# 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.
GENERAL INFORMATION (Continued)

WARNING:

• THE AIRBAG SYSTEM IS A SENSITIVE, COM-PLEX ELECTROMECHANICAL UNIT. BEFORE ATTEMPTING TO DIAGNOSE OR SERVICE ANY AIR-BAG 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 SYS-TEM CAPACITOR TO DISCHARGE BEFORE FUR-THER SYSTEM SERVICE. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIR-BAG 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 INFLA-TOR. 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 OCCU-PANT PROTECTION.

• THE FASTENERS, SCREWS, AND BOLTS ORIG-inally USED FOR THE AIRBAG SYSTEM COMPO-NENTS HAVE SPECIAL COATINGS AND ARE SPECIFICALLY DESIGNED FOR THE AIRBAG SYS-TEM. THEY MUST NEVER BE REPLACED WITH ANY SUBSTITUTES. ANY TIME A NEW FASTENER IS NEEDED, REPLACE IT WITH THE CORRECT FAS-TENERS PROVIDED IN THE SERVICE PACKAGE OR SPECIFIED IN THE CHRYSLER MOPAR PARTS CAT-ALOG.

• 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 mod-ule 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, the cover will split at a pre-determined 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 compo-nents. 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 instrument panel, and has predetermined break-out lines concealed beneath its decorative cover. Upon airbag deployment, the air bag door will split at the breakout lines and the door will pivot out of the way.

The airbag module is secured with two brackets to the instrument panel armature above the glove box opening, and with one bracket to the dash panel behind the glove box. Following an airbag deploy-ment, the instrument panel armature assembly, the airbag door, and the airbag module 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 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 on the floor pan transmission tunnel 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 that 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).

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.

6. Read and record any stored DTC data.
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, the clockspring, the instrument panel assembly, and the passenger side airbag door 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).

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 vehicle scrap pile.

Fig. 2 Wear Safety Glasses and Rubber Gloves
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.

(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, the clockspring must be replaced. See Clockspring in this group for the procedures.
(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) Connect the horn switch wire harness connectors.
(9) Install the airbag module in the steering wheel. Tighten the mounting screws to 10.2 N·m (90 in. lbs.).
(10) Do not connect the battery negative cable at this time. See Airbag System in the Diagnosis and Testing section of this group for the proper procedures.

PASSENGER SIDE
The following procedure is for replacement of a faulty or damaged passenger side airbag module. If the passenger side airbag module has been deployed, the instrument panel assembly, the passenger side airbag door and the passenger side airbag module must be replaced. Refer to Instrument Panel Assembly in Group 8E - Instrument Panel Systems for the procedures.
(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 assembly from the vehicle. Refer to Instrument Panel Assembly in Group 8E - Instrument Panel Systems for the procedures.
REMOVAL AND INSTALLATION (Continued)

(3) Place the instrument panel face down on a work bench.

(4) Remove the three nuts that secure the passenger side airbag module to the instrument panel armature (Fig. 5).

(5) Remove the passenger side airbag module from the instrument panel.

(6) If the airbag has been deployed, the instrument panel assembly must be replaced. See Instrument Panel Assembly in Group 8E - Instrument Panel Systems for the procedures.

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.

(7) Install the passenger side airbag module in the instrument panel. Tighten the three airbag module mounting nuts to 12 N·m (105 in. lbs.).

(8) Reverse the remaining removal procedures to complete the installation. When reinstalling the instrument panel, be certain that the airbag module wire harness connector latches are fully engaged.

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

DRIVER SIDE AIRBAG TRIM COVER AND HORN SWITCH

WARNING:

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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 from the steering wheel. See Airbag Module in this group for the procedures.

(3) Remove the plastic horn switch feed wire retainer(s) from the stud(s) on the airbag housing (Fig. 6) or (Fig. 7).
(4) Remove the four nuts that secure the upper and lower trim cover retainers to the studs on the airbag housing (Fig. 8) or (Fig. 9).

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

(6) Remove the horn switch ground wire eyelet from the 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. 10) or (Fig. 11).

**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.
REMOVAL AND INSTALLATION (Continued)

(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. 12).

(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. 11).

(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 the Diagnosis and Testing section of this group for the proper procedures.

PASSENGER SIDE AIRBAG DOOR

(1) Remove the instrument panel assembly from the vehicle. See Instrument Panel Assembly in Group 8E - Instrument Panel Systems for the procedures.

(2) Place the instrument panel face up on a work bench.

(3) Remove the five screws that secure the airbag door upper flange to the top of the instrument panel (Fig. 13).

(4) Remove the grab handle bezel from the instrument panel. See Grab Handle Bezel in Group 8E - Instrument Panel Systems for the procedures.

(5) Remove the five screws that secure the airbag door lower flange to the instrument panel above the glove box opening.

(6) Place the instrument panel face down on the work bench.

(7) Remove the passenger side airbag module from the instrument panel. See Airbag Module in this group for the procedures.

(8) Remove the two screws that secure the passenger side airbag door bracket to the instrument panel armature (Fig. 14).

(9) Remove and discard the two airbag door bracket J-nuts from the instrument panel armature. These J-nuts must be replaced with new parts whenever the airbag door bracket screws are removed.

(10) Place the instrument panel face up on the work bench.

(11) Remove the passenger side airbag door from the instrument panel.

(12) Reverse the removal procedures to install. Tighten the two passenger side airbag door bracket screws to 12 N·m (105 in. lbs.). Tighten the upper and lower airbag door flange screws to 2.2 N·m (20 in. lbs.).

WARNING: BE CERTAIN THAT ALL FASTENERS FOR THE AIRBAG DOOR ARE REINSTALLED. FAILURE TO DO THIS COULD RESULT IN IMPROPER OR INCOMPLETE AIRBAG DEPLOYMENT, AND POSSIBLE PERSONAL INJURY.
REMOVAL AND INSTALLATION (Continued)

(13) Do not connect the battery negative cable at this time. See Airbag System in the Diagnosis and Testing section of this group 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.

(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) Pull back the carpet from the floor pan transmission tunnel area under the heater-A/C housing floor duct and forward of the center floor console.
(3) If the vehicle is equipped with the optional anti-lock brake system, remove the acceleration switch and mounting bracket from the floor pan transmission tunnel (Fig. 15).

NOTE: Always remove and replace the airbag control module and its mounting bracket as a unit. Replacement modules include a replacement mounting bracket. Do not transfer the module to another mounting bracket.

Fig. 15 Acceleration Switch Remove/Install

(4) Remove the four screws that secure the Airbag Control Module (ACM) mounting bracket to the floor pan transmission tunnel (Fig. 16).

Fig. 16 Airbag Control Module Remove/Install
(5) Slide the ACM and mounting bracket out from under the heater-A/C housing floor duct far enough to access the wire harness connector.

(6) Unplug the ACM wire harness connector. To unplug the wire harness connector from the ACM (Fig. 17):

(a) Pull the two white locks out about 3 mm (0.125 in.) from each side of the connector.
(b) Squeeze the two connector latch tabs between the thumb and forefinger.
(c) Pull the connector out of the ACM receptacle.

(7) Remove the ACM and mounting bracket from the vehicle as a unit.

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

(9) Plug in the wire harness connector to the ACM. Be certain that the connector latches are fully engaged and that the connector locks are pushed in.

(10) Attach the ACM to the floor pan transmission tunnel with the four mounting screws. Tighten the mounting screws to 10.7 N·m (95 in. lbs.).

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

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

CLOCKSPRING

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 DISABLING 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 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 from the steering wheel. See Airbag Module in this group for the procedures.

(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-3428-B).

(7) Remove the steering column opening cover from the instrument panel. Refer to Steering Column Opening Cover in Group 8E - Instrument Panel Systems for the procedures.

(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. 18).

(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
REMOVAL AND INSTALLATION (Continued)

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

(18) Plug the two clockspring wire harness connectors into the instrument panel 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. Tighten the shroud mounting screws to 2 N·m (18 in. lbs.).

(20) Reinstall the steering column opening cover to the instrument panel. Refer to Steering Column Opening Cover in Group 8E - Instrument Panel Systems for the procedures.

(21) The front wheels should still be in the straight-ahead position. Install the steering wheel being certain to index the flats on the hub of the steering wheel with 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 driver side airbag module onto the steering wheel. See Airbag Module in this group for the procedures.

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.

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ADJUSTMENTS (Continued)

(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 driver side airbag module from the steering wheel. See Airbag Module in this group for the procedures.

(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-3428-B).

(7) Rotate the clockspring rotor clockwise to the end of its travel (Fig. 20). **Do not apply excessive torque.**

(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 the clockspring another one-half turn.

(9) The front wheels should still be in the straight-ahead position. Install the steering wheel being certain to index the flats on the hub of the steering wheel with 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 onto the steering wheel. See Airbag Module in this group for the procedures.