

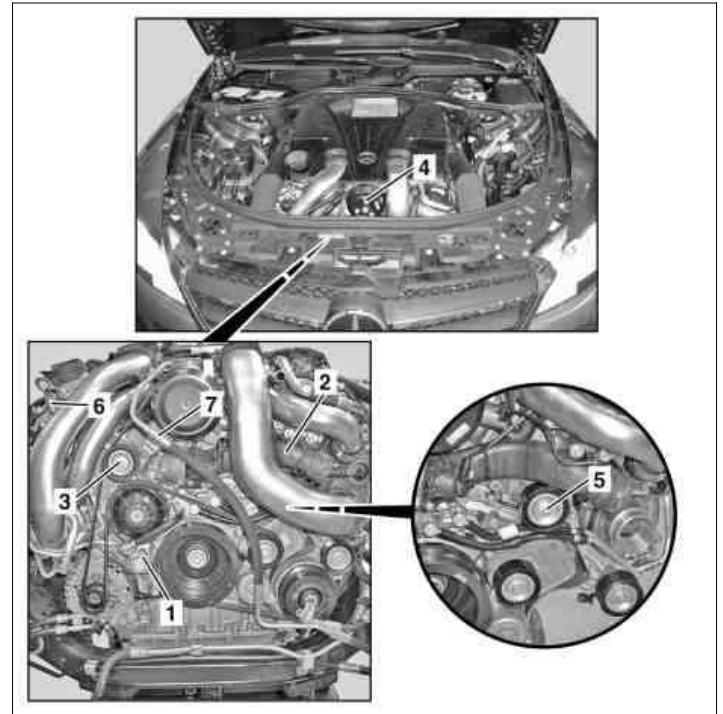
Engine 157, 278 in model 212, 218

Engine 278 in model 207






Modification notes




15.07.2013	Tightening procedure for coolant pump, added	Operation step 9	AR20.10-P-1280-01KH
------------	--	------------------	---------------------


- 1 Coolant pump
- 2 Coolant thermostat
- 3 Guide pulley
- 5 Guide pulley
- 6 Oil dipstick guide tube
- 7 Pressure line



P20.10-2288-12

 	Remove/install		
1	Remove fan unit	MODEL 207 MODEL 212, 218	AR20.40-P-5050CW AR20.40-P-5050EL
2	Remove poly-V belt		AR13.20-P-0001ELB
3	Remove coolant thermostat (2)		AR20.10-P-2460ELB
4	Remove charge air ducts		AR09.41-P-8620ELB
5	Remove upper guide pulley on timing case cover		AR13.20-P-0001ELB
6	Remove guide pulleys (3, 5) on oil filter housing and on coolant pump (1)		AR13.20-P-0001ELB
7	Detach lower section of the coolant line to the low temperature-circuit expansion reservoir on timing case cover and on the lower bracket	Vehicles with code (139) Measures for engine cooling M157/M278	AR20.20-P-7442ELB
8	Detach turbocharger coolant lines to coolant pump (1)	Vehicles with code (139) Measures for engine cooling M157/M278 Vehicles without code (139) Measures for engine cooling M157/M278  Installation: Replace seals.	AR20.20-P-7443ELB AR20.20-P-7440ELB
9	Remove screw/bolts for coolant pump (1)	Coolant pump tightening procedure Bolt plan for coolant pump  Installation: Replace screw/bolts; observe bolt plan and tightening sequence.  Screw/bolt, coolant pump to timing case cover/crankcase	AR20.10-P-1280-01KH AR20.10-P-1271-03MMB *BA20.10-P-1001-01W

10	Remove coolant pump (1) from timing case cover	 Installation: Replace seal.	
	Clean		
11	Clean sealing surfaces on coolant pump (1) and timing case cover	Loctite 7200 Loctite 7063 cleaning spray (150 ml)	AR01.00-P-0050-01A *BR00.45-Z-1038-04A *BR00.45-Z-1046-04A
12	Install in the reverse order		
13	Check cooling system for leaktightness	MODEL 207 MODEL 212, 218	AR20.00-P-1010FH AR20.00-P-1010EL
 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.	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
14	Conduct engine test run and check coolant pump (1) for leaktightness		

 **Coolant pump, coolant thermostat**

Number	Designation		Engine 157	Engine 278	
BA20.10-P-1001-01W	Screw/bolt, coolant pump M7 to timing case cover/ crankcase	Stage 1	Nm	2	5
		Stage 2	Nm	14	14
	M8	Stage 1	Nm	20	10
		Stage 2	Nm	-	20

Repair materials

Number	Designation	Order number
BR00.45-Z-1038-04A	Loctite 7200	Henkel AG & Co. KGaA http://www.loctite.de
BR00.45-Z-1046-04A	Loctite 7063 cleaning spray (150 ml)	A 001 986 71 71 10