

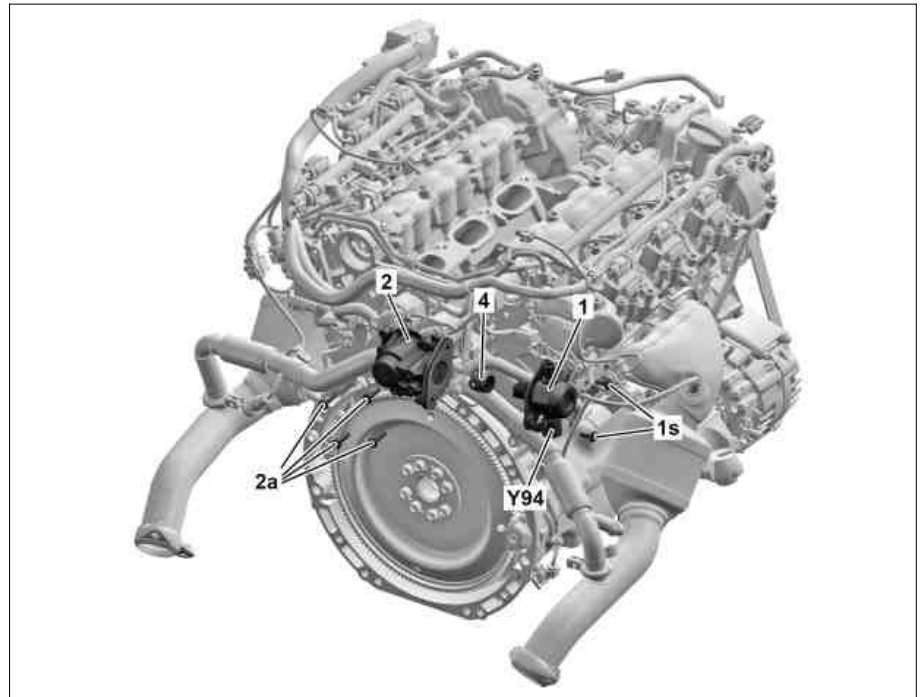
Engine 276 in model 204, 207

### 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 204.057

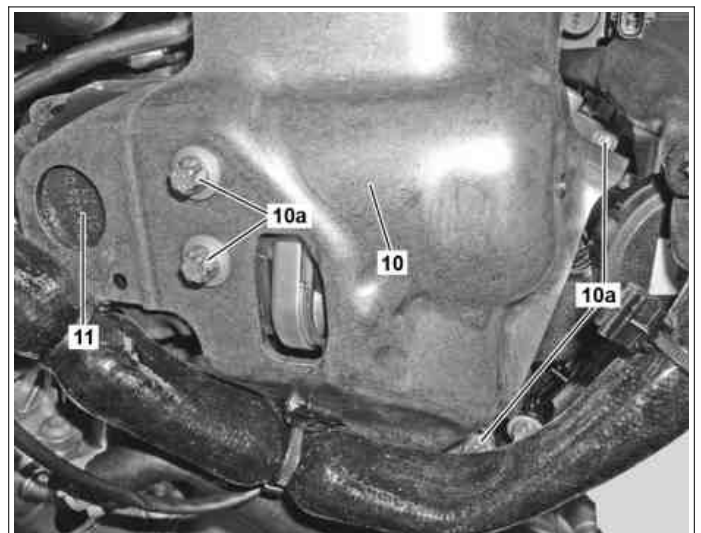
- 1 High-pressure pump
- 1s Screw/bolts
- 2 High pressure pump housing
- 2a Screw/bolts
- 4 Tappet element
- Y94 Quantity control valve



