AUDIO SYSTEMS

CONTENTS

GENERAL INFORMATION

INTRODUCTION

An audio system is standard factory-installed equipment on this model, unless the vehicle is ordered with an available radio delete option. Refer to 8W-47 Audio System in Group 8W - Wiring Diagrams for complete circuit descriptions and diagrams.

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

AUDIO SYSTEM

Several combinations of radio receivers and speaker systems are offered on this model. The standard equipment audio system includes an AM/FM (RAL sales code) receiver, and speakers in two locations.

Following are general descriptions of the major components in the standard and optional factory-installed audio systems. Refer to the owner's manual in the vehicle glove box for more information on the features, use and operation of each of the available audio systems.

DESCRIPTION AND OPERATION

RADIO

Available factory-installed radio receivers for this model include an AM/FM (RAL sales code), an AM/FM/cassette (RAS sales code), and an AM/FM/CD/cassette/3-band graphic equalizer (RAZ sales code). All factory-installed radio receivers are stereo Electronically Tuned Radios (ETR), and include an electronic digital clock function.

The radio can only be serviced by an authorized radio repair station. Refer to the latest Warranty Policies and Procedures manual for a current listing of authorized radio repair stations.

For more information on radio features, setting procedures, and control functions refer to the owner's manual in the vehicle glove box.

IGNITION-OFF DRAW FUSE

All vehicles are equipped with an Ignition-Off Draw (IOD) fuse that is removed when the vehicle is shipped from the factory. This fuse feeds various accessories that require battery current when the ignition switch is in the Off position, including the clock and radio station preset memory functions. The fuse is removed to prevent battery discharge during vehicle storage.

When removing or installing the IOD fuse, it is important that the ignition switch be in the Off position. Failure to place the ignition switch in the Off position can cause the radio display to become scrambled when the IOD fuse is removed and replaced. Removing and replacing the IOD fuse again, with the

DESCRIPTION AND OPERATION (Continued)

ignition switch in the Off position, will correct the scrambled display condition.

The IOD fuse should be checked if the radio is inoperative. The IOD fuse is located in the Power Distribution Center (PDC). Refer to the PDC label for IOD fuse identification and location.

SPEAKER

The standard equipment speaker system includes two 13.3 centimeter (5.25 inch) diameter full-range speakers. Each speaker is mounted to the lower front corner of the front door inner panel behind the door trim panel.

The four speaker option adds two 13.3 centimeter (5.25 inch) diameter full-range speakers to the standard speaker system, for a total of four speakers. Each of the additional speakers is mounted behind a grille installed on the outboard ends of a speaker support structure, which is integral to the headliner and located just forward of the upper liftgate opening reinforcement near the rear of the vehicle cargo area.

The premium speaker option upgrades all of the speakers to Infinity models, and includes a 100 watt Infinity amplifier. Each front door has two separate Infinity speakers: a woofer mounted low in the door, and a tweeter mounted behind the door flag trim panel. Infinity coaxial speakers are mounted in the headliner speaker support structure. The Infinity amplifier is mounted to the floor panel under the left rear seat cushion.

ANTENNA

All models use a fixed-length stainless steel rod-type antenna mast, installed at the right front fender of the vehicle. The antenna mast is connected to the center wire of the coaxial antenna cable, and is not grounded to any part of the vehicle.

To eliminate static, the antenna base must have a good ground. The coaxial antenna cable shield (the outer wire mesh of the cable) is grounded to the antenna base and the radio chassis.

The antenna coaxial cable has an additional disconnect, located near the right cowl side inner panel behind the instrument panel. This additional disconnect allows the instrument panel assembly to be removed and installed without removing the radio.

The factory-installed Electronically Tuned Radios (ETRs) automatically compensate for radio antenna trim. Therefore, no antenna trimmer adjustment is required or possible when replacing the receiver or the antenna.

RADIO NOISE SUPPRESSION

DESCRIPTION

Radio Frequency Interference (RFI) and Electro-Magnetic Interference (EMI) noise suppression is accomplished primarily through circuitry internal to the radio receivers. These internal suppression devices are only serviced as part of the radio receiver.

External suppression devices that are used on this vehicle to control RFI or EMI noise include the following:

- Radio antenna base ground
- Radio receiver chassis ground wire or strap
- Engine-to-body ground strap
- Resistor-type spark plugs
- Radio suppression-type secondary ignition wiring.

For more information on the spark plugs and secondary ignition components, refer to **Ignition System** in the Description and Operation section of Group 8D - Ignition System.

DIAGNOSIS AND TESTING

AUDIO SYSTEM

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.

DIAGNOSIS AND TESTING (Continued)

