Air Bag and Safety Belt Pretensioner Supplemental Restraint System (SRS)

Refer to Wiring Diagram Set 46 (Fusion/Milan/MKZ, Fusion Hybrid/Milan Hybrid) for schematic and connector information. See: Vehicle > Electrical > Diagrams By Number

Pinpoint Test - Supplemental Restraint System (SRS)

Pinpoint Test W: DTCs B00C2:12, B00C2:13 and B00C2:1A

Refer to Wiring Diagram Set 46 (Fusion/Milan/MKZ, Fusion Hybrid/Milan Hybrid), Supplemental Restraint System for schematic and connector information. See: Vehicle > Electrical > Diagrams By Number

Normal Operation

The Occupant Classification System Module (OCSM) monitors Occupant Classification Sensor (OCS) weight sensor bolt "C" and circuitry for faults. If the OCSM detects a fault, it will store DTC B00C2:12, B00C2:13 or B00C2:1A in memory and send a message to the Restraints Control Module (RCM).

The RCM will store DTC B00A0:09 in memory and send a message to the Instrument Cluster (IC) module to illuminate the air bag warning indicator.

- DTC B00C2:12 (Passenger Seat Occupant Classification Sensor "C": Circuit Short To Battery) - When the OCSM measures voltage on the OCS weight sensor bolt "C" signal circuit above 4.85 volts, a fault will be indicated.
- DTC B00C2:13 (Passenger Seat Occupant Classification Sensor "C": Circuit Open) - When the OCSM measures resistance greater than 498,200 ohms on the OCS weight sensor bolt "C" signal circuit, a fault will be indicated.
- DTC B00C2:1A (Passenger Seat Occupant Classification Sensor "C": Circuit Resistance Below Threshold) - When the OCSM measures resistance less than 441,800 ohms on the OCS weight sensor bolt "C" signal circuit, a fault will be indicated.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- OCS weight sensor jumper harness
- OCS weight sensor bolt "C"
- OCSM

PINPOINT TEST W: DTCs B00C2:12, B00C2:13 AND B00C2:1A

WARNING: Never probe the electrical connectors on air bag, Safety Canopy(R) or side air curtain modules. Failure to follow this instruction may result in the accidental deployment of these modules, which increases the risk of serious personal injury or death.

NOTICE: Use the correct probe adapter(s) from the Flex Probe Kit when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

Most faults are due to connector and/or wiring concerns. Carry out a thorough inspection and verification before proceeding with the pinpoint test. See: Air Bag Systems > Initial Inspection and Diagnostic Overview > Inspection and Verification

NOTE: Supplemental Restraint System (SRS) components should only be disconnected or reconnected when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

NOTE: The OCS weight sensor bolt(s) are 3 wire sensors and cannot be tested using a multi-meter.

NOTE: Always make sure the correct SRS component is being installed. Parts released for other vehicles may not be compatible even if they appear physically similar. Check the part number listed in the Ford Catalog Advantage(TM) to make sure the correct component is being installed. If an incorrect SRS component is installed, DTCs may set.
NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

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W1 RETRIEVE OCSM DTCs

- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Self Test - OCSM.
- Was DTC B00C2:12, B00C2:13 or B00C2:1A retrieved on-demand during self-test?

Yes
This fault cannot be cleared until it is corrected and the DTC is no longer retrieved on-demand during self test. GO to W2.

No
This is an intermittent fault when present as a CMDTC only. GO to W11.

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W2 CHECK THE SEAT WIRING AND CONNECTORS

- Ignition OFF.
- WARNING: Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Carry out a thorough inspection of the OCS system wiring, terminals and connectors, weight sensor bolt connector and connection, wiring harness routing and the related seat wiring harness and body wiring harness terminals and connectors.
- Were any problems noted?

Yes
DEPOWER the SRS. REFER to Supplemental Restraint System (SRS) Depowering and Repowering See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.

REPAIR the seat connectors and wiring as needed.
Refer to Wiring Diagram Set 5 (Fusion/Milan/MKZ, Fusion Hybrid/Milan Hybrid), Connector Repair Procedures for schematic and connector information. See: Vehicle > Electrical > Diagrams By Number
GO to W12.

No
For DTC B00C2:12, GO to W3.
For DTC B00C2:13, GO to W5.
For DTC B00C2:1A, GO to W8.

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W3 CHECK OCS WEIGHT SENSOR BOLT "C" SIGNAL CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.
- Disconnect: Passenger Seat Side Air Bag Module C314.
- Disconnect: OCS Weight Sensor Bolt "C" C3330.
- Repower the SRS. Do not prove out at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.
- Ignition ON.
- Measure the voltage between OCS weight sensor bolt "C" C3330-3, circuit VR226 (YE/GY), harness side and ground.
Is any voltage present?

Yes
REPAIR circuit VR226 (YE/GY). GO to W12.

No
GO to W4.

W4 CHECK OCS WEIGHT SENSOR BOLT "C" RETURN CIRCUIT FOR A OPEN

- Ignition OFF.
- Measure the resistance between OCS weight sensor bolt "C" C3330-2, circuit RR153 (GY/BU), harness side and ground.

Is the resistance less than 5 ohms?

Yes
GO to W10.

No
REPAIR circuit RR153 (GY/BU). GO to W12.

W5 CHECK OCS WEIGHT SENSOR BOLT "C" FOR A FAULT STATUS CHANGE (OPEN INDICATED)

NOTE: This pinpoint test step will attempt to change the fault reported by the OCSM by inducing a different fault condition. If the fault reported changes, this indicates the OCSM is functioning correctly and is not the source of the fault.
- Ignition OFF.
- Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering. See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.
- Disconnect: OCS Weight Sensor Bolt "C" C3330.
- Disconnect: Passenger Seat Side Air Bag Module C314.
- Connect a fused jumper wire between OCS weight sensor bolt C C3330 C3330-3, circuit VR226 (YE/GY), harness side and C3330-2, circuit RR153 (GY/BU), harness side.
- Repower the SRS. Do not prove out at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering. See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Self Test - OCSM.
- **DIAGNOSTIC TIP:** When viewing DTCs with the OCS weight sensor bolt "C" C3330 circuits shorted together, a low resistance circuit fault would normally be retrieved.
- **Did the on-demand DTC change from B00C2:13 to B00C2:1A?**

**Yes**
INSTALL a new inboard weight sensor assembly. REFER to Occupant Classification Sensor seen: Seat Occupant Sensor > Removal and Replacement. GO to W12.

**No**
GO to W6.

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W6 CHECK OCS WEIGHT SENSOR BOLT "C" SIGNAL CIRCUIT FOR AN OPEN
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- Ignition OFF.
- **WARNING:** Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Disconnect: OCSM C3159.
- Remove the fused jumper wire from OCS weight sensor bolt "C" C3330.
- Measure the resistance between OCSM C3159-7, circuit VR226 (YE/GY), harness side and OCS weight sensor bolt "C" C3330-3, circuit VR226 (YE/GY), harness side.

- Is the resistance less than 0.5 ohm?

**Yes**
GO to W7.

**No**
REPAIR circuit VR226 (YE/GY). GO to W12.

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W7 CHECK OCS WEIGHT SENSOR BOLT "C" VREF CIRCUIT FOR AN OPEN
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- Ignition OFF.
- **WARNING:** Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Disconnect: OCSM C3159.
- Remove the fused jumper wire from OCS weight sensor bolt "C" C3330.
- Measure the resistance between OCSM C3159-7, circuit VR226 (YE/GY), harness side and OCS weight sensor bolt "C" C3330-3, circuit VR226 (YE/GY), harness side.
- Is the resistance less than 0.5 ohm?

**Yes**
GO to W7.

**No**
REPAIR circuit VR226 (YE/GY). GO to W12.
Measure the resistance between OCS weight sensor bolt “C” C3330-1, circuit CR153 (GN/WH), harness side and OCSM C3159-8, circuit CR153 (GN/WH), harness side.

- Is the resistance less than 5 ohms?

Yes
GO to W10.

No

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W8 CHECK OCS WEIGHT SENSOR BOLT "C" FOR A FAULT STATUS CHANGE (RESISTANCE BELOW THRESHOLD INDICATED)

NOTE: This pinpoint test step will attempt to change the fault reported by the OCSM by inducing a different fault condition. If the fault reported changes, this indicates the OCSM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- WARNING: Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Disconnect: OCS Weight Sensor Bolt “C” C3330.
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Self Test - OCSM.
- DIAGNOSTIC TIP: When viewing DTCs with the OCS Weight Sensor Bolt “C” disconnected, an open sensor circuit fault would normally be retrieved.
- Did the on-demand DTC change from B00C2:1A to B00C2:13?

Yes
INSTALL a new inboard weight sensor assembly. REFER to Occupant Classification Sensor See: Seat Occupant Sensor > Removal and Replacement. GO to W12.

No
GO to W9.

