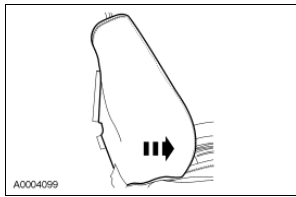


Remove the side air bag module nuts.

11. With one hand on the side air bag module, position the seat back trim cover and pad forward enough to access the side air bag module.



12. Disconnect and remove the side air bag module.

Installation

1. Connect the side air bag module electrical connector.
2. **⚠ WARNING:** Inspect the mounting surfaces of the side air bag module for any foreign objects before installing the side air bag module. If any foreign objects are found, remove them. Failure to do so may result in personal injury, in the event of an air bag deployment.

⚠ WARNING: Inspect the side air bag deployment chute and the side air bag cavity in the seat back pad for any foreign objects. If any foreign objects are found remove them. Failure to do so may result in personal injury, in the event of an air bag deployment.

⚠ WARNING: Before installing the side air bag module into the deployment chute, check it for damage and foreign objects. If the air bag module is damaged, replace it. If any foreign objects are found, remove them. Failure to do so may result in personal injury, in the event of an air bag deployment.

⚠ WARNING: If the air bag cover has separated or the air bag material has been exposed, install a new side air bag module. Do not attempt to repair the air bag module. Failure to do so may result in personal injury, in the event of an air bag deployment

⚠ WARNING: Check the side air bag deployment chute for damage. The deployment chute must not be repaired. If there is any damage to the deployment chute, the seat back trim cover and deployment chute must be installed new as a unit.

⚠ WARNING: If the air bag deployment chute is not properly positioned, the side air bag may not deploy correctly.

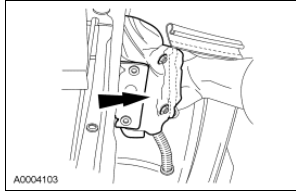
⚠ WARNING: Inspect the mounting surfaces of the deployment chute and the seat back frame mounting bracket for any foreign objects, before installing the side air bag module/deployment chute assembly. If any foreign objects are found, remove them. Failure to do so may result in personal injury, in the event of an air bag deployment.

NOTE: The alignment pin will only allow the side air bag module to be installed to the seat back mounting bracket one way.

NOTE: Make sure the electrical connector is securely fastened to the side air bag module before installing the air bag module into the deployment chute.

Position the side air bag module into the deployment chute.

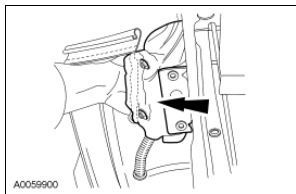
- Position the side air bag module into the deployment chute with the alignment pin offset to the top and the electrical connector to the bottom of the seat back to properly position the alignment pin correctly when the side air bag module and deployment chute are mounted to the seat back frame mounting bracket.
- The side air bag module mounting studs must come through the deployment chute stud openings.



3. **NOTE:** The deployment chute should not have any wrinkles or folds where it contacts the seat back frame mounting bracket.

Install the side air bag module onto the front seat back frame mounting bracket and install the nuts.

- Tighten to 9 Nm (80 lb-in).

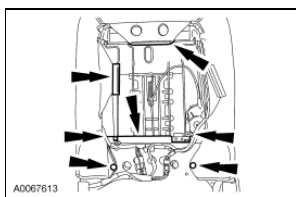


4. Reposition the seat back pad and trim cover to the seat back frame.

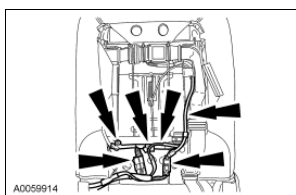
5. **NOTE:** Check that all 3 attaching clips on the side air bag nuts cover are correctly installed around the side air bag mounting bracket

Attach the side air bag nuts cover.

6. Fasten the seat back trim cover J-clips.

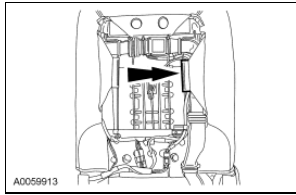


7. Connect the electrical connectors and attach all pin-type retainers to the lower seat back frame.



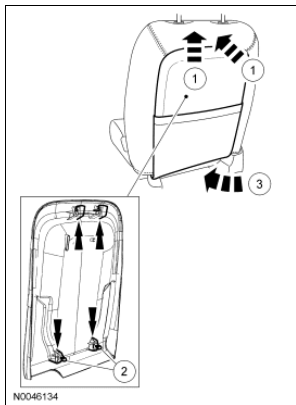
8. If equipped with climate control seats, install the climate control duct and the pin-type retainer.

9. Fasten the trim cover J-clip over the climate control duct (if equipped).



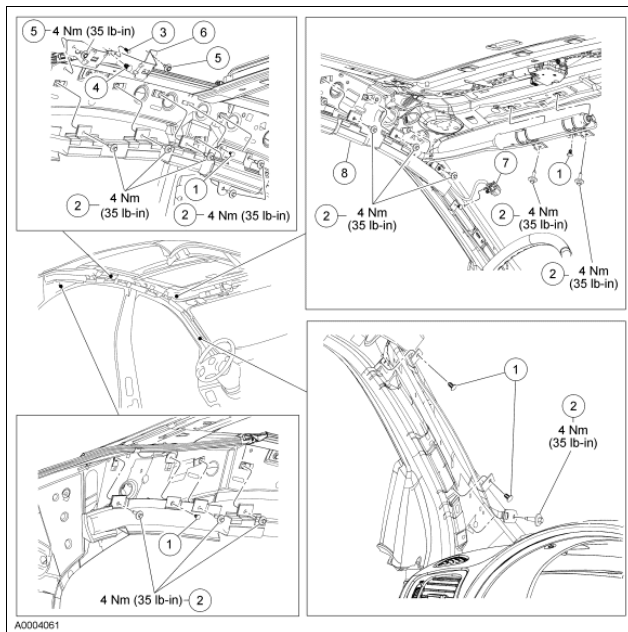
10. Install the seat backrest trim panel.

1. Position the top of the backrest trim panel at an angle to the backrest frame and push it forward and slide it upward to engage the upper hooks.
2. Continue positioning the backrest trim panel upward and align the 2 lower pin-type retainers with the holes in the backrest frame.
3. Push the bottom of the backrest trim panel forward and seat the 2 pin-type retainers.



11. Repower the system. For additional information, refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of this section.
-

Side Air Curtain Module



Item	Part Number	Description
1	W705635-S	Pin-type retainers (5 required)
2	W503924-S	Side air curtain retaining screws (13 required)
3	—	Pin-type retainer (part of 54312A52)
4	—	Pin-type retainer (part of 54312A52)
5	—	Screws
6	54312A53	Grab handle bracket
7	—	Side air curtain module electrical connector (part of 14A005)
8	54042D95	Side air curtain module

Removal

⚠ WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. This will reduce the risk of injury in the event of an accidental deployment.

⚠ WARNING: To reduce the risk of personal injury from an accidental deployment, always carry or place a live side air curtain module with the curtain and tear seam pointed away from your body. Failure to do so can result in personal injury in the event of a side air curtain deployment.

⚠ WARNING: After deployment, the surface of the side air curtain can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards.

⚠ WARNING: Never probe the connector on the side air curtain module. Doing so can result in side air curtain deployment which can result in personal injury.

⚠ WARNING: Anytime the side air curtain has deployed, the headliner, and all A, B, and C pillar upper trim panels and attaching hardware must be installed new along with any other damaged components and hardware. Failure to do so can result in personal injury in the event of a side air curtain deployment.

⚠ WARNING: Vehicles equipped with side air curtain modules require a specific headliner. When installing a new headliner on a vehicle equipped with side air curtain modules, make sure a headliner for side air curtain modules is being used. The word "AIRBAG" will appear on the headliner where it meets each B-pillar trim panel. Failure to do so can result in personal injury in the event of a side air curtain module deployment.

⚠ WARNING: Before installing a side air curtain module, inspect the roofline for any damage. If necessary, the sheet metal must be reworked to its original condition and structural integrity. All fasteners must be replaced and any foreign objects removed. Failure to do so may result in personal injury in the event of a side air curtain deployment.

⚠ WARNING: The side air curtain must be installed in the vehicle using new torque-prevailing type U-nuts, part number W709759 or W520822. Use of this U-nut is mandatory so as to reduce the risk of loss of fastener effectiveness. Failure to follow these instructions may result in personal injury in the event of a side air curtain deployment.

