

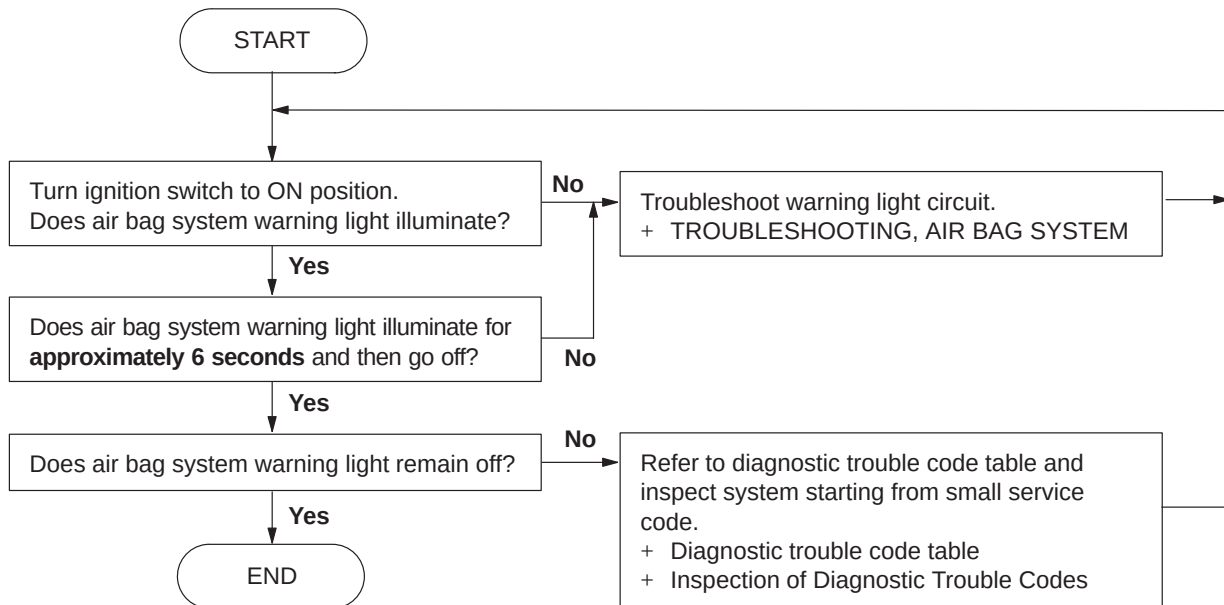
ON-BOARD DIAGNOSTIC [AIR BAG SYSTEM]

AIR BAG SYSTEM

Diagnostic Trouble Code

- The SAS unit has an on-board diagnostic function that flashes or illuminates the air bag system warning light to indicate trouble in the air bag system. The trouble can be determined by the warning light illumination or flashing pattern.

Flowchart



Note

- When a malfunction has occurred in the air bag system and the air bag system warning light doesn't turn on after the ignition switch is turned to ON position, the warning buzzer built into the SAS unit sounds 5 times for 5 cycles.

Diagnostic trouble code table

DTC	Output pattern	Diagnosed circuit
1	ON  OFF	SAS unit connector poor connection
2	ON  OFF	SAS unit
3	ON  OFF	Power supply of SAS unit
6	ON  OFF	Driver-side air bag module
7	ON  OFF	Passenger-side air bag module
—	Continuously flashes	Deployment authorization standby code

Caution

- When the output pattern continuously flashes (standby code), perform the deployment authorization procedure. (Refer to AIR BAG SYSTEM, AIR BAG MODULE DEPLOYMENT AUTHORIZATION PROCEDURE.)

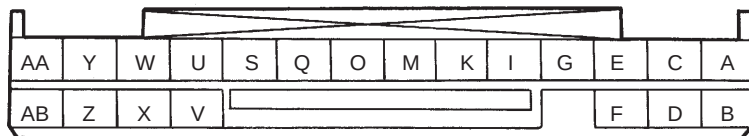
ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

Inspection of Diagnostic Trouble Codes

DTC 1		SAS UNIT CONNECTOR POOR CONNECTION	
DETECTION CONDITION	Warning • Detection conditions are for understanding DTC outline before performing inspection. Performing inspection with only detection conditions may cause injury due to operating error or damage the system. When performing inspection, always follow inspection procedure.		
	No continuity between poor connection detector bar terminals of SAS unit		
POSSIBLE CAUSE	• Poor connection of connector • SAS unit connector malfunction • Damaged SAS unit		
STEP	INSPECTION		ACTION
1	VERIFY THAT SAS UNIT CONNECTOR IS CONNECTED WITH SAS UNIT Warning • Handling air bag system components improperly can accidentally deploy air bag modules, which may seriously injure you. Read SERVICE WARNINGS before handling air bag system components. + AIR BAG SYSTEM, SERVICE WARNINGS Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove front console. Is SAS unit connector securely connected?	Yes	Go to next step.
		No	Reconnect connector properly.
2	INSPECT SAS UNIT CONNECTOR Remove column cover. Disconnect clock spring connector. Remove glove compartment. (Vehicles with passenger-side air bag) Disconnect passenger-side air bag module connector. (Vehicles with passenger-side air bag) Disconnect SAS unit connector. Is SAS unit connector okay?	Yes	Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION
		No	Replace wiring harness.

