

**Equipment information**

<b>Equipment:</b>	23412003173
<b>Type:</b>	TBD12 234V
<b>Output:</b>	0000444,0 kW
<b>Speed:</b>	1500 1/min
<b>Build date:</b>	01.03.1993
<b>KLU-Number:</b>	
<b>ETL scope:</b>	EU090571
<b>MVS:</b>	212
<b>Customer:</b>	Henkelhausen GmbH & Co. KG
<b>Location:</b>	Krefeld
<b>Country:</b>	Germany
<b>VKU date:</b>	01.03.1993
<b>VKU' date:</b>	
<b>Commissioning date:</b>	
<b>Begin of guarantee period:</b>	
<b>Man. begin of guar. period:</b>	no
<b>End of guarantee period:</b>	
<b>ID maintenance contract:</b>	
<b>ID insurance contract:</b>	
<b>Guarantee package:</b>	

## Assembly group directory

<b>Equipment:</b>	23412003173	<b>Engine type:</b>	TBD12 234V
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<b>ETL scope:</b>	EU090571		

<b>CG</b>	<b>ETL-No.</b>	<b>Designation (en)</b>	<b>Designation (en)</b>
<b>1</b>		<b>Crankcase</b>	
1	0509 0592	Crankc. end cover	Crankc. end cover
1	0509 0593	Crankc. end cover	Crankc. end cover
1	0509 0670	Crankcase breather	Crankcase breather
1	0509 0676	Blanking parts	Blanking parts
1	0509 0678	Cover	Cover
1	0509 1568	Engine mounting	Engine mounting
1	0509 1575	Crankcase	Crankcase
1	0509 1589	Breather pipe	Breather pipe
1	0509 4011	Cover	Cover
1	0509 4645	Main bearing	Main bearing
<b>2</b>		<b>Oil pan</b>	
2	0509 4394	Oil pan	Oil pan
<b>5</b>		<b>Crankshaft</b>	
5	0509 1269	V-grooved pulley	V-grooved pulley
5	0509 1280	Flywheel	Flywheel
5	0509 1429	Vibration damper	Vibration damper
5	0509 1465	Crankshaft	Crankshaft
<b>6</b>		<b>Connecting rod</b>	
6	0509 0600	Connecting rod	Connecting rod
<b>7</b>		<b>Piston</b>	
7	0509 0599	Piston	Piston
<b>8</b>		<b>Cylinder head</b>	
8	0509 0488	Cylinder head	Cylinder head
8	0509 0640	Valve mechan.cover	Valve mechan.cover
<b>10</b>		<b>Camshaft</b>	
10	0509 1459	Camshaft	Camshaft
<b>11</b>		<b>Timing gears</b>	
11	0509 0596	Valve drive	Valve drive
11	0509 0597	Pushrod	Pushrod
<b>14</b>		<b>Lube oil pump</b>	
14	0509 0646	Gear.oil feed pump	Gear.oil feed pump
<b>15</b>		<b>Lube oil/-cooler</b>	
15	0509 0668	Oil cooler	Oil cooler
15	0509 4272	Lubric. oil filter	Lubric. oil filter
<b>16</b>		<b>Oil pipes</b>	
16	0509 0648	Lubricat. oil line	Lubricat. oil line
16	0509 0664	Oil suction line	Oil suction line
16	0509 1962	Lubricat. oil line	Lubricat. oil line
<b>17</b>		<b>Injection pump</b>	
17	0509 0672	Parts inject.pump	Parts inject.pump
17	0509 1470	Coupling	Coupling
17	0509 4284	Fuel inject. pump	Fuel inject. pump
17	0509 4759	Parts inject.pump	Parts inject.pump
17	0509 4760	Parts of governor	Parts of governor
<b>18</b>		<b>Injection pump drive</b>	
18	0509 4063	Inject. pump drive	Inject. pump drive
<b>19</b>		<b>Injector</b>	