⚠ WARNING: Inspect the side air curtain module before installation. If the side air curtain module is damaged or the cover has separated and the curtain material has been exposed, a new side air curtain module must be installed. Do not attempt to repair the side air curtain module. Failure to follow these instructions can result in personal injury in the event of a side air curtain module deployment.

⚠ WARNING: To reduce the risk of injury, do not obstruct or place objects in the deployment path of the side air curtain module. Failure to follow these instructions can result in personal injury in the event of a side air curtain module deployment.

⚠ WARNING: Never put any type of fastener or tie strap around any part of the side air curtain module or interior trim panel. This will prevent the side air curtain module from deploying correctly. Failure to do so can result in personal injury in the event of a side air curtain module deployment.

⚠ WARNING: To reduce the risk of personal injury, do not use any memory saver devices.

NOTE: The air bag warning lamp illuminates when the RCM fuse is removed and the ignition switch is ON. This is normal operation and does not indicate a supplemental restraint system (SRS) fault.

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

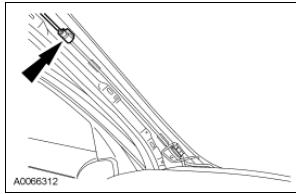
NOTE: Repair is made by installing a new part only. If the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE: Driver side shown, passenger side similar.

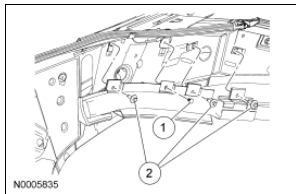
1. Depower the system. For additional information, refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section.
2. **⚠ WARNING:** Anytime the side air curtain has deployed, the headliner, and all A-, B-, and C-pillar upper trim panels and attaching hardware must be replaced along with any other damaged components and hardware. Failure to do so may result in personal injury in the event of a side air curtain deployment.

Remove the headliner. For additional information, refer to [Section 501-05](#).

3. Disconnect and detach the side air curtain module electrical connector located at the A-pillar.



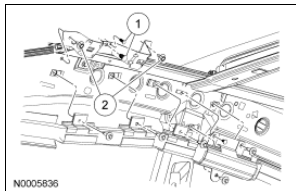
4. Remove the side air curtain module retainers near the C-pillar.
 1. Remove the pin-type retainer.
 2. Remove the 3 screws.



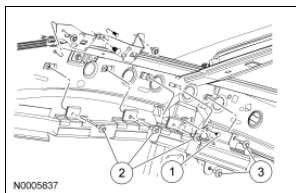
5. **NOTE:** If the side air curtain is being serviced on the passenger side, remove the front row bracket also.

Remove the grab handle bracket located above the rear door.

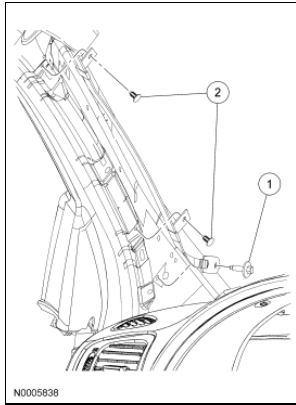
1. Remove the 2 pin-type retainers.
2. Remove the 2 screws and the grab handle bracket.



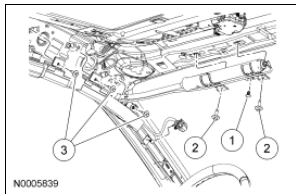
6. Remove the side air curtain module retainers located near the B-pillar.
 1. Remove the pin-type retainer.
 2. Remove the 3 screws.
 3. Remove the 2 screws.



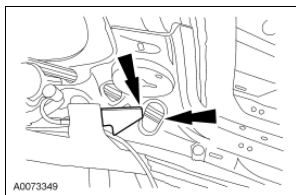
7. Remove the A-pillar tether retainers.
 1. Remove the screw.
 2. Remove the 2 pin-type retainers.



8. Remove the remaining side air curtain module retainers located near the A-pillar.
 1. Remove the side air curtain module canister pin-type retainer.
 2. Remove the 2 side air curtain module canister screws.
 3. Remove the 3 side air bag module screws.



9. Release the side air curtain module alignment ear located through the sheet metal opening at the top of the A-pillar and remove the side air curtain.



