SERVICE BULLETIN

NUMBER: 08-020-07

GROUP: Electrical

DATE: July 13, 2007

SUBJECT:

Supplemental Front Air Bag Sensor Replacement (Lifetime Warranty)

OVERVIEW:

This bulletin involves verifying that a right and/or left front impact supplemental airbag sensor(s) Diagnostic Trouble Code (DTC) exists in the Occupant Restraint Control Module (ORC). If DTC's exist, the right and left supplemental front airbag sensors must be replaced and the sensor harness connectors must be inspected for corrosion and replaced if necessary.

NOTE: Technicians performing this procedure for the first time should fully familiarize themselves with the steps and procedures listed in this Service Bulletin before proceeding.

MODELS:

2005	(RG)	Chrysler Voyager
2005	(RS)	Town & Country/Caravan/Voyager

NOTE: This bulletin applies to vehicles built at the Windsor Assembly Plant ("R" in the 11th VIN position) through February 3, 2005 (MDH 020323), the St. Louis Assembly plant ("B" in the 11th VIN position) through January 19, 2005 (MDH 011923) or the Styler Assembly plant ("Y" in the 11th VIN position) through January 04, 2005 (MDH 010423).

DISCUSSION:

The supplemental front airbag sensors may crack under certain conditions and allow water to enter into the sensor(s). These sensors were added to enhance the performance of the vehicles airbag system; however, a cracked sensor may not operate properly in a frontal crash. A cracked sensor can also illuminate the airbag warning light.

DIAGNOSIS:

If the vehicle operator experiences air bag warning lamp illumination with any of the following DTC's; NO RIGHT FRONT IMPACT SENSOR COMMUNICATION / RIGHT FRONT IMPACT SENSOR INTERNAL 1 / NO LEFT FRONT IMPACT SENSOR COMMUNICATION or LEFT FRONT IMPACT SENSOR INTERNAL 1 , perform the Repair Procedure. If the air bag warning lamp is on due to other DTC's, this bulletin does not apply. Refer to diagnostic procedures available in DealerCONNECT >>> TechCONNECT under: Diagnostics > 7.2 AIRBAG for further information.

NOTE: Vehicles that are included in Customer Satisfaction Notification G09 are not included in this Service Bulletin and must be repaired under the procedures and labor operation numbers listed within G09. Vehicles not included in G09 must use this Service Bulletin for repair.

PARTS REQUIRED:

Qty.	Part No.	Description
1	CBX2G091	Supplemental Front Airbag Sensor Package (Each Kit Contains: 2 Airbag Sensors, 4 M8 Washers, 4 M6 Bolts, 4 M7 Self Tapping Bolts)
2 (AR)	*CBX2G092	Harness Connector Splice Package Wiring Kit, (Each Kit Contains: 1 Harness Connector, 2 Splice Bands and 2 Heat Shrink Tubes)
1 (AR)	**CBX2G093	Riv-Nut Package, (Each Kit Contains: 4 M6 Riv-Nuts, 1 M6 Bolt {used as an installation tool}, 1 M6 Nut With Washer {used as an installation tool})
1	J8126688	Dielectric Grease (1 tube will service about 150 sensors)

* Harness Connector Splice Package Wiring Kit is only required for vehicles found with corrosion in the sensor connector.

** Riv-Nut Package is only required if the Riv-nut(s) spin and require replacement.

NOTE: Connectors, Self-Tapping Screws and Riv-nuts will be used on an "as needed" basis.

SPECIAL TOOLS / EQUIPMENT REQUIRED:

NPN	Battery Charger
CH2002	General Purpose Interface Bus Cable Assembly
CH6000A	Scan Tool (DRBIII®)
CH7000A/7001A	J1962 Cable with red DRBIII® connector
	TechCONNECT Workstation
10042	Wire Splice Crimp Tool
NPN	Powered Cut Off Wheel
NPN	10 mm Crows Foot Wrench

REPAIR PROCEDURE:

1. Lower the driver's side window.
2. Disconnect the Negative Battery Cable.
3. Refer to the detailed removal procedures available in DealerCONNECT>>>TechCONNECT under: Service Information Tab >>> Group 8, Electrical >>> Restraints >>> Impact Sensor >>> Removal.
4. When removing the attaching bolts for the sensor, does any of the bolts spin freely and not come out? (See NOTES below).
   a. Yes >>> Proceed to Step #5
   b. No >>> Proceed to Step #22

NOTE: There are 2 types of bolts used to fasten the sensors to the radiator crossmember; a M7 self tapping bolt or a M6 bolt used with a riv-nut. If the bolt spins and cannot be removed, the riv-nut has broken loose. If the riv-nut spins and the bolt cannot be removed, proceed to next step to replace riv-nut(s). If no issue with the riv-nut is found, proceed to Step #22.

