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2015 FORD C-Max OEM Service and Repair Workshop Manual

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- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C341B-1	Ω	Ground
C341B-3	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to H22
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No	GO to H21
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H21 CHECK THE REAR HEIGHT MOTOR CIRCUITS FOR A SHORT TO GROUND WITH THE MOTOR DISCONNECTED

- Disconnect: Driver Seat Rear Height Motor C363.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C341B-1	Ω	Ground
C341B-3	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	INSTALL a new driver seat track.
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- Connect: DSM (driver front seat module) C341B and C341E.
- Ignition ON.
- Connect a 12-volt incandescent test light between:

Positive Lead	Measurement / Action	Negative Lead
C363-1		C363-3

NOTE

Because the seat motor electrical connector is disconnected, the DSM (driver front seat module) may only activate the seat motor output for approximately 500 ms then turn off.

Activate the seat control switch (rear height up and down) positions while observing the test light.

Does the test light momentarily illuminate when the seat control switch is activated in both positions?

Yes	INSTALL a new driver seat track. REFER to: Front Seat Track (501-10A Front Seats, Removal and Installation). GO to H37
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No	GO to H36
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H24 CHECK THE HORIZONTAL MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect: Driver Side Airbag In-line C3051.
- Disconnect: DSM (driver front seat module) C341B and C341E.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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(501-10A Front Seats, Removal and Installation).

GO to [H37](#)

H26 CHECK THE HORIZONTAL MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C341B-5	Ω	Ground
C341B-6	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes GO to [H28](#)

No GO to [H27](#)

H27 CHECK THE HORIZONTAL MOTOR CIRCUITS FOR A SHORT TO GROUND WITH THE MOTOR DISCONNECTED

- Disconnect: Driver Seat Horizontal Motor C362.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C341B-5	Ω	Ground

NOTICE

The following step uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250- 300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

- Connect: DSM (driver front seat module) C341B and C341E.
- Ignition ON.
- Connect a 12-volt incandescent test light between:

Positive Lead	Measurement / Action	Negative Lead
C362-1		C362-3

NOTE

Because the seat motor electrical connector is disconnected, the DSM (driver front seat module) may only activate the seat motor output for approximately 500 ms then turn off.

Activate the seat control switch (horizontal forward and backward) positions while observing the test light.

Does the test light momentarily illuminate when the seat control switch is activated in both positions?

Yes	INSTALL a new driver seat horizontal motor. REFER to: Front Seat Track Motor (501-10A Front Seats, Removal and Installation). GO to H37
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No	GO to H36
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H30 CHECK THE RECLINER MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

C341A-4		Ground
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Are any voltages present?

Yes	REPAIR the affected circuit. GO to H37
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No	INSTALL a new driver seat backrest frame. GO to H37
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H32 CHECK THE FRONT RECLINER MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C341A-1	Ω	Ground
C341A-4	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to H34
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No	GO to H33
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H33 CHECK THE RECLINER MOTOR CIRCUITS FOR A SHORT TO GROUND WITH THE MOTOR DISCONNECTED

- Disconnect: Driver Seat Recliner Motor C3187.
- Measure:

No REPAIR the affected circuit. GO to [H37](#)

H35 CHECK FOR VOLTAGE TO THE RECLINER MOTOR

NOTICE

The following step uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250- 300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

- Connect: DSM (driver front seat module) C341A and C341E.
- Ignition ON.
- Connect a 12-volt incandescent test light between:

Positive Lead	Measurement / Action	Negative Lead
C3187-1		C3187-3

NOTE

Because the seat motor electrical connector is disconnected, the DSM (driver front seat module) may only activate the seat motor output for approximately 500 ms then turn off.

Activate the seat control switch (recline forward and backward) positions while observing the test light.

Does the test light momentarily illuminate when the seat control switch is activated in both positions?

Yes INSTALL a new driver seat backrest frame. GO to [H37](#)

No GO to [H36](#)

H36 CHECK THE DSM (DRIVER FRONT SEAT MODULE) OPERATION

Yes	Repair is complete. RETURN the vehicle to the customer.
No	REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing).

PINPOINT TEST I : THE MEMORY SEAT DOES NOT OPERATE USING THE MEMORY SET SWITCH

Refer to Wiring Diagrams Cell 123for schematic and connector information.

