

Engine 276 in model 212, 218

### Modification notes

24.09.2014	Union nut, fuel line to high-pressure pump		BA07.03-P-1002-01D
24.09.2014	Union nut, fuel line to fuel distributor		BA07.03-P-1001-01D

### Shown on model 212.080

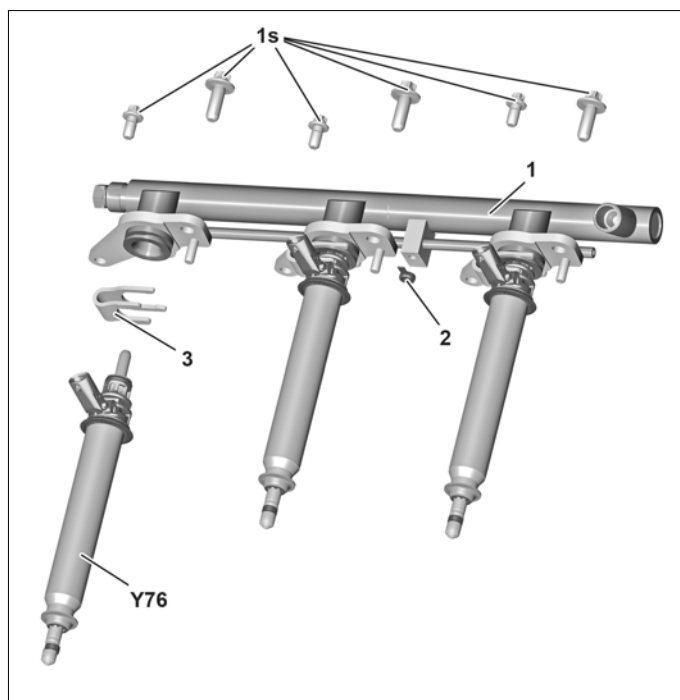
78 Center section of the bulkhead



P00.00-4697-11

### Shown on model 212.080

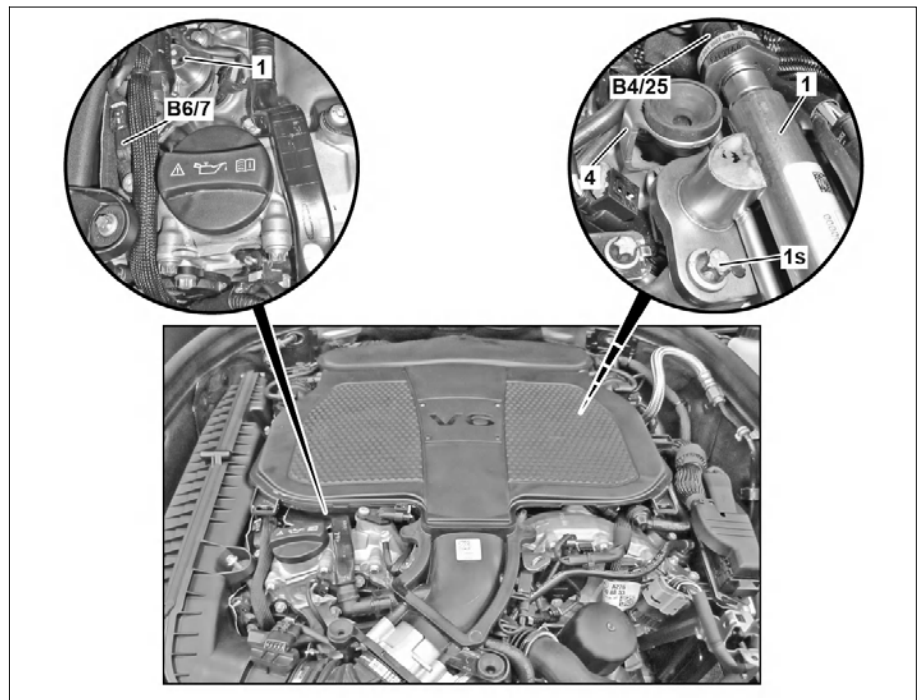
- 1 Rail
- 1s Screw/bolt
- 2 Seal
- 3 Hold-down tool
- Y76 Fuel injectors



P07.03-2293-12


















Shown on model 212.080

- 1 Rail
- 1s Screw/bolt
- 4 Support
- B4/25 Fuel pressure and temperature sensor
- B6/7 Right exhaust camshaft Hall sensor



