



September 2015

Dealer Service Instructions for:

# Safety Recall R47 / NHTSA 15V-534 Side Airbag Inflatable Curtain

## Models

**2014-2015** (DS) RAM 1500 Quad Cab Pickup

NOTE: This recall applies only to the above vehicles built through August 08, 2015 (MDH 080808).

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Federal law requires you to complete this recall service on these vehicles before retail delivery. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this recall on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

## Subject

The right and left Side Airbag Inflatable Curtains (SABIC) on about 188,000 of the above vehicles may not deploy as intended. An improperly deployed SABIC, during certain crash events, could allow additional injuries to rear seat occupants.

The above vehicles fail to conform to the requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 226, "Ejection Mitigation".

## Repair

A foil patch will be installed on each side of the headliner and the right and left Side Airbag Inflatable Curtains will be inspected for proper orientation. In a small number of cases, one or both of the Side Airbag Inflatable Curtains may need to be replaced.

# **Parts Information**

**Part Number Description** 

CBPFR473AA Kit, Foil Patch (order one kit per vehicle)

Each package contains the following components:

Quantity Description2 Foil Patch

# **Parts Return**

No parts return required for this campaign.

# **Special Tools**

The following special tools are required to perform this repair:

➤ NPN wiTECH VCI Pod Kit

➤ NPN Laptop Computer

➤ NPN wiTECH Software

#### **Service Procedure**

#### A. Lower Headliner

WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before performing this service procedure.

In Step 6 of this Service Procedure, you must disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing this procedure. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

At no time should any source of electricity be permitted near the inflator on the back of a non-deployed airbag. When carrying a non-deployed airbag, the trim cover or airbag cushion side of the unit should be pointed away from the body to minimize injury in the event of an accidental deployment.

CAUTION: Hands should be clean or clean cloth gloves used when handling the headliner to avoid damage to the headliner.

- 1. Using a small flat-bladed tool, carefully open the two fastener covers located in the left Apillar trim panel (Figure 1).
- 2. Partially remove the left door seal.
- 3. Remove and save the two bolts that secure the left A-pillar trim panel to the left A-pillar and remove the trim panel (Figure 1).
- 4. Repeat steps 1 through 3 for the right A-Pillar.



Figure 1 - A-Pillar Trim

- 5. Position the front seats to the full forward position with the seat backs fully forward.
- 6. Disconnect and isolate the negative battery cable. Disengage the two red 10A airbag fuses in the Power Distribution Center (F85 and **F86).** If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable. Wait two minutes for the system capacitor to discharge before further service.

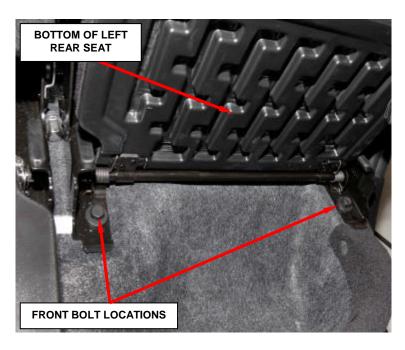


Figure 2 - Right Rear Seat Bolt Locations

- 7. Use the following steps to remove the rear seats.
  - a. Disconnect the electrical connector from the left rear seat, if equipped.
  - b. Remove the four bolts attaching the left rear seat and remove the left rear seat from the vehicle (Figure 2 and 3).

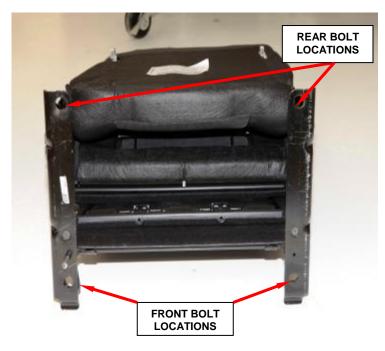


Figure 3 – Right Rear Seat Bolt Locations
(Shown out of Vehicle for Photographic Purposes)

- c. Remove the two rear seat front bolts that attach the sub-woofer and remove the sub-woofer, if equipped (Figure 4).
- d. **For vehicles equipped with a sub-woofer**, disconnect the electrical connector.

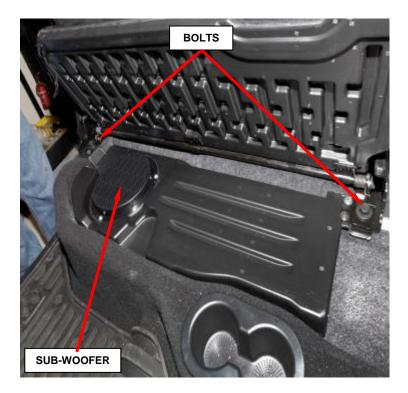


Figure 4 – Sub-Woofer

e. Disconnect the electrical connector from the right rear seat, if equipped.

f. Remove the rear center seat belt anchor bolt (Figure 5).

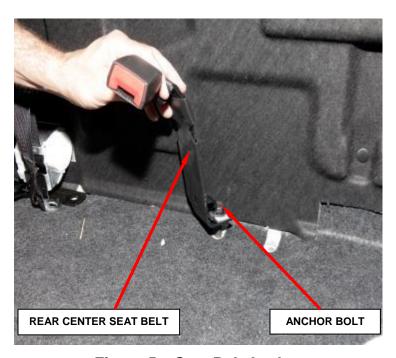


Figure 5 - Seat Belt Anchor

g. Remove the two remaining rear bolts attaching the right rear seat and remove the right rear seat from the vehicle (Figure 6).

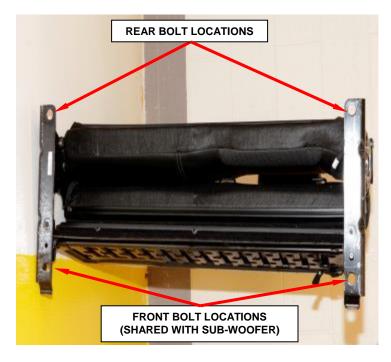


Figure 6 – Right Seat Bolt Locations
(Shown out of Vehicle for Photographic Purposes)

8. Remove the left rear seat belt anchor bolt (Figure 7).

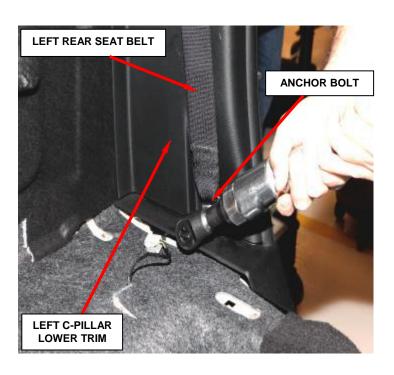


Figure 7 - Left Rear Seat Belt Anchor

9. Separate the left lower C-pillar trim retaining clips from the left lower C-pillar and the left rear door scuff plate (Figure 8).



10. Remove the left seat belt from the hole in the lower C-pillar and remove the left lower C-pillar trim.

Figure 8 - Left Lower C-Pillar Trim

11. Separate the left rear turning loop cover and remove the left rear turning loop bolt (Figure 9).

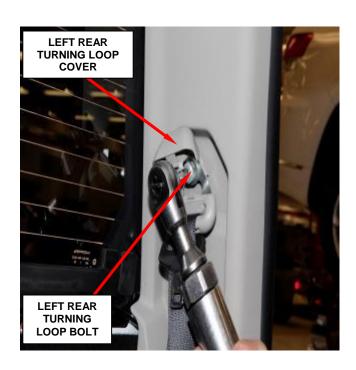


Figure 9 - Left Rear Turning Loop



Figure 10 – Left Upper C-Pillar

12. Partially remove the left door seal (Figure 10).

13. Remove the left C-pillar upper trim screw and remove the left C-pillar upper trim (Figure 10).

14. Remove the left front door cowl trim panel (Figure 11).



Figure 11 - Left Front Door Cowl Trim

15. Release the retaining clips and remove the left lower B-pillar trim panel (Figure 12).



Figure 12 - Left Lower B-Pillar Trim

16. Separate the left B-pillar turning loop cover and remove the turning loop bolt (Figure 13).

17. Using a small flat-bladed tool, carefully open the two fastener covers located on the left grab handle (Figure 13).

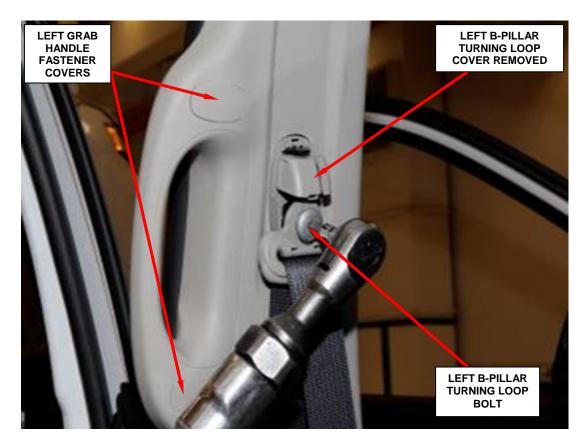


Figure 13 – B-Pillar Turning Loop

- 18. Remove and save the two fasteners that secure the left grab handle to the B-pillar (Figure 14).
- 19. Using a trim stick C-4755 or equivalent, disengage the retaining clips that secure the left upper B-pillar trim to the pillar and remove the trim panel (Figure 14).
- 20. Repeat steps 8 through 19 for the right side of the vehicle.

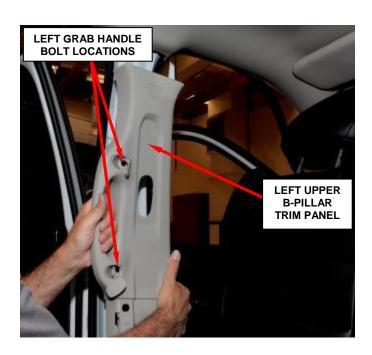


Figure 14 - Grab Handle

- 21. Remove and save the two CHMSL attaching screws and pull the CHMSL from the cab (Figure 15).
- 22. Disconnect the CHMSL electrical connector.
- 23. Connect the battery negative cable.
- 24. Position the front seats to the full rearward position with the seat backs fully reclined.
- 25. Disconnect the battery negative cable.

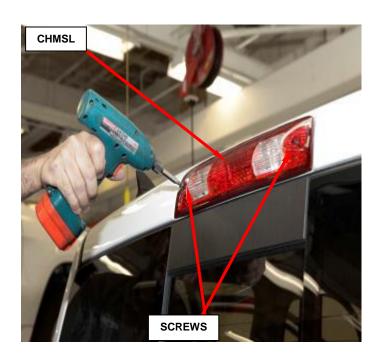
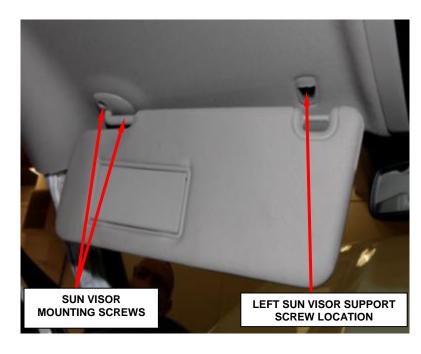


Figure 15 - CHMSL

26. Remove and save the left and right side sun visor support screws and remove the sun visor supports (Figure 16).



27. Remove and save the left and right side sun visor mounting screws and remove the sun visors (Figure 16).

Figure 16 - Sun Visor

28. Using a small flat bladed tool, open the coat hook screw cover and remove the screws and coat hooks (Figure 17).

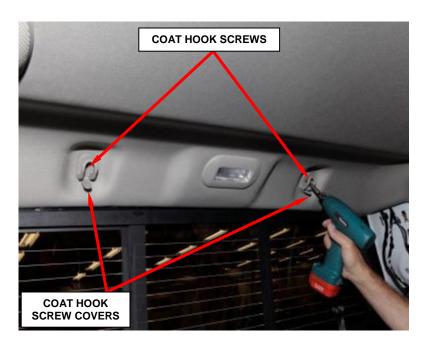


Figure 17 - Coat Hooks

29. Release the wire harness retaining clips from the right and left A-pillars (Figure 18).



Figure 18 - A-Pillar Wire Harness

30. Release the wire harness retaining clips from the right and left C-pillars (Figure 19).



Figure 19 - C-Pillar Wire Harness

- 31. Carefully disengage the sun roof hook and loop retainers from around the sun roof to release the headliner from the roof, if equipped with a sun roof.
- 32. Twist the rear view mirror assembly clockwise and release the mirror from the aluminum button attached to the windshield.
- 33. <u>For vehicles equipped with a DVD player</u>, remove the DVD monitor screws and separate the monitor from the roof.
- 34. <u>For vehicles equipped with a DVD player</u>, disconnect the DVD housing electrical connectors.
- 35. Release the front and rear door seals at the top of the door opening.

CAUTION: Lowering the headliner is a two person operation. Attempting to perform this operation by yourself may result in damage to the headliner.

