



Horn

Refer to Wiring Diagrams Section [413-06](#), Horn for schematic and connector information.

Special Tool(s)

 <p>ST1137-A</p>	<p>73III Automotive Meter 105-R0057 or equivalent</p>
 <p>ST2332-A</p>	<p>Worldwide Diagnostic System (WDS) 418-F224, New Generation STAR (NGS) Tester 418-F052, or equivalent diagnostic tool</p>

Principles of Operation

When the horn switch is depressed, a message is sent from the instrument cluster via the network communication link to the front electronic module (FEM). The FEM acknowledges the message and energizes the horn relay by grounding the horn relay coil which allows the dual note horn to sound.

Inspection and Verification

NOTE: The FEM and instrument cluster must be reconfigured upon replacement. Refer to [Section 418-01](#).

1. Verify the customer concern by operating the horn.
2. Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
<ul style="list-style-type: none"> • Damaged horn • Damaged horn switch • Damaged horn relay • Damaged air bag sliding contact (14A664) C2 	<ul style="list-style-type: none"> • Battery junction box (BJB) Fuses: <ul style="list-style-type: none"> ■ 425 (40A) ■ 422 (20A) • Central junction box (CJB) Fuses: <ul style="list-style-type: none"> ■ 202 (5A) ■ 213 (5A) ■ 217 (5A) ■ 220 (10A) • Auxiliary junction box (AJB) Fuse(s): <ul style="list-style-type: none"> ■ 104 (15A) • Damaged circuitry • Damaged horn relay • Loose or corroded connections • Damaged air bag sliding contact (14A664)

3. If the concern remains after the inspection, connect the diagnostic tool to the data link connector (DLC) located beneath the instrument panel and select the vehicle to be tested from the diagnostic tool menu. If the diagnostic tool does not communicate with the vehicle:
 - check that the program card is correctly installed.
 - check the connections to the vehicle.
 - check the ignition switch position.
4. If the diagnostic tool still does not communicate with the vehicle, refer to the diagnostic tool manual.
5. Carry out the DATA LINK DIAGNOSTIC TEST. If the diagnostic tool responds with:
 - CKT914, CKT915 or CKT70 = ALL ECUS NO RESP/NOT EQUIP, refer to [Section 418-00](#).
 - NO RESP/NOT EQUIP for instrument cluster, GO to Pinpoint Test B.
 - NO RESP/NOT EQUIP for FEM, GO to Pinpoint Test A.
 - SYSTEM PASSED, retrieve and record the continuous diagnostic trouble codes (DTCs), erase the continuous DTCs and carry out self-test diagnostics for the instrument cluster and FEM.
6. If the DTCs retrieved are related to the concern, go to the Instrument Cluster Diagnostic Trouble Code (DTC) Index or go to the FEM Diagnostic Trouble Code (DTC) Index to continue diagnostics.
7. If no DTCs related to the concern are retrieved, proceed to Symptom Chart to continue diagnostics.

FEM Diagnostic Trouble Code (DTC) Index

FEM Diagnostic Trouble Code (DTC) Index

DTC	Description	Source	Action
B1319	Driver Door Ajar Circuit Failure	FEM	REFER to Section 417-02 .
B1327	Passenger Door Ajar Circuit Failure	FEM	REFER to Section 417-02 .

