INSTRUMENT PANEL SYSTEMS

DESCRIPTION AND OPERATION

INSTRUMENT PANEL SYSTEM

DESCRIPTION

The instrument panel serves as the command center of the vehicle, which necessarily makes it a very complex unit. The instrument panel is designed to house the controls and monitors for standard and optional powertrains, climate control systems, audio systems, lighting systems, safety systems and many other comfort or convenience items. The instrument panel is also designed so that all of the various controls can be safely reached and the monitors can be easily viewed by the vehicle operator when driving, while still allowing relative ease of access to each of these items for service. See the owner's manual in the vehicle glove box for more information on the features, use and operation of all of the instrument panel components and systems.

This group is responsible for covering service information for the vehicle instrument panel systems. However, complete service information coverage for all of the systems and components housed in the instrument panel in a single section of the service manual would not be practical. Therefore, the service information for any component will be found in the group designated to cover the vehicle system that the component belongs to, even though the component is mounted on or in the instrument panel. If you cannot locate a listing for the component or system you are servicing in the table of contents for this group, or if you are uncertain as to which vehicle system a component belongs to, it is suggested that you refer to the alphabetical Component and System Index found at the back of this service manual.

INSTRUMENT PANEL

DESCRIPTION

Modular instrument panel construction allows all of the gauges and controls to be serviced from the front of the panel. In addition, most of the instrument panel electrical or heating and air conditioning components can be accessed without complete instrument panel removal. If necessary, the instrument panel can be removed from the vehicle as an assembly.

Removal of the steering column opening cover and the knee blocker provides access to the steering column mounts, the steering column wiring, the gearshift interlock mechanism, the headlamp switch, and much of the instrument panel wiring. Removal of the glove box provides access to the fusebox module, additional instrument panel wiring, and many of the heating and air conditioning components.

Removal of the instrument cluster bezel allows access to the cluster assembly. Removal of the cluster
assembly allows access to the cluster illumination and indicator lamp bulbs, and more of the instrument panel wiring.

Removal of the instrument panel center bezel allows access to the radio, the heating and air conditioning controls, the power outlet or cigar lighter, and the accessory switches. The power outlet/cigar lighter is serviced only as a unit with the accessory switch bezel.

A bezel on each outboard end of the lower instrument panel is removed to service the instrument panel speakers. Removal of the complete instrument panel is required for service of the passenger side airbag module and most internal components of the heating and air conditioning system housing.

**INSTRUMENT CLUSTER**

**DESCRIPTION**

A single instrument cluster is offered on this model. This cluster is an electromechanical unit that utilizes integrated circuitry and information carried on the Chrysler Collision Detection (CCD) data bus network for control of all gauges and many of the indicator lamps. This cluster also incorporates a digital Vacuum Fluorescent Display (VFD) for the odometer/trip odometer display functions. Some variations of this cluster exist due to optional equipment and regulatory requirements.

The cluster includes the following analog gauges:
- Coolant temperature gauge
- Fuel gauge
- Oil pressure gauge
- Speedometer
- Tachometer
- Voltmeter.

This cluster also includes provisions for the following indicator lamps:
- Airbag indicator lamp
- Anti-lock Brake System (ABS) lamp
- Brake warning lamp
- Check gauges lamp
- Cruise-on indicator lamp
- Four-wheel drive indicator lamp
- Headlamp high beam indicator lamp
- Low fuel warning lamp
- Malfunction indicator (Check Engine) lamp
- Seat belt reminder lamp
- Sentry Key Immobilizer System (SKIS) indicator lamp
- Turn signal indicator lamps
- Upshift indicator lamp (manual transmission).

The instrument cluster circuitry has a self-diagnostic actuator test capability, which will test each of the CCD bus message-controlled functions of the cluster by lighting the appropriate indicator lamps and positioning the gauge needles at several predetermined locations on the gauge faces in a prescribed sequence. For more information on this function, refer to Instrument Cluster in the Diagnosis and Testing section of this group.

The instrument cluster circuitry also integrates a chime tone generator and a timer circuit. These items replace the chime or buzzer module, and the separate timer circuit for the rear window defogger system. Refer to Chime Warning System in the Description and Operation section of Group 8U - Chime/Buzzer Warning Systems for more information on the chime functions of the instrument cluster. Refer to Rear Window Defogger System in the Description and Operation section of Group 8N - Electrically Heated Systems for more information on the timer function of the instrument cluster.

The instrument cluster for this model is serviced only as a complete unit. If a cluster gauge or the cluster circuit board are faulty, the entire cluster must be replaced. The cluster lens, the cluster hood and mask, the rear cluster housing cover, the odometer reset knob boot and the incandescent lamp bulbs and holders are available for service replacement.

**OPERATION**

**GAUGE**

With the ignition switch in the On or Start positions, voltage is supplied to all gauges through the instrument cluster electronic circuit board. With the ignition switch in the Off position, voltage is not supplied to the gauges. The gauges do not accurately indicate any vehicle condition unless the ignition switch is in the On or Start positions.

All of the instrument cluster gauges, except the odometer, are air core magnetic units. Two fixed electromagnetic coils are located within the gauge. These coils are wrapped at right angles to each other around a movable permanent magnet. The movable magnet is suspended within the coils on one end of a shaft. The gauge needle is attached to the other end of the shaft.

One of the coils has a fixed current flowing through it to maintain a constant magnetic field strength. Current flow through the second coil changes, which causes changes in its magnetic field strength. The current flowing through the second coil is changed by the instrument cluster electronic circuitry in response to messages received on the Chrysler Collision Detection (CCD) data bus network.

The gauge needle moves as the movable permanent magnet aligns itself to the changing magnetic fields created around it by the electromagnets. The instrument cluster circuitry is programmed to move all of the gauge needles back to the low end of their respec-
DESCRIPTION AND OPERATION (Continued)

tive scales after the ignition switch is turned to the Off position.

INDICATOR LAMP

Indicator lamps are located in the instrument cluster and are served by the cluster circuit board and connectors. Many of the indicator lamps in the instrument cluster are controlled by the instrument cluster circuitry in response to messages received over the Chrysler Collision Detection (CCD) data bus network.

The anti-lock brake system lamp, brake warning lamp, four-wheel drive indicator lamp, headlamp high beam indicator lamp, and turn signal indicator lamps are hard wired. The seat belt reminder lamp is controlled by the instrument cluster programming. The instrument cluster circuitry uses CCD data bus messages from the Powertrain Control Module (PCM), Airbag Control Module (ACM), and the Sentry Key Immobilizer Module (SKIM) to control all of the remaining indicator lamps.

Each of the indicator lamps in the instrument cluster uses incandescent bulbs and holders, which are available for service replacement.

CLUSTER ILLUMINATION LAMP

The cluster illumination lamps are hard wired in the instrument cluster. When the park or head lamps are turned on, the cluster illumination lamps light. Illumination brightness is adjusted by rotating the headlamp switch knob (clockwise to dim, counterclockwise to brighten). The instrument cluster illumination lamps receive battery feed from the panel dimmer rheostat in the headlamp switch through a fuse in the fuseblock module.

The instrument cluster electronic circuitry also monitors the cluster illumination lamp dimming level whenever the park or head lamps are turned on. The instrument cluster electronic circuitry responds by adjusting the dimming level of the odometer Vacuum Fluorescent Display (VFD), and sending dimming level messages over the Chrysler Collision Detection (CCD) data bus network. When the park lamps or headlamps are turned off, the VFD is illuminated at full brightness for improved daylight visibility.

Each of the cluster illumination lamps is located on the instrument cluster circuit board. Each cluster illumination lamp has a replaceable bulb and bulb holder.

INSTRUMENT PANEL CIGAR LIGHTER AND POWER OUTLET

DESCRIPTION

An accessory power outlet is standard equipment on this model. The power outlet is installed in the instrument panel accessory switch bezel, which is located near the bottom of the instrument panel center bezel area, next to the ash receiver. A plastic cap snaps into the power outlet base when the power outlet is not in use. A cigar lighter that fits into the power outlet is a dealer-installed option.

