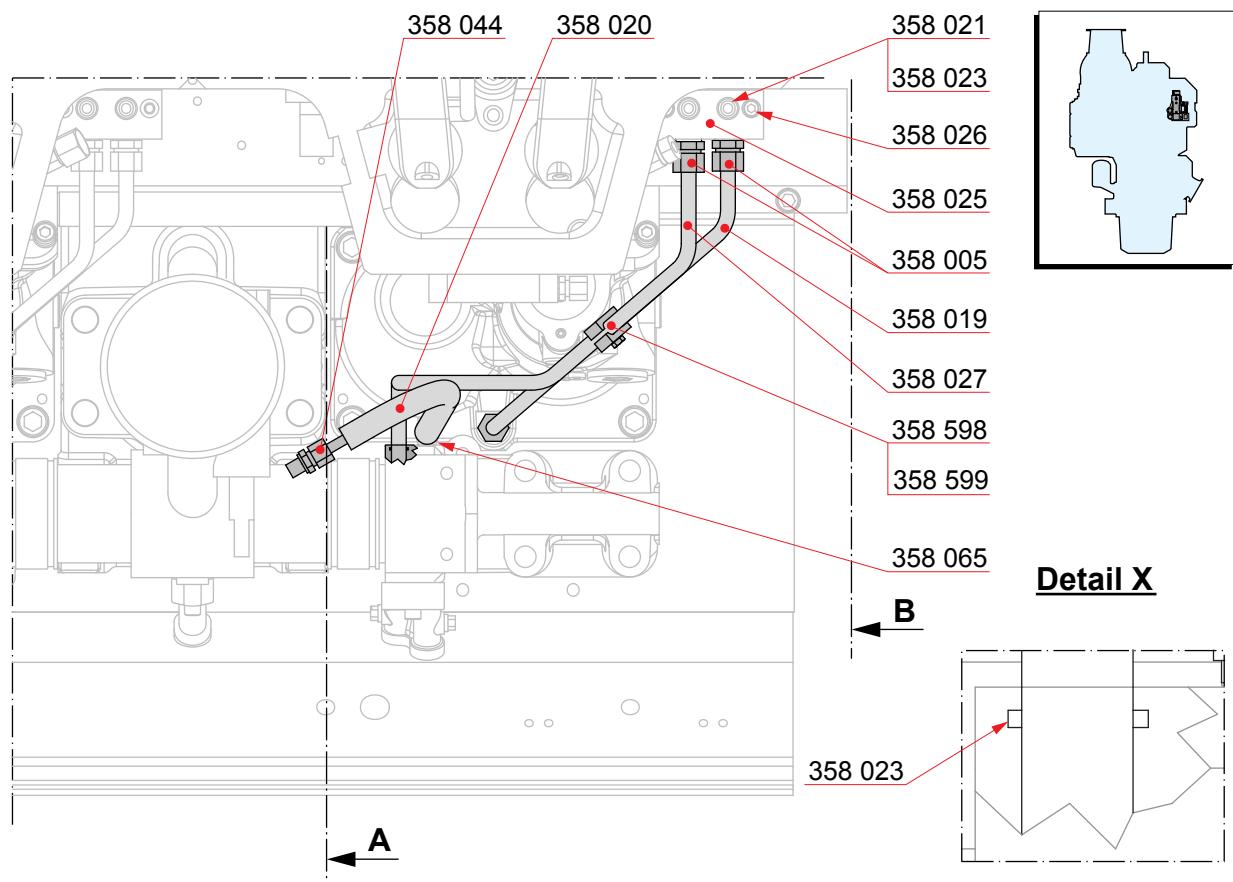
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Leak oil pipe, clean, free end

Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 083	Pipe	1	-
358 104	Pipe clamp	1	-
358 105	Screw	1	-
358 632	Pipe union	1	-
358 633	Plug	1	-

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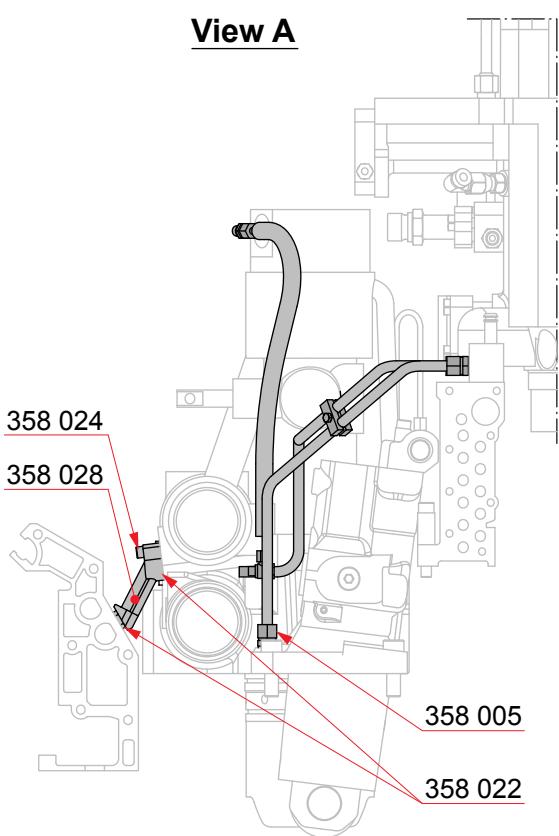
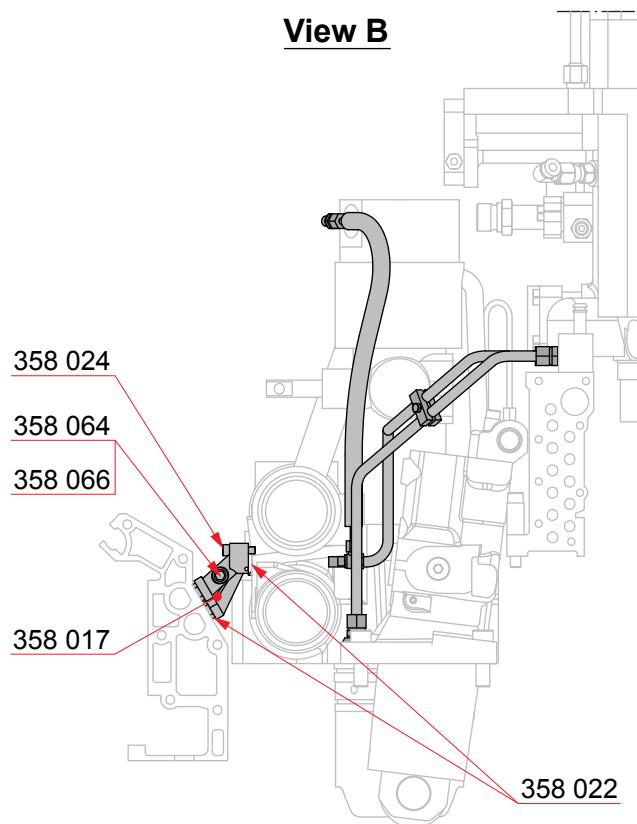
Connection pieces for oil pipe



Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 005	Pipe union	3	-
358 019	Pipe	1	-
358 020	Flexible hose	1	-
358 021	Connection piece	2	-
358 023	O-ring	5	-
358 025	Connection piece	1	-
358 026	Screw	2	-
358 027	Pipe	1	-
358 044	Pipe union	1	-
358 065	Pipe union	1	-
358 598	Clamp	1	-
358 599	Screw	1	-

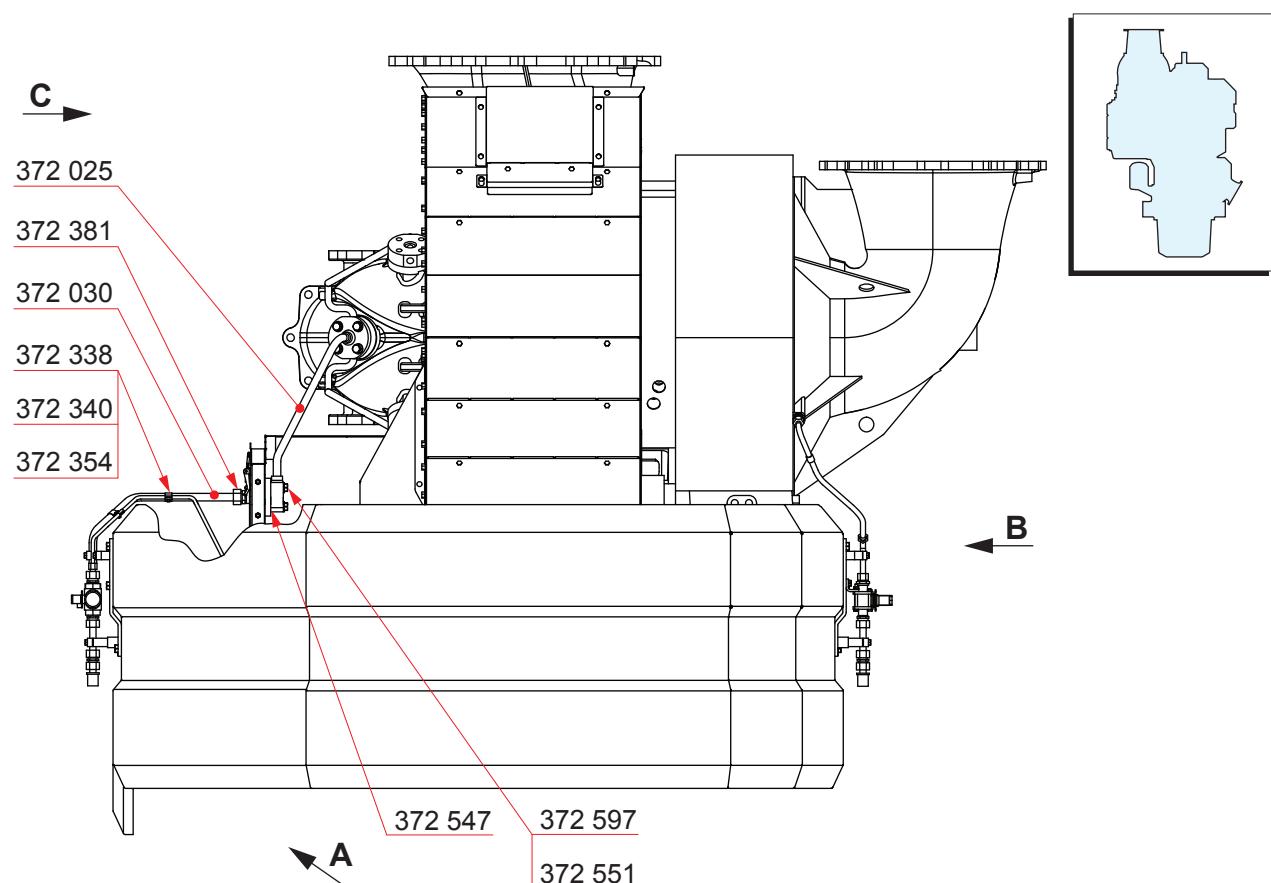
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Updated: 11.05.2009

Connection pieces for oil pipe

View A**View B**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 005	Pipe union	3	-
358 017	Connection piece	1	-
358 022	O-ring	6	-
358 024	Screw	2	-
358 028	Connection piece	1	-
358 064	Plug	2	-
358 066	Sealing ring	2	-

Cleaning device for turbocharger



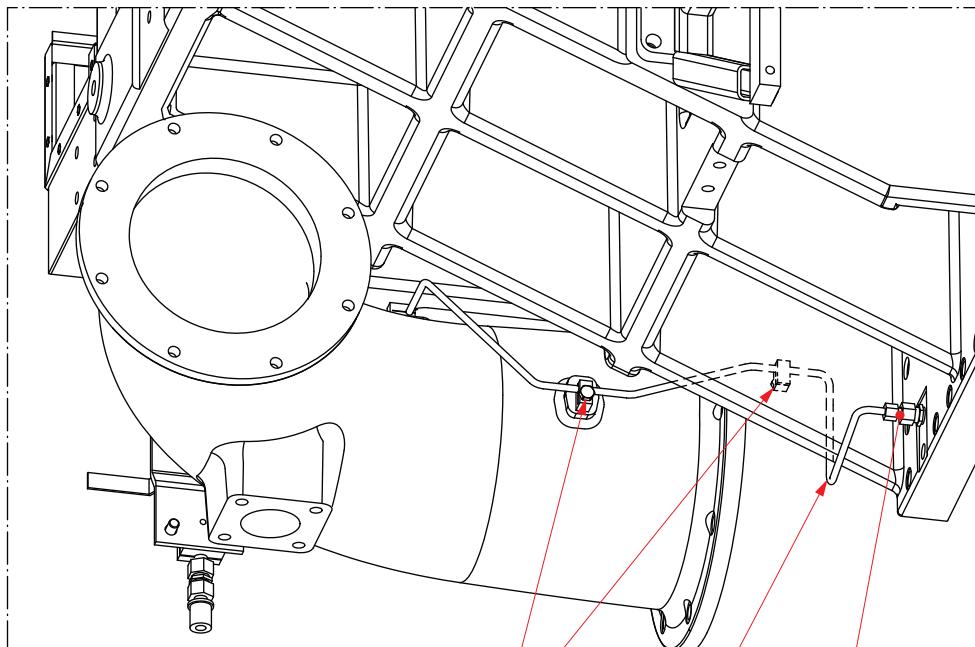
Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 025	Pipe	1	-
372 030	Pipe	1	-
372 338	Screw	2	-
372 340	Pipe clamp	4	-
372 354	Nut	2	-
372 381	Pipe union	1	-
372 547	Gasket	1	-
372 551	Washer	8	-
372 597	Screw	4	-

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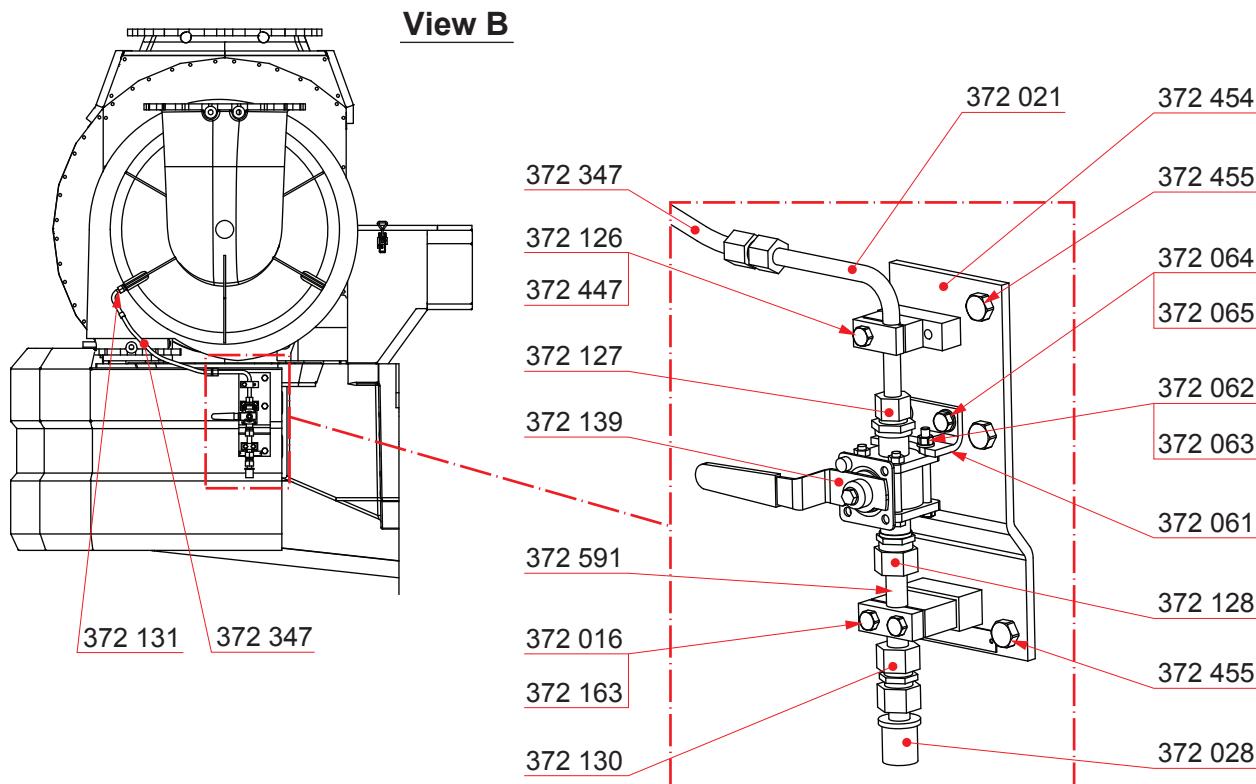
Updated: 16.09.2008

Cleaning device for turbocharger

View A

Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 131	Pipe union	2	-
372 590	Pipe clamp	3	-
372 592	Pipe	1	-
372 596	Screw	3	-
372 599	Reduction union	1	-

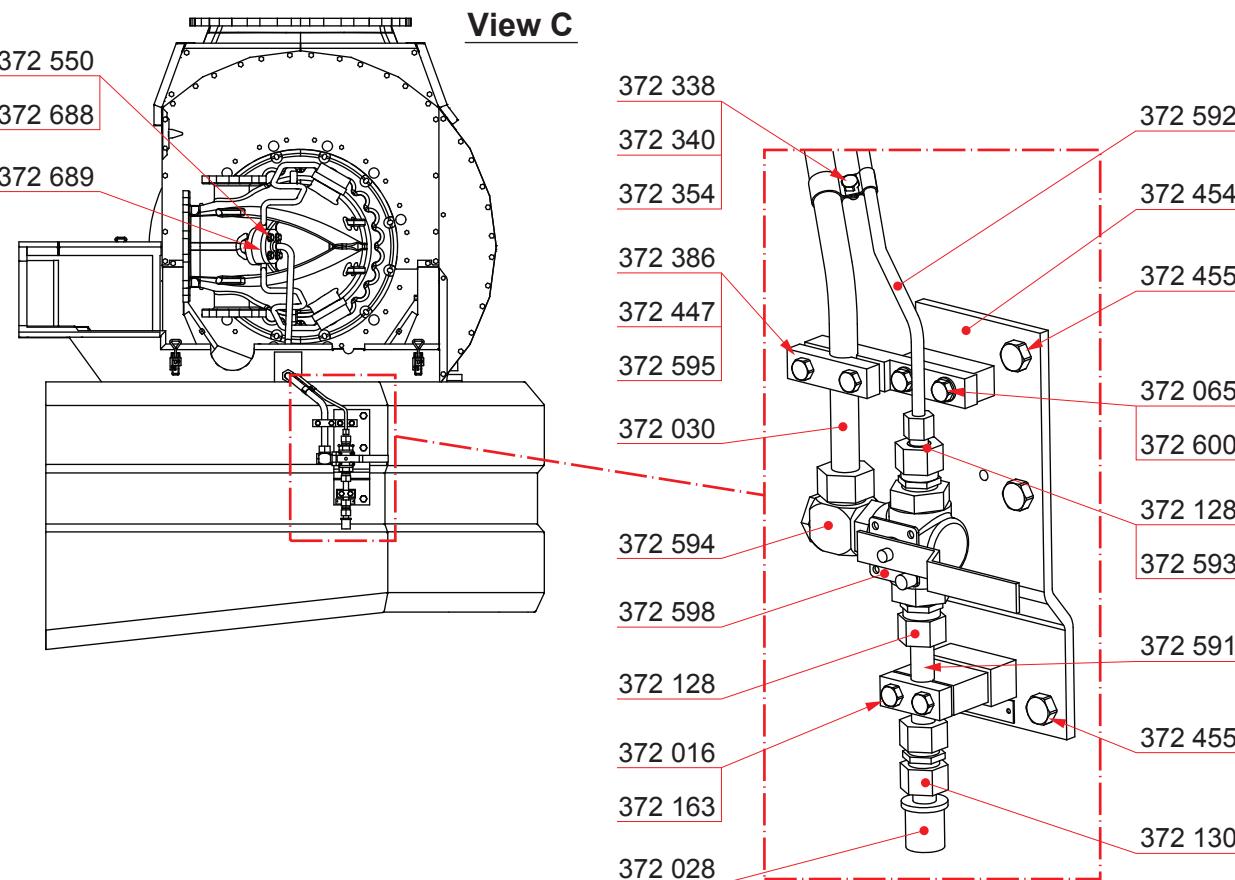
Cleaning device for turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 016	Screw	4	-
372 021	Pipe	1	-
372 028	Adapter	2	-
372 061	Bracket	1	-
372 062	Screw	2	-
372 063	Washer	2	-
372 064	Screw	2	-
372 065	Washer	4	-
372 126	Pipe clamp	1	-
372 127	Pipe union	1	-
372 128	Pipe union	3	-
372 130	Pipe union	2	-
372 131	Pipe union	2	-
372 139	Ball valve	1	-
372 163	Pipe clamp	2	-
372 347	Flexible hose	1	-
372 447	Screw	3	-
372 454	Bracket	2	-
372 455	Screw	6	-
372 591	Pipe	2	-

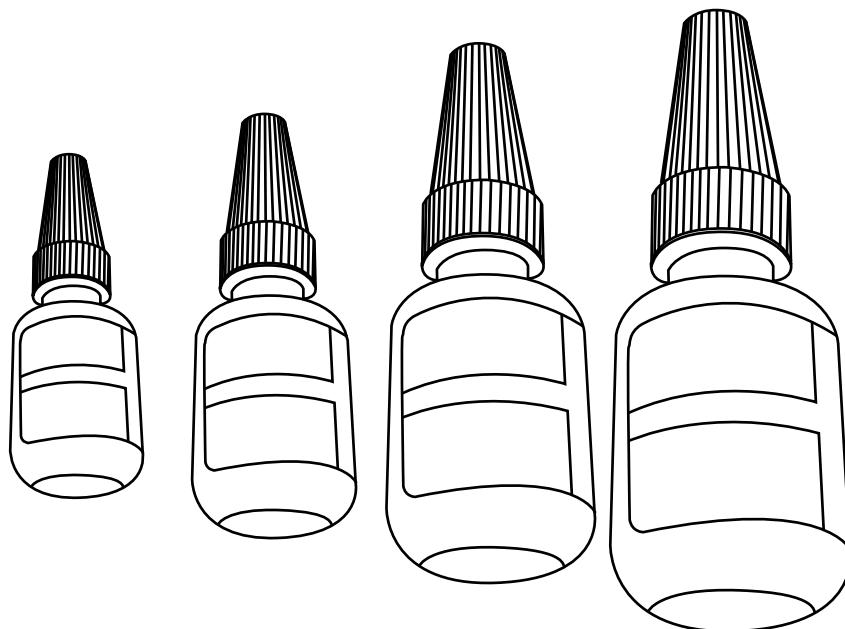
Edition: B
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Cleaning device for turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 016	Screw	4	-	372 689	Sealing washer	1	-
372 028	Adapter	2	-				
372 030	Pipe	1	-				
372 065	Washer	4	-				
372 128	Pipe union	3	-				
372 130	Pipe union	2	-				
372 163	Pipe clamp	2	-				
372 338	Screw	2	-				
372 340	Pipe clamp	4	-				
372 354	Nut	2	-				
372 386	Bracket	1	-				
372 447	Screw	3	-				
372 454	Bracket	2	-				
372 455	Screw	6	-				
372 550	Screw	4	-				
372 591	Pipe	2	-				
372 592	Pipe	1	-				
372 593	Reduction union	1	-				
372 594	Pipe union	1	-				
372 595	Nut	2	-				
372 598	Valve	1	-				
372 600	Screw	2	-				
372 688	Distance sleeve	4	-				

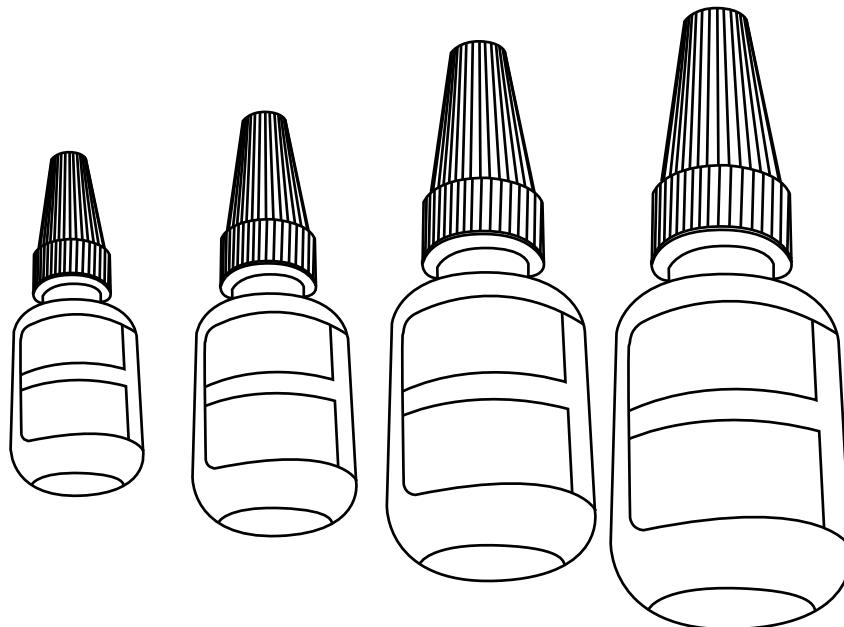
Chemicals



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 001	Glue compound	1	-	387 024	Glue compound	1	-
387 002	Glue compound	1	-	387 025	Glue compound	1	-
387 003	Glue compound	1	-	387 026	Glue compound	1	-
387 004	Glue compound	1	-	387 027	Glue compound	1	-
387 005	Glue compound	1	-	387 028	Glue compound	1	-
387 006	Glue compound	1	-	387 029	Assembly compound	1	-
387 007	Glue compound	1	-	387 030	Glue compound	1	-
387 008	Glue compound	1	-	387 031	Glue compound	1	-
387 009	Glue compound	1	-	387 032	Glue compound	1	-
387 010	Glue compound	1	-	387 033	Glue compound	1	-
387 011	Glue compound	1	-	387 034	Glue compound	1	-
387 012	Glue compound	1	-	387 035	Glue compound	1	-
387 013	Glue compound	1	-				
387 014	Glue compound	1	-	NOTE!	When ordering chemicals, please use the spare part numbers found in the specific sections.		
387 015	Glue compound	1	-				
387 016	Glue compound	1	-				
387 017	Glue compound	1	-				
387 018	Glue compound	1	-				
387 019	Glue compound	1	-				
387 020	Glue compound	1	-				
387 021	Contact lubrication	1	-				
387 022	Contact lubrication	1	-				
387 023	Contact lubrication	1	-				

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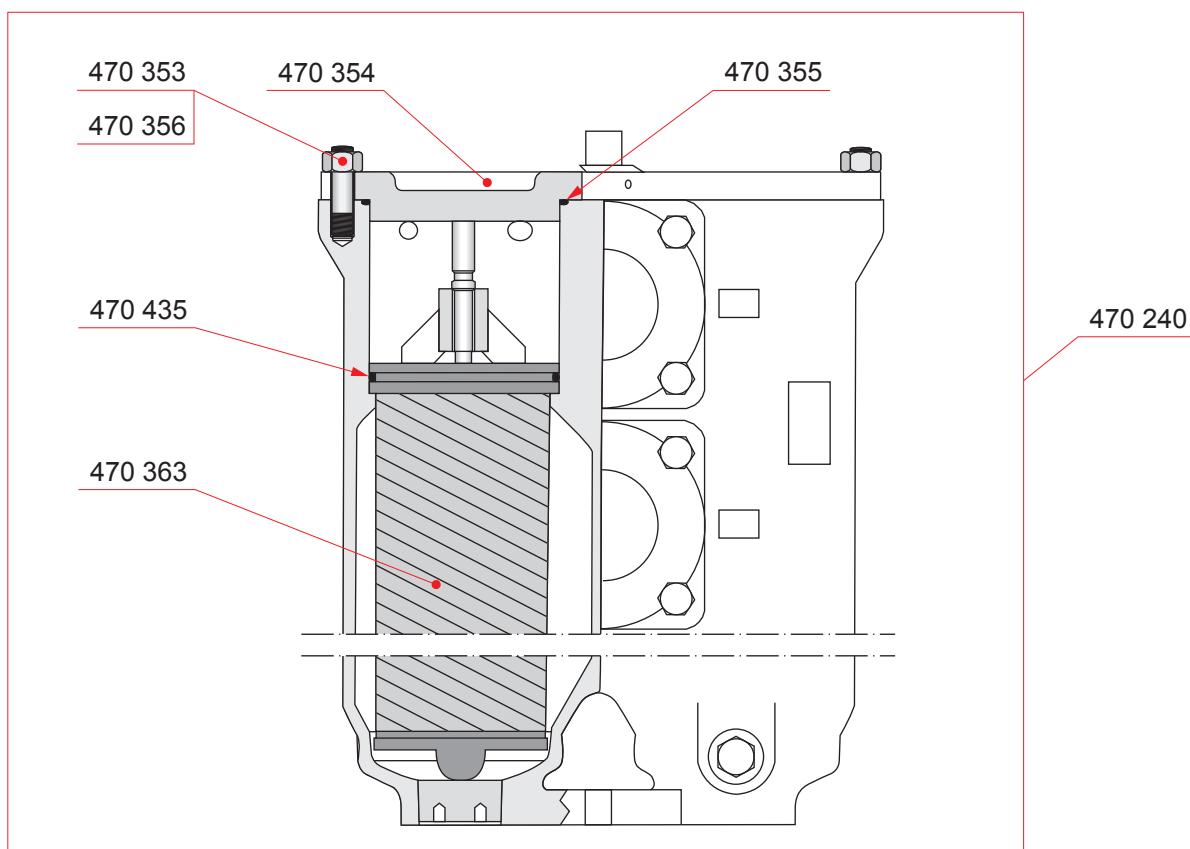
Chemicals



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 036	Glue compound	1	-	387 060	Sealant	1	-
387 037	Glue compound	1	-	387 061	Glue compound	1	-
387 038	Contact lubrication	1	-	387 062	Glue compound	1	-
387 039	Contact lubrication	1	-				
387 040	Glue compound	1	-				
387 041	Contact lubrication	1	-				
387 042	Glue compound	1	-				
387 043	Contact lubrication	1	-				
387 044	Glue compound	1	-				
387 045	Glue compound	1	-				
387 046	Glue compound	1	-				
387 048	Corrosion protection	1	-				
387 049	Cleaner	1	-				
387 050	Glue compound	1	-				
387 051	Glue compound	1	-				
387 052	Activator	1	-				
387 053	Contact lubrication	1	-				
387 054	Contact lubrication	1	-				
387 055	Contact lubrication	1	-				
387 056	Contact lubrication	1	-				
387 057	Contact lubrication	1	-				
387 058	Contact lubrication	1	-				
387 059	Glue compound	1	-				

NOTE! When ordering chemicals, please use the spare part numbers found in the specific sections.

Filter

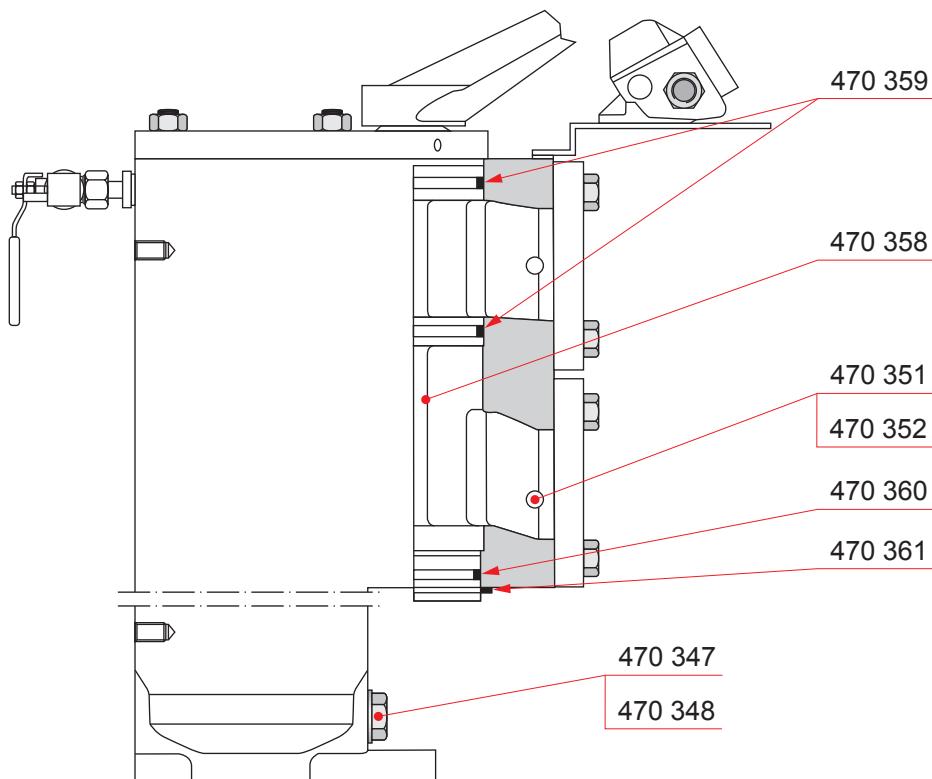


Part No.	Description	Qty [Pcs]	Wt. [Kg]
470 240	Fuel filter, complete	1	-
470 353	Screw	6	-
470 354	Cover	2	-
470 355	O-ring	2	-
470 356	Nut	8	-
470 363	Filter	2	-
470 435	O-ring (1)	2	-

NOTE! (1) Used in filter types DN 25, DN 32,
DN 40 and DN 50.

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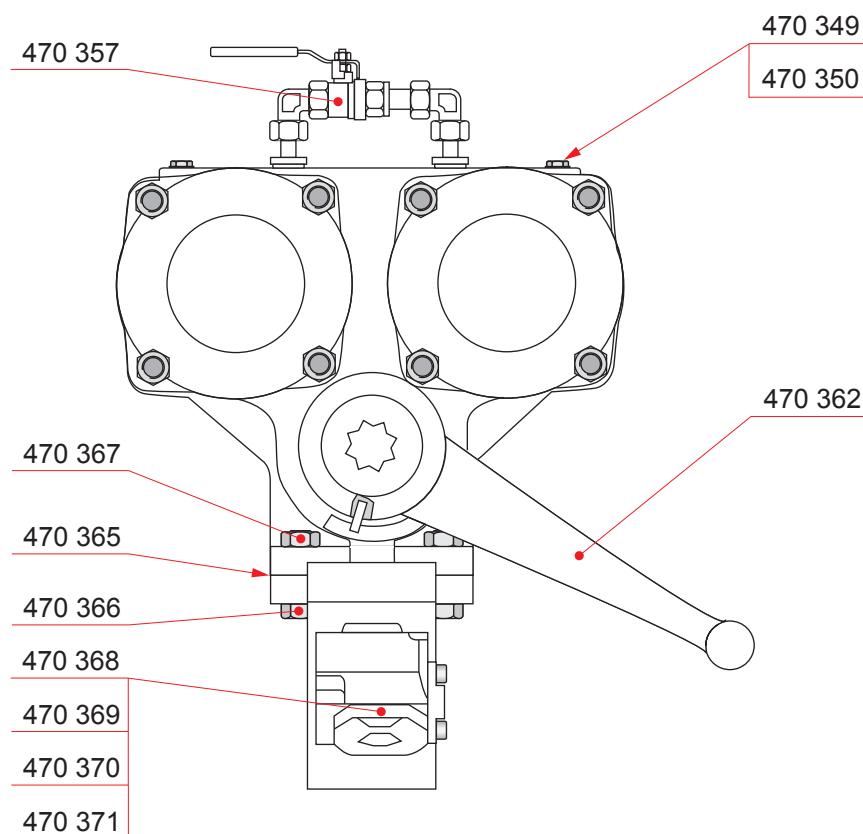
Filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
470 347	Plug	2	-
470 348	Gasket	2	-
470 351	Plug	2	-
470 352	Gasket	2	-
470 358	Spindle	1	-
470 359	O-ring	2	-
470 360	O-ring (2)	1	-
470 361	Locking ring	1	-

NOTE! (2) Used in filter types DN 65 and DN 80.

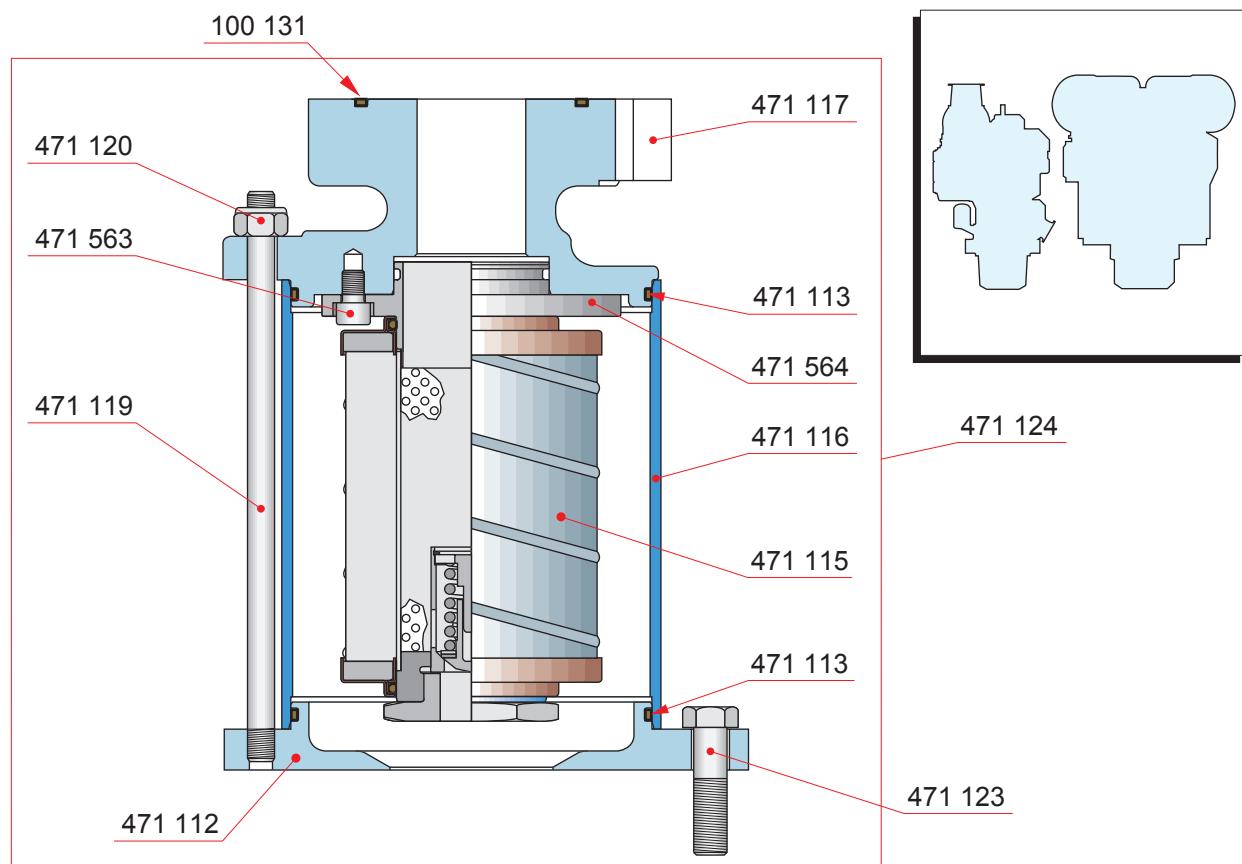
Filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
470 349	Plug	2	-
470 350	Gasket	2	-
470 357	Ball valve	1	-
470 362	Hand lever	1	-
470 365	Gasket	2	-
470 366	Screw	8	-
470 367	Nut	8	-
470 368	Indicator	1	-
470 369	Screw	2	-
470 370	Nut	2	-
470 371	Spring washer	2	-

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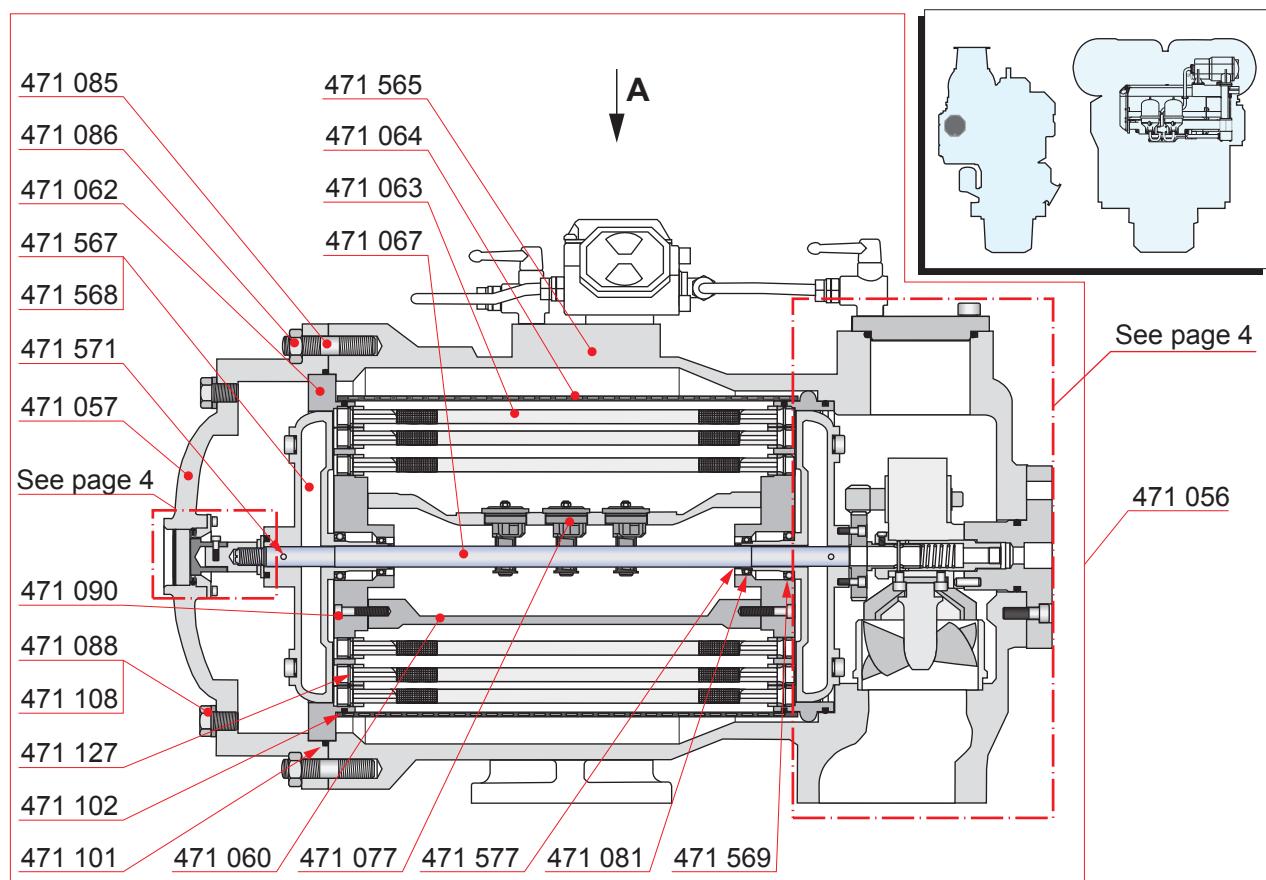
Running-in filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 124	Running-in filter	1	15.0
471 112	Flange	1	5.0
471 113	O-ring	2	-
471 115	Filter cartridge	1	0.2
471 116	Pipe	1	3.0
471 117	Flange	1	4.5
471 119	Screw	2	-
471 120	Nut	2	-
471 563	Screw	3	-
471 564	Adapter	1	6.0
100 131	O-ring	1	-
471 123	Screw	2	-

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Lubricating oil filter

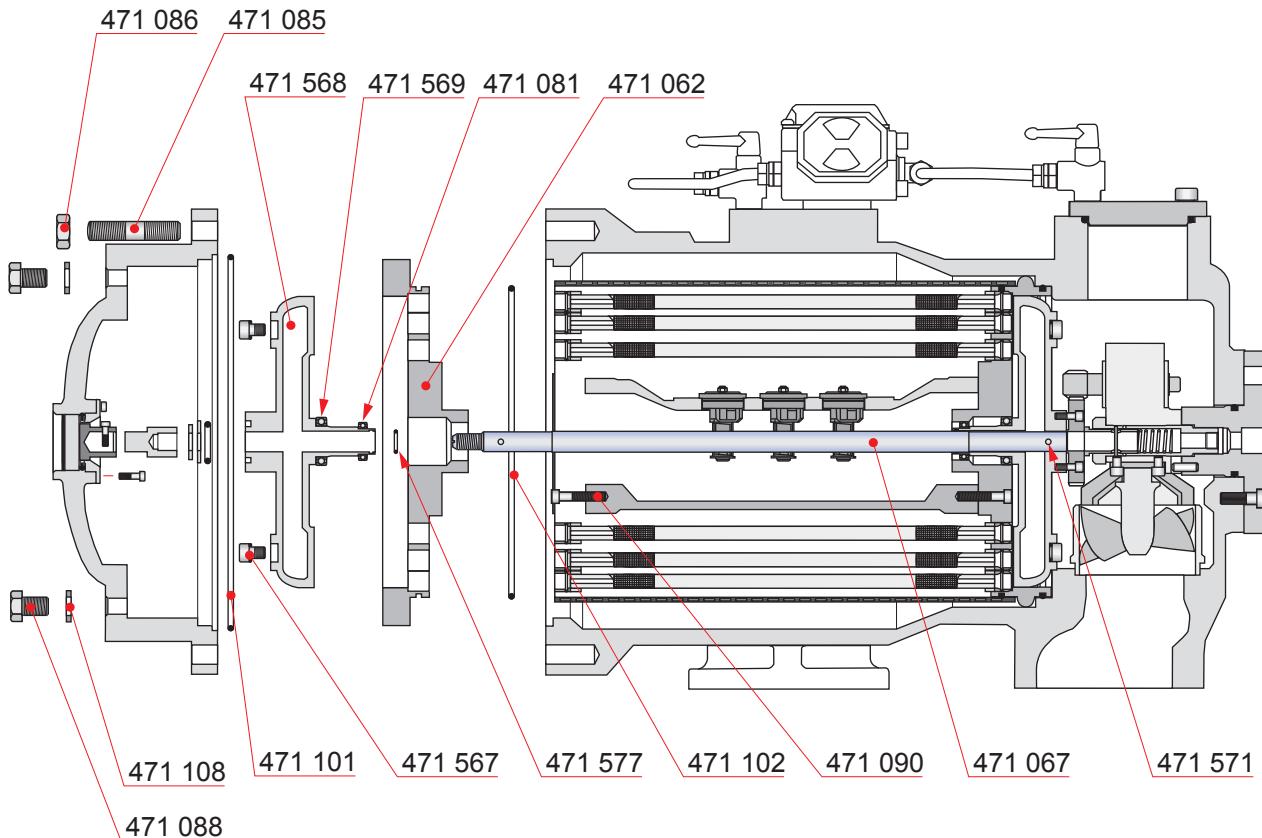


Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 056	Lubricating oil filter	1	-
471 057	Cover	1	-
471 060	Tube stack	1	-
471 062	Plate	1	-
471 063	Filter cartridge	48	-
471 064	Filter cartridge	1	-
471 067	Shaft	1	-
471 077	Valve	6	-
471 081	Ball bearing	2	-
471 085	Screw	8	-
471 086	Nut	8	-
471 088	Screw	2	-
471 090	Screw	6	-
471 101	O-ring	1	-
471 102	O-ring	2	-
471 108	Gasket	2	-
471 127	Cord ring	96	-
471 565	Housing	1	-
471 567	Plug	2	-
471 568	Distributor	1	-
471 569	Ball bearing	2	-
471 571	Adjusting screw	1	-
471 577	O-ring	2	-

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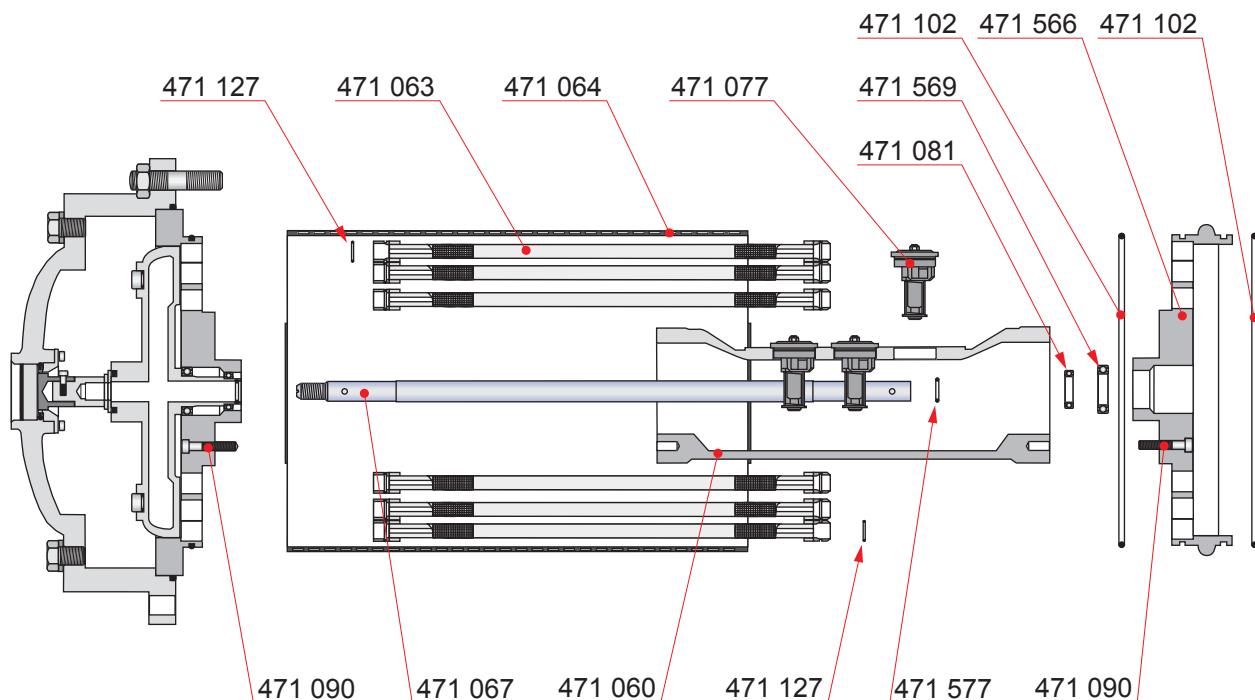
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Updated: 12.02.2007

Lubricating oil filter

Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 062	Plate	1	-
471 067	Shaft	2	-
471 081	Ball bearing	2	-
471 085	Screw	8	-
471 086	Nut	8	-
471 088	Screw	2	-
471 090	Screw	6	-
471 101	O-ring	1	-
471 102	O-ring	3	-
471 108	Gasket	2	-
471 567	Plug	2	-
471 568	Distributor	1	-
471 569	Ball bearing	2	-
471 571	Adjusting screw	1	-
471 577	O-ring	2	-

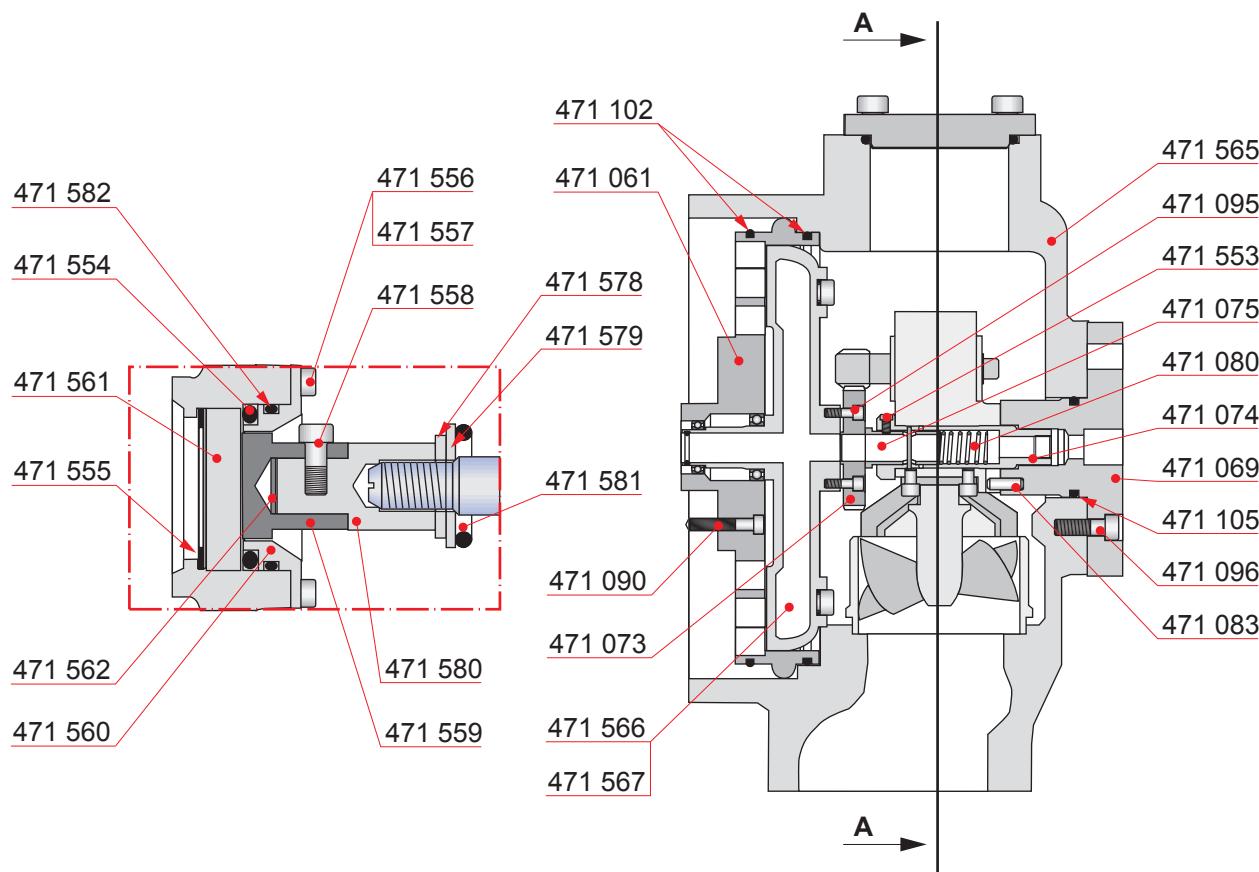
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 060	Tube stack	1	-
471 063	Filter cartridge	48	-
471 064	Filter cartridge	1	-
471 067	Shaft	1	-
471 077	Valve	6	-
471 081	Ball bearing	2	-
471 090	Screw	6	-
471 102	O-ring	2	-
471 127	Cord ring	96	-
471 566	Distributor	1	-
471 569	Ball bearing	2	-
471 577	O-ring	2	-

