

Pinpoint Test - DTC: AM

U2300:55, U2300:64

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

NOTE: DTC U2300:55 is set in every new RCM that has not previously been installed or that has previously been installed but has not yet successfully received configuration data messages from the BCM. DO NOT replace any components for this DTC unless directed to do so by the following pinpoint test.

Normal Operation and Fault Conditions

The RCM receives a configuration data message from the BCM when the RCM proves out during the very first ignition cycle after it is installed. During prove-out at the beginning of each subsequent ignition cycle, the BCM sends configuration data to the RCM and the RCM compares the message to the message that was received during the very first ignition cycle.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U2300:55	Central Configuration: Not Configured	This DTC is present in every new RCM. Once the new RCM is installed and it successfully receives a configuration data message from the BCM, this DTC reports as a CMDTC. If the RCM reports this DTC on-demand, it means that the configuration data message has not been received from the BCM.

U2300:64	Central Configuration: Signal Plausibility Failure	If the RCM receives a configuration data message that does not match the configuration data that was previously received and stored, it sets this DTC. This DTC can set on-demand during the RCM prove-out, but change to a CMDTC later on in the ignition cycle if the correct message is eventually received. If PMI has not been carried out for the BCM, this DTC sets.
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Possible Sources

- RCM or BCM configuration
- BCM
- RCM

PINPOINT TEST A : U2300:55, U2300:64



WARNING: Do not handle, move or change the original horizontal mounting position of the Restraints Control Module (RCM) while the Restraints Control Module (RCM) is connected and the ignition switch is ON. Failure to follow this instruction may result in the accidental deployment of the Safety Canopy® and cause serious personal injury or death.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

- REFER to: [Health and Safety Precautions](#) (100-00 General Information, Description and Operation).
- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- Record the RCM Diagnostic Trouble Codes (DTCs) that were retrieved during the self-test.

Is DTC U2300:55 or U2300:64 retrieved on-demand?

Yes	GO to A2
No	If DTC U2300:55 or U2300:64 is retrieved as a CMDTC, CLEAR the RCM Diagnostic Trouble Codes (DTCs) and REPEAT the self-test. If DTC U2300:55 or U2300:64 does not return, RELEASE the vehicle to the customer. If DTC U2300:55 or U2300:64 returns on-demand, GO to A2

A2 CHECK FOR THE CORRECT BCM (BODY CONTROL MODULE)

- Using the Log Viewer function of the diagnostic scan tool, retrieve and record the BCM part number.
- Check the recorded part number against the number listed in the Ford parts catalog.

Does the recorded part number match the number listed in the Ford parts catalog?

Yes	GO to A3
No	 Click here to access Guided Routine (BCM). USE As-Built data when carrying out PMI for the BCM. GO to A4

A3 CHECK FOR THE CORRECT RCM (RESTRAINTS CONTROL MODULE)

- Using the Log Viewer function of the diagnostic scan tool, retrieve and record the RCM part number.
- Check the recorded part number against the number listed in the Ford parts catalog.

Does the recorded part number match the number listed in the Ford parts catalog?

Yes	CARRY OUT PMI for the BCM using As-Built data. CLEAR the Diagnostic Trouble Codes (DTCs) and REPEAT the RCM self-test. If DTC U2300:55 or U2300:64 are retrieved, CARRY OUT PMI for the RCM using As-Built data. GO to A4
No	INSTALL the correct RCM and use As-Built data when carrying out PMI. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A4

A4 CHECK FOR ADDITIONAL RCM (RESTRAINTS CONTROL MODULE) OR BCM (BODY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, perform BCM self-test.

Were any Diagnostic Trouble Codes (DTCs) retrieved from the RCM or BCM during self-test?

Yes	If RCM Diagnostic Trouble Codes (DTCs) were retrieved, do not clear any Diagnostic Trouble Codes (DTCs) until all Diagnostic Trouble Codes (DTCs) have been resolved. REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If BCM Diagnostic Trouble Codes (DTCs) were retrieved, diagnose the BCM. REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
No	CLEAR all Continuous Memory Diagnostic Trouble Codes (CMDTCs). PROVE OUT the SRS. The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: A

B0001:11, B0001:12, B0001:13 and B0001:1A

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

Normal Operation and Fault Conditions

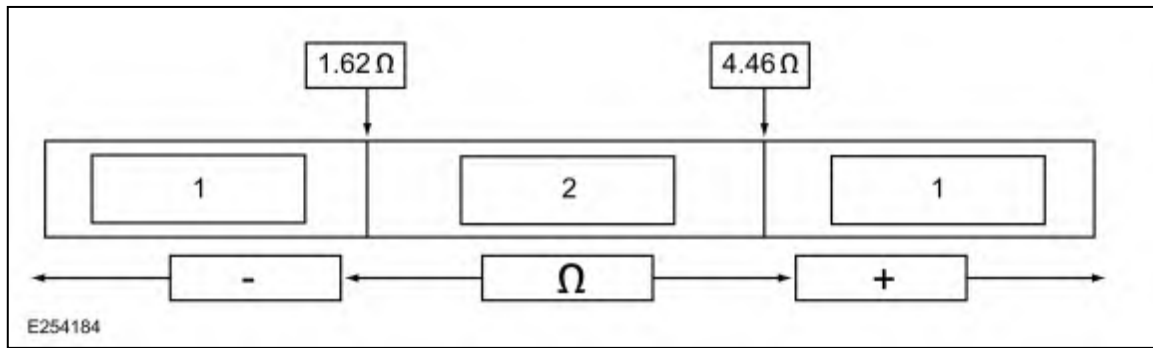
The RCM continuously monitors the driver airbag stage 1 circuits for the following faults:

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

If a fault is detected, the RCM stores DTC B0001:11, B0001:12, B0001:13 or B0001:1A in memory and sends a message to the IPC to illuminate the airbag warning indicator.

The RCM analyzes the deployment loop resistance to determine if a fault exists. The value displayed in the PID is the deployment loop resistance measured by the RCM. If the value displayed is lower or higher than the desired range (refer to diagram below), the RCM can set a DTC. As the deployment loop resistance drifts farther outside the desired range, the chance for a DTC increases. Small variations in resistance can occur due to the effect of road vibrations on terminal fit. Crimps and terminals can be affected by stress and harness movement and can cause an increase in resistance due to wire strain. These variables can result in an intermittent fault. For this reason, the test requires the PID value to be within the desired range before the fault is considered repaired, regardless if the module is reporting an on-demand DTC at the time of diagnosis. Following this direction helps make sure that minor changes in resistance do not create a repeat concern. This test uses process of elimination to diagnose each part of the deployment loop circuit including:

- Wiring
- Connections
- Clockspring
- Driver airbag
- RCM



Item	Description
1	May set DTC
2	Desired range

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B0001:11	Driver Frontal Stage 1 Deployment Control: Circuit Short to Ground	A fault is indicated when the RCM senses a short to ground on either driver airbag stage 1 circuit for more than 6 seconds.
B0001:12	Driver Frontal Stage 1 Deployment Control: Circuit Short to Battery	A fault is indicated when the RCM senses a short to voltage on either driver airbag stage 1 circuit for more than 6 seconds.
B0001:13	Driver Frontal Stage 1 Deployment Control: Circuit Open	A fault is indicated when the RCM measures more than the desired resistance range between driver airbag stage 1 circuits for more than 6 seconds.
B0001:1A	Driver Frontal Stage 1 Deployment Control: Circuit Resistance Below Threshold	A fault is indicated when the RCM measures less than the desired resistance range between driver airbag stage 1 circuits for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- Clockspring
- Driver airbag
- RCM

PINPOINT TEST A : B0001:11, B0001:12, B0001:13 AND B0001:1A

 **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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B0001:11, B0001:12, B0001:13 or B0001:1A 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. If DTC U3003:16 or U3003:17 is retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the driver airbag Diagnostic Trouble Codes (DTCs). For DTC B0001:13 or B0001:1A, GO to A2 For DTC B0001:11, GO to A12 For DTC B0001:12, GO to A15
No	This is an intermittent fault when present as a CMDTC only. If DTC U3003:16 or U3003:17 is retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the driver airbag Continuous Memory Diagnostic Trouble Codes (CMDTCs). For DTC B0001:13 or B0001:1A, GO to A20 For DTC B0001:11, GO to A21 For DTC B0001:12, GO to A22

A2 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_00_R) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- Monitor and record the resistance value displayed by the DEPLOY_00_R PID.

Does the PID value read between 1.62 and 4.46 ohms?

Yes	GO to A19
No	GO to A3

A3 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_00_R) PID (PARAMETER IDENTIFICATION) WHILE CARRYING OUT THE HARNESS TEST

- Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
- While monitoring the DEPLOY_00_R PID, carry out the harness test of the driver airbag circuits and accessible connectors (including any inline connectors) by wiggling and flexing the wire harness, connectors, tilting and rotating the steering wheel frequently. Record the resistance value indicated by the PID.

Does the PID value read between 1.62 and 4.46 ohms while carrying out the harness test?

Yes	DEPOWER the SRS. REFER to: Supplemental Restraint System (SRS) Depowering (501-20B Supplemental Restraint System, General Procedures). REPAIR the connector, terminals or wire harness or INSTALL a new clockspring as needed. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	For PID value less than 1.62 ohms, GO to A4 For PID value greater than 4.46 ohms, GO to A8

A4 CHECK THE DRIVER FRONTAL STAGE 1 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Repower the SRS. Do not prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the driver airbag disconnected, open circuit faults are normally retrieved on stages 1 and 2.

Did the on-demand DTC change from B0001:1A to B0001:13?

Yes	GO to A17
No	GO to A5

A5 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (LOW RESISTANCE INDICATED) (CLOCKSPRING DISCONNECTED)

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

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Clockspring C218A.
- Repower the SRS. Do not prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the clockspring disconnected, open circuit faults are normally retrieved on stages 1 and 2.

Did the on-demand DTC change from B0001:1A to B0001:13?

Yes	GO to A18
No	GO to A6

A6 CHECK FOR A SHORT BETWEEN DRIVER AIRBAG STAGE 1 CIRCUITS

- Ignition OFF.

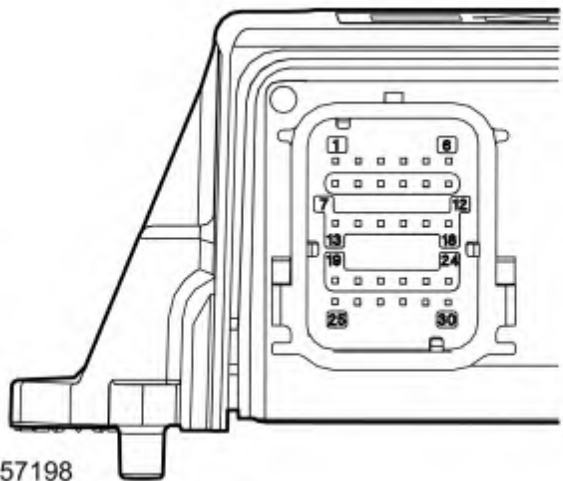
Is the resistance greater than 10,000 ohms?

Yes	GO to A19
No	GO to A7

A7 CHECK THE RCM (RESTRAINTS CONTROL MODULE) FOR LOW RESISTANCE

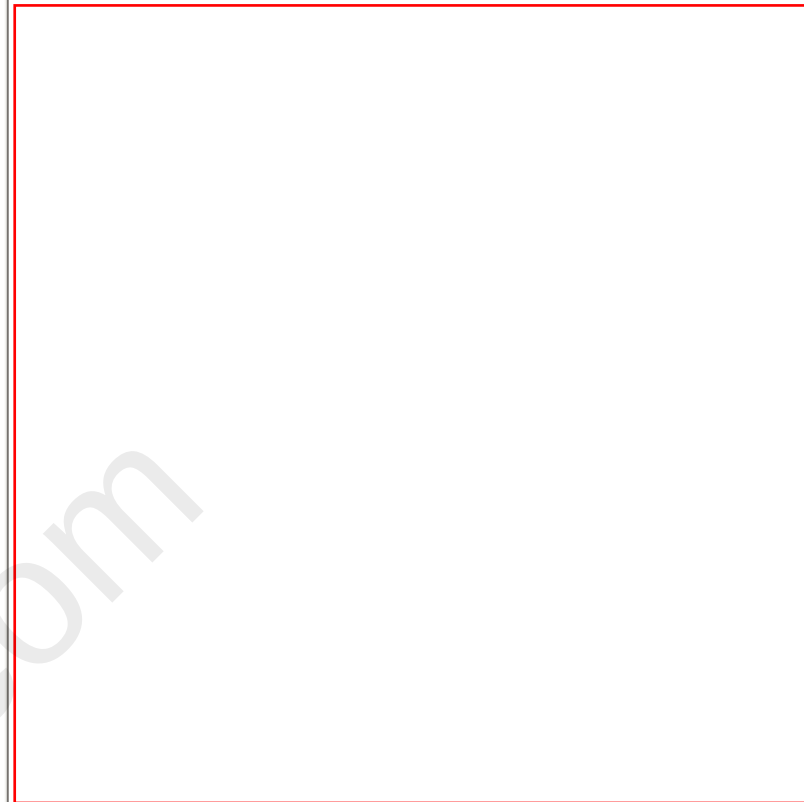
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead



E157198

C310A, pin 29, component side



C310A, pin 30, component side

Is the resistance greater than 10,000 ohms?

Yes	REPAIR the driver airbag stage 1 circuit(s) for a short together. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	GO to A19

A8 CHECK THE DRIVER AIRBAG STAGE 1 CIRCUITS FOR AN OPEN

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Disconnect RCM C310A and C310B.

Are the resistances less than 1 ohm?

Yes	GO to A10
No	GO to A9

A9 CHECK THE DRIVER AIRBAG STAGE 1 CIRCUITS FOR AN OPEN (CLOCKSPRING DISCONNECTED)

- Disconnect Clockspring C218A.

Are the resistances less than 0.5 ohm?

Yes	GO to A18
No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24

A10 CHECK THE DRIVER AIRBAG STAGE 1 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Connect RCM C310A and C310B.
- Repower the SRS. Do not prove out the SRS 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 self-test.

- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the driver airbag stage 1 circuits shorted together, a low resistance fault is normally retrieved on stage 1. Stage 2 shows an open circuit fault because the driver airbag is disconnected.

Was DTC B0001:1A retrieved on-demand during self-test?

Yes	REMOVE the fused jumper wire and GO to A17
No	REMOVE the fused jumper wire and GO to A11

A11 CHECK THE DRIVER AIRBAG STAGE 1 DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (OPEN INDICATED)

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Clockspring C218A.
- Repower the SRS. Do not prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the driver airbag stage 1 circuits shorted together, a low resistance fault is normally retrieved on stage 1. Stage 2 shows an open circuit fault because the clockspring is disconnected.

Was DTC B0001:1A retrieved on-demand during self-test?

Yes	REMOVE the fused jumper wire and GO to A18
No	REMOVE the fused jumper wire and GO to A19

A12 CHECK THE DRIVER FRONTAL STAGE 1 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Repower the SRS. Do not prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the driver airbag disconnected, open circuit faults are normally retrieved on stages 1 and 2.

Did the on-demand DTC change from B0001:11 to B0001:13?

Yes	GO to A17
No	GO to A13

A13 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (SHORT TO GROUND INDICATED) (CLOCKSPRING DISCONNECTED)

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

- Ignition OFF.
- Disconnect Clockspring C218A.
 - Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the clockspring disconnected, open circuit faults are normally retrieved on stages 1 and 2.

Did the on-demand DTC change from B0001:11 to B0001:13?

Yes	GO to A18
No	GO to A14

A14 CHECK THE DRIVER AIRBAG STAGE 1 CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Are the resistances greater than 10,000 ohms?

Yes	GO to A19
No	Due to the shorting bar feature in the RCM electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24

A15 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (SHORT TO BATTERY INDICATED) (CLOCKSPRING DISCONNECTED)

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

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Disconnect Clockspring C218A.
 - Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

- Repower the SRS. Do not prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the clockspring disconnected, open circuit faults are normally retrieved on stages 1 and 2.

Did the on-demand DTC change from B0001:12 to B0001:13?

Yes	GO to A18
No	GO to A16

A16 CHECK THE DRIVER AIRBAG STAGE 1 CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.
- Repower the SRS. Do not prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.

Is any voltage present?

Yes	Due to the shorting bar feature in the RCM electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	GO to A19

A17 CONFIRM THE DRIVER AIRBAG FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Install the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Repower the SRS. Do not prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	INSTALL a new driver airbag. REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation). GO to A24
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B0001:13 or B0001:1A, GO to A20 For DTC B0001:11, GO to A21 For DTC B0001:12, GO to A22

A18 CONFIRM THE CLOCKSPRING FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Clockspring C218A.
- Install the driver airbag.

REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).

- Connect RCM C310A and C310B (if previously disconnected).

- Repower the SRS. Do not prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	INSTALL a new clockspring. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation). GO to A24
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B0001:13 or B0001:1A, GO to A20 For DTC B0001:11, GO to A21 For DTC B0001:12, GO to A22

A19 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.

- Depower the SRS.

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

- Install the driver airbag (if previously removed).

REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).

- Connect Clockspring C218A (if previously disconnected).

- Connect RCM C310A and C310B (if previously disconnected).

- Repower the SRS. Do not prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A24
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B0001:13 or B0001:1A, GO to A20 For DTC B0001:11, GO to A21 For DTC B0001:12, GO to A22

A20 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL RESISTANCE (DEPLOY_00_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT

- Ignition OFF.
- Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
- Ignition ON.
- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- While monitoring the DEPLOY_00_R PID, attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wire harness, tilting and rotating the steering wheel frequently. Record the resistance value indicated by the PID.

Does the PID value read between 1.62 and 4.46 ohms?

Yes	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A23
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No	If the driver airbag PID indicates incorrect resistance only when the steering wheel is rotated, INSTALL a new clockspring. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation). For all other faults, DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
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A21 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO GROUND FAULT

- Ignition OFF.
- Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
- Ignition ON.
- Attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wire harness, tilting and rotating the steering wheel frequently.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B0001:11 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A23

A22 CHECK THE DRIVER FRONTAL STAGE 1 DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO BATTERY FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Remove the steering column shrouds to access the clockspring connectors.
REFER to: [Steering Column Shrouds](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

- Repower the SRS. Do not prove out the SRS 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, tilting and rotating the steering wheel frequently.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B0001:12 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A23

A23 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
 - Inspect connector(s) (including any inline 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.
 - Inspect RCM C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.
 - Inspect Driver Airbag C216A Connector Position Assurance (CPA) tab to verify that it is correctly seated and free of damage.

Were any concerns found?

Yes	REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A24
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A24

A24 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AA, Regular Cab

B1418:11 and B1418:93

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

Normal Operation and Fault Conditions

The RCM monitors the passenger door side impact sensor circuits for the following faults:

- Open circuit
- Short to voltage
- Short to ground
- Faulted passenger door side impact sensor

If a fault is detected, the RCM stores DTC B1418:11 or B1418:93 in memory and sends a message to the IPC to illuminate the airbag warning indicator.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1418:11	Passenger Side Restraints Sensor 1: Circuit Short to Ground	A fault is indicated when the RCM senses a short to ground on the passenger door side impact sensor feed circuit.
B1418:93	Passenger Side Restraints Sensor 1: No Operation	A fault is indicated when the RCM senses a faulted passenger door side impact sensor, a short to voltage on the sensor feed circuit or an open feed or return circuit.

Possible Causes

- Wiring, terminals or connectors
- Passenger door side impact sensor
- RCM

Visual Inspection and Diagnostic Pre-checks

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

PINPOINT TEST A : B1418:11 AND B1418:93

 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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.
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 parts catalog to make sure the correct component is being installed. If an incorrect SRS component is installed, Diagnostic Trouble Codes (DTCs) may set.
NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.
NOTE: Do not probe any impact sensor. The impact sensor cannot be tested using a multi-meter
A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B1418:11 or B1418:93 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. If DTC U3003:16 or U3003:17 is retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the impact sensor Diagnostic Trouble Codes (DTCs). For DTC B1418:11, GO to A2 For DTC B1418:93, GO to A4
No	If DTC U3003:16 or U3003:17 is retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the impact sensor Continuous Memory Diagnostic Trouble Codes (CMDTCs). This is an intermittent fault when present as a CMDTC only. GO to A9

A2 CHECK THE PASSENGER SIDE RESTRAINTS SENSOR 1 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Front Door Side Impact Sensor C644.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Did the on-demand DTC change from B1418:11 to B1418:93?

Yes	INSTALL a new passenger door side impact sensor. REFER to: Front Door Side Impact Sensor (501-20B Supplemental Restraint System, Removal and Installation). GO to A10
No	GO to A3

A3 CHECK THE PASSENGER DOOR SIDE IMPACT SENSOR FEED CIRCUITS FOR A SHORT TO GROUND OR A SHORT TOGETHER

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Is the resistance greater than 10,000 ohms?

Yes	GO to A8
No	REPAIR the circuits. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A10

A4 CHECK THE PASSENGER DOOR SIDE IMPACT SENSOR AND RCM (RESTRAINTS CONTROL MODULE) CONNECTIONS (NO OPERATION INDICATED)

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Inspect the Passenger Front Door Side Impact Sensor electrical connector C644 to make sure it is fully seated and locked. Seat and lock the connector as necessary.
- Gain access to the RCM and inspect C310A and C310B to make sure they are fully seated and locked. Seat and lock the connector as necessary
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was DTC B1418:93 retrieved on-demand during self-test?

Yes	GO to A5
No	The fault has been corrected. GO to A10

A5 CHECK THE PASSENGER DOOR SIDE IMPACT SENSOR FEED CIRCUIT FOR A SHORT TO VOLTAGE (NO OPERATION INDICATED)

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Front Door Side Impact Sensor C644.
- Disconnect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A10
No	GO to A6

A6 CHECK THE PASSENGER DOOR SIDE IMPACT SENSOR CIRCUITS FOR AN OPEN

- Ignition OFF.
- Depower the SRS.
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 A7
No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A10

A7 CHECK THE PASSENGER SIDE RESTRAINTS SENSOR 1 DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (NO OPERATION INDICATED)

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

- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Did the on-demand DTC change from B1418:93 to B1418:11?

Yes	REMOVE the fused jumper wire and INSTALL a new passenger door side impact sensor. REFER to: Front Door Side Impact Sensor (501-20B Supplemental Restraint System, Removal and Installation). GO to A10
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No	REMOVE the fused jumper wire and GO to A8
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A8 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Passenger Door Side Impact Sensor C644.
- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A10
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No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A9
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A9 CHECK FOR AN INTERMITTENT FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Door Side Impact Sensor C644.
- Disconnect RCM C310A and C310B.
- Connect Passenger Door Side Impact Sensor C644.
- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was DTC B1418:11 or B1418:93 retrieved on-demand during the 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 B1418:11, GO to A2 For DTC B1418:93, GO to A4
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A10

A10 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AB

B1417:11 and B1417:93

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

The RCM monitors the RH front impact severity sensor circuits for the following faults:

- Open circuit
- Short to voltage
- Short to ground
- Faulted RH front impact severity sensor

If a fault is detected, the RCM stores DTC B1417:11 or B1417:93 in memory and sends a message to the IPC to illuminate the airbag warning indicator.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1417:11	Passenger Frontal Restraints Sensor: Circuit Short to Ground	A fault is indicated when the RCM senses a short to ground on the RH front impact severity sensor feed circuit.
B1417:93	Passenger Frontal Restraints Sensor: No Operation	A fault is indicated when the RCM senses a faulted RH front impact severity sensor, a short to voltage on the feed circuit or an open feed or return circuit.

Possible Causes

- Wiring, terminals or connectors

- RH front impact severity sensor
- RCM

Visual Inspection and Diagnostic Pre-checks

- Inspect for a damaged RH front impact severity sensor.
- Inspect the RH front impact severity sensor mounting and orientation.
- Inspect for damaged wiring harness(es).
- Inspect for loose or damaged connectors.

PINPOINT TEST A : B1417:11 AND B1417:93



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.

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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: Do not probe any impact sensor. The impact sensor cannot be tested using a multi-meter

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B1417:11 or B1417:93 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. If DTC U3003:16 or U3003:17 is also retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the impact sensor Diagnostic Trouble Codes (DTCs). For DTC B1417:11, GO to A2 For DTC B1417:93, GO to A5
No	If DTC U3003:16 or U3003:17 is also retrieved on-demand, REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the impact sensor Continuous Memory Diagnostic Trouble Codes (CMDTCs). This is an intermittent fault when present as a CMDTC only. GO to A10

A2 CHECK THE RIGHT FRONTAL RESTRAINTS 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RH Front Impact Severity Sensor C1466.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Did the on-demand DTC change from B1417:11 to B1417:93?

Yes	INSTALL a new RH front impact severity sensor. REFER to: Front Impact Severity Sensor (501-20B Supplemental Restraint System, Removal and Installation). GO to A11
No	GO to A3

A3 CHECK THE RH (RIGHT-HAND) FRONT IMPACT SEVERITY SENSOR FEED CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Is the resistance greater than 10,000 ohms?

Yes	GO to A4
No	REPAIR the circuit. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A11

A4 CHECK FOR A SHORT BETWEEN RH (RIGHT-HAND) FRONT IMPACT SEVERITY SENSOR CIRCUITS

Is the resistance greater than 10,000 ohms?

Yes	GO to A9
No	REPAIR the circuits. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A11

A5 CHECK THE RH (RIGHT-HAND) FRONT IMPACT SEVERITY SENSOR AND RCM (RESTRAINTS CONTROL MODULE) CONNECTIONS (NO OPERATION INDICATED)

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Inspect the RH Front Impact Severity Sensor C1466 to make sure it is fully seated and locked. Seat and lock the connector as necessary.
- Gain access to the RCM and inspect C310A and C310B to make sure they are fully seated and locked. Seat and lock the connector as necessary.
- Repower the SRS. Do not prove out the SRS 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 self-test.

Was DTC B1417:93 retrieved on-demand during self-test?

Yes	GO to A6
No	The fault has been corrected. GO to A11

A6 CHECK THE RH (RIGHT-HAND) FRONT IMPACT SEVERITY SENSOR FEED CIRCUIT FOR A SHORT TO VOLTAGE (NO OPERATION INDICATED)

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RH Front Impact Severity Sensor C1466.
- Disconnect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A11
No	GO to A7

A7 CHECK THE RH (RIGHT-HAND) FRONT IMPACT SEVERITY SENSOR CIRCUITS FOR AN OPEN (NO OPERATION INDICATED)

- Ignition OFF.
- Depower the SRS.
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 A8
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No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A11
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A8 CHECK THE RIGHT FRONTAL RESTRAINTS SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (NO OPERATION INDICATED)

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

- Connect: RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Did the on-demand DTC change from B1417:93 to B1417:11?

Yes	REMOVE the fused jumper wire and INSTALL a new RH front impact severity sensor. REFER to: Front Impact Severity Sensor (501-20B Supplemental Restraint System, Removal and Installation). GO to A11
No	REMOVE the fused jumper wire and GO to A9

A9 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect RH Front Impact Severity Sensor C1466.
- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A11
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A10

A10 CHECK FOR AN INTERMITTENT FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RH Front Impact Severity Sensor C1466.
- Disconnect RCM C310A and C310B.
- Connect RH Front Impact Severity Sensor C1466.
- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was DTC B1417:11 or B1417:93 retrieved on-demand during the 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 B1417:11, GO to A2 For DTC B1417:93, GO to A5
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A11

A11 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AC

B141B:11, B141B:12, B141B:13, B141B:1A

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

Normal Operation and Fault Conditions

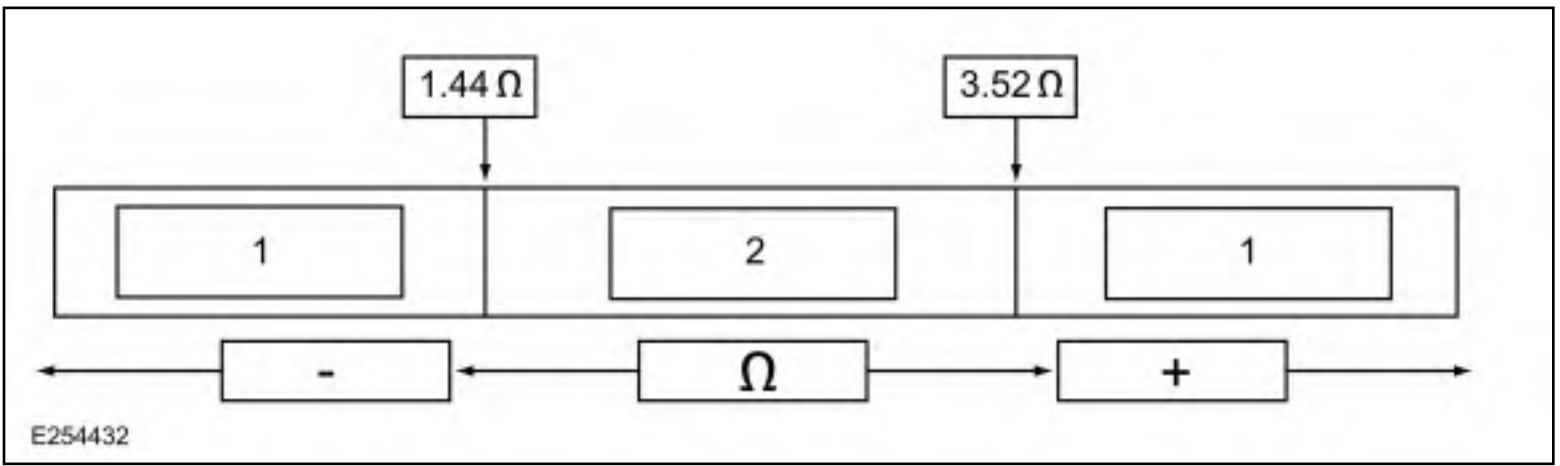
The RCM continuously monitors the LH safety belt inflator circuits for the following faults:

- Resistance out of range
- Unexpected voltage
- Short to ground
- Faulted LH safety belt inflator

If a fault is detected, the RCM stores DTC B141B:11, B141B:12, B141B:13 or B141B:1A in memory and sends a message to the IPC to illuminate the airbag warning indicator.

The RCM analyzes the deployment loop resistance to determine if a fault exists. The value displayed in the PID is the deployment loop resistance measured by the RCM. If the value displayed is lower or higher than the desired range (refer to diagram below), the RCM can set a DTC. As the deployment loop resistance drifts farther outside the desired range, the chance for a DTC increases. Small variations in resistance can occur due to the effect of road vibrations on terminal fit. Crimps and terminals can be affected by stress and harness movement and can cause an increase in resistance due to wire strain. These variables can result in an intermittent fault. For this reason, the test requires the PID value to be within the desired range before the fault is considered repaired, regardless if the module is reporting an on-demand DTC at the time of diagnosis. Following this direction helps make sure that minor changes in resistance do not create a repeat concern. This test uses process of elimination to diagnose each part of the deployment loop circuit including:

- Wiring
- Connections
- LH safety belt inflator
- RCM



Item	Description
1	May set DTC
2	Desired range

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B141B:11	Second Row Driver Side Inflatable Seatbelt Deployment Control: Circuit Short to Ground	A fault is indicated when the RCM senses a short to ground on either LH safety belt inflator circuit for more than 6 seconds.
B141B:12	Second Row Driver Side Inflatable Seatbelt Deployment Control: Circuit Short to Battery	A fault is indicated when the RCM senses a short to voltage on either LH safety belt inflator circuit for more than 6 seconds.
B141B:13	Second Row Driver Side Inflatable Seatbelt Deployment Control: Circuit Open	A fault is indicated when the RCM measures more than the desired resistance between the LH safety belt inflator circuits for more than 6 seconds.
B141B:1A	Second Row Driver Side Inflatable Seatbelt Deployment Control: Circuit Resistance Below Threshold	A fault is indicated when the RCM measures less than the desired resistance between the LH safety belt inflator circuits for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- LH safety belt inflator
- RCM

PINPOINT TEST A : B141B:11, B141B:12, B141B:13 AND B141B:1A



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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B141B:11, B141B:12, B141B:13 and B141B: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. If DTC U3003:16 or U3003:17 is also retrieved on-demand, REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the LH safety belt inflator Diagnostic Trouble Codes (DTCs). For DTC B141B:13 or B141B:1A, GO to A2 For DTC B141B:11, GO to A8 For DTC B141B:12, GO to A10
No	This is an intermittent fault when present as a CMDTC only. If DTC U3003:16 or U3003:17 is also retrieved on-demand, REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the LH safety belt inflator Continuous Memory Diagnostic Trouble Codes (CMDTCs). For DTC B141B:13 or B141B:1A, GO to A13 For DTC B141B:11, GO to A14 For DTC B141B:12, GO to A15

A2 CHECK THE SECOND ROW LEFT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_27_R) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- Monitor and record the resistance value displayed by the DEPLOY_27_R PID.

Does the PID value read between 1.44 and 3.52 ohms?

Yes	GO to A12
No	GO to A3

A3 CHECK THE SECOND ROW LEFT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_27_R) PID (PARAMETER IDENTIFICATION) WHILE CARRYING OUT THE HARNESS TEST

- While monitoring the DEPLOY_27_R PID, carry out the harness test of the LH safety belt inflator circuits and accessible connectors (including any inline connectors) by wiggling and flexing the wire harness and connectors frequently. Record the resistance value indicated by the PID.

Does the PID value read between 1.44 and 3.52 ohms while carrying out the harness test?

Yes	DEPOWER the SRS and REPAIR the connector, terminals or wire harness as needed. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	For PID value less than 1.44 ohms, GO to A4 For PID value greater than 3.52 ohms, GO to A6

A4 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.*

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the LH safety belt buckle and inflator disconnected, open circuit faults are normally retrieved for the left rear safety belt inflator and buckle sensor.

Did the on-demand DTC change from B141B:1A to B141B:13?

Yes	GO to A11
No	GO to A5

A5 CHECK FOR A SHORT BETWEEN THE LH (LEFT-HAND) SAFETY BELT INFLATOR CIRCUITS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Is the resistance greater than 10,000 ohms?

Yes	GO to A12
No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A6 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR AN OPEN

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
- Disconnect RCM C310A and C310B.

Are the resistances less than 0.5 ohm?

Yes	GO to A7
No	REPAIR the circuits. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A7 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the LH safety belt buckle and inflator disconnected and the LH safety belt inflator circuits shorted together, a low resistance fault is normally retrieved for the left rear safety belt inflator. An open circuit fault is normally retrieved for the left rear safety belt buckle sensor.

Did the on-demand DTC change from B141B:13 to B141B:1A?

Yes	REMOVE the fused jumper wire and GO to A11
No	REMOVE the fused jumper wire and GO to A12

A8 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.*

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the LH safety belt buckle and inflator disconnected, open circuit faults are normally retrieved for the left rear safety belt inflator and buckle sensor.

Did the on-demand DTC change from B141B:11 to B141B:13?

Yes	GO to A11
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No	GO to A9
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A9 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Are the resistances greater than 10,000 ohms?

Yes	GO to A12
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No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
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A10 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
- Disconnect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	GO to A12

A11 CONFIRM THE LH (LEFT-HAND) SAFETY BELT INFLATOR FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Left Rear Safety Belt Buckle and Inflator C3646.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	INSTALL a new LH safety belt buckle (includes safety belt inflator). REFER to: Rear Seatbelt Buckle LH - Vehicles With: Inflatable Seatbelts (501-20A Seatbelt Systems, Removal and Installation). GO to A17
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No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B141B:13 or B141B:1A, GO to A13 For DTC B141B:11, GO to A14 For DTC B141B:12, GO to A15
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A12 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Left Rear Safety Belt Buckle and Inflator C3646 (if previously disconnected).
- Connect RCM C310A and C310B (if previously disconnected).
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A17
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No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B141B:13 or B141B:1A, GO to A13 For DTC B141B:11, GO to A14 For DTC B141B:12, GO to A15
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A13 CHECK THE SECOND ROW LEFT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_27_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT

- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- While monitoring the DEPLOY_27_R PID, 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.

Does the PID value read between 1.44 and 3.52 ohms?

Yes	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16
No	DEPOWER the SRS. REFER to: Supplemental Restraint System (SRS) Depowering (501-20B Supplemental Restraint System, General Procedures). REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A14 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR 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 self-test.

Was DTC B141B:11 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16

A15 CHECK THE LH (LEFT-HAND) SAFETY BELT INFLATOR DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO BATTERY FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was DTC B141B:12 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16

A16 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Left Rear Safety Belt Buckle and Inflator C3646.
 - Inspect connector(s) (including any inline 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.
 - Inspect RCM C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.

Were any concerns found?

Yes	REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A17

A17 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AD

B141C:11, B141C:12, B141C:13, B141C:1A

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

Normal Operation and Fault Conditions

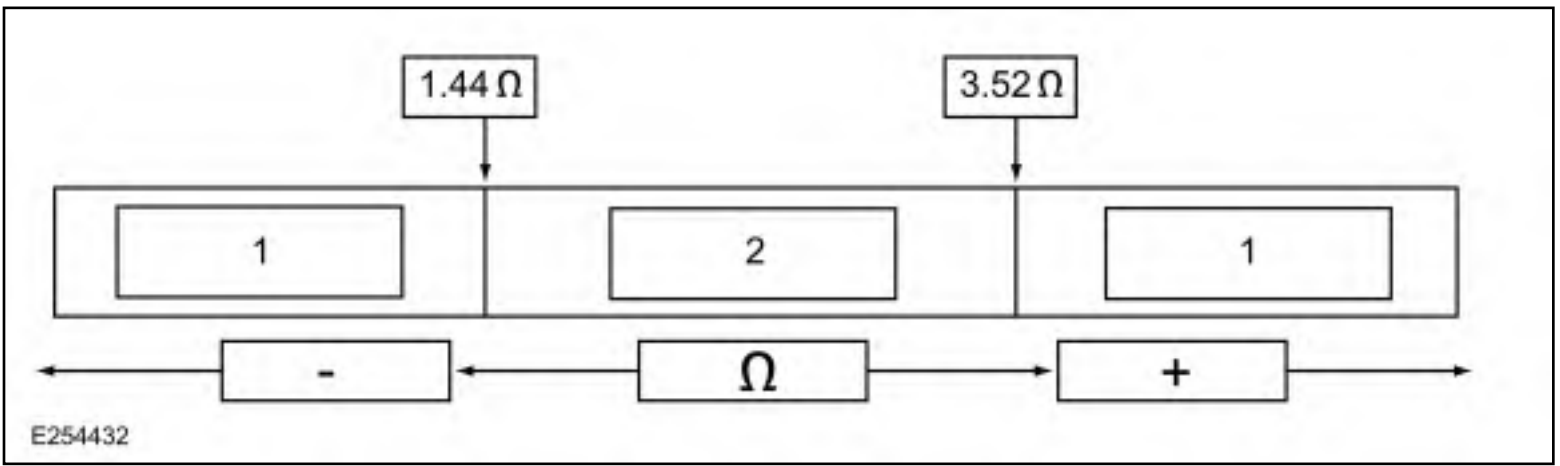
The RCM continuously monitors the RH safety belt inflator circuits for the following faults:

- Resistance out of range
- Unexpected voltage
- Short to ground
- Faulted RH safety belt inflator

If a fault is detected, the RCM stores DTC B141C:11, B141C:12, B141C:13 or B141C:1A in memory and sends a message to the IPC to illuminate the airbag warning indicator.

