

# ON-BOARD DIAGNOSTIC FUNCTION

B3E080201046T02

## Self-Malfunction Diagnostic Function

### Malfunction detection function

- Detects overall malfunctions in the air bag system-related parts.

### Fail-safe function

- If the SAS control module performance/function cannot be maintained due to any cause, the fail-safe function stops air bag system control and flashes the air bag system warning light to prevent the air bags from operating (deploying) accidentally.

### Memory function

- Stores malfunctions in the air bag system-related parts detected by the malfunction detection function, and the stored malfunction contents are not cleared even if the ignition switch is turned to the LOCK position or the negative battery cable is disconnected.

### Display Function

- When the malfunction detection function detects a malfunction, the air bag system warning light illuminates to advise the driver. Using the external tester communication function, DTCs can be output to the DLC-2 via the CAN line.

**DTC table**

DTC	System malfunction location
WDS display	
B1046	Driver-side curtain air bag module and other air bag module circuits short
B1047	Driver-side side air bag module and other air bag module circuits short
B1048	Passenger-side air bag module (inflator No.1) and other air bag module circuits short
B1049	Passenger-side pre-tensioner front buckle and other air bag module circuits short
B104B	Driver-side side air bag sensor and other sensor circuits short to power supply
B104C	Passenger-side side air bag sensor and other sensor circuits short to power supply
B104D	Crash zone sensor and other sensor circuits short to power supply
B104E	Driver-side side air bag sensor circuit open or short
B104F	Passenger-side side air bag sensor (internal circuit abnormal)
B1050	Passenger-side side air bag sensor circuit open or short
B1051	Driver-side side air bag sensor (internal circuit abnormal)
B1053	Driver-side front buckle switch and other sensor circuits short to power supply
B1054	Driver-side pre-tensioner front buckle and other air bag module circuits short
B1055	Passenger-side side air bag module and other air bag module circuits short
B1056	Passenger-side curtain air bag module and other air bag module circuits short
B1057	Driver-side air bag module (inflator No.1) and other air bag module circuits short
B1058	Driver-side air bag module (inflator No.2) and other air bag module circuits short
B1059	Passenger-side air bag module (inflator No.2) and other air bag module circuits short

B105A	SAS control module activation (deployment) control frequency error
B1231	SAS control module activation (deployment) control freeze
B1317	SAS control module power supply voltage increases (16.1 V or more)
B1318	SAS control module power supply voltage decreases (less than 9 V)
B1342	SAS control module
B1877	Driver-side pre-tensioner front buckle circuit resistance high
B1878	Driver-side pre-tensioner front buckle circuit short to power supply
B1879	Driver-side pre-tensioner front buckle circuit short to body ground
B1881	Passenger-side pre-tensioner front buckle circuit resistance high
B1882	Passenger-side pre-tensioner front buckle circuit short to power supply
B1883	Passenger-side pre-tensioner front buckle circuit short to body ground
B1884	Passenger air bag deactivation (PAD) indicator circuit open or short to body ground
B1885	Driver-side pre-tensioner front buckle circuit resistance low
B1886	Passenger-side pre-tensioner front buckle circuit resistance low
B1890	Passenger air bag deactivation (PAD) indicator circuit short to power supply
B1916	Driver-side air bag module (inflator No.1) circuit short to power supply
B1925	Passenger-side air bag module (inflator No.1) circuit short to power supply
B1932	Driver-side air bag module (inflator No.1) circuit resistance high
B1933	Passenger-side air bag module (inflator No.1) circuit resistance high
B1934	Driver-side air bag module (inflator No.1) circuit resistance low
B1935	Passenger-side air bag module (inflator No.1) circuit resistance low
B1936	Driver-side air bag module (inflator No.1) circuit short to body ground
B1938	Passenger-side air bag module (inflator No.1) circuit short to body ground
B1992	Driver-side side air bag module circuit short to power supply
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	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
B2226	Crash zone sensor (internal circuit abnormal)
B2227	Crash zone sensor (communication error)
B2228	Driver-side air bag module (inflator No.2) circuit short to body ground
B2229	Passenger-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
B2231	Passenger-side air bag module (inflator No.2) circuit short to power supply
B2232	Driver-side air bag module (inflator No.2) circuit resistance high
B2233	Passenger-side air bag module (inflator No.2) circuit resistance high
B2234	Driver-side air bag module (inflator No.2) circuit resistance low
B2235	Passenger-side air bag module (inflator No.2) circuit resistance low
B2432	Driver-side front buckle switch circuit open
B2433	Driver-side front buckle switch circuit open or short to power supply
B2434	Driver-side front buckle switch circuit short to body ground
B2435	Driver-side front buckle switch circuit resistance not within specification
B2477	Configuration error

	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
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
B2855	Crash zone sensor circuit short
B2856	Crash zone sensor ID mismatch
B2886	Passenger-side side air bag sensor ID mismatch
B2887	Driver-side side air bag sensor ID mismatch
U2017	Driver-side side air bag sensor (communication error)
U2018	Passenger-side side air bag sensor (communication error)

## PID/Data Monitoring Function

- By using the PID/data monitoring function, the monitored item of the input/output signal, as set on the SAS control module, can be freely selected and read out in real-time.
- The WDS or equivalent is used to read out PID/data monitor information.

### PID/data monitor table

PID name (definition)	Unit/Condition	Operation Condition (Reference)	Terminal
CCNT_RCM (Number of continuous DTCs)		<ul style="list-style-type: none"> <li>• DTCs detected: 1-255</li> <li>• No DTCs detected: 0</li> </ul>	
D_ABAGR2 (Driver-side air bag module (inflator No.2) resistance)	Ohm	Under any condition: 1.5-3.7 ohms	1U, 1Q
DABAGR (Driver-side air bag module (inflator No.1) resistance)	Ohm	Under any condition: 1.5-3.7 ohms	1I, 1M
DFCURTRES (Driver-side curtain air bag module resistance)	Ohm	Under any condition: 1.4-3.2 ohms	2AG, 2AK
DR_BUKL (Driver-side buckle switch status)	Buckled/ Unbuckled	<ul style="list-style-type: none"> <li>• Driver-side buckle switch on: Buckled</li> <li>• Driver-side buckle switch off: Unbuckled</li> </ul>	2W
DR_PTENS (Driver-side pre-tensioner front buckle resistance)	Ohm	Under any condition: 1.5-3.1 ohms	2J, 2N
DS_AB (Driver-side side air bag module resistance)	Ohm	Under any condition: 1.4-3.2 ohms	2B, 2F
I_PAD_FLT (PAD switch status)	OK/ Fault	<ul style="list-style-type: none"> <li>• PAD switch normal: OK</li> <li>• PAD switch abnormal: Fault</li> </ul>	1P
I_PAD_SW (PAD switch status)	ON/ OFF	<ul style="list-style-type: none"> <li>• PAD switch is at PASS AIRBAG ON position: ON</li> <li>• PAD switch is at PASS AIRBAG OFF position: OFF</li> </ul>	1P
P_ABAGR2			

(Passenger-side air bag module (inflator No.2) resistance)	Ohm	Under any condition: 1.4-2.9 ohms	1R, 1V
PABAGR (Passenger-side air bag module (inflator No.1) resistance)	Ohm	Under any condition: 1.4-2.9 ohms	1J, 1N
PFCURTRES (Passenger-side curtain air bag module resistance)	Ohm	Under any condition: 1.4-3.2 ohms	2AH, 2AL
PS_AB (Passenger-side side air bag module resistance)	Ohm	Under any condition: 1.4-3.2 ohms	2I, 2M
PS_PTENS (Passenger-side pre-tensioner front buckle resistance)	Ohm	Under any condition: 1.5-3.1 ohms	2A, 2E
VBATTRCM (SAS control module input voltage)	V	<ul style="list-style-type: none"> <li>• Ignition switch is at ON: B+</li> <li>• Other: 0</li> </ul>	1D