

2012 - Mazda6 - Restraints

DTC B1196:11/ B1196:13/ B1196:87/ B1196:96

System Malfunction Location

DTC	System Malfunction Location
M-MDS display	
B1196:11	Driver-side side air bag sensor No.2 circuit short to body ground
B1196:13	Driver-side side air bag sensor No.2 circuit short to power supply or open line
B1196:87	Invalid signal from driver-side side air bag sensor No.2
B1196:96	Driver-side side air bag sensor No.2 internal malfunction

Detection Condition

WARNING:

- Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.
- Wiring harness between the driver-side side air bag sensor No.2 and SAS control module has a malfunction
- Driver-side side air bag sensor No.2 has a malfunction

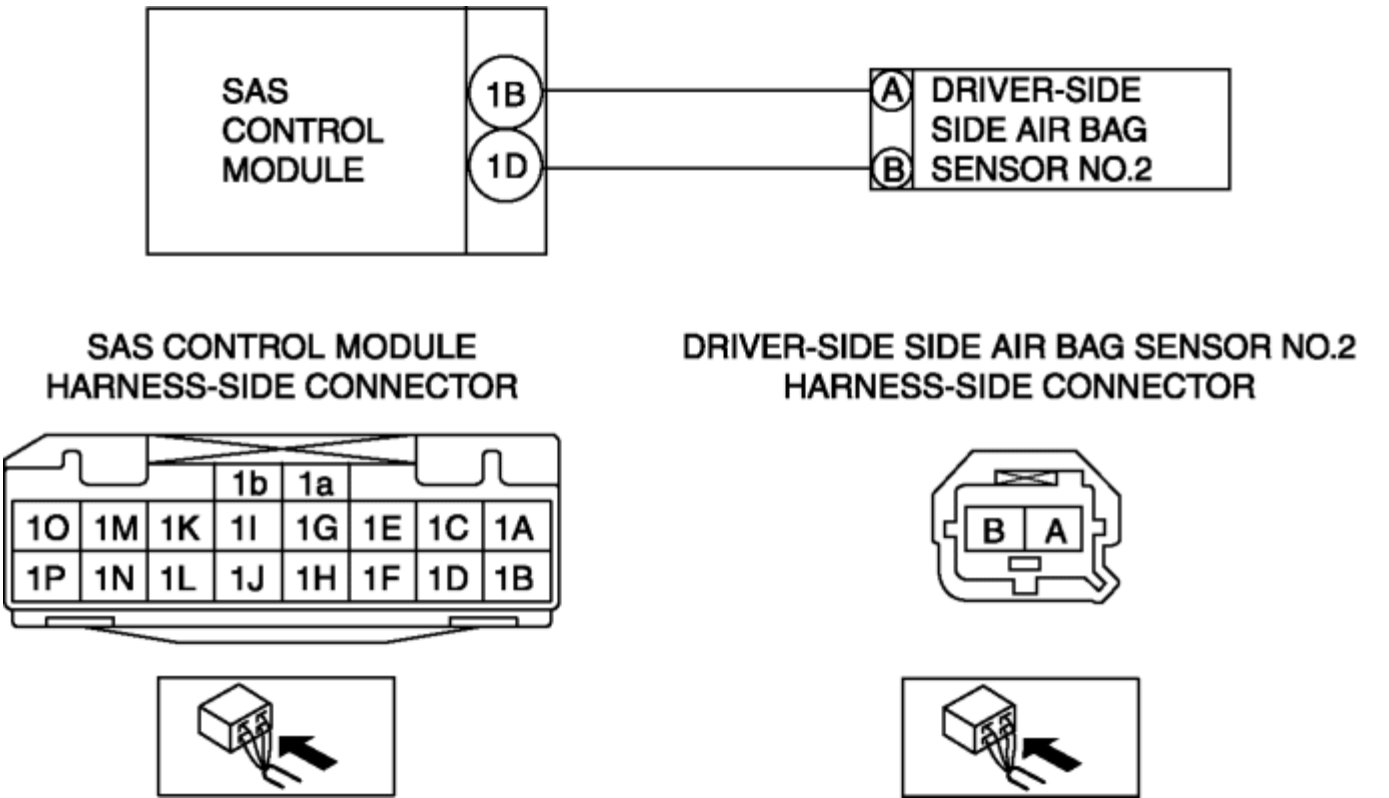
Possible Causes

- Driver-side side air bag sensor No.2 connector malfunction
- Open or short circuit in the wiring harness between the driver-side side air bag sensor No.2 and SAS control module

