# ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]

id0402b2800200

## On-Board Diagnostic (OBD) Test Description

- The OBD test inspects the integrity and function of the DSC and outputs the results when requested by the specific tests.
- On-board diagnostic test also:
  - Provides a quick inspection of the DSC usually performed at the start of each diagnostic procedure.
  - Provides verification after repairs to ensure that no other faults occurred during service.
- The OBD test is divided into 3 tests:
  - Read/clear diagnostic results, PID monitor and record and active command modes.

# Read/clear diagnostic results

This function allows you to read or clear DTCs in the DSC HU/CM memory.

#### PID/Data monitor and record

 This function allows you to access certain data values, input signals, calculated values, and system status information.

#### **Active command modes**

• This function allows you to control devices through the M-MDS.

# Reading DTCs Procedure CMDTC self test

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "Self Test".
  - (2) Select "All CMDTCs".
- 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 DSC. (See Clearing DTCs Procedure.)

#### **ODDTC** self test

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "Self Test".
  - (2) Select "Modules".
  - (3) Select "ABS".
- 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 DSC. (See Clearing DTCs Procedure.)

#### **Clearing DTCs Procedure**

#### **CMDTC** clearing DTCs procedure

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "Self Test".
  - (2) Select "All CMDTCs".
- 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. Switch the ignition to off.
- 6. Switch the ignition ON (engine off) and wait for **5** s or more.
- 7. Perform DTC inspection. (See Reading DTCs Procedure.)
- 8. Verify that no DTCs are displayed.

#### **ODDTC clearing DTCs procedure**

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "Self Test".
  - (2) Select "Modules".
  - (3) Select "ABS".
- 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. Switch the ignition to off.
- 6. Switch the ignition ON (engine off) and wait for **5** s or more.
- 7. Perform DTC inspection. (See Reading DTCs Procedure.)

8. Verify that no DTCs are displayed.

#### PID/Data Monitor and Record Procedure

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

#### **Active Command Modes Procedure**

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "DataLogger".
  - (2) Select "Modules".
  - (3) Select "ABS".
- 3. Select the simulation items from the PID table.
- 4. Perform the active command modes function, inspect the operations for each parts.
  - If the operation of output parts cannot be verified after the active command mode inspection is performed, this could indicate the possibility of an open or short circuit, sticking, or operation malfunction in the output parts.

# **Snapshot Data Access Procedure**

- 1. Connect the M-MDS (IDS) to the DLC-2.
- 2. After the vehicle is identified, select the following items from the initialization screen of the IDS.
  - (1) Select "Self Test".
  - (2) Select "Modules".
  - (3) Select "ABS".
- 3. Then, select the "Retrieve CMDTCs" and perform procedures according to directions on the IDS screen.
- 4. Retrieve the snapshot data according to the directions on the IDS screen.

#### Note

- Snapshot data appears at the top of the help screen when the displayed DTC is selected.
- The snapshot data stores the currently detected DTC data.

