

2007 ACCESSORIES & EQUIPMENT

Horns - H3

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Horn Bolt	10 N.m	88 lb in

SCHEMATIC AND ROUTING DIAGRAMS

HORN SCHEMATICS

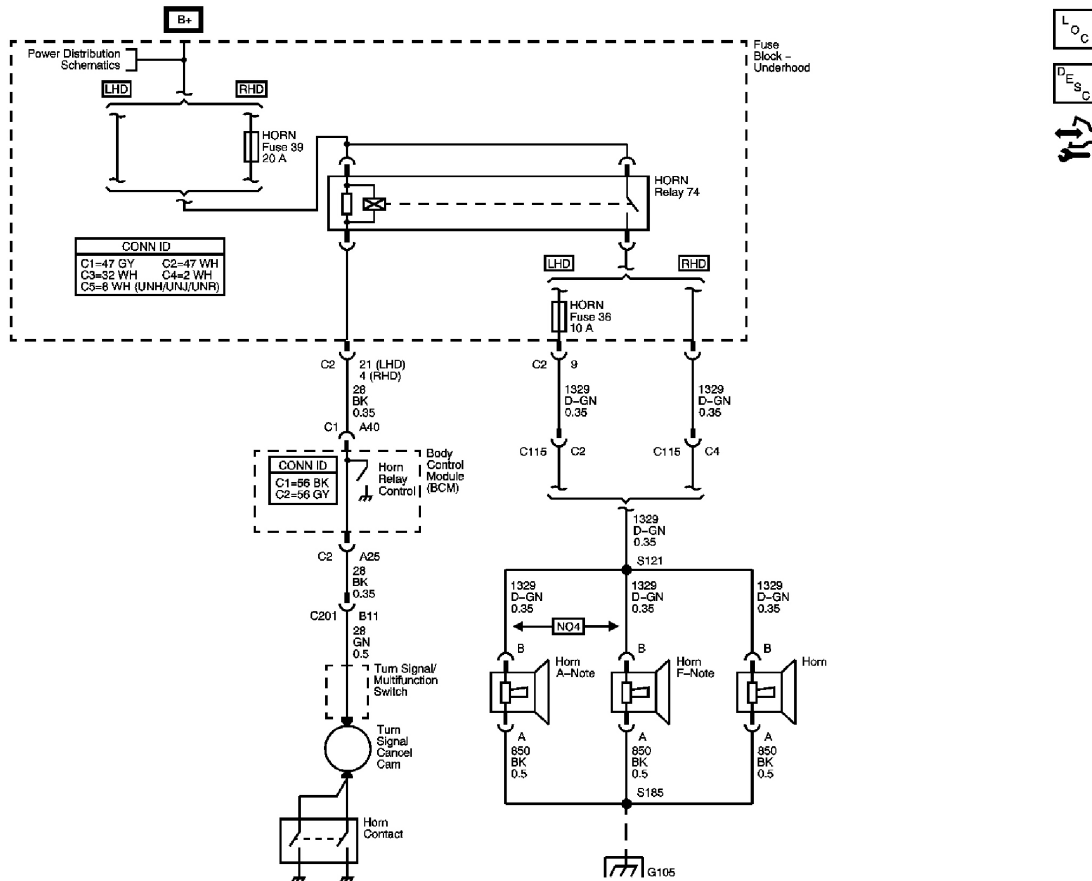


Fig. 1: Horn Circuit Schematic

Courtesy of GENERAL MOTORS CORP.

