

Yellow warning message in the "Cooling system fault, operating energy input reduced, service required" display in connection with the fault entry "B3A0077" in the powertrain control unit N127 (PTCU)

Topic number	LI83.30-P-079196
Version	2
Function group	83.30 - Air conditioning
Date	10/27/25
Validity	Model series 294, 295, 296, 297
Reason for change	Remedy

Complaint

Yellow instrument cluster message: "Cooling system fault, operating energy input reduced, service required"

Cause

Fault code "B3A0077 - The regulation valve in the refrigerant circuit for the battery cooling gets stuck open. The ordered position cannot be achieved" stored.
Faulty expansion valve component part Y140/1

Remedy

Check the part number of Y140/1.

If the vehicle has A 297 830 79 03 or older, replace Y140/1 with A 297 830 89 03 or newer.

Do not replace defective components with part number A 297 830 8903 and an expansion valve production date after February 1, 2025!
Please create TIPS case, attach the current quick test and attach picture of the evaporator assembly component part label and a picture of the production date of the EXV Y140/1 (see example attached).

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 > Display message > Coolant - Serviced Required

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 297 830 8903			Evaporator	1		X

Attachments	
File	Description
Label ZB Chiller.PNG	Example of chiller assembly label
	
Label EXV.PNG	Example of expansion valve Y140/1 label
	

Control unit/fault code	
Control unit	Fault text
N127 - Drivetrain (PTCU) (CPC3EV297)	B3A0077 - The regulation valve in the refrigerant circuit for battery cooling is stuck open. The commanded position cannot be reached.

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			8309F	