

HORNS

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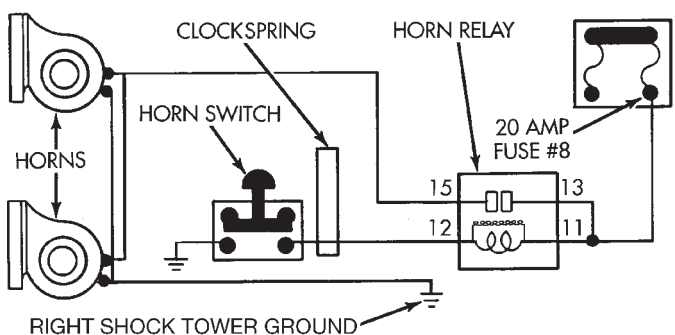
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DESCRIPTION AND OPERATION

INTRODUCTION

WARNING: ON VEHICLES EQUIPPED WITH AIR-BAG, SEE GROUP 8M, RESTRAINT SYSTEMS FOR STEERING WHEEL OR COLUMN REMOVAL PROCEDURES.

The horn circuit consists of a horn switch, horn relay, and horns. The horn circuit feed is from the fuse to the horn relay in the Junction Block. When the horn switch is depressed, it completes the ground circuit. Then the horn relay coil closes a set of contacts which allows current to flow to the horns. Refer to Horn System Schematic.



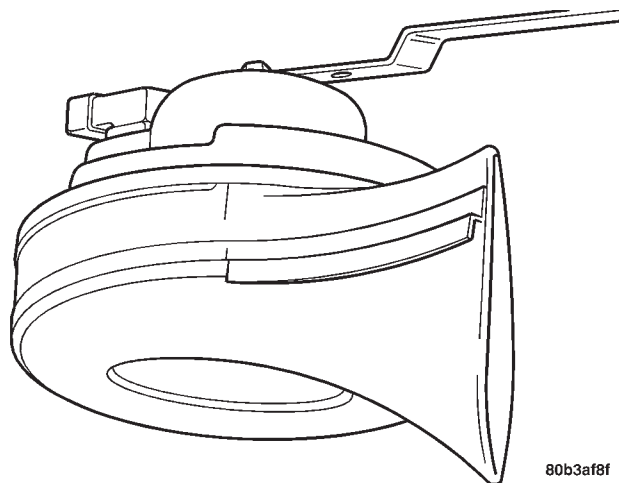
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Fig. 1 Horn System

DIAGNOSIS AND TESTING

HORN

- (1) Disconnect wire connector at each horn.
- (2) Using a voltmeter, connect one lead to body ground and the other lead to the positive wire terminal of the horn connector (Fig. 2).
- The right horn is grounded on the front outboard side of the right frame rail. The left horn is grounded on the left front fender apron.
- (3) When the horn switch is depressed, battery voltage should be present. Repeat for the other horn.
- (4) If no voltage, repair as necessary. If battery voltage is present, go to next step.
- (5) Using an ohmmeter, test the negative terminal of the connector for continuity to ground. Repeat for the other horn.
- (6) If no ground, repair as necessary.
- (7) If wires test OK and horn(s) does not sound, replace horn(s).



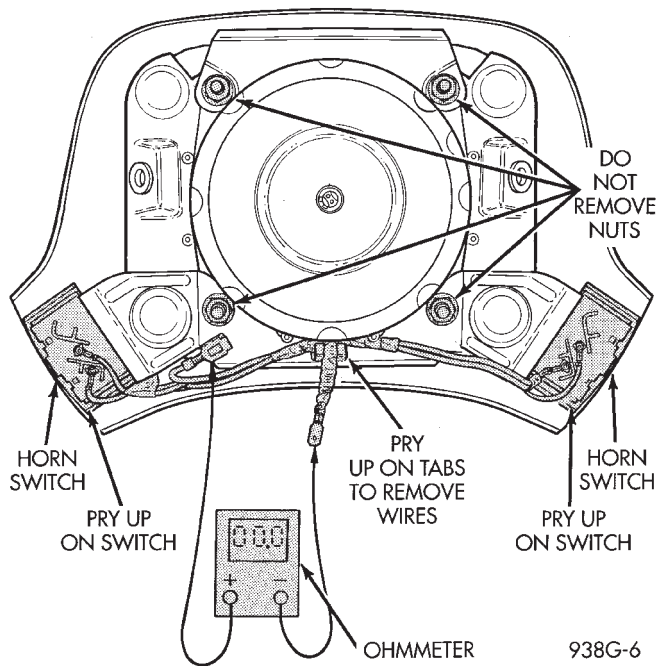
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Fig. 2 Horn

DIAGNOSIS AND TESTING (Continued)

HORN SWITCH

- (1) Using ohmmeter, connect one lead to ground wire and the other lead to the positive wire (Fig. 3).
- (2) Depress horn switch, should have continuity repeat for other switch. If no continuity replace switches.

