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2015 MAZDA CX-3 OEM Service and Repair Workshop Manual

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DTC							
M-MDS display	Air bag system warning light	System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
[B1196:29]	Illuminated	Driver-side side air bag sensor No.2 internal malfunction	—	—	C, D	×	(See Inspection procedure for configuration and undetected component DTC.)
[B1196:4A]	Illuminated	Driver-side side air bag sensor No.2 ID error (assembly incorrect)	—	—	C, D	×	
[B1196:87]	Illuminated	Signal reception error from driver-side side air bag sensor No.2	—	—	C, D	×	
[B1196:96]	Illuminated	Driver-side side air bag sensor No.2 internal malfunction	—	—	C, D	×	
[B1196:55]	Illuminated	Configuration setting error (driver-side side air bag sensor No.2 structural malfunction)	—	—	C, D	×	
[B1197:29]	Illuminated	Passenger-side side air bag sensor No.2 internal malfunction	—	—	C, D	×	(See Inspection procedure for configuration and undetected component DTC.)
[B1197:4A]	Illuminated	Passenger-side side air bag sensor No.2 ID error (assembly incorrect)	—	—	C, D	×	
[B1197:87]	Illuminated	Signal reception error from passenger-side side air bag sensor No.2	—	—	C, D	×	
[B1197:96]	Illuminated	Passenger-side side air bag sensor No.2 internal malfunction	—	—	C, D	×	
[B1197:55]	Illuminated	Configuration setting error (passenger-side side air bag sensor structural malfunction)	—	—	C, D	×	
B1206:00	—	SAS control module collision judgement signal output (fuel cut off signal output)	—	—	C, D	×	(See DTC B1206:00/B143A:00/B1A55:00/U2107:00 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO 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						
[B1228:11]	Illuminated	Driver-side lap pre-tensioner seat belt circuit short to body ground	–	–	C, D	×	(See Inspection procedure for configuration and undetected component DTC.)
[B1228:12]	Illuminated	Driver-side lap pre-tensioner seat belt circuit short to power supply	–	–	C, D	×	
[B1228:13]	Illuminated	Driver-side lap pre-tensioner seat belt circuit open circuit or resistance high	–	–	C, D	×	
[B1228:19]	Illuminated	Short circuit to driver-side lap pre-tensioner seat belt and other air bag module circuits	–	–	C, D	×	
[B1228:1A]	Illuminated	Driver-side lap pre-tensioner seat belt circuit resistance low	–	–	C, D	×	
[B1228:55]	Illuminated	Configuration setting error (driver-side lap pre-tensioner seat belt structural malfunction)	–	–	C, D	×	
[B1410:11]	Illuminated	Driver-side rear pre-tensioner seat belt circuit short to body ground	–	–	C, D	×	(See Inspection procedure for configuration and undetected component DTC.)
[B1410:12]	Illuminated	Driver-side rear pre-tensioner seat belt circuit short to power supply	–	–	C, D	×	
[B1410:13]	Illuminated	Driver-side rear pre-tensioner seat belt circuit open circuit or resistance high	–	–	C, D	×	
[B1410:19]	Illuminated	Short circuit to driver-side rear pre-tensioner seat belt and other air bag module circuits	–	–	C, D	×	
[B1410:1A]	Illuminated	Driver-side rear pre-tensioner seat belt circuit resistance low	–	–	C, D	×	
[B1410:55]	Illuminated	Configuration setting error (driver-side rear pre-tensioner seat belt structural malfunction)	–	–	C, D	×	

