

Horn

DTC Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

BCM DTC Chart

DTC	Description	Actions
B1323:11	Horn Switch: Circuit Short To Ground	GO to Pinpoint Test B
B1C55:12	Horn Relay: Circuit Short to Battery	GO to Pinpoint Test A
B1C55:14	Horn Relay: Circuit Short to Ground or Open	- If the horns are inoperative, GO to Pinpoint Test A - If the horns are always on, GO to Pinpoint Test B

Symptom Chart

Symptom Chart: Horn

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

Symptom Chart

Condition	Possible Sources	Actions
Both horns are inoperative	Refer to Pinpoint Test	GO to Pinpoint Test A
An individual horn is inoperative	Horn assembly	Install a new horn assembly. REFER to: Horn (413-06 Horn, Removal and Installation).
The horns are always on	Refer to Pinpoint Test	GO to Pinpoint Test B

Pinpoint Tests

The Horns Are Inoperative

Refer to Wiring Diagrams Cell [44](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Horn - System Operation and Component Description (413-06 Horn, Description and Operation).

BCM DTC Chart

DTC	Description	Fault Trigger Condition
B1C55:12	Horn Relay: Circuit Short to Battery	Sets when the BCM detects a short to voltage from the horn relay control circuit. The BCM disables the horn when this DTC is set.

DTC	Description	Fault Trigger Condition
B1C55:14	Horn Relay: Circuit Short to Ground or Open	Sets when the BCM detects an open from the horn relay control circuit.

Possible Causes

- Fuse
- Wiring, terminals or connectors
- Clockspring
- Horn
- Horn relay
- Driver airbag
- Steering wheel
- SCCM
- BCM

Visual Inspection and Diagnostic Pre-checks

Verify the BJB fuse 15 (20A) is OK.

PINPOINT TEST A : THE HORNS ARE INOPERATIVE

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

NOTICE: The following pinpoint test uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250-300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

A1 CHECK THE BCM (BODY CONTROL MODULE) OUTPUT BY ACTIVATING THE BCM (BODY CONTROL MODULE) HORN_RELAY PID (PARAMETER IDENTIFICATION)

- Ignition ON.
- Using a diagnostic scan tool, view the BCM Parameter Identifications (PIDs).
- Select the active command BCM HORN_RELAY PID and command the horn ON and then OFF.

Do the horns sound when commanded ON?

Yes	GO to A9
No	GO to A2

A2 CHECK THE HORN RELAY

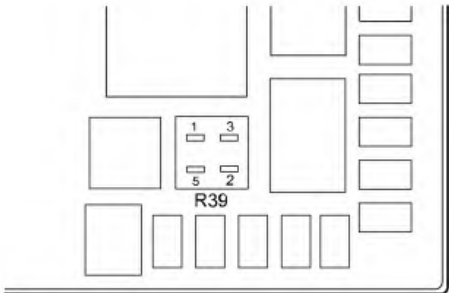
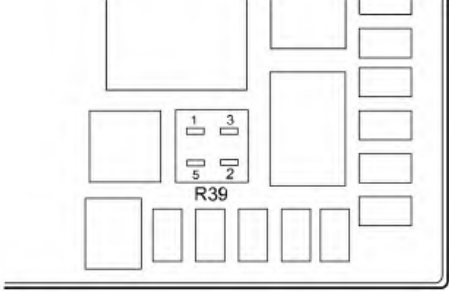
- Ignition OFF.
- Disconnect Horn Relay.
- Install a known good relay.
- Ignition ON.
- Select the active command BCM HORN_RELAY PID and command the horn ON and then OFF.

Does the horn sound when commanded?

Yes	REMOVE the known good relay. INSTALL a new horn relay.
No	REMOVE the known good relay. GO to A3

A3 CHECK THE HORN RELAY VOLTAGE SUPPLY CIRCUITS FOR AN OPEN

- Ignition OFF.
- Connect:

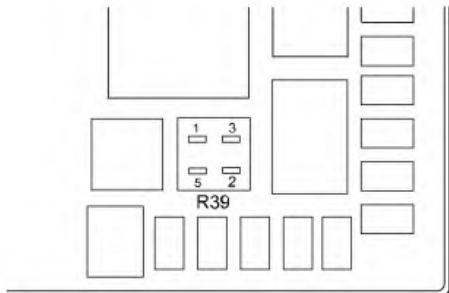
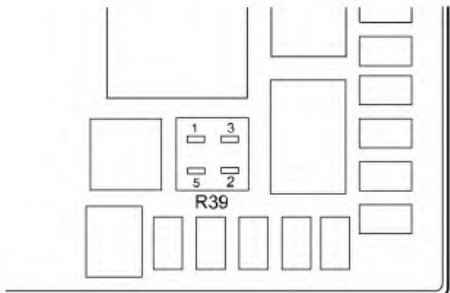
Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 1		Ground
 E205601 Horn relay, cavity 3		Ground

Does the test lamp illuminate when connected?

