



HYUNDAI Technical Service Bulletin

GROUP BODY	NUMBER 23-BD-002H
DATE JANUARY, 2023	MODEL(S) ALL

SUBJECT: INFORMATION FOR LAMP CONDENSATION

This TSB supersedes 20-BD-014H by adding more information and examples for lamp condensation and updating the service information to diagnose and repair this condition.

Description: This bulletin provides information regarding condensation related to the accumulated moisture in the headlamp, rear combination lamp, daytime running lamp (DRL), or fog lamp. This TSB illustrates the various causes of condensation inside the lamp assembly.

Lamp assembly replacement is NOT necessary in most cases. This condition can be eliminated by turning on the lamps with the engine running for several minutes or during normal driving operation.



Applicable Vehicles: All

Warranty Information:

The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process.

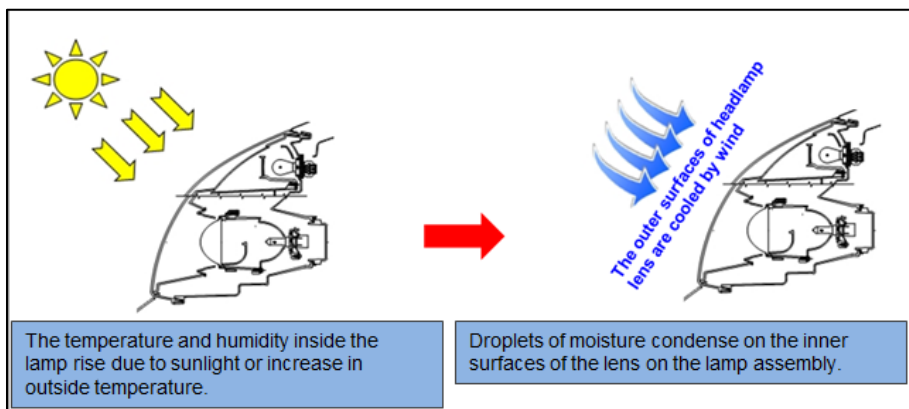


STUI Pictures Required

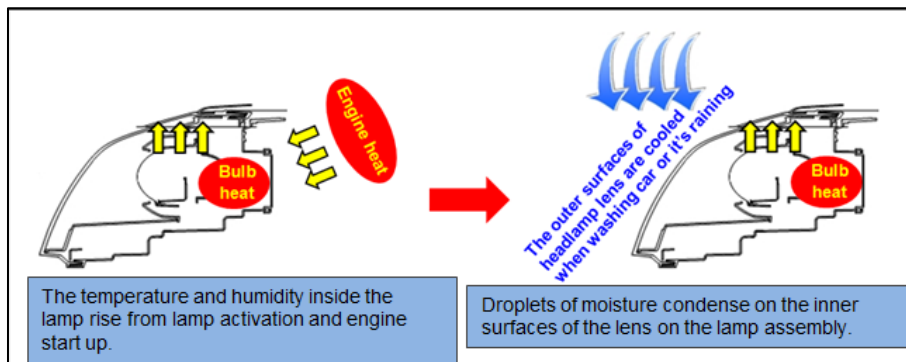
When submitting a warranty claim, please ensure photos are captured as shown in the examples on page 3, with the headlamp installed and the fender and hood partially visible.

A. Causes of Lamp Condensation

1. Natural Condensation



2. Condensation from Engine Startup



The amount and location of condensation will vary based on environmental factors and vehicle usage conditions (lamp usage, driving time and/or distance, etc.).

Condensation may occur on only one side of the vehicle if it is parked in a certain position that exposes one side to direct sunlight while the other side is in shade.

A similar example of the natural occurrence of condensation is windshield fogging. During cold temperatures, the warm air inside the cabin may condense on the windshield if it has enough moisture. This occurs because the warm air is cooled down past its dew point as it flows over the cold windshield surface.

The dew point is the temperature at which the air is unable to “hold” any more water vapor. The water vapor in the air will begin to condense into liquid droplets (dew) if the air is cooled down past its dew point.

B. Lamp Condensation Identification

i Information

Condensation from the accumulated moisture is a normal occurrence. Lamp assembly replacement is **NOT** necessary to resolve this condition.

1. Normal Condensation
Condensation occurring inside the lamp assembly after rain or a car wash cycle is considered a natural occurrence. Condensation can also occur after the vehicle is parked outside during cold temperatures. This condition occurs when water vapor inside the lamp assembly is exposed to temperature variations.

This condensation is **NORMAL** and replacement is **NOT REQUIRED**.

i Information

See page 4 for the service procedure to remove normal condensation.



