

Technical Service Bulletin



94 Exterior lights have moisture accumulation

94 23 64 2012749/16 May 9, 2023. Supersedes Technical Service Bulletin Group 94 number 21-34 dated February 17, 2021, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
All Audi Models	2016 - 2024	All	Not Applicable

Condition

REVISION HISTORY		
Revision	Date	Purpose
16	-	Revised header (Added MY 23,24) Revised <i>Technical Background</i> (Updated information)
15	02/17/2021	Revised header (Added MY22, models, and attachment) Revised <i>Service</i> (Added reference to TSB 2061922)
14	12/06/2019	Revised header (Added MY20 and MY21)



Customer states:

- Condensation is visible on the inside of the headlight, taillight, fog light, side marker light, front turn signal, daytime running lights, and/or third brake light lens.

Workshop findings:

- Workshop is able to confirm the customer concern. **Figure 1** provides examples of **NORMAL** amounts of moisture that may be visible. The level of moisture buildup may vary car-to-car or even between lamps on the same vehicle.

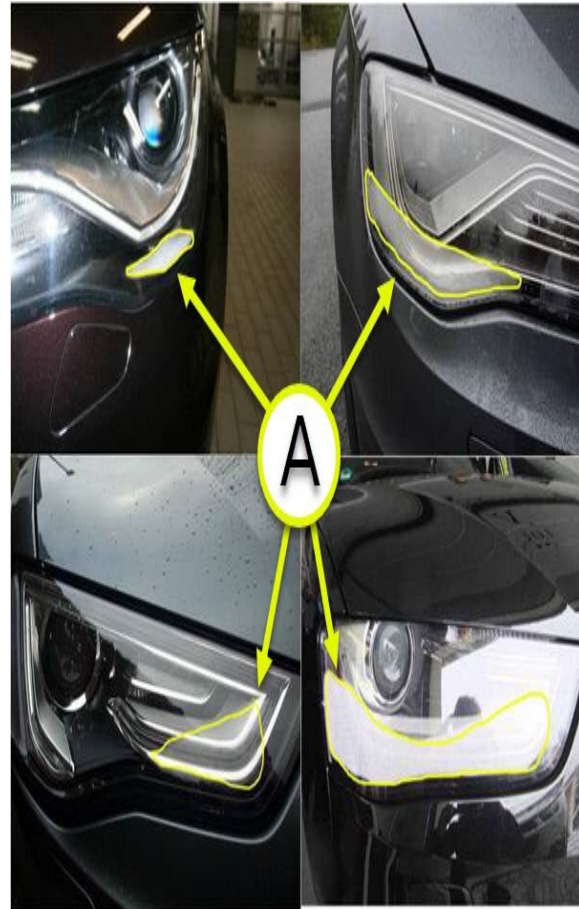


Figure 1. Normal condensation/moisture on the inside of the lights.

Technical Background

Process of physical condensation on headlights and tail lights:

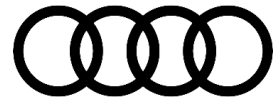
In winter and/or in wet weather, the complaint “condensation on the lens, moisture in the lamp” can occur on the headlights and other exterior lights as there is more humidity in the surrounding air.

Headlights and tail lights are normally open systems meaning air from the outside circulates through the component. This type of design is necessary to ensure pressure equalization.

When the vehicle is parked after use, the back of the headlight is heated up by residual heat from the engine, for example, while at the same time, the lens is cooled down by the cold outside air. This creates a temperature difference which causes the humidity in the air to condense on the inside of the lens.

Driving through a car wash or using a steam cleaner on the engine compartment amplifies this phenomenon by increasing the humidity in the component.

LED headlights and tail lights:



The lens does not warm up even when the lights are switched on because none of the light emitted is in the infrared spectrum. In this case, only the pressure difference at the vents occurring while driving provides the needed airflow to clear up the condensation. The vents are arranged and designed in such a way that the lens will be cleared after driving with sufficient ventilation.

The normal presence of moisture/condensation:

- Does not affect the performance of the headlight or taillight.
- Does not cause corrosion inside the component.
- Can occur on any lamp.
- May vary depending on environmental conditions and driving habits.
- **Is NOT a condition covered under warranty.**

Production Solution

Not Applicable

Service

Always check for TSBs that are specific to your vehicle configuration and specific customer concern. This TSB provides a general overview when performing the diagnosis of moisture concerns that are internal to an exterior lighting assembly.

Please document this repair following the instructions in TSB 2061922: *94 How to properly document optical concerns for headlights and tail lights.*



The light emission surface (Figure 2A) of the main beam should be clear after driving for approximately 10 minutes with the main beam on.

- Driving speeds must be consistently over 45mph for the ventilation system to properly function.
- Residual condensation (Figure 2B) may be present depending on ambient conditions, this is normal.
- The amount of time required for the condensation to clear will depend on the outside temperature, relative humidity, and the vehicle speed (higher speeds provide better ventilation).
- Leaving a vehicle stationary with lamps on is **NOT** sufficient for clearing moisture

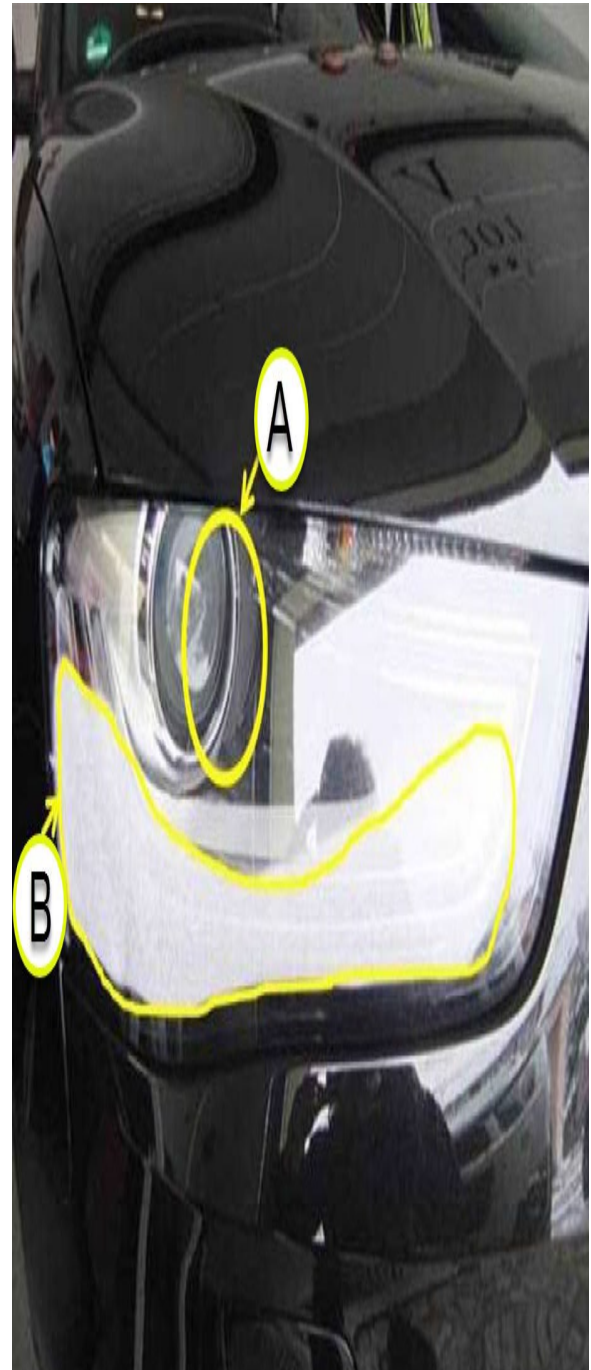


Figure 2. A: Main beam light emission surface. B: Condensation of the headlamp.

If water drops or condensation are present on the light emission surface (Figure 2A) after performing step one, inspect the headlamp assembly for the root cause:

- Missing cover.



- Damaged seal.
- Clogged drain.
- Outside influence.
- Vent tube disconnected from the headlamp.



Tip: Take a photo before and after Step 1 for visual comparison. Please retain photos for at least 1 month after claim submission.



Note: If there is condensation in the headlights, the light emission surface of the lens must be clear after the vehicle is driven in such a way as to provide sufficient ventilation (on a major road/motorway) with the low beam headlamp switched on. The remaining inside surfaces may still have condensation on them after the drive; this is not a problem.

