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

Topic number	LI83.20-P-076623
Version	2
Function group	83.20 - Heating
Date	6/17/25
Validity	EQA (H243), EQB (X243)
Reason for change	Remedy change

Complaint

• Insufficient heating output in vehicle interior

• Customer describes a one-off, loud "plopping" 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

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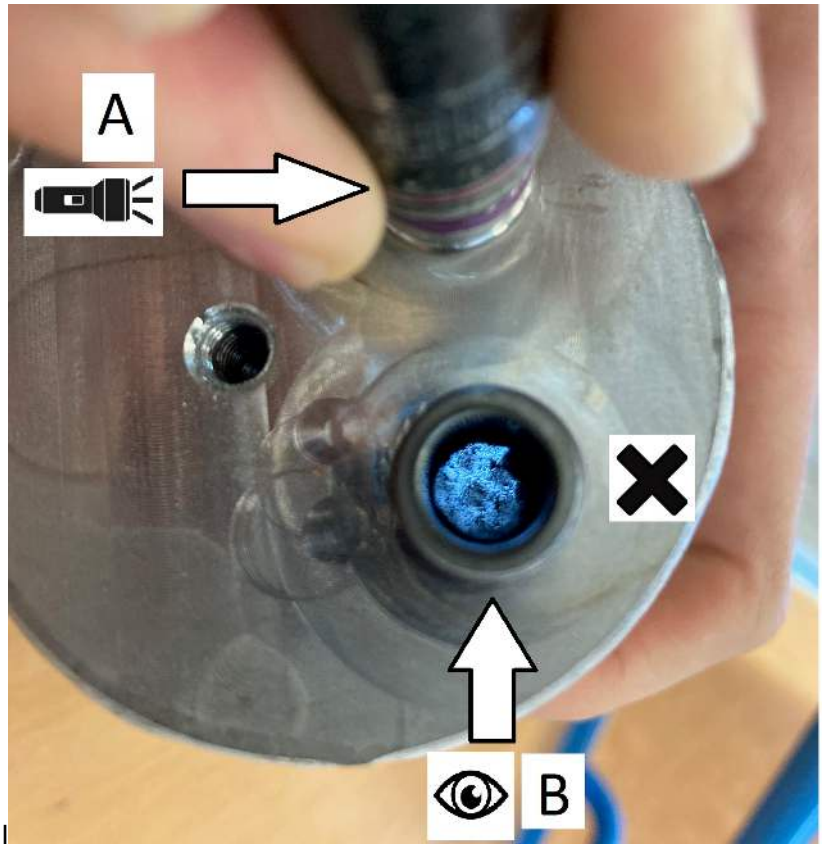
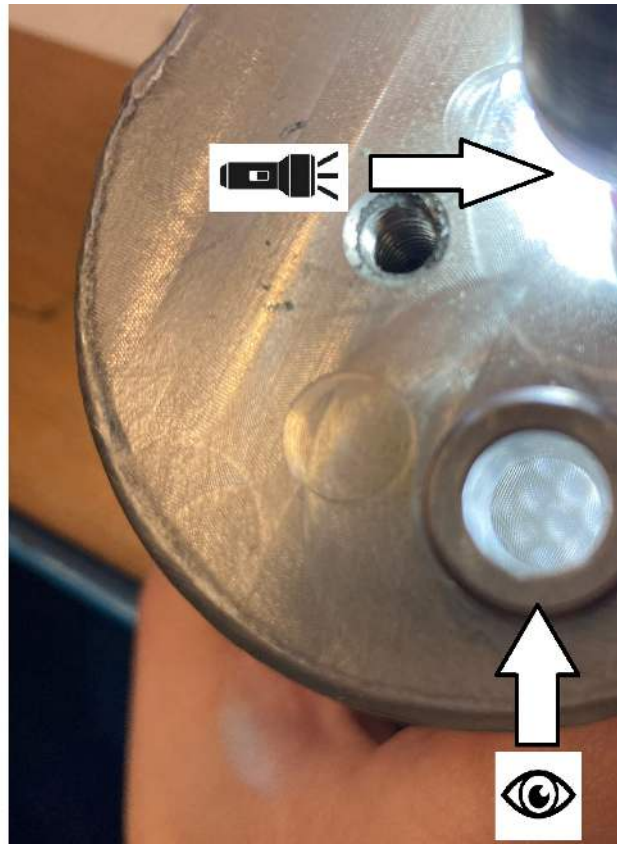
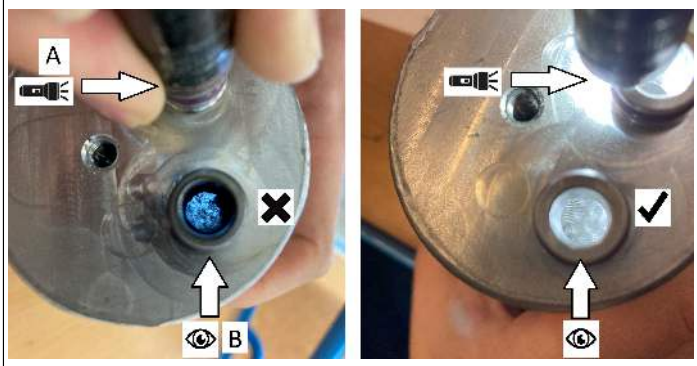