- 36. Carefully lower the headliner and disconnect the sun roof electrical connector to the body harness, if equipped with a sun roof.
- 37. Lower the headliner and rest it on the dash panel and seat backs.
- 38. Continue with Section B. Inspect Side Airbag Inflatable Curtain (SABIC).

## **B.** Inspect Side Airbag Inflatable Curtain (SABIC)



Figure 20 – Passed Inspection: Anti-Twist Stripe Position

- 1. As viewed through the opposite side door opening, inspect the anti-twist stripe on the inboard side of the right side (red stripe) SABIC and left side (blue stripe) SABIC for twisted cushions.
  - ➤ Vehicles that <u>have</u> the anti-twist stripe visible on one or both SABICs, continue with **Step 2 of this procedure** (Figure 20).
  - ➤ Vehicles that <u>do not have</u> the anti-twist stripe visible on one or both SABICs, continue with Section C. Replace Side Airbag Inflatable Curtain (SABIC) (Figure 21).

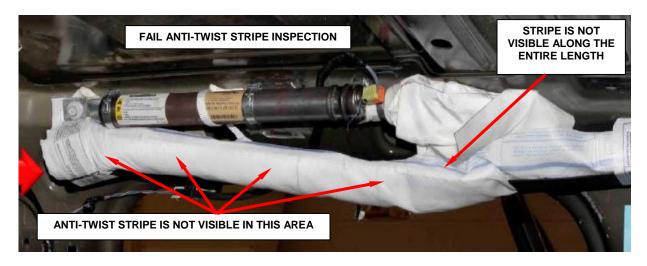


Figure 21 – Failed Inspection: Anti-Twist Stripe Position

2. Inspect the airbag ramp retaining clip on the right and left side SABIC modules. Ensure the airbag ramp retaining clip is fully engaged to the inner roof rail hole (Figure 22).

CAUTION: The airbag ramp retaining clip must be fully engaged to the roof rail hole on both sides. The wrap must not be completely torn.

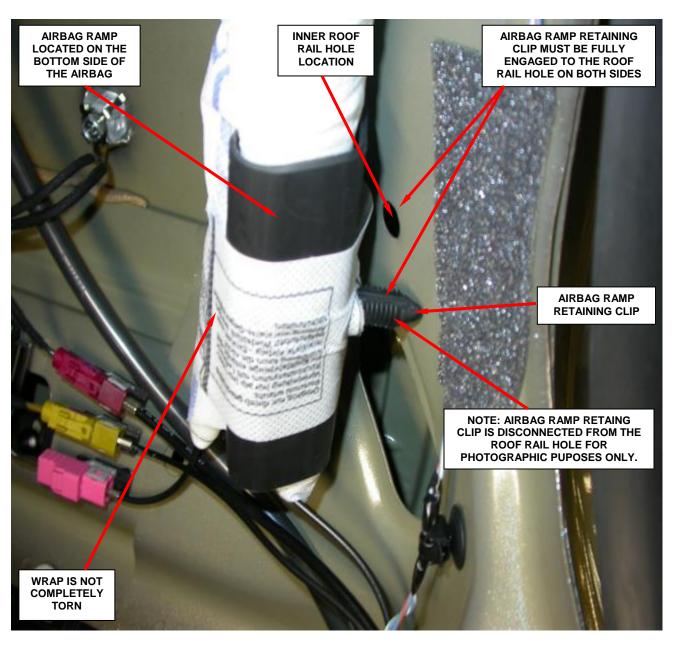
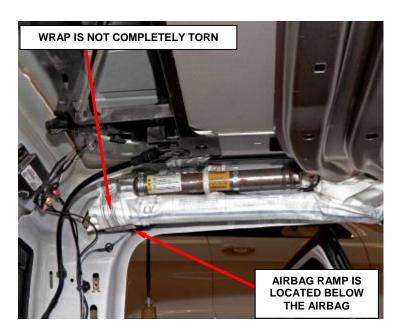


Figure 22 – Airbag Ramp Position

- 3. Inspect the airbag ramp position on the right and left side SABIC modules. The airbag ramp should be located on the bottom side of the airbag and the wrap must not be torn.
  - Vehicles that do not have either airbag ramp out of position or the wrap is not completely torn on either side, continue with Section D. Install Foil Patches (Figure 22 and 23).



Vehicles that have either airbag ramp out of position or the wrap is completely torn on either side, continue with Section C. Replace Side Airbag Inflatable Curtain's (SABIC's) (Figure 24).