The RCM analyzes the deployment loop resistance to determine if a fault exists. The value displayed in the PID is the deployment loop resistance measured by the RCM. If the value displayed is lower or higher than the desired range (refer to diagram below), the RCM can set a DTC. As the deployment loop resistance drifts farther outside the desired range, the chance for a DTC increases. Small variations in resistance can occur due to the effect of road vibrations on terminal fit. Crimps and terminals can be affected by stress and harness movement and can cause an increase in resistance due to wire strain. These variables can result in an intermittent fault. For this reason, the test requires the PID value to be within the desired range before the fault is considered repaired, regardless if the module is reporting an on-demand DTC at the time of diagnosis. Following this direction helps make sure that minor changes in resistance do not create a repeat concern. This test uses process of elimination to diagnose each part of the deployment loop circuit including:

- Wiring
- Connections
- RH safety belt inflator
- RCM



Item	Description
1	May set DTC
2	Desired range

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B141C:11	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Circuit Short to Ground	A fault is indicated when the RCM senses a short to ground on either RH safety belt inflator circuit for more than 6 seconds.
B141C:12	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Circuit Short to Battery	A fault is indicated when the RCM senses a short to voltage on either RH safety belt inflator circuit for more than 6 seconds.
B141C:13	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Circuit Open	A fault is indicated when the RCM measures more than the desired resistance between the RH safety belt inflator circuits for more than 6 seconds.
B141C:1A	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Circuit Resistance Below Threshold	A fault is indicated when the RCM measures less than the desired resistance between the RH safety belt inflator circuits for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- RH safety belt inflator
- RCM

PINPOINT TEST A : B141C:11, B141C:12, B141C:13 AND B141C:1A



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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Was DTC B141C:11, B141C:12, B141C:13 and B141C: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. If DTC U3003:16 or U3003:17 is also retrieved on-demand, REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the RH safety belt inflator Diagnostic Trouble Codes (DTCs). For DTC B141C:13 or B141C:1A, GO to A2 For DTC B141C:11, GO to A8 For DTC B141C:12, GO to A10
No	This is an intermittent fault when present as a CMDTC only. If DTC U3003:16 or U3003:17 is also retrieved on-demand, REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is not retrieved on-demand during self-test, DIAGNOSE the RH safety belt inflator Continuous Memory Diagnostic Trouble Codes (CMDTCs). For DTC B141C:13 or B141C:1A, GO to A13 For DTC B141C:11, GO to A14 For DTC B141C:12, GO to A15

A2 CHECK THE SECOND ROW RIGHT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_28_R) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- Monitor and record the resistance value displayed by the DEPLOY_28_R PID.

Does the PID value read between 1.44 and 3.52 ohms?

Yes	GO to A12
No	GO to A3

A3 CHECK THE SECOND ROW RIGHT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_28_R) PID (PARAMETER IDENTIFICATION) WHILE CARRYING OUT THE HARNESS TEST

- While monitoring the DEPLOY_28_R PID, carry out the harness test of the RH safety belt inflator circuits and accessible connectors (including any inline connectors) by wiggling and flexing the wire harness and connectors frequently. Record the resistance value indicated by the PID.

Does the PID value read between 1.44 and 3.52 ohms while carrying out the harness test?

Yes	DEPOWER the SRS and REPAIR the connector, terminals or wire harness as needed. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	For PID value less than 1.44 ohms, GO to A4 For PID value greater than 3.52 ohms, GO to A6

A4 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.*

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the RH safety belt buckle and inflator disconnected, open circuit faults are normally retrieved for the right rear safety belt inflator and buckle sensor.

Did the on-demand DTC change from B141C:1A to B141C:13?

Yes	GO to A11
No	GO to A5

A5 CHECK FOR A SHORT BETWEEN THE RH (RIGHT-HAND) SAFETY BELT INFLATOR CIRCUITS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Is the resistance greater than 10,000 ohms?

Yes	GO to A12
No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A6 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR AN OPEN

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
- Disconnect RCM C310A and C310B.

Are the resistances less than 0.5 ohm?

Yes	GO to A7
No	REPAIR the circuits. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A7 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Connect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the RH safety belt buckle and inflator disconnected and the RH safety belt inflator circuits shorted together, a low resistance fault is normally retrieved for the right rear safety belt inflator. An open circuit fault is normally retrieved for the right rear safety belt buckle sensor.

Did the on-demand DTC change from B141C:13 to B141C:1A?

Yes	REMOVE the fused jumper wire and GO to A11
No	REMOVE the fused jumper wire and GO to A12

A8 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR 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 by inducing a different fault condition. If the reported fault changes, this indicates the RCM is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.
- **DIAGNOSTIC TIP:** When viewing Diagnostic Trouble Codes (DTCs) with the RH safety belt buckle and inflator disconnected, open circuit faults are normally retrieved for the right rear safety belt inflator and buckle sensor.

Did the on-demand DTC change from B141C:11 to B141C:13?

Yes	GO to A11
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No	GO to A9
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A9 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.

Are the resistances greater than 10,000 ohms?

Yes	GO to A12
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No	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
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A10 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
- Disconnect RCM C310A and C310B.
- Repower the SRS. **Do not** prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit(s). Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	GO to A12

A11 CONFIRM THE RH (RIGHT-HAND) SAFETY BELT INFLATOR FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Right Rear Safety Belt Buckle and Inflator C3647.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	INSTALL a new RH safety belt buckle (includes safety belt inflator). REFER to: Rear Seatbelt Buckle RH - Vehicles With: Inflatable Seatbelts (501-20A Seatbelt Systems, Removal and Installation). GO to A17
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No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B141C:13 or B141C:1A, GO to A13 For DTC B141C:11, GO to A14 For DTC B141C:12, GO to A15
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A12 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Connect Right Rear Safety Belt Buckle and Inflator C3647 (if previously disconnected).
- Connect RCM C310A and C310B (if previously disconnected).
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A17
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No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. For DTC B141C:13 or B141C:1A, GO to A13 For DTC B141C:11, GO to A14 For DTC B141C:12, GO to A15
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A13 CHECK THE SECOND ROW RIGHT INFLATABLE SEATBELT DEPLOYMENT CONTROL (DEPLOY_28_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT

- Using a diagnostic scan tool, view RCM Parameter Identifications (PIDs).
- While monitoring the DEPLOY_28_R PID, 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.

Does the PID value read between 1.44 and 3.52 ohms?

Yes	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16
No	DEPOWER the SRS. REFER to: Supplemental Restraint System (SRS) Depowering (501-20B Supplemental Restraint System, General Procedures). REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17

A14 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR 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 self-test.

Was DTC B141C:11 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16

A15 CHECK THE RH (RIGHT-HAND) SAFETY BELT INFLATOR DEPLOYMENT CONTROL CIRCUITS FOR AN INTERMITTENT SHORT TO BATTERY FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
- Repower the SRS. **Do not** prove out the SRS 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 self-test.

Was DTC B141C:12 retrieved on-demand during self-test?

Yes	DEPOWER the SRS and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A16

A16 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect Right Rear Safety Belt Buckle and Inflator C3647.
 - Inspect connector(s) (including any inline 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.
 - Inspect RCM C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.

Were any concerns found?

Yes	REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A17
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A17

A17 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AE

BXXXX:2B (any BXXXX DTC with a 2B failure type) Signal Cross Coupled

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

Normal Operation and Fault Conditions

The RCM monitors all deployable device and sensor circuits for a signal cross coupled (short) between components. Signal cross coupled Diagnostic Trouble Codes (DTCs) are present when one or both circuits of a component are shorted to one or both circuits of another component. Signal cross coupled Diagnostic Trouble Codes (DTCs) do not set when the circuits of a single device are shorted together, a different DTC is present (for example, a DTC for circuit resistance below threshold). The RCM sends a message to the IPC to illuminate the airbag warning indicator. When a normal loop fault is present (one loop is either shorted to battery/ground, open circuit or low resistance), then signal cross coupled diagnostics are not active. Once the normal loop fault is repaired, the signal cross coupled diagnostics resume.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B0001:2B	Driver Frontal Stage 1 Deployment Control: Signal Cross Coupled	If the RCM detects a short between the driver airbag stage 1 circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0002:2B	Driver Frontal Stage 2 Deployment Control: Signal Cross Coupled	If the RCM detects a short between the driver airbag stage 2 circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.

B0005:2B	Collapsible Steering Column Deployment Control: Signal Cross Coupled	If the RCM detects a short between the deployable steering column circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0010:2B	Passenger Frontal Stage 1 Deployment Control: Signal Cross Coupled	If the RCM detects a short between the passenger airbag stage 1 circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0011:2B	Passenger Frontal Stage 2 Deployment Control: Signal Cross Coupled	If the RCM detects a short between the passenger airbag stage 2 circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0050:2B	Driver Seatbelt Sensor: Signal Cross Coupled	If the RCM detects a short between the driver safety belt buckle switch circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0052:2B	Passenger Seatbelt Sensor: Signal Cross Coupled	If the RCM detects a short between the passenger safety belt buckle switch circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0070:2B	Driver Seatbelt Pretensioner "A" Deployment Control: Signal Cross Coupled	If the RCM detects a short between the driver safety belt anchor pretensioner circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B0072:2B	Passenger Seatbelt Pretensioner "A" Deployment Control: Signal Cross Coupled	If the RCM detects a short between the passenger safety belt anchor pretensioner circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.

B007E:2B	Driver Seatbelt Pretensioner "C" Deployment Control: Signal Cross Coupled	If the RCM detects a short between the driver safety belt retractor pretensioner circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B007F:2B	Passenger Seatbelt Pretensioner "C" Deployment Control: Signal Cross Coupled	If the RCM detects a short between the passenger safety belt retractor pretensioner circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B00B5:2B	Driver Seat Track Position Restraints Sensor: Signal Cross Coupled	If the RCM detects a short between the LH seat track position sensor circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B00C5:2B	Passenger Seat Track Position Restraints Sensor: Signal Cross Coupled	If the RCM detects a short between the RH seat track position sensor circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B11CF:2B	Passenger Frontal Airbag Canister Vent: Signal Cross Coupled	If the RCM detects a short between the passenger airbag canister vent circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B1404:2B	Driver Side Airbag Deployment Control: Signal Cross Coupled	If the RCM detects a short between the driver side airbag circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B1405:2B	Driver Curtain Deployment Control 1: Signal Cross Coupled	If the RCM detects a short between the LH side air curtain circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B1407:2B	Passenger Side Airbag Deployment Control: Signal Cross Coupled	If the RCM detects a short between the passenger side airbag circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.

B1408:2B	Passenger Curtain Deployment Control 1: Signal Cross Coupled	If the RCM detects a short between the RH side air curtain circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B140C:2B	Second Row Driver Side Seatbelt Sensor: Signal Cross Coupled	If the RCM detects a short between the second row LH safety belt buckle sensor circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B140D:2B	Second Row Passenger Side Seatbelt Sensor: Signal Cross Coupled	If the RCM detects a short between the second row RH safety belt buckle sensor circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B141B:2B	Second Row Driver Side Inflatable Seatbelt Deployment Control: Signal Cross Coupled	If the RCM detects a short between the second row LH safety belt inflator circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.
B141C:2B	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Signal Cross Coupled	If the RCM detects a short between the second row RH safety belt inflator circuits and the circuits of another SRS component, it sets this DTC and the DTC of the corresponding SRS component.

Possible Sources

- Wiring, terminals or connectors
- RCM

Visual Inspection and Diagnostic Pre-Checks

- Inspect the affected wiring harness(es) for damage, if accessible.

PINPOINT TEST A : BXXXX:2B (ANY BXXXX DTC (DIAGNOSTIC TROUBLE CODE) WITH A 2B FAILURE TYPE) SIGNAL CROSS COUPLED



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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

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

Yes	This fault cannot be cleared until it is corrected and the DTC is no longer retrieved during the on-demand self test. If DTC U3003:16 or U3003:17 is also retrieved on-demand, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 are not retrieved on-demand, GO to A2
No	If DTC U3003:16 or U3003:17 is retrieved on-demand as well, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 are not retrieved on-demand, DIAGNOSE the signal cross-coupled Continuous Memory Diagnostic Trouble Codes (CMDTCs). This is an intermittent fault when present as a CMDTC only. GO to A4

A2 CHECK THE AFFECTED CIRCUITS FOR A SIGNAL CROSS COUPLED FAULT

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.
- Using the signal cross coupled Diagnostic Trouble Codes (DTCs) present on-demand, identify the affected SRS devices.

- **NOTE:** *Most signal cross coupled faults are due to connector and/or wiring harness damage. Carry out a thorough inspection of connector(s) and/or wiring harness for damage.*

Disconnect all of the affected SRS devices.

- Using the following table, measure the resistance between the circuits of one affected SRS device to the other affected SRS device.
 - Example: If Diagnostic Trouble Codes (DTCs) B0001:2B and B0002:2B are being diagnosed, measure the resistance between circuit CR101 to circuits CR102 and RR102. Then measure the resistance between circuit RR101 to circuits CR102 and

Device/Loop (DTC)	Connector
Driver airbag stage 1 (B0001:2B)	● C216A-1 ● C216A-2
Driver airbag stage 2 (B0002:2B)	● C216B-1 ● C216B-2
Deployable steering column (B0005:2B)	● C2360-1 ● C2360-2
Passenger airbag stage 1 (B0010:2B)	● C256-1 ● C256-2
Passenger airbag stage 2 (B0011:2B)	● C256-4 ● C256-5
Driver safety belt buckle (B0050:2B)	● C3201-5
Passenger safety belt buckle (B0052:2B)	● C3738-5
Driver safety belt anchor pretensioner (B0070:2B)	● C323B-1 ● C323B-2
Passenger safety belt anchor pretensioner (B0072:2B)	● C303B-1 ● C303B-2
Driver safety belt retractor pretensioner (B007E:2B)	● C323A-1 ● C323A-2
Passenger safety belt retractor pretensioner (B007F:2B)	● C303A-1 ● C303A-2
Driver seat position sensor (B00B5:2B)	● C356-2
Passenger seat position sensor (B00C5:2B)	● C3288-2
Passenger airbag canister vent (B11CF:2B)	● C256-7 ● C256-8
Driver side airbag (B1404:2B)	● C3051-1 (Inline) ● C3051-2 (Inline)
LH side air curtain (B1405:2B)	● C3321-1 ● C3321-2
Passenger side airbag (B1407:2B)	● C3053-1 (Inline) ● C3053-2 (Inline)

RH side air curtain (B1408:2B)	• C3329-1 • C3329-2
Second row LH safety belt buckle sensor (B140C:2B)	• C3646-3
Second row RH safety belt buckle sensor (B140D:2B)	• C3647-3
Second row LH safety belt inflator (B141B:2B)	• C3646-1 • C3646-2
Second row RH safety belt inflator (B141C:2B)	• C3647-1 • C3647-2

Are the resistances greater than 10,000 ohms between the affected circuits?

Yes	GO to A3
No	REPAIR the affected circuits. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A5

A3 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Connect all previously disconnected restraint system component(s).
- Connect RCM C310A and C310B.
- Repower the SRS. Do not prove out the SRS 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 self-test.

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

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A5
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A4

A4 CHECK FOR AN INTERMITTENT FAULT

NOTE: Most cross link faults are due to connector and/or wiring harness damage. Carry out a thorough inspection of connector(s) and/or wiring harness for damage.

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect all of the affected SRS devices.
Refer to Wiring Diagrams Cell 46 for schematic and connector information.
- Inspect the wiring harness(es) for any type of damage. If damage is found, repair as necessary.
Refer to Wiring Diagrams Cell 5 for schematic and connector information.
- Repower the SRS. Do not prove out the SRS 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 self-test.

Were any signal cross coupled Diagnostic Trouble Codes (DTCs) 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 A2
No	The fault is not present and cannot be recreated at this time. CHECK for causes of the intermittent fault. ATTEMPT to recreate the hard fault by flexing the wire harness and cycling the ignition frequently. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A5

A5 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.*

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
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No	The repair is complete. RETURN the vehicle to the customer.
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Pinpoint Test - DTC: AF

BXXXX:4A (any BXXXX DTC with a 4A failure type) Incorrect Component Installed

Normal Operation and Fault Conditions

The RCM monitors all SRS device connections. If the RCM detects a connection or device connected that is not stored in memory or is not configured for the component, the RCM sets a DTC and sends a message to the IPC to illuminate the airbag warning indicator.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B0001:4A	Driver Frontal Stage 1 Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0002:4A	Driver Frontal Stage 2 Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0005:4A	Collapsible Steering Column Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0010:4A	Passenger Frontal Stage 1 Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0011:4A	Passenger Frontal Stage 2 Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.

B0050:4A	Driver Seatbelt Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0052:4A	Passenger Seatbelt Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0070:4A	Driver Seatbelt Pretensioner "A" Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0072:4A	Passenger Seatbelt Pretensioner "A" Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B007E:4A	Driver Seatbelt Pretensioner "C" Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B007F:4A	Passenger Seatbelt Pretensioner "C" Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B0080:4A	Driver Seatbelt Load Limiter Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B00B5:4A	Driver Seat Track Position Restraints Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B00C5:4A	Passenger Seat Track Position Restraints Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B00D5:4A	Restraint System Passenger Disable Indicator: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B11CF:4A	Passenger Frontal Airbag Canister Vent: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1202:4A	Restraint System Passenger Enable Indicator: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.

B1404:4A	Driver Side Airbag Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1405:4A	Driver Curtain Deployment Control 1: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1407:4A	Passenger Side Airbag Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1408:4A	Passenger Curtain Deployment Control 1: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B140C:4A	Second Row Driver Side Seatbelt Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B140D:4A	Second Row Passenger Side Seatbelt Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1413:4A	Driver Frontal Restraints Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1414:4A	Driver Side Restraints Sensor 1: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1415:4A	Driver Side Restraints Sensor 2: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1417:4A	Passenger Frontal Restraints Sensor: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1418:4A	Passenger Side Restraints Sensor 1: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1419:4A	Passenger Side Restraints Sensor 2: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.

B141B:4A	Second Row Driver Side Inflatable Seatbelt Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B141C:4A	Second Row Passenger Side Inflatable Seatbelt Deployment Control: Incorrect Component Installed	This DTC sets if the RCM detects the device but it is not configured for this component.
B1469:4A	Unused Satellite Restraints Sensor 1: Incorrect Component Installed	This DTC sets if the RCM detects an unexpected impact sensor.
B146A:4A	Unused Satellite Restraints Sensor 2: Incorrect Component Installed	This DTC sets if the RCM detects an unexpected impact sensor.

Possible Sources

- RCM not configured or configured incorrectly
- Incorrect RCM installed
- Incorrect impact sensor installed

Visual Inspection and Diagnostic Pre-checks

- Review recent service history to identify repairs where an incorrect component may have been installed.

PINPOINT TEST A : BXXXX:4A (ANY BXXXX DTC (DIAGNOSTIC TROUBLE CODE) WITH A 4A FAILURE TYPE) INCORRECT COMPONENT INSTALLED



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.

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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

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

Yes	This fault cannot be cleared until it is corrected and the DTC is no longer retrieved during self-test. If DTC B00A0:4A was retrieved, REFER to: Pinpoint Test - DTC: L (501-20B Supplemental Restraint System, Diagnosis and Testing). If DTC U3003:16 or U3003:17 is retrieved on-demand as well, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). For all other incorrect component installed Diagnostic Trouble Codes (DTCs), GO to A2
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No	If DTC U3003:16 or U3003:17 is retrieved on-demand as well, DIAGNOSE those Diagnostic Trouble Codes (DTCs) first. REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
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If DTC U3003:16 or U3003:17 are not retrieved on-demand, DIAGNOSE the Continuous Memory Diagnostic Trouble Codes (CMDTCs).
This is an intermittent fault when present as a CMDTC only. GO to [A5](#)

A2 CHECK THE RCM (RESTRAINTS CONTROL MODULE) PART NUMBER

- Ignition ON.
- Check the vehicle repair history. Using the Log Viewer function of the diagnostic scan tool, retrieve and record the RCM part number.
- Check the part number recorded against the number listed in the Ford parts catalog and verify the correct RCM is installed in the vehicle.

Is the correct RCM installed?

Yes	GO to A3
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No	INSTALL the correct RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A6
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A3 VERIFY THE RCM (RESTRAINTS CONTROL MODULE) CONFIGURATION

- Carry out PMI for the RCM. Use As-Built data when carrying out PMI. Refer to the scan tool instructions to carry out PMI.
- Using a diagnostic scan tool, perform RCM self-test.

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

Yes	For DTC B1413:4A, B1414:4A, B1415:4A, B1417:4A, B1418:4A or B1419:4A, GO to A4 For all other incorrect component installed Diagnostic Trouble Codes (DTCs), CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A6
No	The fault is corrected. GO to A6

A4 VERIFY THE SUSPECT IMPACT SENSOR PART NUMBER

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Gain access to the suspect impact sensor(s) for which incorrect component installed Diagnostic Trouble Codes (DTCs) were retrieved. Refer to the table for the appropriate procedure(s).

DTC	Component	Procedure

B1413:4A	LH front impact severity sensor	REFER to: Front Impact Severity Sensor (501-20B Supplemental Restraint System, Removal and Installation).
B1414:4A	Driver front door side impact sensor	REFER to: Front Door Side Impact Sensor (501-20B Supplemental Restraint System, Removal and Installation).
B1415:4A (SuperCab vehicles only)	LH B-pillar side impact sensor	REFER to: B-Pillar Side Impact Sensor - SuperCab (501-20B Supplemental Restraint System, Removal and Installation).
B1415:4A (SuperCrew vehicles only)	LH C-pillar side impact sensor	REFER to: C-Pillar Side Impact Sensor - SuperCrew (501-20B Supplemental Restraint System, Removal and Installation).
B1417:4A	RH front impact severity sensor	REFER to: Front Impact Severity Sensor (501-20B Supplemental Restraint System, Removal and Installation).
B1418:4A	Passenger front door side impact sensor	REFER to: Front Door Side Impact Sensor (501-20B Supplemental Restraint System, Removal and Installation).

B1419:4A (SuperCab vehicles only)	RH B-pillar side impact sensor	REFER to: B-Pillar Side Impact Sensor - SuperCab (501-20B Supplemental Restraint System, Removal and Installation).
B1419:4A (SuperCrew vehicles only)	RH C-pillar side impact sensor	REFER to: C-Pillar Side Impact Sensor - SuperCrew (501-20B Supplemental Restraint System, Removal and Installation).

- Record the part number from each suspect impact sensor.
- Check the part number(s) recorded against the number listed in the Ford parts catalog and verify that each suspect impact sensor installed in the vehicle is correct.

Do the part numbers of all suspect impact sensors match the part numbers listed in the Ford parts catalog?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. GO to A6
No	INSTALL the correct impact sensor(s) as necessary. For DTC B1413:4A or B1417:4A, REFER to: Front Impact Severity Sensor (501-20B Supplemental Restraint System, Removal and Installation). For DTC B1414:4A or B1418:4A, REFER to: Front Door Side Impact Sensor (501-20B Supplemental Restraint System, Removal and Installation). For SuperCab vehicles with DTC B1415:4A or B1419:4A, REFER to: B-Pillar Side Impact Sensor - SuperCab (501-20B Supplemental Restraint System, Removal and Installation). For SuperCrew vehicles with DTC B1415:4A or B1419:4A, REFER to: C-Pillar Side Impact Sensor - SuperCrew (501-20B Supplemental Restraint System, Removal and Installation).

A5 CHECK FOR AN INTERMITTENT FAULT

- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform RCM self-test to retrieve Diagnostic Trouble Codes (DTCs).

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

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation). GO to A6
No	Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A6

A6 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- 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 \(SRS\) 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, OCSM and BECMB.

Using a diagnostic scan tool, carry out RCM self-test.

Are any RCM, OCSM and/or BECMB 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 Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AG

C0061:68, C0062:68, C0063:68, C0064:68, C0065:68

Diagnostic Overview

Normal Operation and Fault Conditions

The RCM provides the stability/traction control system with acceleration sensor data over the HS-CAN2. In addition to transmitting the data, the RCM monitors this data internally to make sure that the data is within an expected range.

If the data is outside of the expected range and a fault is detected, the RCM stores DTC C0061:68, C0062:68, C0063:68, C0064:68, and/or C0065:68 in memory. However, the RCM does not request that the IPC illuminate the airbag warning indicator when these faults are present.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
C0061:68	Lateral Acceleration Sensor: Event Information	A fault is indicated when the lateral acceleration sensor is transmitting data that is outside of the range expected by the RCM.
C0062:68	Longitudinal Acceleration Sensor: Event Information	A fault is indicated when the longitudinal acceleration sensor is transmitting data that is outside of the range expected by the RCM.
C0063:68	Yaw Rate Sensor: Event Information	A fault is indicated when the yaw rate sensor is transmitting data that is outside of the range expected by the RCM.

C0064:68	Roll Rate Sensor: Event Information	A fault is indicated when the roll rate sensor is transmitting data that is outside of the range expected by the RCM.
C0065:68	Vertical Acceleration Sensor: Event Information	A fault is indicated when the vertical acceleration sensor is transmitting data that is outside of the range expected by the RCM.

Possible Sources

- Aggressive driving conditions or rough roads
- RCM mounting
- RCM

PINPOINT TEST A : C0061:68, C0062:68, C0063:68, C0064:68, C0065:68



WARNING: Do not handle, move or change the original horizontal mounting position of the Restraints Control Module (RCM) while the Restraints Control Module (RCM) is connected and the ignition switch is ON. Failure to follow this instruction may result in the accidental deployment of the Safety Canopy® and cause serious personal injury or death.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 RETRIEVE RCM (RESTRAINTS CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.

Were Diagnostic Trouble Codes (DTCs) C0061:68, C0062:68, C0063:68, C0064:68, or C0065:68 the only Diagnostic Trouble Codes (DTCs) retrieved?

Yes	CLEAR the RCM Diagnostic Trouble Codes (DTCs). GO to A2
No	DIAGNOSE all other RCM Diagnostic Trouble Codes (DTCs) first. REFER to: Airbag Supplemental Restraint System (SRS) (501-20B) .

A2 CHECK FOR A RETURNING FAULT

- Test drive the vehicle. Choose a route with LH and RH turns. Avoid rough roads and **do not** drive the vehicle aggressively.
- Using a diagnostic scan tool, perform RCM self-test.

Were Diagnostic Trouble Codes (DTCs) C0061:68, C0062:68, C0063:68, C0064:68, or C0065:68 the only RCM Diagnostic Trouble Codes (DTCs) retrieved?

Yes	GO to A3
No	If no RCM Diagnostic Trouble Codes (DTCs) were retrieved, the Diagnostic Trouble Codes (DTCs) may have been triggered by aggressive driving or rough road conditions. INFORM the customer that aggressive driving conditions or rough road conditions can set these Diagnostic Trouble Codes (DTCs). RETURN the vehicle to the customer. If any other RCM Diagnostic Trouble Codes (DTCs) were retrieved, DIAGNOSE those Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) (501-20B) .

A3 CHECK THE RCM (RESTRAINTS CONTROL MODULE) INSTALLATION

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Inspect the RCM installation and make sure that the hardware is fully seated and tightened correctly.
REFER to: Restraints Control Module (RCM) (501-20B) .
- Inspect the RCM mounting surface for damage, corrosion, or foreign materials.

Is the RCM mounted correctly and is the mounting surface clean and free from damage?

Yes	GO to A4
No	REPAIR the mounting or INSTALL new hardware, as necessary. GO to A6

A4 CONFIRM THE RCM (RESTRAINTS CONTROL MODULE) FAULT

NOTE: Make sure all SRS components and the RCM electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) will be recorded.

- Connect RCM C310A and C310B.
- Repower the SRS. Do not prove out the SRS at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- Using a diagnostic scan tool, clear all RCM Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, perform RCM self-test.

Was the original DTC retrieved on-demand during self-test?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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. REFER to: Restraints Control Module (RCM) (501-20B) . GO to A6
No	In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A5

A5 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS.
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
- Disconnect RCM C310A and C310B.
- Inspect RCM C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.
- Inspect RCM C310A and C310B for pushed-out, loose or spread terminals and loose or frayed wire connections at terminals.
- Inspect wire harnesses for any damaged, pinched, cut or pierced wires.

Were any concerns found?

Yes	REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to A6
No	The fault is not present and cannot be recreated at this time. Do not install any new SRS components at this time. Install SRS components only when directed to do so in the pinpoint test. GO to A6

A6 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)



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.

- Ignition OFF.
- 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](#) (501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- **NOTE:** When selecting Restraints from the Self Test menu, DTCs are retrieved from the RCM, OCSM and, if equipped, BECMB.

Using a diagnostic scan tool, perform the **Restraints** self-test to retrieve Diagnostic Trouble Codes (DTCs).

Are any RCM, OCSM and/or BECMB 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. REFER to: Airbag Supplemental Restraint System (SRS) (501-20B) .
No	The repair is complete. RETURN the vehicle to the customer.