The cigar lighter/power outlet base is serviced only as a part of the accessory switch bezel unit. If the base is faulty or damaged, the accessory switch bezel unit must be replaced. The cigar lighter knob and heating element unit is available for service. This component cannot be repaired and, if faulty or damaged, it must be replaced.

OPERATION

The cigar lighter/power outlet base or receptacle shell is connected to ground, and an insulated contact in the bottom of the shell is connected to battery current. The power outlet receives battery voltage from a fuse in the Power Distribution Center (PDC) through the accessory relay only when the ignition switch is in the Accessory or On positions. Refer to Accessory Relay in the Description and Operation section of this group for more information on this component.

The cigar lighter knob and heating element are encased within a spring-loaded housing, which also features a sliding protective heat shield. When the knob and heating element are inserted in the receptacle shell, the heating element resistor coil is grounded through its housing to the receptacle shell. If the cigar lighter knob is pushed inward, the heat shield slides up toward the knob exposing the heating element, and the heating element extends from the housing toward the insulated contact in the bottom of the receptacle shell.

Two small spring-clip retainers are located on either side of the insulated contact inside the bottom of the receptacle shell. These clips engage and hold the heating element of the dealer-installed cigar lighter against the insulated contact long enough for the resistor coil to heat up. When the heating element is engaged with the contact, battery current can flow through the resistor coil to ground, causing the resistor coil to heat.

When the resistor coil becomes sufficiently heated, excess heat radiates from the heating element causing the spring-clips to expand. Once the spring-clips expand far enough to release the heating element, the spring-loaded housing forces the knob and heating element to pop back outward to their relaxed position. When the cigar lighter knob and element are pulled out of the receptacle shell, the protective heat shield slides downward on the housing so that the heating element is recessed and shielded around its circumference for safety.
DESCRIPTION AND OPERATION (Continued)

ACCESSORY RELAY

DESCRIPTION
The accessory relay is an electromechanical device that switches fused battery current to the standard accessory power outlet or optional cigar lighter when the ignition switch is turned to the Accessory or On positions. The accessory relay is located in a wire harness connector that is secured to the 100-way connector bracket under the driver side of the instrument panel, near the cowl side inner panel in the passenger compartment.

The accessory relay is a International Standards Organization (ISO) relay. Relays conforming to the ISO specifications have common physical dimensions, current capacities, terminal patterns, and terminal functions.

The accessory relay cannot be repaired or adjusted and, if faulty or damaged, it must be replaced.

OPERATION
The ISO relay consists of an electromagnetic coil, a resistor or diode, and three (two fixed and one movable) electrical contacts. The movable (common feed) relay contact is held against one of the fixed contacts (normally closed) by spring pressure. When the electromagnetic coil is energized, it draws the movable contact away from the normally closed fixed contact, and holds it against the other (normally open) fixed contact.

When the electromagnetic coil is de-energized, spring pressure returns the movable contact to the normally closed position. The resistor or diode is connected in parallel with the electromagnetic coil in the relay, and helps to dissipate voltage spikes that are produced when the coil is de-energized.

DIAGNOSIS AND TESTING

INSTRUMENT CLUSTER
If all of the gauges and/or indicator lamps are inoperative, perform the Preliminary Diagnosis. If an individual gauge or Chrysler Collision Detection (CCD) data bus message-controlled indicator lamp is inoperative, go directly to the Actuator Test. If an individual hard wired indicator lamp is inoperative, refer to Instrument Cluster - Hard Wired Lamp Diagnosis in the Diagnosis and Testing section of this group for the procedures to diagnosis that lamp. For complete circuit diagrams, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

PRELIMINARY DIAGNOSIS
(1) If the indicator lamps operate, but none of the gauges operate, go to Step 2. If all of the gauges and the CCD data bus message-controlled indicator lamps are inoperative, go to Step 5.
(2) Check the fused B(+) fuse in the Power Distribution Center (PDC). If OK, go to Step 3. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.
(3) Check for battery voltage at the fused B(+) fuse in the PDC. If OK, go to Step 4. If not OK, repair the open fused B(+) circuit to the battery as required.
(4) Disconnect and isolate the battery negative cable. Remove the instrument cluster. Connect the battery negative cable. Check for battery voltage at the fused B(+) circuit cavity of the instrument cluster wire harness connector A. If OK, refer to Instrument Cluster - Actuator Test in the Diagnosis and Testing section of this group. If not OK, repair the open fused B(+) circuit to the fuse in the PDC as required.
(5) Check the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 6. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.
(6) Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Install the instrument cluster. Connect the battery negative cable. Turn the ignition switch to the On position. Set the park brake. The red brake warning lamp should light. If OK, go to Step 8. If not OK, go to Step 9.
(7) Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Install the instrument cluster. Connect the battery negative cable. Turn the ignition switch to the On position. Set the park brake. The red brake warning lamp should light. If OK, go to Step 8. If not OK, go to Step 9.
(8) Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Install the instrument cluster. Connect the battery negative cable. Turn the ignition switch to the On position. Set the park brake. The red brake warning lamp should light. If OK, go to Step 8. If not OK, go to Step 9.
(9) Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Remove the instrument cluster. Connect the battery
DIAGNOSIS AND TESTING (Continued)

negative cable. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (run/start) circuit cavity of the instrument cluster wire harness connector A. If OK, refer to Instrument Cluster - Actuator Test in the Diagnosis and Testing section of this group. If not OK, repair the open fused ignition switch output (run/start) circuit to the fuse in the fuseblock module as required.

(10) Disconnect and isolate the battery negative cable. Remove the instrument cluster. Check for continuity between the ground circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be continuity. If OK, refer to Instrument Cluster - Actuator Test in the Diagnosis and Testing section of this group. If not OK, repair the open ground circuit to ground as required.

ACTUATOR TEST

The instrument cluster actuator test will put the instrument cluster into its self-diagnostic mode. In this mode the instrument cluster can perform a self-diagnostic test that will confirm that the instrument cluster circuitry, the gauges, and the CCD data bus message controlled indicator lamps are capable of operating as designed. During the actuator test the instrument cluster circuitry will position each of the gauge needles at various specified calibration points, and turn all of the CCD data bus message-controlled lamps on and off at specified time intervals (Fig. 1).

Successful completion of the actuator test will confirm that the instrument cluster is operational. However, there may still be a problem with the CCD data bus, the Powertrain Control Module (PCM), the Airbag Control Module (ACM), the Sentry Key Immobilizer Module (SKIM) or the inputs to one of these electronic control modules. Use a DCR scan tool and the proper Diagnostic Procedures manual for testing of these components.

If an individual gauge does not respond properly, or does not respond at all during the actuator test, the instrument cluster should be removed. However, check that the gauge mounting screws on the instrument cluster electronic circuit board for proper tightness before considering instrument cluster replacement. If the gauge mounting screws check OK, replace the faulty cluster.

If an individual indicator lamp does not illuminate during the actuator test, the instrument cluster should be removed. However, check that the incandescent lamp bulb is not faulty and that the bulb holder is properly installed on the instrument cluster electronic circuit board before considering instrument cluster replacement. If the bulb and bulb holder check OK, replace the faulty instrument cluster.

(1) Begin the test with the ignition switch in the Off position.

(2) Depress the trip odometer reset button.

(3) While holding the trip odometer reset button depressed, turn the ignition switch to the On position, but do not start the engine.

(4) Release the trip odometer reset button.

(5) Compare the operation of the suspect gauge(s) and/or indicator lamp(s) with the Instrument Cluster Actuator Test chart (Fig. 1).

(6) The instrument cluster will automatically exit the self-diagnostic mode and return to normal operation at the completion of the test, if the ignition switch is turned to the Off position during the test, or if a vehicle speed message indicating that the vehicle is moving is received from the PCM on the CCD data bus during the test.

(7) Go back to Step 1 to repeat the test, if required.

HARD WIRED LAMP DIAGNOSIS

Each of the lamps found in this section depends upon a hard wired circuit input to the instrument cluster for proper operation. The following procedures will help to diagnose conditions that may cause an inoperative hard wired lamp circuit condition.

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

ANTI-LOCK BRAKE SYSTEM LAMP

The diagnosis found here addresses an inoperative Anti-lock Brake System (ABS) lamp condition. If the ABS lamp stays on with the ignition switch in the On position, or comes on and stays on while driving, refer to Antilock Brakes in the Diagnosis and Testing section of Group 5 - Brakes for diagnosis. If no ABS problem is found, the following procedure will help locate a short or open in the ABS lamp circuit. For complete circuit descriptions, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

(1) Check the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

(2) Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (run/start) fuse in the fuseblock module. If
Fig. 1 Instrument Cluster Actuator Test

Note: 1.5 seconds after completing test, all pointers should return to pointer stops and odometer should be turned off.
OK, go to Step 3. If not OK, repair the open fused ignition switch output (run/start) circuit to the ignition switch as required.

3. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Remove the instrument cluster. Connect the battery negative cable. Turn the ignition switch to the On position and within five seconds check for continuity between the ABS warning indicator driver circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be continuity for five seconds after ignition On, and then an open circuit. If OK, replace the faulty bulb. If not OK, go to Step 4.

4. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Disconnect the Controller Anti-lock Brake (CAB) wire harness connector. Check for continuity between the ABS warning indicator driver circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be no continuity. If OK, go to Step 5. If not OK, repair the shorted ABS warning indicator driver circuit as required.

5. Check for continuity between the ABS warning indicator driver circuit cavities of the instrument cluster wire harness connector A and the CAB wire harness connector. There should be continuity. If OK, refer to Antilock Brakes in the Diagnosis and Testing section of Group 5 - Brakes for diagnosis of the CAB. If not OK, repair the open ABS warning indicator driver circuit as required.

6. If not OK, repair the open fused ignition switch output (run/start) circuit to the ignition switch as required.

3. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Disconnect the wire harness connector at the park brake switch. With the park brake released, check for continuity between the park brake switch terminal and a good ground. There should be no continuity. If OK, go to Step 4. If not OK, adjust or replace the faulty park brake switch.

4. Disconnect the wire harness connector at the brake warning switch. Check for continuity between the two terminals of the brake warning switch. There should be continuity. If OK, go to Step 5. If not OK, replace the faulty brake warning switch.

5. Check for continuity between each of the two brake warning switch terminals and a good ground. In each case, there should be no continuity. If OK, go to Step 6. If not OK, replace the faulty brake warning switch.

6. With both the park brake switch and the brake warning switch wire harness connectors still disconnected, check for continuity between the red brake warning indicator driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be no continuity. If OK, go to Step 7. If not OK, repair the shorted red brake warning indicator driver circuit as required.

7. With the ignition switch held in the Start position, check for continuity between the red brake warning indicator driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be continuity. If OK, go to Step 8. If not OK, repair the open red brake warning indicator driver circuit to the ignition switch as required.

8. Turn the ignition switch to the Off position. Remove the instrument cluster. Check for continuity between the red brake warning indicator driver circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be no continuity. If OK, go to Step 9. If not OK, repair the shorted red brake warning indicator driver circuit as required.

9. Check for continuity between the red brake warning indicator driver circuit cavities of the instrument cluster wire harness connector A and the brake warning switch wire harness connector. There should be continuity. If OK, replace the faulty bulb. If not OK, repair the open red brake warning indicator driver circuit as required.

**BRAKE WARNING LAMP**

The diagnosis found here addresses an inoperative brake warning lamp condition. If the brake warning lamp stays on with the ignition switch in the On position and the park brake released, or comes on while driving, refer to Base Brake System for vehicles not equipped with the four wheel anti-lock brake system, or refer to Antilock Brakes for vehicles equipped with the four wheel anti-lock brake system in the Diagnosis and Testing section of Group 5 - Brakes for further diagnosis. If no brake system problem is found, the following procedure will help locate a short or open circuit, or a faulty switch. For complete circuit diagrams, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

1. Check the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

2. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 3. If not OK, repair the open fused ignition switch output (run/start) circuit to the ignition switch as required.

3. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Disconnect the wire harness connector at the park brake switch. With the park brake released, check for continuity between the park brake switch terminal and a good ground. There should be no continuity. If OK, go to Step 4. If not OK, adjust or replace the faulty park brake switch.

4. Disconnect the wire harness connector at the brake warning switch. Check for continuity between the two terminals of the brake warning switch. There should be continuity. If OK, go to Step 5. If not OK, replace the faulty brake warning switch.

5. Check for continuity between each of the two brake warning switch terminals and a good ground. In each case, there should be no continuity. If OK, go to Step 6. If not OK, replace the faulty brake warning switch.

6. With both the park brake switch and the brake warning switch wire harness connectors still disconnected, check for continuity between the red brake warning indicator driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be no continuity. If OK, go to Step 7. If not OK, repair the shorted red brake warning indicator driver circuit as required.

7. With the ignition switch held in the Start position, check for continuity between the red brake warning indicator driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be continuity. If OK, go to Step 8. If not OK, repair the open red brake warning indicator driver circuit to the ignition switch as required.

8. Turn the ignition switch to the Off position. Remove the instrument cluster. Check for continuity between the red brake warning indicator driver circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be no continuity. If OK, go to Step 9. If not OK, repair the shorted red brake warning indicator driver circuit as required.

9. Check for continuity between the red brake warning indicator driver circuit cavities of the instrument cluster wire harness connector A and the brake warning switch wire harness connector. There should be continuity. If OK, replace the faulty bulb. If not OK, repair the open red brake warning indicator driver circuit as required.

**CLUSTER ILLUMINATION LAMP**

The diagnosis found here addresses an inoperative instrument cluster illumination lamp condition. If the problem being diagnosed includes inoperative exterior lighting controlled by the headlamp switch,
that system needs to be repaired first. If the exterior lamps controlled by the headlamp switch are inoperative, refer to Headlamp Diagnosis in the Diagnosis and Testing section of Group 8L - Lamps for diagnosis. If no exterior lighting system problems are found, the following procedure will help locate a short or open in the cluster illumination lamp circuit. If the problem being diagnosed involves a lack of dimming control for the odometer/trip odometer Vacuum Fluorescent Display (VFD), but all of the other cluster illumination lamps can be dimmed, repair the open headlamp switch output circuit input to the instrument cluster. For complete circuit diagrams, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

1. Check the panel lamps dimmer fuse in the fuseblock module. If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

2. Turn the park lamps on with the headlamp switch. Rotate the headlamp switch knob counterclockwise to just before the interior lamps detent. Check for battery voltage at the panel lamps dimmer fuse in the fuseblock module. Rotate the headlamp switch knob clockwise while observing the test voltmeter. The reading should go from battery voltage to zero volts. If OK, go to Step 3. If not OK, repair the open panel lamps dimmer switch signal circuit to the headlamp switch as required. If the circuit tests OK, refer to Headlamp Diagnosis in the Diagnosis and Testing section of Group 8L - Lamps to diagnose the headlamp switch.

3. Disconnect and isolate the battery negative cable. Remove the instrument cluster. Turn the headlamp switch off. Remove the panel lamps dimmer fuse from the fuseblock module. Probe the fused panel lamps dimmer switch signal circuit cavity of the instrument cluster wire harness connector A. Check for continuity to a good ground. There should be no continuity. If OK, go to Step 4. If not OK, repair the shorted fused panel lamps dimmer switch signal circuit as required.