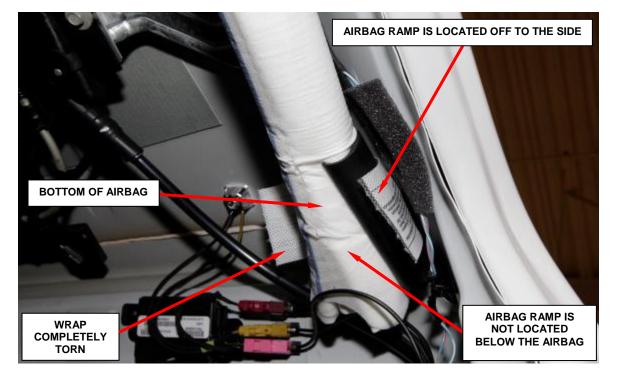


Figure 24 - Failed Inspection: Airbag Ramp and Wrap

## C. Replace Side Airbag Inflatable Curtain (SABIC)

NOTE: Replace the specific SABIC that fails the inspections outlined in Section B. SABIC part numbers: 68161580AJ (right side SABIC) and 68161581AJ (left side SABIC).

NOTE: If a side airbag inflatable curtain is being removed, but has not been deployed, the headliner does not have to be removed from the passenger compartment. Lowering the headliner and resting it on the seat backs will allow enough clearance to remove the side airbag inflatable curtain from the vehicle. However, if either side airbag inflatable curtain has been deployed, the headliner must be removed from the passenger compartment and replaced with a new unit.

1. Remove the four bolts that secure the side airbag inflatable curtain to the inner roof rail (Figure 25).

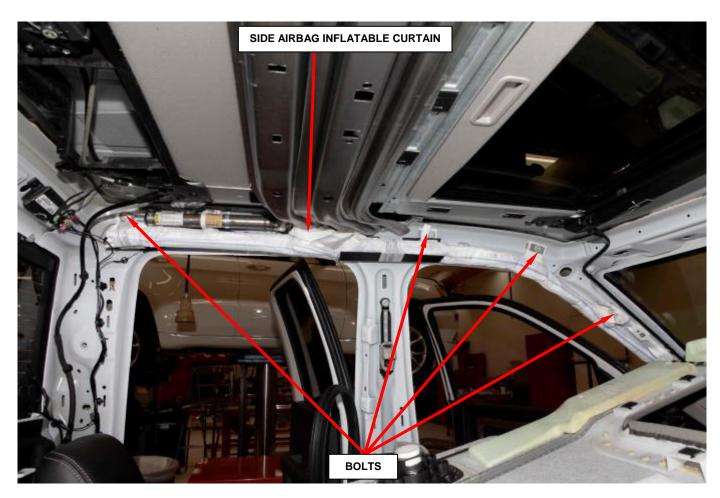


Figure 25 – Side Airbag Inflatable Curtain Bolt Locations

2. Disengage the plastic push-in retainer that secures the side airbag inflatable curtain front tether to the assist handle bracket on the inner Apillar (Figure 26).



3. Disengage the two plastic push-in retainers that secure the side airbag inflatable curtain to the inner roof rail (Figure 27).

Figure 26 - Plastic Push-in Retainers

4. The body wire harness electrical connector is secured by integral latches to the connector receptacle at the rear of the inflator. Pinch both latches firmly, then pull the insulator straight out from the airbag inflator to disconnect it from the connector receptacle (Figure 27).

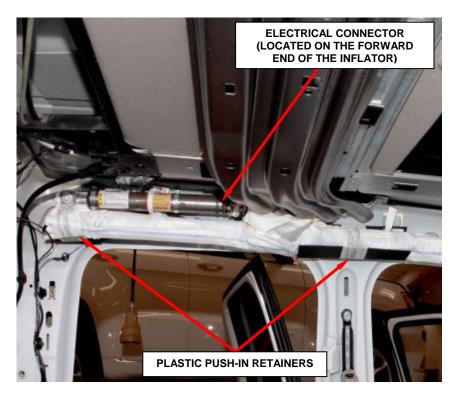


Figure 27 - Plastic Push-in Retainers

- 5. Remove the side airbag inflatable curtain front tether retaining bolt (Figure 28).
- 6. Slide the inflator rearward far enough to disengage the T-tab at the front of the inflator bracket from the keyed slot in the inner roof rail over the rear door opening (Figure 29).
- 7. Remove the left side airbag inflatable curtain from the vehicle as a unit.
- 8. Check to be certain that the four spring nuts are properly installed in the inner roof rail and that they are in good condition.
- 9. Position the new side airbag inflatable curtain into the vehicle as a unit.
- 10. Insert the T-tab at the front of the inflator bracket into the keyed slot in the inner roof rail over the rear door opening and slide the inflator forward to engage it (Figure 29).