Pinpoint Test - DTC: AH

U0100:00

Normal Operation and Fault Conditions

The OCSM and RCM both use information contained in messages from the PCM sent on the HS-CAN.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0100:00	Lost Communication with ECM/PCM "A": No Sub Type Information	This DTC sets if the OCSM does not receive an expected message from the PCM.
U0100:00	Lost Communication with ECM/PCM "A": No Sub Type Information	This DTC sets if the RCM does not receive an expected message from the PCM.

Possible Causes

- Network traffic
- PCM
- RCM
- OCSM

PINPOINT TEST A : U0100:00

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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

A1 VERIFY DIAGNOSTIC SCAN TOOL COMMUNICATION WITH THE PCM (POWERTRAIN CONTROL MODULE)

 **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.

- REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).
- Ignition ON.
- Connect the diagnostic scan tool.
- Check that a vehicle session can be established using the diagnostic scan tool.

Can a vehicle session be established?

Yes	If DTC U0100:00 was retrieved from the OCSM, GO to A2 If DTC U0100:00 was retrieved from the RCM, GO to A3
No	To diagnose no communication with the PCM, REFER to: Communications Network (418-00) .

A2 CHECK THE OCSM (OCCUPANT CLASSIFICATION SYSTEM MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform OCSM self-test.
- Using a diagnostic scan tool, clear OCSM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform OCSM self-test.

Is DTC U0100:00 retrieved again?

Yes	GO to A4
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

A3 CHECK THE RCM (RESTRAINTS CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform RCM self-test.

Is DTC U0100:00 retrieved again?

Yes	GO to A4
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

A4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PCM (POWERTRAIN CONTROL MODULE) KOEO (KEY ON, ENGINE OFF) SELF-TEST

- Using a diagnostic scan tool, perform PCM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the PCM KOEO self-test.

Is DTC P0562 or P0563 recorded?

Yes	DIAGNOSE the PCM Diagnostic Trouble Codes (DTCs). Refer to the appropriate section in Group 303 for the procedure.
No	If DTC U0100:00 was originally retrieved from the OCSM, GO to A5 If DTC U0100:00 was originally retrieved from the RCM, GO to A6

A5 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE OCSM (OCCUPANT CLASSIFICATION SYSTEM MODULE) SELF-TEST

- Using a diagnostic scan tool, perform OCSM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the OCSM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AU (501-20B) .
No	GO to A7

A6 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform RCM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the RCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AU (501-20B) .
No	GO to A8

A7 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0100:00 SET IN MODULES OTHER THAN THE OCSM (OCCUPANT CLASSIFICATION SYSTEM MODULE)

- Using a diagnostic scan tool, perform self-test for all modules.

Is DTC U0100:00 set in the ABS module or in the RCM?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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 PCM. Refer to the appropriate section in Group 303 for the procedure.
No	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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 OCSM. REFER to: Occupant Classification System (OCS) Sensor - Vehicles With: Multi-Contour Seats (501-20B) . REFER to: Occupant Classification System (OCS) Sensor - Vehicles Without: Multi-Contour Seats (501-20B) .

A8 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0100:00 SET IN OTHER MODULES OTHER THAN THE RCM (RESTRAINTS CONTROL MODULE)

- Using a diagnostic scan tool, perform self-test for all modules.

Is DTC U0100:00 set in the ABS module or in the OCSM?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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 PCM. Refer to the appropriate section in Group 303 for the procedure.
No	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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. REFER to: Restraints Control Module (RCM) (501-20B) .

Pinpoint Test - DTC: AI

U0140:00

Normal Operation and Fault Conditions

The RCM uses information contained in messages from the BCM sent on the HS-CAN2.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0140:00	Lost Communication with Body Control Module: No Sub Type Information	This DTC sets if the RCM does not receive an expected message from the BCM.

Possible Sources

- Network traffic
- BCM
- RCM

PINPOINT TEST A : U0140:00



WARNING: Do not handle, move or change the original horizontal mounting position of the Restraints Control Module (RCM) while the Restraints Control Module (RCM) is connected and the ignition switch is ON. Failure to follow this instruction may result in the accidental deployment of the Safety Canopy® and cause serious personal injury or death.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 CHECK THE COMMUNICATION NETWORK

-  **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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, carry out a network test.

Does the BCM pass the network test?

Yes	GO to A2
No	To diagnose no communication with the BCM, REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

A2 CHECK THE RCM (RESTRAINTS CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform RCM self-test.

Is DTC U0140:00 retrieved again?

Yes	GO to A3
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

A3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Check the recorded Diagnostic Trouble Codes (DTCs) from the RCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	GO to A4

A4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE BCM (BODY CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform BCM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the BCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
No	GO to A5

A5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0140:00 SET IN OTHER MODULES

- Ignition ON.
- Using a diagnostic scan tool, perform self-test for all modules.

Is DTC U0140:00 set in the ABS Module or in the IPC?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,  Click here to access Guided Routine (BCM).
No	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).

Pinpoint Test - DTC: AJ

U0154:00

Normal Operation and Fault Conditions

The RCM uses information contained in messages from the OCSM sent on the HS-CAN2.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0154:00	Lost Communication with Restraints Occupant Classification System Module: No Sub Type Information	This DTC sets if the RCM does not receive an expected message from the OCSM.

Possible Sources

- Network traffic
- OCSM
- RCM

PINPOINT TEST A : U0154:00



WARNING: Do not handle, move or change the original horizontal mounting position of the Restraints Control Module (RCM) while the Restraints Control Module (RCM) is connected and the ignition switch is ON. Failure to follow this instruction may result in the accidental deployment of the Safety Canopy® and cause serious personal injury or death.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 CHECK THE COMMUNICATION NETWORK

-  **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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, carry out a network test.

Does the OCSM pass the network test?

Yes	GO to A2
No	To diagnose no communication with the OCSM, REFER to: Communications Network (418-00) .

A2 CHECK THE RCM (RESTRAINTS CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform RCM self-test.

Is DTC U0154:00 retrieved again?

Yes	GO to A3
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

A3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Check the recorded Diagnostic Trouble Codes (DTCs) from the RCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AU (501-20B) .
No	GO to A4

A4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE OCSM (OCCUPANT CLASSIFICATION SYSTEM MODULE) SELF-TEST

- Using a diagnostic scan tool, perform OCSM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the OCSM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AU (501-20B) .
No	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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. REFER to: Airbag Supplemental Restraint System (SRS) (501-20B) . REPEAT the RCM self-test. If DTC U0154:00 returns, INSTALL a new OCS sensor. REFER to: Occupant Classification System (OCS) Sensor - Vehicles With: Multi-Contour Seats (501-20B) . REFER to: Occupant Classification System (OCS) Sensor - Vehicles Without: Multi-Contour Seats (501-20B) .

Pinpoint Test - DTC: AK

U0155:00

Normal Operation and Fault Conditions

The RCM uses information contained in messages from the IPC sent on the HS-CAN.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0155:00	Lost Communication with Instrument Panel Cluster (IPC) Control Module: No Sub Type Information	This DTC sets if the RCM does not receive an expected message from the IPC for 6 seconds.

Possible Causes

- Network traffic
- IPC
- RCM

PINPOINT TEST A : U0155:00

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: Only disconnect or reconnect SRS components when instructed to do so within a pinpoint test step. Failure to follow this instruction may result in incorrect diagnosis of the SRS.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 CHECK THE COMMUNICATION NETWORK

-  **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.

REFER to: [Pyrotechnic Device Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

- Ignition ON.
- Using a diagnostic scan tool, carry out a network test.

Does the IPC pass the network test?

Yes	GO to A2
No	To diagnose no communication with the IPC, REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

A2 CHECK THE RCM (RESTRAINTS CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform RCM self-test.

Is DTC U0155:00 retrieved again?

Yes	GO to A3
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

A3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Check the recorded Diagnostic Trouble Codes (DTCs) from the RCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AN, Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	GO to A4

A4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform IPC self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the IPC self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
No	GO to A5

A5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0155:00 SET IN OTHER MODULES

- Using a diagnostic scan tool, perform self-test for all modules.

Is DTC U0155:00 set in the BCM, ACM, or APIM (if equipped)?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,  Click here to access Guided Routine (IPC).
No	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).

Pinpoint Test - DTC: AL

U0253:00

Normal Operation and Fault Conditions

The RCM uses information contained in messages from the APIM sent on the HS-CAN2.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0253:00	Lost Communication with Accessory Protocol Interface Module: No Sub Type Information	This DTC sets if the RCM does not receive an expected message from the APIM.

Possible Sources

- Network traffic
- APIM
- RCM

PINPOINT TEST A : U0253:00



WARNING: Do not handle, move or change the original horizontal mounting position of the Restraints Control Module (RCM) while the Restraints Control Module (RCM) is connected and the ignition switch is ON. Failure to follow this instruction may result in the accidental deployment of the Safety Canopy® and cause serious personal injury or death.

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

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

A1 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Using a diagnostic scan tool, carry out a network test.

Does the APIM pass the network test?

Yes	GO to A2
No	To diagnose no communication with the APIM, REFER to: Communications Network (418-00) .

A2 CHECK THE RCM (RESTRAINTS CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform RCM self-test.
- Using a diagnostic scan tool, clear RCM Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform RCM self-test.

Is DTC U0253:00 retrieved again?

Yes	GO to A3
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No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
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A3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Check for recorded Diagnostic Trouble Codes (DTCs) from the RCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to: Pinpoint Test - DTC: AU (501-20B) .
No	GO to A4

A4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE APIM (SYNC MODULE) SELF-TEST

- Using a diagnostic scan tool, perform APIM self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the APIM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	REFER to the appropriate section to DIAGNOSE the battery voltage Diagnostic Trouble Codes (DTCs). Refer to the appropriate section in Group 415 for the procedure.
No	GO to A5

A5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0253:00 SET IN OTHER MODULES

- Ignition ON.
- Using a diagnostic scan tool, perform self-test for all modules.

Is DTC U0253:00 set in the ACM?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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 APIM. Refer to the appropriate section in Group 415 for the procedure.
No	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. 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. REFER to: Restraints Control Module (RCM) (501-20B) .