Installation

1. **⚠ WARNING:** The side air curtain must be installed in the vehicle using new torque-prevailing type U-nuts, part number W709759 or W520822. Use of this U-nut is mandatory so as to reduce the risk of loss of fastener effectiveness. Failure to follow these instructions may result in personal injury in the event of a side air curtain deployment.

Remove all U-nut fasteners and install new.

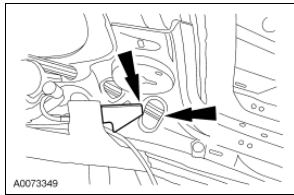
2. **⚠ WARNING:** Before installing the side air curtain module, inspect the roofline for any damage. If necessary, the sheet metal must be reworked to its original condition and structural integrity. Install new fasteners and remove any foreign objects. Failure to do so may result in personal injury in the event of a side air curtain deployment.

⚠ WARNING: Before installing the side air curtain module, if the module is damaged or the cover has separated or the side air curtain material has been exposed, install a new side air curtain module. Do not attempt to repair the side air curtain. Failure to follow these instructions could result in personal injury in the event of a side air curtain deployment.

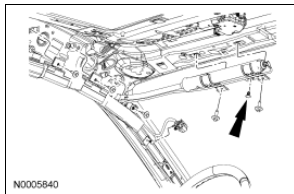
⚠ WARNING: Never put any type of fastener or tie strap around any part of the side air curtain module or interior trim panel. This will prevent the side air curtain module from

deploying correctly. Failure to do so can result in personal injury in the event of a side air curtain module deployment.

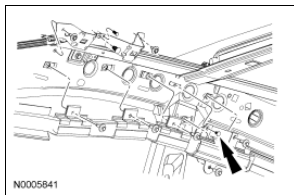
Align and install the side air curtain module alignment ear into the sheet metal opening at the top of the A-pillar.



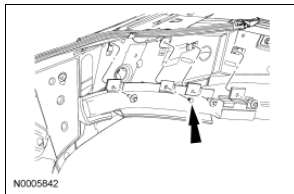
3. Install the side air curtain module canister pin-type retainer.



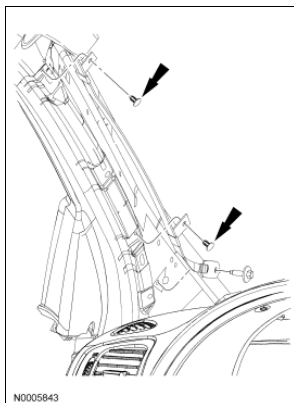
4. Install the side air curtain module pin-type retainer.



5. Install the side air curtain module pin-type retainer.



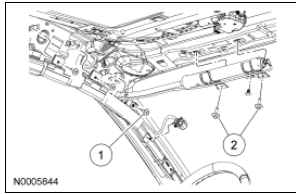
6. Install the 2 A-pillar tether pin-type retainers.



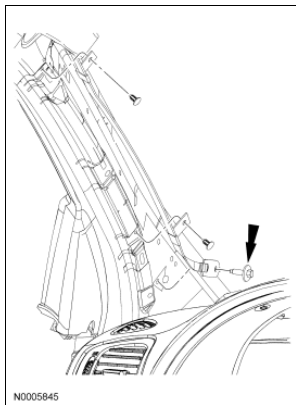
7. Install the side air curtain module screws located near the A-pillar.

1. Install the side air curtain module screw.

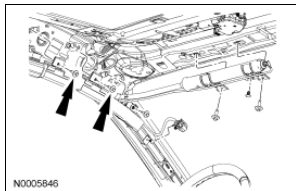
- ◆ Tighten to 4 Nm (35 lb-in).
- 2. Install the 2 side air curtain module canister screws.
- ◆ Tighten to 4 Nm (35 lb-in).



- 8. Install the A-pillar tether anchor screw.
- Tighten to 4 Nm (35 lb-in).

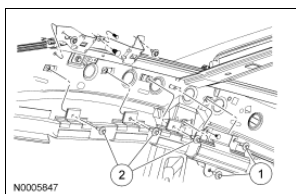


- 9. Install the 2 side air curtain module screws.
- Tighten to 4 Nm (35 lb-in).



