

Warning
 Do not attempt to diagnose or troubleshoot air bag circuitry without consulting the Workshop Manual. Improper troubleshooting could cause the air bags to deploy inadvertently, causing injury.

From: Armstrong, Dave (D.)
Sent: Friday, February 03, 2006 11:25 AM
To: Pappas, Bill (B.)
Subject: Re: P221 clockspring diagnostics
Attachments: 2006 P221 B2293 PPT.pdf

Enjoy....

>>> "Pappas, Bill (B.)" <bpappas@ford.com> 02/03/06 10:29AM >>>

Dave,
Could you forward me the P221 clockspring troubleshooting procedure??

I would appreciate it.

Thanks,
Bill Pappas
Tough Truck Restraints
Tel # (313) 337-3043
Cell # (313) 805-3445
Text Page: bpappas

DIAGNOSIS AND TESTING (Continued)

Pinpoint Test K: LFC 19 and 21/DTC B2293 — Restraint System — Air Bag Fault

Normal Operation

The front air bags will deploy upon receiving a flow of current from the restraints control module (RCM). Refer to Air Bag and Safety Belt Pretensioner Supplemental Restraint System (SRS) in this section.

The RCM checks all of the front air bag circuits for faults. If the RCM detects one of the following faults on any of the front air bag circuits, it will store diagnostic trouble code (DTC) B2293 in memory, and depending on the fault, flash either lamp fault code (LFC) 19 or 21 depending on the fault (or higher priority code if one exists) on the air bag indicator.

Fault Conditions

The RCM monitors for the following fault conditions:

- Low resistance
- High resistance or circuit open
- Circuit short to voltage
- Circuit short to ground

Possible Causes

A driver air bag fault can be caused by:

- damaged wiring, terminals or connectors.
- a faulty clockspring.
- a faulty driver air bag module.
- a faulted RCM.




Possible Causes

A passenger air bag fault can be caused by:

- damaged wiring, terminals or connectors.
- a faulty passenger air bag module.
- a faulted RCM.

PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT

NOTE: Most faults are due to connector and/or wiring concerns. Carry out a thorough Inspection and Verification before proceeding with the pinpoint test.

Test Step		Result / Action to Take
K1	CHECK FOR A HARD OR INTERMITTENT DTC	
<p> WARNING: Restraint system diagnostic tools are for service only. Tools must be removed prior to operating the vehicle over the road. Failure to remove restraint system diagnostic tools could result in injury and possible violation of vehicle safety standards.</p> <p> WARNING: Never probe the connectors on the air bag module. Doing so can result in air bag deployment, which can result in personal injury.</p> <p> WARNING: The safety belt pretensioner is a pyrotechnic device. Always wear safety glasses when repairing an air bag equipped vehicle and when handling a safety belt buckle pretensioner or safety belt retractor pretensioner. Never probe a pretensioner electrical connector. Doing so could result in pretensioner or air bag deployment and could result in personal injury.</p> <p>NOTE: After diagnosing or repairing an SRS, the restraint system diagnostic tools must be removed before operating the vehicle over the road.</p> <p>NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.</p> <ul style="list-style-type: none"> • Enter the following diagnostic mode on the diagnostic tool: On-Demand Self Test. • Enter the following diagnostic mode on the diagnostic tool: Flag DTC B2293/Record All Flagged Faults. • Enter the following diagnostic mode on the diagnostic tool: Retrieve/Flag/Record Continuous DTCs. • Was DTC B2293 retrieved during the on-demand self test? 		<p>Yes This is a hard fault. The fault condition is still present. This fault cannot be cleared until it is corrected and the DTC is no longer retrieved during the on-demand self test. GO to K2.</p> <p>No This is an intermittent fault. The fault condition is not present at this time. GO to K38.</p>

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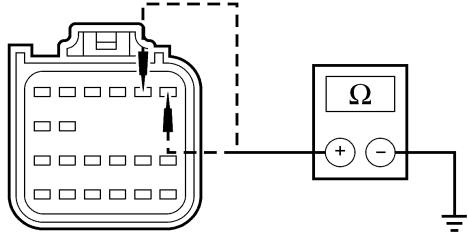
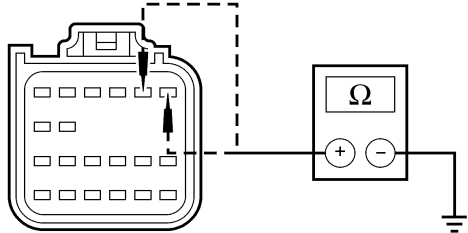
DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)**

Test Step		Result / Action to Take
K2	CHECK THE DRIVER AND PASSENGER AIR BAG MODULES	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • If the flagged fault was reported for the driver air bag module: <ul style="list-style-type: none"> — Remove the driver air bag module. Refer to Driver Air Bag Module in this section. — Connect restraint system diagnostic tools 418-F395 (2 required) to the driver air bag module squib 1 and squib 2 connectors. • If the flagged fault was reported for the passenger air bag module: <ul style="list-style-type: none"> — Disconnect the passenger air bag module C256a and C256b. — Connect restraint system diagnostic tool 418-F395 (2 required) to passenger air bag module C256a and C256b. • Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Enter the following diagnostic mode on the diagnostic tool: On-Demand Self Test. • Was DTC B2293 retrieved during the on-demand self test? 	<p>Yes</p> <p>This is a hard fault. The fault condition is still present. This fault cannot be cleared until it is corrected and the DTC is no longer retrieved during the on-demand self test.</p> <p>Using the flagged faults recorded in the step K1, GO to the appropriate pinpoint test step.</p> <p>If a flagged fault of “?” was recorded, multiple faults exist and the entire pinpoint test must be carried out.</p> <p>For driver air bag module squib 1 with a short to ground fault, GO to K3.</p> <p>For driver air bag module squib 1 with a short to battery fault, GO to K5.</p> <p>For driver air bag module squib 1 with an open circuit fault, GO to K7.</p> <p>For driver air bag module squib 1 with a low resistance fault, GO to K11.</p> <p>For passenger air bag module squib 1 with a short to ground fault, GO to K14.</p> <p>For passenger air bag module squib 1 with a short to battery fault, GO to K15.</p> <p>For passenger air bag module squib 1 with an open circuit fault, GO to K16.</p> <p>For passenger air bag module squib 1 with a low resistance fault, GO to K18.</p> <p>For driver air bag module squib 2 with a short to ground fault, GO to K20.</p> <p>For driver air bag module squib 2 with a short to battery fault, GO to K22.</p> <p>For driver air bag module squib 2 with an open circuit fault, GO to K24.</p> <p>For driver air bag module squib 2 with a low resistance fault, GO to K28.</p> <p>For passenger air bag module squib 2 with a short to ground fault, GO to K31.</p> <p>For passenger air bag module squib 2 with a short to battery fault, GO to K32.</p> <p>For passenger air bag module squib 2 with an open circuit fault, GO to K33.</p> <p>For passenger air bag module squib 2 with a low resistance fault, GO to K35.</p> <p>No</p> <p>If a flagged fault of “?” was recorded in Step K1, multiple faults exist and the entire pinpoint test must be carried out.</p> <p>If a fault was flagged against driver air bag module in Step K1, INSTALL a new driver air bag module. REFER to Driver Air Bag Module in this section. GO to K39.</p> <p>If a fault was flagged against passenger air bag module in Step K1, INSTALL a new passenger air bag module. REFER to Passenger Air Bag Module in this section. GO to K39.</p>
K3	CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE	
	<ul style="list-style-type: none"> • Key in OFF position. 	