B1342	ECU Is Defective	FEM	CLEAR the DTC. RETRIEVE the DTCs. If DTC B1342 is retrieved, INSTALL a new FEM. REFER to Section 419-10 .
B1438	Wiper Mode Select Switch Circuit Failure	FEM	REFER to Section 501-16 .
B1446	Wiper Park Sense Circuit Failure	FEM	REFER to Section 501-16 .
B1479	Wiper Washer Fluid Level Sensor Circuit Failure	FEM	REFER to Section 501-16 .
B1499	Lamp Turn Signal Left Circuit Failure	FEM	REFER to Section 417-01 .
B1501	Lamp Turn Signal Left Circuit Short to Battery	FEM	REFER to Section 417-01 .
B1503	Lamp Turn Signal Right Circuit Failure	FEM	REFER to Section 417-01 .
B1505	Lamp Turn Signal Right Circuit Short to Battery	FEM	REFER to Section 417-01 .
B1519	Hood Switch Circuit Failure	FEM	REFER to Section 419-01A .
B1567	Lamp Headlamp High Beam Circuit Failure	FEM	REFER to Section 417-01 .
B1676	Battery Pack Voltage Out of Range	FEM	REFER to Section 414-00 .
B1794	Lamp Headlamp Low — Beam Circuit Failure	FEM	REFER to Section 417-01 .
B2214	Window Passenger Front Up Switch Short to Battery	FEM	REFER to Section 501-11 .
B2215	Window Passenger Front Down Switch Short to Battery	FEM	REFER to Section 501-11 .
B2312	Mirror Passenger Horizontal Feedback Potentiometer Circuit Failure	FEM	REFER to Section 501-09 .
B2316	Mirror Passenger Vertical Feedback Potentiometer Circuit Failure	FEM	REFER to Section 501-09 .
B2442	Intrusion Sensor Fault	FEM	REFER to Section 419-01A .
B2477	Module Configuration Failure	FEM	REFER to Section 418-01 .
C1284	Oil Pressure Switch Failure	FEM	REFER to Section 413-01 .
C1446	Brake Switch Circuit Failure	FEM	REFER to Section 417-01 .
C1924	VAPS Solenoid Actuator Output Circuit Short to Ground	FEM	REFER to Section 211-00 .
C1925	VAPS Solenoid Actuator Return Circuit Failure	FEM	REFER to Section 211-00 .
U1027	SCP (J1850) Invalid or Missing Data for Engine RPM	PCM	CARRY OUT the PCM self-test.
U1041	SCP (J1850) Invalid or Missing Data Vehicle Speed	ABS	CARRY OUT the ABS self-test.
U1059	SCP (J1850) Invalid or Missing Data for Transmission/ Transaxle/PRNDL	PCM	CARRY OUT the PCM self-test.
U1218	SCP (J1850) Invalid or Missing Data for External Lamps	ICM	CARRY OUT the ICM self-test.
U1222	SCP (J1850) Invalid or Missing Data for Interior Lamps	ICM	CARRY OUT the ICM self-test.
U1227	SCP (J1850) Invalid or Missing Data for Body Status Request	ICM	CARRY OUT the ICM self-test.

FEM Parameter Identification (PID) Index

FEM Parameter Identification (PID) Index

PID	Description	Expected Value
AL_EVT1	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT2	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT3	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT4	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT5	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT6	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT7	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
AL_EVT8	Last 8 Alarm Events	DROPEN, HOODTR, IGNTAM, PANIC, T_AJAR, RR_SD, LR_SD, P_DOOR, D_DOOR, RADIO, WINDO, ULTRS, NOEVNT, BB_SND
CCNT	Number Of Continuous DTCs In Module	one count per bit
D_DOOR	Left Front Door Ajar Switch	CLOSED, AJAR
FLUID_1	Brake Fluid Level Switch #1	OFF, ON
HOOD_SW	Hood Ajar Switch	CLOSED, AJAR
IGN_R	Ignition Switch -RUN Position	NO, YES
L_HIGH	Left High Beam Lamp Driver	Off---, Off-B-, On---, On-B-
L_LOW	Left Low Beam Lamp	Off---, Off-B-, On---, On-B-
LF_TURN	Left Front Turn Lamp	Off---, Off-B-, On---, On-B-
LMRKOUT	Left Front Marker Lamp	Off---, Off-B-, On---, On-B-
OILWRN	Oil Level Warning Lamp	Off---, On---
P_DN_SW	Passenger Down Activated	OFF, DOWN
P_DOOR	Passenger Door Ajar Switch	CLOSED, AJAR
P_UP_SW	Passenger Up Activated	OFF, UP
PRK_BRK	Parking Brake Switch Input	OFF, ON
PSMRPSH	Passenger Mirror Position Sensor (Left/Right)	#####
PSMRPSV	Passenger Mirror Position	#####

PSPWAMP	Power Window Passenger's Peak Motor Current	####
PWM_DC1	PWM Duty Cycle #1	%
R_HIGH	Right High Beam Lamp Driver	Off---, Off-B-, On---, On-B-
R_LOW	Right Low Beam Lamp	Off---, Off-B-, On---, On-B-
RADIO5W	Security Input Switch Status	OFF, ON
RF_TURN	Right Front Turn Lamp	Off---, Off-B-, On---, On-B-
RMRKSTB	Right Front Marker Lamp	Off---, Off-B-, On---, On-B-
STLKOUT	Steering Column Lock Ground Output	OFF, ON
VBAT	Battery Voltage	V
WFLUID	Washer Fluid Level	LOW, OK
WPMODE	Wiper Control Mode Select	WASH, OPEN, INVLD, OFF, INTVL1, INTVL2, INTVL3, INTVL4, INTVL5, INTVL6, INTVL7, LOW, HIGH
WPPRKS	Windshield Wiper Park Sense	notPRK, PARKED

