

RESTRAINTS

Seat Belts - Coupe & Wagon

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Child Tether Anchor Bolt	30 N.m	22 lb ft
Front Seat Belt Buckle Assembly	40 N.m	30 lb ft
Rear Seat Center Belt Retractor Bolt	30 N.m	22 lb ft
Rear Seat Center Shoulder Belt Anchor Plate Bolt	36 N.m	27 lb ft
Seat Belt Buckle Nut	36 N.m	27 lb ft
Seat Belt Retractor Bolt	45 N.m	33 lb ft
Seat Shoulder Belt Anchor Plate Bolt	45 N.m	33 lb ft
Shoulder Belt Guide Bolt	47 N.m	35 lb ft

SCHEMATIC WIRING DIAGRAMS

SEAT BELT WIRING SCHEMATICS

Seat Belt System

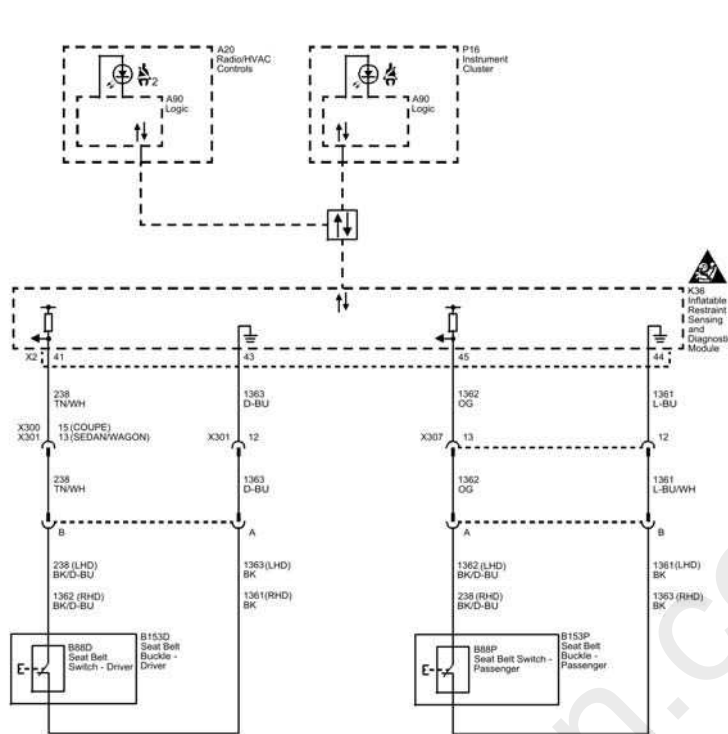


Fig. 1: Seat Belt System

Courtesy of GENERAL MOTORS COMPANY

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC CODE INDEX

DIAGNOSTIC CODE INDEX

DTC	Description
DTC B0072 or B0073	DTC B0072 Driver Seat Belt Switch Circuit DTC B0073 Passenger Seat Belt Switch Circuit

DTC B0072 OR B0073: SEAT BELT 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 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 Switch Signal	B0072 02, B0072 0B	B0072 04, B0072 06, B0072 0C	B0072 04, B0072 06	B0072 01, B0072 05	B0072 08
Passenger Seat Belt Switch Signal	B0073 02, B0073 0B	B0073 04, B0073 06, B0073 0C	B0073 04, B0073 06	B0073 01, B0073 05	B0073 08

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 switch signal circuit to determine a buckled or unbuckled condition. The inflatable restraint sensing and diagnostic module monitors the seat belt switch circuits and if a fault is detected a DTC will be set.

Conditions for Running the DTC

Ignition voltage is between 9-16 V.

Conditions for Setting the DTC

B0072 01 or B0073 01

The seat belt switch circuit is shorted to voltage.

B0072 02 or B0073 02

The seat belt switch circuit is shorted to ground.

B0072 04 or B0073 03

The seat belt switch circuit is open.

B0072 05 or B0073 05

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

B0072 06 or B0073 06

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

B0072 08 or B0073 08

The seat belt switch signal is invalid.

B0072 0B or B0073 0B

The seat belt switch signal is above threshold.

B0072 0C or B0073 0C

The seat belt switch 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

COMPONENT CONNECTOR END VIEWS - INDEX - COUPE AND WAGON

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.
 - **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**
3. 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. Scan tool disconnected. Disconnect the harness connector at the appropriate B153 Seat Belt Buckle. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 5 ohms between the low reference circuit terminal 2 and ground.
 - **If 5 ohms or greater**
 1. Ignition OFF, disconnect the harness connector at the K36 Inflatable Restraint Sensing and Diagnostic Module.
 2. Test for less than 2 ohms in the low reference circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.
 - **If less than 5 ohms**
3. Ignition ON.
4. Verify the appropriate scan tool Seat Belt Status parameter is Buckled.
 - **If not Buckled**
 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 terminal 1 and ground.
 - 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.
- **If Buckled**
- 5. Install a 3 A fused jumper wire between the signal circuit terminal 1 and the low reference circuit terminal 2.
- 6. Verify the appropriate scan tool Seat Belt Status parameter is Unbuckled.
 - **If not Unbuckled**
 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.
 - 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 K36 Inflatable Restraint Sensing and Diagnostic Module.
 - **If Unbuckled**
- 7. Test or replace the B153 Seat Belt Buckle.

Component Testing

1. Ignition OFF. Scan tool disconnected. Disconnect the harness connector at the appropriate B153 Seat Belt Buckle. It may take up to 2 min for all vehicle systems to power down.
2. Test for infinite resistance between the signal terminal 1 and the low reference terminal 2.
 - **If less than infinite resistance**
Replace the B153 Seat Belt Buckle.
 - **If infinite resistance**
3. Insert the seat belt into the buckle.
4. Test for less than 5 ohms between the signal terminal 1 and the low reference terminal 2.
 - **If 5 ohms or greater**
Replace the B153 Seat Belt Buckle.
 - **If less than 5 ohms**
5. All OK.

Repair Instructions

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

- **Front Seat Belt Buckle Replacement**
- **Control Module References** for inflatable restraint sensing and diagnostic module replacement,

programming, and setup.

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. Refer to **Checking Aftermarket Accessories** .
- 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 DOES NOT RETRACT

1. Grasp the seat belt and pull it out slowly and evenly from the retractor, do that in 15-25mm (5/8-1in) increments, continuing until the seat belts entire length has been pulled out.
2. Release the seat belt, and allow the retractor to slowly retract the full length of the seat belt. The seat belt must retract without any additional help.
3. Additionally, make sure, that the seat belt can be stopped any time while retracting and then resumed while being released again. This must also be possible in all retracting positions.
4. Should problems be observed in step 3, perform the first two steps 2 more times.
5. Should the retractor, after performing these steps, not function freely and properly, it is to be replaced with a new part.

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	-
Driver Seat Belt Switch Low Reference	-	2	-	-
1. Indicator will remain ON with seat belt buckled. 2. Indicator will illuminate only for the bulb check.				

Circuit/System Description

The driver seat belt switch is a 2-wire switch wired to the Inflatable Restraint Sensing and Diagnostic Module using a signal circuit and a low reference circuit. When the seat belt is unbuckled the switch is closed, and when the seat belt is buckled the switch is open. The Inflatable Restraint Sensing and Diagnostic Module sends the status of the driver seat belt via serial data to the Instrument Cluster. After receiving the message, the Instrument Cluster controls the illumination of the driver seat belt indicator.

Reference Information

Schematic Reference

Seat Belt Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX - COUPE AND WAGON

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. Verify the driver seat belt indicator turns ON and OFF when commanding the Instrument Cluster all indicators ON and OFF with a scan tool.

- **If the driver seat belt indicator does not turn ON and OFF as commanded .**

Replace the P16 Instrument Cluster.

- **If the driver seat belt indicator does turn ON and OFF as commanded**

2. Verify the scan tool Diver Seat Belt Switch parameter changes between Buckled and Unbuckled when buckling and unbuckling the driver seat belt.

- **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**

3. 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.

- **B88D Seat Belt Switch-Driver**
- **Seat belt switch harness connector**
- **K36 Inflatable Restraint Sensing and Diagnostic Module**
- **Inflatable Restraint Sensing and Diagnostic Module wiring harness connector**

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the B88D Seat Belt Switch - Driver. It may take up to 2 minutes for all vehicle systems to power down.

2. Test for less than 5 ohms between the low reference circuit terminal B and ground.

- **If 5 ohms or greater**

1. Disconnect the X2 harness connector at the K36 Inflatable Restraint Sensing and Diagnostic Module.

2. Test for less than 2 ohms in each low reference circuit end to end.

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

- If less than 2 ohms, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.

- **If less than 5 ohms**

3. Ignition ON.

4. Verify the scan tool Driver Seat Belt Status parameter is Buckled.

- **If the parameter is not Buckled**

1. Ignition OFF, disconnect the X2 harness connector at the K36 Inflatable Restraint Sensing and

Diagnostic Module.

2. Test for infinite resistance between the seat belt switch signal circuit terminal A and ground.
 - 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.
 - **If the parameter is Buckled**
5. Install a 3 A fused jumper wire between the signal circuit terminal A and the low reference circuit terminal B.
6. Verify the scan tool Driver Seat Belt Status parameter is Unbuckled.
 - **If the parameter is not Unbuckled**
 1. Ignition OFF, disconnect the X2 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.
 - 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 each circuit end to end.
 - If 2 ohms or greater, repair the open/high resistance in the circuit.
 - If less than 2 ohms, replace the K36 Inflatable Restraint Sensing and Diagnostic Module.
 - **If the parameter is Unbuckled**
7. Test or replace the B88D Seat Belt Switch-Driver.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B88D Seat Belt Switch - Driver, buckle the driver seat belt.
2. Test for infinite resistance between the signal circuit terminal A and the low reference terminal B.
 - **If not infinite resistance**

Replace the B88D Seat Belt Switch - Driver.
 - **If infinite resistance**
3. Unbuckle the driver seat belt.
4. Test for less than 1 ohms between the signal circuit terminal A and the low reference terminal B.
 - **If 1 ohms or greater**

Replace the B88D Seat Belt Switch - Driver.
 - **If less than 1 ohms**
5. All OK.

Repair Instructions

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

- **Front Seat Belt Buckle Replacement**
- **Control Module References** for Inflatable Restraint Sensing and Diagnostic Module and Instrument Cluster replacement, programming, and setup

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.

Circuit/System Description

The seat belt buckle switch is located within the seat belt buckle assembly and provides an input to the inflatable restraint sensing and diagnostic module (SDM). The SDM supplies a low reference circuit and a seat belt switch signal circuit to determine a buckled or unbuckled condition.

If the SDM determines the driver seat belt has not been buckled, the SDM will send a serial data message to the instrument panel cluster (IPC) to illuminate the seat belt warning indicator. If the SDM determines that a passenger is sitting in the passenger seat and the seat belt has not been buckled, the SDM will send a serial data message to the passenger presence system (PPS) display to illuminate the passenger seat belt warning indicator.

Diagnostic Aids

Objects on the passenger seat can cause the passenger seat belt reminder to be commanded on. Depending on the sensing technology used, a conductive object (computers, MP3 players, cell phones, diagnostic scan tool, wires, a hand, etc.) placed on the passenger seat may cause the Passenger Presence Detection Module to command the passenger air bag indicator ON and/or command the passenger seat belt indicator ON. The fasten seat belt chime will also sound.

Reference Information

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Seat Belt Schematics

Connector End View Reference

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- **Connector Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON, observe the scan tool Passenger Seat Belt Switch parameter while buckling and unbuckling the passenger seat belt. The parameter should change between Buckled and Unbuckled.
 - If the parameter does not cycle between the specified values, refer to Passenger Seat Belt Switch Circuit Malfunction.
2. Ignition ON, while sitting in the passenger seat with the seat belt unbuckled, verify the passenger seat belt warning indicator is illuminated on the PPS display.
 - If the indicator is not illuminated, replace the PPS display.

