DTC B3600Passenger Compartment Dimming Request Signal Circuit Voltage Below Threshold

Diagnostic Instructions

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

DTC Descriptor

DTC B3600 03: Passenger Compartment Dimming Request Signal Circuit Voltage Below Threshold

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
12-Volt Reference	B1395 03, B3600 03	B3600 03	2	B1395 07
I/P Dimming Signal	B3600 03	B3600 03	1	—
1. Interior Backlighting Inoperative 2. Interior Backlighting Will Not Dim				

Circuit/System Description

The instrument panel (I/P) dimmer switch is used to increase and decrease the brightness of the interior backlighting components. The body control module (BCM) supplies a 12-volt reference through the instrument panel (I/P) dimming voltage reference circuit to the interior lamp dimmer switch, which is part of the headlamp switch. When the dimmer switch is placed in a desired brightness position, reference voltage is applied through the dimmer switch rheostat and the I/P lamps dimmer switch signal circuit to the BCM. The BCM interprets this

voltage signal, then applies a pulse width modulated (PWM) voltage through the I/P lamps control circuit and the LED dimming control circuit to all related interior lamps, illuminating them to the desired level of brightness.

Conditions for Running the DTC

The ignition is ON.

Conditions for Setting the DTC

- The BCM detects a short to ground or open in the 12-volt reference circuit.
- The BCM detects a short to ground or open in the I/P dimming signal circuit.

Action Taken When the DTC Sets

The I/P lamps are not illuminated.

Conditions for Clearing the DTC

A history DTC will clear once 100 consecutive malfunction-free ignition cycles have occurred.

Reference Information

Schematic Reference
Interior Lights Dimming Schematics

Connector End View Reference
Component Connector End Views

Description and Operation
Interior Lighting Systems Description and Operation

Electrical Information Reference
- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference
Control Module References for scan tool information

Circuit/System Verification

Ignition ON, cover the ambient light sensor, vary the interior lamp dimming switch from dim to full bright. The I/P lamps should dim and then become full bright.

Circuit/System Testing

1). Ignition OFF, disconnect the harness connector at the headlamp switch.
2). Ignition ON, test for 11.8–12.2 volts between the 12-volt reference circuit terminal 15 and ground.If greater than the specified range, test
3). the 12-volt reference circuit for short to voltage.If the circuit tests normal, replace the BCM.If less than the specified range, test the 12-volt reference circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4). Verify the scan tool Dimming Control Signal parameter is less than 0.75 volts.If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
5). Install a 3A fused jumper wire between the signal circuit terminal 13 and the 12-volt reference circuit terminal 15. Verify the scan tool Dimming
6). Control Signal parameter is greater than 11.294 volts.If less than the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
7). If all circuits test normal, test or replace the headlamp switch.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the diagnostic procedure.

- Headlamp Switch Replacement
- Control Module References for BCM replacement, setup, and programming