Normal Operation and Fault Conditions REFER to: [Front Seats - System Operation and Component Description](#)

(501-10A Front Seats, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
DDM (driver door module) B1C03:23	Memory #1 Switch: Signal Stuck Low	If a short to ground is sensed on the switch input circuit during the DDM (driver door module) self-test, the DTC (diagnostic trouble code) is set. If activity is sensed on the input circuit for greater than 2 minutes, the DTC (diagnostic trouble code) is set as continuous. With the DTC (diagnostic trouble code) set, any input signal on the circuit is ignored.
DDM (driver door module) B1C04:23	Memory #2 Switch: Signal Stuck Low	If a short to ground is sensed on the switch input circuit during the DDM (driver door module) self-test, the DTC (diagnostic trouble code) is set. If activity is sensed on the input circuit for greater than 2 minutes, the DTC (diagnostic trouble code) is set as continuous. With the DTC (diagnostic trouble code) set, any input signal on the circuit is ignored.
DDM (driver door module) B1C05:23	Memory #3 Switch: Signal Stuck Low	If a short to ground is sensed on the switch input circuit during the DDM (driver door module) self-test, the DTC (diagnostic trouble code) is set. If activity is sensed on the input circuit for greater than 2 minutes, the DTC (diagnostic trouble code) is set as continuous. With the DTC (diagnostic trouble code) set, any input signal on the circuit is ignored.

		seat control switch can operate the associated motor in two-second increments.
DSM (driver front seat module) B1B93:11	Seat Recline Motor Speed/Position Sensor: Circuit Short To Ground	If a short to ground condition is present on the affected motor's position sensor (Hall-effect) feedback circuit, the DTC (diagnostic trouble code) is set. After a DTC (diagnostic trouble code) is set, a memory recall is not possible but the seat control switch can operate the associated motor in two-second increments.
DSM (driver front seat module) B1B93:15	Seat Recline Motor Speed/Position Sensor: Circuit Short To Battery Or Open	If an open or short to voltage condition is present on the affected motor's position sensor (Hall-effect) feedback circuit, the DTC (diagnostic trouble code) is set. After a DTC (diagnostic trouble code) is set, a memory recall is not possible but the seat control switch can operate the associated motor in two-second increments.

Possible Sources

- Wiring, terminals or connectors
- Memory SET switch
- Missing ignition status information
- Horizontal motor
- Seat track
- Seat backrest
- DDM (driver door module)

WARNING

Incorrect repair techniques or actions can cause an accidental Supplemental Restraint System (SRS) deployment. Never compromise or depart from these instructions. Failure to precisely follow all instructions could result in serious personal injury from an accidental deployment.

11 CHECK THE DSM (DRIVER FRONT SEAT MODULE) IGNITION STATUS PID (PARAMETER IDENTIFICATION) STATES

- Ignition ON.
- Access the DSM (driver front seat module) and monitor the IGN_SW_STATE (Ignition Switch State) PID (parameter identification)
Monitor the PID (parameter identification) while cycling the ignition from ON to OFF and back to ON.

- Access the DDM (driver door module) and monitor the MEMORY_SW_3 (Memory Switch 3) PID (parameter identification)

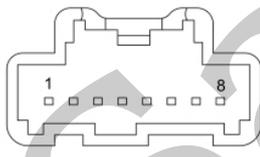
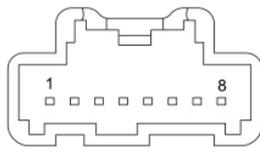
Do the PID (parameter identification) values agree with the switch button positions?

Yes	GO to I9
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No	GO to I4
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I4 CHECK THE MEMORY SET SWITCH

- Ignition OFF.
- Disconnect: Driver Door Lock Control Switch C541.
- While pressing and releasing the indicated memory recall button 1, measure the **component side resistance** of the driver door lock control switch using the following table:

Positive Lead	Measurement / Action	Negative Lead
 <p>E206990</p> <p>C541, pin 5, Component Side</p>	Ω	 <p>E206990</p> <p>C541, pin 3, Component Side</p>

- While pressing and releasing the indicated memory recall button 2, measure the **component side resistance** of the driver door lock control switch using the following table:

Positive Lead	Measurement / Action	Negative Lead