

Seat Belts

Specifications

Fastener Tightening Specifications

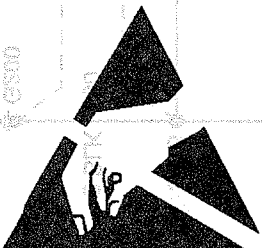
Application	Specification	
	Metric	English
Driver and Passenger Seat Buckle-Side Belt Bolt/Screw	42 N·m	31 lb ft
Driver and Passenger Seat Retractor-Side Belt Bolt/Screw	28 N·m	21 lb ft
Driver and Passenger Seat Retractor-Side Belt (Anchor Plate) Bolt/Screw	42 N·m	31 lb ft
Driver and Passenger Seat Retractor-Side Belt Bolt/Screw (Convertible)	42 N·m	31 lb ft
Driver and Passenger Seat Shoulder Belt Guide Bolt/Screw (Convertible)	42 N·m	31 lb ft
Rear Seat Buckle-Side Belt Bolt/Screw	42 N·m	31 lb ft
Rear Seat Retractor-Side Belt Bolt/Screw (Convertible)	42 N·m	31 lb ft
Rear Seat Retractor-Side Belt Bolt/Screw (Coupe)	42 N·m	31 lb ft
Rear Seat Retractor-Side Belt Guide Bolt/Screw (Convertible)	42 N·m	31 lb ft
Rear Seat Retractor-Side Belt Guide Bolt/Screw (Coupe)	10 N·m	89 lb in
Rear Seat Retractor-Side Belt Guide Retractor Bracket Bolt/Screw (Convertible)	30 N·m	22 lb ft
Rear Seat Retractor-Side Belt Retractor Nut (Coupe)	55 N·m	41 lb ft

GM SPO Group Numbers

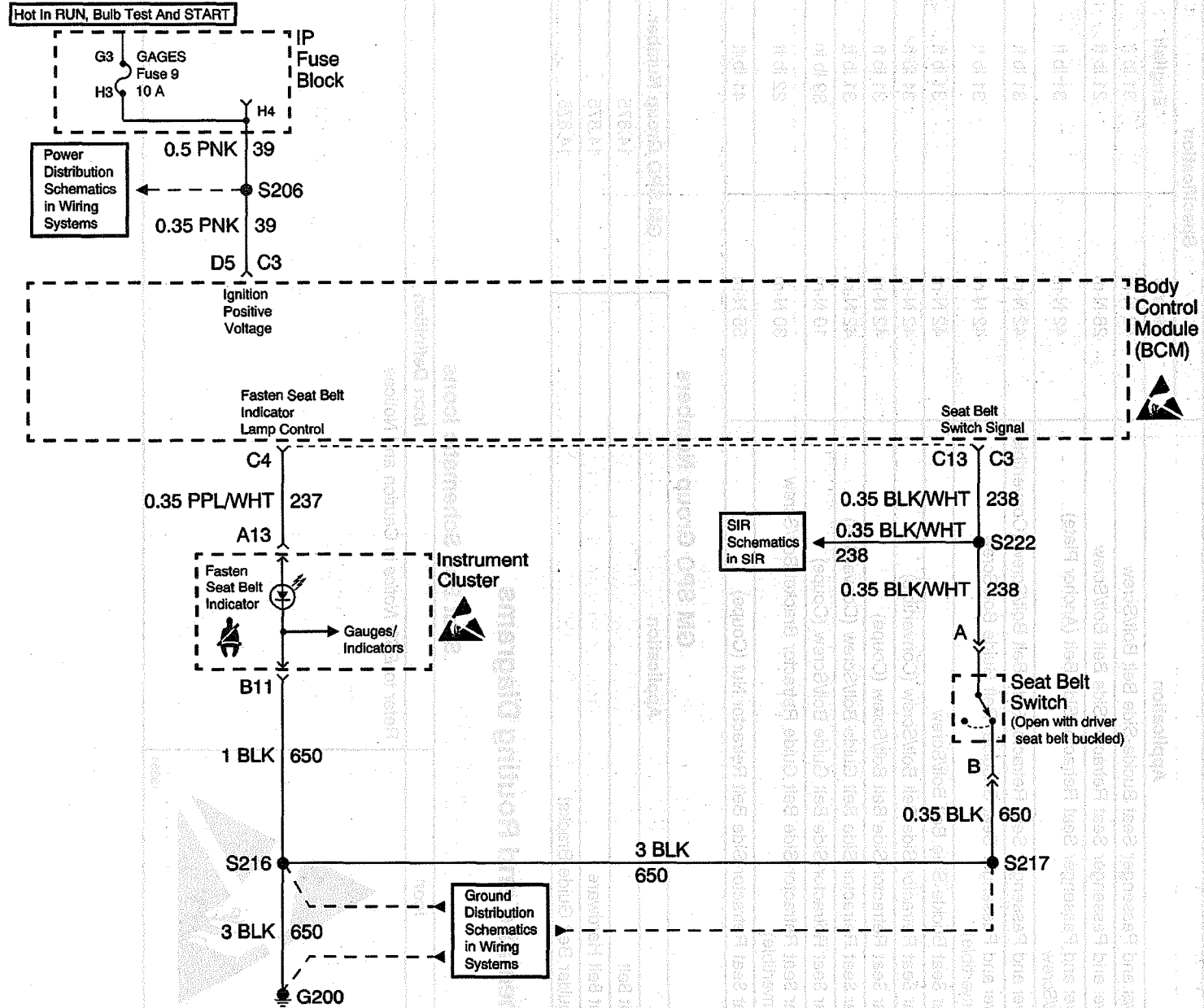
Application	GM SPO Group Number
Seat Belt	14.875
Seat Belt Hardware	14.875
Shoulder Belt Guide Bracket	14.875

Schematic and Routing Diagrams

Seat Belt Schematic Icons

Icon	Icon Definition
 19384	Refer to <i>ESD Notice</i> in Caution and Notices.

Seat Belt Schematics



LOC
DESC



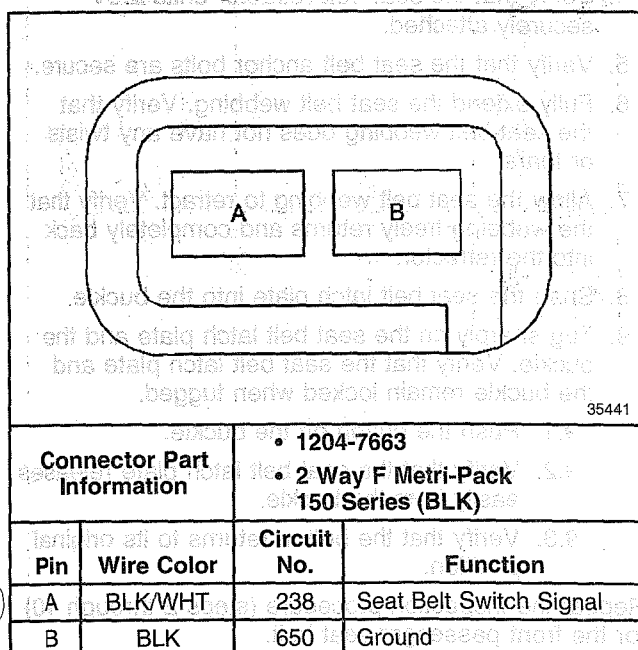
Component Locator

Seat Belt Components

Name	Location	Locator View	Connector End View
Body Control Module (BCM)	Under the right side of the IP near the blower motor	Body Control Module Component Views in Body Control System	Body Control Module Connector End Views in Body Control System
Instrument Cluster	On the left side of the IP	Instrument Panel, Gauges, and Console Component Views in Instrument Panel, Gauges and Console	Instrument Panel, Gauges, and Console Connector End Views in Instrument Panel, Gauges and Console
IP Fuse Block	On the left end of the IP carrier	Instrument Panel, Gauges, and Console Component Views in Instrument Panel, Gauges and Console	—
Seat Belt Switch	Part of the driver seat buckle assembly	—	Seat Belt Connector End Views
G200	Near the left A-pillar, bolted to the IP mounting stud behind the kick panel	Harness Routing Views in Wiring Systems	—
S206	In the IP harness, at the rear compartment lid release relay breakout	—	—
S216	In the IP harness, main branch, approximately 10 cm (4 in) from the instrument cluster breakout	—	—
S217	In the IP harness, main branch, approximately 18 cm (6.8 in) from the body control module (BCM) breakout	—	—
S222	In the IP harness, approximately 6 cm (2.4 in) from G202 breakout, in inflatable restraint sensing and diagnostic module (SDM) breakout	—	—

Seat Belt Connector End Views

Seat Belt Switch



Diagnostic Information and Procedures

A Diagnostic Starting Point - Seat Belts

Begin the system diagnosis with *A Diagnostic System Check*. The Diagnostic System Check will provide the following information:

- The identification of the control module(s) which command the system.
- The identification of any stored diagnostic trouble codes (DTCs) and their status.

The use of the Diagnostic System Check will identify the correct procedure for diagnosing the system and where the procedure is located.

Diagnostic Trouble Code (DTC) List/Type

Description	Module
DTC 24/34 Seatbelt Indicator Shorted to Ground or Battery	Body Control Module (BCM)

A Diagnostic System Check

Step	Action	Yes	No
1	Attempt to operate the rear compartment lid release and the power door locks. Do the rear compartment lid release and the power door locks operate properly?	Go to Step 2	Go to <i>Cannot Enter BCM Diagnostics</i> in Body Control Systems
2	Check for body control module (BCM) DTCs. Refer to <i>Diagnostic Trouble Code (DTC) Displaying</i> in Body Control Systems. Does the BCM display a code 24/34?	Go to <i>Diagnostic Trouble Code (DTC) List/Type</i>	Go to Step 3
3	Does the BCM flash any other DTCs?	Go to <i>Diagnostic Trouble Code (DTC) List/Type</i> in Body Control Systems	Go to <i>Symptoms - Seat Belts</i>

Operational and Functional Checks

Caution: To help avoid personal injury from unrepaired crash damage to a restraint system:

- Replace each seat belt system worn during a crash unless the crash was minor.
- Perform the seat belt check for each seat belt system. Replace the seat belt system if there is any doubt about the condition of system components.

