

2008 RESTRAINTS

On-Board Diagnostic (Restraints) - Mazda CX-9

FOREWORD

OUTLINE

- The OBD (on-board diagnostic) system has the following functions:
 - Malfunction detection function: Detects malfunctions in the air bag system and outputs DTCs.
 - Data monitor function: Reads out specific input/output signals and the system status.
- Diagnostic DTCs can be read/cleared using the M-MDS.

FLOWCHART

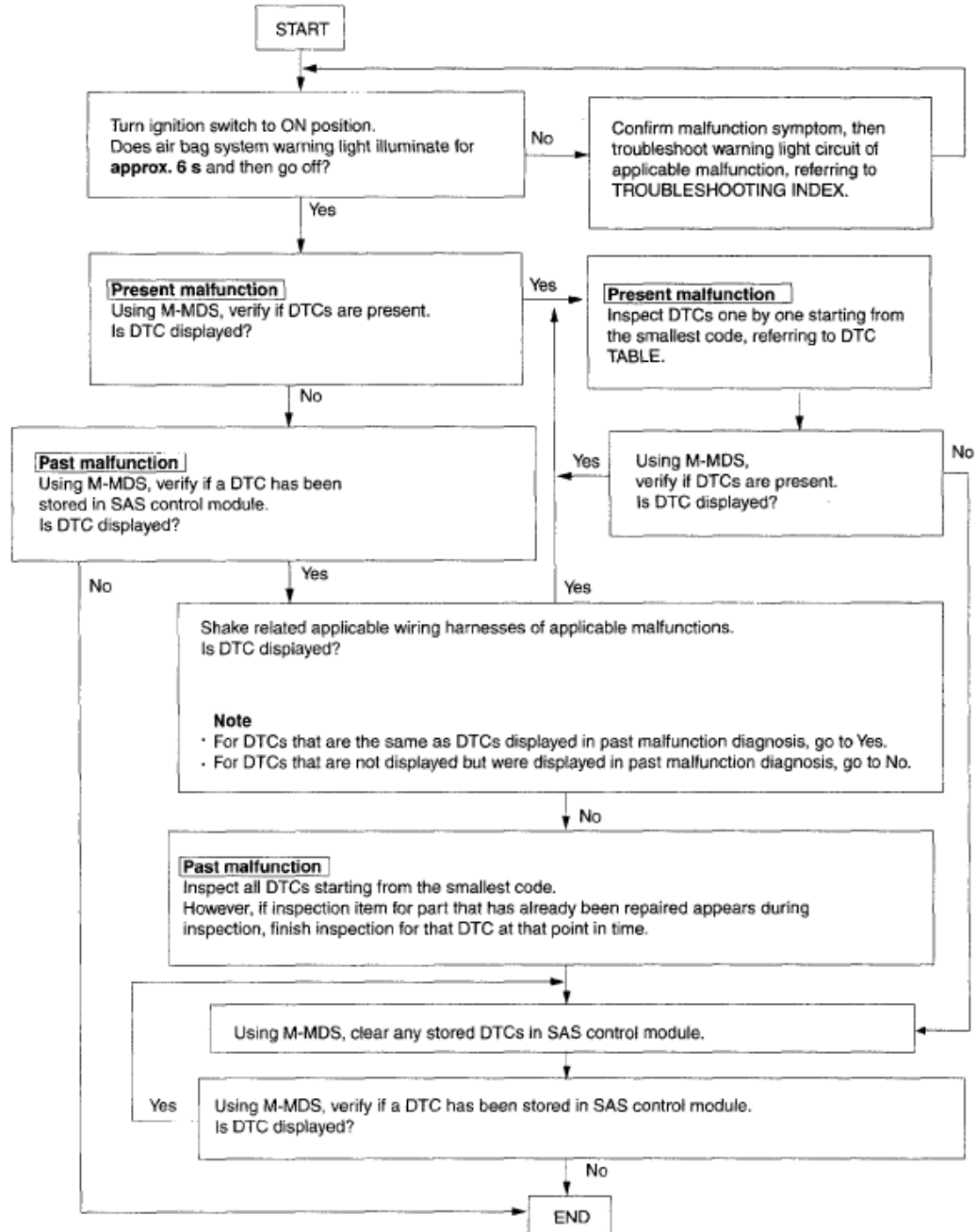
- Use the following flowchart to verify the cause of the trouble.

NOTE:

- **While performing the inspection of the past malfunction code, the applicable DTCs may be added to memory by removing or disconnecting the related parts. Inspect only the DTCs that were indicated before inspecting.**
- **When DTCs of the present malfunction are no longer output after present or past malfunctions or both have been repaired, be sure to perform past malfunction display cancellation to prevent repair of malfunctions that have already been repaired.**

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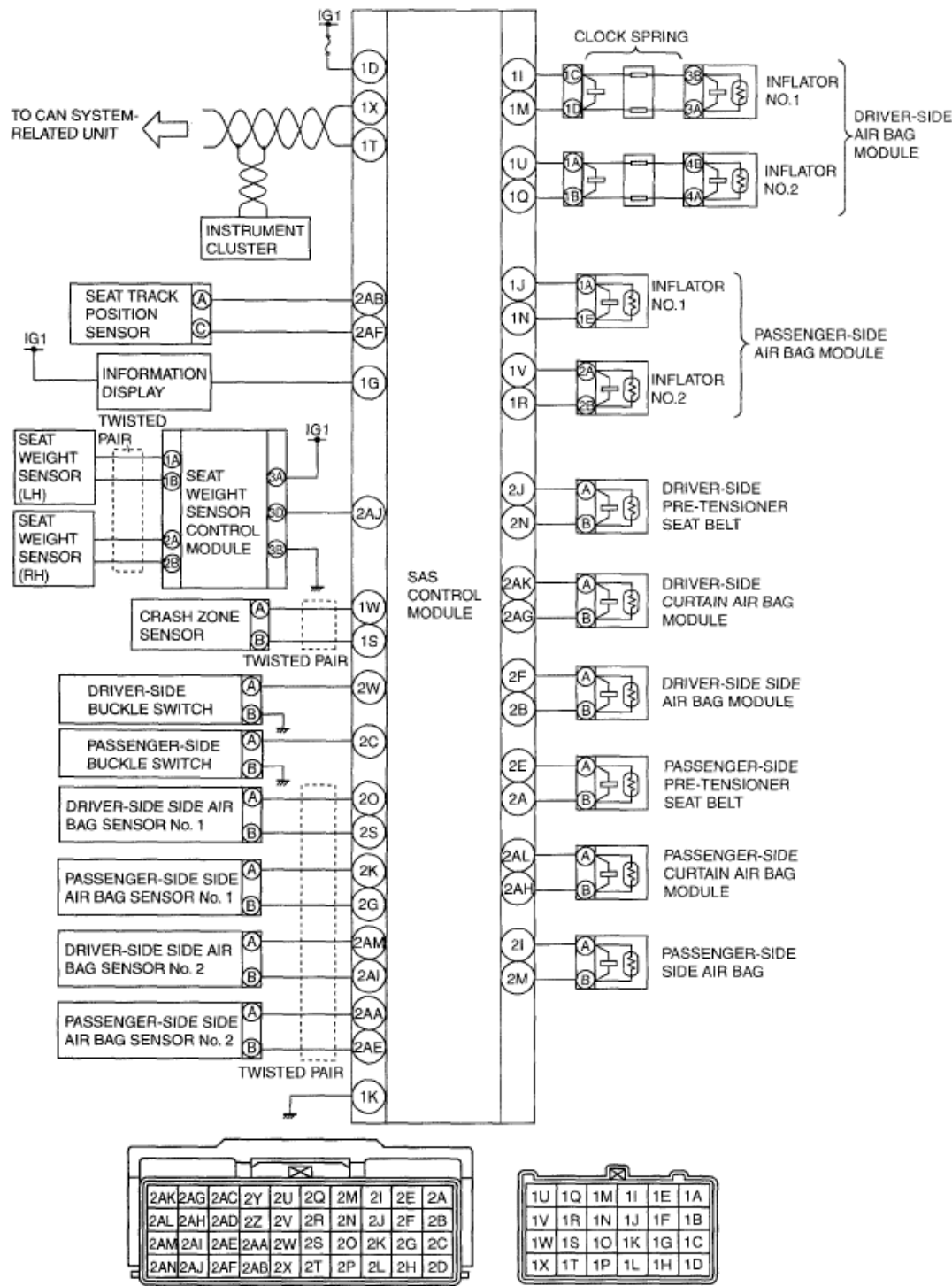
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Fig. 1: Flow Chart
Courtesy of MAZDA MOTORS CORP.

AIR BAG SYSTEM WIRING DIAGRAM (ON-BOARD DIAGNOSTIC)

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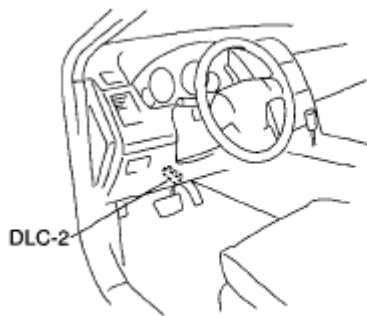


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Fig. 2: Air Bag System Wiring Diagram
 Courtesy of MAZDA MOTORS CORP.

DTC DISPLAY

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Self Test".
 2. Select "Modules".
 3. Select "RCM".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "RCM".
 3. Select "Self Test".



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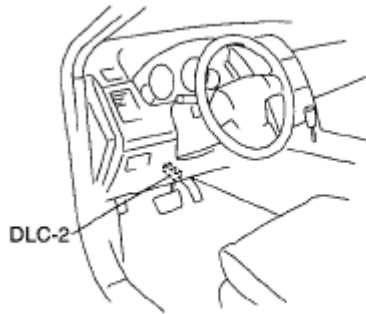
Fig. 3: Identifying DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

3. Verify the DTC according to the directions on the screen.
 - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the SAS control module. (See **CLEARING DTC.**)

CLEARING DTC

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Self Test".
 2. Select "Modules".
 3. Select "RCM".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".

2. Select "RCM".
3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Verify that no DTCs are displayed.



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Fig. 4: Identifying DLC-2 Connector
 Courtesy of MAZDA MOTORS CORP.

DTC TABLE

- DTCs are common for present and past malfunction diagnosis.

NOTE:

- When DTCs not shown in the DTC table are displayed, replace the SAS control module.
- If the air bag system warning light does not illuminate or remains illuminated when the ignition switch is turned to the ON position, inspect and repair the air bag system warning light circuit, and then confirm that the air bag system warning light is operational.
- The air bag system warning light flashes the DTC pattern for five cycles, and then remains illuminated until the ignition switch is turned to the ACC or LOCK position.











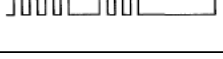
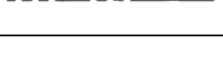
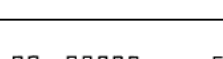
DTC TABLE

DTC CHART

DTC			System malfunction location	Page
M-MDS display	Air bag system warning light			
	Flashing pattern	Priority ranking		
B1013	16		20	Seat weight sensor calibration error (See DTC B1013.)
				Driver-side curtain air bag












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B1046	24		19	module and other air bag module circuits short	(See <u>DTC B1046, B2773, B2774, B2775, B2776.</u>)
B1047	22		17	Driver-side side air bag module and other air bag module circuits short	(See <u>DTC B1047, B1992, B1993, B1994, B1995.</u>)
B1048	21		12	Passenger-side air bag module (inflator No.1) and other air bag module circuits short	(See <u>DTC B1048, B1925, B1933, B1935, B1938.</u>)
B1049	34		14	Passenger-side pre-tensioner seat belt and other air bag module circuits short	(See <u>DTC B1049, B1881, B1882, B1883, B1886.</u>)
B104B	43		8	Driver-side side air bag sensor No. 1 and other sensor circuits short to power supply	(See <u>DTC B104B, B104E, B1051, U2017.</u>)
B104C	44		7	Passenger-side side air bag sensor No.1 and other sensor circuits short to power supply	(See <u>DTC B104C, B104F, B1050, U2018.</u>)
B104D	42		11	Crash zone sensor and other sensor circuits short to power supply	(See <u>DTC B104B, B104E, B1051, U2017.</u>)
B104E	43		8	Driver-side side air bag sensor No.1 circuit open or short	(See <u>DTC B104B, B104E, B1051, U2017.</u>)
B104F	44		7	Passenger-side side air bag sensor No.1 (internal circuit abnormal)	(See <u>DTC B104C, B104F, B1050, U2018.</u>)
B1050				Passenger-side side air bag sensor No.1 circuit open or short	
B1051	43		8	Driver-side side air bag sensor No.1 (internal circuit abnormal)	(See <u>DTC B104B, B104E, B1051, U2017.</u>)
B1054	33		15	Driver-side pre-tensioner seat belt and other air bag module circuits short	(See <u>DTC B1054, B1877, B1878, B1879, B1885.</u>)
B1055	23		16	Passenger-side side air bag module and other air bag module circuits short	(See <u>DTC B1055, B1996, B1997, B1998, B1999.</u>)
B1056	25		18	Passenger-side curtain air bag module and other air bag module circuits short	(See <u>DTC B1056, B2777, B2778, B2779, B2780.</u>)
				Driver-side air bag module	(See <u>DTC B1057, B1916,</u>