Figure 28 - Tether Retaining Bolt

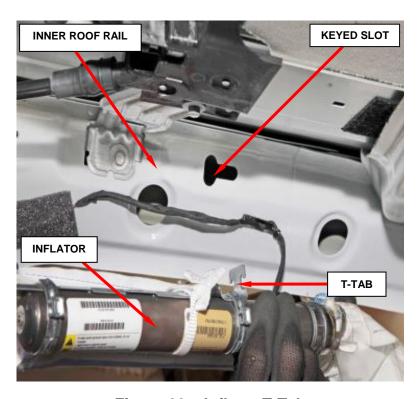


Figure 29 - Inflator T-Tab

- 11. Connect the body wire harness electrical connector for the side airbag inflatable curtain to the connector receptacle at the back of the inflator. Be certain that each connector is fully engaged in its receptacle by listening carefully for a distinct, audible click as each connector latch snaps into place (Figure 27).
- 12. Align the two plastic push-in retainers that secure the side airbag inflatable curtain with the holes in the inner roof side rail and push it straight in until they are fully seated (Figure 27).
- 13. Working from rear to front, install and tighten the four bolts that secure the side airbag inflatable curtain to the spring nuts in the inner roof rail. Tighten to 70 in. lbs. (8 N·m) (Figure 25).
- 14. Engage the plastic push-in retainer that secures the side airbag inflatable curtain front tether to the assist handle bracket on the inner A-pillar (Figure 26).
- 15. Install the front tether retaining bolt. Tighten to 70 in. lbs. (8 N⋅m) (Figure 26).
- 16. Repeat steps 1 through 15 if both side airbag inflatable curtains fail the inspection procedure outlined in **Section B. Inspect Side Airbag Inflatable Curtain (SABIC).**
- 17. Continue with **Section D. Install Foil Patches.**

## **D.** Install Foil Patches

- 1. On the right side of the headliner, measure 3 1/2 inches (90mm) from the C-Pillar edge of the headliner and mark the headliner for the rear edge of the foil patch (Figure 30 and 31).
- 2. Measure 3/8 inch (10mm) from the outer edge of the headliner and mark the headliner for the outboard edge of the foil patch (Figure 30 and 31).

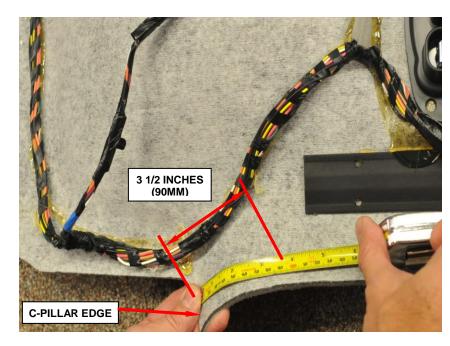


Figure 30 – Mark 3 ½ inches (90mm) Location on Headliner

3. Remove the backing from the foil patch.

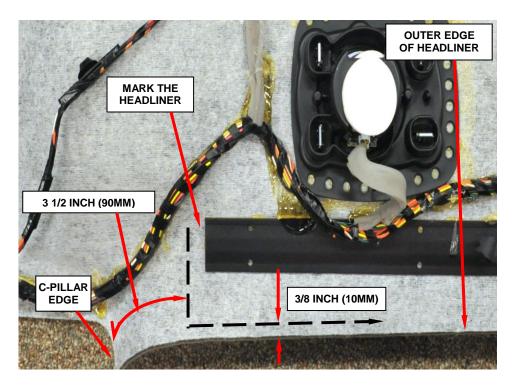


Figure 31 - Mark 3/8 inch (10mm) Location on Headliner

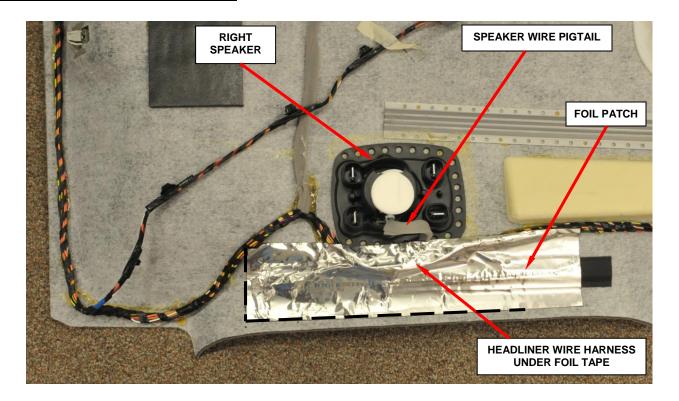


Figure 32 – Foil Patch Installed (Right Side Shown)

4. Install the foil patch to the headliner using the markings as a guideline and smooth the foil patch edges (Figure 32).

NOTE: If the headliner wire harness is positioned under the foil patch, smooth the foil patch around the wire harness.

NOTE: Assure the speaker wire pigtail is not positioned under the foil patch. See Figure 32 for proper speaker wire orientation.

- 5. Repeat Steps 1 through 4 on the left side of the headliner.
- 6. Continue with Section E. Install Headliner.

#### E. Install Headliner

CAUTION: Hands should be clean or clean cloth gloves used when handling the headliner to avoid damage to the headliner.

CAUTION: Installing the headliner is a two person operation. Attempting to perform this operation by yourself may result in damage to the headliner.

- 1. Carefully lift the headliner into position and engage the driver's side visor center support.
- 2. Route the CHMSL wiring pigtail through the body opening to assist in connecting the electrical connector.
- 3. Connect the sun roof electrical connector to the body harness, if equipped.
- 4. For vehicles equipped with a DVD player, connect the DVD housing electrical connectors.
- 5. **For vehicles equipped with a DVD player**, position the DVD monitor to the roof and install the DVD monitor screws.
- 6. Use the following steps to install the rear view mirror.
  - a. Align the indicator mark on mirror bracket to the 12 o'clock position on the windshield mirror button.
  - b. Place the mirror bracket over the windshield button.
  - c. Rotate the mirror assembly 60 degrees counterclockwise to attach to the windshield until positive stop (detent) is felt.
- 7. Carefully engage the sun roof hook and loop retainers around the sun roof to secure the headliner to the roof, if equipped with a sun roof.
- 8. Install the wire harness retaining clips on the right and left C-pillars (Figure 19).
- 9. Install the wire harness retaining clips on the right and left A-pillars (Figure 18).

- 10. Install the two coat hooks and covers (Figure 17).
- 11. Install the right and left sun visors (Figure 16).

# CAUTION: When removing or installing the screws, be certain to avoid any wiring or drain tube interference.

- a. Position the sun visor support through the headliner and fully seat the base of the support to the roof panel.
- b. Position the sun visor onto the headliner.
- c. Install the two screws that secure each sun visor to the roof panel. Tighten the screws to  $6 \text{ N} \cdot \text{m}$  (53 in. lbs.).
- 12. Connect the CHMSL electrical connector.
- 13. Install the CHMSL and secure the two screws (Figure 15).
- 14. Connect the battery negative cable.
- 15. Position the front seats to the full forward position with the seat backs fully forward.
- 16. Disconnect the battery negative cable.
- 17. Install the left upper B-pillar trim panel to the B-pillar (Figure 14).
- 18. Install the B-pillar turning loop and bolt. Tighten to 30 ft. lbs. (40 N⋅m) (Figure 14).
- 19. Install the B-pillar turning loop cover.
- 20. Install the grab handle fasteners and tighten to 44 in. lbs. (5 N⋅m).
- 21. Seat the grab handle fastener caps (Figure 13).
- 22. Install the left lower B-pillar trim panel (Figure 12).

- 23. Install the left front door cowl trim panel (Figure 11).
- 24. Install the left C-pillar upper trim (Figure 10).
- 25. Install the left C-pillar upper trim screw and tighten (Figure 10).
- 26. Install the left rear turning loop bolt and tighten to 30 ft. lbs. (40 N⋅m) (Figure 9).
- 27. Install the left turning loop cover.
- 28. Install the left seat belt through the hole in the lower C-pillar and install the left lower C-pillar trim (Figure 8).
- 29. Install the left rear door scuff plate.
- 30. Install the left rear seat belt anchor and tighten to 30 ft. lbs. (40 N⋅m) (Figure 7).
- 31. Repeat steps 16 through 29 on the **<u>right</u>** side of the vehicle.
- 32. Position the right rear seat in the vehicle.
- 33. Install the two rear bolts to the right rear seat and tighten to 35 ft. lbs. (47 N·m) (Figure 6).
- 34. Position the shoulder belt back into place and install the rear center seat belt anchor bolt. Tighten to 35 ft. lbs. (47 N·m).
- 35. Connect the electrical connector to the right rear seat, if equipped.
- 36. Connect the electrical connector to the sub-woofer and place the sub-woofer in position, if equipped (Figure 4).
- 37. Install the two front seat bolts and tighten to 35 ft. lbs. (47 N·m) (Figure 4).
- 38. Position the left rear seat in the vehicle.

- 39. Install the four bolts to the left rear seat and tighten to 35 ft. lbs.  $(47 \text{ N} \cdot \text{m})$  (Figure 2 and 3).
- 40. Connect the electrical connector to the left rear seat, if equipped.
- 41. Install the right and left side A-pillar trim panels and close the two fastener covers (Figure 1).
- 42. Install all four door seals.
- 43. Do not connect the negative battery cable at this time. Continue with **Section F. Supplemental Restraint System (SRS) Verification Test.**

## F. Supplemental Restraint System (SRS) Verification Test

NOTE: During the following test, the airbag fuses in the Power Distribution Center remain disengaged during steps 1 through 3 of the Supplemental Restraint System (SRS) Verification Test.

NOTE: The wiTECH scan tool must be used to perform this recall. The wiTECH software is required to be at the latest release level before performing this procedure.

- 1. Connect the wiTECH VCI pod to the vehicle data link connector located under the steering column.
- 2. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector and connect the battery negative cable.
- 3. Turn the ignition switch to the "**ON**" position and exit the vehicle and close the doors.
- 4. Check to be certain that nobody is in the vehicle, then engage the two red 10A airbag fuses in the Power Distribution Center (F85 and F86).
- 5. Open the wiTECH Diagnostic application.
- 6. Starting at the "**Select Tool**" screen, select the row/tool for the wiPOD device you are using, then select "Next".
- 7. Enter your "User id" and "Password", then select "Finish".

8. Clear all DTC's in all modules using the wiTECH scan tool.

NOTE: Any active Diagnostic Trouble Codes (DTC's) may require an additional key cycle from "ON" to "OFF" to change DTC status from "active" to "stored".

- 9. Turn the ignition switch to the "**OFF**" position for about 15 seconds, and then back to the "**ON**" position. Observe the airbag indicator in the instrument cluster.
  - The airbag indicator in the instrument cluster should illuminate for six to eight seconds, and then go out. This indicates that the SRS is functioning normally and that the repairs are complete. Turn the ignition to the "OFF" position, remove the wiPOD and return the vehicle to the customer.
  - ➤ If the airbag indicator fails to light or the light and stays ON, there is still an active SRS fault or malfunction. Refer to the appropriate diagnostic information to diagnose the problem.
- 10. Close the hood, remove the wiTECH VCI pod.

11. Return the vehicle to the customer.

## **Completion Reporting and Reimbursement**

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims submitted will be used by FCA to record recall service completions and provide dealer payments.

Use one of the following labor operation numbers and time allowances:

	Labor Operation <a href="Mailto:Number">Number</a>	Time Allowance
Inspect Right and Left Side SABICs and Install Two Foil Patches	23-R4-71-82	2.5 hours
Inspect Right and Left Side SABICs, Replace One SABIC and Install Two Foil Patches	23-R4-71-83	2.7 hours
Inspect Right and Left Side SABICs, Replace Two SABICs and Install Two Foil Patches	23-R4-71-84	3.0 hours

NOTE: See the Warranty Administration Manual, Recall Claim Processing Section, for complete recall claim processing instructions.

# **Dealer Notification**

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

#### **Owner Notification and Service Scheduling**

All involved vehicle owners known to FCA are being notified of the service requirement by first class mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Enclosed with each owner letter is an Owner Notification postcard to allow owners to update our records if applicable.

#### **Vehicle Lists, Global Recall System, VIP and Dealer Follow Up**

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an <u>updated</u> VIN list of <u>their incomplete</u> vehicles. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the "Service" tab and then click on "Global Recall System." Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at recall launch, those with a phone number, city, zip code, or VIN sequence.

Dealers <u>must</u> perform this repair on all unsold vehicles <u>before</u> retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

Recall VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this recall only and is strictly prohibited from all other use.

#### **Additional Information**

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Services / Field Operations FCA US LLC