Circuit/System Testing

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

- **The SDM**
- **The SDM wiring harness connector**
- **The seat belt buckle**
- **The seat belt buckle wiring harness connector**

Passenger Seat Belt Switch Circuit Malfunction.

1. Ignition OFF, disconnect the harness connector at the passenger seat belt switch.
2. Ignition OFF, test for less than 10 ohms between the low reference circuit terminal A and ground.
 - If greater than the specified range, test the low reference circuit for an open/high resistance. If the circuit tests normal, replace the SDM.
3. Ignition ON, verify the scan tool Passenger Seat Belt Switch parameter is Unbuckled.
 - If not the specified value, test the signal circuit terminal B for a short to ground. If the circuit tests normal, replace the SDM.
4. Install a 3A fused jumper wire between the signal circuit terminal B and the low reference circuit terminal A. Verify the scan tool Passenger Seat Belt Switch parameter is Buckled.
 - 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 SDM.

5. If all circuits test normal, test or replace the seat belt buckle assembly.

Repair Instructions

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

- **Seat Belt Retractor Pretensioner Replacement - Front (AQ9 and Coupe prior to VIN B0100175) ,
Seat Belt Retractor Pretensioner Replacement - Front (W2E) , Seat Belt Retractor Pretensioner
Replacement - Front (AQ9 and Coupe)**
- **Control Module References** for SDM replacement, programming and setup

REPAIR INSTRUCTIONS

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.

SEAT BELT LATCH STOP INSTALLATION

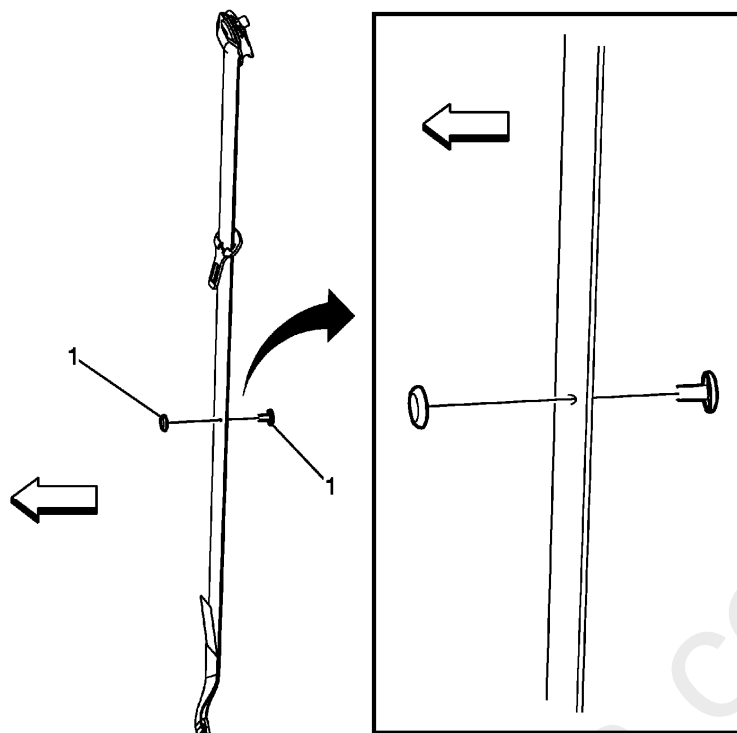


Fig. 2: View Of Seat Belt Latch Stop Components
 Courtesy of GENERAL MOTORS COMPANY

Seat Belt Latch Stop Installation

Callout	Component Name
Preliminary Procedure	
1. Locate the hole in the seat belt webbing where the original seat belt stop button was located. 2. If the original hole in the seat belt webbing is not visible, perform the following: • If either the right or left stop button is missing use the opposing seat belt as a reference. • With the opposing seat belt fully stowed, measure the distance between the seat belt lower anchor and the stop button. • Using the measurement obtained above, measure and mark the location of the missing stop button on the center of the seat belt webbing. 3. Ensure the seat belt latch plate is located above the mark or original hole.	
1	Seat Belt Stop Button Procedure 1. Work the male half of the stop button through the hole in the webbing or at the marked location. 2. Align the female half of the stop button with the male half of the stop button. 3. Snap the two halves together.

4. Trim off any excess of the male half of the stop button flush with the female half of the stop button.

TIP: Ensure the male half of the stop button is facing forward in the vehicle in order to ensure the stop button will not snag customers clothing.

