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2011 FORD Explorer OEM Service and Repair Workshop Manual

Go to manual page

Sample

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- Wait 10 seconds.
- Using the diagnostic scan tool, perform the BCM (body control module) self-test.

Is DTC (diagnostic trouble code) U3000:49 still present?

Yes	GO to AH2

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been falsely set by the BCM (body control module) causing the signal to momentarily stop and set the DTC (diagnostic trouble code) .

AH2 INSTALL BCM (BODY CONTROL MODULE) PMI (PROGRAMMABLE MODULE INSTALLATION)

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Install BCM (body control module) As-Built data from PTS (Professional Technician System) following scan tool instructions.

Is DTC (diagnostic trouble code) U2100:00, U2101:00 and/or U2200:00 still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM (body control module) . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).

No	The system is operating correctly at this time.

PINPOINT TEST AI : BCM (BODY CONTROL MODULE) INPUT POWER VOLTAGE BELOW THRESHOLD

Refer to Wiring Diagrams Cell 13for schematic and connector information.
Refer to Wiring Diagrams Cell 10for schematic and connector information.
Normal Operation and Fault Conditions The BCM (body control module) receives voltage at all times from the BCMC (body control module C) . **DTC Fault Trigger Conditions**

Sample

- Fuse 210 (30A)

NOTE

If the BCM (body control module) ignition voltage is not present, inspect the ignition switch connector C250 or C2195.

AI1 RECHECK THE BCM (BODY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Connect the diagnostic tool.
- Using a diagnostic scan tool, clear the DTCs.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the BCM (body control module) self-test.

Is DTC (diagnostic trouble code) U3006:16, U3007:16, U3013:16 or U3014:16 still present?

Yes	GO to AI2

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to a previous low battery voltage condition.

AI2 CHECK FOR CHARGING SYSTEM DTCS SET IN OTHER MODULES

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

Are any charging system DTCs recorded?

Yes	Diagnose those DTCs first. Refer to the appropriate section in Group 414for the procedure.

No	GO to AI3

AI3 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Check the battery condition and verify the battery is fully charged.
  REFER to: Battery(414-01 Battery, Mounting and Cables, Diagnosis and Testing).

Is the battery OK and fully charged?

Sample

No	GO to AI5

AI5 CHECK THE BCM (BODY CONTROL MODULE) VOLTAGE SUPPLY CIRCUITS

- Ignition OFF.
- Disconnect BCM (body control module) C2280G .
- Disconnect BCM (body control module) C2280H .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280G-17	V	Ground
C2280G-21	V	Ground
C2280G-22	V	Ground

Positive Lead	Measurement / Action	Negative Lead
C2280H-1	V	Ground

Are the voltages within 0.2 volt of the recorded battery voltage?

Yes	GO to AI6

No	REPAIR the circuit in question for high resistance.

Sample

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM (body control module) . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).

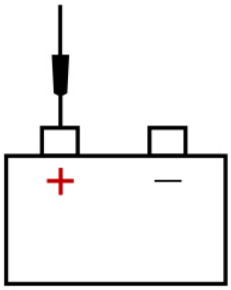
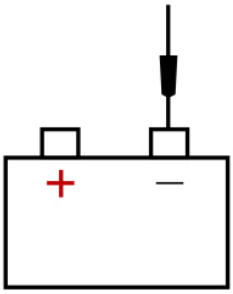
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST AJ : BCM (BODY CONTROL MODULE) INPUT POWER VOLTAGE ABOVE THRESHOLD

Refer to Wiring Diagrams Cell 13for schematic and connector information.
Refer to Wiring Diagrams Cell 10for schematic and connector information.
Normal Operation and Fault Conditions The BCM (body control module) receives voltage at all times from the BCMC (body control module C) . **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BCM (body control module) U3006:17	Control Module Input Power 'A' Circuit/Open: Circuit Voltage Above Threshold	A continuous and on-demand DTC (diagnostic trouble code) that sets in the BCM (body control module) if the BCM (body control module) detects higher than expected battery voltage on the voltage supply input circuit.
BCM (body control module) U3006:1C	Control Module Input Power 'A' Circuit/Open: Circuit Voltage Out Of Range	A continuous and on-demand DTC (diagnostic trouble code) that sets in the BCM (body control module) if the BCM (body control module) detects out of range voltage on the voltage supply input circuit.
BCM (body control module) U3007:17	Control Module Input Power 'B' Circuit/Open: Circuit Voltage Above Threshold	A continuous DTC (diagnostic trouble code) that sets in the BCM (body control module) if the BCM (body control module) detects higher than expected battery voltage on the voltage supply input circuit.

Sample

Positive Lead	Measurement / Action	Negative Lead
		

Does the battery voltage rise to 16 volts or higher?

Yes	DIAGNOSE the charging system concern. Refer to the appropriate section in Group 414for the procedure.

No	GO to AJ3

AJ3 RECHECK THE BCM (BODY CONTROL MODULE) CMDTCS

- Using a diagnostic scan tool, clear the DTCs.
- Wait 10 seconds.
- Using a diagnostic scan tool, check the BCM (body control module) CMDTCs.

Is DTC (diagnostic trouble code) U3006:17, U3006:1C, U3007:17, U3013:17 or U3014:17 present?

Yes	GO to AJ4

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been caused by module connections or may have been set previously during battery charging or while jump starting the vehicle. ADDRESS the root cause of any connector or pin issues.

AJ4 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.

Sample

Body Control Module C (BCMC)

419-10 Multifunction Electronic Modules	***2022 F-150***
Diagnosis and Testing	***Procedure revision date: 08/24/2022***

Body Control Module C (BCMC)

Diagnostic Trouble Code (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).

Diagnostic Trouble Code Chart

Module	DTC (diagnostic trouble code)	Description	Action
BCMC (body control module C)	U0121:87	Lost Communication With Anti-Lock Brake System (ABS) Control Module: Missing Message	GO to Pinpoint Test C
BCMC (body control module C)	U0122:87	Lost communication with Vehicle Dynamics Control Module: Missing Message	GO to Pinpoint Test D
BCMC (body control module C)	U0415:81	Invalid Data Received from Anti-Lock Brake System (ABS) Control Module "A": Invalid Serial Data Received	GO to Pinpoint Test C

Sample

BCMC (body control module C)	U3000:49	Control Module: Internal Electronic Failure	GO to Pinpoint Test L
BCMC (body control module C)	U3000:57	Control Module: Invalid / Incompatible Software Component	GO to Pinpoint Test L
BCMC (body control module C)	U3003:16	Battery Voltage: Circuit Voltage Below Threshold	GO to Pinpoint Test M
BCMC (body control module C)	U3003:17	Battery Voltage: Circuit Voltage Above Threshold	GO to Pinpoint Test N

Pinpoint Tests

PINPOINT TEST A : U0100:87

Refer to Wiring Diagrams Cell 14for schematic and connector information.
Normal Operation and Fault Conditions REFER to: Module Controlled Functions - System Operation and Component Description
(419-10 Multifunction Electronic Modules, Description and Operation).
DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BCMC (body control module C) U0100:87	Lost Communication With ECM/PCM 'A': Missing Message	A continuous memory DTC (diagnostic trouble code) that sets in the BCMC (body control module C) if powertrain data messages received from the PCM (powertrain control module) are missing.

Possible Sources

- Communication network concern
- Charging system concern
- PCM (powertrain control module)
- BCMC (body control module C)

Sample

- Using a diagnostic scan tool, check the BCMC (body control module C) CMDTCs.

Is DTC (diagnostic trouble code) U0100:87 retrieved again?

Yes	GO to A4

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

A4 RETRIEVE THE PCM (POWERTRAIN CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform the PCM (powertrain control module) KOEO (key on, engine off) self-test.

Are any PCM (powertrain control module) DTCs present?

Yes	DIAGNOSE and REPAIR those DTCs first. REFER to the Master DTC (diagnostic trouble code) Chart.

No	GO to A5

A5 RETRIEVE THE BCMC (BODY CONTROL MODULE C) DTCS

- Using a diagnostic scan tool, perform the BCMC (body control module C) self-test.

Are any BCMC (body control module C) DTCs present?

Yes	DIAGNOSE and REPAIR those DTCs first. REFER to the Master DTC (diagnostic trouble code) Chart.

No	GO to A6

A6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0100:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear the DTCs.
- Ignition OFF.

Sample

A8 CHECK FOR CORRECT BCMC (BODY CONTROL MODULE C) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCMC (body control module C) 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 BCMC (body control module C) 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCMC (body control module C) . REFER to: Body Control Module C (BCMC) (419-10 Multifunction Electronic Modules, 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.

PINPOINT TEST B : U0111:87

Refer to Wiring Diagrams Cell 14for schematic and connector information.

Normal Operation and Fault Conditions REFER to: Module Controlled Functions - System Operation and Component Description
(419-10 Multifunction Electronic Modules, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BCMC (body control module C) U0111:87	Lost Communication With Battery Energy Control Module 'A': Missing Message	A continuous memory DTC (diagnostic trouble code) that sets in the BCMC (body control module C) if data

Sample