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B1057				(inflator No.1) and other air bag module circuits short	B1932, B1934, B1936.)
B1058	19		13	Driver-side air bag module (inflator No.2) and other air bag module circuits short	(See <u>DTC B1058, B2228, B2230, B2232, B2234.</u>)
B1059	21		12	Passenger-side air bag module (inflator No.2) and other air bag module circuits short	(See <u>DTC B1059, B2229, B2231, B2233, B2235.</u>)
B105A	-	Continuously illuminated	1	SAS control module activation (deployment) control frequency error	(See <u>DTC B105A.</u>)
B105B	46		10	Driver-side side air bag sensor No. 2 and other sensor circuits short to power supply	(See <u>DTC B105B, B110C, B1144, B1145.</u>)
B105F	47		9	Passenger-side side air bag sensor No. 2 and other sensor circuits short to power supply	(See <u>DTC B105F, B110D, B1146, B1147.</u>)
B110C	46		10	Driver-side side air bag sensor No. 2 circuit open or short	(See <u>DTC B105B, B110C, B1144, B1145.</u>)
B110D	47		9	Passenger-side side air bag sensor No. 2 circuit open or short	(See <u>DTC B105F, B110D, B1146, B1147.</u>)
B110E	46		10	Driver-side side air bag sensor No.2 ID mismatch	(See <u>DTC B110E, B110F, B2856, B2886, B2887.</u>)
B110F	47		9	Passenger-side side air bag sensor No.2 ID mismatch	
B1144	46		10	Driver-side side air bag sensor No. 2 (internal circuit abnormal)	(See <u>DTC B105B, B110C, B1144, B1145.</u>)
B1145				Driver-side side air bag sensor No. 2 (communication error)	
B1146	47		9	Passenger-side side air bag sensor No. 2 (internal circuit abnormal)	(See <u>DTC B105F, B110D, B1146, B1147.</u>)
B1147				Passenger-side side air bag sensor No. 2 (communication error)	
B1231	13		3	SAS control module activation (deployment) control freeze	(See <u>DTC B1231.</u>)











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B1317	-	Continuously illuminated	1	SAS control module power supply voltage increases (18.1 V or more)	(See <u>DTC B1317, B1318.</u>)
B1318	-	Continuously illuminated	1	SAS control module power supply voltage decreases (less than 8 V)	
B1342	12		2	SAS control module (internal circuit abnormal)	(See <u>DTC B1342, B1921.</u>)
	-	Continuously illuminated	1		
B1868	-	-	1	Air bag system warning light malfunction	(See <u>DTC B1868.</u>)
B1877	33		15	Driver-side pre-tensioner seat belt circuit resistance high	(See <u>DTC B1054, B1877, B1878, B1879, B1885.</u>)
B1878				Driver-side pre-tensioner seat belt circuit short to power supply	
B1879				Driver-side pre-tensioner seat belt circuit short to body ground	
B1881	34		14	Passenger-side pre-tensioner seat belt circuit resistance high	(See <u>DTC B1049, B1881, B1882, B1883, B1886.</u>)
B1882				Passenger-side pre-tensioner seat belt circuit short to power supply	
B1883				Passenger-side pre-tensioner seat belt circuit short to body ground	
B1884	18		21	Passenger air bag deactivation (PAD) indicator circuit open or short to body ground	(See <u>DTC B1884, B1890.</u>)
B1885	33		15	Driver-side pre-tensioner seat belt circuit resistance low	(See <u>DTC B1054, B1877, B1878, B1879, B1885.</u>)
B1886	34		14	Passenger-side pre-tensioner seat belt circuit resistance low	(See <u>DTC B1049, B1881, B1882, B1883, B1886.</u>)
B1890	18		21	Passenger air bag deactivation (PAD) indicator circuit short to power supply	(See <u>DTC B1884, B1890.</u>)
				Driver-side air bag module	(See <u>DTC B1057, B1916.</u>)













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B1916	19		13	(inflator No.1) circuit short to power supply	<u>B1932, B1934, B1936.</u>
B1921	-	Continuously illuminated	1	Air bag diagnostic ground circuit open	(See <u>DTC B1342, B1921.</u>)
B1925	21		12	Passenger-side air bag module (inflator No.1) circuit short to power supply	(See <u>DTC B1048, B1925, B1933, B1935, B1938.</u>)
B1932	19		13	Driver-side air bag module (inflator No.1) circuit resistance high	(See <u>DTC B1057, B1916, B1932, B1934, B1936.</u>)
B1933	21		12	Passenger-side air bag module (inflator No.1) circuit resistance high	(See <u>DTC B1048, B1925, B1933, B1935, B1938.</u>)
B1934	19		13	Driver-side air bag module (inflator No.1) circuit resistance low	(See <u>DTC B1057, B1916, B1932, B1934, B1936.</u>)
B1935	21		12	Passenger-side air bag module (inflator No.1) circuit resistance low	(See <u>DTC B1048, B1925, B1933, B1935, B1938.</u>)
B1936	19		13	Driver-side air bag module (inflator No.1) circuit short to body ground	(See <u>DTC B1057, B1916, B1932, B1934, B1936.</u>)
B1938	21		12	Passenger-side air bag module (inflator No.1) circuit short to body ground	(See <u>DTC B1048, B1925, B1933, B1935, B1938.</u>)
B1992	22		17	Driver-side side air bag module circuit short to power supply	(See <u>DTC B1047, B1992, B1993, B1994, B1995.</u>)
B1993				Driver-side side air bag module circuit short to body ground	
B1994				Driver-side side air bag module circuit resistance high	
B1995				Driver-side side air bag module circuit resistance low	
B1996	23		16	Passenger-side side air bag module circuit short to power supply	(See <u>DTC B1055, B1996, B1997, B1998, B1999.</u>)
B1997				Passenger-side side air bag module circuit short to body ground	
B1998				Passenger-side side air bag module circuit resistance high	









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B1999				Passenger-side side air bag module circuit resistance low	
B2226	42		11	Crash zone sensor (internal circuit abnormal)	(See <u>DTC B104D, B2226, B2227, B2855.</u>)
B2227				Crash zone sensor (communication error)	
B2228	19		13	Driver-side air bag module (inflator No.2) circuit short to body ground	(See <u>DTC B1058, B2228, B2230, B2232, B2234.</u>)
B2229	21		12	Passenger-side air bag module (inflator No.2) circuit short to body ground	(See <u>DTC B1059, B2229, B2231, B2233, B2235.</u>)
B2230	19		13	Driver-side air bag module (inflator No.2) circuit short to power supply	(See <u>DTC B1058, B2228, B2230, B2232, B2234.</u>)
B2231	21		12	Passenger-side air bag module (inflator No.2) circuit short to power supply	(See <u>DTC B1059, B2229, B2231, B2233, B2235.</u>)
B2232	19		13	Driver-side air bag module (inflator No.2) circuit resistance high	(See <u>DTC B1058, B2228, B2230, B2232, B2234.</u>)
B2233	21		12	Passenger-side air bag module (inflator No.2) circuit resistance high	(See <u>DTC B1059, B2229, B2231, B2233, B2235.</u>)
B2234	19		13	Driver-side air bag module (inflator No.2) circuit resistance low	(See <u>DTC B1058, B2228, B2230, B2232, B2234.</u>)
B2235	21		12	Passenger-side air bag module (inflator No.2) circuit resistance low	(See <u>DTC B1059, B2229, B2231, B2233, B2235.</u>)
B2290	16		20	Seat weight sensor signal malfunction	(See <u>DTC B2290.</u>)
B2477	54		6	Configuration error	(See <u>DTC B2477.</u>)
B2773	24		19	Driver-side curtain air bag module circuit resistance low	(See <u>DTC B1046, B2773, B2774, B2775, B2776.</u>)
B2774				Driver-side curtain air bag module circuit resistance high	
B2775				Driver-side curtain air bag module circuit short to body ground	
B2776				Driver-side curtain air bag module circuit short to power supply	

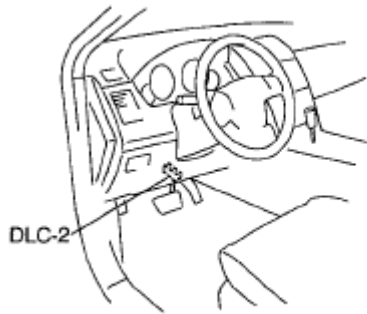
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B2777	25		18	Passenger-side curtain air bag module circuit resistance low	(See <u>DTC B1056, B2777, B2778, B2779, B2780.</u>)
B2778				Passenger-side curtain air bag module circuit resistance high	
B2779				Passenger-side curtain air bag module circuit short to body ground	
B2780				Passenger-side curtain air bag module circuit short to power supply	
B2855	42		11	Crash zone sensor circuit short	(See <u>DTC B104D, B2226, B2227, B2855.</u>)
B2856				Crash zone sensor ID mismatch	
B2886	44		7	Passenger-side side air bag sensor No.1 ID mismatch	(See <u>DTC B110E, B110F, B2856, B2886, B2887.</u>)
B2887	43		8	Driver-side side air bag sensor No.1 ID mismatch	
C1946	49		22	Seat track position sensor circuit open	(See <u>DTC C1946, C1947, C1948, C1981, C1982.</u>)
C1947				Seat track position sensor circuit short to body ground	
C1948				Seat track position sensor circuit resistance not within specification	
C1981				Seat track position sensor circuit malfunction	
C1982				Seat track position sensor circuit short to power supply	
U2017	43		8	Driver-side side air bag sensor No. 1 (communication error)	(See <u>DTC B104B, B104E, B1051, U2017.</u>)
U2018	44		7	Passenger-side side air bag sensor No. 1 (communication error)	(See <u>DTC B104C, B104F, B1050, U2018.</u>)
U0073	14		4	CAN system communication error	(See <u>DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM] .</u>)
U0100	-	-	1	Communication error to PCM	
U0155	-	-	1	Communication error to instrument cluster	

PID/DATA MONITOR DISPLAY

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "DataLogger".
 2. Select "Modules".
 3. Select "RCM".



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Fig. 5: Identifying DLC-2 Connector
 Courtesy of MAZDA MOTORS CORP.

- When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "RCM".
 3. Select "DataLogger".
- 3. Select the applicable PID from the PID table.
- 4. Verify the PID data according to the directions on the screen.

NOTE:

- **The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.**

PID/DATA MONITOR TABLE

PID/DATA MONITOR CHART

PID name	Unit/Condition	Operation Condition	Terminal
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(definition)		(Reference)	
BUCKLE_D (Driver-side buckle switch status)	Unbuckled/Buckled	<ul style="list-style-type: none"> • Driver-side buckle switch off: Buckled • Driver-side buckle switch on: Unbuckled 	2W
BUCKLE_P (Passenger-side buckle switch status)	Unbuckled/Buckled	<ul style="list-style-type: none"> • Passenger-side buckle switch off: Buckled • Passenger-side buckle switch on: Unbuckled 	2C
CCNT_RCM (Number of continuous DTCs)	-	Indicates number of DTC	-
CRSH_RC (Number of detected collisions)	-	Indicates number of detected collisions	-
DTC_CLR_ST ⁽¹⁾ (OCS DTC cleared state)	Starting/Normal End/In Process/OCS Fault	Fault information cleared at seat weight sensor	2AJ
IGN_V (IG1 voltage)	V	Ignition switch is at ON: B+	1D
OCS_CAL_ST ⁽²⁾ (Seat weight sensor calibration status)	Starting/Normal End/Commanding/NG (Voltage)/ NG (Weight)/ Timeout/In Process/OCS Fault	<ul style="list-style-type: none"> • Seat weight sensor calibration start-up: Starting • Seat weight sensor calibration completed normally: Normal End • Seat weight sensor calibration command being sent: Commanding • Voltage malfunction during seat weight sensor calibration: NG (Voltage) • Weight error during seat weight 	2AJ

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		<p>sensor calibration: NG (Weight)</p> <ul style="list-style-type: none"> • Seat weight sensor calibration time limit passed: Timeout • Seat weight sensor calibration being processed: In Process • Seat weight sensor or Seat weight sensor control module malfunction: OCS Fault 	
OCS_SYS_ST ⁽¹⁾ (Seat weight sensor status)	Empty/SMALL/Indeterminate/LARGE/Invalid	Occupant classification status determined by seat weight sensor	2AJ
OCSFLT_CAL (Passenger sensing system calibration status)	OK/FAULT	<ul style="list-style-type: none"> • Sensor normal: OK • Seat weight sensor calibration error: FAULT 	2AJ
OCSFLT_COM (Passenger sensing system communication status)	OK/FAULT	<ul style="list-style-type: none"> • Sensor normal: OK • Seat weight sensor control module communication error: FAULT 	2AJ
OCSFLT_L (Passenger sensing system (LH) malfunction status)	OK/FAULT	<ul style="list-style-type: none"> • Sensor normal: OK • Seat weight sensor (LH) malfunction: FAULT 	2AJ
OCSFLT_MDL (Passenger sensing system control module malfunction status)	OK/FAULT	<ul style="list-style-type: none"> • Sensor normal: OK • Seat weight sensor control module malfunction: FAULT 	2AJ
OCSFLT R		<ul style="list-style-type: none"> • Sensor normal: OK 	

