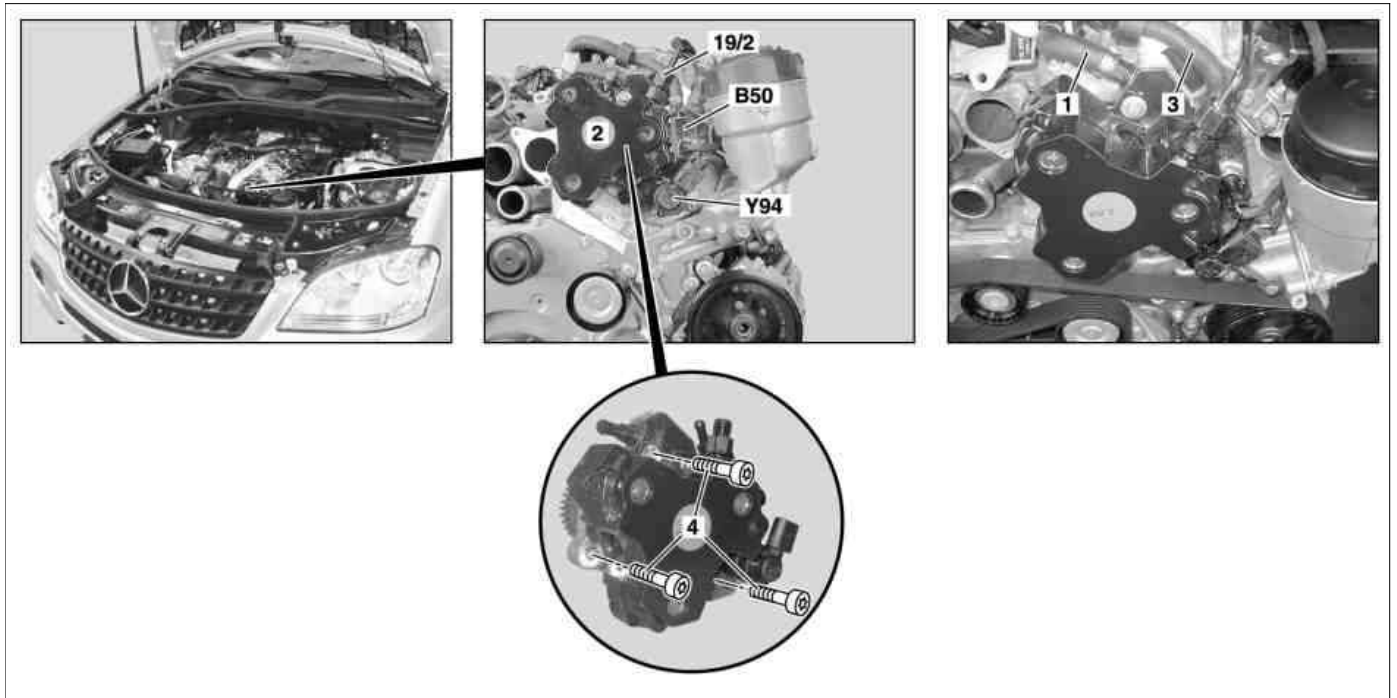


ENGINE 642 in MODEL 164, 251



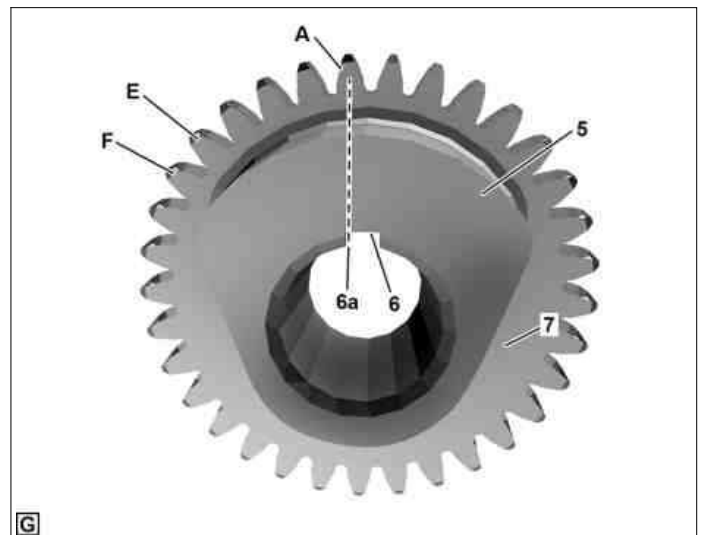
P07.02-2067-09

1 Fuel hose
 2 high-pressure pump
 3 Fuel hose

4 Screw/bolts
 19/2 Pressure line
 B50 Fuel temperature sensor

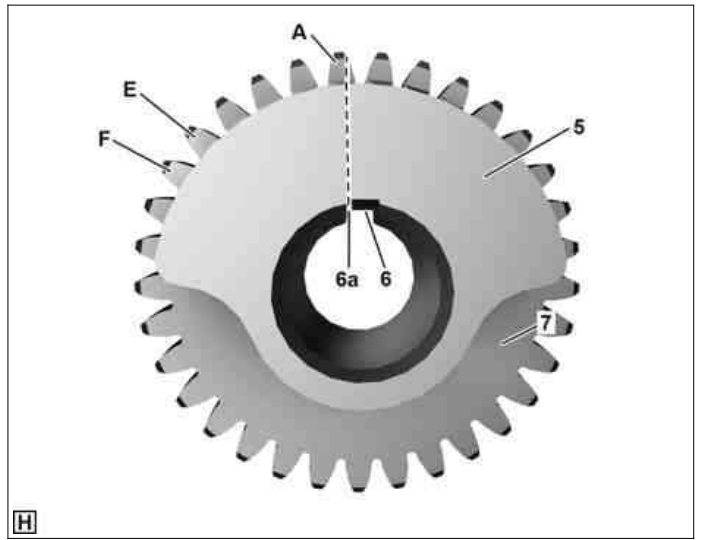
Y94 Quantity control valve

5 Correctional weight
 6 Groove
 6a Left edge
 7 Drive gear
 A Tooth
 E Tooth
 F Tooth



P07.02-2190-11

- 5 Correctional weight
- 6 Groove
- 6a Left edge
- 7 Drive gear
- A Tooth
- E Tooth
- F Tooth



P07.02-2191-11

	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
	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
	Risk of injury 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
	Remove		
1	Removes strut tower brace	MODEL 164.8 with ENGINE 642 Remove strut tower brace from strut tower mounts.	AR62.30-P-2500GY
2	Remove engine cover	MODEL 164 with ENGINE 642 MODEL 251 with ENGINE 642	AR01.10-P-2405GZB AR01.10-P-2405RTB
3	Detach bracket from fuel pressure sensor on cylinder head cover	MODEL 251 with ENGINE 642.8 Lay fuel pressure sensor down to side with bracket and lines connected.	AR07.04-P-0030SXI
4	Remove pressure line (19/2)	Seal off the pressure line (19/2) using a stop plug. In this way ingress of foreign bodies is avoided. Counterhold threaded sleeve of pressure line (19/2) when removing and installing using a suitable tool. Record plug	AR07.16-P-1080GZB *129589009100
5	Detach fuel hoses (1, 3) from high-pressure pump (2)	Close off fuel hose (1, 3) using a suitable stop plug. In this way ingress of foreign bodies is avoided. Record plug	 *129589009100
6	Disconnect electrical connection at quantity control valve (Y94)		
7	Disconnect electrical connection at the fuel temperature sensor (B50)		
8	Position piston of cylinder 1 on crankshaft to ignition TDC	The engine must not be turned back against the direction of rotation. The timing chain can skip otherwise and engine damage can occur.	
9	Remove screw/bolts (4) for high-pressure pump (2)		

10	Remove high-pressure pump (2) from cylinder head	The high-pressure pump (2) must not be disassembled or opened.	
	Install		
11	Modify drive gear (7)	When replacing high-pressure pump (2).	AR07.02-P-1021GZB
12	Clean sealing surfaces of the high-pressure pump (2)		
