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2015 FORD Mondeo Hatchback OEM Service and Repair Workshop Manual

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- Using a diagnostic scan tool, clear the BECM (battery energy control module) Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U0300:00 and/or U0312:00 retrieved?

Yes	ADDRESS all other BECM (battery energy control module) Diagnostic Trouble Codes (DTCs). REFER to the DTC (diagnostic trouble code) chart in this section. If no other BECM (battery energy control module) Diagnostic Trouble Codes (DTCs) are present, GO to AZ2

No	The concern is not present at this time.

AZ2 CHECK FOR THE CORRECT HIGH VOLTAGE BATTERY PACK

- Access the vehicle high voltage battery pack information label and record the part number.
- Compare the part number to the number listed in the parts catalog and/or vehicle build information.

Is the high voltage battery part number correct for the vehicle application?

Yes	GO to AZ3

No	INSTALL the corrrect high voltage battery pack.

AZ3 CARRY OUT A PMI (PROGRAMMABLE MODULE INSTALLATION) ON THE BECM (BATTERY ENERGY CONTROL MODULE) .

- Ignition ON.
- Using the FDRS (Ford Diagnosis and Repair System) with the latest software update perform a PMI (programmable module installation) on the BECM (battery energy control module) .
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U0300:00 and/or U0312:00 retrieved?

Yes	INSTALL a new BECM (battery energy control module) . REFER to: Battery Energy Control Module (BECM) - Electric (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).

No	The concern is not present at this time.

PINPOINT TEST BB : U0431:00

Normal Operation and Fault Conditions

When powered on, the BECM (battery energy control module) receives and monitors input messages via the HS-CAN (high-speed controller area network) . This DTC (diagnostic trouble code) sets if the HS-CAN (high-speed controller area network) message ignition status from the BCM (body control module) is invalid. This DTC (diagnostic trouble code) will not result in the MIL (malfunction indicator lamp) illuminating and will not affect vehicle operation.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BECM (battery energy control module) U0431:00	Invalid Data Received From Body Control Module 'A': No Sub Type Information	DTC (diagnostic trouble code) indicates a HS-CAN (high-speed controller area network) message from the BCM (body control module) is invalid for 5 seconds.

Possible Sources

- High network traffic
- BCM (body control module) input

BB1 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.
- Using a diagnostic scan tool, clear the BECM (battery energy control module) Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Wait 5 seconds.
- Ignition ON.
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U0431:00 present?

Yes	RETRIEVE BCM (body control module) Diagnostic Trouble Codes (DTCs). REFER to: Body Control Module (BCM)

Yes	RETRIEVE RCM (restraints control module) Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing).

No	The concern is not present at this time.

PINPOINT TEST BD : U057D:00

Normal Operation and Fault Conditions

When powered on, the BECM (battery energy control module) receives and monitors input messages via the HS-CAN (high-speed controller area network) . This DTC (diagnostic trouble code) sets if the HS-CAN (high-speed controller area network) charger input power maximum, charger ready status, voltage output, current output, and/or battery charger fault status messages from the SOBDM (secondary on-board diagnostic control module A) are invalid. This DTC (diagnostic trouble code) does not illuminate the MIL (malfunction indicator lamp) and DC (direct current) charging is terminated for the current power cycle.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BECM (battery energy control module) U057D:00	Invalid Data Received From Off-Board Charger Control Module: No Sub Type Information	DTC (diagnostic trouble code) indicates HS-CAN (high-speed controller area network) DC (direct current) charge ready status, DC (direct current) charge isolation status, EVSE power maximum, EVSE output current minimum, EVSE output current maximum, EVSE output current actual, EVSE output voltage minimum, EVSE output voltage maximum, and/or EVSE output voltage actual messages from the OBCC (Off-Board Charger Controller) are invalid for 5 seconds.

Possible Sources

- High network traffic
- OBCC (Off-Board Charger Controller) input

BD1 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.

- SOBDMC (secondary on-board diagnostic control module C) input

BE1 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.
- Using a diagnostic scan tool, clear the BECM (battery energy control module) Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Wait 5 seconds.
- Ignition ON.
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U0594:00 present?

Yes	RETRIEVE SOBDMC (secondary on-board diagnostic control module C) Diagnostic Trouble Codes (DTCs). REFER to: Rear Electric Drive Assembly (302-02 Rear Electric Drive Assembly, Diagnosis and Testing).

No	The concern is not present at this time.

PINPOINT TEST BF : U0599:00

Normal Operation and Fault Conditions

When powered on, the BECM (battery energy control module) receives and monitors input messages via the HS-CAN (high-speed controller area network) . This DTC (diagnostic trouble code) sets if the HS-CAN (high-speed controller area network) high-voltage input or high-voltage current usage message from the Direct Current/Direct Current (DC/DC) converter control module is invalid. This DTC (diagnostic trouble code) will not result in the MIL (malfunction indicator lamp) illuminating and will not affect vehicle operation

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition

(wrench) indicator and MIL (malfunction indicator lamp) are both illuminated. The electric motor propulsion will be limited reducing vehicle power.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BECM (battery energy control module) U1030:00	Software Incompatibility With Hybrid/EV Battery: No Sub Type Information	This DTC (diagnostic trouble code) sets if the BECM (battery energy control module) software detects the incorrect high voltage battery cells.

Possible Sources

- Incorrect BECM (battery energy control module) hardware and/or software
- Mismatch between the BECM (battery energy control module) and the high voltage battery cell type

BG1 CARRY OUT A PMI (PROGRAMMABLE MODULE INSTALLATION) ON THE BECM (BATTERY ENERGY CONTROL MODULE) .

- Ignition ON.
- Using the FDRS (Ford Diagnosis and Repair System) with the latest software update perform a PMI (programmable module installation) on the BECM (battery energy control module) .
  REFER to: Module Programming(418-01A Module Configuration, General Procedures).
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U1030:00 retrieved?