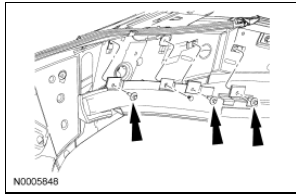
- 10. Install the side air curtain module screws located near the B-pillar.

- 1. Install the 2 screws.
- ◆ Tighten to 4 Nm (35 lb-in).
- 2. Install the 3 screws.
- ◆ Tighten to 4 Nm (35 lb-in).



- 11. Install the 3 side air curtain module screws located near the C-pillar.

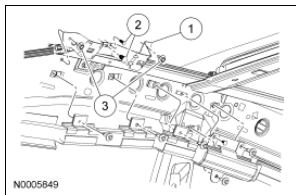
- Tighten to 4 Nm (35 lb-in).



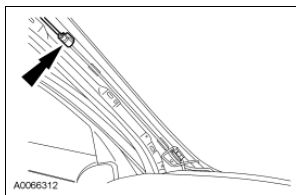
12. **NOTE:** If the side air curtain is being serviced on the passenger side, install the front row bracket also.

Install the grab handle bracket.

1. Position the grab handle bracket.
2. Install the 2 pin-type retainers.
3. Install the 2 screws.



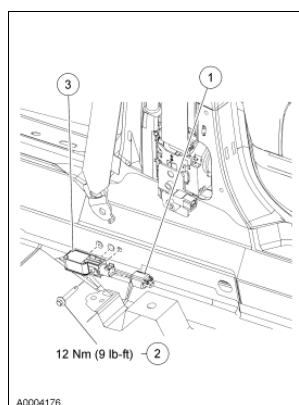
13. Connect the side air curtain module electrical connector.



14. **⚠ WARNING:** Anytime the side air curtain has deployed, the headliner, and all A-, B-, and C-pillar upper trim panels and attaching hardware must be replaced along with any other damaged components and hardware. Failure to do so may result in personal injury in the event of a side air curtain deployment.

Install the headliner. For additional information, refer to [Section 501-05](#) .

15. Repower the system. For additional information, refer to [Supplemental Restraint System \(SRS\) Depowering and Repowering](#) in this section.

Side Impact Sensor — First Row, B-Pillar

Item	Part Number	Description
1	—	Side impact connector (part of 14A005)
2	W707305-S	Side impact bolt
3	14B345	Side impact sensor

Removal

⚠ WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. This will reduce the risk of injury in the event of an accidental deployment.

⚠ WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag supplemental restraint system (SRS) is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. Replace and correctly position the sensor or any other damaged supplemental restraint system (SRS) components whether or not the air bag is deployed.

⚠ WARNING: To reduce the risk of personal injury, do not use any memory saver devices.

NOTE: The air bag warning lamp illuminates when the RCM fuse is removed and the ignition switch is ON. This is normal operation and does not indicate a supplemental restraint system (SRS) fault.

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

NOTE: Passenger side shown, driver side similar.

NOTE: Repair is made by installing a new part only. If the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

1. Remove the front seat on the side with the affected B-pillar side impact sensor and depower the system. For additional information, refer to [Section 501-10](#).
2. **NOTE:** The B-pillar side impact sensor is located under the carpet on the inboard side of the rocker panel.

Remove the B-pillar trim panel. For additional information, refer to [Section 501-05](#).

3. Disconnect the side impact sensor electrical connector.
4. Remove the side impact sensor bolt.
5. Remove the side impact sensor.

Installation

1. **NOTE:** Align the locator tabs of the side impact sensor to the openings in the rocker panel sheet metal.

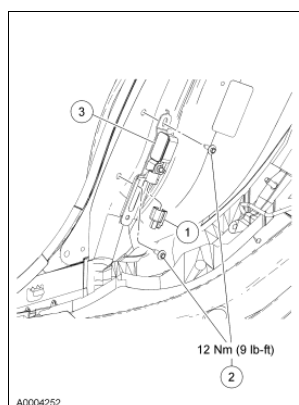
Install the B-pillar side impact sensor.

2. **⚠ WARNING: The tightening torque of the air bag side impact sensor retaining bolt is critical for correct system operation.**

Install the side impact sensor bolt.

- Tighten to 12 Nm (9 lb-ft).