Perform the following inspection from the driver's seat:

1. Turn the ignition switch to the ON position.
Verify proper operation of the seat belt reminder lamp with the belt buckled and with the seat belt unbuckled.
Refer to *Seat Belt System Description* Seat Belt System Description.
2. Inspect the shoulder belt guide in order to ensure that the following conditions are met:
 - The shoulder belt guide swivels freely
 - The seat belt webbing is seated flatly in the guide slot
 - The seat belt webbing does not bind

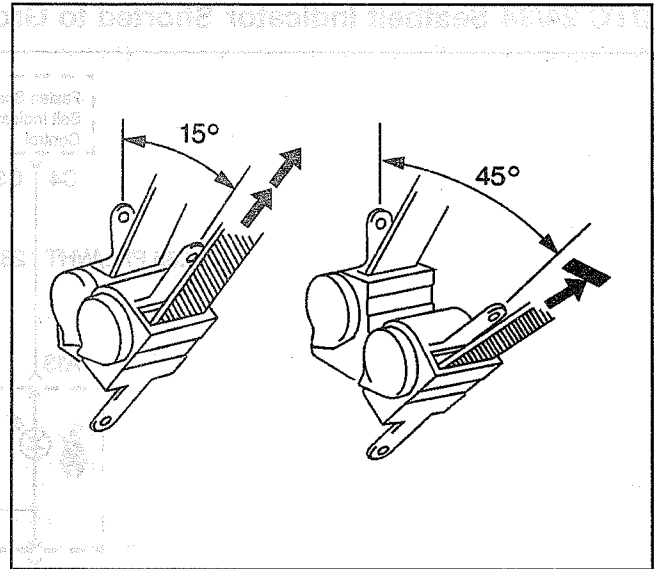
3. Verify that the seat belt buckle faces inboard and is accessible.
4. Verify that the seat belt retractor units are securely attached.
5. Verify that the seat belt anchor bolts are secure.
6. Fully extend the seat belt webbing. Verify that the seat belt webbing does not have any twists or tears.
7. Allow the seat belt webbing to retract. Verify that the webbing freely returns and completely back into the retractor.
8. Snap the seat belt latch plate into the buckle.
9. Tug sharply on the seat belt latch plate and the buckle. Verify that the seat belt latch plate and the buckle remain locked when tugged.
 - 9.1. Push the button on the buckle.
 - 9.2. Verify that the seat belt latch plate releases easily from the buckle.
 - 9.3. Verify that the button returns to its original position.

Repeat the inspection procedure (steps 2 through 10) for the front passenger seat belt.

Repeat the inspection procedure (steps 2 through 10) for the rear seat belts.

Caution: Perform this test in an area clear of other vehicles and/or obstructions. Do not conduct this test on the open road. A large, empty parking lot is suitable. Failure to observe this precaution may result in damage to the vehicle and possible personal injury.

1. Fasten the seat belts. An assistant is needed when the retractor under test is not part of the driver seat belt.
2. Slowly accelerate the vehicle to 16 km/h (10 mph) and then firmly apply the brakes.
3. Verify that the seat belt locks when braking firmly.
4. If the belt does not lock, proceed with the following steps.
 - 4.1. Remove the seat belt retractor assembly.
 - 4.2. Tilt the seat belt retractor slowly.
 - 4.3. Verify that the seat belt webbing can be pulled from the retractor at an angle of 15 degrees or less and cannot be pulled from the retractor at an angle of 45 degrees or more.

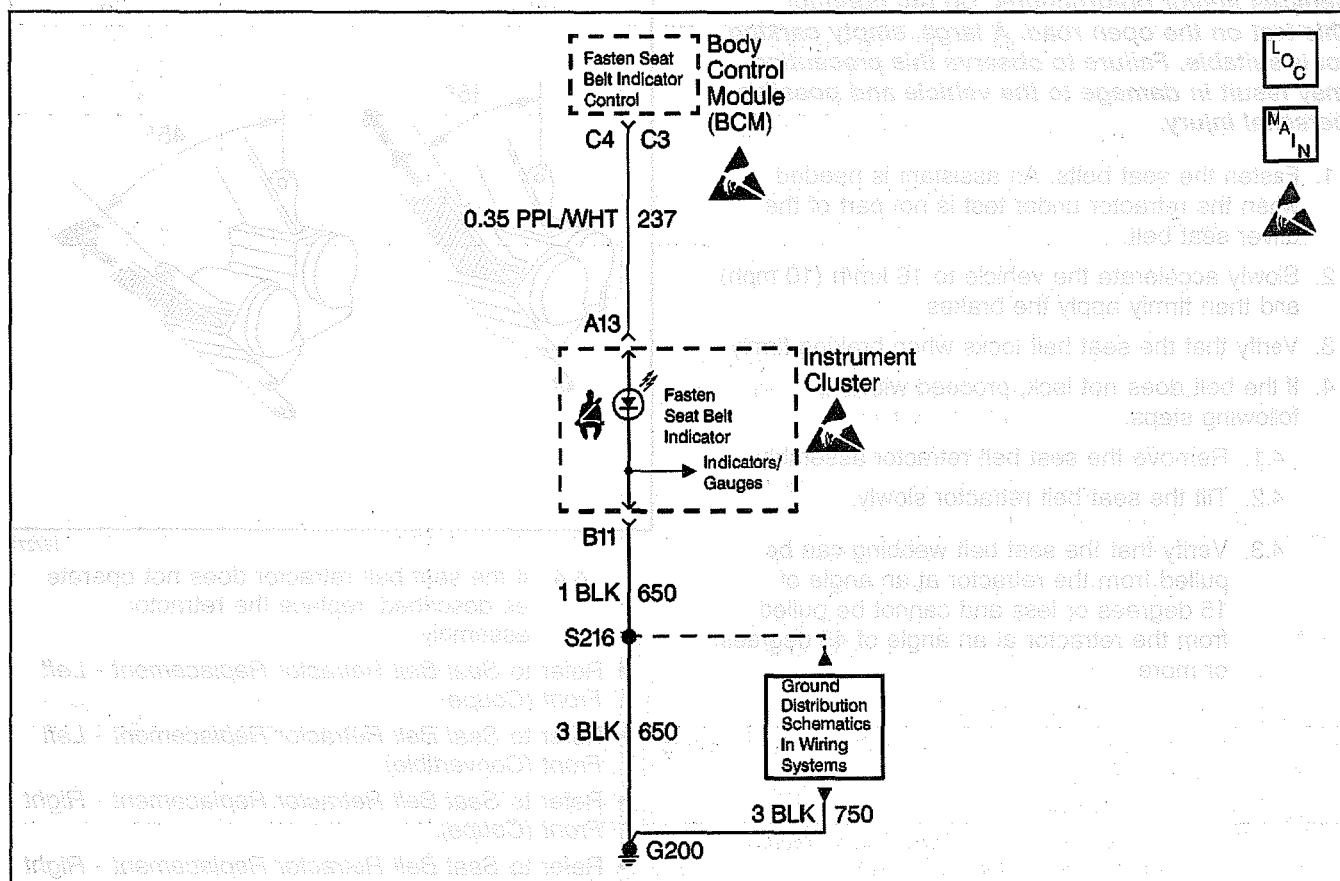


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- 4.4. If the seat belt retractor does not operate as described, replace the retractor assembly.

- Refer to *Seat Belt Retractor Replacement - Left Front (Coupe)*.
- Refer to *Seat Belt Retractor Replacement - Left Front (Convertible)*.
- Refer to *Seat Belt Retractor Replacement - Right Front (Coupe)*.
- Refer to *Seat Belt Retractor Replacement - Right Front (Convertible)*.
- Refer to *Seat Belt Retractor Replacement - Rear (Coupe)*.
- Refer to *Seat Belt Retractor Replacement - Rear (Convertible)*.

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DTC 24/34 Seatbelt Indicator Shorted to Ground or Battery

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Circuit Description

The body control module (BCM) provides a 12 volt output to the FASTEN SEATBELT indicator lamp on the instrument cluster while the driver's seatbelt is unfastened.

Conditions for Setting the DTC

The FASTEN SEATBELT output has been detected by the BCM to be shorted to the ground, or shorted to B+ for greater than 50 milliseconds.

Action Taken When the DTC Sets

The FASTEN SEATBELT indicator lamp does not illuminate when the following conditions exist:

- The ignition is in the ON position.
- The driver side seatbelt is not fastened.

Conditions for Clearing the DTC

The fault is corrected and the DTC memory clearing procedure is completed.

Diagnostic Aids

If the only DTC that flashes is a HISTORY code (DTC 34), the problem may be intermittent. Perform the test shown while "wiggling" the wiring and connectors. This can often cause the fault to appear. Test for a poor connections at the BCM connector, which could cause an open or an intermittent fault. Refer to Intermittent/History DTCs in *Diagnostic Trouble Code (DTC) Displaying Displaying DTCs*.

Test Description

The number(s) below refer to the step number(s) on the diagnostic table.

2. This step tests the FASTEN SEATBELT indicator for operation with the body control module (BCM) disconnected, which would reveal a short to B+ in circuit 237.
3. This step determines if there is a short to the ground in the instrument cluster.
4. If the instrument cluster is OK, this step determines if circuit 237 is shorted to the ground or if the BCM is defective.
7. If there is a short to B+, this step determines if the short is in the instrument cluster or in circuit 237.

DTC 24/34 Seatbelt Indicator Shorted to Ground or Battery

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check
2	1. Disconnect the body control module (BCM) connector C3. 2. Turn the ignition switch to the RUN position. Is the FASTEN SEATBELT indicator ON?	—	Go to Step 8	Go to Step 3
3	1. Turn the ignition switch to the OFF position. 2. Connect the BCM connector C3. 3. Remove the instrument cluster. 4. Connect a test lamp from the instrument cluster connector terminal A13 to terminal B11. Refer to <i>Circuit Testing</i> in Wiring Systems. 5. Unlatch the driver side seatbelt. 6. Turn the ignition switch to the RUN position. Does the test lamp illuminate?	—	Go to Step 9	Go to Step 4
4	1. Turn the ignition switch to the OFF position. 2. Disconnect the BCM connector C3. 3. Connect a test lamp from BCM connector C3 terminal C4 to battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 5	Go to Step 6
5	Repair the short to ground in circuit 237. Refer to <i>Wiring Repairs</i> in Wiring Systems. Is the repair complete?	—	System OK	—
6	Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Is the repair complete?	—	System OK	—
7	1. Remove the instrument cluster. 2. Connect a test lamp from BCM connector C3 terminal C4 to ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 8	Go to Step 9
8	Repair a short to battery voltage in circuit 237. Refer to <i>Wiring Repairs</i> in Wiring Systems. Is the repair complete?	—	System OK	—
9	Replace the instrument cluster. Refer to <i>IP Cluster Replacement</i> in Instrument Panel, Gauges, and Console. Is the repair complete?	—	System OK	—

10	Did you correct the condition?	—	System OK	Go to Step 2
9	Did you complete the replacement?	—	System OK	Go to Step 10
8	Did you complete the replacement?	—	System OK	Go to Step 10
7	Did you find and repair a short?	—	System OK	Go to Step 10

Symptoms - Seat Belts

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

1. Perform *A Diagnostic System Check* before using the Symptom Tables in order to verify that there are no DTCs set.
2. Review the system description in order to familiarize yourself with the system functions. Refer to *Seat Belt System Description*.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the Seat Belts System. Refer to *Checking Aftermarket Accessories* in Wiring Systems.
- 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 and Poor Connections* in Wiring Systems.