P07.02-2139-06

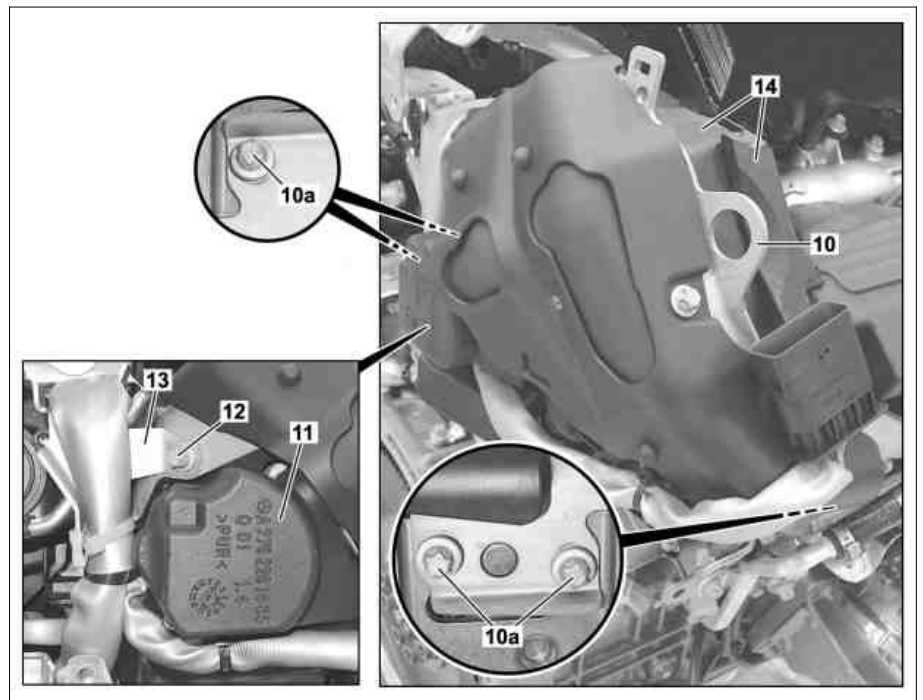
### Shown on model 204.057

- 10 Crash plate
- 10a Screw/bolts
- 11 Insulation



















P07.00-2154-11













- 10 Crash plate
- 10a Screw/bolts
- 11 Insulation
- 12 Screw/bolt
- 13 Bracket
- 14 Insulation



P07.00-2158-06

	<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
	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
	General information on work on gasoline direct injection system		AH07.00-P-2000-01A
	<b>Remove</b>		
1	Drain coolant Notes on coolant	Engine 276.9 in model 204, 207  Engine 276.8 in model 207	AR20.00-P-1142FH AH20.00-N-2080-01A AR20.00-P-1142A
2	Detach ground line from battery Notes on battery	Model 204 with engine 276  Model 207 with engine 276	AR54.10-P-0003CW AH54.10-P-0001-01A AR54.10-P-0003EW
3.1	Remove both air filter housings	Engine 276.8 in model 207	AR09.10-P-1150ELS
3.2	Remove air filter housing	Engine 276.9 in model 204, 207	
4	Remove insulation on rail on the right		
5	Remove intake manifold	Engine 276.9 in model 204, 207	AR09.20-P-1961FH
6	Detach engine wiring harness on crash plate (10)		
7	Disconnect left electrical connection at ME-SFI [ME] control unit and unclip electrical line at bracket (13) and place to one side	Engine 276.8 in model 207	AR07.08-P-7008ELS
8	Unclip ME-SFI [ME] control unit from bracket and place to one side with attached lines	Engine 276.8 in model 207	AR07.08-P-7008ELS
9	Detach coolant hose to heater cooler at bulkhead	Engine 276.8 in model 207	
10	Remove center section of bulkhead	Engine 276.8 in model 207	
11	Remove bracket at crash plate (10) and vacuum pump	Engine 276.8 in model 207	
12	Rotate engine at crankshaft center bolt in direction of engine rotation to a 40° crank angle (CKA) after top dead center (TDC) on cylinder 1 (ignition TDC)		AR05.10-P-7620-04MM
13	Remove screw/bolt (12) and press the bracket (13) to one side.	Engine 276.8 in model 207	
14	Unscrew screw/bolts (10a) and remove crash plate (10)	Bolt, shield to housing for high-pressure pump drive/bracket	*BA07.02-P-1003-01C
15	Remove insulation (11, 14) on high-pressure pump (1)		

