AUDIO SYSTEMS

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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.

AUDIO SYSTEM

Several combinations of radio receivers and speaker systems are offered on this model. The standard equipment audio system includes an AM/FM/cassette (RAS sales code) receiver, and speakers in four 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/cassette (RAS sales code), an AM/FM/cassette/5-band graphic equalizer with CD changer control feature (RBN sales code), an AM/FM/CD/3-band graphic equalizer (RBR sales code), or an AM/FM/CD/cassette/3-band graphic equalizer (RAZ sales code). All factory-installed 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. 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 ignition switch in the Off position, will correct the scrambled display condition.

The IOD fuse should be checked if the radio or clock displays are inoperative. The IOD fuse is located in the junction block. Refer to the label on the back of the junction block fuse access panel for IOD fuse identification and location.

DESCRIPTION AND OPERATION (Continued)

SPEAKER

The standard equipment speaker system includes speakers in four locations. One full-range 15.2 by 22.9 centimeter (6.0 by 9.0 inch) speaker is located in each front door. There is also one full-range 13.3 centimeter (5.25 inch) diameter speaker located in each rear cab side panel for the standard cab and the club cab models, or in each rear door of the quad cab models.

The optional premium speaker system features Infinity model speakers in six locations. Each of the standard front door speakers are replaced with Infinity model speakers that include an integral 30 watt dual amplifier, which is used to drive both the front door speaker and an Infinity tweeter mounted in the A-pillar garnish moulding. Each of the standard rear speakers is replaced by an Infinity model speaker, which is driven by the amplifier in the radio. The total available power of the premium speaker system is about 150 watts.

FILTER, CHOKE, AND SPEAKER RELAY

Models equipped with the Infinity premium speaker package use this filter, choke, and speaker relay unit to control battery feed to the two speaker-mounted amplifiers. The filter, choke, and speaker relay unit should be checked if there is no sound output noted from both of the front door speakers and the A-pillar tweeters.

The filter, choke, and speaker relay unit is mounted to the lower instrument panel center brace, inboard of the Central Timer Module (CTM) and directly above the 16-way data link connector. The filter, choke, and speaker relay unit can be accessed for service without instrument panel disassembly or removal.

The filter, choke, and speaker relay unit cannot be repaired and, if faulty or damaged, the unit must be replaced.

ANTENNA

All models use a fixed-length stainless steel rod-type antenna mast, installed at the right front fender of the vehicle. A plastic sleeve is installed over the length of the mast to reduce wind noise.

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 passenger side end of the instrument panel at the cowl side inner 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

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 serviced, and should be checked in the case of RFI or EMI noise complaints, include the following:

- Radio antenna base ground
- Radio chassis ground wire, strap, or bracket
- Engine-to-body ground strap (if the vehicle is so equipped)
- Cab-to-bed ground strap (if the vehicle is so equipped)
- Heater core ground strap (if the vehicle is so equipped)
- Resistor-type spark plugs
- Radio suppression-type secondary ignition wiring.

In addition, 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 that circuit, repair that circuit as required before considering any component replacement.

If the source of the 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

DESCRIPTION AND OPERATION (Continued)

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.

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.

RADIO

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

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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.

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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. If only an Infinity tweeter is inoperative, go to Step 8. If any other speaker is inoperative, go to Step 2.

NOTE: If the vehicle is equipped with the Infinity premium speaker package and all of the Infinity-amplfied speakers are inoperative or lack response, see Filter, Choke, and Speaker Relay in the Diagnosis and Testing section of this group.

(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. Check both the speaker feed (+) circuit and return (–) circuit cavities for the inoperative speaker location(s) of the radio wire harness connectors for continuity to ground. In each case, there

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.	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.
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.
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.

DIAGNOSIS AND TESTING (Continued)

should be no continuity. If OK, go to Step 3. If not OK, repair the shorted speaker circuit(s) as required.

(3) If the inoperative speaker is an Infinity-amplified speaker (front door-mounted), go to Step 5. If the vehicle is equipped with the standard speaker system or the inoperative speaker is an Infinity rear-mounted speaker, 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 3 and 8 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 with an Infinity-amplified speaker (front door-mounted), go to Step 6. If OK with the standard speakers or for an Infinity rear-mounted speaker, 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 amplified speaker (–) circuit cavity in the body half of the speaker wire harness connector and a good ground. There should be continuity. If OK, go to Step 7. If not OK, repair the open circuit as required.

