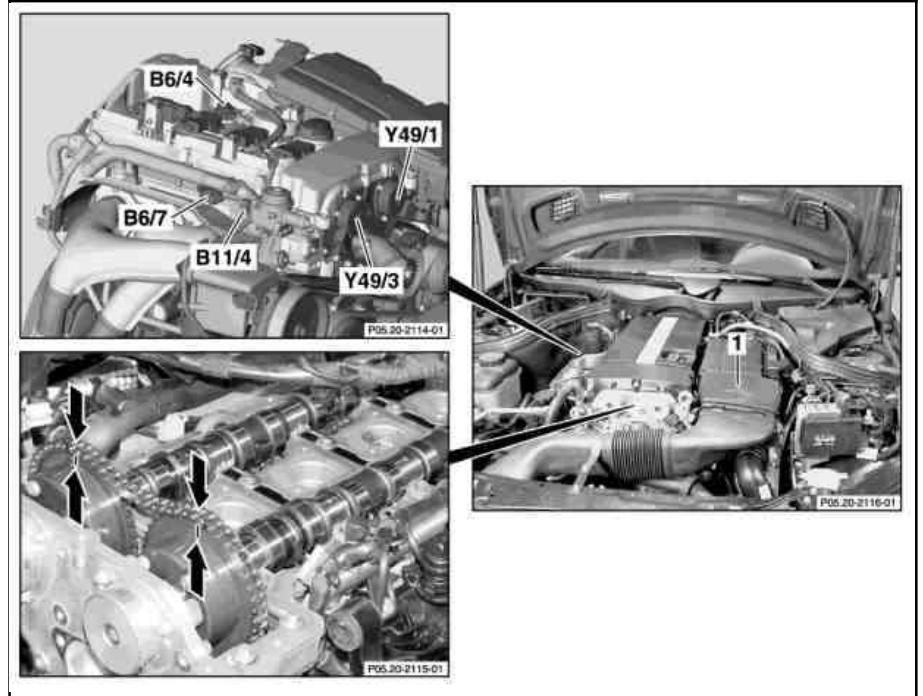


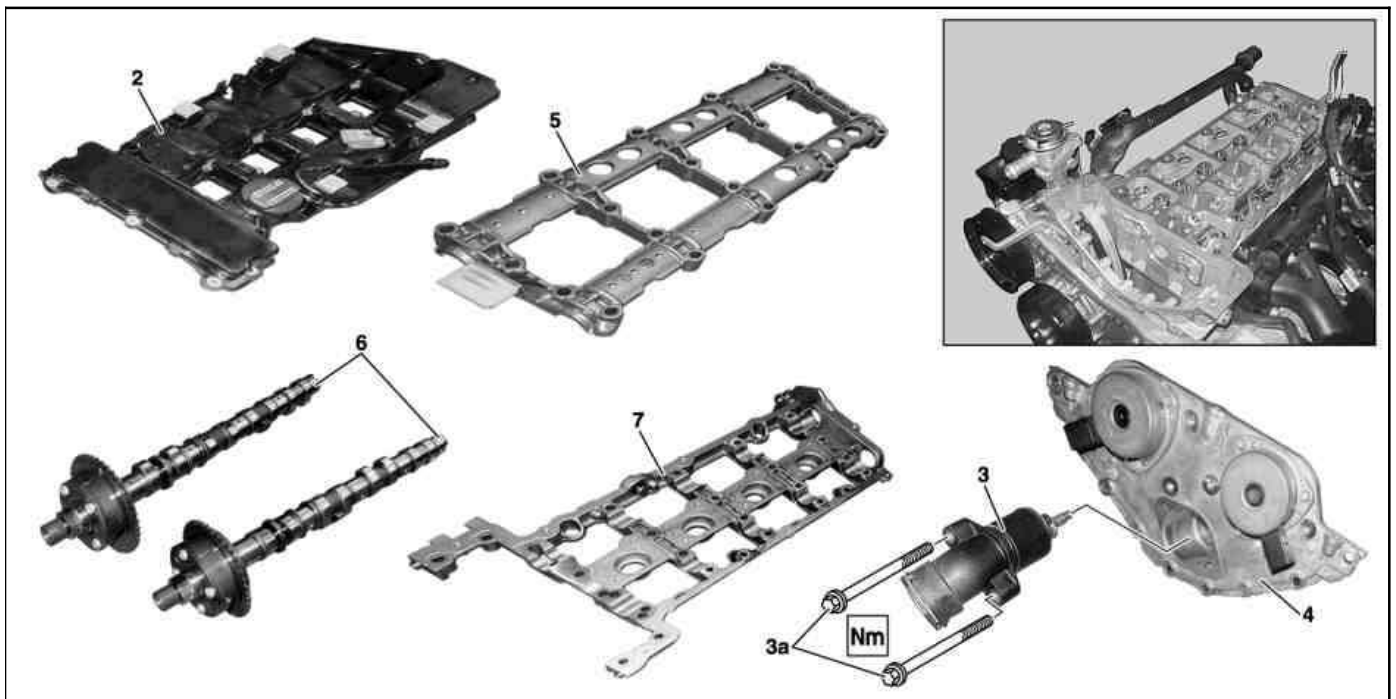
- ENGINE 271.940 in MODELS 203.042 /242 /742, 209.342 /442
- ENGINE 271.941 in MODELS 211.042 /242
- ENGINE 271.946 in MODELS 203.046 /246 /746
- ENGINE 271.948 in MODELS 203.040 /240 /740
- ENGINE 271.942 in MODELS 203.043 /243 /743, 209.343
- ENGINE 271.921 in MODEL 203.730
- ENGINE 271.955 in MODELS 209.341 /441
- ENGINE 271.956 in MODELS 211.041 /241

**1 Air filter housing**

- B6/4** Left intake camshaft Hall sensor
- B6/7** Right exhaust camshaft Hall sensor
- B11/4** Coolant temperature sensor
- Y49/1** Camshaft intake solenoid
- Y49/3** Camshaft exhaust solenoid



P05.20-2117-06



P05.20-2118-09

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|---|--|--|
| <ul style="list-style-type: none"> <li><b>2</b> Cylinder head cover</li> <li><b>3</b> Coolant thermostat housing</li> </ul> | <ul style="list-style-type: none"> <li><b>3a</b> Bolts</li> <li><b>4</b> Front cover</li> <li><b>5</b> Top part of camshaft bearing housing</li> </ul> | <ul style="list-style-type: none"> <li><b>6</b> Camshafts</li> <li><b>7</b> Bottom part of camshaft bearing housing</li> </ul> |
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**Modification notes**

16.4.03	Change in the repair method, to release the timing chain, the chain tensioner is no longer removed, instead the slide rail in the cylinder head is pushed back	Step 9 revised
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	Remove/install		
1	Open engine hood	Model 203 Model 209 Model 211	AR88.40-P-1000P AR88.40-P-1000Q AR88.40-P-1000T
2	Remove air filter housing (1).		AR09.10-P-1150Q
3	Remove engine-side engine wiring harness	For this, detach the plugs of the following components: left intake camshaft Hall sensor (B6/4), right exhaust camshaft Hall sensor (B6/7), coolant temperature sensor (B11/4), camshaft exhaust solenoid (Y49/3), camshaft intake solenoid (Y49/1).	
4	Remove cylinder head cover (2)	Model 203, 209 Model 211	AR01.20-P-5014QK AR01.20-P-5014TK
5	Spin engine at crankshaft in direction of rotation until piston of cylinder 1 is positioned at	The cams of the exhaust camshaft and of the inlet camshaft at cylinder 1 must be pointing up at an angle.	
6	Mark position of camshafts (6)	Mark the position of the camshaft drive gears and the position of the timing chain with a line (see arrows). For a new assembly set up basic position for camshafts.	AR05.20-P-6020QK
7	Remove guide pulley of poly V-belt		*BA01.40-P-1001-01K
8	Remove coolant thermostat housing (3)		*BA01.30-P-1009-01J
9	Remove front cover (4) at cylinder head		AR01.30-P-5700QK
10	Release timing chain		AR05.10-P-7605-01TK
11	Remove top part of camshaft bearing housing (5)	 <b>Installation:</b> Pay attention to tightening pattern of camshaft case	*BA01.30-P-1003-01J AR05.20-P-6995-01QK
12	Remove camshafts (6)	At the same time unhinge timing chain and secure against falling down.	AR05.20-P-6992QK
13	Remove left exhaust camshaft Hall sensor (B6/7)		
14	Loosen shield of exhaust manifold	Only unscrew mounting screw at shield.	
15	Remove bottom part of camshaft bearing housing (7)  Notice for sealing compound blend of camshaft bearing housing subdivision (7)	Heat sealing compound with a  hot air gun and then carefully pry off bottom part of camshaft bearing housing (7). <b>Installation:</b> Clean sealing surfaces and apply fresh sealant.  	*BR00.45-Z-1013-01A *BA01.30-P-1004-01J AH05.20-P-6995-01QK *WH58.30-Z-1004-20A
16	Install in the reverse order		

**Cylinder head**

Number	Designation				Engine 271
BA01.30-P-1003-01J	Bolt, upper part of camshaft bearing housing to cylinder head	M7	Stage 1	Nm	10
			Stage 2	∠°	90
BA01.30-P-1004-01J	Bolt, lower part of camshaft bearing housing to cylinder head	M7		Nm	14
BA01.30-P-1009-01J	Bolt, thermostat housing to cylinder head	M6		Nm	9

**Crankcase, timing case cover, end cover**

Number	Designation	Engine 271

BA01.40-P-1001-01K	Bolt, guide pulley to timing case	Nm	20
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**Commercially available tools**

Number	Designation
WH58.30-Z-1004-20A	Hot-air gun

**Repair materials**

Number	Designation	Order number
BR00.45-Z-1013-01A	Sealant	A 003 989 98 20