

Seat Belts

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Description and Operation

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Seat Belt System Description and Operation

Restraint System

The vehicle has front and rear seat belts that are the primary means of occupant restraint. Seat belts help to keep the occupants inside the passenger compartment and to gradually reduce the impact forces during the following events:

- Frontal impact type crashes
- Rear impact type crashes
- Side impact type crashes
- Roll-over type crashes

All seat belt retractors have emergency locks. The retractors remain unlocked during normal operation and under normal driving conditions. The retractors remain unlocked during normal conditions in order to allow free movement of the upper body of each occupant. A pendulum locks the seat belt webbing into position. The pendulum causes a locking bar to engage a cog on the spool of the retractor mechanism when the following conditions occur:

- A rapid extraction of the seat belt webbing from the retractor
- An abrupt change in vehicle speed
- An abrupt change in vehicle direction
- Operation of the vehicle on a steep upgrade
- Operation of the vehicle on a downgrade

The seat belts have an automatic locking (cinch) feature. The cinch feature is activated when the seat belt webbing is completely extended from the retractor. The cinch feature prevents the webbing from extending beyond the position from which it is allowed to retract. Use of the cinch feature is recommended for securing a child seat. The cinch feature may be cancelled by allowing the webbing to wind back completely into the retractor. After the cinch feature is cancelled, the webbing is unlocked. After the cinch feature is cancelled, the webbing will extend from the retractor. This vehicle is also equipped with a supplemental inflatable restraint (SIR) system. Refer to [Supplemental Inflatable Restraint System Description and Operation](#)

Front Seat Belt System

The front seat belt system includes a driver and passenger seat belt pretensioner retractor. Both front seat belt pretensioners includes a seat belt switch in the seat buckle which controls a reminder lamp and a tone alarm.

Note:

The front passenger seat is equipped with a seat belt reminder sensor, which detects an occupant. If the seat belt reminder sensor detects an empty front passenger seat, then the passenger fasten safety belt indicator will be disabled.

- When the driver seat belt is buckled and the ignition switch is turned ON, the following events will occur:
 - - The tone alarm will not operate.
 - The reminder lamp will not operate.
- When the passenger seat belt is buckled with an occupant sitting in the passenger front seat, then the ignition switch is turned ON, the following events will occur:
 - - The tone alarm will not operate.
 - The reminder lamp, which is located within the Passenger Air Bag Disable Indicator, will not be turned ON.

- When the driver seat belt is not buckled and the ignition switch is in the ON position, the following events will occur:
 -
 - The tone alarm will operate for 4â€“8â€“seconds and then go OFF.
 - The fasten safety belt indicator will turn ON for 20â€“seconds, until the driver seat belt is buckled.
- When the passenger seat belt is not buckled with an occupant sitting in the passenger front seat, then the ignition switch is turned ON, the following events will occur:
 -
 - The tone alarm will operate for 4â€“8â€“seconds and then go OFF.
 - The reminder lamp, which is located within the Passenger Air Bag Disable Indicator, will be turned ON.

Rear Seat Belt System

The Rear Seat Belt System includes the following components:

- The rear seat belt retractor is located at the wheelhouse panel and attached to the floor panel by the rear seat shoulder belt retractor bracket.
- The rear and the middle seat belt buckles are attached to each seat.

Child Seat Restraint System

Warning:

A child in a rear-facing child restraint can be seriously injured if the front passenger air bag inflates, because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle ownerâ€™s manual and the instructions that came with the child restraint.

A child in a rear-facing child restraint can be seriously injured if the right-front passenger's air bag inflates. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owner's manual and the instruction that came with the child restraint.

The child seat may only be used in a forward facing seating location. The child seat should be installed and secured according to the manufacturer's directions. If the child seat has a top strap, the seat will need to be anchored. Passengers should not be allowed to sit at locations where the seat belts are being used to secure the child seat.

All vehicles are equipped with a dual-mode type retractor with emergency and automatic locking features. The automatic locking feature is for restraint of a child seat. The child seat can be secured by pulling the seat belt all the way out to lock it. Then tighten the seat belt around the child seat.

If a child seat is to be used in the second seat position, a special dealer-installed anchor must be used in order to anchor the child seat top strap. This only applies to the seats designed with the top strap provision and for the vehicles sold in Canada. In order to ensure the correct top strap angle, the child seat is only to be used at the seating position for which the top strap anchor is installed.

Fasten Safety Belt Indicators

There are two fasten safety belt indicators for this vehicle. The driver fasten safety belt reminder is displayed in the instrument cluster, and the passenger fasten safety belt reminder is displayed in the passenger air bag disable indicator. The fasten safety belt indicator may only be ON during RUN. The fasten safety belt indicator illuminates under the following conditions:

- During the bulb check
- The inflatable restraint sensing and diagnostic module (SDM) sends the status of the driver seat belt to the instrument cluster via serial data. The passenger seat belt status is sent to the passenger air bag disable indicator DIC via a hardwire. If any of the seat belts are unfastened, the inflatable restraint sensing and diagnostic module will send a serial data message to the radio requesting a chime sound to be turned ON after a bulb check.

Diagnostic Information and Procedures

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DTC B0072 or B0073

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 B0072

Driver Seat Belt Switch Circuit

DTC B0073

Passenger Seat Belt Switch Circuit

For symptom byte information refer to [Symptom Byte List](#).

Diagnostic Fault Information

Circuit	Short to Ground	High Resistance	Open	Short to Voltage	Signal Performance
Driver Seat Belt Buckle Signal	B0072â€%02, B0072â€%0B	B0072â€%04, B0072â€%06, B0072â€%0C	B0072â€%04, B0072â€%06	B0072â€%01, B0072â€%05	B0072â€%08
Driver Seat Belt Buckle Low Reference	â€”	B0072â€%04, B0072â€%06, B0072â€%0C	B0072â€%04, B0072â€%06	â€”	â€”
Passenger Seat Belt Buckle Signal	B0073â€%02, B0073â€%0B	B0073â€%04, B0073â€%06, B0073â€%0C	B0073â€%04, B0073â€%06	B0073â€%01, B0073â€%05	B0073â€%08
Passenger Seat Belt Buckle Low Reference	â€”	B0073â€%04, B0073â€%06, B0073â€%0C	B0073â€%04, B0073â€%06	â€”	â€”

Circuit/System Description

The inflatable restraint seat belt buckle switch is within the seat belt buckle and provides an input to the inflatable restraint sensing and diagnostic module (SDM). The inflatable restraint sensing and diagnostic module supplies a low reference circuit and a seat belt buckle signal circuit to determine a buckled or unbuckled condition. The inflatable restraint sensing and diagnostic module monitors the seat belt buckle circuits and if a fault is detected a DTC will be set.

