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1996 FORD Mondeo Wagon OEM Service and Repair Workshop Manual

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NOTE

SRS (supplemental restraint system) 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 (supplemental restraint system) .

NOTE

Always make sure the correct SRS (supplemental restraint system) 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 parts catalog to make sure the correct component is being installed. If an incorrect SRS (supplemental restraint system) component is installed, Diagnostic Trouble Codes (DTCs) may set.

NOTE

The SRS (supplemental restraint system) must be fully operational and free of faults before releasing the vehicle to the customer.

AC1 RETRIEVE RCM (RESTRAINTS CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

• WARNING

Before beginning any service procedure in this section, refer to Safety Warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

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

Was DTC (diagnostic trouble code) B140C:11, B140C:12, B140C:13 and B140C:1D retrieved on-demand during self-test?

Yes

This fault cannot be cleared until it is corrected and the DTC (diagnostic trouble code) is no longer retrieved on-demand during self-test.

For DTC (diagnostic trouble code) B140C:11 or B140C:1D, GO to [AC2](#) For DTC (diagnostic trouble code) B140C:12, GO to [AC4](#) For DTC (diagnostic trouble code) B140C:13, GO to [AC5](#)

Positive Lead	Measurement / Action	Negative Lead
C3557-1	Ω	Ground
C3557-1	Ω	C3557-2

Are the resistances greater than 10,000 ohms?

Yes	GO to AC9
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No	REPAIR the circuit. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to AC11
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AC4 CHECK THE SECOND ROW DRIVER SIDE SEATBELT BUCKLE SENSOR CIRCUIT FOR A SHORT TO VOLTAGE

- 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 .
- Disconnect Second Row Driver Side Seatbelt Buckle Assembly C3557 .
- 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
C3557-1	\bar{V}	Ground

When viewing Diagnostic Trouble Codes (DTCs) with the second row driver seatbelt buckle sensor circuits shorted together, a short to ground fault is normally retrieved.

Did the on-demand DTC (diagnostic trouble code) change from B140C:13 to B140C:11?

Yes	REMOVE the fused jumper wire and GO to AC8
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No	REMOVE the fused jumper wire and GO to AC6
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AC6 CHECK THE SECOND ROW DRIVER SIDE SEATBELT BUCKLE SENSOR CIRCUIT 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 RCM (restraints control module) C310A and C310B .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C310B-57	Ω	C3557-1

Is the resistance less than 0.5 ohm?

Yes	GO to AC7
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No	REPAIR the circuit. Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to AC11
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AC7 CHECK THE SECOND ROW DRIVER SIDE SEATBELT BUCKLE SENSOR GROUND CIRCUIT FOR AN OPEN

- Measure:

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

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

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

Yes	INSTALL a new rear seatbelt buckle assembly (includes second row driver seatbelt buckle and sensor). REFER to: Rear Seatbelt Buckle LH (501-20A Seatbelt Systems, Removal and Installation). GO to AC11
No	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. GO to AC10

AC9 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) 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) are 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 wiring 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 5for schematic and connector information.
- Connect RCM (restraints control module) C310A and C310B (if previously disconnected).

all

previously disconnected components and connectors.

- 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, carry out RCM (restraints control module) self-test.

Was DTC (diagnostic trouble code) B140C:11, B140C:12, B140C:13 and B140C:1D retrieved on-demand during self-test?

Yes	<p>This fault cannot be cleared until it is corrected and the DTC (diagnostic trouble code) is no longer retrieved on-demand during self-test.</p> <p>For DTC (diagnostic trouble code) B140C:11 or B140C:1D, GO to AC2 For DTC (diagnostic trouble code) B140C:12, GO to AC4 For DTC (diagnostic trouble code) B140C:13, GO to AC5</p>
No	<p>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 AC11</p>

AC11 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

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

- Connect

all

previously disconnected components and connectors.

- 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.

- **NOTE**

RCM (restraints control module) B140D:11	Second Row Passenger Side Seatbelt Sensor: Circuit Short To Ground	A fault is indicated when the RCM (restraints control module) senses a short to ground on the second row passenger side seatbelt buckle sensor circuit for more than 6 seconds.
RCM (restraints control module) B140D:12	Second Row Passenger Side Seatbelt Sensor: Circuit Short To Battery	A fault is indicated when the RCM (restraints control module) senses a short to voltage on the second row passenger side seatbelt buckle sensor circuit for more than 6 seconds.
RCM (restraints control module) B140D:13	Second Row Passenger Side Seatbelt Sensor: Circuit Open	A fault is indicated when the RCM (restraints control module) senses an open on either second row passenger side seatbelt buckle sensor circuit for more than 6 seconds.
RCM (restraints control module) B140D:1D	Second Row Passenger Side Seatbelt Sensor: Circuit Current Out Of Range	A fault is indicated when the RCM (restraints control module) measures current outside of an acceptable range on the second row passenger side seatbelt buckle sensor circuit for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- Second row passenger side seatbelt buckle sensor
- RCM (restraints control module)

Visual Inspection and Pre-checks

- Inspect for a damaged second row passenger side seatbelt buckle.
- 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

Before beginning any service procedure in this section, refer to Safety Warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

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

Was DTC (diagnostic trouble code) B140D:11, B140D:12, B140D:13 and B140D:1D retrieved on-demand during self-test?

Yes	<p>This fault cannot be cleared until it is corrected and the DTC (diagnostic trouble code) is no longer retrieved on-demand during self-test.</p> <p>For DTC (diagnostic trouble code) B140D:11 or B140D:1D, GO to AD2 For DTC (diagnostic trouble code) B140D:12, GO to AD4 For DTC (diagnostic trouble code) B140D:13, GO to AD5</p>
No	<p>This is an intermittent fault when present as a CMDTC (continuous memory diagnostic trouble code) only. GO to AD10</p>

AD2 CHECK THE SECOND ROW PASSENGER SIDE SEATBELT BUCKLE SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (SHORT TO GROUND OR CURRENT OUT OF RANGE 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.
- Disconnect Second Row Passenger Side Seatbelt Buckle C3558 .
- Ignition ON.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

- **DIAGNOSTIC TIP:**

When viewing Diagnostic Trouble Codes (DTCs) with the second row passenger side seatbelt buckle sensor disconnected, an open circuit fault is normally retrieved.

Did the on-demand DTC (diagnostic trouble code) change from B140D:11 or B140D:1D to B140D:13?


Yes	GO to AD8
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REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Disconnect RCM (restraints control module) C310A and C310B .
- Disconnect Second Row Passenger Side Seatbelt Buckle C3558 .
- 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
C3558-3		Ground

Is any voltage present?

Yes	REPAIR the circuit. Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to AD11
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No	GO to AD9
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AD5 CHECK THE SECOND ROW PASSENGER SIDE SEATBELT BUCKLE SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (OPEN 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).

Is the resistance less than 0.5 ohm?

Yes	GO to AD7
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No	REPAIR the circuit. Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to AD11
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AD7 CHECK THE SECOND ROW PASSENGER SIDE SEATBELT BUCKLE SENSOR GROUND CIRCUIT FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C310B-53	Ω	C3558-4

Is the resistance less than 3 ohms?

Yes	GO to AD9
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No	REPAIR the circuit. Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to AD11
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AD8 CONFIRM THE SECOND ROW PASSENGER SIDE SEATBELT BUCKLE SENSOR 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.