HORNS

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DESCRIPTION AND OPERATION
INTRODUCTION
WARNING: ON VEHICLES EQUIPPED WITH AIRBAG, SEE GROUP 8M, PASSIVE RESTRAINT SYSTEMS FOR STEERING WHEEL REMOVAL.

The horn circuit consists of a horn switch, horn relay, and horn. The horn circuit feed is from the fuse to the horn relay in the Power Distribution Center (PDC). The PDC is mounted on the battery tray. When the horn switch is depressed, it completes the ground circuit. The horn relay coil closes contacts and allows current to flow to the horn. The horn is grounded to the headlamp ground connection (Fig. 1).

HORN SWITCH

The horn switch is mounted between the outer and inner cover of the Driver Airbag Module (Fig. 2). When the Driver Airbag is pressed the horn switch makes contact to ground. The ground signal is carried to the horn relay and the horn sounds.

(1) The horn switch grounds to the airbag housing.
(2) If horn does not sound check for corrosion:
   • Horn wire
   • Horn switch ground connected to airbag metal housing
   • Airbag to steering wheel
   • Ensure horn wire is properly connected and insulator is in place on wire
(3) Refer to Group 8W, Wiring Diagrams if wire circuit needs to be repaired.

*Fig. 1 Horn System
1 – CLOCK SPRING
2 – HORN RELAY
3 – 15 AMP FUSE
4 – HEAD LAMP GROUND
5 – HORN
6 – HORN SWITCH

*Fig. 2 Horn Switch
1 – AIRBAG MODULE
2 – HORN SWITCH
**DIAGNOSIS AND TESTING**

**HORN**

1. Disconnect wire connector at horn.
2. Using a voltmeter, connect one lead to ground terminal and the other lead to the positive wire terminal (Fig. 3).
3. Depress the horn switch, battery voltage should be present.
4. If no voltage, refer to Horn System Test. If voltage is OK, go to Step 5.
5. Using ohmmeter, test ground wire for continuity to ground.
6. If no ground repair as necessary.
7. If wires test OK and horn does not sound, replace horn.

**HORN RELAY**

1. Remove horn relay from Power Distribution Center (PDC).
2. Using ohmmeter, test for continuity between ground and circuit 65 of horn relay.
   a. When the horn switch is not depressed, no continuity should be present.
   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. Insert a jumper wire between circuit 63 and 66 of the Power Distribution Center.
   a. If horn sounds replace relay.
   b. If the horn does not sound, install horn relay and refer to Horn Test.
4. Using voltmeter, test voltage at:
   a. Circuit 62 and 66 test for battery voltage from fuse C to body ground.
   b. If voltage is incorrect repair as necessary. Refer to Group 8W, Wiring Diagrams.
5. Check relay for 70 to 75 ohms resistance from terminal 85 to 86 (Fig. 4). If resistance not OK, replace relay.

**HORN SWITCH**

1. Remove horn relay from the Power Distribution Center.
2. Using ohmmeter, connect one lead to ground and the other lead to cavity 65 of the power distribution center. Refer to Group 8W - Wiring Diagrams.
3. Depress horn switch, should have continuity. If no continuity go to Step 4.
4. Test continuity at horn switch, remove the Driver Airbag Module. Refer to Driver Airbag Module Removal and Installation procedures.
5. Using ohmmeter, connect one lead to the airbag module ground and the other lead to B+ wire. Refer to Group 8W - Wiring Diagrams and (Fig. 3).
6. Depress horn switch, and the meter should show continuity. If no continuity, replace the Driver Airbag Module. If OK, repair as necessary.

**HORN SYSTEM TEST**

Refer to Horn System Test table. If the horn does not sound, check the horn fuse located in the Power Distribution Center. If the fuse is blown, replace with the correct fuse. If the horn fails to sound and the new fuse blows when depressing the horn switch, a short circuit in the horn or the horn wiring between the fuse terminal and the horn is responsible, or a defective horn switch allowed the horn to burn out is responsible.

1. If the fuse is OK, test horn relay. Refer to Horn Relay Test.
2. If the relay is OK, test horn. Refer to Horn Test.

**CAUTION:** Continuous sounding of horn will cause horn to fail.
**DIAGNOSIS AND TESTING (Continued)**

Should the horn sound continuously:
- Unplug the horn relay from Power Distribution Center.
- Refer to Horn Relay Test.
- Refer to Group 8W, wiring Diagrams for circuit and wiring information.

