

167 Air Conditioning System Leak

Topic number	LI83.30-P-077763
Version	20
Function group	83.30 - Air conditioning
Date	5/19/25
Validity	167
Reason for change	Remedy change

Complaint

Customer concern of Air Conditioning not cooling.

Cause

Possible refrigerant leak at the evaporator.

Remedy

Perform the following measures :

Remedy 1:

(Only applies to vehicles produced prior to April 15, 2022)

Must be included for warranty:

1. Picture of the forming gas check being performed with RO that shows the VIN clearly in view. (see attachments)
2. Clear picture of VIN on B-pillar.
3. Ensure that the rest of the AC system has been thoroughly checked for leaks before condemning the evaporator.

Remedy 2:

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

Must be included for warranty:

1. Picture of the forming gas check being performed with RO that shows the VIN clearly in view. (see attachments)
2. Clear picture of VIN on B-pillar.
3. Attach pictures of new and old bracket so it can be seen if leaking to your warranty submission.

Ensure that the entire AC system has been thoroughly checked for leaks.

XENTRY Tips

If no leaks were found AND the system came in with no cooling/low charge, OR the evaporator is suspected of leaking:

Replace the expansion valve and bracket (comes with new valve) as per WIS. (Refer to the attachments "Clamp surface of the bracket" and install the bracket with the clamp surface being parallel to the expansion valve)

Be sure to tighten the valve to 7Nm and alternate each bolt when tightening.

Make sure old bracket is included with expansion valve for warranty return as it is needed for analysis.

If the production date is also before July 2024, replace the dryer as well.

After, charge the system and perform a few drive cycles.

Recheck the vehicle for leaks.

If no leaks are found, the vehicle can be released.

If any leaks are found afterwards, 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. Picture of the forming gas check being performed with RO that shows the VIN clearly in view.
4. OBS recording of XENTRY AC actual values of compressor request to be on and current value. (Instructions in Attachments)
5. Video recording of the leak being found via sniffer at the R/F AC drain after removing the under dash panel. (see attached videos)
6. 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.
7. 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.
8. Open a TIPS case in the HV/LV inbox labeled "167 Evaporator Suspected of Leaking" with all attachments.

Remedy 3:

(Only applies to vehicles produced after April 1, 2025)

Ensure that the entire AC system has been thoroughly checked for leaks.

If any leaks are found, then open a TIPS case with the following:

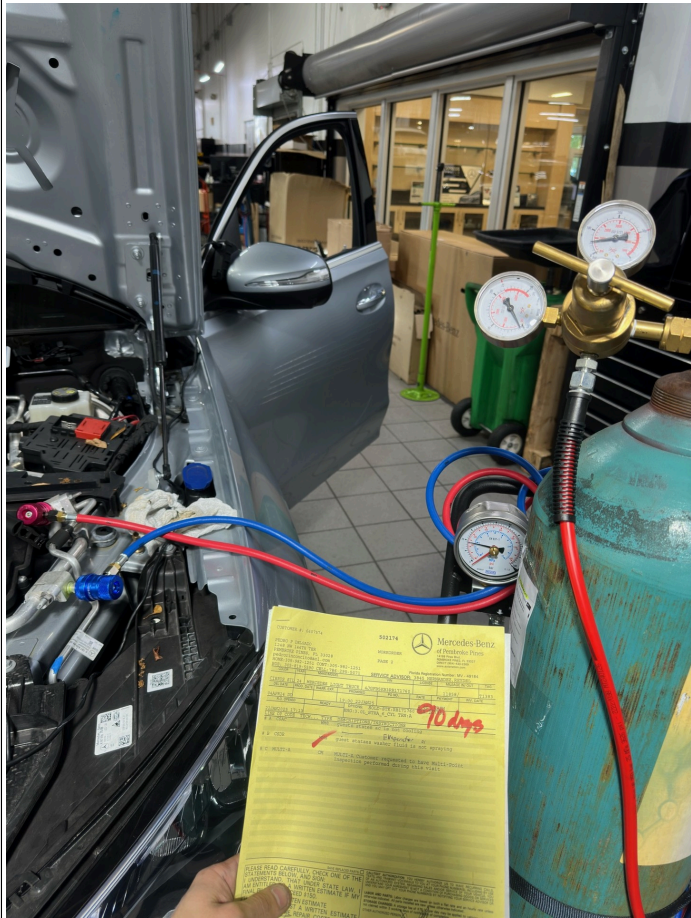
1. Initial Quick Test
2. Create a short video of the actual pressures via AC machine, showing the engine running, and hold a copy of the VIN/RO in view as well.
3. Picture of the forming gas check being performed with RO that shows the VIN clearly in view.
4. OBS recording of XENTRY AC actual values of compressor request to be on and current value. (Instructions in Attachments)
5. 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)
6. 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.

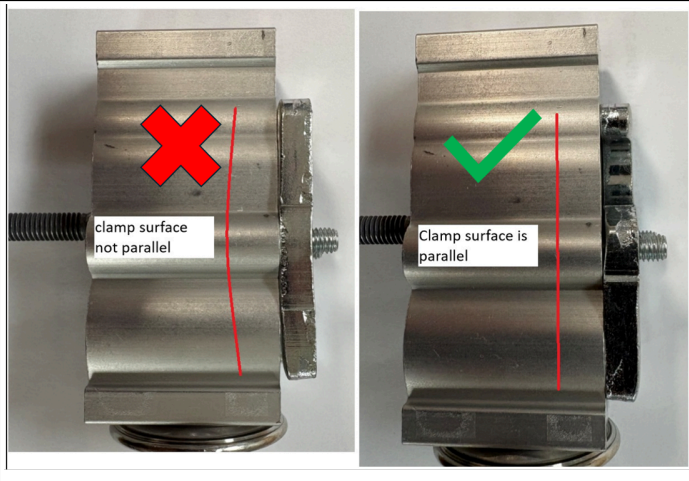
XENTRY Tips

7.
- 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.
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.
- All documents, with the exception of videos need to be uploaded for the warranty claim. Videos are only needed if a TIPS case is opened.
- Ensure that a full vacuum is pulled on the system for at least 30 minutes after replacement
- Condenser replacement is NOT authorized as a suitable repair in lieu of the dryer not being available.

Attachments	
File	Description
Expansion valve leak.mkv	
Leak at drain hose.mkv	
Using OBS Studio For Xentry Kits.pptx	
gas+forming+502174.jpg	Forming gas picture required for warranty
	
Clamp surface of the bracket.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
	Damage Code		8343204	Submit all claims under this damage code