COMPONENT LOCATOR

HORN COMPONENT VIEWS

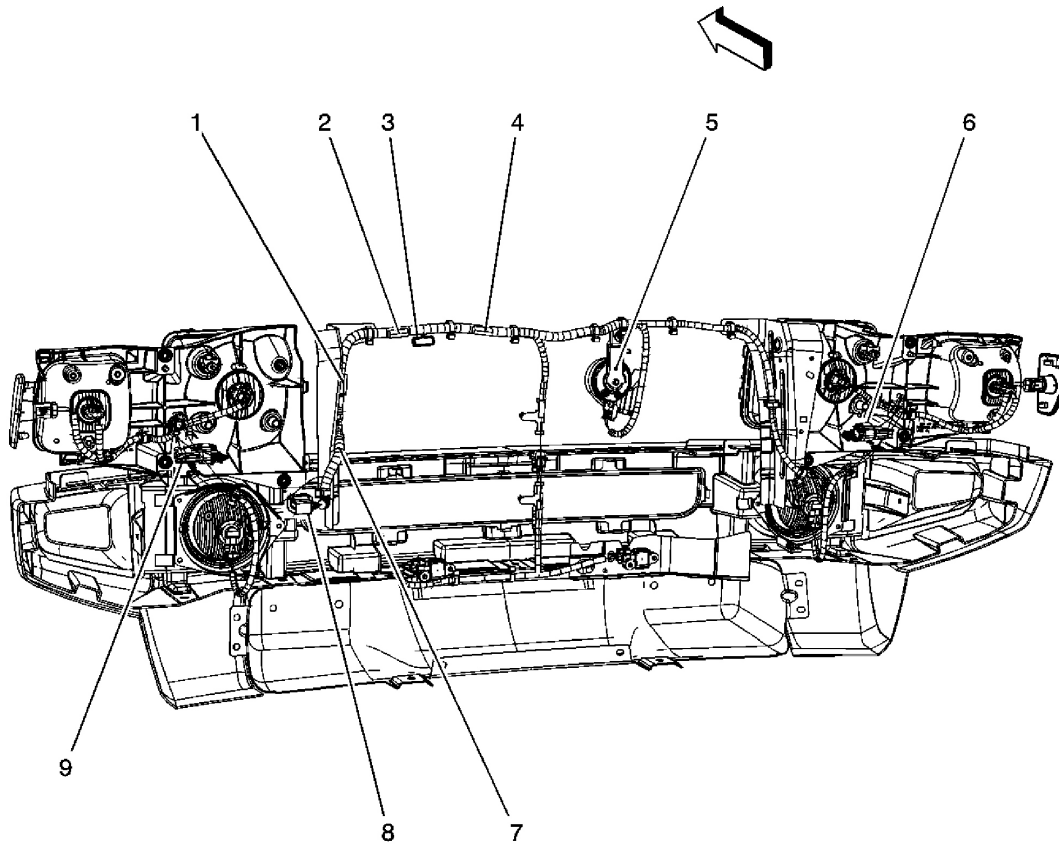


Fig. 2: Forward Lamp Harness Components
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 2

Callout	Component Name
1	S185
2	S109
3	S112
4	S120
5	Horn

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

6	C117 Forward Lamp Harness to Headlamp Jumper Harness
7	S134
8	C115 Forward Lamp Harness to Body Harness
9	C116 Forward Lamp Harness to Headlamp Jumper Harness

HORN CONNECTOR END VIEWS

Horn

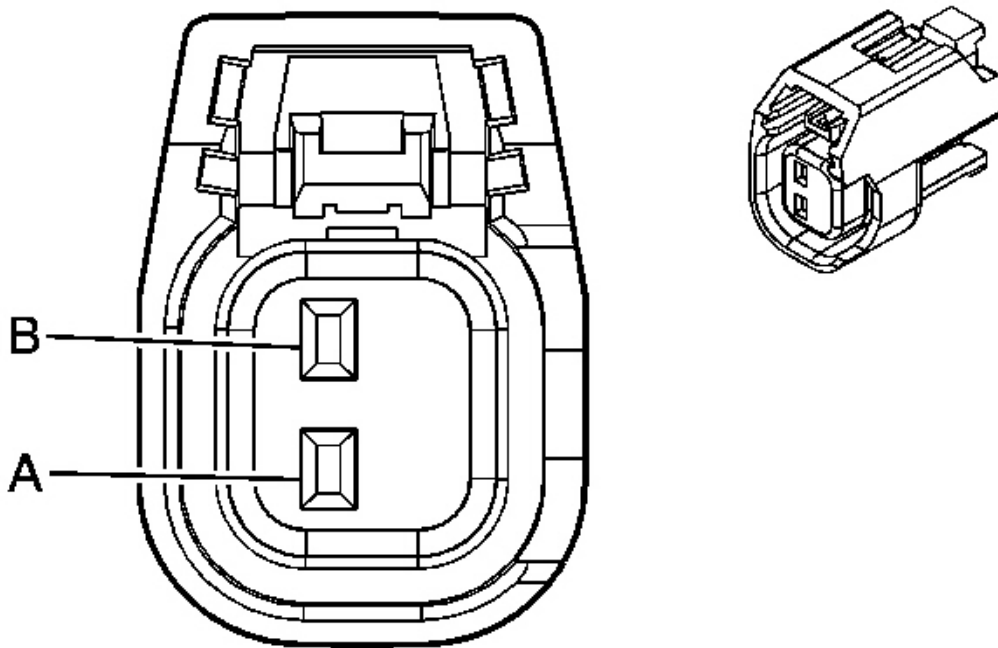


Fig. 3: Horn Connector End View
Courtesy of GENERAL MOTORS CORP.

Horn Connector Parts Information

Connector Part Information

- OEM: 15419715
- Service: 88988313
- Description: 2-Way F GT 150 Sealed (GY)

Terminal Part Information

- Terminal/Tray: 12191818/8
- Core/Insulation Crimp: See Terminal Kit
- Release Tool/Test Probe: See Terminal Kit

Horn Connector Terminal Identification

Pin	Wire Color	Circuit No.	Function
A	BK	850	Ground
B	D-GN	1329	Horn Supply Voltage

Horn A - Note (NO4)

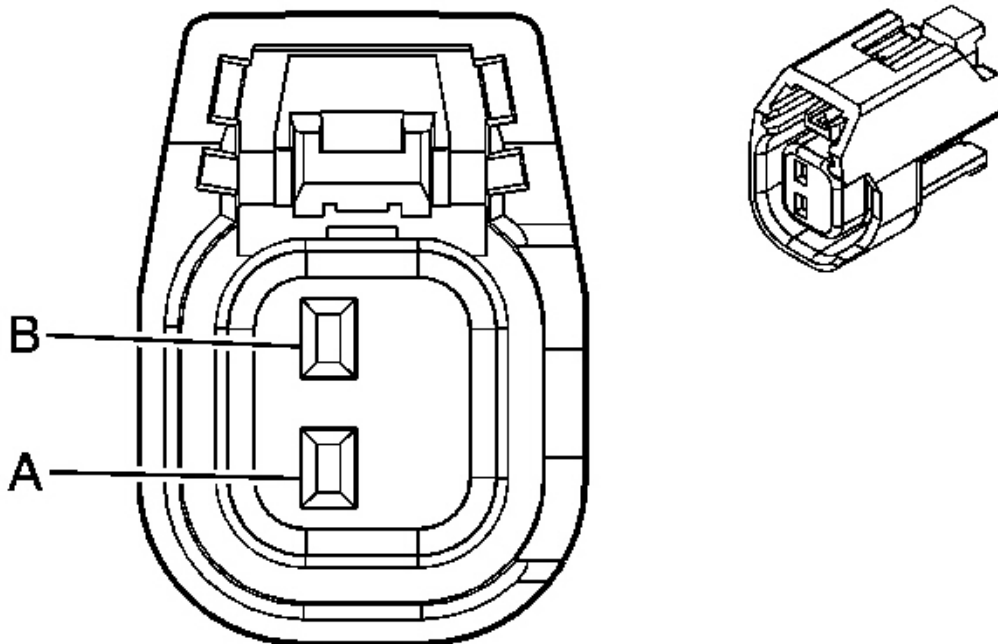


Fig. 4: Horn Connector End View
 Courtesy of GENERAL MOTORS CORP.

Horn Connector Parts Information

Connector Part Information

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

- OEM: 15419715
- Service: 88988313
- Description: 2-Way F GT 150 Sealed (GY)

Terminal Part Information

- Terminal/Tray: 12191818/8
- Core/Insulation Crimp: See Terminal Kit
- Release Tool/Test Probe: See Terminal Kit

Horn A Terminal Identification

Pin	Wire Color	Circuit No.	Function
A	BK	850	Ground
B	D-GN	1329	Horn Supply Voltage

Horn F - Note (NO4)

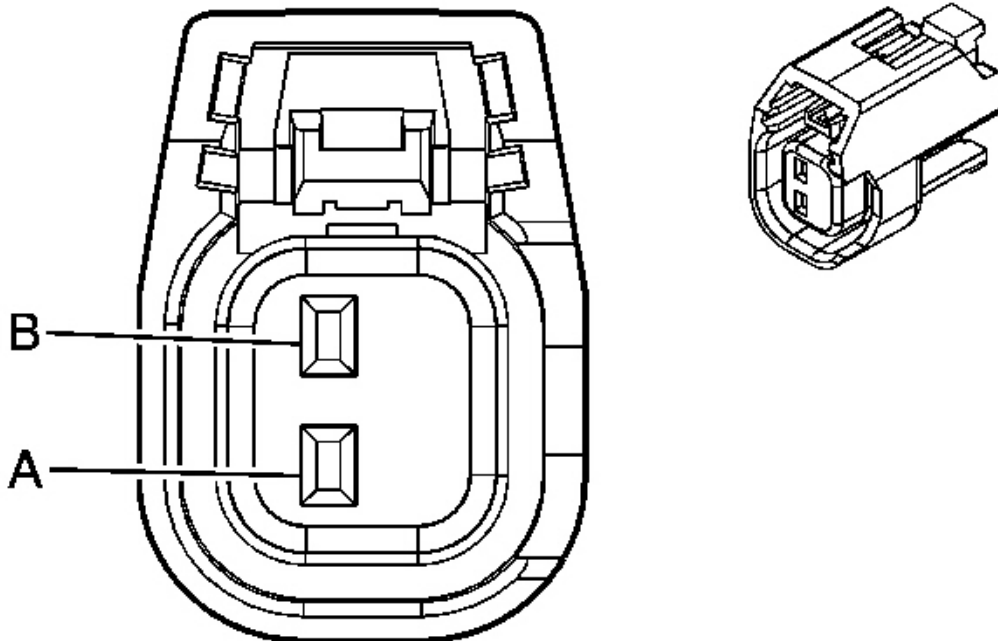


Fig. 5: Horn Connector End View
 Courtesy of GENERAL MOTORS CORP.

Horn Connector Parts Information

Connector Part Information

- OEM: 15419715
- Service: 88988313
- Description: 2-Way F GT 150 Sealed (GY)

Terminal Part Information

- Terminal/Tray: 12191818/8
- Core/Insulation Crimp: See Terminal Kit
- Release Tool/Test Probe: See Terminal Kit

Horn F Terminal Identification

Pin	Wire Color	Circuit No.	Function
A	BK	850	Ground
B	D-GN	1329	Horn Supply Voltage

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC STARTING POINT - HORNS

Begin the system diagnosis with the **Diagnostic System Check - Vehicle** . The Diagnostic System Check will provide the following information:

- The identification of the control modules which command the system.
- The ability of the control modules to communicate through the serial data circuit.
- The identification of any stored diagnostic trouble codes (DTCs) and their status.

The use of the Diagnostic System Check will identify the correct procedure for diagnosing the system and where the procedure is located.

SCAN TOOL OUTPUT CONTROLS

Scan Tool Output Controls

Scan Tool Output Control	Additional Menu Selection(s)	Description
--------------------------	------------------------------	-------------

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

Horn Relay	Theft Deterrent, Special Functions, Body Control Module	The body control module (BCM) activates the horn relay momentarily when you select On.
------------	---	--

SCAN TOOL DATA LIST

The Horns Scan Tool Data List contains all of the horn related parameters that are available on the scan tool. The parameters in the list are arranged in alphabetical order. The column, "Data List," indicates the location of the parameter within the scan tool menu selections. Use the Horns Scan Tool Data List as directed by a diagnostic table or in order to supplement the diagnostic procedures. Begin all of the diagnostic procedures with **Diagnostic System Check - Vehicle** .

Use the Scan Tool Data List only after the following is determined:

- There is no published DTC procedure nor published symptom procedure for the customer concern.
- The DTC or symptom diagnostic procedure indicated by the diagnostic system check does not resolve the customer concern.

The Typical Data Values are obtained from a properly operating vehicle under the conditions specified in the first row of the Scan Tool Data List table. Comparison of the parameter values from the suspect vehicle with the Typical Data Value(s) may reveal the source of the customer concern.

Scan Tool Data List

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine OFF			
Battery Voltage	Data	Volts	Varies
Horn Relay Command	Outputs	On/Off	Off

SCAN TOOL DATA DEFINITIONS

Battery Voltage

The scan tool displays the current state of the battery in volts.

Horn Relay Command

The scan tool displays On/Off to indicate the current state of the horn relay as commanded by the body control module (BCM) or the horn switch.

SYMPTOMS - HORNS

IMPORTANT: The following steps must be completed before using the symptom tables:

Review the system operation in order to familiarize yourself with the system functions. Refer to **Horns System Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the horn system. Refer to **Checking Aftermarket Accessories** .
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.
- Perform the following if a horn buzzes or has a harsh tone:
 - Inspect for debris in the joint where the horn fastens to the vehicle.
 - Test the torque of the horn mounting hardware. The horn mounting hardware should be tightened to a torque of 10 N.m (7 lb ft).

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for Intermittent Conditions and Poor Connections** .

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- **Horns Always On**
- **Horns Inoperative**
- **Horns - Poor Tone**

HORNS ALWAYS ON

Test Description

The number below refers to the step number on the diagnostic table.

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

5: Tests if ground is constantly being applied to the horn relay.

Horns Always On

Step	Action	Yes	No
1	Did you perform the Diagnostic System Check - Vehicle?	Go to Step 2	Go to <u>Diagnostic System Check - Vehicle</u>
2	Depress and release the horn switch. Are the horns ON at all times?	Go to Step 3	Go to <u>Testing for Intermittent Conditions and Poor Connections</u>
3	Disconnect the body control module (BCM). Are the horns ON at all times?	Go to Step 4	Go to Step 8
4	Disconnect the horn relay. Are the horns ON at all times?	Go to Step 10	Go to Step 5
5	Connect a test lamp between the battery positive voltage circuit of the horn relay coil and the horn relay control circuit. Does the test lamp illuminate?	Go to Step 7	Go to Step 6
6	Inspect for poor connections at the horn relay. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> . Did you find and correct the condition?	Go to Step 13	Go to Step 12
7	Repair the short to ground in the horn relay control circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 13	-
8	Test the horn switch signal circuit for a short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you find and correct the condition?	Go to Step 13	Go to Step 9
9	Inspect for poor connections at the harness connector of the BCM. Refer to <u>Testing for Intermittent Conditions and Poor</u>		

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

	<u>Connections</u> and <u>Connector Repairs</u> . Did you find and correct the condition?	Go to Step 13	Go to Step 11
10	Repair the short to voltage in the horn fuse supply voltage circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 13	-
11	Replace the BCM. Refer to <u>Control Module References</u> for replacement, setup and programming. Did you complete the replacement?	Go to Step 13	-
12	Replace the horn relay. Did you complete the replacement?	Go to Step 13	-
13	Operate the horns. Do the horns operate properly?	System OK	Go to Step 1

HORNS INOPERATIVE

Test Description

The numbers below refer to the step numbers on the diagnostic table.

4: Tests for voltage at the battery positive voltage terminal of the horn relay coil.

6: Tests for voltage at the battery positive voltage terminal of the horn relay switch. The HORN fuse supplies power to the battery positive voltage terminal of the horn relay switch.

14: The horns need maximum current flow to operate properly. A high resistance (greater than 0.5 ohms) in the horn control circuit or the horn ground circuit could cause operating problems with the horns. Inspect the circuits for faults that would restrict current flow.

Horns Inoperative

Step	Action	Yes	No
1	Did you perform the Diagnostic System Check - Vehicle?	Go to Step 2	Go to <u>Diagnostic System Check - Vehicle</u>
2	Depress the horn switch. Do the horns operate?	Go to <u>Testing for Intermittent Conditions and Poor Connections</u>	Go to Step 3

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

3	<ol style="list-style-type: none"> 1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. With a scan tool, command the horn relay ON and OFF. <p>Do the horns turn ON and OFF with each command?</p>	Go to Step 11	Go to Step 4
4	<ol style="list-style-type: none"> 1. Disconnect the horn relay. 2. Connect a test lamp between the battery positive voltage circuit of the horn relay coil and a good ground. <p>Does the test lamp illuminate?</p>	Go to Step 5	Go to Step 15
5	<ol style="list-style-type: none"> 1. Connect a test lamp between the battery positive voltage circuit of the horn relay coil and the horn relay control circuit. 2. Depress and hold the horn switch. <p>Does the test lamp illuminate?</p>	Go to Step 6	Go to Step 12
6	<p>Connect a test lamp between the battery positive voltage circuit of the horn relay switch and a good ground.</p> <p>Does the test lamp illuminate?</p>	Go to Step 7	Go to Step 16
7	<p>Momentarily connect a 15-amp fused jumper wire between the battery positive voltage circuit of the horn relay switch and the horn fuse supply voltage circuit.</p> <p>Do the horns operate?</p>	Go to Step 10	Go to Step 8
8	<ol style="list-style-type: none"> 1. Reconnect the horn relay. 2. Disconnect the horn connector. 3. Connect a test lamp between the horn fuse supply voltage circuit and a good ground. 4. Depress and hold the horn switch. 		