Audio System Diagnosis		
CONDITION	POSSIBLE CAUSE	CORRECTION
NO AUDIO.	1. Fuse faulty. 2. Radio connector faulty. 3. Wiring faulty. 4. Ground faulty. 5. Radio faulty. 6. Speakers faulty. 7. Amplifier faulty (if equipped).	1. Check radio fuses in junction block. Replace fuses, if required. 2. Check for loose or corroded radio connector. Repair, if required. 3. Check for battery voltage at radio connector. Repair wiring, if required. 4. Check for continuity between radio chassis and a known good ground. There should be continuity. Repair ground, if required. 5. See Radio in the Diagnosis and Testing section of this group. 6. See Speaker in the Diagnosis and Testing section of this group. 7. See Speaker in the Diagnosis and Testing section of this group.
NO DISPLAY.	1. Fuse faulty. 2. Radio connector faulty. 3. Wiring faulty. 4. Ground faulty. 5. Radio faulty.	1. Check radio fuses in junction block. Replace fuses, if required. 2. Check for loose or corroded radio connector. Repair, if required. 3. Check for battery voltage at radio connector. Repair wiring, if required. 4. Check for continuity between radio chassis and a known good ground. There should be continuity. Repair ground, if required. 5. See Radio in the Diagnosis and Testing section of this group.
CLOCK WILL NOT KEEP SET TIME.	1. Fuse faulty. 2. Radio connector faulty. 3. Wiring faulty. 4. Ground faulty. 5. Radio faulty.	1. Check ignition-off draw fuse. Replace fuse, if required. 2. Check for loose or corroded radio connector. Repair, if required. 3. Check for battery voltage at radio connector. Repair wiring, if required. 4. Check for continuity between radio chassis and a known good ground. There should be continuity. Repair ground, if required. 5. See Radio in the Diagnosis and Testing section of this group.
POOR RADIO RECEPTION.	1. Antenna faulty. 2. Ground faulty. 3. Radio faulty.	1. See Antenna in the Diagnosis and Testing section of this group. 2. Check for continuity between radio chassis and a known good ground. There should be continuity. Repair ground, if required. 3. See Radio in the Diagnosis and Testing section of this group.
NO/POOR TAPE OPERATION.	1. Faulty tape. 2. Foreign objects behind tape door. 3. Dirty cassette tape head. 4. Faulty tape deck.	1. Insert known good tape and test operation. 2. Remove foreign objects and test operation. 3. Clean head with Mopar Cassette Head Cleaner. 4. Exchange or replace radio, if required.

DIAGNOSIS AND TESTING (Continued)

Audio System Diagnosis		
CONDITION	POSSIBLE CAUSE	CORRECTION
NO COMPACT DISC OPERATION	1. Faulty CD. 2. Foreign material on CD. 3. Condensation on CD or optics. 4. Faulty CD player.	1. Insert known good CD and test operation. 2. Clean CD and test operation. 3. Allow temperature of vehicle interior to stabilize and test operation. 4. Exchange or replace radio, if required.

RADIO

For circuit descriptions and diagrams, refer to 8W-47 - Audio System in 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.

CAUTION: The speaker output of the radio is a "floating ground" system. Do not allow any speaker lead to short to ground, as damage to the radio may result.

(1) Check the fuse(s) in the junction block and the Power Distribution Center (PDC). If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse(s).

(2) Check for battery voltage at the fuse in the PDC. If OK, go to Step 3. If not OK, repair the open circuit to the battery as required.

(3) Turn the ignition switch to the On position. Check for battery voltage at the fuse in the junction block. If OK, go to Step 4. If not OK, repair the open circuit to the ignition switch as required.

(4) Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Remove the radio, but do not unplug the radio wire harness connectors. Check for continuity between the radio chassis and a good ground. There should be continuity. If OK, go to Step 5. If not OK, repair the open radio chassis ground circuit as required.

(5) Connect the battery negative cable. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (accessory/run) circuit cavity of the left (gray) radio wire harness connector. If OK, go to Step 6. If not OK, repair the open circuit as required.

(6) Turn the ignition switch to the Off position. Check for battery voltage at the fused B(+) circuit cavity of the left (gray) radio wire harness connector. If OK, replace the faulty radio. If not OK, repair the open circuit to the Ignition-Off Draw (IOD) fuse as required.

SPEAKER

For circuit descriptions and diagrams, refer to 8W-47 - Audio System in 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.

CAUTION: The speaker output of the radio is a "floating ground" system. Do not allow any speaker lead to short to ground, as damage to the radio may result.

(1) Turn the ignition switch to the On position. Turn the radio on. Adjust the balance and fader controls to check the performance of each individual speaker. Note the speaker locations that are not performing correctly. Go to Step 2.

(2) Turn the radio off. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Remove the radio from the instrument panel. If the vehicle is equipped with the Infinity speaker package, also unplug the wire harness connectors at the amplifier. Check both the speaker feed (+) circuit and return (–) circuit cavities for the inoperative speaker location(s) at the radio wire harness connectors for continuity to ground. In each case, there should be no continuity. If OK, go to Step 3. If not OK, repair the shorted speaker circuit(s) as required.

DIAGNOSIS AND TESTING (Continued)

(3) If the vehicle is equipped with the Infinity speaker package, go to Step 6. If the vehicle is equipped with the standard speaker system, check the resistance between the speaker feed (+) circuit and return (–) circuit cavities of the radio wire harness connectors for the inoperative speaker location(s). The meter should read between 2 and 12 ohms (speaker resistance). If OK, go to Step 4. If not OK, go to Step 5.

(4) Install a known good radio. Connect the battery negative cable. Turn the ignition switch to the On position. Turn on the radio and test the speaker operation. If OK, replace the faulty radio. If not OK, turn the radio off, turn the ignition switch to the Off position, disconnect and isolate the battery negative cable, remove the test radio, and go to Step 5.

(5) Unplug the speaker wire harness connector at the inoperative speaker. Check for continuity between the speaker feed (+) circuit cavities of the radio wire harness connector and the speaker wire harness connector. Repeat the check between the speaker return (–) circuit cavities of the radio wire harness connector and the speaker wire harness connector. In each case, there should be continuity. If OK, replace the faulty speaker. If not OK, repair the open circuit(s) as required.

(6) For each inoperative speaker location, check for continuity between the speaker feed (+) circuit cavities of the radio wire harness connectors and the amplifier wire harness connectors. Repeat the check for each inoperative speaker location between the speaker return (–) circuit cavities of the radio wire harness connectors and the amplifier wire harness connectors. In each case, there should be continuity. If OK, go to Step 7. If not OK, repair the open circuit as required.

(7) Check for continuity between the two ground circuit cavities of the amplifier wire harness connector and a good ground. There should be continuity. If OK, go to Step 8. If not OK, repair the open circuit(s) as required.

