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2015 MAZDA 5 / Premacy OEM Service and Repair Workshop Manual

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Step	Inspection		Action
2	INSPECT DRIVER-SIDE REAR PRE- TENSIONER SEAT BELT CIRCUIT FOR SHORT TO GROUND  Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.)  Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.)  Disconnect the passenger-side air bag module connector. (See PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the driver and passenger-side front seat connectors. (See FRONT SEAT REMOVAL/INSTALLATION.)  Remove the driver and passenger-side B- pillar lower trim. (See B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side front pre-tensioner seat belt connector. (See FRONT SEAT BELT REMOVAL/INSTALLATION.)  Remove the passenger-side trunk side trim. (See TRUNK SIDE TRIM REMOVAL/INSTALLATION.)  Disconnect the passenger-side rear pre- tensioner seat belt connector. (See REAR SEAT BELT REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side curtain air bag module connectors. (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION ITWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the driver and passenger-side curtain air bag module connectors. (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION ITWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the dil SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION ITWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Inspect for continuity between the following terminals (wiring harness-side) and body ground:  — SAS control module terminal 1AB  — SAS control module terminal 1AB  — SAS control module terminal 1AB  — SAS control module terminal 1AD	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and driver-side rear pre-tensioner seat belt terminal. If there is a common connector:  • 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 ground.  • Replace the malfunctioning part. If there is no common connector:  • Replace the wiring harness which has a short to ground.  Go to Step 8.
	the wiring harness between the SAS control module and driver-side rear pre-tensioner seat belt. • Is there continuity?	No	Go to the next step.

Step	Inspection		Action
	INSPECT DRIVER-SIDE REAR PRETENSIONER SEAT BELT  • Switch the ignition off.  • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)  • Connect the SAS control module connectors.  • Except for the driver-side rear pretensioner seat belt connector, reconnect all disconnected connectors.  • Connect the SST (49 N088 0A0) or apply 2 ohms resistance to the driver-side rear pretensioner seat belt connector (wiring harness-side) terminals A-B.  • Set the SST (49 N088 0A0) to 2 ohms.  • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)  • Switch the ignition ON (engine off or on).  • Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)  • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)	Yes	Go to the next step.
7		No	Replace the driver-side rear pre-tensioner seat belt. (See REAR SEAT BELT REMOVAL/INSTALLATION.) Then go to the next step.
	PERFORM SAS CONTROL MODULE DTC INSPECTION  • Switch the ignition off.  • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION.)  • Disconnect the SST (49 NO88 OAO) or the 2 ohms resistance.  • Connect the driver-side rear pre-tensioner seat belt connector.  • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)  • Switch the ignition ON (engine off or on).  • Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)  • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC	Yes	Repeat the inspection from Step 1.  • If the malfunction recurs, replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)
	INSPECTION [SAS CONTROL MODULE (TWO- STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].) • Are the same DTCs present?	No	DTC troubleshooting completed.

Step	Inspection		Action
2	INSPECT PASSENGER-SIDE PRE-TENSIONER SEAT BELT CIRCUIT FOR SHORT TO GROUND  Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.)  Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.)  Disconnect the passenger-side air bag module connector. (See PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the driver and passenger-side front seat connectors. (See FRONT SEAT REMOVAL/INSTALLATION.)  Remove the driver and passenger-side B- pillar lower trim. (See B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side front pre-tensioner seat belt connector. (See FRONT SEAT BELT REMOVAL/INSTALLATION.)  Remove the driver-side trunk side trim. (with rear pre-tensioner seat belt) (See TRUNK SIDE TRIM REMOVAL/INSTALLATION.)  Disconnect the driver-side rear pre- tensioner seat belt connectors. (See REAR SEAT BELT REMOVAL/INSTALLATION.)  Remove the headliner. (See HEADLINER REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side curtain air bag module connectors. (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  DISCONNECT the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  DISCONNECT the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  DISCONNECT the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Inspect for continuity while shaking the wiring harness-side) and body ground:  Inspect for continuity while shaking the wiring harness between the SAS	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and passenger-siderear pre-tensioner seat belt terminal.  If there is a common connector:  • 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 ground.  • Replace the malfunctioning part.  If there is no common connector:  • Replace the wiring harness which has a short to ground.  Go to Step 8.
	control module and passenger-side rear pre-tensioner seat belt. • Is there continuity?	No	Go to the next step.

