

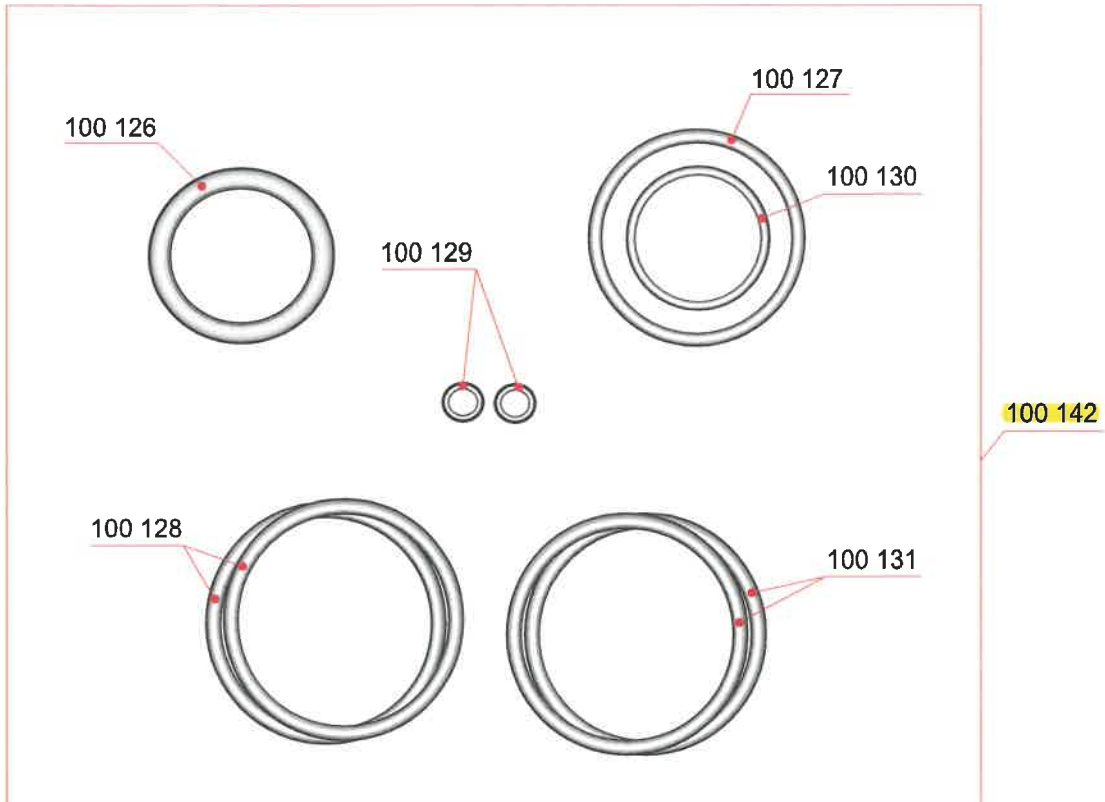
CITY OF ALEXANDRIA

DG HUNTER UNITS 5-11 - SPARE PARTS
ELECTRIC PRODUCTION

APPENDIX A
PRODUCT DATA SHEETS

APPENDIX A

Hydraulic jack for main bearing cap

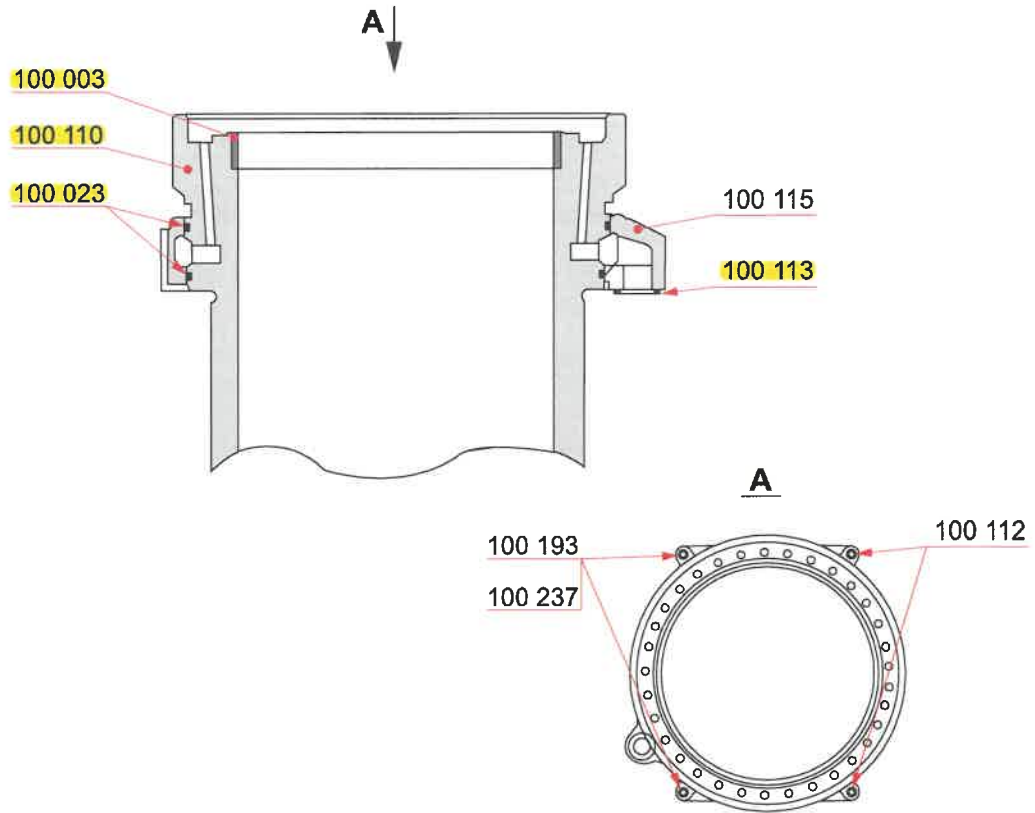


Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 142	Sealing set	1	-
100 126	O-ring (1)	1	-
100 127	O-ring (1)	1	-
100 128	O-ring (1)	2	-
100 129	O-ring (1)	2	-
100 130	O-ring (1)	1	-
100 131	O-ring (1)	2	-

NOTE! (1) Not available separately.

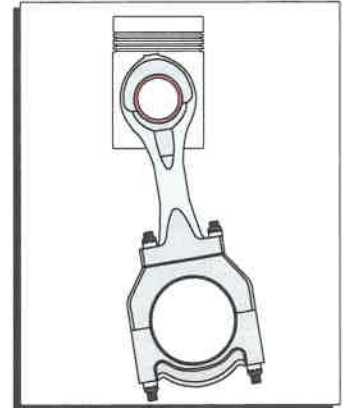
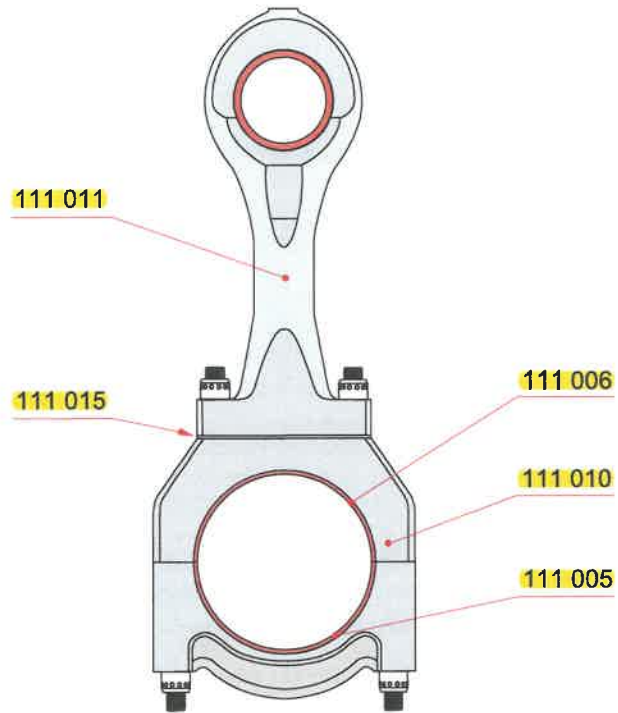
APPENDIX A

Cylinder liner with anti-polishing ring



Part No.	Description	Qty [Pcs]	Wt. [Kg]
100 003	Anti-polishing ring	1	-
100 023	O-ring	2	-
100 110	Cylinder liner	1	-
100 112	Screw	2	-
100 113	O-ring	1	-
100 115	Water jacket	1	-
100 193	Screw	2	-
100 237	Clamp	2	-

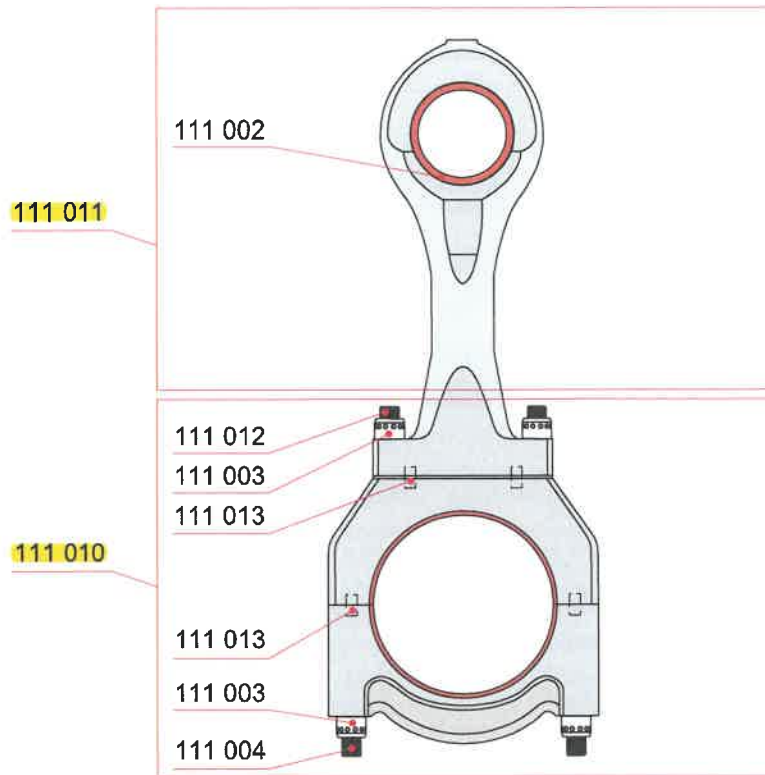
Connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 005	Big end bearing shell, lower	1	-
111 006	Big end bearing shell, upper	1	-
111 010	Connecting rod, lower part	1	80.2
111 011	Connecting rod, upper part	1	77.0
111 015	Shim	1	-

APPENDIX A

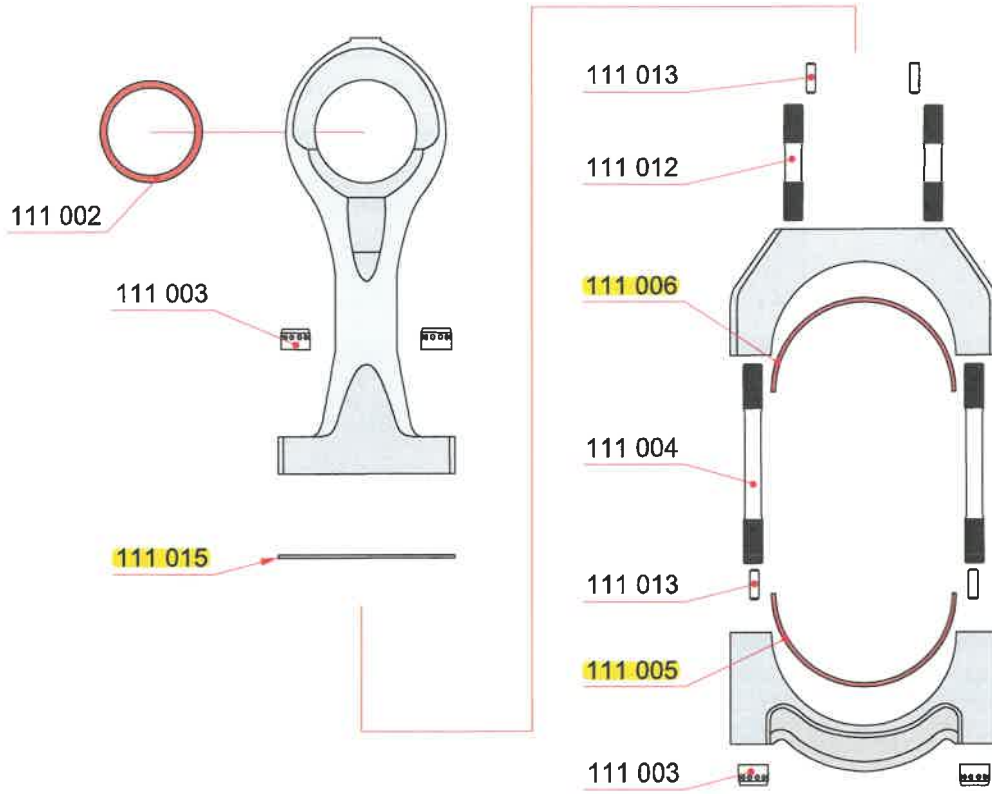
Connecting rod



Part No.	Description	Qty [Pcs]	Wt. [Kg]
111 010	Connecting rod, lower part	1	80.2
111 003	Nut	8	0.2
111 004	Screw	4	1.3
111 012	Screw	4	0.8
111 013	Pin	4	-
111 011	Connecting rod, upper part	1	77.0
111 002	Gudgeon pin bearing bush	1	3.8

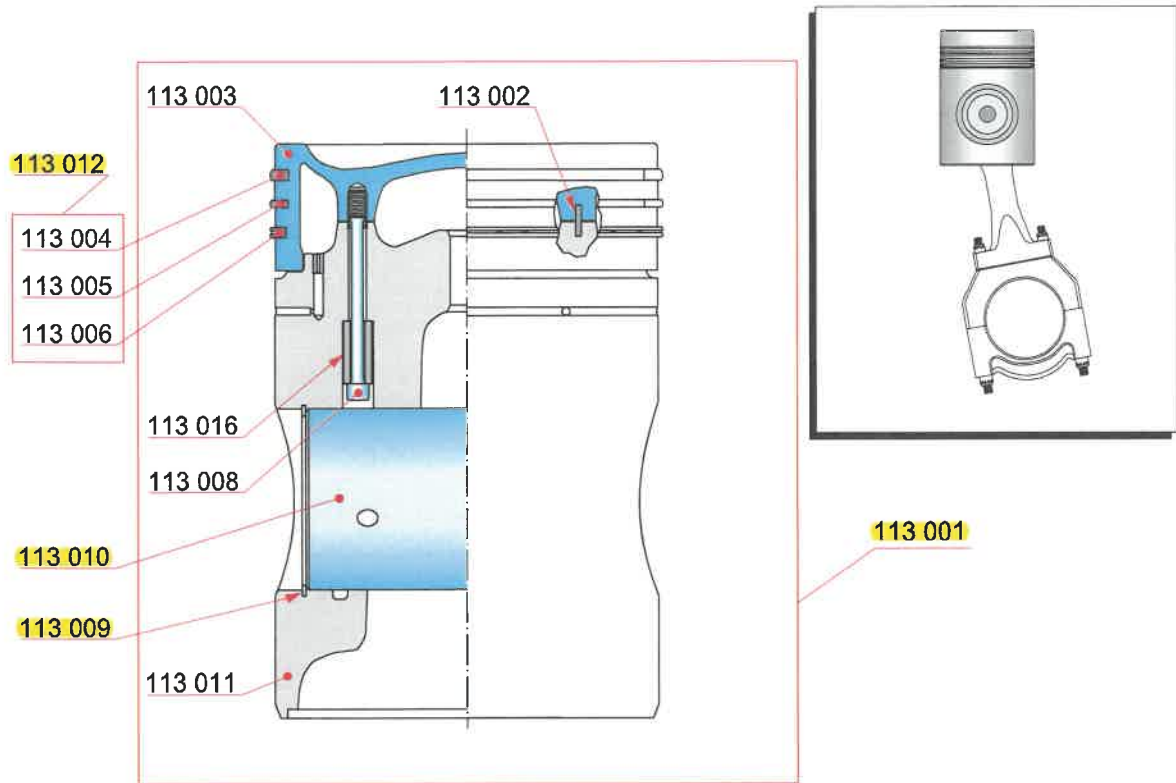
APPENDIX A

Connecting rod



APPENDIX A

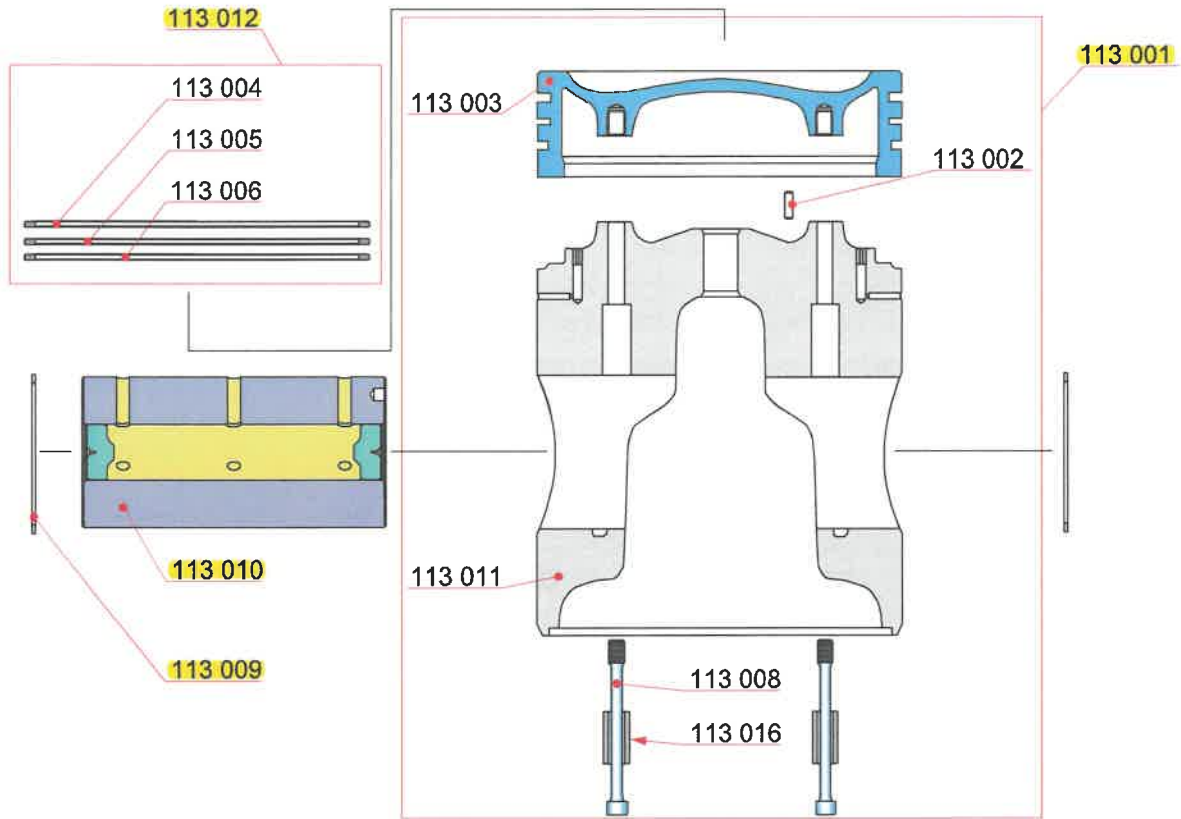
Piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 001	Piston	1	12.5
113 002	Pin	1	0.7
113 003	Piston crown	1	0.5
113 008	Screw	4	0.2
113 011	Piston skirt	1	43.0
113 016	Bush	4	0.1
113 012	Piston ring set	1	-
113 004	Piston ring I	1	0.7
113 005	Piston ring II	1	0.3
113 006	Piston ring III	1	0.3
113 009	Securing ring	2	0.1
113 010	Gudgeon pin	1	0.1

APPENDIX A

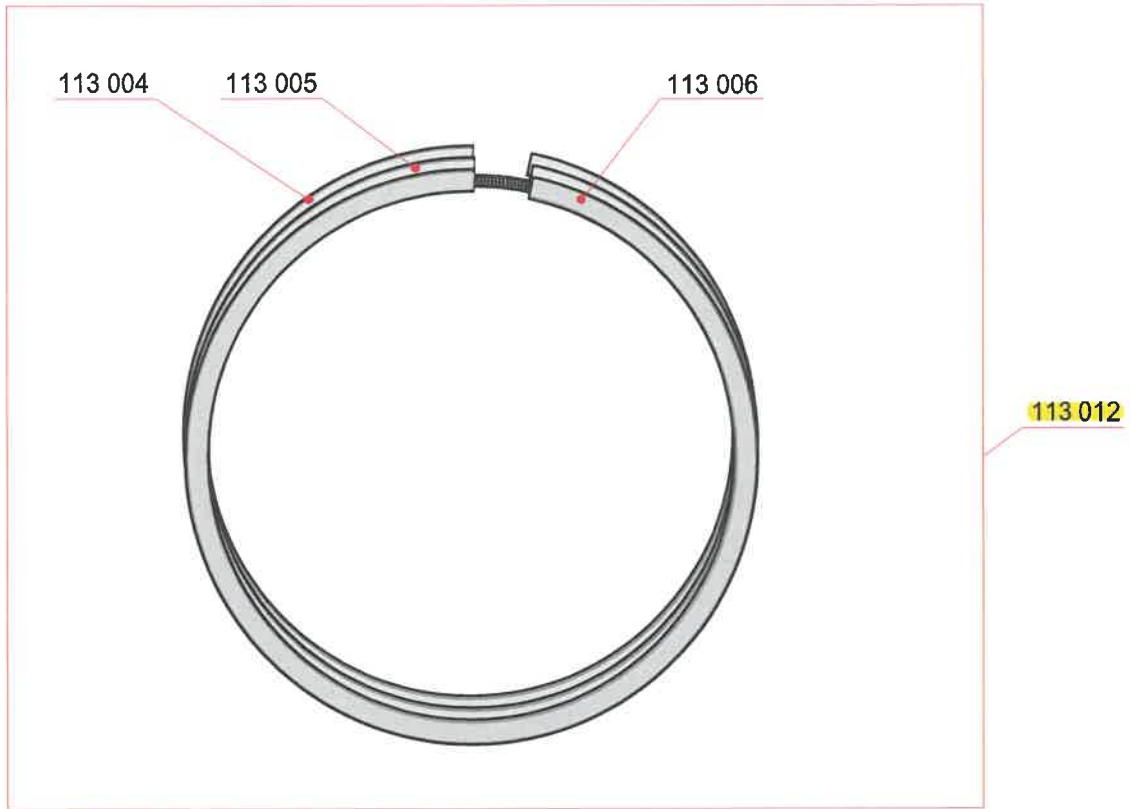
Piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 001	Piston	1	12.5
113 002	Pin	1	0.7
113 003	Piston crown	1	0.5
113 008	Screw	4	0.2
113 011	Piston skirt	1	43.0
113 016	Bush	4	0.1
113 012	Piston ring set	1	-
113 004	Piston ring I	1	0.7
113 005	Piston ring II	1	0.3
113 006	Piston ring III	1	0.3
113 009	Securing ring	2	0.1
113 010	Gudgeon pin	1	0.1

APPENDIX A

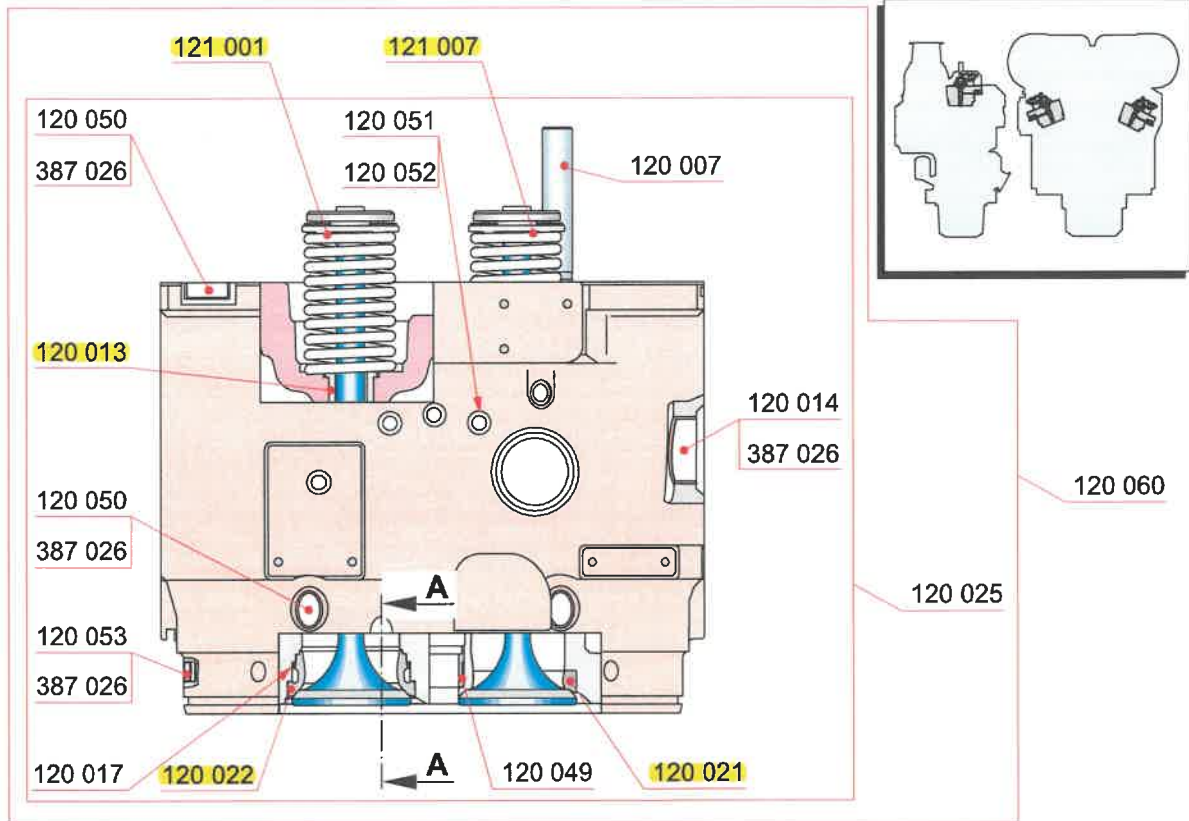
Piston



Part No.	Description	Qty [Pcs]	Wt. [Kg]
113 012	Piston ring set	1	-
113 004	Piston ring I	1	0.7
113 005	Piston ring II	1	0.3
113 006	Piston ring III	1	0.3

APPENDIX A

Cylinder head



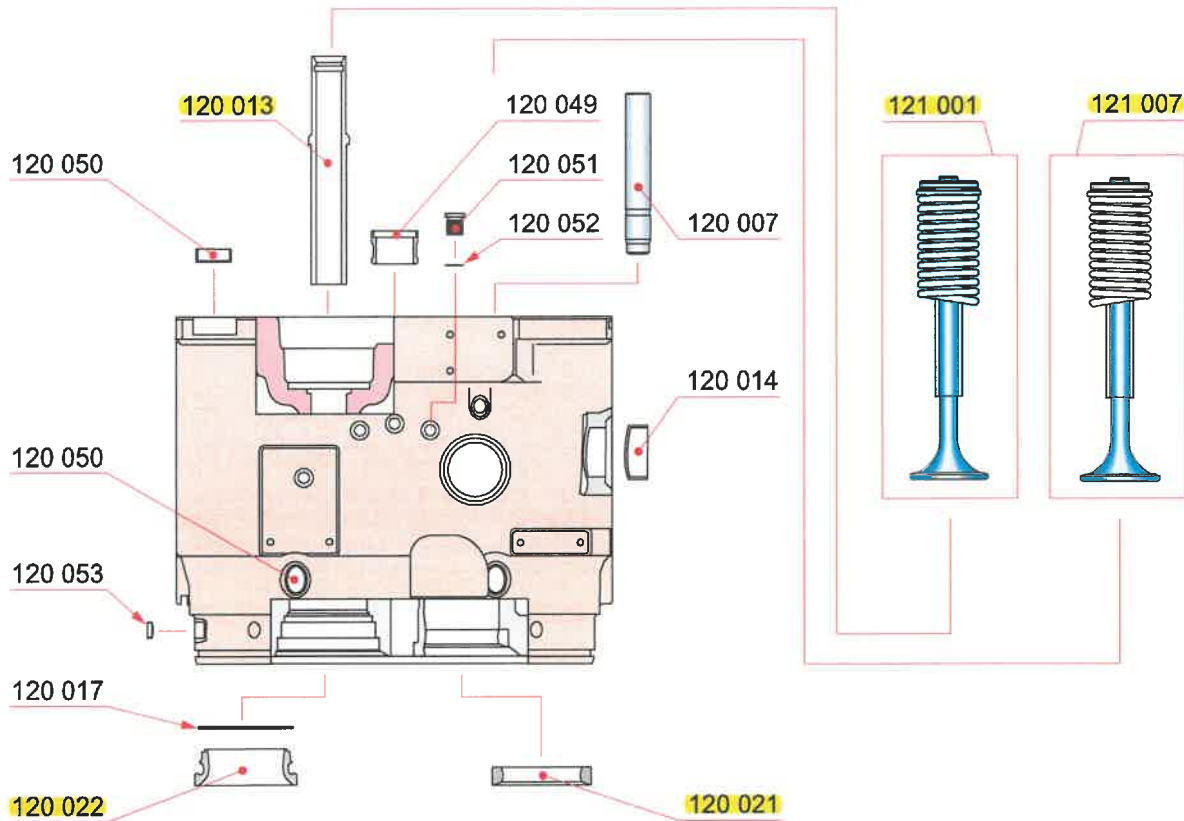
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 060	Cylinder head with inlet and exhaust valve (1)	1	-
121 001	Exhaust valve, compl.	2	-
121 007	Inlet valve, compl.	2	-
120 025	Cylinder head (2)	1	-
120 007	Yoke pin	2	-
120 013	Valve guide	4	-
120 014	Sealing push-in cap	5	-
120 017	O-ring	2	-
120 021	Seat ring for inlet valve	2	-
120 022	Seat ring for outlet valve	2	-
120 049	Sleeve	1	-
120 050	Sealing push-in cap	13	-
120 051	Plug	2	-
120 052	Sealing ring	2	-
120 053	Sealing push-in cap	8	-
387 026	Glue compound	1	-

NOTE! (1) With valves

NOTE! (2) Without valves

APPENDIX A

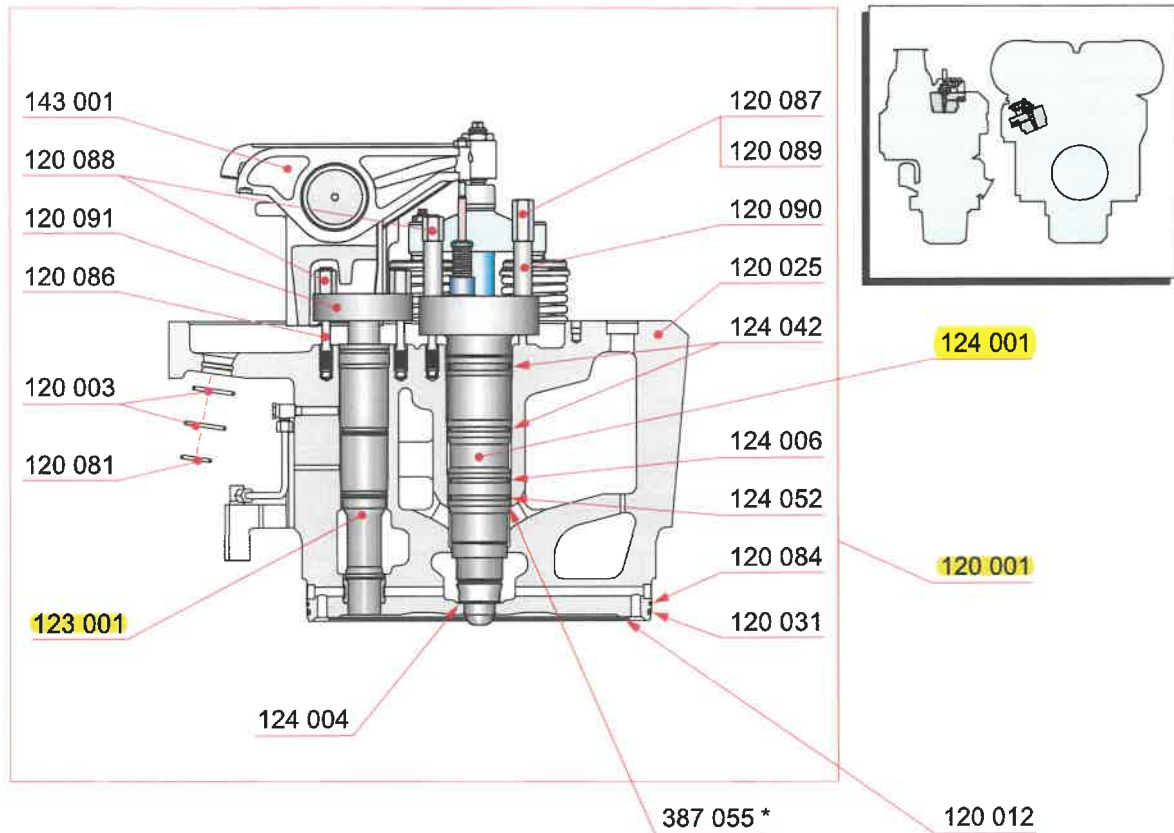
Cylinder head



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 007	Yoke pin	2	-
120 013	Valve guide	4	-
120 014	Sealing push-in cap	5	-
120 017	O-ring	2	-
120 021	Seat ring for inlet valve	2	-
120 022	Seat ring for outlet valve	2	-
120 049	Sleeve	1	-
120 050	Sealing push-in cap	13	-
120 051	Plug	2	-
120 052	Sealing ring	2	-
120 053	Sealing push-in cap	8	-
121 001	Exhaust valve, compl.	2	-
121 007	Inlet valve, compl.	2	-

APPENDIX A

Cylinder head with starting valve

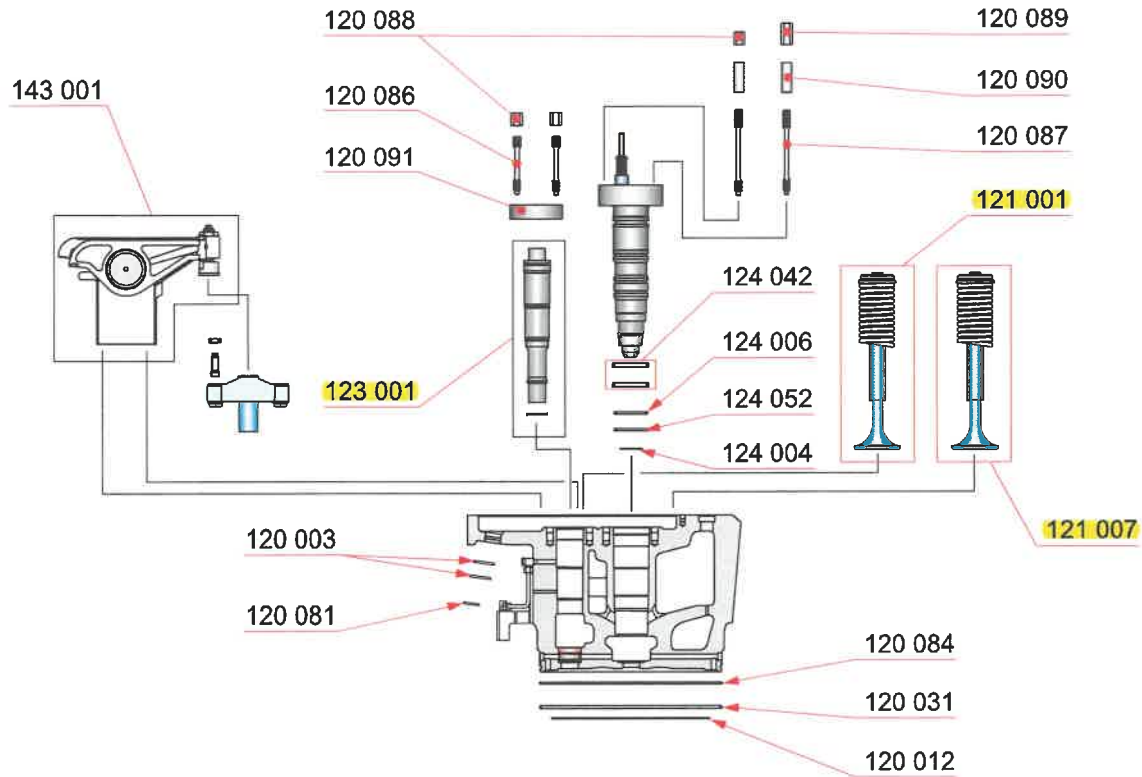


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 001	Cylinder head	1	-	NOTE!	(4) See section 124-		
120 003	O-ring	2	-	NOTE!	*) Prechamber O-rings to be slightly lubricated.		
120 025	Cylinder head (1)	1	319				
120 031	O-ring	1	-				
120 081	O-ring	1	-				
120 084	O-ring	1	-				
120 086	Screw	2	0.2				
120 087	Screw	2	0.2				
120 088	Nut	3	-				
120 089	Nut	1	0.1				
120 090	Sleeve	2	0.2				
120 091	Yoke	1	1.5				
123 001	Starting valve (2)	1	6.4				
124 004	Gasket	1	-				
124 006	O-ring	1	-				
124 042	O-ring	2	-				
124 052	O-ring	1	-				
143 001	Rocker arms with bracket (3)	1	46.5				
120 012	Gasket	1	0.2				
124 001	Prechamber (4)	1	-				
387 055	Contact lubrication *	1	-				

NOTE! (1) See section 120-
 NOTE! (2) See section 123-
 NOTE! (3) See section 143-

APPENDIX A

Cylinder head with starting valve



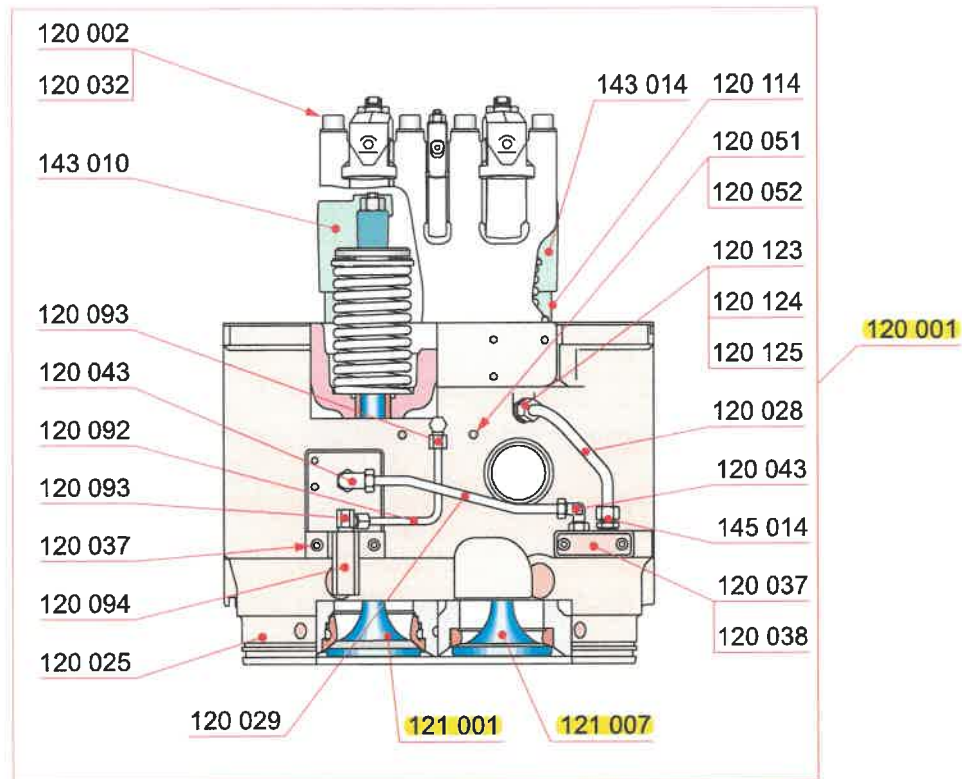
Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 003	O-ring	2	-	NOTE!	(5) See section 121-		
120 012	Gasket	1	0.2				
120 031	O-ring	1	-				
120 081	O-ring	1	-				
120 084	O-ring	1	-				
120 086	Screw	2	0.2				
120 087	Screw	2	0.2				
120 088	Nut	3	-				
120 089	Nut	1	0.1				
120 090	Sleeve	2	0.2				
120 091	Yoke	1	1.5				
121 001	Exhaust valve, compl. (5)	2	-				
121 007	Inlet valve, compl. (5)	2	-				
123 001	Starting valve (2)	1	6.4				
124 004	Gasket	1	-				
124 006	O-ring	1	-				
124 042	O-ring	2	-				
124 052	O-ring	1	-				
143 001	Rocker arms with bracket (3)	1	46.5				

NOTE! (2) See section 123-

NOTE! (3) See section 143-

APPENDIX A

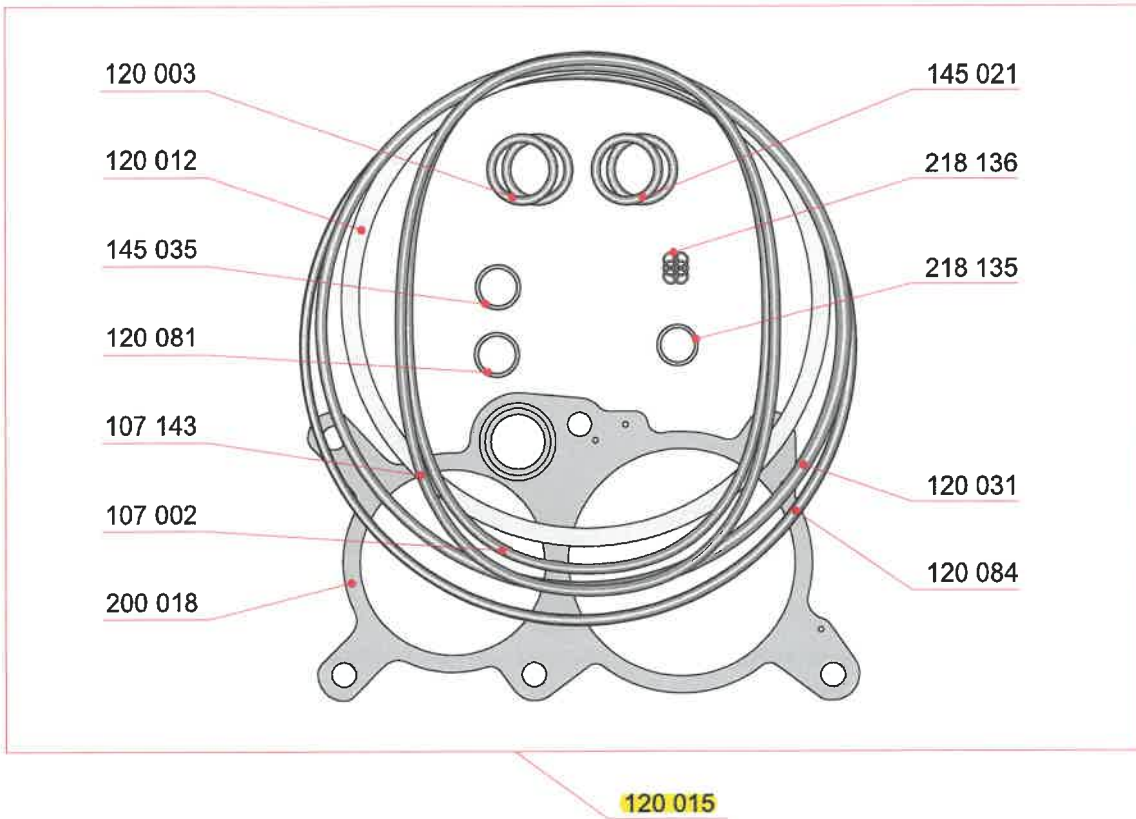
Cylinder head with starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 001	Cylinder head	1	-	145 014	Pipe union	1	-
120 002	Screw	6	0.3				
120 025	Cylinder head (1)	1	319	NOTE!	(1) See section 120-		
120 028	Pipe	1	-	NOTE!	(3) See section 143-		
120 029	Pipe	1	0.1	NOTE!	(5) See section 121-		
120 032	Washer	6	-				
120 037	Screw	4	-				
120 038	Connection piece	1	0.6				
120 043	Pipe union	2	0.2				
605 002	O-ring	1	-				
605 023	O-ring	1	-				
605 024	Retaining ring	1	-				
120 051	Plug	2	-				
120 052	Sealing ring	2	-				
120 092	Pipe	1	0.5				
120 093	Pipe union	2	-				
120 094	Connection piece	1	1.6				
120 114	Pin	2	-				
120 123	Nut	1	-				
120 124	Cutting ring	1	-				
120 125	Pipe union	1	-				
121 001	Exhaust valve, compl. (5)	2	-				
121 007	Inlet valve, compl. (5)	2	-				
143 010	Yoke for exhaust valve, compl. (3)	1	2.8				
143 014	Yoke for inlet valve, compl. (3)	1	2.8				

APPENDIX A

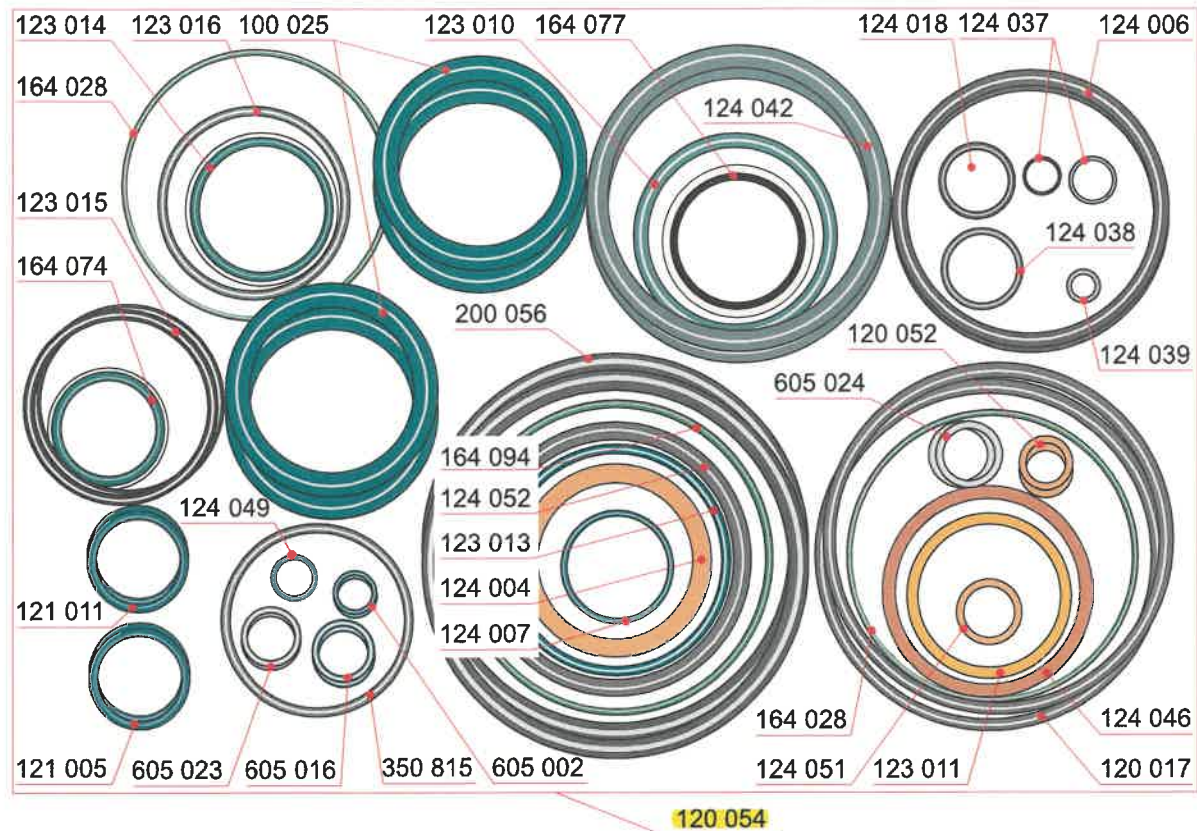
Cylinder head with starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 015	Sealing set for cylinder head replacement	1	0.6
107 002	Hose gasket	1	-
107 143	Hose gasket	1	-
120 003	O-ring	2	-
120 012	Gasket	1	0.2
120 031	O-ring	1	-
120 081	O-ring	1	-
120 084	O-ring	1	-
145 021	O-ring	2	-
145 035	O-ring	1	-
200 018	Gasket	1	0.3
218 135	O-ring	1	0.2
218 136	O-ring	6	-

APPENDIX A

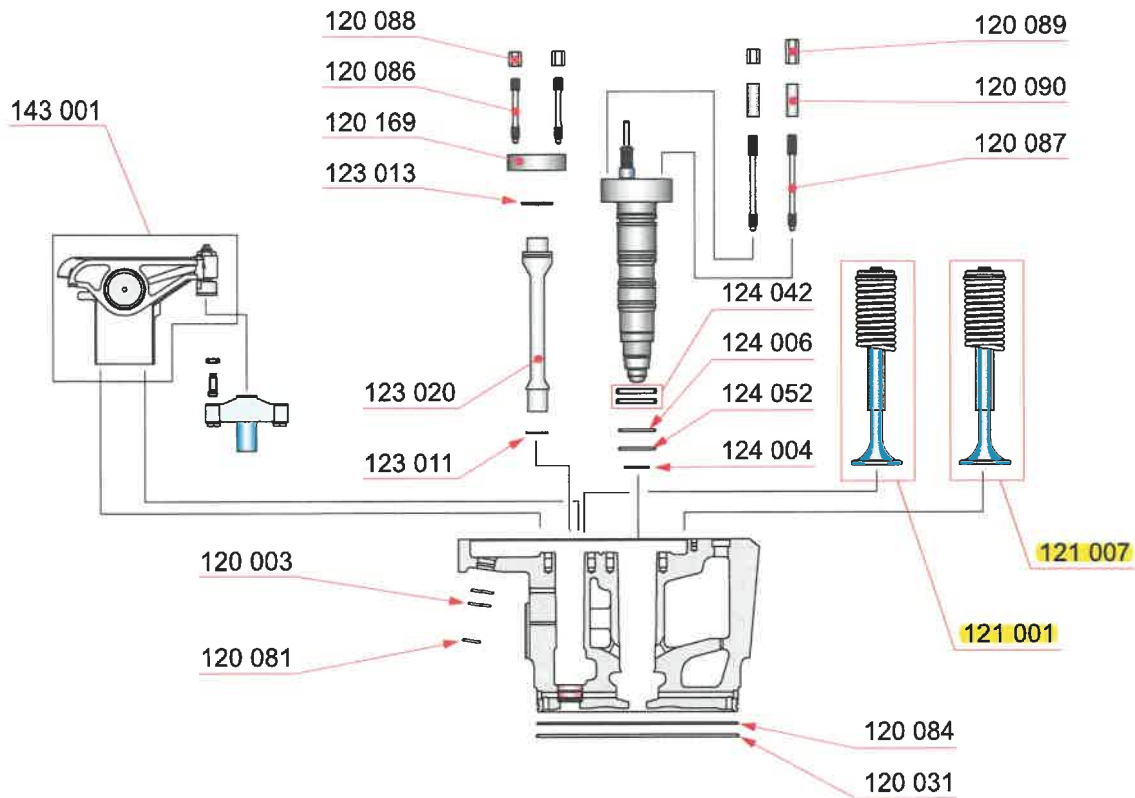
Cylinder head with starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 054	Sealing set for cylinder head overhaul	1	0.4	164 074	O-ring	2	-
100 025	O-ring	4	-	164 077	O-ring	1	-
120 017	O-ring	2	-	164 094	O-ring (1)	1	-
120 052	Sealing ring	2	-	200 056	O-ring	2	-
121 005	O-ring	2	-	350 815	O-ring	1	-
121 011	O-ring	2	-	605 002	O-ring	2	-
123 010	O-ring	1	-	605 016	Sealing ring	2	-
123 011	Sealing ring	1	-	605 023	O-ring	2	-
123 013	O-ring	1	-	605 024	Retaining ring	2	-
123 014	O-ring (1)	1	-				
123 015	O-ring	1	-	NOTE!	(1) Not used in all installations.		
123 016	O-ring	1	-	NOTE!	(2) Choose right O-rings according to your prechamber valve type.		
124 004	Gasket (3)	2	-	NOTE!	(3) The brighter bronze coloured prechamber gasket is of harder material, see service bulletin 3412Q062 for more information.		
124 006	O-ring (2)	2	-				
124 018	O-ring	1	-				
124 037	Sealing ring	1	-				
124 038	O-ring (1)	1	-	NOTE!	(4) Choose right O-ring according to your prechamber valve type.		
124 039	O-ring (4)	1	-	NOTE!	(5) Select o-ring with the same size that is replaced.		
124 042	O-ring (2)	2	-				
124 046	Sealing ring (1)	1	-				
124 049	O-ring (4)	1	0.2				
124 052	O-ring (2)	1	-				
164 028	O-ring (5)	1	-				
164 028	O-ring (5)	1	-				
124 007	O-ring	1	-				
124 051	Seal ring (1)	1	-				

APPENDIX A

Cylinder head without starting valve

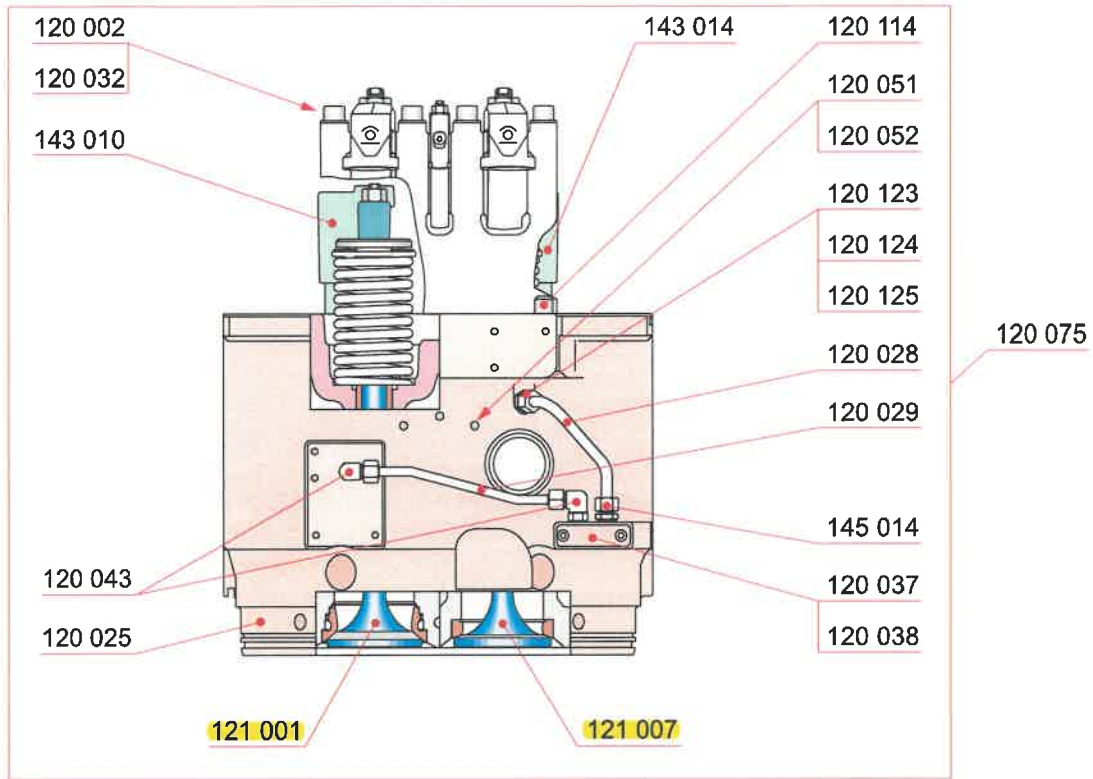


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 003	O-ring	2	-	NOTE!	(5) See section 121-		
120 031	O-ring	1	-				
120 081	O-ring	1	-				
120 084	O-ring	1	-				
120 086	Screw	2	-				
120 087	Screw	2	-				
120 088	Nut	3	-				
120 089	Nut	1	-				
120 090	Sleeve	2	-				
120 091	Yoke	1	-				
121 001	Exhaust valve, compl. (5)	2	-				
121 007	Inlet valve, compl. (5)	2	-				
123 011	Sealing ring	1	-				
123 013	O-ring	1	-				
123 020	Dummy	1	-				
124 004	Gasket	1	-				
124 006	O-ring	1	-				
124 042	O-ring	2	-				
124 052	O-ring	1	-				
143 001	Rocker arms with bracket (3)	1	-				

NOTE! (3) See section 143-

APPENDIX A

Cylinder head without starting valve

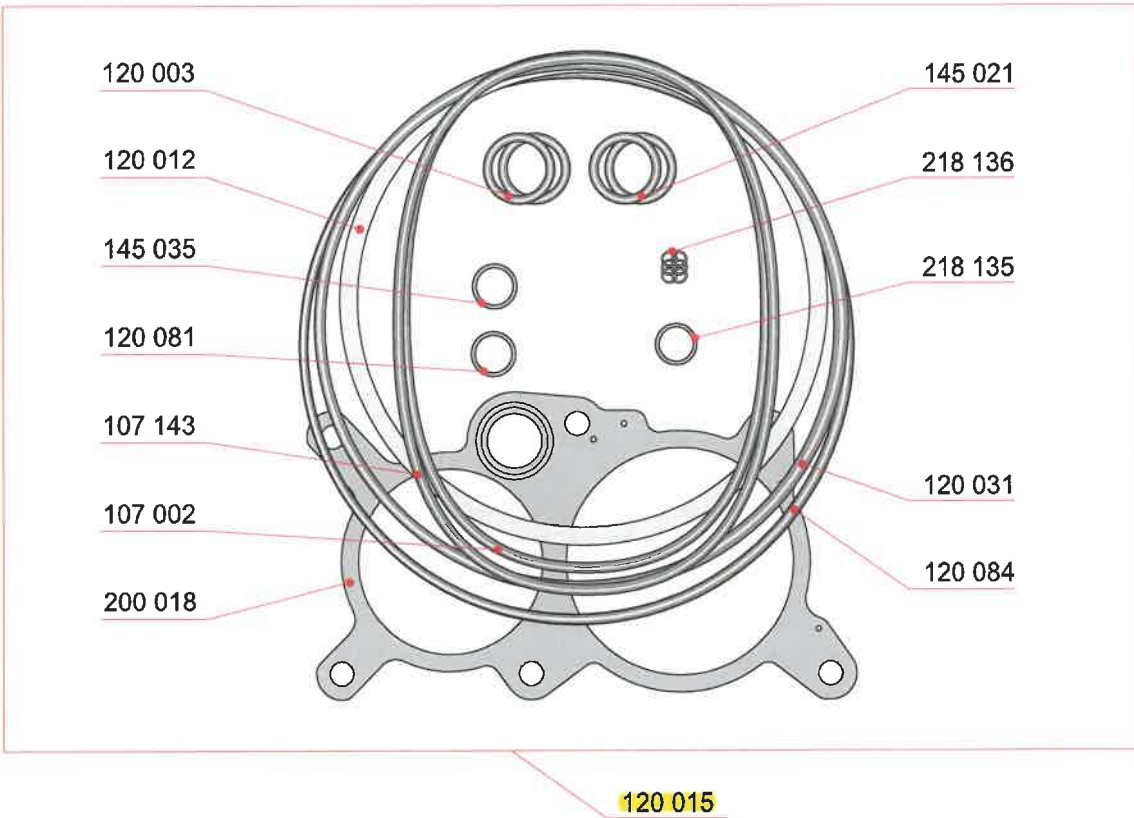


Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 075	Cylinder head	1	-	NOTE!	(3) See section 143-		
120 002	Screw	6	-	NOTE!	(5) See section 121-		
120 025	Cylinder head (1)	1	-				
120 028	Pipe	1	-				
120 029	Pipe	1	-				
120 032	Washer	6	-				
120 037	Screw	2	-				
120 038	Connection piece	1	-				
120 043	Pipe union	2	-				
605 002	O-ring	1	-				
605 023	O-ring	1	-				
605 024	Retaining ring	1	-				
120 051	Plug	2	-				
120 052	Sealing ring	2	-				
120 114	Pin	2	-				
120 123	Nut	1	-				
120 124	Cutting ring	1	-				
120 125	Pipe union	1	-				
121 001	Exhaust valve, compl. (5)	2	-				
121 007	Inlet valve, compl. (5)	2	-				
143 010	Yoke for exhaust valve, compl. (3)	1	-				
143 014	Yoke for inlet valve, compl. (3)	1	-				
145 014	Pipe union	1	-				

NOTE! (1) See section 120-

APPENDIX A

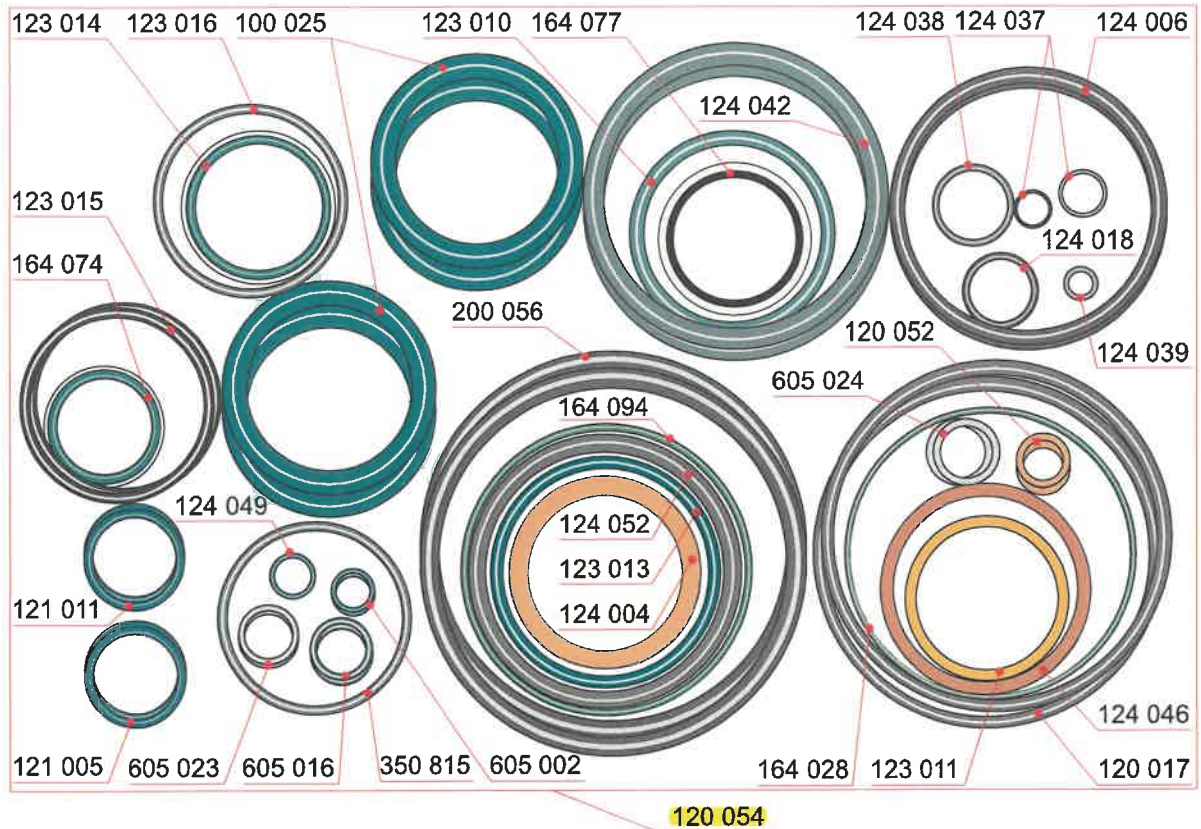
Cylinder head without starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 015	Sealing set for cylinder head replacement	1	-
107 002	Hose gasket	1	-
107 143	Hose gasket	1	-
120 003	O-ring	2	-
120 012	Gasket	1	-
120 031	O-ring	1	-
120 081	O-ring	1	-
120 084	O-ring	1	-
145 021	O-ring	2	-
145 035	O-ring	1	-
200 018	Gasket	1	-
218 135	O-ring	1	-
218 136	O-ring	6	-

APPENDIX A

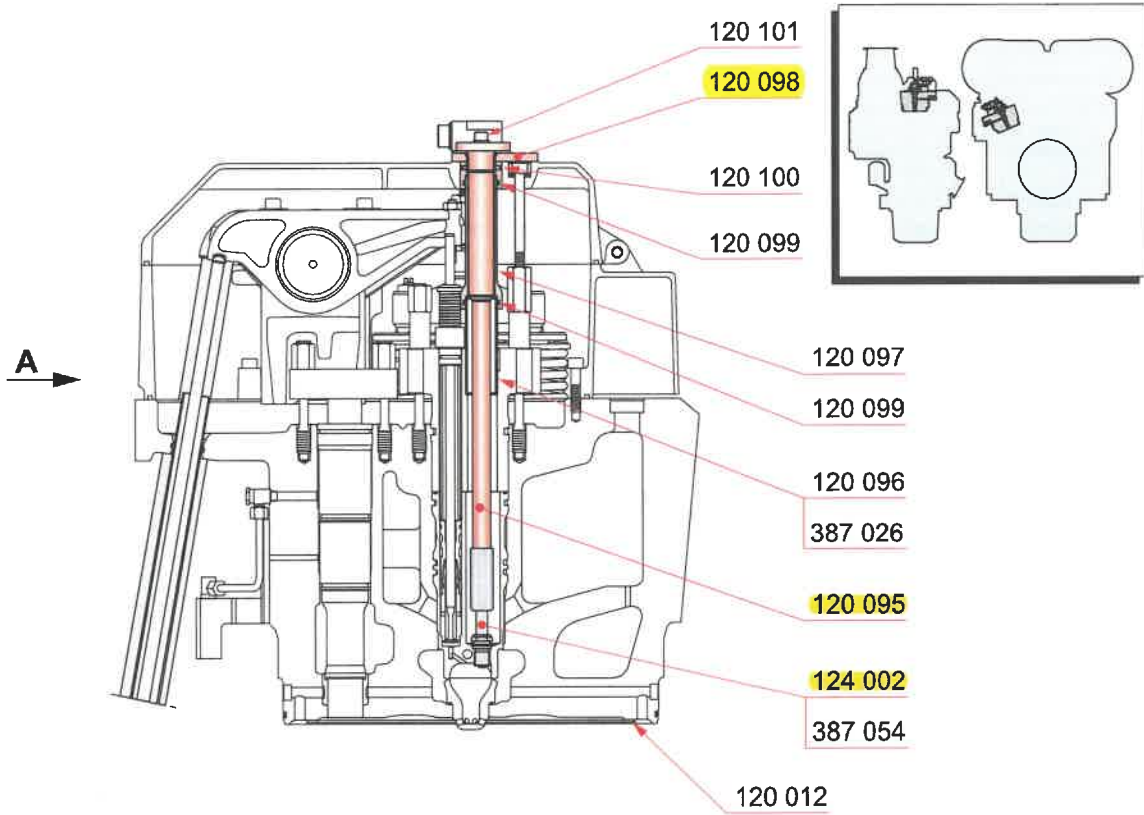
Cylinder head without starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 054	Sealing set for cylinder head overhaul	1	-	200 056	O-ring	2	-
100 025	O-ring	4	-	350 815	O-ring	1	-
120 017	O-ring	2	-	605 002	O-ring	2	-
120 052	Sealing ring	2	-	605 016	Sealing ring	2	-
121 005	O-ring	2	-	605 023	O-ring	2	-
121 011	O-ring	2	-	605 024	Retaining ring	2	-
123 010	O-ring	1	-	NOTE!	(1) Not used in all installations.		
123 011	Sealing ring	1	-	NOTE!	(2) Choose right O-rings according to your prechamber valve type.		
123 013	O-ring	1	-	NOTE!	* Choose right O-ring according to your prechamber valve type.		
123 014	O-ring (1)	1	-				
123 015	O-ring	1	-				
123 016	O-ring	1	-				
124 004	Gasket	2	-				
124 006	O-ring (2)	2	-				
124 018	O-ring	1	-				
124 037	Sealing ring	1	-				
124 038	O-ring	1	-				
124 039	O-ring *	1	-				
124 042	O-ring (2)	2	-				
124 046	Sealing ring (1)	1	-				
124 049	O-ring *	1	-				
124 052	O-ring (2)	1	-				
164 028	O-ring	1	-				
164 074	O-ring	2	-				
164 077	O-ring	1	-				
164 094	O-ring (1)	1	-				

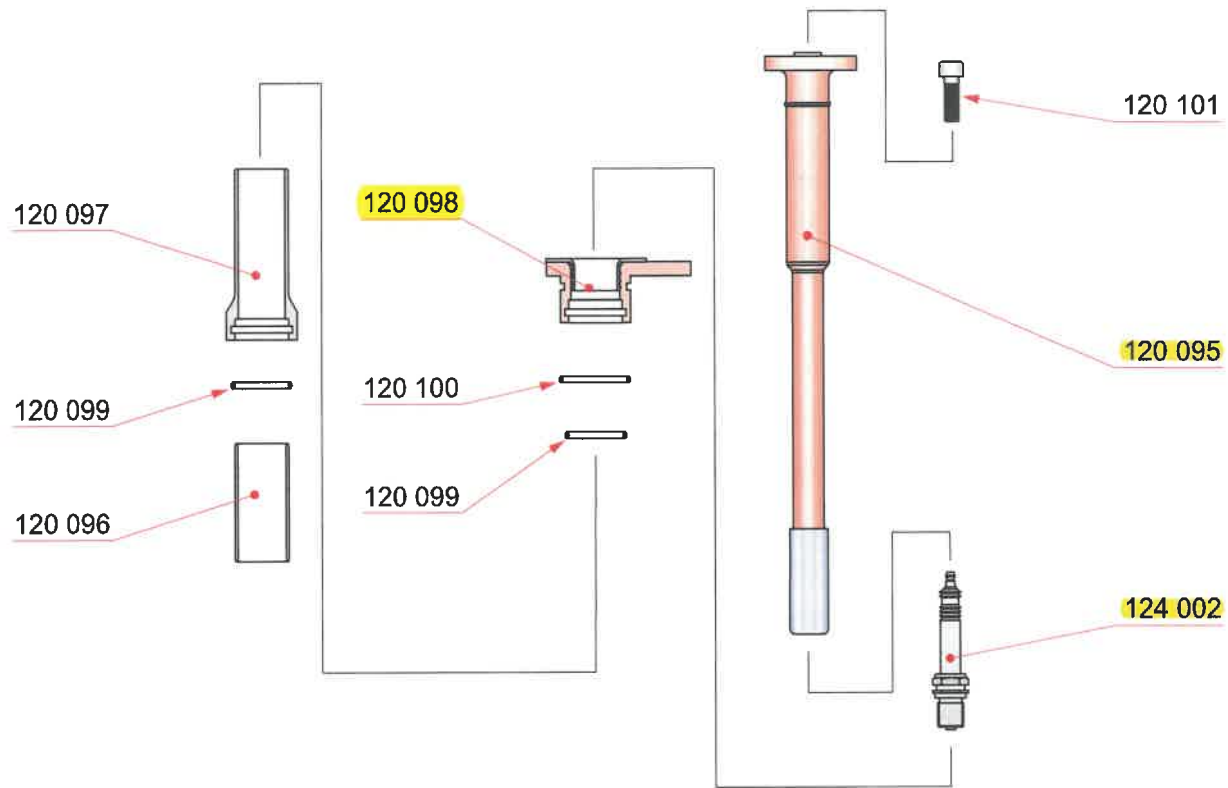
APPENDIX A

Cylinder head equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 012	Gasket	1	-
120 095	Ignition coil	1	-
120 096	Pipe	1	-
120 097	Sealing bush	1	-
120 098	Flange	1	-
120 099	O-ring	2	-
120 100	O-ring	1	-
120 101	Screw	2	-
124 002	Spark plug	1	-
387 026	Glue compound	1	-
387 054	Contact lubrication	1	-

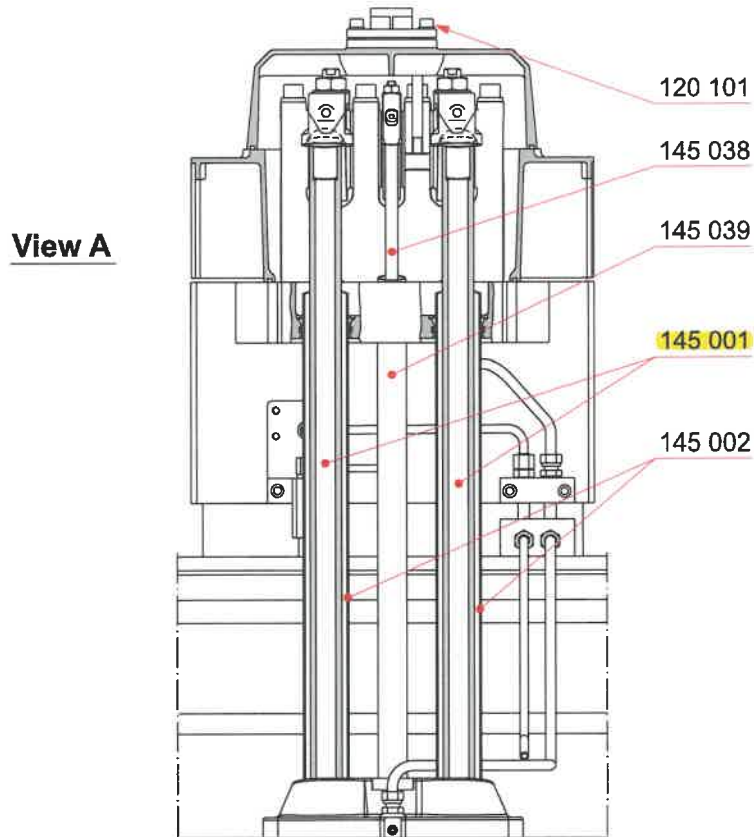
Cylinder head equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 095	Ignition coil	1	-
120 096	Pipe	1	-
120 097	Sealing bush	1	-
120 098	Flange	1	-
120 099	O-ring	2	-
120 100	O-ring	1	-
120 101	Screw	2	-
124 002	Spark plug	1	-

APPENDIX A

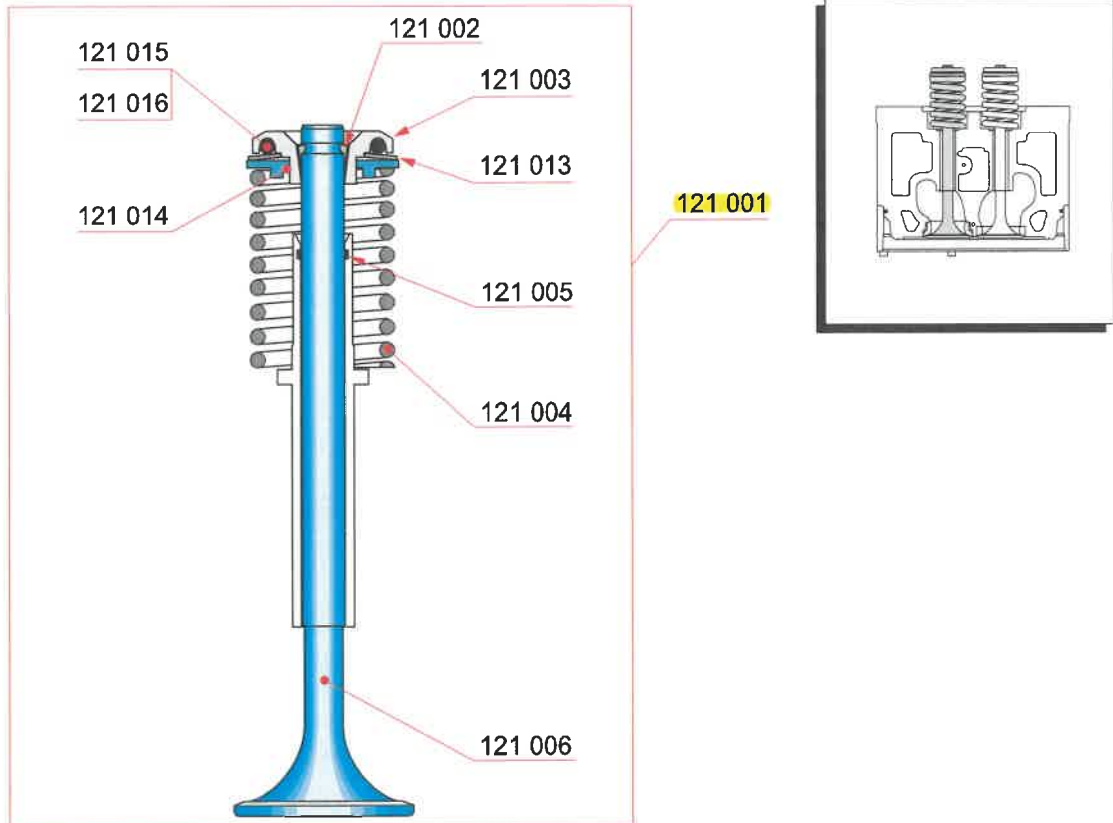
Cylinder head equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 101	Screw	2	-
145 001	Push rod	2	-
145 002	Protecting pipe	2	-
145 038	Push rod	1	-
145 039	Protecting pipe	1	-

APPENDIX A

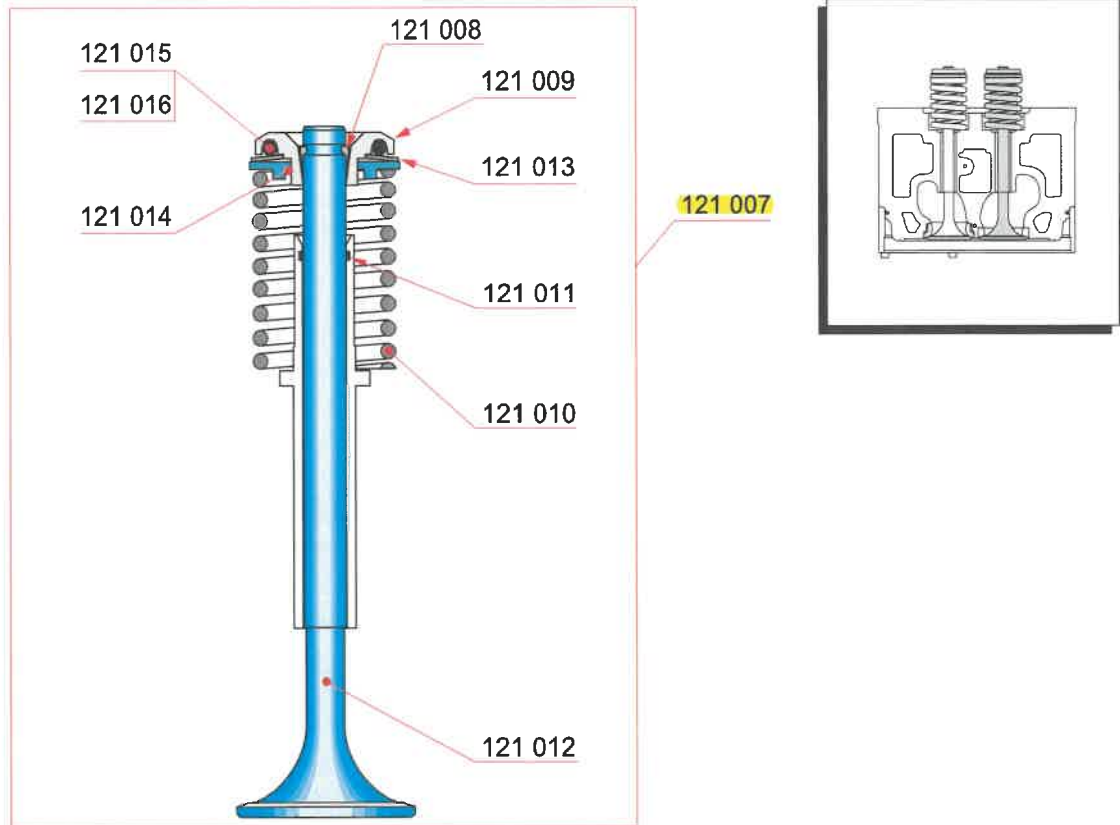
Exhaust valve assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 001	Exhaust valve, compl.	1	5.3
121 002	Valve cotter pair	1	-
121 003	Rotocap	1	0.7
121 013	Spring plate	1	-
121 014	Retainer ring	1	-
121 015	Spring	7	-
121 016	Ball	7	-
121 004	Spring	1	1.5
121 005	O-ring	1	-
121 006	Exhaust valve	1	2.9

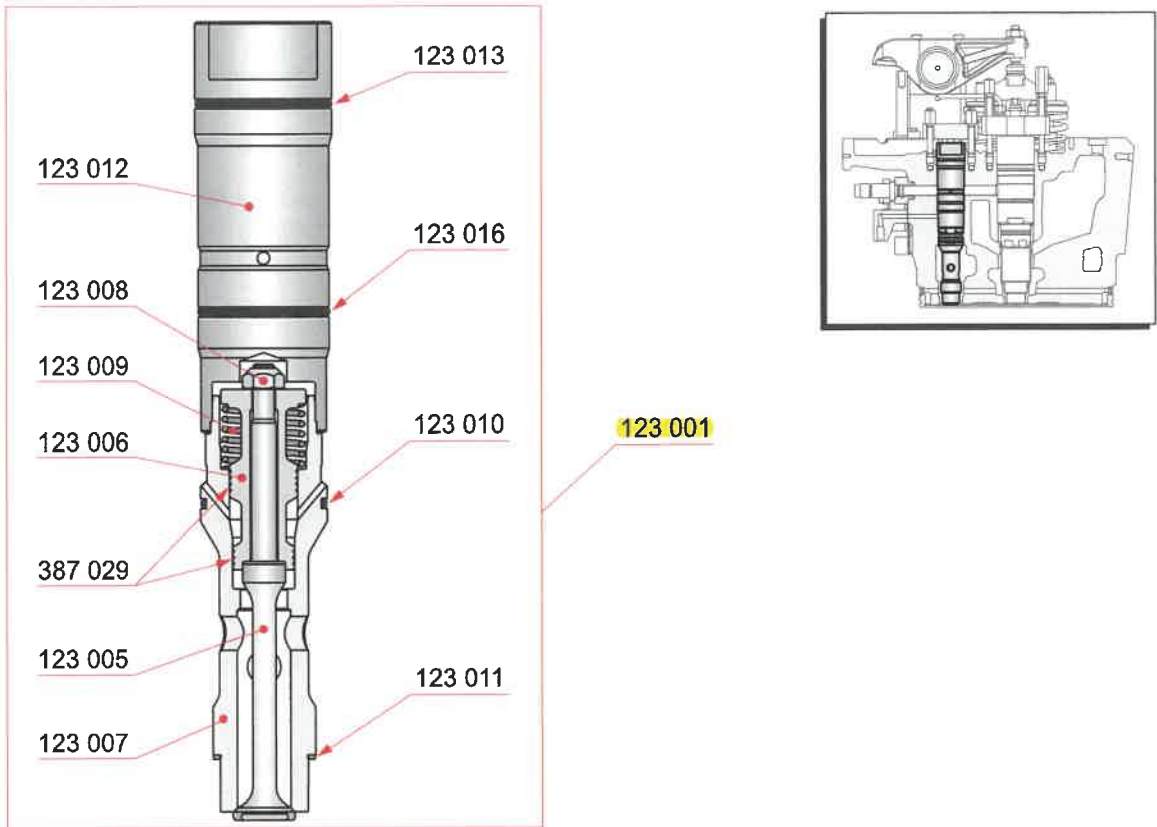
APPENDIX A

Inlet valve assembly



Part No.	Description	Qty [Pcs]	Wt. [Kg]
121 007	Inlet valve, compl.	1	-
121 008	Valve cotter pair	1	-
121 009	Rotocap	1	0.7
121 013	Spring plate	1	-
121 014	Retainer ring	1	-
121 015	Spring	7	-
121 016	Ball	7	-
121 010	Spring	1	1.5
121 011	O-ring	1	-
121 012	Inlet valve	1	3.1

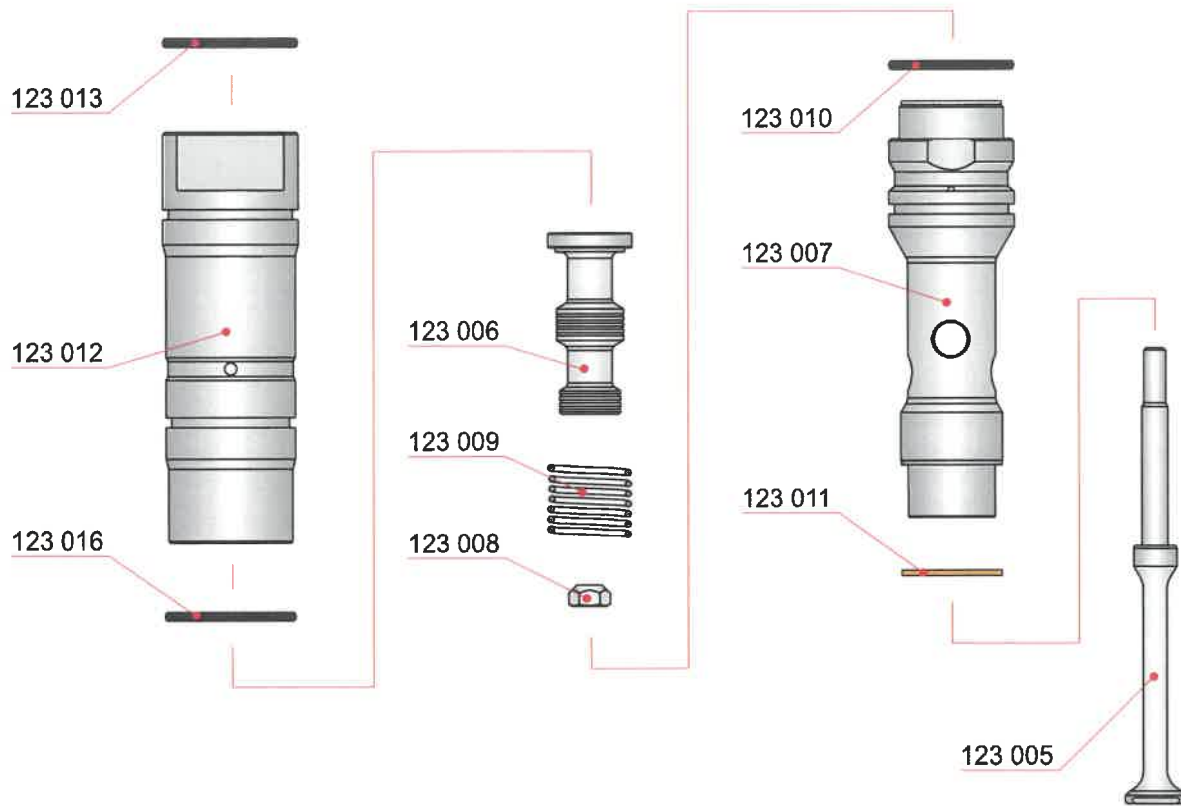
Starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
123 001	Starting valve	1	-
123 005	Spindle	1	-
123 006	Piston	1	-
123 007	Housing	1	-
123 008	Nut	1	-
123 009	Spring	1	-
123 010	O-ring	1	-
123 011	Sealing ring	1	-
123 012	End piece	1	-
123 013	O-ring	1	-
123 016	O-ring	1	-
387 029	Assembly compound	1	-

APPENDIX A

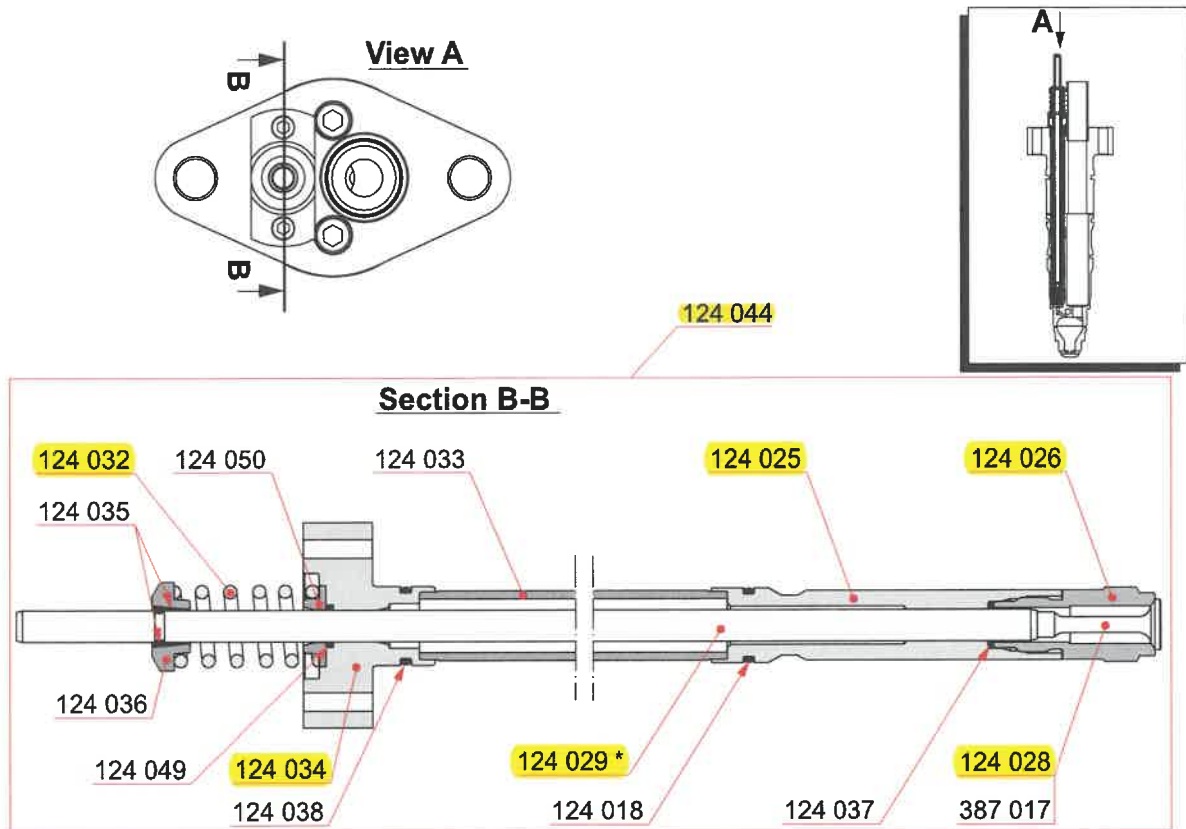
Starting valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
123 001	Starting valve	1	-
123 005	Spindle	1	-
123 006	Piston	1	-
123 007	Housing	1	-
123 008	Nut	1	-
123 009	Spring	1	-
123 010	O-ring	1	-
123 011	Sealing ring	1	-
123 012	End piece	1	-
123 013	O-ring	1	-
123 016	O-ring	1	-

APPENDIX A

Prechamber control valve

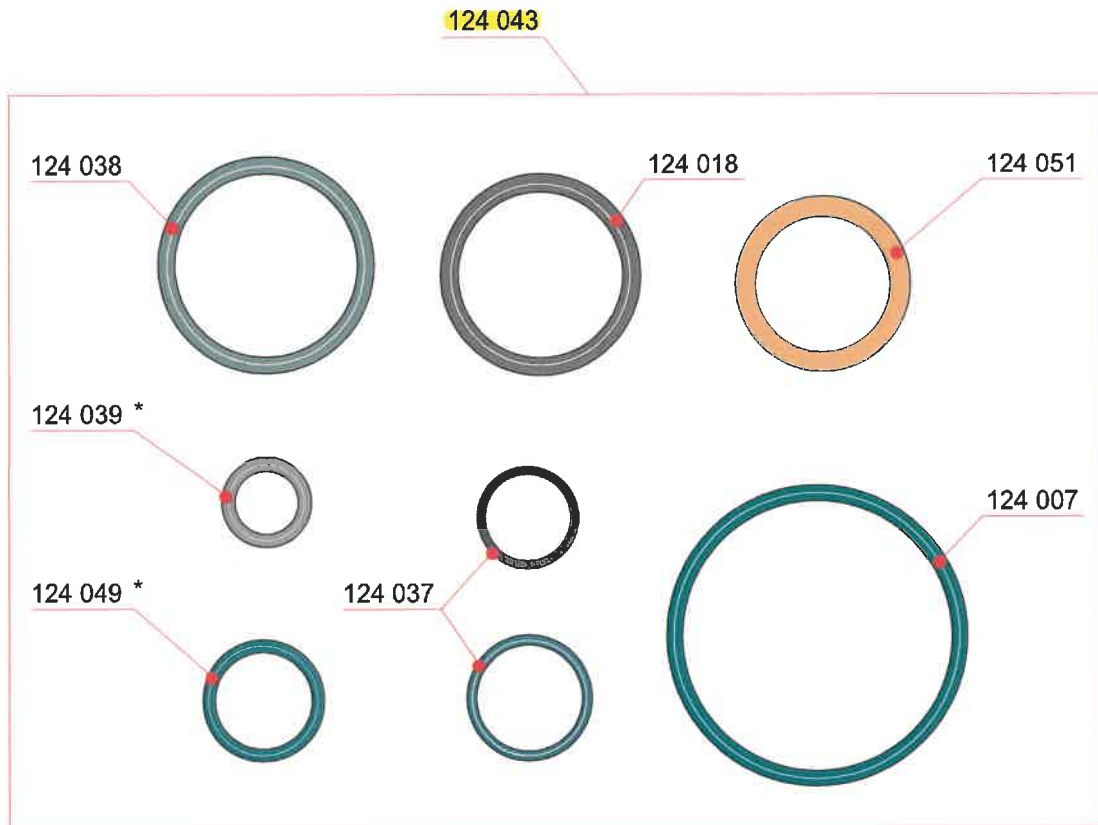


Part No.	Description	Qty [Pcs]	Wt. [Kg]
124 044	Prechamber control valve	1	-
124 018	O-ring	1	-
124 025	Valve guide	1	0.2
124 026	Valve seat	1	-
124 028	Valve	1	-
124 029	Rod *	1	0.1
124 032	Spring	1	-
124 033	Extension	1	0.2
124 034	Yoke	1	0.3
124 035	Valve cotter pair	1	-
124 036	Spring retainer	1	-
124 037	Sealing ring	1	-
124 038	O-ring	1	-
124 049	O-ring	1	0.2
124 050	Spring guide	1	-
387 017	Glue compound	1	-

NOTE! *) To be lubricated with engine oil before mounting.

APPENDIX A

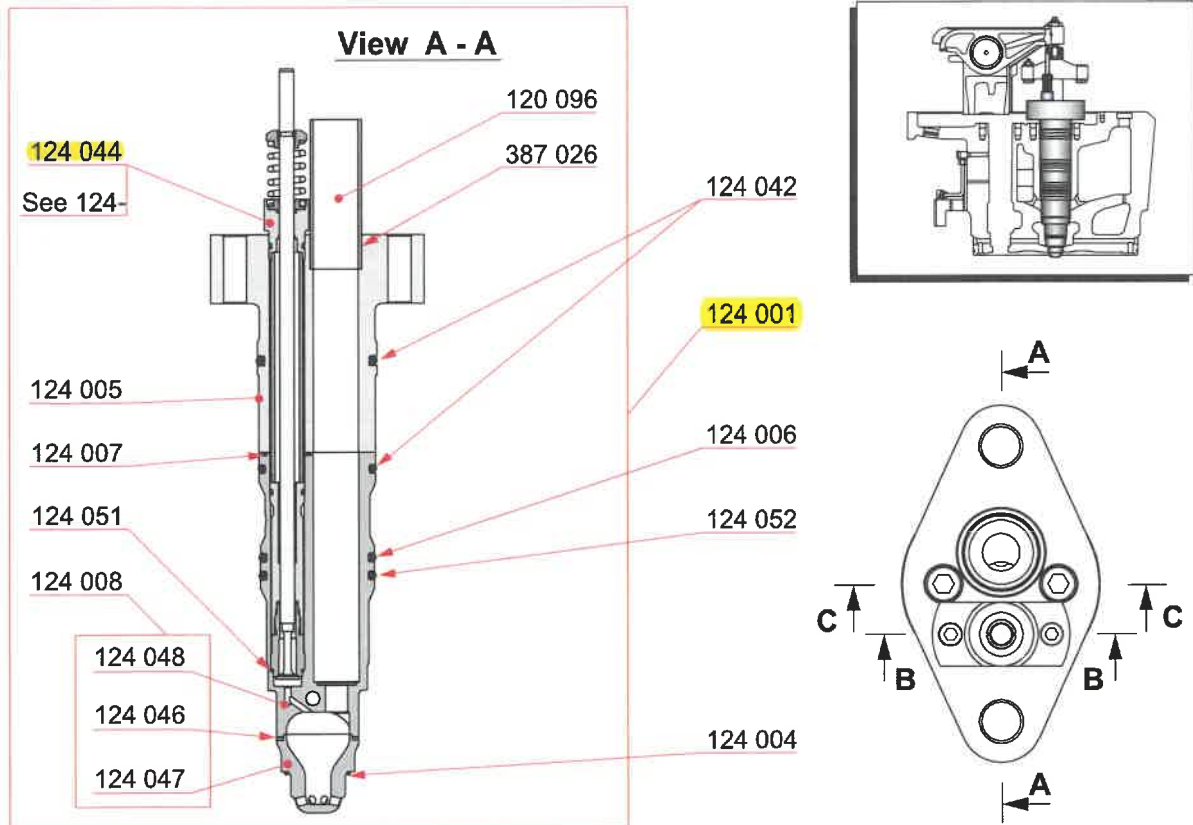
Prechamber control valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
124 043	Sealing set	1	-
124 007	O-ring	1	-
124 018	O-ring	1	-
124 037	Sealing ring	1	-
124 038	O-ring (1)	1	-
124 039	O-ring *	1	-
124 049	O-ring *	1	0.2
124 051	Seal ring (1)	1	-

NOTE! (1) Not used in all installations.
 NOTE! * Choose right O-ring according to your prechamber valve type.

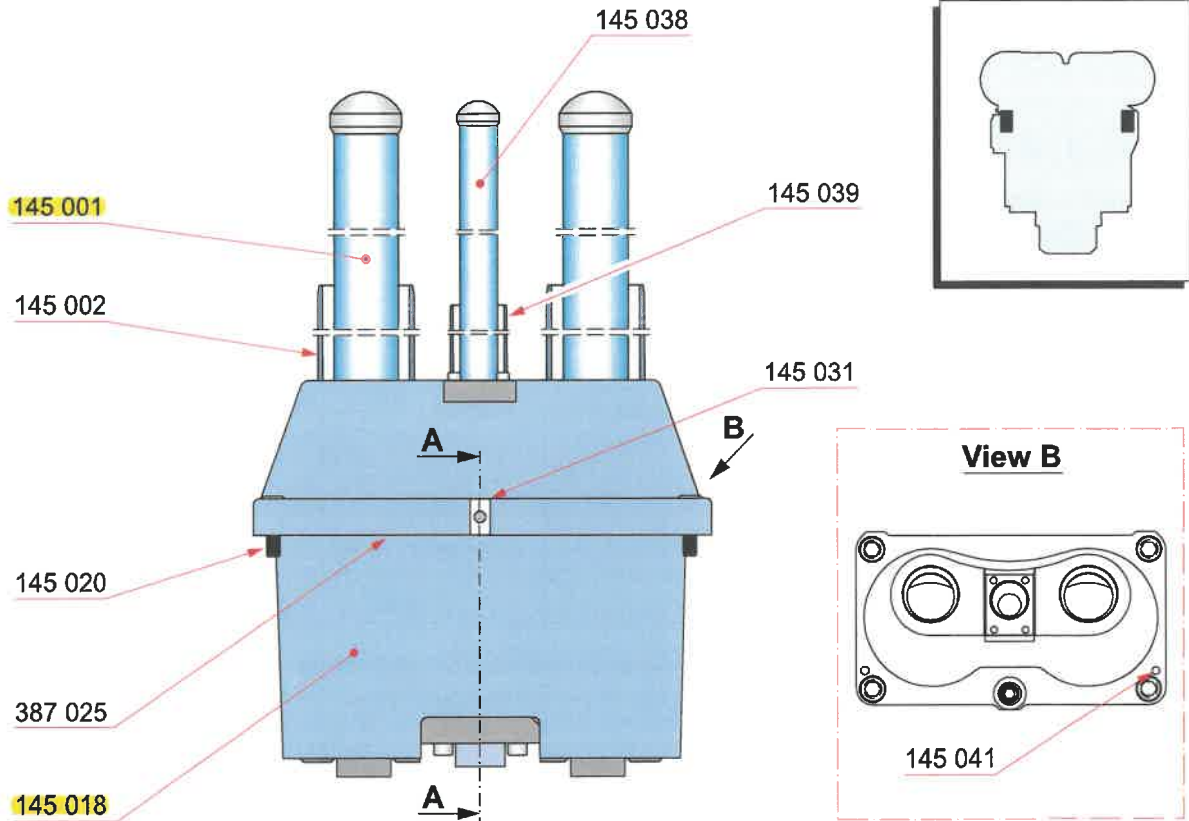
Prechamber



Part No.	Description	Qty [Pcs]	Wt. [Kg]
124 001	Prechamber	1	-
120 096	Pipe	1	-
124 005	Yoke	1	-
124 007	O-ring	1	-
124 008	Prechamber	1	-
124 046	Sealing ring	1	-
124 047	Prechamber, lower part	1	-
124 048	Prechamber, upper part	1	-
124 044	Prechamber control valve	1	-
124 004	Gasket	1	-
124 006	O-ring	1	-
124 042	O-ring	2	-
124 051	Seal ring	1	-
124 052	O-ring	1	-
387 026	Glue compound	1	-

APPENDIX A

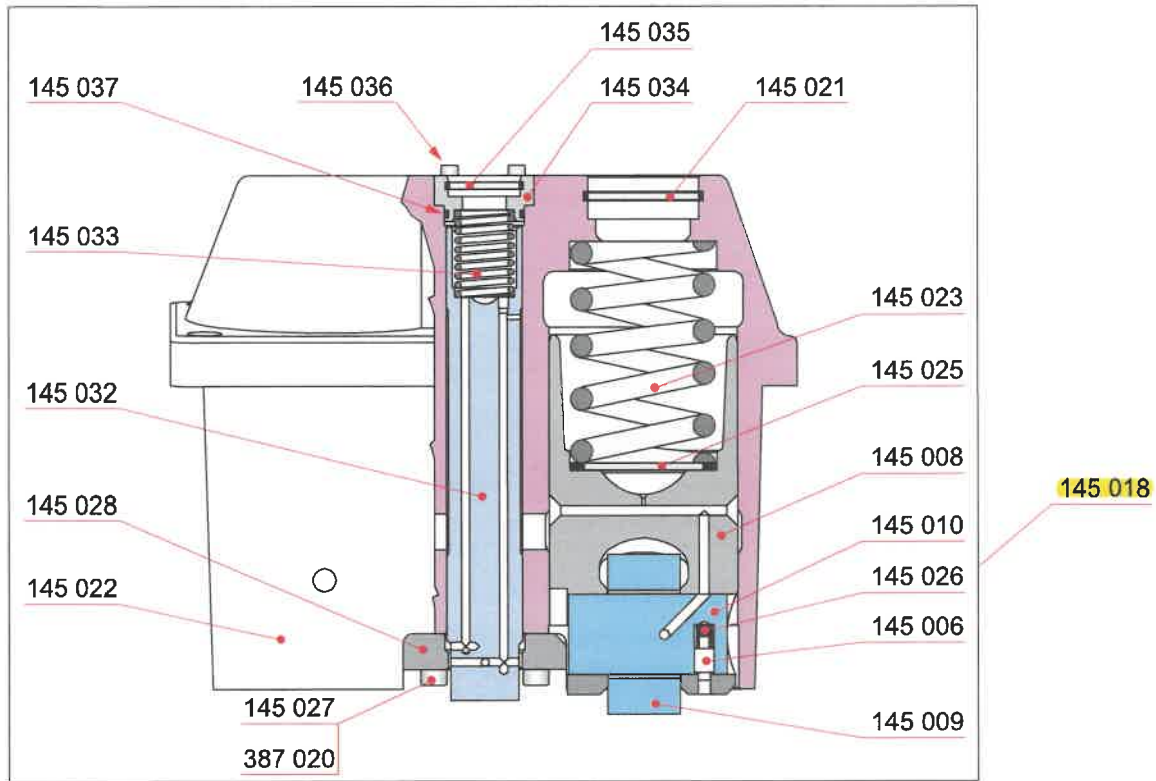
Valve tappet with guide block



Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 001	Push rod	2	-
145 002	Protecting pipe	2	-
145 018	Valve tappet	1	-
145 020	Screw	4	-
145 031	O-ring	1	-
145 038	Push rod	1	-
145 039	Protecting pipe	1	-
145 041	Spring pin	2	-
387 025	Glue compound	1	-

APPENDIX A

Valve tappet with guide block

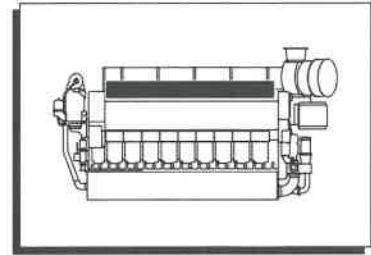
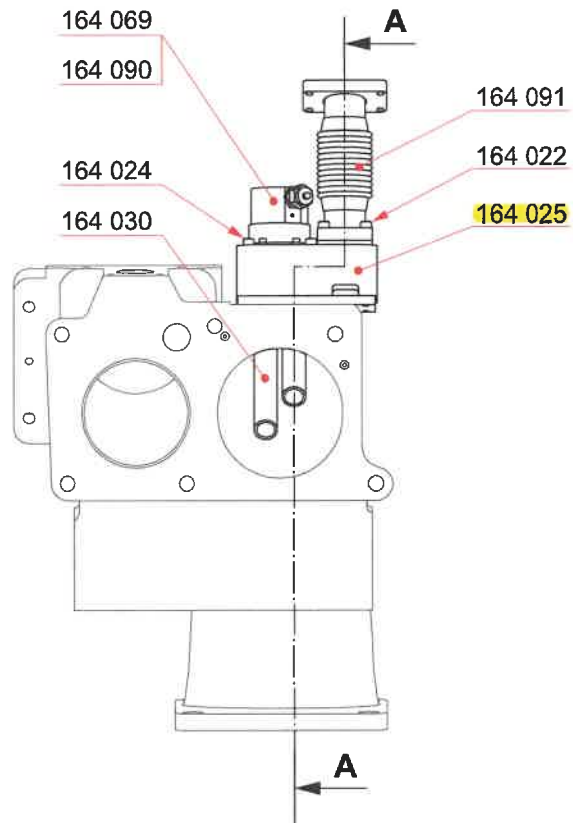


Part No.	Description	Qty [Pcs]	Wt. [Kg]
145 018	Valve tappet	1	-
145 006	Pin	2	-
145 008	Valve tappet	2	-
145 009	Tappet roller (1)	2	-
145 010	Roller pin	2	-
145 021	O-ring	2	-
145 022	Housing	1	-
145 023	Spring	2	-
145 025	Washer	2	-
145 026	Spring	2	-
145 027	Screw	4	-
145 028	Guiding plate	1	-
145 032	Valve tappet	1	-
145 033	Spring	1	-
145 034	Cover	1	-
145 035	O-ring	1	-
145 036	Screw	4	-
145 037	O-ring	1	-
387 020	Glue compound	1	-

NOTE! (1) Bearing bush included.

APPENDIX A

Main gas admission valve

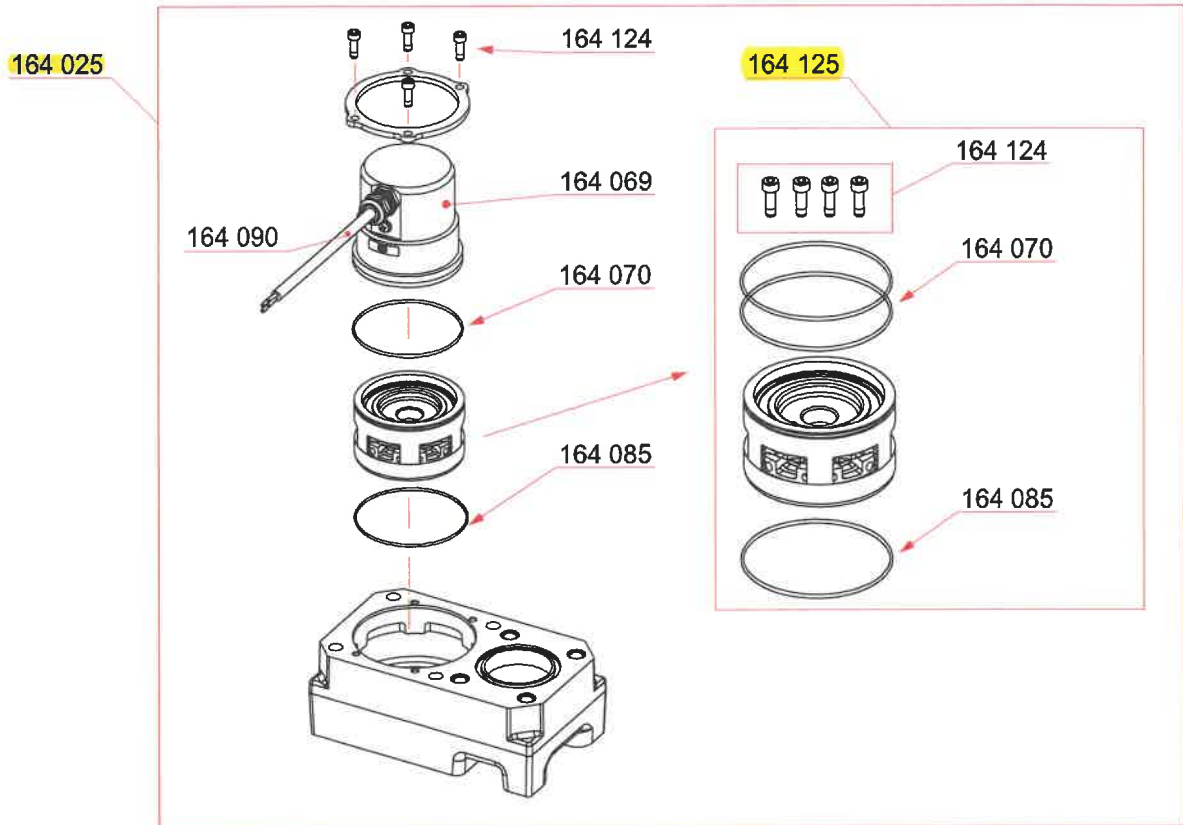


Part No.	Description	Qty [Pcs]	Wt. [Kg]
164 022	Screw	4	-
164 024	Screw	4	-
164 025	Main gas valve	1	3.8
164 069	Coil	1	1.7
164 090	Cable (1)	1	-
164 030	Pipe	1	1.8
164 091	Bellows	1	3.0

NOTE! (1) L= 3700 mm

APPENDIX A

Main gas admission valve



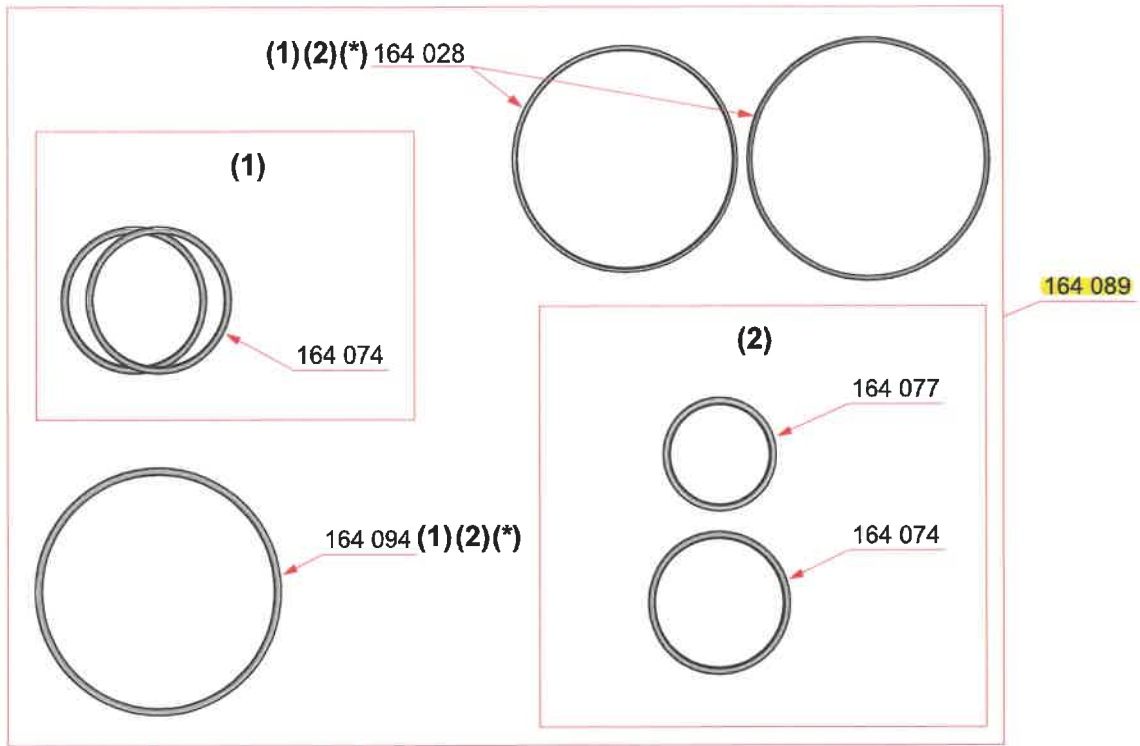
Part No.	Description	Qty [Pcs]	Wt. [Kg]
164 025	Main gas valve	1	3.8
164 069	Coil	1	1.7
164 090	Cable (1)	1	-
164 125	Cartridge set	1	3.7
164 070	O-ring (2) *)	2	-
164 085	O-ring (2)	1	-
164 124	Screw set	1	0.1

NOTE! (1) L= 3700 mm

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

NOTE! *) Amount depends on installation.

Main gas admission valve



Part No.	Description	Qty [Pcs]	Wt. [Kg]
164 089	Spare part set	1	0.1
164 028	O-ring *	1	-
164 028	O-ring *	1	-
164 074	O-ring (1)	2	-
164 074	O-ring (2)	1	-
164 077	O-ring (2)	1	-
164 094	O-ring *	1	-

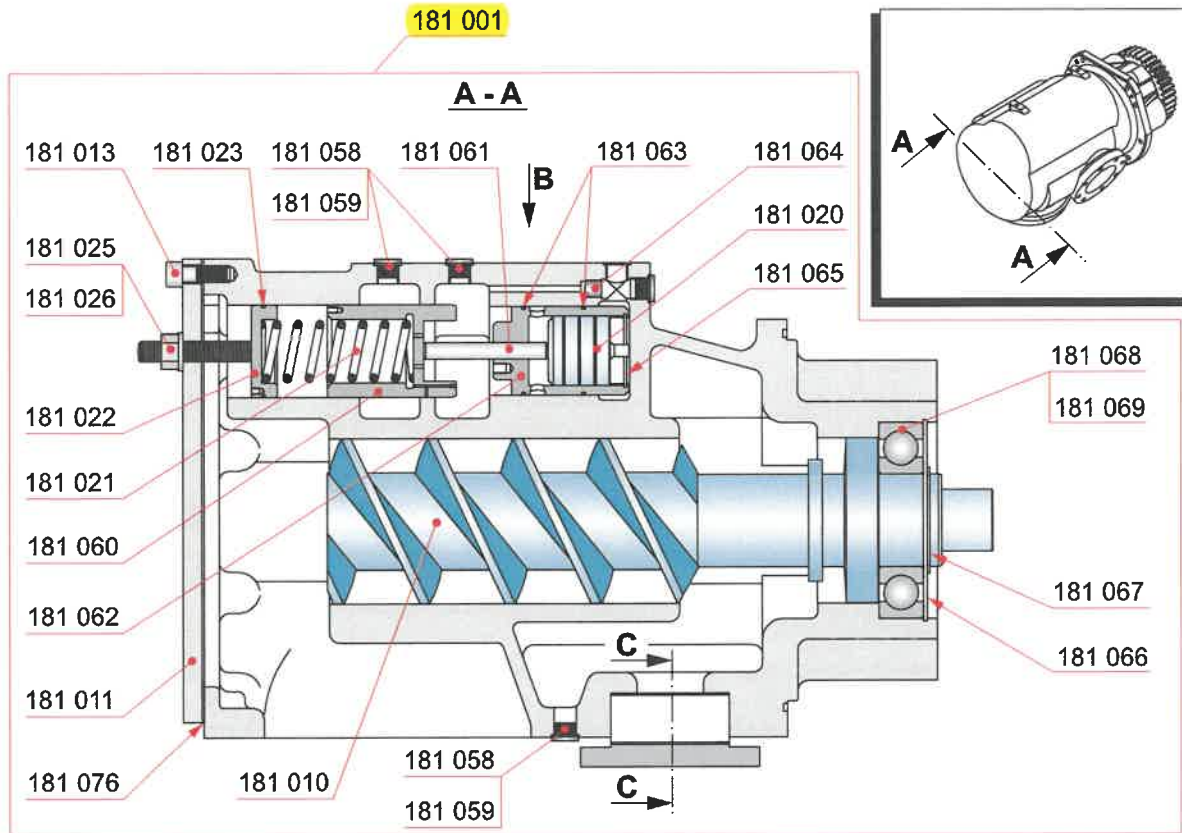
NOTE! (1) Used for Wärtsilä engines.

NOTE! (2) Used for Vasa engines.

NOTE! *) Select o-ring with the same size that is replaced.

APPENDIX A

Lubricating oil pump



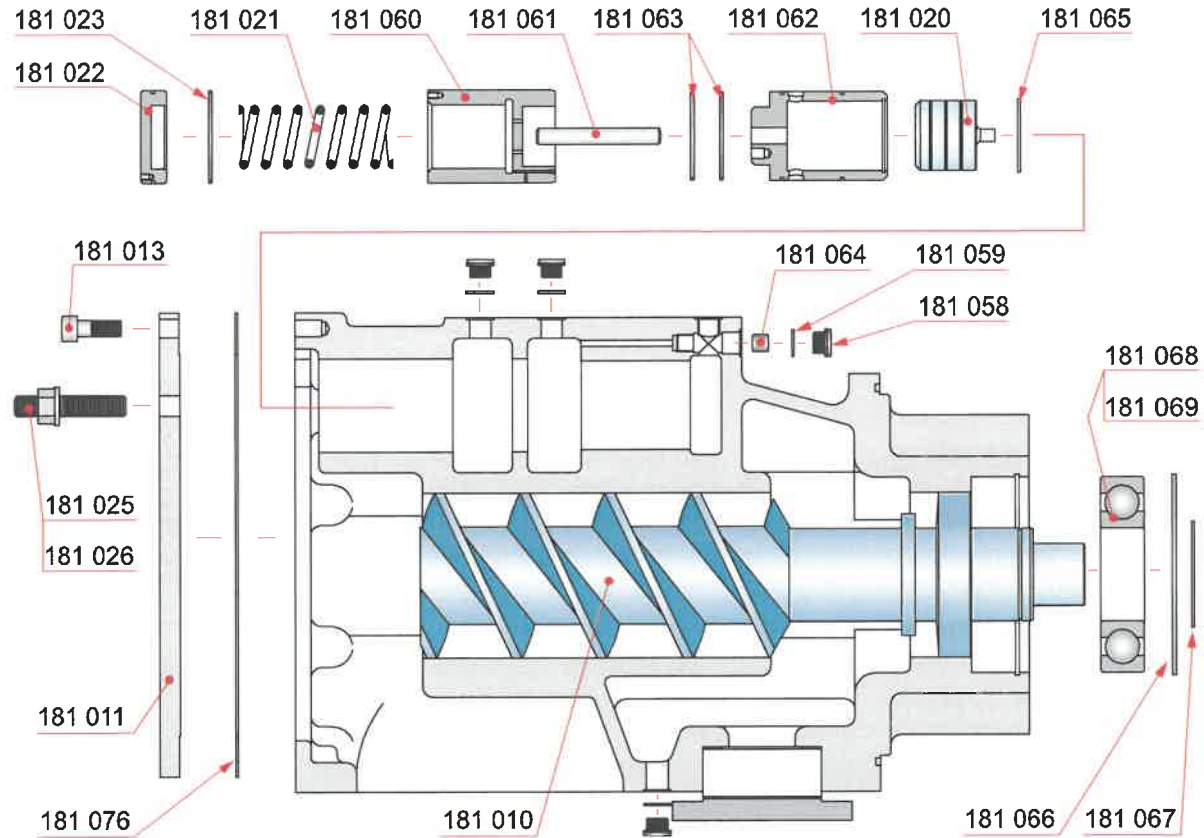
Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 001	Lubricating oil pump	1	-	NOTE!	(3) Included in Spindle set 181 079		
181 010	Drive shaft (3)	1	80.0				
181 011	Cover	1	-				
181 013	Screw	9	-				
181 020	Piston (2)	1	-				
181 021	Compression spring (2)	1	-				
181 022	Spring holder (2)	1	-				
181 023	O-ring (2)	1	-				
181 025	Screw (2)	1	-				
181 026	Nut (2)	1	-				
181 058	Screw (1) (2)	7	-				
181 059	Sealing ring (1) (2)	7	-				
181 060	Valve cone (2)	1	-				
181 061	Cylindrical pin (2)	1	-				
181 062	Valve sleeve (2)	1	-				
181 063	O-ring (2)	2	-				
181 064	Non-return valve (2)	1	-				
181 065	Circlip (2)	1	-				
181 066	Circlip (1)	1	0.2				
181 067	Circlip (1)	1	-				
181 068	Spacer ring	1	-				
181 069	Ball bearing (1)	1	5.0				
181 076	Gasket (2)	1	-				

NOTE! (1) Included in Service kit 181 077

NOTE! (2) Included in Valve kit 181 078

APPENDIX A

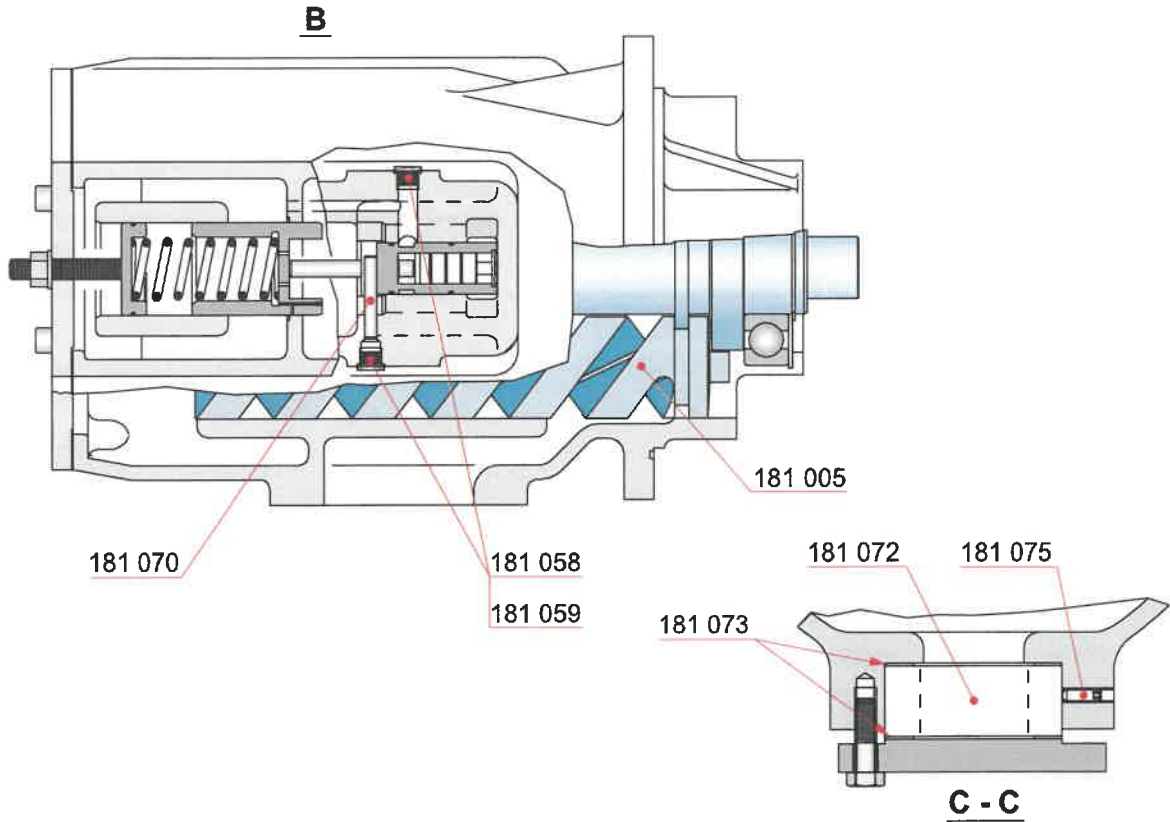
Lubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 010	Drive shaft (3)	1	80.0	NOTE!	(1) Included in Service kit 181 077		
181 011	Cover	1	-	NOTE!	(2) Included in Valve kit 181 078		
181 013	Screw	9	-	NOTE!	(3) Included in Spindle set 181 079		
181 020	Piston (2)	1	-				
181 021	Compression spring (2)	1	-				
181 022	Spring holder (2)	1	-				
181 023	O-ring (2)	1	-				
181 025	Screw (2)	1	-				
181 026	Nut (2)	1	-				
181 058	Screw (1) (2)	7	-				
181 059	Sealing ring (1) (2)	7	-				
181 060	Valve cone (2)	1	-				
181 061	Cylindrical pin (2)	1	-				
181 062	Valve sleeve (2)	1	-				
181 063	O-ring (2)	2	-				
181 064	Non-return valve (2)	1	-				
181 065	Circlip (2)	1	-				
181 066	Circlip (1)	1	0.2				
181 067	Circlip (1)	1	-				
181 068	Spacer ring	1	-				
181 069	Ball bearing (1)	1	5.0				
181 076	Gasket (2)	1	-				

APPENDIX A

Lubricating oil pump

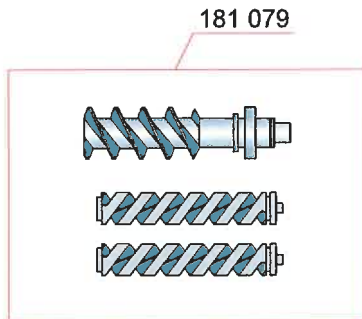
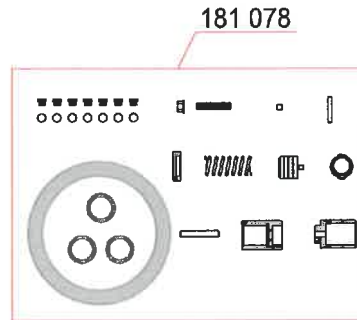
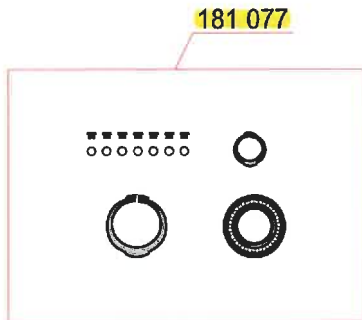


Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 005	Drive shaft (3)	2	30.0
181 058	Screw (1) (2)	7	-
181 059	Sealing ring (1) (2)	7	-
181 070	Threaded pin (2)	1	-
181 072	Non-return valve	1	0.5
181 073	Gasket	2	-
181 075	Threaded pin	1	-

- NOTE!** (1) Included in Service kit 181 077
- NOTE!** (2) Included in Valve kit 181 078
- NOTE!** (3) Included in Spindle set 181 079

APPENDIX A

Lubricating oil pump

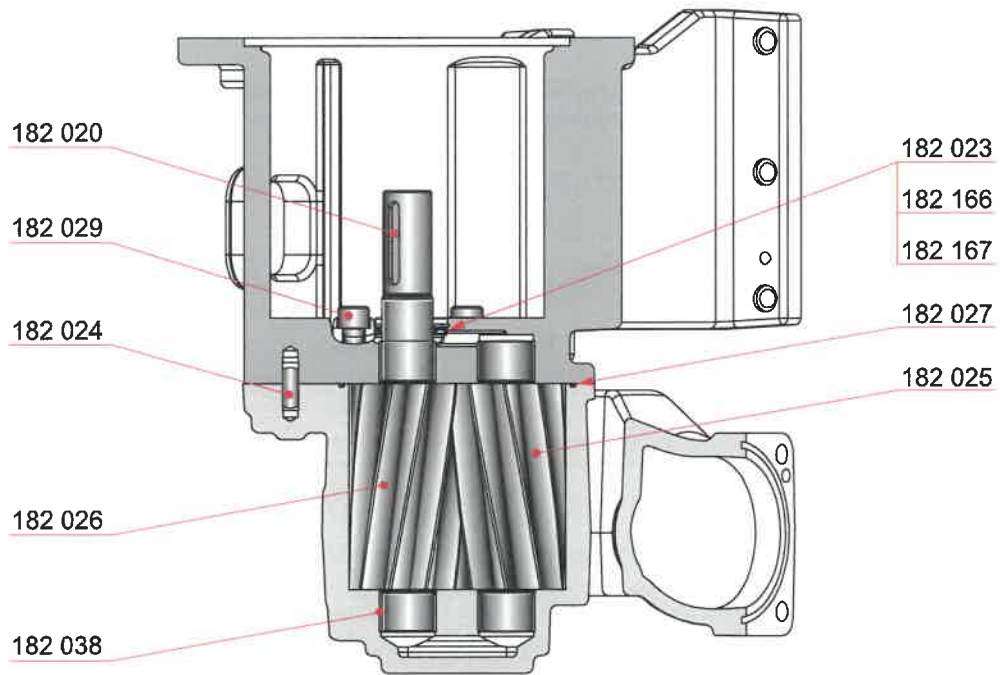


Part No.	Description	Qty [Pcs]	Wt. [Kg]
181 077	Service kit	1	-
181 078	Valve kit	1	-
181 079	Spindle set	1	140

APPENDIX A

Prelubricating oil pump

Section B - B

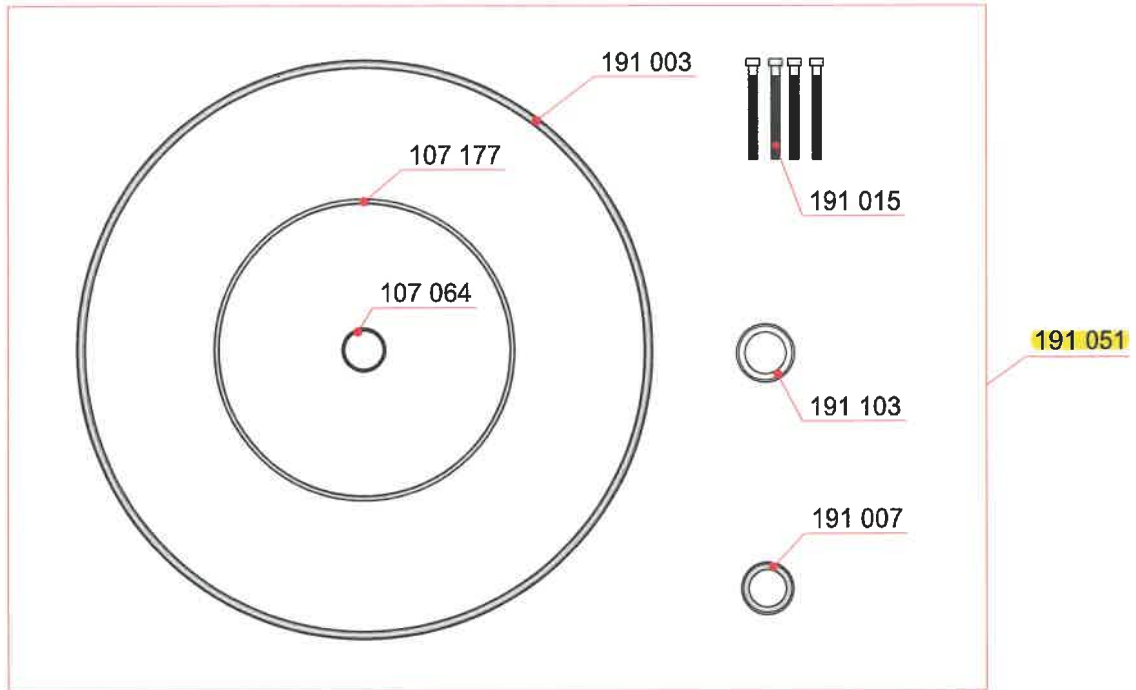


Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 020	Key	1	-
182 023	Seal (2)	1	-
182 024	Pin	2	-
182 025	Gear shaft	1	5.6
182 026	Drive gear shaft	1	6.5
182 027	O-ring (2)	1	-
182 029	Screw	4	0.3
182 038	Bearing bush	4	-
182 062	Sealing set (1)	1	-
182 166	Retainer ring	1	-
182 167	Shim ring	1	-

NOTE! (1) Sealing set includes items marked
(2)

APPENDIX A

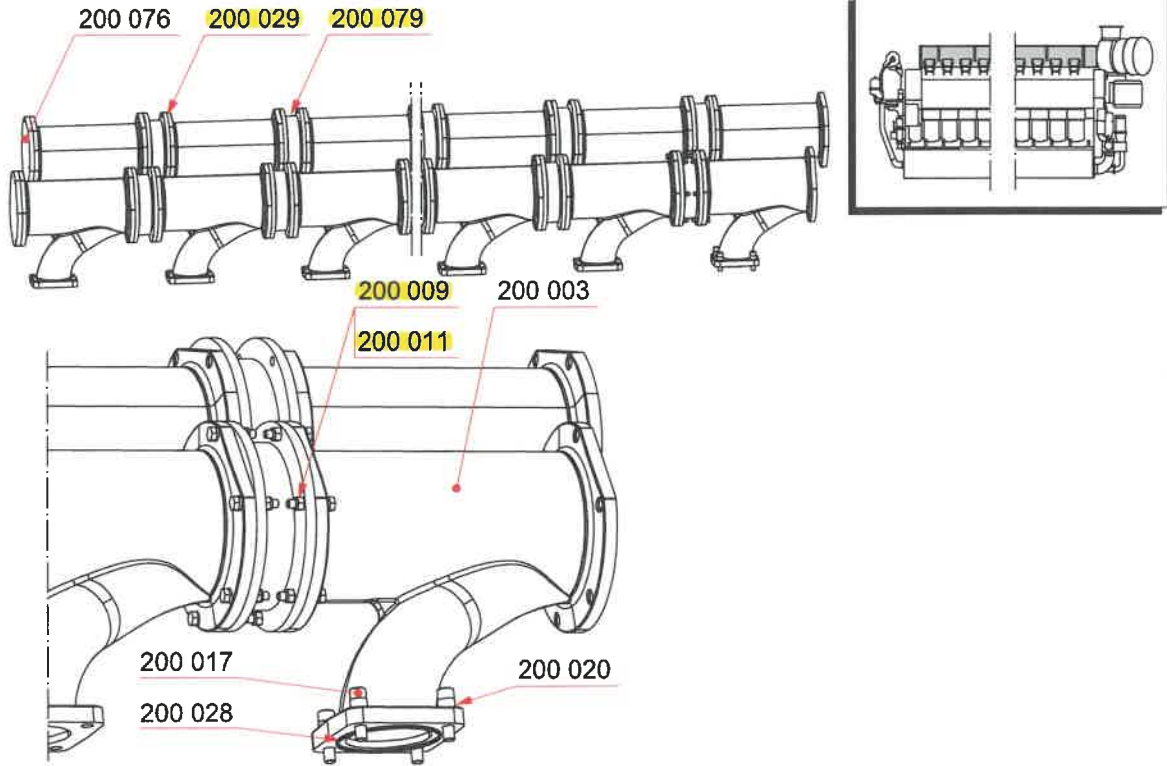
Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 051	Sealing set	1	0.4
107 064	O-ring	1	-
107 177	O-ring	1	-
191 003	O-ring	1	-
191 007	Shaft seal	1	0.1
191 015	Screw	4	-
191 103	Shaft seal	1	-

APPENDIX A

Exhaust system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 003	Exhaust pipe	*	-
200 009	Screw	*	-
200 011	Nut	*	-
200 017	Screw	*	-
200 020	Distance piece	*	-
200 028	Sealing ring	*	-
200 029	Gasket	*	-
200 076	End flange	2	-
200 079	Bellows	*	-

NOTE! * See page 2

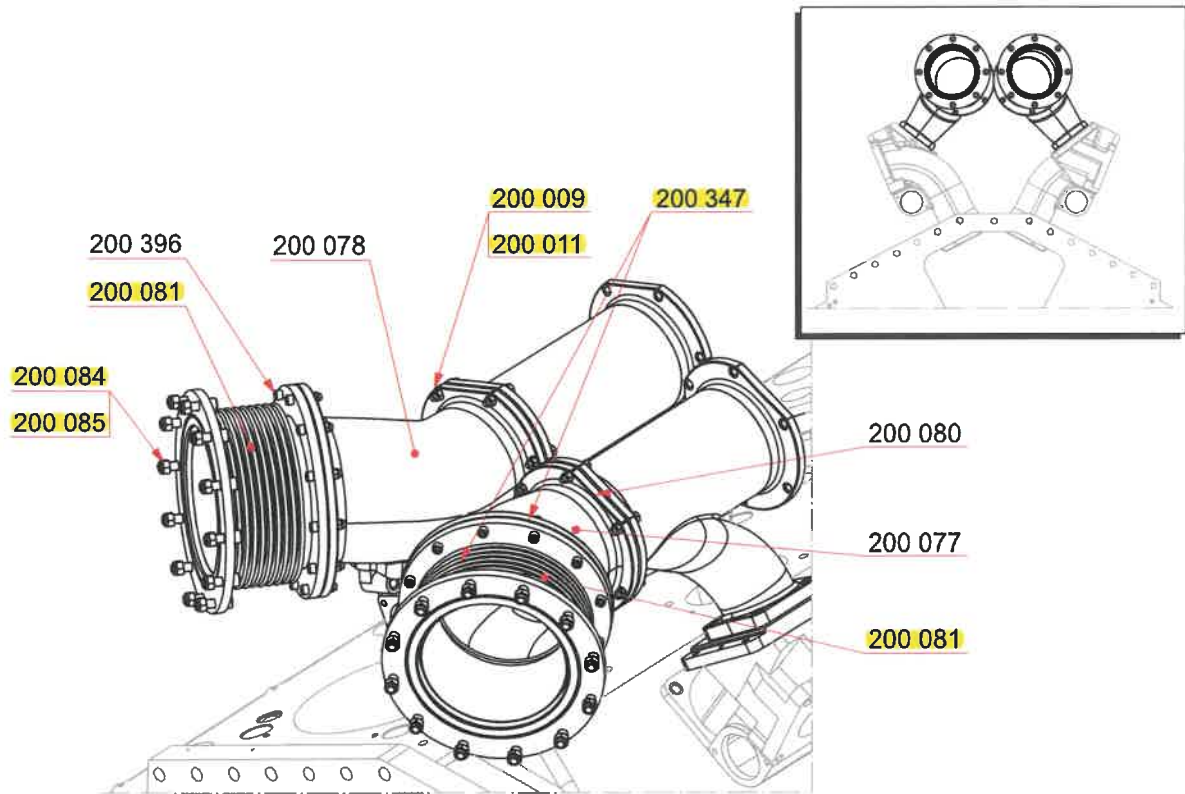
APPENDIX A

Exhaust system

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces			
	12V	16V	18V	20V
200 003 Exhaust pipe	10	16	18	20
200 009 Screw	120	180	204	228
200 011 Nut	120	180	204	228
200 017 Screw	40	64	72	80
200 020 Distance piece	40	64	72	80
200 028 Sealing ring	10	16	18	20
200 029 Gasket	20	30	34	38
200 079 Bellows	10	14	16	16

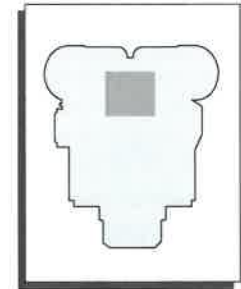
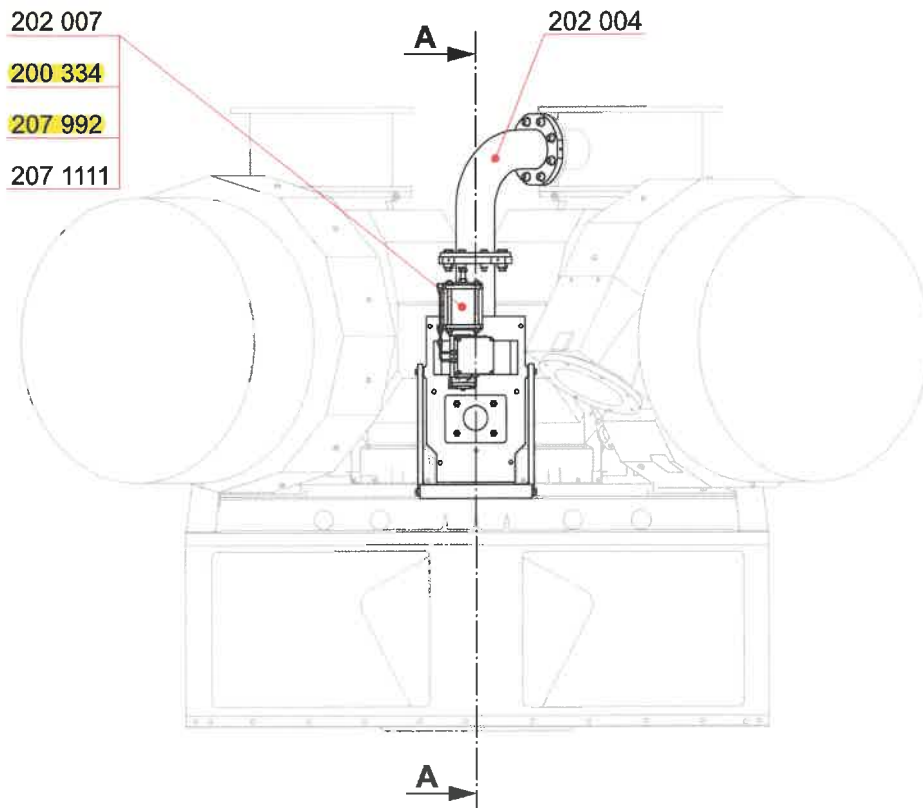
Connection piece for exhaust gas



Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 009	Screw	12	-
200 011	Nut	36	-
200 077	Connection piece	1	-
200 078	Connection piece	1	-
200 080	Sealing ring	2	-
200 081	Bellows	2	-
200 084	Screw	24	-
200 085	Nut	24	-
200 347	Sealing ring	4	-
200 396	Screw	24	-

APPENDIX A

Wastegate system



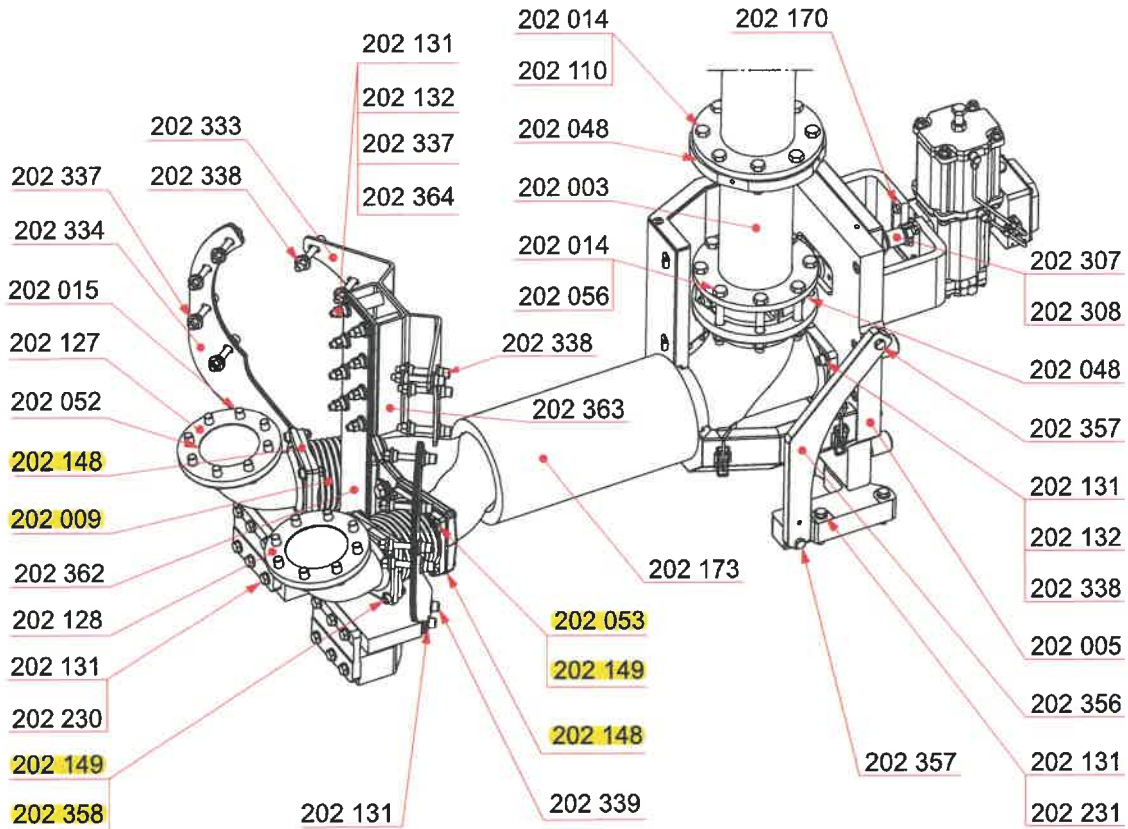
Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 004	Pipe (1)	1	-
202 007	Valve (2)	1	19.6
200 334	Positioner	1	1.5
207 992	Butterfly valve	1	9.0
207 1111	Actuator	1	10.6

NOTE! (1) See section 202-

NOTE! (2) See section 207-

APPENDIX A

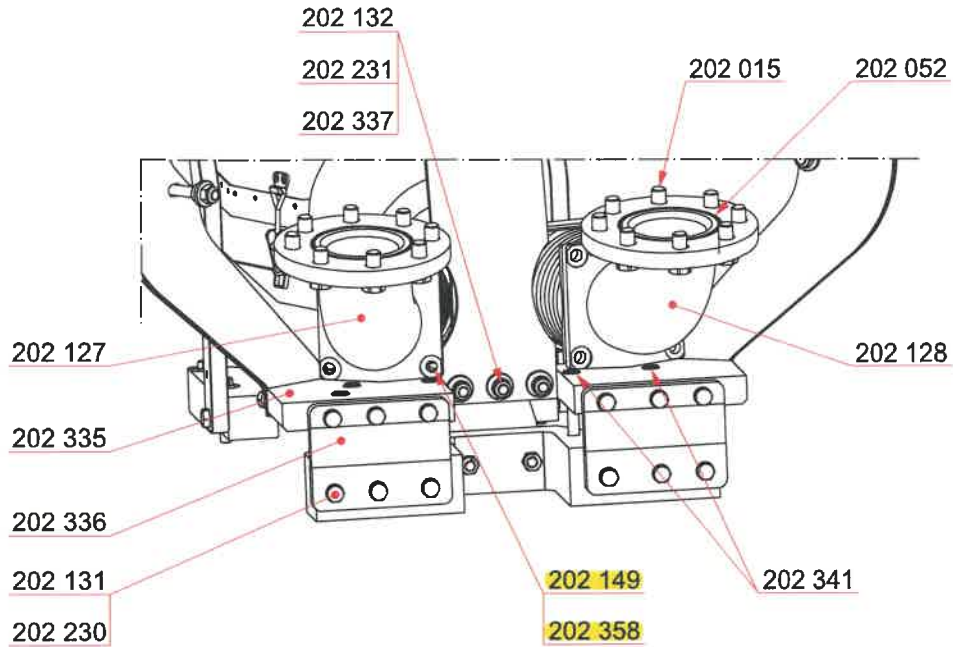
Wastegate system



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 003	Pipe	1	13.7	202 334	Support	10	0.7
202 005	Bracket	1	116	202 337	Distance sleeve	43	-
202 009	Bellows	2	2.6	202 338	Screw	20	-
202 014	Nut	16	-	202 339	Screw	4	-
202 015	Screw	18	-	202 356	Support arm	2	4.3
202 048	Sealing ring	3	-	202 357	Screw	4	-
202 052	Sealing ring	2	-	202 358	Screw	8	-
202 053	Screw	8	-	202 362	Support	5	1.0
202 056	Screw	8	0.2	202 363	Support	1	5.2
202 110	Screw	8	0.1	202 364	Screw	8	0.1
202 127	Pipe	1	10.4				
202 128	Pipe	1	10.4				
202 131	Washer	44	-				
202 132	Nut	33	-				
202 148	Sealing ring	4	-				
202 149	Nut	16	-				
202 170	Screw	4	-				
202 173	Exhaust pipe	1	56.8				
202 230	Screw	12	-				
202 231	Screw	9	-				
202 307	Distance piece	1	0.8				
202 308	Key	1	-				
202 333	Support	1	5.0				

APPENDIX A

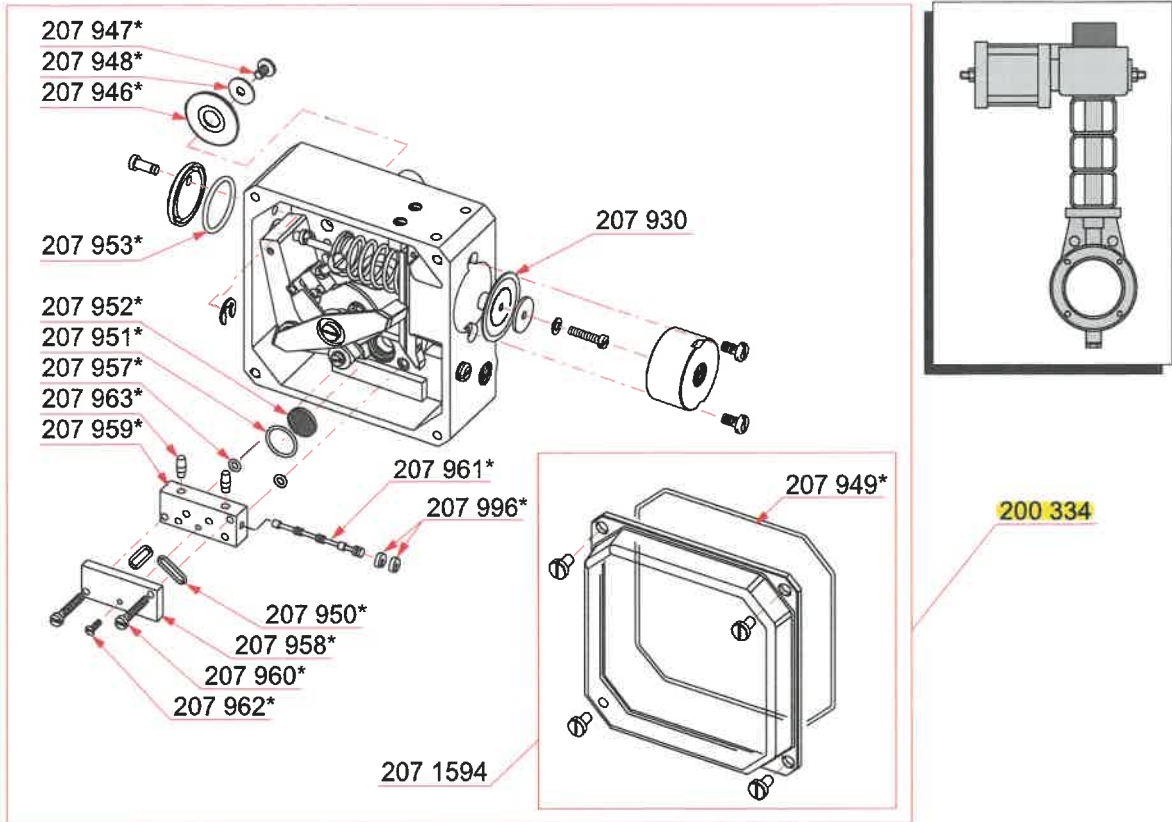
Wastegate system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
202 015	Screw	18	-
202 052	Sealing ring	2	-
202 127	Pipe	1	10.4
202 128	Pipe	1	10.4
202 131	Washer	44	-
202 132	Nut	33	-
202 149	Nut	16	-
202 230	Screw	12	-
202 231	Screw	9	-
202 335	Bracket	1	17.0
202 336	Support	2	2.2
202 337	Distance sleeve	43	-
202 341	Screw	4	0.1
202 358	Screw	8	-

APPENDIX A

Positioner for butterfly valve

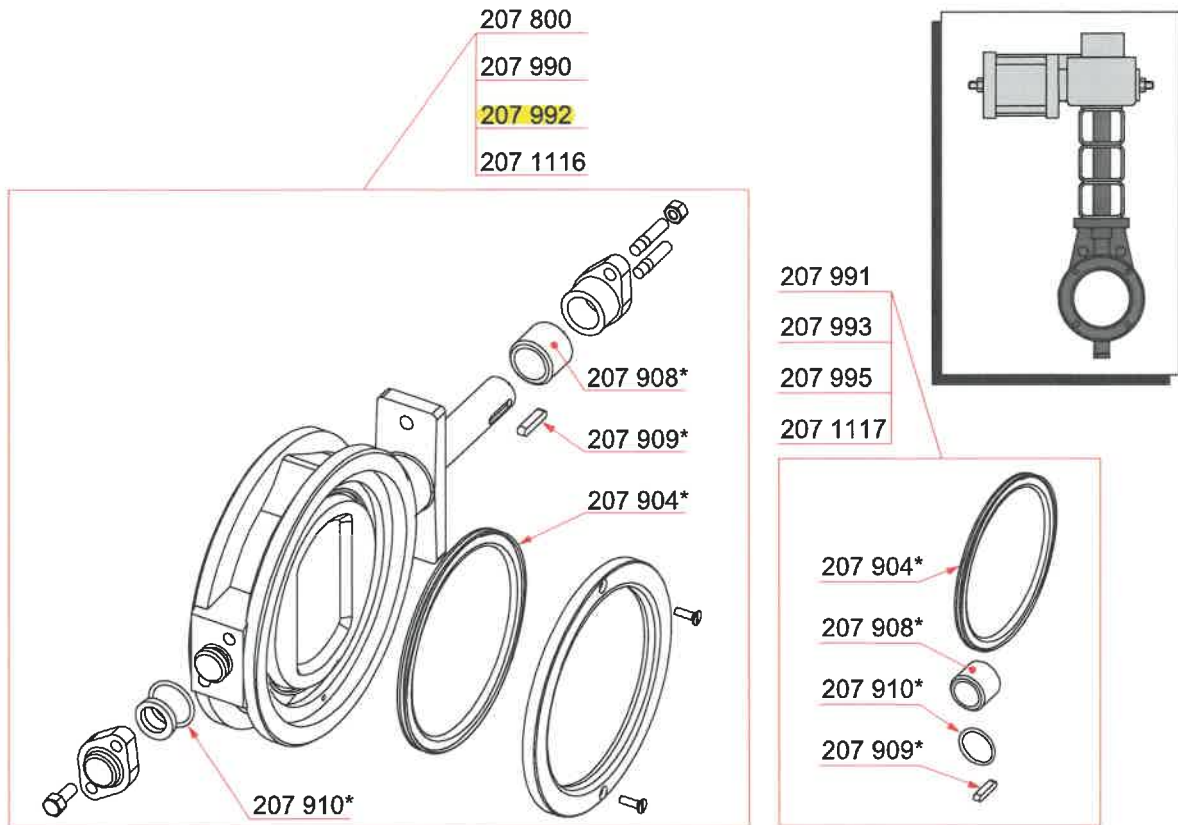


Part No.	Description	Qty [Pcs]	Wt. [Kg]
200 334	Positioner	1	-
207 930	Diaphragm	1	-
207 946	Diaphragm *	1	-
207 947	Screw *	1	-
207 948	Washer *	1	-
207 950	O-ring *	2	-
207 951	O-ring *	1	-
207 952	Filter *	1	-
207 953	O-ring *	1	-
207 957	O-ring *	2	-
207 958	Plate *	1	-
207 959	Housing *	1	-
207 960	Screw *	2	-
207 961	Spool assembly *	1	-
207 962	Screw *	1	-
207 963	Silencer *	2	-
207 996	Clip *	2	-
207 1594	Cover	1	-
207 949	O-ring *	1	-

NOTE! *) Components are not available as single parts.

APPENDIX A

Butterfly valve



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

NOTE! (1) See page 2.

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

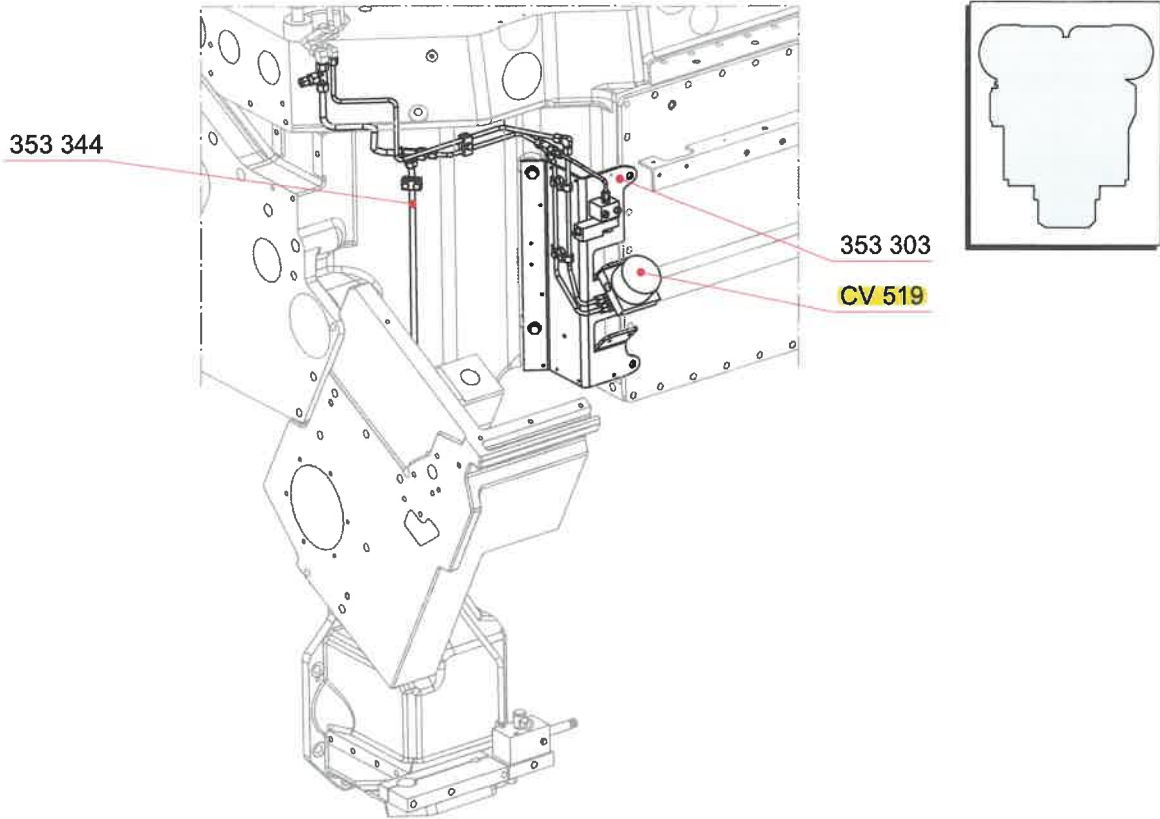
APPENDIX A

Butterfly valve

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

APPENDIX A

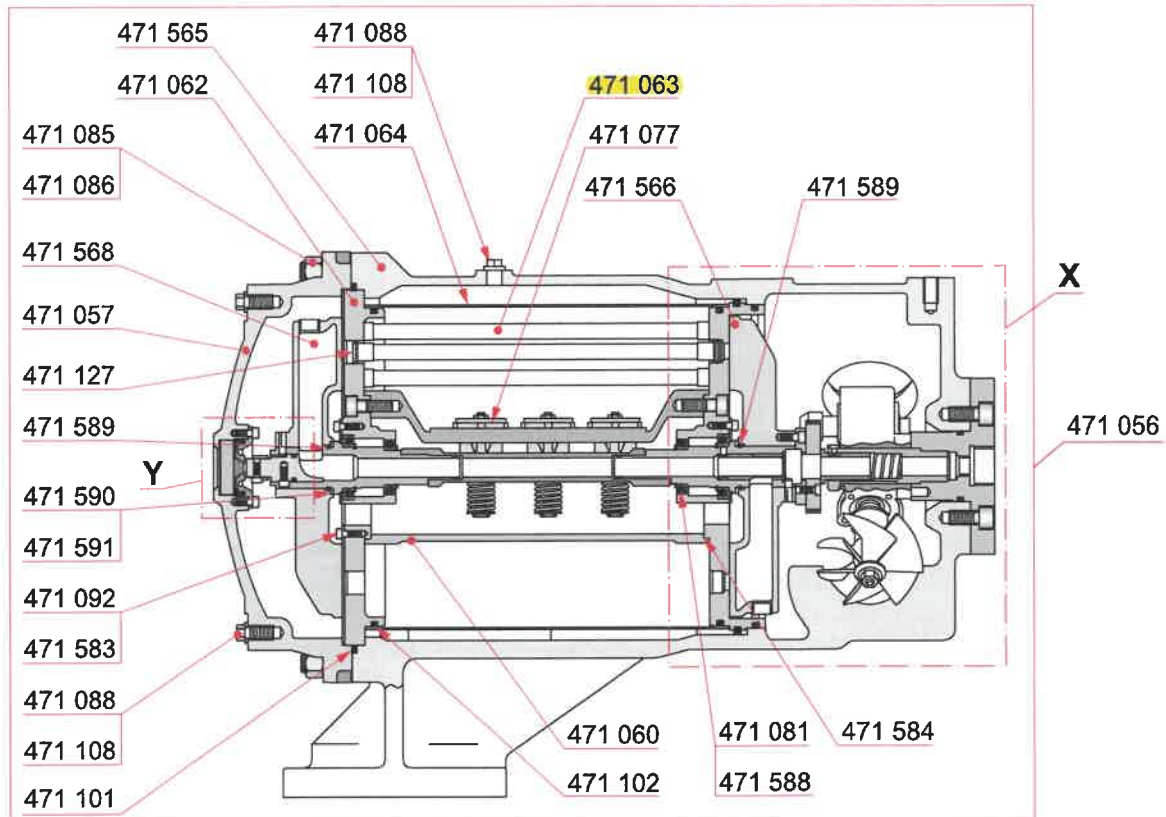
Air pipes for waste gate



Part No.	Description	Qty [Pcs]	Wt. [Kg]
353 303	Supporting plate	1	-
353 344	Pipe	1	-
CV519	I/P converter	1	-

APPENDIX A

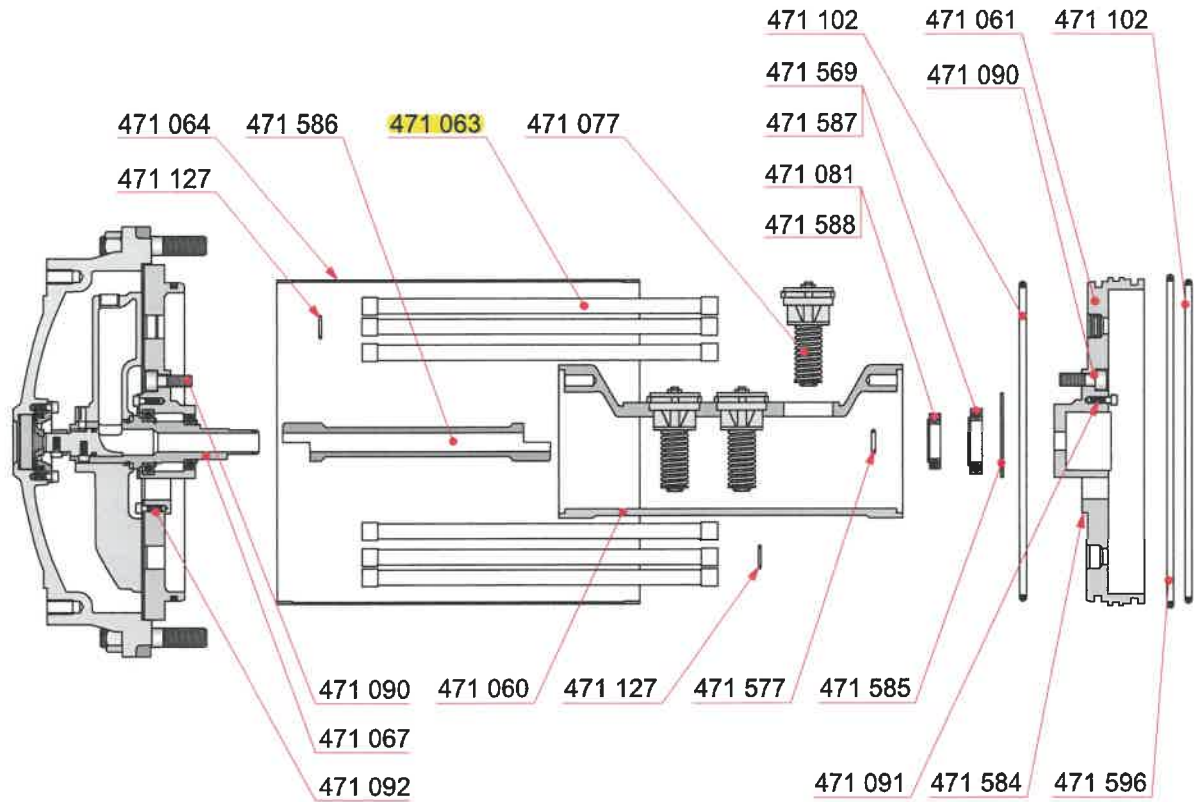
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 056	Lubricating oil filter	1	-
471 057	Cover	1	11.0
471 060	Tube stack	1	1.5
471 062	Plate	1	1.0
471 063	Filter cartridge	78	-
471 064	Filter cartridge	1	1.0
471 077	Valve	6	0.1
471 081	Ball bearing	2	-
471 085	Screw	8	-
471 086	Nut	8	-
471 088	Screw	3	-
471 092	Screw	3	-
471 101	O-ring	1	-
471 102	O-ring	3	-
471 108	Gasket	3	-
471 127	Cord ring	156	-
471 565	Housing	1	11.0
471 566	Distributor	1	0.6
471 568	Distributor	1	0.6
471 583	Pin	1	-
471 584	Pin	2	-
471 588	Locking ring	2	-
471 589	O-ring	2	-
471 590	Washer	2	-
471 591	Support disc	2	-
471 603	Candles tool kit	1	-

APPENDIX A

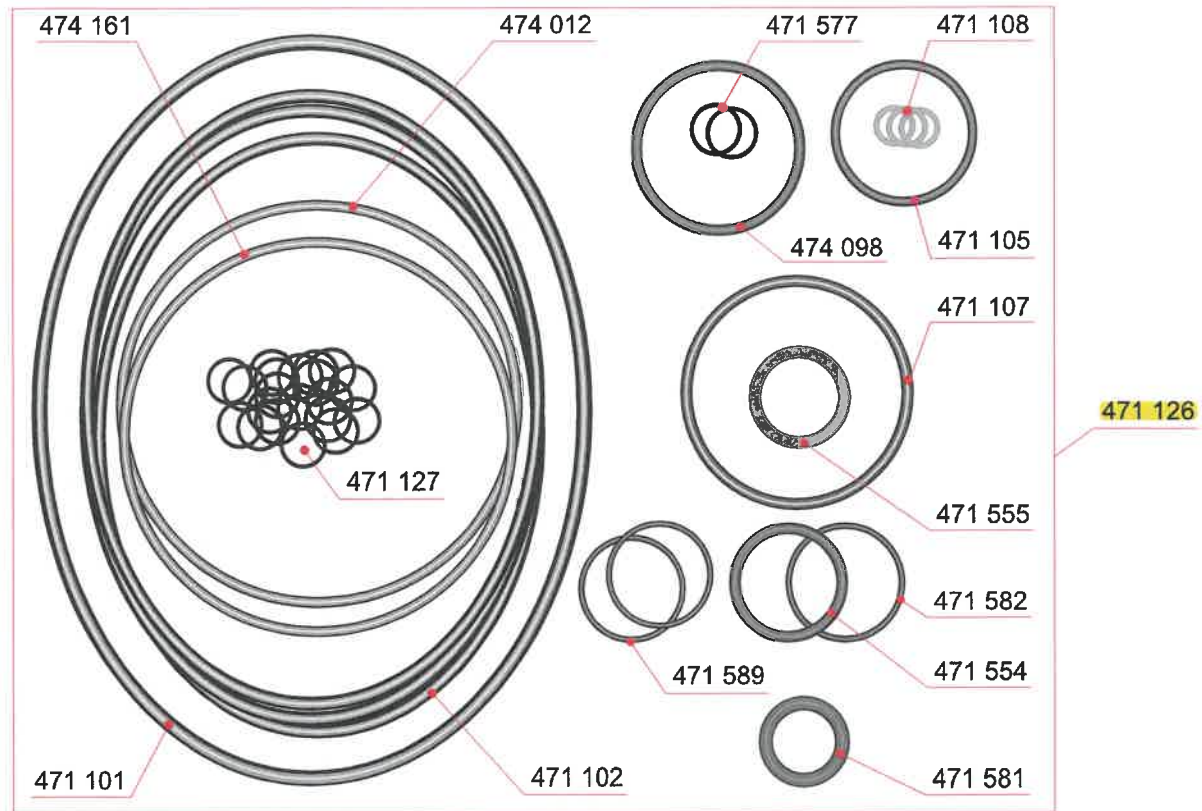
Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 060	Tube stack	1	1.5
471 061	Plate	1	1.0
471 063	Filter cartridge	78	-
471 064	Filter cartridge	1	1.0
471 067	Shaft	2	1.0
471 077	Valve	6	0.1
471 081	Ball bearing	2	-
471 090	Screw	6	-
471 091	Screw	6	-
471 092	Screw	3	-
471 102	O-ring	3	-
471 127	Cord ring	156	-
471 569	Ball bearing	2	0.1
471 577	O-ring	2	-
471 584	Pin	2	-
471 585	Bracket	2	-
471 586	Pipe	1	1.1
471 587	Locking ring	2	-
471 588	Locking ring	2	-
471 596	Guide ring	1	-

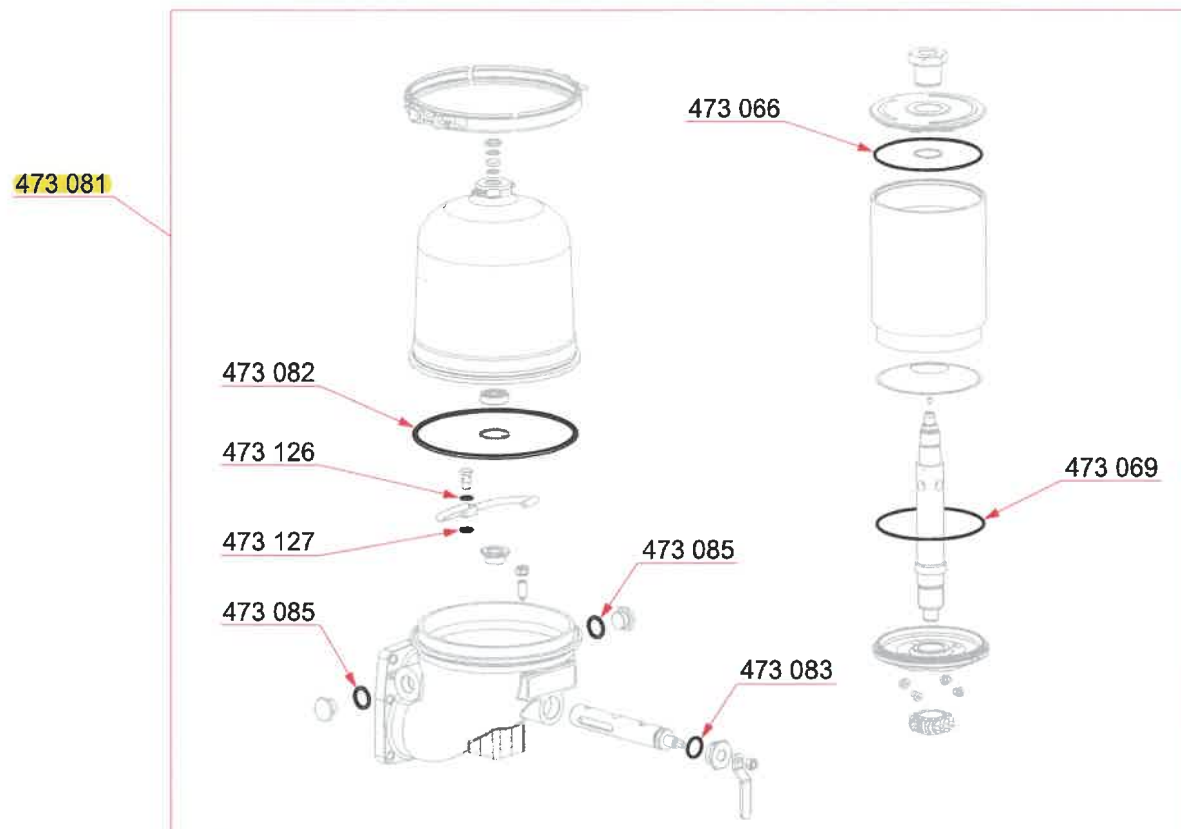
APPENDIX A

Lubricating oil filter



Part No.	Description	Qty [Pcs]	Wt. [Kg]
471 126	Sealing set	1	1.5
471 101	O-ring	1	-
471 102	O-ring	3	-
471 105	O-ring	1	-
471 107	O-ring	1	-
471 108	Gasket	3	-
471 127	Cord ring	156	-
471 554	O-ring	1	-
471 555	Gasket	1	-
471 577	O-ring	2	-
471 581	O-ring	1	-
471 582	O-ring	1	-
471 589	O-ring	2	-
474 012	O-ring	1	-
474 098	O-ring	1	-
474 161	O-ring	1	-

Centrifugal filter

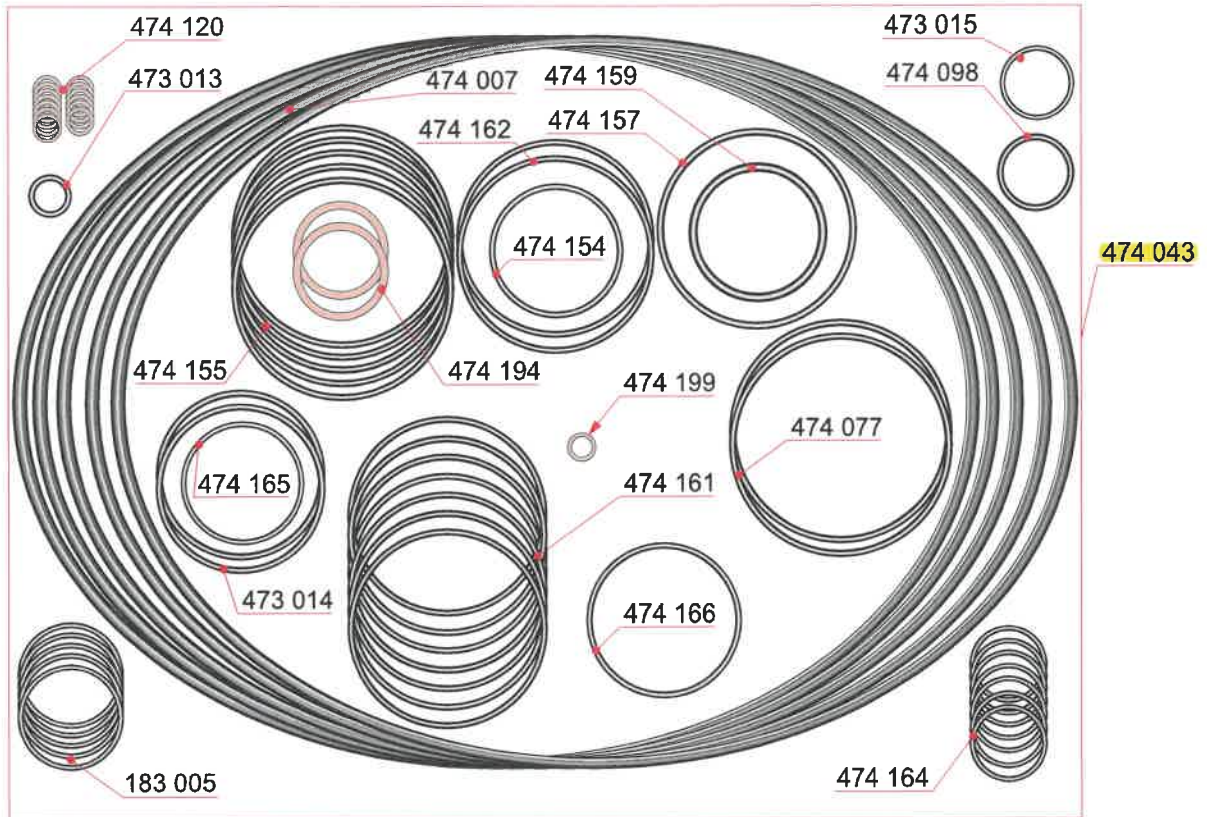


Part No.	Description	Qty [Pcs]	Wt. [Kg]
473 081	Sealing set	1	-
473 066	O-ring (1)	1	-
473 069	O-ring (1)	1	-
473 082	O-ring (1)	1	-
473 083	O-ring (1)	1	-
473 085	Sealing ring (1)	2	-
473 126	Sealing ring (1)	1	-
473 127	Sealing ring (1)	1	-

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

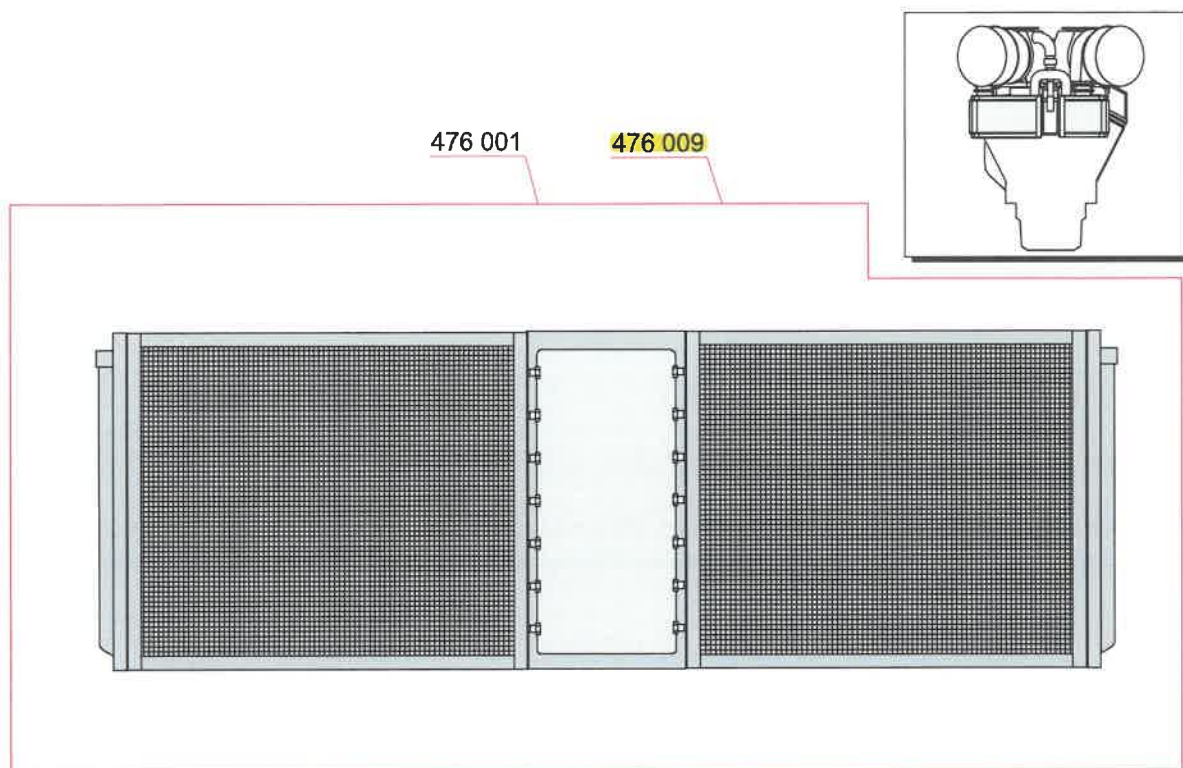
APPENDIX A

Lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
474 043	Sealing set	1	1.0
183 005	O-ring	5	-
473 013	O-ring	1	-
473 014	O-ring	2	-
473 015	O-ring	1	-
474 007	Gasket	5	0.1
474 077	O-ring	2	-
474 098	O-ring	1	-
474 120	Sealing ring	13	-
474 154	O-ring	1	-
474 155	O-ring	5	-
474 157	O-ring	1	-
474 159	O-ring	1	-
474 161	O-ring	7	-
474 162	O-ring	2	-
474 164	O-ring	6	-
474 165	O-ring	1	-
474 166	O-ring	1	0.1
474 194	Sealing ring	2	-
474 199	Sealing ring	1	-

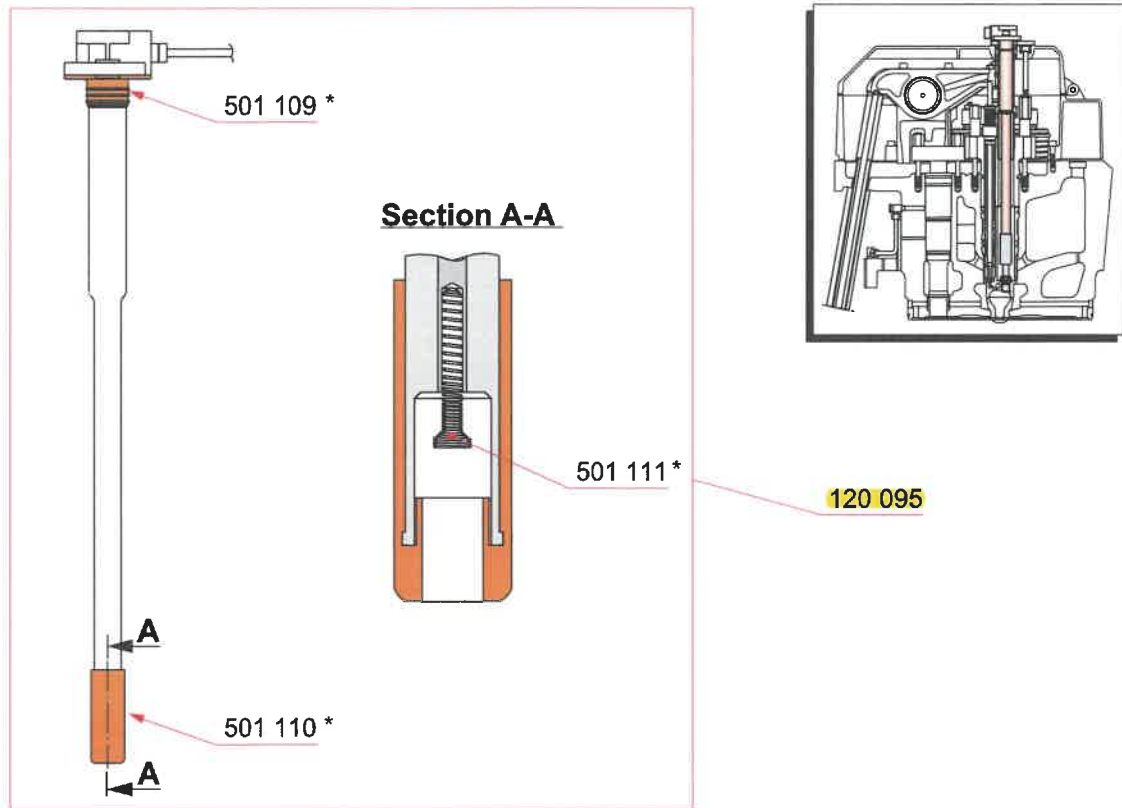
Charge air cooler



Part No.	Description	Qty [Pcs]	Wt. [Kg]
476 001	Charge air cooler	1	-
476 009	Sealing set (1)	1	-

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

Spare part kit for ignition coil



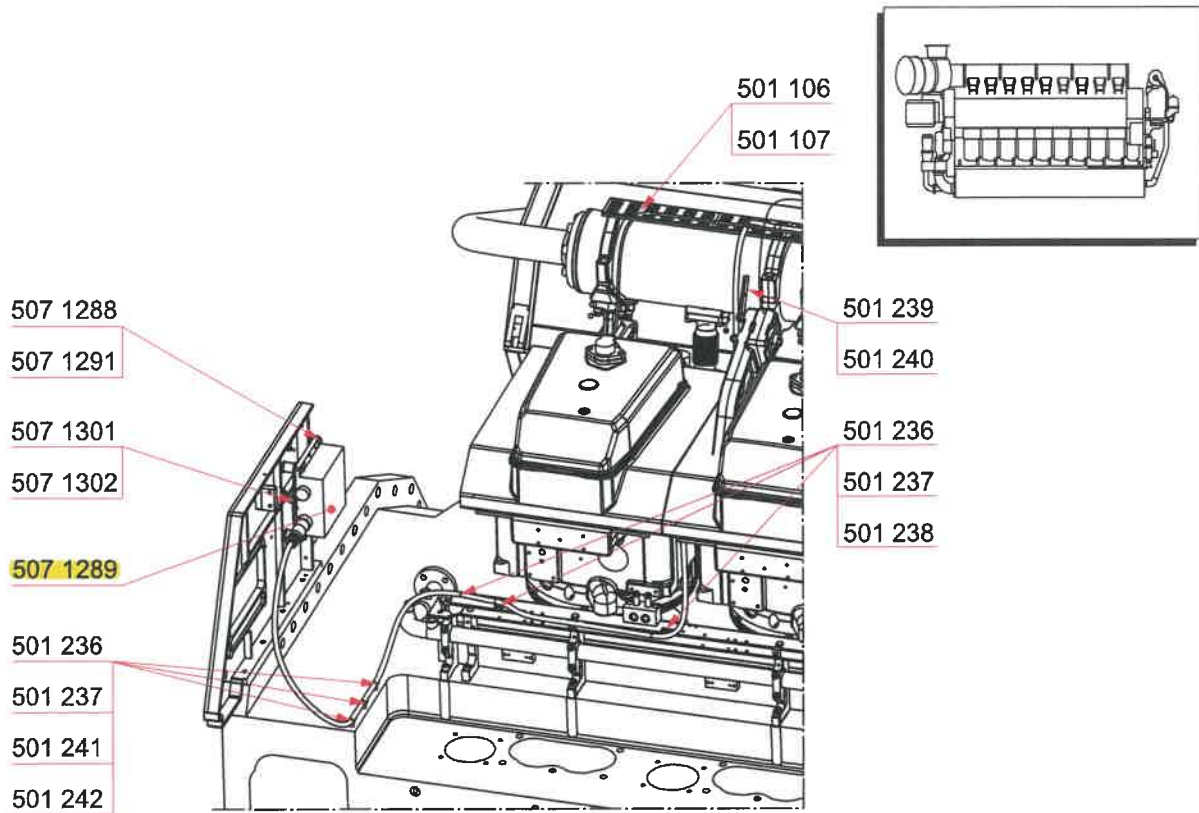
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 095	Ignition coil	1	-
501 109	Grommet *	1	-
501 110	Boot *	1	-
501 111	Spring *	1	-

NOTE! *) Components are not available as single parts.

NOTE! *) See page 2.

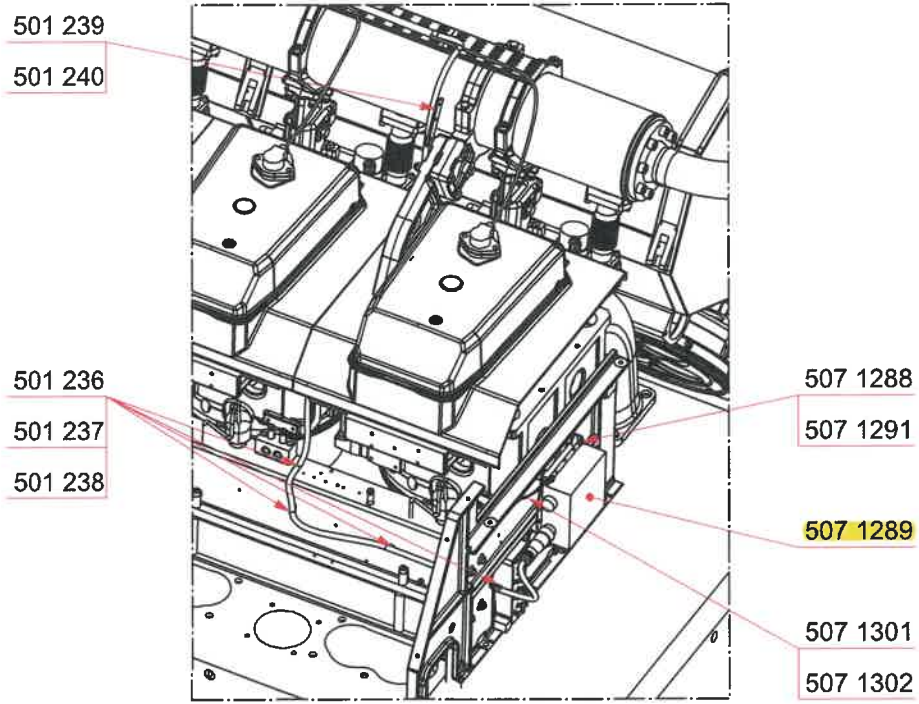
APPENDIX A

Electrical equipment for ignition system



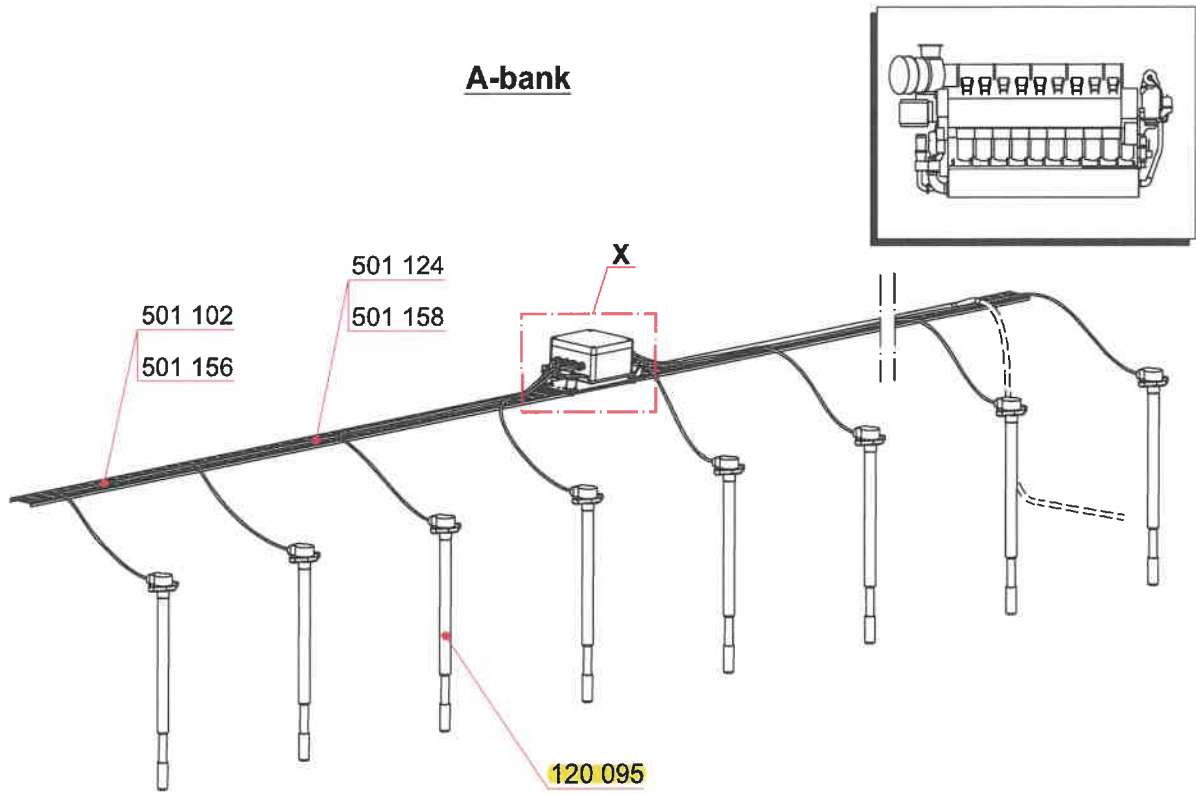
Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 106	Screw	20	-
501 107	Washer	20	-
501 236	Steel strip	10	-
501 237	Cable clamp	10	-
501 238	Screw	7	-
501 239	Pipe clamp	2	0.1
501 240	Nut	2	-
501 241	Screw	3	-
501 242	Distance sleeve	3	-
507 1288	Damper	8	-
507 1289	Ignition module	2	3.5
507 1291	Nut	8	-
507 1301	Cable set	2	-
507 1302	Screw	2	-

Electrical equipment for ignition system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 236	Steel strip	10	-
501 237	Cable clamp	10	-
501 238	Screw	7	-
501 239	Pipe clamp	2	0.1
501 240	Nut	2	-
507 1288	Damper	8	-
507 1289	Ignition module	2	3.5
507 1291	Nut	8	-
507 1301	Cable set	2	-
507 1302	Screw	2	-

Electrical equipment for ignition system



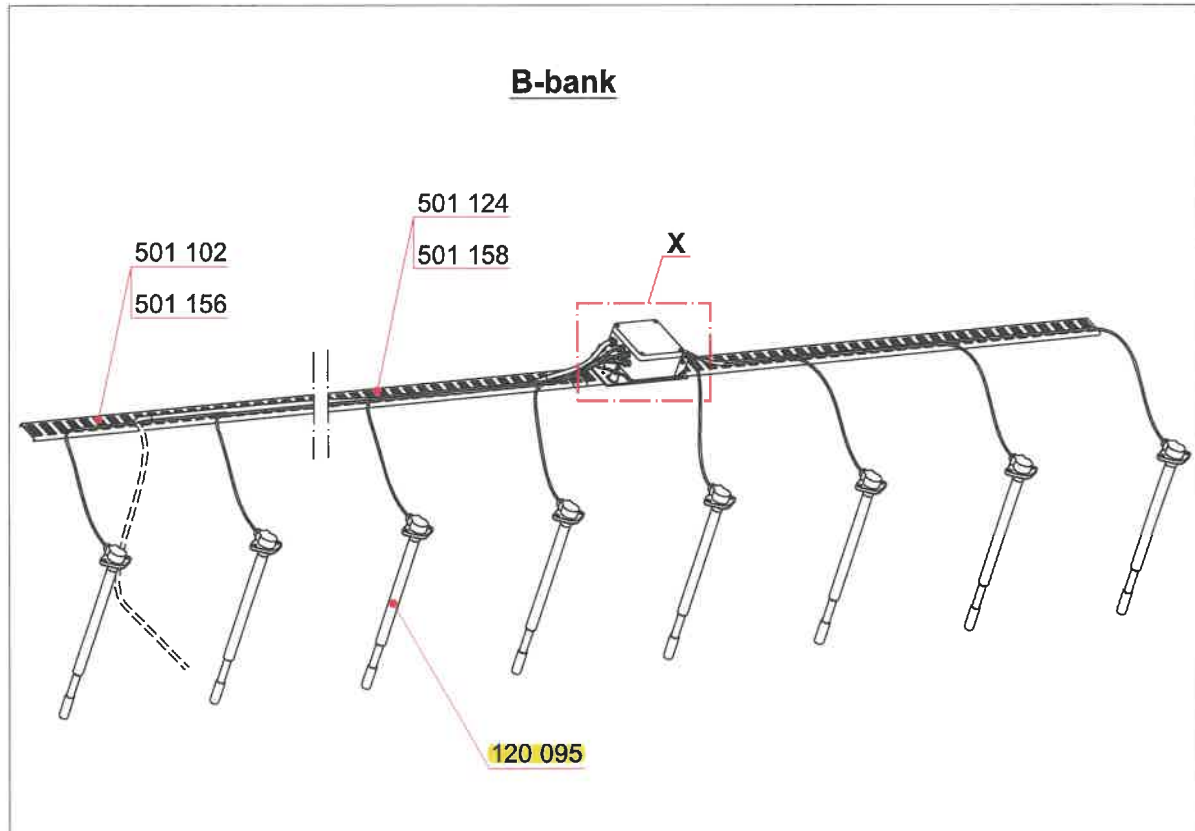
Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 095	Ignition coil (1)	*	-
501 102	Cable tray **	1	-
501 124	Clamp	*	-
501 156	Steel strip	*	-
501 158	Screw	*	-

NOTE! (1) See 120-

NOTE! *) See page 4.

NOTE! **) Length needed when ordering

Electrical equipment for ignition system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
120 095	Ignition coil (1)	*	-
501 102	Cable tray **	1	-
501 124	Clamp	*	-
501 156	Steel strip	*	-
501 158	Screw	*	-

NOTE! (1) See 120-

NOTE! *) See page 4.

NOTE! **) Length needed when ordering

APPENDIX A

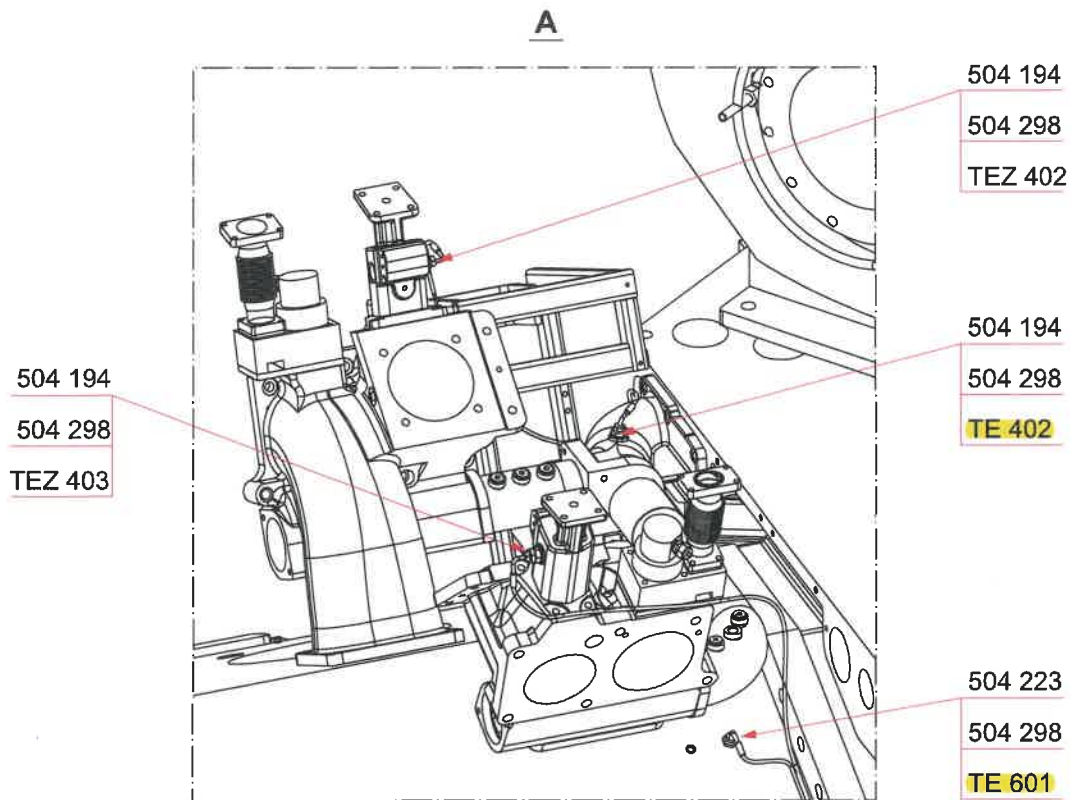
Electrical equipment for ignition system

Quantity according to number of cylinders

Part No. and Description	Quantity in pieces	
	16V	20V
120 095 Ignition coil	8	10
501 124 Clamp	2	4
501 156 Steel strip	15	20
501 158 Screw	4	8

APPENDIX A

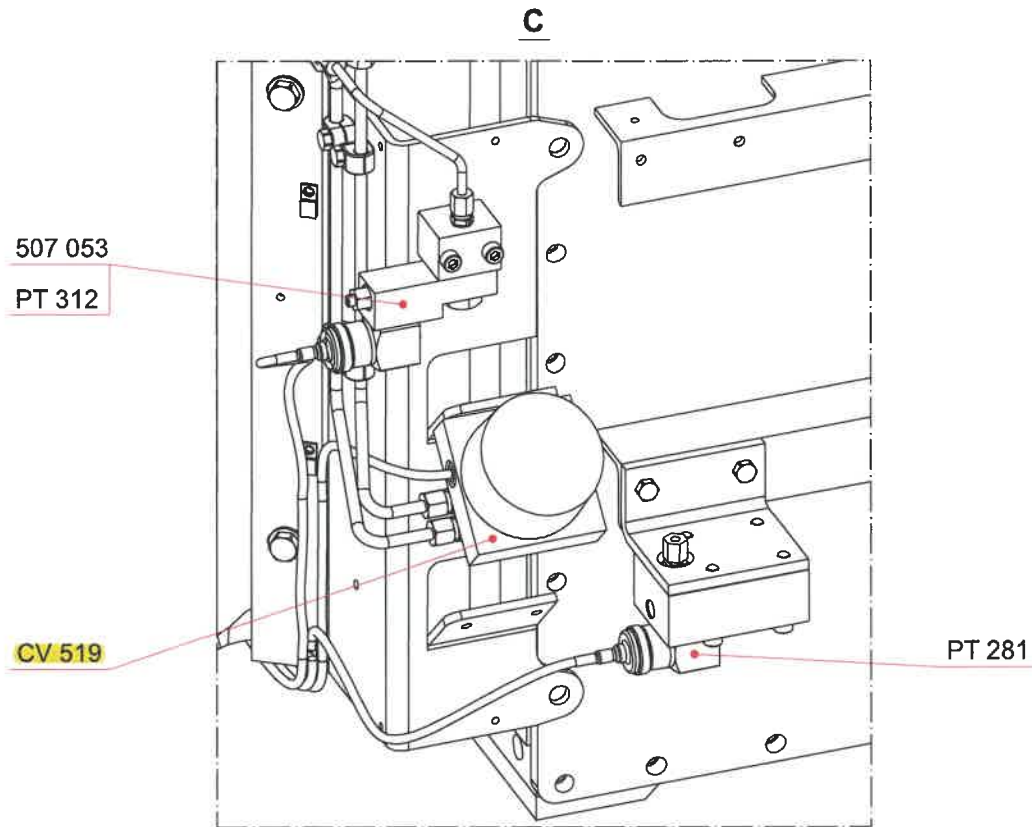
Electrical equipment at free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 194	Protecting well	5	0.2
504 223	Protecting well	2	0.3
504 298	Sealing ring	9	-
TE402	Temperature sensor, HT water, after engine	1	-
TE601	Charge air temperature, inlet	1	-
TEZ402	Temperature sensor, HT- water outlet	1	-
TEZ403	Temperature sensor, HT- water outlet	1	-

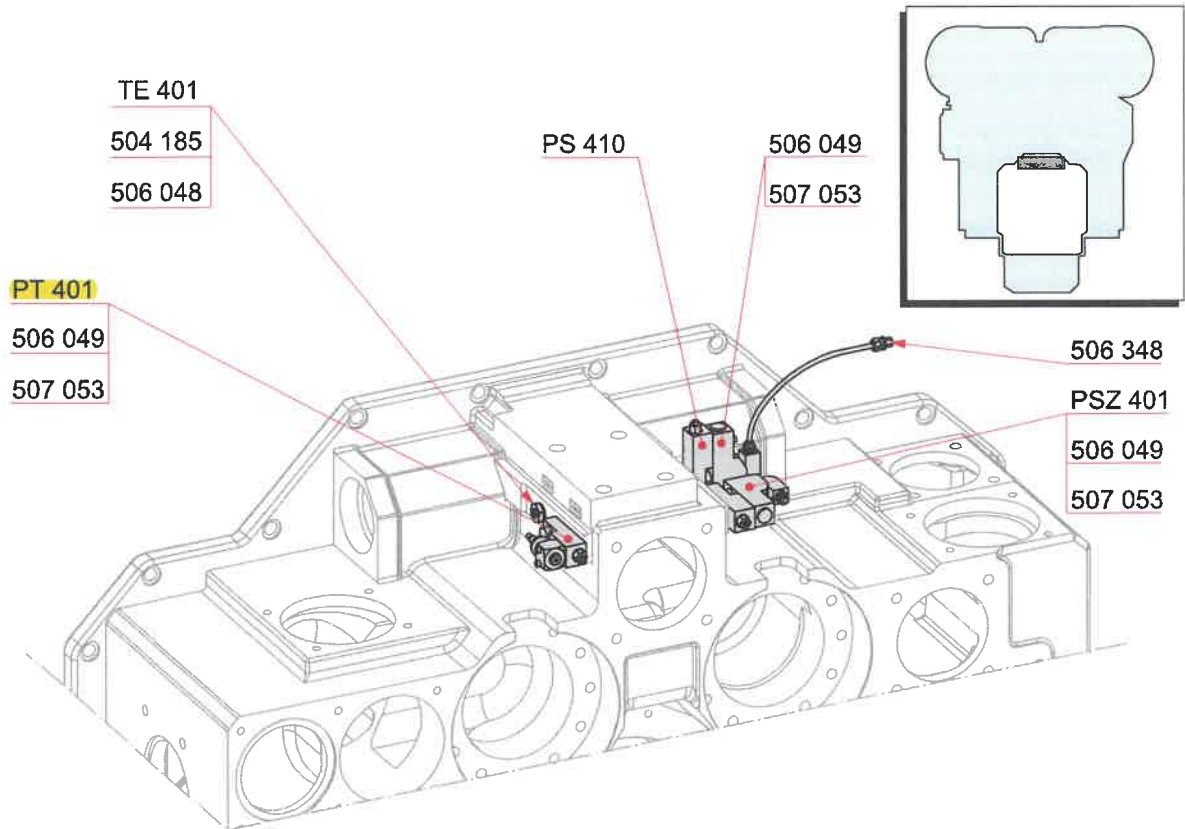
APPENDIX A

Electrical equipment at free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 053	Pressure gauge valve	2	0.6
CV519	I/P converter	1	-
PT281	Pressure transmitter	1	-
PT312	Pressure sensor	1	-

Sensors on pump cover

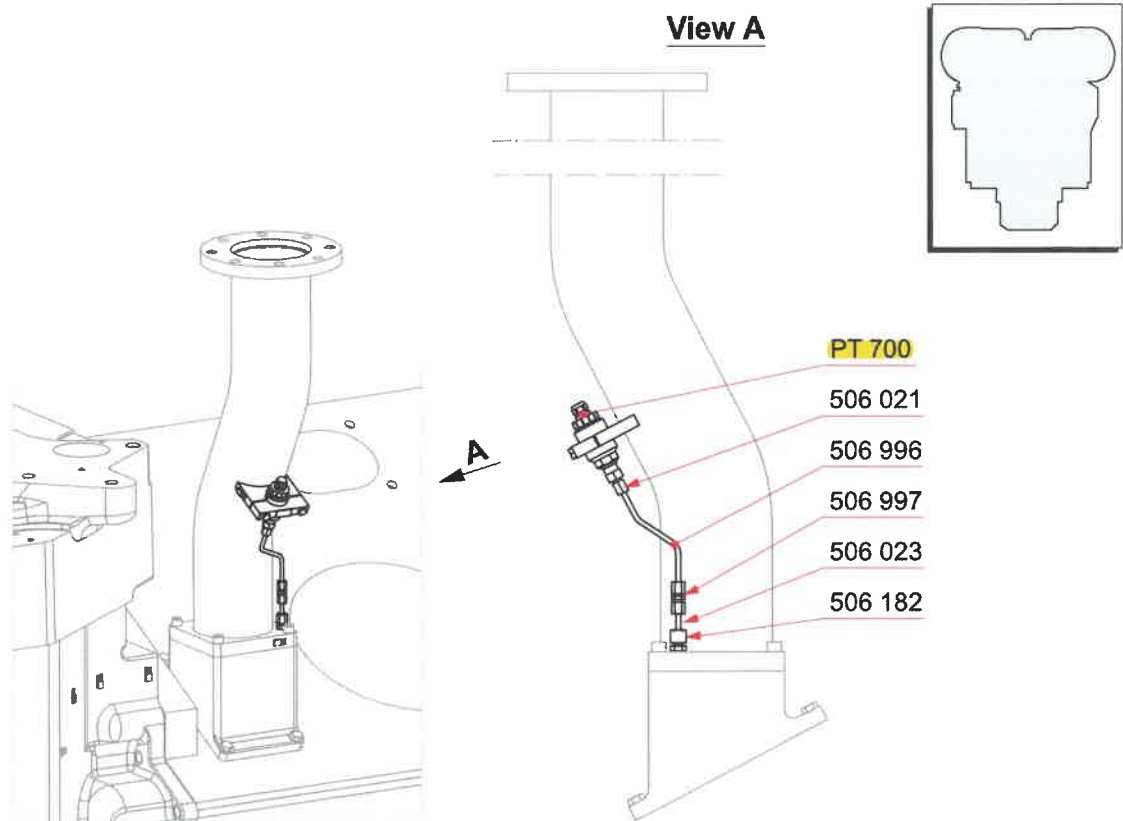


Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 185	Protection well	1	-
506 048	Sealing ring	1	-
506 049	Screw *)	4	-
506 348	Cable gland *)	1	-
507 053	Pressure gauge valve *)	2	-
PS410	Pressure sensor *)	1	-
PSZ401	Pressure sensor *)	1	-
PT401	Pressure sensor	1	-
TE401	Temperature sensor, HT water, before engine *)	1	-

NOTE! *) Amount depends on installation.

APPENDIX A

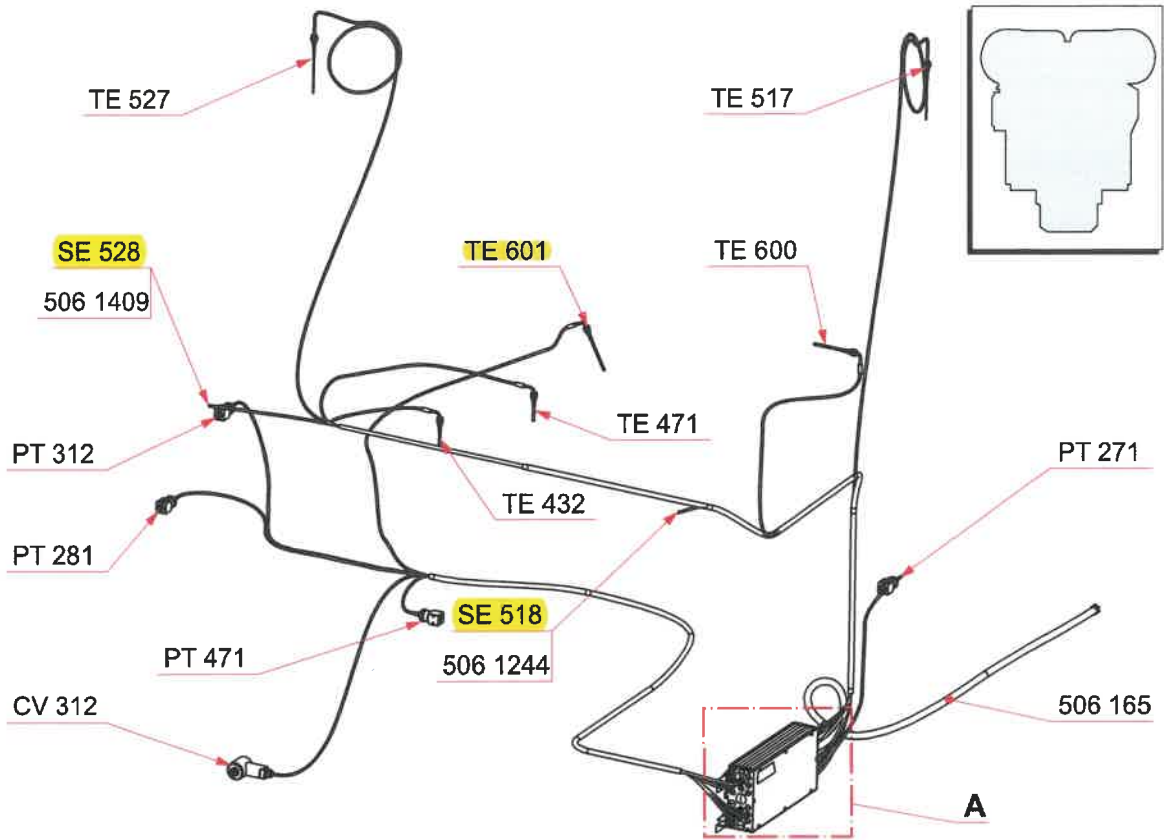
Sensor for crankcase pressure



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 021	Pipe union	1	-
506 023	Pipe	1	-
506 182	Pipe union	1	-
506 996	Pipe	1	-
506 997	Pipe union	1	-
PT700	Pressure sensor	1	-

APPENDIX A

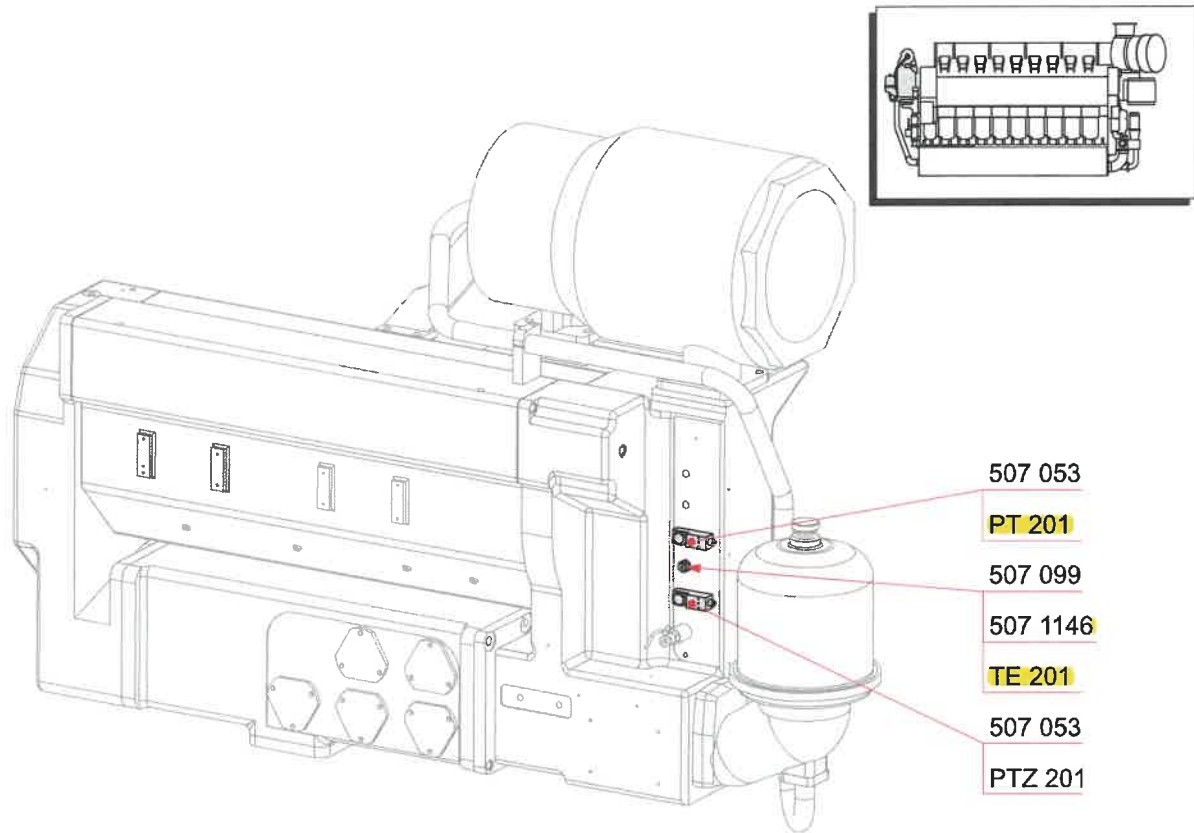
Electrical equipment in free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]
506 165	Cable	3	0.2
506 1244	Cable	1	0.7
506 1409	Cable set	1	1.3
CV312	Solenoid valve	1	0.6
PT271	Pressure sensor	1	0.8
PT281	Pressure transmitter	1	0.8
PT312	Pressure sensor	1	0.8
PT471	Pressure sensor	1	0.8
SE518	Speed pick-up	1	-
SE528	Speed pick-up	1	-
TE432	Temp.transmitter, HT water, after TC	1	0.6
TE471	LT water temperature, before charge air cooler	1	0.6
TE517	Temperature sensor	1	1.5
TE527	Temperature sensor	1	1.5
TE600	Temperature sensor	1	0.6
TE601	Charge air temperature, inlet	1	0.6

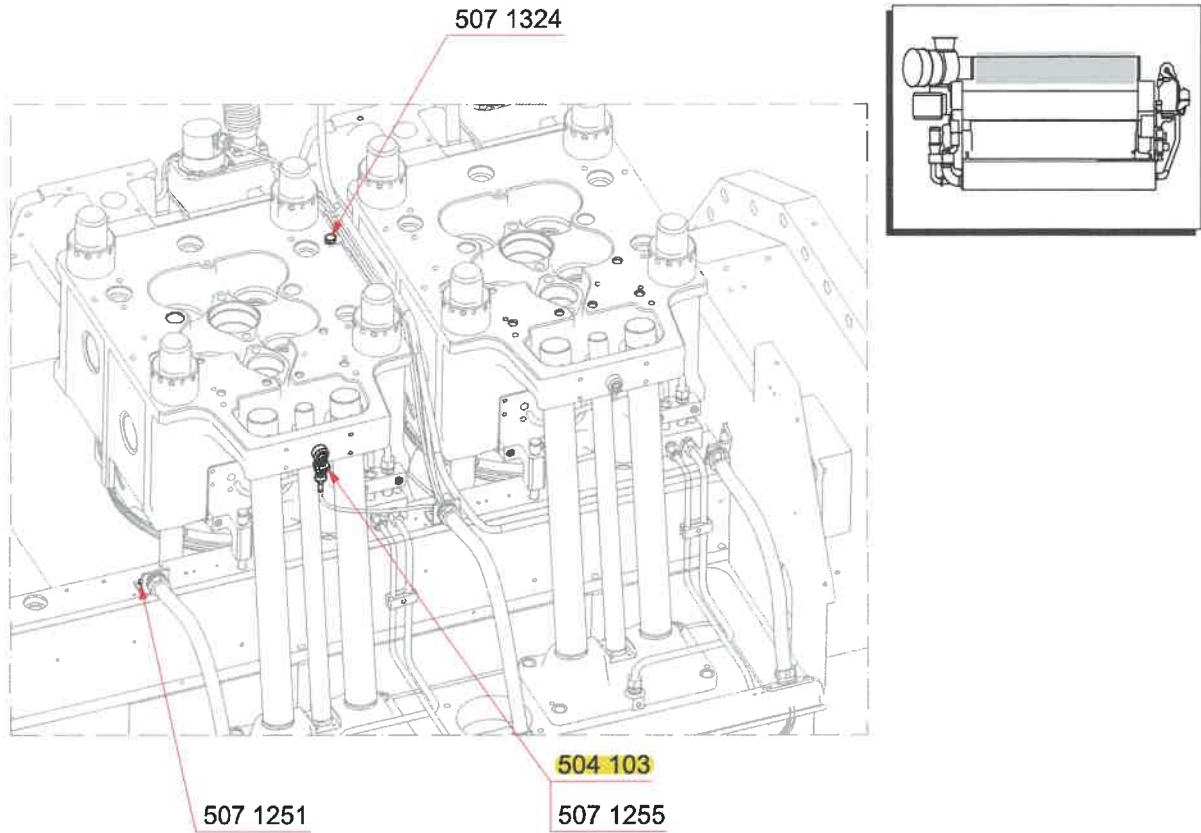
APPENDIX A

Electrical equipment, lube oil module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 053	Pressure gauge valve	3	-
507 099	Sealing ring	1	-
507 1146	Protecting cap	1	-
PT201	Pressure sensor	1	-
PTZ201	Pressure sensor	1	-
TE201	Temperature sensor	1	-

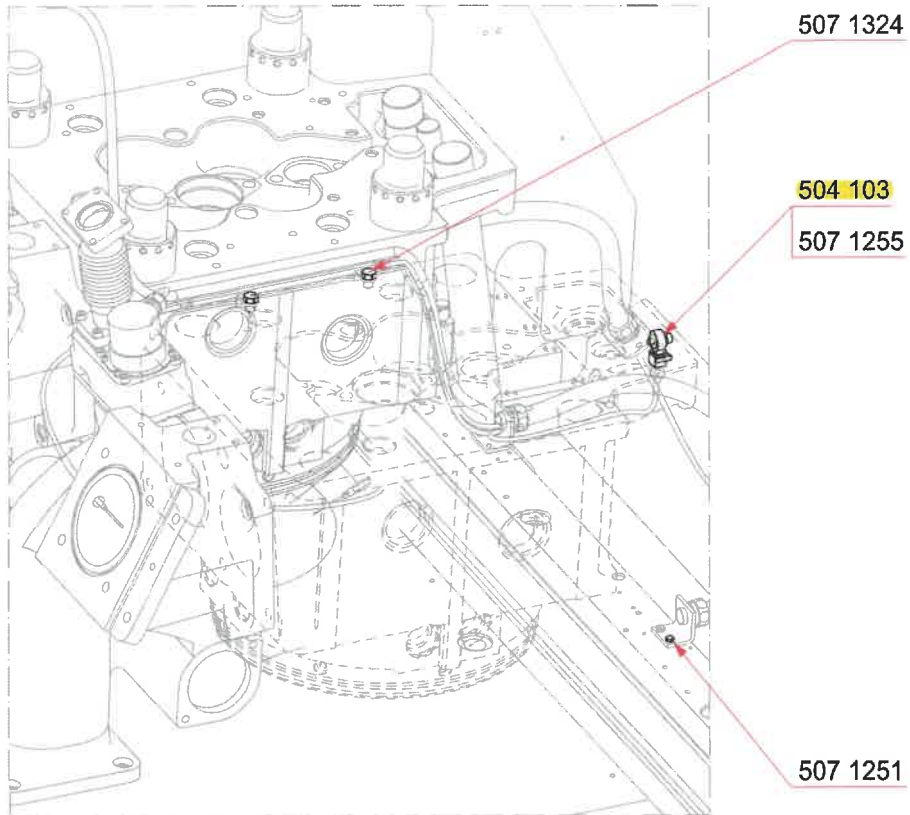
Electrical equipment for cylinder



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 103	Knock sensor	1	-
507 1251	Screw	2	-
507 1255	Screw	1	-
507 1324	Screw	2	-

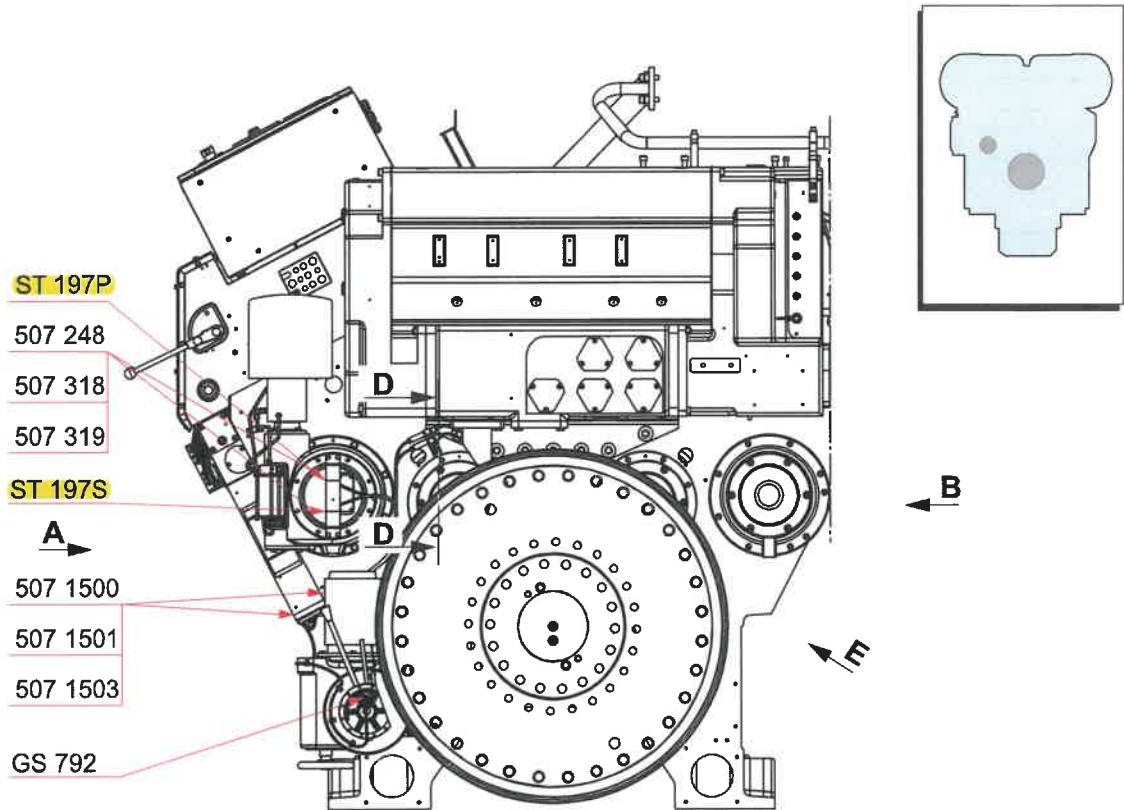
APPENDIX A

Electrical equipment for cylinder



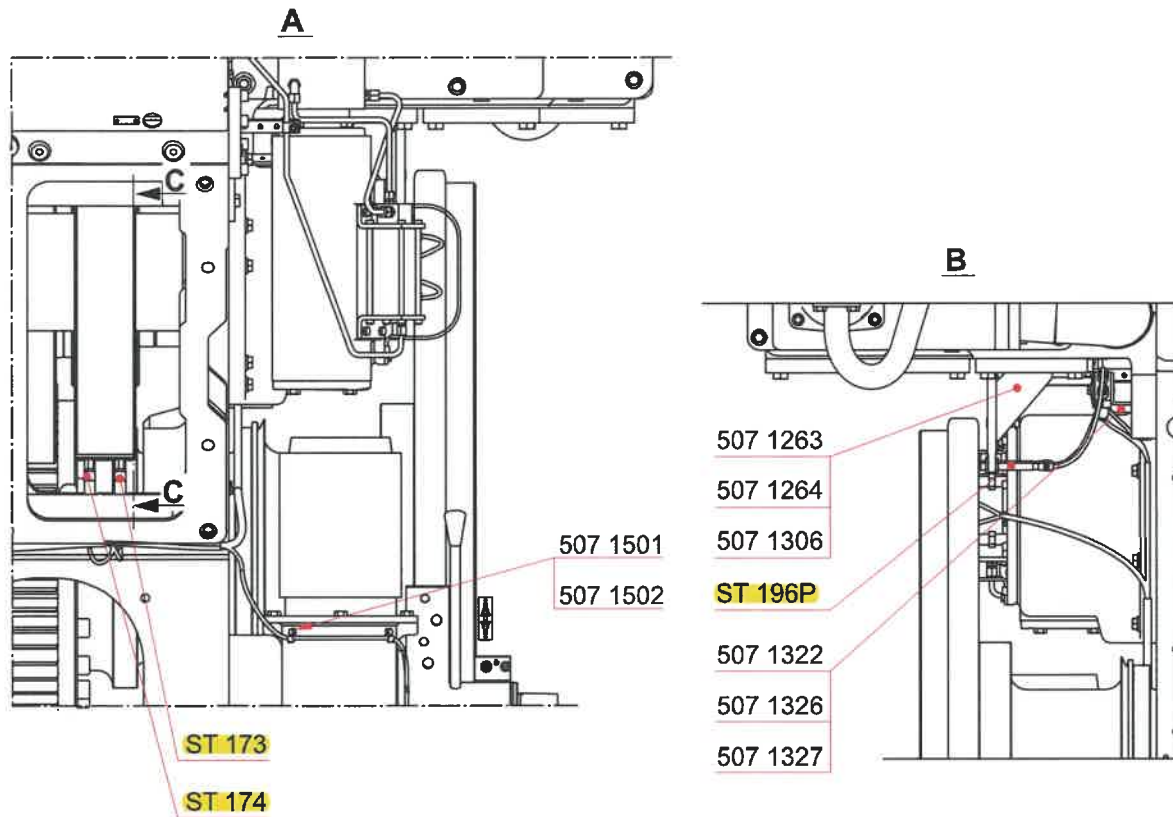
Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 103	Knock sensor	1	-
507 1251	Screw	2	-
507 1255	Screw	1	-
507 1324	Screw	2	-

Electrical equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 248	Screw	2	-
507 318	Lead-through piece	4	0.1
507 319	O-ring	4	-
507 1500	Cable clamp	9	-
507 1501	Screw	15	-
507 1503	Steel strip	9	-
GS792	Limit switch	1	0.5
ST197P	Limit switch	1	0.5
ST197S	Limit switch	1	0.5

Electrical equipment

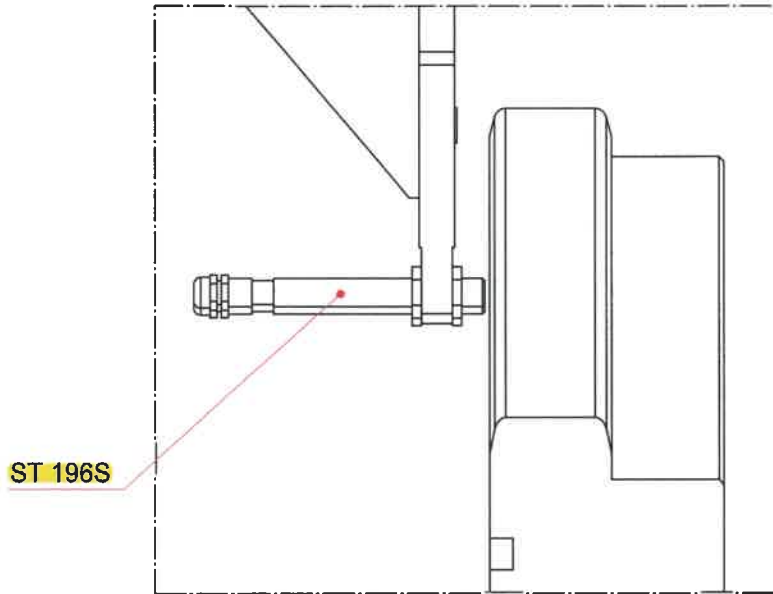


Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 1263	Support *)	1	8.8
507 1264	Screw *)	4	-
507 1306	O-ring *)	1	-
507 1322	Screw *)	1	-
507 1326	Cable clamp *)	1	0.2
507 1327	Washer *)	1	-
507 1501	Screw	15	-
507 1502	Fastener	6	-
ST196P	Speed sensor	1	0.6
ST173	Speed pick-up	1	0.5
ST174	Speed pick-up	1	0.5

NOTE! *) Not used in all installations.

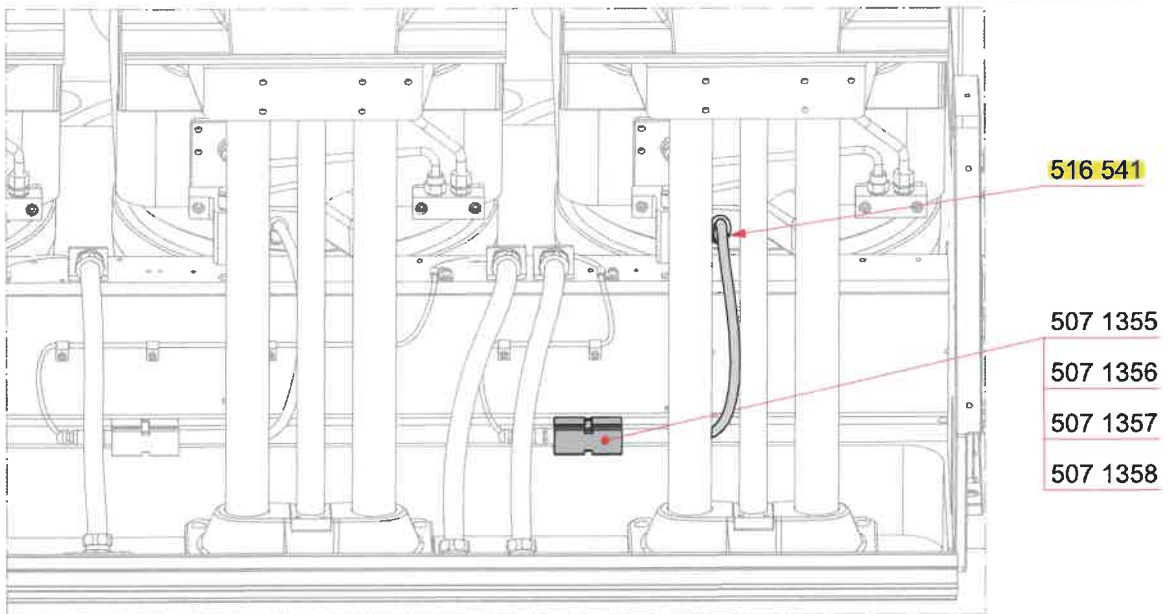
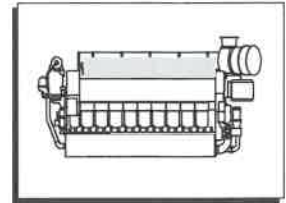
Electrical equipment

D - D



Part No.	Description	Qty [Pcs]	Wt. [Kg]
ST196S	Speed sensor	1	0.6

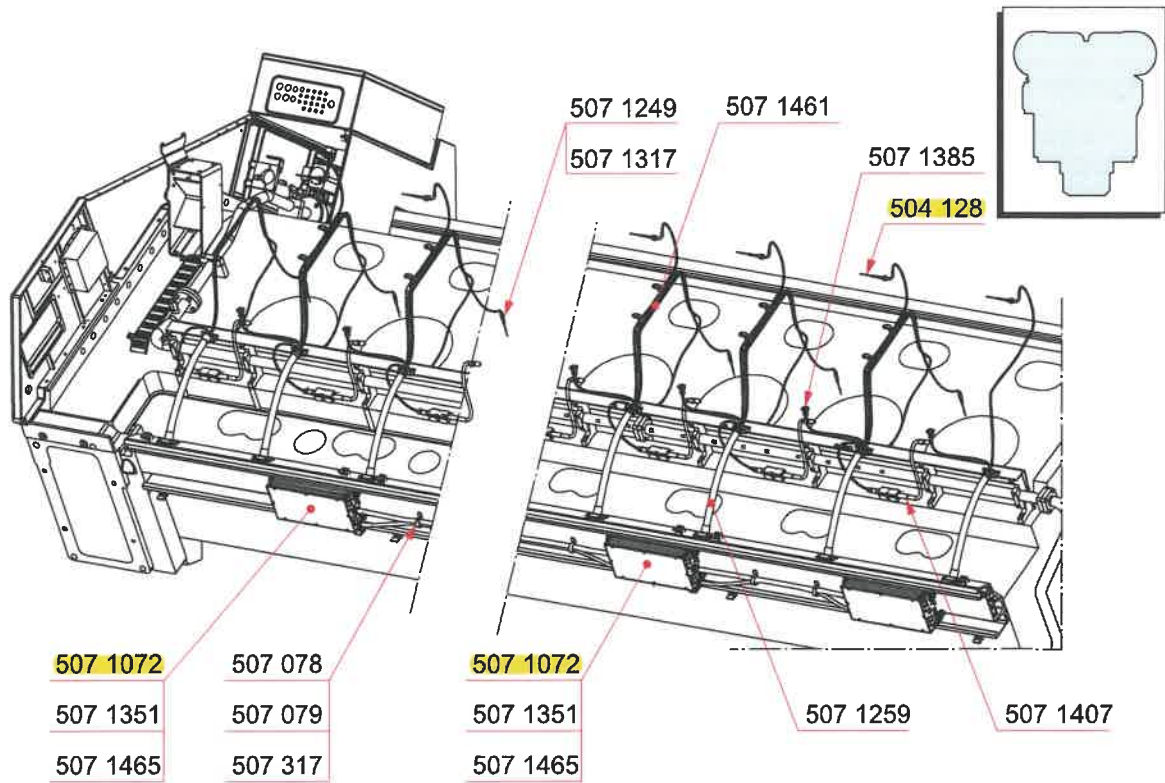
Electrical equipment for cylinder



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 1355	Holder	1	-
507 1356	Cover	1	-
507 1357	Screw	2	-
507 1358	Steel strip	1	-
516 541	Pressure transducer	1	-

APPENDIX A

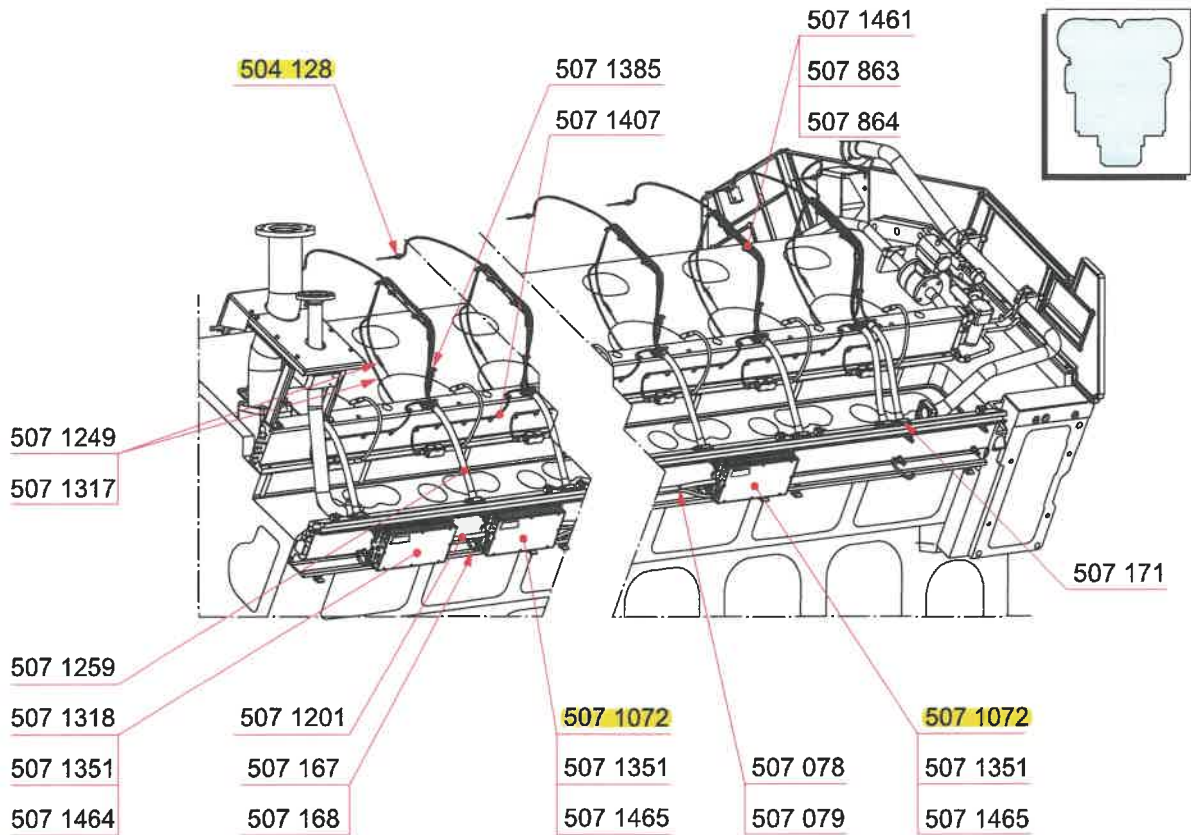
Electrical equipment, B bank



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	10	-
507 078	Clamp	23	-
507 079	Screw	23	-
507 317	Steel strip	23	-
507 1072	Control unit CCM	4	-
507 1249	Thermoelement	20	-
507 1259	Metal hose	11	-
507 1317	Adapter	20	-
507 1351	Corrosion protection	4	-
507 1385	Cable set	10	-
507 1407	Cable set	10	-
507 1461	Cable rail	9	-
507 1465	Connector set for CCM	4	-

APPENDIX A

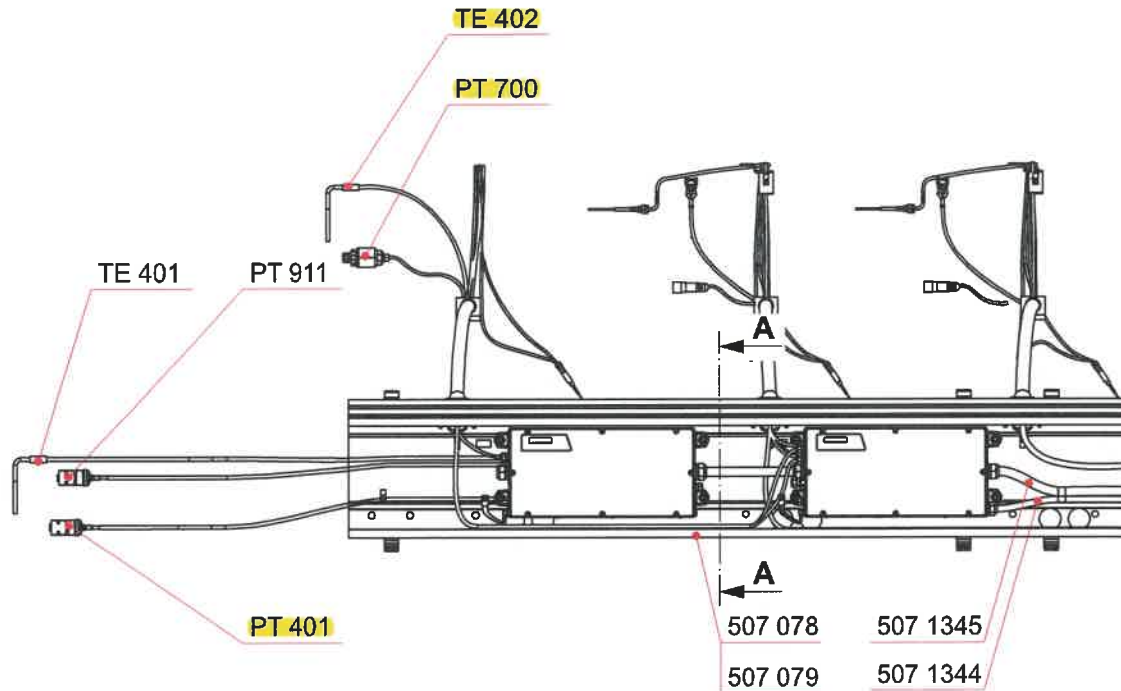
Electrical equipment, A bank



Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 128	Temperature sensor	10	-
507 078	Clamp	20	-
507 079	Screw	20	-
507 167	Cable set	6	-
507 168	Screw	11	-
507 171	Screw	22	-
507 1072	Control unit CCM	4	-
507 1201	Cable (1)	1	-
507 1249	Thermoelement	20	-
507 1259	Metal hose	11	-
507 1317	Adapter	20	-
507 1318	Electronic unit IOM	1	-
507 1351	Corrosion protection	5	-
507 1385	Cable set	10	-
507 1407	Cable set	10	-
507 1461	Cable rail	9	-
507 863	Cable clamp	5	-
507 864	Screw	5	-
507 1464	Connector set for IOM	1	-
507 1465	Connector set for CCM	4	-

NOTE! (1) L= 2000 mm

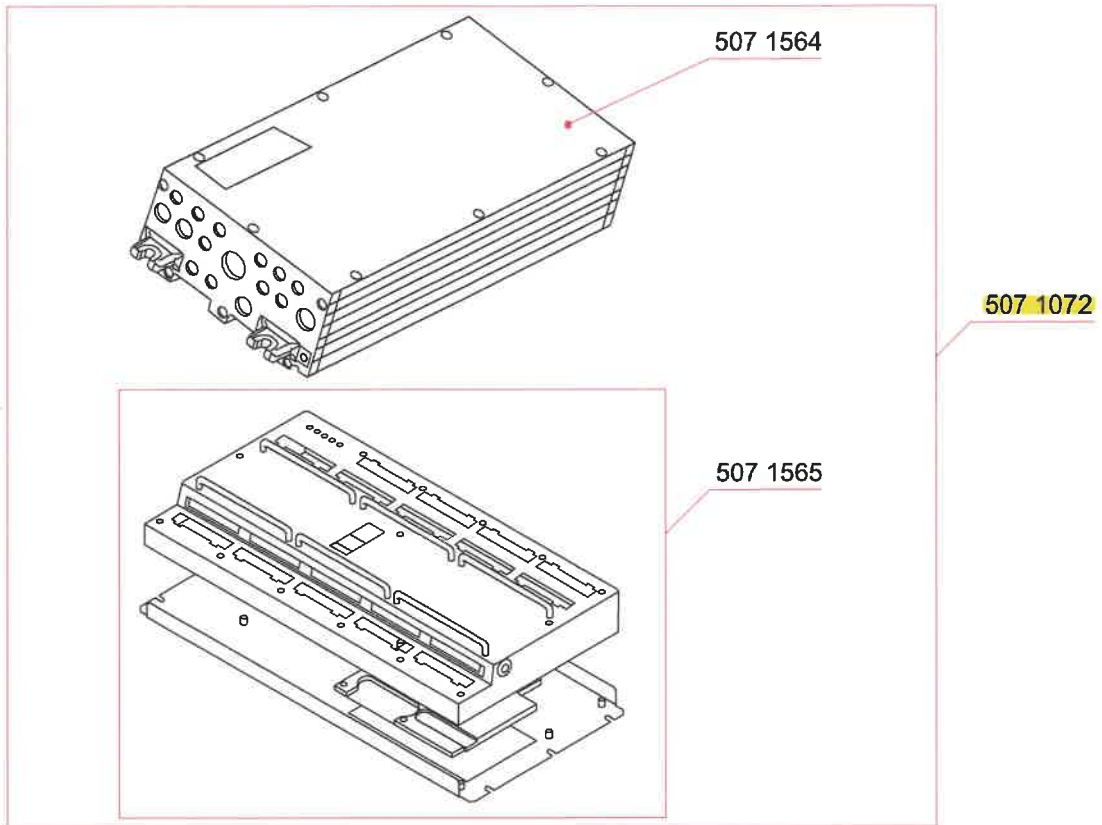
Electrical equipment, A bank



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 078	Clamp	20	-
507 079	Screw	20	-
507 1344	Cable (1)	1	-
507 1345	Cable (1)	1	-
PT401	Pressure sensor	1	-
PT700	Pressure sensor	1	-
PT911	Pressure sensor	1	-
TE401	Temperature sensor, HT water, before engine	1	-
TE402	Temperature sensor, HT water, after engine	1	-

NOTE! (1) L= 7000 mm

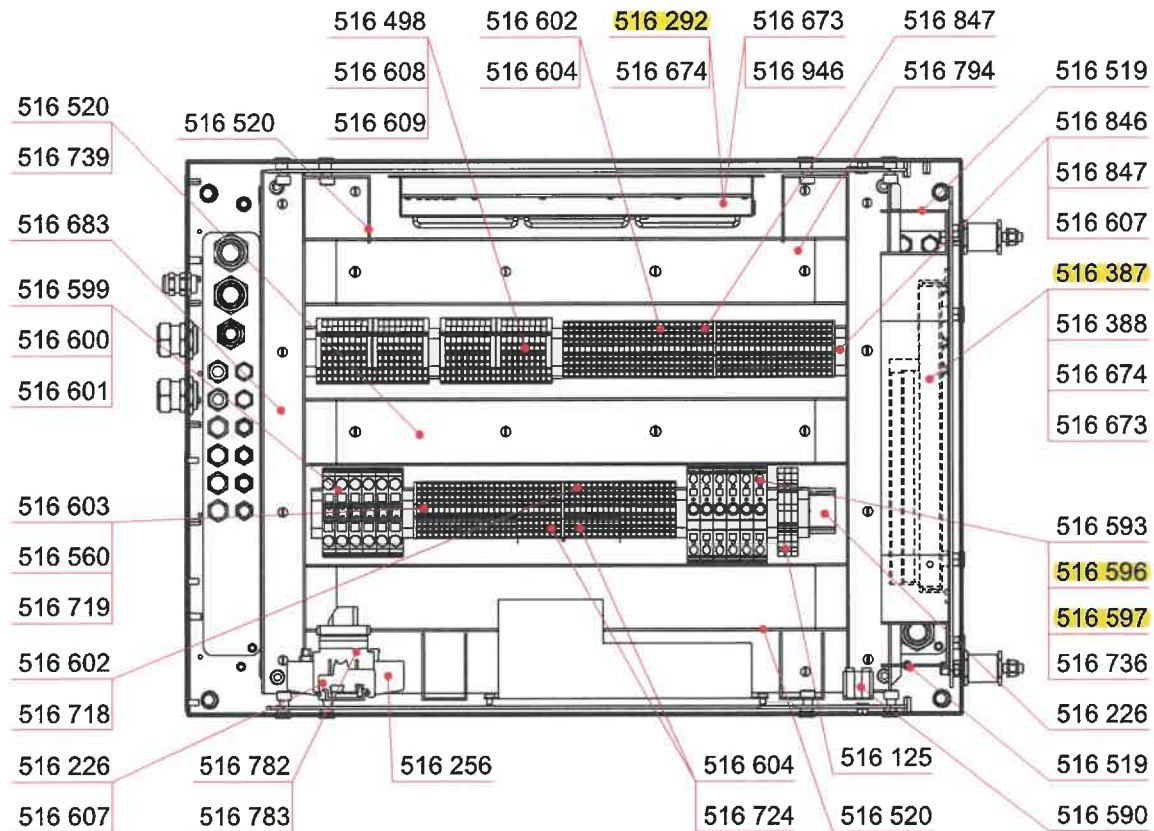
Cylinder control module



Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 1072	Control unit CCM	1	-
507 1564	Box	1	-
507 1565	Electronic unit	1	-

APPENDIX A

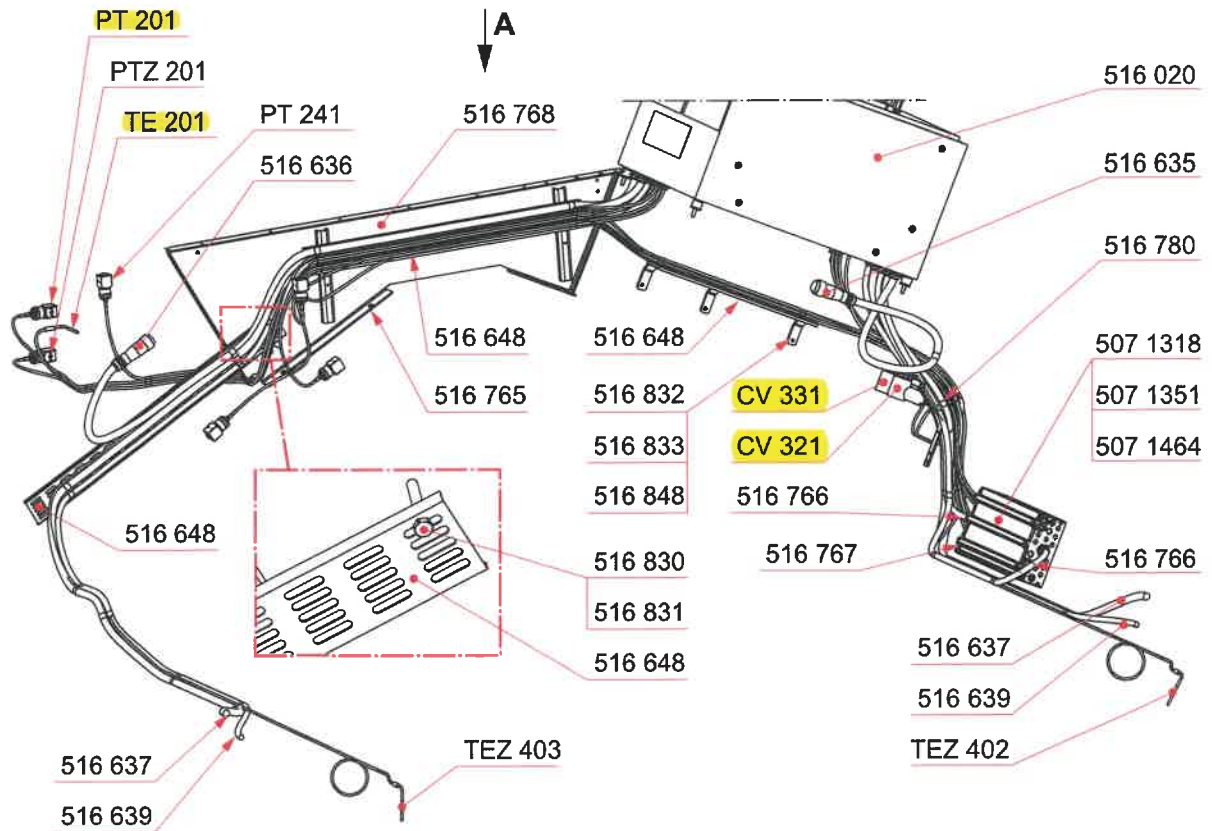
Electrical equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
516 125	Relay	3	-	516 609	Ground receptacle	8	-
516 226	Terminal strip rail	1	-	516 673	Resistor 22 kR	4	-
516 256	Electronic unit	1	-	516 674	Resistor 120 R	2	-
516 292	Control unit	1	-	516 683	Holder for tie wrap	20	-
516 387	Engine safety module	1	-	516 718	Terminal strip	10	-
516 388	Connector	1	-	516 719	Terminal strip	18	-
516 498	Plug 8-pin	8	-	516 724	Jumper	2	-
516 519	Cable tray *	1	-	516 736	Fixed bridge	1	-
516 520	Cable tray *	1	-	516 739	Cable *	1	-
516 560	Terminal strip	8	-	516 782	Switch	1	-
516 590	Diode	2	-	516 783	Terminal	1	-
516 593	Fuse terminal	6	-	516 794	Cable *	1	-
516 596	Fuse 1A	4	-	516 846	Terminal strip	7	-
516 597	Fuse 4A	2	-	516 847	Terminal strip	7	-
516 599	Terminal strip	2	-	516 946	Connector	1	-
516 600	Terminal strip	2	-				
516 601	Terminal strip	2	-	NOTE!	*) Length needed when ordering.		
516 602	Terminal strip	58	-				
516 603	Terminal strip	2	-				
516 604	End plate	4	-				
516 607	End clamp	12	-				
516 608	Receptacle, DIN-rail mounting	32	-				

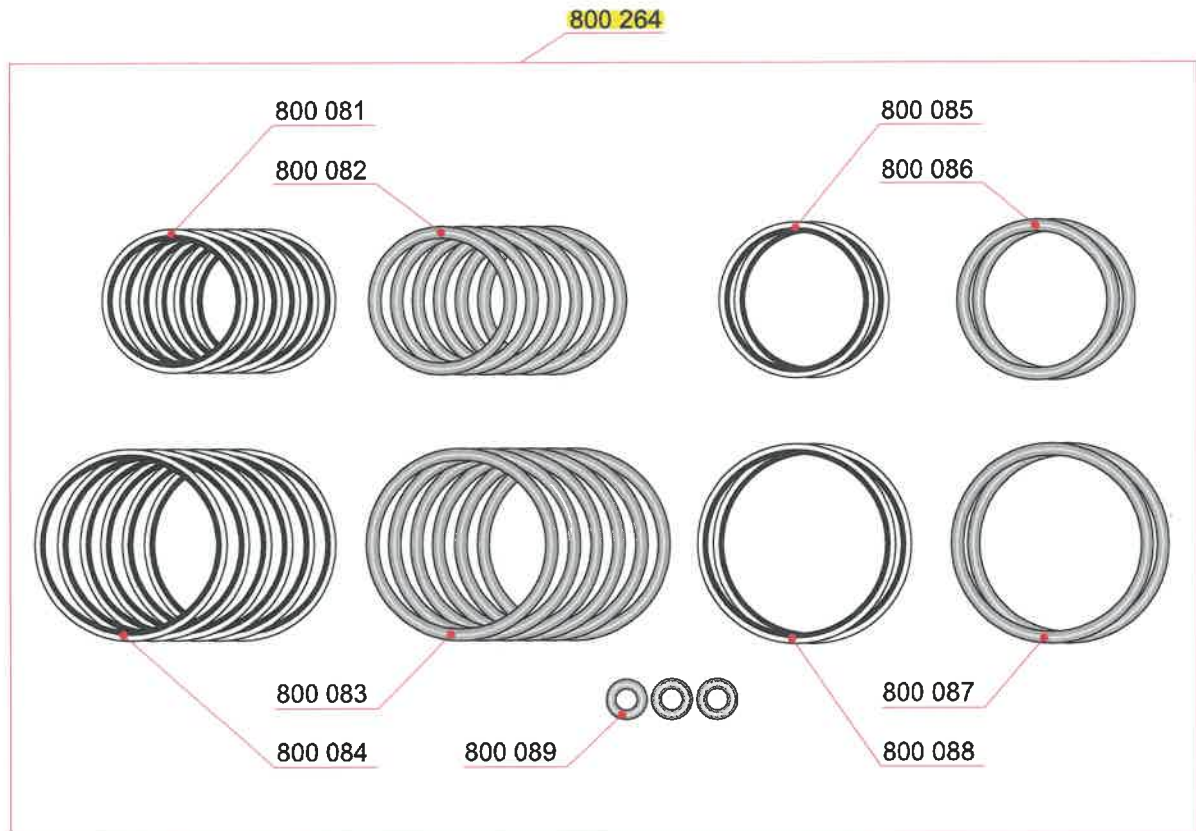
APPENDIX A

Electrical equipment



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
507 1318	Electronic unit	1	-	PT241	Lube oil pressure, filter inlet	1	-
507 1351	Corrosion protection	1	-	PTZ201	Pressure sensor	1	-
507 1464	Connector set for IOM	1	-	TE201	Temperature sensor	1	-
516 020	Connecting box (*)	1	-	TEZ402	Temperature sensor, HT-water outlet	1	-
516 635	Cable set	1	-	TEZ403	Temperature sensor, HT-water outlet	1	-
516 636	Cable set	1	-	NOTE!	(1) L = 11.5 m		
516 637	Cable (1)	1	-	NOTE!	(2) L = 7000 mm		
516 639	Cable (1)	1	-	NOTE!	(4) L = 2160 mm		
516 648	Cable tray (4)	1	-	NOTE!	(5) L = 3100 mm		
516 765	Screw	3	-	NOTE!	(6) L = 30 mm		
516 766	Cable (2)	1	-	NOTE!	*) See 516-		
516 767	Cable (5)	1	-				
516 768	Cover	1	-				
516 780	Cable rail	1	-				
516 830	Pipe (6)	1	-				
516 831	Screw	1	-				
516 832	Screw	6	-				
516 833	Pipe clamp	3	-				
516 848	Washer	6	-				
CV321	Solenoid valve	1	-				
CV331	Solenoid valve	1	-				
PT201	Pressure sensor	1	-				

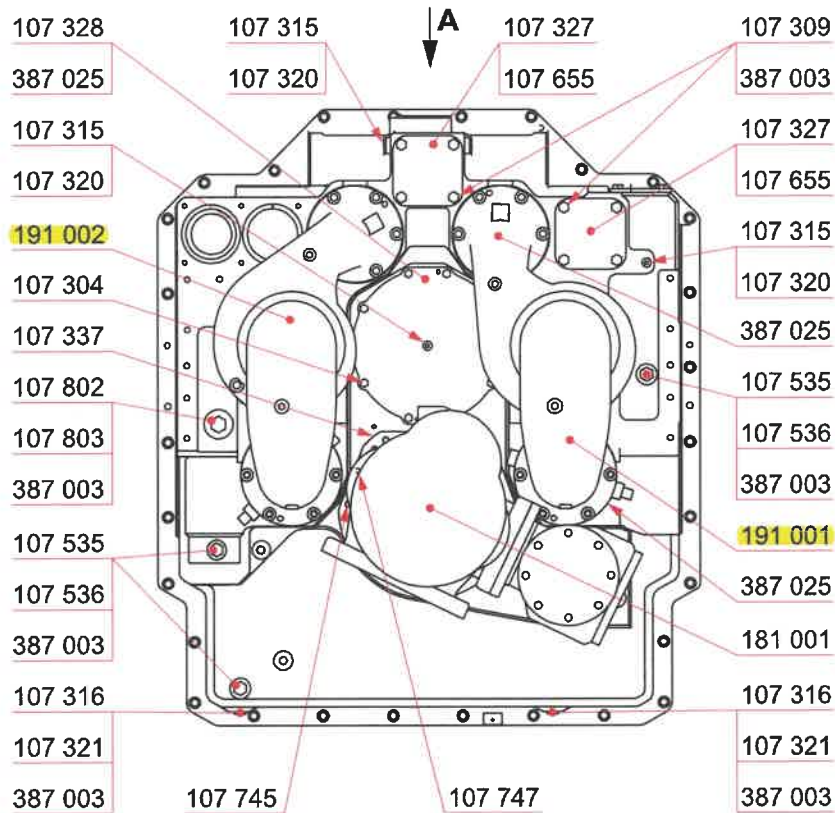
Hydraulic tightening tools



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

APPENDIX A

Pump cover

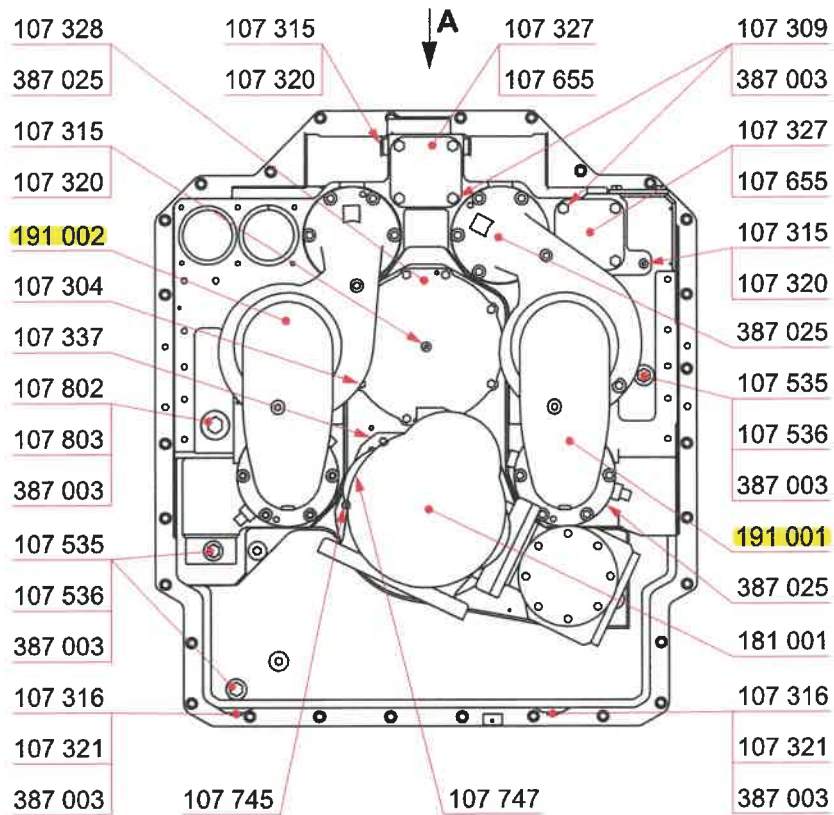


Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 304	Screw	8	-
107 309	Screw	12	-
107 315	Plug	6	-
107 316	Plug	2	-
107 320	Sealing ring	6	-
107 321	Sealing ring	2	-
107 327	Blind flange	2	4.8
107 328	Flange	1	5.3
107 337	O-ring	2	-
107 535	Plug	3	0.3
107 536	Sealing ring	3	-
107 655	O-ring	2	-
107 745	Screw	8	-
107 747	Cylindrical pin	3	-
107 802	Sealing ring	1	-
107 803	Plug	1	0.8
181 001	Lubricating oil pump	1	-
191 001	HT water pump	1	-
191 002	LT water pump	1	-
387 003	Glue compound	1	-
387 025	Glue compound	1	-

NOTE! Clockwise rotating engine

APPENDIX A

Pump cover



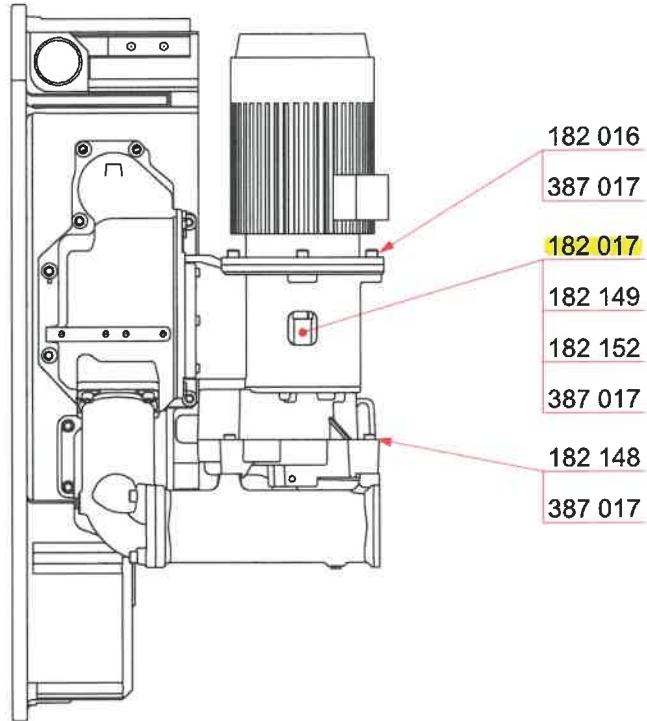
Part No.	Description	Qty [Pcs]	Wt. [Kg]
107 304	Screw	8	-
107 309	Screw	12	-
107 315	Plug	6	-
107 316	Plug	2	-
107 320	Sealing ring	6	-
107 321	Sealing ring	2	-
107 327	Blind flange	2	4.8
107 328	Flange	1	5.3
107 337	O-ring	2	-
107 535	Plug	3	0.3
107 536	Sealing ring	3	-
107 655	O-ring	2	-
107 745	Screw	8	-
107 747	Cylindrical pin	3	-
107 802	Sealing ring	1	-
107 803	Plug	1	0.8
181 001	Lubricating oil pump	1	-
191 001	HT water pump	1	-
191 002	LT water pump	1	-
387 003	Glue compound	1	-
387 025	Glue compound	1	-

NOTE! Counter-clockwise rotating engine

APPENDIX A

Prelubricating oil pump

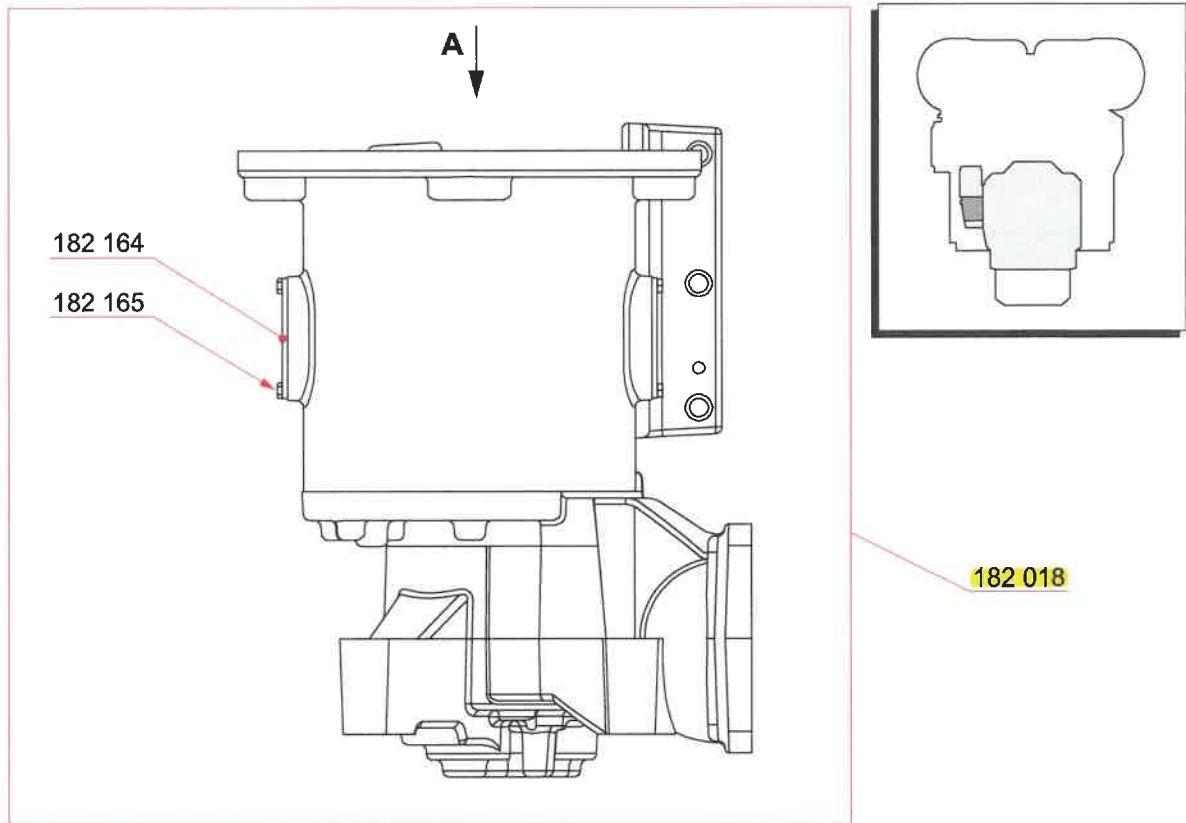
A



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 016	Screw	4	-
182 017	Flexible coupling	1	3.3
182 148	Screw	3	0.2
182 149	Screw	2	-
182 152	Key	1	-
387 017	Glue compound	1	-

APPENDIX A

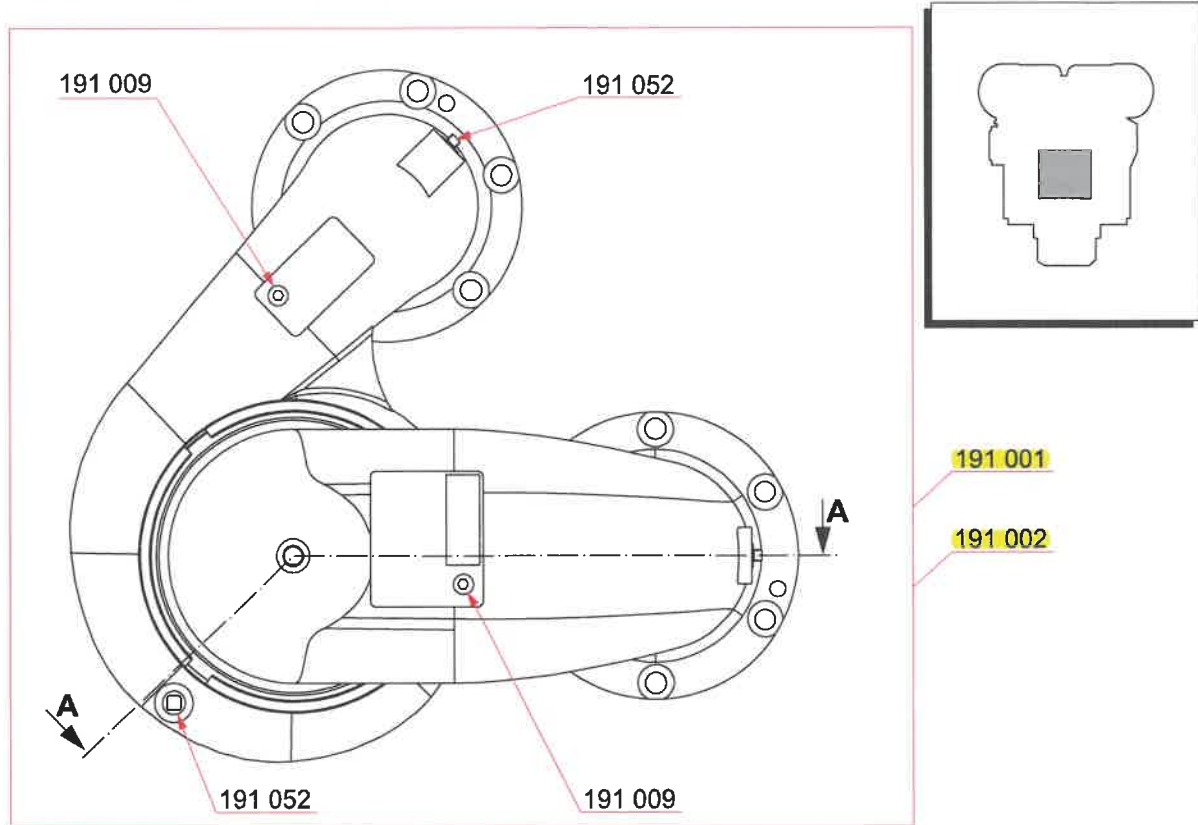
Prelubricating oil pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
182 018	Prelubricating oil pump	1	-
182 164	Cover	2	-
182 165	Screw	4	-

APPENDIX A

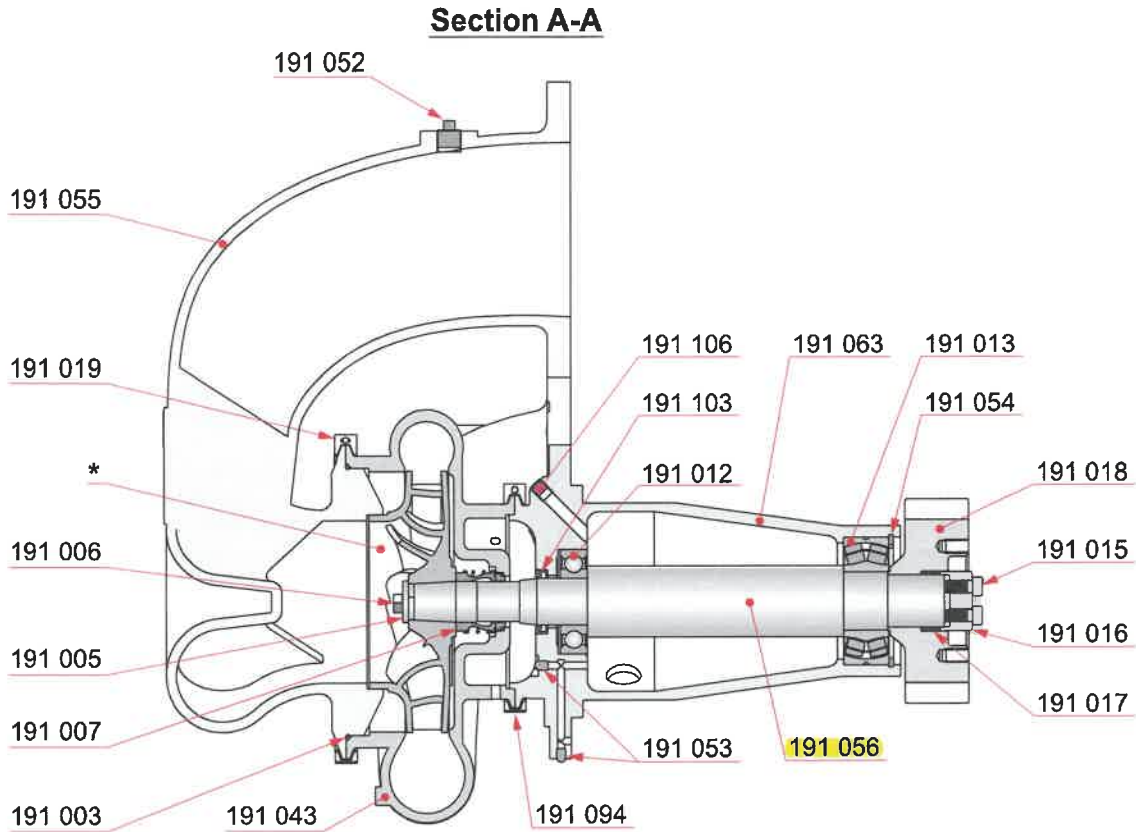
Water pump



Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 001	HT water pump	1	-
191 002	LT water pump	1	-
191 009	Plug	2	0.2
191 052	Plug	3	-

APPENDIX A

Water pump

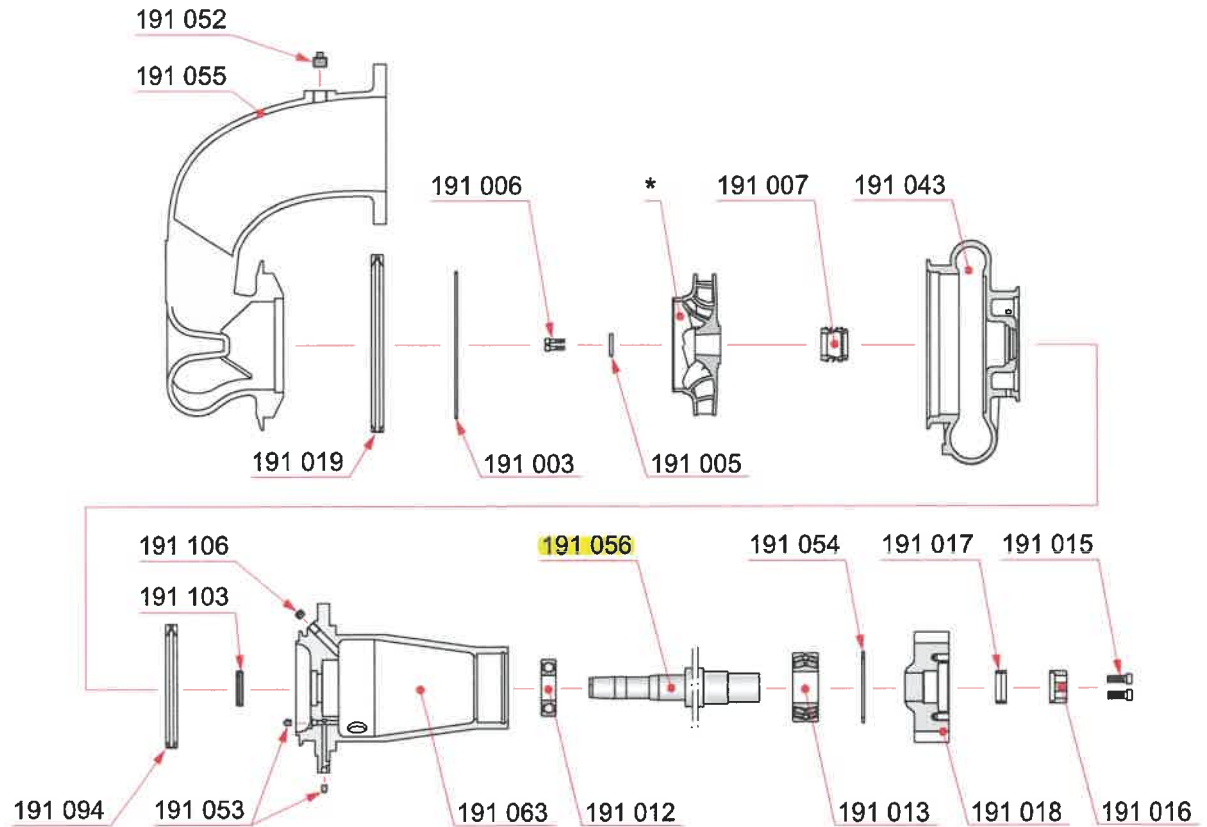


Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 003	O-ring	1	-
191 005	Washer	1	-
191 006	Screw	2	-
191 007	Shaft seal	1	0.1
191 012	Bearing	1	0.6
191 013	Bearing	1	1.9
191 015	Screw	4	-
191 016	Pressure plate	1	0.3
191 017	Pair of friction rings	2	-
191 018	Drive gear wheel	1	3.2
191 019	Clamp ring	1	0.3
191 043	Chamber	1	28.5
191 052	Plug	3	-
191 053	Shield plug	4	0.2
191 054	Retainer ring	1	-
191 055	Housing	1	36.0
191 056	Shaft	1	7.0
191 063	Bearing housing	1	20.0
191 094	Clamp ring	1	0.5
191 103	Shaft seal	1	-
191 106	Plug	1	0.2

NOTE! *) Impeller, see page 4.

APPENDIX A

Water pump

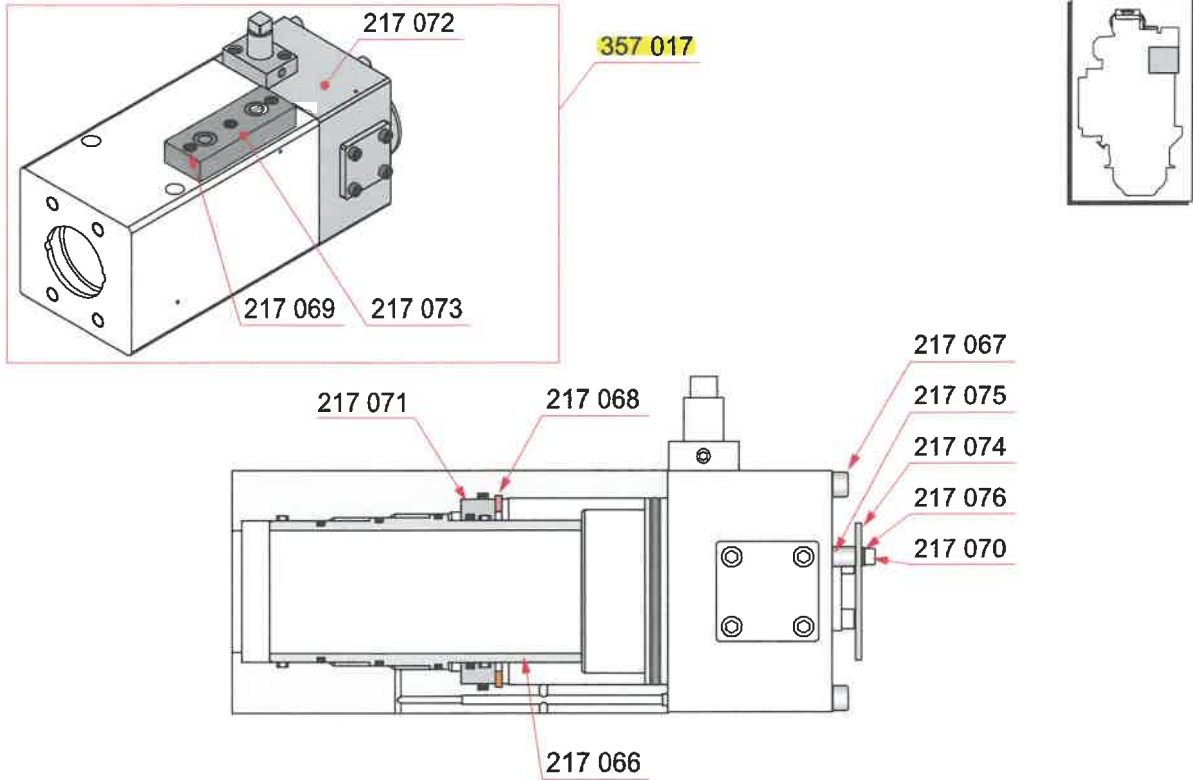


Part No.	Description	Qty [Pcs]	Wt. [Kg]
191 003	O-ring	1	-
191 005	Washer	1	-
191 006	Screw	2	-
191 007	Shaft seal	1	0.1
191 012	Bearing	1	0.6
191 013	Bearing	1	1.9
191 015	Screw	4	-
191 016	Pressure plate	1	0.3
191 017	Pair of friction rings	2	-
191 018	Drive gear wheel	1	3.2
191 019	Clamp ring	1	0.3
191 043	Chamber	1	28.5
191 052	Plug	3	-
191 053	Shield plug	4	0.2
191 054	Retainer ring	1	-
191 055	Housing	1	36.0
191 056	Shaft	1	7.0
191 063	Bearing housing	1	20.0
191 094	Clamp ring	1	0.5
191 103	Shaft seal	1	-
191 106	Plug	1	0.2

NOTE! *) Impeller, see page 4.

APPENDIX A

Starting valve

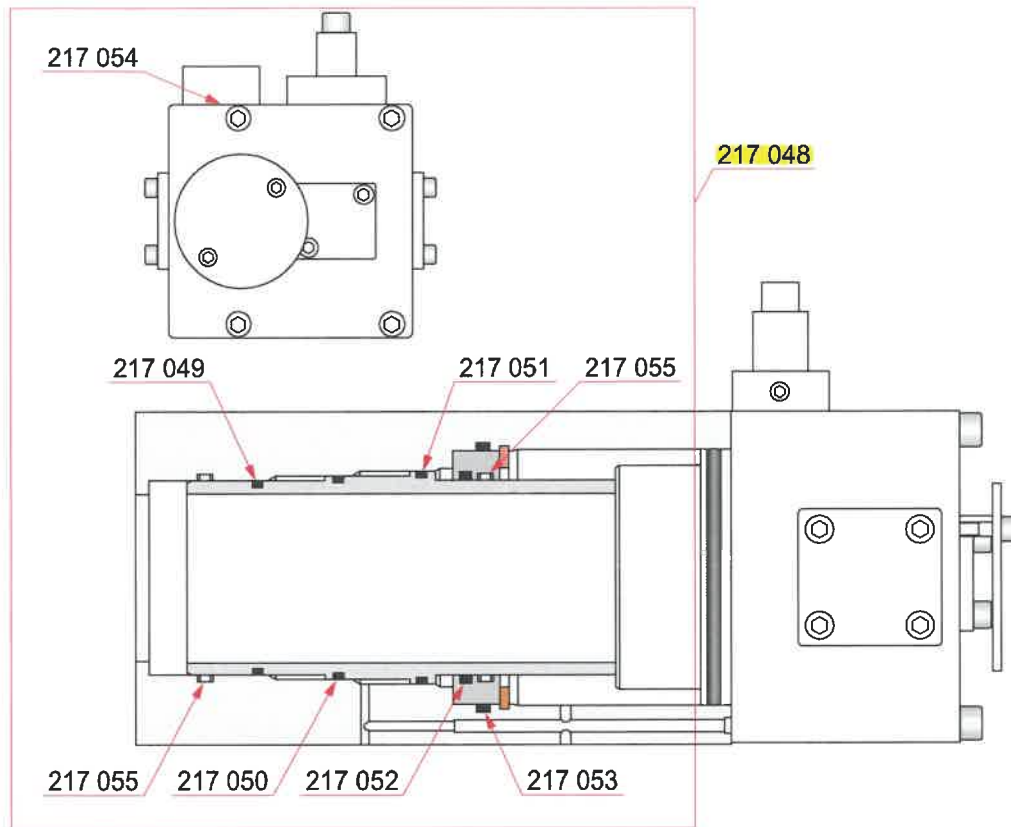


Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 017	Main starting valve	1	-
217 066	Piston	1	-
217 067	Screw	4	-
217 068	Locking ring	1	-
217 069	Screw	3	-
217 070	Screw	2	-
217 071	Sealing ring	1	-
217 072	Starting valve assembly (1) (2)	1	-
217 073	Plate	1	-
217 074	Disc	1	-
217 075	Pipe	2	-
217 076	Washer	2	-

NOTE! (1) See page 4.
 NOTE! (2) Not available separately.

APPENDIX A

Starting valve



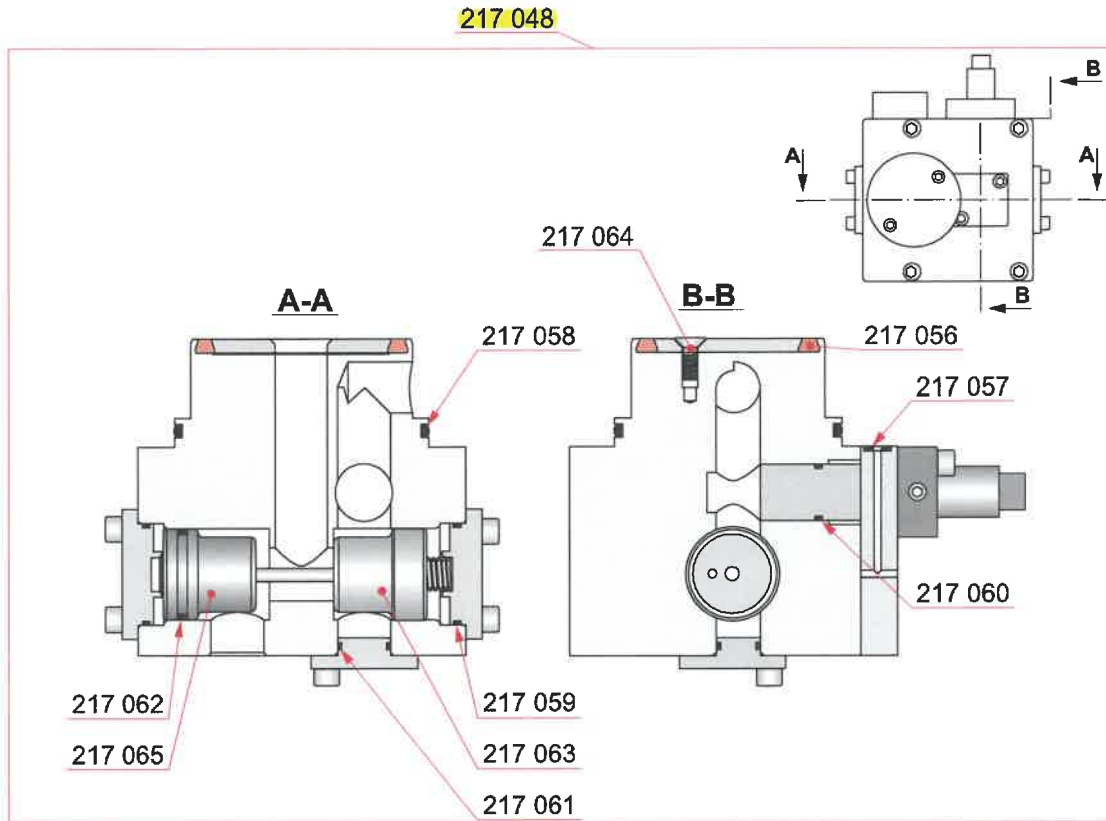
Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 048	Repair kit	1	-
217 049	O-ring *	1	-
217 050	O-ring *	1	-
217 051	O-ring *	1	-
217 052	O-ring *	1	-
217 053	O-ring *	1	-
217 054	O-ring *	2	-
217 055	Slide ring *	2	-

NOTE! All parts marked with * are included in the Repair kit

NOTE! Parts included in Repair kit are not available separately

APPENDIX A

Starting valve



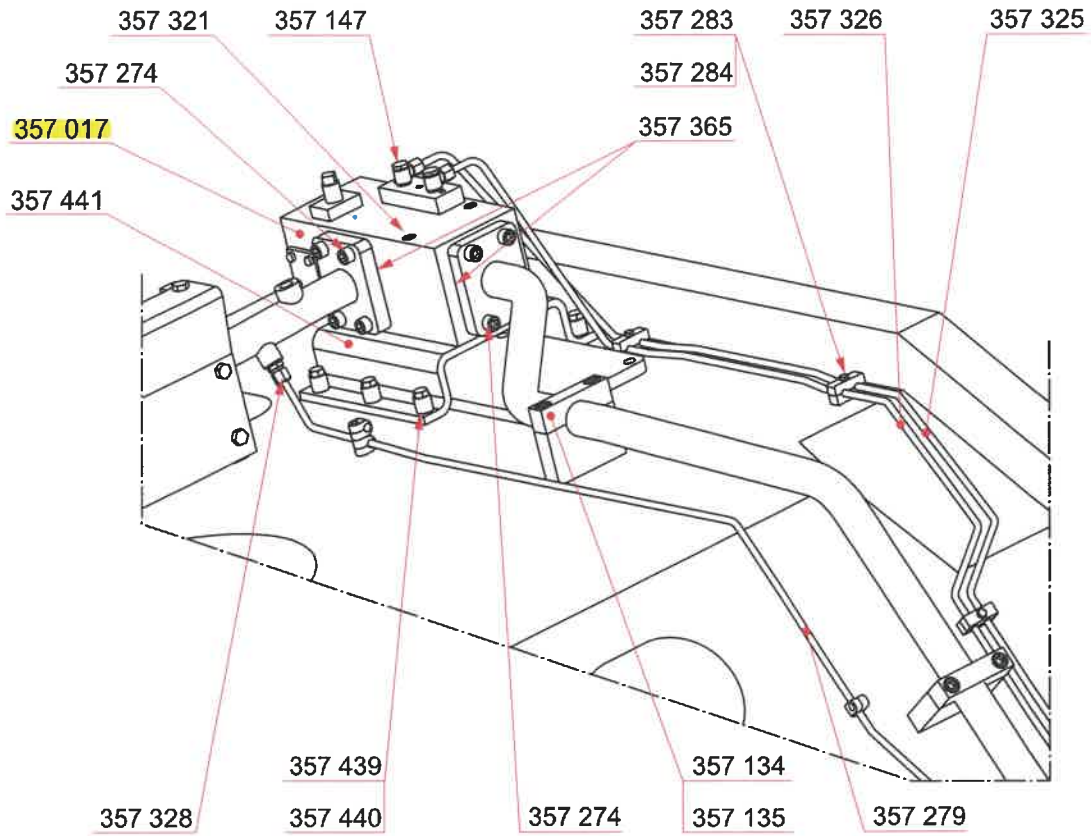
Part No.	Description	Qty [Pcs]	Wt. [Kg]
217 048	Repair kit	1	-
217 056	Seal *	1	-
217 057	O-ring *	1	-
217 058	O-ring *	1	-
217 059	O-ring *	2	-
217 060	O-ring *	1	-
217 061	O-ring *	1	-
217 062	O-ring *	1	-
217 063	Piston *	1	-
217 064	Screw *	4	-
217 065	Piston *	1	-

NOTE! All parts marked with * are included in the Repair kit

NOTE! Parts included in Repair kit are not available separately

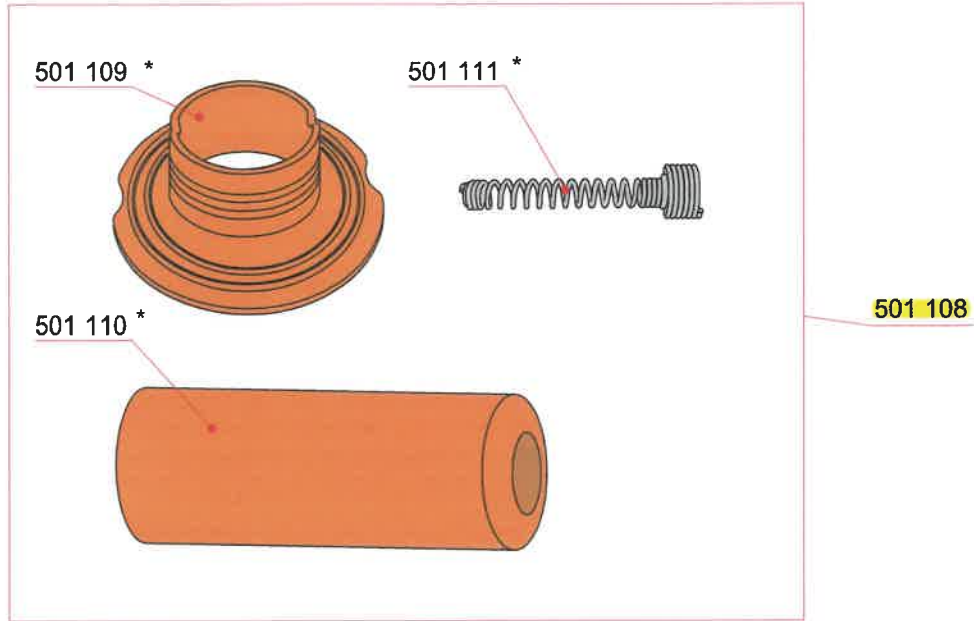
APPENDIX A

Starting air system with slow turning system



Part No.	Description	Qty [Pcs]	Wt. [Kg]
357 017	Main starting valve	1	11.5
357 134	Pipe clamp	2	1.4
357 135	Screw	4	0.1
357 147	Pipe union	2	-
357 274	Screw	8	-
357 279	Pipe	1	0.5
357 283	Pipe clamp	4	-
357 284	Screw	4	-
357 321	Screw	2	-
357 325	Pipe	1	0.4
357 326	Pipe	1	0.4
357 328	Pipe union	1	-
357 365	O-ring	2	-
357 439	Distance sleeve	6	-
357 440	Screw	6	-
357 441	Bracket	1	6.5

Spare part kit for ignition coil

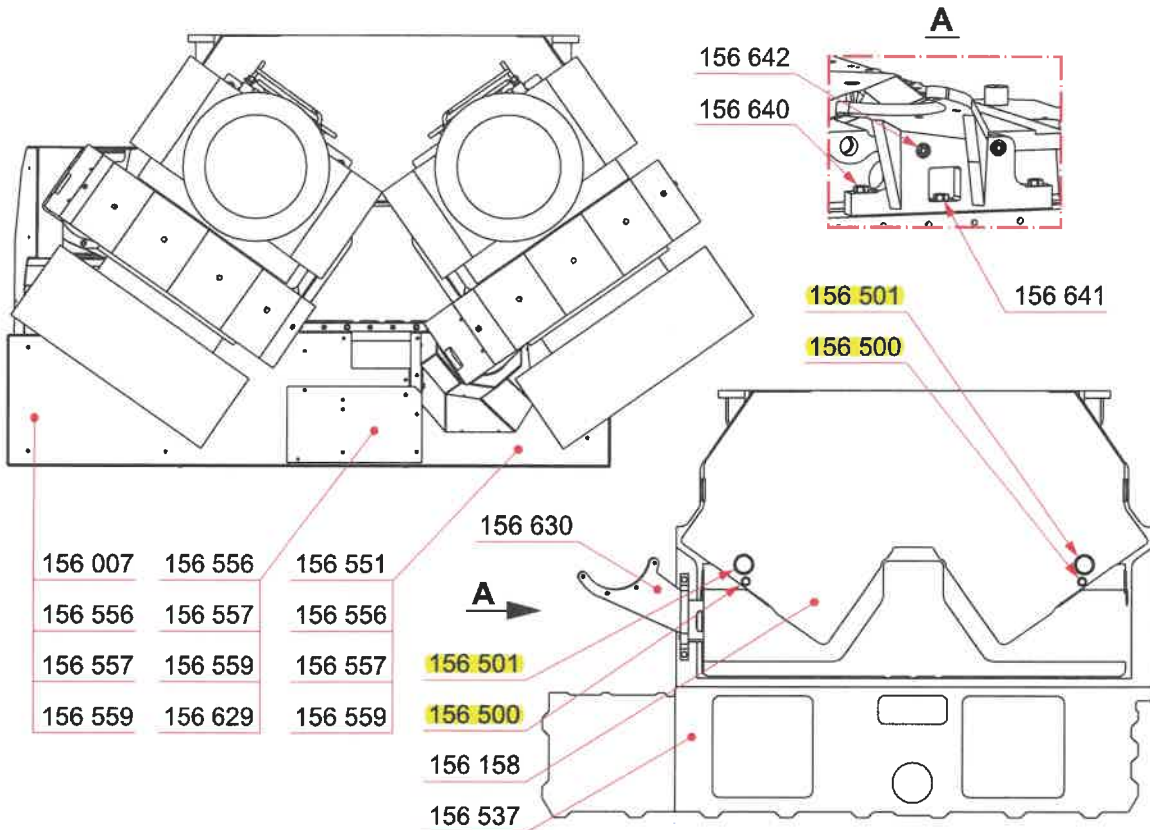


Part No.	Description	Qty [Pcs]	Wt. [Kg]
501 108	Spare part kit	1	-
501 109	Grommet *	1	-
501 110	Boot *	1	-
501 111	Spring *	1	-

NOTE! *) Components are not available as single parts.

APPENDIX A

Charge air system

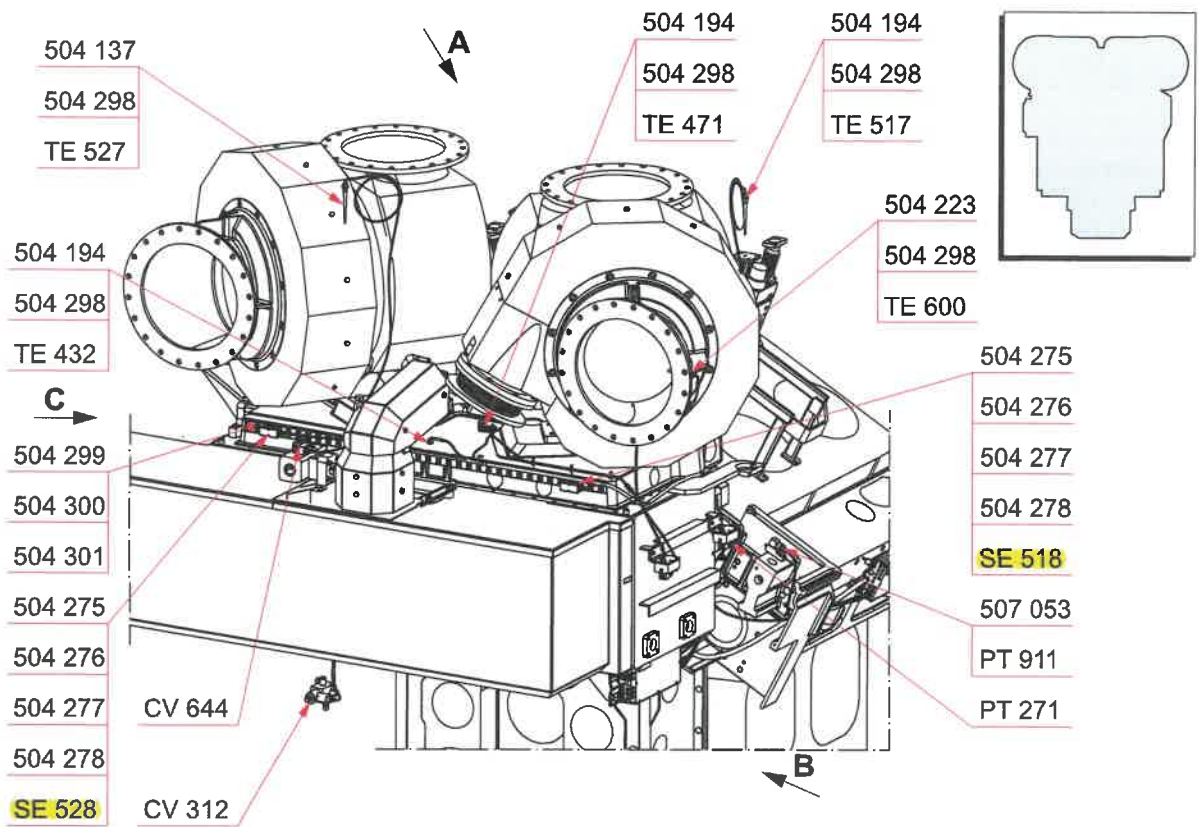


156 007	156 556	156 551
156 556	156 557	156 556
156 557	156 559	156 557
156 559	156 629	156 559

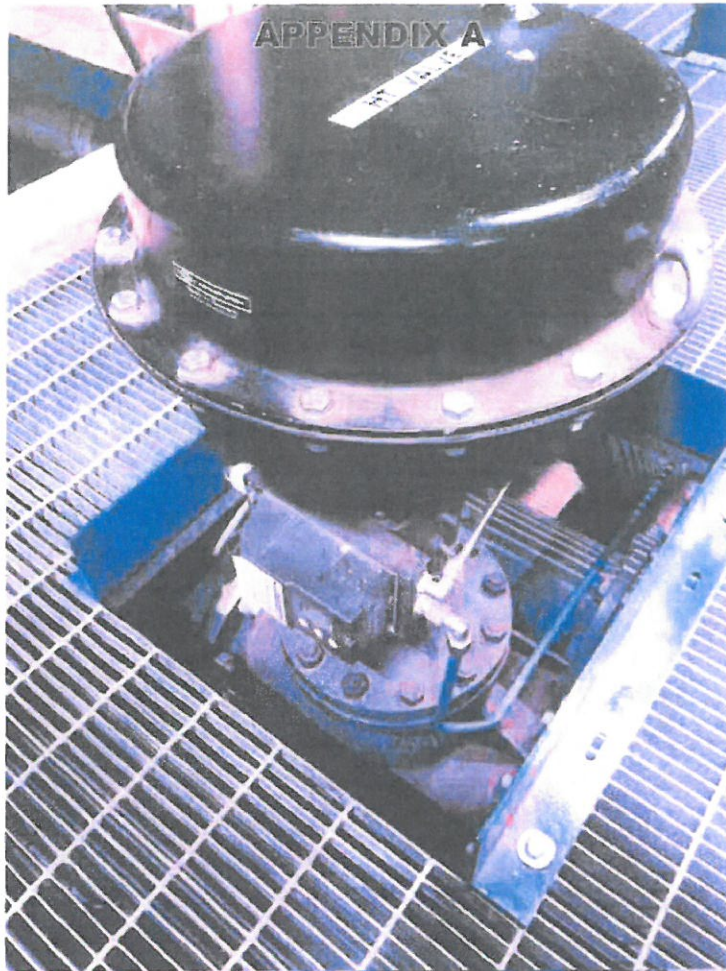
Part No.	Description	Qty [Pcs]	Wt. [Kg]
156 007	Cover	1	23.6
156 158	Bracket	1	2283
156 500	O-ring	2	-
156 501	O-ring	2	-
156 537	Air duct	1	820
156 551	Cover	1	11.2
156 556	Screw	19	-
156 557	Screw	62	-
156 559	Washer	85	-
156 629	Cover	1	4.6
156 630	Support	1	25.0
156 640	Screw	2	0.1
156 641	Screw	1	-
156 642	Screw	2	0.1

APPENDIX A

Electrical equipment at free end



Part No.	Description	Qty [Pcs]	Wt. [Kg]	Part No.	Description	Qty [Pcs]	Wt. [Kg]
504 137	Protecting well	2	0.4	TE600	Temperature sensor	1	-
504 194	Protecting well	5	0.2				
504 223	Protecting well	2	0.3	NOTE!	(1) Not used in all installations.		
504 275	Holder	2	-	NOTE!	*) Length needed when ordering.		
504 276	Cover	2	-				
504 277	Steel strip	2	-				
504 278	Screw	5	-				
504 298	Sealing ring	9	-				
504 299	Distance sleeve	6	-				
504 300	Cable tray *)	1	0.7				
504 301	Screw	6	-				
507 053	Pressure gauge valve	2	0.6				
CV312	Solenoid valve	1	-				
CV644	Antisurge valve (1)	1	-				
PT271	Pressure sensor	1	-				
PT911	Pressure sensor	1	-				
SE518	Speed pick-up	1	-				
SE528	Speed pick-up	1	-				
TE432	Temp.transmitter, HT water, after TC	1	-				
TE471	LT water temperature, before charge air cooler	1	-				
TE517	Temperature sensor	1	-				
TE527	Temperature sensor	1	-				

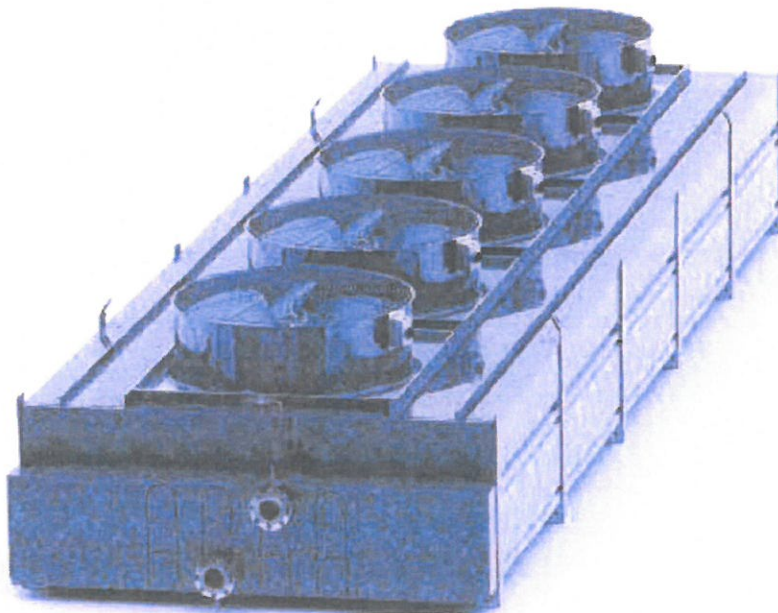


Item MOD203 -
Control Valve Assembly
(HT 3-Way Valve)



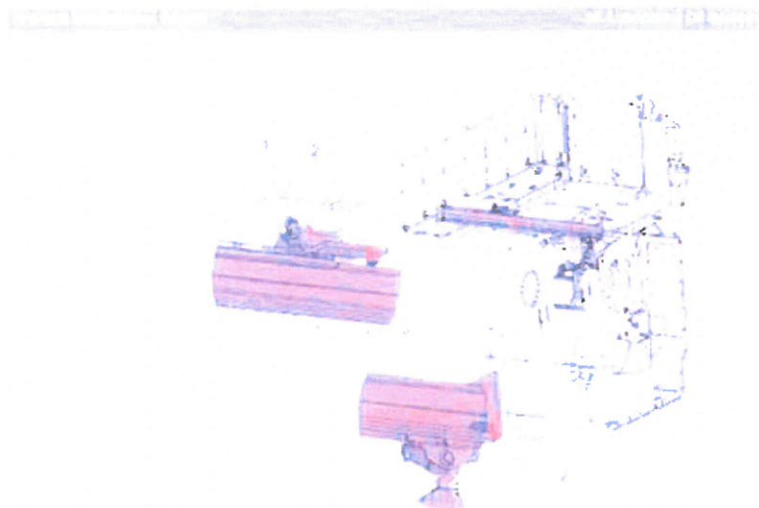
APPENDIX A

Item # FBLGS-1260-12
Radiator Tube Assembly
(Lower Part/Tubes only;
Without Fans, Electric Motors, Etc.)



APPENDIX A

Item # 836 021 Lifting Device



1. Lifting lid
2. Fastening screw

Fig. 18.4. Removing the lubricating oil pump with equipment

3. Open the pump fastening screws
4. Remove the pump