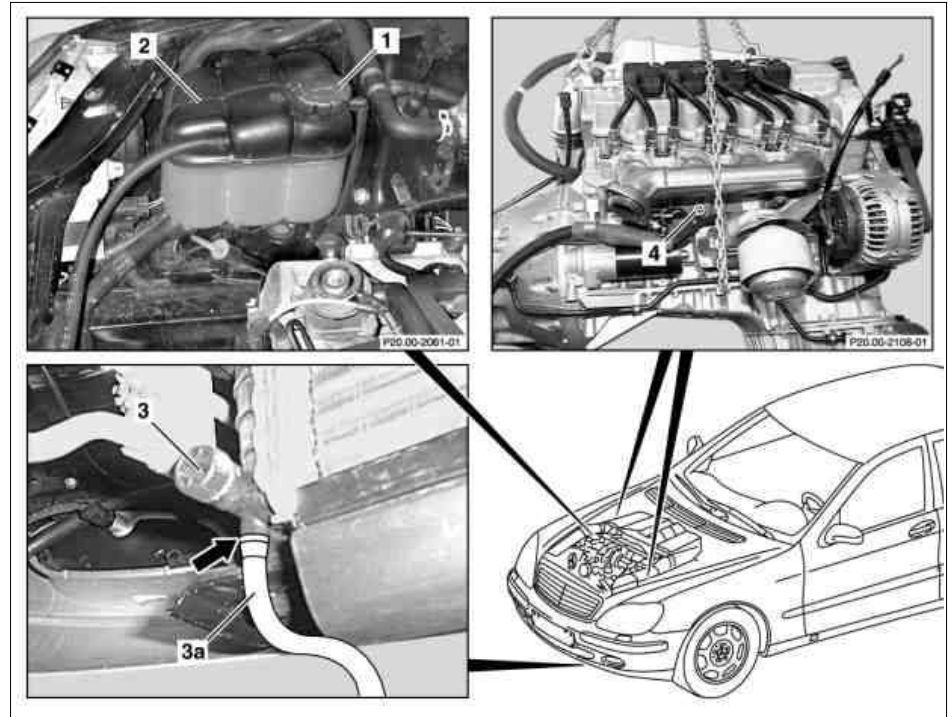


Engine 113.963 in model 230.475
 Engine 113.990 in model 211.076/276
 Engine 113.991 in model 215.374, 220.074/174
 Engine 113.992 in model 230.474
 Engine 113.995 in model 230.472











Shown on model 220

- 1 Cooling system cap
 2 Coolant expansion reservoir
 3 Drain screw for radiator
 3a Drain hose
 4 Drain screw for cylinder crankcase



P20.00-2107-06

<p> Warning</p>	<p>Risk of injury to skin and eyes suffering scalding from contact with hot coolant spray. Risk of poisoning from swallowing coolant.</p>	<p>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.</p>	<p>AS20.00-Z-0001-01A</p>
	<p>Notes on coolant</p>		<p>AH20.00-N-2080-01A</p>
	<p>Drain off</p>		
<p>1</p>	<p>Open hood</p>	<p>Engine 113.991 in model 215.374, 220.074/174 Engine 113.990 in model 211.076/276 Engine 113.963 in model 230.475 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472</p>	<p>AR88.40-P-1000M AR88.40-P-1000T AR88.40-P-1000R</p>
<p>2</p>	<p>Detach ground line(s) from battery (batteries)</p>	<p>Engine 113.963 in model 230.475 Engine 113.991 in model 215.374, 220.074/174 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472 Only when draining coolant at cylinder crankcase, right. Engine 113.963 in model 230.475 except code P99 (Special model "AMG Black Series") Engine 113.992 in model 230.474 except code P99 (Special model "AMG Black Series") Engine 113.995 in model 230.472 except code P99 (Special model "AMG Black Series") Engine 113.991 in model 215.374, 220.074/174</p> <p> Do not connect no-load current retention unit.</p>	<p>AR54.10-P-0003R AR54.10-P-0003I</p>