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CG	ETL-No.	Designation (en)	Designation (en)
19	0509 4077	Fuel injector	Fuel injector
<b>20</b>		<b>Fuel filter</b>	
20	0509 1688	Fuel filter	Fuel filter
20	0509 1692	Fuel line	Fuel line
<b>21</b>		<b>Fuel pipes/fuel tank</b>	
21	0509 0666	Leak off line	Leak off line
21	0509 0667	Back leak.connect.	Back leak.connect.
21	0509 4286	High pressure pipe	High pressure pipe
<b>22</b>		<b>Suction pipe/air cleaner</b>	
22	0509 1425	Intake manifold	Intake manifold
22	0509 1633	Bath air cleaner	Bath air cleaner
22	0509 1635	Bath air cleaner	Bath air cleaner
<b>29</b>		<b>Control linkage</b>	
29	0509 4866	Engine speed contr	Engine speed contr
29	0509 4867	Engine speed contr	Engine speed contr
<b>36</b>		<b>Water cooler</b>	
36	0509 4217	Heat exchanger	Heat exchanger
<b>37</b>		<b>Cooling water pump</b>	
37	0509 1273	Centrifugal pump	Centrifugal pump
37	0509 4163	Tensioning pulley	Tensioning pulley
<b>38</b>		<b>Water pipes</b>	
38	0509 1277	Cooling water line	Cooling water line
38	0509 2469	Indirect cooling	Indirect cooling
38	0509 4287	Cooling water line	Cooling water line
<b>39</b>		<b>Cooling air blower</b>	
39	0501 6365	Narrow v-belt	Narrow v-belt
<b>41</b>		<b>Exhaust manifold</b>	
41	0509 0697	Exhaust manifold	Exhaust manifold
41	0509 1955	Exhaust manifold	Exhaust manifold
<b>43</b>		<b>Turbocharger</b>	
43	0509 0653	Turbocharger	Turbocharger
43	0509 0669	Turbocharging assy	Turbocharging assy
43	0509 0692	Parts turbocharger	Parts turbocharger
43	0509 1679	Sheeting/panelling	Sheeting/panelling
<b>44</b>		<b>Alternator/starter motor</b>	
44	0500 3725	Protecting cap	Protecting cap
44	0501 6365	Narrow v-belt	Narrow v-belt
44	0503 2360	V-belt	V-belt
44	0509 0681	Cover	Cover
44	0509 4090	Starter	Starter
44	0509 4602	Alternator	Alternator
44	0509 4603	Driving parts	Driving parts
44	0509 5563	Parts start.motor	Parts start.motor
<b>46</b>		<b>Engine mounting, rigid</b>	
46	0509 1283	Engine mounting	Engine mounting
<b>48</b>		<b>Electrical accessories</b>	
48	0503 3560	Temper.transmitter	Temper.transmitter
48	0503 3561	Switching device	Switching device
48	0509 1026	Oil pressur.switch	Oil pressur.switch

