

PASSIVE RESTRAINT SYSTEMS

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GENERAL INFORMATION

INTRODUCTION

A dual front airbag system is a standard equipment safety feature on this model. The system includes an inflatable airbag module in the center of the steering wheel, and a second inflatable airbag module in the instrument panel above the glove box. This system is designed to reduce serious injuries to the driver and front seat passenger during a frontal impact of the vehicle.

To test this passive restraint system, refer to the proper Diagnostic Procedures manual. If an airbag module assembly is defective and non-deployed, refer to the Chrysler Corporation current parts return list in the Warranty Policies and Procedures manual for the proper handling procedures.

Following are general descriptions of the major components in the airbag system. Refer to 8W-43 - Airbag System in Group 8W - Wiring Diagrams for complete circuit descriptions and diagrams.

NOTE: This group covers both Left-Hand Drive (LHD) and Right-Hand Drive (RHD) versions of this model. Whenever required and feasible, the RHD versions of affected vehicle components have been constructed as mirror-image of the LHD versions. While most of the illustrations used in this group represent only the LHD version, the diagnostic and service procedures outlined can generally be applied to either version. Exceptions to this rule have been clearly identified as LHD or RHD, if a special illustration or procedure is required.

GENERAL INFORMATION (Continued)

WARNING:

- **THE AIRBAG SYSTEM IS A SENSITIVE, COMPLEX ELECTROMECHANICAL UNIT. BEFORE ATTEMPTING TO DIAGNOSE OR SERVICE ANY AIRBAG SYSTEM OR RELATED STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENTS YOU MUST FIRST DISCONNECT AND ISOLATE THE BATTERY NEGATIVE (GROUND) CABLE. THEN WAIT TWO MINUTES FOR THE SYSTEM CAPACITOR TO DISCHARGE BEFORE FURTHER SYSTEM SERVICE. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.**

- **THE AIRBAG MODULE INFLATOR ASSEMBLY CONTAINS SODIUM AZIDE AND POTASSIUM NITRATE. THESE MATERIALS ARE POISONOUS AND EXTREMELY FLAMMABLE. CONTACT WITH ACID, WATER, OR HEAVY METALS MAY PRODUCE HARMFUL AND IRRITATING GASES (SODIUM HYDROXIDE IS FORMED IN THE PRESENCE OF MOISTURE) OR COMBUSTIBLE COMPOUNDS. IN ADDITION, THE PASSENGER AIRBAG MODULE CONTAINS ARGON GAS PRESSURIZED TO OVER 2500 PSI. DO NOT ATTEMPT TO DISMANTLE AN AIRBAG MODULE OR TAMPER WITH ITS INFLATOR. DO NOT PUNCTURE, INCINERATE, OR BRING INTO CONTACT WITH ELECTRICITY. DO NOT STORE AT TEMPERATURES EXCEEDING 93° C (200° F).**

- **REPLACE AIRBAG SYSTEM COMPONENTS ONLY WITH PARTS SPECIFIED IN THE CHRYSLER MOPAR PARTS CATALOG. SUBSTITUTE PARTS MAY APPEAR INTERCHANGEABLE, BUT INTERNAL DIFFERENCES MAY RESULT IN INFERIOR OCCUPANT PROTECTION.**

- **THE FASTENERS, SCREWS, AND BOLTS ORIGINALLY USED FOR THE AIRBAG SYSTEM COMPONENTS HAVE SPECIAL COATINGS AND ARE SPECIFICALLY DESIGNED FOR THE AIRBAG SYSTEM. THEY MUST NEVER BE REPLACED WITH ANY SUBSTITUTES. ANY TIME A NEW FASTENER IS NEEDED, REPLACE IT WITH THE CORRECT FASTENERS PROVIDED IN THE SERVICE PACKAGE OR SPECIFIED IN THE CHRYSLER MOPAR PARTS CATALOG.**

- **WHEN A STEERING COLUMN HAS AN AIRBAG MODULE ATTACHED, NEVER PLACE THE COLUMN ON THE FLOOR OR ANY OTHER SURFACE WITH THE STEERING WHEEL OR AIRBAG MODULE FACE DOWN.**

DESCRIPTION AND OPERATION

AIRBAG MODULE*DRIVER SIDE*

The airbag module protective trim cover is the most visible part of the driver side airbag system. The module is mounted directly to the steering wheel. Located under the airbag module trim cover are the horn switch, the airbag cushion, and the airbag cushion supporting components. The airbag module includes a housing to which the cushion and inflator are attached and sealed. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged.

The inflator assembly is mounted to the back of the airbag module. The inflator seals the hole in the airbag cushion so it can discharge the gas it produces directly into the cushion when supplied with the proper electrical signal. The protective trim cover is fitted to the front of the airbag module and forms a decorative cover in the center of the steering wheel. Upon airbag deployment, this cover will split at a predetermined breakout line.

PASSENGER SIDE

The airbag door on the instrument panel above the glove box is the most visible part of the passenger side airbag system. Located under the airbag door are the airbag cushion and its supporting components. The airbag module includes a housing to which the cushion and inflator are attached and sealed. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged.

The inflator assembly is mounted to the back of the airbag module. The inflator seals the hole in the airbag cushion so it can discharge the gas it produces directly into the cushion when supplied with the proper electrical signal. The airbag door is secured to the airbag module and the instrument panel base, and has predetermined breakout lines concealed beneath its decorative cover. Upon airbag deployment, the airbag door will split at the breakout lines and the door will pivot out of the way.