DTC 2		SAS UNIT	
DETECTION CONDITION	Warning Detection conditions are for understanding DTC outline before performing inspection. Performing inspection with only detection conditions may cause injury due to operating error or damage the system. When performing inspection, always follow inspection procedure.		
	Malfunction in SAS unit inner circuit		
POSSIBLE CAUSE	Damaged SAS unit		
STEP	INSPECTION		ACTION
—	—		Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION

ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

DTC 3		POWER SUPPLY OF SAS UNIT	
DETECTION CONDITION	Warning Detection conditions are for understanding DTC outline before performing inspection. Performing inspection with only detection conditions may cause injury due to operating error or damage the system. When performing inspection, always follow inspection procedure. Voltage supplied to SAS unit is 9 V or less.		
POSSIBLE CAUSE	Note - Diagnostic trouble code 3 is indicated when voltage simultaneously drops in the harness of both of following circuits. - Harness between METER 15 A fuse and terminal AB of SAS unit connector. - Harness between ENGINE 15 A fuse and terminal Z of SAS unit connector. - Weak battery - Malfunction in wiring harness between battery and SAS unit - Damaged SAS unit		
STEP	INSPECTION		ACTION
1	INSPECT BATTERY	Yes	Go to next step.
	Warning Handling air bag system components improperly can accidentally deploy air bag modules, which may seriously injure you. Read SERVICE WARNINGS before handling air bag system components. + AIR BAG SYSTEM, SERVICE WARNINGS Is battery voltage more than 9 V ?	No	Battery is weak. Inspect charge/discharge system. + Section G, CHARGING SYSTEM, BATTERY INSPECTION
2	INSPECT WIRING HARNESS BETWEEN BATTERY AND SAS UNIT Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove column cover. Disconnect clock spring connector. Remove glove compartment. (Vehicles with passenger-side air bag) Disconnect passenger-side air bag module connector. (Vehicles with passenger-side air bag) Remove front console. Disconnect SAS unit connector. Turn ignition switch to ON position. Measure voltage at terminal AB or Z of SAS unit connector. Is voltage more than 9 V ?	Yes	Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION
		No	Repair wiring harness. (Ignition switch-Fuse block)
SAS UNIT CONNECTOR			
			

ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

DTC 6		DRIVER-SIDE AIR BAG MODULE	
DETECTION CONDITION	Warning • Detection conditions are for understanding DTC outline before performing inspection. Performing inspection with only detection conditions may cause injury due to operating error or damage the system. When performing inspection, always follow inspection procedure.		
	Resistance detected between terminals M and O of SAS unit is other than 1.87—3.42 Ω .		
POSSIBLE CAUSE	• Damaged driver-side air bag module • Damaged clock spring • Open or short circuit in wiring harness between clock spring and SAS unit • Damaged SAS unit		
STEP	INSPECTION		ACTION
1	INSPECT CLOCK SPRING PIN Warning • Handling air bag system components improperly can accidentally deploy air bag modules, which may seriously injure you. Read SERVICE WARNINGS before handling air bag system components. + AIR BAG SYSTEM, SERVICE WARNINGS Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove driver-side air bag module. + AIR BAG SYSTEM, DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION Is clock spring pin okay?	Yes	Go to next step.
		No	Replace clock spring. + AIR BAG SYSTEM, CLOCK SPRING REMOVAL/INSTALLATION
2	VERIFY WHETHER MALFUNCTION IS IN DRIVER-SIDE AIR BAG MODULE OR OTHER PARTS Connect SST (Air bag simulator) to clock spring. Connect negative battery cable. Is diagnostic trouble code 6 indicated when ignition switch is turned to ON position?	Yes	Go to next step.
		No	Replace driver-side air bag module. + AIR BAG SYSTEM, DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION
3	INSPECT CLOCK SPRING CONNECTOR PIN Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove column cover. Disconnect clock spring connector. Is clock spring connector pin okay?	Yes	Go to next step.
		No	Replace wiring harness.
4	VERIFY WHETHER MALFUNCTION IS IN CLOCK SPRING OR OTHER PARTS Connect SST (Air bag simulator) to clock spring connector. Connect negative battery cable. Is diagnostic trouble code 6 indicated when ignition switch is turned to ON position?	Yes	Go to next step.
		No	Replace clock spring. + AIR BAG SYSTEM, CLOCK SPRING REMOVAL/INSTALLATION

