

ACCESSORIES & EQUIPMENT

Vehicle Access - CTS Sedan

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Front Side Door Latch Bolts	10 N.m	89 lb in
Front Side Door Latch Cover Screws	5 N.m	44 lb in
Front Side Door Outside Handle Bracket Screw	5 N.m	44 lb in
Front Side Door Outside Handle Insert Screw	1.5 N.m	13 lb in
Front Side Door Striker Bolts	22 N.m	16 lb ft
Rear Compartment Latch Bolts	12 N.m	106 lb in
Rear Compartment Lid Latch Striker Bolts	9 N.m	80 lb in
Rear Side Door Latch Bolts	10 N.m	89 lb in
Rear Side Door Outside Handle Bracket Screw	5 N.m	44 lb in
Rear Side Door Outside Handle Insert Screw	1.5 N.m	13 lb in
Rear Side Door Striker Bolts	22 N.m	16 lb ft

SCHEMATIC WIRING DIAGRAMS

DOOR LOCK/INDICATOR WIRING SCHEMATICS

Ajar Switches and Lock Indicators

Lock Switches and Child Lock Status

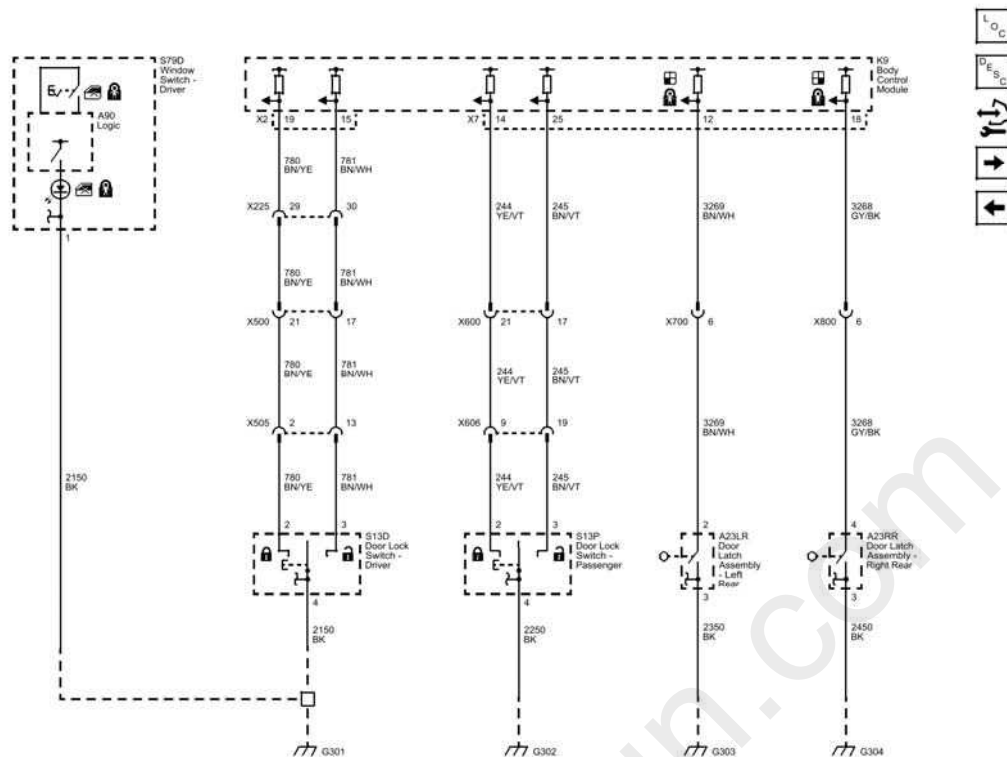


Fig. 2: Lock Switches and Child Lock Status
 Courtesy of GENERAL MOTORS COMPANY

Actuators

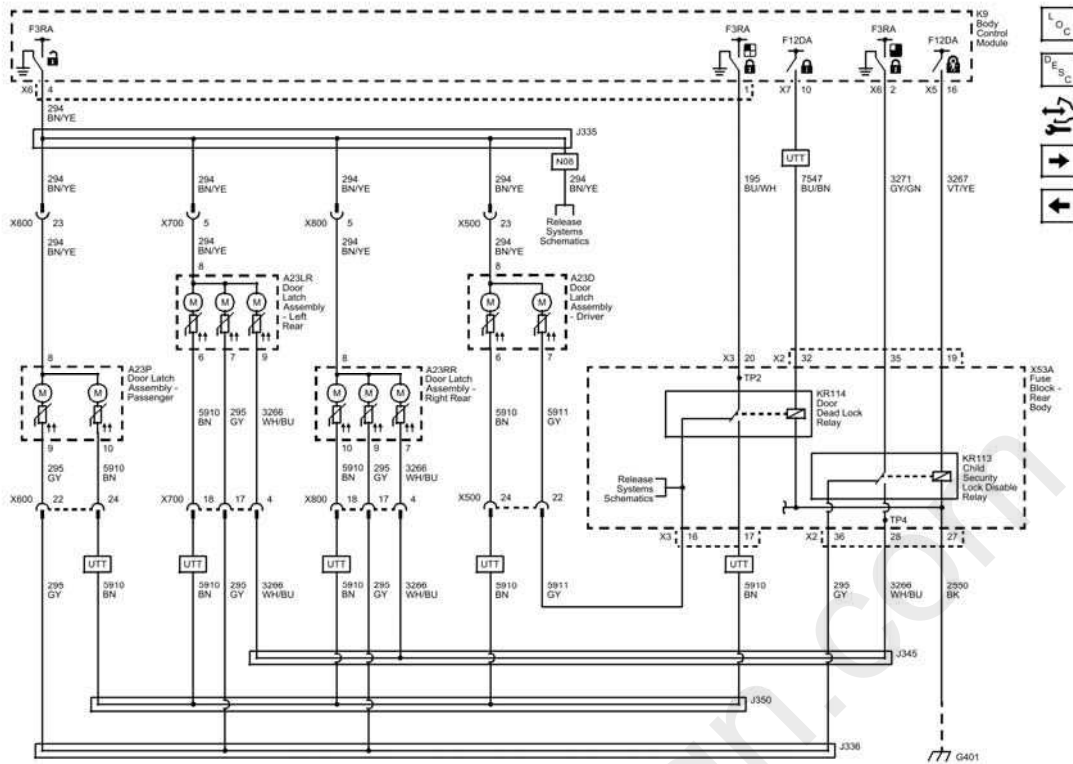


Fig. 3: Actuators
Courtesy of GENERAL MOTORS COMPANY

Door Handle Switches

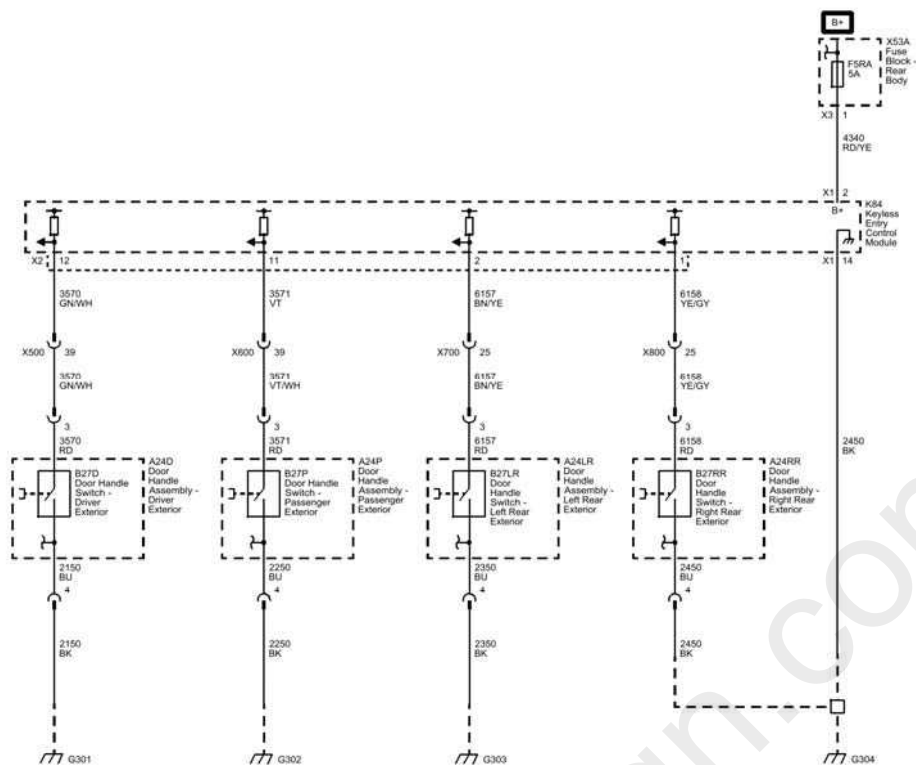


Fig. 4: Door Handle Switches

Courtesy of GENERAL MOTORS COMPANY

RELEASE SYSTEMS WIRING SCHEMATICS

Rear Compartment

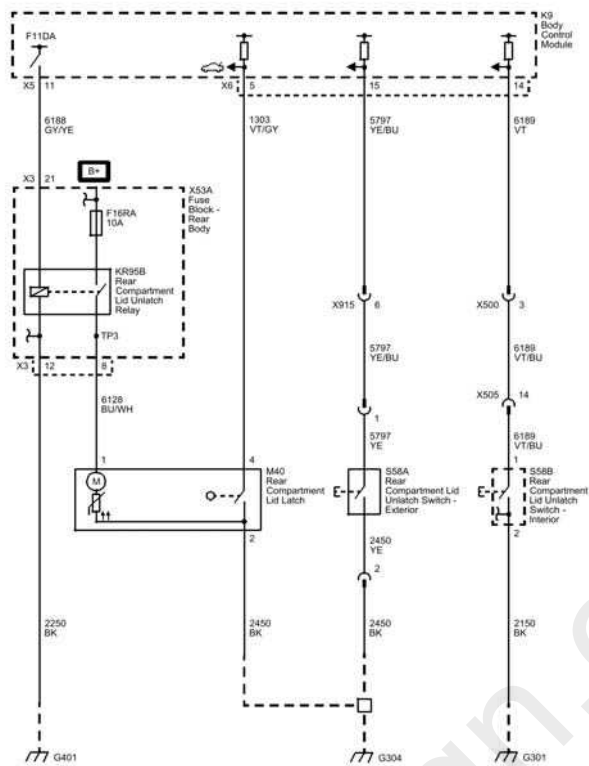


Fig. 5: Rear Compartment

Courtesy of GENERAL MOTORS COMPANY

Fuel Door Lock (N08)



Courtesy of GENERAL MOTORS COMPANY

DIAGNOSTIC CODE INDEX

DTC	Description
<u>DTC B1474 or B3849</u>	DTC B1474 02 Passenger Exterior Door Handle Switch Circuit Short to Ground DTC B3849 02 Driver Exterior Door Handle Switch Circuit Short to Ground
<u>DTC B1534 or B1535</u>	DTC B1534 02 Left Rear Door Handle Switch Circuit Short to Ground DTC B1535 02 Right Rear Door Handle Switch Circuit Short to Ground
<u>DTC B2494</u>	DTC B2494 Liftgate Handle Switch Circuit
<u>DTC B2730</u>	DTC B2730 00 Interior Trunk Lid Unlatch Switch Circuit Malfunction
<u>DTC B297B or B297C</u>	DTC B297B 5A Driver Door Open Switch Circuit Not Plausible DTC B297C 5A Passenger Door Open Switch Circuit Not Plausible
<u>DTC B3125, B3130, or B3135 (With UTT)</u>	DTC B3125 Driver Door Only Unlock Circuit DTC B3130 All Doors Unlock Circuit DTC B3135 All Doors Lock Circuit
<u>DTC B3125, B3130, or</u>	DTC B3125 Driver Door Only Unlock Circuit

<u>B3135 (Without UTT)</u>	DTC B3130 All Doors Unlock Circuit DTC B3135 All Doors Lock Circuit
<u>DTC B3140, B3145, B3150, or B3155</u>	DTC B3140 00 Driver Door Unlock Switch Circuit DTC B3145 00 Passenger Door Unlock Switch Circuit DTC B3150 00 Driver Front Door Lock Switch Circuit DTC B3155 00 Passenger Front Door Lock Switch Circuit
<u>DTC B3265</u>	DTC B3265 Trunk Lid Unlatch Output Circuit
<u>DTC B3618</u>	DTC B3618 00 Exterior Liftgate Unlatch Switch Circuit Malfunction
<u>DTC B3797</u>	DTC B3797 02 All Door Dead Lock Circuit Short to Ground
<u>DTC B3930</u>	DTC B3930 Child Security Lock Motors Circuit
<u>DTC B3938</u>	DTC B3938 Fuel Door Actuator Lock Circuit

DTC B1474 OR B3849: FRONT DOOR HANDLE SWITCH

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 Descriptors

DTC B1474 02

Passenger Exterior Door Handle Switch Circuit Short to Ground

DTC B3849 02

Driver Exterior Door Handle Switch Circuit Short to Ground

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Driver Door Handle Switch Signal	B3849 02	1	1	-
Driver Door Handle Switch Ground	-	1	-	-
Passenger Door Handle Switch Signal	B1474 02	2	2	-
Passenger Door Handle Switch Ground	-	2	-	-
1. Driver Door Handle Switch Malfunction 2. Passenger Door Handle Switch Malfunction				

Circuit/System Description

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signals from the keyless entry control module are pulled to ground.

Conditions for Running the DTC

Battery voltage is between 9-16 V.

Conditions for Setting the DTC

B1474 02

The keyless entry control module detects the passenger exterior door handle switch signal circuit is shorted to ground or closed for greater than 180 seconds.

B3849 02

The keyless entry control module detects the driver exterior door handle switch signal circuit is shorted to ground or closed for more than 180 seconds.

Action Taken When the DTC Sets

The keyless entry control module will ignore input from the affected door switch and the doors will not lock or unlock when the affected door handle switch is pressed.

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 40 ignition cycles.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the scan tool Exterior Driver Door Handle Switch or the Exterior Passenger Door Handle Switch parameters changes between Active and Inactive when pressing and releasing the B27D Door Handle Switch-Driver Exterior or the B27P Door Handle Switch-Passenger Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.
 - **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Exterior Door Handle Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K84 Keyless Entry Control Module.
 2. 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 K84 Keyless Entry Control Module.
- **If Inactive**
- 5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.
- 6. Verify the scan tool Exterior Door Handle Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K84 Keyless Entry Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K84 Keyless Entry Control Module.
 - **If Active**
- 7. Test or replace the B27 Door Handle Switch-Exterior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Exterior.
2. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the B27 Door Handle Switch-Exterior.
 - **If infinite resistance**
3. Test for less than 5 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the closed position.
 - **If 5 ohms or greater**

Replace the B27 Door Handle Switch-Exterior.
 - **If less than 5 ohms**
4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Outside Handle Replacement**
- **Control Module References** for keyless entry control module replacement, programming and setup

DTC B1534 OR B1535: REAR DOOR HANDLE SWITCH

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 Descriptors

DTC B1534 02

Left Rear Door Handle Switch Circuit Short to Ground

DTC B1535 02

Right Rear Door Handle Switch Circuit Short to Ground

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Left Rear Door Handle Switch Signal	B1534 02	1	1	-
Left Rear Door Handle Switch Ground	-	1	-	-
Right Rear Door Handle Switch Signal	B1535 02	2	2	-
Right Rear Door Handle Switch Ground	-	2	-	-
1. Left Rear Door Handle Switch Malfunction 2. Right Rear Door Handle Switch Malfunction				

Circuit/System Description

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signals from the keyless entry control module are pulled to ground.

Conditions for Running the DTC

Battery voltage is between 9-16 V.

Conditions for Setting the DTC

B1534 02

The keyless entry control module detects the left rear exterior door handle switch signal circuit is shorted to ground or closed for greater than 180 seconds.

B1535 02

The keyless entry control module detects the right rear exterior door handle switch signal circuit is shorted to ground or closed for greater than 180 seconds.

Action Taken When the DTC Sets

The keyless entry control module will ignore input from the affected door switch and the doors will not lock or unlock when the affected door handle switch is pressed.

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 40 ignition cycles.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the scan tool Exterior Left Rear Door Handle Switch or the Exterior Right Rear Door Handle Switch parameters changes between Active and Inactive when pressing and releasing B27LR Door Handle Switch-Left Rear Exterior or the B27RR Door Handle Switch-Right Rear Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Rear Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Exterior Door Handle Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K84 Keyless Entry Control Module.
 2. 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 K84 Keyless Entry Control Module.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.
6. Verify the scan tool Exterior Door Handle Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K84 Keyless Entry Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
- If less than 2 ohms, replace the K84 Keyless Entry Control Module.

- **If Active**

7. Test or replace the B27 Door Handle Switch-Rear Exterior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Rear Exterior.
2. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.

- **If less than infinite resistance**

Replace the B27 Door Handle Switch-Rear Exterior.

- **If infinite resistance**

3. Test for less than 5 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the closed position.

- **If 5 ohms or greater**

Replace the B27 Door Handle Switch-Rear Exterior.

- **If less than 5 ohms**

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Side Door Outside Handle Replacement**
- **Control Module References** for keyless entry control module replacement, programming and setup

DTC B2494: LIFTGATE HANDLE SWITCH

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 B2494

Liftgate Handle Switch Circuit

For symptom byte information refer to: **Symptom Byte List**

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Signal	B2494 00, B2494 02, B3618 00	1	1	-
Ground	-	1	-	-
1. Exterior Rear Compartment Lid Release Switch Inoperative				

Circuit/System Description

When the ignition is ON, the body control module (BCM) supplies a 12 V signal to the rear compartment lid unlatch switch through the exterior trunk release switch signal circuit. When the exterior rear compartment lid unlatch switch is pressed, the voltage within the signal circuit is pulled low and in response, the BCM will energize the trunk release relay.

Conditions for Running the DTC

The system voltage is 9-16 V.

Conditions for Setting the DTC

B2494 00

The BCM detects a short to ground in the rear compartment lid unlatch switch signal circuit for greater than 30 seconds

B2494 02

The keyless entry control module detects a short to ground in the rear compartment lid unlatch switch signal circuit for greater than 60 seconds

Action Taken When the DTC Sets

The exterior rear compartment lid unlatch switch will be inoperative.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Luggage Compartment 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

1. Ignition ON.
2. Verify the scan tool Body Control Module Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter changes between Active and Inactive when pressing and releasing the S58A Rear Compartment Lid Unlatch Switch-Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.
 - **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
- If less than 2 ohms, repair the open/high resistance in the ground connection.
- **If less than 10 ohms**
- 3. Ignition ON.
- 4. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal 1 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**
- 5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 2.
- 6. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
- 7. Test or replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior.
2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.
 - **If infinite resistance**
3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.
 - **If 3 ohms or greater**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

- If less than 3 ohms

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Compartment Lid Release Switch Replacement (Rear Compartment Lid), Rear Compartment Lid Release Switch Replacement (Door Trim Panel)**
- **Control Module References** for BCM or keyless entry control module replacement, programming and setup

DTC B2730: INTERIOR TRUNK LID UNLATCH SWITCH CIRCUIT MALFUNCTION

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 B2730 00

Interior Trunk Lid Unlatch Switch Circuit Malfunction

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Signal	B2730 00	1	1	-
Ground	-	1	-	-
1. Interior Rear Compartment Lid Release Switch Inoperative				

Circuit/System Description

When the ignition is ON, the Body Control Module supplies a 12 V signal to the rear compartment lid unlatch switch through the trunk release switch signal circuit. When the interior rear compartment lid release switch is pressed, the voltage within the signal circuit is pulled low and in response, the Body Control Module will energize the trunk release relay.

Conditions for Running the DTC

The system voltage is 9-16 V.

Conditions for Setting the DTC

The Body Control Module detects a short to ground in the interior rear compartment lid release switch signal circuit for greater than 60 seconds

Action Taken When the DTC Sets

The Body Control Module ignores the input from the interior rear compartment lid unlatch switch.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Luggage Compartment 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

1. Ignition ON.
2. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter changes between Inactive and Active when pressing the S58B Rear Compartment Lid Unlatch Switch-Interior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S58B Rear Compartment Lid Unlatch Switch-Interior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal 1 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 2.
6. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S58B Rear Compartment Lid Unlatch Switch-

Interior.

2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.

- **If less than infinite resistance**

Replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

- **If infinite resistance**

3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.

- **If 3 ohms or greater**

Replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

- **If less than 3 ohms**

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Compartment Lid Release Switch Replacement (Rear Compartment Lid), Rear Compartment Lid Release Switch Replacement (Door Trim Panel)**
- **Control Module References** for Body Control Module replacement, programming and setup

DTC B297B OR B297C: DOOR OPEN SWITCH

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 Descriptors

DTC B297B 5A

Driver Door Open Switch Circuit Not Plausible

DTC B297C 5A

Passenger Door Open Switch Circuit Not Plausible

Diagnostic Fault Information

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Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Driver Door Open Switch Signal	B297B 5A	B297B 5A	B297B 5A	-
Passenger Door Open Switch Signal	B297C 5A	B297C 5A	B297C 5A	-
Driver Door Latch Ground	-	1	-	-
Passenger Door Latch Ground	-	1	-	-
1. Ajar Indicator Inoperative				

Circuit/System Description

The keyless entry control module provides a 12 V signal to the driver and passenger door open switch signal circuits. The driver window motor provides a 12 V signal to the driver door ajar switch signal circuit. The passenger window switch provides a 12V signal to the passenger door ajar switch signal circuit. The door open switches and the door ajar switches are integral to each door latch assembly.

The door open switch and the door ajar switch contacts will be open with the door is fully closed, the door switches within the door latch are designed so that the when the door is ajar, the contact in the door ajar switch closes , the voltage is pulled low and the window motor will then send a serial data message to the body control module indicating that the door is ajar. When the door is opened further, the contact in the door open switch will then close providing a ground for the door open signal circuit, the keyless entry control module will then detect that the door is open.

Conditions for Running the DTC

Battery voltage is between 9-16 V.

Conditions for Setting the DTC

B297B 5A

- The keyless entry control module detects the driver door open switch is Active while receiving a serial data message from the Body Control Module that the driver door ajar switch is Inactive.
- The condition must be present for greater than 30 seconds

B297C 5A

- The keyless entry control module detects the passenger door open switch is Active while receiving a serial data message from the Body Control Module that the passenger door ajar switch is Inactive.
- The condition must be present for greater than 30 seconds.

Action Taken When the DTC Sets

B297B 5A or B297C 5A

The driver information center will display the message: Service Steering Column Lock.

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the keyless entry control module receives a serial data message from the BCM that the door is ajar before the keyless entry control module detects the door open switch is active, then the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Column Lock Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Steering Wheel and Column Description and Operation (N37) , Steering Wheel and Column Description and Operation (N38)

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

1. Ignition ON.
2. Verify the scan tool Body Control Module Driver Door Ajar Switch parameter changes between Inactive and Active when opening and closing the driver door.
 - **If the parameter does not change**

Refer to **Door Ajar Indicator Malfunction**
 - **If the parameter changes**

3. Verify the scan tool Keyless Entry Control Module Driver Door Open Switch parameter changes between Inactive and Active when opening and closing the driver door.

- **If the parameter does not change**

Refer to Circuit/System Testing

- **If the parameter changes**

4. Verify the scan tool Body Control Module Passenger Door Ajar Switch parameter changes between Inactive and Active when opening and closing the passenger door.

- **If the parameter does not change**

Refer to **Door Ajar Indicator Malfunction**

- **If the parameter changes**

5. Verify the scan tool Keyless Entry Control Module Passenger Door Open Switch parameter changes between Inactive and Active when opening and closing the passenger door.

- **If the parameter does not change**

Refer to Circuit/System Testing

- **If the parameter changes**

6. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly. It may take up to 2 minutes for all vehicle systems to power down.

2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.

- **If 10 ohms or greater**

1. Ignition OFF.

2. Test for less than 2 ohms in the ground circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.

- If less than 2 ohms, repair the open/high resistance in the ground connection.

- **If less than 10 ohms**

3. Ignition ON.

4. Verify the scan tool Door Open Switch parameter is Inactive.

- **If not Inactive**

1. Ignition OFF, disconnect the harness connector at the K84 Keyless Entry Control Module.

2. Test for infinite resistance between the signal circuit terminal 2 and ground.

- If less than infinite resistance, repair the short to ground on the circuit.

- If infinite resistance, replace the K84 Keyless Entry Control Module.

- **If Inactive**

5. Install a 3 A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 3.
6. Verify the scan tool Door Open Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K84 Keyless Entry Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K84 Keyless Entry Control Module.
 - **If Active**
7. Test or replace the A23 Door Latch Assembly.

Component Testing

Static Test

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. With the door in the closed position, test for infinite resistance between the signal terminal 2 and the ground terminal 3
 - If not the specified value, replace the A23 Door Latch Assembly.
3. With the door in the open position, test for less than 5 ohms between the signal terminal 2 and the ground terminal 3
 - If greater than the specified range, replace the A23 Door Latch Assembly.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Latch Replacement**
- **Control Module References** for Keyless Entry Control Module replacement, programming and setup

DTC B3125, B3130, OR B3135 (WITH UTT): DRIVER DOOR ONLY UNLOCK/ALL DOORS UNLOCK-LOCK

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 Descriptors

DTC B3125

Driver Door Only Unlock Circuit

DTC B3130

All Doors Unlock Circuit

DTC B3135

All Doors Lock Circuit

For symptom byte information refer to: **Symptom Byte List****Diagnostic Fault Information**

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B3125 02, B3130 02, B3135 02	B3125 02, B3130 02, B3135 02	-	-
Door Lock/Unlock Control	B3125 02, B3130 02, B3135 02	2, 3, 4	B3125 01, B3130 01, B3135 01	-
Door Lock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Driver Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Left Rear Door Latch Lock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Left Rear Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Passenger Door Latch Lock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Passenger Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Right Rear Door Latch Lock Control	B3125 02, B3130 02, B3135 02	4	B3125 01, B3130 01, B3135 01	-
	B3125 02,		B3125 01,	

Right Rear Door Latch Unlock Control	B3130 02, B3135 02	4	B3130 01, B3135 01	-
1. Driver Door Lock Malfunction 2. Passenger Door Lock Malfunction 3. Left Rear Door Lock Malfunction 4. Right Rear Door Lock Malfunction				

Circuit/System Description

The body control module (BCM) powers the reversible door latch assemblies by providing battery positive voltage and ground to the appropriate lock and unlock control circuits of the door latch assemblies. The lock and unlock control circuits of the rear doors and passenger door latch assemblies are all connected together. When the door latch assemblies are not active, all actuator lock and unlock control circuits are supplied a floating voltage door driver by the BCM. Transitioning of the lock actuators to the lock or unlocked position depends upon which control circuits receive voltage and which control circuits receive ground.

The underhood fuse block contains a PCB relay which controls the functions of the electronic child locks which is part of the rear door latch assemblies. When the relay is in it's inactive state and the BCM commands the latches to LOCK and UNLOCK, voltage will pass through the relay contacts for normal LOCK and UNLOCK functions of the passenger, left rear and right rear door latch assemblies

Conditions for Running the DTC

When the ignition is ON.

Conditions for Setting the DTC

B3125 01, B3130 01, B3135 01

The BCM detects a short to battery on a door latch control circuit

B3125 02, B3130 02, B3135 02

- A short to ground or an open/high resistance in the BCM B+ circuit.
- The BCM detects a short to ground on a door latch control circuit.

Action Taken When the DTC Sets

The BCM will not command the door lock system.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

- **Door Lock/Indicator Schematics**
- **Body Control System Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks Description and Operation

Electrical Information Reference

- **Testing for Intermittent Conditions and Poor Connections**
- **Circuit Testing**
- **Wiring Repairs**
- **Connector Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify all vehicle doors LOCK and UNLOCK when commanding the All Doors Lock/Unlock with a scan tool.
 - **If only the driver door LOCK or UNLOCK functions do not work**
Refer to **Power Door Locks Malfunction**.
 - **If one or more, but not all, passenger door LOCK or UNLOCK functions do not work**
Refer to **Power Door Locks Malfunction**.
 - **If all door LOCK and UNLOCK functions do not work**
Refer to Circuit/System Testing
 - **If the LOCK and UNLOCK function for all doors works**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the X6 harness connector at the K9 Body Control Module. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 4 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the B+ circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
 - **If the test lamp does not illuminate and the circuit fuse is open**
 - 3. Ignition OFF.
 - 4. Test for infinite resistance between the B+ circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 - 5. Disconnect the harness connector at each of the A23 Door Latch Assemblies.
 - 6. Test for infinite resistance between each control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the appropriate A23 Door Latch Assembly.
 - **If the test lamp illuminates**
5. Ignition OFF, connect the X2 harness connector at the K9 Body Control Module and disconnect the X2 and X3 harness connectors at the X53A Fuse Block-Rear Body. Ignition ON
6. Verify that a test lamp does not illuminate between each control circuit terminal listed below and ground:
 - K9 Body Control Module - control circuit terminal 4 X6
 - X53A Fuse Block-Rear Body - control circuit terminal 16 X3
 - X53A Fuse Block-Rear Body - control circuit terminal 17 X3
 - X53A Fuse Block-Rear Body - control circuit terminal 28 X2
 - X53A Fuse Block-Rear Body - control circuit terminal 36 X2
 - **If the test lamp illuminates**

Repair the short to voltage on the control circuit
 - **If the test lamp does not illuminate**

1. Ignition OFF, connect the X2 and X3 harness connectors at the X53A Fuse Block-Rear Body.
Ignition ON
2. Verify that a test lamp does not illuminate between each control circuit terminal listed below and ground:
 - K9 Body Control Module - control circuit terminal 1 X6
 - K9 Body Control Module - control circuit terminal 2 X6
 - If the test lamp illuminates, test the control circuit for a short to voltage. If the circuit tests normal, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp does not illuminate**
7. Test for infinite resistance between each control circuit terminal listed below and ground:
 - K9 Body Control Module - control circuit terminal 4 X6
 - X53A Fuse Block-Rear Body - control circuit terminal 16 X3
 - X53A Fuse Block-Rear Body - control circuit terminal 17 X3
 - X53A Fuse Block-Rear Body - control circuit terminal 28 X2
 - X53A Fuse Block-Rear Body - control circuit terminal 36 X2
 - **If not infinite resistance**
 - Repair the short to ground on the control circuit
 - **If infinite resistance**
 1. Connect the X2 and X3 harness connectors at the X53A Fuse Block-Rear Body
 2. Test for infinite resistance between each control circuit terminal listed below and ground:
 - K9 Body Control Module - control circuit terminal 1 X6
 - K9 Body Control Module - control circuit terminal 2 X6
 - If not infinite resistance, test the control circuit for a short to ground. If the circuit tests normal, replace the X53A Fuse Block-Rear Body.
 - **If infinite resistance**
8. Replace the K9 Body Control Module.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Control Module References** for BCM replacement, programming and setup

DTC B3125, B3130, OR B3135 (WITHOUT UTT): DRIVER DOOR ONLY UNLOCK/ALL DOORS UNLOCK-LOCK

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 Descriptors

DTC B3125

Driver Door Only Unlock Circuit

DTC B3130

All Doors Unlock Circuit

DTC B3135

All Doors Lock Circuit

For symptom byte information refer to: **Symptom Byte List**

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B3125 02, B3130 02, B3135 02	B3125 02, B3130 02, B3135 02	-	-
Door Lock/Unlock Control	B3125 02, B3130 02, B3135 02	2, 3, 4	B3125 01, B3130 01, B3135 01	-
Door Lock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Driver Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Left Rear Door Latch Lock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Left Rear Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Passenger Door Latch Lock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Passenger Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-

Right Rear Door Latch Lock Control	B3125 02, B3130 02, B3135 02	4	B3125 01, B3130 01, B3135 01	-
Right Rear Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	4	B3125 01, B3130 01, B3135 01	-
1. Driver Door Lock Malfunction 2. Passenger Door Lock Malfunction 3. Left Rear Door Lock Malfunction 4. Right Rear Door Lock Malfunction				

Circuit/System Description

The body control module (BCM) powers the reversible door latch assemblies by providing battery positive voltage and ground to the appropriate lock and unlock control circuits of the door latch assemblies. The lock and unlock control circuits of the rear doors and passenger door latch assemblies are all connected together. When the door latch assemblies are not active, all actuator lock and unlock control circuits are supplied a floating voltage door driver by the BCM. Transitioning of the lock actuators to the lock or unlocked position depends upon which control circuits receive voltage and which control circuits receive ground.

The underhood fuse block contains a PCB relay which controls the functions of the electronic child locks which is part of the rear door latch assemblies. When the relay is in it's inactive state and the BCM commands the latches to LOCK and UNLOCK, voltage will pass through the relay contacts for normal LOCK and UNLOCK functions of the passenger, left rear and right rear door latch assemblies

Conditions for Running the DTC

When the ignition is ON.

Conditions for Setting the DTC

B3125 01, B3130 01, B3135 01

The BCM detects a short to battery on a door latch control circuit

B3125 02, B3130 02, B3135 02

- A short to ground or an open/high resistance in the BCM B+ circuit.
- The BCM detects a short to ground on a door latch control circuit.

Action Taken When the DTC Sets

The BCM will not command the door lock system.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.

- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

- **Door Lock/Indicator Schematics**
- **Body Control System Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks Description and Operation

Electrical Information Reference

- **Testing for Intermittent Conditions and Poor Connections**
- **Circuit Testing**
- **Wiring Repairs**
- **Connector Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify all vehicle doors LOCK and UNLOCK when commanding the All Doors Lock/Unlock with a scan tool.
 - **If only the driver door LOCK or UNLOCK functions do not work**
Refer to **Power Door Locks Malfunction**.
 - **If one or more, but not all, passenger door LOCK or UNLOCK functions do not work**
Refer to **Power Door Locks Malfunction**.
 - **If all door LOCK and UNLOCK functions do not work**
Refer to Circuit/System Testing

- **If the LOCK and UNLOCK function for all doors works**
- 3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the X6 harness connector at the K9 Body Control Module. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 4 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the B+ circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
 - **If the test lamp does not illuminate and the circuit fuse is open**
 1. Ignition OFF.
 2. Test for infinite resistance between the B+ circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Disconnect the harness connector at each of the A23 Door Latch Assemblies.
 4. Test for infinite resistance between each control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the appropriate A23 Door Latch Assembly.
 - **If the test lamp illuminates**
5. Ignition OFF, connect the X2 harness connector at the K9 Body Control Module and disconnect the harness connector at the A23D Door Latch Assembly-Driver. Ignition ON

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door locks using the door lock switch to restore the voltage for testing.

6. Test for greater than 5 V between the control circuit terminal 8 and ground.
 - **If 5 V or less**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit terminal listed below and ground:
 - Control circuit terminal 1 X6
 - Control circuit terminal 2 X6
 - Control circuit terminal 4 X6
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K9 Body Control Module.
 - **If greater than 5 V**
7. Verify that a test lamp does not illuminate between the control circuit terminal 8 and ground
 - **If the test lamp illuminates**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module and disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for less than 1 V between the control circuit terminal listed below and ground:
 - K9 Body Control Module - control circuit terminal 1 X6
 - K9 Body Control Module - control circuit terminal 4 X6
 - X53A Fuse Block-Rear Body - control circuit terminal 28 X2
 - X53A Fuse Block-Rear Body - control circuit terminal 36 X2
 - If greater than 1 V, repair the short to voltage on the circuit.
 3. Ignition OFF, connect the X2 harness connector at the X53A Fuse Block-Rear Body. Ignition ON
 4. Test for less than 1 V between the K9 Body control Module control circuit terminal 2 X6 and ground
 - If greater than 1 V, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp does not illuminate**
8. Replace the K9 Body Control Module.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. Install a 25 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the A23 Door Latch Assembly should perform the LOCK and UNLOCK function.
 - **If the actuator does not perform the LOCK and UNLOCK function**

Replace the A23 Door Latch Assembly.
 - **If the actuator performs the LOCK and UNLOCK function**
3. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Front Side Door Latch Replacement**
- **Rear Side Door Latch Replacement**
- **Control Module References** for BCM replacement, programming and setup

DTC B3140, B3145, B3150, OR B3155: DOOR UNLOCK SWITCH

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 Descriptors

DTC B3140 00

Driver Door Unlock Switch Circuit

DTC B3145 00

Passenger Door Unlock Switch Circuit

DTC B3150 00

Driver Front Door Lock Switch Circuit

DTC B3155 00

Passenger Front Door Lock Switch Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Driver Door Lock Switch Lock Signal	B3150 00	2	2	-
Driver Door Lock Switch Unlock Signal	B3140 00	3	3	-
Driver Door Lock Switch Ground	-	1	-	-

Passenger Door Lock Switch Lock Signal	B3155 00	4	4	-
Passenger Door Lock Switch Unlock Signal	B3145 00	5	5	-
Passenger Door Lock Switch Ground	-	6	-	-
1. Driver Door Lock Switch Inoperative 2. Driver Door Lock Switch Lock Inoperative 3. Driver Door Lock Switch Unlock Inoperative 4. Passenger Door Lock Switch Lock Inoperative 5. Passenger Door Lock Switch Unlock Inoperative 6. Passenger Door Lock Switch Inoperative				

Circuit/System Description

The body control module (BCM) monitors the voltage level of the door lock and door unlock signal circuits. When the driver door lock switch is in the open position, the voltage level in the signal circuit will be near 12 V. When the driver door lock switch is pressed to the lock or unlock position, the voltage level in the appropriate signal circuit will drop to 0 V and the BCM will detect the voltage drop and command the door latches to perform the requested lock or unlock command.

Conditions for Running the DTC

The system voltage is 9-16 V.

Conditions for Setting the DTC

B3140 00

The BCM detects short to ground in the driver lock signal circuit for greater than 60 seconds.

B3145 00

The BCM detects short to ground in the passenger unlock signal circuit for greater than 60 seconds.

B3150 00

The BCM detects a short to ground in the driver lock signal circuit for greater than 60 seconds.

B3155 00

The BCM detects a short to ground in the passenger lock signal circuit for greater than 60 seconds.

Action Taken When the DTC Sets

B3140 00

The BCM will ignore the unlock signal and the doors will not unlock when using the driver door unlock switch.

B3145 00

The BCM will ignore the unlock signal and the doors will not unlock when using the passenger door unlock switch.

B3150 00

The BCM will ignore the lock signal and the doors will not lock when using the driver door lock switch.

B3155 00

The BCM will ignore the lock signal and the doors will not lock when using the passenger door lock switch.

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the scan tool Driver Door Lock Switch parameter changes from Inactive to Lock and Unlock when pressing the S13D Door Lock Switch-Driver.
 - **If the parameter does not change**

Refer to Circuit/System Testing .
 - **If the parameter changes**
3. Verify the scan tool Passenger Door Lock Switch parameter changes from Inactive to Lock and Unlock when pressing the S13P Door Lock Switch-Passenger.
 - **If the parameter does not change**

Refer to Circuit/System Testing .
 - **If the parameter changes**
4. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate S13 Door Lock Switch. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Door Lock Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. 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.
 3. Test for infinite resistance between the signal circuit terminal 2 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.

6. Verify the scan tool Door Lock Switch parameter is Unlock.
 - **If not Unlock**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Unlock**
7. Install a 3 A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 4.
8. Verify the scan tool Door Lock Switch parameter is Lock.
 - **If not Lock**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Lock**
9. Test or replace the S13 Door Lock Switch.

Component Testing

Door Lock Switch

1. Ignition OFF, disconnect the harness connector at the appropriate S13 Door Lock Switch.
2. Test for infinite resistance between the signal terminal 2 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S13 Door Lock Switch.
 - **If infinite resistance**
3. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S13 Door Lock Switch

- **If infinite resistance**

4. Test for less than 2 ohms between the signal terminal 2 and the ground terminal 4 with the switch in the Lock position.

- **If 2 ohms or greater**

Replace the S13 Door Lock Switch.

- **If less than 2 ohms**

5. Test for less than 2 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the Unlock position.

- **If 2 ohms or greater**

Replace the S13 Door Lock Switch.

- **If less than 2 ohms**

6. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Door Lock Switch Replacement - Driver Side**
- **Door Lock Switch Replacement - Passenger Front**
- **Control Module References** for BCM replacement, programming and setup

DTC B3265: TRUNK LID UNLATCH OUTPUT CIRCUIT

Diagnostic Instructions

- Perform the prior to **Diagnostic System Check - Vehicle** 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 B3265

Trunk Lid Unlatch Output Circuit

For symptom byte information, refer to **Symptom Byte List** .

