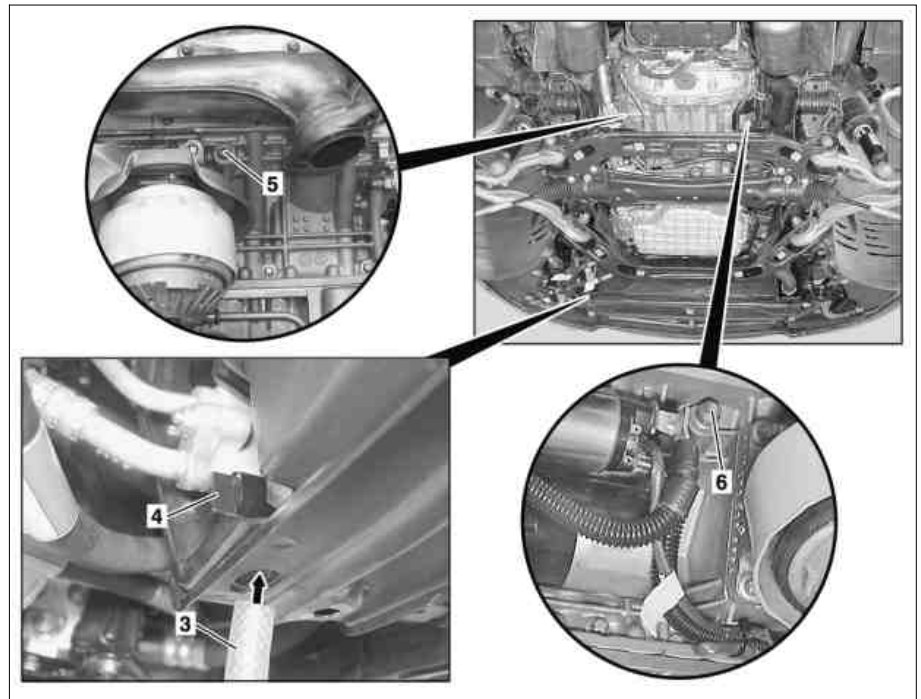


ENGINE 272, 273 in MODEL 221









ENGINE 273 in MODEL 216

- 3 Drain hose
- 4 Drain plug on radiator
- 5 Left cylinder crankcase drain screw
- 6 Right cylinder crankcase drain screw



P20.00-2280-06

	Drain		
⚠ Danger!	Risk of injury to skin and eyes caused by scalding from contact with hot coolant spray. Risk of poisoning caused by 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
⚠ Danger!	Risk of death caused by vehicle slipping or toppling off the lifting platform.	Align vehicle between columns of vehicle lift and position four support plates at vehicle lift support points specified by vehicle manufacturer.	AS00.00-Z-0010-01A
ⓘ	Notes on coolant		AH20.00-N-2080-01A
1	Unscrew cooling system cap at coolant expansion reservoir	i Turn cooling system cap slowly and release excess pressure, then unscrew cooling system cap.	
	Drain coolant from radiator		
2	Slide drain hose on to left fitting (3) at radiator		
3	Open radiator drain plug (4) and drain coolant	i Follow regulations for disposal of coolant.	
4	Turn key for about 5 s in ignition lock in position 1 and then turn key again into position 0	Model 221.095 / 195 i Repeat process twice after a waiting time of about 30 seconds in order to empty the low-temperature water circuit.	
	Drain coolant at crankcase		
5	Detach ground line(s) from battery/batteries	Except model 221.095 /195 i Vehicles with 4MATIC: Before draining the coolant at the left drain screw (5). i Vehicles without 4MATIC: Before draining the coolant at the right drain screw (6).	AR54.10-P-0003SX
6	Remove power electronics from cylinder crankcase	Model 221.095/ 195: Before draining the coolant at the right drain screw (6).	AR08.10-P-0011SXH
7	Loosen the left or right drain plug (5, 6) at the crankcase until it can be turned manually		
8	Push drain hose (3) onto left (5) or right (6) drain screw		
9	Continue to manually loosen left or right drain plug (5, 6) and drain coolant	i Follow regulations for disposal of coolant.	

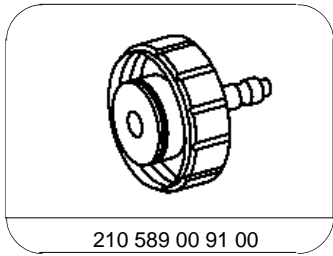
	Filling		
10.1	Tighten drain plug (4) at radiator and detach siphon hose from fitting (3)	After coolant is drained at radiator	
10.2	Detach drain hose (3) and tighten crankcase drain plug at left and right (5, 6)	After draining the coolant at the crankcase 	*BA20.00-P-1001-02E
11	Mount power electronics on cylinder crankcase	Model 221.095/ 195: After draining the coolant at the right drain screw (6).	AR08.10-P-0011SXH
12	Attach ground line(s) for battery (batteries)	Except model 221.095 /195  Vehicles with 4MATIC: after draining the coolant at LH drain screw (5).  Vehicles without 4MATIC: after draining the coolant at RH drain screw (6).	AR54.10-P-0003SX
13.1	Pour in coolant and bleed cooling system Coolant specifications Anticorrosion/antifreeze agents (Sheet 325.0) Notes on coolant level	Except model 221.095 /195  Reuse clean coolant. Sheet 310.1 Sheet 325.0   	AR20.00-P-1142-04A BB00.40-P-0310-01A BB00.40-P-0325-00A *BF20.00-P-1001-02U *210589009100 *285589002100 AH20.00-P-1142-01V
13.2	Add coolant, bleed cooling system and turn key for about 5 s in ignition lock in position 1 and then turn key again into position 0	Model 221.095 / 195  Repeat process twice after a waiting time of about 30 seconds in order to charge and purge the low-temperature water circuit.	AR20.00-P-1142-04A
14	Inspect cooling system for leaks		AR20.00-P-1010SX
15	Connect STAR DIAGNOSIS, read out fault memory and erase if necessary Connect STAR DIAGNOSIS and read out fault memory	Except model 221.095 /195: After detaching the ground line(s) for battery(batteries).	AD00.00-P-2000-04A

 Engine cooling, general

Number	Designation		Engine	Engine
			272	273
BA20.00-P-1001-02E	Coolant drain plug on crankcase	Nm	12	12

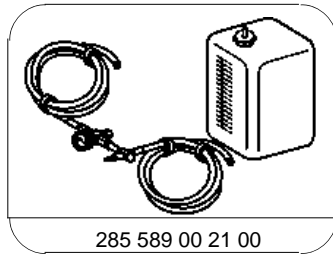
 Cooling system

Number	Designation	Engine			
		272 in model 221 Engine 272.985 in model 219	273 in model 216, 221		
BF20.00-P-1001-02U	Cooling system	Total filling capacity	≈Liters	8	8.5
		Antifreeze/water	up to -37°C	50/50	50/50
			up to -45°C	55/45	55/45
	Specifications for Operating Fluids	Sheet	BB00.40-P-0310-01A	BB00.40-P-0310-01A	
		Sheet	BB00.40-P-0325-00A	BB00.40-P-0325-00A	



210 589 00 91 00

Test cap



285 589 00 21 00

Vacuum-type cooling system filler