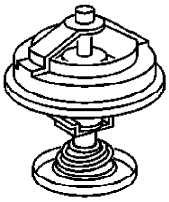
AF20.20-U-8050A	Engine coolant temperature high (over 110 C)	1.10.91

ENGINE 602, 603 up to 30.6.92

Damage code	Cause	Remedy	
50 001 53	[i] Also refer to Diagnostic Directory 2, Group 20, Topic 20-92021. ● Radiator is clogged with corrosion. ● Viscous fan coupling does not engage. **Test:** Perform the following procedures: 1. Bring engine to operating temperature (coolant temperature approx. 100°C). 2. Stop engine. Check radiator temperature in area of fan hub (by checking surface temperature with hand). 3. Start engine. Raise engine speed slowly to determine if viscous fan coupling audibly engages.	If radiator was cold to the touch and viscous fan coupling did not audibly engage: ● Drain coolant from system. ● Remove thermostat and install special tool 000 589 74 63 00 (open thermostat") together with sealing ring. ● Install special tool 117 589 00 90 00 (flushing adaptor") between radiator and upper radiator hose. Connect tap water hose to flushing adaptor. Set heater system to warm". ● With all drains opened and expansion tank cap removed, flush cooling/heating system with clean tap water for **5 minutes** with various engine speeds from idle up to 2500 r ● Stop engine and allow water to drain. ● Close all drains. ● Dilute 1 kg citric acid powder in approx. 1 gallon clean tap water. ● Pour citric acid mixture into coolant reservoir. Add clean tap water to fill cooling system to marking on coolant reservoir. Close coolant reservoir with expansion tank cap. ● Run engine for **15 minutes** at various speeds. ● Drain cleaning solution.pm. ● Again, with all drains opened, flush cooling/heating system with clean tap water for **5 minutes** at various engine speeds from idle up to 2500 rpm. Ensure cleaning solution is completely drained and flushed out of cooling and heating system to avoid corrosion damage from citric acid. ● Replace radiator. ● Fill cooling system with anti-corrosion/antifreeze/water solution. [i] Use only Mercedes-Benz approved coolant. Correct coolant ratio is critical: 50% Mercedes-Benz approved coolant, 50% clean tap water. ● Pressure test cooling system and inspect for leaks. Verify correct output from heater. Work Instruction Recommendation: Service Microfiche, Engines 601, 602, 603, Mechanical IV, Group 20, Job 20-010, Job 20-015, Job 20-310, Job 20-419 and Job 20-420.	

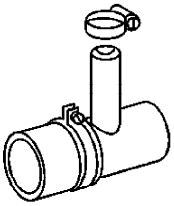
Parts ordering note

Part no.	Designation	Quantity
Q 1 03 0002	Anti-corrosion/antifreeze coolant	1
000 989 10 25	Citric acid powder (0.5 kg)	2



000 589 74 63 00

Blind plug



117 589 00 90 00

Flushing pipe