Driver-side side air bag sensor No.2 malfunction

- SAS control module malfunction

System Wiring Diagram



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 CONNECTOR WARNING: • Handling the component parts improperly can accidentally operate (deploy) the air bag module, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See AIR BAG SYSTEM SERVICE WARNINGS.) (See AIR BAG SYSTEM SERVICE CAUTIONS.) • Switch the ignition to off. • Disconnect the negative battery cable and wait for 1 min or more.	Yes Replace the driver-side side air bag sensor No.2 wiring harness.
		No Go to the next step.

	Remove the rear side seat back. (See REAR SIDE SEAT BACK REMOVAL/ INSTALLATION.) • Disconnect the driver-side side air bag sensor No.2 connector. (See SIDE AIR BAG SENSOR NO. 2 REMOVAL/ INSTALLATION.) • Inspect the driver-side side air bag sensor No.2 connector. (Corrosion, damage, and disconnected pins) • Is there any malfunction of the driver-side side air bag sensor No.2 connector?		
2	INSPECT WIRING HARNESS BETWEEN SAS CONTROL MODULE AND DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 • Remove the column cover. (See COLUMN COVER REMOVAL/ INSTALLATION.) • Disconnect the clock spring connector. • Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/ INSTALLATION.) • Disconnect the passenger-side air bag module connector. • Disconnect the driver and passenger-side side air bag module connectors. • Remove the C-pillar trim. (See C-PILLAR TRIM REMOVAL/ INSTALLATION.) • Disconnect the driver and passenger-side curtain air bag module connectors. • Remove the B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/ INSTALLATION.) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. • Remove the rear console. (See REAR CONSOLE REMOVAL/ INSTALLATION.) • Disconnect the SAS control module connectors. • Inspect the wiring harnesses between SAS control module connector terminal 1B and driver-side side air bag sensor No.2 connector terminal A, and SAS control module connector terminal 1D and driver-side side air bag sensor No.2 connector terminal B for the following: ▪ Short circuit between terminals ▪ Short to body ground ▪ Open circuit	Yes	Go to the next step.
		No	Replace the wiring harness between the SAS control module and the driver-side side air bag sensor No.2.

NOTE:

	- Inspect for continuity while shaking the wiring harness between the SAS control module and the driver-side side air bag sensor No.2. - Is the wiring harness normal?		
3	INSPECT THE WIRING HARNESS BETWEEN THE SAS CONTROL MODULE AND DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 FOR A SHORT CIRCUIT TO THE POWER SUPPLY - Connect the negative battery cable. - Switch the ignition to ON with SAS control module connector and driver-side side air bag sensor No.2 disconnected. - Measure the voltage of SAS control module connector terminals 1B and 1D. NOTE: - Measure the voltage while shaking the wiring harness between the SAS control module and the driver-side side air bag sensor No.2. - Is the voltage measured?	Yes	Replace the wiring harness between the SAS control module and the driver-side side air bag sensor No.2.
		No	Go to the next step.
4	PERFORM SAS CONTROL MODULE DTC INSPECTION - Switch the ignition to off. - Disconnect the negative battery cable and wait for 1 min or more. - Reconnect all disconnected connectors. - Connect the negative battery cable. - Switch the ignition to ON. - Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC.) - Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION.) - Are the same DTCs present?	Yes	Replace the driver-side side air bag sensor No.2, then go to the next step. (See SIDE AIR BAG SENSOR NO. 2 REMOVAL/ INSTALLATION.)
		No	DTC troubleshooting completed.
5	RE-PERFORM SAS CONTROL MODULE DTC INSPECTION - Switch the ignition to ON. - Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC.) - Perform the DTC inspection for the SAS control module	Yes	Replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	DTC troubleshooting

	using the M-MDS. (See DTC INSPECTION .)	
	• Are the same DTCs present?	completed.

