

Engine 276 in model 204

Engine 276.9, 278 in model 207

Modification notes

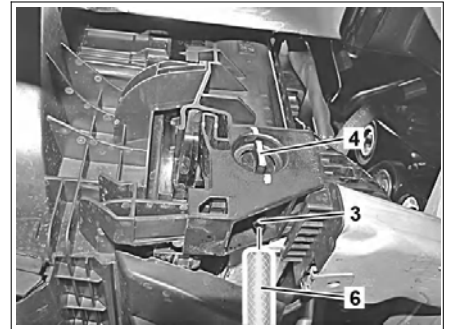
12.02.2014	Work procedure altered and special tools for electrical vacuum pump and NTKL adaptation, added.	Operation steps 14 to 26	AR20.00-P-1142-04A
26.09.2014	Mischungsverhältnis Kühlmittel		BF20.00-P-1001-04A

- 1 Cap
2 Coolant expansion reservoir



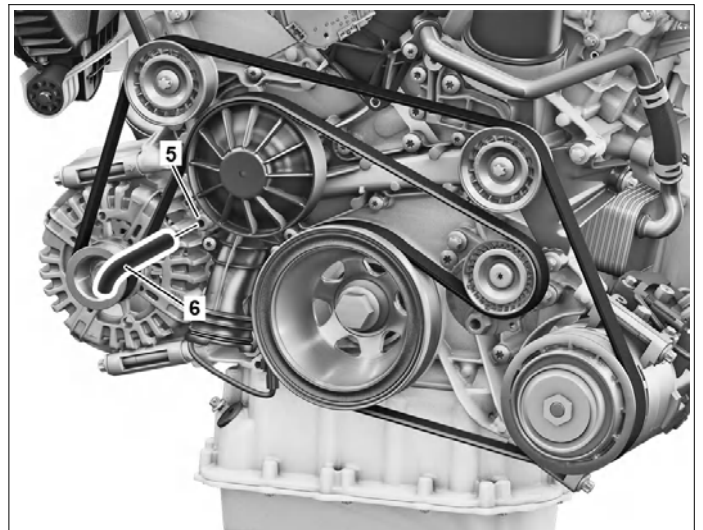
P20.30-2398-01

- 3 Drain fitting
4 Drain screw for radiator
6 Drain hose























P20.20-2412-01

- 5 Coolant pump drain screw
6 Drain hose



P20.00-2422-11

	Risk of death caused by vehicle slipping or toppling off of the lifting platform.	Align vehicle between vehicle lift columns and position the four support plates at the vehicle lift support points specified by the vehicle manufacturer.	AS00.00-Z-0010-01A
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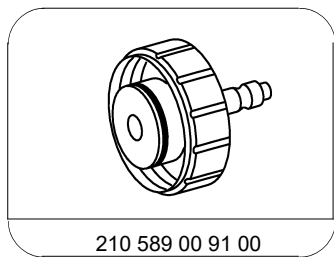
	Risk of injury to skin and eyes suffering scalding from contact with hot coolantspray. Risk of poisoning from swallowing coolant.	Do not open cooling system unless coolant temperature is below 90 °C. Open cap slowly and release the pressure. Do not pour coolant into beverage containers. Wear protective gloves, protective clothing and safety glasses.	AS20.00-Z-0001-01A
	Notes on coolant		AH20.00-N-2080-01A
	Drain off		
1	Unscrew cap (1) on coolant expansion reservoir (2)	 Unscrew cap (1) slowly and relieve overpressure.	
2	Remove lower engine compartment paneling	Engine 276 in model 204.0/2 Engine 276 in model 204.3 Engine 276.9, 278 in model 207 Engine 276 in model 204.9	AR61.20-P-1105EW AR61.20-P-1105CY
	Drain coolant at radiator		
3	Slide drain hose (6) onto drain fitting (3)		
4	Slacken drain screw on radiator (4) and drain coolant.	 Remove radiator drain screw (4) until the coolant flows out. Permanent damage to the radiator drain screw (4) will occur otherwise.  Catch coolant in a suitable container.  Observe regulations to dispose of coolant.	
5	Turn ignition key for about 5 s in ignition lock into position 1 and then turn key into position 0	Engine 278 in model 207  Repeat this procedure twice after a waiting time of about 30 s in order to empty the low-temperature water circuit.	
	Drain coolant from coolant pump		
6	Loosen coolant pump drain screw (5)	Engine 276 in model 204 Engine 276.9 in model 207  Drain screw on coolant pump	*BA20.10-P-1008-01AA
