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2010 FORD EcoSport OEM Service and Repair Workshop Manual

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C256-1		Ground
C256-2		Ground

Is any voltage present?

Yes	<p>Due to the shorting bar feature in the RCM (restraints control module) electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar.</p> <p>REPAIR the circuit(s).</p> <p>Refer to Wiring Diagrams Cell 5 for schematic and connector information.</p> <p>GO to E18</p>
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No	GO to E13
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E12 CONFIRM THE PASSENGER AIRBAG FAULT

NOTE

Make sure all SRS (supplemental restraint system) components and the RCM (restraints control module) electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Prior to reconnecting any previously disconnected SRS (supplemental restraint system) component:
 - inspect connector(s) (including any inline connectors) for pushed-out, loose or spread terminals and loose or frayed wire connections at terminals.
 - inspect wire harness for any damaged, pinched, cut or pierced wires.
 - inspect RCM (restraints control module) C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.
 - inspect Passenger Airbag C256 and make sure the Connector Position Assurance (CPA) tabs are not broken and the clip is not damaged.

- inspect wire harness for any damaged, pinched, cut or pierced wires.
- inspect RCM (restraints control module) C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.
- repair any concerns found.

Refer to Wiring Diagrams Cell 5 for schematic and connector information.

- Connect Passenger Airbag C256 (if previously disconnected).
- Connect RCM (restraints control module) C310A and C310B (if previously disconnected).
- Repower the SRS (supplemental restraint system) . Do not prove out the SRS (supplemental restraint system) at this time.

REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

Was the original DTC (diagnostic trouble code) retrieved on-demand during self-test?

<p>Yes</p>	<p>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 RCM (restraints control module) .</p> <p>REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).</p> <p>GO to E18</p>
<p>No</p>	<p>In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS (supplemental restraint system) components at this time. Install SRS (supplemental restraint system) components only when directed to do so in the pinpoint test.</p> <p>For DTC (diagnostic trouble code) B0010:13 or B0010:1A, GO to E14 For DTC (diagnostic trouble code) B0010:11, GO to E15 For DTC (diagnostic trouble code) B0010:12, GO to E16</p>

E14 CHECK THE PASSENGER FRONTAL STAGE 1 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_05_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT

- Remove the glove compartment.
- REFER to: [Glove Compartment](#)(501-12 Instrument Panel and Console, Removal and Installation).
- Using the diagnostic scan tool,

E16 CHECK THE PASSENGER FRONTAL STAGE 1 DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO BATTERY FAULT

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Remove the glove compartment.
REFER to: [Glove Compartment](#)(501-12 Instrument Panel and Console, Removal and Installation).
- Disconnect Passenger Airbag C256 .
- Repower the SRS (supplemental restraint system) . Do not prove out the SRS (supplemental restraint system) at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- Attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wire harness frequently.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

Was DTC (diagnostic trouble code) B0010:12 retrieved on-demand during self-test?

Yes	DEPOWER the SRS (supplemental restraint system) and REPAIR as necessary. REFER to: Supplemental Restraint System (SRS) Depowering (501-20B Supplemental Restraint System, General Procedures). Refer to Wiring Diagrams Cell 46for schematic and connector information. GO to E18
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS (supplemental restraint system) components at this time. Install SRS (supplemental restraint system) components only when directed to do so in the pinpoint test. GO to E17

E17 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Airbag C256 .

Restraints

self-test.

Are any RCM (restraints control module) or OCSM (occupant classification system module) Diagnostic Trouble Codes (DTCs) retrieved on-demand during self-test?

Yes	Do not clear any Diagnostic Trouble Codes (DTCs) until all Diagnostic Trouble Codes (DTCs) have been resolved. DIAGNOSE and REPAIR the SRS (supplemental restraint system) Diagnostic Trouble Codes (DTCs). REFER to the DTC (diagnostic trouble code) Chart in this section.
No	The repair is complete. RETURN the vehicle to the customer.

PINPOINT TEST F : B0011:11, B0011:12, B0011:13, B0011:1A

Refer to Wiring Diagrams Cell 46 for schematic and connector information.

Normal Operation and Fault Conditions REFER to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).

The RCM (restraints control module)

continuously monitors the passenger airbag stage 2 circuits for the following faults:

- Resistance out of range
- Unexpected voltage
- Short to ground
- Faulted passenger airbag

If a fault is detected, the RCM (restraints control module) stores DTC (diagnostic trouble code)

B0011:11, B0011:12, B0011:13 or B0011:1A in memory and sends a message to the IPC (instrument panel cluster)

to illuminate the airbag warning indicator.

The RCM (restraints control module)

analyzes the deployment loop resistance to determine if a fault exists. The value displayed in the PID (parameter identification)

is the deployment loop resistance measured by the RCM (restraints control module)

. If the value displayed is lower or higher than the desired range (refer to diagram below), the RCM (restraints control module)

can set a DTC (diagnostic trouble code)

B0011:12	Short To Battery	passenger airbag stage 2 circuit for more than 6 seconds.
RCM (restraints control module) B0011:13	Passenger Frontal Stage 2 Deployment Control: Circuit Open	A fault is indicated when the RCM (restraints control module) measures more than the desired resistance between the passenger airbag stage 2 circuits for more than 6 seconds.
RCM (restraints control module) B0011:1A	Passenger Frontal Stage 2 Deployment Control: Circuit Resistance Below Threshold	A fault is indicated when the RCM (restraints control module) measures less than the desired resistance between the passenger airbag stage 2 circuits for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- Passenger airbag
- RCM (restraints control module)

Visual Inspection and Pre-checks

- Inspect for damaged wiring harness(es).
- Inspect for loose or damaged connectors.

