

VOLVO
TAD1643 VE-B

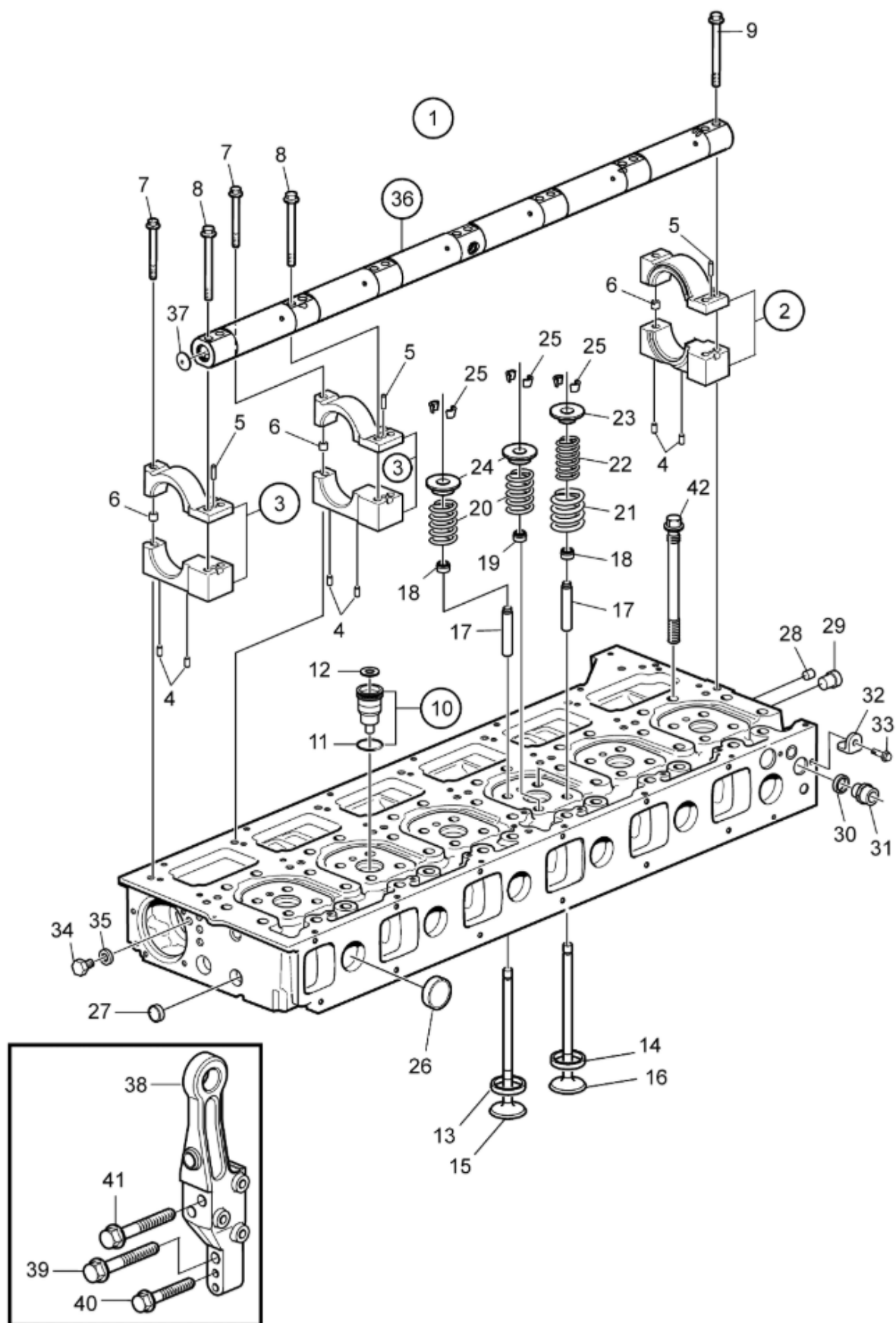
Engine

SPARE PARTS

ILLUSTRATIONS LIST

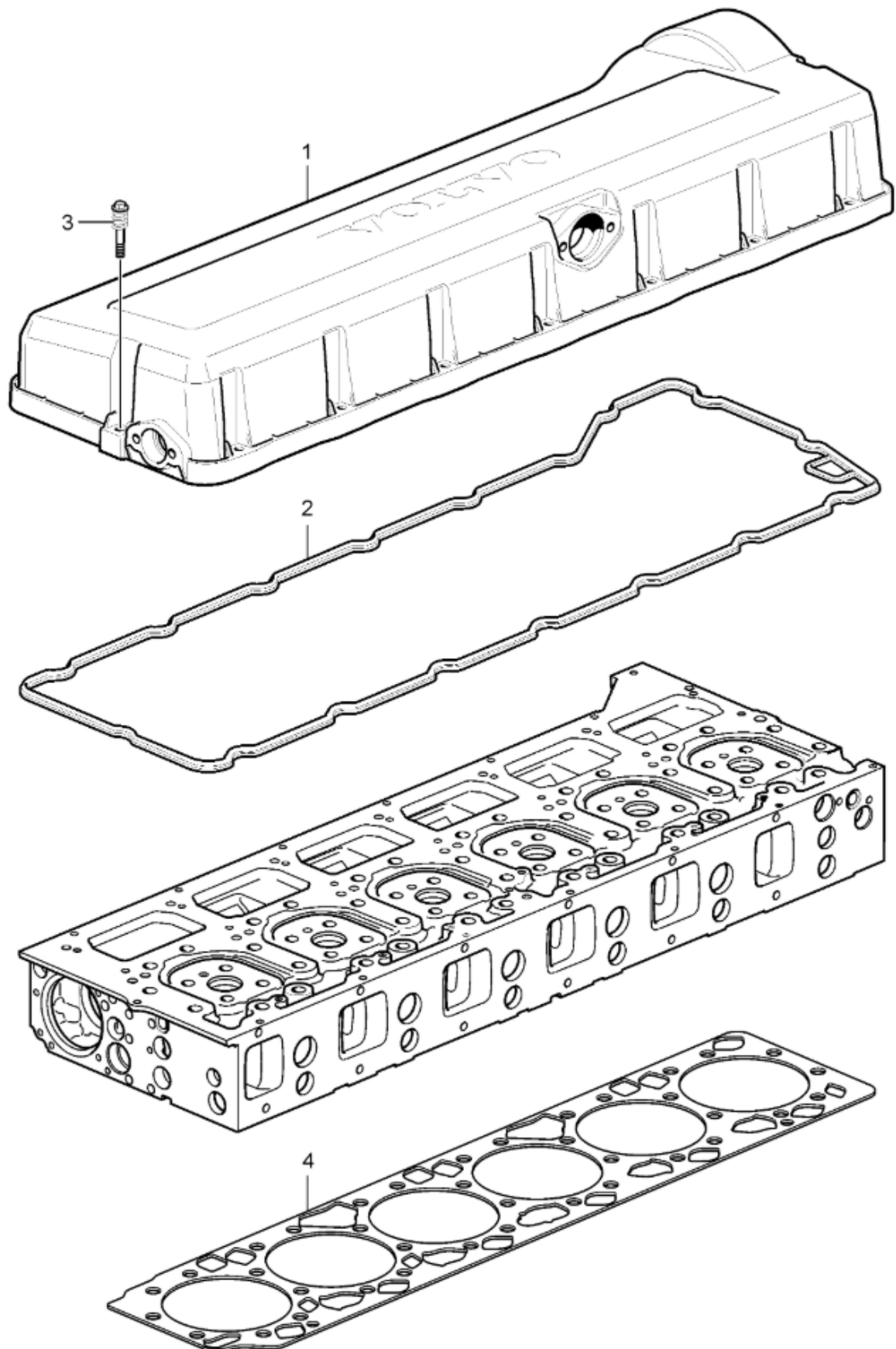
- 1 – CYLINDER HEAD
- 2 – VALVE COVER
- 3 – CYLINDE BLOCK
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- 36 – ALTERNATOR
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1 - CYLINDER HEAD



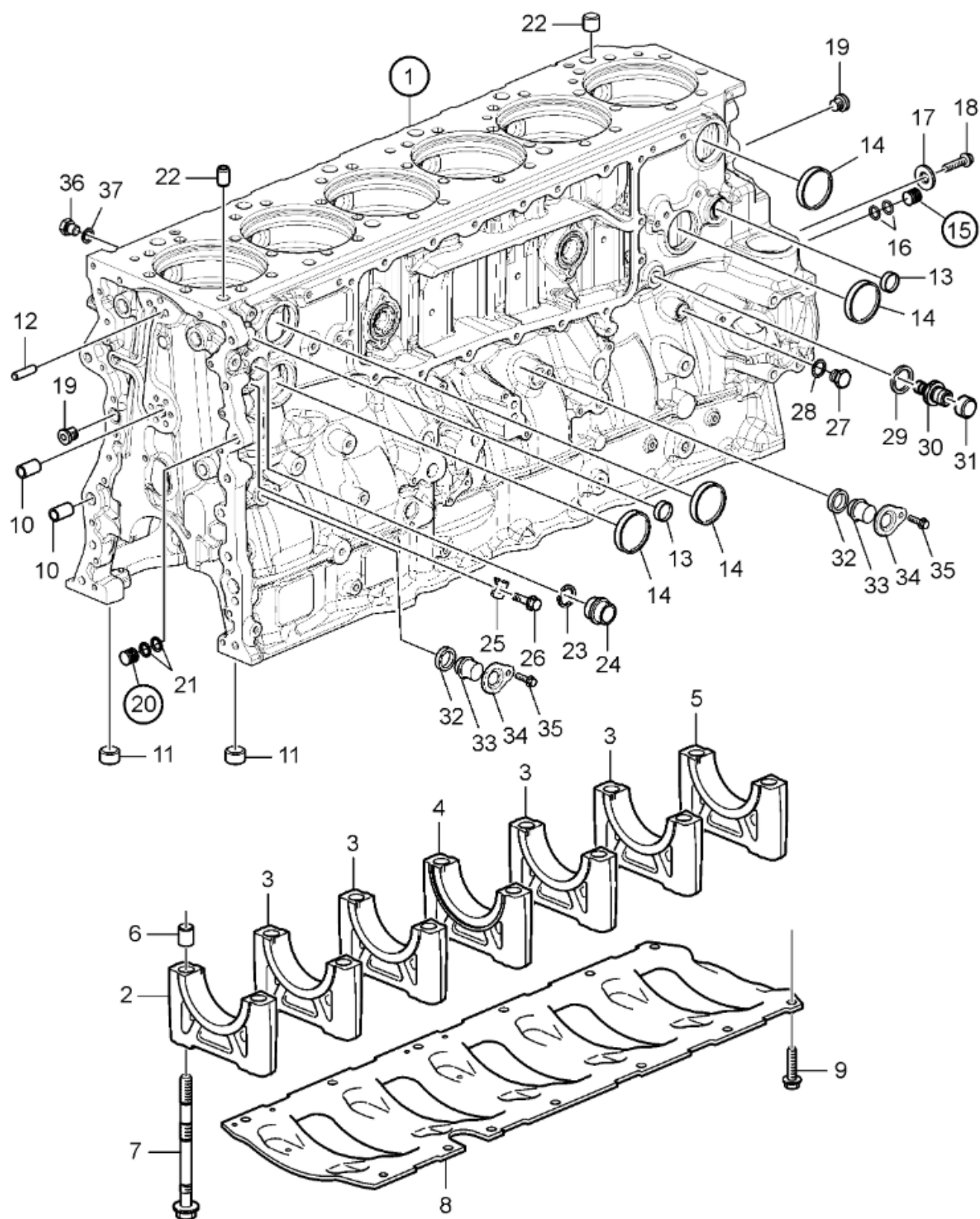
#	Part no	Qty	
<input type="checkbox"/> 1	3801605	1	Cylinder head, exch
<input type="checkbox"/> 1	22216118	1	Cylinder head SN2016010025-
2	21235155	1	▪ Bearing housing
3		6	▪ Bearing housing
<input type="checkbox"/> 4	422426	14	▪ ▪ Pin
<input type="checkbox"/> 5	950550	6	▪ ▪ Pin
<input type="checkbox"/> 6	1546484	7	▪ ▪ Pivot pin
<input type="checkbox"/> 7	975105	7	▪ Flange screw
<input type="checkbox"/> 8	21344753	12	▪ Flange screw
<input type="checkbox"/> 9	20412482	1	▪ Flange screw
<input type="checkbox"/> 10	21351717	6	▪ Injector sleeve
<input type="checkbox"/> 11	20536487	1	▪ ▪ O-ring
<input type="checkbox"/> 12	21261987	1	▪ ▪ Washer
<input type="checkbox"/> 13	21780358	12	▪ Valve seat, intake
<input type="checkbox"/> 14	22059584	12	▪ Valve seat, exhaust
<input type="checkbox"/> 15	20739057	12	▪ Inlet valve
<input type="checkbox"/> 16	20513285	12	▪ Exhaust valve
<input type="checkbox"/> 17	21067953	24	▪ Valve guide
<input type="checkbox"/> 18	20924435	18	▪ Valve stem seal
<input type="checkbox"/> 19	22612096	6	▪ Valve stem seal
19	22890696	6	▪ Valve stem seal
<input type="checkbox"/> 20	22527820	12	▪ Valve spring
<input type="checkbox"/> 21	21448332	12	▪ Valve spring
<input type="checkbox"/> 21	22807212	12	▪ Valve spring
<input type="checkbox"/> 22	21324296	12	▪ Valve spring
<input type="checkbox"/> 23	8131835	12	▪ Valve spring washer
<input type="checkbox"/> 24	20551394	12	▪ Valve spring washer
<input type="checkbox"/> 25	8170995	48	▪ Valve collet
<input type="checkbox"/> 26	24426721	16	▪ Expansion plug
<input type="checkbox"/> 26	24426723	6	▪ Expansion plug
<input type="checkbox"/> 27	24426722	6	▪ Expansion plug
<input type="checkbox"/> 28	968062	1	▪ Plug
<input type="checkbox"/> 29	20496040	1	▪ Cap plug
<input type="checkbox"/> 30	1547252	2	▪ Sealing ring
<input type="checkbox"/> 31	20845995	2	▪ Plug
<input type="checkbox"/> 32	1546531	1	▪ Lock brace
<input type="checkbox"/> 33	984732	1	▪ Flange screw
<input type="checkbox"/> 34	965768	1	▪ Plug
<input type="checkbox"/> 34	966142	1	▪ Plug
<input type="checkbox"/> 35	18665	1	▪ Gasket
<input type="checkbox"/> 35	11994	1	▪ Gasket
<input type="checkbox"/> 36	21534993	1	Rocker arm shaft
<input type="checkbox"/> 37	955096	2	▪ Expansion plug
38		1	Lifting eye
<input type="checkbox"/> 39	984850	1	Flange screw
<input type="checkbox"/> 40	994441	1	Flange screw
<input type="checkbox"/> 41	984818	2	Flange screw
<input type="checkbox"/> 42	21345129	38	Flange screw L=187mm

2 - VALVE COVER



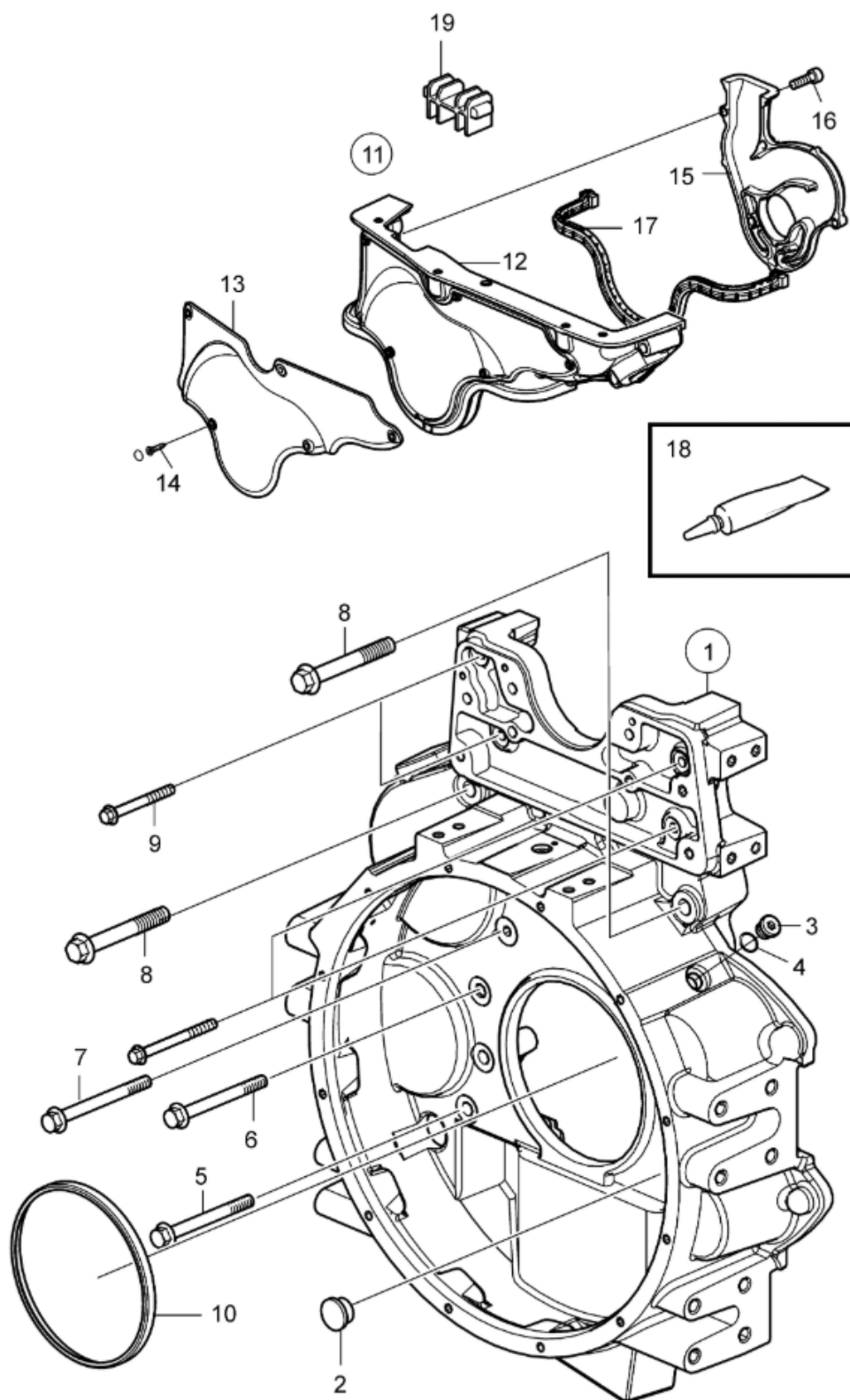
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<input type="checkbox"/>	1	20709580	1	Valve cover SN2016007732-
<input type="checkbox"/>	2	20736230	1	Sealing strip
<input type="checkbox"/>	3	20739547	17	Flange screw
<input type="checkbox"/>	4	21575727	1	Gasket

3 - CYLINDER BLOCK



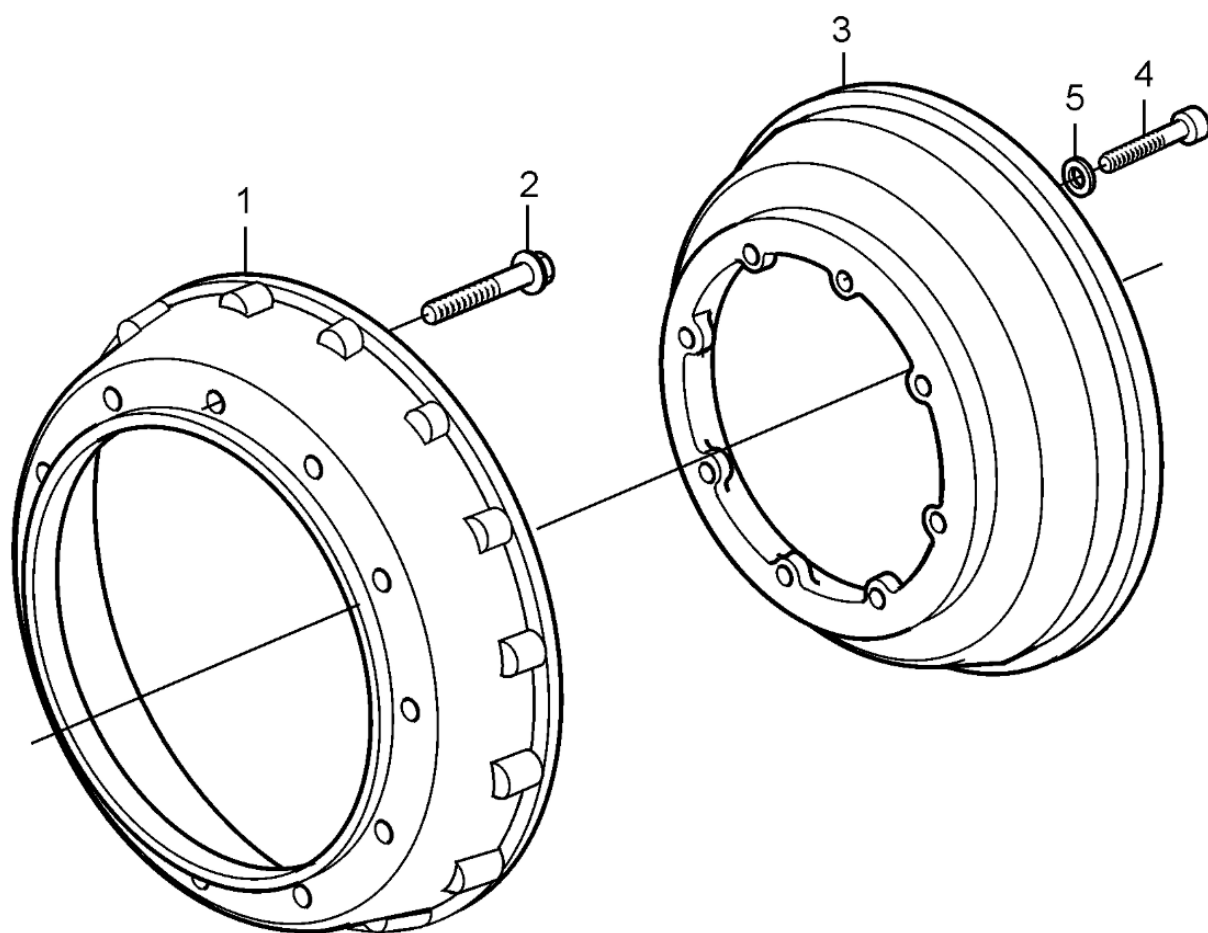
#	Part no	Qty	Description
<input type="checkbox"/> 1	22056791	1	Cylinder block
2		1	▪ Main bearing cap
3		4	▪ Main bearing cap
4		1	▪ Main bearing cap
5		1	▪ Main bearing cap
<input type="checkbox"/> 6	8131967	14	▪ Guide sleeve
<input type="checkbox"/> 7	21344781	14	▪ Flange screw
<input type="checkbox"/> 8	20722628	1	Frame
<input type="checkbox"/> 9	975110	13	Flange screw
<input type="checkbox"/> 10	8131145	2	Guide sleeve
<input type="checkbox"/> 11	417588	2	Guide sleeve
<input type="checkbox"/> 12	950588	1	Pin
<input type="checkbox"/> 13	24426721	2	Expansion plug
<input type="checkbox"/> 14	8131937	4	Expansion plug
<input type="checkbox"/> 15	20562189	1	Plug
<input type="checkbox"/> 16	466922	2	▪ O-ring
<input type="checkbox"/> 17	976944	1	Washer
<input type="checkbox"/> 18	994445	1	Flange screw M8x16mm
<input type="checkbox"/> 19	20529445	2	Plug
<input type="checkbox"/> 20	20562189	1	Plug
<input type="checkbox"/> 21	466922	2	▪ O-ring
<input type="checkbox"/> 22	20485996	2	Pin
<input type="checkbox"/> 23	471708	2	Rubber moulding
<input type="checkbox"/> 24	20381177	2	Plug
<input type="checkbox"/> 25	1546532	2	Lock brace
<input type="checkbox"/> 26	984733	2	Flange screw
<input type="checkbox"/> 27	960631	1	Plug
<input type="checkbox"/> 28	11996	1	Gasket
<input type="checkbox"/> 29	979099	1	Gasket
<input type="checkbox"/> 30	1676622	1	Quick coupling
<input type="checkbox"/> 31	476279	1	Protecting cap
<input type="checkbox"/> 32	21940615	2	Sealing ring
<input type="checkbox"/> 33	20567779	2	Plug
<input type="checkbox"/> 34	20740148	2	Yoke
<input type="checkbox"/> 35	984733	2	Flange screw
<input type="checkbox"/> 36	960629	1	Plug
<input type="checkbox"/> 37	11994	1	Gasket

4 - FLYWHEEL HOUSING



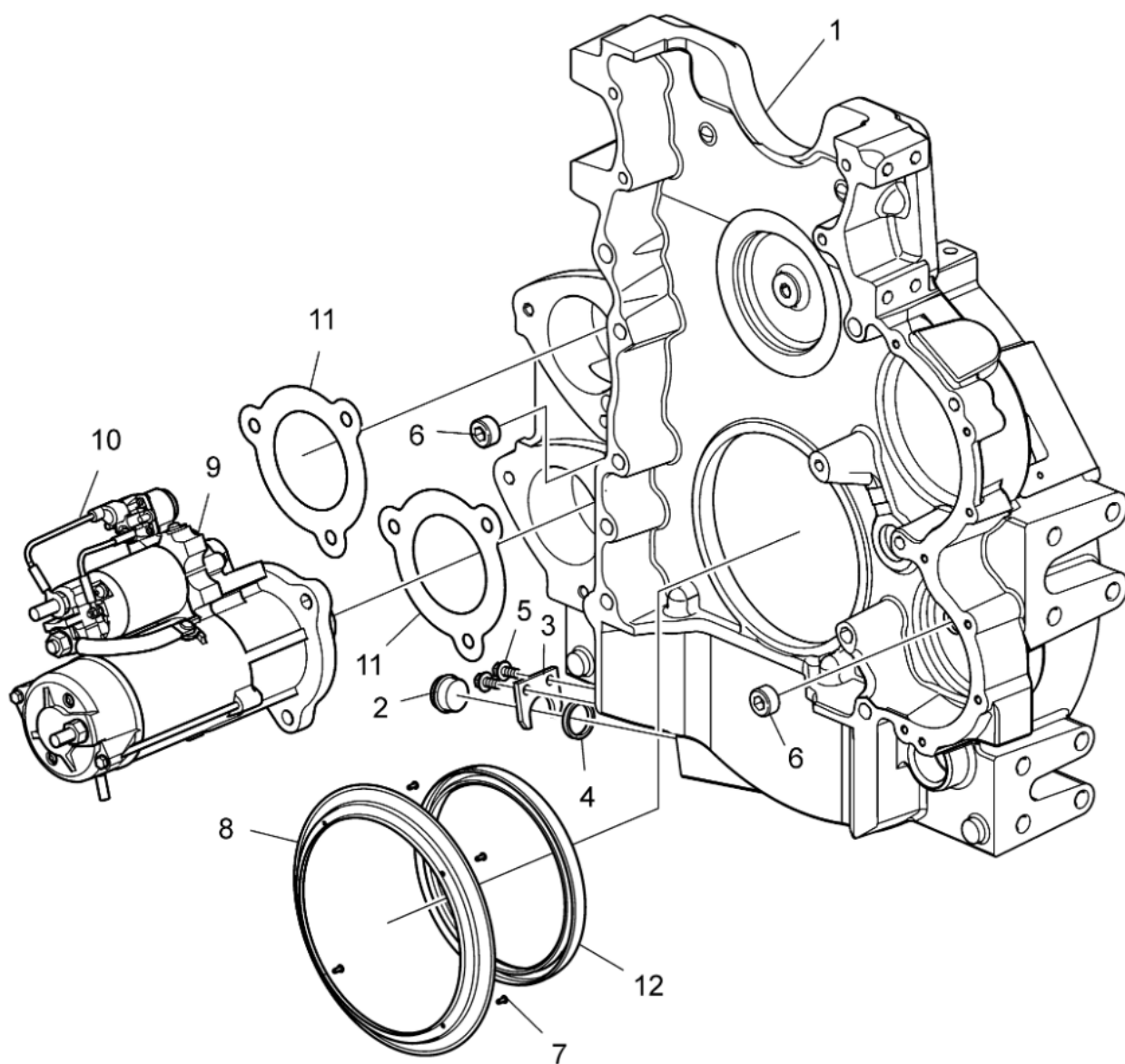
#	Part no	Qty	Description	S
1	22569860	1	Flywheel housing	
2	979947	1	■ Plug	
3	966144	1	Plug	
4	11998	1	Gasket	
5	984862	6	Flange screw M14x90mm	
6	984863	1	Flange screw M14x100mm	
7	984760	3	Flange screw M10x90mm	
8	975130	2	Flange screw M16x120mm	
9	984762	2	Flange screw M10x110mm	
10	85108352	1	Crankshaft seal SN-2016118292	
10	22191895	1	Crankshaft seal SN2016118293-	
11	22199951	1	Timing gear cover SN-2016007731	
11	22997662	1	Timing gear cover SN2016007732-	
12		1	■ Timing gear cover	
13		1	■ Noise shield	
14		4	■ Rivet	
15		1	■ Oil separator	
16	940326	4	■ Hex. socket screw	
17	20815558	1	Sealing strip	
18	1161231	1	Sealant 304ml	
18	1161277	1	Sealant 20g	
19	21185132	2	Seal	

5 - FLYWHEEL ADAPTER



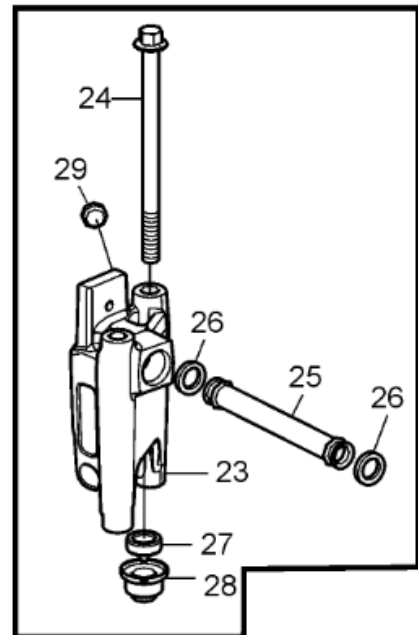
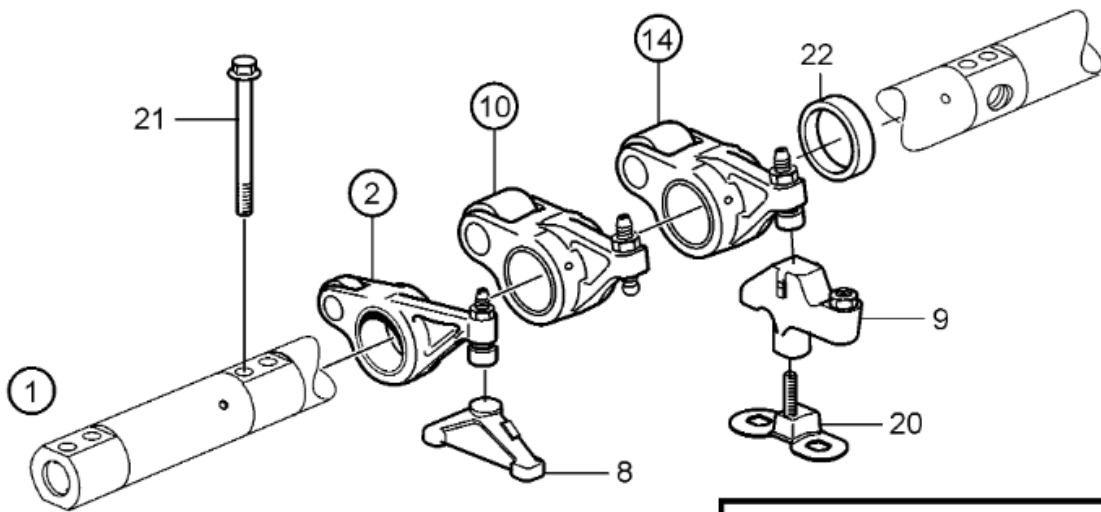
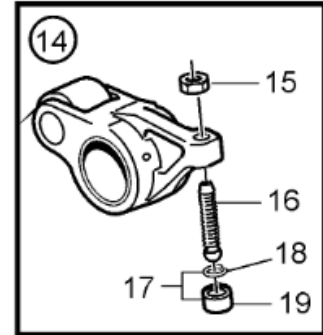
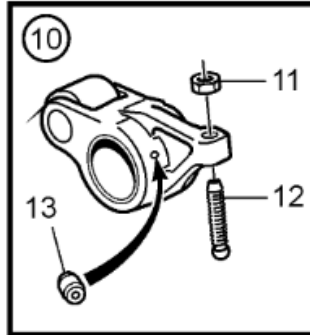
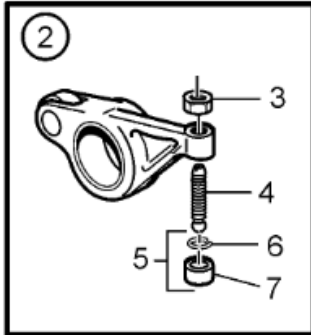
#	Part no	Qty	Description
1	3826138	1	Adapter, flywheel casing From SAE 1 to SAE 0.
2	984754	12	Flange screw
3	3826137	1	Adapter, flywheel From SAE 1 to SAE 0.
4	981744	8	Hex. socket screw
5	18634	8	Washer

6 - FLYWHEEL HOUSING



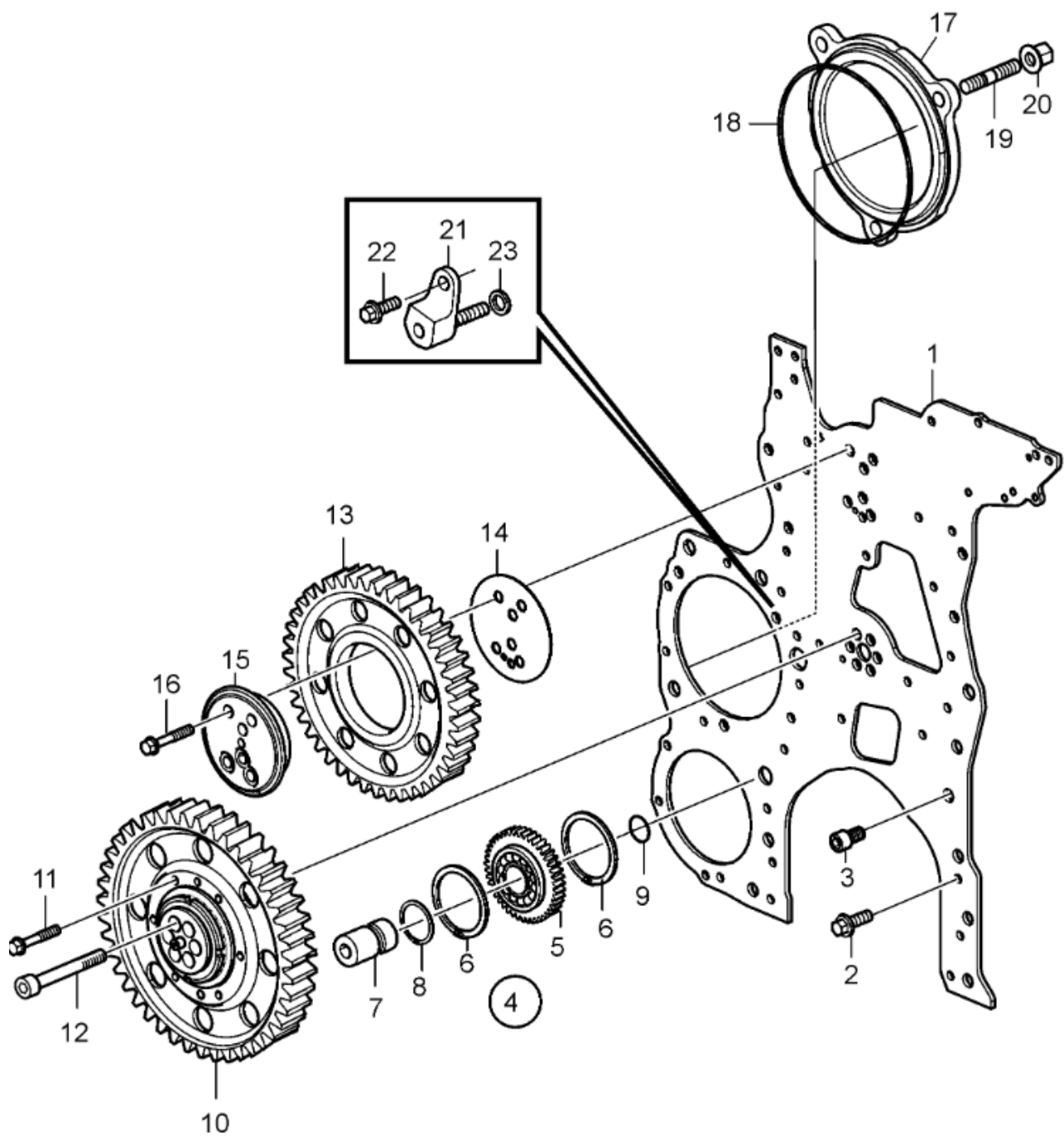
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1	78466891	1	Flywheel housing
2	11031785	1	▪ Plug
3	11031769	1	▪ Lock washer
4	421158	1	▪ Sealing ring
5	984733	2	▪ Flange screw
6	60112001	2	▪ Plug
7	905650	4	▪ Drive screw
8	15004855	1	▪ Oil deflector ring
9	17233221	1	Starter motor
10	17233221	1	▪ Starter motor
11	11127393	2	Gasket
12	17460059	1	Mounting ring

7 – ROCKER ARM SHAFT



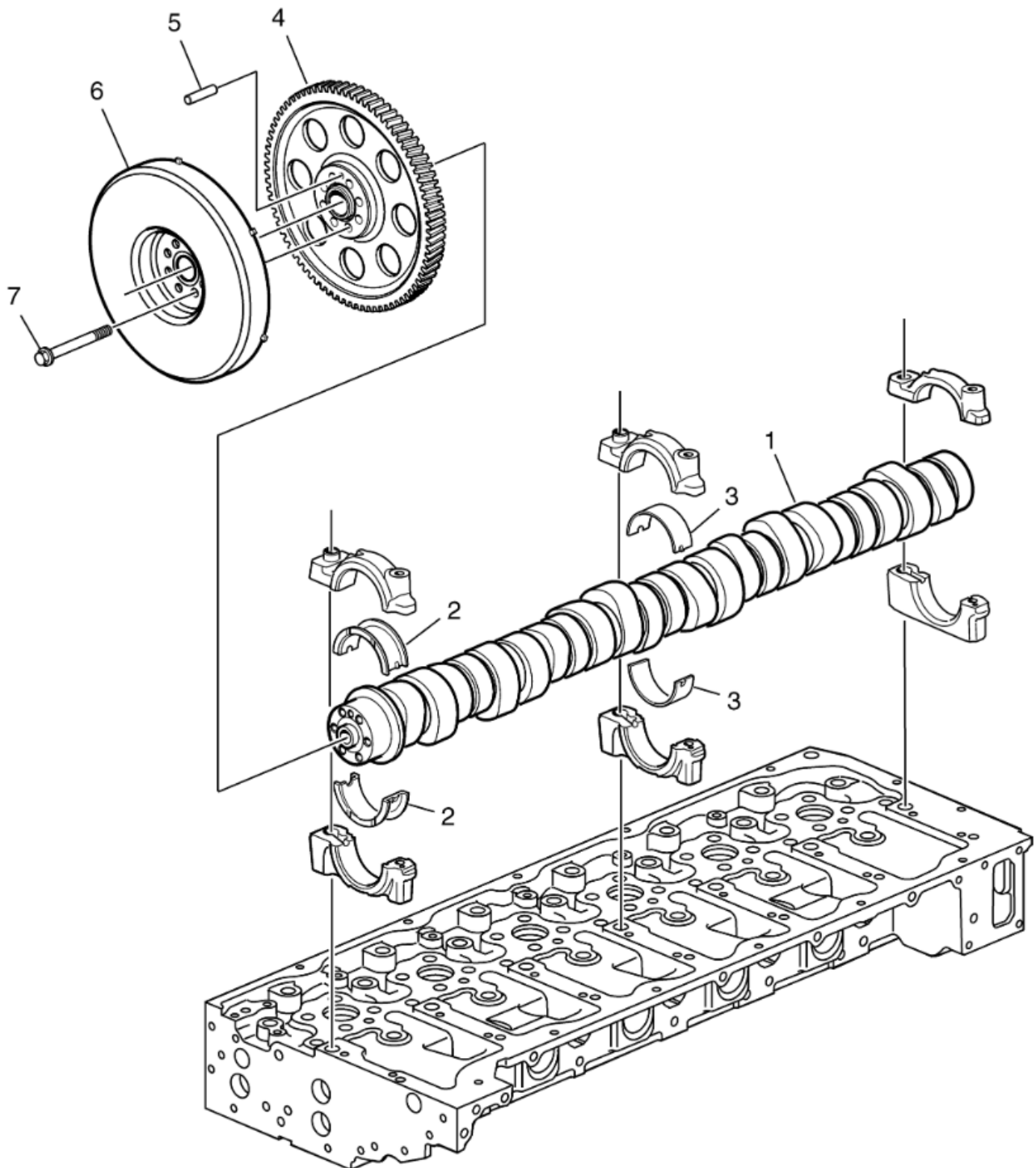
#	Part no	Qty	Description
1	Rocker arm shaft		
2	22255550	6	Rocker arm, intake
3	946911	1	▪ Hexagon nut
4	20501055	1	▪ Ball stud
5	21054149	1	▪ Ball socket
6	944364	1	▪ ▪ O-ring
7		1	▪ ▪ Ball seat
8	21061323	6	Valve bridge, intake
9	20857578	6	Valve caliper, exhaust
10	21732658	6	Rocker arm, fuel injector
11	1677396	1	▪ Hexagon nut
12	20501057	1	▪ Adjusting screw
13	3964817	1	▪ Jet
14	21415399	6	Rocker arm, exhaust
15	946911	1	▪ Hexagon nut
16	20501055	1	▪ Ball stud
17	21054149	1	▪ Ball socket
18	944364	1	▪ ▪ O-ring
19		1	▪ ▪ Ball seat
20	20554268	6	Guide pin
21	21344753	14	Flange screw
22	21402081	6	Spacer sleeve
23	21105100	1	Intermediate housing
24	984746	2	Flange screw
25	20571452	1	Outlet pipe
26	1677370	2	Sealing ring
27	20526428	1	Sealing ring
28	20775471	1	Spacer sleeve
29	955082	1	Cap plug