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

	Does the test lamp illuminate?	Go to Step 9	Go to Step 17
9	<ol style="list-style-type: none"> 1. Connect a test lamp between the horn fuse supply voltage circuit and the horn ground circuit. 2. Depress and hold the horn switch. 		
	Does the test lamp illuminate?	Go to Step 13	Go to Step 18
10	Inspect for poor connections at the horn relay. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> .		
	Did you find and correct the condition?	Go to Step 22	Go to Step 19
11	Test the horn switch signal for a short to voltage or open. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you find and correct the condition?	Go to Step 22	Go to Step 21
12	Test the control circuit of the horn relay for a short to voltage or an open. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you find and correct the condition?	Go to Step 22	Go to Step 21
13	<ol style="list-style-type: none"> 1. Connect a 15-amp fused jumper wire between the positive battery terminal and the horn fuse supply voltage circuit terminal of the horn. 2. Momentarily connect another jumper wire between the negative battery terminal and the ground terminal of the horn. 		
	Does the horn sound?	Go to Step 14	Go to Step 20
14	Repair the open or high resistance in the horn fuse supply voltage circuit or the horn ground. A resistance as low as 0.5 ohms could cause operating problems with the horns. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> .		
	Did you complete the repair?	Go to Step 22	-
	Repair the open or high resistance in the		

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

15	battery positive voltage circuit of the horn relay coil. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 22	-
16	Repair the open or high resistance in the battery positive voltage circuit of the horn relay switch. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 22	-
17	Repair the open, high resistance or short to ground in the horn fuse supply voltage circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 22	-
18	Repair the open or high resistance in the horn ground circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Did you complete the repair?	Go to Step 22	-
19	Replace the horn relay. Refer to <u>Relay Replacement (Attached to Wire Harness)</u> or <u>Relay Replacement (Within an Electrical Center)</u> . Did you complete the replacement?	Go to Step 22	-
20	Replace the horn assembly. Refer to <u>Horn Replacement</u> . Did you complete the replacement?	Go to Step 22	-
21	Replace the body control module (BCM). Refer to <u>Control Module References</u> for replacement, setup and programming. Did you complete the replacement?	Go to Step 22	-
22	Operate the horns. Do the horns operate properly?	System OK	Go to Step 1

HORNS - POOR TONE

Horns - Poor Tone

Step	Action	Yes	No
	Did you perform the Diagnostic System		Go to

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

1	Check - Vehicle?	Go to Step 2	<u>Diagnostic System Check - Vehicle</u>
2	Depress the horn switch. Do the horns have a harsh tone or buzzing?	Go to Step 3	Go to <u>Testing for Intermittent Conditions and Poor Connections</u>
3	<ol style="list-style-type: none"> 1. Test the horn mounting hardware for adequate torque. Refer to <u>Fastener Tightening Specifications</u>. 2. Inspect the horns for debris in the joint where the horns attach to the vehicle. 		
	Did you find and correct the condition?	Go to Step 7	Go to Step 4
4	<p>Perform the following for each of the horns:</p> <ol style="list-style-type: none"> 1. Disconnect the horn connector. 2. Connect a 15-amp fuse jumper wire between the positive battery terminal and the horn fuse supply voltage circuit terminal of the horn. 3. Connect another jumper wire between the negative battery terminal and the ground terminal of the horn. 		
	Does the horn have a harsh tone or buzzing?	Go to Step 6	Go to Step 5
5	<p>Repair the high resistance in the horn fuse supply voltage circuit or the horn ground circuit. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u>.</p> <p>Did you complete the repair?</p>	Go to Step 7	-
6	<p>Replace the horn. Refer to <u>Horn Replacement</u>.</p> <p>Did you complete the replacement?</p>	Go to Step 7	-
7	<p>Operate the horns.</p> <p>Do the horns operate properly?</p>	System OK	Go to Step 1