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.

NOTICE

Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector.

NOTE

Most faults are due to connector and/or wiring concerns. Carry out a thorough inspection and verification before proceeding with the pinpoint test.

No	<p>This is an intermittent fault when present as a CMDTC (continuous memory diagnostic trouble code) only.</p> <p>For DTC (diagnostic trouble code) B0011:13 or B0011:1A, GO to F13 For DTC (diagnostic trouble code) B0011:11, GO to F14 For DTC (diagnostic trouble code) B0011:12, GO to F15</p>
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F2 CHECK THE PASSENGER FRONTAL STAGE 2 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_06_R) PID (PARAMETER IDENTIFICATION)

- Using the diagnostic scan tool,
Access the RCM (restraints control module) and monitor the DEPLOY_06_R (Passenger Frontal Stage 2 Deployment Control Resistance) (mOhm) PID (parameter identification)
- Monitor and record the value of the PID (parameter identification) .

Does the PID (parameter identification) value read between 1.7 and 2.98 ohms?

Yes	GO to F12
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No	GO to F3
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F3 CHECK THE PASSENGER FRONTAL STAGE 2 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_06_R) PID (PARAMETER IDENTIFICATION) WHILE CARRYING OUT THE HARNESS TEST

- Gain access to the passenger airbag wiring as necessary.
- Using the diagnostic scan tool,
Access the RCM (restraints control module) and monitor the DEPLOY_06_R (Passenger Frontal Stage 2 Deployment Control Resistance) (mOhm) PID (parameter identification)
- While monitoring the PID (parameter identification) , carry out the harness test of the passenger airbag circuits and accessible connectors (including any inline connectors) by wiggling and flexing the wire harness and connectors frequently.

Does the PID (parameter identification) value stay between 1.7 and 2.98 ohms while carrying out the wiggle test?

Yes	<p>DEPOWER the SRS (supplemental restraint system) and REPAIR the connector, terminals or wire harness as needed.</p> <p>Refer to Wiring Diagrams Cell 5for schematic and connector information.</p> <p>GO to F17</p>
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- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM (restraints control module) C310A and C310B .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C256-4	Ω	C256-5

Is the resistance greater than 10,000 ohms?

Yes	GO to F12
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No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to F17
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F6 CHECK THE PASSENGER AIRBAG CIRCUITS FOR AN OPEN

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Airbag C256 .
- Disconnect RCM (restraints control module) C310A and C310B .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C310A-7	Ω	C256-4

When viewing Diagnostic Trouble Codes (DTCs) with the passenger airbag stage 2 circuits shorted together, a low resistance fault is normally retrieved. An open circuit fault is also retrieved for passenger airbag stage 1 and the passenger airbag canister vent, due to the passenger airbag connector being disconnected.

Did the on-demand DTC (diagnostic trouble code) change from B0011:13 to B0011:1A?

Yes	REMOVE the fused jumper wire and GO to F11
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No	REMOVE the fused jumper wire and GO to F12
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F8 CHECK THE PASSENGER AIRBAG DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (SHORT TO GROUND INDICATED)

NOTE

This pinpoint test step attempts to change the fault reported by the RCM (restraints control module) by inducing a different fault condition. If the reported fault changes, this indicates the RCM (restraints control module) is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Remove the glove compartment.
REFER to: [Glove Compartment](#)(501-12 Instrument Panel and Console, Removal and Installation).
- Disconnect Passenger Airbag C256 .
- Repower the SRS (supplemental restraint system) .

Do not

prove out the SRS (supplemental restraint system) at this time.

REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.
- **DIAGNOSTIC TIP:**

When viewing Diagnostic Trouble Codes (DTCs) with the passenger airbag disconnected, an open circuit fault is normally retrieved on stage 2. An open circuit fault is also retrieved for passenger airbag stage 1 and the passenger airbag canister vent, due to the passenger airbag connector being disconnected.

Did the on-demand DTC (diagnostic trouble code) change from B0011:11 to B0011:13?

REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Remove the glove compartment.

REFER to: [Glove Compartment](#)(501-12 Instrument Panel and Console, Removal and Installation).

- Disconnect Passenger Airbag C256 .
- Disconnect RCM (restraints control module) C310A and C310B .
- Repower the SRS (supplemental restraint system) .

Do not

prove out the SRS (supplemental restraint system) at this time.

REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C256-4	\overline{V}	Ground
C256-5	\overline{V}	Ground

Is any voltage present?

Yes	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to F17
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No	GO to F12
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F11 CONFIRM THE PASSENGER AIRBAG FAULT

NOTE

Make sure all SRS (supplemental restraint system) components and the RCM (restraints control module) electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes