

All with M17x - CEL ON - DTC P012800 The Coolant Temperature is Below the Specified Temperature

Topic number	LI20.10-P-072886
Version	20
Function group	20.10 - Coolant pump, coolant thermostat
Date	4/21/26
Validity	All vehicles equipped with an M17x engine
Reason for change	Re-formatting remedy section

Complaint

CEL ON with DTC P012800 "The Coolant Temperature is Below the Specified Temperature" active and stored in the ME (N3/10). There are no drivability concerns related to the complaint.

Cause

Root cause varies

Remedy

Prior to performing any repairs for this complaint: With a cold engine, pressurize the high temp coolant circuit and while it's under pressure, release the cap on the low temp coolant circuit and check if the pressure drops right away or not. If the pressure drops, the lower hoses are swapped. Correct this, fill, bleed and test drive the vehicle. If the complaint returns, then continue with the steps below.

IMPORTANT: Use VMI to check for emission extended warranty – Engine Thermostat (incl. software update) MY19-23, Various Models and Platforms (167, 190, 205, 213, 217, 222, 223, 232, 253, 290, 463)

If the vehicle is covered under an emission extended warranty, Please perform steps outlined in the NCU for repairs.

If vehicle is not covered under an emission extended warranty, then proceed as follows:

Check for available software updates to the ME (N3/10). If updated software is available, perform the update, clear the DTC and then perform each of the "WARM START" and "COLD START" test drives listed below twice. If the code does not re-appear then release the vehicle

If there is no new software available OR the DTC returns after the test drives then perform the following steps:

- Drain the coolant through a fine mesh sieve and check for signs of debris. Additionally, inspect the coolant reservoir for debris. If any debris is found, flush the system several times to clear as much of the debris as possible
- Replace the thermostat and bleed the system as outlined in AR20.00-P-1142-04A, evacuate the system for 20-30 minutes instead of the 5 minutes specified in step 22
- NOTE: Please use all the tools specified in the AR document

XENTRY Tips

- NOTE: There are two valid thermostats to choose from in the parts section of this LI. Please verify which PN is applicable for the vehicle being worked on via XENTRY Parts Information
- After bleeding the system clear the DTC and perform each of the "WARM START" and "COLD START" test drives listed below twice. If the DTC does not reappear after the tests, release the vehicle

If there is no new software available, the thermostat has already been replaced, and the DTC returns open a TIPS case and attach the following documents:

- Initial quick test
- ME (N3/10) control unit log
- The results of an R48 test from a "yes" response and from a "no" response

WARM START

- Begin with the engine coolant temperature at approximately 50 degrees C
- Activate the AC system, if defrost is not in use open the windows
- Drive the car normally until a coolant temperature of 75 degrees C is achieved
- Depress the accelerator pedal 50% for ~5 seconds (partial acceleration)
- Let off the accelerator pedal and let the car coast for ~10 seconds
- Continue to drive the car normally

COLD START

- Drive for ~7 miles (normal driving)
- Shut off the engine in a parking lot (or similar), wait 30 seconds, then restart and continue driving
- Depress the accelerator pedal 50% for ~5 seconds (partial acceleration)
- Let off the accelerator pedal and let the car coast for ~10 seconds
- Continue to drive the car normally

WIS-References		
Document number	Title	Note
AR20.00-P-1142-04A	Pour in coolant and bleed coolant system	none

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 vehicles, 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 management > Indicator lamp > Engine diagnosis > lit

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A1772007901			THERMOSTAT	1	M177LS2, M177LSE	X
A1772008801			THERMOSTAT	1	M176, M177LS1, M178	X

Control unit/fault code

Control unit	Fault text
N3/10 - Motor electronics 'MED1775' for combustion engine 'M176/M177/M178' (ME) (MED1775)	P012800 - The coolant temperature is below the coolant thermostat specified temperature. _

Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
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