Diagnostic Fault Information

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Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B3265 01, B3265 04	B3265 01, B3265 04	-	-
Rear Compartment Lid Unlatch Relay Control	B3265 02	B3265 04	B3265 01	-
Rear Body Fuse Block Ground	-	B3265 04	-	-

Circuit/System Description

The body control module applies battery positive voltage to the rear compartment lid unlatch relay control circuit which energizes the coil side of the relay. The switch side of the relay then closes, supplying battery positive voltage to the control circuit of the rear compartment lid latch. The rear compartment lid latch then releases the rear compartment lid so that it may be manually raised to an open position.

Conditions for Running the DTC

When the rear compartment lid latch release is actively being requested by the body control module.

Conditions for Setting the DTC

B3265 01

The body control module detects a short to voltage on the rear compartment lid release relay control circuit.

B3265 01, B3265 04

A short to ground or an open/high resistance in the BCM B+ circuit terminal 1 X2

B3265 02

The body control module detects a short to ground on the rear compartment lid release relay control circuit.

B3265 04

The body control module detects an open/high resistance on the rear compartment lid release relay control circuit or an open/high resistance on the relay ground circuit.

Action Taken When the DTC Sets

The body control module will command the rear compartment lid unlatch relay, but the rear compartment latch will not operate.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.

- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Luggage Compartment 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

1. Ignition ON.
2. Verify the M40 Rear Compartment Lid Latch functions when commanding the Rear Body Unlatch with a scan tool.
 - **If the M40 Rear Compartment Lid Latch does not function**

Refer to Circuit/System Testing.
 - **If the M40 Rear Compartment Lid Latch does function**
3. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 1 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition OFF.

2. Test for less than 2 ohms in the B+ circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
 - **If the test lamp does not illuminate and the circuit fuse is open**
3. Ignition OFF.
4. Test for infinite resistance between the B+ circuit 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 the test lamp illuminates**
3. Ignition OFF and all vehicle systems OFF, disconnect the X3 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down.
4. Test for less than 10 ohms between the ground circuit terminal 12 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
5. Connect a test lamp between the control circuit terminal 21 and ground, ignition ON.
6. Verify the test lamp turns ON when commanding the Rear Body Unlatch with a scan tool.
 - **If the test lamp is always OFF**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit and ground
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If the test lamp is always ON**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON
 2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the K9 Body Control Module.
 - **If the test lamp turns ON and OFF**
7. Test or replace the X53A Fuse Block-Rear Body.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Control Module References** for body control module replacement, programming and setup

DTC B3618: EXTERIOR LIFTGATE UNLATCH SWITCH CIRCUIT MALFUNCTION

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 B3618 00

Exterior Liftgate Unlatch Switch Circuit Malfunction

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Signal	B3618 00	1	1	-
Ground	-	1	-	-
1. Exterior Rear Compartment Lid Release Switch Inoperative				

Circuit/System Description

When the ignition is ON, the body control module (BCM) supplies a 12 V signal to the rear compartment lid unlatch switch through the trunk release switch signal circuit. When the exterior rear compartment lid release switch is pressed, the voltage within the signal circuit is pulled low and in response, the BCM will energize the trunk release relay.

Conditions for Running the DTC

The system voltage is 9-16 V.

Conditions for Setting the DTC

The BCM detects a short to ground in the rear compartment lid release switch signal circuit for greater than 60 seconds

Action Taken When the DTC Sets

The BCM ignores the input from the rear compartment lid unlatch switch.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Luggage Compartment 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

1. Ignition ON.
2. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter changes between Active and Inactive when pressing and releasing the S58A Rear Compartment Lid Unlatch Switch-Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.
 - **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal 1 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 2.
6. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior.
2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

- **If infinite resistance**

3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.

- **If 3 ohms or greater**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

- **If less than 3 ohms**

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Compartment Lid Release Switch Replacement (Rear Compartment Lid), Rear Compartment Lid Release Switch Replacement (Door Trim Panel)**
- **Control Module References** for BCM replacement, programming and setup

DTC B3797: ALL DOOR DEAD LOCK CIRCUIT SHORT TO GROUND

Diagnostic Instructions

- Perform the prior to **Diagnostic System Check - Vehicle** 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 B3797 02

All Door Dead Lock Circuit Short to Ground

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Control	B3797 02	1	1	-
1. Door Dead Lock Malfunction				

Circuit/System Description

When the body control module (BCM) receives a command to activate the door dead locks, the BCM will apply voltage to the door lock security printed circuit board relay. This will energize the relay closing the contacts and enable the BCM to supply voltage to the dead locks in each of the doors.

Conditions for Running the DTC

When the relay is being actively commanded by the BCM.

Conditions for Setting the DTC

The BCM detects a short to ground in the door lock security printed circuit board relay control circuit.

Action Taken When the DTC Sets

The interior door handles will always be disable or will never locked out depending upon the state of the door latches when the fault occurred

Conditions for Clearing the DTC

- This DTC will change from current to history when the fault is no longer present.
- A history DTC will clear after 100 consecutive ignition cycles if the condition for the malfunction is no longer present.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.

2. Verify the interior door handles do not open the doors when commanding the Door Dead Lock to LOCK with a scan tool.
 - **If all interior door handles open the doors**

Refer to Circuit/System Testing
 - **If all interior door handles do not open the doors**
3. Verify the interior door handles will open the doors when commanding the Door Dead Lock to UNLOCK with a scan tool.
 - **If all interior door handles do not open the doors**

Refer to Circuit/System Testing
 - **If all interior door handles open the doors**
4. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block - Rear Body. It may take up to 2 minutes for all vehicle systems to power down
2. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Connect a test lamp between the control circuit terminal 32 and ground, ignition ON.
4. Verify the test lamp turns ON and OFF when commanding the Door Dead Lock to LOCK and UNLOCK with a scan tool.
 - **If the test lamp is always OFF**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If the test lamp is always ON**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control

Module, ignition ON.

2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the K9 Body Control Module.
 - **If the test lamp turns ON and OFF**

5. Replace the X53A Fuse Block - Rear Body.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Control Module References** for BCM replacement, programming and setup

DTC B3930: CHILD SECURITY LOCK MOTORS CIRCUIT

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 B3930

Child Security Lock Motors Circuit

For symptom byte information refer to: **Symptom Byte List**

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Control	B3930 02	B3930 04	B3930 01	-
Ground	-	B3930 04	-	-

Circuit/System Description

The child door lockout switch is on the driver door lock/window switch and controls the function of the rear interior door handles as well as the function of the rear window switches. When the body control module receives a command from the window lockout switch, it will apply voltage to the door lock security relay coil, this will energize the relay and the contact within the relay will then direct the voltage to lock the left rear and right rear child locks and then isolate them from the normal door lock system to prevent the rear doors from being opened by using the interior rear door handles.

Conditions for Running the DTC

When the relay is being actively commanded by the body control module.

Conditions for Setting the DTC

B3930 01

The BCM detects a short to battery on the child security lock disable relay control circuit

B3930 02

The BCM detects a short to ground on the child security lock disable relay control circuit

B3930 04

The BCM detects an open/high resistance on the child security lock disable relay control circuit

Action Taken When the DTC Sets

- The interior rear door handles will always function or will always be disabled depending upon the state of the rear door latch when the fault occurred.
- The body control module will command the lockout indicator to flash ON and OFF when the lockout switch is pressed.

Conditions for Clearing the DTC

- This DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify both interior rear door handles do not open the rear doors when commanding the Child Security Lock Motors ON with a scan tool.
 - **If both interior door handles open the rear doors**
 - Refer to Circuit/System Testing.
 - **If both interior door handles do not open the rear doors**
3. Verify both interior rear door handles will open the rear doors when commanding the Child Security Lock Motors OFF with a scan tool.
 - **If both interior door handles do not open the rear doors**
 - Refer to Circuit/System Testing.
 - **If both interior door handles open the rear doors**
4. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition OFF, connect the X2 harness connector at the X53A Fuse Block-Rear Body. Disconnect the X5 harness connector at the K9 Body Control Module, ignition ON.
4. Verify that a test lamp does not illuminate between the control circuit terminal 16 and ground.
 - **If the test lamp illuminates**

1. Ignition OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 16 X5 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp is not illuminated**
5. Connect a 3A fused jumper wire between the control circuit terminal 16 and B+.
6. Listen as the KR113 Child Security Lock Disable Relay activates.
 - **If the KR113 Child Security Lock Disable Relay does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 16 X5 and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the X53A Fuse Block-Rear Body.
 - **If the KR113 Child Security Lock Disable Relay activates**
7. Replace the K9 Body Control Module.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Control Module References** for body control module replacement, programming and setup

DTC B3938: FUEL DOOR ACTUATOR LOCK CIRCUIT

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 Descriptors

DTC B3938

Fuel Door Actuator Lock Circuit

For symptom byte information refer to: **Symptom Byte List**

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B3938 01, B3938 04	B3938 01, B3938 04	-	-
Fuel Door Lock Relay Control	B3938 02	B3938 04	B3938 01	-
Rear Body Fuse Block Ground	-	B3938 04	-	-

Circuit/System Description

The locking and unlocking of the fuel door is a function of the power door lock system. The fuel door lock actuator is supplied by the door lock signal circuit and the driver door unlock signal circuit which is switched through the fuel door relay. The fuel door relay coil is controlled by the body control module (BCM). When the vehicles doors are unlocked, the body control module (BCM) will respond by applying voltage to the fuel door relay coil control circuit. This energizes the coil causing the switch contacts to close. With the switch contacts closed, the driver door unlock circuit supplies voltage and ground to each control circuit of the fuel door lock actuator , unlocking the fuel door.

Conditions for Running the DTC

When the relay is actively commanded by the BCM

Conditions for Setting the DTC

B3938 01

The BCM detects a short to voltage in the fuel door unlatch relay control circuit

B3938 01, B3938 04

A short to ground or an open/high resistance in the BCM B+ circuit terminal 3 X2

B3938 02

The BCM detects a short to ground in the fuel door unlatch relay control circuit.

B3938 04

The BCM detects an open/high resistance in the fuel door unlatch relay control circuit or the rear body fuse block ground circuit.

Action Taken When the DTC Sets

The BCM will command the fuel door lock actuator but the fuel filler door may not be able to be opened.

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.
- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

- **Release Systems Schematics**
- **Body Control System Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Fuel Fill Door Description and Operation (NO8 Only)

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

1. Ignition ON.
2. Verify the M97 Fuel Door Lock Actuator will LOCK and UNLOCK when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the M97 Fuel Door Lock Actuator does not LOCK or UNLOCK the fuel filler door**

Refer to Circuit/System Testing.
 - **If the M97 Fuel Door Lock Actuator does LOCK or UNLOCK the fuel filler door**
3. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the B+ circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
 - **If the test lamp does not illuminate and the circuit fuse is open**
 3. Ignition OFF.
 4. Test for infinite resistance between the B+ circuit 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 the test lamp illuminates**
 - 3. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down
 - 4. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
 - 5. Connect the X2 harness connector at the X53A Fuse Block-Rear Body and disconnect the X7 harness connector at the K9 Body Control Module. Ignition ON.
 - 6. Verify that a test lamp does not illuminate between the control circuit terminal 4 and ground.
 - **If the test lamp illuminates**

Repair the short to voltage on the control circuit
 - **If the test lamp does not illuminate**
 - 7. Briefly connect a 3A fused jumper wire between the control circuit terminal 4 and B+, listen as the KR132 Fuel Door Lock Relay activates.
 - **If the KR132 Fuel Door Lock Relay does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, test or replace the X53A Fuse Block-Rear Body.
 - **If the KR132 Fuel Door Lock Relay activates**
8. Replace the K9 Body control Module.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Fuel Tank Filler Door Lock Actuator Replacement**
- **Control Module References** for BCM replacement, programming and setup

SYMPTOMS - VEHICLE ACCESS

NOTE: The following steps must be completed before using the symptom tables.

1. Perform the **Diagnostic System Check - Vehicle** , before using the Symptom Tables in order to verify that all of the following are true:
 - There are no DTCs set
 - The control modules can communicate via the serial data link
2. Review the system operation in order to familiarize yourself with the system functions. Refer to the following systems description:
 - **Door Ajar Indicator Description and Operation**
 - **Fuel Fill Door Description and Operation (NO8 Only)**
 - **Luggage Compartment Description and Operation**
 - **Power Door Locks Description and Operation**

Visual/Physical Inspection

- Inspect for aftermarket devices which may affect the operation of the system. Refer to **Checking Aftermarket Accessories** .
- Inspect the easily accessible or visible system components for obvious damage or conditions which may cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for Intermittent Conditions and Poor Connections** .

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- **Door Lock Indicator Malfunction**
- **Exterior Door Handle Switch Malfunction**
- **Fuel Filler Door Release Malfunction**
- **Door Ajar Indicator Malfunction**
- **Power Door Child Lock Malfunction**
- **Power Door Dead Lock Malfunction**
- **Power Door Lock Key Cylinder Switches Malfunction**
- **Power Door Locks Malfunction**
- **Trunk Release Malfunction**
- **Trunk Ajar Indicator Malfunction**

DOOR LOCK INDICATOR MALFUNCTION

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
LED Indicator Dimming Control	B2625 02	2, 4	-	-
Driver Door Lock Indicator Control	1	2	2	-
Passenger Door Lock Indicator Control	3	4	4	-
1. Driver Door Lock Indicator Always ON 2. Driver Door Lock Indicator Always OFF 3. Passenger Door Lock Indicator Always ON 4. Passenger Door Lock Indicator Always OFF				

Circuit/System Description

The driver door latch and front passenger door latch control the door lock status indicators for the door lock indicators located within the driver and passenger door lock switches. The body control module provides voltage to the indicators and the door latches contain lock status switches that are open when the doors are not locked and closed when the doors are locked. When the door latches are locked, the lock status switches will be closed which will provide a ground path for the door lock status indicators which will illuminate indicating the doors are locked.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the driver and passenger doors LOCK and UNLOCK when commanding the All Doors Lock/Unlock with a scan tool.
 - **If a door does not LOCK or UNLOCK**

Refer to **Power Door Locks Malfunction**

- **If the driver and passenger doors LOCK and UNLOCK**
3. Verify the scan tool Driver Door Ajar Switch and Passenger Door Ajar Switch parameter changes between Inactive and Active when opening and closing the passenger and driver doors
 - **If a parameter does not change**

Refer to **Door Ajar Indicator Malfunction**

- **If the parameters change**
4. Verify the driver and passenger door lock indicators turn ON and OFF when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the driver door lock indicator is always ON or always OFF**

Refer to Circuit/System Testing - Driver Door Lock Indicator Malfunction.

- **If the passenger door lock indicator is always ON or always OFF**

Refer to Circuit/System Testing - Passenger Door Lock Indicator Malfunction.

- **If the driver and passenger door lock indicators are always OFF**

Refer to Circuit/System Testing - Both Door Lock Indicators Inoperative.

- **If the driver and passenger door lock indicators turn ON and OFF**

5. All OK.

Circuit/System Testing

Driver Door Lock Indicator Malfunction

1. Ignition OFF, disconnect the harness connector at the S13D Door Lock Switch-Driver. Ignition ON
2. Connect a test lamp between the control circuit terminal 6 and B+.
3. Verify the test lamp turns ON and OFF when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the test lamp is always OFF**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the A23D Door Latch Assembly-Driver.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the A23D Door Latch Assembly-Driver.
 - **If the test lamp is always ON**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the A23D Door Latch Assembly-Driver.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the A23D Door Latch Assembly-Driver
 - **If the test lamp turns ON and OFF**
4. Test or replace the S13D Door Lock Switch-Driver.

Passenger Door Lock Indicator Malfunction

1. Ignition OFF, disconnect the harness connector at the S13P Door Lock Switch-Passenger. Ignition ON
2. Connect a test lamp between the control circuit terminal 6 and B+.
3. Verify the test lamp turns ON and OFF when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the test lamp is always OFF**

1. Ignition OFF, remove the test lamp, disconnect the harness connector at the A23P Door Latch Assembly-Passenger.
2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
3. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the A23P Door Latch Assembly-Passenger.
 - **If the test lamp is always ON**
1. Ignition OFF, remove the test lamp, disconnect the harness connector at the A23P Door Latch Assembly-Passenger.
2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the A23P Door Latch Assembly-Passenger
 - **If the test lamp turns ON and OFF**
4. Test or replace the S13P Door Lock Switch-Passenger.

Both Door Lock Indicators Inoperative

1. Ignition OFF, disconnect the harness connector at the S13D Door Lock Switch-Driver and the S13P Door Lock Switch-Passenger. Ignition ON
2. Connect a test lamp between the control circuit terminal 5 and ground.
3. Verify the test lamp turns ON when using the S36 Instrument Panel Dimmer Switch to it's maximum setting.
 - **If the test lamp is OFF**
 - 1. Ignition OFF, remove the test lamp, disconnect the X1 harness connector at the K9 Body Control Module.
 - 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 - 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If the test lamp is ON**
4. Test or replace the S13D Door Lock Switch-Driver and the S13P Door Lock Switch-Passenger.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Door Lock Switch Replacement - Driver Side**

- **Door Lock Switch Replacement - Passenger Front**
- **Front Side Door Latch Replacement**
- **Control Module References** for body control module replacement, setup and programming

EXTERIOR DOOR HANDLE SWITCH MALFUNCTION

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
Driver Door Handle Switch Signal	B3849 02	1	1	-
Driver Door Handle Switch Ground	-	1	-	-
Passenger Door Handle Switch Signal	B1474 02	2	2	-
Passenger Door Handle Switch Ground	-	2	-	-
Left Rear Door Handle Switch Signal	B1534 02	3	3	-
Left Rear Door Handle Switch Ground	-	3	-	-
Right Rear Door Handle Switch Signal	B1535 02	4	4	-
Right Rear Door Handle Switch Ground	-	4	-	-
1. Driver Door Handle Switch Malfunction 2. Passenger Door Handle Switch Malfunction 3. Left Rear Door Handle Switch Malfunction 4. Right Rear Door Handle Switch Malfunction				

Circuit/System Description

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signals from the keyless entry control module are pulled to ground.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the scan tool Exterior Driver Door Handle Switch, Exterior Passenger Door Handle Switch, Exterior Left Rear Door Handle Switch and Exterior Right Rear Door Handle Switch parameters changes between Active and Inactive when pressing and releasing each B27 Door Handle Switch-Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing.
 - **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.

2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Exterior Door Handle Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K84 Keyless Entry Control Module.
 2. 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 K84 Keyless Entry Control Module.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.
6. Verify the scan tool Exterior Door Handle Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K84 Keyless Entry Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K84 Keyless Entry Control Module.
 - **If Active**
7. Test or replace the B27 Door Handle Switch-Exterior.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate B27 Door Handle Switch-Exterior.
2. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the B27 Door Handle Switch-Exterior.
 - **If infinite resistance**
3. Test for less than 5 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the closed position.
 - **If 5 ohms or greater**

Replace the B27 Door Handle Switch-Exterior.

- If less than 5 ohms

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Outside Handle Replacement**
- **Rear Side Door Outside Handle Replacement**
- **Control Module References** for keyless entry control module replacement, programming and setup

FUEL FILLER DOOR RELEASE MALFUNCTION

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
BCM B+	B3938 01, B3938 04	B3938 01, B3938 04	-	-
Fuel Door Release Actuator Relay Control	B3938 02	B3938 04	B3938 01	-
Fuel Door Latch Lock Control	B3125 02, B3130 02, B3135 02	1	1	-
Fuel Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	1	1	-
Rear Fuse Block Ground	-	B3938 04	-	-
1. Fuel Door Latch Inoperative				

Circuit/System Description

The locking and unlocking of the fuel door is a function of the power door lock system. The fuel door release actuator is supplied by the door lock signal circuit and the driver door unlock signal circuit which is switched through the fuel door relay. The fuel door relay coil is controlled by the body control module (BCM). When the vehicles doors are unlocked, the BCM will respond by applying voltage to the fuel door relay coil control circuit. This energizes the coil causing the switch contacts to close. With the switch contacts closed, the driver

door unlock circuit supplies voltage and ground to each control circuit of the fuel door release actuator, unlocking the fuel door.

Diagnostic Aids

Vehicles equipped with the Passive Keyless Entry system will passively lock all doors and the fuel door 8 seconds after the customer exits and leaves the vehicle (as may occur for gasoline stations requiring prepayment before refueling). The customer returning to the vehicle may not be aware that this a normal function and will discover the fuel door is locked and cannot be opened.

Verify the customer have been instructed and fully understands the functions of the Passive Keyless Entry system.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Fuel Fill Door Description and Operation (NO8 Only)

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

1. Ignition ON.
2. Verify the M97 Fuel Door Lock Actuator will LOCK and UNLOCK when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the M97 Fuel Door Lock Actuator does not LOCK or UNLOCK the fuel filler door**

Refer to Circuit/System Testing.

- **If the M97 Fuel Door Lock Actuator does LOCK or UNLOCK the fuel filler door**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down
2. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Verify that a test lamp does not illuminate between the control circuit terminal 4 and ground.
 - **If the test lamp illuminates**

Repair the short to voltage on the control circuit
 - **If the test lamp does not illuminate**
4. Connect the X2 harness connector at the X53A Fuse Block-Rear Body and disconnect the X7 harness connector at the K9 Body Control Module. Ignition ON.
5. Briefly connect a 3A fused jumper wire between the control circuit terminal 4 and B+, listen as the KR132 Fuel Door Lock Relay activates.
 - **If the KR132 Fuel Door Lock Relay does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, test or replace the X53A Fuse Block-Rear Body.
 - **If the KR132 Fuel Door Lock Relay activates**
6. Ignition OFF, connect the X2 harness connector at the X53A Fuse Block-Rear Body . Disconnect the harness connector at the M97 Fuel Door Lock Actuator, ignition ON.

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door

locks using the door lock switch to restore the voltage for testing.

7. Test for greater than 6 V between the control circuit terminal 1 and ground.
 - **If 6 V or less**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance on the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If greater than 6 V**
8. Connect a test lamp between the control circuit terminal 1 and control circuit terminal 2, ignition ON.
9. Verify the test lamp turns ON when commanding the All Doors Lock/Unlock with a scan tool.
 - **If the test lamp remains OFF during either of the commands**
 1. Ignition OFF, remove the test lamp, disconnect the X3 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance the control circuit terminal 19 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the X53A Fuse Block-Rear Body.
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp turns ON during each of the commands**
10. Test or replace the M97 Fuel Door Lock Actuator.

Component Testing

1. Ignition OFF, disconnect the harness connector at the M97 Fuel Door Lock Actuator.
2. Install a 25 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the M97 Fuel Door Lock Actuator should perform the LOCK and UNLOCK function.
 - **If the actuator does not perform the LOCK and UNLOCK function**

Replace the M97 Fuel Door Lock Actuator.
 - **If the actuator performs the LOCK and UNLOCK function**
3. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Fuel Tank Filler Door Lock Actuator Replacement**
- **Control Module References** for BCM replacement, programming and setup

DOOR AJAR INDICATOR MALFUNCTION

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
Driver Door Ajar Switch Signal	1	2	2	-
Left Rear Door Ajar Switch Signal	1	4	4	-
Right Front Door Ajar Switch Signal	1	3	3	-
Right Rear Door Ajar Switch Signal	1	5	5	-
Driver Door Latch Ground	-	2	-	-
Passenger Door Latch Ground	-	3	-	-
Left Rear Door Latch Ground	-	4	-	-
Right Rear Door Latch Ground	-	5	-	-
1. Ajar indicator always illuminated 2. Ajar indicator inoperative when driver door is open 3. Ajar indicator inoperative when passenger door is open 4. Ajar indicator inoperative when left rear door is open 5. Ajar indicator inoperative when right rear door is open				

Circuit/System Description

The driver and passenger window motor will supply a 12 V signal to the their respective door ajar switch signal circuits. The rear window switches each supplies a 12 V signal to their respective rear door ajar switch signal circuits. The door ajar switches are integral to each door latch assembly. When a door is opened, the normally open door ajar switch closes. With the door ajar switch closed, ground is provided to the door ajar switch signal circuit. The window motor or window switch will detect the voltage drop and will communicate the door ajar via serial data with the instrument panel cluster which will display the appropriate door ajar message.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Door Ajar Indicator 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

1. Ignition ON.
2. Verify the scan tool Driver Door Ajar Switch parameter changes between Inactive and Active when opening and closing the driver door.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Driver Door Ajar Switch Malfunction.
 - **If the parameter changes**
3. Verify the scan tool Passenger Door Ajar Switch parameter changes between Inactive and Active when opening and closing the passenger door.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Passenger Door Ajar Switch Malfunction.
 - **If the parameter changes**
4. Verify the scan tool Left Rear Door Ajar Switch parameter changes between Inactive and Active when opening and closing the left rear door.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Left Rear Door Ajar Switch Malfunction.

- **If the parameter changes**

5. Verify the scan tool Right Rear Door Ajar Switch parameter changes between Inactive and Active when opening and closing the right rear door.

- **If the parameter does not change**

Refer to Circuit/System Testing - Right Rear Door Ajar Switch Malfunction.

- **If the parameter changes**

6. All OK.

Circuit/System Testing

Driver Door Ajar Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the A23D Door Latch Assembly - Driver. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.

- **If 10 ohms or greater**

1. Ignition OFF.
2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.

- **If less than 10 ohms**

3. Ignition ON.
4. Verify the scan tool Driver Door Ajar Switch parameter is Inactive.

- **If not Inactive**

1. Ignition OFF, disconnect the harness connector at the M74D Window Motor - Driver.
2. Test for infinite resistance between the signal circuit terminal 1 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the M74D Window Motor - Driver.

- **If Inactive**

5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 3.
6. Verify the scan tool Driver Door Ajar Switch parameter is Active.

- **If not Active**

1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the harness connector at the M74D Window Motor - Driver, ignition ON.
2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
3. Test for less than 2 ohms in the signal circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
- If less than 2 ohms, replace the M74D Window Motor - Driver.

- **If Active**

7. Test or replace the A23D Door Latch Assembly - Driver.

Passenger Door Ajar Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the A23P Door Latch Assembly - Passenger. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Passenger Door Ajar Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the M74P Window Motor - Passenger.
 2. Test for infinite resistance between the signal circuit terminal 5 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the M74P Window Motor - Passenger.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 5 and the ground circuit terminal 3.
6. Verify the scan tool Passenger Door Ajar Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the harness connector at the M74P Window Motor - Passenger, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the M74P Window Motor - Passenger.
 - **If Active**
7. Test or replace the A23P Door Latch Assembly - Passenger.

Left Rear Door Ajar Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the A23LR Door Latch Assembly - Left Rear. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Left Rear Door Ajar Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the S79LR Window Switch - Left Rear.
 2. Test for infinite resistance between the signal circuit terminal 1 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the S79LR Window Switch - Left Rear.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 3.
6. Verify the scan tool Left Rear Door Ajar Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the harness connector at the S79LR Window Switch - Left Rear, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the S79LR Window Switch - Left Rear.
 - **If Active**
7. Test or replace the A23LR Door Latch Assembly - Left Rear.

Right Rear Door Ajar Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the A23RR Door Latch Assembly - Right Rear. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
- **If less than 10 ohms**
- 3. Ignition ON.
- 4. Verify the scan tool Right Rear Door Ajar Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the S79RR Window Switch - Right Rear.
 2. Test for infinite resistance between the signal circuit terminal 5 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the S79RR Window Switch - Right Rear.
 - **If Inactive**
- 5. Install a 3 A fused jumper wire between the signal circuit terminal 5 and the ground circuit terminal 3.
- 6. Verify the scan tool Right Door Ajar Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the harness connector at the S79RR Window Switch - Right Rear, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the S79RR Window Switch - Right Rear.
 - **If Active**
- 7. Test or replace the A23RR Door Latch Assembly - Right Rear.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. Test for infinite resistance between the terminals listed below with the switch in the open position.
 - A23D Door Latch Assembly - Driver signal terminal 1 and ground terminal 3
 - A23LR Door Latch Assembly - Left Rear signal terminal 1 and ground terminal 3
 - A23RR Door Latch Assembly - Right Rear signal terminal 5 and ground terminal 3
 - A23P Door Latch Assembly - Passenger signal terminal 5 and ground terminal 3
 - **If less than infinite resistance**

Replace the A23 Door Latch Assembly.
 - **If infinite resistance**
3. Test for less than 5 ohms between the terminals listed below with the switch in the closed position.

- A23D Door Latch Assembly - Driver signal terminal 1 and ground terminal 3
- A23LR Door Latch Assembly - Left Rear signal terminal 1 and ground terminal 3
- A23RR Door Latch Assembly - Right Rear signal terminal 5 and ground terminal 3
- A23P Door Latch Assembly - Passenger signal terminal 5 and ground terminal 3
- **If 5 ohms or greater**

Replace the A23 Door Latch Assembly.

- **If less than 5 ohms**

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Latch Replacement**
- **Rear Side Door Latch Replacement**
- **Rear Side Door Window Switch Replacement**
- **Front Side Door Window Regulator Motor Replacement**

POWER DOOR CHILD LOCK MALFUNCTION

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
Door Lock Security Relay Control	B3930 02	1	1	-
Door Lock Security Relay Ground	-	1	-	-
Left Rear Door Lock Status Signal	-	4	4	-
Left Rear Door Latch Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Left Rear Door Latch Ground	-	4	-	-
Right Rear Door Lock Status Signal	-	4	4	-

Right Rear Door Latch Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Right Rear Door Latch Ground	-	4	-	-
1. Both Rear Door Child Door Lockout Malfunction 2. Left Rear Door Child Door Lockout Malfunction 3. Right Rear Door Child Door Lockout Malfunction 4. Rear Windows Always Function From Local Rear Window Switches				

Circuit/System Description

The child door lockout switch is on the driver door lock/window switch and controls the child locks on the rear doors as well as the rear window switches. When the body control module receives a command from the window lockout switch, it will apply voltage to the door lock security relay coil, this will energize the relay and the contact within the relay will then direct the voltage to lock the left rear and right rear child locks and then isolate them from the normal door lock system to prevent the rear doors from being opened by using the interior rear door handles.

The body control module monitors the voltage level of the rear lock status signal circuits to determine if the rear door latches have been locked out. A switch within the rear door latch will be open or closed depending upon the lockout status of the rear latch. If the rear latches are locked out, the switch will be open and the BCM will disable the functions of the rear window switches. If the latches have not been lockout, the switch will be closed, pulling the voltage within the signal circuit to 0 volts and the body control module will permit normal rear window switch functions.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

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Power Door Locks Description and Operation

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- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify both interior rear door handles do not open the rear doors when commanding the Child Security Lock Motors ON with a scan tool.
 - **If both interior rear door handles open the rear doors**

Refer to Circuit/System Testing - Security Lockout Inoperative.
 - **If a single interior rear door handle opens the rear door**

Refer to Circuit/System Testing - Single Door Security Lockout Malfunction.
 - **If both interior door handles do not open the rear doors**
3. Verify both interior rear door handles will open the rear doors when commanding the Child Security Lock Motors OFF with a scan tool.
 - **If both interior rear door handles do not open the rear doors**

Refer to Circuit/System Testing - Security Lockout Inoperative.
 - **If a single interior rear door handle does not open the rear door**

Refer to Circuit/System Testing - Single Door Security Lockout Malfunction.
 - **If both interior door handles open the rear doors**
4. Verify both rear window switches do not open the rear windows when commanding the Child Security Lock Motors ON with a scan tool.
 - **If a rear window switch continues to function**

Refer to Circuit/System Testing - Rear Window Lockout Inoperative.
 - **If the rear window switch is inoperative**
5. Verify the scan tool Child Security Lock/Window Lockout Switch parameter changes between On and Off when pressing the lockout switch on the S79D Window Switch-Driver.
 - **If the parameter does not change**

Replace the S79D Window Switch-Driver.
 - **If the parameter changes**
6. All OK.

Circuit/System Testing

Security Lockout Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition OFF, connect the X2 harness connector at the X53A Fuse Block-Rear Body. Disconnect the X5 harness connector at the K9 Body Control Module, ignition ON.
4. Verify that a test lamp does not illuminate between the control circuit terminal 16 and ground.
 - **If the test lamp illuminates**
 1. Ignition OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 16 X5 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp is not illuminated**
5. Connect a 3A fused jumper wire between the control circuit terminal 16 and B+.
6. Listen as the KR113 Child Security Lock Disable Relay activates.
 - **If the KR113 Child Security Lock Disable Relay does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 16 X5 and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the X53A Fuse Block-Rear Body.
 - **If the KR113 Child Security Lock Disable Relay activates**
7. Replace the K9 Body Control Module.

Single Door Security Lockout Malfunction

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly-Rear.

Ignition ON

2. Connect a test lamp between control circuit terminals listed below:
 - A23LR Door Latch Assembly-Left Rear - control circuit terminal 9 and control circuit terminal 8
 - A23RR Door Latch Assembly-Right Rear - control circuit terminal 7 and control circuit terminal 8
3. Verify the test lamp turns ON and OFF when commanding the Child Security Lock Motors ON and OFF with a scan tool.
 - **If the test lamp remains OFF during either of the commands**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between each control circuit 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 the test lamp turns ON during each of the commands**
4. Test or replace the A23 Door Latch Assembly-Rear.

Rear Window Lockout Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly-Rear. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Rear Child Security Lock Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal listed below and ground.
 - A23LR Door Latch Assembly-Left Rear - signal circuit terminal 2
 - A23RR Door Latch Assembly-Right Rear - signal circuit terminal 4
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K9 Body Control Module.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal and the ground circuit terminals listed below:
 - A23LR Door Latch Assembly-Left Rear - signal circuit terminal 2 and ground circuit terminal 3
 - A23RR Door Latch Assembly-Right Rear - signal circuit terminal 4 and ground circuit terminal 3

6. Verify the scan tool Rear Child Security Lock Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the A23 Door Latch Assembly-Rear.

Component Testing

Door Latch Test

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly-Rear.
2. Install a 30 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the A23 Door Latch Assembly-Rear should perform the LOCK and UNLOCK functions.
 - **If the function does not perform the LOCK and UNLOCK function**

Replace the A23 Door Latch Assembly-Rear.
 - **If the function performs the LOCK and UNLOCK function**
3. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Side Door Latch Replacement**
- **Front Side Door Window Control Switch Replacement (Left Side)**
- **Rear Body Fuse Block Replacement**
- **Control Module References** for body control module replacement, programming and setup

POWER DOOR DEAD LOCK MALFUNCTION

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
Driver Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Driver Door Global Door Lock Control	B3125 02, B3130 02, B3135 02	1	B3125 01, B3130 01, B3135 01	-
Door Lock Security Relay Control	B3797 02	1 , 2, 3, 4	1 , 2, 3, 4	-
Left Rear Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Left Rear Door Global Door Lock Control	B3125 02, B3130 02, B3135 02	3	B3125 01, B3130 01, B3135 01	-
Passenger Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Passenger Door Global Door Lock Control	B3125 02, B3130 02, B3135 02	2	B3125 01, B3130 01, B3135 01	-
Right Rear Door Latch Unlock Control	B3125 02, B3130 02, B3135 02	4	B3125 01, B3130 01, B3135 01	-
Right Rear Door Global Door Lock Control	B3125 02, B3130 02, B3135 02	4	B3125 01, B3130 01, B3135 01	-
Rear Fuse Block Ground	-	1 , 2, 3, 4	-	-
1. Driver Door Latch Dead Lock Malfunction 2. Passenger Door Latch Dead Lock Malfunction 3. Left Rear Door Latch Dead Lock Malfunction 4. Right Rear Door Latch Dead Lock Malfunction				

Circuit/System Description

Vehicles equipped with the UTT option contain a reversible dead lock motor contained within each door latch assembly. Each dead lock motor is controlled by 2 circuits; the dead lock control circuit and the dead lock unlock control circuit. To dead lock a door, the body control module (BCM) locks the door by momentarily energizing the door lock relay. To complete the dead locking, the BCM momentarily applies voltage to the dead lock control circuit and ground to the door lock relay control circuit and the door latches will then dead lock.

To restore the interior door handle functions, the BCM uses the same circuit as the normal door unlocking system and the dead locks will unlatch with the rest of the door locks.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

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Description and Operation

Power Door Locks 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

1. Ignition ON.
2. Verify the interior door handles do not open the doors when commanding the Door Dead Lock to LOCK with a scan tool.
 - **If all interior door handles open the doors**

Refer to Circuit/System Testing - Security Lockout Inoperative.
 - **If a single interior door handle opens the door**

Refer to Circuit/System Testing - Single Door Security Lockout Malfunction.
 - **If all interior door handles do not open the doors**
3. Verify the interior door handles will open the doors when commanding the Door Dead Lock to UNLOCK with a scan tool.
 - **If all interior door handles do not open the doors**

Refer to Circuit/System Testing - Security Lockout Inoperative.

- **If a single interior door handle does not open the door**

Refer to Circuit/System Testing - Single Door Security Lockout Malfunction.

- **If all interior door handles open the doors**

4. All OK.

Circuit/System Testing

Security Lockout Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition OFF, connect the X2 harness connector at the X53A Fuse Block-Rear Body. Disconnect the X7 harness connector at the K9 Body Control Module, ignition ON.
4. Verify that a test lamp does not illuminate between the control circuit terminal 10 and ground.
 - **If the test lamp illuminates**
 1. Ignition OFF, remove the test lamp, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 10 X7 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X53A Fuse Block-Rear Body.
 - **If the test lamp is not illuminated**
5. Connect a 3A fused jumper wire between the control circuit terminal 4 and B+.
6. Listen as the KR114 Door Dead Lock Relay activates.
 - **If the KR114 Door Dead Lock Relay does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 10 X7 and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance

3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the X53A Fuse Block-Rear Body.
 - **If the KR114 Door Dead Lock Relay activates**

7. Replace the K9 Body Control Module.

Single Door Security Lockout Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. Connect a test lamp between control circuit terminals listed below, ignition ON.
 - A23D Door Latch Assembly - Driver control terminal 6 and control terminal 8
 - A23P Door Latch Assembly - Passenger control terminal 10 and control terminal 8
 - A23LR Door Latch Assembly - Left Rear control terminal 6 and control terminal 8
 - A23RR Door Latch Assembly - Right Rear control terminal 10 and control terminal 8
3. Verify the test lamp turns ON and OFF when commanding the Door Dead Lock to LOCK and UNLOCK with a scan tool.
 - **If the test lamp remains OFF during either of the commands**
 1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between each control circuit 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 the test lamp turns ON during each of the commands**
4. Test or replace the A23 Door Latch Assembly.

Component Testing

Door Latch Test

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. Install a 30 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the A23 Door Latch Assembly should perform the LOCK and UNLOCK functions.
 - **If the function does not perform the LOCK and UNLOCK function**

Replace the A23 Door Latch Assembly.
 - **If the function performs the LOCK and UNLOCK function**
3. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Latch Replacement**
- **Rear Side Door Latch Replacement**
- **Rear Body Fuse Block Replacement**
- **Control Module References** for BCM replacement, programming and setup

POWER DOOR LOCK KEY CYLINDER SWITCHES MALFUNCTION

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
Signal	1	1	1	-
Ground	-	1	-	-
1. Key Cylinder Switch Inoperative				

Circuit/System Description

The driver window switch monitors the voltage level of the key switch unlock signal circuit. When the key is inserted into the driver door key cylinder and turned to the Unlock position, a switch within the driver door latch closes causing the voltage to drop within the key switch unlock signal circuit. The driver window switch will detect the drop in voltage and will send a serial data message to the BCM commanding all the doors to unlock.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

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Power Door Locks Description and Operation

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- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Circuit/System Verification

1. Ignition ON
2. Command all doors to LOCK with a scan tool.
3. Verify the passenger and rear doors UNLOCK when inserting the key into the driver door lock key cylinder and turning the key to the unlock position.
 - **If the passenger and rear doors does not UNLOCK**

Refer to Circuit/System Testing.
 - **If the passenger and rear doors UNLOCKS**
4. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the A23D Door Latch Assembly-Driver. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Test for greater than 10 V between the signal circuit terminal 5 and ground.
 - **If 10 V or less**
 1. Ignition OFF, disconnect the harness connector at the S79D Window Switch-Driver.
 2. Test for infinite resistance between the signal circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance on the circuit.
 - If less than 2 ohms, replace the S79D Window Switch-Driver.
 - **If greater than 10 V**
5. Test or replace the A23D Door Latch Assembly-Driver.

