

Spare Parts Catalogue

Document ID

Date of issue

Installation

Engine type

Engine number

Project

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NEVSKY 402 - Product type W6L20

Product number: PAAE212739, PAAE212740

100 Engine block, bearings, oil sump, covers

Section	Description	Valid for Products
100-0021B	Oil sump, deep	
100-0033A	Engine foot	
100-0037D	Engine block	
100-0040C	Grounding equipment	
107-010B	Cover for cylinder head	
107-0031D	Crankcase cover with centrifugal filter	
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107-0121A	End cover	

110 Crankshaft, flywheel, connecting rod, piston

Section	Description	Valid for Products
110-0002H	Crankshaft	
110-0012A	Vibration damper	
111-0001B	Connecting rod	
113-0004A	Piston	
114-0011A	Flywheel connection	

120 Cylinder head with valves

Section	Description	Valid for Products
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120-0013A	Cylinder head equipment
120-0016A	Cylinder head, complete
120-0017A	Cylinder head, subassembly
121-0003C	Valve assembly
125-0001E	Indicator valve

130 Intermediate gears

Section	Description	Valid for Products
131-0001B	Intermediate gears for camshaft drive	

140 Valve mechanism, camshaft

Section	Description	Valid for Products
143-0002A	Rocker arms and bearing bracket	
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150 Charge air system

Section	Description	Valid for Products
156-0036B	Heat shield	
156-0044G	Turbocharger	
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160 Injection equipment, gas manifold

Section	Description	Valid for Products
165-0008C	Injection pump	
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167-0009B	Injection pipe	
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Section	Description	Valid for Products
181-0006C	Lubricating oil pump	PAAE212740

181-0008A	Lubricating oil pump	PAAE212739
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182-0012E	Prelubricating pump assembly	
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183-0009B	Thermostatic valve for lubricating oil	

190 Cooling water pumps, thermostatic valves

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200 Exhaust manifold

Section	Description	Valid for Products
200-025A	Exhaust manifold 6L20	
205-0066C	Insulation box for exhaust manifold	

210 Starting equipment

Section	Description	Valid for Products
213-0004B	Stop lever and end cover	
218-0025A	Air starter	
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220 Regulating mechanism

Section	Description	Valid for Products
220-0002B	Governor	
223-0001D	Governor drive	PAAE212739
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224-0003C	Control shaft	
224-0005B	Adjustable link rod	
228-0003B	Pneumatic overspeed trip device	
228-0005A	Piping for pneumatic overspeed trip device	

230 Speed measuring system

Section	Description	Valid for Products
231-0005A	Speed pick-ups	

340 Thermostatic valves

Section	Description	Valid for Products
349-003A	Non-return valve for pre-lubricating oil pump	

350 Manifold (fuel, lube oil, cooling water, starting air etc.)

Section	Description	Valid for Products
350-0001F	Pulse damper for fuel oil	
350-0032E	Fuel pipes	
352-0024C	Suction pipe for oil pump	
352-0025C	Lube oil pipes for centrifugal filter	
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352-0087A	Lubricating oil pipes, flywheel end	PAAE212740
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352-0109B	Lubricating oil pipes at free end	
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356-0004B	Pipes for pressure sensors	
357-0004C	Air supply pipe for air tank	
358-0004C	Leak oil pipe, dirty, flywheel end	
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370 Cleaning device, crankcase ventilation

Section	Description	Valid for Products
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372-022E	Washing device for turbine with flowmeter	
372-0038A	Cleaning device piping for turbine	
387-0001N	Chemicals	

470 Filters, coolers

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471-0029B	Lube oil module	
473-0005A	Centrifugal filter	
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500 Transducers, instrument panel, thermometers

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810-0002C	Tools for main bearings
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811-0002C	Tools for connecting rod
811-0003A	Optional tools for piston
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837-0001B	Tools for turbocharger
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884-0005A	Miscellaneous tools
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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

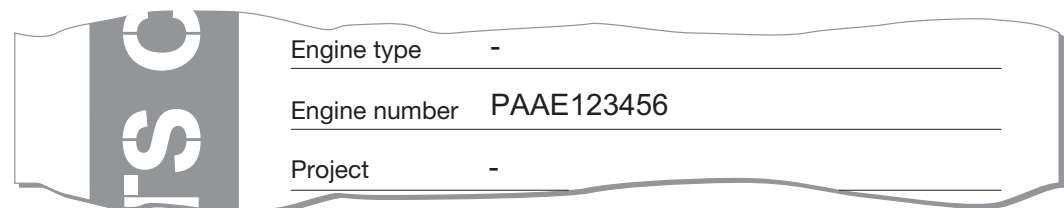
When ordering spare parts, include the following information in the order:

- 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.



Engine type	-
Engine number	PAAE123456
Project	-

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.

WÄRTSILÄ 32 Spare Parts List 167-0022
Edition: A
Page: 114
Updated: 28.10.2011

Injection valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]	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	-				

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.
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	-	

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.

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

Fig 3-1 Spare parts slip

Serial number

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

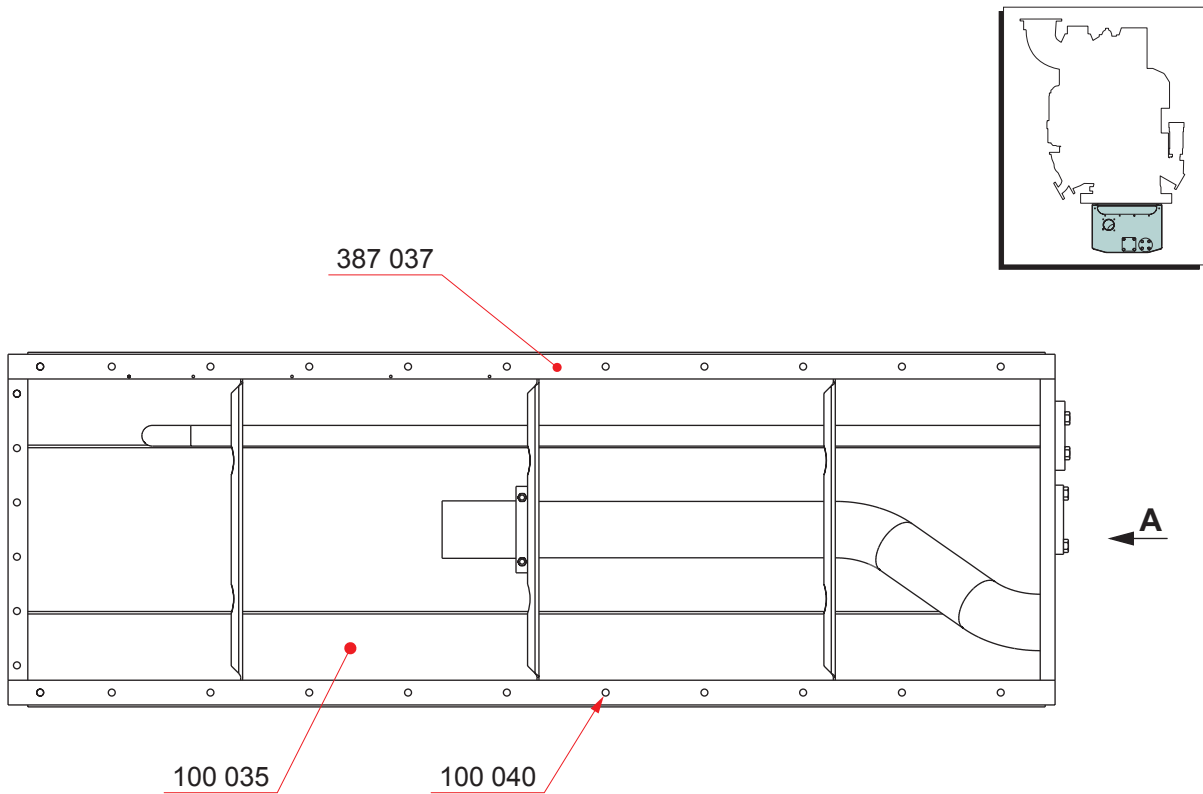
Spare part number

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.

Oil sump, deep

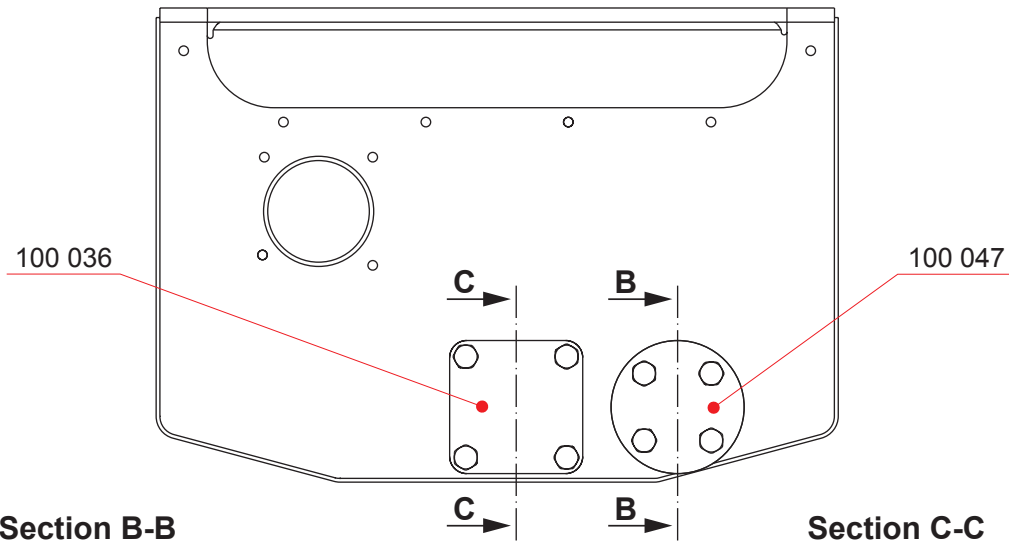


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 035	Oil sump	1	-
100 040	Screw	22	-
387 037	Glue compound	1	-

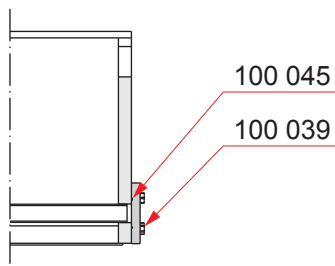
Edition: B
 Page: 2(2)
 Updated: 02.11.2009

Oil sump, deep

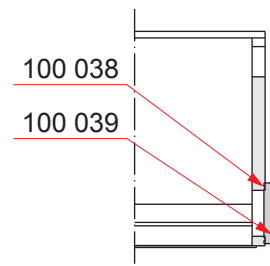
View A



Section B-B

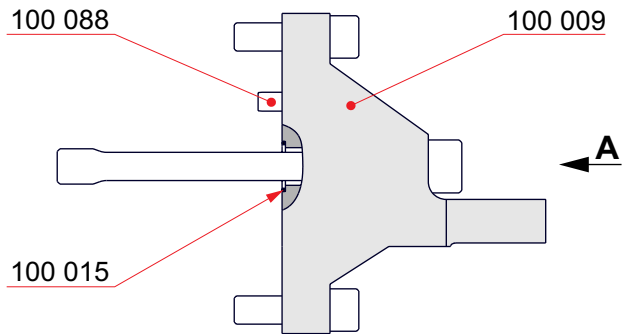
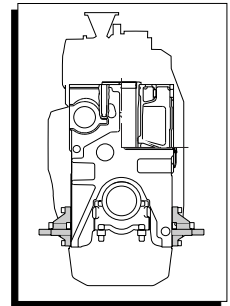
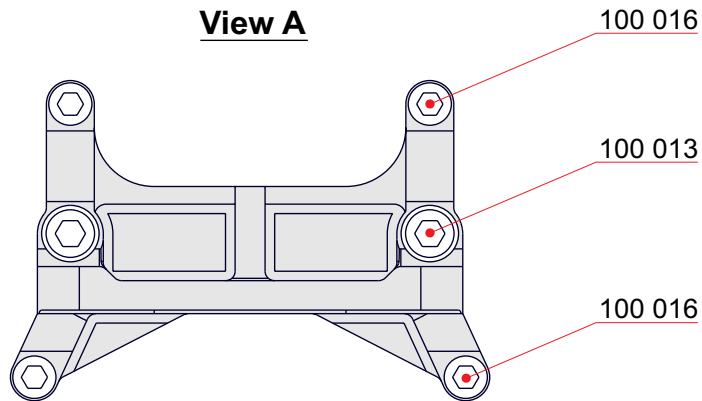


Section C-C



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 036	Flange	1	2.9
100 038	O-ring	1	-
100 039	Screw	8	-
100 045	O-ring	1	-
100 047	Flange	1	2.2

Engine foot



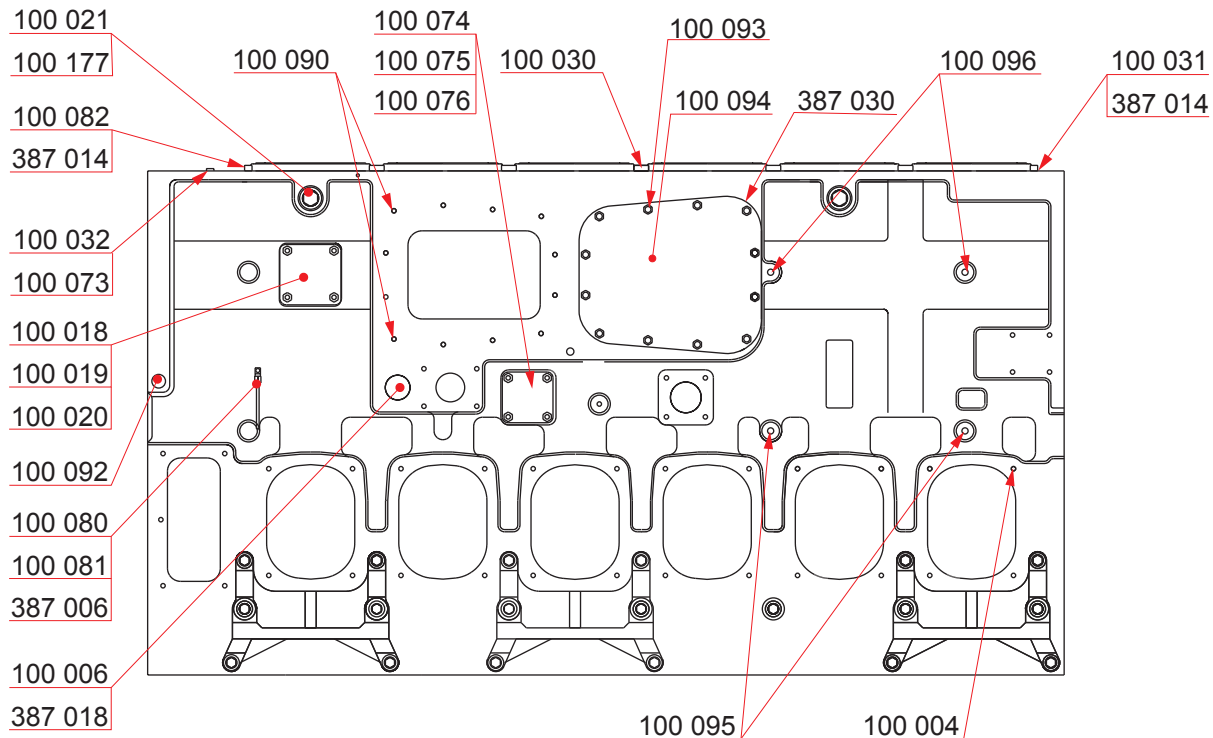
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 009	Engine foot	1	28.7
100 013	Side screw, long	2	1.5
100 015	O-ring	2	-
100 016	Screw	4	0.4
100 088	Pin	2	-

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Edition: D
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Updated: 10.05.2011

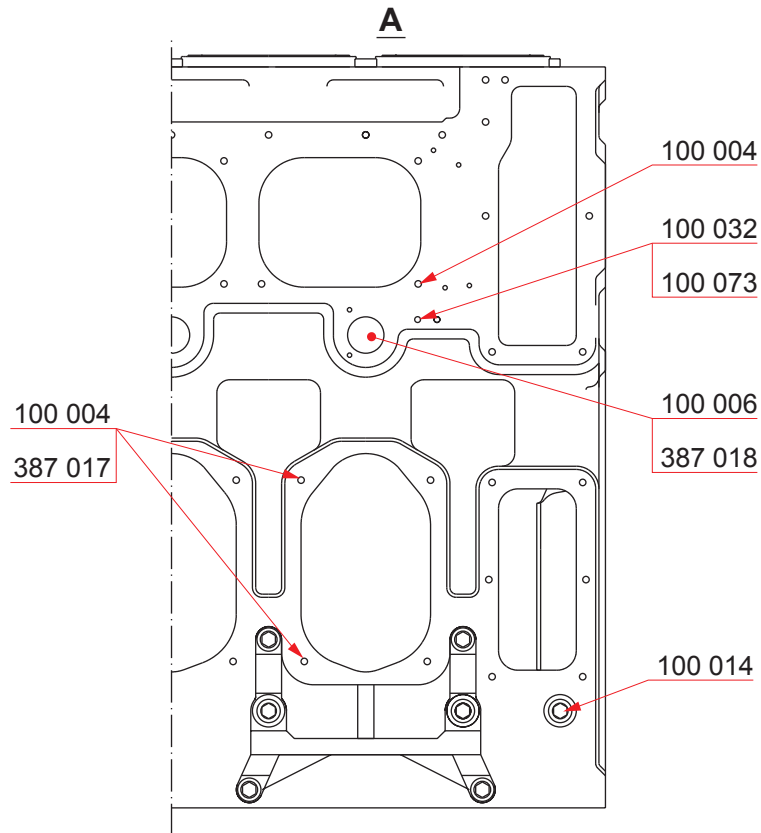
Engine block

B



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 004	Screw	*	-	387 014	Glue compound	1	-
100 006	Sealing push-in cap	*	-	387 018	Glue compound	1	-
100 018	Cover for air receiver	*	1.2	387 030	Glue compound	1	-
100 019	Gasket	*	-	100 177	Sealing ring	*	-
100 020	Screw	*	-				
100 021	Plug	*	0.4	NOTE!	(#) Not used if VIC is installed		
100 030	Sealing piece	*	-	NOTE!	*) See page 5		
100 031	Sealing piece	1	-				
100 032	Plug (#)	3	-				
100 073	Sealing ring (#)	3	-				
100 074	Flange	1	1.4				
100 075	Gasket	1	-				
100 076	Screw	4	-				
100 080	Pipe union	1	-				
100 081	Pipe	1	-				
100 082	Sealing piece	1	-				
100 090	Screw	*	-				
100 092	Plug	1	0.2				
100 093	Screw	12	-				
100 094	Blind flange	1	4.2				
100 095	Screw	2	0.2				
100 096	Screw	2	0.2				
387 006	Glue compound	1	-				

Engine block



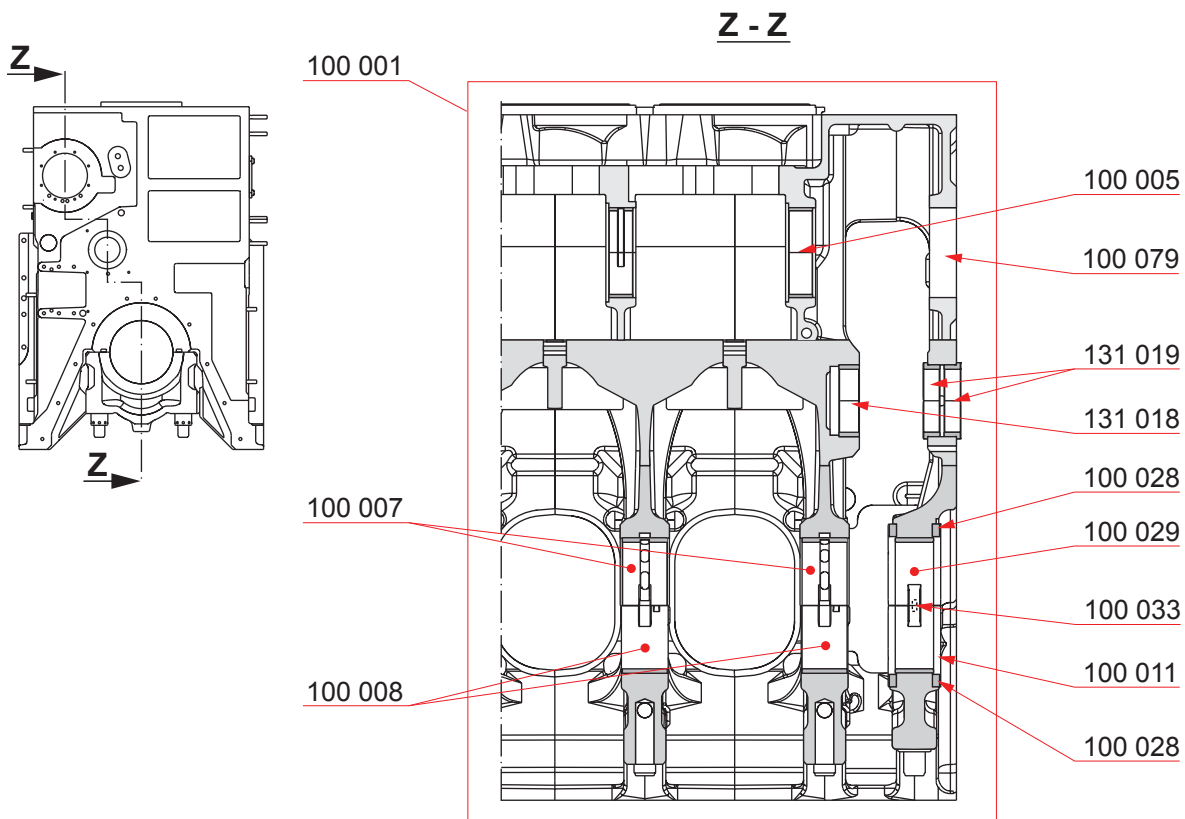
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 004	Screw	*	-
100 006	Sealing push-in cap	*	-
100 014	Side screw, short	*	1.1
100 032	Plug	2	-
100 073	Sealing ring	2	-
387 017	Glue compound	1	-
387 018	Glue compound	1	-

NOTE! *) See page 5

Edition: D

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Updated: 10.05.2011

Engine block

Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 001	Engine block	1	-
100 005	Camshaft bearing bush	*	-
100 007	Main bearing shell, upper	*	-
100 008	Main bearing shell, lower	*	-
100 011	Pin	4	-
100 028	Thrust bearing	4	-
100 029	Flywheel bearing shell	2	-
100 033	Pin	1	-
100 079	Camshaft bearing bush	1	-
131 018	Bearing bush	1	-
131 019	Bearing bush	2	-

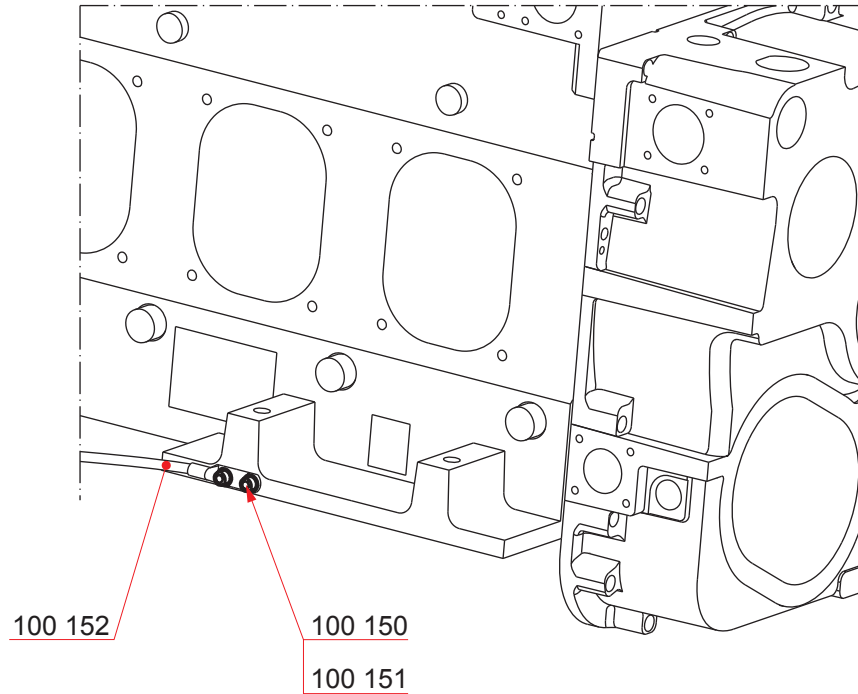
NOTE! *) See page 5

Engine block

Part No. and Description	Quantity in pieces		
	6L	8L	9L
100 002 Cylinder liner	6	8	9
100 003 Anti-polishing ring	6	8	9
100 004 Screw	72	95	107
100 005 Camshaft bearing bush	6	8	9
100 006 Sealing push-in cap	7	9	10
100 007 Main bearing shell, upper	7	9	10
100 008 Main bearing shell, lower	7	9	10
100 009 Engine foot	4	4	6
100 010 Round nut	40	52	58
100 013 Side screw, long	8	8	12
100 014 Side screw, short	7	11	9
100 015 O-ring	8	8	12
100 016 Screw	16	16	24
100 017 Main bearing screw	16	20	22
100 018 Cover for air receiver	1	2	2
100 019 Gasket	1	2	2
100 020 Screw	4	8	8
100 021 Plug	2	3	3
100 022 Plug	2	3	3
100 023 Sealing ring	12	16	18
100 024 Cylinder head screw	24	32	36
100 025 O-ring	24	32	36
100 027 Cap	24	32	36
100 030 Sealing piece	5	7	8
100 088 Pin	8	8	12
100 090 Screw	2	6	6
100 132 Shim ring	6	8	9
100 177 Sealing ring	2	3	3

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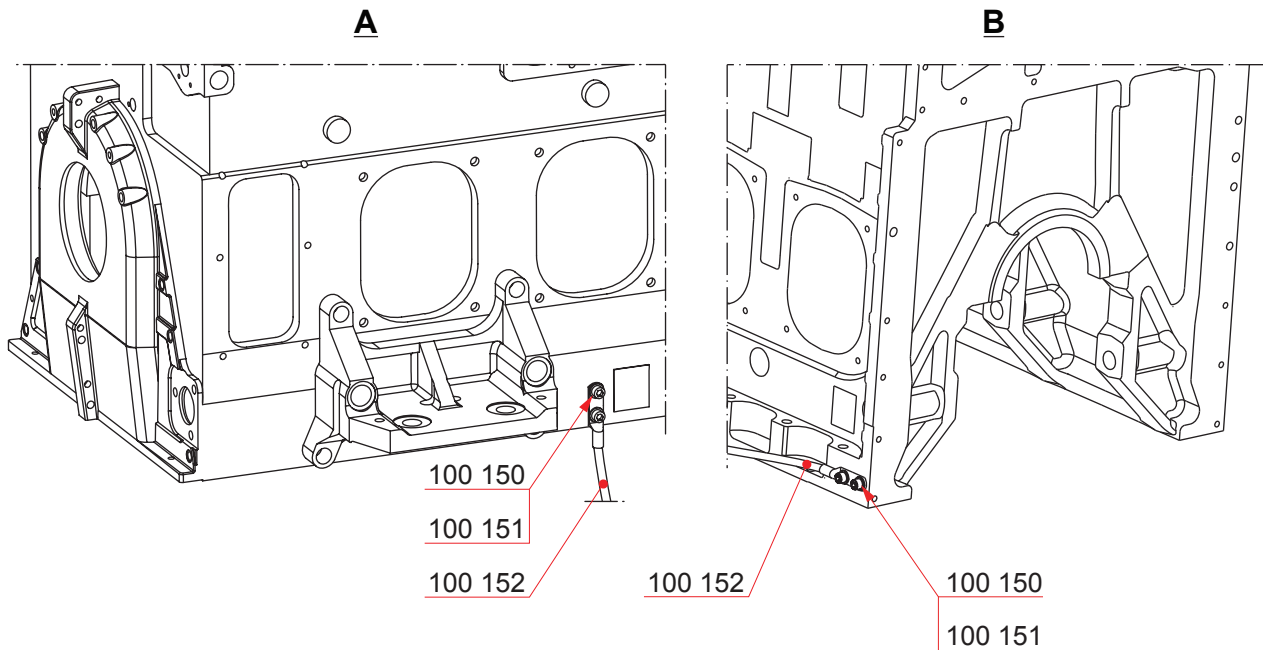
Grounding equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 150	Screw	2	-
100 151	Washer	2	-
100 152	Cable set	1	0.7

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 Updated: 27.09.2010

Grounding equipment

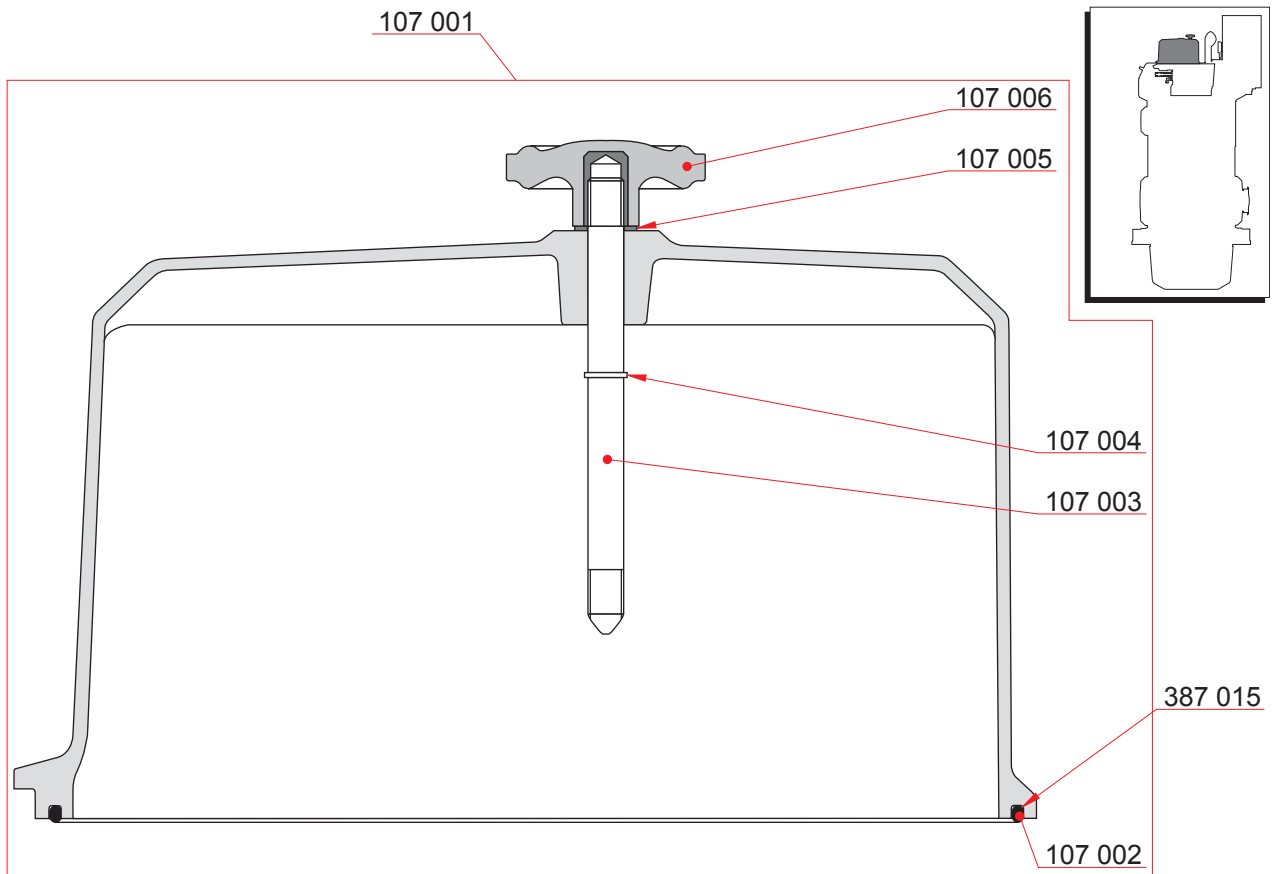


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 150	Screw	2	-
100 151	Washer	2	-
100 152	Cable set	1	0.7

NOTE! A: Flexibly mounted engines

NOTE! B: Auxpac phase 2 engines (D2)

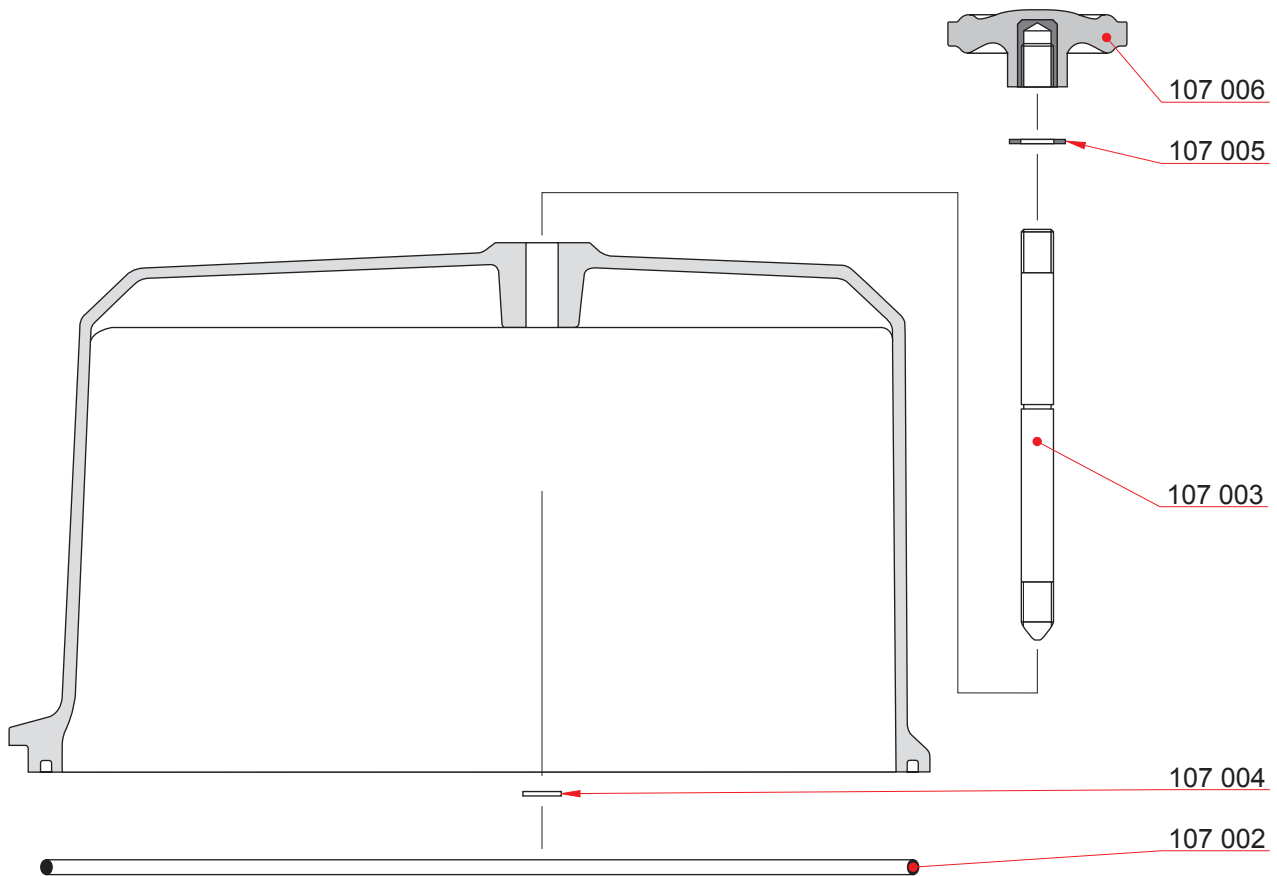
Cover for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 001	Cover for cyl. head	1	3.6
107 002	Hose gasket for cylinder head cover	1	-
107 003	Screw	1	0.1
107 004	Retainer ring	1	-
107 005	Sealing washer	1	-
107 006	Hand wheel	1	-
387 015	Glue compound	1	-

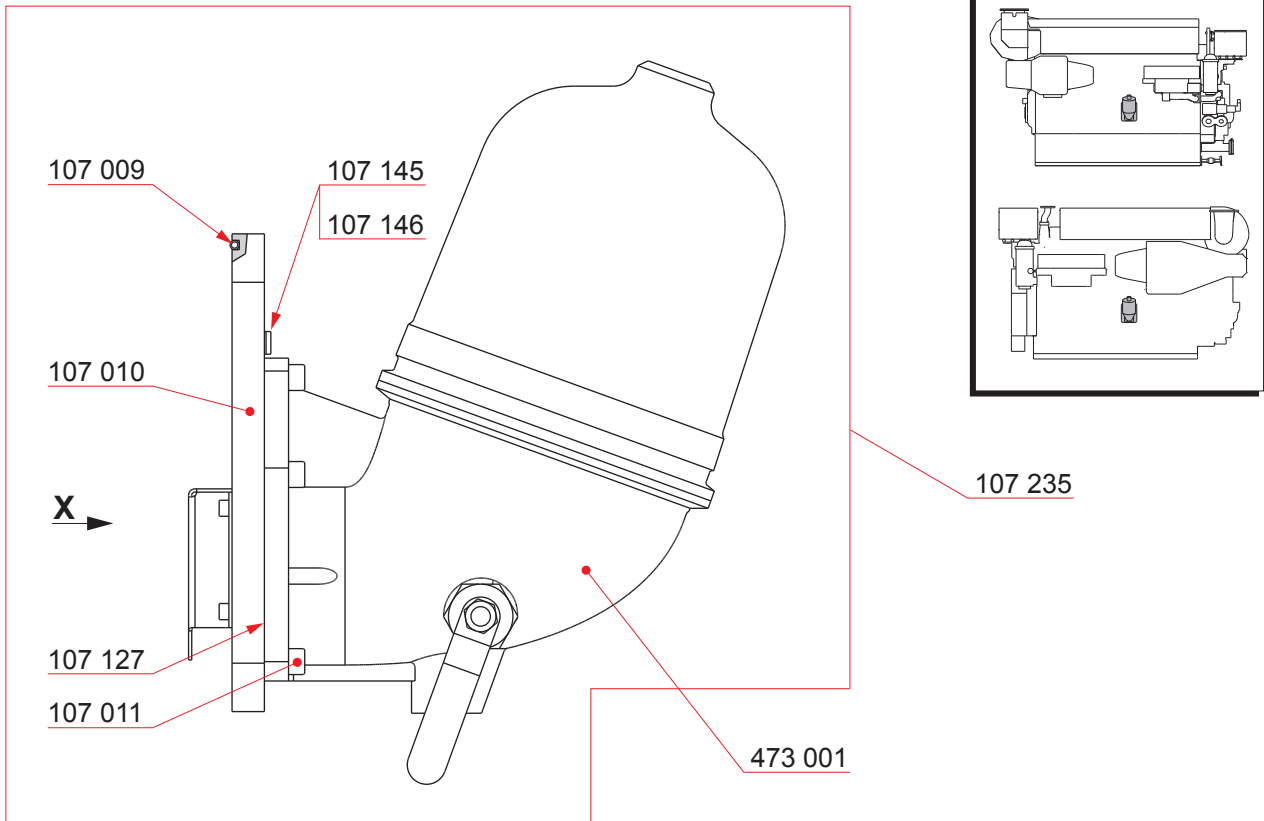
Edition: B
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 Updated: 30.04.1996

Cover for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 002	Hose gasket for cylinder head cover	1	-
107 003	Screw	1	0.1
107 004	Retainer ring	1	-
107 005	Sealing washer	1	-
107 006	Hand wheel	1	-

Crankcase cover with centrifugal filter



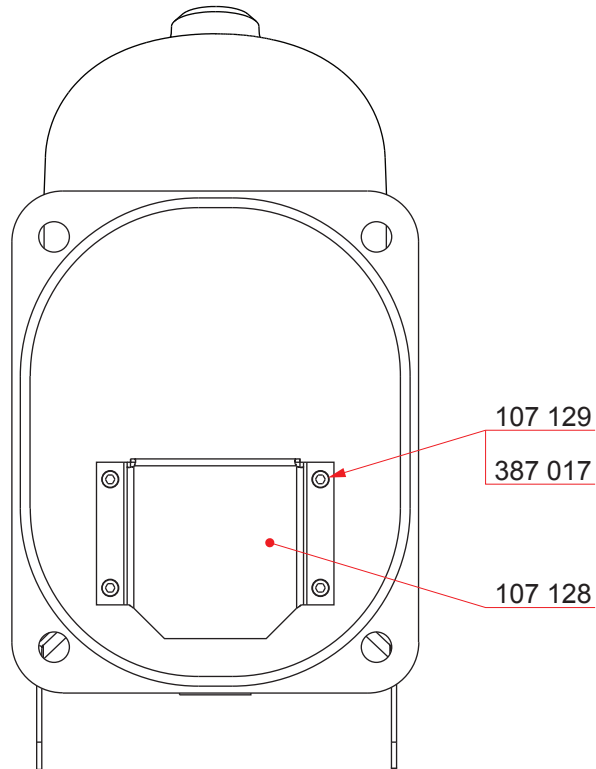
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 235	Crankcase cover compl., without centrifugal filter	1	-
107 009	Hose gasket	1	-
107 010	Crankcase cover	1	-
107 011	Screw	6	-
107 127	O-ring	1	-
107 145	Plug	1	-
107 146	Sealing ring	1	-
473 001	Centrifugal filter (1)	1	-

NOTE! (1) see section 473-

Edition: D

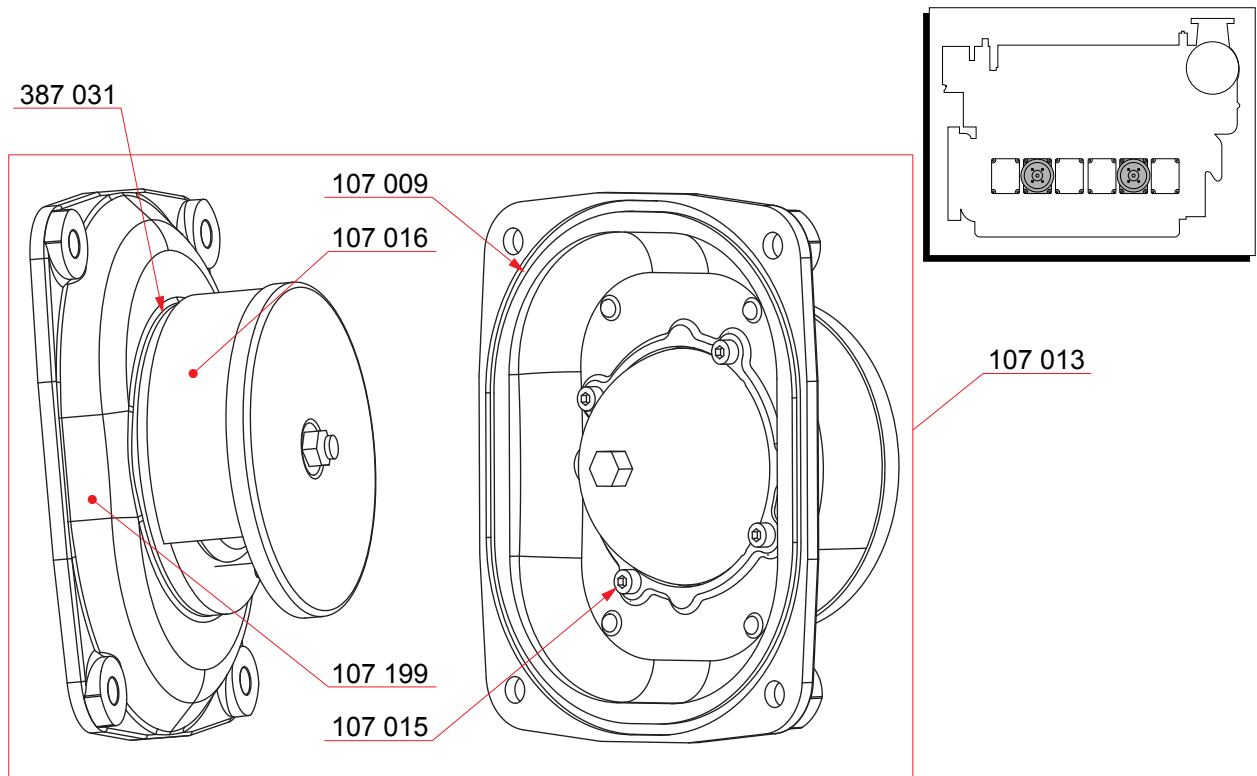
Page: 2(2)

Updated: 22.11.2010

Crankcase cover with centrifugal filter**X**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 128	Protecting cover	1	-
107 129	Screw	4	-
387 017	Glue compound	1	-

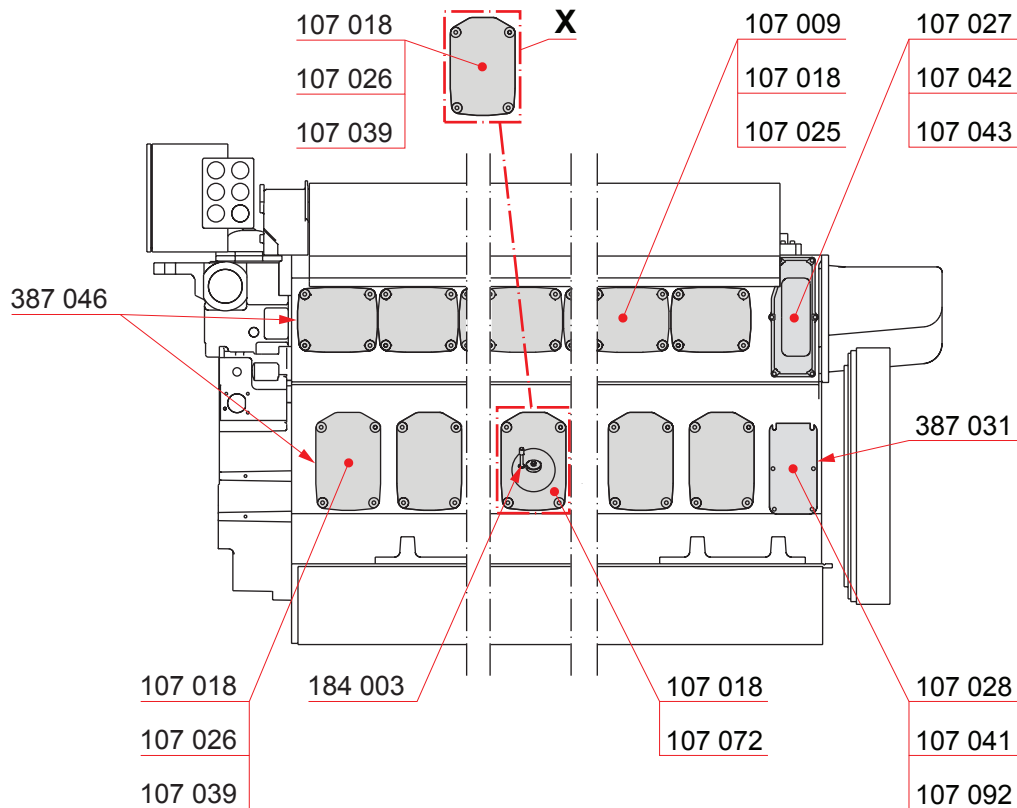
Crankcase cover with relief valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 013	Crankcase cover with relief valve	1	-
107 009	Hose gasket	1	-
107 015	Screw	4	-
107 016	Relief valve	1	2.4
107 199	Crankcase cover	1	1.5
387 031	Glue compound	1	-

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Covers



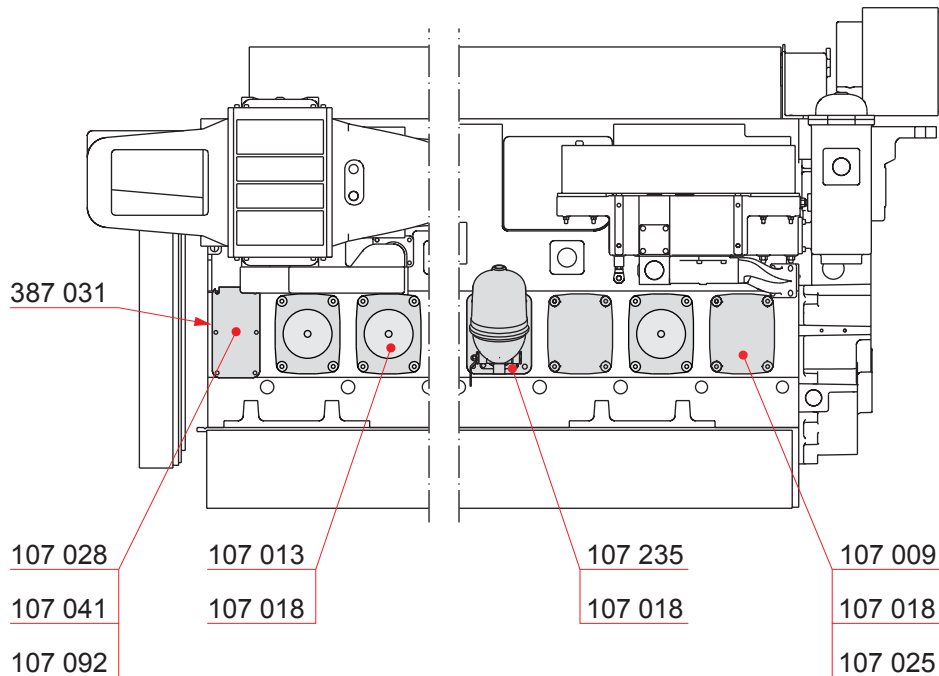
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 009	Hose gasket	*	-
107 018	Nut	*	-
107 025	Cover	*	1.6
107 026	Crankcase cover	*	1.9
107 027	Cover for camshaft gear	1	2.0
107 028	Cover	2	1.5
107 039	Hose gasket for lower side cover	*	-
107 041	Screw	12	-
107 042	Hose gasket for camshaft gear cover	1	-
107 043	Screw	6	-
107 072	Crankcase cover with oil filling opening	*	-
107 092	Washer	4	-
184 003	Oil dipstick	*	-
387 031	Glue compound	1	-
387 046	Glue compound	1	-

NOTE! *) See page 3.

NOTE! X) If dry sump.

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Covers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 009	Hose gasket	*	-
107 013	Crankcase cover with relief valve	*	4.0
107 018	Nut	*	-
107 025	Cover	*	1.6
107 028	Cover	2	1.5
107 041	Screw	12	-
107 092	Washer	4	-
107 235	Crankcase cover compl., without centrifugal filter (1)	1	20.0
387 031	Glue compound	1	-

NOTE! (1) The placement of covers depends on installation.

NOTE! *) See page 3.

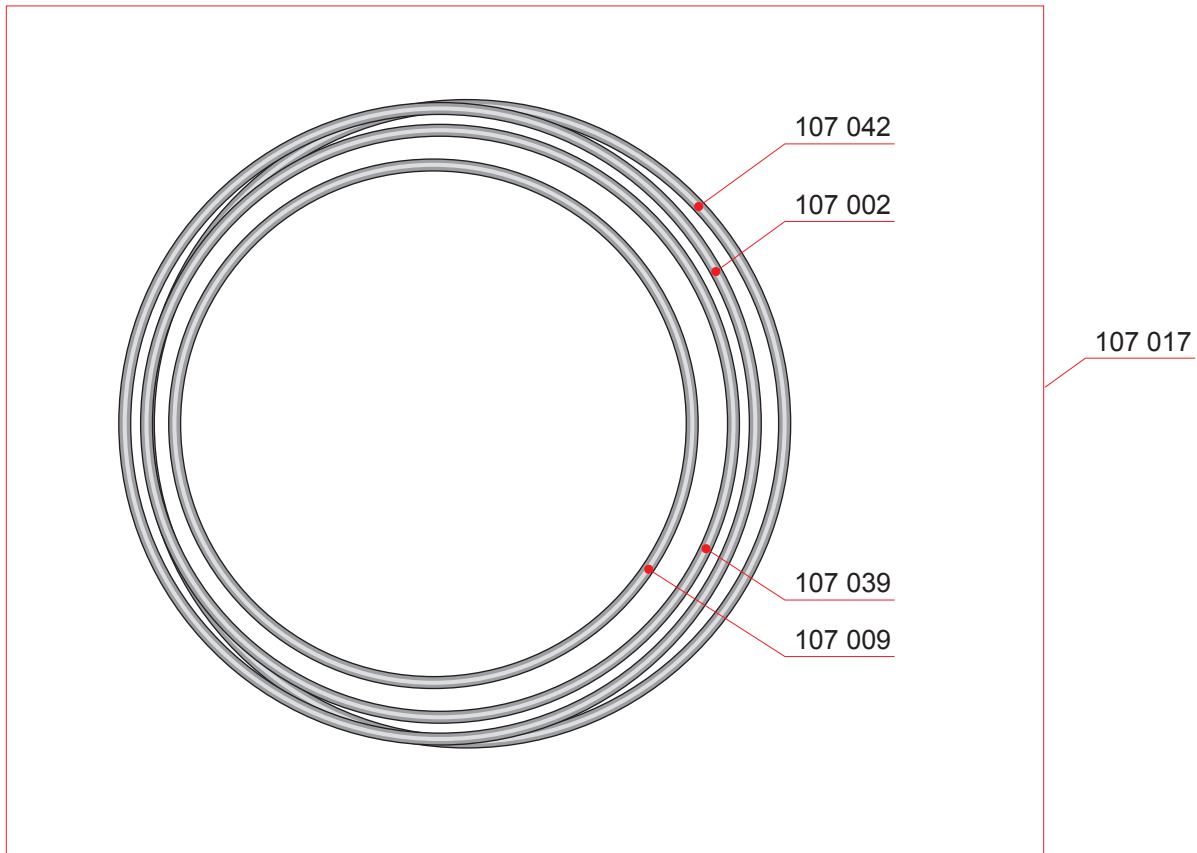
Covers

Quantity according to number of cylinders and used sump type.

Part No	Pieces								
	6L20			8L20			9L20		
	Wet	Dry	Deep	Wet	Dry	Deep	Wet	Dry	Deep
107 009	8	8	8	11	11	11	12	12	12
107 013	3	3	3	4	4	4	5	5	5
107 018	72	72	72	96	96	96	108	108	108
107 025	8	8	8	11	11	11	12	12	12
107 026	5	6	5	7	8	7	8	9	8
107 039	5	6	5	7	8	7	8	9	8
107 072	1	-	1	1	-	1	1	-	1
184 003	1	-	1	1	-	1	1	-	1

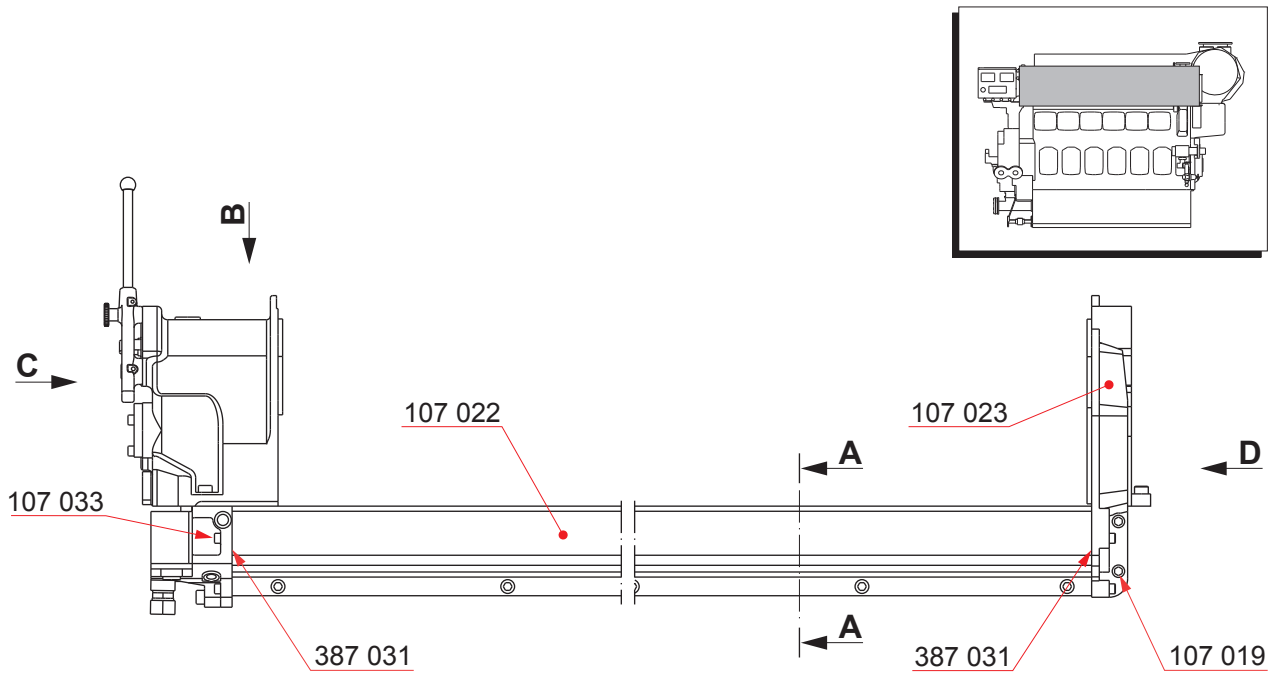
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 Updated: 01.02.2012

Covers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 017	Sealing set for covers	1	-
107 002	Hose gasket for cylinder head cover	1	-
107 009	Hose gasket	1	-
107 039	Hose gasket for lower side cover	1	-
107 042	Hose gasket for camshaft gear cover	1	-

Side covers

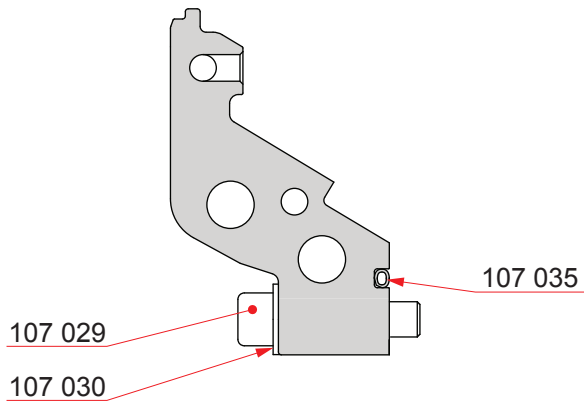


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 019	Screw	9	-
107 022	Side cover, lower part	1	27.8
107 023	End cover, upper half	1	14.8
107 033	Screw	2	-
387 031	Glue compound	1	-

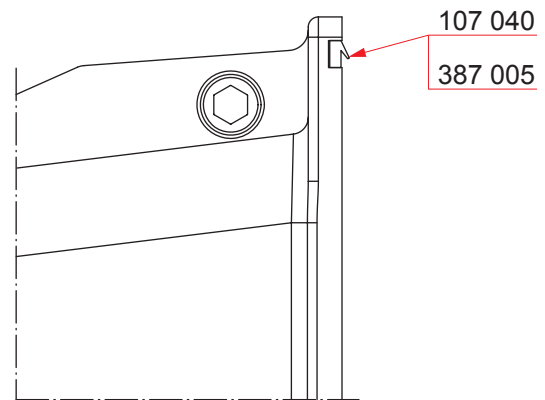
Edition: B
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Side covers

A - A



B

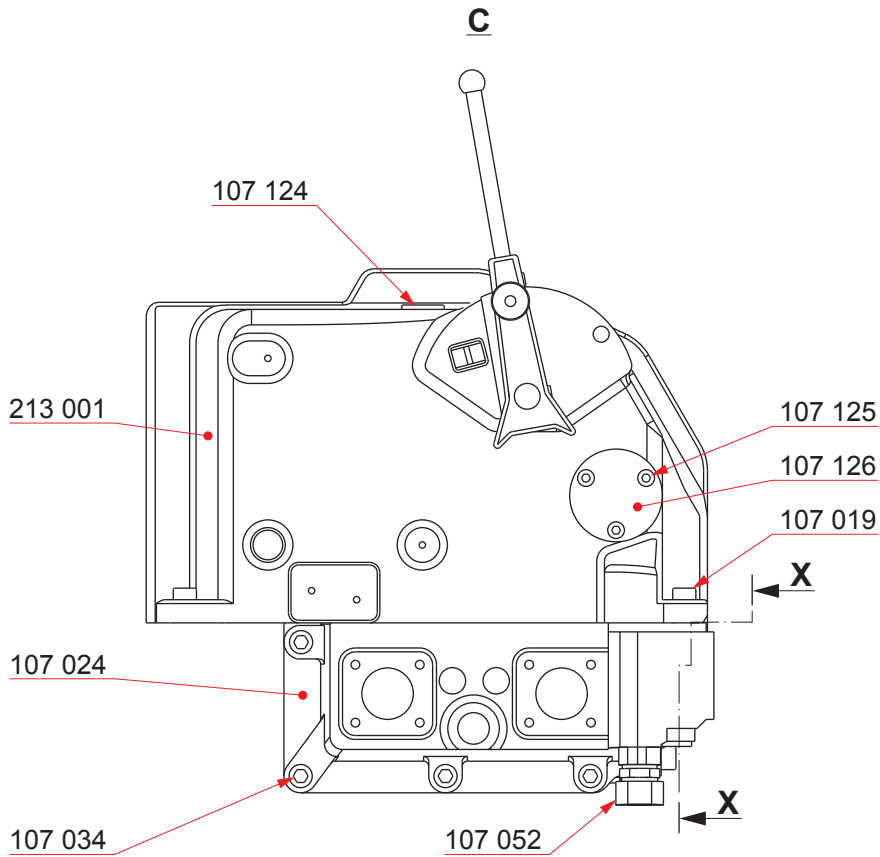


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 029	Screw (2)	*	-
107 030	Washer (2)	*	-
107 035	Hose gasket (1)	1	-
107 040	Gasket	1	-
387 005	Glue compound	1	-

NOTE! (1) Specify length when ordering.

NOTE! (2) See page 6.

Side covers

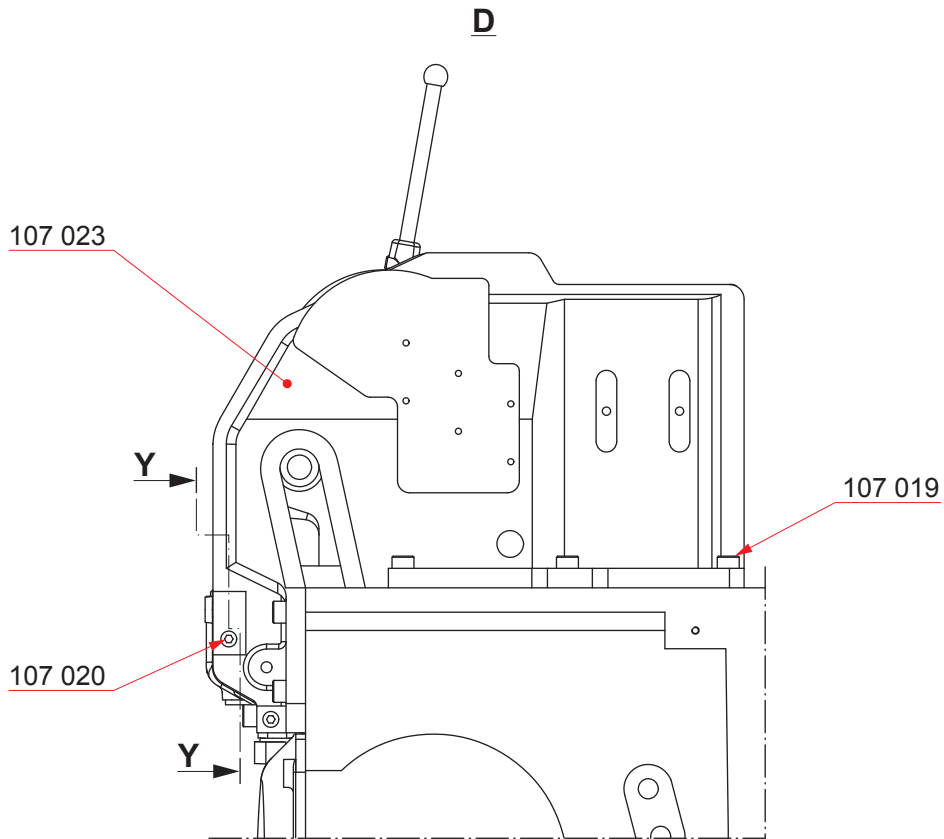


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 019	Screw	9	-
107 024	End cover, lower half	1	9.5
107 034	Screw	4	-
107 052	Pipe union	1	0.1
107 124	Plug	1	-
107 125	Screw	3	-
107 126	Bearing housing	1	0.6
213 001	Stop lever and end cover (1)	1	18.8

NOTE! (1) See section 213-

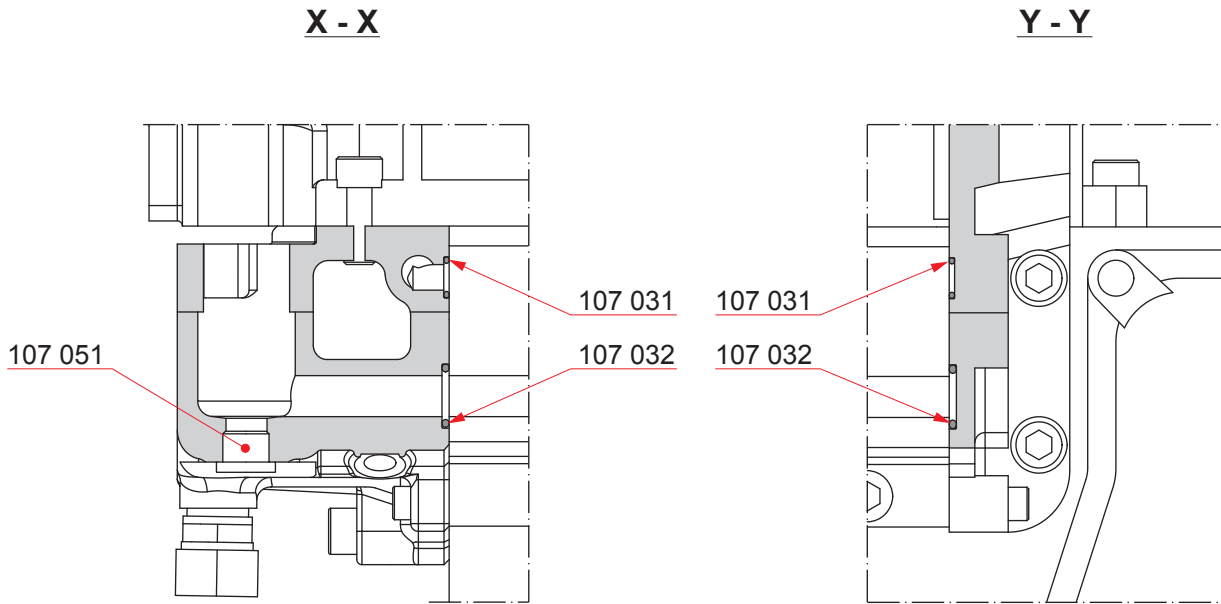
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 Updated: 07.02.2012

Side covers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 019	Screw	9	-
107 020	Screw	2	-
107 023	End cover, upper half	1	14.8

Side covers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 031	O-ring	4	-
107 032	O-ring	4	-
107 051	Plug	1	-

Edition: B

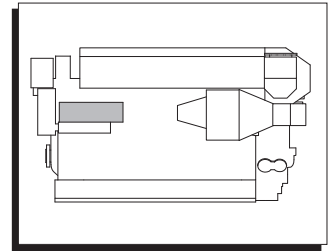
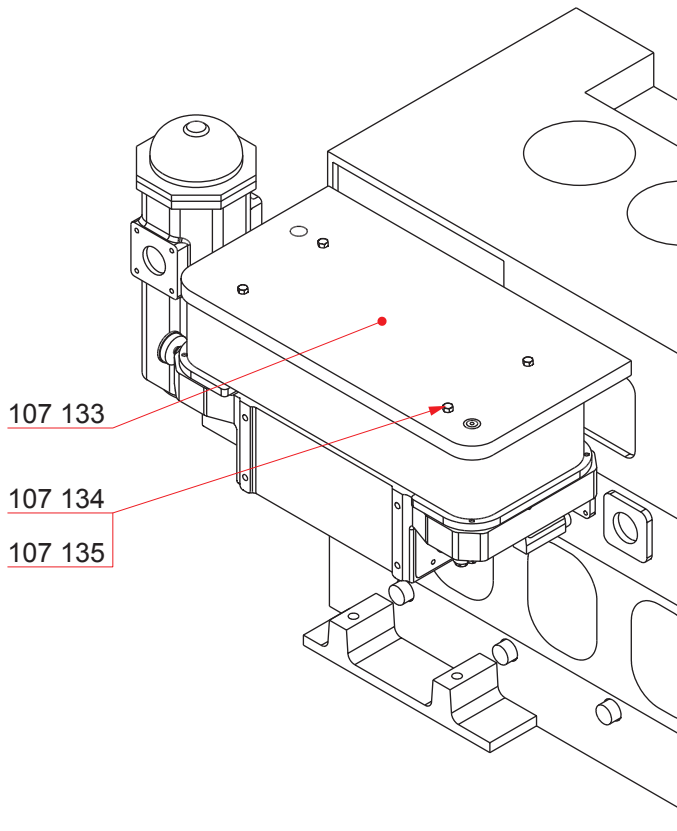
Page: 6(6)

Updated: 07.02.2012

Side covers

Part No. and Description	Quantity in pieces		
	6L	8L	9L
107 029 Screw	7	9	10
107 030 Washer	7	9	10

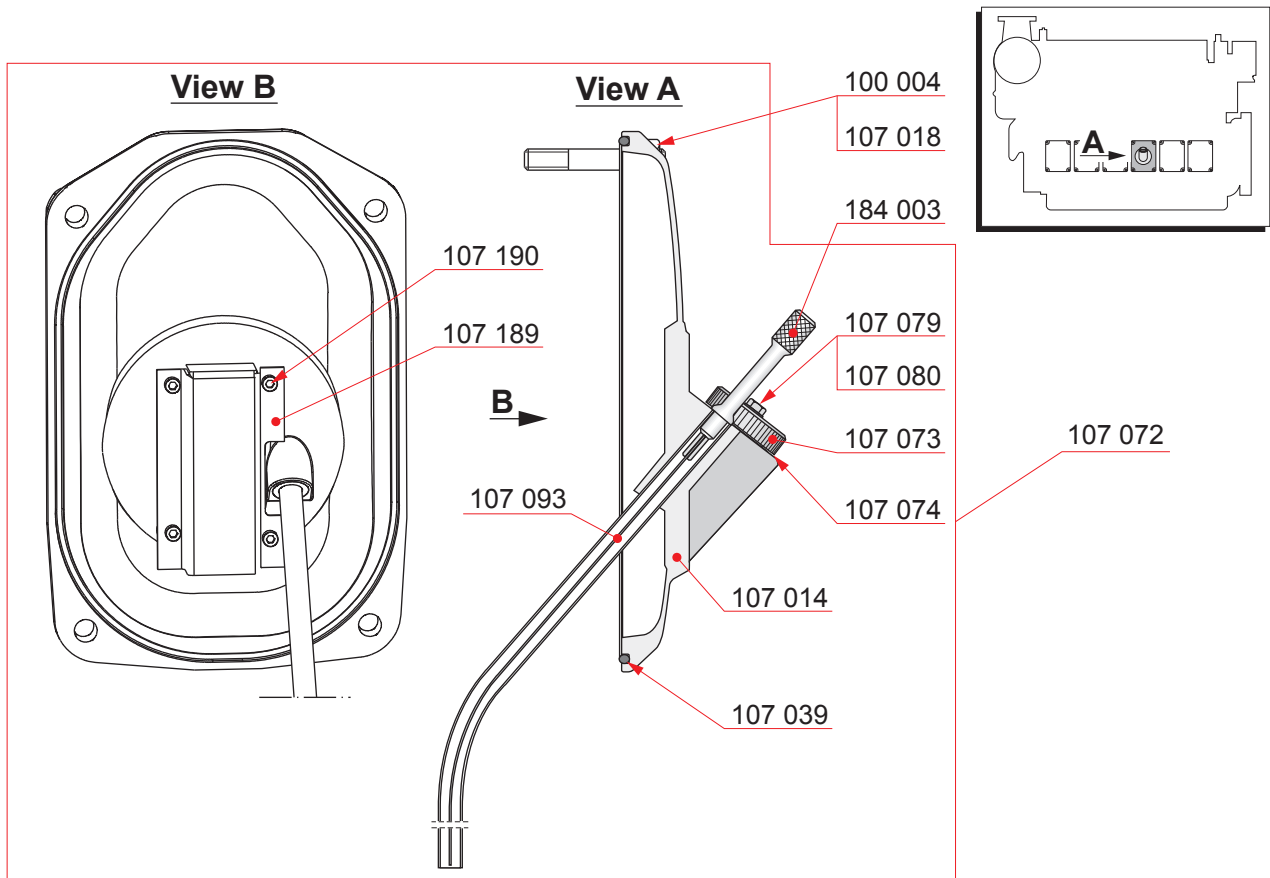
Shield for lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 133	Shield	1	-
107 134	Screw	4	-
107 135	Washer	4	-

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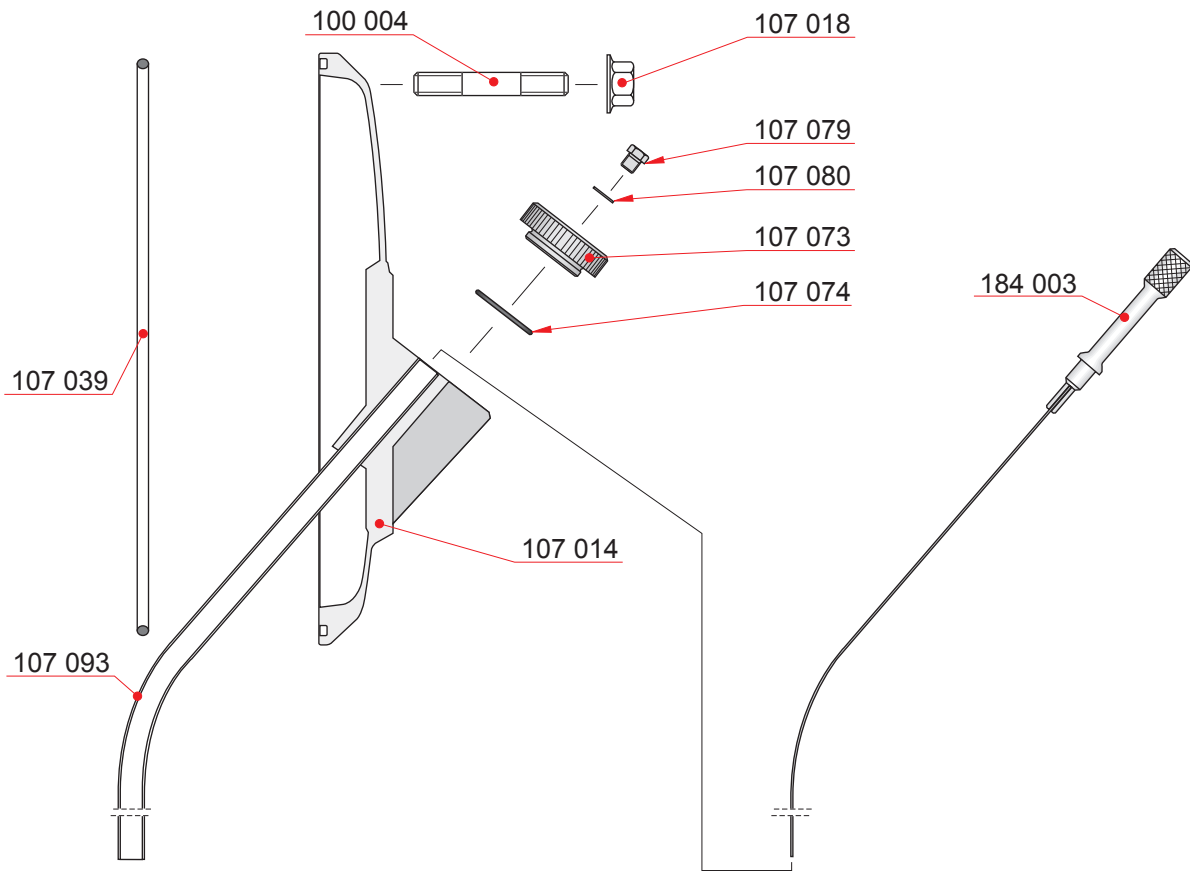
Crankcase cover with oil filling opening and dipstick



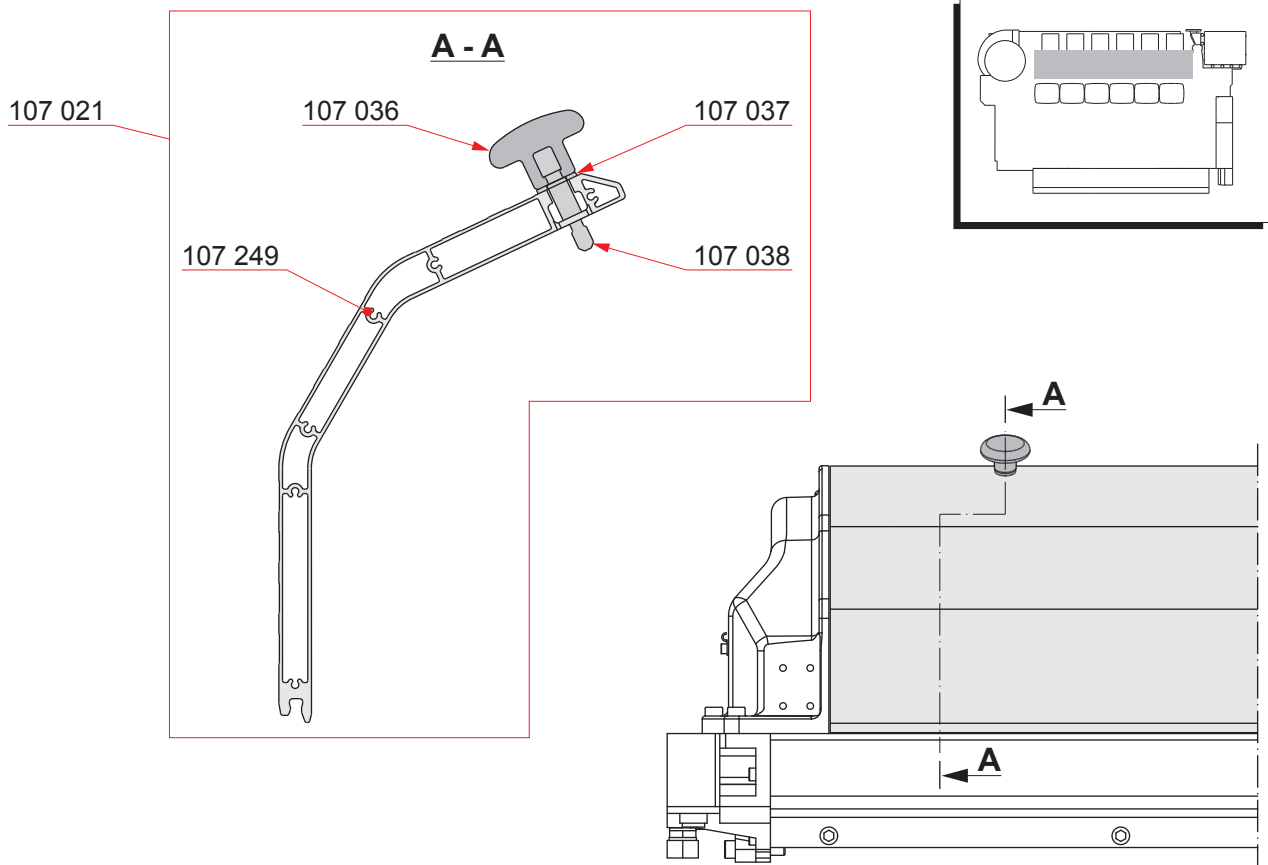
Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 004	Screw	4	-
107 018	Nut	4	-
107 072	Crankcase cover with oil filling opening	1	8.0
107 014	Crankcase cover	1	-
107 039	Hose gasket for lower side cover	1	-
107 073	Plug	1	0.4
107 074	O-ring	1	-
107 079	Plug	1	-
107 080	Sealing ring	1	-
107 093	Protecting pipe	1	0.8
107 189	Protecting cover	1	-
107 190	Screw	4	-
184 003	Oil dipstick	1	-

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Crankcase cover with oil filling opening and dipstick



Side cover, upper part



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 021	Side cover, upper part (1)	*	-
107 036	Hand wheel (1)	*	-
107 037	Washer (1)	*	-
107 038	Screw (1)	*	-
107 249	Cover (1)	*	-

NOTE! (1) See page 2.

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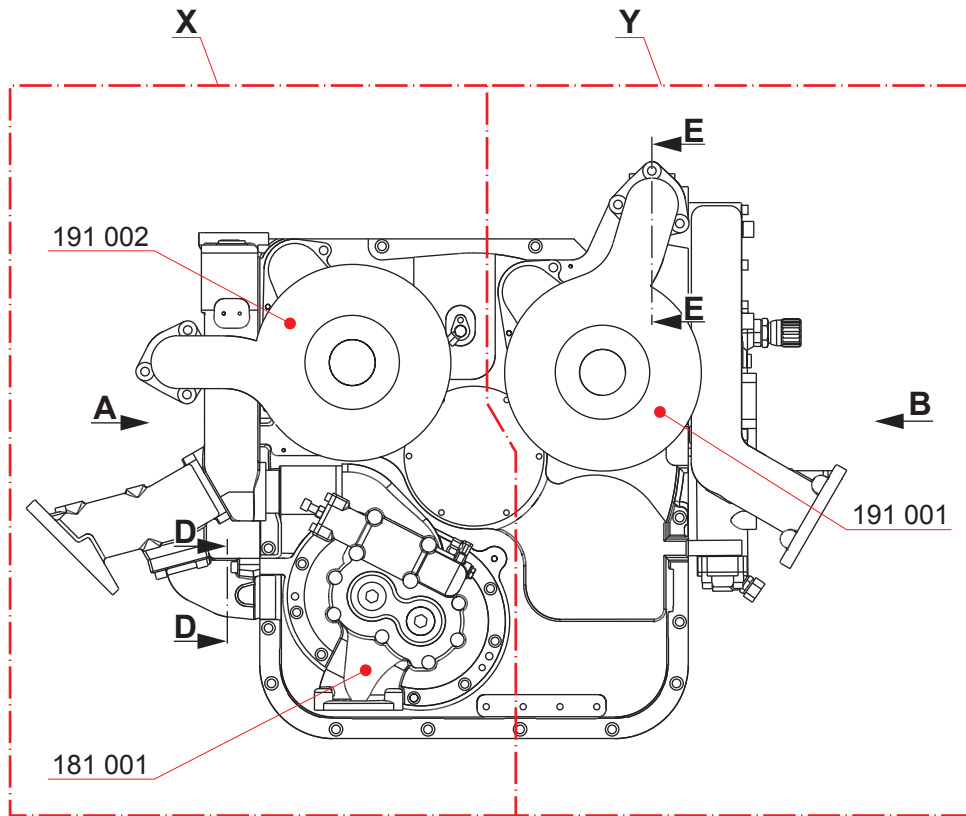
Page: 2(2)

Updated: 26.04.2011

Side cover, upper part

Part No. and Description	Quantity in pieces		
	6L	8L	9L
107 021 Side cover, upper part	2	2	3
107 036 Hand wheel	4	4	6
107 037 Washer	4	4	6
107 038 Screw	4	4	6
107 249 Cover	2	2	3

Pump cover assembly



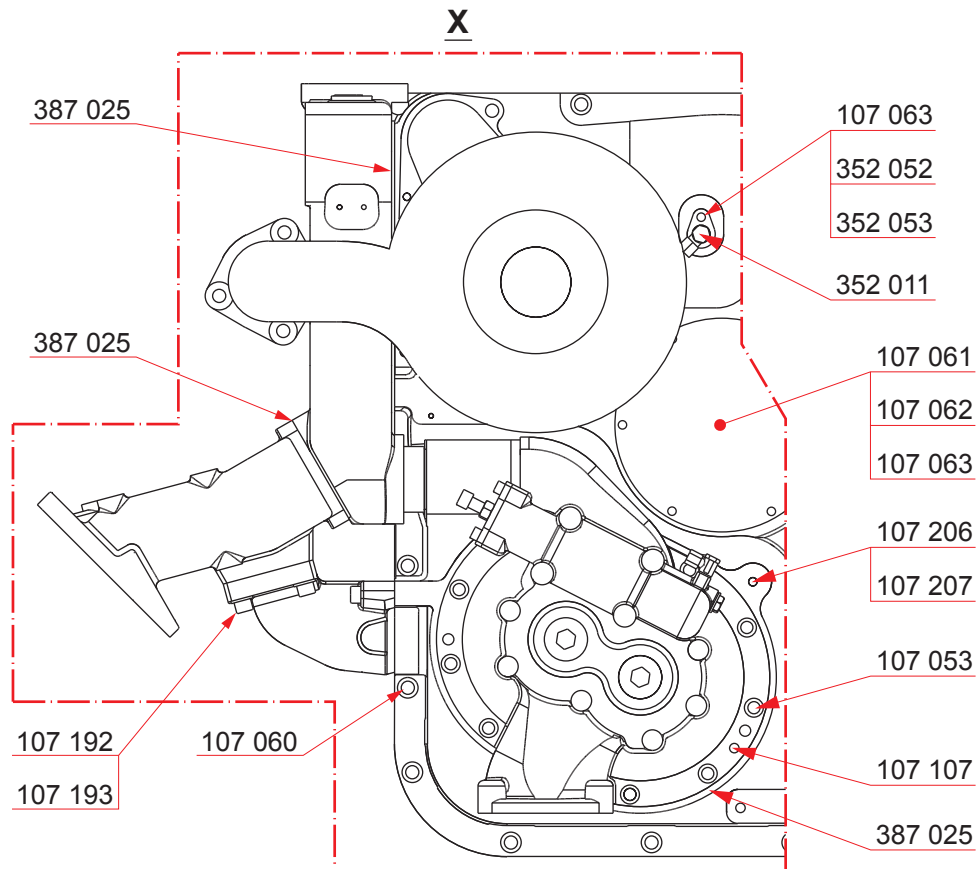
Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump (1)	1	-
191 001	HT water pump (2)	1	-
191 002	LT water pump (2)	1	-

NOTE! (1) See section 181-

NOTE! (2) See section 191-

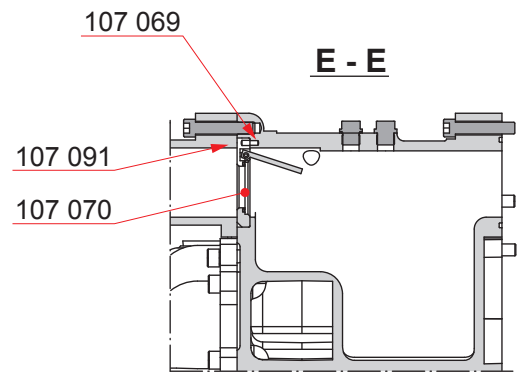
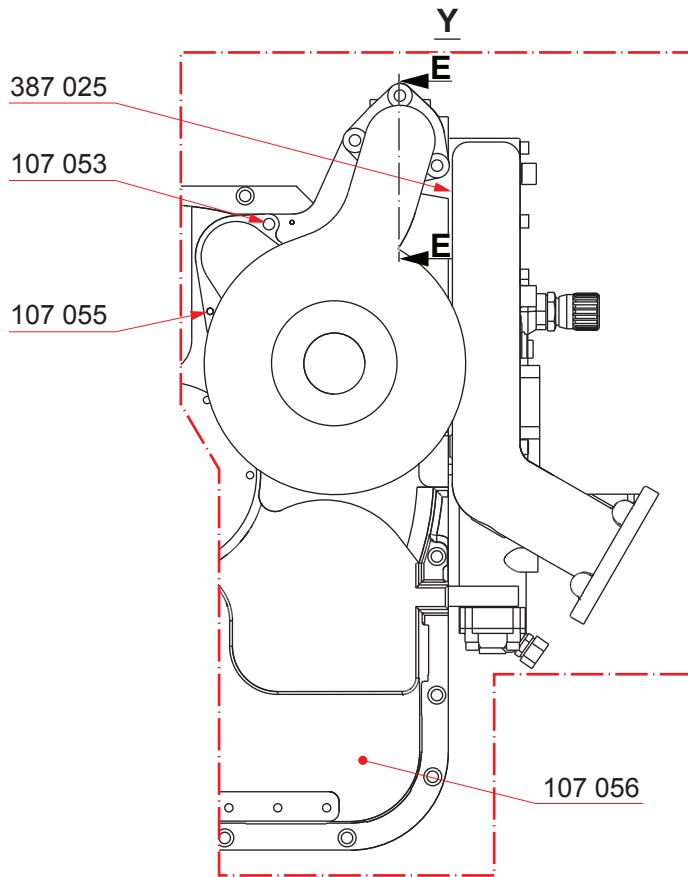
Edition: A
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 Updated: 30.05.2011

Pump cover assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 053	Screw	19	-
107 060	Screw	15	-
107 061	Gasket	1	-
107 062	Cover	1	3.0
107 063	Screw	7	-
107 107	Pin	2	-
107 192	Screw	8	-
107 193	Washer	2	-
107 206	Sealing ring	1	-
107 207	Plug	1	-
352 011	Pipe union	1	-
352 052	Oil nozzle	1	-
352 053	O-ring	1	-
387 025	Glue compound	1	-

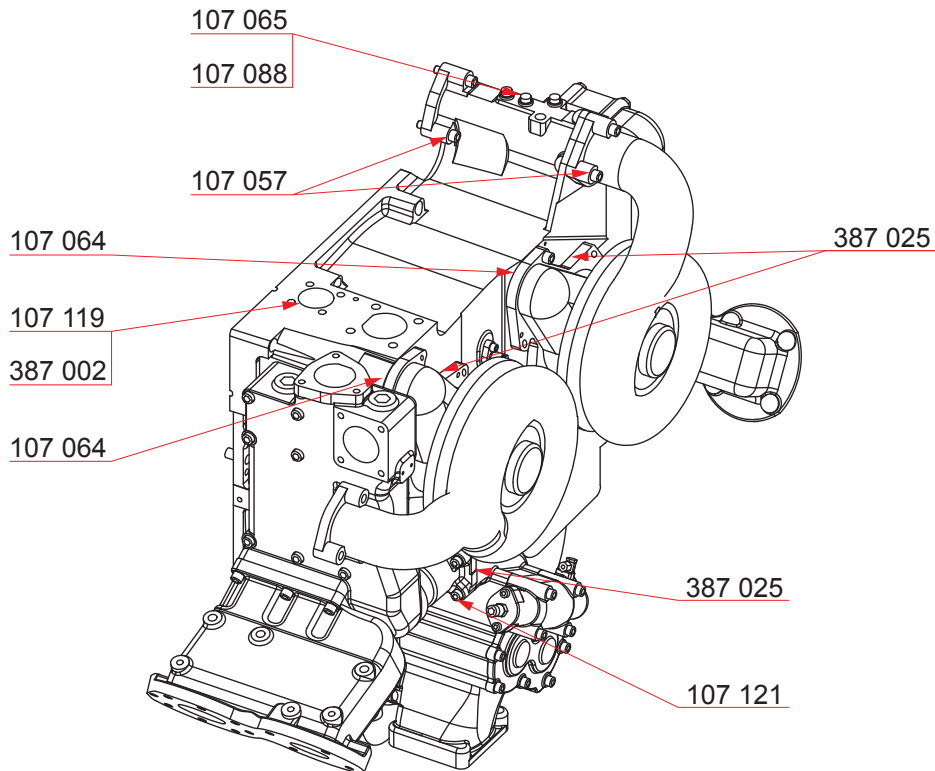
Pump cover assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 053	Screw	19	-
107 055	Pin	4	-
107 056	Pump cover	1	156
107 069	Pin	1	-
107 070	Non-return valve	1	0.5
107 091	O-ring	1	-
387 025	Glue compound	1	-

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Pump cover assembly

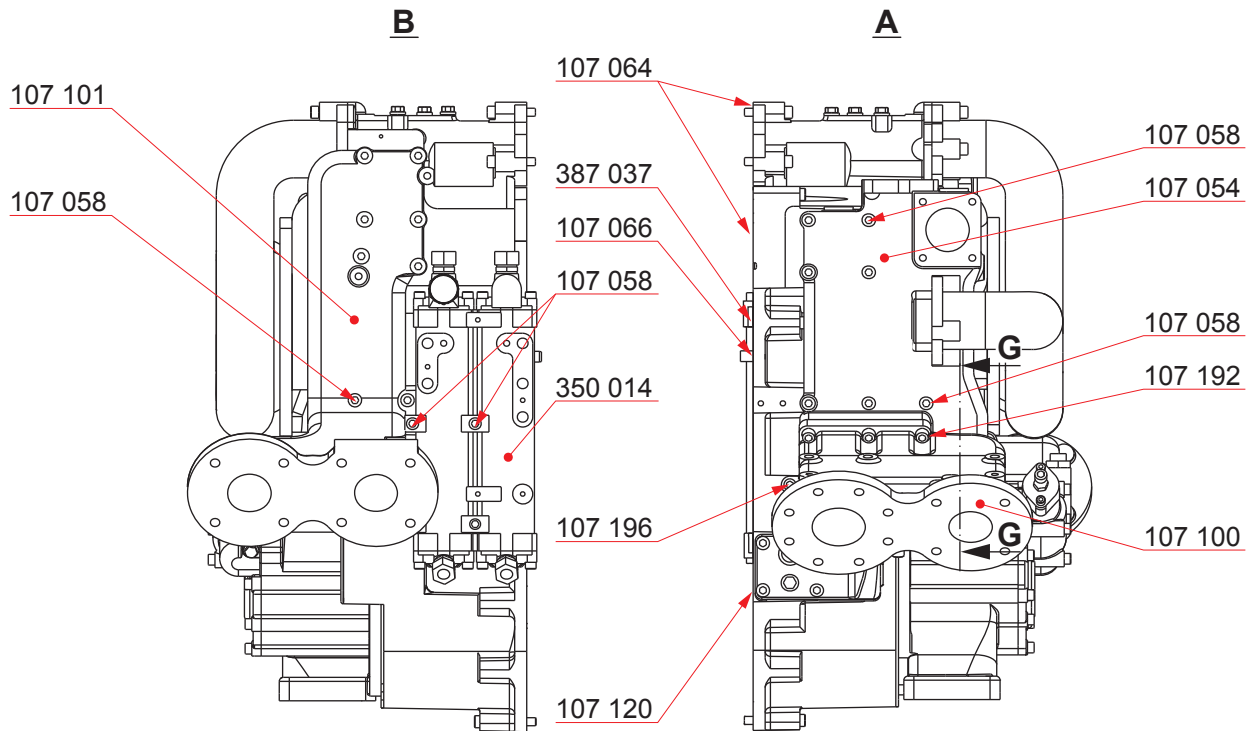


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 057	Screw	6	-
107 064	O-ring	4	-
107 065	Plug	3	-
107 088	Sealing ring	*	-
107 119	Sealing push-in cap (1)	1	-
107 121	Screw	4	-
387 002	Glue compound	1	-
387 025	Glue compound	1	-

NOTE! (1) Only for LD engines without VIC

NOTE! *) See page 7.

Pump cover assembly



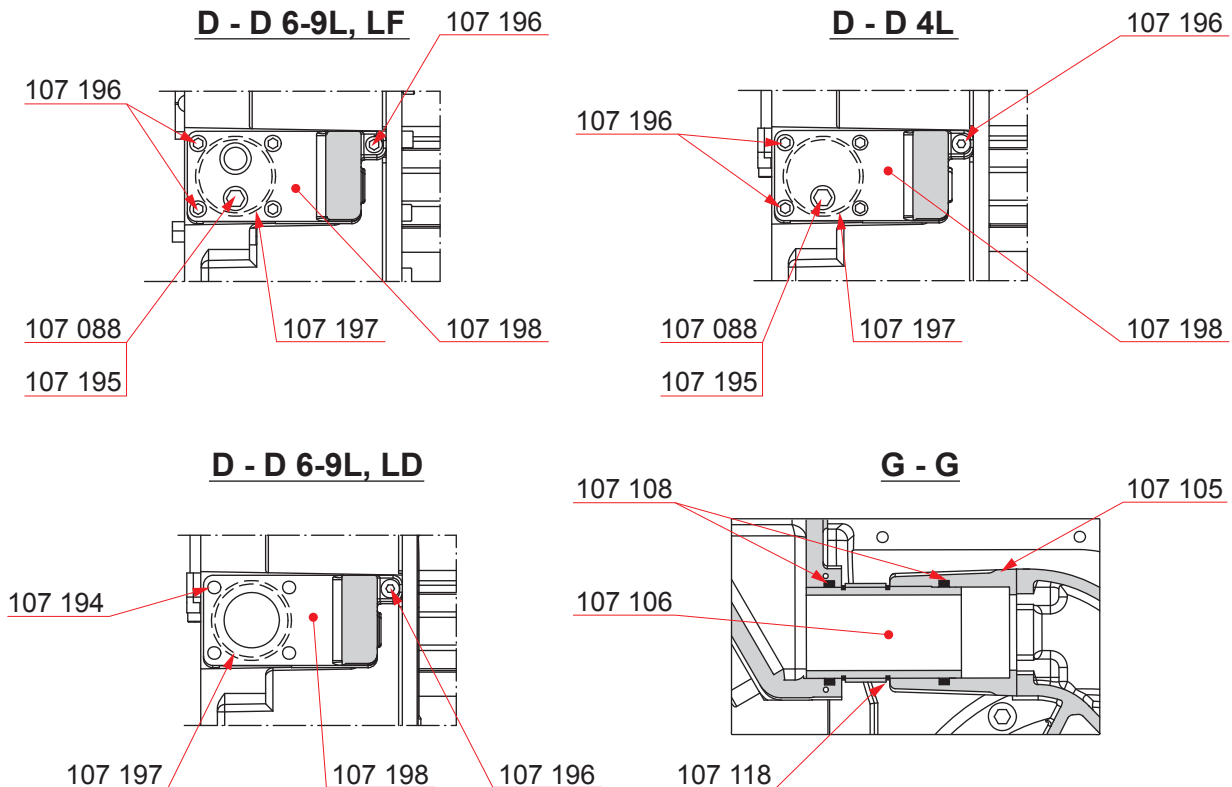
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 054	Water connection	1	31.0
107 058	Screw	19	0.1
107 064	O-ring	4	-
107 066	Pin	2	-
107 100	Water connection	1	24.0
107 101	Water connection	1	-
107 120	O-ring	1	-
107 192	Screw	8	-
107 196	Screw	*	-
350 014	Pulse damper (1)	1	-
387 037	Glue compound	1	-

NOTE! (1) See section 350-

NOTE! *) See page 7.

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Pump cover assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 088	Sealing ring	*	-
107 105	Connection piece	1	2.1
107 106	Pipe	1	0.9
107 108	O-ring	2	-
107 118	Retaining ring	2	-
107 194	Stud	*	-
107 195	Plug	*	-
107 196	Screw	*	-
107 197	O-ring	1	-
107 198	Connecting piece	1	7.0

NOTE! *) See page 7.

NOTE! LD= Turbocharger in driving end.

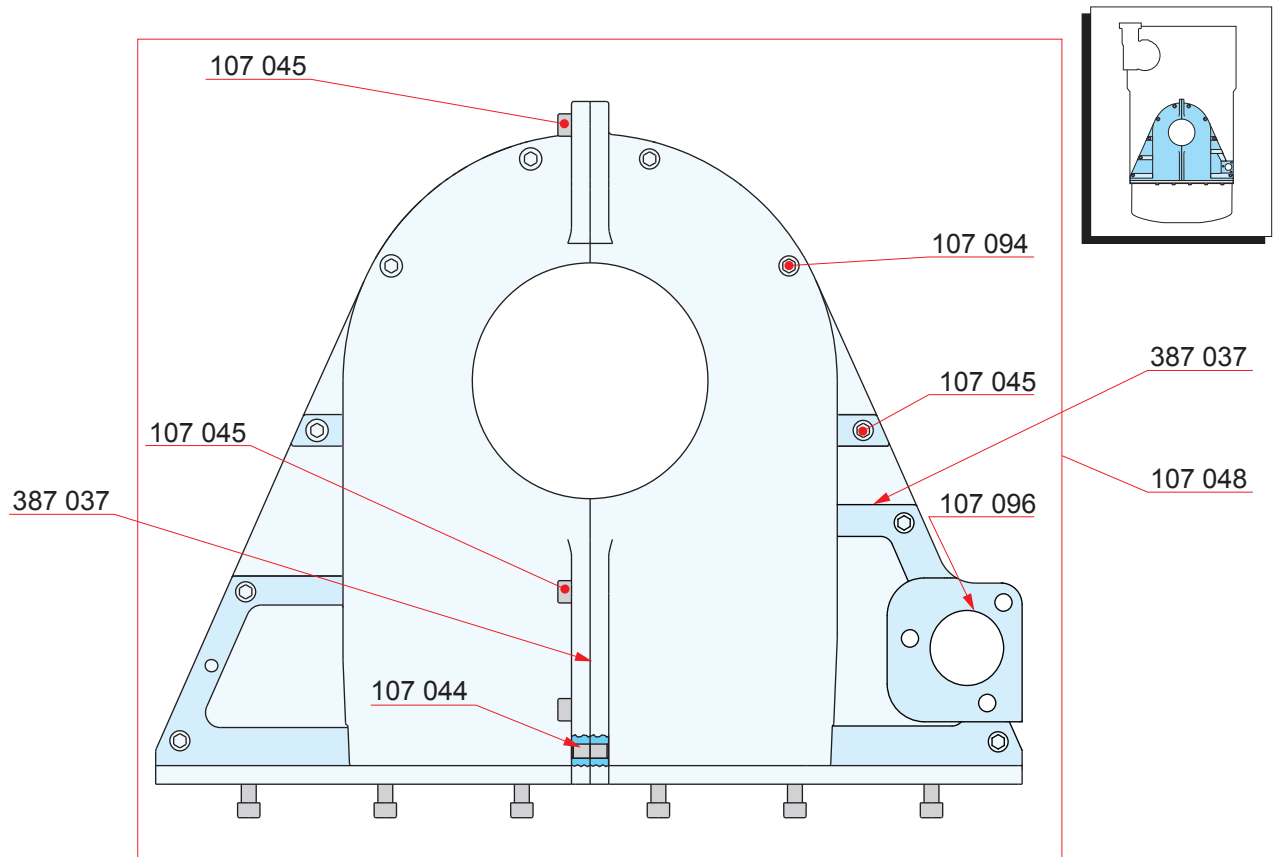
NOTE! LF= Turbocharger in free end.

Pump cover assembly

Part No. and Description	Quantity in pieces		
	4L20 LF	6-9L20 LD	6-9L20 LF
107 088 Sealing ring	4	3	4
107 194 Stud	-	1	-
107 195 Plug	1	-	1
107 196 Screw	6	2	6

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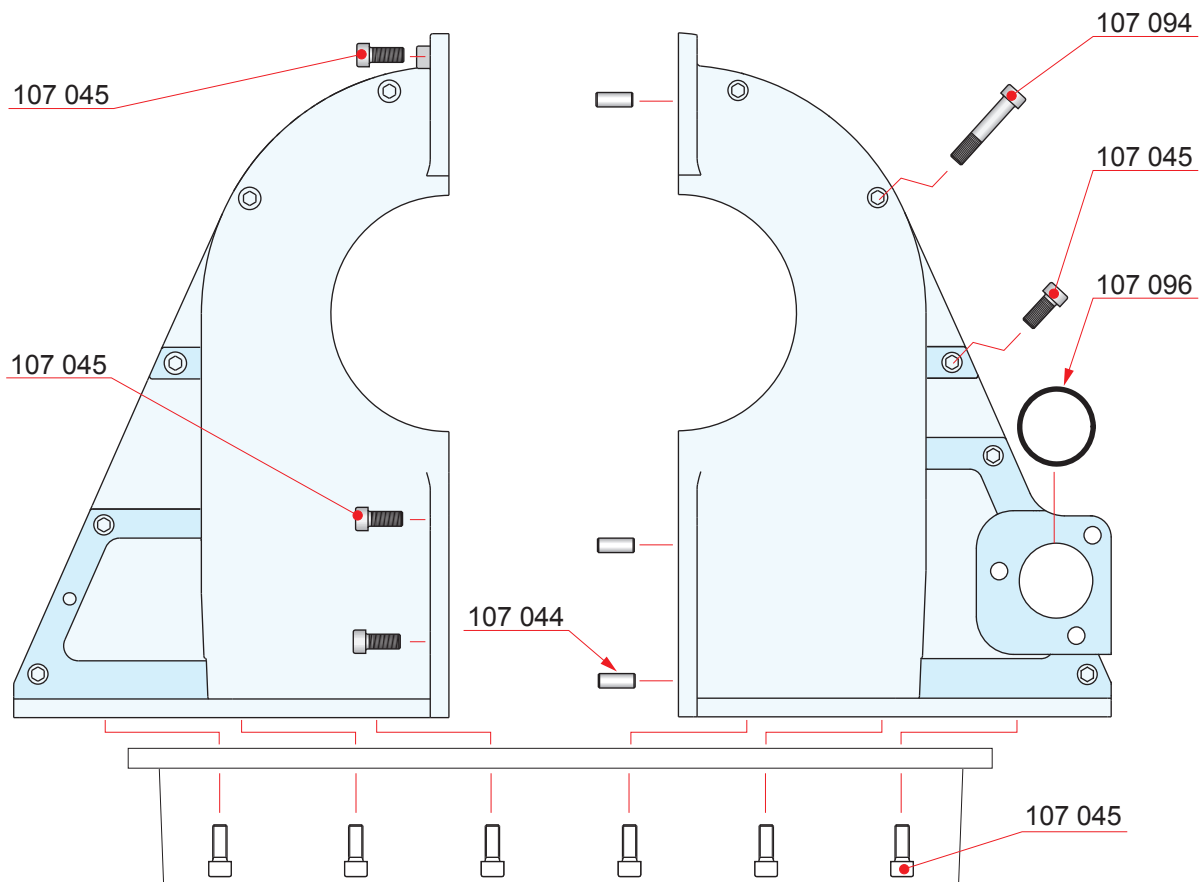
End cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 048	End cover, compl.	1	-
107 044	Pin	3	-
107 045	Screw	16	-
107 094	Screw	4	-
107 096	O-ring	1	-
387 037	Glue compound	1	-

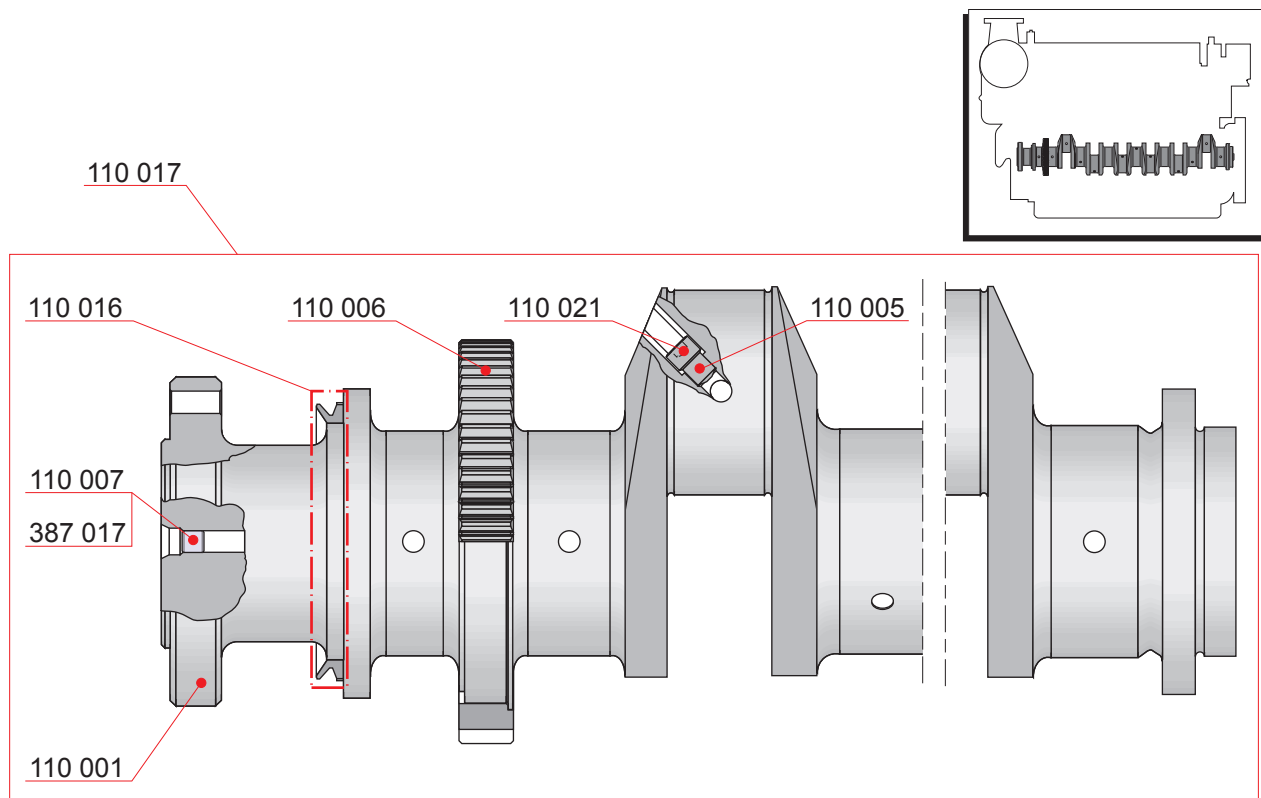
Edition: A
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 Updated: 29.06.2011

End cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 044	Pin	3	-
107 045	Screw	16	-
107 094	Screw	4	-
107 096	O-ring	1	-

Crankshaft

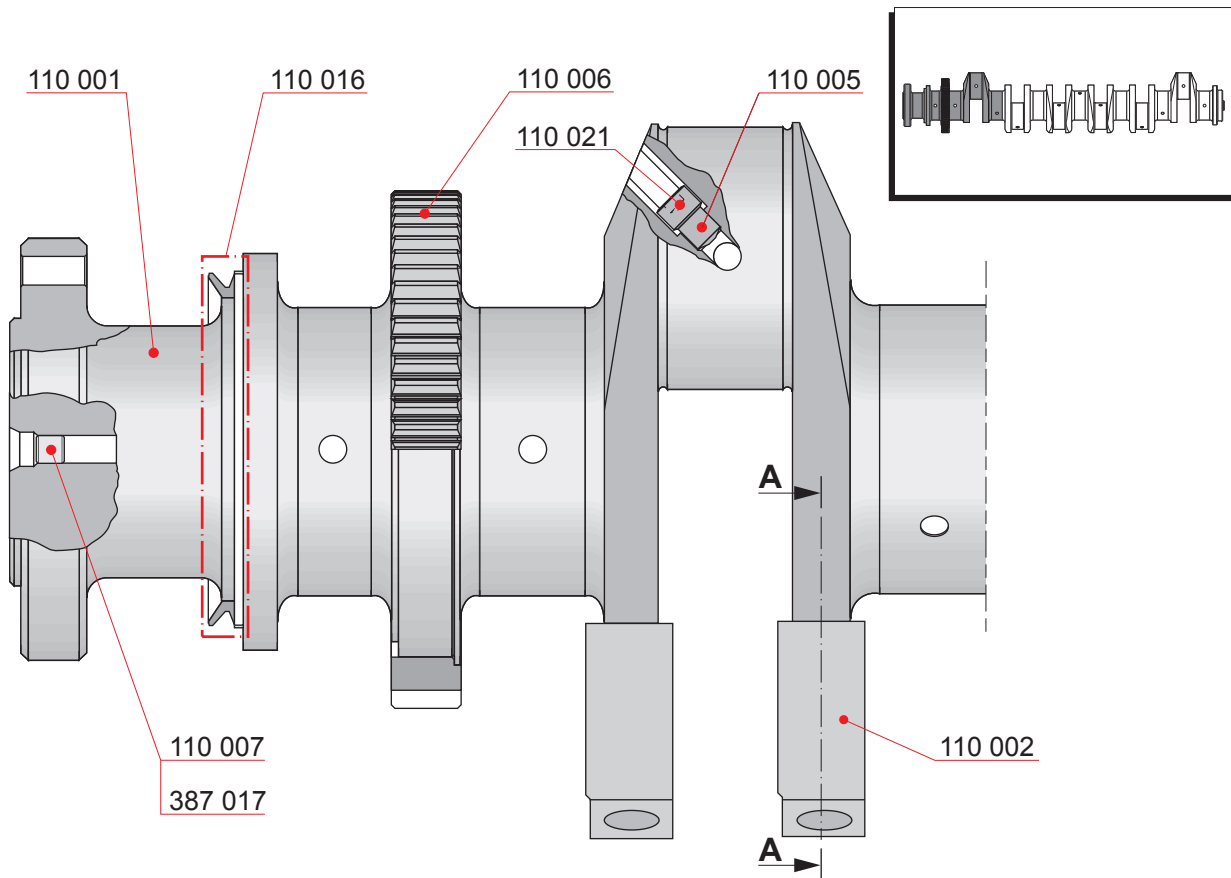


Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 017	Crankshaft, assembly	1	-
110 001	Crankshaft	1	-
110 005	Plug	*	-
110 006	Gear wheel	1	11.2
110 007	Plug	1	-
110 016	V-ring spare part kit	1	0.4
110 021	Screw	*	-
387 017	Glue compound	1	-

NOTE! *) See page 8.

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Crankshaft

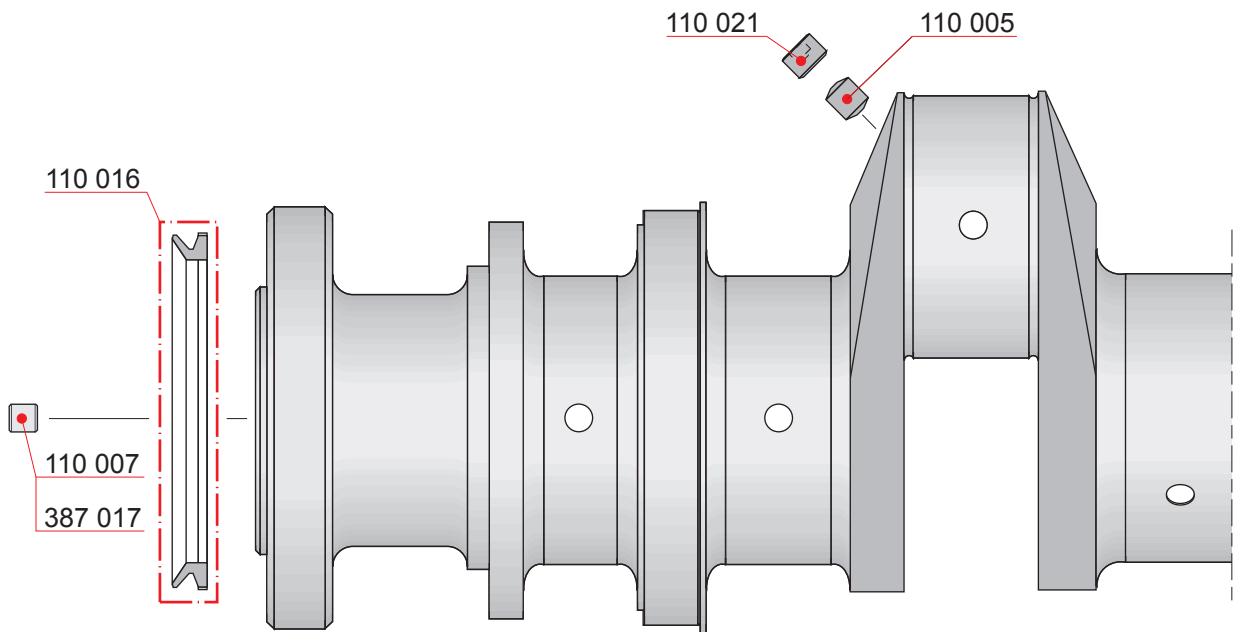


Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 001	Crankshaft	1	-
110 002	Counterweight (1)	*	14.9
110 005	Plug	*	-
110 006	Gear wheel	1	11.2
110 007	Plug	1	-
110 016	V-ring spare part kit	1	0.4
110 021	Screw	*	-
387 017	Glue compound	1	-

NOTE! (1) not used in 4L20

NOTE! *) See page 8.

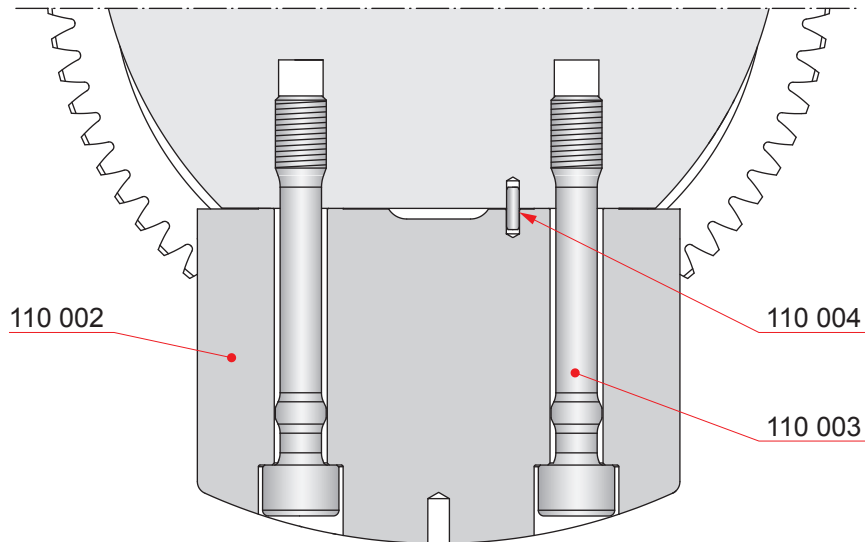
Crankshaft



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Crankshaft

A - A

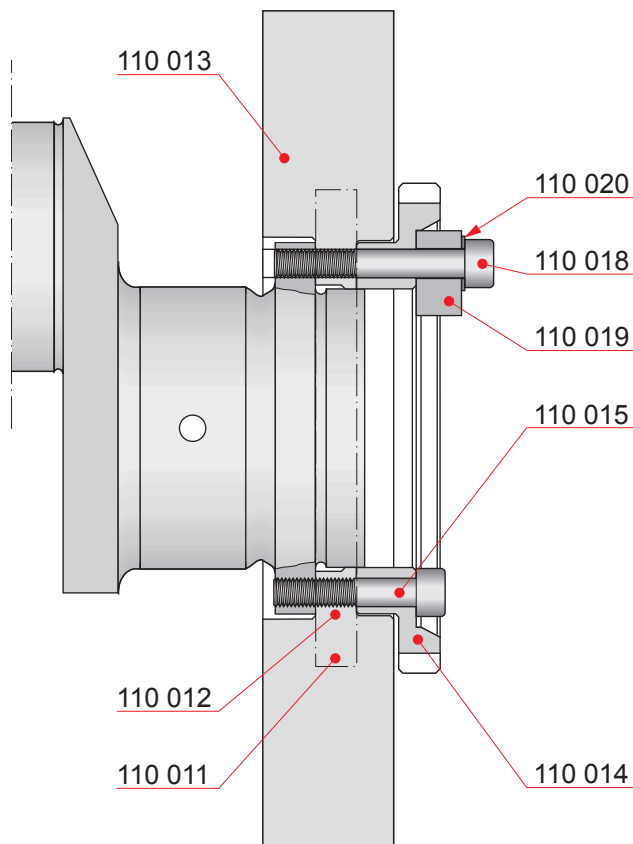


Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 002	Counterweight (1)	*	14.9
110 003	Screw (1)	*	0.6
110 004	Pin (1)	*	-

NOTE! (1) not used in 4L20

NOTE! *) See page 8.

Crankshaft



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	21.4
110 015	Screw	*	0.7
110 018	Screw (2)	4	-
110 019	Counterweight (2)	1	-
110 020	Washer (2)	4	-

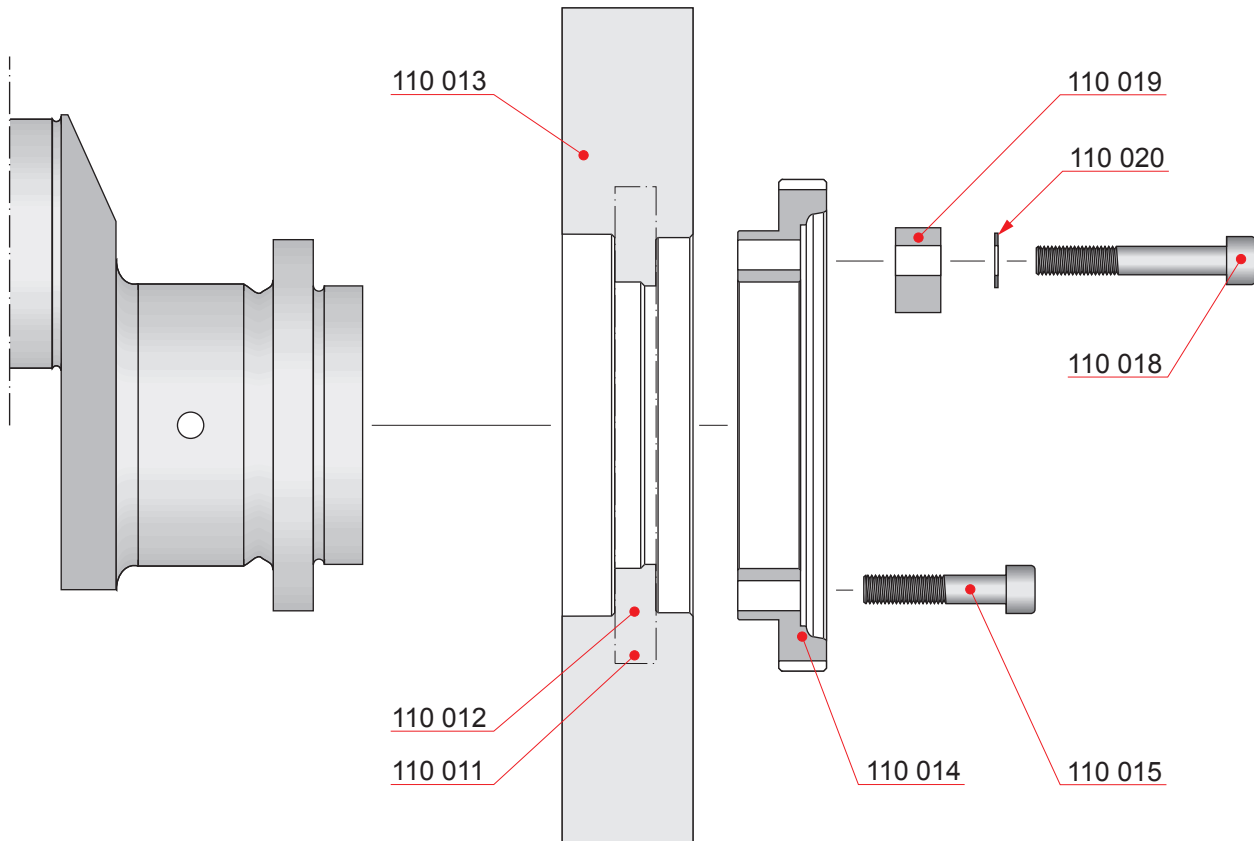
NOTE! (1) One of these is used.

NOTE! (2) For 9L20 only

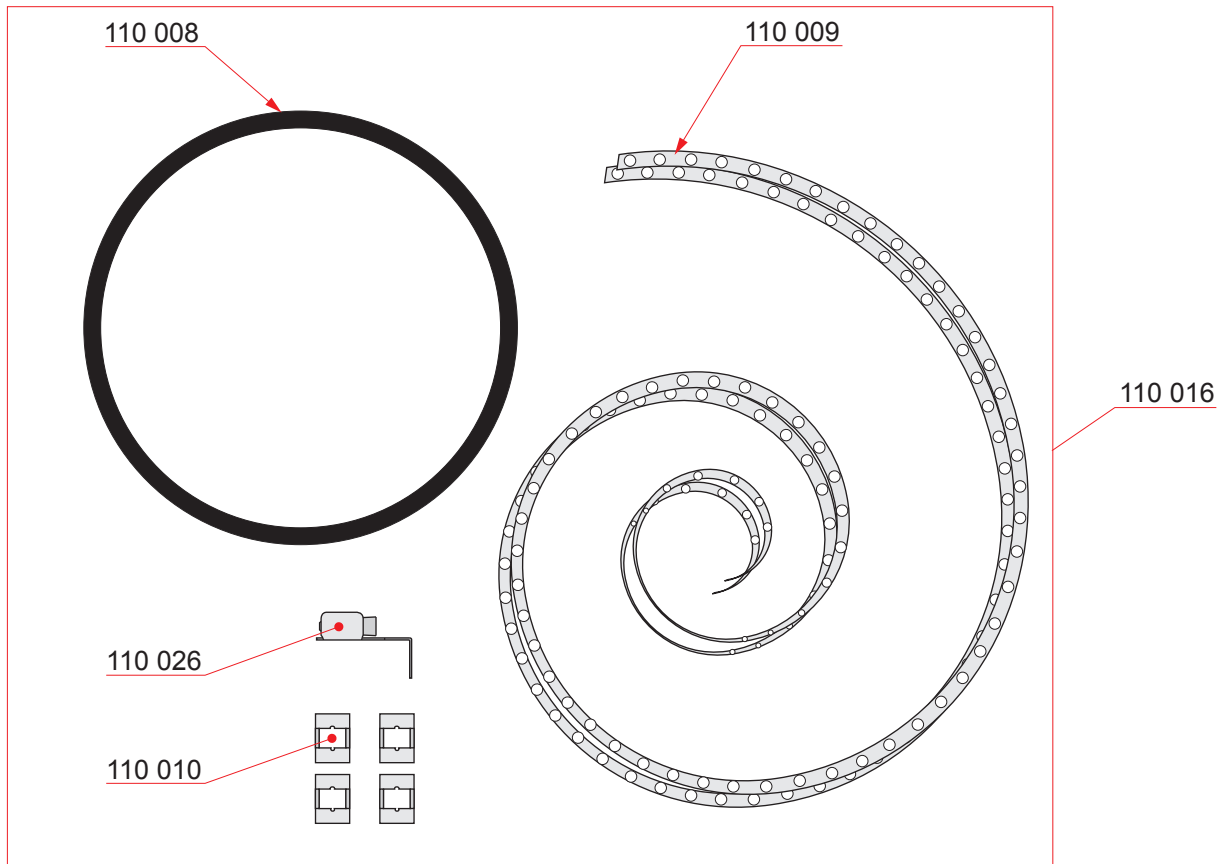
NOTE! *) See page 8.

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Crankshaft



Crankshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 016	V-ring spare part kit	1	0.4
110 008	Sealing ring	1	0.2
110 009	Strap (1)	1	-
110 010	Stretcher	4	-
110 026	Screw	1	-

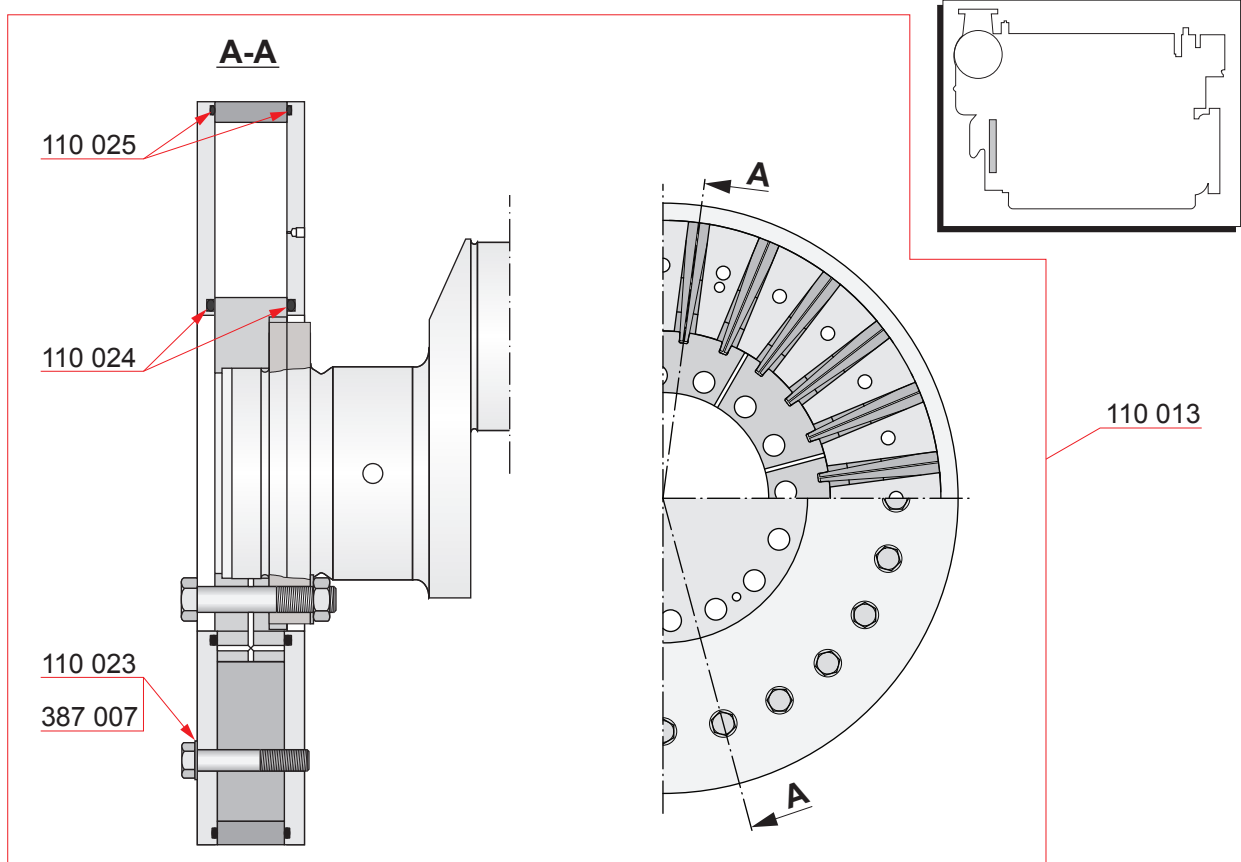
NOTE! (1) L = 890 mm

Edition: H
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Updated: 23.02.2012

Crankshaft

Part No. and Description	Quantity in pieces			
	4L	6L	8L	9L
110 002 Counterweight	-	12	16	18
110 003 Screw	-	24	32	36
110 004 Pin	-	12	16	18
110 005 Plug	4	6	8	9
110 015 Screw	8	8	16	12
110 021 Screw	4	6	8	9

Vibration damper

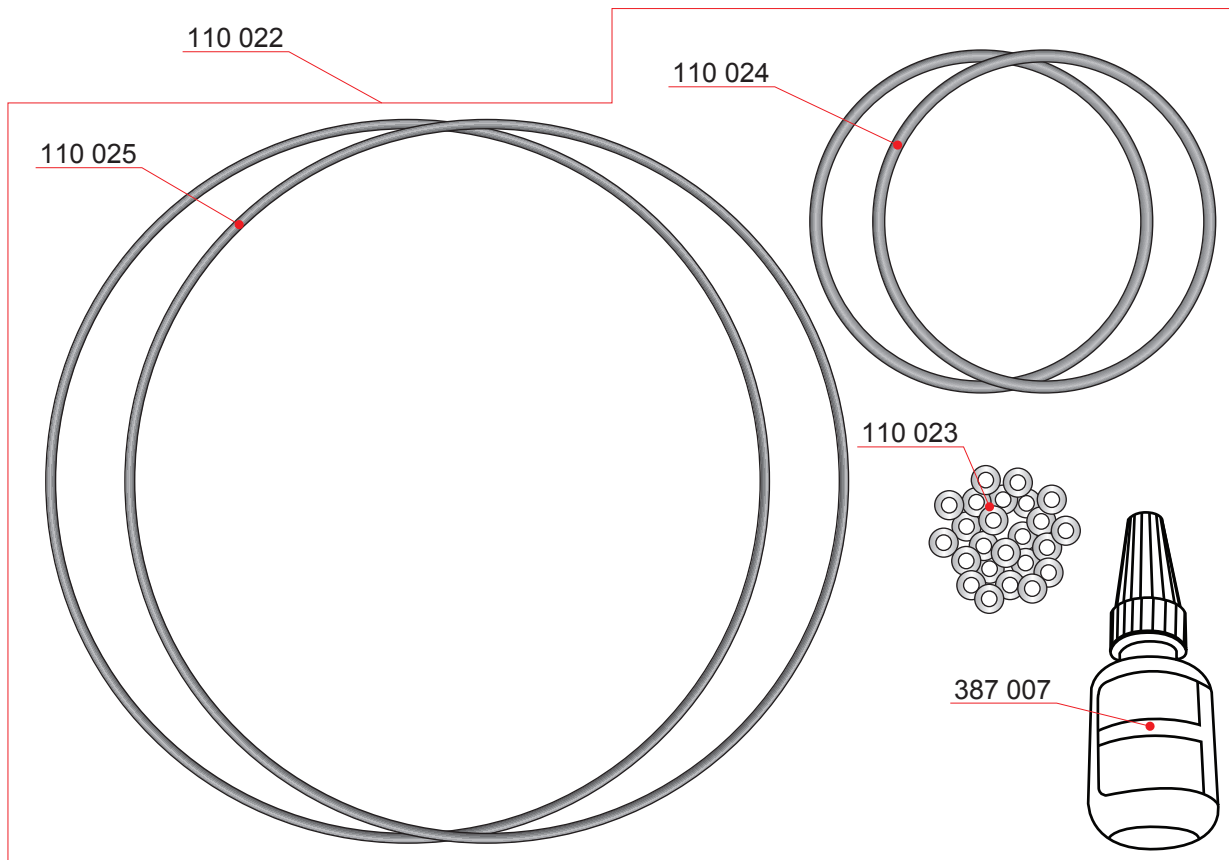


Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 013	Vibration damper	1	-
110 023	Disc spring (1)	24	-
110 024	O-ring (1)	2	-
110 025	O-ring (1)	2	-
387 007	Glue compound	1	-

NOTE! (1) Parts available only as spare part kit, see next page(s).

