# 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.

## 2010 FORD S-Max OEM Service and Repair Workshop Manual

Go to manual page

| | |
|---|---|
| **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 RTM (radio transceiver module) .<br>REFER to: Radio Transceiver Module (RTM)<br>(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 AN : THE SCCM (STEERING COLUMN CONTROL MODULE) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL**

Refer to Wiring Diagrams Cell 14for schematic and connector information.
Refer to Wiring Diagrams Cell 31for schematic and connector information.
**Normal Operation and Fault Conditions** The SCCM (steering column control module) communicates on the HS-CAN2 (high-speed controller area network 2) . REFER to: Controller Area Network (CAN) Module Communications Network - Electric - System Operation and Component Description
(418-00A Controller Area Network (CAN) Module Communications Network, Description and Operation).
**Possible Sources**

- Fuse
- Wiring, terminals and connector
- SCCM (steering column control module)

**Visual Inspection and Pre-checks**

- Verify BCM (body control module) fuse 13 (7.5A) is OK. BCM (body control module) fuse 13 is a 3-blade fuse containing fuse 12.

**AN1 CHECK THE HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) TERMINATION RESISTANCE**

- Ignition OFF.
- Disconnect negative battery cable.
- Disconnect the diagnostic scan tool cable from the remote DLC (data link connector) .
- Disconnect GWM (gateway module A) C2431A .
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|

- Connect negative battery cable.
- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C226A-2 | V | Ground |

**Is the voltage greater than 11 volts?**

| | |
|---|---|
| **Yes** | GO to AN4 |

| | |
|---|---|
| **No** | VERIFY BCM (body control module) fuse 13 (7.5A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short. |

**AN4 CHECK THE SCCM (STEERING COLUMN CONTROL MODULE) GROUND CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Disconnect negative battery cable.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C226A-8 | Ω | Ground |

**Is the resistance less than 3 ohms?**

| | |
|---|---|
| **Yes** | CONNECT all disconnected connectors. GO to AN5 |

| | |
|---|---|
| **No** | REPAIR the circuit. |

**Visual Inspection and Pre-checks**

- Verify BCMC (body control module C) [ BJB (battery junction box) ] fuse 134 (25A) is OK.

**AO1 CHECK THE SCMG (DRIVER MULTI-CONTOUR SEAT MODULE) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Disconnect: SCMG (driver multi-contour seat module)  C3385.
- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C3385-1 | V | Ground |

**Is the voltage greater than 11 volts?**

| | |
|---|---|
| **Yes** | GO to AO3 |

| | |
|---|---|
| **No** | VERIFY BCMC (body control module C) [ BJB (battery junction box) ] fuse 134 (25A) is OK. If OK, GO to AO2 If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short. |

**AO2 CHECK THE MULTI-CONTOUR SEAT RELAY CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Disconnect BCMC (body control module C) [ BJB (battery junction box) ] C1035C .
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C1035C-50 | Ω | C3385-1 |

**Is the resistance less than 3 ohms?**

| | | |
|---|---|---|
| C3385-4 | Ω | C2431A-16 |

**Are the resistances less than 3 ohms?**

| | |
|---|---|
| **Yes** | CONNECT all disconnected connectors. GO to AO5 |

| | |
|---|---|
| **No** | REPAIR the circuit in question. |

**AO5 CHECK FOR CORRECT SCMG (DRIVER MULTI-CONTOUR SEAT MODULE) OPERATION**

- Ignition OFF.
- Disconnect and inspect the SCMG (driver multi-contour seat module) connector.
- 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 SCMG (driver multi-contour seat 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 (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 SCMG (driver multi-contour seat module) .<br>REFER to: Driver Multi-Contour Seat Module [SCMG] (501-10A Front Seats, 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. |

**AP2 CHECK THE MULTI-CONTOUR SEAT RELAY CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Disconnect BCMC (body control module C) [ BJB (battery junction box) ] C1035C .
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C1035C-50 | Ω | C3386-1 |

