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2015 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

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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	INSPECT DRIVER-SIDE PRESSURE SENSOR • Switch the ignition off. • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Remove the driver-side front door trim. (See FRONT DOOR TRIM REMOVAL/INSTALLATION.) • Verify that the driver-side pressure sensor is correctly installed. (See PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) • Is the driver-side pressure sensor correctly installed?	Yes	Go to the next step.
		No	Correctly install the driver-side pressure sensor. (See PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.] .) Then go to Step 10.
2	INSPECT DRIVER-SIDE PRESSURE SENSOR CONNECTOR • Disconnect the driver-side pressure sensor connector. (See PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) • Inspect the driver-side pressure sensor connector (wiring harness-side). (Corrosion, damage, and disconnected pins) • Is there any malfunction of the driver-side pressure sensor connector (wiring harness-side)?	Yes	Replace the malfunctioning part, then go to Step 10.
		No	Go to the next step.

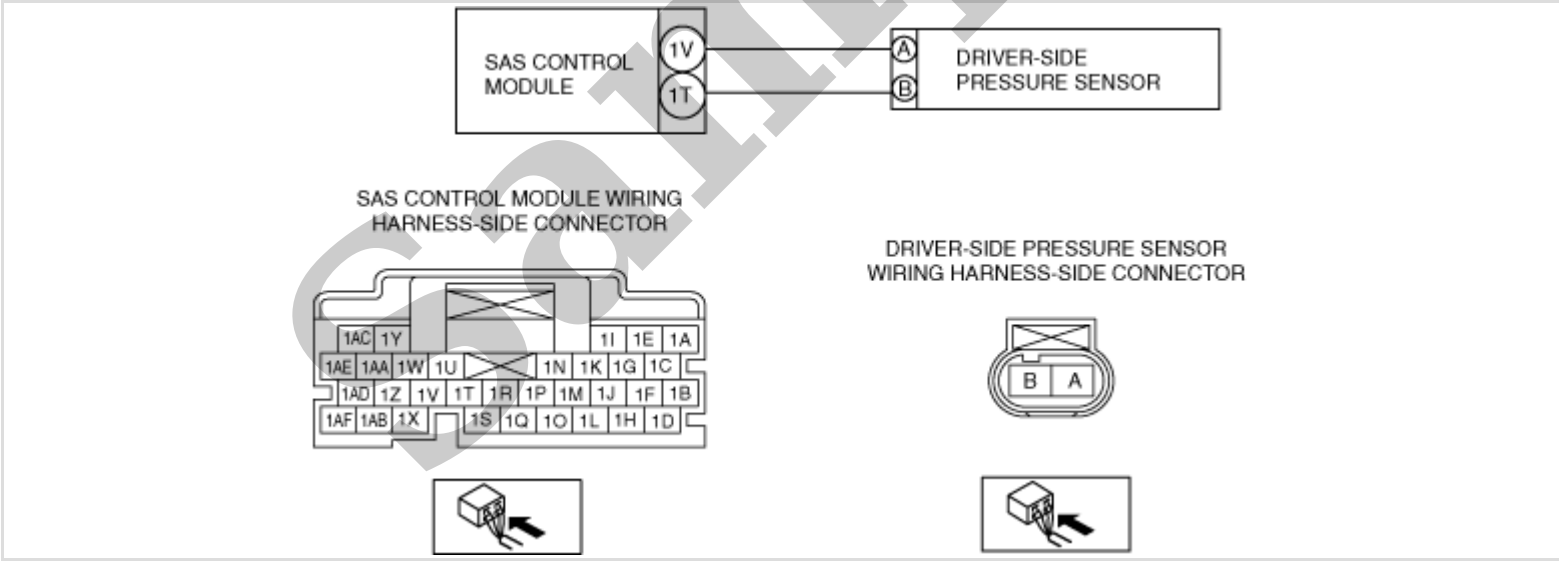
Step	Inspection		Action
6	INSPECT PASSENGER-SIDE PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.) - Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) - 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.) - 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. - Is there continuity?	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 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. Then go to Step 10.

DTC B1226:29/B1226:4A/B1226:87/B1226:96 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)]

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System malfunction location	• B1226:29, B1226:96:Driver-side pressure sensor internal malfunction • B1226:4A:Driver-side pressure sensor ID error (assembly incorrect) • B1226:87:Signal reception error from driver-side pressure sensor
Detection condition	Warning • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure. • SAS control module detects a driver-side pressure sensor signal error • SAS control module detects a driver-side pressure sensor internal malfunction • SAS control module detects a different sensor installed • SAS control module detects open circuit between the SAS control module and the driver-side pressure sensor
Fail-safe function	Not applicable
Possible cause	• Driver-side pressure sensor connector malfunction • Open circuit in the wiring harness between the Driver-side pressure sensor and SAS control module • Driver-side pressure sensor malfunction • SAS control module malfunction

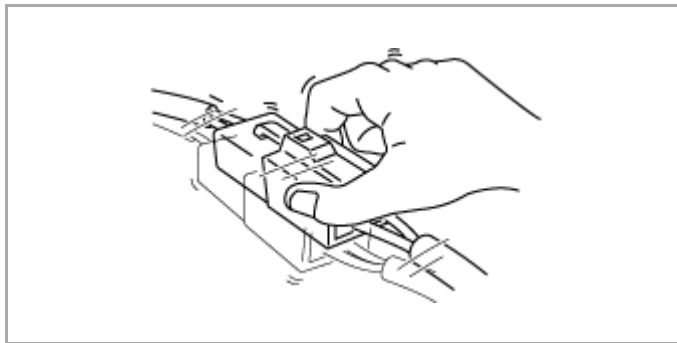


Diagnostic procedure

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
4	DETERMINE IF MALFUNCTION CAUSE IS DRIVER-SIDE PRESSURE SENSOR • Replace the driver-side pressure sensor. (See PRESSURE SENSOR REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) • 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?	Yes	Go to the next step.
		No	DTC troubleshooting completed.
5	PERFORM SAS CONTROL MODULE DTC INSPECTION • Connect the SAS control module connectors. • Reconnect all disconnected connectors. • 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?	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.].)
		No	DTC troubleshooting completed.

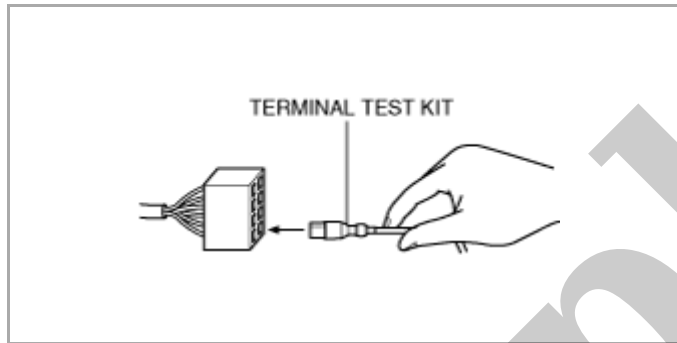


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— Inspect the female terminals on the connector of the electric component which is suspected to be the cause of the malfunction for poor connection. (See **ELECTRICAL SYSTEM**.)

Note

- Tool used (Reference): terminal test kit (49US-15-KIT)



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Air Bag System Specification Identification

- Because two types of driver and passenger-side air bag module controls, “Two-step deployment control” and “Standard deployment control”, are available depending on when the vehicle was produced, identify the specification referring to the following identification.

Identification

- In this manual, “Two-step deployment control system” or “Standard deployment control system” is used if the service contents differ depending on the control.
- Control is identified by the following components.

×: Equipped - : Not equipped

Item	Two-step deployment control system - US/Canada/Israel spec.	Standard deployment control system - Mexico spec.
Sophisticated air bag sensor (SAS) control module	×	×
Crash zone sensor	×	×
Side air bag sensor	×	×
Pressure sensor	×	-
Driver-side air bag module	× (Two-step deployment type)	× (Standard deployment type)
Passenger-side air bag module	× (Two-step deployment type)	× (Standard deployment type)
Side air bag module	×	×
Curtain air bag module	×	×

Step	Inspection		Action
3	PERFORM SAS CONTROL MODULE DTC INSPECTION • 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?	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.].)
		No	DTC troubleshooting completed.

Sample

DTC		System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
M-MDS display	Air bag system warning light						
B0010:11	Illuminated	Passenger-side air bag module (inflator No.1) circuit short to body ground	—	—	C, D	×	(See DTC B0010:11/B0010:12/B0010:13/B0010:19/B0010:1A [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B0010:12	Illuminated	Passenger-side air bag module (inflator No.1) circuit short to power supply	—	—	C, D	×	
B0010:13	Illuminated	Passenger-side air bag module (inflator No.1) circuit open circuit or resistance high	—	—	C, D	×	
B0010:19	Illuminated	Short circuit to passenger-side air bag module (inflator no.1) and other air bag module circuits	—	—	C, D	×	
B0010:1A	Illuminated	Passenger-side air bag module (inflator No.1) circuit resistance low	—	—	C, D	×	
B0010:55	Illuminated	Configuration setting error (passenger-side air bag module (inflator No.1) structural malfunction)	—	—	C, D	×	(See DTC B0001:55/B0010:55 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)

DTC		System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
M-MDS display	Air bag system warning light						
B0094:11	Illuminated	Driver-side crash zone sensor circuit short to body ground	–	–	C, D	×	(See DTC B0094:11/B0094:12/B0094:29/B0094:2B/B0094:4A/B0094:87/B0094:96 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B0094:12	Illuminated	Driver-side crash zone sensor circuit short to power supply	–	–	C, D	×	
B0094:29	Illuminated	Driver-side crash zone sensor internal malfunction	–	–	C, D	×	
B0094:2B	Illuminated	Short circuit to driver-side crash zone sensor and other air bag sensor circuits	–	–	C, D	×	
B0094:4A	Illuminated	Driver-side crash zone sensor ID error (assembly incorrect)	–	–	C, D	×	
B0094:87	Illuminated	Signal reception error from driver-side crash zone sensor	–	–	C, D	×	
B0094:96	Illuminated	Driver-side crash zone sensor internal malfunction	–	–	C, D	×	(See DTC B0094:55/B1417:55 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B0094:55	Illuminated	Configuration setting error (driver-side crash zone sensor structural malfunction)	–	–	C, D	×	
B00A0:09	Illuminated	Occupant classification sensor internal malfunction	–	–	C, D	×	
B00A0:28	Illuminated	Occupant classification sensor calibration check error	–	–	D	×	(See DTC B00A0:28 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B00A0:4A	Illuminated	Occupant classification sensor ID mismatch	–	–	C, D	×	(See DTC B00A0:4A [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)

DTC		System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
M-MDS display	Air bag system warning light						
B10FD:11	Illuminated	Driver-side side air bag sensor or passenger-side pressure sensor circuit short to body ground	—	—	C, D	×	(See DTC B10FD:11/B10FD:12/B10FD:29/B10FD:2B/B10FD:4A/B10FD:87/B10FD:96 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B10FD:12	Illuminated	Driver-side side air bag sensor or passenger-side pressure sensor circuit short to power supply	—	—	C, D	×	
B10FD:29	Illuminated	Driver-side side air bag sensor internal malfunction	—	—	C, D	×	
B10FD:2B	Illuminated	Short circuit to driver-side side air bag sensor or passenger-side pressure sensor and other air bag sensor circuits	—	—	C, D	×	
B10FD:4A	Illuminated	Driver-side side air bag sensor ID error (assembly incorrect)	—	—	C, D	×	
B10FD:87	Illuminated	Signal reception error from driver-side side air bag sensor	—	—	C, D	×	
B10FD:96	Illuminated	Driver-side side air bag sensor internal malfunction	—	—	C, D	×	(See DTC B10FD:55/B10FE:55 [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)
B10FD:55	Illuminated	Configuration setting error (driver-side side air bag sensor structural malfunction)	—	—	C, D	×	
[B10FE:2F]	Illuminated	Passenger-side side air bag sensor signal is unstable	—	—	C, D	×	(See DTC B10FE:2F [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].)