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 Updated: 08.07.2011

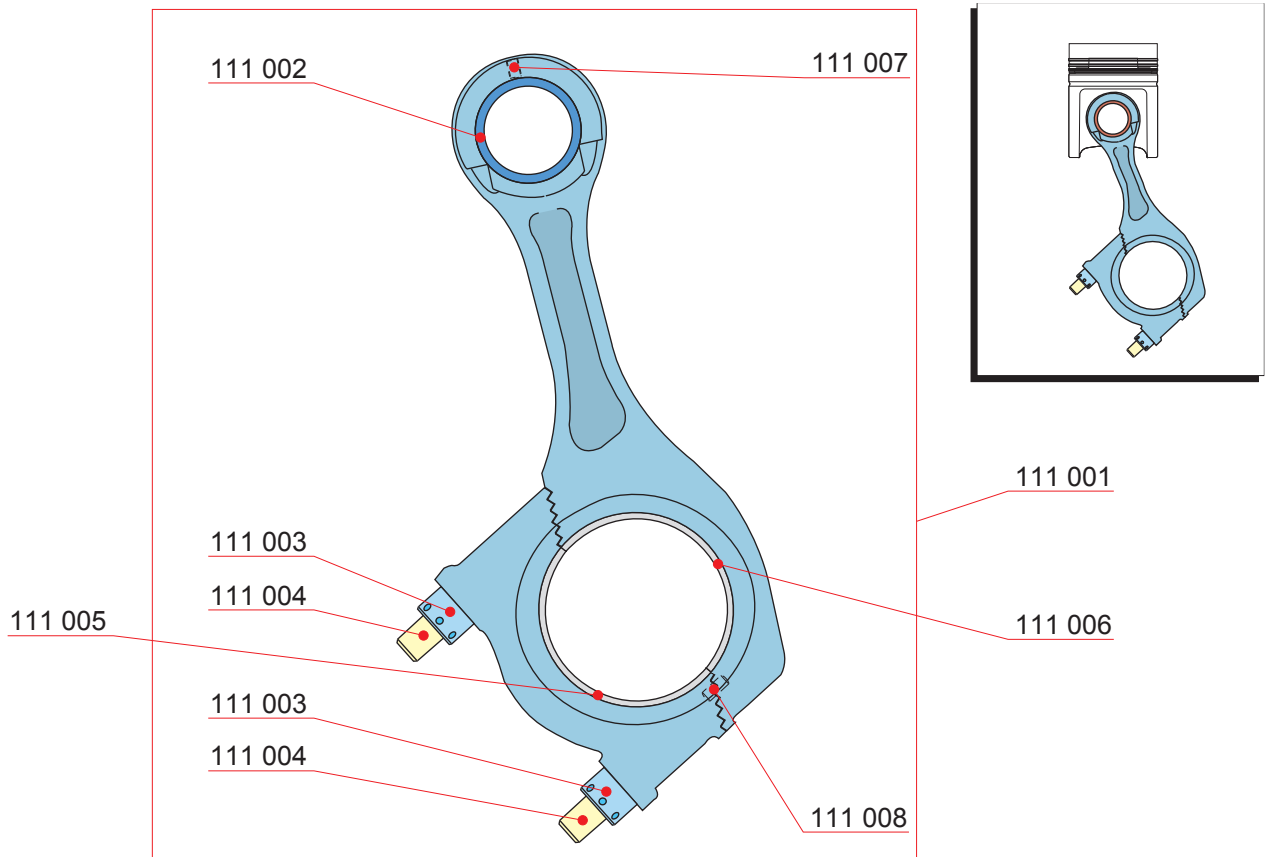
Vibration damper



Part No.	Description	Qty [Pcs]	Wt. [Kg]
110 022	Spare part set for vibration damper	1	3.3
110 023	Disc spring (1)	24	-
110 024	O-ring (1)	2	-
110 025	O-ring (1)	2	-
387 007	Glue compound	1	-

NOTE! (1) Parts are not available separately.

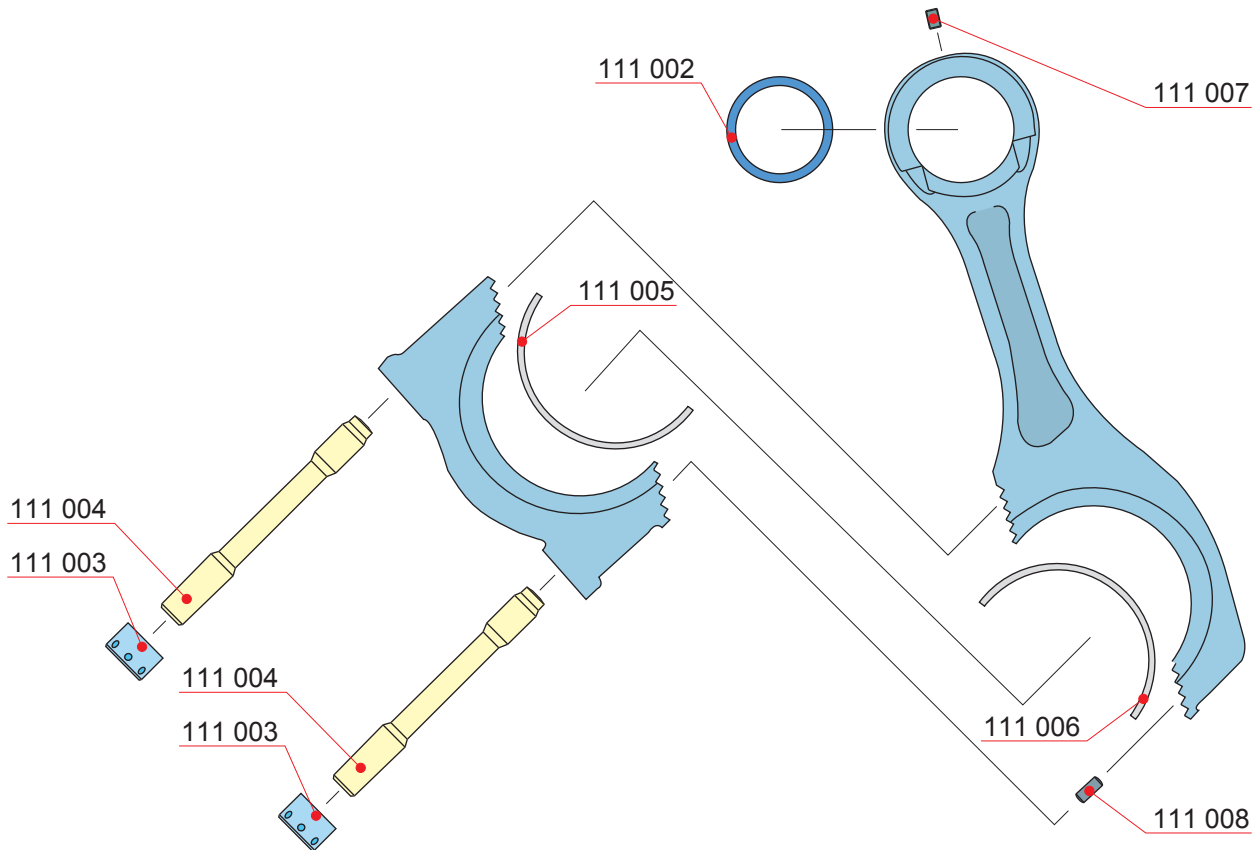
Connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 001	Connecting rod	1	35.0
111 002	Gudgeon pin bearing bush	1	1.2
111 003	Nut	2	0.3
111 004	Screw	2	-
111 007	Plug	1	-
111 008	Pin	1	-
111 005	Big end bearing shell, lower	1	-
111 006	Big end bearing shell, upper	1	-

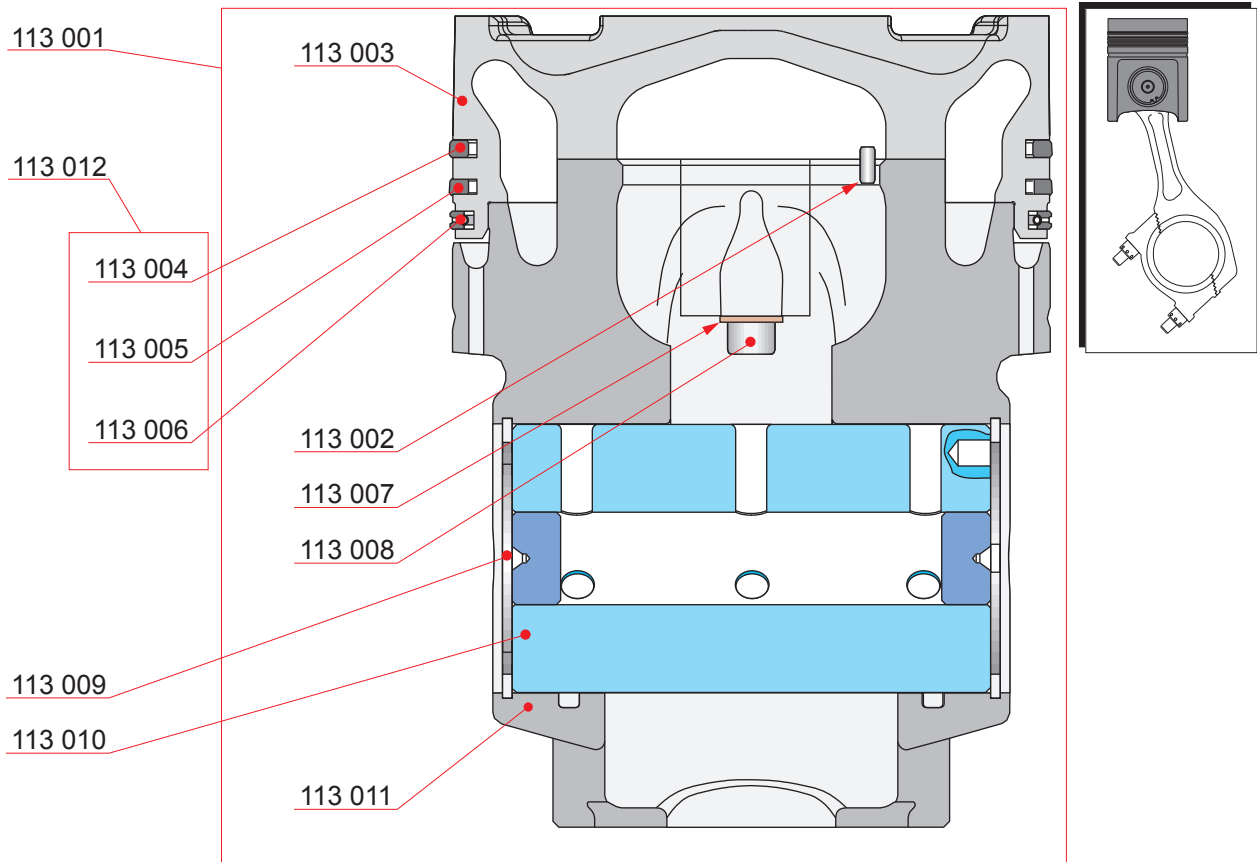
Edition: B
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 Updated: 03.12.1993

Connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 002	Gudgeon pin bearing bush	1	1.2
111 003	Nut	2	0.3
111 004	Screw	2	-
111 005	Big end bearing shell, lower	1	-
111 006	Big end bearing shell, upper	1	-
111 007	Plug	1	-
111 008	Pin	1	-

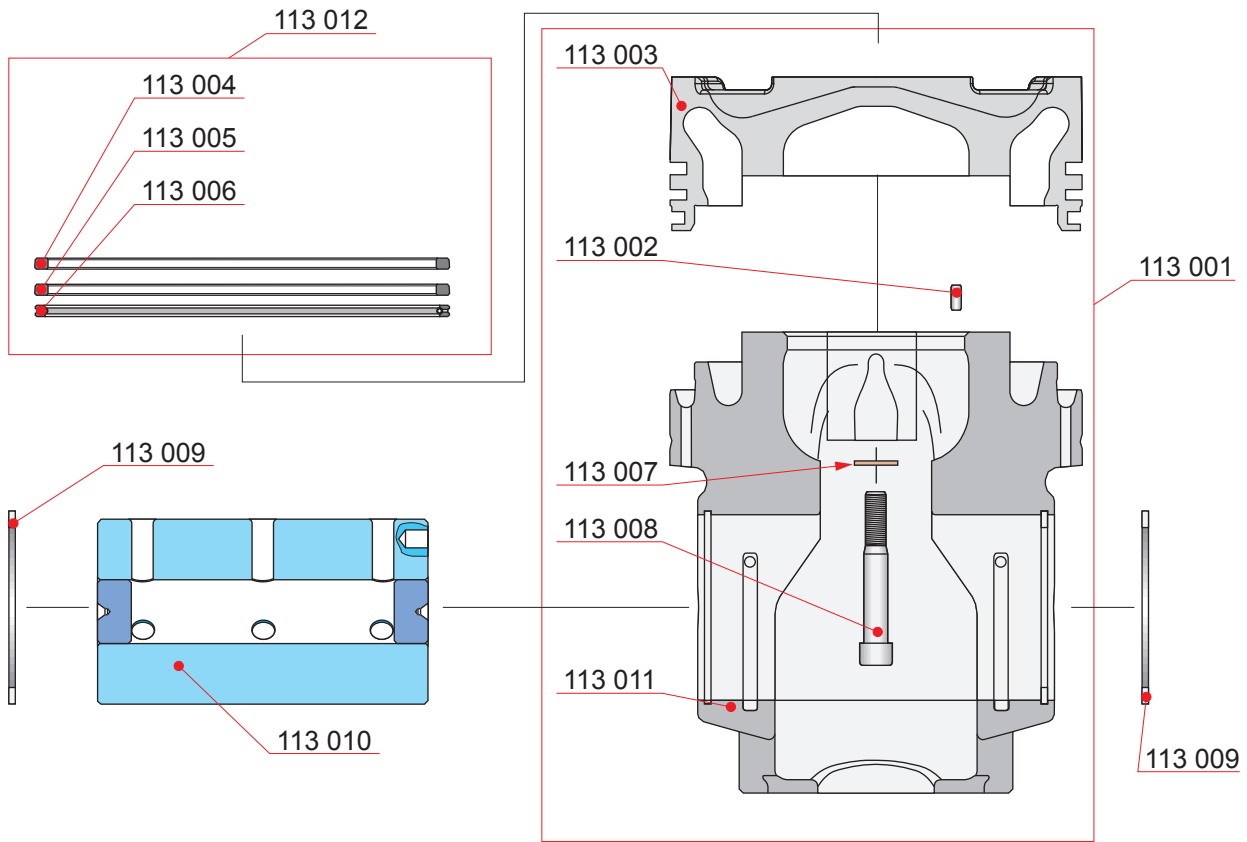
Piston



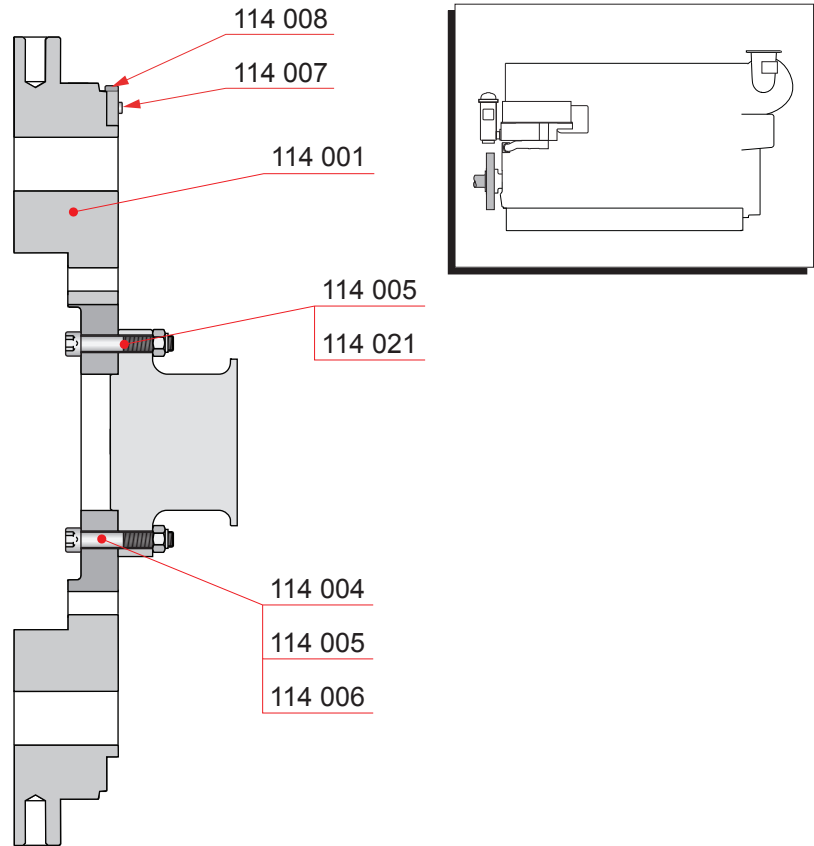
Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 001	Piston	1	21.0
113 003	Piston crown	1	6.5
113 002	Pin	1	-
113 007	Washer	2	-
113 008	Screw	2	0.1
113 011	Piston skirt	1	14.0
113 002	Pin	2	-
113 009	Securing ring	2	-
113 010	Gudgeon pin	1	7.2
113 012	Piston ring set	1	0.5
113 004	Piston ring I	1	-
113 005	Piston ring II	1	0.2
113 006	Piston ring III	1	-

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Updated: 06.08.2009

Piston



Flywheel connection



Part No.	Description	Qty [Pcs]	Wt. [Kg]
114 001	Flywheel	1	-
114 004	Screw	*	0.3
114 005	Nut	8	-
114 006	Washer	*	-
114 007	Screw	20	-
114 008	Gear rim	1	-
114 021	Screw	*	0.4

NOTE! *) See page 2.

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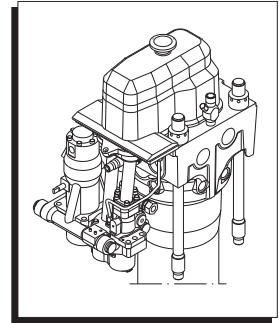
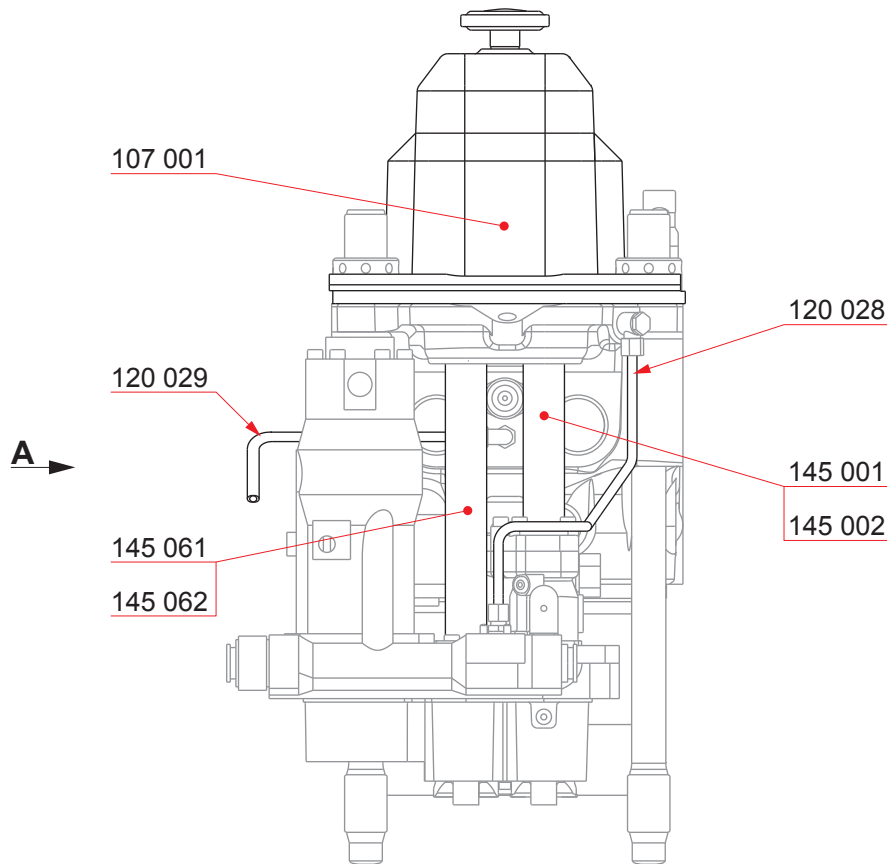
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Updated: 21.11.2007

Flywheel connection

Part No. and Description	Quantity in pieces			
	4L	6L	8L	9L
114 004 Screw	4	3	-	-
114 006 Washer	4	3	-	-
114 021 Screw	4	5	8	8

Cylinder head equipment

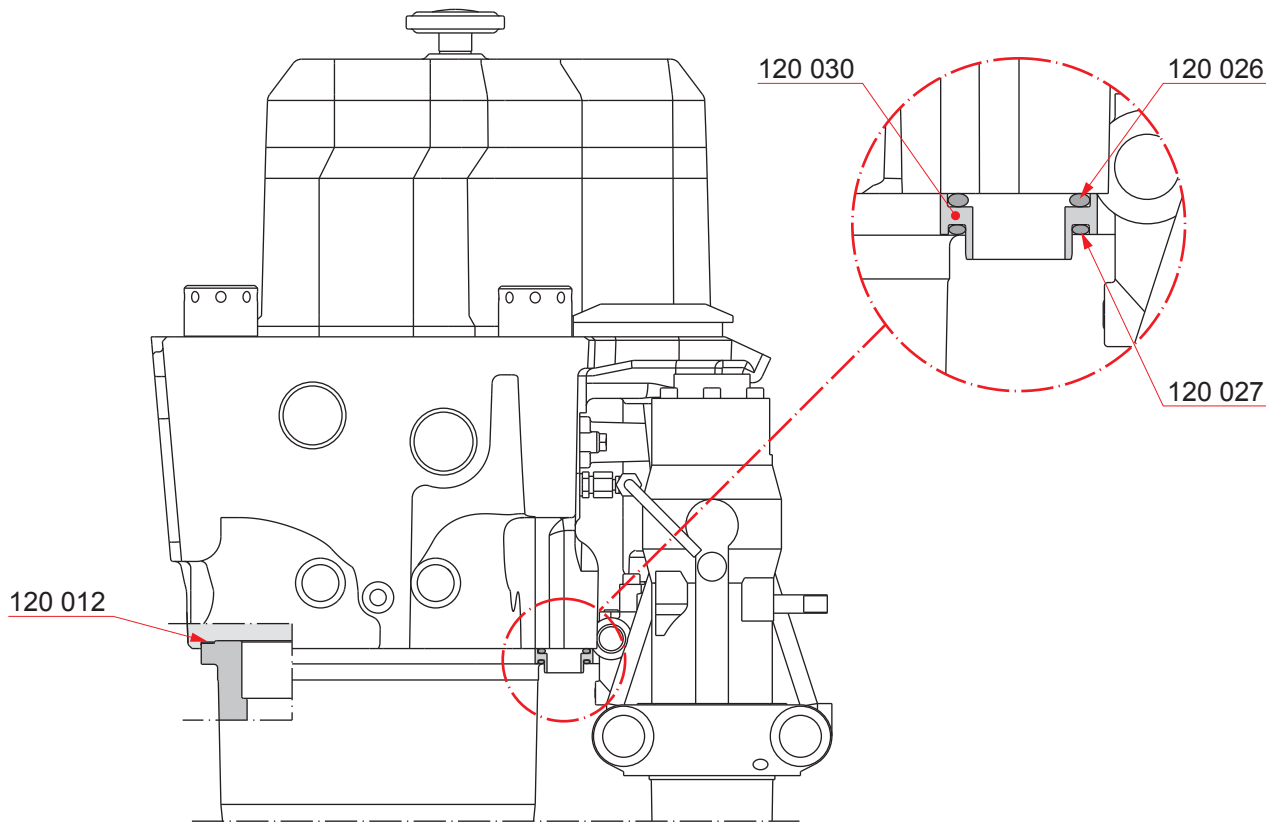


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 001	Cover for cyl. head	1	3.6
120 028	Pipe	1	-
120 029	Pipe	1	-
145 001	Push rod	1	0.8
145 002	Protecting pipe	1	0.4
145 061	Protecting pipe	1	0.6
145 062	Push rod	1	1.2

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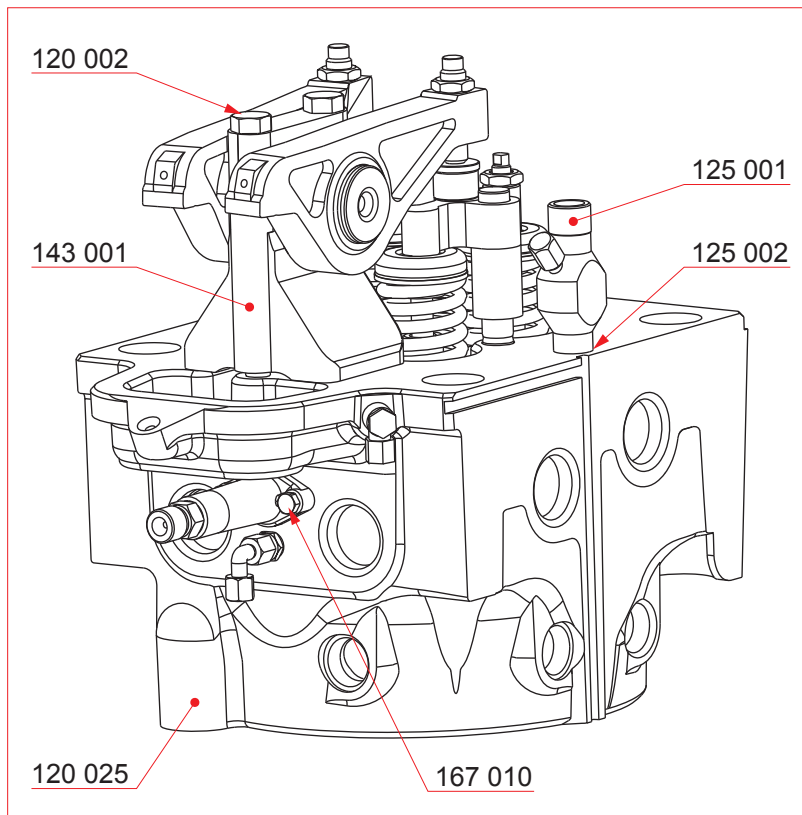
Cylinder head equipment

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 012	Gasket	1	-
120 026	O-ring	1	-
120 027	O-ring	1	-
120 030	Connection piece	1	-

Cylinder head, complete



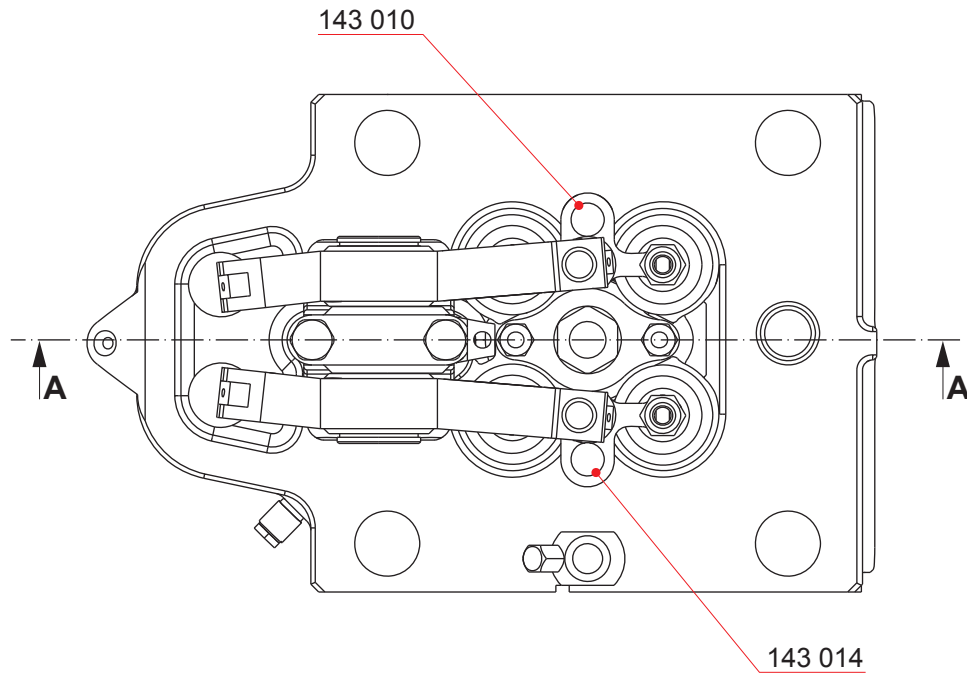
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 001	Cylinder head, complete	1	-
120 002	Screw	2	-
120 025	Cylinder head with inlet and exhaust valve	1	-
125 001	Indicator valve (2)	1	-
125 002	Sealing ring selection (2)	1	-
143 001	Rocker arms with bracket (1)	1	-
167 010	Screw	2	-

NOTE! (1) See section 143-

NOTE! (2) See section 125-

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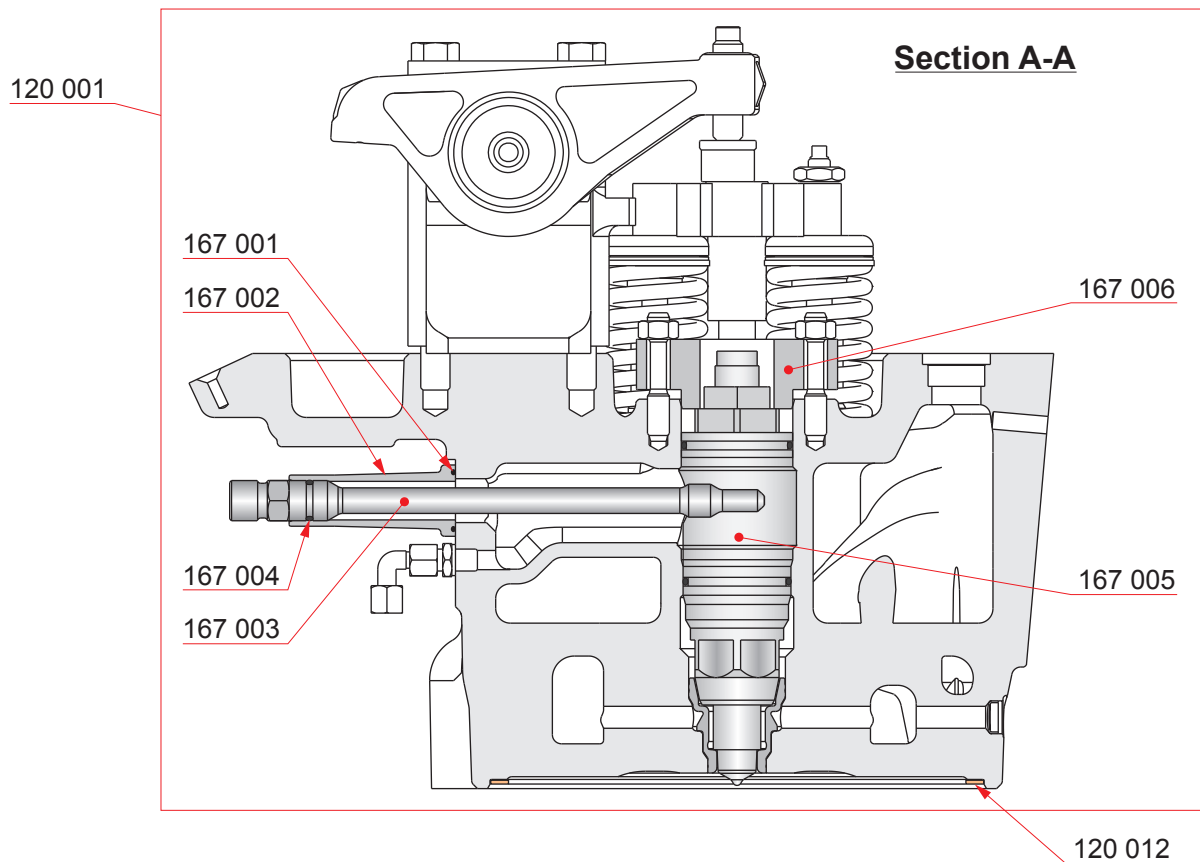
Cylinder head, complete



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 010	Yoke for exhaust valve, compl. (1)	1	-
143 014	Yoke for inlet valve, compl. (1)	1	-

NOTE! (1) See section 143-

Cylinder head, complete



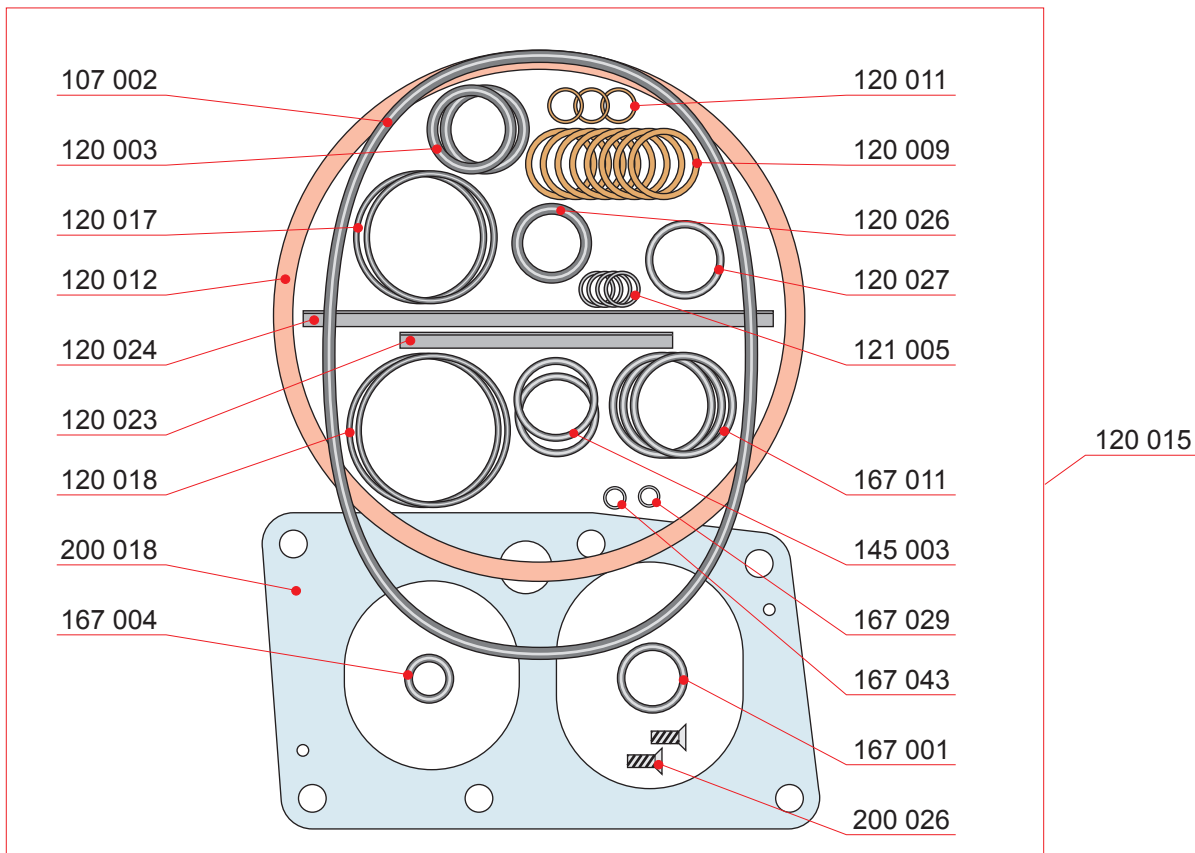
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 001	Cylinder head, complete	1	-
167 001	O-ring	1	-
167 002	Protecting sleeve	1	-
167 003	Connection piece	1	-
167 004	O-ring	1	-
167 005	Injection valve (1)	1	-
167 006	Yoke	1	-
120 012	Gasket	1	-

NOTE! (1) See section 167-

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Updated: 01.07.2010

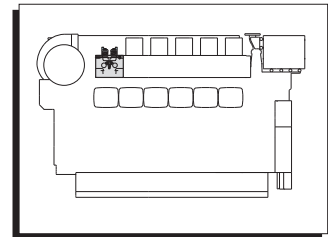
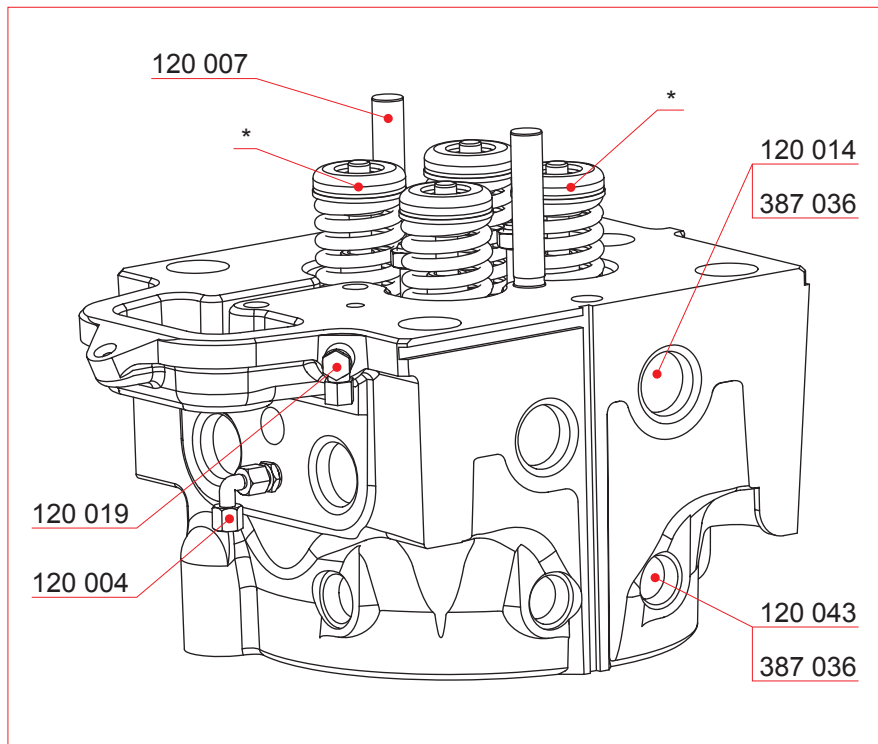
Cylinder head, complete

Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 015	Sealing set for cylinder head overhaul	1	-
107 002	Hose gasket for cylinder head cover	1	-
120 003	O-ring	2	-
120 009	Sealing ring *)	8	-
120 011	Sealing ring *)	3	-
120 012	Gasket	1	-
120 017	O-ring	2	-
120 018	O-ring **)	2	-
120 023	Gasket	1	-
120 024	Gasket	1	-
120 026	O-ring	1	-
120 027	O-ring	1	-
121 005	O-ring	4	-
145 003	O-ring	2	-
167 001	O-ring	1	-
167 004	O-ring	1	-
167 011	O-ring	3	-
167 029	O-ring	1	-
167 043	O-ring	1	-
200 018	Gasket	1	-
200 026	Rivet	2	-

NOTE! *) If applicable.

NOTE! **) Used when exhaust seat equipped with two O-rings.

Cylinder head, subassembly

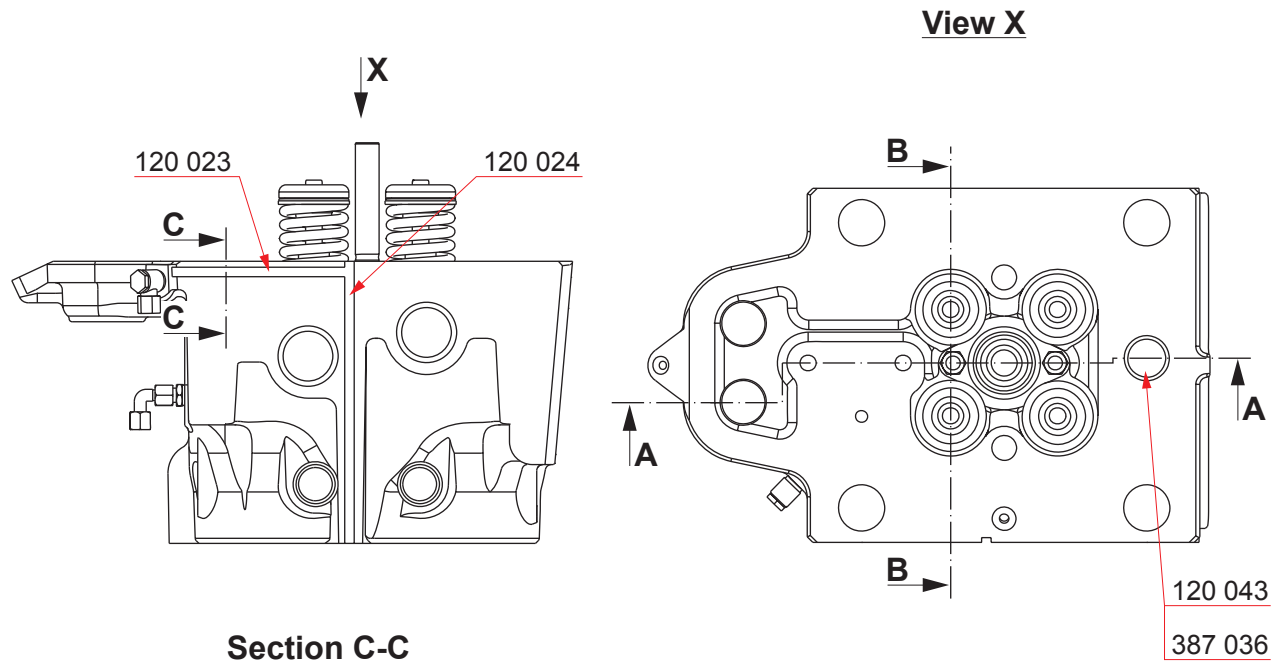


Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 025	Cylinder head with inlet and exhaust valve	1	-
120 004	Pipe union	1	-
120 007	Yoke pin	2	0.3
120 014	Sealing push-in cap	6	-
120 019	Pipe union	1	-
120 043	Sealing push-in cap	8	-
387 036	Glue compound	1	-

NOTE! *) See section 121-

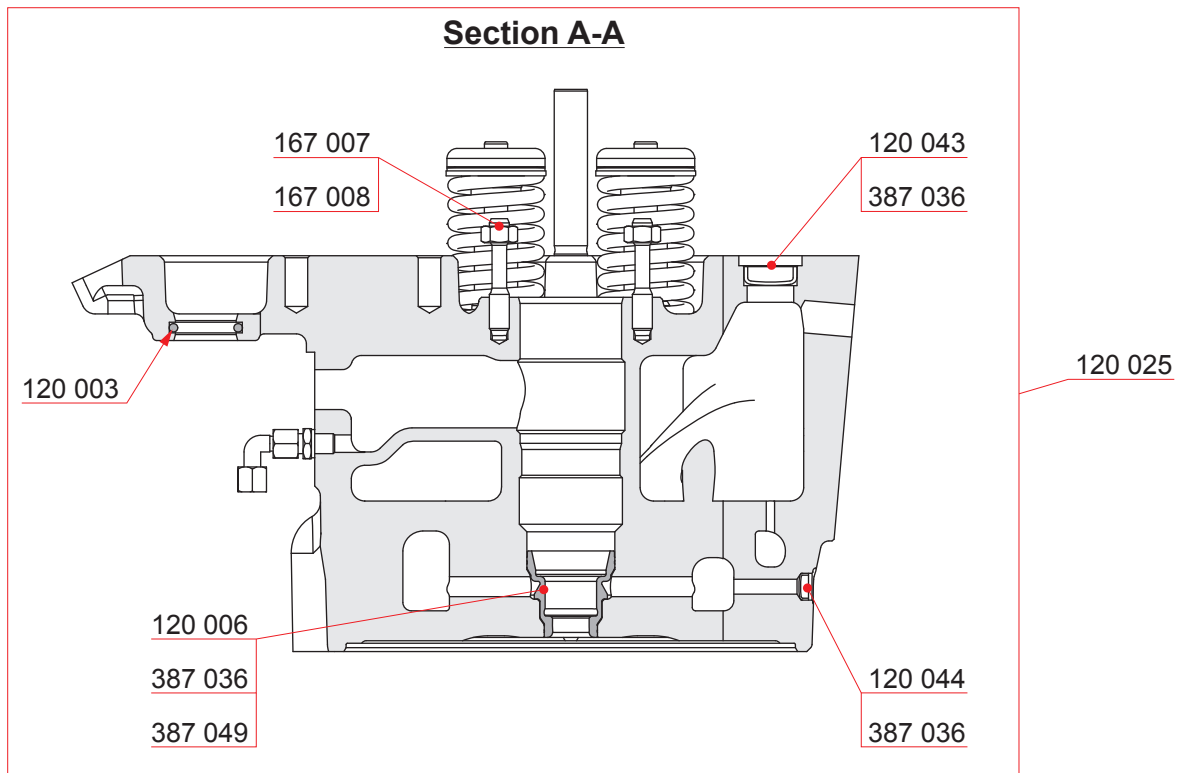
Edition: A
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 Updated: 05.08.2010

Cylinder head, subassembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 023	Gasket	1	-
120 024	Gasket	1	-
120 043	Sealing push-in cap	8	-
387 036	Glue compound	1	-
387 061	Glue compound	1	-

Cylinder head, subassembly

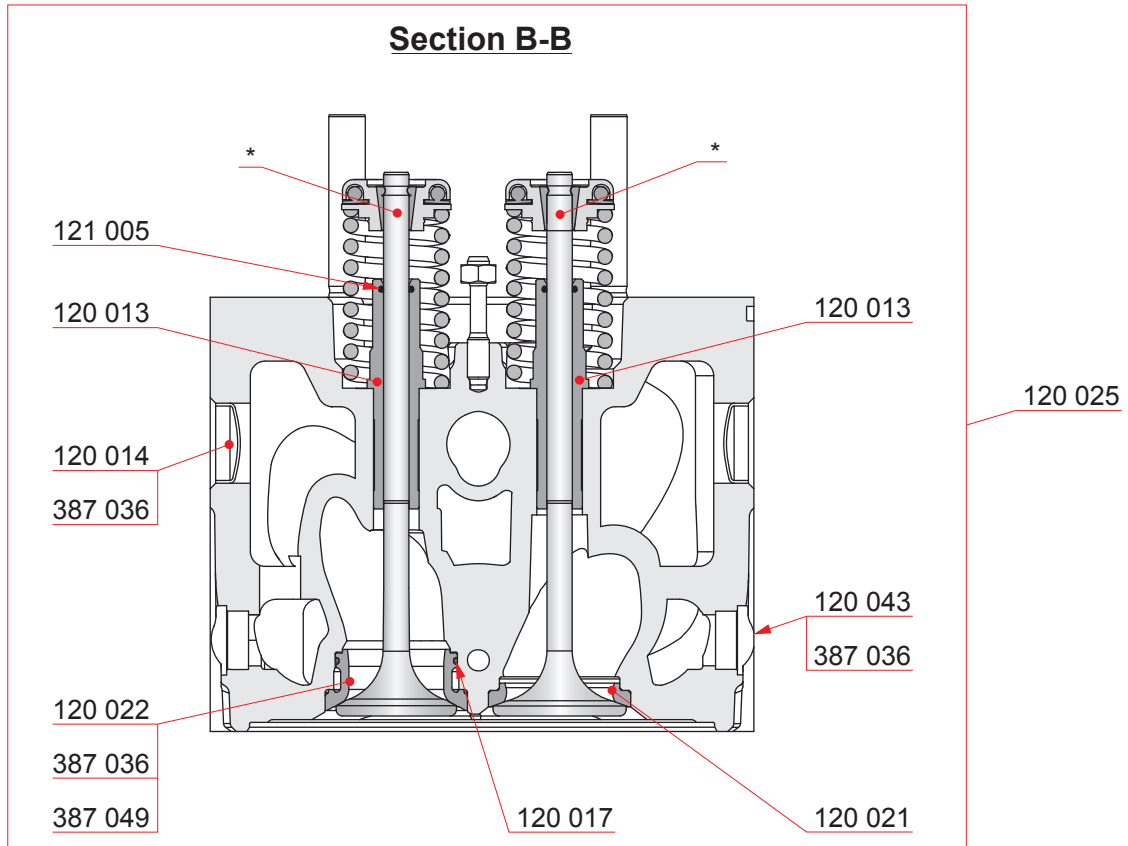


Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 025	Cylinder head with inlet and exhaust valve	1	-
120 003	O-ring	2	-
120 006	Sleeve	1	0.2
120 043	Sealing push-in cap	8	-
120 044	Sealing push-in cap	2	-
167 007	Nut	2	-
167 008	Screw	2	-
387 036	Glue compound	1	-
387 049	Cleaner	1	-

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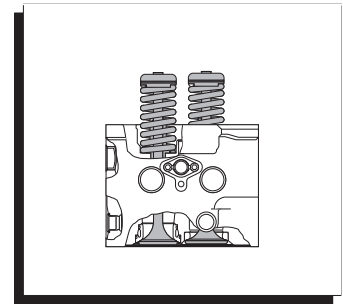
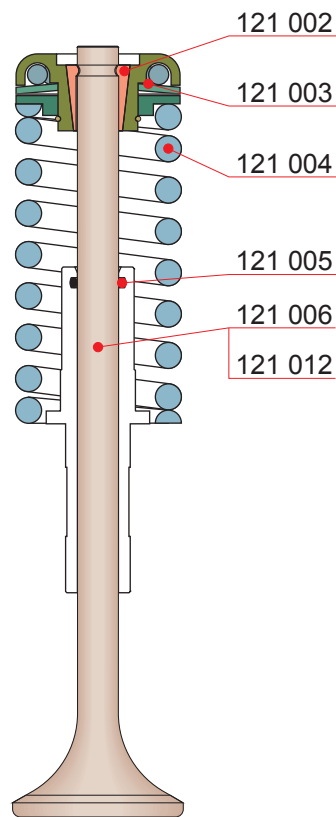
Updated: 05.08.2010

Cylinder head, subassembly

Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 025	Cylinder head with inlet and exhaust valve	1	-
120 013	Valve guide	4	0.3
120 014	Sealing push-in cap	6	-
120 017	O-ring	2	-
120 021	Seat ring for inlet valve	2	0.1
120 022	Seat ring for outlet valve	2	0.3
120 043	Sealing push-in cap	8	-
121 005	O-ring	4	-
387 036	Glue compound	1	-
387 049	Cleaner	1	-

NOTE! *) See section 121-

Valve assembly

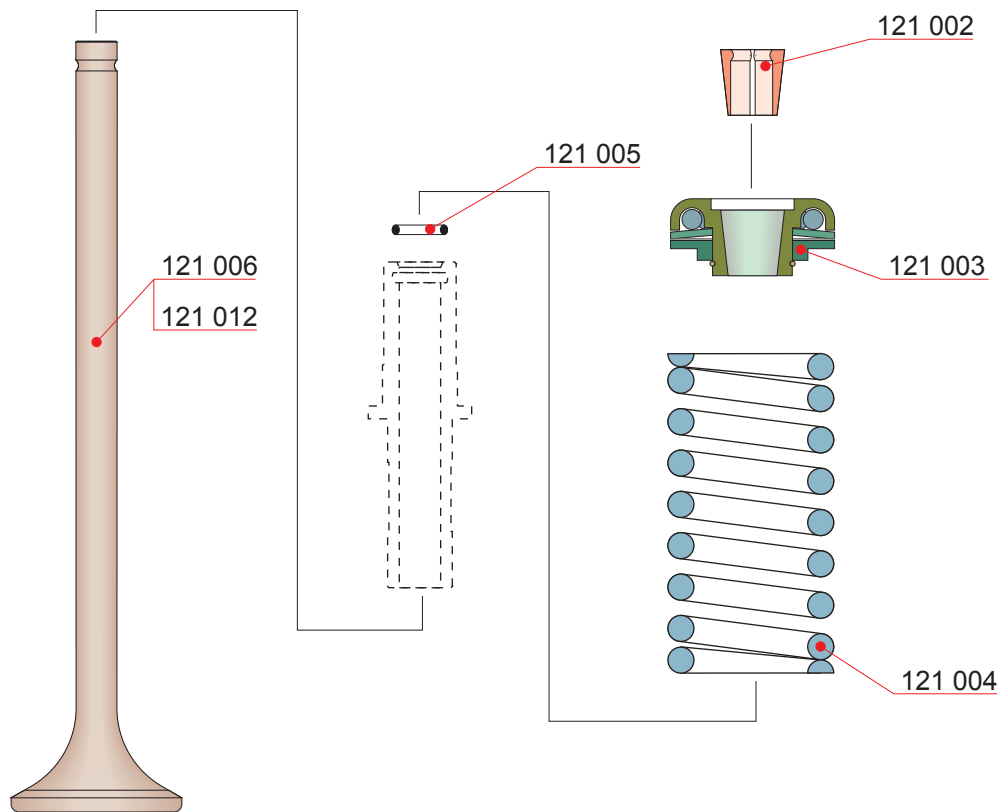


Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 002	Valve cotter pair	4	-
121 003	Rotocap	4	-
121 004	Spring	4	-
121 005	O-ring	4	-
121 006	Exhaust valve	2	-
121 012	Inlet valve	2	-

Edition: C

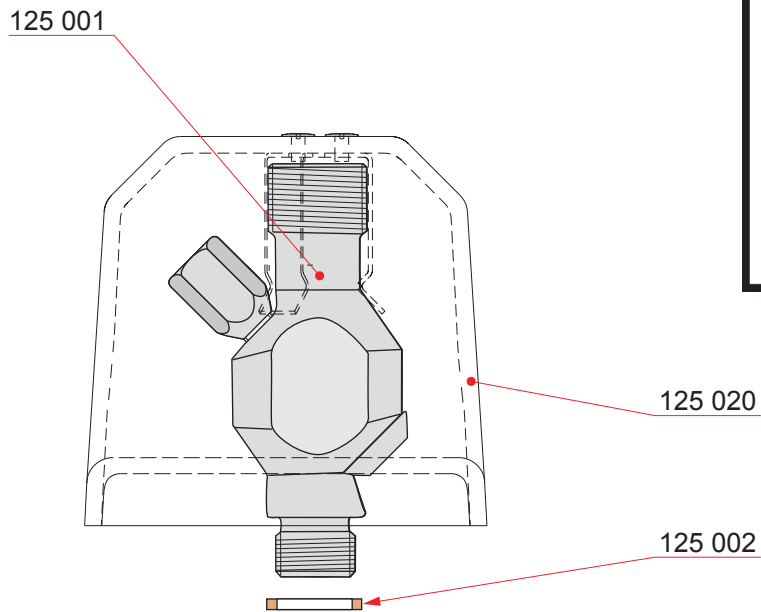
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Updated: 19.02.2008

Valve assembly

Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 002	Valve cotter pair	4	-
121 003	Rotocap	4	-
121 004	Spring	4	-
121 005	O-ring	4	-
121 006	Exhaust valve	2	-
121 012	Inlet valve	2	-

Indicator valve

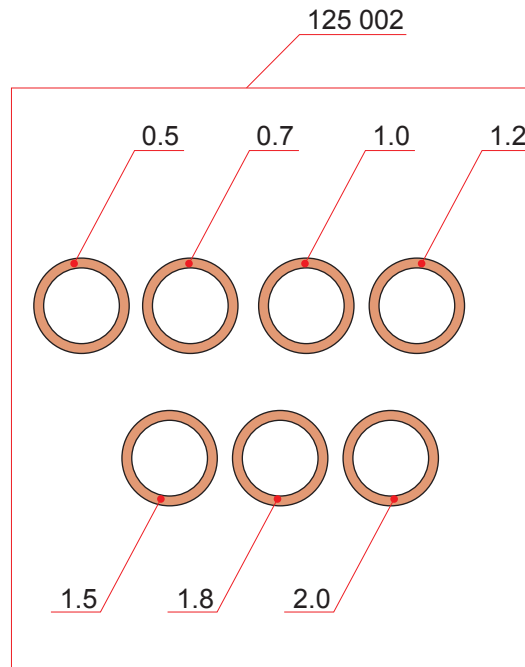


Part No.	Description	Qty [Pcs]	Wt. [Kg]
125 001	Indicator valve	1	-
125 002	Sealing ring selection (1)	1	-
125 020	Heat shield	1	-

NOTE! (1) See page 2.

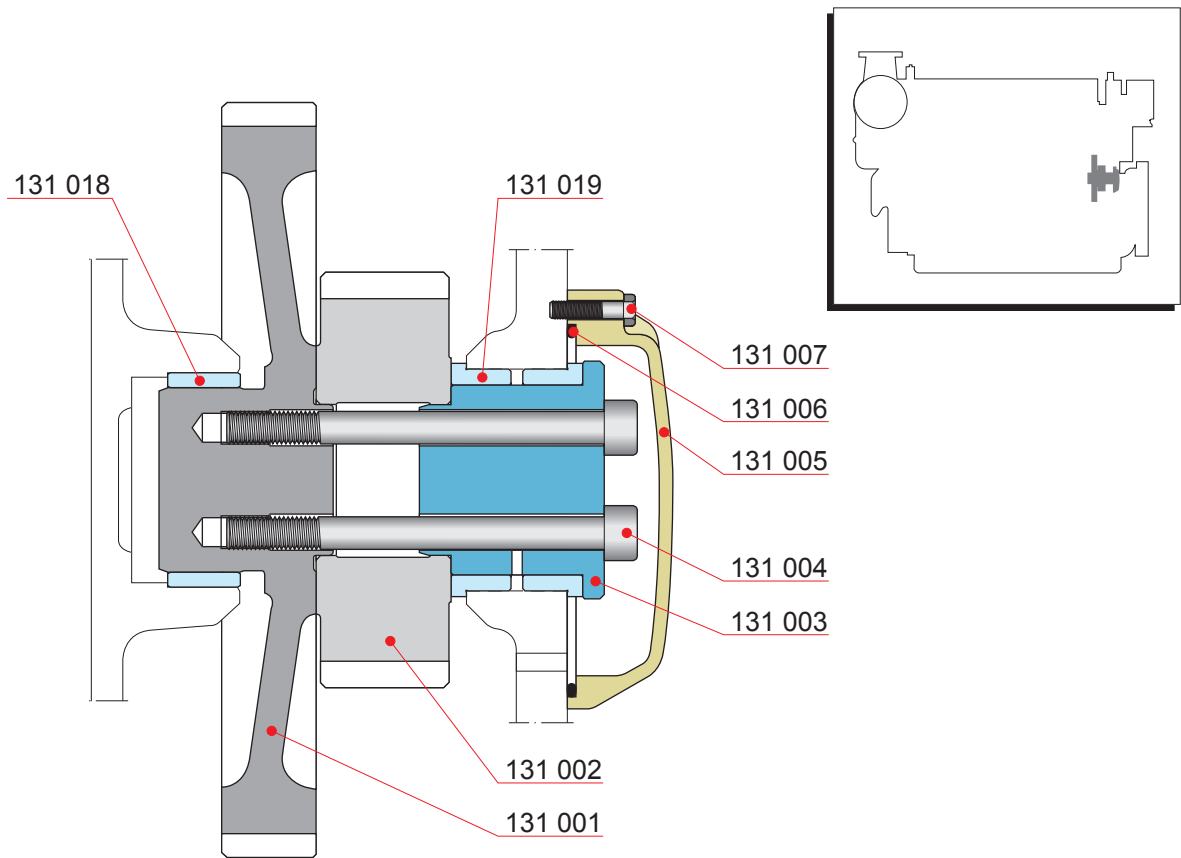
Edition: E
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Updated: 01.09.2009

Indicator valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
125 002	Sealing ring selection	1	-

Intermediate gears for camshaft drive



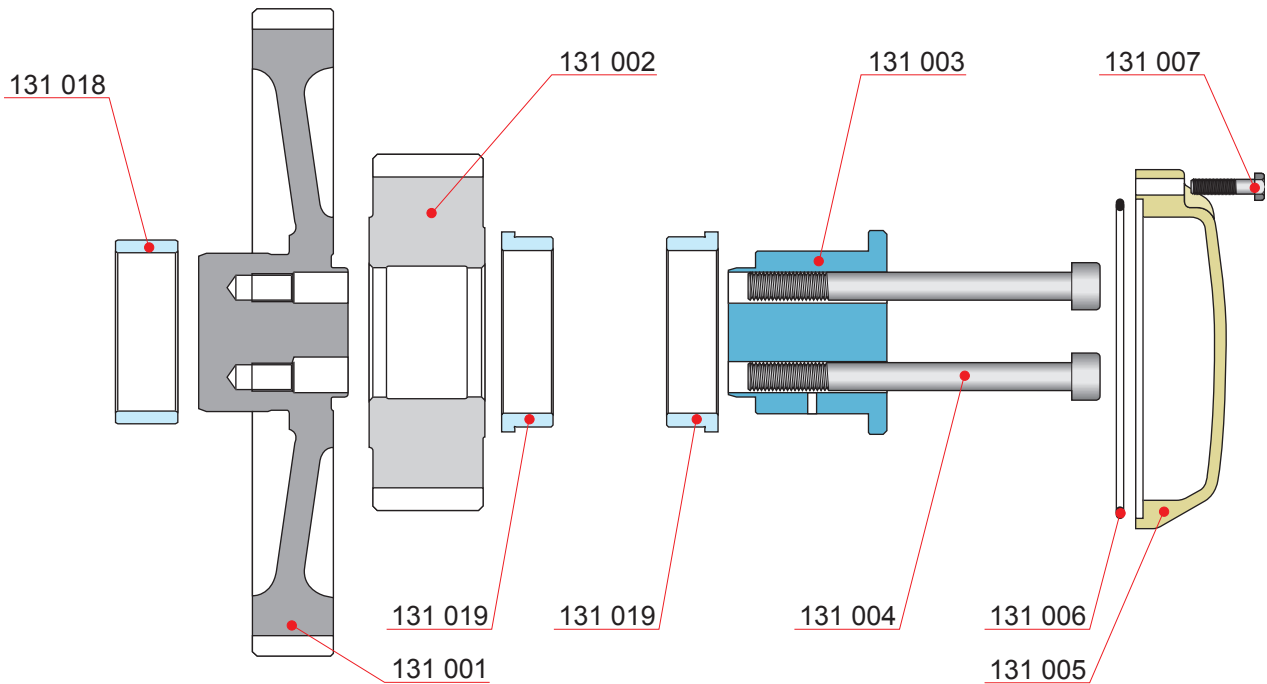
Part No.	Description	Qty [Pcs]	Wt. [Kg]
131 001	Bigger intermediate gear	1	27.4
131 002	Smaller intermediate gear	1	11.3
131 003	Bearing piece	1	4.4
131 004	Screw	5	0.5
131 005	Cover for intermediate gear	1	1.0
131 006	O-ring	1	-
131 007	Screw	4	-
131 018	Bearing bush	1	-
131 019	Bearing bush	2	-

Edition: B

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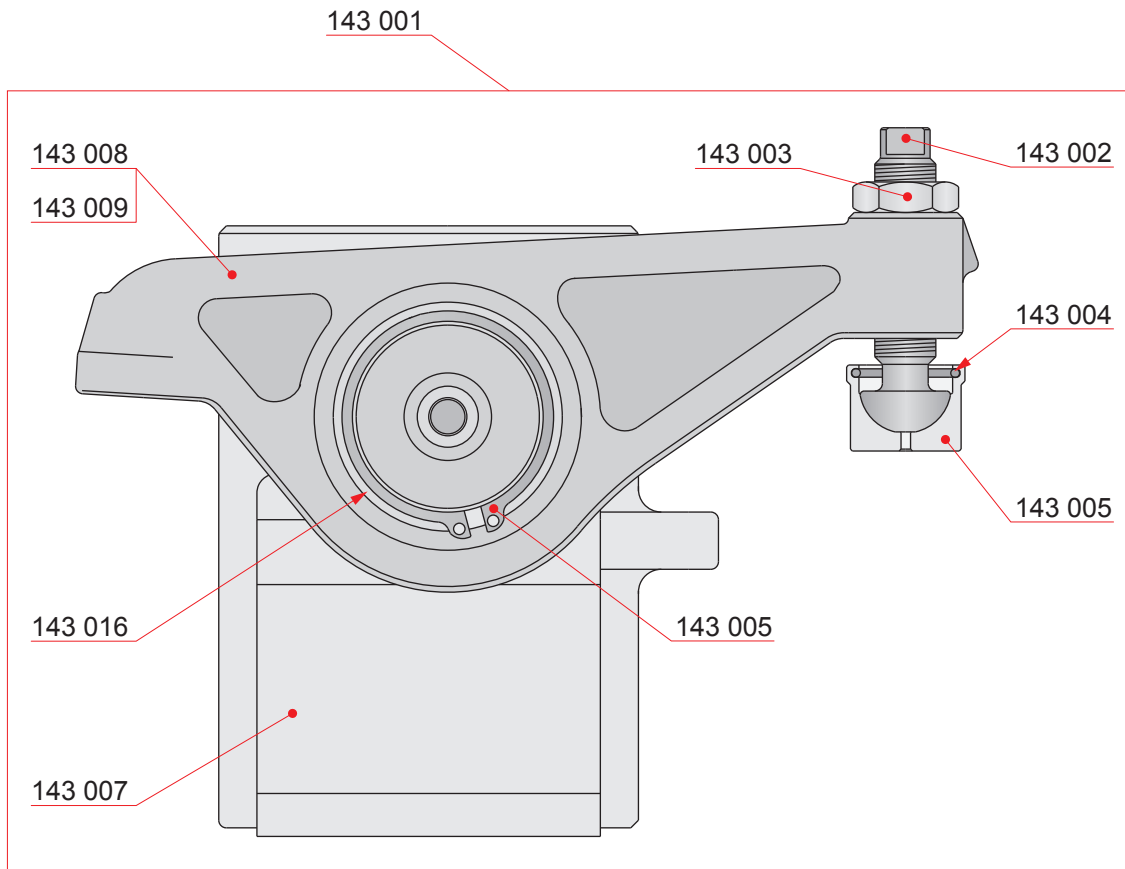
Updated: 26.01.2012

Intermediate gears for camshaft drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
131 001	Bigger intermediate gear	1	27.4
131 002	Smaller intermediate gear	1	11.3
131 003	Bearing piece	1	4.4
131 004	Screw	5	0.5
131 005	Cover for intermediate gear	1	1.0
131 006	O-ring	1	-
131 007	Screw	4	-
131 018	Bearing bush	1	-
131 019	Bearing bush	2	-

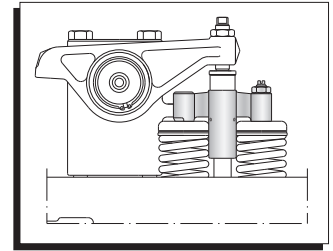
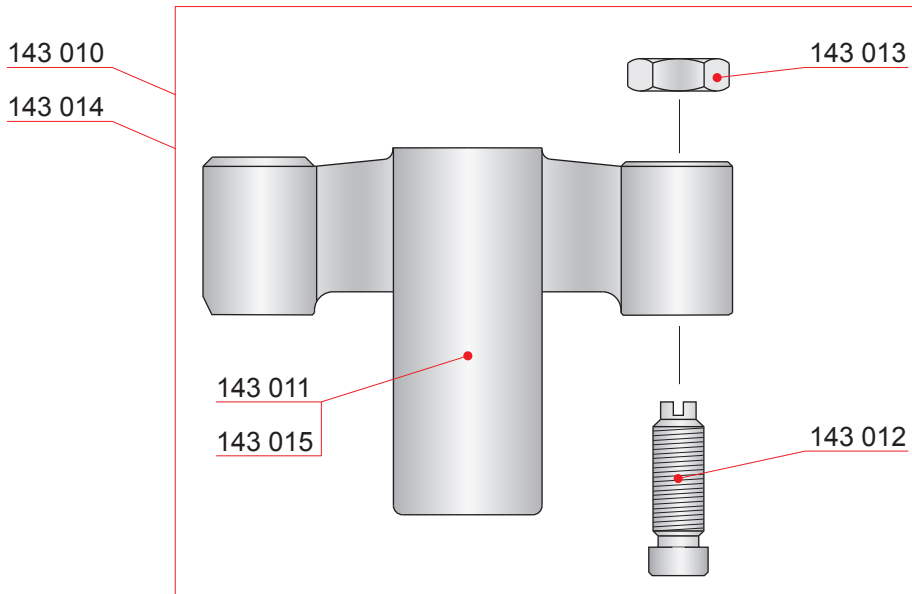
Rocker arms and bearing bracket



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 001	Rocker arms with bracket	1	9.8
143 002	Adjusting screw	2	-
143 003	Nut	2	-
143 004	Snap ring	2	-
143 005	Ball socket seat	2	-
143 006	Retainer ring	2	-
143 007	Bearing bracket	1	5.6
143 008	Rocker arm for exhaust valve	1	1.9
143 009	Rocker arm for inlet valve	1	1.8
143 016	Bearing bush	1	0.2

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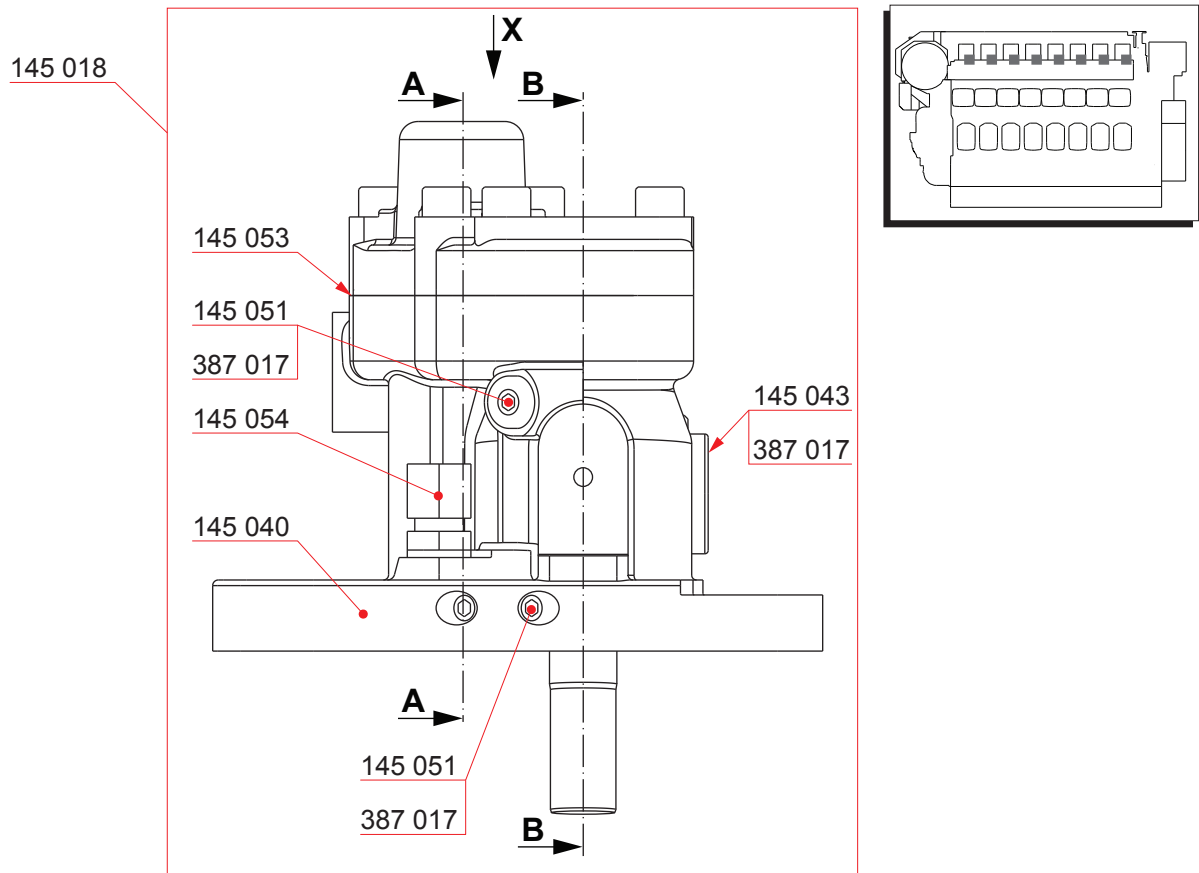
Yokes for inlet and exhaust valves



Part No.	Description	Qty [Pcs]	Wt. [Kg]
143 010	Yoke for exhaust valve, compl.	1	0.8
143 011	Yoke for exhaust valve	1	0.8
143 012	Adjustable pin	1	-
143 013	Nut	1	-
143 014	Yoke for inlet valve, compl.	1	0.8
143 012	Adjustable pin	1	-
143 013	Nut	1	-
143 015	Yoke for inlet valve	1	0.8

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Housing for VIC

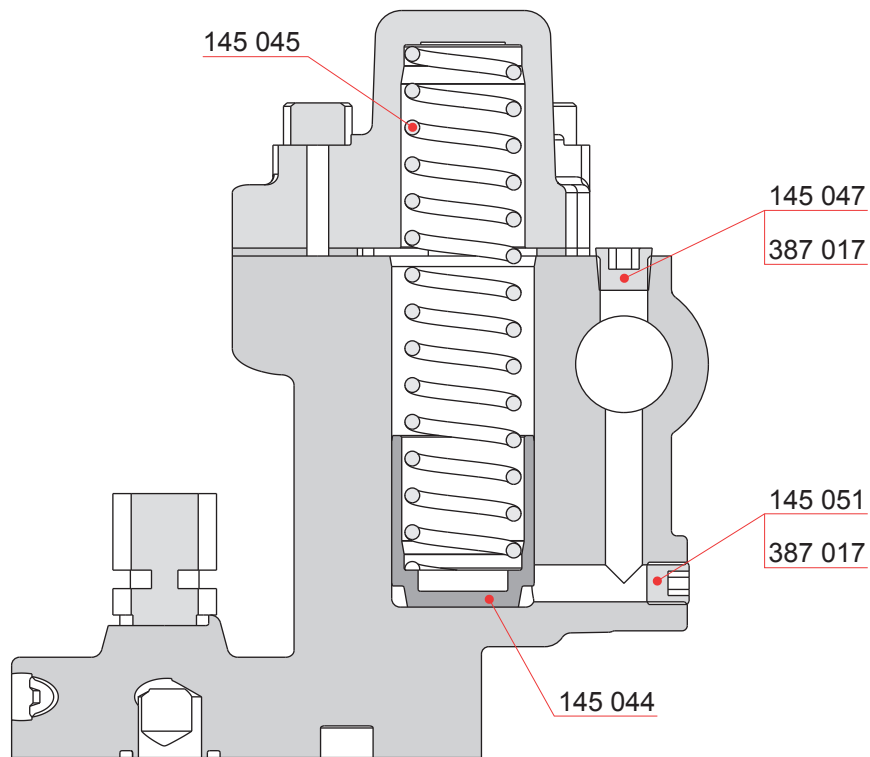


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 018	Housing	1	5.5
145 040	Housing	1	4.0
145 043	Plug	1	-
145 051	Plug	5	-
145 053	Gasket	1	0.1
145 054	Pipe union	1	-
387 017	Glue compound	1	-

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 Updated: 11.03.2010

Housing for VIC

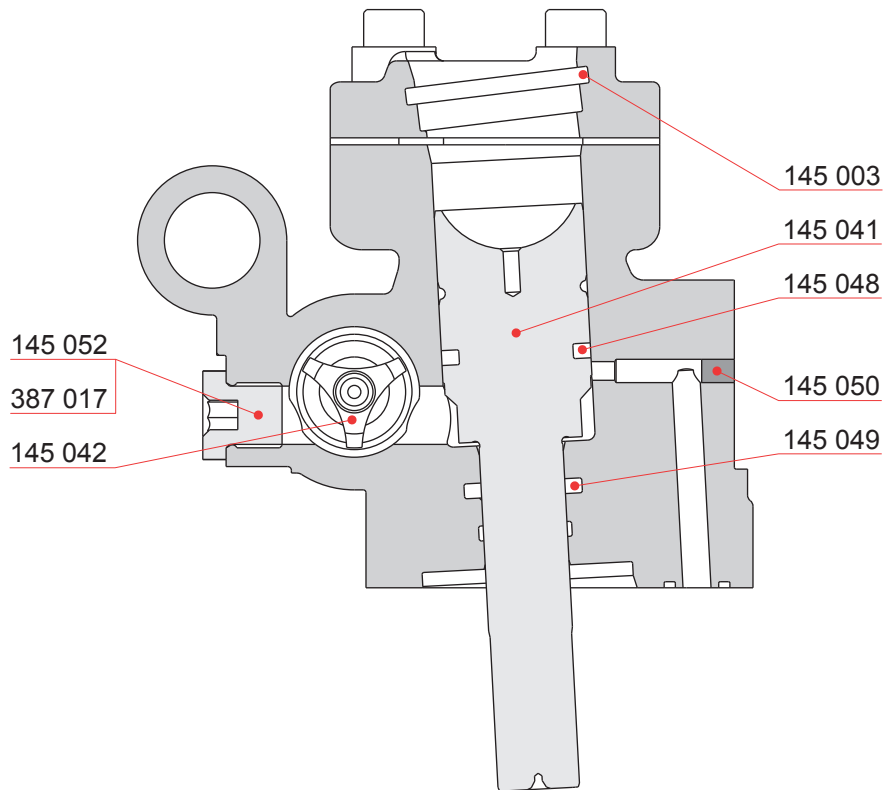
Section A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 044	Piston	1	-
145 045	Spring	1	-
145 047	Plug	1	-
145 051	Plug	5	-
387 017	Glue compound	1	-

Housing for VIC

Section B-B

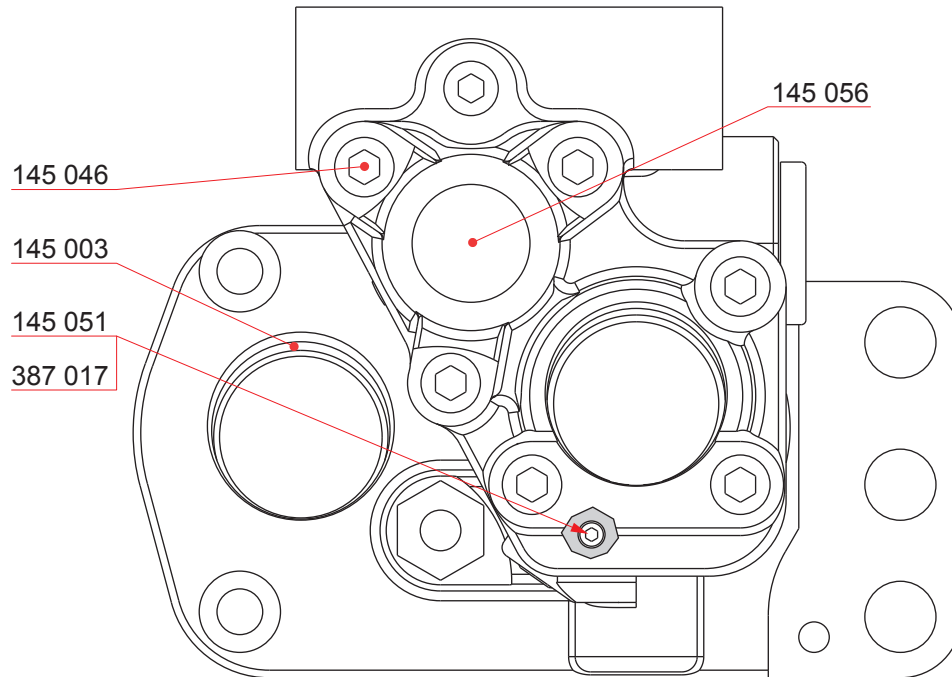


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 003	O-ring	2	-
145 041	Piston	1	-
145 042	Non-return valve	1	0.1
145 048	Sealing ring	1	-
145 049	Sealing ring	1	-
145 050	Expander	1	-
145 052	Plug	1	-
387 017	Glue compound	1	-

Edition: B
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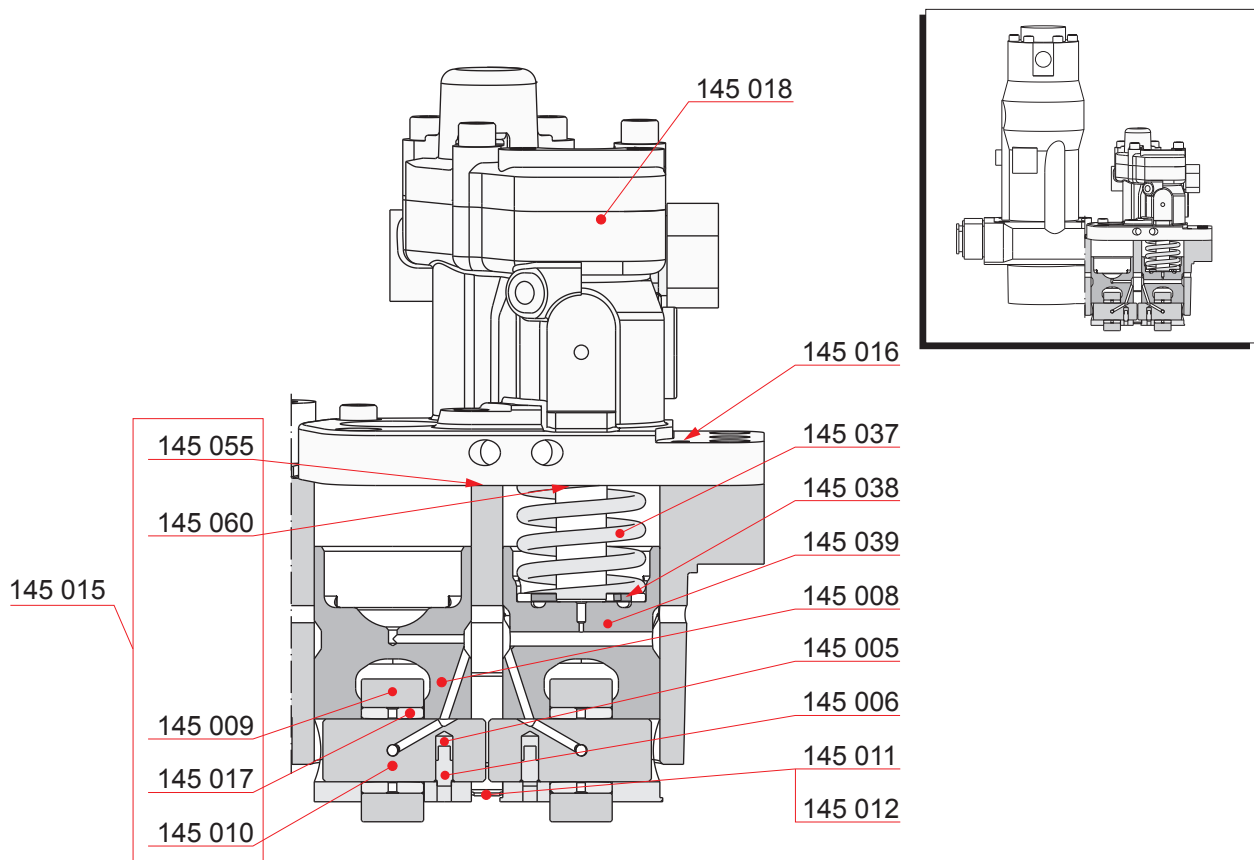
Housing for VIC

View X



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 003	O-ring	2	-
145 046	Screw	6	-
145 051	Plug	5	-
145 056	Cover	1	0.6
387 017	Glue compound	1	-

Fuel oil system in Hot-box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 005	Spring	2	-
145 006	Pin	2	-
145 008	Valve tappet	1	0.6
145 009	Tappet roller (1)	2	-
145 010	Roller pin (1)	2	0.2
145 011	Securing plate	1	-
145 012	Screw	2	-
145 015	Valve tappet roller kit (2)	1	0.4
145 016	Pin	4	-
145 017	Bearing bush	2	-
145 018	Housing (3)		-
145 037	Spring	1	-
145 038	Washer	1	-
145 039	Valve tappet	1	0.6
145 055	O-ring	1	-
145 060	O-ring	1	-

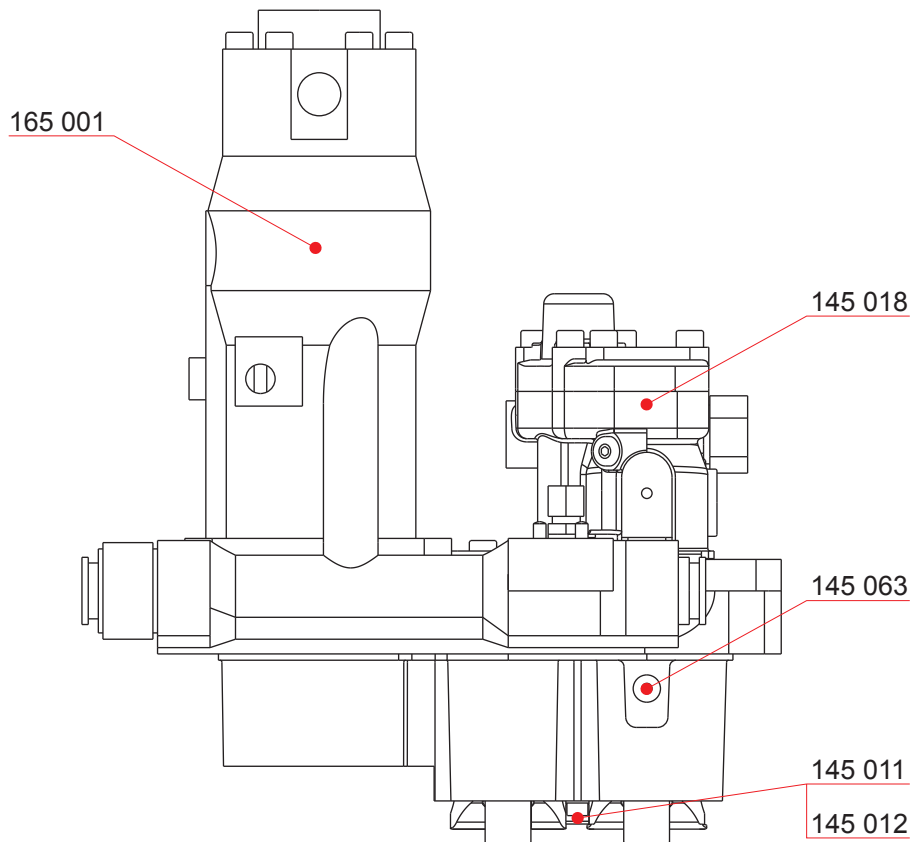
NOTE! (1) Parts included in kit 145 015 and are not delivered separately!

NOTE! (2) See page 4.

NOTE! (3) See own section 145-

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 Updated: 28.09.2009

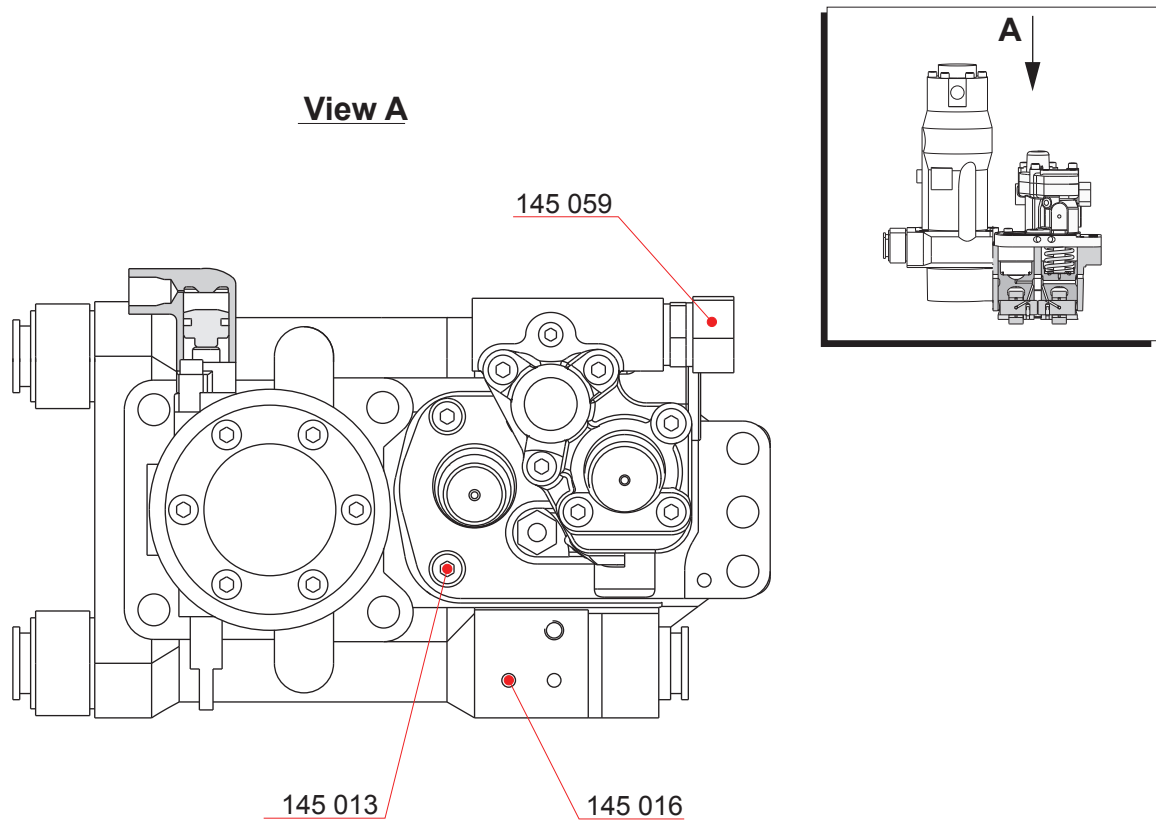
Fuel oil system in Hot-box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 011	Securing plate	1	-
145 012	Screw	2	-
145 018	Housing (3)	-	-
145 063	Expander	1	-
165 001	Injection pump	-	-

NOTE! (3) See own section 145-

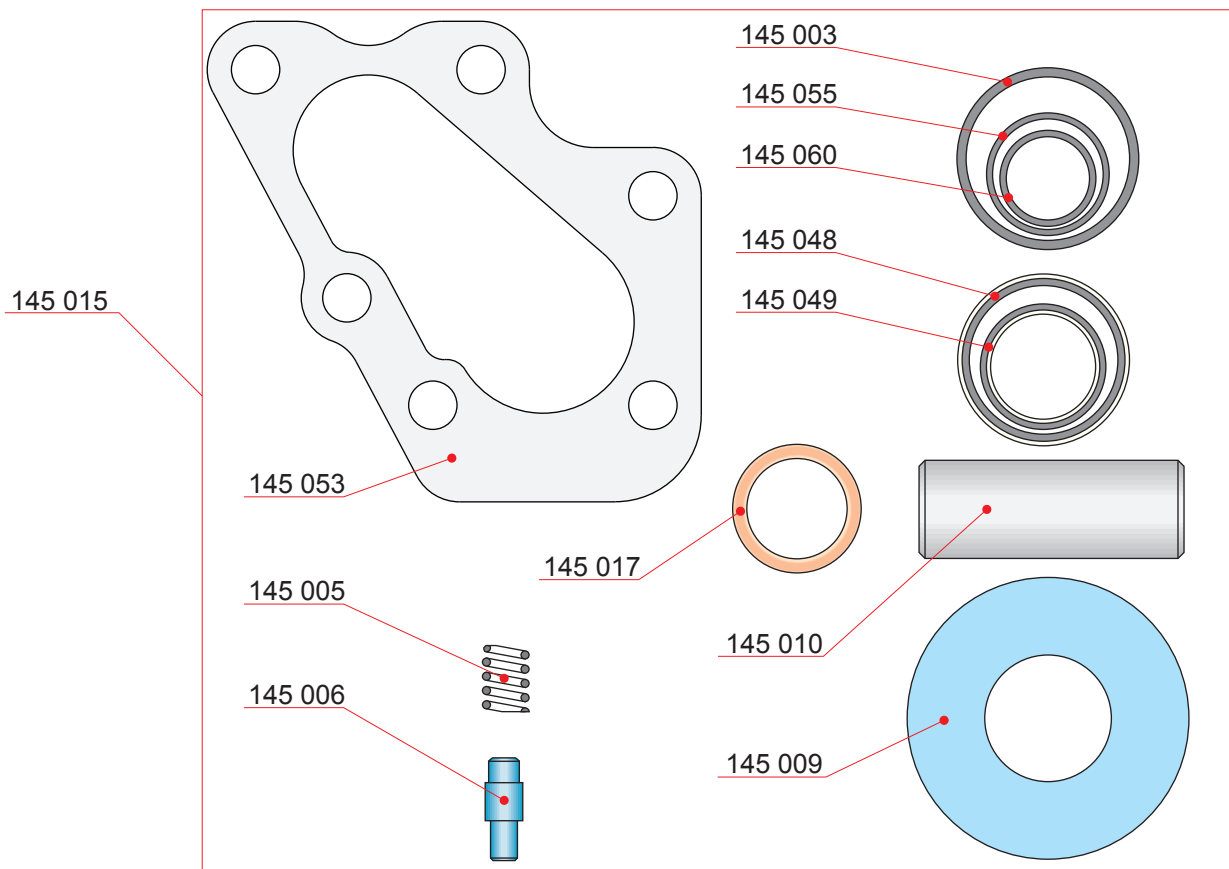
Fuel oil system in Hot-box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 013	Screw	2	-
145 016	Pin	4	-
145 059	Pipe union	1	0.1

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 Updated: 28.09.2009

Fuel oil system in Hot-box

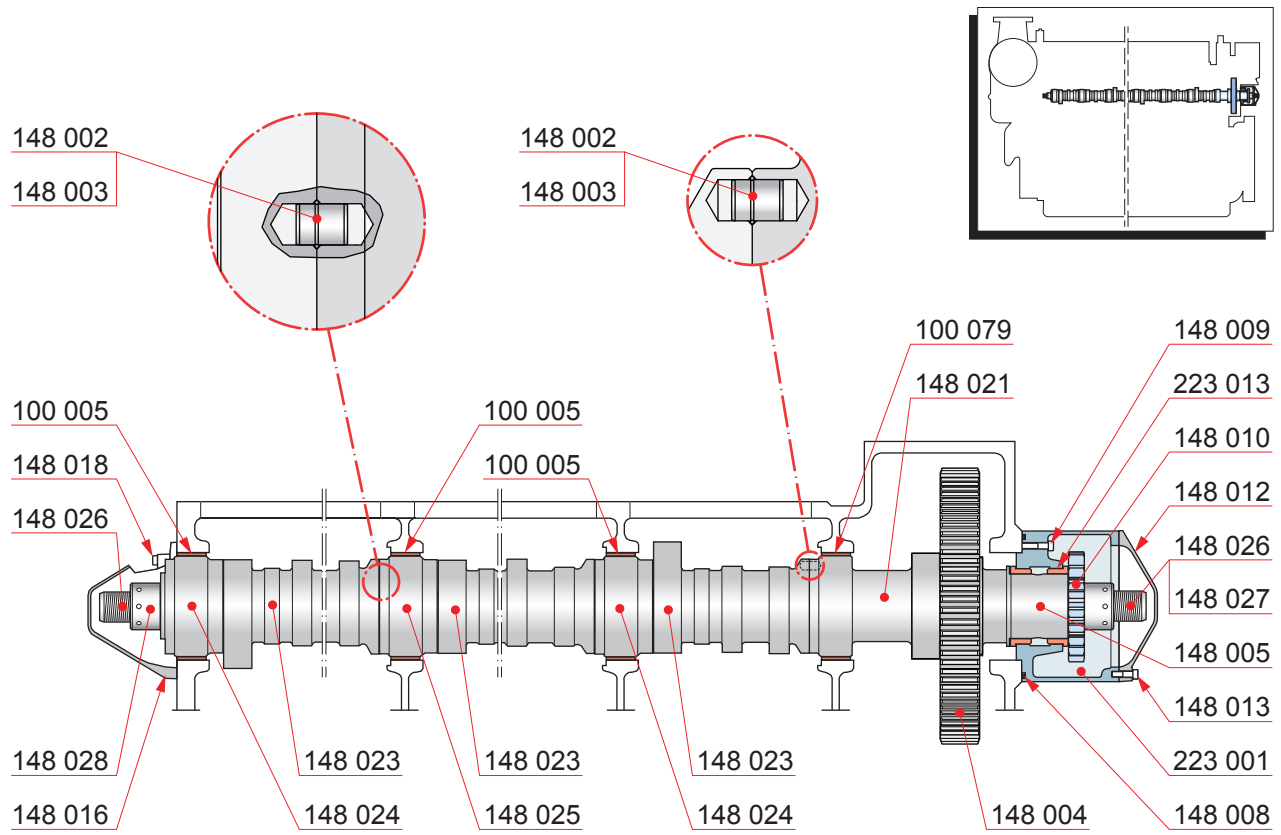


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 015	Valve tappet roller kit (2)	1	0.4
145 003	O-ring	2	-
145 005	Spring	2	-
145 006	Pin	2	-
145 009	Tappet roller (1)	2	-
145 010	Roller pin (1)	2	0.2
145 017	Bearing bush	2	-
145 048	Sealing ring	1	-
145 049	Sealing ring	1	-
145 053	Gasket	1	0.1
145 055	O-ring	1	-
145 060	O-ring	1	-

NOTE! (1) Parts included in kit 145 015 and are not delivered separately!

NOTE! (2) Only one kit required per cylinder

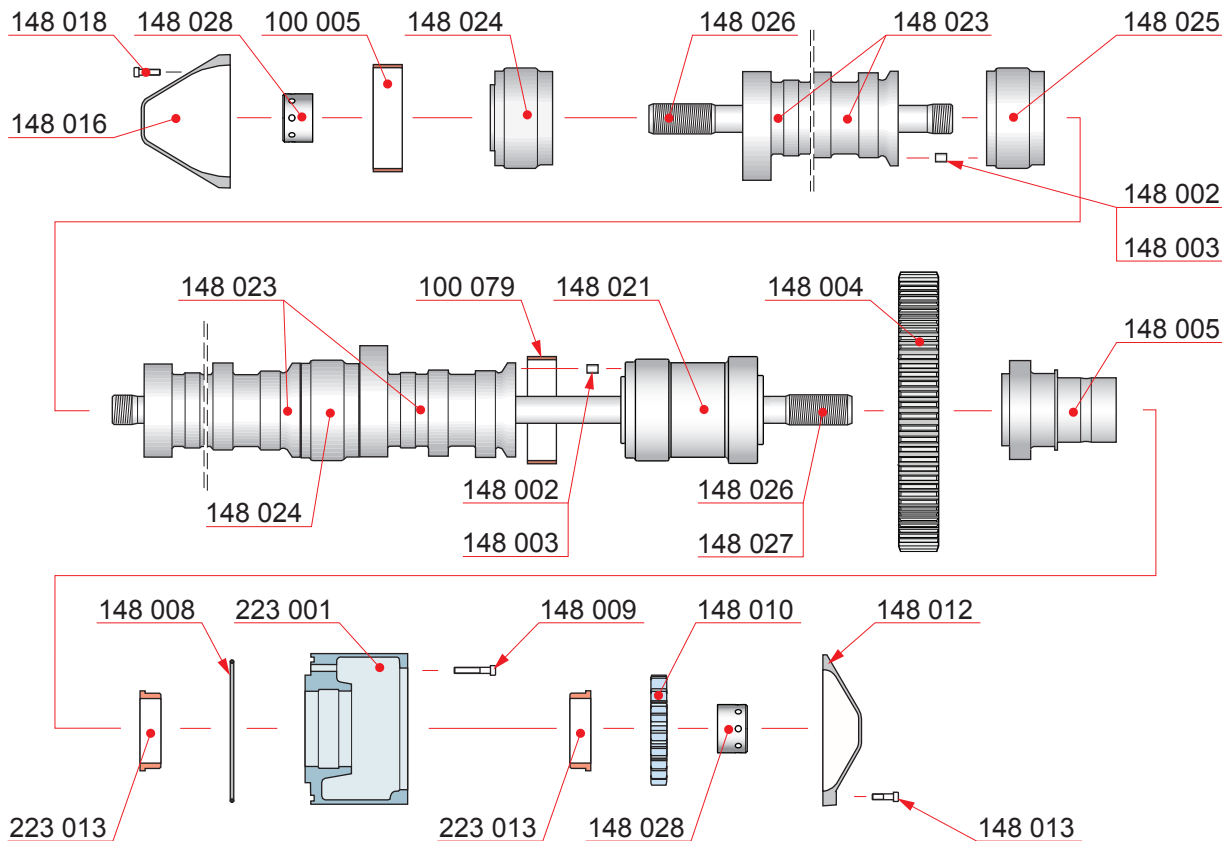
Camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 005	Camshaft bearing bush	*	-	NOTE!	(1) See section 223-		
100 079	Camshaft bearing bush	1	-	NOTE!	* See page 3.		
148 002	Guide pin	*	-				
148 003	Snap ring	*	-				
148 004	Drive gear	1	25.4				
148 005	End piece	1	26.0				
148 008	O-ring	1	-				
148 009	Screw	8	-				
148 010	Gear	1	2.3				
148 012	Cover	1	0.7				
148 013	Screw	6	-				
148 016	Cover	1	1.2				
148 018	Screw	4	-				
148 021	Extension piece	1	16.0				
148 023	Camshaft piece	*	14.5				
148 024	Bearing piece	*	8.7				
148 025	Bearing piece	1	8.7				
148 026	Screw	*	9.2				
148 027	Screw	*	11.8				
148 028	Round nut	2	0.7				
223 001	Governor drive (1)	1	19.1				
223 013	Thrust bearing bush	2	0.5				

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Camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 005	Camshaft bearing bush	*	-	NOTE!	(1) See section 223-		
100 079	Camshaft bearing bush	1	-	NOTE!	* See page 3.		
148 002	Guide pin	*	-				
148 003	Snap ring	*	-				
148 004	Drive gear	1	25.4				
148 005	End piece	1	26.0				
148 008	O-ring	1	-				
148 009	Screw	8	-				
148 010	Gear	1	2.3				
148 012	Cover	1	0.7				
148 013	Screw	6	-				
148 016	Cover	1	1.2				
148 018	Screw	4	-				
148 021	Extension piece	1	16.0				
148 023	Camshaft piece	*	14.5				
148 024	Bearing piece	*	8.7				
148 025	Bearing piece	1	8.7				
148 026	Screw	*	9.2				
148 027	Screw	*	11.8				
148 028	Round nut	2	0.7				
223 001	Governor drive (1)	1	19.1				
223 013	Thrust bearing bush	2	0.5				

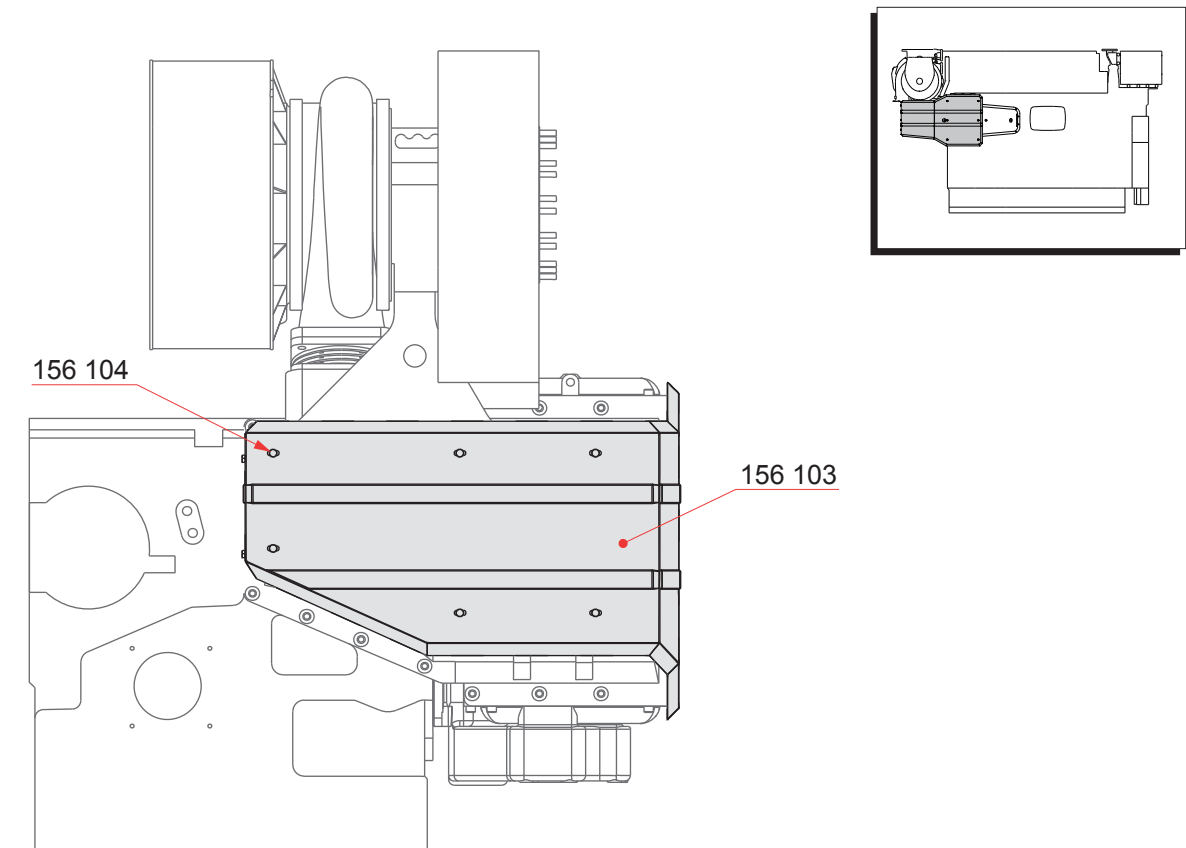
Camshaft

Quantity according to number of cylinders

Part No	Pieces			
	4L20	6L20	8L20	9L20
100 005	4	6	8	9
148 002	8	12	16	18
148 003	8	12	16	18
148 023	4	6	8	9
148 024	3	5	7	8
148 026	1	1	1	2
148 027	1	1	1	-

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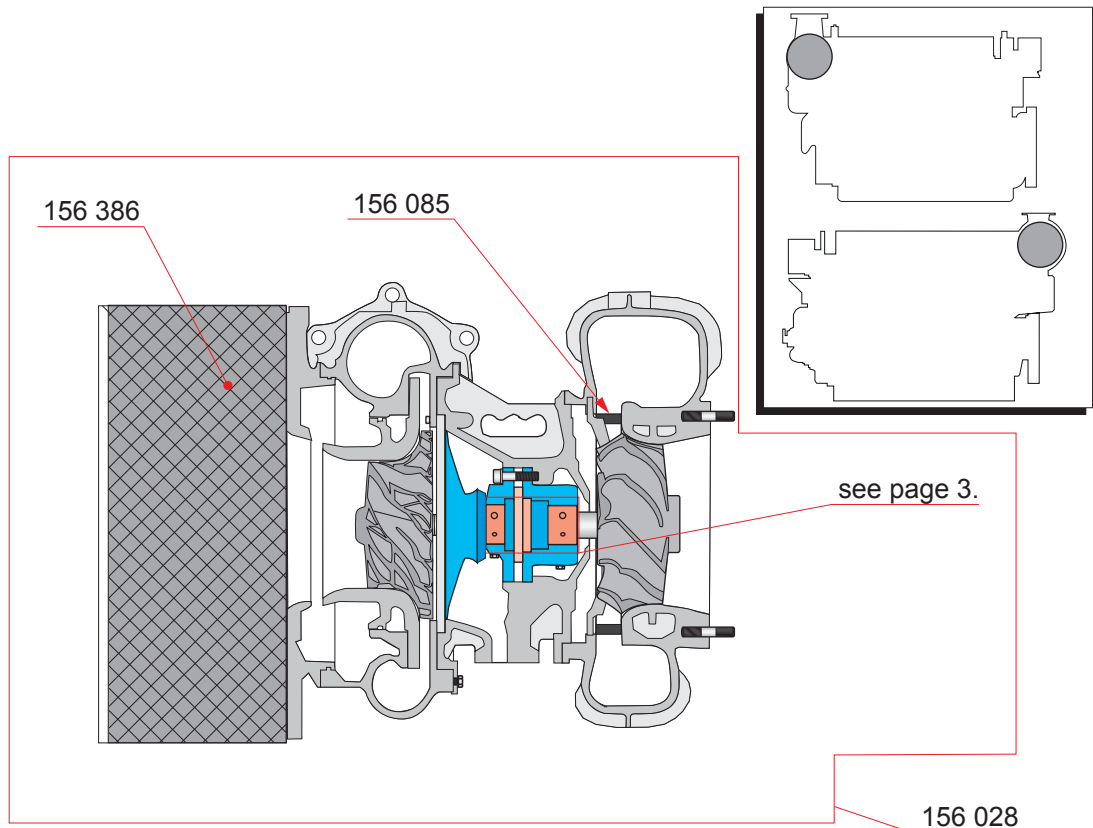
Heat shield



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 103	Shield plate	1	-
156 104	Screw	14	-

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Turbocharger

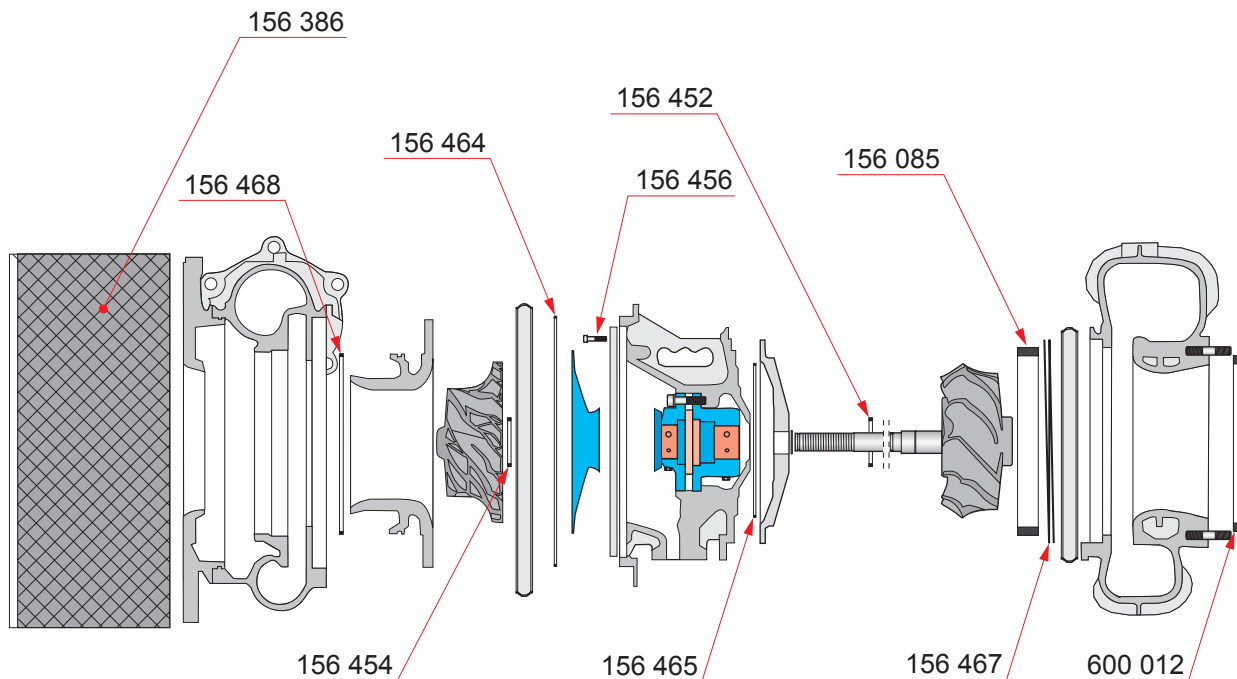


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 028	Turbocharger	1	350
156 085	Nozzle	1	3.6
156 386	Filter cartridge	1	0.2

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

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Updated: 23.01.2007

Turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 085	Nozzle	1	3.6
156 386	Filter cartridge	1	0.2
156 452	Piston ring (2)	1	-
156 454	Piston ring (2)	1	-
156 456	Screw (1) (2)	3	-
156 464	Packing ring (1)	1	-
156 465	Gasket (1)	1	-
156 467	Lamellar labyrinth seal (1)	1	-
156 468	Packing ring (1)	1	-
600 012	Sealing ring (1) (3)	1	-

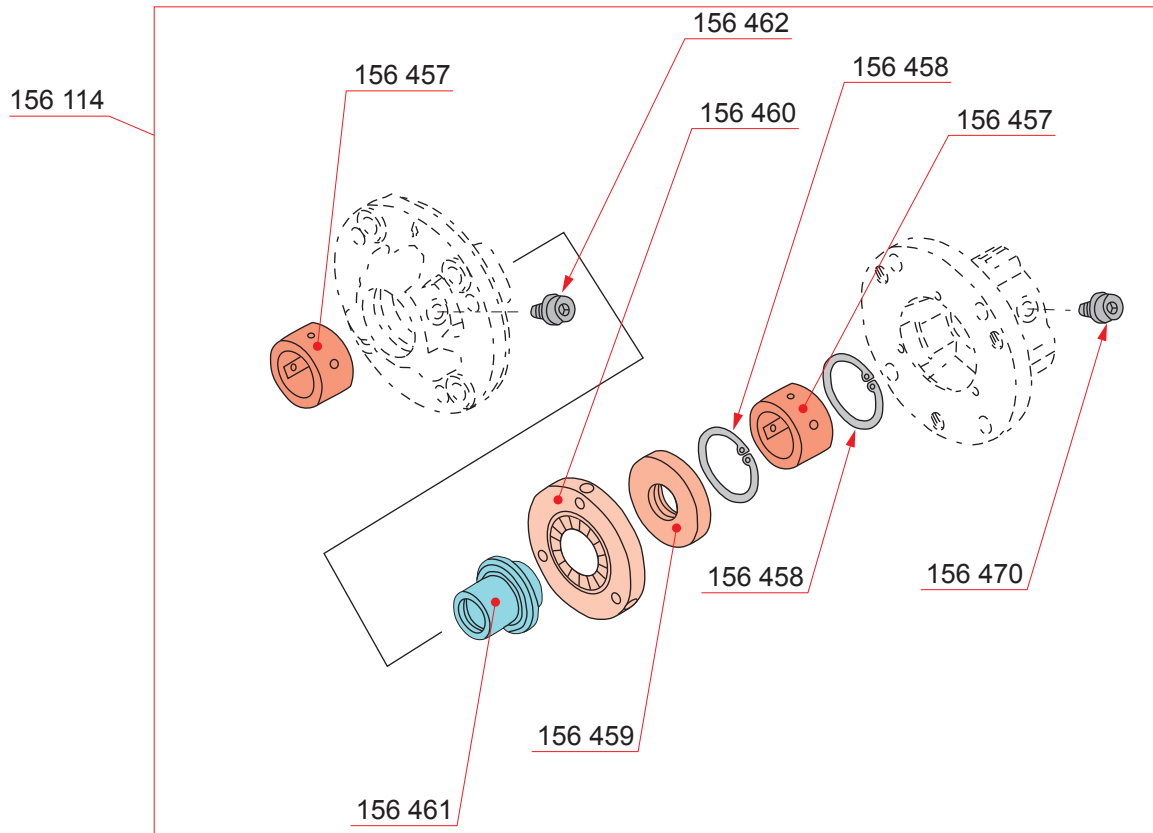
NOTE! (1) Spare part set 156 112 includes items marked (1).

NOTE! (2) Spare part set 156 113 includes items marked (2).

NOTE! (3) see section 600-xx

NOTE! Only Spare part sets (156 112-156 114), Nozzle (156 085), Cartridge (156 180) and Filter cartridge (156 386) can be ordered.

Turbocharger



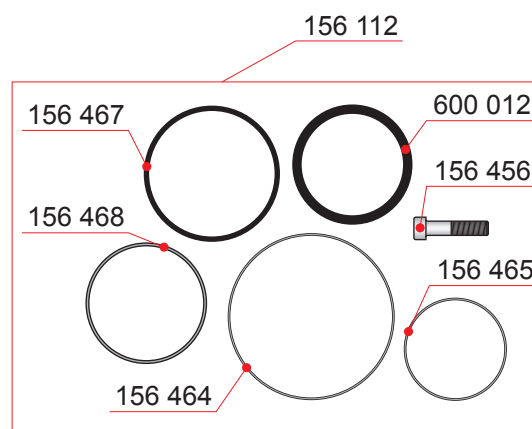
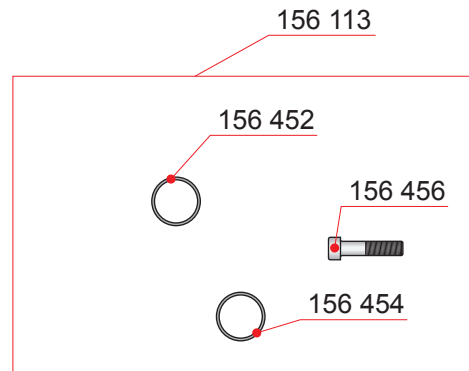
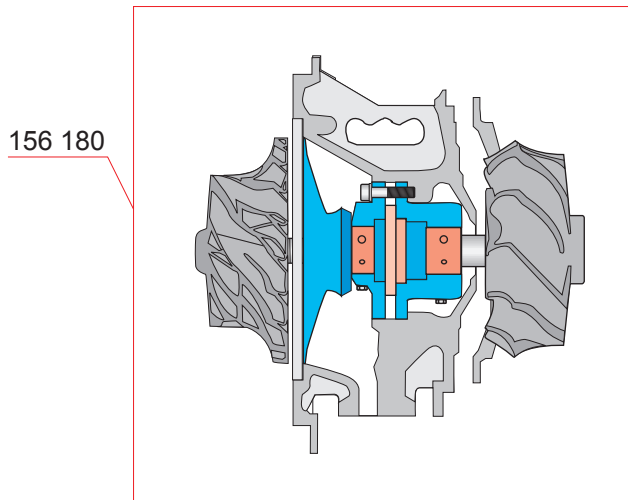
Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 114	Bearing part kit	1	2.2
156 457	Bearing (3)	2	-
156 458	Locking ring (3)	2	-
156 459	Thrust ring (3)	1	-
156 460	Thrust bearing (3)	1	-
156 461	Auxiliary bearing (3)	1	-
156 462	Screw (3)	3	-
156 470	Screw (3)	3	-

NOTE! (3) Spare part set 156 114 includes items marked (3).

NOTE! Only Spare part sets (156 112-156 114), Nozzle (156 085), Cartridge (156 180) and Filter cartridge (156 386) can be ordered.

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Turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 112	O-ring kit	1	3.3
156 464	Packing ring (1)	1	-
156 465	Gasket (1)	1	-
156 467	Lamellar labyrinth seal (1)	1	-
156 468	Packing ring (1)	1	-
600 012	Sealing ring (1) (3)	1	-
156 113	V-clamp kit	1	0.2
156 452	Piston ring (2)	1	-
156 454	Piston ring (2)	1	-
156 456	Screw (1) (2)	3	-
156 180	Cartridge	1	-

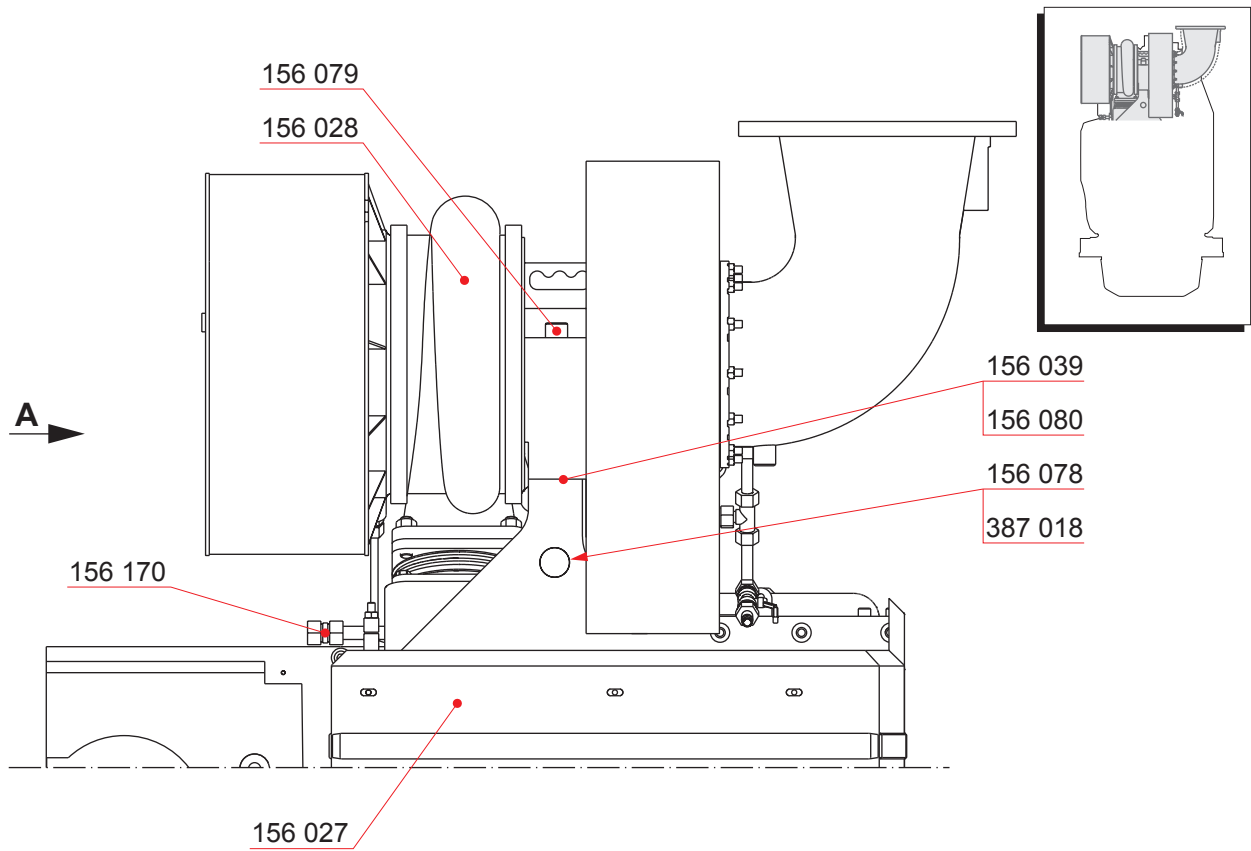
NOTE! (1) Spare part set 156 112 includes items marked (1).

NOTE! (2) Spare part set 156 113 includes items marked (2).

NOTE! (3) see section 600-xx

NOTE! Only Spare part sets (156 112-156 114), Nozzle (156 085), Cartridge (156 180) and Filter cartridge (156 386) can be ordered.

Turbocharger bracket assembly

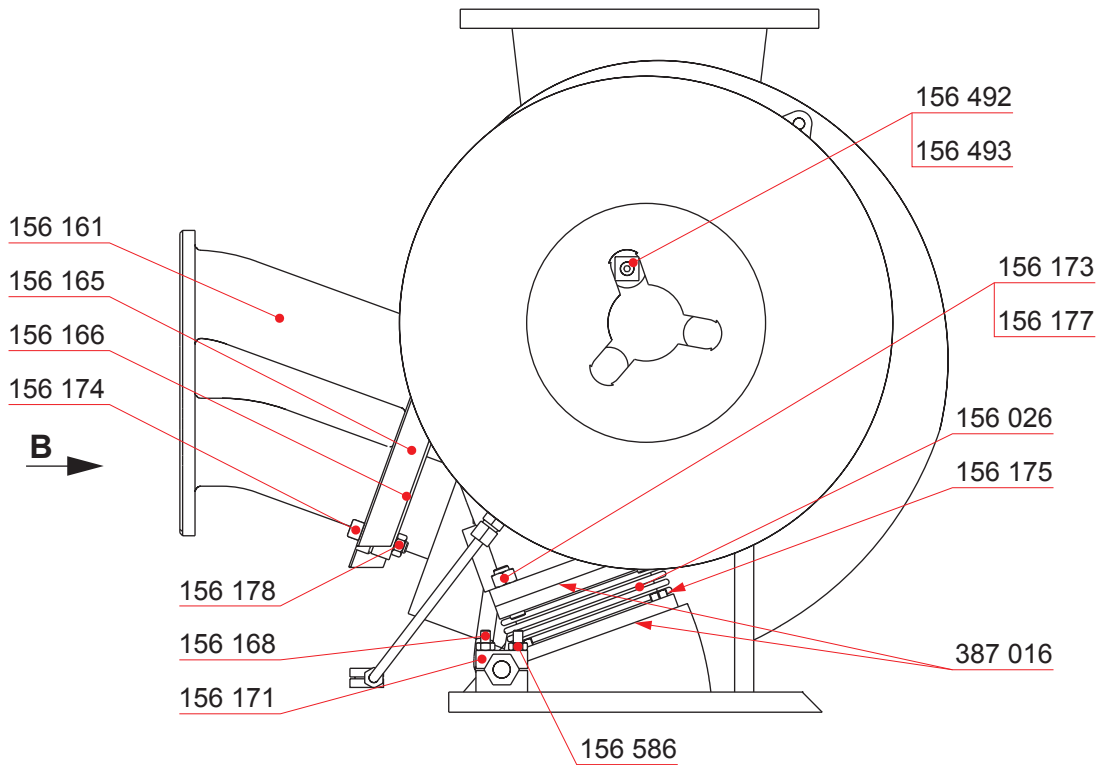


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 027	Bracket	1	-
156 028	Turbocharger	1	-
156 039	O-ring	1	-
156 078	Plug	1	-
156 079	Screw	2	-
156 080	O-ring	1	-
156 170	Pipe union	1	-
387 018	Glue compound	1	-

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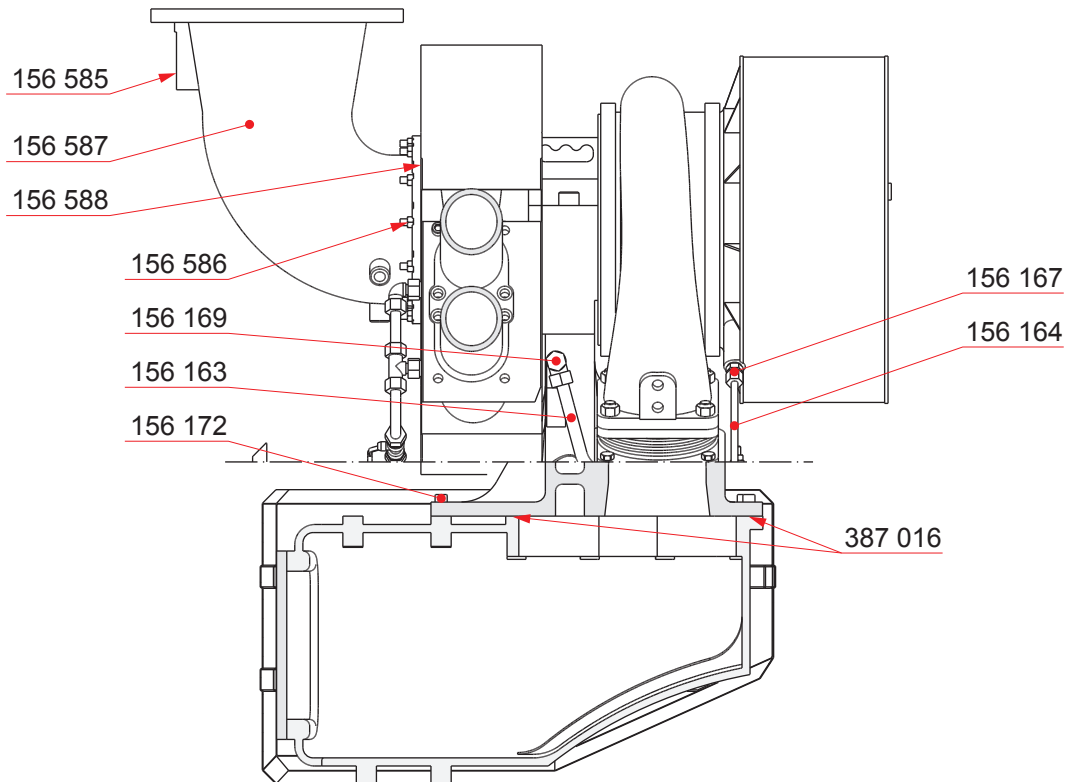
Updated: 16.11.2009

Turbocharger bracket assembly**View A**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 026	Bellows	1	-
156 161	Exhaust pipe	2	-
156 165	End plate	1	-
156 166	Sealing ring	2	-
156 168	Screw	2	-
156 171	Pipe clamp	1	-
156 173	Screw	4	-
156 174	Screw	8	-
156 175	Screw	4	-
156 177	Nut	4	-
156 178	Locking nut	8	-
156 492	Bracket	1	-
156 493	Screw	1	-
156 586	Nut	14	-
387 016	Glue compound	1	-

Turbocharger bracket assembly

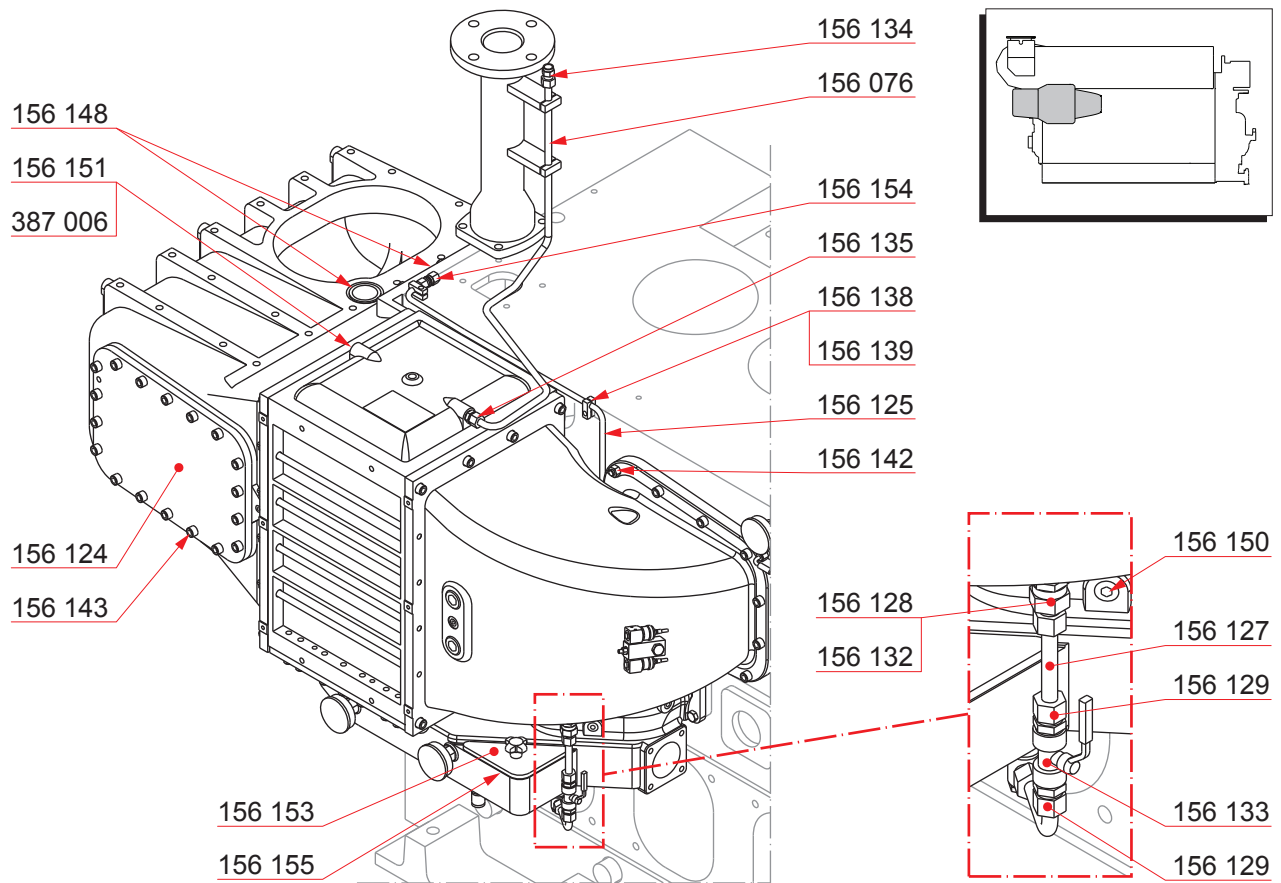
View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 163	Pipe	1	-
156 164	Pipe	1	-
156 167	Pipe union	1	-
156 169	Pipe union	1	-
156 172	Screw	14	-
156 585	Plug	4	-
156 586	Nut	14	-
156 587	Exhaust pipe	1	-
156 588	Sealing ring	1	-
387 016	Glue compound	1	-

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Charge air cooler

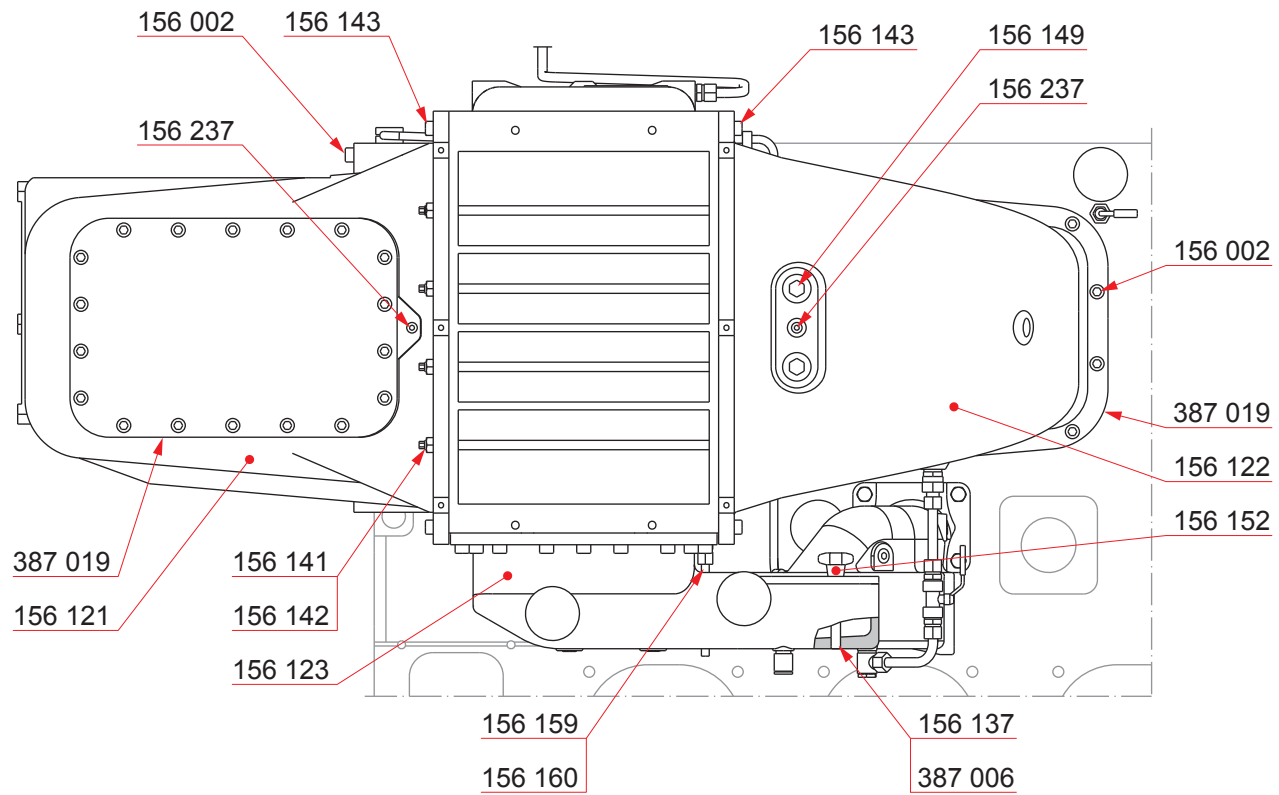


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 076	Pipe	1	-
156 124	Cover	1	4.6
156 125	Pipe	1	-
156 127	Pipe	1	-
156 128	Pipe union	1	-
156 129	Pipe union	2	-
156 132	Reduction union	1	0.1
156 133	Ball valve	1	0.1
156 134	Pipe union	1	-
156 135	Pipe union	1	-
156 138	Pipe clamp	2	-
156 139	Screw	2	-
156 142	Nut	10	-
156 143	Screw	34	-
156 148	O-ring	2	-
156 150	Plug	3	-
156 151	Plug	1	-
156 153	Cap	1	-
156 154	Pipe union	1	-
156 155	Gasket	1	-
387 006	Glue compound	1	-

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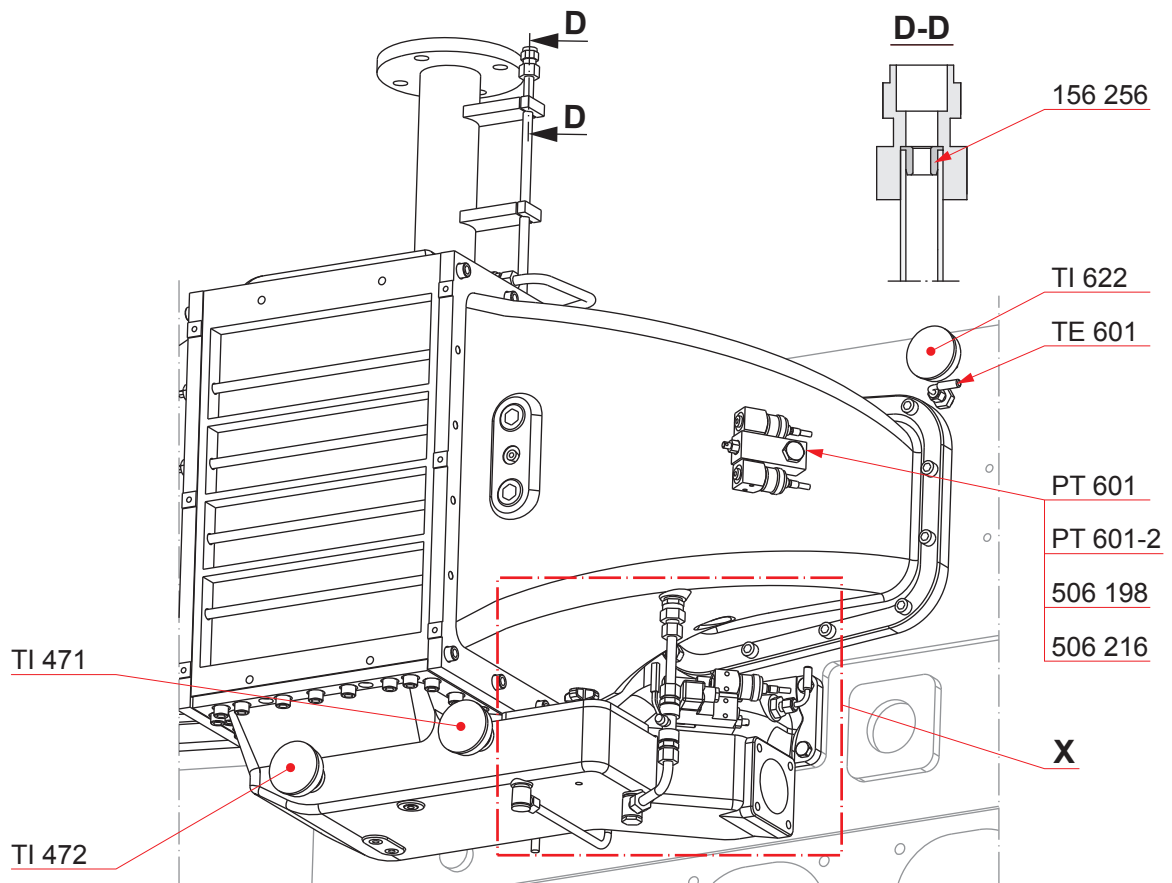
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Updated: 17.11.2011

Charge air cooler

Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 002	Screw	21	-
156 121	Air box	1	149
156 122	Air inlet piece	1	68.7
156 123	Water connection	1	43.5
156 137	Screw	1	-
156 141	Screw	8	0.3
156 142	Nut	10	-
156 143	Screw	34	-
156 149	Plug	2	0.1
156 152	Hand wheel	1	-
156 159	Pipe union	1	-
156 160	Pipe	1	-
156 237	Plug	2	-
387 006	Glue compound	1	-
387 019	Glue compound	1	-

Charge air cooler



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 256	Orifice	1	-
506 198	Pressure gauge valve (1)	1	-
506 216	Pressure gauge valve (1)	1	-
PT601	Pressure transducer, charge air pressure	1	-
PT601-2	Pressure transducer (2)	1	-
TE601	Temperature sensor, charge air	1	-
TI471	Thermometer, LT water, before charge air cooler (2)	1	-
TI472	Thermometer, LT water, after charge air cooler (2)	1	-
TI622	Thermometer for charge air, after cooler (2)	1	-

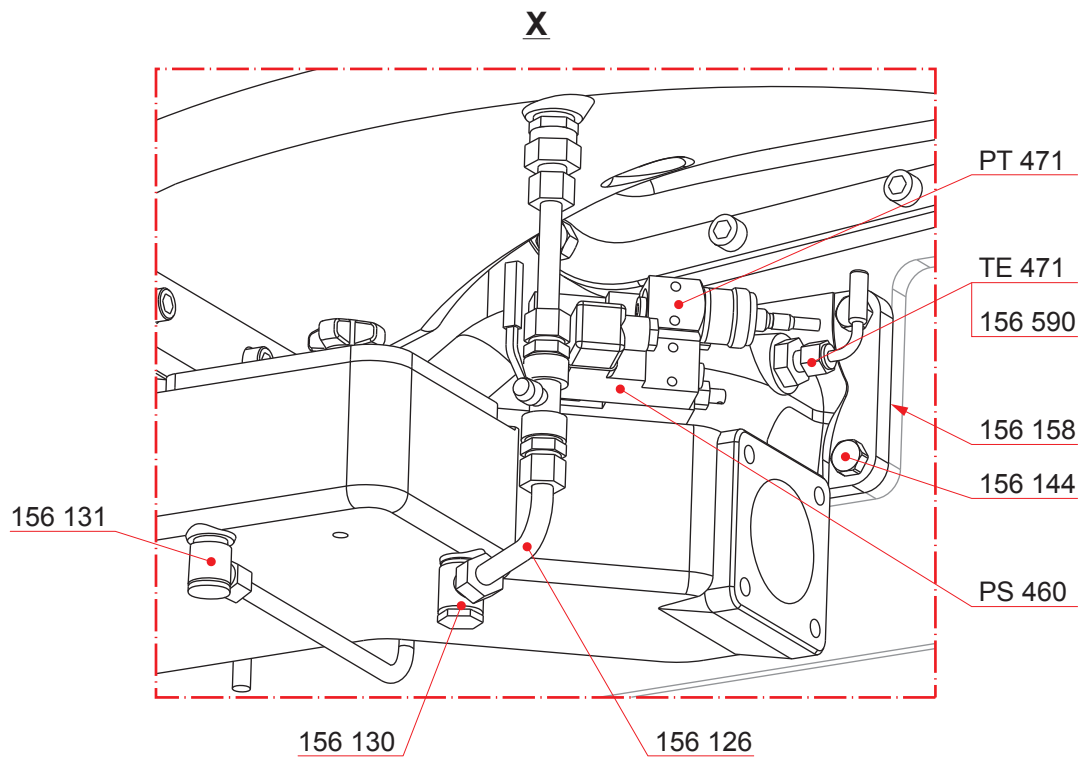
NOTE! (1) See section 506-0040.