8 - ROCKER ARM SHAFT



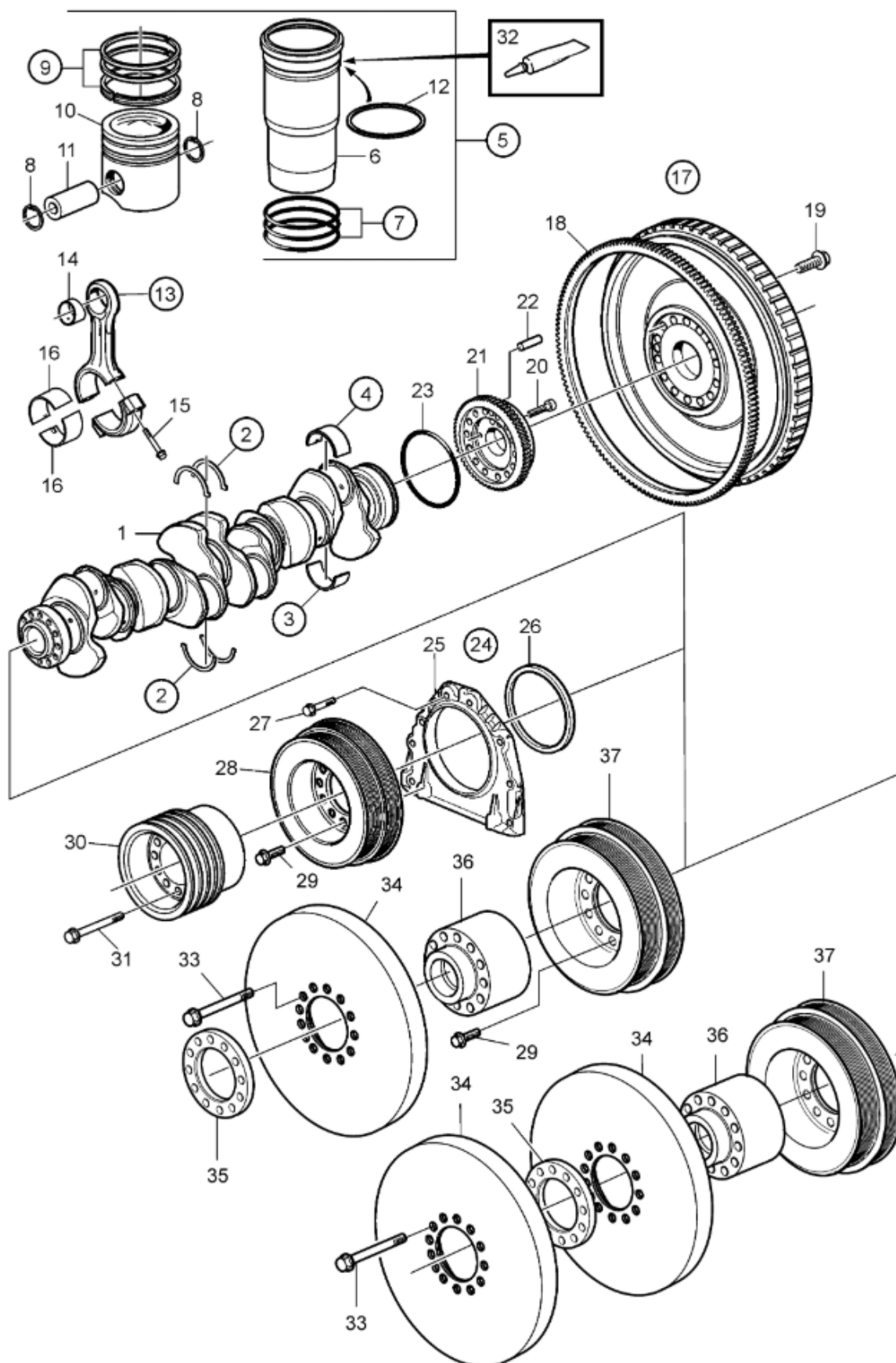
#	Part no	Qty	Description
1	Rocker arm shaft		
2	22255550	6	Rocker arm, intake
3	21054149	1	▪ Ball socket
4	944364	1	▪ ▪ O-ring
5		1	▪ ▪ Ball seat
6	946911	1	▪ Hexagon nut
7	20501055	1	▪ Ball stud
8	21732658	6	Rocker arm, Injector
9	3964817	1	▪ Jet
10	20501057	1	▪ Adjusting screw
11	1677396	1	▪ Hexagon nut
12	21415409	6	Rocker arm, exhaust
13		2	▪ Plug
14	946911	1	▪ Hexagon nut
15		1	▪ Adjusting screw
16		1	▪ Piston
17	21054149	1	▪ Ball socket
18	944364	1	▪ ▪ O-ring
19	21732664	6	Rocker arm, exhaust
20	1677396	1	Hexagon nut
21		1	Adjusting screw
22	20724261	1	Ball socket
23	976012	1	▪ O-ring
24		1	▪ Push rod
25		1	▪ Ball socket
26	20724250	6	Leaf spring
27	20775507	12	Hex. socket screw
28	20554106	6	Valve caliper
29	21801388	6	Yoke
30	21344774	6	Flange screw
31	20857578	6	Valve caliper
32	20551362	1	▪ Adjusting screw
33	946911	1	▪ Hexagon nut
34	20554268	6	Guide pin
35	21596642	1	Control valve
36	955082	3	▪ Cap plug
37	20526428	1	▪ Sealing ring
38	984746	1	Flange screw
39	20571452	1	Outlet pipe
40	1677370	1	Sealing ring

9 - CAMSHAFT



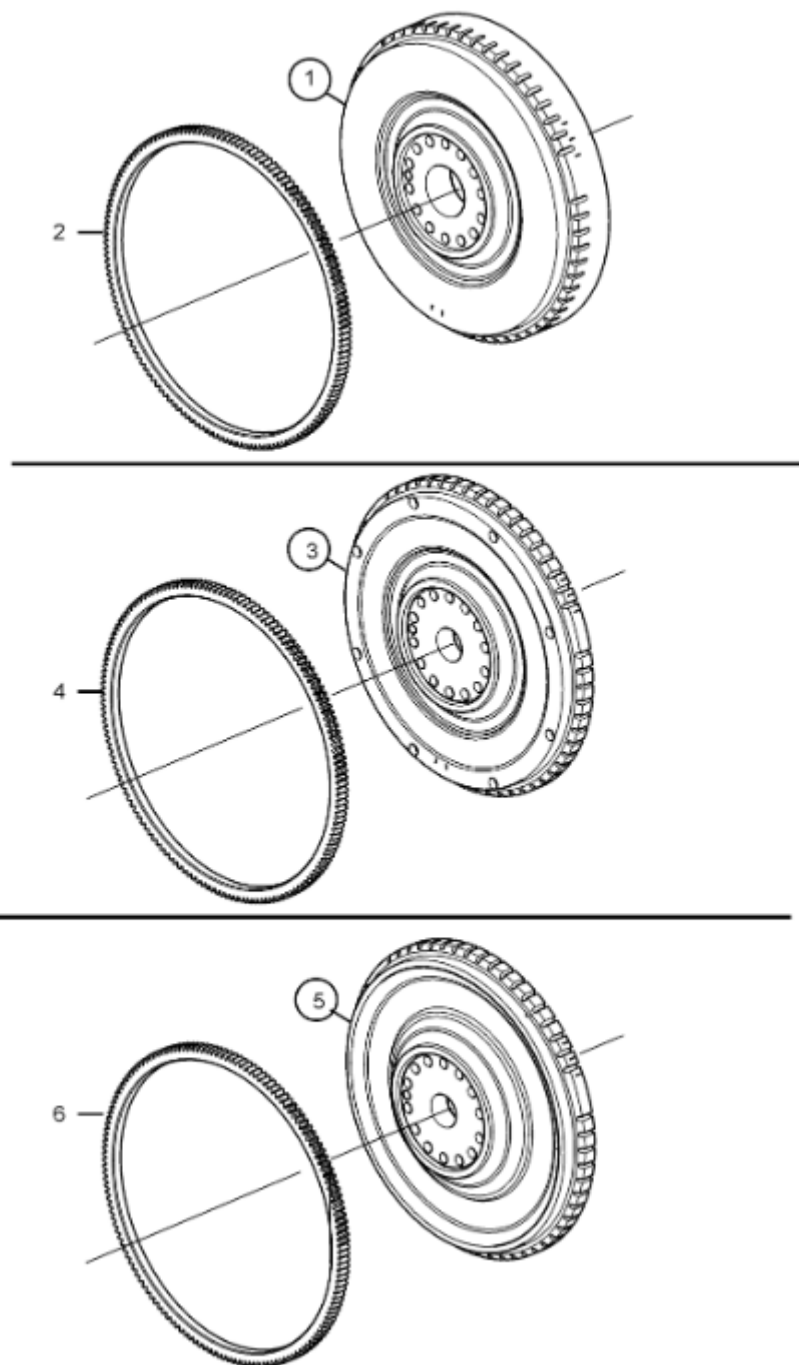
#	Part no	Qty	Description	S
1	22650748	1	Camshaft	
2	21006109	1	Camshaft bearing kit Std	
3	21006103	6	Camshaft bearing kit Std SN2016010025-	
3	276631	6	Camshaft bearing kit O.S=0,25mm	
3	276632	6	Camshaft bearing kit O.S=0,50mm	
3	276633	6	Camshaft bearing kit O.S=0,75mm	
4	21456239	1	Gear, camshaft gear	
5	950551	1	Pin	
6	21473105	1	Vibration damper	
7	8192804	8	Flange screw	

10 - CRANK MECHANISM



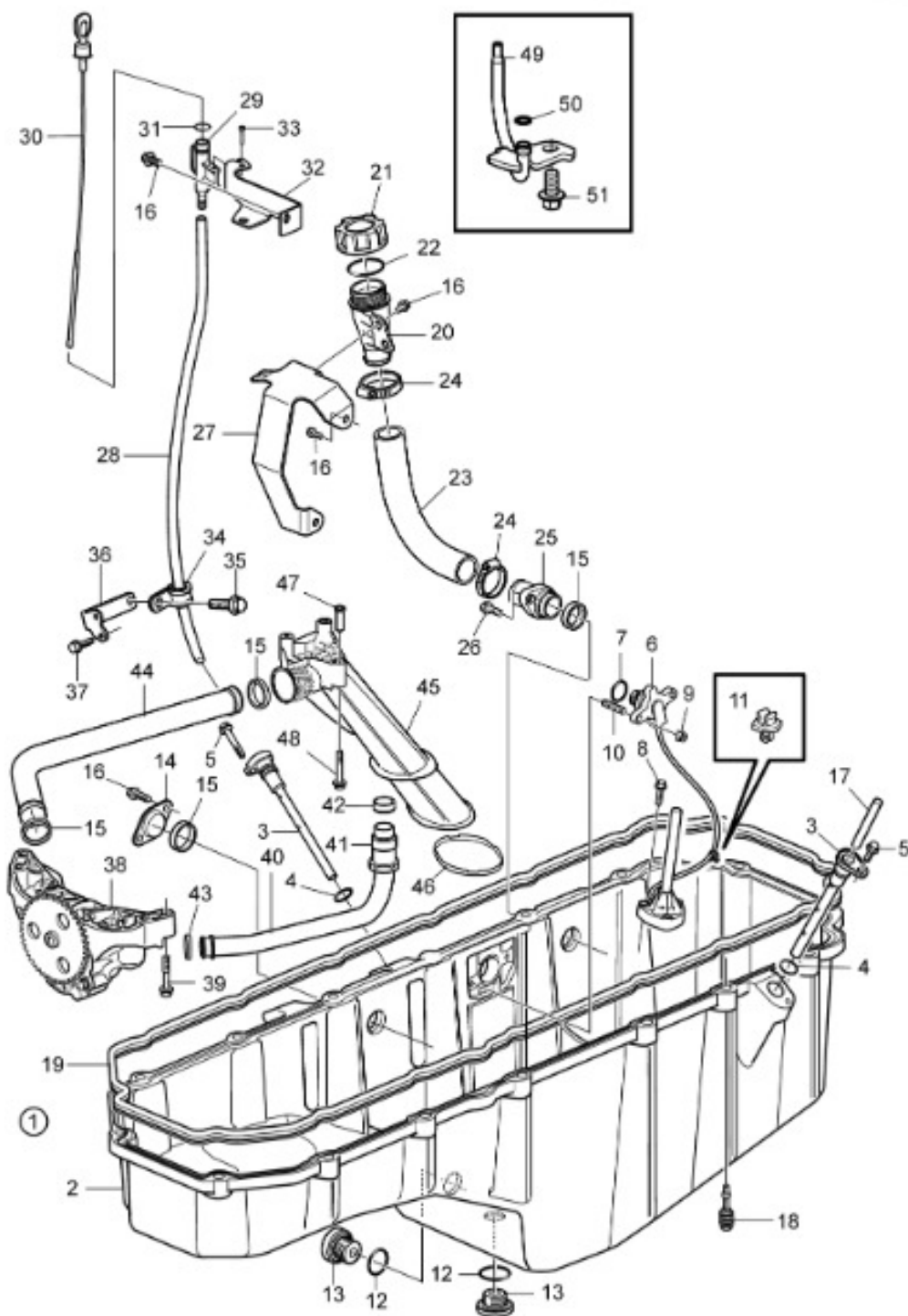
#	Part no	Qty	Description
1	8131247	1	Crankshaft SN-2016120951
1	22235130	1	Crankshaft SN2016120952-
2	21948268	1	Thrust washer kit
3	20578851	6	Main bearing kit Std
3	20700881	6	Main bearing kit O.S=0,25mm
3	20700882	6	Main bearing kit O.S=0,50mm
3	20700885	6	Main bearing kit O.S=0,75mm
3	20700886	6	Main bearing kit O.S=1,00mm
3	20700887	6	Main bearing kit O.S=1,25mm
4	20578853	1	Main bearing kit Std, Bearing no 7
4	20700890	1	Main bearing kit O.S=0,25mm, Bear
4	20700891	1	Main bearing kit O.S=0,50mm, Bear
4	20700893	1	Main bearing kit O.S=1,00mm, Bear
5	21254035	6	Cylinder liner kit
6		1	▪ Cylinder liner
7	20520607	1	▪ Sealing ring kit See parts bulletin
7	22179684	1	▪ Sealing ring kit See parts bulletin
8	945483	2	▪ Snap ring
9	20819869	1	▪ Piston ring kit
10		1	▪ Piston
11		1	▪ Gudgeon pin
12	20523555	1	Shim
12	20523556	1	Shim
12	20523557	1	Shim
13	21535917	6	Connecting rod
14	20898010	6	▪ Bushing
15	8131198	24	▪ Flange screw
16	20586602	6	Big-end bearing kit
16	20586603	6	Big-end bearing kit
16	20586604	6	Big-end bearing kit
16	20586606	6	Big-end bearing kit
17	3840066	1	Flywheel
18	20711957	1	Ring gear
19	21344746	14	Flange screw
20	984738	2	Flange screw
21	21430914	1	Gear
22	950656	1	Pin
23	997790	1	O-ring
24	21054681	1	Cover SN-2016120951
25	20777236	1	Cover SN2016120952-
26	21347087	1	Crankshaft seal SN-2016120951
26	21779548	1	Crankshaft seal SN2016120952-
27	984736	8	Flange screw
28	20585893	1	Vibration damper
29	984815	6	Flange screw
30	3829173	1	Pulley
31	984821	12	Flange screw
32	1161231	1	Sealant
32	1161277	1	Sealant
33	984825	12	Flange screw
34	3889367	2	Vibration damper
35	3838497	1	Spacer
36	3838498	1	Adapter
37	3837486	1	Pulley

11 - FLYWHEEL



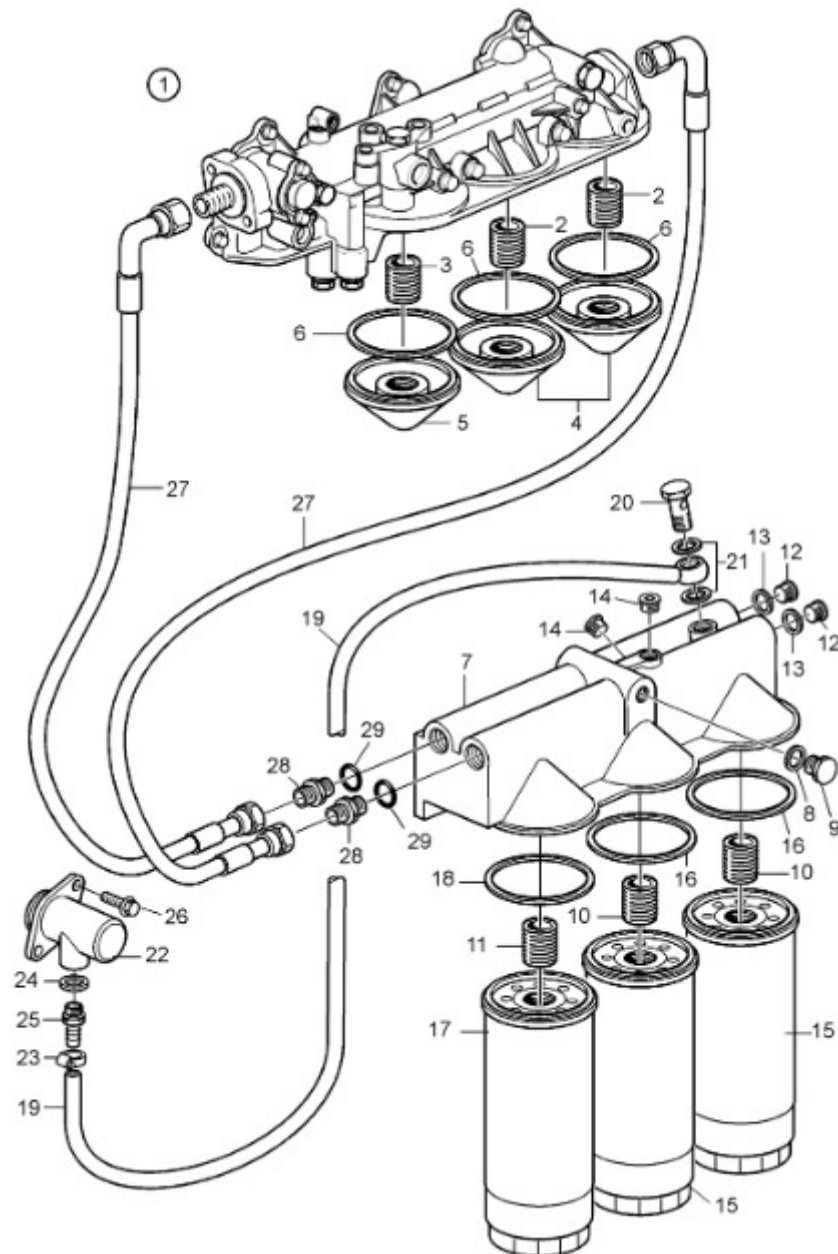
#	Part no	Qty	Description
1	3840066	1	Flywheel Std, SAE 1
2	20711957	1	▪ Ring gear
3	3848344	1	Flywheel For Clark C8000,
4	20711957	1	▪ Ring gear
5	22739170	1	Flywheel Clutch Damper Di
6	20711957	1	▪ Ring gear

12 - LUBRICATION SYSTEM



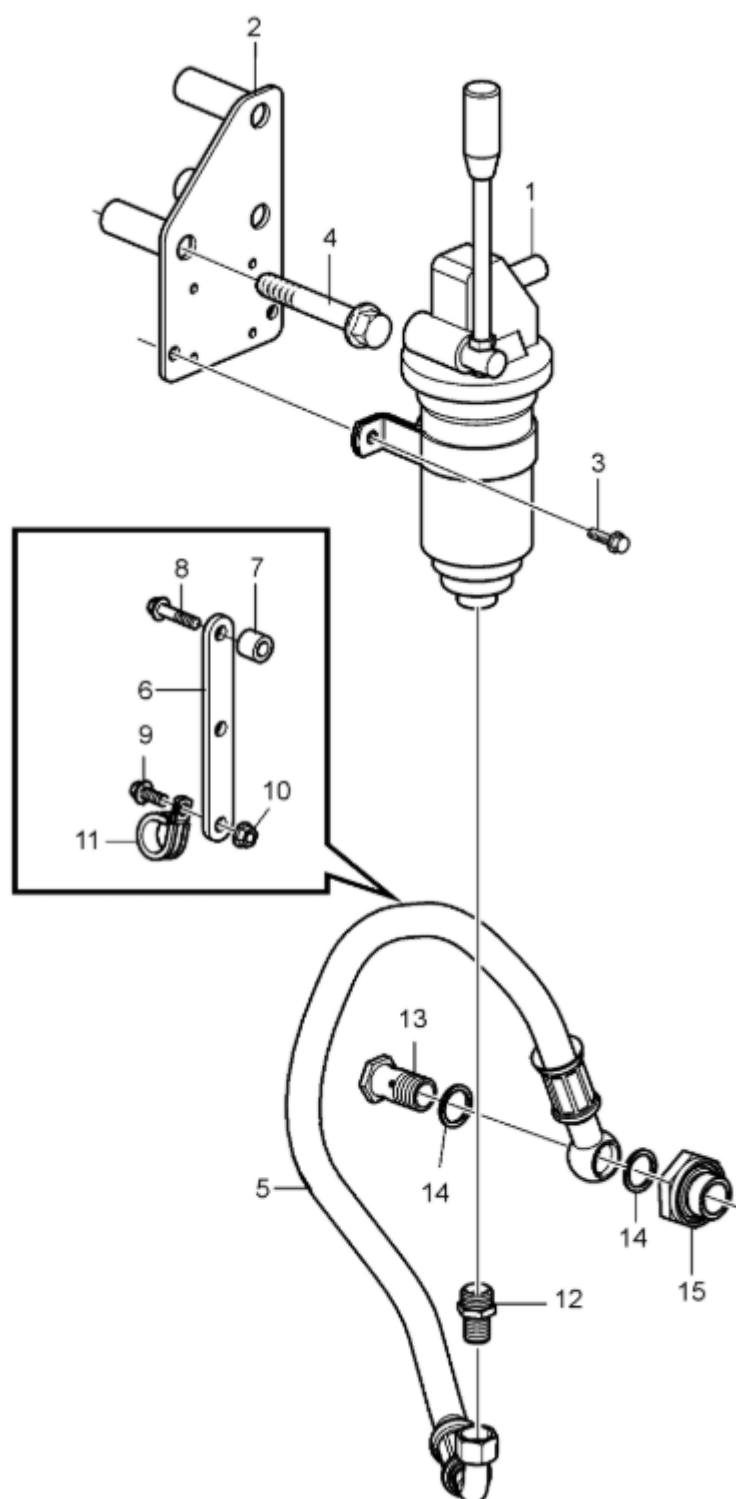
#	Part no	Qty	Description
1	17443046	1	Oil pan
2		1	▪ Sump
3	21523327	2	▪ Pipe
4	949656	2	▪ O-ring
5	984734	2	▪ Flange screw
6	22807993	1	▪ Oil level sensor
			Replaced by 23285701
6	23285701	1	▪ Oil level sensor
7	990719	1	▪ O-ring
8	984728	3	▪ Flange screw
9	990949	2	▪ Flange lock nut
10	953035	2	▪ Stud
11	20700754	2	▪ Retainer
12	948610	2	O-ring
13	11127354	2	Magnetic plug
14	3964803	1	Plug
15	21780376	4	Sealing ring
16	984733	7	Flange screw
17	20533484	1	Plug
18	20739547	16	Flange screw
19	20734156	1	Sealing strip
20	20808091	1	Oil filler pipe
21	20807510	1	▪ Oil filler cap
22	20365079	1	▪ Rubber washer
23	21328920	1	Hose
24	994561	2	Hose clamp
25	20462497	1	Connection pipe
26	984735	2	Flange screw
27	22422487	1	Bracket
28	11158388	1	Pipe
29	11129411	1	▪ Anchorage
30	40005190	1	Oil dipstick
			SN-2016107256
30	23082417	1	Oil dipstick
			SN2016107257-
31	944124	1	O-ring
32	22053499	1	Bracket
33	975371	1	Six point socket scr
34	952626	1	Clamp
35	955271	1	Hexagon screw
36	21361329	1	Bracket
37	20784686	2	Flange screw
38	21708142	1	Oil pump
39	21344756	4	Flange screw
40	20708889	1	Pressure pipe
41		1	▪ Fitting screw
42	980790	1	▪ Ferrule
43	1543578	1	Sealing ring
44	20553751	1	Suction pipe
45	20547257	1	Oil strainer
46	8131965	1	▪ Strainer
47	20547263	1	▪ Spacer sleeve
48	994451	3	Flange screw
49	3839496	6	Piston cooling jet
50	976012	6	▪ O-ring
51	994445	6	Flange screw