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DIAGNOSIS AND TESTING (Continued)

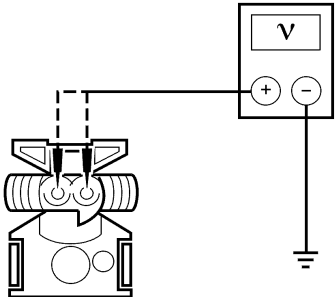
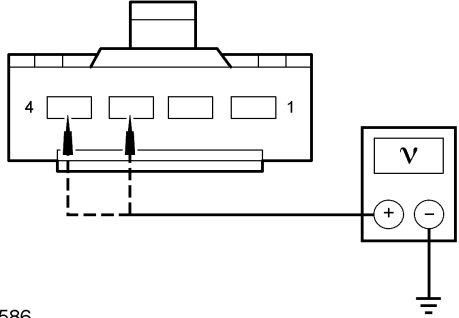
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

	Test Step	Result / Action to Take
K3	CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)	
	<ul style="list-style-type: none"> • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: RCM C310a and C310b. • Disconnect: Driver Air Bag Module Squib 1 Restraint System Diagnostic Tool. • Measure the resistance between RCM C310a-1, circuit 614 (GY/OG), harness side and ground; and between RCM C310a-2, circuit 615 (GY/WH), harness side and ground.  <p>A0041212</p> <ul style="list-style-type: none"> • Are the resistances greater than 1,000,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K4.</p>
K4	CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE CLOCKSPrING	
	<ul style="list-style-type: none"> • Disconnect: Clockspring C218a. • Measure the resistance between RCM C310a-1, circuit 614 (GY/OG), harness side and ground; and between RCM C310a-2, circuit 615 (GY/WH), harness side and ground.  <p>A0041212</p> <ul style="list-style-type: none"> • Are the resistances greater than 1,000,000 ohms? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 614 (GY/OG) or circuit 615 (GY/WH). GO to K39.</p>
K5	CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Driver Air Bag Module Squib 1 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Key in ON position. 	

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DIAGNOSIS AND TESTING (Continued)

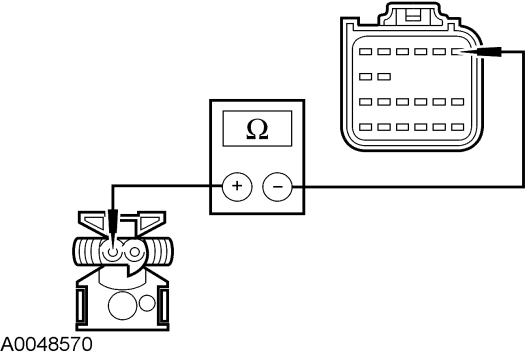
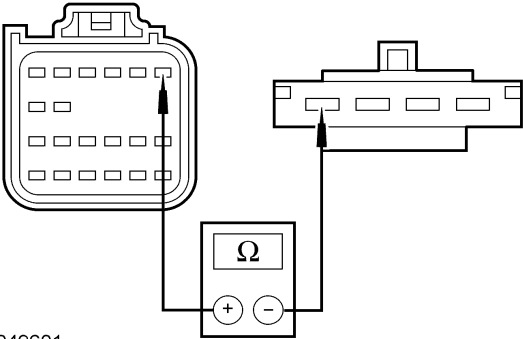
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K5	<p>CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the voltage between driver air bag module squib 1 electrical connector, circuit 614 (GY/OG), harness side and ground; and between driver air bag module squib 1 electrical connector, circuit 615 (GY/WH), harness side and ground.  <p>A0088715</p> <ul style="list-style-type: none"> Are the voltages less than 0.2 volt? 	<p>Yes GO to K37.</p> <p>No GO to K6.</p>
K6	<p>CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE CLOCKSPrING</p> <ul style="list-style-type: none"> Key in OFF position. Disconnect: Clockspring C218a. Key in ON position. Measure the voltage between clockspring C218a-3, circuit 615 (GY/WH), harness side and ground; and between clockspring C218a-4, circuit 614 (GY/OG), harness side and ground.  <p>A0088586</p> <ul style="list-style-type: none"> Are the voltages less than 0.2 volt? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 614 (GY/OG) or 615 (GY/WH). GO to K39.</p>
K7	<p>CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Driver Air Bag Module Squib 1 Restraint System Diagnostic Tool. Disconnect: RCM C310a and C310b. 	

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DIAGNOSIS AND TESTING (Continued)

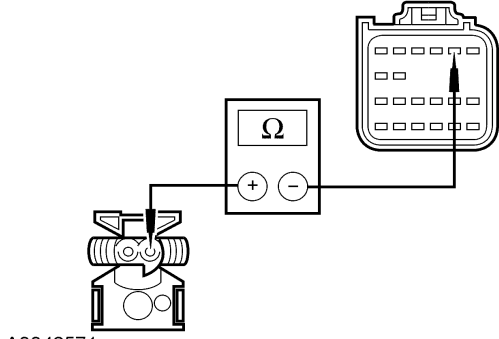
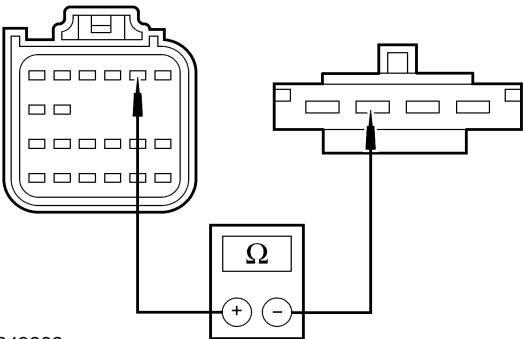
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K7 CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-1, circuit 614 (GY/OG), harness side and driver air bag module squib 1 electrical connector, circuit 614 (GY/OG), harness side.  <p>A0048570</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K9.</p> <p>No GO to K8.</p>
<p>K8 CHECK CIRCUIT 614 (GY/OG) FOR AN OPEN BETWEEN THE RCM AND THE CLOCKSPRING</p> <ul style="list-style-type: none"> Disconnect: Clockspring C218a. Measure the resistance between RCM C310a-1, circuit 614 (GY/OG), harness side and clockspring C218a-4, circuit 614 (GY/OG), harness side.  <p>A0049601</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 614 (GY/OG). GO to K39.</p>

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DIAGNOSIS AND TESTING (Continued)

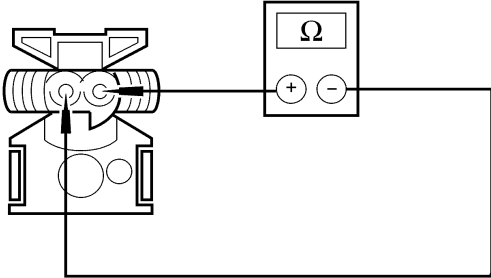
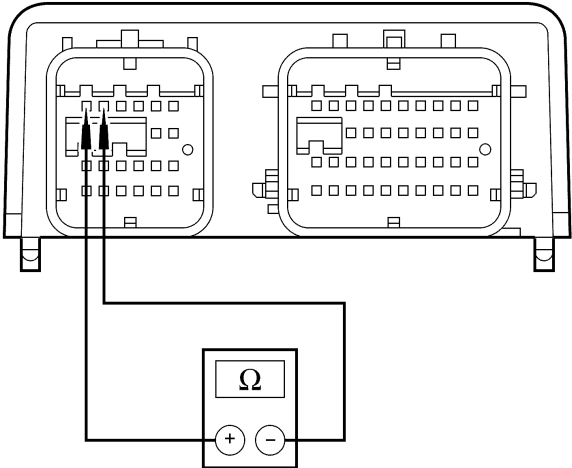
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K9	<p>CHECK CIRCUIT 615 (GY/WH) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-2, circuit 615 (GY/WH), harness side and driver air bag module squib 1 electrical connector, circuit 615 (GY/WH), harness side.  <p>A0048571</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K37.</p> <p>No GO to K10.</p>
K10	<p>CHECK CIRCUIT 615 (GY/WH) FOR AN OPEN BETWEEN THE RCM AND THE CLOCKSPRING</p> <ul style="list-style-type: none"> Disconnect: Clockspring C218a. Measure the resistance between RCM C310a-2, circuit 615 (GY/WH), harness side and clockspring C218a-3, circuit 615 (GY/WH), harness side.  <p>A0049602</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 615 (GY/WH). GO to K39.</p>
K11	<p>CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR LOW RESISTANCE BETWEEN THE DRIVER AIR BAG MODULE AND THE RCM</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Driver Air Bag Module Squib 1 Restraint System Diagnostic Tool. 	