FRONT SEAT BELT BUCKLE REPLACEMENT

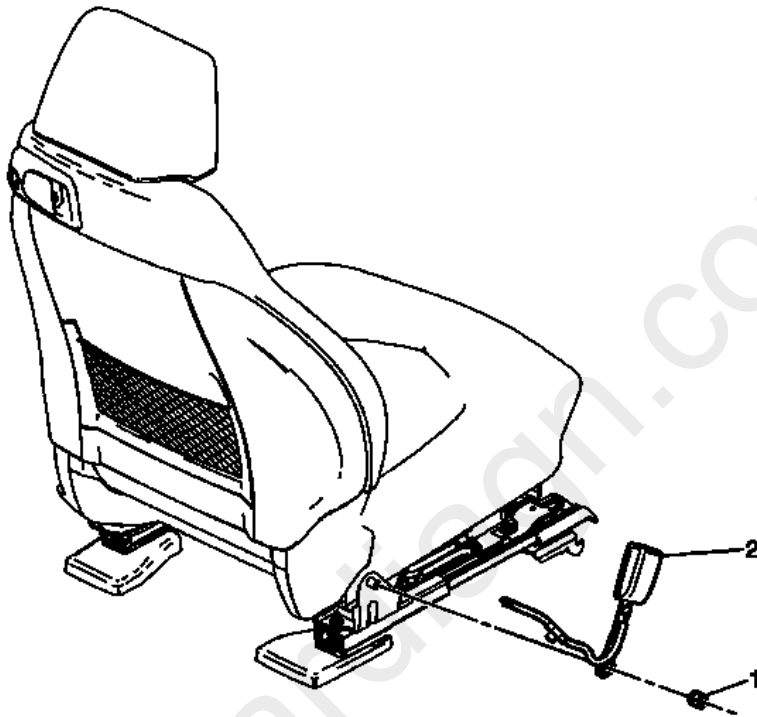


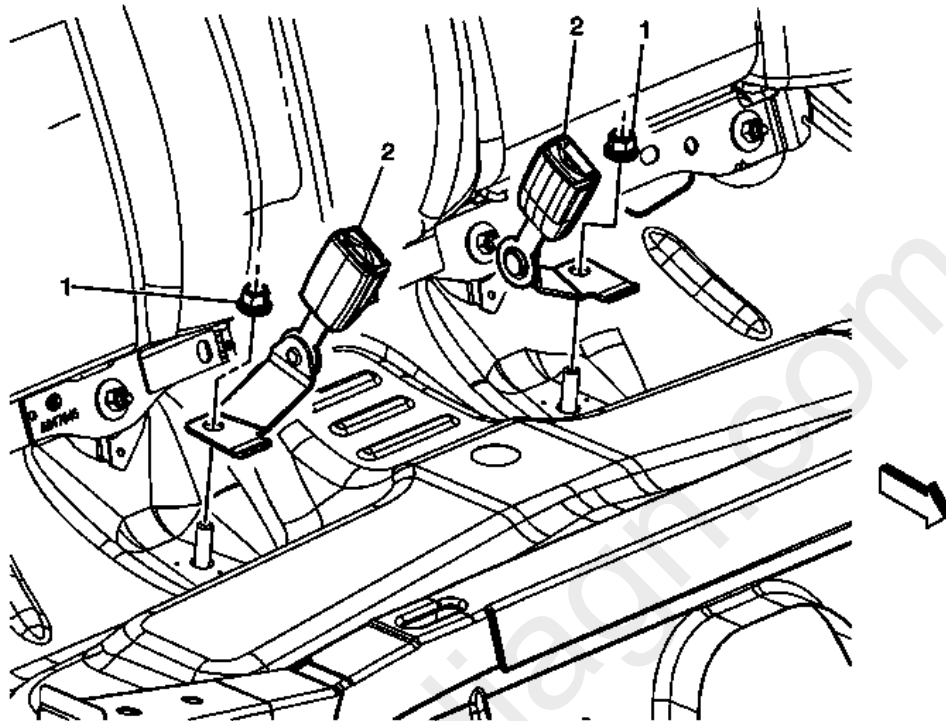
Fig. 3: Front Seat Belt Buckle
Courtesy of GENERAL MOTORS COMPANY

Front Seat Belt Buckle Replacement

Callout	Component Name
Preliminary Procedure Remove front seat. Refer to Front Seat Removal and Installation - Bucket (W2E) , Front Seat Removal and Installation - Bucket (AQ9) .	
1	Front Seat Belt Buckle Fastener CAUTION: Refer to Fastener Caution . Tighten 40 N.m (30 lb ft)

Procedure

Disconnect the electrical connector.

REAR SEAT BUCKLE SIDE BELT REPLACEMENT (COUPE)**Fig. 4: Rear Seat Buckle Side Belt (Coupe)**

Courtesy of GENERAL MOTORS COMPANY

Rear Seat Buckle Side Belt Replacement (Coupe)

Callout	Component Name
Preliminary Procedure	
Remove the rear seat cushion. Refer to <u>Rear Seat Cushion Removal and Installation (Coupe)</u> .	
1	Rear Seat Belt Buckle Nut (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 42 N.m (31 lb ft)
2	Rear Seat Belt Assembly Buckle

REAR SEAT BUCKLE SIDE BELT REPLACEMENT (WAGON)

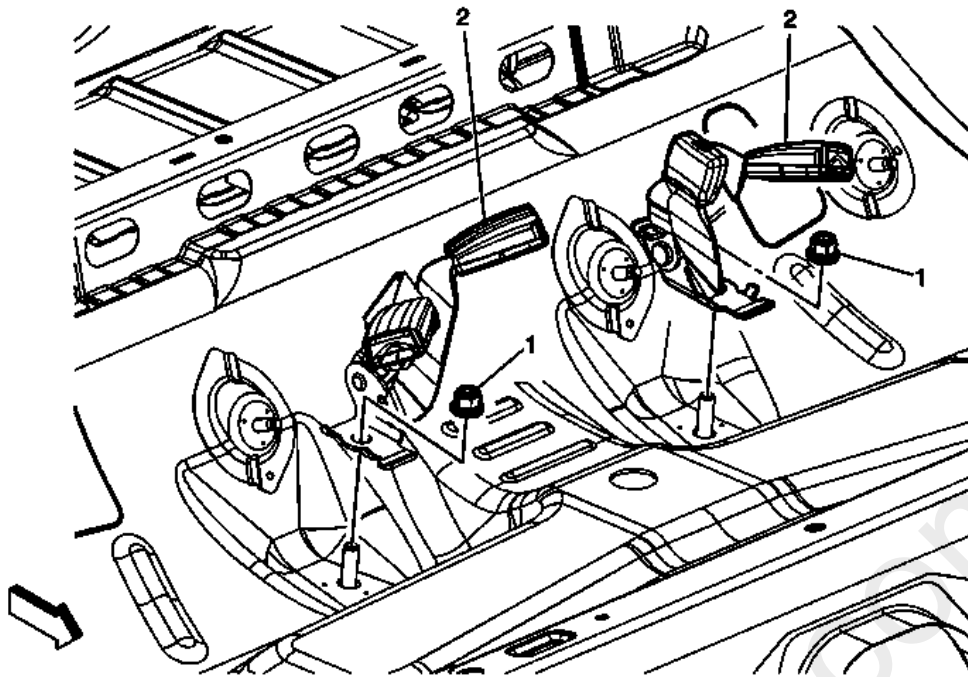


Fig. 5: Rear Seat Buckle Side Belt (Wagon)
 Courtesy of GENERAL MOTORS COMPANY

Rear Seat Buckle Side Belt Replacement (Wagon)

