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## 2002 FORD Mondeo Wagon OEM Service and Repair Workshop Manual

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(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.
  - 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).
- Connect 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.
- 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?**

<b>Yes</b>	<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: <a href="#">Restraints Control Module (RCM)</a> (501-20B Supplemental Restraint System, Removal and Installation).</p> <p>GO to <a href="#">AD11</a></p>
<b>No</b>	<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. GO to <a href="#">AD10</a></p>

- 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

When selecting Restraints from the Self Test menu, DTCs are retrieved from the RCM (restraints control module) and OCSM (occupant classification system module) .

Using a diagnostic scan tool, perform

#### 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?**

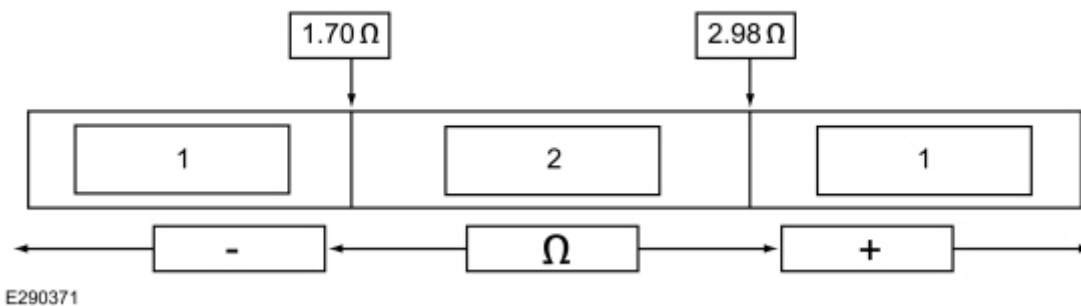
<b>Yes</b>	Do not clear any Diagnostic Trouble Codes (DTCs) until <b>all</b> Diagnostic Trouble Codes (DTCs) have been resolved. DIAGNOSE and REPAIR the SRS (supplemental restraint system) Diagnostic Trouble Codes (DTCs). REFER to the DTC (diagnostic trouble code) Chart in this section.
<b>No</b>	The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

#### PINPOINT TEST AE : B1410:11, B1410:12, B1410:13, B1410:1A

Refer to Wiring Diagrams Cell 46for 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)



- 1 - May set DTC (diagnostic trouble code)
- 2 - Desired range

#### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
RCM (restraints control module) B1410:11	Second Row Driver Side Seatbelt Pretensioner Deployment Control: Circuit Short To Ground	A fault is indicated when the RCM (restraints control module) senses a short to ground on either second row driver side seatbelt retractor pretensioner circuit for more than 6 seconds.
RCM (restraints control module) B1410:12	Second Row Driver Side Seatbelt Pretensioner Deployment Control: Circuit Short To Battery	A fault is indicated when the RCM (restraints control module) senses a short to voltage on either second row driver side seatbelt retractor pretensioner circuit for more than 6 seconds.
RCM (restraints control module) B1410:13	Second Row Driver Side Seatbelt Pretensioner Deployment Control: Circuit Open	A fault is indicated when the RCM (restraints control module) measures more than the desired resistance between the second row driver side seatbelt retractor pretensioner circuits for more than 6 seconds.
RCM (restraints control module) B1410:1A	Second Row Driver Side Seatbelt Pretensioner Deployment Control: Circuit Resistance Below Threshold	A fault is indicated when the RCM (restraints control module) measures less than the desired resistance between the second row driver side seatbelt retractor pretensioner circuits for more than 6 seconds.

## NOTE

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

### AE1 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, perform RCM (restraints control module) self-test.

**Was DTC (diagnostic trouble code) B1410:11, B1410:12, B1410:13 and B1410:1A retrieved on-demand during self-test?**

<b>Yes</b>	<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>If DTC (diagnostic trouble code) U3003:16 or U3003:17 is also retrieved on-demand, <a href="#">GO to Pinpoint Test BD</a></p> <p>If DTC (diagnostic trouble code) U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the second row driver side seatbelt retractor pretensioner Diagnostic Trouble Codes (DTCs).</p> <p>For DTC (diagnostic trouble code) B1410:13 or B1410:1A, GO to <a href="#">AE2</a> For DTC (diagnostic trouble code) B1410:11, GO to <a href="#">AE8</a> For DTC (diagnostic trouble code) B1410:12, GO to <a href="#">AE10</a></p>
<b>No</b>	<p>This is an intermittent fault when present as a CMDTC (continuous memory diagnostic trouble code) only.</p> <p>If DTC (diagnostic trouble code) U3003:16 or U3003:17 is also retrieved on-demand, <a href="#">GO to Pinpoint Test BD</a></p> <p>If DTC (diagnostic trouble code) U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the second row driver side seatbelt retractor pretensioner Continuous Memory Diagnostic Trouble Codes (CMDTCs).</p> <p>For DTC (diagnostic trouble code) B1410:13 or B1410:1A, GO to <a href="#">AE13</a> For DTC (diagnostic trouble code) B1410:11, GO to <a href="#">AE14</a> For DTC (diagnostic trouble code) B1410:12, GO to <a href="#">AE15</a></p>

## AE4 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (LOW RESISTANCE 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).
- Disconnect Second Row Driver Side Seatbelt Retractor Pretensioner C3646 .
- 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 second row driver side seatbelt retractor pretensioner disconnected, an open circuit fault is normally retrieved.

**Did the on-demand DTC (diagnostic trouble code) change from B1410:1A to B1410:13?**

<b>Yes</b>	GO to <a href="#">AE11</a>
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<b>No</b>	GO to <a href="#">AE5</a>
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## AE5 CHECK FOR A SHORT BETWEEN THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER CIRCUITS

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

Are the resistances less than 0.5 ohm?

Yes	GO to <a href="#">AE7</a>
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No	REPAIR the circuits. Refer to Wiring Diagrams Cell 5for schematic and connector information. GO to <a href="#">AE17</a>
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**AE7 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER DEPLOYMENT CONTROL 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.

- Connect RCM (restraints control module) C310A and C310B .
- Connect a fused jumper wire:

Lead 1	Measurement / Action	Lead 2
C3646-1		C3646-2

- 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 second row driver side seatbelt retractor pretensioner circuits shorted together, a low resistance fault is normally retrieved.

**Did the on-demand DTC (diagnostic trouble code) change from B1410:13 to B1410:1A?**

## AE9 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER CIRCUITS FOR A SHORT TO GROUND

- 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
C3646-1	$\Omega$	Ground
C3646-2	$\Omega$	Ground

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

<b>Yes</b>	GO to <a href="#">AE12</a>
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<b>No</b>	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to <a href="#">AE17</a>
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## AE10 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER CIRCUITS 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 Second Row Driver Side Seatbelt Retractor Pretensioner C3646 .
- Disconnect RCM (restraints control module) C310A and C310B .
- Repower the SRS (supplemental restraint system) .



- 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 Second Row Driver Side Seatbelt Retractor Pretensioner C3646 and make sure the Connector Position Assurance (CPA) tabs are not broken and the clip is not damaged.
- Repair any concerns found.

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

- Connect Second Row Driver Side Seatbelt Retractor Pretensioner C3646 .
- 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?**

<b>Yes</b>	<p>INSTALL a new second row driver side seatbelt retractor pretensioner.</p> <p>REFER to: <a href="#">Rear Seatbelt Retractor and Pretensioner - SuperCab</a> (501-20A Seatbelt Systems, Removal and Installation).</p> <p>, or REFER to: <a href="#">Rear Seatbelt Retractor and Pretensioner - SuperCrew</a> (501-20A Seatbelt Systems, Removal and Installation).</p> <p>GO to <a href="#">AE17</a></p>
<b>No</b>	<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) B1410:13 or B1410:1A, GO to <a href="#">AE13</a> For DTC (diagnostic trouble code) B1410:11, GO to <a href="#">AE14</a> For DTC (diagnostic trouble code) B1410:12, GO to <a href="#">AE15</a></p>

**AE12 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT**

**NOTE**

restraint system) components only when directed to do so in the pinpoint test.

For DTC (diagnostic trouble code) B1410:13 or B1410:1A, GO to [AE13](#) For DTC (diagnostic trouble code) B1410:11, GO to [AE14](#) For DTC (diagnostic trouble code) B1410:12, GO to [AE15](#)

### **AE13 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER DEPLOYMENT CONTROL (DEPLOY\_20\_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT**

- Using the diagnostic scan tool,  
Access the RCM (restraints control module) and monitor the DEPLOY\_20\_R (Second Row Driver Side Seatbelt Pretensioner Deployment Control) (mOhm) PID (parameter identification)
- While monitoring the PID (parameter identification) , attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wire harness frequently. Record the resistance value indicated by the PID (parameter identification) .

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

**Yes**

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 [AE16](#)

**No**

DEPOWER the SRS (supplemental restraint system) .  
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)  
(501-20B Supplemental Restraint System, General Procedures).  
REPAIR as necessary.  
Refer to Wiring Diagrams Cell 5for schematic and connector information.  
GO to [AE17](#)

### **AE14 CHECK THE SECOND ROW DRIVER SIDE SEATBELT RETRACTOR PRETENSIONER DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO GROUND FAULT**

- 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) B1410:11 retrieved on-demand during self-test?**

**Yes**

DEPOWER the SRS (supplemental restraint system) and REPAIR as necessary.  
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)