The airbag module is secured with screws at the bottom to the instrument panel base above the glove box opening, and at the top to the instrument panel base underneath the instrument panel top cover. The airbag module and airbag door are available as separate service items. Following an airbag deployment, the airbag module and airbag door must be replaced.

STORAGE

An airbag module must be stored in its original, special container until used for service. Also, it must be stored in a clean, dry environment; away from sources of extreme heat, sparks, and high electrical

DESCRIPTION AND OPERATION (Continued)

energy. Always place or store an airbag module on a surface with its trim cover or airbag side facing up, to minimize movement in case of an accidental deployment.

IMPACT SENSOR

The impact sensor provides verification of the direction and severity of an impact. One impact sensor is used. It is located inside the Airbag Control Module (ACM), which is secured to a bracket under the left side front bucket seat inside the vehicle.

The impact sensor is an accelerometer that senses the rate of deceleration. The microprocessor in the ACM monitors the impact sensor signal. A pre-programmed decision algorithm in the microprocessor determines when the deceleration rate indicates an impact is severe enough to require airbag system protection. When the programmed conditions are met, the ACM sends an electrical signal to deploy the airbag system components.

The impact sensor is calibrated for the specific vehicle. The sensor is only serviced as a unit with the ACM. The sensor cannot be repaired or adjusted and, if faulty or damaged, the ACM unit must be replaced.

CLOCKSPRING

The clockspring is mounted on the steering column behind the steering wheel. This assembly consists of a plastic housing which contains a flat, ribbon-like, electrically conductive tape that winds and unwinds with the steering wheel rotation.

The clockspring is used to maintain a continuous electrical circuit between the wire harness and the driver side airbag module, the horn switch, and the vehicle speed control switches on vehicles that are so equipped.

The clockspring must be properly centered when it is installed on the steering column following any service removal, or it will be damaged. See the Clockspring Centering procedure in this group for more information.

The clockspring cannot be repaired. If the clockspring is faulty, damaged, or if the airbag has been deployed, the clockspring must be replaced.

AIRBAG CONTROL MODULE

The Airbag Control Module (ACM) contains the impact sensor, and a microprocessor that monitors the impact sensor and the airbag system electrical circuits to determine the system readiness. The ACM contains On-Board Diagnostics (OBD), and will send an airbag lamp-on message to the instrument cluster on the Chrysler Collision Detection (CCD) data bus to light the airbag indicator lamp in the instrument cluster when a monitored airbag system fault occurs.

The ACM also contains an energy-storage capacitor. This capacitor stores enough electrical energy to deploy the airbags for up to one second following a battery disconnect or failure during an impact. The purpose of the capacitor is to provide airbag system protection in a severe secondary impact, if the initial impact has damaged or disconnected the battery, but was not severe enough to deploy the airbags.

The ACM cannot be repaired and, if damaged or faulty, it must be replaced.

DIAGNOSIS AND TESTING**AIRBAG SYSTEM**

A DRB scan tool is required for diagnosis of the airbag system. Refer to the proper Diagnostic Procedures manual for more information.

(1) Disconnect and isolate the battery negative cable. If the airbag has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) Connect the DRB scan tool to the 16-way data link wire harness connector. The connector is located on the driver side lower edge of the instrument panel, outboard of the steering column (Fig. 1).

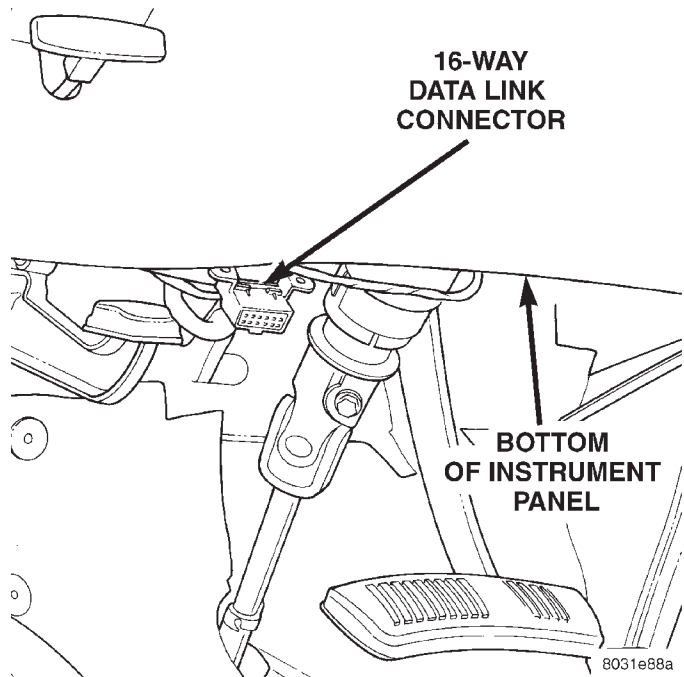


Fig. 1 16-Way Data Link Connector - Typical

(3) Turn the ignition switch to the On position. Exit the vehicle with the DRB. Use the latest version of the proper DRB cartridge.

(4) After checking that nobody is inside the vehicle, reconnect the battery negative cable.

(5) Using the DRB, read and record the active Diagnostic Trouble Code (DTC) data.