Callout	Component Name
Preliminary Procedure Remove the rear seat cushion. Refer to <u>Rear Seat Cushion Removal and Installation (Wagon)</u> .	
1	Rear Seat Belt Buckle Nut (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 42 N.m (31 lb ft)
2	Rear Seat Belt Assembly Buckle

FRONT SEAT BELT GUIDE ADJUSTER REPLACEMENT (WAGON)

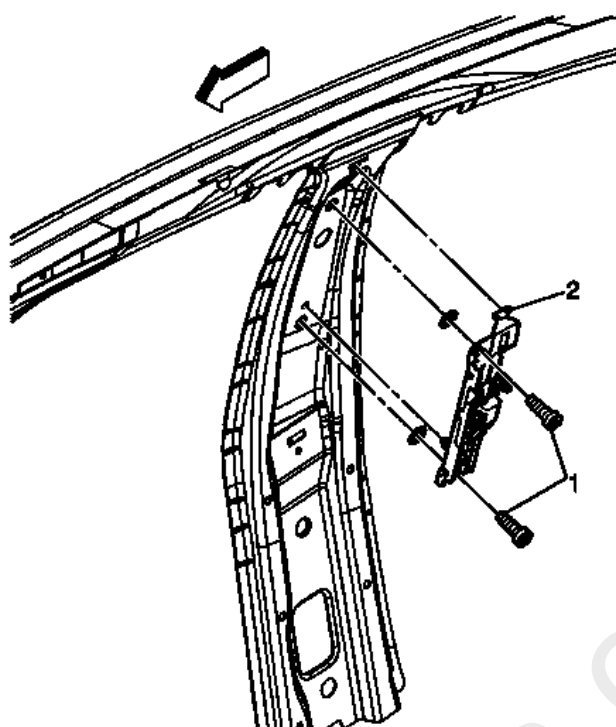


Fig. 6: Exploded Viewing of Assembly Front Seat Shoulder Belt Guide Adjuster
 Courtesy of GENERAL MOTORS COMPANY

Front Seat Belt Guide Adjuster Replacement (Wagon)

Callout	Component Name
Preliminary Procedure Remove the center pillar upper trim. Refer to <u>Center Pillar Upper Trim Panel Replacement (Wagon)</u> .	
1	Shoulder Belt Guide Bolt CAUTION: Refer to <u>Fastener Caution</u> . Tighten 47 N.m (35 lb ft)
2	Shoulder Belt Guide Adjuster

REAR SEAT BELT RETRACTOR REPLACEMENT (WAGON)

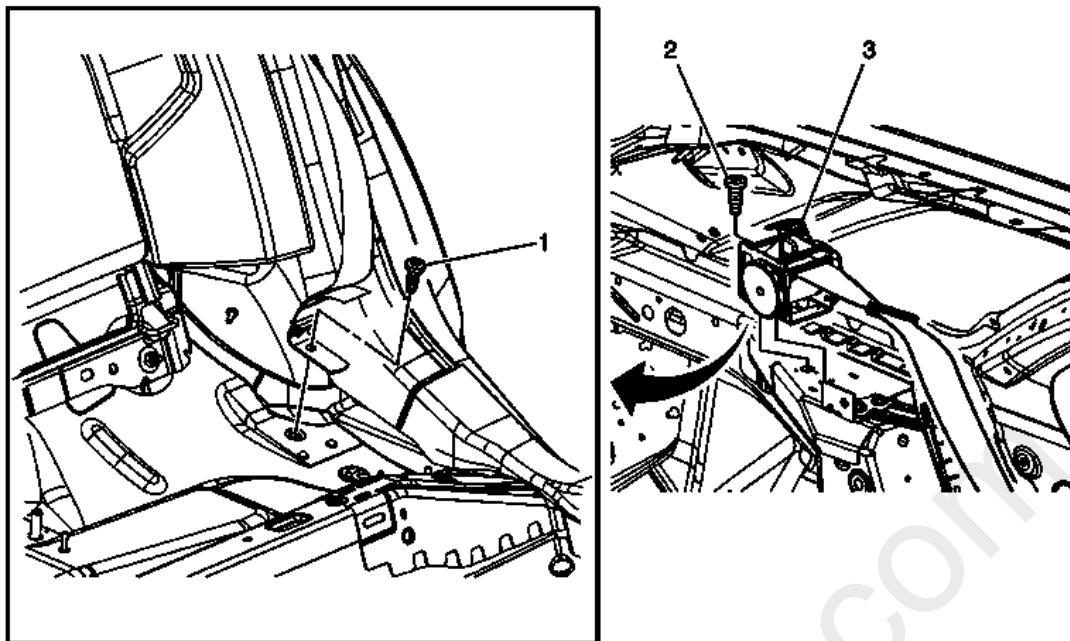


Fig. 7: Rear Seat Belt Retractor (Wagon)
 Courtesy of GENERAL MOTORS COMPANY

Rear Seat Belt Retractor Replacement (Wagon)

Callout	Component Name
Preliminary Procedure	
1. Remove the rear seat cushion. Refer to <u>Rear Seat Cushion Removal and Installation (Wagon)</u> . 2. Remove the rear seat back. Refer to <u>Rear Seat Back Cushion Removal and Installation (Wagon)</u> . 3. Remove the body side lower trim panel. Refer to <u>Body Side Lower Trim Panel Replacement (Wagon)</u> .	
1	Seat Shoulder Belt Anchor Plate Bolt CAUTION: Refer to <u>Fastener Caution</u> . Tighten 45 N.m (33 lb ft)
2	Seat Belt Retractor Bolt Tighten 45 N.m (33 lb ft)
3	Rear Shoulder Seat Belt Retractor

REAR SEAT BELT RETRACTOR REPLACEMENT (COUPE)