Component Testing

1. Ignition OFF, disconnect the harness connector at the A23D Door Latch Assembly-Driver.
2. Test for infinite resistance between the signal terminal 5 and the ground terminal 3 with the switch in the open position:
 - **If less than infinite resistance**

Replace the A23D Door Latch Assembly-Driver.
 - **If infinite resistance**
3. Test for less than 2 ohms between the signal terminal 5 and the ground terminal 3 with the switch in the closed position:
 - **If 2 ohms or greater**

Replace the A23D Door Latch Assembly-Driver.
 - **If less than 2 ohms**
4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Side Door Window Control Switch Replacement (Left Side)**
- **Front Side Door Latch Replacement**

POWER DOOR LOCKS MALFUNCTION

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
BCM B+	B3125 02, B3130 02, B3135 02	B3125 02, B3130 02, B3135 02	-	-
BCM Ground	-	7	-	-
Driver Door Lock Switch Lock Signal	B3150 00	3	3	-
Driver Door Lock Switch				

Unlock Signal	B3140 00	2	2	-
Driver Door Lock Switch Ground	-	1	-	-
Passenger Door Lock Switch Lock Signal	B3155 00	4	4	-
Passenger Door Lock Switch Unlock Signal	B3145 00	5	5	-
Passenger Door Lock Switch Ground	-	6	-	-
Driver Door Unlock Control	B3125 02, B3130 02, B3135 02	B3125 04, B3130 04, B3135 04	B3125 01, B3130 01, B3135 01	-
Doors Lock Control	B3125 02, B3130 02, B3135 02	B3125 04, B3130 04, B3135 04	B3125 01, B3130 01, B3135 01	-
Passenger Doors Unlock Control	B3125 02, B3130 02, B3135 02	B3125 04, B3130 04, B3135 04	B3125 01, B3130 01, B3135 01	-
1. Driver Door Lock Switch Inoperative 2. Driver Door Lock Switch Lock Inoperative 3. Driver Door Lock Switch Unlock Inoperative 4. Passenger Door Lock Switch Lock Inoperative 5. Passenger Door Lock Switch Unlock Inoperative 6. Passenger Door Lock Switch Inoperative 7. All Door Latches Inoperative				

Circuit/System Description

The body control module powers the reversible door latch assemblies by providing battery positive voltage and ground to the appropriate lock and unlock control circuits of the door latch assemblies. The lock and unlock control circuits of the rear doors and passenger door latch assemblies are all connected together. When the door latch assemblies are not active, all actuator lock and unlock control circuits are supplied a floating voltage door driver by the body control module. Transitioning of the lock actuators to the lock or unlocked position depends upon which control circuits receive voltage and which control circuits receive ground.

The body control module supplies a 12 V signal to each of the door lock and door unlock signal circuits. When the door lock switches are in the open position, the voltage level in the signal circuit will be near 12 V. When any door lock switch is pressed to the lock or unlock position, the voltage level in the appropriate signal circuit will drop to 0 V and the body control module will detect the voltage drop and command the door latches to perform the requested lock or unlock command.

Diagnostic Aids

Verify the smooth and consistent mechanical operation of each part of the door latch system prior to performing extensive electrical diagnostics

Any door that does not function smoothly or consistently, refer to **Door Will Not Open/Close, Door Binding,**

or Locks, Handles, or Cylinders Do Not Function.

Reference Information

Schematic Reference

Door Lock/Indicator Schematics

Connector End View Reference

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- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool Driver Door Lock Switch parameter changes from Inactive to Lock and Unlock when pushing the appropriate switch on the S13D Door Lock Switch-Driver.

- **If the parameter does not change**

Refer to Circuit/System Testing - Driver Door Lock Switch Malfunction.

- **If the parameter changes**

3. Verify the scan tool Passenger Door Lock Switch parameter changes from Inactive to Lock and Unlock when pushing the appropriate switch on the S13P Door Lock Switch-Passenger.

- **If the parameter does not change**

Refer to Circuit/System Testing - Passenger Door Lock Switch Malfunction.

- **If the parameter changes**

4. Verify all vehicle doors LOCK and UNLOCK when commanding the All Doors Lock/Unlock to Lock

and Unlock with a scan tool.

- **If only the driver door LOCK or UNLOCK functions do not work**

Refer to Circuit/System Testing - Driver Door Lock Malfunction.

- **If one or more, but not all, passenger door LOCK or UNLOCK functions do not work**

Refer to Circuit/System Testing - Passenger Door Lock Malfunction.

- **If all door LOCK and UNLOCK functions do not work**

Refer to Circuit/System Testing - All Door Lock Inoperative.

- **If the LOCK and UNLOCK function for all doors works**

5. All OK.

Circuit/System Testing

Driver Door Lock Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S13D Door Lock Switch-Driver. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Driver Door Lock Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. 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.
 3. Test for infinite resistance between the signal circuit terminal 2 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.
6. Verify the scan tool Driver Door Lock Switch parameter is Unlock.
 - **If not Unlock**

1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Unlock**
7. Install a 3 A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 4.
8. Verify the scan tool Driver Door Lock Switch parameter is Lock.
 - **If not Lock**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Lock**
9. Test or replace the S13D Door Lock Switch-Driver.

Passenger Door Lock Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S13P Door Lock Switch-Passenger. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 4 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Passenger Door Lock Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. 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.
- 3. Test for infinite resistance between the signal circuit terminal 2 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**
- 5. Install a 3 A fused jumper wire between the signal circuit terminal 3 and the ground circuit terminal 4.
- 6. Verify the scan tool Passenger Door Lock Switch parameter is Unlock.
 - **If not Unlock**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Unlock**
 - 7. Install a 3 A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 4.
 - 8. Verify the scan tool Passenger Door Lock Switch parameter is Lock.
 - **If not Lock**
 1. Ignition OFF, remove the fused jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Lock**
 - 9. Test or replace the S13P Door Lock Switch-Passenger.

Driver Door Lock Malfunction

1. Ignition OFF, disconnect the harness connector at the A23D Door Latch Assembly-Driver. Ignition ON.

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door locks using the S13D Door Lock Switch-Driver to restore the voltage for

testing.

2. Test for greater than 6 V between the control circuit terminal 7 and ground.
 - **If 6 V or less**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance on the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If greater than 6 V**

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door locks using the S13D Door Lock Switch-Driver to restore the voltage for testing.

3. Test for greater than 6 V between the control circuit terminal 8 and ground.
 - **If 6 V or less**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance on the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If greater than 6 V**
4. Test or replace the A23D Door Latch Assembly-Driver.

Passenger Door Lock Malfunction

1. Ignition OFF, disconnect the harness connector at the appropriate passenger or rear A23 Door Latch Assembly. Ignition ON.

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door

locks using the door lock switch to restore the voltage for testing.

2. Test for greater than 6 V between the control circuit terminal listed below and ground:

- A23P Door Latch Assembly-Passenger - control circuit terminal 8
- A23RR Door Latch Assembly-Right Rear - control circuit terminal 8
- A23LR Door Latch Assembly-Left Rear - control circuit terminal 8

○ **If 6 V or less**

1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.

2. Test for infinite resistance between the control circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 ohms in the control circuit end to end.

- If 2 ohms or greater, repair the open/high resistance on the circuit.
- If less than 2 ohms, replace the K9 Body Control Module.

○ **If greater than 6 V**

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door locks using the door lock switch to restore the voltage for testing.

3. Test for greater than 6 V between the control circuit terminal listed below and ground:

- A23P Door Latch Assembly-Passenger - control circuit terminal 9
- A23RR Door Latch Assembly-Right Rear - control circuit terminal 9
- A23LR Door Latch Assembly-Left Rear - control circuit terminal 7

○ **If 7 V or less**

1. Ignition OFF, disconnect the X2 harness connector at the X53A Fuse Block-Rear Body and disconnect the X6 harness connector at the K9 Body Control Module

2. Test for less than 2 ohms between the control circuit terminals listed below:

- X53A Fuse Block-Rear Body control circuit terminal 36 X2 and A23P Door Latch Assembly-Passenger control circuit terminal 9
- X53A Fuse Block-Rear Body control circuit terminal 35 X2 and K9 Body Control Module control circuit terminal 2 X6
- If greater than 2 ohms, repair the open/high resistance on the circuit.

3. Connect the X2 harness connector at the X53A Fuse Block-Rear Body

4. Test for less than 2 ohms between the A23P Door Latch Assembly-Passenger control circuit terminal 9 and the K9 Body Control Module control circuit terminal 2 X6

- If greater than 2 ohms, replace the X53A Fuse Block-Rear Body.

5. Connect the X6 harness connector at the K9 Body Control Module

6. Ignition ON, test for greater than 7 V between the A23P Door Latch Assembly-Passenger control circuit terminal 9 and ground
 - If 7 V or less, replace the K9 Body Control Module.
 - **If greater than 7 V**
4. Test or replace the A23 Door Latch Assembly.

All Door Locks Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the X6 harness connector at the K9 Body Control Module. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 3 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 4 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the B+ circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
 - **If the test lamp does not illuminate and the circuit fuse is open**
 1. Ignition OFF.
 2. Test for infinite resistance between the B+ circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Disconnect the harness connector at each A23 Door Latch Assembly.
 4. Test for infinite resistance between each control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the appropriate A23 Door Latch Assembly.
 - **If the test lamp illuminates**
5. Ignition OFF, connect the X2 and X6 harness connectors at the K9 Body Control Module. Disconnect the harness connector at the A23D Door Latch Assembly-Driver, ignition ON.

NOTE: Leaving the DMM connected between a control circuit and ground for greater than 20 seconds will cause the K9 Body Control Module to interpret the test as a system fault and will cause the voltage on the

control circuit to drop to 0 V. If the voltage drops to 0 V, operate the door locks using the driver door lock switch to restore the voltage for testing.

6. Test for greater than 7 V between the control circuit terminal 7 and ground.
 - **If 7 V or less**
 1. Ignition OFF, disconnect the X6 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the control circuit terminal listed below and ground:
 - Control circuit terminal 1 X6
 - Control circuit terminal 2 X6
 - Control circuit terminal 4 X6
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K9 Body Control Module.
 - **If greater than 7 V**
7. Replace the K9 Body Control Module.

Component Testing

Driver Door Lock Switch

1. Ignition OFF, disconnect the harness connector at the S13D Door Lock Switch-Driver.
2. Test for infinite resistance between the signal terminal 2 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S13D Door Lock Switch-Driver.
 - **If infinite resistance**
3. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S13D Door Lock Switch-Driver
 - **If infinite resistance**
4. Test for less than 2 ohms between the signal terminal 2 and the ground terminal 4 with the switch in the Lock position.
 - **If 2 ohms or greater**

Replace the S13D Door Lock Switch-Driver.
 - **If less than 2 ohms**
5. Test for less than 2 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the Unlock position.

- **If 2 ohms or greater**

Replace the S13D Door Lock Switch-Driver.

- **If less than 2 ohms**

6. All OK

Passenger Door Lock Switch

1. Ignition OFF, disconnect the harness connector at the S13P Door Lock Switch-Passenger.
2. Test for infinite resistance between the signal terminal 2 and the ground terminal 4 with the switch in the open position.

- **If less than infinite resistance**

Replace the S13P Door Lock Switch-Passenger.

- **If infinite resistance**

3. Test for infinite resistance between the signal terminal 3 and the ground terminal 4 with the switch in the open position.

- **If less than infinite resistance**

Replace the S13P Door Lock Switch-Passenger

- **If infinite resistance**

4. Test for less than 2 ohms between the signal terminal 2 and the ground terminal 4 with the switch in the Lock position.

- **If 2 ohms or greater**

Replace the S13P Door Lock Switch-Passenger.

- **If less than 2 ohms**

5. Test for less than 2 ohms between the signal terminal 3 and the ground terminal 4 with the switch in the Unlock position.

- **If 2 ohms or greater**

Replace the S13P Door Lock Switch-Passenger

- **If less than 2 ohms**

6. All OK

Door Latch Test

1. Ignition OFF, disconnect the harness connector at the appropriate A23 Door Latch Assembly.
2. Install a 25 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a

jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the A23 Door Latch Assembly should perform the LOCK and UNLOCK function.

- **If the actuator does not perform the LOCK and UNLOCK function**

Replace the A23 Door Latch Assembly.

- **If the actuator performs the LOCK and UNLOCK function**

3. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Door Lock Switch Replacement - Driver Side**
- **Door Lock Switch Replacement - Passenger Front**
- **Front Side Door Latch Replacement**
- **Rear Side Door Latch Replacement**
- **Rear Body Fuse Block Replacement**
- **Control Module References** for body control module replacement, programming and setup

TRUNK RELEASE MALFUNCTION

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
Rear Body Fuse Block B+	3	3	-	-
Rear Compartment Lid Unlatch Relay Control	B3265 02	B3265 04	B3265 01	-
Rear Body Fuse Block Ground	-	B3265 04	-	-
Exterior Rear Compartment Lid Unlatch Switch Signal	B2494 00	1	1	-
Interior Rear Compartment Lid Unlatch Switch Ground	-	1	-	-
Interior Rear Compartment Lid Unlatch Switch Signal	B2730 00	2	2	-
Exterior Rear Compartment Lid Unlatch Switch Ground	-	2	-	-

Rear Compartment Lid Latch Control	2	3	2	-
Rear Compartment Lid Latch Ground	-	3	-	-
1. Exterior Rear Compartment Lid Release Switch Inoperative 2. Interior Rear Compartment Lid Release Switch Inoperative 3. Rear Compartment Lid Release Inoperative				

Circuit/System Description

The body control module supplies a 12 V reference voltage to the rear compartment lid unlatch switch through the release switch signal circuit. When the rear compartment lid unlatch switch is pressed, the release switch signal circuit is grounded through the rear compartment lid unlatch switch ground circuit and the reference voltage is pulled low within the body control module. In response, the body control module applies battery positive voltage to the rear compartment lid release relay control circuit, which energizes the coil side of the relay. The switch side of the rear compartment lid release relay then closes, supplying battery positive voltage through the relay and the rear compartment lid latch control circuit activating the latch so that the trunk lid may be manually raised to an open position.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Luggage Compartment 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

1. Ignition ON.
2. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter changes between Active and Inactive when pressing and releasing the S58A Rear Compartment Lid Unlatch Switch-Exterior.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Exterior Trunk Release Switch Inoperative
 - **If the parameter changes**
3. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter changes between Inactive and Active when pressing the S58B Rear Compartment Lid Unlatch Switch-Interior.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Interior Trunk Release Switch Inoperative
 - **If the parameter changes**
4. Verify the M40 Rear Compartment Lid Latch functions when commanding the Trunk Lid Unlatch with a scan tool.
 - **If the M40 Rear Compartment Lid Latch does not function**

Refer to Circuit/System Testing - Release Actuator Inoperative
 - **If the M40 Rear Compartment Lid Latch does function**
5. All OK.

Circuit/System Testing

Exterior Trunk Release Switch Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.

2. Test for infinite resistance between the signal circuit terminal 1 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 2.
6. Verify the scan tool Trunk Lid/Liftgate Window Exterior Unlatch Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

Interior Trunk Release Switch Inoperative

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S58B Rear Compartment Lid Unlatch Switch-Interior. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal 1 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the ground circuit terminal 2.

6. Verify the scan tool Interior Trunk Lid/Liftgate Window Unlatch Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

Release Actuator Inoperative

1. Ignition OFF, and all vehicle systems OFF. Disconnect the harness connector at the M40 Rear Compartment Lid Latch. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Connect a test lamp between the control circuit terminal 1 and ground, ignition ON.
4. Verify the test lamp does not turn ON and OFF when commanding the Trunk Lid Unlatch with a scan tool.
 - **If the test lamp turns ON and OFF**

Test or replace the M40 Rear Compartment Lid Latch.
 - **If the test lamp does not turn ON and OFF**
5. Ignition OFF, connect the harness connector at the M40 Rear Compartment Lid Latch. Disconnect the X3 harness connector at the X53A Fuse Block-Rear Body. It may take up to 2 minutes for all vehicle systems to power down
6. Test for less than 10 ohms between the ground circuit terminal 12 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.

- If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
- 7. Ignition ON
- 8. Verify the M40 Rear Compartment Lid Latch is not activated.
 - **If the M40 Rear Compartment Lid Latch is activated**
 1. Ignition OFF, disconnect the harness connector at the M40 Rear Compartment Lid Latch, ignition ON.
 2. Test for less than 1 V between the control circuit terminal 1 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, test or replace the M40 Rear Compartment Lid Latch.
 - **If the M40 Rear Compartment Lid Latch is not activated**
- 9. Connect a 10 A fused jumper wire between the control circuit terminal 8 and B+.
- 10. Verify the M40 Rear Compartment Lid Latch activates.
 - **If the M40 Rear Compartment Lid Latch does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the M40 Rear Compartment Lid Latch, ignition ON.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 ohms in the control circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, test or replace the M40 Rear Compartment Lid Latch.
 - **If the M40 Rear Compartment Lid Latch activates**
- 11. Ignition OFF, connect the X3 harness connector at the X53A Fuse Block-Rear Body. Disconnect the X5 harness connector at the K9 Body Control Module, ignition ON.
- 12. Verify the M40 Rear Compartment Lid Latch is not activated.
 - **If the M40 Rear Compartment Lid Latch is activated**
 1. Ignition OFF, disconnect the X3 harness connector at the X53A Fuse Block-Rear Body.
 2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 11 X5 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X53A Fuse Block-Rear Body.
 - **If the M40 Rear Compartment Lid Latch is not activated**
- 13. Connect a 3 A fused jumper wire between the control circuit terminal 11 and B+.
- 14. Verify the M40 Rear Compartment Lid Latch activates.
 - **If the M40 Rear Compartment Lid Latch does not activate**
 1. Ignition OFF, remove the jumper wire, disconnect the X3 harness connector at the X53A Fuse Block-Rear Body, ignition ON.
 2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 11 X5 and

ground

- If less than Infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 ohms in the control circuit end to end.

- If 2 ohms or greater, repair the open/high resistance in the circuit.
- If less than 2 ohms, replace the X53A Fuse Block-Rear Body.

- **If the M40 Rear Compartment Lid Latch activates**

15. Replace the K9 Body Control Module.

Component Testing

Rear Compartment Lid Latch

1. Ignition OFF, disconnect the harness connector at the M40 Rear Compartment Lid Latch.
2. Install a 10 A fused jumper wire between the control terminal 1 and 12 V. Install a jumper wire between the ground terminal 2 and ground.
3. Verify the M40 Rear Compartment Lid Latch activates.
 - **If the M40 Rear Compartment Lid Latch does not activate.**

Replace the M40 Rear Compartment Lid Latch.

- **If the M40 Rear Compartment Lid Latch does activate.**

4. All OK

Exterior Trunk Release Switch

1. Ignition OFF, disconnect the harness connector at the S58A Rear Compartment Lid Unlatch Switch-Exterior.
2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

- **If infinite resistance**

3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.
 - **If 3 ohms or greater**

Replace the S58A Rear Compartment Lid Unlatch Switch-Exterior.

- **If less than 3 ohms**

4. All OK

Interior Trunk Release Switch

1. Ignition OFF, disconnect the harness connector at the S58B Rear Compartment Lid Unlatch Switch-Interior.
2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.
 - **If less than infinite resistance**

Replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

- **If infinite resistance**
3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.
 - **If 3 ohms or greater**

Replace the S58B Rear Compartment Lid Unlatch Switch-Interior.

- **If less than 3 ohms**
4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Body Fuse Block Replacement**
- **Rear Compartment Lid Release Switch Replacement (Rear Compartment Lid), Rear Compartment Lid Release Switch Replacement (Door Trim Panel)**
- **Rear Compartment Lid Latch Replacement**
- **Control Module References** for body control module replacement, programming and setup

TRUNK AJAR INDICATOR MALFUNCTION

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
Signal	1	2	2	-
Ground	-	3	-	-

- | |
|---|
| <ol style="list-style-type: none">1. Trunk Ajar Message Always Illuminated2. Trunk Ajar Message Inoperative3. Trunk Release Inoperative |
|---|

Circuit/System Description

The Body Control Module (BCM) supplies a 12 V signal to the rear compartment lid ajar switch signal circuit. When the rear compartment lid latch releases the rear compartment lid, the rear compartment lid ajar switch, which is internal to the rear compartment lid latch, is supplied with ground which causes the trunk ajar switch signal circuit to be pulled low. The BCM interprets this and communicates via serial data to the driver information center which will display the Trunk Open message.

Reference Information

Schematic Reference

Release Systems Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - SEDAN

Description and Operation

Door Ajar Indicator 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

1. Ignition ON.
2. Verify the scan tool Rear Closure Ajar Switch parameter changes between Inactive and Active when opening and closing the trunk.
 - **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**
- 3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the M40 Rear Compartment Lid Latch. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
 - **If 10 ohms or greater**
 1. Ignition OFF.
 2. Test for less than 2 ohms in the ground circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, repair the open/high resistance in the ground connection.
 - **If less than 10 ohms**
3. Ignition ON.
4. Verify the scan tool Rear Closure Ajar Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit terminal 4 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**
5. Install a 3 A fused jumper wire between the signal circuit terminal 4 and the ground circuit terminal 2.
6. Verify the scan tool Rear Closure Ajar Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 ohms in the signal circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K9 Body Control Module.
 - **If Active**
7. Test or replace the M40 Rear Compartment Lid Latch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the M40 Rear Compartment Lid Latch.
2. Test for infinite resistance between the signal terminal 4 and the ground terminal 2 with the switch in the

open position.

- **If less than infinite resistance**

Replace the M40 Rear Compartment Lid Latch.

- **If infinite resistance**

3. Test for less than 3 ohms between the signal terminal 4 and the ground terminal 2 with the switch in the closed position.

- **If 3 ohms or greater**

Replace the M40 Rear Compartment Lid Latch.

- **If less than 3 ohms**

4. All OK

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Rear Compartment Lid Latch Replacement**
- **Control Module References** for BCM replacement, programming and setup

DOOR WILL NOT OPEN/CLOSE, DOOR BINDING, OR LOCKS, HANDLES, OR CYLINDERS DO NOT FUNCTION

Door Will Not Open/Close, Door Binding, or Locks, Handles, or Cylinders Do Not Function

Step	Action	Yes	No
DEFINITION: This diagnostic table is designed to address the mechanical diagnosis of the door latching system, which could include the inside and outside handles, latch rods/cables, latches, or latch cylinders.			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to Step 2	Go to <u>Diagnostic System Check - Vehicle</u>
2	Were you sent here from a Vehicle Access Symptom Table?	Go to Step 3	Go to <u>Symptoms - Vehicle Access</u>
3	Does the door open with the outside handle?	Go to Step 4	Go to Step 10
4	Does the door open with the inside handle?	Go to Step 5	Go to Step 11
5	Does the manual latch knob latch and unlatch the latch smoothly without binding?	Go to Step 6	Go to Step 12
6	Does the door latch switch and/or the keyless entry transmitter latch and unlatch the door latch or door latches?	Go to Step 7	Go to Step 14
7	Is the outside key cylinder loose or does it rattle or fall out? (if equipped)	Go to Step 15	Go to Step 8
8	Does the outside key cylinder latch and unlatch the latch and function smoothly without binding? (if equipped)	Go to Step 9	Go to Step 16

9	Does the door bind, does it take excessive effort to open, or is it misaligned?	Go to Step 17	Go to Step 18
10	If the door will not open with the outside handle, or the handle is obstructed or loose, check the following: • For cold weather freezing, thaw as necessary. • Check the handle for foreign material. Remove material as necessary. • Check the handle grab bar for looseness or damage. Repair as necessary. • Check the handle for full travel. If the issue is not resolved, remove the trim panel as necessary to gain access to door hardware and check the following: • Check the handle chassis for loose fasteners, broken chassis inserts, loose or missing spring, or a loose, missing or bent rod lever. • Check for bent rod to the outside handle. • Check that the handle grab bar engages the rod lever properly. • Check for interference of rod and handle to other components in the door. • Check that handle rod is securely attached at both latch and handle. • Check if rod is positioned properly in the clip on the latch. At rest position, the handle should be fully against the down stop and the latch lever should be at the bottom of its travel. Correct by opening clip, repositioning rod in clip and closing clip till it snaps, as necessary. Did you find and correct the condition?	Go to Step 18	Go to Step 11
11	Door will not open with the inside handle: • Check the inside handle for foreign material. Remove material as necessary. • Check that the handle is secure. Correct as necessary. • If rear door, verify child security is not engaged. • Remove the trim panel as necessary to and check the		

	inside handle rod/cable attachments at both the latch and handle. If the cable is kinked or pinched, correct as necessary.		
	Did you find and correct the condition?	Go to Step 18	Go to Step 12
12	The door will not or is difficult to unlatch with the inside manual latch knob: • For cold weather freezing, thaw as necessary • Check the latch knob for a loose condition. Repair or replace as necessary. Check the latch knob for binding or dragging using the following procedure: 1. Remove the latch knob. 2. If condition goes away, check for drag/interference of the latch knob against the inner belt seal, or the trim panel. Correct as required. If further action is required, remove the trim panel and check the latch rod and latch knob for interference with the following: • Water deflector/paper • Side impact foam • Rod grommet in sheet metal • Glass run channel • Other rods or cables • Trim panel		
	Did you find and correct the condition?	Go to Step 18	Go to Step 13
13	With a manual lock, if the latch will not function properly do the following: 1. Function the lock/unlatch lever on the latch to unlatch the latch. Check for high internal resistance. 2. With the door open, manually close the latch with a screwdriver. 3. Check the latch for internal binding by actuating the latch with the inside door handle lever.		

	4. Manually close the latch with a screwdriver again. 5. Check the latch for internal binding by actuating the latch with the outside door handle lever.		
	Did you find and correct the condition?	Go to Step 18	Go to Step 14
14	If power locks are included in vehicle options and do not function with either the keyless entry transmitter or switch: 1. For cold weather freezing, thaw as necessary. 2. Remove trim pad as required and check the following: • Verify door harness has appropriate power connectors for switches and latch. • Check harness connector pins for corrosion. • Assure wire harness connectors are seated and locked properly at latch and switch. Remove and re-seat if required. • Check door harness for cuts/chafing/corrosion. Correct/replace as required. • Check for 12V at latch and door switch. Correct/proceed accordingly. • Check BCM for trouble codes. Correct/proceed accordingly. 3. If power locks still do not function do the following: 1. Remove latch from door cavity. 2. Connect latch to electrical connector outside the door. 3. Function power lock/unlatch switch in both latch and unlatch directions. Watch for lock/unlatch lever on latch to move completely from one position to the other. 4. If lever does not move, remove connector from old latch and attach to new latch outside of door cavity. 5. Verify new latch is functional, if so, attach rods and install new latch in door.		
	Did you find and correct the condition?	Go to Step 18	Go to Step 15
	If the key cylinder is loose do the following:		

15	• Remove the trim if necessary. • Check that the retaining clip is properly seated. (if equipped) • Check that the fastener is properly torqued. (if equipped)		
	Did you find and correct the condition?	Go to Step 18	Go to Step 16
16	The outside key cylinder will not latch and unlatch the latch and function smoothly without binding: 1. For cold weather freezing, thaw as necessary 2. Remove trim if required. 3. Check that the key cylinder rod is securely attached both to the key cylinder pawl and the latch. 4. Check that key cylinder lever, rod and latch lever are free of interferences. Remove interferences as required. 5. Check that latch cylinder rod is routed properly. Re-route as required. 6. Remove rod from latch cylinder and actuate cylinder. Check for internal resistance. Lubricate latch cylinder as required 7. Verify Cylinder rotates with vehicle key. If not, code and replace cylinder to match vehicle key. See latch cylinder coding and replacing.		
	Did you find and correct the condition?	Go to Step 18	Go to Step 17
17	The door is difficult to open: • Check for interference with the fender, adjacent door, body opening or door striker and adjust as necessary. • Check for binding door hinges. Lubricate or align/adjust as necessary. • Check the door check link for binding. Lubricate as necessary. • Adjust the door as necessary.		
	Did you find and correct the condition?	Go to Step 18	Go to appropriate Door Lock Striker Adjustment procedure.
	Verify proper operation of the door closing system.		

18	• Outside handle • Inside handle • Manual lock/unlatch ○ Outside key cylinder ○ Inside latch knob ○ Double pull handle • Power lock/unlatch ○ Key fob ○ Door switches • Door opening/closing effort		
	Is the condition still present?	Go to Step 1	System OK

REPAIR INSTRUCTIONS

FUEL TANK FILLER DOOR LOCK ACTUATOR REPLACEMENT

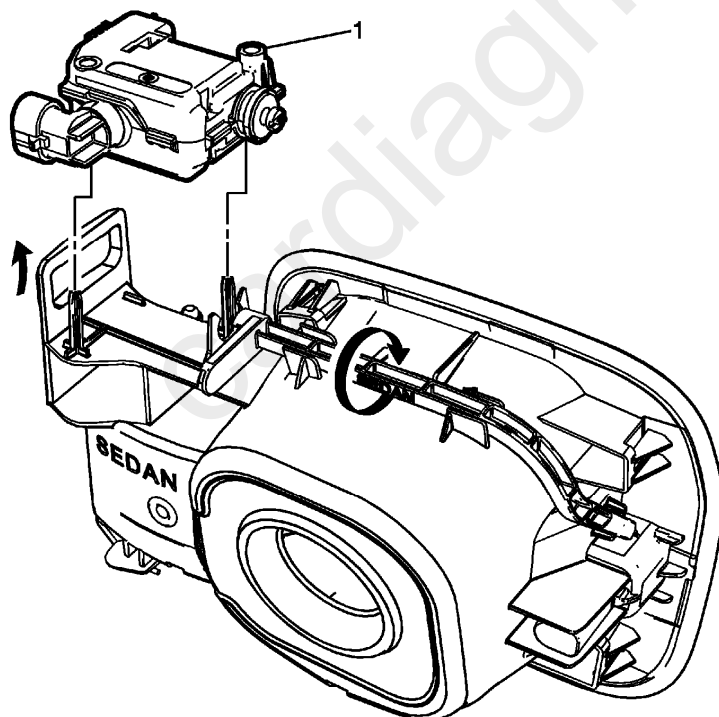


Fig. 7: Fuel Tank Filler Door Lock Actuator
 Courtesy of GENERAL MOTORS COMPANY

Fuel Tank Filler Door Lock Actuator Replacement

Callout	Component Name
Preliminary Procedure	
Remove the fuel tank filler pipe housing. Refer to <u>Fuel Tank Filler Pipe Housing Replacement</u> .	
	Fuel Tank Filler Door Lock Actuator
	Procedure
1	1. Disconnect the actuator electrical harness from the fuel tank filler pipe housing. 2. Remove the actuator rod from the actuator shaft, with light pressure, pressing sideways on the rod at the shafts end, and rotating the rod outward from the housing. 3. Release the 3 retainers while using light upward pressure on the actuator.

FRONT SIDE DOOR INSIDE HANDLE CABLE REPLACEMENT

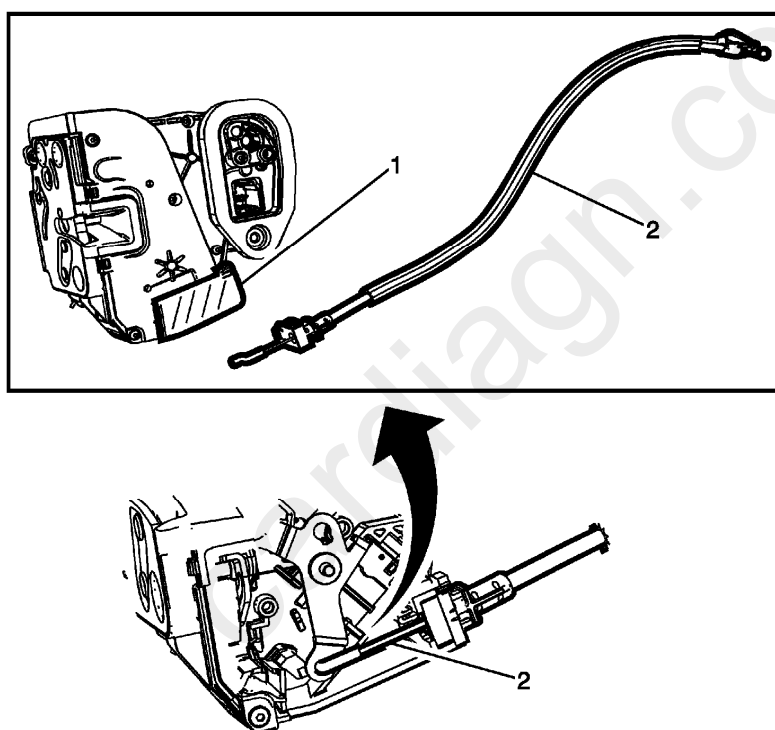


Fig. 8: Rear Side Door Inside Handle Cable & Cover
Courtesy of GENERAL MOTORS COMPANY

Front Side Door Inside Handle Cable Replacement

Callout	Component Name
Preliminary Procedure	
Remove the front side door latch and handle bracket assembly from the door. Refer to <u>Front Side Door Latch Replacement</u> .	
	Front Side Door Inside Handle Cable Access Cover

1	Procedure 1. Use a suitable tool, open the access cover to view the cable end. 2. Release the cable end from the latch assembly.
2	Front Side Door Inside Handle Cable NOTE: Ensure that the door lock system operates properly before installing the trim.

REAR SIDE DOOR INSIDE HANDLE CABLE REPLACEMENT

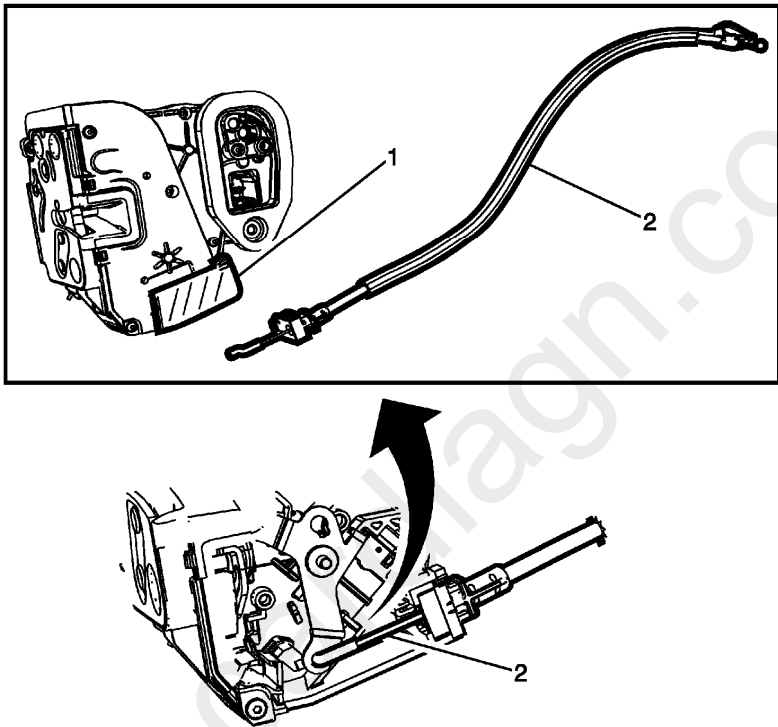


Fig. 9: Rear Side Door Inside Handle Cable & Cover
Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Inside Handle Cable Replacement

Callout	Component Name
Preliminary Procedure Remove the rear side door latch and handle bracket assembly from the door. Refer to Rear Side Door Latch Replacement .	
1	Rear Side Door Inside Handle Cable Cover Procedure 1. Use a suitable tool, open the access cover to view the cable end.

	2. Release the cable end from the latch assembly.
2	Rear Side Door Inside Handle Cable NOTE: Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR LOCK CYLINDER REPLACEMENT

Removal Procedure

NOTE: When performing this procedure the latch and handle bracket assembly must be removed from the vehicle to replace the door lock cylinder assembly.

1. Remove the front side door latch and door outside handle bracket assembly as one from the door. Refer to **Front Side Door Latch Replacement**.

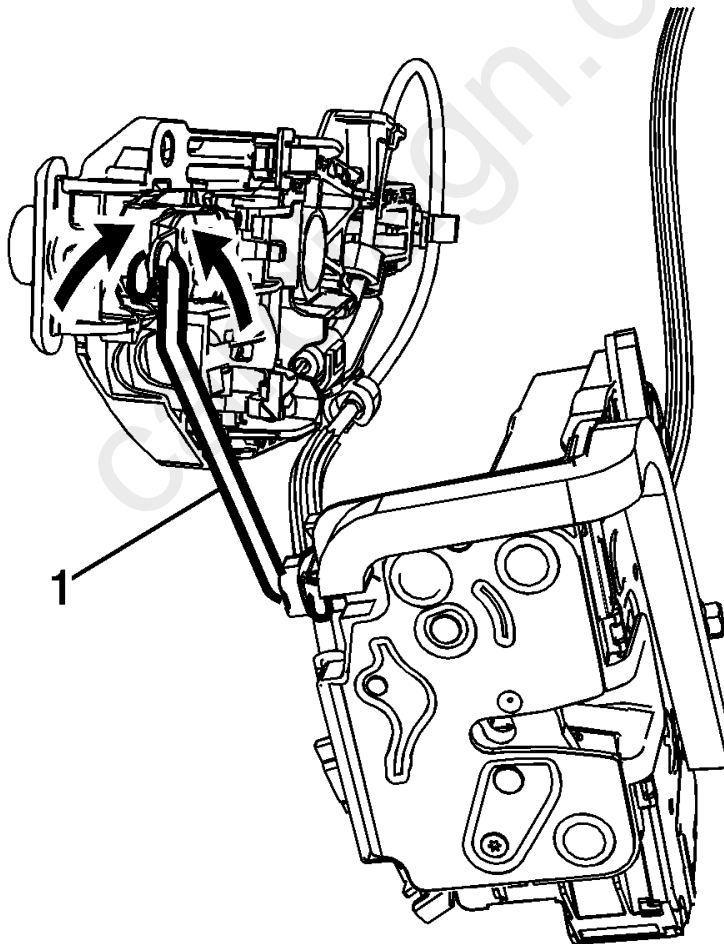


Fig. 10: Front Side Door Lock Cylinder Rod

Courtesy of GENERAL MOTORS COMPANY

NOTE: Its not necessary to disconnect the inside or outside handle cables to replace the door lock cylinder.

2. Disconnect the front side door lock cylinder rod (1) from the lock cylinder.

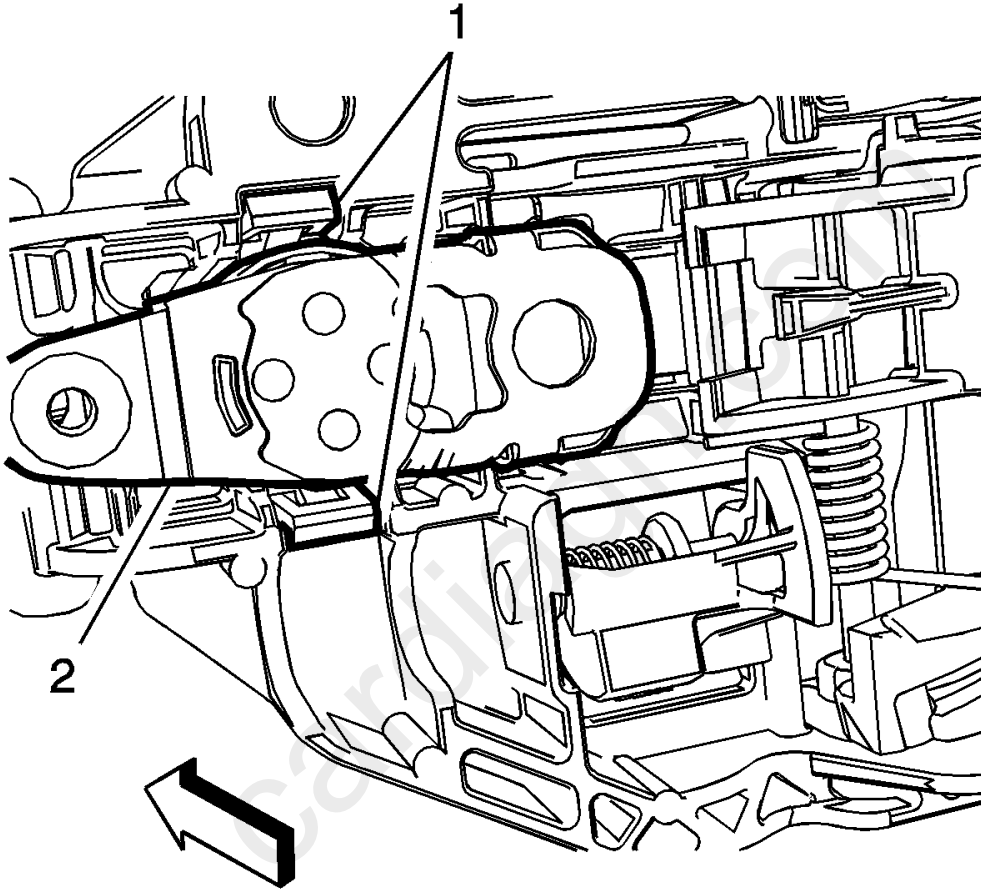


Fig. 11: Lock Cylinder Retainers

Courtesy of GENERAL MOTORS COMPANY

3. From the back side of the outside handle bracket, use a suitable tool, push up and down on the lock cylinder retainers (1) releasing the retainer from the cylinder.

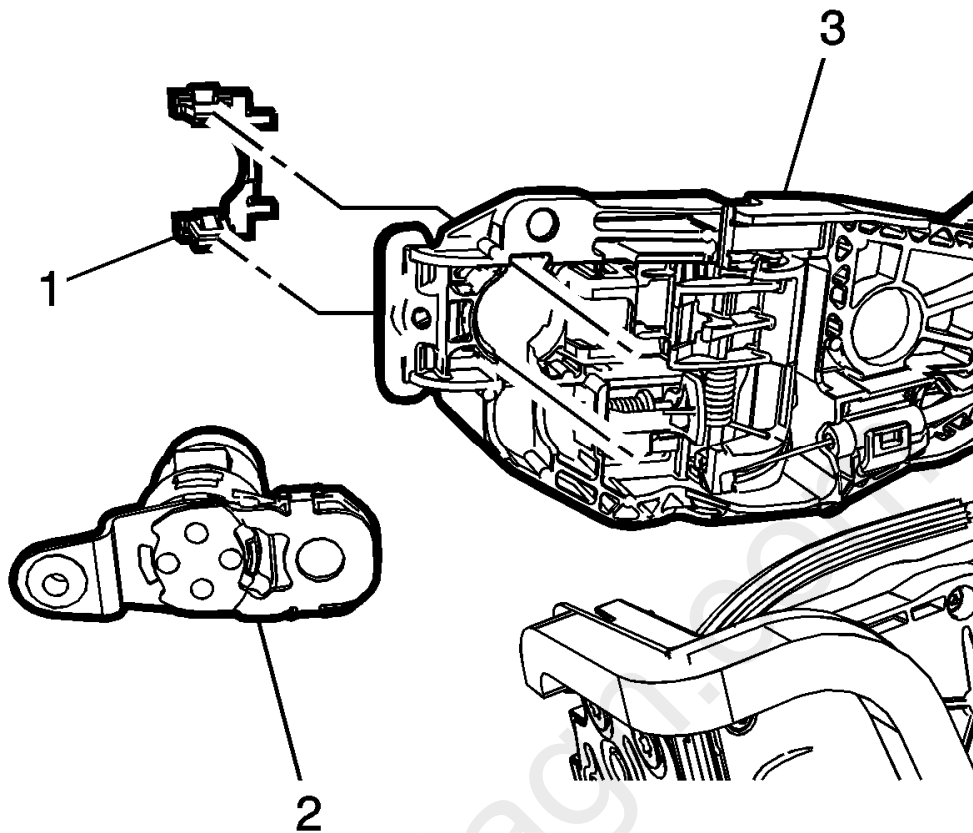


Fig. 12: Front Side Door Lock Cylinder & Mounting Components
Courtesy of GENERAL MOTORS COMPANY

4. With the lock cylinder retainer (1) removed pull the lock cylinder (2) rearward releasing it from the handle bracket (3).

Installation Procedure

1. If replacing with a NEW lock cylinder, the new lock cylinder must be coded. Refer to **Front Side Door Lock Cylinder Coding (Free Wheeling)** , **Front Side Door Lock Cylinder Coding (Non Free Wheeling)** .

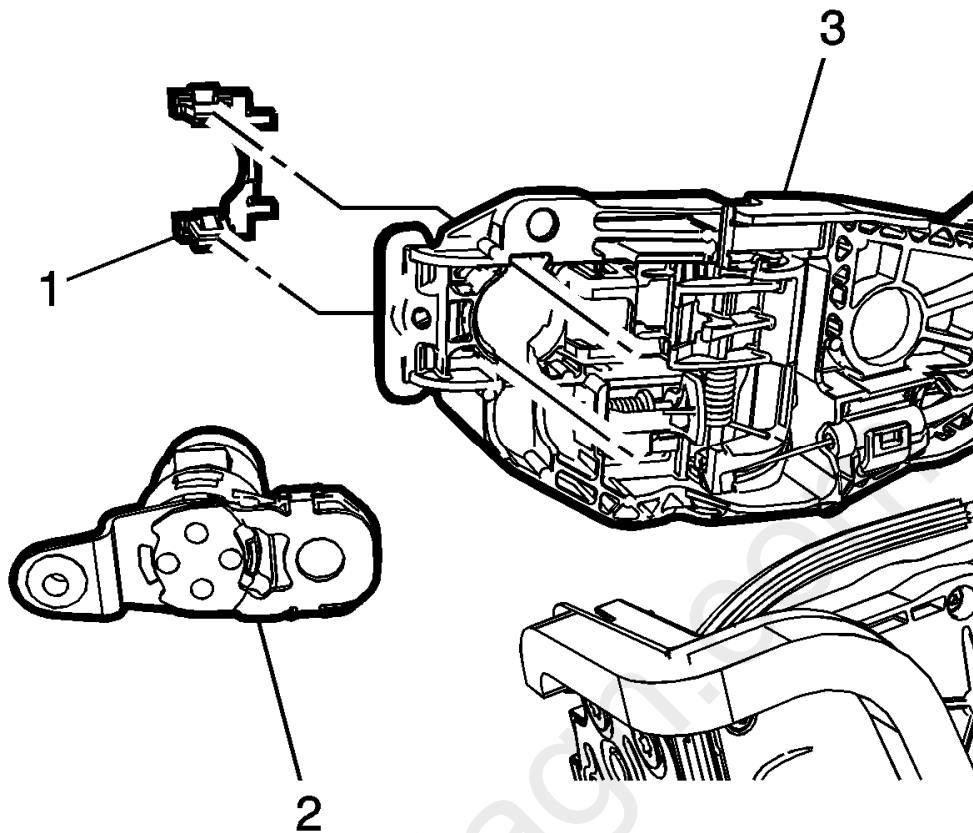


Fig. 13: Front Side Door Lock Cylinder & Mounting Components
Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure that the door lock cylinder is engage all the way into the side door handle locator tabs. Insert the key into the door lock cylinder, turn left to right checking for binding before install the assembly to the vehicle.

2. Install the lock cylinder retainer (1) to the front side door outside handle bracket assembly (3).
3. Install the door lock cylinder (2) in the front side door outside handle bracket, push forward locking the lock cylinder (2) into the lock cylinder retainer.

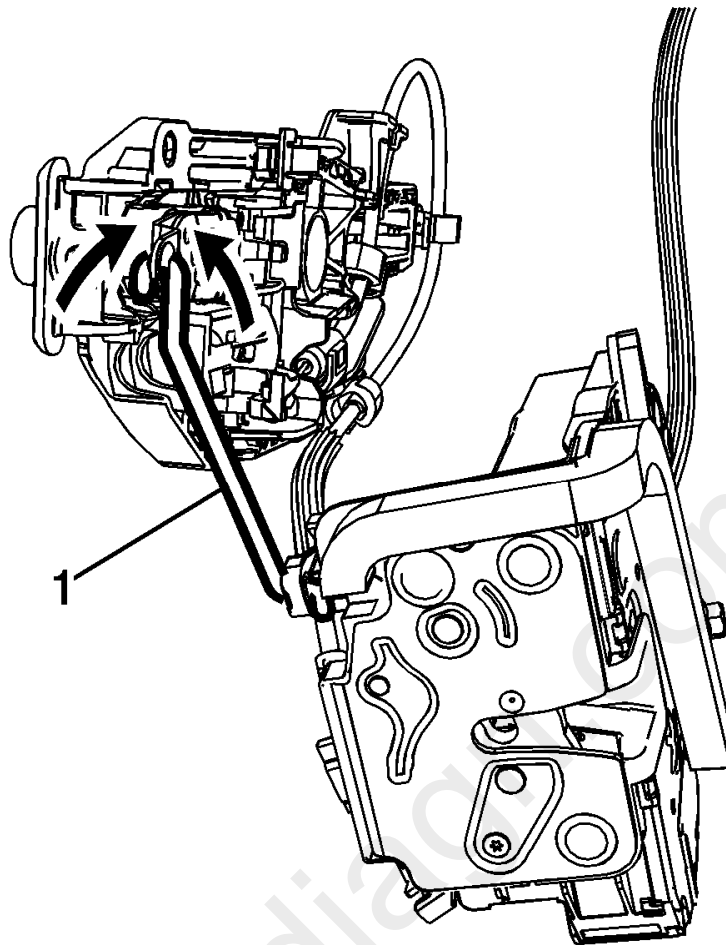


Fig. 14: Front Side Door Lock Cylinder Rod
Courtesy of GENERAL MOTORS COMPANY

4. Connect the door lock cylinder rod (1) to the lock cylinder.
5. Install the front side door latch and handle bracket assembly as one in the vehicle. Refer to **Front Side Door Latch Replacement**.
6. Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR INSIDE HANDLE REPLACEMENT

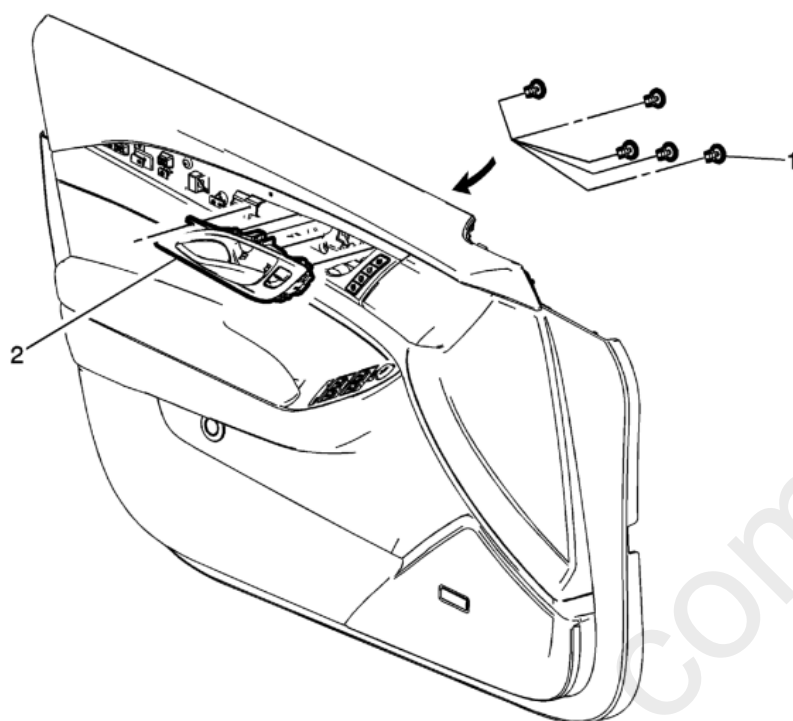


Fig. 15: Front Side Door Inside Handle
 Courtesy of GENERAL MOTORS COMPANY

Front Side Door Inside Handle Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the front side door trim. Refer to <u>Front Side Door Trim Replacement</u> . 2. Remove the front side door trim panel applique. Refer to <u>Front Side Door Trim Panel Applique Replacement</u> . 3. Reposition insulator, as required.	
1	Front Side Door Inside Handle Fastener (Qty: 5) CAUTION: Refer to <u>Fastener Caution</u> . NOTE: The five screws are located on the backside of the trim panel. Tighten 1.4 (12 lb in)
	Front Side Door Inside Handle Assembly

Procedure

1. Disconnect the front side door inside handle illumination lamp connector and harness retainer.
2. Release the handle trim from the metal retaining clip from the backside of the trim panel.
3. Remove the handle and bezel as an assembly from the door trim panel.
4. Transfer the handle illumination lamp, door lock switch and the bezel to the new handle.

FRONT SIDE DOOR OUTSIDE HANDLE REPLACEMENT

Removal Procedure

1. Remove the front side door trim. Refer to **Front Side Door Trim Replacement** .
2. Remove the front side door water deflector.

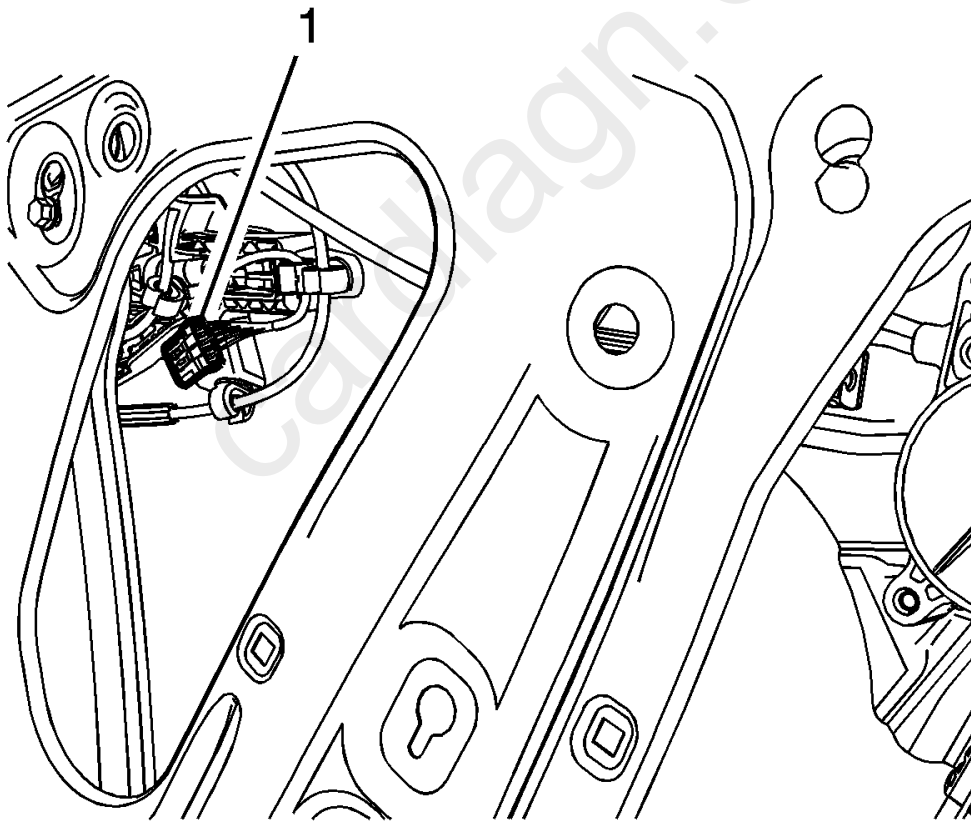


Fig. 16: Luminous Reflecting Light Electrical Connector

Courtesy of GENERAL MOTORS COMPANY

3. Disconnect the electrical connector (1) from the front side door outside handle bracket for the luminous reflecting light, if equipped

NOTE: When removing the door lock cylinder screw Do Not go past the hard stop.

4. Loosen the screw for the lock cylinder bezel. Refer to **Front Side Door Lock Cylinder Bezel Replacement**.

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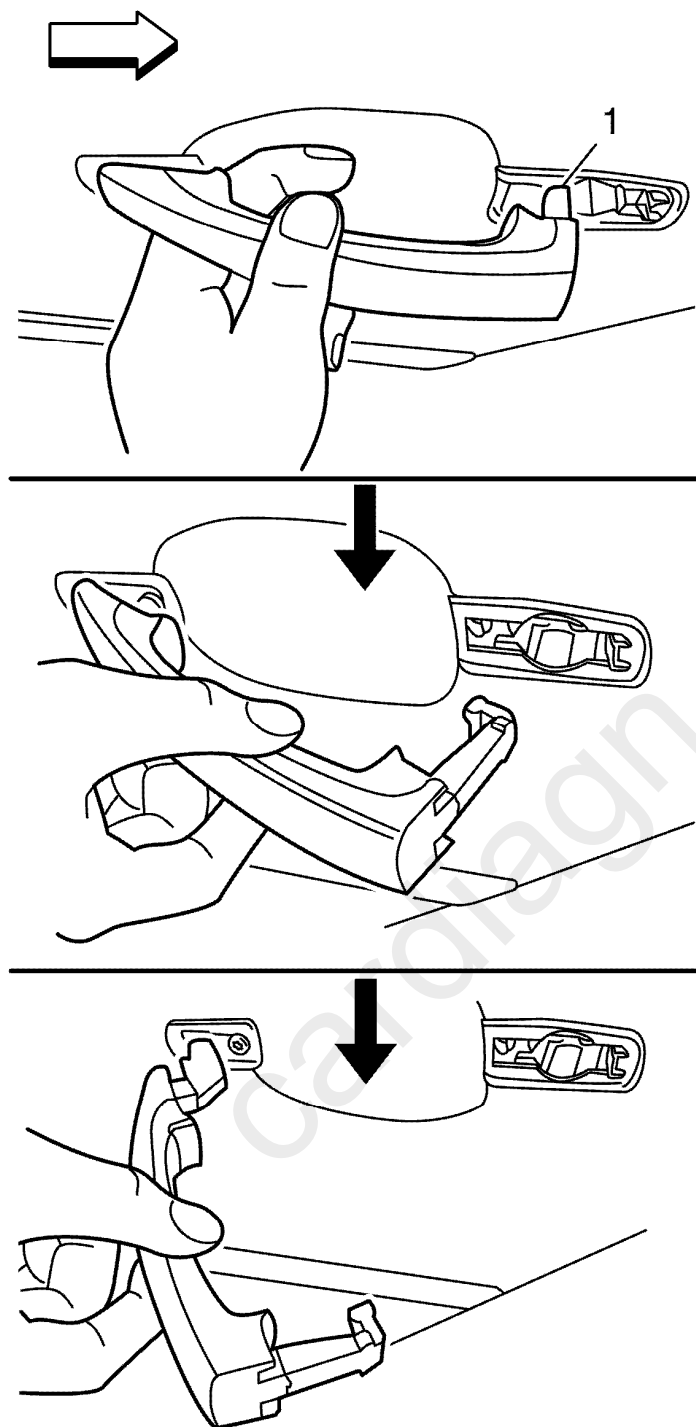


Fig. 17: Pulling Side Door Outside Handle To Rear
Courtesy of GENERAL MOTORS COMPANY

5. Remove the front side door outside handle (1) from the door as follows:
 1. Open the door handle fully.

2. Slide the door handle rearward releasing the handle from the door handle bracket.
3. Remove the front side door outside handle and connector from the door.

Installation Procedure

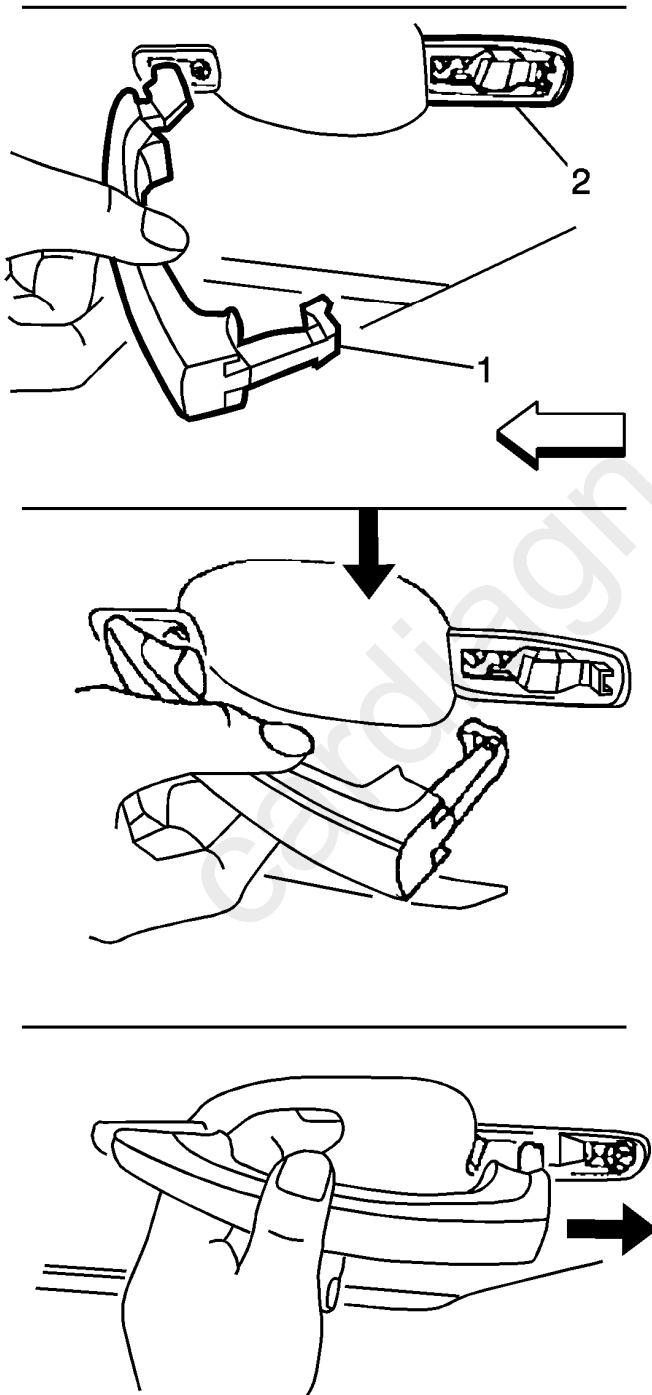


Fig. 18: Door Handle

Courtesy of GENERAL MOTORS COMPANY

NOTE: The front side door outside handle cannot be installed until the counter balance (1) and handle is reset.

1. Install the front side door outside handle (1) to the door (2).
2. Insert the front side door handle into the door handle pocket.
3. Slide the front side door handle forward securing it into the door handle bracket.

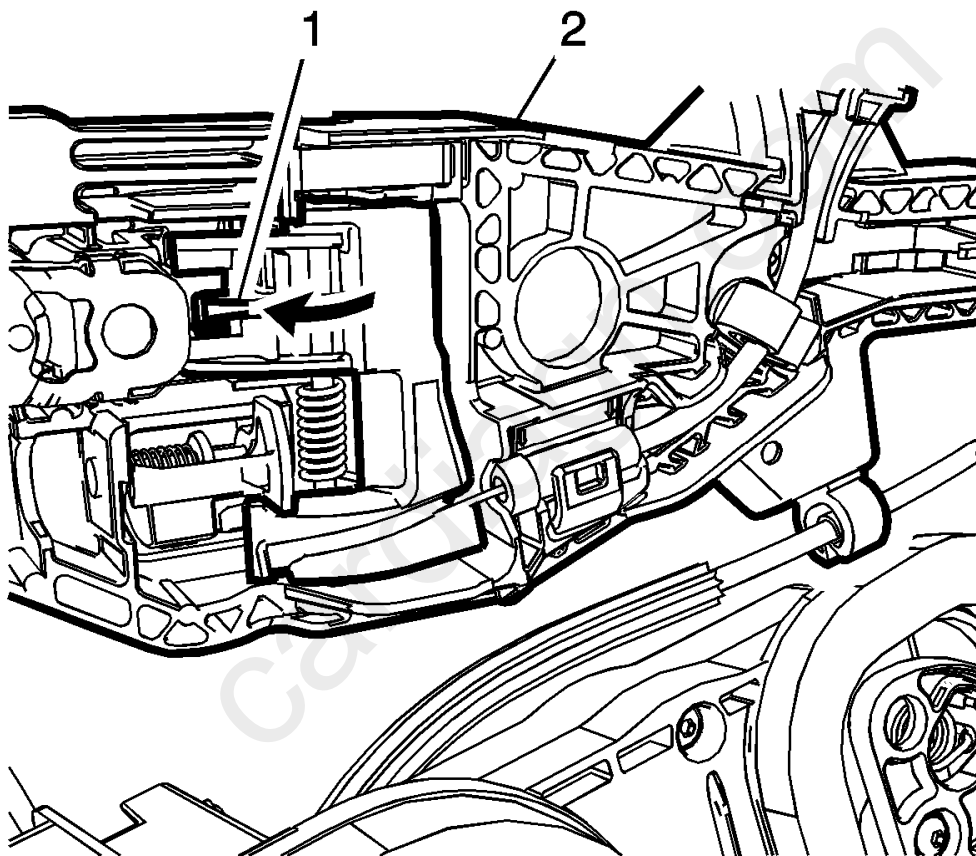


Fig. 19: Door Handle Bracket Housing Counterbalance Lever

Courtesy of GENERAL MOTORS COMPANY

4. From inside the door, push outward on the door handle bracket housing counterbalance lever (1) at the same time. Slide the outside door handle toward the lock cylinder then forward engaging the handle to the housing counterbalance.
5. Install the screw to the lock cylinder bezel. Refer to **Front Side Door Lock Cylinder Bezel Replacement**.

Hold the lock cylinder bezel flush to the door sheet and turn the lock cylinder screw to a mechanical hard stop.

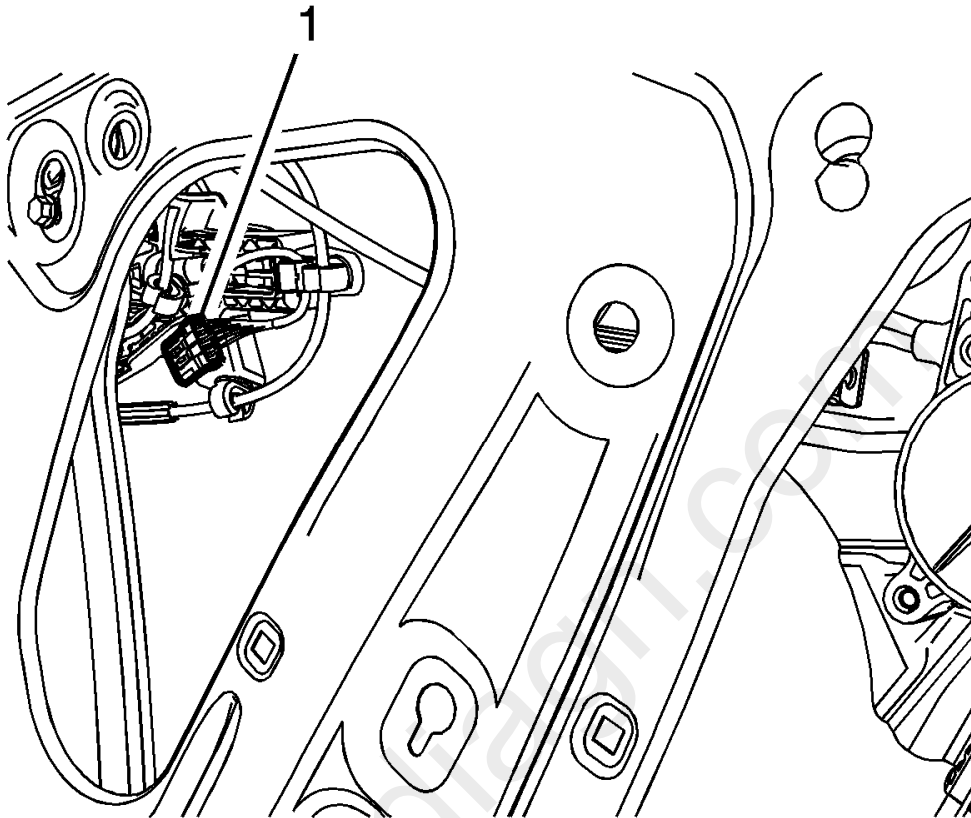


Fig. 20: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

6. Connect the electrical connector (1) to the front side door outside handle bracket for the luminous reflecting light, if equipped.
7. Ensure that the door lock system operates properly before installing the trim.
8. Install the front side door water deflector.
9. Install the front side door trim. Refer to **Front Side Door Trim Replacement** .

FRONT SIDE DOOR OUTSIDE HANDLE BRACKET REPLACEMENT

Removal Procedure

1. Remove the front side door outside handle. Refer to **Front Side Door Outside Handle Replacement**.

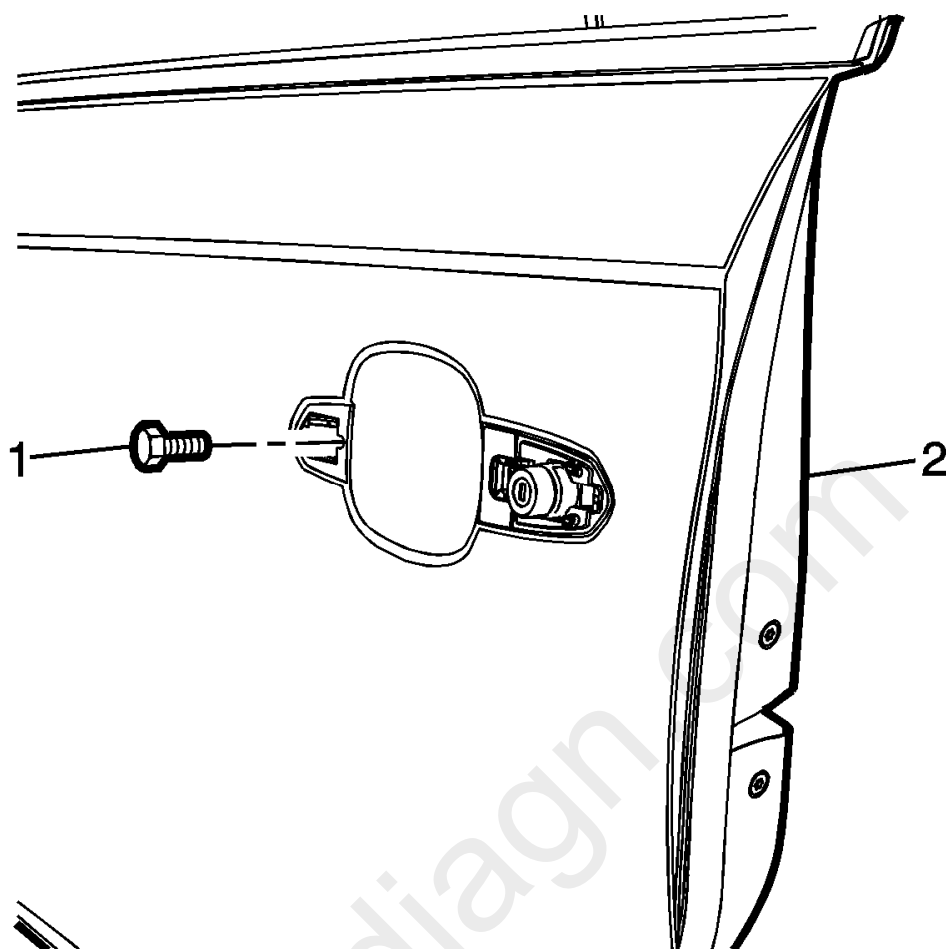


Fig. 21: Rear Side Door Outside Handle Bracket Screw
Courtesy of GENERAL MOTORS COMPANY

2. Remove the screw (1) that retains the front side door outside bracket in the door (2).

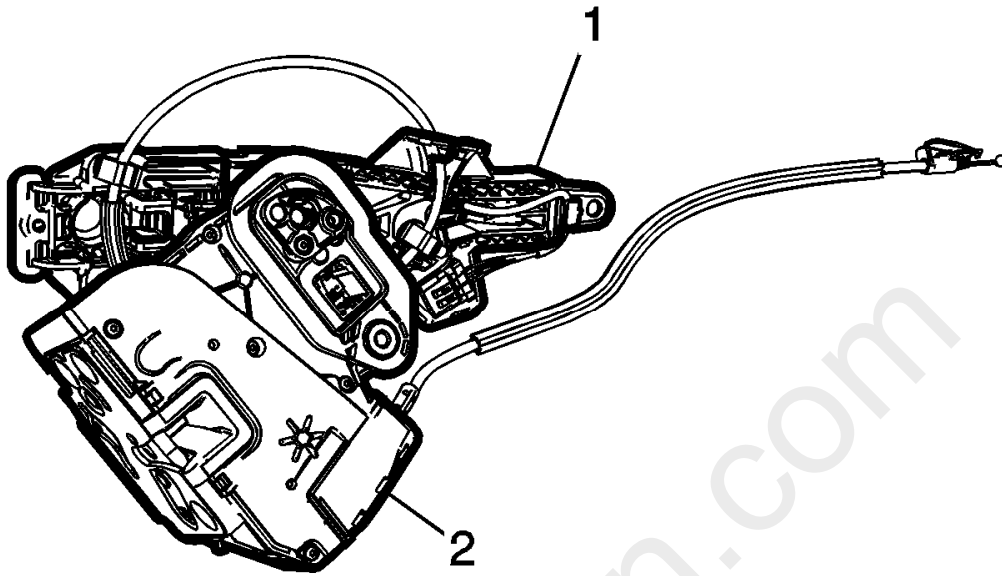


Fig. 22: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

3. Remove the door outside handle bracket (1) and the front side door latch (2) assembly from the vehicle. Refer to **Front Side Door Latch Replacement**.
4. Remove the front side door lock rod from the cylinder.
5. Remove the front side door lock cylinder from the handle bracket. Refer to **Front Side Door Lock Cylinder Replacement**.

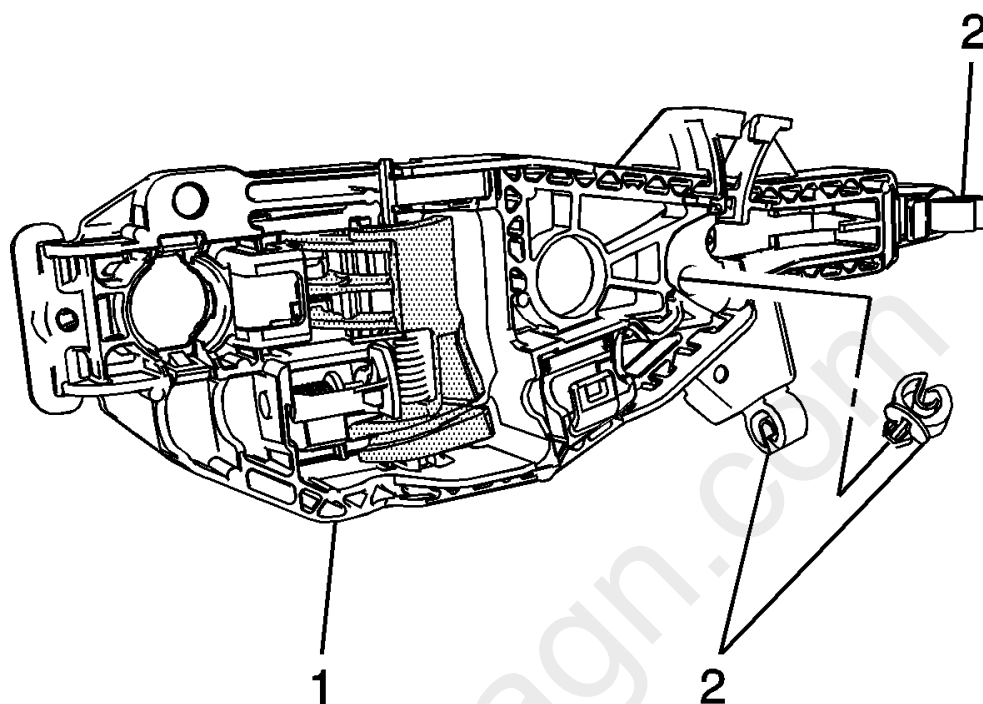


Fig. 23: Rear Side Door Outside Handle Bracket
Courtesy of GENERAL MOTORS COMPANY

6. Remove the front side door outside handle cable from the handle bracket (1). Refer to **Front Side Door Outside Handle Cable Replacement**.

Installation Procedure

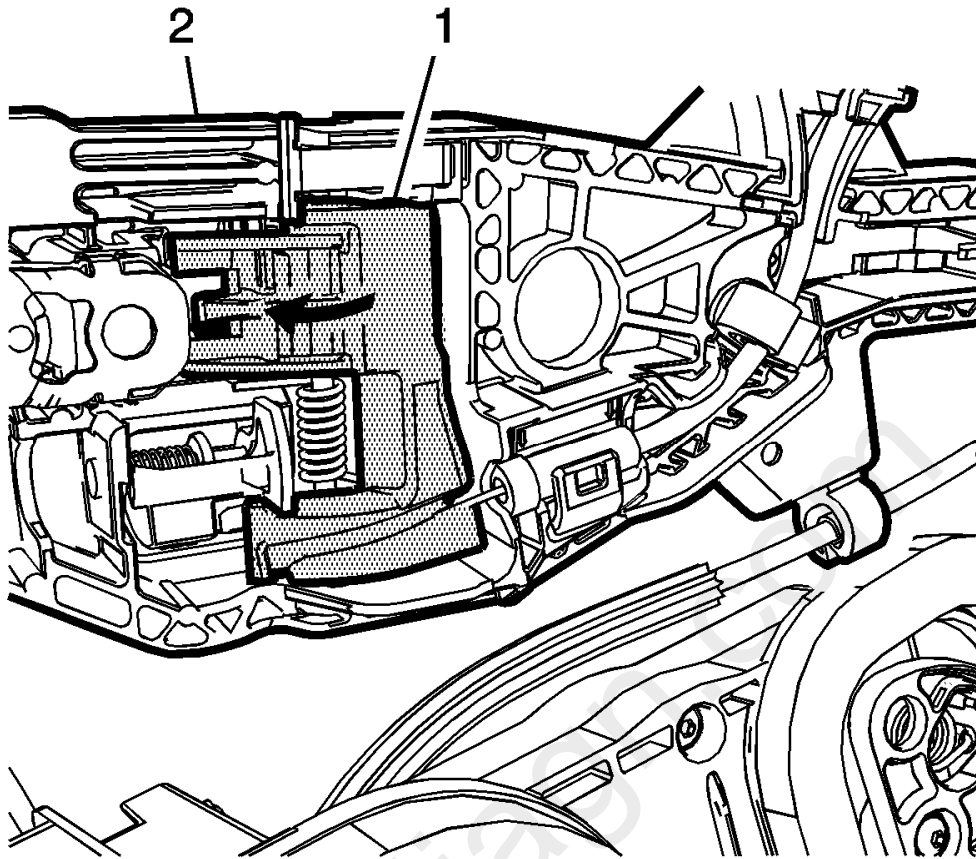


Fig. 24: Rear Side Door Outside Handle Bracket Counter Balance & Wire Harness Retainers
Courtesy of GENERAL MOTORS COMPANY

NOTE: It may be necessary to transfer the wire harness retainers (2) from the old handle bracket.

1. Reset the front side door outside handle bracket counter balance (1) as follows:
 1. The outside door handle can Not be install until the counter balance (1) is reset.
 2. Grasp the front side door outside handle bracket (2) with one hand.
 3. From the back side of the counter balance (1), push forward on the counter balance until it locks into the detent of the handle bracket.
2. Install the front side door lock cylinder to the handle bracket. Refer to **Front Side Door Lock Cylinder Replacement**.
3. Install the front side door lock rod to the lock cylinder.
4. Install the front side door outside handle cable to the handle bracket. Refer to **Front Side Door Outside Handle Cable Replacement**.

