Component Procedures: Parking Lamp

Table of Contents

Component Procedures: Parking Lamp

Park, License, and/or Tail Lamps Malfunction (Article 10363)

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.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Headlamp Switch Park Lamp s ON Signal 2	B257A 00	2	—	
License Plate Lamp Control	B3883 02	B3883 01, B3883 04	B3883 01	—
Park Lamps Control – Left	B2585 02	B2585 01, B2585 04	B2585 01, B2585 04	—
Park Lamps Control – Right	B3867 02	B3867 01, B3867 04	B3867 01, B3867 04	—
Park Lamps Control – Left Rear (without T90)	B3881 02	B3881 04, B3881 01	B3881 04, B3881 01	—
Park Lamps Control – Right Rear (without T90)	B3882 02	B3882 04, B3882 01	B3882 04, B3882 01	—
Headlamp Switch Ground	—	2	—	—
License Plate Lamp Ground - Left	—	1	—	—
License Plate Lamp Ground - Right	—	1	—	—
Side Marker Lamp Ground – Left Front	—	1	—	—
Side Marker Lamp Ground – Right Front	—	1	—	—
Side Marker Lamp Ground – Left Rear	—	1	—	—
Side Marker Lamp Ground – Right Rear	—	1	—	—
Stop/Tail/ Turn Signal Lamps Ground – Left	—	1	—	—
Stop/Tail/ Turn Signal Lamp s Ground – Right	—	1	—	—

1. Park, License, and/or Tail Lamp s Malfunction 2. Park Lamp Switch Malfunction

Circuit/System Description

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, and license lamps control circuits illuminating the park, tail, and license lamp s.

Reference Information

Schematic Reference
Exterior Lights Schematics
Connector End View Reference
Component Connector End Views
Description and Operation
Exterior 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.
- Verify the scan tool Parking Lamp Switch parameter changes between Active and Inactive while commanding the park lamps ON and OFF with the headlamp switch.
- If the parameter does not change Refer to Park Lamp Switch Malfunction.
- If the parameter changes
- Verify the left park lamps turn ON and OFF when commanding the Left Park Lamps ON and OFF with a scan tool.
- If the left park lamps do not turn ON and OFF Refer to Park Lamps Malfunction.
- If the left park lamps turn ON and OFF
- Verify the right park lamps turn ON and OFF when commanding the Right Park Lamps ON and OFF with a scan tool.
- If the right park lamps do not turn ON and OFF Refer to Park Lamps Malfunction.
- If the right park lamps turn ON and OFF
- Verify the license plate lamps turn ON and OFF when commanding the License Plate Lamps ON and OFF with a scan tool.
- If the license plate lamps do not turn ON and OFF Refer to License Plate Lamps Malfunction.
- If the license plate lamps turn ON and OFF

- All OK.

Circuit/System Testing

Park Lamp Switch Malfunction

- Ignition OFF, all doors closed, all accessories OFF, disconnect the harness connector at the S30 headlamp switch. It may take up to 2 minutes for all vehicle systems to power down.
- Test for less than 15 Ω between the ground circuit terminal 6 and ground.
- If 15 Ω or greater
- Ignition OFF.
- Test for less than 2 Ω in the ground circuit end to end.
- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω, repair the open/high resistance in the ground connection.
- If less than 15 Ω
- Verify the scan tool Park Lamps Switch parameter is Inactive.
- If not Inactive
- Ignition OFF, disconnect the X1 harness connector at the K9 body control module.
- Test for infinite resistance between the signal circuit terminal 3 and ground.
- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the K9 body control module.
- If Inactive
- Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 6.
- Verify the scan tool Park Lamps Switch parameter is Active.
- If not Active
- Ignition OFF, disconnect the X1 harness connector at the K9 body control module, ignition ON.
- Test for less than 1 V between the signal circuit terminal 3 and ground.
- If 1 V or greater, repair the short to voltage on the circuit.
- If less than 1 V
- Test for less than 2 Ω in the signal circuit end to end.
- If less than 2 Ω, replace the K9 body control module.
- If Active
- Test or replace the S30 headlamp switch.

Park Lamps Malfunction

- Ignition OFF, exterior lamps OFF, trunk latch latched, disconnect the harness connector at the appropriate park lamp.
- Test for less than 5 Ω between the appropriate ground circuit terminal and ground.
- If 5 Ω or greater
- If less than 5 Ω
- Connect a test lamp between the appropriate control circuit terminal and ground, ignition ON.
- Verify the test lamp turns ON and OFF when commanding the appropriate Park Lamps ON and OFF with a scan tool.
- If the test lamp is always OFF
- Ignition OFF, disconnect the appropriate harness connector listed below at the K9 body control module.
- X4
- X5
- Test for infinite resistance between the control circuit and ground.
- If infinite resistance
- Test for less than 2 Ω in the control circuit end to end.
- If the test lamp is always ON
- Test for less than 1 V between the control circuit terminal and ground.
- If less than 1 V, replace the K9 body control module.
- If the test lamp turns ON and OFF
- Test or replace the appropriate park lamp.

License Plate Lamps Malfunction

- Ignition OFF, exterior lamps OFF, trunk latch latched, remove both E7 license plate lamp bulbs .
- Test for less than 5 Ω between each ground circuit terminal 2 and ground.
- Connect a test lamp between the E7L license plate lamp – left control circuit terminal 1 and ground, ignition ON.
- Verify the test lamp turns ON and OFF when commanding the License Plate Lamps ON and OFF with a scan tool.
- Ignition OFF, disconnect the X4 harness connector at the K9 body control module.
- Ignition OFF, disconnect the X4 harness connector at the K9 body control module, ignition ON.
- Connect a test lamp between the E7R license plate lamp – right control circuit terminal 1 and ground,

ignition ON.
- Test or replace the appropriate E7 license plate lamp bulb.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.
- Rear License Plate Lamp Replacement
- Parking and Turn Signal Lamp Bulb Replacement
- Tail Lamp Bulb Replacement
- Front Side Marker Lamp Replacement
- Rear Side Marker Lamp Replacement
- Headlamp, Instrument Panel Lamp Dimmer, and Fog Lamp Switch Replacement
- Tail Lamp Replacement - Inboard
- Tail Lamp Replacement - Outboard
- Control Module References for BCM replacement, programming, and setup