Conditions for Running the DTC

Ignition voltage is between 9â€“16â€%V.

Conditions for Setting the DTC

B0072â€%01 or B0073â€%01

The seat belt buckle circuit is shorted to voltage.

B0072â€%02 or B0073â€%02

The seat belt buckle circuit is shorted to ground.

B0072â€%04 or B0073â€%03

The seat belt buckle circuit is open.

B0072â€%05 or B0073â€%05

The seat belt buckle circuit is shorted to voltage or open.

B0072â€%06 or B0073â€%06

The seat belt buckle circuit is shorted to ground or open.

B0072â€%08 or B0073â€%08

The seat belt buckle signal is invalid.

B0072â€%0B or B0073â€%0B

The seat belt buckle signal is above threshold.

B0072â€%0C or B0073â€%0C

The seat belt buckle signal is below threshold.

Action Taken When the DTC Sets

The inflatable restraint sensing and diagnostic module will store a DTC and illuminate the air bag indicator in the instrument cluster.

Conditions for Clearing the DTC

The condition for setting the DTC no longer exists.

Reference Information

Schematic Reference

[Seat Belt Schematics](#)

Connector End View Reference

[Master Electrical Component List](#)

Description and Operation

[Supplemental Inflatable Restraint System Description and Operation](#)

Electrical Information Reference

- [Circuit Testing](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)
- [Connector Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the appropriate scan tool Seat Belt Status parameter changes between Buckled and Unbuckled when the seat belt is buckled and unbuckled.
3.
 - **If the parameter does not change**
 - Refer to Circuit/System Testing.
4.
 - **If the parameter changes**

5. All OK.

Circuit/System Testing

Note:

When removing connectors inspect for damage or corrosion. Damage or corrosion in the following requires repair or replacement of the affected component/connector.

- B153D Seat Belt Buckle-Driver
- B153P Seat Belt Buckle-Passenger
- K36 Inflatable Restraint Sensing and Diagnostic Module

1. Ignition OFF, disconnect the harness connector at the appropriate B153â€œSeat Belt Buckle. It may take up to 2 min for all vehicle systems to power down.

2. Test for less than 5â€œ between the low reference circuit terminalâ€œ1 and ground.

3.

- **If 5â€œ or greater**

4.

1. Ignition OFF, disconnect the harness connector at the K36 Inflatable Restraint Sensing and Diagnostic Module.

2. Test for less than 2â€œ in the low reference circuit end to end.

3.

- If 2â€œ or greater, repair the open/high resistance in the circuit.
- If less than 2â€œ, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.

5.

- **If less than 5â€œ**

6. Ignition ON.

7. Verify the appropriate scan tool Seat Belt Status parameter is Buckled.

8.

- **If not Buckled**

9.

1. Ignition OFF, disconnect the harness connector at the K36 Inflatable Restraint Sensing and Diagnostic Module.

2. Test for infinite resistance between the signal circuit terminalâ€œ2 and ground.

3.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.

10.

- **If Buckled**

11. Install a 3â€œA fused jumper wire between the signal circuit terminalâ€œ2 and the low reference circuit terminalâ€œ1.

12. Verify the appropriate scan tool Seat Belt Status parameter is Unbuckled.

13.

- **If not Unbuckled**

14.
 1. Ignition OFF, disconnect the harness connector at the K36 Inflatable Restraint Sensing and Diagnostic Module, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 3.
 - If 1 V or greater, repair the short to voltage on the circuit.
 4.
 - If less than 1 V
 5. Test for less than 2 Ω in the signal circuit end to end.
 6.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.
15.
 - **If Unbuckled**
16. Test or replace the B153 Seat Belt Buckle.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B153 Seat Belt Buckle.
2. Test for less than 5 Ω between the signal terminal 2 and the low reference terminal 1.
3.
 - **If 5 Ω or greater**
 - Replace the B153 Seat Belt Buckle.
4.
 - **If less than 5 Ω**
5. Insert the seat belt into the buckle.
6. Test for infinite resistance between the signal terminal 2 and the low reference terminal 1.
7.
 - **If less than infinite resistance**
 - Replace the B153 Seat Belt Buckle.
8.
 - **If infinite resistance**
9. All OK.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- [Front Seat Belt Buckle Replacement](#)
- [SIR/SRS Wiring Repairs](#)
- [Control Module References](#) for inflatable restraint sensing and diagnostic module replacement, programming, and setup.

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DTC B0082

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 B0082 01

Seat Belt Reminder Sensor Short to Battery

DTC B0082 02

Seat Belt Reminder Sensor Short to Ground

DTC B0082 04

Seat Belt Reminder Sensor Open Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Seat Belt Reminder Sensor Signal	B0082 02	B0082 04	B0082 01	
Seat Belt Reminder Sensor Ground		B0082 04	B0082 04	

Circuit/System Description

The passenger seat belt reminder sensor is within the passenger seat cushion and provides an input to the inflatable restraint sensing and diagnostic module (SDM). The SDM supplies a low reference circuit and a seat belt reminder sensor signal circuit to determine seated or unseated condition of passenger seat.

Conditions for Running the DTC

Ignition voltage is between 9-16V.

Conditions for Setting the DTC

B0082 01

The SDM detects a short to voltage in the seat belt reminder sensor signal circuit.

B0082 02

The SDM detects a short to ground in the seat belt reminder sensor signal circuit.

B0082 04

The SDM detects an open/high resistance in the seat belt reminder sensor signal circuit or the seat belt reminder sensor ground circuit.

Action Taken When the DTC Sets

The SIR System is disabled and no deployments are allowed.