3. Connect the side impact sensor electrical connector.
 4. Install the B-pillar trim panel. For additional information, refer to [Section 501-05](#) .
 5. Install the front seat on the side with the affected B-pillar side impact sensor . For additional information, refer to [Section 501-10](#) .
 6. Repower the system. For additional information, refer to [Supplemental Restraint System \(SRS\) Depowering and Repowering](#) in this section.
 7. Check the active restraint system for correct operation. For additional information, refer to section [Section 501-20A](#) .
-

Side Impact Sensor — Second Row, C-Pillar

Item	Part Number	Description
1	—	Side impact sensor connector (part of 14A005)
2	W707935- S437M	Side impact sensor bolts (2 required)
3	14B345	Side impact sensor

Removal

⚠ WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. This will reduce the risk of injury in the event of an accidental deployment.

⚠ WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag supplemental restraint system (SRS) is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. Replace and correctly position the sensor or any other damaged supplemental restraint system (SRS) components whether or not the air bag is deployed.

⚠ WARNING: To reduce the risk of personal injury, do not use any memory saver devices.

NOTE: The air bag warning lamp illuminates when the RCM fuse is removed and the ignition switch is ON. This is normal operation and does not indicate a supplemental restraint system (SRS) fault.

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

NOTE: Repair is made by installing a new part only. If the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE: Passenger side shown, driver side similar.

1. Depower the system. For additional information, refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section.
2. Remove the rear seat bolster on the side with the affected C-pillar side impact sensor. For additional information, refer to Section 501-10.
3. Disconnect the side impact sensor electrical connector.

4. Remove the 2 side impact sensor bolts.
5. Remove the side impact sensor.

Installation

1. **NOTE:** Align the locator tab of the second row side impact sensor mounting bracket to the opening in the C-pillar sheet metal.

Install the C-pillar side impact sensor.

2. **⚠ WARNING: The tightening torque of the air bag side impact sensor retaining bolts is critical for correct system operation.**

Install the side impact sensor bolts.

- Tighten to 12 Nm (9 lb-ft).

3. Connect the side impact sensor electrical connector.
 4. Install the rear seat bolster on the side with the affected C-pillar side impact sensor. For additional information, refer to Section 501-10.
 5. Repower the system. For additional information, refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section.
 6. Check the active restraint system for correct operation. For additional information, refer to Section 501-20A.
-

Torque Specifications

Description	Nm	lb-ft	lb-in
Air conditioning (A/C) line bracket bolt	10	—	89
Engine crossmember bolts	90	66	—
Engine mount nuts	63	46	—
Front/rear control arm cam bolts and nuts	175	129	—
Front stabilizer bar link nuts	55	41	—
I-brace bracket shoulder bolts	30	22	—
I-brace front bolts	55	41	—
I-brace rear bolts	30	22	—
Radiator support crossmember bolts	103	76	—
Rear brake line bracket bolt	20	15	—
Rear brake line fitting	20	15	—
Rear strut bolts	133	98	—
Rear subframe bolts	103	76	—
Steering gear bolts and nuts	103	76	—

Subframe and Mounting Systems

Radiator Support Crossmember

The radiator support crossmember is bolted to the body and is used to:

- aid in structural support.
- provide mounting surfaces for the front of the front suspension control arms.
- provide a mounting point for the front stabilizer bar.
- support the radiator.

Engine Support Crossmember

The engine support crossmember is bolted to the body and is used to:

- aid in structural support.
- provide mounting surfaces for the rear of the front suspension control arms.
- provide a mounting point for the engine isolators.
- provide a mounting point for the underbody stiffener.

Front I-Brace and Bracket Assembly

The I-brace and bracket assemblies are bolted to the body and the engine crossmember and are used to:

- provide support for the engine crossmember.
- stiffen the underbody.

Rear Subframe

The rear subframe is bolted to the body and is used to:

- aid in structural support.
- provide mounting surfaces for the rear suspension bar.
- provide mounting surfaces for the rear axle differential.
- provide a mounting point for the rear stabilizer.

If the rear subframe bushings become worn or damaged a new rear subframe must be installed as a unit. New rear subframe bushings cannot be installed.

Body Misalignment Check

⚠ CAUTION: Do not attempt to correct any serious misalignment with 1 pulling/pushing operation. Damage to the structure may occur.

⚠ CAUTION: In case of severe or sharp bends, it may be necessary to use heat. Any attempt to cold-straighten a severely bent bracket may cause ruptures of the welds. It may also cause cracks in the bent part. Never heat the area to more than 650°C (1,202°F). Always use temperature-indicating crayons when applying heat to any part.

NOTE: All measurements should be made from the bare metal; remove the trim and bumper covers as necessary.

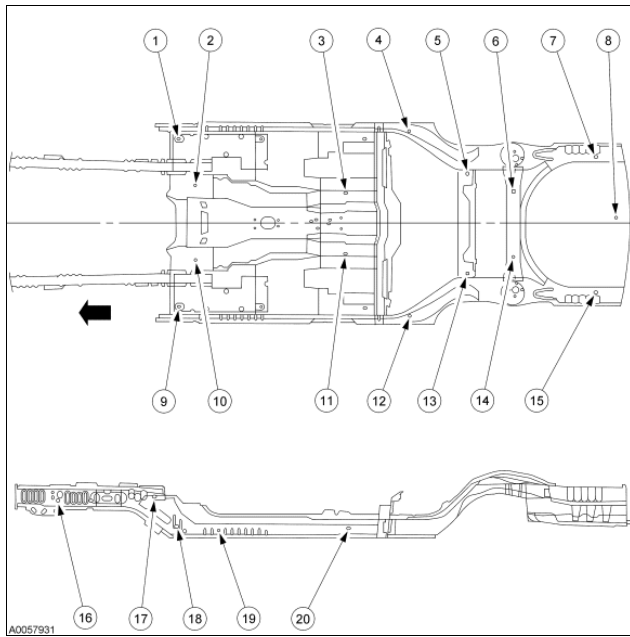
1. Repair the badly damaged areas before taking measurements for underbody alignment.
 2. To check the underbody alignment, take the measurements between opposite reference points, such as crease lines or weld joints.
 3. Monitor the upper body structure for excessive stress or movement while making any corrections to the underbody structure. Remove the windshield glass and rear window glass to prevent breakage. For additional information, refer to Section 501-11.
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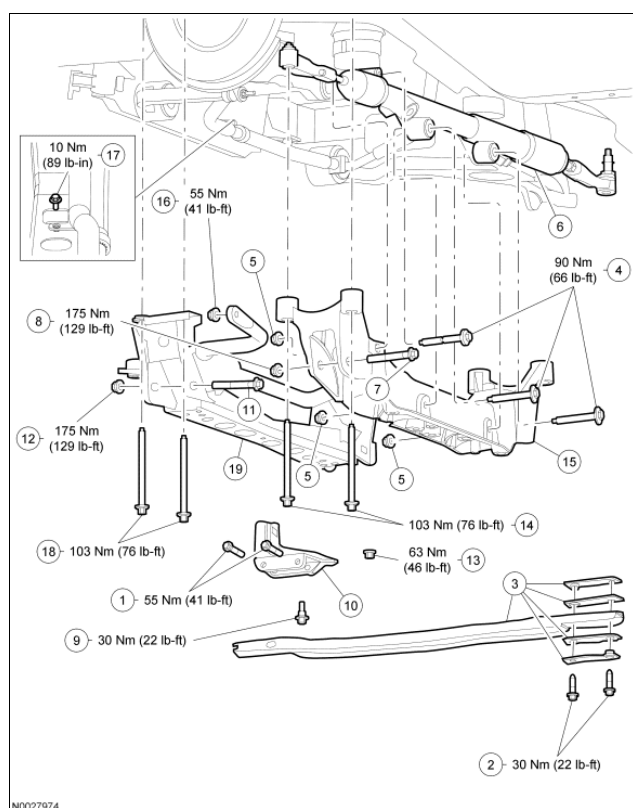
Underbody Misalignment Check

1. The dimensions of the underbody must be restored to provide the correct front and rear wheel alignment geometry.
2. All the dimensions are measured between the centers of the existing holes in the underbody unless otherwise specified.
3. Inspect all underbody structural members for cracks, twists or bends. Check all welded connections for cracks. Inspect the support brackets for looseness. Carry out any necessary repairs or install new components as necessary.
4. The X axis is referenced from the front of the vehicle. The Y axis is referenced from the center line of the vehicle.