(7) Install the radio. Connect the battery negative cable. Turn the ignition switch to the On position. Turn the radio on. Check for battery voltage at the amplified speaker (+) circuit cavity of the speaker wire harness connector. If OK, replace the faulty speaker. If not OK, repair the open circuit to the filter, choke, and speaker relay as required.

(8) Turn the radio off. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Unplug the wire harness connector at the front door speaker located on the same side of the vehicle as the inoperative tweeter. Check both the tweeter amplified feed (+) circuit and amplified return (–) circuit cavities in the body half of the front door speaker wire harness connector for continuity to ground. In each case, there should be no continuity. If OK, go to Step 9. If not OK, repair the shorted tweeter circuit(s) as required.

(9) Unplug the wire harness connector at the A-pillar garnish moulding for the inoperative tweeter. Check for continuity between the tweeter amplified feed (+) circuit cavities in the body halves of the front door speaker wire harness connector and the tweeter wire harness connector. Repeat the check between the tweeter amplified return (–) circuit cavities in the body halves of the front door speaker wire harness connector and the tweeter wire harness connector. In each case, there should be continuity. If OK, go to Step 10. If not OK, repair the open circuit(s) as required.

(10) Check the resistance between the tweeter amplified feed (+) circuit and amplified return (–) circuit cavities in the body half of the front door speaker wire harness connector. The meter should read between 3 and 8 ohms (speaker resistance). If OK, replace the faulty front door Infinity speaker and amplifier unit. If not OK, replace the faulty tweeter.

FILTER, CHOKE, AND SPEAKER RELAY

The filter, choke, and speaker relay is used to switch power to the individual speaker amplifiers used with the Infinity premium speaker package. The choke and relay are serviced only as a unit. If the front door speakers lack bass or low frequency response, while no sound is noted at the Infinity-amplified tweeters in the A-pillar garnish mouldings, the choke and relay should be considered suspect. However, before replacement make the following checks of the choke and relay circuits. For circuit descriptions and diagrams, refer to 8W-47 - Audio System in Group 8W - Wiring Diagrams.

(1) Check the fuse in the junction block. If OK, go to Step 2. If not OK, replace the faulty fuse.

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

(3) Unplug the choke and relay wire harness connector. Check for battery voltage at the fused B(+) circuit cavity of the choke and relay wire harness connector. If OK, go to Step 4. If not OK, repair the open circuit as required.

(4) Probe the ground circuit cavity of the choke and relay wire harness connector. Check for continuity to a good ground. There should be continuity. If OK, go to Step 5. If not OK, repair the open circuit to ground as required.

(5) Turn the ignition switch to the On position and turn the radio on. Check for battery voltage at the radio 12-volt output circuit cavity of the choke and relay wire harness connector. If OK, go to Step 6. If not OK, repair the open circuit as required.

(6) Turn the radio and ignition switches to the Off position. Plug in the choke and relay wire harness

DIAGNOSIS AND TESTING (Continued)

connector. Check for battery voltage at the amplified speaker (+) circuit cavity of the choke and relay wire harness connector. There should be zero volts. Turn the ignition and radio switches to the On position. There should now be battery voltage. If OK, repair the circuits from the choke and relay wire harness connector to the speaker amplifiers as required. If not OK, replace the faulty choke and relay.

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).

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.

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.

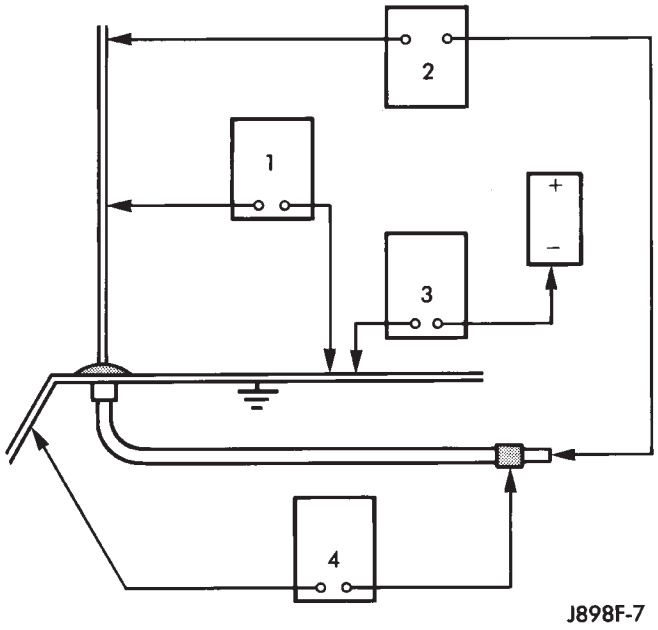

Fig. 1 Antenna Tests

(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.

DIAGNOSIS AND TESTING (Continued)

RADIO FREQUENCY INTERFERENCE

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Inspect the ground connections at the following:
- Blower motor
- Electric fuel pump
- Generator
- Ignition module
- Wiper motor
- Antenna coaxial ground
- Radio ground
- Body-to-engine braided ground strap (if the vehicle is so equipped).

Clean, tighten, or repair the connections as required.

Also inspect the following secondary ignition system components, as described in Group 8D - Ignition Systems:
- Spark plug wire routing and condition
- Distributor cap and rotor
- Ignition coil
- Spark plugs.

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

REMOVAL AND INSTALLATION

RADIO

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(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 Group 8E - Instrument Panel Systems for the procedures.

(3) Remove the two screws that secure the radio to the instrument panel (Fig. 2).

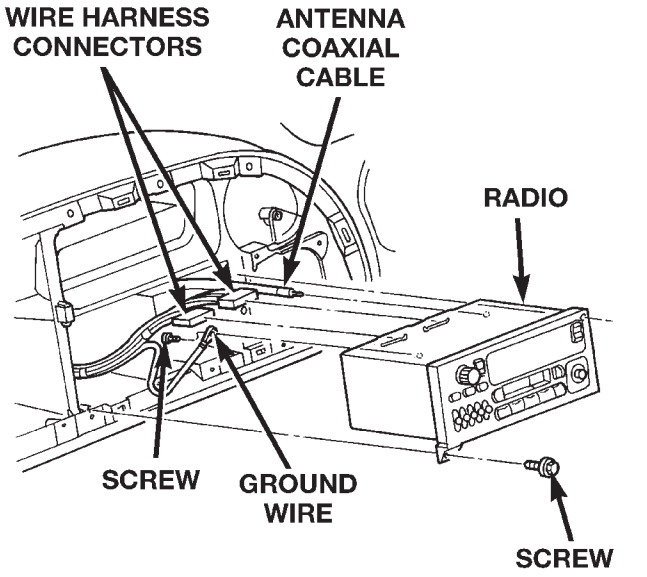


Fig. 2 Radio Remove/Install

(4) Pull the radio out from the instrument panel far enough to access the wire harness connectors and the antenna coaxial cable connector (Fig. 3).

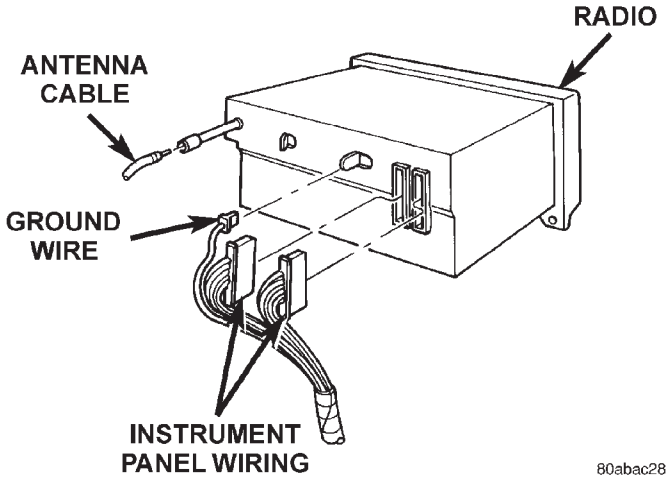


Fig. 3 Radio Connections - Typical

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

(6) If so equipped, remove the screw that secures the ground wire to the back of the radio chassis.

(7) Remove the radio from the instrument panel.