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

[SIR Schematics](#)

Connector End View Reference

[Master Electrical Component List](#)

Description and Operation

[Supplemental Inflatable Restraint System Description and Operation](#)

Electrical Information Reference

- [Circuit Testing](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)
- [Connector Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

Circuit/System Verification

1. Ignition ON, with the passenger seat unoccupied, verify the scan tool Passenger Seat Occupancy Status parameter is Empty Seat.
2. With the passenger seat occupied, verify the scan tool Passenger Seat Occupancy Status parameter is Occupied.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the B60 seat belt reminder sensor.
2. Test for less than 30 Ω between the ground circuit terminal 2 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance. If the circuit tests normal, replace the K36 SDM.
4. Ignition ON, test for 4.75 $\pm$ 5.25%V between the signal circuit terminal 1 and ground.
5.
 - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
 - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the K36 SDM.
6. If all circuits test normal, replace the B60 seat belt reminder sensor.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Driver or Passenger Seat Cushion Pad Replacement](#)
- [Control Module References](#) for SDM replacement, setup and programming

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Symptoms - Seat Belts

Note:

Review the seat belt system description and operation in order to familiarize yourself with the system and how it functions. Refer to [Seat Belt System Description and Operation](#).

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the seat belt system.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could 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 the following symptom diagnostic procedure in order to diagnose the symptom:

- [Seat Belt Indicator Malfunction - Driver](#)
- [Seat Belt Indicator Malfunction - Passenger](#)
- [Seat Belt Indicator Malfunction - Rear](#)

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Seat Belt Indicator Malfunction - Driver

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 Seat Belt Switch Signal	1	2	2	â€”
Driver Seat Belt Indicator Control	1	2	2	â€”
Driver Seat Belt Switch Ground	â€”	2	2	â€”
1. Driver Seat Belt Indicator Always Illuminated				
2. Driver Seat Belt Indicator Inoperative				

Circuit/System Description

For vehicles equipped with the driver and passenger air bags, the driver seat belt switch will supply a ground for the seat belt indicator when the seat belt is unbuckled causing that indicator to illuminate.

For vehicles equipped with the driver air bag only, the driver seat belt switch supplies a ground to the SDM when the seat belt is buckled. When the driver is unbuckled, the seat belt switch opens removing the ground to the SDM. The SDM will then supply voltage to the seat belt indicator which will then cause that indicator to illuminate.

Reference Information

Schematic Reference

[Seat Belt Schematics](#)

Connector End View Reference

[Master Electrical Component List](#)

Description and Operation

[Seat Belt System 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. With RPO AJ3, ignition ON, observe the scan tool Driver Seat Belt Status parameter while buckling and unbuckling the driver seat belt. The value should change from Unbuckled to Buckled.
- 2.

- If the values do not change, refer to Seat Belt Switch Malfunction (With RPO AJ3).
3. With RPO AJ3, command the Driver Seat Belt Reminder ON and OFF with a scan tool, the seat belt indicator should turn ON and OFF while changing between the commanded states.
 4.
 - If the indicator is always ON or always OFF, refer to Driver Seat Belt Indicator Malfunction (With RPO AJ3).
 5. Without RPO AJ3, ignition ON, observe the seat belt indicator while buckling and unbuckling the driver seat belt. The indicator should turn ON and OFF as the seat belt is buckled and unbuckled.
 6.
 - If the indicator is always ON or always OFF, refer to Seat Belt Switch Malfunction (Without RPO AJ3).

Circuit/System Testing

Seat Belt Switch Malfunction (With RPO AJ3)

1. Ignition OFF, disconnect the harness connector at the B153D driver seat belt buckle.
2. Test for less than 1 Ω between the ground circuit terminal 1 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance. If the circuit tests normal, replace the K36 SDM.
4. Ignition ON, verify the scan tool Driver Seat Belt Status parameter is Buckled.
5.
 - If not the specified value, test the signal circuit terminal 2 for a short to ground. If the circuit tests normal, replace the K36 SDM.
6. Install a 3A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 1. Verify the scan tool Driver Seat Belt Status parameter is Buckled.
7.
 - If not the specified value, test the signal circuit for a short to voltage or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
8. If all circuits test normal, test or replace the B153D driver seat belt buckle.

Seat Belt Indicator Malfunction (With RPO AJ3)

1. Ignition OFF, disconnect the harness connector at the A5 driver information center.
2. Test for less than 1 Ω between the ground circuit terminal 7 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance.
4. Connect a test lamp between the control circuit terminal 11 and ground.
5. Ignition ON, command the Driver Seat Belt Reminder ON and OFF with a scan tool, the test lamp should turn ON and OFF while changing between the commanded states.
6.
 - If the test lamp is always ON, test the control circuit for a short to voltage. If the circuit tests normal, replace the K36 SDM.
 - If the test lamp is always OFF, test the control circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
7. If all circuit test normal, replace the A5 driver information center.

Seat Belt Switch Malfunction (Without RPO AJ3)

1. Ignition OFF, disconnect the harness connector at the B153D driver seat belt buckle.
2. Test for less than 1â€‰%â„ between the ground circuit terminal 1 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance.
4. Ignition ON, verify the seat belt indicator is OFF.
5.
 - If the seat belt indicator is ON, test the control circuit terminal 2 for a short to ground. If the circuit tests normal, replace the P16 instrument cluster.
6. Install a 3â€‰%A fused jumper wire between the control circuit terminal 2 and the ground circuit terminal 1. Verify the seat belt indicator is ON.
7.
 - If the seat belt indicator is OFF, test the control circuit for a short to voltage or an open/high resistance. If the circuit tests normal, replace the P16 instrument cluster.
8. If all circuits test normal, test or replace the B153D driver seat belt buckle.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B153D driver seat belt buckle.
2. Test for infinite resistance between the signal terminal 2 and the ground terminal 1 with the switch in the open position.
3.
 - If not the specified value, replace the B153D driver seat belt buckle.
4. Test for less than 2â€‰%â„ between the signal terminal 2 and the ground terminal 1 with the switch in the closed position.
5.
 - If greater than the specified range, replace the B153D driver seat belt buckle.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Front Seat Belt Buckle Replacement](#)
- [Instrument Panel Airbag Arming Status Display Replacement](#)
- [Control Module References](#) for the instrument cluster and SDM replacement, setup, and programming

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Seat Belt Indicator Malfunction - Passenger

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
Passenger Seat Belt Switch Signal	1	2	2	â€”
Seat Belt Indicator Control	1	2	2	â€”
Passenger Seat Belt Switch Ground	â€”	2	â€”	â€”
1. Seat Belt Indicator Always Illuminated				
2. Seat Belt Indicator Inoperative				

Circuit/System Description

The passenger seat belt switch supplies a ground to the SDM when the seat belt is buckled. When a seat belt is unbuckled, a switch opens removing the ground to the SDM. The SDM will then supply voltage to the seat belt indicator which will then cause that indicator to illuminate.