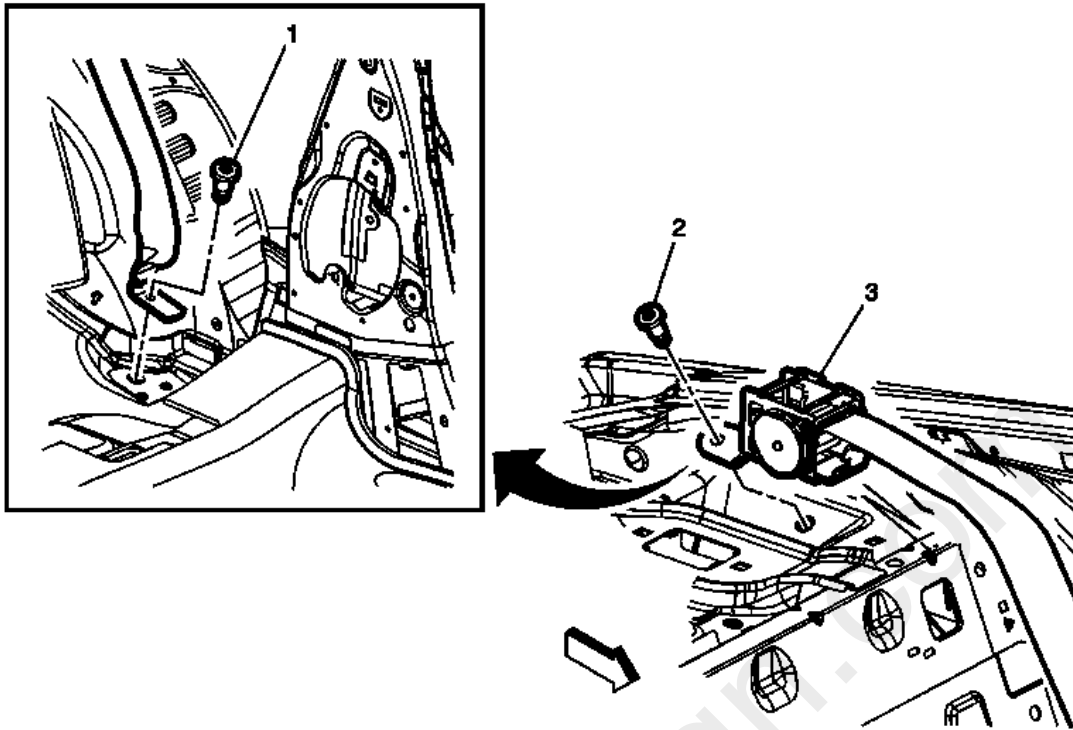


Fig. 8: Rear Seat Belt Retractor & Components (Coupe)

Courtesy of GENERAL MOTORS COMPANY

Rear Seat Belt Retractor Replacement (Coupe)

Callout	Component Name
Preliminary Procedure	
1. Loosen the 2 rear nuts securing the roof side rail inflatable restraint module. Not necessary to remove the roof rail module or the headliner.	
2. Remove the rear window panel trim. Refer to <u>Rear Window Panel Trim Replacement (Coupe)</u> .	
1	Seat Shoulder Belt Anchor Plate Bolt CAUTION: Refer to <u>Fastener Caution</u> . Tighten 45 N.m (33 lb ft)
2	Seat Belt Retractor Bolt Tighten 45 N.m (33 lb ft)
	Rear Shoulder Seat Belt Retractor Procedure

- | | |
|---|---|
| 3 | Disengage the shoulder belt from the body side front lower trim panel.
TIP: Use appropriate hand tool when removing the upper retractor fastener. Do not use electric driver or impact gun. |
|---|---|

REAR SEAT CENTER RETRACTOR SIDE BELT REPLACEMENT (WAGON)

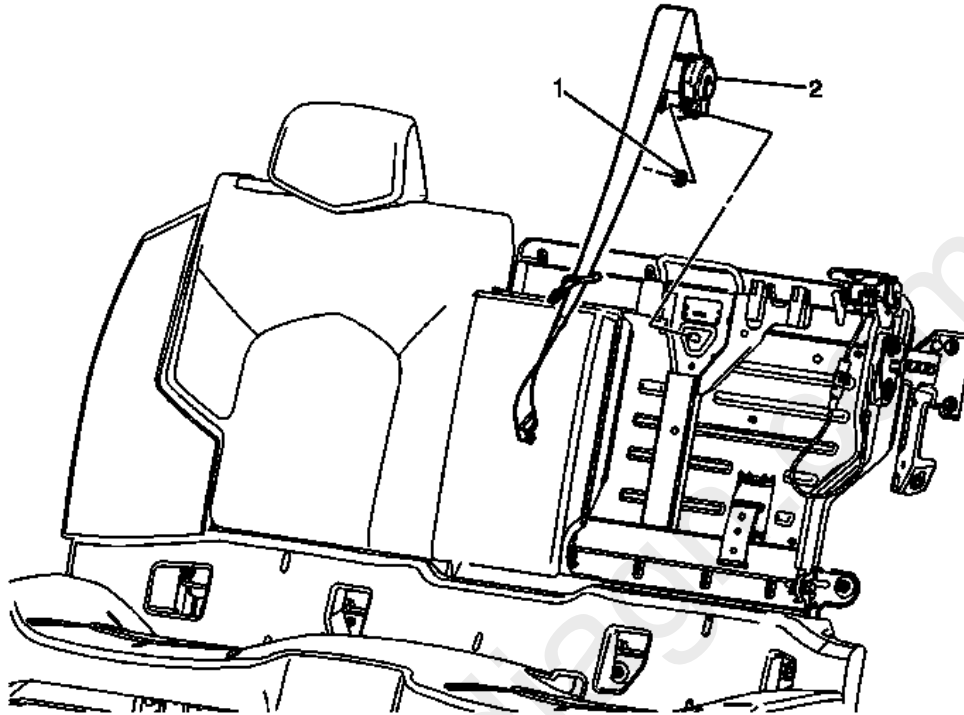


Fig. 9: Rear Seat Center Retractor Side Belt (Wagon)
 Courtesy of GENERAL MOTORS COMPANY