(8) Check the amplifier fuse in the junction block. If OK, go to Step 9. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

(9) Install the radio. Connect the battery negative cable. Check for battery voltage at the amplifier fuse in the junction block. If OK, go to Step 10. If not OK, repair the open circuit to the PDC as required.

(10) Check for battery voltage at the two fused B(+) circuit cavities of the amplifier wire harness connector. If OK, go to Step 11. If not OK, repair the open circuit to the fuse in the junction block as required.

(11) Turn the ignition switch to the On position. Turn the radio on. Check for battery voltage at the radio 12 volt output circuit cavity of the amplifier wire harness connector. If OK, go to Step 12. If not OK, repair the open circuit to the radio as required.

(12) Turn the radio off. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. For each inoperative speaker location, check both the amplified feed (+) circuit and the amplified return (–) circuit cavities of the amplifier wire harness connectors for continuity to ground. In each case there should be no continuity. If OK, go to Step 13. If not OK, repair the short circuit as required.

(13) For each inoperative speaker location, check the resistance between the amplified feed (+) circuit and the amplified return (–) circuit cavities of the amplifier wire harness connectors. The meter should read between 2 and 12 ohms (speaker resistance). If OK, replace the faulty amplifier. If not OK, go to Step 14.

(14) Unplug the speaker wire harness connector at the inoperative speaker. Check for continuity between the amplified feed (+) circuit cavities of the speaker wire harness connector and the amplifier wire harness connector. Repeat the check between the amplified return (–) circuit cavities of the speaker wire harness connector and the amplifier wire harness connector. In each case there should be continuity. If OK, replace the faulty speaker. If not OK, repair the open circuit as required.

ANTENNA

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.

The following four tests are used to diagnose the antenna with an ohmmeter:

- **Test 1** - Mast to ground test
- **Test 2** - Tip-of-mast to tip-of-conductor test
- **Test 3** - Body ground to battery ground test
- **Test 4** - Body ground to coaxial shield test.

The ohmmeter test lead connections for each test are shown in Antenna Tests (Fig. 1).

DIAGNOSIS AND TESTING (Continued)

NOTE: This model has a two-piece antenna coaxial cable. Tests 2 and 4 must be conducted in two steps to isolate a coaxial cable problem; from the coaxial cable connection under the right end of the instrument panel near the right cowl side inner panel to the antenna base, and then from the coaxial cable connection to the radio chassis connection.

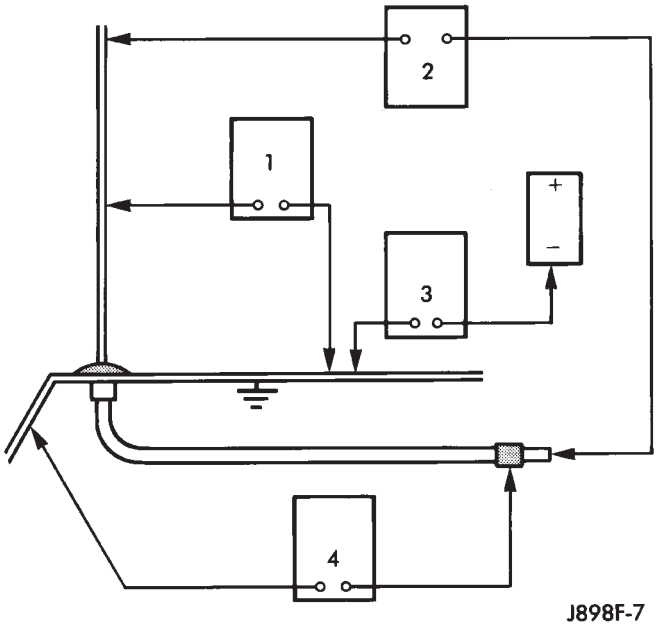

Fig. 1 Antenna Tests

TEST 1

Test 1 determines if the antenna mast is insulated from the base. Proceed as follows:

(1) Unplug the antenna coaxial cable connector from the radio chassis and isolate.

(2) Connect one ohmmeter test lead to the tip of the antenna mast. Connect the other test lead to the antenna base. Check for continuity.

(3) There should be no continuity. If continuity is found, replace the faulty or damaged antenna base and cable assembly.

TEST 2

Test 2 checks the antenna for an open circuit as follows:

(1) Unplug the antenna coaxial cable connector from the radio chassis.

(2) Connect one ohmmeter test lead to the tip of the antenna mast. Connect the other test lead to the center pin of the antenna coaxial cable connector.

(3) Continuity should exist (the ohmmeter should only register a fraction of an ohm). High or infinite resistance indicates damage to the base and cable assembly. Replace the faulty base and cable, if required.

TEST 3

Test 3 checks the condition of the vehicle body ground connection. This test should be performed with the battery positive cable removed from the battery. Disconnect both battery cables, the negative cable first. Reconnect the battery negative cable and perform the test as follows:

(1) Connect one ohmmeter test lead to the vehicle fender. Connect the other test lead to the battery negative post.

(2) The resistance should be less than one ohm.

(3) If the resistance is more than one ohm, check the braided ground strap connected to the engine and the vehicle body for being loose, corroded, or damaged. Repair the ground strap connection, if required.

TEST 4

Test 4 checks the condition of the ground between the antenna base and the vehicle body as follows:

(1) Connect one ohmmeter test lead to the vehicle fender. Connect the other test lead to the outer crimp on the antenna coaxial cable connector.

(2) The resistance should be less then one ohm.

(3) If the resistance is more then one ohm, clean and/or tighten the antenna base to fender mounting hardware.

RADIO FREQUENCY INTERFERENCE

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For complete circuit diagrams, see Group 8W - Wiring Diagrams. Inspect the ground paths and connections at the following locations:

- Blower motor
- Electric fuel pump
- Engine-to-body ground strap
- Generator
- Ignition module
- Radio antenna base ground
- Radio receiver chassis ground wire or strap
- Wiper motor.

If the source of RFI or EMI noise is identified as a component on the vehicle (i.e., generator, blower motor, etc.), the ground path for that component should be checked. If excessive resistance is found in any ground circuit, clean, tighten, or repair the

DIAGNOSIS AND TESTING (Continued)

ground circuits or connections to ground as required before considering any component replacement.

For service and inspection of secondary ignition components, refer to the Diagnosis and Testing section of Group 8D - Ignition Systems. Inspect the following secondary ignition system components:

- Distributor cap and rotor
- Ignition coil
- Spark plugs
- Spark plug wire routing and condition.

Reroute the spark plug wires or replace the faulty components as required.

If the source of the RFI or EMI noise is identified as two-way mobile radio or telephone equipment, check the equipment installation for the following:

- Power connections should be made directly to the battery, and fused as closely to the battery as possible.
- The antenna should be mounted on the roof or toward the rear of the vehicle. Remember that magnetic antenna mounts on the roof panel can adversely affect the operation of an overhead console compass, if the vehicle is so equipped.
- The antenna cable should be fully shielded coaxial cable, should be as short as is practical, and should be routed away from the factory-installed vehicle wire harnesses whenever possible.
- The antenna and cable must be carefully matched to ensure a low Standing Wave Ratio (SWR).

Fleet vehicles are available with an extra-cost RFI-suppressed Powertrain Control Module (PCM). This unit reduces interference generated by the PCM on some radio frequencies used in two-way radio communications. However, this unit will not resolve complaints of RFI in the commercial AM or FM radio frequency ranges.

REMOVAL AND INSTALLATION

RADIO

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(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 center bezel away from the instrument panel to release the six snap clip retainers (Fig. 2).

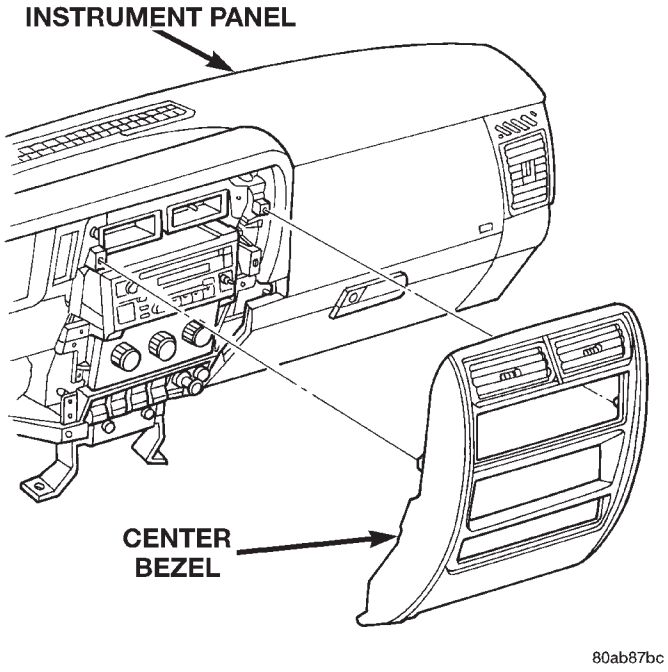

Fig. 2 Center Bezel Remove/Install

(3) Remove the center bezel from the instrument panel.

(4) Remove the two screws that secure the radio to the instrument panel (Fig. 3).

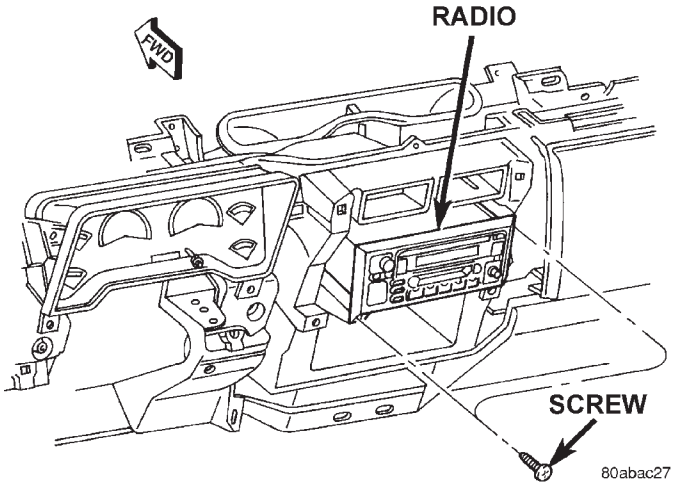

Fig. 3 Radio Remove/Install

(5) Pull the radio out from the instrument panel far enough to access the wire harness connectors and the antenna coaxial cable connector (Fig. 4).

(6) Unplug the wire harness connectors and the antenna coaxial cable connector from the rear of the radio.

(7) Remove the radio from the instrument panel.

REMOVAL AND INSTALLATION (Continued)

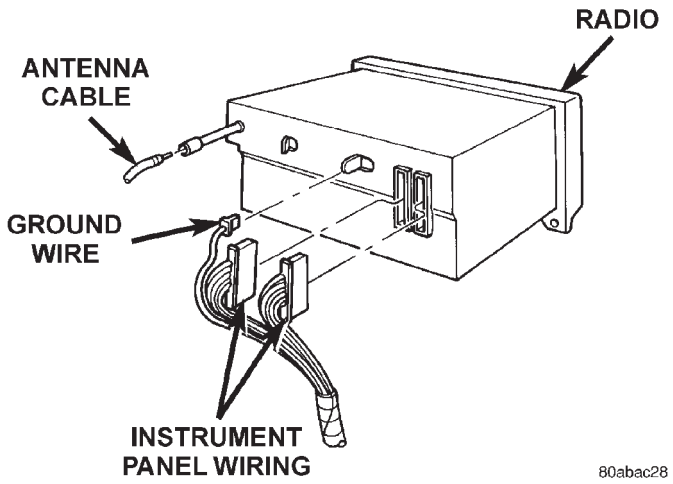

Fig. 4 Radio Connections - Typical

(8) Reverse the removal procedures to install. Tighten the radio mounting screws to 3.9 N·m (35 in. lbs.).

AMPLIFIER

(1) Disconnect and isolate the battery negative cable.

(2) Disengage the rear seat cushion latch by pulling upward on the release strap. Tilt the seat cushion forward.

(3) Lift the carpeting in the left under-seat area as required to access the amplifier.

(4) Unplug the two wire harness connectors from the amplifier (Fig. 5).

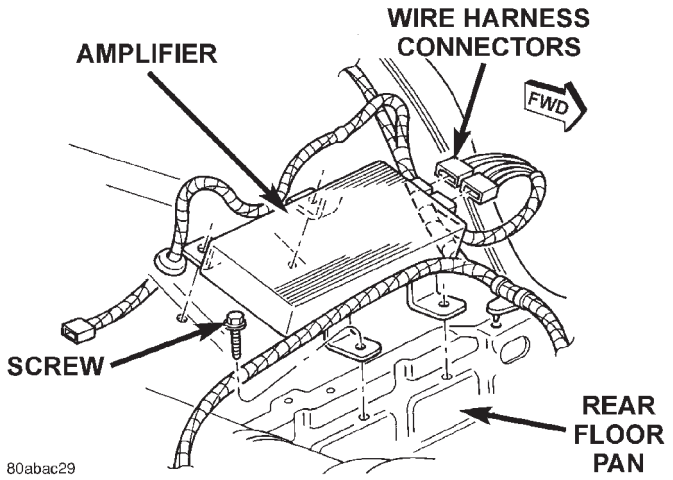

Fig. 5 Amplifier Remove/Install

(5) Remove the three screws that secure the amplifier to the floor panel.

(6) Remove the amplifier from the floor panel.

(7) Reverse the removal procedures to install. Tighten the amplifier mounting screws to 2.8 N·m (25 in. lbs.).

SPEAKER

FRONT DOOR

LOWER

(1) Disconnect and isolate the battery negative cable.

(2) If the vehicle is so equipped, remove the manual window regulator crank handle with a removal tool (Fig. 6).

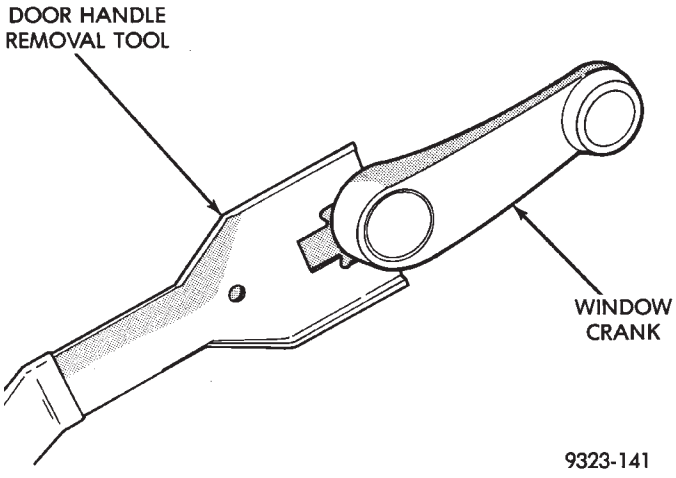

Fig. 6 Window Regulator Crank Handle Remove - Typical

(3) Remove the screws that secure the front door trim panel to the inner door panel (Fig. 7) or (Fig. 8).

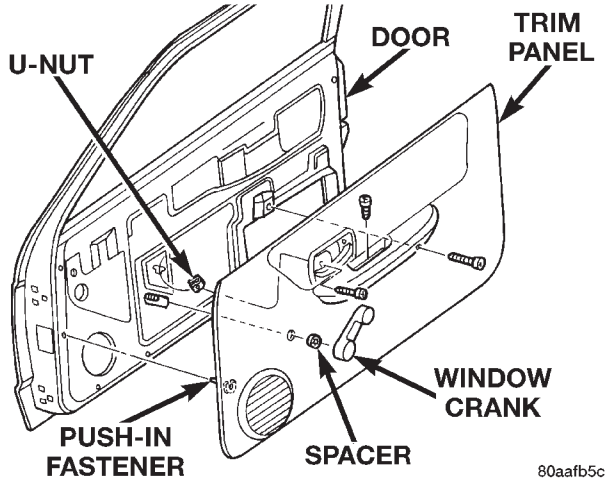

Fig. 7 Front Door Trim Panel Remove/Install - Manual Window

(4) Using a trim stick or another suitable wide flat-bladed tool, gently pry the front door trim panel away from the door around the perimeter to release the trim panel retainers.

NOTE: To aid in the removal of the trim panel, start at the bottom of the panel.