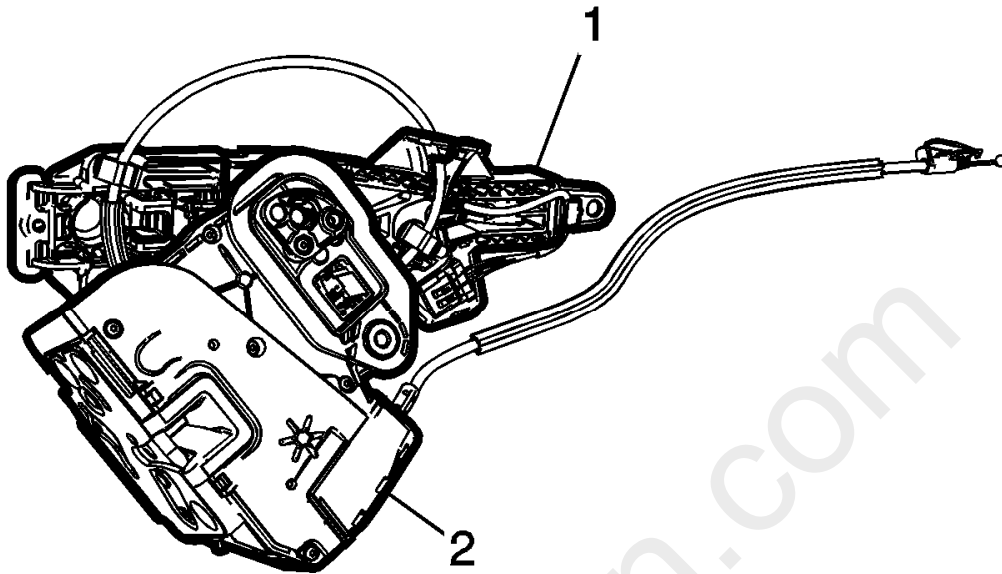


Fig. 25: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

NOTE:

- Ensure that the counter balance is reset and locked in the detent of the handle bracket. The counter balance can't Not be reset after the latch and handle bracket has been reinstalled in the door.
- Bracket should be slid full rearward prior to tightening bracket screw.

5. Install the outside handle bracket (1) and the front side door latch (2) assembly to the vehicle. Refer to **Front Side Door Latch Replacement**.

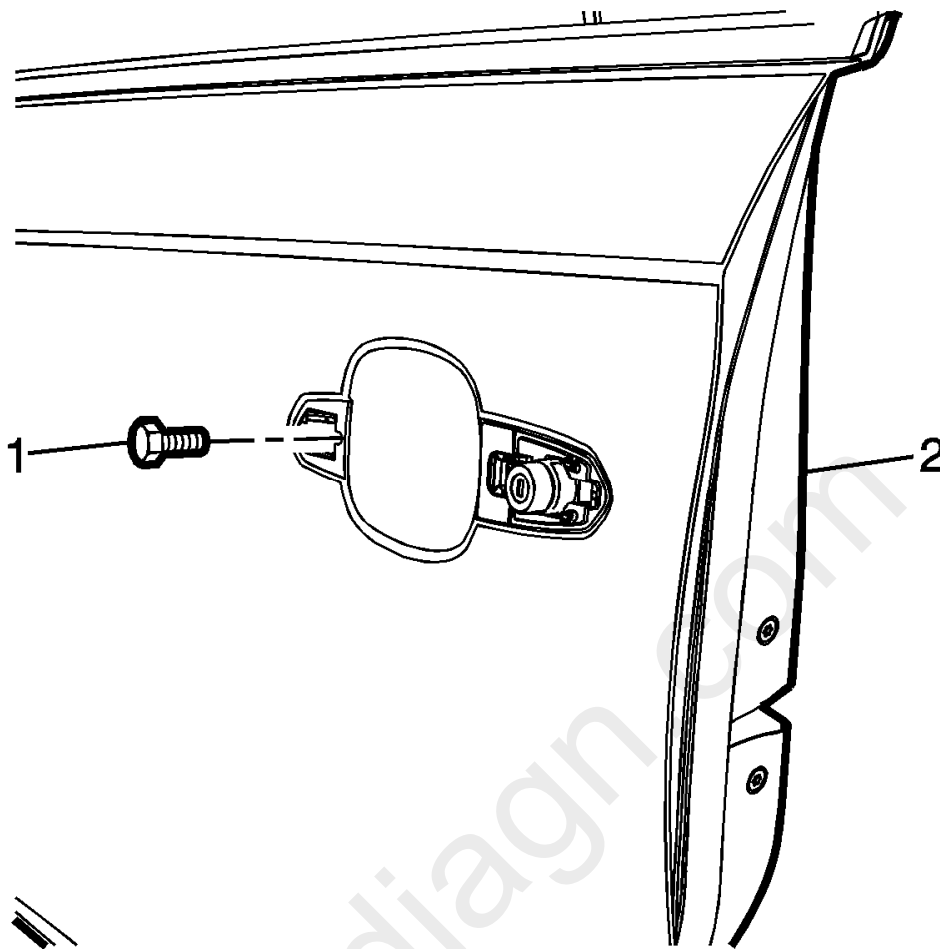


Fig. 26: Rear Side Door Outside Handle Bracket Screw
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

6. Install the front side door outside bracket screw to the door (2) and tighten to 5 N.m (44 lb in)
7. Install the front side door outside handle. Refer to **Front Side Door Outside Handle Replacement**.
8. Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR OUTSIDE HANDLE CABLE REPLACEMENT

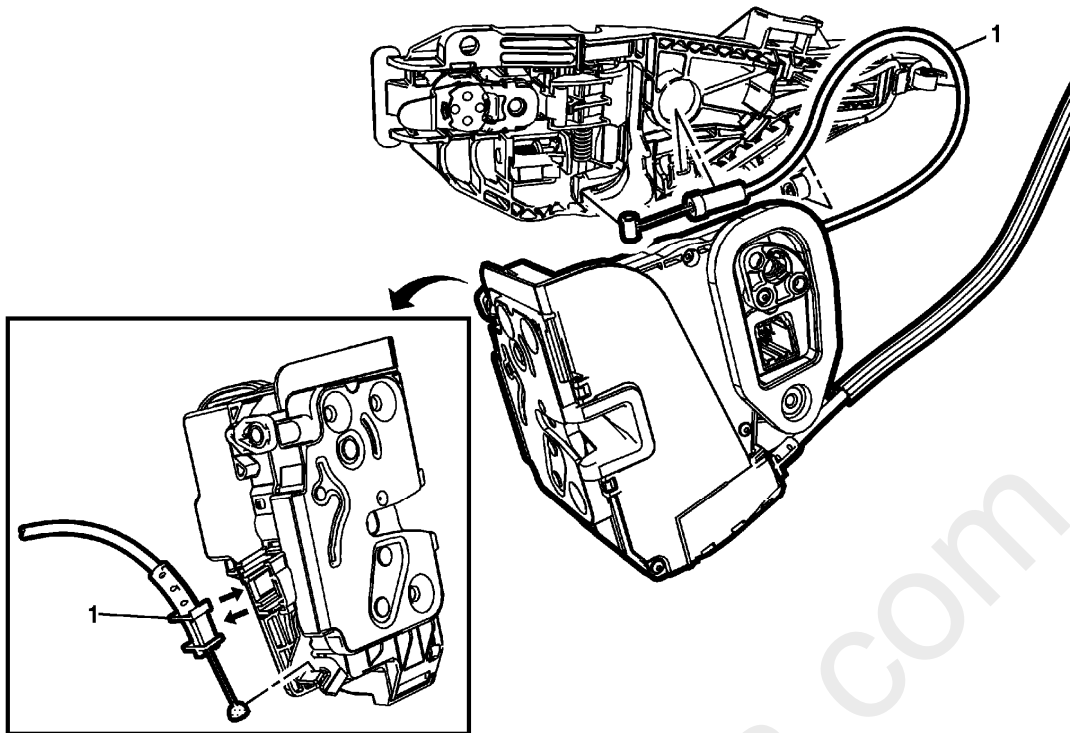


Fig. 27: Rear Side Door Outside Handle Cable
 Courtesy of GENERAL MOTORS COMPANY

Front Side Door Outside Handle Cable Replacement

Callout	Component Name
Preliminary Procedure Remove the front side door latch and handle bracket assembly from the door. Refer to <u>Front Side Door Latch Replacement</u> .	
1	Front Side Door Outside Handle Cable Procedure 1. Remove the front side door outside handle cable from the retainers. 2. Release the cable from the back of the latch assembly. 3. Remove the front side door outside handle cable from the front side door outside handle bracket. NOTE: Ensure that the door lock system operates properly before installing the trim.

REAR SIDE DOOR OUTSIDE HANDLE BRACKET REPLACEMENT

Removal Procedure

1. Remove the rear side door outside handle. Refer to **Rear Side Door Outside Handle Replacement**.

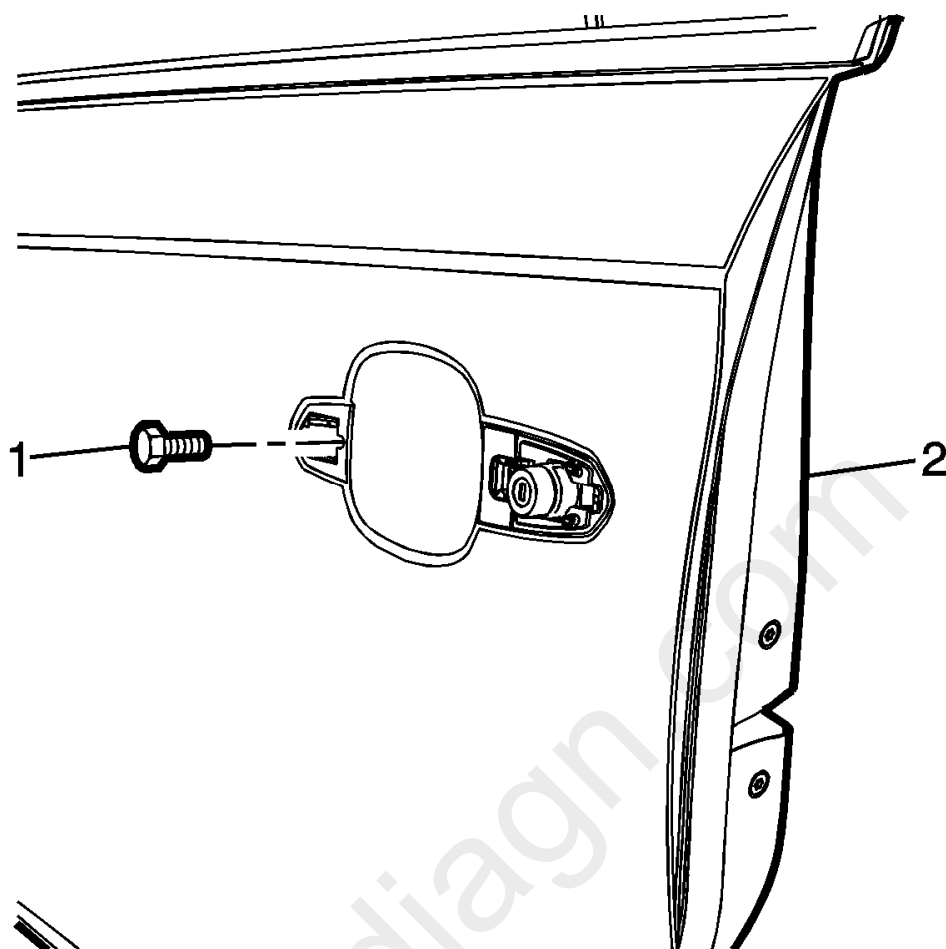


Fig. 28: Rear Side Door Outside Handle Bracket Screw
Courtesy of GENERAL MOTORS COMPANY

2. Remove the screw (1) that retains the rear side door outside bracket to the door (2).

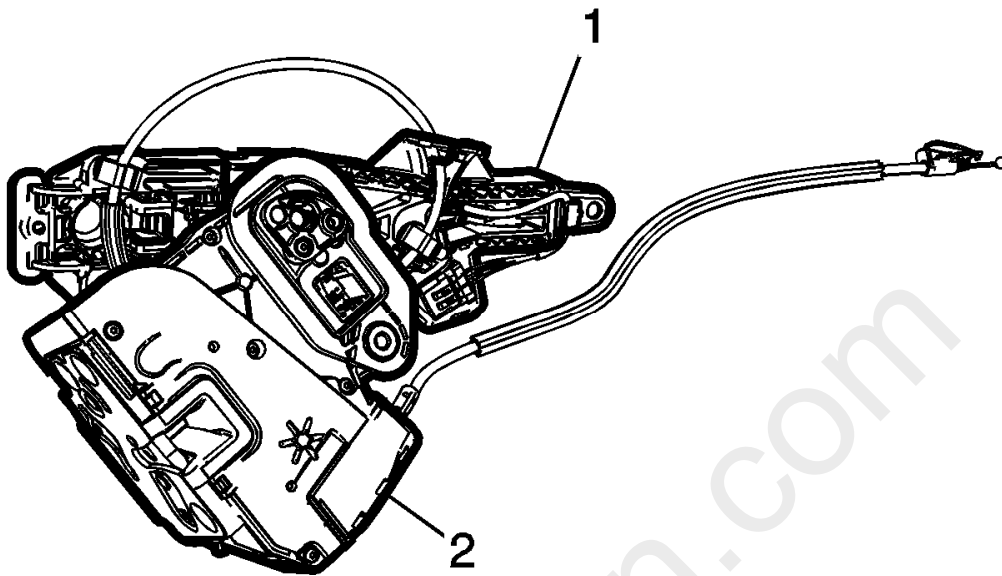


Fig. 29: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

3. Remove the outside handle bracket (1) and the rear side door latch (2) assembly from the vehicle as one. Refer to **Rear Side Door Latch Replacement**.

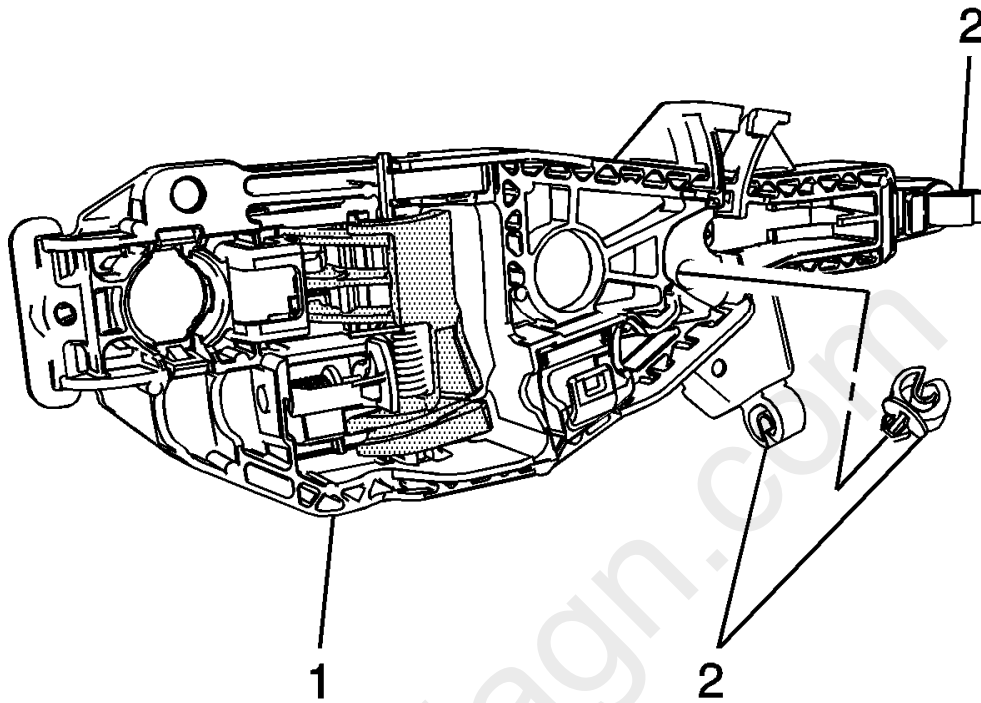


Fig. 30: Rear Side Door Outside Handle Bracket
Courtesy of GENERAL MOTORS COMPANY

4. Remove the rear side door outside handle cable from the bracket (1) retainers (2).
5. Remove the rear side door outside handle cable. Refer to **Rear Side Door Outside Handle Cable Replacement**.
6. Remove the lock cylinder blank from the bracket.

Installation Procedure

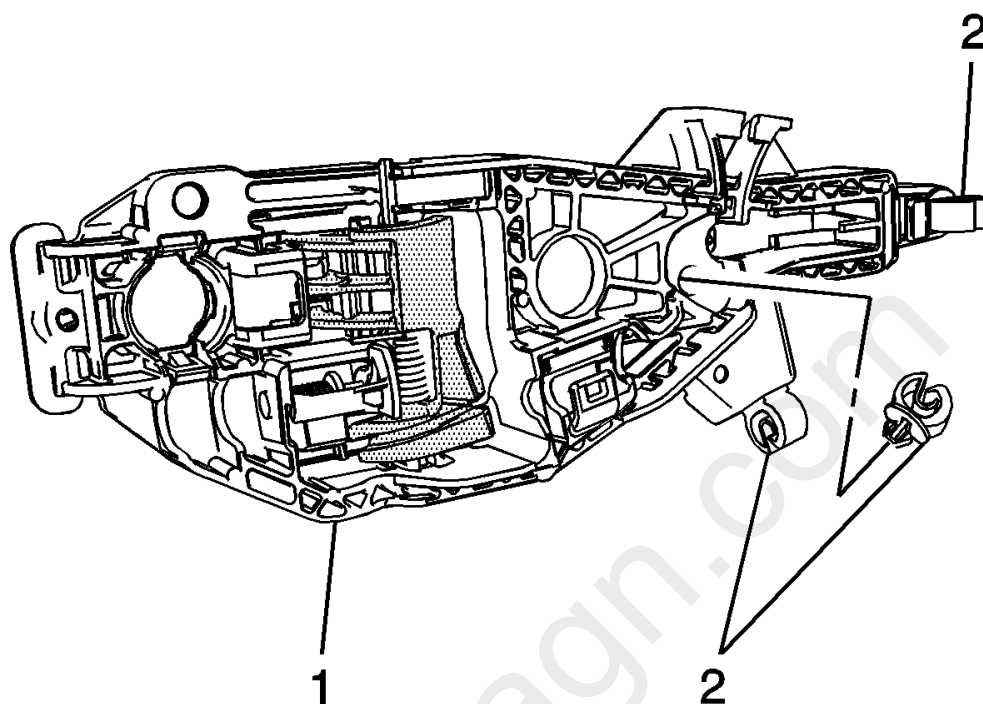


Fig. 31: Rear Side Door Outside Handle Bracket
Courtesy of GENERAL MOTORS COMPANY

1. Transfer the rear side door outside handle bracket cable retainers (2) and lock cylinder blank to the new bracket.
2. Install the rear side door outside handle cable. Refer to **Rear Side Door Outside Handle Cable Replacement**.

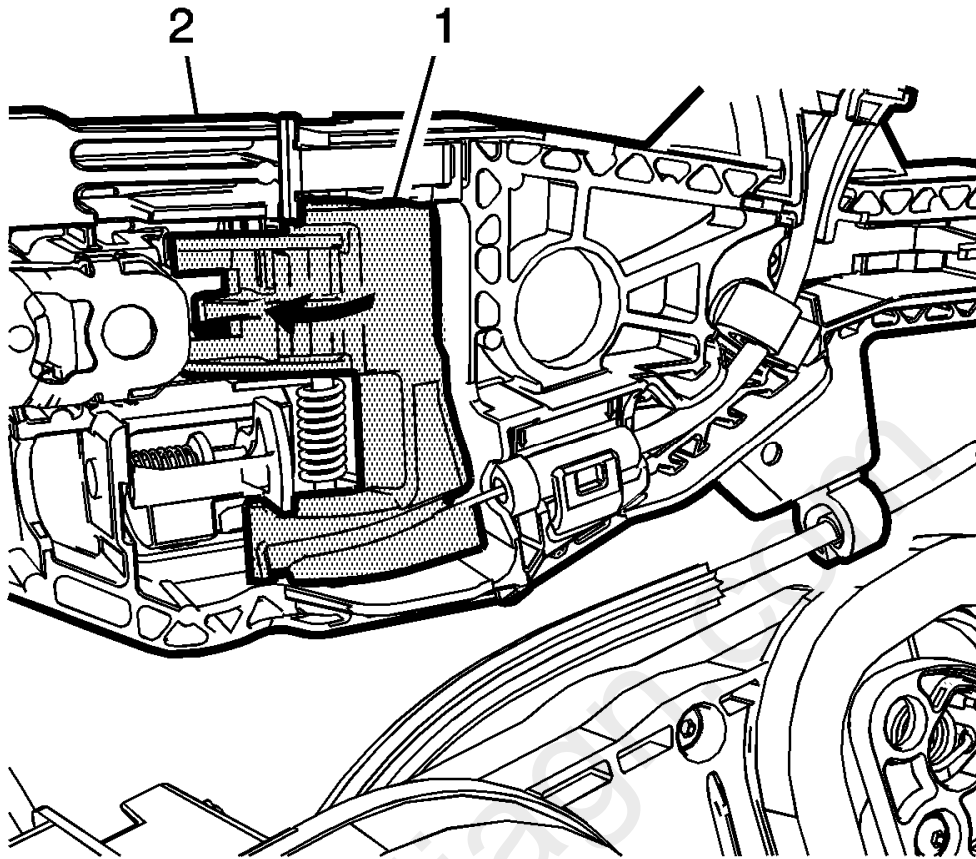


Fig. 32: Rear Side Door Outside Handle Bracket Counter Balance & Wire Harness Retainers
Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure that the counter balance is reset and locked in the detent of the handle bracket. The counter balance can't Not be reset after the latch and handle bracket has been reinstalled in the door.

3. Set the rear side door outside handle bracket counter balance (1) as follows:
 1. The outside door handle can Not be install until the counter balance (1) is reset.
 2. Grasp the rear side door outside handle bracket (2) with one hand.
 3. From the back side of the counter balance (1), push forward until the counter balance locks into the detent of the handle bracket.

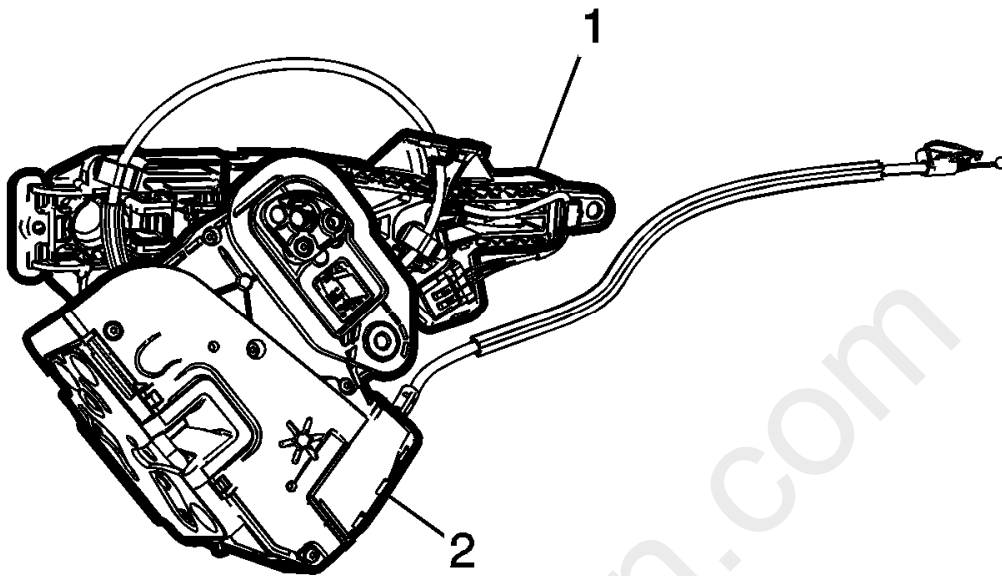


Fig. 33: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

NOTE: Bracket should be slid full rearward prior to tightening bracket screw.

4. Install the outside handle bracket (1) and the rear side door latch (2) assembly in the vehicle as one. Refer to **Rear Side Door Latch Replacement**.

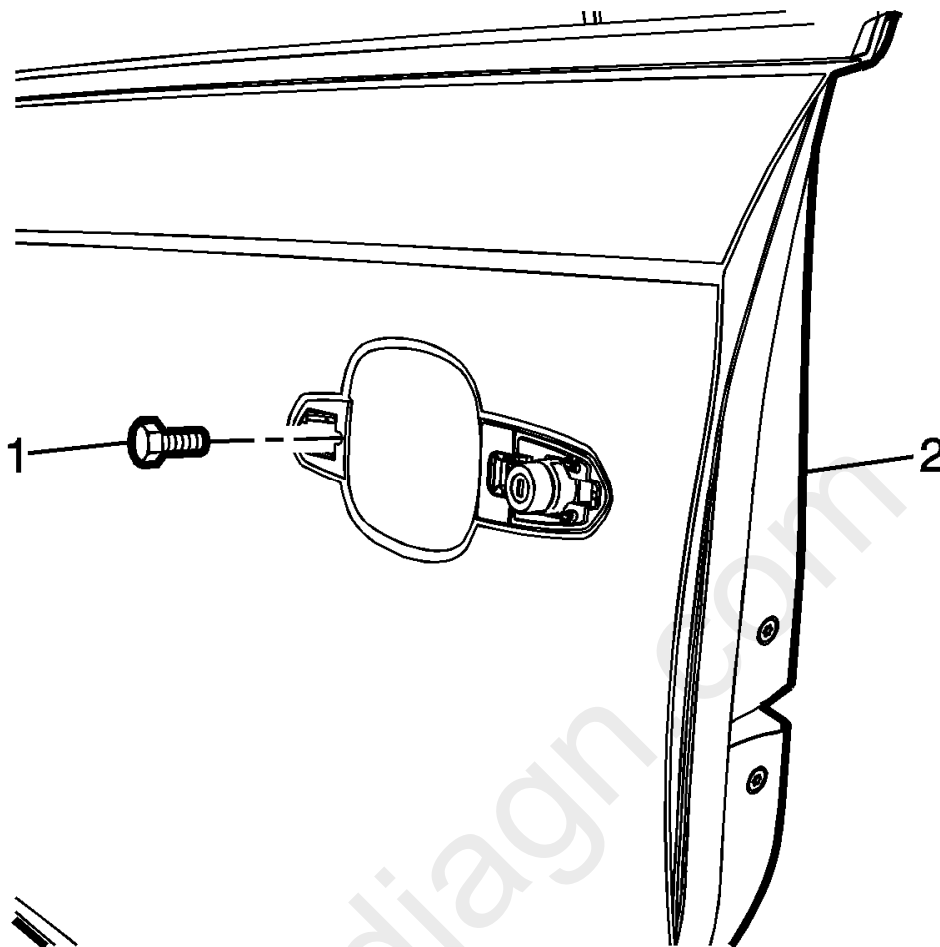


Fig. 34: Rear Side Door Outside Handle Bracket Screw
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

5. Install the rear side door outside handle bracket screw to the door (2) and tighten to 5 N.m (44 lb in).
6. Install the rear side door outside handle. Refer to Rear Side Door Outside Handle Replacement.
7. Ensure that the door lock system operates properly before installing the trim.

REAR COMPARTMENT LID LATCH RELEASE CABLE HANDLE REPLACEMENT

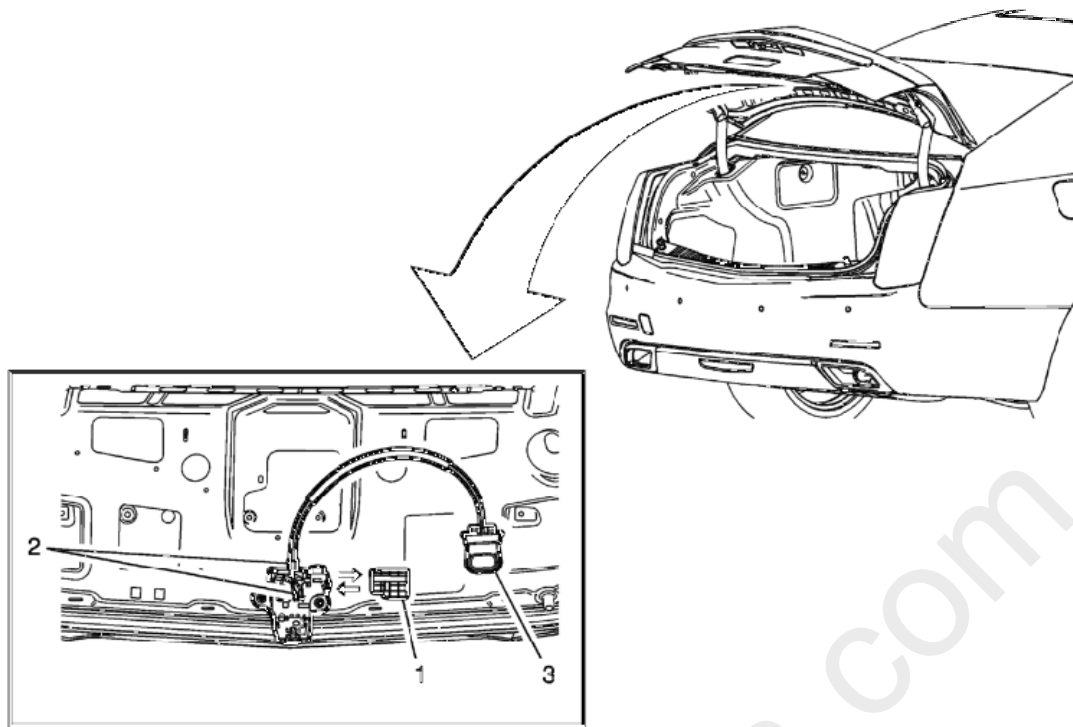


Fig. 35: Rear Compartment Lid Latch Release Cable Handle
 Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Latch Release Cable Handle Replacement

Callout	Component Name
Preliminary Procedure Remove the rear compartment lid inner panel trim. Refer to <u>Rear Compartment Lid Inner Panel Trim Replacement</u> .	
1	Rear Compartment Lid Latch Release Cable Handle Access Cover Procedure Depress the retainers and slide the access cover to the right to access the cable end.
2	Rear Compartment Lid Latch Release Cable Handle Procedure 1. Disconnect the rear compartment lid inside latch handle cable from the rear compartment lid latch. 2. Disconnect the rear compartment lid latch handle cable from the rear compartment lid.
3	Rear Compartment Lid Latch Release Cable Handle

REAR SIDE DOOR INSIDE HANDLE REPLACEMENT

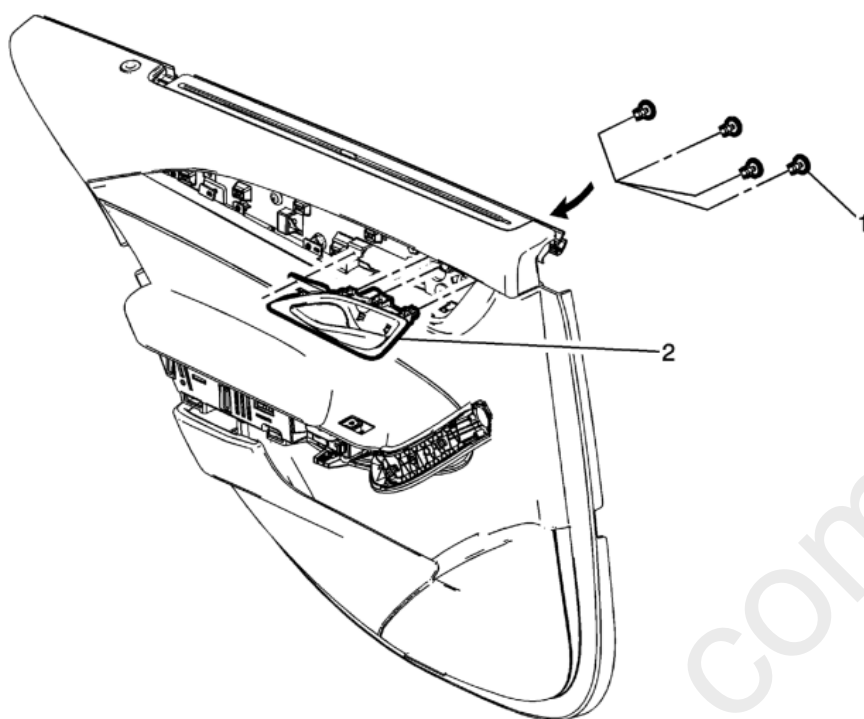


Fig. 36: Rear Side Door Inside Handle
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Inside Handle Replacement

Callout	Component Name
Preliminary Procedures	
1. Remove the rear side door trim. Refer to <u>Rear Side Door Trim Replacement</u> . 2. Remove the rear side door trim panel applique. Refer to <u>Rear Side Door Trim Panel Applique Replacement</u> .	
1	Rear Side Door Handle Rear Fastener (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> . NOTE: The four screws are located on the backside of the trim panel. Tighten 1.4 (12 lb in)
	Rear Side Door Inside Handle Assembly Procedure

2

1. Disconnect the rear side door inside handle illumination lamp connector and harness retainer.
2. Remove the handle and bezel as an assembly from the door trim panel.
3. Transfer the handle illumination lamp and the bezel to the new handle.

REAR SIDE DOOR OUTSIDE HANDLE REPLACEMENT

Removal Procedure

1. Remove the rear side door trim. Refer to **Rear Side Door Trim Replacement**.
2. Remove the rear side door armrest plate bolts and plate from the inner door panel.
3. Remove the rear side door water deflector.

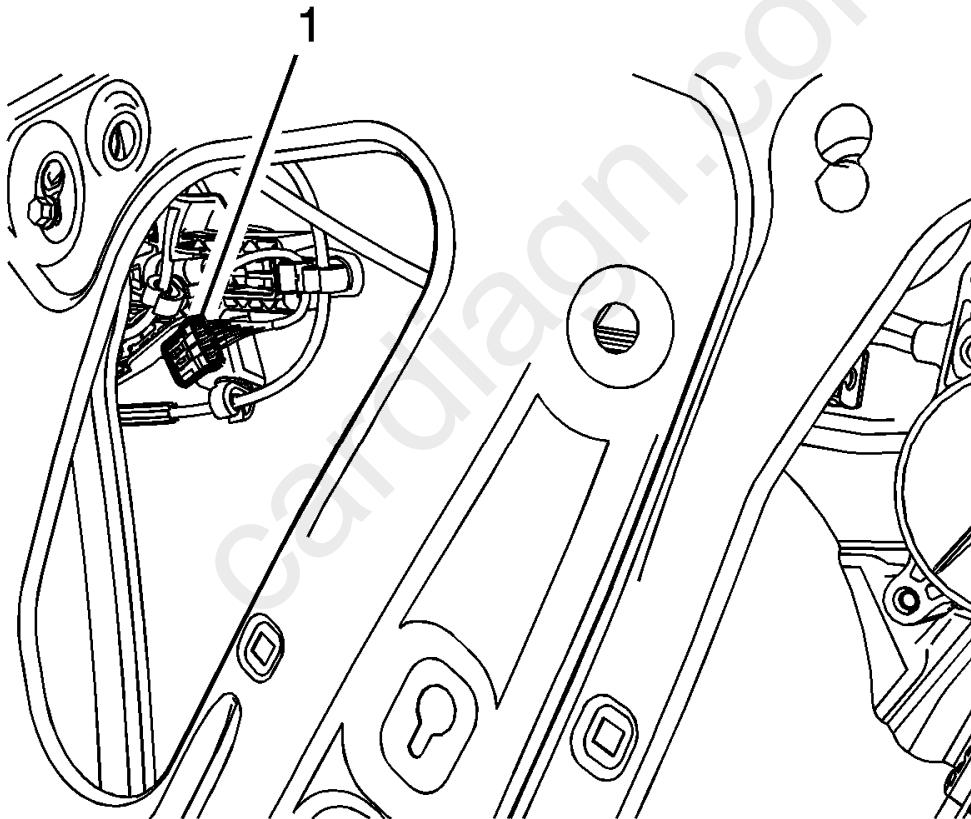


Fig. 37: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

4. Disconnect the electrical connector (1) from the luminous reflecting light, if equipped

NOTE: When removing the door lock cylinder screw Do Not go past the hard stop.

5. Loosen the screw for the rear side door lock cylinder cover. Refer to Rear Side Door Lock Cylinder Opening Cover Replacement.

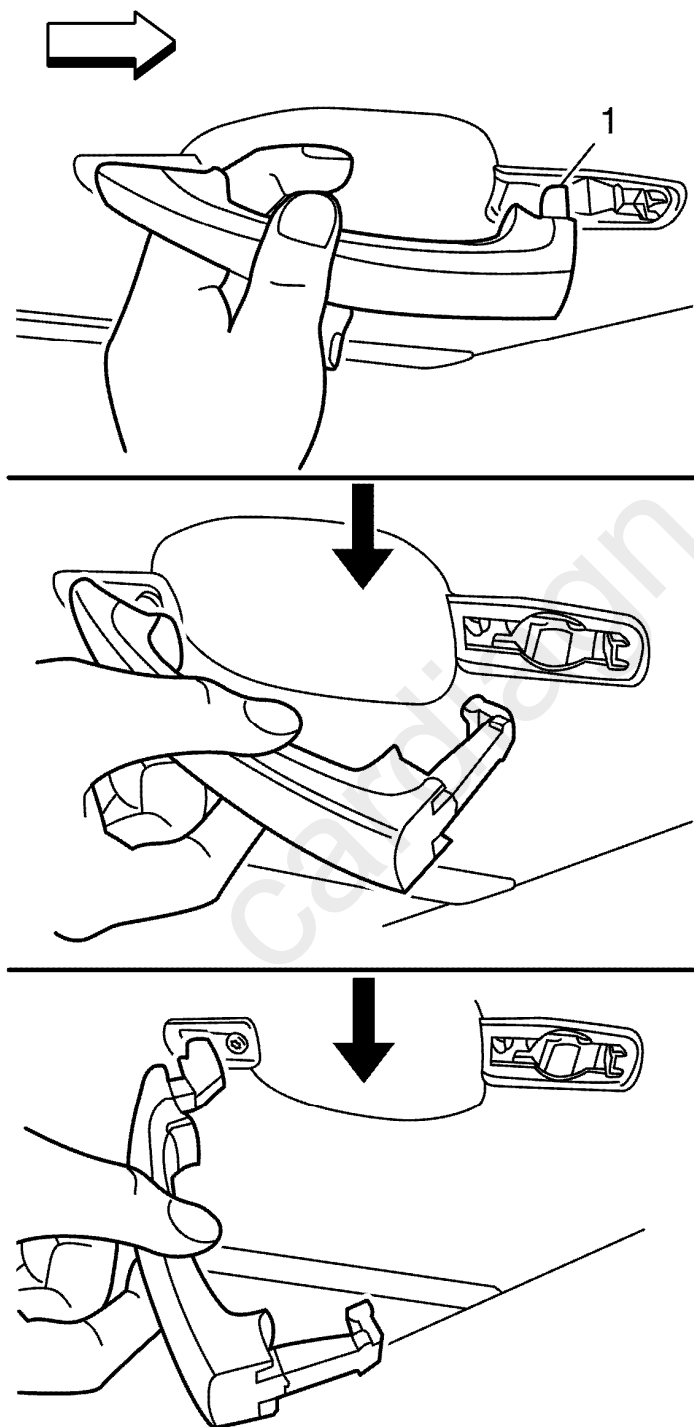


Fig. 38: Pulling Side Door Outside Handle To Rear
Courtesy of GENERAL MOTORS COMPANY

6. Remove the rear side door outside handle (1) from the door as follows:
 1. Open the door handle fully.
 2. Slide the door handle rearward releasing the handle from the door handle bracket.
 3. Remove the rear side door outside handle and connector from the door.