Yes	GO to A4
No	VERIFY BJB fuse 15 (20A) is OK. If OK, REPAIR the circuit in question. If not OK, REFER to the Wiring Diagrams to identify the possible causes of the circuit short.

A4 CHECK THE HORN RELAY OUTPUT

- Connect:

Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 3		 E205601 Horn relay, cavity 5

- Remove the fused jumper wire.

Do the horns sound when the jumper wire is connected?

Yes	GO to A7
No	GO to A5

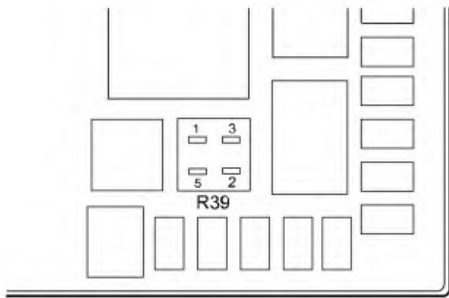
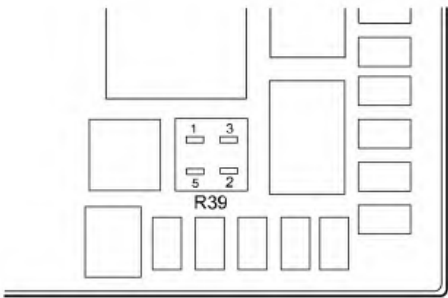
A5 CHECK THE HORN VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Disconnect Horn [C131](#) .
- Connect:

HORN	
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Positive Lead	Measurement / Action	Negative Lead
C131-2		Ground

- Connect:

Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 3		 E205601 Horn relay, cavity 5

- Remove the fused jumper wire.

Does the test lamp illuminate when the jumper wire is connected?

Yes	GO to A6
No	REPAIR the circuit.

A6 CHECK THE HORN GROUND CIRCUIT FOR AN OPEN

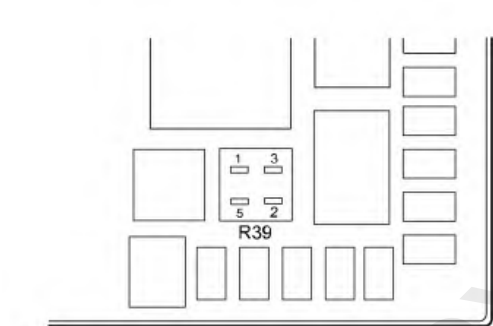
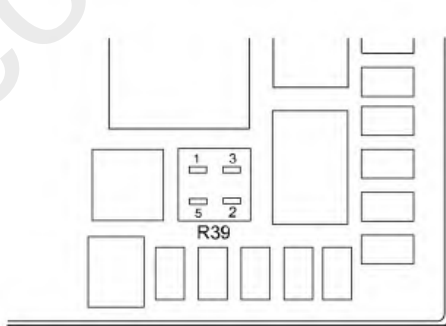
NOTICE: The following step uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250-300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

- Connect:

HORN

Positive Lead	Measurement / Action	Negative Lead
C131-2		C131-1

- Connect:

Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 3		 E205601 Horn relay, cavity 5

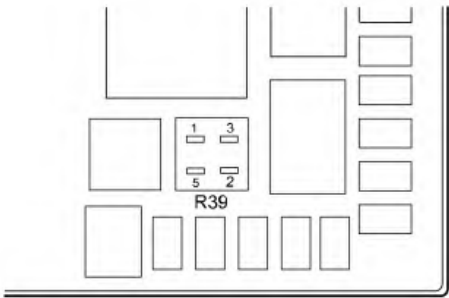
- Remove the fused jumper wire.

Does the test lamp illuminate when the jumper wire is connected?

Yes	INSTALL a new horn assembly. REFER to: Horn (413-06 Horn, Removal and Installation).
No	REPAIR the circuit.

A7 CHECK THE HORN RELAY COIL CONTROL CIRCUIT FOR A SHORT TO VOLTAGE

- Disconnect BCM [C2280F](#) .
- Ignition ON.
- Measure:

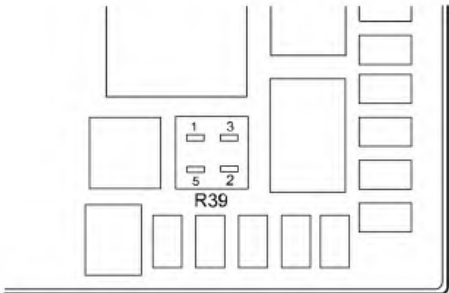
Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 2		Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to A8

A8 CHECK THE HORN RELAY CONTROL CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

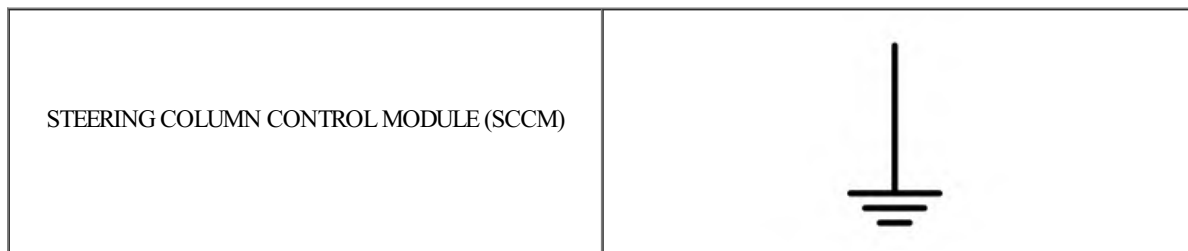
Positive Lead	Measurement / Action	Negative Lead
 E205601 Horn relay, cavity 2	Ω	C2280F-20

Is the resistance less than 3 ohms?

Yes	GO to A15
No	REPAIR the circuit.

A9 CHECK THE BCM (BODY CONTROL MODULE) HORN SWITCH INPUT

- Ignition OFF.
- Disconnect SCCM [C226A](#) (vehicles not equipped with adaptive steering).
- Disconnect Clockspring [C218A](#) (vehicles equipped with adaptive steering).
- For vehicles not equipped with adaptive steering, connect:



Positive Lead	Measurement / Action	Negative Lead
C226A-1		Ground

- For vehicles equipped with adaptive steering, connect:



Positive Lead	Measurement / Action	Negative Lead
C218A-5		Ground

- Remove the fused jumper wire.

Do the horns sound when the jumper wire is connected?

Yes	GO to A11
No	GO to A10

A10 CHECK THE BCM (BODY CONTROL MODULE) HORN SWITCH INPUT CIRCUIT FOR AN OPEN

- Disconnect BCM [C2280B](#).
- For vehicles not equipped with adaptive steering, measure:

BODY CONTROL MODULE (BCM)	STEERING COLUMN CONTROL MODULE (SCCM)
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Positive Lead	Measurement / Action	Negative Lead
C2280B-18	Ω	C226A-1

- For vehicles equipped with adaptive steering, measure:

BODY CONTROL MODULE (BCM)	CLOCKSPRING
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Positive Lead	Measurement / Action	Negative Lead
C2280B-18	Ω	C218A-5

Is the resistance less than 3 ohms?

Yes	GO to A15
No	REPAIR the circuit.

A11 CHECK THE CLOCKSPRING GROUND CIRCUIT FOR AN OPEN

- Disconnect Clockspring [C218A](#) .
- For vehicles not equipped with adaptive steering, measure:

CLOCKSPRING	
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Positive Lead	Measurement / Action	Negative Lead
C218A-8	Ω	Ground

- For vehicles equipped with adaptive steering, measure:

CLOCKSPRING	
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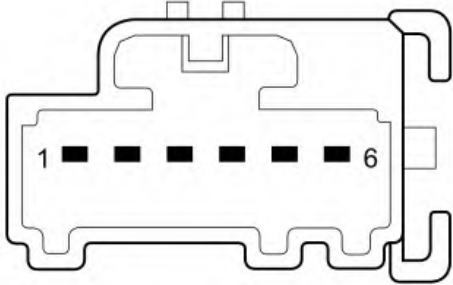
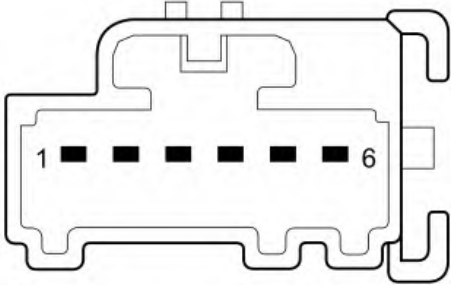
Positive Lead	Measurement / Action	Negative Lead
C218A-6	Ω	Ground

Is the resistance less than 3 ohms?

Yes	For vehicles not equipped with adaptive steering, GO to A13 For vehicles equipped with adaptive steering, GO to A12
No	REPAIR the circuit.

A12 CHECK THE CLOCKSPRING INTEGRITY (VEHICLES EQUIPPED WITH ADAPTIVE STEERING)

- Remove the clockspring.
REFER to: Clockspring - Vehicles With: Adaptive Steering (501-20B Supplemental Restraint System, Removal and Installation).
- Connect Clockspring [C218A](#).
- Connect:

Positive Lead	Measurement / Action	Negative Lead
 E236543 Clockspring C218E, pin 1, component side		 E236543 Clockspring C218E, pin 4, component side

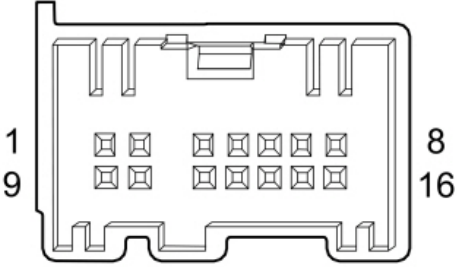
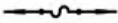
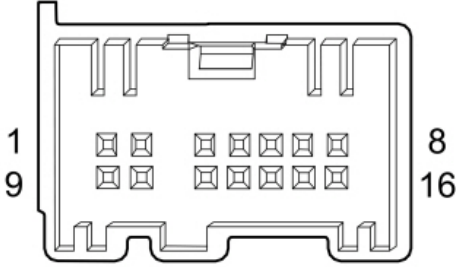
- Remove the fused jumper wire.

Do the horns sound when the jumper wire is connected?

Yes	INSTALL a new steering wheel (includes steering wheel wiring harness). REFER to: Steering Wheel - Vehicles With: Adaptive Steering (211-04 Steering Column, Removal and Installation).
No	INSTALL a new clockspring. REFER to: Clockspring - Vehicles With: Adaptive Steering (501-20B Supplemental Restraint System, Removal and Installation).

A13 CHECK THE CLOCKSPrING INTEGRITY (VEHICLES NOT EQUIPPED WITH ADAPTIVE STEERING)

- Remove the driver airbag.
REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation).
- Disconnect Clockspring [C218B](#) .
- Connect Clockspring [C218A](#) .
- Connect SCCM [C2414A](#) .
- Connect:

Positive Lead	Measurement / Action	Negative Lead
 E190425 Clockspring C218B, pin 4, component side		 E190425 Clockspring C218B, pin 1, component side

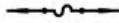
- Remove the fused jumper wire.

Do the horns sound when the jumper wire is connected?

Yes	GO to A14
No	INSTALL a new clockspring. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation). TEST the system for normal operation. If the horn is still inoperative, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).

A14 ISOLATE THE HORN SWITCH

- Connect Clockspring [C218B](#).
- Connect:

Positive Lead	Measurement / Action	Negative Lead
C217-1		C217-2

- Remove the fused jumper wire.

Do the horns sound when the jumper wire is connected?

Yes	INSTALL a new driver airbag (includes horn switch). REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation).
No	INSTALL a new steering wheel (includes steering wheel wiring harness). REFER to: Steering Wheel (211-04 Steering Column, Removal and Installation).

A15 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect the BCM connectors.
- Repair:
 - corrosion (install new connector or terminals â€ clean module pins)
 - damaged or bent pins â€ install new terminals/pins
 - pushed-out pins â€ install new pins as necessary
- Install the horn relay (if previously removed).
- Connect Horn [C131](#).
- Reconnect the BCM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, Click here to access Guided Routine (BCM) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

The Horns Are Always On

Refer to Wiring Diagrams Cell [44](#) for schematic and connector information.

