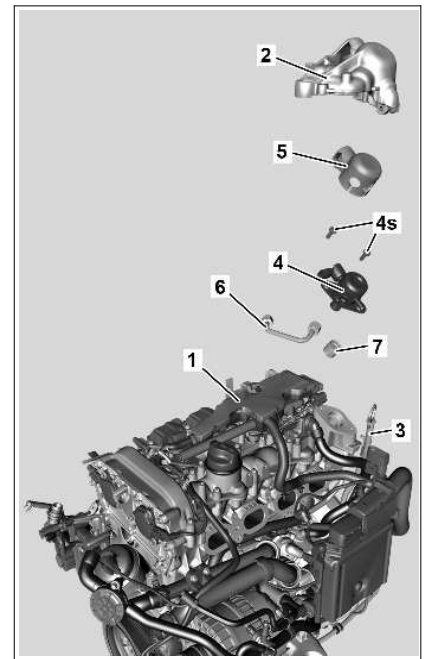


Engine 274.9 in model 213

Engine 274.9 in model 238




















Shown on engine 274.9 in model 213 (except 213.050)





- 1 Cable duct
- 2 Shielding
- 4 High pressure pump
- 4s Bolts
- 5 Soundproofing
- 6 High pressure pipe
- 7 Tappet element




P07.02-2158-03

Danger	Risk of explosion caused by fuel igniting. Risk of injury to skin and eyes caused by fuel spraying out at high pressure	Keep all ignition sources out of hazard area. Do not carry out any work on system when it is pressurized.	AS07.16-Z-0001-01A
Danger	Risk of explosion caused by fuel igniting, risk of poisoning caused by inhaling and swallowing fuel as well as risk of injury to eyes and skin caused by contact with fuel.	No fires, sparks, open flames or smoking. Pour fuels into suitable and appropriately marked containers only. Wear protective clothing when handling fuel.	AS47.00-Z-0001-01A
Topical note	Notes on threaded connections fastened using a tightening angle-based tightening process		AH00.00-P-0020-01A
Topical note	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
Topical note	Notes on avoiding damage through contamination and foreign objects		AH00.00-P-5000-01A
	Note on calculation of tightening torque when using insertion or socket tools with various effective lengths		AH00.00-P-0015-01CW
	General information on work on gasoline direct injection system		AH07.00-P-2000-01A
	Remove		
1	Remove center and rear sections of lower engine compartment lining.		AR61.20-P-1105LWE
2	Remove fuel pressure via the service connection.	Dust cap at service connection Pressure hose	AR07.03-P-1460-01MR *BA07.03-P-1003-01F *119589046300
3	Disconnect ground line from battery.	Engine 274.9 in model 238 Engine 274.9 in model 213	AR54.10-P-0003LWO AR54.10-P-0003LW
4	Remove upper engine cover.		
5	Remove soundproofing.	Engine 274.9 in model 213 except code 920 (Direct petrol injection with stratified charging) Engine 274.9 in model 238 except code 920 (Direct petrol injection with stratified charging)	AR94.30-P-5410MRD
6	Remove engine air intake duct upstream of air filter.		

7	Rotate engine using center bolt of crankshaft in direction of engine rotation to a crank angle (CKA) of 79° after top dead center (TDC) at cylinder 1.	 Socket wrench bit	*001589650900
8	Remove cable duct (1).		
9	Release and disconnect electrical connection of high-pressure pump (4).		
10	Remove shielding (2).	Tightening procedure  Unfasten shielding (2) counter to the tightening procedure.	AR07.02-P-0815-01MR
11	Remove soundproofing(5).		
12	Clean area around the high-pressure pump (4) and high-pressure line (6).	Assembly cleaner	*BR00.45-Z-1028-04A
13	Release fuel pressure in the fuel high-pressure circuit.		AR07.03-P-1460-02MM
14	Remove low-pressure line from the high-pressure pump (4) and seal connections with suitable stop plugs.	 Record plug  Pliers for click clamps	*129589009100 *171589003700
15	Remove high-pressure line (6) and seal connections with suitable stop plugs.	 Do not kink or bend high-pressure line (6). Otherwise leaks and damage can occur.  Record plug  Box wrench bit	*129589009100 *000589800300
16	Remove screws (4s).	 Remove screw/bolt (4s) alternately respectively by half a revolution. Damage may occur otherwise to the high-pressure pump (4).	
17	Remove high-pressure pump (4).		
18	Pull tappet element (7) out of the cylinder head cover.		
	Check		
19	Check tappet element (7) for wear and damage.	If damage or wear is present, ↓ replace tappet element (7).	
20	Check high-pressure line (6).	Assembly cleaner If damage is present, ↓ Replace the high-pressure line (6).	AR07.03-P-1010-03MM *BR00.45-Z-1028-04A
	Clean		
21	Clean mount for high-pressure pump (4) in the cylinder head cover.		
	Install		
22	Position the tappet element (7) in the cylinder head cover.	 The drive roller of the tappet element (7) must sit on the camshaft. The camshaft can get damaged otherwise.	
23	Replace sealing ring of the high-pressure pump (4).		
24	Position high-pressure pump (4) in cylinder head cover.		
25	Screw in new screws (4s).	 Screw in screw/bolts (4s) alternately each by half a revolution. Damage may occur otherwise to the high-pressure pump (4).  The high-pressure pump (4) must lie flat on the cylinder head cover () after tightening the screw/bolts (4s). Otherwise leaks and damage can occur to the high-pressure pump (4).  Bolt, high-pressure pump to cylinder head cover	*BA07.02-P-1003-01D
26	Install the high-pressure line (6).	 Union nut, fuel line to high-pressure pump  Union nut, fuel line to fuel distributor  Box wrench bit	AR07.03-P-1010-02MR *BA07.03-P-1002-01F *BA07.03-P-1001-01F *000589800300
27	Attach low-pressure line with new clamp to the high-pressure pump (4).	 Pliers for click clamps	*171589003700

28	Install soundproofing (5).		
29	Install shielding (2).	Tightening procedure  Bolt for high-pressure pump shielding	AR07.02-P-0815-01MR *BA07.02-P-1004-01D
30	Attach cable duct (1).	 M6 × 1	*BA00.10-P-1002-04A
31	Connect electrical connector of the high-pressure pump (4).		
32	Install engine air intake duct upstream of air filter.		
33	Connect ground line to the battery.	Engine 274.9 in model 238 Engine 274.9 in model 213	AR54.10-P-0003LWO AR54.10-P-0003LW
34	Install soundproofing.	Engine 274.9 in model 213 except code 920 (Direct petrol injection with stratified charging) Engine 274.9 in model 238 except code 920 (Direct petrol injection with stratified charging)	AR94.30-P-5410MRD
35	Switch on ignition.	 Switch on ignition for 5 s before engine start to fill high-pressure pump (4) with fuel. Damage may occur otherwise to the high-pressure pump (4).	
36	Check the fuel high-pressure circuit.	Engine 274.9 in model 238 Engine 274.9 in model 213	AR07.03-P-1010-04MM AD00.00-P-2000-06LWO AD00.00-P-2000-04B
 Warning	Risk of accident from vehicle starting off by itself when engine running. Risk of injury (bruises and burns) resulting from working on the engine while it is being started or when it is running. Perform engine test run. While doing so, check engine for proper operation and leak tightness.	Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
37			
38	Install center and rear lower engine compartment lining.		AR61.20-P-1105LWE
39	Install upper engine cover.		

 Metric screws/bolts and nuts as per MBN 10 105, 10 143


Number	Designation	8.8	10.9
BA00.10-P-1002-04A	M6 × 1	Nm 9	13

 High pressure pump


Number	Designation	Engine 274
BA07.02-P-1003-01D	Bolt, high-pressure pump to cylinder head cover	Nm 14

 High pressure pump

Number	Designation	Engine 274
BA07.02-P-1004-01D	Bolt for high-pressure pump shielding	Nm 20

 Injection nozzles, injection valves, lines

Number	Designation	Engine 274
BA07.03-P-1001-01F	Union nut, fuel line to fuel distributor	Stage 1 Nm 15
		Stage 2 ∠° 75
		Stage 3 ∠° 25

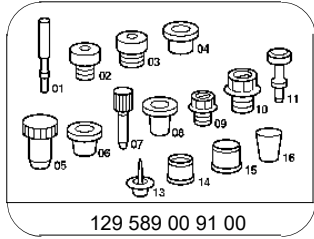
 Injection nozzles, injection valves, lines

Number	Designation	Engine 274
BA07.03-P-1002-01F	Union nut, fuel line to high-pressure pump	Stage 1 Nm 15

	Stage 2	4°	75
	Stage 3	4°	25

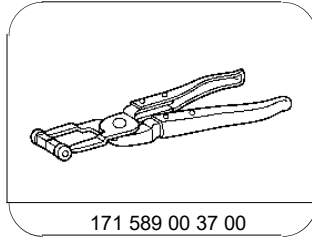
Nm Injection nozzles, injection valves, lines

Number	Designation			Engine 274
BA07.03-P-1003-01F	Dust cap at service connection	Plastic	Nm	2
		Metal	Nm	15



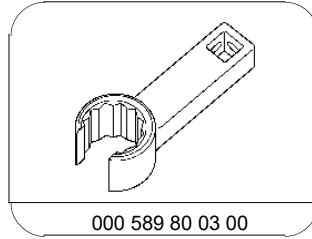
129 589 00 91 00

Record plug



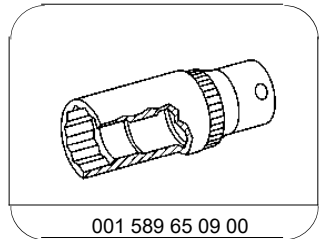
171 589 00 37 00

Pliers for click clamps



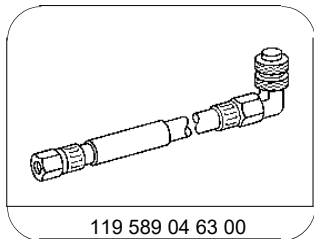
000 589 80 03 00

Box wrench bit



001 589 65 09 00

Socket wrench bit



119 589 04 63 00

Pressure hose

Repair materials

Number	Designation	Order number
BR00.45-Z-1028-04A	Assembly cleaner	A 000 986 56 01