Symptom List

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

- *Fasten Safety Belt Indicator/Chime Always On*
- *Fasten Safety Belt Indicator/Chime Inoperative*
- *Fasten Safety Belt Chime Always On*
- *Fasten Safety Belt Chime Inoperative*

Fasten Safety Belt Indicator/Chime Always On

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check
2	1. Turn the ignition to the RUN position. 2. Latch the driver's seat belt. Does the fasten seat belt indicator turn off?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	Disconnect the BCM connector C2 and the BCM connector C3. Is the fasten seat belt indicator still on?	—	Go to Step 4	Go to Step 6
4	Inspect for and repair a short to battery voltage in circuit 237. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and repair a short?	—	Go to Step 10	Go to Step 5
5	Replace the instrument cluster. Refer to <i>IP Cluster Replacement</i> in Instrument Panel, Gauges and Console. Did you complete the replacement?	—	Go to Step 10	—
6	Connect a test lamp between the BCM connector C2 terminal B and connector C3 terminal C13. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 9
7	Test for and repair a short to ground in circuit 238. Refer to <i>Circuit Testing</i> or <i>Wiring Repairs</i> in Wiring Systems. Did you find and repair a short?	—	Go to Step 10	Go to Step 8
8	Replace the seat belt switch. Did you complete the replacement?	—	Go to Step 10	—
9	Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 10	—
10	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Fasten Safety Belt Indicator/Chime Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check
2	1. Turn the ignition to the RUN position. 2. Leave the driver's seat belt unbuckled. Does the fasten seat indicator illuminate and remain on?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the BCM connector C2 and connector C3. 2. Connect a 15A fused jumper from BCM connector C3 terminal C4 to battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the fasten seat belt indicator turn on?	—	Go to Step 4	Go to Step 6
4	Test for and repair a poor connection at the BCM connector C3 terminal C4. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 11	Go to Step 5
5	Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 11	—
6	1. Leave the 15A fused jumper connected. 2. Connect a test lamp from instrument cluster connector terminal A13 to ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 8	Go to Step 7
7	Repair the open in circuit 237 between the BCM and the instrument cluster. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 11	—
8	Test for and repair an open in circuit 650 between the instrument cluster and S216. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and repair an open?	—	Go to Step 11	Go to Step 9
9	Test for and repair a poor connection at the instrument cluster connector. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 11	Go to Step 10
10	Replace the instrument cluster. Refer to <i>IP Cluster Replacement</i> in Instrument Panel, Gauges and Console. Did you complete the replacement?	—	Go to Step 11	—
11	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Fasten Safety Belt Chime Always On

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check
2	1. Turn the ignition switch to the RUN position. 2. Fasten the driver's seat belt. Does the fasten safety belt chime turn off?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	Does the fasten seat belt indicator remain on after 10-seconds?	—	Go to Fasten Safety Belt Indicator/Chime Always On	Go to Step 4
4	Replace the body control module (BCM). Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 5	—
5	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Fasten Safety Belt Chime Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check
2	1. Turn the ignition to the RUN position. 2. Leave the driver's seat belt unbuckled. Does the fasten safety belt chime sound?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the body control module (BCM) connector C2 and connector C3. 2. Connect a test lamp between the BCM connector C2 terminal B and connector C3 terminal C13. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 4	Go to Step 6
4	Test for and repair a poor connection at terminal C13. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 12	Go to Step 5
5	Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 12	—
6	1. Disconnect the seat belt switch. 2. Connect a test lamp from the BCM connector C2 terminal B to the seat belt switch connector terminal A. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 8
7	Repair the open in circuit 238 between the seat belt switch and the BCM. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 12	—
8	Connect a test lamp from the BCM connector C2 terminal B to the seat belt switch connector terminal B. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 10	Go to Step 9
9	Repair the open in circuit 650 from the seat belt switch to S217. between the seat belt switch and the BCM. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 12	—

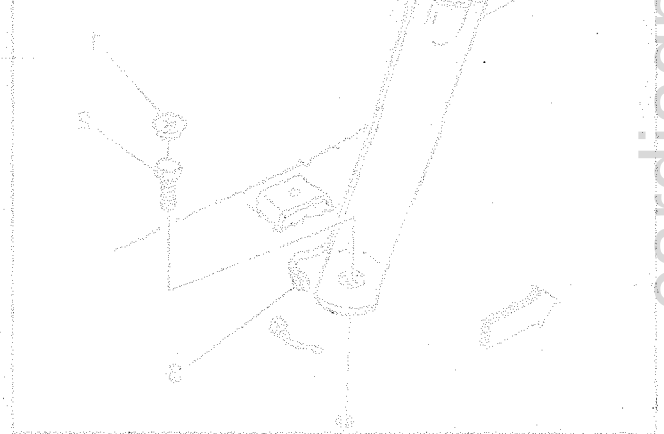
Fasten Safety Belt Chime Inoperative (cont'd)

Step	Action	Value(s)	Yes	No
10	Test for and repair a poor connection at the seat belt switch. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 12	Go to Step 11
11	Replace the seat belt switch. Did you complete the replacement?	—	Go to Step 12	—
12	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Seat Belt Service Precautions

- Do not bleach or dye the seat belt webbing. Clean the seat belt webbing with a mild soap and water solution and a soft brush or a cloth.
- Keep sharp edges and damaging objects away from the seat belts. Avoid bending or damaging any part of the seat belt buckle or the latch plate.
- Replace seat belts which are cut or damaged in any way.
- Use only the correct seat belt anchor bolts and screws.
 - Tighten the bolts and the screws to the correct torque value. Refer to *Fastener Tightening Specifications*.
 - When installing the seat belt anchor bolts, start the bolt by hand in order to ensure that the bolt is threaded straight.

- Seat belts and retractors must be serviced as a set with service replacement parts only. Do not attempt to make repairs to the individual compartments.
- Verify that the replacement part number is correct for the vehicle and at that seating position. Do not substitute a seat belt from a different seating position.
- Replace any seat belts which have a visible caution label instructing replacement.
- Some seat belts have an Energy Management Loop, which is an overlap of the seat belt webbing that is stitched together. If any of the stitching is separated, replace the seat belt.



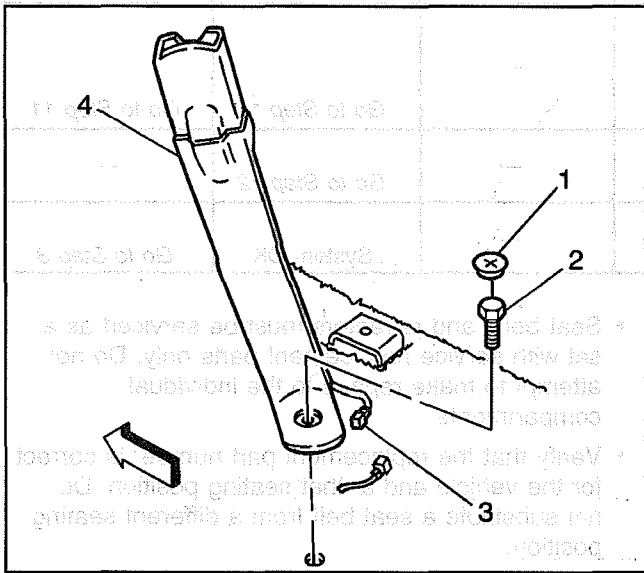
Repair Instructions

Seat Belt Buckle Replacement - Left Front

Removal Procedure

Caution: The seat belt assembly and/or the bracket assembly must be replaced as a unit only. Do not substitute parts for any reason, or personal injury could result in the event of a collision.

1. Remove the front seat, if necessary. Refer to *Seat Replacement - Front Bucket (Chevrolet)* in Seats.
2. Remove the driver side seat belt warning electrical connector.
3. Remove the plug (2) from the bolt/screw (3).
4. Remove the bolt/screw (3) that attaches the belt (1) to the floor pan.
5. Remove the belt (1).



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Installation Procedure

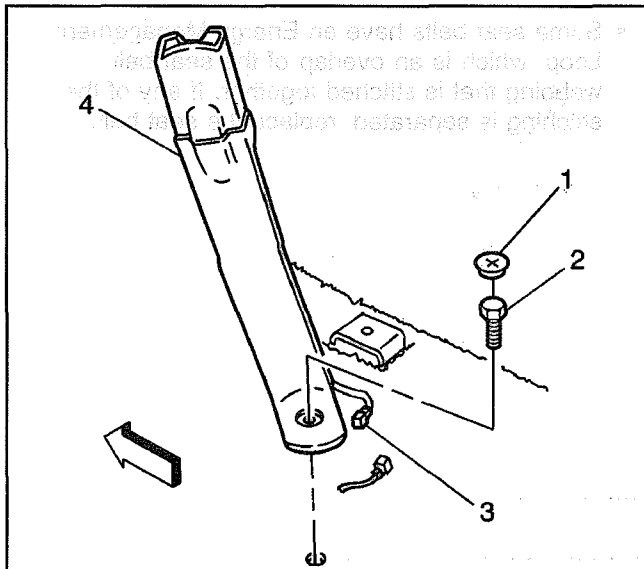
1. Install the belt (1).

Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the bolt/screw (3) that attaches the belt (1) to the floor pan.

Tighten

- Tighten the bolt/screw (3) to 42 N·m (31 lb ft).
3. Connect the plug (2) to the bolt/screw (3).
4. Install the driver side seat belt warning electrical connector.
5. Install the front seat. Refer to *Seat Replacement - Front Bucket (Chevrolet)* in Seats.



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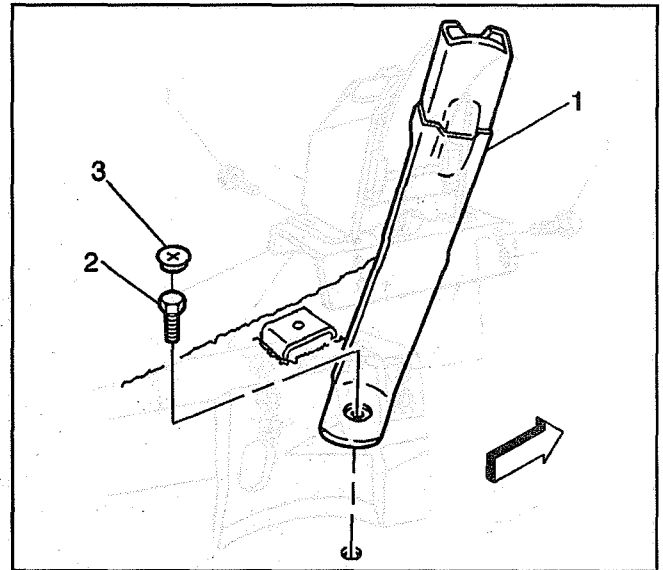
Seat Belt Buckle Replacement - Right Front

Removal Procedure

1. Remove the front seat, if necessary. Refer to *Seat Replacement - Front Bucket (Chevrolet)* in Seats.

Caution: The seat belt assembly and/or the bracket assembly must be replaced as a unit only. Do not substitute parts for any reason, or personal injury could result in the event of a collision.

2. Remove the plug (3) from the bolt/screw (2).
3. Remove the bolt/screw (2) that attaches the belt to the floor pan.
4. Remove the belt (1).



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Installation Procedure

1. Install the belt (1).

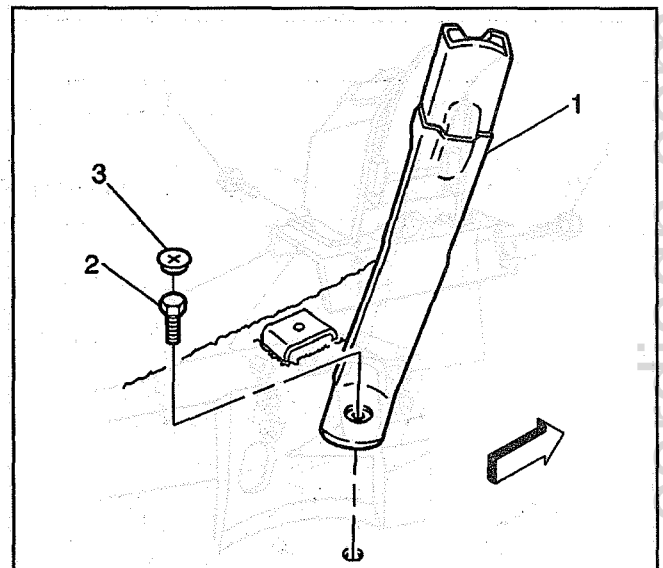
Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the bolt/screw (2) that attaches the belt (1) to the floor pan.

Tighten

Tighten the bolt/screw (2) to 42 N·m (31 lb ft).

3. Install the plug (3) to the bolt/screw (2).
4. Install the front seat. Refer to *Seat Replacement - Front Bucket (Chevrolet)* in Seats.

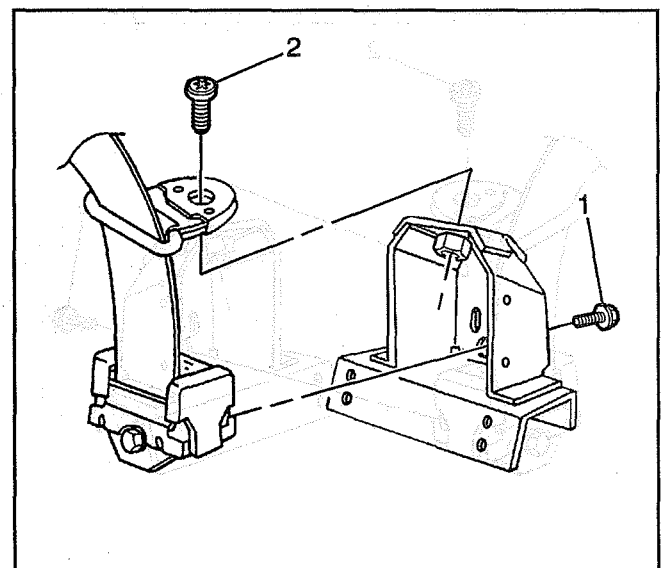


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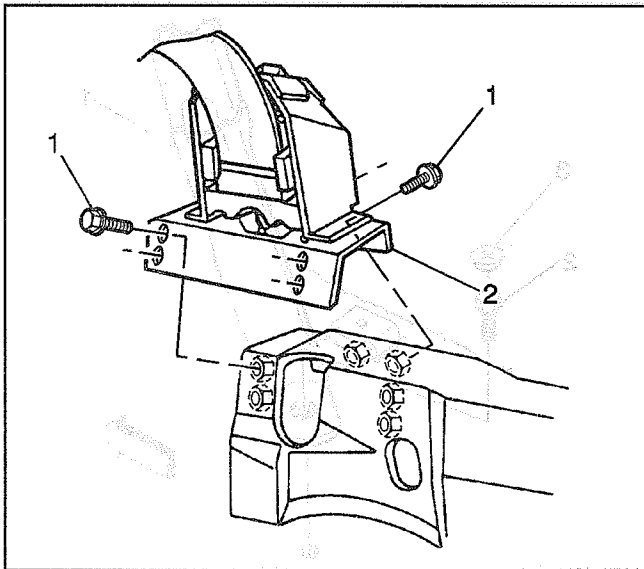
Shoulder Belt Replacement - Rear (Retractor Bracket)

Removal Procedure

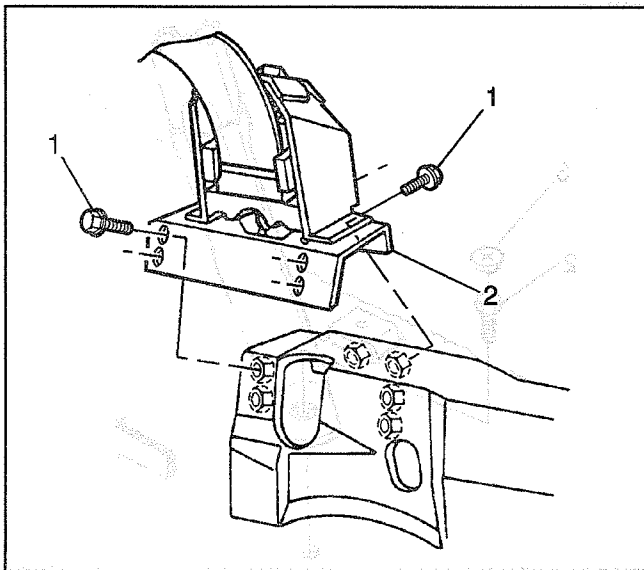
1. Remove the retractor trim cover.
2. Remove the bolt/screw (2) from the rear seat retractor-side belt guide.
3. Remove the bolt/screw (1) from the rear seat retractor-side belt.



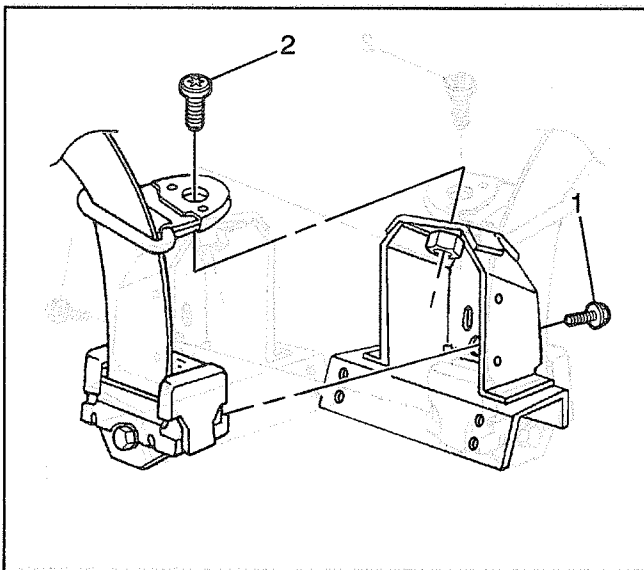
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180037



180027

4. Remove the retractor from the bracket (2).
5. Remove the bracket bolts/screws (1).
6. Remove the bracket (2).

Removal Procedure

1. Remove the front seat. Refer to *Front Seat Removal - Front Bucket (Chevrolet) in Seats*.

Caution: The seat belt assembly and/or the bracket assembly must be replaced as a unit only. Do not substitute parts for any reason or personal injury could result in the event of a collision.

2. Remove the plug (3) from the bolt/screw (2).

3. Remove the bolt/screw (2) that attaches the belt to the floor pan.

4. Remove the belt (1).

Installation Procedure

1. Install the bracket (2).

Notice: Refer to *Fastener Notice* in *Cautions and Notices*.

2. Install the bracket bolts/screws (1).

Tighten

Tighten the bolts/screws (1) to 30 N·m (22 lb ft).

3. Connect the retractor to the bracket (2).

4. Install the bolt/screw (1) to the rear seat retractor-side belt.

Tighten

Tighten the bolt (2) to 42 N·m (31 lb ft).

5. Install the bolt/screw (2) to the rear seat retractor-side belt guide.

Tighten

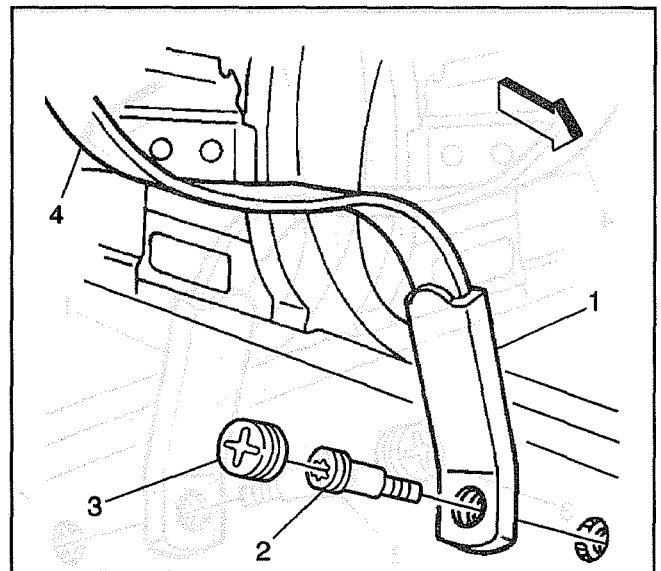
Tighten the bolt/screw (2) to 42 N·m (31 lb ft).

6. Install the retractor trim cover.

Seat Belt Retractor Replacement - Left Front (Coupe)

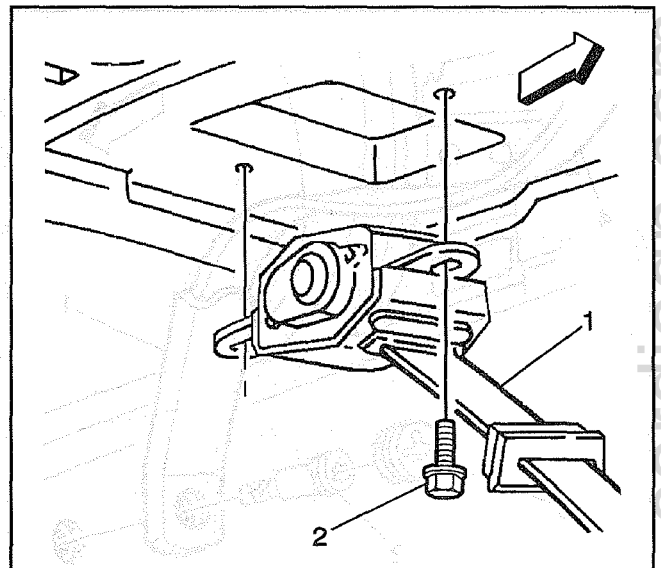
Removal Procedure

1. Remove the plug (3) from the bolt/screw (2).
2. Remove the bolt/screw (2) that attaches the plate to the rocker panel.
3. Remove the plate.
4. Pull the webbing and the plate out of the shoulder belt guide.
5. Lower the rear portion of the headliner finishing trim panel. Refer to *Hard Top Headliner Replacement* in Roof.



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6. Remove the bolts/screws (2) that attach the belt (1) to the rear roof panel.
7. Remove the belt (2) from the rear roof panel.



180045

Installation Procedure

1. Connect the belt (1) to the rear roof panel.

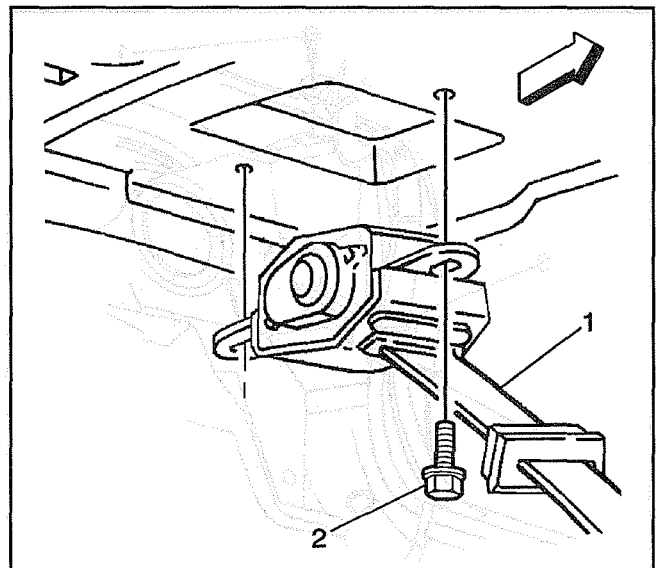
Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the bolts/screws (2).

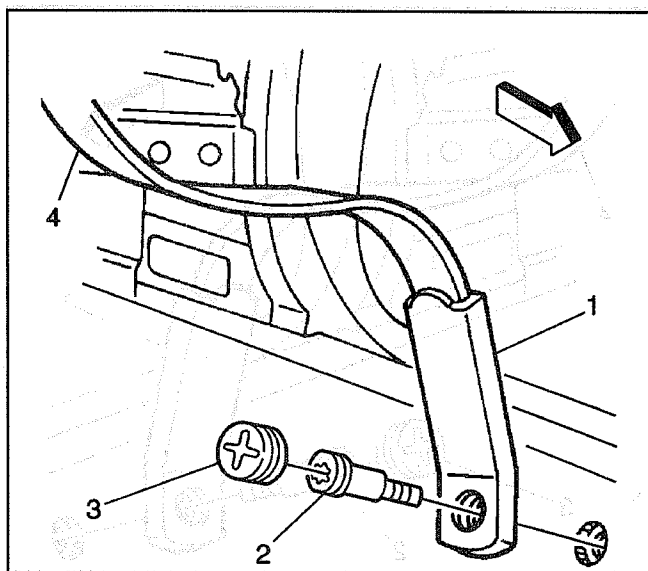
Tighten

Tighten the bolts/screws (2) to 28 N·m (20 lb ft).

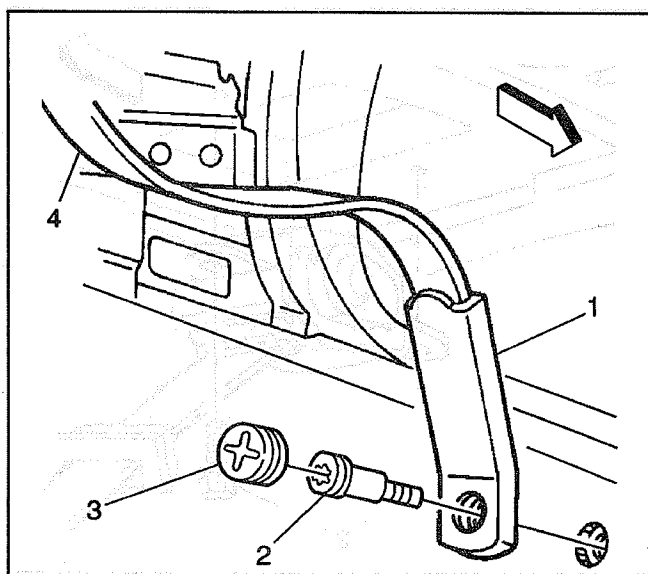
3. Raise the rear portion of the headliner finishing trim panel back into position. Refer to *Hard Top Headliner Replacement* in Roof.



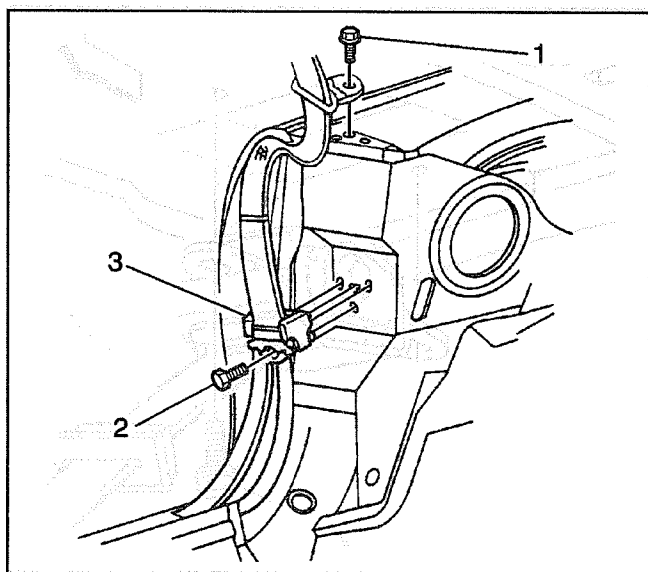
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4. Route the webbing and the plate through the shoulder belt guide.
5. Install the plate to the rocker panel.
6. Install the bolt/screw (2).
- Tighten**
Tighten the bolt/screw (2) to 42 N·m (31 lb ft).
7. Install the plug (3) to the bolt/screw (2).

Seat Belt Retractor Replacement - Left Front (Convertible)

Removal Procedure

1. Remove the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Convertible)* in Interior Trim.
2. Remove the plug (3) from the bolt/screw (2).
3. Remove the bolt/screw (2) that attaches the plate to the rocker panel.
4. Remove the shoulder belt guide bolt/screw (3).
5. Remove the retractor-side belt (1).
6. Remove the shoulder belt retractor-side bolt/screw (2).

Installation Procedure

1. Install the retractor-side belt (1).

Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the shoulder belt guide bolt/screw (3).

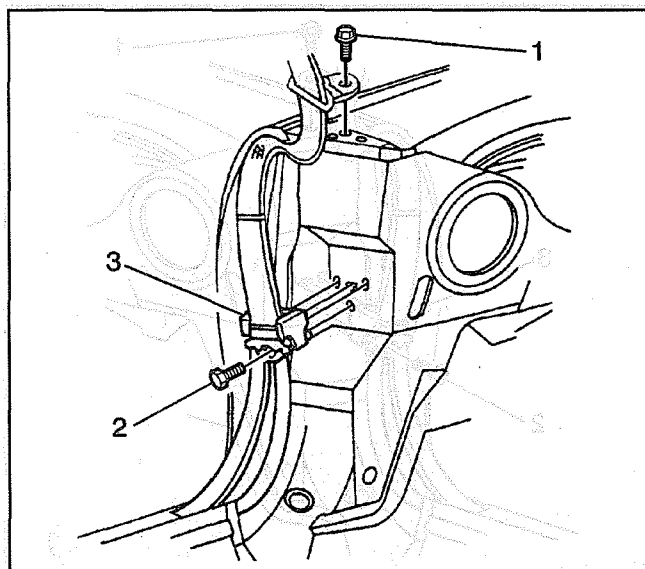
Tighten

Tighten the bolt/screw (3) to 42 N·m (31 lb ft).

3. Install the shoulder belt retractor-side bolt/screw (2).

Tighten

Tighten the bolt/screw (2) to 42 N·m (31 lb ft).



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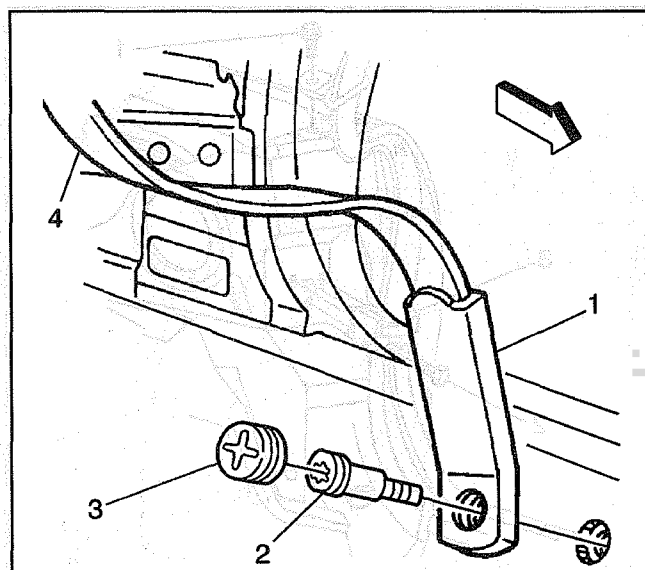
4. Install the bolt/screw (2) that attaches the plate to the rocker panel.

Tighten

Tighten the bolt/screw (2) to 42 N·m (31 lb ft).

5. Install the plug (3) to the bolt/screw (2).

6. Install the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Convertible)* in Interior Trim.

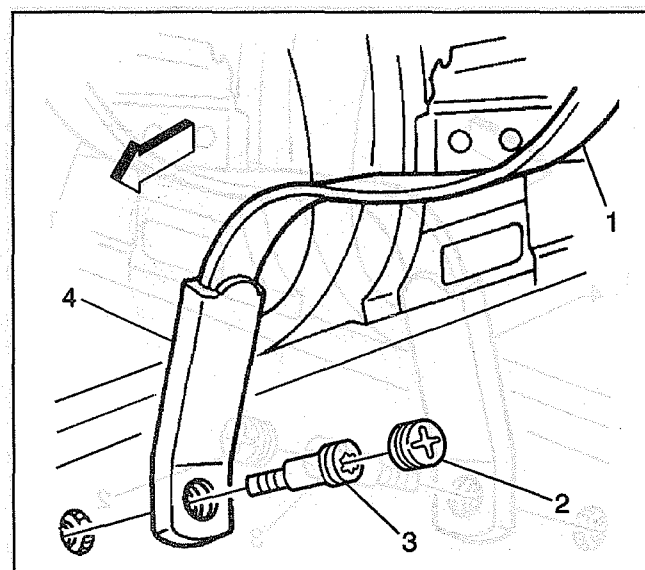


180044

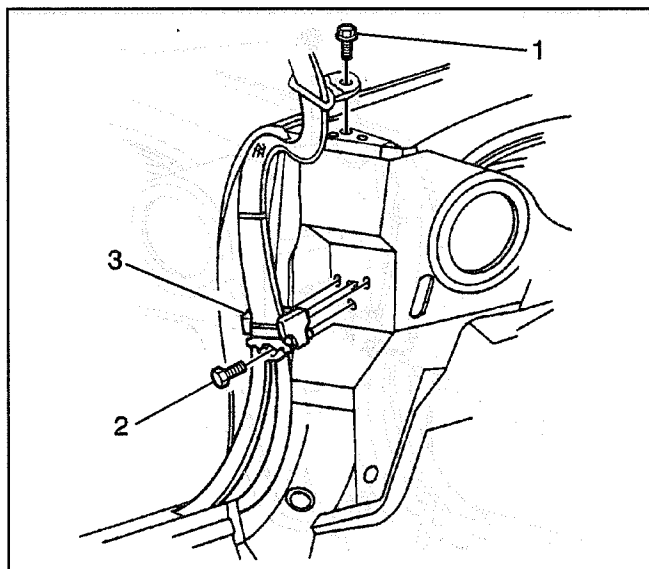
Seat Belt Retractor Replacement - Right Front (Convertible)

Removal Procedure

1. Remove the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Convertible)* in Interior Trim.
2. Remove the plug (2) from the bolt/screw (3).
3. Remove the bolt/screw (3) that attaches the plate to the rocker panel.

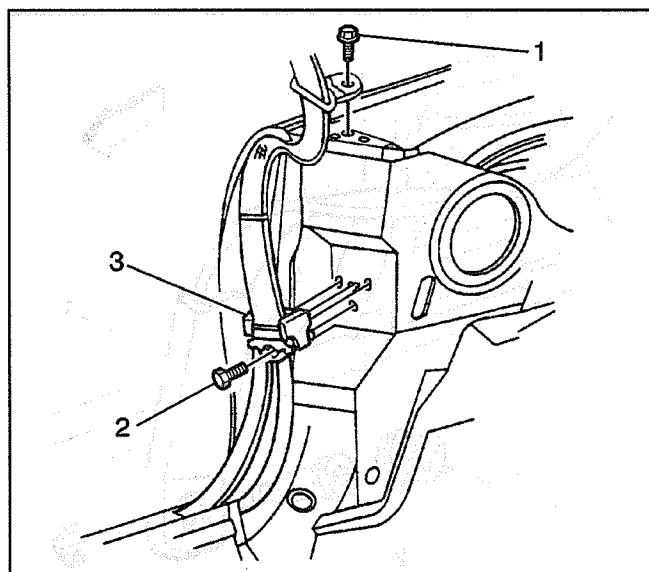


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4. Remove the bolt/screw (1) from the shoulder belt guide.
5. Remove the retractor-side belt (3).
6. Remove the bolt/screw (2) from the retractor-side shoulder belt (3).



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Installation Procedure

1. Install the retractor-side belt (3).

Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the bolt/screw (1) to the shoulder belt guide.

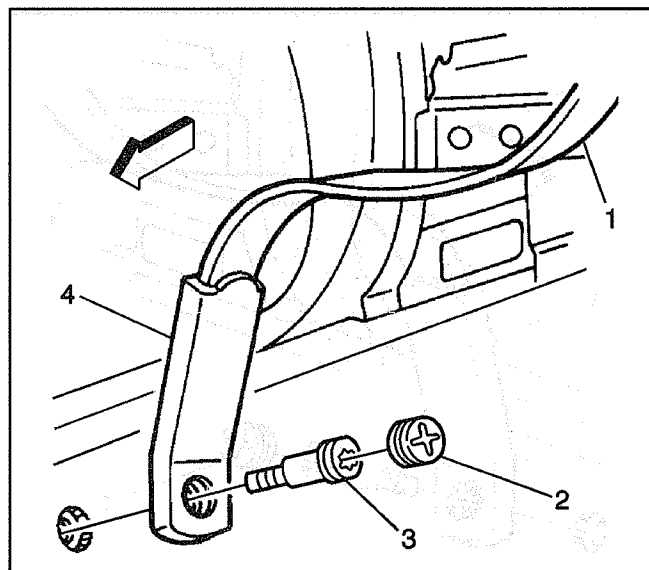
Tighten

Tighten the bolt/screw (1) to 42 N-m (31 lb ft).

3. Install the bolt/screw (1) to the retractor-side shoulder belt.

Tighten

Tighten the bolt/screw to (2) to 42 N-m (31 lb ft).



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4. Install the bolt/screw (3) that attaches the plate to the rocker panel.

Tighten

Tighten the bolt/screw (3) to 42 N-m (31 lb ft).

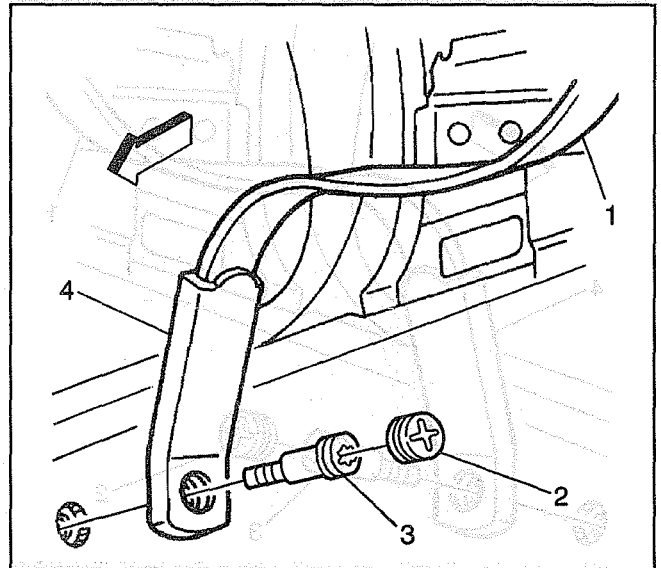
5. Connect the plug (2) to the bolt (3).

6. Install the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Convertible)* in Interior Trim.

Seat Belt Retractor Replacement - Right Front (Coupe)

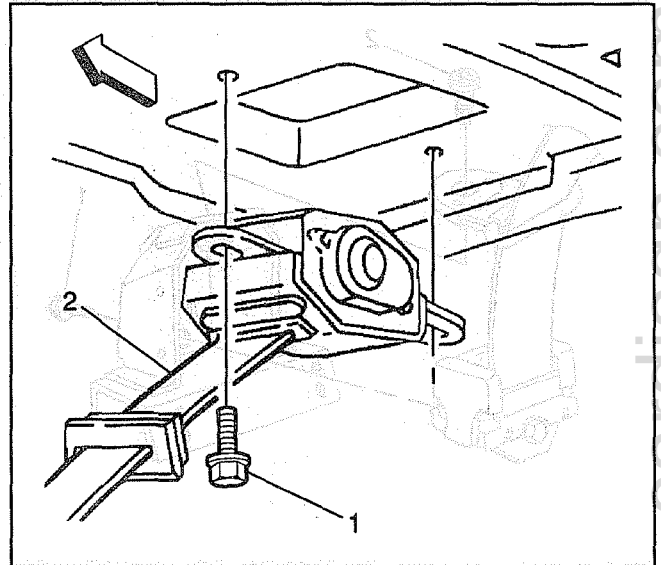
Removal Procedure

1. Remove the plug (2) from the bolt/screw (3).
2. Remove the bolt/screw (3) that attaches the plate to the rocker panel.
3. Remove the attaching plate.
4. Pull the webbing and the plate out of the shoulder belt guide.
5. Lower the rear portion of the headlining finishing trim panel. Refer to *Hard Top Headliner Replacement* in Roof.



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6. Remove the bolts/screws (1) that attach the bolt (2) to the rear roof panel.
7. Remove the belt (1) from the rear roof panel.



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Installation Procedure

1. Connect the belt (2) to the rear roof panel.

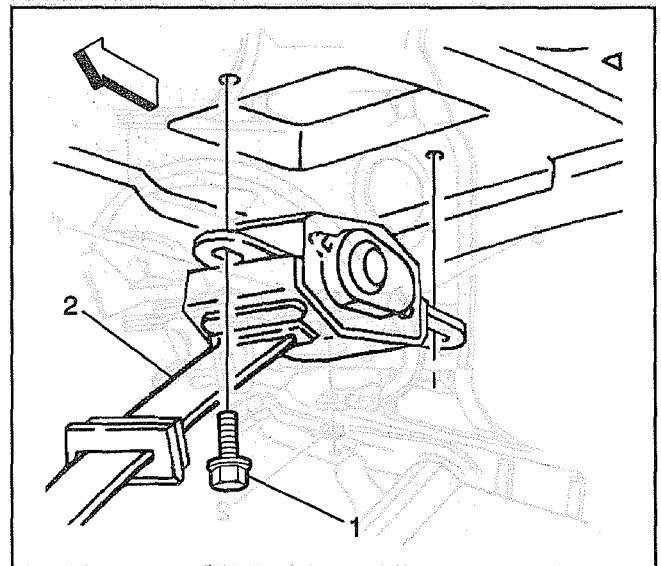
Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the bolts/screws (1).

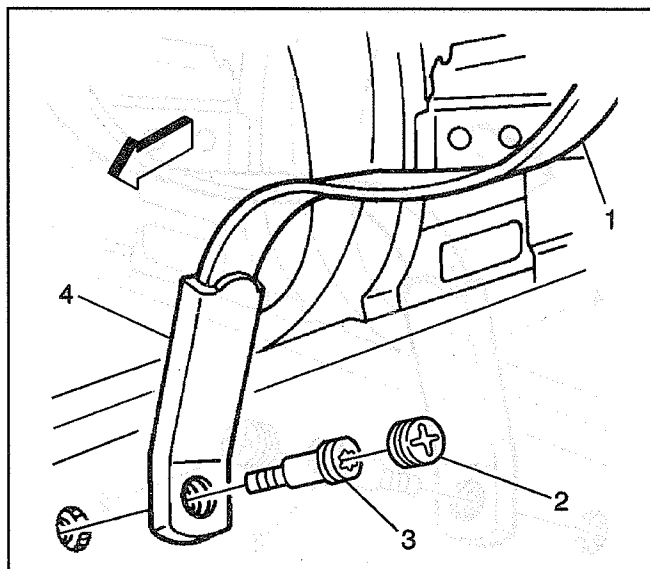
Tighten

Tighten the bolts/screws (1) to 28 N·m (20 lb ft).

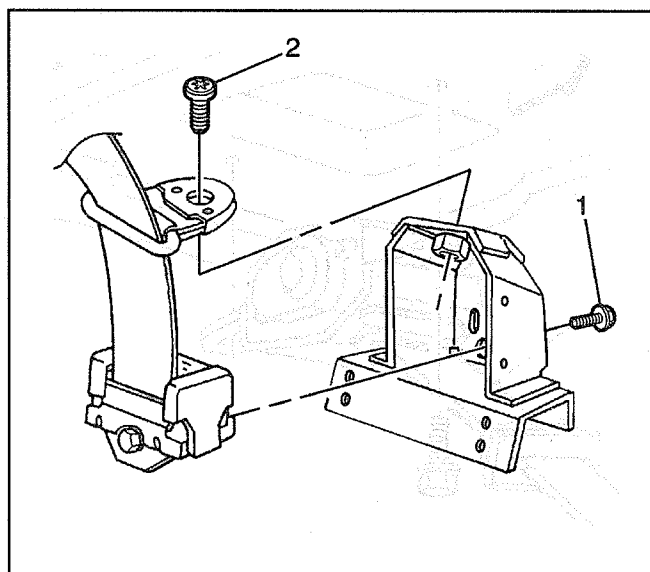
3. Raise the rear portion of the headlining finishing trim panel back into position. Refer to *Hard Top Headliner Replacement* in Roof.



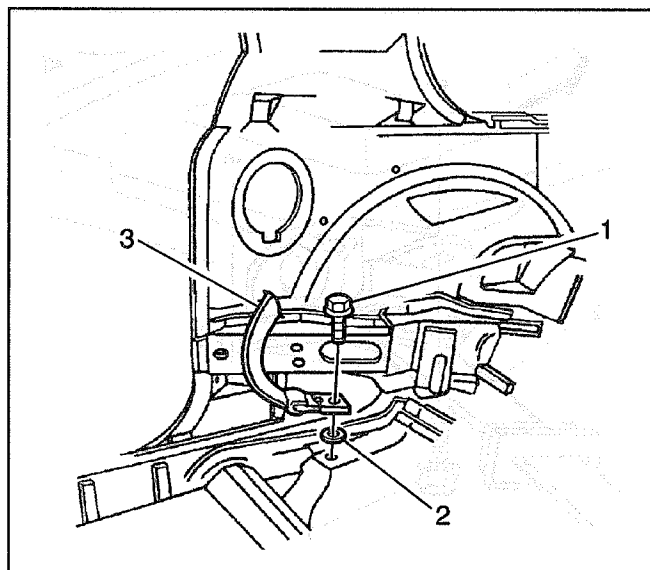
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180030

4. Route the webbing and the plate through the shoulder belt guide.
5. Connect the plate to the rocker panel.
6. Install the bolt/screw (3).
- Tighten**
Tighten the bolt/screw (3) to 42 N-m (31 lb ft).
7. Connect the plug (2) to the bolt/screw (3).

Seat Belt Retractor Replacement - Rear (Convertible)

Removal Procedure

1. Remove the retractor trim cover. Refer to *Shoulder Belt Replacement - Rear (Retractor Bracket)*.
2. Remove the rear seat cushion. Refer to *Seat Replacement - Bucket (Seatback Cushion)* in Seats.
3. Remove the bolt/screw (2) from the rear seat retractor-side belt guide.
4. Remove the bolt/screw (1) from the rear seat retractor-side shoulder belt.
5. Remove the bolt/screw (1) and the spacer (2) that attaches the belt (3) to the floor panel.
6. Remove the rear seat belt (3).

Installation Procedure

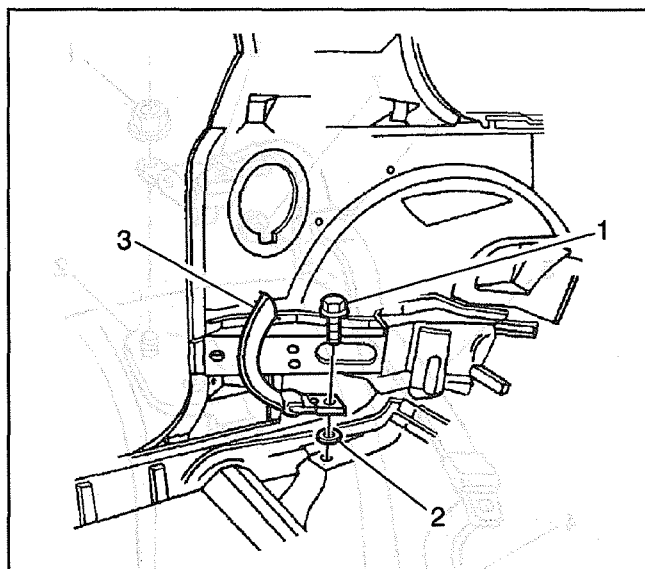
1. Attach the rear seat belt anchor plate to the floor panel.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Connect the bolt/screw (1) through the belt anchor plate and the spacer (2) to the floor panel.

Tighten

Tighten the bolt (1) to 42 N·m (31 lb ft).



180030

3. Install the bolt/screw (1) to the rear seat retractor-side shoulder belt.

Tighten

Tighten the bolt (1) to 42 N·m (31 lb ft).

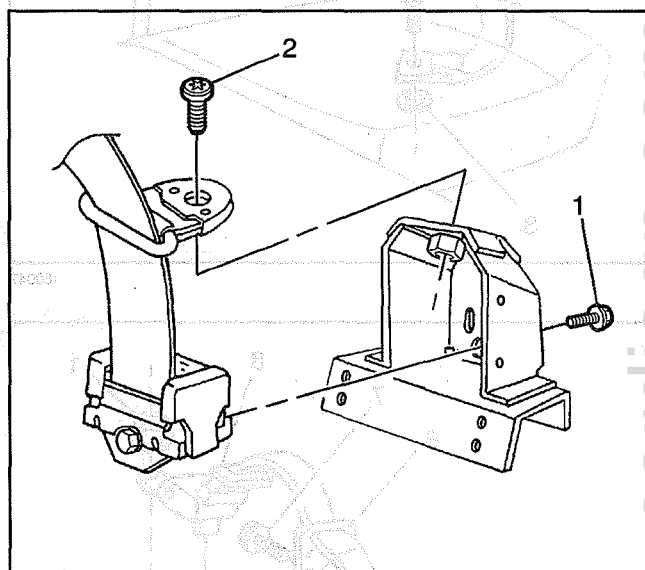
4. Install the bolt/screw (2) to the rear seat retractor-side belt guide.

Tighten

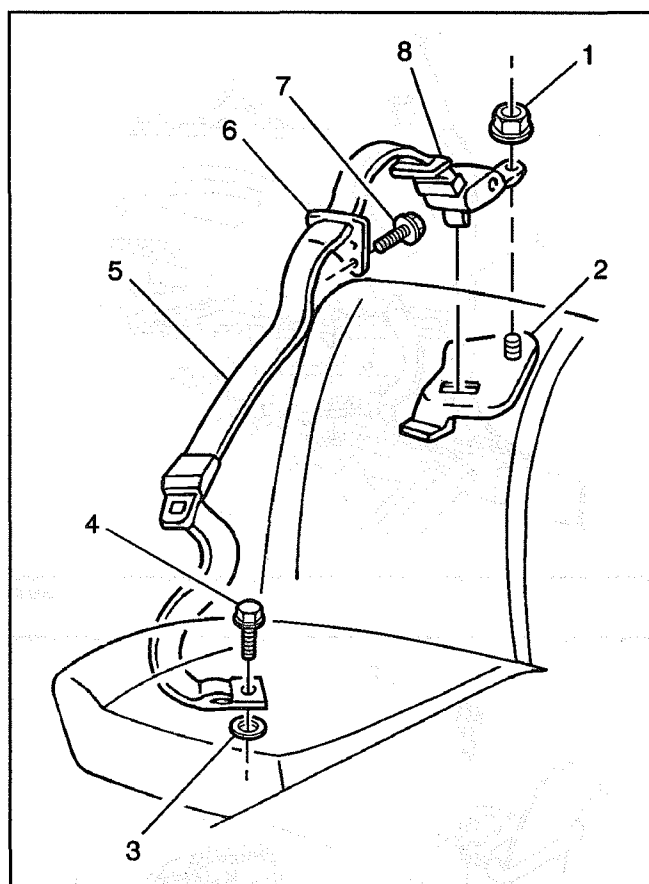
Tighten the bolt (2) to 42 N·m (31 lb ft).

5. Install the rear seat cushion. Refer to *Seat Replacement - Bucket (Seatback Cushion)* in Seats.

6. Install the retractor trim cover. Refer to *Shoulder Belt Replacement - Rear (Retractor Bracket)*.



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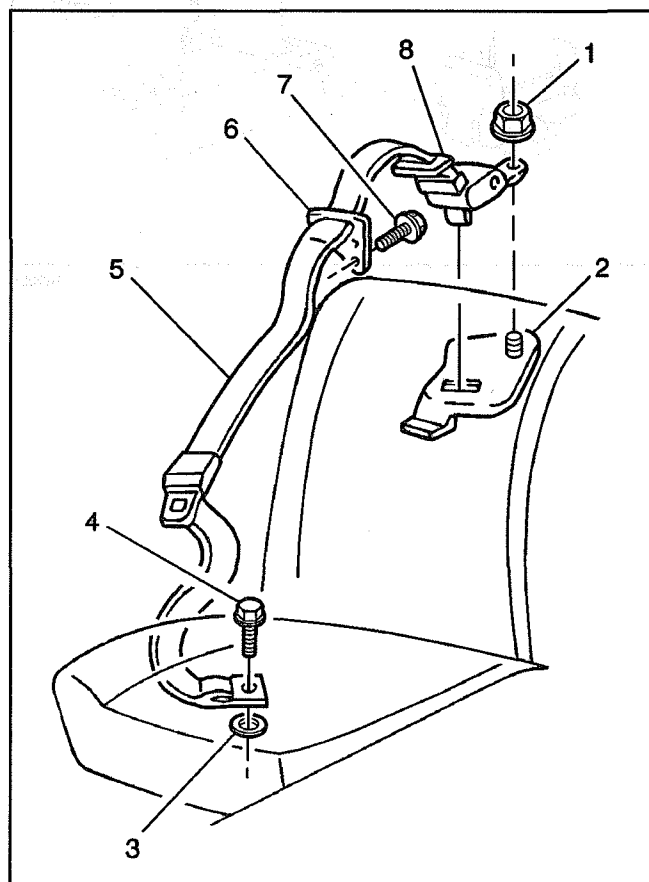


180047

Seat Belt Retractor Replacement - Rear (Coupe)

Removal Procedure

1. Remove the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Coupe)* in Interior Trim.
2. Remove the rear seat cushion. Refer to *Seat Replacement - Bucket (Seatback Cushion)* in Seats.
3. Remove the nut (1) that attaches the rear seat retractor-side shoulder belt to the inner wheelhouse panel (2).
4. Remove the bolts/screws (7) that attach the rear seat shoulder belt guide (6) to the rear seat back cushion.
5. Remove the bolt/screw (4) and the spacer (3) that attaches the belt (5) to the floor panel.
6. Remove the belt (5) from the vehicle.



180047

Installation Procedure

1. Connect the belt anchor plate to the floor panel.
- Notice:** Refer to *Fastener Notice* in Cautions and Notices.

2. Connect the bolt/screw (4) and the spacer (3) to the floor panel.

Tighten

Tighten the bolt/screw to 42 N·m (31 lb ft).

3. Connect the shoulder belt guide (6) to the rear seat back cushion.
4. Install the bolts/screws (7).

Tighten

Tighten the bolts/screws (7) to 10 N·m (89 lb in).

5. Connect the belt retractor to the inner wheelhouse panel (2).
6. Install the nut (1).

Tighten

Tighten the nut to 55 N·m (41 lb ft).