NOTE! (2) Depending on installation.

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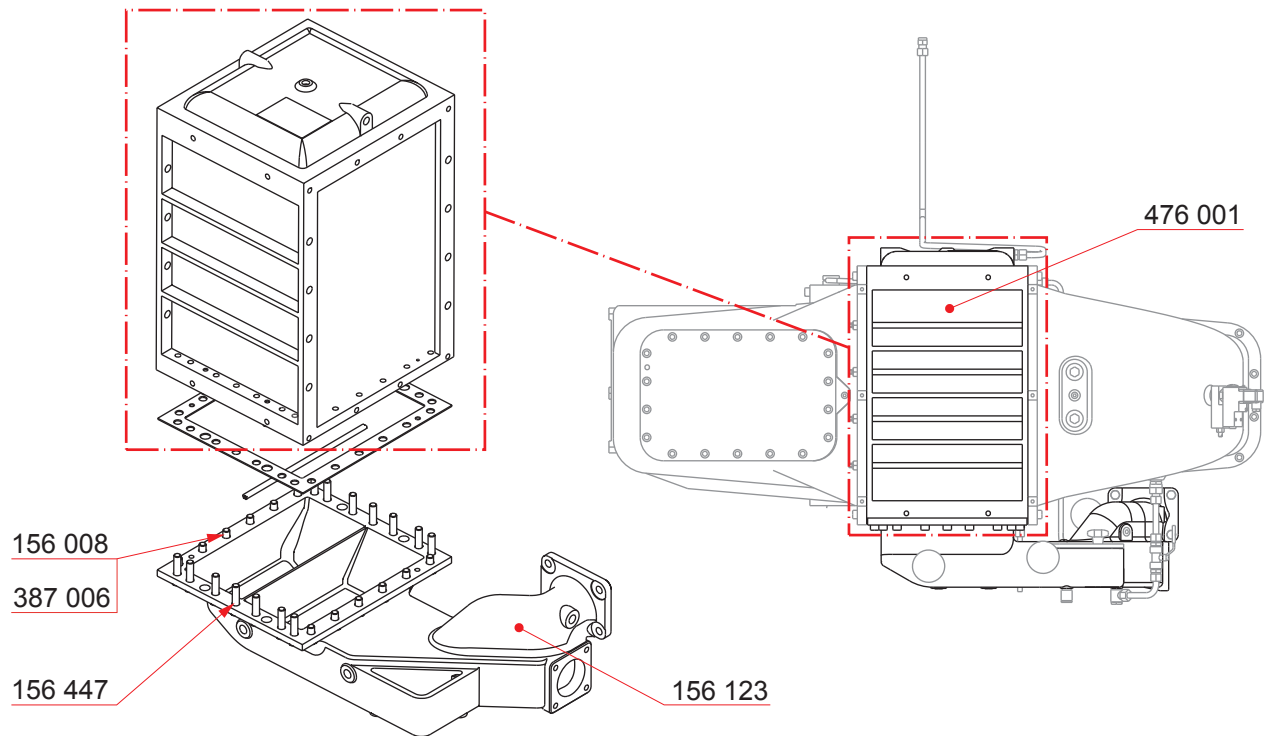
Updated: 17.11.2011

Charge air cooler

Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 126	Pipe	1	-
156 130	Pipe union	1	-
156 131	Pipe union	1	-
156 144	Screw	4	-
156 158	O-ring	1	-
156 590	Protection well	1	-
PS460	Pressure switch, start LT-stand by pump (*)	1	-
PT471	Pressure transducer, LT water	1	-
TE471	Temperature sensor for LT water	1	-

NOTE! (*) Optional.

Charge air cooler

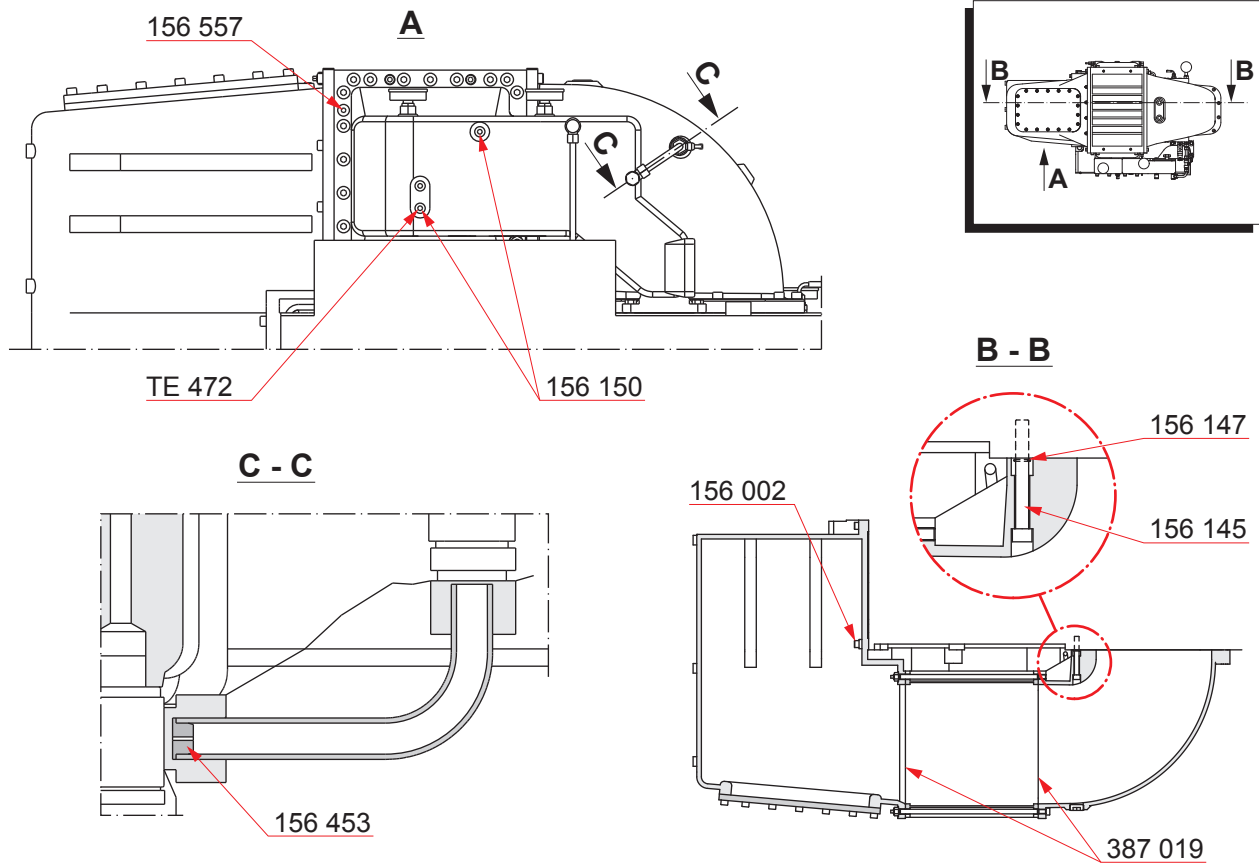


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 008	Screw	12	-
156 123	Water connection	1	43.5
156 447	Screw	14	-
387 006	Glue compound	1	-
476 001	Charge air cooler (1)	1	-

NOTE! (1) See section 476-

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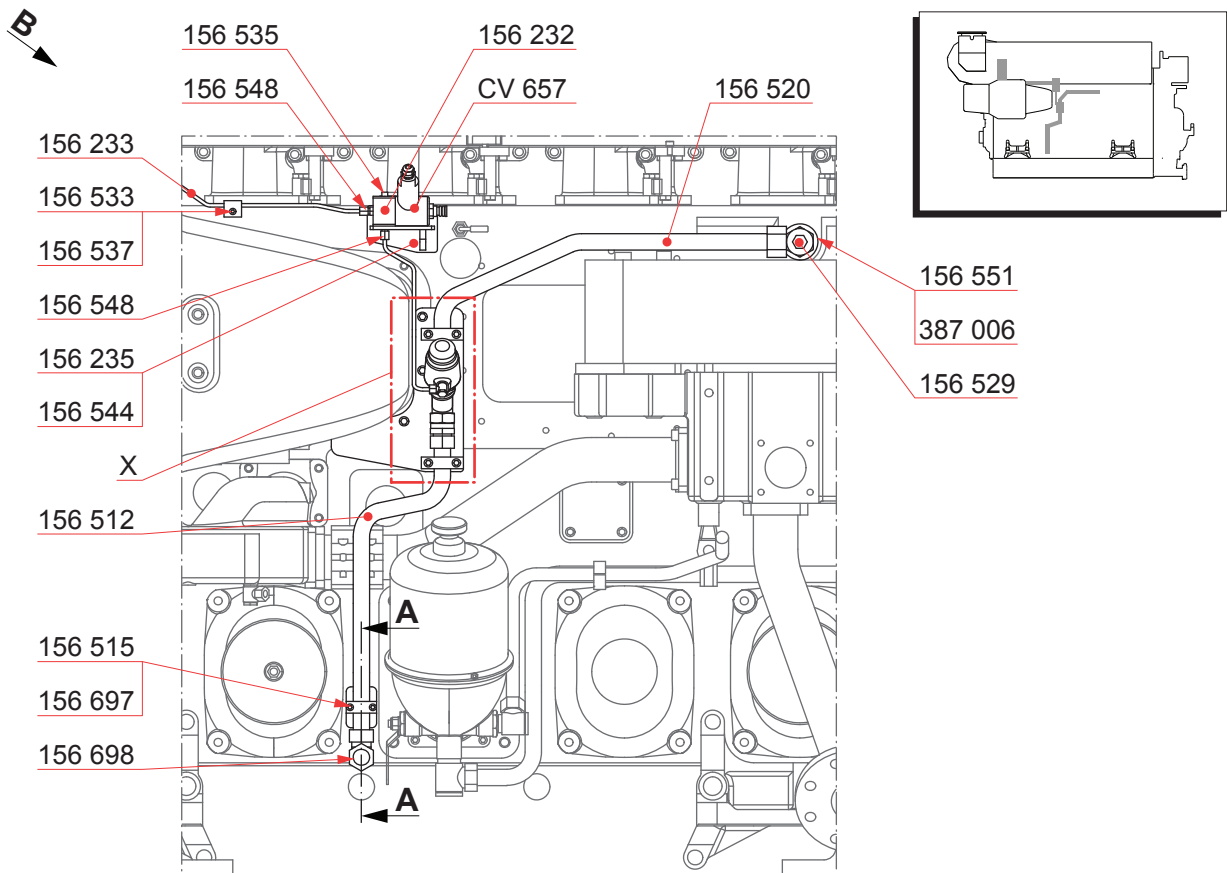
Charge air cooler



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 002	Screw	21	-
156 145	Screw	2	0.1
156 147	O-ring	2	-
156 150	Plug	3	-
156 453	Throttle ring	1	-
156 557	Plug	1	-
387 019	Glue compound	1	-
TE472	Temp. sensor, LT-water after charge air cooler (*)	1	-

NOTE! (*) Optional.

Wastegate for charge air

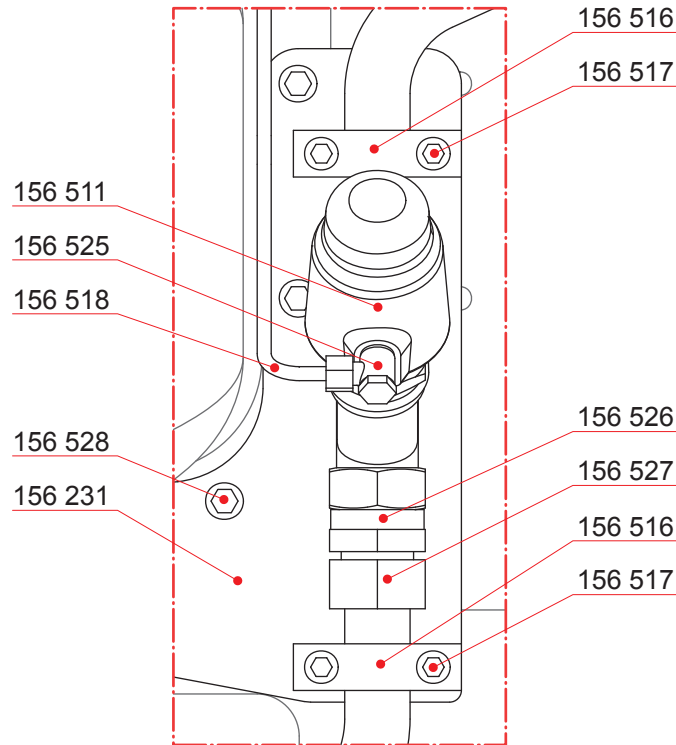


Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 232	Valve body	1	0.4
156 233	Control air pipe	1	-
156 235	Screw	5	-
156 512	Air pipe	1	0.9
156 515	Screw	2	-
156 520	Air pipe	1	0.9
156 529	Angle union	1	2.5
156 533	Pipe clamp	6	-
156 535	Screw	3	-
156 537	Screw	5	-
156 544	Bracket	1	1.2
156 548	Male stud	2	-
156 551	Adapter	1	0.5
156 697	Pipe clamp	1	0.6
156 698	Pipe union	1	0.4
387 006	Glue compound	1	-
CV657	Solenoid valve	1	0.6

Edition: B

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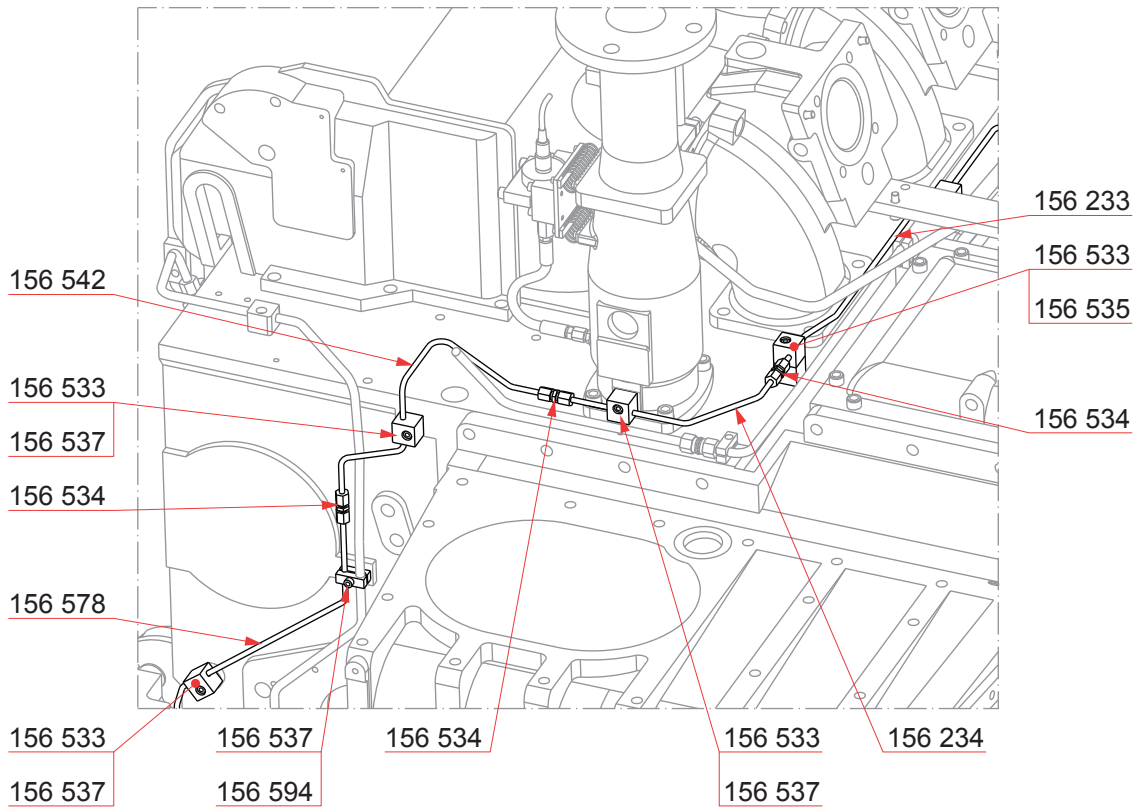
Updated: 23.04.2010

Wastegate for charge air**Detail X**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 231	Bracket	1	2.2
156 511	Air valve	1	1.6
156 516	Pipe clamp	2	-
156 517	Screw	4	-
156 518	Control air pipe	1	-
156 525	Angle union	1	-
156 526	Distance ring	2	-
156 527	Male stud	2	0.3
156 528	Screw	4	-

Wastegate for charge air

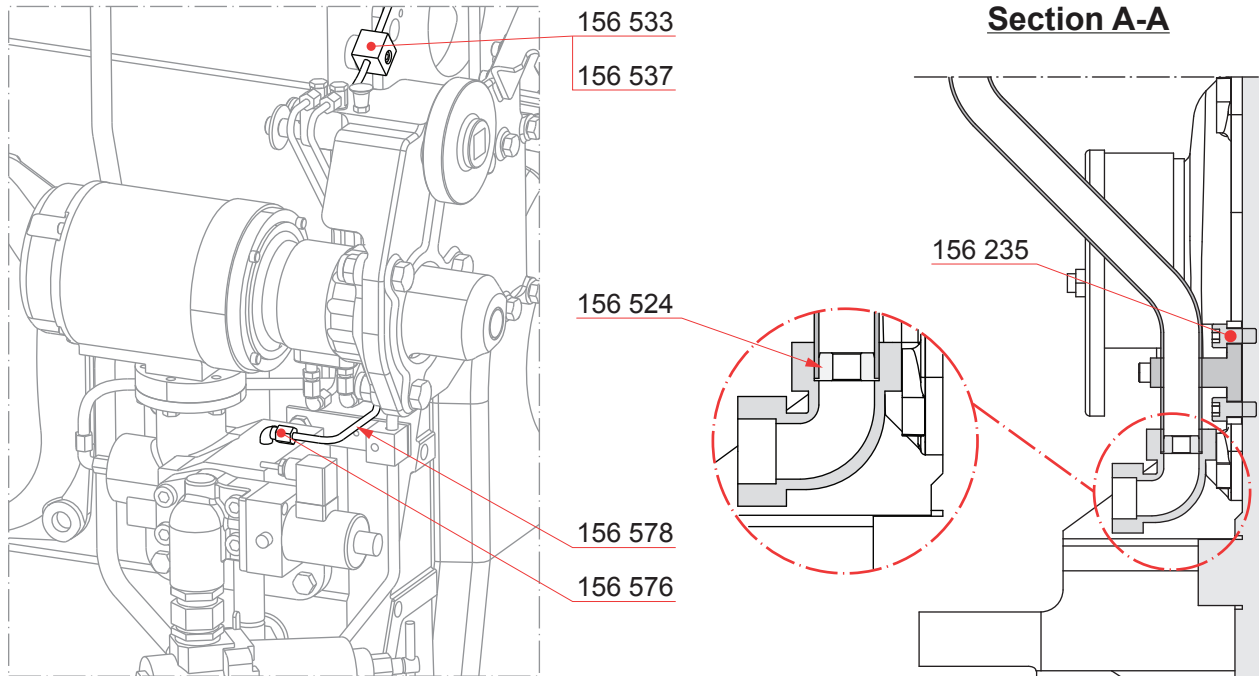
View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 233	Control air pipe	1	-
156 234	Control air pipe	1	-
156 533	Pipe clamp	6	-
156 534	Straight union	3	-
156 535	Screw	3	-
156 537	Screw	5	-
156 542	Control air pipe	1	-
156 578	Control air pipe	1	0.1
156 594	Pipe clamp	1	-

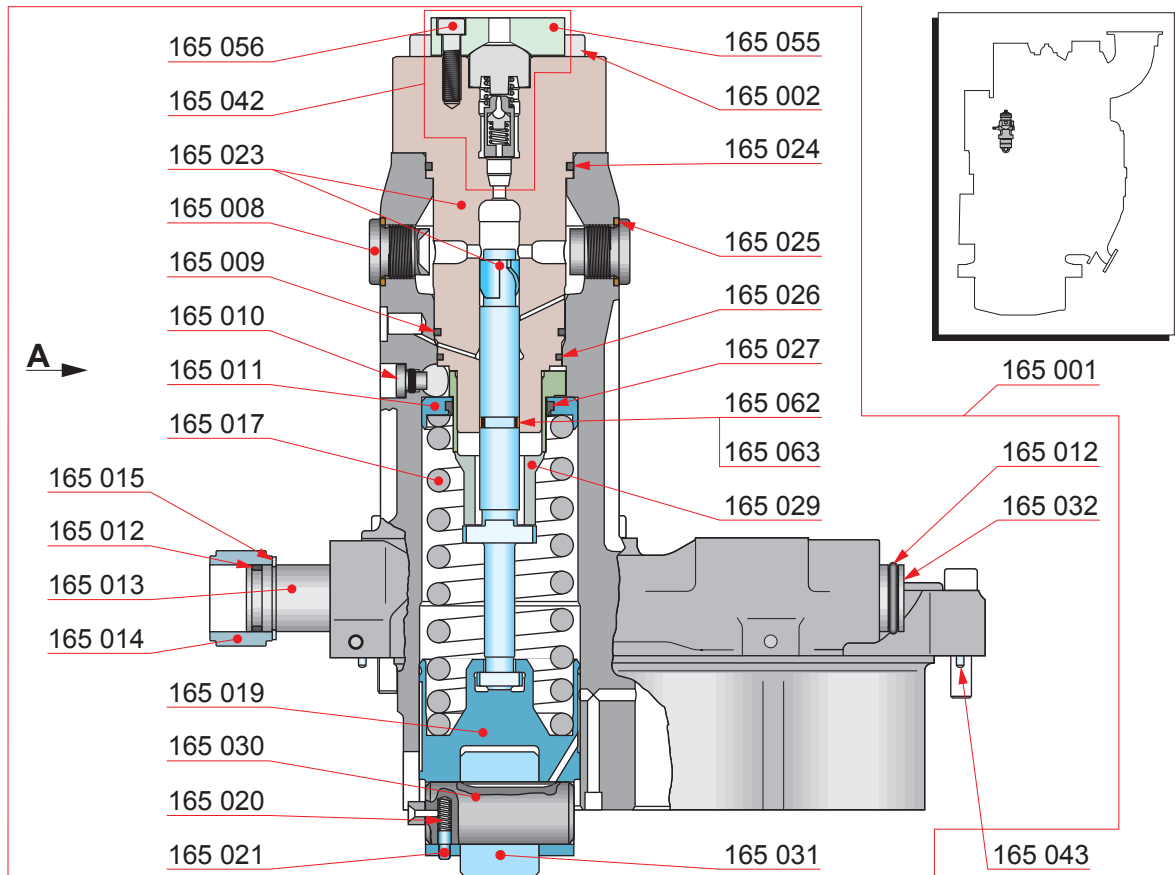
Edition: B
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 Updated: 23.04.2010

Wastegate for charge air



Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 235	Screw	5	-
156 524	Throttle ring	1	-
156 533	Pipe clamp	6	-
156 537	Screw	5	-
156 576	Pipe union	1	-
156 578	Control air pipe	1	0.1

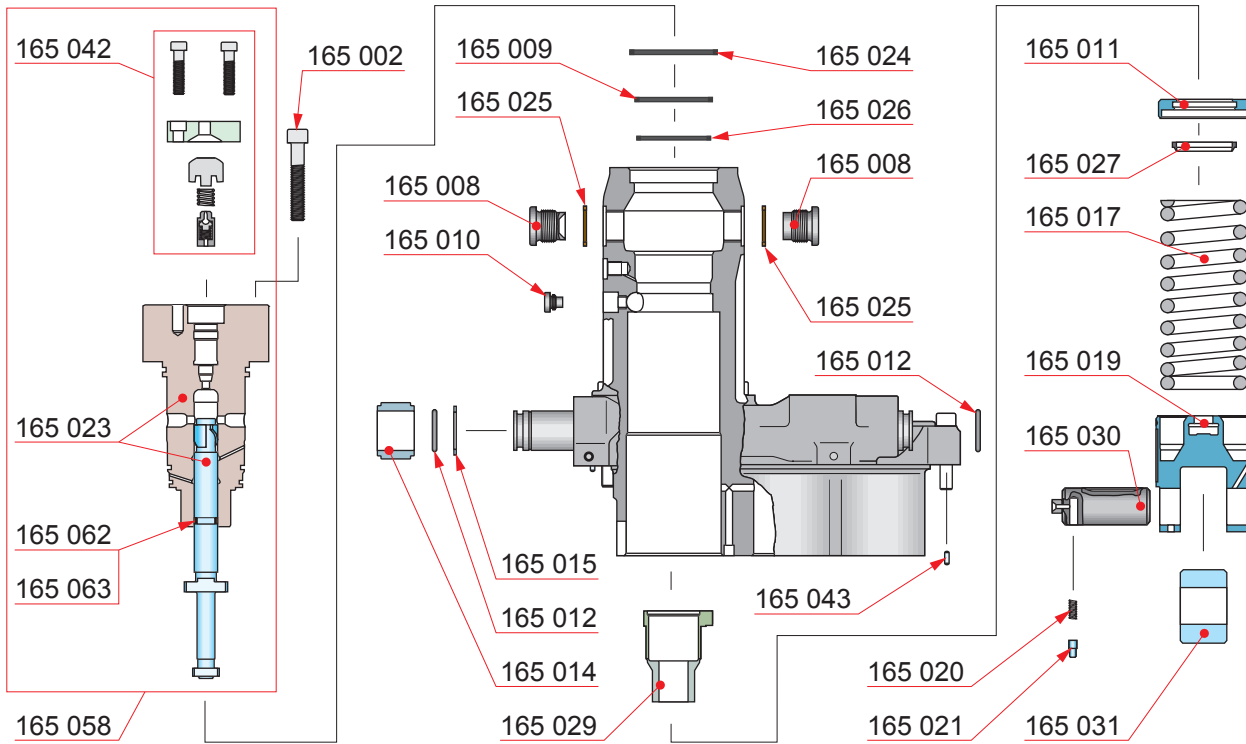
Injection pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 001	Injection pump	1	-	165 055	Flange	1	-
165 002	Screw	7	-	165 056	Screw	4	-
165 008	Erosion plug	2	-	165 043	Pin	2	-
165 009	Sealing ring (2)	1	-				
165 010	Plug	1	-	NOTE!	(1) See page 4.		
165 011	Spring plate	1	-	NOTE!	(2) Parts included in the set and not delivered separately!		
165 012	O-ring	4	-				
165 013	Sleeve	2	-				
165 014	Sleeve	2	-				
165 015	Retainer ring	2	-				
165 017	Spring	1	-				
165 019	Tappet	1	-				
165 020	Spring	1	-				
165 021	Pin	1	-				
165 023	Pump element (1)	1	-				
165 062	Sealing ring (2)	1	-				
165 063	O-ring (2)	1	-				
165 024	Sealing ring (2)	1	-				
165 025	Sealing ring	2	-				
165 026	O-ring (2)	1	-				
165 027	Scraper ring	1	-				
165 029	Control sleeve	1	-				
165 030	Tappet pin	1	-				
165 031	Tappet roller	1	-				
165 032	Sleeve	2	-				
165 042	Two way pressure valve, compl. (1)	1	-				

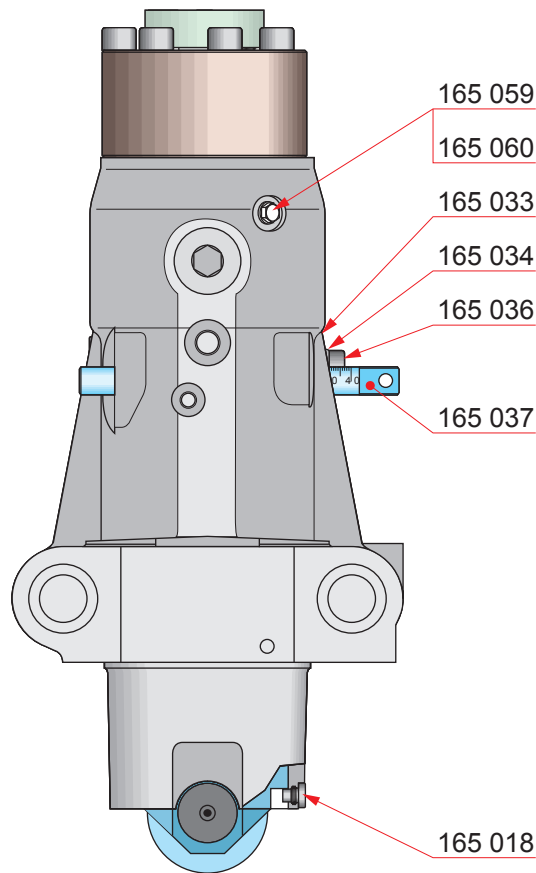
Edition: C
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Injection pump



Injection pump

View A

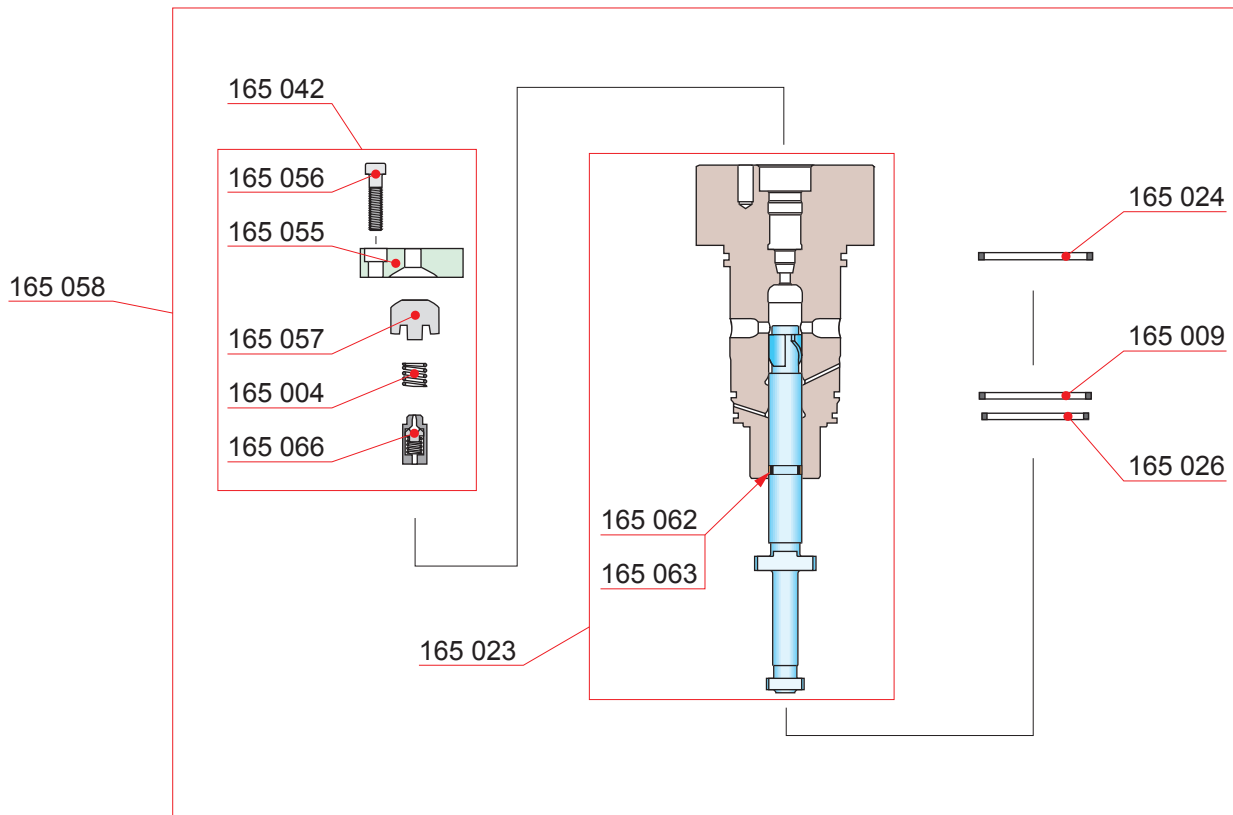


Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 018	Guide screw	1	-
165 033	Plate set	1	-
165 034	Indicator	1	-
165 036	Screw	1	-
165 037	Fuel rack	1	-
165 059	Sealing ring	1	-
165 060	Vent screw	1	-

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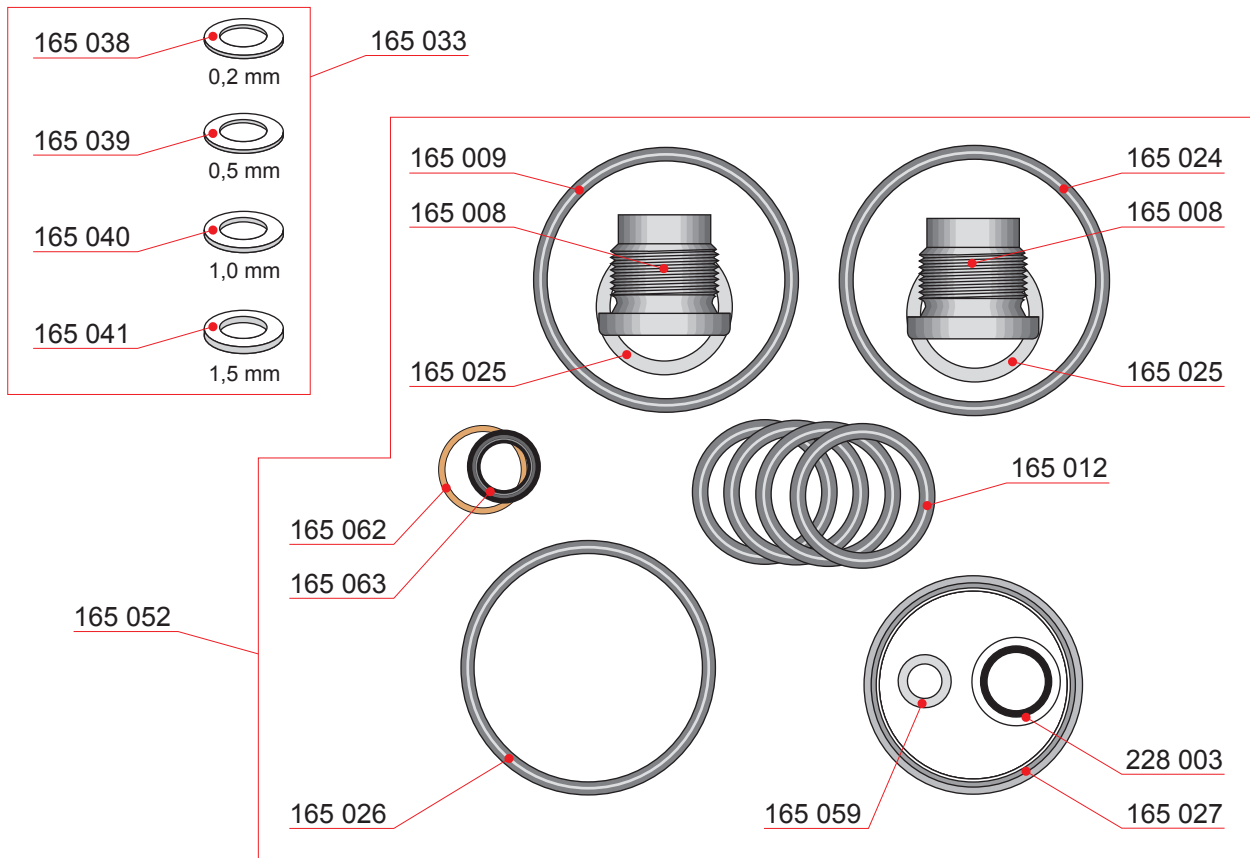
Updated: 20.04.2011

Injection pump

Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 058	Spare part kit	1	-
165 009	Sealing ring (2)	1	-
165 023	Pump element	1	-
165 062	Sealing ring (2)	1	-
165 063	O-ring (2)	1	-
165 024	Sealing ring (2)	1	-
165 026	O-ring (2)	1	-
165 042	Two way pressure valve, compl.	1	-
165 004	Spring (2)	1	-
165 055	Flange	1	-
165 056	Screw	4	-
165 057	Pressure piece (2)	1	-
165 066	Constant pressure valve (2)	1	-

NOTE! (2) Parts included in the set and not delivered separately!

Injection pump



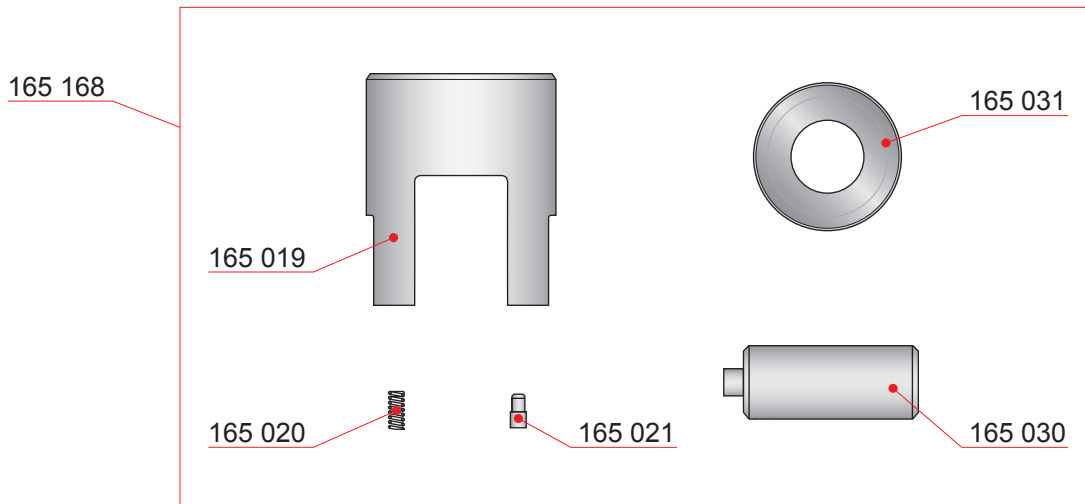
Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 033	Plate set	1	-
165 038	Plate 0.2 mm	1	-
165 039	Plate 0.5 mm	1	-
165 040	Plate 1.0 mm	1	-
165 041	Plate 1.5 mm	1	-
165 052	Sealing set for injection pump	1	-
165 008	Erosion plug	2	-
165 009	Sealing ring	1	-
165 012	O-ring	4	-
165 024	Sealing ring	1	-
165 025	Sealing ring	2	-
165 026	O-ring	1	-
165 027	Scraper ring	1	-
165 059	Sealing ring	1	-
165 062	Sealing ring	1	-
165 063	O-ring	1	-
228 003	Slide ring (3)	1	-

NOTE! (3) See section 228-01.

Edition: C

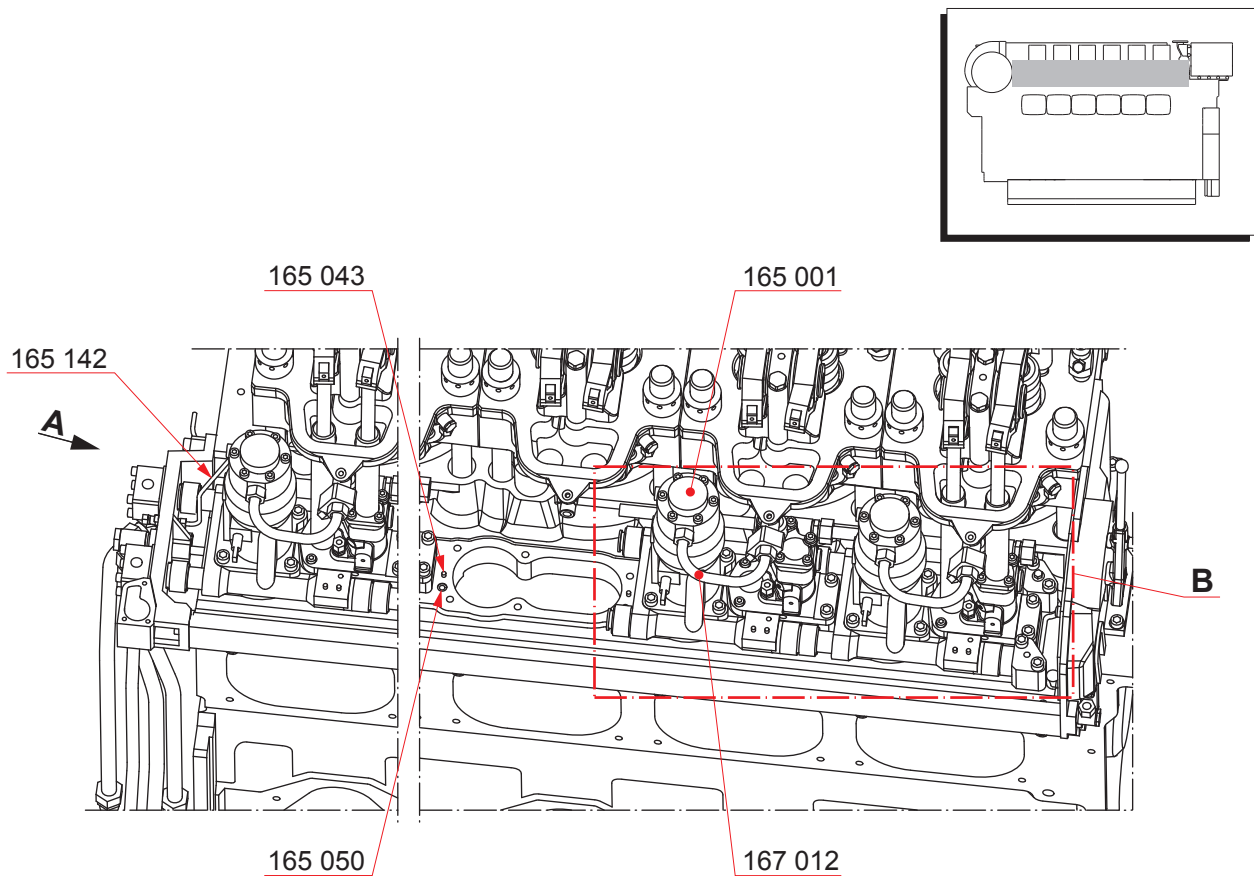
Page: 6(6)

Updated: 20.04.2011

Injection pump

Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 168	Tappet roller kit	1	-
165 019	Tappet	1	-
165 020	Spring	1	-
165 021	Pin	1	-
165 030	Tappet pin	1	-
165 031	Tappet roller	1	-

Fuel oil system in Hot-box



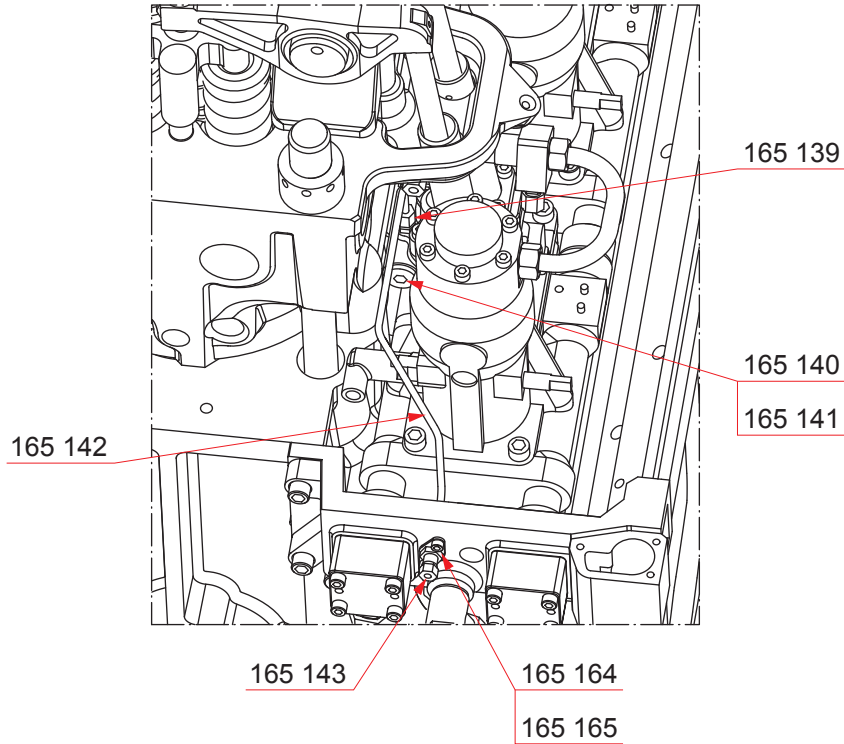
Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 001	Injection pump (1)	*	27.1
165 043	Pin (1)	*	-
165 050	O-ring (1)	*	-
165 142	Pipe	1	-
167 012	Injection pipe (1)	*	-

NOTE! (1) See page 5.

Edition: C

Page: 2(5)

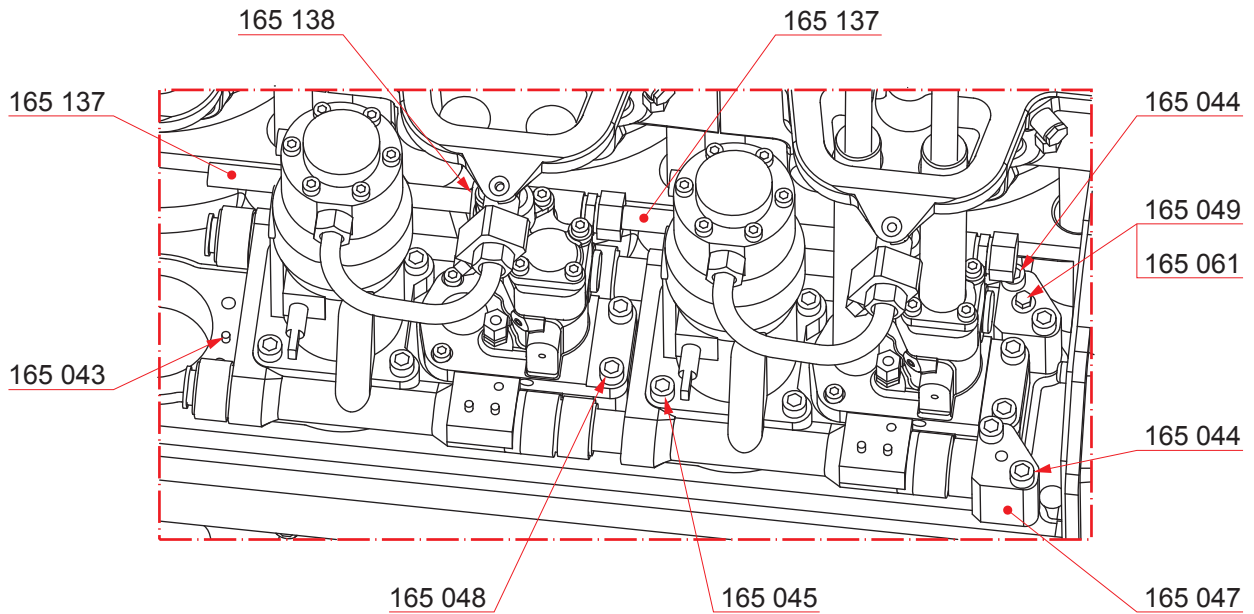
Updated: 17.02.2011

Fuel oil system in Hot-box**View A**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 139	Pipe union	1	-
165 140	Sealing ring	1	-
165 141	Plug	1	-
165 142	Pipe	1	-
165 143	Pipe union	1	-
165 164	Flange	1	-
165 165	Screw	2	-

Fuel oil system in Hot-box

Detail B



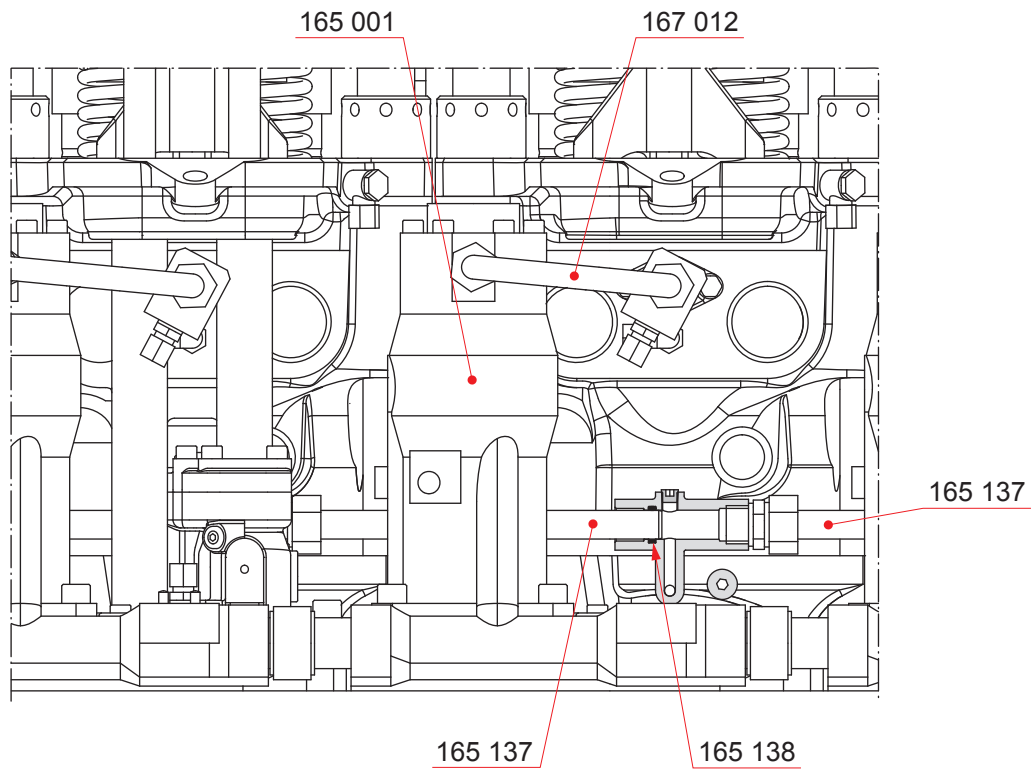
Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 043	Pin (1)	*	-
165 044	Screw	4	-
165 045	Screw (1)	*	-
165 047	End piece	2	0.6
165 048	Screw (1)	*	-
165 049	Plug	1	-
165 061	Sealing ring	1	-
165 137	Pipe (1)	*	0.1
165 138	O-ring (1)	*	-

NOTE! (1) See page 5.

Edition: C

Page: 4(5)

Updated: 17.02.2011

Fuel oil system in Hot-box

Part No.	Description	Qty [Pcs]	Wt. [Kg]
165 001	Injection pump (1)	*	27.1
165 137	Pipe (1)	*	0.1
165 138	O-ring (1)	*	-
167 012	Injection pipe (1)	*	-

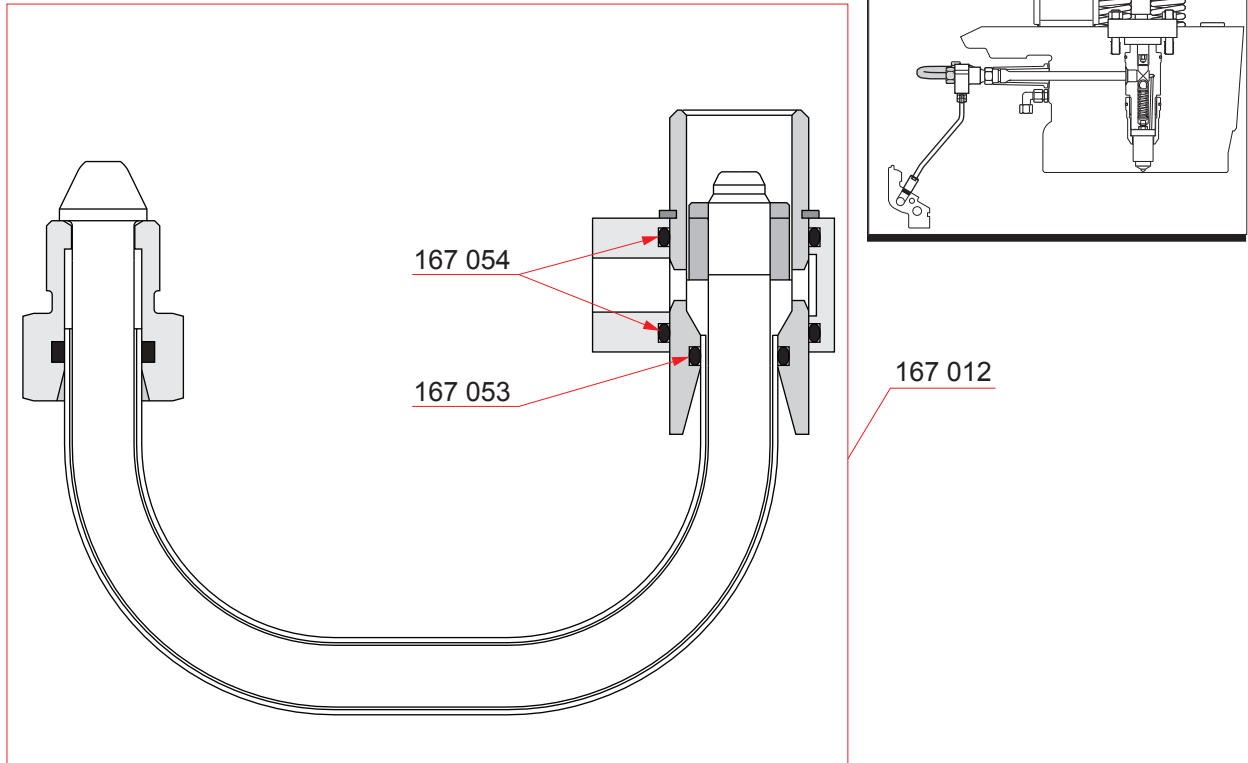
NOTE! (1) See page 5.

Fuel oil system in Hot-box

Part No. and Description	Quantity in pieces			
	4L	6L	8L	9L
165 001 Injection pump	4	6	8	9
165 043 Pin	8	12	16	18
165 045 Screw	16	24	32	36
165 048 Screw	8	12	16	18
165 050 O-ring	4	6	8	9
165 137 Pipe	3	5	7	8
165 138 O-ring	3	5	7	8
167 012 Injection pipe	4	6	8	9

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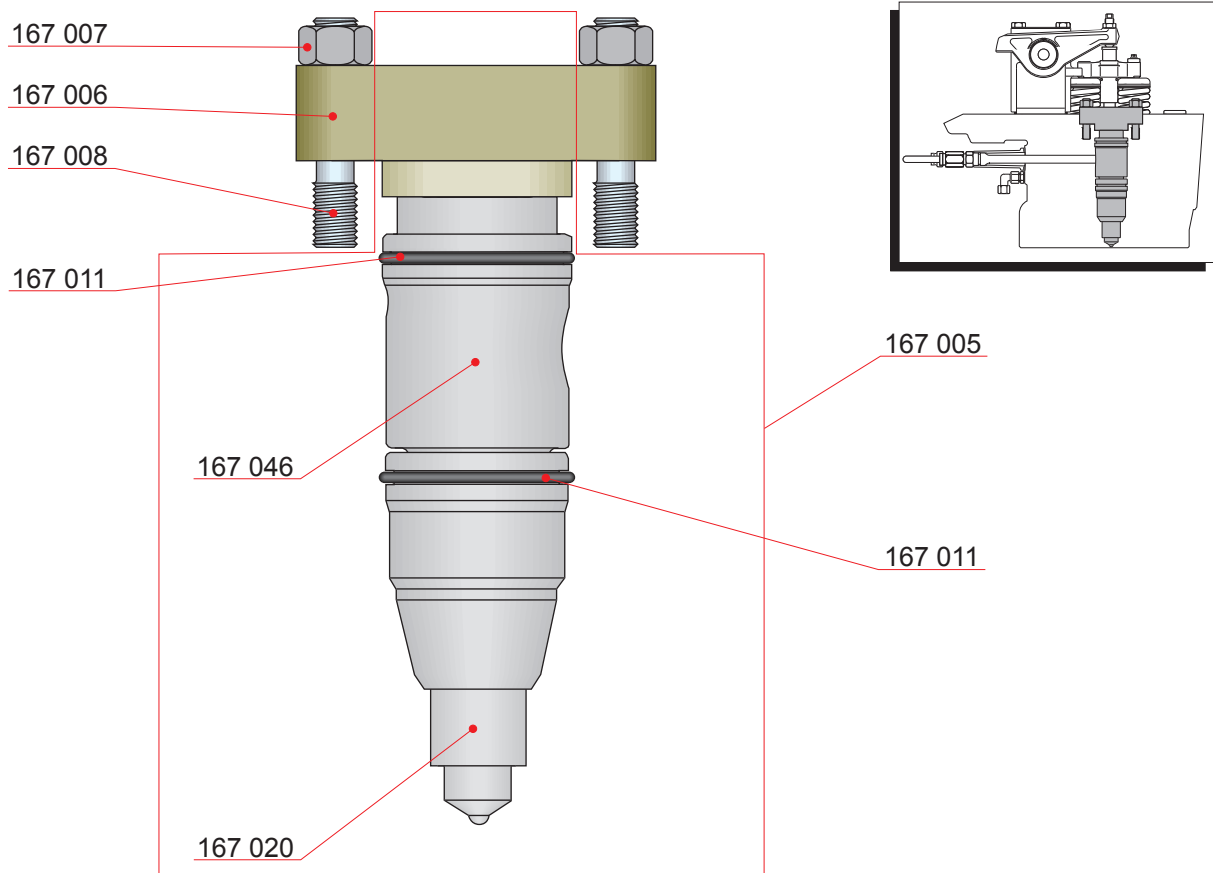
Injection pipe



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 012	Injection pipe	1	0.7
167 053	O-ring	1	-
167 054	O-ring	2	-

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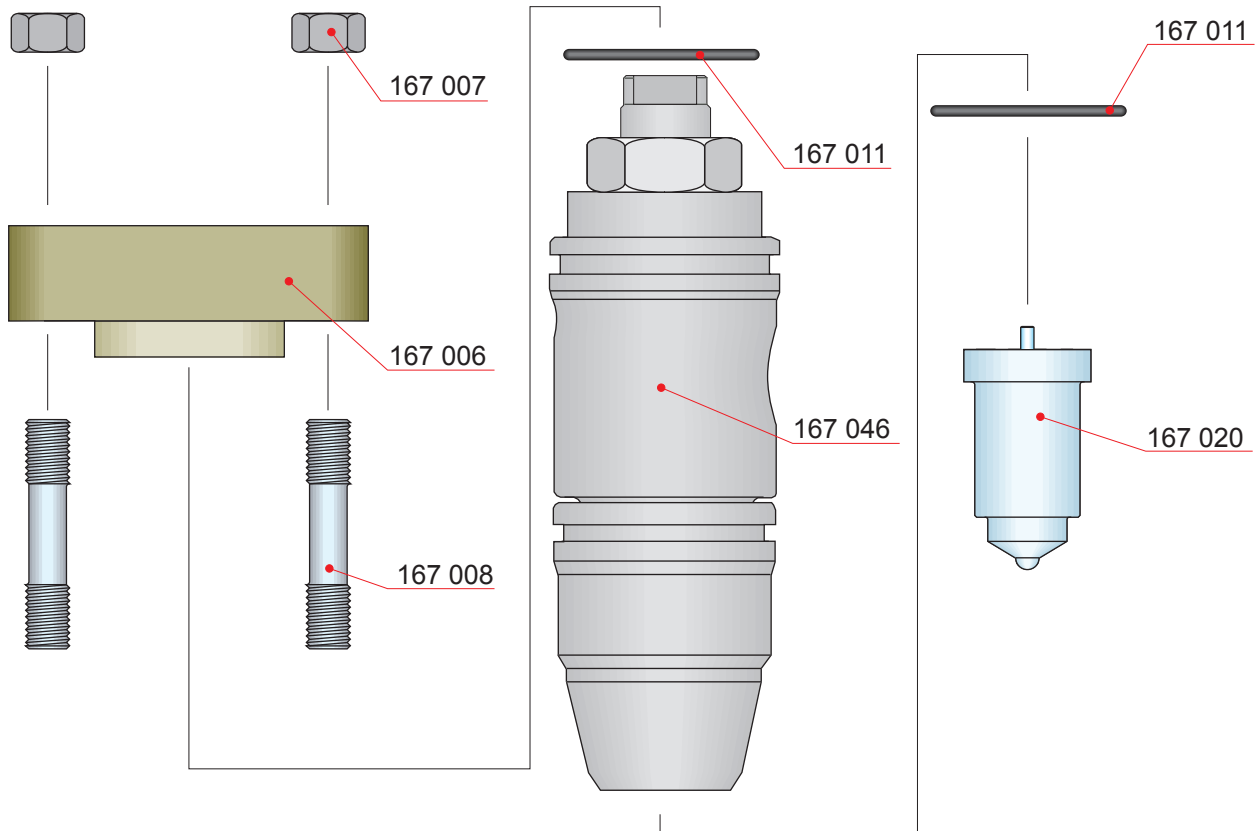
Injection valve



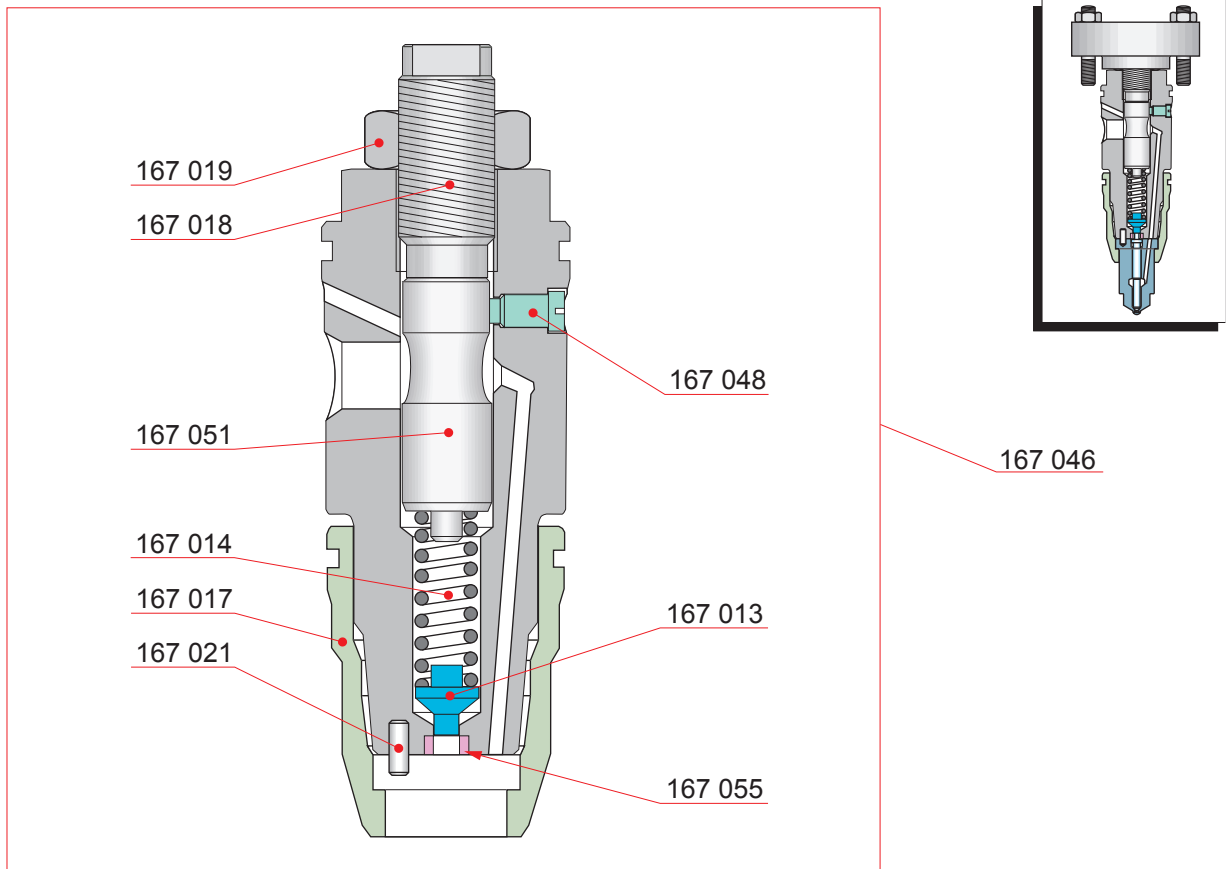
Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 005	Injection valve	1	3.0
167 020	Nozzle	1	0.3
167 046	Nozzle holder	1	2.7
167 006	Yoke	1	-
167 007	Nut	2	-
167 008	Screw	2	-
167 011	O-ring	2	-

Edition: A
Page: 2(5)
Updated: 06.07.2009

Injection valve



Injection valve

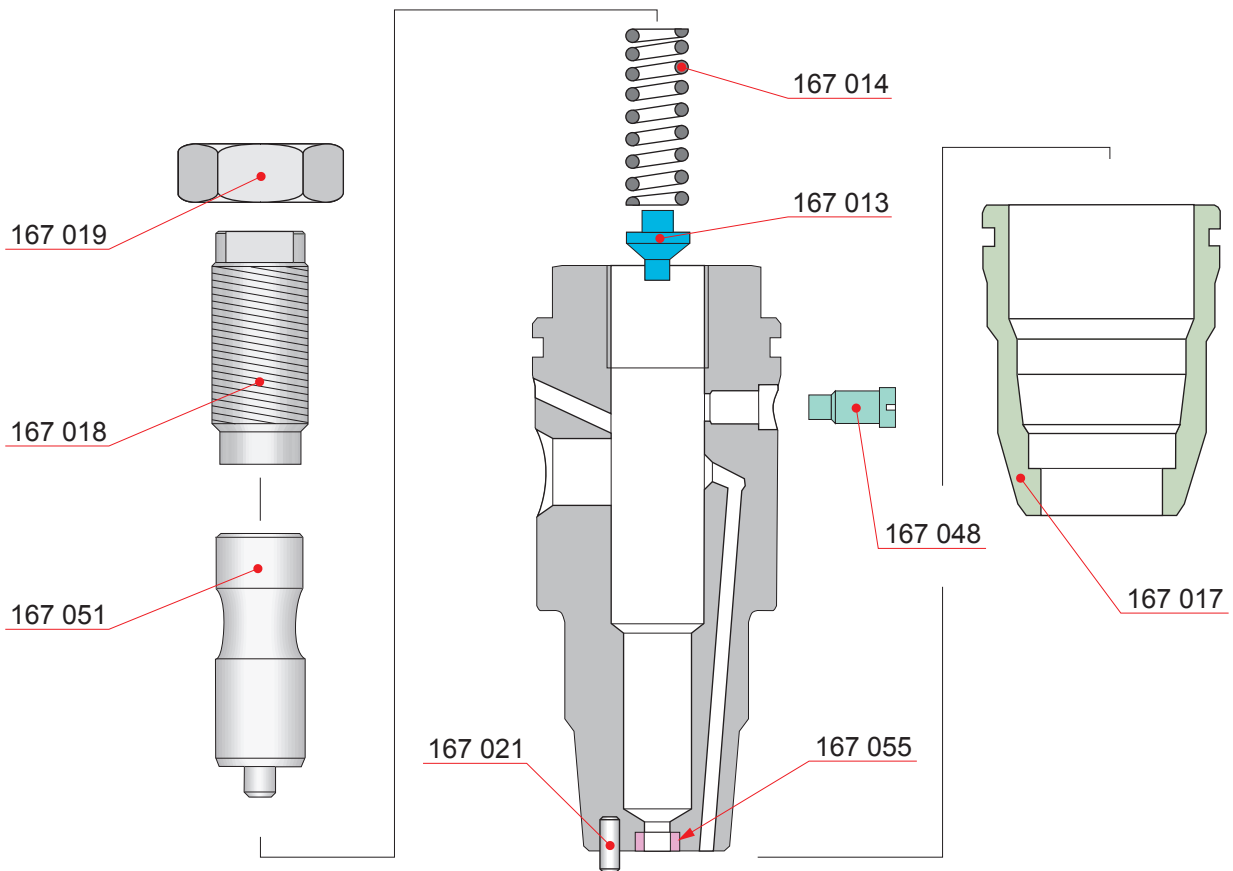


Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 046	Nozzle holder	1	2.7
167 013	Push rod	1	-
167 014	Spring	1	-
167 017	Nozzle nut	1	0.4
167 018	Adjusting screw	1	-
167 019	Retainer screw	1	-
167 021	Pin	2	-
167 048	Guide screw (1)	1	-
167 051	Push rod	1	0.1
167 055	Impact bush	1	0.1

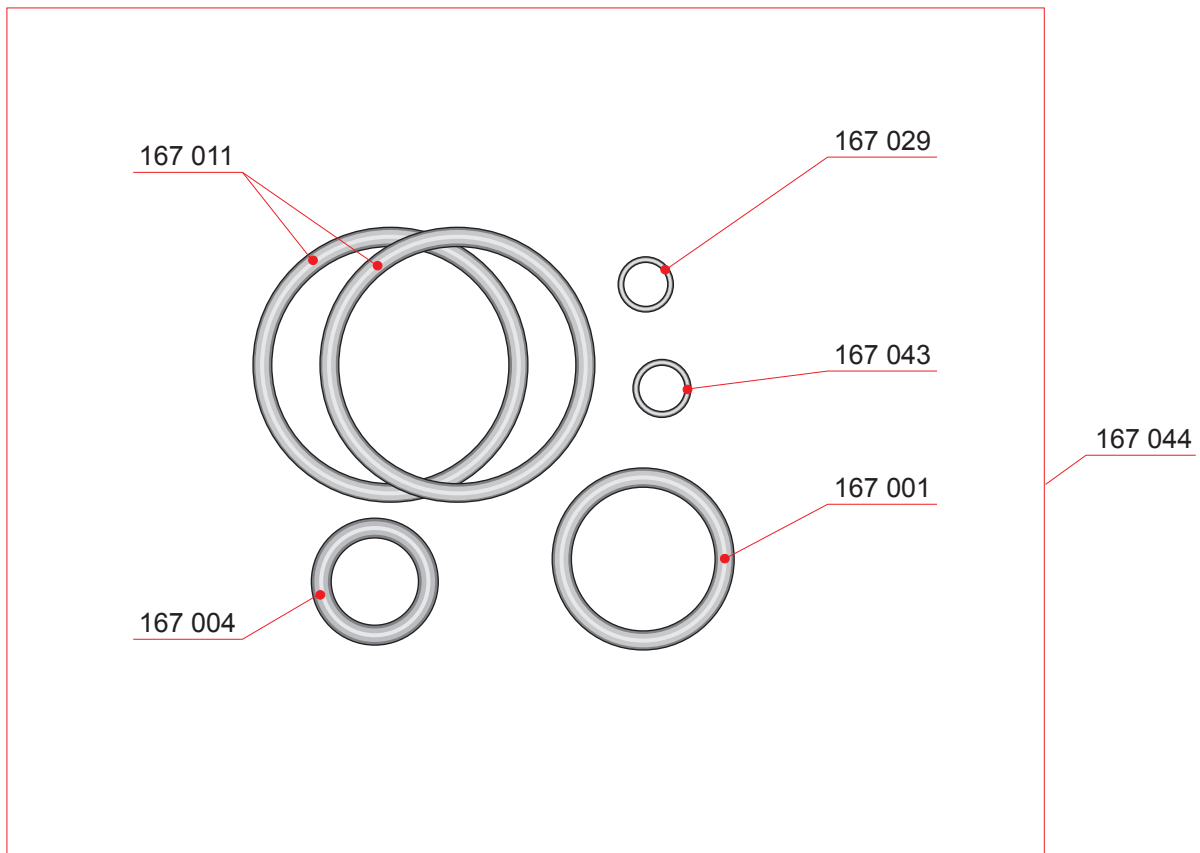
NOTE! (1) Secured with Loctite or equivalent

Edition: A
Page: 4(5)
Updated: 06.07.2009

Injection valve



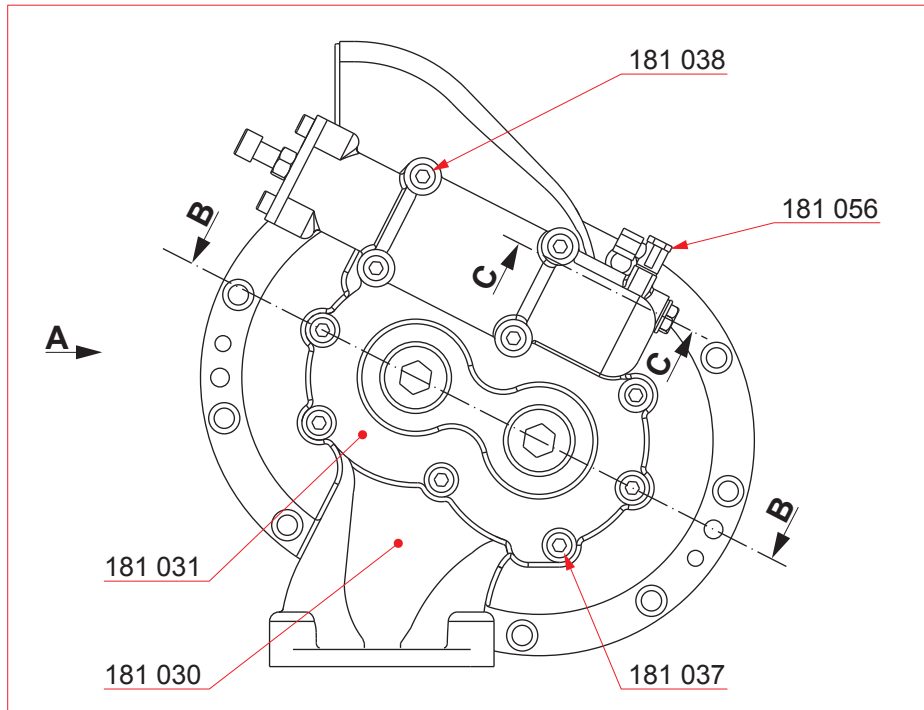
Injection valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 044	Sealing set for injection valve	1	-
167 001	O-ring	1	-
167 004	O-ring	1	-
167 011	O-ring	2	-
167 029	O-ring	1	-
167 043	O-ring	1	-

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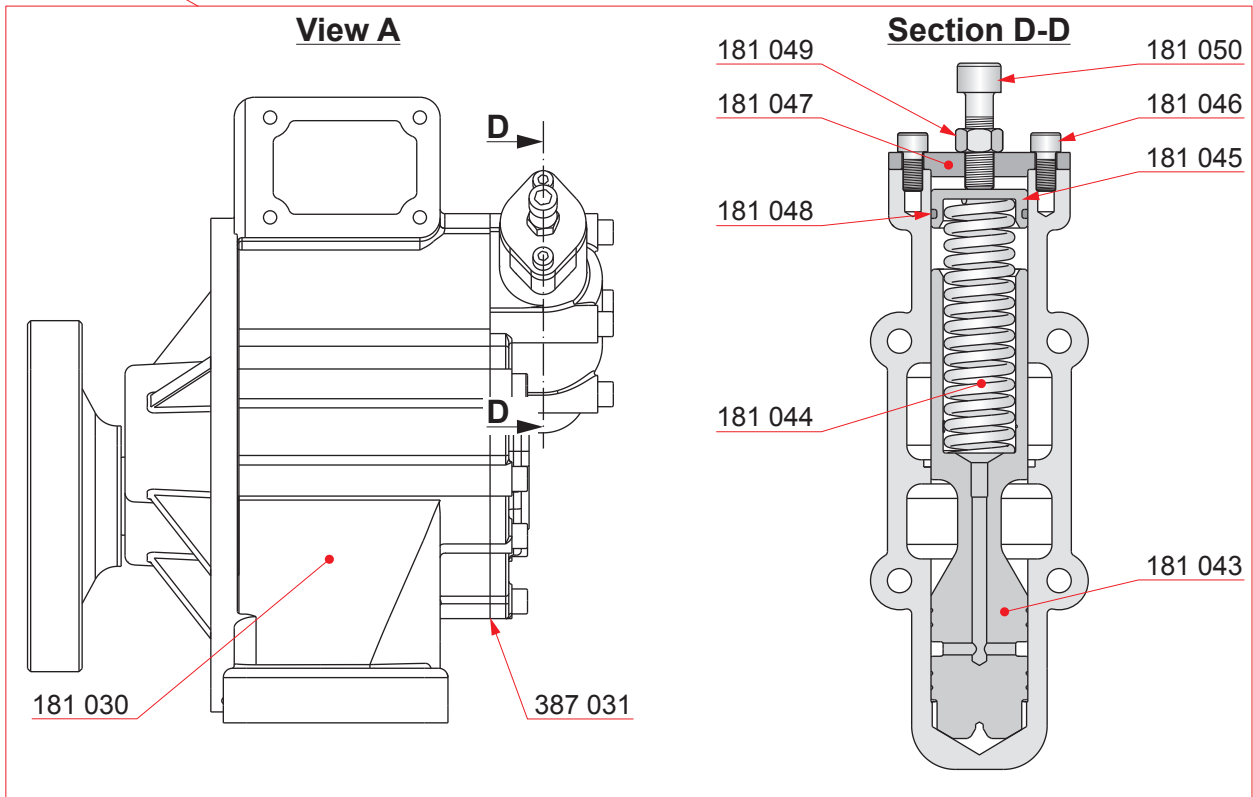
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	-
181 030	Housing	1	-
181 031	Cover	1	6.2
181 037	Screw	6	-
181 038	Screw	4	-
181 056	Pipe union	1	-

Lubricating oil pump

181 001

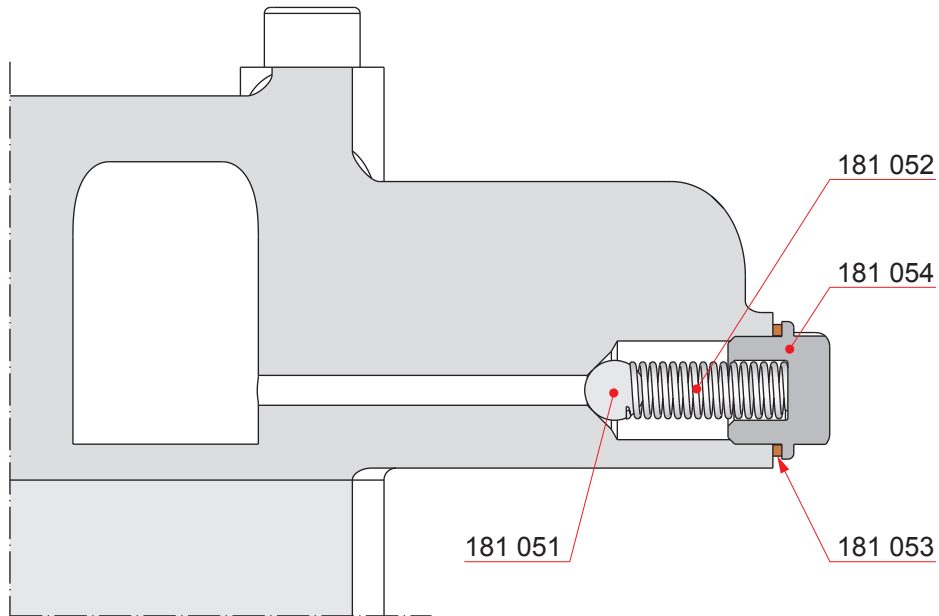


Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	-
181 030	Housing	1	-
181 043	Piston	1	2.0
181 044	Compression ring	1	0.1
181 045	Spring holder	1	-
181 046	Screw	2	-
181 047	Cover	1	0.2
181 048	O-ring	1	-
181 049	Nut	1	-
181 050	Screw	1	-
387 031	Glue compound	1	-

Edition: C
 Page: 4(4)
 Updated: 28.09.2009

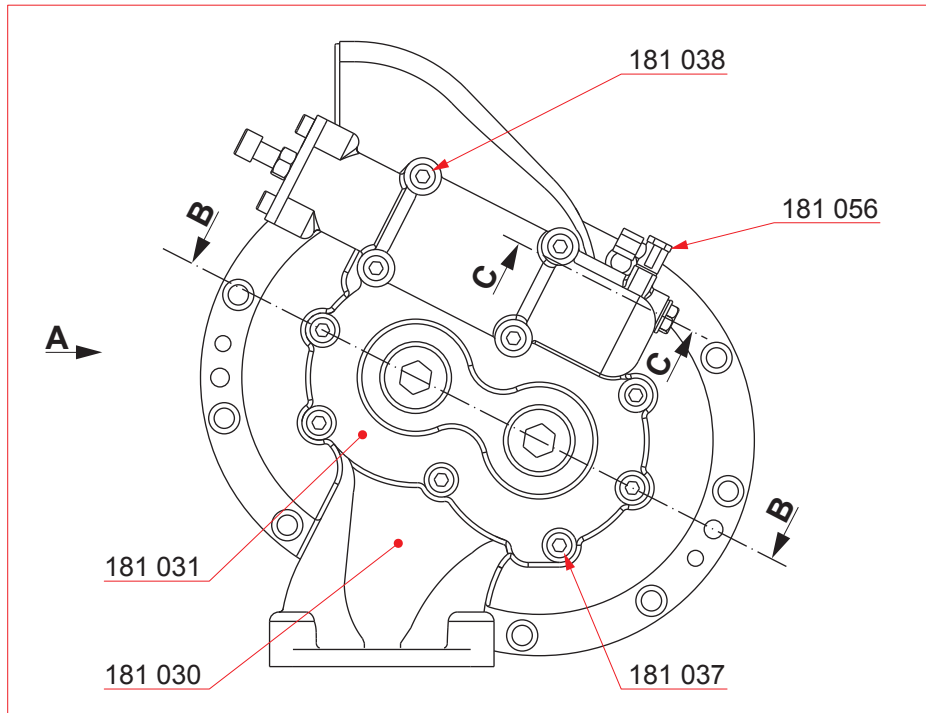
Lubricating oil pump

Section C-C



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 051	Bearing ball	1	-
181 052	Compression spring	1	-
181 053	Sealing ring	1	-
181 054	Plug	1	-

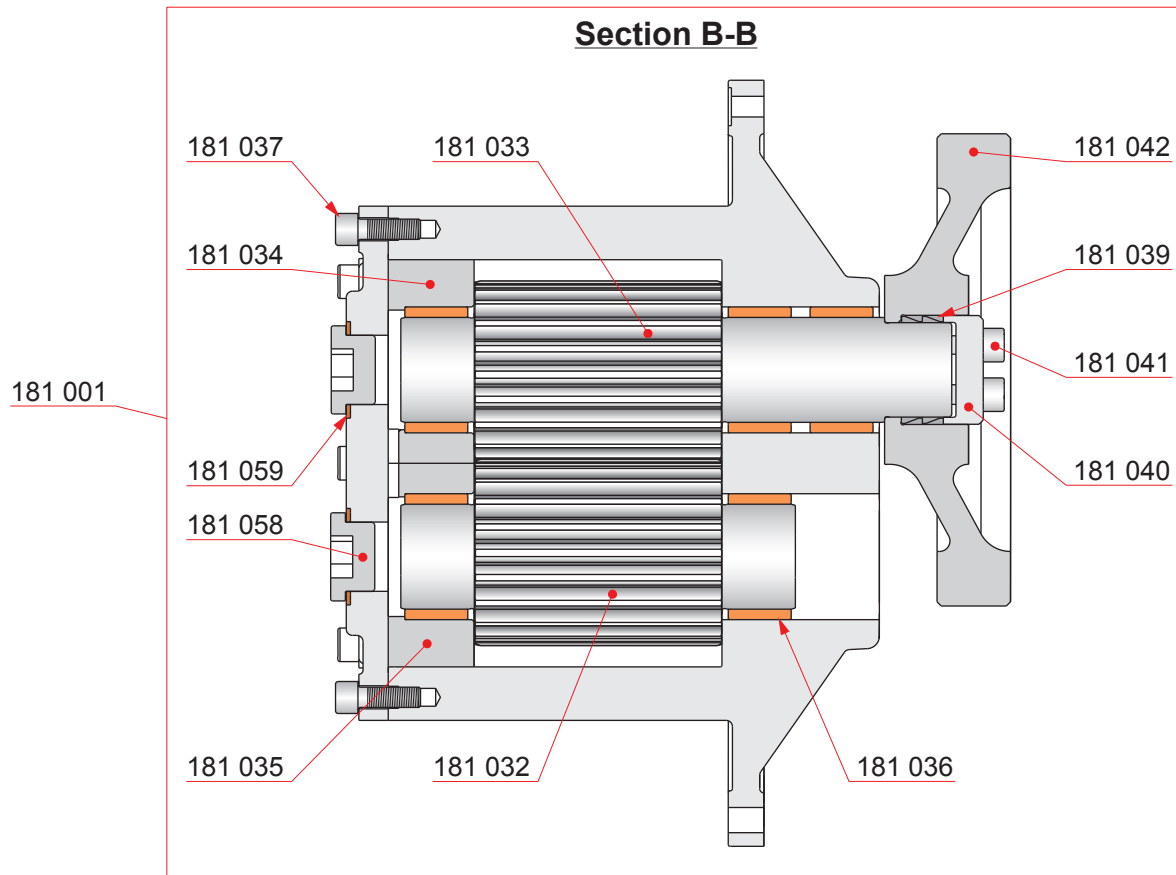
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	35.0
181 030	Housing	1	-
181 031	Cover	1	6.2
181 037	Screw	6	-
181 038	Screw	4	-
181 056	Pipe union	1	-

Edition: A
 Page: 2(4)
 Updated: 24.09.2009

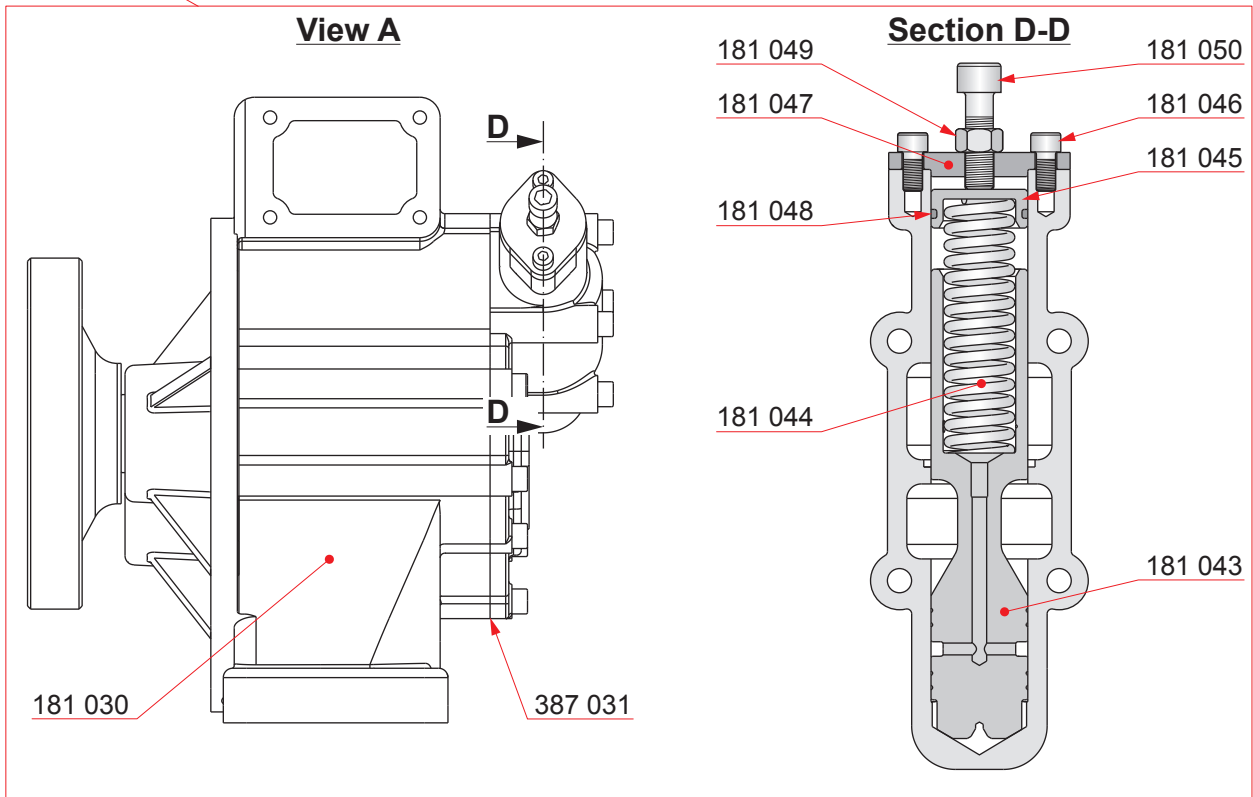
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	35.0
181 032	Drive gear	1	3.5
181 033	Drive gear	1	4.0
181 034	Sleeve	1	1.6
181 035	Sleeve	1	1.6
181 036	Bearing bush	5	0.2
181 037	Screw	6	-
181 039	Pair of friction rings	2	-
181 040	Pressure plate	1	0.2
181 041	Screw	4	-
181 042	Drive gear	1	7.6
181 058	Plug	2	0.1
181 059	Sealing ring	2	-

Lubricating oil pump

181 001

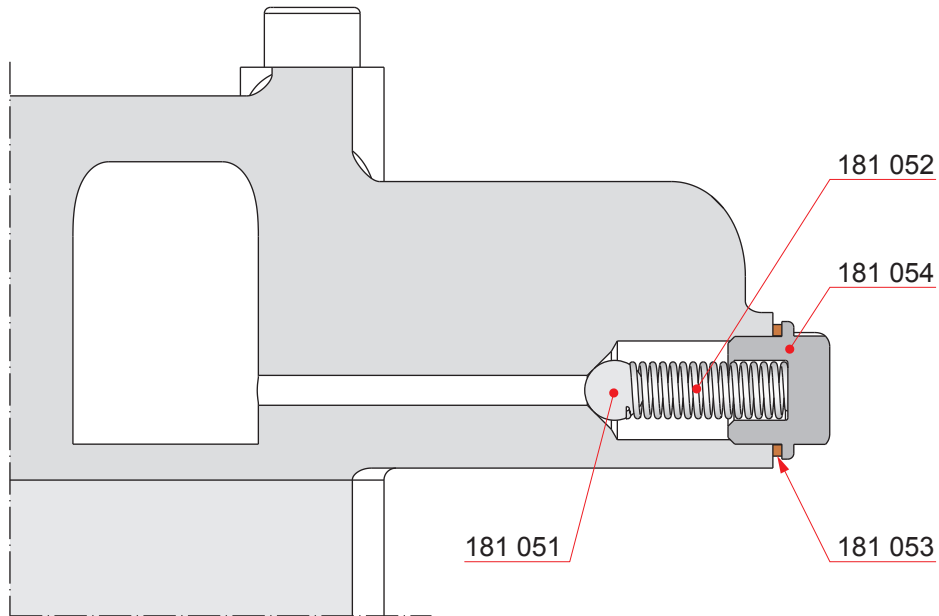


Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	35.0
181 030	Housing	1	-
181 043	Piston	1	2.0
181 044	Compression ring	1	0.1
181 045	Spring holder	1	-
181 046	Screw	2	-
181 047	Cover	1	0.2
181 048	O-ring	1	-
181 049	Nut	1	-
181 050	Screw	1	-
387 031	Glue compound	1	-

Edition: A
 Page: 4(4)
 Updated: 24.09.2009

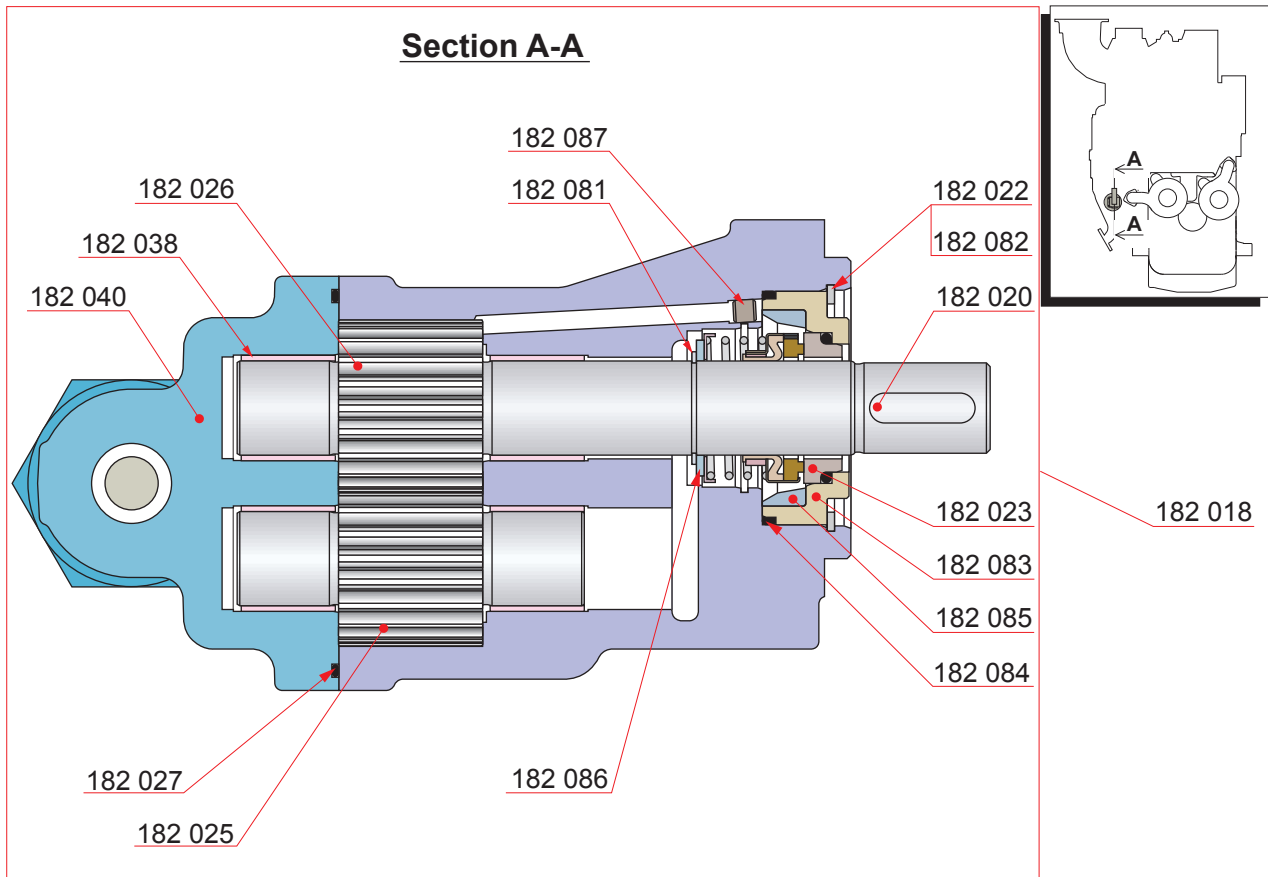
Lubricating oil pump

Section C-C



Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 051	Bearing ball	1	-
181 052	Compression spring	1	-
181 053	Sealing ring	1	-
181 054	Plug	1	-

Prelubricating oil pump

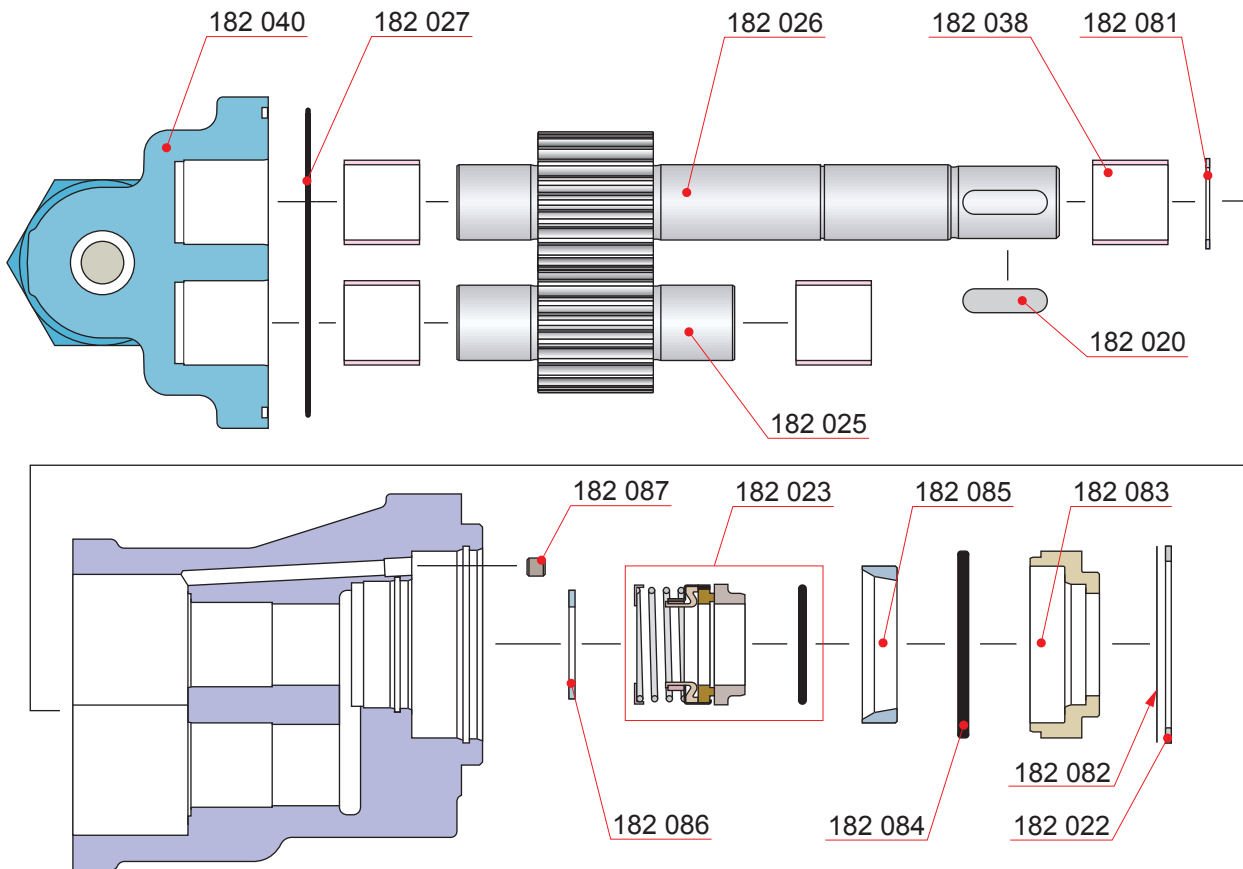


Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 018	Prelubricating oil pump	1	11.0
182 020	Key	1	-
182 022	Retainer ring	1	-
182 023	Seal (1)	1	-
182 025	Gear shaft	1	0.6
182 026	Drive gear shaft	1	1.0
182 027	O-ring (1)	1	-
182 038	Bearing bush	4	-
182 040	End cover	1	-
182 081	Retaining ring	1	-
182 082	Shim	2	-
182 083	Sleeve seal	1	0.2
182 084	O-ring (1)	1	-
182 085	Seal spacer	1	-
182 086	Support ring	1	-
182 087	Nozzle	1	-

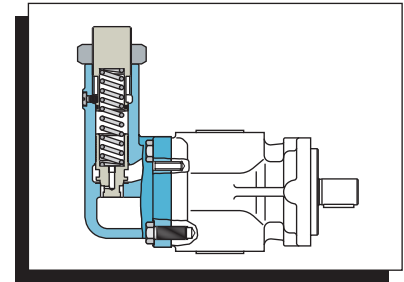
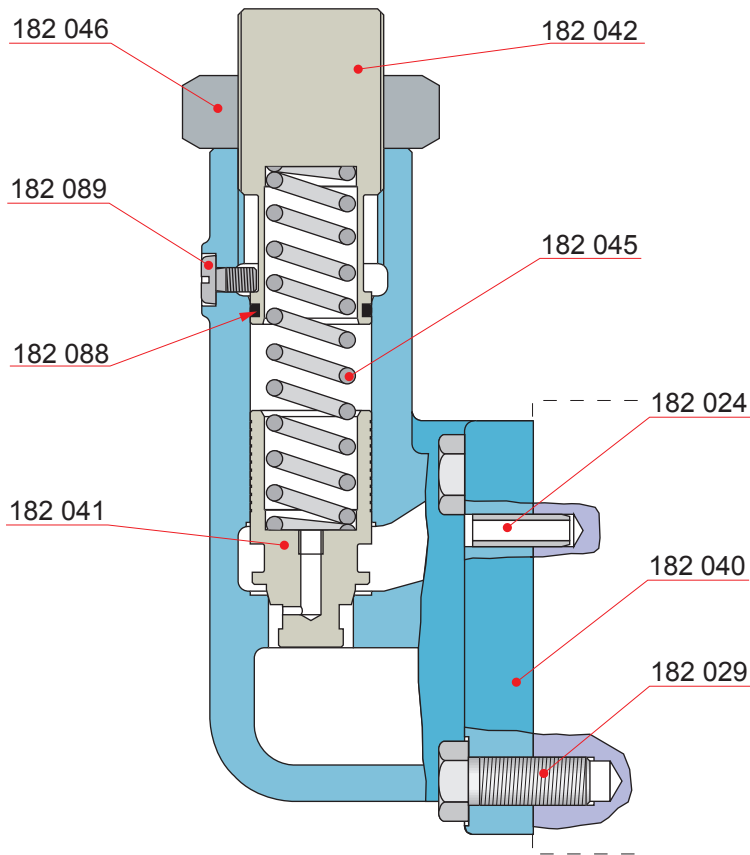
NOTE! (1) included in sealing set 182 099.

Edition: E
 Page: 2(5)
 Updated: 13.03.2008

Prelubricating oil pump



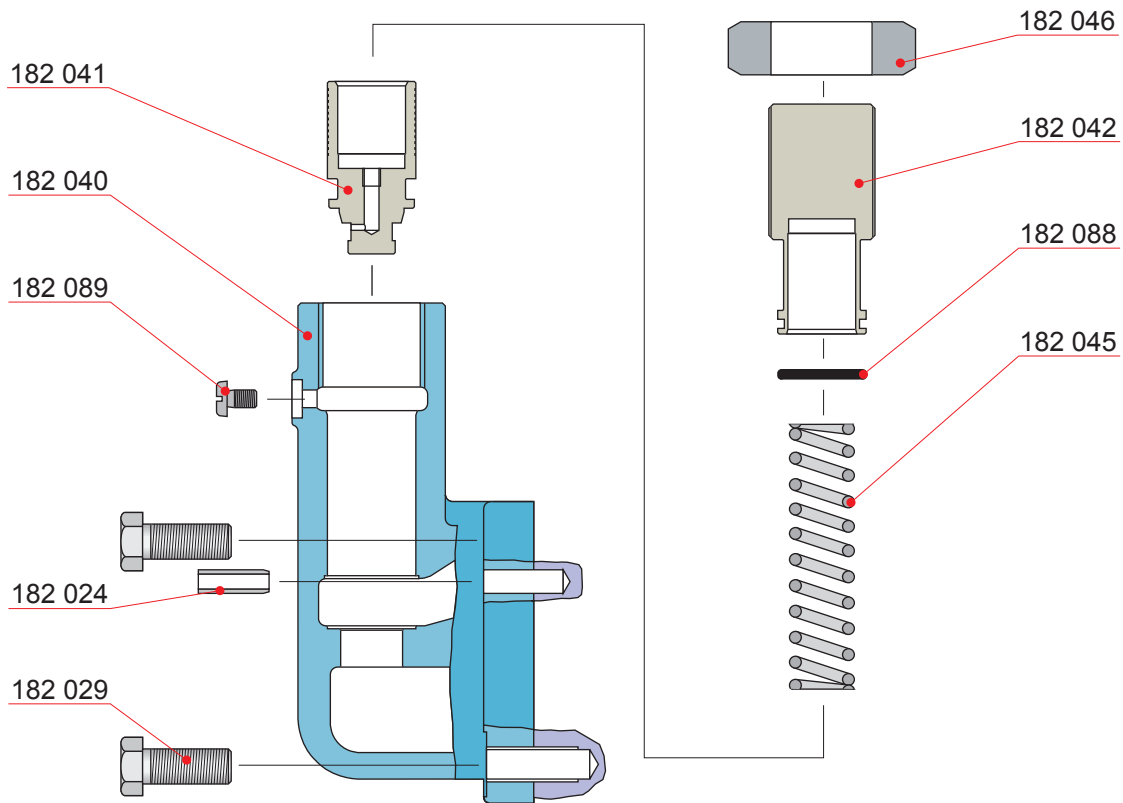
Prelubricating oil pump



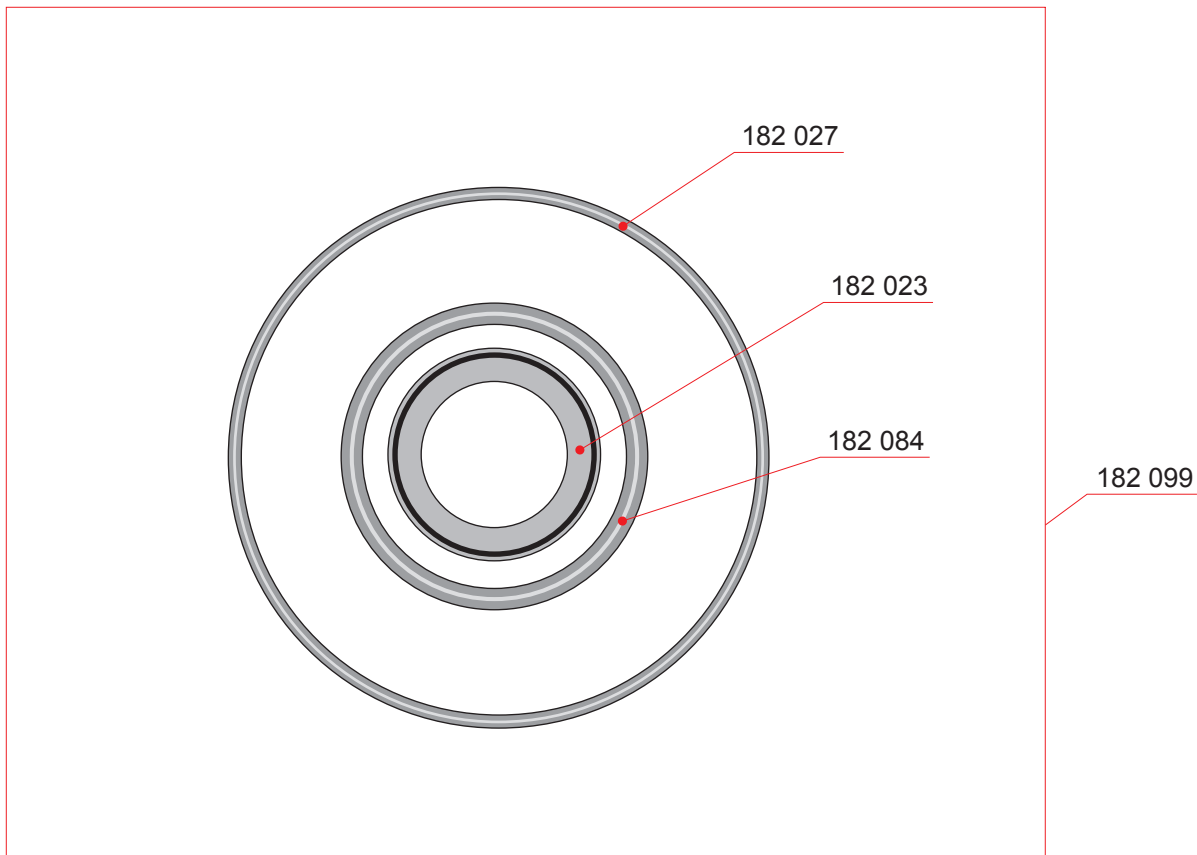
Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 024	Pin	2	-
182 029	Screw	4	-
182 040	End cover	1	-
182 041	Piston	1	-
182 042	Spindle	1	0.1
182 045	Spring	1	-
182 046	Nut	1	-
182 088	O-ring	1	-
182 089	Setting screw	1	-

Edition: E
Page: 4(5)
Updated: 13.03.2008

Prelubricating oil pump



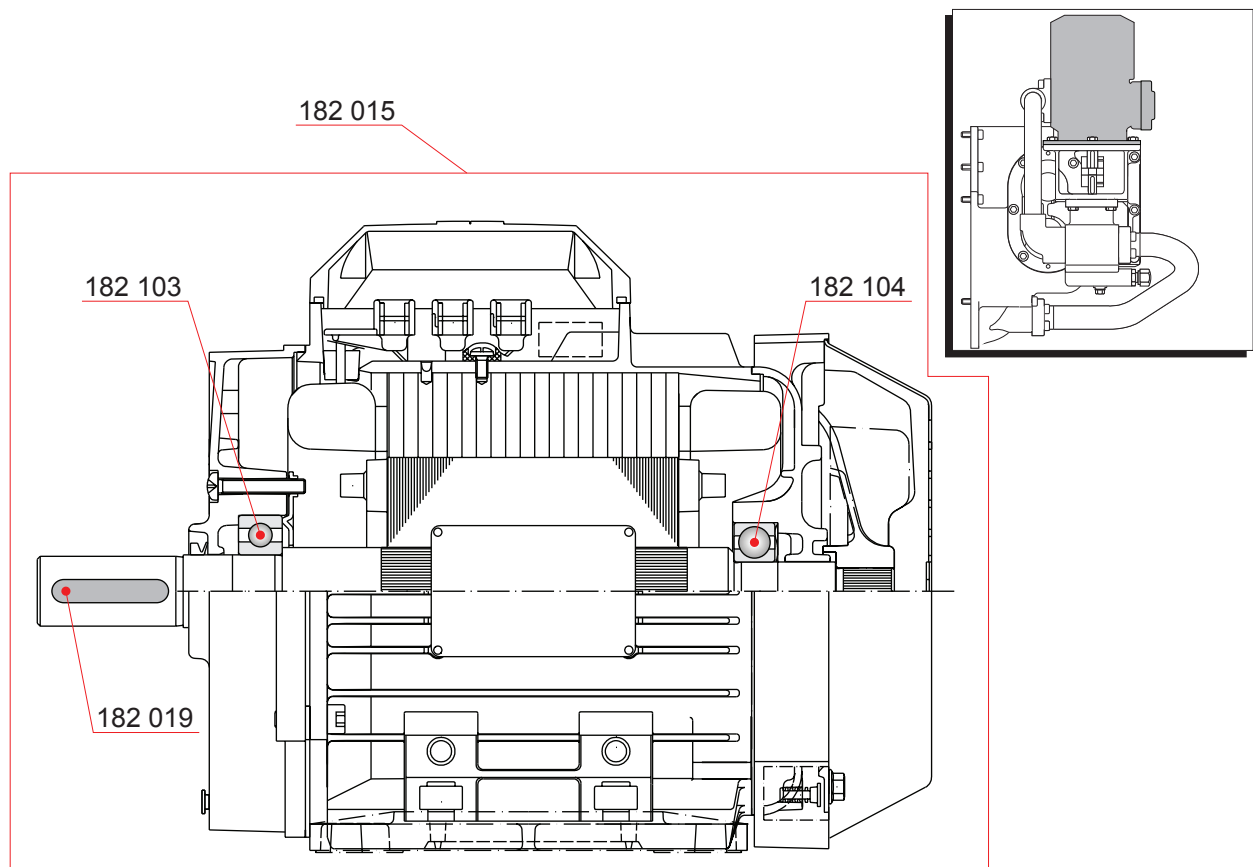
Prelubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 099	Sealing set	1	0.1
182 023	Seal	1	-
182 027	O-ring	1	-
182 084	O-ring	1	-

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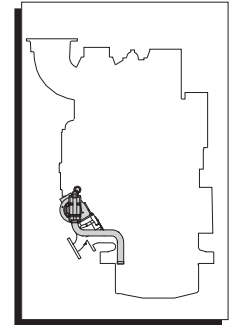
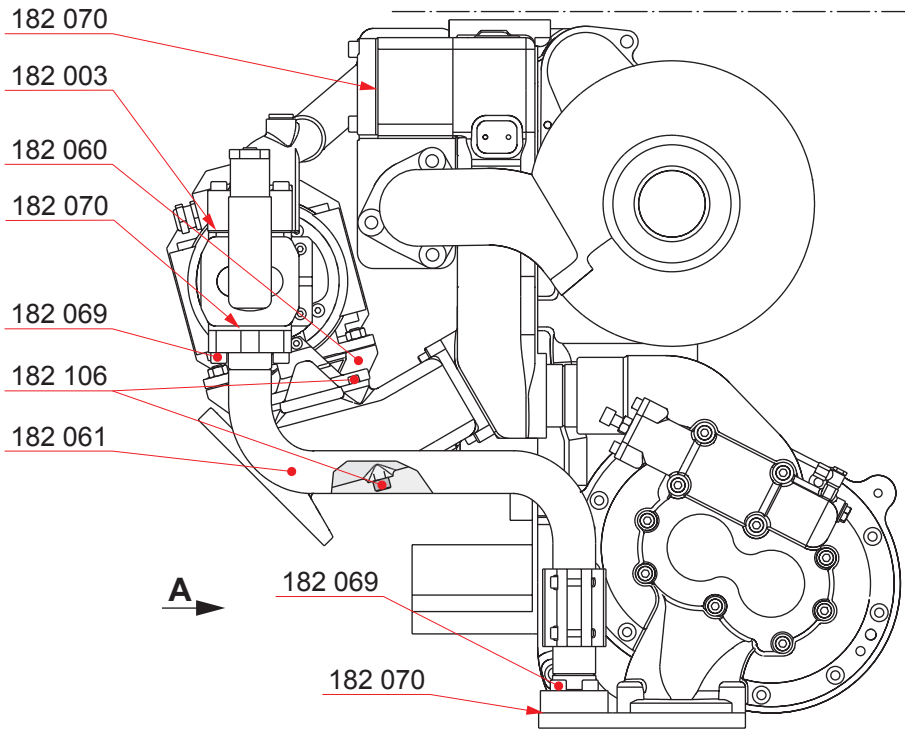
Electric motor for prelubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 015	Electrical motor	1	15.5
182 019	Key	1	-
182 103	Ball bearing	1	0.2
182 104	Ball bearing	1	0.1

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Prelubricating pump assembly

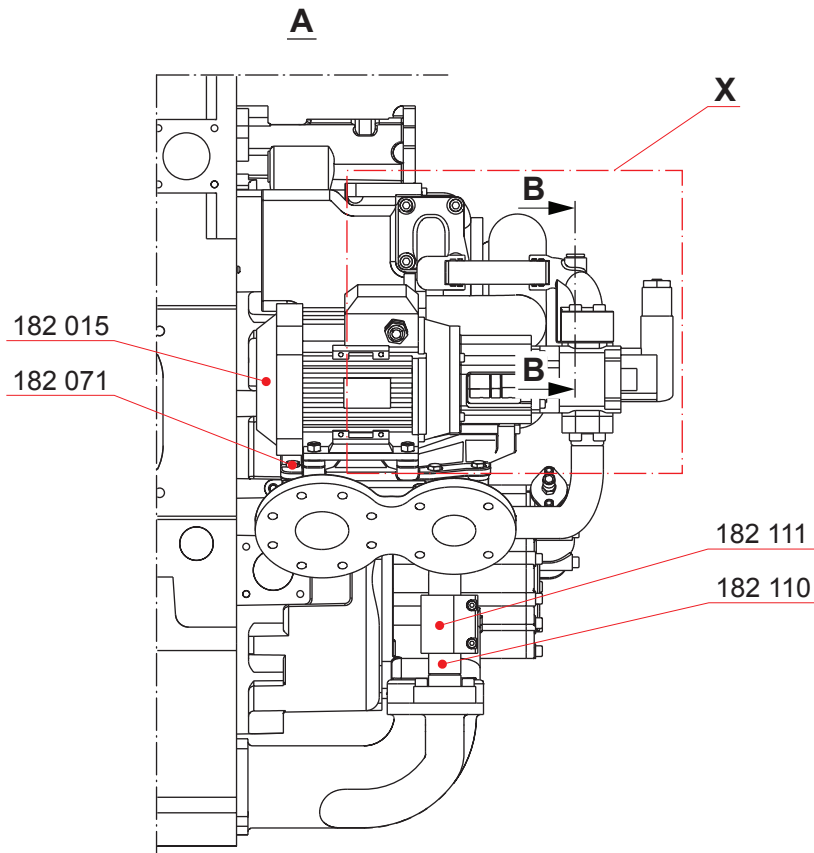


Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 003	O-ring	1	-
182 060	Bracket	1	6.2
182 061	Suction pipe	1	2.5
182 069	Screw	8	-
182 070	O-ring	3	-
182 106	Screw	7	0.1

Edition: E

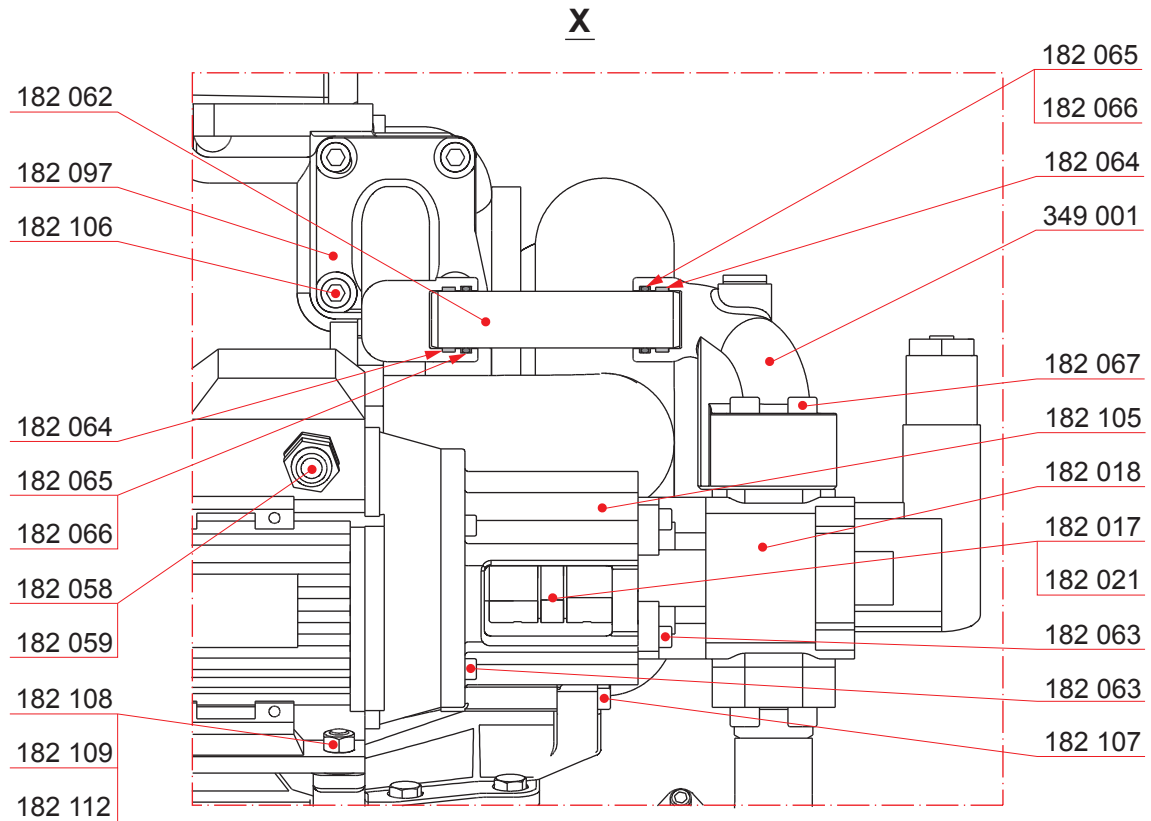
Page: 2(5)

Updated: 11.01.2011

Prelubricating pump assembly

Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 015	Electrical motor	1	-
182 071	Screw	3	-
182 110	Pipe	1	1.1
182 111	Pipe	1	1.0

Prelubricating pump assembly

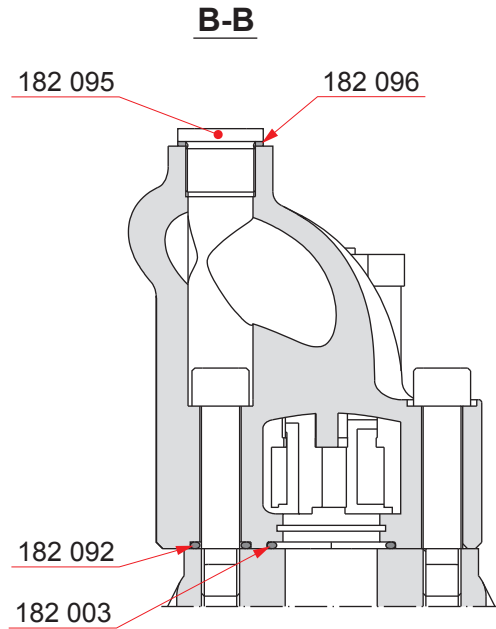


Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 017	Flexible coupling	1	0.3
182 021	Flexible coupling rubber	1	-
182 018	Prelubricating oil pump (1)	1	11.0
182 058	Cable gland	1	-
182 059	Nut	1	-
182 062	Pipe	1	-
182 063	Screw	8	-
182 064	O-ring	2	-
182 065	Back-up ring	4	-
182 066	O-ring	2	-
182 067	Screw	4	-
182 097	Bend	1	-
182 105	Bracket	1	-
182 106	Screw	7	0.1
182 107	Screw	2	-
182 108	Stud	4	-
182 109	Nut	4	-
182 112	Washer	4	-
349 001	Non-return valve	1	2.9

NOTE! (1) See section for prelubricating oil pump 182-

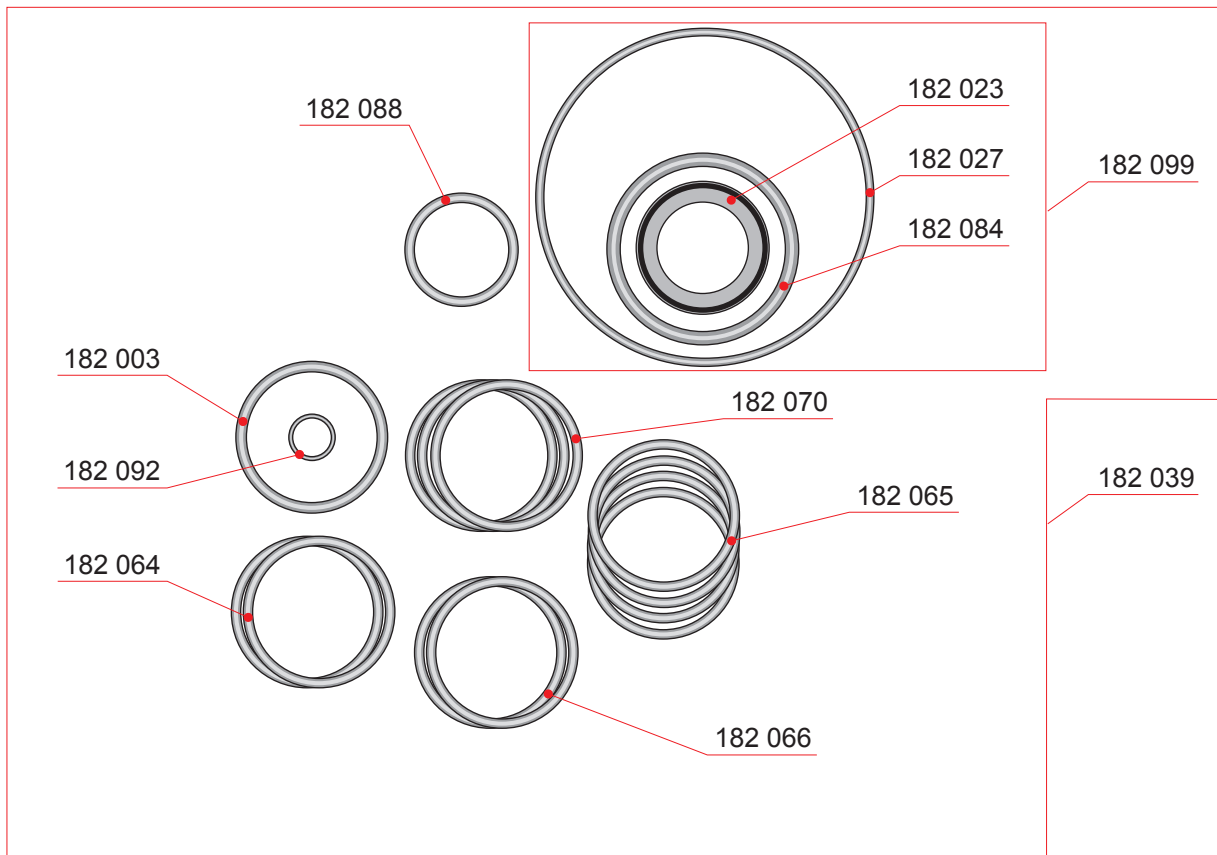
Edition: E
 Page: 4(5)
 Updated: 11.01.2011

Prelubricating pump assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 003	O-ring	1	-
182 092	O-ring	1	-
182 095	Plug	1	-
182 096	Sealing ring	1	-

Prelubricating pump assembly



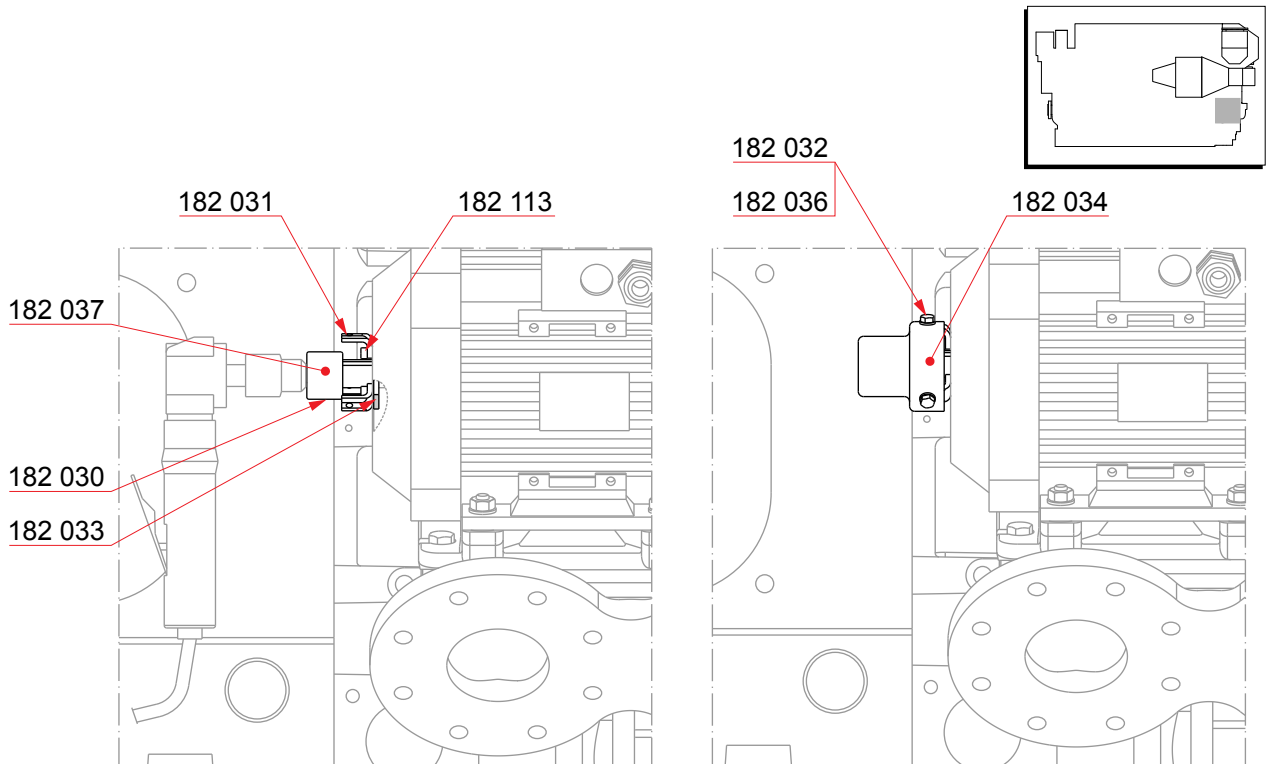
Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 039	Sealing set (1)	1	0.2
182 003	O-ring	1	-
182 064	O-ring	2	-
182 065	Back-up ring	4	-
182 066	O-ring	2	-
182 070	O-ring	3	-
182 088	O-ring	1	-
182 092	O-ring	1	-
182 099	Sealing set (2)	1	0.1
182 023	Seal	1	-
182 027	O-ring	1	-
182 084	O-ring	1	-

NOTE! (1) The sealing set includes sealings for pump and pipes.

NOTE! (2) See section for prelubricating oil pump 182-

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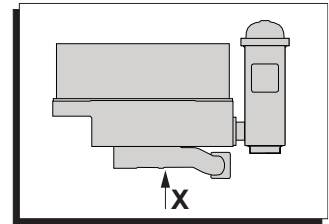
Turning tool for prelubricating pump



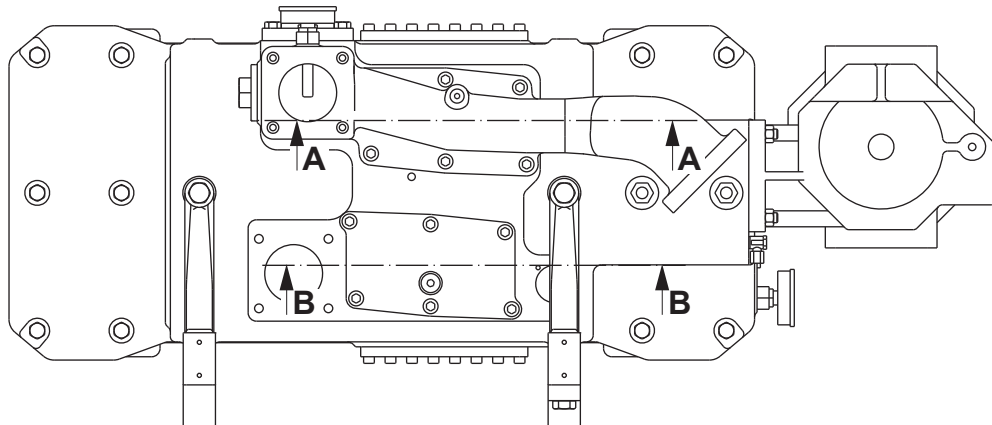
Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 030	Retainer screw	1	-
182 031	Screw	3	-
182 032	Screw	3	-
182 033	Support ring	1	-
182 034	Cover	1	-
182 036	Washer	3	-
182 037	Connecting piece	1	0.2
182 113	Screw	3	-

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Thermostatic valve for lubricating oil



View X



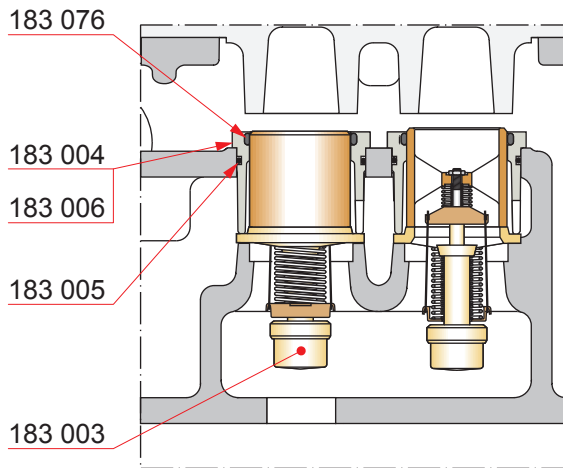
Part No.	Description	Qty [Pcs]	Wt. [Kg]
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NOTE! See page 2.

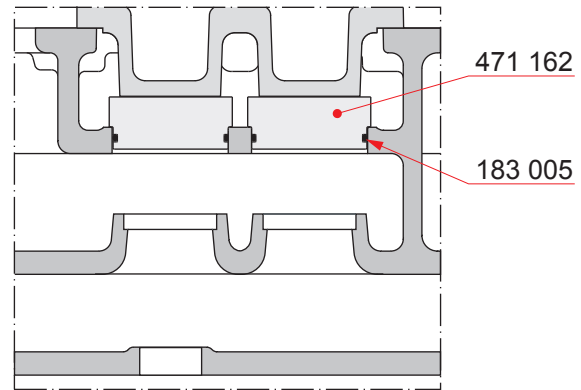
Edition: B
 Page: 2(3)
 Updated: 10.06.2010

Thermostatic valve for lubricating oil

Section A-A



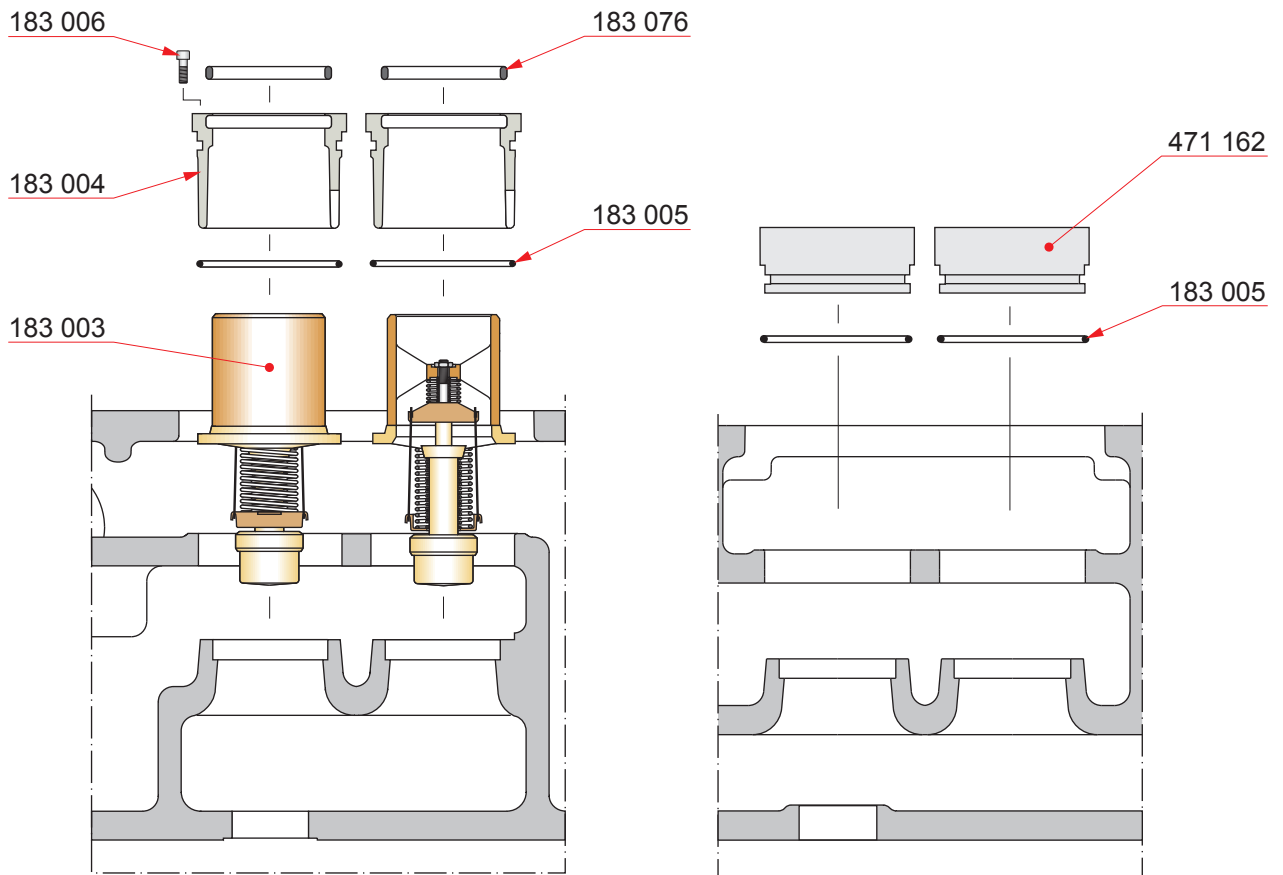
Section B-B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 003	Thermostatic element	2	0.7
183 004	Holder	2	0.5
183 005	O-ring	4	-
183 006	Screw	4	-
183 076	O-ring	2	-
471 162	Flange (1)	2	-

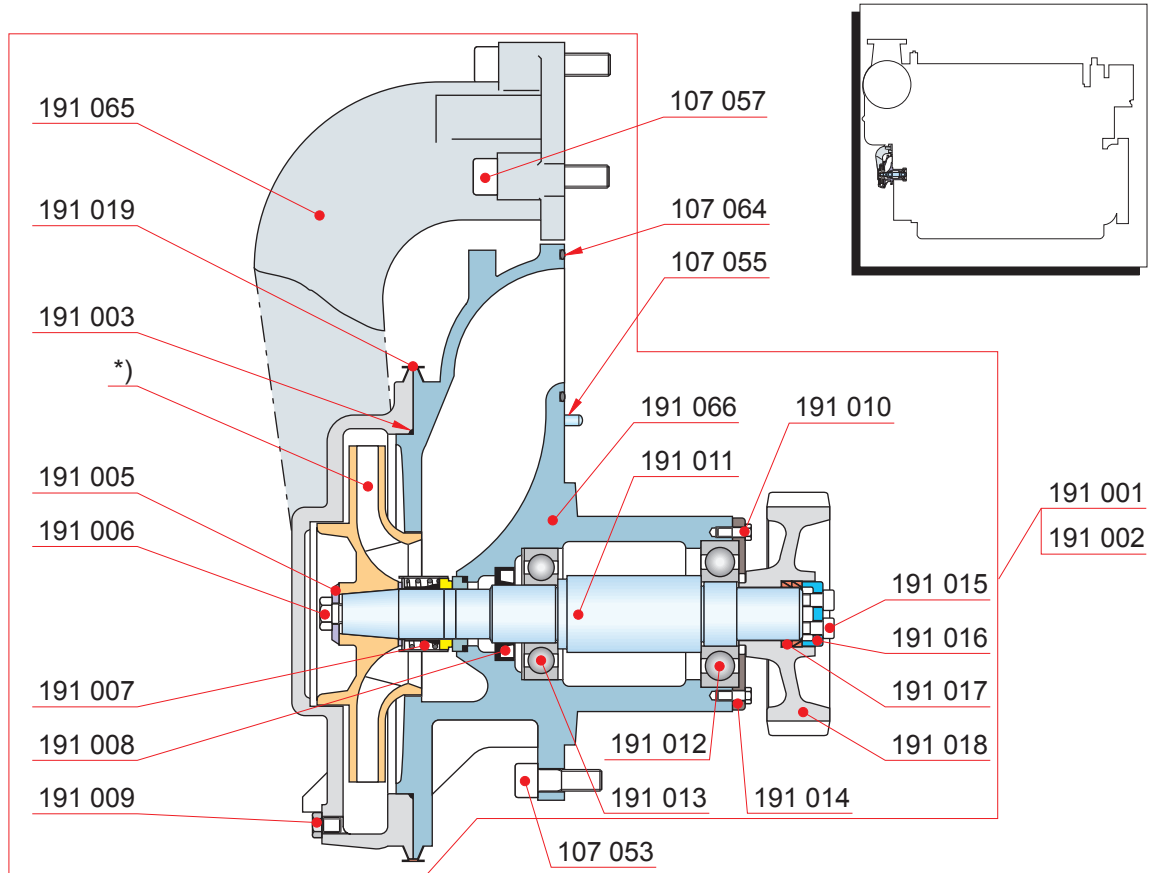
NOTE! (1) Not used if LT-thermostatic elements assembled. Thermostatic valve for LT-water, see section 196.

Thermostatic valve for lubricating oil



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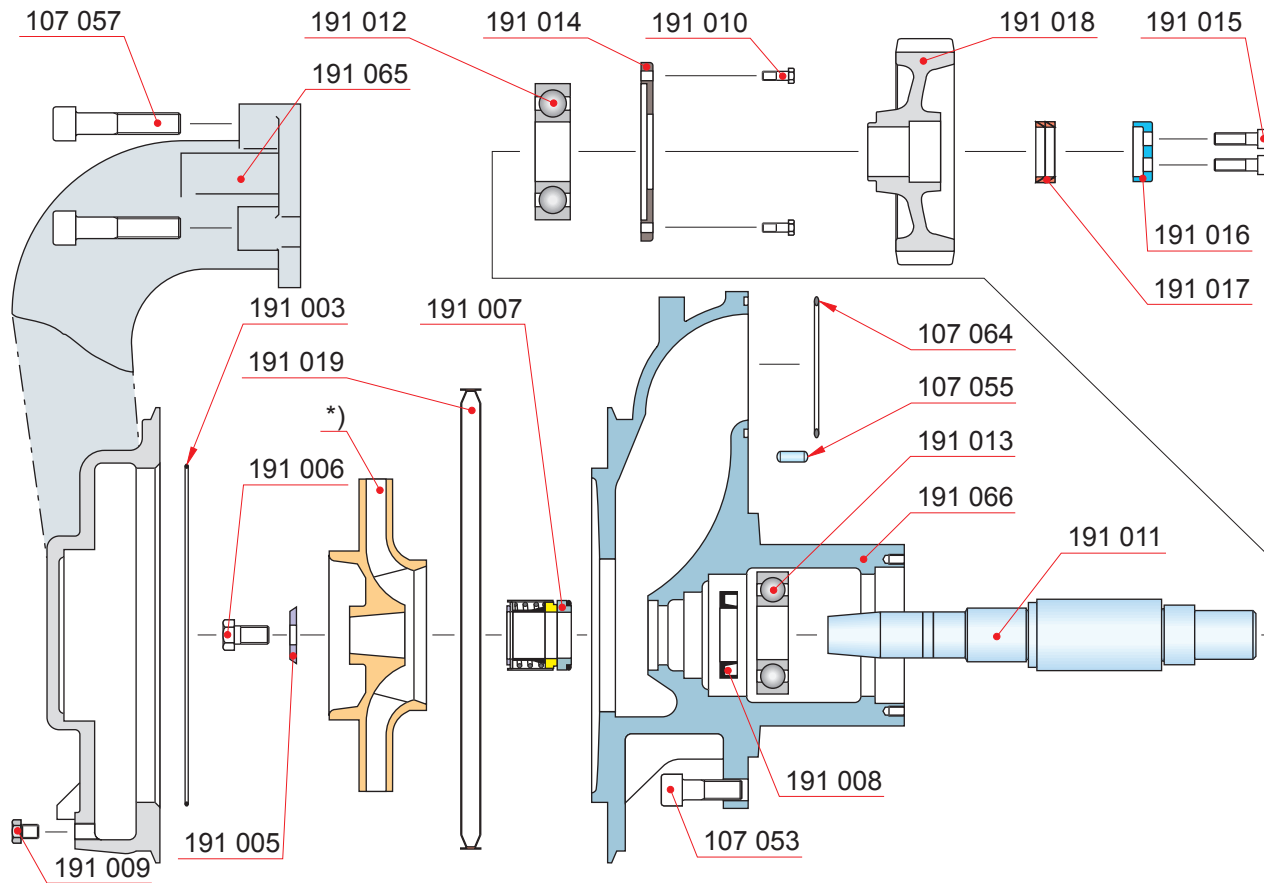
Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 001	HT water pump	1	-	NOTE!	(1) included in the spare part kit for LT/ HT-water Pump, see page 4.		
191 002	LT water pump	1	-				
191 003	O-ring (1)	1	-	NOTE!	*) Impeller, see page 3.		
191 005	Washer	1	-				
191 006	Screw	1	-				
191 007	Shaft seal (1)	1	0.2				
191 008	Gamma ring (1)	1	-				
191 009	Plug	3	-				
191 010	Screw	4	-				
191 011	Shaft	1	2.5				
191 012	Bearing (1)	1	0.6				
191 013	Bearing (1)	1	0.5				
191 014	Bearing housing cover	1	0.4				
191 015	Screw (1)	3	-				
191 016	Pressure plate	1	-				
191 017	Pair of friction rings	2	-				
191 018	Drive gear wheel	1	-				
191 019	Clamp ring	1	0.5				
191 065	Volute casing	1	41.0				
191 066	Bearing housing	1	41.0				
107 053	Screw	5	-				
107 055	Pin	2	-				
107 057	Screw	3	-				
107 064	O-ring (1)	2	-				

Edition: I
 Page: 2(4)
 Updated: 07.11.2007

Water pump



Water pump

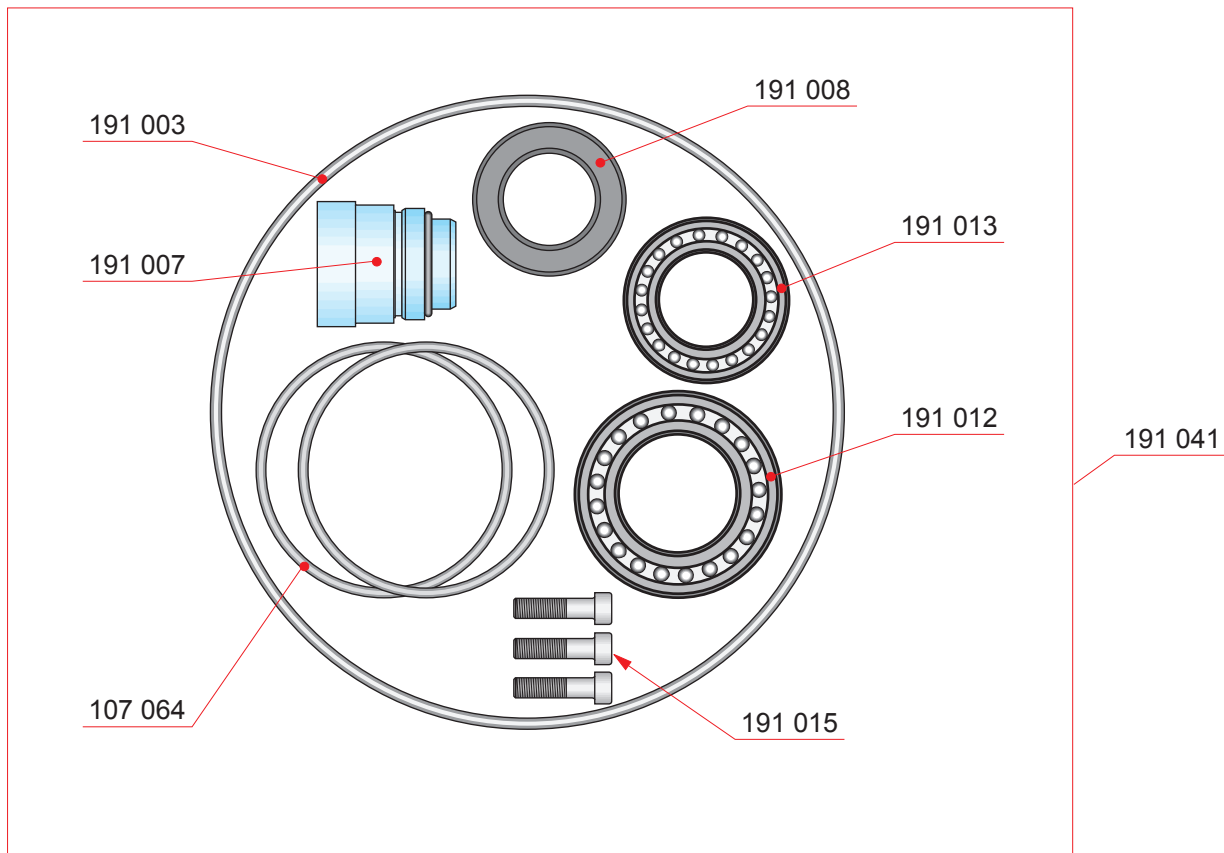
PART NUMBER SELECTION TABLE FOR IMPELLER

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
191 022	WD-70L168A	168	1
191 023	WD-70L170A	170	1
191 024	WD-70L172A	172	1
191 025	WD-70L175A	175	1
191 026	WD-70L180A	180	1
191 027	WD-70L187A	187	1
191 028	WD-70L191A	191	1
191 029	WD-70L205B	205	1
191 030	WD-70R168A	168	1
191 031	WD-70R170A	170	1
191 032	WD-70R172A	172	1
191 033	WD-70R175A	175	1
191 034	WD-70R180A	180	1
191 035	WD-70R187A	187	1
191 036	WD-70R191A	191	1
191 037	WD-70R205B	205	1
191 039	WD-70R197B	197	1
191 040	WD-70L197B	197	1

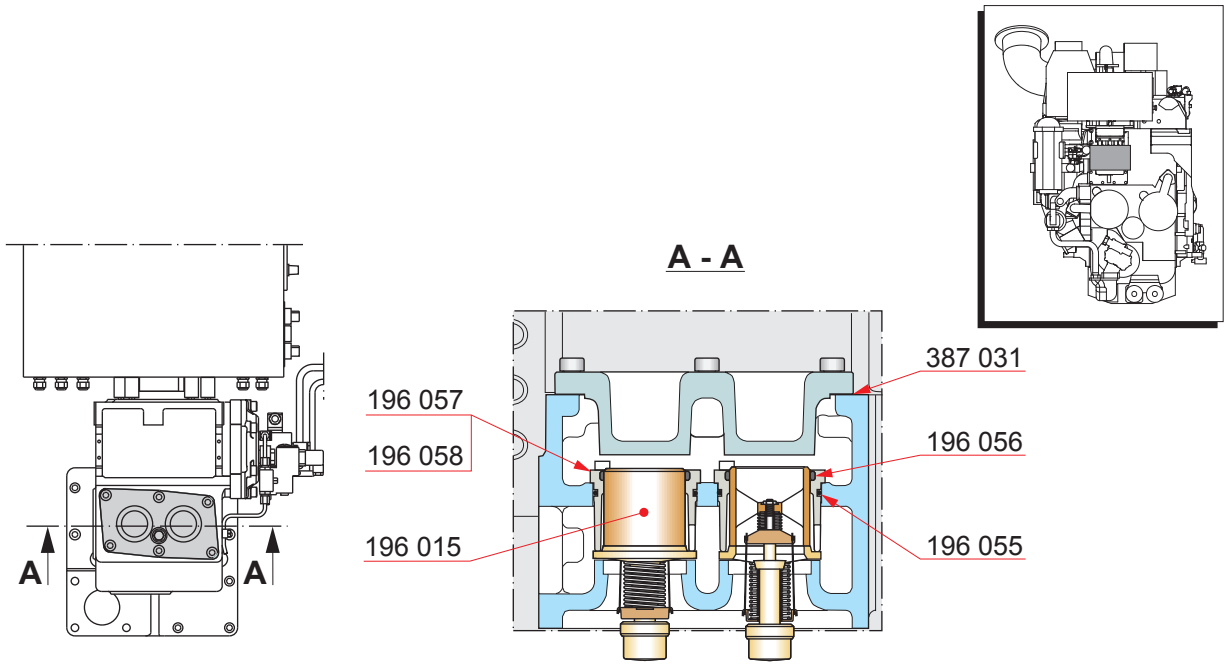
Edition: I
 Page: 4(4)
 Updated: 07.11.2007

Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 041	Sealing set for LT/HT-water pump	1	0.2
107 064	O-ring	2	-
191 003	O-ring	1	-
191 007	Shaft seal	1	0.2
191 008	Gamma ring	1	-
191 012	Bearing	1	0.6
191 013	Bearing	1	0.5
191 015	Screw	3	-

Thermostatic valve for HT water

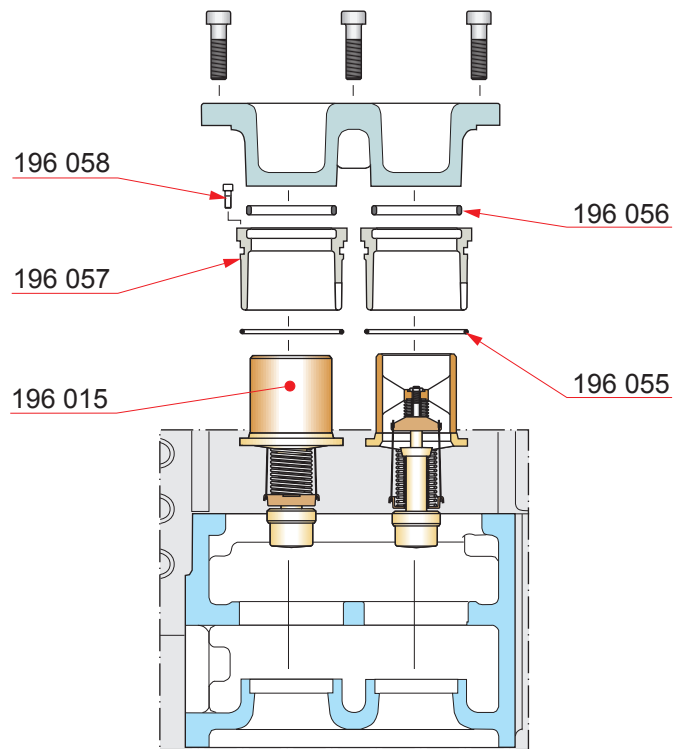


Part No.	Description	Qty [Pcs]	Wt. [Kg]
196 015	Thermostatic element	2	-
196 055	O-ring	2	-
196 056	O-ring	2	-
196 057	Holder	2	-
196 058	Screw	4	-
387 031	Glue compound	1	-

Edition: C

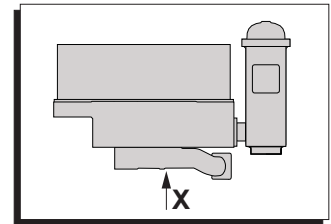
Page: 2(2)

Updated: 04.10.2010

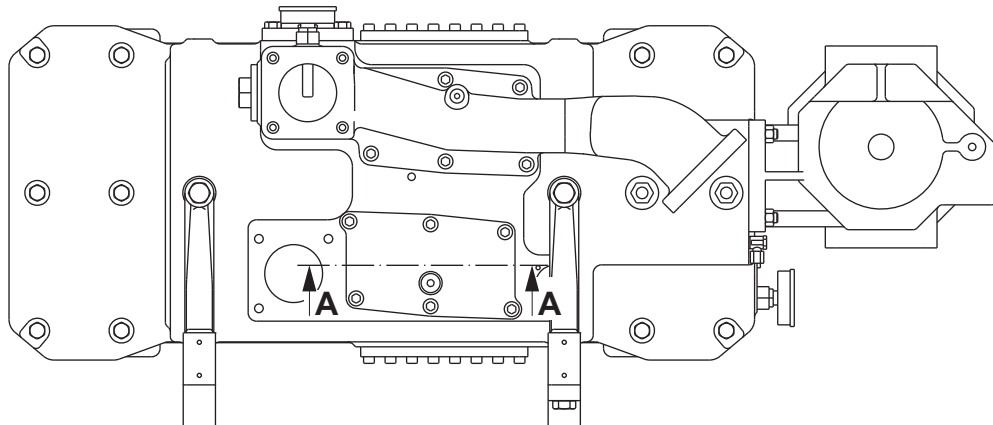
Thermostatic valve for HT water

Part No.	Description	Qty [Pcs]	Wt. [Kg]
196 015	Thermostatic element	2	-
196 055	O-ring	2	-
196 056	O-ring	2	-
196 057	Holder	2	-
196 058	Screw	4	-

Thermostatic valve for LT-water



View X



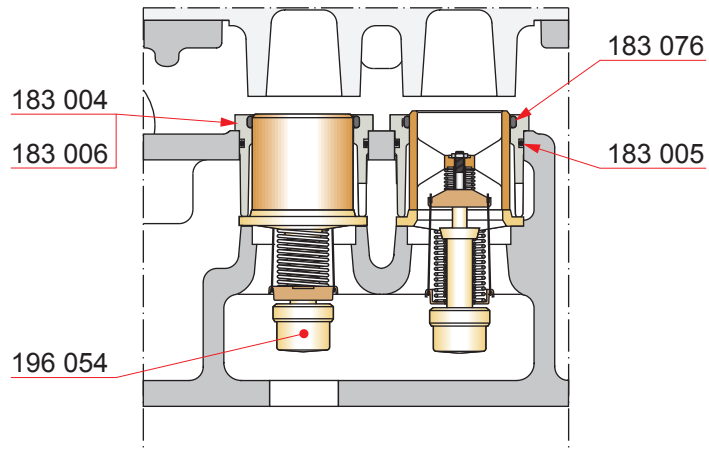
Part No.	Description	Qty [Pcs]	Wt. [Kg]
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NOTE! See page 2.

Edition: A
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 Updated: 10.12.2009

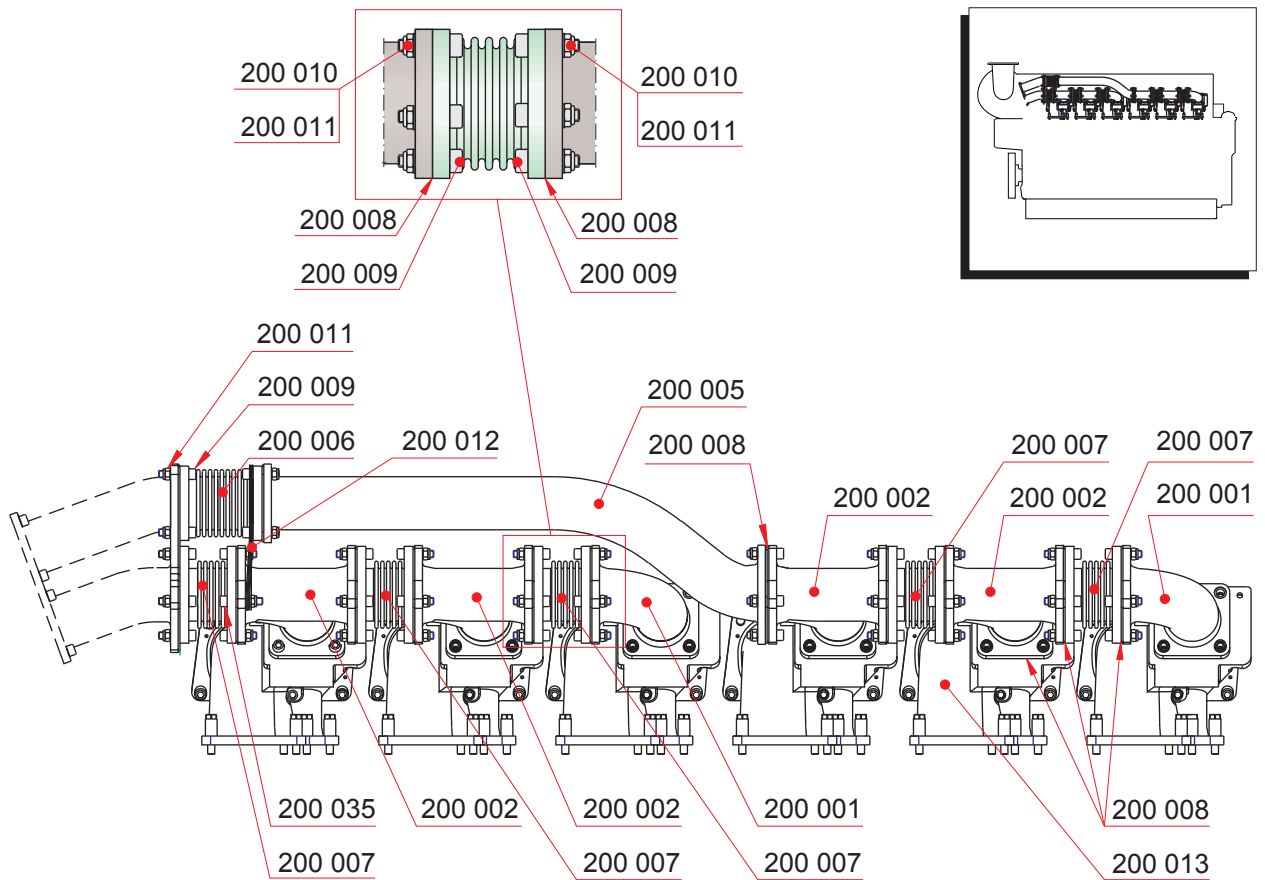
Thermostatic valve for LT-water

Section A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
183 004	Holder	4	-
183 005	O-ring	4	-
183 006	Screw	8	-
183 076	O-ring	4	-
196 054	Thermostatic element	2	-

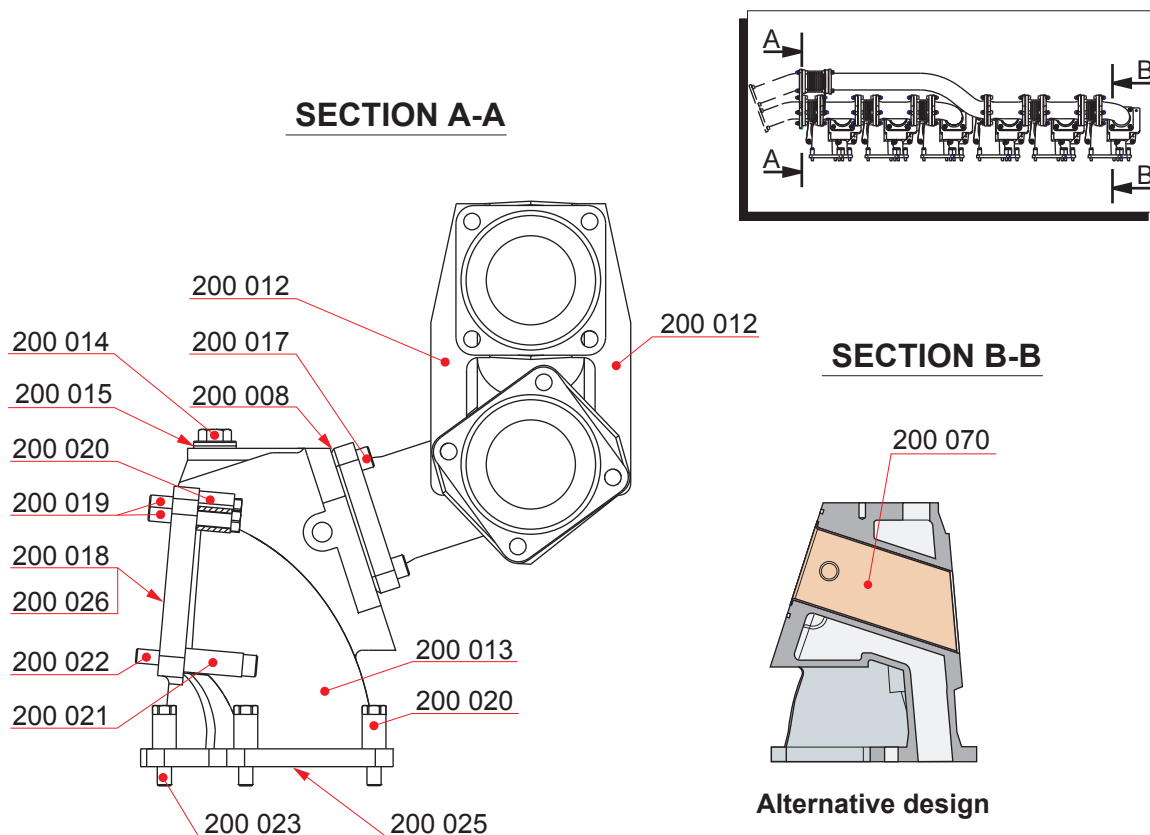
Exhaust manifold 6L20



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 001	Exhaust pipe	2	5.7
200 002	Exhaust pipe	4	7.8
200 005	Exhaust pipe	1	-
200 006	Bellows	1	2.7
200 007	Bellows	5	2.8
200 008	Sealing ring	19	-
200 009	Screw	50	-
200 010	Washer	52	-
200 011	Nut	52	-
200 012	Support	8	0.2
200 013	Multiduct	6	45.0
200 035	Screw	2	0.1

Edition: A
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 Updated: 11.01.2000

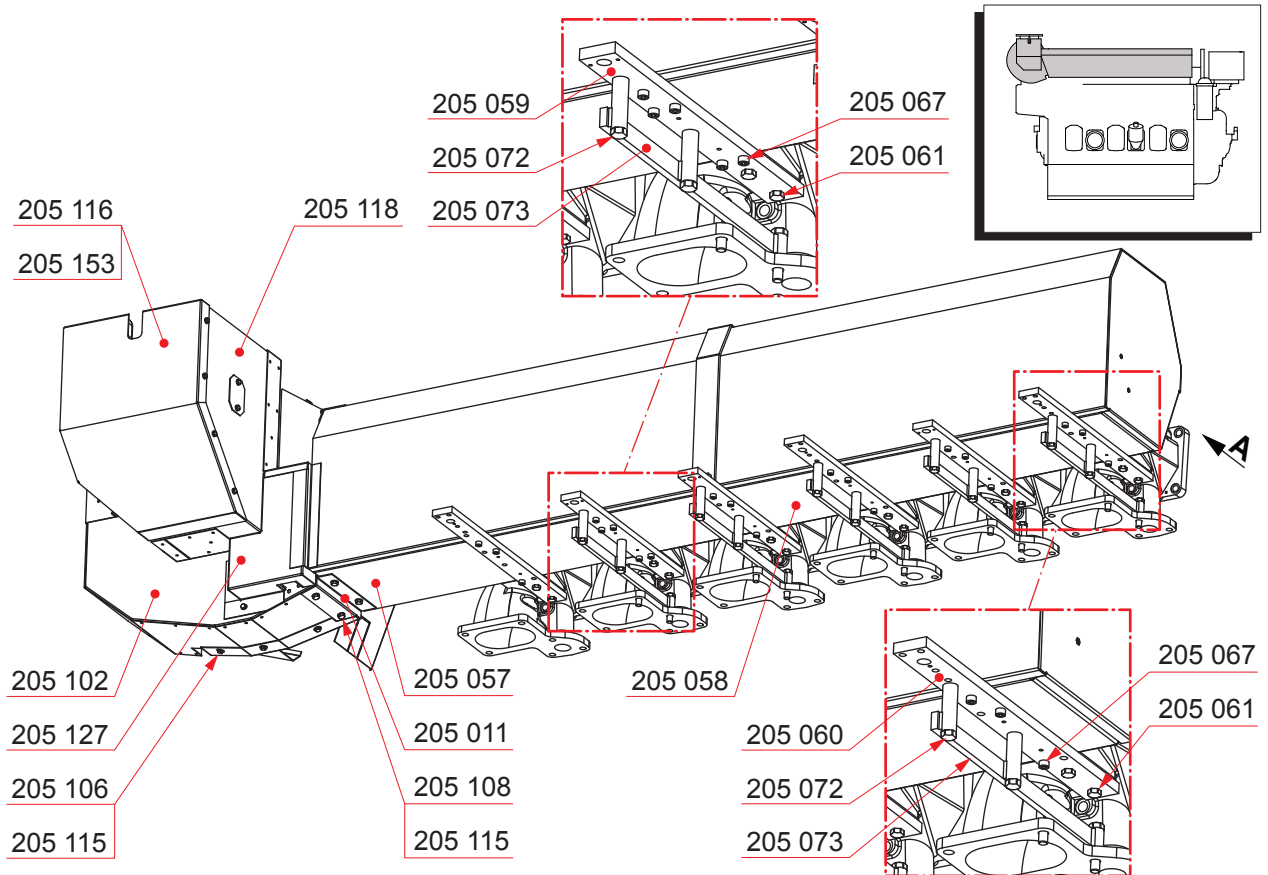
Exhaust manifold 6L20



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 008	Sealing ring	19	-
200 012	Support	8	0.2
200 013	Multiduct	6	45.0
200 014	Adapter	6	0.2
200 015	Sealing ring	6	-
200 017	Screw	24	-
200 018	Gasket	6	-
200 019	Screw	18	-
200 020	Distance piece	48	-
200 021	Distance piece	12	-
200 022	Screw	18	-
200 023	Screw	36	-
200 025	Gasket	6	0.2
200 026	Rivet	12	-
200 070	Sleeve *)	6	0.5

NOTE! *) Depending on installation

Insulation box for exhaust manifold

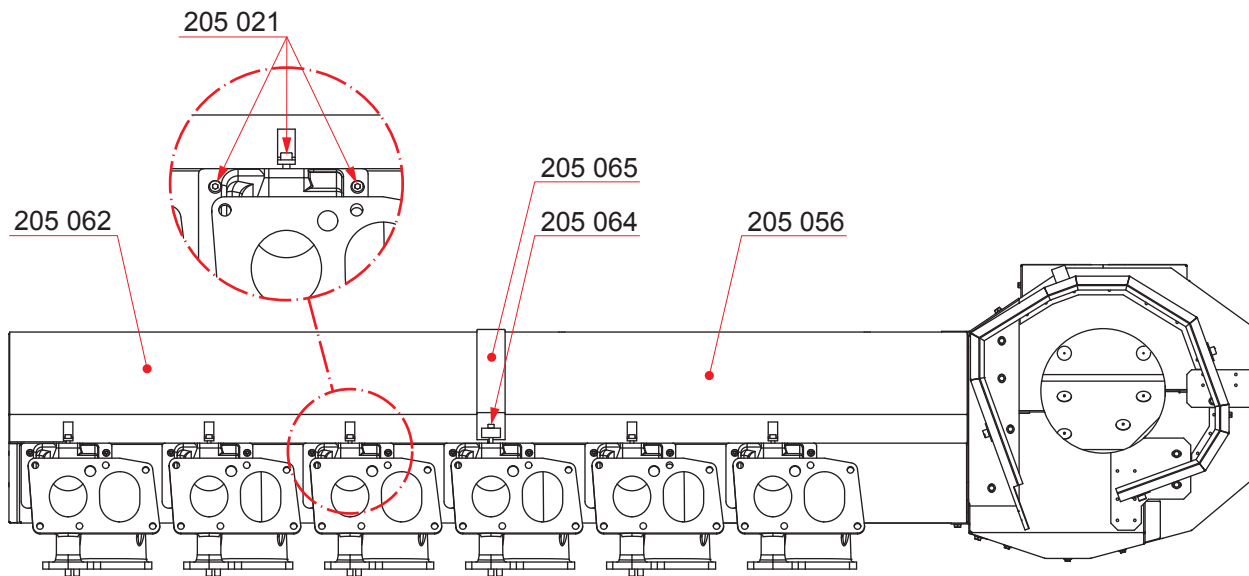


Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 011	Bracket	1	-
205 057	Lower protecting panel	1	-
205 058	Lower protecting panel	1	-
205 059	Bracket	3	2.6
205 060	Bracket	3	2.6
205 061	Screw	24	-
205 067	Screw	20	-
205 072	Screw	10	-
205 073	Bracket	5	3.0
205 102	Insulation	1	-
205 106	Screw	32	-
205 108	Screw	6	-
205 115	Washer	21	-
205 116	Insulation	1	-
205 153	Cover plate	1	-
205 118	Insulation	1	-
205 127	Cover	1	-

Edition: C

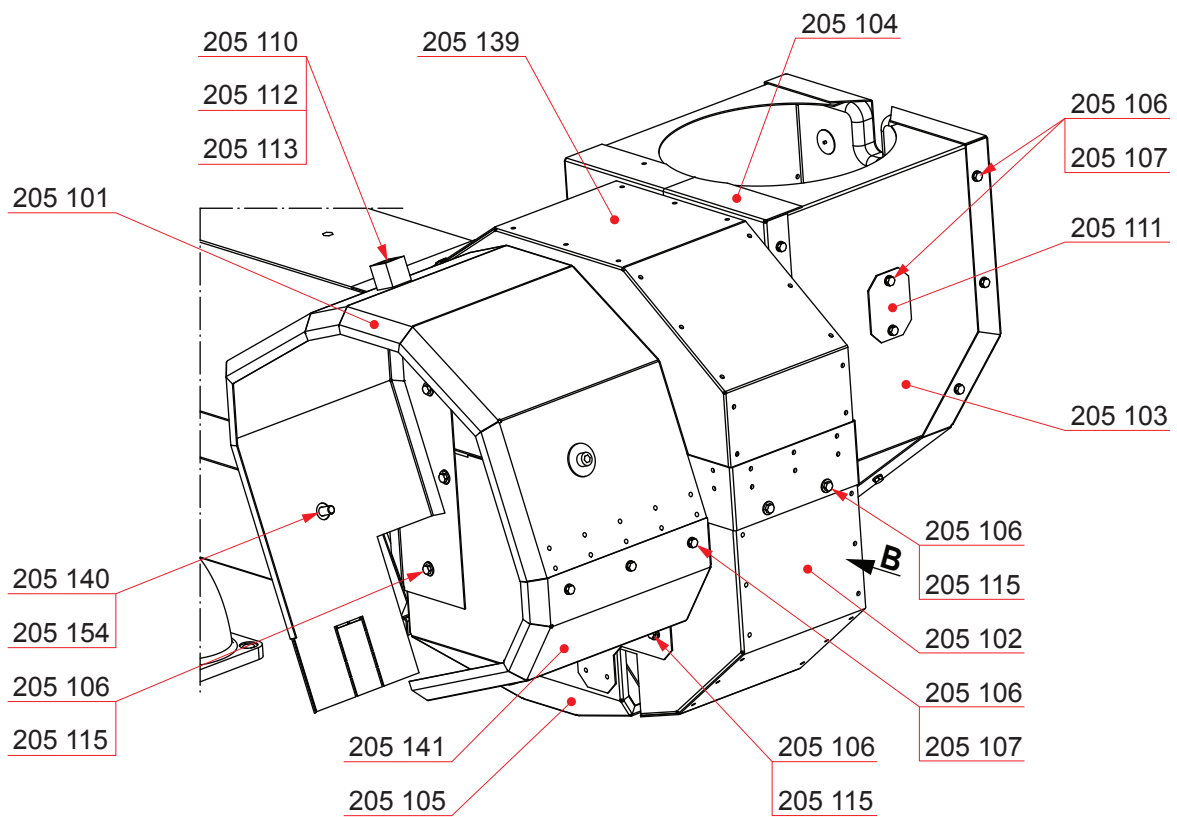
Page: 2(4)

Updated: 05.03.2012

Insulation box for exhaust manifold**A**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 021	Screw	17	-
205 056	Upper protecting panel	1	-
205 062	Upper protecting panel	1	40.0
205 064	Screw	2	-
205 065	Cover profile	1	-

Insulation box for exhaust manifold

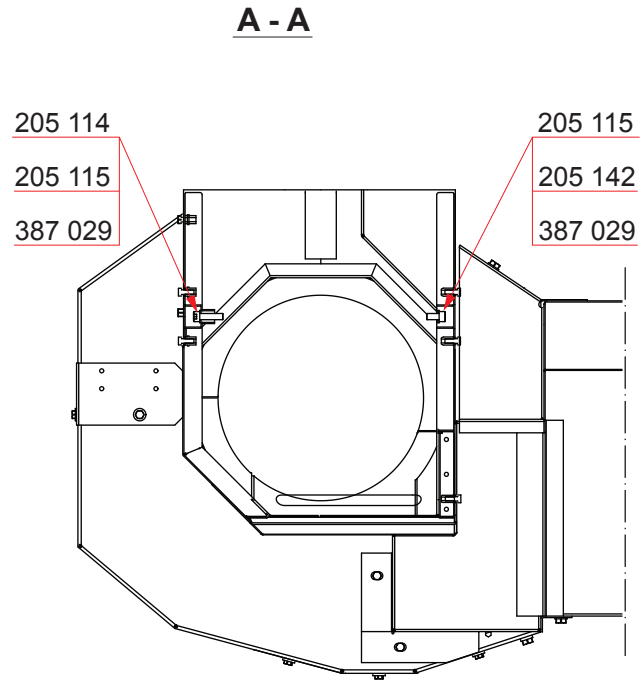
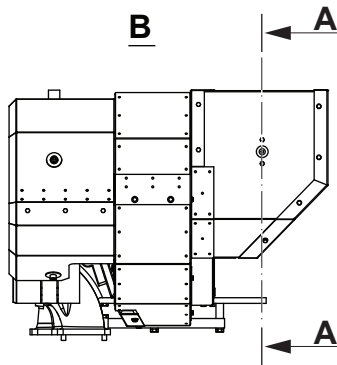


Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 101	Insulation	1	-
205 102	Insulation	1	-
205 103	Insulation	1	-
205 104	Insulation	1	-
205 105	Insulation	1	-
205 106	Screw	32	-
205 107	Washer	19	-
205 110	Bracket	1	-
205 111	Cover plate	2	0.6
205 112	Washer	1	-
205 113	Screw	1	-
205 115	Washer	21	-
205 139	Insulation	1	-
205 140	Screw	3	-
205 141	Insulation	1	-
205 154	Washer	3	-

Edition: C

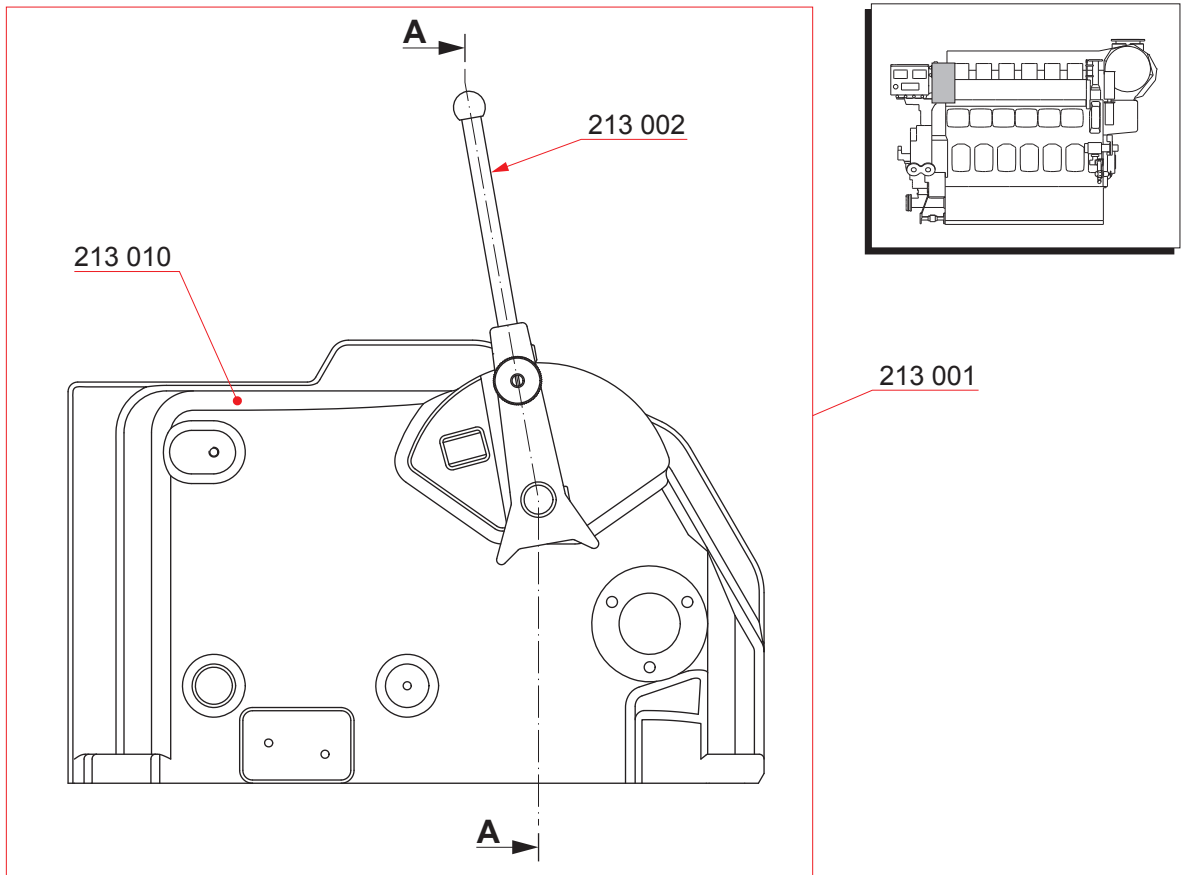
Page: 4(4)

Updated: 05.03.2012

Insulation box for exhaust manifold

Part No.	Description	Qty [Pcs]	Wt. [Kg]
205 114	Screw	1	-
205 115	Washer	21	-
205 142	Screw	1	-
387 029	Lubricant	1	-

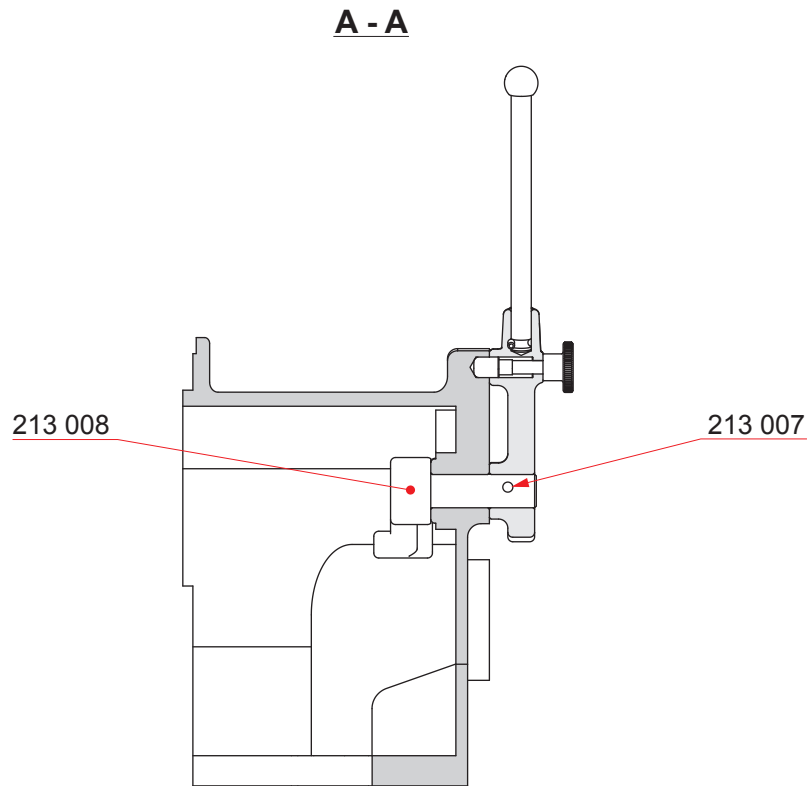
Stop lever and end cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 001	Stop lever and end cover	1	-
213 002	Stop lever	1	0.8
213 010	End cover	1	17.5

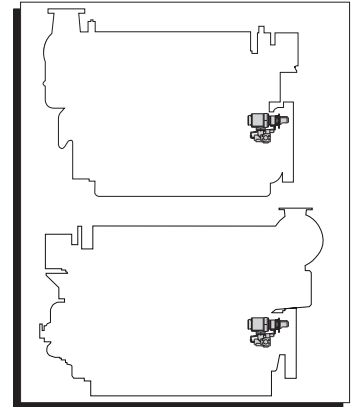
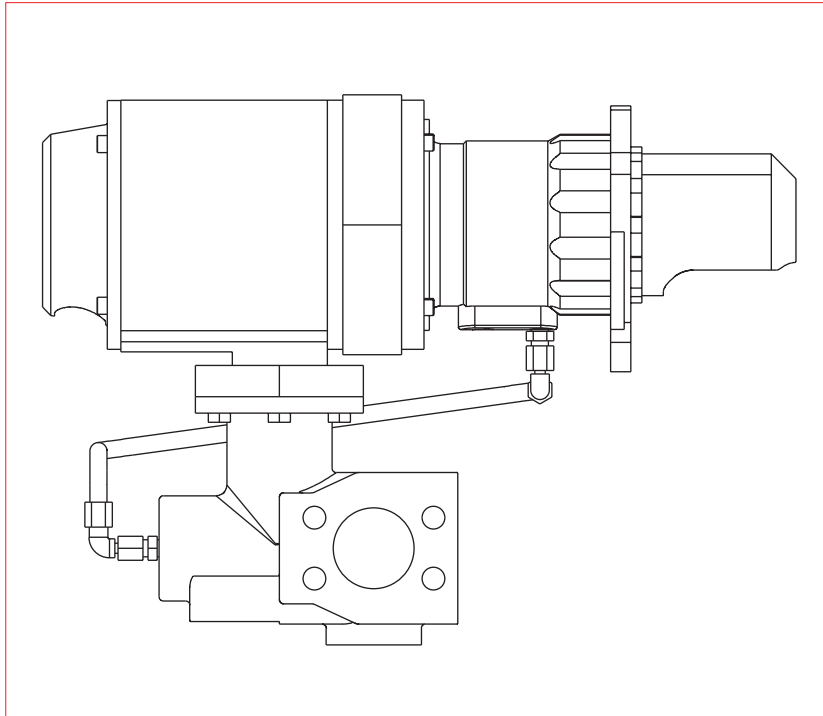
Edition: B
Page: 2(2)
Updated: 07.02.2012

Stop lever and end cover



Part No.	Description	Qty [Pcs]	Wt. [Kg]
213 007	Pin	1	-
213 008	Lever	1	0.5

Air starter

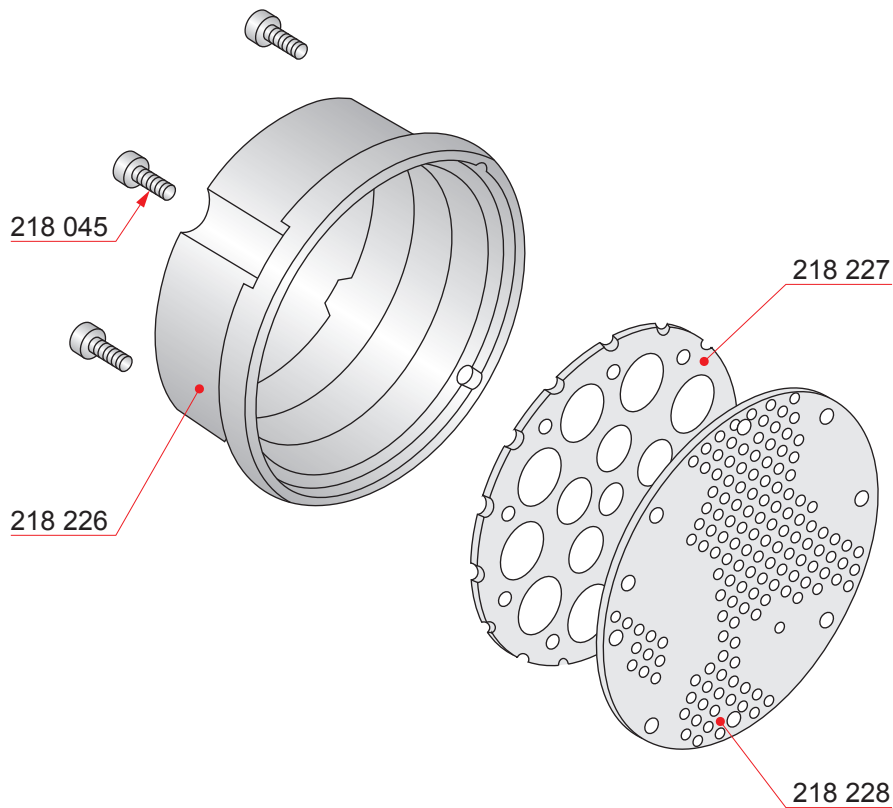


218 006

Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 006	Starting motor	1	-

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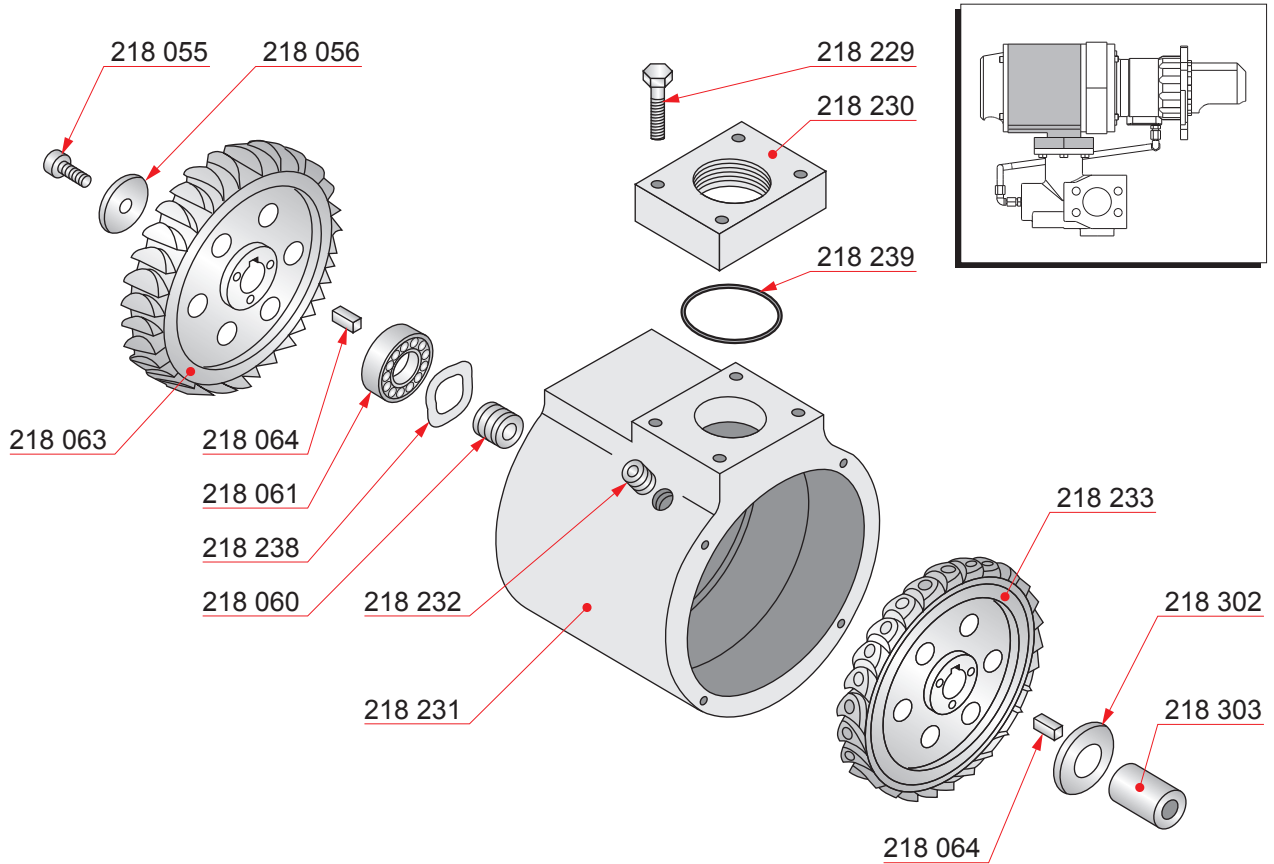
Air starter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 045	Screw (1)	4	-
218 226	Exhaust deflector	1	2.0
218 227	Exhaust support	1	0.5
218 228	Exhaust guard	1	0.5

NOTE! (1) Included in the overhaul kit 218 110.

Air starter

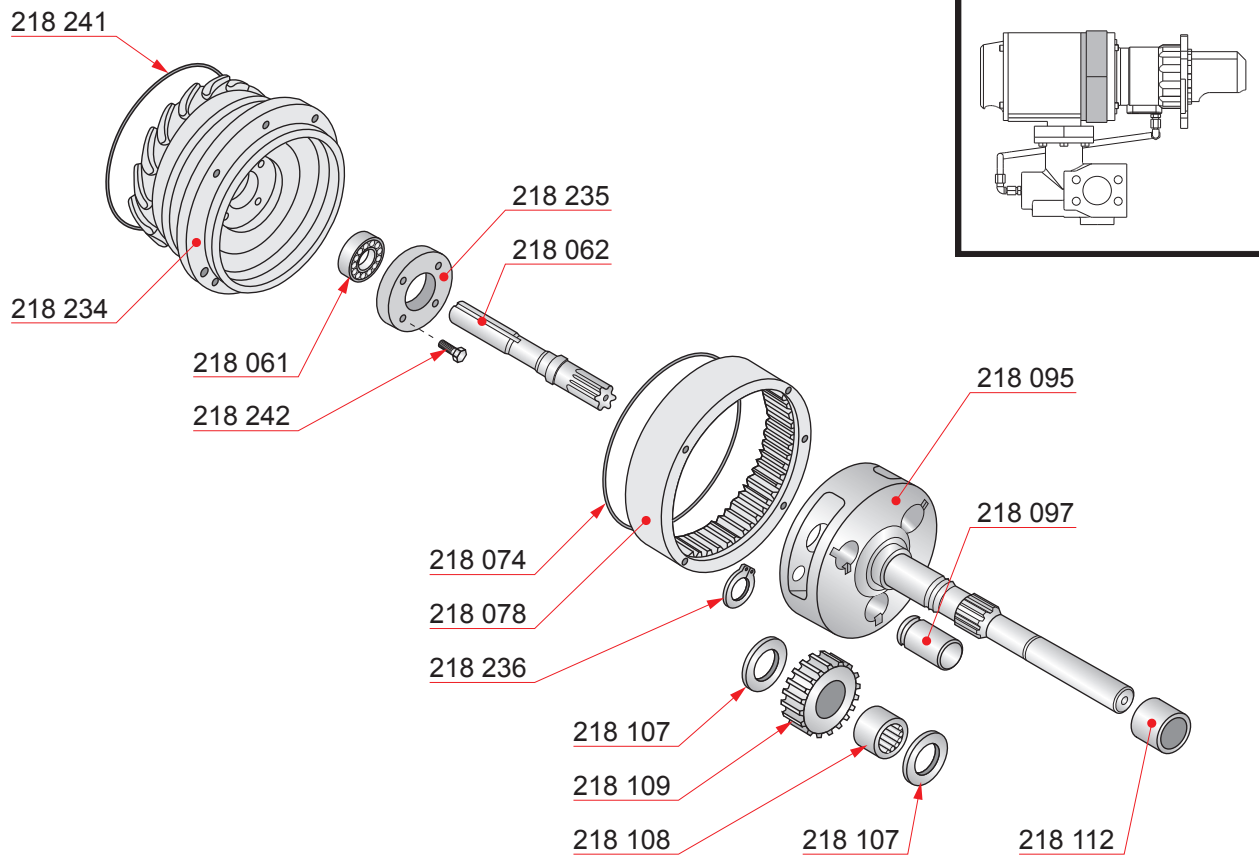


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 055	Screw (1)	1	-
218 056	Rotor washer	1	-
218 060	Bearing spacer (1)	1	-
218 061	Bearing (1)	2	-
218 063	Turbine rotor	1	0.9
218 064	Key (1)	2	-
218 229	Screw	4	-
218 230	Adapter	1	0.2
218 231	Containment	1	2.3
218 232	Plug	1	-
218 233	Turbine rotor	1	0.9
218 238	Bearing pre-load spring (1)	2	-
218 239	O-ring (1)	1	-
218 302	Lip seal (1)	1	-
218 303	Bearing spacer (1)	1	-

NOTE! (1) Included in the overhaul kit 218 110.

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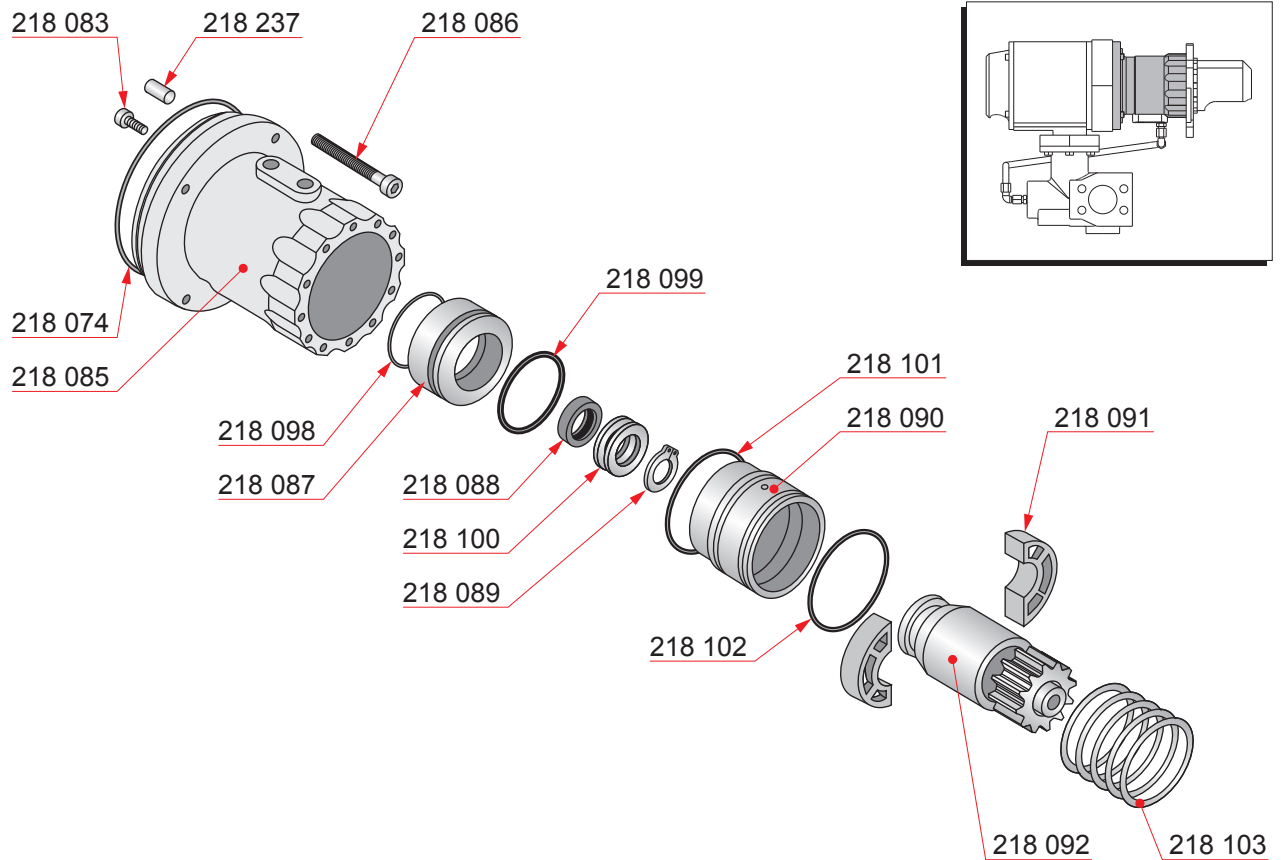
Air starter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 061	Bearing (1)	2	-
218 062	Turbine shaft	1	0.2
218 074	O-ring (1)	2	-
218 078	Ring gear	1	2.2
218 095	Carrier/Outputshaft	1	1.5
218 097	Planet gear shaft	3	1.5
218 107	Gear spacer (1)	6	-
218 108	Needle bearing (1)	3	-
218 109	Planet gear	3	0.5
218 112	Oil impregnated bearing (1)	1	-
218 234	Turbine housing	1	0.8
218 235	Bearing retainer	1	-
218 236	Retainer ring	3	-
218 241	O-ring (1)	1	-
218 242	Screw (1)	4	-

NOTE! (1) Included in the overhaul kit 218 110.

Air starter

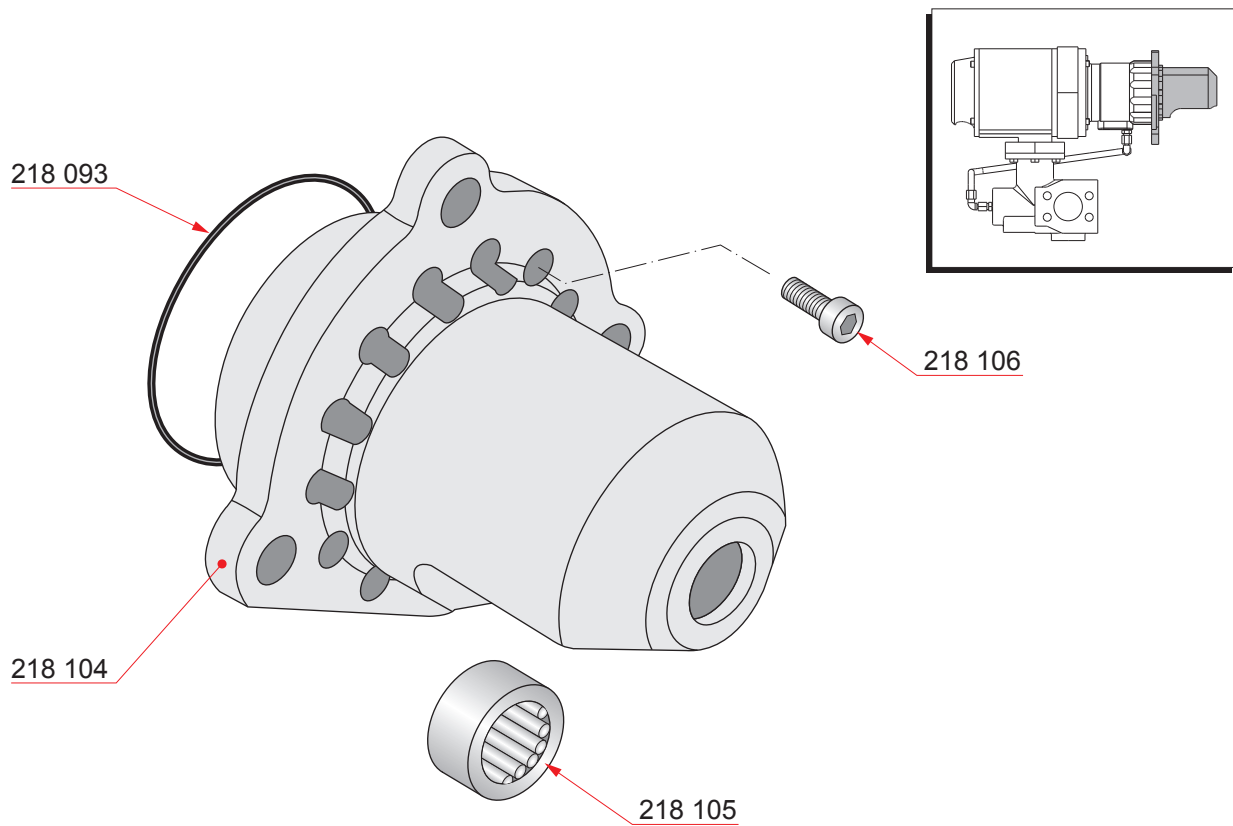


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 074	O-ring (1)	2	-
218 083	Screw (1)	4	-
218 085	Gearbox housing	1	2.3
218 086	Screw (1)	4	-
218 087	Bearing hub	1	0.2
218 088	Lip seal (1)	1	-
218 089	Retainer ring (1)	1	-
218 090	Pre-engage piston	1	0.2
218 091	Split ring (1)	2	-
218 092	Starter drive	1	1.3
218 098	O-ring (1)	1	-
218 099	O-ring (1)	1	-
218 100	Thrust washer (1)	2	-
218 101	O-ring (1)	1	-
218 102	O-ring (1)	1	-
218 103	Compression ring	1	0.1
218 237	Dowel pin	1	0.5

NOTE! (1) Included in the overhaul kit 218 110.

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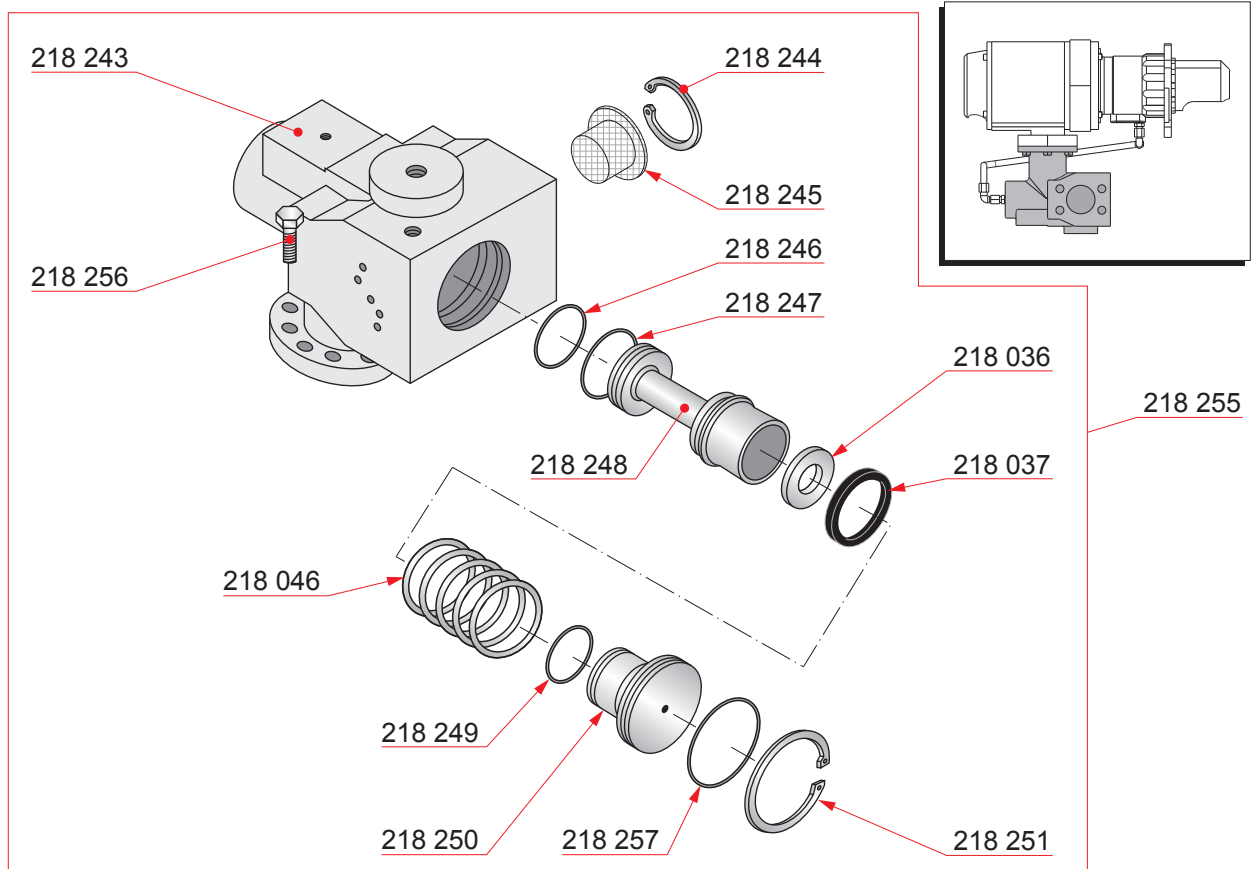
Air starter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 093	O-ring (1)	1	-
218 104	Drive housing	1	2.3
218 105	Roller bearing (1)	1	-
218 106	Screw (1)	12	-

NOTE! (1) Included in the overhaul kit 218 110.

Air starter

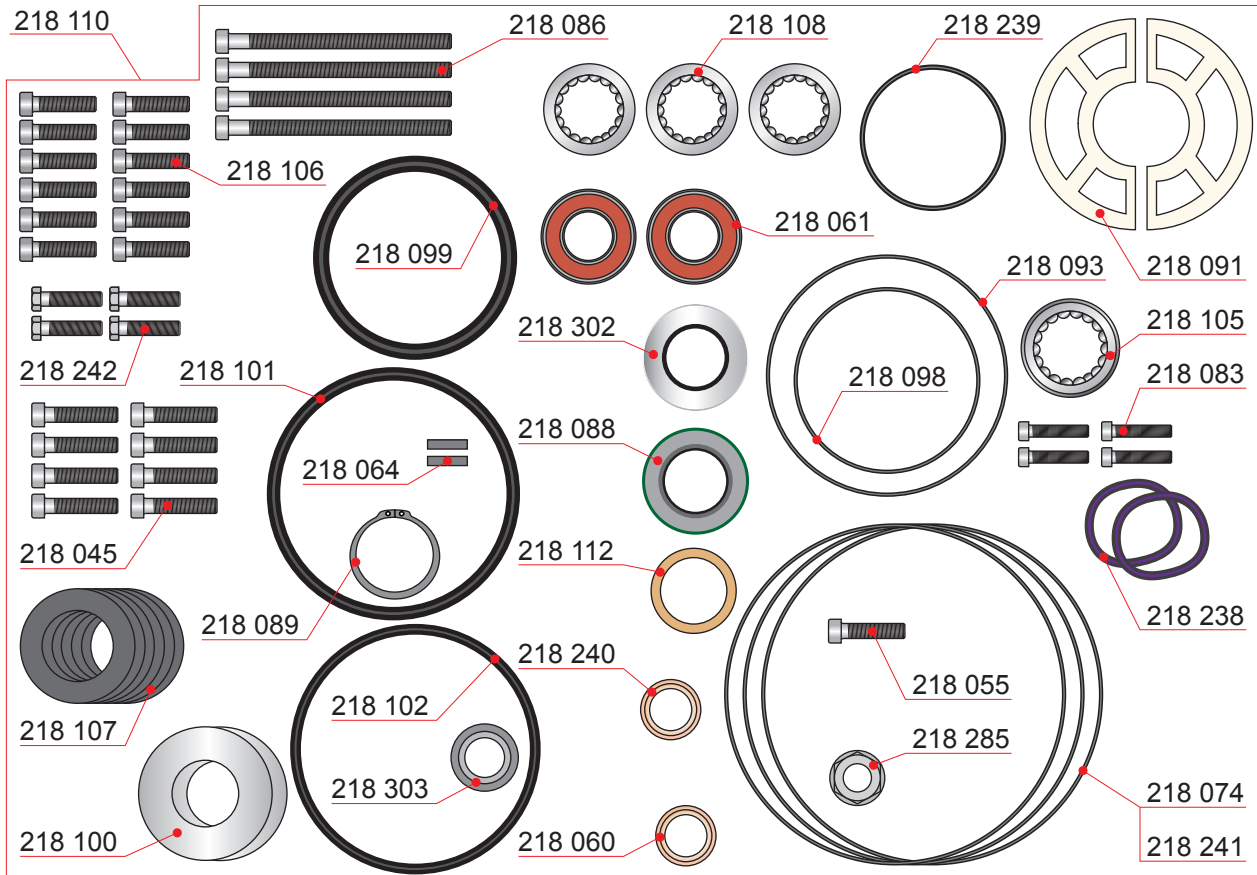


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 255	Relay valve	1	3.8
218 036	Shock dampener (2)	1	-
218 037	O-ring cap	1	-
218 046	Compression ring (2)	1	-
218 243	Housing	1	1.8
218 244	Retainer ring (2)	1	-
218 245	Screen plate (2)	1	-
218 246	O-ring (2)	1	-
218 247	O-ring (2)	1	-
218 248	Piston	1	0.3
218 249	O-ring (2)	1	-
218 250	End cap	1	-
218 251	Retainer ring (2)	1	-
218 256	Screw (2)	6	-
218 257	O-ring (2)	1	-

NOTE! (2) Included in the relay valve kit 218 289.

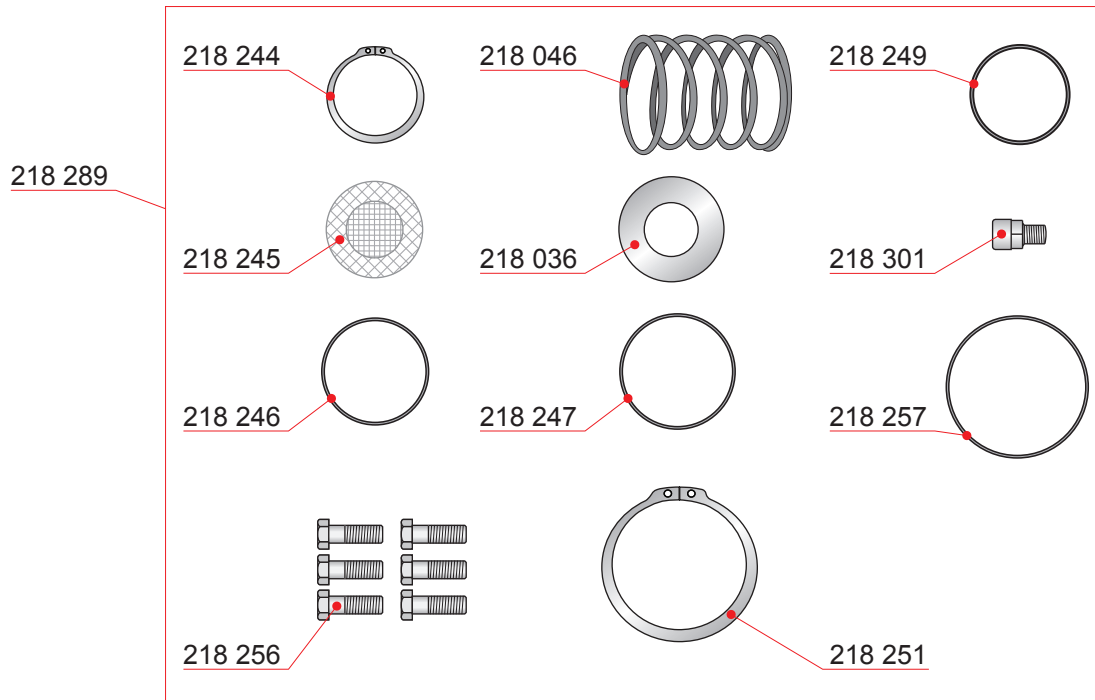
Edition: A
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Updated: 07.12.2010

Air starter



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 110	Overhaul kit	1	1.8	218 242	Screw	4	-
218 045	Screw	8	-	218 285	Nut (1)	1	-
218 055	Screw	1	-	218 302	Lip seal	1	-
218 060	Bearing spacer	1	-	218 303	Bearing spacer	1	-
218 061	Bearing	2	-				
218 064	Key	2	-	NOTE!	(1) Not used in current configuration.		
218 074	O-ring	2	-				
218 083	Screw	4	-				
218 086	Screw	4	-				
218 088	Lip seal	1	-				
218 089	Retainer ring	1	-				
218 091	Split ring	2	-				
218 093	O-ring	1	-				
218 098	O-ring	1	-				
218 099	O-ring	1	-				
218 100	Thrust washer	2	-				
218 101	O-ring	1	-				
218 102	O-ring	1	-				
218 105	Roller bearing	1	-				
218 106	Screw	12	-				
218 107	Gear spacer	6	-				
218 108	Needle bearing	3	-				
218 112	Oil impregnated bearing	1	-				
218 238	Bearing pre-load spring	2	-				
218 239	O-ring	1	-				
218 240	Spacer (1)	1	-				
218 241	O-ring	1	-				

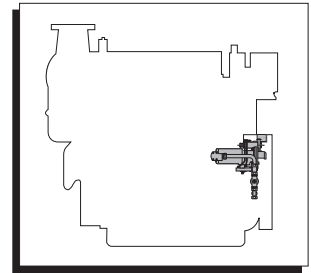
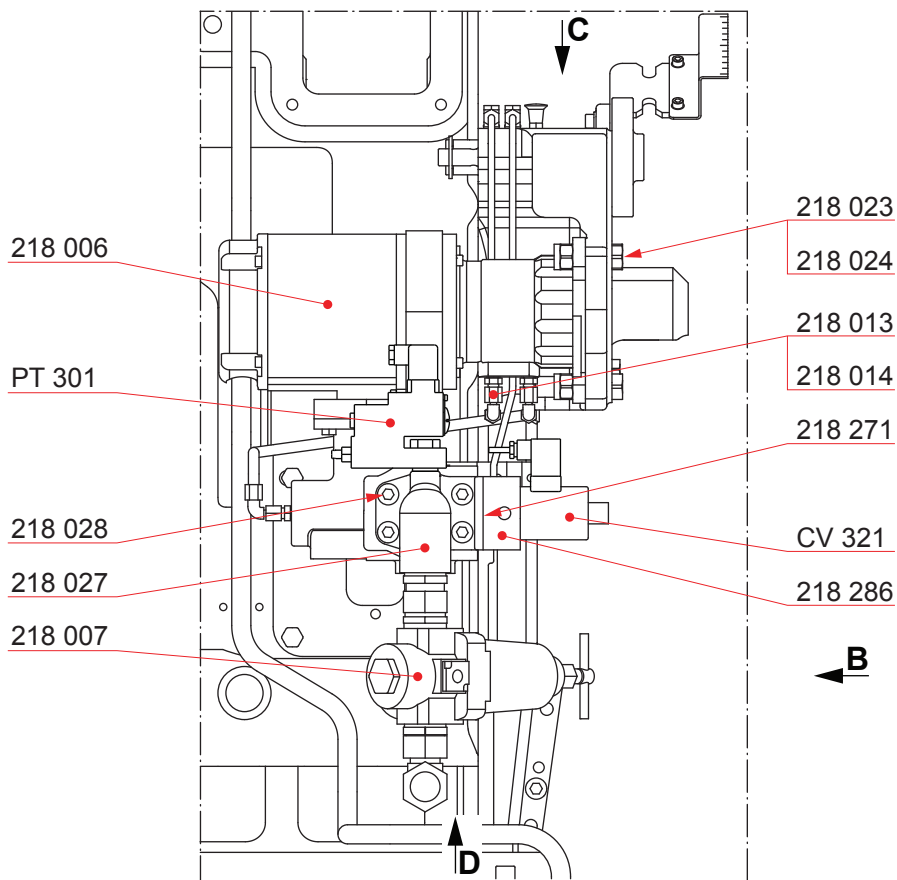
Air starter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 289	Kit for relay valve	1	0.3
218 036	Shock dampener	1	-
218 046	Compression ring	1	-
218 244	Retainer ring	1	-
218 245	Screen plate	1	-
218 246	O-ring	1	-
218 247	O-ring	1	-
218 249	O-ring	1	-
218 251	Retainer ring	1	-
218 256	Screw	6	-
218 257	O-ring	1	-
218 301	Vent plug	1	-

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Starting air system

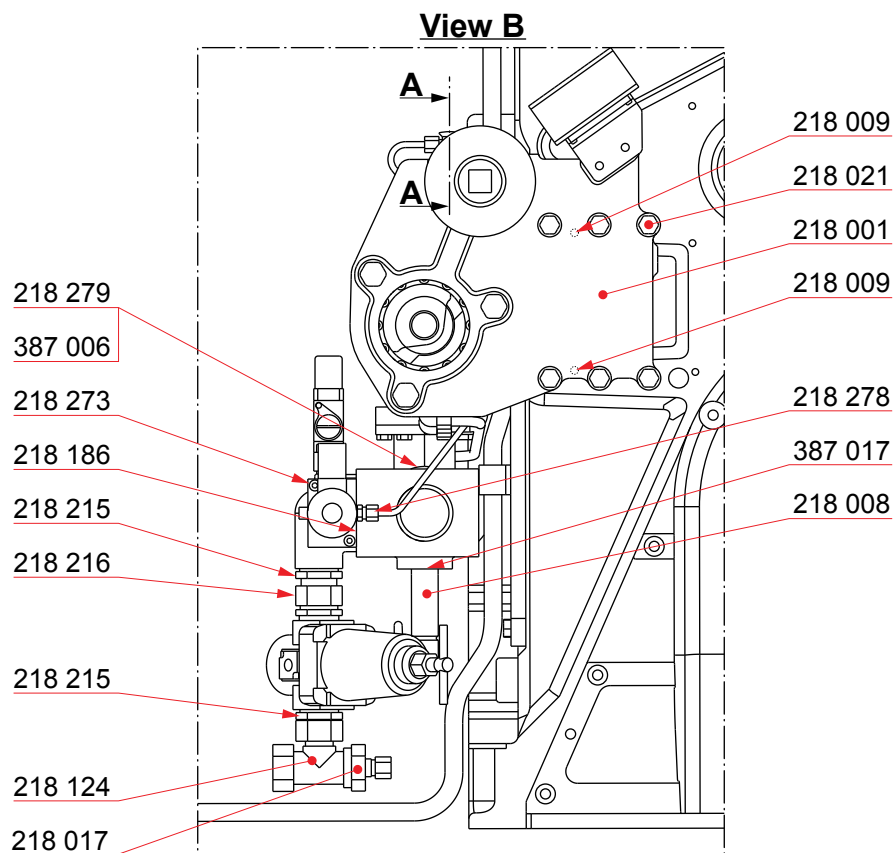


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 006	Starting motor	1	21.2
218 007	Pressure regulating valve	1	2.1
218 013	Pipe union	1	-
218 014	Pipe union	1	-
218 023	Screw	3	0.1
218 024	Nut	3	-
218 027	Pipe union	1	1.8
218 028	Screw	4	-
218 271	O-ring	1	-
218 286	Valve body	1	0.4
CV321	Solenoid valve, starting air	1	2.0
PT301	Pressure transducer, starting air	1	-

Edition: C

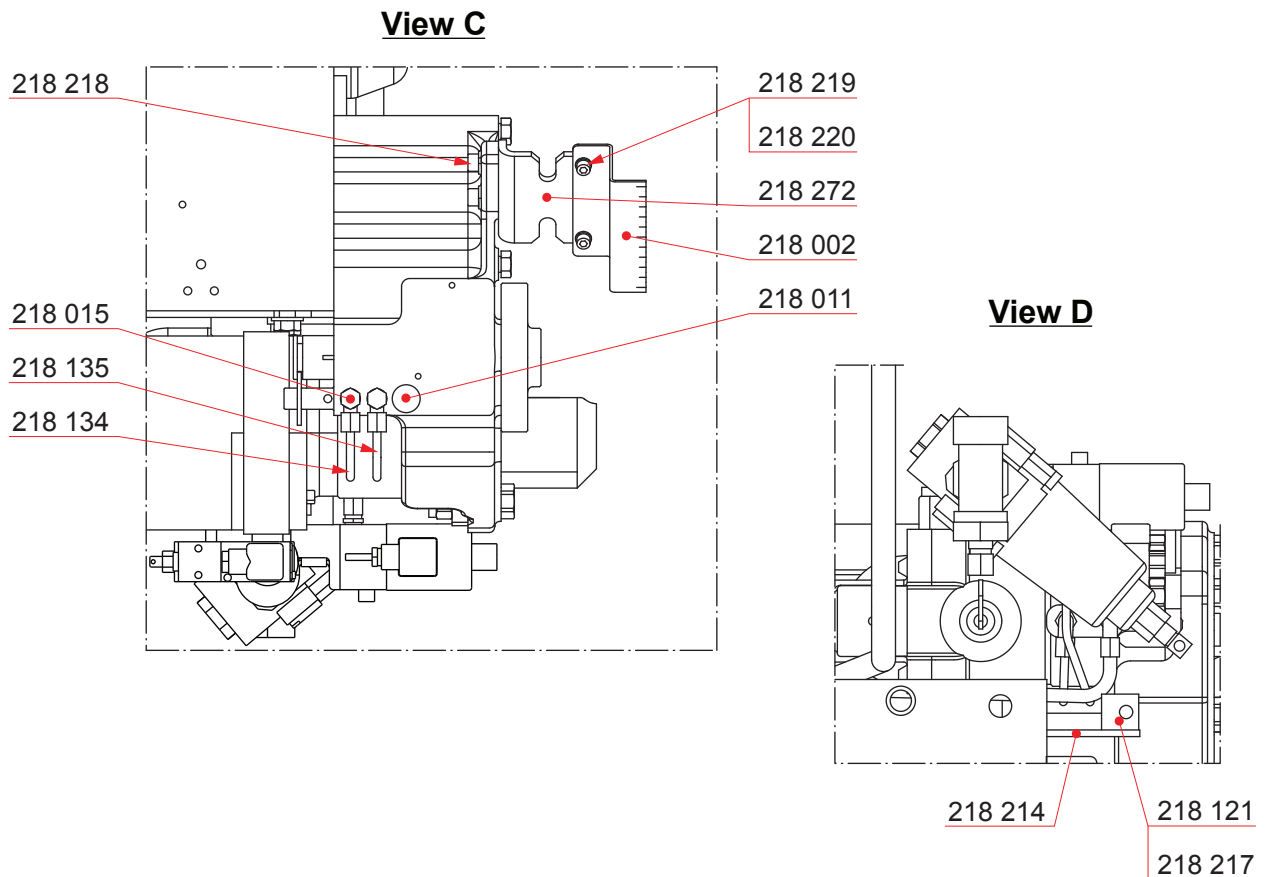
Page: 2(4)

Updated: 13.03.2009

Starting air system

Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 001	Bracket	1	18.8
218 008	Relief valve	1	0.4
218 009	Pin	2	-
218 017	Pipe union	1	0.2
218 021	Screw	6	0.1
218 124	Pipe union	1	-
218 186	O-ring	1	-
218 215	Pipe union	2	0.1
218 216	Pipe union	1	0.3
218 273	Screw	2	-
218 278	Pipe union	1	-
218 279	Plug	1	-
387 006	Glue compound	1	-
387 017	Glue compound	1	-

Starting air system

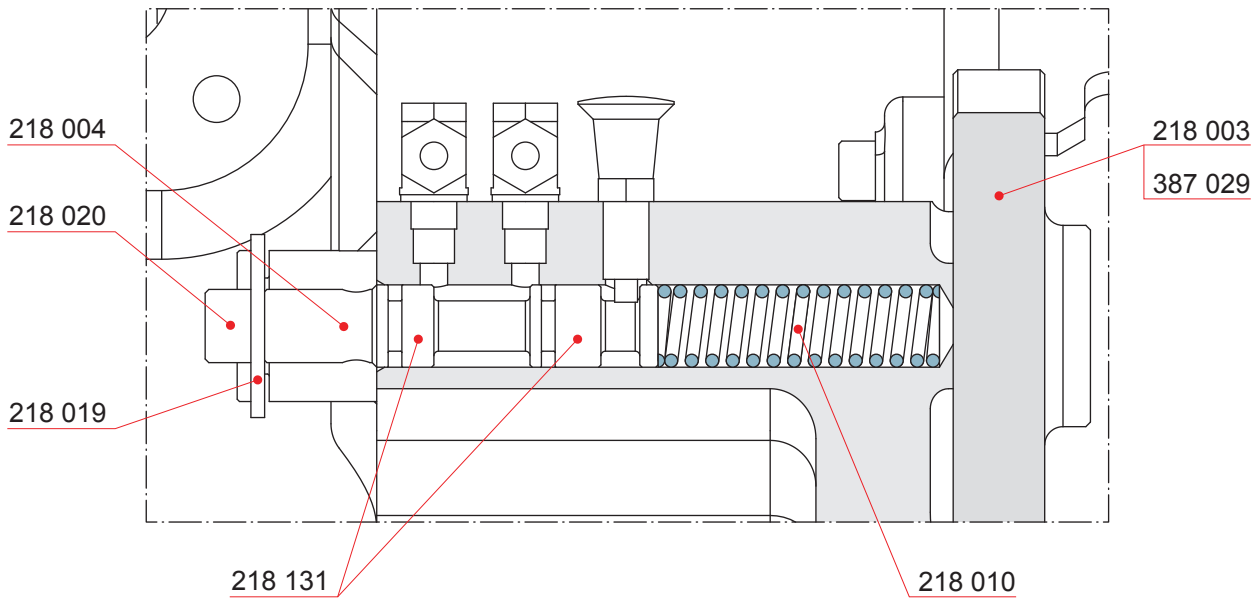


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 002	Indicating device	1	-
218 011	Pin	1	-
218 015	Pipe union	2	-
218 121	Screw	1	-
218 134	Pipe	1	-
218 135	Pipe	1	0.1
218 214	Supporting plate	1	-
218 217	Pipe clamp	1	-
218 218	Screw	2	-
218 219	Screw	2	0.3
218 220	Washer	2	-
218 272	Bracket	1	0.4

Edition: C

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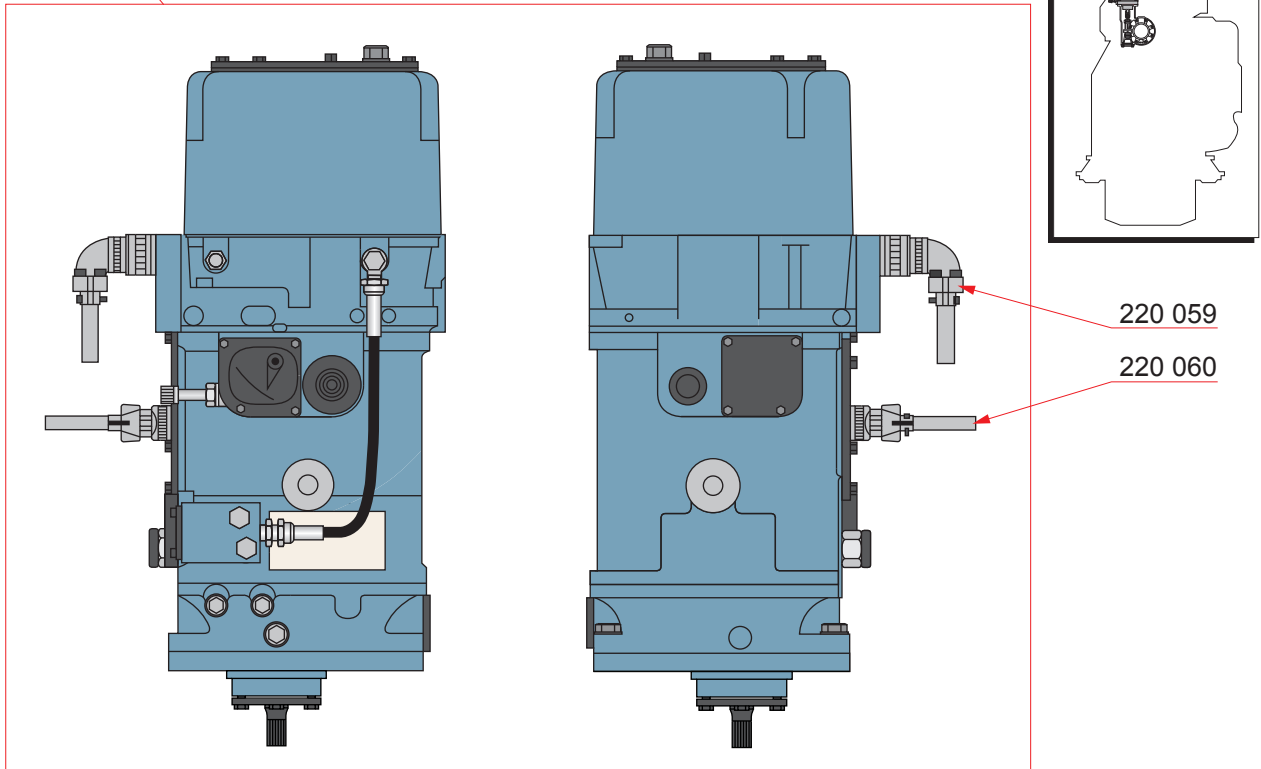
Updated: 13.03.2009

Starting air system**Section D-D**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 003	Rotating gear	1	2.5
218 004	Spindle	1	0.1
218 010	Spring	1	-
218 019	Washer	1	-
218 020	Screw	1	-
218 131	O-ring	2	-
387 029	Lubricant	1	-

Governor

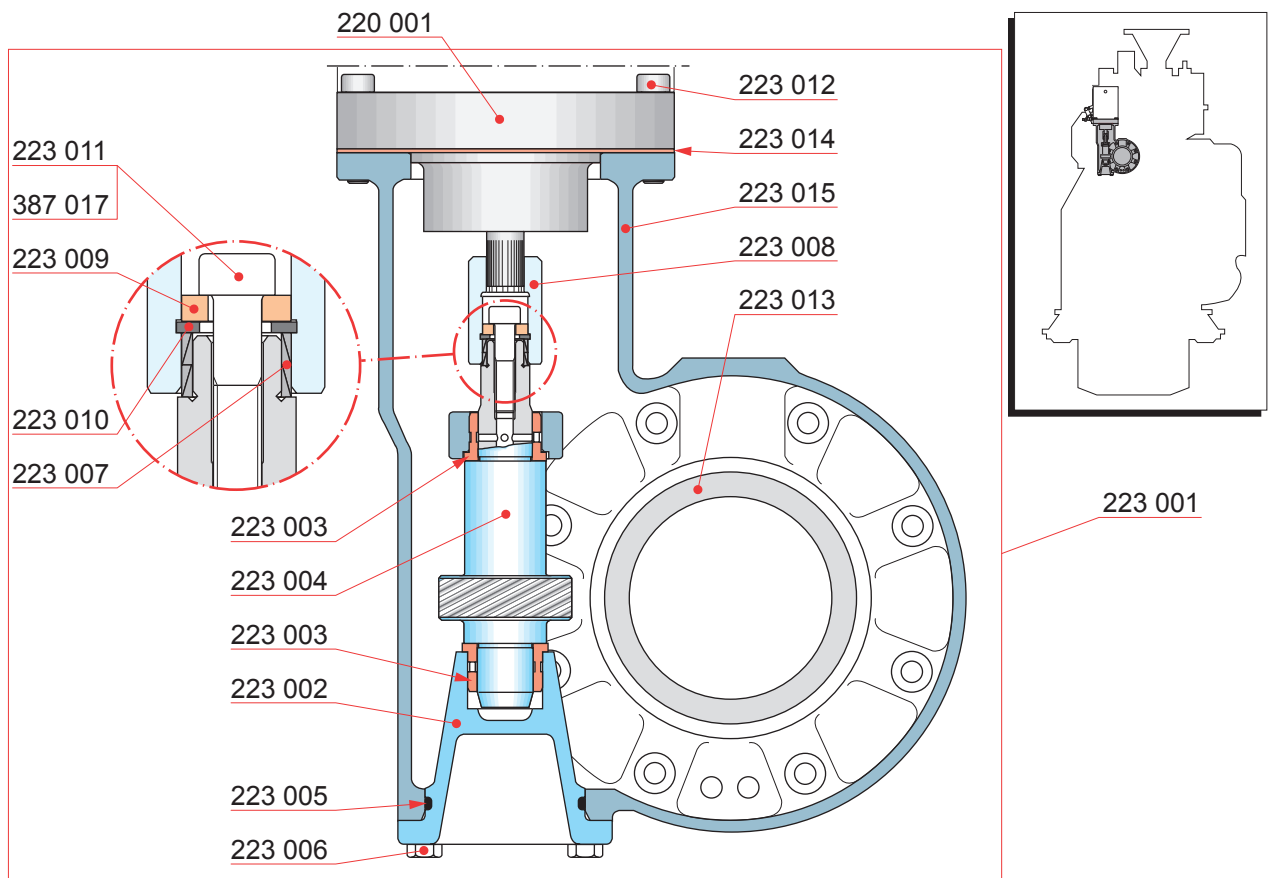
220 001



Part No.	Description	Qty [Pcs]	Wt. [Kg]
220 001	Governor	1	24.0
220 059	Cable set	1	-
220 060	Cable set	1	-

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Governor drive

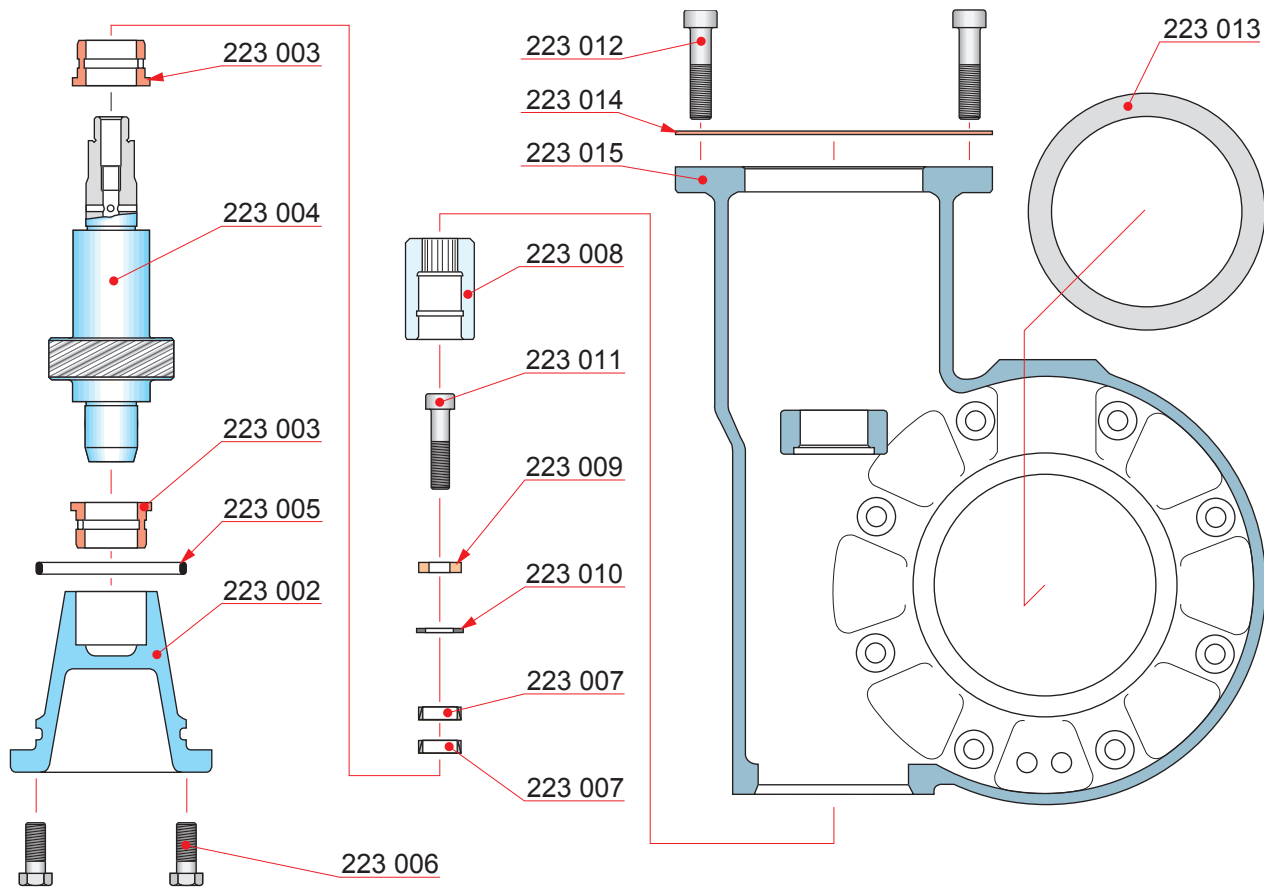


Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 001	Governor drive	1	19.1
223 002	Bearing housing	1	1.4
223 003	Bearing bush	2	-
223 004	Shaft	1	0.9
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.2
223 009	Washer	1	-
223 010	Retainer ring	1	-
223 011	Screw	1	-
223 012	Screw	4	-
223 013	Thrust bearing bush	2	0.5
223 014	Gasket	1	-
223 015	Bracket	1	-
387 017	Glue compound	1	-

Edition: D

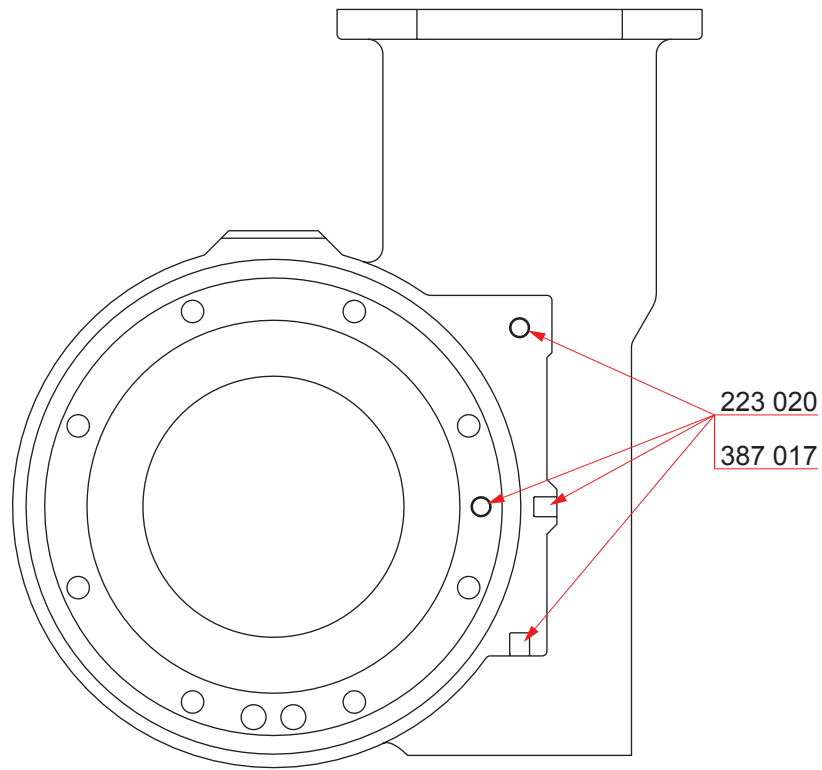
Page: 2(3)

Updated: 08.07.2009

Governor drive

Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 002	Bearing housing	1	1.4
223 003	Bearing bush	2	-
223 004	Shaft	1	0.9
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.2
223 009	Washer	1	-
223 010	Retainer ring	1	-
223 011	Screw	1	-
223 012	Screw	4	-
223 013	Thrust bearing bush	2	0.5
223 014	Gasket	1	-
223 015	Bracket	1	-

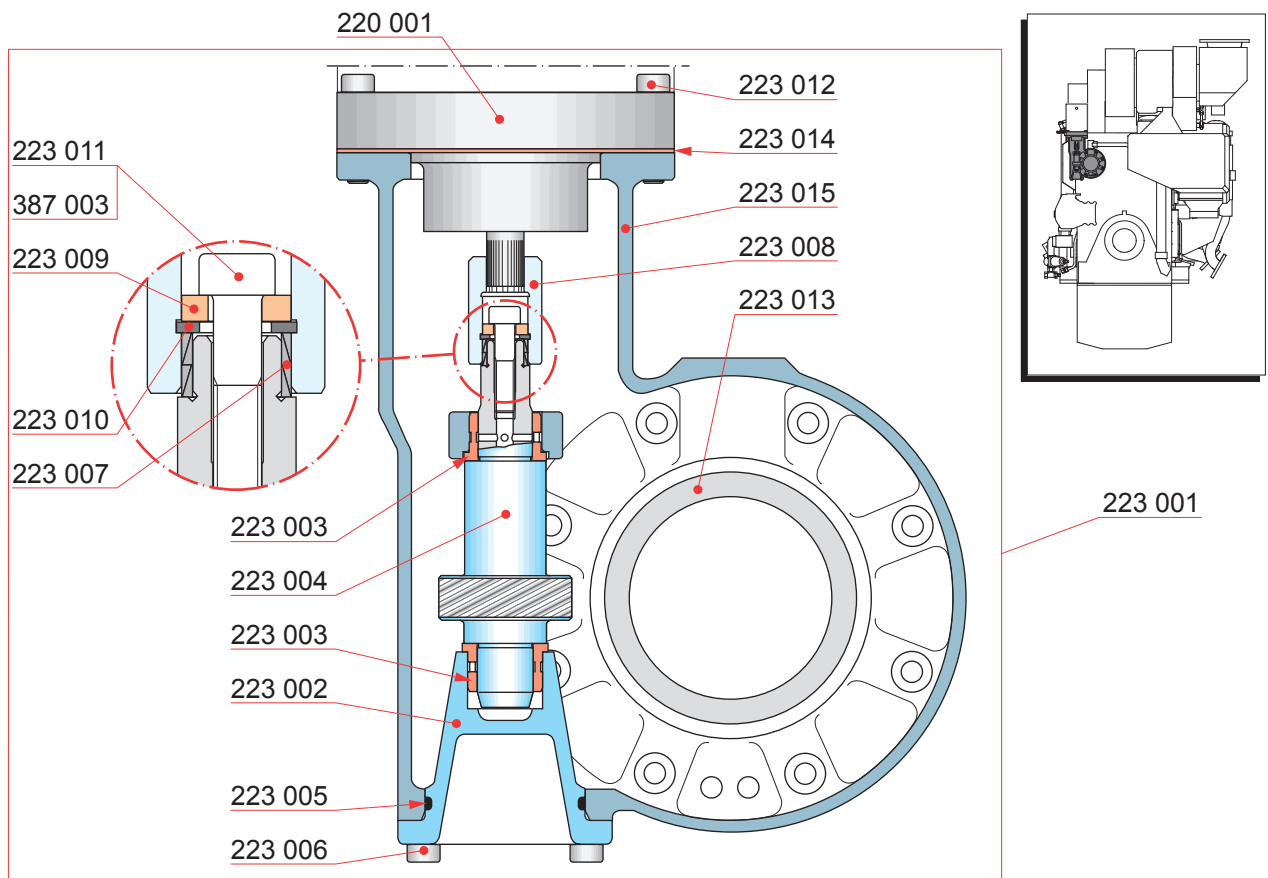
Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 020	Hexagon socket set screw	4	-
387 017	Glue compound	1	-

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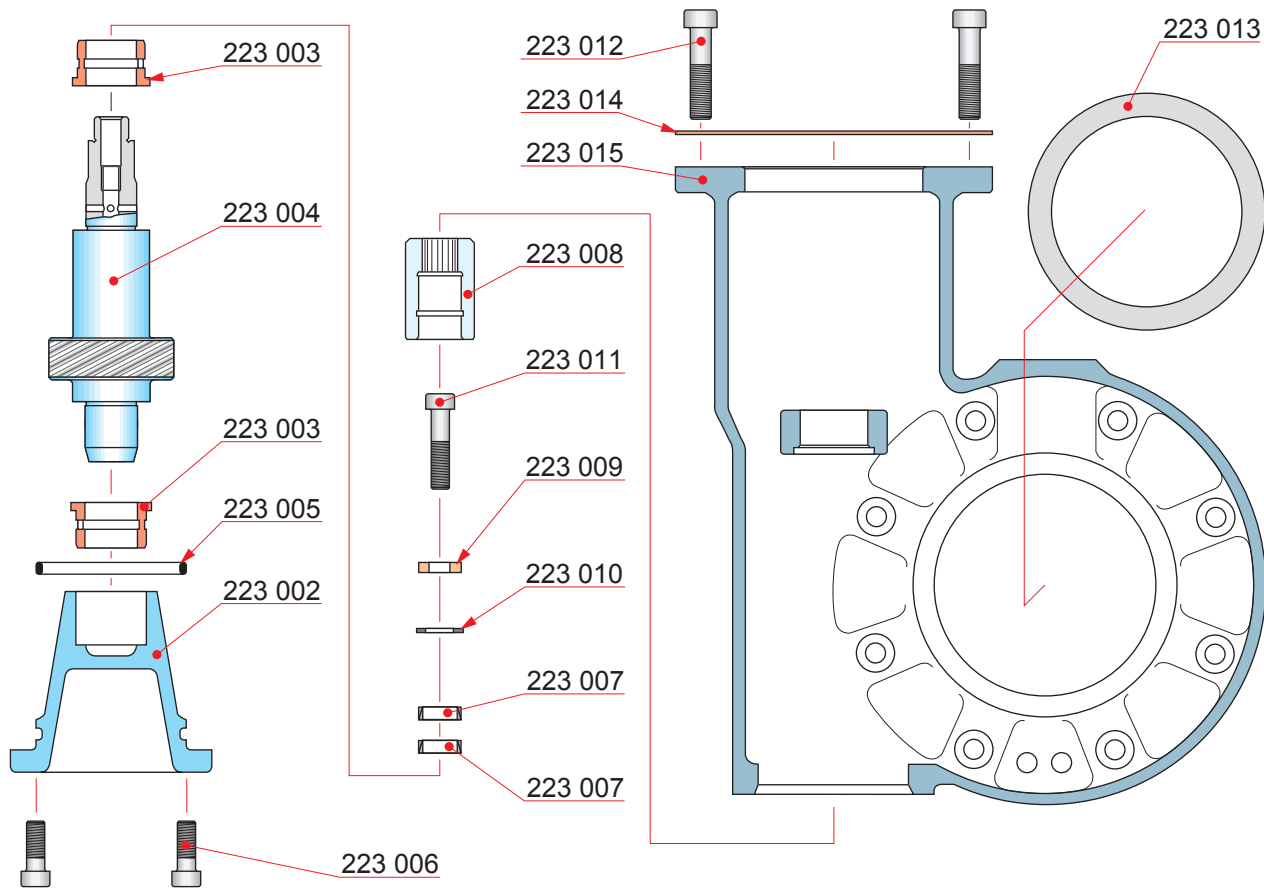
Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 001	Governor drive	1	-
223 002	Bearing housing	1	1.4
223 003	Bearing bush	2	-
223 004	Shaft	1	0.9
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.2
223 009	Washer	1	-
223 010	Retainer ring	1	-
223 011	Screw	1	-
223 012	Screw	4	-
223 013	Thrust bearing bush	2	0.6
223 014	Gasket	1	-
223 015	Bracket	1	14.8
387 003	Glue compound	1	-

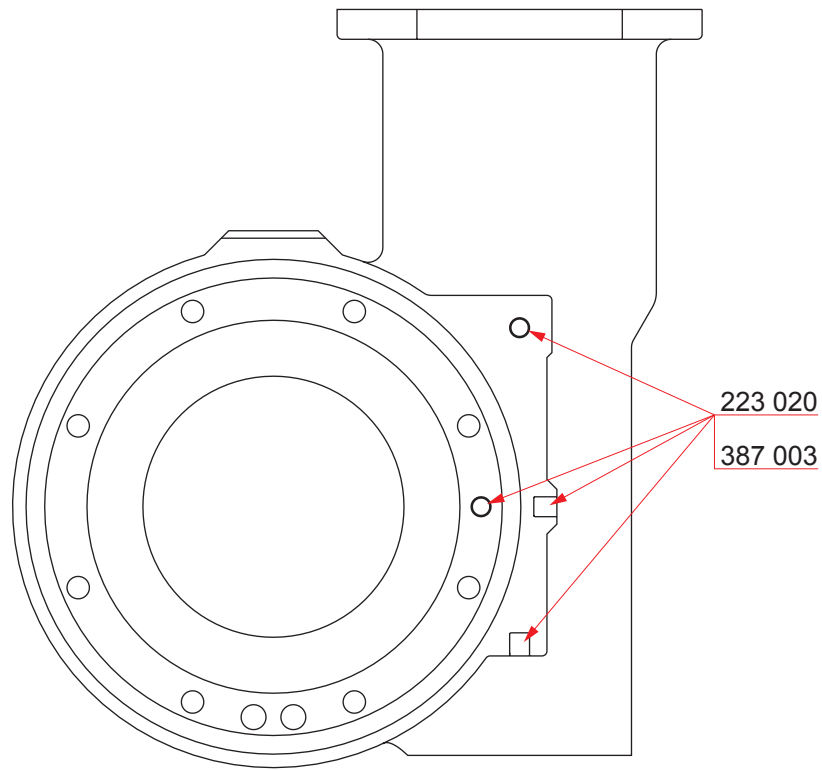
Edition: E
 Page: 2(3)
 Updated: 09.05.2012

Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 002	Bearing housing	1	1.4
223 003	Bearing bush	2	-
223 004	Shaft	1	0.9
223 005	O-ring	1	-
223 006	Screw	4	-
223 007	Pair of friction rings	2	-
223 008	Coupling	1	0.2
223 009	Washer	1	-
223 010	Retainer ring	1	-
223 011	Screw	1	-
223 012	Screw	4	-
223 013	Thrust bearing bush	2	0.6
223 014	Gasket	1	-
223 015	Bracket	1	14.8

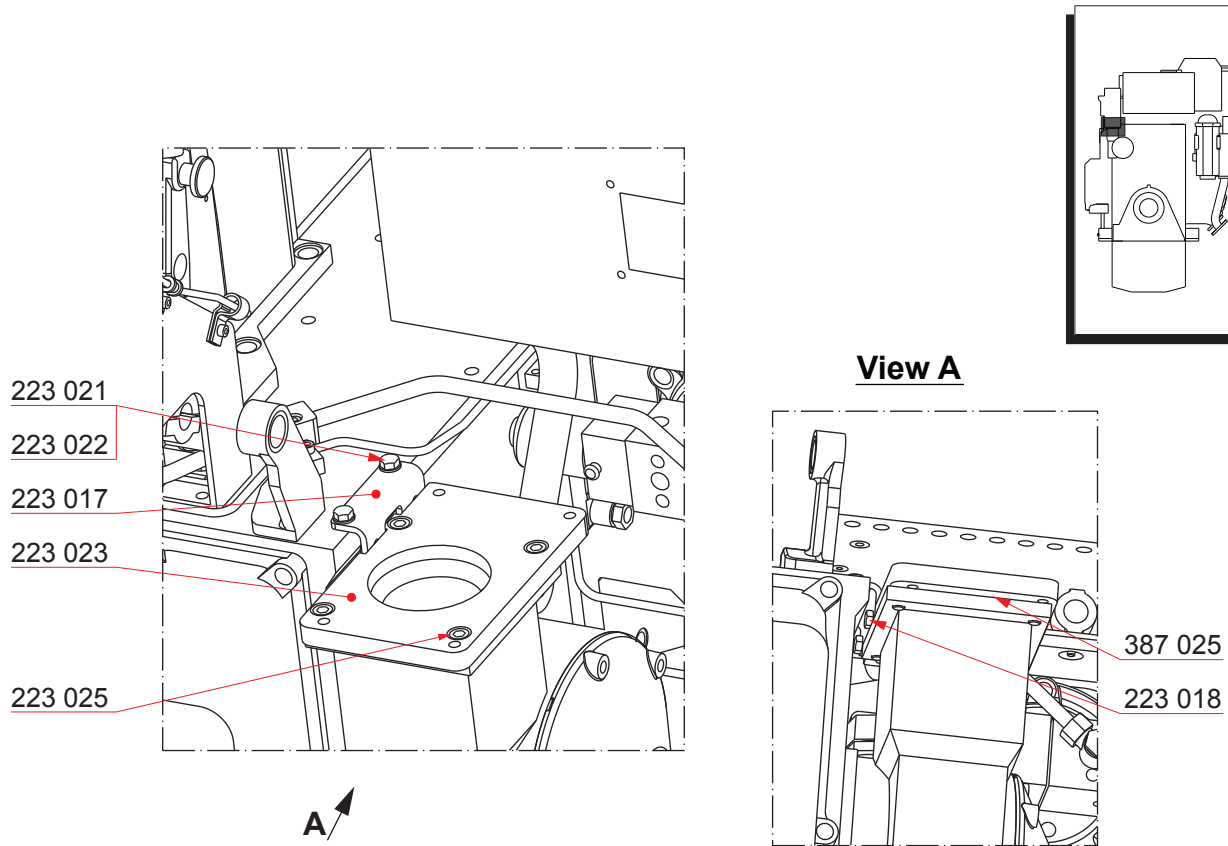
Governor drive



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 020	Hexagon socket set screw	4	-
387 003	Glue compound	1	-

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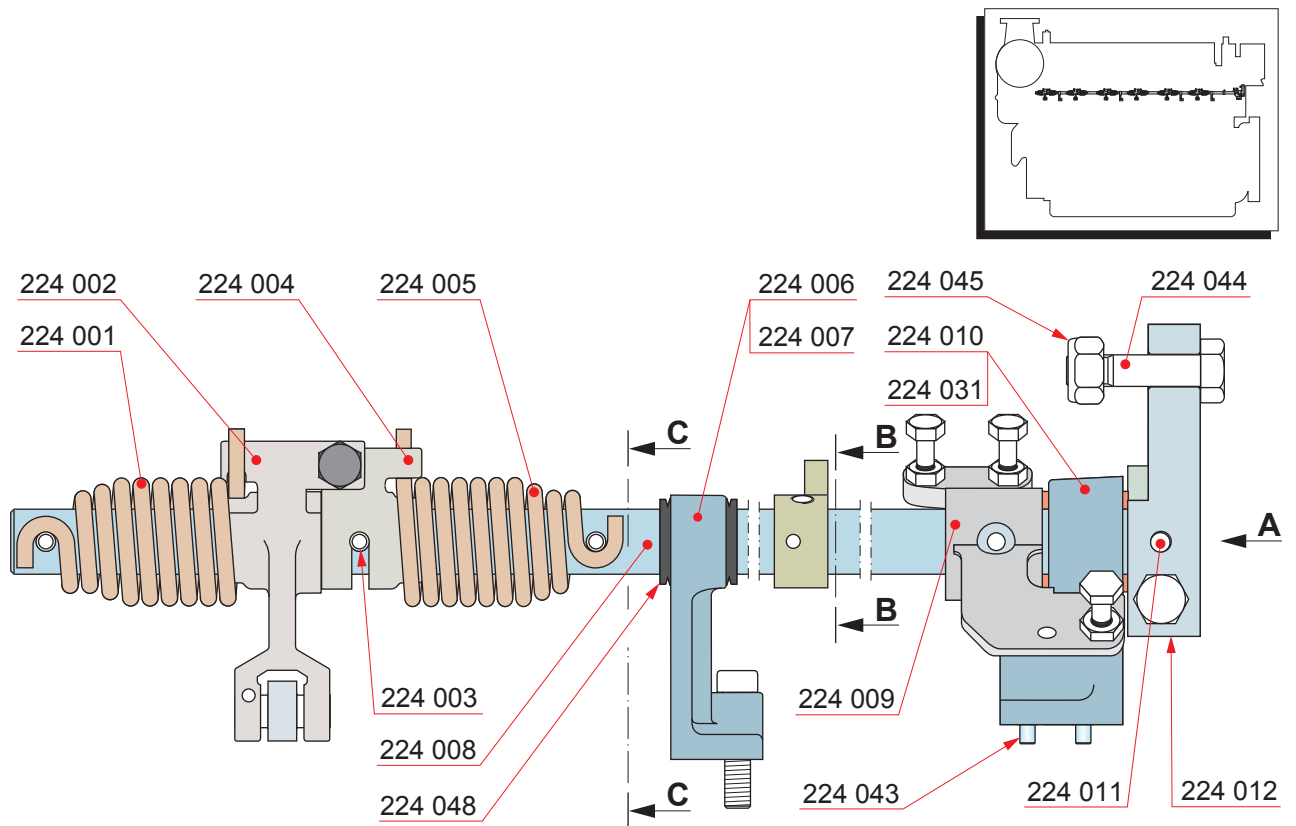
Bracket for actuator



Part No.	Description	Qty [Pcs]	Wt. [Kg]
223 017	Bracket	1	0.2
223 018	Screw	2	-
223 021	Screw	2	-
223 022	Washer	2	-
223 023	Flange	1	3.5
223 025	Screw	4	-
387 025	Glue compound	1	-

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Control shaft



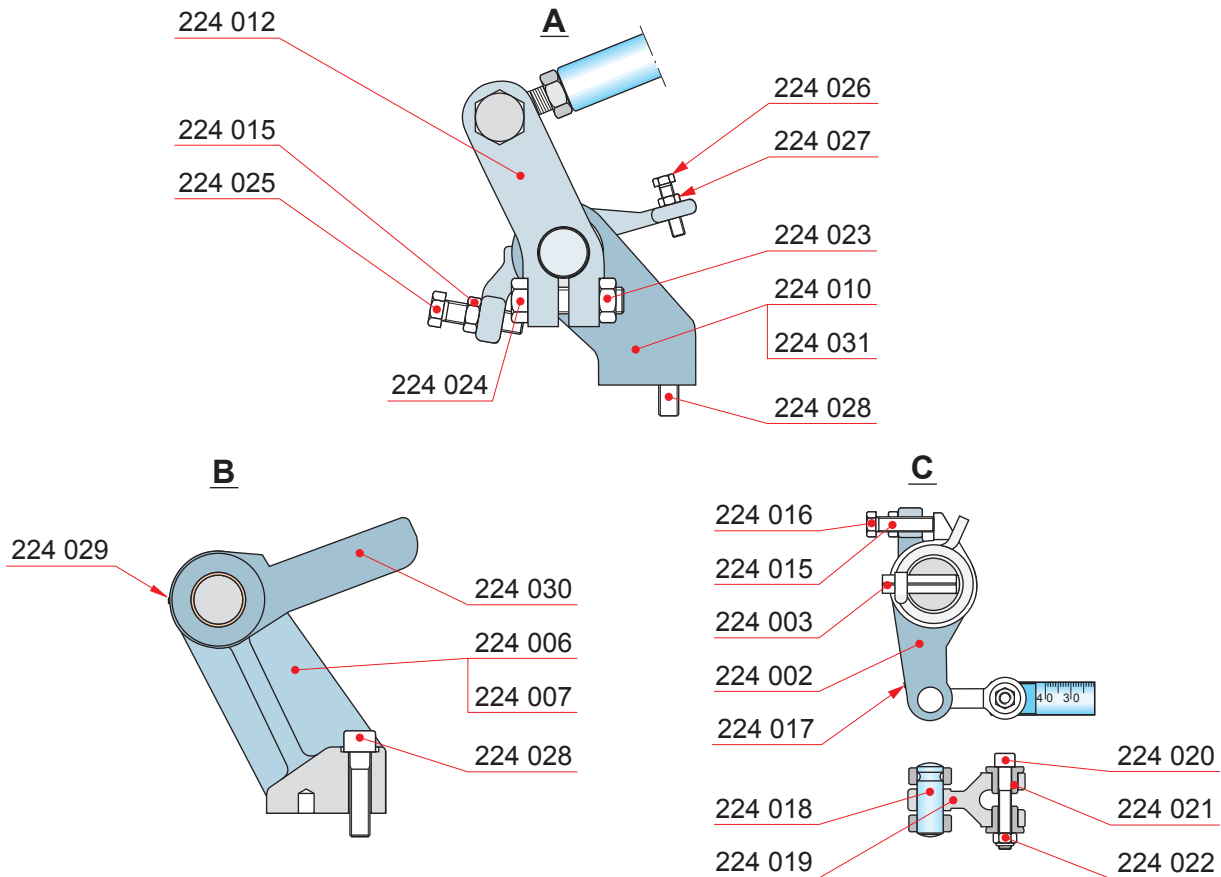
Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 001	Torsional spring	*	0.1
224 002	Lever	*	0.3
224 003	Pin	*	-
224 004	Follower	*	0.2
224 005	Torsional spring	*	0.2
224 006	Bearing housing	*	0.8
224 007	Bearing bush	*	-
224 008	Control shaft	1	3.6
224 009	Load limiter	1	0.3
224 010	Bearing housing	1	0.7
224 031	Bearing bush	2	-
224 011	Pin	1	-
224 012	Lever	1	0.3
224 043	Pin	2	-
224 044	Screw	1	-
224 045	Nut	1	-
224 048	V-ring	*	-

NOTE! * See page 3.

Edition: C

Page: 2(3)

Updated: 16.01.2012

Control shaft

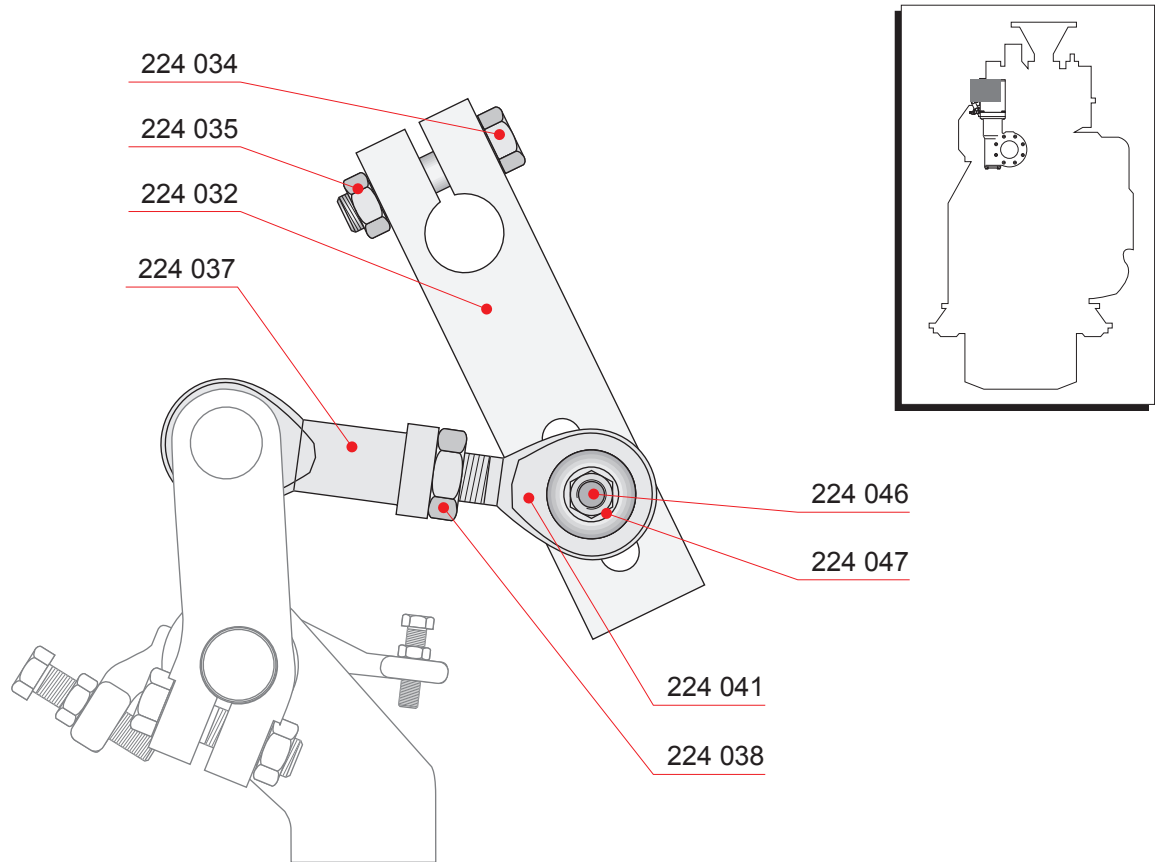
Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 002	Lever	*	0.3	NOTE!	* See page 3.		
224 003	Pin	*	-				
224 006	Bearing housing	*	0.8				
224 007	Bearing bush	*	-				
224 010	Bearing housing	1	0.7				
224 031	Bearing bush	2	-				
224 012	Lever	1	0.3				
224 015	Nut	*	-				
224 016	Screw	*	-				
224 017	Pin	*	-				
224 018	Shaft for lever	*	-				
224 019	Lever	*	-				
224 020	Screw	*	-				
224 021	Sleeve for injection pump	*	-				
224 022	Nut	*	-				
224 023	Nut	1	-				
224 024	Screw	1	-				
224 025	Screw	1	-				
224 026	Screw	2	-				
224 027	Nut	2	-				
224 028	Screw	*	-				
224 029	Pin	2	-				
224 030	Lever arm	1	0.3				

Control shaft

Part No. and Description	Quantity in pieces			
	4L	6L	8L	9L
224 001 Torsional spring	4	6	8	9
224 002 Lever	4	6	8	9
224 003 Pin	12	18	24	27
224 004 Follower	4	6	8	9
224 005 Torsional spring	4	6	8	9
224 006 Bearing housing	3	4	5	5
224 007 Bearing bush	3	4	5	5
224 015 Nut	5	7	9	10
224 016 Screw	4	6	8	9
224 017 Pin	4	6	8	9
224 018 Shaft for lever	4	6	8	9
224 019 Lever	4	6	8	9
224 020 Screw	4	6	8	9
224 021 Sleeve for injection pump	8	12	16	18
224 022 Nut	4	6	8	9
224 028 Screw	4	5	6	6
224 048 V-ring	6	8	10	10

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Adjustable link rod

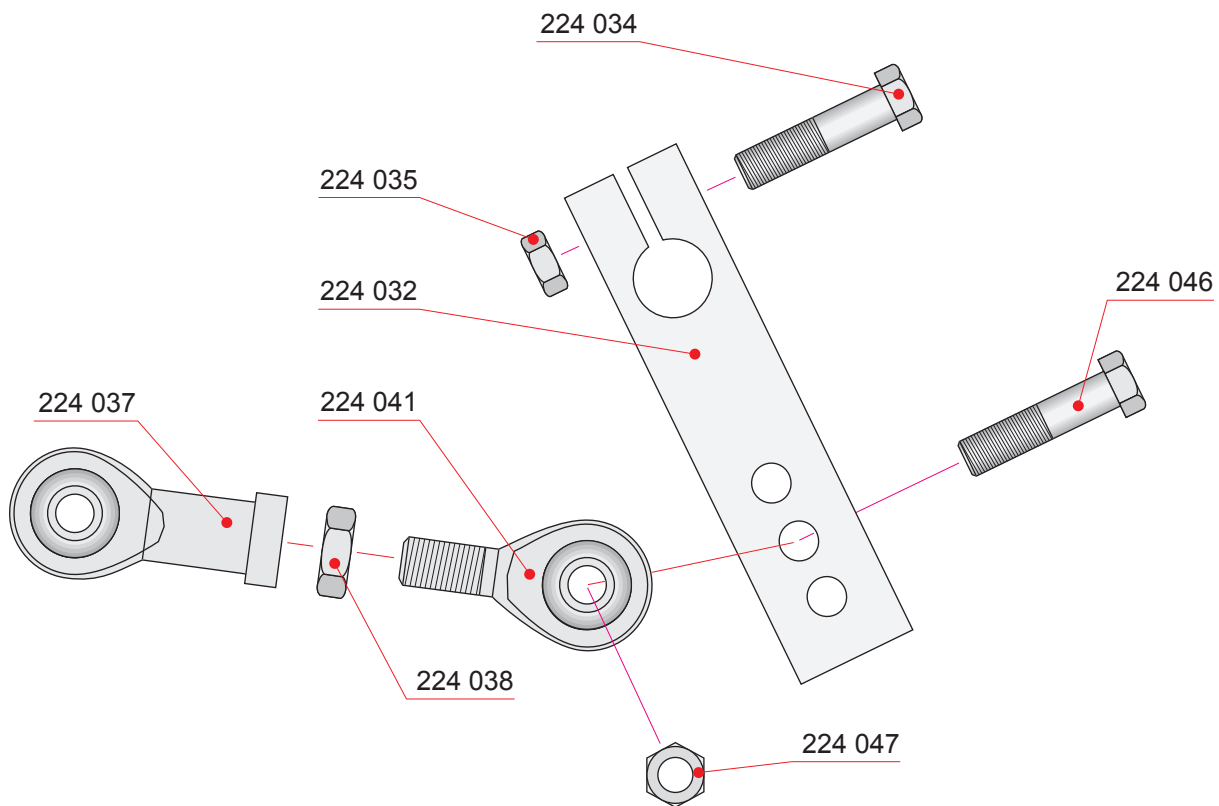


Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 032	Lever	1	-
224 034	Screw	1	-
224 035	Nut	1	-
224 037	Ball joint, right	1	-
224 038	Nut, right-hand	1	-
224 041	Ball joint, left	1	-
224 046	Screw	1	-
224 047	Nut	1	-

Edition: B

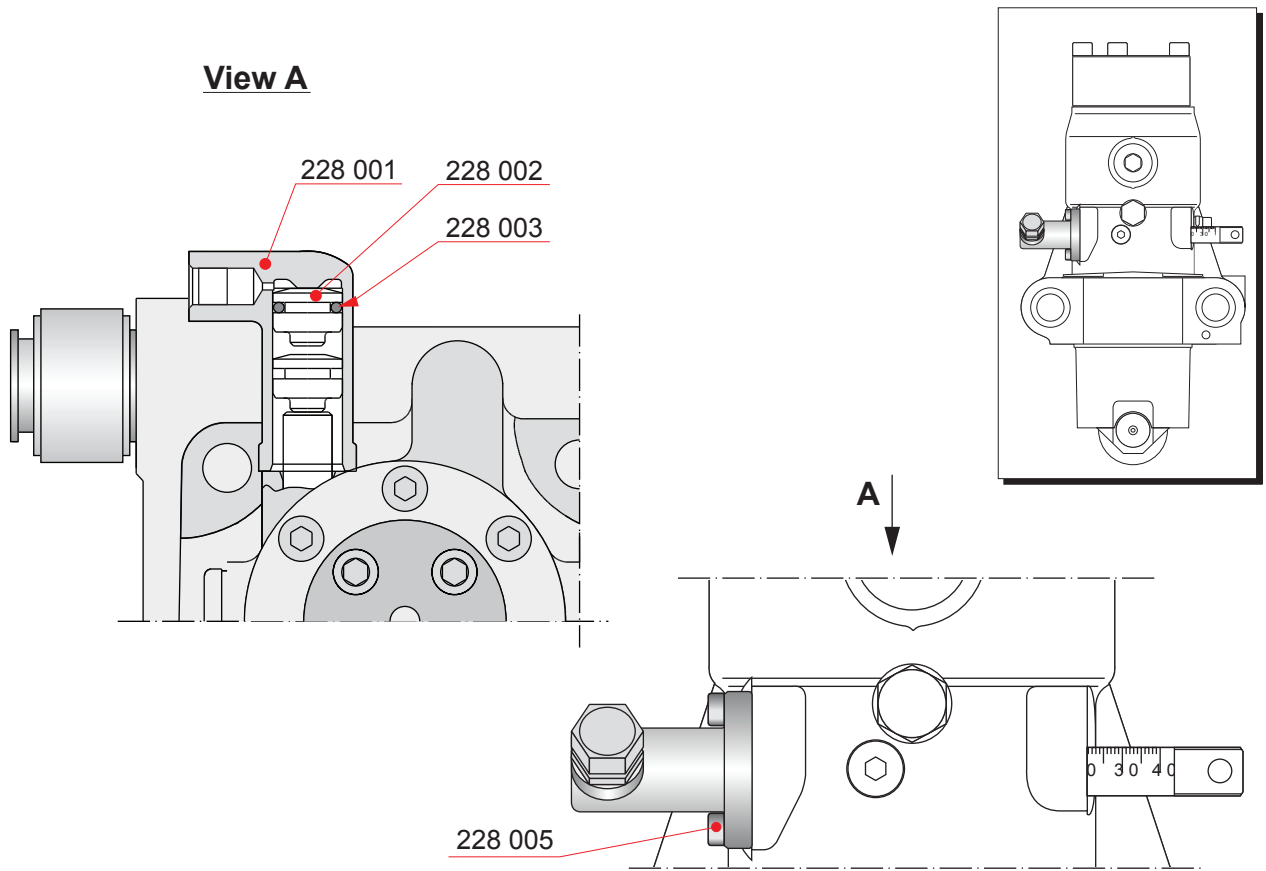
Page: 2(2)

Updated: 12.12.2011

Adjustable link rod

Part No.	Description	Qty [Pcs]	Wt. [Kg]
224 032	Lever	1	-
224 034	Screw	1	-
224 035	Nut	1	-
224 037	Ball joint, right	1	-
224 038	Nut, right-hand	1	-
224 041	Ball joint, left	1	-
224 046	Screw	1	-
224 047	Nut	1	-

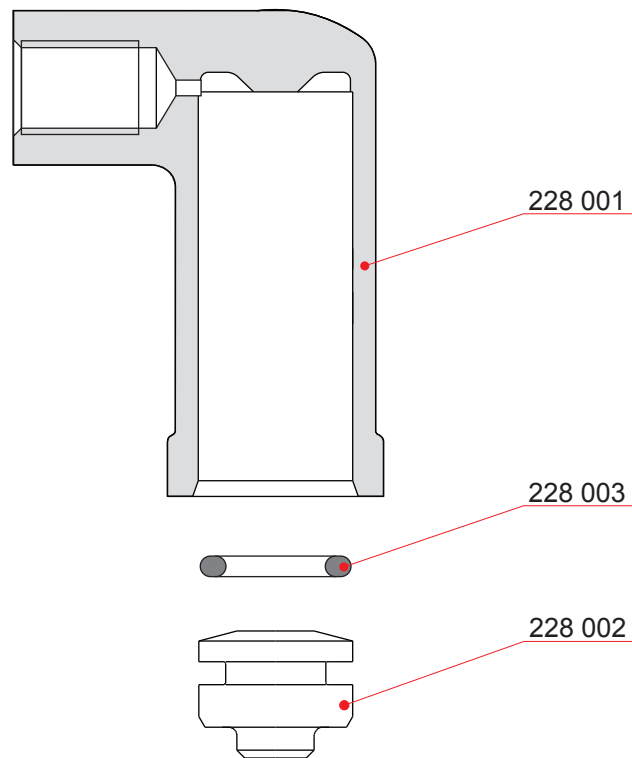
Pneumatic overspeed trip device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 001	Housing	1	-
228 002	Piston	1	-
228 003	Slide ring	1	-
228 005	Screw	2	-

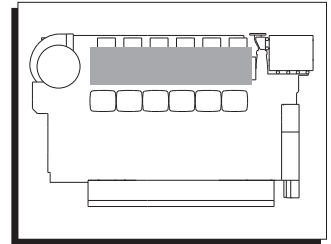
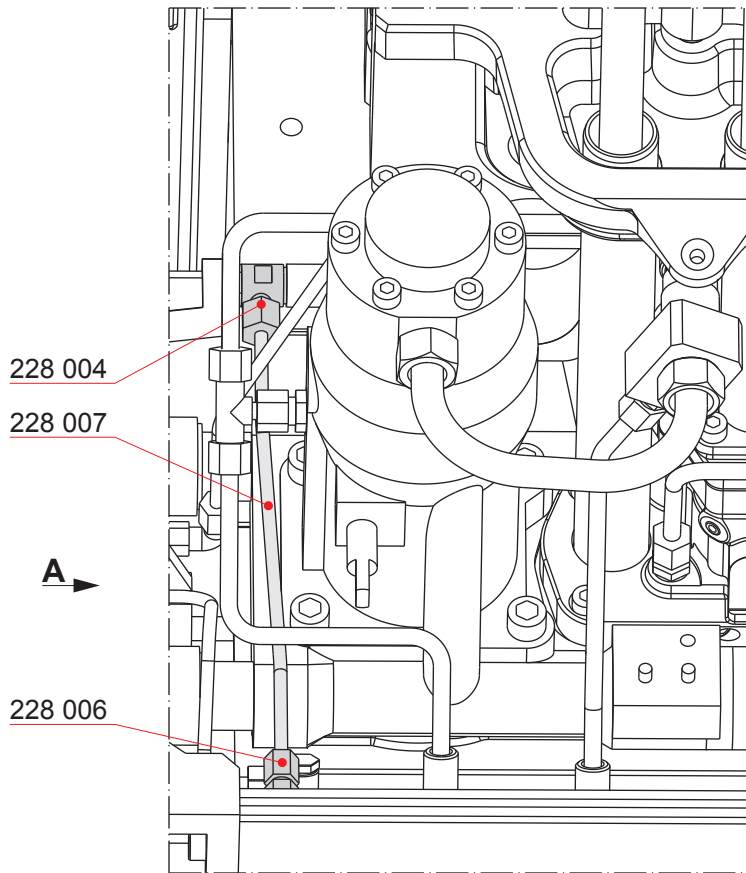
Edition: B
Page: 2(2)
Updated: 19.10.2007

Pneumatic overspeed trip device



Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 001	Housing	1	-
228 002	Piston	1	-
228 003	Slide ring	1	-

Piping for pneumatic overspeed trip device



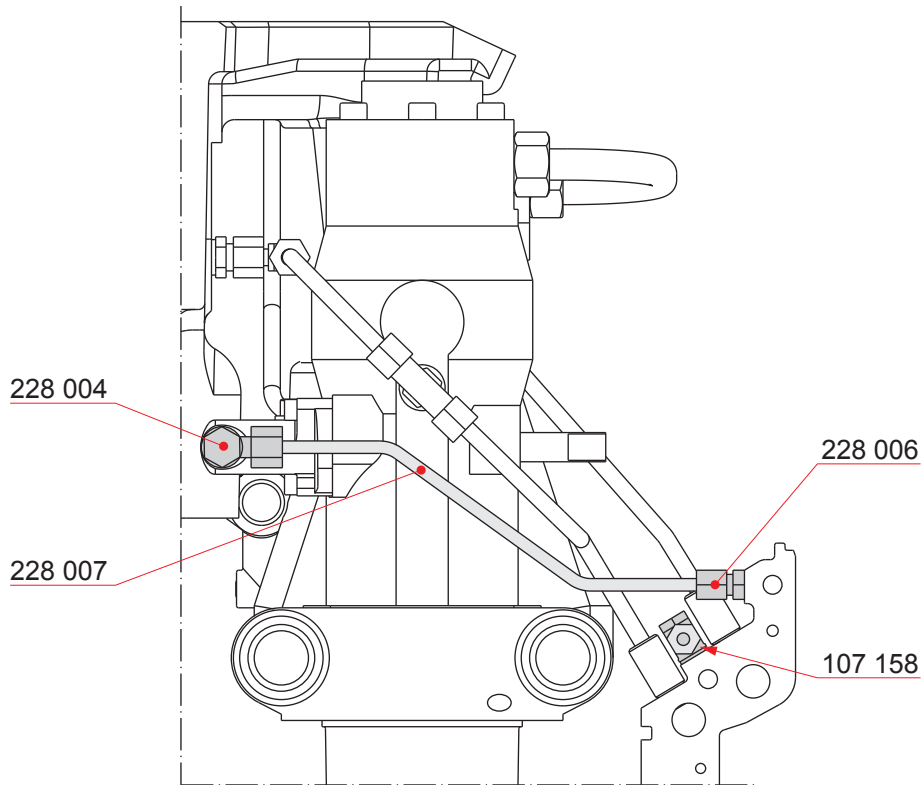
Part No.	Description	Qty [Pcs]	Wt. [Kg]
228 004	Pipe union	*	-
228 006	Pipe union	*	-
228 007	Pipe	*	-

NOTE! * See page 3.

Edition: A
 Page: 2(3)
 Updated: 09.09.2009

Piping for pneumatic overspeed trip device

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 158	Pipe union	2	-
228 004	Pipe union	*	-
228 006	Pipe union	*	-
228 007	Pipe	*	-

NOTE! * See page 3.

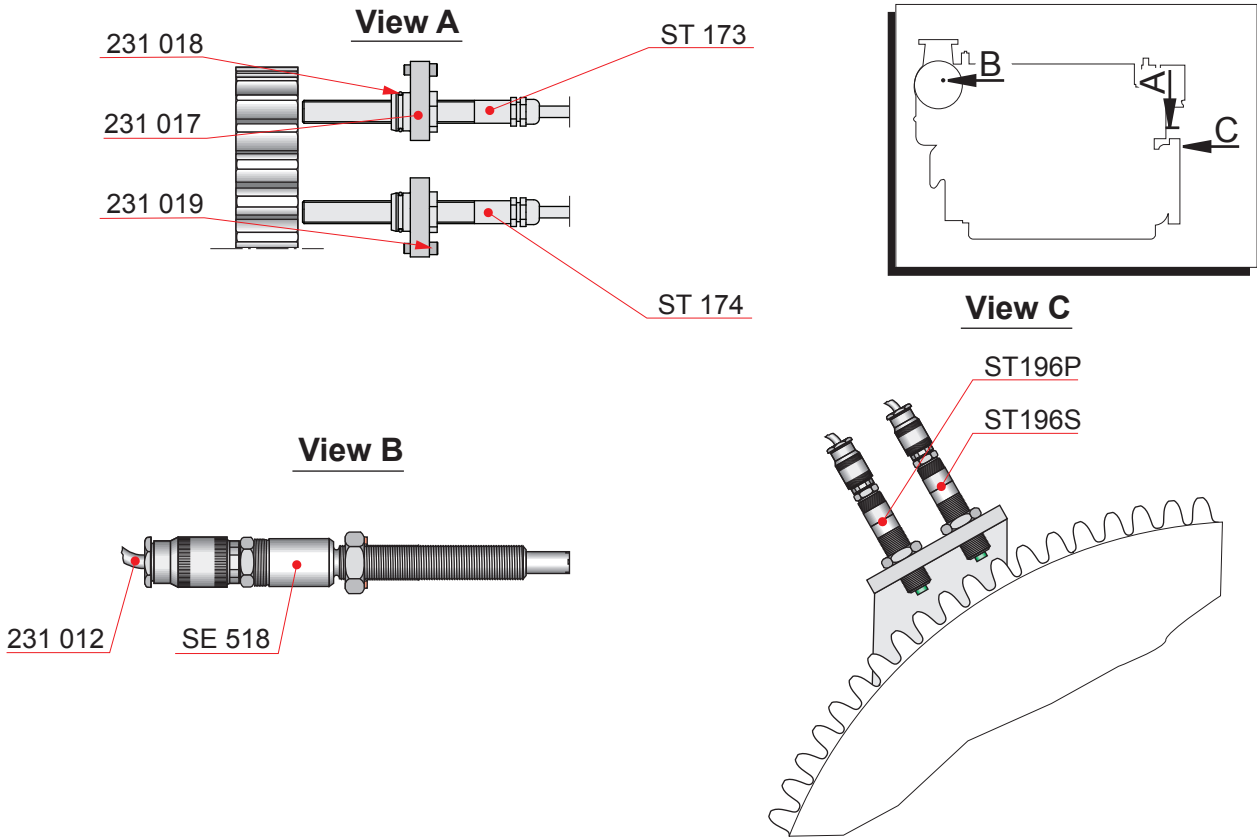
Piping for pneumatic overspeed trip device

Quantity according to number of cylinders

Part No.	Pieces			
	4L	6L	8L	9L
228 004	4	6	8	9
228 006	4	6	8	9
228 007	4	6	8	9

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Speed pick-ups

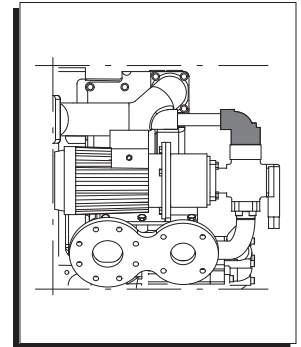
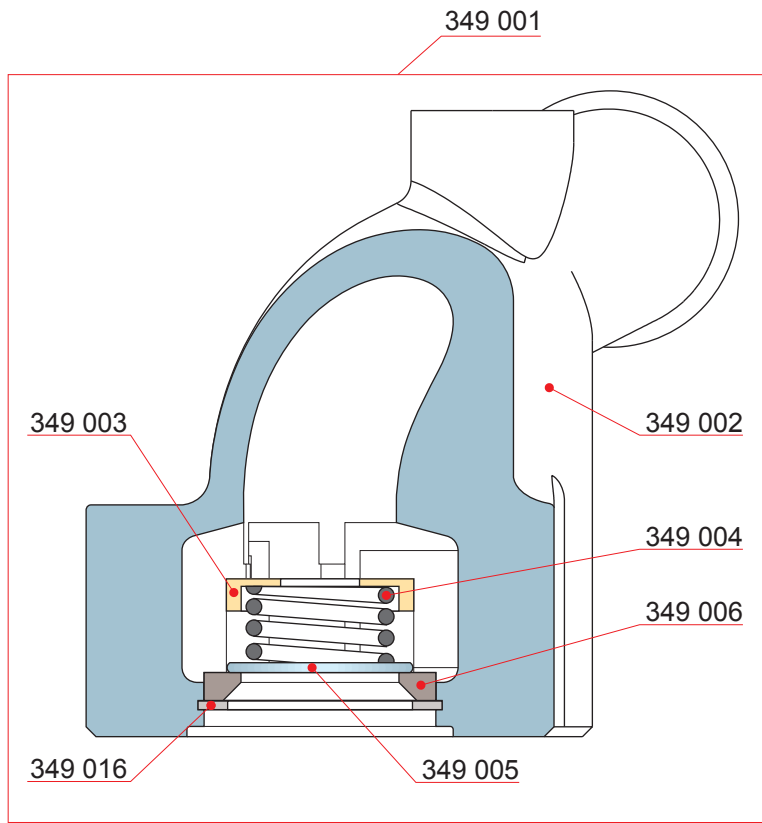


Part No.	Description	Qty [Pcs]	Wt. [Kg]
ST196P	Speed sensor (1) (3)	1	0.4
ST196S	Speed sensor (1) (3)	1	0.4
ST173	Speed pick-up (1)	1	0.9
ST174	Speed pick-up (1)	1	0.9
SE518	Speed pick-up for TC	1	-
231 012	Cable (2)	1	-
231 017	Bracket	2	0.1
231 018	O-ring	2	-
231 019	Screw	2	-

- NOTE! (1) Cable included.
- NOTE! (2) L= 6000 mm
- NOTE! (3) Only for installations which have electronic governor.

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Non-return valve for pre-lubricating oil pump

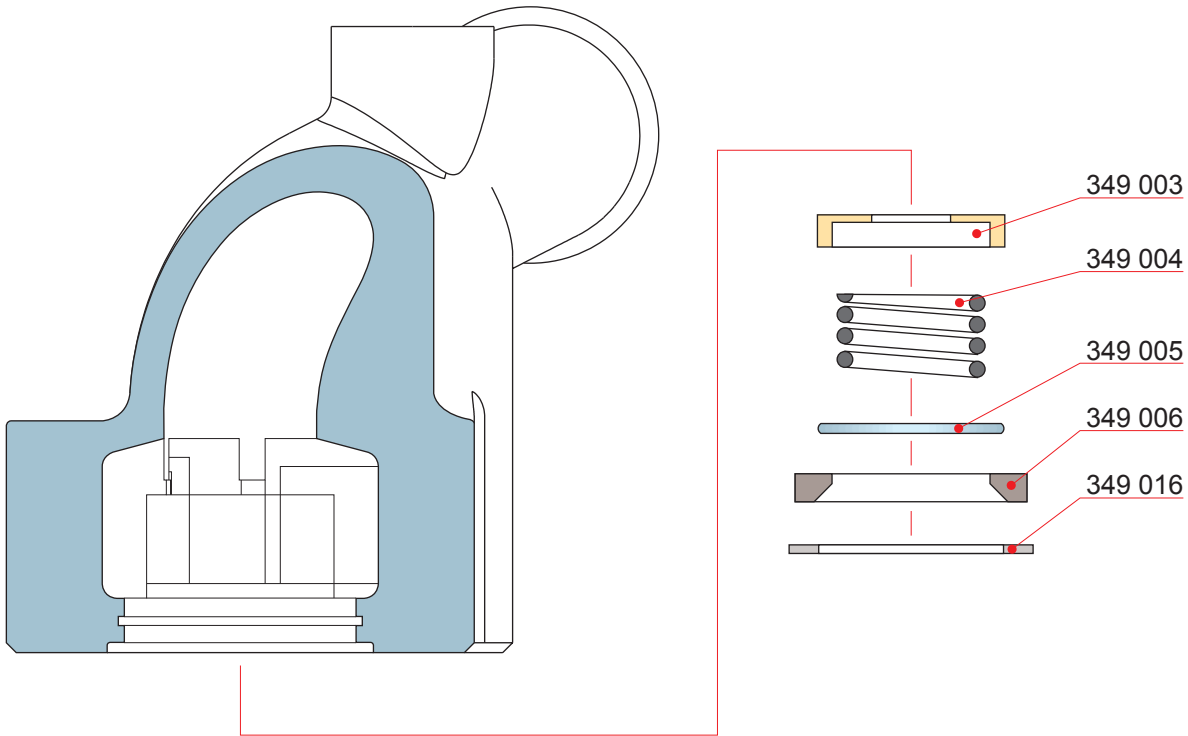


Part No.	Description	Qty [Pcs]	Wt. [Kg]
349 001	Non-return valve	1	0.5
349 002	Housing	1	2.8
349 003	Spring retainer	1	-
349 004	Spring	1	-
349 005	Valve disc	1	-
349 006	Seal ring	1	-
349 016	Retainer ring	1	-

Edition: A

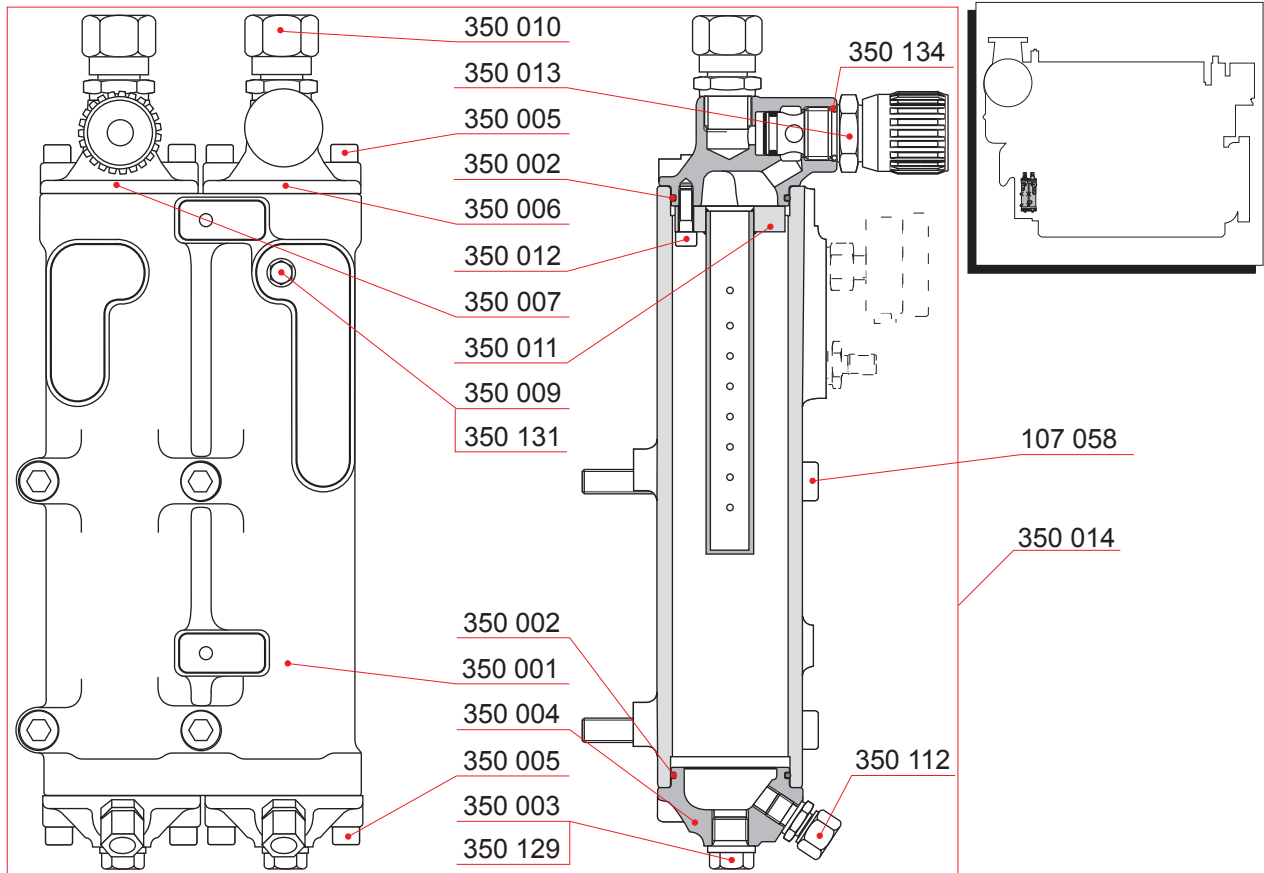
Page: 2(2)

Updated: 10.02.2003

Non-return valve for pre-lubricating oil pump

Part No.	Description	Qty [Pcs]	Wt. [Kg]
349 003	Spring retainer	1	-
349 004	Spring	1	-
349 005	Valve disc	1	-
349 006	Seal ring	1	-
349 016	Retainer ring	1	-

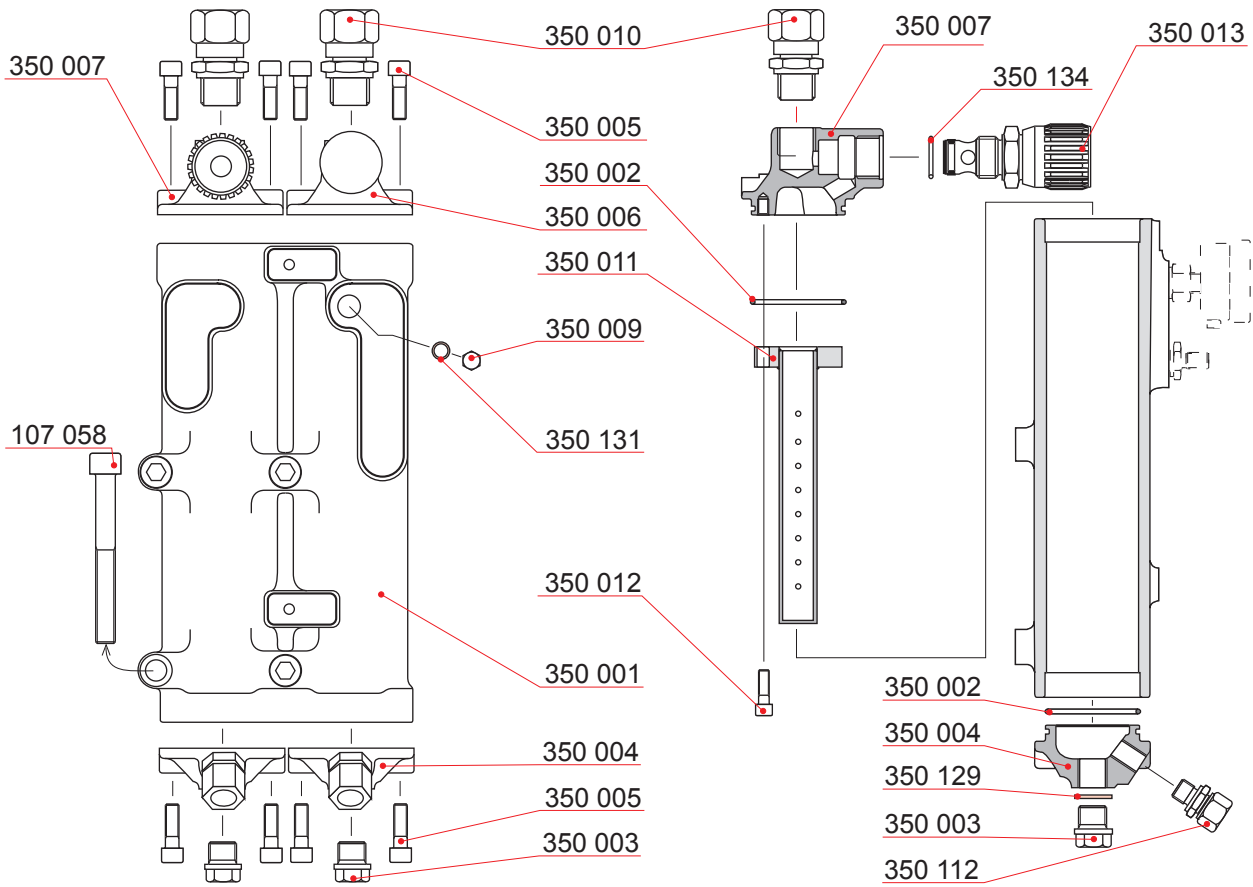
Pulse damper for fuel oil



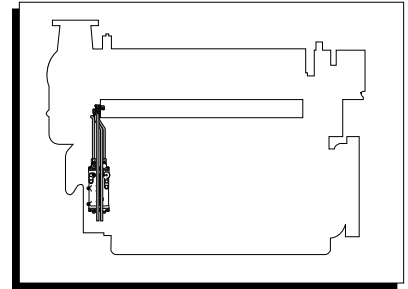
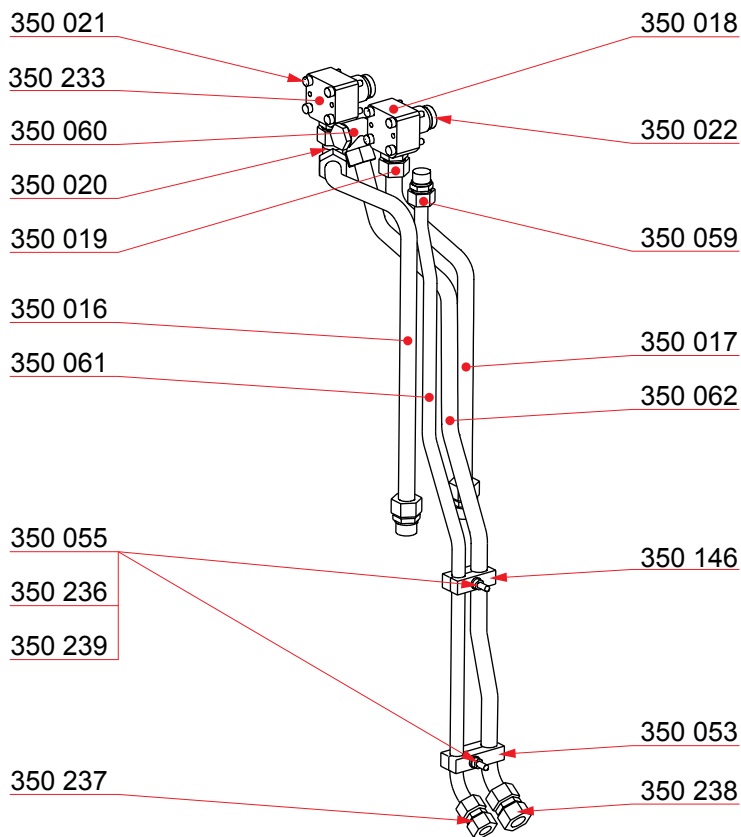
Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 014	Pulse damper	1	20.3
350 001	Housing	1	13.1
350 002	O-ring	4	-
350 003	Plug	1	-
350 004	Flange	2	0.6
350 005	Screw	16	-
350 006	Flange	1	-
350 007	Flange	1	-
350 009	Plug	1	-
350 010	Pipe union	2	0.2
350 011	Pipe	2	0.7
350 012	Screw	6	-
350 013	Control valve	1	0.6
350 112	Pipe union	2	0.1
350 129	Sealing ring	2	-
350 131	Sealing ring	1	-
350 134	O-ring	1	-
107 058	Screw	4	-

Edition: F
 Page: 2(2)
 Updated: 05.10.2007

Pulse damper for fuel oil



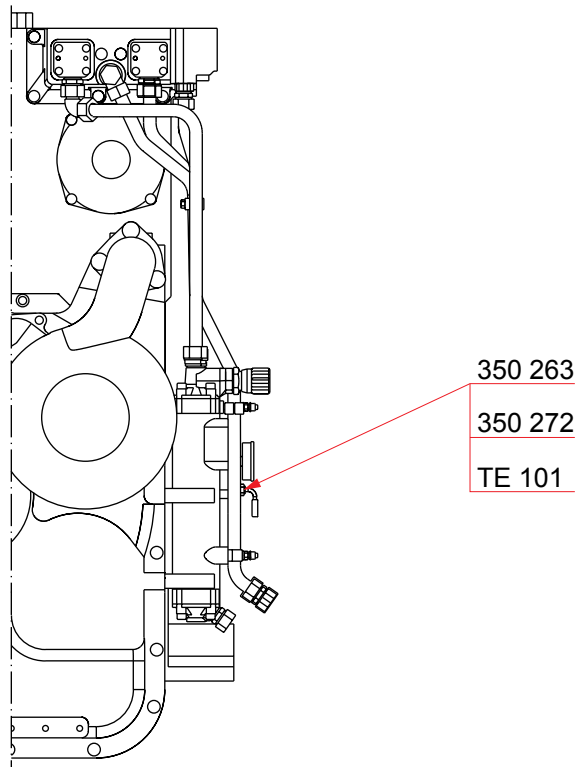
Fuel pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 016	Pipe	1	0.6
350 017	Pipe	1	0.5
350 018	Flange	1	1.0
350 019	Pipe union	1	0.2
350 020	Pipe union	1	0.4
350 021	Screw	8	-
350 022	O-ring	2	0.1
350 053	Pipe clamp	1	-
350 055	Screw	2	-
350 059	Pipe union	1	0.1
350 060	Pipe union	1	0.4
350 061	Pipe	1	0.6
350 062	Pipe	1	-
350 146	Pipe clamp	1	-
350 233	Flange	1	1.0
350 236	Nut	2	-
350 237	Pipe union	1	0.2
350 238	Pipe union	1	0.3
350 239	Washer	4	-

Edition: E
 Page: 2(2)
 Updated: 29.09.2008

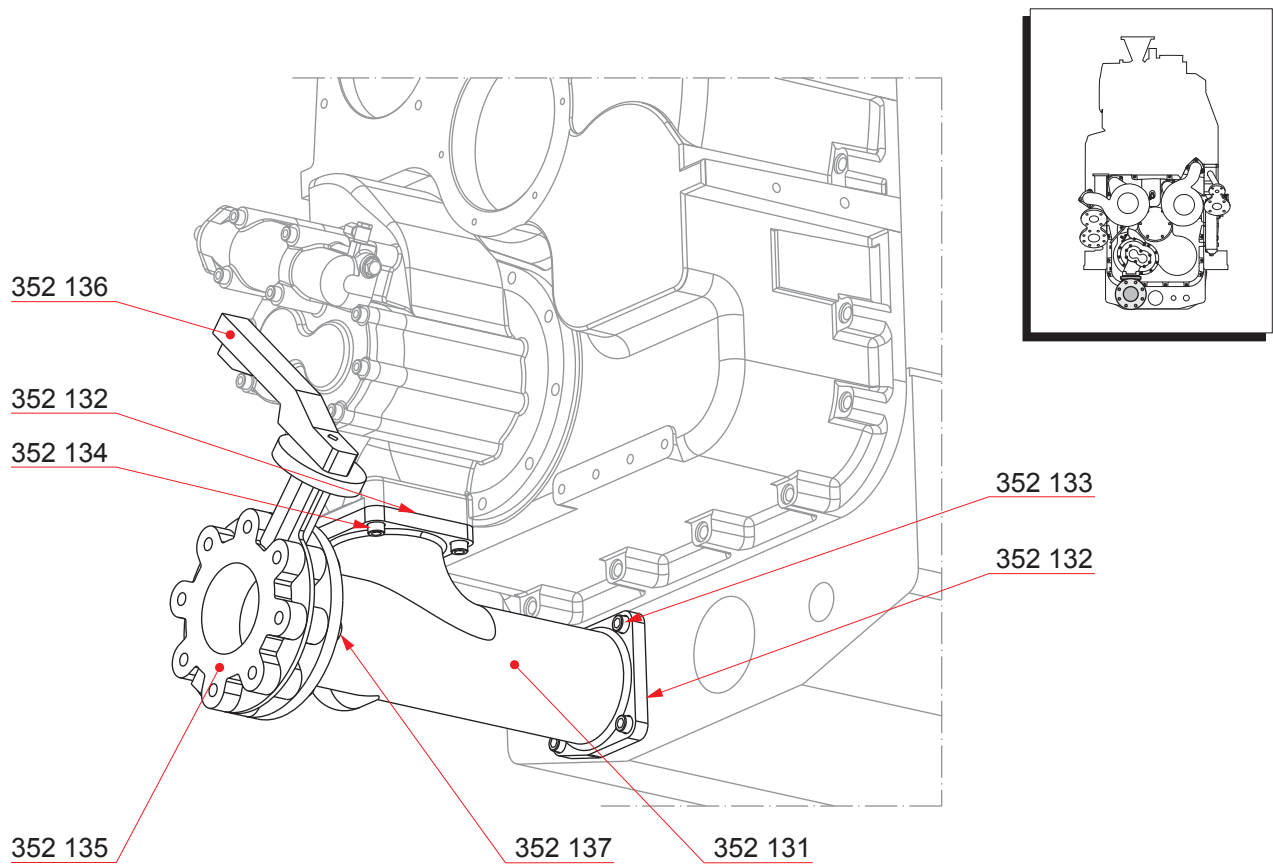
Fuel pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
350 263	Protecting well (1)	1	0.1
350 272	Sealing ring (1)	1	-
TE101	Temperature sensor, fuel oil temperature (1)	1	-

NOTE! (1) Depending on installation.

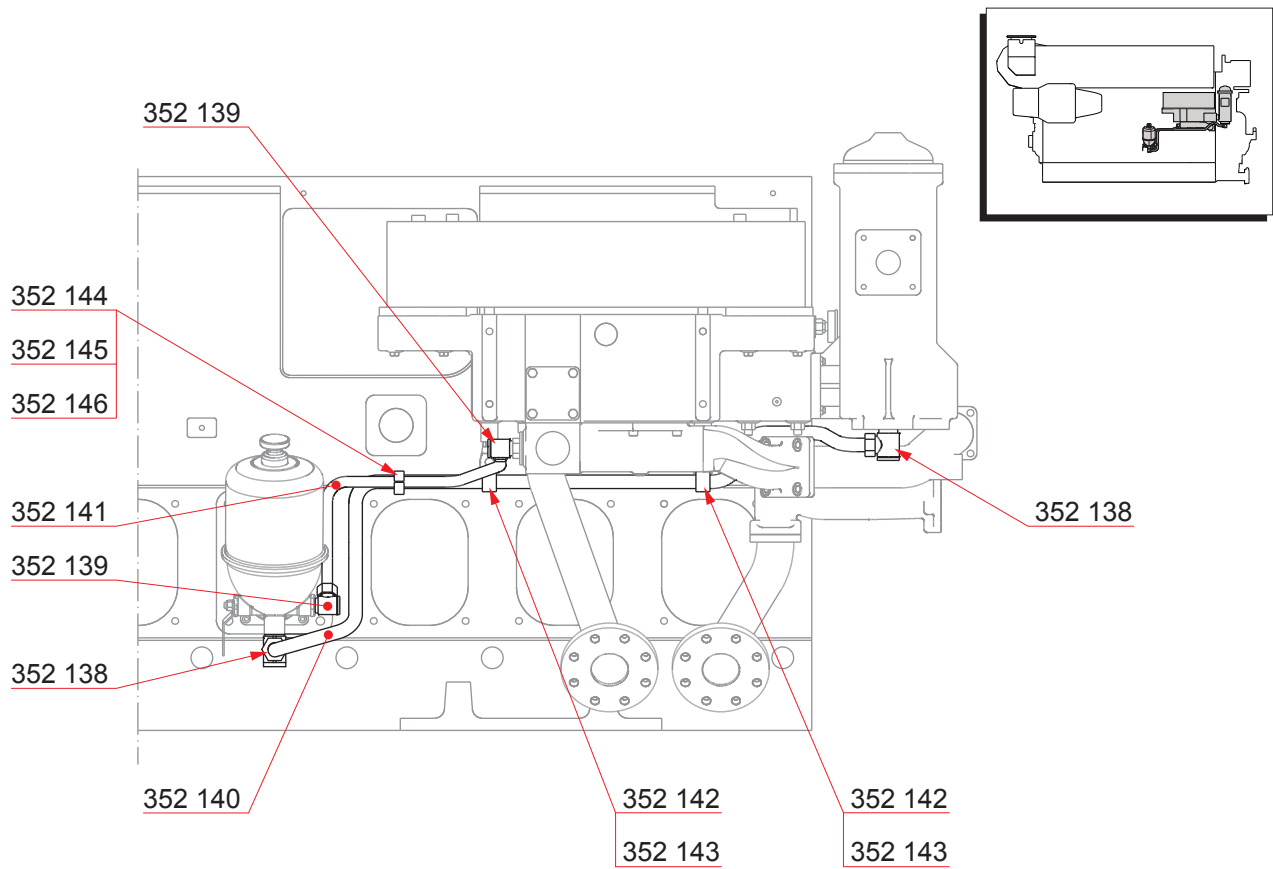
Suction pipe for oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 131	Suction pipe	1	17.6
352 132	O-ring	2	-
352 133	Screw	4	-
352 134	Screw	4	-
352 135	Valve	1	6.9
352 136	Lever arm	1	-
352 137	Screw	8	-

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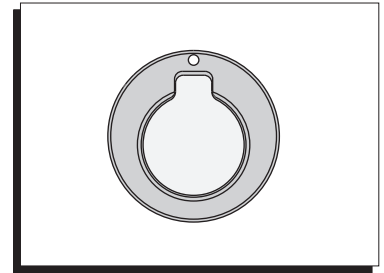
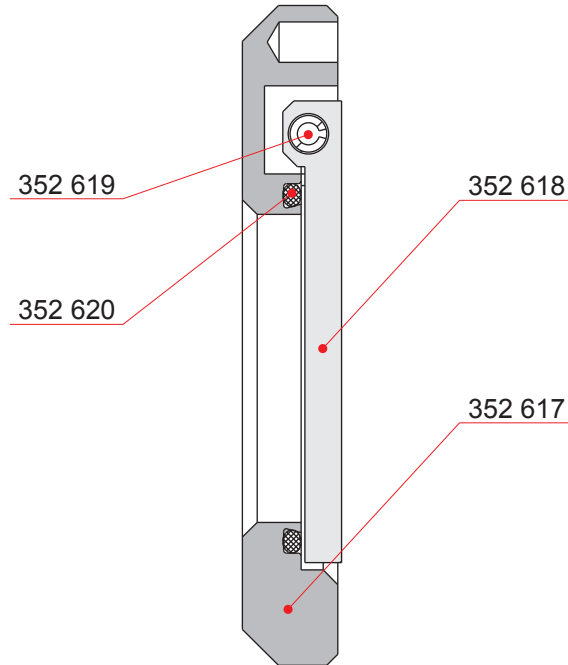
Lube oil pipes for centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 138	Pipe union	2	0.7
352 139	Pipe union	2	0.4
352 140	Pipe	1	2.3
352 141	Pipe	1	0.8
352 142	Pipe clamp	2	-
352 143	Screw	4	-
352 144	Pipe clamp	1	0.3
352 145	Screw	1	-
352 146	Nut	1	-

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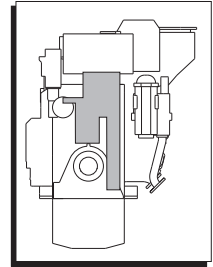
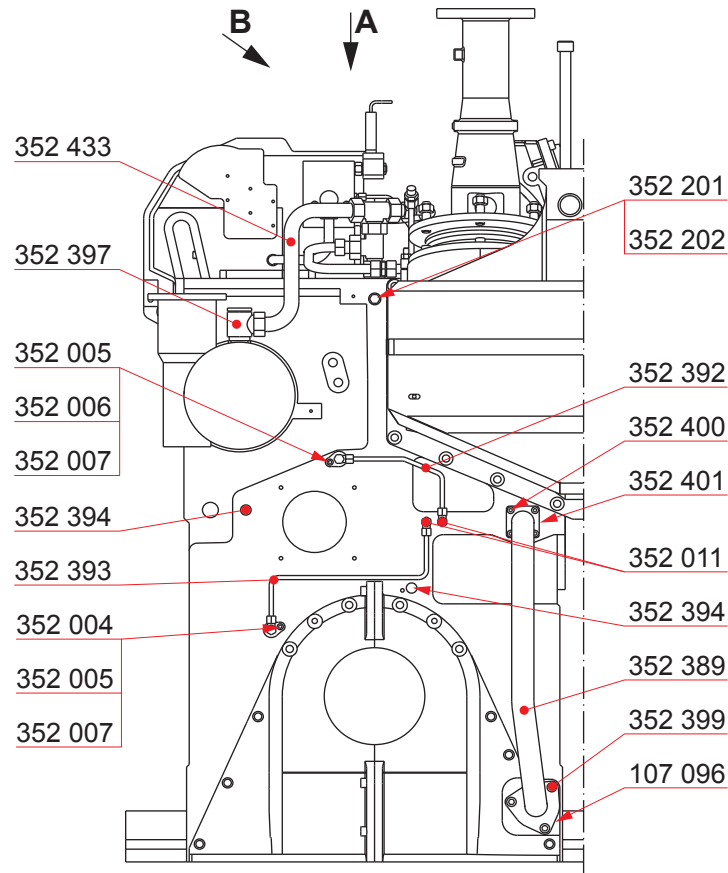
Non-return valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 617	Flange	1	0.4
352 618	Flap	1	-
352 619	Spring pin	1	-
352 620	O-ring	1	-

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Lubricating oil pipes, flywheel end

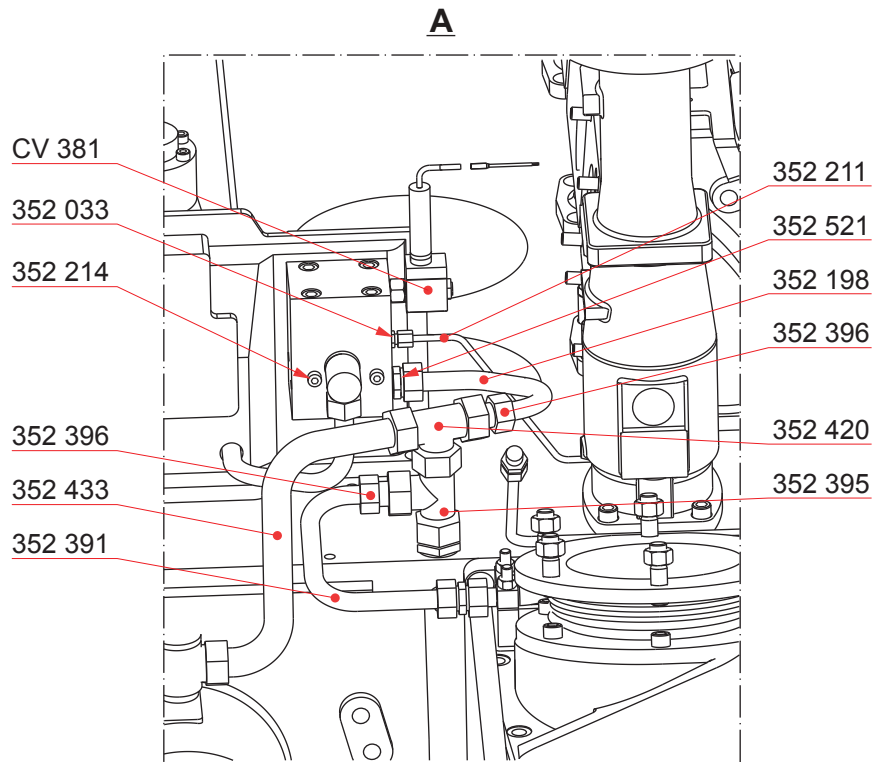


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 096	O-ring	1	-
352 004	Oil nozzle	1	-
352 005	O-ring	2	-
352 006	Oil nozzle	1	0.2
352 007	Screw	2	-
352 011	Pipe union	4	-
352 201	Sealing ring	1	-
352 202	Plug	1	-
352 389	Pipe	1	2.7
352 392	Pipe	1	0.1
352 393	Pipe	1	0.2
352 394	Cap	2	-
352 397	Union	1	0.7
352 399	Screw	3	-
352 400	Screw	4	-
352 401	O-ring	1	-
352 433	Pipe	1	1.0

Edition: B

Page: 2(3)

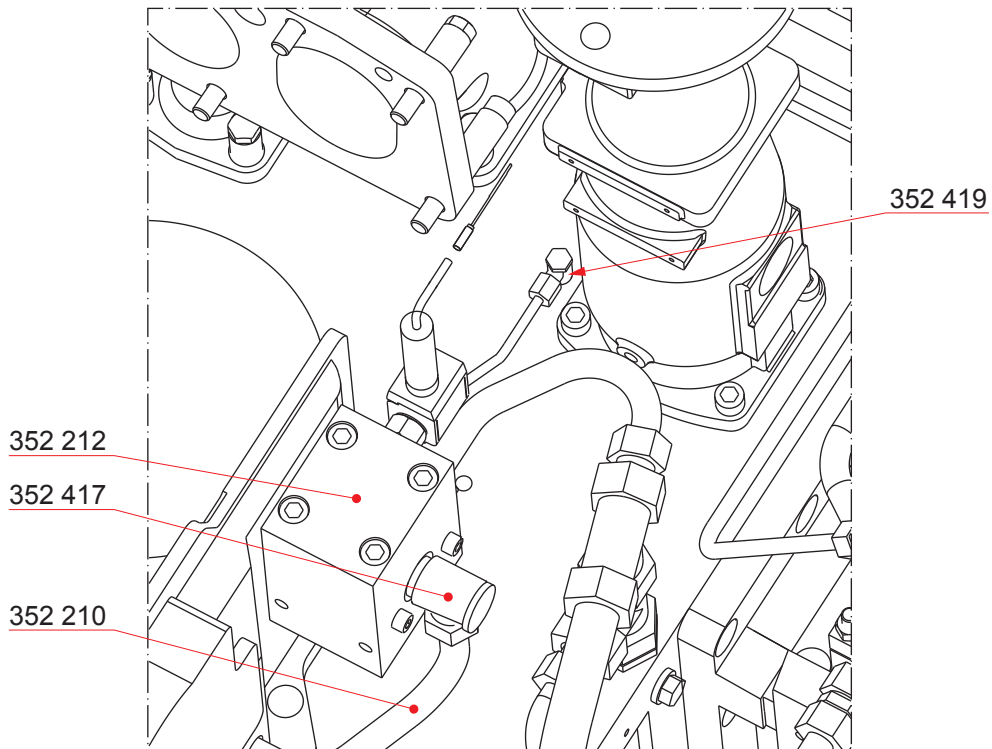
Updated: 14.10.2011

Lubricating oil pipes, flywheel end

Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 033	Pipe union	1	-
352 198	Pipe	1	0.1
352 211	Pipe	1	-
352 214	Screw	2	-
352 391	Pipe	1	0.6
352 395	Union	1	0.8
352 396	Union	2	0.2
352 420	Pipe union	1	0.6
352 433	Pipe	1	1.0
352 521	Pipe union	1	0.1
CV381	Control valve	1	0.6

Lubricating oil pipes, flywheel end

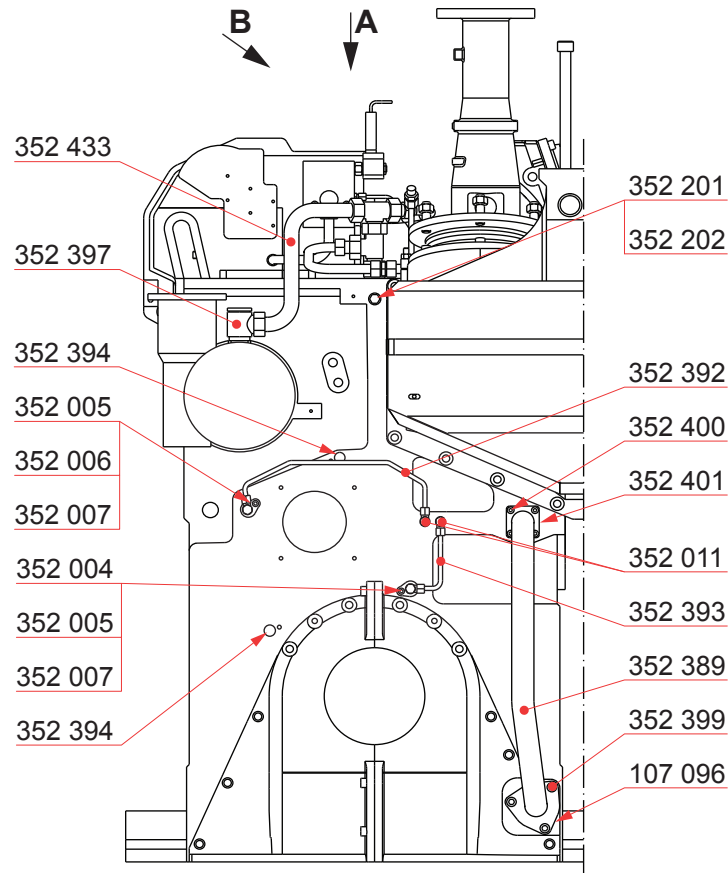
B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 210	Pipe	1	0.2
352 212	Control valve	1	4.5
352 417	Pipe union	1	0.3
352 419	Pipe union	1	-

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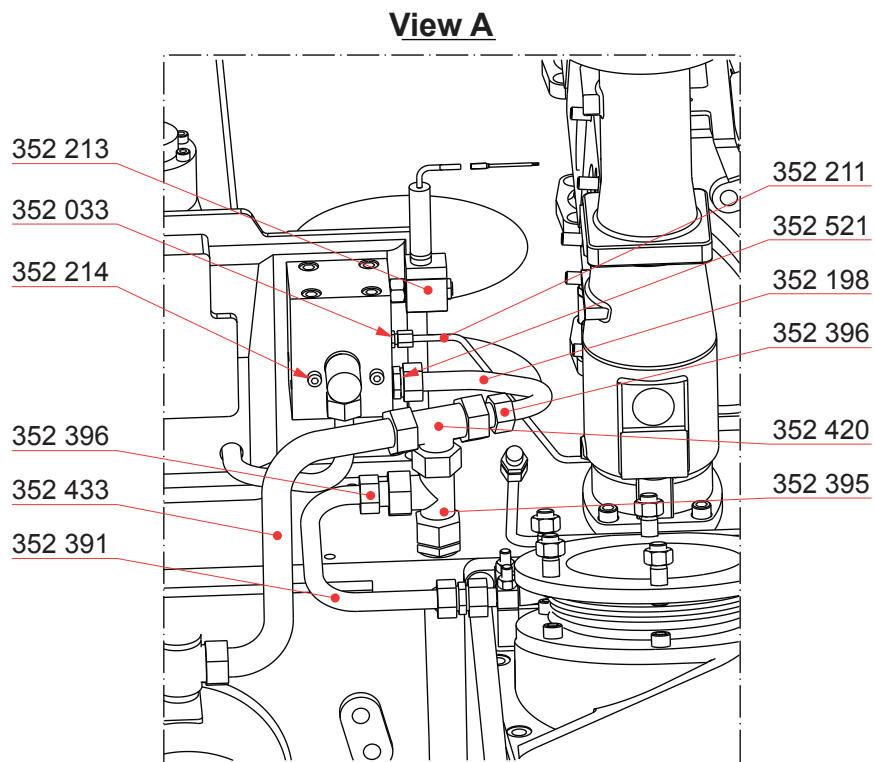
Lubricating oil pipes, flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 096	O-ring	1	-
352 004	Oil nozzle	1	-
352 005	O-ring	2	-
352 006	Oil nozzle	1	-
352 007	Screw	2	-
352 011	Pipe union	4	-
352 201	Sealing ring	1	-
352 202	Plug	1	-
352 389	Pipe	1	-
352 392	Pipe	1	-
352 393	Pipe	1	-
352 394	Cap	2	-
352 397	Union	1	2.5
352 399	Screw	3	-
352 400	Screw	4	-
352 401	O-ring	1	-
352 433	Pipe	1	1.0

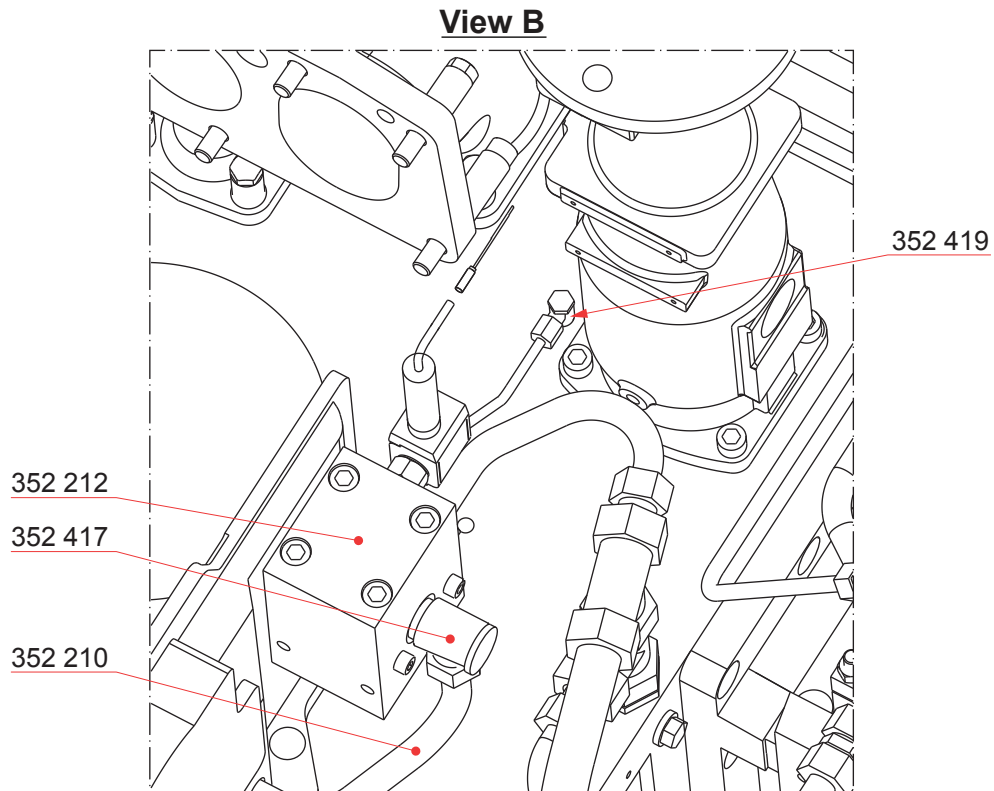
Edition: A
 Page: 2(3)
 Updated: 17.08.2009

Lubricating oil pipes, flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 033	Pipe union	1	-
352 198	Pipe	1	0.1
352 211	Pipe	1	-
352 213	Solenoid	1	0.6
352 214	Screw	2	-
352 391	Pipe	1	-
352 395	Union	1	0.8
352 396	Union	2	0.2
352 420	Pipe union	1	0.6
352 433	Pipe	1	1.0
352 521	Pipe union	1	0.1

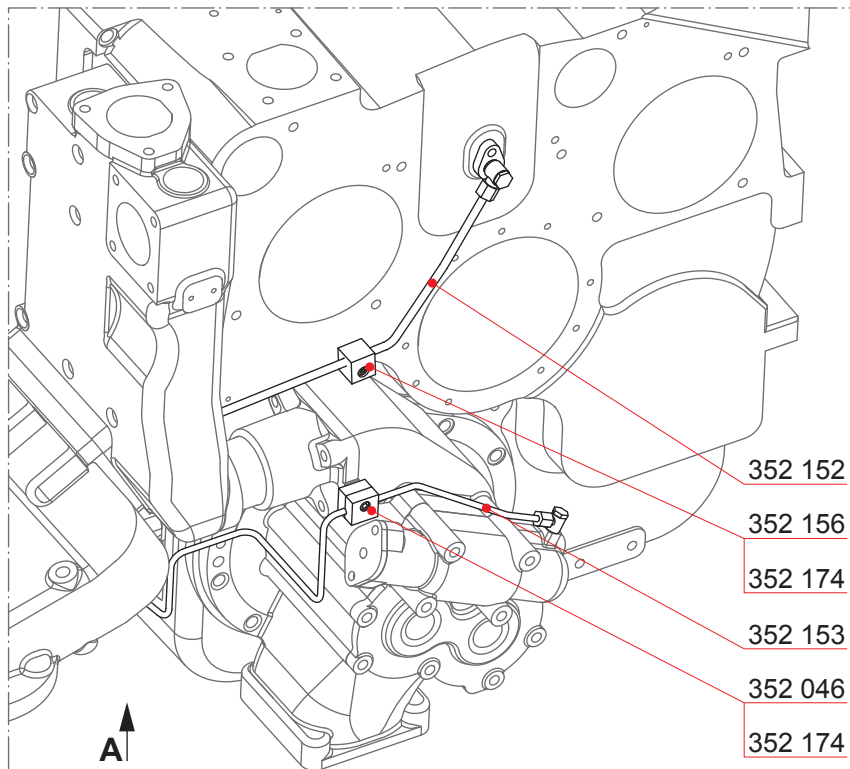
Lubricating oil pipes, flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 210	Pipe	1	0.2
352 212	Control valve	1	4.5
352 417	Pipe union	1	0.3
352 419	Pipe union	1	-

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Lubricating oil pipes at free end

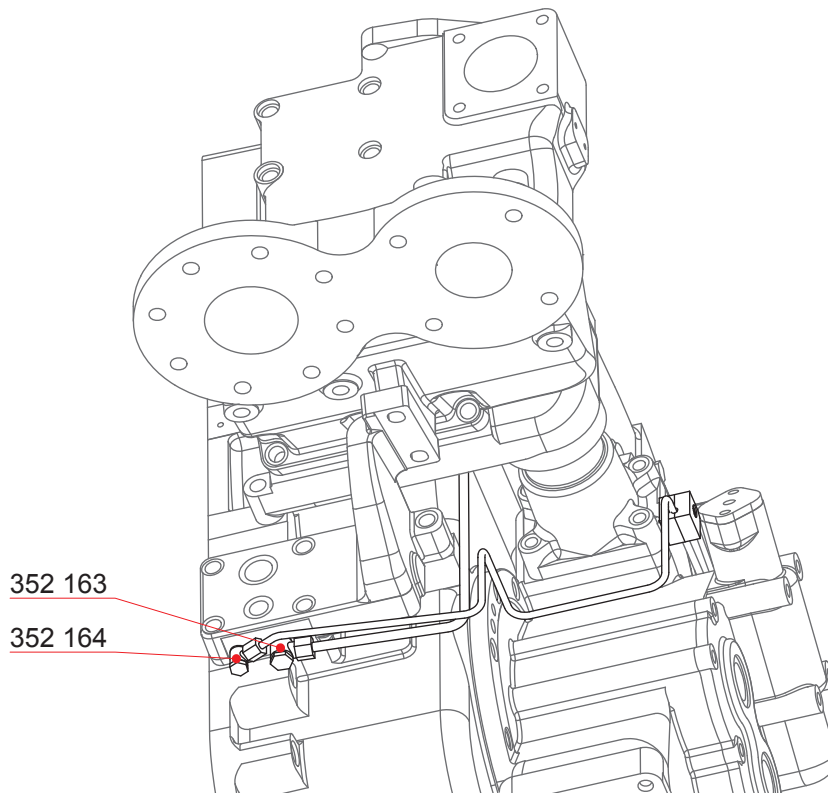


Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 046	Pipe clamp	1	-
352 152	Pipe	1	0.1
352 153	Pipe	1	0.1
352 156	Pipe clamp	1	-
352 174	Screw	2	-

Edition: A
Page: 2(2)
Updated: 14.06.2010

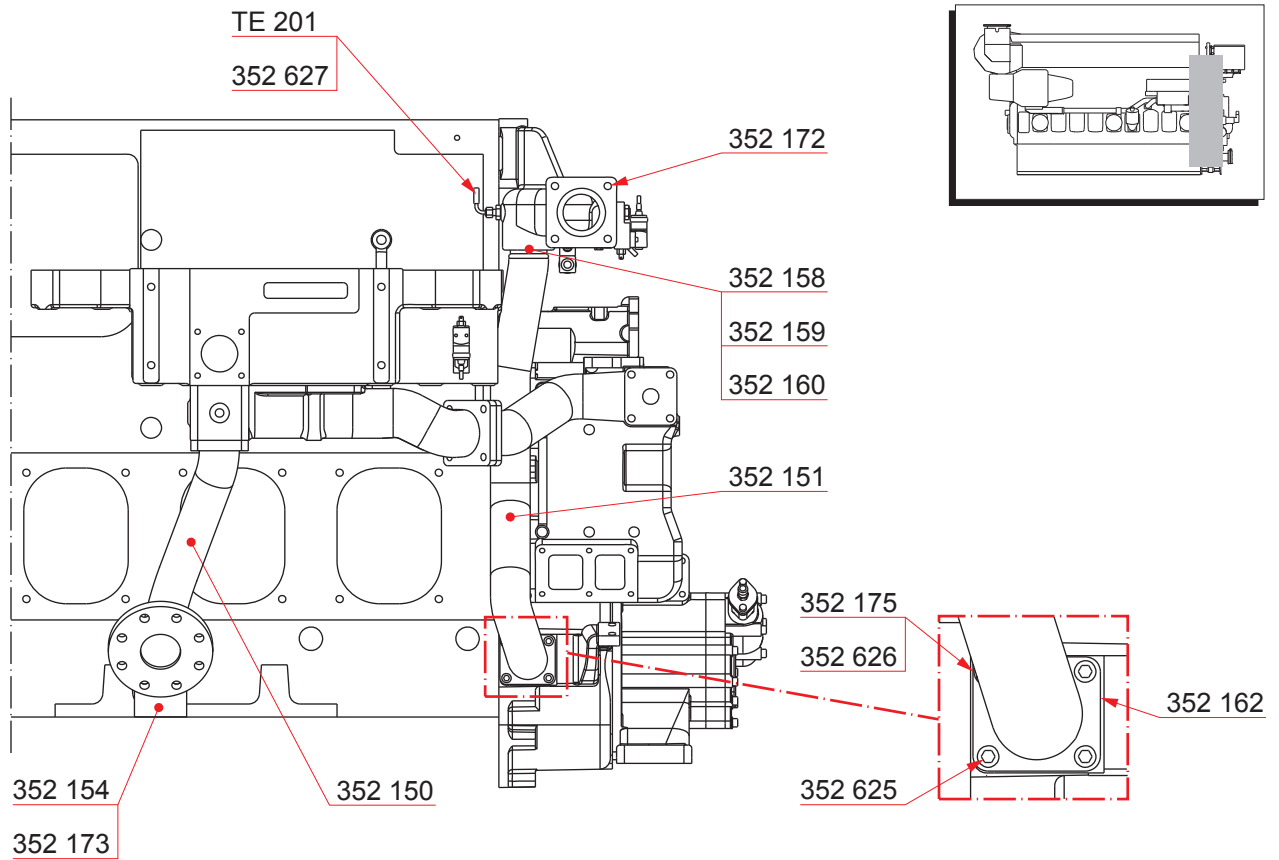
Lubricating oil pipes at free end

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 163	Pipe union	1	-
352 164	Pipe union	1	-

Lubricating oil pipes at free end

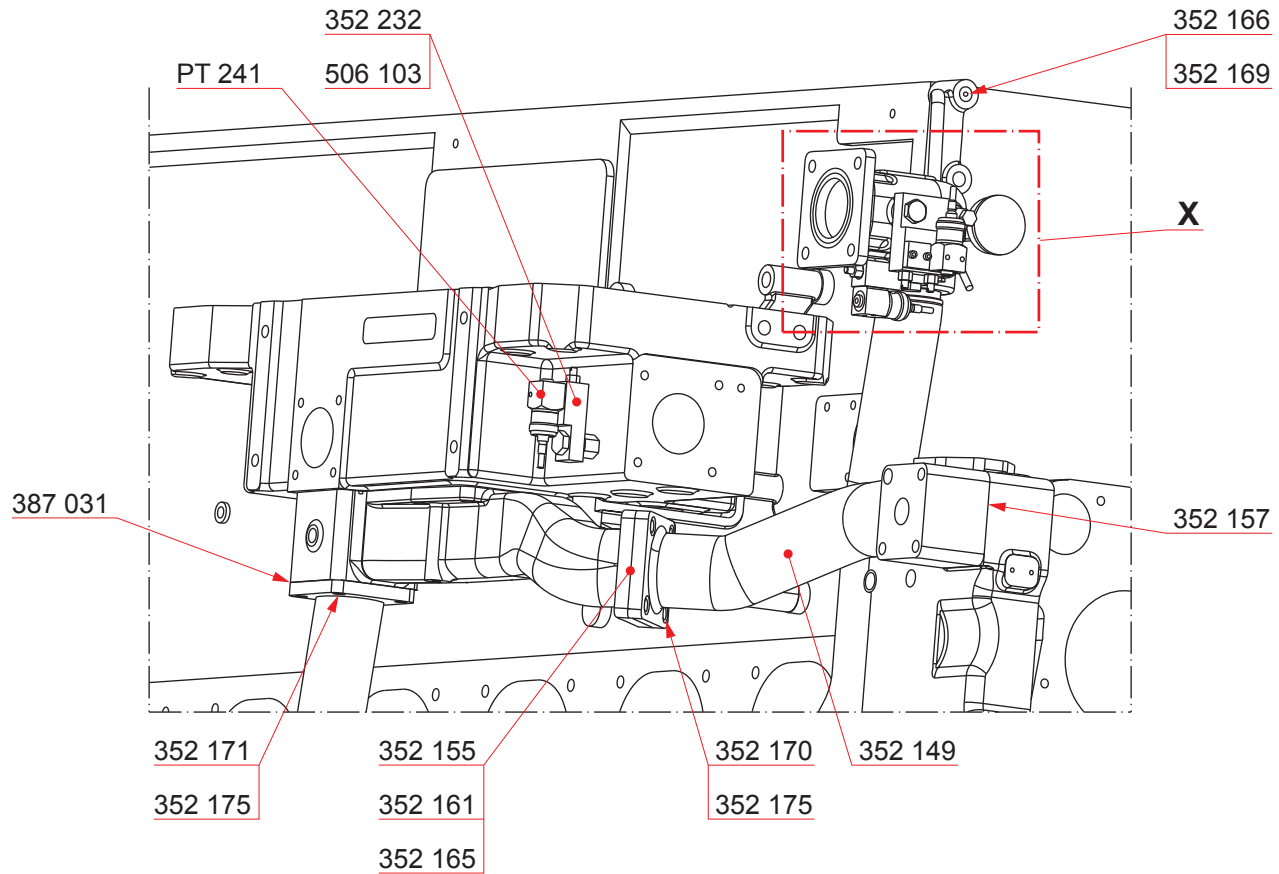


Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 150	Pipe	1	2.3
352 151	Pipe	1	6.0
352 154	Bracket	1	0.6
352 158	Guide ring	1	-
352 159	O-ring	1	-
352 160	Support ring	2	-
352 162	O-ring	1	-
352 172	Screw	4	-
352 173	Screw	2	-
352 175	Nut	9	-
352 625	Screw	3	-
352 626	Washer	1	-
352 627	Protection well	1	0.1
TE201	Temperature sensor, lubricating oil temperature	1	-

Edition: B

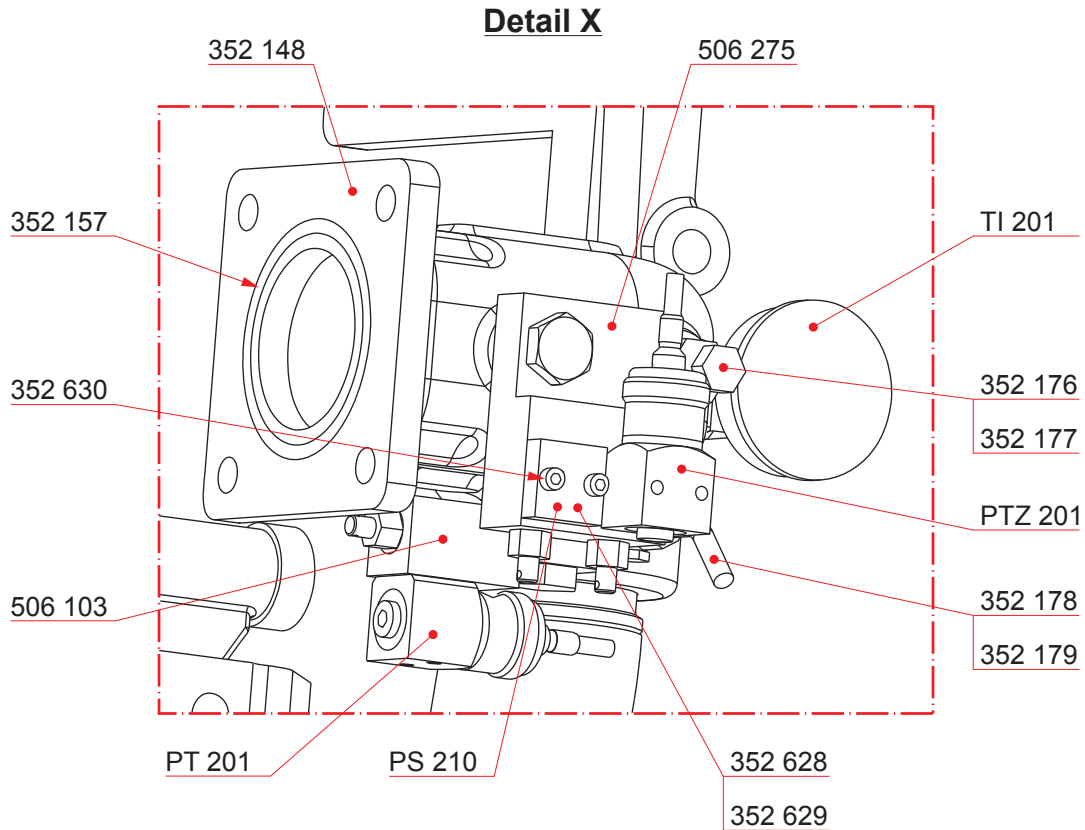
Page: 2(4)

Updated: 21.03.2011

Lubricating oil pipes at free end

Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 149	Pipe	1	-
352 155	Non-return valve	1	0.5
352 157	O-ring	2	-
352 161	O-ring	1	-
352 165	Spring pin	1	-
352 166	Washer	2	-
352 169	Screw	2	-
352 170	Screw	4	-
352 171	Screw	4	0.1
352 175	Nut	9	-
352 232	Adapter	1	-
387 031	Glue compound	1	-
506 103	Pressure gauge valve	2	0.3
PT241	Pressure transducer, lube oil	1	-

Lubricating oil pipes at free end



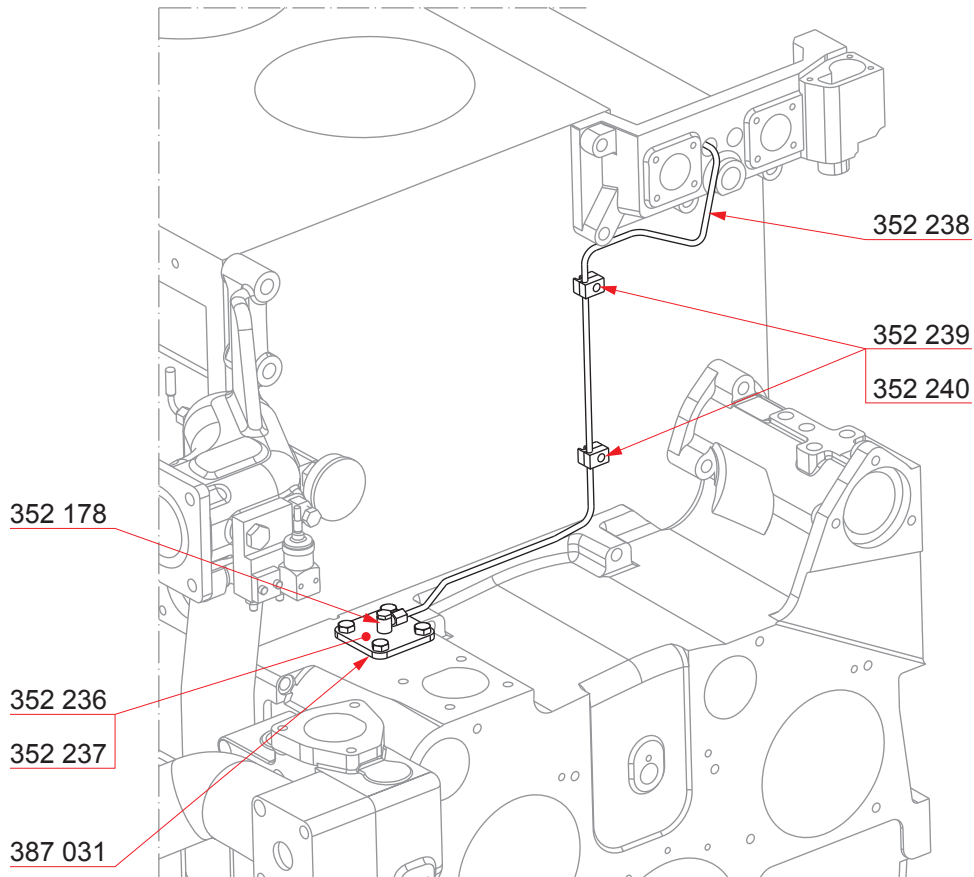
Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 148	Pipe	1	10.5
352 157	O-ring	2	-
352 176	Spindle	1	-
352 177	Nut	1	-
352 178	Pipe union	2	-
352 179	Pipe	1	-
352 628	O-ring	1	-
352 629	End piece	2	-
352 630	Screw	2	-
506 103	Pressure gauge valve	2	0.3
506 275	Pressure gauge valve	1	2.0
PS210	Pressure switch, start of lube oil stand by pump (*)	1	-
PT201	Pressure transducer, lube oil	1	-
PTZ201	Pressure transducer, lube oil press. engine inlet	1	-
TI201	Thermometer for lubricating oil, before engine (1)	1	-

NOTE! (*) Optional.

NOTE! (1) Depending on installation.

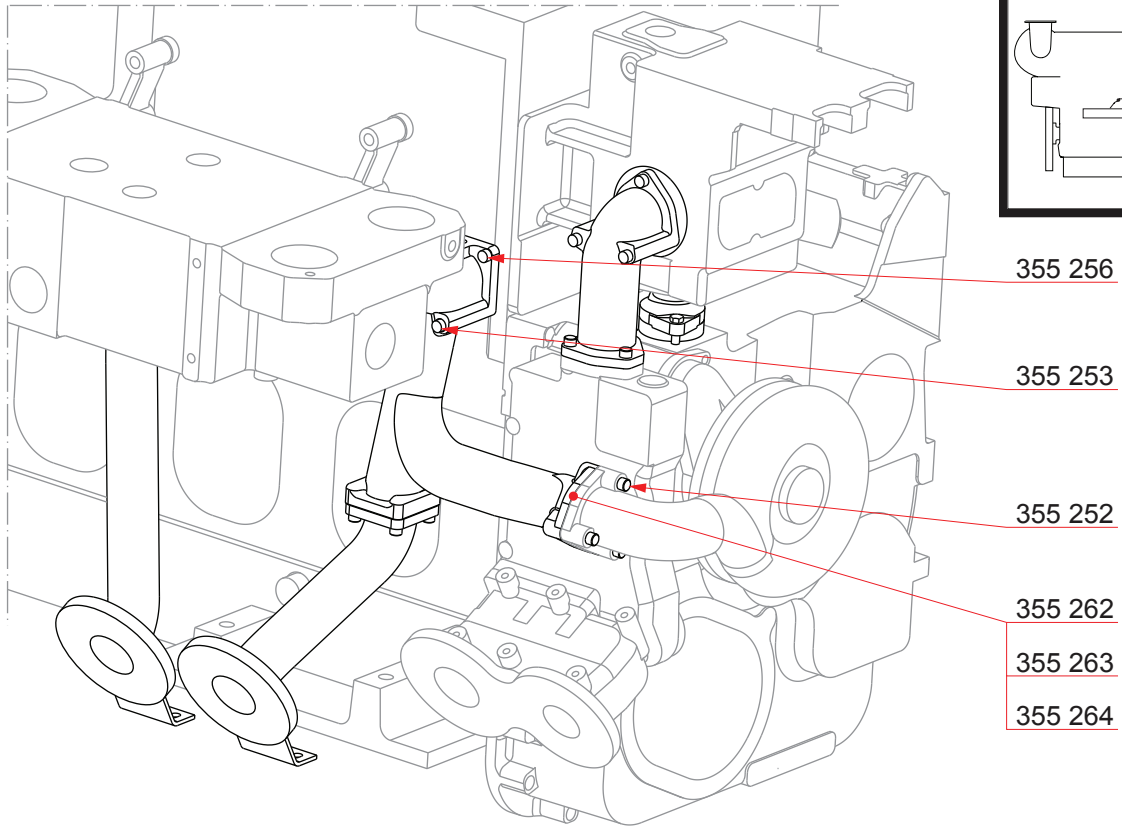
Edition: B
 Page: 4(4)
 Updated: 21.03.2011

Lubricating oil pipes at free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
352 178	Pipe union	2	-
352 236	Flange	1	0.3
352 237	Screw	4	-
352 238	Pipe	1	0.1
352 239	Pipe clamp	4	-
352 240	Screw	2	-
387 031	Glue compound	1	-

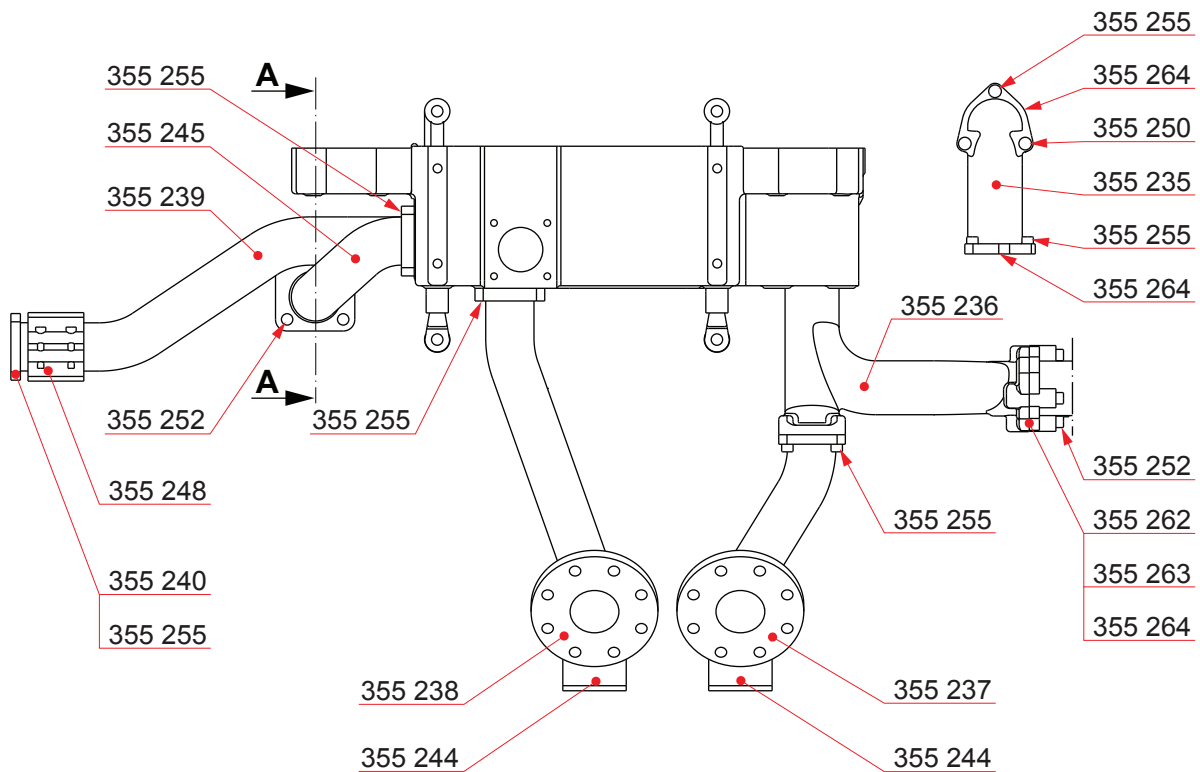
Water pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 236	Bend	1	-
355 248	Flexible coupling	1	0.8
355 250	Screw	2	0.1
355 252	Screw	7	-
355 253	Screw	2	0.1
355 255	Screw	24	-
355 256	Screw	6	-
355 262	Non-return valve	1	0.5
355 263	Spring pin	1	-
355 264	O-ring	4	-

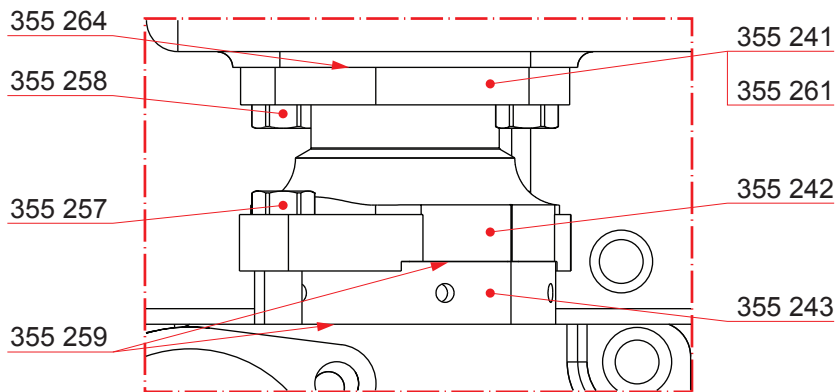
Edition: J
 Page: 2(3)
 Updated: 25.11.2009

Water pipes

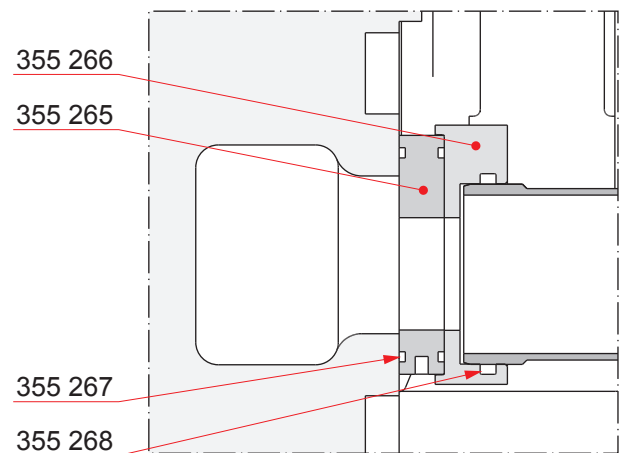
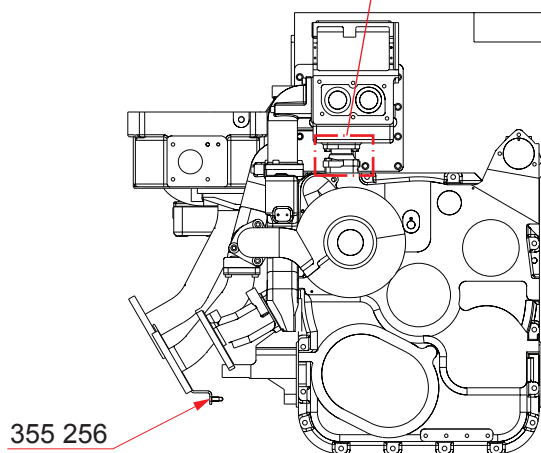


Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 235	Bend	1	5.2
355 236	Bend	1	-
355 237	Pipe	1	-
355 238	Pipe	1	-
355 239	Pipe	1	-
355 240	Pipe	1	-
355 244	Bracket	2	0.6
355 245	Bend	1	-
355 248	Flexible coupling	1	0.8
355 250	Screw	2	0.1
355 252	Screw	7	-
355 255	Screw	24	-
355 262	Non-return valve	1	0.5
355 263	Spring pin	1	-
355 264	O-ring	4	-

Water pipes



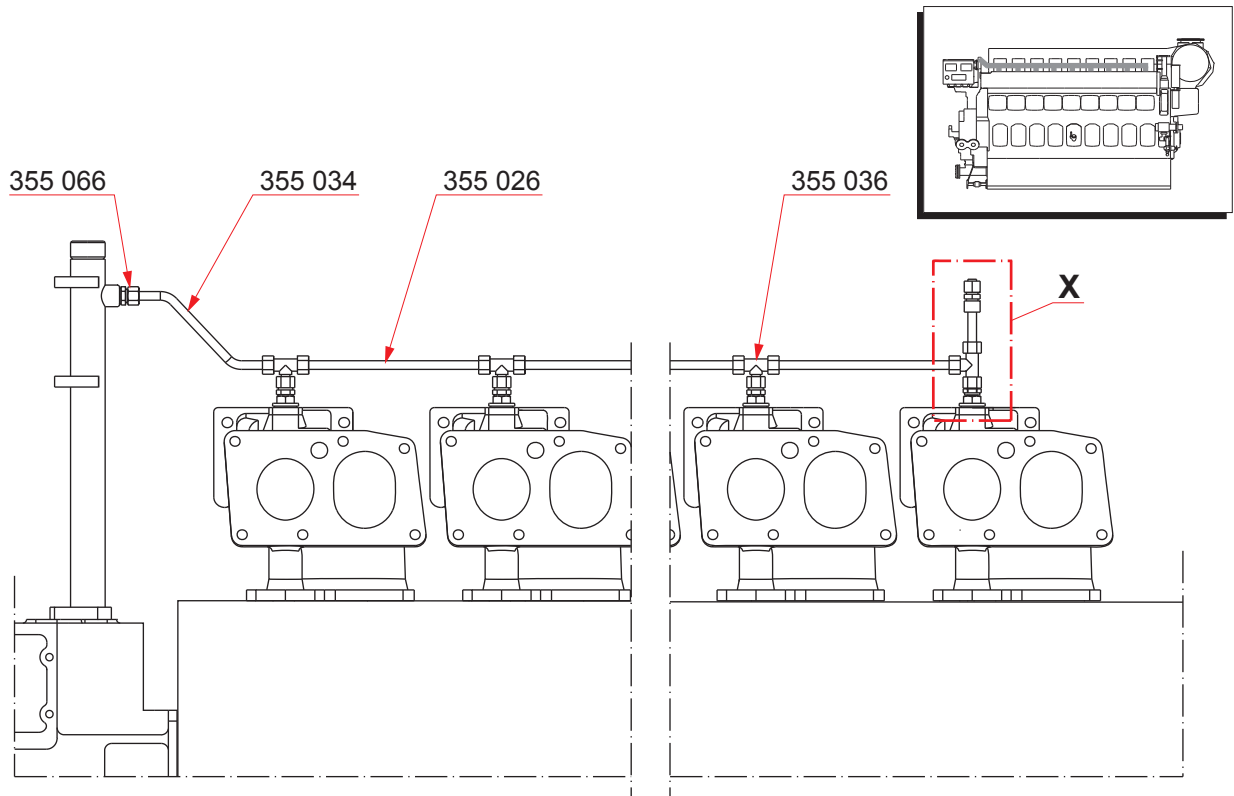
Section A-A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 241	Flange	1	0.5
355 242	Pipe	1	1.3
355 243	Throttle flange	1	0.8
355 256	Screw	6	-
355 257	Screw	2	-
355 258	Screw	2	-
355 259	O-ring	2	-
355 261	O-ring	1	-
355 264	O-ring	4	-
355 265	Throttle flange	1	-
355 266	Throttle flange	1	-
355 267	O-ring	2	-
355 268	O-ring	1	-

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Vent piping from multiducts



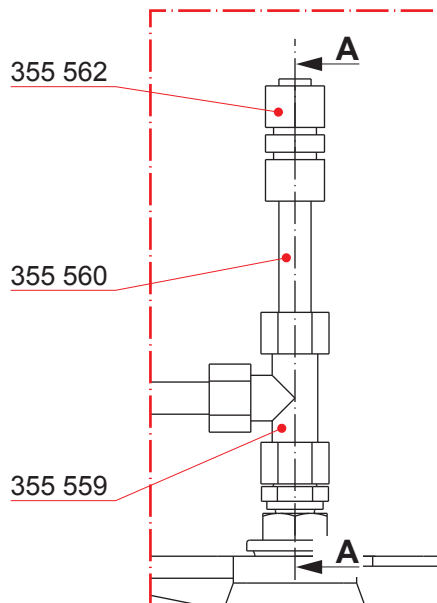
Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 026	Pipe	*	0.1
355 034	Pipe	1	-
355 036	Pipe union	*	0.2
355 066	Pipe union	1	-

NOTE! * See page 3.

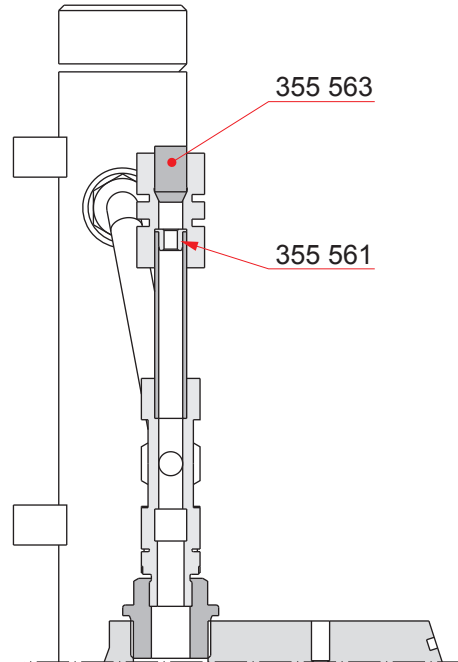
Edition: A
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 Updated: 24.09.2010

Vent piping from multiducts

Detail X



A - A



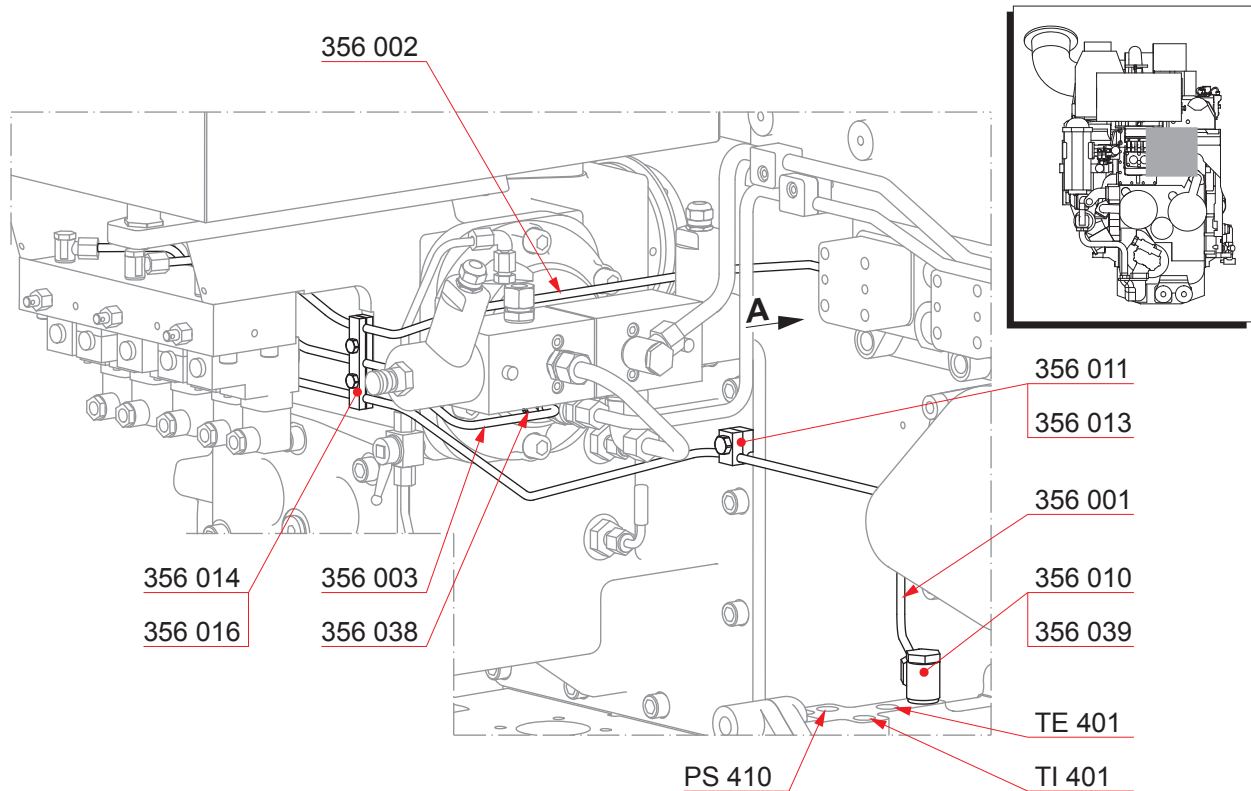
Part No.	Description	Qty [Pcs]	Wt. [Kg]
355 559	Pipe union	1	-
355 560	Pipe	1	-
355 561	Orifice	1	-
355 562	Pipe union	1	-
355 563	Plug	1	-

Vent piping from multiducts

Part No. and Description	Quantity in pieces		
	6L	8L	9L
355 026 Pipe	5	7	8
355 036 Pipe union	5	7	8

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Pipes for pressure sensors



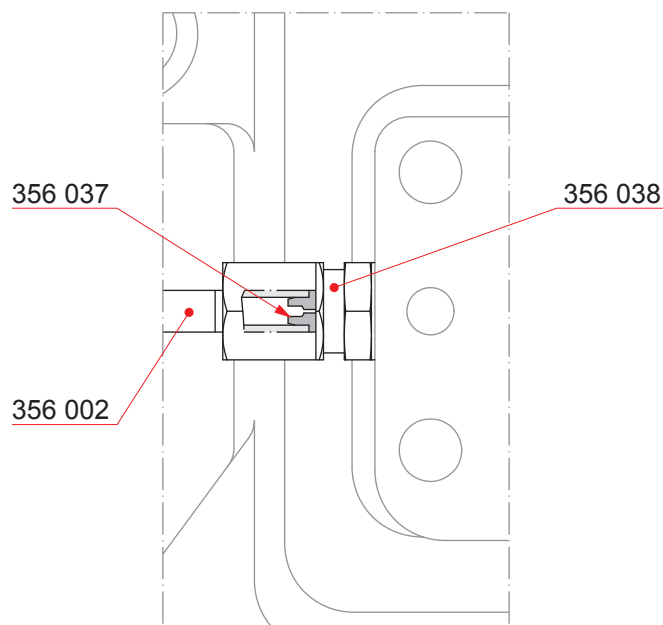
Part No.	Description	Qty [Pcs]	Wt. [Kg]
356 001	Pipe	1	-
356 002	Pipe	1	-
356 003	Pipe	1	-
356 010	Pipe union	1	0.2
356 011	Pipe clamp	2	-
356 013	Screw	1	-
356 014	Pipe clamp	2	-
356 016	Screw	2	-
356 038	Pipe union	2	-
356 039	Pipe union	1	-
PS410	Pressure switch, start HT-stand by pump (*)	1	-
TE401	Temperature sensor, HT water, before engine	1	-
TI401	Thermometer, HT water, before engine (*)	1	-

NOTE! (*) Optional.

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Updated: 01.10.2010

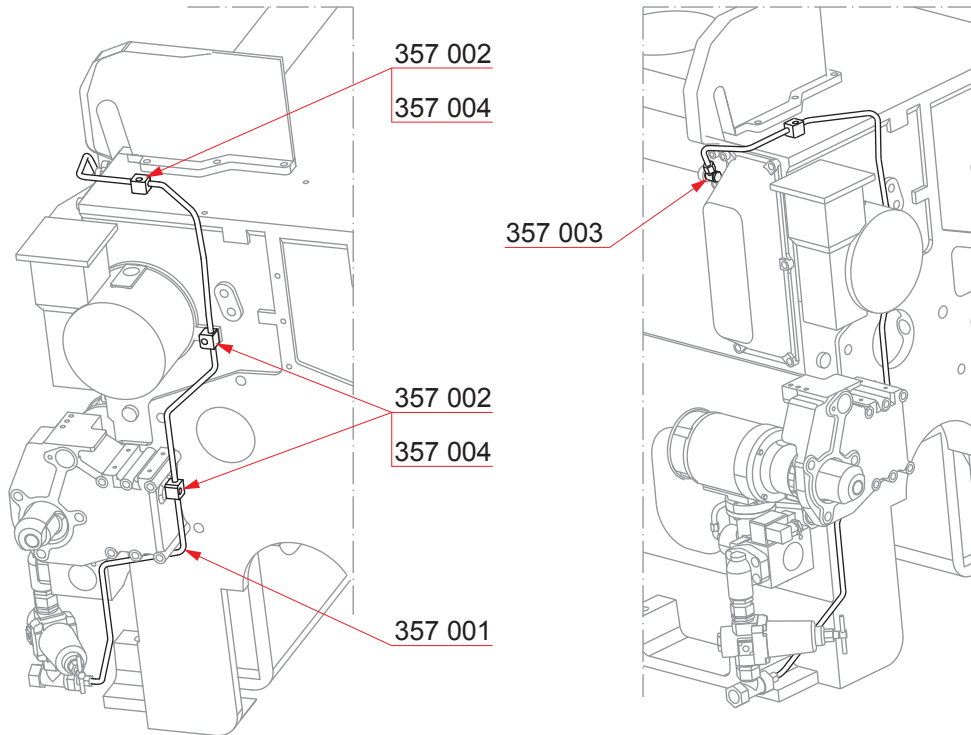
Pipes for pressure sensors

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
356 002	Pipe	1	-
356 037	Throttle ring	1	-
356 038	Pipe union	2	-

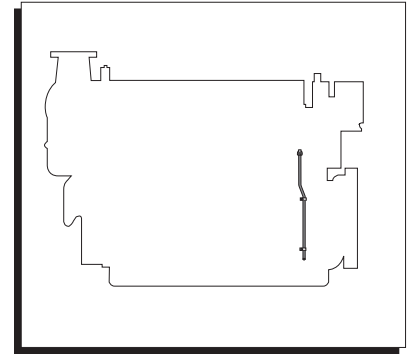
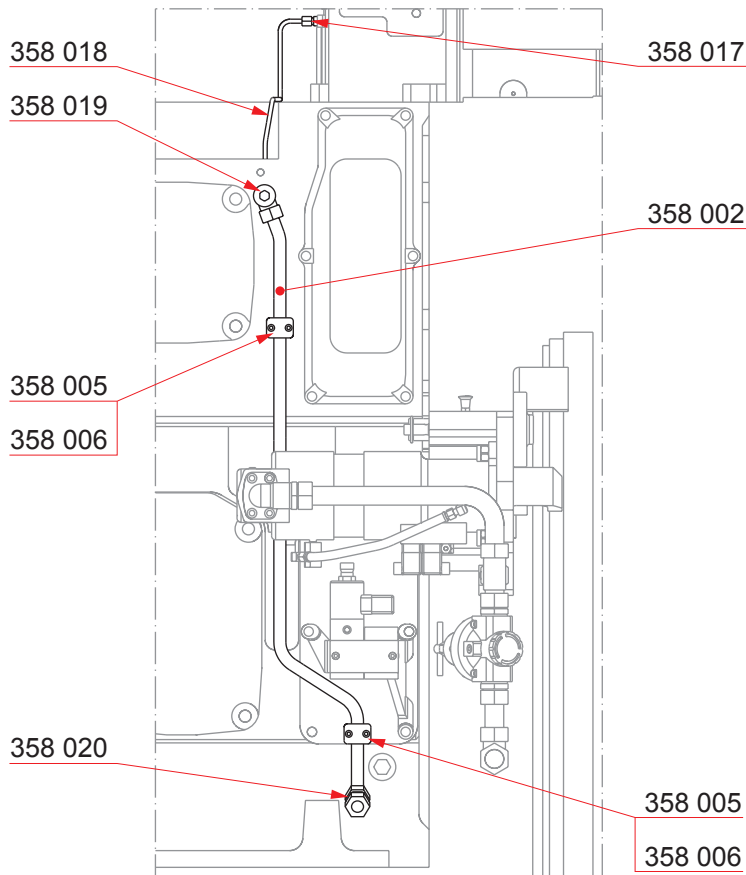
Air supply pipe for air tank



Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 001	Pipe	1	0.3
357 002	Pipe clamp	3	-
357 003	Union	1	-
357 004	Screw	3	-

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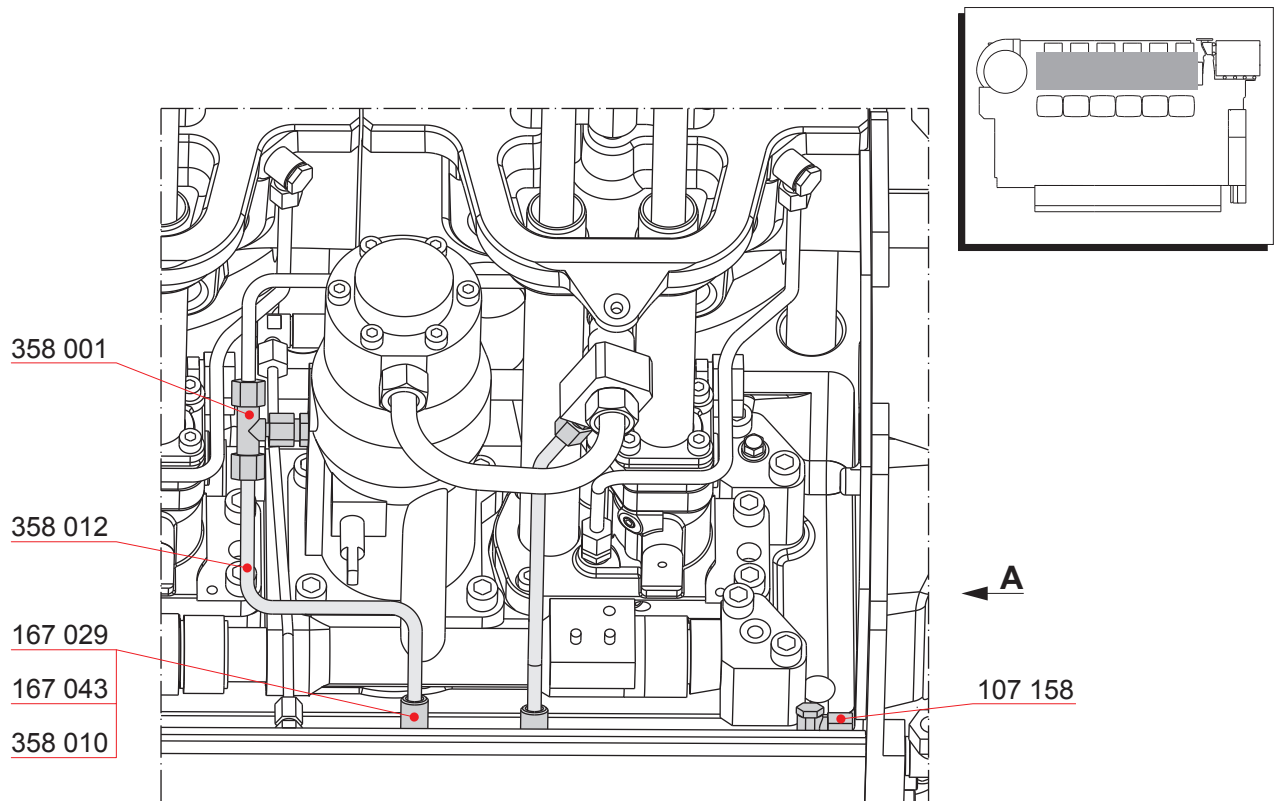
Leak oil pipe, dirty, flywheel end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
358 002	Leak oil pipe	1	0.6
358 005	Pipe clamp	2	-
358 006	Screw	4	-
358 017	Pipe union	1	-
358 018	Leak oil pipe	1	-
358 019	Pipe union	1	0.3
358 020	Pipe union	1	0.2

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Leak oil pipes



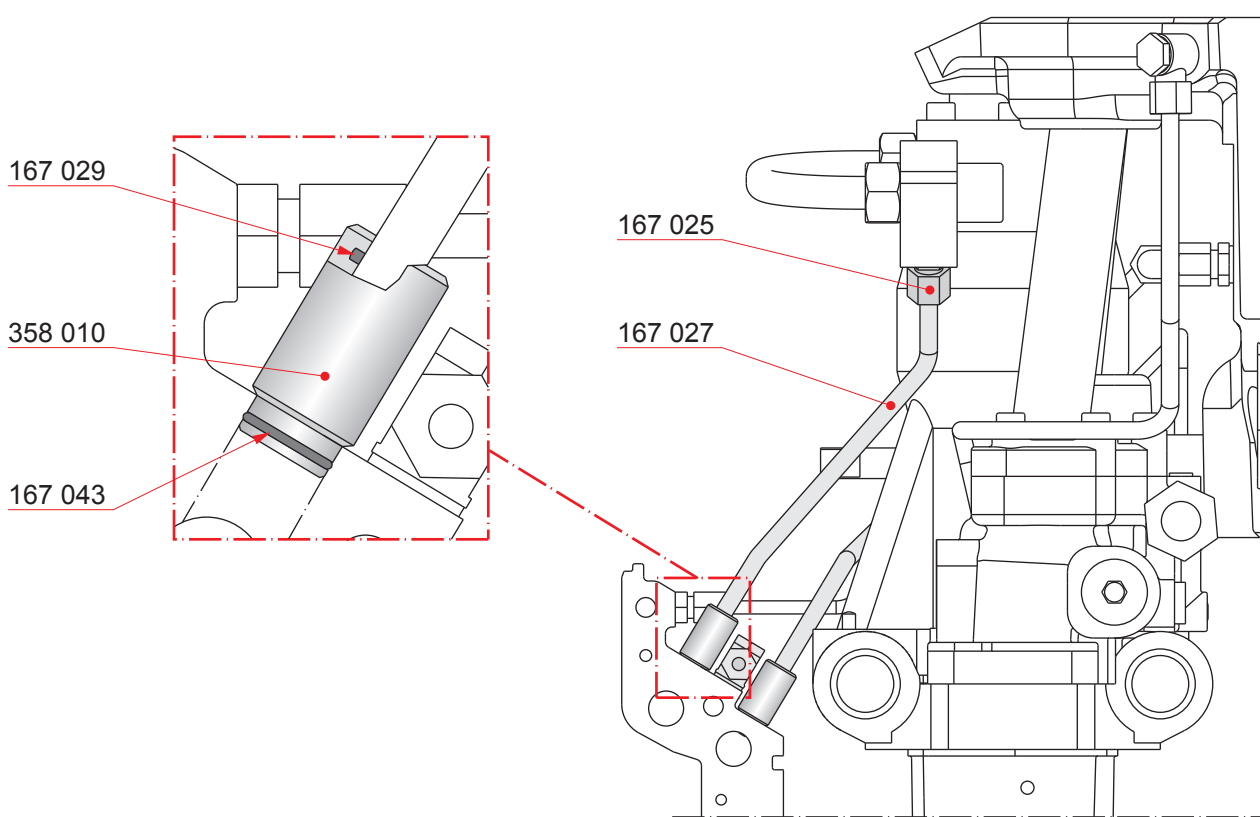
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 158	Pipe union	2	-
167 029	O-ring	*	-
167 043	O-ring	*	-
358 001	Pipe union	*	-
358 010	Connection piece	*	-
358 012	Leak oil pipe	*	-

NOTE! * See page 3.

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Leak oil pipes

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
167 025	Pipe union	*	-
167 027	Leak oil pipe	*	-
167 029	O-ring	*	-
167 043	O-ring	*	-
358 010	Connection piece	*	-

NOTE! * See page 3.

