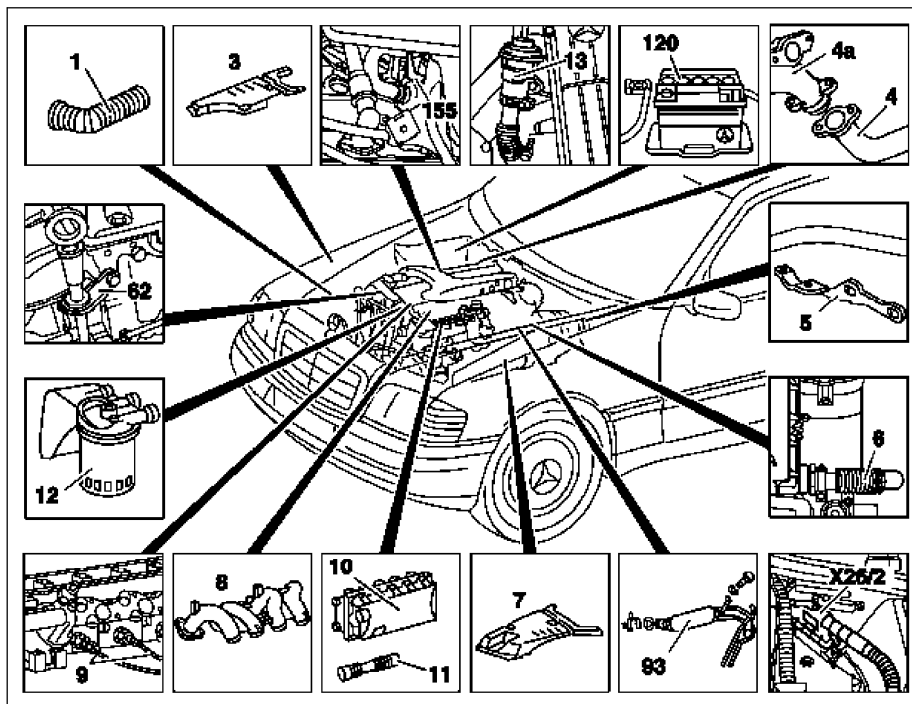


ENGINE 601 in MODEL 124, 201, 202

ENGINE 602 in MODEL 124, 201

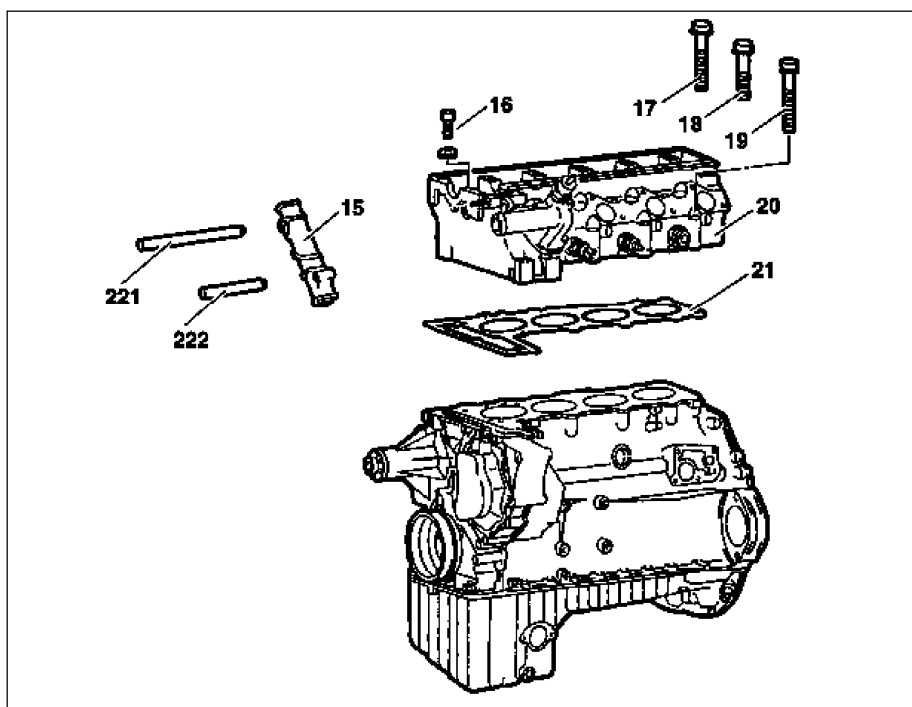
ENGINE 603 in MODEL 124, 126, 140

- 1 Intake hose
 3, 7 Cover
 4 Exhaust pipe
 4a Exhaust manifold
 5 Exhaust side support
 6 Exhaust gas recirculation line
 8 Intake manifold
 9 Glow plug connection line
 10 Air filter
 11 Air intake hose
 12 Fuel filter
 13 EGR valve
 62 Bracket
 93 Manifold of heater feed line
 120 Battery
 155 Supporting strut
 X26/2 Plug connection



P01.30-0363-06

- 15 Slide rail cylinder head
 16 Hexagon socket head screws of cylinder head to timing case cover
 17 Cylinder head bolts
 18 Cylinder head bolts
 19 Cylinder head bolts
 20 Cylinder head
 21 Cylinder head gasket
 221 Slide rail pins
 222 Slide rail pins




P01.30-0364-06

Modification notes

1.1.91	Cylinder head bolts changed	Refer to Step 24	BT01.30-P-0003-01A
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	Remove/Install		
	Remove cylinder head only once the engine has cooled off		
1	Remove camshaft	Installation: Check basic position of camshaft	ra05006010220x AR05.20-P-6010HW
2	Remove nozzle holder	On naturally aspirated engine On turbocharged engine	ra07016010230x ra07016026810x

3	Remove radiator	Models 124, 126, 140, 201 Model 202	AR20.20-P-3865HW AR20.20-P-3865HA
4	Remove poly V-belt		AR13.25-P-3200HW
5	Pinch-off ground line at battery (120)		AR54.10-P-0003A
6.1	Remove air intake hose (11) and air cleaner cover (10) with filter insert	Naturally aspirated engine	
7.1	Detach cover (3, 7)	Model 140	
8.1	Detach intake hose (1) to turbocharger	On turbocharged engine	
9.1	Unscrew supporting strut (155) of heater return line	On turbocharged engine	
10.1	Unscrew pressure oil line charger to cylinder crankcase	On turbocharged engine	ra09006026020x
11	Detach fuel filter (12)	 For this step pinch off fuel line and unbolt bolts to cylinder head.	
12	Unbolt bracket (62) of oil dipstick guide tube		
13.1	Detach pipe line (6) between exhaust gas recirculation valve and intake manifold or charge air distribution pipe	For engine fitted with exhaust gas recirculation	
14.1	Detach exhaust gas recirculation (13) line to air guide housing	For engine fitted with exhaust gas recirculation	
15	Unbolt exhaust side support (5) at transmission		
16	Unscrew exhaust pipe (4) from exhaust manifold	On naturally aspirated engine On turbocharged engine	ra49006010100x ra49006027000x
17.1	Remove manifold of heater feed at rear left cylinder head	For engines fitted with exhaust gas recirculation Installation: Replace O-ring	
18	Unscrew glow plug connection line (9)		
19.1	Unplug connector (X26/2)	Model 202	
20	Remove intake manifold (8) on naturally aspirated engine or charge air distribution pipe on turbocharged engine	On naturally aspirated engine On turbocharged engine	ra14006010180x ra14006021310x
21	Knock out slide rail pins (221, 222) at cylinder head	Installation: Coat collar of sliding rail pins with sealing mass. 	AR01.30-D-5800-04B *116589203300 *116589013400 *605589003300 *BR00.45-Z-1010-01A
22	Take slide rail (15) of timing chain out of chain case		
23	Unscrew hexagon socket head screws (16) in chain case		*BA01.40-P-1002-01A
BT 24	Cylinder head bolt changed Unscrew cylinder head bolts (17, 18, 19) in reverse order of tightening pattern	 Loosening/tightening pattern Installation: Check length and if necessary use new cylinder head bolts. Observe different bolt length and tightening instructions. Oil thread and bolt head contact surface before assembling 	BT01.30-P-0003-01A *601589001000 AR01.30-P-5800-01HW AR01.30-P-5800-03HA *BE01.30-P-1001-04A *BA01.30-P-1003-01C
25	Remove cylinder head (20) together with cylinder head gasket (21)	Clean separating surfaces and check for cracks. Install cylinder head together with new seal.	
26	Clean threaded holes of cylinder head bolts	blow out with compressed air	
27.1	Remove oil from cooling and heating system	If oil present in cooling and heating system	ra20006010016x
28.1	Remove overflow tank and clean	If oil present in cooling and heating system Engine 602.96 in Model 124, 201 Engine 603.96 in Model 124 Engine 603 in Model 140	AR20.30-P-4540HW AR20.30-P-4540HX
29	Install in the reverse order		

30	Check engine oil level, adjust to correct level.		
31	Inspect cooling system for leaks		AR20.00-P-1010HA
 Danger!	Risk of accident caused by vehicle starting off by itself when engine is running. Risk of injury caused by contusions and burns when working in engine during starting procedure	Secure vehicle to prevent it from moving. Wear closed and snug-fitting work clothes. Do not grasp hot or rotating parts.	AS00.00-Z-0005-01A
32	Run engine and inspect for leaks		
33	Read fault memory, erase		AD00.00-P-1000AZ

Cylinder head/cylinder head bolts

Number	Designation	Engines 601, 602 except 602.98, 603		
BE01.30-P-1001-04A	Cylinder head bolt	Thread diameter	M	10
		Length (L) when new	mm	80/102/115
		max. length (L)	mm	82/104/117
		Fig. see		-

Cylinder head tightening torques

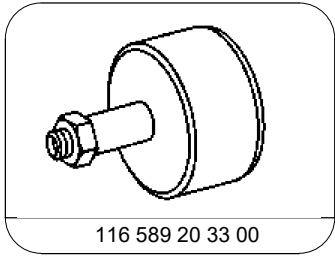
Number	Designation		Engine 601	Engine 602 except 602.98
BA01.30-P-1003-01C	Cylinder head bolt M10	1st stage	Nm 15	15
		2nd stage	Nm 35	35
		Step 3	∟° 90	90
		Settling time	min 10	10
		4th stage	∟° 90	90
		Fig. see	-	-

Cylinder head tightening torques

Number	Designation		Engine 603
BA01.30-P-1003-01C	Cylinder head bolt M10	1st stage	Nm 15
		2nd stage	Nm 35
		Step 3	∟° 90
		Settling time	min 10
		4th stage	∟° 90
		Fig. see	ra01006010415x

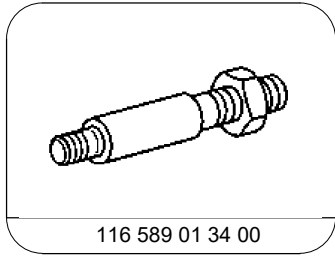
Crankcase, timing case cover, end cover

Number	Designation		Engine 601, 602 except 602.98, 603
BA01.40-P-1002-01A	Bolt of cylinder head to timing case cover	Nm	25



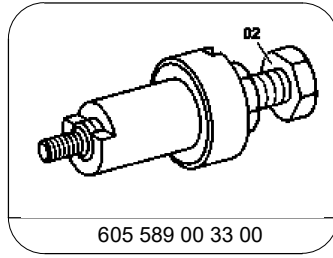
116 589 20 33 00

Impact extractor



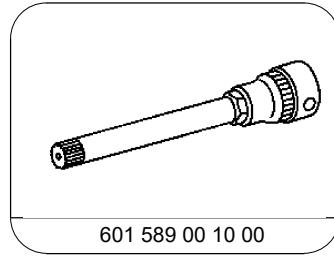
116 589 01 34 00

Threaded pin



605 589 00 33 00

Extractor



601 589 00 10 00

Screwdriver bit

Auxiliary repair materials

Number	Designation	Order number
BR00.45-Z-1010-01A	Loctite 574 sealant	001 989 89 20