13 - OIL FILTERS



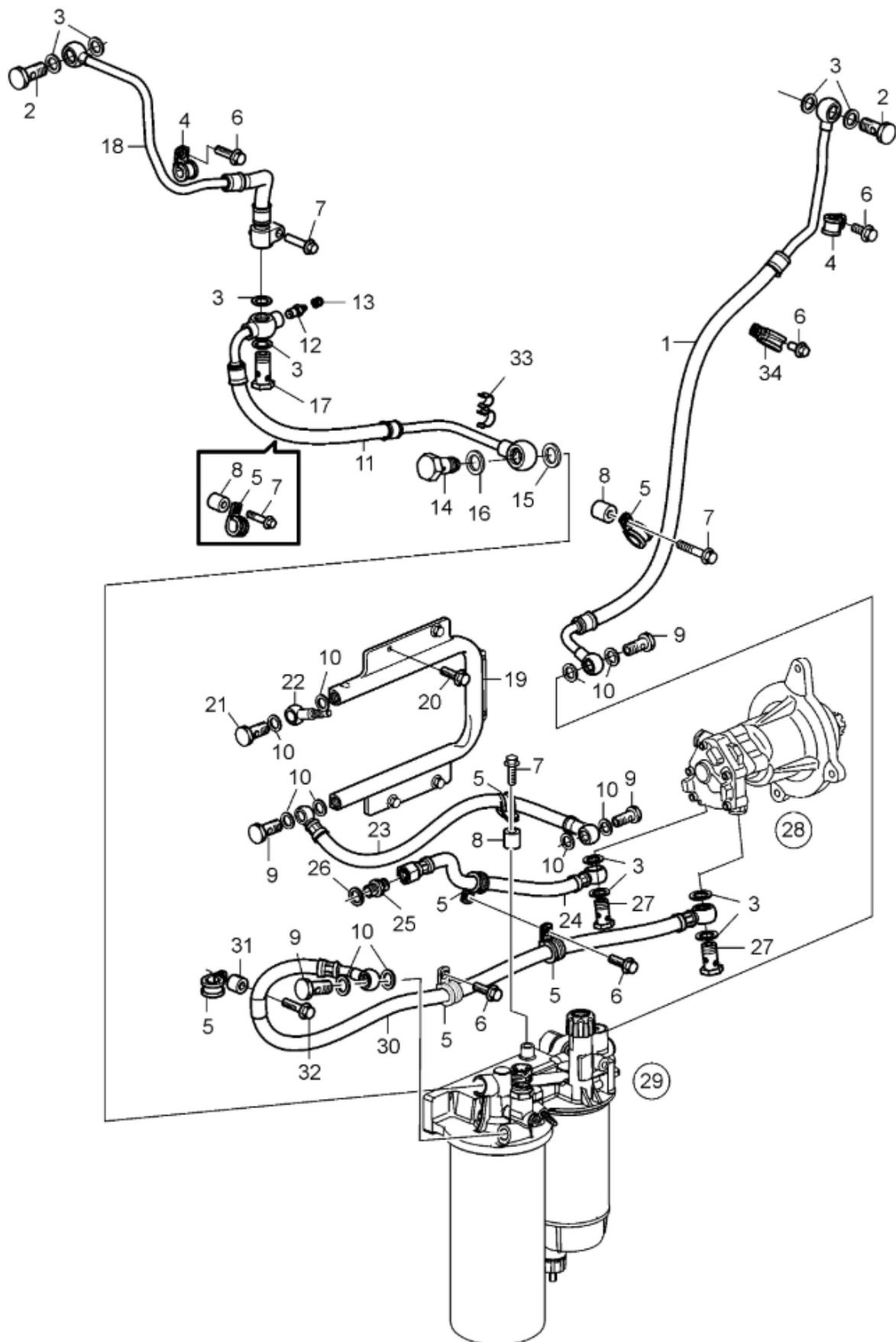
#	Part no	Qty	Description
1	22655069	1	Oil filter housing
2	466623	2	▪ Nipple
3	469904	1	▪ Nipple
4	21145970	2	Cover
5	21145971	1	Cover
6	993235	3	X-ring
7	11127988	1	Oil filter housing
8	976932	1	▪ Gasket
9	471598	1	▪ Plug
10	466623	2	▪ Nipple
11	469904	1	▪ Nipple
12	942352	2	Plug
13	982508	2	Gasket
14	984793	2	Plug
15	21632664	2	Oil filter
15	23075366	2	Oil filter
16		2	▪ Gasket
17	23075367	1	Oil filter SN2016107824-
18		1	▪ Gasket
19	21521886	1	Hose
20	991048	1	Hollow screw
21	20852764	2	Sealing ring
22	3819332	1	Pipe
23	961664	1	Hose clamp
24	969011	1	Gasket
25	20405767	1	Hose nipple
26	984733	2	Flange screw
27	23434306	2	Hose
28	11158220	2	Adapter
29	982508	2	Gasket

14 - DRAIN PUMP



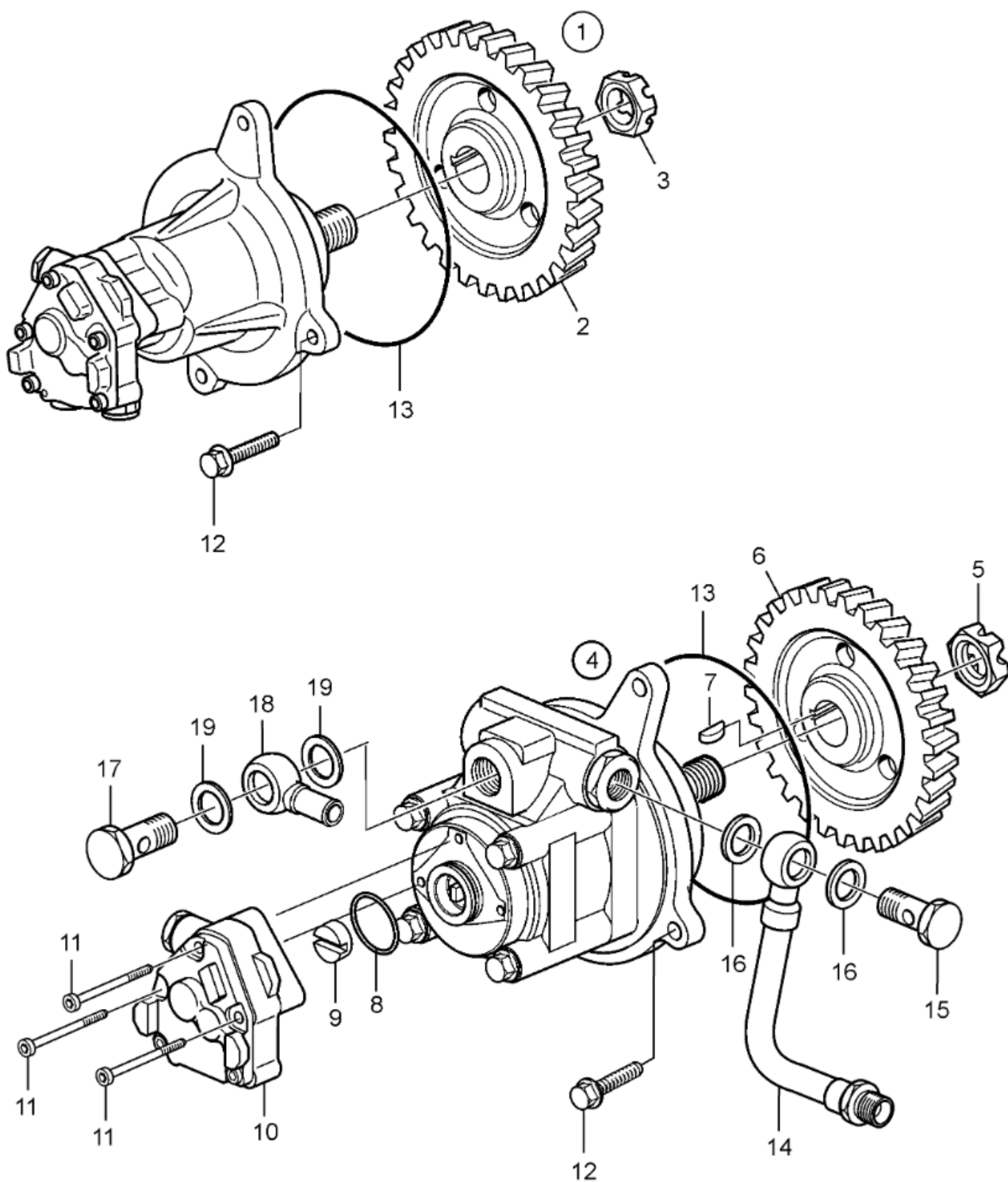
#	Part no	Qty	Description
1	3827475	1	Oil drain pump
2	3836697	1	Bracket
3	984734	2	Flange screw
4	975127	3	Flange screw L=90mm
5	21276558	1	Oil hose
6	3829091	1	Bracket
7	20573472	1	Spacer sleeve
8	984737	1	Flange screw
9	984734	1	Flange screw
10	990940	1	Flange nut
11	949379	1	Clamp
12	944177	1	Nipple
13	966821	1	Hollow screw
14	18813	2	Gasket
15	21171958	1	Plug

15 - FUEL SYSTEM



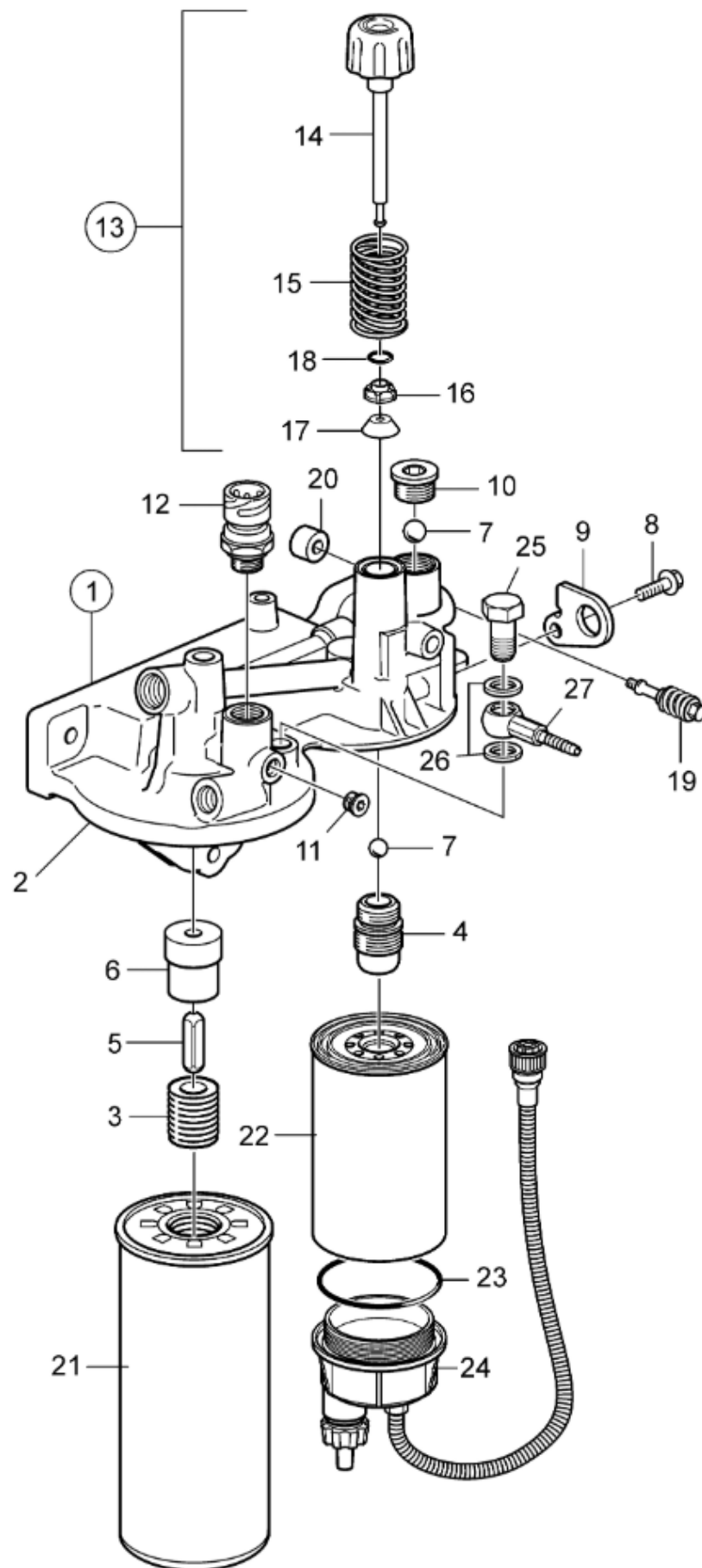
#	Part no	Qty	Description
1	22394978	1	Fuel hose
2	941686	2	Hollow screw
3	20852765	10	Sealing ring
4	949746	2	Clamp
5	949747	6	Clamp
6	984733	5	Flange screw
7	984737	3	Flange screw
8	826652	3	Spacer sleeve
9	991048	4	Hollow screw
10	20852764	12	Sealing ring
11	21948562	1	Fuel hose
12	20548012	1	▪ Faucet
13	20547976	1	▪ Protecting cover
14	21140647	1	Overflow valve
15	11998	1	Gasket
16	20883435	1	Sealing ring
17	190713	1	Hollow screw
18	21948554	1	Fuel hose
19	17208196	1	Radiator
20	994258	5	Flange screw
21	25167	1	Hollow screw
22	3587322	1	Banjo nipple
23	21311219	1	Fuel pipe
24	21311221	1	Fuel pipe
25	946602	1	Nipple
26	993685	1	Gasket
27	991046	2	Hollow screw
28	20902698	1	Tandem pump
			With servo pump., Cor
28	22677520	1	Fuel pump
			Without servo pump., (
			(3594872)
29	22035823	1	Fuel filter housing
30	20909822	1	Fuel pipe
31		1	Spacer washer
32	984736	1	Flange screw
33	3545508	1	Retainer
34	949747	1	Clamp

16 - FUEL PUMP



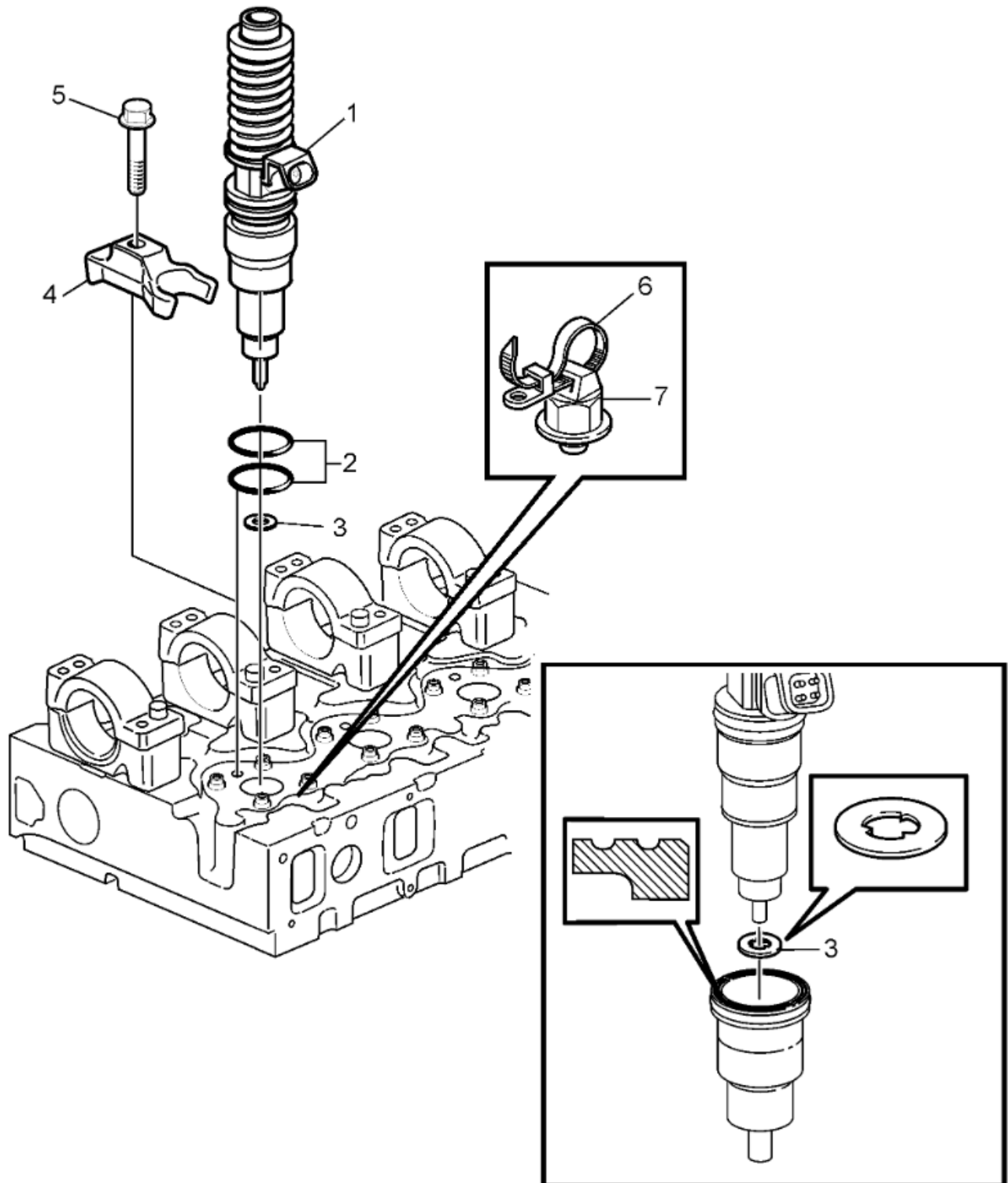
#	Part no	Qty	Description
1	22677520	1	Fuel pump Without servo pump.
2	8131292	1	▪ Gear
3	20367040	1	▪ Castle nut
4	20902698	1	Tandem pump With servo pump.
5	20367040	1	▪ Castle nut
6	8131292	1	▪ Gear
7	1505357	1	▪ Woodruff key
8	85103703	1	▪ O-ring
9	85103779	1	▪ Constant velocity jo
10	20997341	1	▪ Fuel pump (85103778)
11	85103780	3	▪ Hex. socket screw
12	994386	1	Flange screw L=55mm
12	984736	2	Flange screw L=30mm
13	977030	1	O-ring
14	21406534	1	Servo pipe
15	941686	1	Hollow screw
16	982724	2	Gasket
17	191620	1	Hollow screw
18	1598185	1	Banjo nipple
19	982508	2	Gasket

17 - FUEL FILTER HOUSING ASSEMBLY



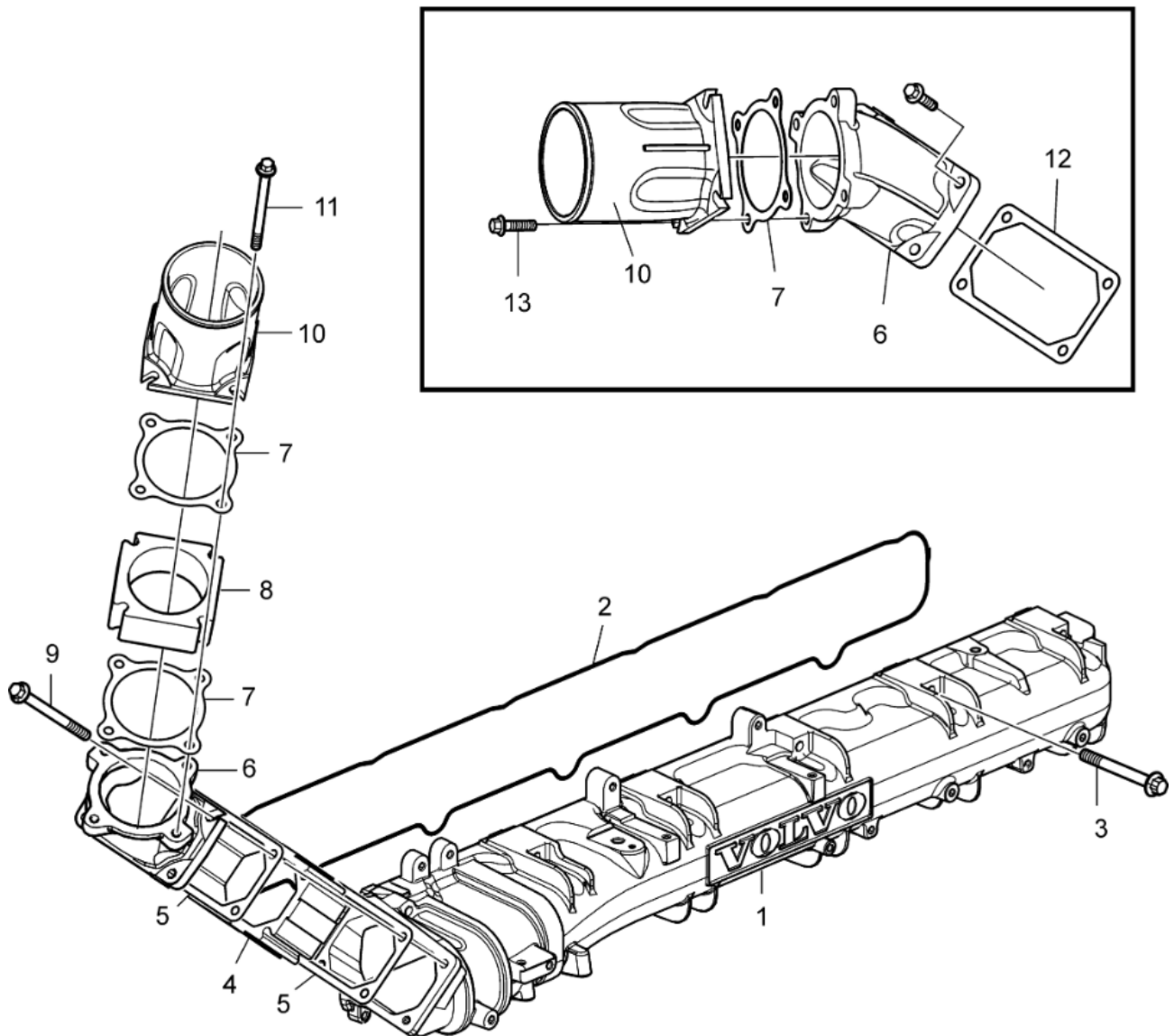
#	Part no	Qty	Description
1	22035823	1	Fuel filter housing
2		1	▪ Filter housing
3	21140585	1	▪ Nipple
4		1	▪ Nipple
5	20733505	1	▪ Valve
6		1	▪ Sleeve
			Included in filter housin
7	20528999	1	▪ Ball
8	20784686	1	▪ Flange screw
9		1	▪ Bracket
10	20744692	1	▪ Cap
11	20542751	1	▪ Plug
12	21634021	1	▪ Pressure sensor
			Fuel/Oil Pressure SN-2
12	22899626	1	Pressure sensor
			Fuel/Oil Pressure SN2
13	22763401	1	▪ Hand pump
14	20784020	1	▪ ▪ Pump shaft
15	20784027	1	▪ ▪ Spring
16	20528992	1	▪ ▪ Control plunger
17	20528991	1	▪ ▪ Back-up ring
18	20528990	1	▪ ▪ O-ring
19	20739547	3	Flange screw
20	21091546	3	Rubber element
21	20976003	1	Fuel filter
			Replaced by 22480372
21	22480372	1	Fuel filter
22	20998367	1	Fuel filter
23	967344	1	O-ring
24	21333413	1	Bowl
24	21086803	1	Bowl
			Metal
25	3594288	1	Valve
26	20852764	2	Sealing ring
27	993586	1	Banio nipple

18 - INJECTOR



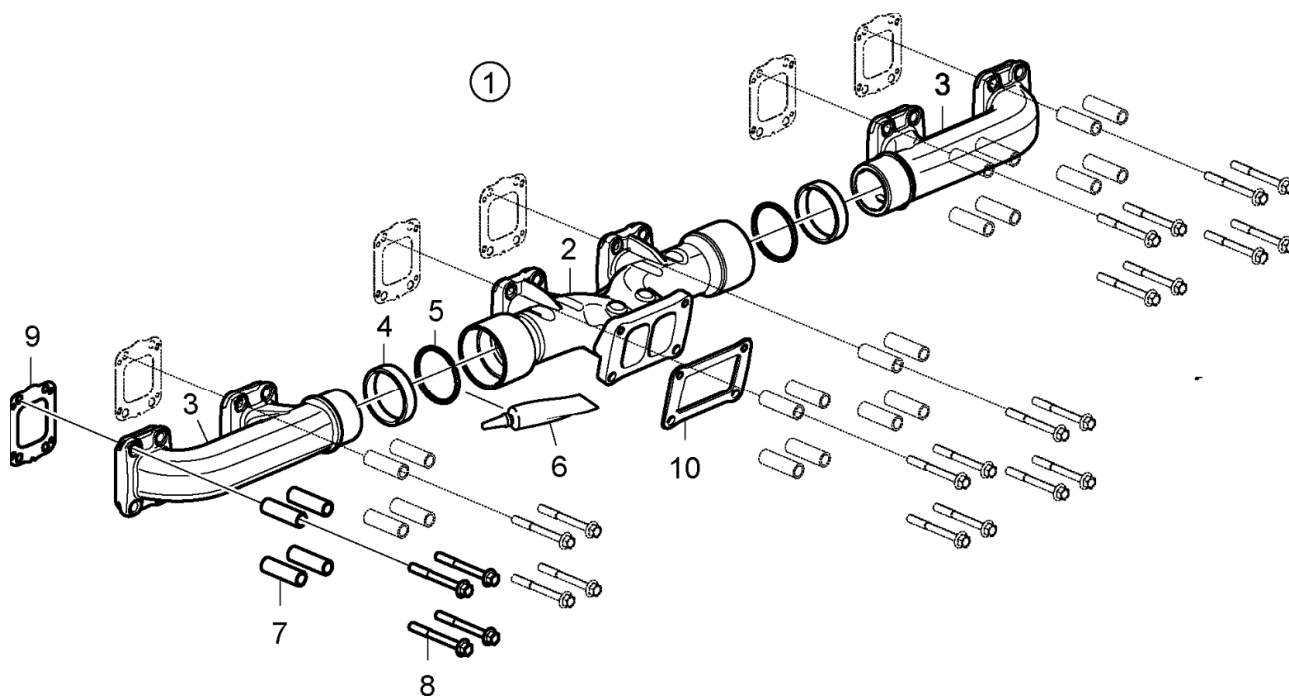
#	Part no	Qty	Description
1	3801371	6	Unit injector
1	21379944	6	Unit injector
2	276948	1	▪ O-ring kit
3	21261987	1	▪ Washer
			SN2016021776-
4	21801388	6	Yoke
5	21344774	6	Flange screw
6	983472	1	Cable tie
			For cable to unit in
7	8131393	1	Retainer
			For cable to unit in

19 - INLET MANIFOLD



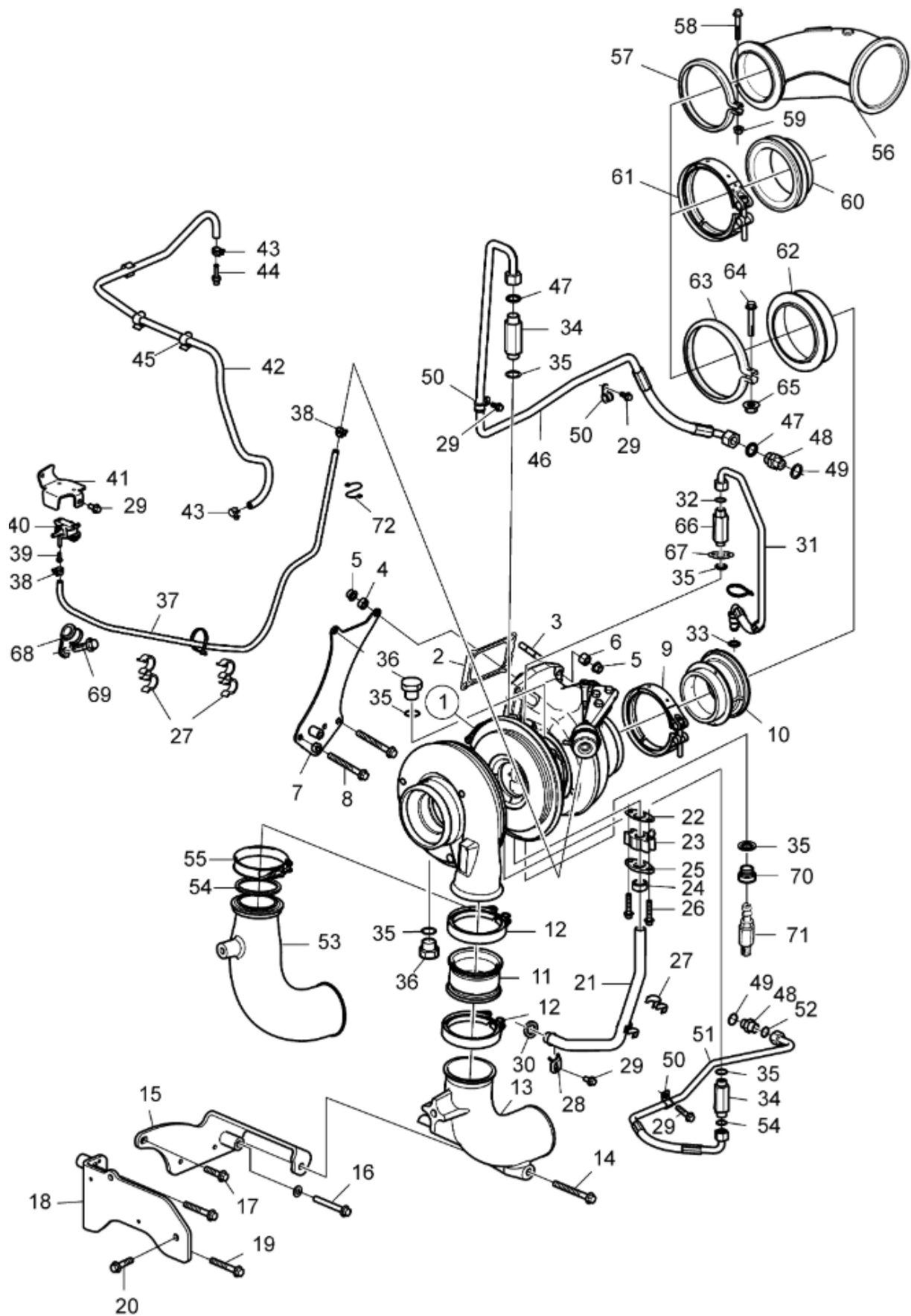
#	Part no	Qty	Description
1	20970992	1	Inlet manifold
2	20563945	1	Seal
3	996457	12	Flange screw
4	22554715	1	Intermediate housing
5	3979639	2	Plane gasket
6	21308891	1	Charge air pipe
7	21313833	2	Gasket
8	21158651	1	Dummy
9	984744	4	Flange screw
10	21308893	1	Connection pipe
11	984741	4	Flange screw
12	3979639	1	Plane gasket
13	984736	8	Flange screw

20 - EXHAUSING MANIFOLD



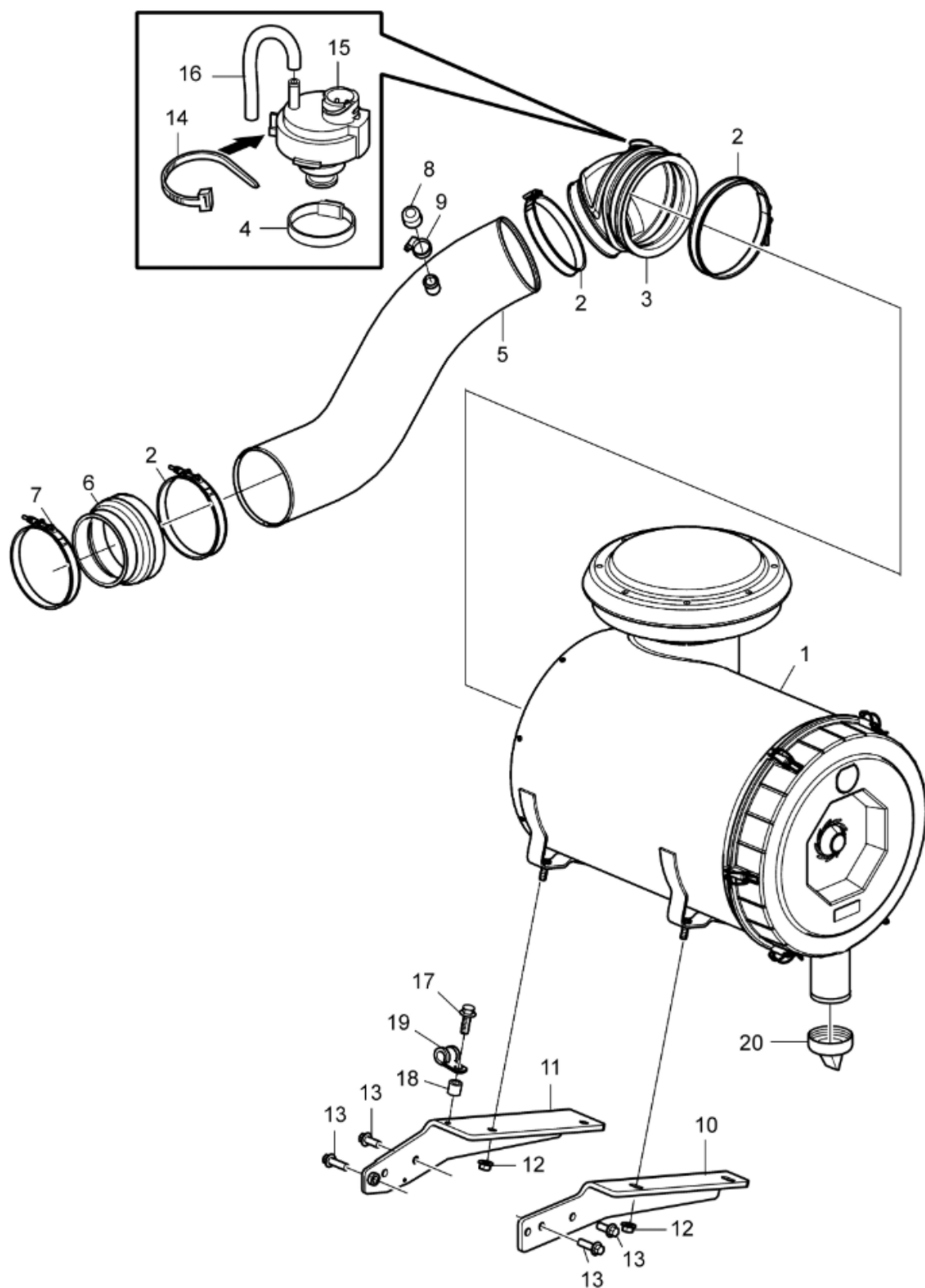
#	Part no	Qty	Description
1	17225285	1	Exhaust manifold
2		1	▪ Exhaust manifold
3	20901584	2	▪ Exhaust manifold
4	20938964	1	▪ Sealing kit
5	21695684	2	▪ Sealing ring
6	591247	1	▪ Sealant
7	1546517	24	Spacer sleeve
8	21344787	24	Flange screw
9	21352841	6	Gasket
10	22707542	1	Gasket

21 - TURBOCHARGER



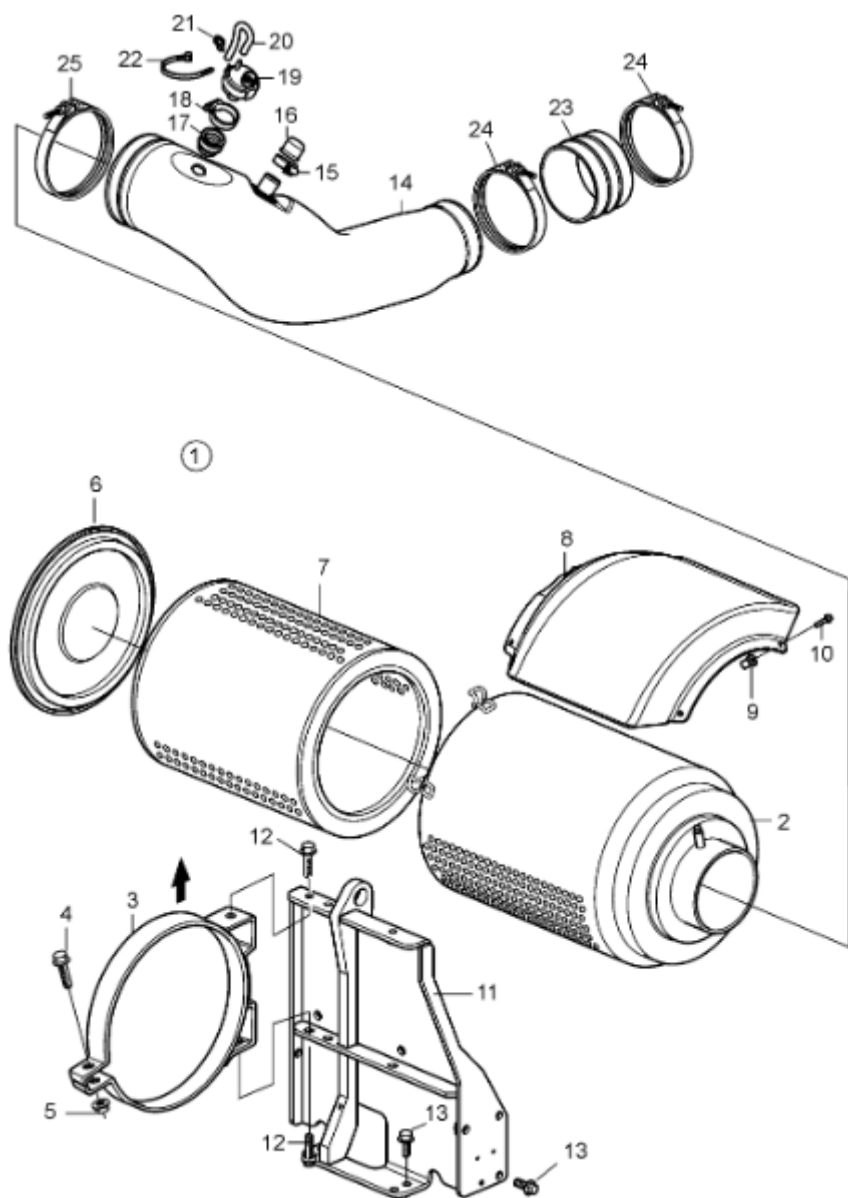
#	Part no	Qty	Description
1	3801669	1	Turbocharger, exch
1	22283878	1	Turbocharger
1	22283878	1	Turbocharger
2	22707542	1	Gasket
3	21345127	4	Stud
4	60112076	2	Spacer sleeve
5	994628	4	Flange nut
6	60112113	2	Spacer sleeve
7	22632685	1	Support
8	994386	3	Flange screw
9	22576146	1	V-clamp
10	22643434	1	Adapter
11	15185107	1	Charge air hose
12	20592783	2	V-clamp
13	22850363	1	Connecting pipe
14	984763	1	Flange screw
15	22608053	1	Bracket
16	984757	1	Flange screw
17	969445	1	Flange screw
18	22588011	1	Bracket
19	975103	2	Flange screw
20	984755	1	Flange screw
21	22929323	1	Return pipe
22	21875781	1	Gasket
23	8148729	1	Connector
24	469601	1	Rubber moulding
25	469543	1	Pipe flange
26	984738	2	Flange screw
27	3121512	4	Retainer
28	20844430	1	Lock brace
29	984733	5	Flange screw
30	21940615	1	Sealing ring
31	23437112	1	Oil feed hose
32	976014	1	• O-ring
33	976971	1	• O-ring
34	23306101	2	Socket
35	11998	6	Gasket
36	960632	2	Plug
37	22496078	1	Hose
38	976573	2	Hose clamp
39	959187	2	Hex. socket screw
40	3819161	1	Solenoid valve
41	21311241	1	Bracket
42	11158489	1	Hose
43	975269	2	Hose clamp
44	945713	2	Hose nipple
45	984937	3	Retainer
46	22769764	1	Cooling hose
47	976971	2	• O-ring
48	963948	2	Nipple
49	11996	2	Gasket
50	190635	3	Clamp
51	22485876	1	Hose
52	976971	2	• O-ring
53	22322833	1	Connecting pipe
54	1675066	1	Sealing ring
55	3886542	1	V-clamp
56	21308859	1	Exhaust pipe
57	467310	1	V-clamp
58	994441	1	Flange screw
59	990950	1	Flange lock nut
60	22706523	1	Flange
61	22576146	1	V-clamp
62	3887783	1	Flange
63	467310	1	V-clamp
64	994441	1	Flange screw
65	990950	1	Flange lock nut
66	23306100	1	Nipple
67	22206133	1	Gasket
68	949746	1	Clamp
69	984751	1	Flange screw
70	16381	1	Plug
71	966871	1	Shut-off cock
72	78466868	1	Retainer

22 - AIR FILTER



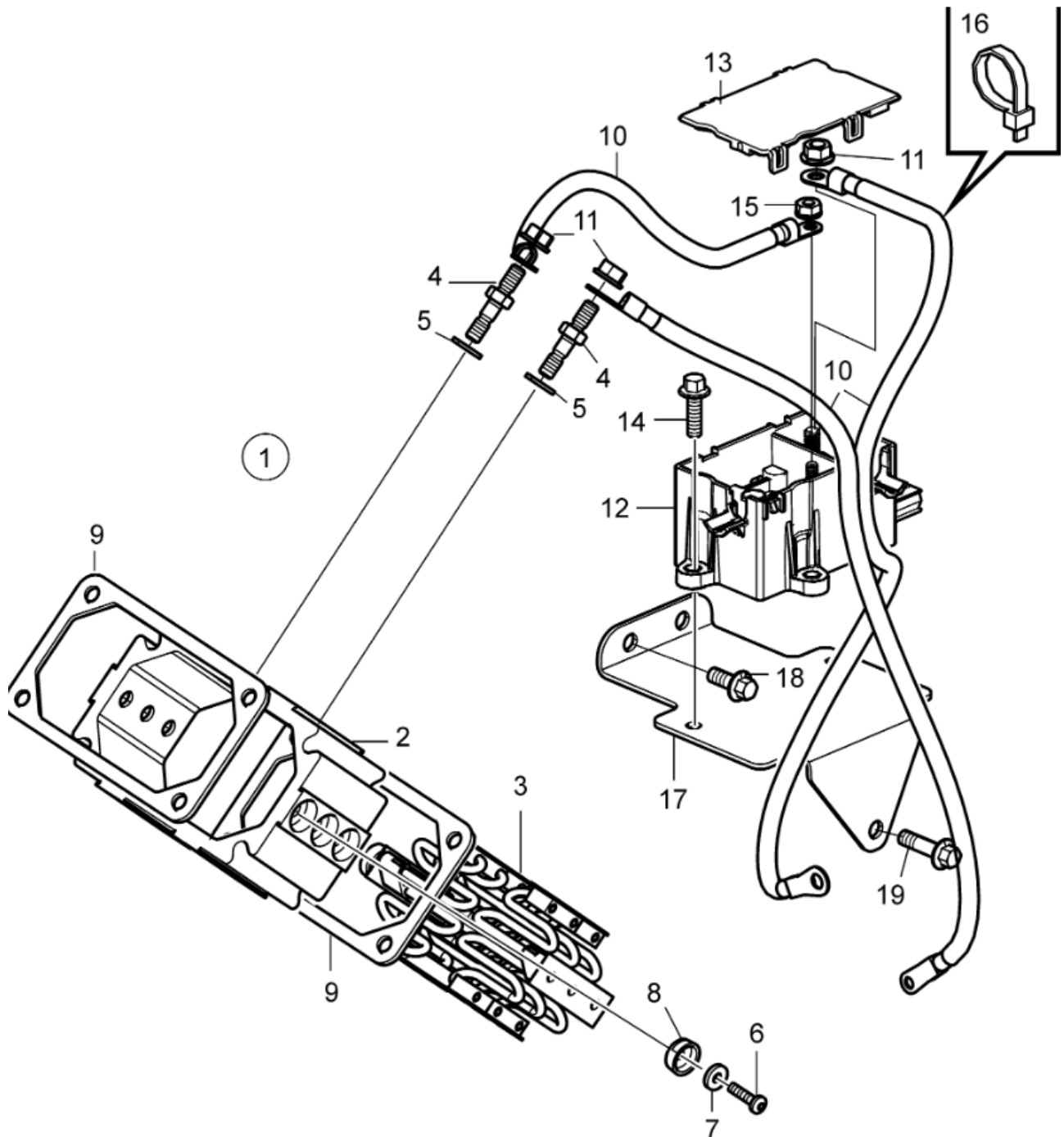
#	Part no	Qty	Description
1	22222434	1	Air cleaner
2	1674223	1	Hose clamp
3	8149322	1	Hose
4	994561	1	Hose clamp
5	21405819	1	Connecting pipe
6	21160546	1	Rubber collar
7	1544735	1	Hose clamp
8	845422	1	Plastic plug
9	994559	1	Hose clamp
10	21377722	1	Bracket
11	21409030	1	Bracket
12	990942	4	Flange nut
13	984816	6	Flange screw
14	994561	1	Hose clamp
15	23307414	1	Vacuum switch
16	949931	1	Hose
17	994386	1	Flange screw
18	807257	1	Spacer sleeve
19	949746	1	Clamp
20	21314482	1	Outlet valve

23 - AIR FILTER COMPONENTS



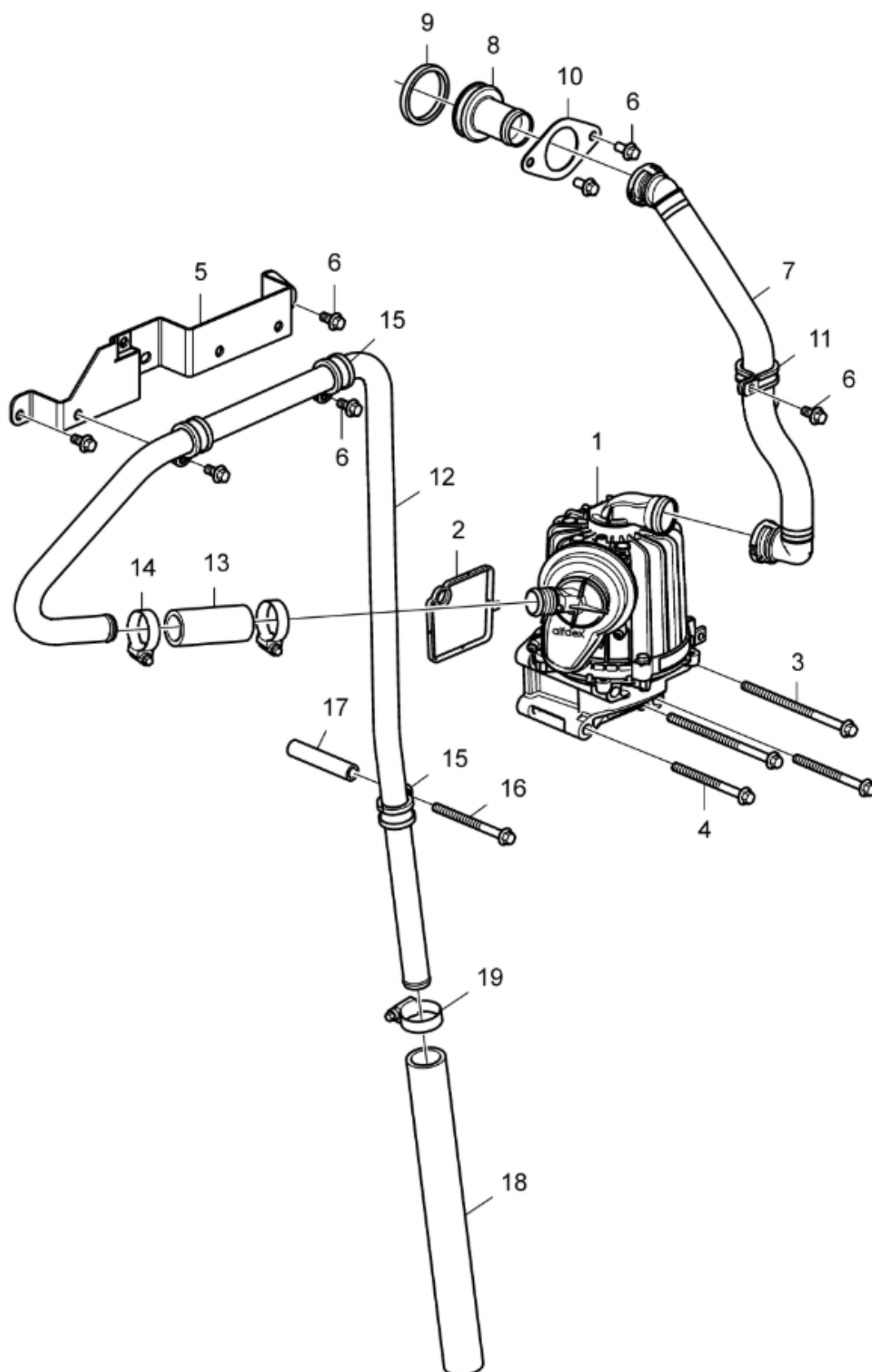
#	Part no	Qty	Description
1	22227756	1	Air filter
2		1	▪ Filter housing
3		2	▪ Tensioning band
4		2	▪ ▪ Screw
5		2	▪ ▪ Nut
6		1	▪ Cap
7	21702911	1	▪ Air filter insert
8	3830971	1	Rain cap
9	930760	4	Expanding nut
10	984727	4	Flange screw
11	21395717	1	Bracket
12	984753	4	Flange screw
13	984815	10	Flange screw
14	22148892	1	Connection pipe
15	22274884	1	Hose clamp
16	845422	1	Plastic plug
17	22092074	1	Retainer
18	994561	1	Hose clamp
19	23307414	1	Vacuum switch
20	949931	1	Hose L=150mm
21	948702	1	Cable tie
22	948210	1	Cable tie
23	21488062	1	Rubber collar
24	1544735	2	Hose clamp
25	1674223	1	Hose clamp

24 - STARTER ELEMENT



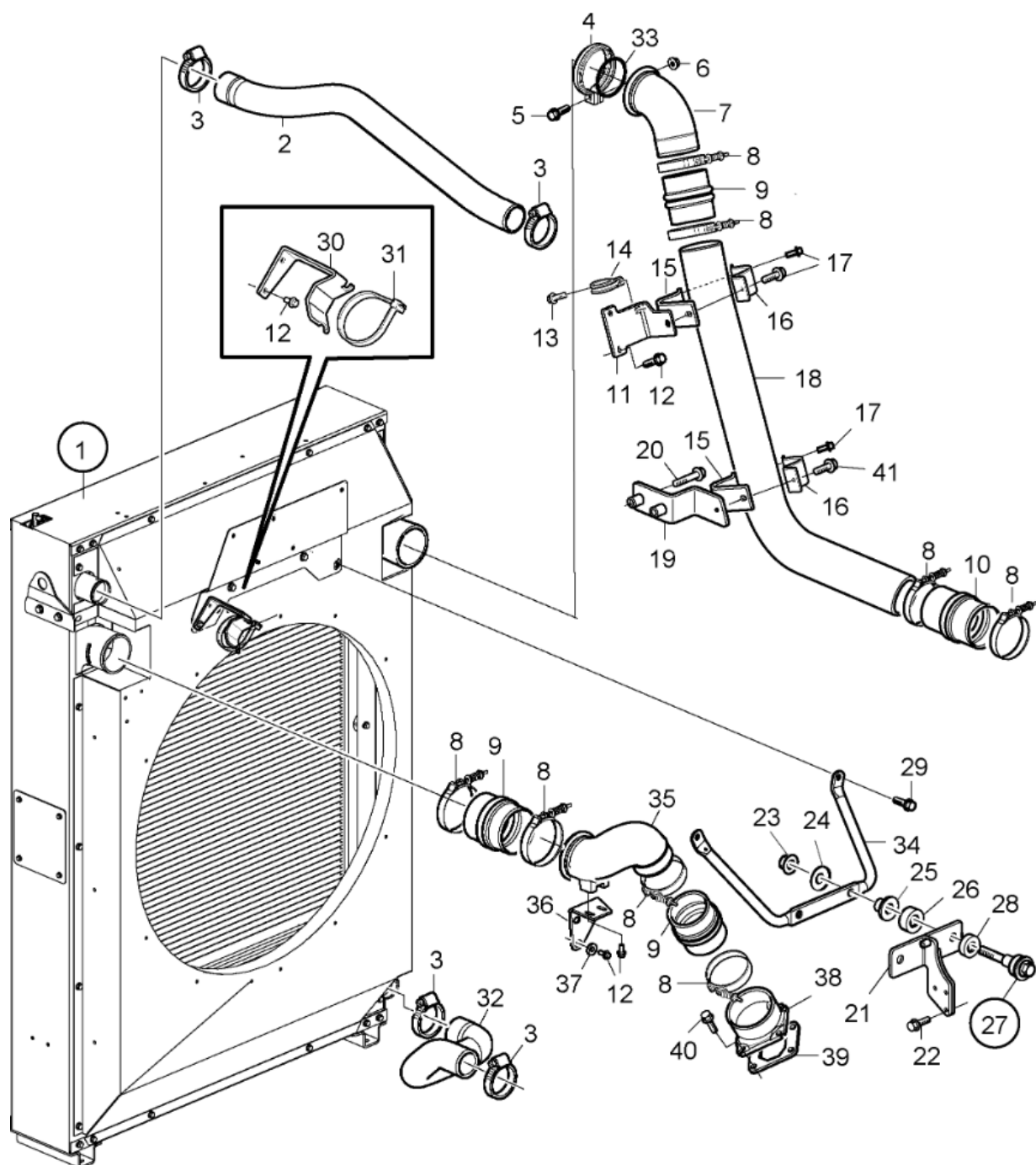
#	Part no	Qty	Description
1	22504359	1	Starter element
2		1	▪ Intermediate section
3		1	▪ Wire element
4		2	▪ Terminal screw
5	192288	2	▪ Washer
6		12	▪ Six point socket
7	960138	12	▪ Washer
8	20942283	6	▪ Sleeve
9	3979639	2	Plane gasket
10	21917020	1	Wiring harness
11	983715	3	Hexagon nut
12	23314469	1	Relay
13	21930585	1	Cover
14	60113519	3	Flange screw
15	983714	1	Hexagon nut
16	948211	1	Cable tie
17	21867511	1	Bracket
18	984734	2	Flange screw
19	984736	1	Flange screw

25 - CRANKCASE VENTILATION



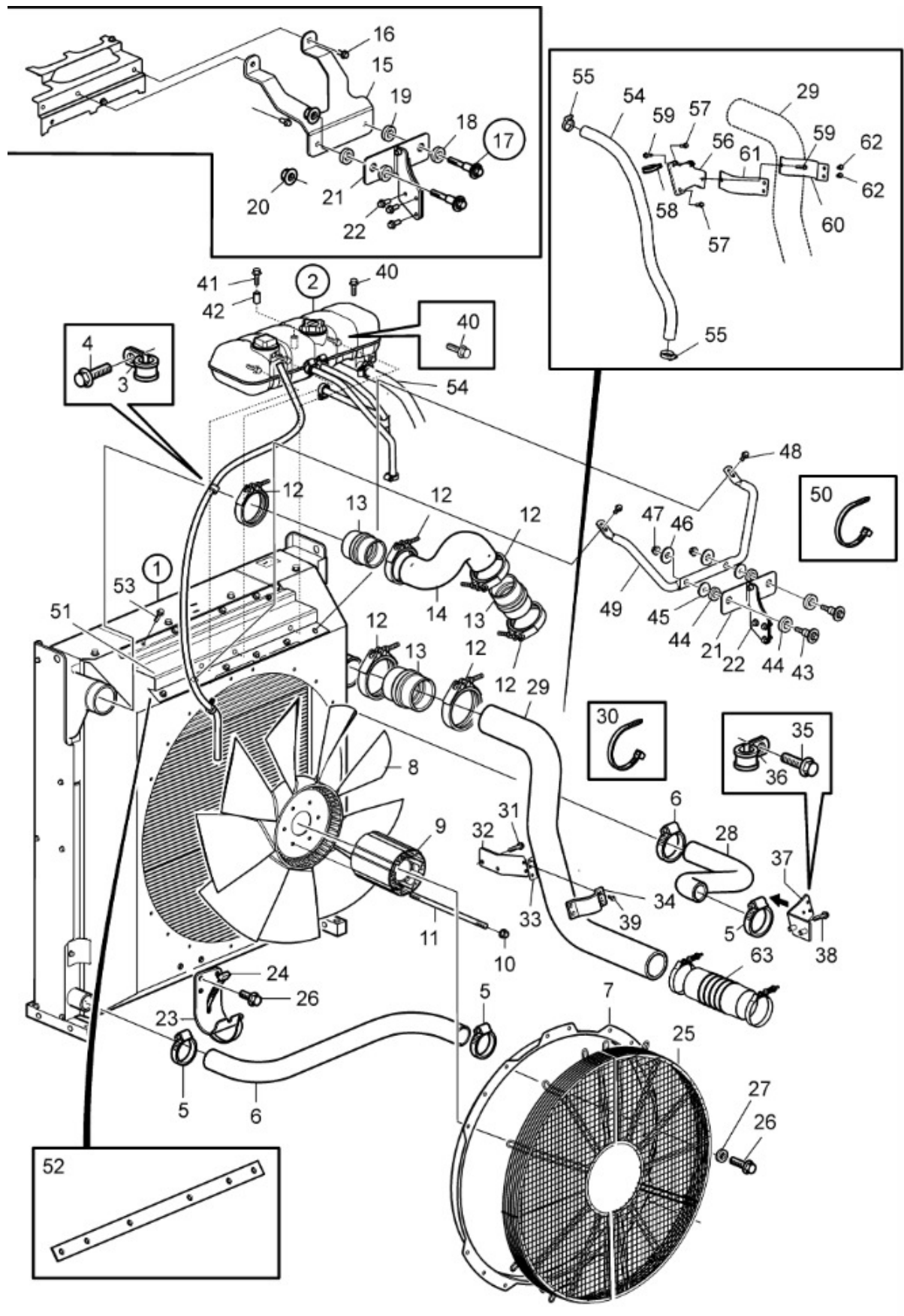
#	Part no	Qty	Description
1	22767073	1	Separator
2	21718395	1	Pipe
3	984733	8	Flange screw
4	20519944	1	Flange
5	21681585	1	Adapter
6	20723207	1	Sealing ring
7	20580933	1	Hose
8	994560	4	Hose clamp
9	21866004	1	Pipe
10	942707	1	Hose
11	21865927	1	Bracket
12	947827	2	Clamp
13	949997	1	Clamp
14	941976	1	Clamp
15	965577	1	Bracket
16	984753	1	Flange screw
17	990941	1	Flange nut
18	984734	1	Flange screw
19	990940	1	Flange nut
20	20532891	1	Gasket
21	984748	2	Flange screw
22	984744	2	Flange screw

26 - RADIATOR



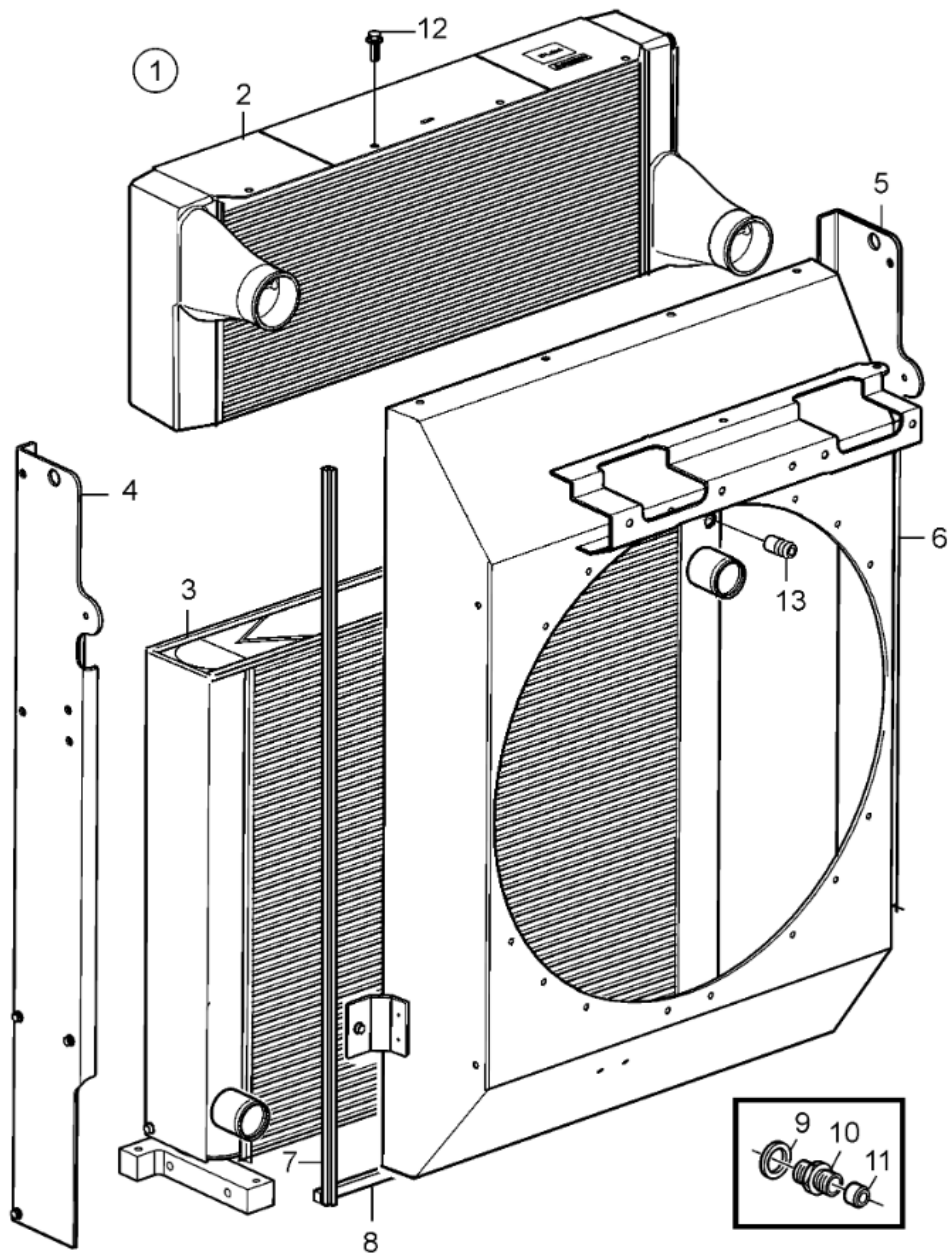
#	Part no	Qty	Description
1	Element		
2	22140179	1	Hose
3	994565	4	Hose clamp
4	3033054	1	V-clamp
5	994441	1	Flange screw
6	990950	1	Flange lock nut
7	22035260	1	Connecting pipe
8	20435760	8	Hose clamp
9	3838792	3	Charge air hose
10	3829133	1	Charge air hose
11	23242492	1	Bracket
12	984733	9	Flange screw
13	984734	1	Flange screw
14	941976	1	Clamp
15	22285230	2	Clamping brace
16	22285225	2	Clamping brace
17	984734	3	Flange screw
18	22494914	1	Charge air pipe
19	22757119	1	Bracket
20	990813	2	Flange screw
21	3594409	1	Bracket
22	984753	3	Flange screw
23	990942	2	Flange nut
24	948556	2	Washer
25	22430803	2	Spacer sleeve
26	866857	2	Rubber bushing
27	22488137	2	Attaching fitting
28	866857	2	▪ Rubber bushing
29	984752	2	Flange screw
30	22162119	1	Bracket
31	978435	1	Cable tie
32	22037699	1	Hose
33	949647	1	O-ring
34	3593807	1	Stay
35	23477801	1	Connecting pipe
36	22471286	1	Bracket
37	976944	3	Washer
38	22150844	1	Connecting pipe
39	21313833	1	Gasket
40	984744	4	Flange screw
41	984736	1	Flange screw

27 - COOLING SYSTEM



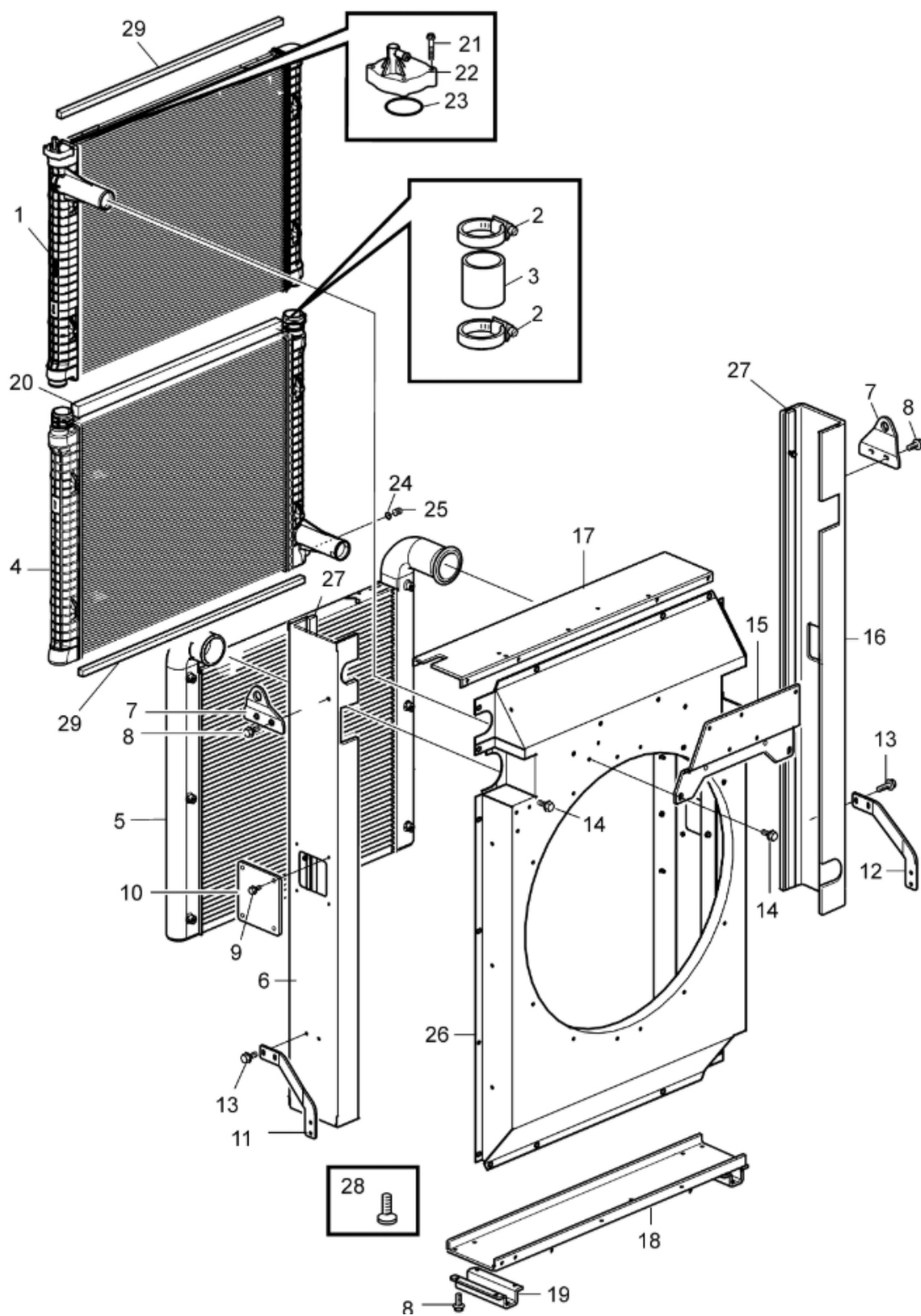
#	Part no	Qty	Description
1	Cooling unit		
1	Cooling unit		
2	1674916	1	Expansion tank SN-2016125842
2	23275232	1	Expansion tank SN2016125843-
3	942810	2	Clamp
4	984734	2	Flange screw
5	994565	4	Hose clamp
6	21888852	1	Hose
7	3827612	1	Fan ring
8	3828963	1	Fan Suction type
8	3828964	1	Fan Pusher type
9	3829537	1	Fan hub Pusher type, L=195mm
9	21418129	1	Fan hub Suction type, L=210mm
10	990941	6	Flange nut
11	130204	6	Stud Pusher type
11	981952	6	Stud Suction type
12	20435760	8	Hose clamp
13	3838792	3	Charge air hose
14	22185615	1	Pipe
15	22546256	1	Brace SN-2016110739
16	984752	2	Flange screw
17	22488137	2	Attaching fitting
18	866857	2	▪ Rubber bushing
19	866857	2	Rubber bushing
20	990942	2	Flange nut
21	3594409	1	Bracket
22	984753	3	Flange screw
23	22036724	1	Bracket
24	980464	1	Cable tie
25	22118112	2	Fan guard
26	984734	12	Flange screw
27	976944	12	Washer
28	21888849	1	Hose
29	22496578	1	Charge air pipe SN-2016102240
29	22828397	1	Charge air pipe SN2016102241-
30	948211	2	Cable tie
31	990810	2	Flange screw
32	22757119	1	Bracket
33		1	Bracket
34	22285230	1	Clamping brace
35	984734	3	Flange screw
36	941976	1	Clamp
37		1	Bracket
38	984739	2	Flange screw
39	990813	2	Flange screw
40	984733	4	Flange screw
41	994386	1	Flange screw
42	848694	1	Spacer sleeve
43	22488137	1	Attaching fitting
44	866857	4	▪ Rubber bushing
45	22430803	2	Spacer sleeve
46	60113331	2	Washer
47	990942	2	Flange nut
48	969445	2	Flange screw
49	23109845	1	Stay SN-2016123901
49	23486385	1	Stay SN2016123902-
50	980464	5	Cable tie
51	23276869	1	Bracket
52	23276871	1	Bracket
53	984752	10	Flange screw
54	22198506	1	Hose
55	994561	2	Hose clamp
56	22827408	1	Bracket
57	995463	2	Flange screw
58	941976	1	Clamp
59	984736	2	Flange screw
60	22285230	1	Clamping brace
61	22285225	1	Clamping brace
62	984734	2	Flange screw
63	3838792	1	Charge air hose SN-2016102240
63	3829133	1	Charge air hose SN2016102241-

28 - RADIATOR CASE



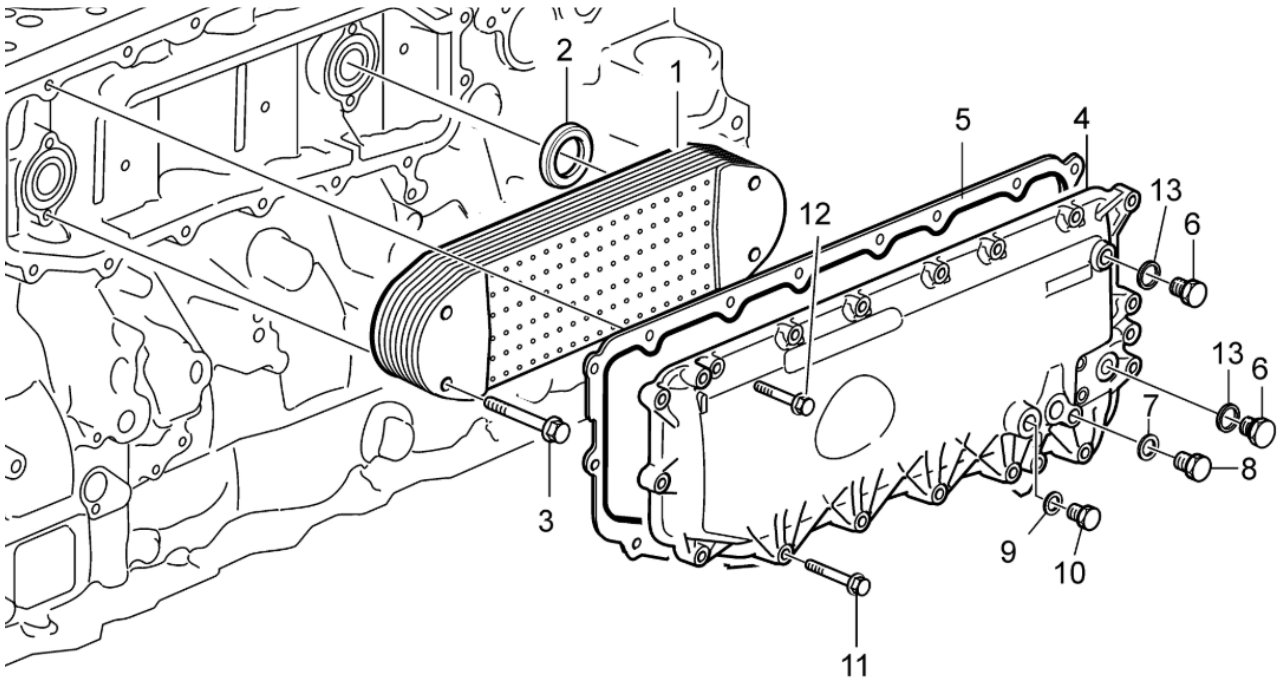
#	Part no	Qty	Description
1		1	Cooling unit SN-2016110739
1		1	Cooling unit SN2016110740-
2	22257084	1	Charge air cooler
3	22257085	1	Radiator
4	22257083	1	Frame
5	22257086	1	Frame
6	22257075	1	Fan shroud SN-2016110739
6	23122124	1	Fan shroud SN2016110740-
7	22257079	2	Seal
8	22257082	1	Seal
9	948885	1	Gasket
10	1676622	1	Quick coupling
11	476279	1	Protecting cap
12	984733	6	Flange screw
13	947043	1	Hose nipple

29 - RADIATOR AND CHARGER AIR COOLER



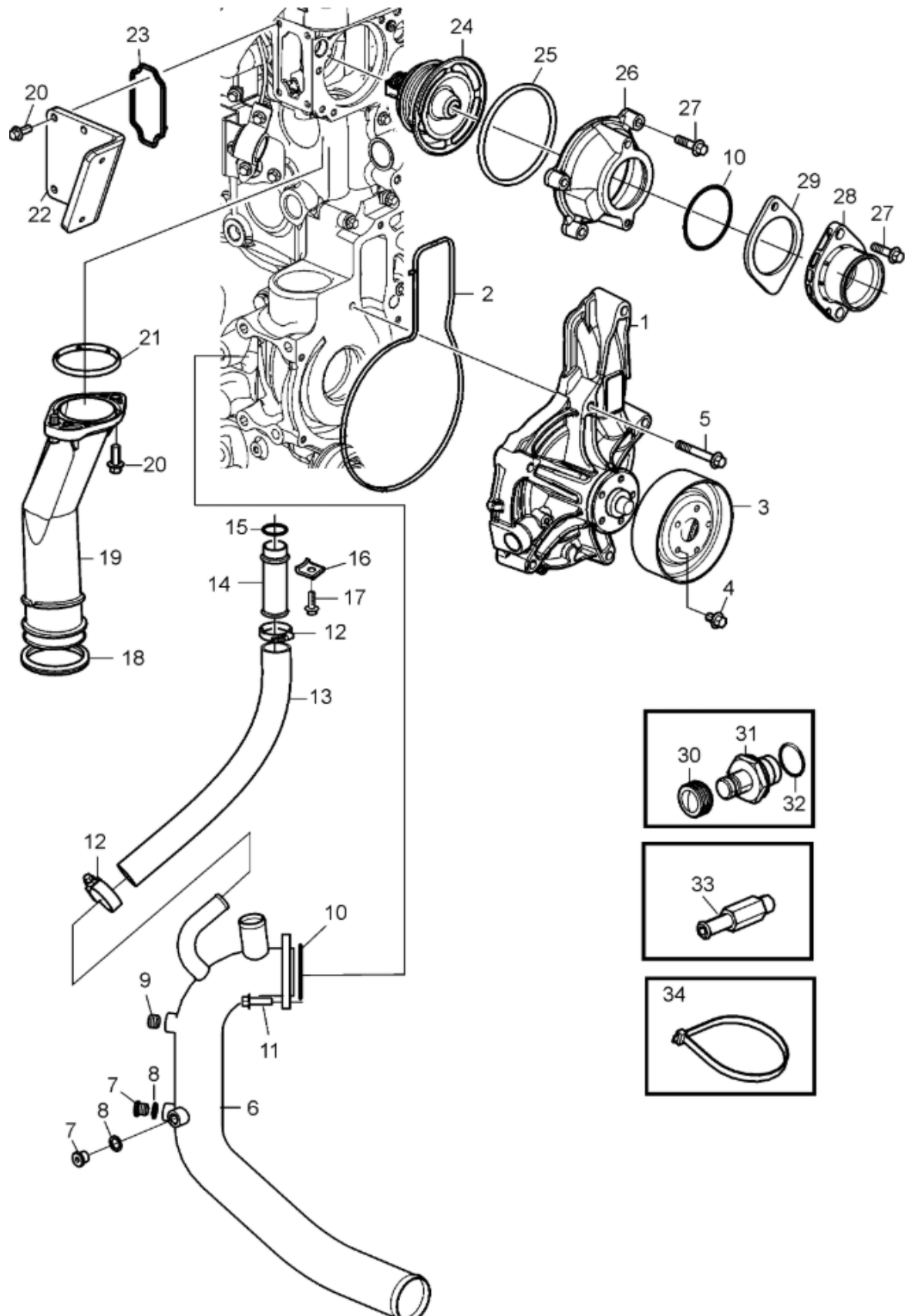
#	Part no	Qty	Description	S
1	22075187	1	Radiator SN-2016107666	
1	23019542	1	Radiator SN2016107734-	
2	961672	4	Hose clamp	
3	22075129	2	Hose	
4	22075185	1	Radiator SN-2016107666	
4	23019545	1	Radiator SN2016107734-	
5	22484849	1	Charge air cooler SN-2016107666	
5	23014436	1	Charge air cooler SN2016107734-	
6	22075126	1	Frame	
7	22075131	2	Bracket	
8	984752	8	Flange screw	
9	22155655	2	Plate	
10	984724	8	Flange screw	
11	3808827	1	Bracket	
12	3808825	1	Bracket	
13	984734	4	Flange screw	
14	984733	50	Flange screw	
15	22272317	1	Bracket	
16	22075124	1	Frame	
17	22075194	1	Frame	
18	22075123	1	Frame	
19	22075190	2	Bracket	
20	22075119	1	Seal	
21	996061	4	Flange screw	
22	22347421	1	Plate	
23	22347412	1	Sealing ring	
24	22347426	1	O-ring	
25	22347425	1	Plug	
26	22465255	1	Cover	
27	22343834	2	Seal	
28	22397409	4	Hex. socket sunk scr	
29	22837691	2	Seal	

30 - OIL COOLER



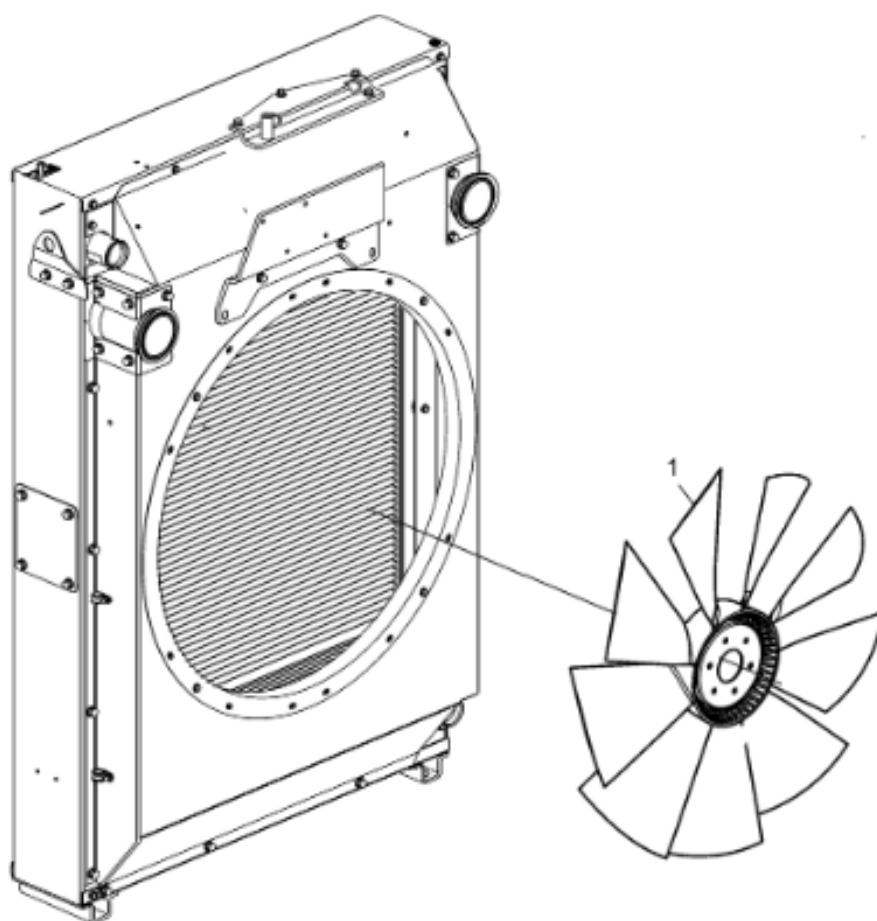
#	Part no	Qty	Description
1	20700516	1	Oil cooler
2	20551483	2	Sealing ring
3	991606	4	Flange screw
4	21426900	1	Cover
5	21302234	1	Gasket
6	960630	1	Plug
7	11994	1	Gasket
8	960629	1	Plug
9	21024032	1	Sealing ring
10	21666520	1	Plug
11	984739	3	Flange screw
12	984738	11	Flange screw
13	969011	2	Gasket

31 - COOLING WATER PUMP



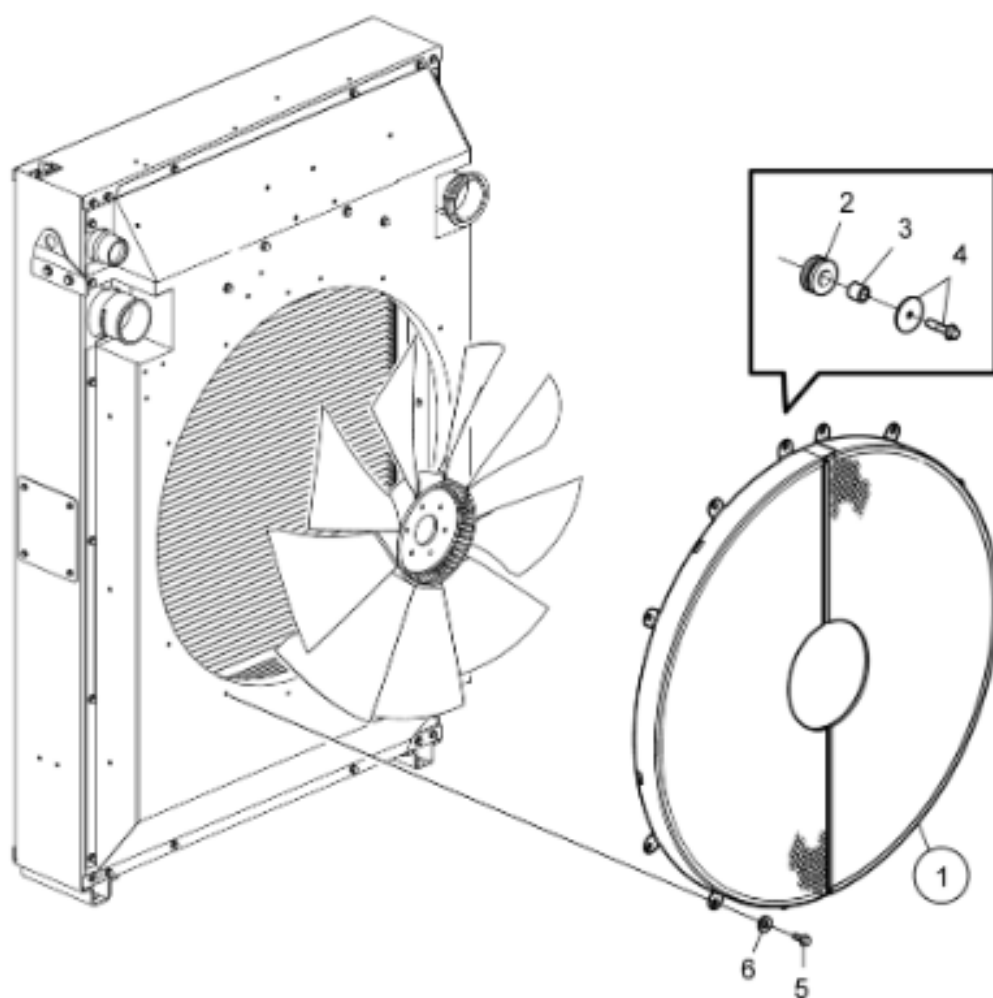
#	Part no	Qty	Description
1	3801418	1	Coolant pump
1	22195450	1	Pump unit SN-2016101135
1	22902431	1	Coolant pump SN2016101136-
1	3801741	1	Coolant pump, exch
2	21103569	1	Rubber moulding
3	20538853	1	Pulley
4	984732	5	Flange screw
5	994386	6	Flange screw
6	22769772	1	Coolant pipe
7	945065	2	■ Plug
8	969011	2	■ Gasket
9	968063	2	■ Plug
10	975675	2	O-ring
11	984735	2	Flange screw
12	21078879	2	Hose clamp
13	969033	1	Rubber hose
14	3838735	1	Connection pipe
15	1547252	1	Sealing ring
16	1546531	1	Lock brace
17	984732	1	Flange screw
18	20799996	1	Sealing ring
19	21420336	1	Connection pipe
20	984734	6	Flange screw
21	21423788	1	Sealing ring
22	22063304	1	Cover
23	8131154	1	Seal
24	21613426	1	Thermostat
25	21503575	1	■ Sealing ring
26	3838404	1	Cover
27	984736	6	Flange screw
28	21843564	1	Coolant pipe
29		1	■ Bracket
30	476279	1	Protecting cap
31	1676622	1	Quick coupling
32	979099	1	Gasket
33	996429	1	Hose nipple
34	980464	1	Cable tie

