

Headlamp Leak Test

Topic number	LI82.10-P-078307
Version	1
Function group	82.10 - Exterior lights
Date	9/20/24
Validity	All
Reason for change	Adaptation of operation steps

Complaint

Headlamps leaking or fogged

Cause

The fogging of the headlamp is a natural phenomenon which can occur under certain climatic conditions.

In contrast to a leaky headlamp, physical fogging does not result in a technical impairment of the headlamp.

A leak test must be performed to determine if physical fogging exists or if the headlamp is leaky.

Remedy

In advance, observe LI82.10-P-078301 "Headlamps or Front Fog Lamps Leaking or Fogged".

1. Prepare headlamp/check for external damage:

For headlamps with a closed system

1. Check the headlamps for any external damage and check also for correct seating of the Gore-diaphragm/correct latching of the cover caps.
2. If the headlamp exhibits any external damage, replace the headlamp.

For headlamps with an open system

1. Check the headlamps for any external damage and seal off the vent then make sure the cover caps are latched correctly into place.
2. If the headlamp exhibits any external damage, replace the headlamp.

Note:

A headlamp with external damage is not a warranty or goodwill case.

2. Leak test of headlamp with overpressure:

- Connect test adapter to pressure tester. (Figure 1)
- Check test adapter for leak tightness. To do so, connect plug and coupling (picture 2) and apply a maximum overpressure of 30 mbar.

XENTRY Tips

The pressure must remain constant. If the pressure does not remain constant, use a new adapter.

- Seal all the outlet openings using sealing compound and the given diaphragm with the plunger (picture 3). (Picture 4)

Make allowance for the different headlamp variants here (there are different outlet openings).

- Check if the headlamp needs to be removed to gain access to the diagnostic socket on the headlamp housing.
- Plug the adapter onto the diagnostic socket on the headlamp housing. (Picture 5).
- Apply a maximum of 30 mbar overpressure to the headlamp housing.

Note: If the maximum overpressure of 50 mbar is exceeded the headlamp seal will be damaged.

- If a pressure drop of less than 10 mbar is measured within 30 seconds, the headlamp is not leaky and the problem is down to natural physical fogging.
- If a pressure drop of more than 10 mbar is measured within 30 seconds, the headlamp is leaky.

Note: The leaky position can be localized with the aid of soap suds.


Replace any leaky headlamps.

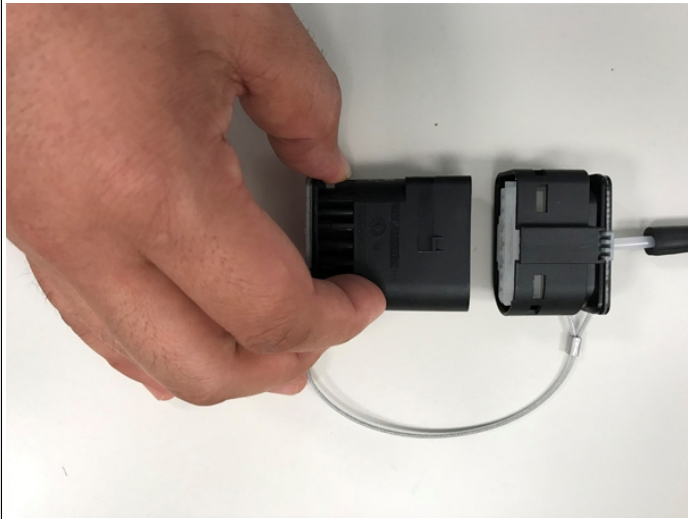
Note:

Desiccant packs can be installed for headlamps that are not leaky.

See:

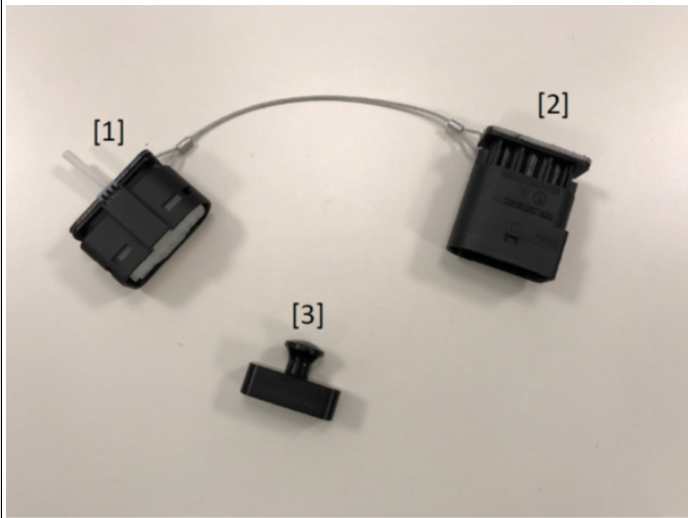
- LI82.10-P-064766 Fogged headlamp, desiccant pack installed - open ventilation system
- LI82.10-P-078304 Fogged headlamp, desiccant pack installed - closed ventilation system

Attachments	
File	Description
(1).jpg 	Picture 1
(2).jpg	Picture 2



(3).jpg

Picture 3



(4).jpg

Picture 4



(5).jpg

Picture 5



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

Lighting > Exterior lights > Front fog lights > Malfunction

Lighting > Exterior lights > Driving lights > Main headlamps > Fogged

Lighting > Exterior lights > Driving lights > Taillamp > Fogged

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
W000589059100			Test adapter	1		

Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note