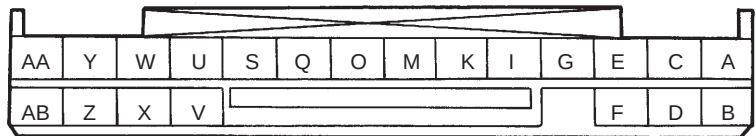
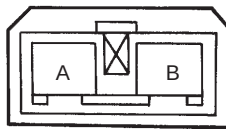
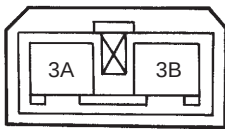
ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

STEP	INSPECTION		ACTION
5	INSPECT WIRING HARNESS BETWEEN CLOCK SPRING AND SAS UNIT Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove glove compartment. (Vehicle with passenger-side air bag) Disconnect passenger-side air bag module connector. (Vehicle with passenger-side air bag) Remove front console. Disconnect SAS unit connector. Inspect wiring harness between terminal O of SAS unit connector and terminal A of clock spring connector, and between terminal M of SAS unit connector and terminal B of clock spring connector for following. • Short to ground • Short to power supply • Open circuit Is wiring harness okay?	Yes	Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION
		No	Replace wiring harness.

CLOCK SPRING

CLOCK SPRING CONNECTOR

SAS UNIT CONNECTOR



DTC 7		PASSENGER-SIDE AIR BAG MODULE	
DETECTION CONDITION	Warning ● Detection conditions are for understanding DTC outline before performing inspection. Performing inspection with only detection conditions may cause injury due to operating error or damage the system. When performing inspection, always follow inspection procedure.		
	Resistance detected between terminals I and K of SAS unit is other than 1.63—2.71 Ω .		
POSSIBLE CAUSE	● Damaged passenger-side air bag module (With passenger-side air bag) ● Damaged false resistance (Without passenger-side air bag) ● Open or short circuit in wiring harness between passenger-side air bag module and SAS unit ● Damaged SAS unit		
STEP	INSPECTION		ACTION
1	Is vehicle equipped with passenger-side air bag module?	Yes	Go to next step.
		No	Go to step 5.

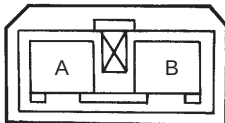
ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

STEP	INSPECTION		ACTION
2	INSPECT PASSENGER-SIDE AIR BAG MODULE CONNECTOR PIN Warning • Handling air bag system components improperly can accidentally deploy air bag modules, which may seriously injure you. Read SERVICE WARNINGS before handling air bag system components. + AIR BAG SYSTEM, SERVICE WARNINGS Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute. Remove glove compartment. Disconnect passenger-side air bag module connector. Is passenger-side air bag module connector pin okay?	Yes	Go to next step.
		No	Replace wiring harness.
3	VERIFY WHETHER MALFUNCTION IS IN PASSENGER-SIDE AIR BAG MODULE OR OTHER PARTS Connect SST (Air bag simulator) to passenger-side air bag module connector. Connect negative battery cable. Is diagnostic trouble code 7 indicated when ignition switch is turned to ON position?	Yes	Go to next step.
		No	Replace passenger-side air bag module. + AIR BAG SYSTEM, PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION
4	INSPECT WIRING HARNESS BETWEEN PASSENGER-SIDE AIR BAG MODULE AND SAS UNIT Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute. Remove column cover. Disconnect clock spring connector. Remove front console. Disconnect SAS unit connector. Inspect wiring harness between terminal K of SAS unit connector and terminal A of passenger-side air bag module connector, and between terminal I of SAS unit connector and terminal B of passenger-side air bag module connector for following. • Short to ground • Short to power supply • Open circuit Is wiring harness okay?	Yes	Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION
		No	Replace wiring harness.

ON-BOARD DIAGNOSTIC (AIR BAG SYSTEM)

STEP	INSPECTION		ACTION
5	VERIFY WHETHER MALFUNCTION IS IN FALSE RESISTANCE OR OTHER PARTS Warning ● Handling air bag system components improperly can accidentally deploy air bag modules, which may seriously injure you. Read SERVICE WARNINGS before handling air bag system components. + AIR BAG SYSTEM, SERVICE WARNINGS	Yes	Go to next step.
	Turn the ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove glove compartment. Remove false resistance. Connect SST (Air bag simulator) to passenger-side air bag module connector. Connect negative battery cable. Is diagnostic trouble code 7 indicated when ignition switch is turned to ON position?	No	Replace false resistance.
6	INSPECT WIRING HARNESS BETWEEN FALSE RESISTANCE AND SAS UNIT Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute . Remove column cover. Disconnect clock spring connector. Remove front console. Disconnect SAS unit connector. Inspect wiring harness between terminal K of SAS unit connector and terminal A of passenger-side air bag module connector, and between terminal I of SAS unit connector and terminal B of passenger-side air bag module connector for following. ● Short to ground ● Short to power supply ● Open circuit Is wiring harness okay?	Yes	Replace SAS unit. + AIR BAG SYSTEM, SAS UNIT REMOVAL/INSTALLATION
		No	Replace wiring harness.

PASSENGER-SIDE AIR BAG
MODULE CONNECTOR



SAS UNIT CONNECTOR