REPAIR INSTRUCTIONS

HORN REPLACEMENT

Removal Procedure

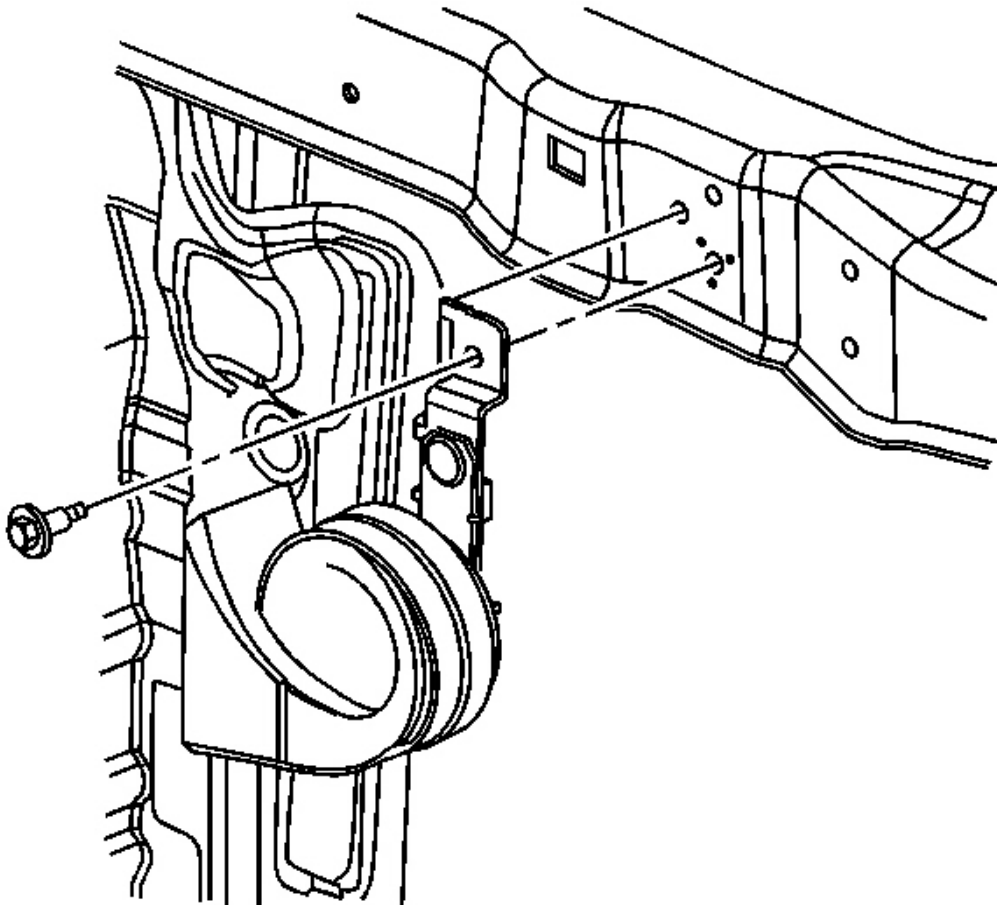


Fig. 6: View Of Horn Assembly
Courtesy of GENERAL MOTORS CORP.

1. Remove the grille. Refer to **Grille Replacement** .
2. Disconnect the horn assembly electrical connector.
3. Remove the bolt that retains the horn assembly to the radiator support.

4. Remove the horn assembly from the body.

Installation Procedure

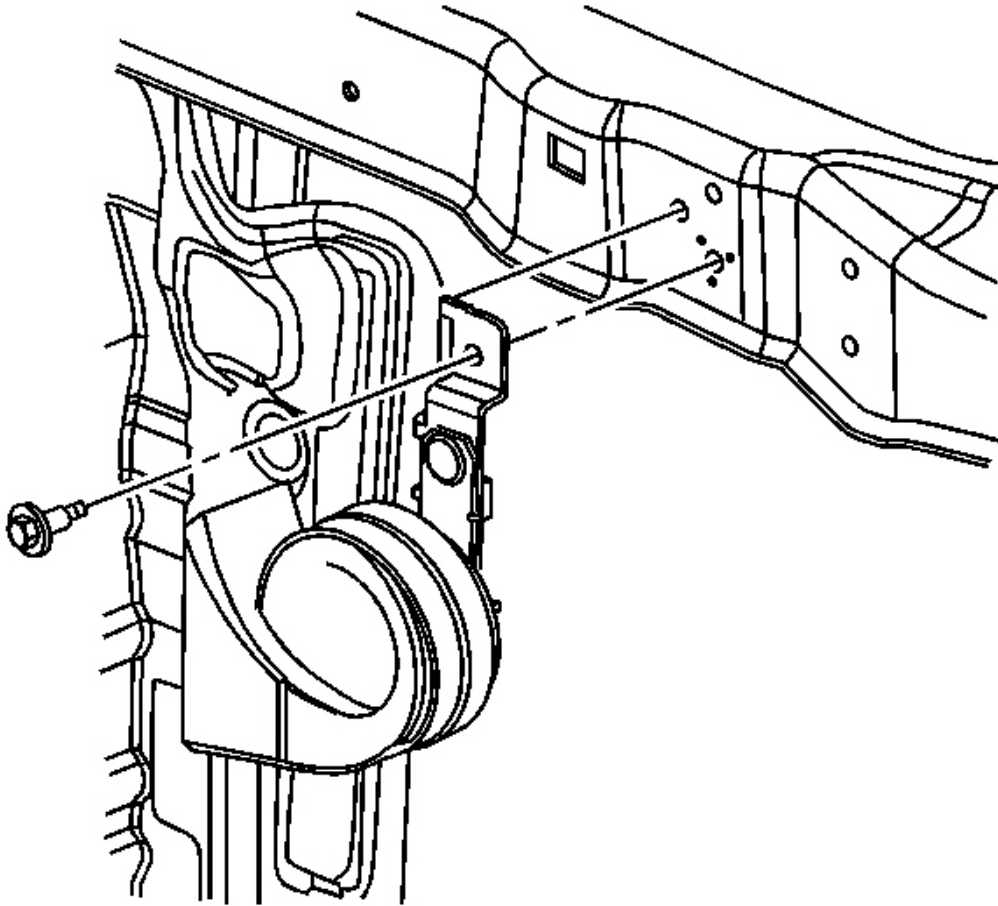


Fig. 7: View Of Horn Assembly
Courtesy of GENERAL MOTORS CORP.

1. Install the horn assembly to the radiator support.

NOTE: Refer to FASTENER NOTICE .

2. Install the bolt that retains the horn assembly to the radiator support.

Tighten: Tighten the bolt to 10 N.m (88 lb in).

3. Connect the horn assembly electrical connector.
4. Install the grille. Refer to **Grille Replacement** .

HORN SWITCH REPLACEMENT

The horn switch is an internal component of the steering wheel inflator module and is not serviceable. If the horn switch fails and needs replacement. Refer to **Inflatable Restraint Steering Wheel Module Replacement** .

DESCRIPTION AND OPERATION

HORNS SYSTEM DESCRIPTION AND OPERATION

System Description

The horn system consists of the following components:

- The HORN fuse
- The horn relay
- The horn switch
- The horn assembly
- The body control module (BCM)

System Operation

The vehicle horn system is activated under the following conditions:

- The horn switch is depressed.
- The BCM commands the horns on. The BCM commands the horns on under any of the following conditions:
 - When the content theft deterrent system detects a vehicle intrusion. For further information refer to **Content Theft Deterrent (CTD) Description and Operation** .
 - When the panic button is depressed on the remote control door lock transmitter. For further information refer to **Keyless Entry System Description and Operation** .
 - When the OnStar® system is used to sound the horns (if equipped.) For further information refer to **OnStar Description and Operation** .
 - When the unlock button on the keyless entry transmitter is pressed, a horn chirp will

2007 Hummer H3

2007 ACCESSORIES & EQUIPMENT Horns - H3

sound to notify the driver that the vehicle has been unlocked. For further information refer to **Keyless Entry System Description and Operation** .

- When the lock button on the keyless entry transmitter is pressed twice within 5 seconds, a horn chirp will sound to notify the driver that the vehicle has been locked. For further information refer to **Keyless Entry System Description and Operation** .

Circuit Operation

Battery positive voltage is applied at all times to the horn relay coil and the horn relay switch. Pressing the horn switch applies ground to the horn relay control circuit. The BCM may also apply ground to the horn relay control circuit as described above. When the horn relay control circuit is grounded, the horn relay is energized and battery positive voltage is applied to the horns through the horn fuse supply voltage circuit. The horns sound as long as ground is applied to the horn relay control circuit.