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(Passenger sensing system (RH) malfunction status)	OK/FAULT	<ul style="list-style-type: none"> • Seat weight sensor (RH) malfunction: FAULT 	2AJ
PS_WEIGHT (Seat weight sensor measured weight of passenger)	kg	Display of load (body weight) on front passenger-side seat	2AJ
PSAB_DepSt (Passenger-side air bag module deployment status)	Inactive/Active	<ul style="list-style-type: none"> • Passenger-side air bag module non-operation (non-deployment) status: Inactive • Passenger-side air bag module operation (deployment) enabled status: Active 	2AJ
RES_AB_D (Driver-side air bag module (inflator No.1) resistance)	ohm	Under any condition: 1.5-9.7 ohms	11,1M
RES_AB_P (Passenger-side air bag module (inflator No.1) resistance)	ohm	Under any condition: 1.0-9.7 ohms	U, 1N
RES_AB2_D (Driver-side air bag module (inflator No.2) resistance)	ohm	Under any condition: 1.5-9.7 ohms	1Q, 1U
RES_AB2_P (Passenger-side air bag module (inflator No.2) resistance)	ohm	Under any condition: 1.0-9.7 ohms	1R, 1V
RES_CAB_D (Driver-side curtain air bag module resistance)	ohm	Under any condition: 1.0-9.7 ohms	2AG, 2AK
RES_CAB_P (Passenger-side	ohm	Under any condition:	2AH,

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curtain air bag module resistance)		1.0-9.7 ohms	2AL
RES_PT_D (Driver-side pre-tensioner seat belt resistance)	ohm	Under any condition: 1.0-9.7 ohms	2N, 2J
RES_PT_P (Passenger-side pre-tensioner seat belt resistance)	ohm	Under any condition: 1.0-9.7 ohms	2A, 2E
RES_SAB_D (Driver-side side air bag module resistance)	ohm	Under any condition: 1.0-9.7 ohms	2B, 2F
RES_SAB_P (Passenger-side side air bag module resistance)	ohm	Under any condition: 1.0-9.7 ohms	2I, 2M
TRAK_SW Seat track position sensor state)	Forward/Rearward	<ul style="list-style-type: none"> • Front seat front position: Forward • Front seat rear position: Rearward 	2AB, 2AF
<p>(1) Used during seat weight sensor calibration setting. Not necessary for diagnostic.</p> <p>(2) When the calibration error is displayed, the error can be cleared by turning the ignition switch to the LOCK position.</p>			

DTC B1013

DTC B1013 DETECTION CONDITION AND POSSIBLE CAUSE

DTC B1013	Seat weight sensor calibration error
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Calibration set value not within valid range.
POSSIBLE	<ul style="list-style-type: none"> • Weight acting on front passenger-side seat during calibration • Improperly installed front passenger-side seat part at time of calibration • Deformed floor where attached to front passenger-side seat • Deformed front passenger-side seat under-bracket or frame

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CAUSE	<ul style="list-style-type: none"> • Seat weight sensor deformed or malfunction • Seat weight sensor control module malfunction • SAS control module malfunction • Load to or deformation of the seat belt rail
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DIAGNOSTIC PROCEDURE

DTC B1013 DIAGNOSTIC PROCEDURE

STEP	INSPECTION		ACTION
1	INSPECT SEAT WEIGHT SENSOR <ul style="list-style-type: none"> • Properly install the passenger-side front seat. • Inspect the seat weight sensor. (See <u>SEAT WEIGHT SENSOR CALIBRATION</u> .) • Is the seat weight sensor normal? 	Yes	[Present malfunction diagnosis] <ul style="list-style-type: none"> • Replace the SAS control module. <p style="text-align: center;">(See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p> [Past malfunction diagnosis] <ul style="list-style-type: none"> • DTC troubleshooting completed.
		No	Go to the next step.
2	INSPECT PASSENGER-SIDE FRONT SEAT <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the passenger-side seat and visually inspect for the following: <ul style="list-style-type: none"> ○ Seat under-bracket deformation ○ Seat frame deformation ○ Seat weight sensor deformation ○ Foreign objects stuck in seat • Are any of the parts deformed or are any foreign objects stuck in the 	Yes	Replace any deformed parts or remove any foreign objects. <ul style="list-style-type: none"> • After replacement, perform seat weight sensor calibration and reperform the DTC inspection. If the DTC is displayed, go the next step. (See <u>SEAT WEIGHT SENSOR CALIBRATION</u> .)
		No	Go to the next step.

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	seat?		
3	INSPECT FLOOR <ul style="list-style-type: none"> • Visually inspect the installation parts of the front passenger-side seat for the following: <ul style="list-style-type: none"> ○ Abnormal floor deformation ○ Installation hole of front passenger-side seat is improperly positioned • Is the floor normal? 	Yes	Go to the next step.
		No	<p style="text-align: center;">Repair floor deformation.</p> <ul style="list-style-type: none"> • After repair, perform seat weight sensor calibration and reperform the DTC inspection. If the DTC is displayed even though the floor has been repaired, go the next step. (See <u>SEAT WEIGHT SENSOR CALIBRATION</u> .)
4	INSPECT SEAT WEIGHT SENSOR CONTROL MODULE <ul style="list-style-type: none"> • Replace the seat weight sensor. • After replacement, perform seat weight sensor calibration. (See <u>SEAT WEIGHT SENSOR CALIBRATION</u> .) • Reperform the DTC inspection. • Is DTC B1013 indicated? 	Yes	<p>Replace the seat weight sensor control module. (See <u>SEAT WEIGHT SENSOR CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • After replacement, perform seat weight sensor calibration and reperform the DTC inspection. If the DTC is displayed even though the seat weight sensor control module has been replaced, replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

DTC B1046, B2773, B2774, B2775, B2776

DTC B1046, B2773, B2774, B2775, B2776 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1046	Driver-side curtain air bag module and other air bag module circuits short
	B2773	Driver-side curtain air bag module circuit resistance low
	B2774	Driver-side curtain air bag module circuit resistance high
	B2775	Driver-side curtain air bag module circuit short to body ground
	B2776	Driver-side curtain air bag module circuit short to power supply

DETECTION CONDITION

WARNING:

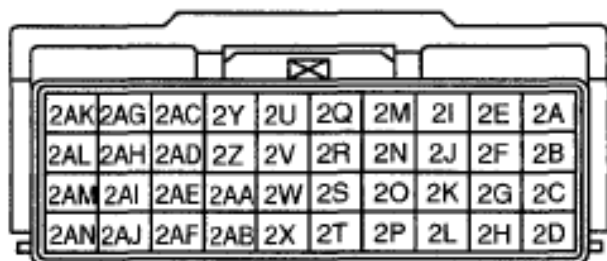
- Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.

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	<ul style="list-style-type: none"> • Resistance other than 1.0-9.7 ohms detected in driver-side curtain air bag module circuit • Malfunction in wiring harness between driver-side curtain air bag module and SAS control module
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in wiring harness between driver-side curtain air bag module and SAS control module <ul style="list-style-type: none"> • Driver-side curtain air bag module malfunction • SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE CURTAIN AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1046, B2773, B2774, B2775, B2776 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT DRIVER-SIDE CURTAIN AIR BAG MODULE <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. (See <u>PID/DATA MONITOR TABLE.</u>) <ul style="list-style-type: none"> ○ RES_CAB_D • Is the resistance of the driver-side curtain air bag module normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">Yes</div> <div>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</div> </div> <hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">No</div> <div>Go to the next step.</div> </div>
	INSPECT DRIVER-SIDE CURTAIN AIR BAG MODULE CONNECTOR <p>WARNING:</p>	

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2	<ul style="list-style-type: none"> Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p><u>(See AIR BAG SYSTEM SERVICE WARNINGS .)</u></p> <p><u>(See AIR BAG SYSTEM SERVICE CAUTIONS .)</u></p>	Yes	Replace the air bag wiring harness.
	<ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Disconnect the negative battery cable and wait for 1 min or more. Disconnect the driver-side curtain air bag module connector. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION .</u>) Is there any malfunction of the driver-side curtain air bag module connector? 	No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE CURTAIN AIR BAG MODULE OR RELATED WIRING HARNESS</p>	Yes	Go to the next step.
	<ul style="list-style-type: none"> Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to driver-side curtain air bag module connector terminals A and B. Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. Connect the negative battery cable. Turn the ignition switch to the ON position. Are DTCs B1046, B2773, B2774, B2775 and/or B2776 indicated? 	No	Replace the driver-side curtain air bag module. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION .</u>)
	<p>INSPECT WIRING HARNESS BETWEEN DRIVER-SIDE CURTAIN AIR BAG MODULE AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Disconnect the negative battery cable and wait for 1 min or more . Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION .</u>) 		

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4	<ul style="list-style-type: none"> • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 2AK and driver-side curtain air bag module terminal A, SAS control module terminal 2AG and driver-side curtain air bag module terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Replace the air bag wiring harness.</p>

DTC B1047, B1992, B1993, B1994, B1995

DTC B1047, B1992, B1993, B1994, B1995 DETECTION CONDITION AND POSSIBLE CAUSE

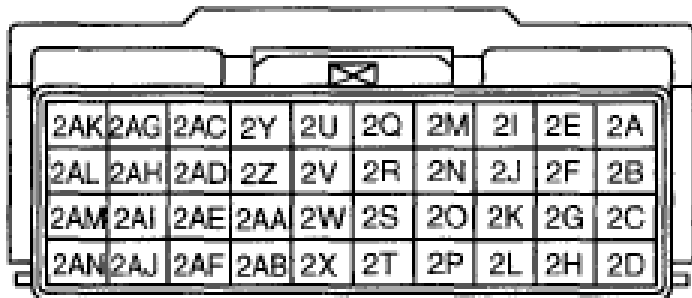
DTC	B1047	Driver-side side air bag module and other air bag module circuits short
	B1992	Driver-side side air bag module circuit short to power supply
	B1993	Driver-side side air bag module circuit short to body ground

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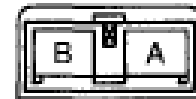
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	B1994	Driver-side side air bag module circuit resistance high
	B1995	Driver-side side air bag module circuit resistance low
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> Detection conditions are for understanding the DTC outline 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. Resistance other than 1.0-9.7 ohms detected in driver-side side air bag module circuit Malfunction in wiring harness between driver-side side air bag module and SAS control module 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> Open or short circuit in wiring harness between driver-side side air bag module and SAS control module <ul style="list-style-type: none"> Driver-side side air bag module malfunction SAS control module malfunction 	

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



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



DIAGNOSTIC PROCEDURE

DTC B1047, B1992, B1993, B1994, B1995 DIAGNOSTIC PROCEDURE

STEP	INSPECTION		ACTION
1	<p>INSPECT DRIVER-SIDE SIDE AIR BAG MODULE</p> <ul style="list-style-type: none"> Using the M-MDS, verify the following PID/DATA monitor. <p>(See PID/DATA MONITOR TABLE.)</p>	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u>.)</p>

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	<ul style="list-style-type: none"> ○ RES_SAB_D ● Is the resistance of the driver-side side air bag module normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	No	Go to the next step.
2	<p>INSPECT DRIVER-SIDE SIDE AIR BAG MODULE CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> ● Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p><u>(See AIR BAG SYSTEM SERVICE WARNINGS .)</u></p> <p><u>(See AIR BAG SYSTEM SERVICE CAUTIONS .)</u></p>	Yes	Replace the air bag wiring harness.
	<ul style="list-style-type: none"> ● Turn the ignition switch to the LOCK position. ● Disconnect the negative battery cable and wait for 1 min or more . ● Disconnect the driver-side side air bag module connector. (See <u>SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) ● Is there any malfunction of the driver-side side air bag module connector? 	No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE SIDE AIR BAG MODULE OR RELATED WIRING HARNESS</p>	Yes	Go to the next step.
	<ul style="list-style-type: none"> ● Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to driver-side side air bag module connector terminals A and B. ● Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. ● Connect the negative battery cable. ● Turn the ignition switch to the ON position. ● Are DTCs B1047, B1992, B1993, B1994, and/or B1995 indicated? 	No	Replace the driver-side side air bag module. (See <u>SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .)

INSPECT WIRING HARNESS BETWEEN DRIVER-SIDE SIDE AIR BAG MODULE AND SAS CONTROL MODULE

- Turn the ignition switch to the LOCK position.
- Disconnect the negative battery cable and wait for **1 min or more**.
- Remove the column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
- Disconnect the clock spring connector. (See **COMBINATION SWITCH REMOVAL/INSTALLATION** .)
- 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** .)
- Disconnect the passenger-side front seat connector. (See **FRONT SEAT REMOVAL/INSTALLATION** .)
- Disconnect the driver and passenger-side curtain air bag module connectors. (See **CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION** .)
- Remove the B-pillar lower trim. (See **B-PILLAR LOWER TRIM REMOVAL/INSTALLATION** .)
- Disconnect the driver and passenger-side pretensioner seat belt connectors. (See **FRONT SEAT BELT REMOVAL/INSTALLATION** .)
- Disconnect the SAS control module connectors. (See **SAS CONTROL MODULE REMOVAL/INSTALLATION** .)
- Inspect the wiring harness between SAS control module terminal 2F and driver-side side air bag module terminal A, SAS control module terminal 2B and driver-side side air bag module terminal B for the following:
 - Short to ground
 - Short to power supply

4

Yes

Replace the SAS control module. (See **SAS CONTROL MODULE REMOVAL/INSTALLATION** .)

No

Replace the air bag wiring harness.

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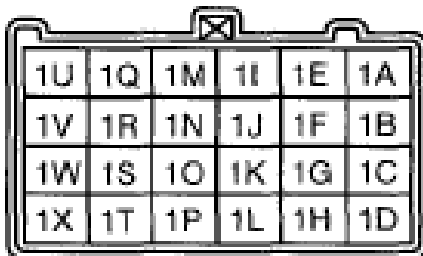
- Open circuit
- Is the wiring harness normal?

DTC B1048, B1925, B1933, B1935, B1938

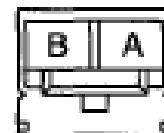
DTC B1048, B1925, B1933, B1935, B1938 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1048	Passenger-side air bag module (inflator No.1) and other air bag module circuits short
	B1925	Passenger-side air bag module (inflator No.1) circuit short to power supply
	B1933	Passenger-side air bag module (inflator No.1) circuit resistance high
	B1935	Passenger-side air bag module (inflator No.1) circuit resistance low
	B1938	Passenger-side air bag module (inflator No.1) circuit short to body ground
DETECTION CONDITION		<p>WARNING:</p> <ul style="list-style-type: none"> ● 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. ● Resistance other than 1.0-9.7 ohms detected in passenger-side air bag module circuit (inflator No.1) ● Malfunction in wiring harness between passenger-side air bag module (inflator No.1) and SAS control module
POSSIBLE CAUSE		<ul style="list-style-type: none"> ● Open or short circuit in wiring harness between passenger-side air bag module (inflator No.1) and SAS control module ● Passenger-side air bag module malfunction ● SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PASSENGER-SIDE AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

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DTC B1048, B1925, B1933, B1935, B1938 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT PASSENGER-SIDE AIR BAG MODULE</p> <ul style="list-style-type: none"> Using the M-MDS, verify the following PID/DATA monitor. <p>(See <u>PID/DATA MONITOR TABLE.</u>)</p> <ul style="list-style-type: none"> RES_AB_P <ul style="list-style-type: none"> Is the resistance of the passenger-side air bag module normal? <ul style="list-style-type: none"> Resistance: 1.0-9.7 ohms 	<p>Yes Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION .</u>)</p>
	<p>No Go to the next step.</p>	
2	<p>INSPECT PASSENGER-SIDE AIR BAG MODULE CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS .</u>)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS .</u>)</p> <ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Disconnect the negative battery cable and wait for 1 min or more . Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION .</u>) Is there any malfunction of the passenger-side air bag module connector? 	<p>Yes Replace the air bag wiring harness.</p>
	<p>No Go to the next step.</p>	
	<p>VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE AIR BAG MODULE OR RELATED WIRING HARNESS</p>	<p>Yes Go to the next step.</p>

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3	<ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to passenger-side air bag module (inflator No.1) connector terminals 1A and 1B, and passenger-side air bag module (inflator No.2) connector terminals 2A and 2B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1048, B1925, B1933, B1935 and/or B1938 indicated? 	No	<p style="text-align: center;">Replace the passenger-side air bag module.</p> <p style="text-align: center;">(See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .)</p>
4	<p><u>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE AIR BAG MODULE AND SAS CONTROL MODULE</u></p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more . • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 1J and passenger-side air bag 	Yes	<p style="text-align: center;">Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>

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<p>module terminal 1 A, SAS control module terminal 1N and passenger-side air bag module terminal 1B for the following:</p> <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit ● Is the wiring harness normal? 	No	Replace the air bag wiring harness.
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DTC B1049, B1881, B1882, B1883, B1886

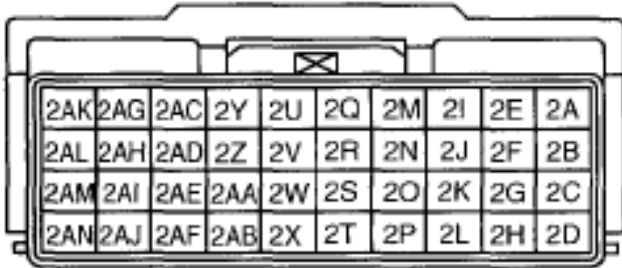
DTC B1049, B1881, B1882, B1883, B1886 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1049	Passenger-side pre-tensioner seat belt and other air bag module circuits short
	B1881	Passenger-side pre-tensioner seat belt circuit resistance high
	B1882	Passenger-side pre-tensioner seat belt circuit short to power supply
	B1883	Passenger-side pre-tensioner seat belt circuit short to body ground
	B1886	Passenger-side pre-tensioner seat belt circuit resistance low
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> ● 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. ● Resistance other than 1.0-9.7 ohms detected in passenger-side pre-tensioner seat belt circuit ● Malfunction in wiring harness between passenger-side pre-tensioner seat belt and SAS control module 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> ● Open or short circuit in wiring harness between passenger-side pre-tensioner seat belt and SAS control module <ul style="list-style-type: none"> ● Passenger-side pre-tensioner seat belt malfunction ● SAS control module malfunction 	

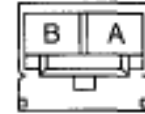
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**SAS CONTROL MODULE WIRING
HARNESS-SIDE CONNECTOR**



**PASSENGER-SIDE PRE-TENSIONER SEAT
BELT WIRING HARNESS-SIDE CONNECTOR**



DIAGNOSTIC PROCEDURE

DTC B1049, B1881, B1882, B1883, B1886 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT PASSENGER-SIDE PRE-TENSIONER SEAT BELT</p> <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. <p>(See <u>PID/DATA MONITOR TABLE</u>.)</p> <ul style="list-style-type: none"> ○ RES_PT_P • Is the resistance of the passenger-side pre-tensioner seat belt normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	<p style="text-align: center;">Yes</p> <p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u>.)</p> <hr/> <p style="text-align: center;">No</p> <p style="text-align: center;">Go to the next step.</p>
	<p>INSPECT PASSENGER-SIDE PRE-TENSIONER SEAT BELT CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u>.)</p>	<p style="text-align: center;">Yes</p> <p>Replace the air bag wiring harness.</p>

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2	<p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more . • Remove the B-pillar lower trim (RH). (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side pre-tensioner seat belt connector. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the passenger-side pre-tensioner seat belt connector? 	No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE PRE-TENSIONER SEAT BELT OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to passenger-side pre-tensioner seat belt connector terminals A and B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1049, B1881, B1882, B1883, and/or B1886 indicated? 	Yes	Go to the next step.
		No	<p>Replace the passenger-side pre-tensioner seat belt. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .)</p>
	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE PRE-TENSIONER SEAT BELT AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT</u> 		

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4	<p><u>REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 2E and passenger-side pretensioner seat belt terminal A, SAS control module terminal 2A and passenger-side pretensioner seat belt terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Replace the air bag wiring harness.</p>

DTC B104B, B104E, B1051, U2017

DTC B104B, B104E, B1051, U2017 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B104B	Driver-side side air bag sensor No.1 and other sensor circuits short to power supply
	B104E	Driver-side side air bag sensor No.1 circuit open or short
	B1051	Driver-side side air bag sensor No.1 (internal circuit abnormal)
	U2017	Driver-side side air bag sensor No.1 (communication error)

WARNING:

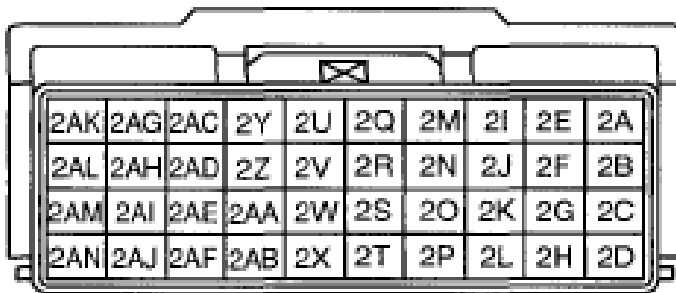
- Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When

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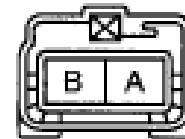
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DETECTION CONDITION	<p>performing an inspection, always follow the inspection procedure.</p> <ul style="list-style-type: none"> • Malfunction in wiring harness between driver-side side air bag sensor No.1 and SAS control module • Malfunction in driver-side side air bag sensor No.1 circuit
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in wiring harness between driver-side side air bag sensor No.1 and SAS control module <ul style="list-style-type: none"> • Driver-side side air bag sensor No.1 malfunction • SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE SIDE AIR BAG SENSOR NO. 1 WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B104B, B104E, B1051, U2017 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR NO.1 CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See AIR BAG SYSTEM SERVICE WARNINGS .)</p>	<p>Yes Replace the air bag wiring harness.</p>

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	<p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the driver-side side air bag sensor No.1 connector. • Is there any malfunction of the driver-side side air bag sensor No.1 connector? 	<p>No</p>	<p>Go to the next step.</p>
<p>2</p>	<p>INSPECT WIRING HARNESS BETWEEN DRIVER-SIDE SIDE AIR BAG SENSOR NO.1 AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) 	<p>Yes</p>	<p>Replace the driver-side side air bag sensor No.1, then go to the next step. (See <u>SIDE AIR BAG SENSOR NO. 1 REMOVAL/INSTALLATION</u> .)</p>

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	<ul style="list-style-type: none"> • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver-side side air bag sensor No.1 connector. • Inspect the wiring harnesses between SAS control module terminal 20 and driver-side side air bag sensor No.1 terminal A, SAS control module terminal 2S and driver-side side air bag sensor No.1 terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	No	Replace the air bag wiring harness.
3	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Connect the SAS control module connector. • Connect the driver and passenger-side pretensioner seat belt connectors. • Connect the driver-side side air bag sensor No.1 connector. • Connect the driver and passenger-side curtain air bag module connectors. • Connect the driver and passenger-side front seat connectors. • Connect the passenger-side air bag module connector. • Connect the clock spring connector. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B104B, B104E, B1051 and/or U2017 indicated? 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

DTC B104C, B104F, B1050, U2018

DTC B104C, B104F, B1050, U2018 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B104C	Passenger-side side air bag sensor No.1 and other sensor circuits short to power supply
	B104F	Passenger-side side air bag sensor No.1 (internal circuit abnormal)
	B1050	Passenger-side side air bag sensor No.1 circuit open or short
	U2018	Passenger-side side air bag sensor No.1 (communication error)

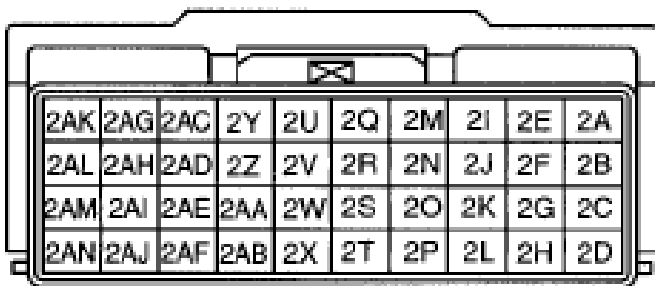
WARNING:

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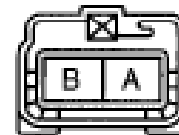
2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

DETECTION CONDITION	<ul style="list-style-type: none"> 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. Malfunction in wiring harness between passenger-side side air bag sensor No.1 and SAS control module Malfunction in passenger-side side air bag sensor No.1 circuit
POSSIBLE CAUSE	<ul style="list-style-type: none"> Open or short circuit in wiring harness between passenger-side side air bag sensor No.1 and SAS control module <ul style="list-style-type: none"> Passenger-side side air bag sensor No.1 malfunction SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PASSENGER-SIDE SIDE AIR BAG SENSOR NO. 1 WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B104C, B104F, B1050, U2018 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
	<p>INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR NO.1 CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See AIR BAG SYSTEM SERVICE)</p>	<p>Yes Replace the air bag wiring harness.</p>

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2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

<p align="center">1</p>	<p><u>WARNINGS .)</u></p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS .)</u></p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the B-pillar lower trim (RH). (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION .)</u> • Disconnect the passenger-side side air bag sensor No.1 connector. (See <u>SIDE AIR BAG SENSOR NO. 1 REMOVAL/INSTALLATION .)</u> • Is there any malfunction of the passenger-side side air bag sensor No.1 connector? 	<p align="center">No</p>	<p align="center">Go to the next step.</p>
<p align="center">2</p>	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE SIDE AIR BAG SENSOR NO.1 AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION .)</u> • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION .)</u> • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION .)</u> • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION .)</u> • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION .)</u> • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION .)</u> 	<p align="center">Yes</p>	<p>Replace the passenger-side side air bag sensor No.1, then go to the next step. (See <u>SIDE AIR BAG SENSOR NO. 1 REMOVAL/INSTALLATION .)</u></p>

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	<ul style="list-style-type: none"> • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side side air bag sensor No.1 connector. • Inspect the wiring harnesses between SAS control module terminal 2K and passenger-side side air bag sensor No.1 terminal A, SAS control module terminal 2G and passenger-side side air bag sensor No.1 terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	No	Replace the air bag wiring harness.
3	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Connect the SAS control module connector. • Connect the driver and passenger-side pretensioner seat belt connectors. • Connect the passenger-side side air bag sensor No.1 connector. • Connect the driver and passenger-side curtain air bag module connectors. • Connect the driver and passenger-side front seat connectors. • Connect the passenger-side air bag module connector. • Connect the clock spring connector. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B104C, B104F, B1050 and/or U2018 indicated? 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

