

Insufficient Heating Output Due To Broken Refrigerant Line Between Refrigerant Compressor And The condenser (Hot Gas Line)

Topic number	LI83.20-P-076623
Version	4
Function group	83.20 - Heating
Date	4/20/26
Validity	EQA (H243), EQB (X243)
Reason for change	Remedy

Complaint

- Insufficient heating output in vehicle interior
- Customer describes a one-off, loud "popping" noise during the journey

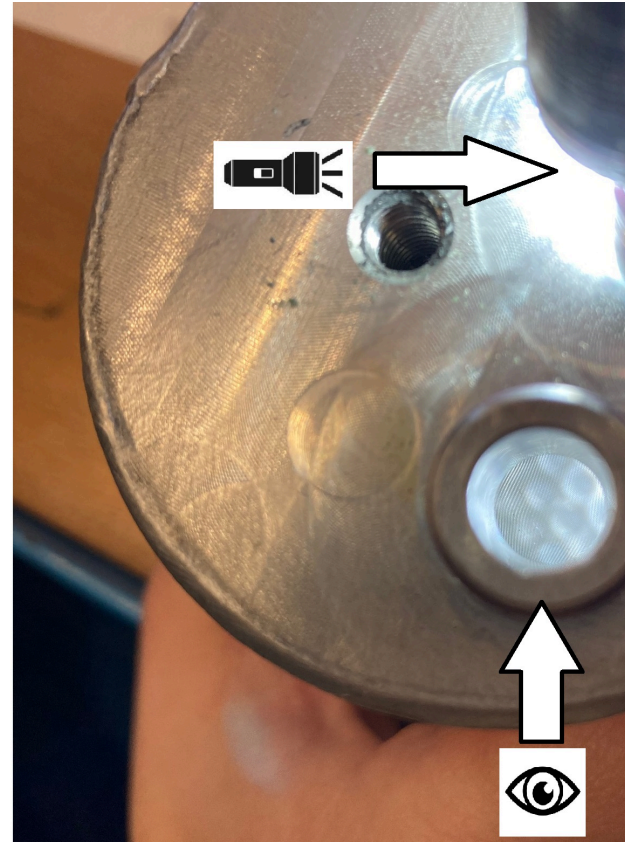
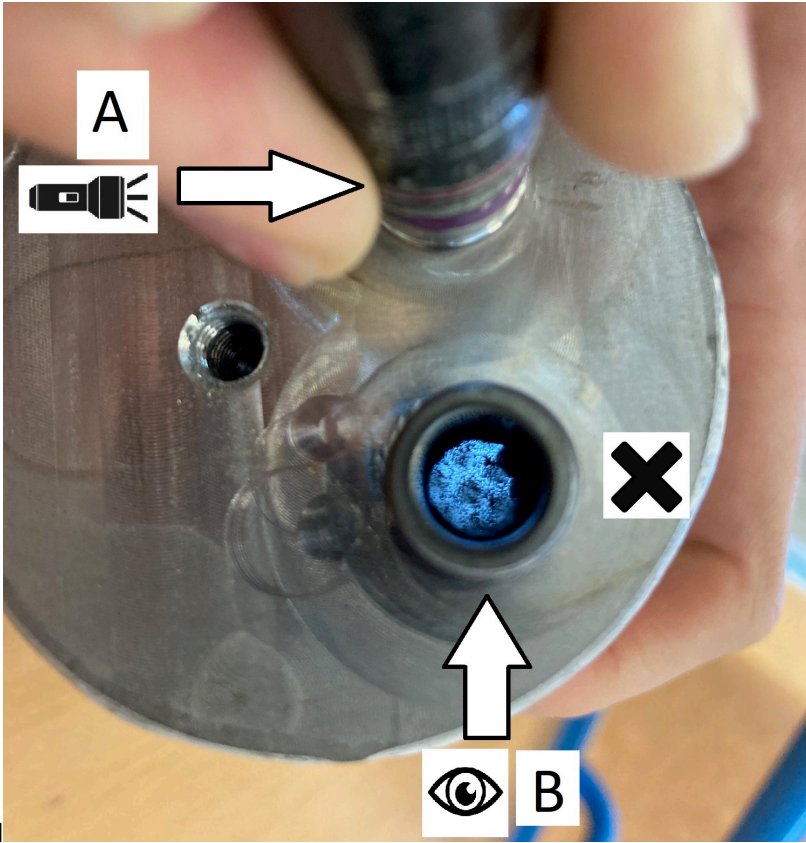
Workshop findings:

- Refrigerant line between refrigerant compressor and condenser is cracked
- If listed line is cracked, please conduct the following tests

1. Are the fault codes B19A200 or P053400 current or stored in air conditioner control unit N10*1?

N10*1 - Signalerfass- und Ansteuermodul - Automatische Klimaregelung (SAM) -f-			
Typ	Teilenummer	Lieferant	Version
Hardware	247 901 81 01	Continental	17/41 003
Software	247 902 20 12	Continental	20/44 000
Diagnosekennung		001022	Steuergerätevariante
			HVAC177_R_20
Fehler	Text		Status
P053400	Der Kältemittelstand ist zu gering. _		S
	Name	Erstes Auftreten	Letztes Auftreten
	Häufigkeitszähler	---	1.00
	Gesamtwegstrecke	11936.00km	11936.00km
	Anzahl der Zündungszyklen seit dem letzten Auftreten des Fehlers	---	9.00
B19A200	Der elektrische Kältemittelkompressor hat Übertemperatur. _		S
	Name	Erstes Auftreten	Letztes Auftreten
	Häufigkeitszähler	---	2.00
	Gesamtwegstrecke	11936.00km	11936.00km
	Anzahl der Zündungszyklen seit dem letzten Auftreten des Fehlers	---	3.00

2. Check dryer cartridge at condenser for particles: Remove dryer cartridge, illuminate inlet of dryer cartridge using flashlight (A), and examine filter screen through outlet of dryer cartridge (B) -> see comparison picture bad/good



Further possible signs for this fault profile are:

- Refrigerant level clearly too low (target: 670 g): In this case, please first of all check where a leak is present in the system
- Loud noises from compressor: If loud noises are coming from the compressor, this finding must be validated with the two tests specified above (check the dryer cartridges or the specified fault codes). Loud noises alone are no reason to replace the compressor, since these can be very subjectively perceived in individual cases.

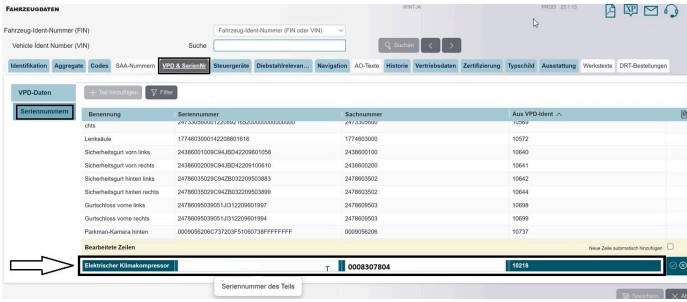
Attachments	
File	Description
checking_filter_of_dryer_cartidge pictogramm.jpg	
Fault codes in the climate control unit.jpg	

XENTRY Tips

- Refrigerant line between refrigerant compressor and capacitor (A2438308600)
3. To use the new refrigerant line A2438308600, the electric line for pressure sensor B161/2 must be extended using the adapter wiring harness A2435408724.
- Disconnect plug from pT sensor
 - Route the adapter line A2435408724 to the newly positioned pT sensor and secure it with a cable tie to prevent chafing
4. Insert the blind plug from the adapter wiring harness onto the old sensor.



5. Check SAM (N10) for latest software. If necessary, perform software update.
6. Finally, please check whether all heating and cooling functions are working; if not, please create a TIPS case with the following information:
- Detailed description of the customer complaint and the workshop measures carried out
 - Initial quick test
 - Photos of the filter screen of the dryer cartridge

Attachments	
File	Description
Redocumentaion VeDoc.jpg	
	
BR243_Spülanweisung_deutsch.pdf	
BR243_Flushing_instruction_english.pdf	

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
Body > Air conditioning > Heater > Insufficient heat output
Body > Air conditioning > Air conditioning > Insufficient cooling output

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A0008307804			refrigerant compressor	1	Important: A0008307804 replaces A0008304404 and A0008307704	X
A0998301400/1500			Capacitor	1		X
A2435408724			Electrical wiring harness sensor	1	Includes line, blind plug, and cable tie	X
A2438308600			Refrigerant line between refrigerant compressor and condenser	1		X
A2938350500			Filter Dryer	1	only if capacitor A0998301400/1500 is installed	X

Control unit/fault code	
Control unit	Fault text

XENTRY Tips

N10*1 - Signal acquisition and actuation module - Automatic climate control (SAM) (HVAC177)	B19A200 - The electric refrigerant compressor has over-temperature. _ P053400 - The refrigerant level is too low. _
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Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			8307Y	