2012 - Mazda6 - Restraints

DTC B1196:11/ B1196:13/ B1196:87/ B1196:96

System Malfunction Location

DTC	System Malfunction Location
M-MDS display	
B1196:11	Driver-side side air bag sensor No.2 circuit short to body ground
B1196:13	Driver-side side air bag sensor No.2 circuit short to power supply or open line
B1196:87	Invalid signal from driver-side side air bag sensor No.2
B1196:96	Driver-side side air bag sensor No.2 internal malfunction

Detection Condition

WARNING:

- Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.
- Wiring harness between the driver-side side air bag sensor No.2 and SAS control module has a malfunction
- Driver-side side air bag sensor No.2 has a malfunction

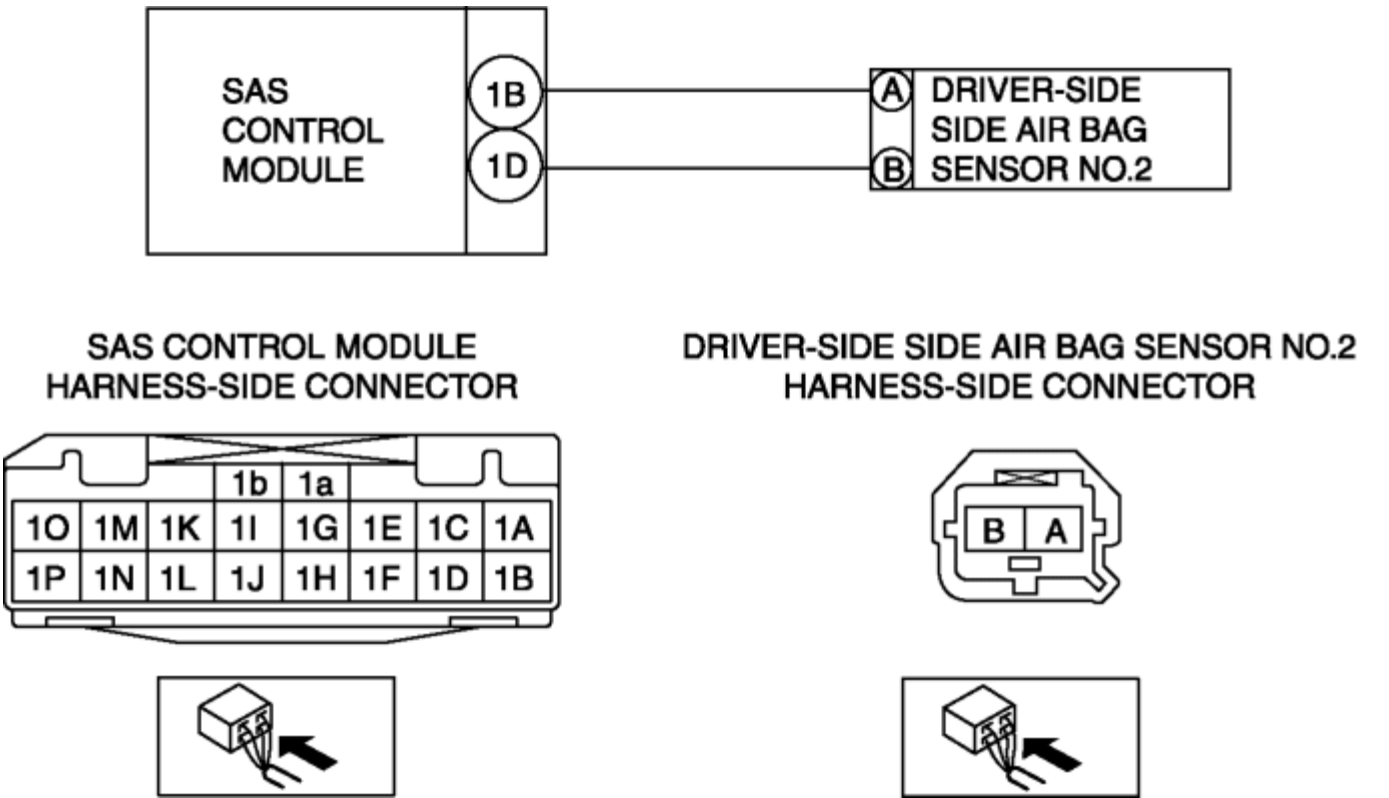
Possible Causes

- Driver-side side air bag sensor No.2 connector malfunction
- Open or short circuit in the wiring harness between the driver-side side air bag sensor No.2 and SAS control module

Driver-side side air bag sensor No.2 malfunction

- SAS control module malfunction

System Wiring Diagram



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 CONNECTOR WARNING: • Handling the component parts improperly can accidentally operate (deploy) the air bag module, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See AIR BAG SYSTEM SERVICE WARNINGS.)(See AIR BAG SYSTEM SERVICE CAUTIONS.) • Switch the ignition to off. • Disconnect the negative battery cable and wait for 1 min or more.	Yes Replace the driver-side side air bag sensor No.2 wiring harness.
		No Go to the next step.

	Remove the rear side seat back. (See REAR SIDE SEAT BACK REMOVAL/ INSTALLATION.) • Disconnect the driver-side side air bag sensor No.2 connector. (See SIDE AIR BAG SENSOR NO. 2 REMOVAL/ INSTALLATION.) • Inspect the driver-side side air bag sensor No.2 connector. (Corrosion, damage, and disconnected pins) • Is there any malfunction of the driver-side side air bag sensor No.2 connector?		
2	INSPECT WIRING HARNESS BETWEEN SAS CONTROL MODULE AND DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 • Remove the column cover. (See COLUMN COVER REMOVAL/ INSTALLATION.) • Disconnect the clock spring connector. • Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/ INSTALLATION.) • Disconnect the passenger-side air bag module connector. • Disconnect the driver and passenger-side side air bag module connectors. • Remove the C-pillar trim. (See C-PILLAR TRIM REMOVAL/ INSTALLATION.) • Disconnect the driver and passenger-side curtain air bag module connectors. • Remove the B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/ INSTALLATION.) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. • Remove the rear console. (See REAR CONSOLE REMOVAL/ INSTALLATION.) • Disconnect the SAS control module connectors. • Inspect the wiring harnesses between SAS control module connector terminal 1B and driver-side side air bag sensor No.2 connector terminal A, and SAS control module connector terminal 1D and driver-side side air bag sensor No.2 connector terminal B for the following: ▪ Short circuit between terminals ▪ Short to body ground ▪ Open circuit	Yes	Go to the next step.
		No	Replace the wiring harness between the SAS control module and the driver-side side air bag sensor No.2.

NOTE:

	- Inspect for continuity while shaking the wiring harness between the SAS control module and the driver-side side air bag sensor No.2. - Is the wiring harness normal?		
3	INSPECT THE WIRING HARNESS BETWEEN THE SAS CONTROL MODULE AND DRIVER-SIDE SIDE AIR BAG SENSOR NO.2 FOR A SHORT CIRCUIT TO THE POWER SUPPLY - Connect the negative battery cable. - Switch the ignition to ON with SAS control module connector and driver-side side air bag sensor No.2 disconnected. - Measure the voltage of SAS control module connector terminals 1B and 1D. NOTE: - Measure the voltage while shaking the wiring harness between the SAS control module and the driver-side side air bag sensor No.2. - Is the voltage measured?	Yes	Replace the wiring harness between the SAS control module and the driver-side side air bag sensor No.2.
		No	Go to the next step.
4	PERFORM SAS CONTROL MODULE DTC INSPECTION - Switch the ignition to off. - Disconnect the negative battery cable and wait for 1 min or more. - Reconnect all disconnected connectors. - Connect the negative battery cable. - Switch the ignition to ON. - Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC.) - Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION.) - Are the same DTCs present?	Yes	Replace the driver-side side air bag sensor No.2, then go to the next step. (See SIDE AIR BAG SENSOR NO. 2 REMOVAL/ INSTALLATION.)
		No	DTC troubleshooting completed.
5	RE-PERFORM SAS CONTROL MODULE DTC INSPECTION - Switch the ignition to ON. - Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC.) - Perform the DTC inspection for the SAS control module	Yes	Replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	DTC troubleshooting

	using the M-MDS. (See DTC INSPECTION .)	
	• Are the same DTCs present?	completed.