13	Replace O-ring on high-pressure pump (2).	Apply engine oil to the O-ring.	
14	Attach marking to tooth (A) of the drive gear (7)	In order to apply the markings in the operation steps 12 and 13 and to adjust in operation step 14, the high-pressure pump (2) is brought into (for example held in) the installation position in a removed condition. Place the groove (6) vertically, determine from the left edge (6a) of the groove (6) vertically to the upper tooth (A) and mark.	
15	Attach markings to teeth (E, F)	Determine the teeth (E, F) from the tooth (A) counterclockwise. Here tooth (A) is the 1st tooth and the teeth (E, F) are the 5th and 6th tooth.	
16	Adjust the position from the drive gear (7) to the high-pressure pump (2)	The teeth (E, F) must stand vertically upwards.	
17	Place high-pressure pump (2) on cylinder head	Ensure that the previously adjusted drive gear (7) is not twisted. Vibrations will occur otherwise.	
18	Screw on high-pressure pump (2) with screw/bolts (4)	Replace screw/bolts (4) due to micro-encapsulation. Screw/bolt, high-pressure pump to cylinder head	*BA07.16-P-1021-01C
19	Separate electrical connection at the fuel temperature sensor (B50)		
20	Connect electrical connection to quantity control valve (Y94)		
21	Mount fuel hoses (1, 3) on high-pressure pump (2)	Check condition of hose clamps and fuel hoses (1, 3) and replace if necessary.	
22	Install pressure line (19/2)	Counterhold threaded sleeve for the pressure line (19/2) when releasing using an appropriate tool.	AR07.16-P-1080GZB
23	Mount bracket for fuel pressure sensor on cylinder head cover	MODEL 164 with ENGINE 642.8	AR07.04-P-0030SXI
24	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. Check fuel system for leaks with engine running	Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts. When replacing the high-pressure pump (2) the ignition must be switched on for at least 15 seconds before the engine is started. The high-pressure pump (2) would be damaged otherwise.	AS00.00-Z-0005-01A
25	Install engine cover	MODEL 164 with ENGINE 642 MODEL 251 with ENGINE 642	AR01.10-P-2405GZB AR01.10-P-2405RTB
26	Install strut tower brace	MODEL 164.8 with ENGINE 642	AR62.30-P-2500GY

Common rail diesel injection (CDI)

Number	Designation		ENGINE 642
BA07.16-P-1021-01C	Screw/bolt, high-pressure pump to cylinder head	Nm	15