Further possible signs for this fault profile are:

• 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	

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P053400 The refrigerant level is too low. CURRENT and STORED

Supplemental information on time of occurrence

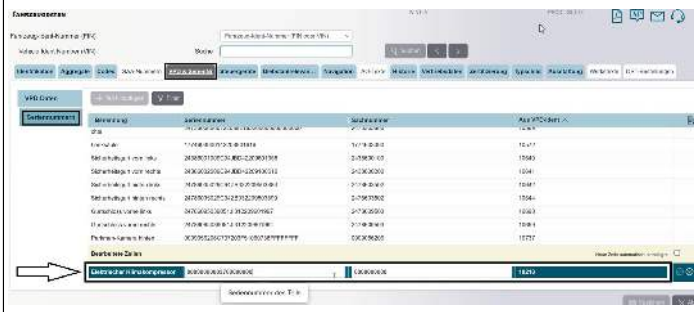
Name	First occurrence	Last occurrence
Frequency counter	---	1.00
Main odometer reading	25152.00km	25152.00km
Number of ignition cycles since the last occurrence of the fault	---	0.00

B19A200 The electric refrigerant compressor has overtemperature. STORED

Supplemental information on time of occurrence

Name	First occurrence	Last occurrence
Frequency counter	---	2.00
Main odometer reading	25024.00km	25152.00km
Number of ignition cycles since the last occurrence of the fault	---	29.00

Redocumentaion VeDoc.jpg



Fehlercode im Klimasteuergerät.jpg

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	

Cause

The refrigerant line between the A/C compressor and capacitor may be damaged due to a high refrigerant temperature.

Remedy

If the tests listed have been carried out and the results correspond to the described fault profile, please carry out the following steps:

1. Flushing of the refrigerant circuit as per AR83.30-P-1785EQA

2. Then replace the following parts:

- A/C compressor (***IMPORTANT: If the A/C compressor A0008304404 or A0008307704 is installed in the vehicle, it must be replaced by part number A0008307804***)
- Refrigerant line between refrigerant compressor and condenser
- If the capacitor A0998301100 is installed, then replace the complete capacitor (including dryer cartridge and PT sensor).
- If capacitor A0998301400/1500 is installed, only new dryer cartridge (A2938350500)

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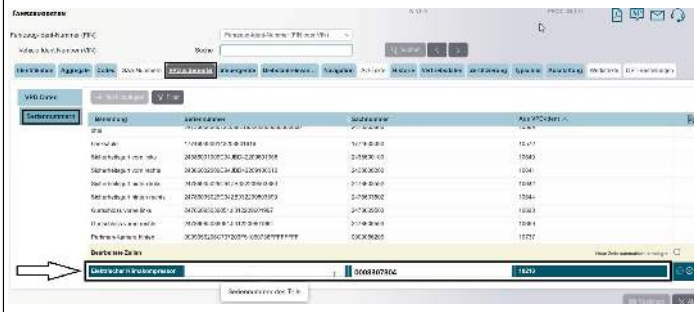
3. Check SAM (N10) for latest software. If necessary, perform software update.

4. Please then check whether all of the heating and cooling functions are active. 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_englisch.pdf	

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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

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A2438307300			Refrigerant line between refrigerant compressor and condenser	1		X
A0998301400			Capacitor	1		X

Control unit/fault code	
Control unit	Fault text
N10*1 - Signal acquisition and actuation module - Automatic climate control (SAM) (HVAC177)	B19A200 - The electric refrigerant compressor has overtemperature. _ P053400 - The refrigerant level is too low. _

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			8307Y	

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