DTC							
M-MDS display	Air bag system warning light	System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
C0061:29	—	Low-G sensor (lateral-G) in SAS control module (internal circuit disabled)	—	—	C, D	×	(See DTC C0061:29/C0062:29/C0063:29 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
C0062:29	—	Low-G sensor (forward-G) in SAS control module (internal circuit disabled)	—	—	C, D	×	
C0063:29	—	Yaw rate sensor in SAS control module (internal circuit disabled)	—	—	C, D	×	
U0001:88	Illuminated	Unit communication error (HS-CAN)	—	—	C, D	×	(See DTC U0001:88/U0100:00/U0101:00/U0155:00 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
U0100:00	Illuminated	Communication error with PCM	—	—	C, D	×	
U0101:00	Illuminated	Communication error with TCM	—	—	C, D	×	
U0155:00	Illuminated	Communication error with instrument cluster	—	—	C, D	×	
U2100:00	Illuminated	Configuration not set	—	—	C, D	×	(See DTC U2100:00 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
U2107:00	—	SAS control module collision judgement signal output (ESS signal output)	—	—	C, D	×	(See DTC B1206:00/B143A:00/B1A55:00/U2107:00 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
U3000:49	Illuminated	SAS control module internal malfunction	—	—	C, D	×	(See DTC U3000:49 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
U3003:16	Illuminated	SAS control module power supply voltage decreases (8 V or less)	—	—	C, D	×	(See DTC U3003:16/U3003:17 [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].)
U3003:17	Illuminated	SAS control module power supply voltage increases (16 V or more)	—	—	C, D	×	

*1:C: CMDTC self test, D: ODDTC self test

PID/DATA MONITOR TABLE [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)]

SM2898710

id0802h508100

PID	Unit/Condition	Data contents	SAS control module terminal
AB_WL (Air bag system warning light status)	Lamp_Off/Lamp_On/Plant_Mode/Unknown	• Air bag system warning light off: Lamp_Off • Air bag system warning light on: Lamp_On • Air bag system warning light flashing: Plant_Mode • Air bag system warning light unrecognized: Unknown	3Q, 3S
OCS_DTC_CLR (Occupant classification sensor DTC cleared status)	Note • Displays in the M-MDS but it does not operate.		
P_OCS_ST (Occupant classification sensor status)	Note • Displays in the M-MDS but it does not operate.		
P_SEAT_M_S (Occupancy sensor)	Off/On	• Not occupant seated in passenger-side front seat: Off • Occupant seated in passenger-side front seat: On	2AA
PCD_A (Poorly connected detector bar terminal voltage nominal (SAS control module connector A))	V	• Normal connected: 270.9 mV or less • Poor connected: 3173.4 mV or more	1a, 1b
PCD_B (Poorly connected detector bar terminal voltage nominal (SAS control module connector B))	V	• Normal connected: 270.9 mV or less • Poor connected: 3173.4 mV or more	2a, 2b
PCD_C (Poorly connected detector bar terminal voltage nominal (SAS control module connector C))	V	• Normal connected: 270.9 mV or less • Poor connected: 3173.4 mV or more	3a, 3b
RES_C_AB_D (Driver-side curtain air bag module resistance nominal)	ohm	Continuous: 0.88-6.33 ohms	1U, 1W
RES_C_AB_P (Passenger-side curtain air bag module resistance nominal)	ohm	Continuous: 0.88-6.33 ohms	1Z, 1AA
RES_F_AB1_D (Driver-side air bag module (inflatorNo.1) resistance nominal)	ohm	Continuous: 1.37-6.33 ohms	3C, 3G
RES_F_AB1_P (Passenger-side air bag module (inflatorNo.1) resistance nominal)	ohm	Continuous: 0.88-6.33 ohms	3K, 3N
RES_S_AB_D (Driver-side side air bag module resistance nominal)	ohm	Continuous: 0.88-10.53 ohms	1G, 1C

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 (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].) • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO 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 [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].)
		No	DTC troubleshooting completed.

Sample

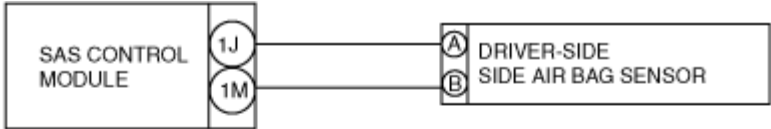
Step	Inspection	Action
3	INSPECT DRIVER-SIDE CRASH ZONE SENSOR CIRCUIT FOR SHORT TO GROUND • Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.) • Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.) • Disconnect the passenger-side air bag module connector. (See PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO 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 pre-tensioner seat belt connectors. (See FRONT 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 [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Disconnect the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — SAS control module terminal 2O — SAS control module terminal 2Q Note • Inspect for continuity while shaking the wiring harness between the SAS control module and driver-side crash zone sensor. • Is there continuity?	Yes 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. 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 7.
	No	Go to the next step.