32 - FAN



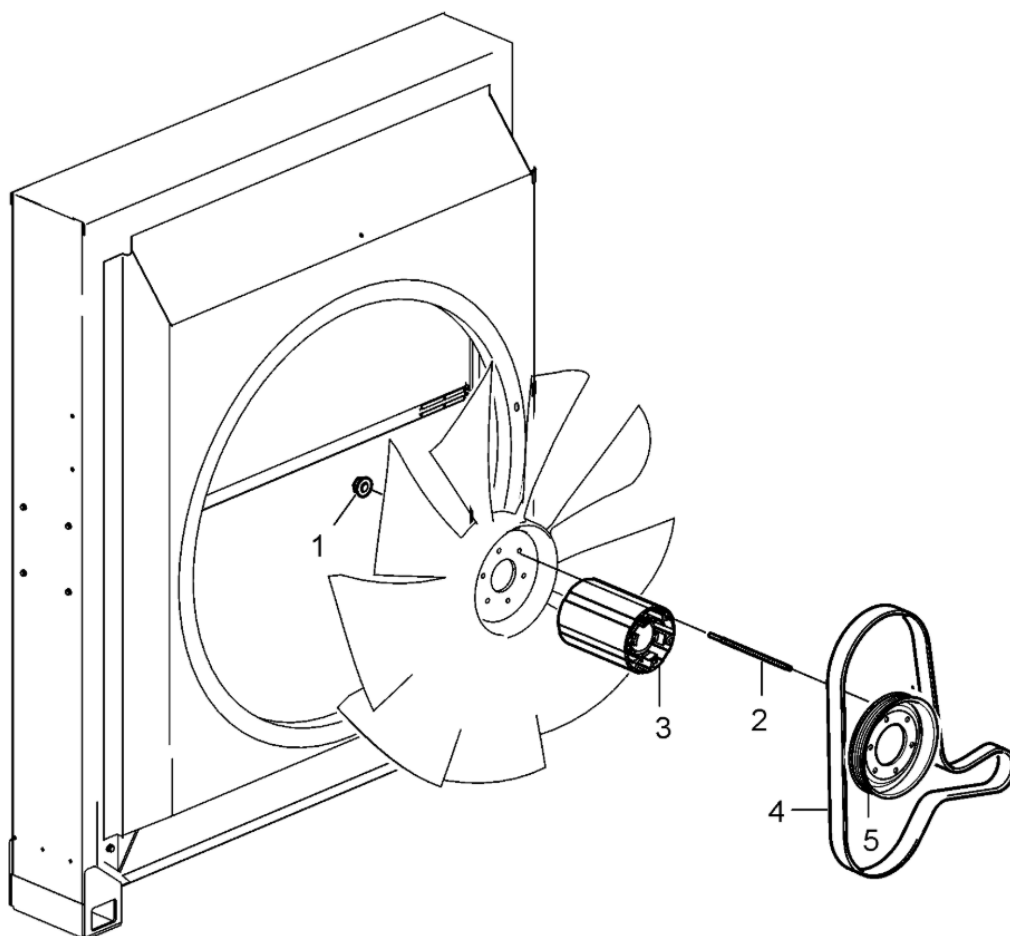
#	Part no	Qty	Description
1	3828964	1	Fan Pushing fan

33 - FAN SHROUD



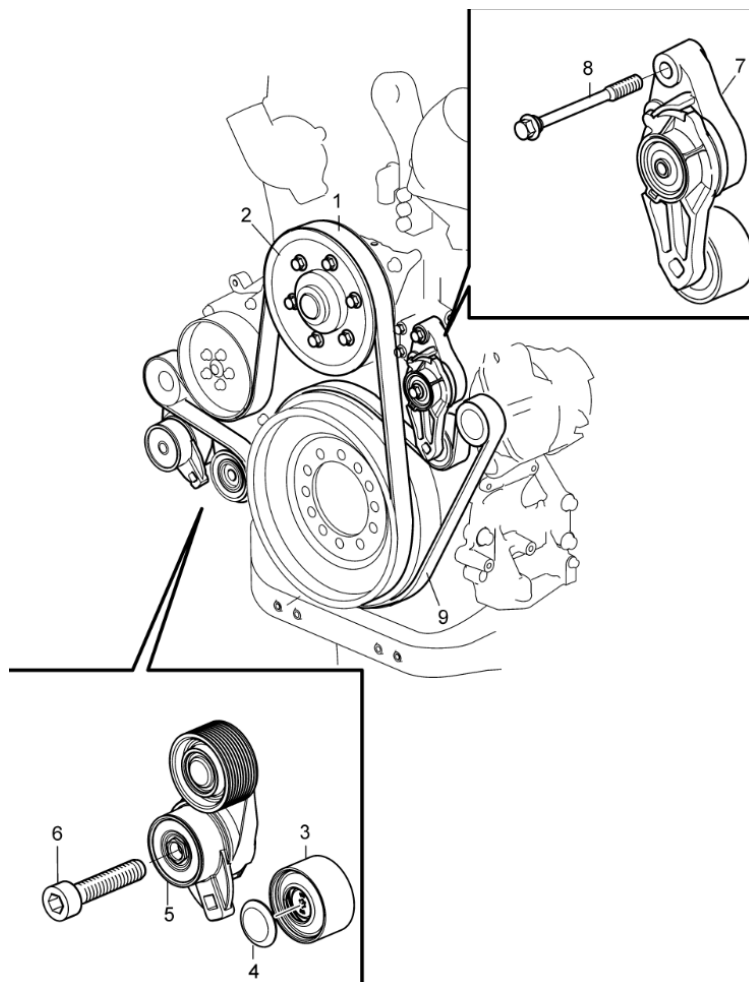
#	Part no	Qty	Description
1	21784986	2	Fan guard SN-2016107282
1	78467466	2	Fan guard SN2016107283-
2	21860181	12	▪ Rubber damper
3	845988	12	▪ Spacer sleeve
4	22147274	12	▪ Flange screw
5	984733	12	Flange screw For Fan Guard :
6	976944	12	Washer For Fan Guard

34 - FAN DRIVE



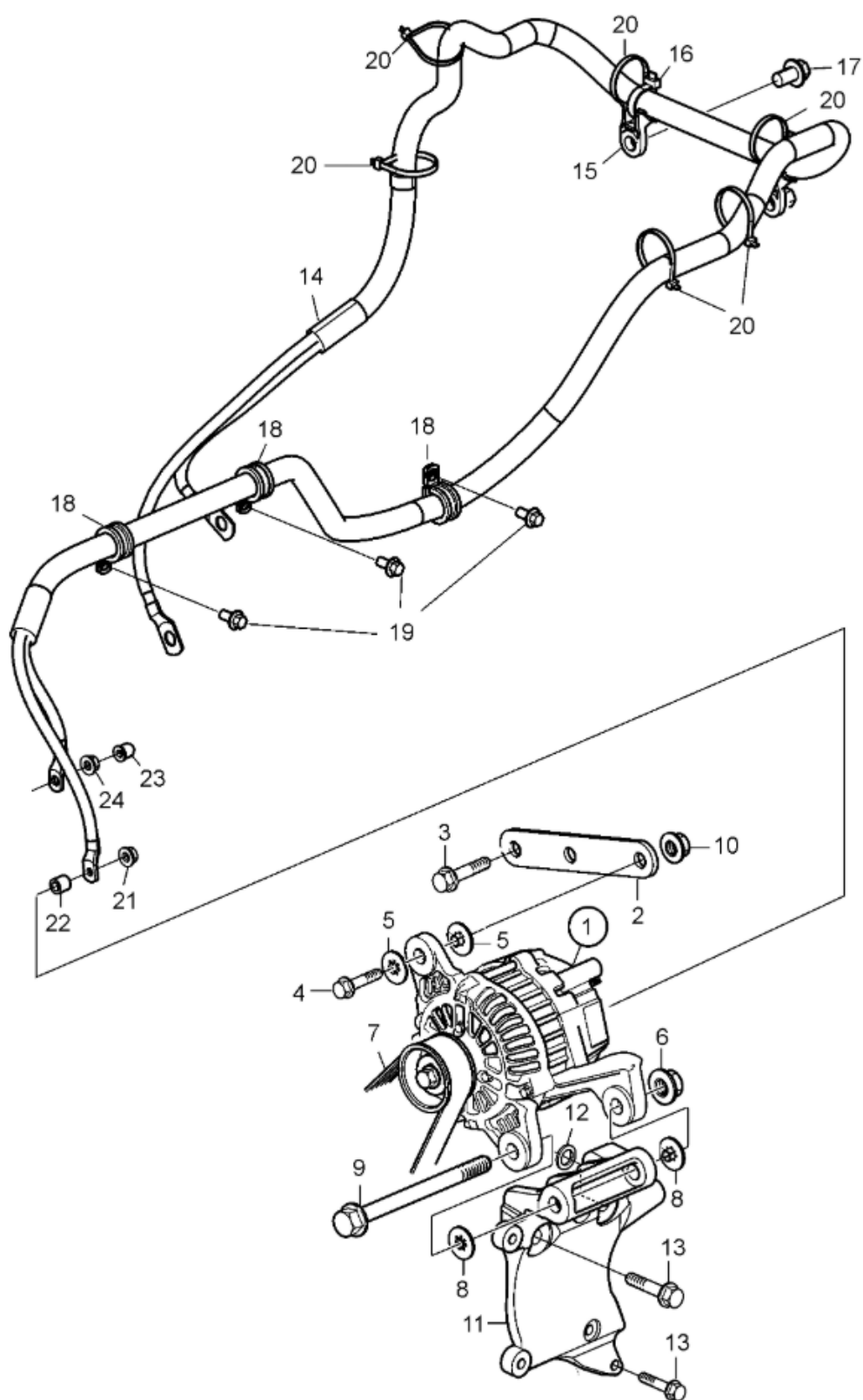
#	Part no	Qty	Description	S
1	990941	6	Flange nut	
2	130204	6	Stud	
3	3829537	1	Fan hub	
4	70326597	1	V-ribbed belt For pulley 3828043	
4	3819398	1	V-ribbed belt For pulley 3829957	
4	3838617	1	V-ribbed belt For pulley 3829958	
5	3828043	1	Pulley Ratio 1:1,08	
5	3829957	1	Pulley Ratio 1:0,97	
5	3829958	1	Pulley Ratio 1:1,0	

35 - BELT TIGHTENER



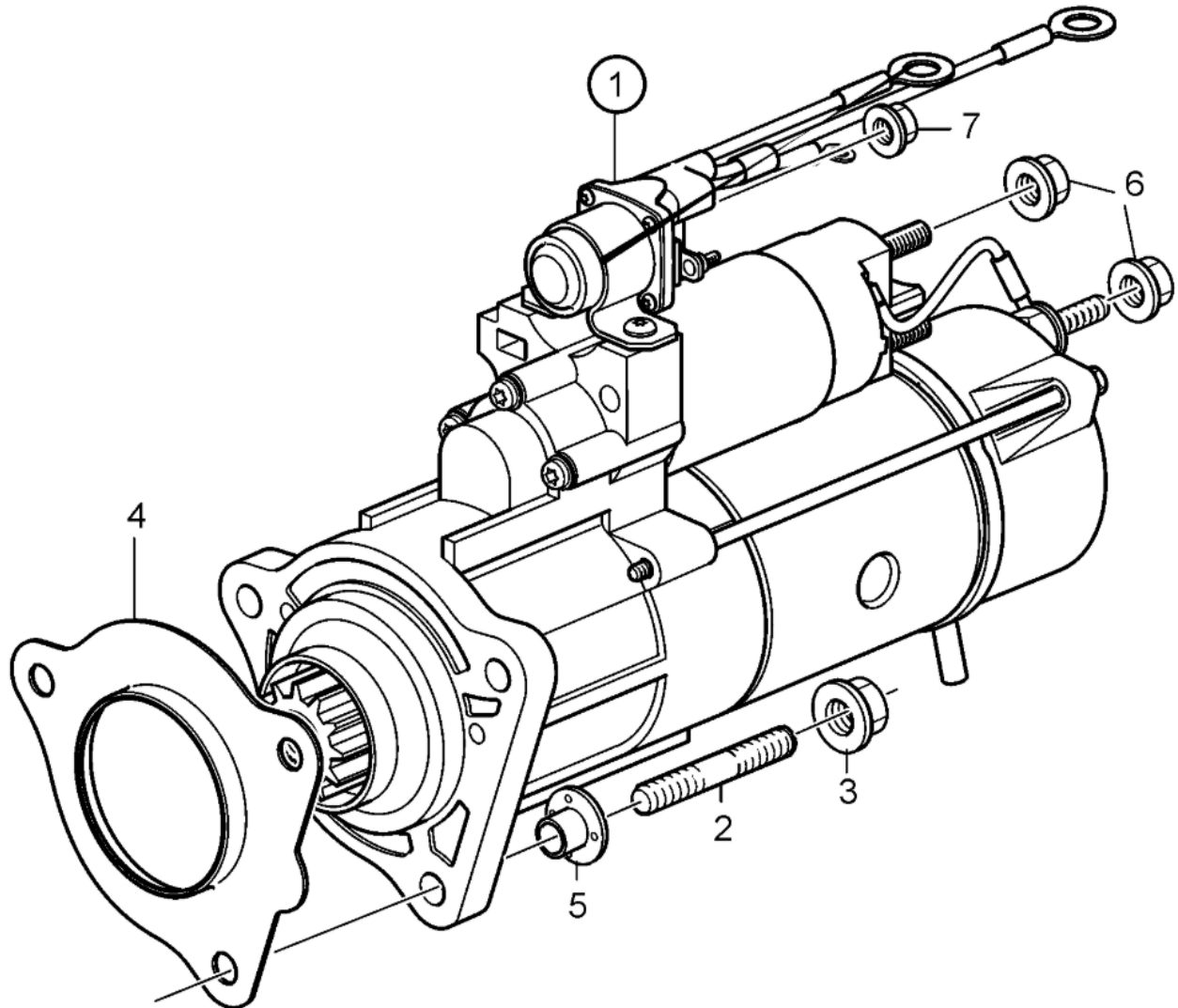
#	Part no	Qty	Description
1	70326597	1	V-ribbed belt For Pulley 3828043
1	3819398	1	V-ribbed belt For Pulley 3829957
1	3838617	1	V-ribbed belt For Pulley 3829958
2	3828043	1	Pulley Ratio 1:1,08 DIA 267mm
2	3829957	1	Pulley Ratio 1:0,93 DIA 244mm
2	3829958	1	Pulley Ratio 1:1,0 DIA 227mm
3	21676635	1	Idler pulley
4	21717627	1	Dust cover
5	21631484	1	Belt tensioner
6	959245	1	Hex. socket screw
7	21422767	1	Belt tensioner
8	21344756	2	Flange screw
9	20430376	1	V-ribbed belt L=1320mm

36 - ALTERNATOR



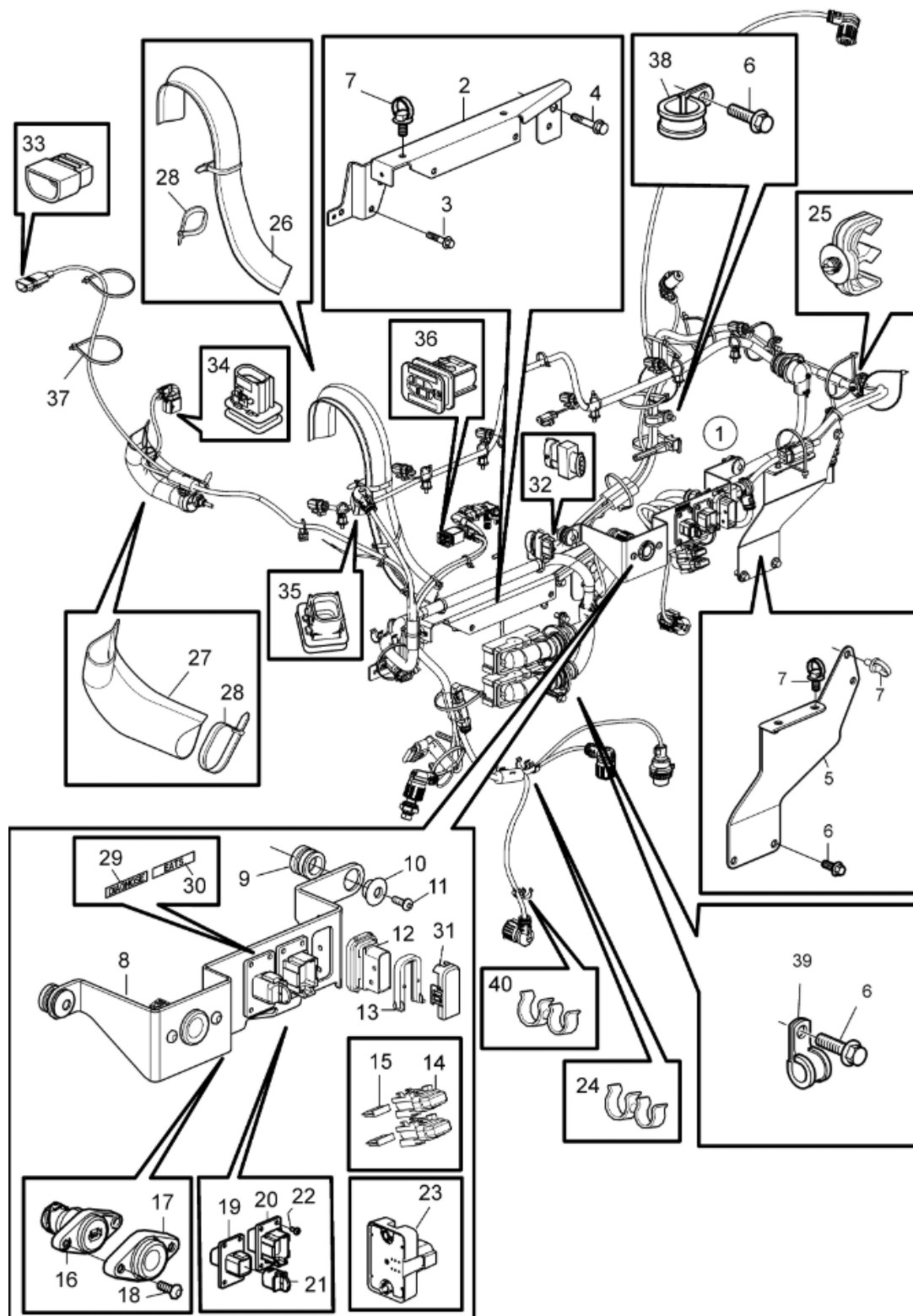
#	Part no	Qty	Description
1	21429786	1	Alternator 28V 110A
1	22591478	1	Alternator 28V/150A
2	3829091	1	Bracket
3	984738	1	Flange screw
4	984752	1	Flange screw
5	21308514	2	Insulating bushing
6	990950	1	Flange lock nut
7	20430376	1	V-ribbed belt
8	21328137	2	Insulating bushing
9	984826	1	Flange screw
10	990960	1	Flange lock nut
11	3885364	1	Bracket
12	8192190	1	Sealing ring
13	969445	4	Flange screw
14	21915982	1	Wiring harness
14	23239795	1	Wiring harness, Braided
15		2	Retainer
16	980464	2	Cable tie
17	984813	2	Flange screw
18	990487	5	Clamp
19	984733	2	Flange screw
20	948211	1	Cable tie
21	983714	2	Hexagon nut
22	1357345	1	Spacer sleeve
23	20576874	1	Cap plug
24	983715	1	Hexagon nut

37 - STARTER



#	Part no	Qty	Description
1	21103722	1	Starter motor
1	3801289	1	Starter motor, exch
2	953098	3	Stud
3	990942	3	Flange nut
4	3888763	1	Gasket
5	21308514	3	Insulating bushing
6	983717	2	Hexagon nut
7	983714	2	Hexagon nut

38 - ELECTRIC



#	Part no	Qty	Description
1	23487217	1	Wiring harness
2	21927928	1	Bracket
3	984737	1	Flange screw
4	984816	2	Flange screw
5	22566969	1	Bracket
6	984733	6	Flange screw
7	980881	6	Cable tie
8	22860712	1	▪ Bracket
9	1079687	3	▪ Rubber cushion
10	1079677	3	▪ Plug
11	969598	3	Six point socket scr
12	994073	1	Housing
13	994291	1	▪ Adapter
14		2	Fuse holder
15	969161	1	Fuse 10A
15	969163	1	Fuse 25A
16	21827824	1	▪ Button
17	21738845	1	▪ Cover
18	986214	2	Six point socket scr
19	992330	1	Housing
20	874432	1	Tab housing
21	3840433	1	Sealing plug
22	972399	8	▪ Six point socket scr
23	21918597	1	▪ Control unit
24	3121512	1	Retainer
25	20440940	2	Retainer
26	3170224	1	Tube
27	20711293	1	Tube
28	22343166	1	Cable tie
29	21243308	1	▪ Decal Diagnose
30		1	Decal EATS
31	995116	1	Cover
32	60110756	1	Housing
33	1307049	1	Housing
34	995107	1	Cover
35	995108	1	Cover

