

DTC B2605

Diagnostic Instructions

- Perform the Diagnostic System Check – Vehicle on page 6-60 prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis on page 6-57 for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions on page 6-58 provides an overview of each diagnostic category.

DTC Descriptor

DTC B2605 00: Daytime Running Lamp Control Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Ambient Light Sensor Signal	B2645 03	B2645 07	B2645 07	—
DRL 2 Relay Control	1	1	B2605 00	—
Ambient Light Sensor Ground	—	B2645 07	—	—
1. Daytime Running Lamps Malfunction				

Circuit/System Description

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 volts depending on outside lighting conditions. The body control module (BCM) provides a 5-volt reference signal to the ambient light sensor. The body control module (BCM) monitors the ambient light sensor signal circuit to determine if outside lighting conditions are correct for either daytime running lights (DRL) or automatic lamp control (ALC) when the headlamp switch is in the AUTO position. In daylight conditions, the BCM will command the DRLs ON by applying ground to the DRL 2 relay via the DRL 2 relay control circuit. When the BCM applies ground to the DRL 2 relay control circuit, the DRL 2 relay coil energizes causing the relay switch contacts to close. With the DRL 2 relay switch contacts closed, battery voltage flows through the DRL 2 fuse to the left and right DRL lamps. Any function or condition that turns on the

headlamps will cancel DRL operation.

Conditions for Running the DTC

- a) Battery voltage must be between 9–16 volts.
- b) Headlamp switch in AUTO position.

Conditions for Setting the DTC

DTC B2605 00 will set when the BCM detects a short to voltage in the DRL 2 relay control circuit.

Action Taken When the DTC Sets

The BCM will disable the DRL 2 relay control circuit.

Conditions for Clearing the DTC

- a) The condition responsible for setting the DTC no longer exists.
- b) A history DTC will clear once 100 consecutive malfunction-free ignition cycles have occurred.

Circuit/System Verification

Ignition ON, verify with a scan tool the park brake switch parameter displays RELEASED.

If not the specified value, refer to Symptoms - Park Brake on page 5-1.

Circuit/System Testing

- 1) Ignition OFF, disconnect the DRL 2 relay.
- 2) Connect a test lamp between the B+ circuit terminal 86 and the relay control circuit terminal 85
- 3) Command the DRL ON and OFF with a scan tool. The test lamp should turn ON and OFF when changing between the commanded states.

If the test lamp is always ON, test the control circuit for a short to ground.

If the circuit tests normal, replace the BCM.

If the test lamp is always OFF, test the control circuit for a short to voltage or an open/high

- 4) resistance. If the circuit tests normal, replace the BCM.
- 5) If all circuits test normal, test or replace the DRL 2 relay.

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