3	Open cooling system cap (1) at coolant expansion reservoir (2)	<p> Pay attention to different versions. Cooling system cap (1) with notch: Turn cooling system cap (1) carefully to first pre-detent, release pressure, then unscrew cooling system cap (1). 1-stage and 2-stage cooling system cap (1): Turn cooling system cap (1) by 1/2 revolution anti-clockwise, release overpressure, then unscrew cooling system cap (1).</p>	
4	Remove lower engine compartment paneling	<p>Engine 113.990 in model 211.076/276 Engine 113.991 in model 215.374, 220.074/174 Engine 113.963 in model 230.475 except code P99 (Special model "AMG Black Series") Engine 113.992 in model 230.474 except code P99 (Special model "AMG Black Series") Engine 113.995 in model 230.472 except code P99 (Special model "AMG Black Series")</p>	<p>AR61.20-P-1105T AR61.20-P-1105M AR61.20-P-1105R</p>
Drain coolant at radiator			
5	Push drain hose (3a) onto engine radiator (3) drain screw (arrow), engine radiator (3) open drain screw and drain coolant	<p> Collect coolant in a suitable container.</p>	
6	Close engine radiator (3) drain screw and detach coolant (3a) drain hose at fitting (arrow)		
Drain coolant at cylinder crankcase			
7	Slide drain hose onto cylinder crankcase drain screw (4), open cylinder crankcase drain screw (4) and drain coolant	<p>Engine 113.963 in model 230.475 Engine 113.991 in model 215.374, 220.074/174 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472</p> <p> Collect coolant in a suitable container.</p>	
8	Detach drain hose on cylinder crankcase drain screw (4) and screw cylinder crankcase drain screw (4) tight	<p>Engine 113.963 in model 230.475 Engine 113.991 in model 215.374, 220.074/174 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472</p> <p> Coolant drain plug on crankcase</p>	*BA20.00-P-1001-02B
9	Lower vehicle		
Pour in			
10	<p>Pour in coolant and bleed cooling system</p> <p>Notes on coolant level</p> <p>Anticorrosion/antifreeze agents (Sheet 325.0)</p> <p>Coolant specifications</p> <p> BB</p> <p> BB</p>	<p> Re-use clean coolant.</p> <p> Cooling system</p> <p> Test cap</p> <p> Cooler vacuum filling device</p>	<p>AR20.00-P-1142-04AK AH20.00-P-1142-01CW BB00.40-P-0325-00A BB00.40-P-0310-01A</p> <p>*BF20.00-P-1001-02K *169589009100 *285589002100</p>
11	Check cooling system for leaktightness		AR20.00-P-1010RVK
12	Install lower engine compartment paneling	<p>Engine 113.990 in model 211.076/276 Engine 113.991 in model 215.374, 220.074/174 Engine 113.963 in model 230.475 except code P99 (Special model "AMG Black Series") Engine 113.992 in model 230.474 except code P99 (Special model "AMG Black Series") Engine 113.995 in model 230.472 except code P99 (Special model "AMG Black Series")</p>	<p>AR61.20-P-1105T AR61.20-P-1105M AR61.20-P-1105R</p>
13	Connect up ground line(s) at battery(ies)	<p>Engine 113.963 in model 230.475 Engine 113.991 in model 215.374, 220.074/174 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472</p> <p>Only when coolant has been drained at cylinder crankcase on the right.</p>	

		Engine 113.963 in model 230.475 except code P99 (Special model "AMG Black Series") Engine 113.992 in model 230.474 except code P99 (Special model "AMG Black Series") Engine 113.995 in model 230.472 except code P99 (Special model "AMG Black Series") Engine 113.991 in model 215.374, 220.074/174	AR54.10-P-0003R AR54.10-P-0003I
14	Perform basic programming	Engine 113.963 in model 230.475 Engine 113.991 in model 215.374, 220.074/174 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472 Only if ground line(s) on battery(ies) were disconnected. Engine 113.963 in model 230.475 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472 Engine 113.991 in model 215.374, 220.074/174	AR00.19-P-0200R AR00.19-P-0200M
15	Connect STAR DIAGNOSIS, read out and clear fault memory	Only if ground line(s) on battery(ies) were disconnected.	AD00.00-P-2000-04A
16	Close engine hood	Engine 113.991 in model 215.374, 220.074/174 Engine 113.990 in model 211.076/276 Engine 113.963 in model 230.475 Engine 113.992 in model 230.474 Engine 113.995 in model 230.472	AR88.40-P-1000M AR88.40-P-1000T AR88.40-P-1000R

 Engine cooling, general

Number	Designation		Engine 112, 113.940/941/942/943 /944/948/960/961/96 3/964/965/966/967/9 68/971/980/981/984/ 986/987/988/990/991 /992/995
BA20.00-P-1001-02B	Coolant drain plug on crankcase	Nm	12

 Cooling system

Number	Designation		Engine 113.963 in model 230.475	Engine 113.986/991 in model 220
BF20.00-P-1001-02K	Cooling system	Total filling capacity Liter	≈ 11,5	≈ 13,5
		Filling capacity of anticorrosion agent/ antifreeze down to -37 °C Liter	≈ 5,8	≈ 6,8
		Filling capacity of anticorrosion agent/ antifreeze down to -45 °C Liter	≈ 6,5	≈ 7,4
		Sheet	BB00.40-P-0310-01A	BB00.40-P-0310-01A
		Sheet	BB00.40-P-0325-00A	BB00.40-P-0325-00A

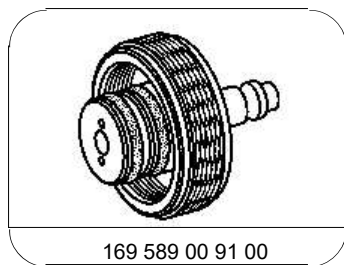
 Cooling system

Number	Designation		Engine 113.990	Engine 113.991 in model 215
BF20.00-P-1001-02K	Cooling system	Total filling capacity Liter	≈ 13,2	≈ 14,5
		Filling capacity of anticorrosion agent/ antifreeze down to -37 °C Liter	≈ 6,6	≈ 7,3
		Filling capacity of anticorrosion agent/ antifreeze down to -45 °C Liter	≈ 7,3	≈ 8

	Sheet	BB00.40-P-0310-01A	BB00.40-P-0310-01A
	Sheet	BB00.40-P-0325-00A	BB00.40-P-0325-00A

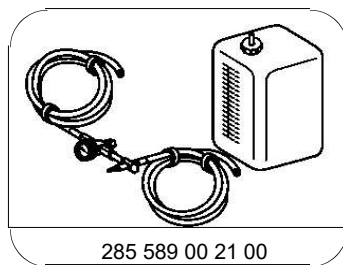
 Cooling system

Number	Designation	Engine 113.992/995 in model 230	
BF20.00-P-1001-02K	Cooling system	Total filling capacity	Liter ≈ 13,0
		Filling capacity of anticorrosion agent/antifreeze down to -37 °C	Liter ≈ 6,5
		Filling capacity of anticorrosion agent/antifreeze down to -45 °C	Liter ≈ 7,3
		Sheet	BB00.40-P-0310-01A
		Sheet	BB00.40-P-0325-00A



169 589 00 91 00

Test cap



285 589 00 21 00

Cooler vacuum filling device