(8) Reverse the removal procedures to install. Tighten the radio ground wire screw to 7 N·m (65 in. lbs.). Tighten the radio mounting screws to 5 N·m (45 in. lbs.).

REMOVAL AND INSTALLATION (Continued)

FILTER, CHOKE, AND SPEAKER RELAY

(1) Disconnect and isolate the battery negative cable.

(2) From the driver side of the vehicle, reach under the instrument panel near the 16-way data link connector and inboard of the ash receiver to unplug the filter, choke, and speaker relay wire harness connector from the instrument panel wire harness (Fig. 4).

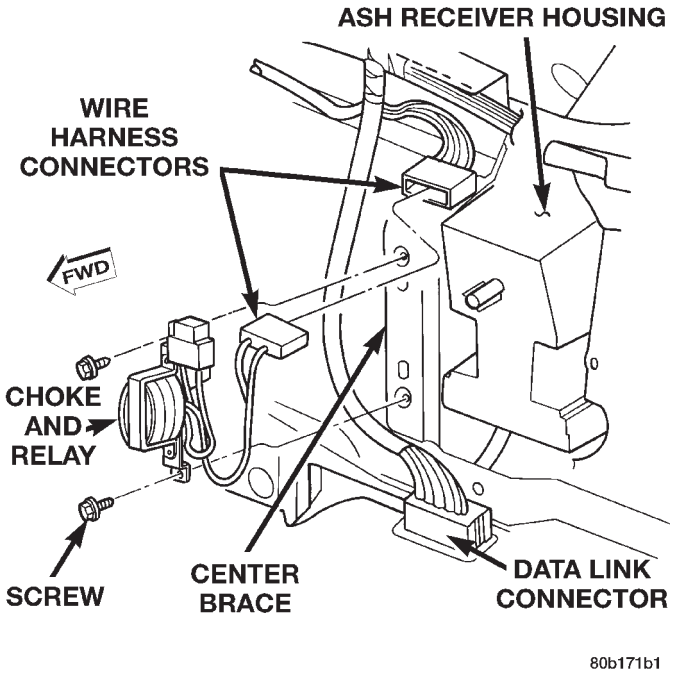


Fig. 4 Filter, Choke, and Speaker Relay Remove/Install

(3) Remove the two screws that secure the filter, choke, and speaker relay mounting bracket to the instrument panel center brace.

(4) Remove the filter, choke, and speaker relay unit from under the instrument panel.

(5) Reverse the removal procedures to install. Tighten the mounting screws to 2.7 N·m (24 in. lbs.).

SPEAKER

A-PILLAR TWEETER

The A-pillar-mounted tweeters are used only with the optional Infinity premium speaker package.

(1) Disconnect and isolate the battery negative cable.

(2) If the vehicle is so equipped, remove the grab handle from the A-pillar. Refer to Group 23 - Body for the procedures.

(3) Disengage the garnish moulding retainers from the A-pillar. Refer to Group 23 - Body for the procedures.

(4) Pull the garnish moulding away from the A-pillar far enough to access and unplug the tweeter wire harness connector (Fig. 5).

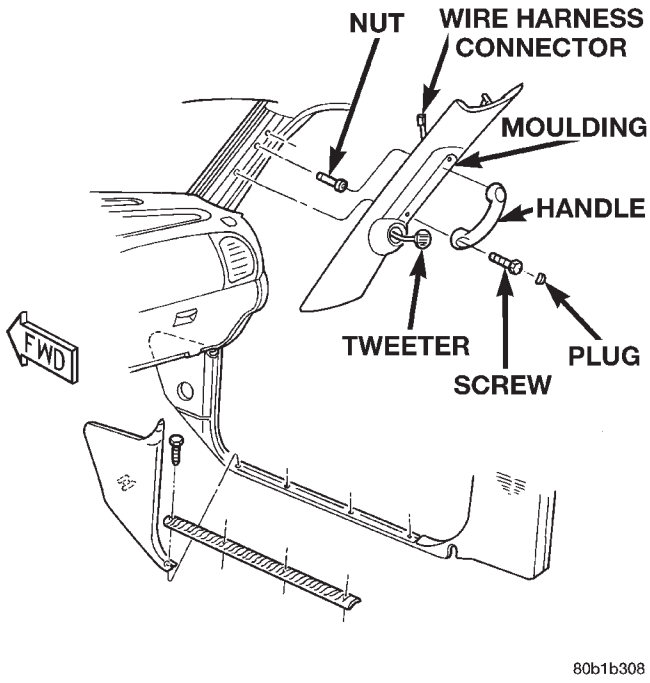


Fig. 5 A-Pillar Tweeter Remove/Install

(5) Remove the garnish moulding from the A-pillar.

