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2004 FORD Mondeo Wagon OEM Service and Repair Workshop Manual

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

#### Were any Diagnostic Trouble Codes (DTCs) retrieved on-demand during self-test?

Yes

The fault(s) cannot be cleared until corrected and the Diagnostic Trouble Codes (DTCs) are no longer retrieved on-demand during self-test.

For DTC (diagnostic trouble code) B1414:11 GO to Al2 For DTC (diagnostic trouble code) B1414:12 GO to Al4 For DTC (diagnostic trouble code) B1414:13, GO to Al5

No

The fault is intermittent when present as a CMDTC (continuous memory diagnostic trouble code) only. GO to Al9

## AI2 CHECK THE DRIVER FRONT DOOR SIDE IMPACT SENSOR 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 fault reported 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 Driver Door Side Impact Sensor C567.
- 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.

#### Did the on-demand Diagnostic Trouble Codes (DTCs) change from B1414:11 to B1414:13?

Yes

INSTALL a new driver door side impact sensor.

REFER to: Front Door Side Impact Sensor

(501-20B Supplemental Restraint System, Removal and Installation).

GO to Al10

## AI4 CHECK THE DRIVER DOOR SIDE IMPACT SENSOR CIRCUITS FOR A SHORT TO VOLTAGE (CIRCUIT SHORT TO BATTERY INDICATED)

- 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 Driver Door Side Impact Sensor C567.
- 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
C567-1	₩	Ground
C567-2	Ÿ	Ground

#### Is any voltage present?

REPAIR the affected circuits.

Yes

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

GO to Al10

No GO to Al8

## AIS CHECK THE DRIVER DOOR SIDE IMPACT SENSOR AND RCM (RESTRAINTS CONTROL MODULE) CONNECTIONS (CIRCUIT OPEN)

• Ignition OFF.

#### Are the resistances less than 0.5 ohm?

Yes	GO to	AI7

REPAIR the affected circuit.

No

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

GO to Al10

## AI7 CHECK THE DRIVER FRONT DOOR SIDE IMPACT SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (CIRCUIT OPEN)

#### 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 fault reported 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 Le	ead 2
C567-1	C	567-2

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

#### Did the DTC (diagnostic trouble code) change from B1414:13 to B1414:11?

**Yes**REMOVE the fused jumper wire and INSTALL a new driver front door side impact sensor.
REFER to: Front Door Side Impact Sensor
(501-20B Supplemental Restraint System, Removal and Installation).

FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new RCM (restraints control module) .

REFER to: Restraints Control Module (RCM)

(501-20B Supplemental Restraint System, Removal and Installation).

GO to Al10

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 Al9

#### AI9 CHECK FOR AN INTERMITTENT FAULT

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .

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

- Disconnect Driver Door Side Impact Sensor C567.
- Disconnect RCM (restraints control module) C310A and C310B.
- Inspect:
  - harness and component connectors for loose or spread terminals and loose or frayed wire connections at terminals.
  - wiring harness for any damage, pinched, cut or pierced wires.
  - 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 Driver Front Door Side Impact Sensor C567.
- Connect 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.
- Using a diagnostic scan tool, carry out RCM (restraints control module) self-test.

Were any Diagnostic Trouble Codes (DTCs) retrieved on-demand during self-test?

### PINPOINT TEST AJ: B1414:11, B1414:12, B1414:13, B1419:11, B1419:12, B1419:13, SUPERCREW AND SUPERCAB

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)

monitors the driver front door side impact sensor and passenger B-pillar (with SuperCab) or C-pillar (with SuperCrew cab) side impact sensors and circuits for the following faults:

- Open circuit
- Short to voltage
- Short to ground
- Faulted driver front door side impact sensor
- Faulted passenger B-pillar side impact sensor (with SuperCab)
- Faulted passenger C-pillar side impact sensor (with SuperCrew cab)

If a fault is detected, the RCM (restraints control module)

stores DTC (diagnostic trouble code)

B1414:11, B1414:12, B1414:13, B1419:11, B1419:12 or B1419:13 in memory and sends a message to the IPC (instrument panel cluster)

to illuminate the airbag warning indicator.

- A short to ground on either impact sensor feed circuit sets DTC (diagnostic trouble code) B1414:11 and B1419:11.
- A short to voltage on either impact sensor feed circuit sets DTC (diagnostic trouble code) B1414:12 and B1419:12.
- A CMDTC (continuous memory diagnostic trouble code) for circuit short to battery (failure type: 12) can be set by a short to voltage on the return circuit of the impact sensor.
- When the feed circuit of either impact sensor is shorted to voltage, an invalid data received fault (failure type :81) may also be present for both sensors.

#### **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	escription	Fault Trigger Condition
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- Driver front door side impact sensor
- Passenger B-pillar side impact sensor (with SuperCab)
- Passenger C-pillar side impact sensor (with SuperCrew cab)
- RCM (restraints control module)

#### **Visual Inspection and Pre-checks**

• Inspect for damaged wiring harness(es).

#### **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.

#### **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

#### **NOTE**

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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 Driver Door Side Impact Sensor C567.
- 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.

Did the on-demand Diagnostic Trouble Codes (DTCs) change from B1414:11 to B1414:13?

Yes

INSTALL a new driver door side impact sensor.

REFER to: Front Door Side Impact Sensor

(501-20B Supplemental Restraint System, Removal and Installation).

GO to AJ16

No GO to AJ3

## A J3 CHECK THE PASSENGER REAR SIDE IMPACT SENSOR 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 fault reported 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).

C567-1	Ω	Ground
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#### • Measure:

Positive Lead	ositive Lead Measurement / Action				
C567-1	Ω	C567-2			

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

REPAIR the affected circuit(s).

No

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

GO to AJ16

## AJ5 CHECK THE PASSENGER REAR SIDE IMPACT SENSOR FEED CIRCUIT FOR A SHORT TO GROUND AND SHORT BETWEEN SENSOR CIRCUITS

#### • Measure:

Positive Lead	Measurement / Action	Negative Lead
C3212-1	Ω	Ground

#### Measure:

Positive Lead	Measurement / Action	Negative Lead
C3212-1	Ω	C3212-2

	GO to AJ16			
No	GO to AJ7			

AJ7 CHECK THE PASSENGER REAR SIDE IMPACT SENSOR CIRCUITS FOR A SHORT TO VOLTAGE (CIRCUIT SHORT TO BATTERY INDICATED)