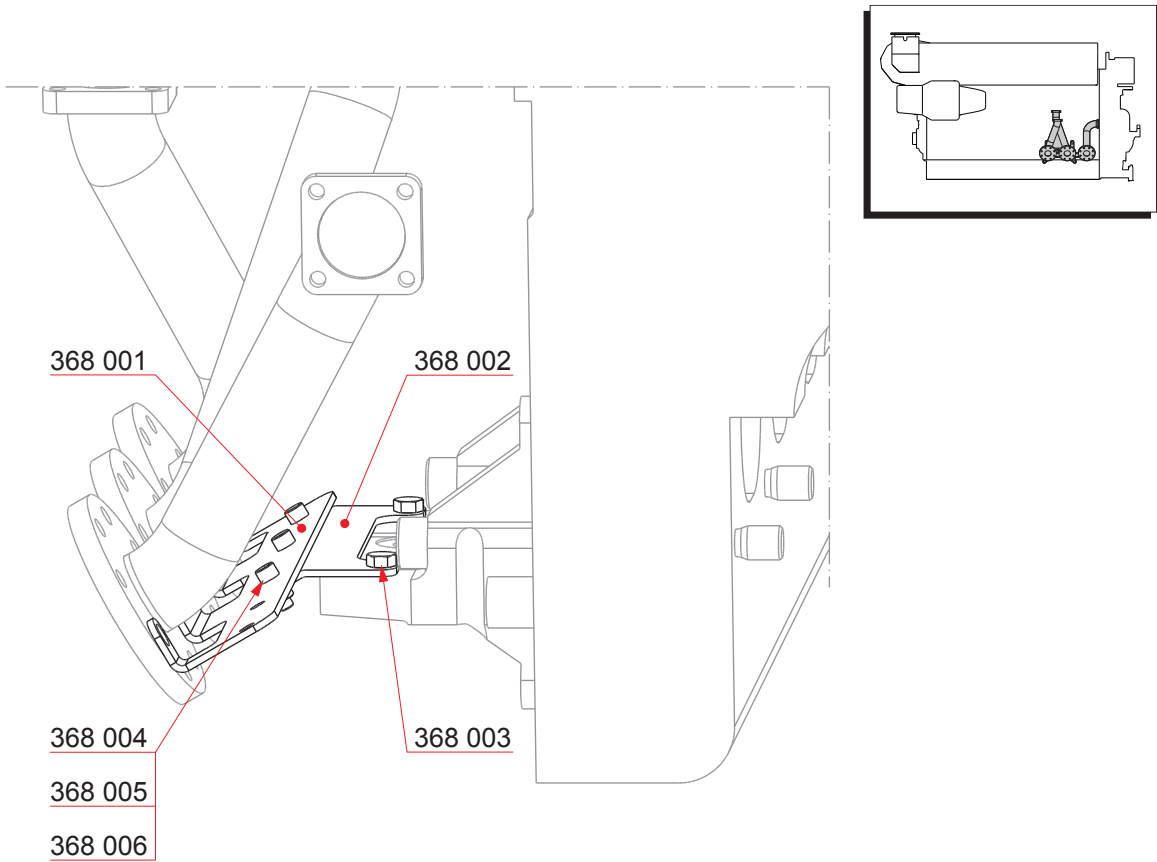
Leak oil pipes

Quantity according to number of cylinders

Part No.	Pieces			
	4L	6L	8L	9L
167 025	4	6	8	9
167 027	4	6	8	9
167 029	8	12	16	18
167 043	8	12	16	18
358 001	4	6	8	9
358 010	8	12	16	18
358 012	4	6	8	9

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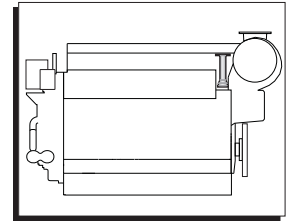
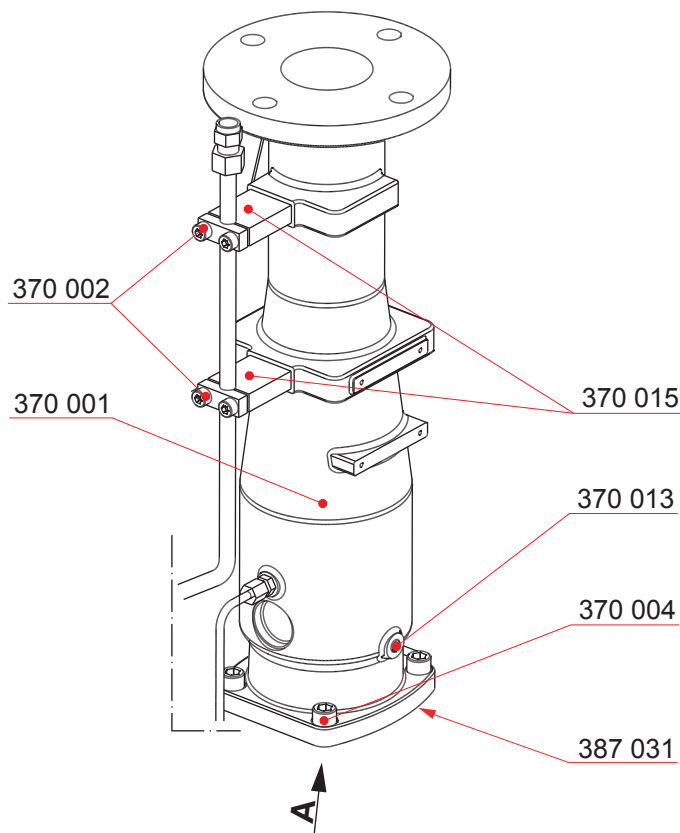
Bracket for water and oil pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
368 001	Bracket	1	-
368 002	Bracket	1	-
368 003	Screw	2	-
368 004	Screw	3	-
368 005	Washer	3	-
368 006	Nut	3	-

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Vent pipe assembly

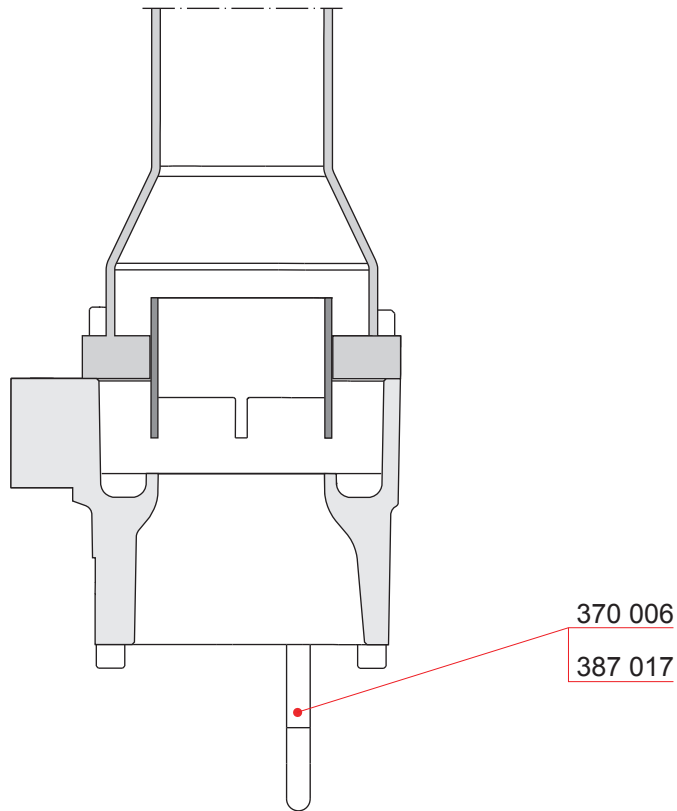


Part No.	Description	Qty [Pcs]	Wt. [Kg]
370 001	Ventilation pipe	1	-
370 002	Screw	4	-
370 004	Screw	4	-
370 013	Plug	1	-
370 015	Clamp	2	-
387 031	Glue compound	1	-

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Updated: 30.10.2006

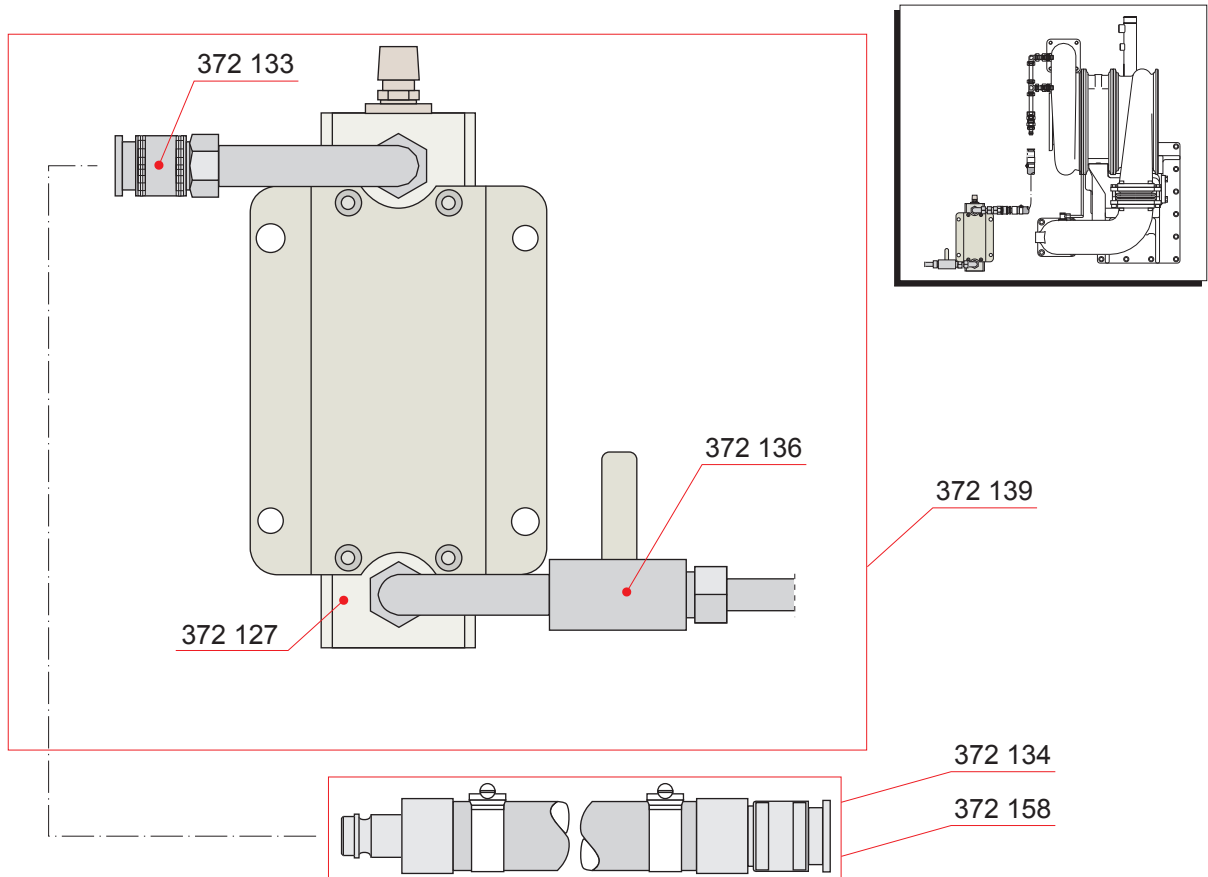
Vent pipe assembly

View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
370 006	Oil lock	1	-
387 017	Glue compound	1	-

Washing device for turbine with flowmeter



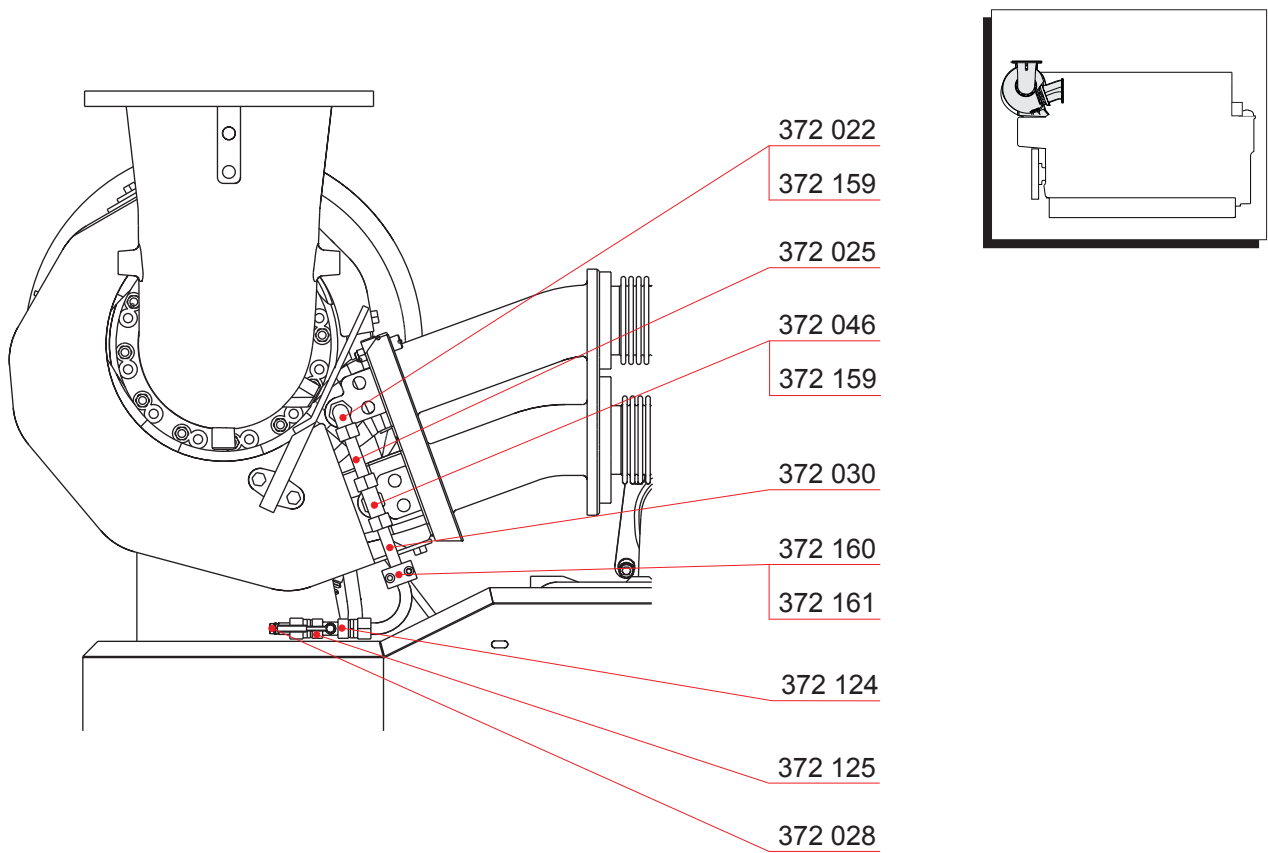
Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 139	Dosing unit	1	3.1
372 127	Flow meter	1	0.7
372 133	Quick coupling	1	0.1
372 136	Ball valve	1	0.1
372 134	Hose (1)	1	3.0
372 158	Hose (2)	1	-

NOTE! (1) L= 10m

NOTE! (2) L= 20m

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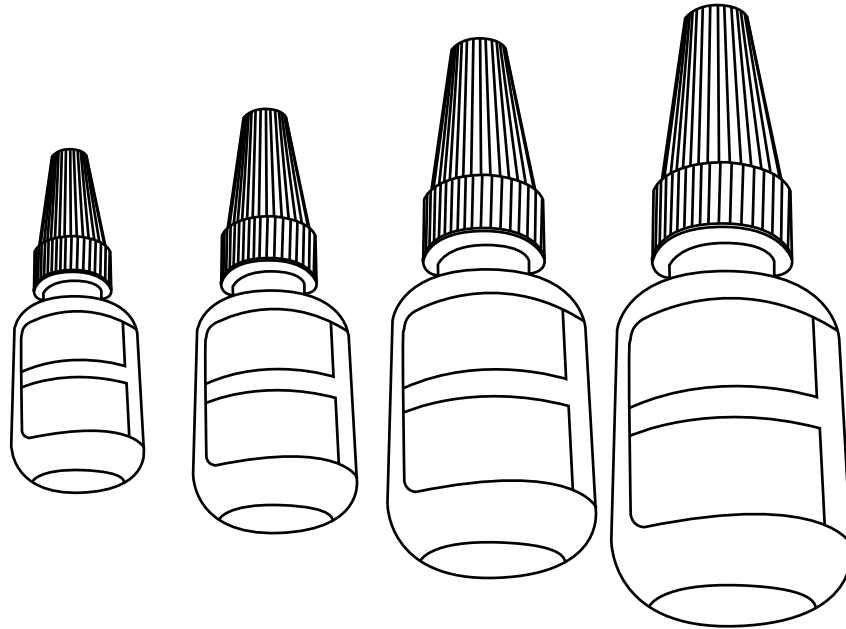
Cleaning device piping for turbine



Part No.	Description	Qty [Pcs]	Wt. [Kg]
372 022	Pipe union	1	-
372 025	Pipe	1	-
372 028	Adapter	1	-
372 030	Pipe	1	-
372 046	Pipe union	1	0.2
372 124	Ball valve	1	0.2
372 125	Pipe union	2	0.1
372 159	Pipe union	2	-
372 160	Pipe clamp	1	-
372 161	Screw	2	-

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Chemicals

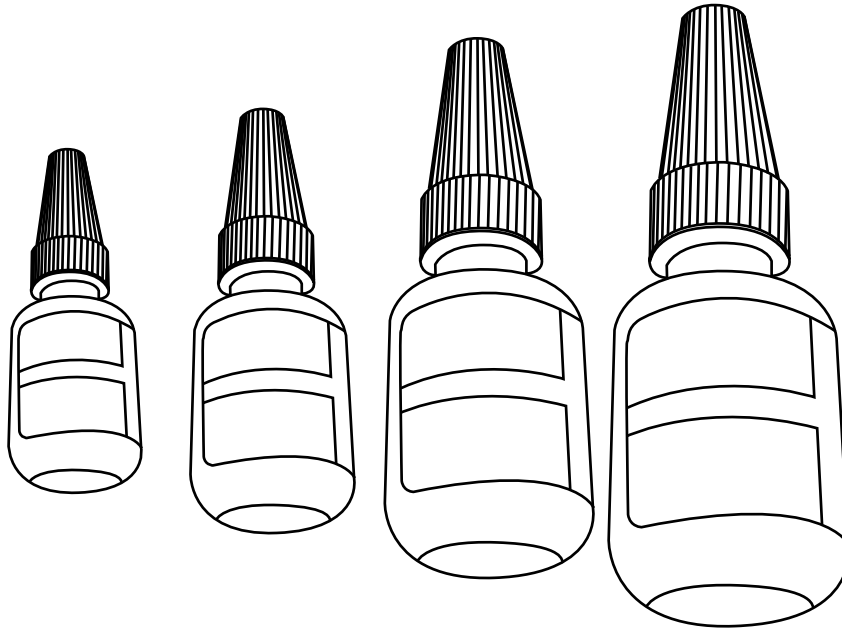


Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 001	Glue compound	1	-
387 002	Glue compound	1	-
387 003	Glue compound	1	-
387 004	Glue compound	1	-
387 005	Glue compound	1	-
387 006	Glue compound	1	-
387 007	Glue compound	1	-
387 008	Glue compound	1	-
387 009	Glue compound	1	-
387 010	Glue compound	1	-
387 011	Glue compound	1	-
387 012	Glue compound	1	-
387 013	Glue compound	1	-
387 014	Glue compound	1	-
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	-

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

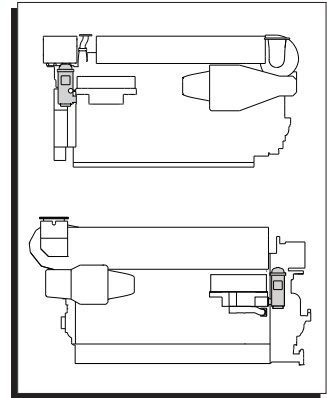
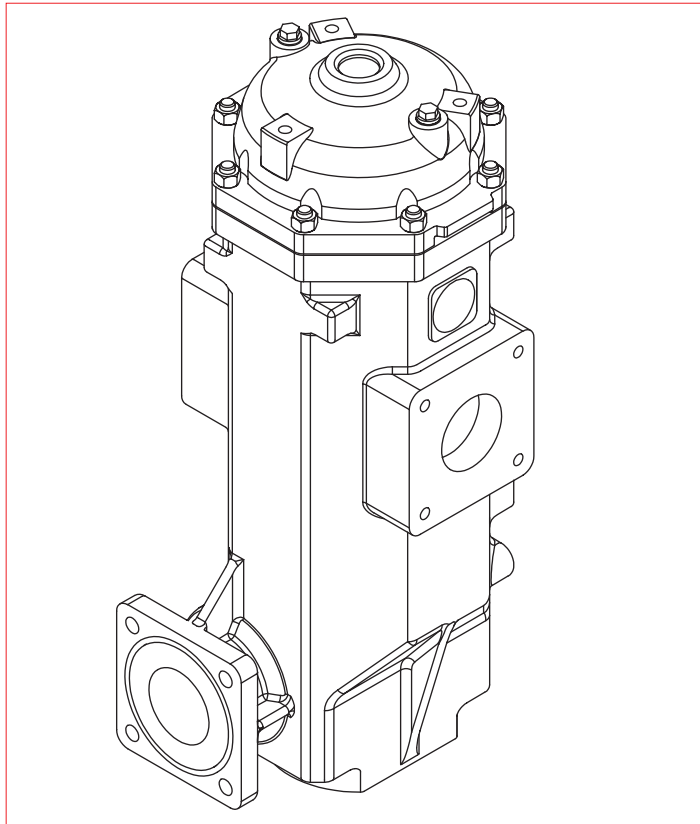
Edition: N
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Updated: 30.09.2010

Chemicals



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
387 021	Contact lubrication	1	-	387 046	Glue compound	1	-
387 022	Contact lubrication	1	-	387 048	Corrosion protection	1	-
387 023	Contact lubrication	1	-	387 049	Cleaner	1	-
387 024	Glue compound	1	-	387 050	Glue compound	1	-
387 025	Glue compound	1	-	387 051	Glue compound	1	-
387 026	Glue compound	1	-	387 052	Activator	1	-
387 027	Glue compound	1	-	387 053	Grease	1	-
387 029	Lubricant	1	-	387 054	Contact lubrication	1	-
387 030	Glue compound	1	-	387 055	Lubricant	1	-
387 031	Glue compound	1	-	387 056	Grease	1	-
387 032	Glue compound	1	-	387 057	Contact lubrication	1	-
387 033	Glue compound	1	-	387 058	Contact lubrication	1	-
387 034	Glue compound	1	-	387 059	Glue compound	1	-
387 035	Glue compound	1	-	387 060	Sealant	1	-
387 036	Glue compound	1	-	387 061	Glue compound	1	-
387 037	Glue compound	1	-				
387 038	Contact lubrication	1	-	NOTE!	When ordering chemicals, please use		
387 039	Contact lubrication	1	-		the spare part numbers found in the		
387 040	Glue compound	1	-		specific sections.		
387 041	Contact lubrication	1	-				
387 042	Glue compound	1	-				
387 043	Grease	1	-				
387 044	Glue compound	1	-				

Lubricating oil filter



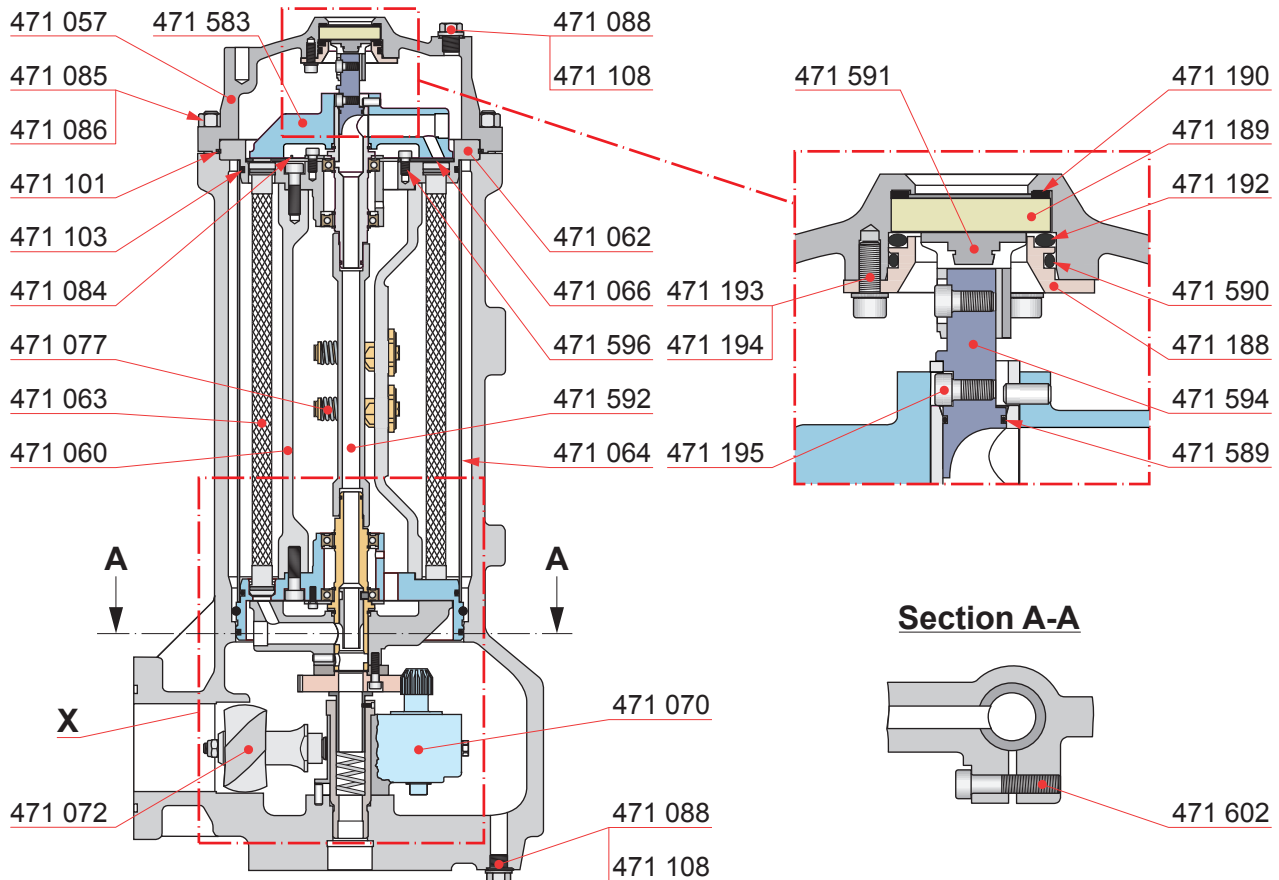
471 056

Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 056	Lubricating oil filter	1	56.0

Edition: B

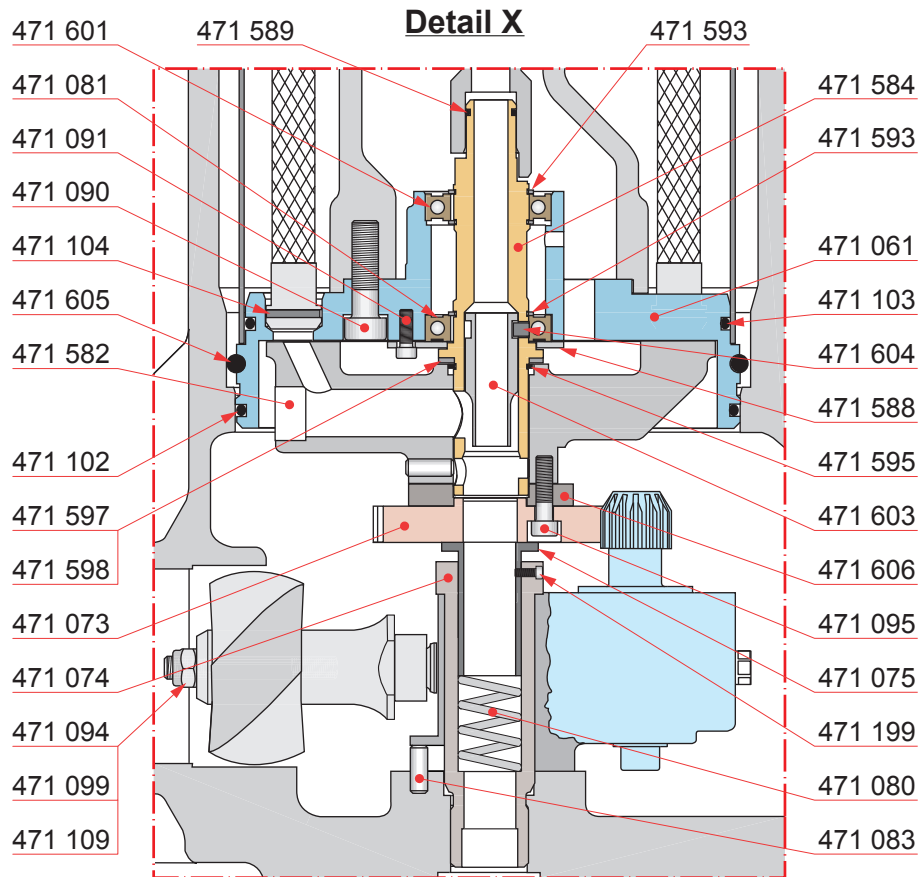
Page: 2(7)

Updated: 01.07.2009

Lubricating oil filter

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 057	Cover	1	-	471 583	Flushing arm	1	0.3
471 060	Joining tube	1	2.3	471 589	O-ring	3	-
471 062	Plate	1	3.1	471 590	O-ring	1	-
471 063	Filter element	19	-	471 591	Safety device	1	1.0
471 064	Filter	1	1.2	471 592	Coupling pipe	1	0.5
471 066	Plate	1	1.0	471 594	Plug	1	-
471 070	Gearbox housing	1	-	471 596	Screw	3	-
471 072	Turbine wing	1	-	471 602	Screw	4	-
471 077	Valve	4	-				
471 084	Pin	1	-				
471 085	Screw	8	-				
471 086	Nut	8	-				
471 088	Screw	3	-				
471 101	O-ring	1	-				
471 103	O-ring	2	-				
471 108	Gasket	3	-				
471 188	Tension ring	1	-				
471 189	Inspection glas	1	-				
471 190	Gasket	1	-				
471 192	O-ring	1	-				
471 193	Screw	3	-				
471 194	Washer	3	-				
471 195	Screw	2	-				

Lubricating oil filter

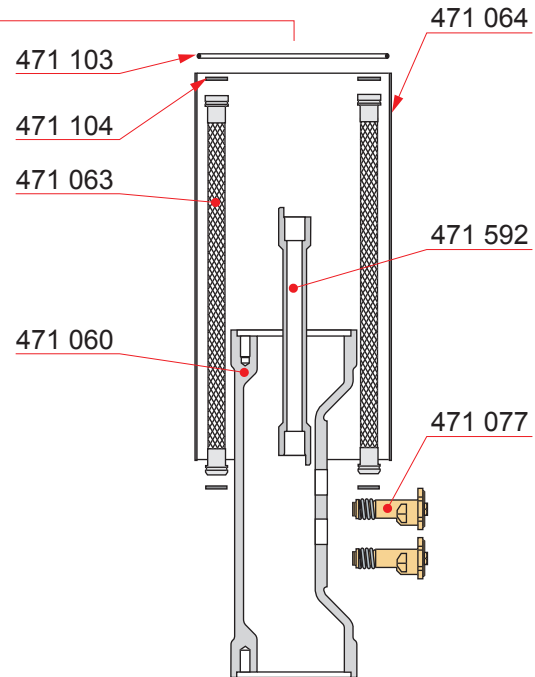
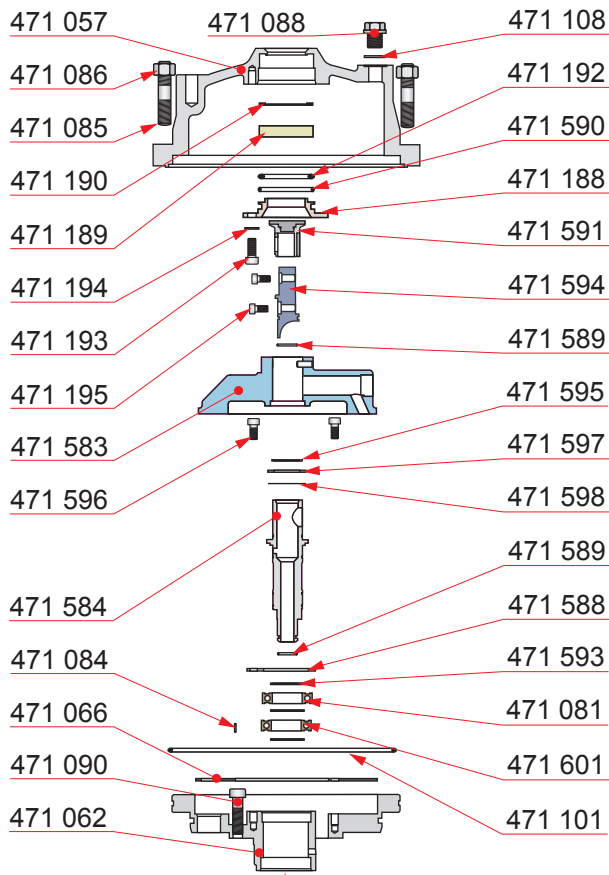


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 061	Plate	1	3.1	471 597	Washer	2	-
471 073	Gear wheel	1	0.4	471 598	Support disc	2	-
471 074	Bush	1	0.3	471 601	Ball bearing	2	0.3
471 075	Bush	1	0.1	471 603	Guide	1	-
471 080	Spring	1	-	471 604	Screw	1	-
471 081	Ball bearing	2	0.3	471 605	Guide ring	1	-
471 083	Pin	1	-	471 606	Coupling	1	-
471 090	Screw	6	-				
471 091	Screw	6	-				
471 094	Screw	1	-				
471 095	Screw	2	-				
471 099	Washer	1	-				
471 102	O-ring	1	-				
471 103	O-ring	2	-				
471 104	O-ring	38	-				
471 109	Nut	1	-				
471 199	Screw	1	-				
471 582	Flushing arm	1	0.3				
471 584	Flushing canal shaft	2	0.3				
471 588	Mounting bracket	2	-				
471 589	O-ring	3	-				
471 593	Locking ring	6	-				
471 595	O-ring	2	-				

Edition: B

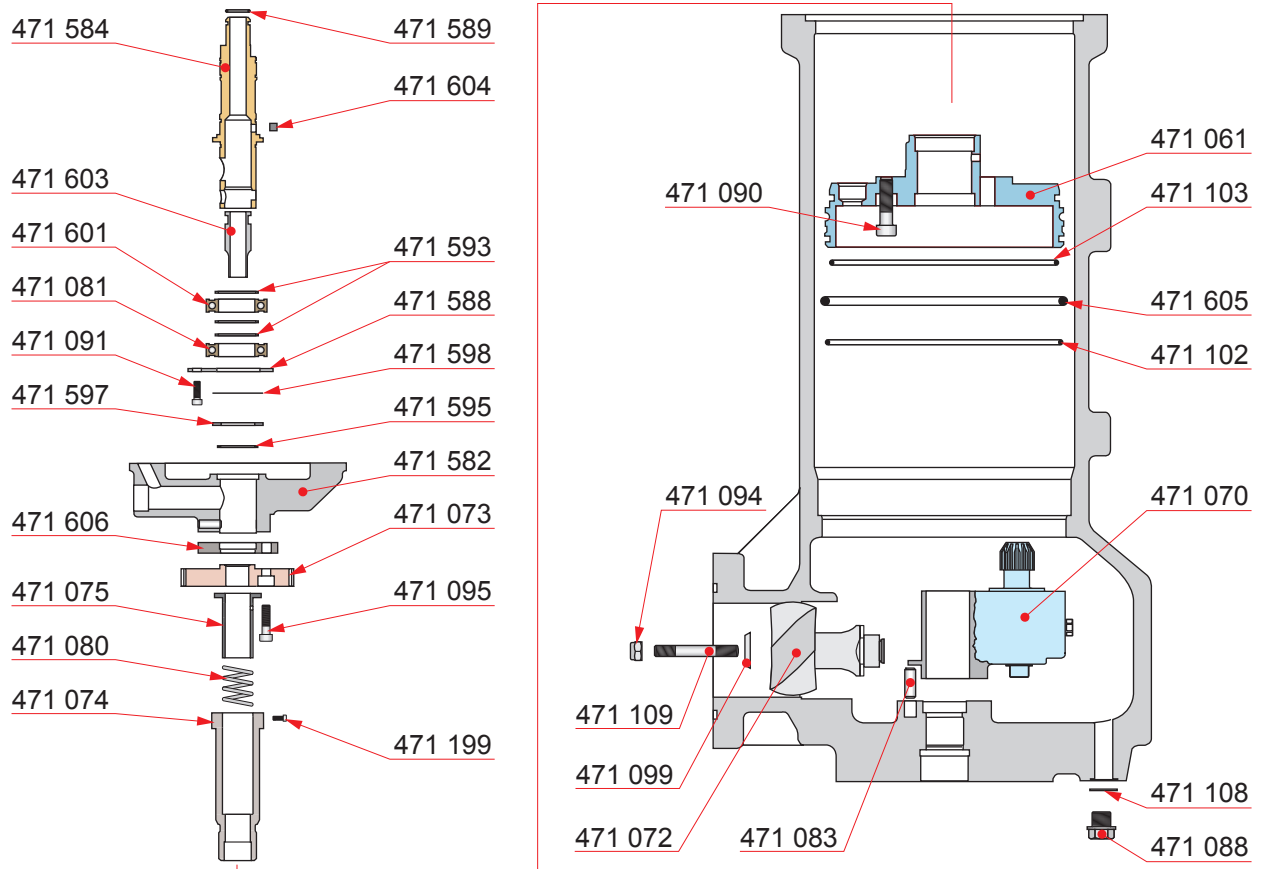
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Updated: 01.07.2009

Lubricating oil filter

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 057	Cover	1	-	471 195	Screw	2	-
471 060	Joining tube	1	2.3	471 583	Flushing arm	1	0.3
471 062	Plate	1	3.1	471 584	Flushing canal shaft	2	0.3
471 063	Filter element	19	-	471 588	Mounting bracket	2	-
471 064	Filter	1	1.2	471 589	O-ring	3	-
471 066	Plate	1	1.0	471 590	O-ring	1	-
471 077	Valve	4	-	471 591	Safety device	1	1.0
471 081	Ball bearing	2	0.3	471 592	Coupling pipe	1	0.5
471 084	Pin	1	-	471 593	Locking ring	6	-
471 085	Screw	8	-	471 594	Plug	1	-
471 086	Nut	8	-	471 595	O-ring	2	-
471 088	Screw	3	-	471 596	Screw	3	-
471 090	Screw	6	-	471 597	Washer	2	-
471 101	O-ring	1	-	471 598	Support disc	2	-
471 103	O-ring	2	-	471 601	Ball bearing	2	0.3
471 104	O-ring	38	-				
471 108	Gasket	3	-				
471 188	Tension ring	1	-				
471 189	Inspection glass	1	-				
471 190	Gasket	1	-				
471 192	O-ring	1	-				
471 193	Screw	3	-				
471 194	Washer	3	-				

Lubricating oil filter

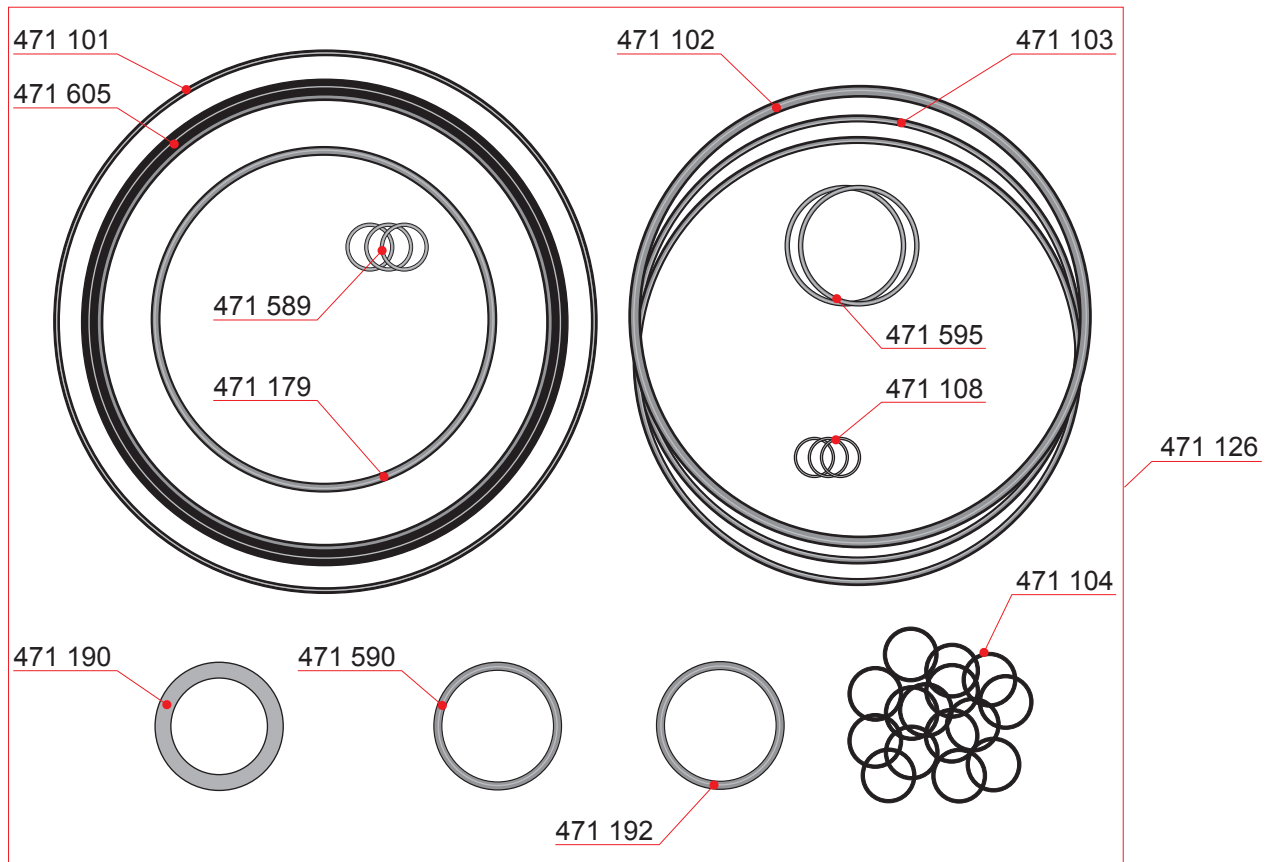


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 061	Plate	1	3.1	471 589	O-ring	3	-
471 070	Gearbox housing	1	-	471 593	Locking ring	6	-
471 072	Turbine wing	1	-	471 595	O-ring	2	-
471 073	Gear wheel	1	0.4	471 597	Washer	2	-
471 074	Bush	1	0.3	471 598	Support disc	2	-
471 075	Bush	1	0.1	471 601	Ball bearing	2	0.3
471 080	Spring	1	-	471 603	Guide	1	-
471 081	Ball bearing	2	0.3	471 604	Screw	1	-
471 083	Pin	1	-	471 605	Guide ring	1	-
471 088	Screw	3	-	471 606	Coupling	1	-
471 090	Screw	6	-				
471 091	Screw	6	-				
471 094	Screw	1	-				
471 095	Screw	2	-				
471 099	Washer	1	-				
471 102	O-ring	1	-				
471 103	O-ring	2	-				
471 108	Gasket	3	-				
471 109	Nut	1	-				
471 199	Screw	1	-				
471 582	Flushing arm	1	0.3				
471 584	Flushing canal shaft	2	0.3				
471 588	Mounting bracket	2	-				

Edition: B

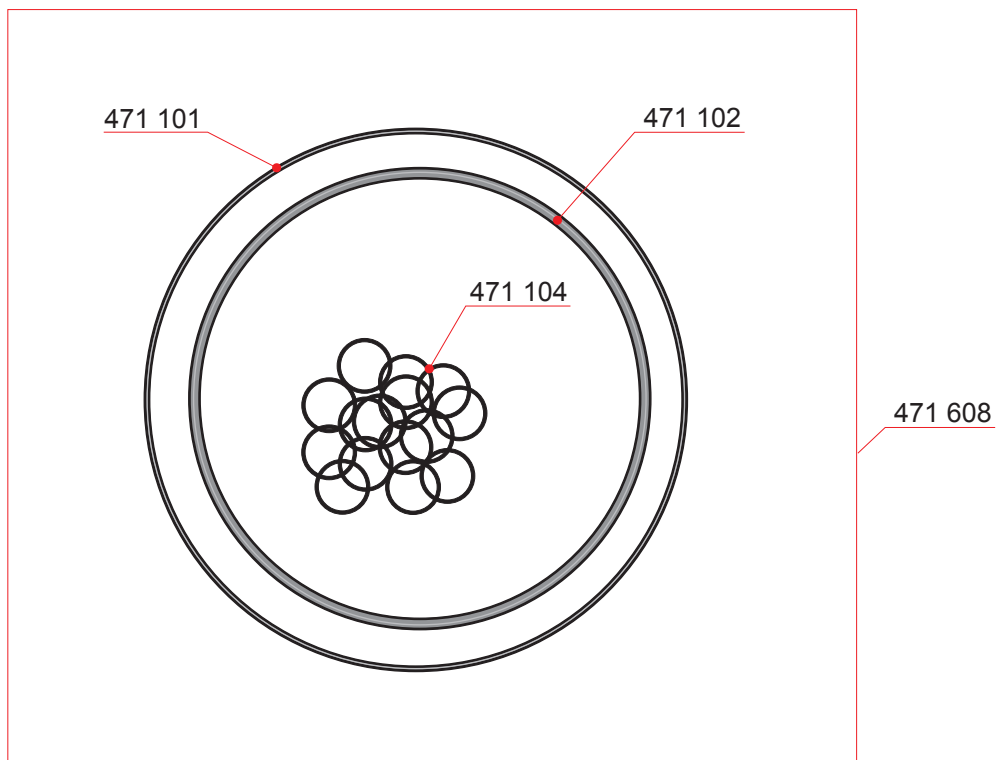
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Updated: 01.07.2009

Lubricating oil filter

Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 126	Sealing set	1	0.3
471 101	O-ring	1	-
471 102	O-ring	1	-
471 103	O-ring	2	-
471 104	O-ring	38	-
471 108	Gasket	3	-
471 179	O-ring	1	-
471 190	Gasket	1	-
471 192	O-ring	1	-
471 589	O-ring	3	-
471 590	O-ring	1	-
471 595	O-ring	2	-
471 605	Guide ring	1	-

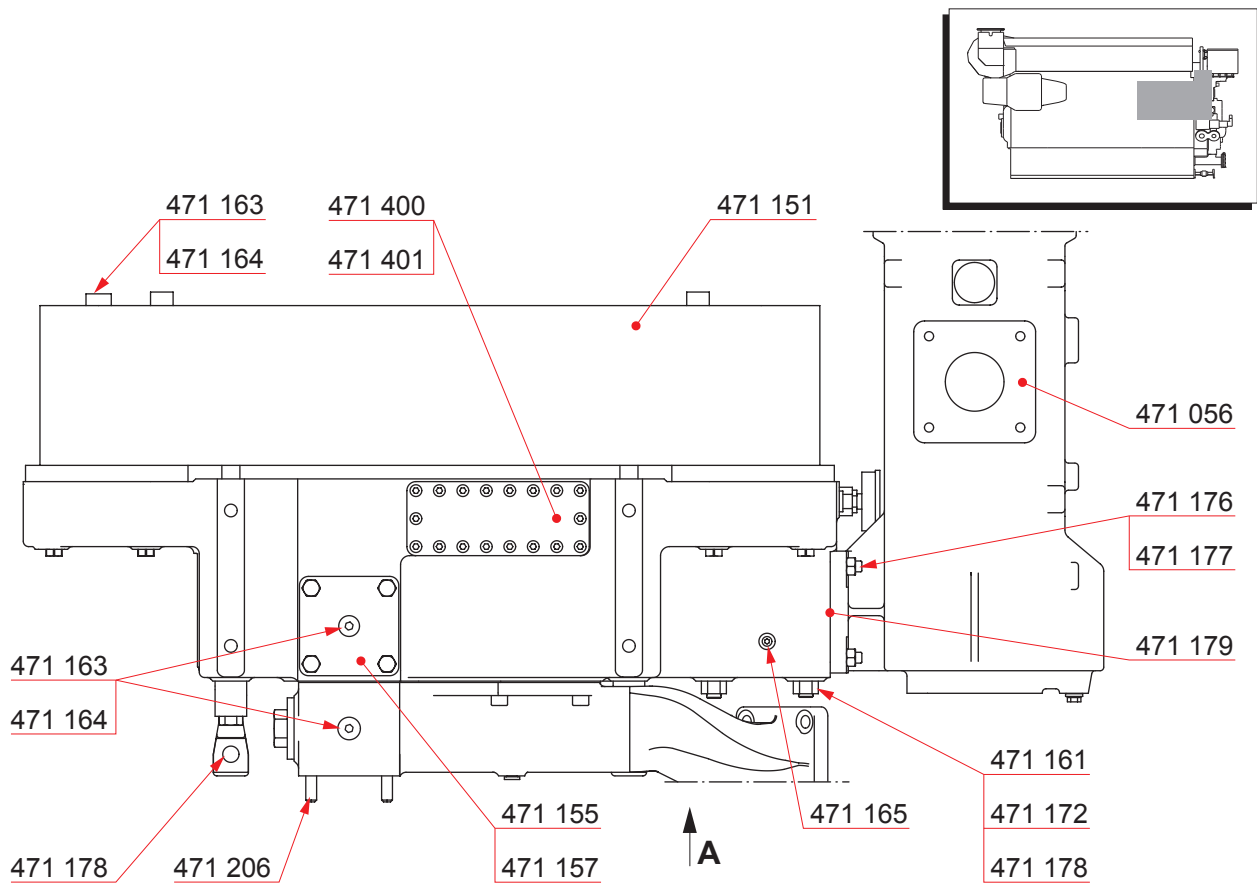
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 608	Sealing set	1	-
471 101	O-ring	1	-
471 102	O-ring	1	-
471 104	O-ring	38	-

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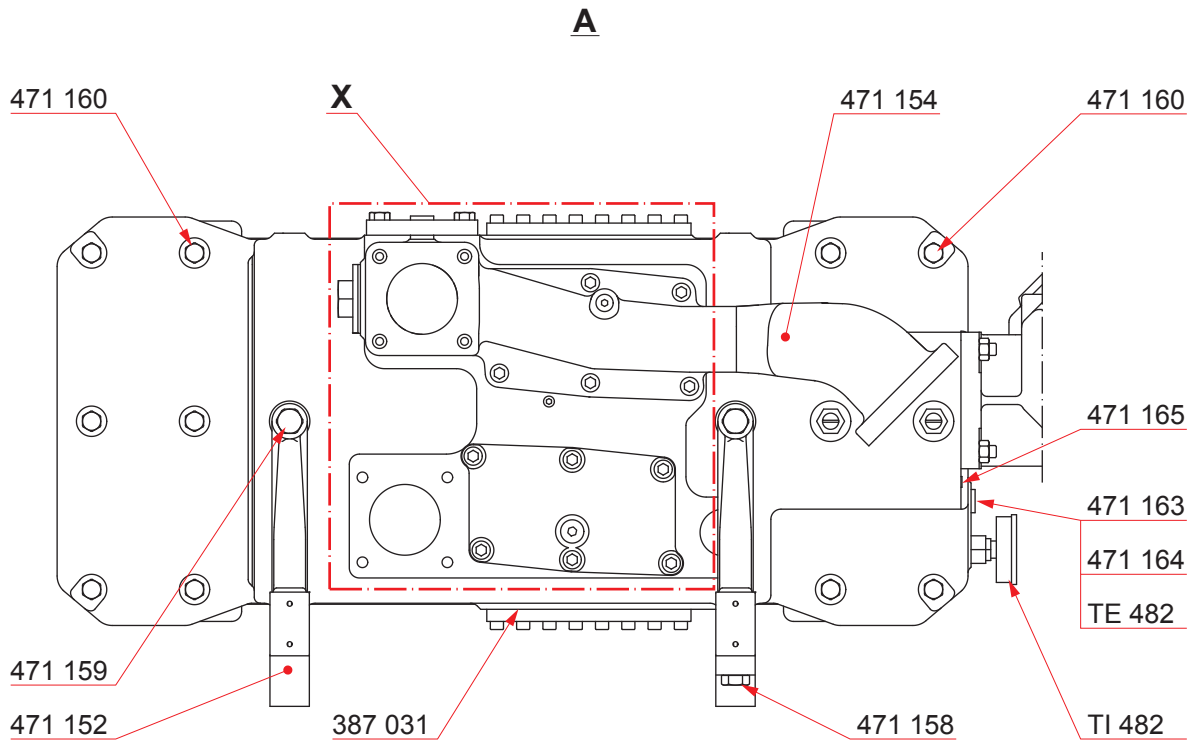
Lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 056	Lubricating oil filter	1	56.0
471 151	Plate heat exchanger	1	-
471 155	Flange	1	-
471 157	Screw	4	-
471 161	Screw	2	0.2
471 163	Plug	5	-
471 164	Sealing ring	5	-
471 165	Plug	3	-
471 172	O-ring	2	-
471 176	Screw	4	-
471 177	Nut	4	-
471 178	Nut	6	-
471 179	O-ring	1	-
471 206	Screw	4	0.1
471 400	Screw	36	-
471 401	Flange	2	0.4

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 Updated: 15.12.2011

Lube oil module

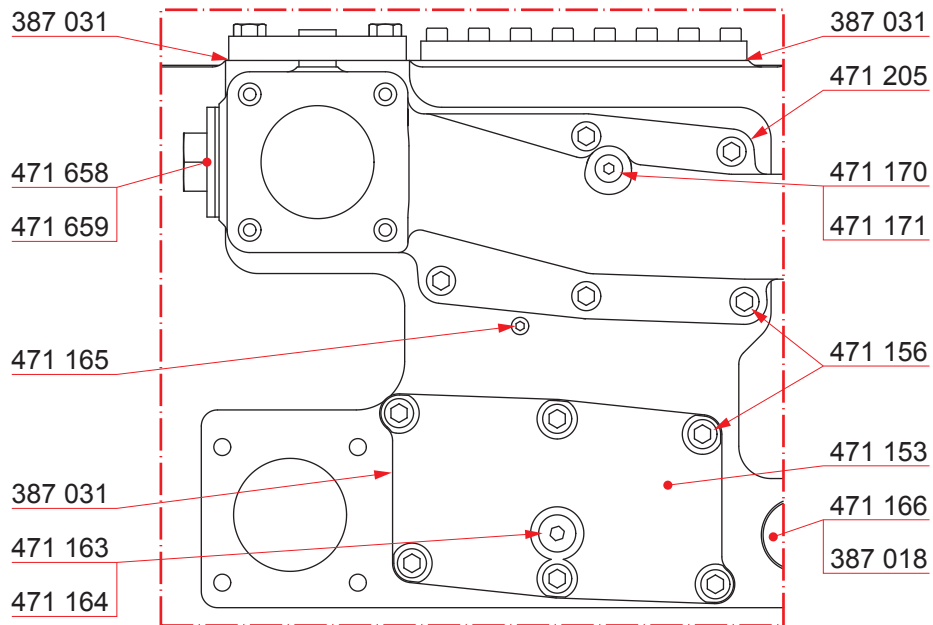


Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 152	Bracket	2	-
471 154	Oil pipe	1	17.4
471 158	Screw	4	0.2
471 159	Screw	2	0.1
471 160	Screw	10	-
471 163	Plug	5	-
471 164	Sealing ring	5	-
471 165	Plug	3	-
TE482	Temp. sensor, LT- thermostatic control, LT- water (1)	1	-
TI482	Thermometer, LT water, after LO-cooler (2)	1	-
387 031	Glue compound	1	-

NOTE! (1) Depending on installation.

NOTE! (2) UNIC-option.

Lube oil module

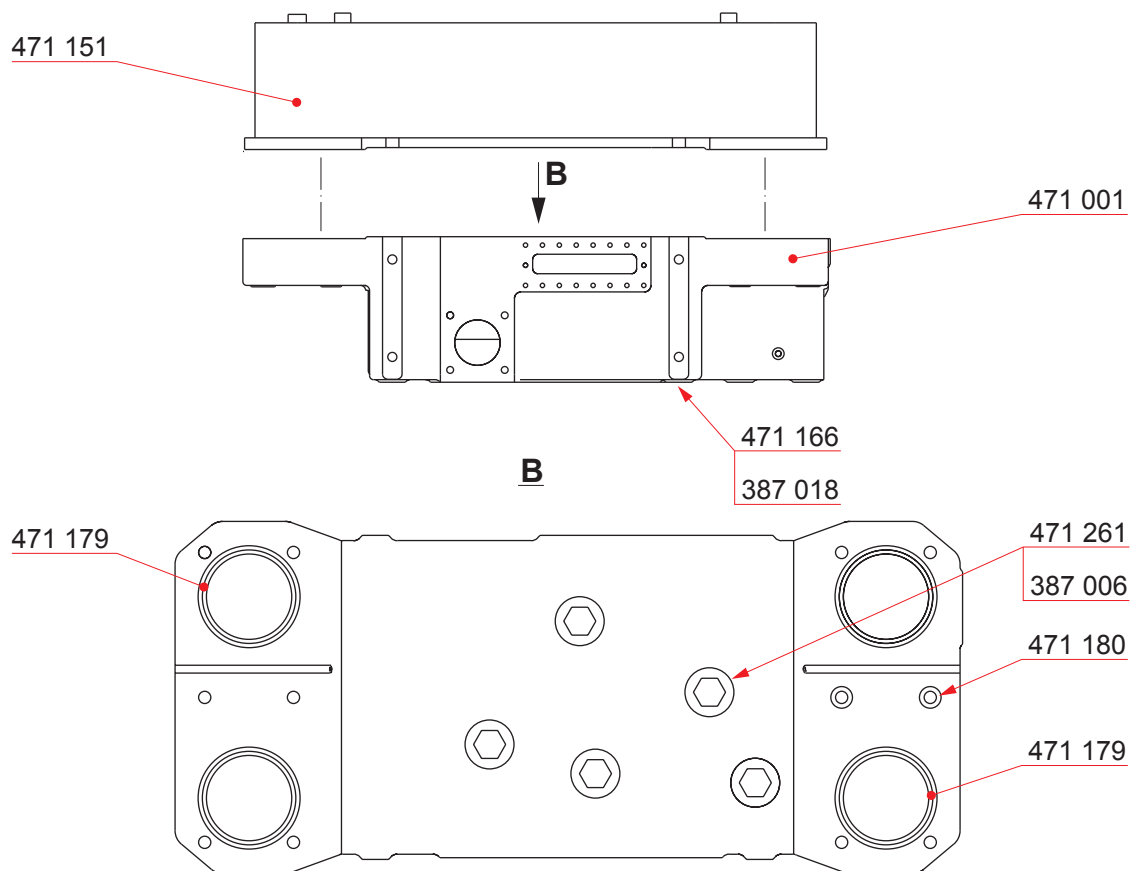
X

Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 153	Cover	1	3.7
471 156	Screw	11	-
471 163	Plug	5	-
471 164	Sealing ring	5	-
471 165	Plug	3	-
471 166	Plug	1	-
471 170	Plug	1	-
471 171	Sealing ring	1	-
471 205	Gasket	1	-
471 658	Sealing ring	1	-
471 659	Plug	1	0.6
387 018	Glue compound	1	-
387 031	Glue compound	1	-

Edition: B

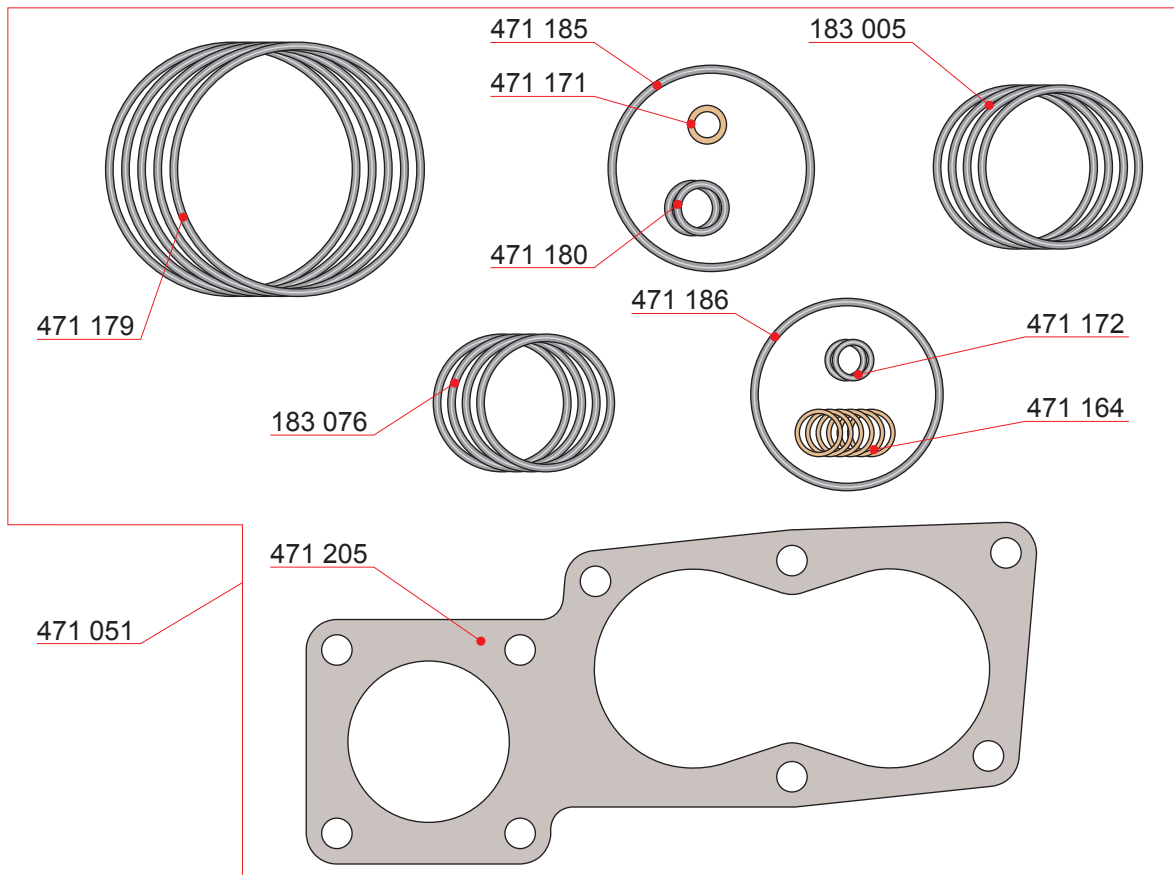
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Lube oil module

Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 001	Housing	1	151
471 166	Plug	1	-
471 261	Plug	5	0.4
471 151	Plate heat exchanger	1	-
471 179	O-ring	1	-
471 180	O-ring	2	-
387 006	Glue compound	1	-
387 018	Glue compound	1	-

Lube oil module



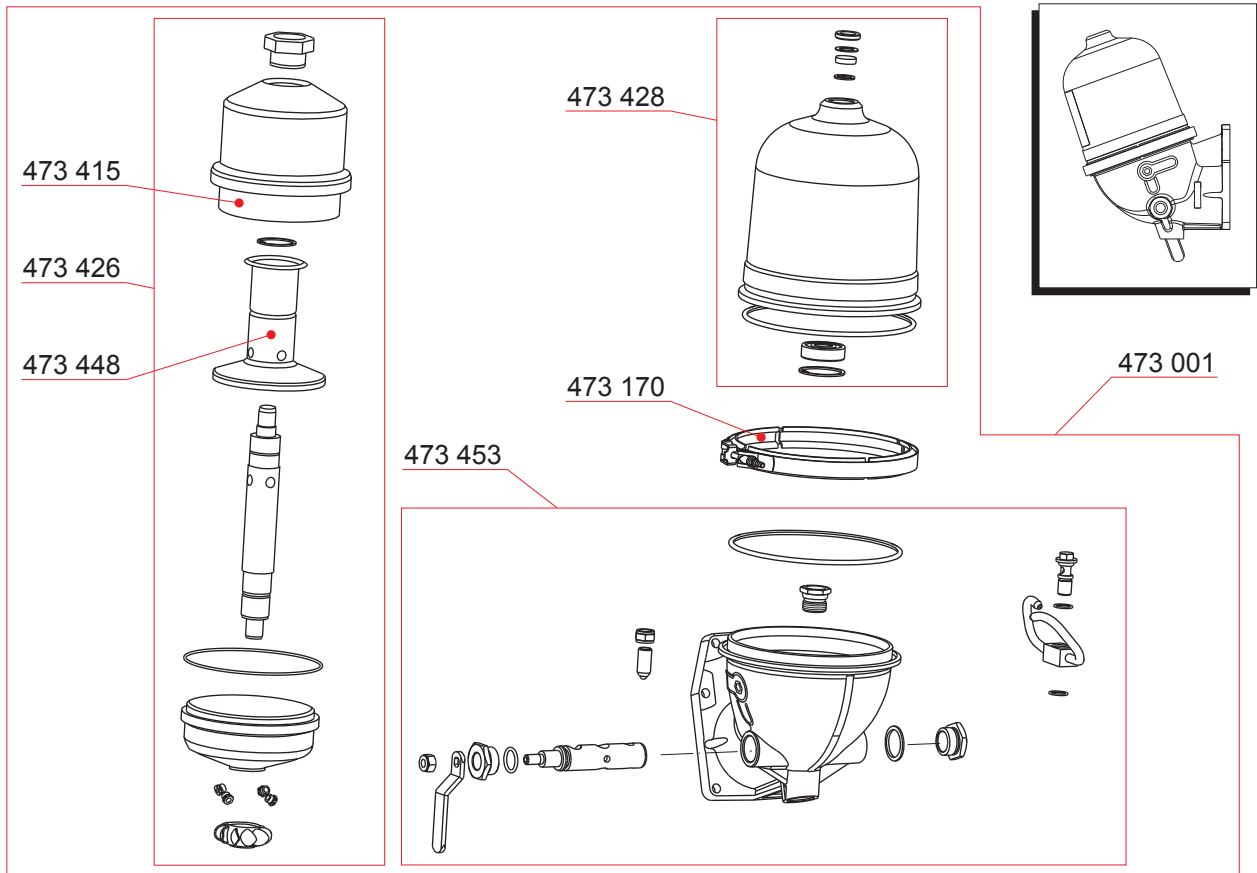
Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 051	Sealing set for lubricating oil module	1	0.2
183 005	O-ring	4	-
183 076	O-ring	2	-
471 164	Sealing ring	6	-
471 171	Sealing ring	1	-
471 172	O-ring	2	-
471 179	O-ring	1	-
471 180	O-ring	2	-
471 185	O-ring (1)	1	-
471 186	O-ring (1)	1	-
471 205	Gasket	1	-

NOTE! (1) Not used when TC at the driving end. (LD)

NOTE! The sealing set for lubricating oil module includes lube oil and cooling water sealings.

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Centrifugal filter



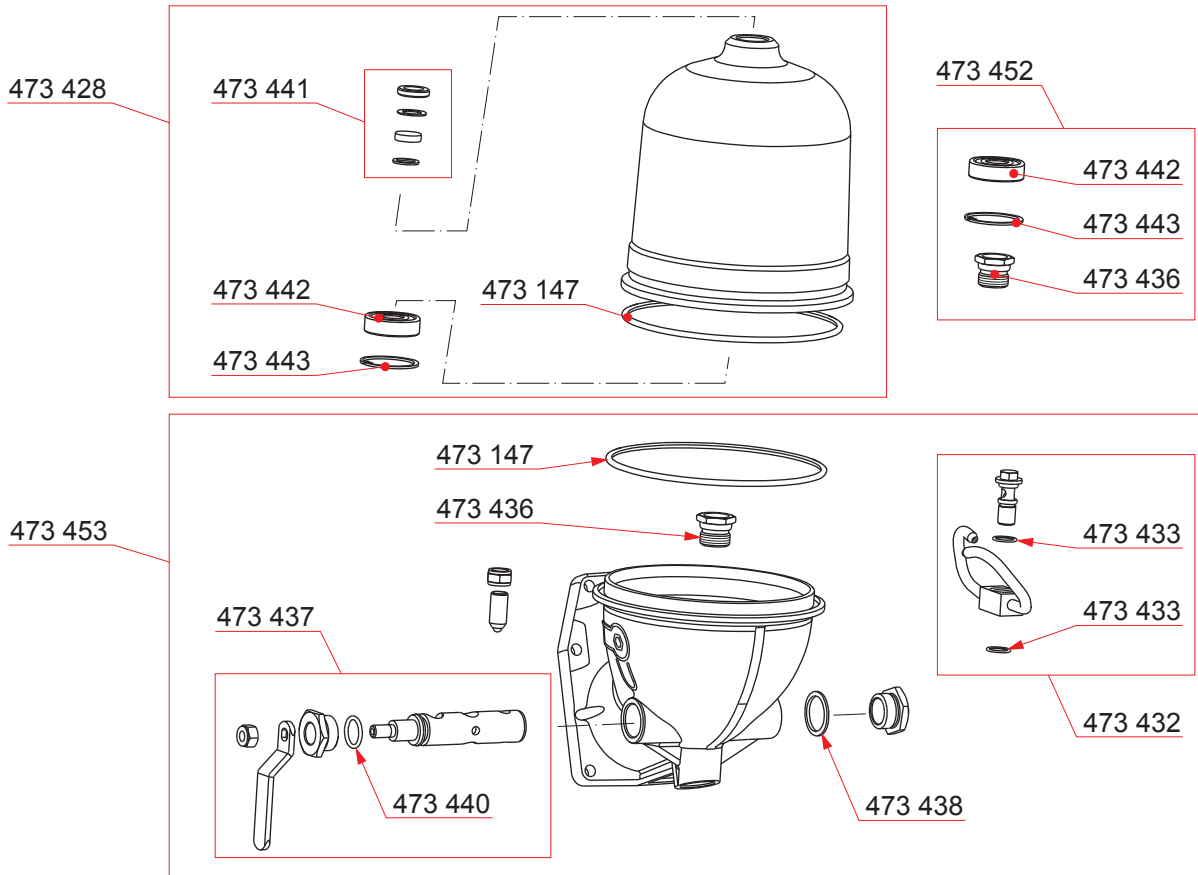
Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 001	Centrifugal filter	1	-
473 170	Cover clamp ring	1	0.5
473 415	Paper insert (*) (2)	1	-
473 426	Rotor assembly kit	1	-
473 428	Cover assembly kit	1	4.0
473 448	Stand tube (*)	1	-
473 453	Body assembly kit	1	8.0

NOTE! (*) Included in kit but also available separately.

NOTE! (2) Supplied in packs of 25 pcs.

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Centrifugal filter

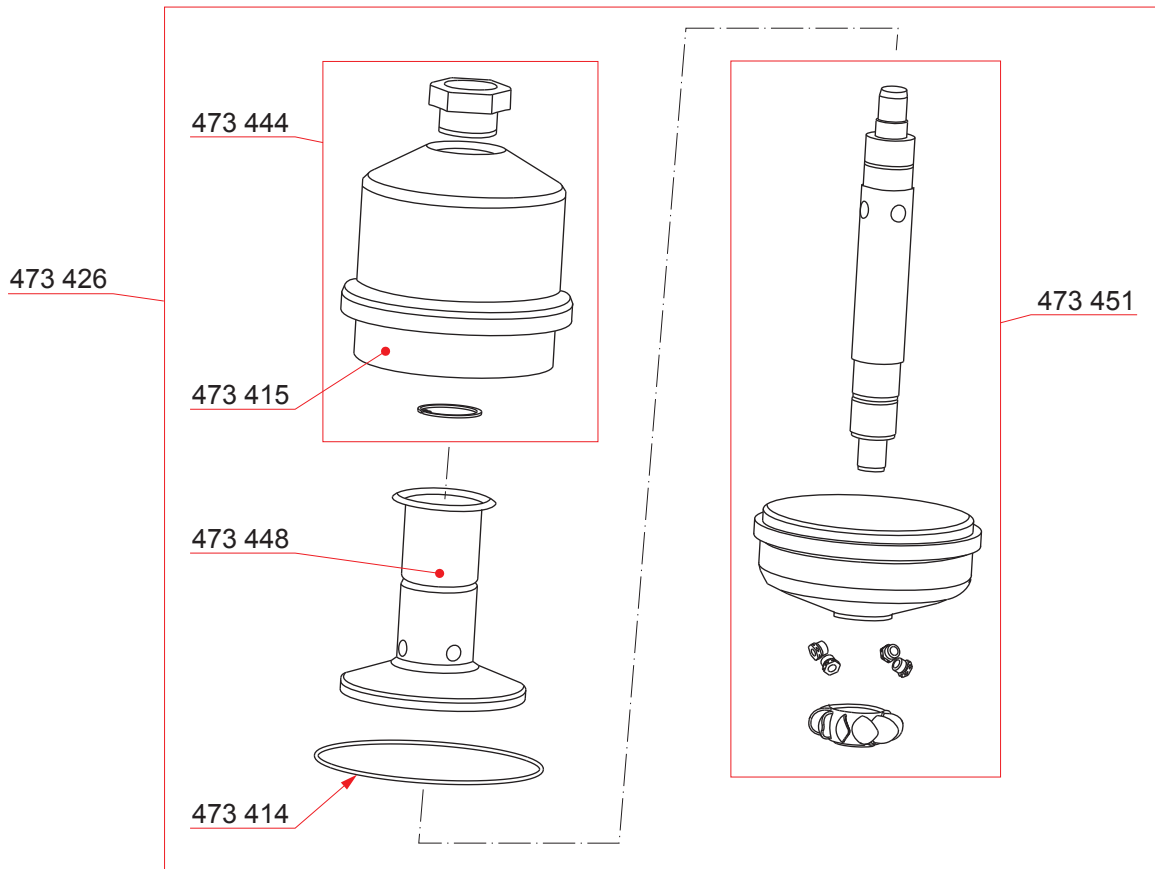


Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 428	Cover assembly kit	1	4.0
473 147	O-ring (1)	1	-
473 441	Sight glass kit (*)	1	0.1
473 442	Cover bearing (1)	1	-
473 443	Circlip (1)	1	-
473 452	Bearing kit	1	0.3
473 436	Bearing (1)	1	-
473 442	Cover bearing (1)	1	-
473 443	Circlip (1)	1	-
473 453	Body assembly kit	1	8.0
473 147	O-ring (1)	1	-
473 432	Tube assembly kit (*)	1	0.5
473 433	O-ring (1)	2	-
473 436	Bearing (1)	1	-
473 437	Valve assembly (*)	1	1.0
473 440	O-ring (1)	1	-
473 438	Seal (1)	1	-

NOTE! (*) Included in kit but also available separately.

NOTE! (1) Included in spare part kit, not available separately.

Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 426	Rotor assembly kit	1	-
473 414	O-ring (1)	1	-
473 415	Paper insert (*) (2)	1	-
473 444	Rotor cover kit (3)	1	-
473 448	Stand tube (*)	1	-
473 451	Rotor base kit	1	-

NOTE! (*) Included in kit but also available separately.

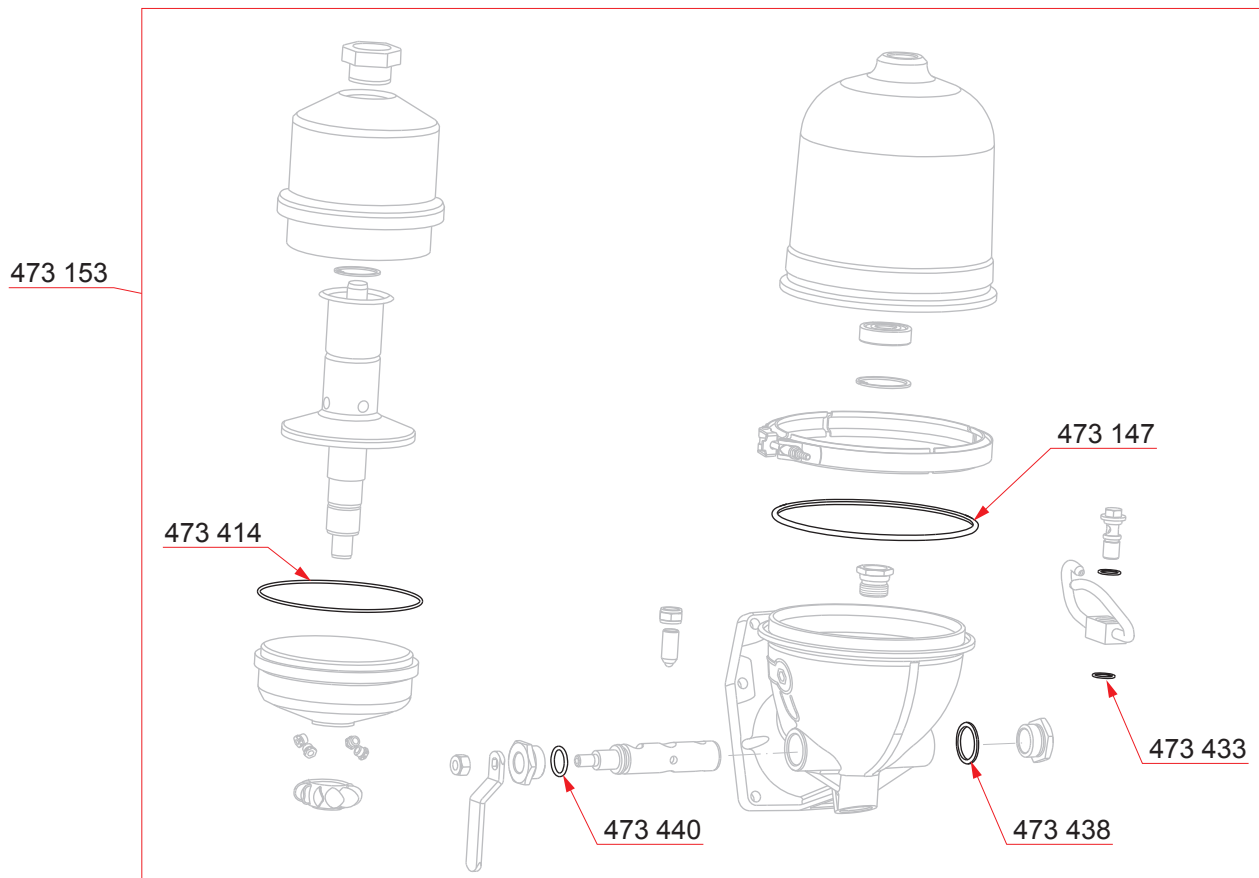
NOTE! (1) Included in spare part kit, not available separately.

NOTE! (2) Supplied in packs of 25 pcs.

NOTE! (3) Paper insert not included.

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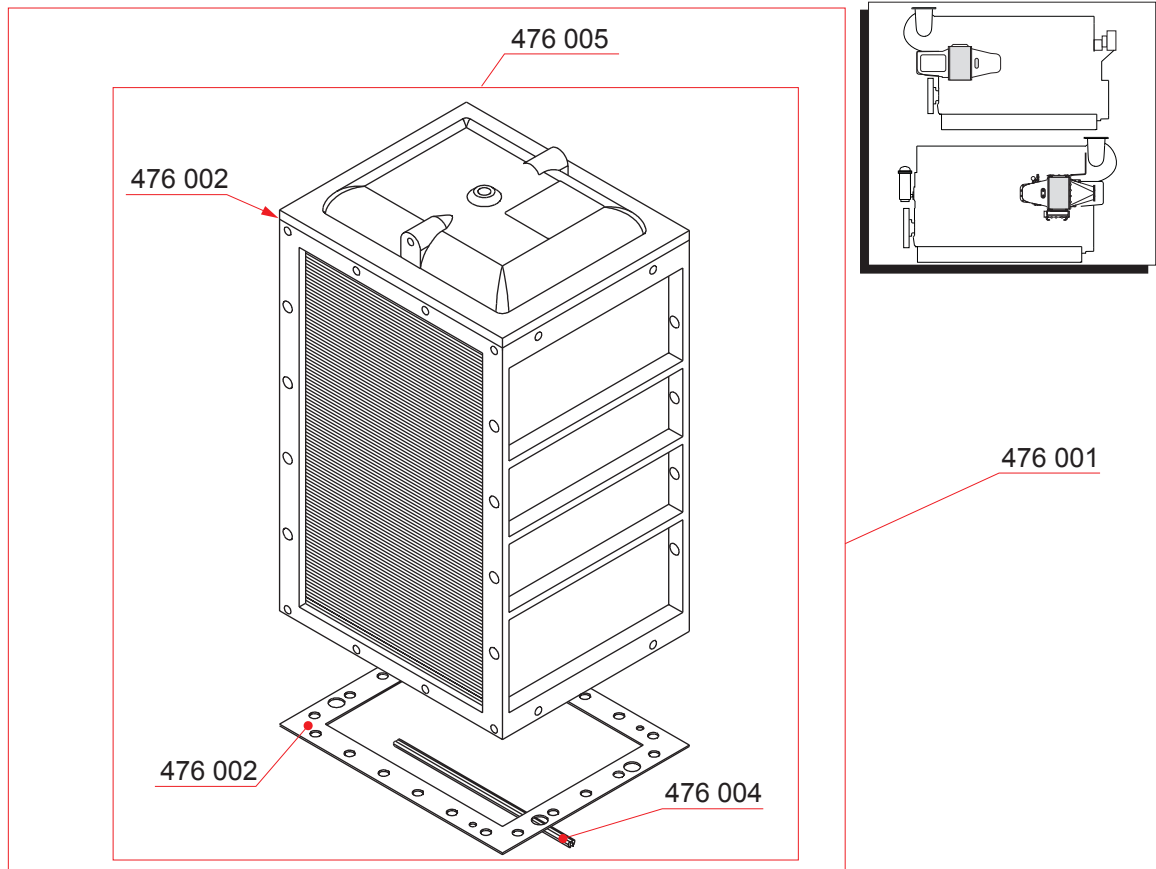
Centrifugal filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 153	Sealing set	1	0.1
473 147	O-ring (1)	1	-
473 414	O-ring (1)	1	-
473 433	O-ring (1)	2	-
473 438	Seal (1)	1	-
473 440	O-ring (1)	1	-

NOTE! (1) Included in sealing set, not available separately.

Air cooler



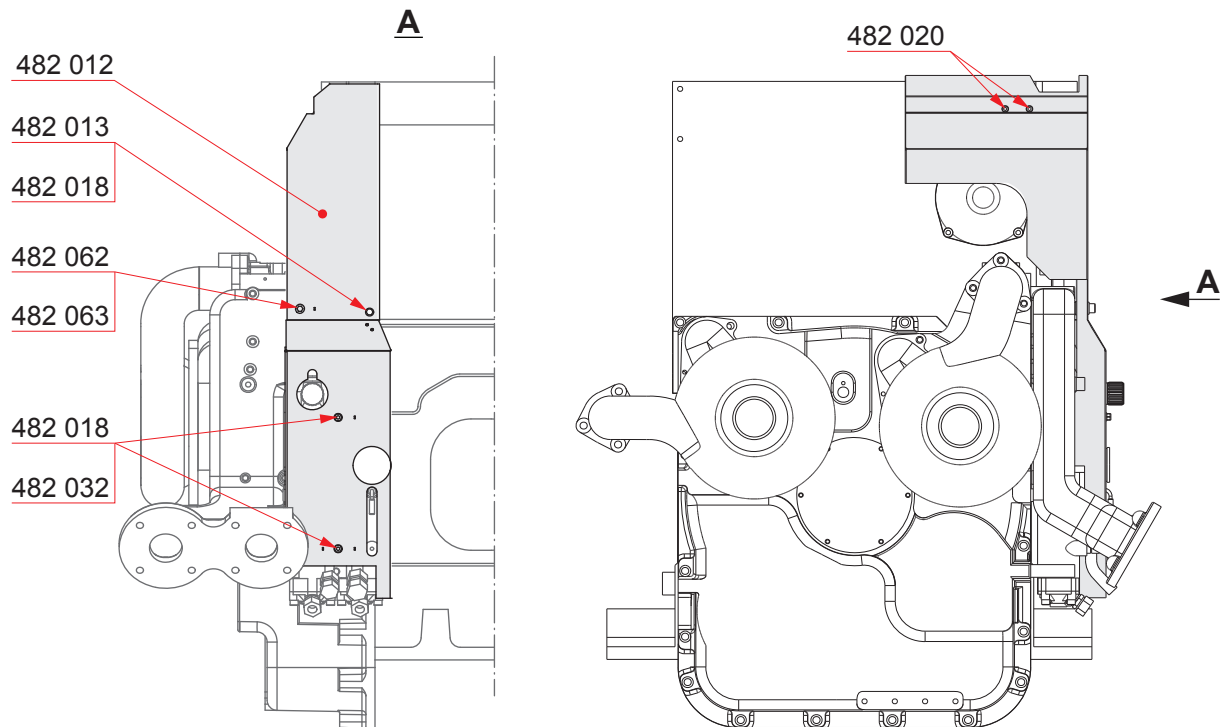
Part No.	Description	Qty [Pcs]	Wt. [Kg]
476 001	Charge air cooler	1	159
476 005	Gasket set (1)	1	1.0
476 002	Gasket (2)	2	-
476 004	Profile gasket (2)	1	-

NOTE! (1) When ordering, please state the serial number and the manufacturer of the air cooler

NOTE! (2) Components are not available as single parts

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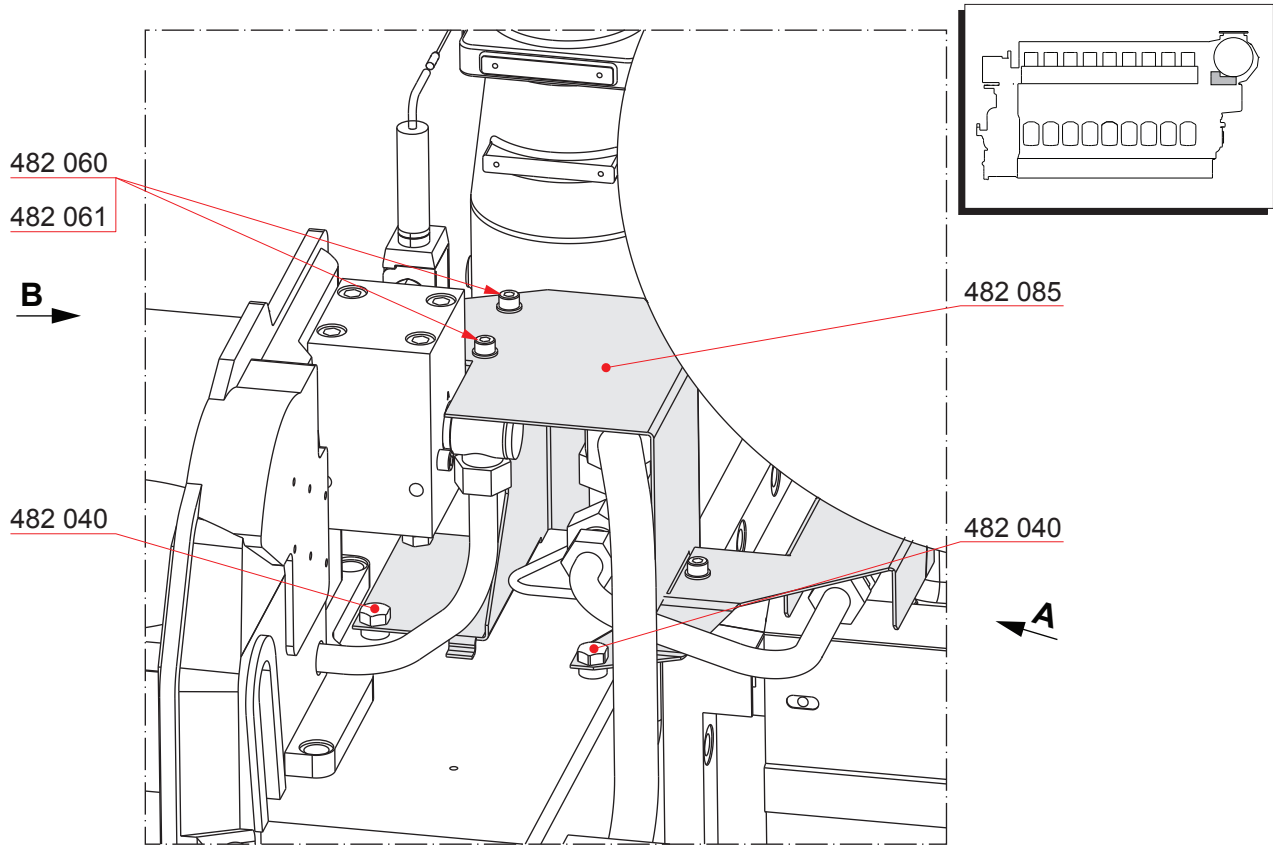
Splash guard for fuel oil pipes



Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 012	Splash guard	1	3.2
482 013	Screw	1	-
482 018	Washer	3	-
482 020	Screw	2	-
482 032	Nut	2	-
482 062	Washer	1	-
482 063	Screw	1	-

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Splash guards for TC oil supply pipe

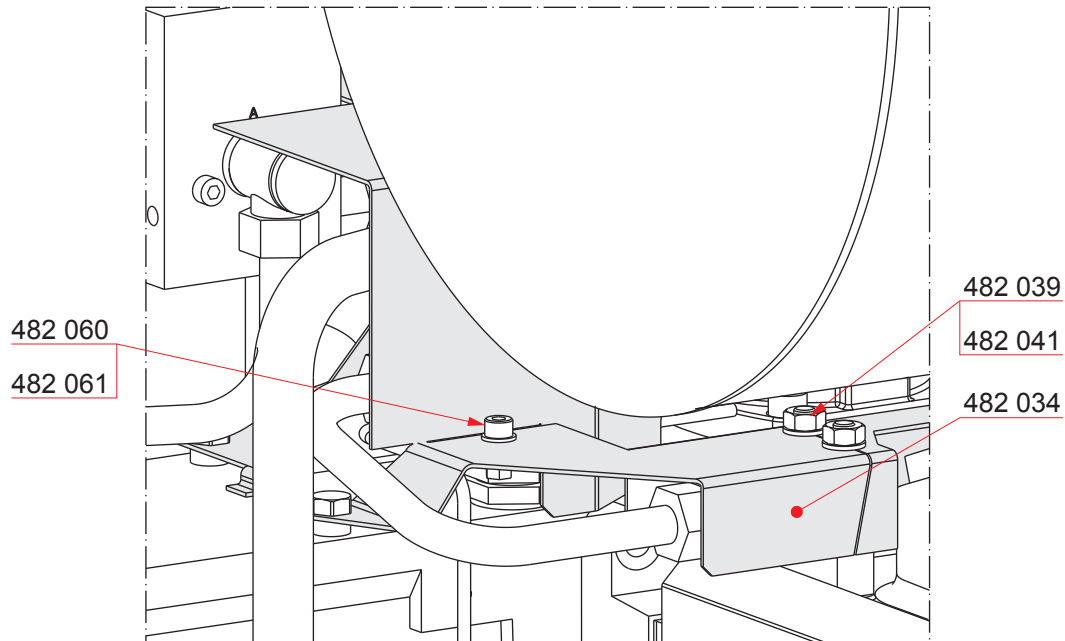


Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 040	Screw	3	-
482 060	Screw	6	-
482 061	Washer	6	-
482 085	Splash guard	1	1.1

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Splash guards for TC oil supply pipe

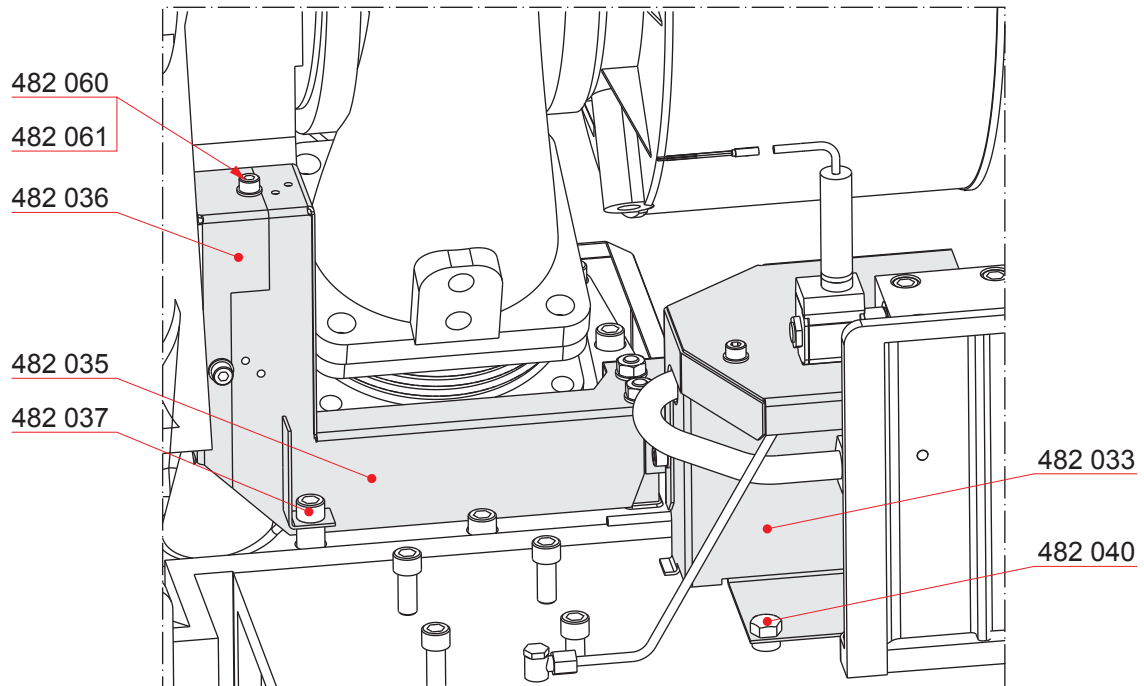
View A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 034	Splash guard	1	-
482 039	Nut	2	-
482 041	Washer	2	-
482 060	Screw	6	-
482 061	Washer	6	-

Splash guards for TC oil supply pipe

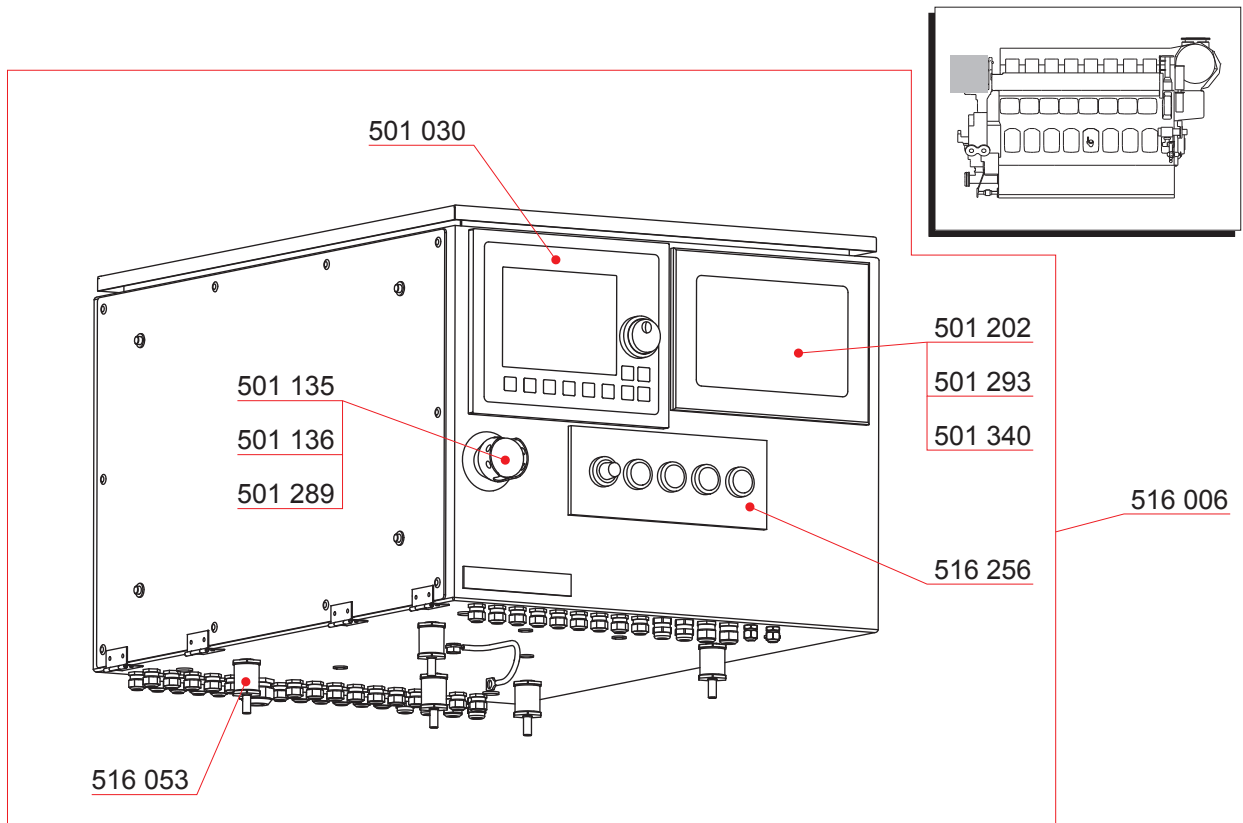
View B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
482 033	Splash guard	1	0.7
482 035	Splash guard	1	-
482 036	Splash guard	1	-
482 037	Screw	1	-
482 040	Screw	3	-
482 060	Screw	6	-
482 061	Washer	6	-

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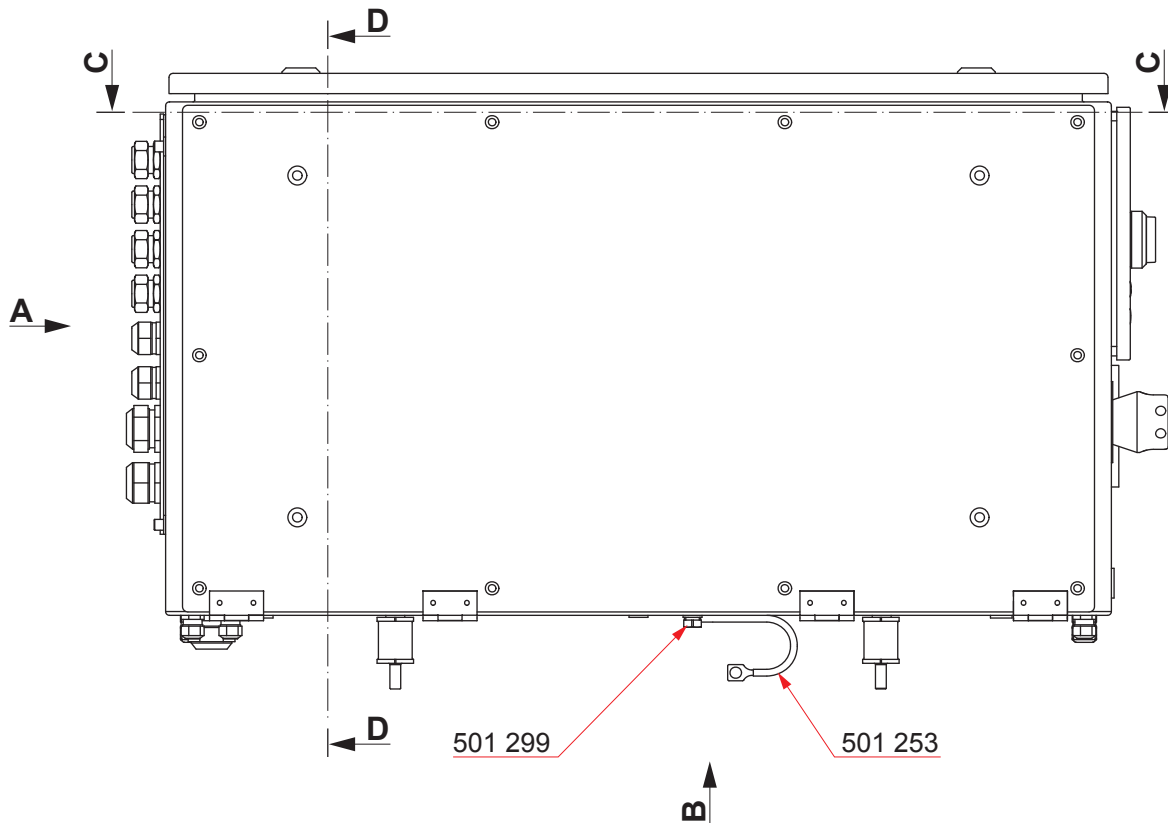
Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 006	Connecting box	1	-
501 030	Display unit	1	2.1
501 135	Push button	1	0.1
501 136	Protective collar	1	-
501 202	Control panel	1	2.0
501 289	Text plate	1	-
501 293	Plug 8-pin, double wire entry	28	-
501 340	Plug 8-pin	18	-
516 053	Vibration damper	6	-
516 256	Control panel	1	1.4

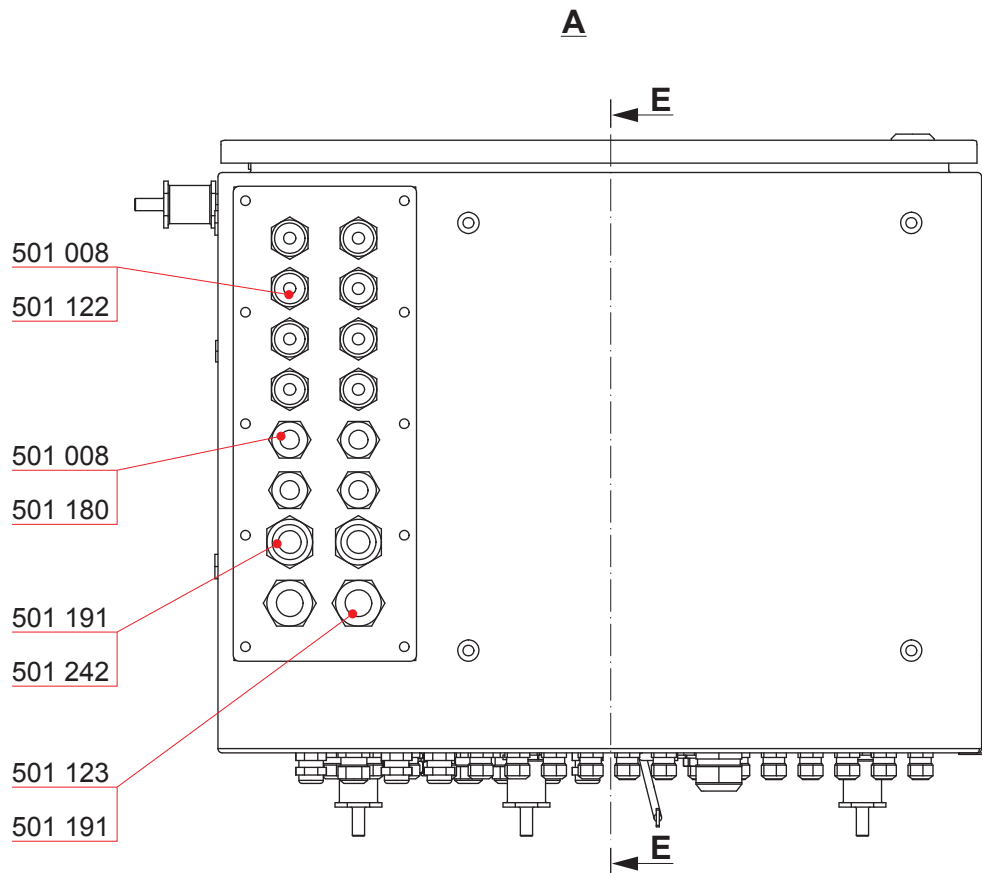
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Connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 253	Earthing strap	1	-
501 299	Screw	1	-

Connecting box

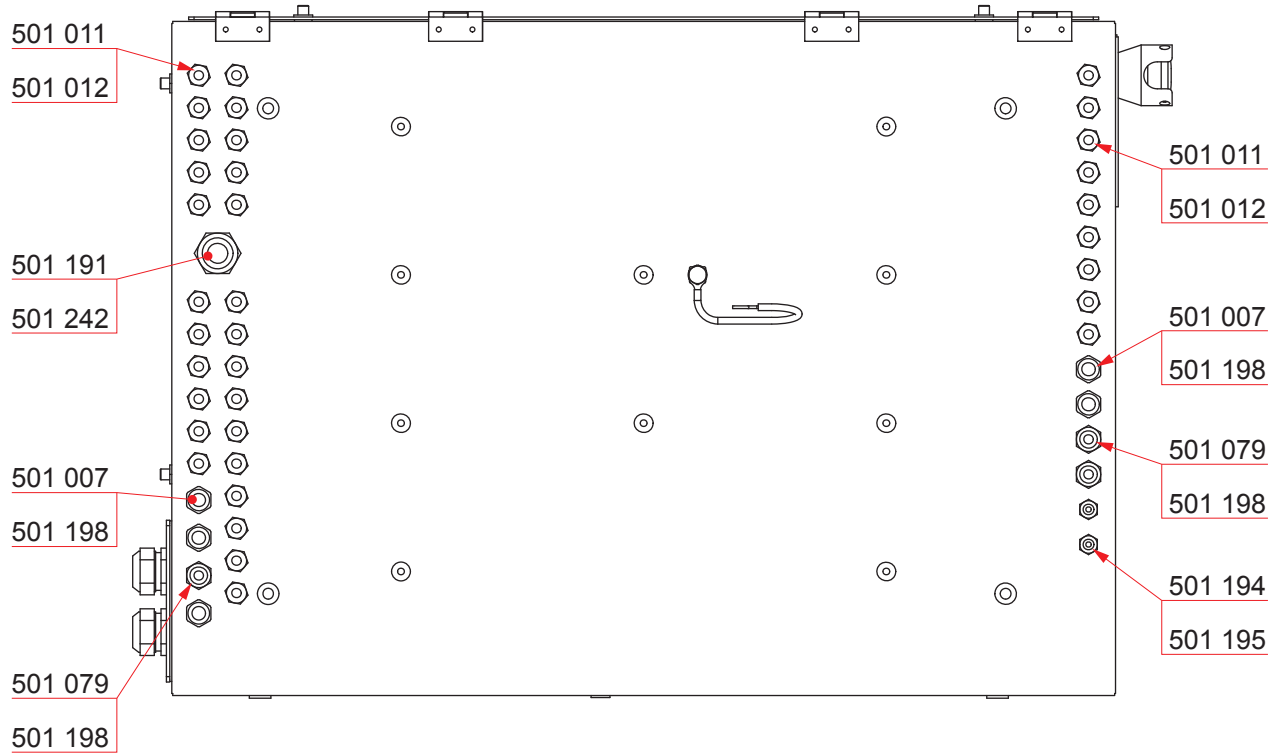


Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 008	Flat nut	12	-
501 122	Cable gland	8	-
501 123	Cable gland	2	-
501 180	Cable gland	4	-
501 191	Nut	5	-
501 242	Cable gland	3	-

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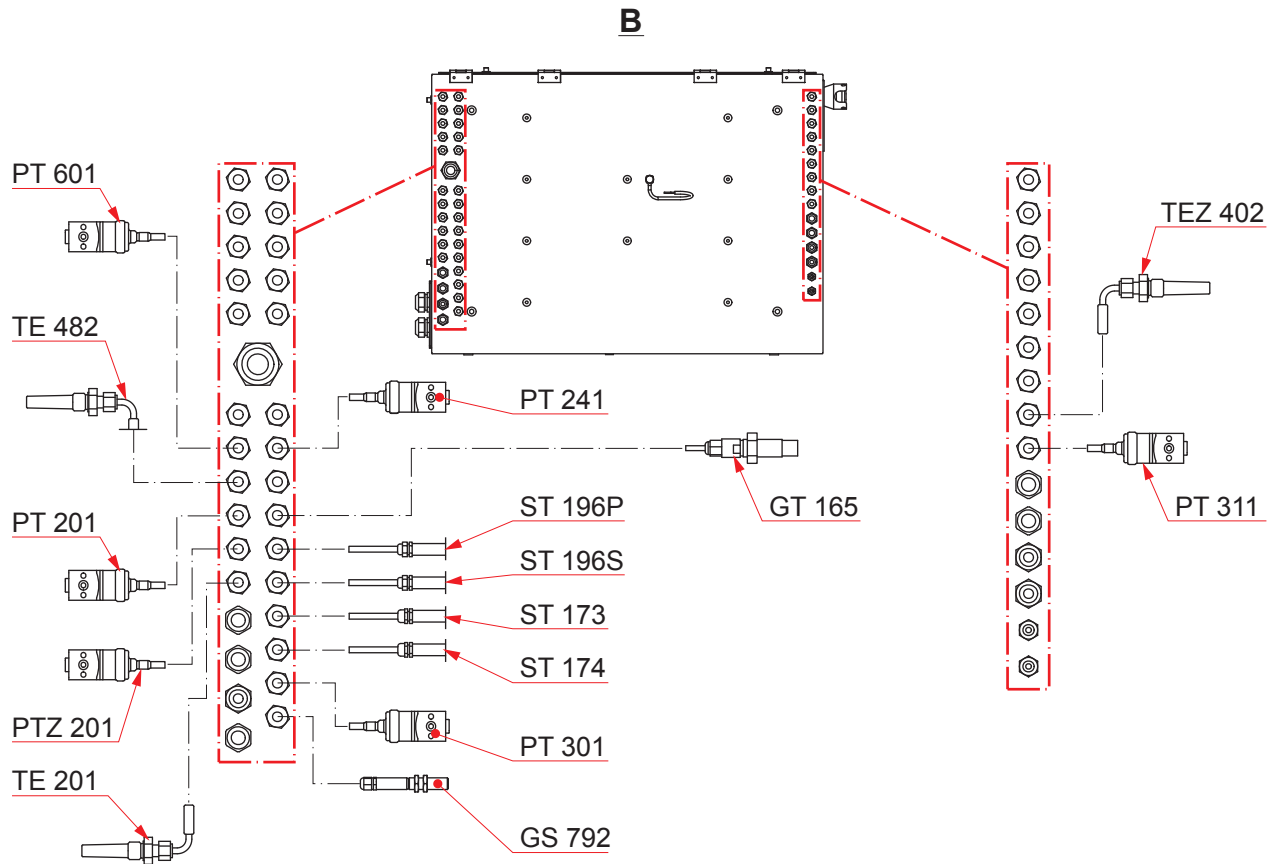
Connecting box

B



Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 007	Cable gland	5	-
501 011	Cable gland	35	-
501 012	Flat nut	35	-
501 079	Cable gland	3	-
501 191	Nut	5	-
501 194	Cable gland	2	-
501 195	Locking nut	2	-
501 198	Locking nut	8	-
501 242	Cable gland	3	-

Connecting box

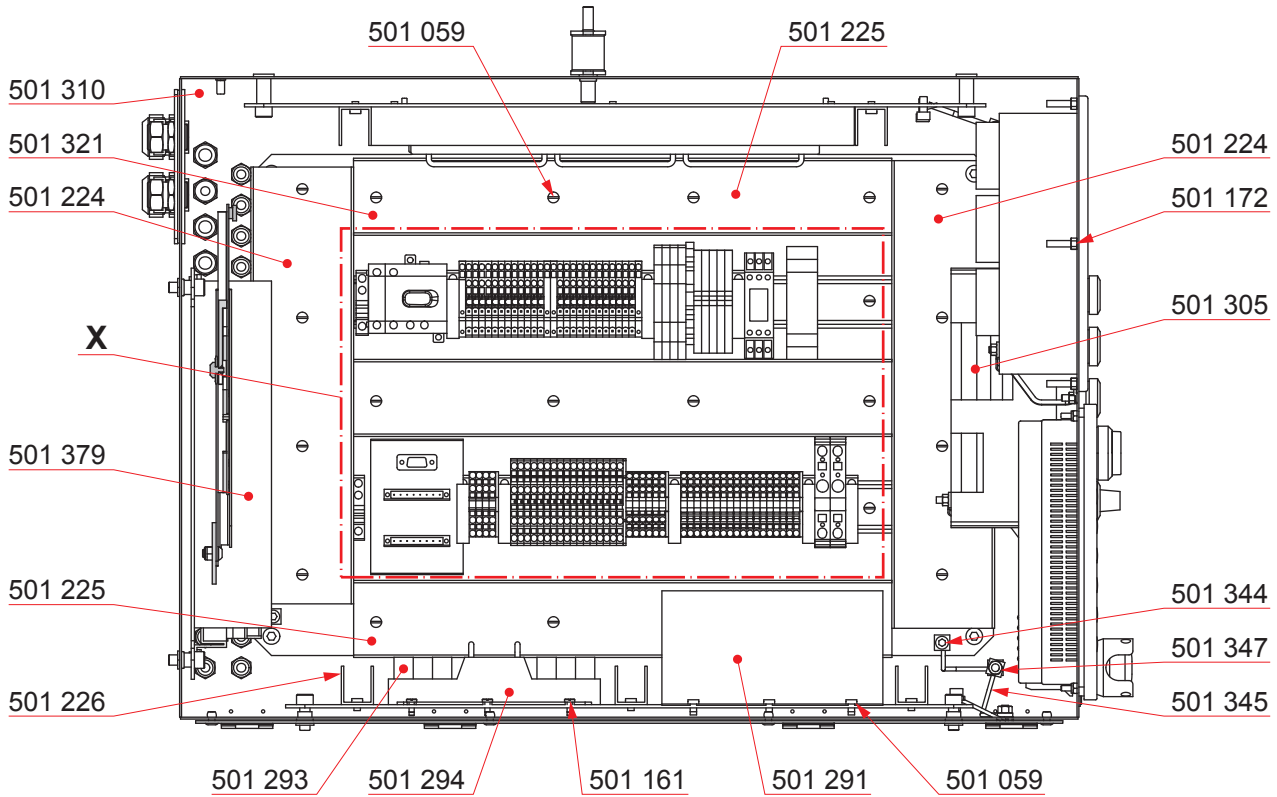


Part No.	Description	Qty [Pcs]	Wt. [Kg]
GS792	Limit switch	1	1.0
GT165	Fuel rack position transducer	1	1.0
PT201	Pressure transducer, lube oil	1	-
PT241	Pressure transducer, lube oil	1	-
PT301	Pressure transducer, starting air	1	1.2
PT311	Pressure transducer	1	0.8
PT601	Pressure transducer, charge air pressure	1	0.8
PTZ201	Pressure transducer, lube oil press. engine inlet	1	-
ST196P	Speed sensor	1	-
ST196S	Speed sensor	1	-
ST173	Speed pick-up	1	-
ST174	Speed pick-up	1	-
TE201	Temperature sensor, lubricating oil temperature	1	-
TE482	Temp. sensor, LT-thermostatic control, LT-water	1	-
TEZ402	Temperature sensor for HT water	1	-

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Connecting box

C - C



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 059	Screw	59	-	NOTE!	*) See wiring diagram.		
501 161	Screw	12	-				
501 172	Nut	16	-				
501 224	Cable tray (3)	1	-				
501 225	Cable tray (2)	1	0.1				
501 226	Cable tray (4)	1	-				
501 291	Electronic unit	1	3.6				
501 293	Plug 8-pin, double wire entry	28	-				
501 294	Electronic unit	1	1.7				
501 305	Resistor 22kohm *)	1	-				
501 310	Corrosion protection	1	0.3				
501 321	Cable, data bus (1)	1	0.2				
501 344	Screw	6	0.3				
501 345	Earthing strap	5	-				
501 347	Nut	3	-				
501 379	Cable tray (5)	1	0.2				

NOTE! (1) L = 10 meters

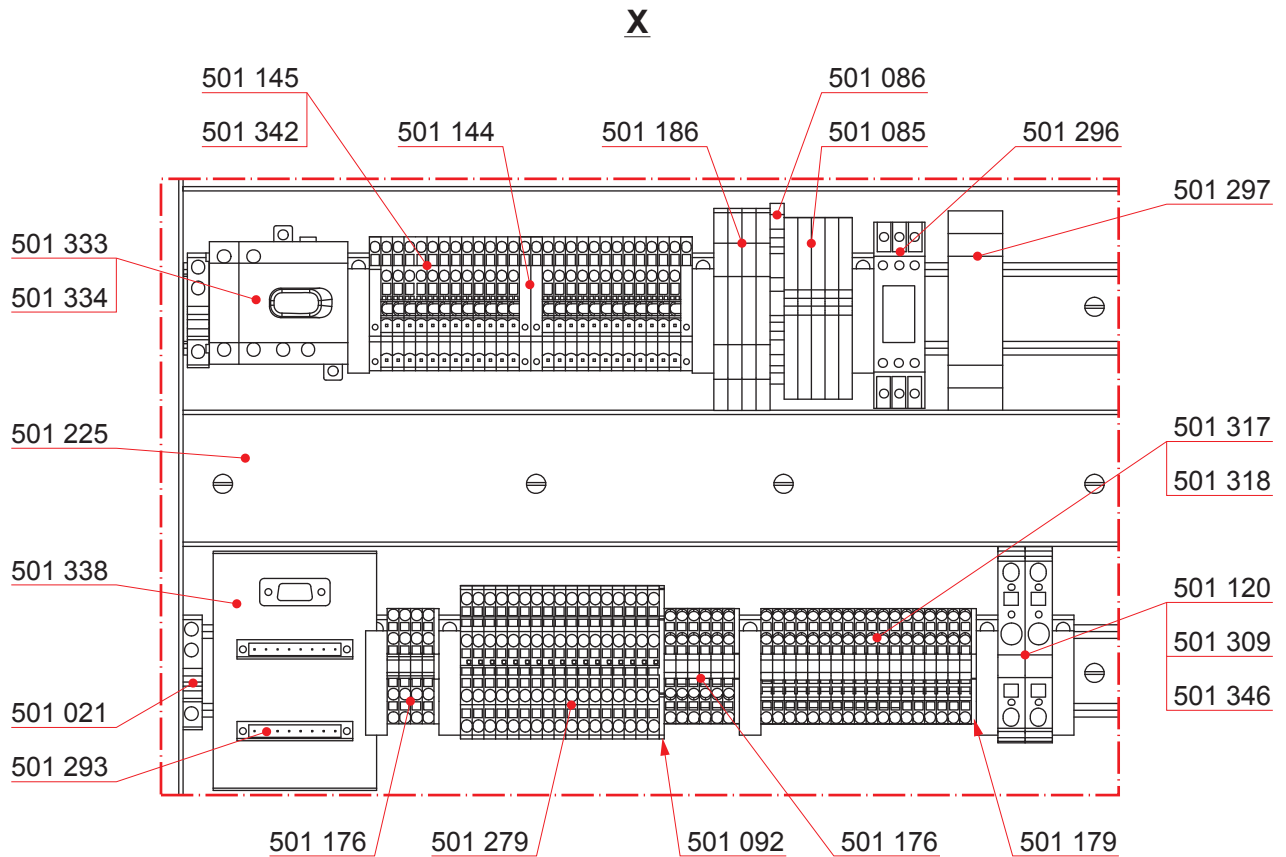
NOTE! (2) L = 1785 mm

NOTE! (3) L = 800 mm

NOTE! (4) L = 2100 mm

NOTE! (5) L = 500 mm

Connecting box

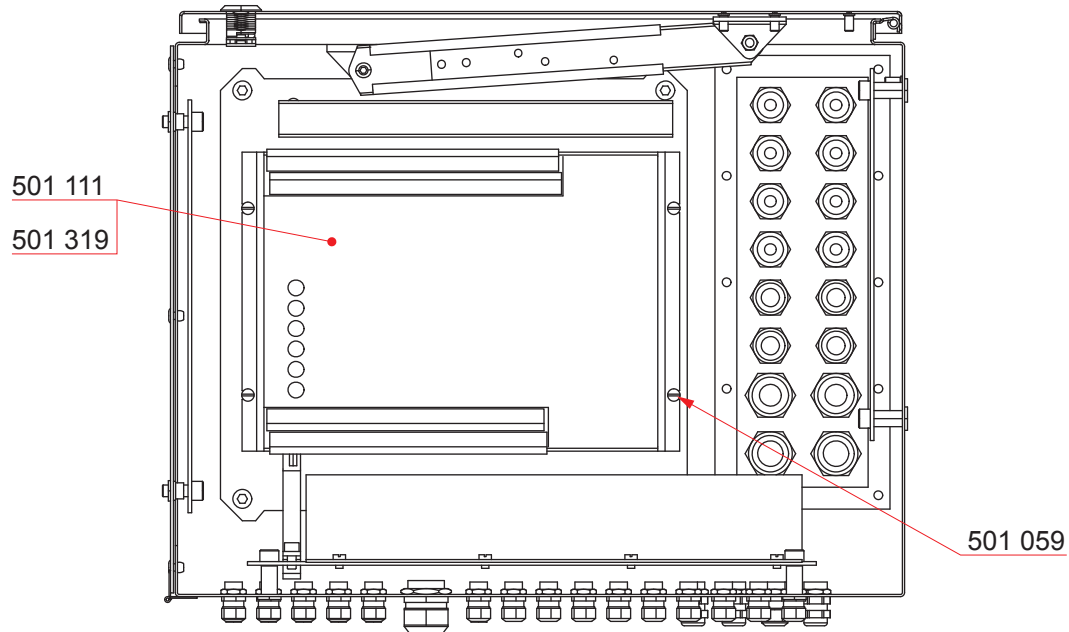


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 021	End stopper	11	-	501 346	Connector	1	-
501 085	Relay	5	-	NOTE! (*) Depending on installation.			
501 086	Relay	1	-	NOTE! (2) L = 1785 mm			
501 092	End plate	1	-				
501 120	Fuse terminal	2	-				
501 144	Terminal strip	4	-				
501 145	Terminal strip	24	-				
501 176	Terminal strip	10	-				
501 179	End plate	3	-				
501 186	Relay	4	-				
501 225	Cable tray (2)	1	0.1				
501 279	Terminal strip	17	-				
501 293	Plug 8-pin, double wire entry	28	-				
501 296	Converter	1	-				
501 297	Amplifier (*)	1	-				
501 309	Fuse	2	-				
501 317	Terminal strip	10	-				
501 318	Terminal strip	8	-				
501 333	Switch	1	0.1				
501 334	PE terminal	1	-				
501 338	Electronic unit	1	0.2				
501 342	Plug 12-pin	4	-				

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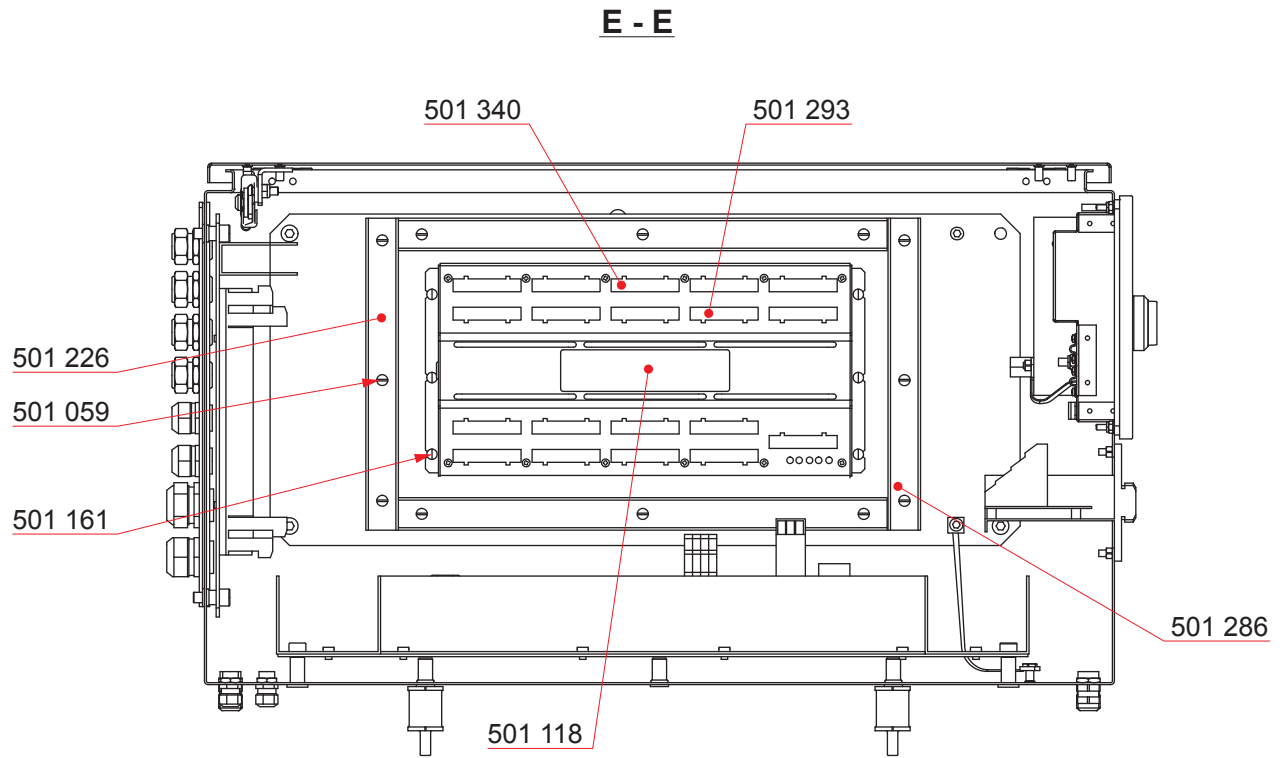
Connecting box

D - D



Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 059	Screw	59	-
501 111	Electronic unit	1	2.1
501 319	Connector set for ESM	1	0.3

Connecting box



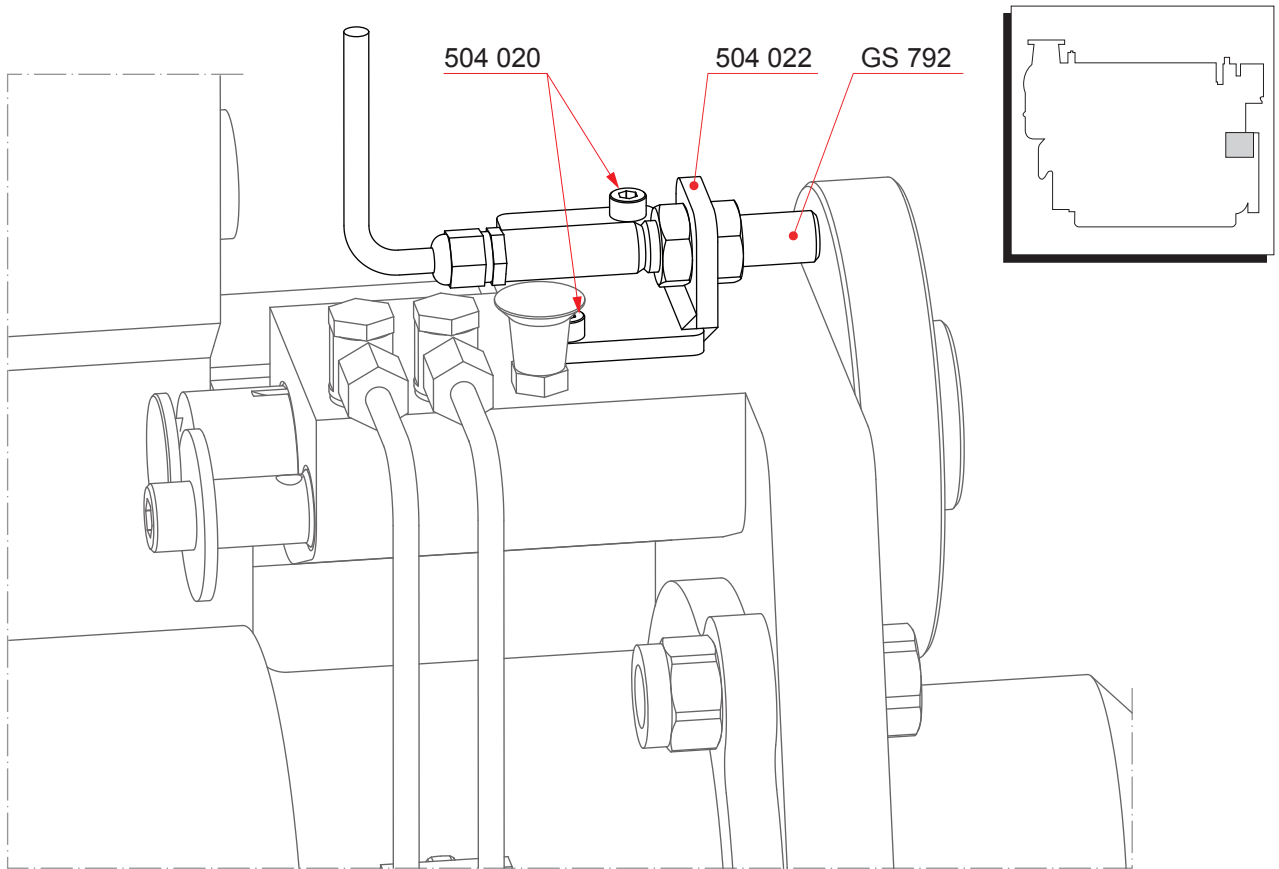
Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 059	Screw	10	-
501 118	Control unit	1	1.8
501 161	Screw	12	-
501 226	Cable tray (4)	1	-
501 286	Cable (1)	1	0.4
501 293	Plug 8-pin, double wire entry	28	-
501 340	Plug 8-pin	18	-

NOTE! (1) L = 4000 mm

NOTE! (4) L = 2100 mm

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Limit switch for turning gear

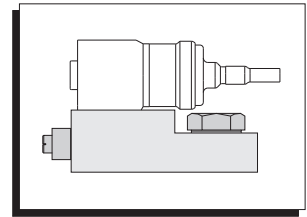
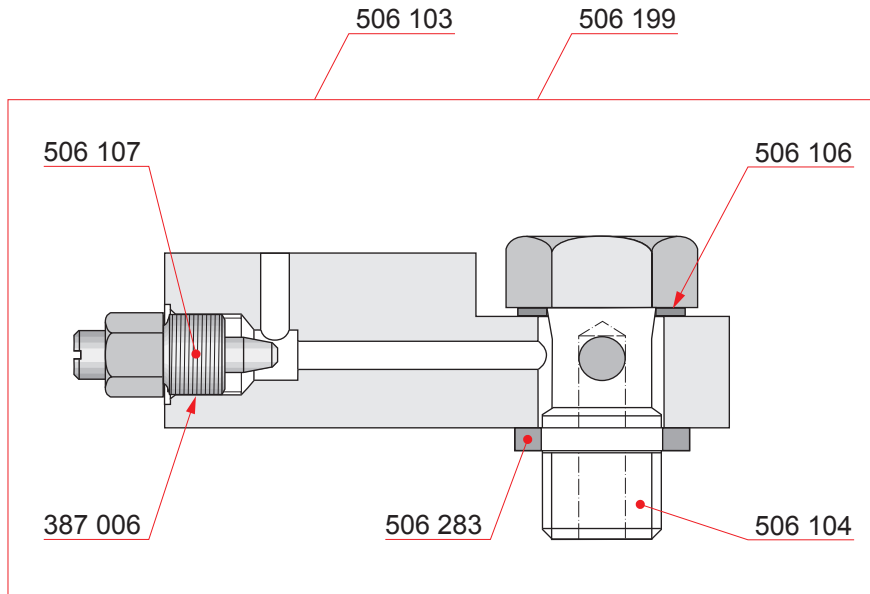


Part No.	Description	Qty [Pcs]	Wt. [Kg]
GS792	Limit switch (1)	1	0.5
504 020	Screw	2	-
504 022	Bracket	1	0.1

NOTE! (1) Cable included.

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Pressure gauge valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 103	Pressure gauge valve (2)	1	-
506 199	Pressure gauge valve (1)	1	-
506 104	Screw	1	-
506 106	Sealing ring	1	-
506 107	Throttle valve	1	-
506 283	Sealing ring	1	-
387 006	Glue compound	1	-

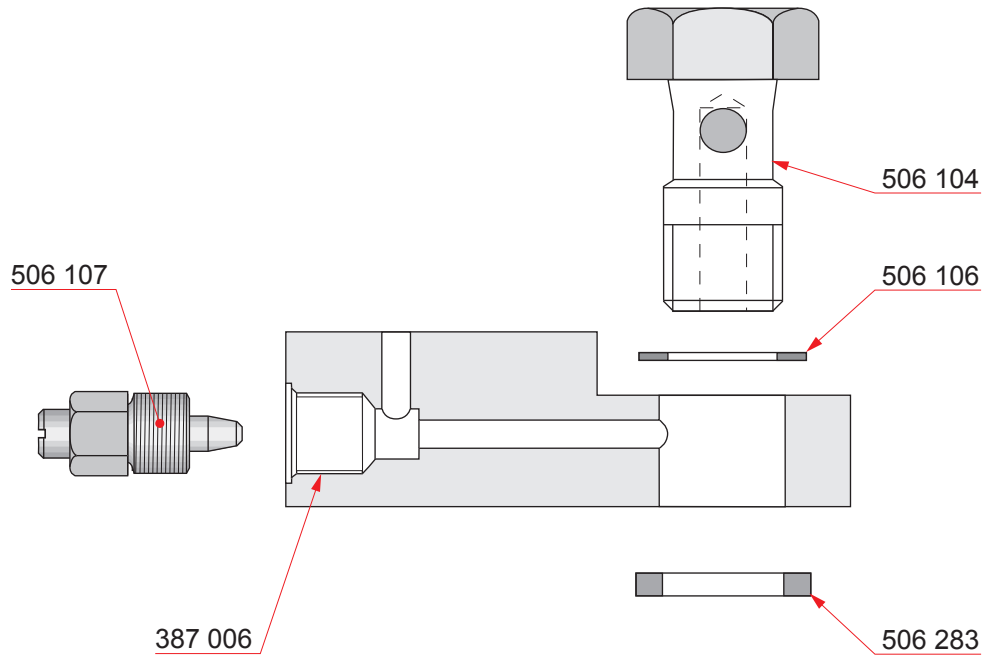
NOTE! 1) Steel housing.

NOTE! 2) Aluminium housing.

Edition: D

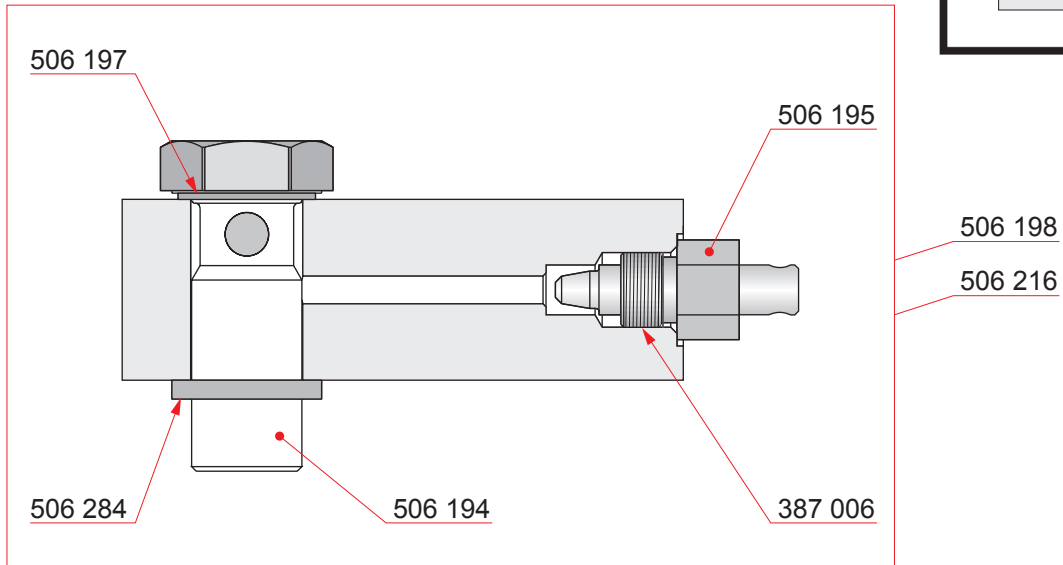
Page: 2(2)

Updated: 22.12.2011

Pressure gauge valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 104	Screw	1	-
506 106	Sealing ring	1	-
506 107	Throttle valve	1	-
506 283	Sealing ring	1	-
387 006	Glue compound	1	-

Pressure gauge valve



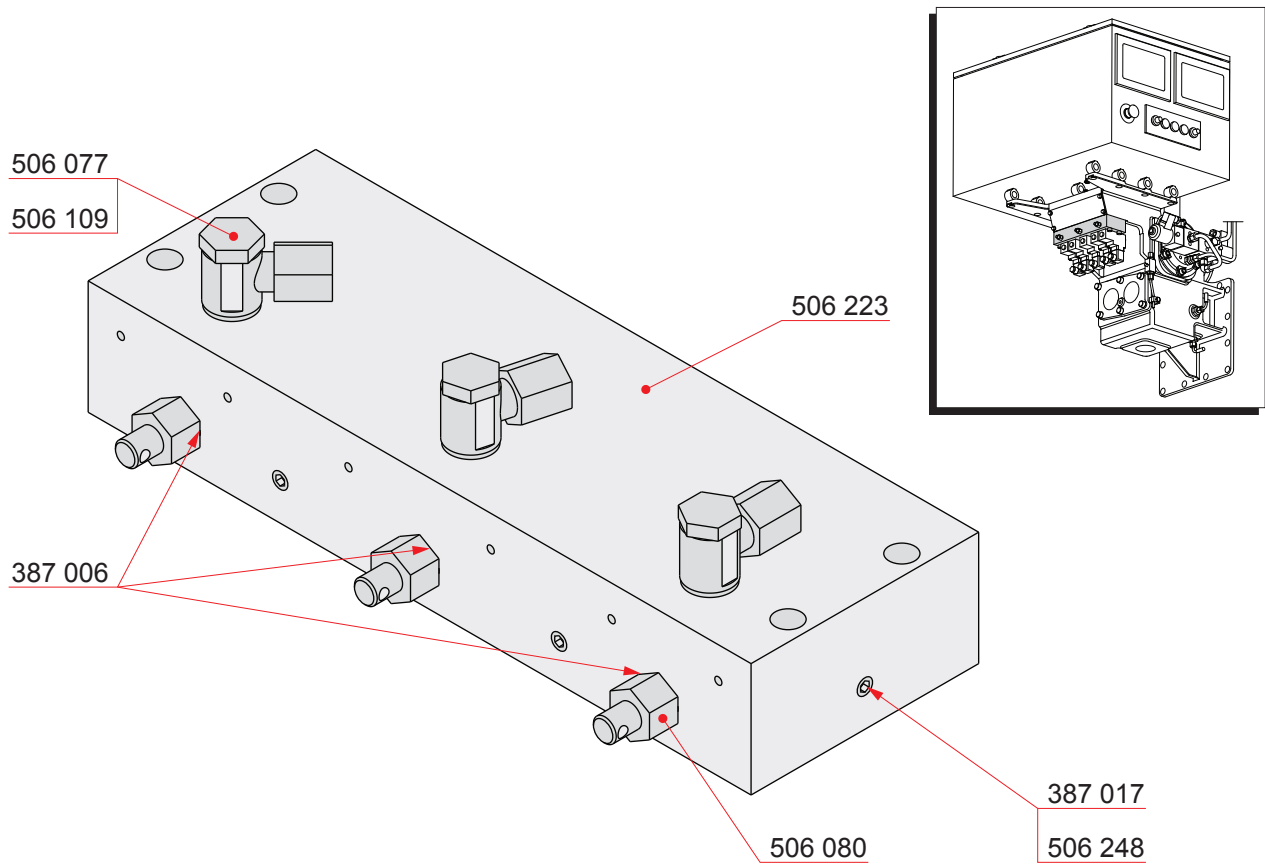
Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 198	Pressure gauge valve (1)	1	-
506 216	Pressure gauge valve (2)	1	-
506 194	Screw	1	-
506 195	Valve	1	-
506 197	Sealing ring	1	-
506 284	Sealing ring	1	-
387 006	Glue compound	1	-

NOTE! (1) Dimensions 29 x 29 x 90

NOTE! (2) Dimensions 29 x 36 x 90

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Adapter for pressure sensors

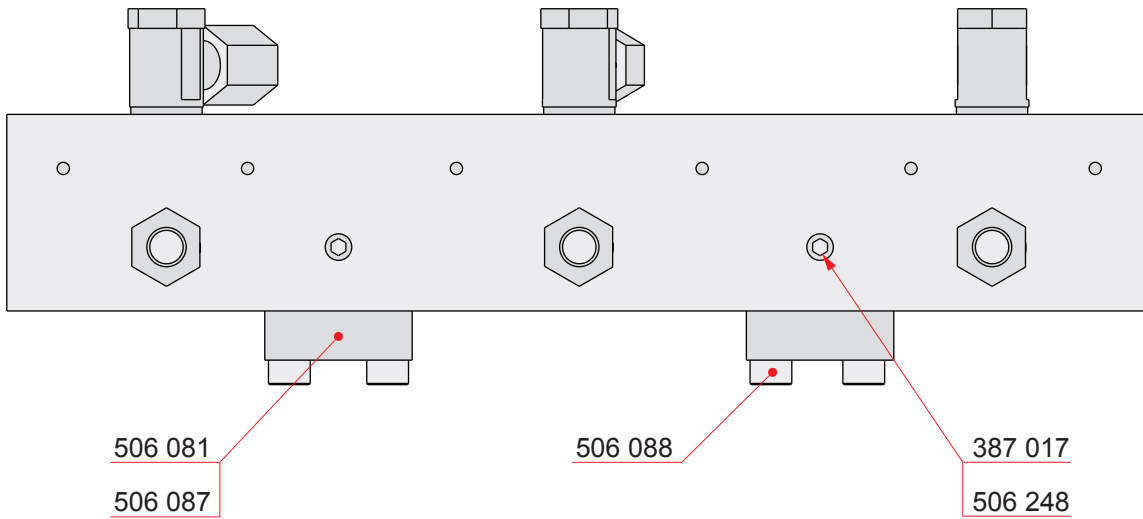


Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 077	Pipe union	3	-
506 080	Throttle valve	3	-
506 109	Seal ring	3	-
506 223	Adapter	1	5.0
506 248	Set screw	4	-
387 006	Glue compound	1	-
387 017	Glue compound	1	-

Edition: B

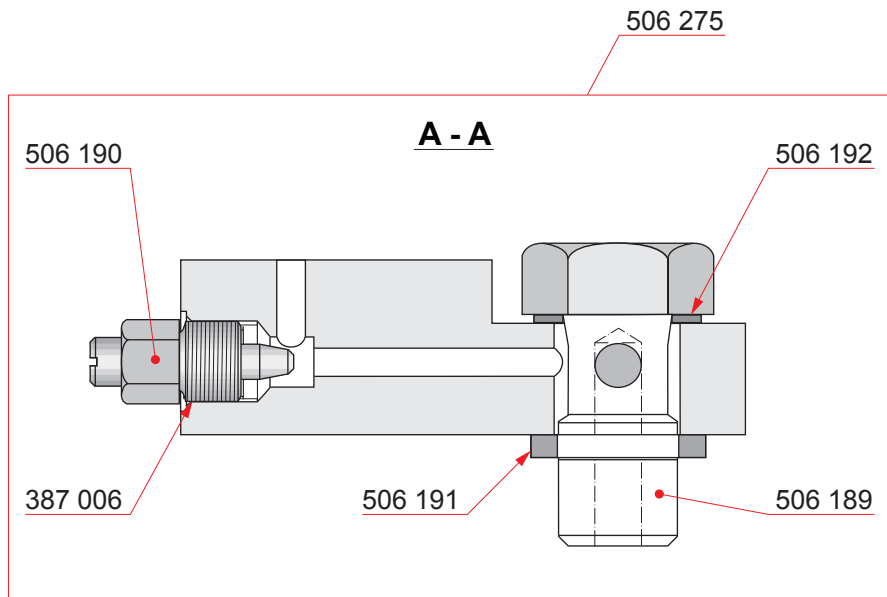
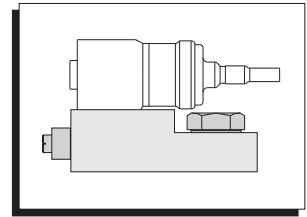
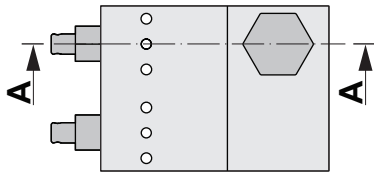
Page: 2(2)

Updated: 02.02.2009

Adapter for pressure sensors

Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 081	End piece	2	-
506 087	O-ring	2	-
506 088	Screw	4	-
506 248	Set screw	4	-
387 017	Glue compound	1	-

Pressure gauge valve

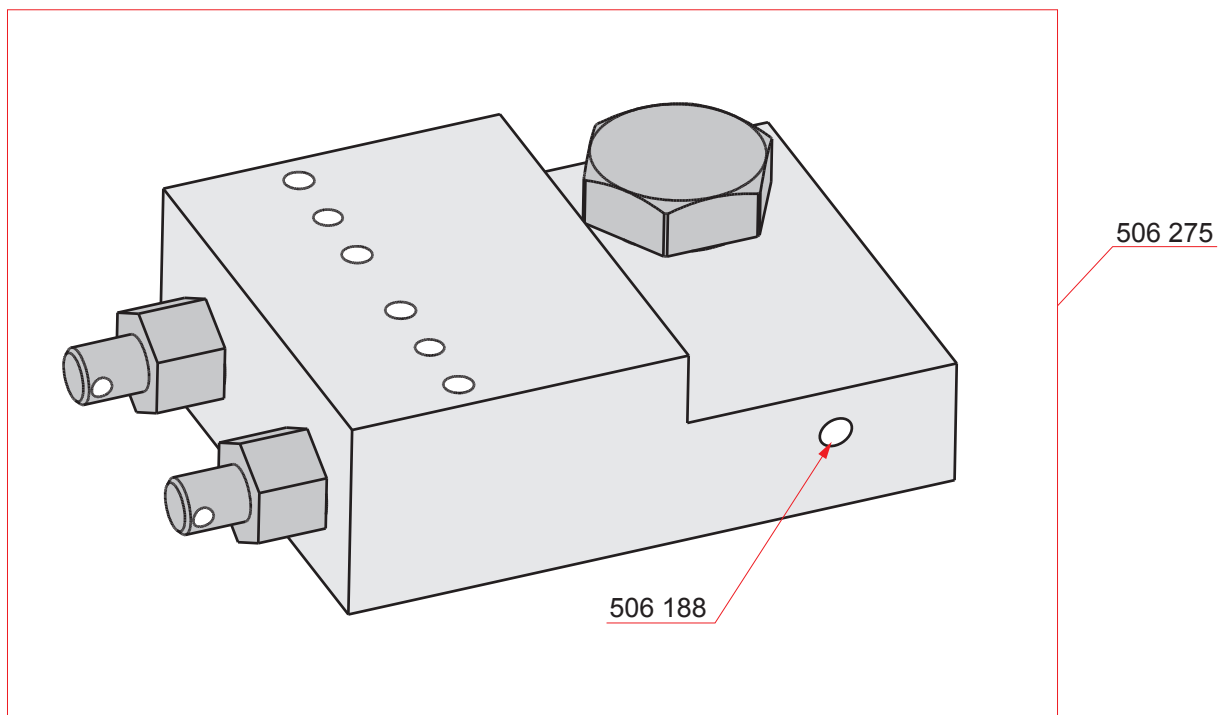


Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 275	Pressure gauge valve	1	-
506 189	Screw	1	-
506 190	Valve	2	-
506 191	Distance ring	1	-
506 192	Sealing ring	1	-
387 006	Glue compound	1	-

Edition: C

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Updated: 06.03.2012

Pressure gauge valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 275	Pressure gauge valve	1	-
506 188	Expander	1	-

Cable clamp

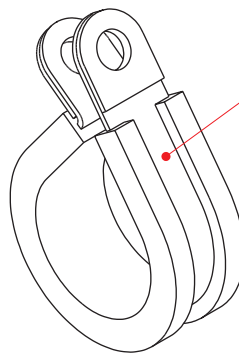
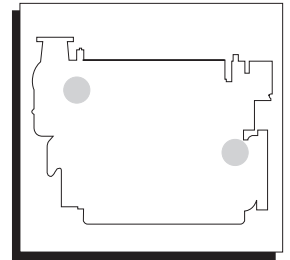
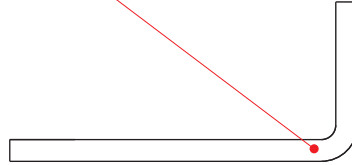
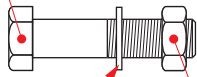
507 138

507 999

507 140

507 139

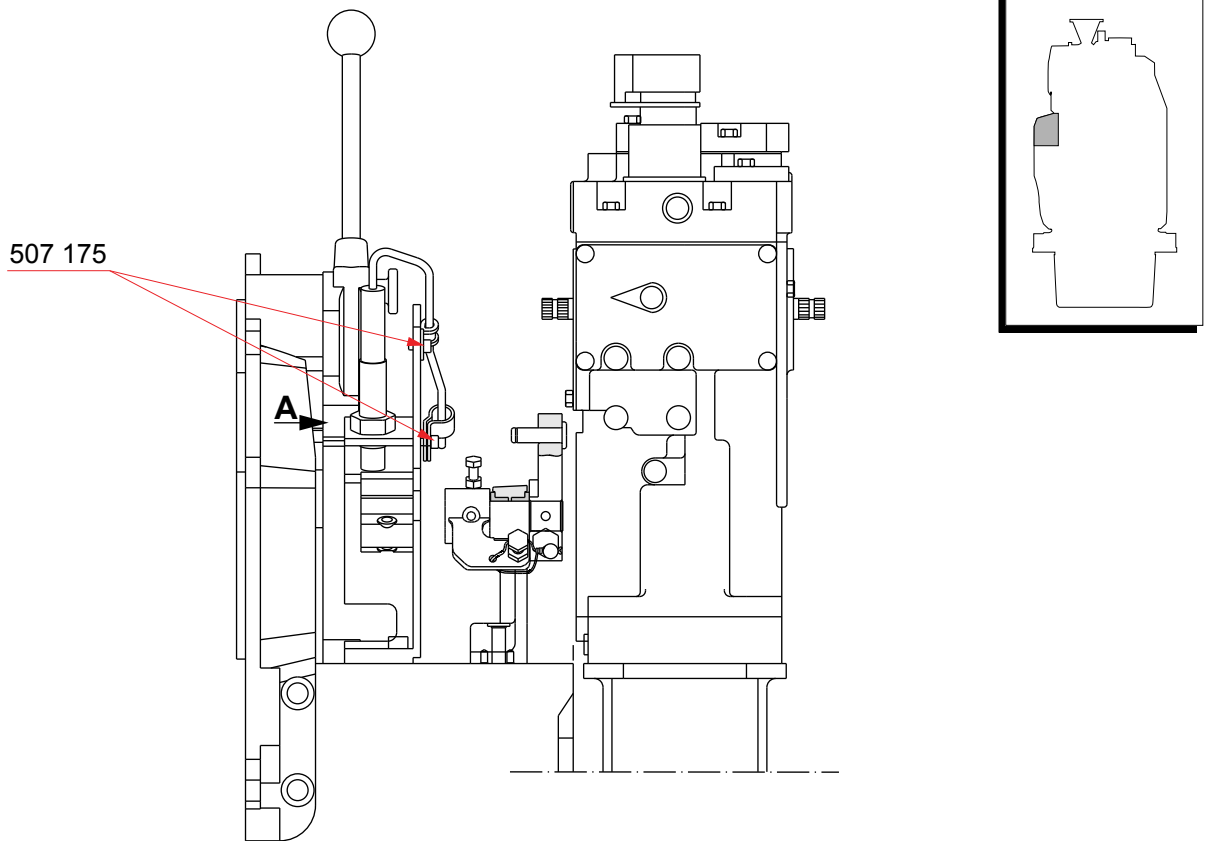
507 998



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 138	Screw	2	-
507 139	Nut	2	-
507 140	Washer	2	-
507 998	Clamp	2	-
507 999	Bracket	2	-

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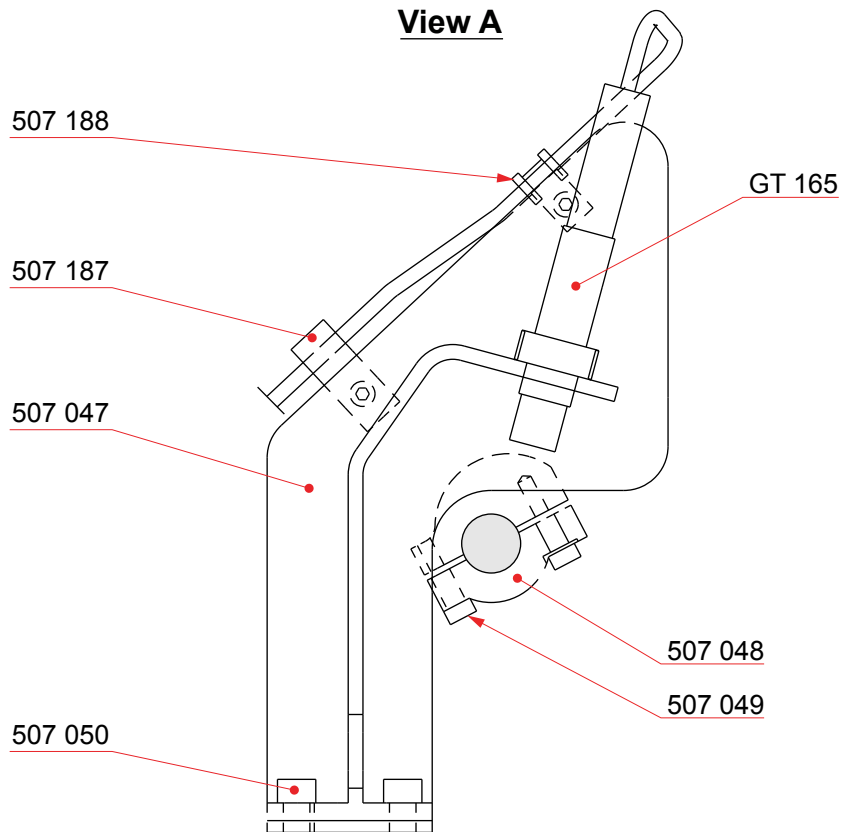
Load sensor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 175	Screw	2	-

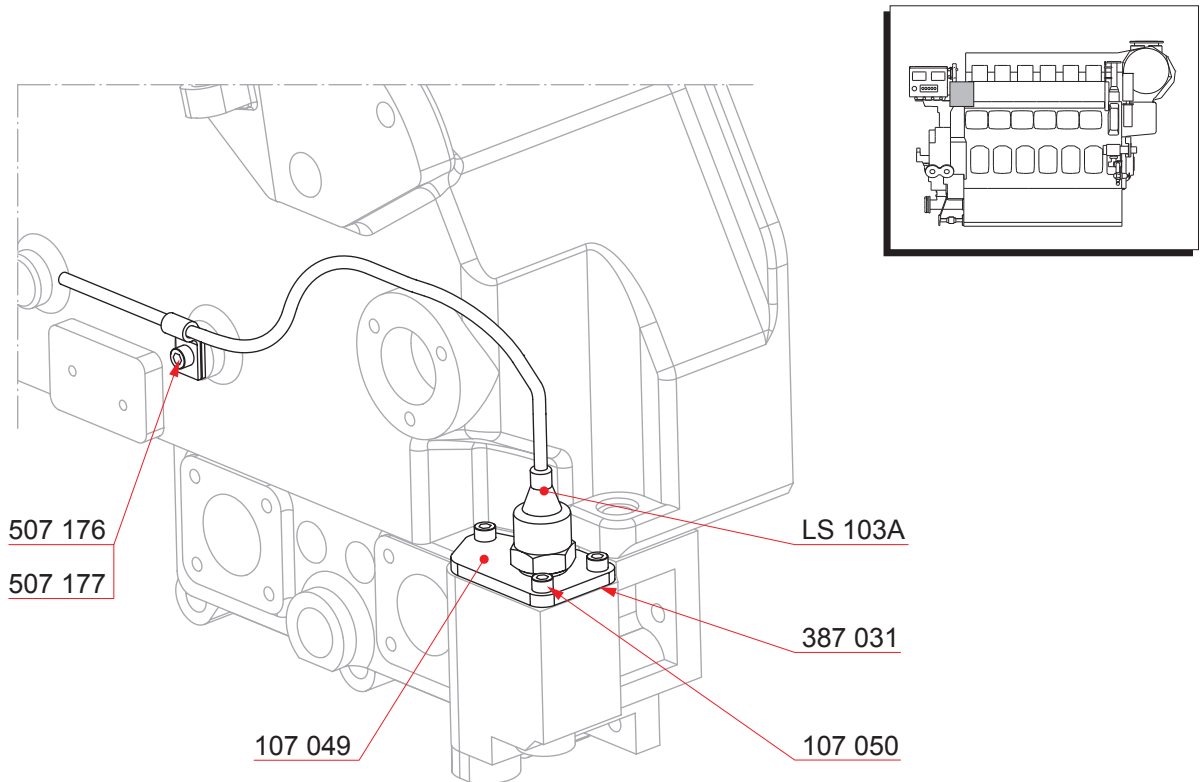
Edition: B
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 Updated: 29.01.2008

Load sensor



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 047	Bracket	1	1.7
507 048	Eccentric	1	0.4
507 049	Screw	2	-
507 050	Screw	2	-
507 187	Fastener	1	-
507 188	Fastener	1	-
GT165	Fuel rack position transducer	1	-

Level switch for fuel pipe block/leakage

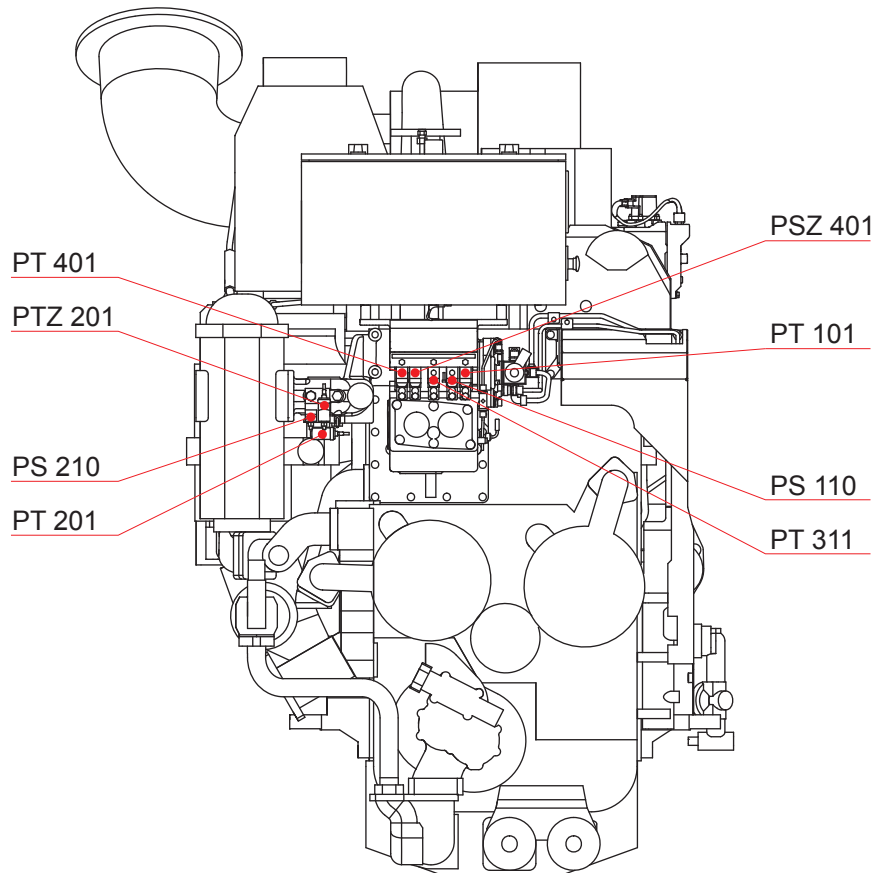


Part No.	Description	Qty [Pcs]	Wt. [Kg]
LS103A	Level switch, fuel pipe block/leakage (1)	1	0.5
107 049	Cover	1	0.4
107 050	Screw	3	0.3
507 176	Cable clip	1	-
507 177	Screw	1	-
387 031	Glue compound	1	-

NOTE! (1) Cable included.

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Sensor locations



Part No.	Description	Qty [Pcs]	Wt. [Kg]
PS110	Pressure switch, start of fuel oil stand by pump (#)	1	-
PS210	Pressure switch, start of lube oil stand by pump (#)	1	-
PSZ401	Pressure switch	1	-
PT101	Pressure transducer, fuel oil	1	-
PT201	Pressure transducer, lube oil	1	-
PT311	Pressure transducer	1	-
PT401	Pressure transducer, HT water	1	-
PTZ201	Pressure transducer, lube oil press. engine inlet	1	-

NOTE! (#) Optional.

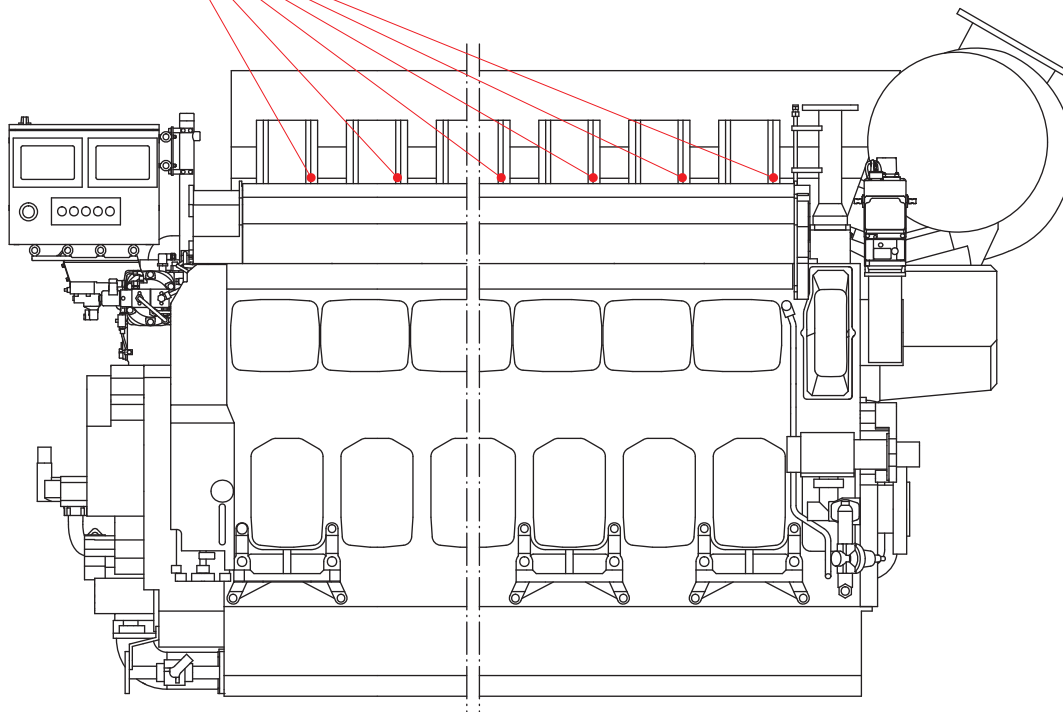
NOTE! When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.

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 Updated: 07.03.2012

Sensor locations

TE 5011A - TE 5091A

200 091



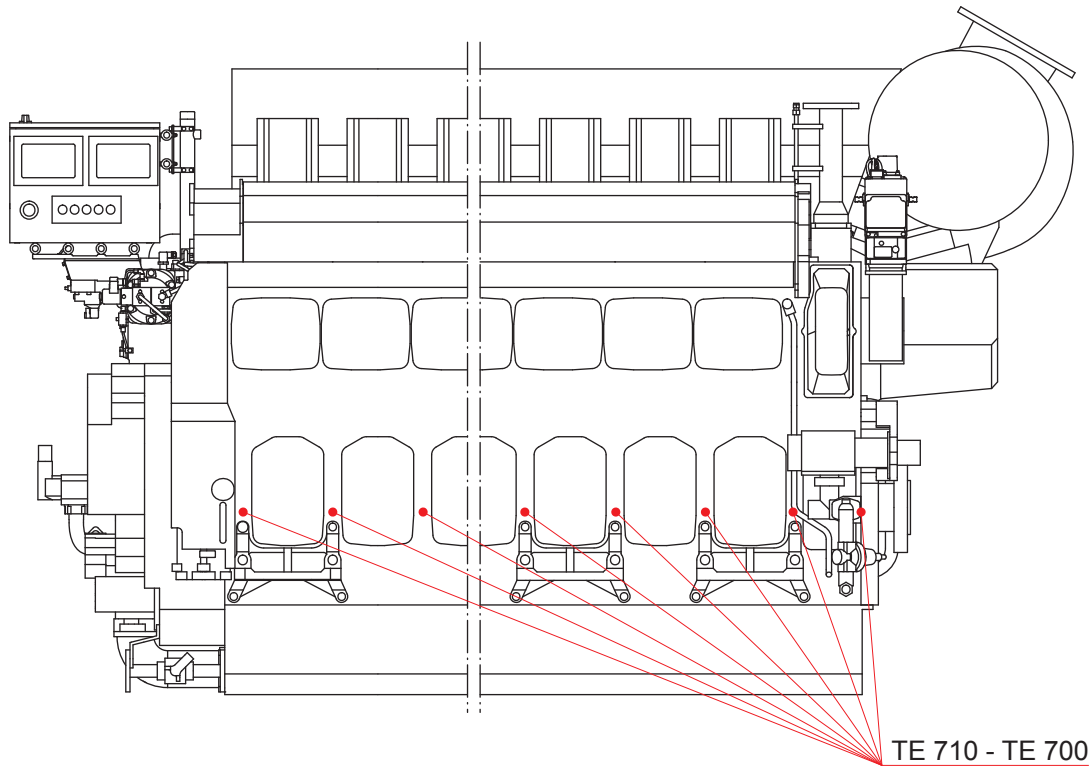
Part No.	Description	Qty [Pcs]	Wt. [Kg]
TE5011A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5021A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5031A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5041A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5051A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5061A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5071A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5081A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
TE5091A	Temperature sensor, exh. gas temp., after cyl.	*	0.5
200 091	Protecting well (5)	1	0.3

NOTE! (5) Specify amount when ordering.

NOTE! *) See page 8.

NOTE! When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.

Sensor locations



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
TE700	Temperature sensor, main bearing 0 (#)	*	-	NOTE!	When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.		
TE701	Temperature sensor, main bearing 1 (#)	*	-				
TE702	Temperature sensor, main bearing 2 (#)	*	-				
TE703	Temperature sensor, main bearing 3 (#)	*	-				
TE704	Temperature sensor, main bearing 4 (#)	*	-				
TE705	Temperature sensor, main bearing 5 (#)	*	-				
TE706	Temperature sensor, main bearing 6 (#)	*	-				
TE707	Temperature sensor, main bearing 7 (#)	*	-				
TE708	Temperature sensor, main bearing 8 (#)	*	-				
TE709	Temperature sensor, main bearing 9 (#)	*	-				
TE710	Temperature sensor, main bearing 10 (#)	*	-				

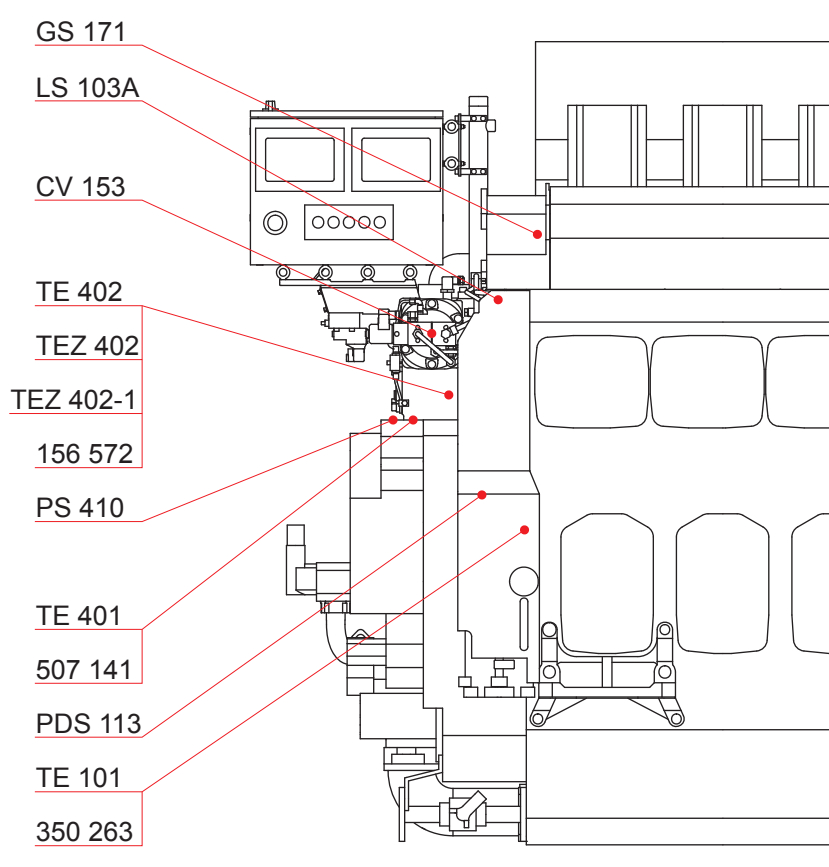
NOTE! (#) Optional.

NOTE! *) See page 8.

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Updated: 07.03.2012

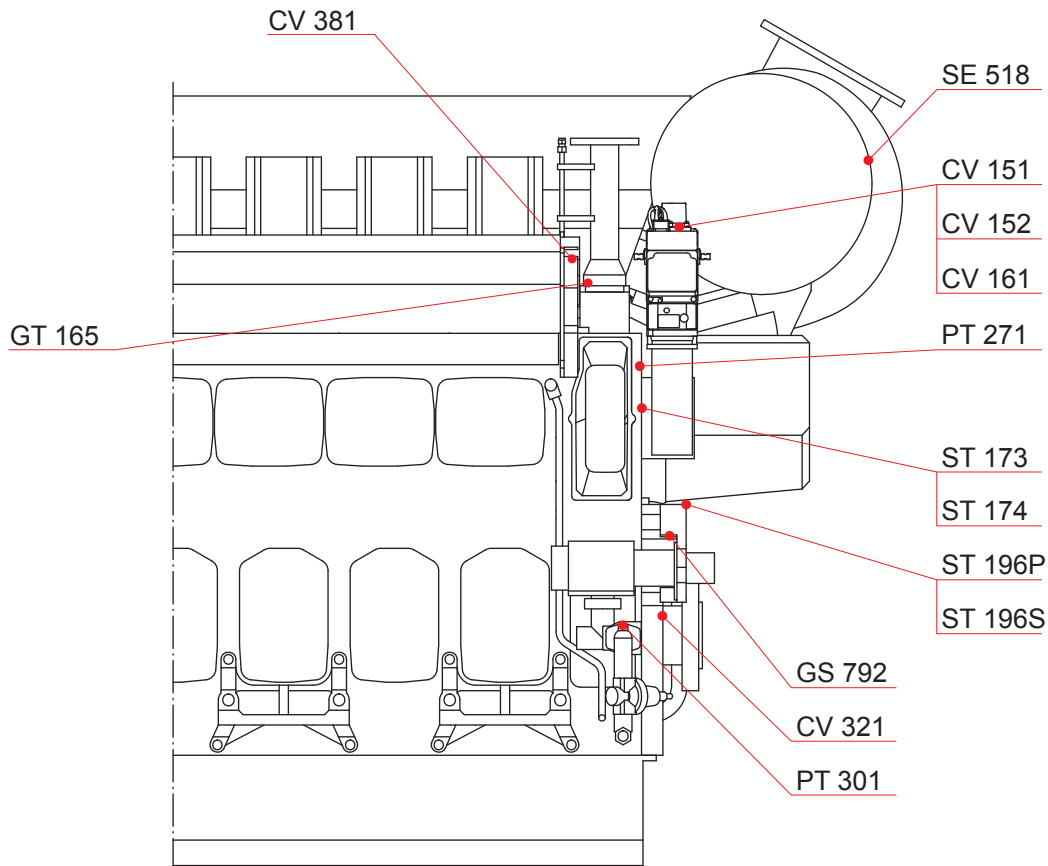
Sensor locations

Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
CV153	Solenoid valve	2	-	NOTE!	When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.		
GS171	Limit switch	1	-				
LS103A	Level switch, fuel pipe block/leakage	1	0.5				
PDS113	Pressure switch, fuel filter high diff. pressure (#)	1	-				
PS410	Pressure switch, start HT-stand by pump (#)	1	-				
TE101	Temperature sensor, fuel oil temperature	1	-				
TE401	Temperature sensor, HT water, before engine	1	-				
TE402	Temperature sensor, HT water, after engine	1	-				
TEZ402	Temperature sensor for HT water	1	-				
TEZ402-1	Temperature sensor for HT water	1	-				
156 572	Protection well	1	-				
350 263	Protecting well	1	-				
507 141	Protecting well (5)	1	0.1				

NOTE! (#) Optional.

NOTE! (5) Specify amount when ordering.

Sensor locations



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
CV151	Solenoid valve (1)	1	-	Arrangement and Wiring Diagram drawings for the specific installation.			
CV152	Solenoid valve (1)	1	-				
CV161	Solenoid valve, actuator control	1	-				
CV321	Solenoid valve, starting air	1	-				
CV381	Control valve (3)	1	-				
GS792	Limit switch	1	-				
GT165	Fuel rack position transducer	1	-				
PT271	Pressure transducer, lube oil pressure TC inlet (6)	1	-				
PT301	Pressure transducer, starting air	1	-				
SE518	Speed pick-up for TC	1	-				
ST196P	Speed sensor	1	-				
ST196S	Speed sensor	1	-				
ST173	Speed pick-up	1	-				
ST174	Speed pick-up	1	-				

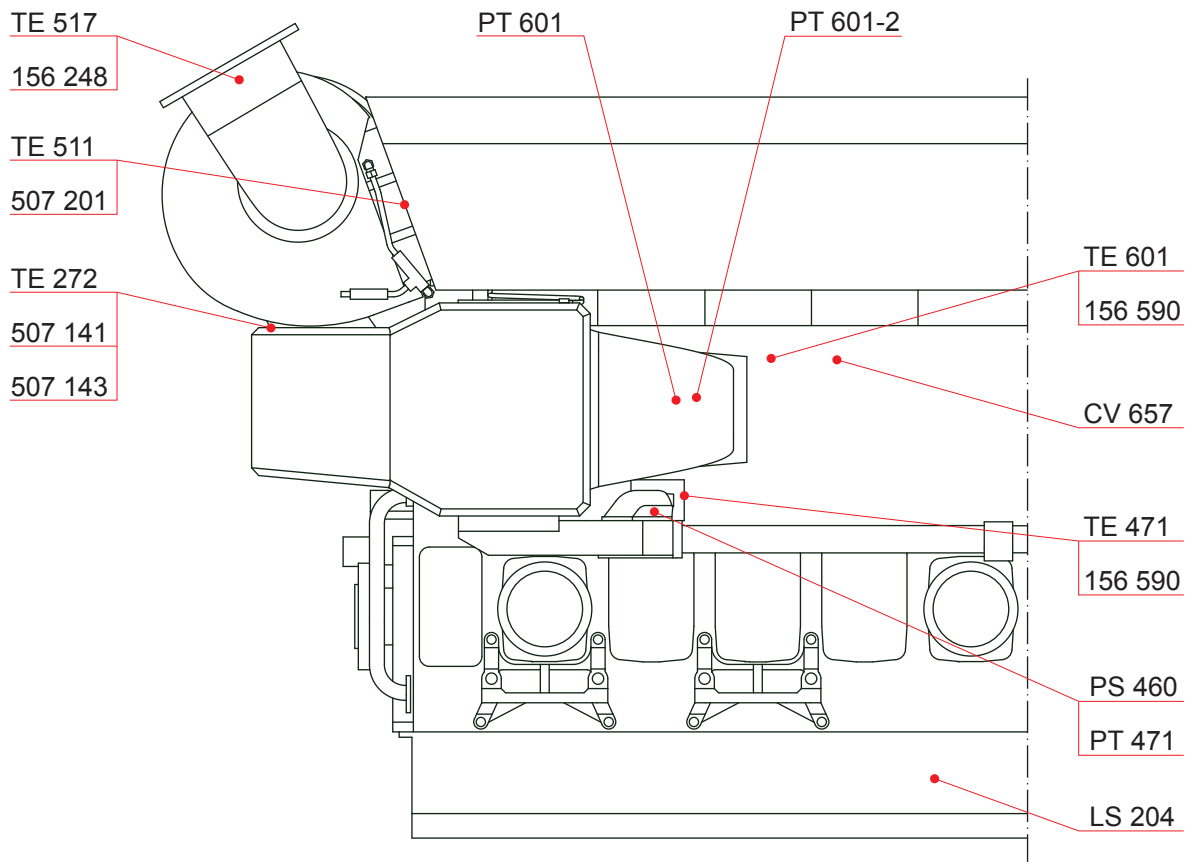
NOTE! (1) Only if RE2231 is used.

NOTE! (3) If variable inlet valve closing (VIC) is used.

NOTE! When ordering spare parts, check codes and names in General

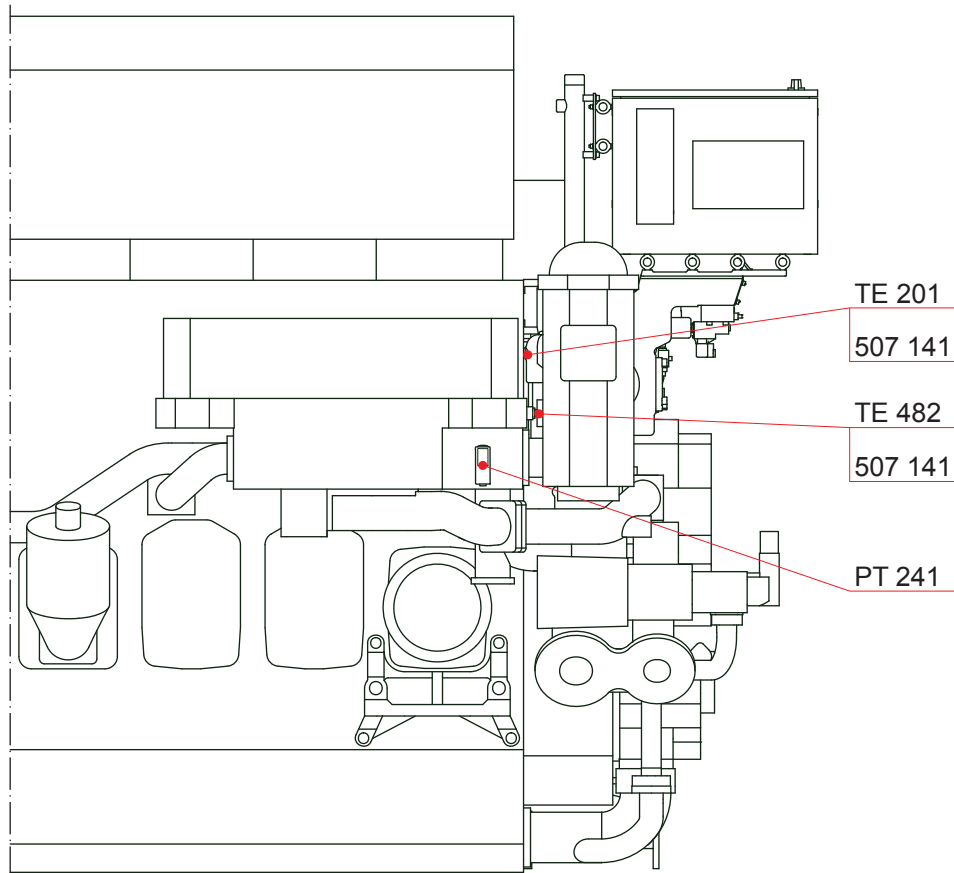
Edition: B
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Updated: 07.03.2012

Sensor locations



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
CV657	Solenoid valve (2)	1	-	507 201	Protecting well	1	0.5
LS204	Level switch, lubricating oil level low	1	-				
PS460	Pressure switch, start LT-stand by pump (#)	1	-	NOTE!	(#) Optional.		
PT471	Pressure transducer, LT water	1	-	NOTE!	(1) Depending on installation.		
PT601	Pressure transducer, charge air pressure	1	-	NOTE!	(2) If air wastegate is used.		
PT601-2	Pressure transducer	1	-	NOTE!	(5) Specify amount when ordering.		
TE272	Temperature sensor, lube oil temperature TC outlet (6)	1	-	NOTE!	(6) If main engine.		
TE471	Temperature sensor for LT water	1	-		When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.		
TE511	Temperature sensor, exh. gas temp., before TC	1	0.8				
TE517	Temperature sensor, exh. gas temp., after TC	1	0.5				
TE601	Temperature sensor, charge air	1	-				
156 248	Protecting well	1	0.3				
156 590	Protection well (5)	1	-				
507 141	Protecting well (5)	1	0.1				
507 143	Sealing ring	1	-				

Sensor locations



Part No.	Description	Qty [Pcs]	Wt. [Kg]
PT241	Pressure transducer, lube oil	1	-
TE201	Temperature sensor, lubricating oil temperature	1	-
TE482	Temp. sensor, LT-thermostatic control, LT-water	1	-
507 141	Protecting well (5)	1	0.1

NOTE! (5) Specify amount when ordering.

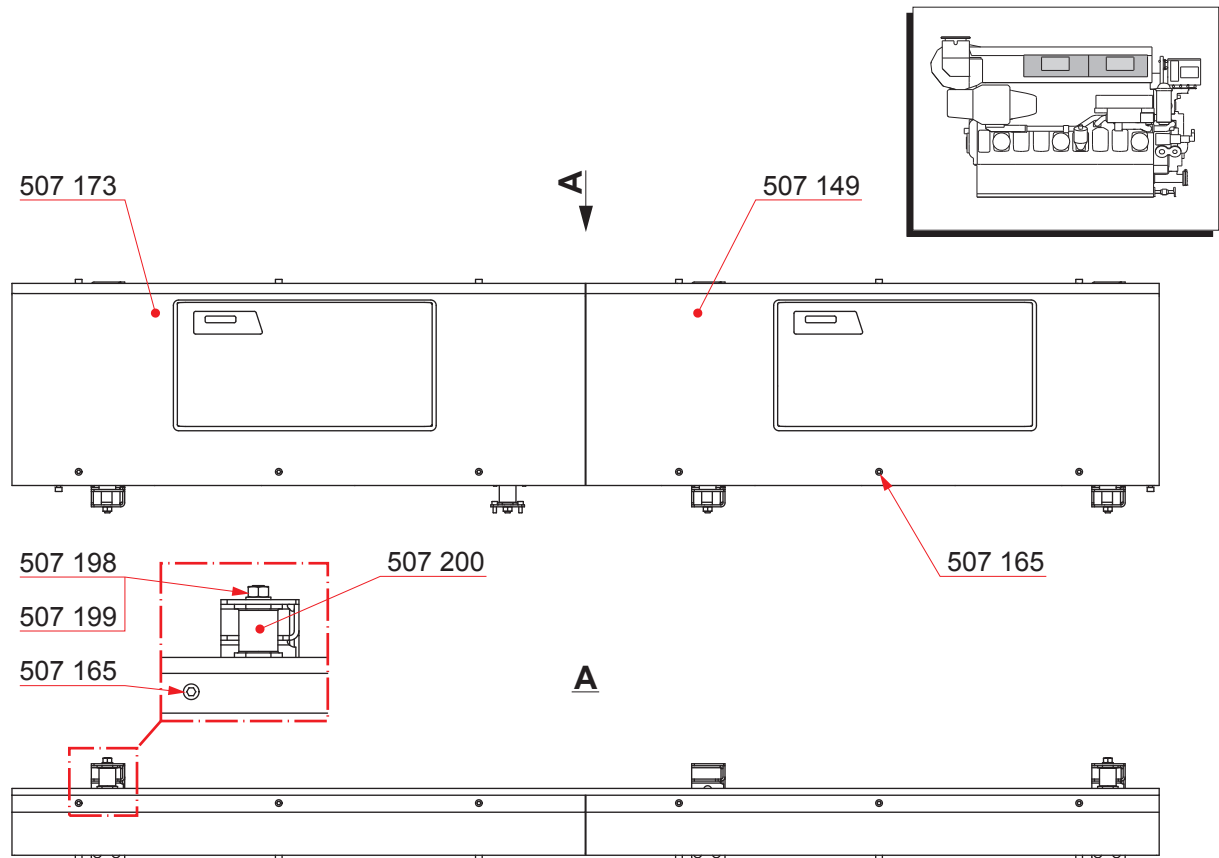
NOTE! When ordering spare parts, check codes and names in General Arrangement and Wiring Diagram drawings for the specific installation.

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 Updated: 07.03.2012

Sensor locations

Part No. and Description	Quantity in pieces			
	4L	6L	8L	9L
TE5 011A Temperature sensor, exh. gas temp., after cyl.	1	1	1	1
TE5 021A Temperature sensor, exh. gas temp., after cyl.	1	1	1	1
TE5 031A Temperature sensor, exh. gas temp., after cyl.	1	1	1	1
TE5 041A Temperature sensor, exh. gas temp., after cyl.	1	1	1	1
TE5 051A Temperature sensor, exh. gas temp., after cyl.	-	1	1	1
TE5 061A Temperature sensor, exh. gas temp., after cyl.	-	1	1	1
TE5 071A Temperature sensor, exh. gas temp., after cyl.	-	-	1	1
TE5 081A Temperature sensor, exh. gas temp., after cyl.	-	-	1	1
TE5 091A Temperature sensor, exh. gas temp., after cyl.	-	-	-	1
TE7 00 Temperature sensor, main bearing 0	1	1	1	1
TE7 01 Temperature sensor, main bearing 1	1	1	1	1
TE7 02 Temperature sensor, main bearing 2	1	1	1	1
TE7 03 Temperature sensor, main bearing 3	1	1	1	1
TE7 04 Temperature sensor, main bearing 4	1	1	1	1
TE7 05 Temperature sensor, main bearing 5	1	1	1	1
TE7 06 Temperature sensor, main bearing 6	-	1	1	1
TE7 07 Temperature sensor, main bearing 7	-	1	1	1
TE7 08 Temperature sensor, main bearing 8	-	-	1	1
TE7 09 Temperature sensor, main bearing 9	-	-	1	1
TE7 10 Temperature sensor, main bearing 10	-	-	-	1

Control modules and electrical equipment



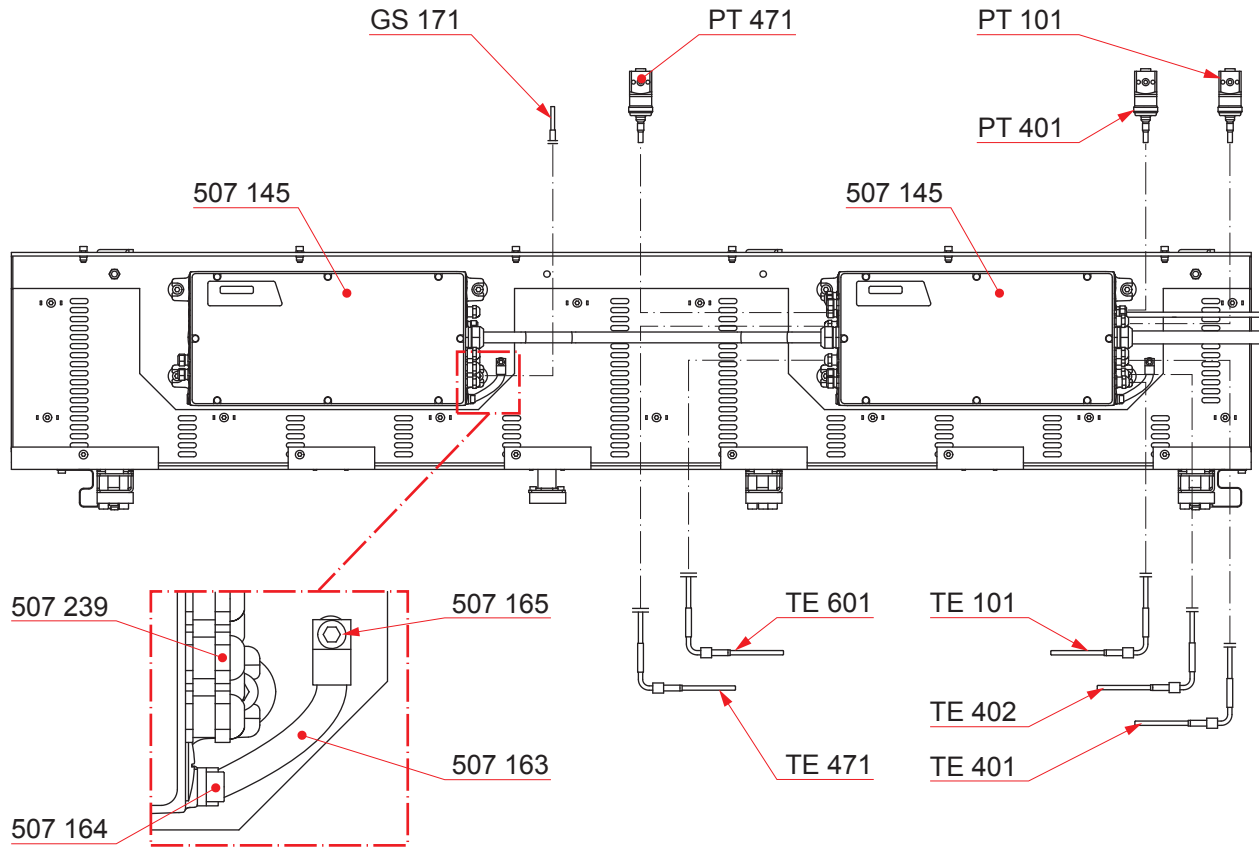
Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 149	Cover	1	4.0
507 165	Screw	27	-
507 173	Cover	1	4.0
507 198	Nut	12	-
507 199	Washer	2	-
507 200	Vibration damper	6	-

Edition: A

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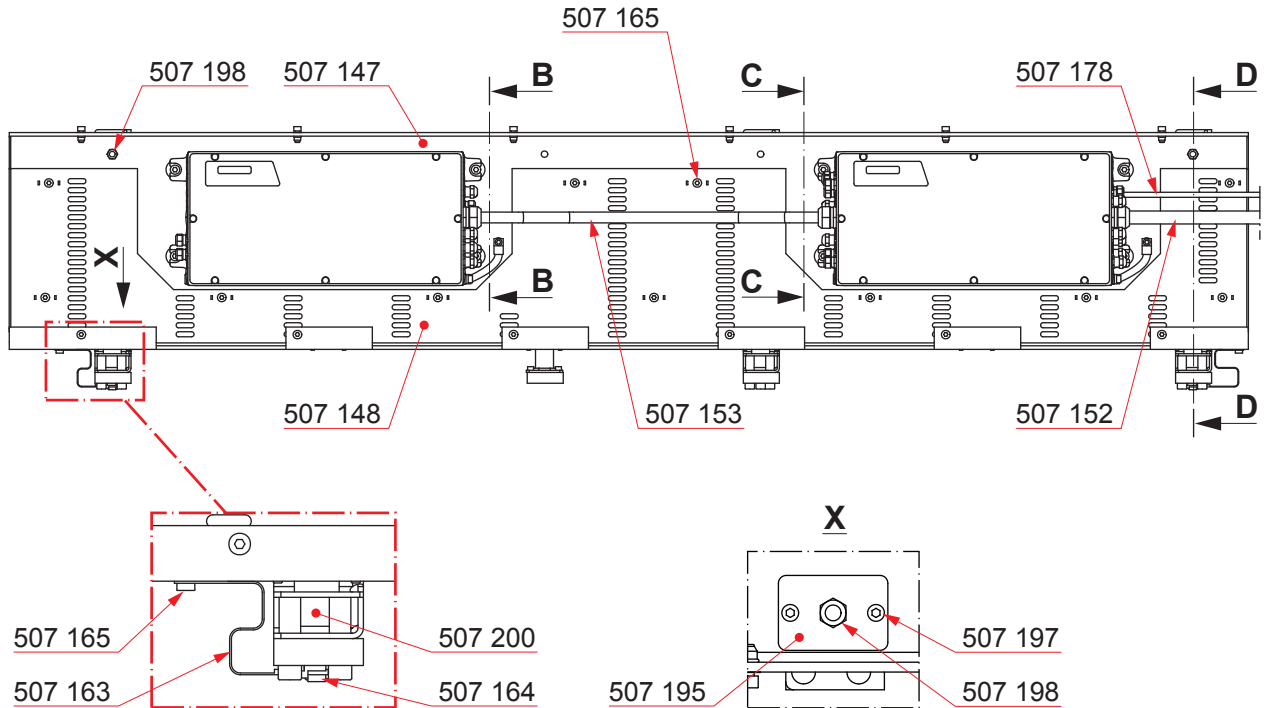
Updated: 16.05.2011

Control modules and electrical equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 145	Electronic unit	2	5.1
507 163	Earthing strap	4	-
507 164	Screw	4	-
507 165	Screw	27	-
507 239	Cable gland	13	-
GS171	Limit switch	1	0.5
PT101	Pressure transducer, fuel oil	1	0.8
PT401	Pressure transducer, HT water	1	-
PT471	Pressure transducer, LT water	1	-
TE101	Temperature sensor, fuel oil temperature	1	-
TE401	Temperature sensor, HT water, before engine	1	-
TE402	Temperature sensor, HT water, after engine	1	-
TE471	Temperature sensor for LT water	1	-
TE601	Temperature sensor, charge air	1	-

Control modules and electrical equipment



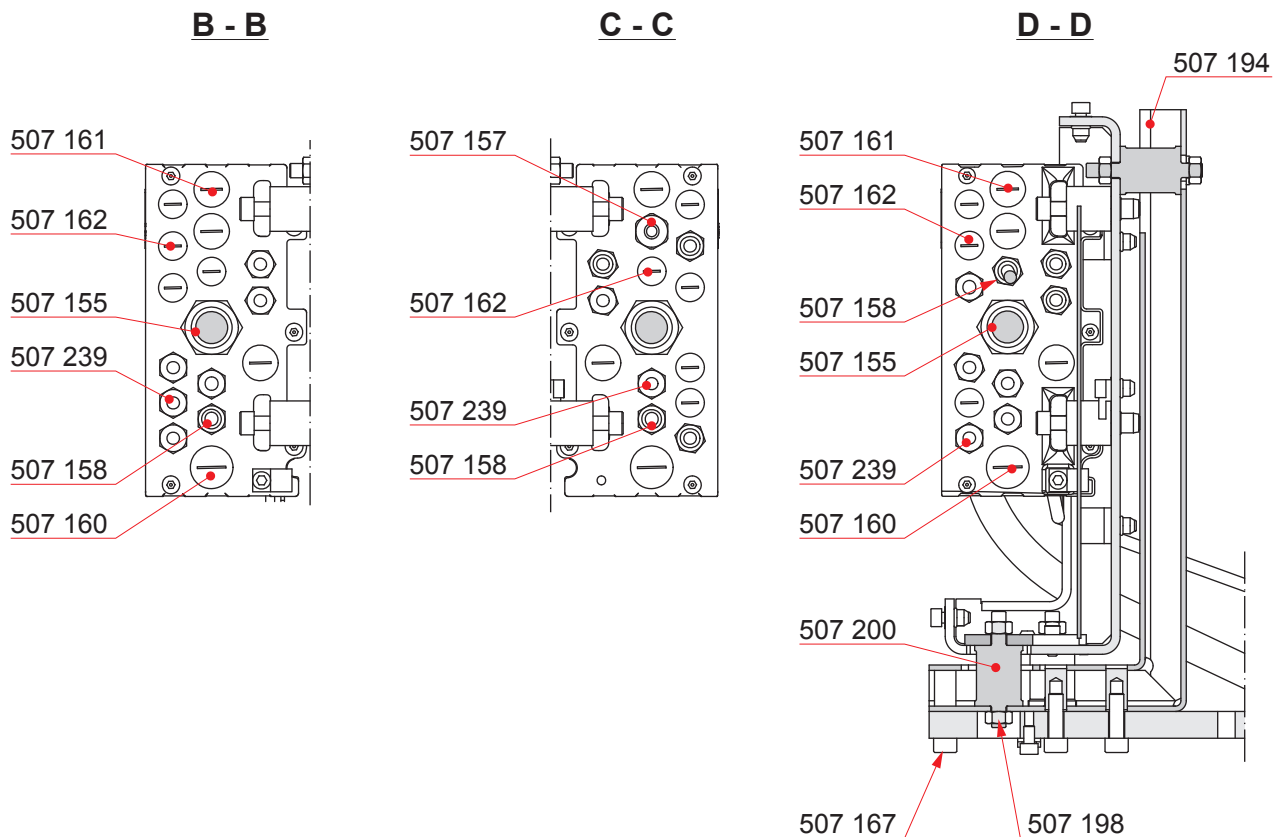
Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 147	Bracket	1	30.0
507 148	Cable rail	1	4.0
507 152	Cable (1)	1	0.2
507 153	Cable (1)	1	0.2
507 163	Earthing strap	4	-
507 164	Screw	4	-
507 165	Screw	27	-
507 178	Cable (1)	1	0.2
507 195	Fastener	6	0.1
507 197	Screw	14	-
507 198	Nut	12	-
507 200	Vibration damper	6	-

NOTE! (1) Specify length when ordering.

Edition: A

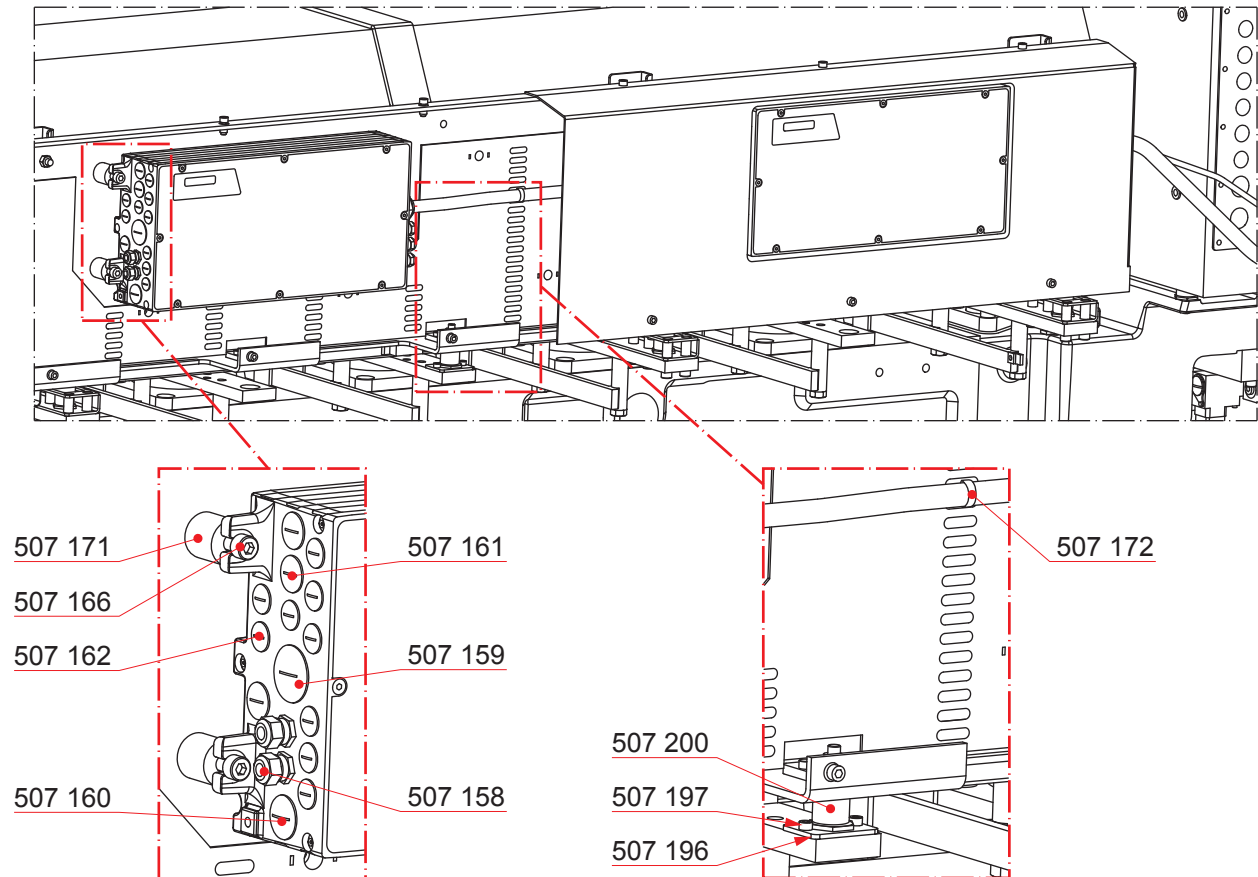
Page: 4(5)

Updated: 16.05.2011

Control modules and electrical equipment

Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 155	Cable gland	3	-
507 157	Cable gland	1	-
507 158	Cable gland	10	-
507 160	Plug	4	-
507 161	Plug	11	-
507 162	Plug	21	-
507 167	Screw	12	-
507 194	Bracket	3	1.5
507 198	Nut	12	-
507 200	Vibration damper	6	-
507 239	Cable gland	13	-

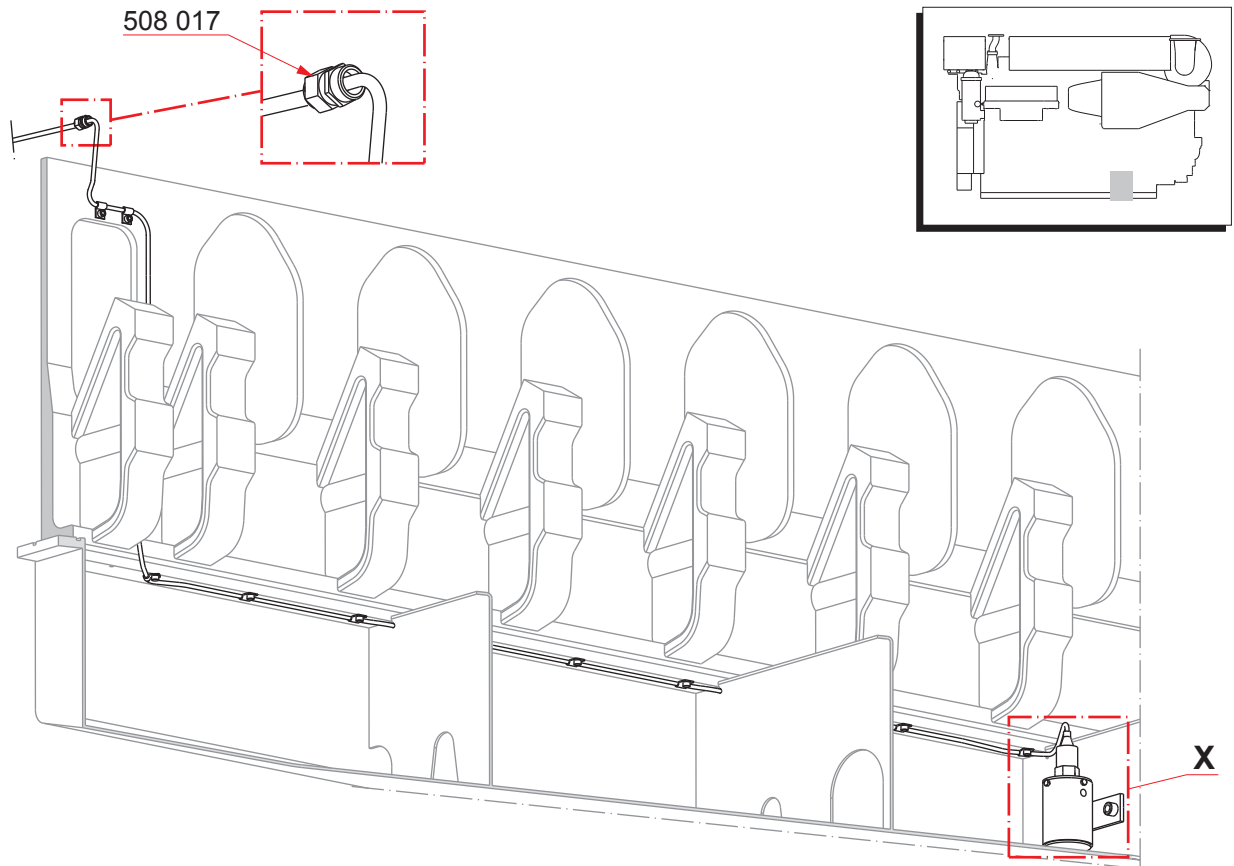
Control modules and electrical equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 158	Cable gland	10	-
507 159	Plug	1	-
507 160	Plug	4	-
507 161	Plug	11	-
507 162	Plug	21	-
507 166	Screw	8	-
507 171	Distance ring	8	0.1
507 172	Cable clamp	18	-
507 196	Fastener	1	0.1
507 197	Screw	14	-
507 200	Vibration damper	6	-

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Lubricating oil level alarm switch

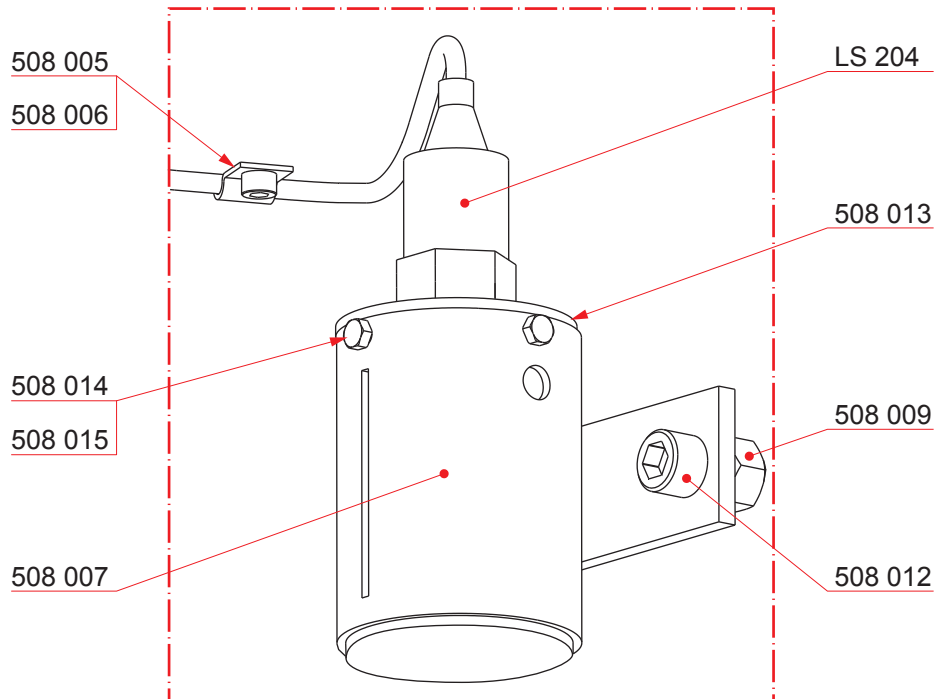


Part No.	Description	Qty [Pcs]	Wt. [Kg]
508 017	Cable gland	1	-

Edition: C

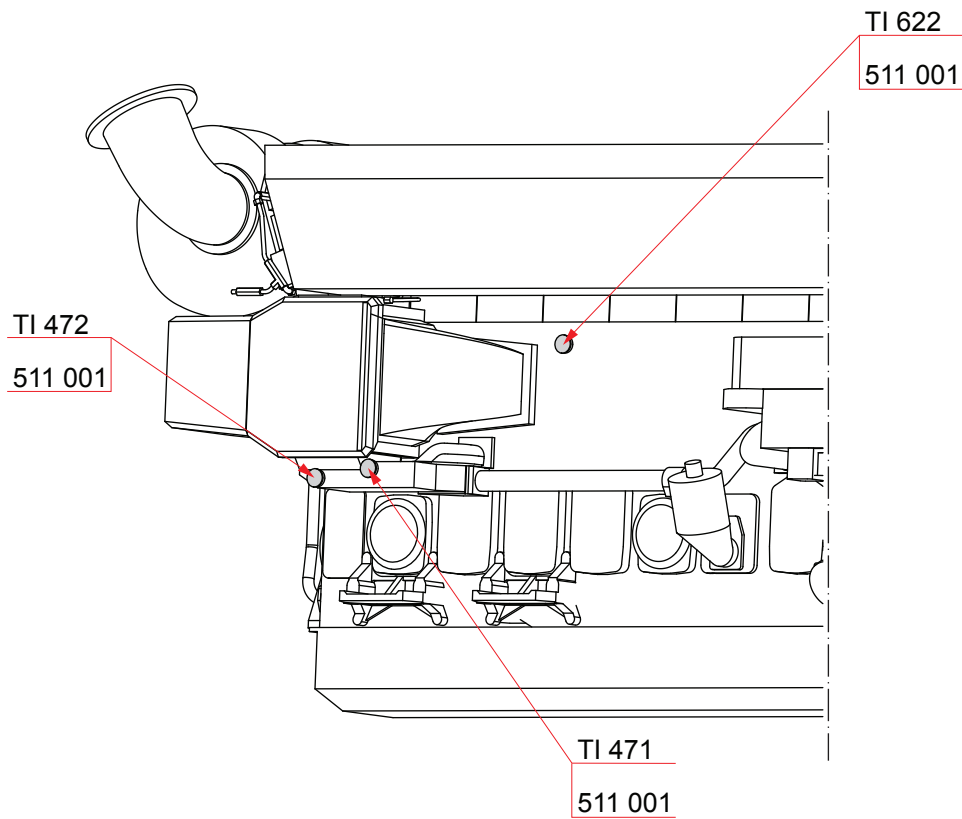
Page: 2(2)

Updated: 28.09.2010

Lubricating oil level alarm switch**Detail X**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
508 005	Cable clamp	12	-
508 006	Screw	12	-
508 007	Tank for alarm device	1	1.3
508 009	Nut	2	-
508 012	Screw	2	-
508 013	Cover	1	0.2
508 014	Screw	3	-
508 015	Locking plate	3	-
LS204	Level switch, lubricating oil level low	1	1.0

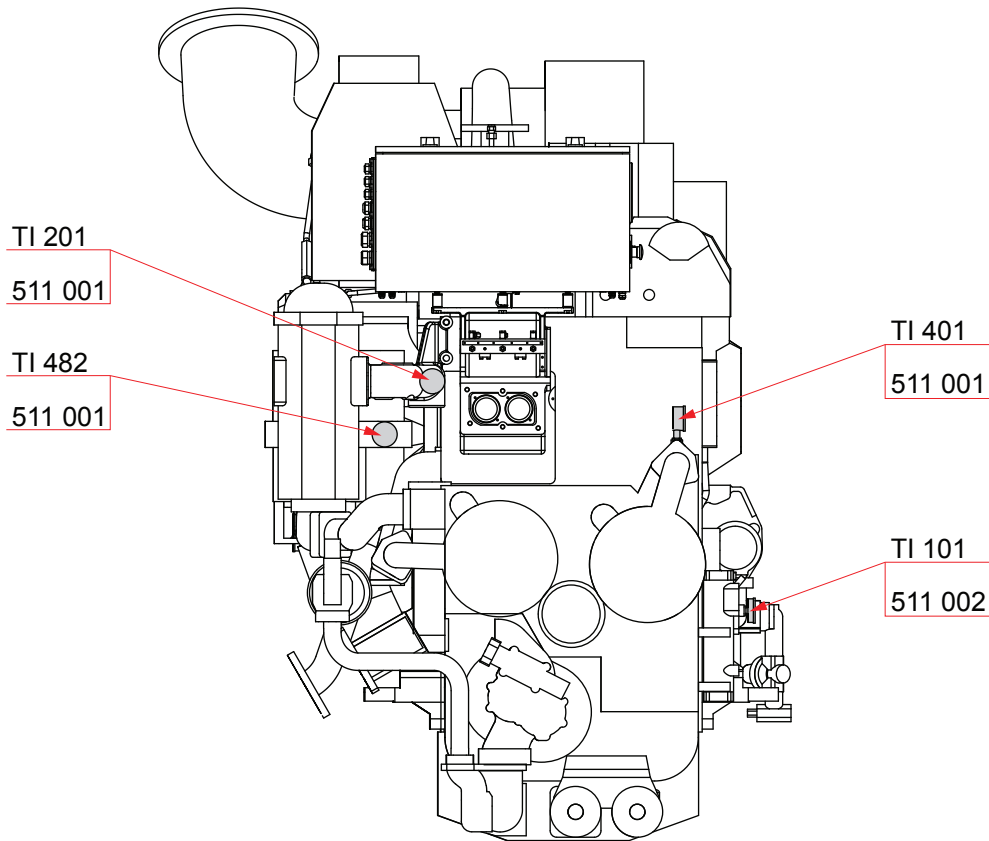
Thermometers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
TI471	Thermometer, LT water, before charge air cooler	1	0.2
TI472	Thermometer, LT water, after charge air cooler	1	0.2
TI622	Thermometer for charge air, after cooler	1	0.2
511 001	Sealing ring	6	-

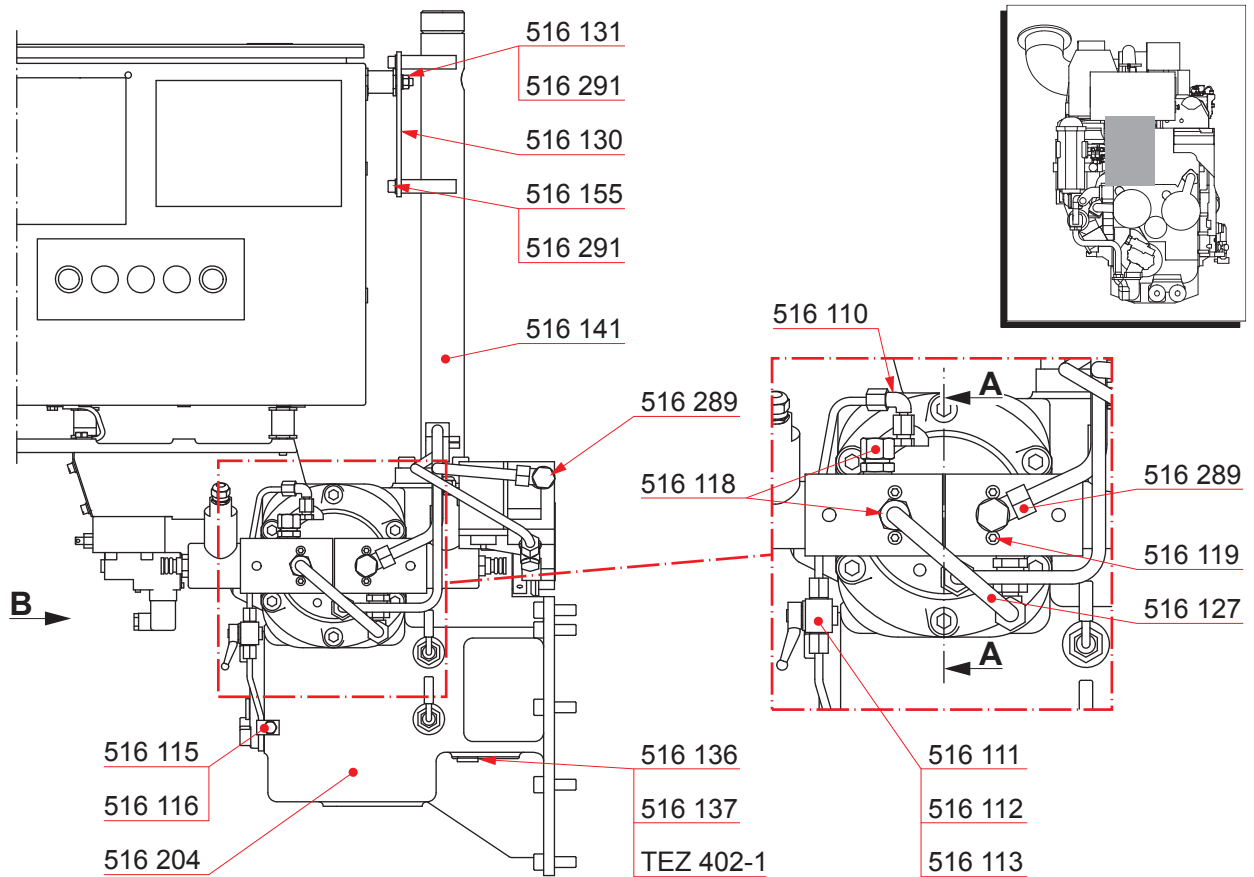
Edition: A
 Page: 2(2)
 Updated: 29.05.2007

Thermometers



Part No.	Description	Qty [Pcs]	Wt. [Kg]
TI101	Thermometer, fuel oil, engine inlet	1	0.2
TI201	Thermometer for lubricating oil, before engine	1	0.2
TI401	Thermometer, HT water, before engine	1	0.3
TI482	Thermometer, LT water, after LO-cooler	1	0.2
511 001	Sealing ring	6	-
511 002	Sealing ring	1	-

Bracket for connecting box



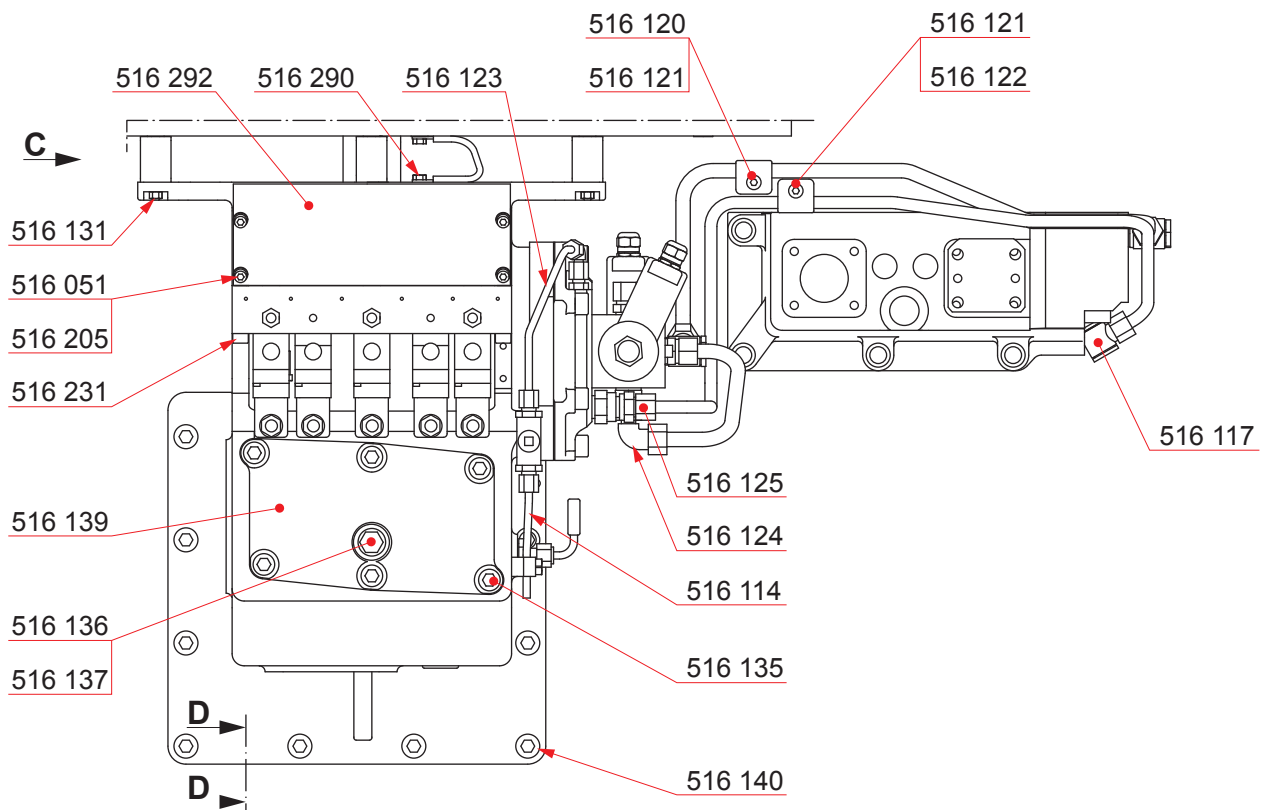
Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 110	Pipe union	1	-
516 111	Cutting ring	2	-
516 112	Union nut	2	-
516 113	Ball valve	1	0.2
516 115	Pipe clamp	2	-
516 116	Screw	1	-
516 118	Pipe union	2	-
516 119	Screw	4	-
516 127	Pipe	1	-
516 130	Bracket	1	0.6
516 131	Nut	7	-
516 136	Sealing ring	2	-
516 137	Plug	2	-
516 141	Pipe	1	3.1
516 155	Screw	4	-
516 204	Bracket	1	76.5
516 289	Pipe union	2	-
516 291	Washer	5	-
TEZ402-1	Temperature sensor for HT water (1)	1	-

NOTE! (1) Depending on installation.

Edition: B

Page: 2(5)

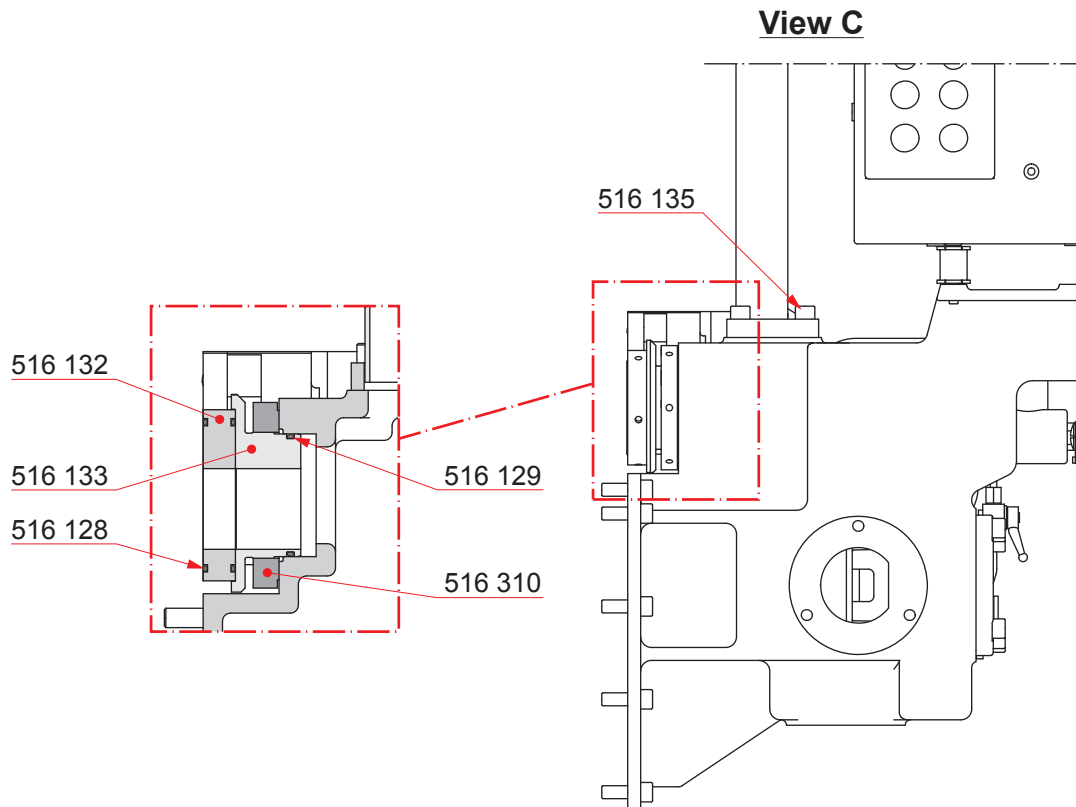
Updated: 05.10.2010

Bracket for connecting box**View B**

Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 051	Screw	4	-
516 114	Pipe	1	-
516 117	Pipe union	1	-
516 120	Pipe clamp	1	-
516 121	Screw	2	-
516 122	Pipe clamp	1	-
516 123	Pipe	1	-
516 124	Pipe union	1	0.1
516 125	Non-return valve	1	0.1
516 131	Nut	7	-
516 135	Screw	9	-
516 136	Sealing ring	2	-
516 137	Plug	2	-
516 139	Cover (1)	1	3.7
516 140	Screw	12	-
516 205	Washer	4	-
516 231	Screw	4	-
516 290	Screw	1	-
516 292	Splash guard	1	0.3

NOTE! (1) The thermostatic valve for HT-water is shown in section 196-

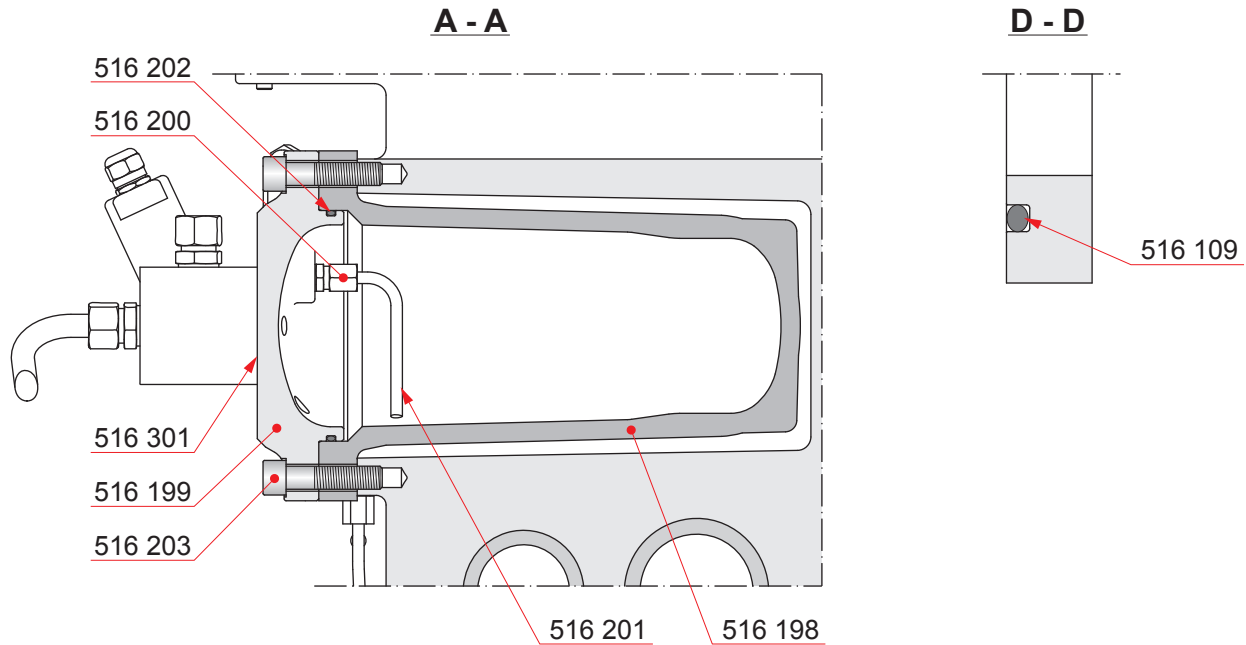
Bracket for connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 128	O-ring	2	-
516 129	O-ring	1	-
516 132	Throttle flange	1	-
516 133	Throttle flange	1	1.2
516 135	Screw	9	-
516 310	Nut	1	1.4

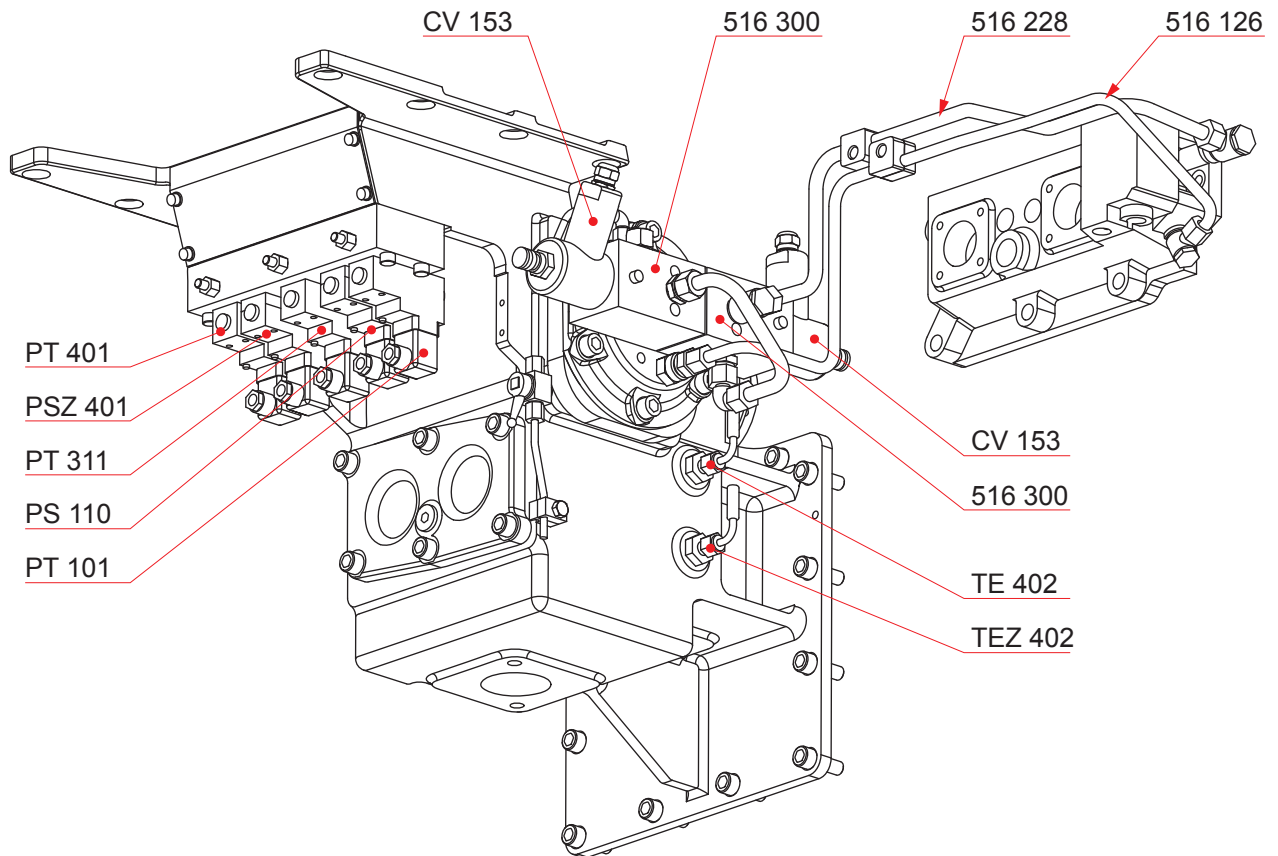
Edition: B
 Page: 4(5)
 Updated: 05.10.2010

Bracket for connecting box



Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 109	O-ring	1	-
516 198	Air tank	1	8.0
516 199	Cover	1	3.5
516 200	Pipe union	1	-
516 201	Pipe	1	-
516 202	O-ring	1	-
516 203	Screw	6	-
516 301	O-ring	2	-

Bracket for connecting box

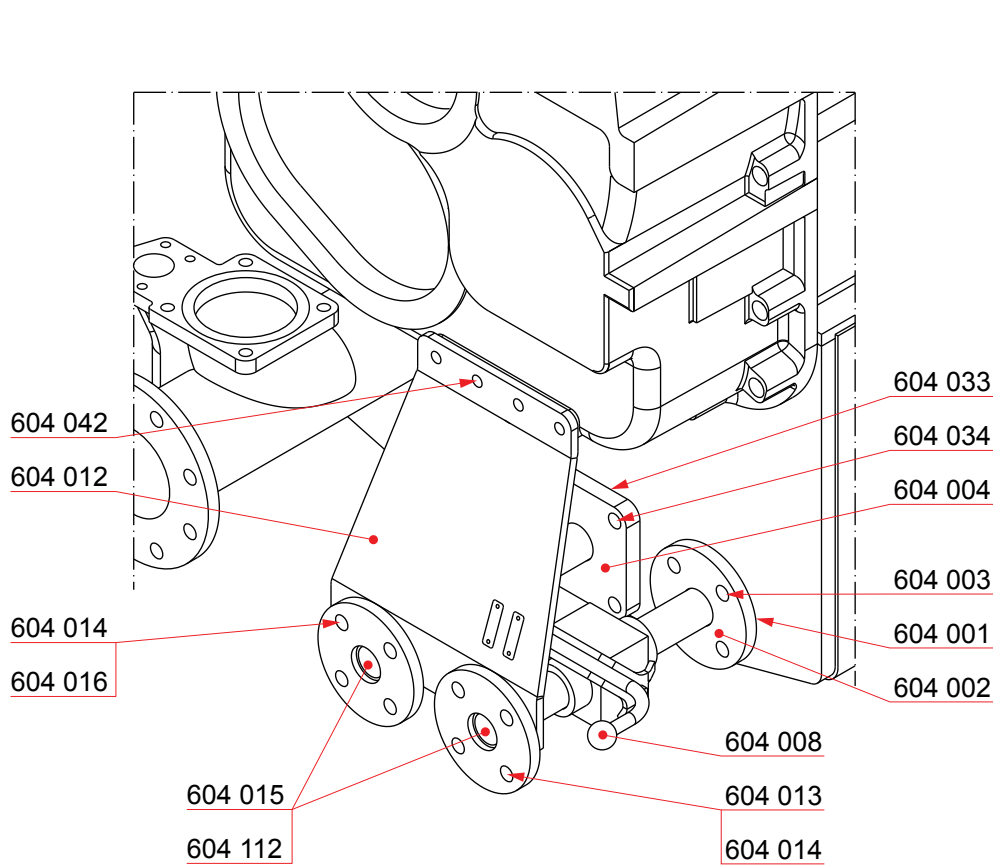


Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 126	Pipe	1	0.2
516 228	Pipe	1	0.4
516 300	Valve body	2	0.5
CV153	Solenoid valve	2	0.6
PS110	Pressure switch, start of fuel oil stand by pump (1)	1	-
PSZ401	Pressure switch (1)	1	-
PT101	Pressure transducer, fuel oil	1	-
PT311	Pressure transducer	1	-
PT401	Pressure transducer, HT water	1	-
TE402	Temperature sensor, HT water, after engine	1	-
TEZ402	Temperature sensor for HT water	1	-

NOTE! (1) Depending on installation.

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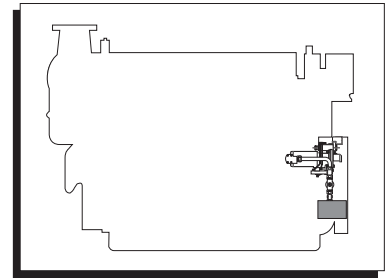
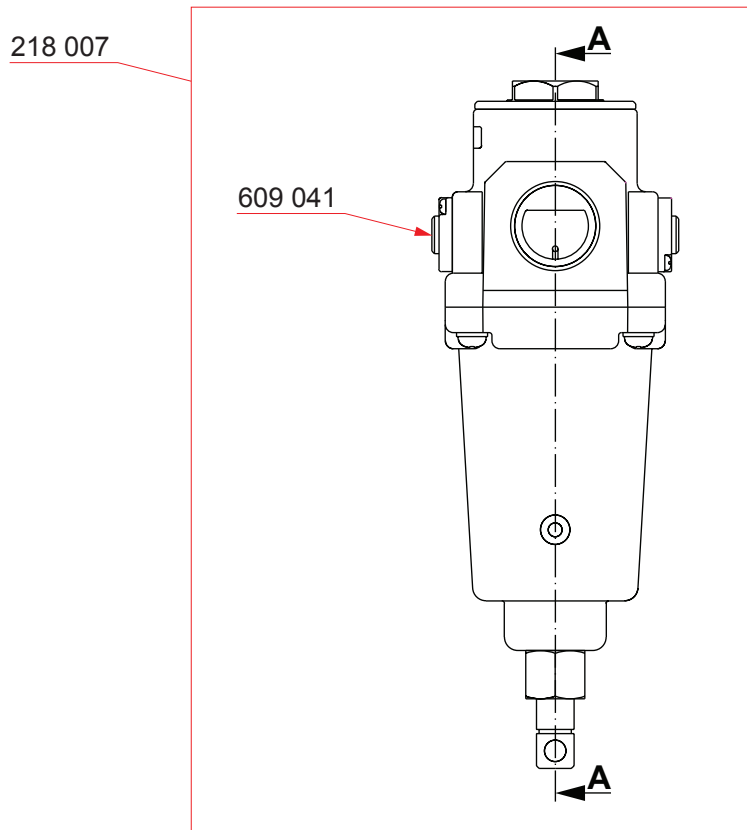
Piping for separator



Part No.	Description	Qty [Pcs]	Wt. [Kg]
604 001	O-ring	1	-
604 002	Pipe	1	8.3
604 003	Screw	4	-
604 004	Pipe	1	9.4
604 008	Lever	1	0.9
604 012	Bracket	1	-
604 013	Screw	4	0.1
604 014	Nut	8	-
604 015	Gasket	2	-
604 016	Screw	4	0.1
604 033	O-ring	1	-
604 034	Screw	4	-
604 042	Screw	4	-
604 112	Flange	2	1.8

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Pressure regulating valve

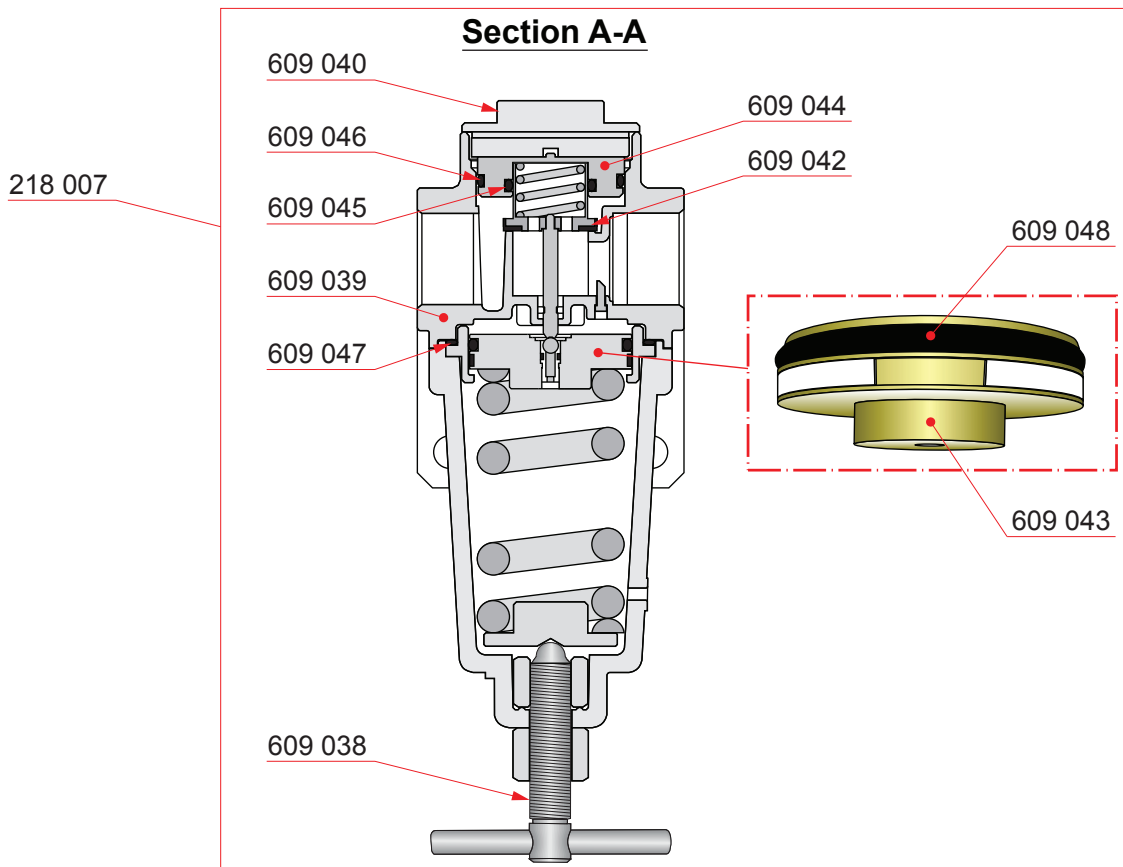


Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 007	Pressure regulating valve	1	2.1
609 041	Plug	2	0.2

Edition: D

Page: 2(3)

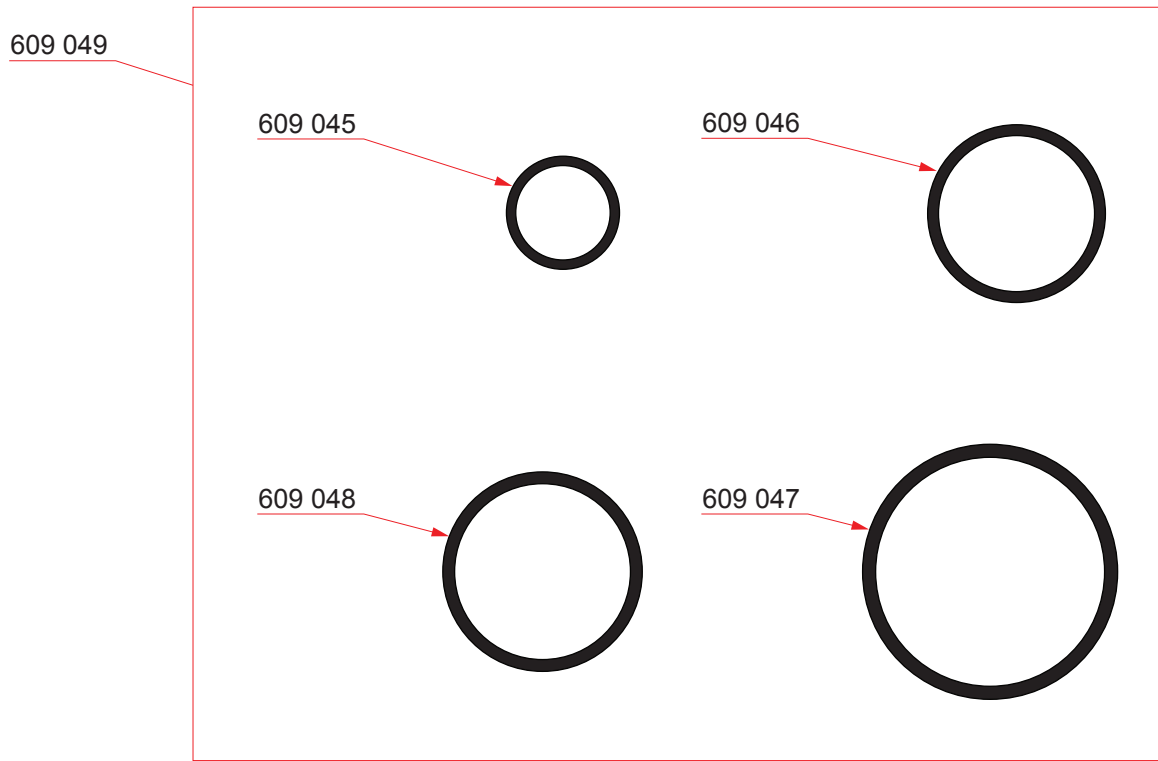
Updated: 27.05.2008

Pressure regulating valve

Part No.	Description	Qty [Pcs]	Wt. [Kg]
218 007	Pressure regulating valve	1	2.1
609 038	Handle	1	0.1
609 039	Body	1	1.5
609 040	Cap	1	0.2
609 042	Valve seat	1	0.1
609 043	Piston	1	0.1
609 044	Valve guide	1	0.1
609 045	O-ring	1	0.1
609 046	O-ring *)	1	-
609 047	O-ring *)	1	-
609 048	O-ring *)	1	-

NOTE! *) Can not be ordered separately.

Pressure regulating valve

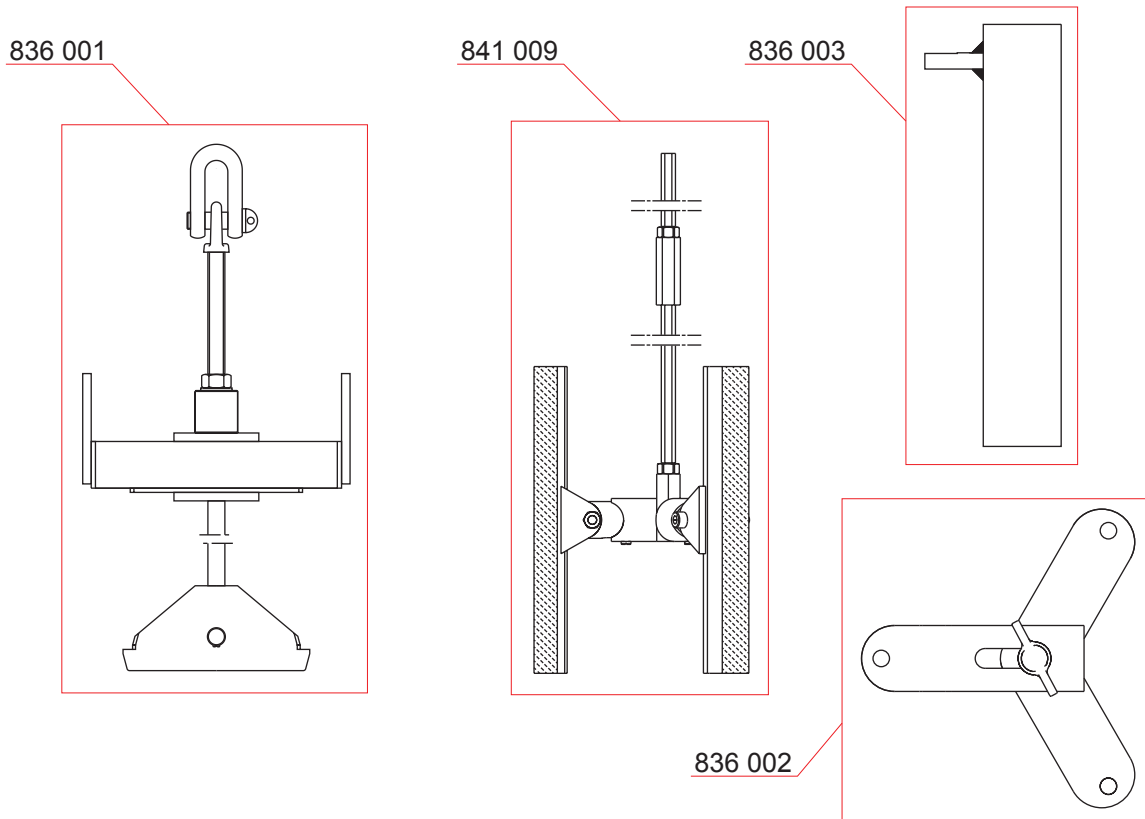


Part No.	Description	Qty [Pcs]	Wt. [Kg]
609 049	Sealing set for pressure regulating valve	1	0.1
609 045	O-ring	1	0.1
609 046	O-ring *)	1	-
609 047	O-ring *)	1	-
609 048	O-ring *)	1	-

NOTE! *) Can not be ordered separately.

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Tools for cylinder liner

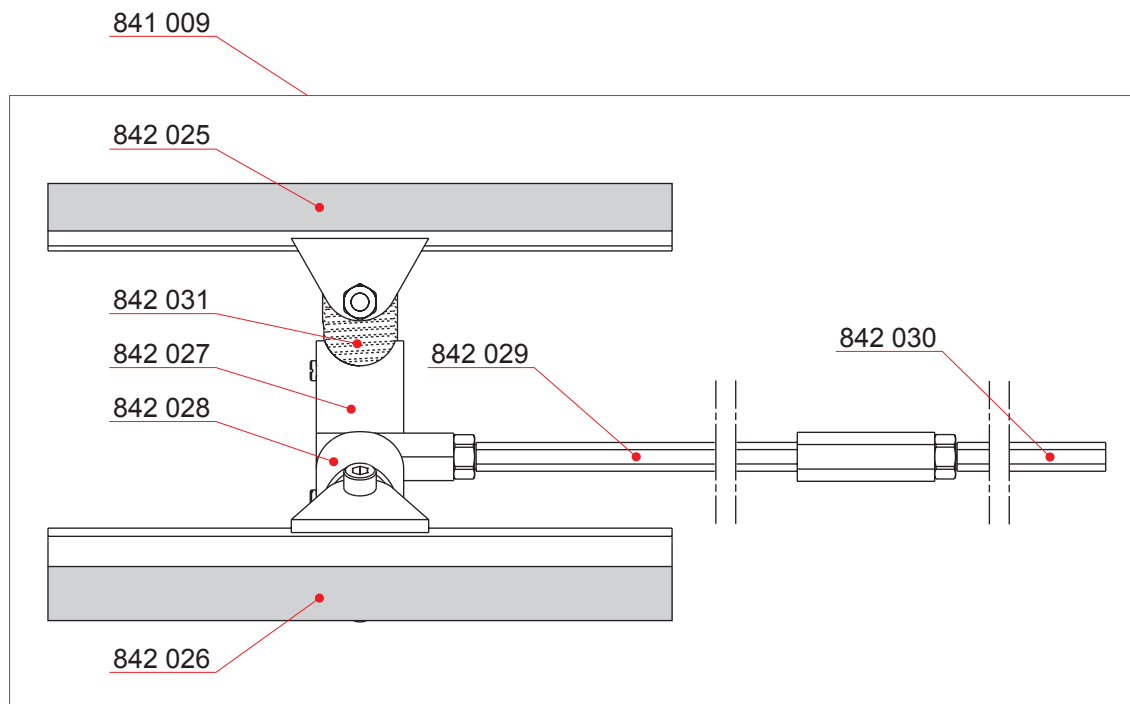


Part No.	Description	Qty [Pcs]	Wt. [Kg]
836 001	Extracting and lifting tool	1	13.6
836 002	Dismantling tool for antipolishing ring	1	0.9
836 003	Holder for cylinder liner	1	1.2
841 009	Honing tool for cylinder liner	1	11.4

Edition: A

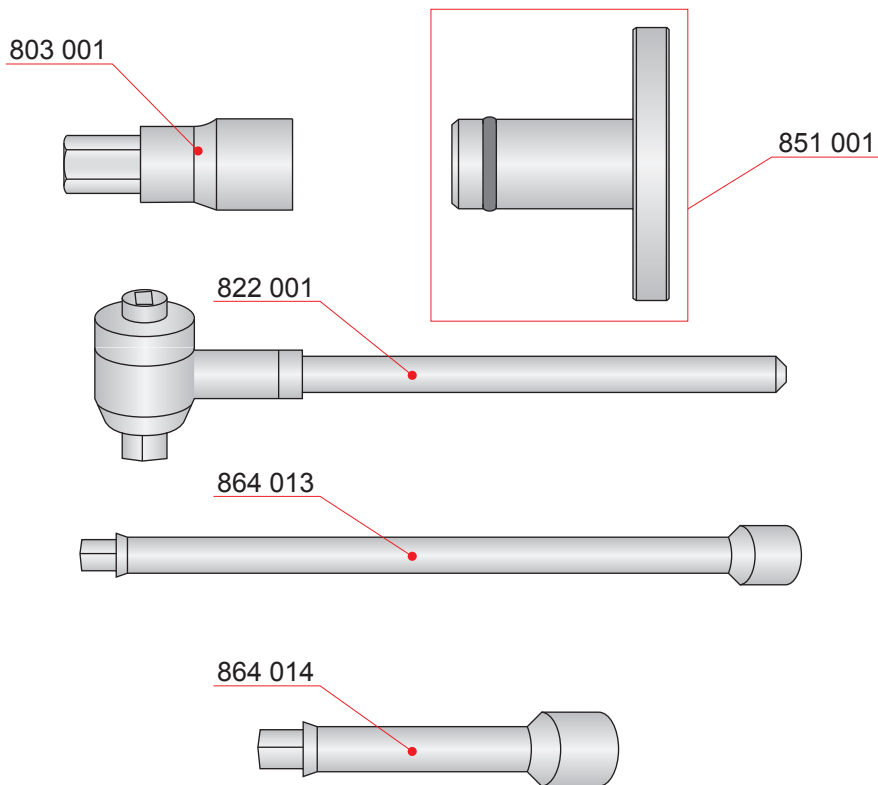
Page: 2(2)

Updated: 24.11.2004

Tools for cylinder liner

Part No.	Description	Qty [Pcs]	Wt. [Kg]
841 009	Honing tool for cylinder liner	1	11.4
842 025	Honing stones 25x25x250, coarse (80), with holder	3	0.6
842 026	Honing stones 25x25x250, fine (400), with holder	3	0.6
842 027	Spindle	1	0.3
842 028	Guide flange	3	0.1
842 029	Shaft	1	-
842 030	Shaft	1	-
842 031	Spring	3	-

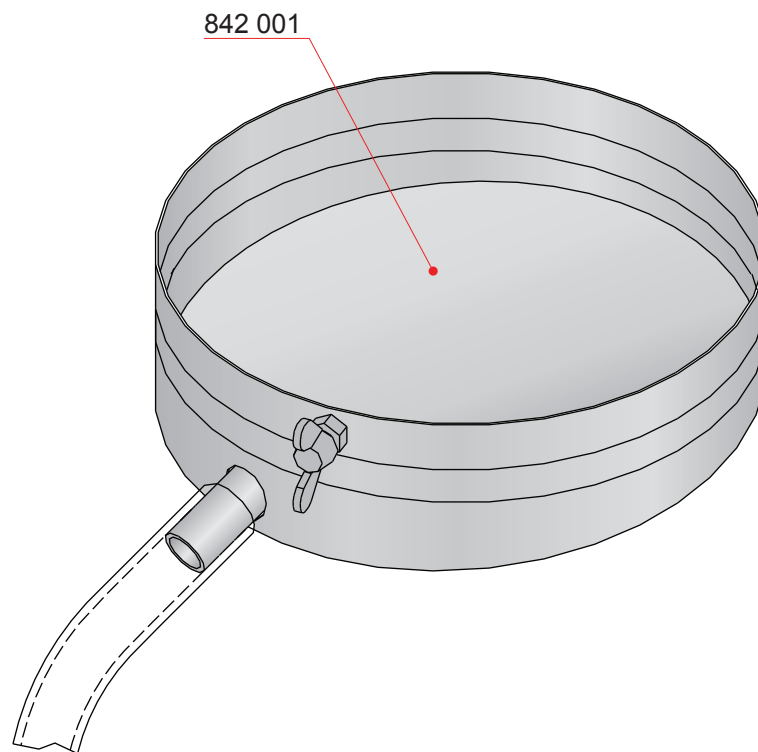
Tools for main bearings



Part No.	Description	Qty [Pcs]	Wt. [Kg]
803 001	Bit 22 hexagon socket screw, 1" square drive	1	1.0
822 001	Torque multiplier X-4	1	5.4
851 001	Turning tool for main bearing shell	1	-
864 013	Extension bar B20x400 with 3/4" square drive	1	1.3
864 014	Extension bar B25x200 with 3/4" square drive	1	1.0

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Optional tools for cylinder liner

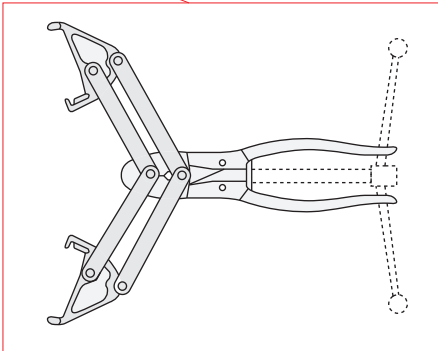


Part No.	Description	Qty [Pcs]	Wt. [Kg]
842 001	Protecting pot for dirty honing oil	1	1.3

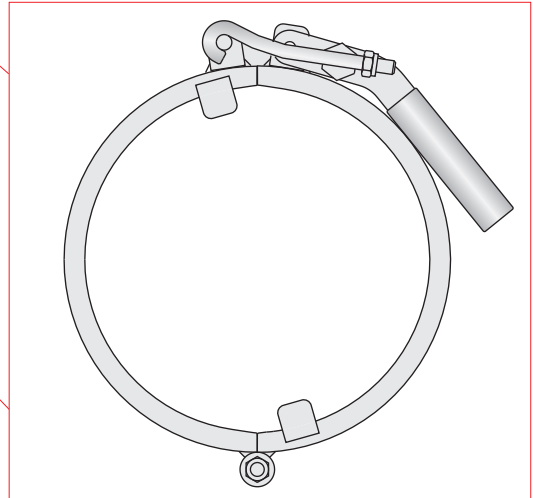
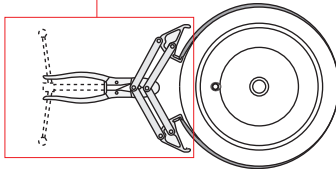
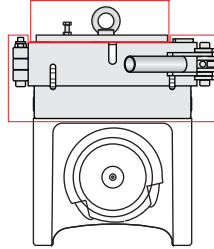
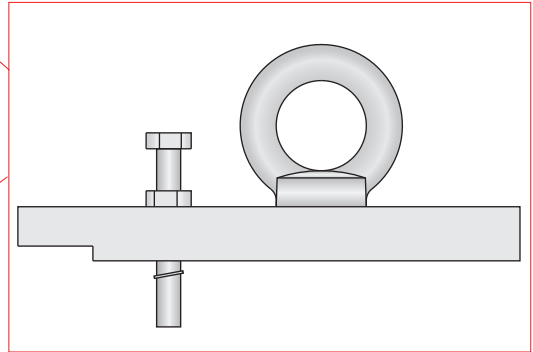
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Tools for piston

843 003



832 002



843 002

Part No.	Description	Qty [Pcs]	Wt. [Kg]
832 002	Lifting yoke	1	0.7
843 002	Clamp tool for piston rings	1	4.7
843 003	Piston ring pliers	1	0.5

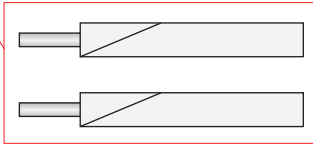
Edition: D

Page: 2(2)

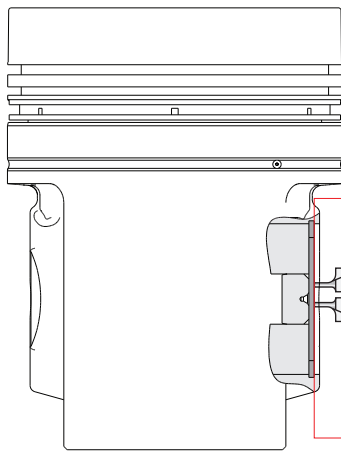
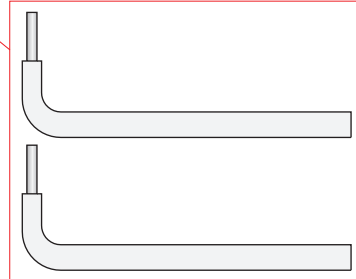
Updated: 14.09.2010

Tools for piston

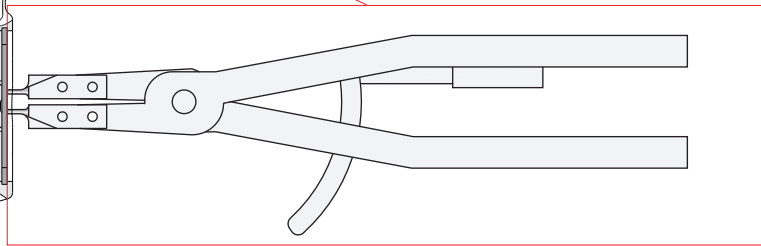
843 005



800 011

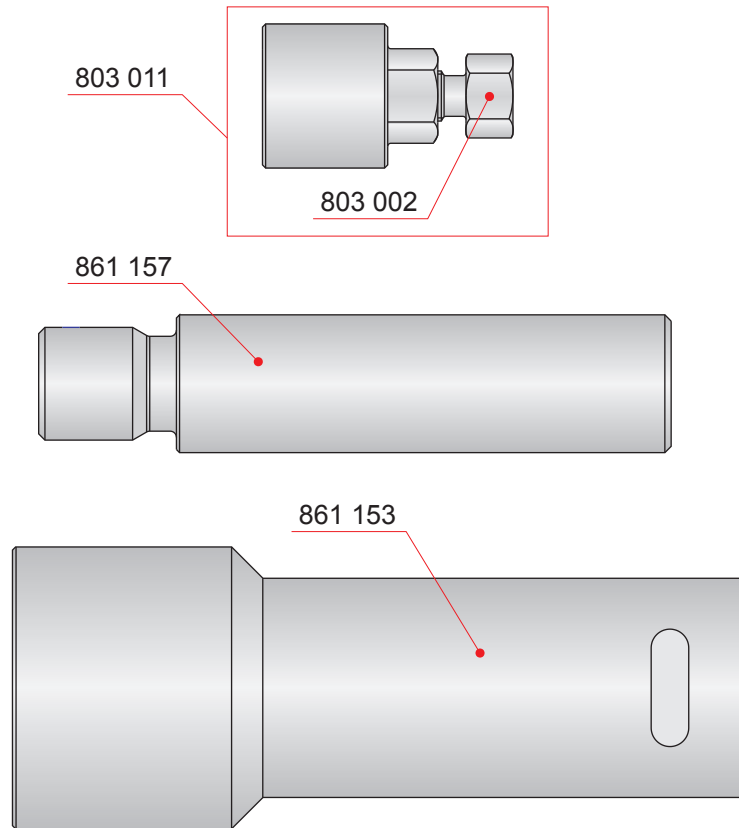


843 004



Part No.	Description	Qty [Pcs]	Wt. [Kg]
843 004	Pliers for retaining rings	1	-
800 011	Spare tips for pliers 843004, 90 degrees	1	-
843 005	Spare tips for pliers 843004, straight	1	-

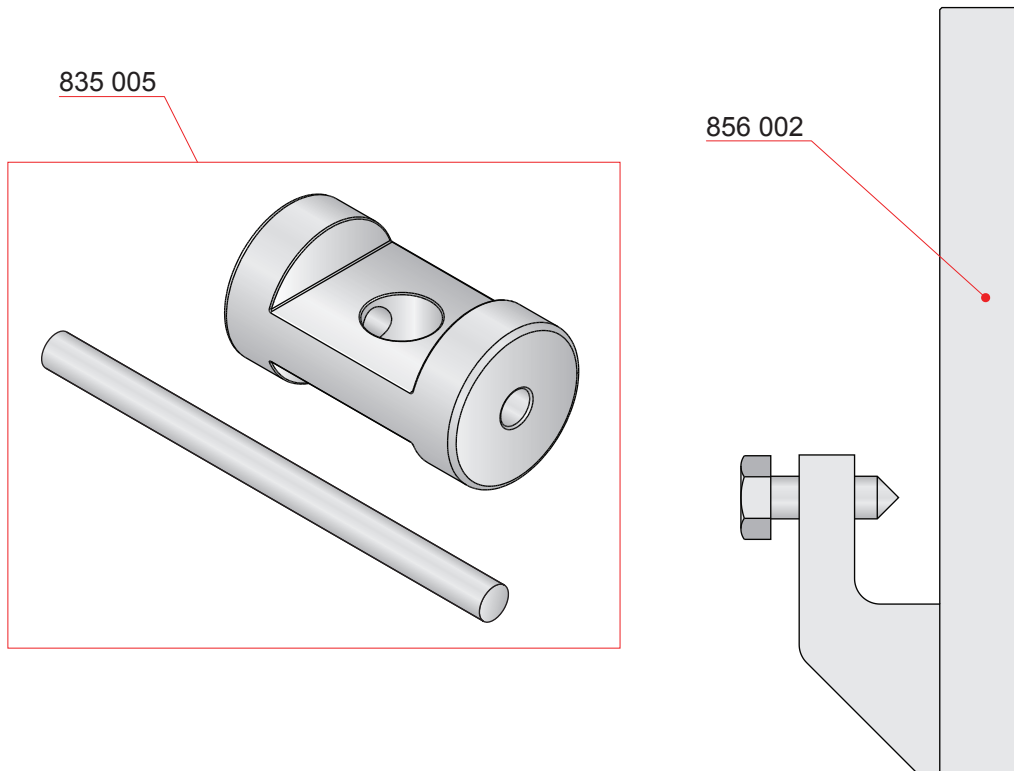
Tools for connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
803 011	Stud remover M30	1	0.5
803 002	Screw	1	0.1
861 153	Distance sleeve M30	2	4.5
861 157	Distance piece M36/M30	2	1.8

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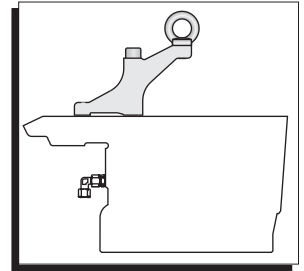
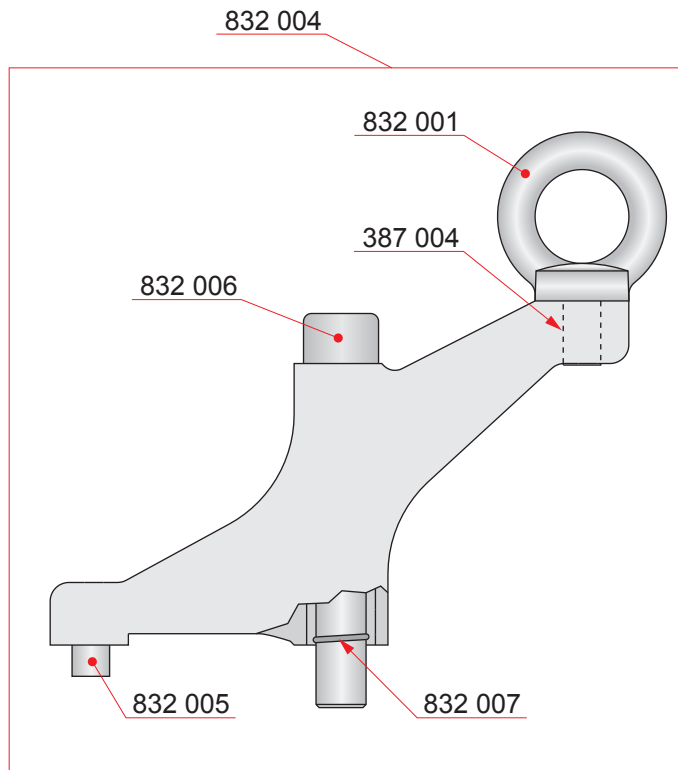
Optional tools for piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
835 005	Mounting tool for piston crown	1	5.0
856 002	Piston holder	1	0.7

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Tools for cylinder head

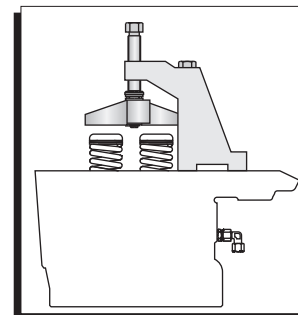
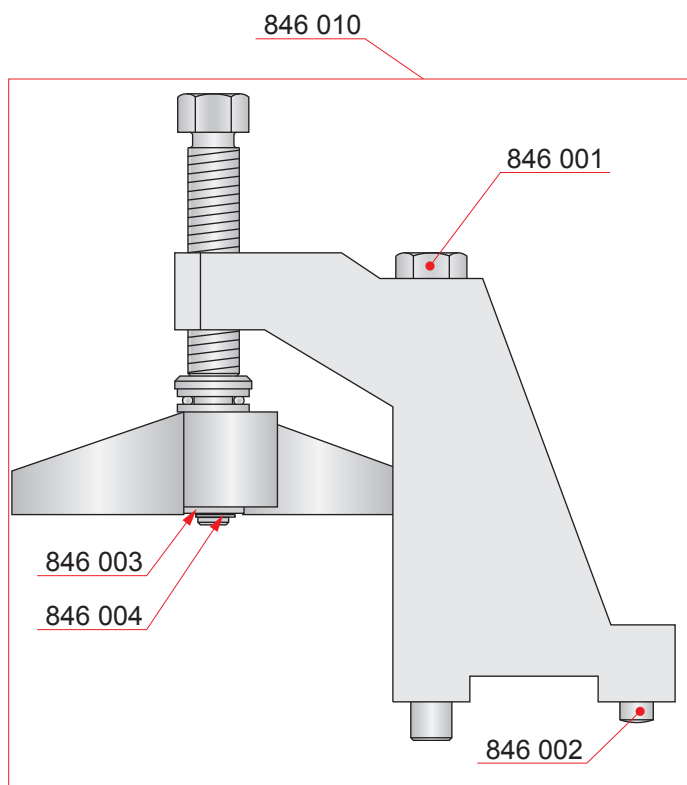


Part No.	Description	Qty [Pcs]	Wt. [Kg]
832 004	Lifting tool for cylinder head	1	1.6
832 001	Lifting eye bolt	1	0.2
832 005	Spring pin	1	-
832 006	Screw	1	0.2
832 007	Snap ring	1	-
387 004	Glue compound	1	-

Edition: D

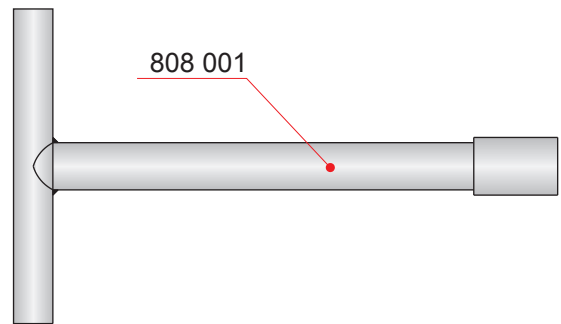
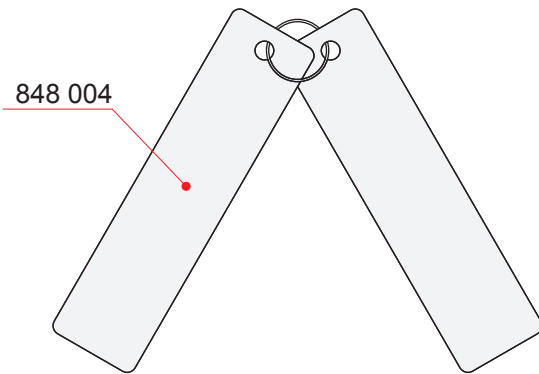
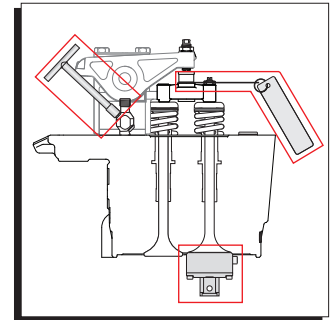
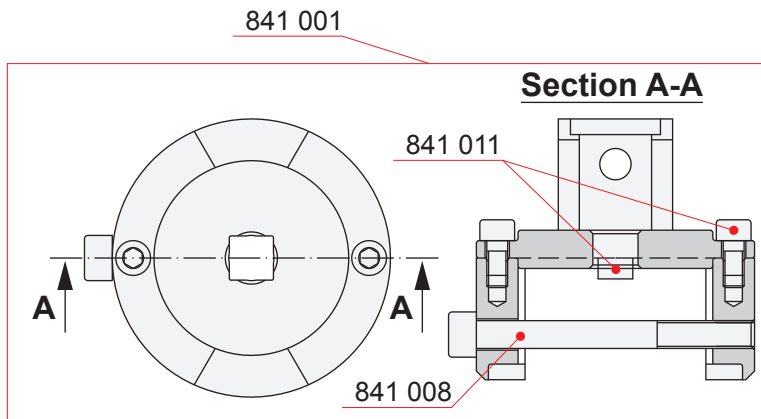
Page: 2(3)

Updated: 04.06.2010

Tools for cylinder head

Part No.	Description	Qty [Pcs]	Wt. [Kg]
846 010	Dismantling tool for valves	1	6.5
846 001	Screw	1	0.3
846 002	Cylindrical pin	1	-
846 003	Washer	1	-
846 004	Retaining ring	1	-

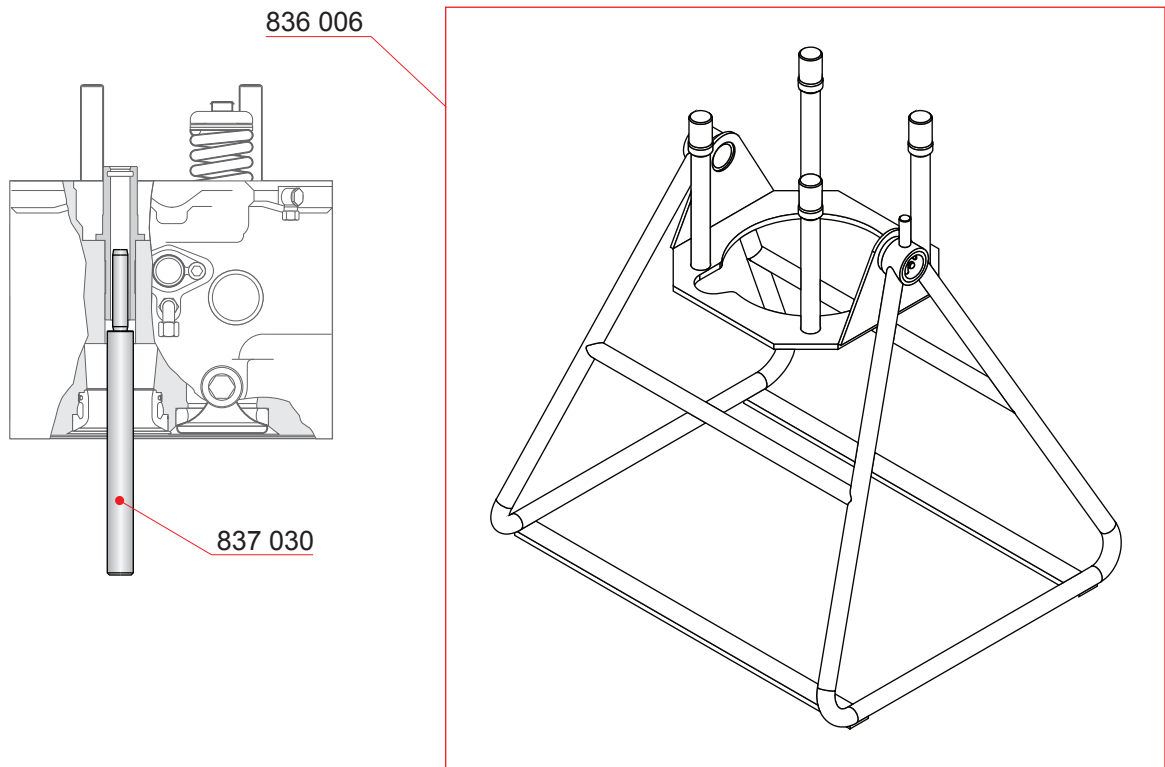
Tools for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
808 001	T-wrench for indicator valve	1	0.5
841 001	Grinding tool for valves	1	0.6
841 008	Screw	1	-
841 011	Screw	4	-
848 004	Valve clearance feeler gauge	1	-

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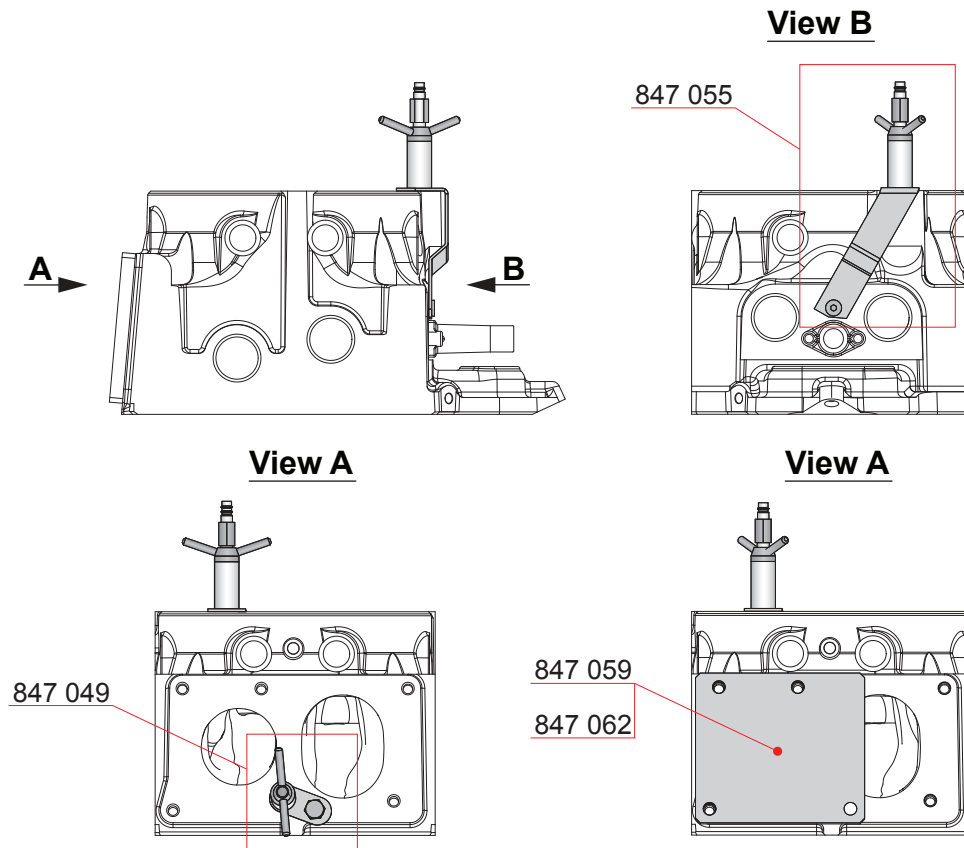
Optional tools for cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
836 006	Service trestle for cylinder head	1	25.0
837 030	Dismantling tool for valve guides	1	1.0

Edition: B
 Page: 2(6)
 Updated: 07.10.2011

Optional tools for cylinder head

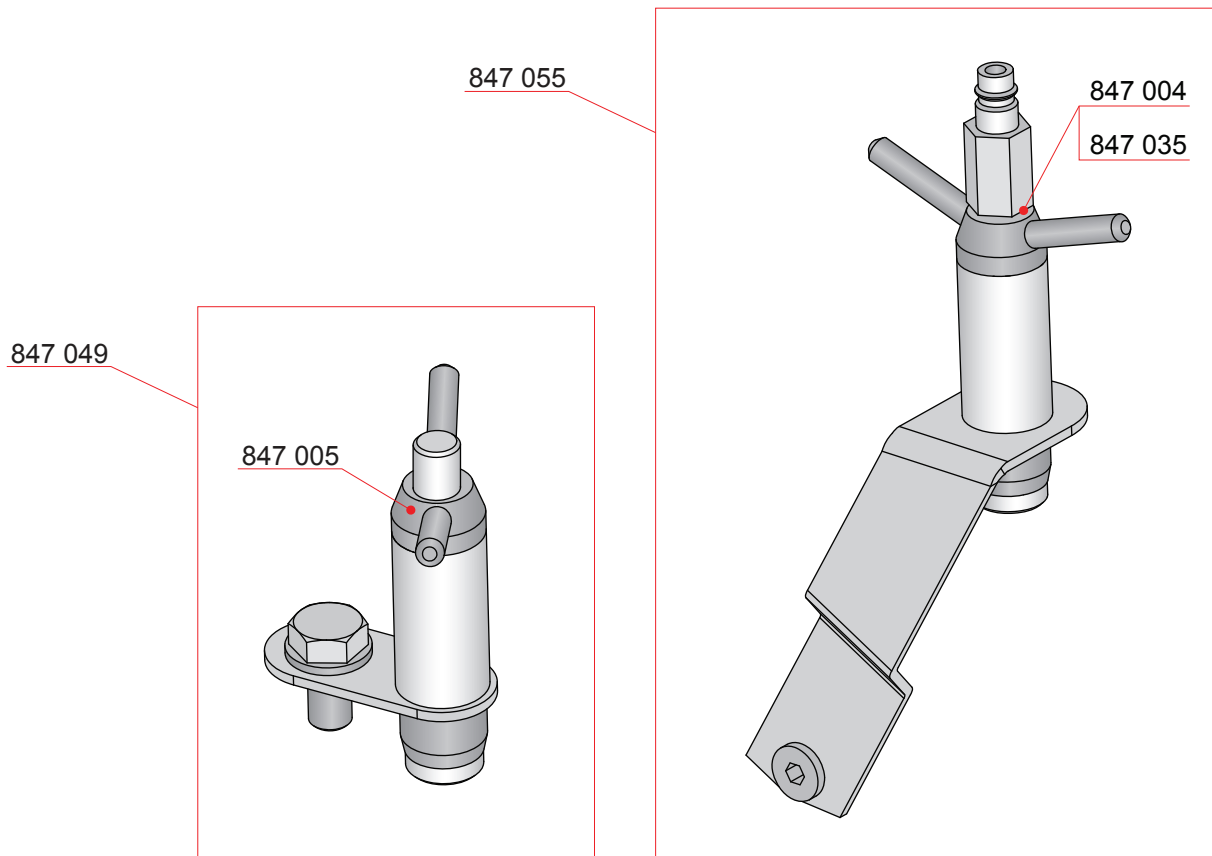


Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 049	Pressure test tool for cylinder head, complete (2)	1	0.5
847 055	Pressure test tool for cylinder head, complete (2)	1	1.5
847 059	Flange (1)	1	3.0
847 062	O-ring (1)	1	-

NOTE! (1) Alternative to 847 049.

NOTE! (2) See page 3.

Optional tools for cylinder head

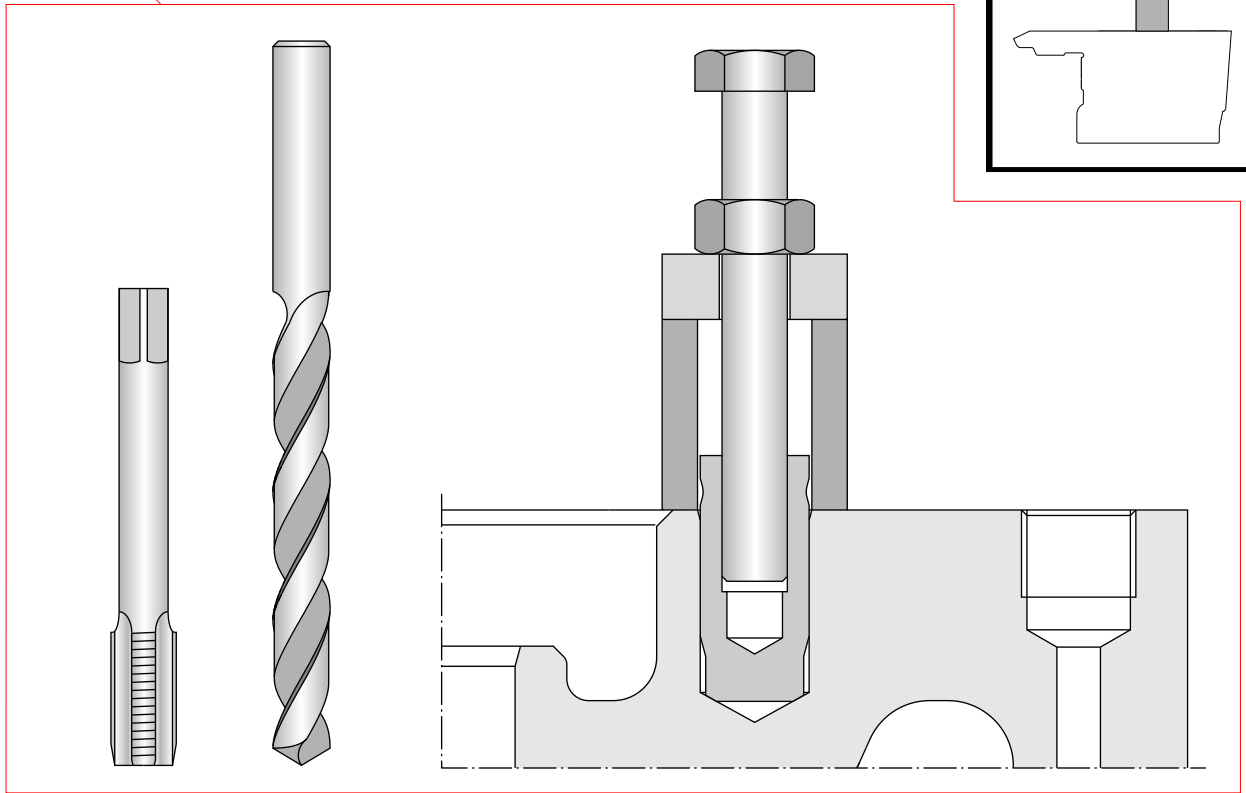


Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 049	Pressure test tool for cylinder head, complete	1	0.5
847 005	Pressure test tool for cylinder head	1	0.3
847 055	Pressure test tool for cylinder head, complete	1	1.5
847 004	Pressure test tool for cylinder head with nipple	1	0.3
847 035	Nipple	1	-

Edition: B
Page: 4(6)
Updated: 07.10.2011

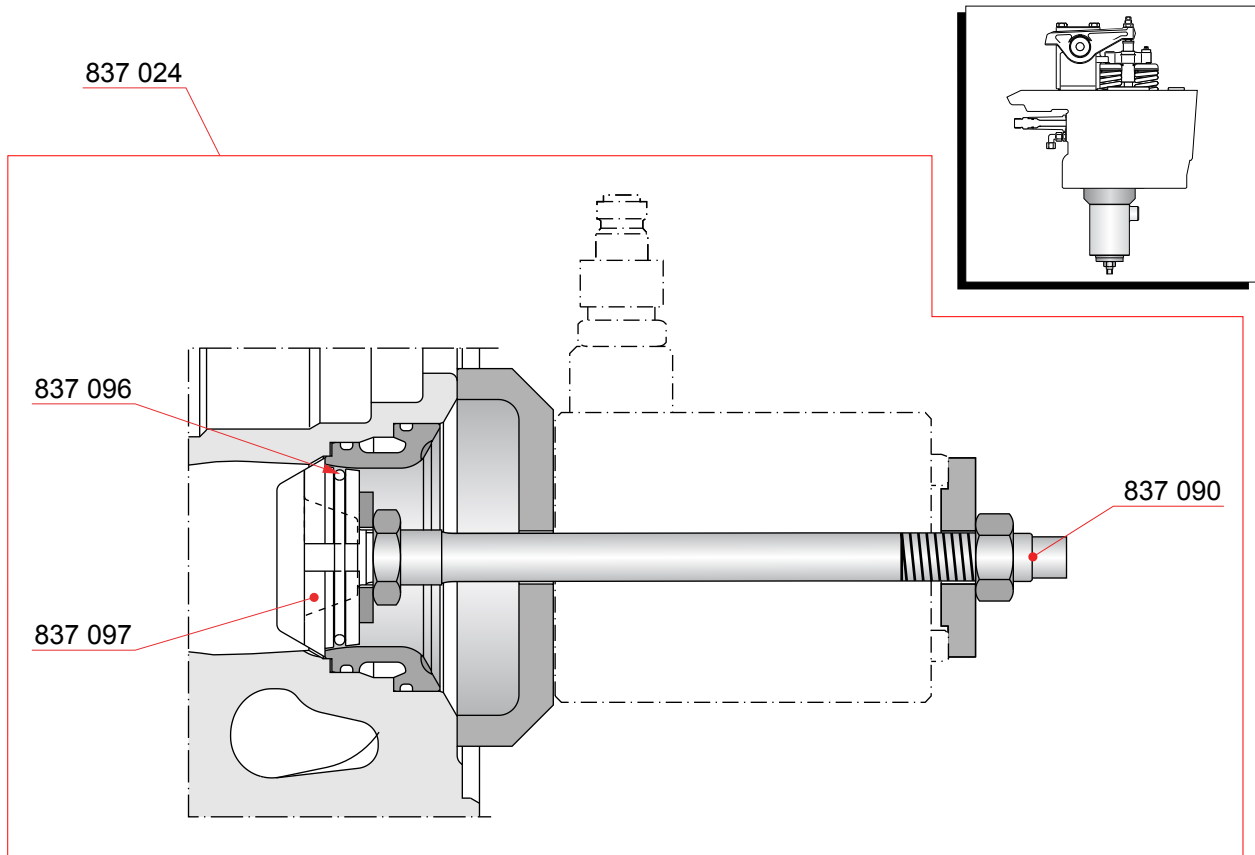
Optional tools for cylinder head

837 031



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 031	Extractor tool for yoke pin	1	0.4

Optional tools for cylinder head

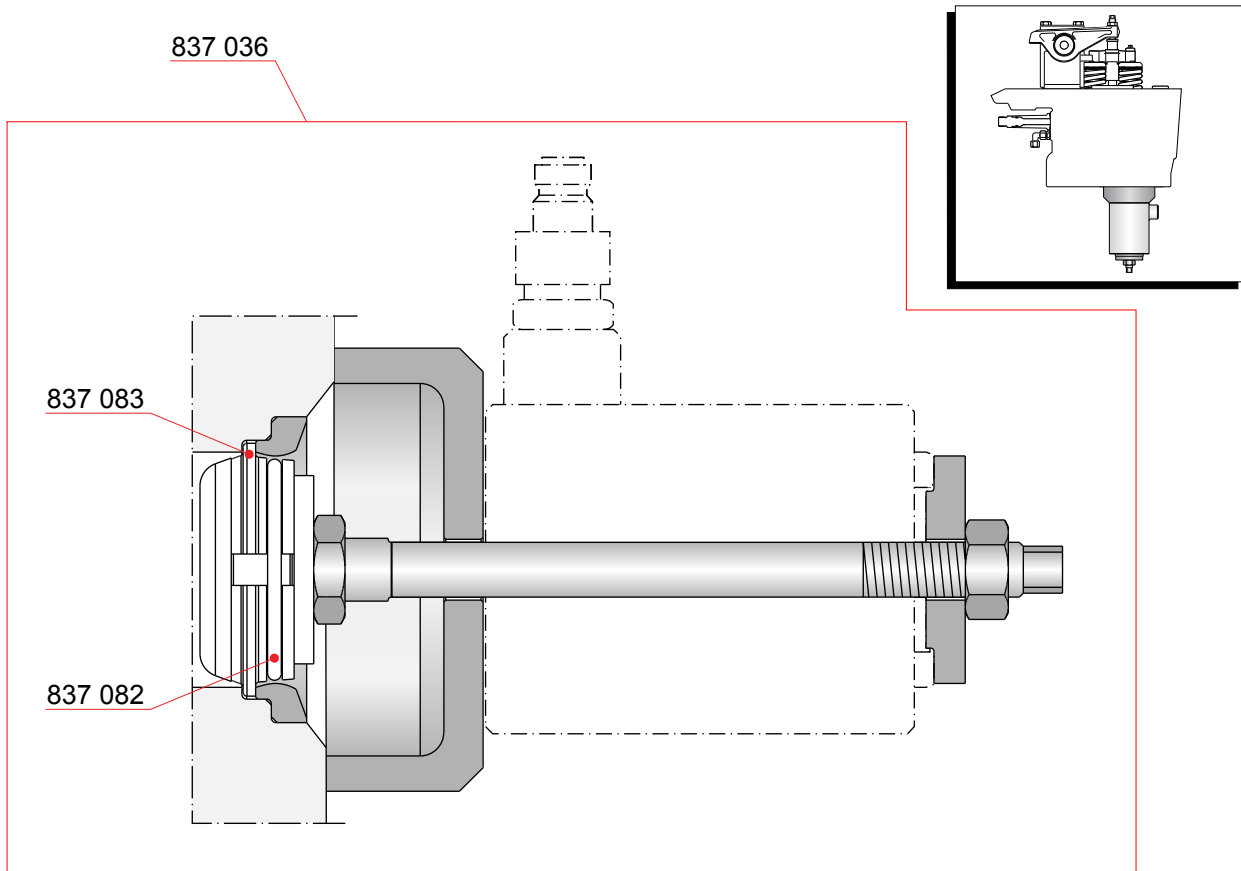


Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 024	Extractor tool for exhaust seat insert	1	1.8
837 090	Spindle	1	-
837 096	O-ring	1	-
837 097	Claw	4	0.1

Edition: B

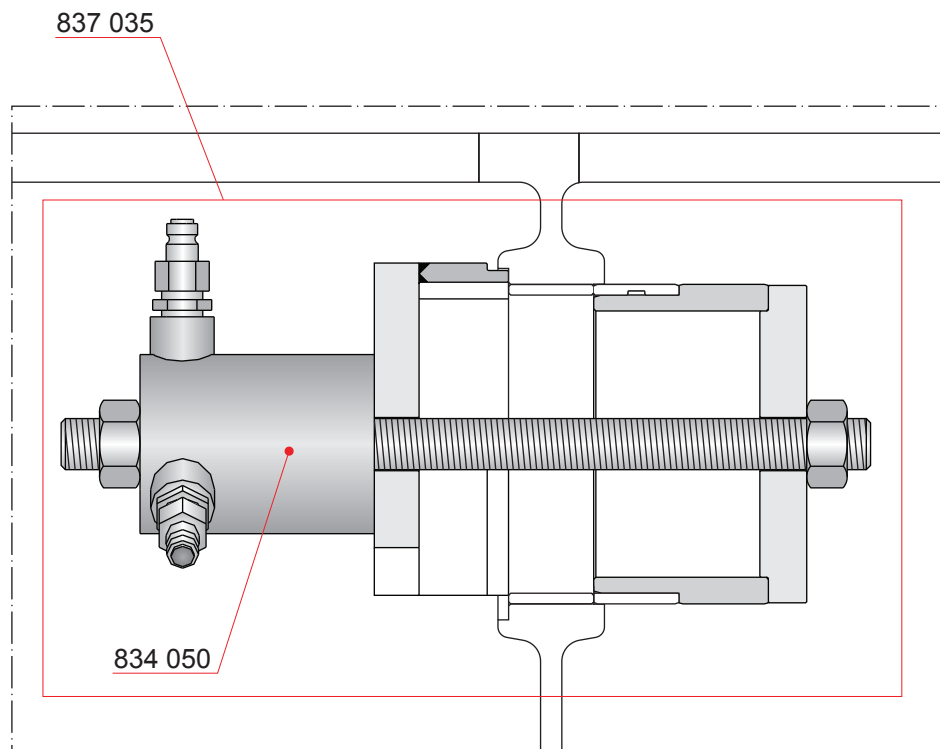
Page: 6(6)

Updated: 07.10.2011

Optional tools for cylinder head

Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 036	Extractor tool for inlet seat insert	1	1.3
837 082	O-ring	1	-
837 083	Claw	4	0.3

Optional tools for camshaft

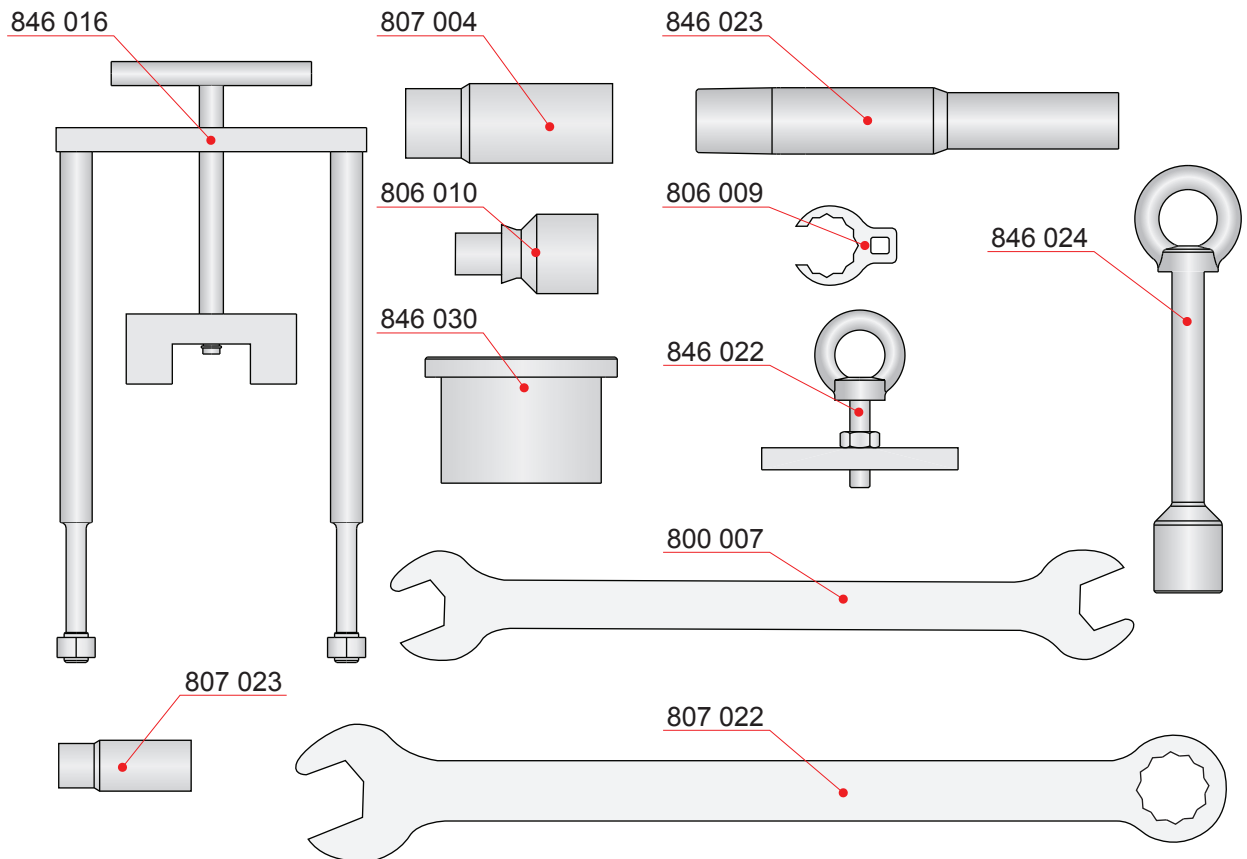


Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 035	Mounting tool for camshaft bearings	1	12.0
834 050	Hydraulic extractor *	1	4.5

NOTE! *) See section 884-

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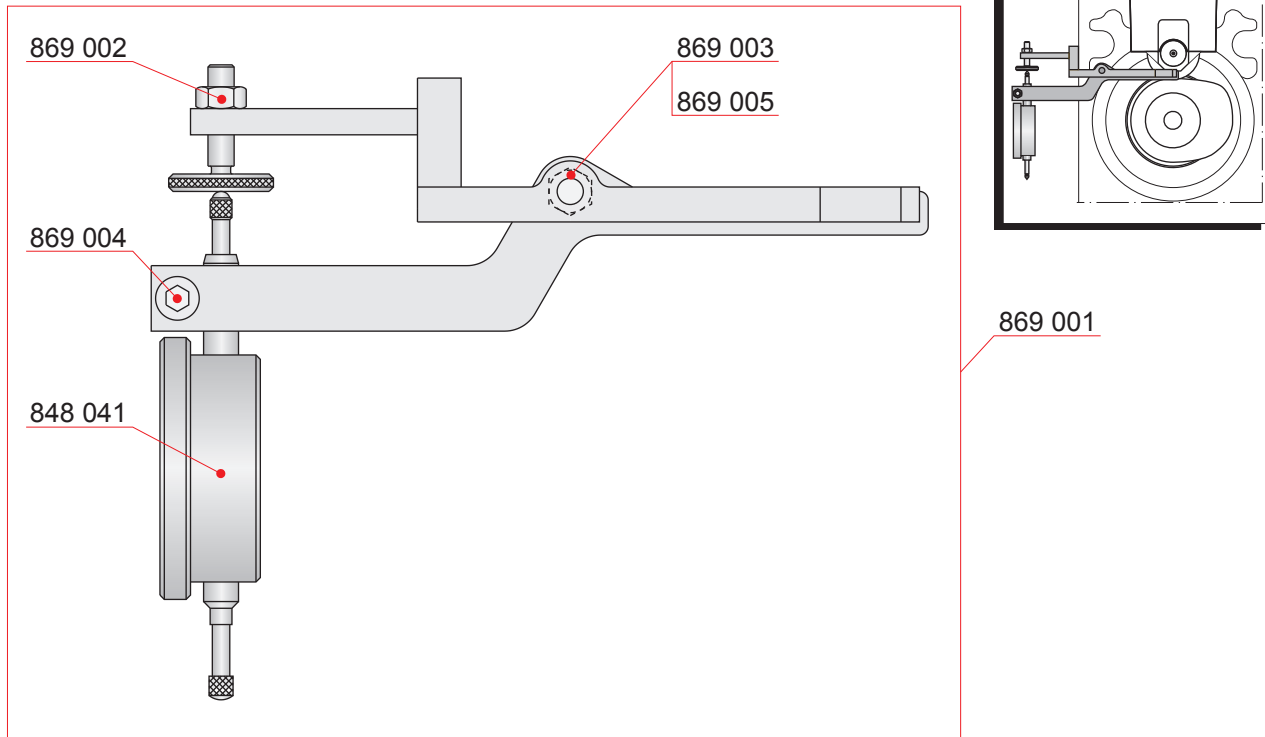
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 007	Engineers wrench 13-17	1	-
806 009	Crowfoot wrench 27 for injection pipes	1	-
806 010	Adapter A10*12.5	1	-
807 004	Long Socket wrench for connecting piece (22X12.5L)	1	0.2
807 022	Combination wrench AL36	1	1.3
807 023	Socket Wrench 46*20 with 3/4" square drive	1	0.1
846 016	Pressing tool for injection pump	1	1.5
846 022	Extractor tool for injection pump	1	0.6
846 023	Tool for injection pump	1	0.1
846 024	Extractor tool for injection valve	1	0.5
846 030	Tool for injection valve	1	1.1

Edition: I
 Page: 2(8)
 Updated: 12.10.2010

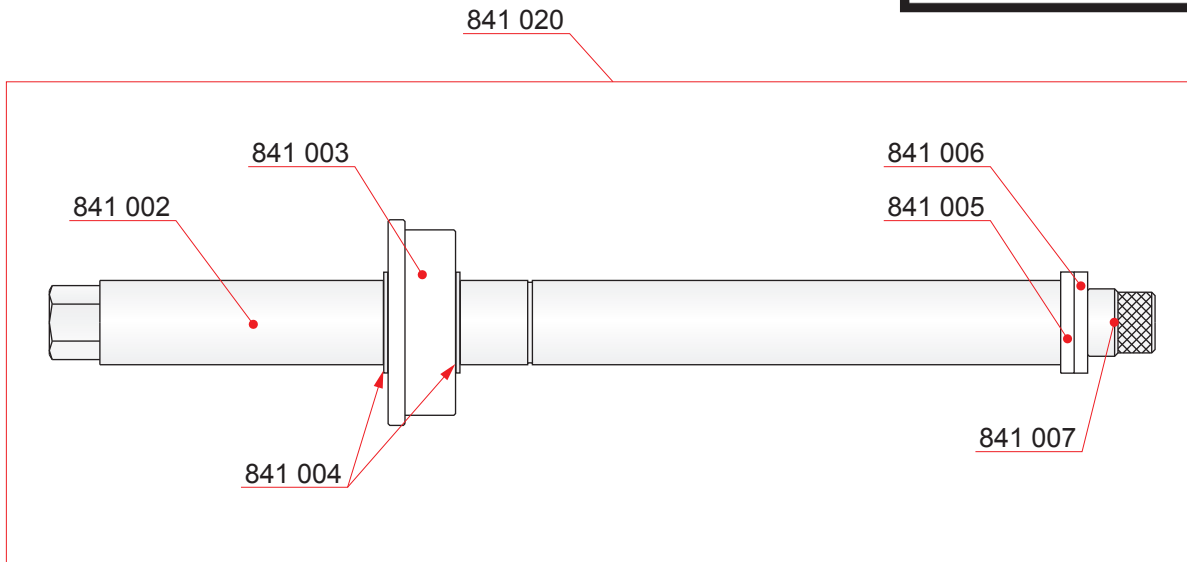
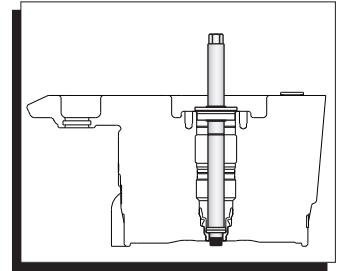
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
869 001	Injection timing tool	1	0.7
848 041	Dial indicator (*)	1	0.2
869 002	Nut	1	-
869 003	Screw	1	-
869 004	Screw	1	0.3
869 005	Washer	1	-

NOTE! (*) Tool requires regular calibration.

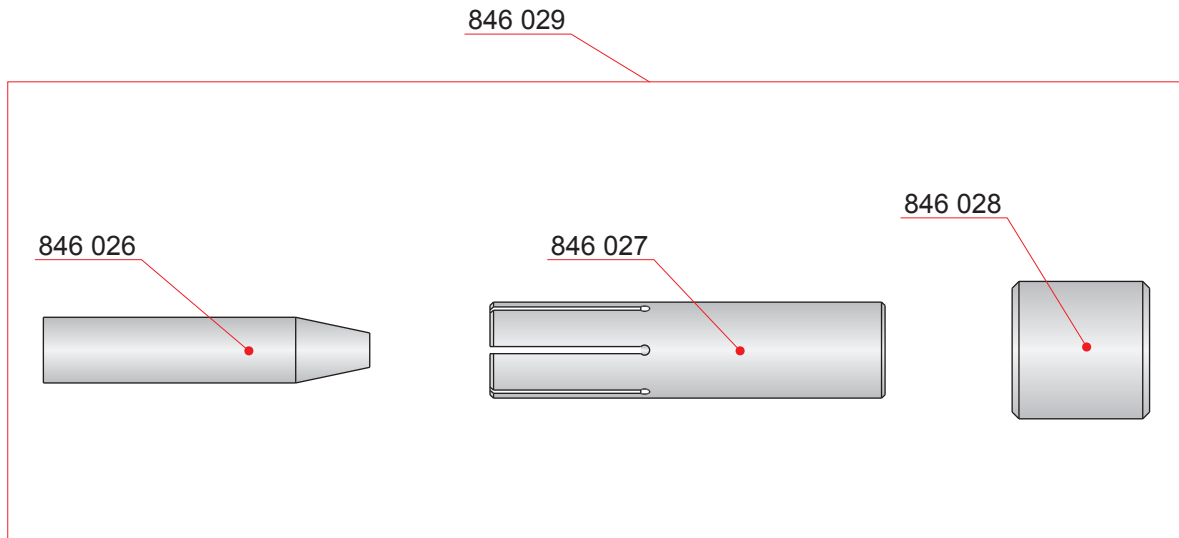
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
841 020	Cleaning tool for injection valve sealing surface	1	1.4
841 002	Mandrel	1	-
841 003	Guide	1	-
841 004	Retaining ring	2	-
841 005	Lapping disc	1	-
841 006	Felt for cleaning tool	10	-
841 007	Screw	1	0.2

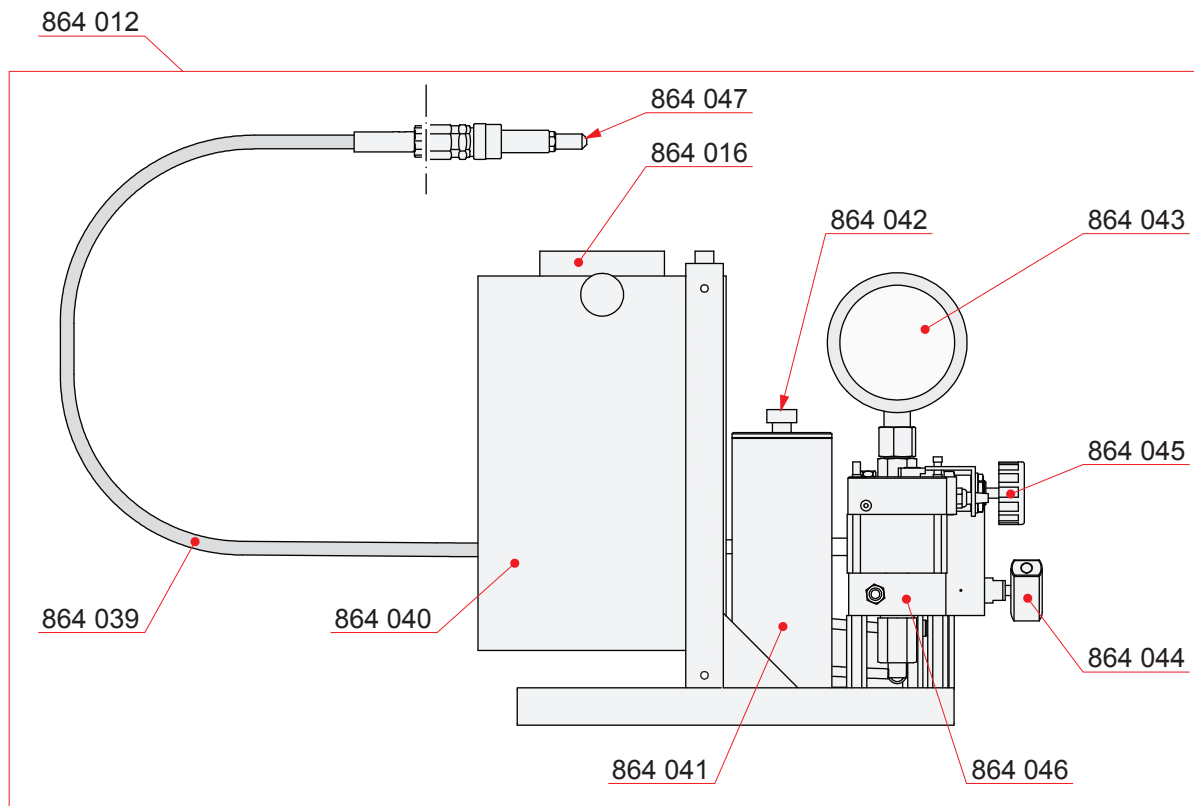
Edition: I
 Page: 4(8)
 Updated: 12.10.2010

Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
846 029	Mounting tools for teflon ring on element plunger	1	0.5
846 026	Protecting sleeve	1	-
846 027	Application rod	1	-
846 028	Calibrating sleeve	1	-

Tools for injection equipment



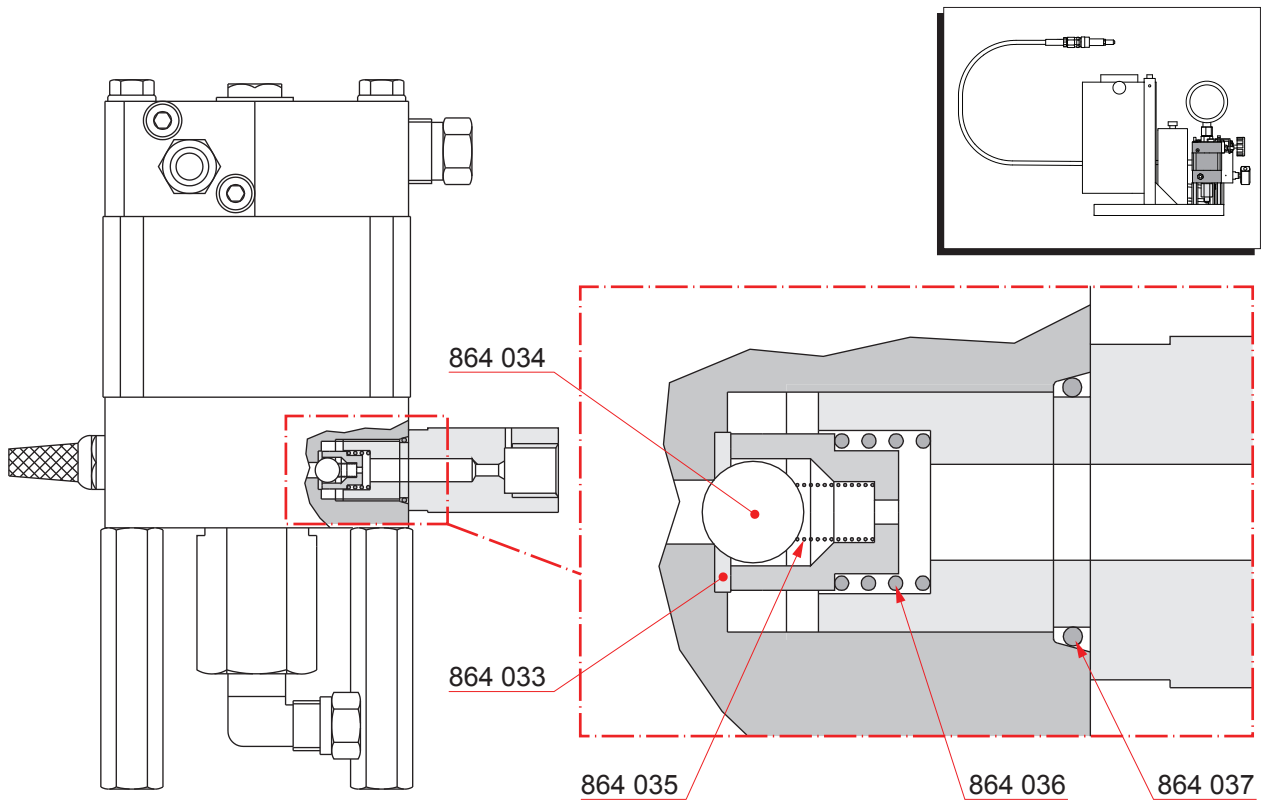
Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 012	Testing tool for injection valve (*)	1	17.0
864 016	Holder	1	7.2
864 039	High-pressure hose	1	1.0
864 040	Injection chamber	1	1.0
864 041	Tank	1	1.0
864 042	Cap	1	0.5
864 043	Pressure gauge	1	1.0
864 044	Valve	1	3.0
864 045	Pressure control valve	1	2.0
864 046	High pressure pump	1	4.0
864 047	Adapter	1	0.5

NOTE! (*) For available seal kit, see page 6 and 7.

NOTE! (*) Tool requires regular calibration.

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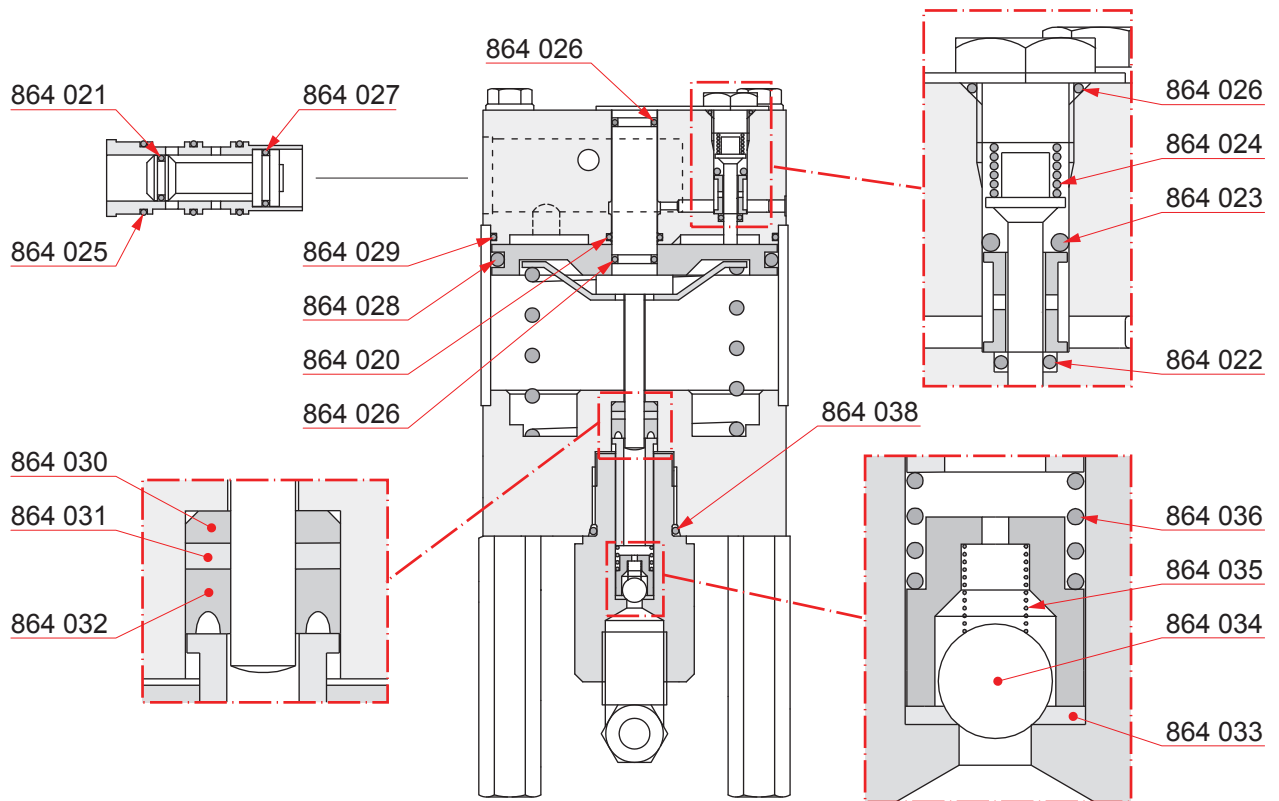
Tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 019	Seal kit for injection valve testing tool (1)	1	-
864 033	Seat	2	-
864 034	Ball	2	-
864 035	Spring	2	-
864 036	Spring	2	-
864 037	O-ring	1	-

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

Tools for injection equipment



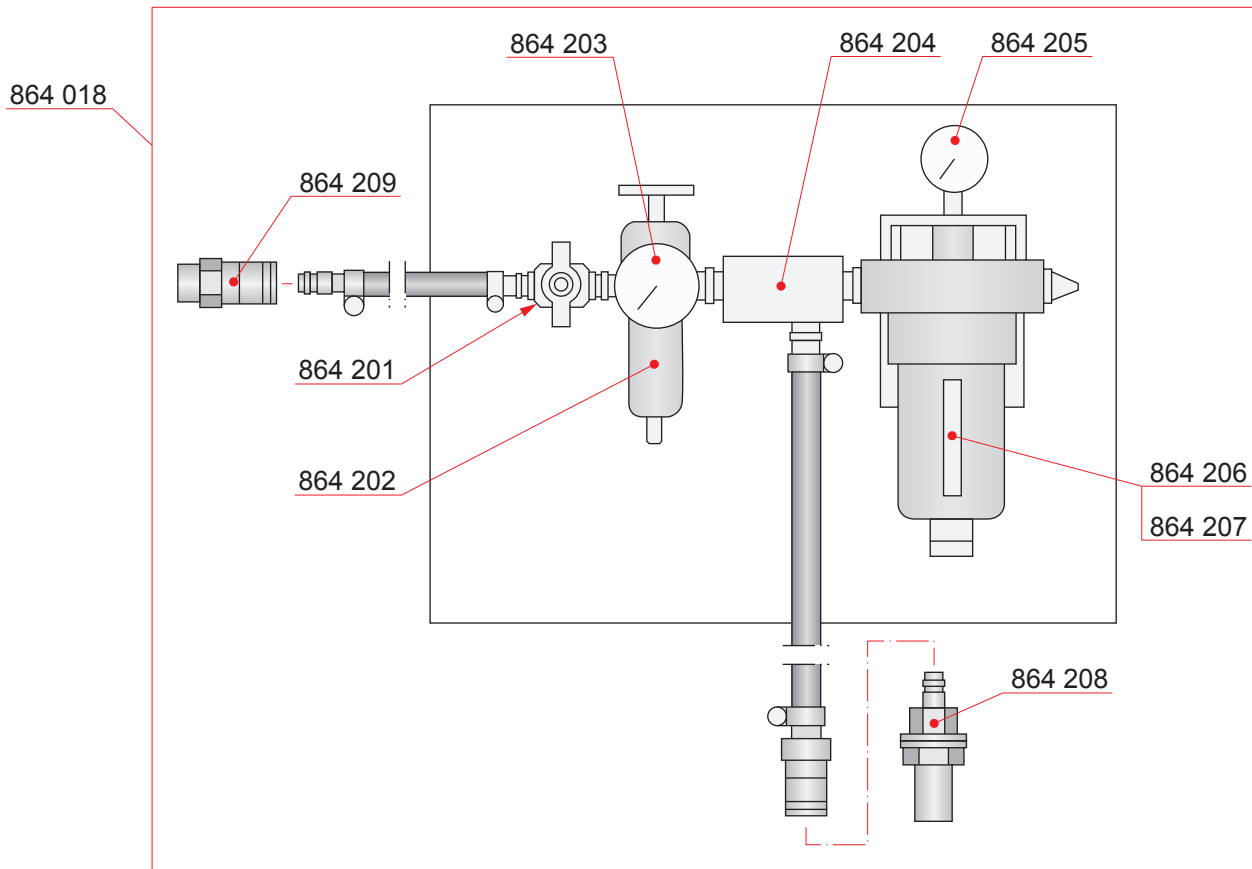
Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 019	Seal kit for injection valve testing tool (1)	1	-
864 020	O-ring	1	-
864 021	O-ring	1	-
864 022	O-ring	1	-
864 023	O-ring	1	-
864 024	Spring	1	-
864 025	O-ring	3	-
864 026	O-ring	3	-
864 027	O-ring	1	-
864 028	O-ring	1	-
864 029	O-ring	1	-
864 030	Support ring	1	-
864 031	Back-up ring	1	-
864 032	Seal	1	-
864 033	Seat	2	-
864 034	Ball	2	-
864 035	Spring	2	-
864 036	Spring	2	-
864 038	O-ring	1	-

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

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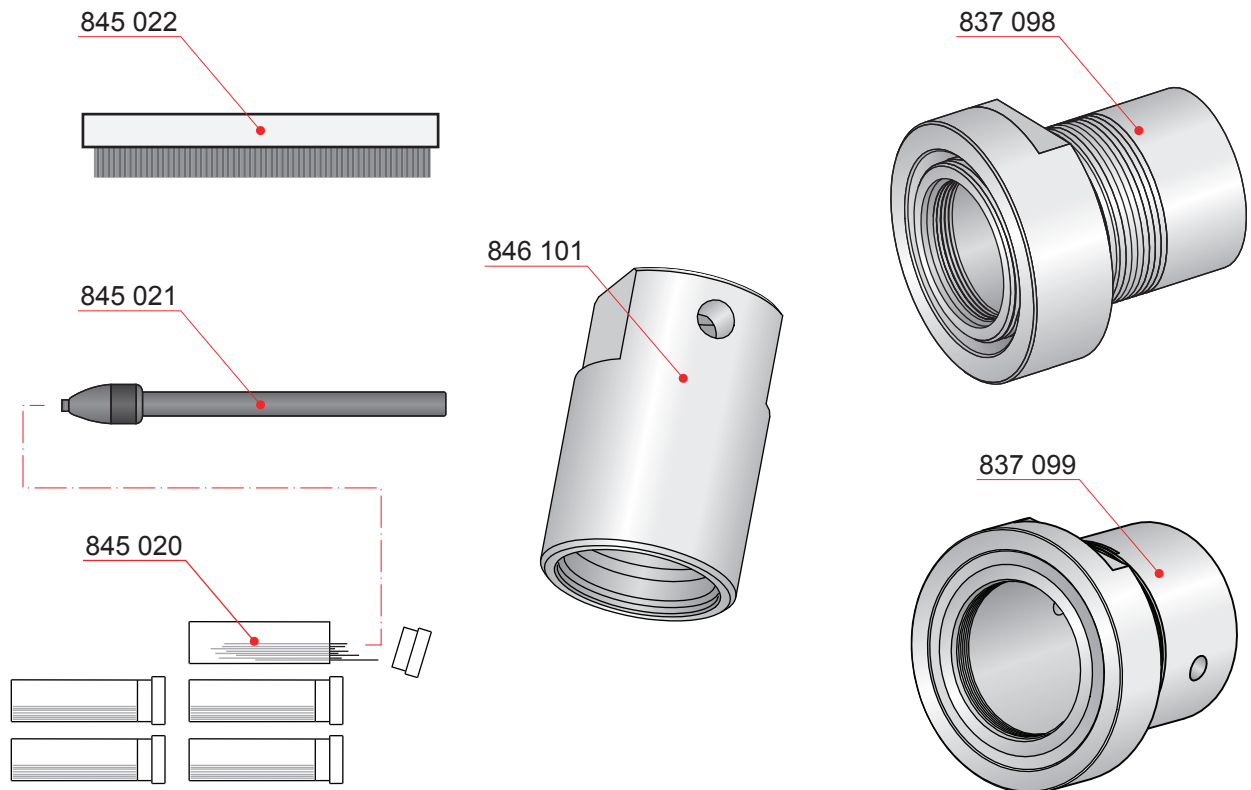
Tools for injection equipment

Part No.	Description	Qty [Pcs]	Wt. [Kg]
864 018	Oil mist separator (1)(2)	1	4.0
864 201	Valve	1	0.2
864 202	Pressure regulator	1	1.0
864 203	Manometer	1	0.1
864 204	Manifold	1	0.5
864 205	Manometer	1	0.1
864 206	Air filter	1	0.3
864 207	Filter element	1	0.1
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.

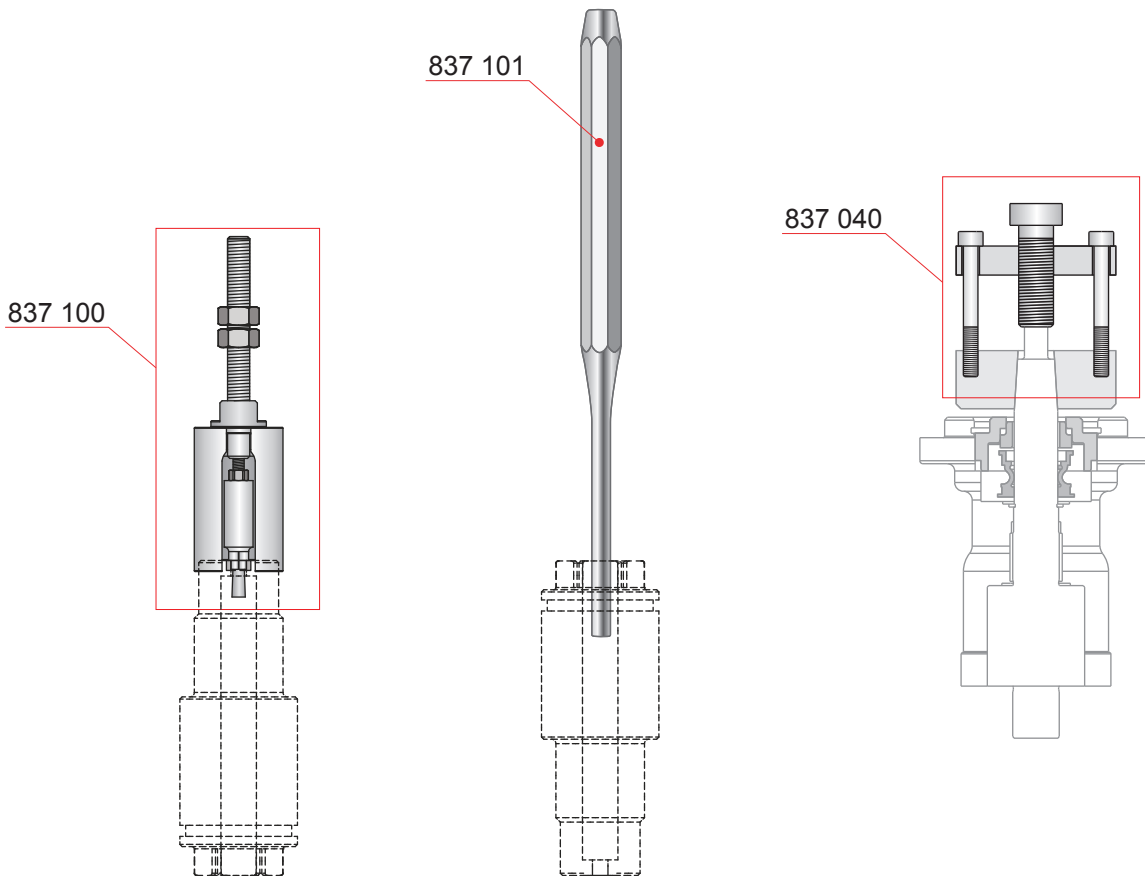
Optional tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 098	Extractor tool for fuel oil pump nut, size 4-25	1	0.4
837 099	Extractor tool for pre lube oil pump nut, 32-80	1	0.9
845 020	Cleaning needles for nozzles, 50 pack	1	-
845 021	Shaft for nozzle cleaning needles	1	-
845 022	Brass wire brush	1	-
846 101	Mounting tool for Kracht fuel oil pump, size 4-25	1	0.3

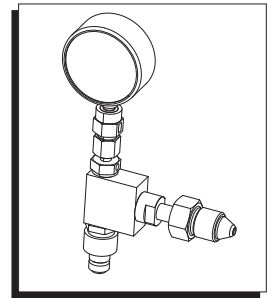
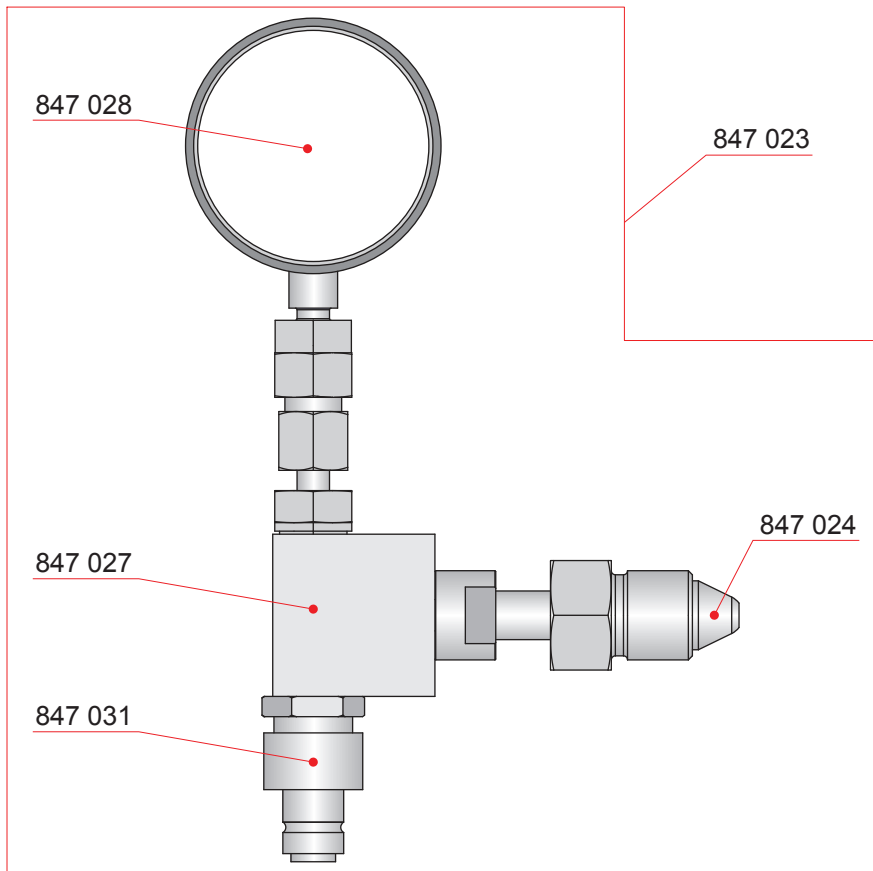
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Optional tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 040	Extractor for fuel oil pump coupling removal	1	0.1
837 100	Extractor tool for injection valve impact bush	1	0.6
837 101	Pin punch	1	-

Optional tools for injection equipment

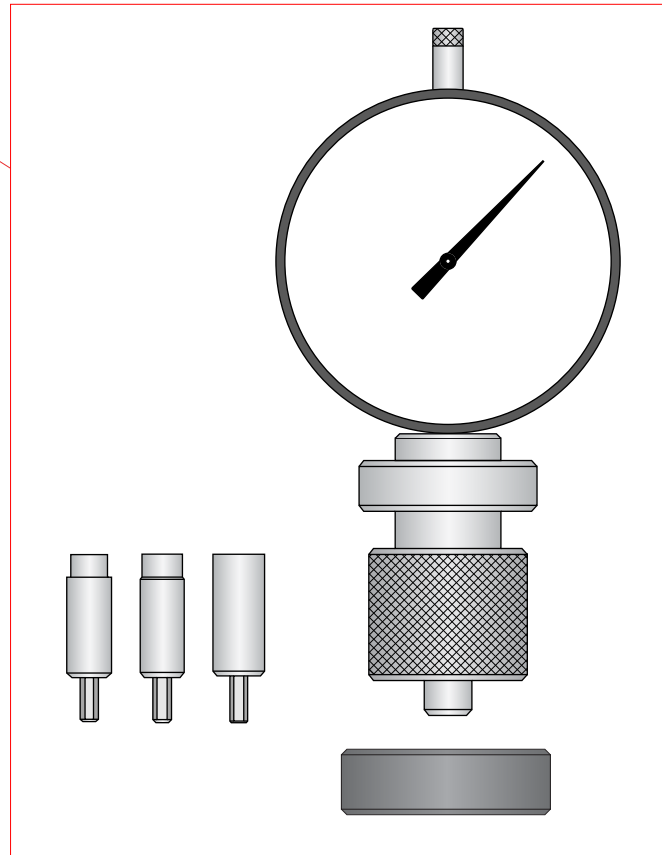


Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 023	Pressure test device for fuel pump	1	0.5
847 024	Adapter	1	0.2
847 027	Connection piece	1	0.2
847 028	Pressure gauge	1	-
847 031	Coupling	1	-

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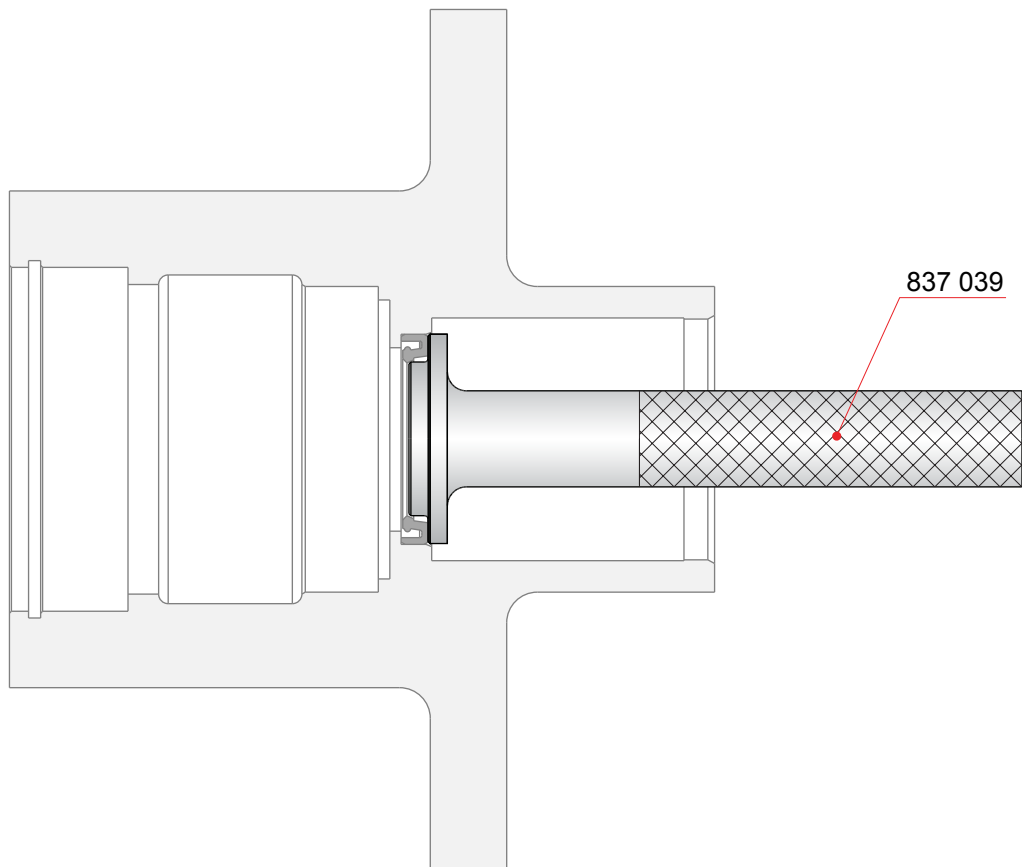
Optional tools for injection equipment

848 051



Part No.	Description	Qty [Pcs]	Wt. [Kg]
848 051	Measuring device for injection nozzle needle lift	1	0.2

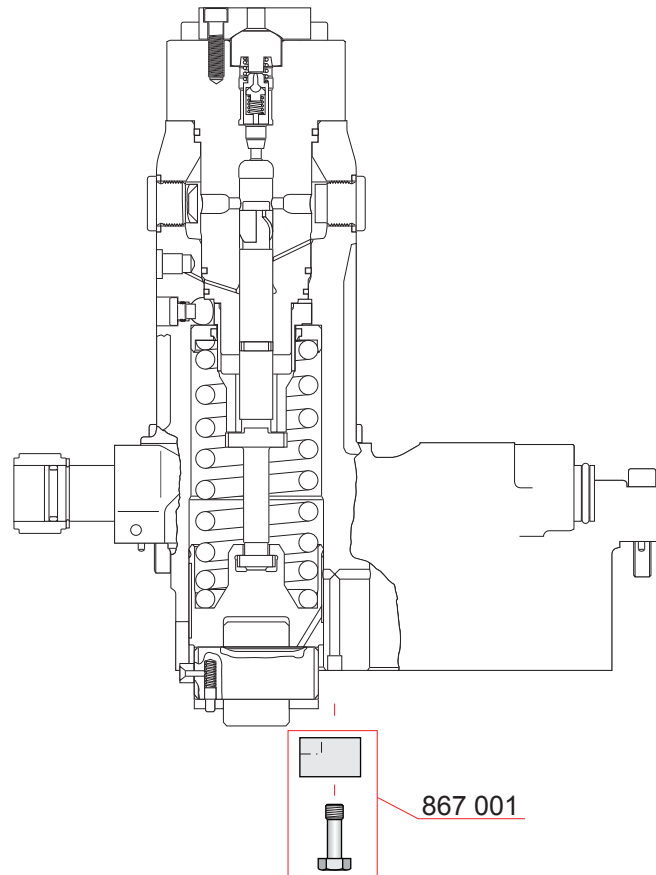
Optional tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 039	Mounting tool for oil seal of fuel oil pump	1	-

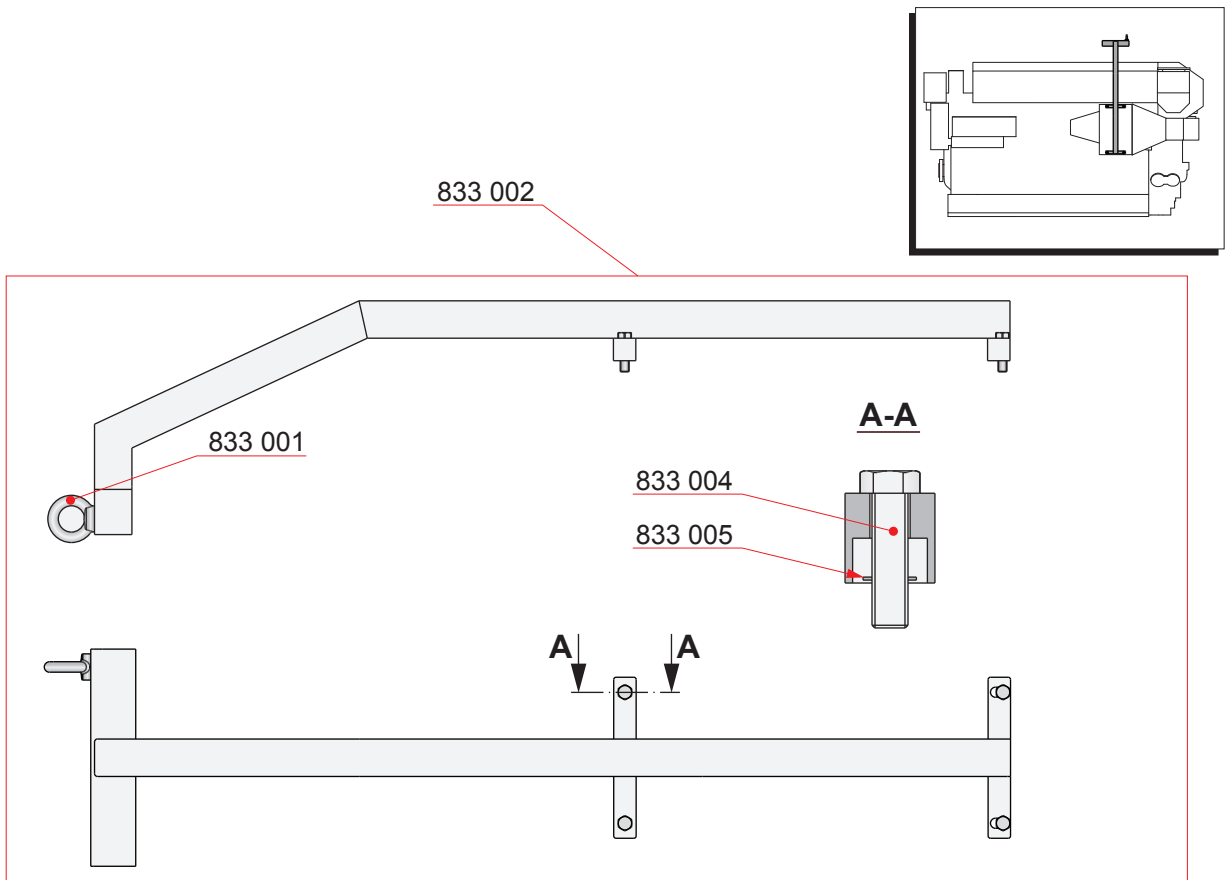
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Optional tools for injection equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
867 001	Locking tool for injection pump tappet roller	1	-

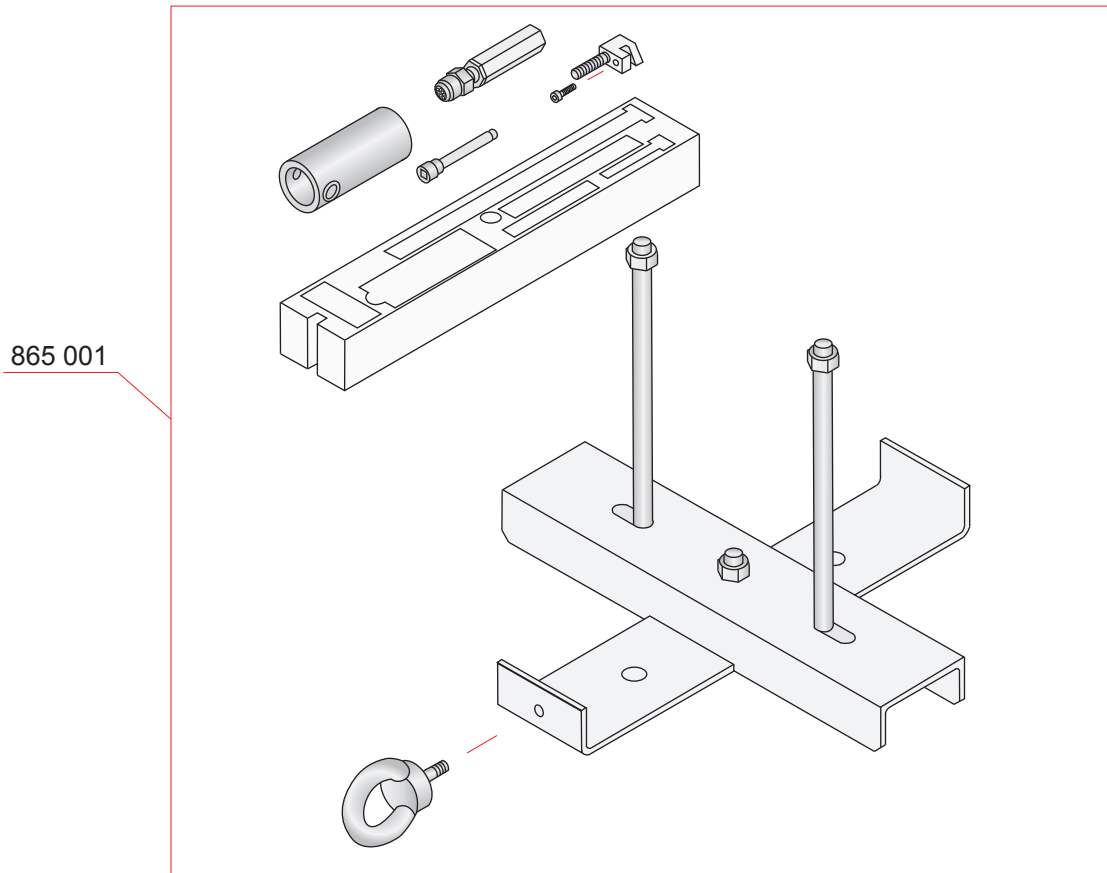
Lifting tool for charge air cooler



Part No.	Description	Qty [Pcs]	Wt. [Kg]
833 002	Lifting tool for charge air cooler	1	22.0
833 001	Lifting eye bolt	1	0.3
833 004	Screw	4	-
833 005	Retaining ring	4	-

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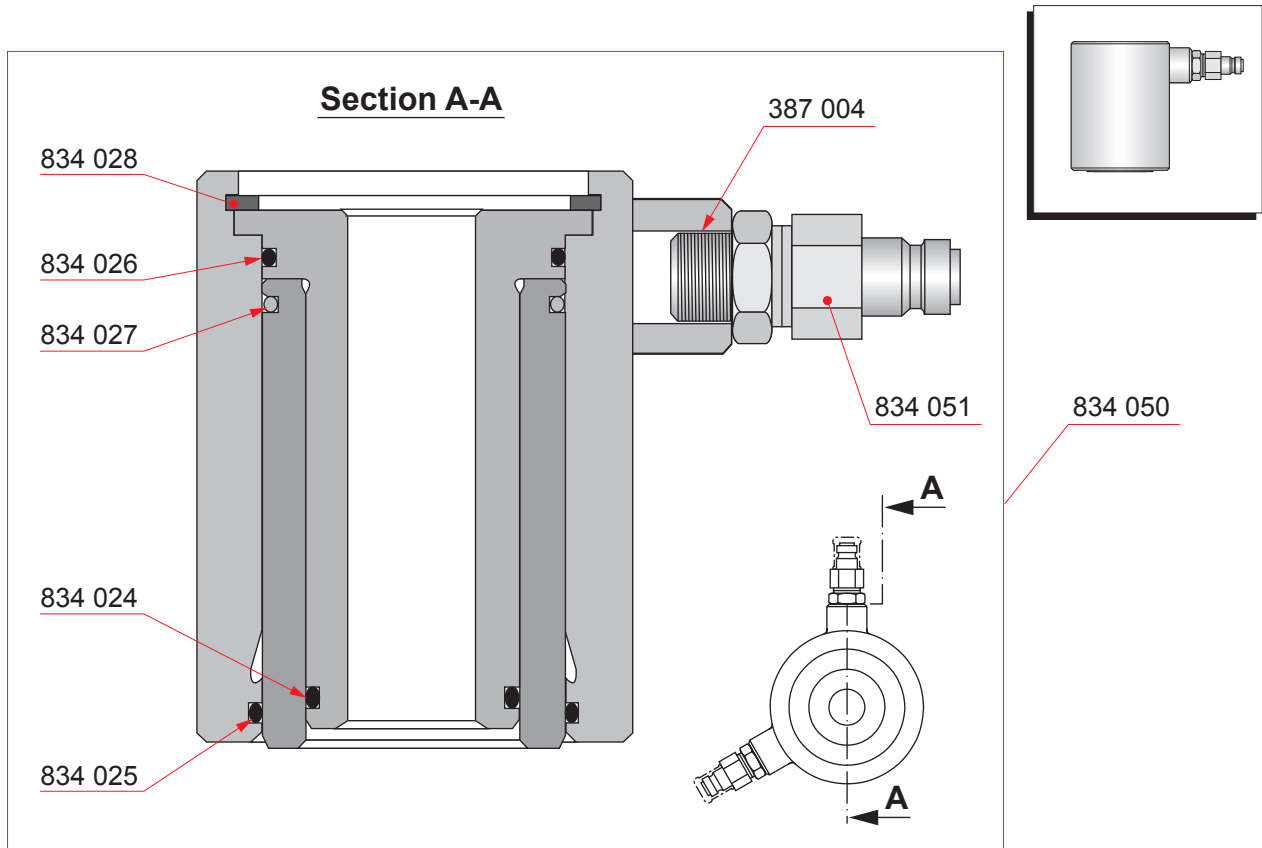
Tools for turbocharger



Part No.	Description	Qty [Pcs]	Wt. [Kg]
865 001	Maintenance tools	1	-

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Optional miscellaneous tools



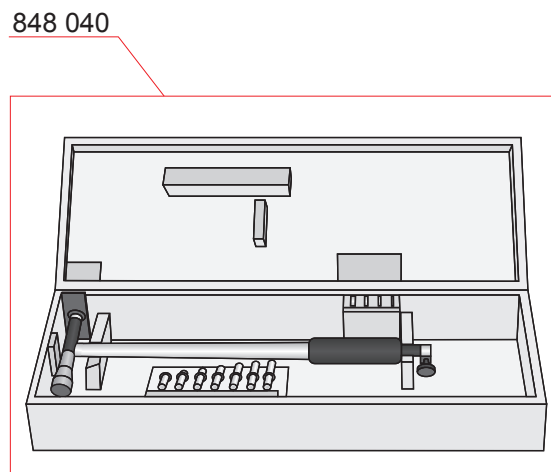
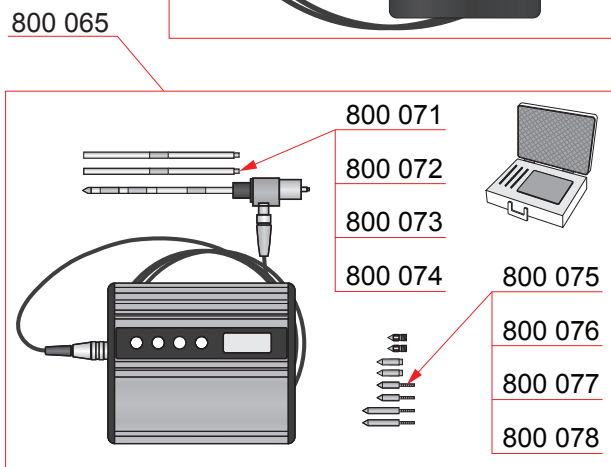
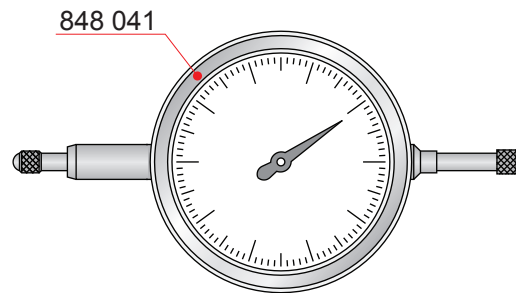
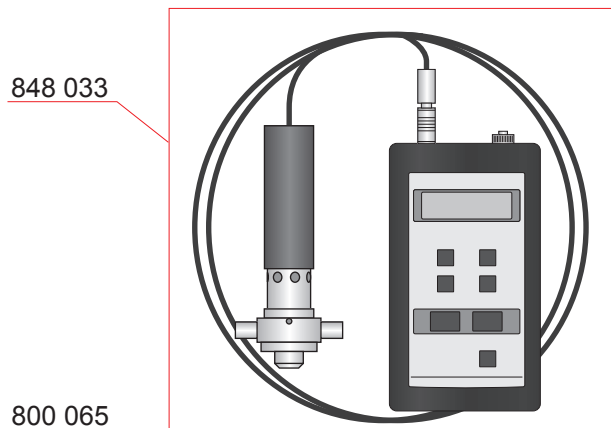
Part No.	Description	Qty [Pcs]	Wt. [Kg]
834 050	Hydraulic extractor (1)	1	4.5
834 024	O-ring *	1	-
834 025	O-ring *	1	-
834 026	O-ring *	1	-
834 027	Snap ring	1	-
834 028	Retaining ring	1	-
834 051	Quick coupling, male	2	-
834 065	Sealing set for hydraulic extractor	1	-
387 004	Glue compound	1	-

NOTE! (1) Tool requires regular maintenance.

NOTE! *) Included in sealingset 834 065.

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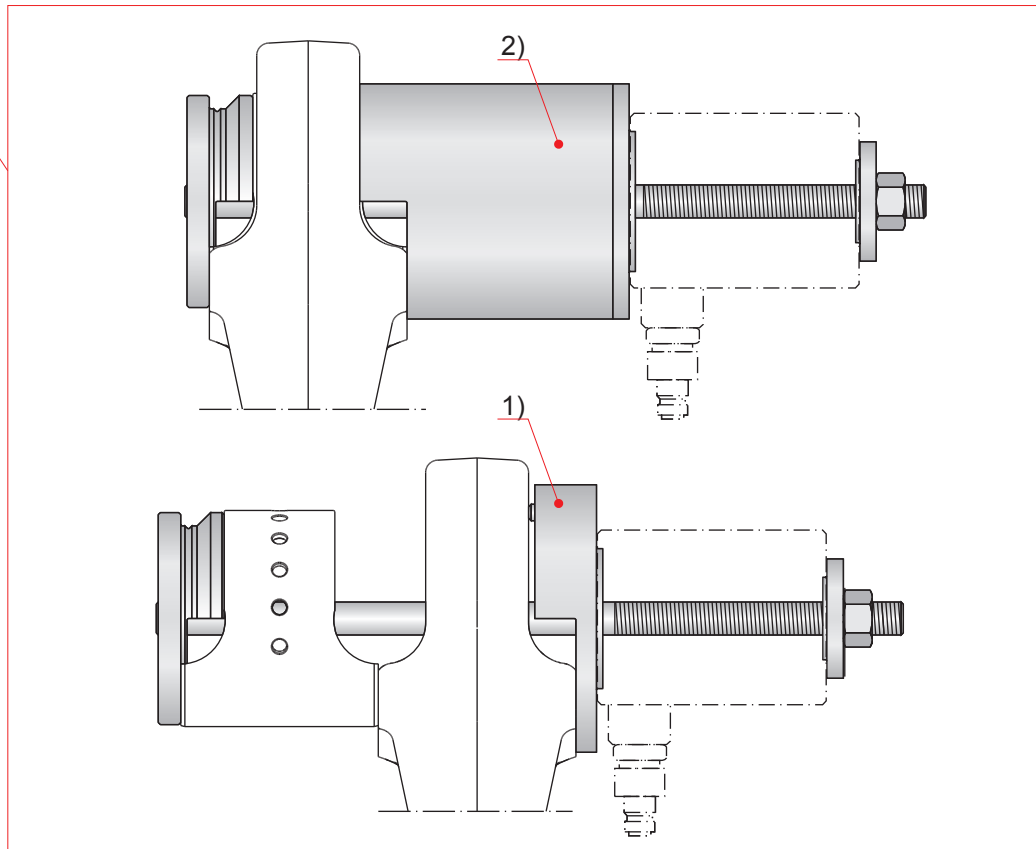
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
800 065	Deflection indicator for crankshaft, DI-5	1	4.3
800 071	Extension bar, 10mm	1	-
800 072	Extension bar, 20mm	1	-
800 073	Extension bar, 80mm	1	-
800 074	Extension bar, 160mm	1	-
800 075	Measuring tip, 7mm	1	-
800 076	Measuring tip, 10mm	1	-
800 077	Measuring tip, 14mm	1	-
800 078	Transducer tip, 17mm	1	-
848 033	Cylinder pressure indicator, electronic model	1	6.9
848 040	Cylinder gauge 160-280 mm	1	3.8
848 041	Dial indicator	1	0.2

Optional miscellaneous tools

837 042



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 042	Tool for gudgeon pin bearing bush	1	5.0

NOTE! (1) Used for mounting

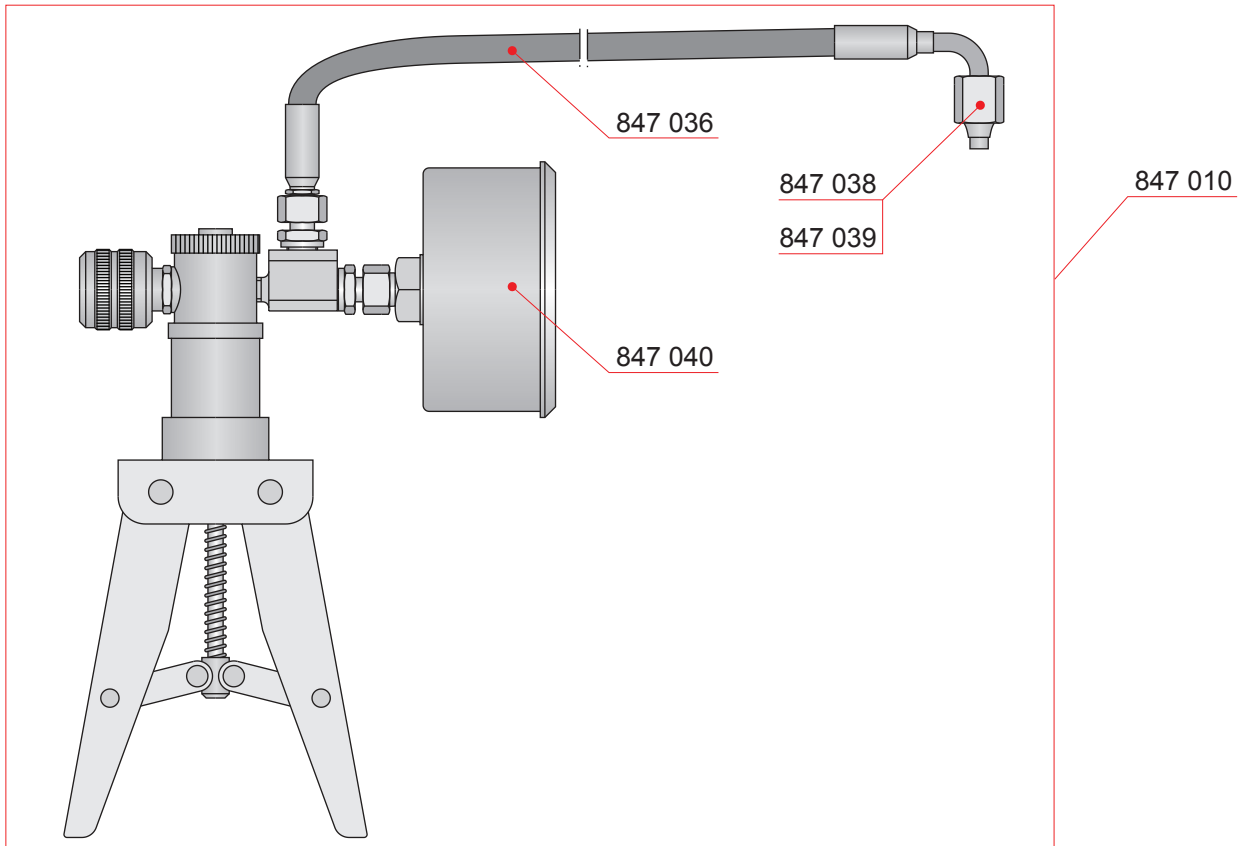
NOTE! (2) Used for dismounting

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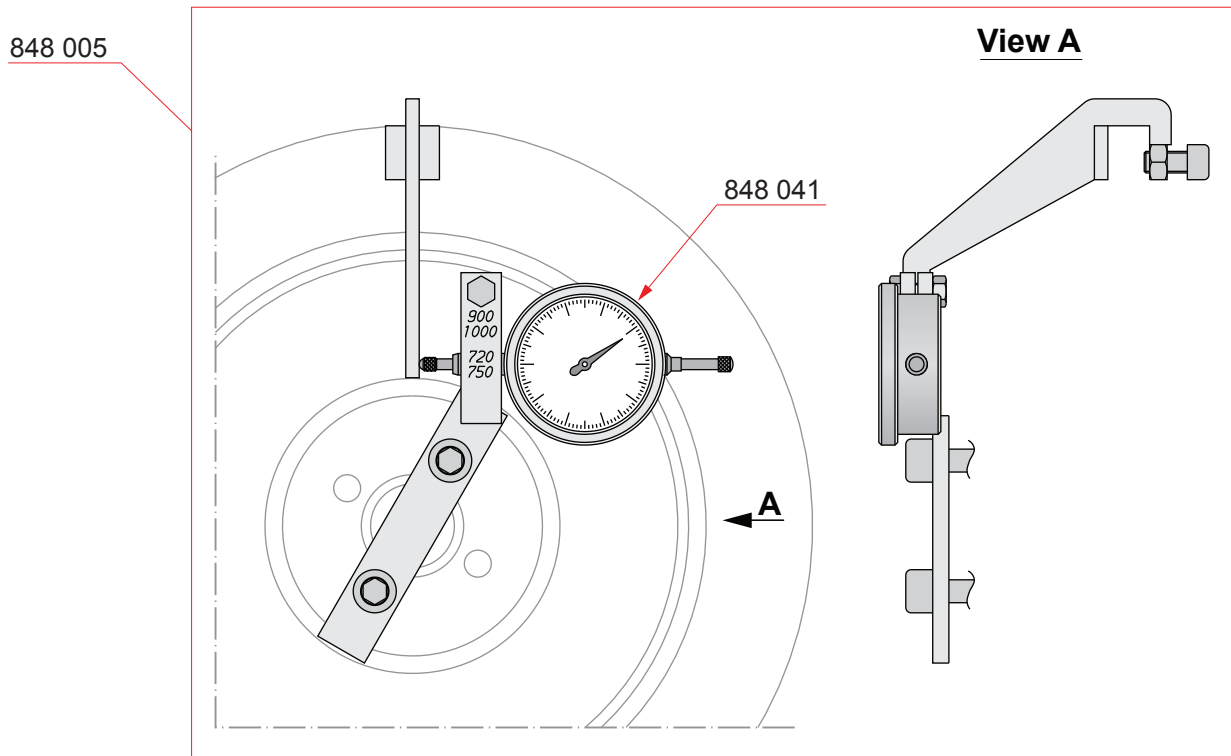
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 010	Pressure switch tester (1)	1	0.9
847 036	Hose	1	0.1
847 038	Union nut	1	-
847 039	Cutting ring	1	-
847 040	Manometer	1	0.3

NOTE! (1) Tool requires regular calibration.

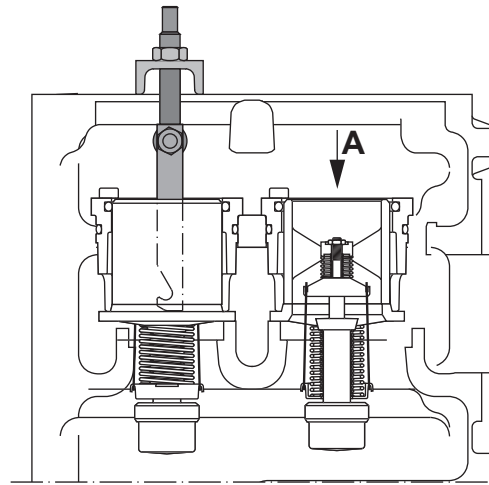
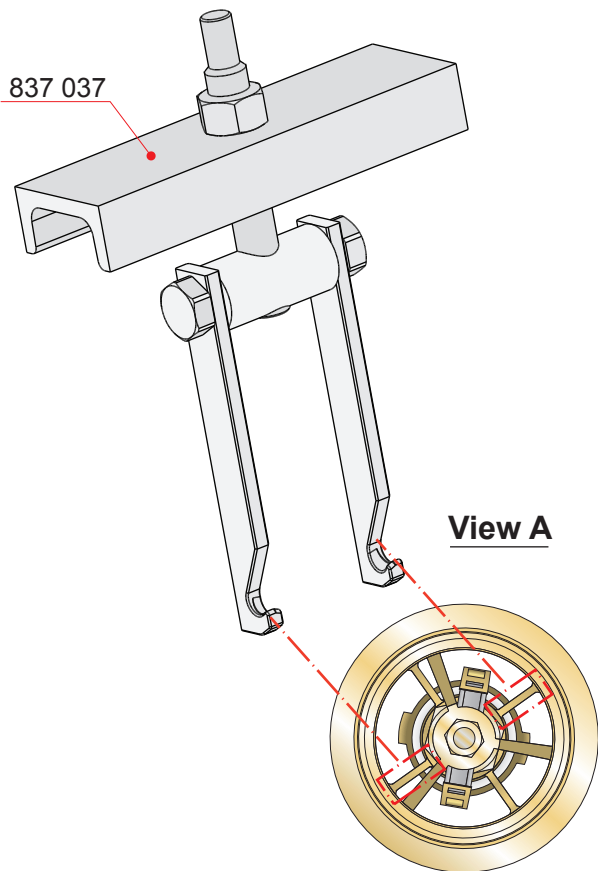
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
848 005	Tool for inspection of backlash on water pump	1	0.5
848 041	Dial indicator	1	0.2

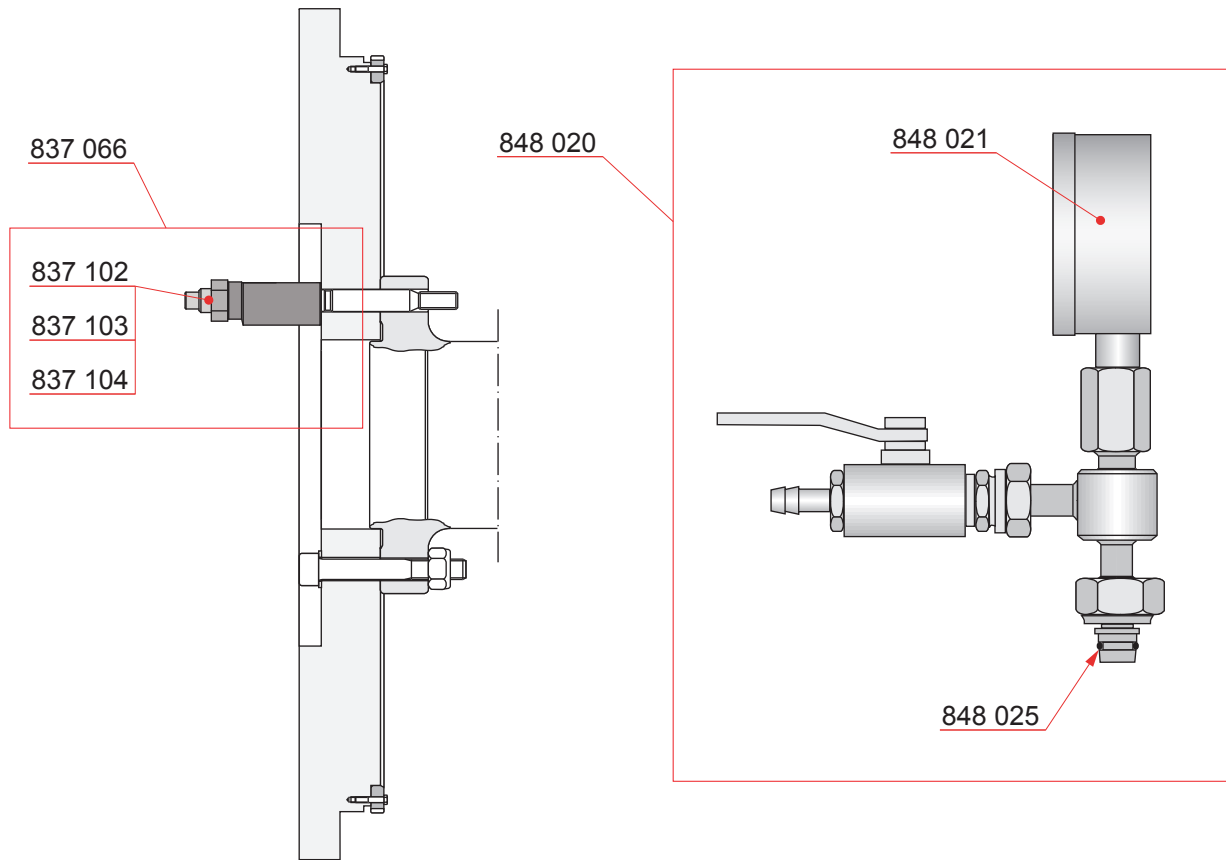
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Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 037	Extractor tool for thermostatic valve	1	0.7

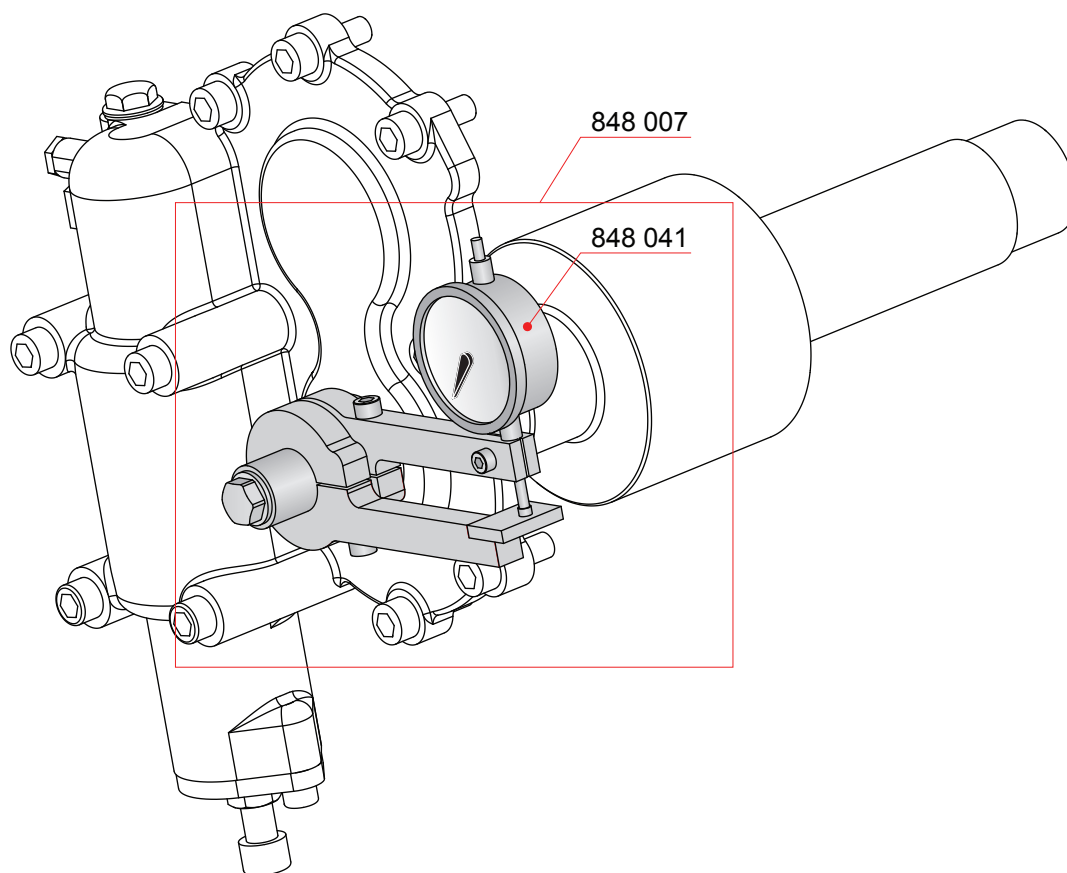
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 066	Extractor for fitted screw	1	1.0
837 102	Screw, M8	1	1.0
837 103	Screw, M10	1	0.5
837 104	Nut	1	0.1
848 020	Cylinder tightness tester	1	1.4
848 021	Pressure gauge	1	0.5
848 025	O-ring	1	-

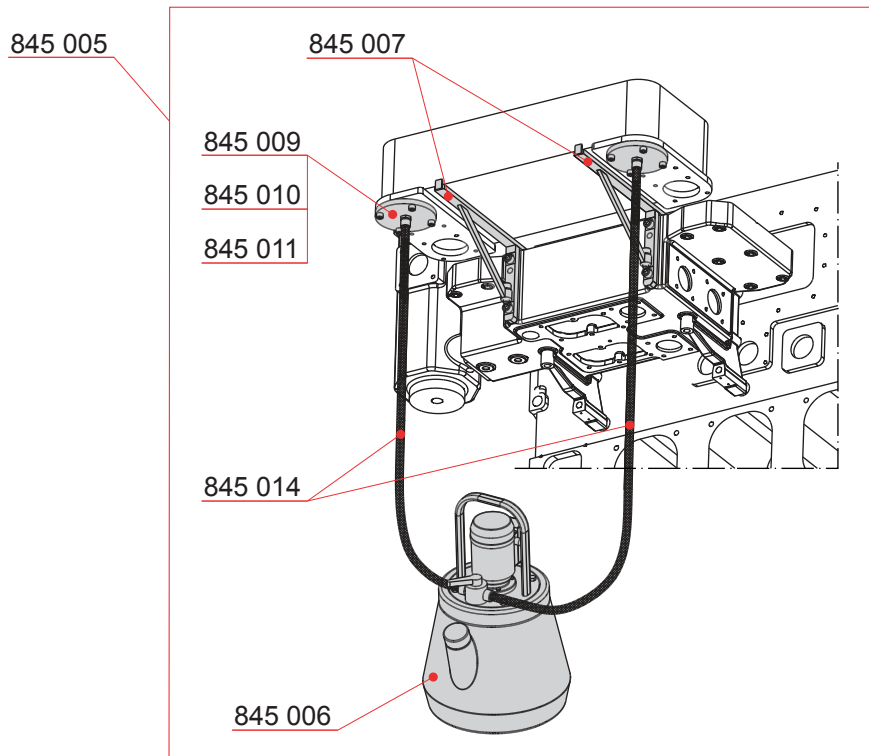
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Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
848 007	Backlash measuring device for oil pump	1	1.4
848 041	Dial indicator	1	0.2

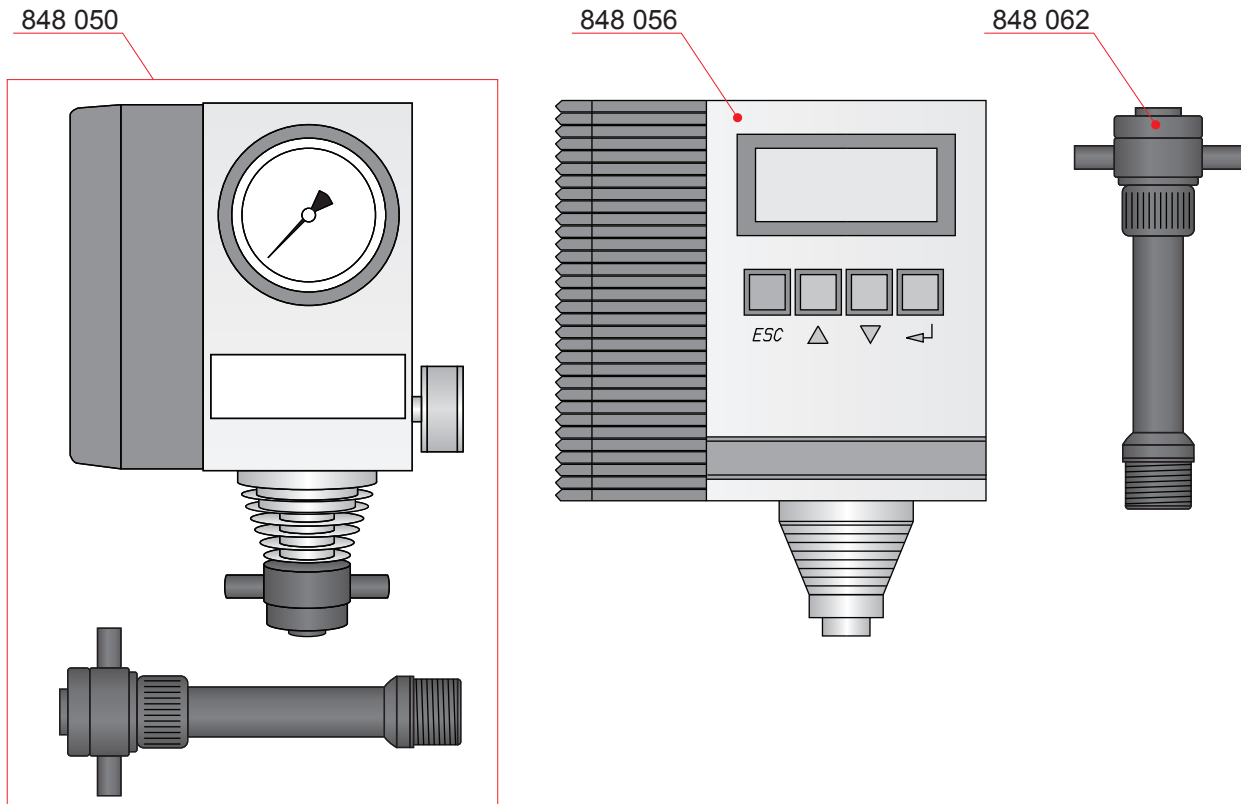
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
845 005	Cleaning device for plate heat exchanger	1	10.0
845 006	Flushing unit	1	-
845 007	Lifting bracket	2	6.1
845 009	Joint flange	2	2.2
845 010	O-ring	2	-
845 011	Screw	8	-
845 014	Hose set	1	0.5

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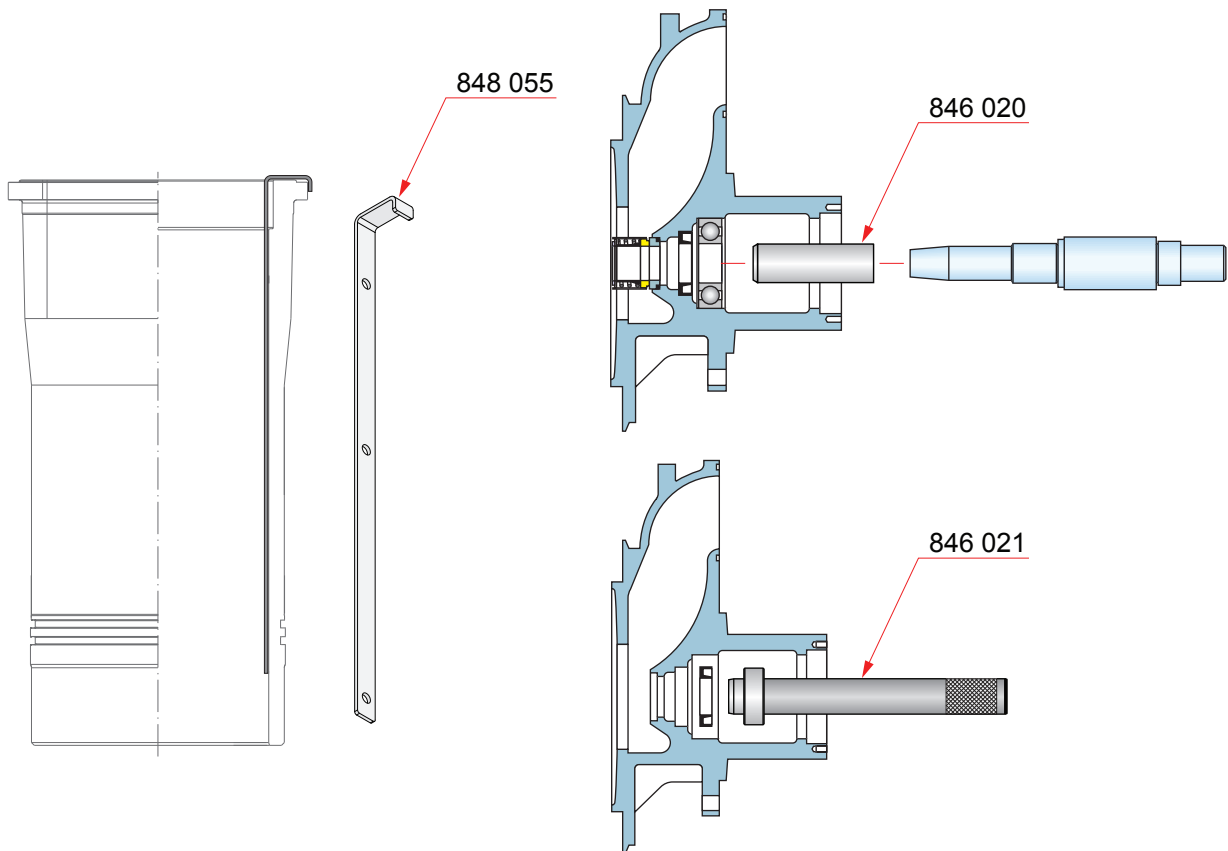
Optional miscellaneous tools



Part No.	Description	Qty [Pcs]	Wt. [Kg]
848 050	Pressure indicator LS-220 bar including extension (1)	1	4.3
848 056	Peak pressure indicator, electronic 0-250 bar (1)	1	8.7
848 062	Extension piece	1	0.5

NOTE! (1) Tool requires regular calibration.

Optional miscellaneous tools

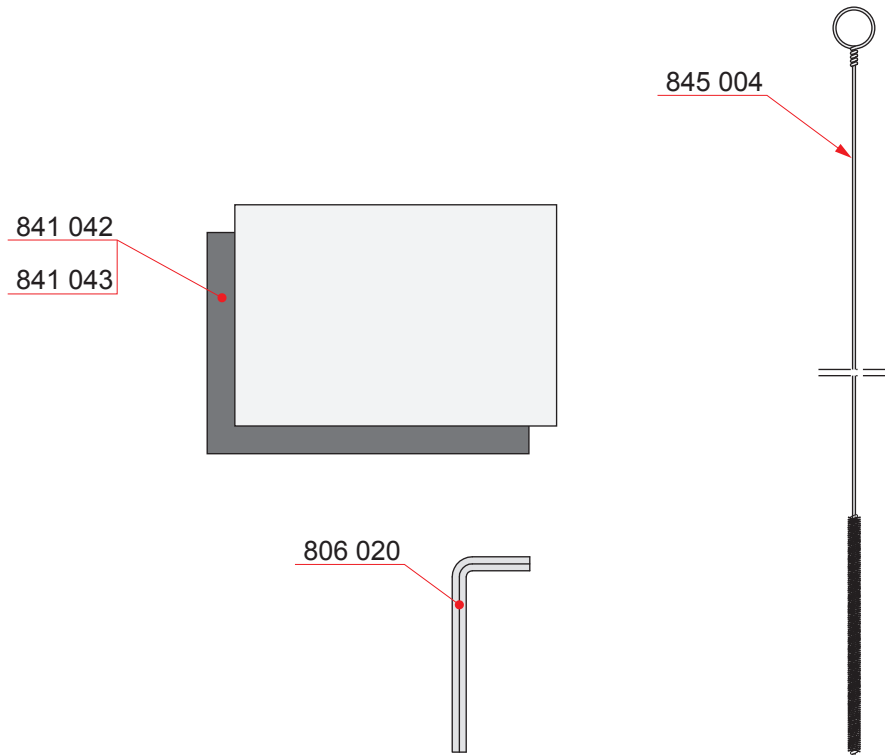


Part No.	Description	Qty [Pcs]	Wt. [Kg]
846 020	Guiding mandrel for shaft of water pump	1	0.3
846 021	Mounting tool for oil seal of water pump	1	0.8
848 055	Measuring rail for cylinder liner	1	-

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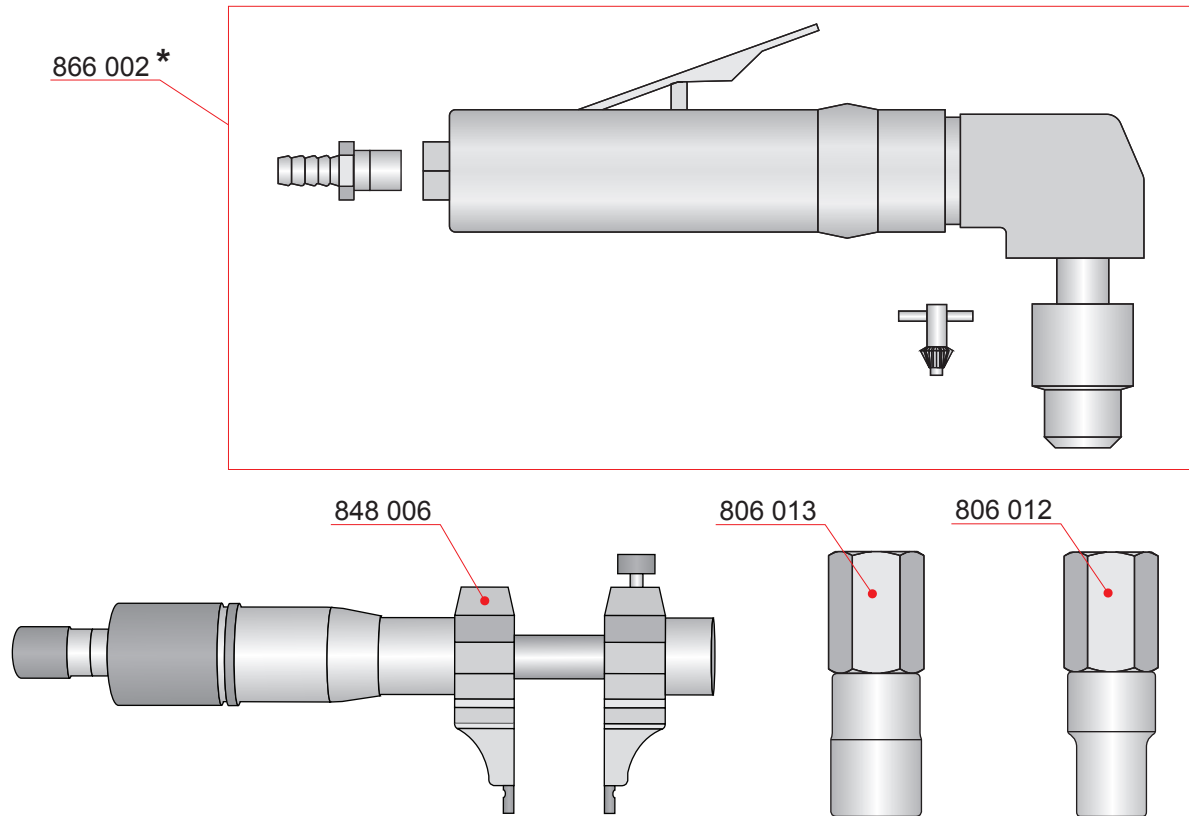
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Optional miscellaneous tools

Part No.	Description	Qty [Pcs]	Wt. [Kg]
806 020	Allen key 3/8" for air starter strainer housing	1	0.1
841 042	Rubber stone for polishing, grit 120	1	0.1
841 043	Rubber stone for polishing, grit 240	1	0.1
845 004	Brush for cleaning oil & circulation water cooler (1)	1	-

NOTE! (1) L= 2000mm

Optional miscellaneous tools



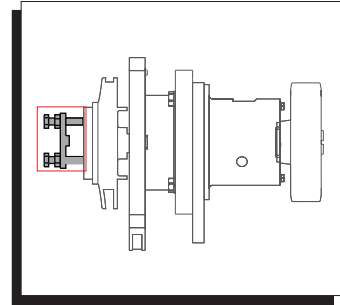
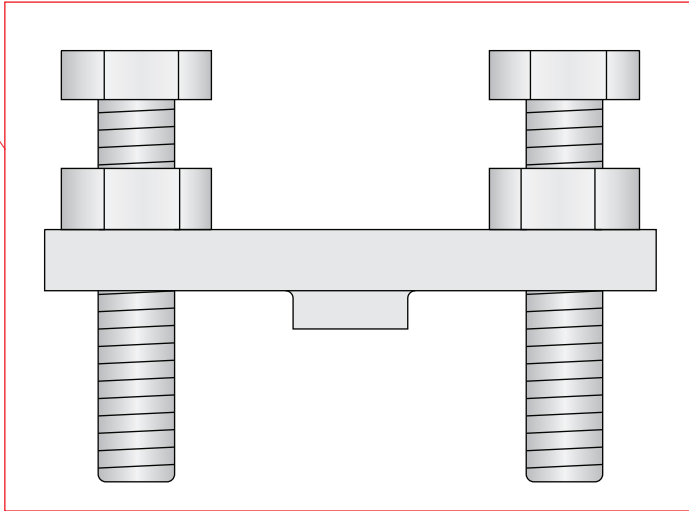
Part No.	Description	Qty [Pcs]	Wt. [Kg]
806 012	Torsion pin for reamer	1	1.0
806 013	Torsion pin for reamer	1	1.0
848 006	Measurement tool for piston ring grooves	1	0.2
866 002	Pneumatic turning device *	1	1.4

NOTE! *) Pneumatic turning device for prelubricating oil pump with extended shaft in free end.

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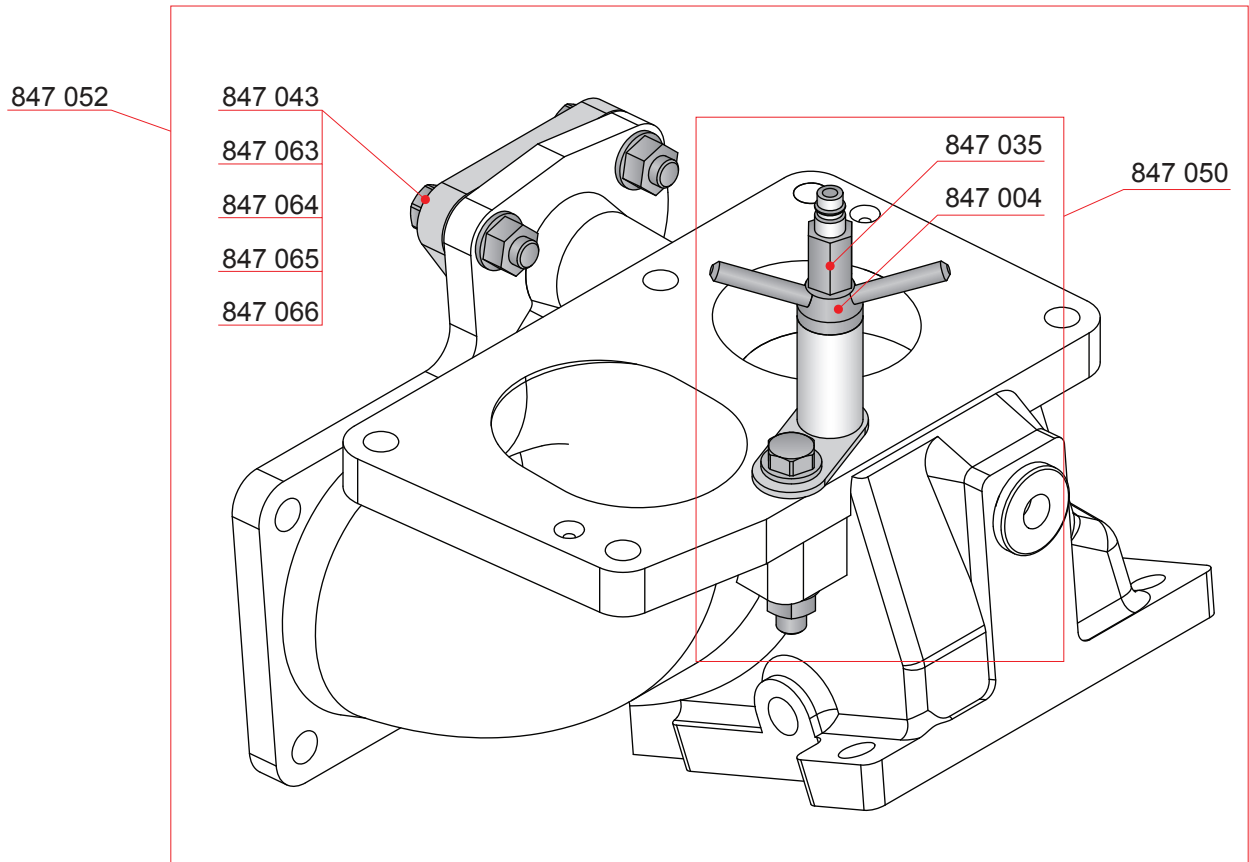
Optional miscellaneous tools

837 026



Part No.	Description	Qty [Pcs]	Wt. [Kg]
837 026	Extractor for impeller of water pump	1	0.4

Optional miscellaneous tools

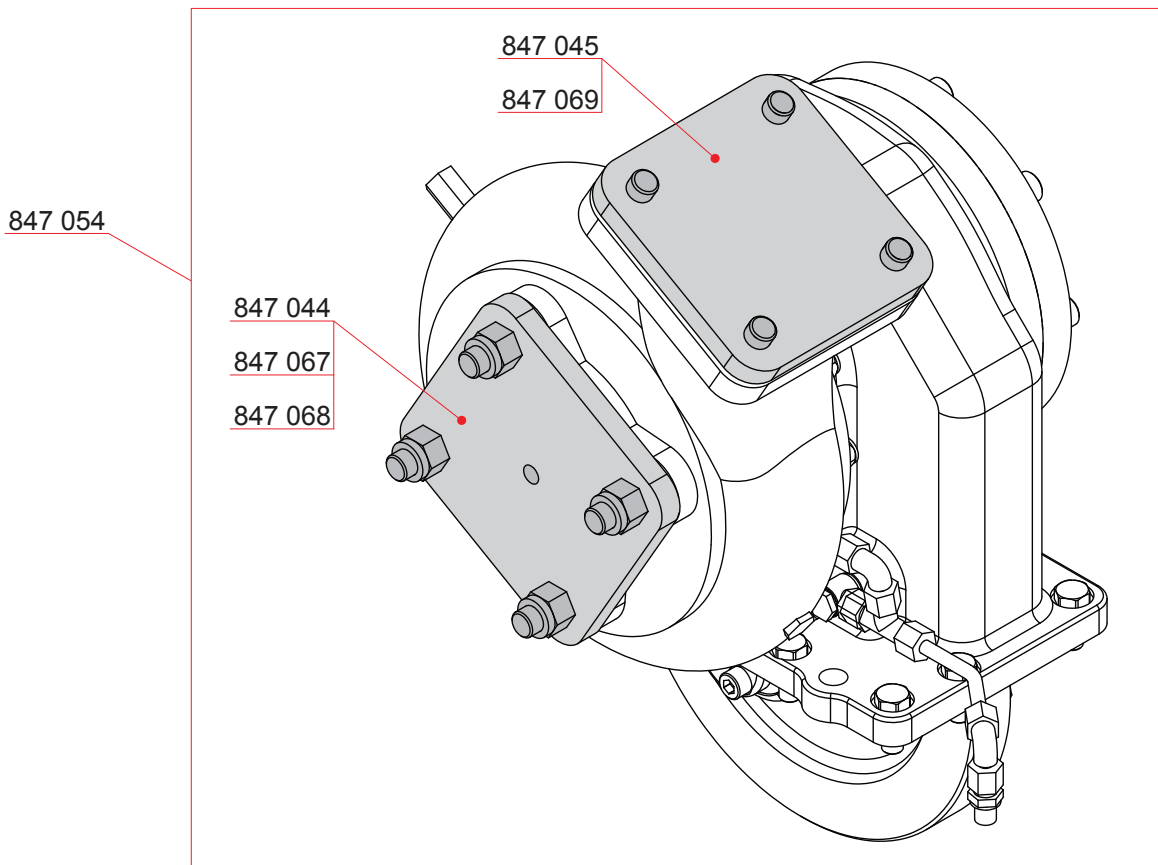


Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 052	Pressure test kit for multiduct	1	2.0
847 043	Pressure test flange	1	0.5
847 050	Pressure test tool for cylinder head, complete	1	1.0
847 004	Pressure test tool for cylinder head with nipple	1	0.3
847 035	Nipple	1	-
847 063	Washer	6	-
847 064	Nut	-	-
847 065	Screw	3	-
847 066	O-ring	1	-

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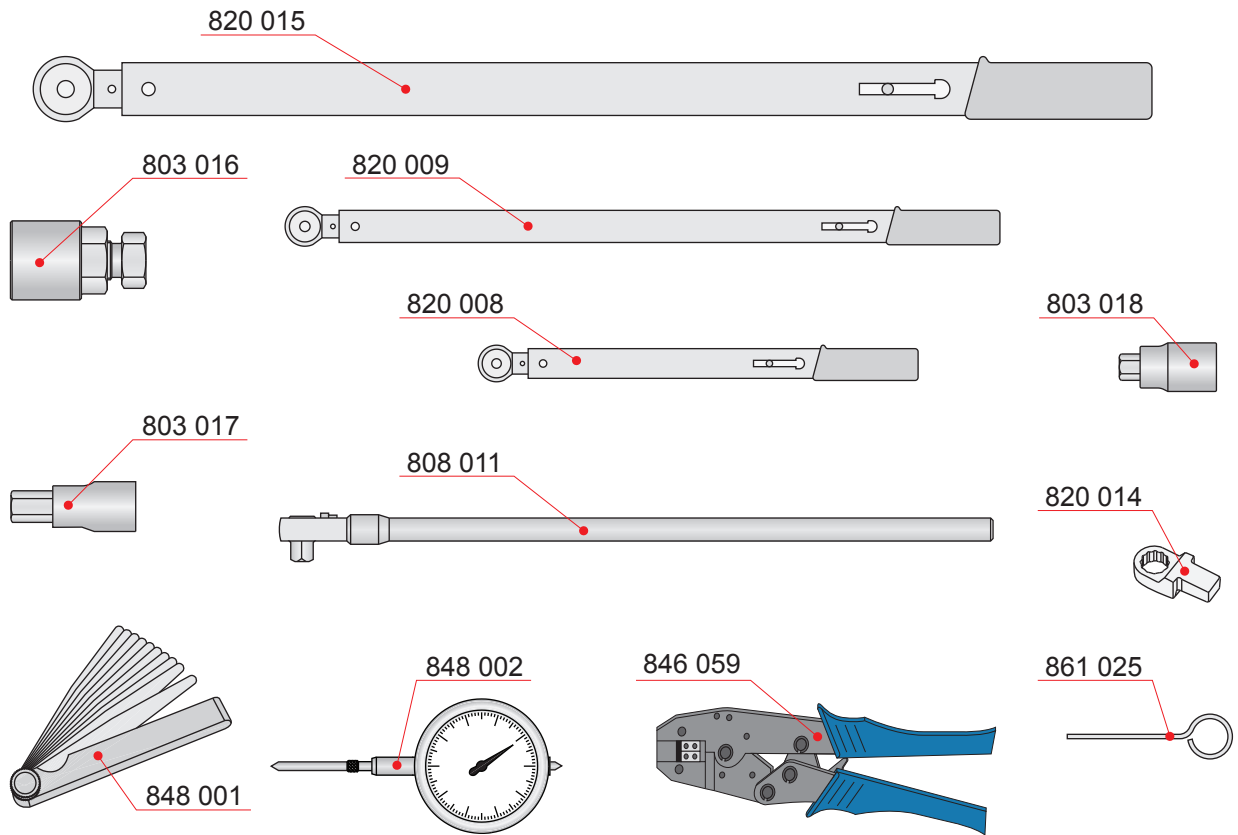
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Optional miscellaneous tools

Part No.	Description	Qty [Pcs]	Wt. [Kg]
847 054	Pressure test flanges for water pump	1	2.0
847 044	Pressure test flange	1	1.0
847 045	Pressure test flange	1	1.0
847 067	O-ring	1	-
847 068	Quick coupling	1	-
847 069	O-ring	1	-

Miscellaneous tools

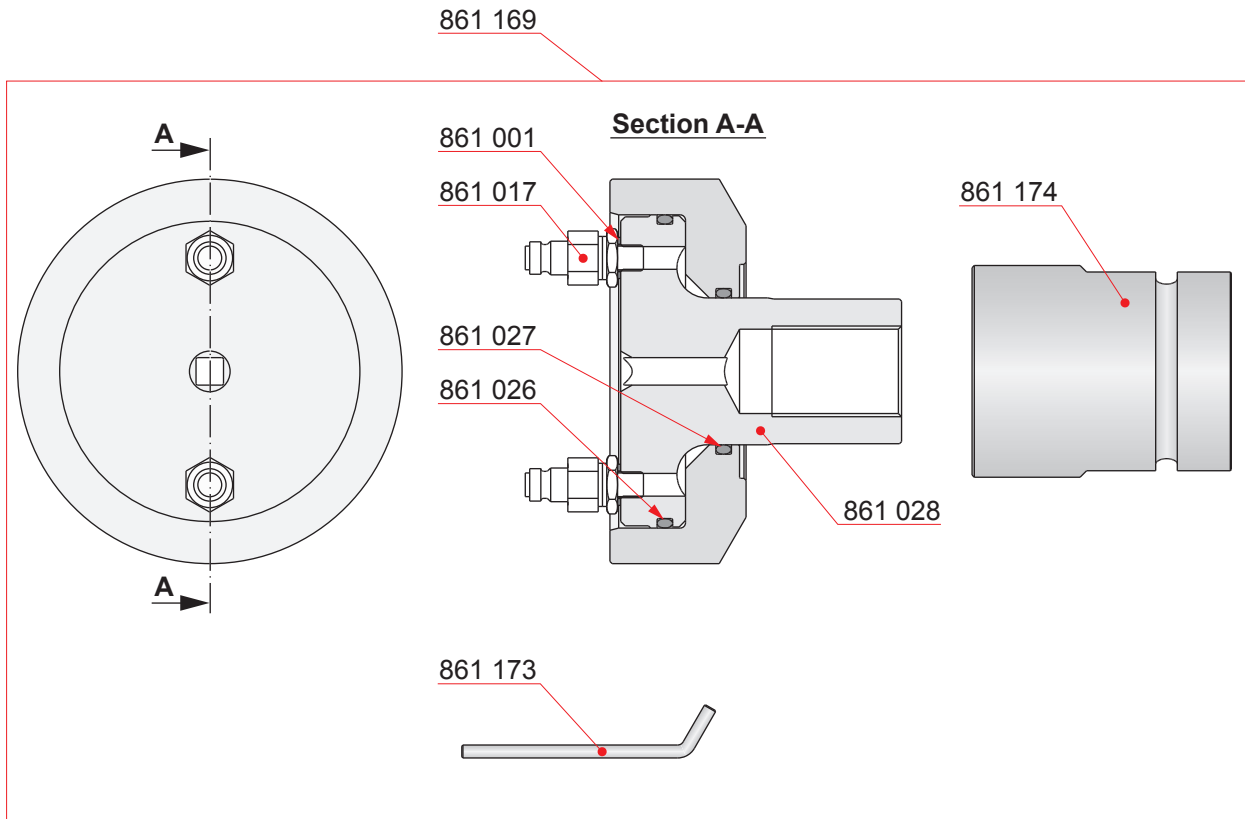


Part No.	Description	Qty [Pcs]	Wt. [Kg]
803 016	Stud remover M36	1	-
803 017	Hexagon socket wrench 19 1" square drive	1	-
803 018	Bit 17 for hexagon socket screw 3/4" square drive	1	-
808 011	Ratchet with torque arm 3/4" square	1	2.9
820 008	Torque wrench 20-100 Nm (*)	1	0.8
820 009	Torque wrench 75-400 Nm (*)	1	-
820 014	Ring insert wrench 19	1	-
820 015	Torque wrench 150-800 Nm (*)	1	-
846 059	Hand crimping tool	1	-
848 001	Feeler gauge set	1	-
848 002	Measure gauge for crankshaft deflection (*)	1	-
861 025	Pin for tightening of nuts Ø6mm	2	-

NOTE! (*) Tool requires regular calibration.

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Hydraulic tightening tool for camshaft



Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 169	Hydraulic cylinder (#)	1	14.5
861 001	Sealing ring (1)	2	-
861 017	Quick coupling, male	2	-
861 026	O-ring (1)	1	-
861 027	O-ring (1)	1	-
861 028	Piston	1	4.9
861 173	Pin for tightening of nuts	1	-
861 174	Distance sleeve	1	2.7

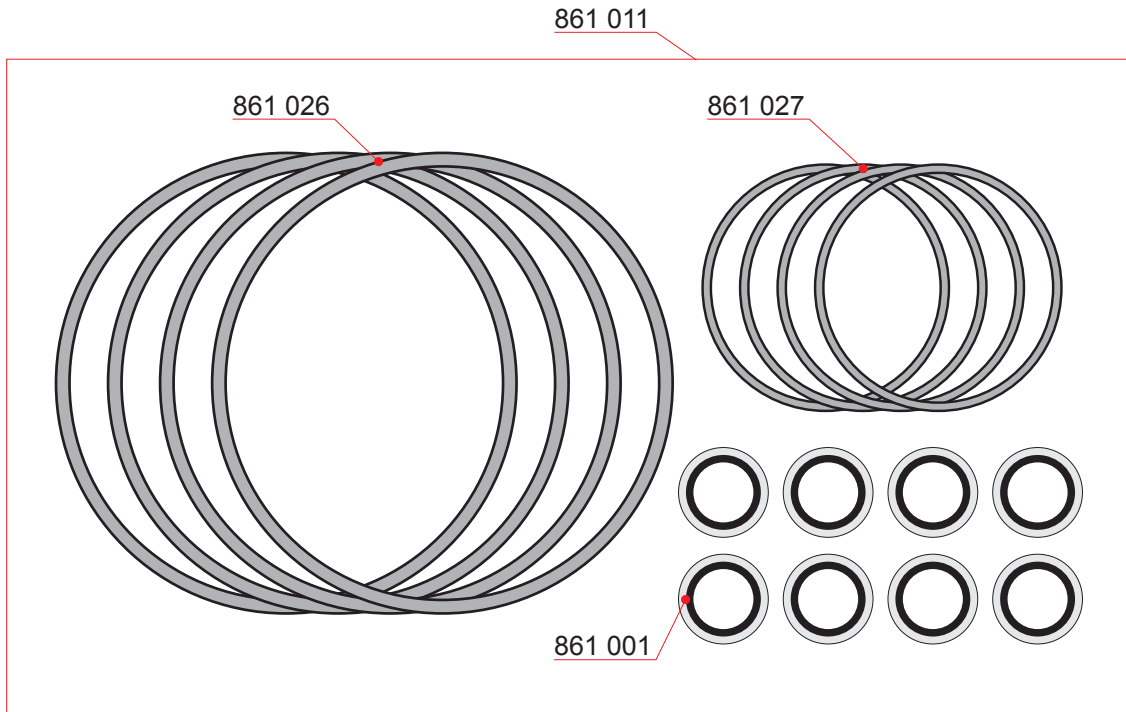
NOTE! (#) Tool requires regular maintenance.

NOTE! (1) See page 2.

Edition: C

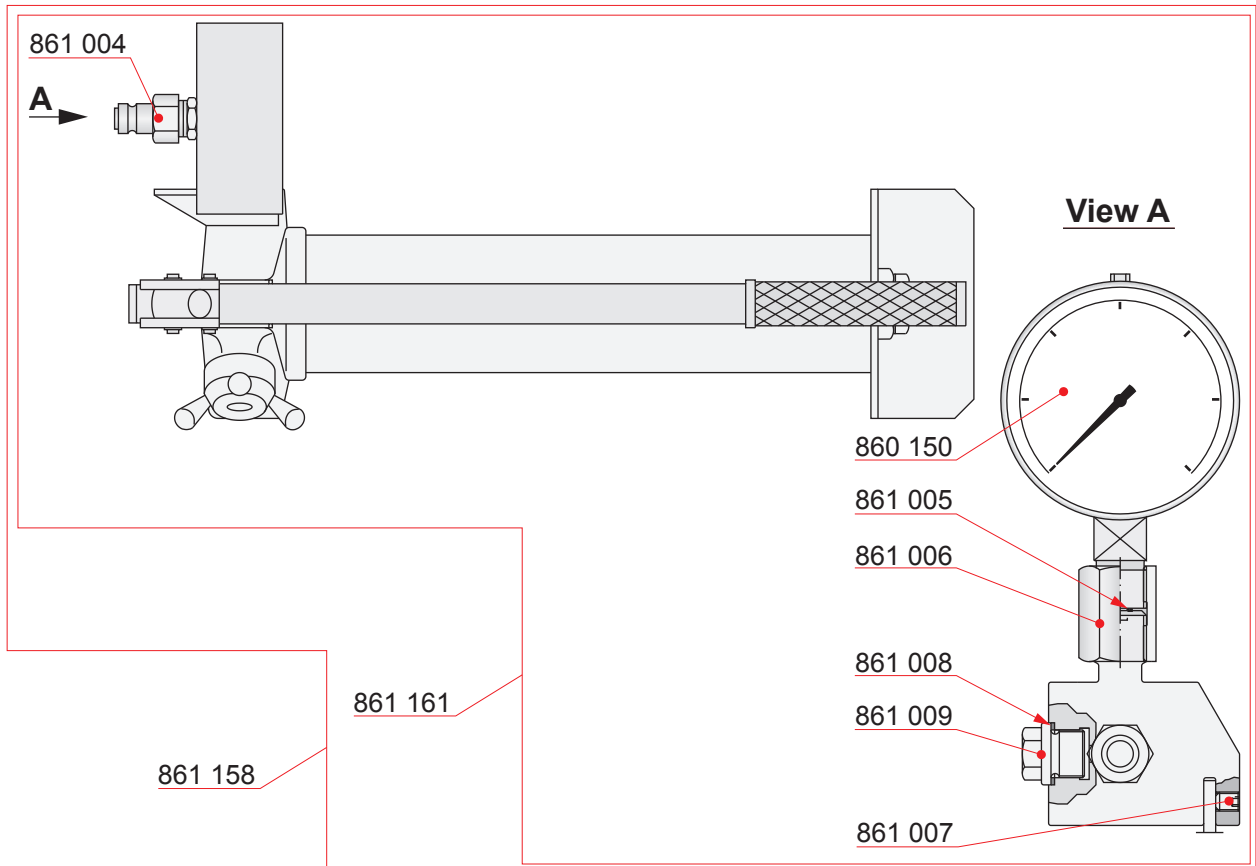
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Hydraulic tightening tool for camshaft

Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 011	Sealing set for hydraulic tightening tool	1	-
861 001	Sealing ring	8	-
861 026	O-ring	4	-
861 027	O-ring	4	-

Hydraulic tightening tools



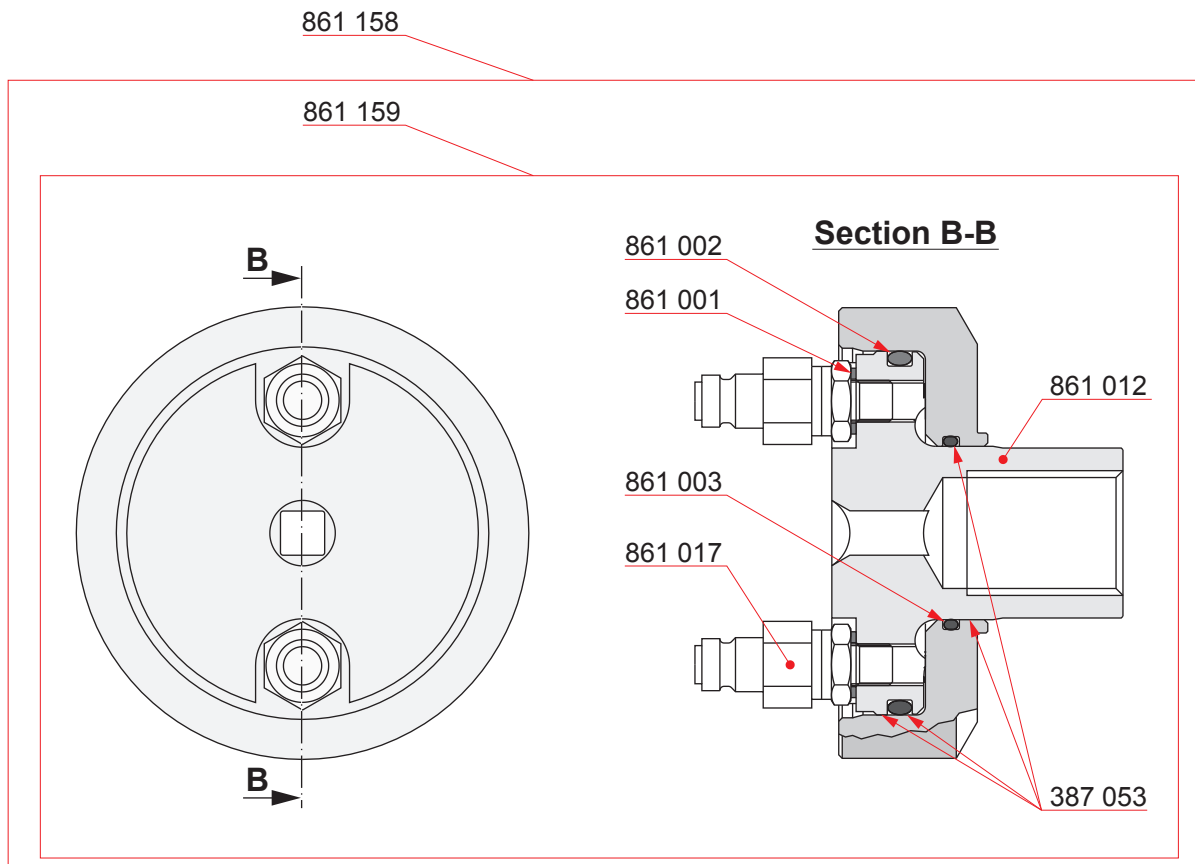
Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 158	Hydraulic tightening tool, complete (#)	1	35.0
861 161	High pressure pump (1000 bar) (#)(*)	1	5.6
860 150	Manometer	1	1.1
861 004	Quick coupling, male	1	-
861 005	Sealing ring	1	-
861 006	Nut	1	0.4
861 007	Screw	2	-
861 008	Sealing ring	1	-
861 009	Plug	1	-

NOTE! (#) Tool requires regular maintenance.

NOTE! (*) Tool requires regular calibration.

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Hydraulic tightening tools



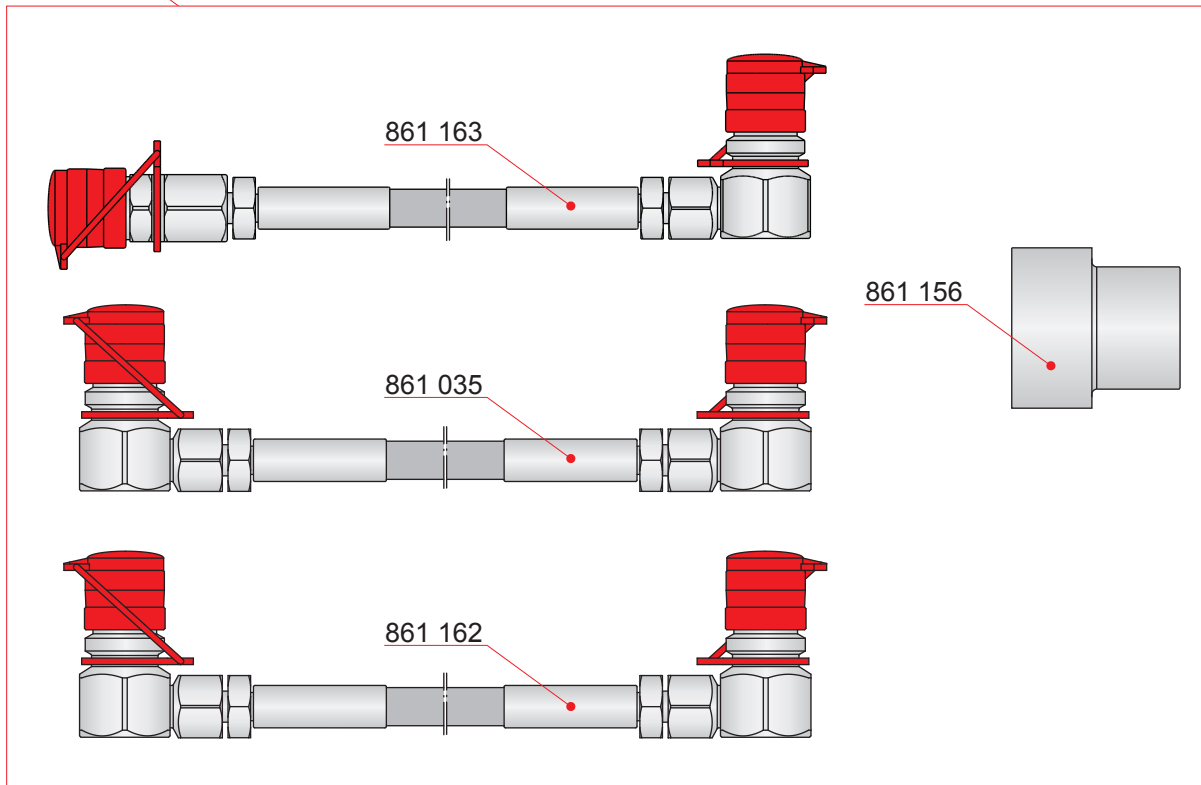
Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 158	Hydraulic tightening tool, complete (#)	1	35.0
861 159	Hydraulic cylinder (#)	4	4.3
861 001	Sealing ring (1)	2	-
861 002	O-ring (1)	1	-
861 003	O-ring (1)	1	-
861 012	Piston	1	-
861 017	Quick coupling, male	2	-
387 053	Grease	1	-

NOTE! (#) Tool requires regular maintenance.

NOTE! (1) See page 4.

Hydraulic tightening tools

861 158



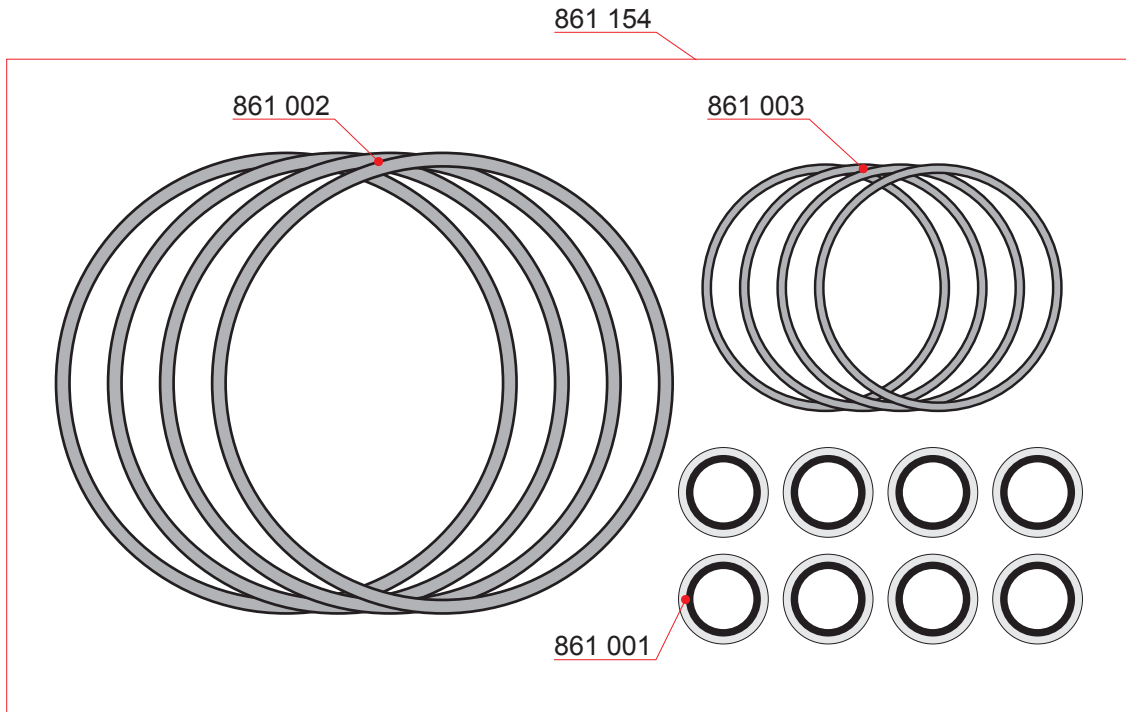
Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 158	Hydraulic tightening tool, complete (#)	1	35.0
861 035	Flexible hose 820mm	1	0.9
861 156	Distance sleeve	4	1.8
861 162	Flexible hose 360mm	2	0.9
861 163	Flexible hose 3000mm	2	1.1

NOTE! (#) Tool requires regular maintenance.

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Hydraulic tightening tools

Part No.	Description	Qty [Pcs]	Wt. [Kg]
861 154	Sealing set for hydraulic tightening tools	1	-
861 001	Sealing ring	8	-
861 002	O-ring	4	-
861 003	O-ring	4	-