Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

1994 FORD Mondeo Hatchback OEM Service and Repair Workshop Manual

Go to manual page

	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).

B4 CHECK BECM (BATTERY ENERGY CONTROL MODULE) DTCS WITH THE RCM (RESTRAINTS CONTROL MODULE) DISCONNECTED

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
  REFER to: Supplemental Restraint System (SRS) Depowering(501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM (restraints control module) C310A and C310B .
- Repower the SRS (supplemental restraint system) . Do not prove out the SRS (supplemental restraint system) at this time.
  REFER to: Supplemental Restraint System (SRS) Repowering(501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- 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) B11D8:11 retrieved?

Yes	GO to B5

No	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 RCM (restraints control module) . REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).

B5 CHECK THE EVENT NOTIFICATION SIGNAL CIRCUIT INSIDE THE HIGH VOLTAGE BATTERY PACK FOR A SHORT TO CASE GROUND

- Depower the high voltage system.

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).

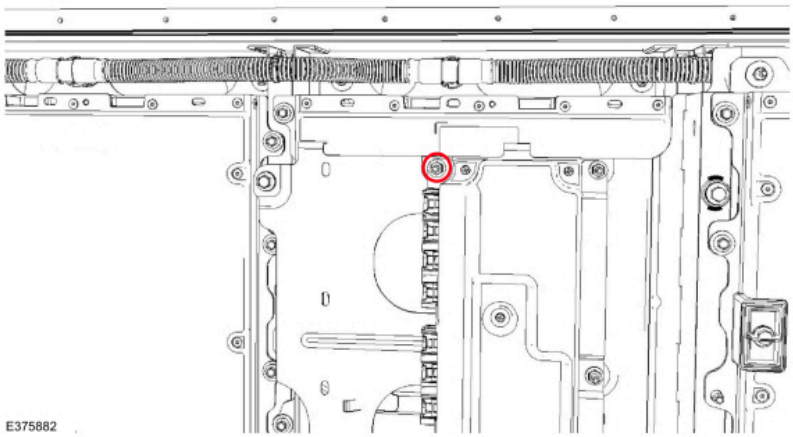
No	GO to B6

B6 CONFIRM THE LOCATION OF THE GROUNDED CIRCUIT

- Disconnect BECM (battery energy control module) low voltage inline C4239 .
- Measure:

NOTE

Any of the BECM (battery energy control module) bracket mounting nuts or high voltage battery pack case can be utilized for case ground.

Positive Lead	Measurement / Action	Negative Lead
C4816A-9	Ω	

B11D8:15	To Battery Or Open	notification signal circuit for 10 seconds or more

Possible Sources

- Wiring, terminals or connectors
- BCM (body control module)
- RCM (restraints control module)
- BECM (battery energy control module)

NOTICE

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 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.
- Using the 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) B11D8:15 present?

Yes	GO to C3

No	The concern is not present at this time.

C2 CHECK CIRCUIT FOR SHORT TO VOLTAGE

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
  REFER to: Supplemental Restraint System (SRS) Depowering(501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM (restraints control module) C310B and C310B .
- Disconnect High Voltage Battery C144 .
- Disconnect TCU (telematic control unit module) C4802A .
- Disconnect PCM (powertrain control module) C1915B .
- Disconnect BCM (body control module) C2280E .
- Ignition ON.

REFER to: Supplemental Restraint System (SRS) Repowering(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- 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) B11D8:15 retrieved?

Yes	GO to C5

No	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).

C5 CHECK BECM (BATTERY ENERGY CONTROL MODULE) DTCS WITH THE RCM (RESTRAINTS CONTROL MODULE) DISCONNECTED

- Depower the SRS (supplemental restraint system) .
  REFER to: Supplemental Restraint System (SRS) Depowering(501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM (restraints control module) C310A and C310B .
- Repower the SRS (supplemental restraint system) . Do not prove out the SRS (supplemental restraint system) at this time.
  REFER to: Supplemental Restraint System (SRS) Repowering(501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- 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) B11D8:15 retrieved?

Yes	GO to C6

	FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new RCM (restraints control module) . REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).

C7 CHECK THE ENS CIRCUIT INSIDE THE HIGH VOLTAGE BATTERY PACK FOR A SHORT TO THE BECM (BATTERY ENERGY CONTROL MODULE) B+ CIRCUITS

- Depower the high voltage system.
  REFER to: High Voltage System De-energizing - Electric(414-03A High Voltage Battery, Mounting and Cables, General Procedures).
- Remove the high voltage battery.
  REFER to: High Voltage Battery - Electric(414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).
- Remove the high voltage battery cover.
  REFER to: High Voltage Battery Cover - Electric(414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).
- Disconnect all the BECM (battery energy control module) connectors in sequence.
  REFER to: Battery Energy Control Module (BECM) - Electric(414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C144-2 (male side)	Ω	C144-5 (male side)
C144-2 (male side)	Ω	C144-6 (male side)

Is the resistance greater than 10,000 ohms?

Yes	GO to C9

C9 CHECK THE ENS CIRCUIT INSIDE THE HIGH VOLTAGE BATTERY PACK FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C144-2 (male side)	Ω	C4816A-9

Is the resistance less than 3 ohms?

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	GO to C10

C10 CONFIRM THE LOCATION OF THE OPEN CIRCUIT

- Disconnect BECM (battery energy control module) low voltage inline C4239 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C144-2 (male side)	Ω	C4239-18 (female side)

Is the resistance less than 3 ohms?

Yes	INSTALL a new wiring harness. REFER to: High Voltage Battery Wiring Harness - Electric (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).

module) B11D8:37	Frequency Too High	than 550Hz for 10 seconds.
BECM (battery energy control module) B11D8:38	Restraint Event Notification: Signal Frequency Incorrect	Sets in the BECM (battery energy control module) when the restraint event notification signal frequency is in the valid range (10-500 Hz) but not a valid state/pattern for 10 seconds.

Possible Sources

- RCM (restraints control module)
- BECM (battery energy control module)
- PCM (powertrain control module)

NOTICE

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.

D1 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.
- Using the 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) B11D8:11, B11D8:15, B11D8:29, B11D8:36, B11D8:37, and/or B11D8:38 present?

Yes	For DTC (diagnostic trouble code) B11D8:11, GO to Pinpoint Test B For DTC (diagnostic trouble code) B11D8:15, GO to Pinpoint Test C For DTC (diagnostic trouble code) B11D8:29, B11D8:36, B11D8:37, and/or B11D8:38, GO to D2

No	The concern is not present at this time.

D2 CHECK THE EVENT NOTIFICATION SIGNAL FREQUENCY

- Ignition OFF.
- Disconnect High Voltage Battery C144 .
- Ignition ON.
- Measure:

PINPOINT TEST E : P062F:00, P064F:00

Normal Operation and Fault Conditions

The BECM (battery energy control module) reads and writes data to the EEPROM and checks for unauthorized software. If the BECM (battery energy control module) detects an EEPROM read/write error or detects unauthorized software a DTC (diagnostic trouble code) is set. The BECM (battery energy control module) illuminates the powertrain malfunction (wrench) indicator and MIL (malfunction indicator lamp) when the fault condition is present. DTC (diagnostic trouble code) p062F:00 results in the BECM (battery energy control module) using default calibration values reducing all-electric range.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BECM (battery energy control module) P062F:00	Internal Control Module EEPROM Error: No Sub Type Information	This DTC (diagnostic trouble code) sets if BECM (battery energy control module) detects an EEPROM (electrically erasable programmable read only memory) malfunction detected. Can be read/write error, checksum error, etc.
BECM (battery energy control module) P064F:00	Unauthorized Software/Calibration Detected: No Sub Type Information	This DTC (diagnostic trouble code) sets if BECM (battery energy control module) detects unauthorized software. This is a permanent DTC (diagnostic trouble code) and re-sets immediately after being cleared.

Possible Sources

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

E1 RETRIEVE BECM (BATTERY ENERGY CONTROL MODULE) DTCS

- Ignition ON.
- Using the 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) P062F:00 or P064F:00 present?

Yes	CARRY OUT PMI (programmable module installation) on the BECM (battery energy control module) . REFER to: Module Programming (418-01A Module Configuration, General Procedures).

BECM (battery energy control module) P0C73:00	Motor Electronics Coolant Pump 'A' Control Performance: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates lost communication with the pump.
BECM (battery energy control module) P2D00:00	Motor Electronics Coolant Pump 'A' Stuck/Stalled: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates the coolant pump motor stuck/stalled fault has occurred.
BECM (battery energy control module) P2D01:00	Motor Electronics Coolant Pump 'A' Overspeed/Air in System: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates the coolant pump dry-run error has occurred.
BECM (battery energy control module) P2D02:00	Motor Electronics Coolant Pump 'A' Underspeed: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates the coolant pump impeller speed below minimum speed error has occurred.
BECM (battery energy control module) P2D03:00	Motor Electronics Coolant Pump 'A' Supply Voltage Circuit: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates the coolant pump power supply is under/overvoltage.
BECM (battery energy control module) P2D04:00	Motor Electronics Coolant Pump 'A' Control Module Overtemperature: No Sub Type Information	This DTC (diagnostic trouble code) sets when the feedback signal the BECM (battery energy control module) receives from the motor electronics coolant pump indicates the coolant pump over temperature or internal error has occurred.

Possible Sources

- Wiring, terminals or connectors
- Low coolant level or air in the coolant system
- Motor electronics coolant pump
- BCMC (body control module C)