P07.03-2297-06

Warning	<b>Risk of injury</b> caused by fingers being jammed or pinched when removing, installing or aligning hoods, doors, trunk lid/rear-end door or sliding roof.	No parts of the body or limbs should be within the operating area when the components are moving.	AS00.00-Z-0011-01A
	<b>Risk of explosion</b> 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
	General information on work on gasoline direct injection system		AH07.00-P-2000-01A
	<b>Remove</b>		
1	Detach ground line from battery Notes on battery		AR54.10-P-0003EW AH54.10-P-0001-01A
2	Remove center section of the bulkhead (78)	Engine 276 in model 212, 218 Engine 276.8 in model 212 Engine 276.9 in model 212.095/195	AR61.25-P-6600EW
3.1	Remove air filter housing	Engine 276.9 in model 212, 218 When removing the right rail (1) Screw/bolt, air filter to air intake pipe support brace Screw/bolt, air filter to cylinder head cover	*BA09.10-P-1002-01M *BA09.10-P-1001-01M
3.2	Remove both air filter housings	Engine 276.8 in model 212, 218 When removing the left or right rail (1)	AR09.10-P-1150ELS
4	Remove connecting flange of the intake manifold	Engine 276.9 in model 212, 218	AR09.20-P-1961EL
5	Remove crash plate and insulation on the high-pressure pump		AR07.02-P-1020EL
6	Relieve fuel pressure over diagnostic socket	Cap on service connection Pressure hose	AR07.03-P-1460-01VA *BA07.03-P-1007-01D *119589046300
7	Remove fuel pressure in fuel high-pressure circuit		AR07.03-P-1460-02MM
8	Detach high-pressure line between rail (1) and high-pressure pump		
9	Detach fuel line (low pressure) at high-pressure pump		
10	Disconnect electrical connection on RH exhaust camshaft Hall sensor (B6/7)	Engine 276.9 in model 212 Engine 276.9 in model 218	
11	Disconnect electrical connection on fuel pressure and temperature sensor (B4/25)		
12	Detach engine wiring harness on the rail (1).	Engine 276.9 in model 212, 218 Engine 276.8 in model 212, 218	AR01.00-P-2410-02EL AR01.00-P-2410-02ELS
13	Remove support (4) for the intake manifold	Engine 276.9 in model 212, 218	

14	Remove screws/bolts (1s)	 Unscrew screw/bolts (1s) alternately each by half a revolution. Begin in the center of the rail (1) and work outwards. Damage to the rail (1) can occur otherwise.	
15	Remove hold-down tool (3) between rail (1) and fuel injectors (Y76)		
16	Mark fuel injectors (Y76) relative to the respective cylinder	 When reusing the fuel injectors (Y76) they must be inserted into the cylinder in which it was previously installed.	
17	Detach rail (1) from fuel injectors (Y76)		
18	Remove fuel injectors (Y76)	 Oil which comes out during disassembly of the rail (1) or from the fuel injectors (Y76) is safe. The rail (1) or the fuel injectors (Y76) can be re-used.  All fuel injectors (Y76) <b>must</b> be pulled out since the rail (1) may <b>only jointly</b> be installed with the fuel injectors (Y76). In case of jammed fuel injectors (Y76): ↓ Remove fuel injectors (Y76).  Puller	AR07.03-P-0004EL  AR07.03-P-0004-03MM *278589003300
	<b>Clean</b>		
19	Clean fuel connections on fuel injectors (Y76)	 During cleaning the fuel connections must be held downwards. This ensures that no dirt gets into the openings. Assembly cleaner	*BR00.45-Z-1028-04A
	<b>Check</b>		
20	Check high-pressure line and replace if necessary	 The sealing cone for high-pressure lines must be checked before assembly. Do this to avoid leaks and damage. Assembly cleaner	AR07.03-P-1010-03MM *BR00.45-Z-1028-04A
	<b>Install</b>		
21	Replace sealing packages for the fuel injectors (Y76) on rail (1)	Assembly cleaner  Drift	AR07.03-P-0004-02MM *BR00.45-Z-1028-04A *278589011500
22	Replace sealing rings and seals (2) on the fuel injectors (Y76)	Assembly cleaner  Assembly tool	AR07.03-P-0004-01MM *BR00.45-Z-1028-04A *272589004300
23	Replace seal (2) on spilling of the rail (1)		
24	Insert fuel injectors (Y76) into rail (1) and fasten in place using the hold-down tools (3)	 When reusing the fuel injectors (Y76) they must be inserted into the cylinder in which it was previously installed.  Fuel injectors (Y76) may only be installed again in combination with the rail (1) (as a whole).  Replace hold-down tool (3).	
25	Insert rail (1) with fuel injectors (Y76) into the cylinder head		
26	Screw in screw/bolts (1s)	 Screw in screw/bolts (1s) alternately each by half a revolution. Begin in the center of the rail (1) and work outwards. Damage to the rail (1) can occur otherwise.  Screw/bolt, fuel distributor to cylinder head cover	*BA07.52-P-1001-01G
27	Install support (4) for the intake manifold	Engine 276.9 in model 212, 218	
28	Mount engine wiring harness on rail (1) and fuel injectors (Y76)	Engine 276.9 in model 212, 218 Engine 276.8 in model 212, 218	AR01.00-P-2410-02EL AR01.00-P-2410-02ELS
29	Connect electrical connection on fuel pressure and temperature sensor (B4/25)	When installing left rail (1)	
30	Connect electrical connection on RH exhaust camshaft Hall sensor (B6/7)	Engine 276 (except 276.8) in model 212 Engine 276 (except 276.8) in model 218 When installing right rail (1)	