FEM Active Command Index

FEM Active Command Index

Active Command	Display	Action
BACKLIGHTING INTENSITY CONTROL COMMAND	ILLUM	%
BRAKE SYSTEM CONTROL COMMAND	SHFT LOCK	OFF, ON
EXTERIOR LAMP CONTROL	PARKLAMP	OFF, ON
FRONT WINDOW CONTROL	RR UP	OFF, ON
FRONT WINDOW CONTROL	PR DOWN	OFF, ON
FRONT WINDSHIELD WIPER/WASHER	SPEED RLY	OFF, ON
FRONT WINDSHIELD WIPER/WASHER	WASH RLY	OFF, ON
FRONT WINDSHIELD WIPER/WASHER	WIPER RLY	OFF, ON
HEAD/CORNERING LAMP CONTROL	HIGH BEAM	OFF, ON
HEAD/CORNERING LAMP CONTROL	LOW BEAM	OFF, ON
INDICATOR LAMP CONTROL	NON MIL	OFF, ON
LAMP CONTROL COMMAND	HDLMPWSH	OFF, ON
POWER MIRROR CONTROL	PR DOWN	OFF, ON
POWER MIRROR CONTROL	PR LEFT	OFF, ON
POWER MIRROR CONTROL	PR RIGHT	OFF, ON
POWER MIRROR CONTROL	PR UP	OFF, ON
STEERING COLUMN CONTROL COMMAND	LOCK_GND	OFF, ON
TURN SIGNAL AND MARKER LAMPS	HAZARD	OFF, ON
VAPS II OUTPUT PULSE CONTROL	VAPSIOUT	%

Instrument Cluster Diagnostic Trouble Code (DTC) Index

Instrument Cluster Diagnostic Trouble Code (DTC) Index

DTC	Description	Source	Action
B1201	Fuel Sender Circuit Failure	ICM	REFER to Section 413-01 .
B1205	EIC Switch-1 Assembly Circuit Failure	ICM	REFER to Section 413-01 .
B1209	EIC Switch-2 Assembly Circuit Failure	ICM	REFER to Section 413-01 .
B1213	Anti-Theft Number of Programmed Keys Is Below Minimum	ICM	REFER to Section 419-01B .
B1246	Dim Panel Potentiometer Switch Circuit Failure	ICM	REFER to Section 413-00 .
B1342	ECU Is Defective	ICM	CLEAR and DOCUMENT the DTCs. CARRY OUT the instrument cluster Self-Test. INSTALL a new instrument cluster if DTC B1342 is retrieved again. REFER to Section 413-01 .
B1352	Ignition Key-In Circuit Failure	ICM	REFER to Section 211-05 .
B1470	Lamp Headlamp Input Circuit Failure	ICM	REFER to Section 417-01 .
B1492	Ignition Cylinder Sensor Open Circuit	ICM	REFER to Section 419-01B .
B1567	Lamp Headlamp High Beam Circuit Failure	ICM	REFER to Section 417-01 .
B1600	PATS Ignition Key Transponder Signal Is Not Received	ICM	REFER to Section 419-01B .
B1601	PATS Received Incorrect Key-Code From Ignition Key Transponder	ICM	REFER to Section 419-01B .
B1602	PATS Received Invalid Format of Key-Code From Ignition Key Transponder	ICM	REFER to Section 419-01B .
B1676	Battery Pack Voltage Out of Range	ICM	REFER to Section 413-01 .
B1681	PATS Transceiver Module Signal Is Not Received	ICM	REFER to Section 419-01B .
B1689	Autolamp Delay Circuit Failure	ICM	REFER to Section 417-01 .
B1875	Turn Signal / Hazard Switch Signal Circuit Failure	ICM	REFER to Section 417-01 .
B2103	Antenna Not Connected	ICM	REFER to Section 419-01B .
B2139	Data Mismatch (Receive Data Does Not Match What Was Expected)	ICM	REFER to Section 419-01A .

B2141	NVM Configuration Failure	ICM	REFER to Section 418-01 .
B2143	NVM Memory Failure	ICM	REFER to Section 413-01 .
B2162	Data Mismatch #2 (receive data does not match what was expected)	ICM	REFER to Section 419-01B .
B2328	Column Reach Feedback Potentiometer Circuit Failure	ICM	REFER to Section 211-04 .
B2332	Column Tilt Feedback Potentiometer Circuit Failure	ICM	REFER to Section 211-04 .
B2351	Steering Column Switch Circuit Failure	ICM	REFER to Section 211-04 .
B2431	Transponder Programming Failed	ICM	REFER to Section 419-01A .
B2472	Fog Lamp Switch Failure	ICM	REFER to Section 417-01 .
B2477	Module Configuration Failure	ICM	REFER to Section 418-01 .
U1041	SCP (J1850) Invalid or Missing Data for Vehicle Speed	ABS	CARRY OUT the ABS self-test.
U1059	SCP (J1850) Invalid or Missing Data for Transmission/ Transaxle/PRNDL	PCM	CARRY out the PCM self-test.
U1073	SCP (J1850) Invalid or Missing Data for Engine Coolant Fluid Temperature	PCM	CARRY OUT the PCM self-test.
U1123	SCP (J1850) Invalid or Missing Data for Odometer Rolling Count	ABS	CARRY OUT the ABS self-test.
U1131	SCP (J1850) Invalid or Missing Data for Fuel System	ICM	REFER to Section 413-01 .
U1147	SCP (J1850) Invalid or Missing Data for Vehicle Security System	PCM	CARRY OUT the PCM self-test.

Instrument Cluster Parameter Identification (PID) Index

Instrument Cluster Parameter Identification (PID) Index

PID	Description	Expected Value
ABCHIME	Air Bag Chime	OFF, ON
ANTISCN	Anti-Scan Function	DISABL, ENABLE
ASWSTAT	Autolamp Switch Input Status	1 KEY, 2 KEY, 3 KEY, 4 KEY, 5 KEY, 6 KEY, 7 KEY, 8 KEY, 9 KEY, 0 KEY, NO KEY
CCNT	Number Of Continuous DTCs In Module	one count per bit
D_SBELT	Driver Seat Belt	OUT, IN
DSWSTAT	Dimmer Switch Input Status	ON, LVL1, LVL2, LVL3, LVL4, LVL5, LVL6, LVL7, LVL8, LVL9, LVL10, LVL11, LVL12, LVL13, LVL14, LVL15, LVL16, LVL17, LVL18, LVL19, LVL20, LVL21, ?
ENABL_S	Vehicle Enable Status	DISABL, ENABLE
HEAD_L	Headlamp Switch Input Status	OFF, PARK, HEADLP, R_FOG, INVLD, ?
HIBEAM	High Beam Switch Input Status	OFF, HIGH, PASS, INVLD, ?
HORN_SW	Horn Input Switch	OFF, ON
IGN_A	Ignition Switch -ACCY Position	NO, YES
IGN_KEY	Ignition Key In / Out	OUT, IN
IGN_O/U	Ignition Switch -OFF/Unlock Position	NO, YES
IGN_R	Ignition Switch -RUN Position	NO, YES
IGN_S	Ignition Switch -START Position	NO, YES
LIGHTSN	Night(True) / Day(False)	NO, YES
M_KEY	Master Key Present	notPRE, PRESENT
NUMKEYS	Number Of Keys Stored In Module	one count per bit
PCM_ID	PCM ID Status	notSTR, STORED
PCM_VFY	PCM Verify OK	NO, YES
RESETSW	Reset Switch	OFF, ON
SELECT	Select/Mode Switch	OFF, ON
TILT	Steering Column Tilt Switch	SHORT, UP, DOWN, OFF
TELEPOS	Telescope Position Sensor	notSEN, SENSED
TELESCP	Steering Column Telescope Switch	SHORT, IN, OUT, OFF
TILTPOS	Tilt Position Sensor	notSEN, SENSED
TR_PARK	Transmission Select Lever In Park Pos	NO, YES

Instrument Cluster Active Command Index

Instrument Cluster Active Command Index

Active Command	Display	Action
ANTI-THEFT INDICATOR LAMP	THEFT_LAMP	OFF, ON
DISPLAY DIMMING CONTROL	ILLUMINAT	OFF, ON
DISPLAY SEGMENT CONTROL II	SEGMENTS	OFF, ON
ENGINE COOLANT GAUGE CONTROL	ENGCOOLNT	0%-100%

FUEL GAUGE CONTROL	FUELLEVEL	0%-100%
MEMORY SELECT CONTROL	MEMORY 1	OFF, ON
MEMORY SELECT CONTROL	MEMORY 2	OFF, ON
PRNDL DISPLAY CONTROL COMMAND	SEGMENTS	OFF, ON
RF_SIGNAL	RF	OFF, ON
SPEEDOMETER CONTROL	SPDOMETER	0%-100%
TACHOMETER CONTROL	TCHOMETER	0%-100%
WARNING LAMPS AND CHIME	ALL_LAMPS	OFF, ON
WARNING LAMPS AND CHIME	CHIME	OFF, ON

Symptom Chart

Symptom Chart

Condition	Possible Sources	Action
<ul style="list-style-type: none"> No communication with front electronic module (FEM) 	<ul style="list-style-type: none"> BJB Fuses 425 (40A) and 422 (20A). Circuitry. J1850 communication network (SCP). FEM. 	<ul style="list-style-type: none"> GO to Pinpoint Test A.
<ul style="list-style-type: none"> No communication with the instrument cluster module 	<ul style="list-style-type: none"> Circuitry. CJB Fuses 202 (5A), 213 (5A), 217 (5A), 220 (10A). J1850 communication network (SCP). Instrument cluster. 	<ul style="list-style-type: none"> GO to Pinpoint Test B.
<ul style="list-style-type: none"> The horn does not sound 	<ul style="list-style-type: none"> BJB Fuse 104 (15A). Circuitry. Horn relay. Horn switch. Horn. FEM. Instrument cluster. 	<ul style="list-style-type: none"> GO to Pinpoint Test C.
<ul style="list-style-type: none"> The horn sounds continuously 	<ul style="list-style-type: none"> Instrument cluster. Horn relay. Circuitry. Horn switch. FEM. 	<ul style="list-style-type: none"> GO to Pinpoint Test D.

Pinpoint Tests

PINPOINT TEST A: NO COMMUNICATION WITH THE FRONT ELECTRONIC MODULE (FEM)

CONDITIONS	DETAILS/RESULTS/ACTIONS
<p>A1 CHECK CIRCUITS 29-DK20 (OG/GN) AND 29S-DK22 (OG/YE) FOR VOLTAGE</p> <p>NOTE: Cycle ignition switch from OFF to RUN to enable the switched system power feature.</p>	
<p>1 </p> <p>2 </p> <p>FEM C201c</p> <p>3 </p> <p>FEM C201f</p> <p>4 </p> <p>5 </p> <p>A0006297</p>	<p>5 Measure the voltage between FEM C201c pin 6, circuit 29-DK20 (OG/GN), harness side and ground; and between FEM C201f pin 1, circuit 29S-DK22 (OG/YE) harness side and ground.</p> <ul style="list-style-type: none"> Are the voltages greater than 10 volts? <p>→ Yes</p>

GO to [A2](#).

→ **No**
REPAIR the circuit(s) in question. TEST the system for normal operation.

A2 CHECK CIRCUITS 31-DK20 (BK/RD), 31-DK20A (BK/RD), 31-DK20B (BK/RD), 31-DK20C (BK/RD) AND 31-DK20D (BK/RD) FOR OPENS

1

2

3

3 Using the following table, measure the resistance between FEM connectors, harness side and ground:

FEM	Pin	Circuit
C201c	12	31-DK20 (BK/RD)
C201a	11	31-DK20A (BK/RD)
C201a	13	31-DK20B (BK/RD)
C201a	14	31-DK20C (BK/RD)
C201a	15	31-DK20D (BK/RD)

- Is the resistance less than 5 ohms?

→ **Yes**
REFER to [Section 418-00](#).

→ **No**
REPAIR the circuit(s) in question. TEST the system for normal operation.

PINPOINT TEST B: NO COMMUNICATION WITH THE INSTRUMENT CLUSTER

CONDITIONS	DETAILS/RESULTS/ACTIONS						
B1 CHECK HOT AT ALL TIMES POWER SUPPLY CIRCUIT							
<p>1 </p> <p>2 </p> <p>3 </p>	<p>3 Measure the voltage between instrument cluster C220b pin 3, circuit 29-GG11 (OG/BU), harness side and ground.</p> <ul style="list-style-type: none"> • Is the voltage greater than 10 volts? <p>→ Yes GO to B2.</p> <p>→ No REPAIR the circuit. TEST the system for normal operation.</p>						
B2 CHECK HOT IN RUN POWER SUPPLY CIRCUITS							
<p>1 </p> <p>2</p>	<p>2 Measure the voltage between the instrument cluster and ground as follows:</p> <table border="1"> <thead> <tr> <th>Connector Pin</th> <th>Circuit</th> </tr> </thead> <tbody> <tr> <td>C220a pin 11</td> <td>15-JA14 (GN/BK)</td> </tr> <tr> <td>C220b pin 6</td> <td>15-GG14 (GN/RD)</td> </tr> </tbody> </table>	Connector Pin	Circuit	C220a pin 11	15-JA14 (GN/BK)	C220b pin 6	15-GG14 (GN/RD)
Connector Pin	Circuit						
C220a pin 11	15-JA14 (GN/BK)						
C220b pin 6	15-GG14 (GN/RD)						

C220b pin 17	75-GG15 (YE/GN)
--------------	-----------------

• Are the voltages greater than 10 volts?

→ **Yes**
GO to [B3](#).

→ **No**
REPAIR the circuit(s). TEST the system for normal operation.

B3 CHECK GROUND CIRCUITS

1

2 Measure the resistance between the instrument cluster and ground as follows:

Connector Pin	Circuit
C220a pin 6	31-AL11 (BK)
C220b pin 13	91-GG11 (BN/RD)



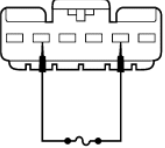

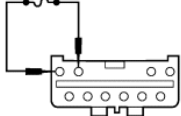


• Are the resistances less than 5 ohms?

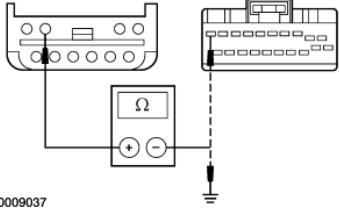
→ **Yes**
REFER to [Section 418-00](#).

→ **No**
REPAIR the circuit(s). TEST the system for normal operation.

PINPOINT TEST C: THE HORN DOES NOT SOUND

CONDITIONS	DETAILS/RESULTS/ACTIONS
C1 CHECK HORN INPUT PID FROM THE INSTRUMENT CLUSTER	
<p>1</p> <p style="text-align: center;">Diagnostic Tool</p> <p>2</p> <p>3</p>	<p>4 Monitor the ICM PID HORN_SW while depressing and releasing the horn switch.</p> <p>• Does the PID indicate ON with the horn switch depressed and OFF with the horn switch released?</p> <p>→ Yes GO to C6.</p> <p>→ No GO to C2.</p>
C2 INITIATE THE HORN CONTROL ACTIVE COMMAND	
	<p>1 Trigger the ICM active command HORN CONTROL.</p> <p>• Does the horn sound?</p> <p>→ Yes GO to C3.</p>

	<p>→ No INSTALL a new instrument cluster. REFER to Section 413-01. CLEAR the DTCs. REPEAT the self-test.</p>
<p>C3 CHECK THE OPERATION OF THE HORN SWITCH</p>	
<p>1 </p> <p>3 </p> <p>Horn Switch Connector</p> <p>4 </p> <p>A0003816</p>	<p>2 Deactivate the air bag system; refer to Section 501-20B.</p> <p>4 Connect a fused (5A) jumper wire between the horn switch connector pin 2, harness side and the horn switch connector pin 5, harness side.</p> <p>• Does the horn sound?</p> <p>→ Yes INSTALL a new horn switch. REFER to Horn—Switch. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No GO to C4.</p>
<p>C4 CHECK THE OPERATION OF THE AIR BAG SLIDING CONTACT</p>	
<p>1 </p> <p>Air Bag Sliding Contact C218</p> <p>2 </p> <p>A0003817</p>	<p>2 Connect a fused (5A) jumper wire between air bag sliding contact C218 pin 9, circuit 10-GJ9 (GY/OG), harness side and air bag sliding contact C218 pin 10, circuit 64-LK18 (BU/RD), harness side.</p> <p>• Does the horn sound?</p> <p>→ Yes INSTALL a new air bag sliding contact. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No GO to C5.</p>
<p>C5 CHECK CIRCUIT 10-GJ9 (GY/OG) FOR AN OPEN</p>	
<p>1 </p> <p>Instrument Cluster C220b</p> <p>2 </p> <p>Air Bag Sliding Contact C218</p> <p>3</p>	<p>3 Measure the resistance between instrument cluster C220b pin 10, circuit 10-GJ9 (GY/OG), harness side and air bag sliding contact C218 pin 9, circuit 10-GJ9 (GY/OG), harness side; and between air bag sliding contact C218 pin 9, circuit 10-GJ9 (GY/OG), harness side and ground.</p>



A0009037


- Is the resistance less than 5 ohms between the instrument cluster and the air bag sliding contact; and greater than 10,000 ohms between the air bag sliding contact and ground?

→ **Yes**
REPAIR circuit 64-LK18 for a short to ground or an open. CLEAR the DTCs. REPEAT the self-test.


→ **No**
REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

C6 CHECK THE OPERATION OF THE HORN RELAY

1



2



Horn Relay C1006

3

Carry out the relay component test. Refer to Wiring Diagrams Section 700-09, Component Testing.


- Is the relay OK?

→ **Yes**
GO to [C7](#).

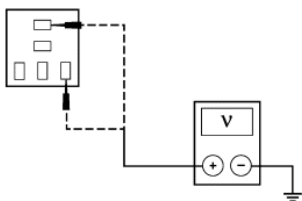
→ **No**
INSTALL a new horn relay. CLEAR the DTCs. REPEAT the self-test.

C7 CHECK CIRCUITS 30-GJ7A (RD/BU) AND 30-GJ7B (RD/BU) FOR AN OPEN

1



2



A0003390

2

Measure the voltage between horn relay C1006 pin 3, circuit 30-GJ7A, harness side and ground; and between horn relay C1006 pin 2, circuit 30-GJ7B (RD/BU), harness side and ground.


- Are the voltages greater than 10 volts?

→ **Yes**
GO to [C8](#).

→ **No**
REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.

C8 CHECK THE HORN OPERATION

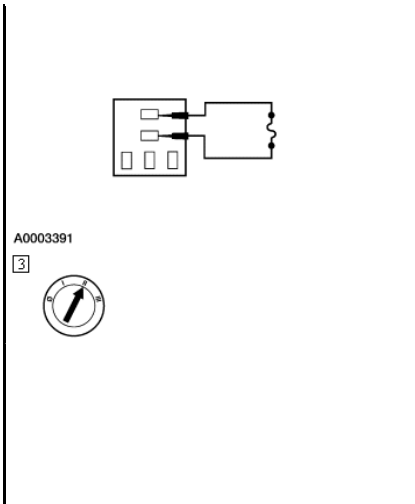
1



2

2

Connect a fused (5A) jumper wire between horn relay C1006 pin 5, circuit 30S-GJ6 (RD/YE), harness side and the horn relay C1006 pin 3, circuit 30-GJ7A (RD/BU), harness side.

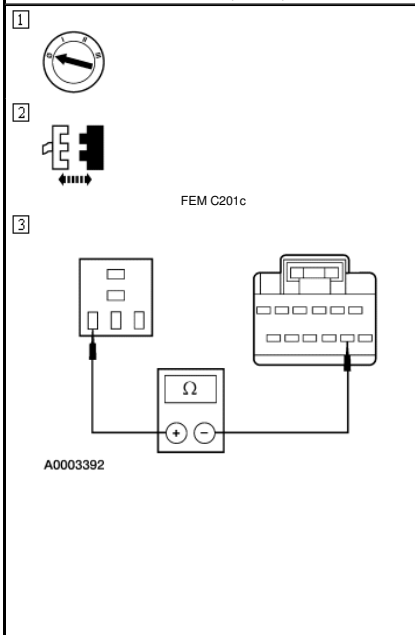


• Does the horn sound?

→ Yes
GO to [C9](#).

→ No
GO to [C10](#).

C9 CHECK CIRCUIT 91S-GJ7 (BN/RD) FOR AN OPEN



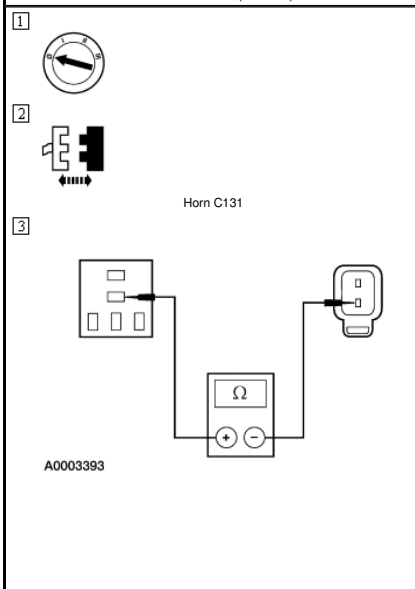
3 Measure the resistance between horn relay C1006 pin 1, circuit 91S-GJ7 (BN/RD), harness side and FEM C201c pin 8, circuit 91S-GJ7 (BN/RD), harness side.

• Is the resistance less than 5 ohms?

→ Yes
INSTALL a new FEM. REFER to [Section 419-10](#). CLEAR the DTCs. REPEAT the self-test.

→ No
REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

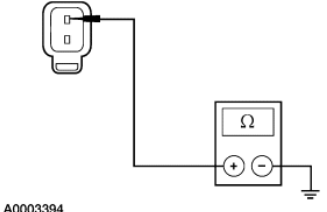
C10 CHECK CIRCUIT 30S-GJ6 (RD/YE) FOR AN OPEN









3 Measure the resistance between horn relay C1006 pin 5, circuit 30S-GJ6 (RD/YE), harness side and horn C131 pin 1, circuit 30S-GJ6 (RD/YE), harness side.



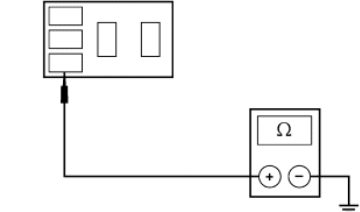

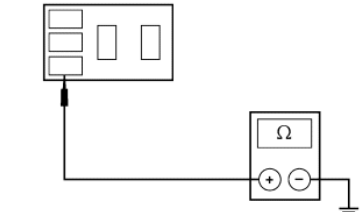
• Is the resistance less than 5 ohms?

→ Yes
GO to [C11](#).

		→ No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
C11 CHECK CIRCUIT 31-GJ6 (BK/YE) FOR AN OPEN		
<p>1</p>  <p>A0003394</p>	<p>1 Measure the resistance between horn C131 pin 2, circuit 31-GJ6 (BK/YE), harness side and ground.</p> <ul style="list-style-type: none"> • Is the resistance less than 5 ohms? <p>→ Yes INSTALL a new horn. REFER to Horn. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>	

PINPOINT TEST D: THE HORN SOUNDS CONTINUOUSLY

CONDITIONS	DETAILS/RESULTS/ACTIONS
D1 CHECK HORN INPUT PID FROM THE INSTRUMENT CLUSTER	
<p>1</p>  <p>Diagnostic Tool</p> <p>2</p>  <p>3</p>  <p>PID HORN_SW</p>	<p>4 Monitor the ICM PID HORN_SW.</p> <ul style="list-style-type: none"> • Does the PID always indicate ON? <p>→ Yes GO to D2.</p> <p>→ No GO to D5.</p>
D2 CHECK THE HORN SWITCH OPERATION	
<p>1</p>  <p>3</p>  <p>Horn Switch</p>	<p>2 Deactivate the air bag system; refer to Section 501-20B.</p> <ul style="list-style-type: none"> • Does the horn stop? <p>→ Yes INSTALL a new horn switch. REFER to Horn—Switch. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No GO to D3.</p>
D3 CHECK THE AIR BAG SLIDING CONTACT OPERATION	
<p>1</p>  <p>Air Bag Sliding Contact C218</p>	

	<ul style="list-style-type: none"> • Does the horn stop? <p>→ Yes INSTALL a new air bag sliding contact. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No GO to D4.</p>
<p>D4 CHECK THE INSTRUMENT CLUSTER OPERATION</p>	
<p>1</p>  <p>Instrument Cluster C220b</p>	<ul style="list-style-type: none"> • Does the horn stop? <p>→ Yes INSTALL a new instrument cluster. REFER to Section 413-01. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No REPAIR circuit 10-GJ9 (GY/OG) for a short to power. CLEAR the DTCs. REPEAT the self-test.</p>
<p>D5 CHECK CIRCUIT 30S-GJ6 (RD/YE) FOR A SHORT TO POWER</p>	
<p>1</p>  <p>Horn Relay C1006</p>	<ul style="list-style-type: none"> • Does the horn stop? <p>→ Yes GO to D6.</p> <p>→ No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>
<p>D6 CHECK CIRCUIT 91S-GJ7 (BK/BU) FOR A SHORT TO GROUND</p>	
<p>1</p>  <p>A0003785</p>	<p>1 Measure the resistance between horn relay C1006 pin 2, circuit 91S-GJ7 (BK/BU), harness side and ground.</p> <ul style="list-style-type: none"> • Is the resistance greater than 10,000 ohms? <p>→ Yes INSTALL a new horn relay. CLEAR the DTCs. REPEAT the self-test.</p> <p>→ No GO to D7.</p>
<p>D7 CHECK CIRCUIT 91S-GJ7 (BK/BU) AND THE FEM FOR A SHORT TO GROUND</p>	
<p>1</p>  <p>FEM C201c</p> <p>2</p>  <p>A0003785</p>	<p>2 Measure the resistance between horn relay C1006 pin 2, circuit 91S-GJ7 (BK/BU), harness side and ground.</p> <ul style="list-style-type: none"> • Is the resistance greater than 10,000 ohms? <p>→ Yes INSTALL a new FEM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test.</p>

→ **No**
REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