Normal amounts of moisture:

If the amount of moisture/condensation is deemed normal please explain this to the customer. Parts replacement **will not** correct the concern and the customer will likely still experience the same issue.

Abnormal amounts of moisture:

Abnormal amounts of moisture can be seen in figures 3 and 4 below. These are examples of excessive moisture still present **AFTER a thorough test drive** with lamps on.

When submitting a claim under warranty, please upload the photos to **DOC-IT** for review. Claims submitted without photos may be charged back.

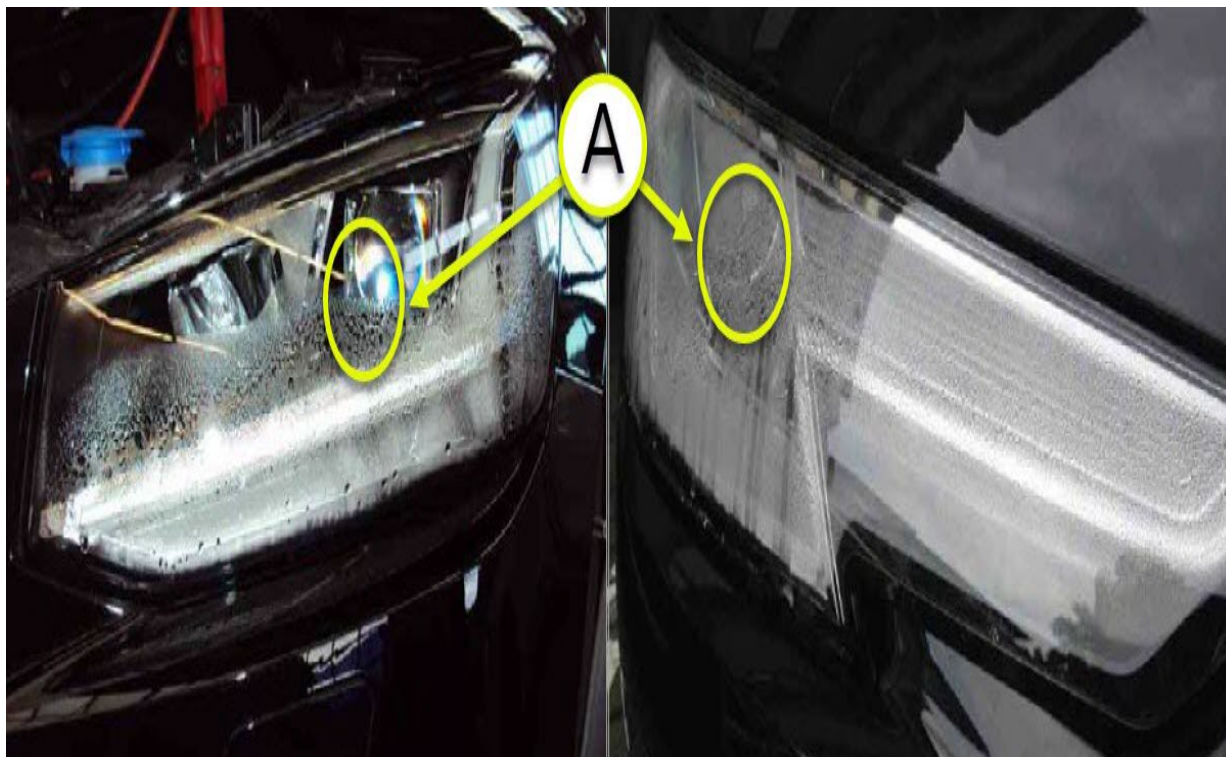


Figure 3. A: Example of a compromised headlamp. Moisture is still present in the light emission surface after a test drive.

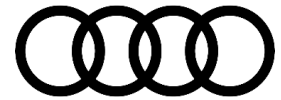


Figure 4: Example of compromised tail lamps after a sufficient test drive.

Warranty

This TSB is informational only and not applicable to any Audi warranty.

Additional Information



The following Technical Service Bulletin(s) will be necessary to complete this procedure:

- TSB 2061922, *94 How to properly document optical concerns for headlights and tail lights.*

All part and service references provided in this TSB (**2012749**) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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