**Fig. 3 Horn Switch****HORN RELAY**

- (1) Remove horn relay.
- (2) Using ohmmeter, test for continuity between ground and terminal 12 of junction block.
 - (a) When the horn switch is not depressed, no continuity.
 - (b) Continuity to ground when horn switch is depressed.
 - (c) If continuity is not correct repair horn switch or wiring as necessary. Refer to Group 8W, Wiring diagrams.
- (3) Using voltmeter, test voltage at:
 - (a) Terminal 11 and 13 test for battery voltage from fuse F30.
 - (b) If voltage is incorrect repair as necessary. Refer to Group 8W, Wiring Diagrams.
- (4) Insert a jumper wire between terminals 13 and 15 of the junction block.
 - (a) If horns sound replace relay.
 - (b) If the horns do not sound, install horn relay and refer to Horn Diagnosis and Testing.

SYSTEM TEST

CAUTION: Continuous sounding of horns may cause horn relay to fail.

Check fuse 18 in the Junction Block and fuse L in the Power Distribution Center. Refer to Horn System Test table.

DIAGNOSIS AND TESTING (Continued)

HORN SYSTEM TEST

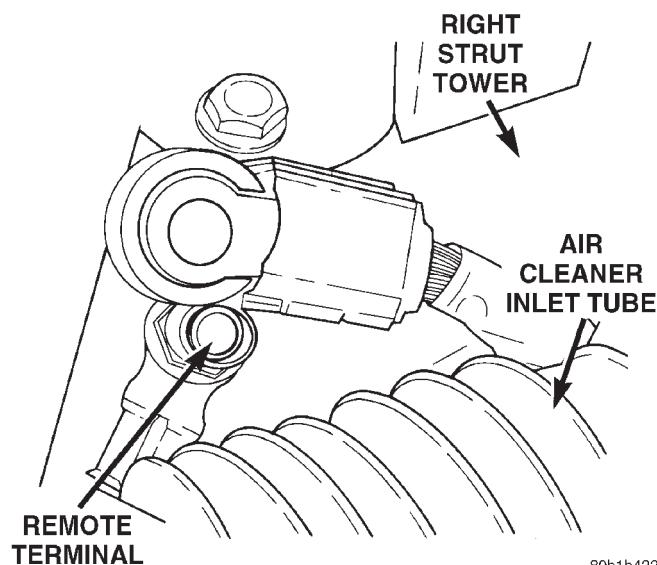
CONDITION	POSSIBLE CAUSE	CORRECTION
HORN SOUNDS CONTINUOUSLY. NOTE: IMMEDIATELY UNPLUG HORN AND RELAY IN THE JUNCTION BLOCK	1. FAULTY HORN RELAY. 2. HORN CONTROL CIRCUIT TO RELAY SHORTED TO GROUND. 3. HORN RELAY CONTROL CIRCUIT X3 SHORTING TO GROUND INSIDE STEERING WHEEL. 4. PINCHED HORN SWITCH WIRE UNDER DRIVER AIRBAG MODULE. 5. DEFECTIVE HORN SWITCH	1. REFER TO HORN RELAY TEST. 2. CHECK HORN RELAY TERMINAL 7 IN JUNCTION BLOCK FOR CONTINUITY TO GROUND INDICATES: A. WIRING HARNESS SHORTED TO GROUND. B. FIND THE SHORT AND REPAIR AS NECESSARY. 3. REMOVE DRIVER AIRBAG MODULE AND CHECK FOR RUBBING, SHORTED OR LOOSE WIRE CONNECTOR AND REPAIR AS NECESSARY. 4. REPLACE DRIVER AIRBAG MODULE. 5. REPLACE DRIVER AIRBAG MODULE.
HORN SOUND INTERMITTENTLY AS THE STEERING WHEEL IS TURNED.	1. HORN RELAY CONTROL CIRCUIT 3 IS SHORTED TO GROUND INSIDE STEERING WHEEL. 2. PINCHED HORN SWITCH WIRE UNDER DRIVER AIRBAG MODULE 3. DEFECTIVE HORN SWITCH	1. REMOVE DRIVER AIRBAG MODULE AND CHECK FOR RUBBING OR LOOSE WIRE/CONNECTOR, REPAIR AS NECESSARY. 2. REPLACE DRIVER AIRBAG MODULE. 3. REPLACE DRIVER AIRBAG MODULE.
HORN DOES NOT SOUND	1. CHECK FUSE 18 IN THE JUNCTION BLOCK. 2. NO VOLTAGE AT HORN RELAY TERMINALS 1 & 2 AND FUSE IS OK. 3. OPEN CIRCUIT FROM TERMINAL 7 OF THE RELAY TO HORN SWITCH X3 CIRCUIT. 4. DEFECTIVE OR DAMAGED HORN. 5. DEFECTIVE HORN SWITCH	1. REPLACE FUSE IF BLOWN AS REPAIR AS NECESSARY. 2. NO VOLTAGE, REPLACE JUNCTION BLOCK OR REPAIR AS NECESSARY. 3. REPAIR CIRCUIT AS NECESSARY. 4. VOLTAGE AT HORN WHEN HORN SWITCH IS PRESSED, REPLACE HORN. 5. REPLACE DRIVER AIRBAG MODULE.
FUSE BLOWS WHEN HORN IS BLOWN	1. SHORT CIRCUIT IN HORN OR HORN WIRING	1. REMOVE HORN RELAY, CHECK FOR SHORTED HORN OR HORN WIRING. DISCONNECT HORN WIRE HARNESS TO ISOLATE SHORT AND REPAIR AS NECESSARY.
FUSE BLOWS WITHOUT BLOWING HORN NOTE: FOR WIRING REPAIRS REFER TO GROUP 8W, WIRE DIAGRAMS.	1. SHORT CIRCUIT	1. REMOVE RELAY, INSTALL NEW FUSE, IF FUSE DOES NOT BLOW REPLACE HORN RELAY. IF FUSE BLOWS WITH RELAY REMOVED, CHECK FOR SHORT TO GROUND WITH OHMMETER BETWEEN TERMINALS 1 & 2 AND THE FUSE TERMINAL. REPAIR AS NECESSARY.