Step	Inspection		Action
	INSPECT PASSENGER-SIDE PRE-TENSIONER SEAT BELT  • Switch the ignition off.  • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL	Yes	Go to the next step.
7	DISCONNECTION/CONNECTION.)  Connect the SAS control module connectors.  Except for the passenger-side rear pretensioner seat belt connector, reconnect all disconnected connectors.  Connect the SST (49 N088 0A0) or apply 2 ohms resistance to the passenger-side rear pre-tensioner seat belt connector (wiring harness-side) terminals A-B.  Set the SST (49 N088 0A0) to 2 ohms.  Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)  Switch the ignition ON (engine off or on).  Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)  Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)  Are the same DTCs present?	No	Replace the passenger-side rear pre-tensioner seat belt. (See REAR SEAT BELT REMOVAL/INSTALLATION.) Then go to the next step.
8	PERFORM SAS CONTROL MODULE DTC INSPECTION  • Switch the ignition off. • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Disconnect the SST (49 N088 0A0) or the 2 ohms resistance. • Connect the passenger-side rear pre- tensioner seat belt connector. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition ON (engine off or on). • Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].) • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC	Yes	Repeat the inspection from Step 1.  • If the malfunction recurs, replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)
	INSPECTION [SAS CONTROL MODULE (TWO- STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].) • Are the same DTCs present?	No	DTC troubleshooting completed.

Step	Inspection		Action
	INSPECT PASSENGER-SIDE PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT  Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.)  Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.)  Disconnect the passenger-side air bag module connectors. (See PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the driver and passenger-side front seat connectors. (See FRONT SEAT REMOVAL/INSTALLATION.)	Yes	Replace the passenger-side pressure sensor, then go to the next step. (See PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)
3	REMOVAL/INSTALLATION.)  Remove the B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side front pre-tensioner seat belt connectors. (See FRONT SEAT BELT REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side lap pre-tensioner seat belt connectors. (See FRONT SEAT BELT REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side rear pre-tensioner seat belt connectors. (See REAR SEAT BELT REMOVAL/INSTALLATION.)  Remove the headliner. (See HEADLINER REMOVAL/INSTALLATION.)  Disconnect the driver and passenger-side curtain air bag module connectors. (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Disconnect the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  Inspect for continuity between the following terminals (wiring harness-side):  — Passenger-side pressure sensor terminal A-SAS control module terminal 1B  — Passenger-side pressure sensor terminal B-SAS control module terminal 1F  Note  Inspect for continuity while shaking the wiring harness between the SAS control module and passenger-side pressure sensor.	No	Refer to the wiring diagram and verify whether or not there is a common connector between SAS control module terminal and passenger-side pressure sensor terminal. If there is a common connector:  • 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.  • Replace the malfunctioning part. If there is no common connector:  • Replace the wiring harness which has an open circuit.  Go to the next step.

# DTC U0001:88/U0100:00/U0101:00/U0155:00 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)]

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<ul> <li>• U0001:88: Unit communication error (HS-CAN)</li> <li>• U0100:00: Communication error with PCM</li> <li>• U0101:00: Communication error with TCM</li> <li>• U0155:00: Communication error with instrument cluster</li> </ul>	
Detection condition	<ul> <li>U0001:88</li> <li>The SAS control module detects a CAN communication line (HS-CAN) error.</li> <li>U0100:00</li> <li>The SAS control module could not receive CAN signal from the PCM for 5 s or more.</li> <li>U0101:00</li> <li>The SAS control module could not receive CAN signal from the TCM for 5 s or more.</li> <li>U0155:00</li> <li>The SAS control module could not receive CAN signal from the instrument cluster for 5 s or more.</li> </ul>
Fail-safe function	Not applicable
Possible cause	<ul> <li>Malfunction in CAN bus communication line</li> <li>Malfunction in CAN line between the SAS control module and PCM</li> <li>Malfunction in CAN line between the SAS control module and TCM</li> <li>Malfunction in CAN line between the SAS control module and instrument cluster</li> </ul>
System wiring diagram	Not applicable