DIAGNOSIS AND TESTING (Continued)

- (6) Read and record any stored DTC data.
- (7) Refer to the proper Diagnostic Procedures manual, if any DTC is found in Step 5 or Step 6.
- (8) Erase the stored DTC data. If any problems remain, the stored DTC data will not erase.
- (9) With the ignition switch still in the On position, make sure nobody is in the vehicle.
- (10) From outside of the vehicle (away from the airbag modules in case of an accidental deployment) turn the ignition switch to the Off position for about ten seconds, and then back to the On position. Observe the airbag indicator lamp in the instrument cluster. It should light for six to eight seconds, and then go out. This indicates that the airbag system is functioning normally.

NOTE: If the airbag indicator lamp fails to light, or lights and stays on, there is an airbag system malfunction. Refer to the proper Diagnostic Procedures manual to diagnose the problem.

SERVICE PROCEDURES

AIRBAG SYSTEM

NON-DEPLOYED

At no time should any source of electricity be permitted near the inflator on the back of an airbag module. When carrying a non-deployed airbag module, the trim cover or airbag side of the module should be pointed away from the body to minimize injury in the event of an accidental deployment. If the module is placed on a bench or any other surface, the trim cover or airbag side of the module should be face up to minimize movement in the event of an accidental deployment.

In addition, the airbag system should be disarmed whenever any steering wheel, steering column, or instrument panel components require diagnosis or service. Failure to observe this warning could result in accidental airbag deployment and possible personal injury. Refer to Group 8E - Instrument Panel Systems for additional service procedures on the instrument panel. Refer to Group 19 - Steering for additional service procedures on the steering wheel and steering column.

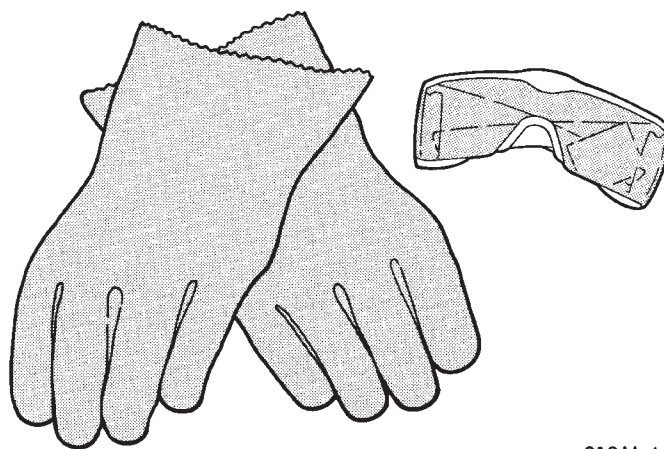
DEPLOYED

Any vehicle which is to be returned to use after an airbag deployment, must have both airbag modules, and the clockspring replaced. These components will be damaged or weakened as a result of an airbag deployment, which may or may not be obvious during a visual inspection, and are not intended for reuse.

Other vehicle components should be closely inspected, but are to be replaced only as required by the extent of the visible damage incurred.

CLEANUP PROCEDURE

Following an airbag system deployment, the vehicle interior will contain a powdery residue. This residue is primarily sodium bicarbonate (baking soda), used as an airbag cushion lubricant. However, there will also be traces of sodium hydroxide powder, a chemical by-product of the generant used for airbag deployment. Since this powder can irritate the skin, eyes, nose, or throat, be sure to wear safety glasses, rubber gloves, and a long-sleeved shirt during cleanup (Fig. 2).



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Fig. 2 Wear Safety Glasses and Rubber Gloves

WARNING: IF YOU EXPERIENCE SKIN IRRITATION DURING CLEANUP, RUN COOL WATER OVER THE AFFECTED AREA. ALSO, IF YOU EXPERIENCE IRRITATION OF THE NOSE OR THROAT, EXIT THE VEHICLE FOR FRESH AIR UNTIL THE IRRITATION CEASES. IF IRRITATION CONTINUES, SEE A PHYSICIAN.

Begin the cleanup by removing the airbag modules from the vehicle as described in this group.

Use a vacuum cleaner to remove any residual powder from the vehicle interior. Clean from outside the vehicle and work your way inside, so that you avoid kneeling or sitting on a non-cleaned area.

Be sure to vacuum the heater and air conditioning outlets as well (Fig. 3). Run the heater and air conditioning blower on the lowest speed setting and vacuum any powder expelled from the outlets. You may need to vacuum the interior of the vehicle a second time to recover all of the powder.

Place the deployed airbag modules in your vehicular scrap pile.

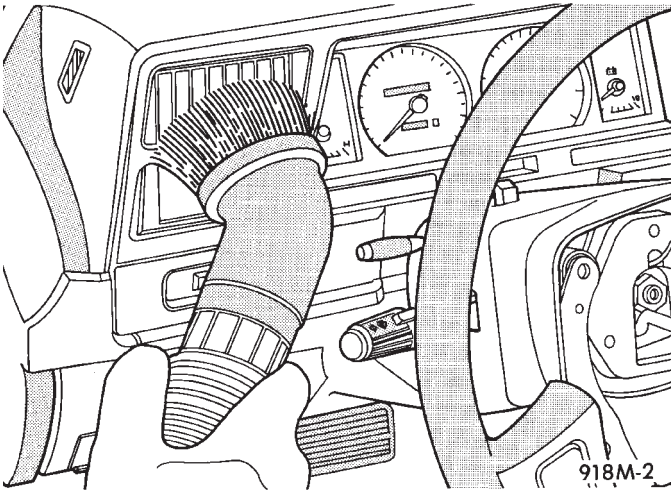


Fig. 3 Vacuum Heater and A/C Outlets

REMOVAL AND INSTALLATION

AIRBAG MODULE

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- **WHEN REMOVING A DEPLOYED AIRBAG MODULE, RUBBER GLOVES, EYE PROTECTION, AND A LONG-SLEEVED SHIRT SHOULD BE WORN. THERE MAY BE DEPOSITS ON THE AIRBAG MODULE AND OTHER INTERIOR SURFACES. IN LARGE DOSES, THESE DEPOSITS MAY CAUSE IRRITATION TO THE SKIN AND EYES.**

DRIVER SIDE

(1) Disconnect and isolate the battery negative cable. If the airbag module has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) From the underside of the steering wheel, remove the two screws that secure the driver side airbag module to the steering wheel (Fig. 4).