REMOVAL AND INSTALLATION

HORN

REMOVAL

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 4).



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Fig. 4 Negative Battery Cable Remote Terminal

- (2) Disconnect wire connector.
- (3) Remove the horn bracket mounting bolt and remove horn.

NOTE: Do not disconnect horn from horn bracket.

INSTALLATION

For installation, reverse the above procedures.

HORN SWITCHES

WARNING: BEFORE BEGINNING ANY AIRBAG SYSTEM REMOVAL OR INSTALLATION PROCEDURES, REMOVE AND ISOLATE THE BATTERY NEGATIVE CABLE FROM THE VEHICLE BATTERY. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY.

REMOVAL

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 4).
- (2) Remove the two speed control switches or cover plates from the steering wheel.
- (3) Remove the screws that attach the driver airbag module to the steering wheel.
- (4) Lift the module to gain access and disconnect the squib and horn wire.
- (5) Place airbag module on a clean level surface with pad facing upward.
- (6) Push switch locking tab inward and remove switch from module. Repeat for other switch.
- (7) Disconnect the ground wire from the retainer plate on the back side of the module. Bend the two retainer tabs on the bracket to release the horn switch wires.

INSTALLATION

For installation, reverse the above procedures. Assure that the switch is locked into position. Use caution not to pinch wires.

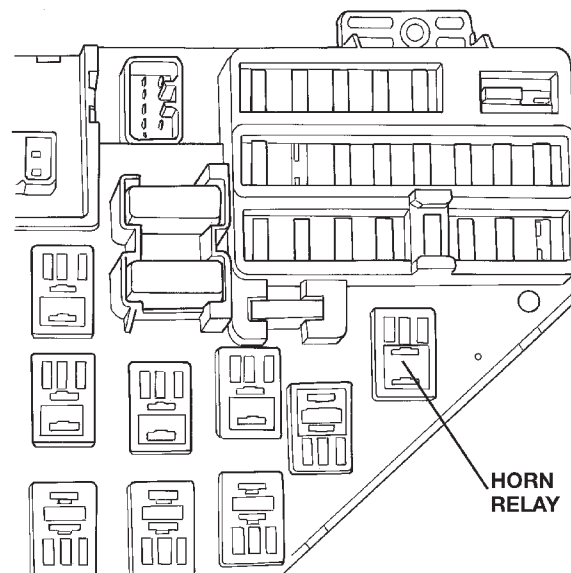
HORN RELAY

REMOVAL

- (1) Using ohmmeter, connect one lead to ground wire and the other lead to the positive wire (Fig. 3).
- (2) Open the driver's door and remove the right instrument panel end cover.
- (3) Remove the horn relay (Fig. 5).

INSTALLATION

For installation, reverse the above procedures.



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Fig. 5 Horn Relay Location