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<b>ETL scope:</b>	EU090571		

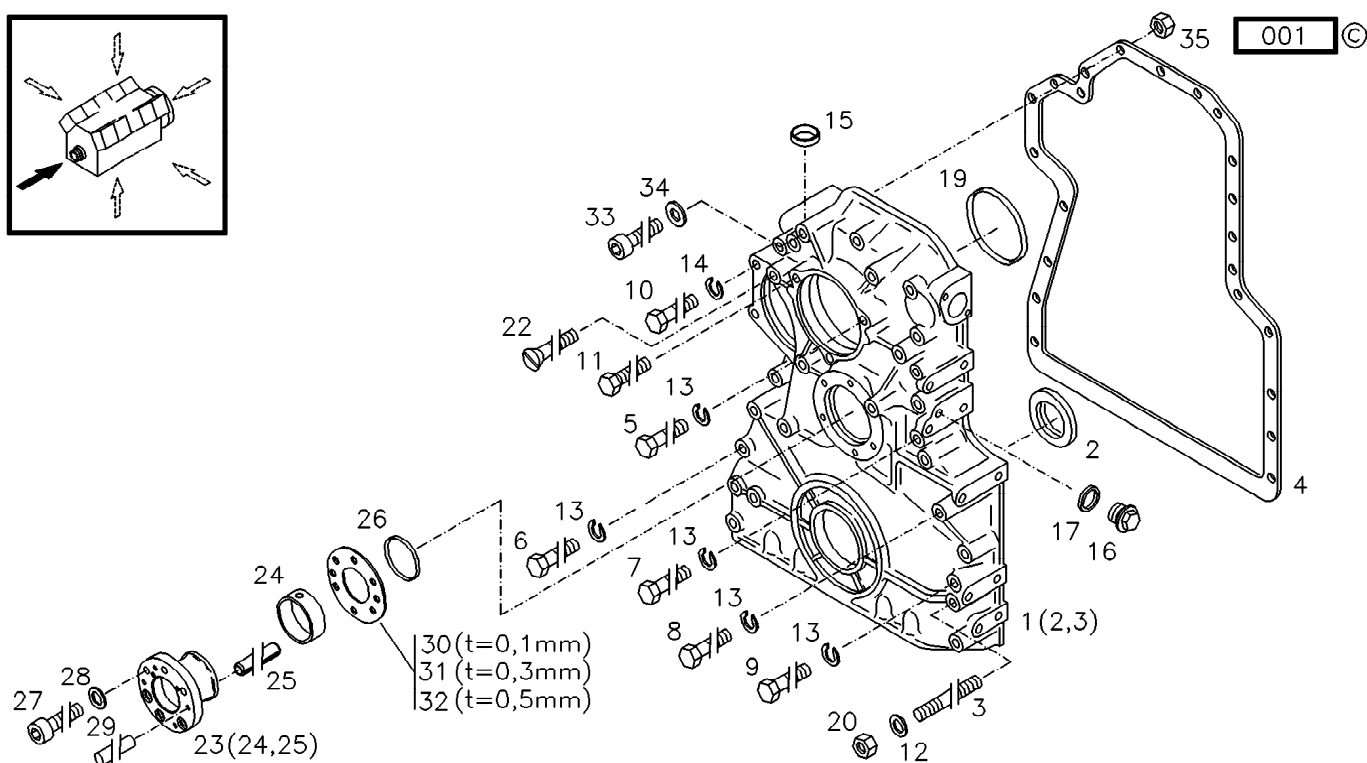
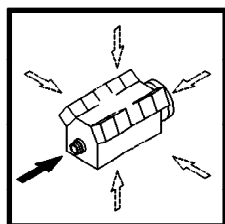
CG	ETL-No.	Designation (en)	Designation (en)
<b>52</b>		<b>Clutch</b>	
52	0509 0647	Flywheel housing	Flywheel housing
<b>56</b>		<b>Engine shutdown</b>	
56	0509 0688	Connector socket	Connector socket
56	0509 1498	Solenoid	Solenoid
<b>57</b>		<b>V-belt guard</b>	
57	0509 4849	V-belt guard	V-belt guard
<b>58</b>		<b>Intercooler</b>	
58	0509 0673	Charge air cooler	Charge air cooler
<b>90</b>		<b>Set of parts</b>	
90	0509 2282	Gasket set	Gasket set
90	0509 2287	Gasket set	Gasket set

