167 Air Conditioning System Leak

Topic number	LI83.30-P-077763
Version	27
Function group	83.30 - Air conditioning
Date	10/21/26
Validity	167
Reason for change	Remedy

Complaint

Customer concern of Air Conditioning not cooling.

*NOTE - Use of tracer DYE for leak checks is not approved. Only approved leak check procedures as per WIS are approved.

Cause

Possible refrigerant leak.

Remedy

Perform the following measures :

Important **- Photo documentation requirement is no longer in effect as of 10/1/2025.**

Remedy 1: Replace Evaporator

(Only applies to vehicles produced PRIOR to April 15, 2022 and has NOT had the evaporator replaced previously)

1. Ensure that the rest of the AC system has been thoroughly checked for leaks with forming gas as per WIS before condemning the evaporator.
2. If no other leaks are found, replace the evaporator
3. ***Important*** - when you get the new evaporator, check the expansion valve bracket to see if there are any bends (see attachment "Bent Bracket").

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a. If bent, remove the expansion valve and bracket and check for damage to the flange (see attachment "Flange Damage").
   i. If damage is found, order another evaporator and claim the part under parts warranty. The warranty claim MUST include a photo of the damage found.
   ii. If no damage is found, flip the bracket and torque to 7Nm. Check the evaporator for proper sealing before fully installing.
b. If no bends are found, the evaporator should be installed in the vehicle.

Note - *If the evaporator housing has been opened or the evaporator or housing has been tampered with, the claim will be debited.

Remedy 2:

(Applies to all vehicles produced on or AFTER April 15, 2022 up to August 1, 2025)

1. Ensure that the entire AC system has been thoroughly checked for leaks with forming gas as per WIS .
2. If no leaks were found AND the system came in with no cooling/low charge, OR the evaporator is suspected of leaking:
3. Replace **ONLY** the **expansion valve bracket, seals, and bolts** as supplied in **kit A 167 832 47 00**, in accordance with the procedure outlined in **WIS document AR83.30-P-5520ME**.
4. **IF THE PRODUCTION DATE IS BETWEEN JUNE 1, 2023 AND JULY 1, 2024, REPLACE THE DRYER AS WELL. (NOT THE CONDENSER)**
5. After, charge the system and perform a few drive cycles.
6. Recheck the vehicle for leaks.
7. If no leaks are found, the vehicle can be released.
8. If a minor leak is detected that is less than 50ppm, then perform the following steps:

- If a leak is detected, fill the system with forming gas
- Close all doors and windows for 10 minutes.
- Vehicle off with no blower activation.
- Open the driver's door and measure ppm detection as soon as the door is open and the sniffer goes into the vehicle.
- If no leaks are measured, fill the system and release.
- If you still feel the evaporator is needed/leaks are still detected, a TIPS case is required for replacement. Provide all documentation listed in Remedy 3.

Remedy 3:

(Only applies to vehicles produced AFTER August 1, 2025)

Ensure that the entire AC system has been thoroughly checked for leaks with forming gas as per WIS .

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If no leaks are found or the expansion valve has been found to be leaking, remove the expansion valve and check the bracket.

If the bracket is bent, replace the expansion valve bracket, seals, and bolts as supplied in kit A 167 832 47 00.

In the warranty submission, include photos of both sides of the bracket and a side profile so it can be seen that the bracket is bent.

If the bracket is NOT bent or leaks from other locations are found, then open a TIPS case with the following:

1. Initial Quick Test
2. Create a short video of the actual pressures via AC machine, showing the engine running, and hold a copy of the VIN/RO in view as well.
3. OBS recording of XENTRY AC actual values of compressor request to be on and current value. (Instructions in Attachments)
4. Video recording of the leak being found via sniffer at the R/F AC drain after removing the under dash panel if the evaporator is suspected. (see attached videos)
5. If the evaporator is found to be leaking via sniffer, another video needs to be uploaded (or a continuation if only making the video after checks), showing the expansion valve being checked for leaks.
6. If no leaks are found with the sniffer at the expansion valve, spray soapy water mix on the expansion valve and check for leaks. Upload a video showing the spray test and VIN.
7. Provide photos of both sides of the bracket and a side profile so it can be seen that the bracket is not bent.
8. Open a TIPS case in the HV/LV inbox labeled "167 AC leak after April 1, 2025" with all attachments.

NOTE: (Applies to all 167's)

- Please see the list of WIS documents for forming gas leak check and recharging of the system.
- Review PCTT 9/25 for forming gas best practices.
- Review PCTT 5/25 for bracket removal best practices.
- Condenser replacement is NOT authorized as a suitable repair in lieu of the dryer not being available.
- Ensure that the correct damage code is used for failed component. (see list of damage codes)
- **Evaporator housings that have been disassembled, present with physical damage, or tags that show signs of tampering will be debited in full.**

Attachments

File	Description
Expansion valve leak.mkv	
Leak at drain hose.mkv	

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Using OBS Studio For Xentry Kits.pptx

Bent bracket.png

Flange damage.png

WIS-References

Document number	Title	Note
AR83.30-P-1760ME	Drain, evacuate and recharge air conditioning, check for proper operation and check for leaks	Performing drain and refill
AR83.30-P-1761ME	Check air conditioning system for leakage	Must be done for all leak checks
AR83.30-P-1785ME	Flush air conditioning	Only to be performed if debris is found in the system
SI83.30-P-0021A	Service Information: Damage code	Notes for damage code to be used.

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 **>** Air conditioning **>** Insufficient cooling output

Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
	Dryer desiccant cartridge	H	8350C7	
	Condenser	H	834370	
	Evaporator Damage Code	H	8343204	

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	Expansion valve	H	834314	Use this for the expansion valve bracket

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