(3) Pull the airbag module away from the steering wheel far enough to access the wire harness connectors on the back of the airbag module.

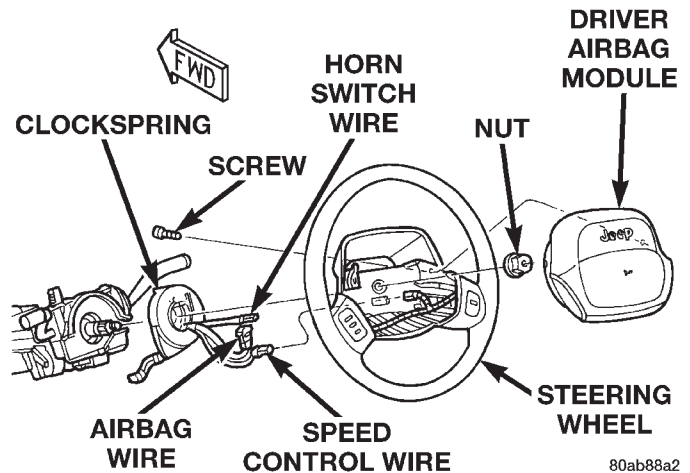


Fig. 4 Driver Side Airbag Module Remove/Install

(4) Unplug the airbag module and horn switch wire harness connectors from the back of the airbag module.

(5) Remove the driver side airbag module from the vehicle.

(6) If the airbag has been deployed, see the procedure for replacing the clockspring in this group.

(7) When installing the airbag module, connect the clockspring wire harness connector to the module by pressing straight in on the connector. Be certain that the connector is fully engaged by observing the latching clip arms on the top of the connector.

(8) Install the two airbag module mounting screws and tighten to 10.2 N·m (90 in. lbs.).

(9) Do not connect the battery negative cable at this time. See Airbag System in Diagnosis and Testing for the proper procedures.

PASSENGER SIDE

(1) Disconnect and isolate the battery negative cable. If the airbag module has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) Remove the instrument panel top cover. Refer to Group 8E - Instrument Panel Systems for the procedures.

(3) Unplug the passenger side airbag module wire harness connector located on the top of the instrument panel between the airbag module and the windshield (Fig. 5).

(4) Disengage the passenger side airbag module wire harness connector retainer from the hole on the top of the instrument panel.

(5) Remove the four screws that secure the upper flange of the passenger side airbag door to the instrument panel (Fig. 6).

(6) Remove the two screws that secure the upper airbag module mounting brackets to the top of the instrument panel.

REMOVAL AND INSTALLATION (Continued)

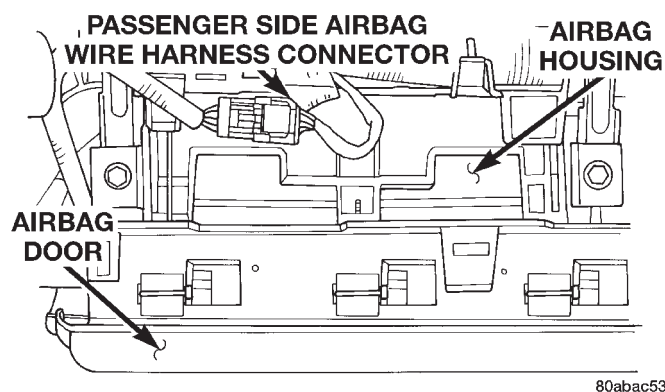


Fig. 5 Passenger Side Airbag Connector Remove/Install

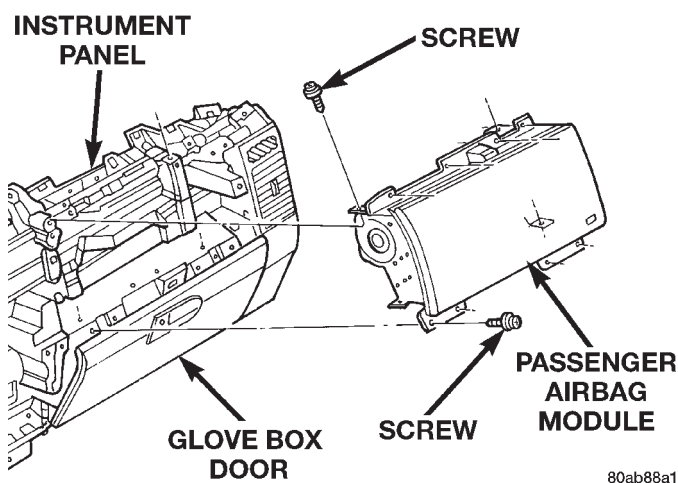


Fig. 6 Passenger Side Airbag Module Remove/Install

(7) Open the glove box door and remove the two glove box door stop bumpers by sliding them down towards the glove box bin and out of their slotted holes in the instrument panel. Roll the glove box door down to its fully opened position.

(8) Remove the four screws that secure the lower flange of the passenger side airbag door to the instrument panel near the upper edge of the glove box opening.

(9) Reach through the glove box opening and up to remove the two screws that secure the lower airbag module mounting brackets to the instrument panel.

(10) Remove the passenger side airbag module and airbag door from the instrument panel as a unit.

(11) Reverse the removal procedures to install. Tighten the hardware as follows:

- Airbag module mounting bracket screws - 11.8 N·m (105 in. lbs.)
- Airbag door mounting screws - 2.2 N·m (20 in. lbs.).

(12) Before reinstalling the instrument panel top cover, be certain that the airbag module wire harness connector latches are fully engaged.

(13) Do not connect the battery negative cable at this time. See Airbag System in Diagnosis and Testing for the proper procedures.

DRIVER SIDE AIRBAG TRIM COVER AND HORN SWITCH

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- THE HORN SWITCH IS INTEGRAL TO THE AIRBAG MODULE TRIM COVER. SERVICE OF THIS COMPONENT SHOULD BE PERFORMED ONLY BY CHRYSLER-TRAINED AND AUTHORIZED DEALER SERVICE TECHNICIANS. FAILURE TO TAKE THE PROPER PRECAUTIONS OR TO FOLLOW THE PROPER PROCEDURES COULD RESULT IN ACCIDENTAL, INCOMPLETE, OR IMPROPER AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

(1) Disconnect and isolate the battery negative cable. If the airbag module has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) Remove the driver side airbag module as described in this group.

(3) Remove the plastic horn switch feed wire retainer from the stud on the airbag housing (Fig. 7).

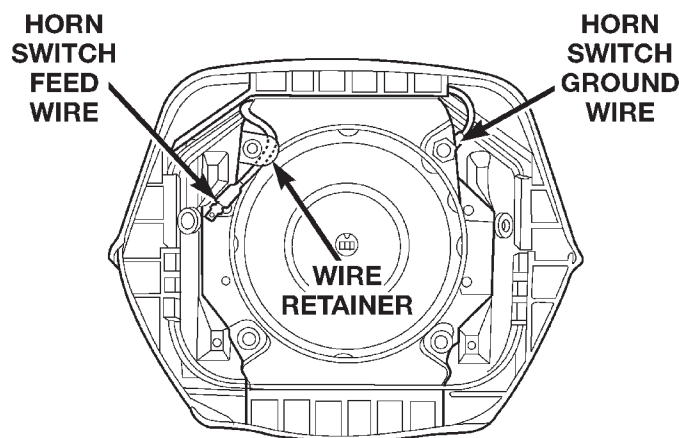
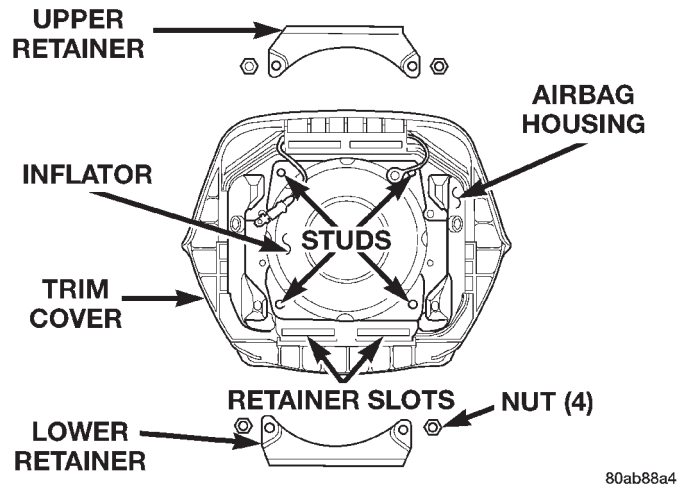


Fig. 7 Horn Switch Feed Wire Remove/Install

REMOVAL AND INSTALLATION (Continued)

(4) Remove the four nuts that secure the upper and lower trim cover retainers to the studs on the airbag housing (Fig. 8).



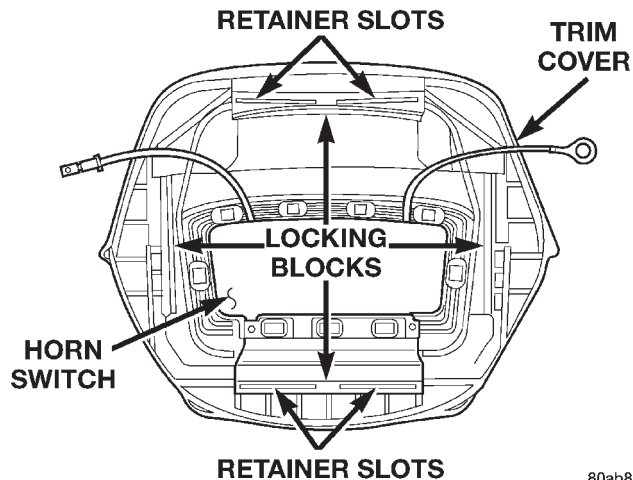
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Fig. 8 Airbag Trim Cover Retainers Remove/Install

(5) Remove the upper and lower trim cover retainers from the airbag housing studs.

(6) Remove the horn switch ground wire eyelet from the upper airbag housing stud.

(7) Disengage the four trim cover locking blocks from the lip around the outside edge of the airbag housing and remove the housing from the cover (Fig. 9).

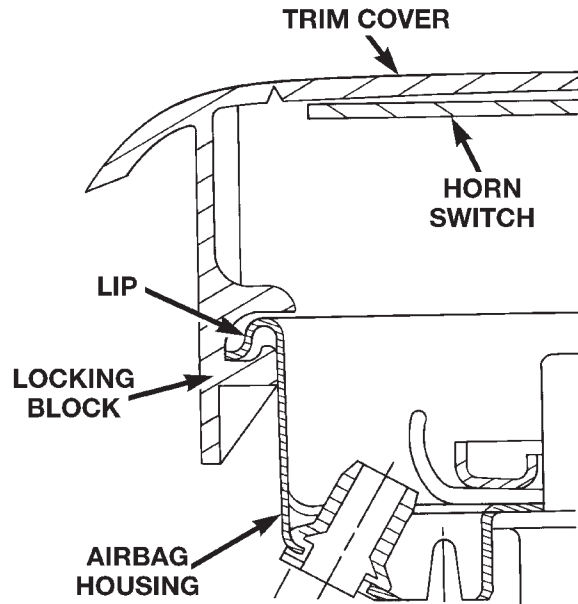


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Fig. 9 Airbag Trim Cover Remove/Install

WARNING: USE EXTREME CARE TO PREVENT ANY FOREIGN MATERIAL FROM ENTERING THE DRIVER SIDE AIRBAG MODULE, OR BECOMING ENTRAPPED BETWEEN THE DRIVER SIDE AIRBAG MODULE TRIM COVER AND THE DRIVER SIDE AIRBAG MODULE. FAILURE TO OBSERVE THIS WARNING COULD RESULT IN OCCUPANT INJURIES UPON AIRBAG DEPLOYMENT.

(8) When installing the trim cover and horn switch, be certain that the locking blocks are fully engaged on the lip of the airbag housing (Fig. 10).



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Fig. 10 Airbag Trim Cover Locking Blocks Installed

(9) When installing the upper and lower trim cover retainers, be certain that the tabs on each retainer are engaged in the retainer slots of the trim cover (Fig. 9).

(10) Install and tighten the trim cover retainer nuts to 10 N·m (90 in. lbs.).

(11) Reverse the remaining removal procedures to complete the installation, but do not connect the battery negative cable at this time. See Airbag System in Diagnosis and Testing for the proper procedures.

PASSENGER SIDE AIRBAG DOOR

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- WHEN REMOVING A DEPLOYED AIRBAG MODULE, RUBBER GLOVES, EYE PROTECTION, AND A LONG-SLEEVED SHIRT SHOULD BE WORN. THERE MAY BE DEPOSITS ON THE AIRBAG MODULE AND OTHER INTERIOR SURFACES. IN LARGE DOSES, THESE DEPOSITS MAY CAUSE IRRITATION TO THE SKIN AND EYES.

REMOVAL AND INSTALLATION (Continued)

(1) Disconnect and isolate the battery negative cable. If the airbag module has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) Remove the passenger side airbag module from the instrument panel as described in this group.

(3) With the airbag module on a bench, slide the airbag door sideways until the keyed slots in the upper and lower airbag door flanges clear the three tabs on the top and the bottom of the airbag housing (Fig. 11).

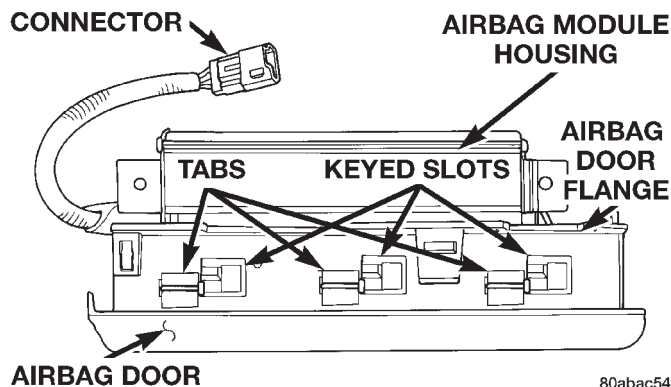


Fig. 11 Passenger Side Airbag Door Remove/Install

(4) Remove the passenger side airbag door from the airbag module.

WARNING: USE EXTREME CARE TO PREVENT ANY FOREIGN MATERIAL FROM ENTERING THE PASSENGER SIDE AIRBAG MODULE, OR BECOMING ENTRAPPED BETWEEN THE PASSENGER SIDE AIRBAG DOOR AND THE PASSENGER SIDE AIRBAG MODULE. FAILURE TO OBSERVE THIS WARNING COULD RESULT IN OCCUPANT INJURIES UPON AIRBAG DEPLOYMENT.

(5) Reverse the removal procedures to complete the installation, but do not connect the battery negative cable at this time. See Airbag System in Diagnosis and Testing for the proper procedures.

AIRBAG CONTROL MODULE

WARNING:

- **THE AIRBAG CONTROL MODULE CONTAINS THE IMPACT SENSOR, WHICH ENABLES THE SYSTEM TO DEPLOY THE AIRBAG. BEFORE ATTEMPTING TO DIAGNOSE OR SERVICE ANY AIRBAG SYSTEM OR RELATED STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENTS YOU MUST FIRST DISCONNECT AND ISOLATE THE BATTERY NEGATIVE (GROUND) CABLE. THEN WAIT TWO MINUTES FOR THE SYSTEM CAPACITOR TO DISCHARGE BEFORE FURTHER SYSTEM SERVICE. THIS IS THE ONLY SURE**

WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

- **NEVER STRIKE OR KICK THE AIRBAG CONTROL MODULE, AS IT CAN DAMAGE THE IMPACT SENSOR OR AFFECT ITS CALIBRATION. IF AN AIRBAG CONTROL MODULE IS ACCIDENTALLY DROPPED DURING SERVICE, THE MODULE MUST BE SCRAPPED AND REPLACED WITH A NEW UNIT. ALWAYS REINSTALL THE AIRBAG CONTROL MODULE PROTECTIVE COVER.**

(1) Disconnect and isolate the battery negative cable. If the airbag has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(2) Remove the left front bucket seat assembly as described in Group 23 - Body.

(3) Remove the three screws that secure the Airbag Control Module (ACM) protective cover to the left front floor pan and the ACM mounting bracket (Fig. 12).

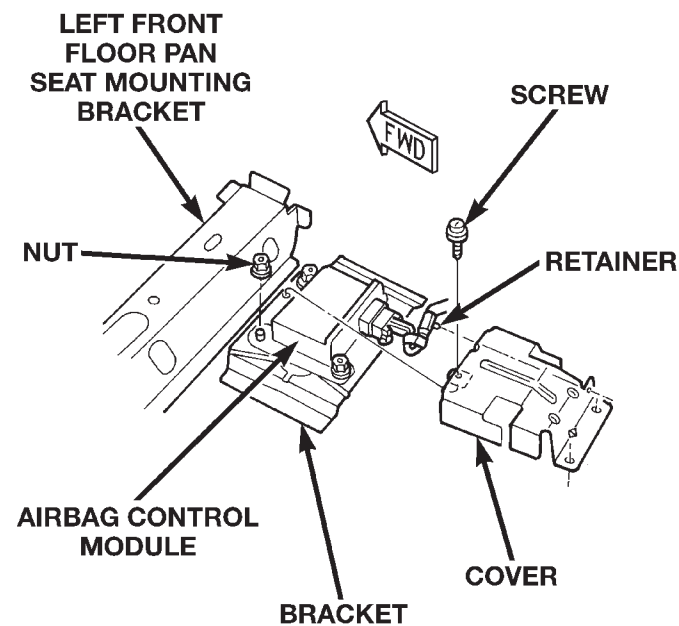


Fig. 12 Airbag Control Module Remove/Install

(4) Pull the ACM protective cover away from the ACM far enough to access and release the ACM wire harness retainer from the slotted hole near the rear of the cover.

(5) Remove the ACM protective cover from the vehicle.

(6) Unplug the ACM wire harness connector. To unplug the connector, squeeze the two connector latch tabs between the thumb and forefinger, while pulling the connector out from the ACM.

REMOVAL AND INSTALLATION (Continued)

(7) Remove the three nuts that secure the ACM mounting bracket to the floor pan mounting bracket.

(8) Remove the ACM from the vehicle.

(9) When installing the ACM, position the unit with the arrow on the ACM housing pointing forward.

(10) Attach the ACM to the floor pan ACM mounting bracket with the three mounting nuts. Tighten the mounting nuts to 7.3 N·m (65 in. lbs.).

(11) Plug in the wire harness connector to the ACM. Be certain that the connector latches are fully engaged.

(12) Position the ACM protective cover over the ACM. Be certain that the wire harness retainer is correctly reinstalled in the slotted hole of the ACM protective cover. Tighten the mounting screws to 4 N·m (35 in. lbs.).

(13) Reverse the remaining removal procedures to complete the installation.

(14) Do not connect the battery negative cable at this time. See Airbag System in Diagnosis and Testing for the proper procedures.

CLOCKSPRING

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(1) Turn the steering wheel until the front wheels are in the straight-ahead position before starting the procedure.

(2) Disconnect and isolate the battery negative cable. If the airbag has not been deployed, wait two minutes for the system capacitor to discharge before further service.

(3) Remove the driver side airbag module as described in this group.

(4) If the vehicle is equipped with the optional vehicle speed control, unplug the speed control switch wire harness connector in the steering wheel.

(5) Remove the nut that secures the steering wheel to the steering column upper shaft.

(6) Remove the steering wheel with a steering wheel puller (Special Tool C-3428B).

(7) Remove the steering column opening cover as described in Group 8E - Instrument Panel Systems.

(8) If the vehicle is so equipped, move the tilt steering column to the fully raised position.

(9) Insert the key in the ignition lock cylinder and turn the ignition switch to the On position.

(10) Insert a small screwdriver or pin punch through the access hole in the lower steering column shroud and depress the ignition lock cylinder retaining tumbler (Fig. 13).

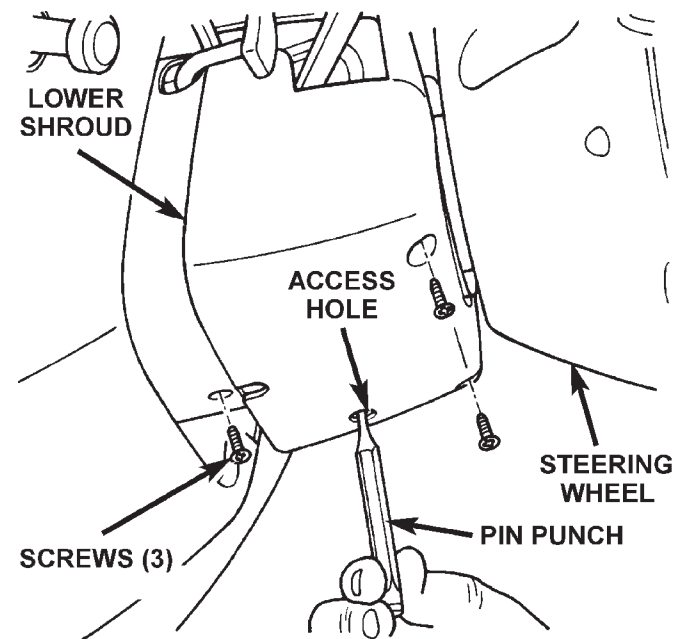


Fig. 13 Steering Column Shrouds Remove/Install

(11) While holding the retaining tumbler depressed, pull the ignition lock cylinder and key out of the ignition lock housing.

(12) Remove the three screws that secure the lower steering column shroud to the upper shroud.

(13) If the vehicle is equipped with a standard non-tilt steering column, loosen the two upper steering column mounting nuts. If the vehicle is equipped with the optional tilt steering column, move the tilt steering column to the fully lowered position.

(14) Remove both the upper and lower shrouds from the steering column.

(15) Unplug the two wire harness connectors from the steering column side of the clockspring.

(16) To remove the clockspring, carefully lift the locating fingers of the clockspring assembly from the steering column as necessary. If the clockspring locating fingers are broken, be certain to remove the broken pieces from the upper steering column housing. The clockspring cannot be repaired. It must be replaced if faulty or damaged, or if the airbag has been deployed.

REMOVAL AND INSTALLATION (Continued)

(17) When installing the clockspring, snap the clockspring onto the steering column. If the clockspring is not properly positioned, see Clockspring Centering in this group before installing the steering wheel.

(18) Plug the two clockspring wire harness connectors into the steering column side of the clockspring. Be certain that the wire harness connector latches are fully engaged.

(19) Reinstall the steering column shrouds and ignition lock cylinder.

(20) Reinstall the steering column opening cover as described in Group 8E - Instrument Panel Systems.

(21) The front wheels should still be in the straight-ahead position. Install the steering wheel being certain to fit the flats on the hub of the steering wheel onto the formations on the inside of the clockspring. Pull the wire harness through the lower hole in the steering wheel hub. Tighten the steering wheel nut to 61 N·m (45 ft. lbs.). Be certain not to pinch the wiring between the steering wheel and the nut.

(22) Install the airbag module as described in this group.

ADJUSTMENTS

CLOCKSPRING CENTERING

If the rotating tape within the clockspring is not positioned properly in relation to the steering wheel and the front wheels, the clockspring may fail during use. The clockspring must be centered if it is not known to be properly positioned, or if the front wheels were moved from the straight-ahead position with the clockspring removed during any service procedure.

WARNING: THE AIRBAG SYSTEM IS A SENSITIVE, COMPLEX ELECTROMECHANICAL UNIT. BEFORE ATTEMPTING TO DIAGNOSE OR SERVICE ANY AIRBAG SYSTEM OR RELATED STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENTS YOU MUST FIRST DISCONNECT AND ISOLATE THE BATTERY NEGATIVE (GROUND) CABLE. THEN WAIT TWO MINUTES FOR THE SYSTEM CAPACITOR TO DISCHARGE BEFORE FURTHER SYSTEM SERVICE. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

(1) Turn the steering wheel until the front wheels are in the straight-ahead position before starting the centering procedure.

(2) Disconnect and isolate the battery negative cable. If the airbag has not been deployed, wait two minutes for the system capacitor to discharge before further service.

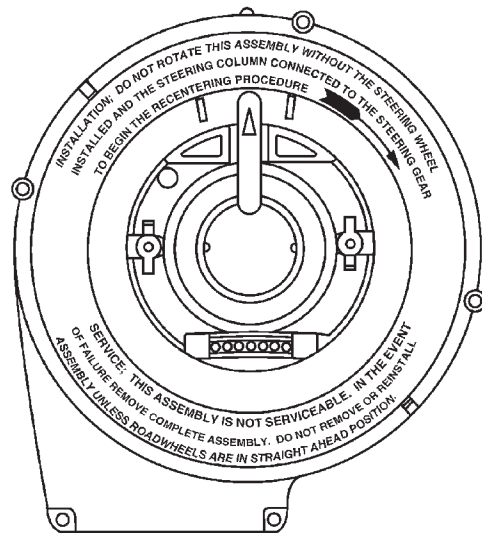
(3) Remove the airbag module as described in this group.

(4) If the vehicle is equipped with the optional vehicle speed control, unplug the speed control switch wire harness connector in the steering wheel.

(5) Remove the nut that secures the steering wheel to the steering column upper shaft.

(6) Remove the steering wheel with a steering wheel puller (Special Tool C-3428B).

(7) Rotate the clockspring rotor clockwise to the end of its travel (Fig. 14). **Do not apply excessive torque.**



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Fig. 14 Clockspring

(8) From the end of the clockwise travel, rotate the rotor about two and one-half turns counterclockwise, until the rotor flats are horizontal. If the clockspring wire harness is not at the bottom, rotate another one-half turn.

(9) The front wheels should still be in the straight-ahead position. Install the steering wheel being certain to fit the flats on the hub of the steering wheel onto the formations on the inside of the clockspring. Pull the wire harness from the clockspring through the lower hole in the steering wheel hub. Tighten the steering wheel nut to 61 N·m (45 ft. lbs.). Be certain not to pinch any of the wiring between the steering wheel and the nut.

(10) Install the airbag module as described in this group.