Reference Information

Schematic Reference

[Seat Belt Schematics](#)

Connector End View Reference

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- [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, have someone sit in the passenger seat. With a scan tool verify the Passenger Seat Occupancy Status indicates Occupied.
2.
 - If the scan tool does not indicate Occupied, test the seat belt reminder sensor signal circuit and the low reference circuit for an open or short. If the circuits test normal, replace the seat belt reminder sensor. Refer to [Driver or Passenger Seat Cushion Pad Replacement](#).

3. Observe the Passenger Seat Belt Status scan tool parameter while buckling and unbuckling the passenger seat belt. The values should change from Unbuckled to Buckled.
4.
 - If the values do not change, refer to Seat Belt Switch Malfunction.
5. Command the Driver Seat Belt Reminder ON and OFF with a scan tool, the seat belt indicator should turn ON and OFF while changing between the commanded states.
6.
 - If the indicator is always ON or always OFF, refer to Seat Belt Indicator Malfunction.

Circuit/System Testing

Seat Belt Switch Malfunction

1. Ignition OFF, disconnect the harness connector at the B88 passenger seat belt switch.
2. Test for less than 1â€‰% between the ground circuit terminal 1 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance. If the circuit tests normal, replace the K36 SDM.
4. Ignition ON, verify the scan tool Seat Belt Status parameter is Buckled.
5.
 - If not the specified value, test the signal circuit terminal 2 for a short to ground. If the circuit tests normal, replace the K36 SDM.
6. Install a 3â€‰% fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 1. Verify the scan tool Seat Belt Status parameter is Buckled.
7.
 - If not the specified value, test the signal circuit for a short to voltage or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
8. If all circuits test normal, test or replace the B88 passenger seat belt switch.

Seat Belt Indicator Malfunction

1. Ignition OFF, disconnect the harness connector at the A5 driver information center.
2. Test for less than 1â€‰% between the ground circuit terminal 7 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance.
4. Connect a test lamp between the control circuit terminal 11 and ground.
5. Ignition ON, command the Driver Seat Belt Reminder ON and OFF with a scan tool, the test lamp should turn ON and OFF while changing between the commanded states.
6.
 - If the test lamp is always ON, test the control circuit for a short to voltage. If the circuit tests normal, replace the K36 SDM.
 - If the test lamp is always OFF, test the control circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
7. If all circuit test normal, test or replace the A5 driver information center.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B88 passenger seat belt switch.

2. Test for infinite resistance between the signal terminal 2 and the ground terminal 1, at the switch, with the switch in the open position.
3.
 - If not the specified value, replace the B88 passenger seat belt switch.
4. Test for less than 2â€™%l© between the signal terminal 2 and the ground terminal 1, at the switch, with the switch in the closed position.
5.
 - If greater than the specified range, replace the B88 passenger seat belt switch.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Front Seat Belt Buckle Replacement](#)
- [Control Module References](#) for the SDM and DIC replacement, setup, and programming

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Seat Belt Indicator Malfunction - Rear

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
Left Rear Seat Belt Switch Signal	1	2	2	â€”
Rear Middle Seat Belt Switch Signal	1	2	2	â€”
Right Rear Seat Belt Switch Signal	1	2	2	â€”
Seat Belt Indicator Control	1	2	2	â€”
Left Rear Seat Belt Switch Ground	â€”	2	â€”	â€”
Rear Middle Seat Belt Switch Ground	â€”	2	â€”	â€”
Right Rear Seat Belt Switch Ground	â€”	2	â€”	â€”
1. Seat Belt Indicator Always Illuminated				
2. Seat Belt Indicator Inoperative				

Circuit/System Description

The rear seat belt switches each supply a ground to the SDM when their seat belts are buckled. When a seat belt is unbuckled, a switch opens removing the ground to the SDM. The SDM will then supply voltage to the seat belt indicator which will then cause that indicator to illuminate.

Reference Information

Schematic Reference

[Seat Belt Schematics](#)

Connector End View Reference

[Component Connector End Views](#)

Description and Operation

[Seat Belt System 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. Observe the scan tool parameters listed below while buckling and unbuckling the left rear, right rear and middle rear seat belts. The values for each should change from Unbuckled to Buckled.

2.
 - 2nd Row Left Seat Belt Status
 - 2nd Row Middle Seat Belt Status
 - 2nd Row Right Seat Belt Status
3.
 - If the values do not change, refer to Seat Belt Switch Malfunction.
4. Command the Driver Seat Belt Reminder ON and OFF with a scan tool, the seat belt indicator should turn ON and OFF while changing between the commanded states.
5.
 - If the indicator is always ON or always OFF, refer to Seat Belt Indicator Malfunction.

Circuit/System Testing

Seat Belt Switch Malfunction

1. Ignition OFF, disconnect the harness connector at the appropriate B88 seat belt switch.
2. Test for less than 1â€‰%â„, between the ground circuit terminal 1 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance. If the circuit tests normal, replace the K36 SDM.
4. Ignition ON, verify the scan tool Seat Belt Status parameter is Buckled.
5.
 - If not the specified value, test the signal circuit terminal 2 for a short to ground. If the circuit tests normal, replace the K36 SDM.
6. Install a 3â€‰%A fused jumper wire between the signal circuit terminal 2 and the ground circuit terminal 1. Verify the scan tool Seat Belt Status parameter is Buckled.
7.
 - If not the specified value, test the signal circuit for a short to voltage or an open/high resistance. If the circuit tests normal, replace the K36 SDM
8. If all circuits test normal, test or replace the appropriate rear B88 seat belt switch.

Seat Belt Indicator Malfunction

1. Ignition OFF, disconnect the harness connector at the A5 driver information center.
2. Test for less than 1â€‰%â„, between the ground circuit terminal 7 and ground.
3.
 - If greater than the specified range, test the ground circuit for an open/high resistance.
4. Connect a test lamp between the control circuit terminal 11 and ground.
5. Ignition ON, command the Driver Seat Belt Reminder ON and OFF with a scan tool, the test lamp should turn ON and OFF while changing between the commanded states.
6.
 - If the test lamp is always ON, test the control circuit for a short to voltage. If the circuit tests normal, replace the K36 SDM.
 - If the test lamp is always OFF, test the control circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the K36 SDM.
7. If all circuit test normal, test or replace the A5 driver information center.

Component Testing

1. Ignition OFF, disconnect the harness connector at the appropriate rear B88 seat belt switch.
2. Test for infinite resistance between the signal terminal 2 and the ground terminal 1 with the switch in the open position.
3.
 - If not the specified value, replace the appropriate rear B88 seat belt switch.
4. Test for less than 2â€™%â„, between the signal terminal 2 and the ground terminal 1 with the switch in the closed position.
5.
 - If greater than the specified range, replace the appropriate rear B88 seat belt switch.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Rear Seat Belt Buckle Replacement](#)
- [Instrument Panel Airbag Arming Status Display Replacement](#)
- [Control Module References](#) for the SDM and DIC replacement, setup, and programming

Repair Instructions

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Repairs and Inspections Required After a Collision

Warning:

Restraint systems can be damaged in a collision. To help avoid injury and ensure that all parts in need of replacement are replaced:

- Replace any seat belt system that was in use during the collision serious enough to deploy any automatic restraint device such as air bags and seat belt pretensioners. This not only includes seat belt systems in use by people of adult size, but seat belt systems used to secure child restraints, infant carriers and booster seats, including LATCH system and top tether anchorages.
- Replace any seat belt system that has torn, worn, or damaged components. This not only includes adult seat belt systems, but built-in child restraints and LATCH system components, if any.
- Replace any seat belt system if you observe the words 'REPLACE' or 'CAUTION', or if a yellow tag is visible. Do not replace a seat belt if only the child seat caution label is visible.
- Replace any seat belt system if you are doubtful about its condition. This not only includes adult seat belt systems, but built-in child restraints, LATCH system components, and any restraint system used to secure infant carriers, child restraints, and booster seats.
- Do NOT replace single seat belt system components in vehicles that have been in a collision as described above. Always replace the entire seat belt system with the buckle, guide and retractor assembly, which includes the latch and webbing material.

After a minor collision where no automatic restraint device was deployed, seat belt system replacement may not be necessary, unless some of the parts are torn, worn, or damaged.

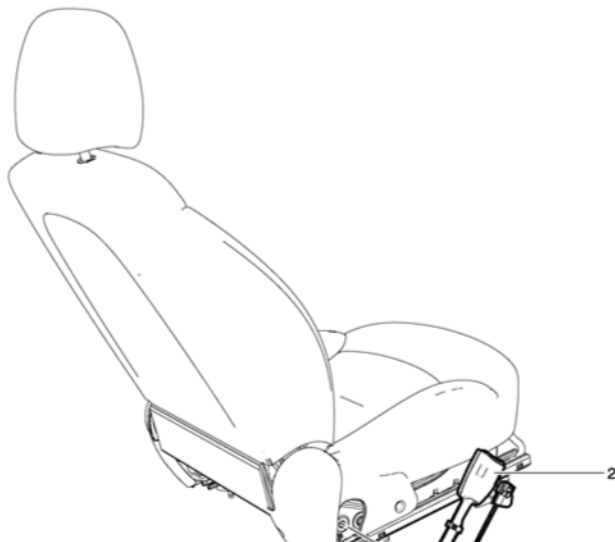
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Front Seat Belt Buckle Replacement





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Callout	Component Name
Preliminary Procedure	
Remove the front seat. Refer to Front Seat Removal and Installation .	
1	Front Seat Belt Buckle Bolt Caution: Refer to Fastener Caution . Tighten 40â€%N-m (30â€%lbâ€%ft)
2	Front Seat Belt Buckle Assembly

Related Part Information

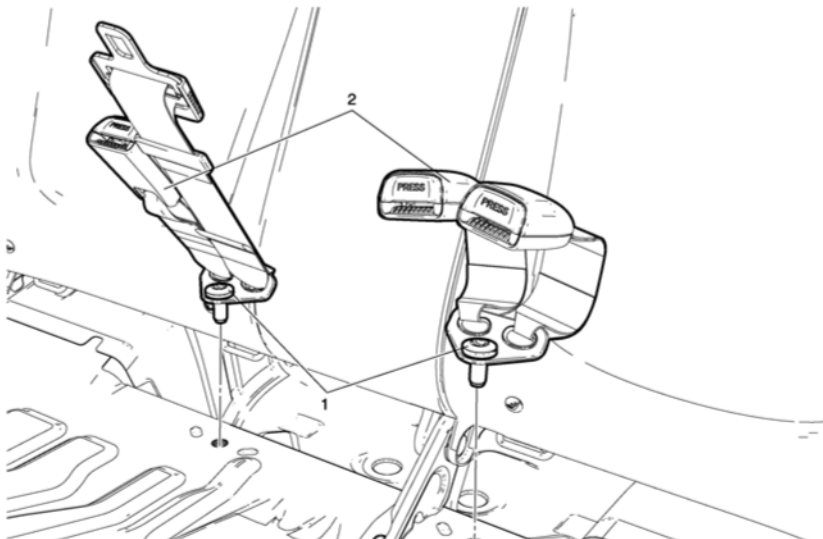
Part Name	Catalog Name	Part Code
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Part Name	Catalog Name	Part Code
Driver Seat Belt Buckle	BUCKLE,D/SEAT BELT	4413A
Passenger Seat Belt Buckle	BUCKLE,P/SEAT BELT	4474A
Front Seat Belt Buckle	BUCKLE,F/SEAT BELT	4651A
Driver Seat Belt Buckle	BUCKLE KIT,D/SEAT BELT	2007W
Driver Seat Belt Buckle	BUCKLE,D/SEAT BELT	2007X
Front Seat Belt Buckle	BUCKLE,F/SEAT BELT	2050A
Driver Seat Belt Buckle	BUCKLE,D/SEAT BELT (W/ PRE-TNSR)	2057A
Passenger Seat Belt Buckle	BUCKLE,P/SEAT BELT (W/ PRE-TNSR)	2058A
Passenger Seat Belt Buckle	BUCKLE KIT,P/SEAT BELT	2402T
Passenger Seat Belt Buckle	BUCKLE,P/SEAT BELT	2402U
Driver Seat Belt Buckle	BUCKLE,D/SEAT BELT	X0167
Passenger Seat Belt Buckle	BUCKLE,P/SEAT BELT	X0168

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Rear Seat Belt Buckle Replacement