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W9 CHECK FOR A SHORT BETWEEN OCS WEIGHT SENSOR BOLT "C" CIRCUITS AND GROUND

- Ignition OFF.
- WARNING: Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Disconnect: OCSM C3159.
- Measure the resistance between OCS weight sensor bolt “C”:
  - C3330-3, circuit VR226 (YE/GY), harness side and ground.
- C3330-3, circuit VR226 (YE/GY), harness side and C3330-2, circuit RR153 (GY/BU), harness side.

- Are the resistances greater than 10,000 ohms?

Yes
GO to W10.

No
REPAIR affected circuits. GO to W12.

W10 CONFIRM THE OCSM FAULT

NOTE: Make sure all restraint system sensor electrical connectors, OCS system components and the OCSM electrical connector are all connected before carrying out the self-test. If not, DTCs will be recorded.

- Ignition OFF.
- WARNING: Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
- Prior to reconnecting any previously disconnected SRS component:
  - inspect connector(s) (including any in-line connectors) for pushed out, loose or spread terminals and loose or frayed wire connections at terminals.
  - inspect wire harness for any damage, pinched, cut or pierced wires.
  - repair any concerns found.
Refer to Wiring Diagram Set 5 (Fusion/Milan/MKZ, Fusion Hybrid/Milan Hybrid), Connector Repair Procedures for schematic and connector information. See: Vehicle > Electrical > Diagrams By Number

- Connect: OCSM C3159 (if previously disconnected).
- Connect: OCS Weight Sensor Bolt “C” C3330.
- If previously directed to depower the SRS, repower the SRS. Do not prove out the SRS at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering. See: Air Bag(s) Arming and Disarming > Procedures > Supplemental Restraint System (SRS) Depowering and Repowering.
  - Ignition ON.
- Enter the following diagnostic mode on the scan tool: Self Test - OCSM.
- Was the original DTC retrieved on-demand during self-test?

Yes
INSTALL a new OCSM. REFER to Occupant Classification System Module (OCSM) See: Seat Occupant Classification Module - Air Bag > Removal and Replacement. GO to W12.

No
In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. SRS components should only be installed when directed to do so in the pinpoint test. GO to W12.

W11 CHECK FOR AN INTERMITTENT FAULT
- ignition off.
- **warning:** turn the ignition OFF and wait one minute to deplete the backup power supply. failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
  - disconnect the ocs weight sensor bolt “c” c3330:
    - inspect connector(s) (including any in-line connectors) for corrosion, loose or spread terminals and loose or frayed wire connections at terminals.
    - inspect wire harness for any damage, pinched, cut or pierced wires.
    - repair any concerns found.
  - refer to wiring diagram set 5 (fusion/milan/mkz, fusion hybrid/milan hybrid), connector repair procedures for schematic and connector information. see: vehicle > electrical > diagrams by number

- connect: all previously disconnected component(s)/connector(s).
- ignition on.
- enter the following diagnostic mode on the scan tool: self test - ocsm.

**was dtc b00c2:12, b00c2:13 or b00c2:1a retrieved on-demand during self-test?**

**yes**
this fault cannot be cleared until it is corrected and the dtc is no longer retrieved on-demand during self-test.

for dtc b00c2:12, go to w3.

for dtc b00c2:13, go to w5.

for dtc b00c2:1a, go to w8.

**no**
check for causes of the intermittent fault. attempt to recreate the hard fault by flexing the wire harness and cycling the ignition key frequently. activate other systems in the same wire harness. do not install any new srs components at this time. srs components should only be installed when directed to do so in the pinpoint test.

refer to wiring diagram set 5 (fusion/milan/mkz, fusion hybrid/milan hybrid), connector repair procedures for schematic and connector information. see: vehicle > electrical > diagrams by number

**go to w12.**

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**w12 check for additional srs dtcs**

- ignition off.
- **warning:** turn the ignition OFF and wait one minute to deplete the backup power supply. failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.
  - reconnect all srs components (if previously disconnected).
  - if previously directed to depower the srs, repower the srs. do not prove out the srs at this time. refer to supplemental restraint system (srs) depowering and repowering see: air bag(s) arming and disarming > procedures > supplemental restraint system (srs) depowering and repowering.
  - ignition on.
  - enter the following diagnostic mode on the scan tool: self test - restraints.
  - **note:** when selecting restraints from the self test menu, dtcs will be retrieved from the rcm and ocsm.
  - are any rcm and/or ocsm retrieved on-demand during self-test?

**yes**
do not clear any dtcs until all dtcs have been resolved. go to the dtc charts for pinpoint test direction. see: all diagnostic trouble codes ( dtc ) > diagnostic trouble code descriptions

**no**
clear all rcm and ocsm cmdtc's. prove out the srs. repair is complete. return the vehicle to the customer.

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