Normal condensation in the headlamp

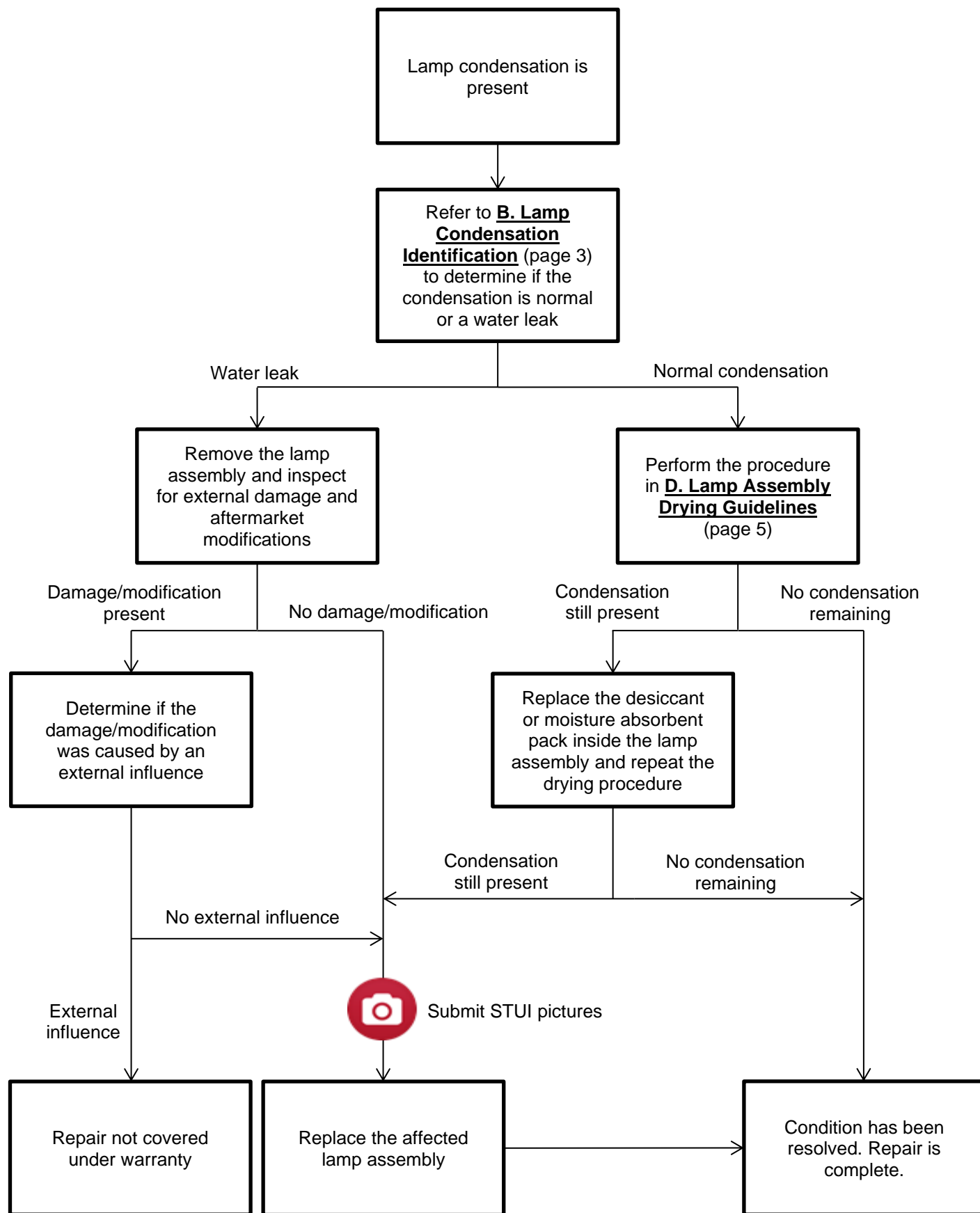
2. Water Leak
If water is collecting at the bottom of the lamp assembly, water streaks are present, or the condensation remains after the lamps have been on for 30 minutes or more, there may be a water leak in the assembly. The leak may be caused by a poor seal between the lamp housing and lens, cracks in the lamp assembly, or poor fitment.

The condition should be diagnosed and repaired as necessary.



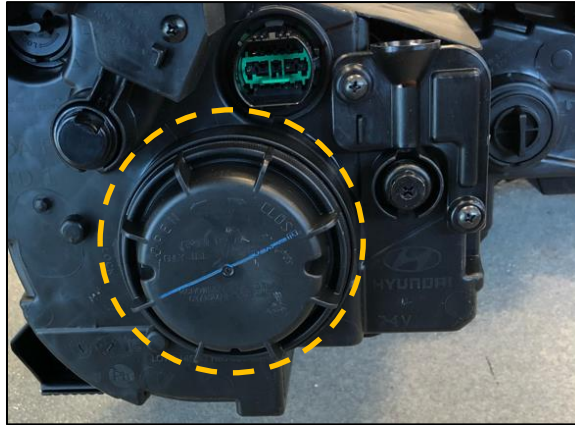
Water collecting inside the lamp assembly

C. Condensation Repair Flowchart



D. Lamp Assembly Drying Guidelines

- Ensure that the vehicle is parked in a well-ventilated area and that the dust cap(s) have been removed prior to drying the lamp assembly.
- Certain lamp assemblies may have two dust caps. Remove both dust caps if applicable.
- To avoid battery discharge, the engine must be running while the lamps are on.
- Allow the vehicle to idle for 30 minutes with the engine running and lamps turned on for the condensation and moisture to evaporate.
- Reinstall the dust cap(s) after drying the lamp assembly.
- If condensation still remains, replace the lamp desiccant or moisture absorbent pack, if equipped, and repeat the lamp assembly drying procedure again.



Example location of the dust cap

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Information

Normal warranty applies for any lamp assembly with condensation. If a lamp desiccant or moisture absorbent pack is replaced, file the warranty claim with the part number for the desiccant or moisture absorbent pack, not the lamp assembly.