7	Push drain hose (6) onto coolant pump drain screw (5)	Engine 276 in model 204 Engine 276.9 in model 207	
8	Continue to turn coolant pump drain screw (5) and drain off coolant	Engine 276 in model 204 Engine 276.9 in model 207  Observe regulations to dispose of coolant.  Catch coolant in a suitable container.	
	Pour in		
9	Tighten down cooler drain screw (4) and detach drain hose (6) from drain fitting (3)		
10	Tighten down coolant pump drain screw (5) and detach drain hose (6)	Engine 276 in model 204 Engine 276.9 in model 207	
11	Pour in coolant and ventilate engine cooling system  Notes on coolant level  BB Coolant specifications  BB Anticorrosion/antifreeze agents (Sheet 325.0)	 Re-use clean coolant.  Coolant mixing ratio  Cooler vacuum filling device  Test cap  NTKL Adaption  Electric vacuum pump	AR20.00-P-1142-04A AH20.00-P-1142-01CW BB00.40-P-0310-01A BB00.40-P-0325-00A *BF20.00-P-1001-04A *285589002100 *210589009100 *285589012100 *285589022100
12	Turn ignition key for about 5 s in ignition lock into position 1 and then again turn key into position 0	Engine 278 in model 207  Repeat this procedure twice after a waiting time of about 30 s in order to empty the low-temperature water circuit.	
	Check		
13	Check engine cooling system for leaktightness		AR20.00-P-1010FH
14	Install lower engine compartment paneling	Engine 276 in model 204.9 Engine 276 in model 204.0/2 Engine 276 in model 204.3 Engine 276.9, 278 in model 207	AR61.20-P-1105CY AR61.20-P-1105EW
15	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 an engine test run and check engine cooling system for proper operation	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

Nm Coolant pump, coolant thermostat

Number	Designation	Stage 1	Nm	Engine 276
BA20.10-P-1008-01AA	Drain screw on coolant pump	Stage 2	6	6
			4°	90

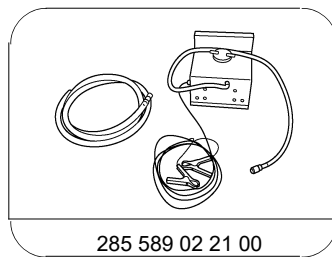
☞ Coolant mixing ratio

Number	Designation	Antifreeze/water	Up to -37°C	%	Engine all
BF20.00-P-1001-04A	Coolant mixing ratio		As of -38 °C	%	50/50
					55/45
			Sheet		BB00.40-P-0310-01 A
			Sheet		BB00.40-P-0325-00 A
			Sheet		BB00.40-P-0326-00 A



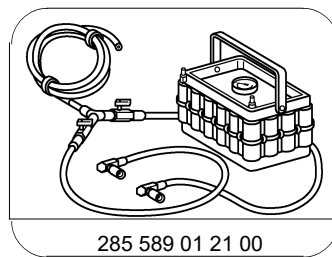
210 589 00 91 00

Test cap



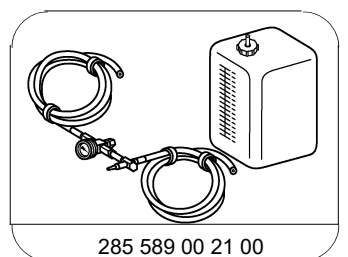
285 589 02 21 00

Electric vacuum pump



285 589 01 21 00

NTKL Adaption



285 589 00 21 00

Cooler vacuum filling device