Yes	GO to BG2

No	The concern was corrected by performing a PMI (programmable module installation) .

BG2 CHECK FOR CORRECT BECM (BATTERY ENERGY CONTROL MODULE) PART NUMBER

- Ignition OFF.
- Using the FDRS (Ford Diagnosis and Repair System) select the log viewer icon and record the BECM (battery energy control module) module part number.

Is the BECM (battery energy control module) part number correct for vehicle application?

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

	Corrupt: No Sub Type Information	the high voltage battery serial number configuration is corrupt.

Possible Sources

- BECM (battery energy control module) configuration
- BECM (battery energy control module)

BH1 CARRY OUT A PMI (PROGRAMMABLE MODULE INSTALLATION) ON THE BECM (BATTERY ENERGY CONTROL MODULE) .

- Ignition ON.
- Using the FDRS (Ford Diagnosis and Repair System) with the latest software update perform a PMI (programmable module installation) on the BECM (battery energy control module) .
- If prompted, verify the correct high voltage battery serial number is entered.
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

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

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 BECM (battery energy control module) . REFER to: Battery Energy Control Module (BECM) - Electric (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).

No	The concern was corrected by performing a PMI (programmable module installation) .

PINPOINT TEST BI : U3000:04, U3000:49

Normal Operation and Fault Conditions

When powered on, the BECM (battery energy control module) performs an internal self tests and monitors high voltage battery voltages at various points inside the pack. If the BECM (battery energy control module) microchip fails an internal self test or if the high voltage battery pack voltage is invalid DTC (diagnostic trouble code) U3000:04 or U3000:49 sets. If a fault is detected the BECM (battery energy control module) will set a DTC (diagnostic trouble code) . DTC (diagnostic trouble code) U3000:04 sets three indicators: MIL (malfunction indicator lamp) , stop safely hazard (red triangle) warning, and powertrain malfunction

Extended range high voltage battery shown, standard range high voltage battery similar.

NOTE

If the components are to be reinstalled, they must be installed in their original locations. Mark the components for installation into their original locations.

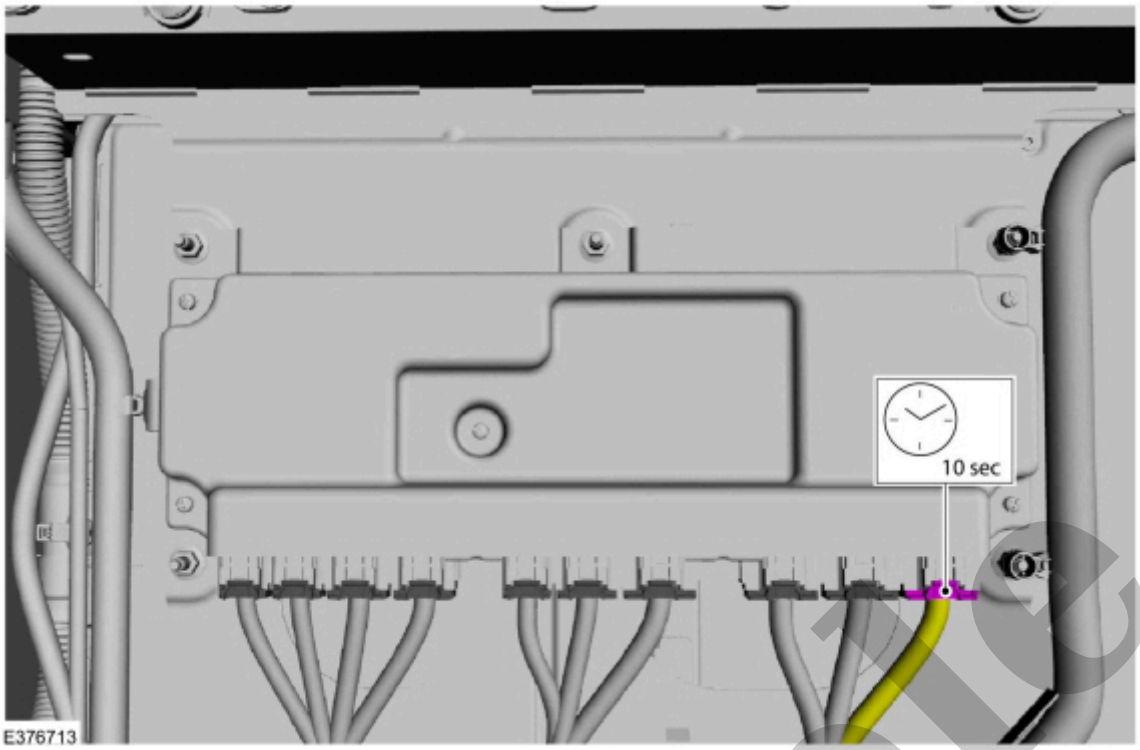
1. Refer to: High Voltage System Health and Safety Precautions - Overview(100-00 General Information, Description and Operation).
2. De-energize the high voltage system.

   Refer to: High Voltage System De-energizing - Electric(414-03A High Voltage Battery, Mounting and Cables, General Procedures).
3. Remove the high voltage battery cover.

   Refer to: High Voltage Battery Cover - Electric(414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).
4. **NOTICE**

   The BECM electrical connectors must be disconnected in the sequence shown or component damage may occur.

   Disconnect the BECM (battery energy control module) electrical connectors in the sequence shown.



Click here to learn about symbols, color coding, and icons used in this manual.

6. **NOTICE**

   The BECM electrical connectors must be disconnected in the sequence shown or component damage may occur.

   Disconnect the BECM (battery energy control module) electrical connectors in the sequence shown.