16	Unclip engine wiring harness on exhaust gas recirculation positioner bracket	Engine 276 in model 204 Engine 276.8 in model 207 except code 920 (Direct petrol injection with stratified charging)	
17	Relieve fuel pressure over diagnostic socket	 Cap on service connection  Pressure hose	AR07.03-P-1460-01VA *BA07.03-P-1007-01D *119589046300
18	Relieve fuel pressure in fuel high-pressure circuit		AR07.03-P-1460-02MM
19	Unscrew union nuts for fuel lines on rails and high-pressure pump (1)	 Thoroughly clean area around fuel line on the locations to be separated. Failure can occur otherwise to the fuel system.  Do not kink or bend fuel lines. This prevents leaks and damage. Assembly cleaner	*BR00.45-Z-1028-04A
20	Disconnect electrical connection on quantity control valve (Y94)		
21	Remove screw/bolts (1s) for high-pressure pump (1) and remove high-pressure pump	 Thoroughly clean area around the fuel high-pressure circuit. Failure can occur otherwise to the fuel system.  Screw/bolts (1s) <b>must</b> be removed alternately each by half a revolution each time when removing the high-pressure pump (1). Damage could occur to the high-pressure pump (1) otherwise.	
22	Pull tappet element (4) out of high-pressure pump housing (2)		
23	Remove bracket on the high-pressure pump housing (2)		
24	Remove screw/bolts (2a) of high-pressure pump housing (2) and remove high-pressure pump housing (2) and pull out upwards		
	<b>Check</b>		
25	Check tappet element (4)	If wear is found: ↓ Replace tappet element (4)	
	<b>Install</b>		
26	Attach high-pressure pump housing (2) and tighten down screw/bolts (2a) of the high-pressure pump housing (2)	Tightening procedure for housing of fuel system high pressure pump  Observe tightening procedure. Damage to the camshaft and to cylinder head can occur otherwise.  Replace seal.  Bolt, high-pressure pump drive housing to cylinder head/cylinder head cover	AR07.02-P-1020-02MM *BA07.02-P-1002-01C
27	Attach bracket on the high-pressure pump housing (2)	 Screw/bolt, additional bracket for high-pressure line to high pressure pump drive housing	*BA07.03-P-1006-01D
28	Push tappet element (4) in high-pressure pump housing (2)	 The tappet element (4) must be installed in such a way that the drive roller for the tappet element (4) sits on the camshaft. Damage can occur to the camshaft otherwise.	
29	Clean mount for high-pressure pump (1) in high-pressure pump housing (2).		
30	Replace sealing ring of the high-pressure pump (1).	 There are two variants of the sealing rings which can be differentiated between based on their color. Dry green sealing ring coated with low-friction paint and insert the black sealing ring wet with oil into the high-pressure pump housing (2). Replace sealing ring by a sealing ring of the same color.	
31	Install high-pressure pump (1) and screw in screw/bolts (1s) of the high-pressure pump (1)	 Screw/bolts (1s) <b>must</b> be screwed in alternately each by half a revolution each time when installing the high-pressure pump (1). Damage could occur to the high-pressure pump (1) otherwise.  Replace screw/bolts (1s) with new ones.	

		<p> The high-pressure pump (1) <b>must</b> lie flat on the high-pressure pump housing (2) after tightening the screw/bolts (1s) .</p> <p> Bolt, high-pressure pump to high-pressure pump drive housing</p>	*BA07.02-P-1001-01C
32	Put on electrical connection on quantity control valve (Y94)		
	<b>Check</b>		
33	Check fuel lines		AR07.03-P-1010-03MM
34	Unscrew union nuts for fuel lines on rails and high-pressure pump (1)		AR07.03-P-1010-02MMA
		<p> Union nut, fuel line to fuel distributor</p> <p> Union nut, fuel line to high-pressure pump</p>	<p>*BA07.03-P-1001-01D</p> <p>*BA07.03-P-1002-01D</p>
35	Clip in engine wiring harness on exhaust gas recirculation positioner bracket	Engine 276 in model 204 Engine 276.8 in model 207 except code 920 (Direct petrol injection with stratified charging)	
36	Install insulation (11, 14) on high-pressure pump (1)		
37	Attach crash plate (10) and screw in screw/bolts (10a)	 Bolt, shield to housing for high-pressure pump drive/bracket	*BA07.02-P-1003-01C
38	Screw in screw/bolt (12) and tighten down bracket (13)		
39	Install bracket at crash plate (10) and vacuum pump		
40	Install center section of the bulkhead	Engine 276.8 in model 207  Ensure correct seating of the center section of the bulkhead.	
41	Detach coolant hose to heater cooler at bulkhead	Engine 276.8 in model 207	
42	Clip ME-SFI [ME] control unit into bracket	Engine 276.8 in model 207	AR07.08-P-7008ELS
43	Place left electrical connection onto ME-SFI [ME] control unit and clip electrical line onto bracket (13)	Engine 276.8 in model 207	AR07.08-P-7008ELS
44	Attach engine wiring harness on crash plate (10)		
45	Install intake manifold	Engine 276.9 in model 204, 207	AR09.20-P-1961FH
46	Attach insulation to rail on the right		AR07.03-P-1010FH
47.1	Install both air filter housing	Engine 276.8 in model 207	AR09.10-P-1150ELS
47.2	Install air filter housing	Engine 276.9 in model 204, 207  Screw/bolt, air filter to cylinder head cover  Screw/bolt, air filter to air intake pipe support brace	<p>*BA09.10-P-1001-01M</p> <p>*BA09.10-P-1002-01M</p>
48	Attach ground line to battery	Engine 276 in model 207	AR54.10-P-0003EW
Topical note	Notes on battery	Engine 276 in model 204	AH54.10-P-0001-01A AR54.10-P-0003CW
49	Switch on ignition	 The ignition <b>must</b> be switched on for 5 s before the engine start in order to fill the high-pressure pump (1) with fuel. Damage could occur to the high-pressure pump (1) otherwise.	
50	Pour in coolant	Engine 276.8 in model 207	AR20.00-P-1142A
Topical note	Notes on coolant	Engine 276.9 in model 204, 207	AH20.00-N-2080-01A AR20.00-P-1142FH
	<b>Check</b>		
51	Check fuel high-pressure circuit.		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
52	Perform an engine test run and check fuel system for proper operation and leaktightness		

 High pressure pump

Number	Designation	Engine 276
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BA07.02-P-1001-01C	Bolt, high-pressure pump to high-pressure pump drive housing	Nm	14
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**Nm** High pressure pump

Number	Designation			Engine 276
BA07.02-P-1002-01C	Bolt, high-pressure pump drive housing to cylinder head/cylinder head cover	Stage 1	Nm	1
		Stage 2	Nm	9

**Nm** High pressure pump

Number	Designation			Engine 276
BA07.02-P-1003-01C	Bolt, shield to housing for high-pressure pump drive/bracket		Nm	14

**Nm** 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

**Nm** 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

**Nm** Injection nozzles, injection valves, lines

Number	Designation			Engine 276
BA07.03-P-1006-01D	Screw/bolt, additional bracket for high-pressure line to high pressure pump drive housing		Nm	9

**Nm** Injection nozzles, injection valves, lines

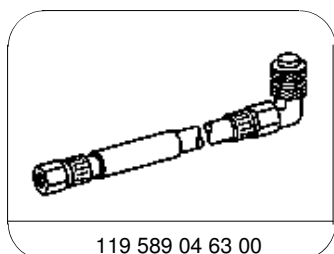
Number	Designation			Engine 276
BA07.03-P-1007-01D	Cap on service connection	Plastic	Nm	2
		Metal	Nm	15

**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



## 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>