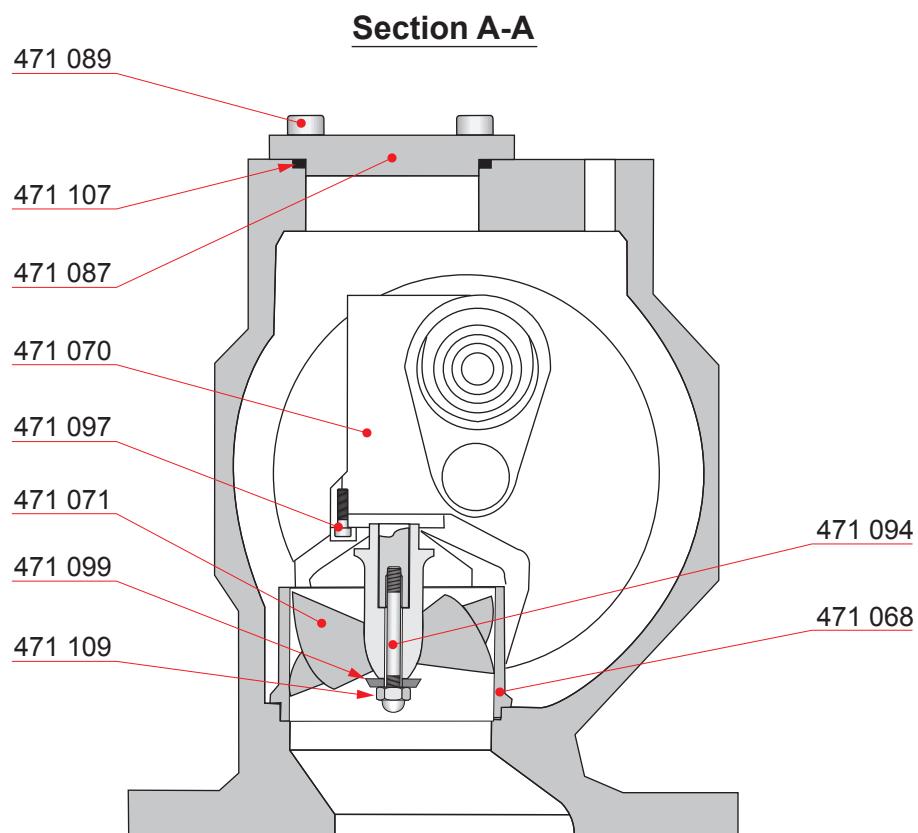
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Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 061	Plate	1	-	471 566	Distributor	1	-
471 069	Flange	1	-	471 567	Plug	2	-
471 073	Gear wheel	1	-	471 578	Spring ring	1	-
471 074	Bush	1	-	471 579	Disc	1	-
471 075	Bush	1	-	471 580	Plug	1	-
471 080	Spring	1	-	471 581	O-ring	1	-
471 083	Pin	1	-	471 582	O-ring	1	-
471 090	Screw	6	-				
471 095	Screw	2	-				
471 096	Screw	4	-				
471 102	O-ring	3	-				
471 105	O-ring	1	-				
471 553	Screw	1	-				
471 554	O-ring	1	-				
471 555	Gasket	1	-				
471 556	Spring washer	3	-				
471 557	Screw	3	-				
471 558	Screw	1	-				
471 559	Bush	1	-				
471 560	Tension ring	1	-				
471 561	Inspection glas	1	-				
471 562	Spring	2	-				
471 565	Housing	1	-				

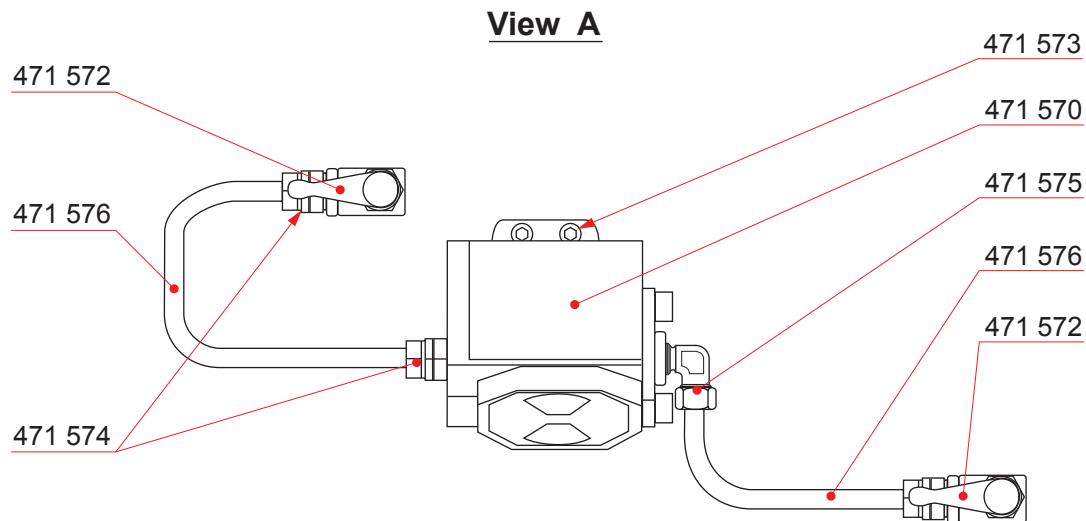
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 068	Turbine housing, LH	1	-
471 070	Gearbox housing	1	-
471 071	Turbine rotor	1	-
471 087	Cover	1	-
471 089	Screw	4	-
471 094	Screw	1	-
471 097	Screw	3	-
471 099	Washer	1	-
471 107	O-ring	1	-
471 109	Nut	1	-

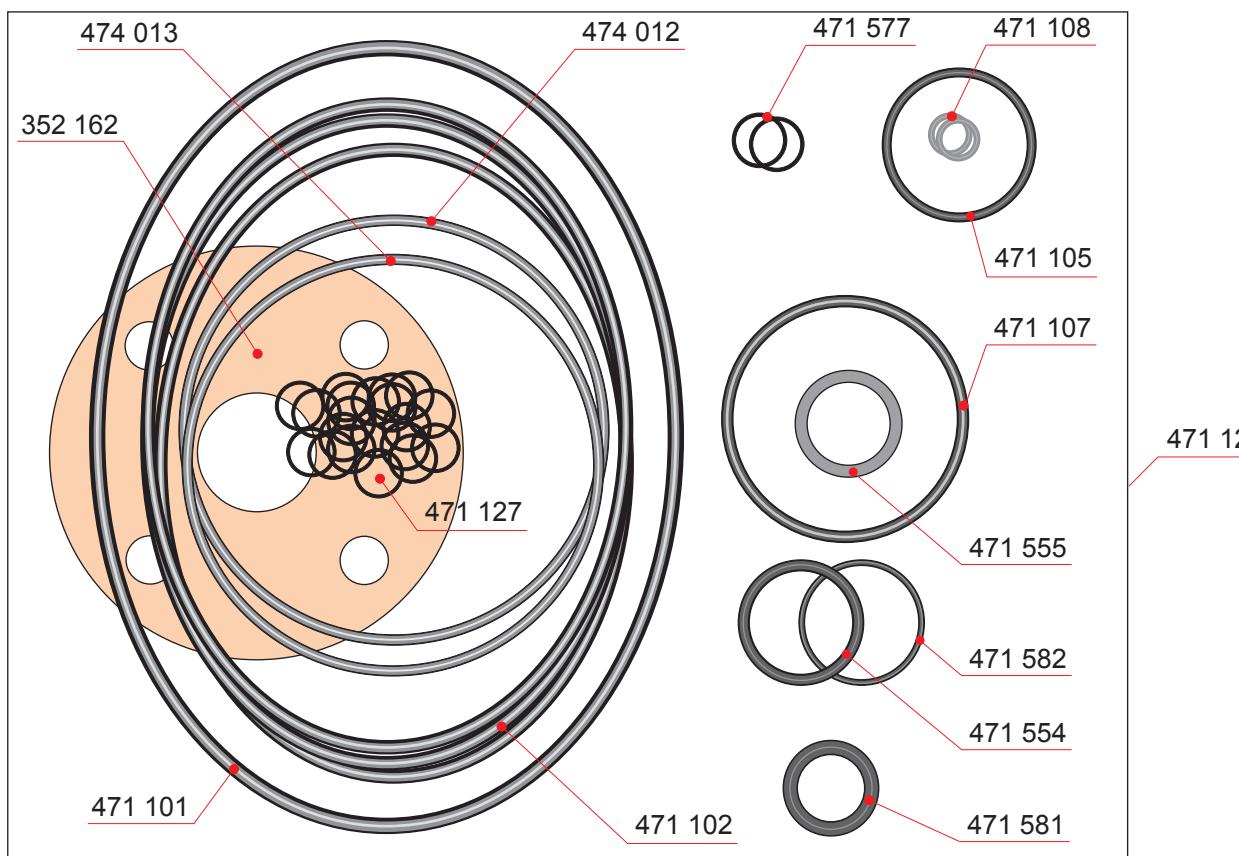
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Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 570	Pressure difference indicator for lube oil filter	1	-
471 572	Valve	2	-
471 573	Screw	2	-
471 574	Pipe union	3	-
471 575	Pipe union	1	-
471 576	Pipe	1	-

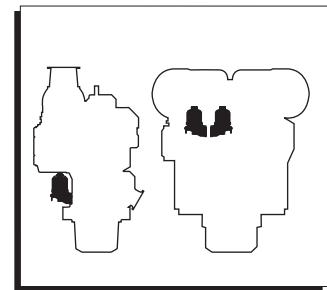
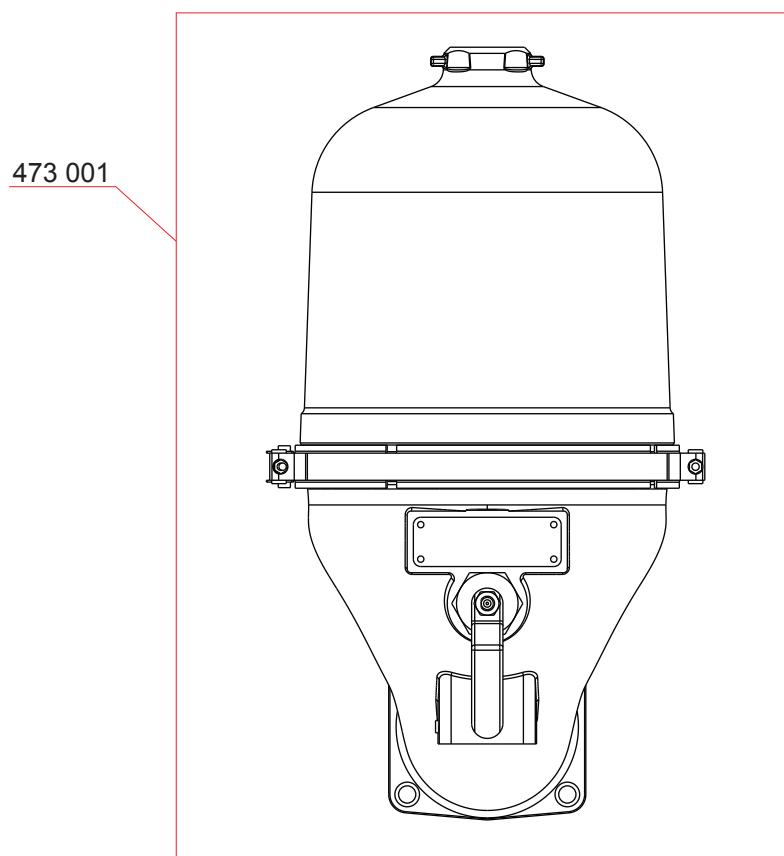
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 126	Sealing set	1	-
352 162	Gasket	1	-
471 101	O-ring	1	-
471 102	O-ring	3	-
471 105	O-ring	1	-
471 107	O-ring	1	-
471 108	Gasket	2	-
471 127	Cord ring	96	-
471 554	O-ring	1	-
471 555	Gasket	1	-
471 577	O-ring	2	-
471 581	O-ring	1	-
471 582	O-ring	1	-
474 012	O-ring	1	-
474 013	O-ring	1	-

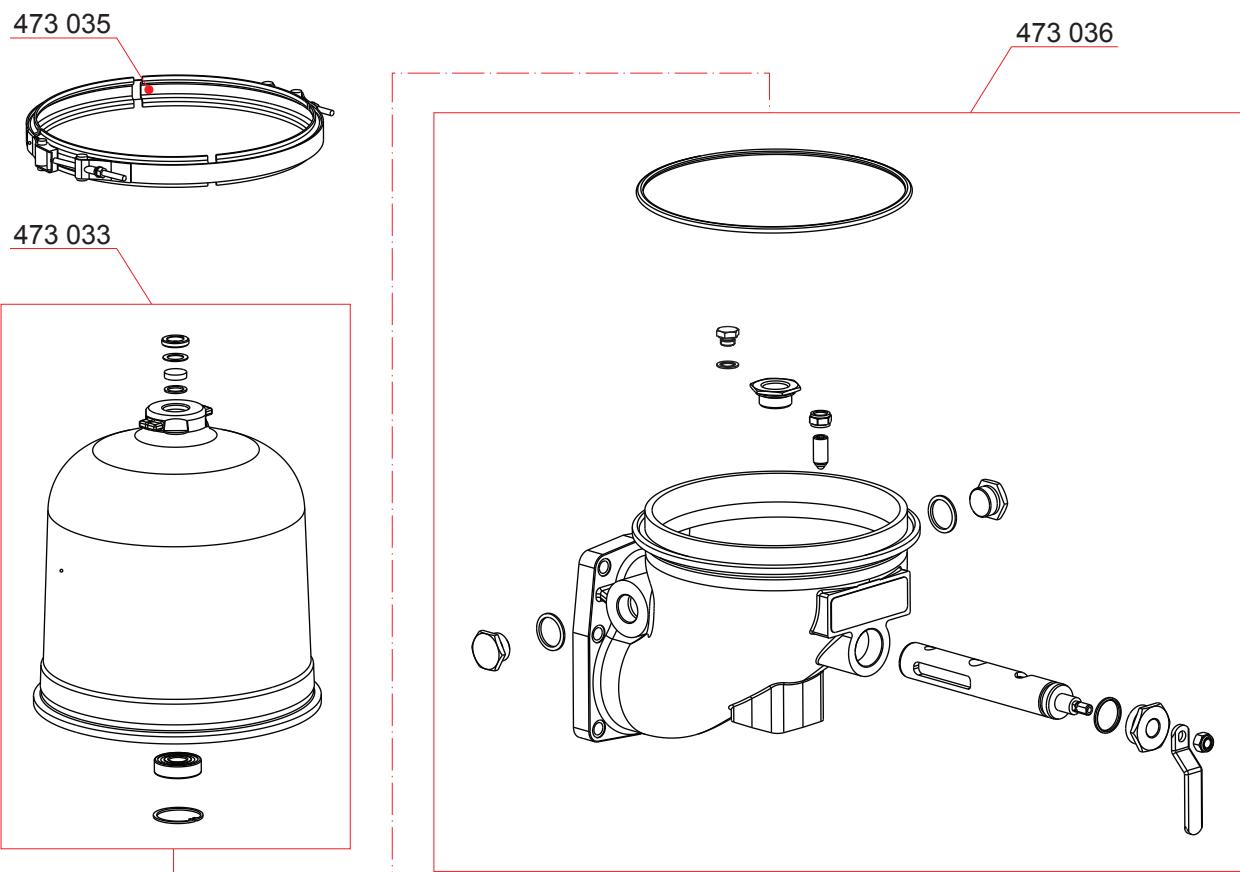
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Centrifugal filter

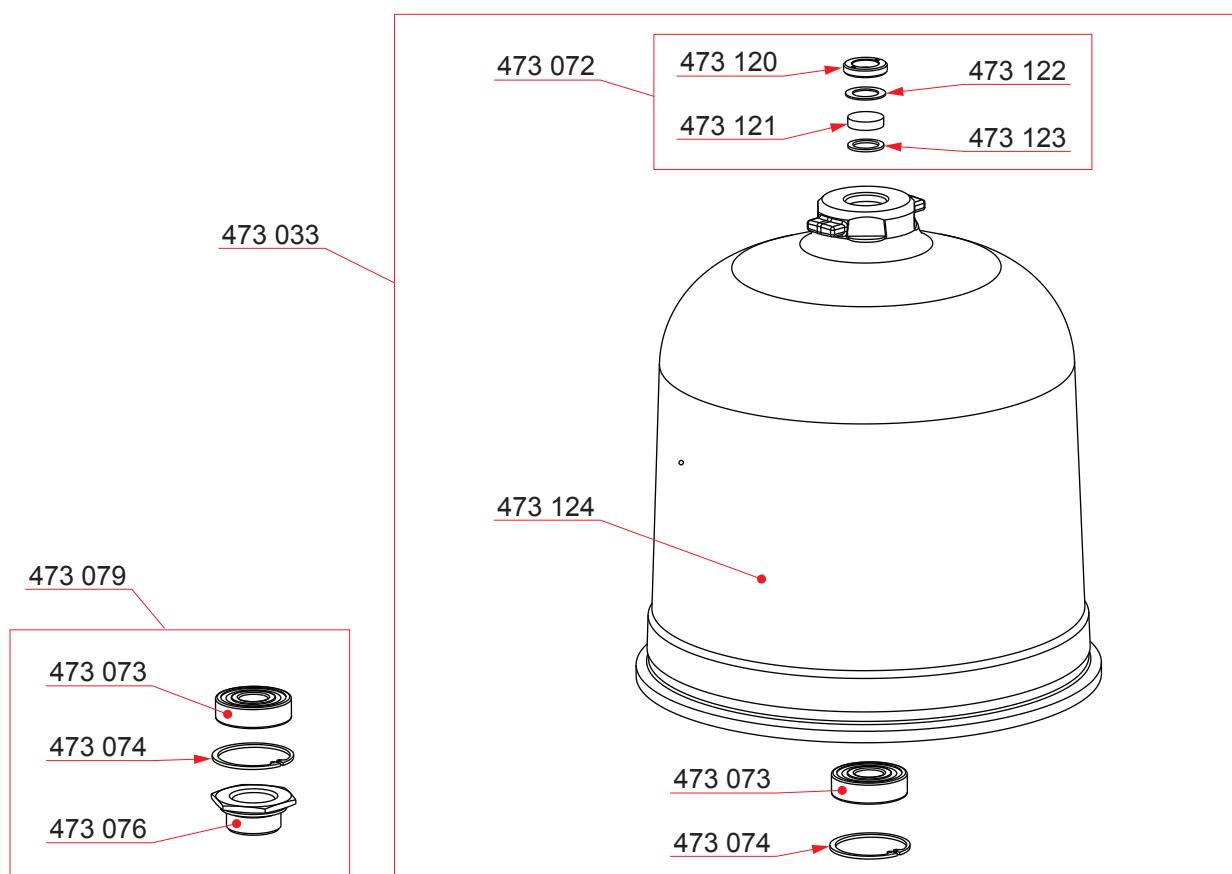


Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 001	Centrifugal filter	1	-

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Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 033	Cover, complete	1	5.5
473 035	Cover clamp ring	1	1.2
473 036	Body, compl.	1	15.8

Centrifugal filter

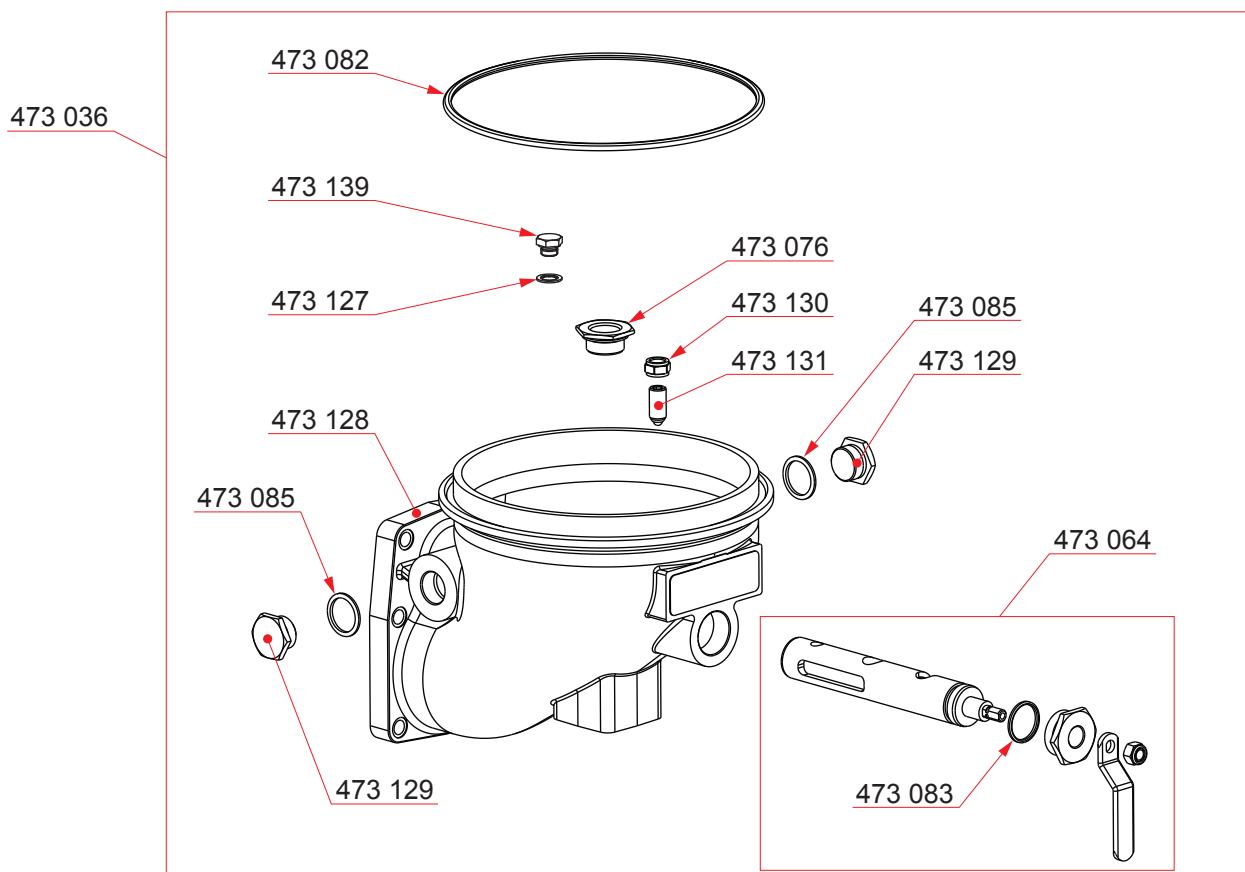
Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 033	Cover, complete	1	5.5
473 072	Sight glass kit	1	0.1
473 120	Retainer ring *	1	-
473 121	Sight glass *	1	-
473 122	Sealing ring *	1	-
473 123	Sealing ring *	1	-
473 073	Cover bearing *	1	-
473 074	Circlip *	1	-
473 124	Cover *	1	-
473 079	Bearing kit (1)	1	0.3
473 073	Cover bearing *	1	-
473 074	Circlip *	1	-
473 076	Bearing *(2)	1	-

NOTE! (1) Glue compound included.

NOTE! (2) Illustrated on page 4.

NOTE! Spare parts marked * can not be ordered separately

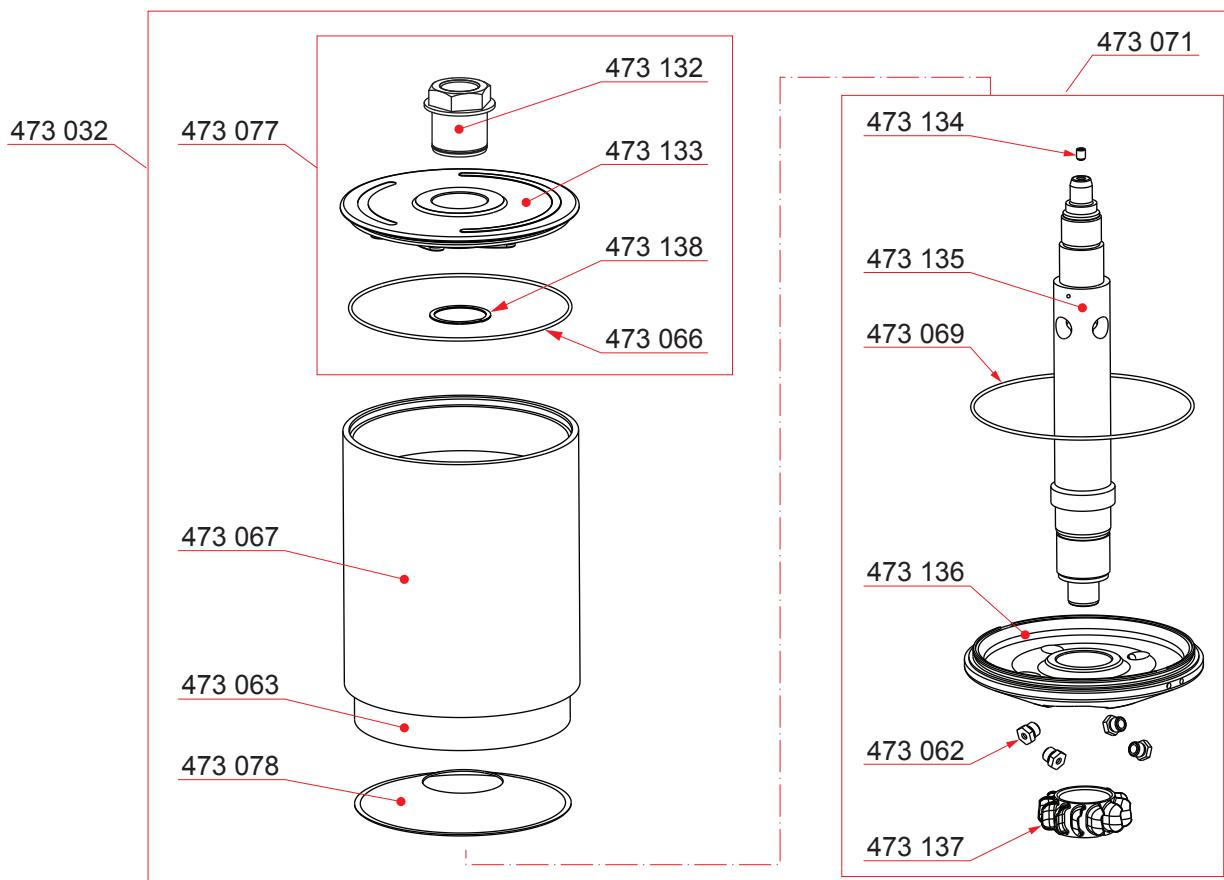
Edition: A
 Page: 4(7)
 Updated: 10.01.2012
Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 036	Body, compl.	1	15.8
473 064	Valve, compl.	1	2.5
473 083	O-ring *	1	-
473 076	Bearing *	1	-
473 082	O-ring *	1	-
473 085	Sealing ring *	2	-
473 127	Sealing ring *	1	-
473 128	Housing *	1	-
473 129	Plug *	2	-
473 130	Nut *	1	-
473 131	Stop screw *	1	-
473 139	Plug *	1	-

NOTE! Spare parts marked * can not be ordered separately

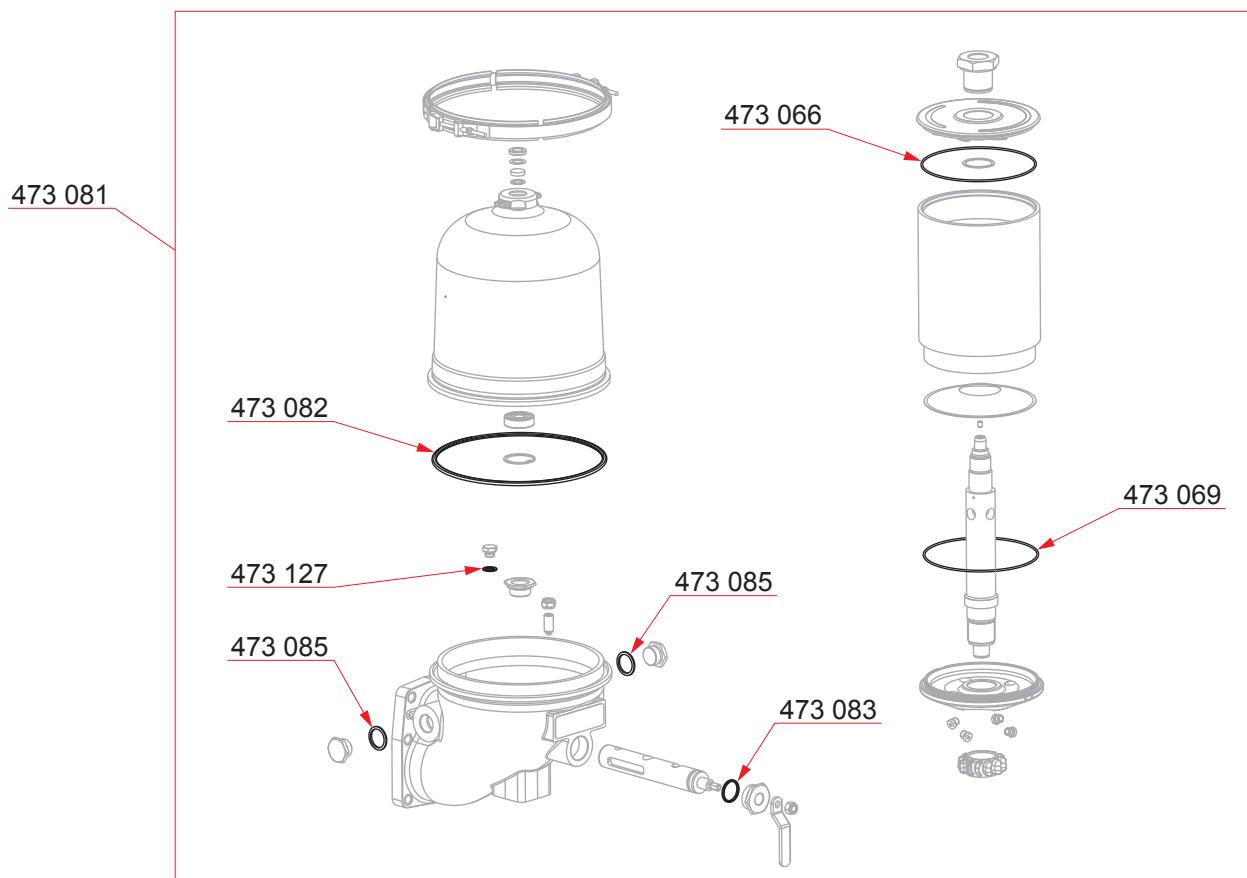
Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 032	Rotor, compl.	1	2.0
473 063	Cartridge	1	0.1
473 067	Rotor tube	1	3.7
473 071	Rotor subassembly	1	6.2
473 062	Nozzle *	4	-
473 069	O-ring *	1	-
473 134	Grub screw *	1	-
473 135	Spindle *	1	-
473 136	Rotor base *	1	-
473 137	Pelton wheel *	1	-
473 077	Rotor cover	1	2.0
473 066	O-ring *	1	-
473 132	Nut *	1	-
473 133	Rotor cover *	1	-
473 138	Sealing ring *	1	-
473 078	Cone	1	0.3

NOTE! Spare parts marked * can not be ordered separately

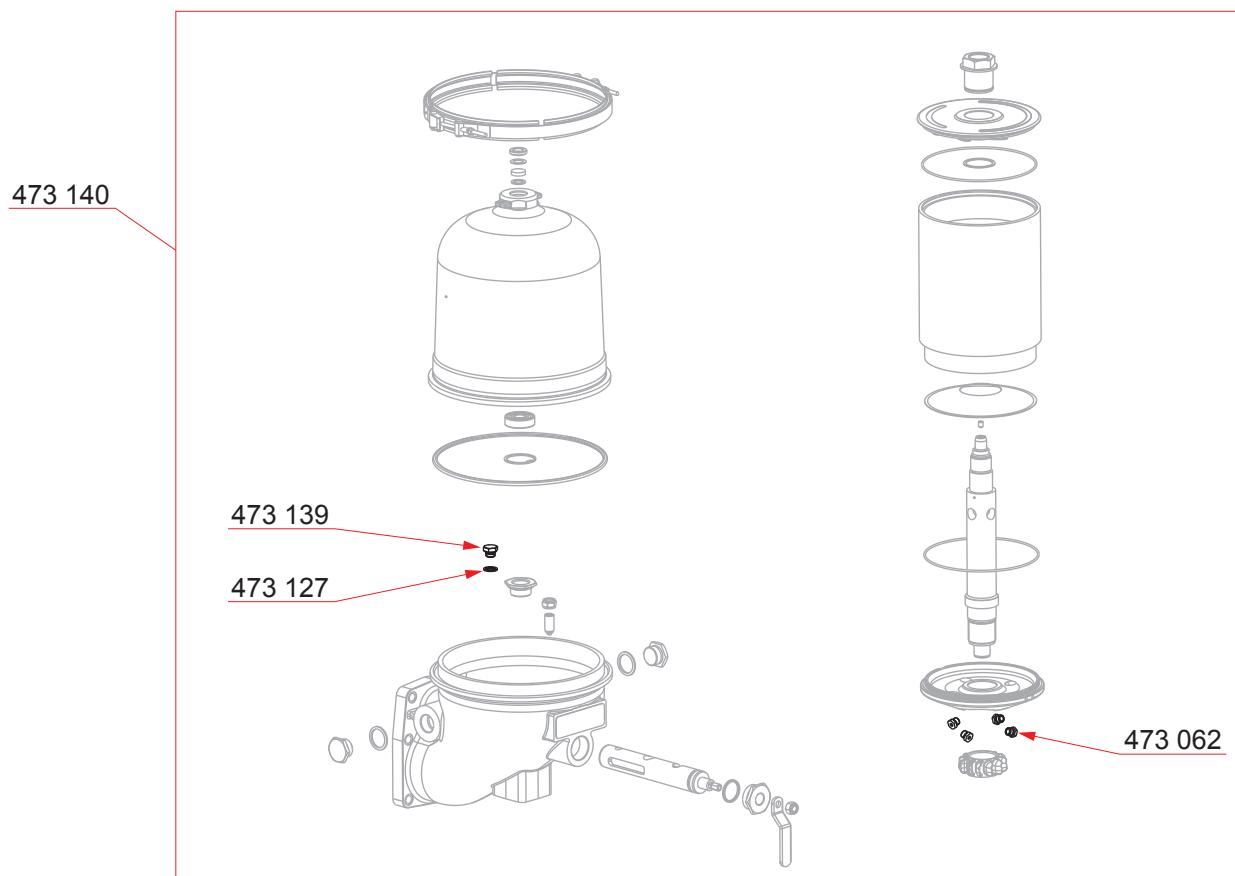
Edition: A
 Page: 6(7)
 Updated: 10.01.2012
Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 081	Sealing set	1	-
473 066	O-ring (1)	1	-
473 069	O-ring (1)	1	-
473 082	O-ring (1)	1	-
473 083	O-ring (1)	1	-
473 085	Sealing ring (1)	2	-
473 127	Sealing ring (1)	1	-

NOTE! (1) Parts included in set are not delivered separately.

Centrifugal filter

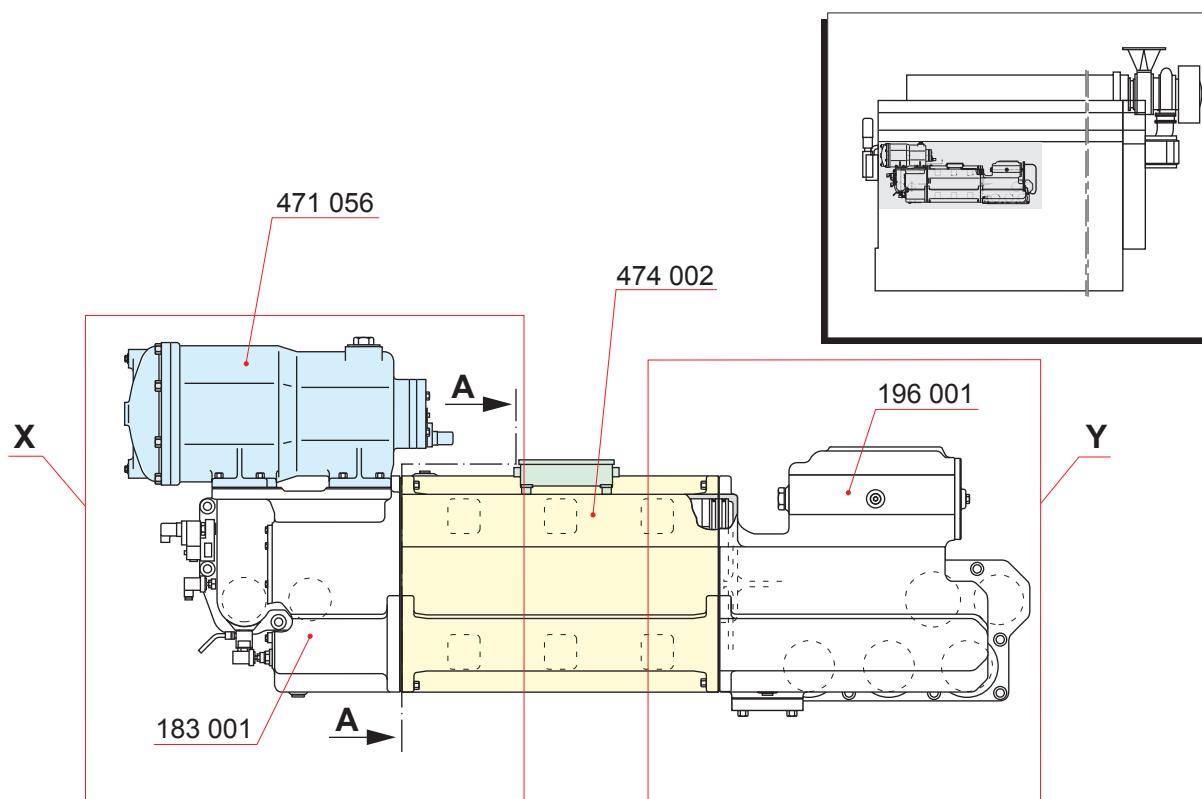


Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 140	Tube assembly removal kit	1	0.2
473 062	Nozzle (1)	4	-
473 127	Sealing ring (1)	1	-
473 139	Plug (1)	1	-

NOTE! (1) Parts included in set are not delivered separately.

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Lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 001	Thermostatic valve for lube oil (1)	1	145
196 001	Thermostatic valve for LT (2)	1	190
471 056	Lubricating oil filter (3)	1	-
474 002	Housing	1	252

NOTE! (1) See section 183-

NOTE! (2) See section 196-

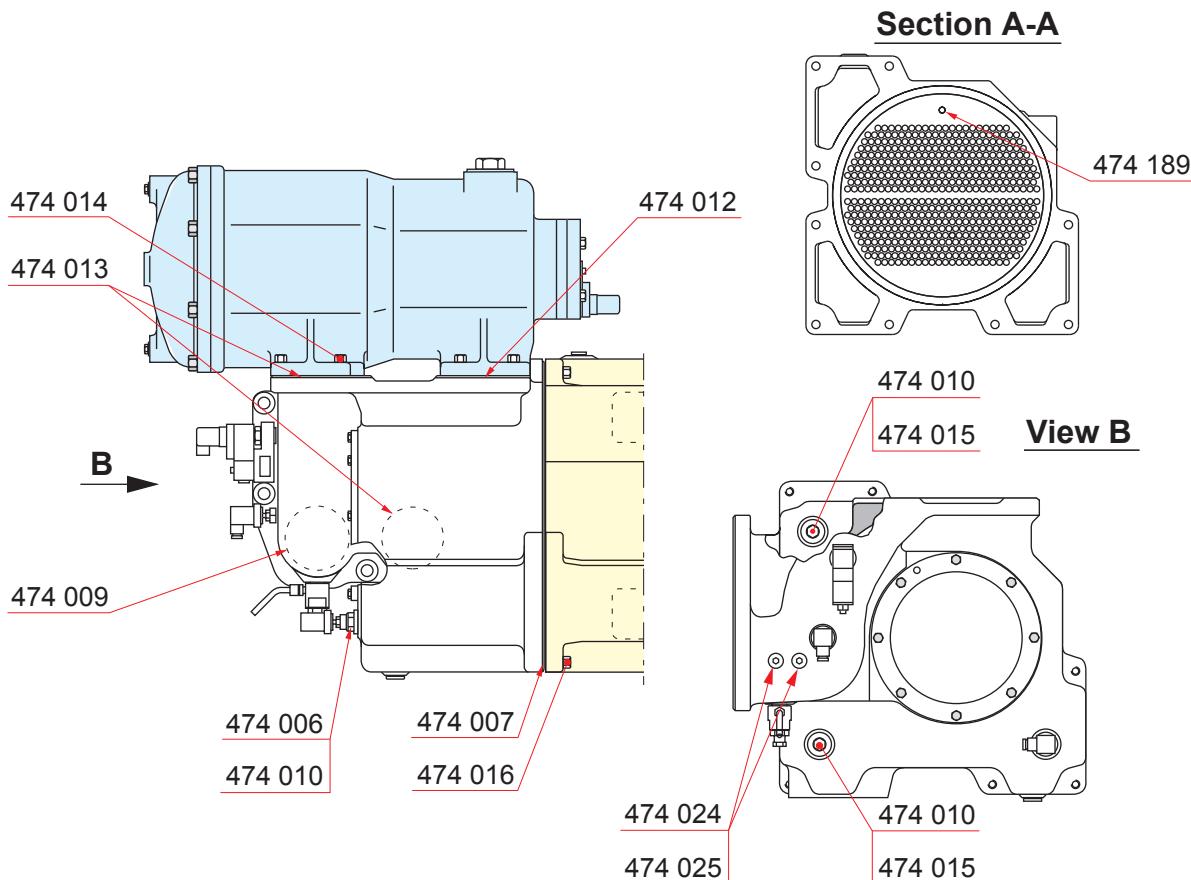
NOTE! (3) See section 471-

NOTE! X) See page 2.

NOTE! Y) See page 3.

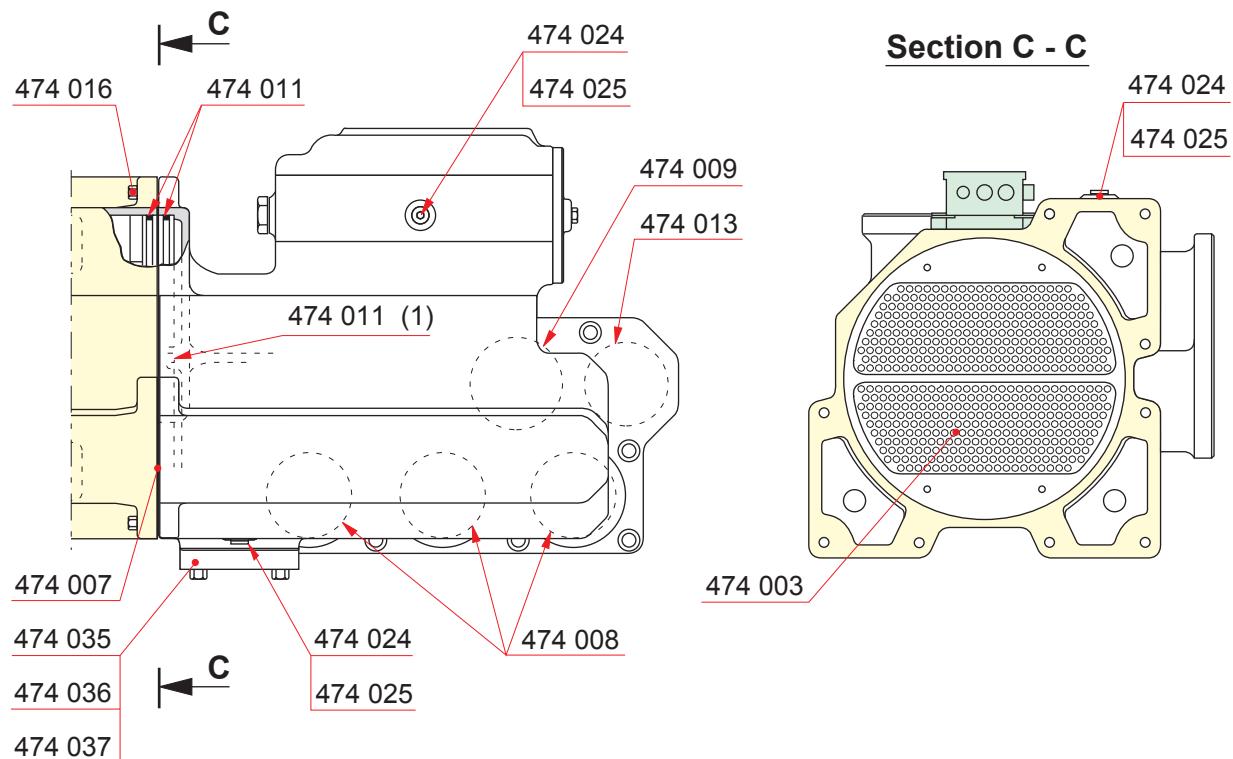
Edition: L
 Page: 2(4)
 Updated: 22.01.2013

Lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 006	Plug	1	0.1
474 007	Gasket	6	0.1
474 009	O-ring	2	-
474 010	Gasket	3	-
474 012	O-ring	1	-
474 013	O-ring	3	-
474 014	Screw	8	-
474 015	Plug	2	0.1
474 016	Screw	18	-
474 024	Plug	5	-
474 025	Gasket	5	-
474 189	Cylindrical pin	1	-

Lube oil module

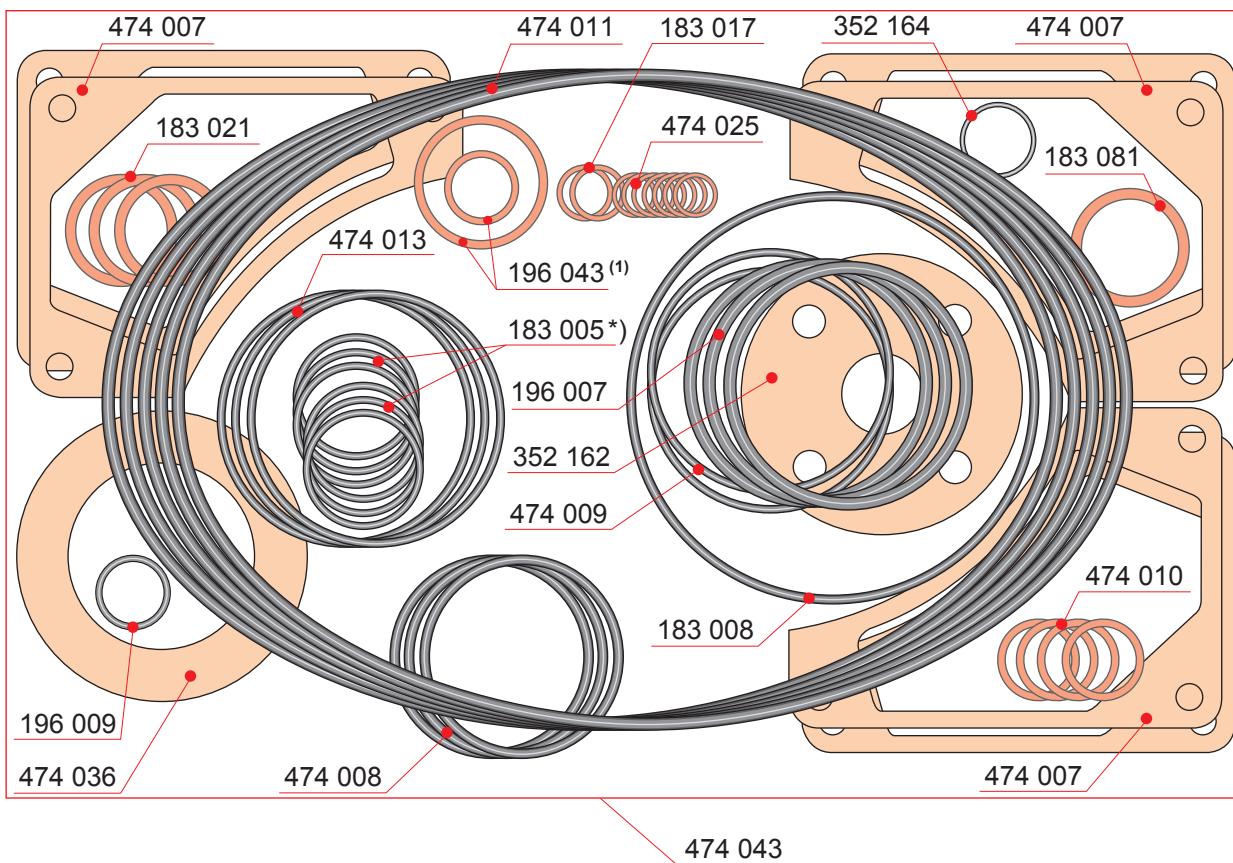


Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 003	Tube stack	1	-
474 007	Gasket	6	0.1
474 008	O-ring	3	-
474 009	O-ring	2	-
474 011	O-ring	5	-
474 013	O-ring	3	-
474 016	Screw	18	-
474 024	Plug	5	-
474 025	Gasket	5	-
474 035	Flange	1	4.2
474 036	Gasket	1	-
474 037	Screw	4	0.1

NOTE! (1) Part to be cutted, length = 370mm.

Edition: L
 Page: 4(4)
 Updated: 22.01.2013

Lube oil module

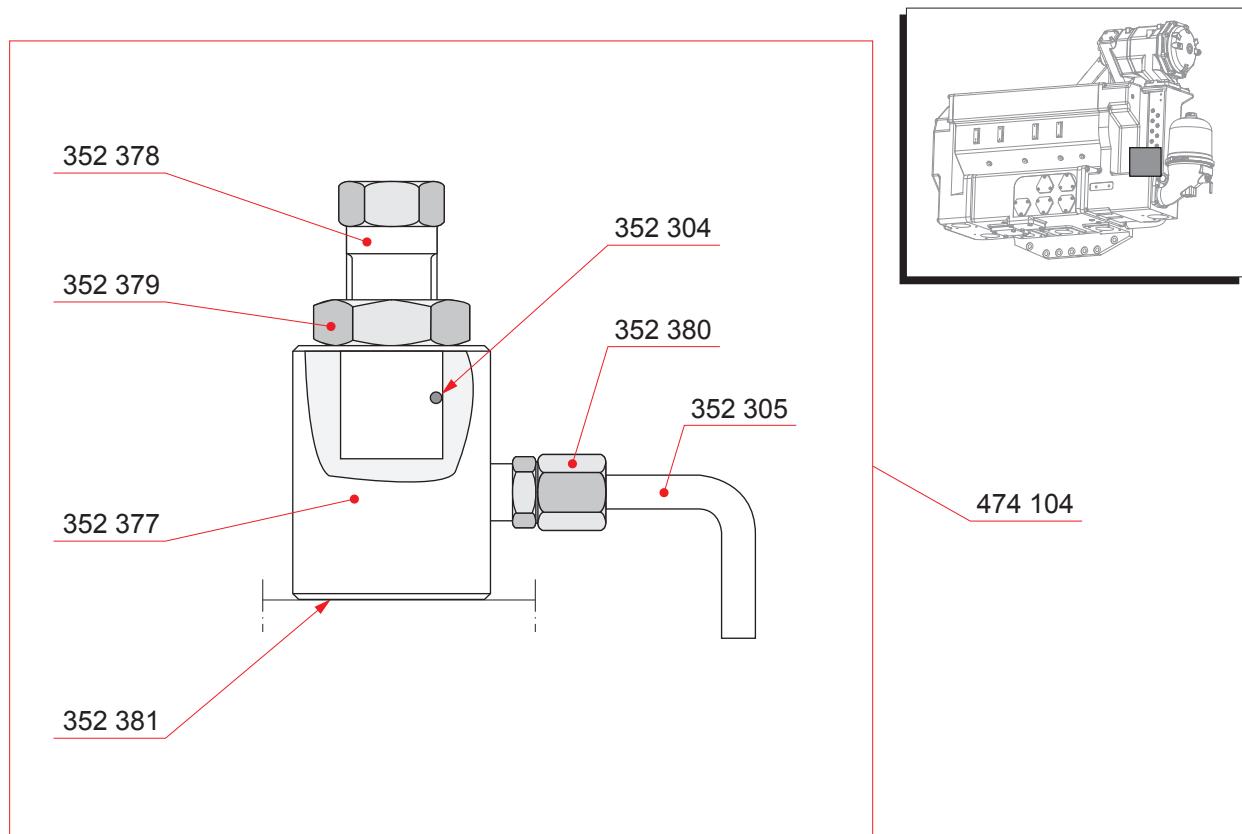


Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 043	Sealing set	1	1.5
183 005	O-ring *)	3	-
183 008	O-ring	1	-
183 017	Sealing ring	2	-
183 021	Sealing ring	3	-
183 081	Sealing ring	1	-
196 007	O-ring	3	-
196 009	O-ring	1	-
196 043	Sealing ring (1)	1	-
352 162	Gasket	1	-
352 164	O-ring	1	-
474 007	Gasket	6	0.1
474 008	O-ring	3	-
474 009	O-ring	2	-
474 010	Gasket	4	-
474 011	O-ring	5	-
474 013	O-ring	3	-
474 025	Gasket	7	-
474 036	Gasket	1	-

NOTE! (1) One of these is used.

NOTE! *) Depends on the thermostatic element size

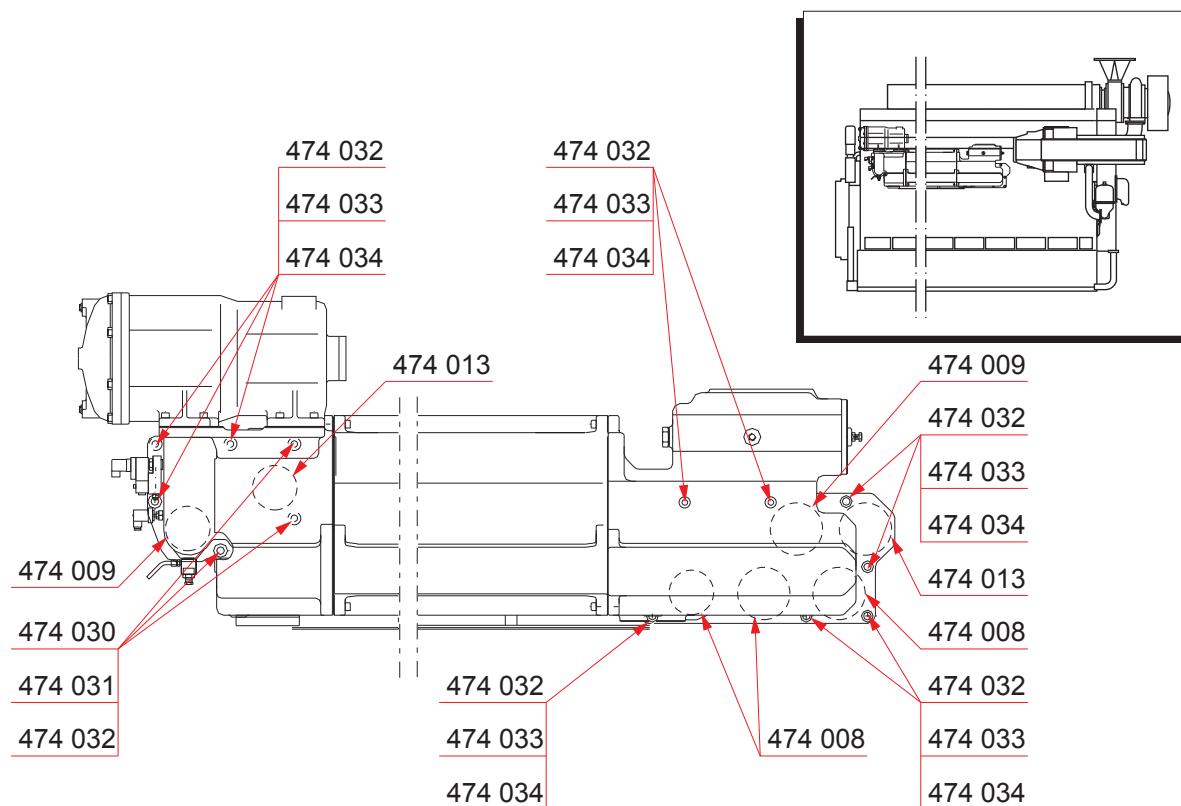
Oil sample valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 104	Valve	1	-
352 304	Pin	1	-
352 305	Pipe	1	-
352 377	Housing	1	0.3
352 378	Spindle	1	0.1
352 379	Nut	1	-
352 380	Pipe union	1	-
352 381	Sealing ring	1	-

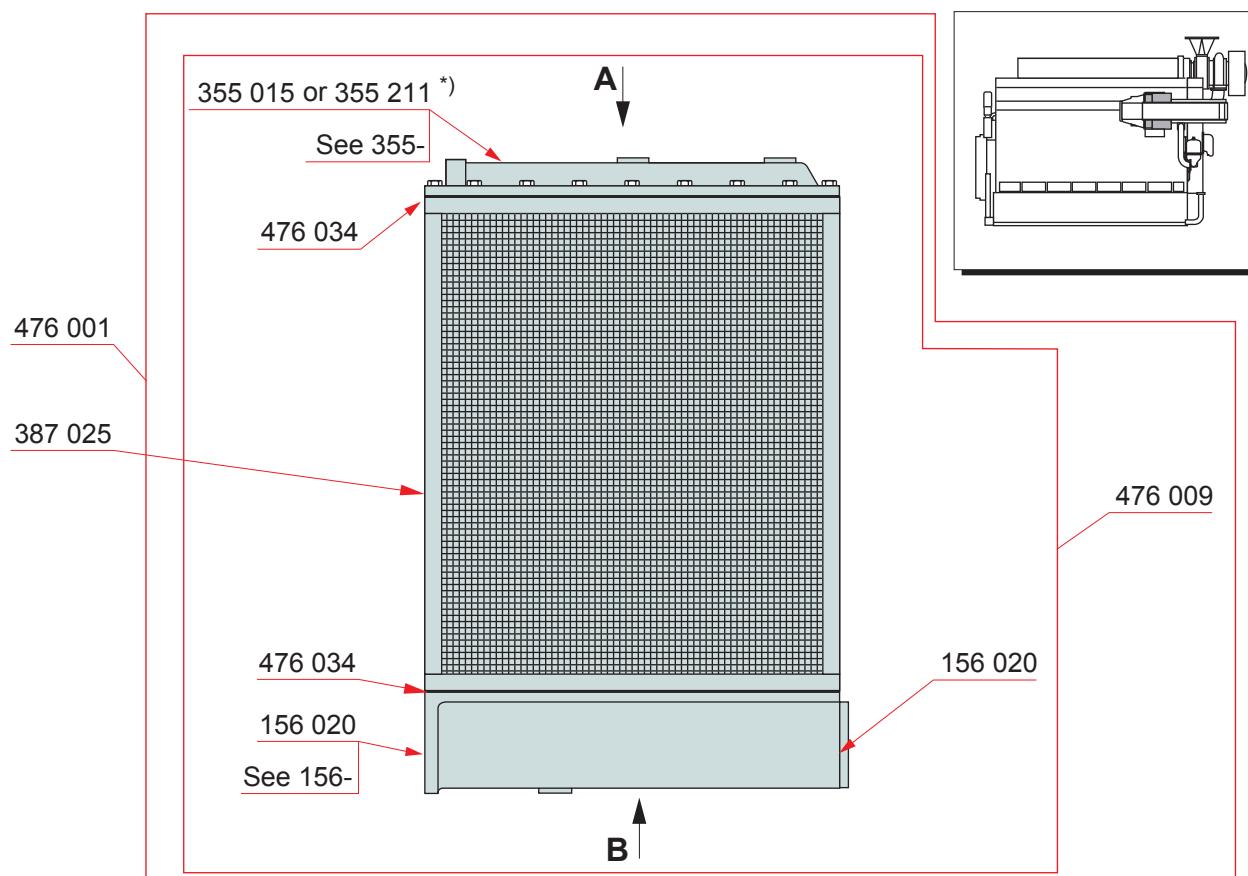
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Fastening for lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 008	O-ring	3	-
474 009	O-ring	2	-
474 013	O-ring	2	-
474 030	Screw	3	-
474 031	Washer	3	-
474 032	Nut	13	-
474 033	Screw	10	-
474 034	Bush	10	-

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Air cooler

Part No.	Description	Qty [Pcs]	Wt. [Kg]
476 001	Charge air cooler	1	-
476 009	Sealing set	1	-
156 020	O-ring	4	-
355 015	O-ring *)	5	-
355 031	O-ring **) (1)	1	-
355 204	O-ring (1) (2)	4	-
355 211	O-ring *) (1)	2	-
355 216	O-ring **) (1)	1	-
476 034	O-ring	4	-
387 025	Glue compound	1	-

NOTE! (1) See 355-

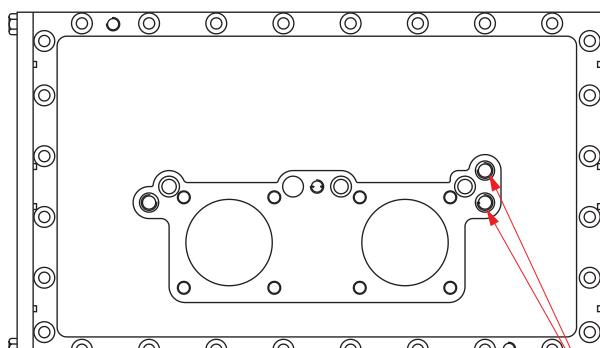
NOTE! (2) Not used in all installations.

NOTE! *) Different spare part number 355 015 or 355 211 is used according to installation.

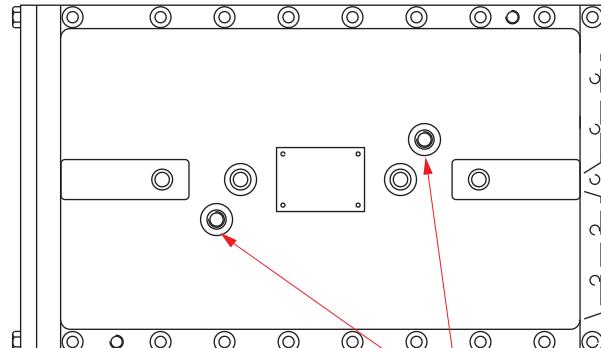
NOTE! **) Different spare part number 355 031 or 355 216 is used according to installation.

Edition: B
Page: 2(3)
Updated: 24.05.2005

Air cooler

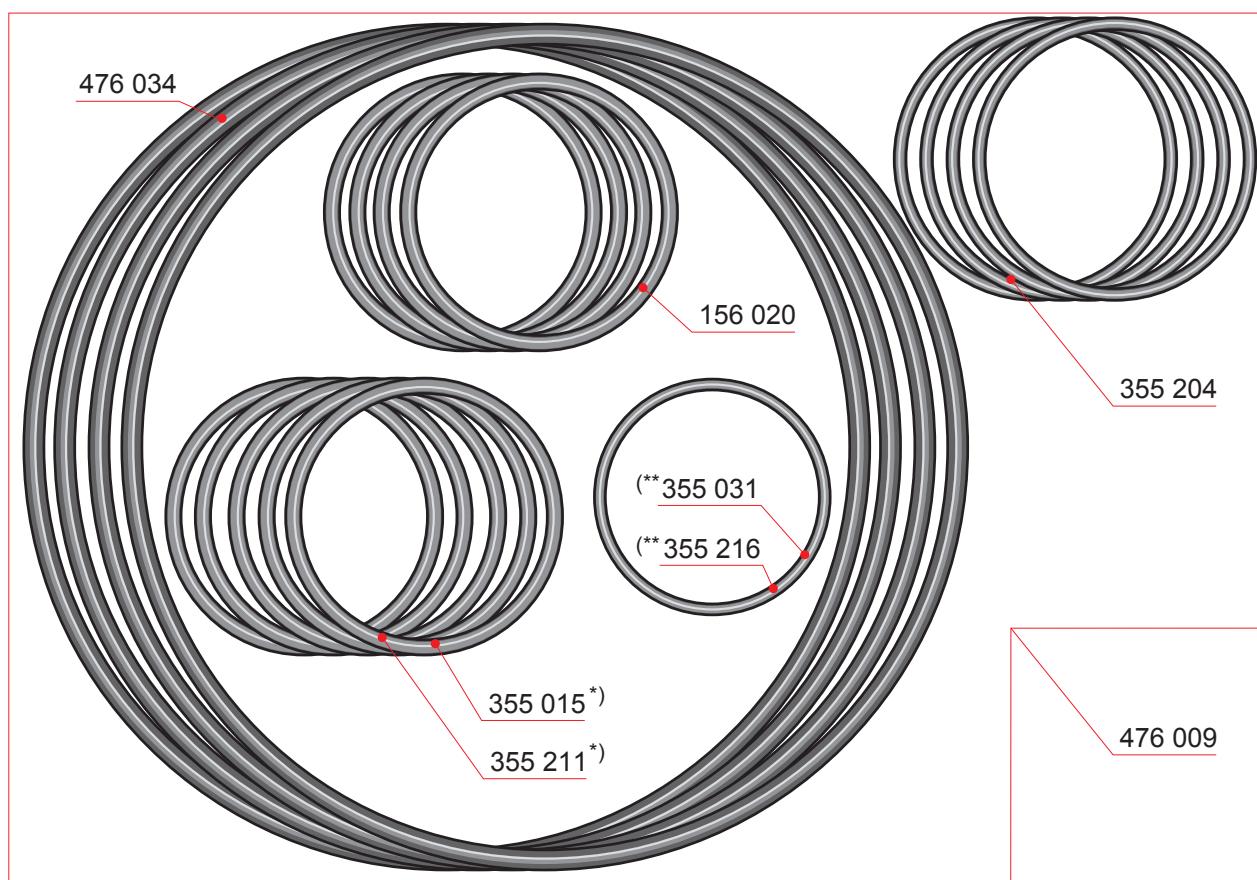
View A

476 004
476 010

View B

476 005
476 010

Part No.	Description	Qty [Pcs]	Wt. [Kg]
476 004	Plug	2	-
476 005	Plug	2	-
476 010	Sealing ring	4	-

Air cooler

Part No.	Description	Qty [Pcs]	Wt. [Kg]
476 009	Sealing set	1	-
156 020	O-ring	4	-
355 015	O-ring *)	5	-
355 031	O-ring **)	1	-
355 204	O-ring (2)	4	-
355 211	O-ring *)	2	-
355 216	O-ring **)	1	-
476 034	O-ring	4	-

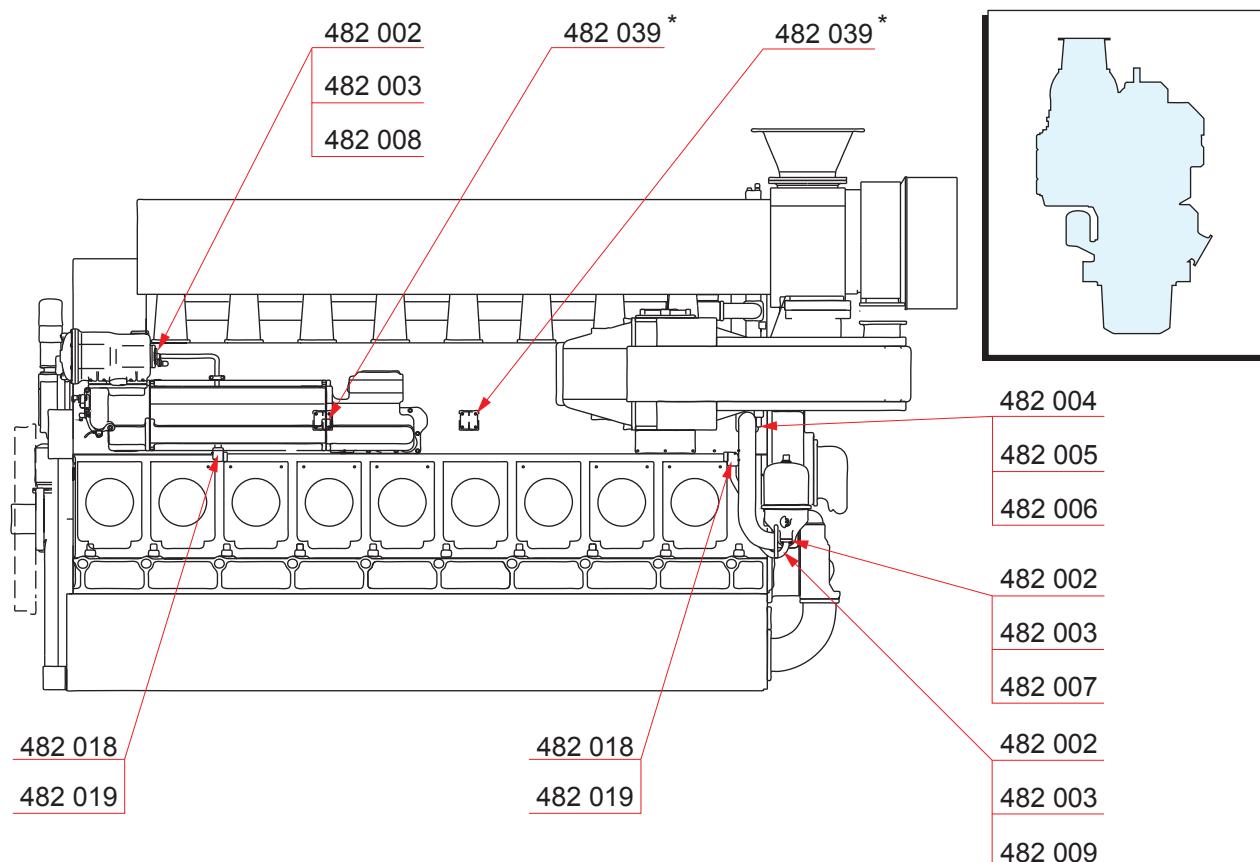
NOTE! (2) Not used in all installations.

NOTE! *) Different spare part number 355 015 or 355 211 is used according to installation.

NOTE! **) Different spare part number 355 031 or 355 216 is used according to installation.

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Sprinkle guards for lube and fuel oil pipes



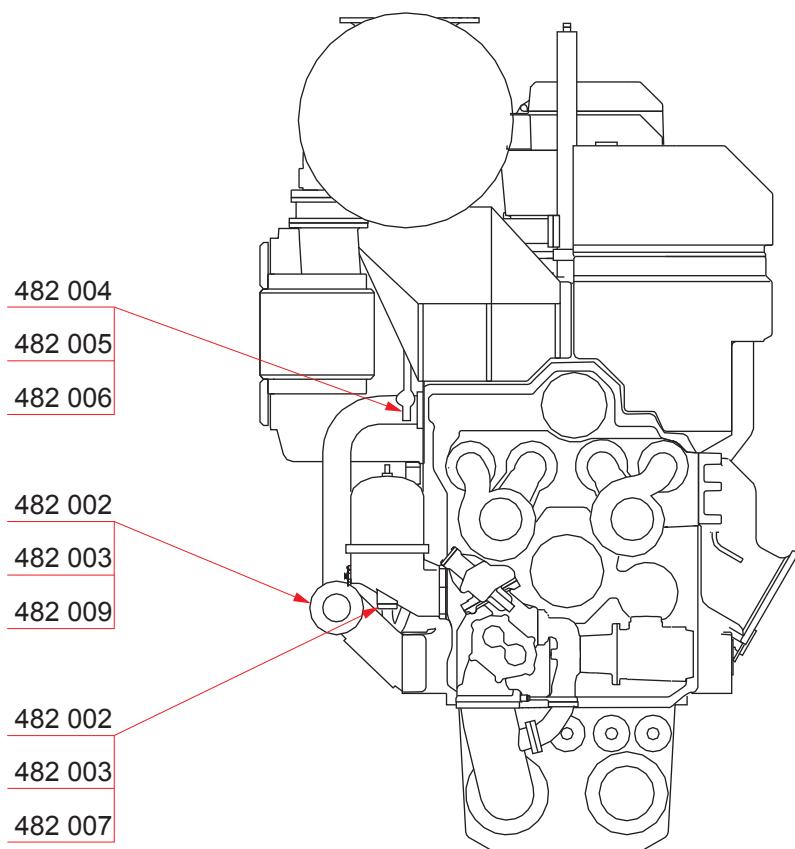
Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 002	Screw (1)	5	-
482 003	Nut (1)	5	-
482 004	Nut	4	-
482 005	Sprinkle guard	1	-
482 006	Screw	4	-
482 007	Sprinkle guard	1	-
482 008	Sprinkle guard	1	-
482 009	Sprinkle guard	1	-
482 018	Sprinkle guard (1)	1	-
482 019	Screw (1)	2	-
482 039	Sprinkle guard * (1)	4	-

NOTE! (1) Amount depends on installation

NOTE! *) Not used in all installations.

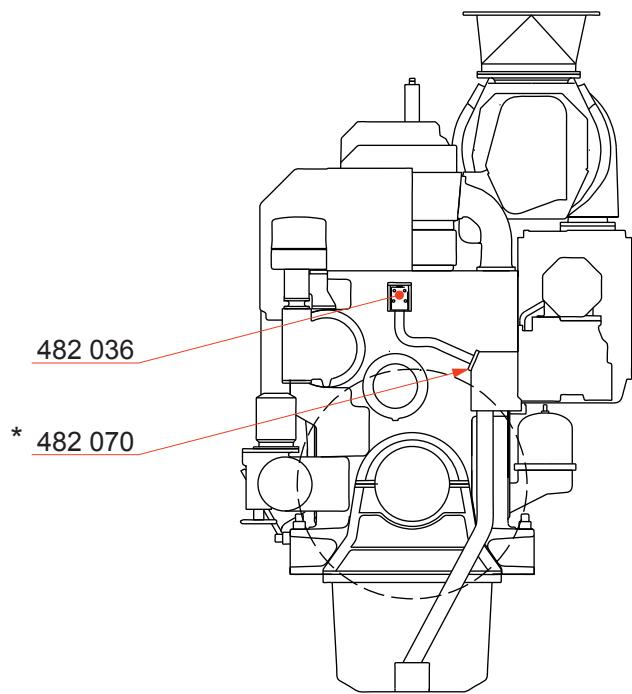
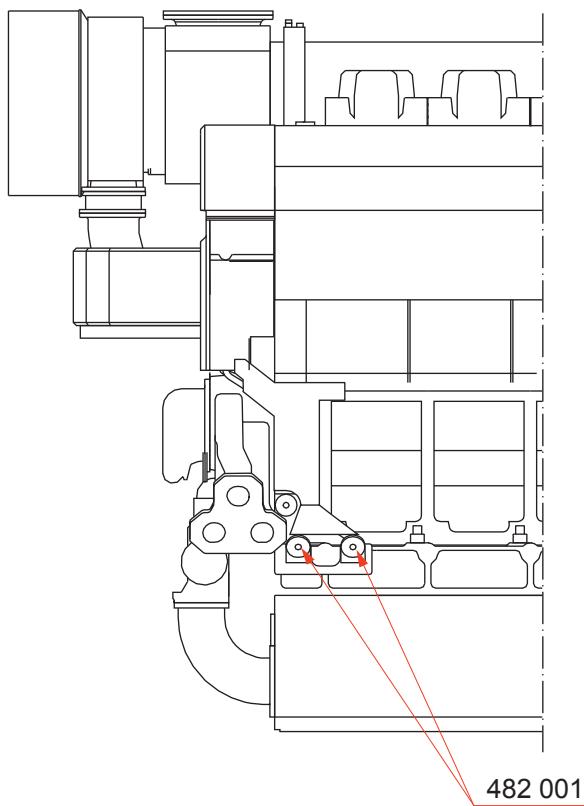
Edition: C
Page: 2(3)
Updated: 19.04.2011

Sprinkle guards for lube and fuel oil pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 002	Screw	5	-
482 003	Nut	5	-
482 004	Nut	4	-
482 005	Sprinkle guard	1	-
482 006	Screw	4	-
482 007	Sprinkle guard	1	-
482 009	Sprinkle guard	1	-

Sprinkle guards for lube and fuel oil pipes

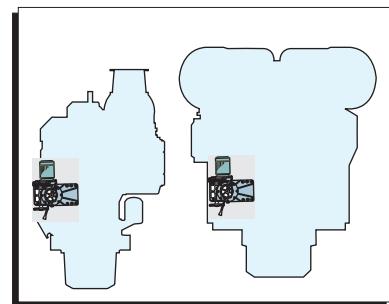
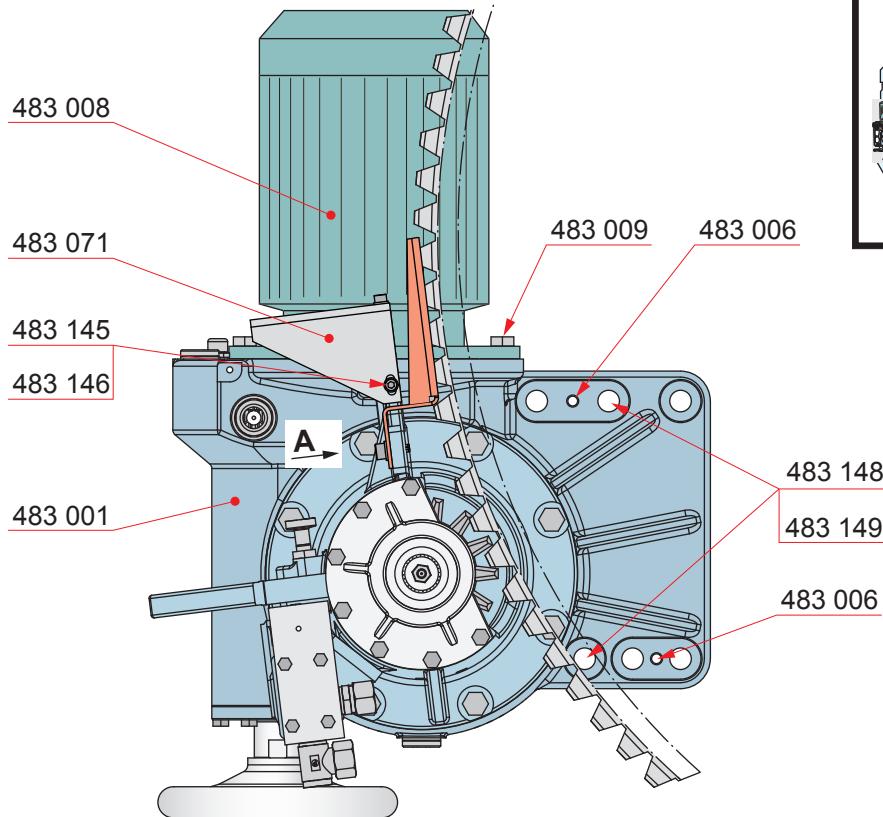


Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 001	Sprinkle guard	2	-
482 036	Sprinkle guard	1	-
482 070	Sprinkle guard *	2	-

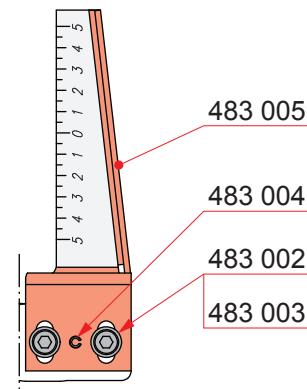
NOTE! *) Not used in all installations.

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Equipment for turning device



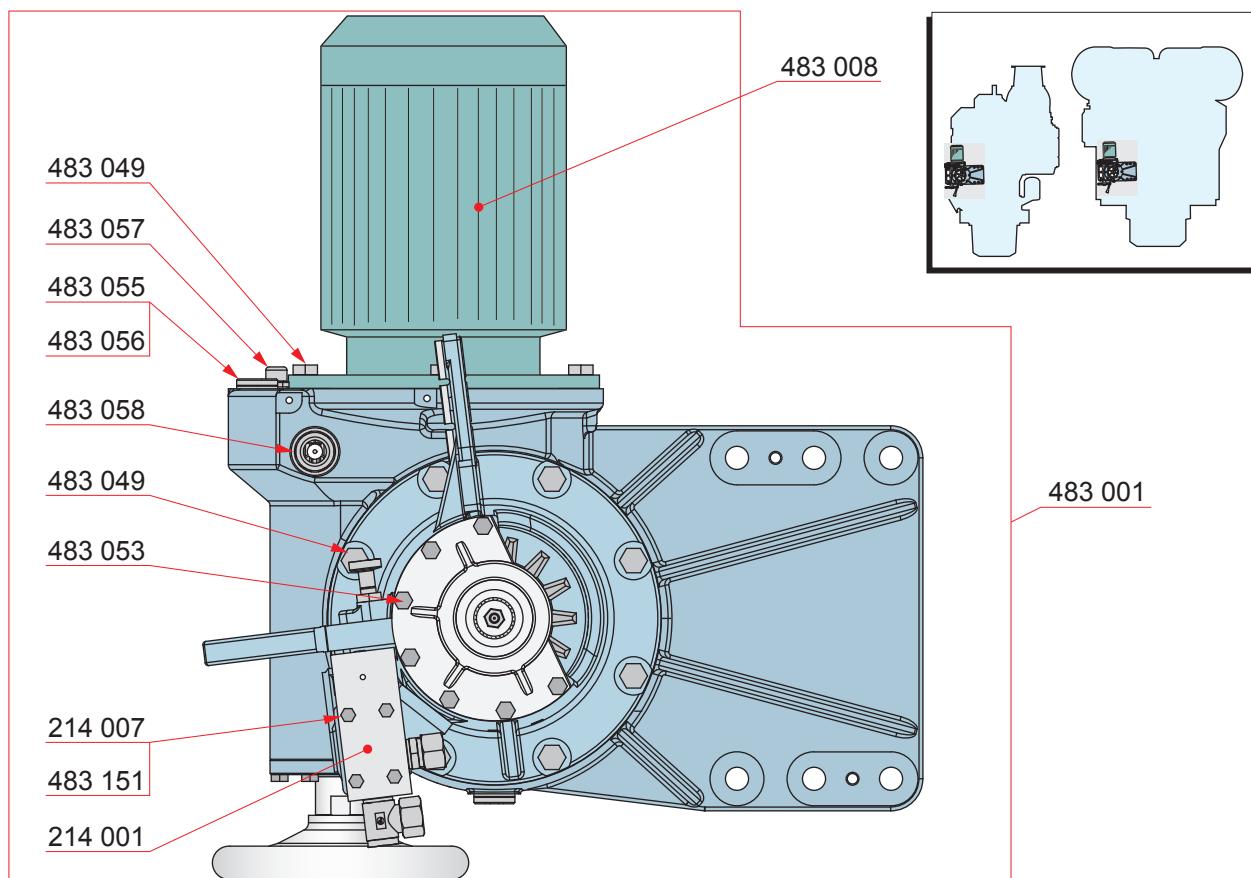
View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 001	Turning device	1	-
483 002	Screw	2	-
483 003	Washer	2	-
483 004	Pin	1	-
483 005	Indicator	1	-
483 006	Pin	2	-
483 008	Electrical motor	1	-
483 009	Screw	4	-
483 071	Shield	1	-
483 145	Screw	2	-
483 146	Washer	2	-
483 148	Screw	6	-
483 149	Washer	6	-

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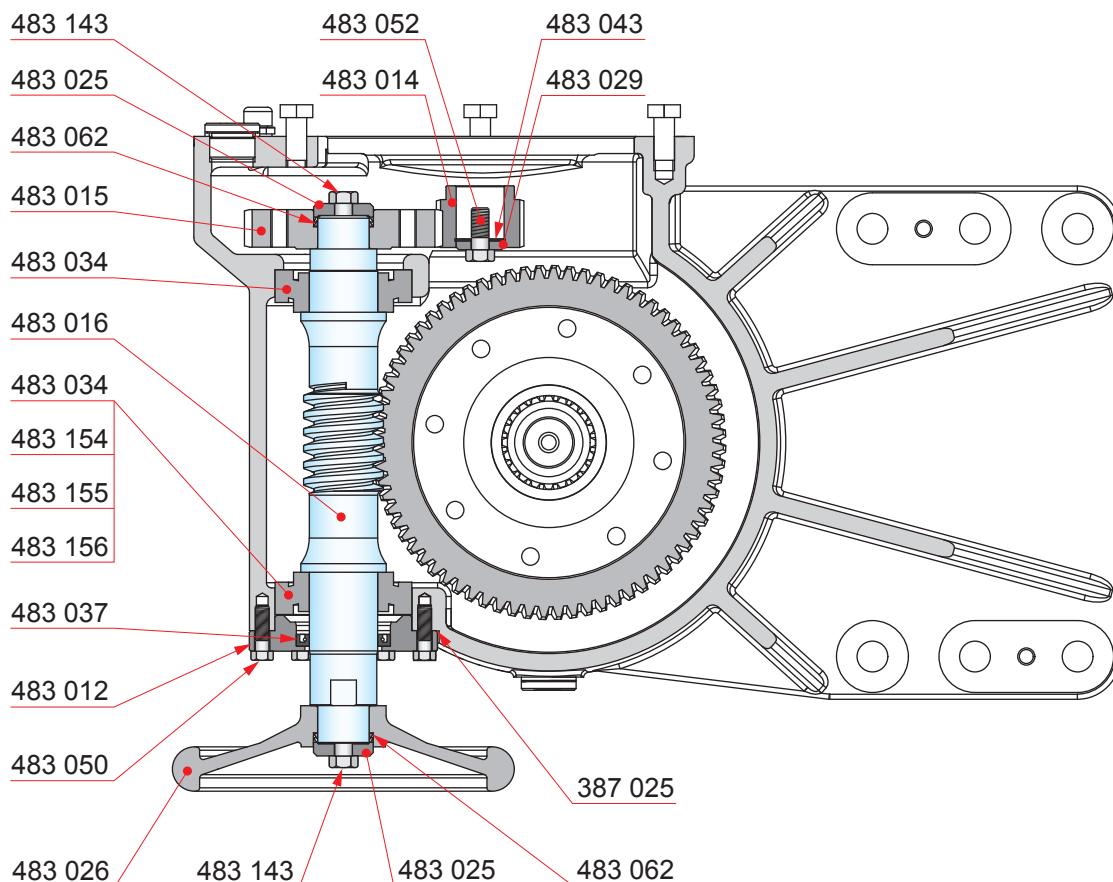
Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 001	Turning device	1	-
214 001	Start blocking device	1	-
214 007	Screw	4	-
483 049	Screw	12	-
483 053	Screw	11	-
483 055	Plug bolt	2	-
483 056	Sealing ring	2	-
483 057	Breather	1	-
483 058	Oil level gauge	1	-
483 151	Washer	4	-
483 008	Electrical motor	1	-

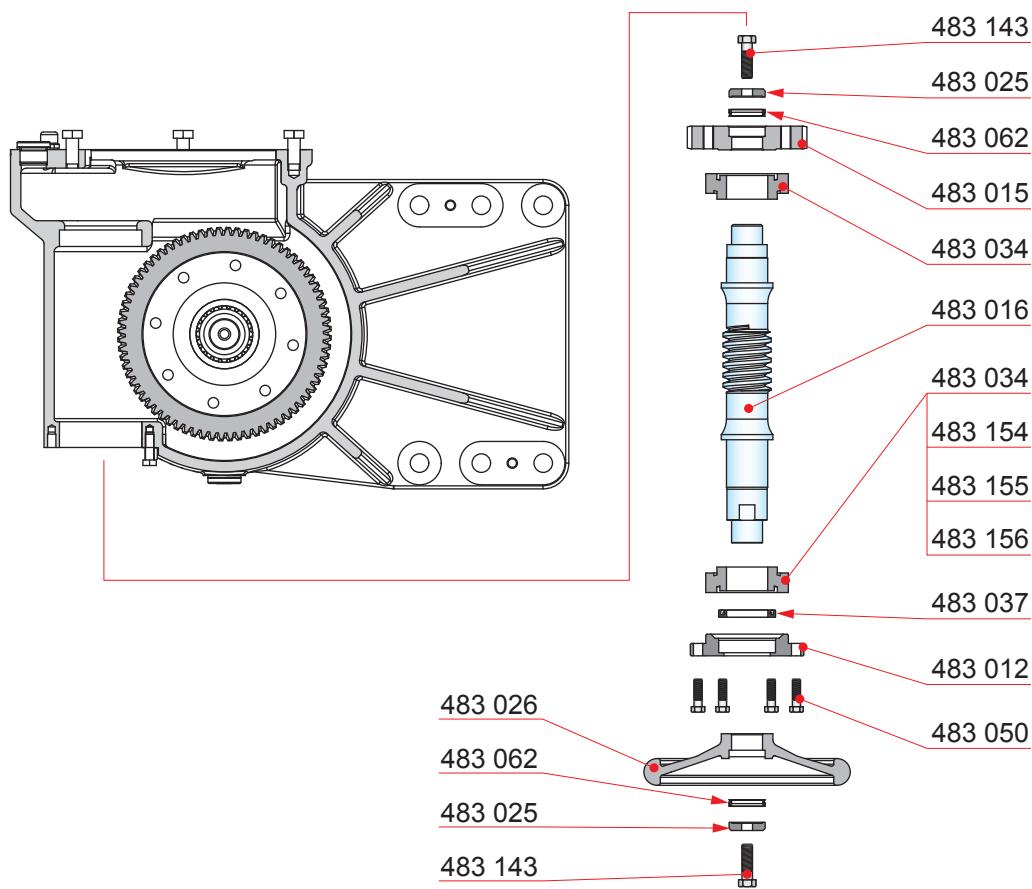
Edition: A
 Page: 2(8)
 Updated: 14.03.2012

Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 012	Cover	1	-
483 014	Primary gear	1	-
483 015	Gear	1	-
483 016	Worm	1	-
483 025	Flange	2	-
483 026	Hand wheel	1	-
483 029	Washer	1	-
483 034	Roller bearing	2	-
483 037	Shaft seal	1	-
483 043	Retaining ring	1	-
483 050	Screw	2	-
483 052	Screw	1	-
483 062	Locking element	2	-
483 143	Screw	2	-
483 154	Shim, 0.05 mm	2	-
483 155	Shim, 0.1 mm	2	-
483 156	Shim, 0.3 mm	2	-
387 025	Glue compound	1	-

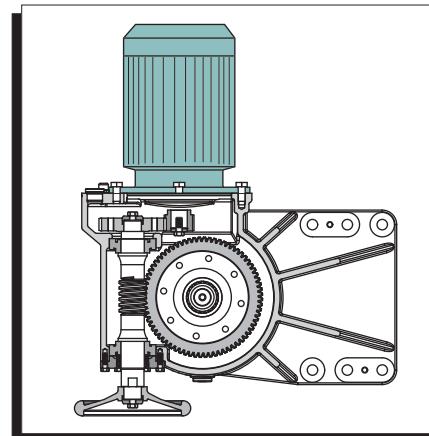
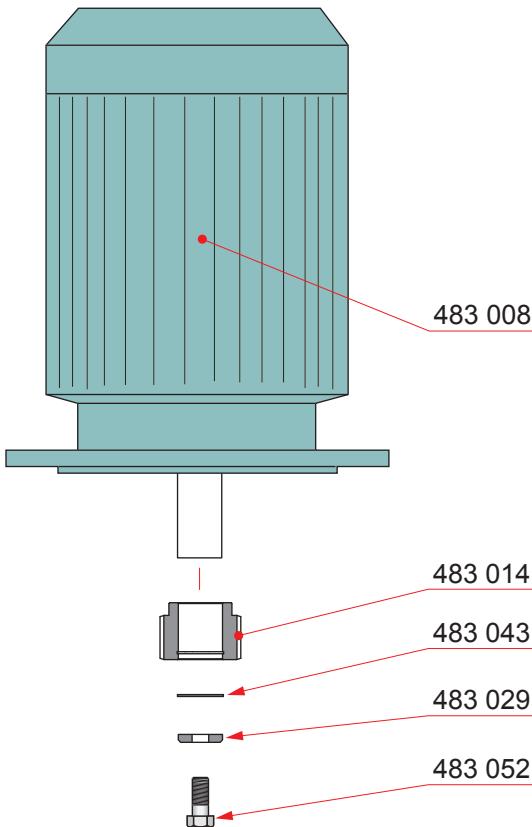
Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 012	Cover	1	-
483 015	Gear	1	-
483 016	Worm	1	-
483 025	Flange	2	-
483 026	Hand wheel	1	-
483 034	Roller bearing	2	-
483 037	Shaft seal	1	-
483 050	Screw	6	-
483 062	Locking element	2	-
483 143	Screw	2	-
483 154	Shim, 0.05 mm	2	-
483 155	Shim, 0.1 mm	2	-
483 156	Shim, 0.3 mm	2	-

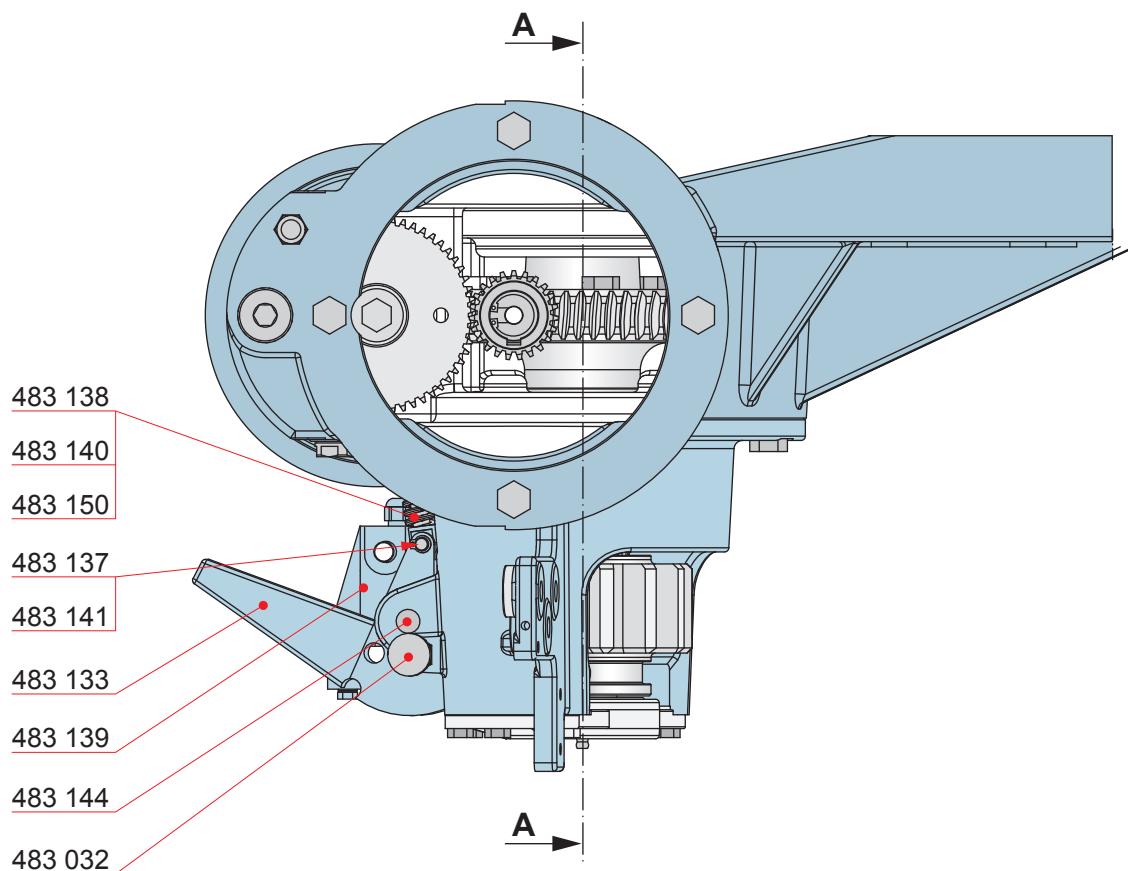
Edition: A
Page: 4(8)
Updated: 14.03.2012

Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 008	Electrical motor	1	-
483 014	Primary gear	1	-
483 029	Washer	1	-
483 043	Retaining ring	1	-
483 052	Screw	1	-

Turning device

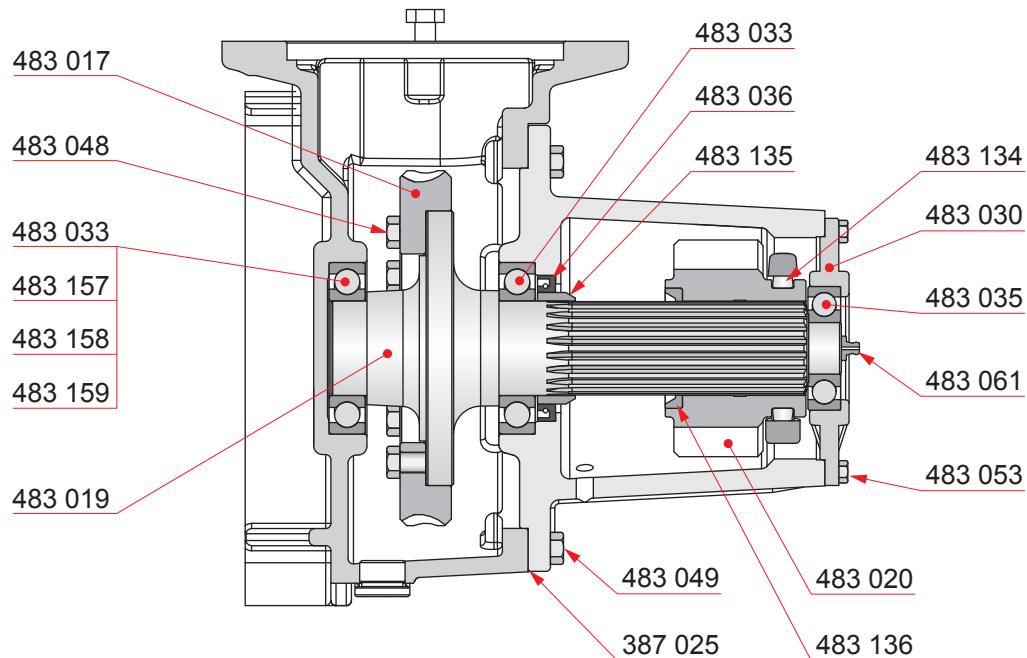


Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 032	Locking device	1	-
483 133	Transfer fork	1	-
483 137	Pin	1	-
483 138	Spring rod	1	-
483 139	Support	1	-
483 140	Push rod	1	-
483 141	Circlip	2	-
483 144	Pin	1	-
483 150	Spring	1	-

Edition: A
 Page: 6(8)
 Updated: 14.03.2012

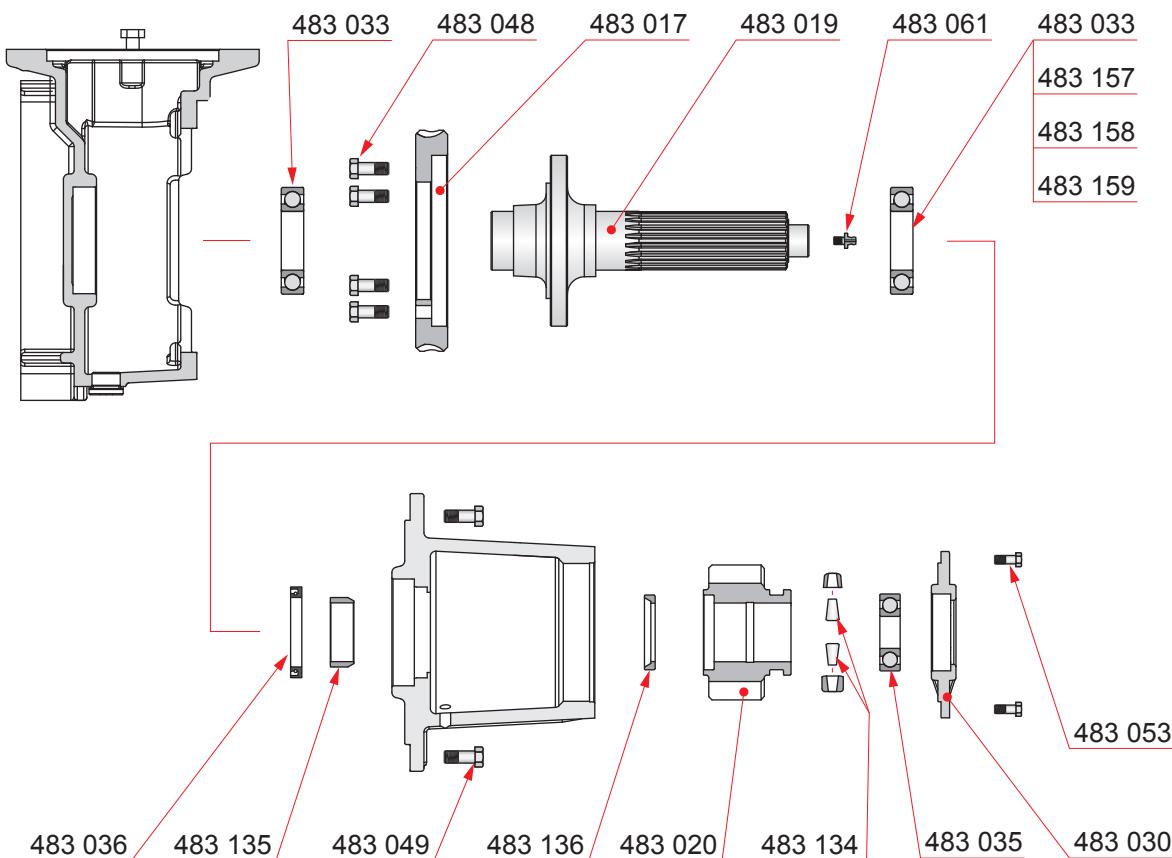
Turning device

Section A - A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 017	Worm wheel	1	-
483 019	Shaft	1	-
483 020	Gear wheel	1	-
483 030	Cover	1	-
483 033	Ball bearing	2	-
483 035	Ball bearing	1	-
483 036	Shaft seal	1	-
483 048	Screw	8	-
483 049	Screw	12	-
483 053	Screw	11	-
483 061	Lubricating nipple	1	-
483 134	Tap of transfer fork	2	-
483 135	Bushing	1	-
483 136	Bushing	1	-
483 157	Shim, 0.05 mm	2	-
483 158	Shim, 0.1 mm	2	-
483 159	Shim, 0.2 mm	2	-
387 025	Glue compound	1	-

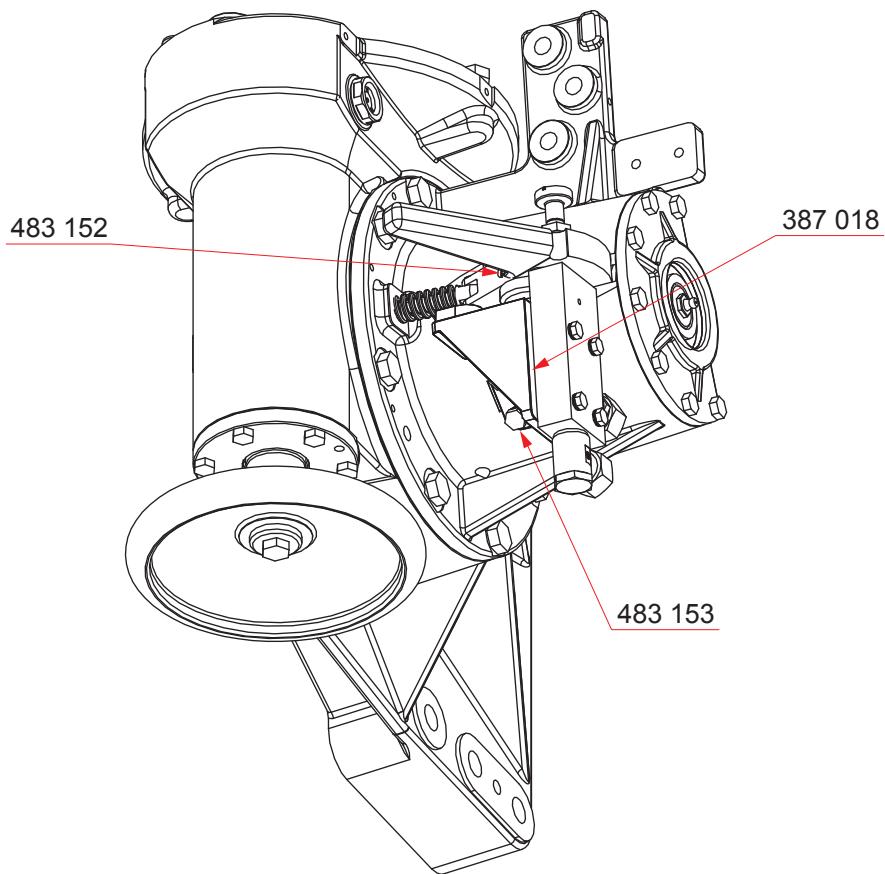
Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 017	Worm wheel	1	-
483 019	Shaft	1	-
483 020	Gear wheel	1	-
483 030	Cover	1	-
483 033	Ball bearing	2	-
483 035	Ball bearing	1	-
483 036	Shaft seal	1	-
483 048	Screw	8	-
483 049	Screw	12	-
483 053	Screw	11	-
483 061	Lubricating nipple	1	-
483 134	Tap of transfer fork	2	-
483 135	Bushing	1	-
483 136	Bushing	1	-
483 157	Shim, 0.05 mm	2	-
483 158	Shim, 0.1 mm	2	-
483 159	Shim, 0.2 mm	2	-

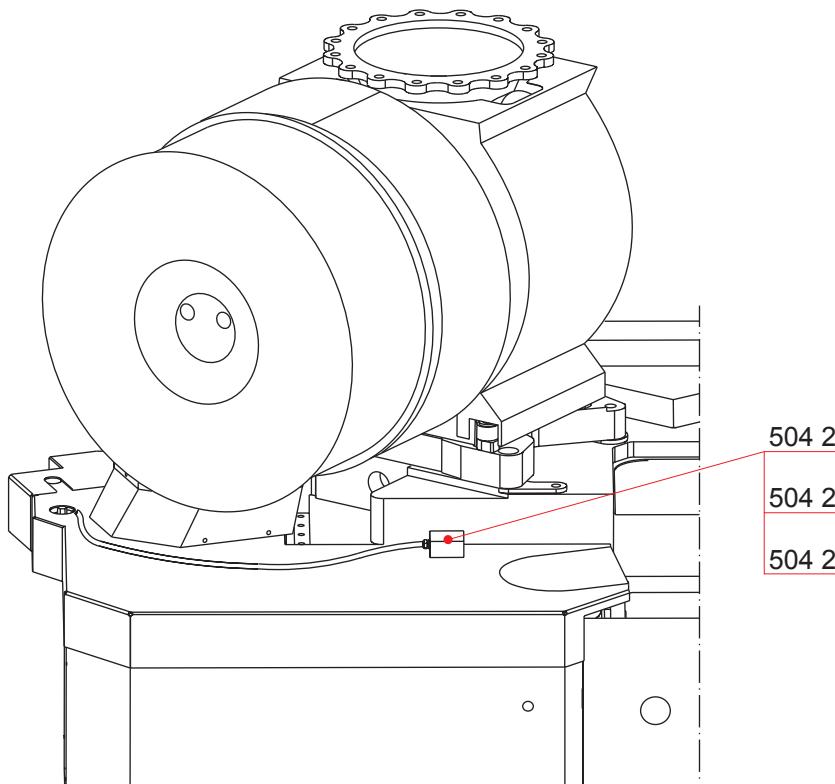
Edition: A
Page: 8(8)
Updated: 14.03.2012

Turning device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
483 152	Screw	1	-
483 153	Washer	4	-
387 018	Glue compound	1	-

Electrical equipment for charge air system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 205	Terminal box	*	-
504 206	Hose	*	-
504 207	Cable gland	*	-

NOTE! *) Quantity depending on installation.
See page 2.