7. Install the rear seat cushion. Refer to *Seat Replacement - Bucket (Seatback Cushion)* in Seats.
8. Install the cargo area front trim panel. Refer to *Trim Panel Replacement - Cargo Area Front (Coupe)* in Interior Trim.

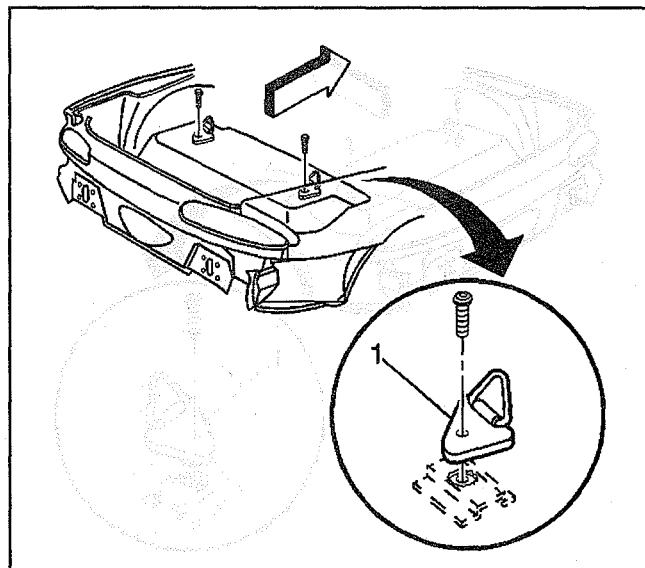
Child Restraint Belt Tether Location (Replacement)

Removal Procedure

Caution: The seat belt assembly and/or bracket assembly must be replaced as a unit only. Do not substitute parts for any reason, or personal injury could result.

Important: Replace the anchor bracket if the anchor bracket is damaged.

1. Remove the bolts/screws.
2. Remove the anchor bracket (1).



587430

Installation Procedure

1. Connect the anchor bracket (1) to the anchor bracket mounting plate.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

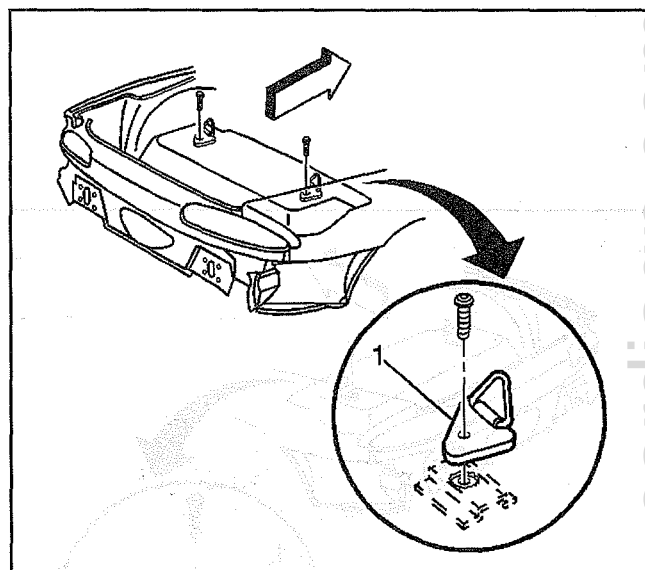
Important: DO NOT use a nut driver to tighten this hardware or the fasteners will not be properly seated.

2. Install the bolts/screws.

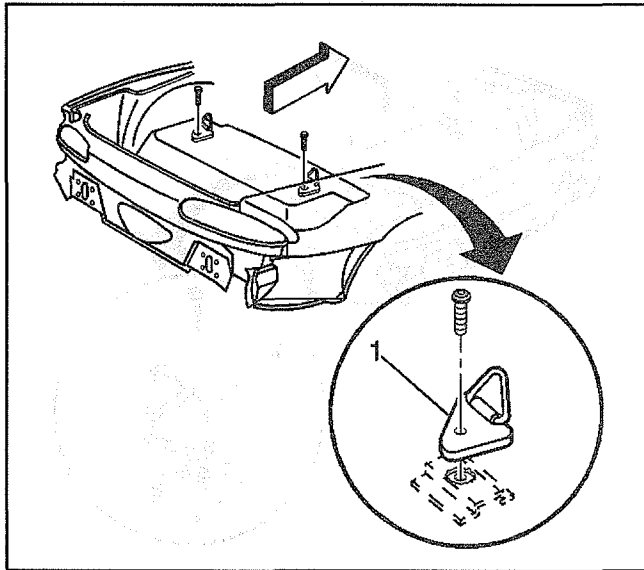
Tighten the bolts/screws until the bolts are fully seated. Do not strip the bolts.

Tighten

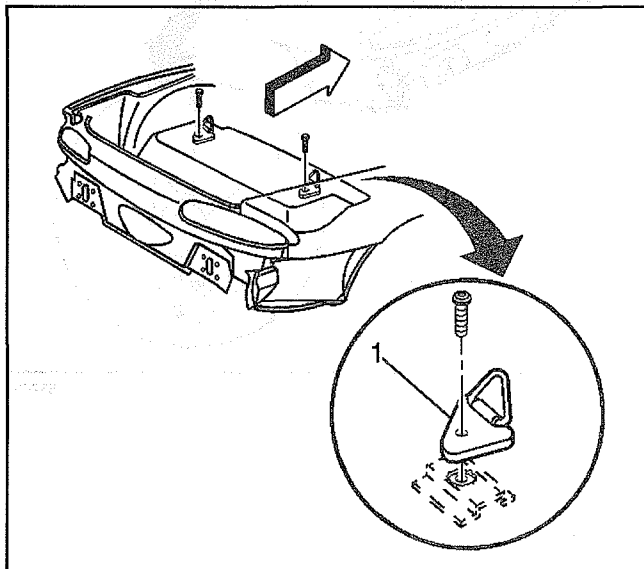
Tighten the bolts/screws to 42 N·m (31 lb ft).



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Child Restraint Belt Tether Location (Child Seat)

Caution: 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. It is always better to secure a child restraint in the rear seat. If a forward-facing child seat 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 instructions that came with the child restraint.

When the child seat is used in the front seat, it is installed by connecting the following components:

- The child seat tether
- The seat belt at the seating position to the rear

A special dealer-installed tether must be used in order to secure the child seat tether when a child seat that requires a top strap will be used in the rear seat. The child seat must be used only at the seating position for which the anchor (1) is installed. This action will ensure that the angle of the child seat tether is correct.

Child Restraint Belt Tether Location (Initial Installation)

Important: All vehicles are equipped with drilled and tapped plates welded to the rear compartment front panel. These plates serve as mounting points for the Child Seat Restraint System Belt Kits. If an anchor bracket (1) is being installed for the first time, use the following procedure:

1. Remove the cargo area side trim panel. Refer to *Trim Panel Replacement - Cargo Area Side (Coupe)* in Interior Trim.
2. Carefully lift the rear edge of the carpeting in order to reveal the anchor bracket mounting plate locations.
3. Choose the mounting location on either the driver side or the passenger side.
4. Position the anchor bracket (1) to the anchor bracket mounting plate.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

Important: DO NOT use a nut driver to tighten this hardware or the fasteners will not be properly seated.

5. Install the bolts/screws.
Fully tighten the bolts/screws. Do not strip the bolts/screws.
6. Replace the carpeting.
Note the bump created by the anchor bracket

Important: Pull the carpet tight before making a cut in the carpet.

7. Carefully slit the carpeting to allow the anchor bracket to protrude.
8. Follow the instructions in the owner's manual and the product information accompanying the child seat regarding the positioning and installation of the child seat when the rear safety belts are used.

Description and Operation

Seat Belt System Description

Restraint System

Seat belts are the primary means of occupant restraint. Seat belts help to keep the occupant(s) 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 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 the vehicle speed
- An abrupt change in the vehicle direction
- Operation of the vehicle on a steep upgrade
- Operation of the vehicle on a steep 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 the webbing is allowed to retract.

Use of the cinch feature is recommended for securing a child seat.

The cinch feature may be canceled by allowing the webbing to wind completely back into the retractor. After the cinch feature is canceled, the webbing is unlocked. The webbing will then extend from the retractor.

This vehicle is also equipped with a Supplemental Inflatable Restraint (SIR) System. Refer to *SIR System Component Description and Definitions* in SIR for more information about the SIR system.

Front Seat System

The front seat belt system includes the following components:

- The driver and the passenger seat buckle-side belts
- The seat buckle-side belts are attached to the floor panel inboard of the front seats.
- The driver and the passenger seat retractor-side belts
 - The driver and the passenger seat retractor-side belts are attached to the floor panel.
- The driver and the passenger seat retractor-side belts are attached to the roof panel (coupe) or to the body lock pillar reinforcement (convertible).

The driver seat belt system includes a seat belt switch in the driver seat buckle-side belt. The seat belt switch controls a reminder lamp and a tone alarm. The reminder lamp and the tone alarm will not operate when the following conditions exist:

- The driver seat belt is buckled
- The driver door is closed
- The ignition switch is turned ON

The following events will occur when the driver door is closed and the ignition switch is turned ON, but the driver seat belt is not buckled:

- The tone alarm will operate for 4 to 8 seconds and then turn off.
- The reminder lamp will operate until the driver seat belt is buckled, or until approximately 1 minute has elapsed.

Refer to Wiring Systems in Body and Accessories in order to diagnose faults in the reminder lamp or the tone alarm.

Rear Seat System

The rear seat belt system includes the following components:

- The rear seat buckle-side belt
 - The rear seat buckle-side belt is attached to the floor panel inboard of the rear seats.
- The rear seat retractor-side belt
 - The rear seat retractor-side belt is attached to the floor panel and the inner wheelhouse panel (coupe) or the floor panel (convertible), and to the rear seat shoulder belt retractor bracket.

Child Restraint

Caution: 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. It is always better to secure a child restraint in the rear seat. If a forward-facing child seat 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 instructions that came with the child restraint.

The child seat should be installed and secured according to the manufacturer's instructions. The automatic locking (cinch) feature can be used to secure the child seat.

The child seat should be anchored if the child seat has a top strap. Refer *Child Restraint Belt Tether Location (Initial Installation)*.

Passengers should not sit at locations where the seat belts are being used to secure the child seat.

Seat Belt System Circuit Description

The body control module (BCM) generates a fasten belts warning for 4–8 seconds and illuminates the fasten seat belt indicator when the BCM senses both of the following conditions:

- The ignition switch is in the RUN, BULB TEST or START position.
- The driver seat belt is unbuckled.

When the ignition switch is in the RUN, BULB TEST or START position, voltage is applied to the BCM ignition positive voltage input. With the driver seat belt unbuckled, ground is applied to the BCM seat belt switch signal input. The BCM applies voltage to the instrument cluster to illuminate the fasten seat belt indicator. The indicator remains ON for approximately 70 seconds. The indicator turns off if the seat belt is buckled.

If the driver seat belt is buckled before the ignition switch is turned to the RUN, BULB TEST or START positions the following will occur:

- The fasten seat belt warning will not sound.
- The fasten seat belt indicator will not illuminate.