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2003 FORD Mondeo Sedan OEM Service and Repair Workshop Manual

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- Using a diagnostic scan tool, clear the SOBDM (secondary on-board diagnostic control module A) DTCs.
- Using a diagnostic scan tool, perform SOBDM (secondary on-board diagnostic control module A) self-test.

Are any of the following DTCs B15A1:01, B15A1:02, B15A1:08, and/or B15A1:49 reported?

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 Charge Status Indicator (CSI), REFER to: Charge Status Indicator (CSI) - Electric (414-03B High Voltage Battery Charging System, Removal and Installation). Using a diagnostic scan tool, clear the SOBDM (secondary on-board diagnostic control module A) DTCs and carry out the SOBDM (secondary on-board diagnostic control module A) self-test. If the DTC(s) does not repeat the vehicle concern has been repaired. If the DTC(s) repeat, INSTALL a new SOBDM (secondary on-board diagnostic control module A) . REFER to: Secondary On-Board Diagnostic Control Module A (SOBDM) - Electric (414-03B High Voltage Battery Charging System, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by connections. Address the root cause of any connector or pin issues.

PINPOINT TEST R : B15A1:67

Refer to Wiring Diagrams Cell 12for schematic and connector information.

Normal Operation and Fault Conditions The Charge Status Indicator (CSI) is a component that indicates the current Customer State-of-Charge (CSoC) and charging operations of battery electric vehicles. The Charge Status Indicator (CSI) displays charging, charging faults, and charging status. Depending on vehicle application the Charge Status Indicator (CSI) is equipped with one or both: charge change button and/or unlock button. The FDRS (Ford Diagnosis and Repair System) is contains an function called "Charge Interface Panel Self-Test" that checks the operation of the charge port door position, courtesy light, charge change button (if equipped), unlock button (if equipped), and Charge Status Indicator (CSI) LED (light emitting diode) s illumination. DTC (diagnostic trouble code) B15A1:67 sets if the "Charge Interface Panel Self-Test" detects the charge port door is not open, courtesy light sequence not starting and/or the button press sequence not performed or acknowledged while the routine is active. **DTC Fault Trigger Conditions**

Refer to Wiring Diagrams Cell 12for schematic and connector information.

Normal Operation and Fault Conditions The SOBDM (secondary on-board diagnostic control module A) also known as the Battery Charger Control Module (BCCM) communicates with the BECM (battery energy control module) over a HS-CAN (high-speed controller area network) to send and receive important vehicle data. When powered on, the SOBDM (secondary on-board diagnostic control module A) continually monitors the HS-CAN (high-speed controller area network) . If communication with a module is lost, a fault is detected and the SOBDM (secondary on-board diagnostic control module A) sets the appropriate DTC (diagnostic trouble code) . **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDM (secondary on-board diagnostic control module A) U0111:00	Lost Communication With Battery Energy Control Module 'A': No Sub Type Information	This DTC (diagnostic trouble code) sets if the SOBDM (secondary on-board diagnostic control module A) does not receive an expected message from the BECM (battery energy control module) .

Possible Sources

- Fuse(s)
- Wiring, terminals or connectors
- BECM (battery energy control module)
- SOBDM (secondary on-board diagnostic control module A)

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.

S1 CHECK THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.
- Using a diagnostic scan tool, clear the SOBDM (secondary on-board diagnostic control module A) DTCs.
- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.

Is DTC (diagnostic trouble code) U0111:00 retrieved?

- Using a diagnostic scan tool, perform a network test and record the results.
- Using a diagnostic scan tool, perform BECM (battery energy control module) self-test.

Does the BECM (battery energy control module) pass the network test and complete a self test?

Yes	GO to S5

No	DIAGNOSE a diagnostic scan tool communication with the BECM (battery energy control module) concern. REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

S5 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE BECM (BATTERY ENERGY CONTROL MODULE)

- Using a diagnostic scan tool, perform the BECM (battery energy control module) self-test.

Is DTC (diagnostic trouble code) U3003:16 or U3003:17 recorded?

Yes	DIAGNOSE the BECM (battery energy control module) DTC (diagnostic trouble code) . REFER to: High Voltage Battery, Mounting and Cables - Electric (414-03A High Voltage Battery, Mounting and Cables, Diagnosis and Testing).

No	GO to S6

S6 CHECK FOR A LOST COMMUNICATION WITH THE BECM (BATTERY ENERGY CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) IN OTHER MODULES

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

Is DTC (diagnostic trouble code) U0111:00 set in multiple modules?

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) .

- Wiring, terminals or connectors
- BCM (body control module)
- SOBDM (secondary on-board diagnostic control module A)

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.

T1 CHECK THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.
- Using a diagnostic scan tool, clear the SOBDM (secondary on-board diagnostic control module A) DTCs.
- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.

Is DTC (diagnostic trouble code) U0140:00 retrieved?

Yes	GO to T2

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.

T2 CHECK THE 12-VOLT BATTERY

	(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

T5 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE BCM (BODY CONTROL MODULE)

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

Is DTC (diagnostic trouble code) U3006:16 or U3006:17 recorded?

Yes	DIAGNOSE the BCM (body control module) DTC (diagnostic trouble code) . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
No	GO to T6

T6 CHECK FOR A LOST COMMUNICATION WITH THE BCM (BODY CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) IN OTHER MODULES

control module A) U0146:00		module A) does not receive an expected message from the GWM (gateway module A) .

Possible Sources

- Fuse(s)
- Wiring, terminals or connectors
- GWM (gateway module A)
- SOBDM (secondary on-board diagnostic control module A)

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.

U1 CHECK THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.
- Using a diagnostic scan tool, clear the SOBDM (secondary on-board diagnostic control module A) DTCs.
- Using a diagnostic scan tool, perform the SOBDM (secondary on-board diagnostic control module A) self-test.

Is DTC (diagnostic trouble code) U0146:00 retrieved?

Yes	GO to U2

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.

U2 CHECK THE 12-VOLT BATTERY

- Carry out the 12-volt battery condition test.
  REFER to: Battery - Electric(414-01 Battery, Mounting and Cables, Diagnosis and Testing).

Did the 12-volt battery pass the condition test?

U5 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE GWM (GATEWAY MODULE A)

- Using a diagnostic scan tool, perform the GWM (gateway module A) self-test.

Is DTC (diagnostic trouble code) U3006:16 or U3006:17 recorded?

Yes	DIAGNOSE the GWM (gateway module A) DTC (diagnostic trouble code) . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
No	GO to U6

U6 CHECK FOR A LOST COMMUNICATION WITH THE GWM (GATEWAY MODULE A) DTC (DIAGNOSTIC TROUBLE CODE) IN OTHER MODULES

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

Is DTC (diagnostic trouble code) U0146:00 set in multiple modules?

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 GWM (gateway module A) . REFER to: Gateway Module A (GWM) (418-00A Controller Area Network (CAN) Module Communications Network, Removal and Installation).
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, it is necessary to seek additional help. REFER to the Service Repair And Technical Assistance Process. A Vehicle Data Recorder (VDR) or similar recorder may also be useful.

PINPOINT TEST V : U0253:00

Yes	GO to V2

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.

V2 CHECK THE 12-VOLT BATTERY

- Carry out the 12-volt battery condition test.
  REFER to: Battery - Electric(414-01 Battery, Mounting and Cables, Diagnosis and Testing).

Did the 12-volt battery pass the condition test?

Yes	GO to V3

No	INSTALL a new 12V battery. REFER to: Battery - Electric (414-01 Battery, Mounting and Cables, Removal and Installation).

V3 REVIEW THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A)

- Review the DTCs recorded during the SOBDM (secondary on-board diagnostic control module A) self-test.

Is DTC (diagnostic trouble code) U3003:16 or U3003:17 recorded?

Yes	DIAGNOSE the battery voltage DTC (diagnostic trouble code) stored in the SOBDM (secondary on-board diagnostic control module A) . REFER to the SOBDM (secondary on-board diagnostic control module A) DTC (diagnostic trouble code) chart.

No	GO to V4

V4 CHECK THE COMMUNICATION NETWORK

- Ignition ON.

	(415-00 Information and Entertainment System - General Information, Removal and Installation).

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, it is necessary to seek additional help. REFER to the Service Repair And Technical Assistance Process. A Vehicle Data Recorder (VDR) or similar recorder may also be useful.

PINPOINT TEST W : U027C:00

Refer to Wiring Diagrams Cell 12for schematic and connector information.
Normal Operation and Fault Conditions The SOBDM (secondary on-board diagnostic control module A) also known as the Battery Charger Control Module (BCCM) communicates with the OBCC (Off-Board Charger Controller) over a HS-CAN (high-speed controller area network) to send and receive important vehicle data. When powered on, the SOBDM (secondary on-board diagnostic control module A) continually monitors the HS-CAN (high-speed controller area network) . If communication with a module is lost, a fault is detected and the SOBDM (secondary on-board diagnostic control module A) sets the appropriate DTC (diagnostic trouble code) . Presence of this results in the CSI (Charge Status Indicator) flashing a fault pattern and the vehicle will not charge. **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDM (secondary on-board diagnostic control module A) U027C:00	Lost Communication With Off-Board Charger Control Module: No Sub Type Information	This DTC (diagnostic trouble code) sets if the SOBDM (secondary on-board diagnostic control module A) does not receive an expected message from the OBCC (Off-Board Charger Controller) .

Possible Sources

- Fuse(s)
- Wiring, terminals or connectors
- OBCC (Off-Board Charger Controller)
- SOBDM (secondary on-board diagnostic control module A)