(6) Disengage the tweeter wire harness retainers from the heat stakes on the back of the A-pillar garnish moulding.

(7) Unsnap the tweeter from the A-pillar garnish moulding mounting hole by pushing out on the tweeter from the inside of the moulding.

(8) Reverse the removal procedures to install. Use a suitable tape or adhesive to secure the tweeter wire harness to the inside of the garnish moulding.

FRONT DOOR

(1) Disconnect and isolate the battery negative cable.

(2) Remove the inside trim panel from the front door. Refer to Group 23 - Body for the procedures.

(3) Remove the screws that secure the speaker near the front of the front door inner panel (Fig. 6).

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

(5) Remove the speaker from the door.

(6) Reverse the removal procedures to install. Tighten the speaker mounting screws to 4 N·m (35 in. lbs.).

REAR CAB SIDE PANEL

(1) Disconnect and isolate the battery negative cable.

REMOVAL AND INSTALLATION (Continued)

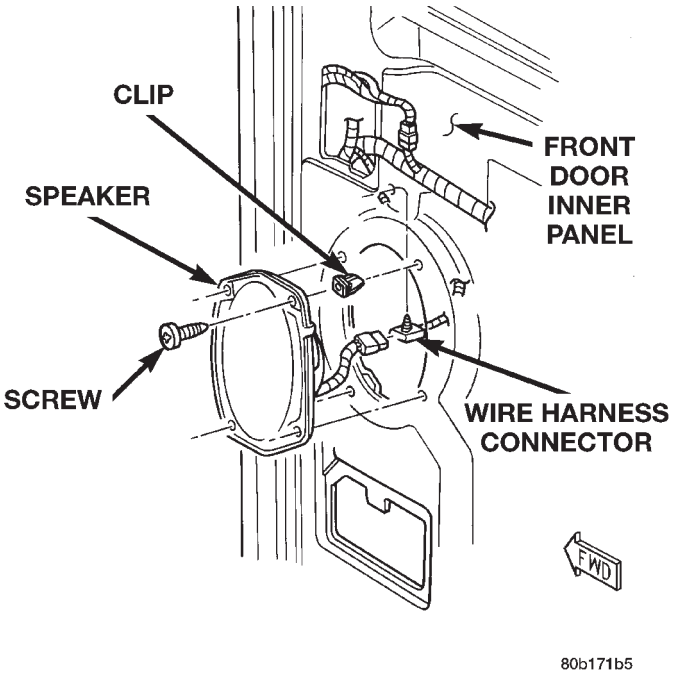


Fig. 6 Front Door Speaker Remove/Install

(2) Remove the quarter inner trim panel from the rear cab side. Refer to Group 23 - Body for the procedures.

(3) Remove the screws that secure the speaker to the rear cab side inner panel (Fig. 7) or (Fig. 8).

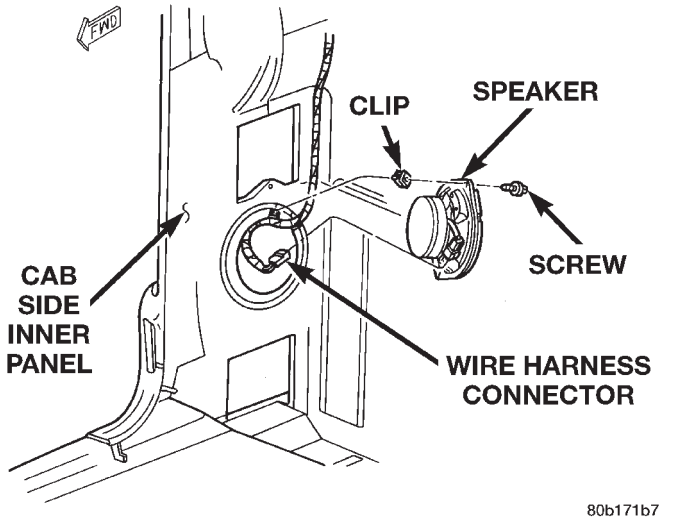


Fig. 7 Rear Speaker Remove/Install - Standard Cab

(4) Pull the speaker away from the rear cab side inner panel far enough to access and unplug the wire harness connector from the speaker.

