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## 2015 MAZDA 2 OEM Service and Repair Workshop Manual

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Step	Inspection		Action
7	<b>INSPECT DRIVER-SIDE AIR BAG MODULE (INFLATOR NO.1) CIRCUIT FOR SHORT TO OTHER AIR BAG MODULE CIRCUITS</b> <ul style="list-style-type: none"> <li>Remove the clock spring. (See <b>CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li> <li>SAS control module and clock spring connectors are disconnected.</li> <li>Other air bag module, pre-tensioner seat belt and lap pre-tensioner seat belt connectors are disconnected.</li> <li>Refer to the wiring diagram and inspect for continuity between the driver-side air bag module (inflator No.1) terminals and other air bag module / pre-tensioner seat belt / lap pre-tensioner seat belt terminals (wiring harness-side).</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Inspect for continuity while shaking the wiring harness between the SAS control module and clock spring.</li> </ul>	Yes	<p>Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and clock spring terminal.</p> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to other air bag module or pre-tensioner seat belt or lap pre-tensioner seat belt circuits.</li> <li>Replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>Replace the wiring harness which has a short to other air bag module or pre-tensioner seat belt or lap pre-tensioner seat belt circuits.</li> </ul> <p>Go to Step 10.</p>
		No	Go to the next step.
8	<b>INSPECT DRIVER-SIDE AIR BAG MODULE (INFLATOR NO.1) CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>SAS control module and clock spring connectors are disconnected.</li> <li>Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>Switch the ignition ON (engine off or on).</li> <li>Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>SAS control module terminal 3C</li> <li>SAS control module terminal 3G</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Measure the voltage while shaking the wiring harness between the SAS control module and clock spring.</li> </ul>	Yes	Go to the next step.
		No	<p>Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and clock spring terminal.</p> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply.</li> <li>Replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>Replace the wiring harness which has a short to power supply.</li> </ul> <p>Go to Step 10.</p>
	<ul style="list-style-type: none"> <li>Is there continuity?</li> </ul>		
	<ul style="list-style-type: none"> <li>Is the voltage 0 V?</li> </ul>		

Diagnostic procedure

Warning

- Handling the component parts improperly can accidentally operate (deploy) the air bag modules, pre-tensioner seat belts and lap pre-tensioner seat belts, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See **AIR BAG SYSTEM SERVICE WARNINGS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.)

Step	Inspection	Action	
1	<b>INSPECT DRIVER-SIDE CRASH ZONE SENSOR</b> <ul style="list-style-type: none"><li>• Switch the ignition off.</li><li>• Disconnect the negative battery terminal and wait for 1 min or more. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION</b>.)</li><li>• Remove the front bumper. (See <b>FRONT BUMPER REMOVAL/INSTALLATION</b>.)</li><li>• Verify that the driver-side crash zone sensor is correctly installed. (See <b>CRASH ZONE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li><li>• Is the driver-side crash zone sensor correctly installed?</li></ul>	Yes	Go to the next step.
		No	Correctly install the driver-side crash zone sensor. (See <b>CRASH ZONE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b> .) Then go to Step 7.
2	<b>INSPECT DRIVER-SIDE CRASH ZONE SENSOR CONNECTOR</b> <ul style="list-style-type: none"><li>• Disconnect the driver-side crash zone sensor connector. (See <b>CRASH ZONE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li><li>• Inspect the driver-side crash zone sensor connector (wiring harness-side). (Corrosion, damage, and disconnected pins)</li><li>• Is there any malfunction of the driver-side crash zone sensor connector (wiring harness-side)?</li></ul>	Yes	Replace the malfunction part, then go to step 7.
		No	Go to the next step.

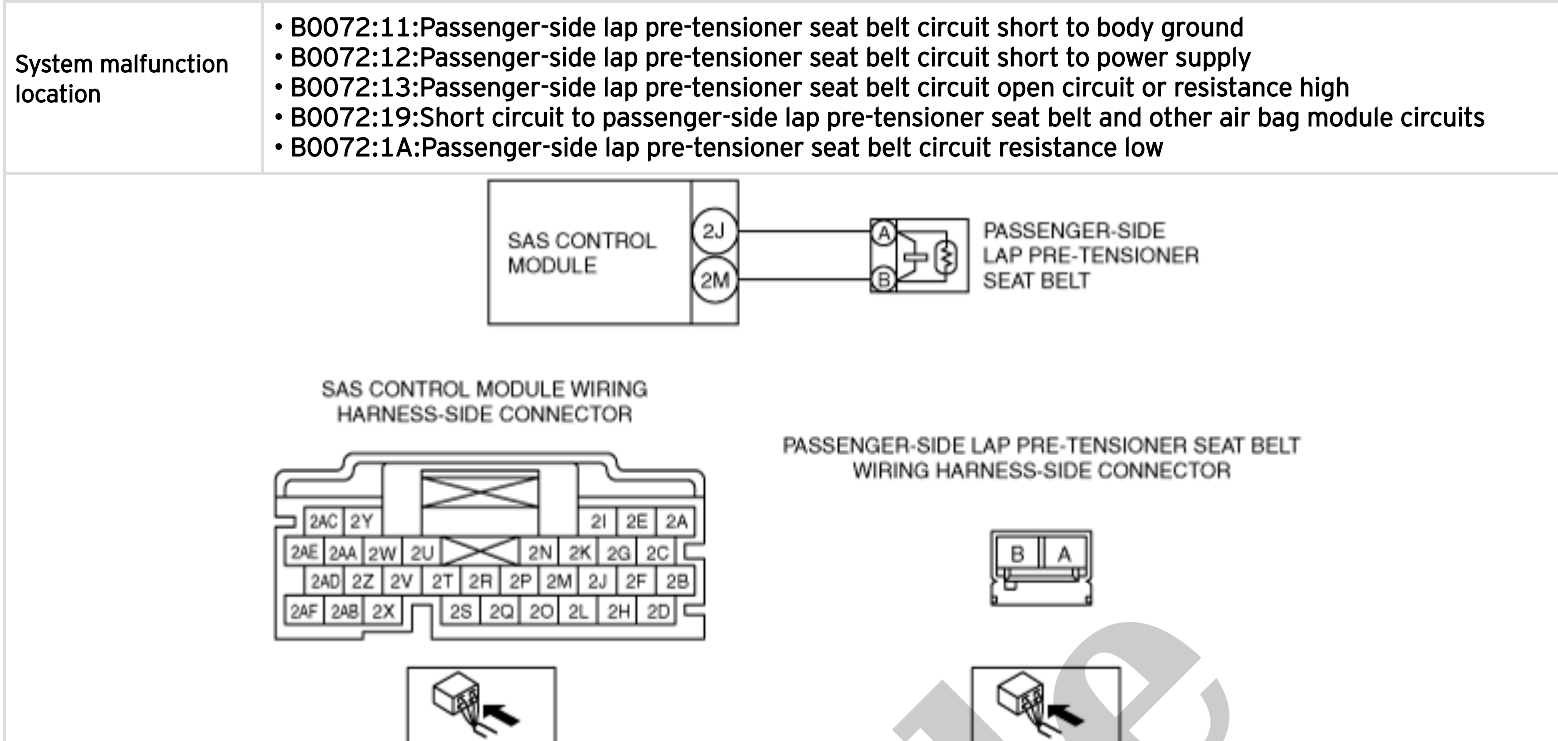
Step	Inspection	Action
6	<b>INSPECT DRIVER-SIDE CRASH ZONE SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Driver-side crash zone sensor and SAS control module connectors are disconnected.</li> <li>• Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Switch the ignition ON (engine off or on).</li> <li>• Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— SAS control module terminal 20</li> <li>— SAS control module terminal 2Q</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Measure the voltage while shaking the wiring harness between the SAS control module and driver-side crash zone sensor.</li> </ul> <p>• Is the voltage 0 V?</p>	Replace the driver-side crash zone sensor, then go to the next step. (See <b>CRASH ZONE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b> .)
		Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and driver-side crash zone sensor terminal. <b>If there is a common connector:</b> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply.</li> <li>• Replace the malfunctioning part.</li> </ul> <b>If there is no common connector:</b> <ul style="list-style-type: none"> <li>• Replace the wiring harness which has a short to power supply.</li> </ul> Go to the next step.
7	<b>PERFORM SAS CONTROL MODULE DTC INSPECTION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery terminal and wait for 1 min or more. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Connect the SAS control module connectors.</li> <li>• Reconnect all disconnected connectors.</li> <li>• Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Switch the ignition ON (engine off or on).</li> <li>• Clear the DTC for the SAS control module using the M-MDS. (See <b>CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)]</b>.)</li> <li>• Perform the DTC inspection for the SAS control module using the M-MDS. (See <b>DTC INSPECTION [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)]</b>.)</li> <li>• Are the same DTCs present?</li> </ul>	Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>• If the malfunction recurs, replace the SAS control module. (See <b>SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li> </ul>
		DTC troubleshooting completed.



Step	Inspection	Action	
2	<b>INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR CONNECTOR</b> <ul style="list-style-type: none"><li>• Disconnect the driver-side side air bag sensor connector. (See <b>SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li><li>• Inspect the driver-side side air bag sensor connector (wiring harness-side). (Corrosion, damage, and disconnected pins)</li><li>• Is there any malfunction of the driver-side side air bag sensor connector (wiring harness-side)?</li></ul>	Yes	Replace the malfunctioning part, then go to Step 7.
		No	Go to the next step.

Sample

Step	Inspection	Action
5	<p><b>INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR OR PASSENGER-SIDE PRESSURE SENSOR CIRCUIT FOR SHORT TO OTHER AIR BAG SENSOR CIRCUITS</b></p> <ul style="list-style-type: none"> <li>• Driver-side side air bag sensor, passenger-side pressure sensor and SAS control module connectors are disconnected.</li> <li>• Remove the front bumper. (See <b>FRONT BUMPER REMOVAL/INSTALLATION</b>.)</li> <li>• Disconnect the driver and passenger-side crash zone sensor connectors. (See <b>CRASH ZONE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li> <li>• Remove the passenger-side B-pillar lower trim. (See <b>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</b>.)</li> <li>• Disconnect the passenger-side side air bag sensor connector. (See <b>SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li> <li>• Remove the driver-side front door trim. (See <b>FRONT DOOR TRIM REMOVAL/INSTALLATION</b>.)</li> <li>• Disconnect the driver-side pressure sensor connector. (See <b>PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li> <li>• Refer to the wiring diagram and inspect for continuity between the driver-side side air bag sensor or passenger-side pressure sensor terminals and other air bag sensor terminals (wiring harness-side).</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Inspect for continuity while shaking the wiring harness between the SAS control module and driver-side side air bag sensor or passenger-side pressure sensor.</li> </ul> <p>• Is there continuity?</p>	<p>Yes</p> <p>Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and driver-side side air bag sensor or passenger-side pressure sensor terminal.</p> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to other air bag sensor circuits.</li> <li>• Replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>• Replace the wiring harness which has a short to other air bag sensor circuits.</li> </ul> <p>Go to Step 7.</p>
		<p>No</p> <p>Go to the next step.</p>



Diagnostic procedure

Warning

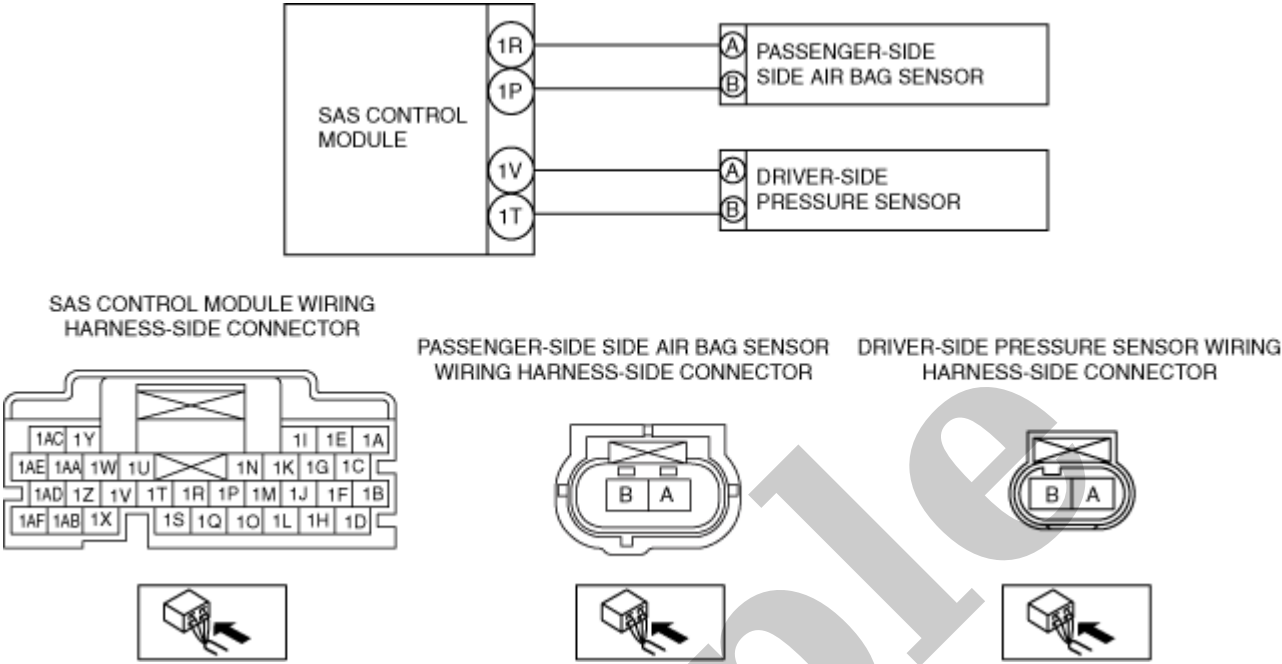
• Handling the component parts improperly can accidentally operate (deploy) the air bag modules, pre-tensioner seat belts and lap pre-tensioner seat belts, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See **AIR BAG SYSTEM SERVICE WARNINGS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.)

Step	Inspection	Action	
1	<b>INSPECT PASSENGER-SIDE LAP PRE-TENSIONER SEAT BELT CONNECTOR</b> <ul style="list-style-type: none"><li>• Switch the ignition off.</li><li>• Disconnect the negative battery terminal and wait for 1 min or more. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li><li>• Remove the passenger-side B-pillar lower trim. (See <b>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.</b>)</li><li>• Disconnect the passenger-side lap pre-tensioner seat belt connector. (See <b>FRONT SEAT BELT REMOVAL/INSTALLATION.</b>)</li><li>• Inspect the passenger-side lap pre-tensioner seat belt connector (wiring harness-side). (Corrosion, damage, and disconnected pins)</li><li>• Is there any malfunction of the passenger-side lap pre-tensioner seat belt connector (wiring harness-side)?</li></ul>	Yes	Replace the malfunctioning part, then go to Step 8.
	No	Go to the next step.	

Step	Inspection	Action	
5	<b>INSPECT PASSENGER-SIDE LAP PRE-TENSIONER SEAT BELT CIRCUIT FOR SHORT TO OTHER AIR BAG MODULE CIRCUITS</b> <ul style="list-style-type: none"> <li>• Passenger-side lap pre-tensioner seat belt and SAS control module connectors are disconnected.</li> <li>• Other air bag module, pre-tensioner seat belt and lap pre-tensioner seat belt connectors are disconnected.</li> <li>• Refer to the wiring diagram and inspect for continuity between the passenger-side lap pre-tensioner seat belt terminal and other air bag module / pre-tensioner seat belt / lap pre-tensioner seat belt terminal (wiring harness-side).</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• <b>Inspect for continuity while shaking the wiring harness between the SAS control module and passenger-side lap pre-tensioner seat belt.</b></li> </ul>	Yes	<p>Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and passenger-side lap pre-tensioner seat belt terminal.</p> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to other air bag module or pre-tensioner seat belt or lap pre-tensioner seat belt circuits.</li> <li>• Replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>• Replace the wiring harness which has a short to other air bag module or pre-tensioner seat belt or lap pre-tensioner seat belt circuits.</li> </ul> <p>Go to Step 8.</p>
		No	Go to the next step.
6	<b>INSPECT PASSENGER-SIDE LAP PRE-TENSIONER SEAT BELT CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Passenger-side lap pre-tensioner seat belt and SAS control module connectors are disconnected.</li> <li>• Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Switch the ignition ON (engine off or on).</li> <li>• Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— SAS control module terminal 2J</li> <li>— SAS control module terminal 2M</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• <b>Measure the voltage while shaking the wiring harness between the SAS control module and passenger-side lap pre-tensioner seat belt.</b></li> </ul>	Yes	Go to the next step.
		No	<p>Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and passenger-side lap pre-tensioner seat belt terminal.</p> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply.</li> <li>• Replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>• Replace the wiring harness which has a short to power supply.</li> </ul> <p>Go to Step 8.</p>
	<ul style="list-style-type: none"> <li>• Is there continuity?</li> </ul>		
	<ul style="list-style-type: none"> <li>• Is the voltage 0 V?</li> </ul>		

System malfunction location

- B10FE:11: Passenger-side side air bag sensor or driver-side pressure sensor circuit short to body ground
- B10FE:12: Passenger-side side air bag sensor or driver-side pressure sensor circuit short to power supply
- B10FE:29, B10FE:96: Passenger-side side air bag sensor internal malfunction
- B10FE:2B: Short circuit to passenger-side side air bag sensor or driver-side pressure sensor and other air bag sensor circuits
- B10FE:4A: Passenger-side side air bag sensor ID error (assembly incorrect)
- B10FE:87: Signal reception error from passenger-side side air bag sensor



Diagnostic procedure

Warning

- Handling the component parts improperly can accidentally operate (deploy) the air bag modules, pre-tensioner seat belts and lap pre-tensioner seat belts, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See **AIR BAG SYSTEM SERVICE WARNINGS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.)

Step	Inspection		Action
1	<b>INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR</b> <ul style="list-style-type: none"><li>• Switch the ignition off.</li><li>• Disconnect the negative battery terminal and wait for 1 min or more. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li><li>• Remove the passenger-side B-pillar lower trim. (See <b>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.</b>)</li><li>• Verify that the passenger-side side air bag sensor is correctly installed. (See <b>SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b>.)</li><li>• Is the passenger-side side air bag sensor correctly installed?</li></ul>	Yes	Go to the next step.
		No	Correctly install the passenger-side side air bag sensor. (See <b>SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]</b> .) Then go to Step 7.

Step	Inspection	Action	
	<b>module and passenger-side side air bag sensor or driver-side pressure sensor.</b> <ul style="list-style-type: none"> <li>Is there continuity?</li> </ul>	No	Go to the next step.
4	<b>INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Passenger-side side air bag sensor and SAS control module connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Passenger-side side air bag sensor terminal A–SAS control module terminal 1R</li> <li>— Passenger-side side air bag sensor terminal B–SAS control module terminal 1P</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Inspect for continuity while shaking the wiring harness between the SAS control module and passenger-side side air bag sensor.</li> <li>Is there continuity?</li> </ul>	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and passenger-side side air bag sensor terminal. <b>If there is a common connector:</b> <ul style="list-style-type: none"> <li>Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit.</li> <li>Replace the malfunctioning part.</li> </ul> <b>If there is no common connector:</b> <ul style="list-style-type: none"> <li>Replace the wiring harness which has an open circuit.</li> </ul> Go to Step 7.