

Direct Current/Direct Current (DC/DC) Converter Control Module

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).

Direct Current/Direct Current (DC/DC) Converter Control Module DTC Chart

DTC	Description	Action
P0A12:11	DC/DC Converter Enable Circuit Low: Circuit Short To Ground	GO to Pinpoint Test A
P1661:13	Output Circuit Check Circuit Low: Circuit Open	This DTC is informational only and sets during a self test if the output current is less than 2 amps. DIAGNOSE all other Direct Current/Direct Current (DC/DC) Diagnostic Trouble Codes (DTCs) first. If no other Diagnostic Trouble Codes (DTCs) are present check for pushed out pins, open circuits, fuses, or disconnected electrical loads that pass through the Direct Current/Direct Current (DC/DC) Converter Control Module. REFER to the Wiring Diagrams manual to identify the possible causes of the open circuits or disconnected electrical loads.
B1310:11	Run/Start Control: Circuit Short To Ground	GO to Pinpoint Test B
B1310:15	Run/Start Control: Circuit Short To Battery or Open	GO to Pinpoint Test C

U0100:87	Lost Communication With ECM/PCM "A": Missing Message	GO to Pinpoint Test E
U1000:00	Solid State Driver Protection Active - Driver Disabled: No Sub Type Information	GO to Pinpoint Test D
U2014:04	Control Module Hardware: System Internal Failure	ADDRESS all other Diagnostic Trouble Codes (DTCs) first. CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If DTC U2014:04 is retrieved again, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
U2100:00	Initial Configuration Not Complete: No Sub Type Information	This DTC will be present in a new service replacement module. CARRY OUT PMI on the Direct Current/Direct Current (DC/DC) converter control module. REFER to: Module Configuration (418-01 Module Configuration) .
U3000:49	Control Module: Internal Electronic Failure	ADDRESS all other Diagnostic Trouble Codes (DTCs) first. CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If DTC U3000:49 is retrieved again, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).

Symptom Chart

Symptom	Possible Sources	Action

• A module does not respond to the scan tool	• Fuse(s) • 12-volt battery • Module Ground • Relay • Wiring, terminals or connectors • Direct Current/ Direct Current (DC/ DC) converter control module	• Perform symptom diagnostics. REFER to: Communications Network (418-00 Module Communications Network) .
• The start/stop function is inoperative and disabled	• System operation criteria not met.	• REFER to: Starting System - System Operation and Component Description (303-06A Starting System - 2.7L EcoBoost (238kW/324PS), Description and Operation). or REFER to: Starting System - System Operation and Component Description (303-06B Starting System - 3.3L Duratec - V6, Description and Operation). or REFER to: Starting System - System Operation and Component Description (303-06C Starting System - 3.5L EcoBoost (272kW/370PS), Description and Operation). or REFER to: Starting System - System Operation

		and Component Description (303-06D Starting System - 5.0L 32V Ti-VCT, Description and Operation).
	12-volt battery	REFER to: Battery (414-01 Battery, Mounting and Cables, Diagnosis and Testing).
	- Fuse(s) - Direct Current/ Direct Current (DC/ DC) converter control module - Wiring, terminals or connectors	REFER to: Starting System (303-06A) . or REFER to: Starting System (303-06B Starting System - 3.3L Duratec - V6, Diagnosis and Testing). or REFER to: Starting System (303-06C Starting System - 3.5L EcoBoost (272kW/370PS), Diagnosis and Testing). or REFER to: Starting System (303-06D Starting System - 5.0L 32V Ti-VCT, Diagnosis and Testing).

Pinpoint Test(s)

P0A12:11

Refer to Wiring Diagrams Cell 40 for schematic and connector information.

Normal Operation and Fault Conditions

During an auto-start-stop event, the Direct Current/Direct Current (DC/DC) converter control module monitors the PCM boost enable control circuit voltage. If the PCM enable control circuit to the Direct Current/Direct Current (DC/DC) converter control module becomes shorted to ground or is low for more than 60 seconds DTC P0A12:11 sets and the Direct Current/Direct Current (DC/DC) converter control module will not boost. If the enable circuit becomes open this DTC will not set however the Direct Current/Direct Current (DC/DC) converter control module will not receive an Re-crank signal from the PCM and will not boost. For more information on the auto-start-stop system,

REFER to: [Starting System - System Operation and Component Description](#) (303-06A Starting System - 2.7L EcoBoost (238kW/324PS), Description and Operation).

or REFER to: [Starting System - System Operation and Component Description](#) (303-06B Starting System - 3.3L Duratec - V6, Description and Operation).

or REFER to: [Starting System - System Operation and Component Description](#) (303-06C Starting System - 3.5L EcoBoost (272kW/370PS), Description and Operation).

or REFER to: [Starting System - System Operation and Component Description](#) (303-06D Starting System - 5.0L 32V Ti-VCT, Description and Operation).

Diagnostic Trouble Code (DTC) Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
P0A12:11	DC/DC Converter Enable Circuit Low: Circuit Short To Ground	Sets in the Direct Current/Direct Current (DC/DC) converter control module when the DC/DC Converter Enable Circuit from the PCM is low for more than 60 seconds.

Possible Sources

- Direct Current/Direct Current (DC/DC) converter control module
- PCM
- Wiring, terminals or connectors

PINPOINT TEST A : P0A12:11

NOTE: Use the correct probe adapter(s) from the Flex Probe Kit when taking measurements. Failure to use the correct probe adapter(s) may damage the connector.

A1 CHECK DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE ENABLE CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Disconnect PCM C1232B.
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to A2

A2 CHECK DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE ENABLE CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.

Is the resistance greater than 10,000 ohms?

Yes	GO to A3
No	REPAIR the circuit.

A3 CHECK DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE ENABLE CIRCUIT FOR AN OPEN

Is the resistance less than 3 ohms?

Yes	GO to A4
No	REPAIR the circuit.

A4 PERFORM THE PCM (POWERTRAIN CONTROL MODULE) SELF TEST

- Connect PCM C1232B.
- Connect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Ignition ON.
- Using a diagnostic scan tool, perform the PCM self-test.

Are any PCM Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC U0298:00, DIAGNOSE the network communication concern. REFER to: Communications Network (418-00 Module Communications Network) . For all other PCM Diagnostic Trouble Codes (DTCs), REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14B Electronic Engine Controls - 3.3L Duratec - V6, Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14C Electronic Engine Controls - 3.5L EcoBoost (272kW/370PS), Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14D Electronic Engine Controls - 5.0L 32V Ti-VCT, Diagnosis and Testing).
No	GO to A5

A5 CHECK DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE PCM (POWERTRAIN CONTROL MODULE) DISCONNECTED

- Disconnect PCM C1232B.
- Ignition ON.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform the Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC P0A12:11 retrieved?

Yes	GO to A6
No	GO to A7

A6 CHECK FOR CORRECT DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE OPERATION

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Inspect and 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 Direct Current/Direct Current (DC/DC) converter control module connector. Make sure it seats and latches 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, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
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.

A7 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM 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 all 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, INSTALL a new PCM. REFER to: Powertrain Control Module (PCM) (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14B Electronic Engine Controls - 3.3L Duratec - V6, Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14C Electronic Engine Controls - 3.5L EcoBoost (272kW/370PS), Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14D Electronic Engine Controls - 5.0L 32V Ti-VCT, Removal and Installation).
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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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B1310:11

Refer to Wiring Diagrams Cell 13 for schematic and connector information.

Normal Operation and Fault Conditions

The Direct Current/Direct Current (DC/DC) converter control module measures the current draw on the run/start switched output circuit. If the Direct Current/Direct Current (DC/DC) converter control module detects a short to ground or if the current draw exceeds 8 amps the DTC B1310:11 sets and the switching transistor is disabled for the current ignition cycle. A excessive number of shorts to ground or current draw events will set DTC U1000:00 and the switching transistor is disabled until it is reset using a diagnostic scan tool. Presence of this DTC may result in the blind spot detection and video camera being inoperative. The SODL and SODR are in the rear lamp assemblies.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1310:11	Run/Start Control: Circuit Short To Ground	Sets in the Direct Current/Direct Current (DC/DC) converter control module when the run/start switched output circuit is shorted to ground or when the current exceeds 8 amps.

Possible Sources

- Wiring, terminals or connectors
- Direct Current/Direct Current (DC/DC) converter control module
- HUD module
- SODL
- SODR
- Video camera

PINPOINT TEST B : B1310:11

NOTE: Use the correct probe adapter(s) from the Flex Probe Kit when taking measurements. Failure to use the correct probe adapter(s) may damage the connector.

B1 CHECK THE DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE RUN/START OUTPUT CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Disconnect LHR lamp assembly C4483.
- Disconnect RHR lamp assembly C4484.
- Disconnect Video camera C4360.

Is the resistance greater than 10,000 ohms?

Yes	GO to B2
No	REPAIR the circuit.

B2 CHECK FOR A SHORTED SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH)

- Connect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Connect LHR lamp assembly C4483.
- Ignition ON.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC B1310:11 present?

Yes	INSTALL a new LHR lamp assembly. REFER to: Rear Lamp Assembly (417-01 Exterior Lighting) .
No	GO to B3

B3 CHECK FOR A SHORTED SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH)

- Ignition OFF.
- Connect RHR lamp assembly C4484.
- Ignition ON.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC B1310:11 present?

Yes	INSTALL a new RHR lamp assembly. REFER to: Rear Lamp Assembly (417-01 Exterior Lighting) .
No	GO to B4

B4 CHECK FOR A SHORTED REAR VIDEO CAMERA

- Ignition OFF.
- Connect Video camera C4360.
- Ignition ON.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC B1310:11 present?

Yes	INSTALL a new rear video camera. REFER to: Rear Parking Aid Camera (413-13 Parking Aid - Vehicles With: Parking Aid Camera) .
No	GO to B5

B5 CHECK FOR CORRECT DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE OPERATION

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Inspect and 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 Direct Current/Direct Current (DC/DC) converter control module connector. Make sure it seats and latches 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, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
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.

B1310:15

Refer to Wiring Diagrams Cell 13 for schematic and connector information.

Normal Operation and Fault Conditions

The Direct Current/Direct Current (DC/DC) converter control module measures the current draw on the run/start switched output circuit. If the current draw is less than expected this indicates the circuit is shorted to battery or open. If a failure is present during Direct Current/Direct Current (DC/DC) converter control module initialization at key on it is disabled until the next ignition cycle. Presence of this DTC may result in the blind spot detection and video camera module being inoperative. The SODL and SODR are in the rear lamp assemblies.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1310:15	Run/Start Control: Circuit Short To Battery or Open	Sets in the Direct Current/Direct Current (DC/DC) converter control module when the run/start switched output circuit current is less than expected.

Possible Sources

- Direct Current/Direct Current (DC/DC) converter control module
- Wiring, terminals or connectors

PINPOINT TEST C : B1310:15

NOTE: Use the correct probe adapter(s) from the Flex Probe Kit when taking measurements. Failure to use the correct probe adapter(s) may damage the connector.

C1 CHECK THE DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE RUN/START CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Disconnect LHR lamp assembly C4483.
- Disconnect RHR lamp assembly C4484.
- Disconnect Video camera C4360.
- Ignition ON.

Is there any voltage present?

Yes	REPAIR the circuit.
No	GO to C2

C2 CHECK FOR AN OPEN TO THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH)

- Ignition OFF.

Is the resistance less than 3 ohms?

Yes	GO to C3
No	REPAIR the circuit.

C3 CHECK FOR AN OPEN TO THE SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH)

Is the resistance less than 3 ohms?

Yes	GO to C4
No	REPAIR the circuit.

C4 CHECK FOR AN OPEN TO THE REAR VIDEO CAMERA

Is the resistance less than 3 ohms?

Yes	GO to C5
No	REPAIR the circuit.

C5 CHECK FOR CORRECT DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE OPERATION

- Ignition OFF.
- Disconnect Direct Current/Direct Current (DC/DC) converter control module C2513.
- Inspect and 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 Direct Current/Direct Current (DC/DC) converter control module connector. Make sure it seats and latches 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, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
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.

U1000:00

Refer to Wiring Diagrams Cell 13 for schematic and connector information.

Normal Operation and Fault Conditions

The Direct Current/Direct Current (DC/DC) converter control module measures the current draw on the run/start switched output circuit on pin 5. If the Direct Current/Direct Current (DC/DC) converter control module detects a short to ground the switching transistor is disabled for the current ignition cycle. An excessive number of shorts to ground or current draw events will set DTC U1000:00 and the switching transistor will be disabled until it is reset using a diagnostic scan tool. Presence of this DTC may result in the blind spot detection and video camera being inoperative.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U1000:00	Solid State Driver Protection Active - Driver Disabled: No Sub Type Information	Sets in the Direct Current/Direct Current (DC/DC) converter control module when an excessive number of run/start control circuit short to ground events have occurred.

Possible Sources

- Wiring, terminals or connectors

- SODL
- SODR
- Video camera
- Direct Current/Direct Current (DC/DC) converter control module
- Wiring, terminals or connectors

PINPOINT TEST D : U1000:00

D1 REVIEW THE DIAGNOSTIC TROUBLE CODES (DTCS)

- Review the Diagnostic Trouble Codes (DTCs) from the Direct Current/Direct Current (DC/DC) converter control module self-test.

Are any other Diagnostic Trouble Codes (DTCs) present, besides U1000:00 or U3000:49?

Yes	REFER to the Direct Current/Direct Current (DC/DC) converter control module DTC chart in this section.
No	GO to D2

D2 REPEAT THE DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE SELF-TEST

- Ignition ON.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform the Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC U3000:49 present?

Yes	INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
No	The system is operating correctly at this time. The circuit short has been repaired.

U0100:87

Refer to Wiring Diagrams Cell 40 for schematic and connector information.

Normal Operation and Fault Conditions

The Direct Current/Direct Current (DC/DC) converter control module communicates with the PCM over a High Speed Controller Area Network (HS-CAN) to send and receive important vehicle data.

When powered on, the Direct Current/Direct Current (DC/DC) converter control module continually monitors the High Speed Controller Area Network (HS-CAN). If communication with a module is lost, a fault is detected and the Direct Current/Direct Current (DC/DC) converter control module sets the appropriate DTC.

Possible Sources

- Network traffic
- Direct Current/Direct Current (DC/DC) converter control module
- PCM

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0100:87	Lost Communication With ECM/PCM "A": Missing Message	This DTC sets if the Direct Current/ Direct Current (DC/DC) converter control module does not receive an expected message from the PCM.

PINPOINT TEST E : U0100:87

E1 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Using a diagnostic scan tool, perform a network test.

Does the PCM pass the network test?

Yes	GO to E2
No	DIAGNOSE the scan tool communication with the PCM concern. REFER to: Communications Network (418-00 Module Communications Network) .

E2 CHECK THE DIRECT CURRENT/DIRECT CURRENT (DC/DC) CONVERTER CONTROL MODULE CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform the Direct Current/Direct Current (DC/DC) converter control module self-test.
- Using a diagnostic scan tool, clear the Direct Current/Direct Current (DC/DC) converter control module Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the Direct Current/Direct Current (DC/DC) converter control module self-test.

Is DTC U0100:87 retrieved?

Yes	GO to E3
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

E3 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PCM (POWERTRAIN CONTROL MODULE)

- Using a diagnostic scan tool, perform the PCM self-test.

Is DTC P0562:00 or P0563:00 recorded?

Yes	DIAGNOSE the PCM DTC. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14B Electronic Engine Controls - 3.3L Duratec - V6, Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14C Electronic Engine Controls - 3.5L EcoBoost (272kW/370PS), Diagnosis and Testing). or REFER to: Electronic Engine Controls (303-14D Electronic Engine Controls - 5.0L 32V Ti-VCT, Diagnosis and Testing).
No	GO to E4

E4 CHECK FOR A LOST COMMUNICATION WITH THE PCM (POWERTRAIN CONTROL MODULE) IN OTHER MODULES

- Using a diagnostic scan tool, retrieve Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0100:00 or U0100:87 set in multiple modules?

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, INSTALL a new PCM. REFER to: Powertrain Control Module (PCM) (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14B Electronic Engine Controls - 3.3L Duratec - V6, Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14C Electronic Engine Controls - 3.5L EcoBoost (272kW/370PS), Removal and Installation). or REFER to: Powertrain Control Module (PCM) (303-14D Electronic Engine Controls - 5.0L 32V Ti-VCT, Removal and Installation).
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No	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, INSTALL a new Direct Current/Direct Current (DC/DC) converter control module. REFER to: Direct Current/Direct Current (DC/DC) Converter Control Module (414-05 Voltage Converter/Inverter, Removal and Installation).
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