



## STAR ONLINE PUBLICATION



**Case Number:** S2308000120

**Release Date:** September 2023

**Symptom/Vehicle Issue:** Rain Sensing Auto Wipers and Auto on Head Lamps Inoperative

**Owner Complaint/Technician Observation:** The owner complains that the rain-sensitive wipers and/or the automatic headlamps are not functioning. The technician observed one or more of the following Diagnostic Trouble Codes (DTCs) have set dependent on the vehicle, **B221D-00 Rain Sensor Module (RSM) Internal, B221D-49 - Rain Sensor Module (RSM) Internal Electronic Failure, B23AA-01 - Implausible Data Received from Rain Sensor - General Electrical Failure.**

**Repair Procedure:** Verify that the auto-on wiper selection within the radio settings is set to on and verify the customer-selected headlamp switch position is positioned for AUTO-ON headlamps. Inspect the windshield area where the light rain sensor is located, make sure nothing is blocking the sensor like windshield tint or any other aftermarket equipment, make sure there are no cracks in the windshield and if a replacement glass, inspect the area of the sensor mounting location.

1. Visually inspect the sensor at the glass, looking for air bubbles from a sensor area that is properly wetted to the glass surface.
2. Functionally check the rain sensing by splashing some water near the area where the sensor is facing, to test if the wipers activate. For the auto headlamps functional check, block the light going into the sensor from exterior glass using an opaque object, make sure the headlamp switch is in auto mode and check headlamp operation.
3. Record DTCs and environmental data checking the voltage recorded when the DTC is set, if the fault set for low voltage test the voltage at the sensor for proper battery voltage.
4. Remove the rear-view mirror cover (inside) and make sure the connector to the sensor is secure, use the push-pull-push method to secure a loose connection. If secure, disconnect the connector and check for bent or pushed-out terminals and repair if needed. Verify the light-rain sensor and harness are secure before further testing.
5. Erase the DTCs and perform a key cycle, the key cycle should be key off for 1 minute with the wiTECH disconnected. Make sure all doors/hood and gate are closed, then turn the ignition back on and test the operation following step 2 checking for proper operation. If no DTCs return release the vehicle. If DTCs return, follow Service Library (SL) DTC diagnostics as needed.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

**Contact STAR Center, or your Technical Assistance Center Via TechCONNECT or eCONTACT ticket if no solution is found**