Edition: A

Page: 2(2)

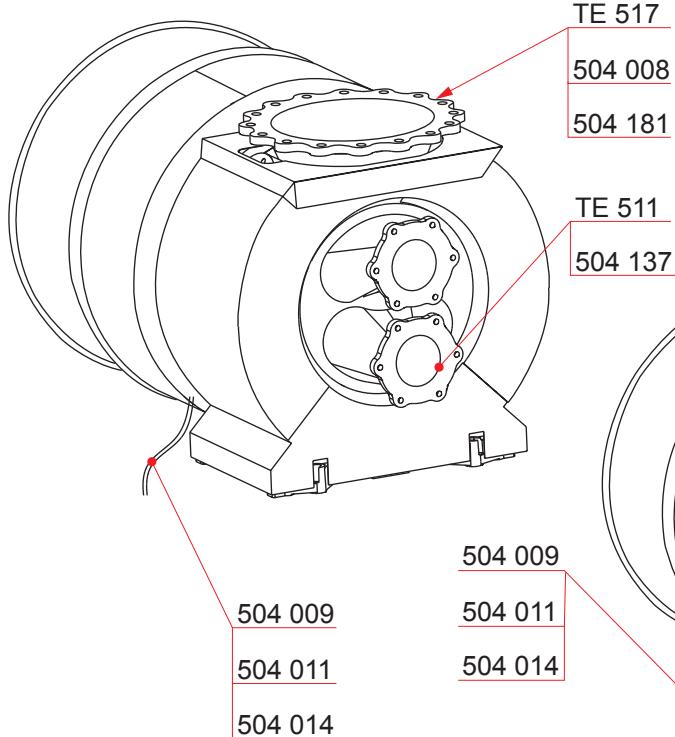
Updated: 27.09.2006

Electrical equipment for charge air system

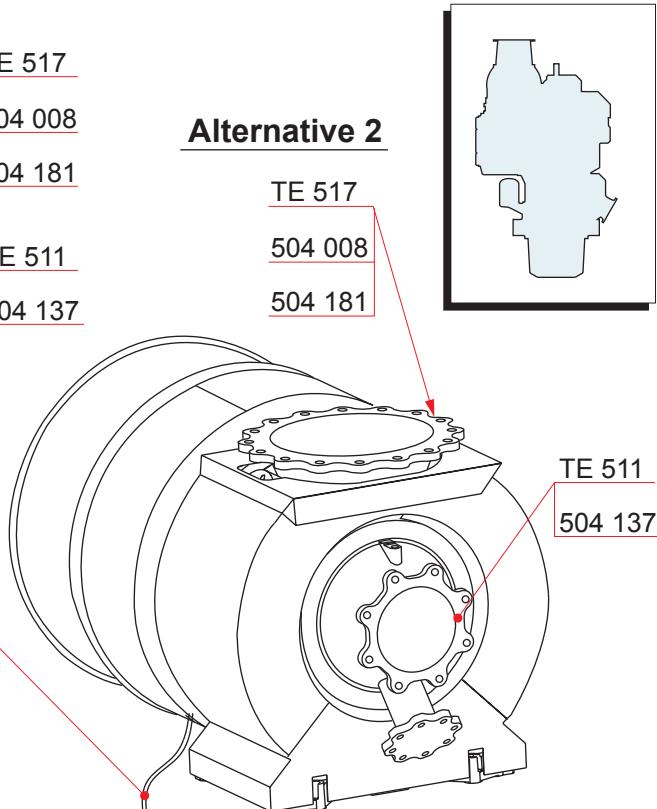
Part No	Pieces	
	L-Engine	V-Engine
504 205	1	2
504 206	1	2
504 207	1	2

Temperature sensor for exhaust gas

Alternative 1



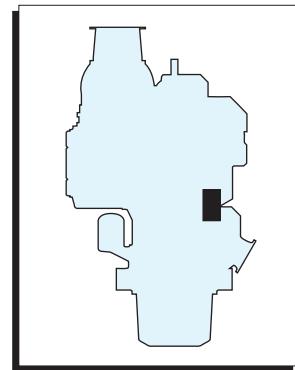
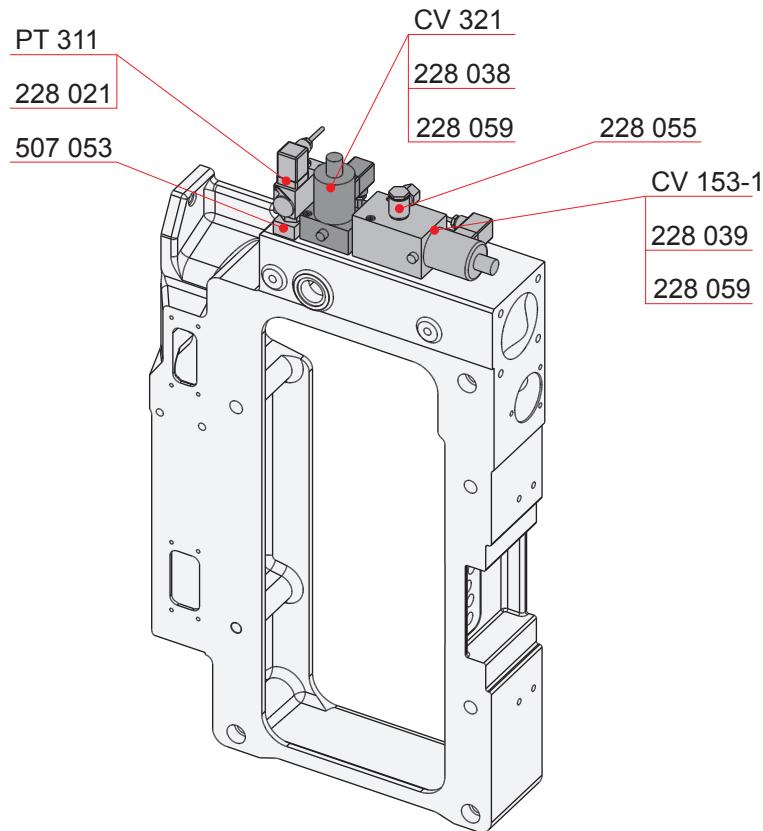
Alternative 2



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 008	Cable clamp	5	-
504 009	Cable clamp	7	-
504 011	Screw	12	-
504 014	Steel strip	7	-
504 137	Protecting well	1	-
504 181	Protecting well	1	-
TE511	Temperature sensor	1	-
TE517	Temperature sensor	1	-

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Electrical equipment for air bottle

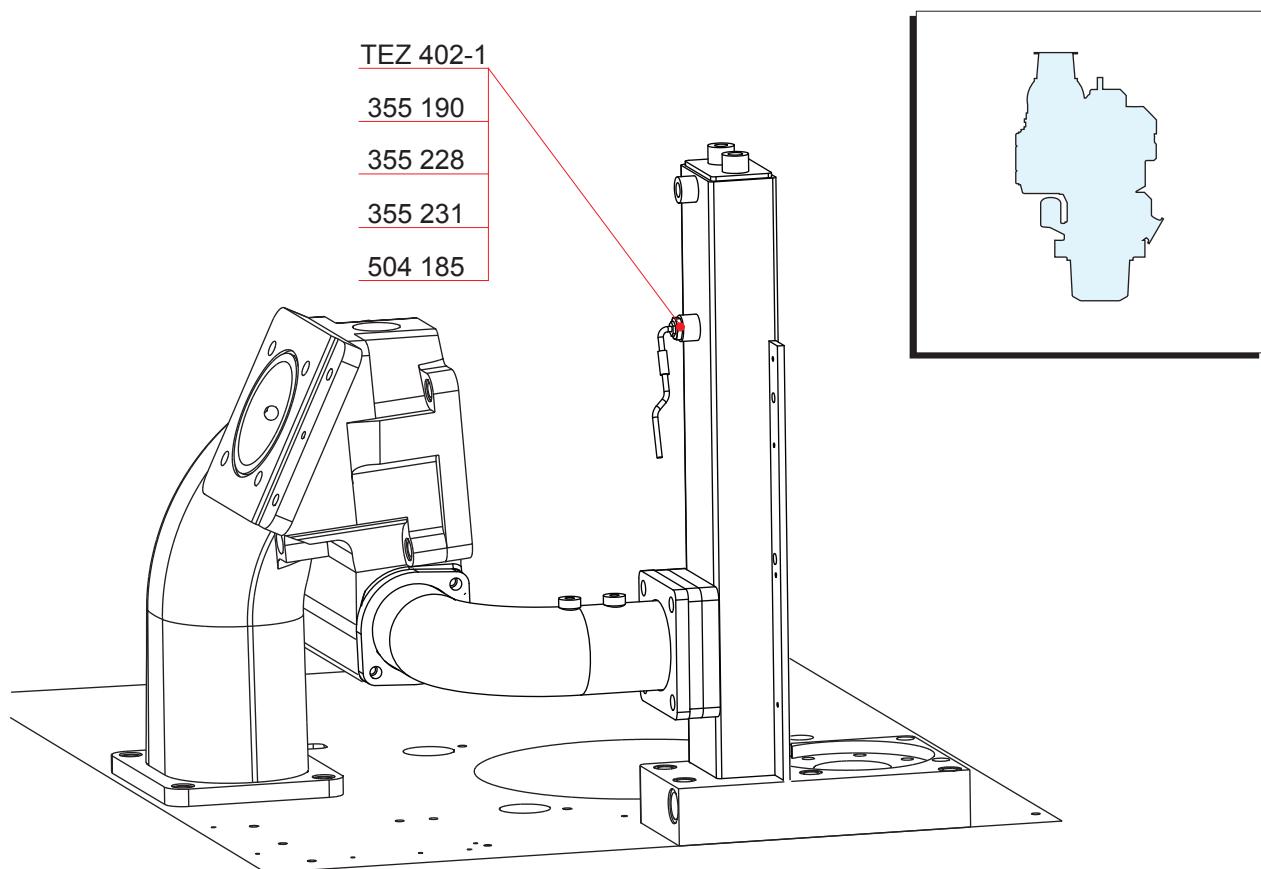


Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 021	Screw	2	-
228 038	Screw	2	-
228 039	Screw	2	-
228 055	Angle union	1	-
228 059	O-ring	2	-
507 053	Pressure gauge valve (1)	1	0.6
CV153-1	Solenoid valve, stop	1	-
CV321	Solenoid valve	1	-
PT311	Pressure sensor	1	-

NOTE! (1) See section 507-

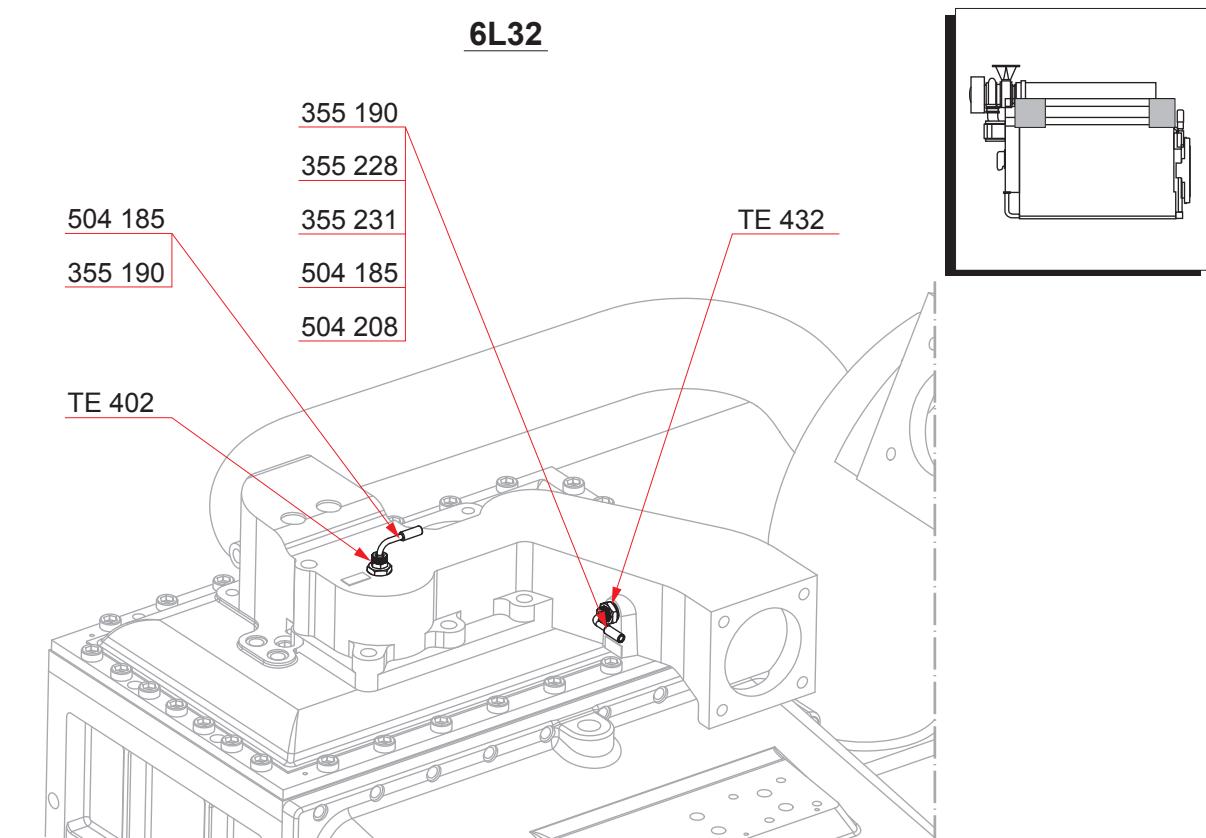
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Sensors



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 190	Sealing ring	1	-
355 228	Screw	8	-
355 231	Cable clamp	8	-
504 185	Protection well	1	-
TEZ402-1	Temperature sensor, HT-water outlet	1	-

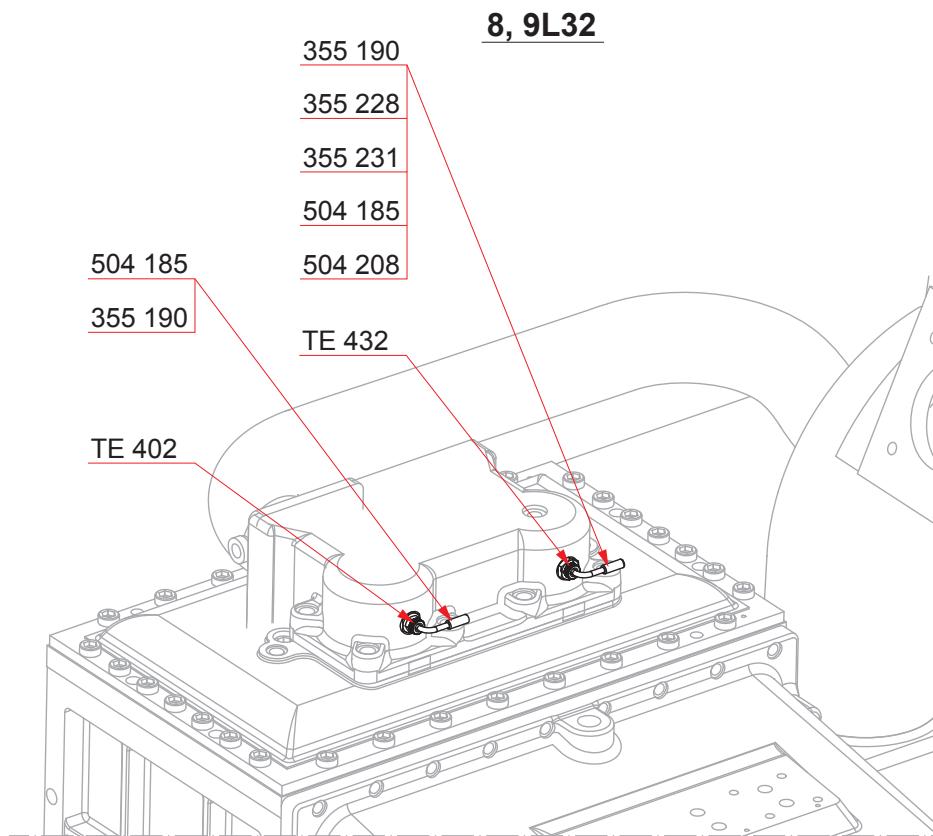
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Sensors for HT-water pipes to CAC

Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 190	Sealing ring	3	-
355 228	Screw	5	-
355 231	Cable clamp	5	-
504 185	Protection well	3	-
504 208	Steel strip	5	-
TE402	Temperature sensor, HT water, after engine	1	-
TE432	Temp.transmitter, HT water, after TC	1	-

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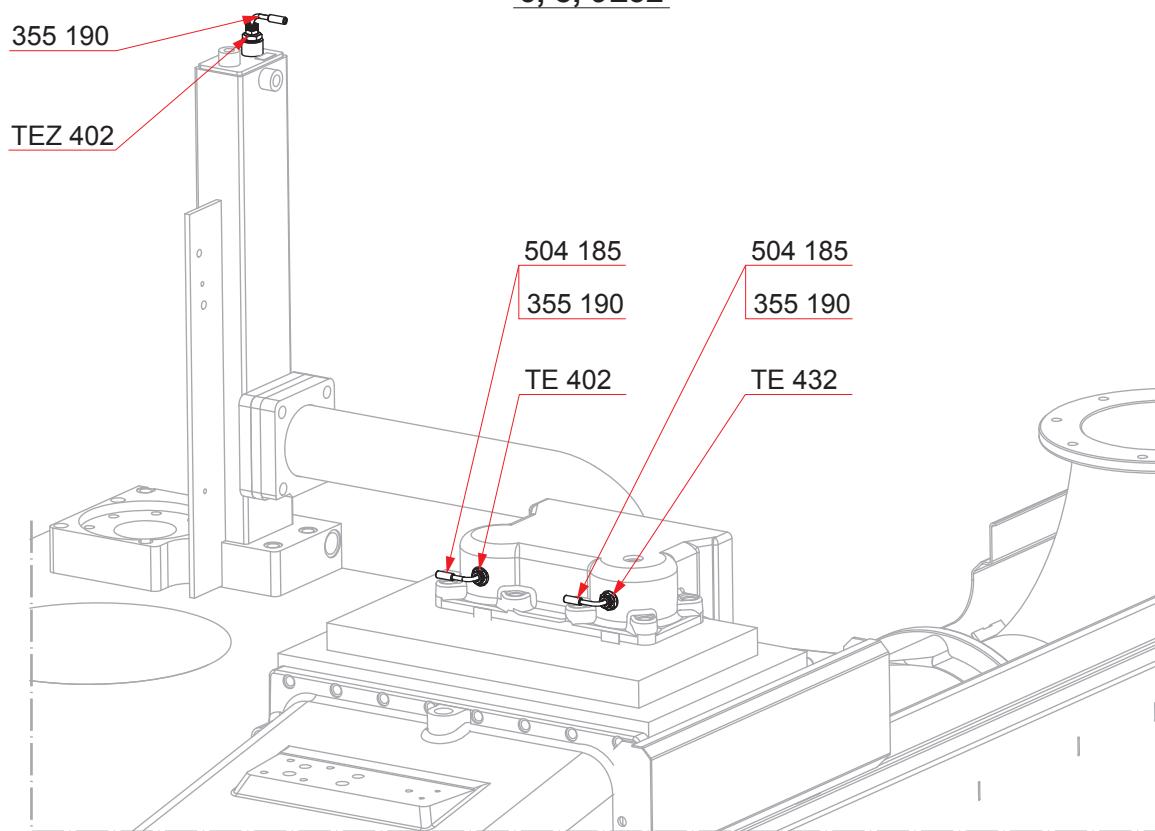
Sensors for HT-water pipes to CAC



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 190	Sealing ring	3	-
355 228	Screw	5	-
355 231	Cable clamp	5	-
504 185	Protection well	3	-
504 208	Steel strip	5	-
TE402	Temperature sensor, HT water, after engine	1	-
TE432	Temp.transmitter, HT water, after TC	1	-

Sensors for HT-water pipes to CAC

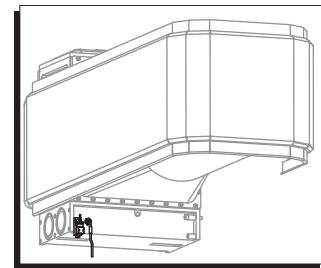
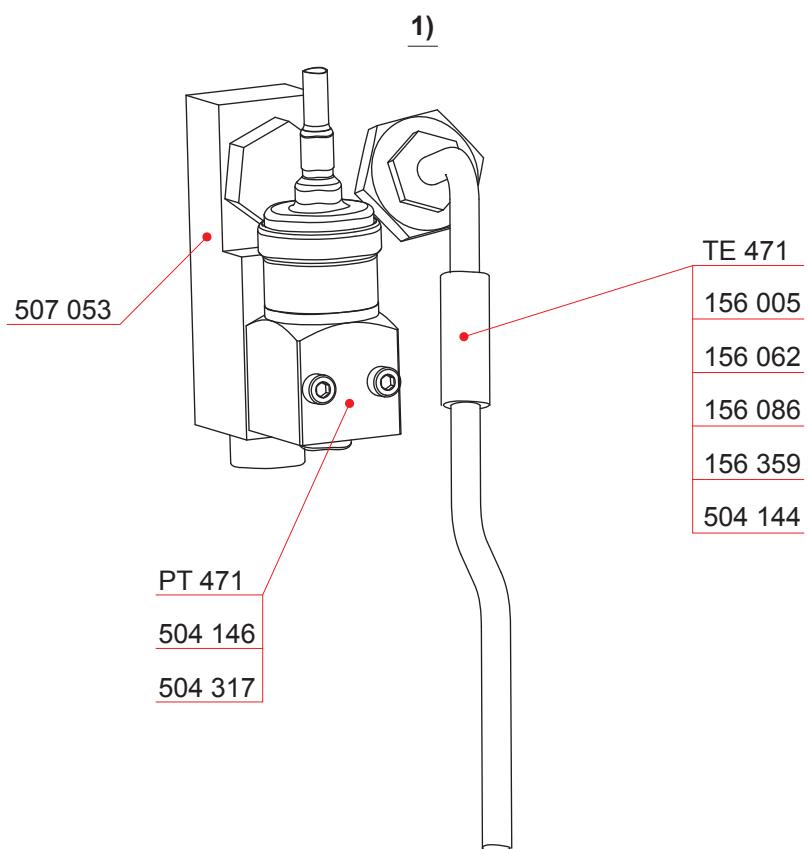
6, 8, 9L32



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 190	Sealing ring	3	-
504 185	Protection well	3	-
TE402	Temperature sensor, HT water, after engine	1	-
TE432	Temp.transmitter, HT water, after TC	1	-
TEZ402	Temperature sensor, HT-water outlet	1	-

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Sensors for charge air cooler



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 005	Clamp	10	-
156 062	Sealing ring	2	-
156 086	Steel strip	10	-
156 359	Screw	15	-
504 144	Protecting well	1	-
504 146	Cable clamp	3	-
504 317	Screw	4	-
507 053	Pressure gauge valve *)	1	-
PT471	Pressure sensor	1	-
TE471	LT water temperature, before charge air cooler	1	-

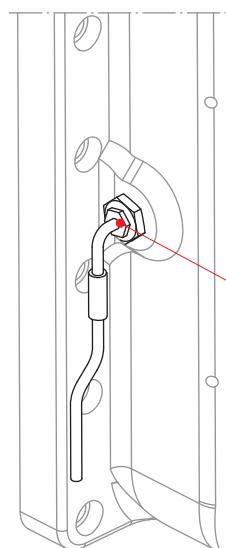
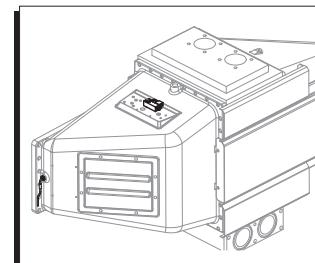
NOTE! *) See 507-

NOTE! 1) When turbocharger is located in free end

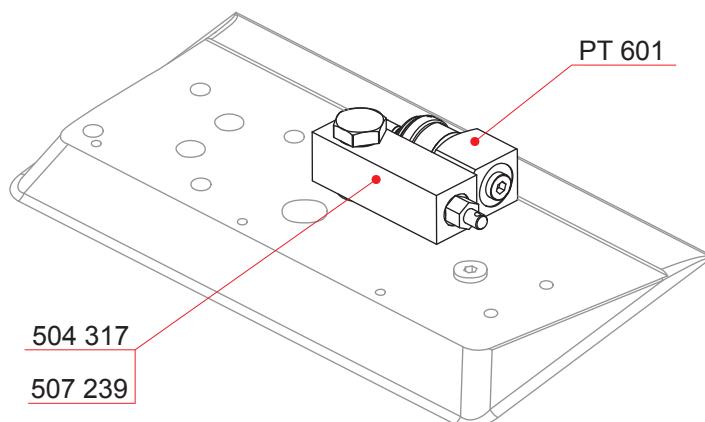
Edition: A
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Sensors for charge air cooler

1)



TE 601
 156 062
 504 145

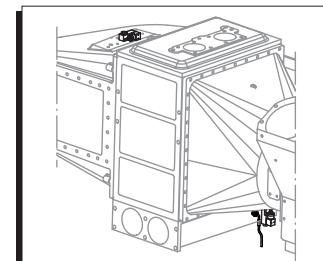
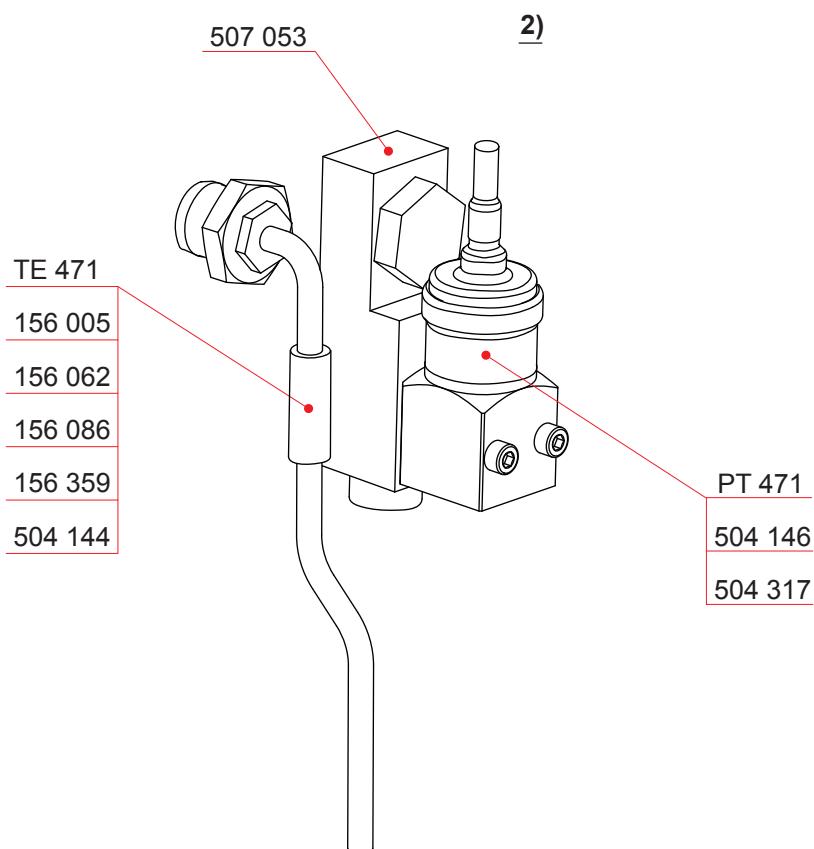


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 062	Sealing ring	2	-
504 145	Protecting well	1	-
504 317	Screw	4	-
507 239	Pressure gauge valve *)	1	-
PT601	Pressure sensor	1	-
TE601	Charge air temperature, inlet	1	-

NOTE! *) See 507-

NOTE! 1) When turbocharger is located in free end

Sensors for charge air cooler



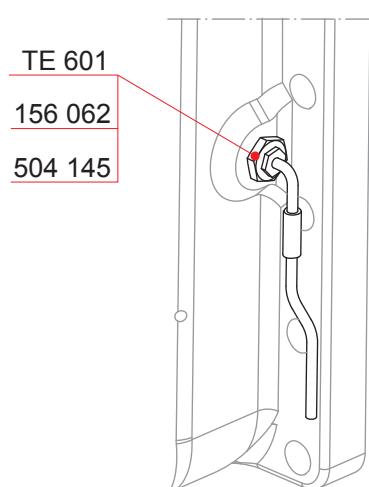
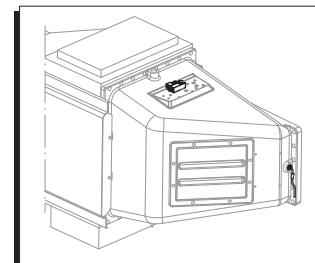
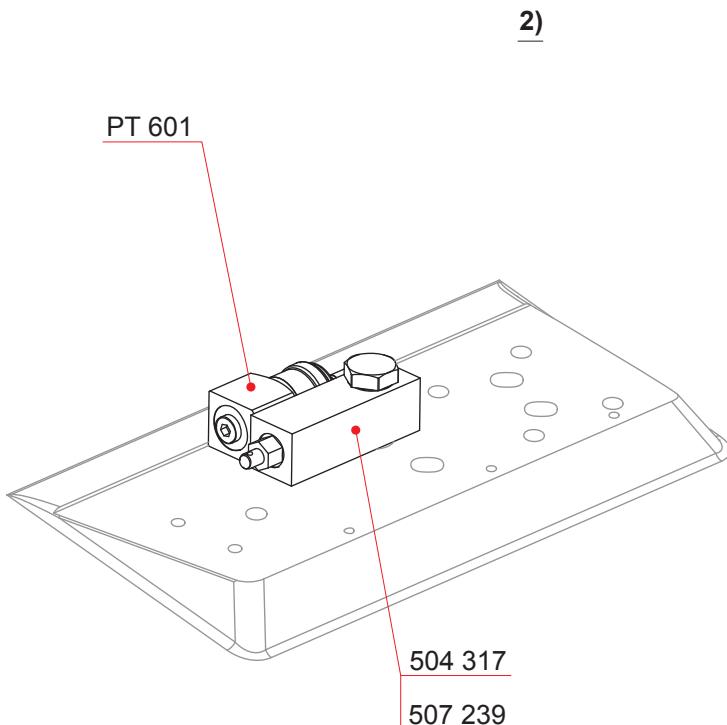
Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 005	Clamp	10	-
156 062	Sealing ring	2	-
156 086	Steel strip	10	-
156 359	Screw	15	-
504 144	Protecting well	1	-
504 146	Cable clamp	3	-
504 317	Screw	4	-
507 053	Pressure gauge valve *)	1	-
PT471	Pressure sensor	1	-
TE471	LT water temperature, before charge air cooler	1	-

NOTE! *) See 507-

NOTE! 2) When turbocharger is located in flywheel end

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Sensors for charge air cooler

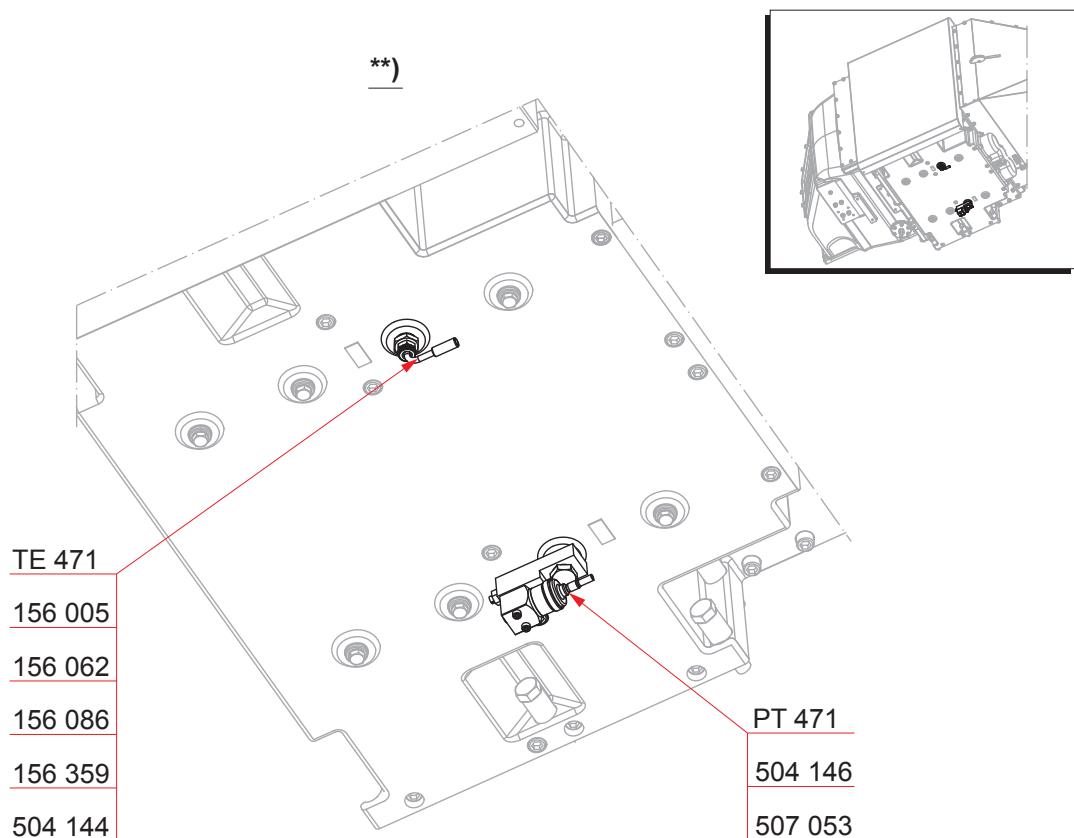


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 062	Sealing ring	2	-
504 145	Protecting well	1	-
504 317	Screw	4	-
507 239	Pressure gauge valve *)	1	-
PT601	Pressure sensor	1	-
TE601	Charge air temperature, inlet	1	-

NOTE! *) See 507-

NOTE! 2) When turbocharger is located in flywheel end

Sensors for charge air cooler

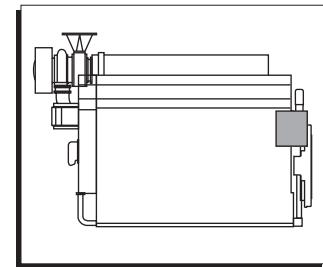
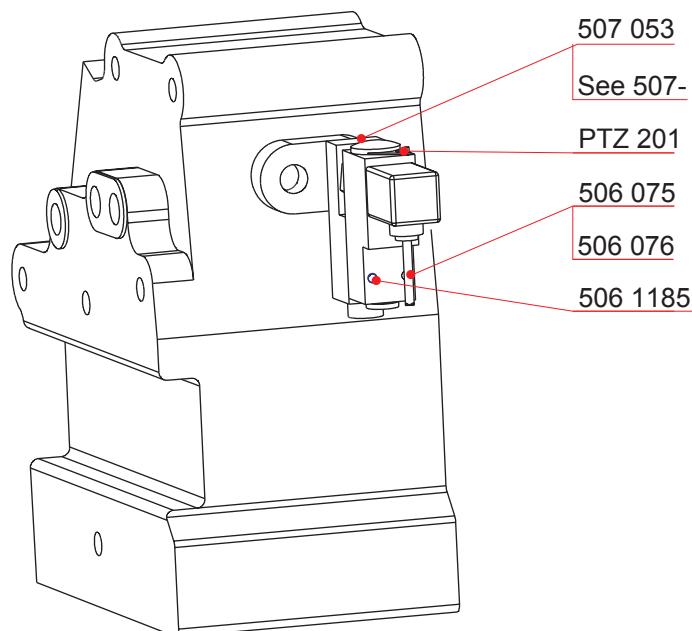


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 005	Clamp	10	-
156 062	Sealing ring	2	-
156 086	Steel strip	10	-
156 359	Screw	15	-
504 144	Protecting well	1	-
504 146	Cable clamp	3	-
507 053	Pressure gauge valve *)	1	-
PT471	Pressure sensor	1	-
TE471	LT water temperature, before charge air cooler	1	-

NOTE! *) See 507-
NOTE! **) Alternative design

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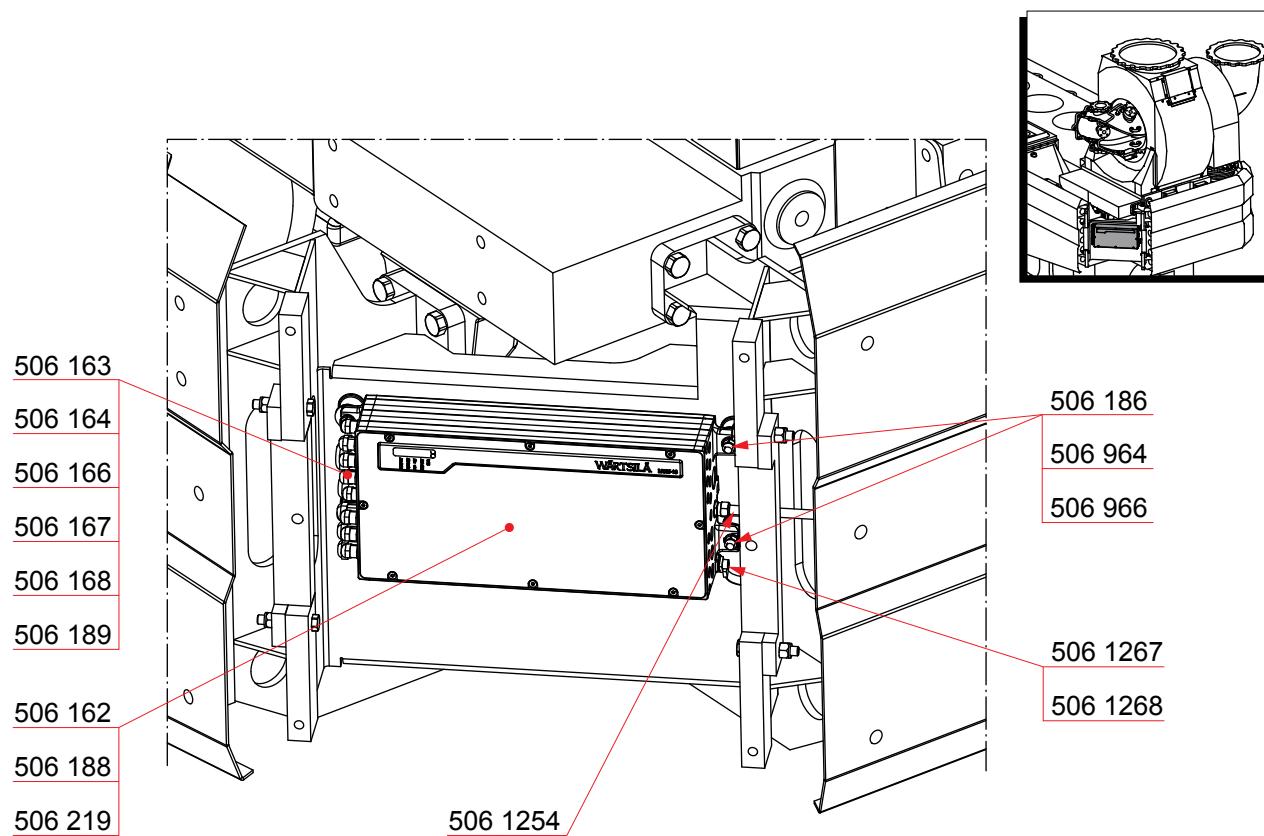
Sensors for lube oil



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 075	Cable clamp	8	-
506 076	Screw	8	-
506 1185	Screw	2	-
507 053	Pressure gauge valve	1	0.6
PTZ201	Pressure sensor	1	-

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Electrical equipment

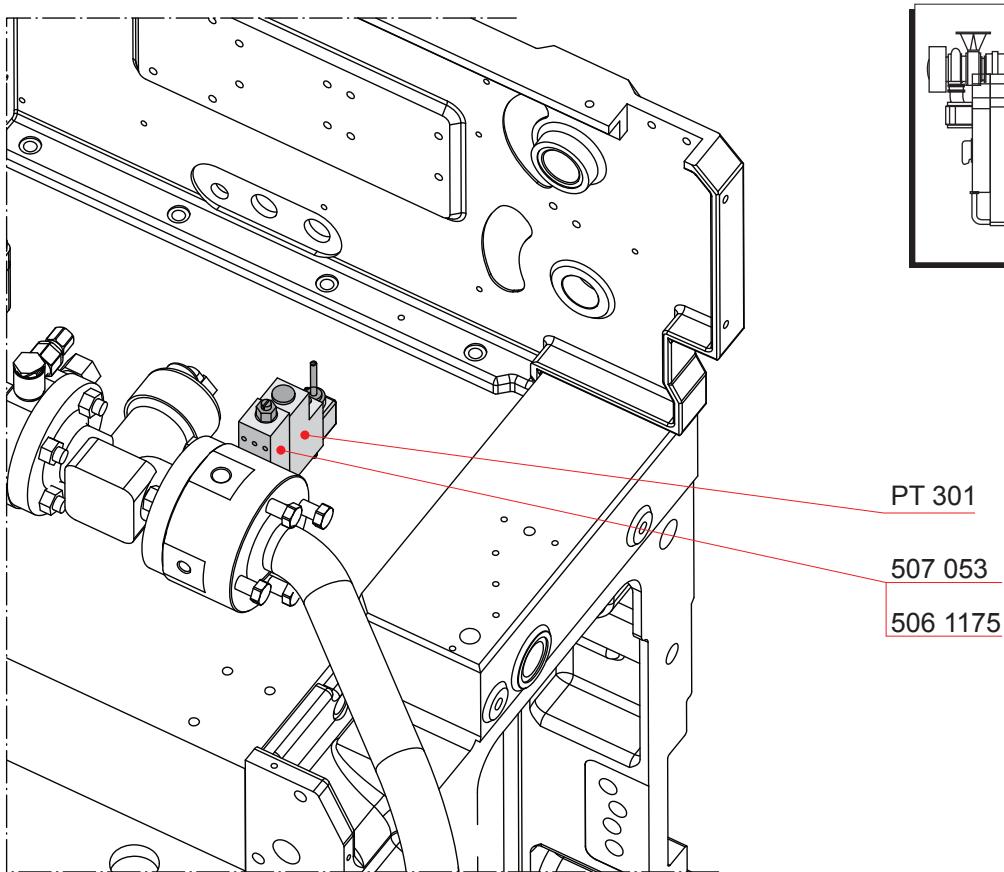


Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 162	Box	1	-
506 163	Cable gland	14	-
506 164	Cable gland	2	-
506 166	Plug	12	-
506 167	Plug	6	-
506 168	Plug	2	-
506 186	Washer	4	-
506 188	Plug 8-pin, double wire entry	12	-
506 189	Plug	1	-
506 219	Corrosion protection	1	-
506 964	Damper	4	-
506 966	Nut	4	-
506 1254	Cable (1)	1	-
506 1267	Earthing strap	1	-
506 1268	Screw	2	-

NOTE! (1) L= 5000 mm

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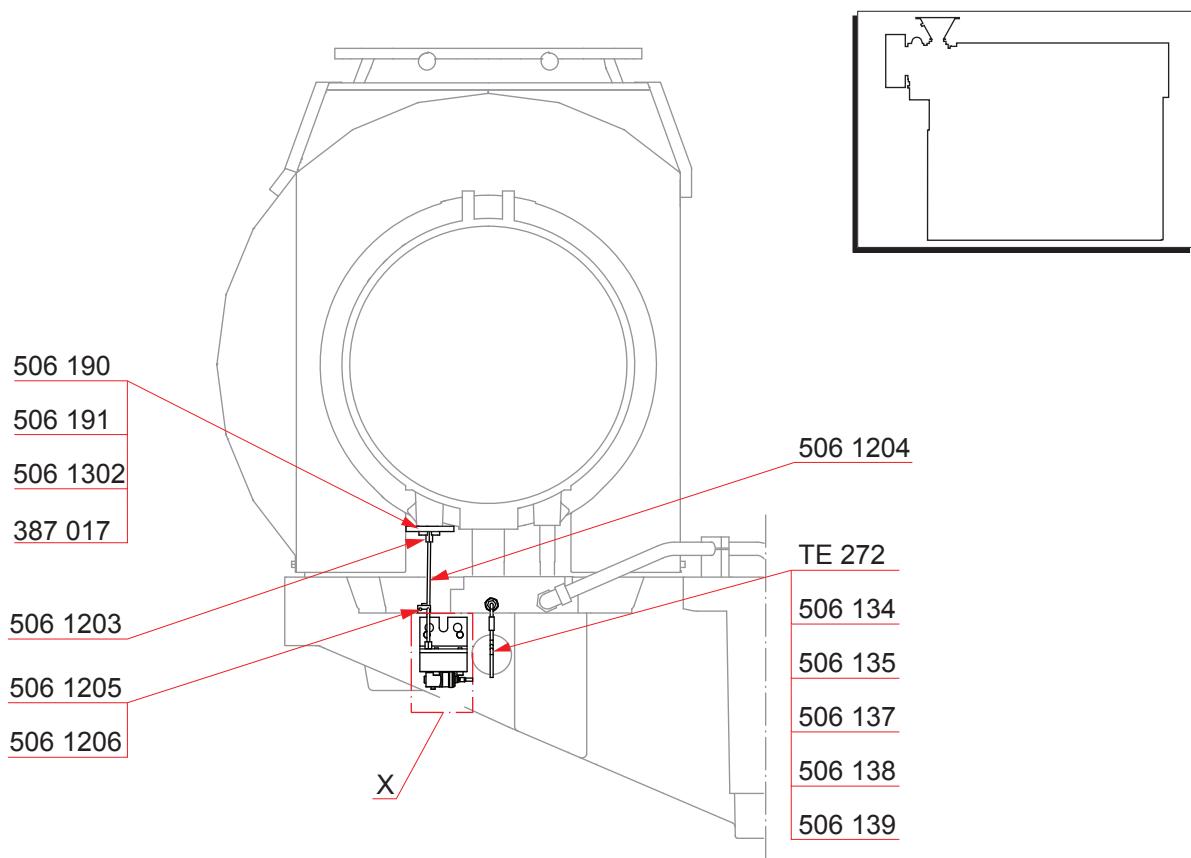
Sensor for starting and control air



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 1175	Screw	2	-
507 053	Pressure gauge valve	1	-
PT301	Pressure sensor	1	-

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Sensors for lube oil

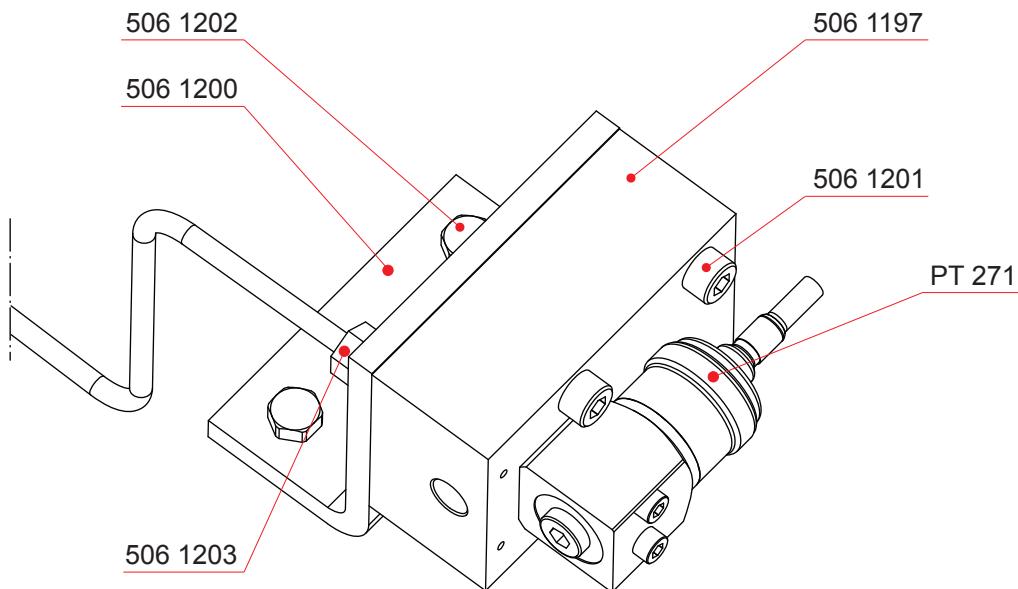


Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 134	Protecting well	1	-
506 135	Sealing ring	1	-
506 137	Cable clamp	5	-
506 138	Steel strip	5	-
506 139	Screw	5	-
506 190	Screw	2	-
506 191	Flange	1	-
506 1203	Pipe union	2	-
506 1204	Steel pipe	1	-
506 1205	Pipe clamp	2	-
506 1206	Screw	1	-
506 1302	O-ring	1	-
TE272	Temperature sensor	1	-
387 017	Glue compound	1	-

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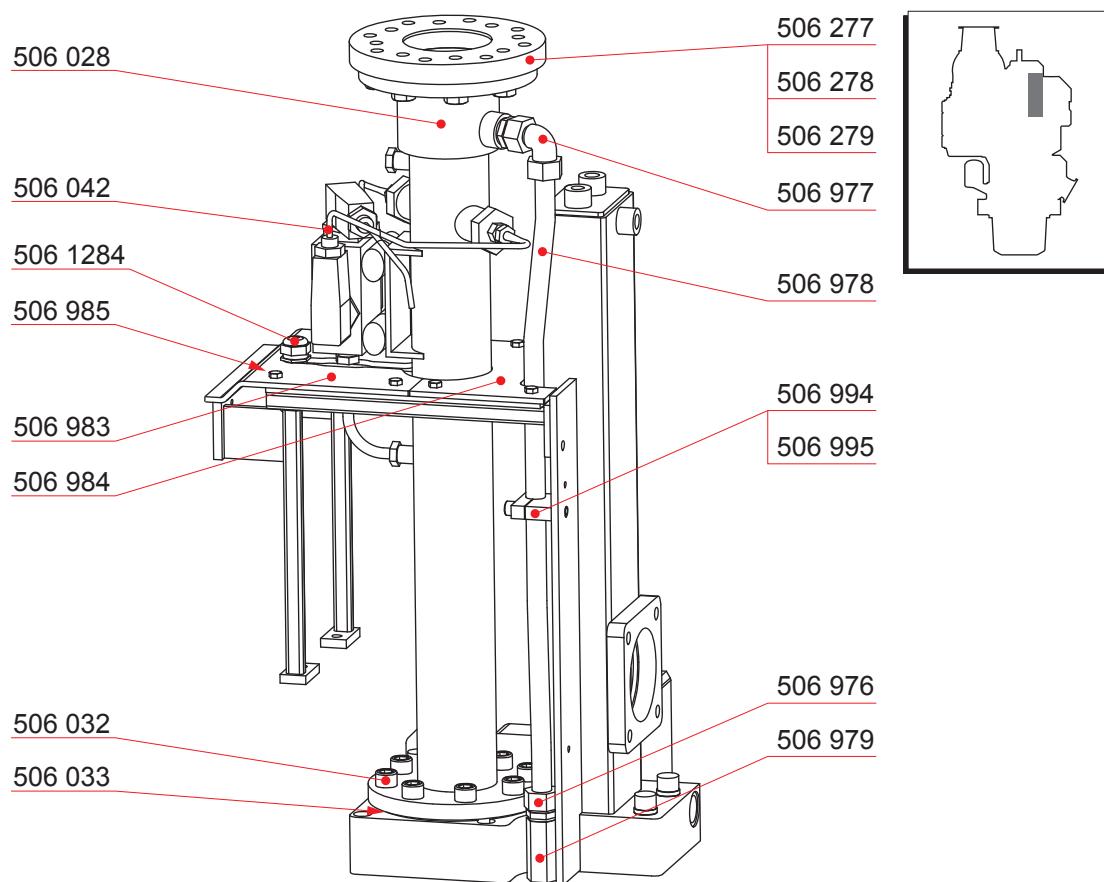
Sensors for lube oil

Detail X



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 1197	Adapter and test valve	1	-
506 1200	Clamp	1	-
506 1201	Screw	4	-
506 1202	Screw	2	-
506 1203	Pipe union	2	-
PT271	Pressure sensor	1	-

Oil mist detector



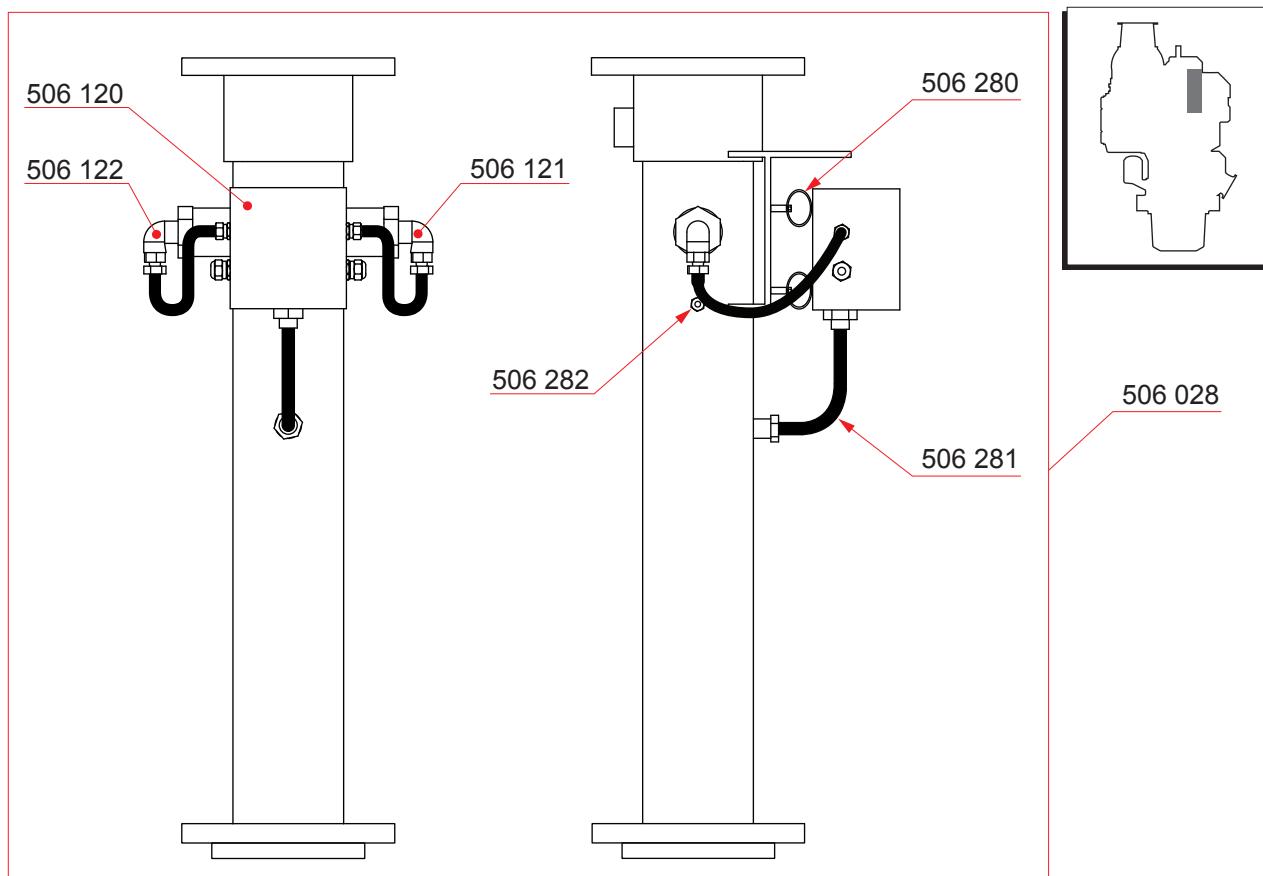
Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 028	Oil mist detector (1)	1	17.5
506 032	Screw	8	0.1
506 033	Gasket	1	-
506 042	Cable (2)	1	0.3
506 277	Flange	1	4.9
506 278	Screw	8	-
506 279	O-ring	1	-
506 976	Pipe union	1	0.2
506 977	Pipe union	1	0.4
506 978	Pipe	1	0.7
506 979	Distance sleeve	1	0.2
506 983	Cover	1	0.7
506 984	Cover	1	0.3
506 985	Screw	7	-
506 994	Pipe clamp	1	0.3
506 995	Screw	1	-
506 1284	Cable gland	1	-

NOTE! (1) See section 506-

NOTE! (2) L= 3000mm

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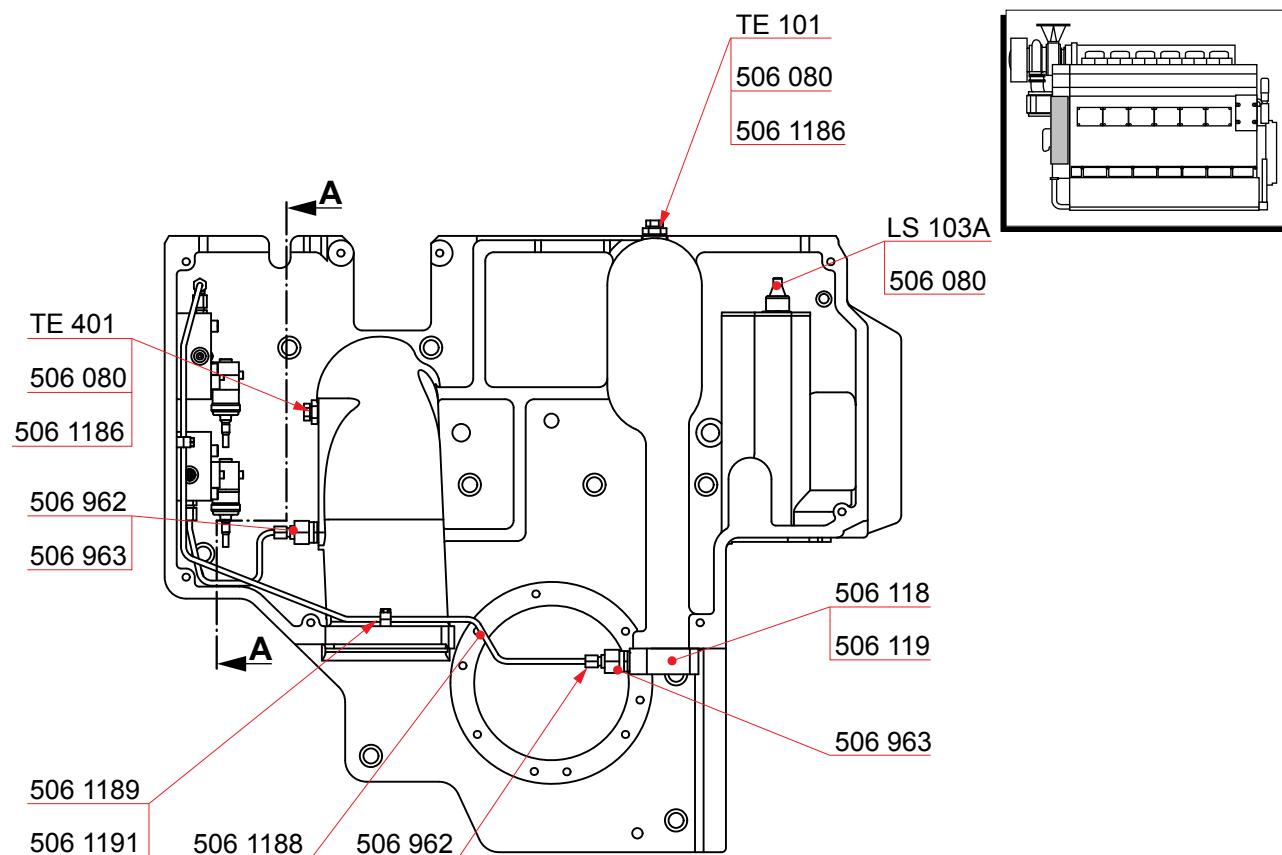
Oil mist detector main unit assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 028	Oil mist detector	1	-
506 120	Box	1	5.0
506 121	Receiver	1	0.5
506 122	Transmitter	1	0.5
506 280	Spring element	2	0.3
506 281	Flexible hose	1	0.5
506 282	Smoke test cartridge	1	-

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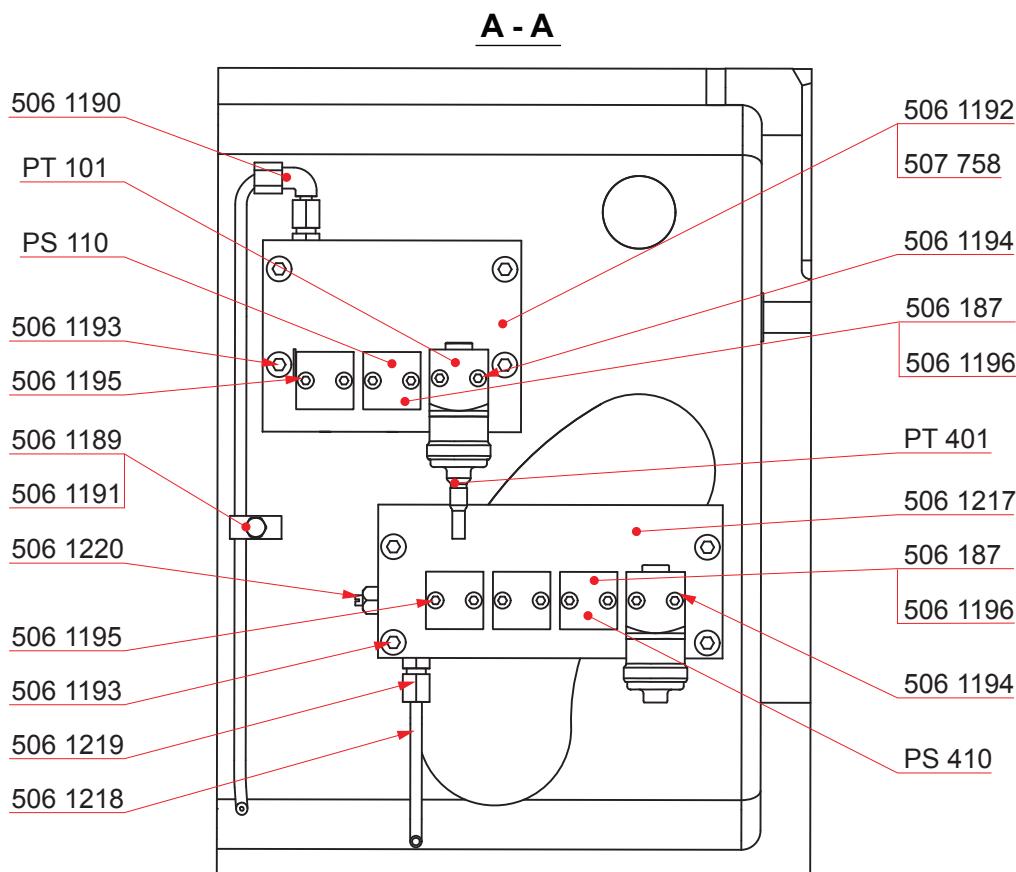
Sensors for multicover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 080	Sealing ring	3	-
506 118	Distance piece	1	0.9
506 119	O-ring	1	-
506 962	Reduction union	2	-
506 963	Pipe union	2	-
506 1186	Protecting well	2	0.2
506 1188	Pipe	1	0.2
506 1189	Screw	2	-
506 1191	Pipe clamp	4	-
LS103A	Level switch	1	0.5
TE101	Temperature sensor, fuel, before engine	1	-
TE401	Temperature sensor, HT water, before engine	1	-

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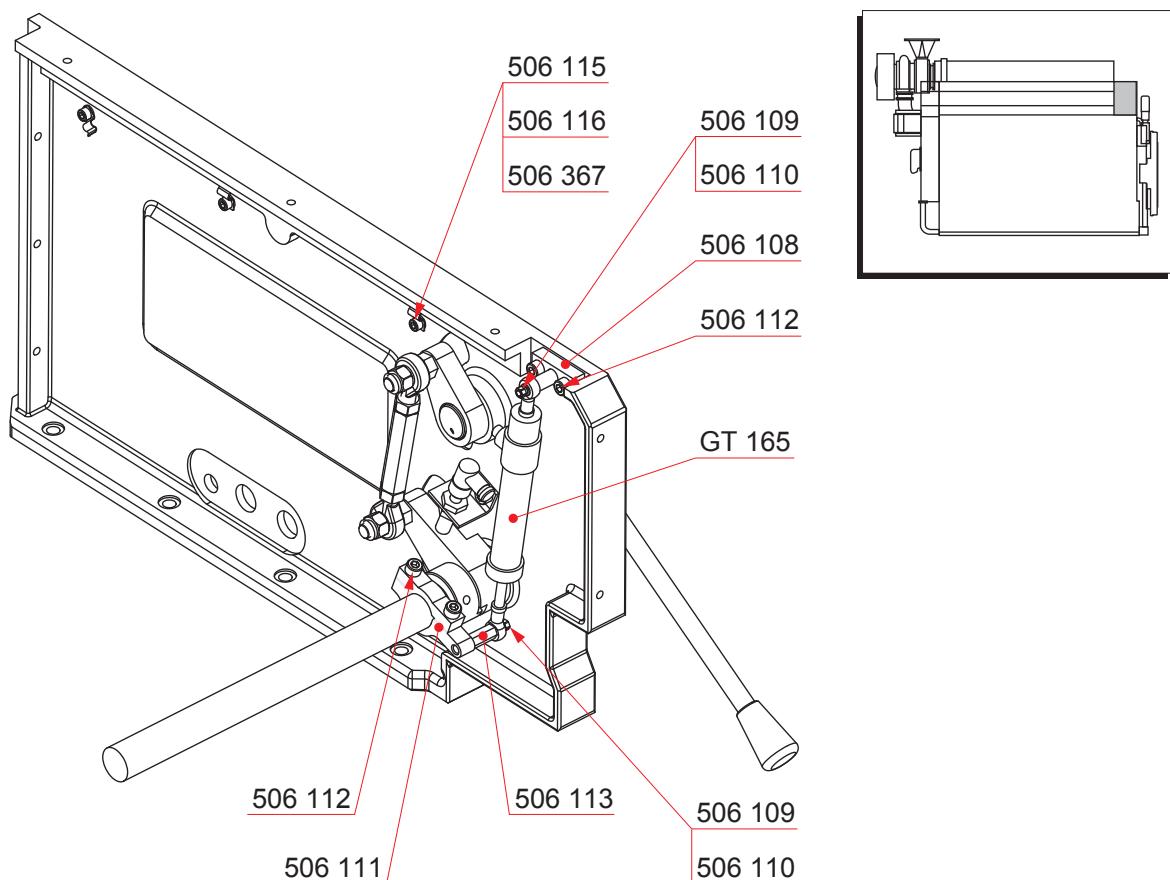
Sensors for multicover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 187	O-ring	5	-
506 1189	Screw	2	-
506 1190	Pipe union	1	-
506 1191	Pipe clamp	4	-
506 1192	Adapter and test valve	1	1.4
507 758	Throttle valve	1	-
506 1193	Screw	8	-
506 1194	Screw	4	-
506 1195	Screw	10	-
506 1196	End piece	5	-
506 1217	Adapter and test valve	1	1.5
506 1220	Throttle valve	1	-
506 1218	Pipe	1	-
506 1219	Pipe union	1	-
PS110	Pressure sensor (*)	1	-
PS410	Pressure sensor (*)	1	-
PT101	Pressure sensor	1	-
PT401	Pressure sensor	1	-

NOTE! (*) Optional.

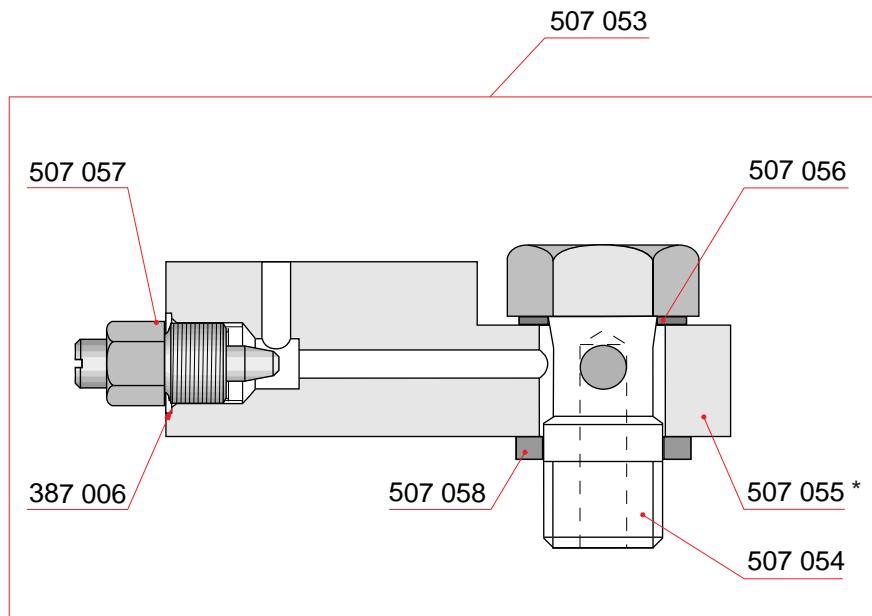
Load indicator assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 108	Holder	1	0.1
506 109	Washer	1	-
506 110	Nut	2	-
506 111	Lever	1	0.2
506 112	Screw	4	-
506 113	Screw	1	-
506 115	Cable clamp	3	-
506 116	Screw	3	-
506 367	Washer	3	-
GT165	Fuel rack position transducer	1	0.4

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Pressure gauge valve

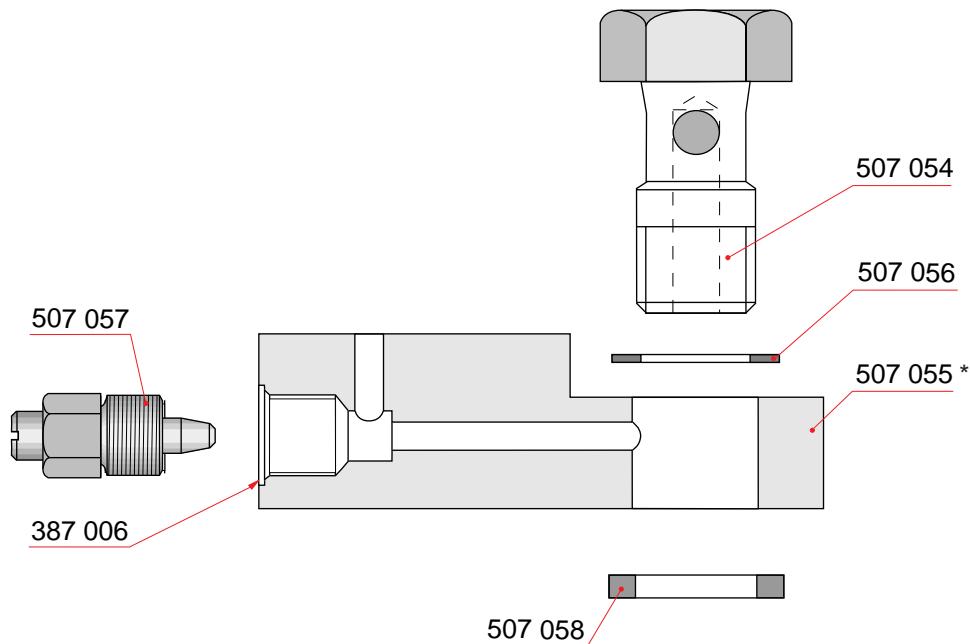


Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 053	Pressure gauge valve	1	-
507 054	Screw	1	-
507 055	Housing *	1	-
507 056	Sealing ring	1	-
507 057	Throttle valve	1	-
507 058	Distance ring	1	-
387 006	Glue compound	1	-

NOTE! *) Component is not available as single part

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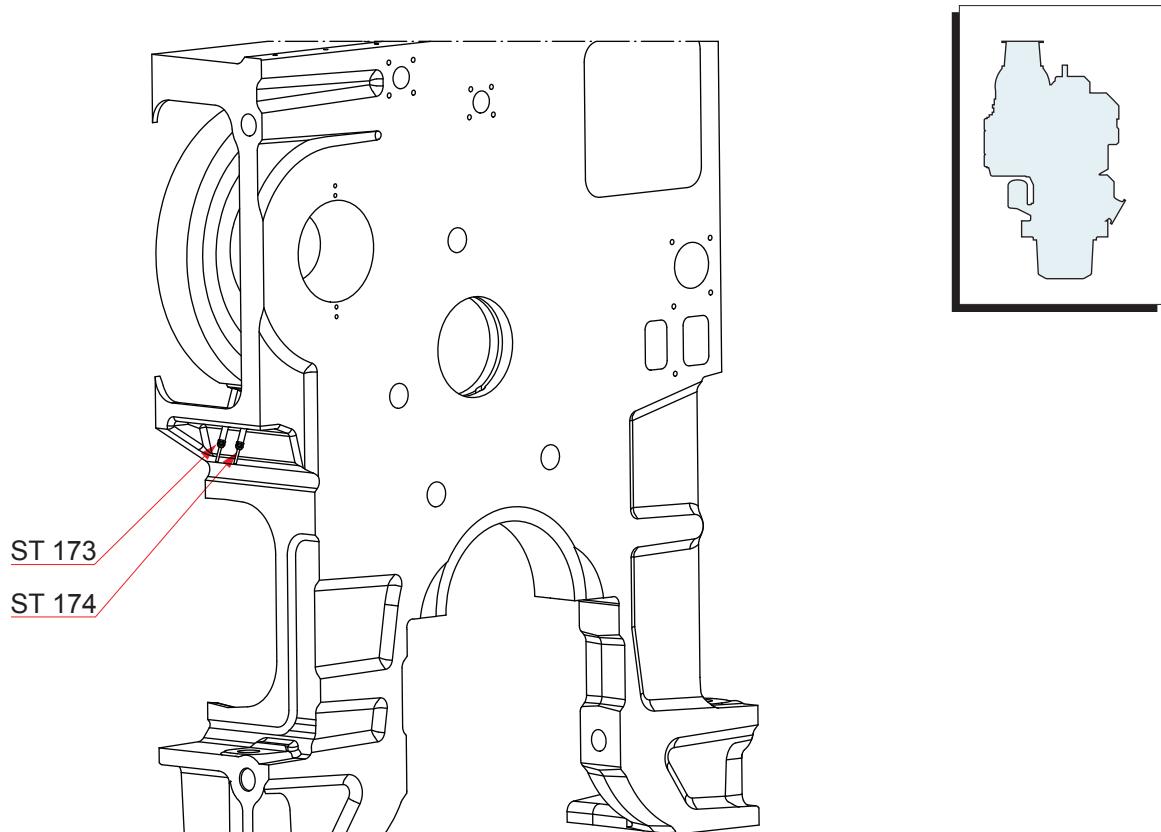
Pressure gauge valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 006	Glue compound	1	-
507 054	Screw	1	-
507 055	Housing *	1	-
507 056	Sealing ring	1	-
507 057	Throttle valve	1	-
507 058	Distance ring	1	-

NOTE! *) Component is not available as single part

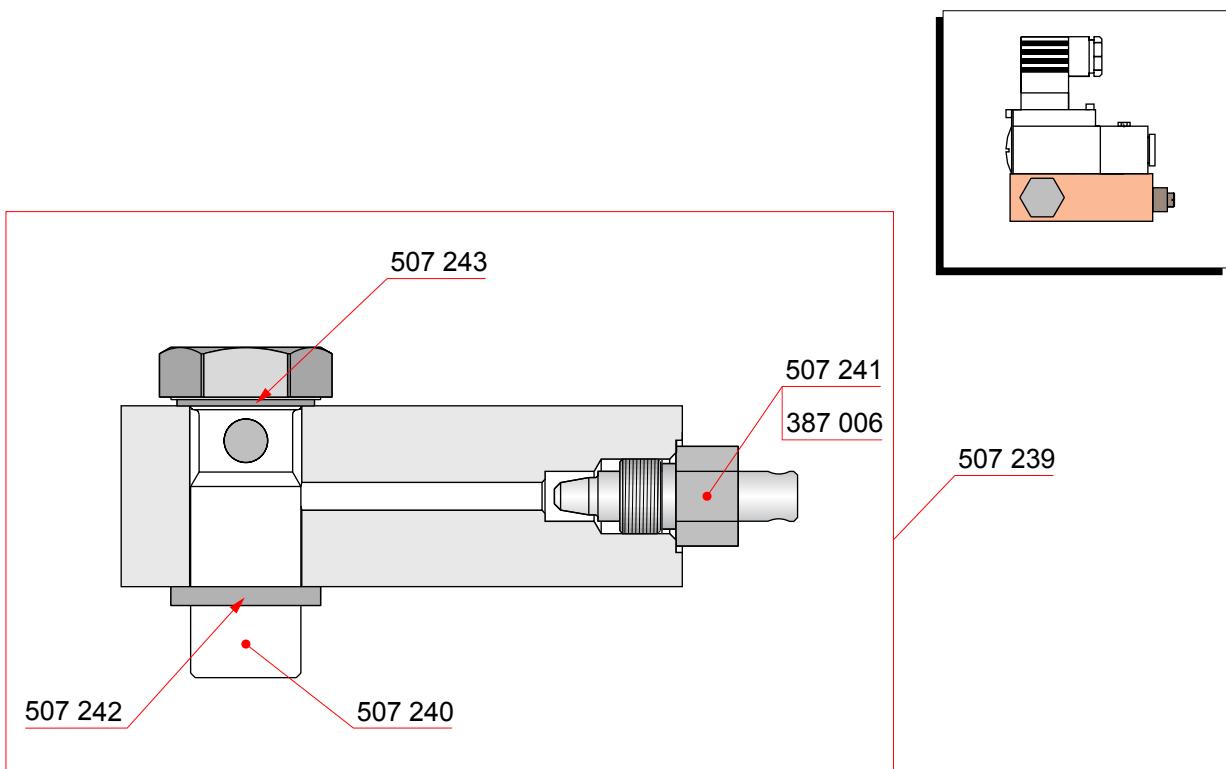
Speed sensor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
ST173	Speed pick-up	1	-
ST174	Speed pick-up	1	-

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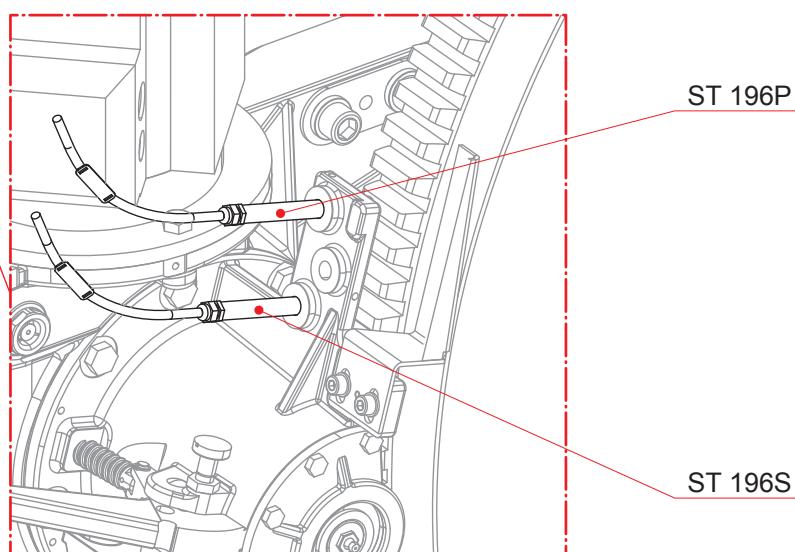
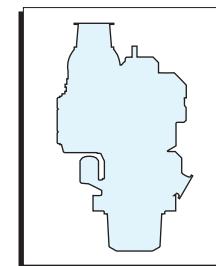
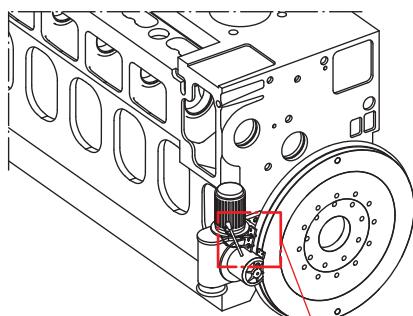
Pressure gauge valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 239	Pressure gauge valve	1	-
507 240	Screw	1	-
507 241	Valve	1	-
507 242	Distance ring	1	-
507 243	Sealing ring	1	-
387 006	Glue compound	1	-

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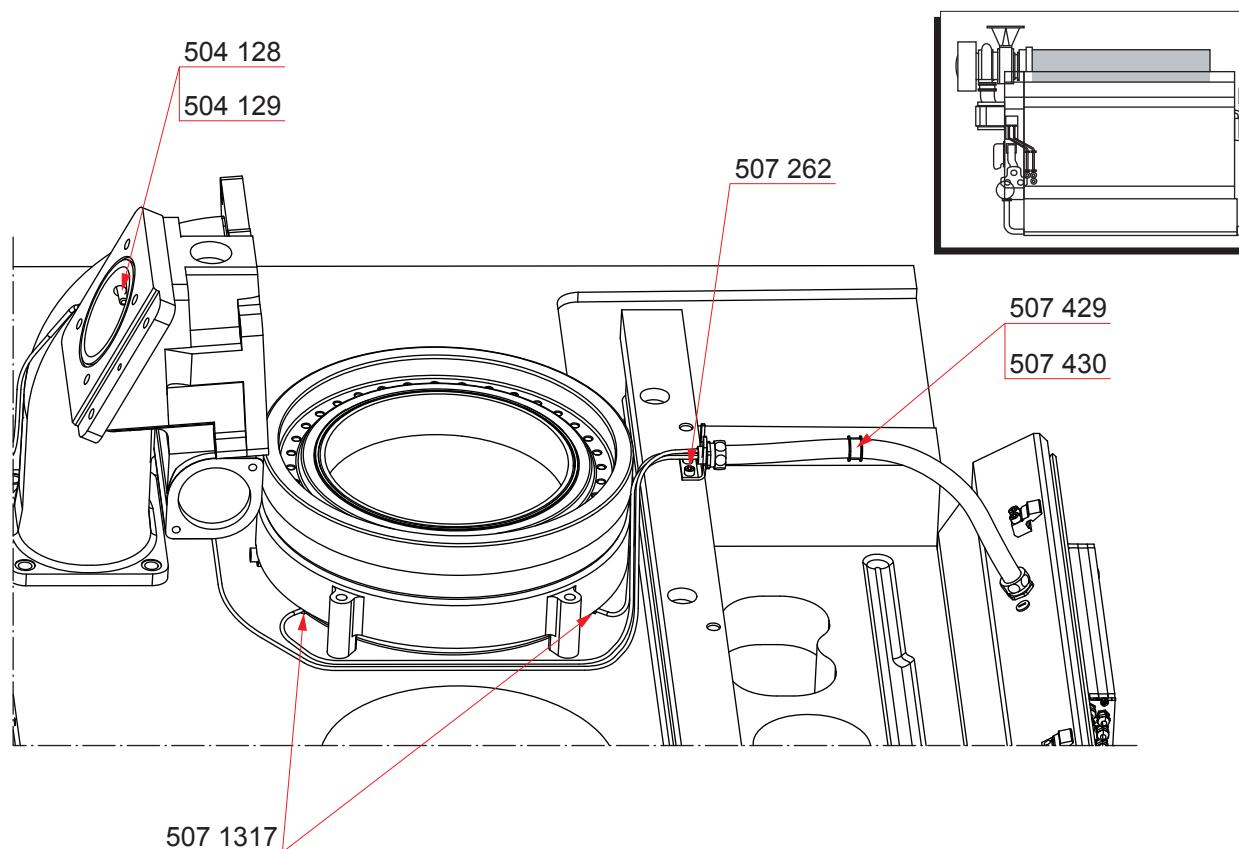
Speed sensors



Part No.	Description	Qty [Pcs]	Wt. [Kg]
ST196P	Speed sensor	1	-
ST196S	Speed sensor	1	-

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Accessories for cylinder liner temperature sensors



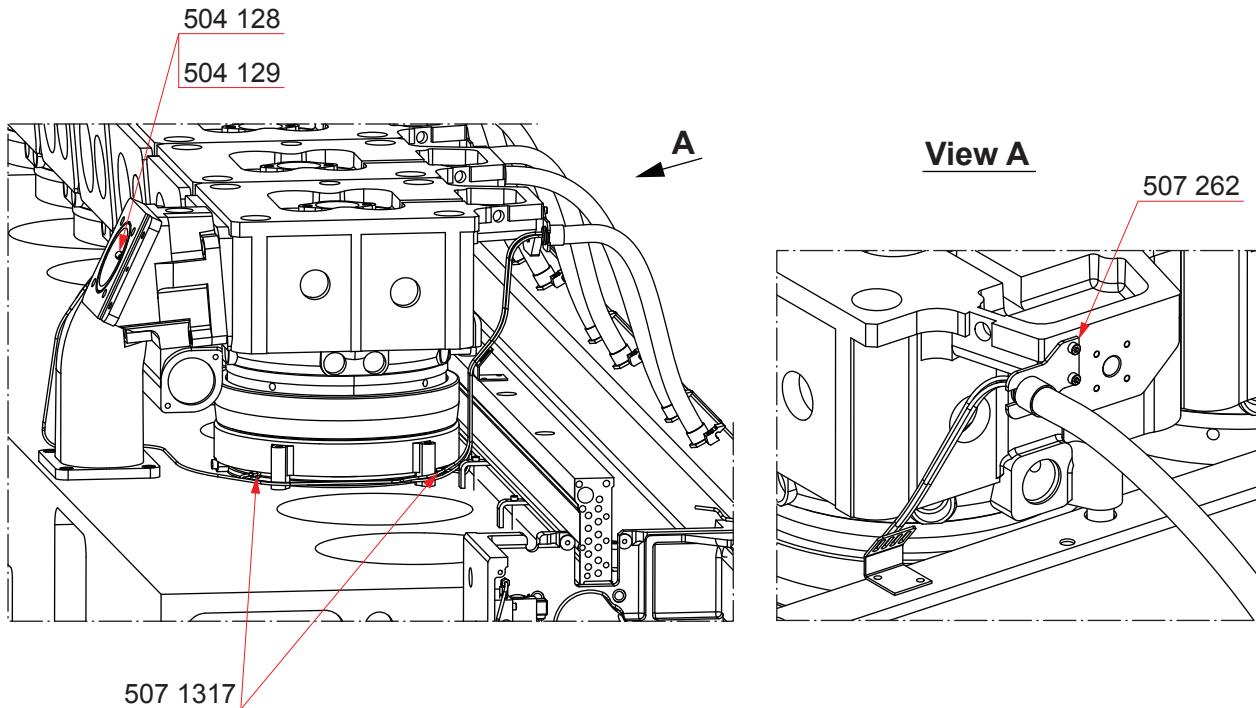
Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	1	-
504 129	Protecting well	1	-
507 262	Screw	2	-
507 429	Screw	1	-
507 430	Fastener	1	-
507 1317	Adapter	2	-

NOTE! Quantity per cylinder.

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Accessories for cylinder liner temperature sensors

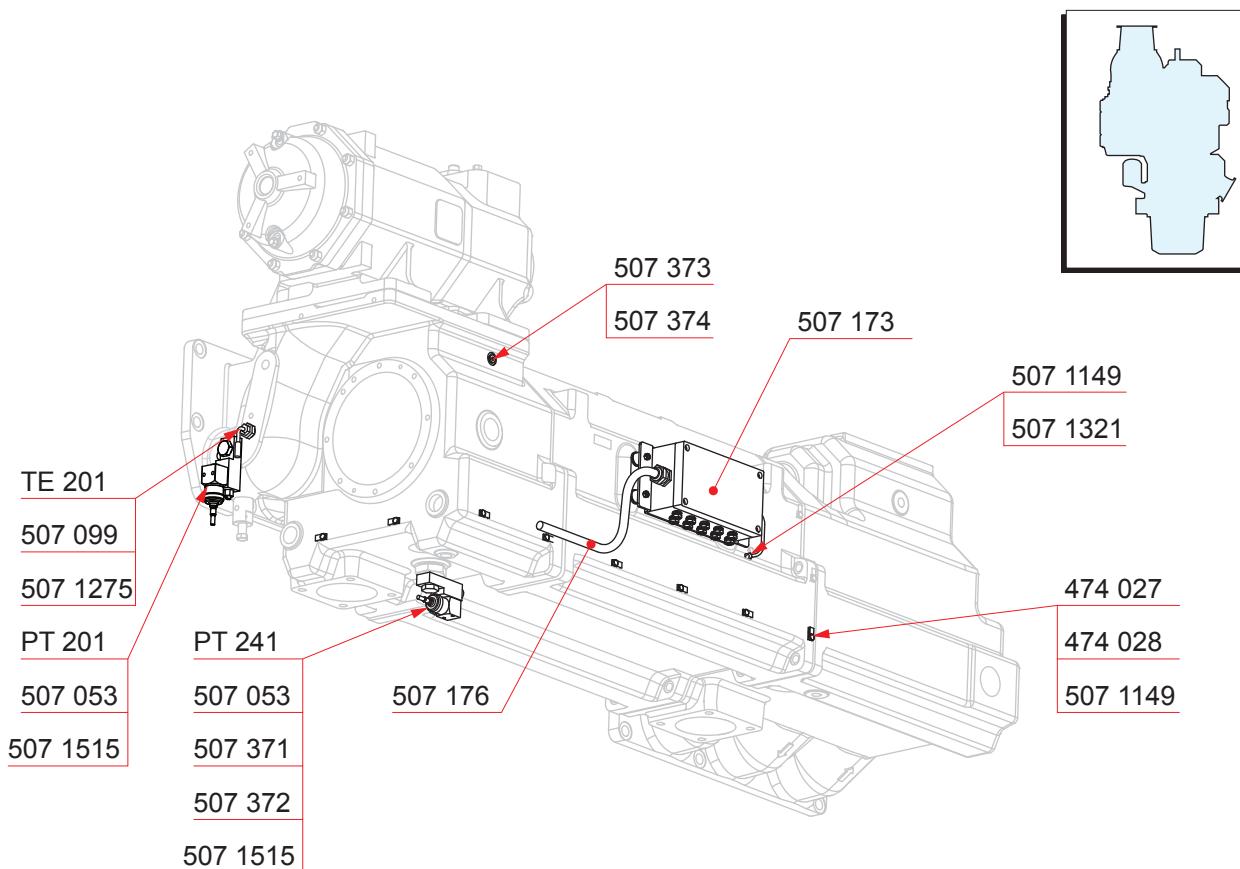
Alternative design



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	1	-
504 129	Protecting well	1	-
507 262	Screw	2	-
507 1317	Adapter	2	-

NOTE! Quantity per cylinder.

Sensors for lube oil

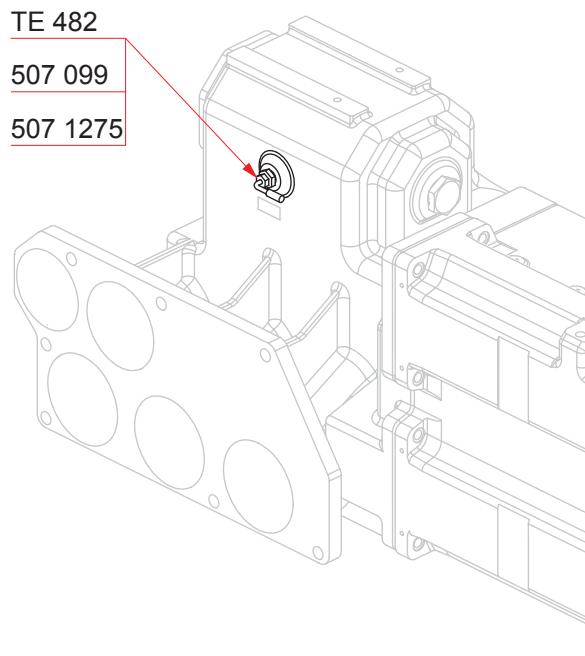


Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 027	Cable clamp	10	-
474 028	Steel strip	15	-
507 053	Pressure gauge valve	2	0.6
507 099	Sealing ring	2	-
507 173	Terminal box	1	5.3
507 176	Cable (1)	1	0.4
507 371	Reduction nipple	1	0.4
507 372	Sealing ring	1	-
507 373	Sealing ring	1	-
507 374	Plug	1	-
507 1149	Screw	11	-
507 1275	Protecting well	2	0.2
507 1321	Earthing strap	1	-
507 1515	Screw	4	-
PT201	Pressure sensor	1	-
PT241	Lube oil pressure, filter inlet	1	-
TE201	Temperature sensor	1	-

NOTE! (1) L= 7000 mm

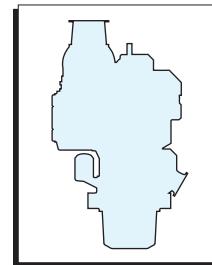
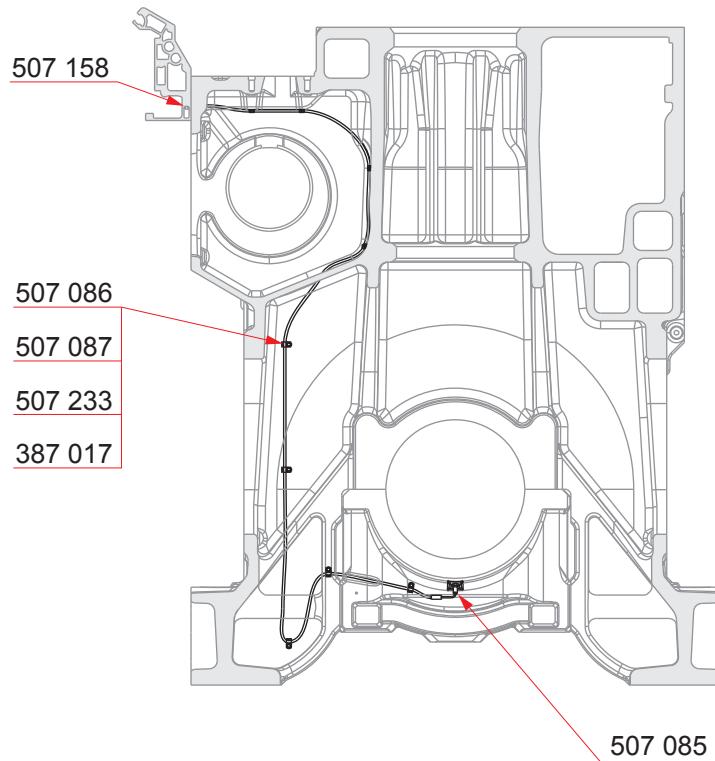
Edition: C
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Updated: 04.04.2013

Sensors for lube oil



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 099	Sealing ring	2	-
507 1275	Protecting well	2	0.2
TE482	Temperature sensor	1	-

Main bearing temperature sensors



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 085	Temperature sensor	*	-
507 086	Pipe clamp	*	-
507 087	Screw	*	-
507 158	Cable gland	*	-
507 233	Steel strip	*	-
387 017	Glue compound	1	-

NOTE! * See page 2

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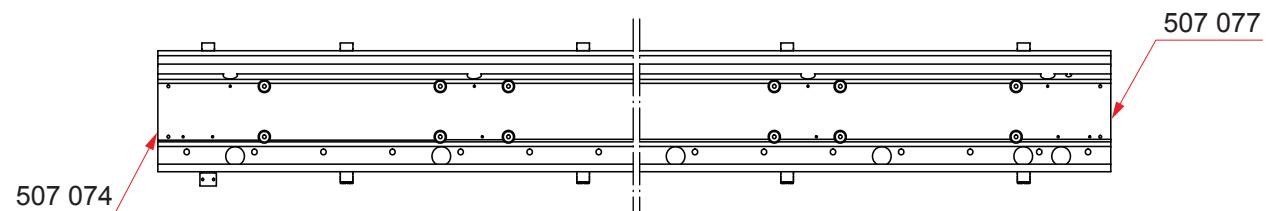
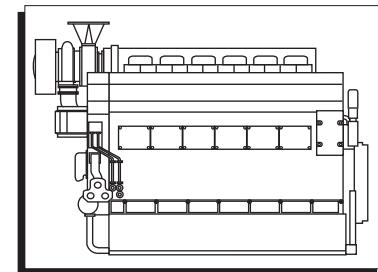
Page: 2(2)

Updated: 15.03.2011

Main bearing temperature sensors

Quantity according to number of cylinders

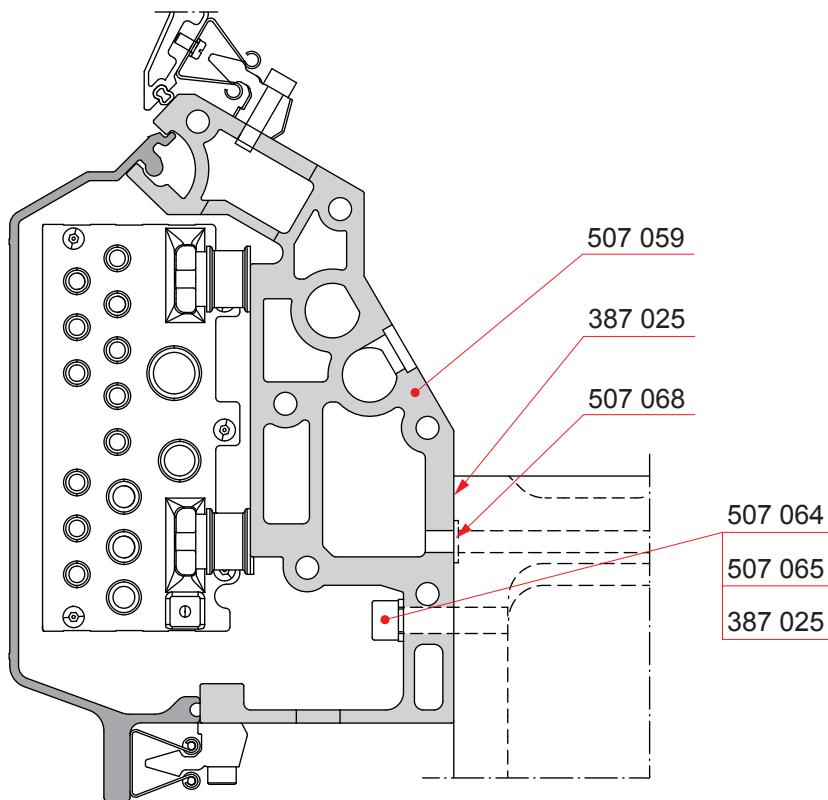
Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
507 085 Temperature sensor	8	9	10	11
507 086 Pipe clamp	72	81	90	99
507 087 Screw	66	75	84	93
507 158 Cable gland	8	9	10	11
507 233 Steel strip	16	18	20	22

Side cover, lower part

Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 074	Gasket	1	-
507 077	Gasket	1	-

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Updated: 14.06.2012

Side cover, lower part



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 059	Cover	1	-
507 064	Screw	*	-
507 065	Washer	*	-
507 068	O-ring	*	-
387 025	Glue compound	1	-

NOTE! *) See page 3.

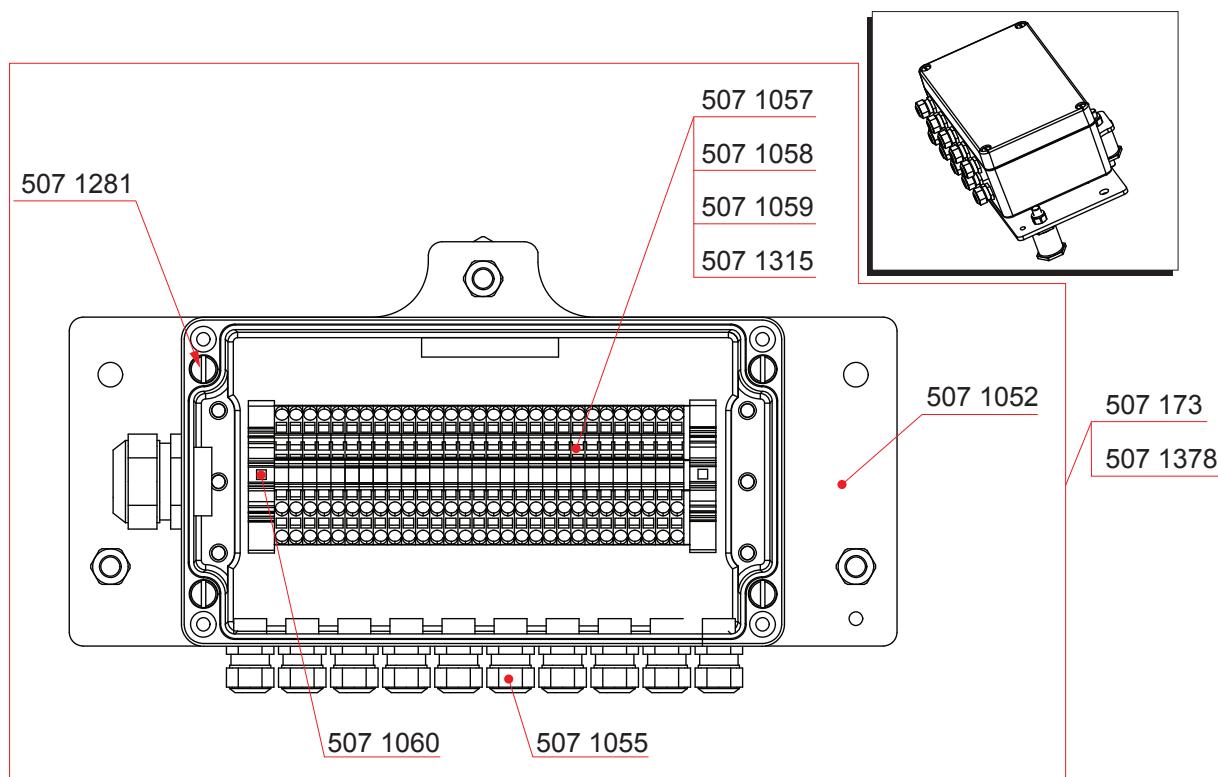
Side cover, lower part

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	6L	7L	8L	9L
507 064 Screw	20	23	26	29
507 065 Washer	20	23	26	29
507 068 O-ring	20	23	26	29

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Terminal box

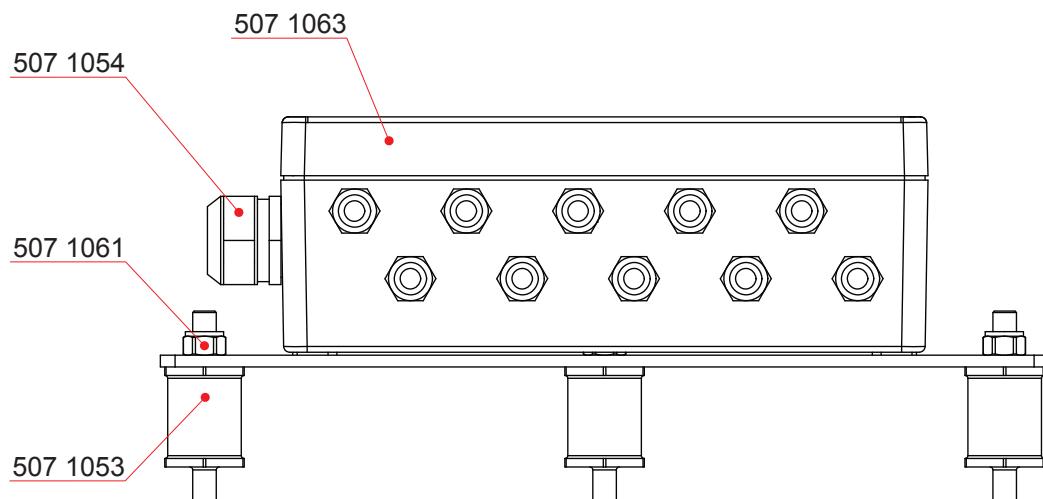


Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 173	Terminal box	1	-
507 1052	Bracket	1	1.2
507 1055	Cable gland	10	-
507 1057	Terminal strip	25	-
507 1058	End plate	1	-
507 1059	End stopper	2	-
507 1060	Terminal strip rail *)	1	0.5
507 1281	Screw	4	0.5
507 1315	Terminal strip	4	-
507 1378	Corrosion protection	1	-

NOTE! *) Length needed when ordering.

