

M254 Red cooling system malfunction - Engine Overheated

Topic number	LI20.10-P-078510
Version	2
Function group	20.10 - Coolant pump, coolant thermostat
Date	2/5/25
Validity	Passenger car with M254 engine
Reason for change	Coolant pump designation modified

Complaint

Red cooling system malfunction warning due to overheat. Low engine performance. Check engine light on.

Fault codes may be stored:

P21814B The cooling system has a malfunction. There is a fault due to overtemperature.

P2B8500 The rpm of the coolant pump is too low.

Cause

Various

Remedy

Check for loose plug at electrical connectors of high temp coolant pump (M43/10 or M75/11) by gently pulling on connector housings.

Create a TIPS case and submit to powertrain team inbox if a loose plug is found at the coolant pump.

Include:

- Initial quick test
- Details on any damage found to engine or cooling system. Include photos if applicable.
- Any other relevant details.

Disclaimer

NOTE: The information contained in this document is intended for use by trained, professional technicians with the knowledge to properly and safely perform diagnosis and repairs on Mercedes-Benz vehicles, using Mercedes-Benz approved tools and equipment. It informs service technicians about conditions that could occur in certain vehicles and provides information that could assist in proper vehicle diagnosis, service, or repair. It does not indicate that a defect is present in any vehicle referenced in this document nor does it imply warranty coverage. DO NOT assume that a symptom or condition, or a described cause of a symptom or condition, affects any particular vehicle or groups of ve-

hicles, or that a described repair applies to any particular vehicle or groups of vehicles. There can be multiple causes resulting in the same or similar symptoms or conditions described in this document, and trained professional service technicians must use their diagnostic skills to make evaluations on a case-by-case basis. The information contained in this document does not guarantee warranty coverage nor does it extend the vehicle's warranty in any way.

Symptoms				
Power generation > Engine cooling system > Function > Has a high coolant temperature				
Power generation > Engine management > Engine running > Runs rough/shakes				
Power generation > Engine cooling system > Indicator lamp > Illuminates red				
Power generation > Engine management > Indicator lamp > Engine diagnosis > lit				
Power generation > Engine management > Engine performance > No/poor output				
Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note