4. Install the panel lamps dimmer fuse in the fuseblock module. Connect the battery negative cable. Turn the park lamps on with the headlamp switch. Rotate the headlamp switch knob counterclockwise to just before the interior lamps detent. Check for battery voltage at the fused panel lamps dimmer switch signal circuit cavity of the instrument cluster wire harness connector A. If OK, replace the faulty cluster illumination lamp bulb(s) and bulb holder(s). If not OK, repair the open fused panel lamps dimmer switch signal circuit as required.

FOUR-WHEEL DRIVE INDICATOR LAMP

The diagnosis found here addresses an inoperative four-wheel drive indicator lamp condition. If the problem being diagnosed is related to lamp accuracy, be certain to confirm that the problem is with the lamp or switch and not with a damaged or inoperative transfer case or transfer case linkage. Refer to NV231 Diagnosis in the Diagnosis and Testing section of Group 21 - Transmission for more information. If no transfer case problem is found, the following procedure will help locate a short or open in the indicator lamp circuit. For complete circuit diagrams, refer to Instrument Cluster in Group 8W - Wiring Diagrams.

1. Check the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

2. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 3. If not OK, repair the open fused ignition switch output (run/start) circuit to the ignition switch as required.

3. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Disconnect the transfer case switch wire harness connector. Check for continuity between the ground circuit cavity of the transfer case switch wire harness connector and a good ground. There should be continuity. If OK, go to Step 4. If not OK, repair the open ground circuit to ground as required.

4. Connect the battery negative cable. Turn the ignition switch to the On position. Install a jumper wire between the part time four wheel drive indicator lamp driver circuit cavity of the transfer case switch wire harness connector and a good ground. The four-wheel drive indicator lamp should light. If OK, replace the faulty transfer case switch. If not OK, go to Step 5.

5. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Remove the instrument cluster. With the transfer case switch wire harness connector still disconnected, check for continuity between the part time four wheel drive indicator lamp driver circuit cavity of the instrument cluster wire harness connector B and a good ground. There should be no continuity. If OK, go to Step 6. If not OK, repair the shorted part time four wheel drive indicator lamp driver circuit as required.

6. Check for continuity between the part time four wheel drive indicator lamp driver circuit cavities of the instrument cluster wire harness connector B and the transfer case switch wire harness connector. There should be continuity. If OK, replace the faulty
bulb. If not OK, repair the open part time four wheel drive indicator lamp driver circuit as required.

HEADLAMP HIGH BEAM INDICATOR LAMP

The diagnosis found here addresses an inoperative headlamp high beam indicator lamp condition. If the problem being diagnosed is related to inoperative headlamp high beams, refer to Headlamp Diagnosis in the Diagnosis and Testing section of Group 8L - Lamps for diagnosis of the headlamp system. If no headlamp system problems are found, the following procedure will help locate an open in the high beam indicator lamp circuit. For complete circuit diagrams, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

(1) Disconnect and isolate the battery negative cable. Remove the instrument cluster.
(2) Connect the battery negative cable. Turn the headlamps on and select the high beams with the multi-function switch stalk. Check for battery voltage at the high beam indicator driver circuit cavity of the instrument cluster wire harness connector A. If OK, replace the faulty bulb. If not OK, repair the open high beam indicator driver circuit to the headlamp dimmer (multi-function) switch as required.

TURN SIGNAL INDICATOR LAMP

The diagnosis found here addresses an inoperative turn signal indicator lamp condition. For any other turn signal problem, refer to Turn Signal and Hazard Warning Systems in the Diagnosis and Testing section of Group 8J - Turn Signal and Hazard Warning Systems for further diagnosis. If no turn signal or hazard warning system problem is found, the following procedure will help locate a short or open in the indicator lamp circuit. For complete circuit diagrams, refer to Instrument Cluster in the Contents of Group 8W - Wiring Diagrams.

(1) Disconnect and isolate the battery negative cable. Remove the instrument cluster.
(2) Connect the battery negative cable. Activate the hazard warning system by moving the hazard warning switch button to the On position. Check for battery voltage at the inoperative (right or left) turn signal circuit cavity of the instrument cluster wire harness connector (connector A - left, or connector B - right). There should be a switching (on and off) battery voltage signal. If OK, replace the faulty (right or left) indicator lamp bulb. If not OK, repair the open (right or left) turn signal circuit to the turn signal/hazard warning (multi-function) switch as required.

ACCESSORY RELAY

The accessory relay (Fig. 2) is located in a wire harness connector that is secured to the 100-way connector bracket under the driver side of the instrument panel, near the cowl side inner panel in the passenger compartment. For complete circuit diagrams, refer to Horn/Cigar Lighter in the Contents of Group 8W - Wiring Diagrams.

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

(1) Remove the accessory relay from its wire harness connector. Refer to Accessory Relay in the Removal and Installation section of this group for the procedures.
(2) A relay in the de-energized position should have continuity between terminals 87A and 30, and no continuity between terminals 87 and 30. If OK, go to Step 3. If not OK, replace the faulty relay.
(3) Resistance between terminals 85 and 86 (electromagnet) should be 75 ± 5 ohms. If OK, go to Step 4. If not OK, replace the faulty relay.
(4) Connect a battery to terminals 85 and 86. There should now be continuity between terminals 30 and 87, and no continuity between terminals 87A and 30. If OK, perform the Relay Circuit Test that follows. If not OK, replace the faulty relay.

RELAY TERMINALS

RELAY CAVITIES

Fig. 2 Accessory Relay

RELAY CIRCUIT TEST

(1) The relay common feed terminal (30) is connected to battery voltage and should be hot at all times. Check for battery voltage at the fused B(+) circuit cavity of the accessory relay wire harness connector. If OK, go to Step 2. If not OK, repair the fused B(+) circuit to the fuse in the Power Distribution Center (PDC) as required.
DIAGNOSIS AND TESTING (Continued)

(2) The relay normally closed terminal (87A) is connected to terminal 30 in the de-energized position, but is not used for this application. Go to Step 3.

(3) The relay normally open terminal (87) is connected to the common feed terminal (30) in the energized position. This terminal supplies battery voltage to the cigar lighter or power outlet when the relay is energized by the ignition switch. There should be continuity between the accessory relay wire harness connector cavity for relay terminal 87 and the accessory relay output circuit cavity in the cigar lighter or power outlet wire harness connector at all times. If OK, go to Step 4. If not OK, repair the open accessory relay output circuit to the cigar lighter or power outlet wire harness connector as required.

(4) The coil battery terminal (86) is connected to the electromagnet in the relay. The accessory relay wire harness connector cavity for this terminal should have continuity to ground at all times. If OK, go to Step 5. If not OK, repair the open ground circuit to ground as required.

(5) The coil ground terminal (85) is connected to the electromagnet in the relay. It receives battery feed to energize the accessory relay when the ignition switch is in the Accessory or On positions. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (acc/run) circuit cavity of the accessory relay wire harness connector. If not OK, repair the open fused ignition switch output (acc/run) circuit to the ignition switch as required.

INSTRUMENT PANEL CIGAR LIGHTER AND POWER OUTLET

For complete circuit diagrams, refer to Horn/Cigar Lighter in the Contents of Group 8W - Wiring Diagrams.

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REMOVAL AND INSTALLATION

STEERING COLUMN OPENING COVER

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REMOVAL

(1) Disconnect and isolate the battery negative cable.

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

(3) Remove the knob and shaft from the headlamp switch. Refer to Headlamp Switch in the Removal and Installation section of this group for the procedures.

(4) Remove the two screws that secure the steering column opening cover to the instrument panel (Fig. 3).

(5) Pull the upper edge of the steering column opening cover straight back and down away from the instrument panel as far as possible.

(6) Rock the lower edge of the steering column opening cover rearward to disengage the hinge hook formations on the lower edge of the cover from the hinge pins on the lower edge of the instrument panel.
REMOVAL AND INSTALLATION (Continued)

(7) Remove the steering column opening cover from the instrument panel.

INSTALLATION

(1) Position the steering column opening cover to the instrument panel.
(2) Engage the hinge hook formations on the lower edge of the steering column opening cover with the hinge pins on the lower edge of the instrument panel.
(3) Tilt the upper edge of the steering column opening cover up into position onto the instrument panel.
(4) Install and tighten the two screws that secure the steering column opening cover to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
(5) Reconnect the battery negative cable.

KNEE BLOCKER

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REMOVAL

(1) Disconnect and isolate the battery negative cable.
(2) Remove the steering column opening cover from the instrument panel. Refer to Steering Column Opening Cover in the Removal and Installation section of this group for the procedures.
(3) Remove the four screws that secure the knee blocker to the instrument panel (Fig. 4).

INSTALLATION

(1) Position the knee blocker to the instrument panel.
(2) Install and tighten the four screws that secure the knee blocker to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
(3) Install the steering column opening cover onto the instrument panel. Refer to Steering Column Opening Cover in the Removal and Installation section of this group for the procedures.
(4) Reconnect the battery negative cable.

HEADLAMP SWITCH

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WARNING: IF THE HEADLAMP SWITCH WAS ON, WAIT FIVE MINUTES TO ALLOW THE CERAMIC DIMMER RESISTOR TO COOL. IF THE CERAMIC DIMMER RESISTOR IS NOT ALLOWED TO COOL, IT CAN BURN YOUR FINGERS.
REMOVAL AND INSTALLATION (Continued)

REMOVAL
(1) Disconnect and isolate the battery negative cable.
(2) Pull the headlamp switch control knob out to the On position stop.
(3) Reach up under the instrument panel outboard of the steering column to access and depress the headlamp switch control knob and shaft release button on the top of the switch body (Fig. 5).
(4) While holding the release button depressed, pull the headlamp switch control knob and shaft unit out of the headlamp switch.
(5) Remove the knee blocker from the instrument panel. Refer to Knee Blocker in the Removal and Installation section of this group for the procedures.
(6) Remove the spanner nut that secures the headlamp switch to the instrument panel mounting bracket.
(7) Pull the headlamp switch away from the instrument panel mounting bracket far enough to access the instrument panel wire harness connectors.
(8) Disconnect the two instrument panel wire harness connectors from the headlamp switch.
(9) Remove the headlamp switch from the instrument panel.

INSTALLATION
(1) Position the headlamp switch to the instrument panel.
(2) Reconnect the two instrument panel wire harness connectors to the headlamp switch.
(3) Position the headlamp switch behind the mounting bracket on the instrument panel.
(4) Install and tighten the spanner nut that secures the headlamp switch to the instrument panel mounting bracket. Tighten the nut to 2.7 N·m (24 in. lbs.).
(5) Install the knee blocker onto the instrument panel. Refer to Knee Blocker in the Removal and Installation section of this group for the procedures.
(6) Insert the shaft of the headlamp switch control knob and shaft unit through the opening in the steering column opening cover and into the headlamp switch.
(7) Push the headlamp switch control knob and shaft unit all the way into the headlamp switch body.
(8) Reconnect the battery negative cable.

INSTRUMENT PANEL TOP COVER

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REMOVAL
(1) Disconnect and isolate the battery negative cable.
(2) Using a trim stick or another suitable wide flat-bladed tool, gently pry the instrument panel top cover up and away from the instrument panel far enough to disengage the five snap clip retainers from their receptacles in the instrument panel (Fig. 6).

INSTALLATION
(1) Position the headlamp switch to the instrument panel.
(2) Reconnect the two instrument panel wire harness connectors to the headlamp switch.
(3) Position the headlamp switch behind the mounting bracket on the instrument panel.
(4) Install and tighten the spanner nut that secures the headlamp switch to the instrument panel mounting bracket. Tighten the nut to 2.7 N·m (24 in. lbs.).
REMOVAL AND INSTALLATION (Continued)

(3) Remove the top cover from the instrument panel.

INSTALLATION
(1) Position the top cover onto the instrument panel.
(2) Align the snap clips on the top cover with the snap clip receptacles in the instrument panel.
(3) Press firmly downward on the top cover over each of the snap clip locations until each of the snap clips is fully seated in their receptacles in the instrument panel.
(4) Reconnect the battery negative cable.

CLUSTER BEZEL

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL
(1) Disconnect and isolate the battery negative cable.
(2) Remove the steering column opening cover from the instrument panel. Refer to Steering Column Opening Cover in the Removal and Installation section of this group for the procedures.
(3) Remove the top cover from the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(4) Remove the two screws that secure the lower mounting tabs of the cluster bezel to the instrument panel (Fig. 7).
(5) Remove the three screws that secure the upper mounting flange of the cluster bezel to the instrument panel (Fig. 8).
(6) Remove the cluster bezel from the instrument panel.

INSTALLATION
(1) Position the cluster bezel to the instrument panel.
(2) Install and tighten the three screws that secure the upper mounting flange of the cluster bezel to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
(3) Install and tighten the two screws that secure the lower mounting tabs of the cluster bezel to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
(4) Install the top cover onto the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(5) Install the steering column opening cover onto the instrument panel. Refer to Steering Column Opening Cover in the Removal and Installation section of this group for the procedures.
(6) Reconnect the battery negative cable.

INSTRUMENT CLUSTER

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.
REMOVAL AND INSTALLATION (Continued)

REMOVAL
(1) Disconnect and isolate the battery negative cable.
(2) Remove the cluster bezel from the instrument panel. Refer to Cluster Bezel in the Removal and Installation section of this group for the procedures.
(3) Remove the four screws that secure the instrument cluster to the instrument panel (Fig. 9).

INSTALLATION
(1) Position the instrument cluster to the instrument panel.
(2) Align the instrument cluster with the cluster opening in the instrument panel and push the cluster firmly and evenly into place. The instrument panel has two self-docking wire harness connectors that will be automatically aligned with, and connected to the cluster connector receptacles when the cluster is installed in the instrument panel.
(3) Install and tighten the four screws that secure the instrument cluster to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
(4) Install the cluster bezel onto the instrument panel. Refer to Cluster Bezel in the Removal and Installation section of this group for the procedures.
(5) Reconnect the battery negative cable.

INSTRUMENT CLUSTER COMPONENTS
Some of the components for the instrument cluster used in this vehicle are serviced individually. The serviced components include: the incandescent instrument cluster indicator lamp and illumination lamp bulbs (including the integral bulb holders), the odometer reset knob boot, the cluster lens, the cluster hood and mask unit, the instrument cluster housing rear cover, and the instrument cluster housing (including the odometer reset knob, the gauge mask, the gauges and the instrument cluster electronic circuit board). Following are the service procedures for the instrument cluster components.

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REMOVAL
CLUSTER BULB
This procedure applies to each of the incandescent cluster illumination lamp or indicator lamp bulb and bulb holder units. However, the illumination lamps and the indicator lamps use different bulb and bulb holder unit sizes. They must never be interchanged. Be certain that any bulb and bulb holder unit removed from the cluster electronic circuit board is reinstalled in the correct position. Always use the correct bulb size and type for replacement. An incorrect bulb size or type may overheat and cause damage to the instrument cluster, the electronic circuit board and/or the gauges.
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Turn the bulb holder counterclockwise about sixty degrees on the cluster electronic circuit board.
(4) Pull the bulb and bulb holder unit straight back to remove it from the bulb mounting hole in the cluster electronic circuit board (Fig. 10).

CLUSTER LENS
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Work around the perimeter of the cluster housing to disengage each of the latches that secure the cluster lens to the cluster housing (Fig. 11).
REMOVAL AND INSTALLATION (Continued)

(4) Gently pull the cluster lens away from the cluster housing.