## Diagnostic procedure

• Perform the malfunction diagnosis according to the troubleshooting procedure for the multiplex communication system. (See FOREWORD [TYPE-A (SKYACTIV-G 2.5)].) (See FOREWORD [TYPE-A (SKYACTIV-G 2.5T, SKYACTIV-D 2.2)].)

### **Diagnostic Procedure**

#### Warning

• Handling the component parts improperly can accidentally operate (deploy) the air bag modules and 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	Inspection	
	VERIFY IF DRIVER-SIDE SIDE AIR BAG SENSOR IS INSTALLED CORRECTLY • Switch the ignition off.	Yes	Go to the next step.
1	<ul> <li>Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)</li> <li>Verify the driver-side side air bag sensor installation condition. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)</li> <li>Is the installation condition normal?</li> </ul>	No	Correctly install the driver-side side air bag sensor and perform the repair completion verification 1. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMEN CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)
2	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR CONNECTOR  • Disconnect the driver-side side air bag sensor connector. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  • Inspect the driver-side side air bag sensor connector (wiring harness-side).	Yes	Replace the malfunctioning part, then perform the repair completion verification 1.
	(Corrosion, damage, and disconnected pins)  • Is there any malfunction of the driver-side side air bag sensor connector (wiring harness-side)?	No	Go to the next step.

Step	Inspection		Action
	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR CIRCUIT FOR SHORT TO EACH OTHER  • Driver-side side air bag sensor and SAS control module connectors are disconnected.  • Inspect for continuity between the following terminals (wiring harness- side):  — SAS control module termina 1J-SAS control module terminal 1M  Note  • Inspect for continuity while shaking the wiring harness between the SAS control module and driver-side side air bag	Yes	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 terminal.  If there is a common connector:  • 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.  • Replace the malfunctioning part.  If there is no common connector:  • Replace the wiring harness which has an open circuit.  Perform the repair completion verification 1.
	sensor. • Is there continuity?	No	Go to the next step.
6	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR CIRCUIT FOR SHORT TO OTHER AIR BAG SENSOR CIRCUITS  • Driver-side side air bag sensor and SAS control module connectors are disconnected.  • Refer to the wiring diagram and inspect for continuity between the driver-side side air bag sensor terminal and other air bag sensor terminals (wiring harness-side).  Note  • Inspect for continuity while shaking the wiring harness between the SAS control module and driver-side side air bag sensor.	Yes	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 terminal.  If there is a common connector:  • 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.  • Replace the malfunctioning part.  If there is no common connector:  • Replace the wiring harness which has a short to other air bag sensor circuits.  Perform the repair completion verification 1.
	• Is there continuity?	No	Go to the next step.

### **Diagnostic Procedure**

#### Warning

• Handling the component parts improperly can accidentally operate (deploy) the air bag modules and 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	Inspection	
	VERIFY IF PASSENGER-SIDE SIDE AIR BAG SENSOR IS INSTALLED	Yes	Go to the next step.
1	CORRECTLY  • Switch the ignition off.  • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)  • Verify the passenger-side side air bag sensor installation condition. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  • Is the installation condition normal?	No	Correctly install the passenger-side side air bag sensor and perform the repair completion verification 1. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)
INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR CONNECTOR  • Disconnect the passenger-side side air bag sensor connector. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)  • Inspect the passenger-side side air bag sensor connector (wiring harness- side). (Corrosion, damage, and disconnected pins)  • Is there any malfunction of the driver- side side air bag sensor connector (wiring harness-side)?	Yes	Replace the malfunctioning part, then perform the repair completion verification 1.	
	side). (Corrosion, damage, and disconnected pins) • Is there any malfunction of the driverside side air bag sensor connector	No	Go to the next step.