Rear Seat Center Retractor Side Belt Replacement (Wagon)

Callout	Component Name
Preliminary Procedure	
1. Remove the rear seat cushion. Refer to <u>Rear Seat Cushion Removal and Installation (Wagon)</u> . 2. Remove the rear seat back cushion cover and pad. Refer to <u>Rear Seat Back Cushion Cover and Pad Replacement (with AM9)</u> , <u>Rear Seat Back Cushion Cover and Pad Replacement (Wagon with 60 Percent Seat)</u> , <u>Rear Seat Back Cushion Cover and Pad Replacement (side with AM9)</u> , <u>Rear Seat Back Cushion Cover and Pad Replacement (Wagon with 40 Percent Seat)</u> , <u>Rear Seat Back Cushion Cover and Pad Replacement (without AM9)</u> .	
1	Seat Belt Retractor Bolt CAUTION: Refer to <u>Fastener Caution</u> .

	Tighten 30 N.m (22 lb ft)
2	Rear Center Seat Belt Retractor

CHILD RESTRAINT TETHER ANCHOR REPLACEMENT

Removal Procedure

WARNING: Do NOT attempt to repair or alter the tether anchor on the child seat restraint system. If the tether anchor is damaged, replace the entire tether anchor. Altering the tether anchor could result in personal injury.

1. Remove the rear shelf panel. Refer to [Rear Window Panel Trim Replacement \(Coupe\)](#) .

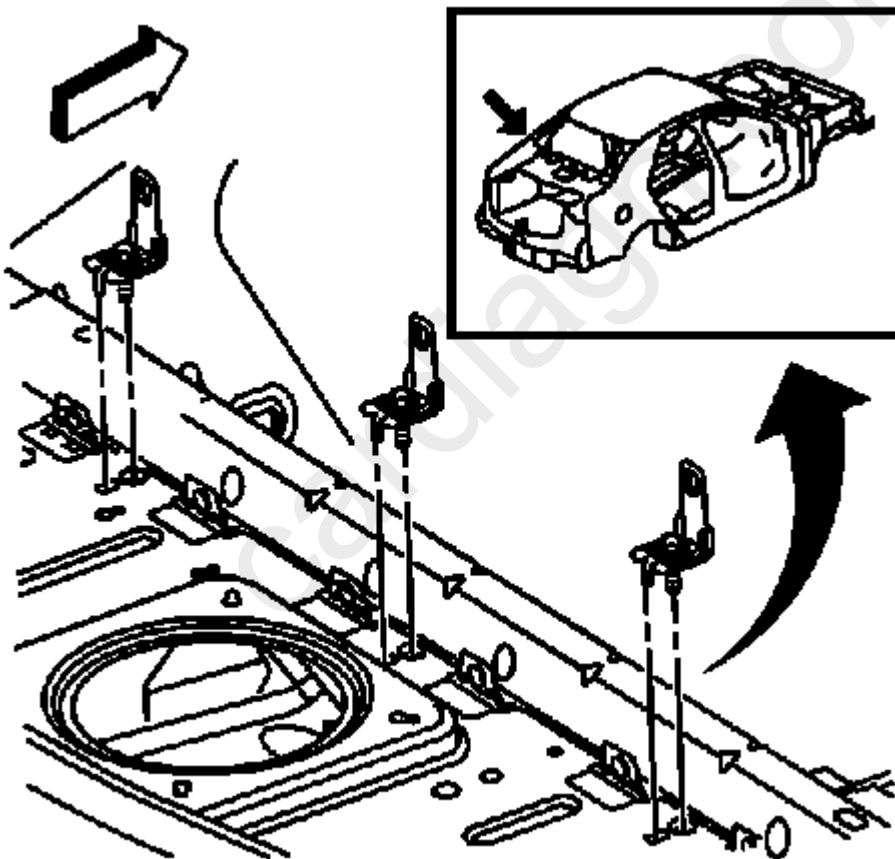


Fig. 10: Child Tether Anchor & Bolt
Courtesy of GENERAL MOTORS COMPANY

2. Remove the bolt that retains the child tether anchor that is being serviced.
3. Remove the child tether anchor from the vehicle.

Installation Procedure

NOTE: During installation ensure that the child tether anchors are installed with the anti-rotation tabs firmly seated in the anti-rotation tab holes on the cross car beam.