**Is the resistance less than 3 ohms?**

| | |
|---|---|
| **Yes** | REFER to the Wiring Diagrams manual to identify the possible voltage supply circuit concern. |

| | |
|---|---|
| **No** | REPAIR the circuit. |

**AP3 CHECK THE SCMH (PASSENGER MULTI-CONTOUR SEAT MODULE) GROUND CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C3386-16 | Ω | Ground |

**Is the resistance less than 3 ohms?**

| | |
|---|---|
| **Yes** | GO to AP4 |

| | |
|---|---|
| **No** | REPAIR the circuit. |

| | |
|---|---|
| | 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 SCMH (passenger multi-contour seat module) .<br>REFER to: Driver Multi-Contour Seat Module [SCMG]<br>(501-10A Front Seats, 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 AQ : THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) (BATTERY CHARGING CONTROL MODULE [BCCM]) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL**

Refer to Wiring Diagrams Cell 14for schematic and connector information.
Refer to Wiring Diagrams Cell 21for schematic and connector information.
**Normal Operation and Fault Conditions** The SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) communicates on the HS-CAN1 (high-speed controller area network 1) . REFER to: Controller Area Network (CAN) Module Communications Network - Electric - System Operation and Component Description
(418-00A Controller Area Network (CAN) Module Communications Network, Description and Operation).
**Possible Sources**

- Fuse
- Wiring, terminals and connectors
- SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM])

**Visual Inspection and Pre-checks**

- Verify BCMC (body control module C) [ BJB (battery junction box) ] fuse 46 (10A) is OK.

**AQ1 CHECK THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) (BATTERY CHARGING CONTROL MODULE [BCCM]) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN**

- Ignition OFF.
- Disconnect: SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) C1821A.
- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|

| | |
|---|---|
| **Yes** | GO to AQ4 |

| | |
|---|---|
| **No** | REPAIR the SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) case ground as necessary. |

**AQ4 CHECK THE HS-CAN1 (HIGH-SPEED CONTROLLER AREA NETWORK 1) CIRCUITS BETWEEN THE SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) (BATTERY CHARGING CONTROL MODULE [BCCM]) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN**

- Disconnect GWM (gateway module A) C2431A .
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C1821A-E2 | Ω | C2431A-7 |
| C1821A-E1 | Ω | C2431A-20 |

**Are the resistances less than 3 ohms?**

| | |
|---|---|
| **Yes** | CONNECT all disconnected connectors. GO to AQ5 |

| | |
|---|---|
| **No** | REPAIR the circuit in question. |

**AQ5 CHECK FOR CORRECT SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) (BATTERY CHARGING CONTROL MODULE [BCCM]) OPERATION**

- Ignition OFF.
- Disconnect and inspect the SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) connector.
- Repair:

- Verify BCMC (body control module C) [ BJB (battery junction box) ] fuses 99 (15A), 5 (5A) and 24 (10A) are OK.

**AR1 CHECK THE SOBDMB (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE B (SOBDMB)) VOLTAGE SUPPLY CIRCUITS FOR AN OPEN**

- Ignition OFF.
- Disconnect SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) C1456B .
- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---|---|---|
| C1456B-5 | V | Ground |
| C1456B-10 | V | Ground |
| C1456B-11 | V | Ground |
| C1456B-37 | V | Ground |

**Are the voltages greater than 11 volts?**

| | |
|---|---|
| **Yes** | GO to AR2 |

| | |
|---|---|
| **No** | Verify BCMC (body control module C) [ BJB (battery junction box) ] fuses 99 (15A), 5 (5A) and 24 (10A) are OK. If OK, REPAIR the circuit in question. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short. |

**AR2 CHECK THE SOBDMB (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE B (SOBDMB)) GROUND CIRCUITS FOR AN OPEN**

| | |
|---|---|
| **Yes** | CONNECT all disconnected connectors. GO to AR4 |

| | |
|---|---|
| **No** | REPAIR the circuit in question. |

**AR4 CHECK FOR CORRECT SOBDMB (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE B (SOBDMB)) OPERATION**

- Ignition OFF.
- Disconnect and inspect the SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) connector.
- 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 SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) 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 (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 SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) .<br>REFER to:<br>Inverter System Controller [SOBDMB]<br>(302-01 Front Electric Drive Assembly, 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 AS : THE SOBDMC (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE C) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL**