

# 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.

## 2017 FORD Fusion Energi OEM Service and Repair Workshop Manual

[Go to manual page](#)

## B13 CHECK THE ADJUSTABLE PEDAL MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect DSM (driver front seat module) C341C (if not previously disconnected).
- Disconnect adjustable pedal motor C2159 (if not previously disconnected).
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
| C2159-1       | $\Omega$             | Ground        |
| C2159-2       | $\Omega$             | Ground        |

### Are the resistances greater than 10,000 ohms?

|            |   |
|------------|---|
| <b>Yes</b> | If sent here because DTC (diagnostic trouble code) B137D:11 is present, INSTALL a new accelerator pedal (the adjustable pedal motor is part of the adjustable pedal assembly).<br>REFER to: <a href="#">Accelerator Pedal</a><br>(310-02 Acceleration Control, Removal and Installation).<br>If DTC (diagnostic trouble code) B137D:11 is <b>not</b> present, GO to <a href="#">B14</a> |
|------------|---|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

## B14 CHECK THE ADJUSTABLE PEDAL MOTOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
| C2159-1       | $\Omega$             | C2159-2       |

### Are the resistances greater than 10,000 ohms?

light probe directly on any connector.


## NOTE

This test step causes Diagnostic Trouble Codes (DTCs) to set in the DSM (driver front seat module) .

## NOTE

When the adjustable pedal motor connector is disconnected on vehicles with the memory feature, the DSM (driver front seat module) provides voltage in 2 seconds intervals only, due to the open circuit in the Hall-effect sensor circuit.

- Ignition OFF.
- Connect DSM (driver front seat module) C341C and C341E .
- Ignition ON.
- Press the adjustable pedal control switch in both directions with a test light connected as indicated:

| Positive Lead | Measurement / Action   | Negative Lead |
|---------------|--|---------------|
| C2159-1       |  | C2159-2       |

**Does the test light illuminate when the adjustable pedal switch is pressed in each direction?**

**Yes** GO to [B17](#)

**No** GO to [B19](#)

## B17 CHECK THE ADJUSTABLE BRAKE PEDAL CABLE INSTALLATION

- Disconnect the adjustable brake pedal cable from the adjustable brake pedal worm gear.
- Operate the adjustable pedal control switch in both directions and observe the cable in the conduit.

**Does the adjustable brake pedal cable turn in the conduit when the switch is pressed?**

**Yes** INSTALL a new brake pedal assembly.  
REFER to: [Brake Pedal and Bracket](#)  
(206-06 Hydraulic Brake Actuation, Removal and Installation).

## B20 CHECK FOR CORRECT DSM (DRIVER FRONT SEAT MODULE) OPERATION

- Connect adjustable pedal motor C2159. Make sure it seats and latches correctly.
- Connect all in-line electrical connectors between the DSM (driver front seat module) and the adjustable pedal motor. Make sure they seat and latch correctly.
- Connect DSM (driver front seat module) C315F. Make sure it seats and latches correctly.
- Operate the system and verify the concern is still present.

### Is the concern still present?

|            |  |
|------------|--|
| <b>Yes</b> | 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.<br><br>If no service articles exist for this concern, INSTALL a new DSM (driver front seat module) .<br>REFER to: <a href="#">Driver Front Seat Module (DSM)</a> (501-10A Front Seats, Removal and Installation). |
| <b>No</b>  | The condition that caused the concern is not present at this time. The concern is intermittent and may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.   |

## PINPOINT TEST C : ADJUSTABLE PEDALS ARE INOPERATIVE OR DO NOT OPERATE CORRECTLY - USING THE MEMORY SET SWITCH BUTTONS OR THE RKE (REMOTE KEYLESS ENTRY) TRANSMITTER

Refer to Wiring Diagrams Cell 127 for schematic and connector information.

**Normal Operation and Fault Conditions** Refer to Adjustable Pedal – with Memory Feature, REFER to: [Hydraulic Brake Actuation - System Operation and Component Description](#) (206-06 Hydraulic Brake Actuation, Description and Operation).

An open in the adjustable pedal motor, foreign material blocking the pedal assembly, a damaged cable, damaged pedal assembly, a CAN (controller area network) failure, or an internal failure of the modules listed below prevents the adjustable pedals from operating correctly. **Possible Sources**

- Foreign material
- Wiring, terminals or connectors
- CAN (controller area network) concern
- Adjustable pedal motor
- Adjustable brake pedal assembly
- RKE (remote keyless entry) transmitter

Diagnostic Trouble Codes (DTCs),  
REFER to: [Locks, Latches and Entry Systems](#)  
(501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).  
For DSM (driver front seat module)  
Diagnostic Trouble Codes (DTCs),  
REFER to: [Front Seats](#)  
(501-10A Front Seats, Diagnosis and Testing).  
For RTM (radio transceiver module)  
Diagnostic Trouble Codes (DTCs),  
REFER to: [Tire Pressure Monitoring System \(TPMS\)](#)  
(204-04B Tire Pressure Monitoring System (TPMS), Diagnosis and Testing).