Normal Operation and Fault Conditions

BCM DTC Chart

DTC	Description	Fault Trigger Condition
B1323:11	Horn Switch: Circuit Short to Ground	Sets when the BCM detects a short to ground from the horn request input circuit.
B1C55:14	Horn Relay: Circuit Short to Ground or Open	Sets when the BCM detects a short to ground from the horn relay control circuit.

Possible Causes

- Wiring, terminals or connectors
- Clockspring
- Horn
- Horn relay
- Driver airbag
- Steering wheel
- SCCM
- BCM

PINPOINT TEST B : THE HORNS ARE ALWAYS ON

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.	
NOTICE: The following pinpoint test uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250-300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.	
B1 CHECK THE HORN VOLTAGE SUPPLY CIRCUIT FOR A SHORT TO VOLTAGE	
• Ignition OFF. • Disconnect Horn Relay.	
Do the horns continue to sound?	
Yes	REPAIR the circuit.
No	GO to B2
B2 CHECK THE HORN RELAY	
• Install a known good relay.	
Do the horns continue to sound?	
Yes	REMOVE the known good relay. GO to B3
No	REMOVE the known good relay. INSTALL a new horn relay.
B3 MONITOR THE BCM (BODY CONTROL MODULE) HORN_SW PID (PARAMETER IDENTIFICATION) FOR A SHORTED INPUT	

- Ignition ON.
- Using a diagnostic scan tool, view the BCM Parameter Identifications (PIDs).
- Monitor the BCM HORN_SW PID.

Does the PID status display OFF?

Yes	GO to B4
No	GO to B5

B4 CHECK THE HORN RELAY CONTROL CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect BCM [C2280F](#) .
- Connect Horn Relay.

Does the horn continue to sound?

Yes	REMOVE the horn relay. REPAIR the circuit.
No	GO to B10

B5 ISOLATE THE BCM (BODY CONTROL MODULE) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect BCM [C2280B](#) .
- Connect Horn Relay.

Does the horn continue to sound?

Yes	GO to B10
No	GO to B6

B6 CHECK THE HORN SWITCH INPUT CIRCUIT TO THE BCM (BODY CONTROL MODULE) FOR A SHORT TO GROUND

- Disconnect SCCM [C226A](#) (vehicles not equipped with adaptive steering).
- Disconnect Clockspring [C218A](#) (vehicles equipped with adaptive steering).
- Connect BCM [C2280B](#) .

Does the horn continue to sound?

Yes	REPAIR the circuit.
No	For vehicles not equipped with adaptive steering, GO to B8 For vehicles equipped with adaptive steering, GO to B7

B7 CHECK THE CLOCKSPRING FOR A SHORT TO GROUND (VEHICLES EQUIPPED WITH ADAPTIVE STEERING)

- Remove the clockspring.
REFER to: Clockspring - Vehicles With: Adaptive Steering (501-20B Supplemental Restraint System, Removal and Installation).
- Connect Clockspring [C218A](#).

Does the horn continue to sound?

Yes	INSTALL a new clockspring. REFER to: Clockspring - Vehicles With: Adaptive Steering (501-20B Supplemental Restraint System, Removal and Installation).
No	INSTALL a new steering wheel (includes steering wheel wiring harness). REFER to: Steering Wheel - Vehicles With: Adaptive Steering (211-04 Steering Column, Removal and Installation).

B8 CHECK THE CLOCKSPRING FOR A SHORT TO GROUND (VEHICLES NOT EQUIPPED WITH ADAPTIVE STEERING)

- Remove the driver airbag.
REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation).
- Disconnect Clockspring [C218B](#).
- Connect SCCM [C226A](#).

Does the horn continue to sound?

Yes	INSTALL a new clockspring. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation). TEST the system for normal operation. If the horn is still inoperative, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).
No	GO to B9

B9 ISOLATE THE HORN SWITCH

- Connect Clockspring [C218B](#).
- Disconnect Horn Switch [C217](#).

Does the horn continue to sound?

Yes	INSTALL a new steering wheel (includes steering wheel wiring harness). REFER to: Steering Wheel (211-04 Steering Column, Removal and Installation).
No	INSTALL a new driver airbag (includes horn switch). REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation).

B10 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect the BCM connectors.
- Repair:
 - corrosion (install new connector or terminals & clean module pins)
 - damaged or bent pins & install new terminals/pins
 - pushed-out pins & install new pins as necessary
- Reconnect the BCM connectors. Make sure they seat and latch correctly.
- Connect Horn [C131](#).
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, Click here to access Guided Routine (BCM) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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