NOTE: The riv-nut procedure is applicable for vehicles built at the Windsor Assembly plant after May 24, 2004 or the St. Louis Assembly plant after June 28, 2004 or the Styler Assembly plant after June 28, 2004. Very few vehicles will require riv-nut replacement.

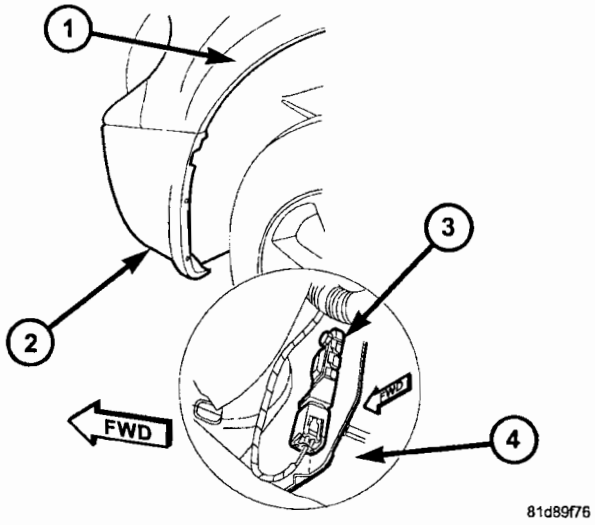

Fig. 1 FRONT IMPACT SENSOR, LEFT SIDE SHOWN

1 - Left Front Fender
2 - Front Fascia
3 - Left Front Impact Sensor
4 - Lower Radiator Crossmember

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5. If the vehicle equipped with fog lamps, disconnect electrical harness connectors from both fog lamps.

6. Remove the 2 screws that secure the left and right wheelhouse splash shield to the front fascia.
7. Carefully separate the lower air dam plastic push retainers from the lower radiator crossmember.
8. Remove the right and left fascia upper bolts from the upper radiator crossmember. (Fig. 2)

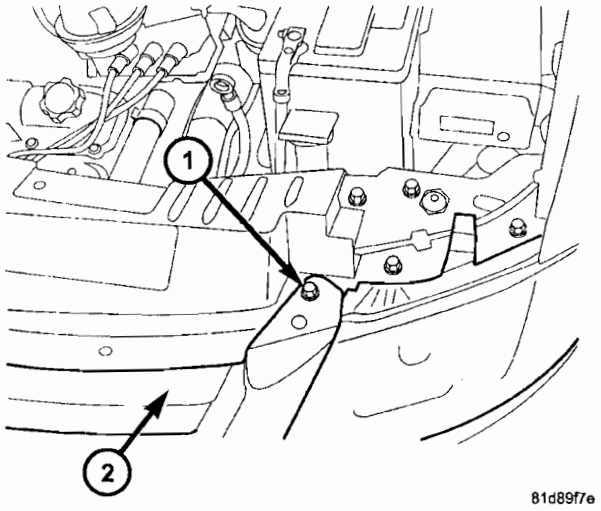

Fig. 2 FASCIA AND UPPER BOLT

1 - Left Upper Fascia Bolt

2 - Front Fascia/Grill

9. Pull the wheelhouse shield back from the front fascia and remove the right and left horizontal nuts holding the front fascia to the front lip of the fender (Fig. 3).

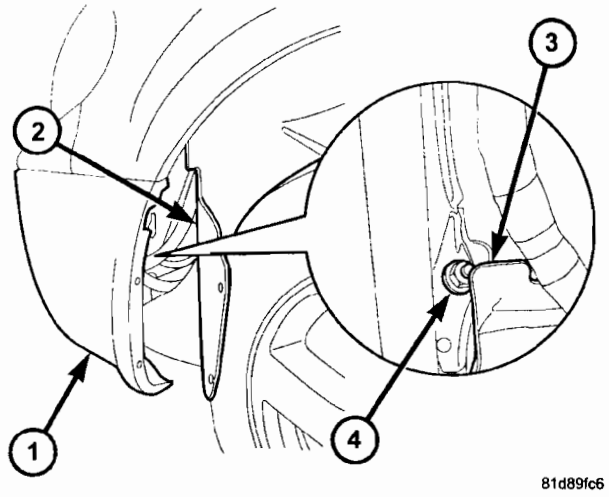

Fig. 3 FASCIA REMOVAL

1 - Front Fascia
2 - Wheelhouse Shield
3 - Left Front Fender Sheet Metal
4 - Remove This Nut - Fascia to Fender

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10. Remove 2 vertical screws holding the front fascia to the front fender.
11. Carefully remove the front fascia and set aside.

CAUTION: Care should be used not to damage painted surfaces.

12. Break the front air bag sensor using a suitable tool. Remove broken sensor pieces.
13. Using a powered cut-off wheel, remove the head of the sensor mounting bolt.
14. Remove sensor bushing from bolt.
15. Using a powered cut-off wheel, cut the bolt and lip of the riv-nut flush with sheet metal.
16. Using a hammer, carefully drive the bolt and the riv-nut into the lower radiator crossmember.

CAUTION: Do not distort the structural sheet metal surface where the riv-nut is attached.

17. Remove the old riv-nut through the access hole in the crossmember using a magnetic tool.

18. Preassemble the new riv-nut, p/n CBX2G093 by installing the M6 nut, and the riv-nut onto the bolt, as shown in (Fig. 4).

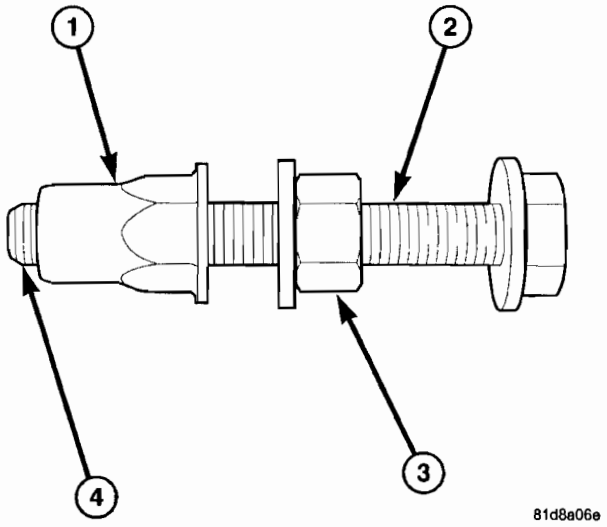

Fig. 4 RIV-NUT INSTALLATION CONFIGURATION

1 - Riv-Nut

2 - Installation Bolt

3 - Installation Nut with Captive Washer Toward Riv-Nut

4 - At Least 1 Full Thread Exposed

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19. Insert the riv-nut and bolt assembly into the original mounting hole.

20. Using a 10 mm crows foot, tighten the installation nut to 9 Nm, (80 in. lb) while holding the installation bolt stationary (Fig. 5).

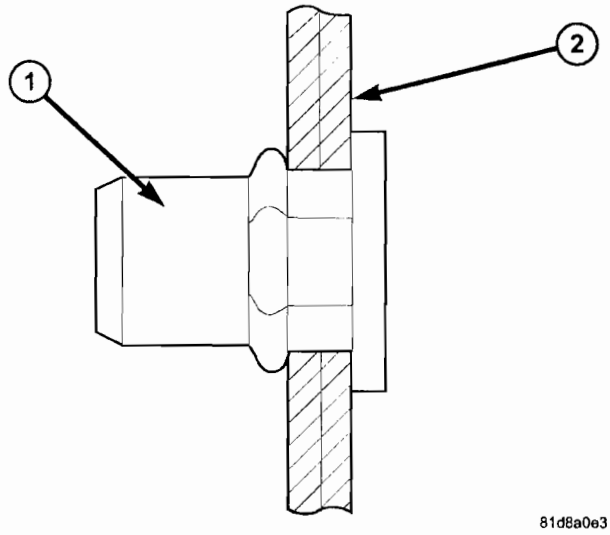

Fig. 5 RIV-NUT INSTALLED

1 - Fully Formed Riv-Nut

2 - Body Sheet Metal

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21. Repeat Step #12 through Step #20 for remaining riv-nut(s) that have broken loose and spin freely.
22. Clean the mounting surface for both sensors.
23. Install the new sensors using the appropriate fasteners;
    a. For sensors fastened with self-tapping bolts. Proceed to >>> Step #24.
    b. For sensors fastened with M6 bolts and riv-nuts . Proceed to >>> Step #26.

24. For self-tapping fastener installation; preassemble both air bag sensors with self-tapping bolts and washers (Fig. 6).

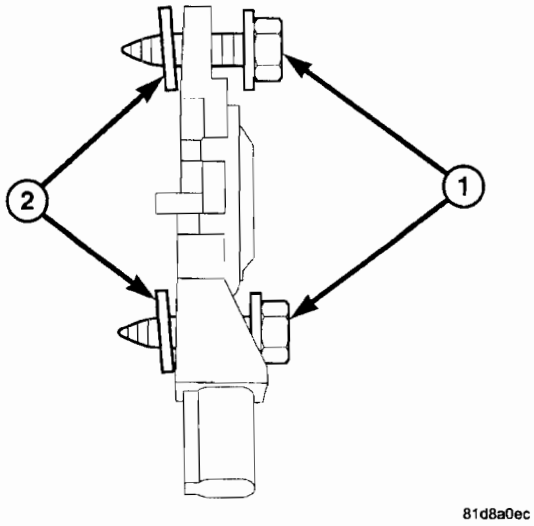

Fig. 6 SELF TAP BOLTS

1 -Self-Tapping Bolt

2 - Washer

3 - Front Impact Sensor

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25. Position the sensors on the vehicle and tighten each self-tapping bolt into the mounting hole about 5 turns to cut new threads for the larger M7 bolt. Tighten to 7 Nm, (60 in. lb). Proceed to Step #27
26. For M6 bolt and riv-nut fastener installation; hand start both bolts in sensors. Tighten to 7 Nm, (60 in. lb).
27. Inspect the right and left air bag sensor wiring connectors. Is there is any sign of corrosion, (white, green or black), on either terminal of the harness connectors?
    a. Yes >>> Proceed to Step #28.
    b. No >>> Proceed to Step #39.

NOTE: Only replace harness connectors that exhibit terminal corrosion.

28. Cut wire harness 3 in. (75mm) back from connector.
29. Remove 1 in. (25mm) of black tape from wire harness going to the vehicle.
30. Strip .5 in. (13mm) of insulation from each wire.
31. Cut the new sensor connector wire harness p/n CBX2G092 the same length as the removed connector wire harness.
32. Strip .5 in. (13mm) of insulation from each wire.
33. Slide one piece of heat shrink tubing on each of the wires.
34. Load and center the splice band into cavity “B” of crimp tool #10042. Close the tool just enough to hold the splice band in place

NOTE: First time use of crimp tool #10042 will require the crimp dies to be installed on the crimper frame. Orient the upper die with the arrow pointed up and the lower die with the arrow pointed forward. The numbers on upper die and letters on lower die will be on the same side.

35. Match the new harness connector wires to the existing vehicle harness as follows:
    a. For the **right (passenger side)** sensor, match the new harness connector wire colors to the same color wire on the existing vehicle wire harness.
    b. For the **left (driver side)** sensor, match the new harness connector wire colors to the same **tracer stripe** color wire on the existing vehicle wire harness.

CAUTION: Ensure wire color/polarity is correct. Incorrect wire color/polarity will cause illumination of the airbag warning lamp.

36. Insert the matched bare wires through the crimp connector from opposite ends. Crimp the connections using #10042 wire splice crimp tool.
37. Solder the crimped connection using only rosin-core solder.
38. Center heat shrink tubing over the connection and heat with a heat gun until tubing is tight and sealant is witnessed at the ends (Fig. 7).

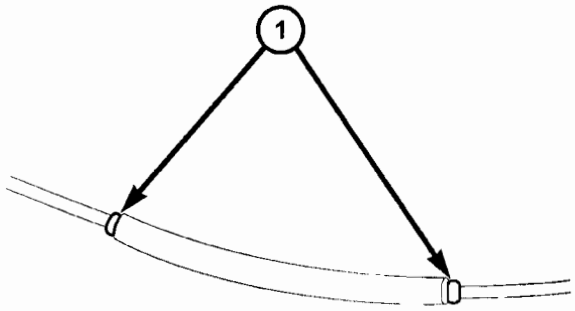

Fig. 7 HEAT SHRINK

1 - Sealant Witnessed at Both Ends

CAUTION: Use only the sealant lined heat shrink tube supplied in wiring kit above. Use of electrical tape or non-sealant lined heat shrink tube may cause circuit failure.

39. Apply a small amount of dielectric grease, p/n J8126688 to the airbag sensor connector end. Using a finger, force the grease into the terminal connections of the airbag sensor connector.
40. Connect the harness connectors to both front airbag sensors.

41. Has the fascia been removed?
    a. Yes >>> Proceed to Step #42.
    b. No >>> Proceed to Step #49.
42. Position the front fascia onto the vehicle.
43. Install the right and left upper fascia bolts, tighten to 5 Nm (50 in lb).
44. Install the right and left horizontal nuts that fasten the front fascia to the lip of the front fender and tighten to 7 Nm (60 in lb).
45. Install the two vertical screws that secure the front fascia to the front fenders.
46. Install the two screws that secure the right and left wheelhouse shield to the front fascia.
47. Using new push pins, if necessary, securing the air dam to the lower radiator crossmember.
48. Connect the electrical harness connectors to the right and left fog lamps, if equipped.
49. Connect the negative battery cable to the battery.
50. Stand next to the vehicle with the driver's door closed. Reach in through the window opening, going behind the steering wheel, and turn the ignition key to the "ON" position. Wait 10 seconds:
    a. If the airbag warning light is not illuminated, the repair is complete. Proceed to Step #51 to clear stored DTC's.
    b. If the airbag warning light is illuminated due to supplemental front airbag sensor faults, switch the ignition key "OFF" and Proceed to Step #51 and clear any DTC's. If the DTC's return and **ARE** related to the Front Impact Sensor(s), Verify proper wiring connections as described in Step #35 above. If wiring connections are correct, or if DTC's are related to other components of the supplemental airbag system, refer to the diagnostic information available in DealerCONNECT>>>TechCONNECT under: Diagnostics > 7.2 AIRBAG for further information.
51. Turn the ignition "OFF" and connect the DRBIII®.

NOTE: The DRBIII® must be at software Version 64.0 or later.

52. Turn the ignition key to "ON".
53. Press the "YES" button when the DRBIII® powers up.
54. Select "DRBIII® STANDALONE" and press "ENTER".
55. Select "1997-2007 DIAGNOSTICS" and press "ENTER".
56. Select "ALL" and press "ENTER".
57. Select "PASSIVE RESTRAINT" and press "ENTER".
58. Select "CLEAR DTCS".
59. Disconnect and remove the DRBIII® from the vehicle.
60. Reset clock.

POLICY:
Reimbursable within the provisions of the warranty.

NOTE: Vehicles included in this Service Bulletin have a lifetime warranty on supplemental front airbag sensors, mounting hardware and sensor electrical connectors as described in this Service Bulletin. See Warranty Bulletin D-07-19 for details associated with the lifetime warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
08-14-25-90	Replace Both Front Airbag Sensors And Inspect Sensor Electrical Connections (C)	0.4 Hrs.
Related Operations:		
08-14-25-50	Replace One Riv-Nut	0.8 Hrs.
08-14-25-51	Replace Each Additional Riv-Nut	0.3 Hrs.
08-14-25-52	Replace One Harness Connector	0.3 Hrs.
08-14-25-53	Replace Two Harness Connectors	0.5 Hrs.
08-14-25-54	Clear Diagnostic Trouble Codes	0.1 Hrs.

NOTE: The related operations for riv-nut replacement above can only be used for vehicles built at the Windsor Assembly plant after May 24, 2004, the St. Louis Assembly plant after June 28, 2004 or the Styler Assembly plant after June 28, 2004.

FAILURE CODE:

ZZ	Service Action