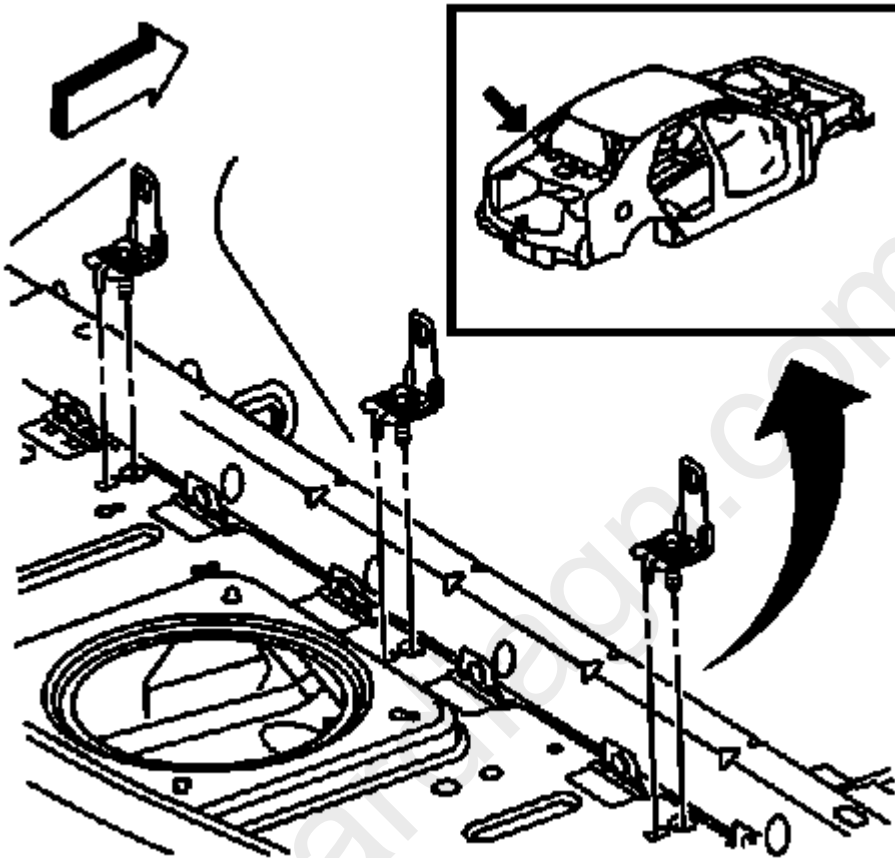


Fig. 11: Child Tether Anchor & Bolt
Courtesy of GENERAL MOTORS COMPANY

1. Install the child tether anchor to the cross car beam.

CAUTION: Refer to Fastener Caution .

2. Install the child tether anchor bolt and tighten to 30 N.m (22 lb ft).
3. Install the rear shelf trim panel. Refer to Rear Window Panel Trim Replacement (Coupe) .

REAR SEAT BELT INTERMEDIATE GUIDE REPLACEMENT (WAGON)

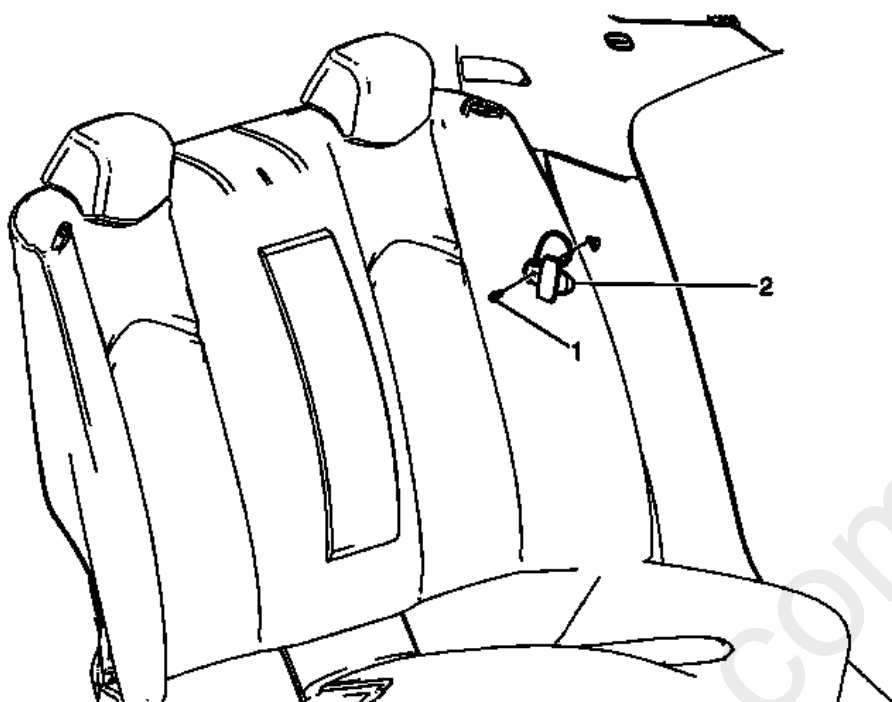


Fig. 12: Rear Seat Shoulder Belt Guide & Retainer (Wagon)
 Courtesy of GENERAL MOTORS COMPANY

Rear Seat Belt Intermediate Guide Replacement (Wagon)

Callout	Component Name
1	Rear Seat Shoulder Belt Guide Retainer Procedure Pull back the rear seat back bolster to allow easier access to the rear shoulder belt guide retainer.
2	Rear Seat Shoulder Belt Guide Assembly

DESCRIPTION AND OPERATION

SEAT BELT SYSTEM DESCRIPTION AND OPERATION

Front Seat Belt System

NOTE: If the vehicle has been in a collision, refer to Repairs and Inspections Required After a Collision for additional information.

The front seat belt system includes a driver and/or passenger seat belt retractor and buckle.

The driver's seat belt system, includes a seat belt switch in the driver seat buckle which controls a reminder lamp and a tone alarm.

- When the driver seat belt is buckled, the driver's door is closed, 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 driver's seat belt is not buckled, the driver's door is closed, and the ignition switch is in ON position, the following events will occur:
 - The tone alarm will operate for 4 to 8 seconds and then go OFF.
 - The reminder lamp will operate for 20 seconds, until the driver seat belt is buckled.

Rear Seat Belt System

The rear seat belt system includes the following components:

- The rear seat belt retractor is located under the rear shelf trim panel and is attached to the rear shelf body panel.
- The center rear seat belt buckle and the outer seat belt buckle are located in the center of the seat cushion and they are attached to the rear floor pan.

Child Seat Restraint System

WARNING: A child in a rear-facing child restraint can be seriously injured if the right-front passengers 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 owners 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.

The inflatable restraint sensing and diagnostic module (SDM) receives a discrete input from the left front seat belt switch. The left front seat belt switch is closed when the seat belt is unbuckled.

Fasten Safety Belt Indicator (ISO Symbol) (Red)

The fasten safety belt indicator may only be ON during RUN. The instrument panel cluster (IPC) illuminates the fasten safety belt indicator under the following conditions:

- During the bulb check.
- The inflatable restraint sensing and diagnostic module (SDM) sends the status of the driver's seat belt switch to the IPC via a class 2 message. If the seat belt is unfastened, the IPC will illuminate the fasten safety belt indicator for 72 seconds or until the seat belt is fastened. If the seat belt is unfastened within 8 seconds following the bulb check, the IPC sends a class 2 serial message requesting 5 chimes to sound.

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