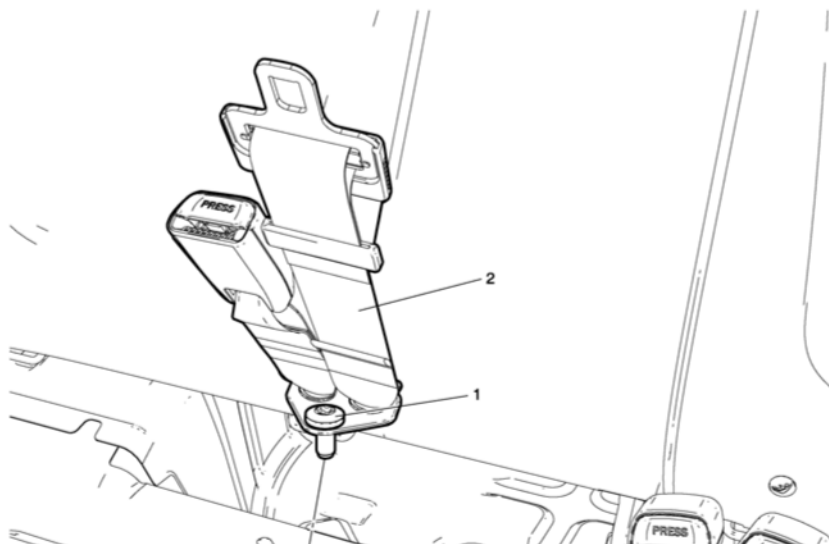
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Callout	Component Name
Preliminary Procedure	
Remove the rear seat cushion. Refer to Rear Seat Cushion Removal and Installation .	
1	Rear Seat Belt Buckle Bolt Caution: Refer to Fastener Caution . Tighten 40â€%N-m (30â€%lbâ€%ft)
2	Rear Seat Belt Buckle Assembly

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Rear Seat Center Belt Replacement





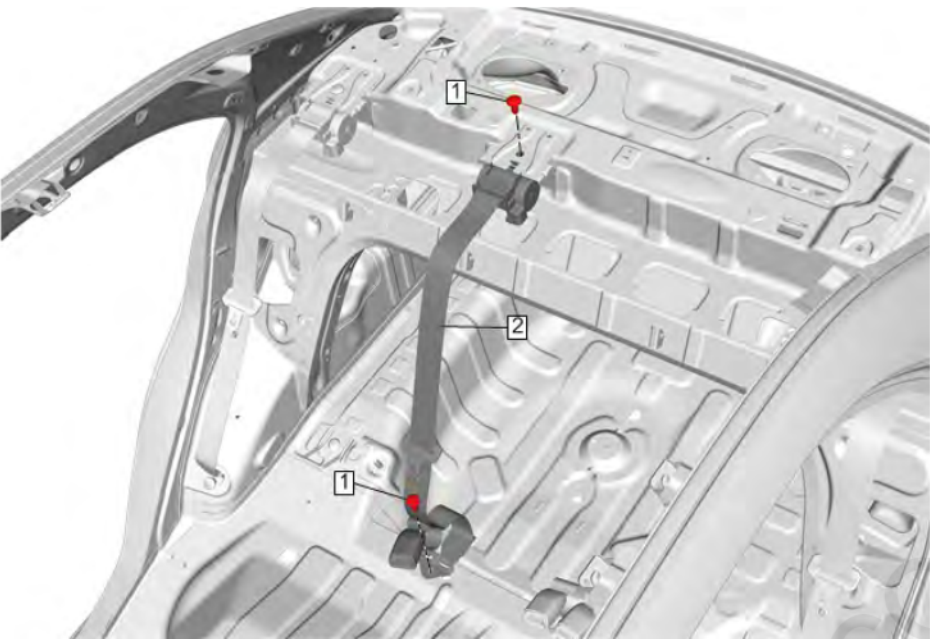
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Callout	Component Name
Preliminary Procedure	
Remove the rear seat cushion. Refer to Rear Seat Cushion Removal and Installation .	
1	Rear Seat Center Belt Nut Caution: Refer to Fastener Caution . Tighten 40â€%N-m (30â€%lbâ€%ft)
2	Rear Seat Center Belt Assembly

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Rear Center Seat Belt Retractor Replacement (Notchback)



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Callout	Component Name
Preliminary Procedure	
1. Rear Seat Cushion Removal and Installation	
2. Rear Seat Back Cushion Removal and Installation	
3. Rear Window Panel Trim Replacement	
1	Rear Seat Belt Retractor Bolt [2>x] Caution : Fastener Caution Tighten 40N-m (30 lb ft)
2	Rear Center Seat Belt Retractor

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Driver or Passenger Seat Belt Replacement





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Callout	Component Name
Preliminary Procedures 1. Remove the center pillar upper trim panel. Refer to Center Pillar Upper Trim Panel Replacement . 2. Remove the center pillar lower trim panel. Refer to Center Pillar Lower Trim Panel Replacement .	
1	Front Seat Belt Upper Anchor Bolt Caution: Refer to Fastener Caution . Tighten 40â€%N-m (30â€%lbâ€%ft)
2	Front Seat Belt Lower Anchor Bolt Tighten 40â€%N-m (30â€%lbâ€%ft)

Callout	Component Name
3	Front Seat Belt Retractor Bolt Tighten 40â€%N-m (30â€%lbâ€%ft)
4	Front Seat Belt Assembly Procedure 1. Disconnect the pretensioner connector from the retractor. 2. Remove the retractor from the body panel.

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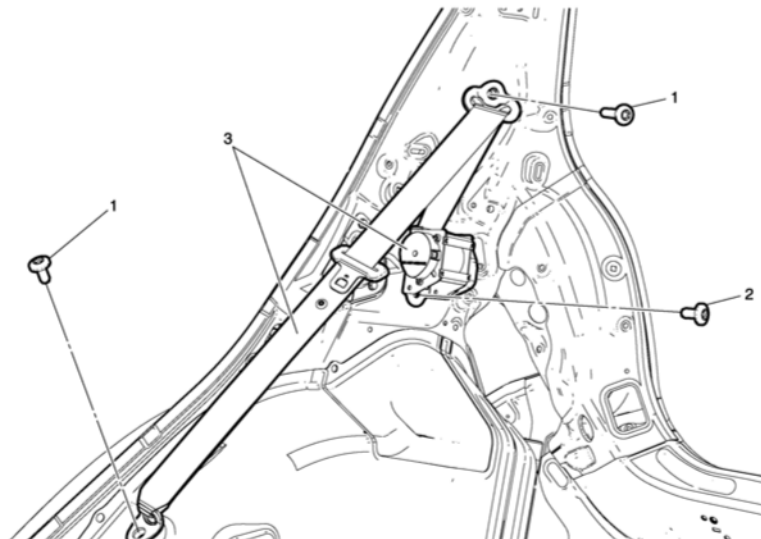
1. SAFETY AND SECURITY

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Shoulder Belt Replacement - Rear (Hatchback)





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Callout	Component Name
Preliminary Procedures	
1. Remove the rear wheelhouse trim finish. Refer to Rear Wheelhouse Trim Finish Panel Replacement .	
2. Remove the quarter window garnish molding. Refer to Quarter Window Garnish Molding Replacement .	
1	Rear Seat Belt Anchor Bolt Caution: Refer to Fastener Caution . Tighten 40â€%N-m (30â€%lbâ€%ft)
2	Rear Seat Belt Retractor Bolt Tighten 40â€%N-m (30â€%lbâ€%ft)

Callout	Component Name
3	Rear Seat Belt Assembly

Related Part Information

Part Name	Catalog Name	Part Code
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Rear Seat Shoulder Belt	BELT,R/SEAT SHLDR	5427A
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Rear Seat Shoulder Belt	BELT,R/SEAT SHLDR	2800A
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Rear Seat Shoulder Belt	BELT,R/SEAT SHLDR	2800B
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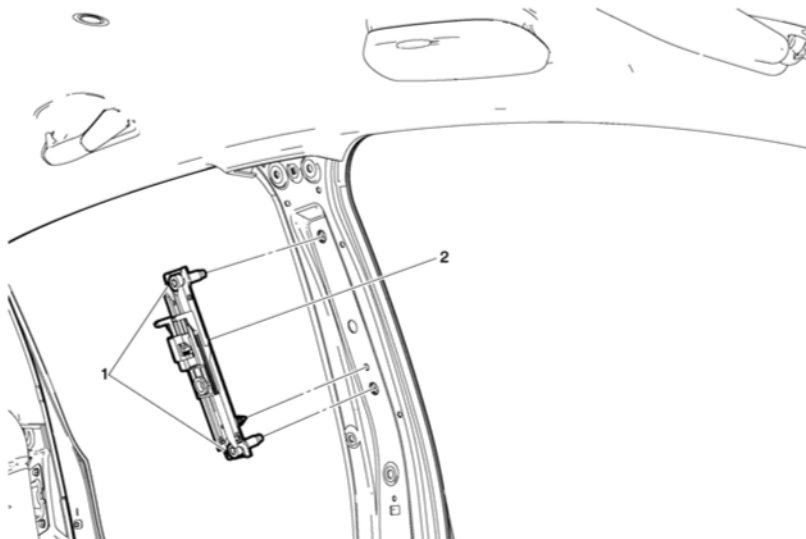
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Front Seat Belt Guide Adjuster Replacement





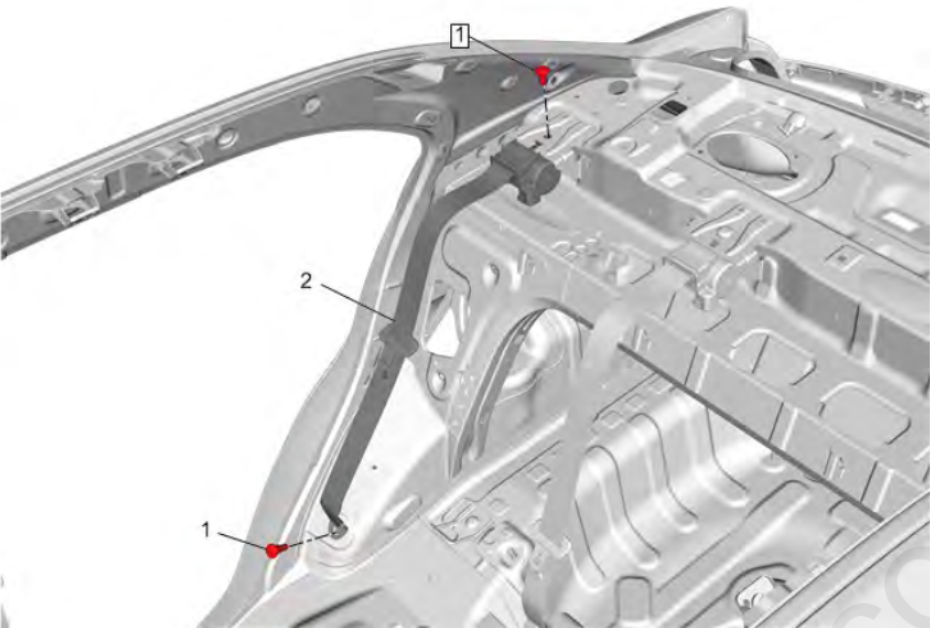
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Callout	Component Name
Preliminary Procedure	
Remover center pillar upper trim panel. Refer to Center Pillar Upper Trim Panel Replacement .	
1	Front Seat Shoulder Belt Guide Adjuster Bolt (Qty: 2) Caution: Refer to Fastener Caution . Tighten 40 N-m (30 lb-ft)
2	Front Seat Shoulder Belt Guide Adjuster Assembly

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Rear Seat Belt Retractor Replacement (Notchback)