Installation Procedure

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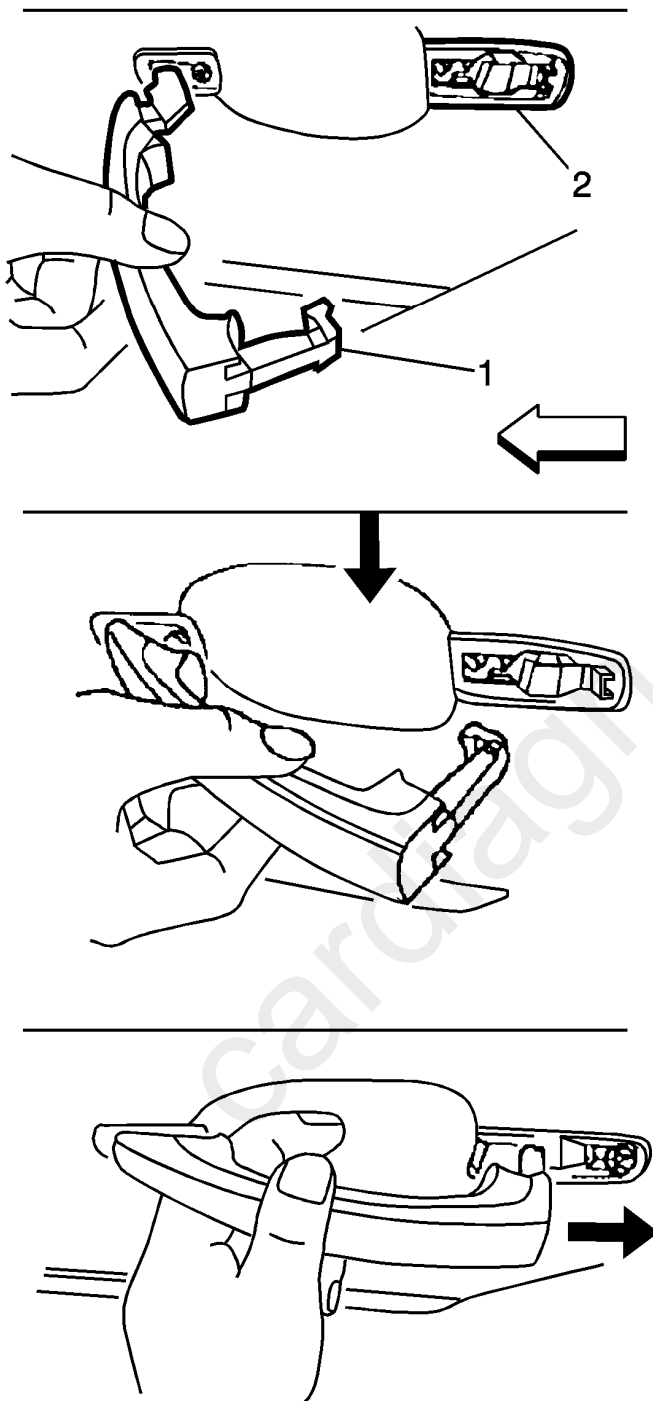


Fig. 39: Door Handle
Courtesy of GENERAL MOTORS COMPANY

NOTE: The rear side door outside handle cannot be installed until the counter

balance (1) and handle is reset.

1. Install the rear side door outside handle (1) to the door (2).
2. Insert the rear side door handle into the door handle pocket.
3. Slide the rear side door handle forward securing it into the door handle bracket.

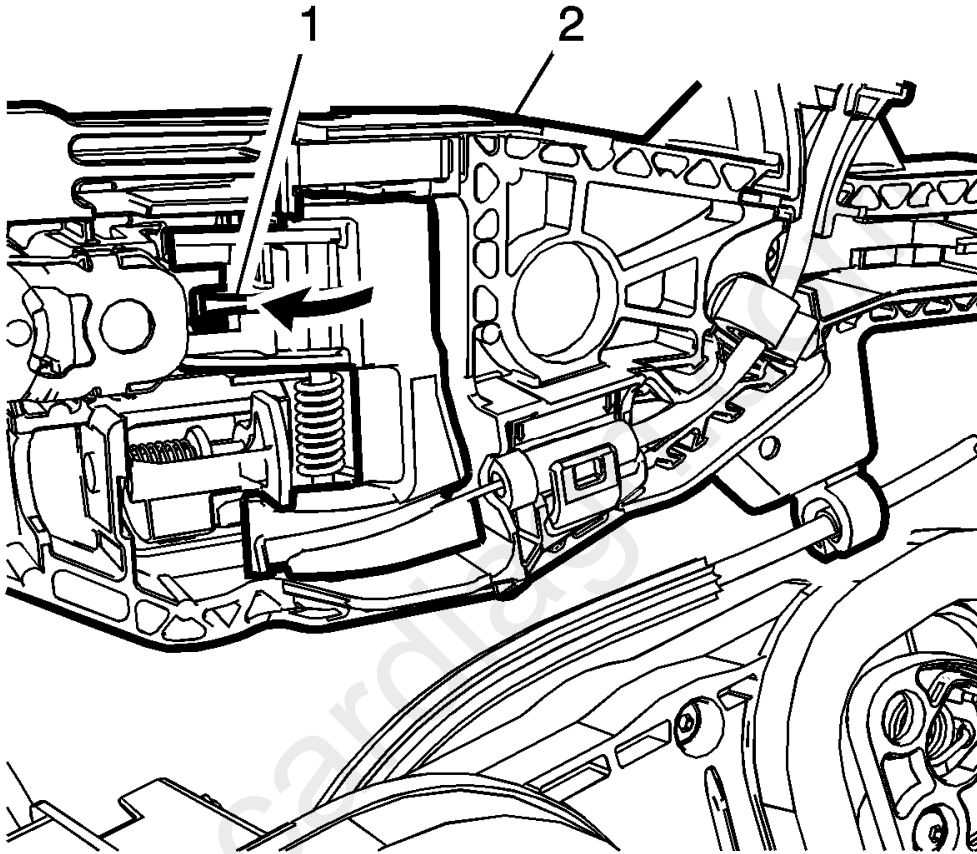


Fig. 40: Door Handle Bracket Housing Counterbalance Lever
Courtesy of GENERAL MOTORS COMPANY

4. From inside the door, push outward on the door handle bracket housing counterbalance lever (1) at the same time. Slide the outside door handle toward the lock cylinder then forward engaging the handle to the housing counterbalance.
5. Install the screw to the rear side door lock cylinder cover. Refer to **Rear Side Door Lock Cylinder Opening Cover Replacement**.

Hold the lock cylinder bezel flush to the door sheet and turn the lock cylinder screw to a mechanical hard stop.

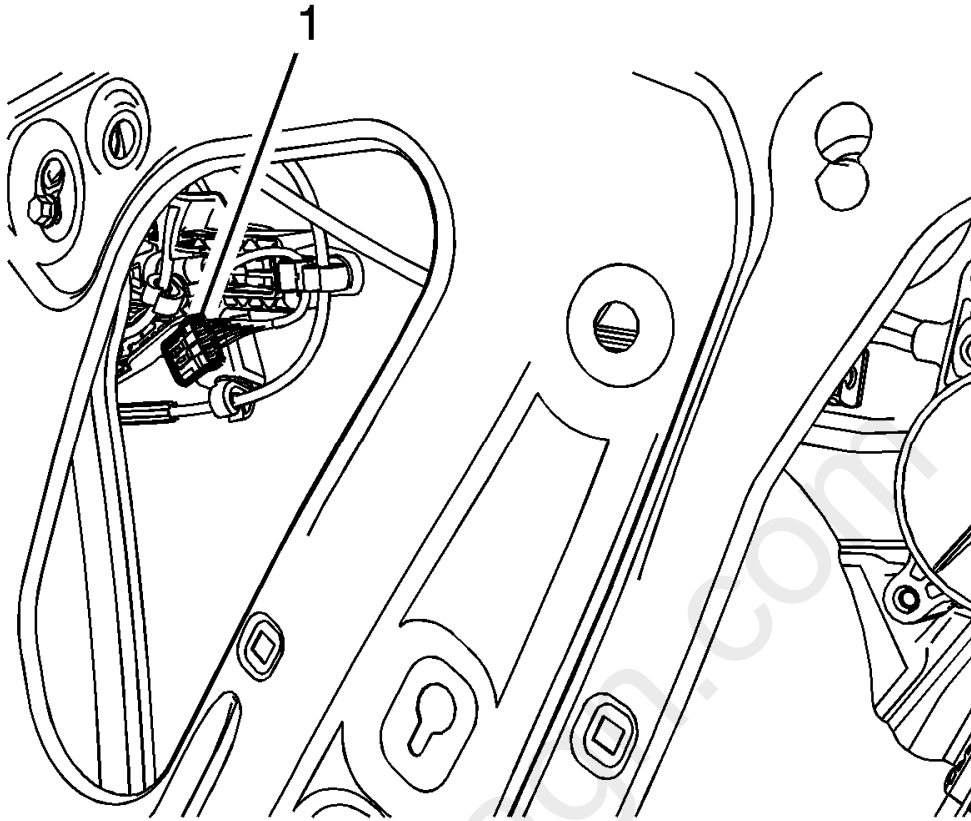


Fig. 41: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

6. Connect the electrical connector (1) to the luminous reflecting light, if equipped.
7. Ensure that the door lock system operates properly before installing the trim.
8. Install the rear side door water deflector.
9. Install the rear side door armrest plate bolts and plate to the inner door panel.
10. Install the rear side door trim. Refer to **Rear Side Door Trim Replacement** .

REAR SIDE DOOR OUTSIDE HANDLE CABLE REPLACEMENT

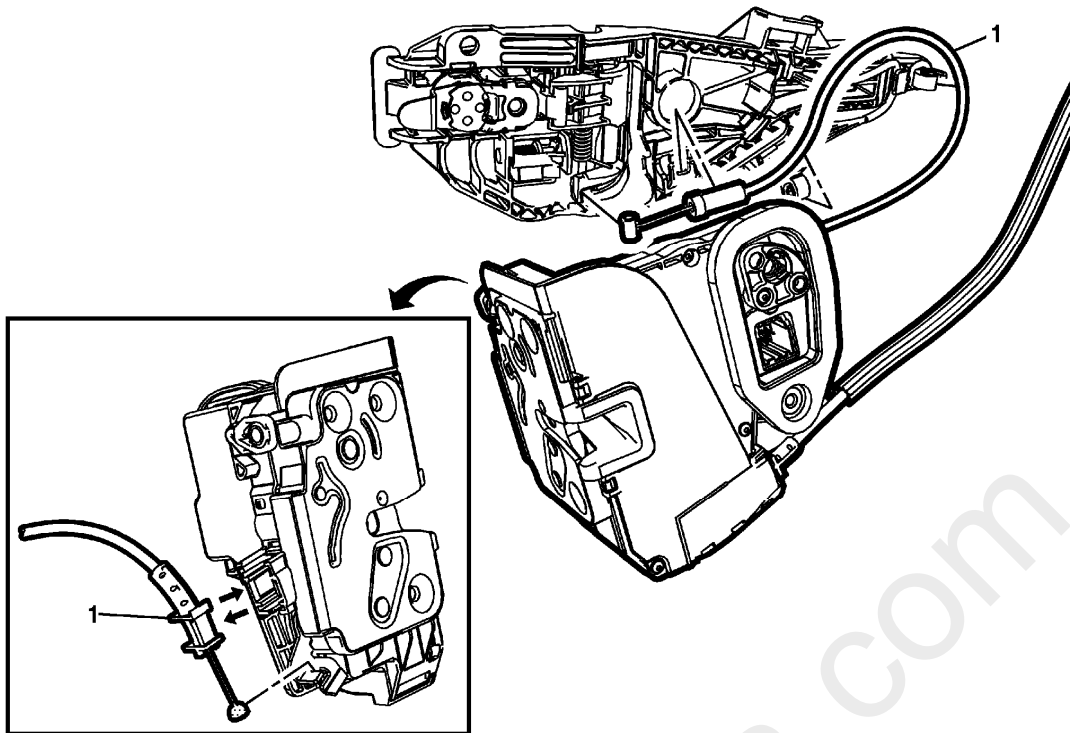


Fig. 42: Rear Side Door Outside Handle Cable
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Outside Handle Cable Replacement

Callout	Component Name
Preliminary Procedure Remove the rear side door latch and handle bracket assembly from the door. Refer to <u>Rear Side Door Latch Replacement</u> .	
1	Rear Side Door Outside Handle Cable Procedure 1. Remove the rear side door outside handle cable from the retainers. Do not remove the inside door handle cable from the latch. 2. Release the cable from the back of the latch assembly. 3. Unhook the cable from the handle bracket. NOTE: Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR LATCH REPLACEMENT

Removal Procedure

1. Remove the front side door trim. Refer to **Front Side Door Trim Replacement** .
2. Remove the front side door water deflector.

NOTE: **Disconnect the window from the window regulator, place the window in the full up position, use masking tape to tape the window to the upper door frame.**

3. Position the front side door window regulator rear rail to access and remove the door latch and handle bracket assembly. Refer to **Front Side Door Window Regulator Replacement** .
4. Remove the front side door window rear channel. Refer to **Front Side Door Window Rear Channel Replacement** .

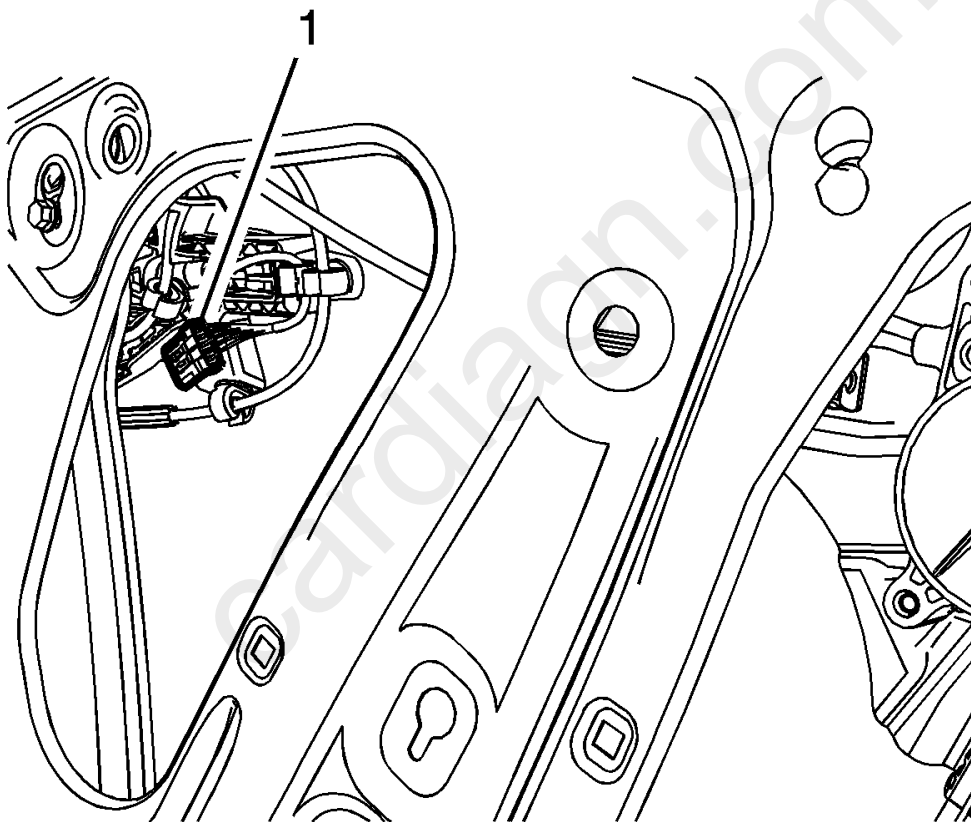


Fig. 43: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

5. Disconnect the electrical connector (1) from the front side door outside handle bracket for the luminous reflecting light, if equipped.
6. Remove the front side door outside handle bracket screw. Refer to **Front Side Door Outside Handle**

Bracket Replacement.

7. Disconnect the front side door latch electrical connector.

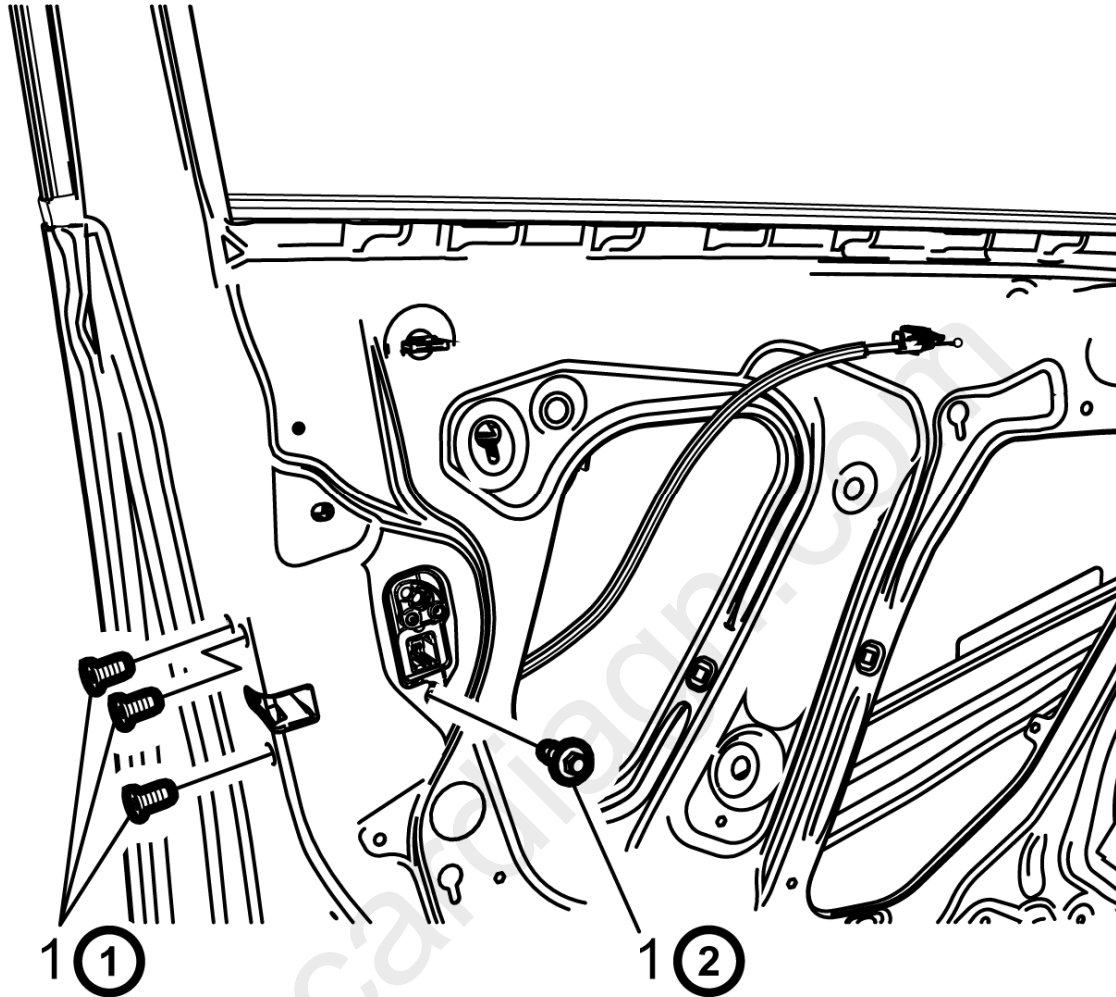


Fig. 44: Rear Side Door Latch & Bolts
Courtesy of GENERAL MOTORS COMPANY

8. Remove the four bolts (1) from the front side door latch.

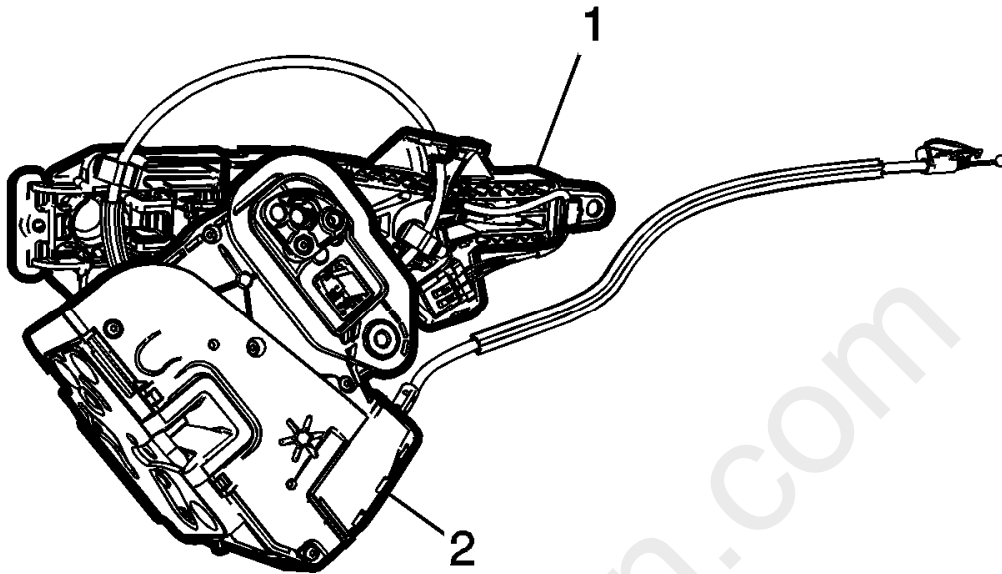


Fig. 45: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

9. Remove the outside handle bracket (1) and the front side door latch (2) as assembly from the vehicle.

Installation Procedure

1. Transfer the front side door inside handle cable. Refer to **Front Side Door Inside Handle Cable Replacement.**
2. Transfer the front side door outside handle cable. Refer to **Front Side Door Outside Handle Cable Replacement.**
3. Transfer the front side door lock cylinder rod.

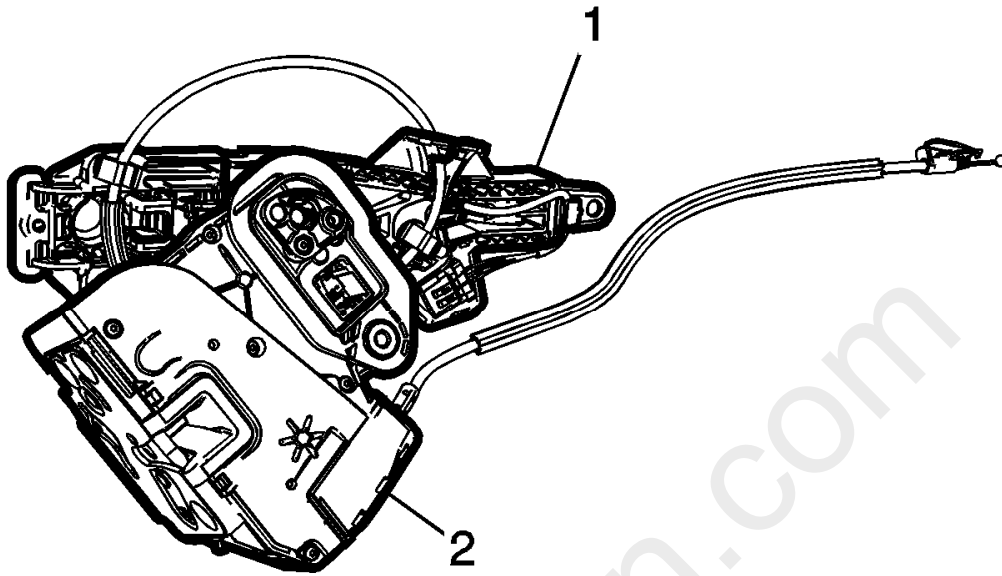


Fig. 46: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

4. Install the outside handle bracket (1) and the front side door latch (2) assembly to the vehicle.

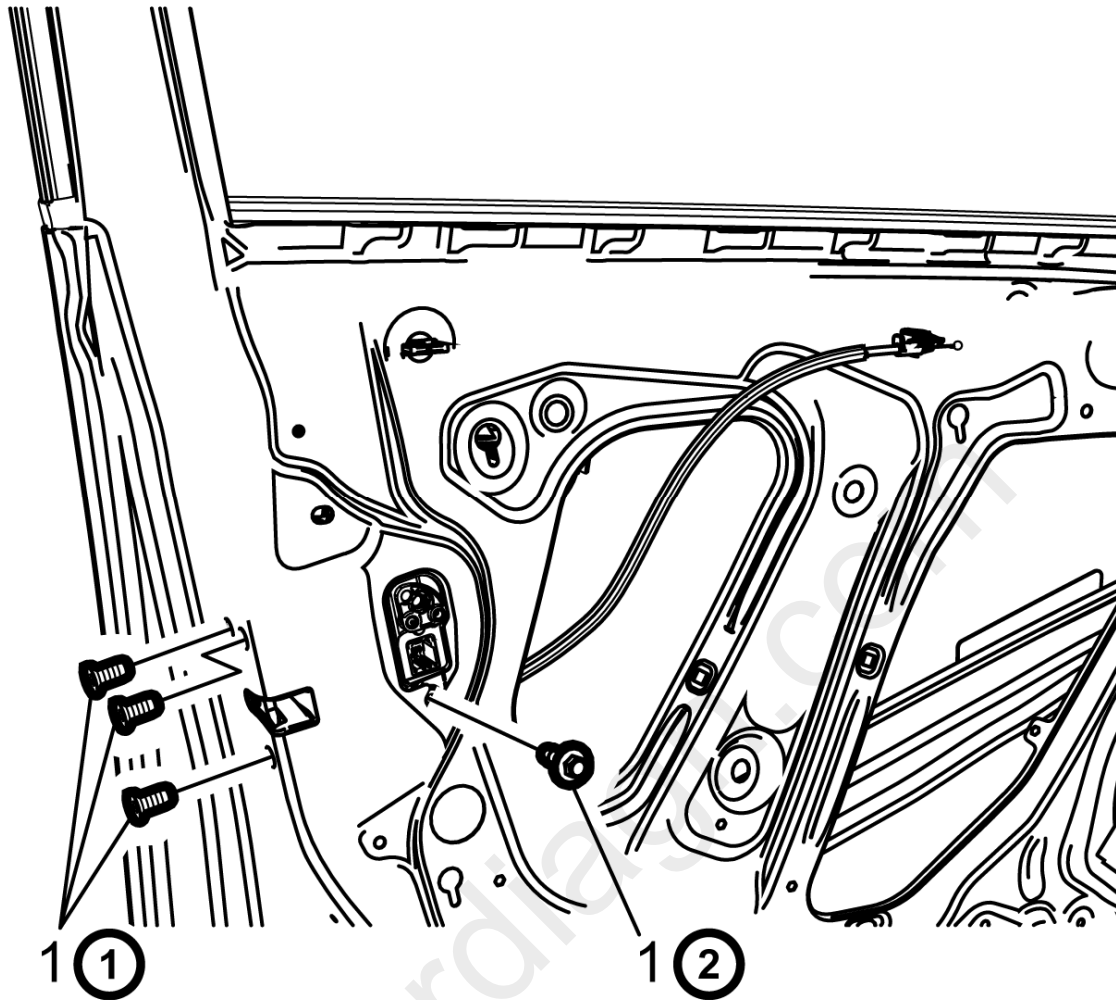


Fig. 47: Rear Side Door Latch & Bolts
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

NOTE: Install and torque the four latch bolts in proper sequence to prevent damage to the latch mechanism.

5. Install the four bolts (1) to the front side door latch and tighten to 10 N.m (89 lb in).
6. Install the front side door outside handle bracket screw. Refer to Front Side Door Outside Handle Bracket Replacement.
7. Install the front side door outside handle. Refer to Front Side Door Outside Handle Bracket Replacement.

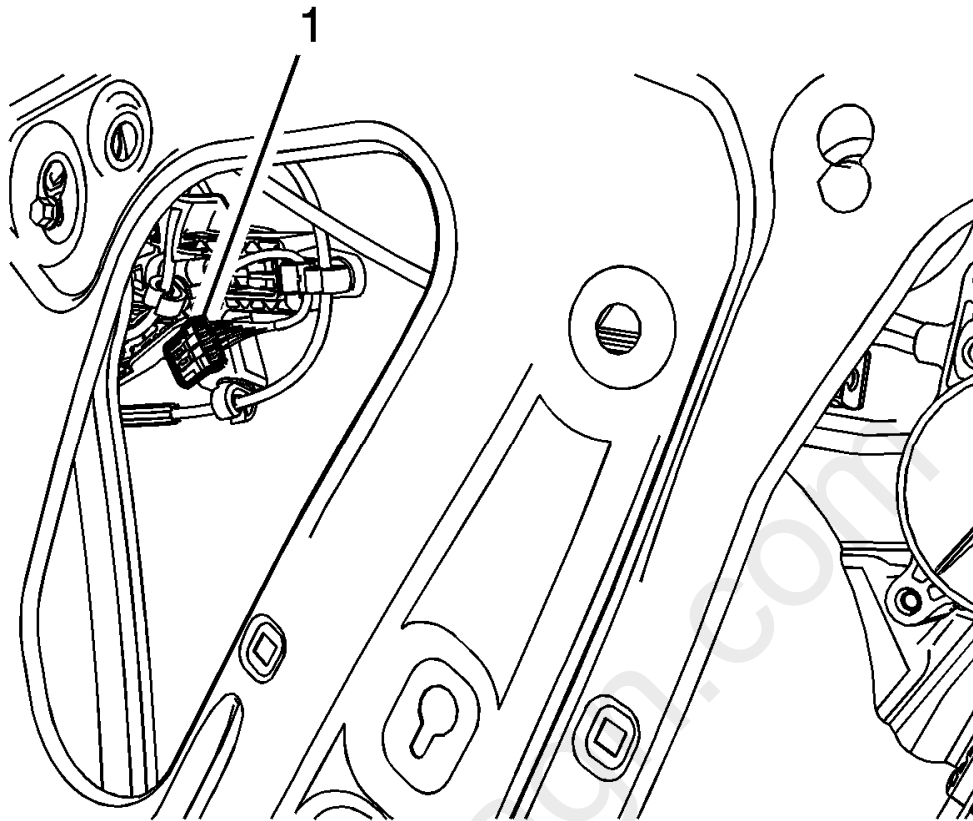


Fig. 48: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

8. Connect the electrical connector (1) to the front side door outside handle bracket for the luminous reflecting light, if equipped.
9. Install the front side door window rear channel. Refer to **Front Side Door Window Rear Channel Replacement** .
10. Connect the electrical connector to the latch.
11. Position the window to the window regulator and reinstall the rear rail to the door. Refer to **Front Side Door Window Regulator Replacement** .
12. Remove the tape from the front side door window and frame.
13. Inspect the door latch and outside handle for proper operation before install the door trim.
14. Install the front side door water deflector.
15. Install the front side door trim. Refer to **Front Side Door Trim Replacement** .

REAR COMPARTMENT LID LATCH REPLACEMENT

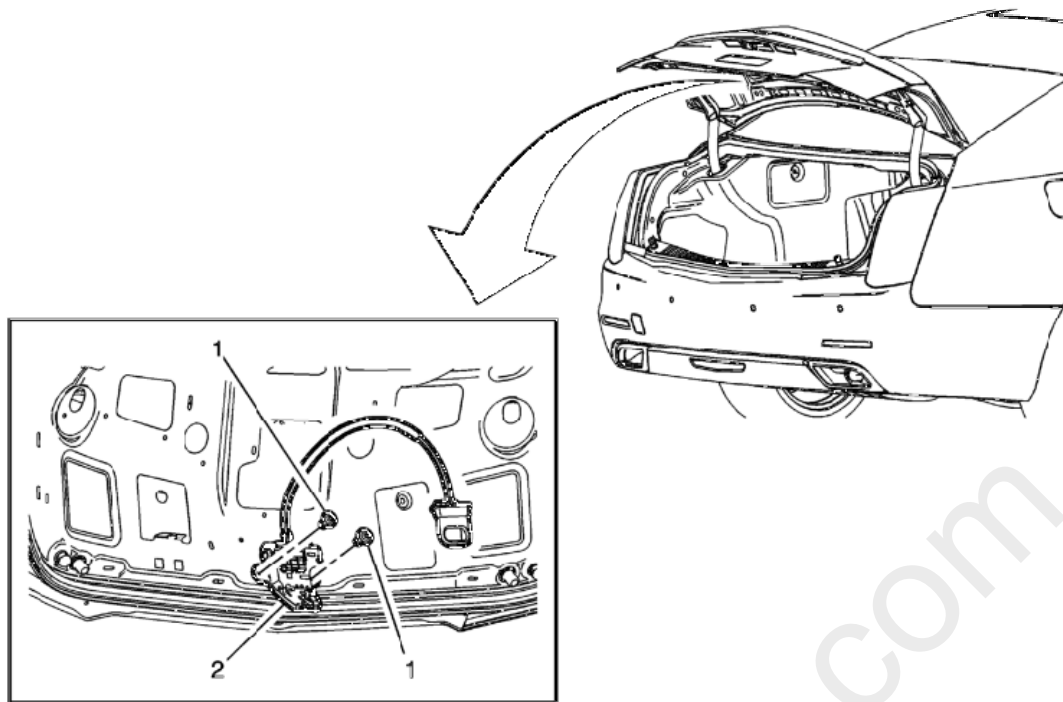


Fig. 49: Rear Compartment Lid Latch
 Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Latch Replacement

Callout	Component Name
Preliminary Procedure Remove the rear compartment lid inner panel trim. Refer to <u>Rear Compartment Lid Inner Panel Trim Replacement</u> .	
1	Rear Compartment Lid Latch Bolt (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 12 (106 lb in)
2	Rear Compartment Lid Latch Procedure 1. Disconnect the rear compartment lid latch handle cable from the rear compartment lid. 2. Disconnect the electrical connector. 3. Slide the lid latch to the left side and then remove.

- | |
|---|
| 4. Transfer the rear compartment lid latch release cable handle. Refer to <u>Rear Compartment Lid Latch Release Cable Handle Replacement</u> |
|---|

REAR SIDE DOOR LATCH REPLACEMENT

Removal Procedure

1. Place the window in the full up position.
2. Remove the rear side door trim. Refer to **Rear Side Door Trim Replacement** .
3. Remove the rear side door armrest plate bolts and plate from the inner door panel.
4. Remove the water deflector.
5. Position the rear side door window to access and remove the door latch and handle bracket.
6. Remove the rear side door window rear channel. Refer to **Rear Side Door Window Rear Channel Replacement** .
7. Remove the rear side door locking rod. Refer to **Rear Side Door Locking Rod Knob Replacement**.
8. Disconnect the electrical connector from the luminous reflecting light, if equipped.
9. Disconnect the rear side door latch electrical connector.
10. Remove the rear side door outside handle. Refer to **Rear Side Door Outside Handle Replacement**.
11. Remove the rear side door outside handle bracket screw. Refer to **Rear Side Door Outside Handle Bracket Replacement**.

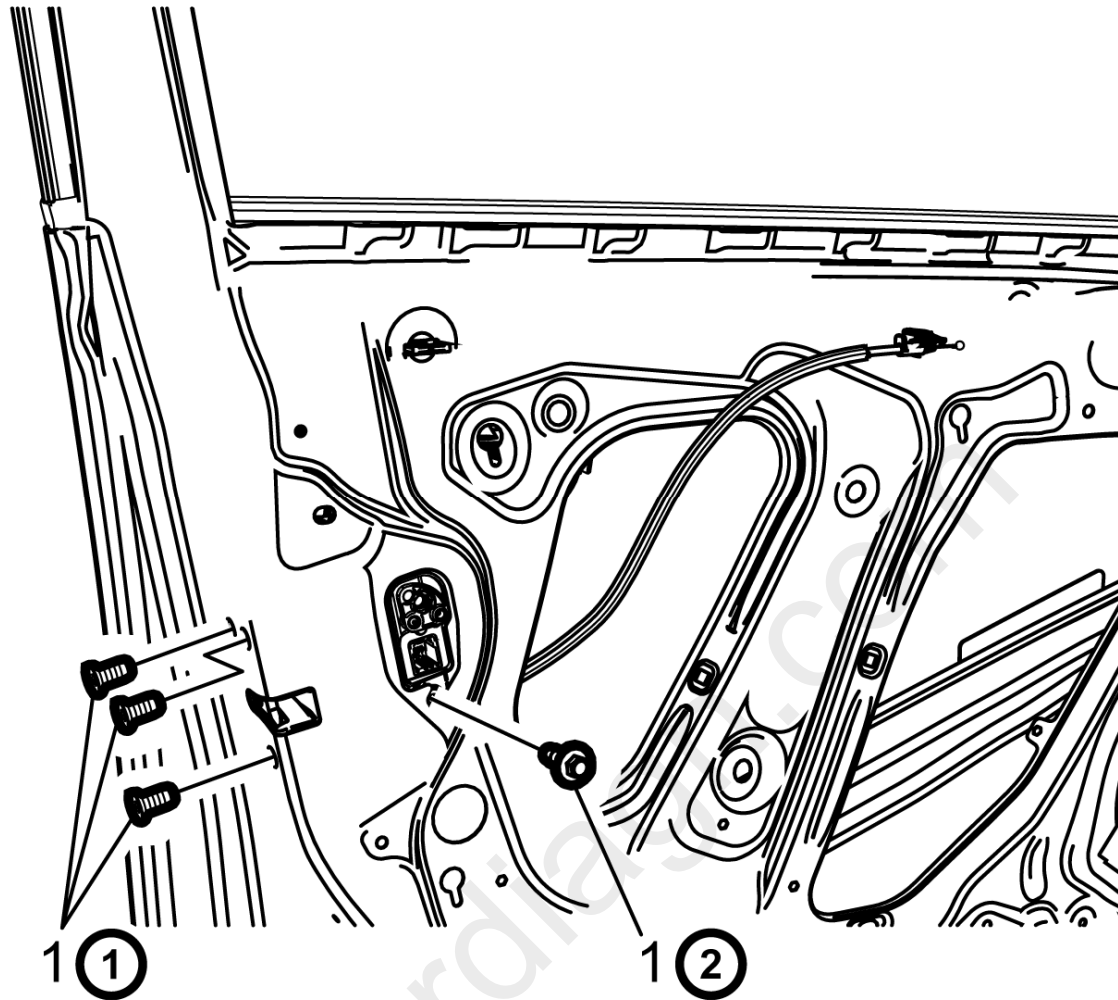


Fig. 50: Rear Side Door Latch & Bolts
Courtesy of GENERAL MOTORS COMPANY

12. Remove the four bolts (1) from the rear side door latch.

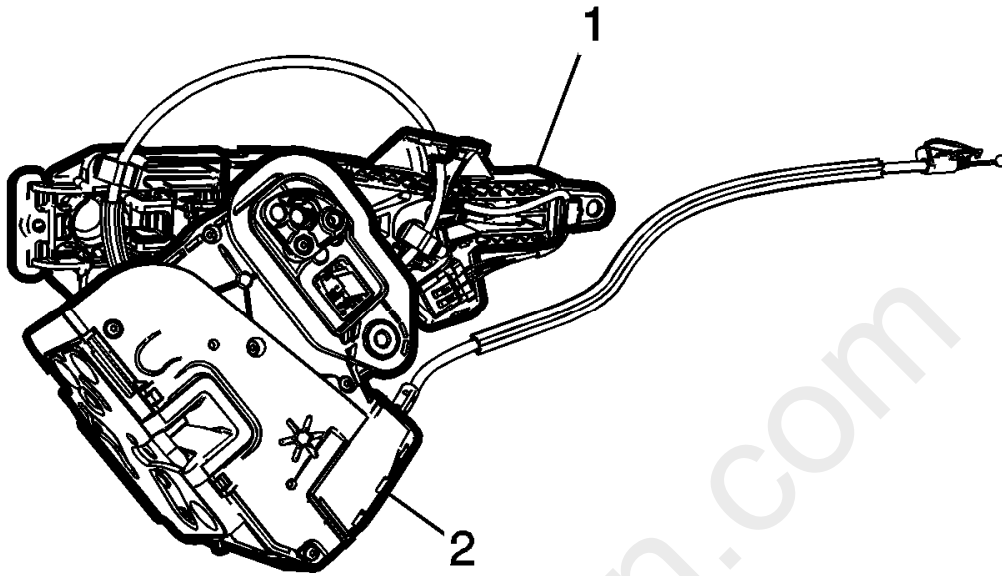


Fig. 51: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

13. Remove the outside handle bracket (1) and the rear side door latch (2) assembly from the vehicle.

Installation Procedure

1. Transfer the rear side door inside handle cable. Refer to **Rear Side Door Inside Handle Cable Replacement.**
2. Transfer the front side door outside handle cable. Refer to **Front Side Door Outside Handle Cable Replacement.**

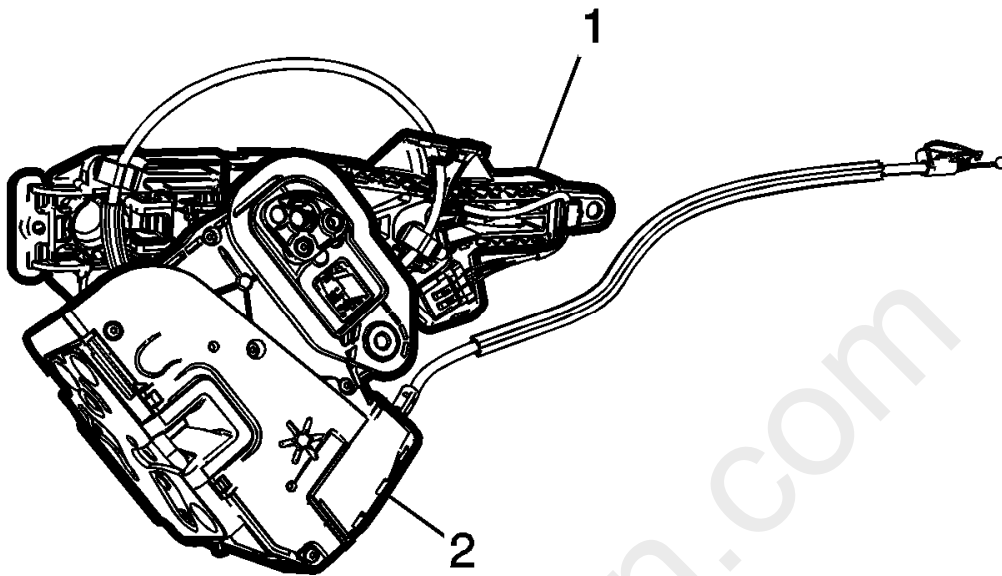


Fig. 52: Rear Side Door Outside Handle Bracket & Latch
Courtesy of GENERAL MOTORS COMPANY

3. Install the outside handle bracket (1) and the rear side door latch (2) assembly in the vehicle.

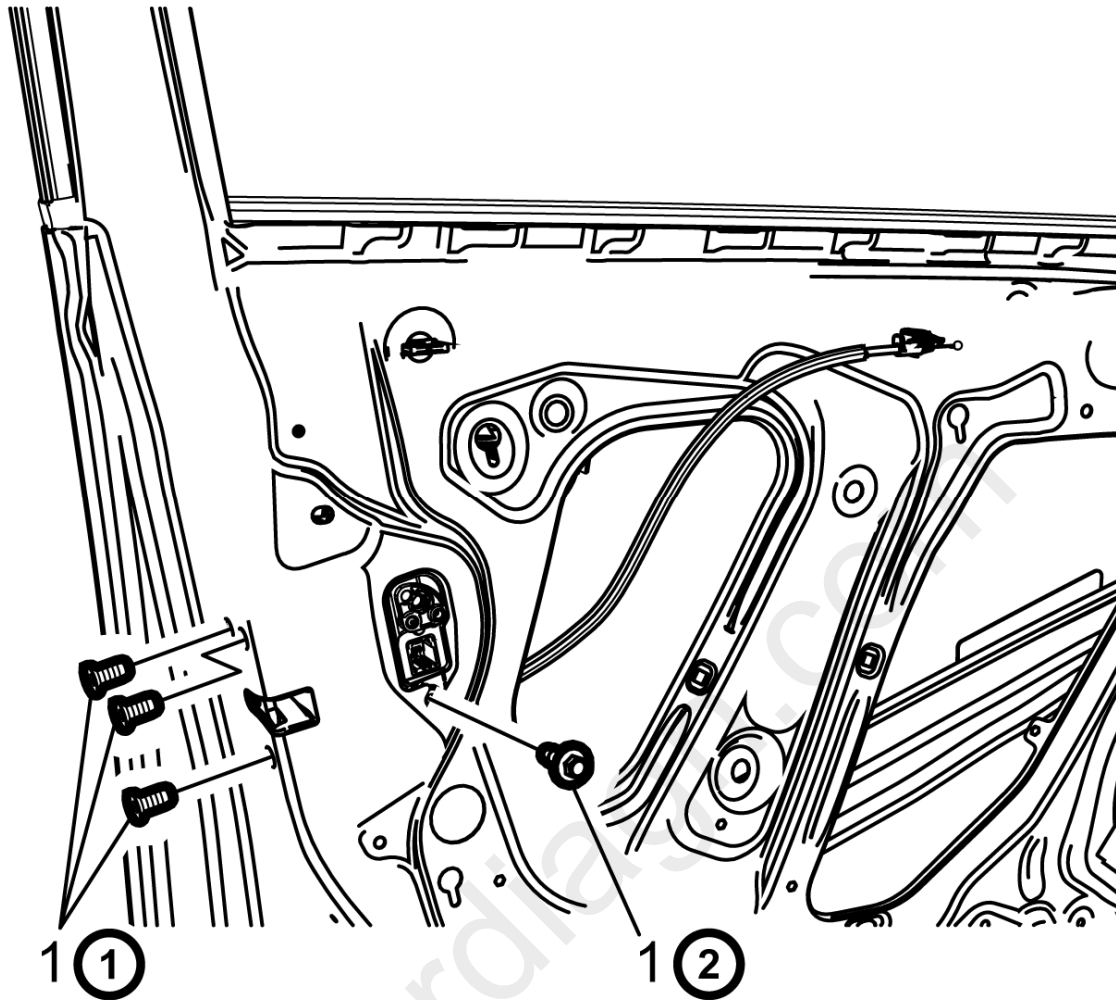


Fig. 53: Rear Side Door Latch & Bolts
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

NOTE: Install and torque the four latch bolts in proper sequence to prevent damage to the latch mechanism.