REMOVAL AND INSTALLATION (Continued)

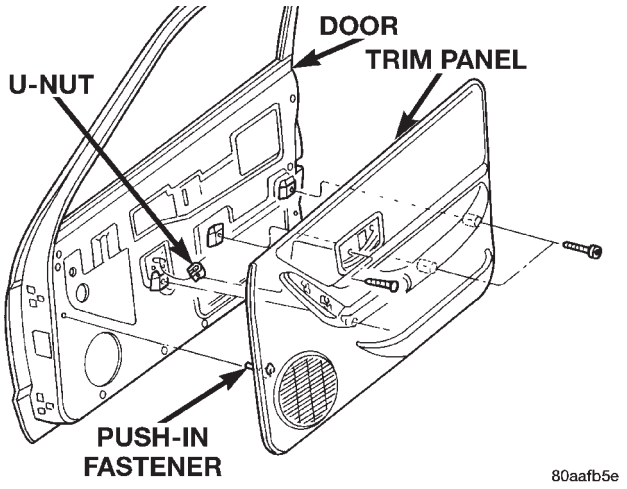

Fig. 8 Front Door Trim Panel Remove/Install - Power Window

(5) Lift the front door trim panel upwards and away from the inner door panel far enough to disengage the top of the panel from the inner belt weatherstrip.

(6) Pull the front door trim panel away from the inner door panel far enough to access the inside door latch release and lock linkage rods near the back of the inside door remote controls.

(7) Unsnap the plastic retainer clips from the inside door remote control ends of the latch release and lock linkage rods, and remove the rod ends from the inside door remote controls.

(8) If the vehicle is so equipped, unplug the wire harness connectors from the door power switch module and, on the driver side only, the power mirror switch.

(9) Set the front door trim panel aside.

(10) Remove the two screws that secure the speaker to the lower front corner of the inner door panel (Fig. 9).

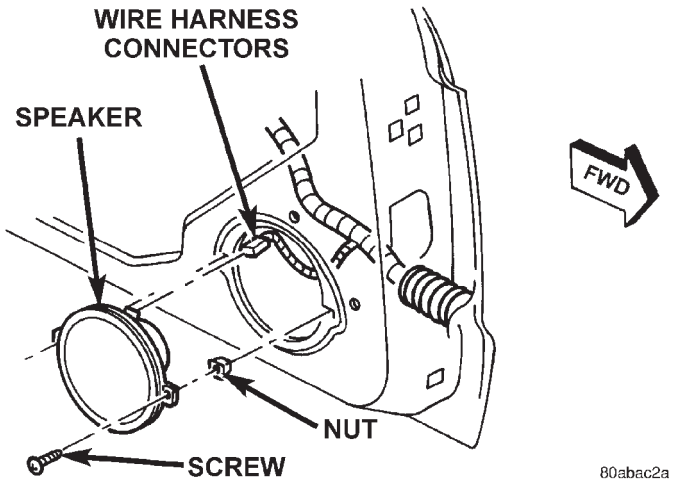

Fig. 9 Front Door Lower Speaker Remove/Install

(11) Pull the speaker away from the inner door panel far enough to access and unplug the speaker wire harness connector.

(12) Remove the speaker from the door.

(13) Reverse the removal procedures to install. Tighten the speaker mounting screws to 1.1 N·m (10 in. lbs.). Tighten the trim panel mounting screws to 2.2 N·m (20 in. lbs.).

UPPER

(1) Remove the front door trim panel from the front door. See Speaker, Front Door, Lower in this group for the procedures.

(2) Remove the one screw that secures the front door flag trim to the inner door panel (Fig. 10).

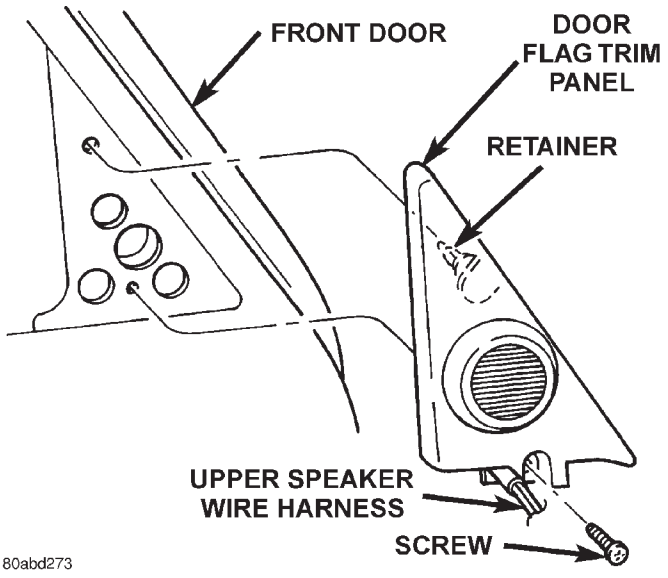

Fig. 10 Front Door Flag Trim Panel Remove/Install

(3) Using a trim stick or another suitable wide flat-bladed tool, gently pry the door flag trim away from the inner door to release the trim panel retainer.

(4) Pull the front door flag trim away from the inner door panel far enough to access and unplug the upper speaker wire harness connector.

(5) Unsnap the speaker from the retainers molded into the back side of the front door flag trim panel.

(6) Reverse the removal procedures to install. Tighten the mounting screw to 2.2 N·m (20 in. lbs.).

REAR HEADLINER

The rear headliner speakers can be serviced without removing the headliner using the procedures that follow. The headliner speaker support structure is integral to the headliner assembly. Refer to Group 23 - Body for the headliner service procedures.

(1) Disconnect and isolate the battery negative cable.

REMOVAL AND INSTALLATION (Continued)

(2) Using a trim stick or another suitable wide flat-bladed tool, gently pry around the perimeter edge of the rear headliner speaker grille to release the five snap retainers that secure the grille to the headliner speaker support structure (Fig. 11).