Underbody Dimensions

Dimension	X axis mm (in)	Y axis mm (in)
1	2,044.59 mm (80.495 in)	614 mm (24.173 in)
2	2,164 mm (85.196 in)	273 mm (10.748 in)
3	3,258 mm (128.267 in)	224 mm (8.818 in)
4	3,725 mm (146.653 in)	675 mm (26.574 in)
5	4,150 mm (163.385 in)	365 mm (14.37 in)
6	4,490 mm (176.771 in)	240 mm (9.448 in)
7	5,100 mm (200.787 in)	500 mm (19.685 in)
8	5,250 mm (206.692 in)	50 mm (1.968 in)
9	2,044.59 mm (80.495 in)	614 mm (24.173 in)
10	2,164 mm (85.196 in)	273 mm (10.748 in)
11	3,258 mm (128.267 in)	224 mm (8.818 in)
12	3,725 mm (146.653 in)	675 mm (26.574 in)
13	4,150 mm (163.385 in)	365 mm (14.37 in)
14	4,490 mm (176.771 in)	240 mm (9.448 in)
15	5,100 mm (200.787 in)	500 mm (19.685 in)
16	1,118 mm (44.015 in)	—
17	1,825 mm (71.85 in)	—
18	1,990 mm (78.346 in)	—
19	2,300 mm (90.551 in)	—
20	3,258 mm (128.267 in)	—



Subframe and Components — Exploded View, Front

N0027974

Item	Part Number	Description
1	N804518-S100	I-brace front bolts (2 each side)
2	W707186-S439	I-brace rear bolts (2 each side)
3	5A099/ 5A098	I-brace (LH/RH)
4	W708659-S439	Steering gear bolts (3 required)
5	W520214-S440	Steering gear nuts (3 required)
6	3504	Steering gear
7	W706993-S439	Rear control arm cam bolts (2 each side)
8	W520215-S440	Rear control arm cam nuts (2 each side)
9	W707308-S439	I-brace bracket shoulder bolt
10	5A143/ 5A144	I-brace bracket (LH/RH)
11	W706993-S439	Front control arm cam bolts (2 each side)
12	W520215-S440	Front control arm cam nuts (2 each side)
13	N621942-S421	Engine mount nuts (2 required)
14	W706329-S439	Engine crossmember bolts (4 required)
15	5026	Engine crossmember
16	W520213-S440	Front stabilizer bar link nuts (2 required)
17	W705968	Air conditioning (A/C) line bracket bolt
18	W708091-S439	Radiator support crossmember bolts
19	5019	Radiator crossmember

1. For additional information, refer to the procedures in this section.
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Crossmember — Engine

Special Tool(s)

	Three Bar Engine Support Kit 303-F072
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Removal and Installation

⚠ CAUTION: Suspension fasteners are critical parts because they affect the performance of vital components and systems and their failure can result in major repair expense. A new part with the same part number must be installed if installation is necessary. Do not use a new part of lesser quality or substitute design. Torque values must be used as specified during reassembly to make sure of correct retention of these parts.

NOTE: New control arm cam bolts and nuts must be installed whenever they are removed from the lower control arm.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to [Section 100-02](#).
2. Using the special tool, support the engine.
3. Remove the front tire and wheel assemblies. For additional information, refer to [Section 204-04](#).
4. **NOTE:** When installing, loosely install the front bolts and then the rear bolts. With the vehicle at curb height, tighten the bolts to the specifications.

Remove the LH I-brace 2 front bolts.

- To install, tighten to 55 Nm (41 lb-ft).

5. Remove the LH I-brace 2 rear bolts.

- To install, tighten to 30 Nm (22 lb-ft).

6. **NOTE:** When installing, loosely install the front bolts and then the rear bolts. With the vehicle at curb height, tighten the bolts to the specifications.

NOTE: When installing the rear bolts, make sure the insulators (4 per side) are properly installed.

Remove the RH I-brace 2 front bolts.

- To install, tighten to 55 Nm (41 lb-ft).

7. Remove the RH I-brace 2 rear bolts.

- To install, tighten to 30 Nm (22 lb-ft).

8. **NOTE:** When installing, use new steering gear nuts.