**No**

If a module does not communicate with the diagnostic scan tool,  
If all modules communicate with the diagnostic scan tool and no Diagnostic Trouble Codes (DTCs) are present, GO to [C3](#)

### **C3 CHECK THE MEMORY SYSTEM OPERATION**

- Set a memory position for the driver seat, exterior mirrors, steering column and adjustable pedals to memory SET switch button 1. Refer to the Owner's Literature for additional instructions for programming a memory position.
- Using the control switches, move the driver seat, exterior mirror, steering column and adjustable pedals to another position.
- Select PARK.
- Press the memory SET switch button 1 and observe the following items:
  - driver seat
  - exterior mirrors
  - steering column
  - brake and accelerator pedals

**Do all items move when the button is pressed?**

**Yes**

GO to [C4](#)

**No**

If **all** items do not move, DIAGNOSE the memory feature.  
REFER to: [Front Seats](#)  
(501-10A Front Seats, Diagnosis and Testing).  
If **only** the adjustable pedals do not move, GO to [C5](#)

(501-10A Front Seats, Diagnosis and Testing).

If **only**

the exterior mirrors do not move,

REFER to: [Rear View Mirrors](#)

(501-09 Rear View Mirrors, Diagnosis and Testing).

If **only**

the steering column does not move,

REFER to: [Steering Column](#)

(211-04 Steering Column, Diagnosis and Testing).

## C5 CHECK THE ADJUSTABLE PEDAL MOTOR AND CABLE INSTALLATION

- Check the adjustable pedal motor and cable for correct installation.

**Are the motor and cable correctly installed?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">C6</a> |
|------------|--------------------------|

|           |   |
|-----------|---|
| <b>No</b> | CORRECT the adjustable pedal motor or cable installation. |
|-----------|---|

## C6 INSPECT FOR FOREIGN MATERIAL

- Inspect the adjustable brake pedal and accelerator assemblies for foreign material causing a binding condition.

**Are the pedal assemblies free from foreign material?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">C7</a> |
|------------|--------------------------|

|           |                              |
|-----------|------------------------------|
| <b>No</b> | REMOVE the foreign material. |
|-----------|------------------------------|

## C7 CHECK THE ADJUSTABLE PEDAL MOTOR AND HALL-EFFECT CIRCUITS FOR AN OPEN

- Ignition OFF.
- Disconnect DSM (driver front seat module) C341C and C341E.
- Disconnect adjustable pedal motor C2159.

|         |          |        |
|---------|----------|--------|
| C2159-3 | $\Omega$ | Ground |
| C2159-4 | $\Omega$ | Ground |

**Are the resistances greater than 10,000 ohms?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">C9</a> |
|------------|--------------------------|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

### **C9 CHECK THE ADJUSTABLE PEDAL MOTOR AND HALL-EFFECT CIRCUITS FOR A SHORT TOGETHER**

- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
| C2159-1       | $\Omega$             | C2159-2       |
| C2159-1       | $\Omega$             | C2159-3       |
| C2159-1       | $\Omega$             | C2159-4       |
| C2159-2       | $\Omega$             | C2159-3       |
| C2159-2       | $\Omega$             | C2159-4       |

|           |  |
|-----------|--|
| <b>No</b> | INSTALL a new adjustable pedal motor (the adjustable pedal motor is part of the accelerator pedal assembly). |
|-----------|--|

**PINPOINT TEST D : B1368:11, B1368:15**

Refer to Wiring Diagrams Cell 127for schematic and connector information.

**Normal Operation and Fault Conditions** The adjustable pedal motor contains a Hall-effect sensor allowing the DSM (driver front seat module) to monitor the adjustable pedal position. The DSM (driver front seat module) stores the sensor information and uses this information when a memory position is recalled using the memory SET switch, a RKE (remote keyless entry) transmitter or a passive ignition key. When 1 or more of the following Diagnostic Trouble Codes (DTCs) is set, the adjustable pedals enter a "jog mode". When the pedals are in jog mode, the memory system recall does not function from the memory SET switch, RKE (remote keyless entry) transmitter or passive ignition key. When in jog mode and the adjustable pedal control switch is pressed, the motor moves the pedals for 2 seconds in the direction selected regardless of the length of time the switch is actually pressed. **DTC Fault Trigger Conditions**

| DTC (diagnostic trouble code)              | Description   | Fault Trigger Condition   |
|--|---|---|
| DSM (driver front seat module)<br>B1368:11 | Adjustable Pedal Position Feedback Sensor: Circuit Short To Ground          | This DTC (diagnostic trouble code) sets in continuous memory or on demand if the Hall-effect feedback voltage is less than 3.5 volts or the Hall-effect monitor voltage is greater than or equal to 6.85 volts. |
| DSM (driver front seat module)<br>B1368:15 | Adjustable Pedal Position Feedback Sensor: Circuit Short To Battery Or Open | This DTC (diagnostic trouble code) sets in continuous memory or on demand if the DSM (driver front seat module) detects battery voltage or open on the Hall-effect switch feedback circuit.                     |

**Possible Sources**

- Wiring, terminals or connectors
- Adjustable pedal motor

**NOTICE**

Use the correct probe adapter(s) when making measurements. Failure to use the correct probe



Are the resistances greater than 10,000 ohms?

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">D3</a> |
|------------|--------------------------|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

### D3 CHECK THE HALL-EFFECT CIRCUITS FOR A SHORT TOGETHER

- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
| C2159-3       | $\Omega$             | C2159-4       |

Is the resistance greater than 10,000 ohms?

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">D4</a> |
|------------|--------------------------|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

### D4 CHECK THE HALL-EFFECT CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
| C2159-3       | $\bar{V}$            | Ground        |
| C2159-4       | $\bar{V}$            | Ground        |

**Diagnostic steps are not provided for this symptom or DTC. REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).**

Copyright © Ford Motor Company

Sample