4. Install four bolts (1) to the rear side door latch and tighten to 10 N.m (89 lb in).
5. Install the rear side door outside handle bracket screw. Refer to Rear Side Door Outside Handle Bracket Replacement.
6. Install the rear side door outside handle. Refer to Rear Side Door Outside Handle Replacement.
7. Connect the rear side door latch electrical connector.

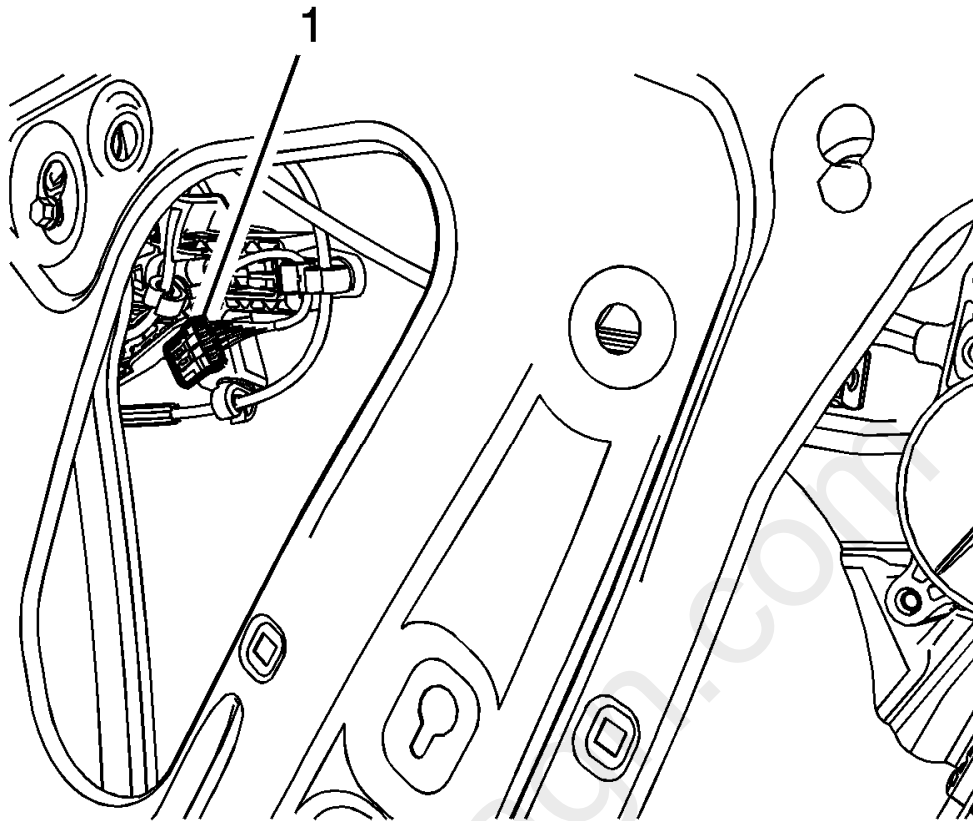


Fig. 54: Luminous Reflecting Light Electrical Connector
Courtesy of GENERAL MOTORS COMPANY

8. Connect the electrical connector (1) to the luminous reflecting light, if equipped.
9. Install the rear side door locking rod. Refer to **Rear Side Door Locking Rod Knob Replacement**.
10. Install the rear side door window rear channel. Refer to **Rear Side Door Window Rear Channel Replacement**.
11. Inspect the door latch and the outside handle for proper operation before install the door trim.
12. Install the water deflector.
13. Install the rear side door armrest plate bolts and plate to the inner door panel.
14. Install the rear side door trim. Refer to **Rear Side Door Trim Replacement**.

FRONT SIDE DOOR LOCK COVER REPLACEMENT

Removal Procedure

1. Place the window in the full up position.

2. Remove the door trim panel. Refer to **Front Side Door Trim Replacement** .
3. Remove the water deflector.

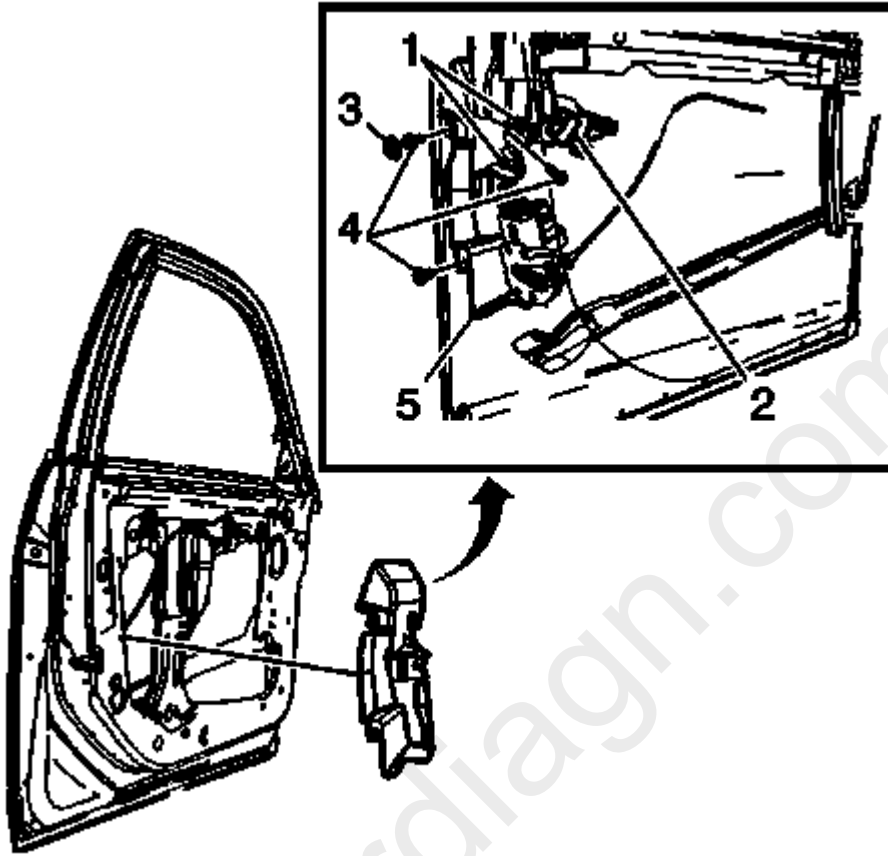


Fig. 55: View of Door and Wiring Harness Assembly
Courtesy of GENERAL MOTORS COMPANY

4. Remove the wiring harness from the retainers (1).
5. Disconnect the electrical connector (2).
6. Remove the screw cover (3).
7. Remove the screws (4) from the outer edge of the door and from the inside.
8. Remove the front side door latch cover (5) from inside the door.

Installation Procedure

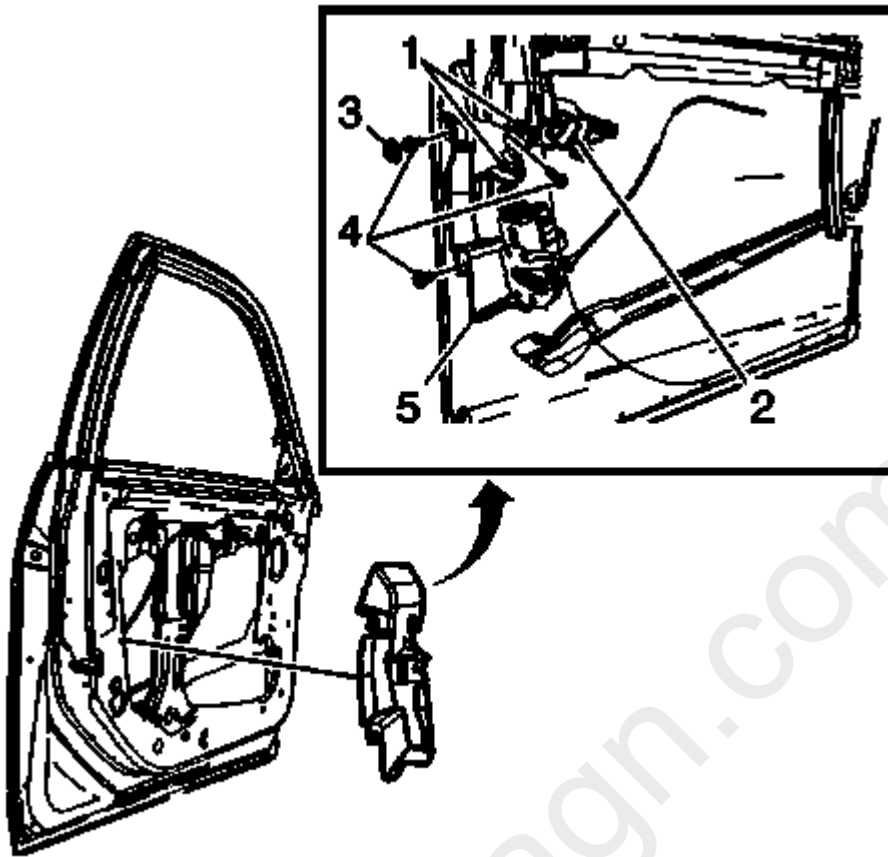


Fig. 56: View of Door and Wiring Harness Assembly
Courtesy of GENERAL MOTORS COMPANY

1. Install the front side door latch cover (5) to cover the lock.

CAUTION: Refer to Fastener Caution .

2. Install the screws (4) to the outer edge of the door and to the inside and tighten to 5 N.m (44 lb in).
3. Install the screw cover (3).
4. Connect the electrical connector (2).
5. Install the wiring harness to the retainers (1).
6. Install the water deflector.
7. Install the door trim panel. Refer to **Front Side Door Trim Replacement** .

REAR SIDE DOOR LOCK CYLINDER OPENING COVER REPLACEMENT

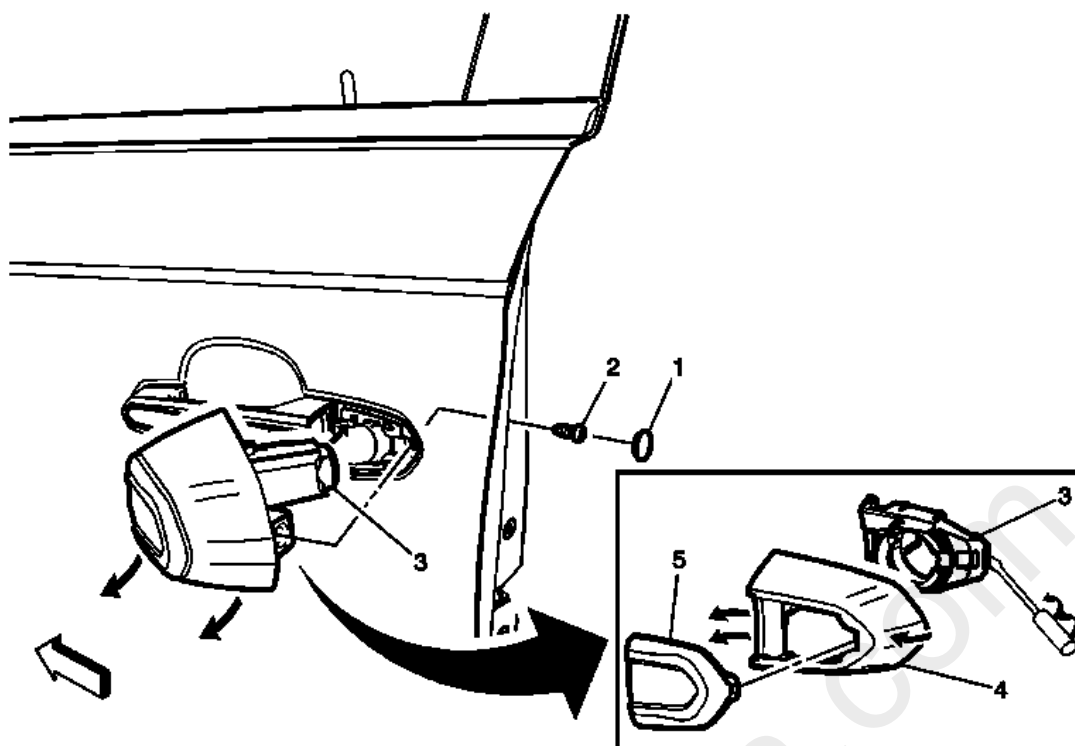


Fig. 57: Rear Side Door Lock Cylinder Opening Cover Components
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Lock Cylinder Opening Cover Replacement

Callout	Component Name
1	Rear Side Door Access Hole Cover NOTE: Do not remove the door trim panel to do this procedure, using a plastic flat-bladed tool, remove the cover that conceals the screw for the lock cylinder/blank.
2	Rear Side Door Lock Cylinder/Blank Screw CAUTION: Refer to <u>Fastener Caution</u> . NOTE: When removing the lock cylinder/blank, Do Not unscrew the screw past the hard stop.
3	Rear Side Door Lock Cylinder/Blank
4	Rear Side Door Lock Cylinder/Blank Opening Cover
5	Rear Side Door Lock Cylinder/Blank Opening Cover Insert Procedure Using a small flat-bladed tool, push outward to release the insert from the opening cover. NOTE:

Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR LOCK CYLINDER BEZEL REPLACEMENT

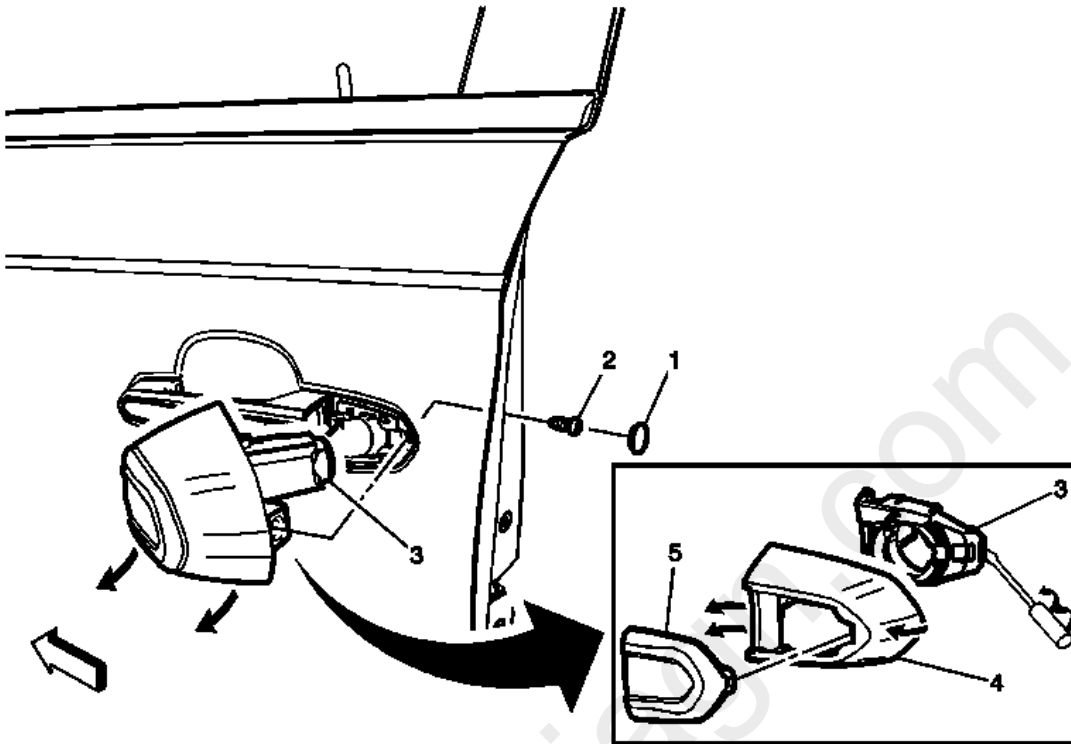


Fig. 58: Rear Side Door Lock Cylinder Opening Cover Components
Courtesy of GENERAL MOTORS COMPANY

Front Side Door Lock Cylinder Bezel Replacement

Callout	Component Name
1	Front Side Door Access Hole Cover NOTE: Using a plastic flat-bladed tool, remove the cap that conceals the bolt from the inside of the door opening.
2	Front Side Door Outside Handle Lock Cylinder Screw CAUTION: Refer to <u>Fastener Caution</u> . NOTE: When removing the lock cylinder/blank, Do Not unscrew the screw past the hard stop.
3	Front Side Door Lock Cylinder Bezel Retainer
	Front Side Door Lock Cylinder Bezel

4	NOTE: Using a small flat-bladed tool, release the bezel from the retainer.
5	Front Side Door Lock Cylinder Bezel Insert Procedure Using a small flat-bladed tool, from the inside of the bezel push outward to release the insert from the bezel. NOTE: Ensure that the door lock system operates properly before installing the trim.

FRONT SIDE DOOR OUTSIDE HANDLE INSERT REPLACEMENT

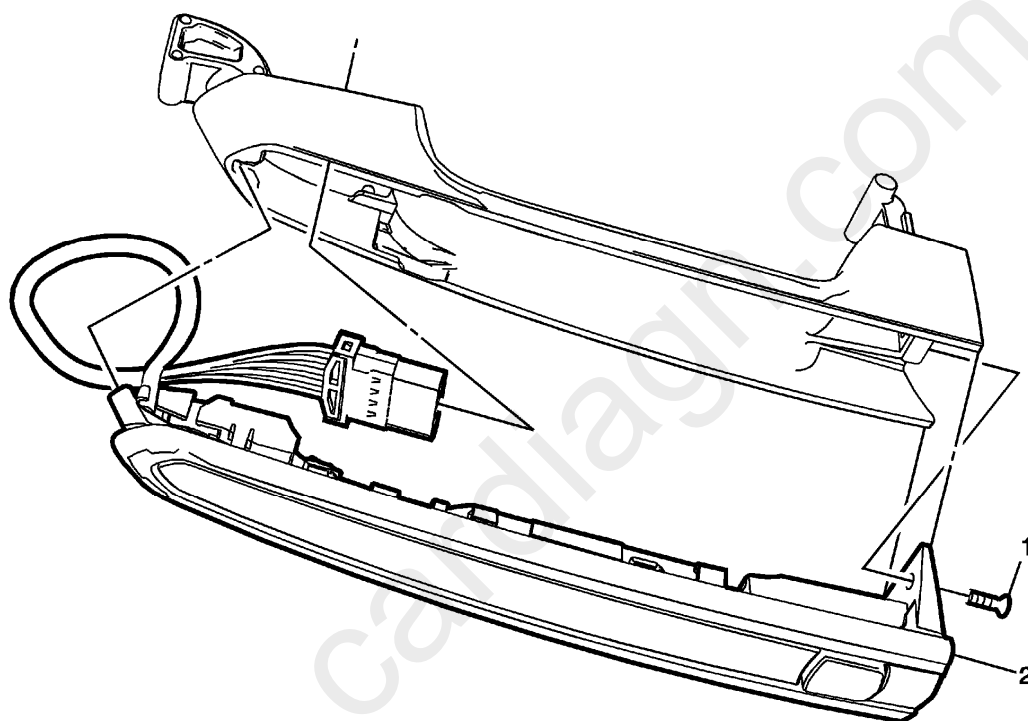


Fig. 59: Rear Side Door Outside Handle Insert & Screw
Courtesy of GENERAL MOTORS COMPANY

Front Side Door Outside Handle Insert Replacement

Callout	Component Name
Preliminary Procedure Remove the front side door outside handle. Refer to <u>Front Side Door Outside Handle Replacement</u> .	
	Front Side Door Outside Handle Insert Screw CAUTION: Refer to <u>Fastener Caution</u> .

1	NOTE: Use care when hand tightening the outside handle insert screw Not to over tighten. Tighten 1.5 (13 lb in)
2	Front Side Door Outside Handle Insert NOTE: Ensure that the door lock system and the luminous reflecting light is operates properly before installing the trim.

FRONT SIDE DOOR LOCK CYLINDER ROD REPLACEMENT

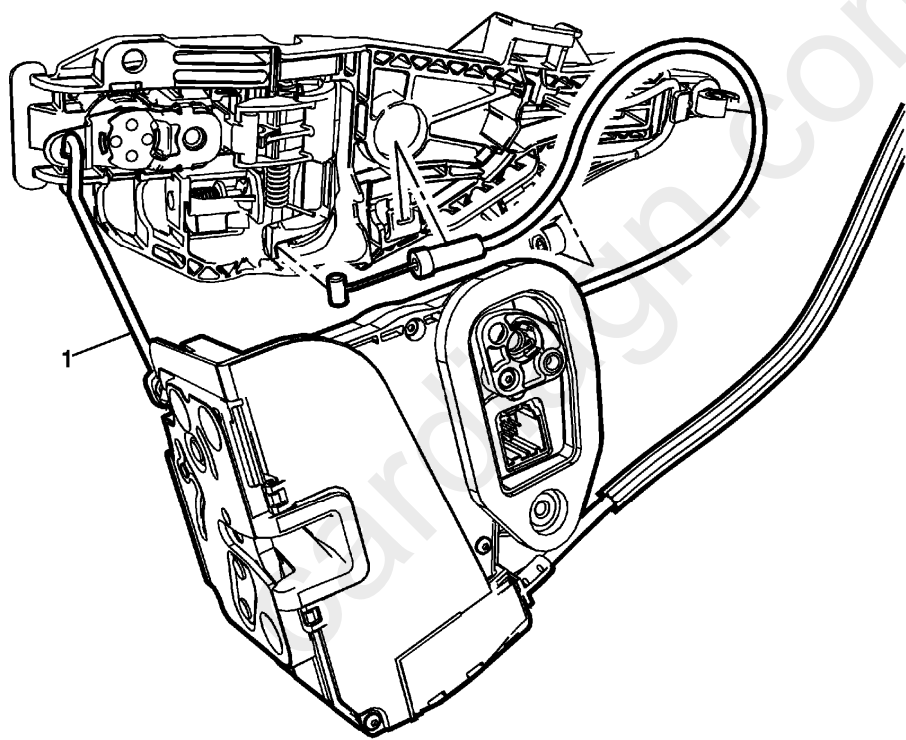


Fig. 60: Front Side Door Lock Cylinder Rod
Courtesy of GENERAL MOTORS COMPANY

Front Side Door Lock Cylinder Rod Replacement

Callout	Component Name
Preliminary Procedure Remove the front side door latch and handle bracket assembly from the door. Refer to Front Side Door Latch Replacement.	
	Front Side Door Lock Cylinder Rod to Latch

1	Procedure 1. Remove the front side door lock cylinder rod from the lock cylinder by turn the housing bracket clockwise. 2. Release the lock cylinder rod from the latch only, do not remove the handle cables from the latch. NOTE: Ensure that the door lock system operates properly before installing the trim.

REAR SIDE DOOR LOCKING ROD KNOB REPLACEMENT

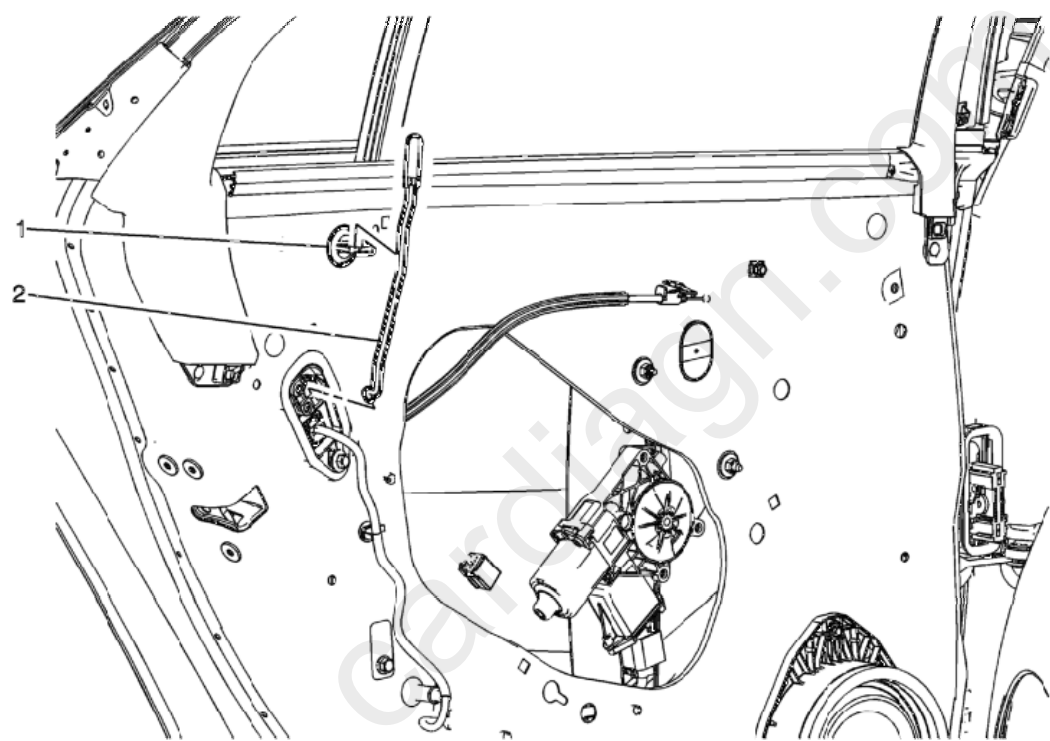


Fig. 61: Rear Side Door Locking Rod Knob
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Locking Rod Knob Replacement

Callout	Component Name
Preliminary Procedure Remove the rear side door trim. Refer to <u>Rear Side Door Trim Replacement</u> .	
1	Rear Side Door Locking Rod Knob Clip Procedure Release the locking rod from the clip.
	Rear Side Door Locking Rod Knob Procedure

2

Turn the locking rod down, pull upward and turn releasing it from the latch.

NOTE:

Ensure that the door lock system operates properly before installing the door trim.

REAR SIDE DOOR OUTSIDE HANDLE INSERT REPLACEMENT

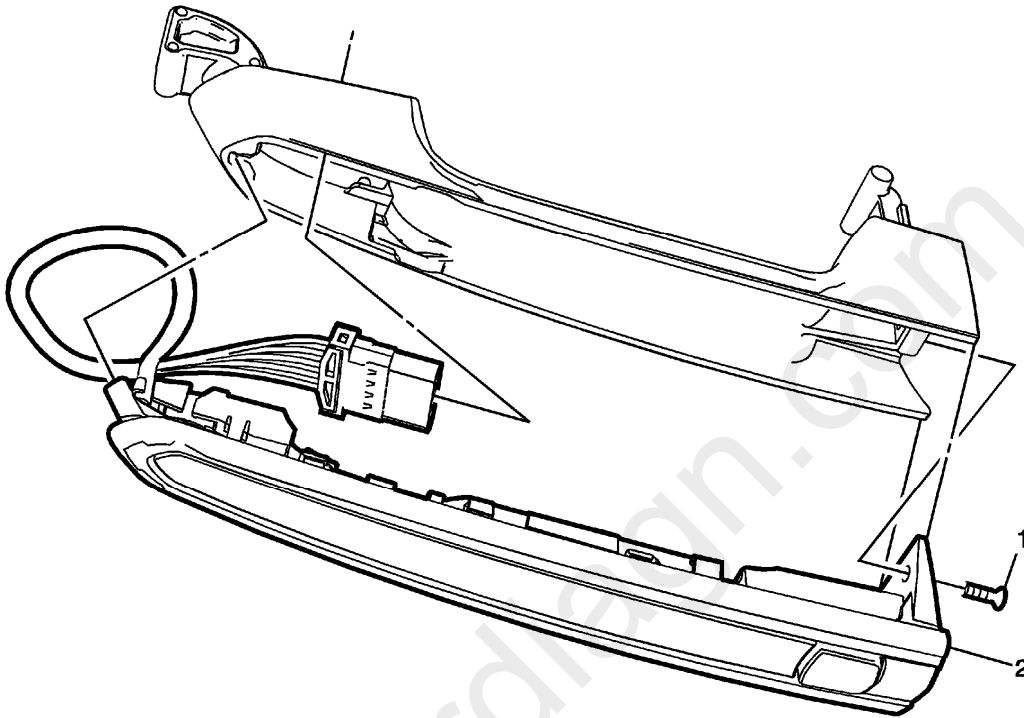


Fig. 62: Rear Side Door Outside Handle Insert & Screw
Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Outside Handle Insert Replacement

Callout	Component Name
Preliminary Procedure	
Remove the rear side door outside handle. Refer to <u>Rear Side Door Outside Handle Replacement</u> .	
1	Rear Side Door Outside Handle Insert Screw CAUTION: Refer to <u>Fastener Caution</u> . NOTE: Use care when hand tightening the outside handle insert screw Not to over tighten. Tighten

	1.5 (13 lb in)
2	Rear Side Door Outside Handle Insert NOTE: Ensure that the door lock system and the luminous reflecting light is operates properly before installing the trim.

REAR COMPARTMENT LID HINGE SPRING REPLACEMENT

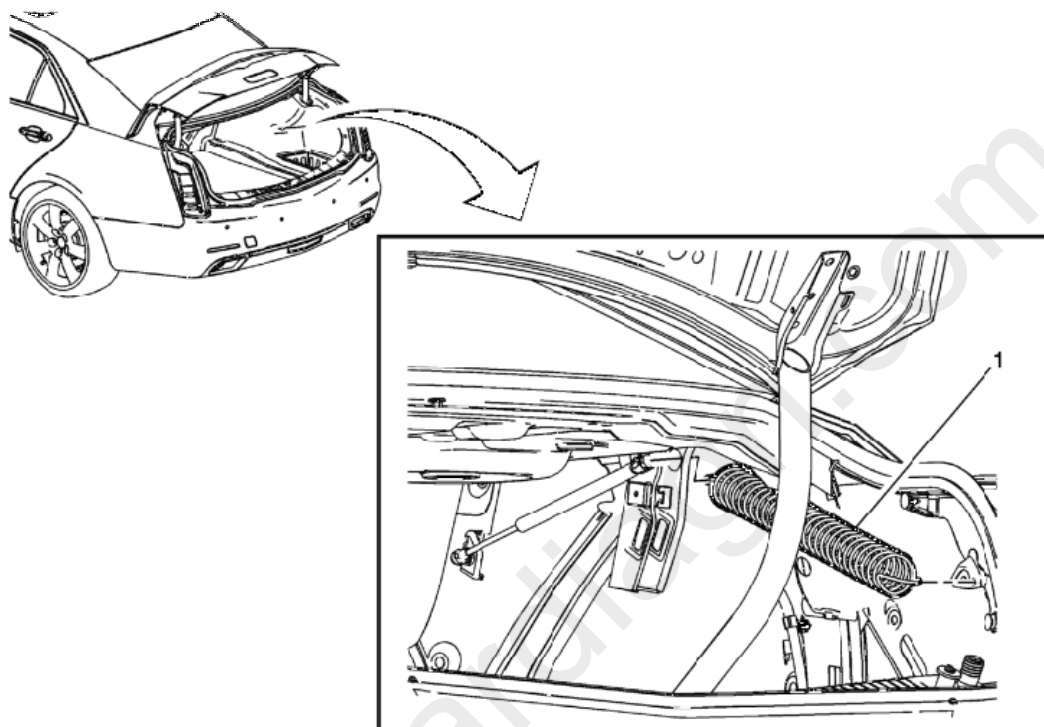


Fig. 63: Rear Compartment Lid Hinge Spring
Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Hinge Spring Replacement

Callout	Component Name
WARNING: When a hood hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury. WARNING: Refer to <u>Eye Protection Warning</u> . Preliminary Procedures 1. Remove the left side rear compartment side trim panel to access the left side spring. Refer to <u>Rear</u>	

Compartment Side Trim Replacement - Left Side .

2. Remove the right side rear compartment side trim panel to access the right side spring. Refer to **Rear Compartment Side Trim Replacement - Right Side .**
3. Remove the rear compartment lid strut. Refer to **Rear Compartment Lid Strut Replacement**

	Rear Compartment Lid Hinge Spring
1	Procedure 1. Pull the rear compartment lid spring backwards and unhook the rear compartment lid spring from the rear compartment lid hinge spring bracket. NOTE: There are two possible tension settings for the spring that will affect the speed the compartment lid will open. The factory installed tension is the slot toward the front of the vehicle. To increase the opening speed, place the springs in the slot most rearward.

FRONT SIDE DOOR LOCK STRIKER ADJUSTMENT

To determine if striker adjustment is required, proceed as follows:

1. Remove the front side door lock striker cover, if equipped. Refer to **Front Side Door Lock Striker Replacement.**

WARNING: In order to prevent SIR deployment, personal injury, or unnecessary SIR system repairs, do not strike the door or the door pillar in the area of the side impact sensor (SIS). Turn OFF the ignition and remove the key when performing service in the area of the SIS.

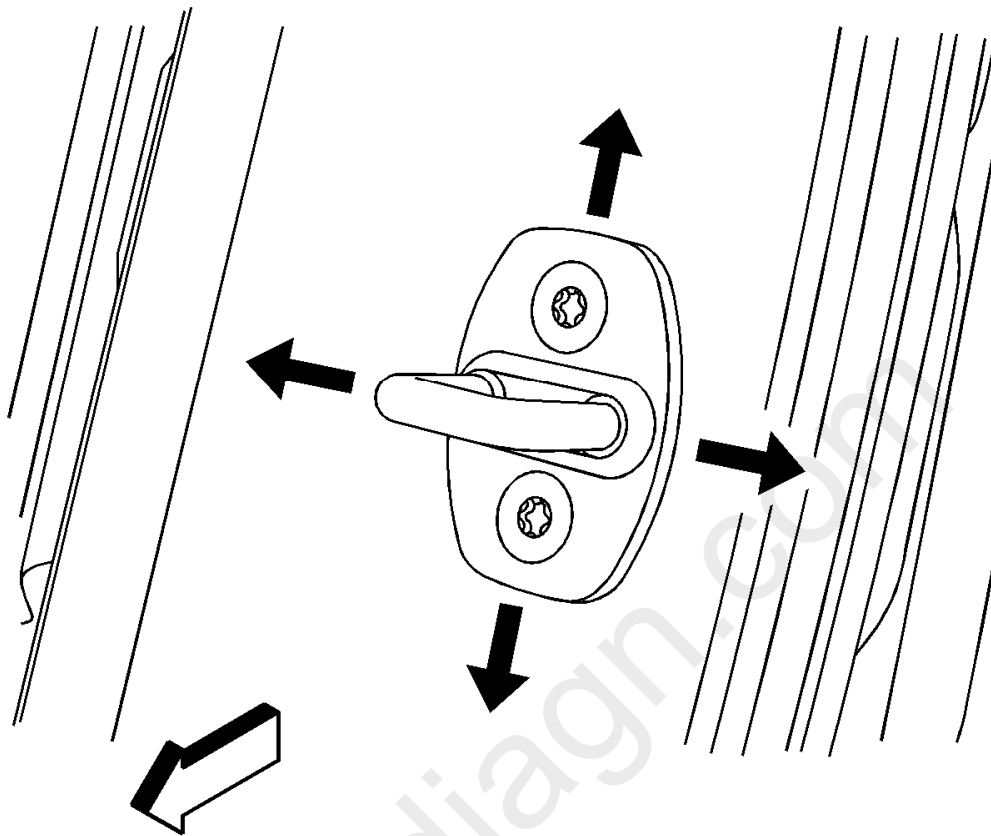


Fig. 64: Striker Adjustment

Courtesy of GENERAL MOTORS COMPANY

2. Ensure the door is properly aligned within the door opening before proceeding with the striker adjustment.
3. Close the door onto the striker and note if the door drags on the striker causing the door to move upward or downward upon contact with the striker. Also note the closing effort to fully engage the lock.
4. Using a grease pencil, mark around the striker for reference of the original position. Loosen the striker.
5. Move the striker to eliminate drag on the striker and door latch and to achieve the proper door position within the door opening. Start with the up/down position, then position the striker to achieve proper alignment to the door opening. Set the in/out adjustment for the proper door seal engagement making sure the door closing efforts are correct.

