

Yellow "Coolant" Message In Instrument Cluster

Topic number	LI20.00-P-073432
Version	3
Function group	20.00 - General
Date	7/26/24
Validity	Model series 167 with M177LS2 48 V
Reason for change	typo

Complaint

Yellow "Coolant" message in instrument cluster

The following fault code may also be present in the PTCU:

P2B2A7A - The speed of the 'Coolant pump' component part is too high. A leak or defective seal was detected.

Notes on fault code:

The fault code affects the 15W pump at the rear right of the vehicle. It is located on the side of the transmission (Fig. 1, position C).

This fault code is set because there is air in the system, so it performs an emergency dry run function.

This LI DOES NOT APPLY to model year 2024 and up vehicles. For these vehicles pump PN's A0005009100 and A0005008900 are the correct pumps

Cause

Various possible causes

Remedy

PLEASE READ ALL THE STEPS AND NOTES BELOW BEFORE PERFORMING ANY STEPS.

Then perform the following steps. Document any findings and discrepancies, where applicable, and create a PTSS case if the following do not remedy the complaint.

Step 1: With the engine cold, use Xentry to activate the two pumps at the passenger front. As they are running, remove the cap from the low temp cooling circuit reservoir and observe the coolant.

- If it overflows the reservoir, or blows out upon removal of the cap there is a restriction somewhere in the coolant lines.
- This can take the form of a physical restriction inside of one of the lines or pumps or a damaged or kinked hardline or rubber hose.
- Activate each pump in succession and listen to it using a stethoscope or by placing an ear to a screwdriver or other implement placed on the pump

XENTRY Tips

- Compare the sound and feel of each pump. An improperly functioning, bled, or faulty pump will make a very distinct churning noise. The pumps should be near silent and should not vibrate or heat up.
- If you find a pump that is making more noise than the others it is most likely pulling in air from somewhere or is encountering a restriction (refer to the first point in this section)

If nothing of note is found, proceed to step 2.

Step 2:

Disassemble underfloor paneling and wheel well interior trim at front right to gain access to the two low temperature pumps.

Take note of or photograph the part number of the pump holder, along with the production date.

Step 3:

Check the installation position of the pumps at the front right of the low-temperature circuit (Fig. 1) :

SPECIFIED PART NUMBER AT EACH LOCATION:

Outer: A 000 500 5500 (Fig. 1, position A)

Inner: A 000 500 3800 (Fig. 1; position B)

- a. If installation position is OK, skip to step 6
- b. If installation position is not OK, continue to step 3

Step 4:

Photograph the pump part numbers at the front right so that the QR-code/DMC code and the part number are visible and legible. Please label the pictures with the original installation position, upload them to the case and proceed to step 4.

Operation step 5:

Order new pump(s) (where the item numbers differ from the specified part number)

SPECIFIED PART NUMBER:

Outer: A 000 500 5500 (Fig. 1, position A)

Inner: A 000 500 3800 (Fig. 1; position B)

Operation step 6:

Use a vacuum bleeder to fill the cooling system of the low-temperature circuit

Operation step 7:

Vent the cooling system of the low-temperature circuit using XENTRY.

Notes on venting:

Please ensure that add-on 19830 for DVD 03/21 or 19831 for DVD 06/21 is installed on XENTRY

The cooling system of the low-temperature circuit is vented in various stages:

To start with, the pumps at front right are actuated at approx. 30%, then 50% and finally at 100%. At 100% actuation, the valve of the coolant circulating the pump at the side of the transmission is opened (Fig. 1; position C).

Please ALWAYS observe the following points during the venting procedure:

- The pumps at front right (Fig. 1, position A and B) always run together. These pumps must NEVER be operated separately of each other for actuation or for test purposes.
- The pump at the rear of the transmission must run permanently after being actuated. If the pump only briefly starts-up and then stops again, it is in a emergency dry run mode because there is too much air in the system. Please repeat the venting routine. If the rear pump at the side of the transmission remains in the emergency dry run mode, STOP and create a PTSS case, add the previously discovered findings to it and escalate it.
- If venting is successful, very little coolant flow noise will be present. It may be necessary to perform the venting routine several times. If after 3 venting attempts the system still has air in it, STOP create a PTSS case, add the previously discovered findings to it and escalate it.

Attachments	
File	Description
Positionen der Pumpen Niedertemperaturkreislauf_location of pumps lower temperature circuit.jpg	Figure 1; positions A, B and C

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 cooling system > Indicator lamp > Illuminates yellow	
Power generation > Engine cooling system > Display message > Coolant - Serviced Required	
Control unit/fault code	
Control unit	Fault text

N127 - Control unit "Drivetrain" (PTCU) (CPC_NG)	P2B2A7A - The rpm of component 'Coolant pump' is too high. Leakage or a defective seal was detected.
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Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			20701**	Please refer to this TIPS document in the dealer text