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2018 FORD C-Max OEM Service and Repair Workshop Manual

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C332-1	\bar{V}	C332-3
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Is the voltage greater than 11 volts when the seat control switch is operated in both directions?

Yes	<p>INSTALL a new horizontal motor.</p> <p>REFER to: Front Seat Track Motor (501-10A Front Seats, Removal and Installation).</p> <p>GO to C10</p>
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No	GO to C7
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C7 CHECK THE SEAT HORIZONTAL MOTOR CIRCUIT FOR AN OPEN

- Disconnect: Passenger Seat Control Switch C3388.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3388-17	Ω	C332-3
C3388-16	Ω	C332-1

Are the resistances less than 3 ohms?

Yes	<p>INSTALL a new passenger seat control switch.</p> <p>REFER to: Front Seat Control Switch (501-10A Front Seats, Removal and Installation).</p> <p>GO to C10</p>
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No	REPAIR the circuit in question. GO to C10
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C3388-19	Ω	C330-1
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Are the resistances less than 3 ohms?

Yes	INSTALL a new passenger seat control switch. REFER to: Front Seat Control Switch (501-10A Front Seats, Removal and Installation). GO to C10
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No	REPAIR the circuit in question. GO to C10
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C10 VERIFY THE SRS (SUPPLEMENTAL RESTRAINT SYSTEM) PROVES OUT SUCCESSFULLY

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Connect: Passenger Side Airbag In-line C3053.
- Connect all previously disconnected connectors.
- REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

Did the SRS (supplemental restraint system) prove out successfully?

Yes	Repair is complete. RETURN the vehicle to the customer.
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No	REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing).
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PINPOINT TEST D : THE POWER LUMBAR IS INOPERATIVE — DRIVER, WITHOUT MULTI-CONTOUR SEATS

Refer to Wiring Diagrams Cell 120for 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).

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect: Driver Side Airbag In-line C3051.
- Disconnect: Driver Seat Lumbar Motor C3215.

NOTE

The voltage being measured changes polarity depending upon which direction the seat control switch is activated.

While pushing the lumbar switch in both directions, measure:

Positive Lead	Measurement / Action	Negative Lead
C3215-A	V̄	C3215-B

Is the voltage greater than 11 volts when the seat control switch is operated in both directions?

Yes	<p>INSTALL a new driver seat power lumbar assembly.</p> <p>REFER to: Front Seat Power Lumbar Assembly - Vehicles Without: Multi-Contour Seats (501-10A Front Seats, Removal and Installation).</p> <p>GO to D3</p>
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No	GO to D2
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D2 CHECK THE SEAT LUMBAR MOTOR CIRCUITS FOR AN OPEN

- Disconnect: Driver Seat Control Switch C360 (8-way seat) or C3387 (10-way seat).
- If equipped with 8-way seat, measure:

Positive Lead	Measurement / Action	Negative Lead
C360-4	Ω	C3215-B

No

REFER to: [Airbag Supplemental Restraint System \(SRS\)](#)(501-20B Supplemental Restraint System, Diagnosis and Testing).

PINPOINT TEST E : THE POWER LUMBAR IS INOPERATIVE — PASSENGER, WITHOUT MULTI-CONTOUR SEATS

Refer to Wiring Diagrams Cell 120 for 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).

Possible Sources

- Wiring, terminals or connectors
- Seat control switch
- Front seat power lumbar assembly

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.

E1 CHECK FOR VOLTAGE TO THE SEAT LUMBAR MOTOR

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect: Passenger Side Airbag In-line C3053.
- Disconnect: Passenger Seat Lumbar Motor C3216.

NOTE

The voltage being measured changes polarity depending upon which direction the seat control switch is activated.

While pushing the lumbar switch in both directions, measure:

Positive Lead	Measurement / Action	Negative Lead
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E3 VERIFY THE SRS (SUPPLEMENTAL RESTRAINT SYSTEM) PROVES OUT SUCCESSFULLY

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Connect: Passenger Side Airbag In-line C3053.
- Connect all previously disconnected connectors.
- REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

Did the SRS (supplemental restraint system) prove out successfully?

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 F : THE MULTI-CONTOUR SEAT IS INOPERATIVE/ DOES NOT OPERATE CORRECTLY — DRIVER

Refer to Wiring Diagrams Cell 120for 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
SCMG (driver multi-contour seat module) B146F:00	Back Bladder System Electropneumatic Failure: No Sub Type Information	During self-test, the system inflates each of the bladders in the back of the seat, then monitors for a change in pressure. If the bladders successfully inflate, the system deflates the bladders while checking for a change in pressure. If the pressure change is not within the allowed threshold, this DTC (diagnostic trouble code) sets.
SCMG (driver multi-contour	Back Bladder System Electropneumatic Failure: System Internal Failures	During self-test, the system inflates each of the bladders in the back of the seat, then monitors for a change in pressure. If the bladders successfully inflate, the system

SCMG (driver multi-contour seat module) B1471:2A	Multi-Contour Seat Switch Input: Stuck in Range	If the seat control switch is active for greater than 2 minutes or is active during the self-test, the SCMG (driver multi-contour seat module) sets this DTC (diagnostic trouble code) .
SCMG (driver multi-contour seat module) B1473:11	Pump Driver: Circuit Short To Ground	This DTC (diagnostic trouble code) sets when the current draw for the air pump driver is too high for a predetermined time period. This DTC (diagnostic trouble code) may be set on-demand or in continuous memory.