ETL no.: 0509 0592 Crankc. end cover

Constr. Group: 01

Equipment: 23412003173  
 Output: 0000444,0 kW  
 ETL scope: EU090571

Engine type: TBD12 234V  
 Speed: 1500 1/min



0509 0592

Item	Material	Kit	MS	VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
1	12188463				1	ST		Crankc. end cover	Crankc. end cover	WITH ITEM.... (2,3)
2	12152276				1	ST		Rot.shaft lip seal	Rot.shaft lip seal	
3	01151604	90	90		2	ST		Stud	Stud	
4	12161804				1	ST		Gasket	Gasket	
5	01111166				1	ST		Hexagon bolt	Hexagon bolt	
6	01111177				1	ST		Hexagon bolt	Hexagon bolt	
7	01111195				3	ST		Hexagon bolt	Hexagon bolt	
8	01111203	20	20		6	ST		Hexagon bolt	Hexagon bolt	
9	01151538				1	ST		Hexagon bolt	Hexagon bolt	
10	01111372				2	ST		Hexagon bolt	Hexagon bolt	
11	01137083	20	20		2	ST		Hexagon bolt	Hexagon bolt	
12	01107283				7	ST		Spring washer	Spring washer	
13	01177981				12	ST		Spring lock washer	Spring lock washer	
14	01178365				2	ST		Spring lock washer	Spring lock washer	
15	01152713				1	ST		Cover	Cover	
16	01100940				1	ST		Screw plug	Screw plug	
17	01118688				1	ST		Sealing ring	Sealing ring	
19	01153947				1	ST		O-seal	O-seal	
20	01122477	20	20		2	ST		Hexagon nut	Hexagon nut	
22	01132357				1	ST		C.sunk head screw	C.sunk head screw	
23	12275022				1	ST		Bearing housing	Bearing housing	WITH ITEM.... (24,25)

ETL no.: 0509 0592    Crankc. end cover    Constr. Group: 01

Equipment:	23412003173	Engine type:	TBD12 234V
Output:	0000444,0 kW	Speed:	1500 1/min
ETL scope:	EU090571		

Item	Material	Kit	MS	VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
24	12200055				1	ST		Bearing bush	Bearing bush	
25	01125638				2	ST		Straight pin	Straight pin	
26	01153853		90	90	1	ST		O-seal	O-seal	
27	01110652		20	20	6	ST		Cheese head screw	Cheese head screw	
28	01154439				6	ST		Plain washer	Plain washer	
29	01105158				2	ST		Parallel pin	Parallel pin	
30	12163847				2	ST		Shim	Shim	
31	12163848				2	ST		Shim	Shim	
32	12163849				2	ST		Shim	Shim	
33	01152868				2	ST		Cheese head screw	Cheese head screw	
34	01154440				4	ST		Plain washer	Plain washer	
35	01125801		20	20	2	ST		Hexagon nut	Hexagon nut	

ETL no.: 0509 0593    Crankc. end cover    Constr. Group: 01

Equipment:

Output:

ETL scope:

23412003173

0000444,0 kW

EU090571

Engine type:

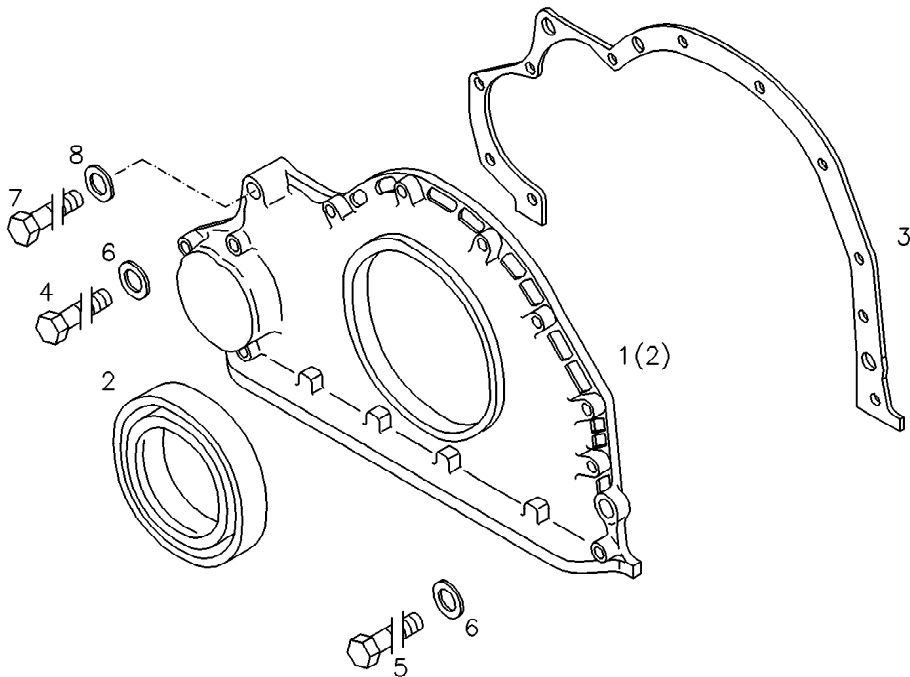
Speed:

TBD12 234V

1500 1/min



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0509 0593

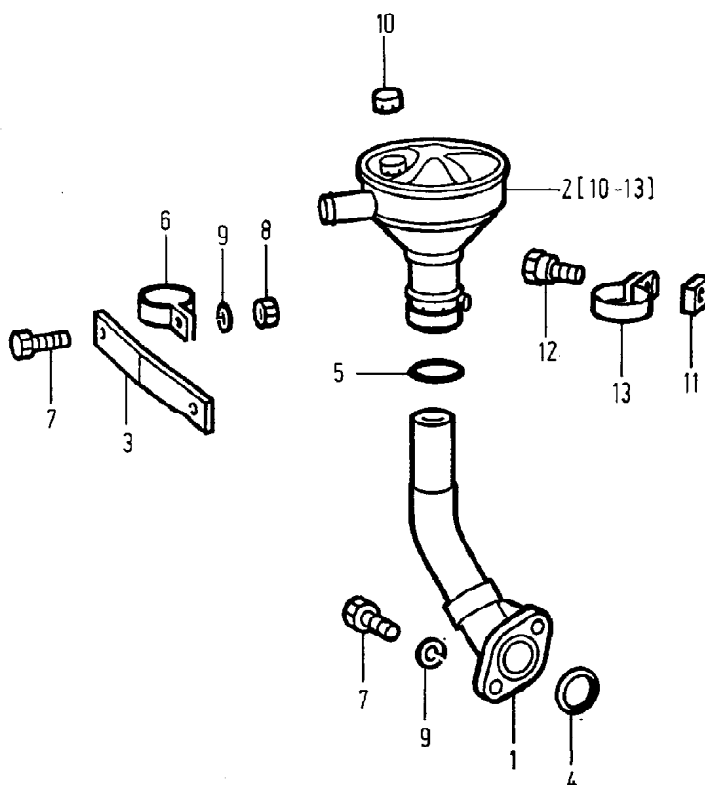
Item	Material	Kit	MS VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
1	12163426			1	ST		Crankc. end cover	Crankc. end cover	WITH ITEM.... (2)
2	12152280			1	ST		Rot.shaft lip seal	Rot.shaft lip seal	
3	12161810			1	ST		Gasket	Gasket	
4	01111156			5	ST		Hexagon bolt	Hexagon bolt	
5	01111166			6	ST		Hexagon bolt	Hexagon bolt	
6	01107283			11	ST		Spring washer	Spring washer	
7	01153608			1	ST		Hexagon bolt	Hexagon bolt	
8	01107292	10		1	ST		Spring washer	Spring washer	

ETL no.: 0509 0670 Crankcase breather

Constr. Group: 01

Equipment: 23412003173  
 Output: 0000444,0 kW  
 ETL scope: EU090571

Engine type: TBD12 234V  
 Speed: 1500 1/min



0509 0670

Item	Material	Kit	MS	VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
1	12163756				1	ST		Tube	Tube	MWM-NR. 6.234.0.942.007 .5
2	12152872	20	20	1	ST			Oil separator	Oil separator	MWM-NR. 6.0525.62.2.001 9
3	12163342			1	ST			Connecting plate	Connecting plate	MWM-NR. 6.234.0.650.006 .4
4	01161340	90	90	1	ST			O-seal	O-seal	MWM-NR. 6.0493.10.4.040 4
5	06214824			1	ST			O-seal	O-seal	MWM-NR. 6.0493.12.8.038 3
6	12151725			1	ST			Pipe clamp	Pipe clamp	MWM-NR. 6.0402.10.1.382 0
7	01112333	20	20	3	ST			Hexagon bolt	Hexagon bolt	MWM-NR. 6.0200.05.0.082 5
8	01122477	20	20	1	ST			Hexagon nut	Hexagon nut	MWM-NR. 6.0210.05.4.008 0
9	01177981			3	ST			Spring lock washer	Spring lock washer	MWM-NR. 6.0216.01.0.008 0
10	12155461	20	20	1	ST			Cap	Cap	MWM-NR. 6.0690.36.1.134 6
11	01152840			1	ST			Square nut	Square nut	MWM-NR. 6.0211.04.0.000 6
12	12156940	90	90	1	ST			Acorn hex. hd bolt	Acorn hex. hd bolt	MWM-NR. 6.0690.74.2.410



ETL no.: 0509 0670    Crankcase breather    Constr. Group: 01

Equipment:	23412003173	Engine type:	TBD12 234V
Output:	0000444,0 kW	Speed:	1500 1/min
ETL scope:	EU090571		

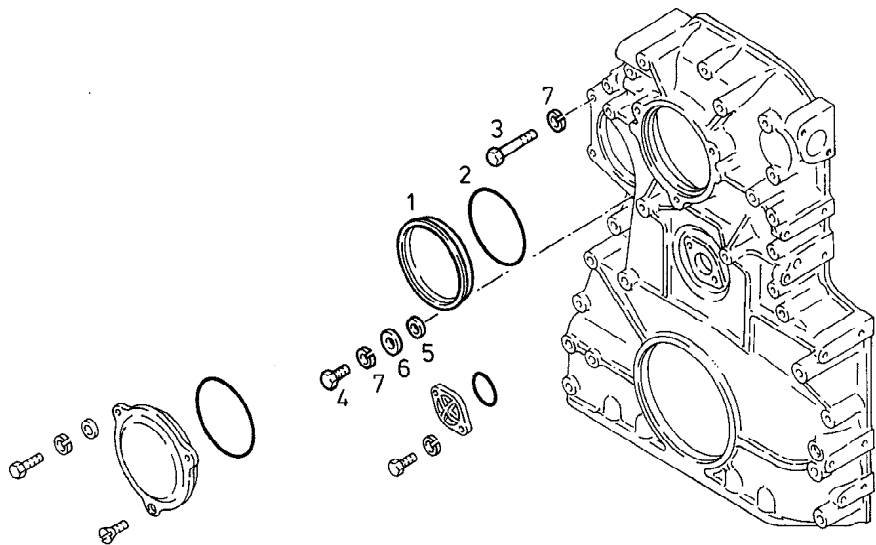
Item	Material	Kit	MS	VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
13	12156344		20	20	1	ST		Pipe clamp	Pipe clamp	1 MWM-NR. 6.0690.65.4.161 3

ETL no.: 0509 0676 Blanking parts

Constr. Group: 01

Equipment: 23412003173  
Output: 0000444,0 kW  
ETL scope: EU090571

Engine type: TBD12 234V  
Speed: 1500 1/min



0509 0676

Item	Material	Kit	MS	VS	Quant	Unit	Ord	Designation (en)	Designation (en)	Remark
1	12162555				1	ST		Cover	Cover	MWM-NR. 6.232.0.976.003 .4
2	01166130		20	20	1	ST		O-seal	O-seal	MWM-NR. 6.0493.10.4.100 3
3	01111166				2	ST		Hexagon bolt	Hexagon bolt	MWM-NR. 6.0200.01.0.086 0
4	01137083		20	20	2	ST		Hexagon bolt	Hexagon bolt	MWM-NR. 6.0200.05.0.082 0
5	12161062				2	ST		Plain washer	Plain washer	MWM-NR. 6.232.0.340.029 .4
6	12164637				2	ST		Plain washer	Plain washer	MWM-NR. 6.305.0.340.010 .4
7	01177981				4	ST		Spring lock washer	Spring lock washer	MWM-NR. 6.0216.01.0.008 0