CAUTION: Refer to Fastener Caution .

6. Tighten the door striker bolts to 25 (18 lb ft).

FRONT SIDE DOOR LOCK STRIKER REPLACEMENT

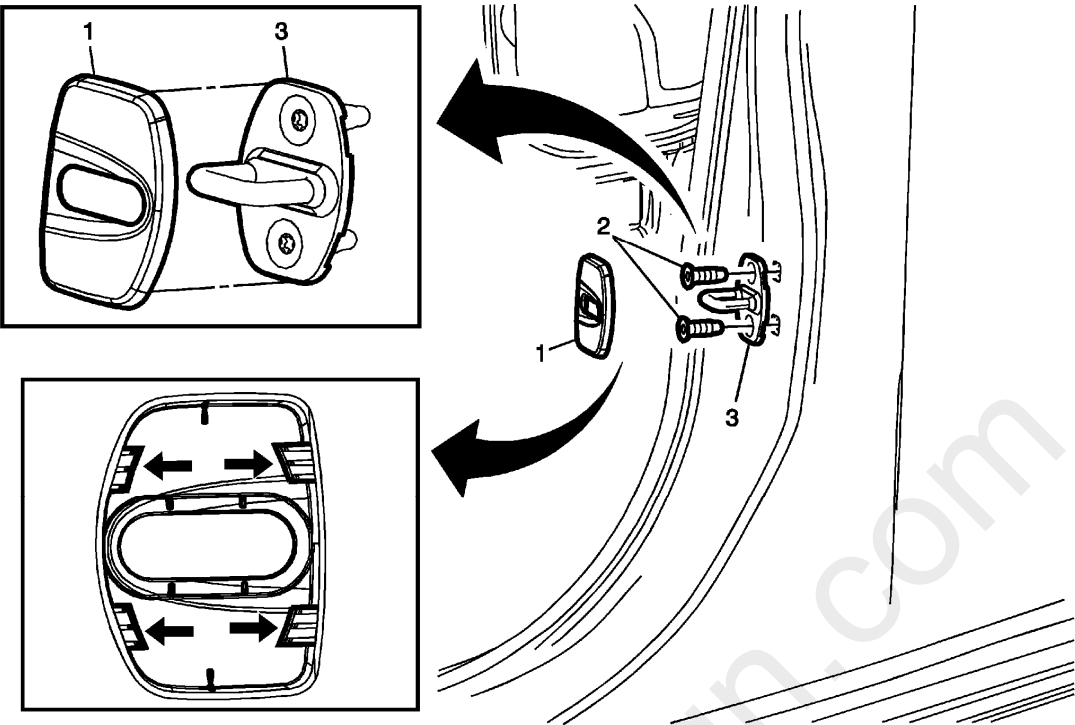


Fig. 65: Rear Side Door Lock Striker & Components
Courtesy of GENERAL MOTORS COMPANY

Front Side Door Lock Striker Replacement

Callout	Component Name
1	Front Side Door Lock Striker Cover WARNING: In order to prevent SIR deployment, personal injury, or unnecessary SIR system repairs, do not strike the door or the door pillar in the area of the side impact sensor (SIS). Turn OFF the ignition and remove the key when performing service in the area of the SIS. NOTE: Use a suitable tool, place the tool between the cover and the striker in a counter clockwise motion turn it releasing the cover from the striker.
2	Front Side Door Lock Striker Bolt (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten

	25 N.m (18 lb ft)
3	Front Side Door Lock Striker Procedure Install the front side door lock striker spacer, if equipped NOTE: Ensure proper alignment after installation. Refer to <u>Front Side Door Lock Striker Adjustment</u>.

REAR COMPARTMENT LID LATCH STRIKER REPLACEMENT

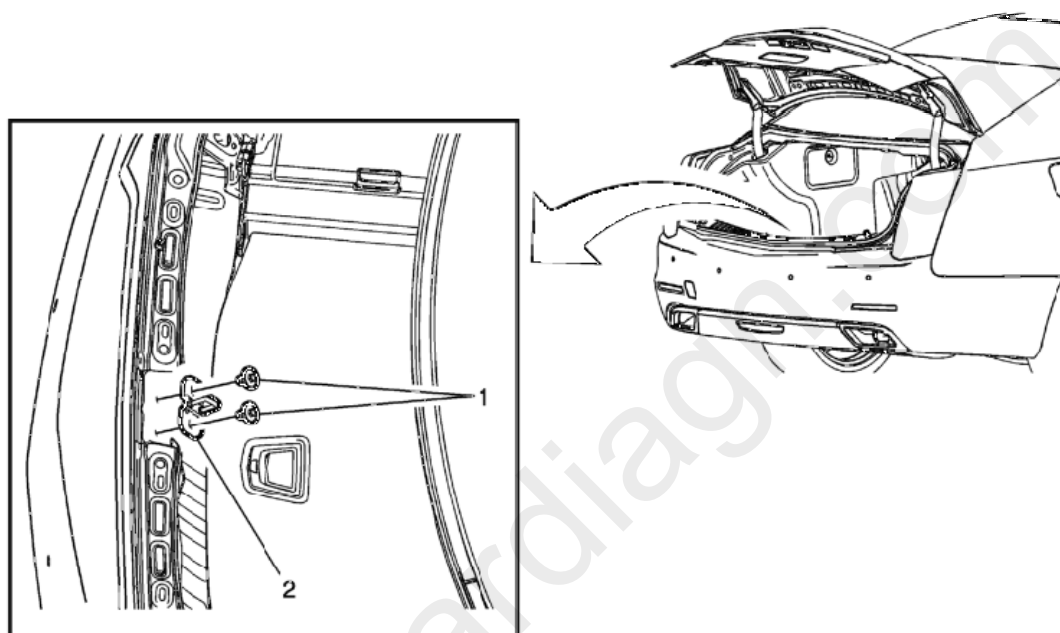


Fig. 66: Rear Compartment Lid Latch Striker
 Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Latch Striker Replacement

Callout	Component Name
Preliminary Procedure Remove the rear end trim finish panel. Refer to <u>Rear End Trim Finish Panel Replacement</u> .	
1	Rear Compartment Lid Latch Striker Bolt (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> .

	Procedure Use a grease pencil to outline the striker before removing the bolts. Tighten 9 (80 lb in)
2	Rear Compartment Lid Latch Striker Procedure Adjust the rear compartment lid, if needed. Refer to <u>Rear Compartment Lid Adjustment</u> .

REAR SIDE DOOR LOCK STRIKER ADJUSTMENT

To determine if striker adjustment is required, proceed as follows:

1. Remove the rear side door lock striker cover, if equipped. Refer to **Rear Side Door Lock Striker Replacement**.

WARNING: In order to prevent SIR deployment, personal injury, or unnecessary SIR system repairs, do not strike the door or the door pillar in the area of the side impact sensor (SIS). Turn OFF the ignition and remove the key when performing service in the area of the SIS.

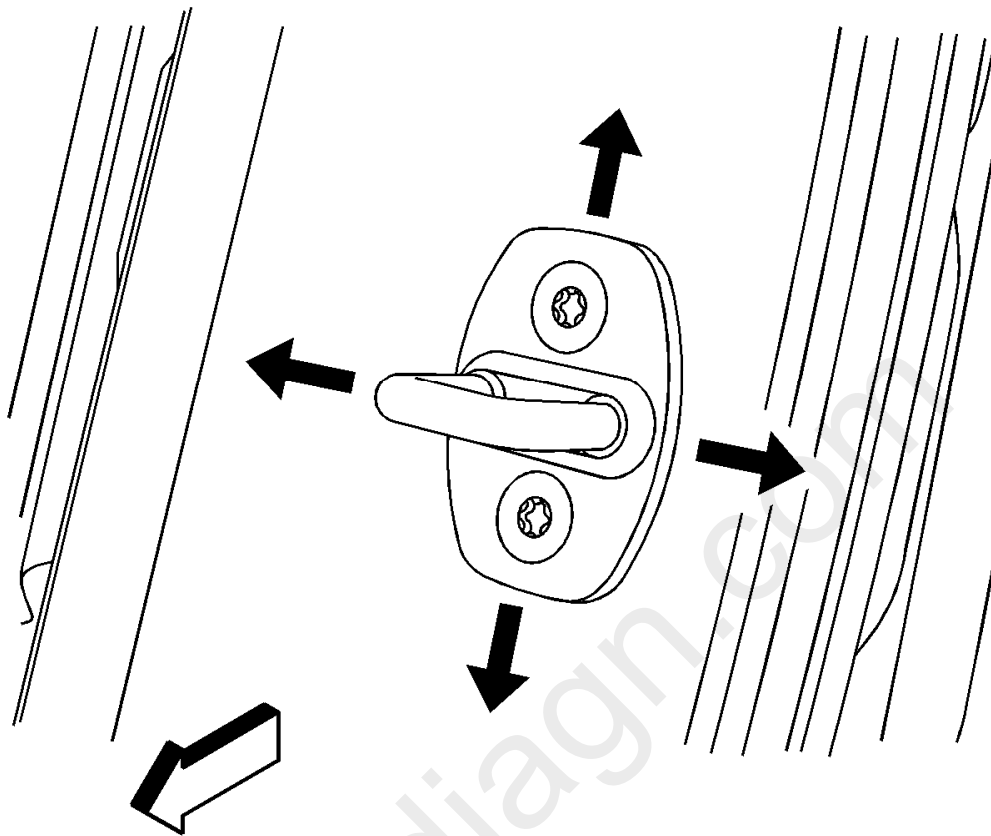


Fig. 67: Striker Adjustment

Courtesy of GENERAL MOTORS COMPANY

2. Ensure the door is properly aligned within the door opening before proceeding with the striker adjustment.
3. Close the door onto the striker and note if the door drags on the striker causing the door to move upward or downward upon contact with the striker. Also note the closing effort to fully engage the lock.
4. Using a grease pencil, mark around the striker for reference of the original position. Loosen the striker.
5. Move the striker to eliminate drag on the striker and door latch and to achieve the proper door position within the door opening. Start with the up/down position, then position the striker to achieve proper alignment to the door opening. Set the in/out adjustment for the proper door seal engagement making sure the door closing efforts are correct.

CAUTION: Refer to Fastener Caution .

6. Tighten the door striker bolts to 22 (16 lb ft).

REAR SIDE DOOR LOCK STRIKER REPLACEMENT

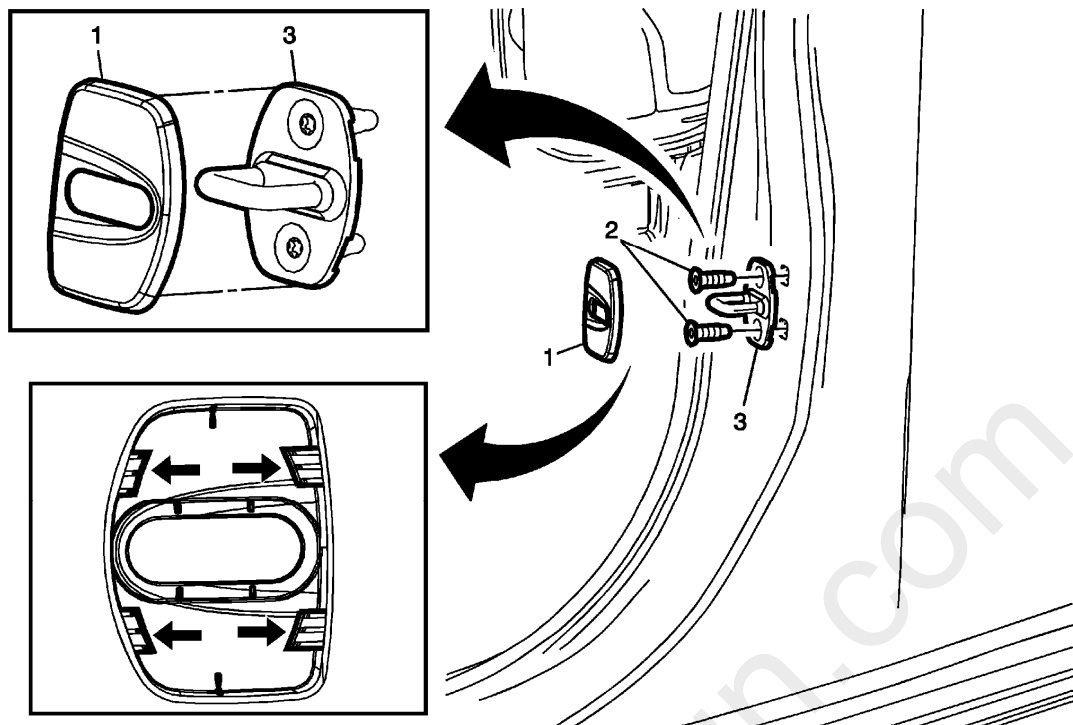


Fig. 68: Rear Side Door Lock Striker & Components
Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Lock Striker Replacement

Callout	Component Name
1	Rear Side Door Lock Striker Cover WARNING: In order to prevent SIR deployment, personal injury, or unnecessary SIR system repairs, do not strike the door or the door pillar in the area of the side impact sensor (SIS). Turn OFF the ignition and remove the key when performing service in the area of the SIS. NOTE: Use a suitable tool, place the tool between the cover and the striker in a counter clockwise motion turn it releasing the cover from the striker.
2	Rear Side Door Lock Striker Bolt (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten

	22 N.m (16 lb ft)
3	Rear Side Door Lock Striker Procedure Install the rear side door lock striker spacer, if equipped NOTE: Ensure proper alignment after installation. Refer to <u>Rear Side Door Lock Striker Adjustment</u> .

OPENING THE FUEL TANK FILLER DOOR WHEN THE DOOR LOCK MALFUNCTIONS

1. Remove the right rear wheelhouse panel liner. Refer to Rear Wheelhouse Liner Replacement .
2. Reach in behind the fuel filler pipe housing and manually slide the actuator rod forward, using light pressure, to override the actuator to release the fuel tank filler door.

DOOR LOCK SWITCH REPLACEMENT - DRIVER SIDE

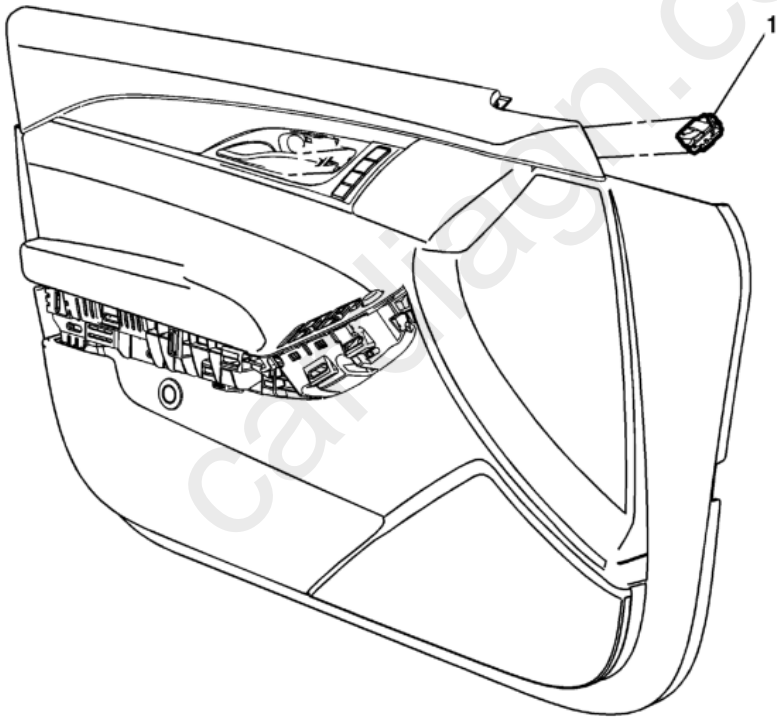


Fig. 69: Door Lock Switch - Driver Side
 Courtesy of GENERAL MOTORS COMPANY

Door Lock Switch Replacement - Driver Side

Callout	Component Name
Preliminary Procedures	
1.	Remove the front side door trim. Refer to <u>Front Side Door Trim Replacement</u> .

2. Reposition insulator, as required.	
1	Door Lock Switch Driver Side Assembly Procedure 1. Using a plastic pry tool, gently pry on the sides to release the switch. 2. Disconnect the electrical connectors. 3. Refer to <u>Control Module References</u> for programming and set up procedures.

DOOR LOCK SWITCH REPLACEMENT - PASSENGER FRONT

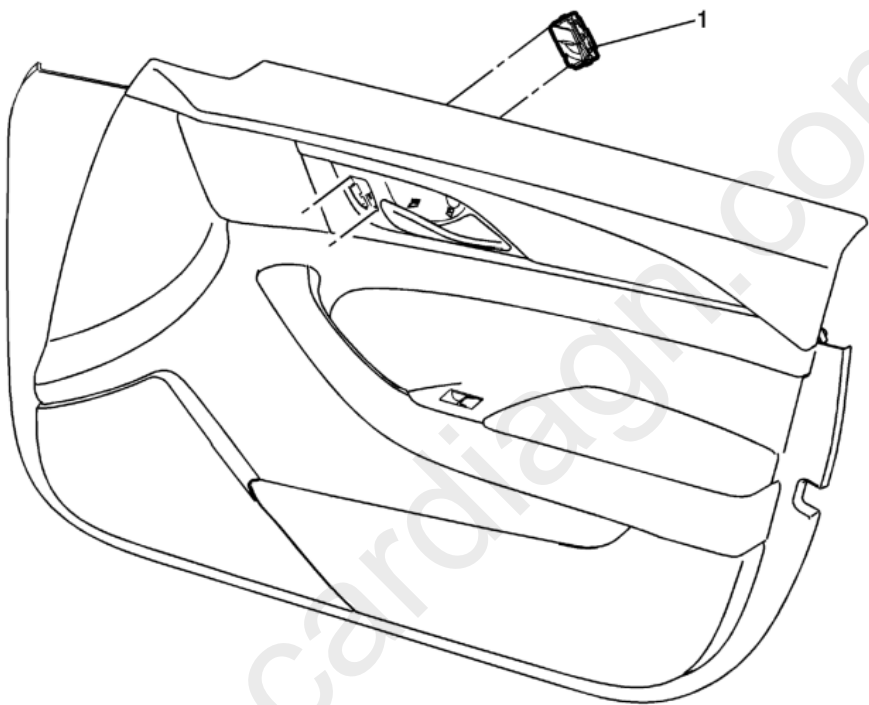


Fig. 70: Door Lock Switch - Passenger Front
 Courtesy of GENERAL MOTORS COMPANY

Door Lock Switch Replacement - Passenger Front

Callout	Component Name
Preliminary Procedures 1. Remove the front side door trim. Refer to <u>Front Side Door Trim Replacement</u> . 2. Reposition insulator, as required.	
1	Door Lock Switch Passenger Front Assembly Procedure

1. Using a plastic pry tool, gently pry on the sides to release the switch.
2. Disconnect the electrical connector.
3. Refer to **Control Module References** for programming and set up procedures.

REAR COMPARTMENT LID RELEASE SWITCH REPLACEMENT (REAR COMPARTMENT LID)

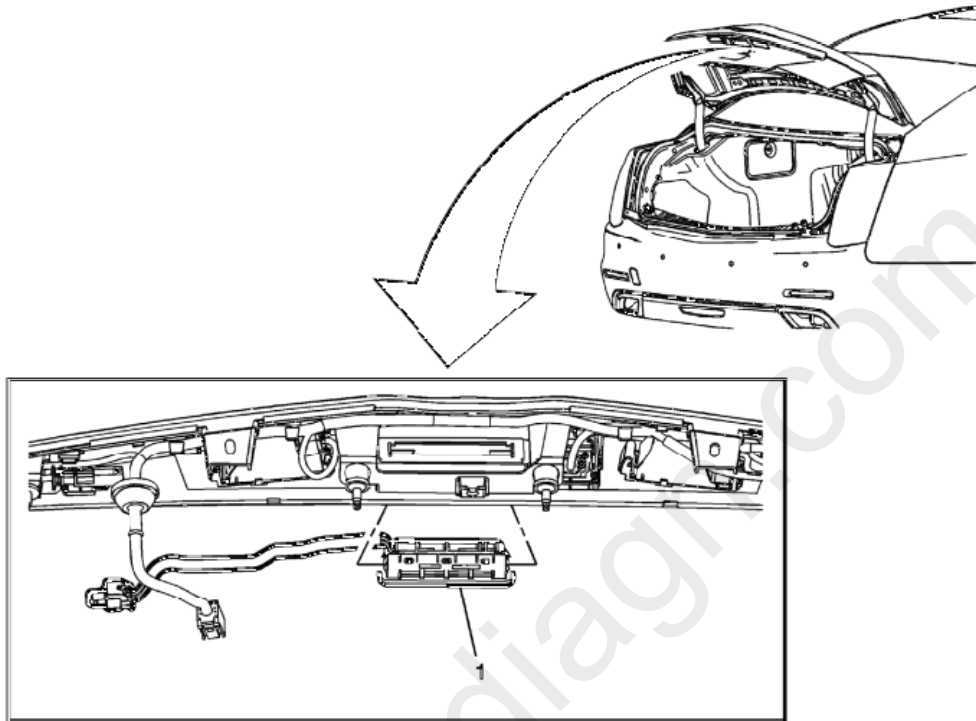


Fig. 71: Rear Compartment Lid Release Switch (Rear Compartment Lid)
 Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Release Switch Replacement (Rear Compartment Lid)

Callout	Component Name
Preliminary Procedure	
1. Remove the rear closure center applique. Refer to <u>Rear Closure Center Applique Replacement</u> . 2. Disconnect the rear compartment lid release switch electrical connector	
1	Rear Compartment Lid Release Switch Procedure Press in the retainers on the sides of the switch and press the rear compartment lid release switch out from the rear closure center applique.

REAR COMPARTMENT LID RELEASE SWITCH REPLACEMENT (DOOR TRIM PANEL)

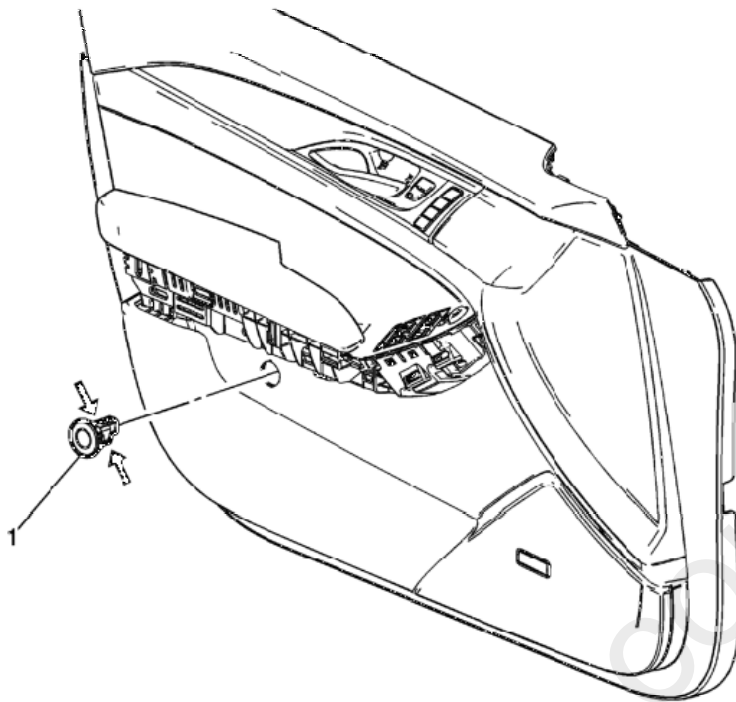


Fig. 72: Rear Compartment Lid Release Switch (Door Trim Panel)
 Courtesy of GENERAL MOTORS COMPANY

Rear Compartment Lid Release Switch Replacement (Door Trim Panel)

Callout	Component Name
Preliminary Procedure	
Remove the front side door trim. Refer to Front Side Door Trim Replacement .	
1	Rear Compartment Lid Release Switch Assembly Procedure 1. Disconnect the electrical connector. 2. Push the 2 tabs in to release the switch from the front side door trim.

DESCRIPTION AND OPERATION

DOOR AJAR INDICATOR DESCRIPTION AND OPERATION

Door Ajar Indicator System Components

The door ajar indicator system consists of the following components:

- Body control module (BCM)
- Instrument cluster

- Driver door latch
- Passenger door latch
- Left rear door latch
- Right rear door latch
- Driver window motor
- Passenger window motor
- Left rear window motor
- Right rear window motor

Door Ajar Indicator Block Diagram

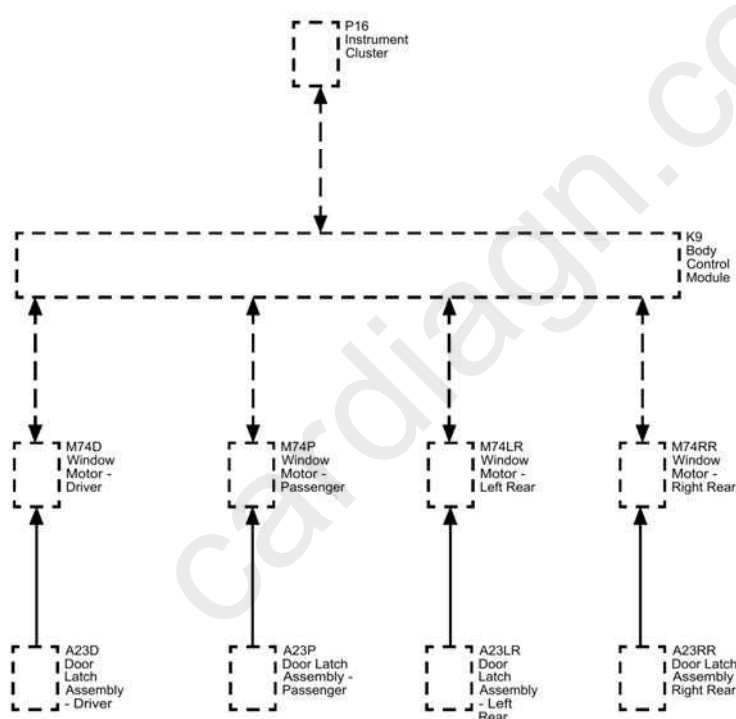


Fig. 73: Door Ajar Indicator Block Diagram
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
DA	Serial Data

DA	Serial Data
DA	Serial Data
DA	Serial Data
DA	Serial Data
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
P16	P16 Instrument Cluster
K9	K9 Body Control Module
A23D	A23D Door Latch Assembly - Driver
A23P	A23P Door Latch Assembly - Passenger
A23LR	A23LR Door Latch Assembly - Left Rear
A23RR	A23RR Door Latch Assembly - Right Rear
M74D	M74D Window Motor - Driver
M74P	M74P Window Motor - Passenger
M74LR	M74LR Window Motor - Left Rear
M74RR	M74RR Window Motor - Right Rear

Driver and Passenger Door Ajar

The window motors each provide a 12 V signal to their respective door ajar switch signal circuits. The door ajar switches are integral to each door latch assembly. When a door is opened, the normally open door ajar switch closes. With the door ajar switch closed, ground is provided to the door ajar switch signal circuit and the voltage within the signal circuit drops. The window motor will detect the voltage drop and will send a serial data message to the body control module which will then send a message to the instrument cluster to command the door ajar message

FUEL FILL DOOR DESCRIPTION AND OPERATION (NO8 ONLY)

Fuel Door Release System Components

- Body control module (BCM)
- Fuel door latch
- Fuel door relay

The fuel door relay switch and coil terminals are supplied with battery voltage at all times via the DR/LCK fuse located in the rear fuse block. The locking and unlocking of the fuel door is a function of the power door lock system. When the vehicles doors are unlocked, the body control module (BCM) receives a GMLAN serial data message that the doors have been locked via a door lock switch or a remote keyless entry (RKE) function. The BCM will respond by applying ground to the fuel door relay control circuit. This energizes the coil causing the switch contacts to close. With the switch contacts closed, battery voltage is supplied to the fuel door release actuator, unlocking the fuel door.

When locking the fuel door, the BCM removes ground from the fuel door relay control circuit causing the relay switch contacts to open. With the relay in a non-energized state, the switch contacts are open to ground at G401. The BCM, upon receipt of a lock serial data signal, will apply ground to the door lock relay. This energizes the door lock relay causing the switch contacts to close. With the switch contacts closed, battery voltage is applied to the fuel door release actuator, rear door locks, rear door deadbolts, and front door deadbolts. The fuel door release actuator is supplied with ground through the open switch contacts of the fuel door relay to ground G401 causing the actuator to lock.

LUGGAGE COMPARTMENT DESCRIPTION AND OPERATION

Rear Compartment Lid Release System Components

- Body control module (BCM)
- Exterior rear compartment lid unlatch switch
- Interior rear compartment lid unlatch switch
- Rear compartment lid latch
- Trunk ajar switch (Part of the rear compartment lid latch)
- Rear body fuse block (Contains rear compartment lid unlatch PCB relay)

14 Trunk Release Block Diagram

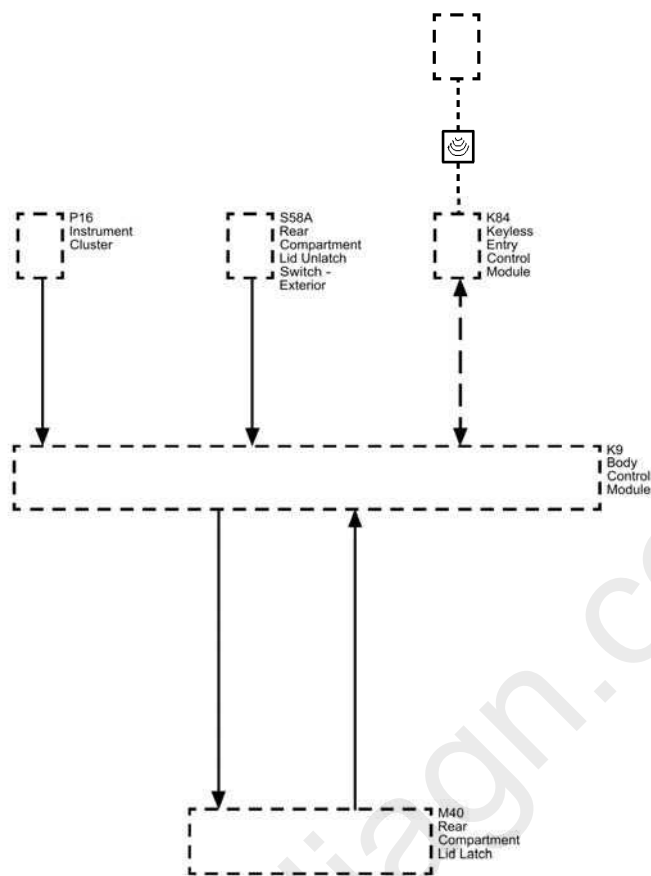


Fig. 74: 14 Trunk Release Block Diagram
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WL	Wireless
DA	Serial Data
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
K84	K84 Keyless Entry Control Module
S58A	S58A Rear Compartment Lid Unlatch Switch - Exterior
P16	P16 Instrument Cluster
K9	K9 Body Control Module
M40	M40 Rear Compartment Lid Latch

Rear Compartment Lid Release Operation

Rear Compartment Lid Unlatch Switch

The BCM monitors a voltage signal to the interior and exterior rear compartment lid unlatch switch so that when either switch is pressed, the voltage within the signal circuit is pulled low and in response, the BCM will detect the voltage drop and check the status of the door lock system. If the vehicle doors are locked, the BCM will ignore the switches, if the vehicle doors have been unlocked, the BCM will recognize the request and will provide voltage to the rear compartment lid unlatch PCB relay.

Rear Compartment Lid Latch

When BCM receives a rear compartment lid release command from the exterior rear compartment lid unlatch switch, the BCM applies brief pulse of voltage to the rear compartment lid unlatch PCB relay control circuit, which energizes the coil side of the relay. The switch side of the rear compartment lid unlatch PCB relay then momentarily closes, supplying a brief pulse of battery positive voltage to the rear compartment lid latch. The rear compartment lid latch is continuously grounded and when it receives the voltage pulse, it will become energized and the latch will activate releasing the trunk lid so that the trunk lid may be manually raised to an open position.

Keyless Entry Transmitter

The BCM may also get a rear compartment lid release command from the remote keyless entry module. When the trunk button is pressed on the keyless entry transmitter, a rear compartment lid release request is sent to the remote keyless entry module, the remote keyless entry module will then send a serial data message to the BCM to command the release of the rear compartment lid.

Trunk Open Message

The body control module (BCM) monitors the voltage level of the trunk ajar signal circuit which is normally at the system voltage when the trunk lid is closed. When the trunk lid is ajar or open, a switch within the latch assembly closes providing a path to ground for the trunk ajar signal circuit. The voltage within the signal circuit will then drop to 0 volts, the BCM will then detect the voltage drop and will send a serial data message to the instrument panel. The instrument panel will then display the Trunk Open message.

POWER DOOR LOCKS DESCRIPTION AND OPERATION

Door Lock System Components

The power door lock system consists of the following components:

- Driver door lock switch
- Passenger door lock switch
- Rear window/door lockout switch, located on the driver window switch
- Body control module (BCM)
- Driver door latch
- Passenger door latch

- Left rear door latch
- Right rear door latch
- Door lock security PCB relay
- Exterior door handle switches
- Keyless entry control module

Power Door Locks Block Diagram

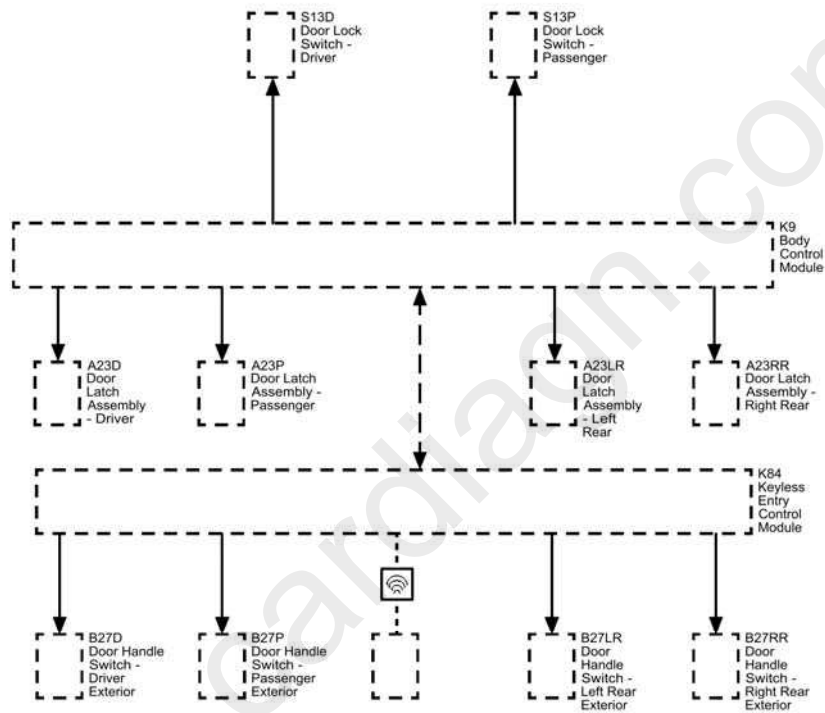


Fig. 75: Power Door Locks Block Diagram
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired

HW	Hard-Wired
HW	Hard-Wired
DA	Serial Data
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
WL	Wireless
S13D	S13D Door Lock Switch - Driver
S13P	S13P Door Lock Switch - Passenger
K9	K9 Body Control Module
A23RR	A23RR Door Latch Assembly - Right Rear
A23LR	A23LR Door Latch Assembly - Left Rear
A23P	A23P Door Latch Assembly - Passenger
A23D	A23D Door Latch Assembly - Driver
K84	K84 Keyless Entry Control Module
B27RR	B27RR Door Handle Switch - Right Rear Exterior
B27LR	B27LR Door Handle Switch - Left Rear Exterior
B27P	B27P Door Handle Switch - Passenger Exterior
B27D	B27D Door Handle Switch - Driver Exterior

Door Lock and Unlock Operation

When a door lock switch is activated in the lock or unlock position, the BCM will receive a ground signal on either the door lock switch lock or unlock signal circuits.

The BCM, upon receipt of a lock switch lock or unlock signal, will supply battery voltage to the door lock actuator lock or unlock control circuits. Since the opposite side of the lock actuator is connected to ground through the other lock actuator control circuit, the doors will then lock or unlock as commanded.

The following three circuits are used to operate the lock:

- Driver door unlock
- Passenger door unlock
- All door lock

The driver door lock actuator is isolated so it can be unlocked by itself using the keyless entry transmitter.

Passive Door Lock/Unlock Operation

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch

closes and the voltage signal within the signal circuit is pulled to ground. The keyless entry control module will detect the voltage drop and a low frequency antenna will transmit a challenge to the keyless entry transmitter. If the challenge is met, the keyless entry transmitter will respond, and the keyless entry control module will send a serial data message to the body control module to command the door(s) to be locked or unlocked

Power Door Child Lock Block Diagram

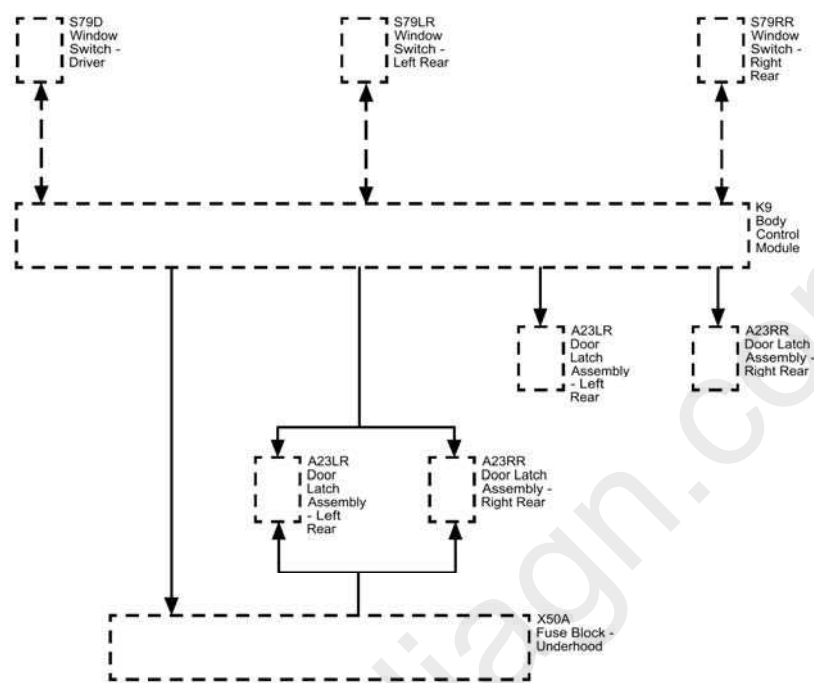


Fig. 76: Power Door Child Lock Block Diagram
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
DA	Serial Data
DA	Serial Data
DA	Serial Data
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
HW	Hard-Wired
S79LR	S79LR Window Switch - Left Rear
S79D	S79D Window Switch - Driver
S79RR	S79RR Window Switch - Right Rear
K9	K9 Body Control Module

A23RR	A23RR Door Latch Assembly - Right Rear
A23LR	A23LR Door Latch Assembly - Left Rear
A23RR	A23RR Door Latch Assembly - Right Rear
A23LR	A23LR Door Latch Assembly - Left Rear
X50A	X50A Fuse Block - Underhood

Rear Window and Rear Door Lockout Operation

The operator has the option to disable the interior rear door handles to prevent the unauthorized opening of the rear door doors while still retaining normal driver and passenger door handle functions. The driver door window switch has a lockout switch that will disable the interior rear door handles and the local rear window switches. When the lockout switch is pressed, the BCM will command the child lockout latches and will also send a disable command to the local rear window switches. The driver and passenger doors will still function normally by pressing a door lock switch which will unlock the doors but the child lockout latches will continue to disable the interior rear door handles.

Pressing the lockout switch again will signal a command to the BCM to unlatch the rear doors, restore normal interior rear door handle functions and restore normal function of the rear window switches

If the lockout indicator flashes while commanding the lockout system, indicates that the BCM has detected a fault in the system and that one or both interior rear door handles are not locked out and/or the local rear window switches are not locked out.