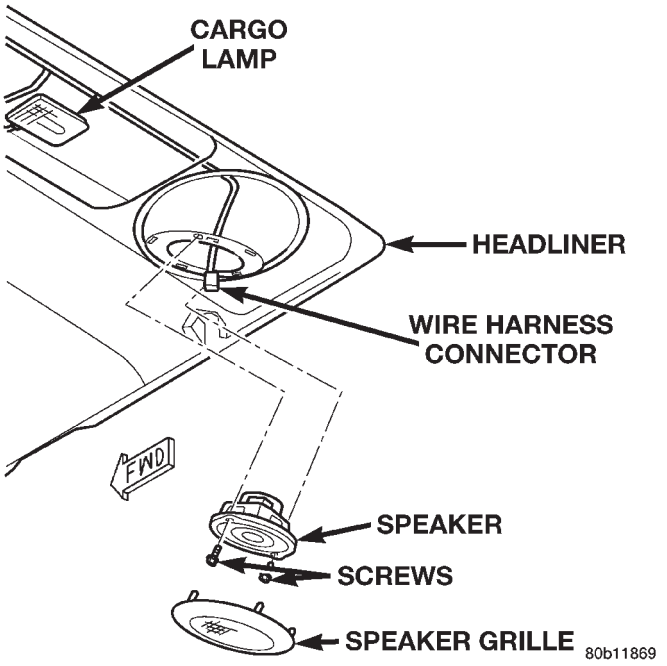

Fig. 11 Rear Headliner Speaker Remove/Install

(3) Remove the speaker grille from the headliner.

(4) Remove the two screws that secure the speaker to the headliner speaker support structure.

(5) Lower the speaker from the headliner far enough to access and unplug the speaker wire harness connector.

(6) Remove the speaker from the headliner.

(7) Reverse the removal procedures to install. Tighten the mounting screws to 2.2 N·m (20 in. lbs.).

ANTENNA

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) Disconnect and isolate the battery negative cable.

(2) Remove the right front fender inner splash shield. Refer to Group 23 - Body for the procedures.

(3) Reach under the right end of the instrument panel to unplug the antenna coaxial cable connector (Fig. 12). Unplug the connector by pulling it apart while twisting the metal connector halves. Do not pull on the cable.

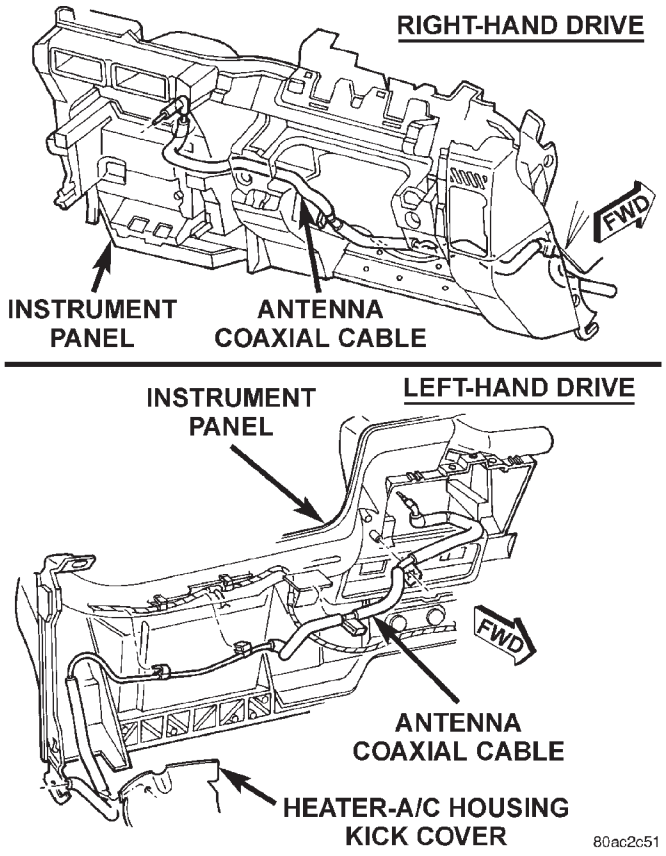

Fig. 12 Antenna Cable Routing

(4) Unscrew the antenna mast from the antenna body (Fig. 13).

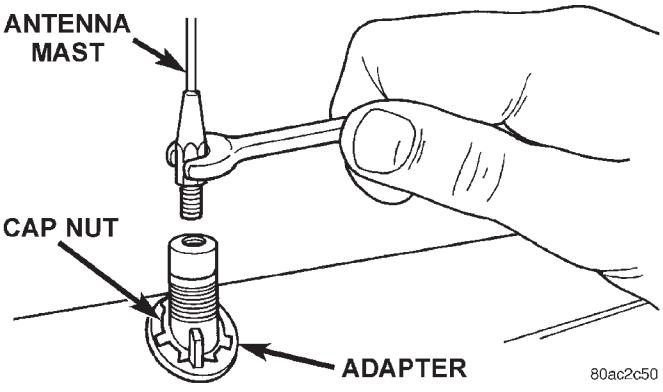

Fig. 13 Antenna Mast Remove/Install - Typical

(5) Remove the antenna cap nut and adapter using an antenna nut wrench (Special Tool C-4816) (Fig. 14).

(6) Lower the antenna body and cable assembly through the top of the fender far enough to access the antenna body by reaching up into the rear of the right front fender wheel housing (Fig. 15).