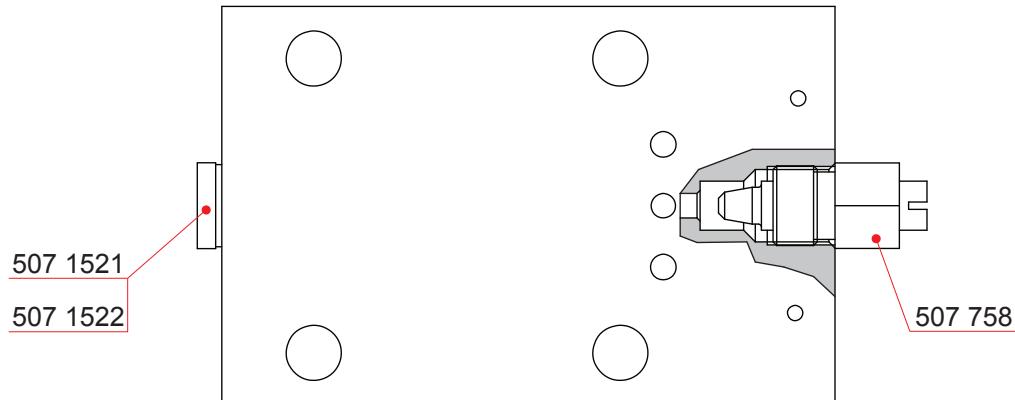
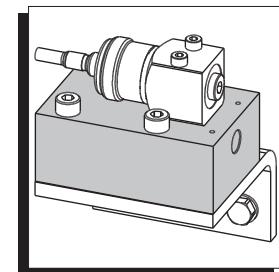
Edition: A
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Updated: 04.04.2013

Terminal box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 1053	Damper	3	-
507 1054	Cable gland	1	-
507 1061	Nut	3	-
507 1063	Connecting box	1	1.5

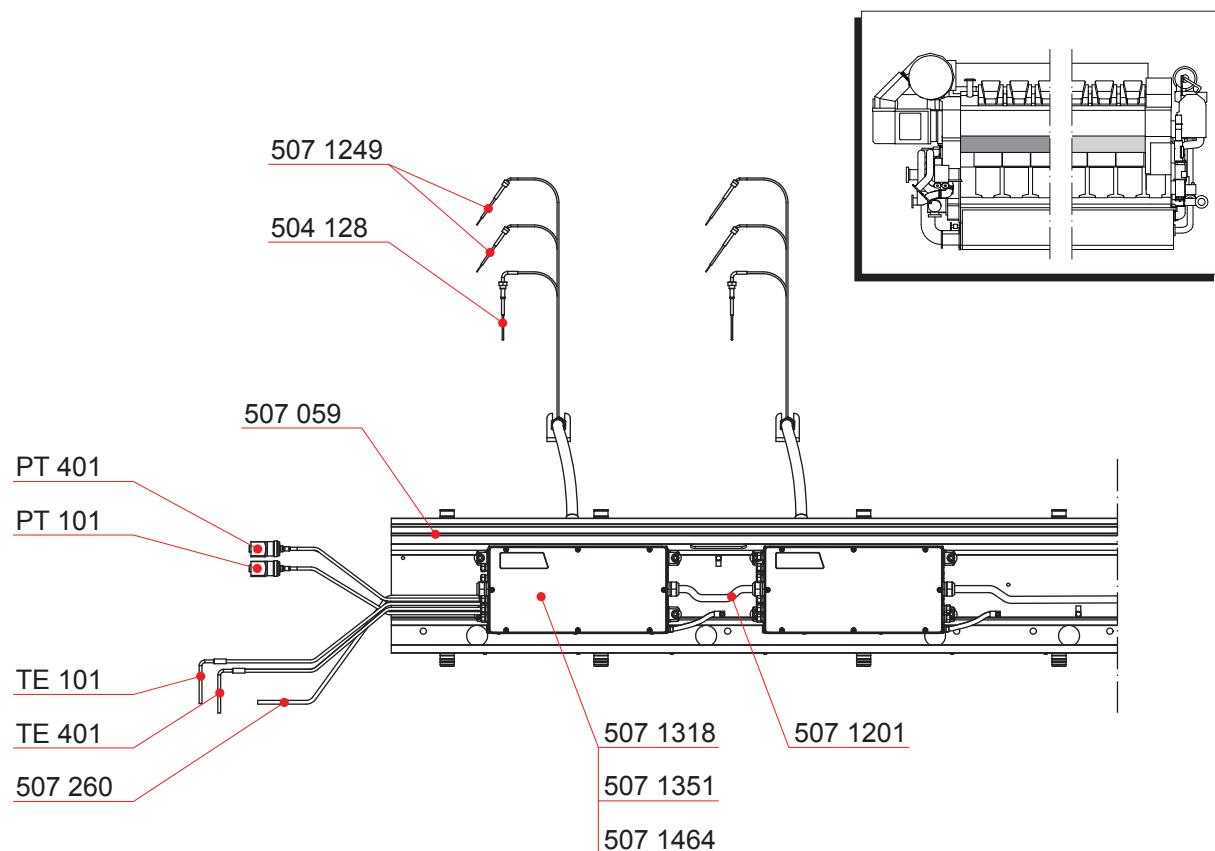
Adapter and test valve for pressure sensors



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 758	Throttle valve	1	-
507 1521	Sealing ring	1	-
507 1522	Plug	1	-

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Electrical equipment for side cover



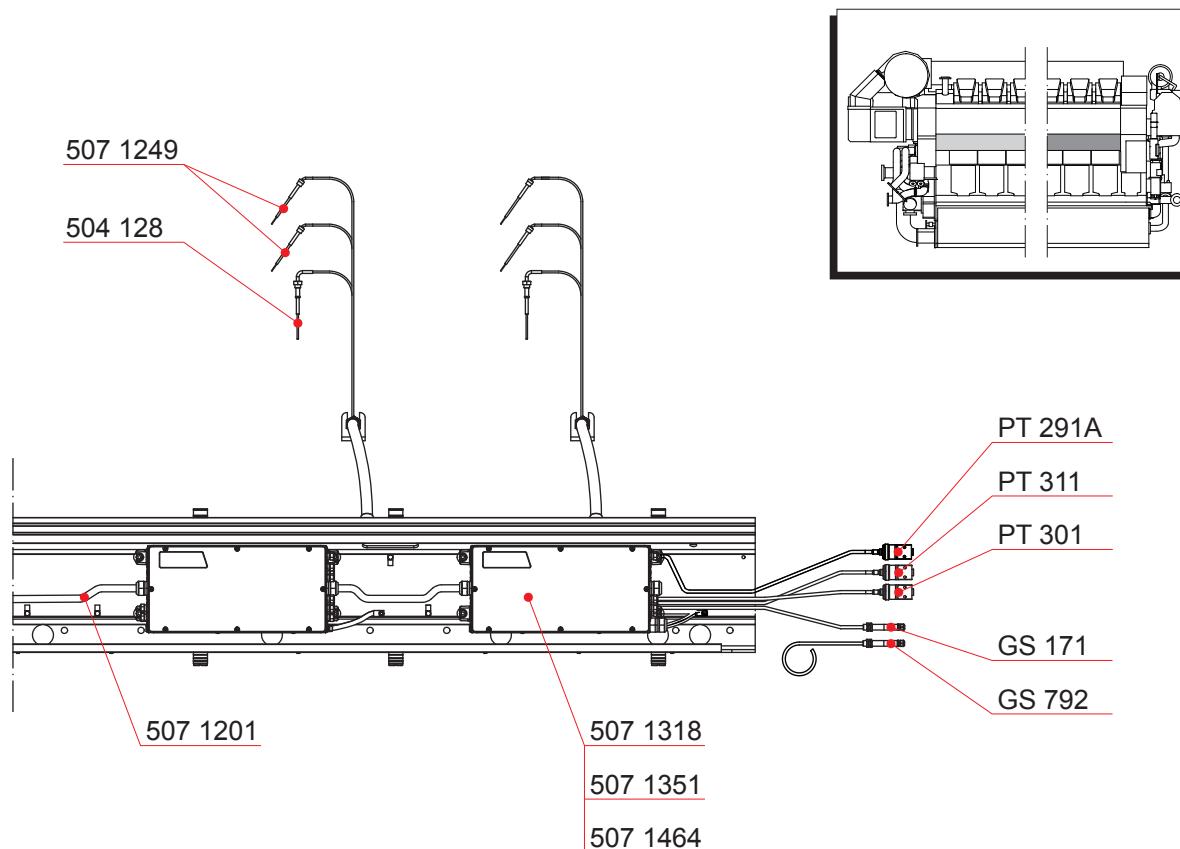
Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	8	0.5
507 059	Cover	1	117
507 260	Cable (1)	3	0.3
507 1201	Cable (2)	5	0.2
507 1249	Thermoelement	16	0.1
507 1318	Electronic unit IOM	5	5.1
507 1351	Corrosion protection	5	-
507 1464	Connector set for IOM	5	-
PT101	Pressure sensor	1	0.8
PT401	Pressure sensor	1	0.8
TE101	Temperature sensor, fuel, before engine	1	0.6
TE401	Temperature sensor, HT water, before engine	1	0.6

NOTE! (1) L= 3000mm

NOTE! (2) L= 4500mm

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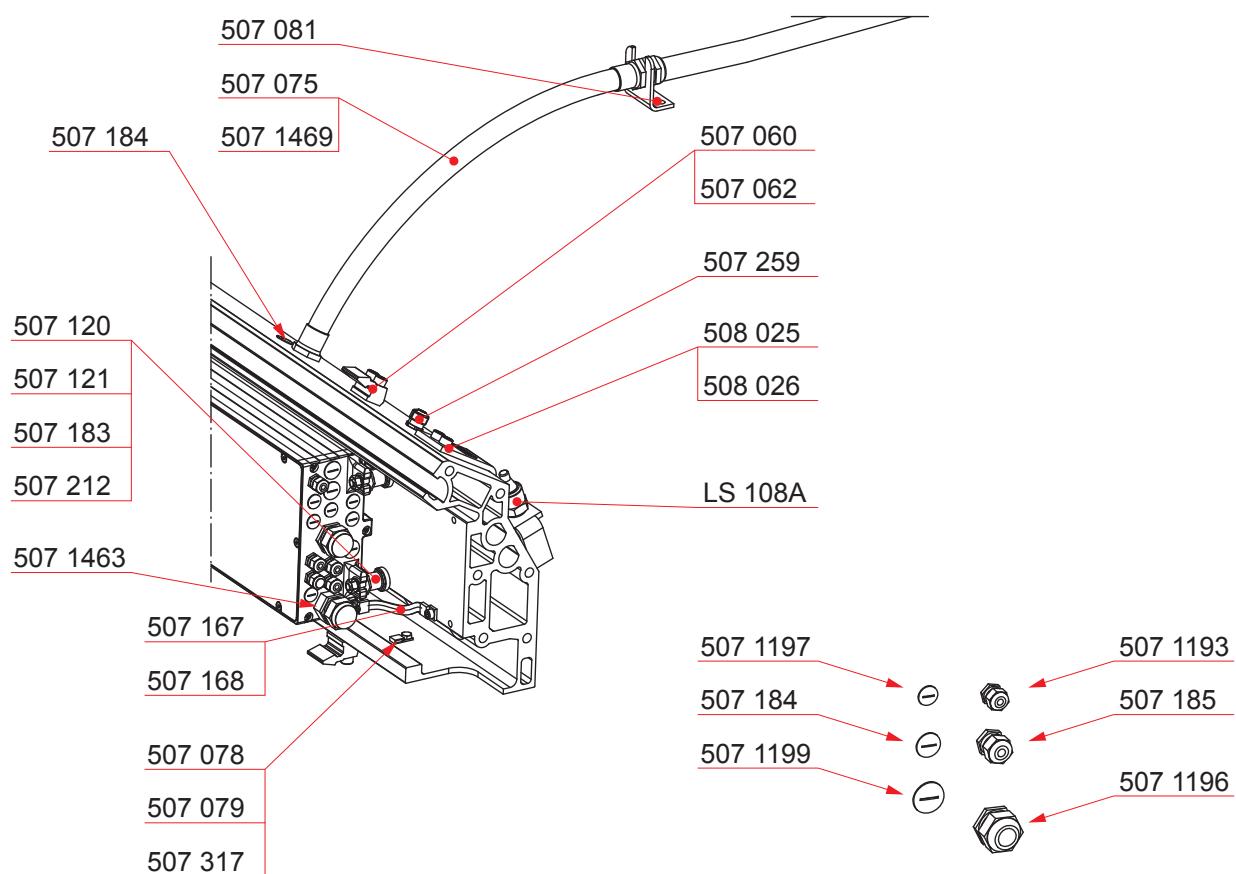
Electrical equipment for side cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	8	0.5
507 1201	Cable (1)	5	0.2
507 1249	Thermoelement	16	0.1
507 1318	Electronic unit IOM	5	5.1
507 1351	Corrosion protection	5	-
507 1464	Connector set for IOM	5	-
GS171	Limit switch	1	0.5
GS792	Limit switch	1	0.5
PT291A	Pressure sensor	1	0.8
PT301	Pressure sensor	1	0.8
PT311	Pressure sensor	1	0.8

NOTE! (1) L= 4500mm

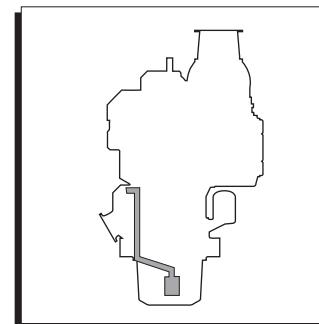
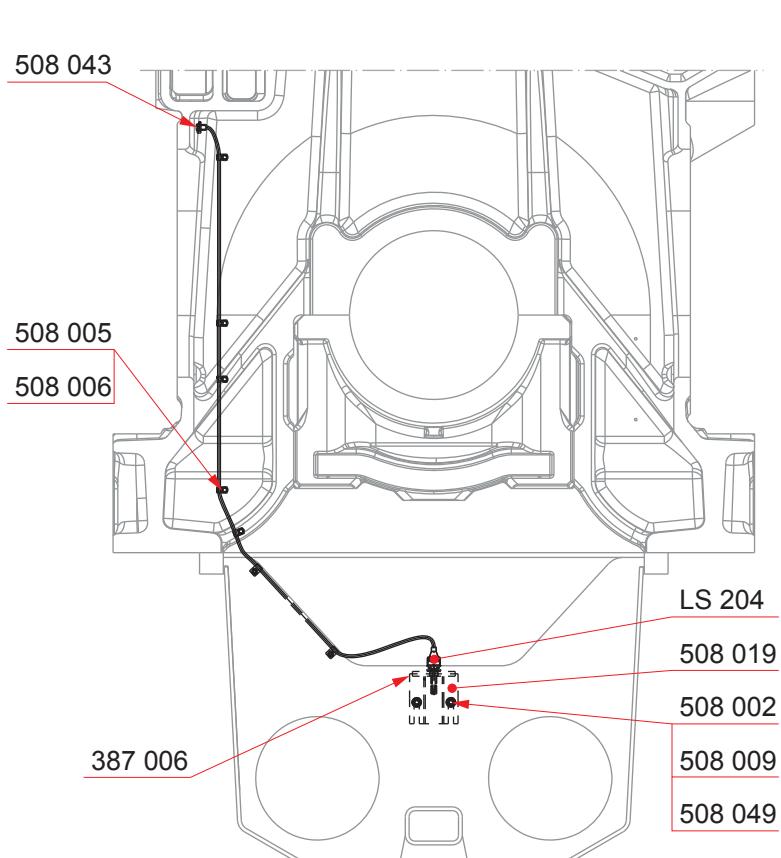
Electrical equipment for side cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 060	Fixing piece	18	-	508 026	Screw	2	-
507 062	Screw	36	-	LS108A	Level switch	1	0.5
507 075	Protecting pipe	8	0.2				
507 078	Clamp	32	-				
507 079	Screw	32	-				
507 081	Clamp	8	0.1				
507 120	Damper	20	-				
507 121	Nut	20	-				
507 167	Cable set	5	-				
507 168	Screw	10	-				
507 183	Distance ring	20	-				
507 184	Plug	37	-				
507 185	Cable gland	1	-				
507 212	Washer	20	-				
507 259	Cable gland	1	-				
507 317	Steel strip	180	-				
507 1193	Cable gland	45	-				
507 1196	Cable gland	11	-				
507 1197	Plug	65	-				
507 1199	Plug	9	-				
507 1463	Fitting	1	-				
507 1469	Sealing	8	-				
508 025	Bracket	1	0.6				

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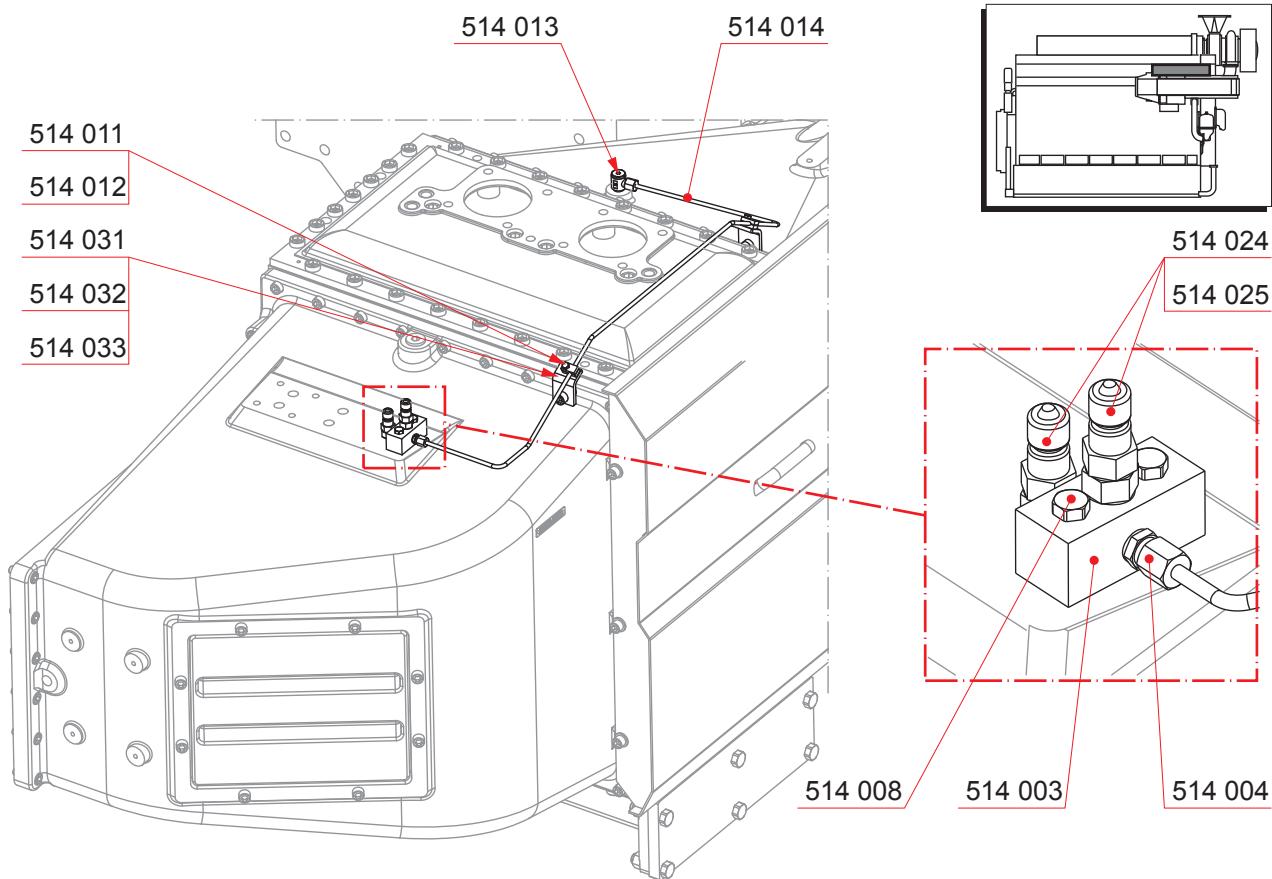
Oil level transducer



Part No.	Description	Qty [Pcs]	Wt. [Kg]
508 002	Screw	2	-
508 005	Cable clamp	7	-
508 006	Screw	7	-
508 009	Nut	2	-
508 019	Bracket	1	-
508 043	Bush seal	1	-
508 049	Washer	2	-
LS204	Level switch, oil level	1	-
387 006	Glue compound	1	-

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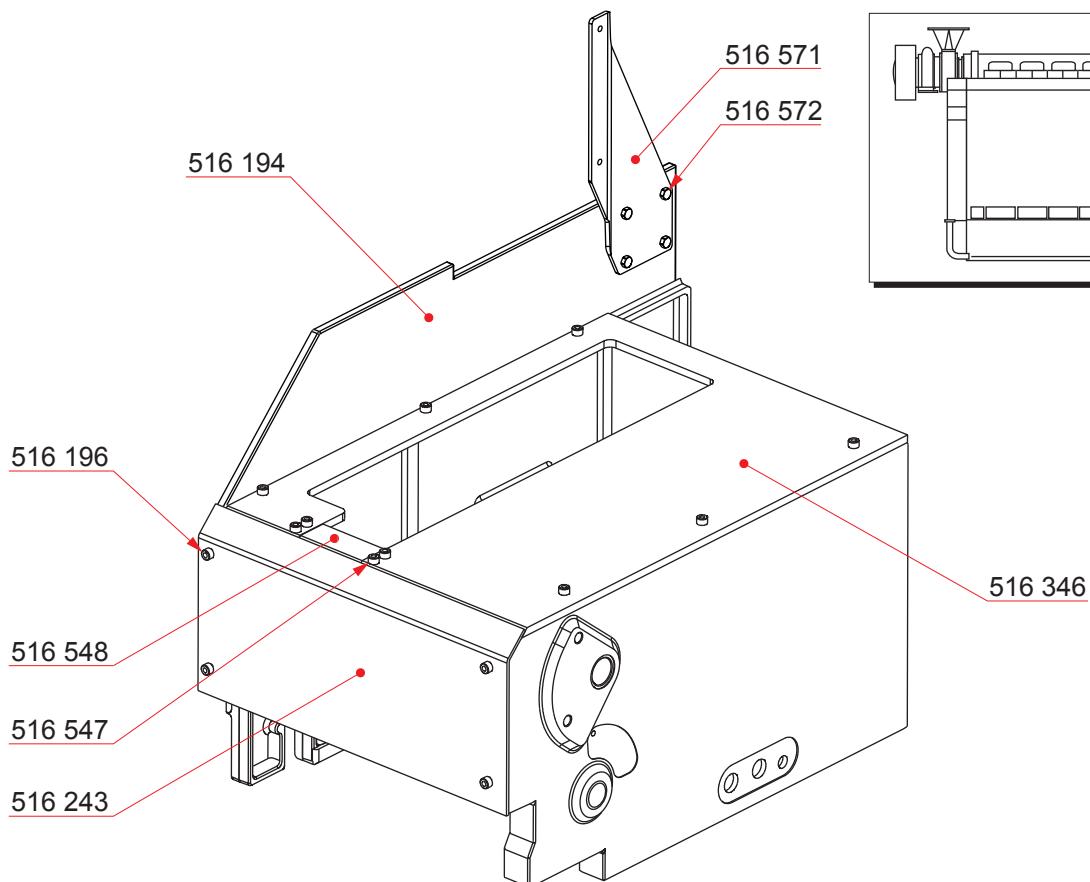
Pressure difference gauges



Part No.	Description	Qty [Pcs]	Wt. [Kg]
514 003	Bracket	1	-
514 004	Pipe union	1	-
514 008	Screw	2	-
514 011	Clamp	2	-
514 012	Screw	2	-
514 013	Pipe union	1	-
514 014	Pipe	1	-
514 024	Pipe union	2	-
514 025	Coupling	2	-
514 031	Distance sleeve	2	-
514 032	Bracket	2	-
514 033	Screw	2	-

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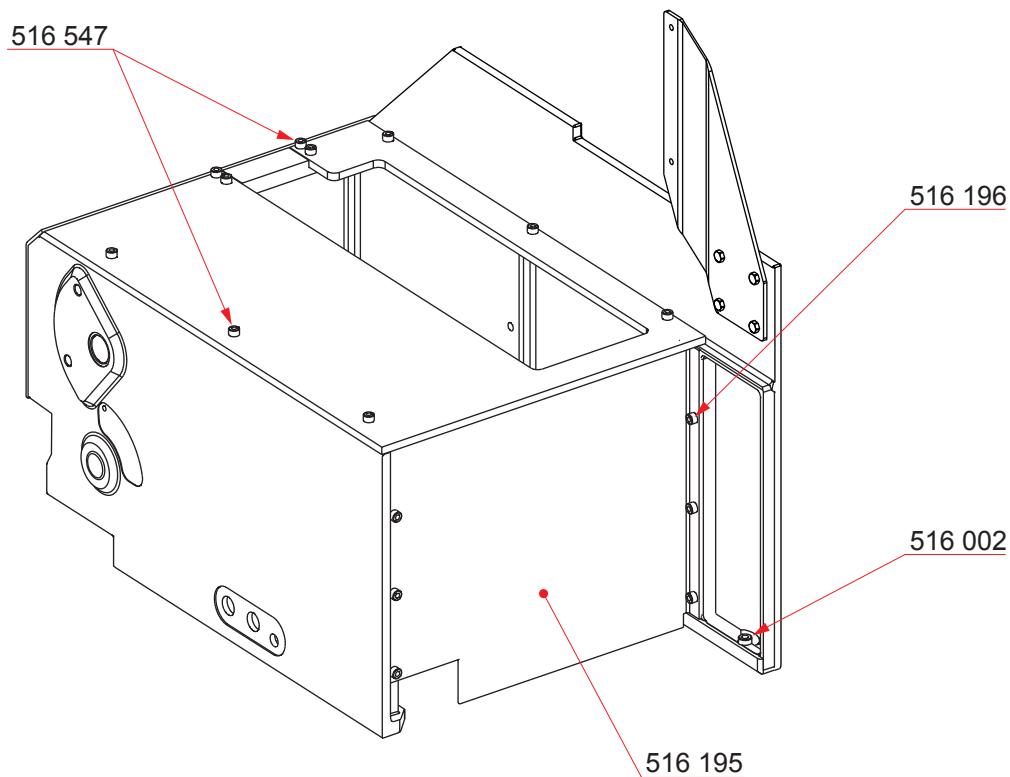
Equipment for connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 194	End cover	1	-
516 196	Screw	10	-
516 243	Cover plate	1	-
516 346	Cover plate	1	-
516 547	Screw	10	-
516 548	Supporting plate	1	-
516 571	Support arm	1	-
516 572	Screw	4	-

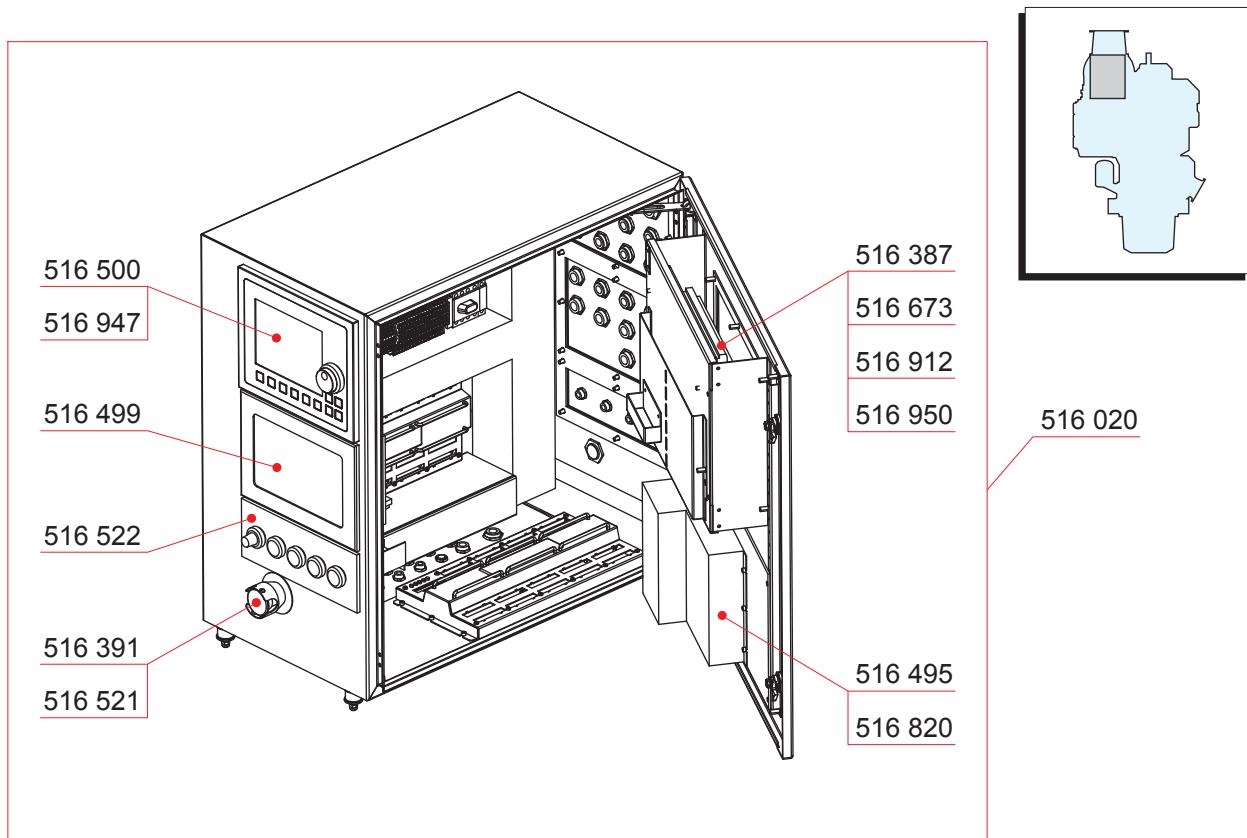
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Equipment for connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 002	Screw	8	-
516 195	Cover plate	1	-
516 196	Screw	10	-
516 547	Screw	10	-

Connecting box

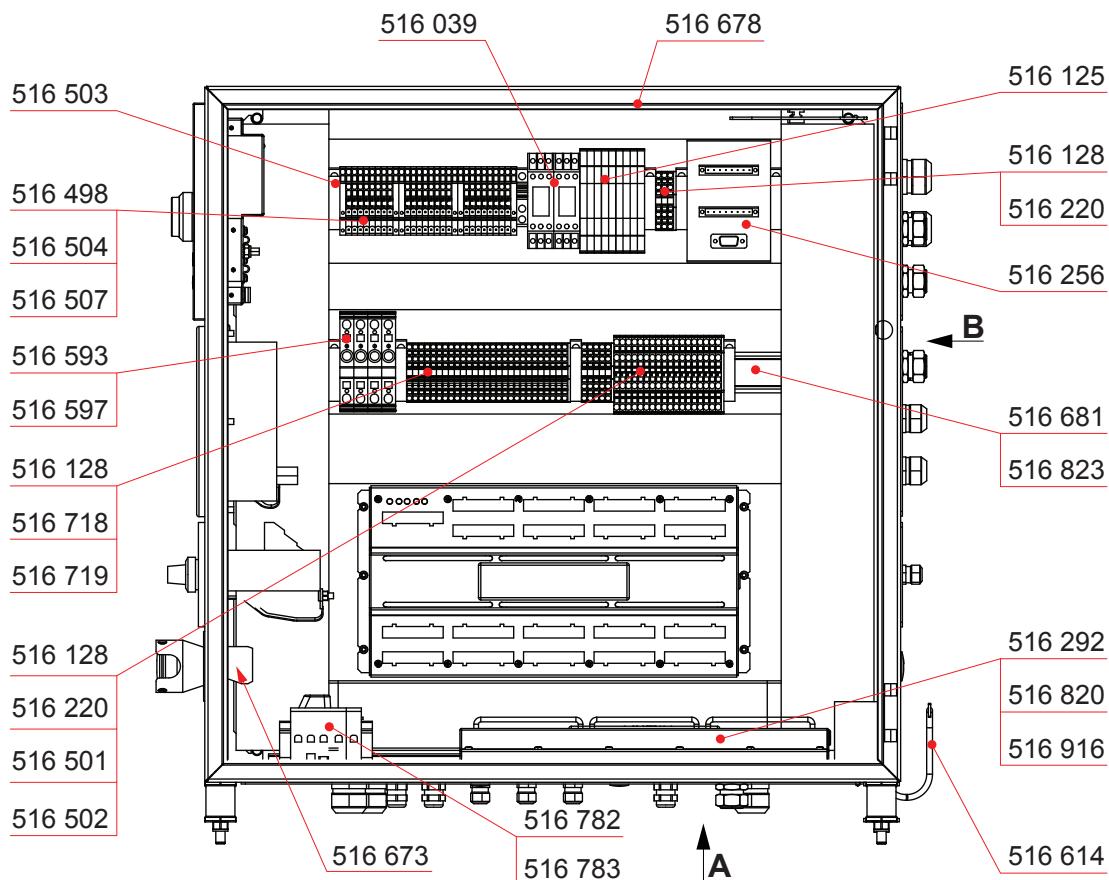


Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 020	Connecting box	1	-
516 387	Engine safety module	1	2.1
516 391	Push button	1	0.1
516 495	Power distribution module	1	3.6
516 499	Display unit	1	2.0
516 500	Display unit	1	2.1
516 521	Guard	1	-
516 522	Control panel	1	1.4
516 673	Resistor 22 kR *	4	-
516 820	Screw	18	-
516 912	Connector set for ESM	1	0.1
516 947	Connector	1	-
516 950	Screw	4	-

NOTE! *) See project specific wiring diagram

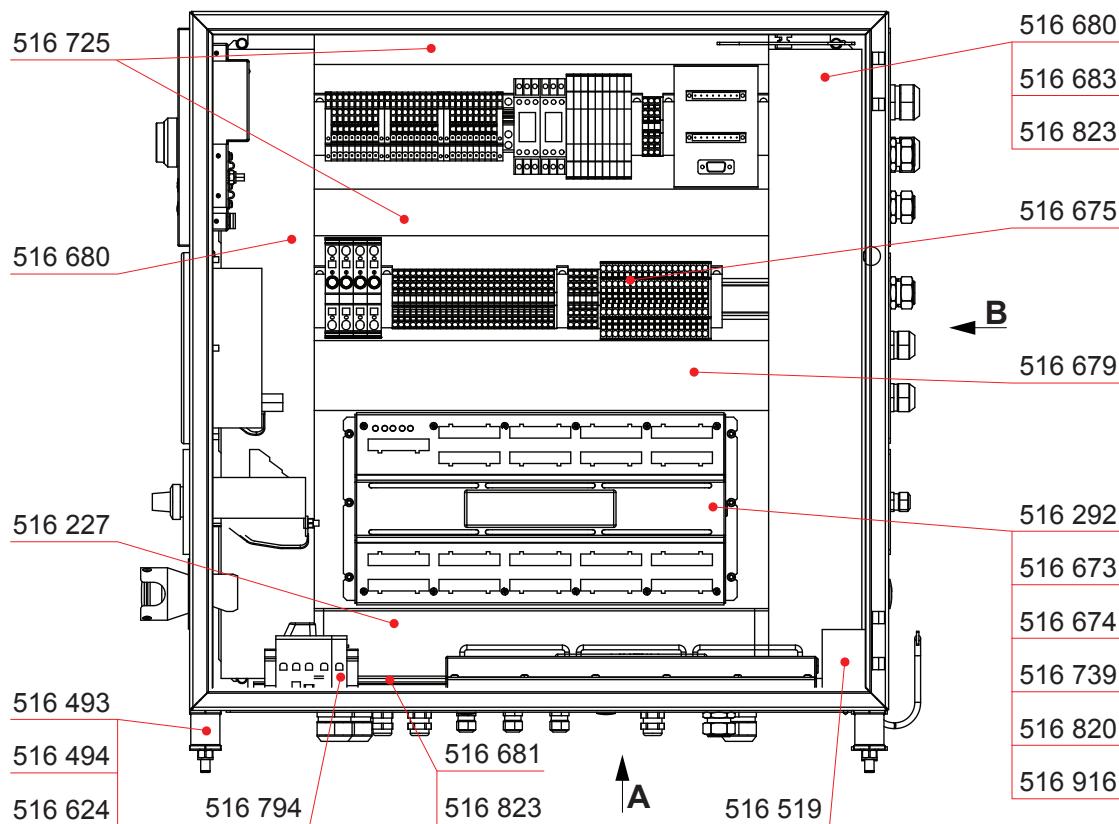
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Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 039	Converter	2	-	516 820	Screw	18	-
516 125	Relay	5	-	516 823	Screw	29	-
516 128	End plate	2	-	516 916	Connector	2	-
516 220	Terminal strip	5	-				
516 256	Electronic unit IOM	1	0.2	NOTE!	*) See project specific wiring diagram		
516 292	Control unit	2	1.8				
516 498	Plug 8-pin	6	-				
516 501	Terminal strip	18	-				
516 502	End plate	1	-				
516 503	End clamp	10	-				
516 504	Receptacle, DIN-rail mounting	24	-				
516 507	Ground receptacle	6	-				
516 593	Fuse terminal	4	-				
516 597	Fuse 4A	4	-				
516 614	Earthing strap	1	-				
516 673	Resistor 22 kR *	4	-				
516 678	Corrosion protection	1	0.3				
516 681	Terminal strip rail	1	0.2				
516 718	Terminal strip	14	-				
516 719	Terminal strip	13	-				
516 782	Switch	1	0.1				
516 783	Terminal	1	-				

Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 227	Cable tray (1)	1	-	NOTE!	(4) L= 780 mm		
516 292	Control unit	2	1.8	NOTE!	(5) L= 6000 mm		
516 493	Damper	7	-	NOTE!	(6) L= 1500 mm		
516 494	Nut	14	-	NOTE!	*) See project specific wiring diagram		
516 519	Cable tray (2)	1	0.1				
516 624	Washer	9	-				
516 673	Resistor 22 kR *	4	-				
516 674	Resistor 120 R *	1	-				
516 675	Resistor 2,2 kR *	1	-				
516 679	Cable tray (1)	1	-				
516 680	Cable tray (3)	1	-				
516 681	Terminal strip rail	1	0.2				
516 683	Holder for tie wrap	27	-				
516 725	Cable tray (4)	1	-				
516 739	Cable (5)	1	-				
516 794	Cable (6)	1	0.4				
516 820	Screw	18	-				
516 823	Screw	29	-				
516 916	Connector	2	-				

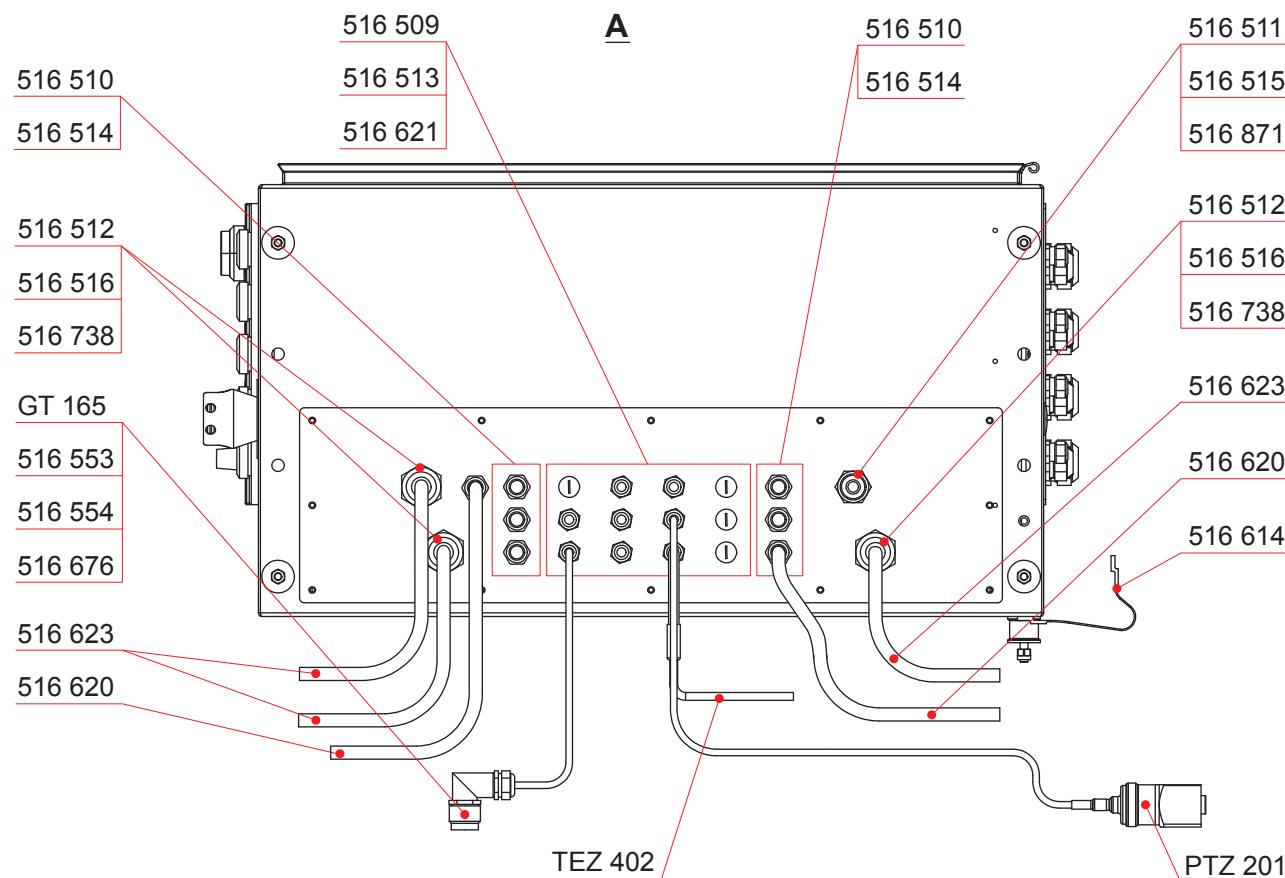
NOTE! (1) L= 390 mm

NOTE! (2) L= 250 mm

NOTE! (3) L= 1080 mm

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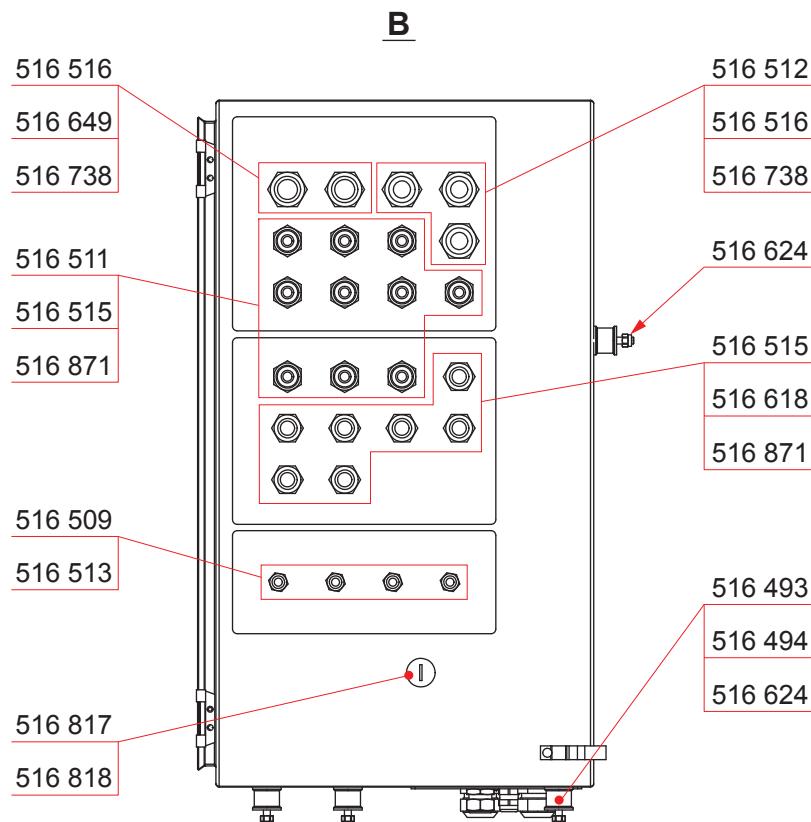
Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 509	Cable gland	12	-	NOTE!	(2) L= 10,5 m		
516 510	Cable gland	7	-	NOTE!	(3) L= 22,5 m		
516 511	Cable gland	11	-				
516 512	Cable gland	6	-				
516 513	Nut	16	-				
516 514	Nut	7	-				
516 515	Nut	18	-				
516 516	Nut	8	-				
516 553	Cable (1)	1	0.2				
516 554	Connector	1	0.3				
516 614	Earthing strap	1	-				
516 620	Cable (2)	1	0.2				
516 621	Blocking plug	4	-				
516 623	Cable (3)	1	0.2				
516 676	Cable gland	1	-				
516 738	Blind disc	7	-				
516 871	Blind disc	18	-				
GT165	Fuel rack position transducer	1	-				
PTZ201	Pressure sensor	1	0.8				
TEZ402	Temperature sensor, HT-water outlet	1	1.1				

NOTE! (1) L= 2050 mm

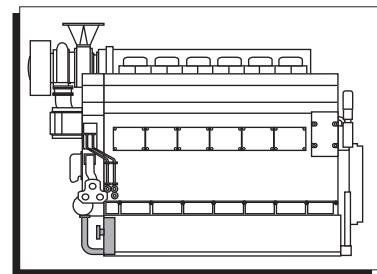
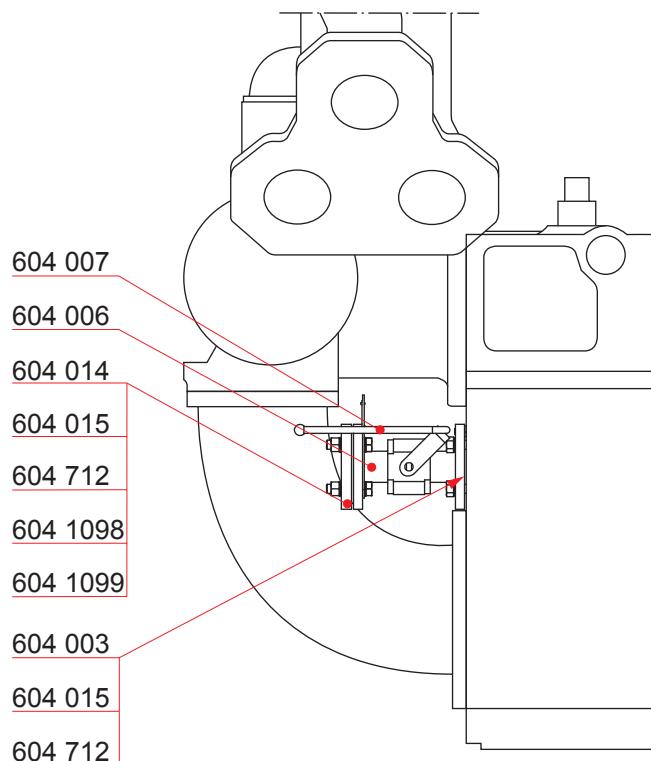
Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 493	Damper	7	-
516 494	Nut	14	-
516 509	Cable gland	12	-
516 511	Cable gland	11	-
516 512	Cable gland	6	-
516 513	Nut	16	-
516 515	Nut	18	-
516 516	Nut	8	-
516 618	Cable gland	7	-
516 624	Washer	9	-
516 649	Cable gland	2	-
516 738	Blind disc	7	-
516 817	Blocking plug	1	-
516 818	Locking nut	1	-
516 871	Blind disc	18	-

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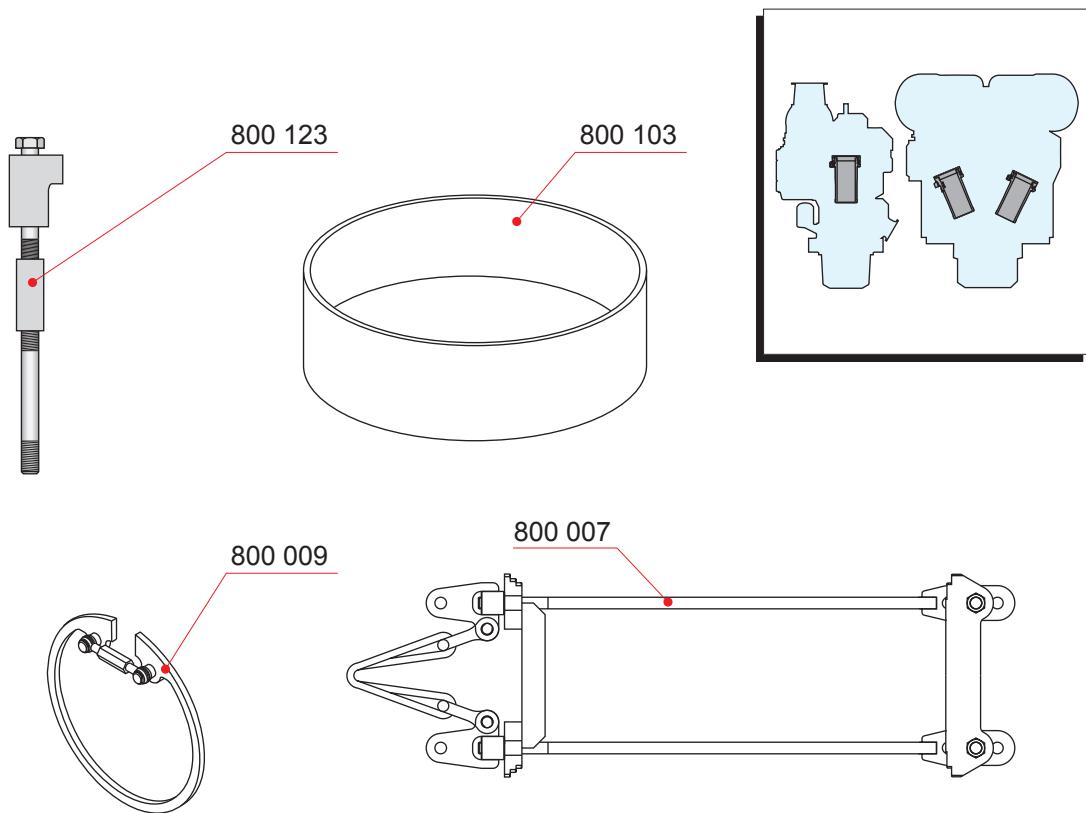
Separator connections with valves



Part No.	Description	Qty [Pcs]	Wt. [Kg]
604 003	Screw	8	-
604 006	Valve	2	-
604 007	Lever	1	-
604 014	Nut	8	-
604 015	Gasket	4	-
604 1098	Screw	6	-
604 1099	Screw	2	-
604 712	Washer	24	-

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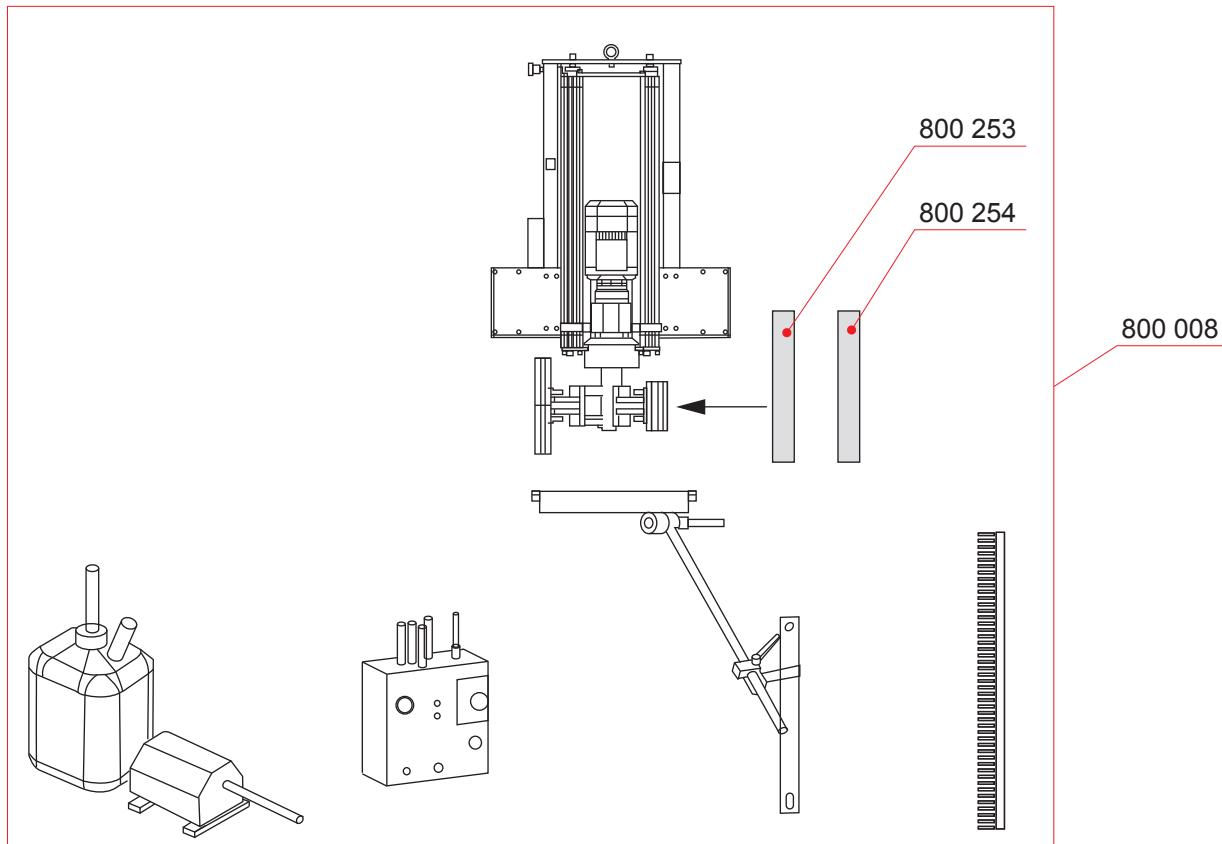
Tools for cylinder liner



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 007	Lifting tool for cylinder liner	1	-
800 009	Dismantling tool for antipolishing ring	1	-
800 103	Assembly tool for piston	1	-
800 123	Fastening tool for cylinder liner	4	-

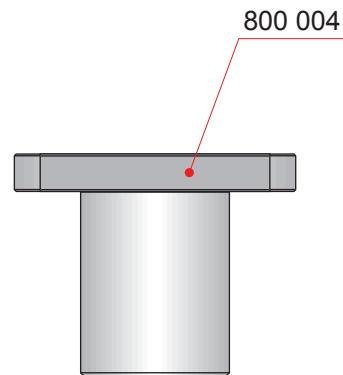
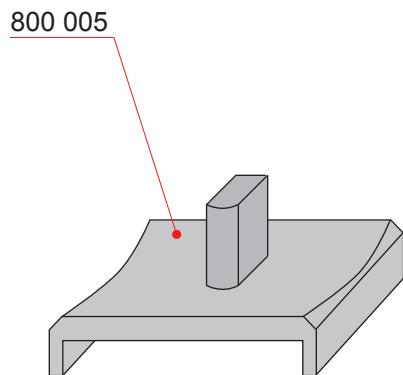
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Tools for cylinder liner



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 008	Honing equipment	1	-
800 253	Honing stone	8	-
800 254	Honing stone	16	-

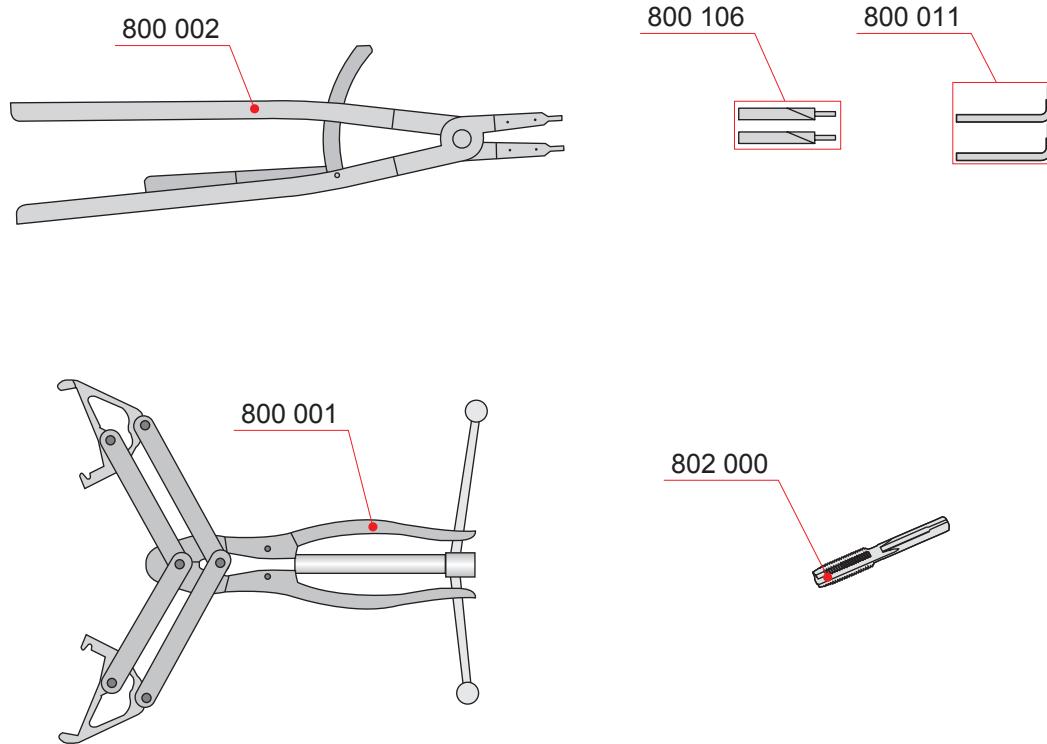
Tools for main bearings



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 004	Turning tool for main bearing shell	1	-
800 005	Turning tool for main bearing shell	1	-

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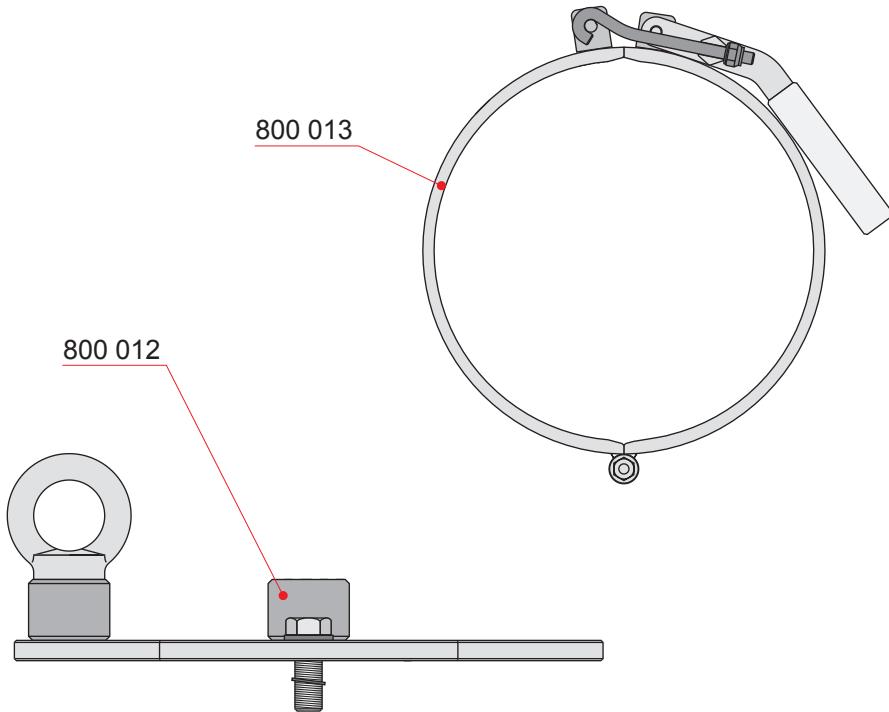
Tools for piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 001	Piston ring pliers	1	0.6
800 002	Pliers for securing ring	1	1.5
802 000	Tap M12	1	-
800 011	Spare tips for pliers 800002, 90 degrees	1	-
800 106	Spare tips for pliers 800002, straight	1	-

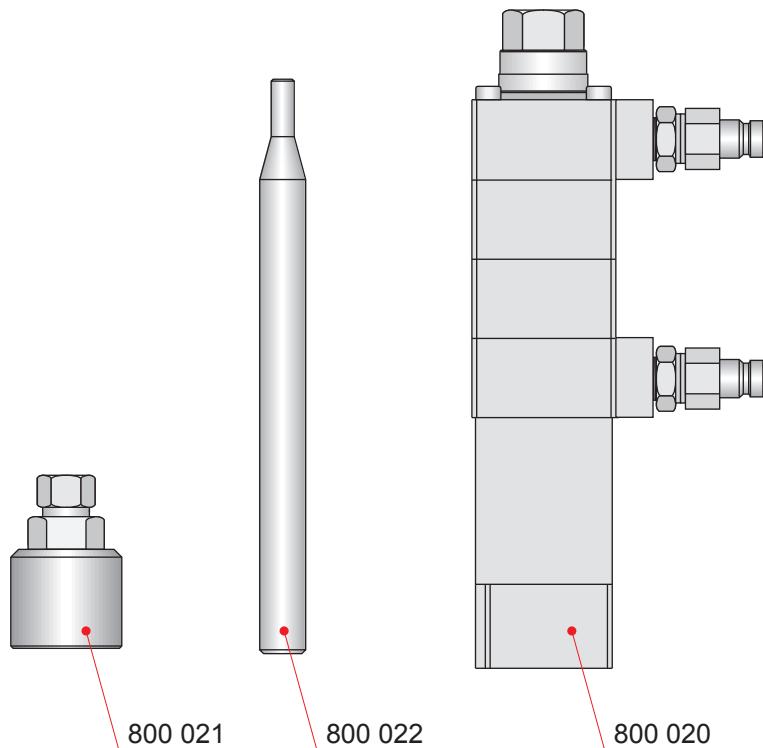
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Tools for piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 012	Lifting tool for piston	1	5.8
800 013	Clamp tool for piston rings	1	9.9

Hydraulic tightening tools



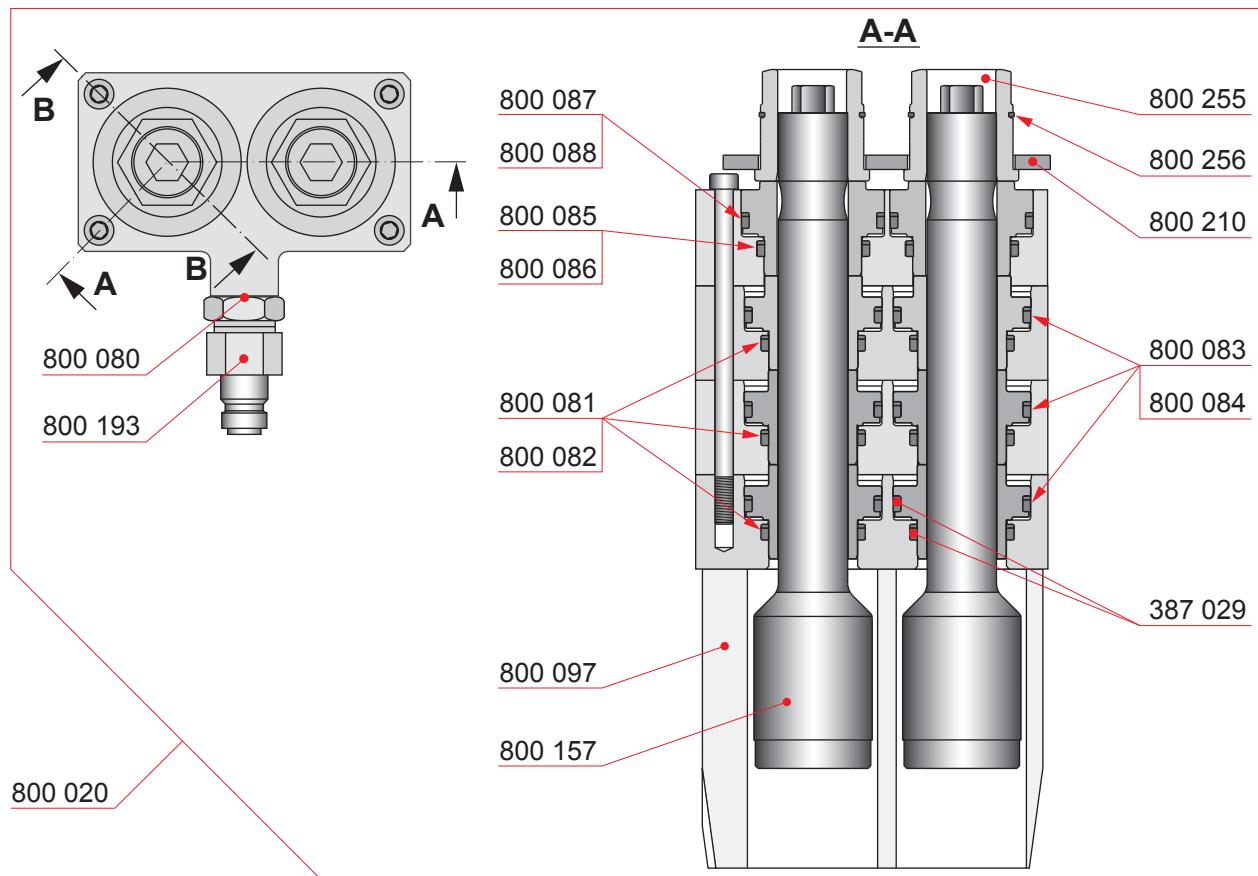
Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 020	Hydraulic tools M27*2, including 800097	2	10.4
800 021	Stud remover M27*2	1	0.5
800 022	Pin for tightening of nuts M27*2	1	0.1

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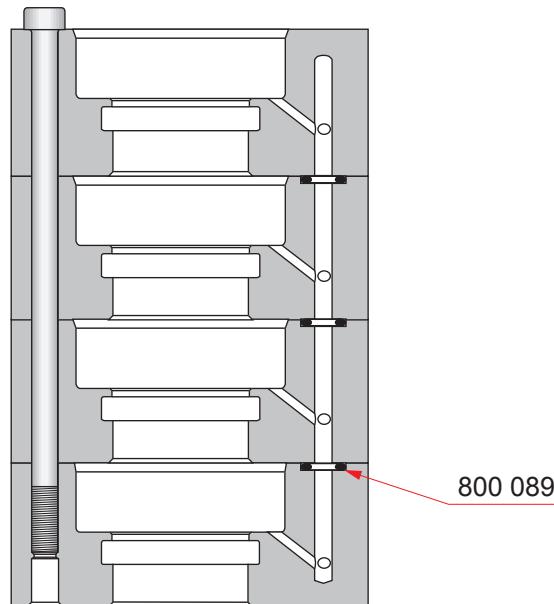
Hydraulic tightening tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 020	Hydraulic tools M27*2, including 800097	1	10.4
800 080	Sealing ring	2	-
800 081	Support ring	6	-
800 082	O-ring	6	-
800 083	O-ring	6	-
800 084	Support ring	6	-
800 085	Support ring	2	-
800 086	O-ring	2	-
800 087	O-ring	2	-
800 088	Support ring	2	-
800 097	Distance sleeve M27*2	1	2.0
800 157	Screw for M27 hydraulic tightening tool	2	1.1
800 193	Quick coupling, male	2	-
800 210	Securing plate	1	0.3
800 255	Nut	2	-
800 256	Retaining ring	2	-
387 029	Assembly compound	1	-

Hydraulic tightening tools

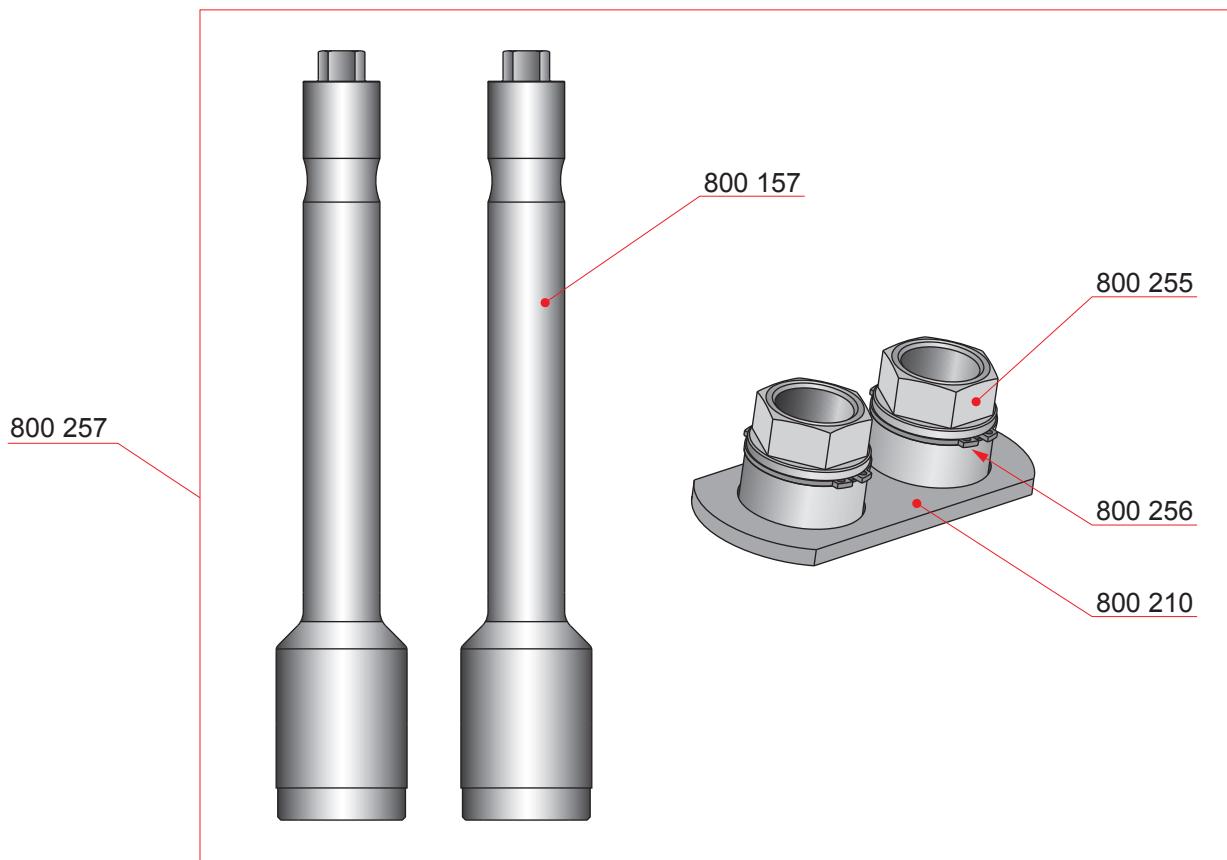
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Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 089	O-ring	3	-

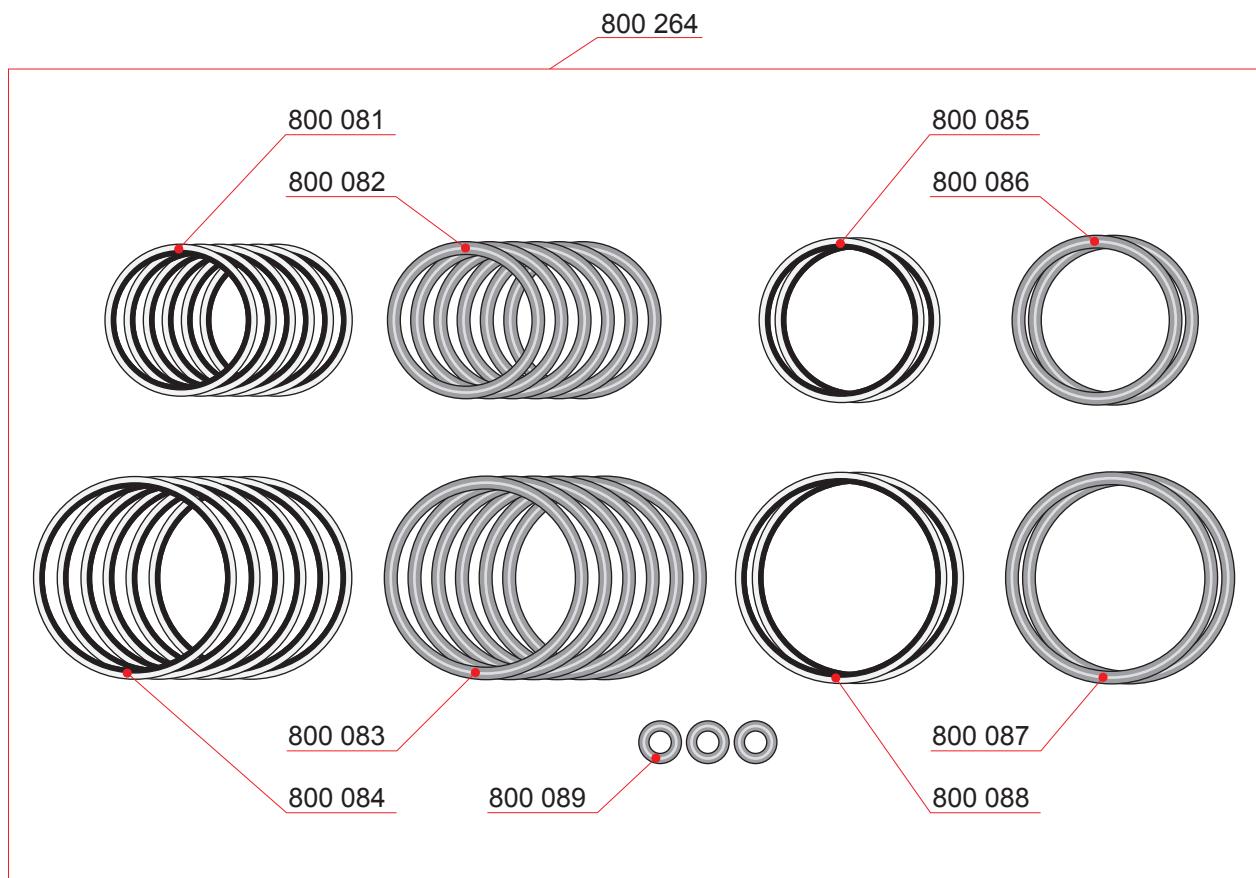
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Hydraulic tightening tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 257	Spare parts kit for hydraulic tightening tool	1	4.8
800 157	Screw for M27 hydraulic tightening tool	2	1.1
800 210	Securing plate	1	0.3
800 255	Nut	2	-
800 256	Retaining ring	2	-

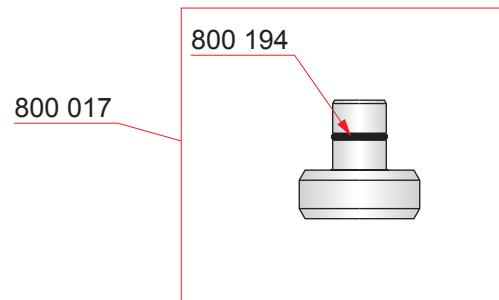
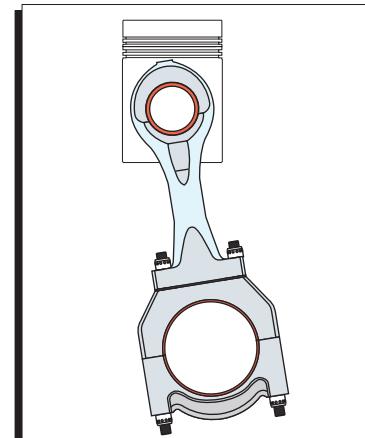
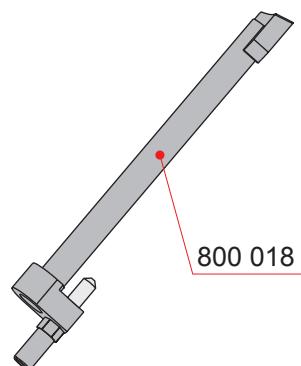
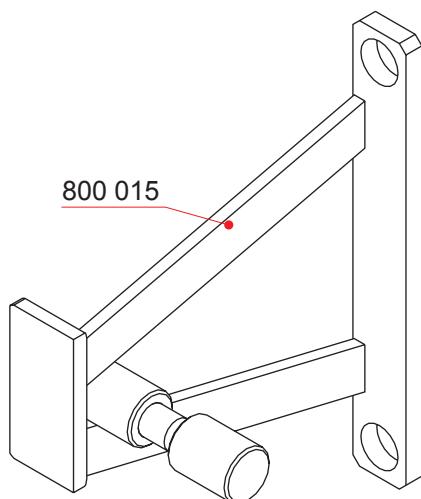
Hydraulic tightening tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 264	Sealing set for hydraulic tightening tool	1	-
800 081	Support ring	6	-
800 082	O-ring	6	-
800 083	O-ring	6	-
800 084	Support ring	6	-
800 085	Support ring	2	-
800 086	O-ring	2	-
800 087	O-ring	2	-
800 088	Support ring	2	-
800 089	O-ring	3	-

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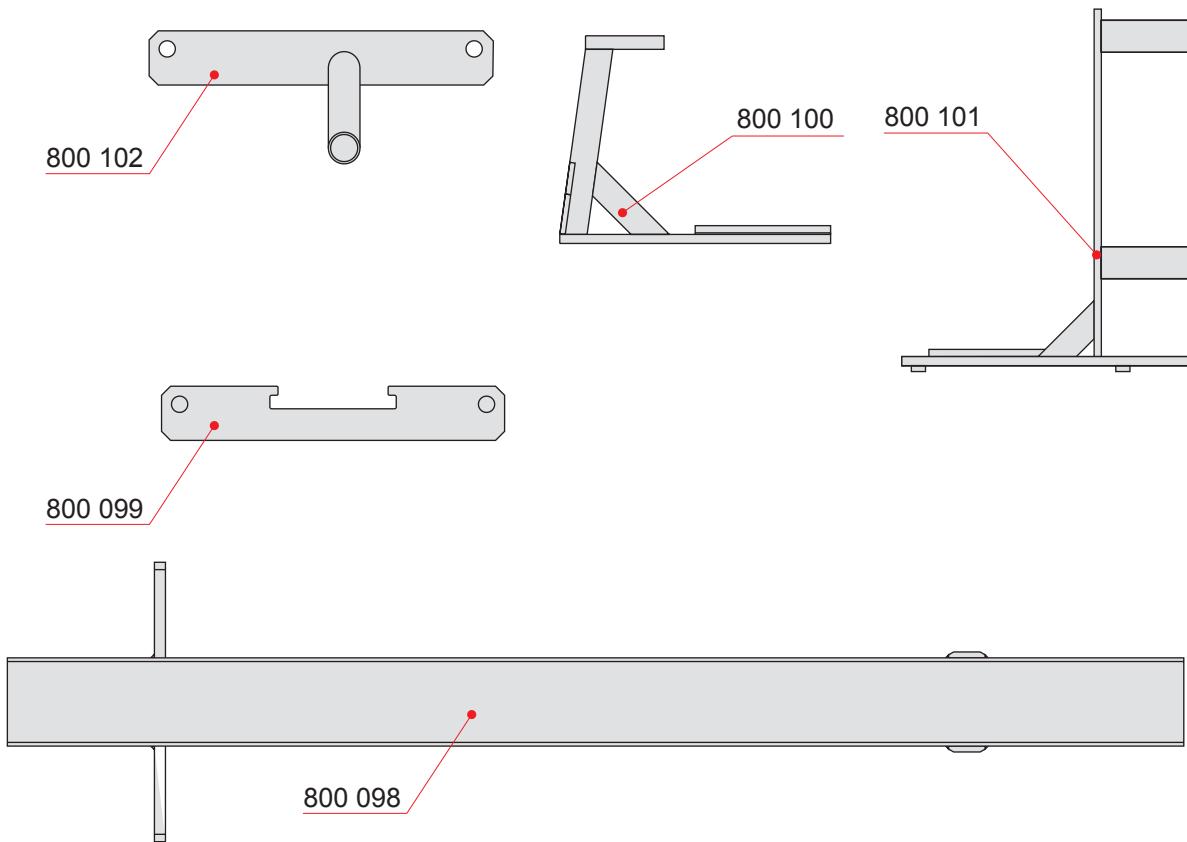
Tools for connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 015	Locking tool for connecting rod big end	1	-
800 017	Guiding plug	2	-
800 194	O-ring	1	-
800 018	Limiter, to be used with 800168	1	-

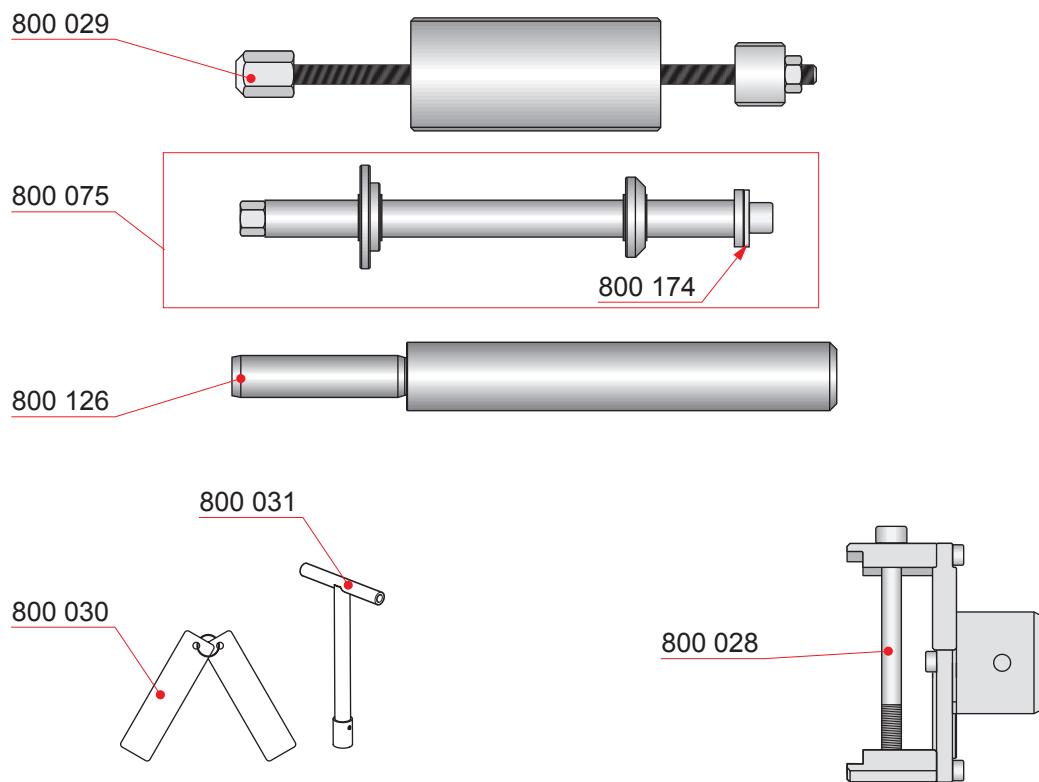
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Tools for connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 098	Assembly rail	1	-
800 099	Support	1	-
800 100	Mounting sledge	1	-
800 101	Mounting sledge	1	-
800 102	Mounting support	1	-

Tools for cylinder head



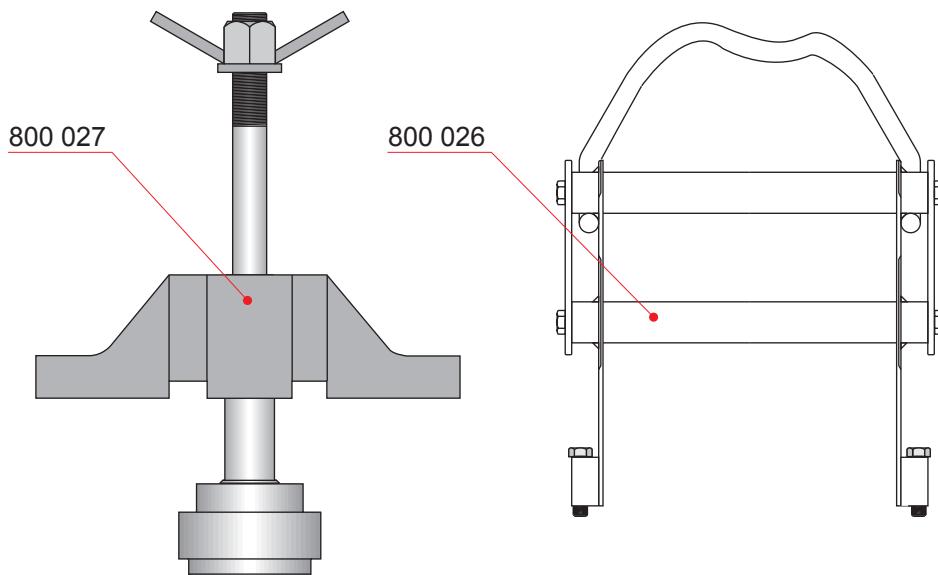
Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 028	Grinding tool for valves	1	1.7
800 029	Removing tool for injection and starting valve	1	4.8
800 030	Valve clearance feeler gauge	1	-
800 031	T-wrench for indicator valve	1	0.5
800 075	Cleaning tool for injection valve sealing surface	1	3.1
800 174	Cleaning felt	1	-
800 126	Extractor tool for valve guide	1	4.5

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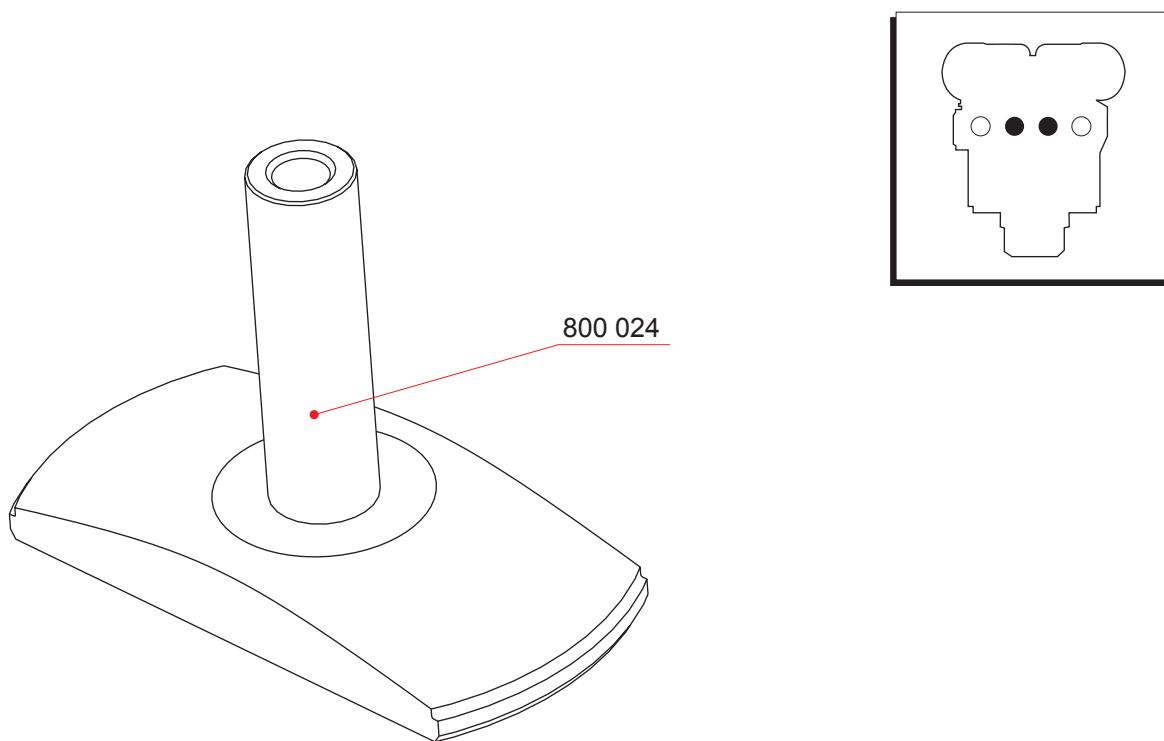
Updated: 12.02.2014

Tools for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 026	Lifting tool for cylinder head	1	10.1
800 027	Mounting and dismantling tool for valves	1	9.5

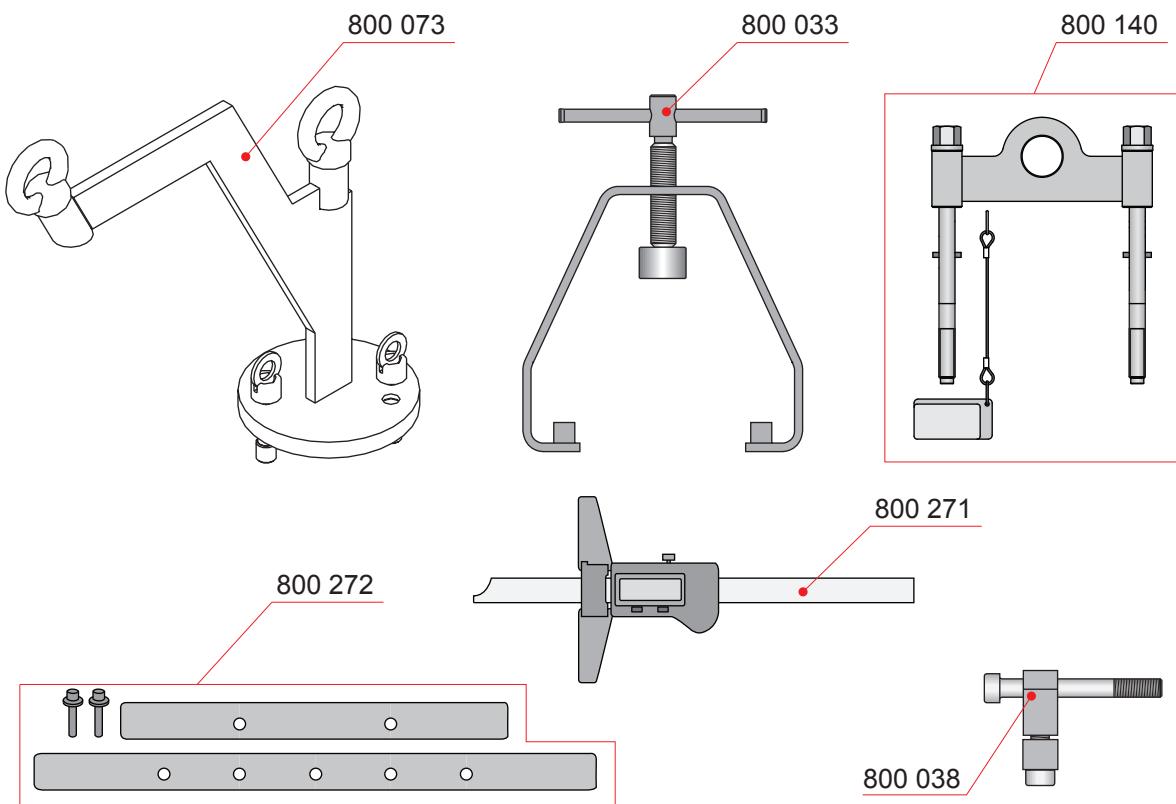
Tools for intermediate gear



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 024	Extractor plate	1	-

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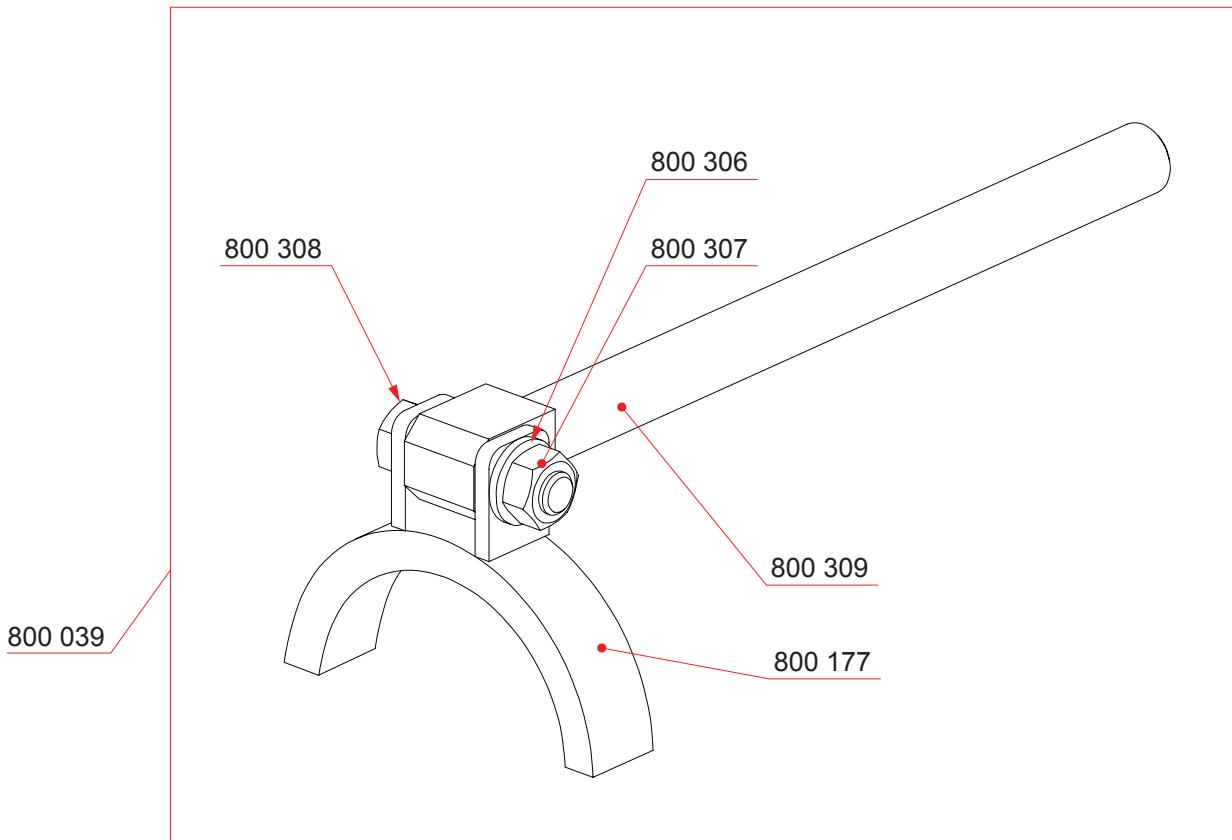
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 033	Dismantling tool for injection pump spring	1	-
800 038	Limiter for fuel rack movements	1	-
800 073	Lifting tool for injection pump	1	-
800 140	Extractor tool for injection tappet *	1	-
800 271	Digital depth gauge with data output, 150 mm	1	-
800 272	Single extension base, 180 mm	1	-

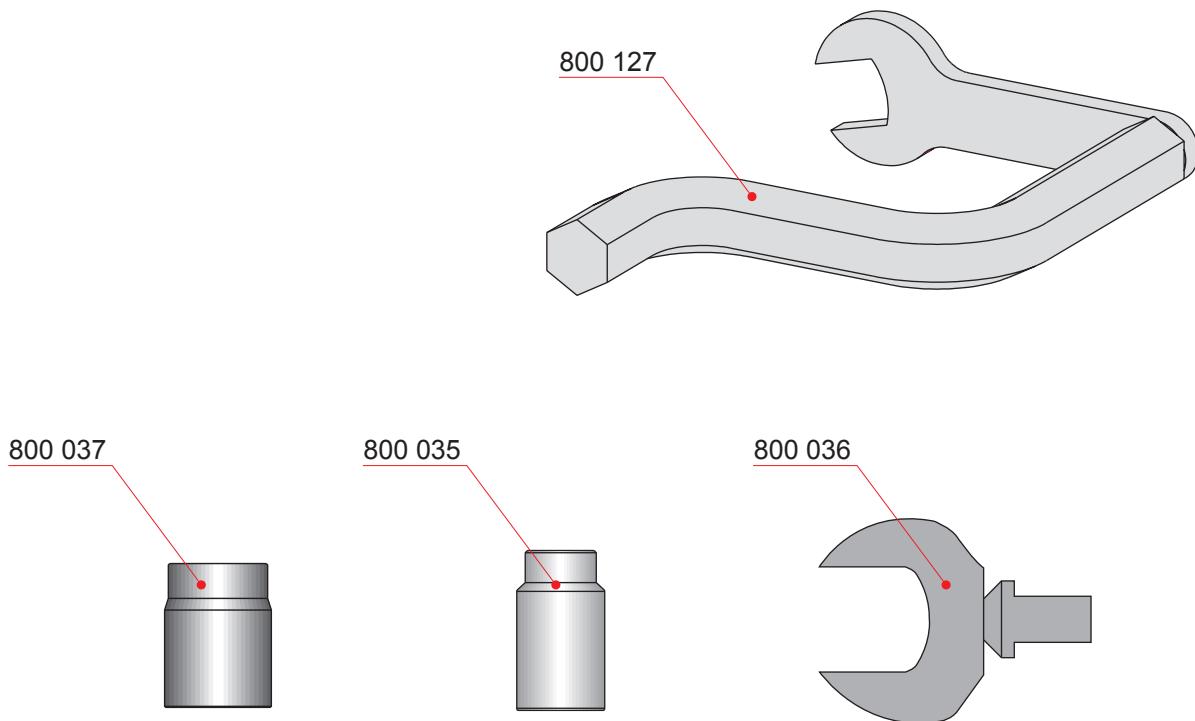
Edition: E
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Updated: 21.01.2013

Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 039	Moving tool for fuel pipe sleeves	1	-
800 177	Saddle	1	-
800 306	Washer	1	-
800 307	Nut	1	-
800 308	Screw	1	-
800 309	Handle	1	-

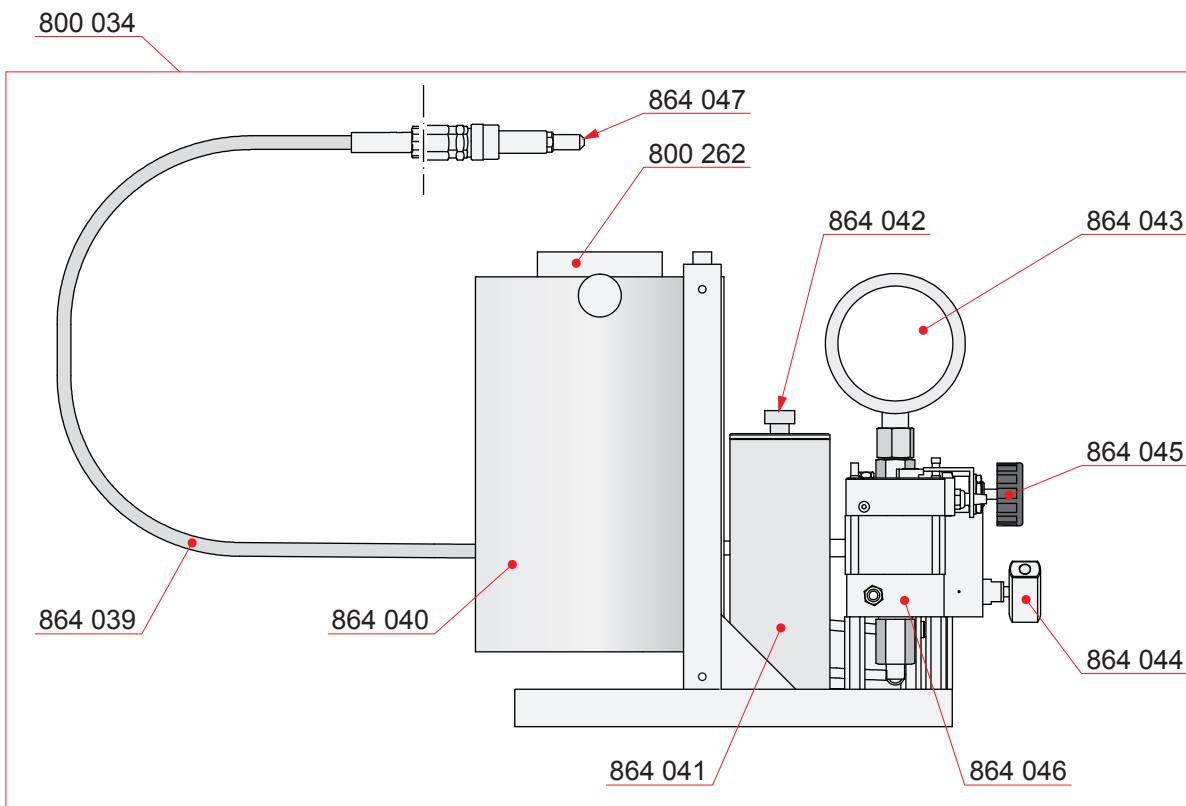
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 035	Socket wrench 36mm	1	-
800 036	Flare nut wrench for tightening of injection pipes	1	-
800 037	Socket wrench 55 mm for nozzle cap nut	1	-
800 127	Tool for connection piece, flange screw	1	-

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Tools for injection equipment

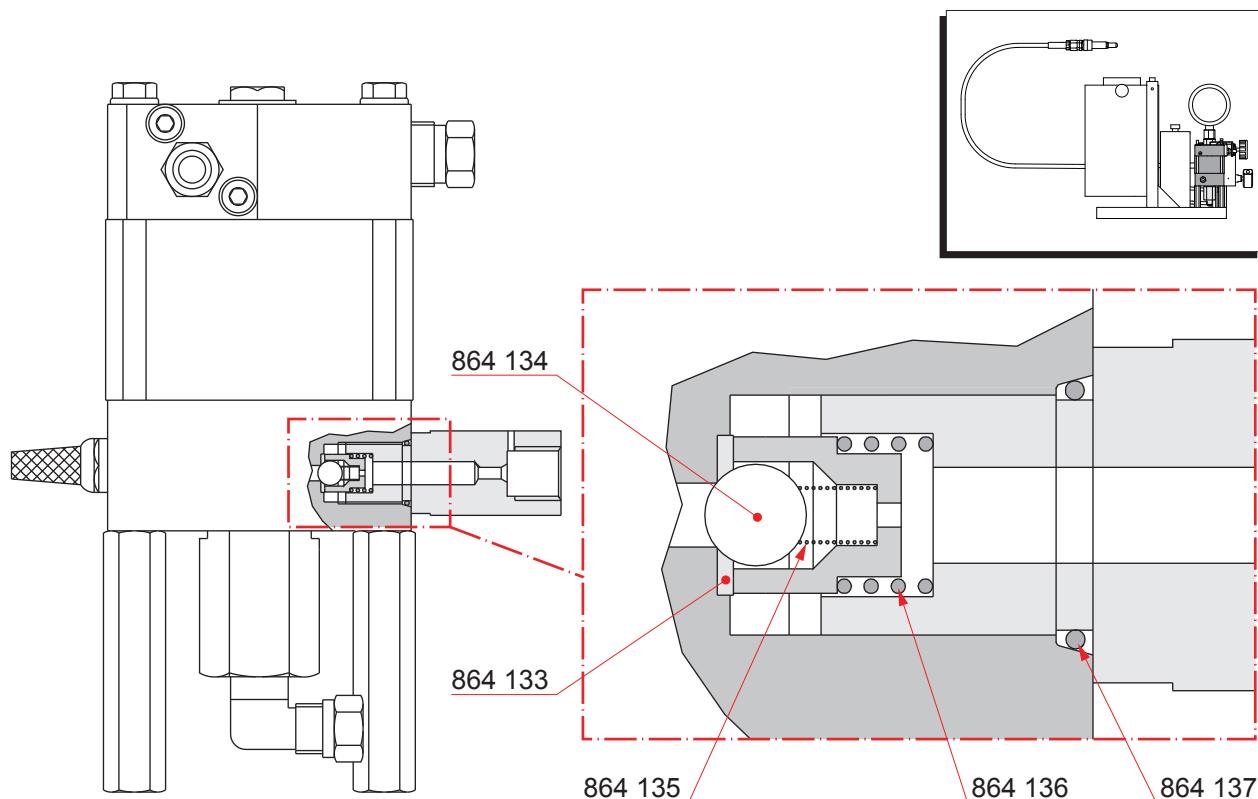


Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 034	Testing tool for injection valve (*)	1	-
800 262	Holder	1	-
864 047	Adapter	1	-
864 039	Hose	1	-
864 040	Injection chamber	1	-
864 041	Tank	1	-
864 042	Cap	1	-
864 043	Pressure gauge	1	-
864 044	Valve	1	-
864 045	Pressure control valve	1	-
864 046	High pressure pump	1	-

NOTE! (*) For available seal kit, see page 5 and 6.

NOTE! (*) Tool requires regular calibration.

Tools for injection equipment

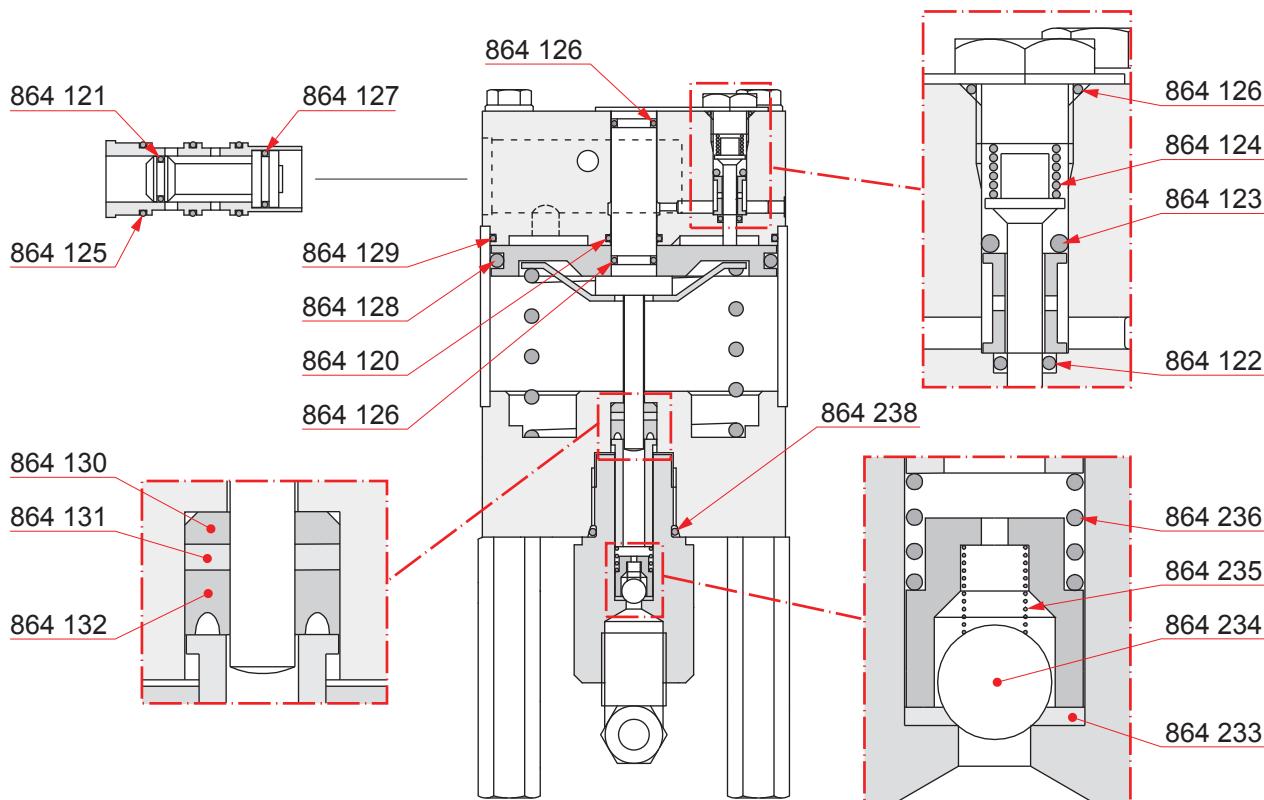


Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 119	Seal kit for injection valve testing tool	1	-
864 133	Seat (1)	2	-
864 134	Ball (1)	2	-
864 135	Spring (1)	2	-
864 136	Spring (1)	2	-
864 137	O-ring (1)	1	-

NOTE! (1) Parts included in the kit not available separately!

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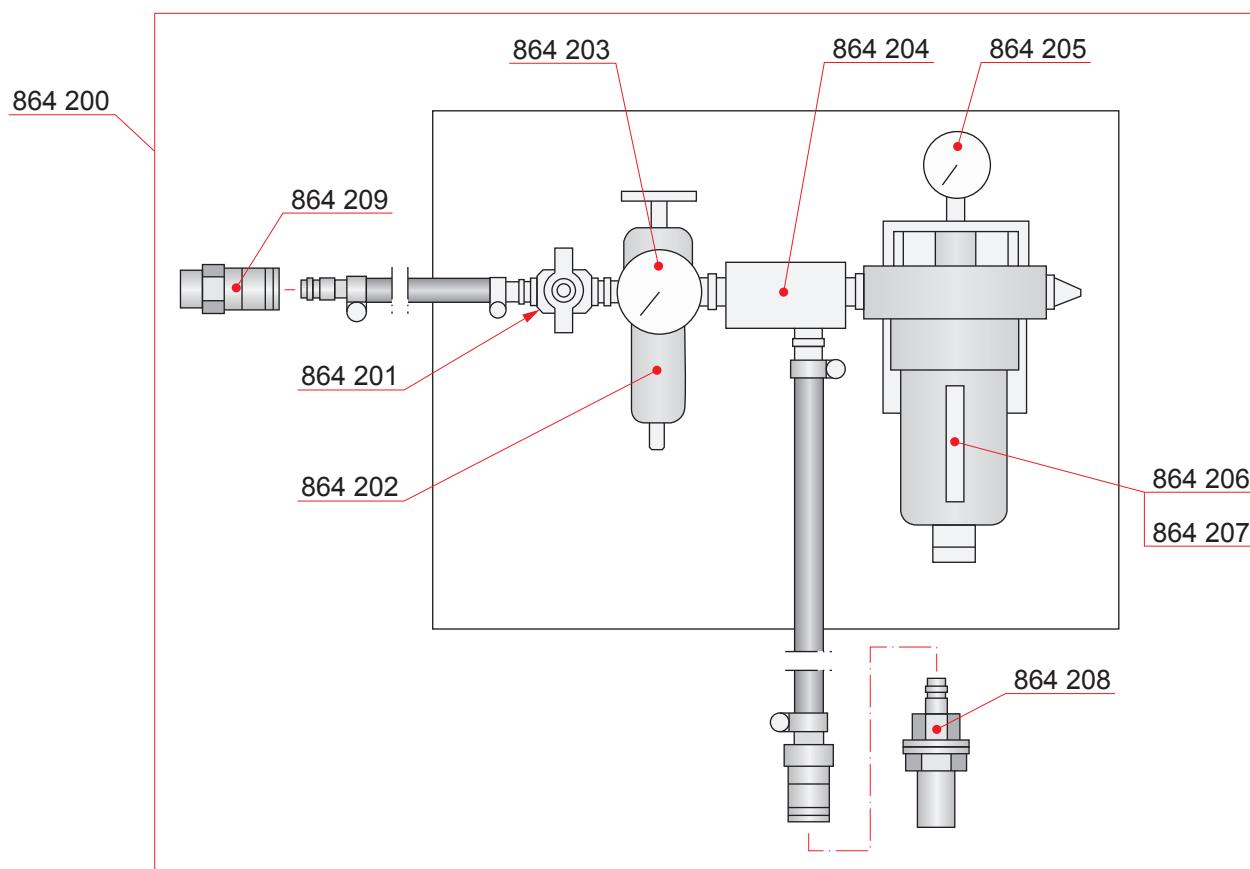
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 119	Seal kit for injection valve testing tool	1	-
864 120	O-ring (1)	1	-
864 121	O-ring (1)	1	-
864 122	O-ring (1)	1	-
864 123	O-ring (1)	1	-
864 124	Spring (1)	1	-
864 125	O-ring (1)	3	-
864 126	O-ring (1)	3	-
864 127	O-ring (1)	1	-
864 128	O-ring (1)	1	-
864 129	O-ring (1)	1	-
864 130	Support ring (1)	1	-
864 131	Back-up ring (1)	1	-
864 132	Seal (1)	1	-
864 233	Seal (1)	2	-
864 234	Ball (1)	2	-
864 235	Spring (1)	2	-
864 236	Spring (1)	2	-
864 238	O-ring (1)	1	-

NOTE! (1) Parts included in the kit not available separately!

Tools for injection equipment



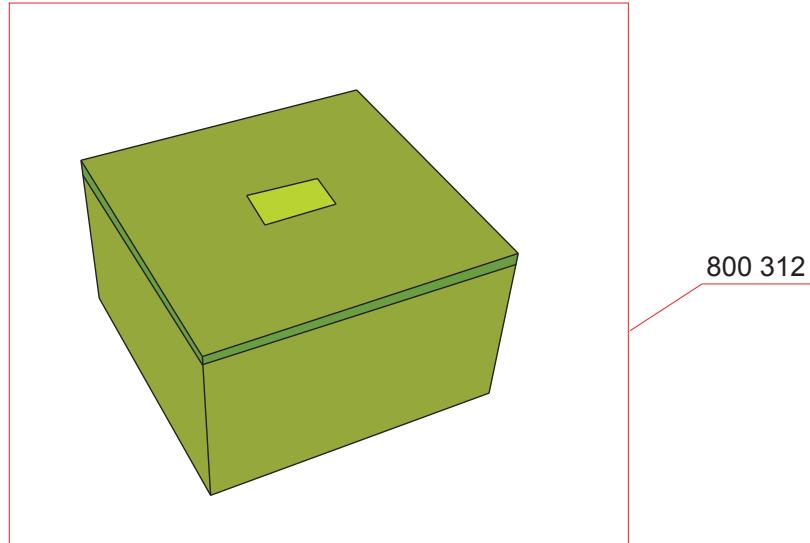
Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 200	Oil mist separator (1)	1	-
864 201	Valve	1	-
864 202	Pressure regulator	1	-
864 203	Manometer	1	-
864 204	Manifold	1	-
864 205	Manometer	1	-
864 206	Air filter	1	-
864 207	Filter element	1	-
864 208	Nipple	1	-
864 209	Quick coupling	1	-

NOTE! (1) Used with testing tool for injection valve.

NOTE! (2) Not included in testing tool for injection valve.

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Tools for turbocharger

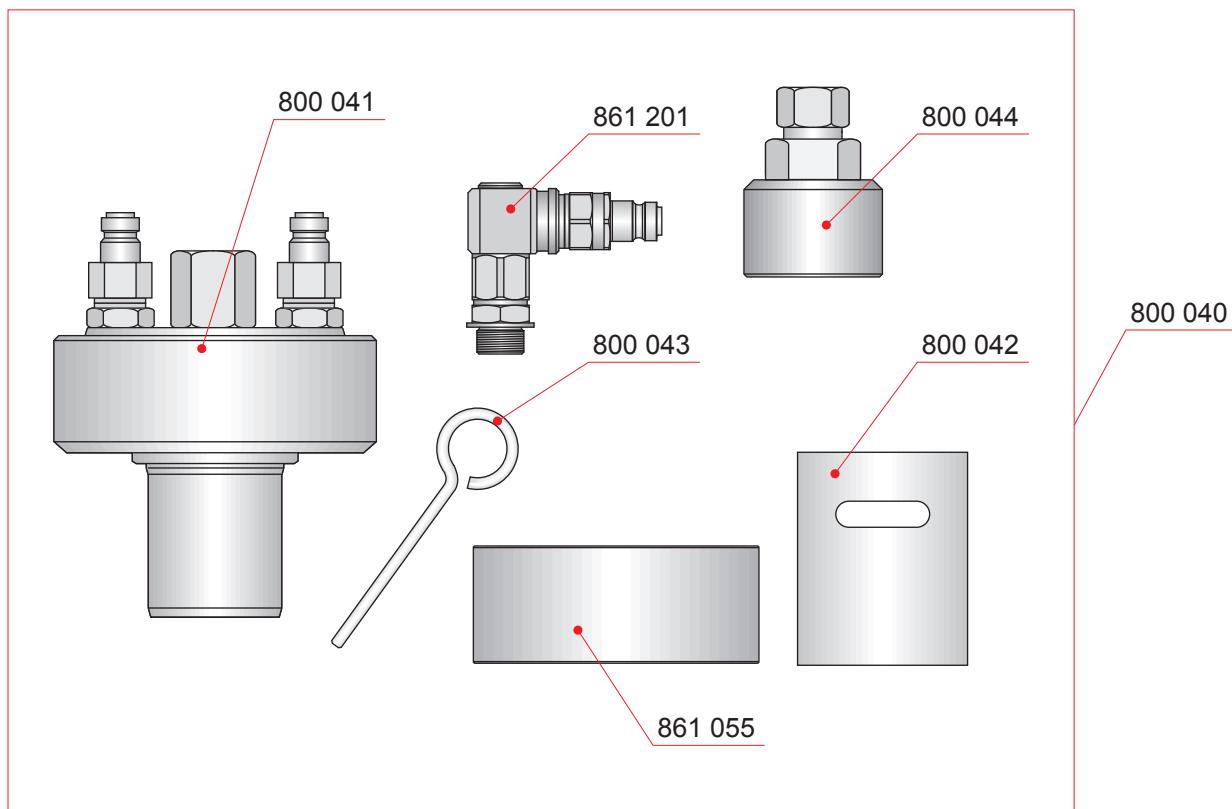


Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 312	Tools for turbocharger *)	1	-

NOTE! *) State engine number, turbocharger type and serial number/Ht number when ordering.

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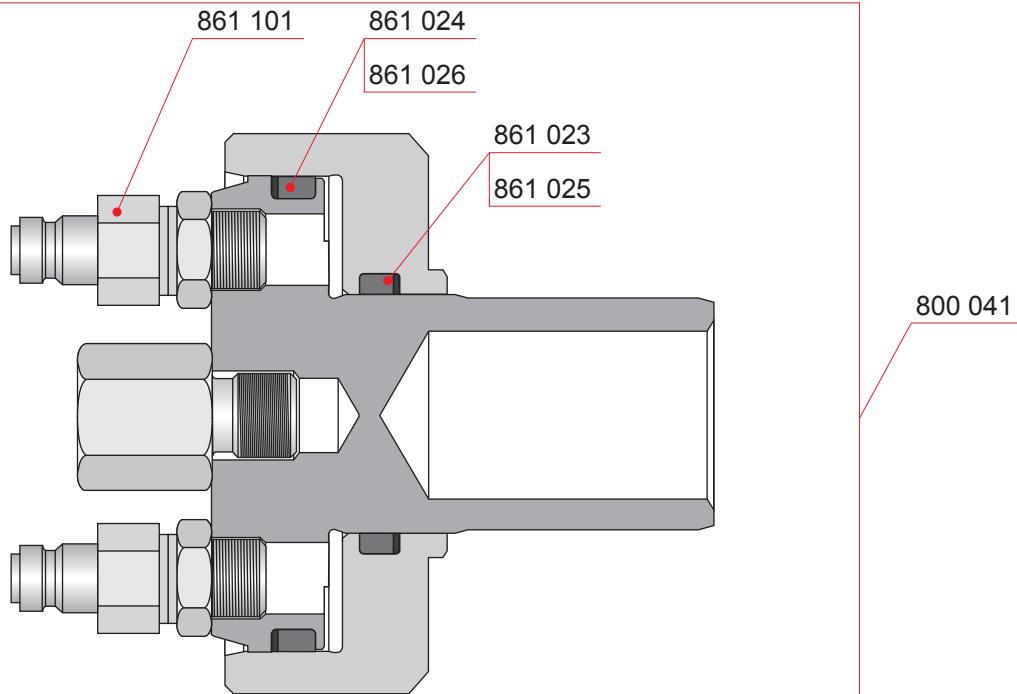
Hydraulic tool (M42)



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 040	Hydraulic tools	1	-
800 041	Hydraulic cylinder M42	2	-
800 042	Distance sleeve M42	2	-
800 043	Pin for tightening of nuts M42	1	-
800 044	Stud remover M42	1	-
861 055	Distance sleeve for big counterweight mounting	2	-
861 201	Swivel coupling	2	-

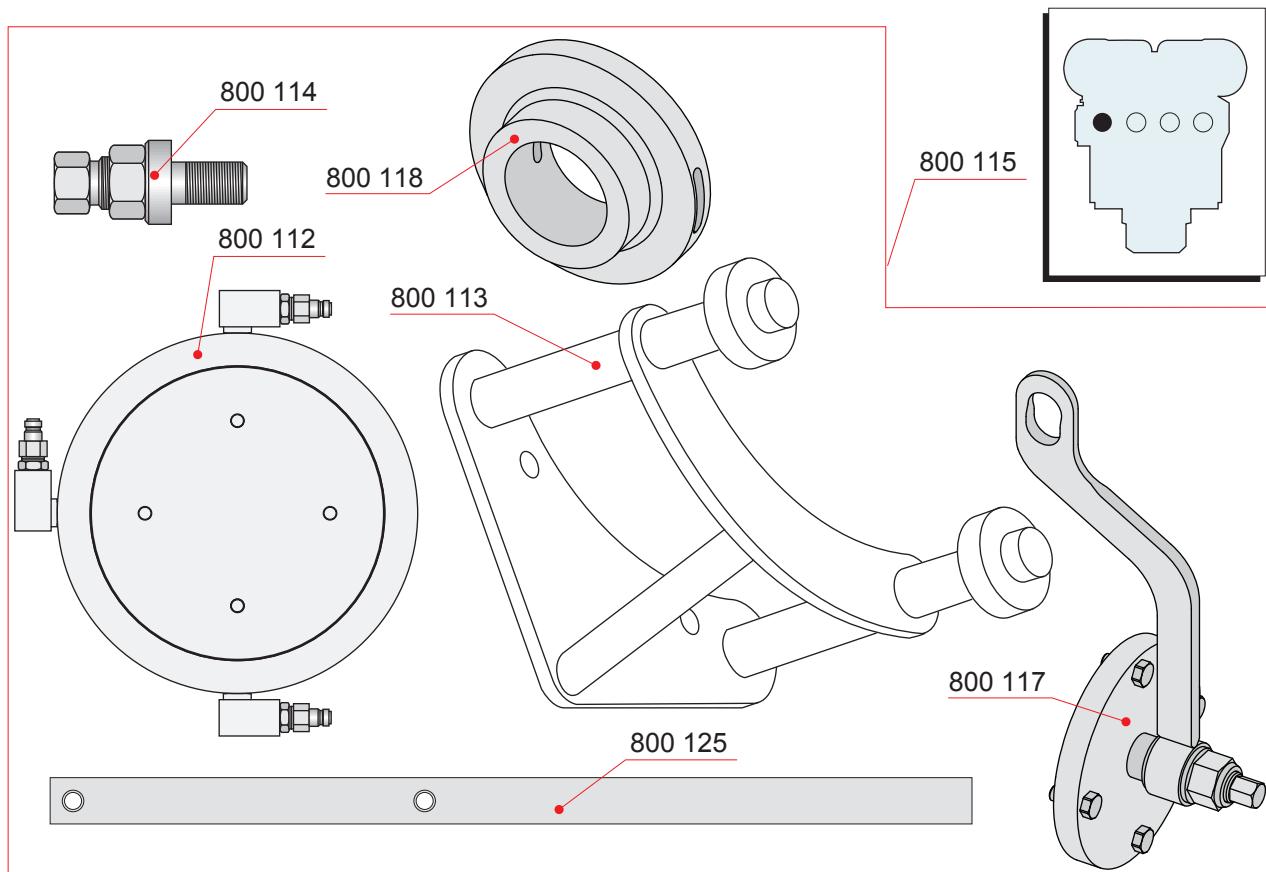
Edition: B
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Updated: 19.08.2009

Hydraulic tool (M42)



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 041	Hydraulic cylinder M42	1	-
861 023	O-ring	1	-
861 024	O-ring	1	-
861 025	Support ring	1	-
861 026	Support ring	1	-
861 101	Quick coupling, male	2	-

Hydraulic tool (M80)



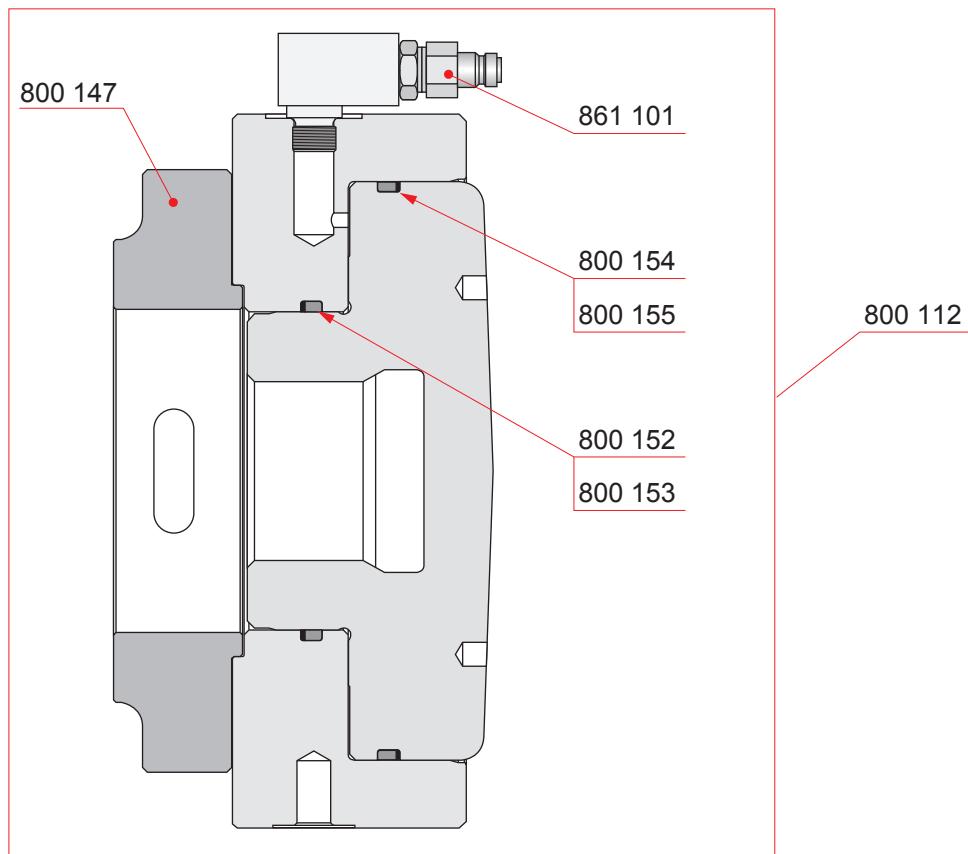
Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 115	Hydraulic tightening tool, complete	1	-
800 112	Hydraulic tool, including 800147	1	-
800 113	Support for hydraulic tool 800112	1	-
800 114	Mounting and removing tool	1	-
800 117	Lifting device for hydraulic tool	1	-
800 118	Sleeve for hydraulic tool	1	-
800 125	Fastening arm for hydraulic tool 800112	1	-

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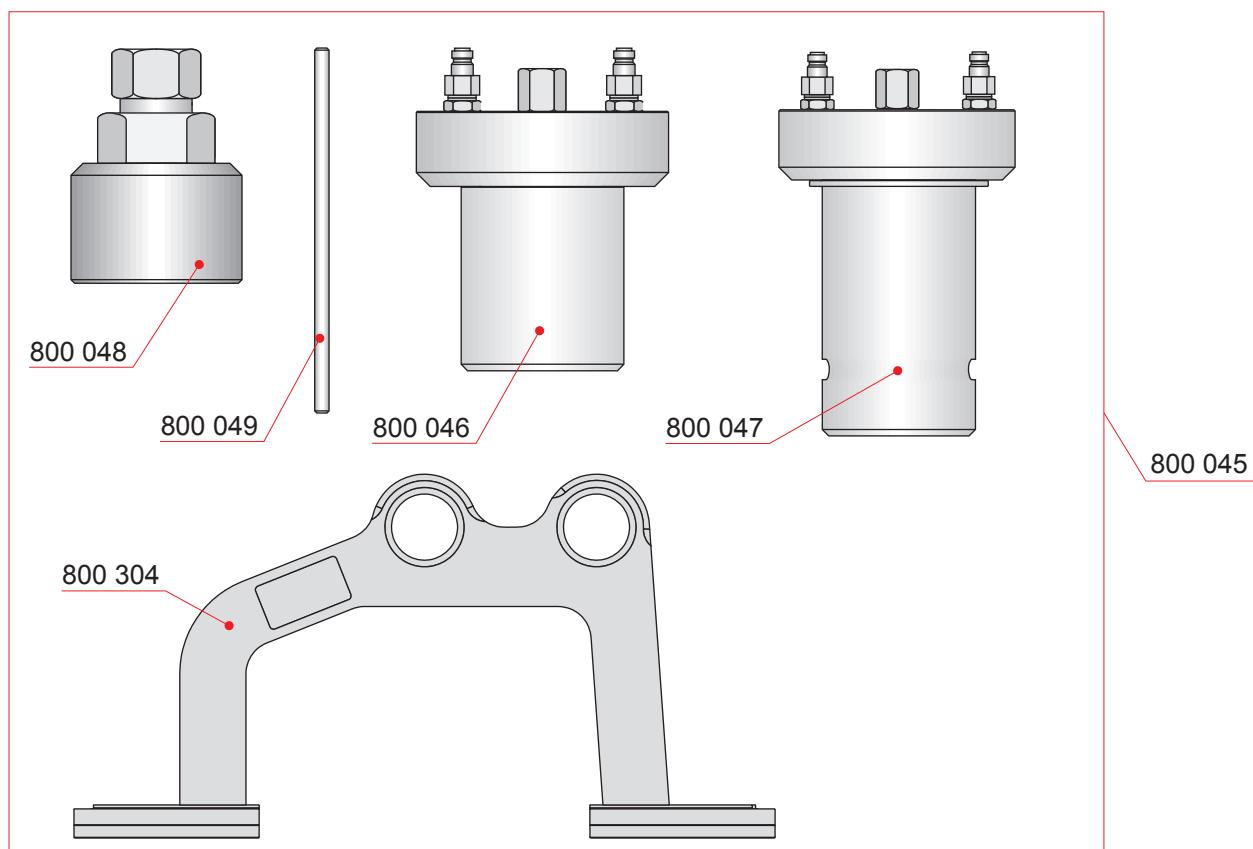
Updated: 18.08.2009

Hydraulic tool (M80)



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 112	Hydraulic tool, including 800147	1	-
800 147	Distance sleeve M80 for intermediate gears	1	-
800 152	O-ring	1	-
800 153	Support ring	1	-
800 154	O-ring	1	-
800 155	Support ring	1	-
861 101	Quick coupling, male	3	-

Hydraulic tool (M56)

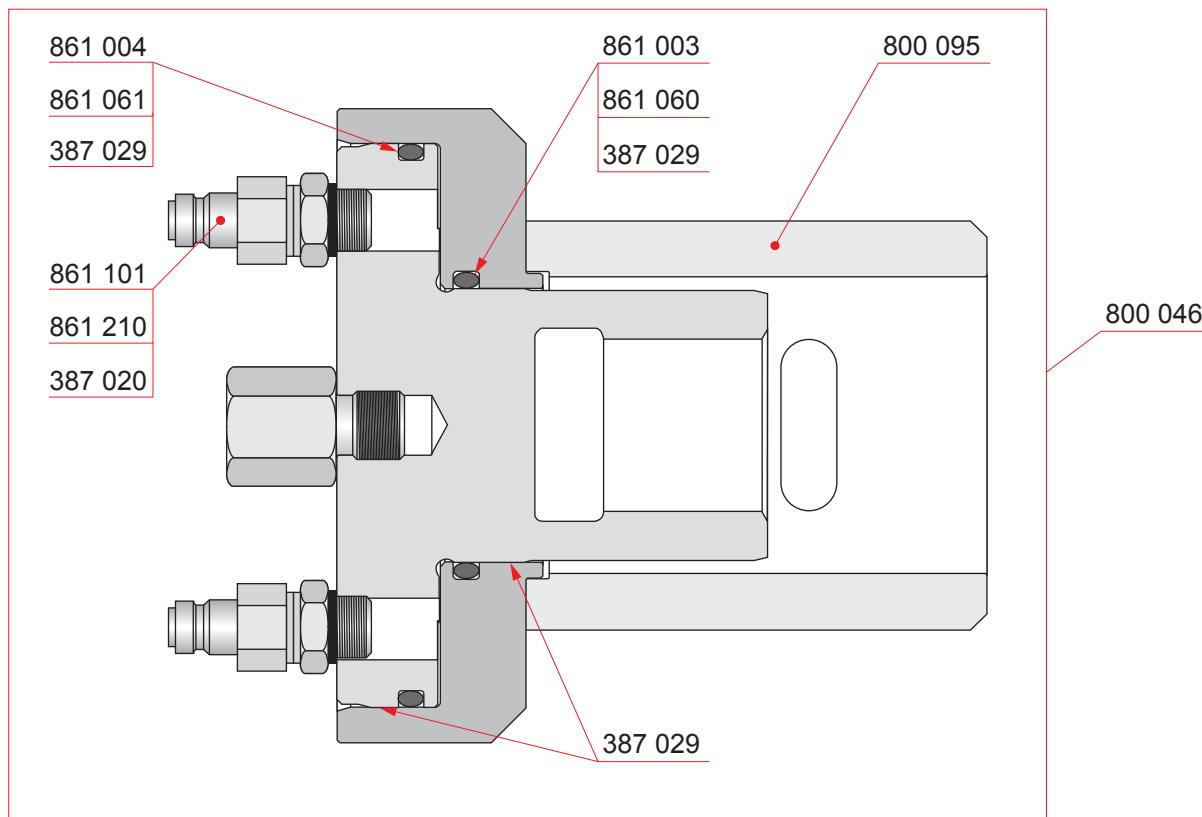


Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 045	Hydraulic tools	1	153
800 046	Hydraulic tools M56, including 800095	2	18.3
800 047	Hydraulic tools M56, including 800096	4	26.0
800 048	Stud remover M56	1	1.2
800 049	Pin for tightening of nuts M56	1	-
800 304	Lifting tool for hydraulic cylinders	1	11.5

Edition: A

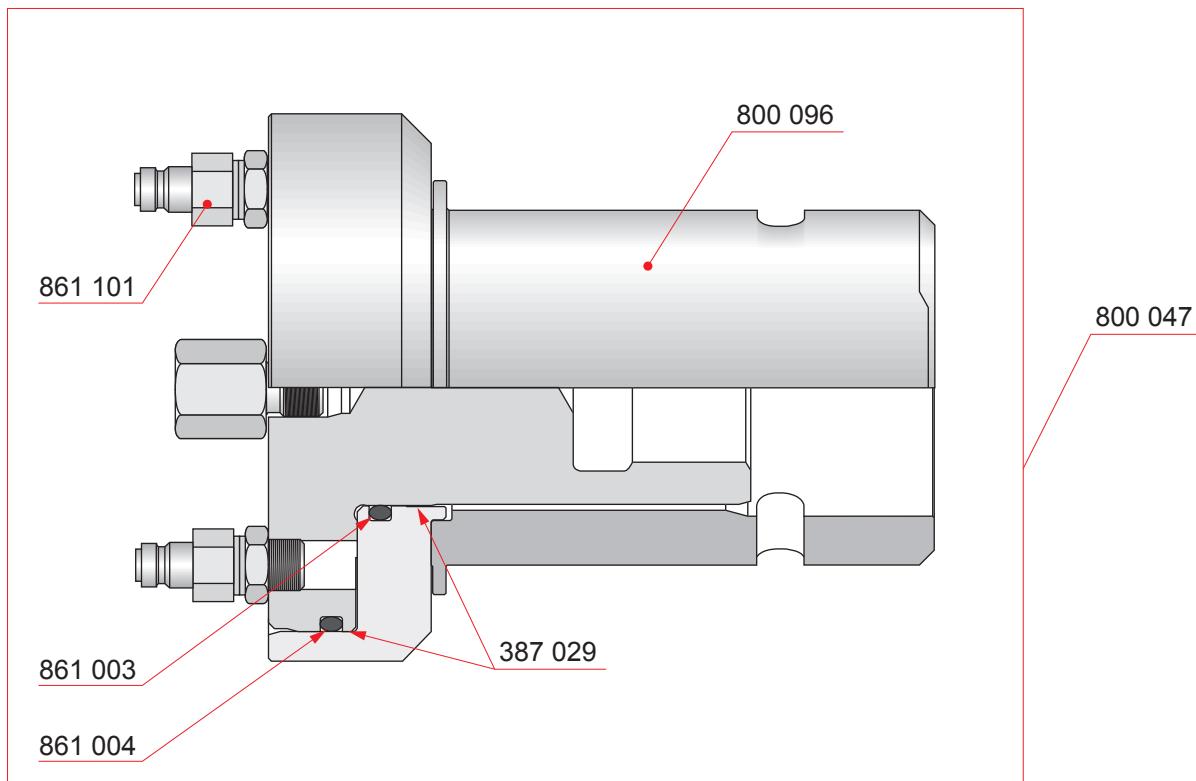
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Updated: 19.04.2012

Hydraulic tool (M56)

Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 046	Hydraulic tools M56, including 800095	2	18.3
800 095	Distance sleeve M56	1	5.4
861 003	O-ring	1	-
861 004	O-ring	1	-
861 060	Support ring	1	-
861 061	Support ring	1	-
861 101	Quick coupling, male	2	-
861 210	Sealing ring	2	-
387 020	Glue compound	1	-
387 029	Assembly compound	1	-

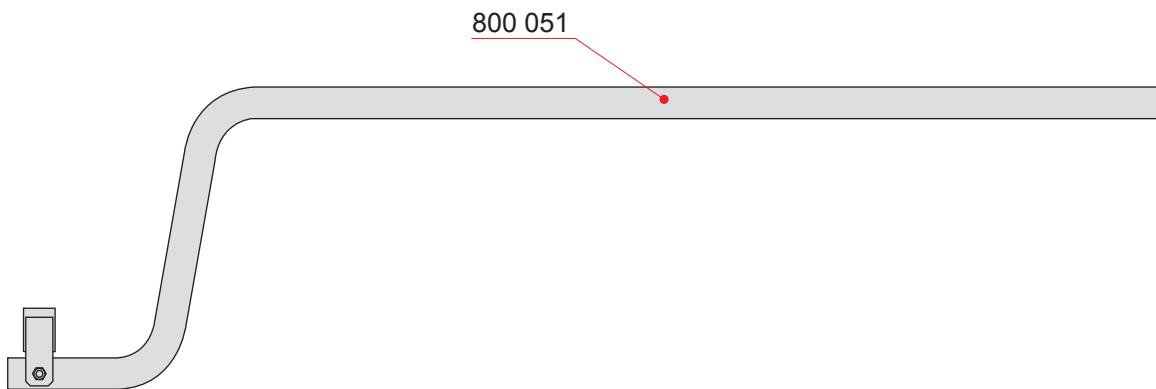
Hydraulic tool (M56)



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 047	Hydraulic tools M56, including 800096	4	26.0
800 096	Distance sleeve M56	1	3.0
861 003	O-ring	1	-
861 004	O-ring	1	-
861 101	Quick coupling, male	2	-
387 029	Assembly compound	1	-

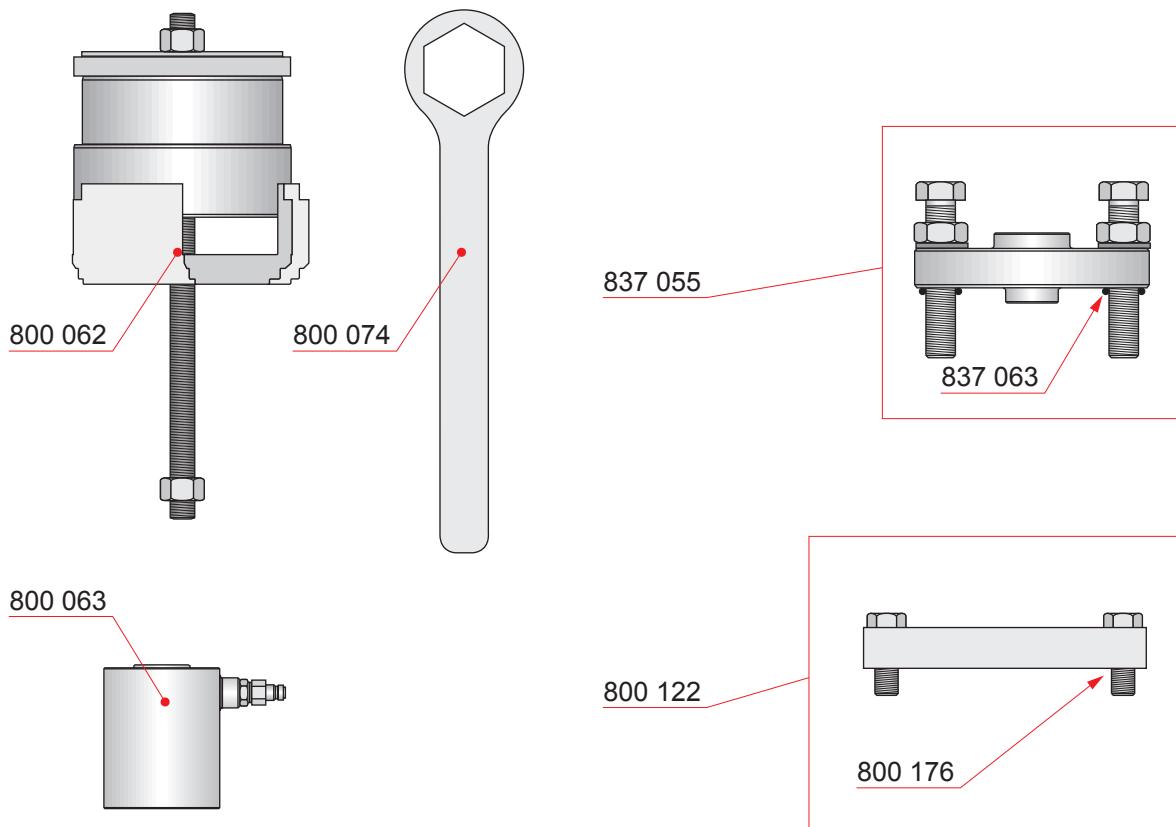
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Updated: 19.04.2012

Hydraulic tool (M56)



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 051	Lifting tool for hydraulic cylinder M56	1	-

Miscellaneous tools



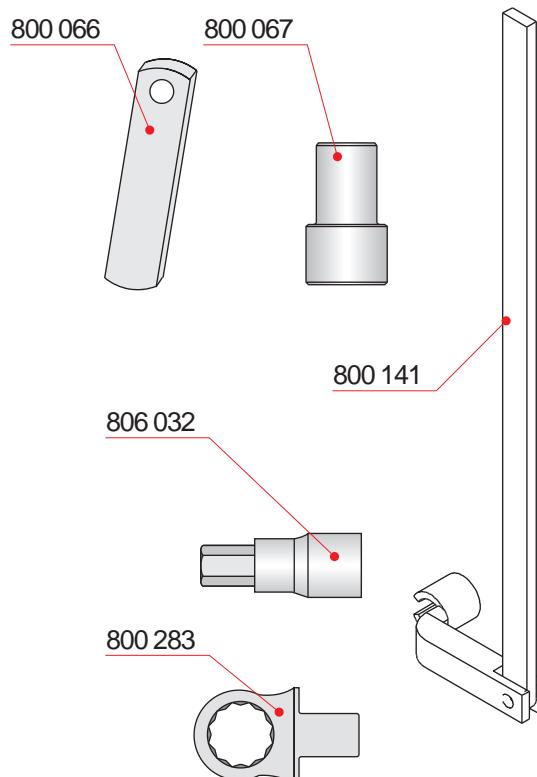
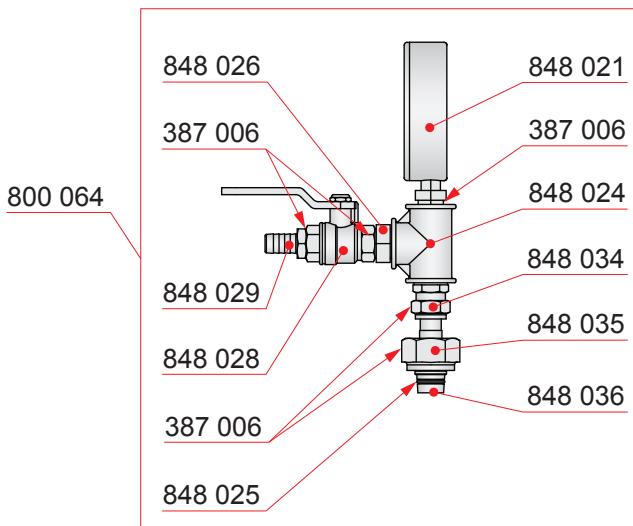
Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 062	Mounting and removing tool for camshaft bearing bu	1	24.8
800 063	Hydraulic extractor	1	11.5
800 074	Wrench for centrifugal filter	1	0.8
800 122	Extractor plate for holder of thermostatic element	1	0.4
800 176	O-ring	2	-
837 055	Extractor for impeller of water pump	1	0.9
837 063	O-ring	2	-

Edition: F

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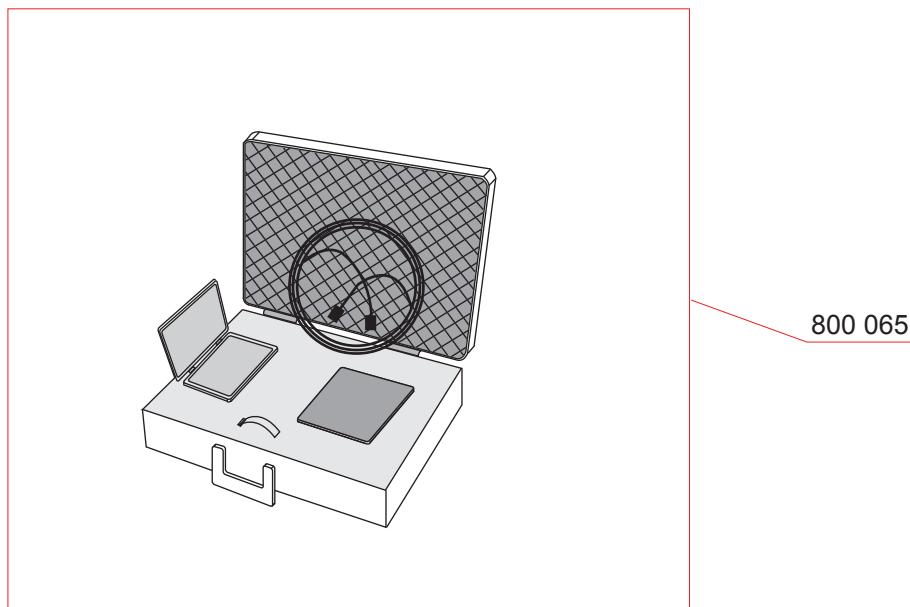
Updated: 08.11.2013

Miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 064	Checking tool for cylinder/valves tightness	1	1.2
848 021	Manometer	1	0.2
848 024	Adapter	1	-
848 025	O-ring	1	-
848 026	Pipe union	1	-
848 028	Ball valve	1	-
848 029	Hose adapter	1	-
848 034	Pipe union	1	-
848 035	Nut	1	-
848 036	Bush	1	-
800 066	Locking plate for injection pump tappet	8	0.2
800 067	Securing pin for valve tappet	16	-
800 068	Lifting eye bolt M12	1	0.2
800 069	Lifting eye bolt M16	1	0.3
800 141	Tool for cylinder liner temperatur sensor	1	0.1
800 283	Box wrench head 21 mm	1	0.1
806 032	Bit, hexagon socket screw 17 with 3/4" square driv	1	0.3

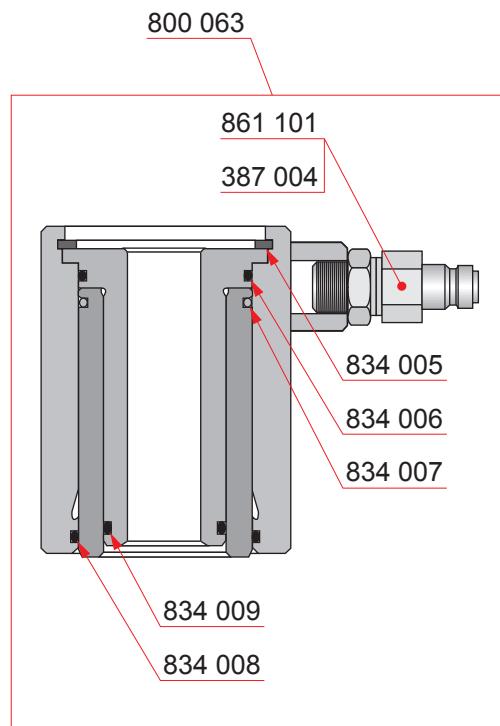
Miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 065	Deflection indicator, crankshaft. D1-4.	1	4.3

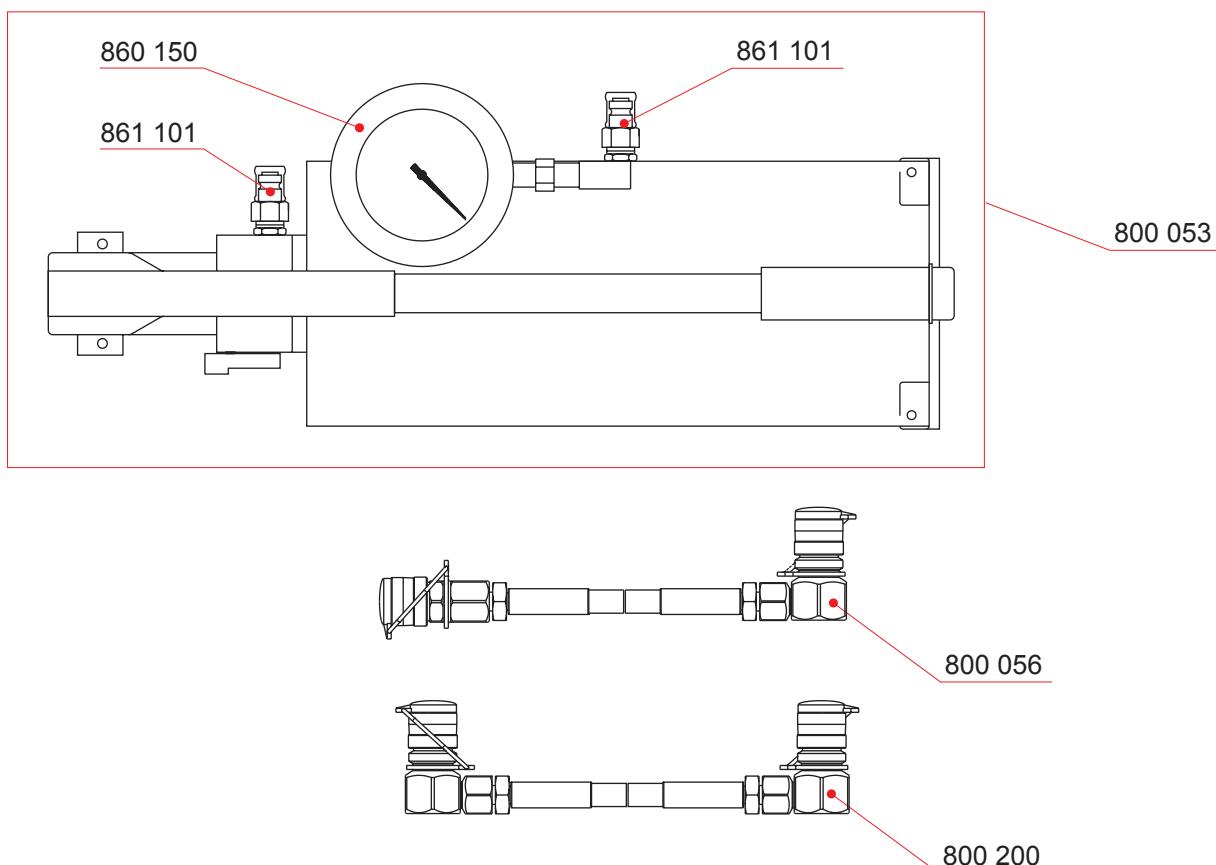
Edition: F
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Updated: 08.11.2013

Miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 063	Hydraulic extractor	1	11.5
834 005	Retaining ring	1	-
834 006	O-ring	1	-
834 007	Snap ring	1	-
834 008	O-ring	1	-
834 009	O-ring	1	-
861 101	Quick coupling, male	2	-
387 004	Glue compound	1	-

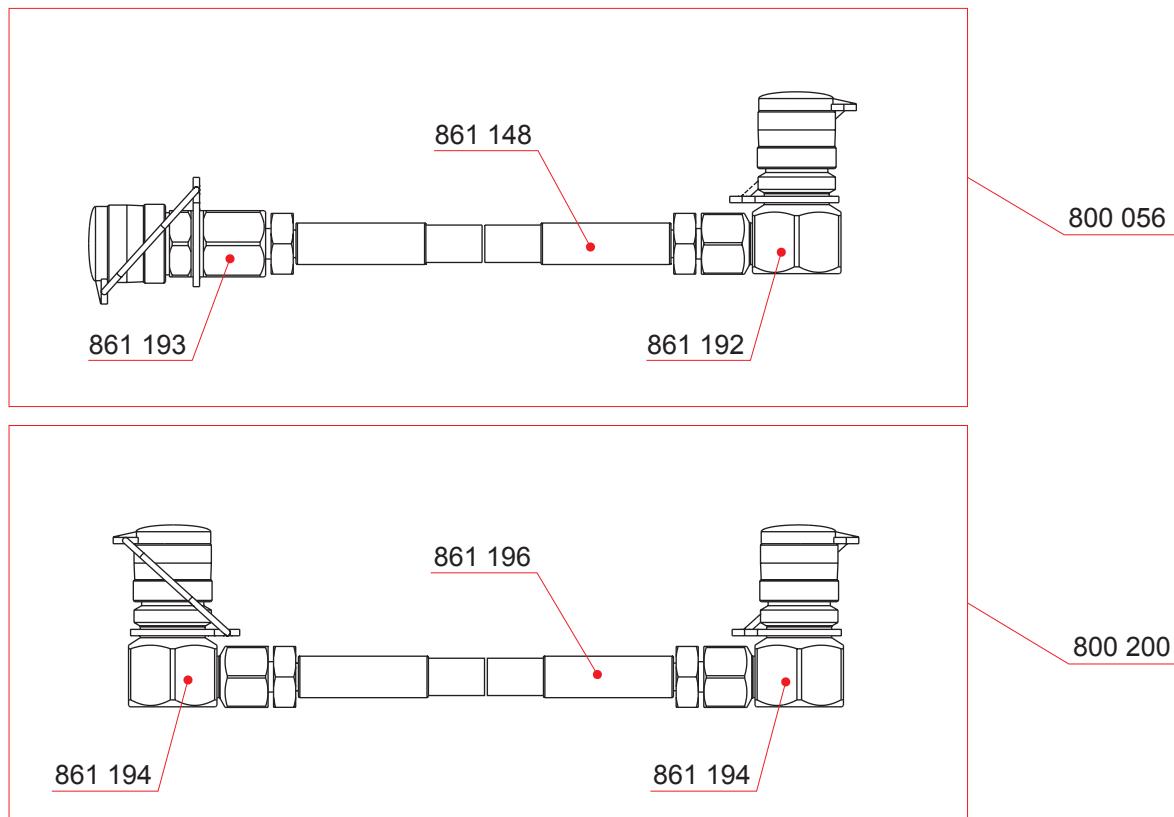
High pressure pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 053	High pressure pump (1000 bar)	1	-
800 243	Repair kit for high pressure pump	1	-
860 150	Manometer	1	-
861 101	Quick coupling, male	2	-
800 056	Flexible hose 3000 mm, including quick couplings	1	-
800 200	Flexible hose 1000 mm, including quick couplings	1	-

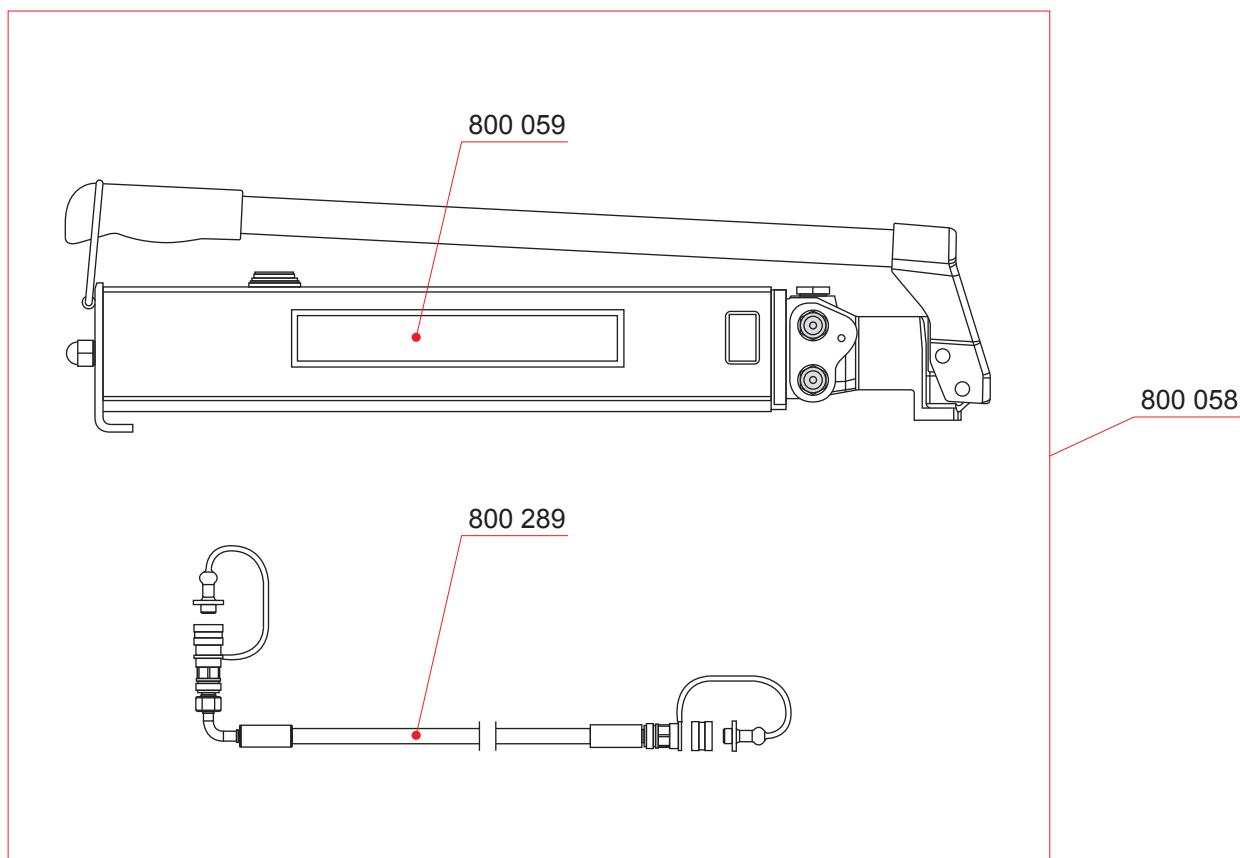
Edition: B
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Updated: 10.12.2009

High pressure pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 056	Flexible hose 3000 mm, including quick couplings	2	-
861 148	Flexible hose 3000 mm	1	-
861 192	Connection piece	1	-
861 193	Connection piece	1	-
800 200	Flexible hose 1000 mm, including quick couplings	3	-
861 194	Connection piece	2	-
861 196	Flexible hose 780 mm	1	-

Low pressure handpump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 058	Low pressure pump (150 bar)	1	-
800 059	Low pressure pump (150 bar)	1	-
800 289	Flexible hose	2	-

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