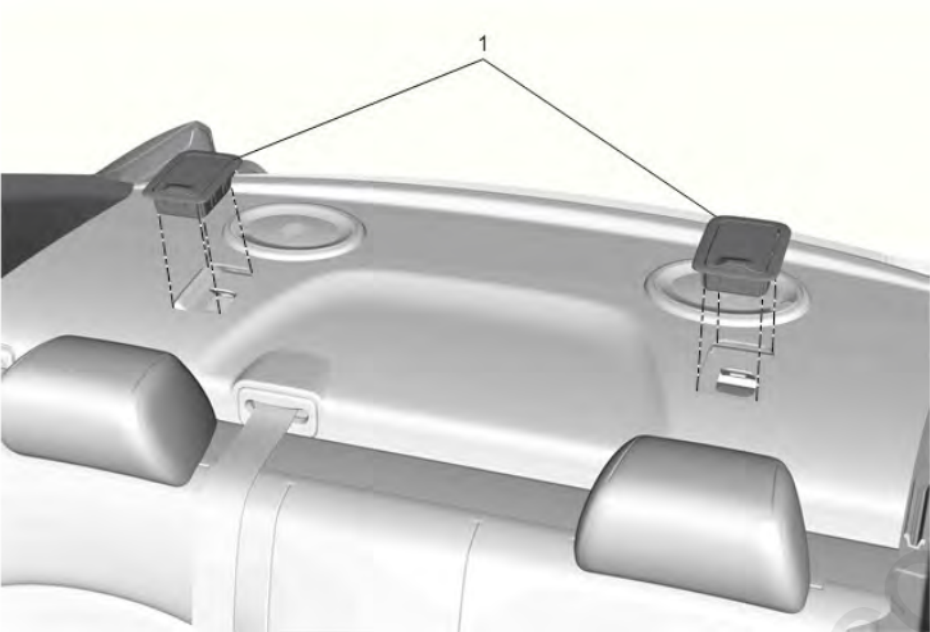


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Callout	Component Name
Preliminary Procedure	
1. Rear Seat Cushion Removal and Installation	
2. Rear Seat Back Cushion Removal and Installation	
3. Rear Window Panel Trim Replacement	
1	Rear Seat Belt Retractor Bolt [2>x] Caution : Fastener Caution Tighten 40N-m (30 lb ft)
2	Rear Seat Belt Retractor

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Child Seat Top Strap Bracket Access Hole Cover Replacement (Notchback)



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Callout	Component Name
	Child Seat Top Strap Bracket Access Hole Cover
1	Procedure
	Using a flat-bladed tool, Remove the child seat top strap bracket access hole cover from rear window panel trim.

Related Part Information

Part Name	Catalog Name	Part Code
Child Seat Top Strap Bracket Access Hole Cover	COVER,CHILD ST TOP STRP BRKT ACC HOLE 2003K	

Specifications

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Fastener Specifications

Reusable Threaded Fastener Tightening Specifications

Application	Specification
	Metric (English)
Note:	
All fasteners listed in this table can be reused after removal.	
Front Seat Belt Buckle Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Front Seat Belt Height Adjuster Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Front Seat Belt Lower Anchor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Front Seat Belt Retractor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Front Seat Belt Upper Anchor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Rear Center Seat Belt Buckle Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Rear Seat Belt Buckle Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Rear Seat Belt Lower Anchor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Rear Seat Belt Retractor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)
Rear Seat Belt Upper Anchor Bolt	40â€%N-mâ€%(30â€%lbâ€%ft)

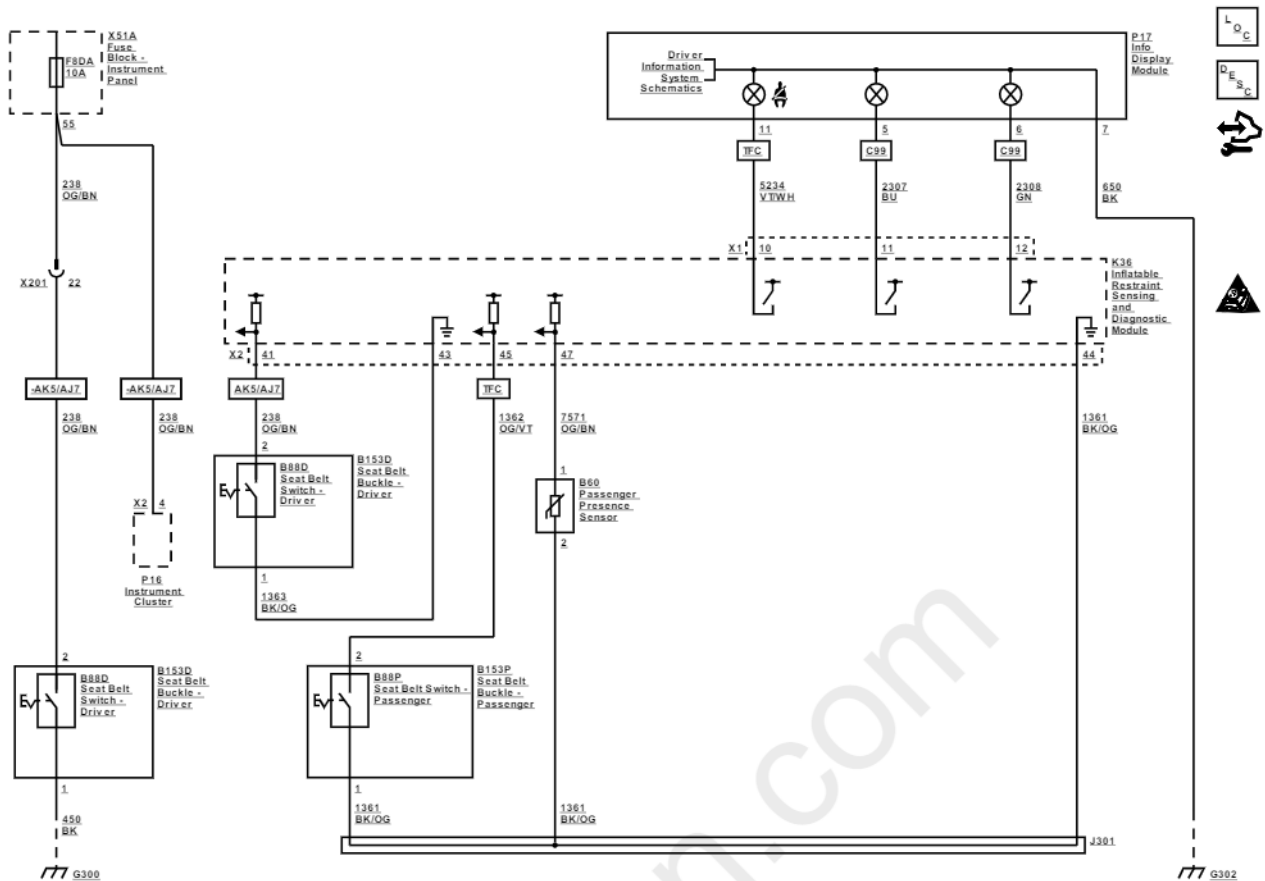
Schematic and Routing Diagrams

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Seat Belt Schematics

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Seat Belts



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