Possible Sources

- Wiring, terminals or connectors
- Seat control switch
- Front seat power lumbar assembly
- Front multi-contour control pump
- Front seat cushion module
- SCMG (driver multi-contour seat module)

Visual Inspection and Pre-checks

- Verify all the hose connections to the SCMG (driver multi-contour seat module) , front seat cushion module and front multi-contour control pump are correctly seated and not leaking and/or check for any signs of restrictions (kinked or pinched hoses).

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.

F1 CHECK THE SCMG (DRIVER MULTI-CONTOUR SEAT MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- NOTE: If the diagnostic scan tool does not communicate to the SCMG (driver multi-contour seat module) ,
REFER to: [Front Seats - System Operation and Component Description](#)(501-10A Front Seats, Description and Operation).
- Using a diagnostic scan tool, perform the SCMG (driver multi-contour seat module) self-test.

Were any Diagnostic Trouble Codes (DTCs) retrieved?

No REPAIR the circuit. GO to [F19](#)

F3 RECHECK THE SCMG (DRIVER MULTI-CONTOUR SEAT MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH SEAT CONTROL SWITCH DISCONNECTED

- Ignition OFF.
- Disconnect: Driver Seat Control Switch C3387.
- Ignition ON.
- Using a diagnostic scan tool, perform the SCMG (driver multi-contour seat module) self-test.

Was DTC (diagnostic trouble code) **B1471:13** retrieved?

Yes INSTALL a new seat control switch.
REFER to: [Front Seat Control Switch](#)
(501-10A Front Seats, Removal and Installation).

No GO to [F4](#)

F4 CHECK THE SEAT CONTROL SWITCH CIRCUIT FOR A SHORT TO GROUND

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect: Driver Side Airbag In-line C3051.
- Disconnect: SCMG (driver multi-contour seat module) C3385.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3387-1	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes GO to [F17](#)

C3387-1	Ω	C3385-6
C3387-2	Ω	C3385-15

Are the resistances less than 3 ohms?

Yes	GO to F17
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No	REPAIR the circuit in question. GO to F19
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F7 VERIFY THE MULTI-CONTOUR SEAT CONTROL PUMP OPERATES

- Ignition OFF.
- Ignition ON.

NOTE

When in MASSAGE mode, the multi-contour seat control pump operates continuously.

Using the seat control switch or touchscreen, place the multi-contour seat into the MASSAGE mode.

- Listen near the seat cushion to determine whether the multi-contour seat control pump is on.

Is the multi-contour seat control pump on?

Yes	GO to F9
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No	GO to F8
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F8 CHECK THE MULTI-CONTOUR SEAT CONTROL PUMP CIRCUITS FOR AN OPEN

- REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect: Driver Side Airbag In-line C3051.
- Disconnect: SCMG (driver multi-contour seat module) C3385.

No	REPAIR the hose(s) or INSTALL a new seat component as necessary.
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F10 CHECK THE BACKREST HOSE(S) FOR CORRECT INSTALLATION, RESTRICTION OR DAMAGE

- Ignition OFF.
- Visually inspect the backrest hose(s) for correct installation or damage and check the hose routing to make sure the entire length of the hose is not restricted, bent, kinked or damaged.

Are the backrest hoses installed correctly with no damage or restrictions?

Yes	GO to F20
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No	REPAIR the hose(s) or INSTALL a new front seat power lumbar assembly. REFER to: Front Seat Power Lumbar Assembly - Vehicles With: Multi-Contour Seats (501-10A Front Seats, Removal and Installation). Operate the system and determine if the concern is still present. If the concern is still present, GO to F20
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F11 CHECK THE CUSHION HOSE(S) FOR CORRECT INSTALLATION, RESTRICTION OR DAMAGE

- Ignition OFF.
- Visually inspect the cushion hose(s) for correct installation or damage and check the hose routing to make sure the entire length of the hose are not restricted (bends, kinks, etc...).

Are the cushion hoses installed correctly with no damage or restrictions?

Yes	GO to F12
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No	REPAIR the hose(s) or INSTALL a new front seat cushion module. REFER to: Front Seat Cushion Adjuster - Vehicles With: Multi-Contour Seats (501-10A Front Seats, Removal and Installation). Operate the system and determine if the concern is still present. If the concern is still present, GO to F20
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F12 CHECK THE THE FRONT SEAT CUSHION MODULE POWER CIRCUIT FOR AN OPEN