31	Mount low-pressure line at high-pressure pump	Union nut, fuel line to fuel distributor	*BA07.03-P-1001-01D
32	Mount high-pressure line on rail (1) and high-pressure pump	Do not kink or bend high-pressure line and low-pressure line . Do this to avoid leaks and damage. The work instructions absolutely must be observed for assembly work. Union nut, fuel line to fuel distributor Union nut, fuel line to high-pressure pump	AR07.03-P-1010-02MMA  *BA07.03-P-1001-01D *BA07.03-P-1002-01D
33	Install crash plate and insulation on the high-pressure pump		AR07.02-P-1020EL
34	Install connecting flange of the intake manifold		AR09.20-P-1961EL
35.1	Install air filter housing	Engine 276.9 in model 212, 218 When installing right rail (1) Screw/bolt, air filter to air intake pipe support brace Screw/bolt, air filter to cylinder head cover	*BA09.10-P-1002-01M *BA09.10-P-1001-01M
35.2	Install both air filter housing	Engine 276.8 in model 212, 218 When installing the left or right rail (1)	AR09.10-P-1150ELS
36	Install center section of the bulkhead (78)	Engine 276.8 in model 212, 218 Engine 276.9 in model 212.095/195 Engine 276.8 in model 212 Engine 276.9 in model 212.095/195 Ensure correct seating of the center section of the bulkhead (78).	AR61.25-P-6600EW
37	Mount ground line on battery		AR54.10-P-0003EW
38	Read out fault memory using the diagnostic system and clear if necessary		
	<b>Check</b>		AD00.00-P-2000-04A
39	Check fuel high-pressure circuit for leaktightness		AR07.03-P-1010-04MM
Warning	<b>Risk of accident</b> from vehicle starting off by itself when engine running. <b>Risk of injury</b> (bruises and burns) resulting from working on the engine while it is being started or when it is running.	Secure vehicle to prevent it from starting off by itself. Wear buttoned-up and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
40	Carry out an engine test run, checking the engine for proper operation and leaktightness		

Injection nozzles, injection valves, lines

Number	Designation	Engine 276		
BA07.03-P-1001-01D	Union nut, fuel line to fuel distributor	Stage 1	Nm	15
		Stage 2	∠°	90

Injection nozzles, injection valves, lines

Number	Designation	Engine 276		
BA07.03-P-1002-01D	Union nut, fuel line to high-pressure pump	Stage 1	Nm	15
		Stage 2	∠°	90

Injection nozzles, injection valves, lines

Number	Designation	Engine 276		
BA07.03-P-1007-01D	Cap on service connection	Plastic	Nm	2
		Metal	Nm	15

Fuel distributor

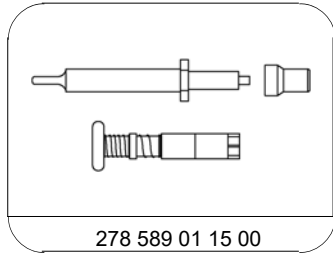
Number	Designation	Engine 276		
BA07.52-P-1001-01G	Screw/bolt, fuel distributor to cylinder head cover		Nm	9

**Nm** Air filter

Number	Designation	Engine 276.9
BA09.10-P-1001-01M	Screw/bolt, air filter to cylinder head cover	Nm 9

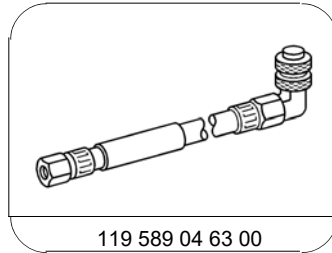
**Nm** Air filter

Number	Designation	Engine 276.9
BA09.10-P-1002-01M	Screw/bolt, air filter to air intake pipe support brace	Nm 9



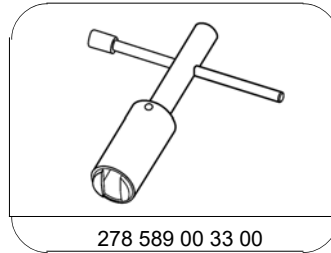
278 589 01 15 00

Drift



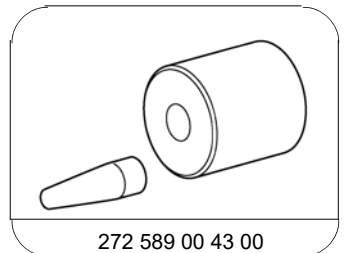
119 589 04 63 00

Pressure hose



278 589 00 33 00

Puller



272 589 00 43 00

Assembly tool

**Repair materials**

Number	Designation	Order number
BR00.45-Z-1028-04A	Assembly cleaner	Adolf Würth GmbH & Co. KG Reinhold-Würth-Str. 12-17 74653 Künzelsau-Gaisbach Germany Tel. +49 7940 15-0 Fax +49 7940 15-1000 <a href="http://www.wuerth.de">http://www.wuerth.de</a>