ODOMETER RESET KNOB BOOT
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Remove the cluster lens from the cluster housing. Refer to Instrument Cluster Components - Cluster Lens in the Removal and Installation section of this group for the procedures.
(4) Remove the odometer reset knob boot by pulling it out of the cluster lens.

CLUSTER HOOD AND MASK
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Remove the cluster lens from the cluster housing. Refer to Instrument Cluster Components - Cluster Lens in the Removal and Installation section of this group for the procedures.
(4) Work around the perimeter of the cluster housing to disengage each of the latches that secure the cluster hood and mask unit to the cluster housing (Fig. 11).
(5) Gently pull the cluster hood and mask unit away from the cluster housing.

CLUSTER HOUSING REAR COVER
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Work around the perimeter of the cluster housing to disengage each of the latches that secure the rear cover to the cluster housing (Fig. 11).
(4) Gently pull the rear cover away from the back of the cluster housing.

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Fig. 10 Cluster Bulb Locations

Fig. 11 Instrument Cluster Components
REMOVAL AND INSTALLATION (Continued)

CLUSTER HOUSING
(1) Disconnect and isolate the battery negative cable.
(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(3) Remove all of the cluster illumination lamp and indicator lamp bulb and bulb holder units from the electronic circuit board. Refer to Instrument Cluster Components - Cluster Bulbs in the Removal and Installation section of this group for the procedures.
(4) Remove the cluster hood and mask unit from the cluster housing. Refer to Instrument Cluster Components - Cluster Hood and Mask in the Removal and Installation section of this group for the procedures.
(5) Remove the rear cover from the cluster housing. Refer to Instrument Cluster Components - Cluster Housing Rear Cover in the Removal and Installation section of this group for the procedures.

INSTALLATION

CLUSTER BULB
This procedure applies to each of the incandescent cluster illumination lamp or indicator lamp bulb and bulb holder units. However, the illumination lamps and the indicator lamps use different bulb and bulb holder unit sizes. They must never be interchanged. Be certain that any bulb and bulb holder unit removed from the cluster electronic circuit board is reinstalled in the correct position.

CAUTION: Always use the correct bulb size and type for replacement. An incorrect bulb size or type may overheat and cause damage to the instrument cluster, the electronic circuit board and/or the gauges.

(1) Insert the bulb and bulb holder unit straight into the correct bulb mounting hole in the cluster electronic circuit board.
(2) With the bulb holder fully seated against the cluster electronic circuit board, turn the bulb holder clockwise about sixty degrees to lock it into place.
(3) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(4) Reconnect the battery negative cable.

ODOMETER RESET KNOB BOOT
(1) Position the odometer reset knob to the mounting hole from the back of the cluster lens.
(2) Pull the odometer reset knob into the mounting hole from the face of the cluster lens.
(3) Install the cluster lens onto the cluster housing. Refer to Instrument Cluster Components - Cluster Lens in the Removal and Installation section of this group for the procedures.
(4) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(5) Reconnect the battery negative cable.

CLUSTER HOOD AND MASK
(1) Align the hood and mask unit with the cluster housing.
(2) Press firmly and evenly on the hood and mask unit to install it onto the cluster housing.
(3) Work around the perimeter of the cluster housing to be certain that each of the latches that secure the cluster lens to the cluster housing is fully engaged.
(4) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(5) Reconnect the battery negative cable.

CLUSTER HOUSING REAR COVER
(1) Position the rear cover to the back of the cluster housing.
(2) Press firmly and evenly on the rear cover until each of the latches that secure the rear cover to the cluster housing is fully engaged.
(3) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(4) Reconnect the battery negative cable.
REMOVAL AND INSTALLATION (Continued)

CLUSTER HOUSING
(1) Install the rear cover onto the cluster housing. Refer to Instrument Cluster Components - Cluster Housing Rear Cover in the Removal and Installation section of this group for the procedures.
(2) Install the cluster hood and mask unit onto the cluster housing. Refer to Instrument Cluster Components - Cluster Hood and Mask in the Removal and Installation section of this group for the procedures.
(3) Install all of the cluster illumination lamp and indicator lamp bulb and bulb holder units into the electronic circuit board. Refer to Instrument Cluster Components - Cluster Bulbs in the Removal and Installation section of this group for the procedures.
(4) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.
(5) Reconnect the battery negative cable.

INSTRUMENT PANEL CENTER BEZEL

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL
(1) Disconnect and isolate the battery negative cable.
(2) Remove the top cover from the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(3) Remove the ash receiver from the ash receiver housing in the lower portion of the instrument panel center bezel.
(4) Remove the one screw from the back of the ash receiver housing that secures the lower portion of the center bezel to the instrument panel (Fig. 12).
(5) Remove the two screws that secure the top of the center bezel to the top of the instrument panel.
(6) Using a trim stick or another suitable wide flat-bladed tool, gently pry the lower edge of the center bezel away from the instrument panel.
(7) Pull the lower edge of the center bezel away from the instrument panel far enough to disengage the four snap dip retainers that secure it from the receptacles in the instrument panel.

INSTALLATION
(1) Position the center bezel to the instrument panel.
(2) Align the snap clips on the center bezel with the receptacles in the instrument panel.
(3) Press firmly on the center bezel over each of the snap dip locations until each of the snap dips is fully engaged in its receptacle on the instrument panel.
(4) Install and tighten the two screws that secure the top of the center bezel to the top of the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
Install and tighten the one screw into the back of the ash receiver housing that secures the lower portion of the center bezel to the instrument panel. Tighten the screw to 2.2 N·m (20 in. lbs.).
(5) Install the ash receiver into the ash receiver housing in the lower portion of the instrument panel center bezel.
(6) Install the top cover onto the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(7) Reconnect the battery negative cable.
REMOVAL AND INSTALLATION (Continued)

INSTRUMENT PANEL ACCESSORY SWITCH BEZEL

WARNING: ON VEHICLES EQUIPPED WITH AIR-BAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIR-BAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

1. Disconnect and isolate the battery negative cable.
2. Remove the center bezel from the instrument panel. Refer to Instrument Panel Center Bezel in the Removal and Installation section of this group for the procedures.
3. Remove the four screws that secure the accessory switch bezel to the instrument panel (Fig. 13).
4. Pull the accessory switch bezel away from the instrument panel far enough to access the instrument panel wire harness connectors.
5. Disconnect the instrument panel wire harness connectors from the connector receptacles, the accessory switches and the cigar lighter/power outlet on the back of the accessory switch bezel.
6. Remove the accessory switch bezel from the instrument panel.

INSTALLATION

1. Position the accessory switch bezel to the instrument panel.
2. Reconnect the instrument panel wire harness connectors to the connector receptacles, the accessory switches and the cigar lighter/power outlet on the back of the accessory switch bezel.
3. Position the accessory switch bezel onto the instrument panel.
4. Install and tighten the four screws that secure the accessory switch bezel to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
5. Install the center bezel onto the instrument panel. Refer to Instrument Panel Center Bezel in the Removal and Installation section of this group for the procedures.
6. Reconnect the battery negative cable.

ACCESSORY RELAY

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REMOVAL

1. Disconnect and isolate the battery negative cable.
2. Reach up under the instrument panel outboard of the steering column to access the accessory relay and the accessory relay wire harness connector, which is secured to the 100-way wire harness connector mounting bracket (Fig. 14).

INSTALLATION

1. Position the accessory switch bezel to the instrument panel.
2. Reconnect the instrument panel wire harness connectors to the connector receptacles, the accessory switches and the cigar lighter/power outlet on the back of the accessory switch bezel.
3. Position the accessory switch bezel onto the instrument panel.
4. Install and tighten the four screws that secure the accessory switch bezel to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
5. Install the center bezel onto the instrument panel. Refer to Instrument Panel Center Bezel in the Removal and Installation section of this group for the procedures.
6. Reconnect the battery negative cable.
REMOVAL AND INSTALLATION (Continued)

(3) Disconnect the accessory relay from the accessory relay wire harness connector.
(4) Remove the accessory relay from under the instrument panel.