(5) Remove the speaker from the rear cab side inner panel.

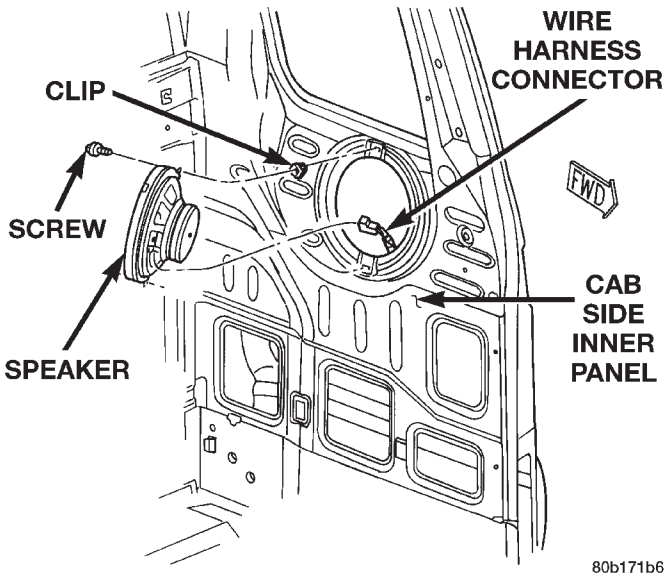


Fig. 8 Rear Speaker Remove/Install - Club Cab

(6) Reverse the removal procedures to install. Tighten the speaker mounting screws to 4 N·m (35 in. lbs.).

REAR DOOR

(1) Disconnect and isolate the battery negative cable.

(2) Remove the inside trim panel from the rear door. Refer to Group 23 - Body for the procedures.

(3) Remove the screws that secure the speaker near the rear of the rear door inner panel (Fig. 9).

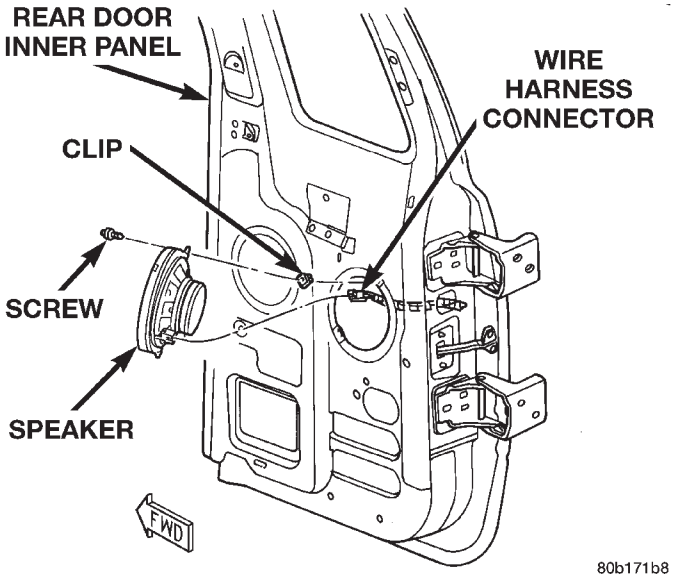


Fig. 9 Rear Door Speaker Remove/Install - Quad Cab

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

REMOVAL AND INSTALLATION (Continued)

(5) Remove the speaker from the door.

(6) Reverse the removal procedures to install. Tighten the speaker mounting screws to 4 N·m (35 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) Reach under the passenger side of the instrument panel near the right cowl side inner panel to disengage the coaxial cable connector from the retainer clip located on the bottom of the heater-A/C housing (Fig. 10).

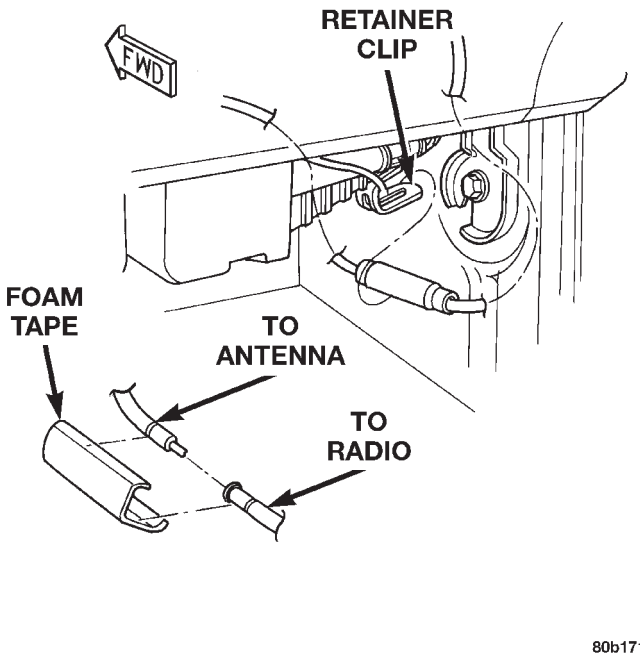


Fig. 10 Antenna Coaxial Cable Connector

(3) Remove the foam tape to access the coaxial cable connector. Unplug the connector by pulling it apart while twisting the metal connector halves. Do not pull on the cable.

(4) Securely tie a suitable length of cord or twine to the connector on the end of the coaxial cable half that is being removed from the vehicle. This cord will be used to pull or “fish” the cable back into position during reinstallation. To remove the radio half of the antenna coaxial cable, go to Step 5. To remove the antenna half of the antenna coaxial cable, go to Step 9.

(5) Remove the glove box from the instrument panel. Refer to Glove Box in the Removal and Installation section of Group 8E - Instrument Panel Systems for the procedures.

(6) Reach through the glove box opening to disengage the radio half of the coaxial cable from the retainer clips on the back of the instrument panel (Fig. 11).

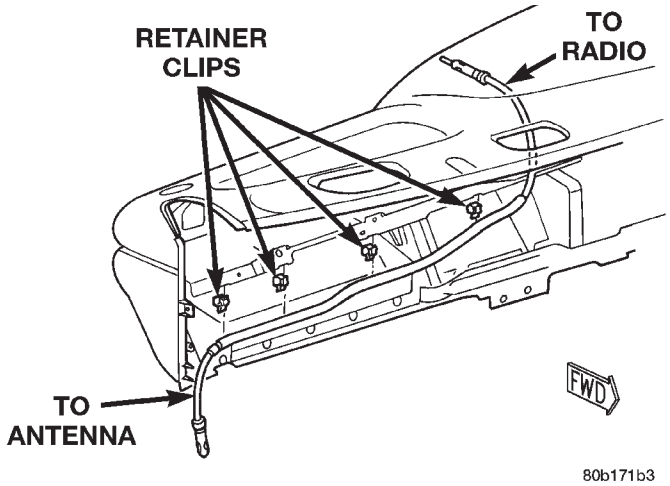


Fig. 11 Antenna Cable Routing

(7) Remove the radio from the instrument panel. See Radio in the Removal and Installation section of this group for the procedures.

(8) Remove the radio half of the antenna coaxial cable from the instrument panel.

(9) Reach above the Powertrain Control Module (PCM) on the right side of the dash panel in the engine compartment to disengage the antenna coaxial cable grommet from the hole in the dash panel (Fig. 12).

(10) Pull the antenna coaxial cable out of the passenger compartment and into the engine compartment through the hole in the dash panel.

(11) Raise the sleeve on the antenna mast far enough to access and unscrew the antenna mast from the antenna body (Fig. 13).

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

(13) Remove the antenna adapter from the top of the fender.

(14) Lower the antenna body and cable assembly through the top of the fender.

(15) Pull the antenna body and cable out through the opening between the right cowl side outer panel and the top of the fender, while feeding the antenna coaxial cable out of the engine compartment through the hole in the right cowl side reinforcement.

REMOVAL AND INSTALLATION (Continued)

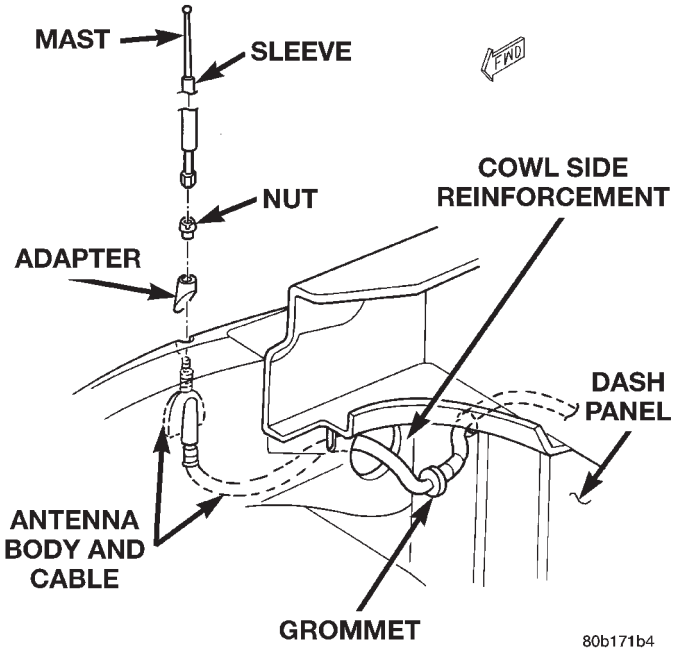


Fig. 12 Antenna Mounting

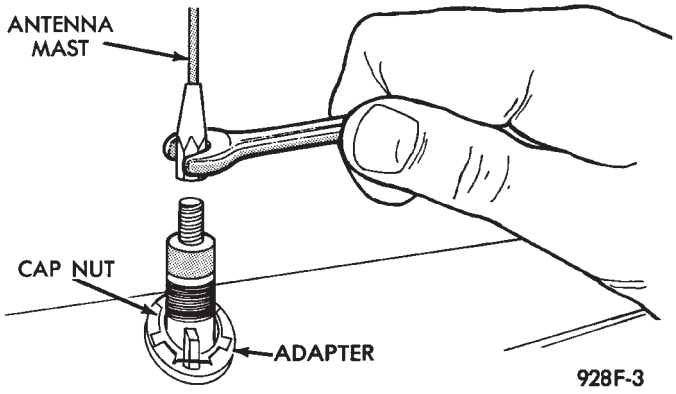


Fig. 13 Antenna Mast Remove/Install - Typical

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

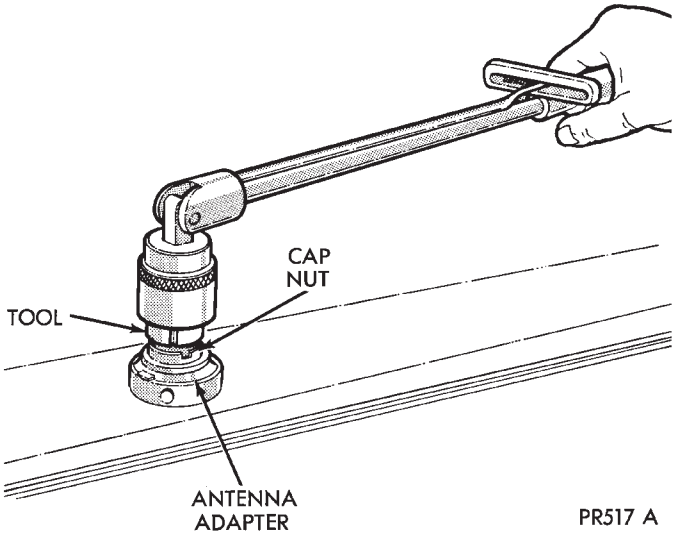
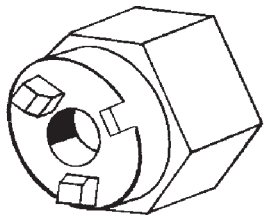


Fig. 14 Antenna Cap Nut Remove/Install - Typical

(17) Reverse the removal procedures to install. Tighten the antenna cap nut to 8 N·m (70 in. lbs.). Tighten the antenna mast to 3.3 N·m (30 in. lbs.).

SPECIAL TOOLS

ANTENNA



Antenna Nut Wrench C-4816