### HORN SYSTEM TEST

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>POSSIBLE CAUSE</th>
<th>CORRECTION</th>
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</thead>
<tbody>
<tr>
<td>HORN SOUNDS CONTINUOUSLY. NOTE: IMMEDIATELY UNPLUG HORN RELAY IN THE POWER DISTRIBUTION CENTER (PDC)</td>
<td>(1) FAULTY HORN RELAY. (2) HORN CONTROL CIRCUIT TO RELAY SHOITED TO GROUND. (3) PINCHED HORN SWITCH WIRE UNDER DRIVER AIRBAG MODULE. (4) DEFECTIVE HORN SWITCH</td>
<td>(1) REFER TO HORN RELAY TEST. (2) CHECK TERMINAL 65 IN PDC FOR CONTINUITY TO GROUND. IF CONTINUITY TO GROUND INDICATES: (A) STEERING WHEEL HORN SWITCH/LEAD SHORTED TO GROUND. (B) WIRING HARNESS SHORTED TO GROUND. FIND THE SHORT AND REPAIR AS NECESSARY. (3) REPLACE DRIVER AIRBAG MODULE. (4) REPLACE DRIVER AIRBAG MODULE.</td>
</tr>
<tr>
<td>HORN SOUND INTERRMITTENTLY AS THE STEERING WHEEL IS TURNED.</td>
<td>(1) HORN RELAY CONTROL CIRCUIT X3 IS SHORTED TO GROUND INSIDE STEERING WHEEL. (2) PINCHED HORN SWITCH WIRE UNDER DRIVER AIRBAG MODULE. (3) DEFECTIVE HORN SWITCH</td>
<td>(1) REMOVE DRIVER AIRBAG MODULE AND/OR STEERING WHEEL. CHECK FOR RUBBING OR LOOSE WIRE/CONNECTOR, REPAIR AS NECESSARY. (2) REPLACE DRIVER AIRBAG MODULE. (3) REPLACE DRIVER AIRBAG MODULE.</td>
</tr>
<tr>
<td>HORN DOES NOT SOUND</td>
<td>(1) CHECK FUSE 23 IN PDC (2) NO VOLTAGE AT HORN RELAY TERMINALS 62 &amp; 66, AND FUSE IS OK. (3) OPEN CIRCUIT FROM TERMINAL 65 OF THE HORN RELAY TO HORN SWITCH X3 CIRCUIT. (4) DEFECTIVE OR DAMAGED HORN. (5) DEFECTIVE HORN SWITCH</td>
<td>(1) REPLACE FUSE IF BLOWN REPAIR AS NECESSARY. (2) NO VOLTAGE, REPAIR PDC AS NECESSARY. (3) REPAIR CIRCUIT AS NECESSARY. (4) VOLTAGE AT HORN WHEN HORN SWITCH IS PRESSED, REPLACE HORN. (5) REPLACE DRIVER AIRBAG MODULE.</td>
</tr>
<tr>
<td>FUSE BLOWS WHEN HORN SOUNDS</td>
<td>(1) SHORT CIRCUIT IN HORN OR HORN WIRING</td>
<td>(1) REMOVE HORN RELAY, CHECK FOR SHORTED HORN OR HORN WIRING. DISCONNECT HORN WIRE HARNESS TO ISOLATE SHORT AND REPAIR AS NECESSARY.</td>
</tr>
<tr>
<td>FUSE BLOWS WITHOUT BLOWING HORN</td>
<td>(1) SHORT CIRCUIT</td>
<td>(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 ON CIRCUIT BETWEEN TERMINALS 62 &amp; 66 AND THE FUSE TERMINAL. REPAIR AS NECESSARY.</td>
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**NOTE:** FOR WIRING REPAIRS REFER TO GROUP 8W, WIRE DIAGRAMS.
REMOVAL AND INSTALLATION

HORN

REMOVAL
(1) Disconnect and isolate the battery negative cable (Fig. 5).

(2) Remove the windshield washer reservoir. Refer to Group 8K Windshield Washer and Wipers, Washer Reservoir Removal and Installation.
(3) Disconnect the harness connector.
(4) Remove the one screw holding the horn assembly to vehicle (Fig. 6).

NOTE: The screw holding the horn assembly is a captive screw and will remain as part of the assembly.

INSTALLATION
For installation, reverse the above procedures.

HORN RELAY

REMOVAL
(1) Remove the Power Distribution Center cover and locate the horn relay (Fig. 7).
(2) Remove the horn relay.

INSTALLATION
For installation, reverse the above procedures.
REMOVAL AND INSTALLATION (Continued)

HORN SWITCH

REMOVAL
(1) Disconnect and isolate the battery negative cable (Fig. 5).
(2) Remove the Driver Airbag Module. Refer to Group 8M Passive Restraint Systems, Driver Airbag Module Removal and Installation.
(3) Clip off strap tie holding the horn switch wire to the airbag module.
(4) Unclip horn switch wire connector from airbag module.
(5) Remove four torx screws from top side of airbag module.
(6) Fold airbag module cover down to expose the horn switch.
(7) Lift the horn switch off indexing tabs and remove from vehicle.

INSTALLATION
For installation, reverse the above procedures.