INSTALLATION

(1) Position the accessory relay to the accessory relay wire harness connector under the instrument panel.
(2) Align the terminals of the accessory relay with the cavities in the accessory relay wire harness connector.
(3) Push on the accessory relay case firmly and evenly until all of the relay terminals are fully seated within the cavities of the accessory relay wire harness connector.
(4) Reconnect the battery negative cable.

GLOVE BOX

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REMOVAL

(1) Disconnect and isolate the battery negative cable.
(2) Release the glove box latch and open the glove box door.
(3) While supporting the glove box door with one hand, grasp the check strap as close to the glove box door as possible and slide the rolled end of the check strap out of the slot in the edge of the door (Fig. 15).
(4) Lower the glove box door far enough to disengage the hinge hook formations on the lower edge of the door from the hinge pins on the lower edge of the instrument panel.
(5) Remove the glove box from the instrument panel.

INSTALLATION

(1) Position the glove box to the instrument panel.
(2) Engage the hinge hook formations on the lower edge of the glove box door with the hinge pins on the lower edge of the instrument panel.
(3) Tilt the upper edge of the glove box door up toward the instrument panel far enough to engage the check strap with the door.
(4) While supporting the glove box door with one hand, grasp the check strap as close to the glove box door as possible and slide the rolled end of the check strap into the slot in the edge of the door.
(5) Close the glove box door.
(6) Reconnect the battery negative cable.

GLOVE BOX COMPONENTS

Service of all of the glove box components (Fig. 16) must be performed with the glove box removed from the instrument panel.

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

GLOVE BOX DOOR AND BIN

(1) Disconnect and isolate the battery negative cable.
(2) Remove the glove box from the instrument panel. Refer to Glove Box in the Removal and Installation section of this group for the procedures.
(3) Remove the screws that secure the glove box latch and handle to the glove box door.
(4) Remove the screws that secure the inner door and bin unit to the outer glove box door.
(5) Remove the inner door and bin unit from the outer glove box door.

**GLOVE BOX CHECK STRAP**

(1) Disconnect and isolate the battery negative cable.

(2) Remove the glove box from the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(3) Remove the screw that secures the glove box check strap to the instrument panel above the glove box opening.

(4) Remove the check strap from the instrument panel.

**GLOVE BOX LATCH AND HANDLE**

(1) Disconnect and isolate the battery negative cable.

(2) Remove the glove box from the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(3) Remove the four screws that secure the glove box latch and handle to the glove box door from the inside of the glove box.

(4) Remove the latch and handle from the glove box door.

**GLOVE BOX LOCK CYLINDER**

(1) Disconnect and isolate the battery negative cable.

(2) Remove the glove box from the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(3) Remove the glove box latch and handle from the glove box. Refer to **Glove Box Components - Glove Box Latch and Handle** in the Removal and Installation section of this group for the procedures.

(4) Insert the key into the glove box lock cylinder.

(5) Insert a small screwdriver into the retaining tumbler release slot and depress the retaining tumbler (Fig. 17).

**INSTALLATION**

**GLOVE BOX DOOR AND BIN**

(1) Position the inner door and bin unit onto the outer glove box door.

(2) Install and tighten the screws that secure the inner door and bin unit to the outer glove box door. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Install and tighten the screws that secure the glove box latch and handle to the glove box door. Tighten the screws to 2.2 N·m (20 in. lbs.).

(4) Install the glove box onto the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(5) Reconnect and isolate the battery negative cable.

**GLOVE BOX CHECK STRAP**

(1) Position the check strap to the instrument panel.

(2) Install and tighten the screw that secures the glove box check strap to the instrument panel above the glove box opening. Tighten the screw to 2.2 N·m (20 in. lbs.).

(3) Install the glove box onto the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(4) Reconnect the battery negative cable.

**GLOVE BOX LATCH AND HANDLE**

(1) Position the latch and handle onto the glove box door.
REMOVAL AND INSTALLATION (Continued)

(2) Install and tighten the four screws that secure the glove box latch and handle to the glove box door from the inside of the glove box. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Install the glove box onto the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(4) Reconnect the battery negative cable.

GLOVE BOX LOCK CYLINDER

(1) Insert the key into the glove box lock cylinder.

(2) Push the lock cylinder into the glove box latch handle by using a gentle twisting and pushing action on the key.

(3) Install the glove box latch and handle onto the glove box. Refer to **Glove Box Components - Glove Box Latch and Handle** in the Removal and Installation section of this group for the procedures.

(4) Install the glove box onto the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(5) Reconnect the battery negative cable.

GLOVE BOX LATCH STRIKER

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

(1) Disconnect and isolate the battery negative cable.

(2) Remove the glove box from the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(3) Remove the two screws that secure the latch striker to the grab handle bezel at the top of the instrument panel glove box opening (Fig. 18).

(4) Remove the latch striker from the instrument panel.

INSTALLATION

(1) Position the latch striker onto the instrument panel.

(2) Install and tighten the two screws that secure the latch striker to the grab handle bezel at the top of the instrument panel glove box opening. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Install the glove box onto the instrument panel. Refer to **Glove Box** in the Removal and Installation section of this group for the procedures.

(4) Reconnect the battery negative cable.

INSTRUMENT PANEL GRAB HANDLE

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

(1) Disconnect and isolate the battery negative cable.

(2) Remove the glove box from the instrument panel. Refer to **Glove Box** in Removal and Installation section of this group for the procedures.

(3) Reach through and above the glove box opening to access and remove the two nuts that secure the stud on each end of the grab handle to the instrument panel (Fig. 19). Discard the used grab handle mounting nuts.

(4) Remove the grab handle from the instrument panel.
REMOVAL AND INSTALLATION (Continued)

INSTALLATION

(1) Position the grab handle onto the instrument panel.

(2) Reach through and above the glove box opening to install and tighten the two nuts that secure the stud on each end of the grab handle to the instrument panel. Tighten the nuts to 5.6 N·m (50 in. lbs.).

(3) Install the glove box onto the instrument panel. Refer to Glove Box in Removal and Installation section of this group for the procedures.

(4) Reconnect the battery negative cable.

INSTRUMENT PANEL GRAB HANDLE BEZEL

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

(1) Disconnect and isolate the battery negative cable.

(2) Remove the grab handle from the instrument panel. Refer to Instrument Panel Grab Handle in the Removal and Installation section of this group for the procedures.

(3) Remove the glove box latch striker from the instrument panel. Refer to Glove Box Latch Striker in the Removal and Installation section of this group for the procedures.

(4) Remove the two screws that secure the grab handle bezel to the instrument panel (Fig. 20).

(5) Remove the grab handle bezel from the instrument panel.

INSTALLATION

(1) Position the grab handle bezel onto the instrument panel.

(2) Install and tighten the two screws that secure the grab handle bezel to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Install the glove box latch striker onto the instrument panel. Refer to Glove Box Latch Striker in the Removal and Installation section of this group for the procedures.

(4) Install the grab handle onto the instrument panel. Refer to Instrument Panel Grab Handle in the Removal and Installation section of this group for the procedures.

(5) Reconnect the battery negative cable.

INSTRUMENT PANEL ASSEMBLY

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

NOTE: Before starting this procedure, be certain to turn the steering wheel until the front wheels are in the straight-ahead position.

(1) Disconnect and isolate the battery negative cable.

(2) Remove the knee blocker from the instrument panel. Refer to Knee Blocker in the Removal and Installation section of this group for the procedures.

(3) Remove the steering column from the vehicle, but do not remove the driver side airbag module, the steering wheel, or the switches from the steering column. Be certain that the steering wheel is locked and secured from rotation to prevent the loss of clockspring centering. Refer to Steering Column in the Removal and Installation section of Group 19 - Steering for the procedures.

(4) From under the driver side of the instrument panel, perform the following:

   (a) Disconnect the instrument panel wire harness connectors from the 100-way wire harness connector near the left cowl side inner panel.

   (b) Disconnect the side window defroster hose at the heater-A/C housing demister/defroster duct (driver side).

(5) Remove the glove box from the instrument panel. Refer to Glove Box in the Removal and Installation section of this group for the procedures.

(6) Reach through the instrument panel glove box opening to perform the following:

   (a) Disconnect the two halves of the heater-A/C system vacuum harness connector.

Fig. 20 Instrument Panel Grab Handle Bezel
Remove/Install
REMOVAL AND INSTALLATION (Continued)

(b) Disconnect the instrument panel wire harness connector from the heater-A/C system wire harness connector.
(c) Disconnect the instrument panel wire harness connector from the passenger side airbag module wire harness connector.
(d) Disconnect the side window demister hose at the heater-A/C housing demister/defroster duct (passenger side).
(e) Disconnect the two halves of the radio antenna coaxial cable connector.
(f) Disconnect the two instrument panel wire harness connectors from the passenger airbag on/off switch wire harness connectors.
(g) Disengage the passenger side airbag on/off switch wire harness from the retainer clip on the plenum bracket that supports the heater-A/C housing just inboard of the fuseblock module.
(h) Remove the two nuts that secure the lower passenger side airbag module bracket to the studs on the dash panel (Fig. 21).

(7) Remove the top cover from the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(8) Remove the three screws that secure each end of the instrument panel to the door hinge pillars (Fig. 22).
(9) Remove the four nuts that secure the top of the instrument panel to the studs on the top of the dash panel.
(10) With the aid of an assistant, lift the instrument panel assembly off of the dash panel studs and remove it from the vehicle.

INSTALLATION

(1) With the aid of an assistant, install the instrument panel assembly onto the dash panel studs in the vehicle.
(2) Install and tighten the four nuts that secure the top of the instrument panel to the studs on the top of the dash panel. Tighten the nuts to 12 N·m (105 in. lbs.).
(3) Install and tighten the three screws that secure each end of the instrument panel to the door hinge pillars. Tighten the screws to 12 N·m (105 in. lbs.).
(4) Install the top cover onto the instrument panel. Refer to Instrument Panel Top Cover in the Removal and Installation section of this group for the procedures.
(5) Reach through the instrument panel glove box opening to perform the following:
(a) Install and tighten the two nuts that secure the lower passenger side airbag module bracket to the studs on the dash panel. Tighten the nuts to 28 N·m (250 in. lbs.).
(b) Engage the passenger side airbag on/off switch wire harness in the retainer clip on the plenum bracket that supports the heater-A/C housing just inboard of the fuseblock module.
(c) Reconnect the two instrument panel wire harness connectors to the passenger airbag on/off switch wire harness connectors.
(d) Reconnect the two halves of the radio antenna coaxial cable connector.
(e) Reconnect the side window demister hose to the heater-A/C housing demister/defroster duct (passenger side).
(f) Reconnect the instrument panel wire harness connector to the passenger side airbag module wire harness connector.
(g) Reconnect the instrument panel wire harness connector to the heater-A/C system wire harness connector.
REMOVAL AND INSTALLATION (Continued)

(h) Reconnect the two halves of the heater-A/C system vacuum harness connector.

(6) Install the glove box onto the instrument panel. Refer to Glove Box in the Removal and Installation section of this group for the procedures.

(7) From under the driver side of the instrument panel, perform the following:
   (a) Reconnect the side window demister hose to the heater-A/C housing demister/defroster duct (driver side).
   (b) Reconnect the instrument panel wire harness connectors to the 100-way wire harness connector near the left cowl side inner panel.

(8) Install the steering column into the vehicle. Be certain that the steering wheel is locked and secured from rotation to prevent the loss of clockspring centering. Refer to Steering Column in the Removal and Installation section of Group 19 - Steering for the procedures.

(9) Install the knee blocker onto the instrument panel. Refer to Knee Blocker in the Removal and Installation section of this group for the procedures.

(10) Reconnect the battery negative cable.

INSTRUMENT PANEL BASE TRIM

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO GROUP 8M - PASSIVE RESTRAINT SYSTEMS BEFORE ATTEMPTING ANY STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

(1) Disconnect and isolate the battery negative cable.

(2) Remove the instrument cluster from the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.

(3) Remove the accessory switch bezel from the instrument panel. Refer to Instrument Panel Accessory Switch Bezel in the Removal and Installation section of this group for the procedures.

(4) Remove the grab handle bezel from the instrument panel. Refer to Instrument Panel Grab Handle Bezel in the Removal and Installation section of this group for the procedures.

(5) Remove the speaker bezels from the instrument panel. Refer to Instrument Panel Speakers in the Removal and Installation section of Group 8F - Audio Systems for the procedures.

(6) Remove the radio from the instrument panel. Refer to Radio in the Removal and Installation section of Group 8F - Audio Systems for the procedures.

(7) Remove the heater-A/C control from the instrument panel. Refer to Heater-A/C Control in the Removal and Installation section of Group 24 - Heating and Air Conditioning Systems for the procedures.

(8) Remove the outboard heater-A/C panel outlets from the instrument panel. Refer to Ducts and Outlets in the Removal and Installation section of Group 24 - Heating and Air Conditioning Systems for the procedures.

(9) Remove the instrument panel assembly from the vehicle. Refer to Instrument Panel Assembly in the Removal and Installation section of this group for the procedures.

(10) Place the instrument panel on a suitable work surface. Be certain to take the proper precautions to protect the instrument panel from any possible cosmetic damage.

(11) Remove the passenger side airbag door from the instrument panel. Refer to Passenger Side Airbag Door in the Removal and Installation section of Group 8M - Passive Restraint Systems for the procedures.

(12) Remove the two screws that secure the 16-way data link wire harness connector to the instrument panel.

(13) Remove the screws around the perimeter that secure the base trim to the instrument panel.

(14) Remove the base trim from the instrument panel.

INSTALLATION

(1) Position the base trim onto the instrument panel.

(2) Install and tighten the screws around the perimeter that secure the base trim to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Install and tighten the two screws that secure the 16-way data link wire harness connector to the instrument panel. Tighten the screws to 2.2 N·m (20 in. lbs.).

(4) Install the passenger side airbag door onto the instrument panel. Refer to Passenger Side Airbag Door in the Removal and Installation section of Group 8M - Passive Restraint Systems for the procedures.

(5) Install the instrument panel assembly into the vehicle. Refer to Instrument Panel Assembly in the Removal and Installation section of this group for the procedures.

(6) Install the outboard heater-A/C panel outlets onto the instrument panel. Refer to Ducts and Outlets in the Removal and Installation section of Group
REMOVAL AND INSTALLATION (Continued)

24 - Heating and Air Conditioning Systems for the procedures.

(7) Install the heater-A/C control onto the instrument panel. Refer to Heater-A/C Control in the Removal and Installation section of Group 24 - Heating and Air Conditioning Systems for the procedures.

(8) Install the radio onto the instrument panel. Refer to Radio in the Removal and Installation section of Group 8F - Audio Systems for the procedures.

(9) Install the speaker bezels onto the instrument panel. Refer to Instrument Panel Speakers in the Removal and Installation section of Group 8F - Audio Systems for the procedures.

(10) Install the grab handle bezel onto the instrument panel. Refer to Instrument Panel Grab Handle Bezel in the Removal and Installation section of this group for the procedures.

(11) Install the accessory switch bezel onto the instrument panel. Refer to Instrument Panel Accessory Switch Bezel in the Removal and Installation section of this group for the procedures.

(12) Install the instrument cluster onto the instrument panel. Refer to Instrument Cluster in the Removal and Installation section of this group for the procedures.

(13) Reconnect the battery negative cable.