DTC B104D, B2226, B2227, B2855

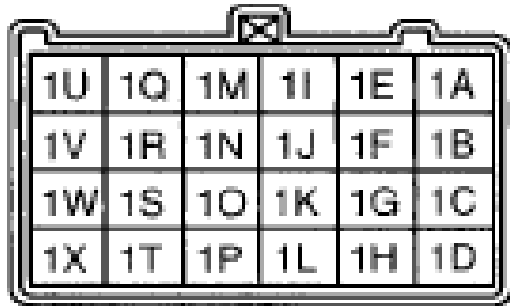
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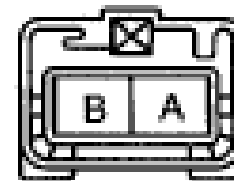
DTC B104D, B2226, B2227, B2855 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B104D	Crash zone sensor and other sensor circuits short to power supply
	B2226	Crash zone sensor (internal circuit abnormal)
	B2227	Crash zone sensor (communication error)
	B2855	Crash zone sensor circuit short
DETECTION CONDITION		<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Malfunction in wiring harness between crash zone sensor and SAS control module • Malfunction in crash zone sensor circuit
POSSIBLE CAUSE		<ul style="list-style-type: none"> • Open or short circuit in wiring harness between crash zone sensor and SAS control module <ul style="list-style-type: none"> • Crash zone sensor malfunction • SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



CRASH ZONE SENSOR WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B104D, B2226, B2227, B2855 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
	INSPECT CRASH ZONE SENSOR CONNECTOR	

<p>1</p>	<p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the crash zone sensor connector. (See <u>CRASH ZONE SENSOR REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the crash zone sensor connector? 	<p>Yes</p> <p>No</p>	<p>Replace the air bag wiring harness.</p> <p>Go to the next step.</p>
	<p>INSPECT WIRING HARNESS BETWEEN CRASH ZONE SENSOR AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) 	<p>Yes</p>	<p>Replace the crash zone sensor, then go to the next step. (See <u>CRASH ZONE SENSOR REMOVAL/INSTALLATION</u> .)</p>

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2	<ul style="list-style-type: none"> • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harnesses between SAS control module terminal 1W and crash zone sensor terminal A, SAS control module terminal 1S and crash zone sensor terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	No	Replace the air bag wiring harness.
3	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Connect the SAS control module connector. • Connect the driver and passenger-side pretensioner seat belt connectors. • Connect the driver and passenger-side curtain air bag module connectors. • Connect the driver and passenger-side front seat connectors. • Connect the passenger-side air bag module connector. • Connect the clock spring connector. • Connect the crash zone sensor connector. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Is DTC B104D, B2226, B2227 and/or B2855 indicated? 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

DTC B1054, B1877, B1878, B1879, B1885

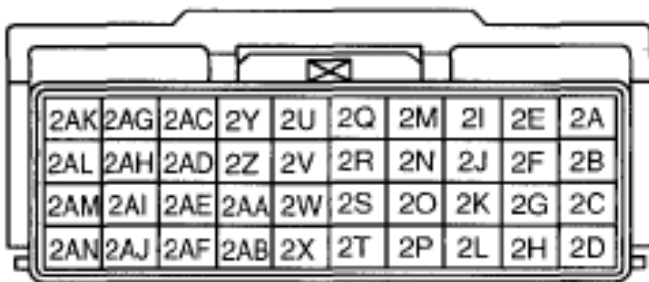
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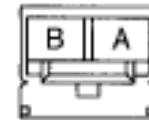
DTC B1054, B1877, B1878, B1879, B1885 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1054	Driver-side pre-tensioner seat belt and other air bag module circuits short
	B1877	Driver-side pre-tensioner seat belt circuit resistance high
	B1878	Driver-side pre-tensioner seat belt circuit short to power supply
	B1879	Driver-side pre-tensioner seat belt circuit short to body ground
	B1885	Driver-side pre-tensioner seat belt circuit resistance low
DETECTION CONDITION		<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Resistance other than 1.0-9.7 ohms detected in driver-side pre-tensioner seat belt circuit • Malfunction in the wiring harness between driver-side pre-tensioner seat belt and SAS control module
POSSIBLE CAUSE		<ul style="list-style-type: none"> • Open or short circuit in wiring harness between driver-side pre-tensioner seat belt and SAS control module • Driver-side pre-tensioner seat belt malfunction • SAS control module malfunction

SAS CONTROL MODULE WIRING
HARNESS-SIDE CONNECTOR



DRIVER-SIDE PRE-TENSIONER SEAT BELT
WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1054, B1877, B1878, B1879, B1885 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
	INSPECT DRIVER-SIDE PRE-TENSIONER SEAT BELT	

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1	<ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. (See <u>PID/DATA MONITOR TABLE.</u>) <ul style="list-style-type: none"> ○ RES_PT_D • Is the resistance of the driver-side pre-tensioner seat belt normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION .</u>)
		No	Go to the next step.
2	<p>INSPECT DRIVER-SIDE PRE-TENSIONER SEAT BELT CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS .</u>)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS .</u>)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the B-pillar lower trim (LH). (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION .</u>) • Disconnect the driver-side pre-tensioner seat belt connector. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION .</u>) • Is there any malfunction of the driver-side pre-tensioner seat belt connector? 	Yes	Replace the air bag wiring harness.
		No	Go to the next step.
	<p>VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE PRE-TENSIONER SEAT BELT OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to driver-side pre-tensioner seat belt connector 	Yes	Go to the next step.

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3	<p>terminals A and B.</p> <ul style="list-style-type: none"> • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1054, B1877, B1878, B1879, and/or B1885 indicated? 	No	<p>Replace the driver-side pre-tensioner seat belt. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .)</p>
4	<p>INSPECT WIRING HARNESS BETWEEN DRIVER-SIDE PRE-TENSIONER SEAT BELT AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>

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<ul style="list-style-type: none"> • Inspect the wiring harness between SAS control module terminal 2J and driver-side pre-tensioner seat belt terminal A, SAS control module terminal 2N and driver-side pre-tensioner seat belt terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	No	Replace the air bag wiring harness.
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DTC B1055, B1996, B1997, B1998, B1999

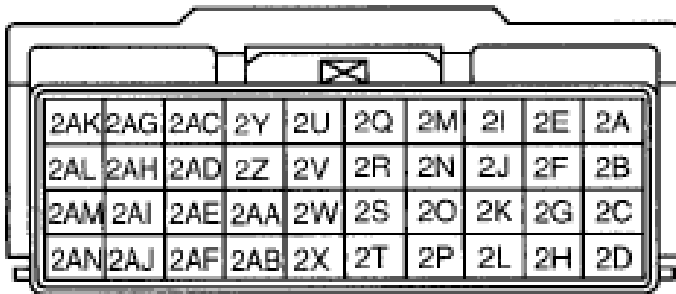
DTC B1055, B1996, B1997, B1998, B1999 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1055	Passenger-side side air bag module and other air bag module circuits short
	B1996	Passenger-side side air bag module circuit short to power supply
	B1997	Passenger-side side air bag module circuit short to body ground
	B1998	Passenger-side side air bag module circuit resistance high
	B1999	Passenger-side side air bag module circuit resistance low
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Resistance other than 1.0-9.7 ohms detected in passenger-side side air bag module circuit • Malfunction in wiring harness between passenger-side side air bag module and SAS control module 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in wiring harness between passenger-side side air bag module and SAS control module <ul style="list-style-type: none"> • Passenger-side side air bag module malfunction • SAS control module malfunction 	

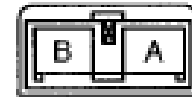
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2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PASSENGER-SIDE SIDE AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1055, B1996, B1997, B1998, B1999 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT PASSENGER-SIDE SIDE AIR BAG MODULE</p> <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. <p>(See <u>PID/DATA MONITOR TABLE.</u>)</p> <ul style="list-style-type: none"> ○ RES_SAB_P • Is the resistance of the passenger-side side air bag module normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	<p style="text-align: center;">Yes</p> <p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION .</u>)</p> <hr/> <p style="text-align: center;">No</p> <p style="text-align: center;">Go to the next step.</p>
	<p>INSPECT PASSENGER-SIDE SIDE AIR BAG MODULE CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS .</u>)</p>	<p style="text-align: center;">Yes</p> <p>Replace the air bag wiring harness.</p>

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2	<p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the passenger-side side air bag module connector. (See <u>SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the passenger-side side air bag module connector? 	No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE SIDE AIR BAG MODULE OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to passenger-side side air bag module connector terminals A and B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1055, B1996, B1997, B1998 and/or B1999 indicated? 	Yes	Go to the next step.
	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE SIDE AIR BAG MODULE AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module 	No	<p>Replace the passenger-side side air bag module. (See <u>SIDE AIR BAG SENSOR NO. 1 REMOVAL/INSTALLATION</u> .)</p>
			<p>Replace the SAS control module. (See</p>

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4	<p>connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • Disconnect the driver-side seat connector. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 21 and passenger-side side air bag module terminal A, SAS control module terminal 2M and passenger-side side air bag module terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	<p><u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Replace the air bag wiring harness.</p>

DTC B1056, B2777, B2778, B2779, B2780

DTC B1056, B2777, B2778, B2779, B2780 DETECTION CONDITION AND POSSIBLE CAUSE

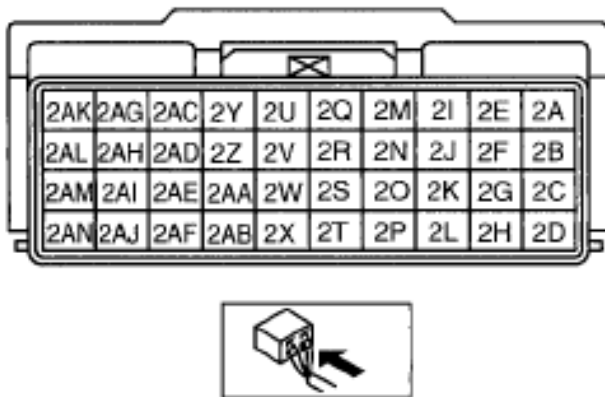
DTC	B1056	Passenger-side curtain air bag module and other air bag module circuits short
	B2777	Passenger-side curtain air bag module circuit resistance low
	B2778	Passenger-side curtain air bag module circuit resistance high
	B2779	Passenger-side curtain air bag module circuit short to body ground
	B2780	Passenger-side curtain air bag module circuit short to power supply
DETECTION	<p>WARNING:</p> <ul style="list-style-type: none"> • 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. 	

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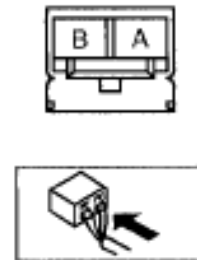
2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

CONDITION	<ul style="list-style-type: none"> Resistance other than 1.0-9.7 ohms detected in passenger-side curtain air bag module circuit Malfunction in wiring harness between passenger-side curtain air bag module and SAS control module
POSSIBLE CAUSE	<ul style="list-style-type: none"> Open or short circuit in wiring harness between passenger-side curtain air bag module and SAS control module <ul style="list-style-type: none"> Passenger-side curtain air bag module malfunction SAS control module malfunction

SAS CONTROL MODULE WIRING
HARNESS-SIDE CONNECTOR



PASSENGER-SIDE CURTAIN AIR BAG MODULE
WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1056, B2777, B2778, B2779, B2780 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT PASSENGER-SIDE CURTAIN AIR BAG MODULE <ul style="list-style-type: none"> Using the M-MDS, verify the following PID/DATA monitor. (See <u>PID/DATA MONITOR TABLE.</u>) <ul style="list-style-type: none"> RES_CAB_P Is the resistance of the passenger-side curtain air bag module normal? <ul style="list-style-type: none"> Resistance: 1.0-9.7 ohms 	Yes: Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION .</u>) No: Go to the next step.
	INSPECT PASSENGER-SIDE CURTAIN AIR BAG MODULE CONNECTOR <p>WARNING:</p>	

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2	<ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p><u>(See AIR BAG SYSTEM SERVICE WARNINGS .)</u></p> <p><u>(See AIR BAG SYSTEM SERVICE CAUTIONS .)</u></p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION .)</u> • Is there any malfunction of the passenger-side curtain air bag module connector? 	Yes	Replace the air bag wiring harness.
		No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE CURTAIN AIR BAG MODULE OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to passenger-side curtain air bag module connector terminals A and B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1056, B2777, B2778, B2779 and/or B2780 indicated? 	Yes	Go to the next step.
		No	Replace the passenger-side curtain air bag module. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION .)</u>
	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE CURTAIN AIR BAG MODULE AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION .)</u> 		

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4	<ul style="list-style-type: none"> • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver-side curtain air bag module connector. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 2AL and passenger-side curtain air bag module terminal A, SAS control module terminal 2AH and passenger-side curtain air bag module terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Replace the air bag wiring harness.</p>

DTC B1057, B1916, B1932, B1934, B1936

DTC B1057, B1916, B1932, B1934, B1936 DETECTION CONDITION AND POSSIBLE CAUSE

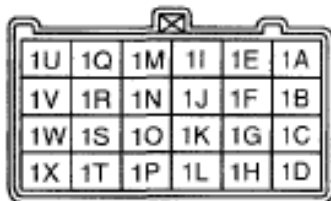
DTC	B1057	Driver-side air bag module (inflator No.1) and other air bag module circuits short
	B1916	Driver-side air bag module (inflator No.1) circuit short to power supply
	B1932	Driver-side air bag module (inflator No.1) circuit resistance high
	B1934	Driver-side air bag module (inflator No.1) circuit resistance low

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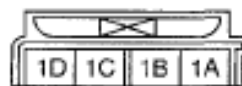
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	B1936	Driver-side air bag module (inflator No.1) circuit short to body ground
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • Detection conditions are for understanding the DTC outline before performing an inspection. Performing 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. • Resistance other than 1.5-9.7 ohms detected in driver-side air bag module (inflator No.1) circuit • Malfunction in wiring harness between driver-side air bag module (inflator No.1) and SAS control module 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in wiring harness between clock spring and SAS control module <ul style="list-style-type: none"> • Clock spring malfunction • Driver-side air bag module malfunction • SAS control module malfunction 	

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



CLOCK SPRING WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR (CLOCK SPRING) (INFLATOR NO.1) (INFLATOR NO.2)



DIAGNOSTIC PROCEDURE

DTC B1057, B1916, B1932, B1934, B1936 DIAGNOSTIC PROCEDURE

STEP	INSPECTION		ACTION
1	<p>INSPECT DRIVER-SIDE AIR BAG MODULE</p> <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. (See PID/DATA MONITOR TABLE.) <ul style="list-style-type: none"> ○ RES_AB_D ○ Is the resistance of the driver-side air bag module (inflator No.1) normal? • Resistance: 1.5-9.7 ohms 	Yes	<p>Replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION .)</p>
		No	<p>Go to the next step.</p>

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2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

2	<p>INSPECT DRIVER-SIDE AIR BAG MODULE CONNECTOR (CLOCK SPRING)</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the driver-side air bag module connector. (See <u>DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the driver-side air bag module (inflator No.1) connector? 	Yes	Replace the air bag wiring harness and/or clock spring.
	No	Go to the next step.	
3	<p>VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE AIR BAG MODULE OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to driver-side air bag module (inflator No.1) connector terminals 3A and 3B, and driver-side air bag module (inflator No.2) connector terminals 4A and 4B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1057, B1916, B1932, B1934 and/or B1936? 	Yes	Go to the next step.
	No	<p>Replace the driver-side air bag module.</p> <p>(See <u>DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .)</p>	
	<p>INSPECT CLOCK SPRING</p> <ul style="list-style-type: none"> • Inspect the clock spring. 	Yes	Go to the next step.

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4	<p>(See <u>CLOCK SPRING INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Is the clock spring normal? 	No	<p>Replace the clock spring. (See <u>CLOCK SPRING REMOVAL/INSTALLATION</u> .)</p>
5	<p>INSPECT WIRING HARNESS BETWEEN CLOCK SPRING AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 1M and clock spring terminal 1D, SAS control module terminal 11 and clock spring terminal 1C for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Replace the air bag wiring harness.</p>

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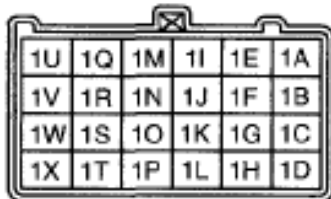
2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

DTC B1058, B2228, B2230, B2232, B2234

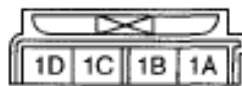
DTC B1058, B2228, B2230, B2232, B2234 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1058	Driver-side air bag module (inflator No.2) and other air bag module circuits short
	B2228	Driver-side air bag module (inflator No.2) circuit short to body ground
	B2230	Driver-side air bag module (inflator No.2) circuit short to power supply
	B2232	Driver-side air bag module (inflator No.2) circuit resistance high
	B2234	Driver-side air bag module (inflator No.2) circuit resistance low
DETECTION CONDITION		<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Resistance other than 1.5-9.7 ohms detected in driver-side air bag module (inflator No.2) circuit • Malfunction in wiring harness between driver-side air bag module (inflator No.2) and SAS control module
POSSIBLE CAUSE		<ul style="list-style-type: none"> • Open or short circuit in wiring harness between clock spring and SAS control module <ul style="list-style-type: none"> • Clock spring malfunction • Driver-side air bag module malfunction • SAS control module malfunction

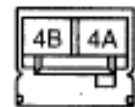
SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



CLOCK SPRING WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR (CLOCK SPRING) (INFLATOR NO.1) (INFLATOR NO.2)



DIAGNOSTIC PROCEDURE

DTC B1058, B2228, B2230, B2232, B2234 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
	<p>INSPECT DRIVER-SIDE AIR BAG MODULE (INFLATOR NO.2)</p> <ul style="list-style-type: none"> • Using the M-MDS, verify the following 	<p>Replace the SAS control module. (See</p>

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1	<p>PID/DATA monitor.</p> <p>(See <u>PID/DATA MONITOR TABLE.</u>)</p> <ul style="list-style-type: none"> ○ RES_AB2_D ● Is the resistance of the driver-side air bag module normal? <ul style="list-style-type: none"> ○ Resistance: 1.5-9.7 ohms 	Yes	<u>SAS CONTROL MODULE REMOVAL/INSTALLATION .)</u>
		No	Go to the next step.
2	<p>INSPECT DRIVER-SIDE AIR BAG MODULE CONNECTOR (CLOCK SPRING)</p> <p>WARNING:</p> <ul style="list-style-type: none"> ● Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS .)</u></p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS .)</u></p> <ul style="list-style-type: none"> ● Turn the ignition switch to the LOCK position. ● Disconnect the negative battery cable and wait for 1 min or more. ● Disconnect the driver-side air bag module connector. (See <u>DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION .)</u> ● Is there any malfunction of the driver-side air bag module connector? 	Yes	Replace the air bag wiring harness.
		No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE AIR BAG MODULE (INFLATOR NO.2) OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> ● Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to driver-side air bag module (inflator No.1) connector terminals 3A and 3B, and driver-side air bag module (inflator No.2) connector terminals 4A and 4B. ● Set the resistance of the SST (Fuel and 	Yes	Go to the next step.
		No	Replace the driver-side air bag module. (See <u>DRIVER-SIDE AIR BAG MODULE</u>)

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	<p>thermometer checker) to the 2-ohm position.</p> <ul style="list-style-type: none"> • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1058, B2228, B2230, B2232 and/or B2234 indicated? 		<u>REMOVAL/INSTALLATION</u> .)
4	<p>INSPECT CLOCK SPRING</p> <ul style="list-style-type: none"> • Inspect the clock spring. <p>(See <u>CLOCK SPRING INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Is the clock spring normal? 	Yes	Go to the next step.
		No	<p>Replace the clock spring.</p> <p>(See <u>CLOCK SPRING REMOVAL/INSTALLATION</u> .)</p>
5	<p>INSPECT WIRING HARNESS BETWEEN CLOCK SPRING AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>

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<p>module terminal 1Q and clock spring terminal 1B, SAS control module terminal 1U and clock spring terminal 1A for the following:</p> <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit <p>● Is the wiring harness normal?</p>	No	Replace the air bag wiring harness.
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DTC B1059, B2229, B2231, B2233, B2235

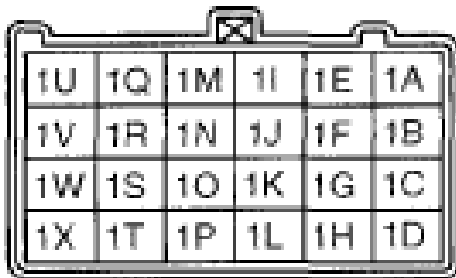
DTC B1059, B2229, B2231, B2233, B2235 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1059	Passenger-side air bag module (inflator No.2) and other air bag module circuits short
	B2229	Passenger-side air bag module (inflator No.2) circuit short to body ground
	B2231	Passenger-side air bag module (inflator No.2) circuit short to power supply
	B2233	Passenger-side air bag module (inflator No.2) circuit resistance high
	B2235	Passenger-side air bag module (inflator No.2) circuit resistance low
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> ● 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. ● Resistance other than 1.0-9.7 ohms detected in passenger-side side air bag module circuit ● Malfunction in wiring harness between passenger-side air bag module (inflator No.2) and SAS control module 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> ● Open or short circuit in wiring harness between passenger-side air bag module (inflator No.2) and SAS control module <ul style="list-style-type: none"> ● Passenger-side air bag module malfunction ● SAS control module malfunction 	

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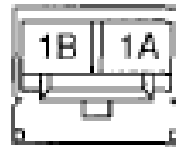
SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PASSENGER-SIDE AIR BAG MODULE WIRING HARNESS-SIDE CONNECTOR

(INFLATOR NO.1)

(INFLATOR NO.2)



DIAGNOSTIC PROCEDURE

DTC B1059, B2229, B2231, B2233, B2235 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT PASSENGER-SIDE AIR BAG MODULE (INFLATOR NO.2) <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. <p>(See <u>PID/DATA MONITOR TABLE.</u>)</p> <ul style="list-style-type: none"> ○ RES_AB2_P <ul style="list-style-type: none"> • Is the resistance of the passenger-side air bag module normal? <ul style="list-style-type: none"> ○ Resistance: 1.0-9.7 ohms 	<p>Yes</p> <p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
	<p>No</p> <p style="text-align: center;">Go to the next step.</p>	
	INSPECT PASSENGER-SIDE AIR BAG MODULE (INFLATOR NO.2) CONNECTOR <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag system components. 	<p>Yes</p> <p>Replace the air bag wiring harness.</p>

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2	<p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the passenger-side air bag module connector? 	No	Go to the next step.
3	<p>VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE AIR BAG MODULE (INFLATOR NO.2) OR RELATED WIRING HARNESS</p> <ul style="list-style-type: none"> • Connect the leads of the SST (Fuel and thermometer checker) or apply 2-ohm resistance to passenger-side air bag module (inflator No.1) connector terminals 1A and • 1B, and passenger-side air bag module (inflator No.2) connector terminals 2A and 2B. • Set the resistance of the SST (Fuel and thermometer checker) to the 2-ohm position. • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B1059, B2229, B2231, B2233 and/or B2235 indicated? 	Yes	Go to the next step.
	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE AIR BAG MODULE AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) 	No	<p>Replace the passenger-side air bag module.</p> <p>(See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .)</p>

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4	<ul style="list-style-type: none"> • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between SAS control module terminal 1V and passenger-side air bag module terminal 2A, SAS control module terminal 1R and passenger-side air bag module terminal 2B for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	<p>Yes</p> <p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		<p>No</p> <p>Replace the air bag wiring harness.</p>

DTC B105A

DTC B105A DETECTION CONDITION AND POSSIBLE CAUSE

DTC B105A	SAS control module activation (deployment) control frequency error
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection with only detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure. • The SAS control module has enabled the air bag module or pre-tensioner seat belt to operate (deploy) five times or more.

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POSSIBLE CAUSE

- SAS control module malfunction

DIAGNOSTIC PROCEDURE

DTC B105A DIAGNOSTIC PROCEDURE

ACTION

- Replace the SAS control module

(See SAS CONTROL MODULE REMOVAL/INSTALLATION .)

DTC B105B, B110C, B1144, B1145

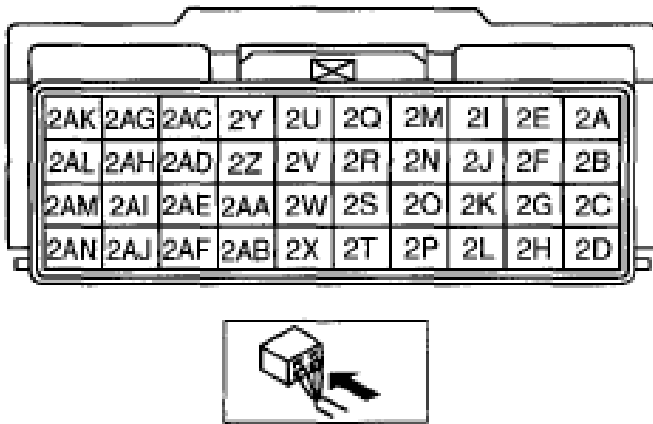
DTC B105B, B110C, B1144, B1145 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B105B	Driver-side side air bag sensor No.2 and other sensor circuits short to power supply
	B110C	Driver-side side air bag sensor No.2 circuit open or short
	B1144	Driver-side side air bag sensor No.2 (internal circuit abnormal)
	B1145	Driver-side side air bag sensor No.2 (communication error)
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • 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. • Malfunction in wiring harness between driver-side side air bag sensor No.2 and SAS control module • Malfunction in driver-side side air bag sensor No.2 circuit 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in wiring harness between driver-side side air bag sensor No.2 and SAS control module <ul style="list-style-type: none"> • Driver-side side air bag sensor No.2 malfunction • SAS control module malfunction 	

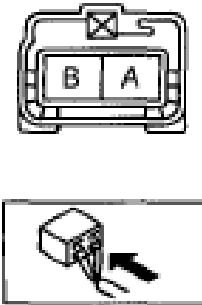
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SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DRIVER-SIDE SIDE AIR BAG SENSOR NO. 2 WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B105B, B110C, B1144, B1145 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the driver-side side air bag sensor No.2 connector. (See <u>SIDE AIR BAG SENSOR NO. 2 REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the driver-side side 	<p style="text-align: center;">Yes</p> <p>Replace the air bag wiring harness.</p> <hr/> <p style="text-align: center;">No</p> <p style="text-align: center;">Go to the next step.</p>

	air bag sensor No.2 connector?	
<p>INSPECT WIRING HARNESS BETWEEN DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) 	2	<p>Yes</p> <p>Replace the driver-side side air bag sensor No.2, then go to the next step. (See <u>SIDE AIR BAG SENSOR NO. 2 REMOVAL/INSTALLATION</u> .)</p>
<ul style="list-style-type: none"> • Inspect the wiring harnesses between SAS control module terminal 2AM and driver-side side air bag sensor No.2 terminal A, SAS control module terminal 2AI and driver-side side air bag sensor No.2 terminal B for the following: <ul style="list-style-type: none"> ○ Short to ground 		<p>No</p> <p>Replace the air bag wiring harness.</p>

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	<ul style="list-style-type: none"> ○ Short to power supply ○ Open circuit ● Is the wiring harness normal? 		
3	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> ● Connect the SAS control module connector. ● Connect the driver and passenger-side pretensioner seat belt connectors. ● Connect the driver-side side air bag sensor No.2 connector. ● Connect the driver and passenger-side curtain air bag module connectors. ● Connect the driver and passenger-side front seat connectors. ● Connect the passenger-side air bag module connector. ● Connect the clock spring connector. ● Connect the negative battery cable. ● Turn the ignition switch to the ON position. ● Are DTCs B105B, B110C, B1144 and/or B1145 indicated? 	Yes	<p>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		No	DTC troubleshooting completed.

DTC B105F, B110D, B1146, B1147

DTC B105F, B110D, B1146, B1147 DETECTION CONDITION AND POSSIBLE CAUSE

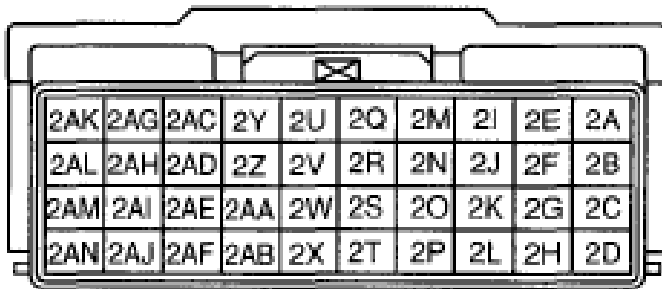
DTC	B105F	Passenger-side side air bag sensor No.2 and other sensor circuits short to power supply
	B110D	Passenger-side side air bag sensor No.2 circuit open or short
	B1146	Passenger-side side air bag sensor No.2 (internal circuit abnormal)
	B1147	Passenger-side side air bag sensor No.2 (communication error)
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> ● 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. ● Malfunction in wiring harness between passenger-side side air bag sensor No.2 and SAS control module ● Malfunction in passenger-side side air bag sensor No.2 circuit 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> ● Open or short circuit in wiring harness between passenger-side side air bag sensor No.2 and SAS control module ● Passenger-side side air bag sensor No.2 malfunction 	

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- SAS control module malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PASSENGER-SIDE SIDE AIR BAG SENSOR NO. 2 WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B105F, B110D, B1146, B1147 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT PASSENGER-SIDE SIDE AIR BAG SENSOR NO.2 CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the passenger-side side air bag sensor No.2 connector. (See <u>SIDE AIR BAG SENSOR NO. 2</u> 	<p style="text-align: center;">Yes</p> <p>Replace the air bag wiring harness.</p> <hr/> <p style="text-align: center;">No</p> <p style="text-align: center;">Go to the next step.</p>

	<p><u>REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • Is there any malfunction of the passenger-side side air bag sensor No.2 connector? 	
<p>2</p>	<p>INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE SIDE AIR BAG SENSOR NO.2 AND SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harnesses between SAS control module terminal 2AA and passenger-side side air bag sensor No.2 terminal A, SAS control module terminal 2AE and passenger-side side air bag sensor No.2 terminal B for the 	<p>Yes</p> <p>Replace the passenger-side side air bag sensor No.2, then go to the next step. (See <u>SIDE AIR BAG SENSOR NO. 2 REMOVAL/INSTALLATION</u> .)</p>

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	following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit ● Is the wiring harness normal? 	No	Replace the air bag wiring harness.
3	INSPECT SAS CONTROL MODULE <ul style="list-style-type: none"> ● Connect the SAS control module connector. ● Connect the driver and passenger-side pretensioner seat belt connectors. ● Connect the passenger-side side air bag sensor No.2 connector. ● Connect the driver and passenger-side curtain air bag module connectors. ● Connect the driver and passenger-side front seat connectors. ● Connect the passenger-side air bag module connector. ● Connect the clock spring connector. ● Connect the negative battery cable. ● Turn the ignition switch to the ON position. ● Are DTCs B105F, B110D, B1146 and/or B1147 indicated? 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

DTC B110E, B110F, B2856, B2886, B2887

DTC B110E, B110F, B2856, B2886, B2887 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B110E	Driver-side side air bag sensor No.2 ID mismatch
	B110F	Passenger-side side air bag sensor No.2 ID mismatch
	B2856	Crash zone sensor ID mismatch
	B2886	Passenger-side side air bag sensor No.1 ID mismatch
	B2887	Driver-side side air bag sensor No.1 ID mismatch
DETECTION CONDITION	WARNING: <ul style="list-style-type: none"> ● 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. ● The SAS control module detects an error of impact magnitude set in the sensor, which occurs due to installation mismatch of the crash zone sensor or side air bag sensors. 	

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POSSIBLE CAUSE

- Crash zone sensor misinstalled with wrong sensor
- Driver-side side air bag sensor No.1 misinstalled with wrong sensor
- Passenger-side side air bag sensor No.1 misinstalled with wrong sensor
- Driver-side side air bag sensor No.2 misinstalled with wrong sensor
- Passenger-side side air bag sensor No.2 misinstalled with wrong sensor

DIAGNOSTIC PROCEDURE

DTC B110E, B110F, B2856, B2886, B2887 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	<p>INSPECT EACH SENSOR FOR INSTALLATION POSITION</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Verify that the crash zone sensor or side air bag sensor is installed in the correct position. • Is each sensor installed correctly? 	Yes	Go to the next step.
		No	Install the each sensor correctly, then go to the next step.
2	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Are DTCs B110E, B110F, B2856, B2886 and/or B2887 indicated? 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	DTC troubleshooting completed.

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DTC B1231

DTC B1231 DETECTION CONDITION AND POSSIBLE CAUSE

DTC B1231	SAS control module activation (deployment) control freeze
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none">• Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection with only 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 determined collision

DIAGNOSTIC PROCEDURE

DTC B1231 DIAGNOSTIC PROCEDURE

ACTION
Replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION .)

DTC B1317, B1318

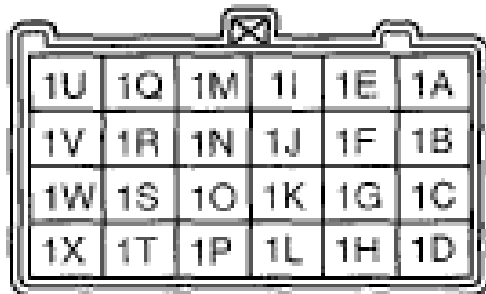
DTC B1317, B1318 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1317	SAS control module power supply voltage increases (18.1 V or more)
	B1318	SAS control module power supply voltage decreases (less than 8 V)
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none">• Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection with only detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.• When the SAS control module power supply voltage is not within 8-18 V.	
POSSIBLE CAUSE	<ul style="list-style-type: none">• Open or short circuit in wiring harness between battery and SAS control module<ul style="list-style-type: none">• SAS 7.5 A fuse malfunction• Battery malfunction• SAS control module malfunction	

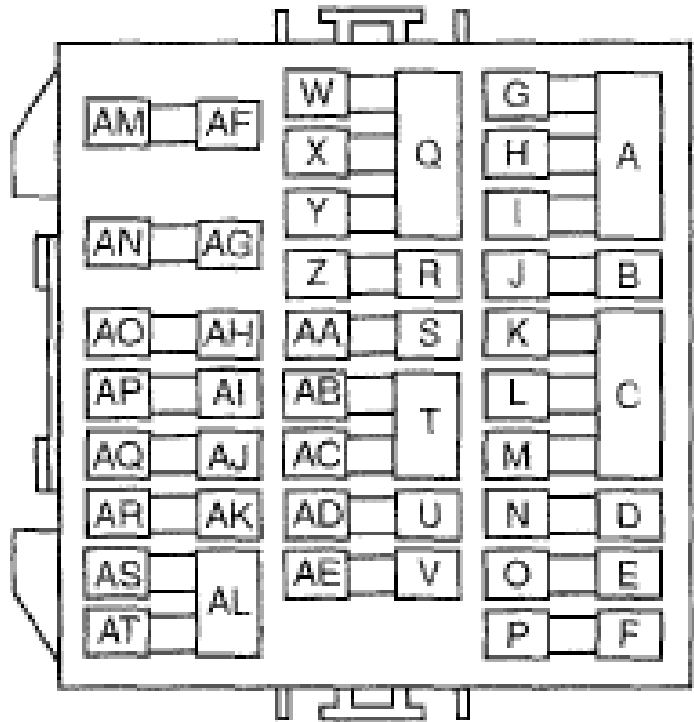
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SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



FUSE WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1317, B1318 DIAGNOSTIC PROCEDURE

Step	Inspection	Action
1	INSPECT FUSE <ul style="list-style-type: none"> • Remove the SAS 7.5 A fuse. • Is the fuse normal? 	Yes Go to the next step.
		No Replace the fuse.
2	INSPECT BATTERY <ul style="list-style-type: none"> • Measure the battery positive voltage. • Is the voltage 8 V-18 V? 	Yes Go to the next step.
		No The battery has a malfunction. Inspect the charge/discharge system.
3	INSPECT WIRING HARNESS BETWEEN BATTERY AND FUSE BLOCK	Yes Install the fuse, then go to the next step.

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	<ul style="list-style-type: none"> • Turn the ignition switch to the ON position. • Measure the fuse block terminal H voltage. • Is the voltage 8 V-18 V? 	No	Repair the wiring harness between the battery and fuse block.
4	<p>INSPECT SAS CONTROL MODULE</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can control module. accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. (See <u>FRONT</u> 	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)
		No	Repair the wiring harness between the

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<p><u>SEAT BELT REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Connect the negative battery cable. • Turn the ignition switch to the ON position. • Measure the voltage at the SAS control module terminal 1D. • Is the voltage 8 V-18 V? 	<p style="text-align: center;">fuse block and SAS</p>
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DTC B1342, B1921

DTC B1342, B1921 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1342	SAS control module (internal circuit abnormal)
	B1921	Air bag diagnostic ground circuit open
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection with only detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure. • Malfunction in the SAS control module internal circuit 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> • SAS control module malfunction 	

DIAGNOSTIC PROCEDURE

DTC B1342, B1921 DIAGNOSTIC PROCEDURE

ACTION
Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)

DTC B1868

DTC B1868 DETECTION CONDITION AND POSSIBLE CAUSE

DTC B1868	Air bag warning system light malfunction
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection with only detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.

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- Air bag warning system light malfunction.

DIAGNOSTIC PROCEDURE

DTC B1868 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>VERIFY THAT SAS CONTROL MODULE CONNECTOR IS CONNECTED</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Are all SAS control module connectors securely connected? 	<p>Yes Go to the next step.</p>
		<p>No Reconnect the connector properly, then go to the next step.</p>
2	<p>INSPECT DTCS IN SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Inspect the DTC for the SAS control module on-board diagnostic system. • Has DTC U0155, U0073 been recorded in memory? 	<p>Yes Perform the applicable DTC inspection. (See <u>DTC TABLE</u>.)</p>
		<p>No Go to the next step.</p>
3	<p>INSPECT INSTRUMENT CLUSTER</p> <ul style="list-style-type: none"> • Inspect the instrument cluster warning lights using check code. <p>(See <u>INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE</u> .)</p> <ul style="list-style-type: none"> • Are the check results okay? 	<p>Yes Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p>
		<p>No Repair or replace the instrument cluster according to inspection results.</p>

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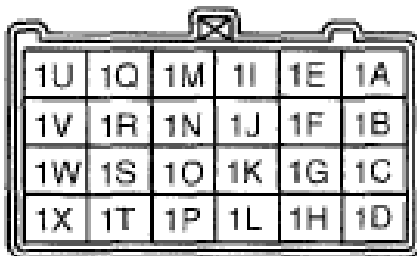
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DTC B1884, B1890

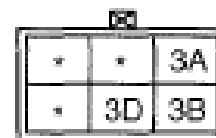
DTC B1884, B1890 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	B1884	Passenger air bag deactivation (PAD) indicator circuit open or short to body ground
	B1890	Passenger air bag deactivation (PAD) indicator circuit short to power supply
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> 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. Malfunction in PAD indicator circuit 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> Open or short circuit in wiring harness between information display and SAS control module <ul style="list-style-type: none"> Open circuit in wiring harness between battery and information display <ul style="list-style-type: none"> information display malfunction SAS control module malfunction 	

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



SEAT WEIGHT SENSOR CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1884, B1890 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT OPERATION OF PAD INDICATOR</p> <ul style="list-style-type: none"> Turn the ignition switch to the ON position. Does the PAD indicator illuminate? 	Yes Go to the next step.
		No Go to Step 5.
	INSPECT FUSE	Yes Install the fuse, then go to the next

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2	<ul style="list-style-type: none"> • Remove the METER 10 A fuse. • Is the fuse normal? 		step.
3	<p>INSPECT BATTERY</p> <ul style="list-style-type: none"> • Measure the battery positive voltage. • Is the voltage 9 V-16 V? 	No	Replace the fuse.
4	<p>INSPECT WIRING HARNESS BETWEEN BATTERY AND PAD INDICATOR</p> <ul style="list-style-type: none"> • Turn the ignition switch to the ON position. • Measure the information display connector terminal E voltage. • Is the voltage 9 V or more? 	Yes	Go to the next step.
5	<p>INSPECT WIRING HARNESS BETWEEN PAD INDICATOR AND SAS CONTROL MODULE</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner front buckles, which may seriously injure you. Read the service warnings before handling the air bag system components. <p>(See <u>AIR BAG SYSTEM SERVICE WARNINGS</u> .)</p> <p>(See <u>AIR BAG SYSTEM SERVICE CAUTIONS</u> .)</p> <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Remove the column cover. (See <u>COLUMN COVER REMOVAL/INSTALLATION</u> .) • Disconnect the clock spring connector. (See <u>COMBINATION SWITCH REMOVAL/INSTALLATION</u> .) • Remove the glove compartment. (See <u>GLOVE COMPARTMENT REMOVAL/INSTALLATION</u> .) • Disconnect the passenger-side air bag module connector. (See <u>PASSENGER-SIDE AIR</u> 	Yes	Go to the next step.

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	<p><u>BAG MODULE REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> • Disconnect the driver and passenger-side front seat connectors. (See <u>FRONT SEAT REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side curtain air bag module connectors. (See <u>CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION</u> .) • Remove the B-pillar lower trim. (See <u>B-PILLAR LOWER TRIM REMOVAL/INSTALLATION</u> .) • Disconnect the driver and passenger-side pretensioner seat belt connectors. (See <u>FRONT SEAT BELT REMOVAL/INSTALLATION</u> .) • Disconnect the SAS control module connectors. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Inspect the wiring harness between information display connector terminal K and SAS control module connector terminal 1G for the following: <ul style="list-style-type: none"> ○ Short to ground ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	No	Replace the air bag wiring harness.
6	<p>INSPECT PAD INDICATOR</p> <ul style="list-style-type: none"> • Disconnect the SAS control module connector. • Connect the information display connector. • Does the PAD indicator illuminate? 	Yes	Replace the information display. (See <u>INFORMATION DISPLAY REMOVAL/INSTALLATION</u> .)
		No	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)

DTC B2290

DTC B2290 DETECTION CONDITION AND POSSIBLE CAUSE

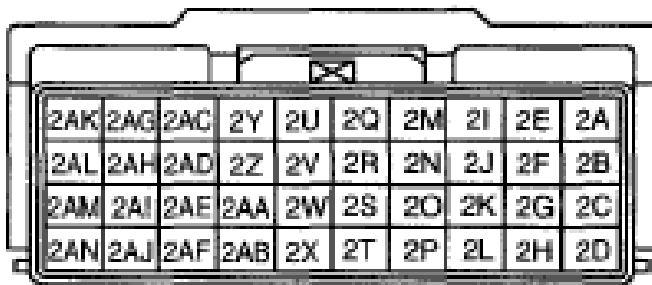
DTC B2290	Seat weight sensor signal malfunction
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.

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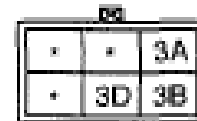
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	<ul style="list-style-type: none"> • Passenger sensing system circuit malfunction
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Seat weight sensor calibration not properly set • Communication error between SAS control module and seat weight sensor control module • Seat weight sensor control module internal malfunction • LH or RH seat weight sensor malfunction

SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



SEAT WEIGHT SENSOR CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DTC B2290 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT SEAT WEIGHT SENSOR CONTROL MODULE CONNECTOR</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally operate (deploy) the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the service warnings and cautions before handling the air bag system components. <p>(See AIR BAG SYSTEM SERVICE WARNINGS .)</p> <p>(See AIR BAG SYSTEM SERVICE CAUTIONS .)</p>	<p>Yes Repair or replace the wiring harness. After replacement, reperform the DTC inspection and verify that no DTCs are displayed.</p>

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	<ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable and wait for 1 min or more. • Disconnect the seat weight sensor control module connector. (See <u>SEAT WEIGHT SENSOR CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Is there any malfunction of the seat weight sensor control module connector? 	No	Go to the next step.
2	<p>INSPECT SEAT WEIGHT SENSOR CONTROL MODULE POWER SUPPLY CIRCUIT</p> <ul style="list-style-type: none"> • Turn the ignition switch to the ON position. • Measure voltage at terminal 3A of seat weight sensor control module connector. • Is voltage more than B+? 	No	<p style="text-align: center;">Go to the next step.</p> <p style="text-align: center;">If there is any malfunction in the wiring harnesses, repair or replace the applicable wiring harness.</p> <p style="text-align: center;">After replacement, reperform the DTC inspection and verify that no DTCs are displayed.</p>
3	<p>INSPECTION WIRING HARNESS</p> <ul style="list-style-type: none"> • Disconnect the SAS control module connector. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .) • Verify continuity in the following wiring harnesses: <ul style="list-style-type: none"> ○ Between SAS control module terminal 2AJ and seat weight sensor control module terminal 3D ○ Between seat weight sensor control module terminal 3B and body ground • Is the continuity normal? 	No	<p style="text-align: center;">Go to the next step.</p> <p style="text-align: center;">If there is any malfunction in the wiring harnesses, repair or replace the applicable wiring harness.</p> <p style="text-align: center;">After replacement, reperform the DTC inspection and verify that no DTCs are displayed.</p>
	<p>INSPECT PASSENGER SENSING SYSTEM</p>	Yes	<p style="text-align: center;">Go to the next step.</p> <p style="text-align: center;">Replace the following parts according to the M-MDS screen:</p> <ul style="list-style-type: none"> • If OCSFLT CAL is displayed:

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4	<ul style="list-style-type: none"> • Connect the seat weight sensor control module connector. • Connect the SAS control module. • Connect the negative battery cable. • Verify the following PIDs using the M-MDS. (See <u>PID/DATA MONITOR TABLE.</u>) <ul style="list-style-type: none"> ○ OCSFLT_CAL ○ OCSFLT_COM ○ OCSFLT_L ○ OCSFLT_MDL ○ OCSFLT_R • Do all PIDs display "OK"? 	No	<ul style="list-style-type: none"> ○ Perform seat weight sensor calibration (See <u>SEAT WEIGHT SENSOR CALIBRATION .</u>) • If OCSFLT_COM or OCSFLT_MDL is displayed: <ul style="list-style-type: none"> ○ Seat weight sensor control module (See <u>SEAT WEIGHT SENSOR CONTROL MODULE REMOVAL/INSTALLATION .</u>) • If OCSFLT_L is displayed: <ul style="list-style-type: none"> ○ Seat weight sensor (LH) (See: 09-13-3 FRONT SEAT DISASSEMBLY/ASSEMBLY.) • If OCSFLT_R is displayed: <ul style="list-style-type: none"> ○ Seat weight sensor (RH) (See <u>FRONT SEAT DISASSEMBLY/ASSEMBLY .</u>)
5	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Reperform the DTC inspection. • Is DTC B2290 indicated? 	Yes	<p>[Present malfunction diagnosis]</p> <ul style="list-style-type: none"> • Replace the SAS control module. <p>(See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION .</u>)</p> <p>[Past malfunction diagnosis]</p> <ul style="list-style-type: none"> • DTC troubleshooting completed.
		No	DTC troubleshooting completed.

DTC B2477

DTC B2477 DETECTION CONDITION AND POSSIBLE CAUSE

DTC B2477	Configuration error
DETECTION CONDITION	<p>WARNING:</p> <ul style="list-style-type: none"> • 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 configuration has not been performed correctly.
POSSIBLE	<ul style="list-style-type: none"> • SAS control module configuration error

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2008 RESTRAINTS On-Board Diagnostic (Restraints) - Mazda CX-9

CAUSE

- SAS control module malfunction

DIAGNOSTIC PROCEDURE

DTC B2477 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION				
1	INSPECT SAS CONTROL MODULE <ul style="list-style-type: none"> • Using the M-MDS, perform SAS control module configuration. (See <u>SAS CONTROL MODULE CONFIGURATION</u> .) • Is DTC B2477 indicated? 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50px;">Yes</td> <td>Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</td> </tr> <tr> <td style="text-align: center;">No</td> <td>DTC troubleshooting completed.</td> </tr> </table>	Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)	No	DTC troubleshooting completed.
Yes	Replace the SAS control module. (See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)					
No	DTC troubleshooting completed.					

DTC C1946, C1947, C1948, C1981, C1982

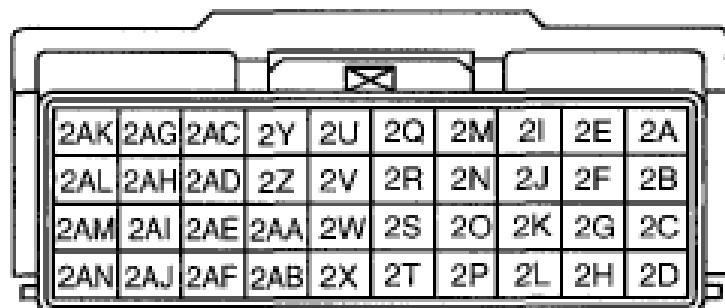
DTC C1946, C1947, C1948, C1981, C1982 DETECTION CONDITION AND POSSIBLE CAUSE

DTC	C1946	Seat track position sensor circuit open
	C1947	Seat track position sensor circuit short to body ground
	C1948	Seat track position sensor circuit resistance not within specification
	C1981	Seat track position sensor circuit malfunction
	C1982	Seat track position sensor circuit short to power supply
DETECTION CONDITION	WARNING: <ul style="list-style-type: none"> • 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. • Malfunction in seat track position sensor circuit. 	
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Malfunction of connector between seat track position sensor and SAS control module. • Open or short circuit in wiring harness between seat track position sensor and SAS control module. <ul style="list-style-type: none"> • Seat track position sensor malfunction • SAS control module malfunction 	

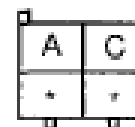
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SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



SEAT TRACK POSITION SENSOR WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC C1946, C1947, C1948, C1981, C1982 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT SEAT TRACK POSITION SENSOR CIRCUIT</p> <ul style="list-style-type: none"> • Using the M-MDS, verify the following PID/DATA monitor. <p>(See PID/DATA MONITOR TABLE.)</p> <ul style="list-style-type: none"> ○ TRAK_SW <ul style="list-style-type: none"> • Is the seat track position sensor circuit normal? 	<p>[Present malfunction diagnosis]</p> <ul style="list-style-type: none"> • Replace the SAS control module. <p>(See SAS CONTROL MODULE REMOVAL/INSTALLATION .)</p> <p>[Past malfunction diagnosis]</p> <ul style="list-style-type: none"> • DTC troubleshooting completed.
		Go to next step.
	<p>INSPECT WIRING HARNESS BETWEEN SEAT TRACK POSITION SENSOR AND SAS CONTROL MODULE</p> <p>WARNING:</p> <ul style="list-style-type: none"> • Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag 	

system components.

(See **AIR BAG SYSTEM SERVICE WARNINGS** .)

(See **AIR BAG SYSTEM SERVICE CAUTIONS** .)

- Turn the ignition switch to the LOCK position.
- Disconnect the negative battery cable and wait for **1 min or more**.
- Remove the column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
- Disconnect the clock spring connector. (See **COMBINATION SWITCH REMOVAL/INSTALLATION** .)
- 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** .)
- Disconnect the driver and passenger-side front seat connectors. (See **FRONT SEAT REMOVAL/INSTALLATION** .)
- Disconnect the driver and passenger-side curtain air bag module connectors. (See **CURTAIN AIR BAG MODULE 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** .)
- Disconnect the SAS control module connectors. (See **SAS CONTROL MODULE REMOVAL/INSTALLATION** .)
- Disconnect the seat track position sensor

Yes

Replace the seat track position sensor, then go to next step.

No

Replace wiring harness, then go to next step.

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	<p>connector</p> <ul style="list-style-type: none"> • Inspect the wiring harness between SAS control module terminal and seat track position sensor terminals for short to ground, short to power supply, and open circuit: <ul style="list-style-type: none"> ○ 2AB-A ○ 2AF-C • Is the wiring harness normal? 		
3	<p>INSPECT SAS CONTROL MODULE</p> <ul style="list-style-type: none"> • Connect the SAS control module connector. • Connect the clock spring connector. • Connect the passenger-side air bag module connector. • Connect the driver-and passenger-side front seat connectors. • Connect the driver-and passenger-side curtain air bag module connectors. • Connect the driver-and passenger-side pre tensioner seat belt connectors. • Connect the seat track position sensor connector. • Are DTCs C1946, C1947, C1948, C1981 and/or C1982 indicated? 	Yes	<p>[Present malfunction diagnosis]</p> <ul style="list-style-type: none"> • Replace the SAS control module. <p>(See <u>SAS CONTROL MODULE REMOVAL/INSTALLATION</u> .)</p> <p>[Past malfunction diagnosis]</p> <ul style="list-style-type: none"> • DTC troubleshooting completed.
		NO	DTC troubleshooting completed.