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DIAGNOSIS AND TESTING (Continued)

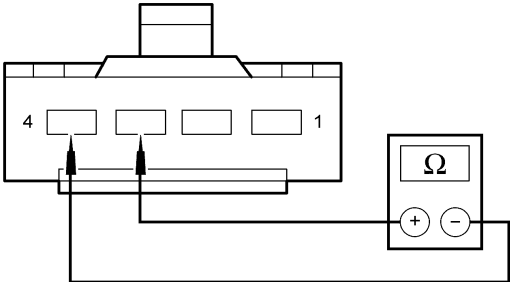
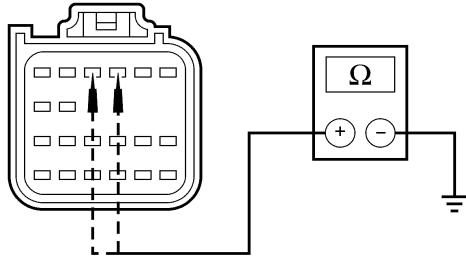
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K11 CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR LOW RESISTANCE BETWEEN THE DRIVER AIR BAG MODULE AND THE RCM (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between driver air bag module squib 1 electrical connector, circuit 614 (GY/OG) and circuit 615 (GY/WH), harness side.  <p>A0030492</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K12.</p>
<p>K12 MEASURE THE RESISTANCE BETWEEN RCM CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH)</p> <ul style="list-style-type: none"> Disconnect: RCM C310a and C310b. Measure the resistance between RCM C310a pin 1, component side and pin 2, component side.  <p>A0041266</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K13.</p> <p>No GO to K37.</p>

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DIAGNOSIS AND TESTING (Continued)

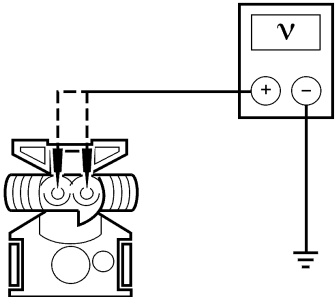
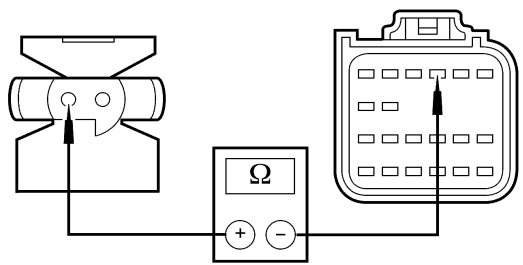
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

	Test Step	Result / Action to Take
K13	<p>CHECK CIRCUIT 614 (GY/OG) AND CIRCUIT 615 (GY/WH) FOR LOW RESISTANCE BETWEEN THE CLOCKSPRING AND THE RCM</p>	
	<ul style="list-style-type: none"> • Connect: RCM C310a and C310b. • Disconnect: Clockspring C218a. • Measure the resistance between clockspring C218a-4, circuit 614 (GY/OG) and C218a-3, circuit 615 (GY/WH), harness side.  <p>A0029872</p> <ul style="list-style-type: none"> • Is the resistance greater than 10,000 ohms? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 614 (GY/OG) and circuit 615 (GY/WH). GO to K39.</p>
K14	<p>CHECK CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p>	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Passenger Air Bag Module Squib 1 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Measure the resistance between RCM C310a-3, circuit 607 (LB/OG), harness side and ground; and between RCM C310a-4, circuit 616 (PK/BK), harness side and ground.  <p>A0041267</p> <ul style="list-style-type: none"> • Are the resistances greater than 1,000,000 ohms? 	<p>Yes GO to K37.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 607 (LB/OG) or circuit 616 (PK/BK). GO to K39.</p>
K15	<p>CHECK CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p>	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Passenger Air Bag Module Squib 1 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Key in ON position. 	

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DIAGNOSIS AND TESTING (Continued)

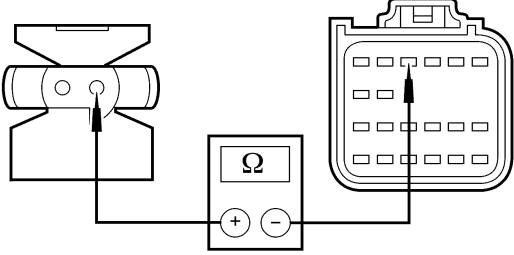
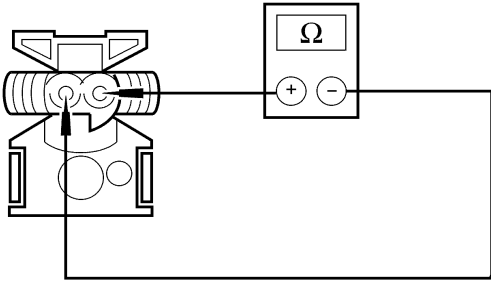
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K15 CHECK CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the voltage between passenger air bag module C256a-2, circuit 607 (LB/OG), harness side and ground; and between passenger air bag module C256a-1, circuit 616 (PK/BK), harness side and ground.  <p>A0088715</p> <ul style="list-style-type: none"> Are the voltages less than 0.2 volt? 	<p>Yes GO to K37.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 607 (LB/OG) or circuit 616 (PK/BK). GO to K39.</p>
<p>K16 CHECK CIRCUIT 607 (LB/OG) FOR AN OPEN BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Passenger Air Bag Module Squib 1 Restraint System Diagnostic Tool. Disconnect: RCM C310a and C310b. Measure the resistance between RCM C310a-3, circuit 607 (LB/OG), harness side and passenger air bag module C256a-2, circuit 607 (LB/OG), harness side.  <p>A0074079</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K17.</p> <p>No REPAIR circuit 607 (LB/OG). GO to K39.</p>

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DIAGNOSIS AND TESTING (Continued)

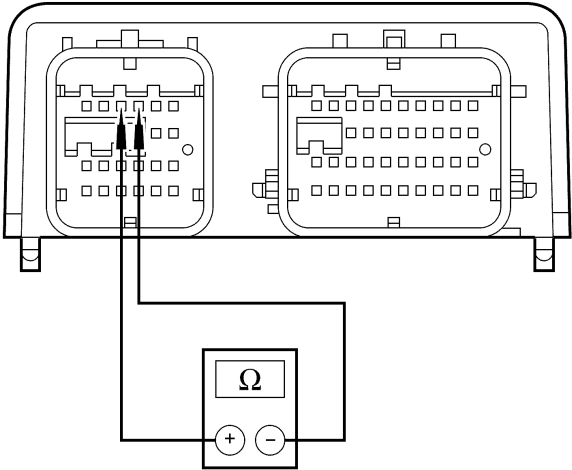
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K17	<p>CHECK CIRCUIT 616 (PK/BK) FOR AN OPEN BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-4, circuit 616 (PK/BK), harness side and passenger air bag module C256a-1, circuit 616 (PK/BK), harness side.  <p>A0074080</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K37.</p> <p>No REPAIR circuit 616 (PK/BK). GO to K39.</p>
K18	<p>CHECK CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK) FOR LOW RESISTANCE BETWEEN THE PASSENGER AIR BAG MODULE AND THE RCM</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Passenger Air Bag Module Squib 1 Restraint System Diagnostic Tool. Measure the resistance between passenger air bag module C256a-2, circuit 607 (LB/OG), harness side and C256a-1, circuit 616 (PK/BK), harness side.  <p>A0030492</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K19.</p>
K19	<p>MEASURE THE RESISTANCE BETWEEN RCM CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK)</p> <ul style="list-style-type: none"> Disconnect: RCM C310a and C310b. 	

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DIAGNOSIS AND TESTING (Continued)

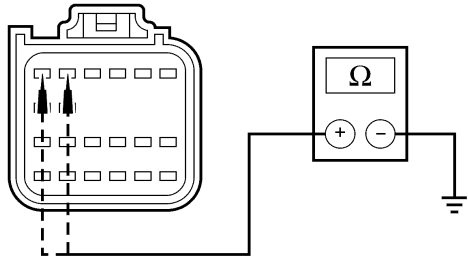
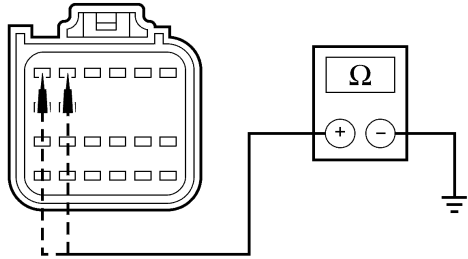
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K19	MEASURE THE RESISTANCE BETWEEN RCM CIRCUIT 607 (LB/OG) AND CIRCUIT 616 (PK/BK) (Continued)	
<ul style="list-style-type: none"> Measure the resistance between RCM C310a pin 3, component side and pin 4, component side.  <p>A0041271</p>		<p>Yes REPAIR circuit 607 (LB/OG) and circuit 616 (PK/BK). GO to K22.</p> <p>No GO to K37.</p>
<ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 		
K20	CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE	
<ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: RCM C310a and C310b. Disconnect: Driver Air Bag Module Squib 2 Restraint System Diagnostic Tool. 		

(Continued)

DIAGNOSIS AND TESTING (Continued)

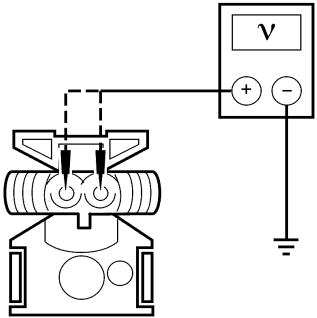
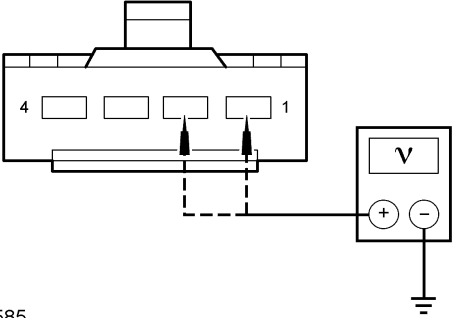
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K20 CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-5, circuit 1516 (YE/WH), harness side and ground; and between RCM C310a-6, circuit 1517 (RD/OG), harness side and ground.  <p>A0041272</p> <ul style="list-style-type: none"> Are the resistances greater than 1,000,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K21.</p>
<p>K21 CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE CLOCKSPRING</p> <ul style="list-style-type: none"> Disconnect: Clockspring C218a. Measure the resistance between RCM C310a-5, circuit 1516 (YE/WH), harness side and ground; and between RCM C310a-6, circuit 1517 (RD/OG), harness side and ground.  <p>A0041272</p> <ul style="list-style-type: none"> Are the resistances greater than 1,000,000 ohms? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 1516 (YE/WH) or circuit 1517 (RD/OG). GO to K39.</p>
<p>K22 CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Driver Air Bag Module Squib 2 Restraint System Diagnostic Tool. Disconnect: RCM C310a and C310b. Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Key in ON position. 	

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DIAGNOSIS AND TESTING (Continued)

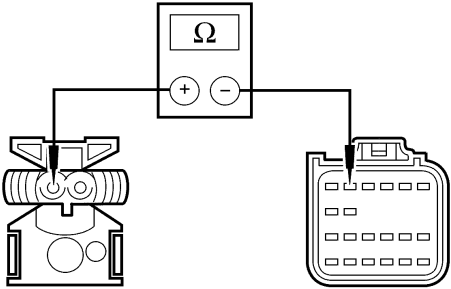
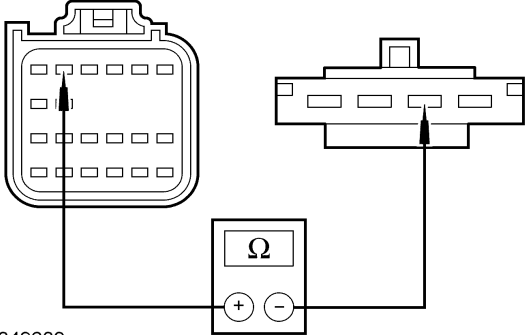
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K22 CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the voltage between driver air bag module squib 2 electrical connector, circuit 1516 (YE/WH), harness side and ground; and between driver air bag module squib 2 electrical connector, circuit 1517 (RD/OG), harness side and ground.  <p>A0094162</p> <ul style="list-style-type: none"> Are the voltages less than 0.2 volt? 	<p>Yes GO to K37.</p> <p>No GO to K23.</p>
<p>K23 CHECK CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE CLOCKSPRING</p> <ul style="list-style-type: none"> Key in OFF position. Disconnect: Clockspring C218a. Key in ON position. Measure the voltage between clockspring C218a-2, circuit 1516 (YE/WH), harness side and ground; and between clockspring C218a-1, circuit 1517 (RD/OG), harness side and ground.  <p>A0088585</p> <ul style="list-style-type: none"> Are the voltages less than 0.2 volt? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 1516 (YE/WH) or circuit 1517 (RD/OG). GO to K39.</p>
<p>K24 CHECK CIRCUIT 1516 (YE/WH) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Driver Air Bag Module Squib 2 Restraint System Diagnostic Tool. Disconnect: RCM C310a and C310b. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

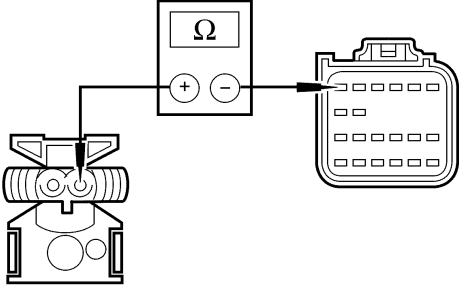
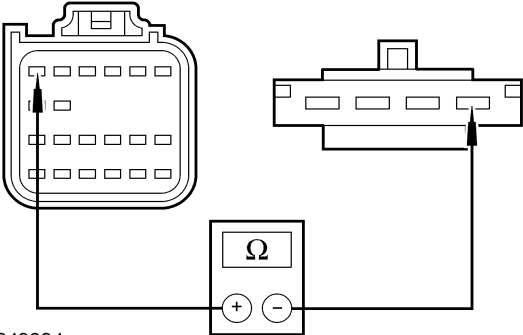
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K24 CHECK CIRCUIT 1516 (YE/WH) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-5, circuit 1516 (YE/WH), harness side and the driver air bag module squib 2 electrical connector, circuit 1516 (YE/WH), harness side.  <p>A0049606</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K26.</p> <p>No GO to K25.</p>
<p>K25 CHECK CIRCUIT 1516 (YE/WH) FOR AN OPEN BETWEEN THE RCM AND THE CLOCKSPRING</p> <ul style="list-style-type: none"> Disconnect: Clockspring C218a. Measure the resistance between RCM C310a-5, circuit 1516 (YE/WH), harness side and the clockspring C218a-2, circuit 1516 (YE/WH), harness side.  <p>A0049603</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 1516 (YE/WH). GO to K39.</p>

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DIAGNOSIS AND TESTING (Continued)

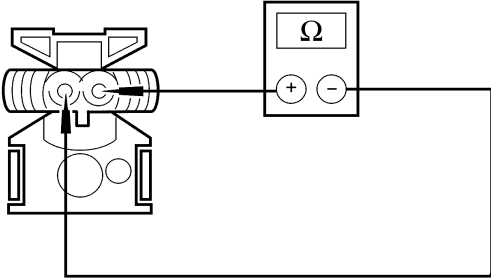
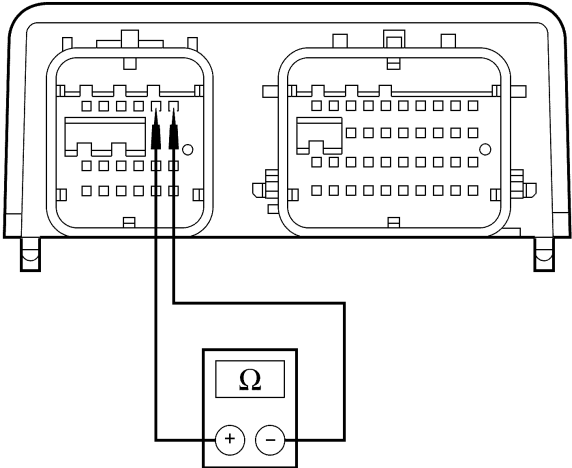
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K26	CHECK CIRCUIT 1517 (RD/OG) FOR AN OPEN BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE	
	<ul style="list-style-type: none"> Measure the resistance between RCM C310a-6, circuit 1517 (RD/OG), harness side and the driver air bag module squib 2 electrical connector, circuit 1517 (RD/OG), harness side.  <p>A0049605</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K37.</p> <p>No GO to K27.</p>
K27	CHECK CIRCUIT 1517 (RD/OG) FOR AN OPEN BETWEEN THE RCM AND THE CLOCKSPRING	
	<ul style="list-style-type: none"> Disconnect: Clockspring C218a. Measure the resistance between RCM C310a-6, circuit 1517 (RD/OG), harness side and clockspring C218a-1, circuit 1517 (RD/OG), harness side.  <p>A0049604</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 1517 (RD/OG). GO to K39.</p>
K28	CHECK FOR LOW RESISTANCE ON CIRCUITS 1516 (YE/WH) AND 1517 (RD/OG) BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE	
	<ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Driver Air Bag Module Squib 2 Restraint System Diagnostic Tool. 	

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DIAGNOSIS AND TESTING (Continued)

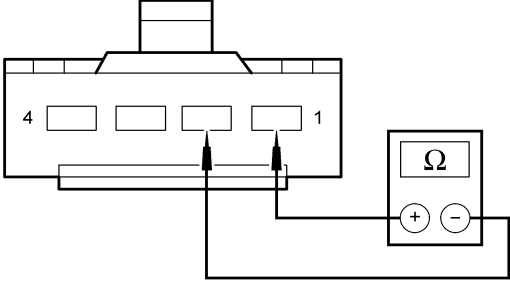
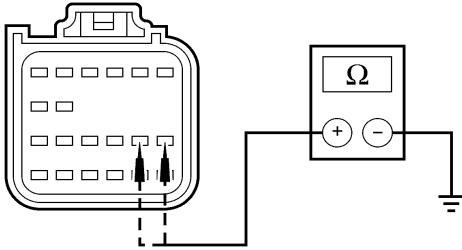
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

	Test Step	Result / Action to Take
K28	<p>CHECK FOR LOW RESISTANCE ON CIRCUITS 1516 (YE/WH) AND 1517 (RD/OG) BETWEEN THE RCM AND THE DRIVER AIR BAG MODULE (Continued)</p>	
	<ul style="list-style-type: none"> Measure the resistance between the driver air bag module squib 2 electrical connector, circuit 1516 (YE/WH), harness side and circuit 1517 (RD/OG), harness side.  <p>A0030495</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K29.</p>
K29	<p>MEASURE THE RESISTANCE BETWEEN THE RCM CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG)</p>	
	<ul style="list-style-type: none"> Disconnect: RCM C310a and C310b. Measure the resistance between RCM C310a pin 5, component side and pin 6, component side.  <p>A0041276</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K30.</p> <p>No GO to K37.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

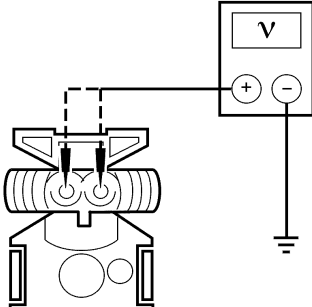
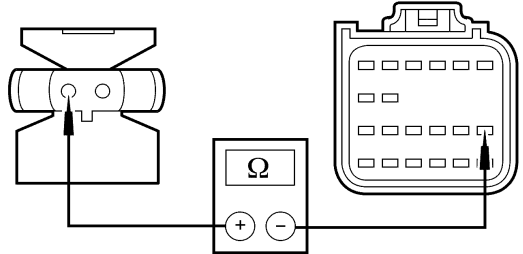
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

	Test Step	Result / Action to Take
K30	<p>CHECK FOR LOW RESISTANCE ON CIRCUIT 1516 (YE/WH) AND CIRCUIT 1517 (RD/OG) BETWEEN THE DRIVER AIR BAG MODULE AND THE CLOCKSPRING</p>	
	<ul style="list-style-type: none"> • Connect: RCM C310a and C310b. • Disconnect: Clockspring C218a. • Measure the resistance between clockspring C218a-1, circuit 1517 (RD/OG), harness side and C218a-2, circuit 1516 (YE/WH), harness side.  <p>A0029882</p> <ul style="list-style-type: none"> • Is the resistance greater than 10,000 ohms? 	<p>Yes INSTALL a new clockspring. REFER to Clockspring in this section. GO to K39.</p> <p>No REPAIR circuit 1516 (YE/WH) and circuit 1517 (RD/OG). GO to K39.</p>
K31	<p>CHECK CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD) FOR A SHORT TO GROUND BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p>	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Passenger Air Bag Module Squib 2 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Measure the resistance between RCM C310a-13, circuit 1518 (BK/WH), harness side and ground; and between RCM C310a-14, circuit 1519 (LG/RD), harness side and ground.  <p>A0041277</p> <ul style="list-style-type: none"> • Are the resistances greater than 1,000,000 ohms? 	<p>Yes GO to K37.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 1518 (BK/WH) or circuit 1519 (LG/RD). GO to K39.</p>
K32	<p>CHECK CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p>	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Passenger Air Bag Module Squib 2 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

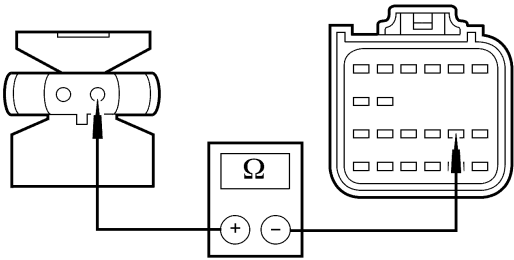
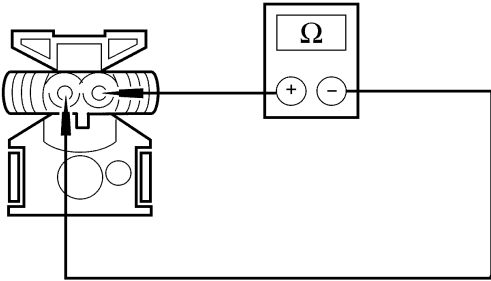
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step	Result / Action to Take
<p>K32 CHECK CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD) FOR A SHORT TO VOLTAGE BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE (Continued)</p> <ul style="list-style-type: none"> • Key in ON position. • Measure the voltage between passenger air bag module C256b-2, circuit 1518 (BK/WH), harness side and ground; and between passenger air bag module C256b-1, circuit 1519 (LG/RD), harness side and ground.  <p>A0094162</p> <ul style="list-style-type: none"> • Are the voltages less than 0.2 volt? 	<p>Yes GO to K37.</p> <p>No Due to the shorting bar feature in the electrical connector, the fault can exist in either circuit. Do not remove or defeat the shorting bar. REPAIR circuit 1518 (BK/WH) or circuit 1519 (LG/RD). GO to K39.</p>
<p>K33 CHECK CIRCUIT 1518 (BK/WH) FOR AN OPEN BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p> <ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Disconnect: Passenger Air Bag Module Squib 2 Restraint System Diagnostic Tool. • Disconnect: RCM C310a and C310b. • Measure the resistance between RCM C310a-13, circuit 1518 (BK/WH), harness side and passenger air bag module C256b-2 circuit 1518 (BK/WH), harness side.  <p>A0074077</p> <ul style="list-style-type: none"> • Is the resistance less than 0.5 ohm? 	<p>Yes GO to K34.</p> <p>No REPAIR circuit 1518 (BK/WH). GO to K39.</p>

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DIAGNOSIS AND TESTING (Continued)

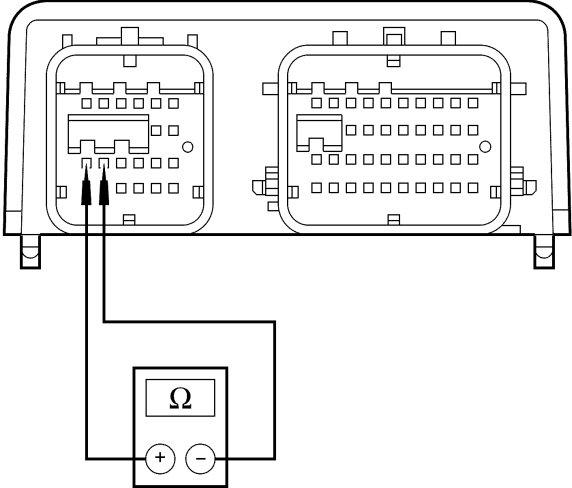
PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K34	<p>CHECK CIRCUIT 1519 (LG/RD) FOR AN OPEN BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a-14, circuit 1519 (LG/RD), harness side and passenger air bag module C256b-1 circuit 1519 (LG/RD), harness side.  <p>A0074078</p> <ul style="list-style-type: none"> Is the resistance less than 0.5 ohm? 	<p>Yes GO to K37.</p> <p>No REPAIR circuit 1519 (LG/RD). GO to K39.</p>
K35	<p>CHECK FOR LOW RESISTANCE ON CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD) BETWEEN THE RCM AND THE PASSENGER AIR BAG MODULE</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Disconnect: Passenger Air Bag Module Squib 2 Restraint System Diagnostic Tool. Measure the resistance between passenger air bag module C256b-1 circuit 1519 (LG/RD), harness side and C256b-2, circuit 1518 (BK/WH), harness side.  <p>A0030495</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to K37.</p> <p>No GO to K36.</p>
K36	<p>MEASURE THE RESISTANCE BETWEEN THE RCM CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD)</p> <ul style="list-style-type: none"> Disconnect: RCM C310a and C310b. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K36	<p>MEASURE THE RESISTANCE BETWEEN THE RCM CIRCUIT 1518 (BK/WH) AND CIRCUIT 1519 (LG/RD) (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between RCM C310a pin 13, component side and pin 14, component side.  <p>A0041281</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes REPAIR circuit 1518 (BK/WH) and circuit 1519 (LG/RD). GO to K39.</p> <p>No GO to K37.</p>
K37	<p>CONFIRM THE RCM FAULT</p> <p>NOTE: Make sure all restraint system diagnostic tools, sensor electrical connectors and the RCM electrical connector are connected before carrying out the on-demand self-test. If not, erroneous DTCs will be recorded</p> <ul style="list-style-type: none"> Key in OFF position. Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Connect: Restraint System Diagnostic Tools. Connect: RCM C310a and C310b. Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. Enter the following diagnostic mode on the diagnostic tool: On-Demand Self Test. Enter the following diagnostic mode on the diagnostic tool: Flag DTC B2293/Record All Flagged Faults. Was DTC B2293 retrieved during the on-demand self test? 	<p>Yes If a “?” was flagged by the diagnostic tool, CARRY OUT the entire pinpoint test. INSTALL a new RCM. REFER to Restraints Control Module (RCM) in this section. GO to K39.</p> <p>No CHECK for causes of the intermittent fault. ATTEMPT to recreate the hard fault by flexing the wire harness and cycling the ignition key frequently. ACTIVATE other systems in the same wire harness. REPAIR any intermittent concerns found. GO to K39.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

	Test Step	Result / Action to Take
K38	CHECK FOR AN INTERMITTENT FAULT	
	<ul style="list-style-type: none"> • Key in OFF position. • Depower the system. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • If the flagged fault was reported for the driver air bag module: <ul style="list-style-type: none"> — Remove the driver air bag module. Refer to Driver Air Bag Module in this section. — Connect restraint system diagnostic tools 418-F395 (2 required) to the driver air bag module squib 1 and squib 2 connectors. • If the flagged fault was reported for the passenger air bag module: <ul style="list-style-type: none"> — Disconnect the passenger air bag module C256a and C256b. — Connect restraint system diagnostic tools 418-F395 (2 required) to passenger air bag module C256a and C256b. • Repower the system. Do not prove out the system at this time. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in this section. • Enter the following diagnostic mode on the diagnostic tool: On-Demand Self Test. • Enter the following diagnostic mode on the diagnostic tool: Flag DTC B2293/Record All Flagged Faults. • Was the DTC B2293 retrieved during the on-demand self test? 	<p>Yes This is a hard fault. The fault condition is now present. This fault cannot be cleared until it is corrected and the DTC is no longer retrieved during the on-demand self test. CHECK for causes of the intermittent fault at or near the affected air bag module connector. REPAIR any intermittent concerns found. If an intermittent concern was found and repaired, GO to K39. If an intermittent concern was not found and repaired, USE the flagged faults recorded and GO to the appropriate pinpoint test step. If a flagged fault of “?” was recorded multiple faults exist and the entire pinpoint test must be carried out. For driver air bag module squib 1 with a short to ground fault, GO to K3. For driver air bag module squib 1 with a short to battery fault, GO to K5. For driver air bag module squib 1 with an open circuit fault, GO to K7. For driver air bag module squib 1 with a low resistance fault, GO to K11. For passenger air bag module squib 1 with a short to ground fault, GO to K14. For passenger air bag module squib 1 with a short to battery fault, GO to K15. For passenger air bag module squib 1 with an open circuit fault, GO to K16. For passenger air bag module squib 1 with a low resistance fault, GO to K18. For driver air bag module squib 2 with a short to ground fault, GO to K20. For driver air bag module squib 2 with a short to battery fault, GO to K22. For driver air bag module squib 2 with an open circuit fault, GO to K24. For driver air bag module squib 2 with a low resistance fault, GO to K28. For passenger air bag module squib 2 with a short to ground fault, GO to K31. For passenger air bag module squib 2 with a short to battery fault, GO to K32. For passenger air bag module squib 2 with an open circuit fault, GO to K33. For passenger air bag module squib 2 with a low resistance fault, GO to K35.</p> <p>No CHECK for causes of the intermittent fault. ATTEMPT to recreate the hard fault by flexing the wire harness and cycling the ignition key frequently. ACTIVATE other systems in the same wire harness. REPAIR any intermittent concerns found. GO to K39.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST K: LFC 19 AND 21/DTC B2293 — RESTRAINT SYSTEM - AIR BAG FAULT (Continued)

Test Step		Result / Action to Take
K39	CHECK FOR ADDITIONAL DTCs	<p>Yes Do not clear any DTCs until all DTCs have been resolved. GO to the Restraints Control Module (RCM) Diagnostic Trouble Code (DTC) Table in this section for pinpoint test direction.</p> <p>No RECONNECT the system. If previously directed to deactivate the system, REACTIVATE the system. REFER to Supplemental Restraint System (SRS) Deactivation and Reactivation in this section. REPOWER the system. REFER to Supplemental Restraint System (SRS) Depowering and Repowering in this section. PROVE OUT the system. CLEAR all DTCs.</p>
	<ul style="list-style-type: none"> Refer to the continuous DTCs recorded during Step K1. Were any continuous DTCs retrieved during Step K1? 	

Pinpoint Test L: LFC 42/DTC B2296 — Restraint System — Impact Sensor Fault

Normal Operation

The front impact severity sensor provides data to the restraints control module (RCM) for use in calculating impact severity. This is accomplished using various electrical and electromechanical sensor(s) throughout the vehicle. Refer to Air Bag and Safety Belt Pretensioner Supplemental Restraint System (SRS) in this section.

The RCM checks all of the impact sensor circuits for faults. If the RCM detects one of the following faults on any of the impact sensor circuits, it will store diagnostic trouble code (DTC) B2296 in memory and flash lamp fault code (LFC) 42 (or higher priority code if one exists) on the air bag indicator.

Fault Conditions

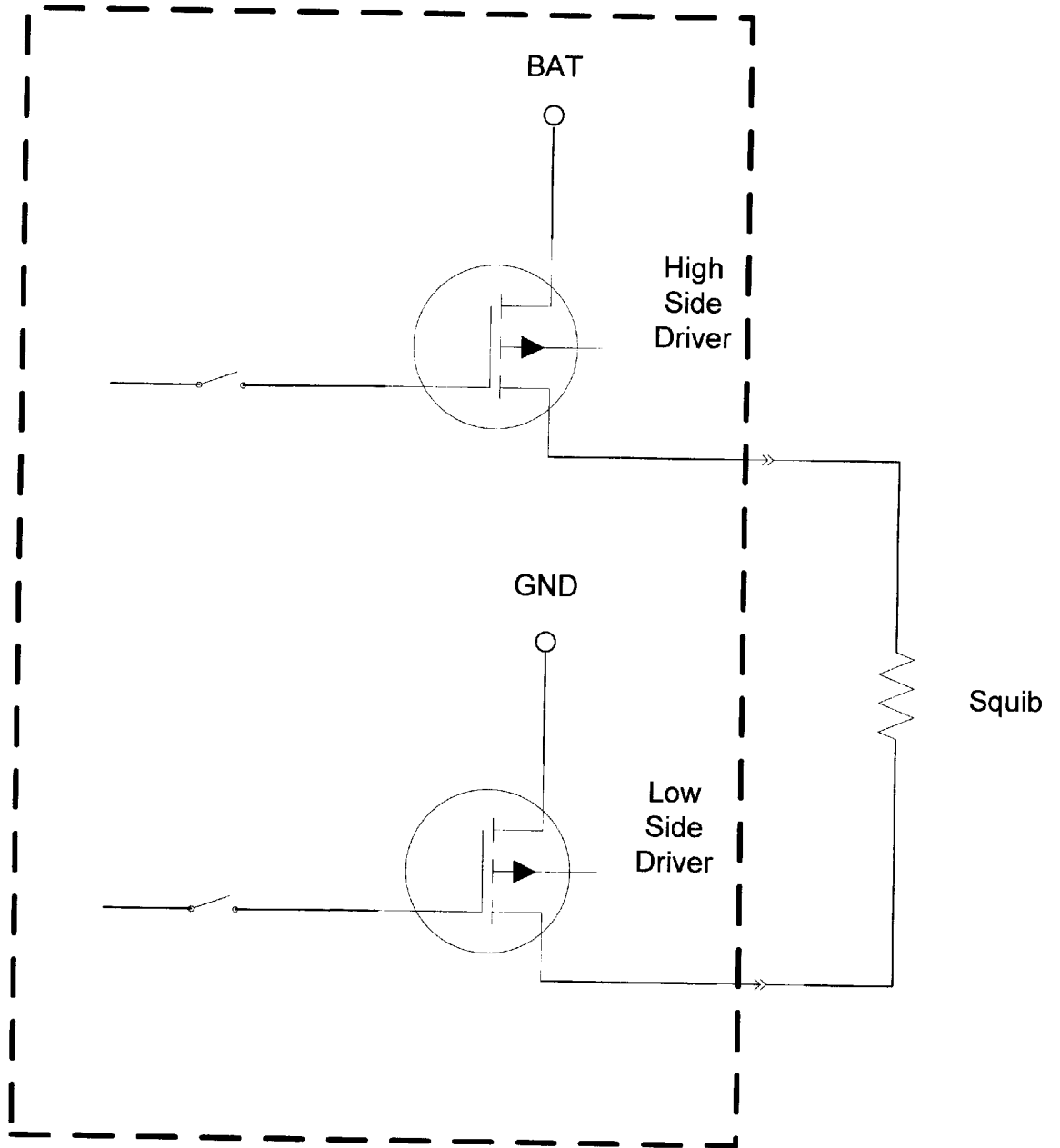
The RCM monitors for the following fault conditions:

- Low resistance
- High resistance or circuit open
- Circuit short to voltage
- Circuit short to ground

Possible Causes

A impact sensor fault can be caused by:

- damaged wiring, terminals or connectors.
- a faulty impact sensor.
- incorrect sensor mounting.
- a faulted RCM.



B1231 Longitudinal Acceleration Threshold Exceeded
 B1317 B+ Voltage High
 B1318 B+ Voltage Low
 B1342 ECU Faulted
 B1869 Lamp Air Bag Warning Indicator Ckt Open
 B1870 Lamp Air Bag Warning Indicator Ckt Short To B+
 B1884 PAD Warning Lamp Inoperative
 B1890 PAD Warning Lamp Ckt Short To B+
 B1891 Air Bag Tone Warning Indicator Ckt Short to B+
 B1892 Air Bag Tone Warning Indicator Ckt Failure
 B1921 Air Bag Diagnostic Monitor Ground Ckt Open
 B2078 Driver Airbag Deactivation Indicator Inoperative
 B2290 Occupant Classification System Fault
 B2292 Restraint System - Seatbelt Pret. status
 B2293 Restraint System - Airbag fault
 B2294 Restraint System - Curtain fault
 B2295 Restraint System - Side Airbag fault
 B2296 Restraint System - Impact sensor fault
 B2432 Dr. Buckle Switch Ckt Open
 B2433 Dr. Buckle Switch Ckt Short to B+
 B2434 Dr. Buckle Switch Ckt Short to Ground
 B2435 Dr. Buckle Switch Resistance out of Range
 B2436 Pass. Buckle Switch Ckt Open
 B2437 Pass. Buckle Switch Ckt Short to B+
 B2438 Pass. Buckle Switch Ckt Short to Ground
 B2439 Pass. Buckle Switch Resistance out of Range
 B2477 Module Configuration Failure
 B2691 Driver Seat Belt Buckle Switch Circuit Fault
 B2692 Passenger Seat Belt Buckle Switch Circuit Fault
 B2860 Airbag Cutoff Switch (ACS) ECU Fault
 B2861 Airbag Cutoff Switch (ACS) Communication Fault
 B2909 Belt Tension Sensor Fault
 C1414 Incorrect Vehicle ID
 C1946 Driver STPS Ckt Open
 C1947 Driver STPS Ckt Short to Ground
 C1948 Driver STPS Ckt Resistance Out of Range
 C1981 Front Driver's Seat Track Position Switch Ckt Fault
 C1982 STPS Ckt Short to B+

PIDs for 3.0 & 4.0

5939 Fault PID (CM) Belt Tension Sensor Fault

1	Bit 7	Front Passenger's Side Belt Tension Sensor Circuit Fault
	Bit 6	Reserved
	Bit 5	Front Passenger's Side Belt Tension Sensor Short to Ground
	Bit 4	Reserved

- Bit 3 Reserved
- Bit 2 Reserved
- Bit 1 Reserved
- Bit 0 Reserved
- 2 Reserved
- 3 Reserved
- 4 Reserved

593A Fault PID (OD) Belt Tension Sensor Fault

- 1 Bit 7 Front Passenger's Side Belt Tension Sensor Circuit Fault
- Bit 6 Reserved
- Bit 5 Front Passenger's Side Belt Tension Sensor Short to Ground
- Bit 4 Reserved
- Bit 3 Reserved
- Bit 2 Reserved
- Bit 1 Reserved
- Bit 0 Reserved
- 2 Reserved
- 3 Reserved
- 4 Reserved

5952 Fault PID Continuous Occupant Classification System Fault Status, Front Passenger Side

- 1 Bit 7 Reserved
- Bit 6 Reserved
- Bit 5 Reserved
- Bit 4 Reserved
- Bit 3 Generic OCS Module Fault, Frt Pass
- Bit 2 OCS Communications Fault, Frt Pass
- Bit 1 OCS Calibration Fault, Frt Pass
- Bit 0 OCS Sensing Element Fault, Frt Pass

5954 Continuous Restraint System - Seatbelt Pret. status

- 1 Bit 7 Dr. Pret. Ckt Resist. Low on Squib
- Bit 6 Dr. Pret. Ckt Open
- Bit 5 Dr. Pret. Ckt Short to B+
- Bit 4 Dr. Pret. Ckt Short to Ground
- Bit 3 Pass. Pret. Ckt Resist. Low on Squib
- Bit 2 Pass. Pret. Ckt Open
- Bit 1 Pass. Pret. Ckt Short to B+
- Bit 0 Pass. Pret. Ckt Short to Ground
- 2 Bit 7 Dr. Pret. Ckt Resist. Low on Squib Row 2
- Bit 6 Dr. Pret. Ckt Open Row 2
- Bit 5 Dr. Pret. Ckt Short to B+ Row 2
- Bit 4 Dr. Pret. Ckt Short to Ground Row 2
- Bit 3 Pass. Pret. Ckt Resist. Low on Squib Row 2

- Bit 2 Pass. Pret. Ckt Open Row 2
- Bit 1 Pass. Pret. Ckt Short to B+ Row 2
- Bit 0 Pass. Pret. Ckt Short to Ground Row 2
- 3 Bit 7 Pret. Ckt Open, Row 2 Middle Position
- Bit 6 Pret. Ckt Short to B+, Row 2 Middle Position
- Bit 5 Pret. Ckt Short to Ground, Row 2 Middle Position
- Bit 4 Pret. Ckt Resist. Low on Squib, Row 2 Middle Position
- 4 Rsrvd.

- 5955 Continuous Restraint System - Airbag status
- 1 Bit 7 Dr. Ckt Short to Ground - Loop #1
- Bit 6 Dr. Ckt Short to B+ - Loop #1
- Bit 5 Dr. Ckt Open - Loop #1
- Bit 4 Dr. Inflator Ckt Resist. Low on Squib - Loop #1
- Bit 3 Pass. Ckt Short to Ground - Loop #1
- Bit 2 Pass. Ckt Short to B+ - Loop #1
- Bit 1 Pass. Ckt Open - Loop #1
- Bit 0 Pass. Inflator Ckt Resist. Low on Squib - Loop #1
- 2 Bit 7 Dr. Ckt Short to Ground - Loop #2
- Bit 6 Dr. Ckt Short to B+ - Loop #2
- Bit 5 Dr. Ckt Open - Loop #2
- Bit 4 Dr. Inflator Ckt Resist. Low on Squib - Loop #2
- Bit 3 Pass. Ckt Short to Ground - Loop #2
- Bit 2 Pass. Ckt Short to B+ - Loop #2
- Bit 1 Pass. Ckt Open - Loop #2
- Bit 0 Pass. Inflator Ckt Resist. Low on Squib - Loop #2
- 3 Rsrvd.
- 4 Rsrvd.

- 5956 Continuous Restraint System - Curtain Fault status
- 1 Bit 7 A-B or A-C Pillar Curtain Ckt Short to B+ - Driver Side
- Bit 6 A-B or A-C Pillar Curtain Ckt Short to Ground - Driver Side
- Bit 5 A-B or A-C Pillar Curtain Ckt Open - Driver Side
- Bit 4 A-B or A-C Pillar Curtain Ckt Resist. Low on Squib - Driver Side
- Bit 3 A-B or A-C Pillar Curtain Ckt Short to Ground - Passenger Side
- Bit 2 A-B or A-C Pillar Curtain Ckt Short to B+ - Passenger Side
- Bit 1 A-B or A-C Pillar Curtain Ckt Open - Passenger Side
- Bit 0 A-B or A-C Pillar Curtain Ckt Resist. Low on Squib - Passenger Side
- 2 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.

- 5957 Continuous Restraint System - Side Airbag Fault status
- 1 Bit 7 Dr. Side Air Bag Ckt Short to B+
- Bit 6 Dr. Side Air Bag Ckt Short to Ground
- Bit 5 Dr. Side Air Bag Ckt Open

- Bit 4 Dr. Side Air Bag Ckt Resistance Low on Squib
- Bit 3 Pass. Side Air Bag Ckt Short to Bat
- Bit 2 Pass. Side Air Bag Ckt Short to Gnd
- Bit 1 Pass. Side Air Bag Ckt Open
- Bit 0 Pass. Side Air Bag Ckt Resistance Low on Squib
- 2 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.

- 5958 Continuous Restraint System - Impact sensor Fault status
- 1 Bit 7 Dr. Side Crash Sensor #1 (front) Mount/Comm. Fault
- Bit 6 Dr. Side Crash Sensor #1 (front) Internal Fault
- Bit 5 Pass. Side, Side Crash Sensor #1 (front) Mount/Comm. Fault
- Bit 4 Pass. Side Crash Sensor #1 (front) Internal Fault
- Bit 3 Rsrvd.
- Bit 2 Rsrvd.
- Bit 1 Rsrvd.
- Bit 0 Rsrvd.
- 2 Bit 7 Rsrvd.
- Bit 6 Rsrvd.
- Bit 5 Rsrvd.
- Bit 4 Rsrvd.
- Bit 3 Front Crash Sensor Mount/Communication Fault
- Bit 2 Front Crash Sensor Internal Fault
- Bit 1 Rsrvd.
- Bit 0 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.

- 5959 Fault PID On-Demand Occupant Classification System Fault Status, Front Passenger Side
- 1 Bit 7 Reserved
- Bit 6 Reserved
- Bit 5 Reserved
- Bit 4 Reserved
- Bit 3 Generic OCS Module Fault, Frt Pass
- Bit 2 OCS Communications Fault, Frt Pass
- Bit 1 OCS Calibration Fault, Frt Pass
- Bit 0 OCS Sensing Element Fault, Frt Pass

- 5961 On-Demand Restraint System - Seatbelt Pret. status
- 1 Bit 7 Dr. Pret. Ckt Resist. Low on Squib
- Bit 6 Dr. Pret. Ckt Open
- Bit 5 Dr. Pret. Ckt Short to B+
- Bit 4 Dr. Pret. Ckt Short to Ground
- Bit 3 Pass. Pret. Ckt Resist. Low on Squib

- Bit 2 Pass. Pret. Ckt Open
- Bit 1 Pass. Pret. Ckt Short to B+
- Bit 0 Pass. Pret. Ckt Short to Ground
- 2 Bit 7 Dr. Pret. Ckt Resist. Low on Squib Row 2
- Bit 6 Dr. Pret. Ckt Open Row 2
- Bit 5 Dr. Pret. Ckt Short to B+ Row 2
- Bit 4 Dr. Pret. Ckt Short to Ground Row 2
- Bit 3 Pass. Pret. Ckt Resist. Low on Squib Row 2
- Bit 2 Pass. Pret. Ckt Open Row 2
- Bit 1 Pass. Pret. Ckt Short to B+ Row 2
- Bit 0 Pass. Pret. Ckt Short to Ground Row 2
- 3 Bit 7 Pret. Ckt Open, Row 2 Middle Position
- Bit 6 Pret. Ckt Short to B+, Row 2 Middle Position
- Bit 5 Pret. Ckt Short to Ground, Row 2 Middle Position
- Bit 4 Pret. Ckt Resist. Low on Squib, Row 2 Middle Position
- 4 Rsrvd.

5962 On-Demand Restraint System - Airbag status

- 1 Bit 7 Dr. Ckt Short to Ground - Loop #1
- Bit 6 Dr. Ckt Short to B+ - Loop #1
- Bit 5 Dr. Ckt Open - Loop #1
- Bit 4 Dr. Inflator Ckt Resist. Low on Squib - Loop #1
- Bit 3 Pass. Ckt Short to Ground - Loop #1
- Bit 2 Pass. Ckt Short to B+ - Loop #1
- Bit 1 Pass. Ckt Open - Loop #1
- Bit 0 Pass. Inflator Ckt Resist. Low on Squib - Loop #1
- 2 Bit 7 Dr. Ckt Short to Ground - Loop #2
- Bit 6 Dr. Ckt Short to B+ - Loop #2
- Bit 5 Dr. Ckt Open - Loop #2
- Bit 4 Dr. Inflator Ckt Resist. Low on Squib - Loop #2
- Bit 3 Pass. Ckt Short to Ground - Loop #2
- Bit 2 Pass. Ckt Short to B+ - Loop #2
- Bit 1 Pass. Ckt Open - Loop #2
- Bit 0 Pass. Inflator Ckt Resist. Low on Squib - Loop #2
- 3 Rsrvd.
- 4 Rsrvd.

5963 On-Demand Restraint System - Curtain Fault status

- 1 Bit 7 A-B or A-C Pillar Curtain Ckt Short to B+ - Driver Side
- Bit 6 A-B or A-C Pillar Curtain Ckt Short to Ground - Driver Side
- Bit 5 A-B or A-C Pillar Curtain Ckt Open - Driver Side
- Bit 4 A-B or A-C Pillar Curtain Ckt Resist. Low on Squib - Driver Side
- Bit 3 A-B or A-C Pillar Curtain Ckt Short to Ground - Passenger Side
- Bit 2 A-B or A-C Pillar Curtain Ckt Short to B+ - Passenger Side
- Bit 1 A-B or A-C Pillar Curtain Ckt Open - Passenger Side
- Bit 0 A-B or A-C Pillar Curtain Ckt Resist. Low on Squib - Passenger Side

- 2 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.

5964 On-Demand Restraint System - Side Airbag Fault status

- 1 Bit 7 Dr. Side Air Bag Ckt Short to B+
- Bit 6 Dr. Side Air Bag Ckt Short to Ground
- Bit 5 Dr. Side Air Bag Ckt Open
- Bit 4 Dr. Side Air Bag Ckt Resistance Low on Squib
- Bit 3 Pass. Side Air Bag Ckt Short to Bat
- Bit 2 Pass. Side Air Bag Ckt Short to Gnd
- Bit 1 Pass. Side Air Bag Ckt Open
- Bit 0 Pass. Side Air Bag Ckt Resistance Low on Squib
- 2 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.

5965 On-Demand Restraint System - Impact sensor Fault status

- 1 Bit 7 Dr. Side Crash Sensor #1 (front) Mount/Comm. Fault
- Bit 6 Dr. Side Crash Sensor #1 (front) Internal Fault
- Bit 5 Pass. Side, Side Crash Sensor #1 (front) Mount/Comm. Fault
- Bit 4 Pass. Side Crash Sensor #1 (front) Internal Fault
- Bit 3 Rsrvd.
- Bit 2 Rsrvd.
- Bit 1 Rsrvd.
- Bit 0 Rsrvd.
- 2 Bit 7 Rsrvd.
- Bit 6 Rsrvd.
- Bit 5 Rsrvd.
- Bit 4 Rsrvd.
- Bit 3 Front Crash Sensor Mount/Communication Fault
- Bit 2 Front Crash Sensor Internal Fault
- Bit 1 Rsrvd.
- Bit 0 Rsrvd.
- 3 Rsrvd.
- 4 Rsrvd.