REMOVAL AND INSTALLATION (Continued)

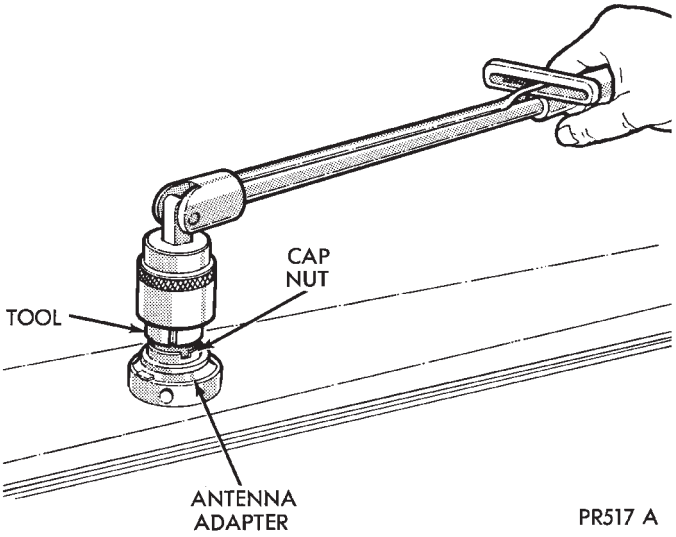

Fig. 14 Antenna Cap Nut and Adapter Remove/ Install - Typical

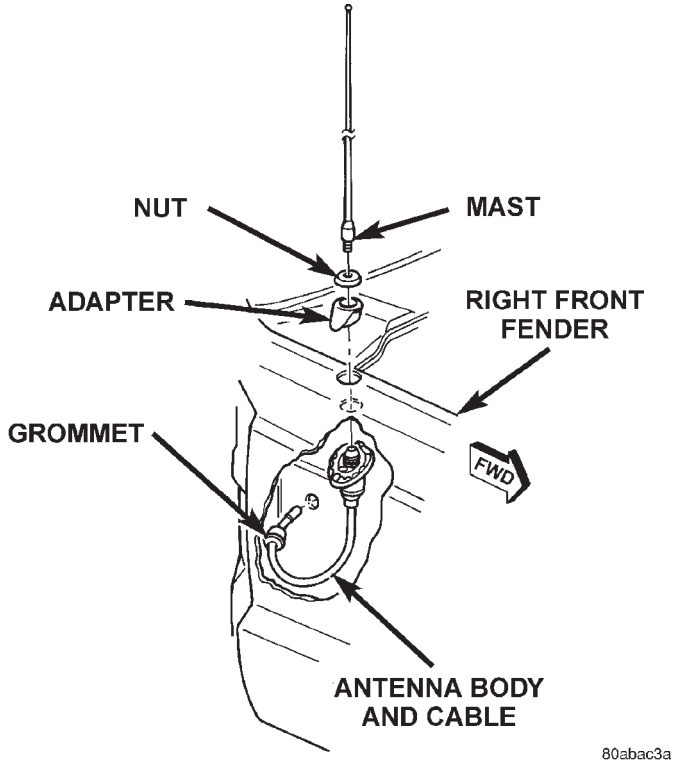

Fig. 15 Antenna Mounting

(7) Disengage the coaxial cable grommet from the hole in the right cowl side outer panel.

(8) Pull the coaxial cable out through the right cowl side outer panel.

(9) Remove the antenna body and cable from the vehicle.

(10) Reverse the removal procedures to install. Tighten the antenna cap nut to 6.2 N·m (55 in. lbs.). Tighten the antenna mast to 3.3 N·m (30 in. lbs.).

RADIO NOISE SUPPRESSION COMPONENTS

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REMOVAL

ENGINE-TO-BODY GROUND STRAP

(1) Remove the screw that secures the engine-to-body ground strap eyelet to the dash panel (Fig. 16).

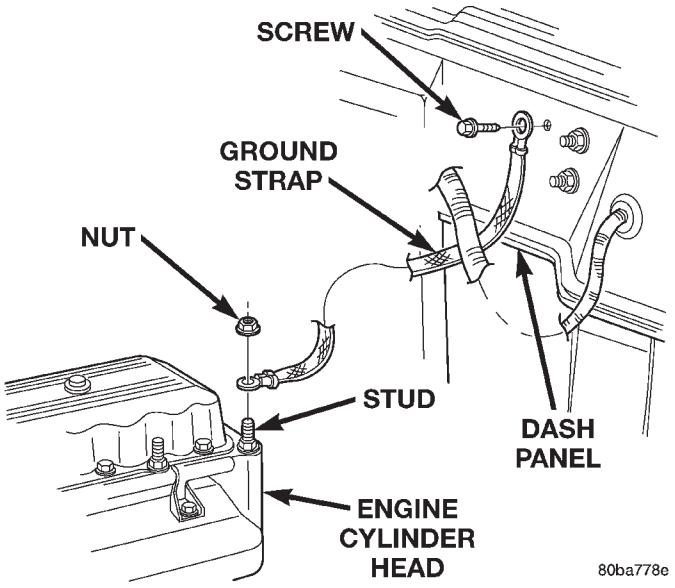


Fig. 16 Engine-To-Body Ground Strap Remove/ Install

(2) Remove the nut that secures the engine-to-body ground strap eyelet to the stud on the left upper rear corner of the engine cylinder head.

(3) Remove the engine-to-body ground strap eyelet from the stud on the left upper rear corner of the engine cylinder head.

(4) Remove the engine-to-body ground strap from the engine compartment.

INSTALLATION

ENGINE-TO-BODY GROUND STRAP

(1) Position the engine-to-body ground strap in the engine compartment.

(2) Position the engine-to-body ground strap eyelet over the stud on the left upper rear corner of the engine cylinder head.

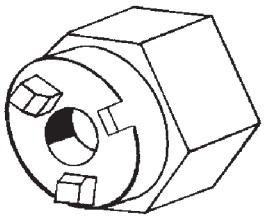
REMOVAL AND INSTALLATION (Continued)

(3) Install and tighten the nut that secures the engine-to-body ground strap eyelet to the stud on the left upper rear corner of the engine cylinder head. Tighten the nut to 27 N·m (20 ft. lbs.).

(4) Install and tighten the screw that secures the engine-to-body ground strap eyelet to the dash panel. Tighten the screw to 27 N·m (20 ft. lbs.).

SPECIAL TOOLS

AUDIO SYSTEMS



Antenna Nut Wrench C-4816