DTC B10FD:11/B10FD:12/B10FD:29/B10FD:2B/B10FD:4A/B10FD:87/B10FD:96
[SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO
SPEC.)]

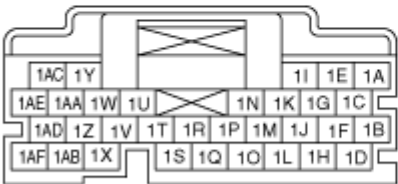
SM2898713

id0802h581350

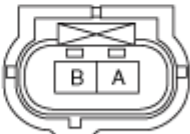
System malfunction location	• B10FD:11: Driver-side side air bag sensor circuit short to body ground • B10FD:12: Driver-side side air bag sensor circuit short to power supply • B10FD:29, B10FD:96: Driver-side side air bag sensor internal malfunction • B10FD:2B: Short circuit to driver-side side air bag sensor and other air bag sensor circuits • B10FD:4A: Driver-side side air bag sensor ID error (assembly incorrect) • B10FD:87: Signal reception error from driver-side side air bag 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. • Wiring harness between the driver-side side air bag sensor and SAS control module has a malfunction • Driver-side side air bag sensor has a malfunction
Fail-safe function	Not applicable
Possible cause	• Driver-side side air bag sensor assembly incorrect • Driver-side side air bag sensor connector malfunction • Open circuit in the wiring harness between the following terminals: — SAS control module terminal 1J–driver-side side air bag sensor terminal A — SAS control module terminal 1M–driver-side side air bag sensor terminal B • Short circuit to body ground in the wiring harness between the following terminals: — SAS control module terminal 1J–driver-side side air bag sensor terminal A — SAS control module terminal 1M–driver-side side air bag sensor terminal B • Short circuit to power supply in the wiring harness between the following terminals: — SAS control module terminal 1J–driver-side side air bag sensor terminal A — SAS control module terminal 1M–driver-side side air bag sensor terminal B • Short circuit to other air bag sensor circuits in the wiring harness between the driver-side side air bag sensor and SAS control module • Driver-side side air bag sensor malfunction • SAS control module malfunction



SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE SIDE AIR BAG SENSOR WIRING HARNESS-SIDE CONNECTOR



Step	Inspection		Action
4	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR CIRCUIT FOR OPEN CIRCUIT • Driver-side side air bag sensor and SAS control module connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): — Driver-side side air bag sensor terminal A–SAS control module terminal 1J — Driver-side side air bag sensor terminal B–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 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 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. Go to Step 7.
5	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. • Remove the front bumper. (See FRONT BUMPER REMOVAL/INSTALLATION.) • Disconnect the driver and passenger-side crash zone sensor connectors. (See CRASH ZONE SENSOR REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Remove the passenger-side B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.) • Disconnect the passenger-side side air bag sensor connector. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Refer to the wiring diagram and inspect for continuity between the driver-side side air bag sensor terminals 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. • Is there continuity?	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. Go to Step 7.
		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 [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.]**.)

Step	Inspection		Action
1	INSPECT PASSENGER-SIDE SIDE AIR BAG 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 passenger-side B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.) • Verify that the passenger-side side air bag sensor is correctly installed. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Is the passenger-side side air bag sensor correctly installed?	Yes	Go to the next step.
		No	Correctly install the passenger-side side air bag sensor. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.] .) Then go to Step 7.
2	INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR CONNECTOR • Disconnect the passenger-side side air bag sensor connector. (See SIDE AIR BAG SENSOR REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) • Inspect the passenger-side side air bag sensor connector (wiring harness-side). (Corrosion, damage, and disconnected pins) • Is there any malfunction of the passenger-side side air bag sensor connector (wiring harness-side)?	Yes	Replace the malfunctioning part, then go to Step 7.
		No	Go to the next step.