#### **DTC Table**

x: Applicable

-: Not applicable/not illuminated

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
B10DF :46	-	-	Illumina ted	-	-	Illumina ted	DSC HU/ CM (internal malfunctio n)	×	-	C, D	×	(See DTC B10DF: 46/C1A08:1C/ U2007:46/ U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light* <sup>1</sup>	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
B11D4 :08 <sup>*1</sup>	-	-	-	-	-	Illumina ted	Laser sensor	×	-	C, D	×	(See DTC B11D4:08/U2107:68 [DYNAMIC STABILITY CONTROL (DSC)].)
C0001: 01 C0002: 01 C0003: 01 C0004: 01 C0010: 01 C0011: 01 C0015: 01 C0018: 01 C0019: 01 C001C :01 C001D :01	Illumin	Illuminat ed	Illumina ted	-	-	Illumina ted	DSC HU/ CM internal malfunctio n (solenoid valve system)	×	-	C, D	×	(See DTC C0001:01/ C0002:01/ C0003:01/ C0004:01/ C0010:01/ C0011:01/ C0014:01/ C0015:01/ C0019:01/C001C: 01/C001D:01 [DYNAMIC STABILITY CONTROL (DSC)].)
C0020: 11 C0020: 12 C0020: 13 C0020: 71	Illumin ated	-	Illumina ted	-	-	Illumina ted	Pump motor, motor relay	×	-	C, D	×	(See DTC C0020:11/ C0020:12/ C0020:13/C0020:71 [DYNAMIC STABILITY CONTROL (DSC)].)
C0023: 62*1	-	-	-	-	-	Illumina ted	Brake switch	×	-	C, D	×	(See DTC C0023:62/ C0040:64 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C0030: 07 C0031: 07	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LF ABS sensor rotor  LF ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:29/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0031: 11 C0031: 15	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LF ABS wheel- speed sensor	×	-	C, D	×	(See DTC C0031:11/ C0031:15/ C0034:11/ C0034:15/ C0037:11/ C0037:15/C003A: 11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0031: 29 C0031: 2F  C0031: 64	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LF ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:07/ C0037:29/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:2P/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C0033: 07 C0034: 07	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RF ABS sensor rotor  RF ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:29/ C0037:2F/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0034: 11 C0034: 15	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RF ABS wheel- speed sensor	×	-	C, D	×	(See DTC C0031:11/ C0031:15/ C0034:11/ C0034:15/ C0037:11/ C0037:15/C003A: 11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0034: 29 C0034: 2F C0034: 64	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RF ABS wheel- speed sensor/ ABS sensor rotor	×	ı	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:07/ C0037:2F/ C0037:2F/ C0037:2F/ C0037:2F/ C0038:2F/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C0036: 07 C0037: 07	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LR ABS sensor rotor  LR ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:29/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0037: 11 C0037: 15	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LR ABS wheel- speed sensor	×	-	C, D	×	(See DTC C0031:11/ C0031:15/ C0034:11/ C0034:15/ C0037:11/ C0037:15/C003A: 11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0037: 29 C0037: 2F C0037: 64	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	LR ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:29/ C0037:29/ C0037:64/ C0039:07/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C0039: 07 C003A :07	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RR ABS sensor rotor  RR ABS wheel- speed sensor/ ABS sensor rotor	×	_	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0036:07/ C0037:07/ C0037:29/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:29/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)
C003A :11 C003A :15	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RR ABS wheel- speed sensor	×	-	C, D	×	(See DTC C0031:11/ C0031:15/ C0034:11/ C0034:15/ C0037:11/ C0037:15/C003A: 11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C003A :29 C003A :2F C003A :64	Illumin ated	_*3	Illumina ted	-	Flashes *4	Illumina ted	RR ABS wheel- speed sensor/ ABS sensor rotor	×	-	C, D	×	(See DTC C0030:07/ C0031:07/ C0031:29/ C0031:2F/ C0031:64/ C0033:07/ C0034:07/ C0034:29/ C0034:2F/ C0034:64/ C0036:07/ C0037:07/ C0037:29/ C0037:2F/ C0037:64/ C0039:07/C003A: 07/C003A:2P/ C003A:2F/C003A: 64 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page (See DTC C0023:62/
C0040: 64	-	-	Illumina ted	-	Flashes *4	Illumina ted	Brake switch	×	-	C, D	×	C0040:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0044: 01	-	-	Illumina ted	-	Flashes *4 *5	Illumina ted*6						(See DTC C0044:01/
C0044: 28	-	-	Illumina ted	-	Flashes *4	Illumina ted	Brake fluid	×		C, D	×	C0044:28/ C0044:54/C0044:64
C0044: 54	-	-	Illumina ted	-	Flashes *4 *5	Illumina ted*6	pressure sensor	^	-	С, D	^	[DYNAMIC STABILITY CONTROL (DSC)].)
C0044:	-	-	Illumina ted	-	Flashes *4	Illumina ted						CONTROL (DOC)].)
C0051: 62 C0051: 64	-	-	Illumina ted	-	Flashes *4	Illumina ted	Steering angle	×	_	C, D	×	(See DTC C0051:62/ C0051:64/ C0051:67/C0051:85
C0051:	-	-	Illumina ted	-	-	Illumina ted	sensor			0, 5		[DYNAMIC STABILITY
C0051: 85	-	-	Illumina ted	-	Flashes *4	Illumina ted						CONTROL (DSC)].)
C0061: 28	-	-	Illumina ted	-	Flashes *4	Illumina ted	SAS control module system	×	-	C, D	×	(See DTC C0061:28/ C0061:64/ C0062:28/ C0062:64/ C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0061: 54	Illumin ated <sup>*6</sup>	-	Illumina ted	-	Flashes *4 *5	Illumina ted <sup>*6</sup>	DSC HU/ CM system (unperfor med initializatio n procedure )	×	-	C, D	×	(See DTC C0061:54/ C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C0061:	-	-	Illumina ted	-	Flashes *4	Illumina ted						(See DTC C0061:28/ C0061:64/
C0062:	Illumin ated*6	-	Illumina ted	-	-	Illumina ted <sup>*6</sup>	SAS control module system	×	-	C, D	×	C0062:28/ C0062:64/ C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0062: 54	Illumin ated <sup>*6</sup>	-	Illumina ted	-	Flashes *4 *5	Illumina ted <sup>*6</sup>	DSC HU/ CM system (unperfor med initializatio n procedure )	×	-	C, D	×	(See DTC C0061:54/ C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C0062: 64	Illumin ated <sup>*6</sup>	-	Illumina ted	-	-	Illumina ted*6	SAS control module system	×	-	C, D	×	(See DTC C0061:28/ C0061:64/ C0062:28/ C0062:64/ C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0062: 76	Illumin ated*6	-	Illumina ted	-	Flashes *4 *5	Illumina ted <sup>*6</sup>	SAS control module system	×	1	C, D	×	(See DTC C0062:76 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063: 28	-	1	Illumina ted	-	Flashes *4	Illumina ted	SAS control module system	×	-	C, D	×	(See DTC C0061:28/ C0061:64/ C0062:28/ C0062:64/ C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063: 54	Illumin ated*6	-	Illumina ted	-	Flashes *4 *5	Illumina ted*6	DSC HU/ CM system (unperfor med initializatio n procedure	×	-	C, D	×	(See DTC C0061:54/ C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063: 64	-	-	Illumina ted	-	Flashes *4	Illumina ted	SAS control module system	×	-	C, D	×	(See DTC C0061:28/ C0061:64/ C0062:28/ C0062:64/ C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C006B :00 C0072: 68	-	-	Illumina ted _*9	-	Flashes *4	Illumina ted -	TCS/DSC control system	×	-	C, D	×	(See DTC C006B: 00/C0072:68 [DYNAMIC STABILITY
C0089: 64	-	-	-	-	-	-	TCS OFF switch	-	-	C, D	×	CONTROL (DSC)].) (See DTC C0089:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C1031: 35	-	-	-	-	Flashes *4	-	Tire pressure monitoring system (TPMS) set switch	×	-	C, D	×	(See DTC C1031:35 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
C1031: 41 C1031: 54 C1031: 68	-	-	-	-	Flashes *4	-	Tire pressure monitoring system (TPMS) system	×	-	C, D	×	(See DTC C1031:41 [DYNAMIC STABILITY CONTROL (DSC)].) (See DTC C1031:54 [DYNAMIC STABILITY CONTROL (DSC)].) (See DTC C1031:68 [DYNAMIC STABILITY CONTROL (DSC)].)
C1A08 :1C	-	-	Illumina ted	-	Flashes *4	Illumina ted	DSC HU/ CM (internal malfunctio n)	×	-	C, D	×	(See DTC B10DF: 46/C1A08:1C/ U2007:46/ U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)
U0001: 88 U0100: 00	Illumin ated Illumin ated*6	-	Illumina ted Illumina ted*6	-	Flashes *4 Flashes *4 *5	Illumina ted Illumina ted*6						(See DTC U0001:88/ U0100:00/ U0101:00/
U0101: 00*7	ated -	-	Illumina ted	-	Flashes *4	Illumina ted	CAN line	×	-	C, D	×	U0114:00/ U0131:00/ U0154:00/
U0114: 00 <sup>*8</sup> U0131:	-	-	- Illumina	-	Flashes *4 Flashes	- Illumina						U0155:00/U0235:00 [DYNAMIC STABILITY
00	-	-	ted	-	*4	ted	040					CONTROL (DSC)].)
U0151: 00	-	Illuminat ed <sup>*6</sup>	Illumina ted	-	Flashes *4 *5	Illumina ted <sup>*6</sup>	SAS control module system (CAN2 line malfunctio n)	×	-	C, D	×	(See DTC U0151:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0154:	-	-	Illumina ted	-	-	-						(See DTC U0001:88/ U0100:00/
U0155:	Illumin		Illumina		Flashes	Illumina						U0101:00/
00 U0235: 00*1	ated*6	-	ted <sup>*6</sup>	-	*4 *5	ted*6 Illumina ted	CAN line	×	-	C, D	×	U0114:00/ U0131:00/ U0154:00/ U0155:00/U0235:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0401: 00	-	-	Illumina ted <sup>*6</sup>	-	Flashes *4 *5	Illumina ted <sup>*6</sup>	Abnormal message from PCM	×	-	C, D	×	(See DTC U0401:00 [DYNAMIC STABILITY CONTROL (DSC)].)

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U0402: 00 <sup>*7</sup>	-	-	Illumina ted	-	Flashes *4	Illumina ted	Abnormal message from transmissi on/ transaxle	×	-	C, D	×	(See DTC U0402:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0420: 00	-	-	Illumina ted	-	Flashes *4	Illumina ted	Abnormal message from EPS CM	×	-	C, D	×	(See DTC U0420:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0423: 00	-	-	-	-	Flashes *4	Illumina ted	Abnormal message from instrument cluster	×	-	C, D	×	(See DTC U0423:00/ U0443:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0433: 00*1	-	-	-	-	-	Illumina ted	Abnormal message from laser sensor	×	ı	C, D	×	(See DTC U0433:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0443:	-	-	-	-	-	Illumina ted	Abnormal message from instrument cluster	×	-	C, D	×	(See DTC U0423:00/ U0443:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0452:	-	-	Illumina ted	-	-	-	Abnormal message					(See DTC U0452:00/ U0452:86
U0452: 86	Illumin ated*6	-	Illumina ted	-	Flashes *4 *5	Illumina ted*6	from SAS control module	×	-	C, D	×	[DYNAMIC STABILITY CONTROL (DSC)].)
U2007: 46	-	-	Illumina ted	-	-	Illumina ted	DSC HU/ CM (internal malfunctio n)	×	1	C, D	×	(See DTC B10DF: 46/C1A08:1C/ U2007:46/ U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)
U2007: 62	Illumin ated	Illuminat ed	Illumina ted	-	-	Illumina ted	DSC HU/ CM (internal malfunctio n)	×	-	C, D	×	(See DTC B10DF: 46/C1A08:1C/ U2007:46/ U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)
U2101: 00	Illumin ated	-	Illumina ted	-	Flashes *4	Illumina ted	Configurat ion data not recorded	×	-	C, D	×	(See DTC U2101:00/ U2300:52/ U2300:54/ U2300:55/ U2300:56/U2300:64 [DYNAMIC STABILITY CONTROL (DSC)].)
U2107: 68 <sup>*1</sup>	-	-	-	-	-	Illumina ted	Laser sensor	×	-	C, D	×	(See DTC B11D4:08/U2107:68 [DYNAMIC STABILITY CONTROL (DSC)].)

DTC No.	ABS warnin g light	Brake system warning light (when parking brake is released )	TCS/ DSC indicat or light	TCS OFF indicat or light	Tire pressu re monito ring system warnin g light	Master warnin g light*1	Malfuncti on location	Fail - saf e	Dri ve cyc le	Self test type *2	Me mor y func tion	Page
U2300: 52 U2300: 54 U2300: 55 U2300: 56 U2300: 64	Illumin ated	-	Illumina ted	-	Flashes *4	Illumina ted	Configurat ion data not recorded	×	-	C, D	×	(See DTC U2101:00/ U2300:52/ U2300:54/ U2300:55/ U2300:56/U2300:64 [DYNAMIC STABILITY CONTROL (DSC)].)
U3000: 49	Illumin ated <sup>*6</sup>	Illuminat ed <sup>*6</sup>	Illumina ted	-	Flashes *4 *5	Illumina ted	DSC HU/ CM (internal malfunctio n)	×	-	C, D	×	(See DTC B10DF: 46/C1A08:1C/ U2007:46/ U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)
U3003:	-	-	-	-	-	-		-				
U3003: 16	Illumin ated	_*10 Illuminat ed*11 *12	Illumina ted	-	Flashes *4	Illumina ted	Power supply system	×	-	C, D	×	(See DTC U3003:08/ U3003:16/U3003:17 [DYNAMIC STABILITY CONTROL (DSC)].)
U3003: 17	Illumin ated	Illuminat ed	Illumina ted	-	Flashes *4	Illumina ted						

<sup>\*1 :</sup> Vehicles with smart city brake support (SCBS)

<sup>\*2 :</sup> C: CMDTC self-test, D: ODDTC self-test

 $<sup>^{*3}</sup>$  : Illuminates when two wheels or more have a malfunction.

<sup>\*4 :</sup> Tire pressure monitoring system warning light illuminates after flashes.

<sup>\*5 :</sup> Not illuminated/flashed depending on malfunction content.

<sup>\*6 :</sup> Not illuminated depending on malfunction content.

 $<sup>^{*7}</sup>$  : ATX only

<sup>\*8 : 4</sup>WD only

<sup>\*9:</sup> Turns on if the slip of a specific wheel is 10km/h {6.2 mph} or more.

 $<sup>^{*10}</sup>$ : When power supply voltage is **7.9—9.6 V** for **550 ms or more**.

<sup>\*11 :</sup> When power supply voltage is **6.0—7.9 V** for **630 ms or more**.

<sup>\*12 :</sup> When power supply voltage is **below 6 V** for **50 ms or more**.

**Fail-safe Function Malfunction Contents** 

Fail-safe Fu		namanici	1011 0011	terits		Fail-safe	function	l				
					_	Contro	l status	1	_			
DTC No.	ABS control	EBD control	Brake control	Engine control	DSC Contro I	Roll over mitigat ion (ROM)	Brake assist control	Vehicl e roll preven tion functio n*1	Hill launch assist (HLA)	Tire pressu re monito ring system (TPMS)	Smart city brake suppor t (SCBS)	Secon dary collisio n reducti on (SCR)
B10DF:46	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d
B11D4:08 <sup>*2</sup>	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
C0001:01 C0002:01 C0003:01 C0004:01 C0010:01 C0011:01 C0014:01 C0015:01 C0018:01 C0019:01 C001C:01 C001D:01	Control disable d	Control disable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d
C0020:11 C0020:12 C0020:13 C0020:71	Control disable d	Control enable d			Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d
C0023:62*2	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
C0030:07 C0031:07 C0031:11 C0031:15 C0031:29 C0031:2F C0031:64	Control disable d	Control enable d*3	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
C0033:07 C0034:07 C0034:11 C0034:15 C0034:29 C0034:2F C0034:64	Control disable d	Control enable d*3	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
C0036:07 C0037:07 C0037:11 C0037:15 C0037:29 C0037:2F C0037:64	Control disable d	Control enable d*3	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
C0039:07 C003A:07 C003A:11 C003A:15 C003A:29 C003A:2F C003A:64	Control disable d	Control enable d*3	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d

	Fail-safe function Control status											
			T00.0	'antual		Contro	l status	1	1	Ting	Cmct	Cocon
DTC No.	ABS control	EBD control	Brake control	Engine control	DSC Contro	Roll over mitigat ion (ROM)	Brake assist control	Vehicl e roll preven tion functio n*1	Hill launch assist (HLA)	Tire pressu re monito ring system (TPMS)	Smart city brake suppor t (SCBS)	Secon dary collisio n reducti on (SCR)
C0040:64	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d
C0044:01	Control enable d	Control enable d		ntrol oled <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
C0044:28	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
C0044:54	Control enable d	Control enable d	Cor disab	ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
C0044:64	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
C0051:62 C0051:64	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0051:67	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d
C0051:85	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0061:28	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0061:54	Control disable d*4	Control enable d	Cor disab	ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
C0061:64	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0062:28	Control disable d*4	Control enable d	Cor disab	ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d	Control disable d	Control enable d	Control disable d*4	Control disable d*4
C0062:54	Control disable d*4	Control enable d		ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
C0062:64	Control disable d*4	Control enable d		ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d	Control disable d	Control enable d	Control disable d*4	Control disable d*4
C0062:76	Control disable d*4	Control enable d		ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d	Control disable d	Control disable d*4	Control disable d*4	Control disable d*4
C0063:28	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0063:54	Control disable d*4	Control enable d		ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4

						Fail-safe	function					
						Contro	l status					
DTC No.	ABS control	EBD control	Brake control	Engine control	DSC Contro	Roll over mitigat ion (ROM)	Brake assist control	Vehicl e roll preven tion functio n*1	Hill launch assist (HLA)	Tire pressu re monito ring system (TPMS)	Smart city brake suppor t (SCBS)	Secon dary collisio n reducti on (SCR)
C0063:64	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C006B:00	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d
C0072:68	Control enable d	Control enable d	Control disable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d
C0089:64						Control	enabled					
C1031:35 C1031:41 C1031:54 C1031:68				Со	ntrol enat	oled				Control disable d	Control	enabled
C1A08:1C	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U0001:88	Control disable d	Control enable d	Control	Control disabled		Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U0100:00	Control disable d*4	Control enable d	l	Control disabled <sup>*4</sup>		Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
U0101:00 <sup>*1</sup>	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U0114:00 <sup>*5</sup>	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d	Control enable d
U0131:00	Control enable d	Control enable d	Control	disabled	Control disable d	disable d	enable d	enable d	Control enable d	disable d	disable d	Control disable d
U0151:00	Control disable d*4	Control enable d		ntrol oled <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
U0154:00	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d
U0155:00	Control disable d*4	Control enable d	1	ntrol oled <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
U0235:00 <sup>*2</sup>	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
U0401:00	Control enable d	Control enable d	1	ntrol bled <sup>*4</sup>	Control disable d*4	Control disable d*4	Control enable d	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
U0402:00 <sup>*1</sup>	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U0420:00	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control disable d

	Fail-safe function											
		1	T00 0		ı	Contro	l status	1	1	T:	0	0
DTC No.	ABS control	EBD control	Brake control	Engine control	DSC Contro	Roll over mitigat ion (ROM)	Brake assist control	Vehicl e roll preven tion functio n*1	Hill launch assist (HLA)	Tire pressu re monito ring system (TPMS)	Smart city brake suppor t (SCBS)	Secon dary collisio n reducti on (SCR)
U0423:00	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control disable d	Control enable d
U0433:00 <sup>*2</sup>	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
U0443:00	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
U0452:00	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d
U0452:86	Control disable d*4	Control enable d	Cor disab	ntrol led <sup>*4</sup>	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4	Control disable d*4
U2007:46	Control enable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d
U2007:62	Control disable d	Control disable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control enable d	Control disable d	Control disable d
U2101:00	Control disable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U2107:68 <sup>*2</sup>	Control enable d	Control enable d	Control	enabled	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control enable d	Control disable d	Control enable d
U2300:52 U2300:54 U2300:55 U2300:56 U2300:64	Control disable d	Control enable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U3000:49	Control disable d*4	Control disable d*4	Control	disabled	Control disable d	Control disable d	Control disable d*4	Control disable d	Control disable d	Control disable d*4	Control disable d	Control disable d
U3003:08						Control	enabled					
U3003:16	Control disable d	Control enable d*6 Control disable d*7 *8	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d
U3003:17	Control disable d	Control disable d	Control	disabled	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d	Control disable d

<sup>\*1 :</sup> ATX only

<sup>\*2 :</sup> Vehicles with smart city brake support (SCBS)

\*3 : Control disabled when two wheels or more have a malfunction.

\*4 : Enabled depending on malfunction content.

\*5 : 4WD only

\*6 .....

<sup>\*6 :</sup> When power supply voltage is **7.9—9.6 V** for **550 ms or more**.

# PID/DATA Monitor Table

PID name (definition)	Unit/Condition	Operation condition (reference)	Action
BRAKE_SW	Off/On	Brake pedal released: Off     Brake pedal depressed: On	Inspect the brake switch. (See BRAKE SWITCH INSPECTION.)
BRK_F_P_C (Calculated Value) BRK_F_P_R (Raw Value)	Pa, psi	Brake pedal depressed: Changes according to the brake fluid pressure	Inspect the brake fluid pressure sensor. (See BRAKE FLUID PRESSURE SENSOR INSPECTION.)
DDS_MODE	Not_Learned/ Learning/ Learned	<ul> <li>During initialization: Not_Learned</li> <li>During learning: Learning</li> <li>Learning completed*: Learned</li> </ul>	Perform the DTC inspection for the DSC HU/CM. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
DSC_OFF_SW	Off/On	• TCS OFF switch is released: Off • TCS OFF switch is depressed: On	Inspect the TCS OFF switch. (See TCS OFF SWITCH INSPECTION.)
DSC_ST	Off/On	During TCS OFF mode: Off     Other than TCS OFF mode: On	Perform the DTC inspection for the DSC HU/CM. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
LAT_ACCL_C (Calculated Value)  LAT_ACCL_R (Raw Value)	G	<ul> <li>Vehicle stopped or driving at constant speed: 0 G</li> <li>Cornering to left: Changes 0 G— positive</li> <li>Cornering to right: Changes 0 G— negative</li> </ul>	Perform the DTC inspection for the SAS control module. (See DTC INSPECTION.)
LON_ACCL_C (Calculated Value) LON_ACCL_R (Raw Value)	G	<ul> <li>Vehicle stopped or driving at constant speed: 0 G</li> <li>Vehicle is driving at a acceleration: Changes 0 G—positive</li> <li>Vehicle is driving at a deceleration: Changes 0 G—negative</li> </ul>	Perform the DTC inspection for the SAS control module. (See DTC INSPECTION.)
P_BRAKE_SW	Off/On	Parking brake lever released: OFF     Parking brake lever pulled: ON	Inspect the parking brake switch. (See PARKING BRAKE SWITCH INSPECTION.)
PMP_MT PMP_MT_SP	Off/On	Pump motor not activated: Off     Pump motor activated: On	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
R_GEAR_SW	Off/On	Except shift/selector lever at R position: OFF     Shift/selector lever at R position: ON	Inspect the PCM. (MTX) (See PCM INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See PCM INSPECTION [SKYACTIV-D 2.2].) Inspect the TCM. (ATX) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FW6A-EL, FW6AX-EL].) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [GW6A-EL, GW6AX-EL].)

 $<sup>^{*7}</sup>$ : When power supply voltage is **6.0—7.9 V** for **630 ms or more**.  $^{*8}$ : When power supply voltage is **below 6 V** for **50 ms or more**.

PID name (definition)	Unit/Condition	Operation condition (reference)	Action
STR_ANG_C (Calculated Value)	• c	Steering wheel in neutral position (not turned): 0° Steering wheel turned to left: Changes 0°—positive Steering wheel turned to right: Changes 0°—negative  Note Constantly indicates 0° until the steering wheel angle neutral position determination by the DSC HU/CM is completed. The steering wheel angle neutral position determination by the DSC HU/CM is completed when the vehicle is driven in a straight line at a speed of 20 km/h or more for several seconds.	Perform the DTC inspection for the PCM, DSC HU/CM, and EPS CM.  If a DTC is displayed after performing the DTC inspection for the PCM, DSC HU/CM, and EPS CM, repair the malfunctioning part according to the applicable DTC troubleshooting.  (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)  (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See EPS CONTROL MODULE INSPECTION.)  After performing the DTC inspection, perform the following procedures:  • Start the engine and drive the vehicle in a straight line at a speed of 20 km/h or more for several seconds.  If an abnormal value is indicated after verifying the value of the STR_ANG_C again, replace the DSC HU/CM.
STR_ANG_R (Raw Value)		Steering wheel position when ignition is switched ON (engine off or on): 0° Steering wheel turned to left: Changes 0°—positive Steering wheel turned to right: Changes 0°—negative  Note The signal displayed in this item is a steering angle (relative angle) signal output from the EPS CM.	Inspect the following PID. • STR_ANG (See EPS CONTROL MODULE INSPECTION.)
TPMS_TYPE	No_DDS/DDS +TOM_EU/DDS +TOM_US	TPMS not equipped: No_DDS TPMS equipped (Corresponding to European regulations): DDS +TOM_EU TPMS equipped (Corresponding to U.S. regulations): DDS+TOM_US	Perform the DTC inspection for the DSC HU/CM. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
V_INLET_LF V_INLET_LR V_INLET_RF V_INLET_RR V_OUTLET_LF V_OUTLET_LR V_OUTLET_RF V_OUTLET_RR	Off/On	Solenoid valve not activated: Off     Solenoid valve activated: On	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
V_STB_LF/RR V_STB_RF/LR	Off/On	Solenoid valve activated: On     Solenoid valve not activated: Off	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
V_TRC_LF/RR V_TRC_RF/LR	Off/On	Solenoid valve activated: On     Solenoid valve not activated: Off	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
VPWR_B_SOL	V	<ul> <li>Ignition switched ON (engine off):</li> <li>Approx. 12.2 V</li> <li>Idling: Approx. 14.1 V</li> </ul>	Inspect power supply circuit. (See DSC HU/CM INSPECTION.)
VSPD	KPH, MPH	Vehicle stopped: 0 KPH, 0 MPH     Vehicle running: Vehicle speed	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)

PID name (definition)	Unit/Condition	Operation condition (reference)	Action		
WSPD_SEN_LF			Inspect the front ABS wheel-speed sensor. (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.)		
WSPD_SEN_LR	KOLL MOLL	• Vehicle stopped: <b>0 KPH, 0 MPH</b>	Inspect the rear ABS wheel-speed sensor. (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [4WD].)		
WSPD_SEN_RF	KPH, MPH	Vehicle running: Vehicle speed	Inspect the front ABS wheel-speed sens (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.)		
WSPD_SEN_RR			Inspect the rear ABS wheel-speed sensor. (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [4WD].)		
YAW_RATE_C (Calculated Value)		Vehicle stopped or driving straight: 0     '/s	Perform the DTC inspection for the SAS		
YAW_RATE_R (Raw Value)	°/s	<ul> <li>Cornering to left: Changes 0 °/s—     positive</li> <li>Cornering to right: Changes 0 °/s—     negative</li> </ul>	control module. (See DTC INSPECTION.)		

<sup>\*:</sup> After ignition is switched off, switch it ON (engine off or on) and verify.

# **Snapshot Data Table**

## Note

- The DSC HU/CM stores the following two types of information when a DTC is detected and displays snap shot data in the M-MDS.

  — Vehicle information detected by DSC HU/CM

  — Vehicle information detected by instrument cluster and received by start stop unit via CAN signal
- Refer to PID monitor table for confirm the DSC system operation status while the DSC CM does not store the DTC. (See PID/DATA Monitor Table.)
- Snapshot data items are not displayed, according to detected DTC.

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
AAT	°C, °F	Ambient air temperature	Not applicable.	Not applicable.
ABS	Inactive/ Active	Antilock braking system	Not applicable.	Not applicable.
APP_STATUS	Accelerator Pedal Off/ Under 20%/ Over 20%/ FAIL	Accelerator pedal position	Not applicable.	Not applicable.
AYC	Inactive/ Active	Active yaw control	Not applicable.	Not applicable.
BRK_F_P_R	Pa, psi	Brake fluid line hydraulic pressure (Raw Value)	BRK_F_P_R	BRK_F_P_R
BTCS	Inactive/ Active	Brake traction control system	Not applicable.	Not applicable.
CFG_STATUS	Config Complete/ Not Configured/ Config Error	Instrument cluster configuration status	Not applicable.	Not applicable.
ECT_STATUS	Under 0 degrees C/ 0 - Under 80 degrees C/ Over 80 degrees C/ FAIL	Engine coolant temperature status	Not applicable.	Not applicable.
EDC	Inactive/ Active	Engine drag control	Not applicable.	Not applicable.

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
IC_VPWR	V	Instrument cluster power supply	The DSC HU/CM constantly receives the power supply voltage value of the instrument cluster sent via CAN signal from the instrument cluster. If a DTC is detected, the DSC HU/CM records the power supply voltage of the instrument cluster when the DTC was detected, and it is displayed in the MMDS.	VRWR <sup>*2</sup>
IG-ON_TIMER	hh:mm:ss* <sup>1</sup>	Elapsed time since ignition was switched ON  Note  • The instrument cluster records the elapsed time since the ignition was switched ON.	The DSC HU/CM constantly receives the elapsed time since the ignition was switched ON sent via CAN signal from the instrument cluster.     If a DTC is detected, the DSC HU/CM records the elapsed time since the ignition was switched ON when the DTC was detected, and it is displayed in the M-MDS.	Not applicable.
LAT_ACCL_R	G	Lateral acceleration (Raw Value)	LAT_ACCL_R	LAT_ACCL_R
LON_ACCL_R	G	Longitudinal acceleration (Raw Value)	LON_ACCL_R	LON_ACCL_R
PMP_MT  PWR_MODE_KEY	Off/On Key Out/ Key Recently Out/ Key Reproved (Position 0)/ Post Accessory (Position 1)/ Post Ignition (Position 1)/ Ignition On (Position 2)/ Running (Position 2)/ Running - Starting In Progress (Position 2)/ Crank (Position 3)	Key Out: Ignition switched to off     Key Recently Out (Position 0):     Elapsed time within 3 s since ignition was switched to off     Accessory (Position 1): Ignition is switched to ACC     Post Ignition (Position 2):     Elapsed time within 3 s since ignition was switched ON     Ignition On (Position 2): Ignition switched ON (engine off)     Running (Position 2): Ignition switched ON (engine on)     Running - Starting: Cranking condition	The DSC HU/CM constantly receives the ignition switch status sent via CAN signal from the instrument cluster.     If a DTC is detected, the DSC HU/CM records the ignition switch status when the DTC was detected, and it is displayed in the M-MDS.	Not applicable.  Not applicable.

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
RPM_STATUS	Engine Stop/ Under 1500rpm/ Over 1500rpm/ FAIL	Engine RPM status	The DSC HU/CM constantly receives the ignition switch status sent via CAN signal from the instrument cluster. If a DTC is detected, the DSC HU/CM records the ignition switch status when the DTC was detected, and it is displayed in the M-MDS.	TACHOMTR*2
SHIFT_STATUS	P/N D/ R/ FAIL	Shift position status	The DSC HU/CM constantly receives the selector lever position sent via CAN signal from the instrument cluster. If a DTC is detected, the DSC HU/CM records the selector lever position when the DTC was detected, and it is displayed in the M-MDS.	Not applicable.
STR_ANG_C	٥	Steering wheel angle (Calculated Value)	STR_ANG_C	STR_ANG_C
TCS	Inactive/ Active	Traction control system	Not applicable.	Not applicable.
TOTAL_DIST	km, ft, mi	Accumulated total traveled distance from completion of vehicle until DSC HU/CM detects DTC (Odometer value in instrument cluster)	The distance traveled when the DSC HU/CM detected a DTC can be calculated by performing the following procedure.  1. Verify the odometer value in the instrument cluster.  2. Verify the snap shot data item TOTAL_DIST.  3. Subtract 2 from 1.	Not applicable.
TOTAL_TIME	hh:mm:ss* <sup>1</sup>	Accumulated total elapsed time since vehicle completion until DSC HU/CM detects a DTC  Note  When the ROOM removed, and the ignition is switched to off, the time is not included in the elapsed time.	The elapsed time when the DSC HU/CM detected a DTC can be calculated by performing the following procedure.  1. Verify the PID item TOTAL_TIME of the instrument cluster.  2. Verify the snap shot data item TOTAL_TIME.  3. Subtract 2 from 1.	Not applicable.
VPWR	V	Power supply	VPWR	VPWR
VSPD	KPH, MPH	Vehicle speed	VSPD	VSPD

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
VSPD_STATUS	Stop/ 0 - 10km/h/ Over 10km/h/ FAIL	When a DTC is detected, the DSC HU/CM receives the vehicle speed being detected by the instrument cluster via CAN signals and displays it in the M-MDS.	The DSC HU/CM constantly receives the vehicle speed sent via CAN signal from the instrument cluster. If a DTC is detected, the DSC HU/CM records the vehicle speed when the DTC was detected, and it is displayed in the M-MDS.	SPEEDOMTR*2
YAW_RATE_R	°/S	Yaw Rate (Raw Value)	YAW_RATE_R	YAW_RATE_R

# **Active Command Modes Table**

Command name Output part		Operation	Operating condition
PMP_MT_SP	Pump motor		
V_INLET_LF	LF inlet solenoid valve		
V_INLET_LR	LR inlet solenoid valve		
V_INLET_RF	RF inlet solenoid valve		
V_INLET_RR	RR inlet solenoid valve		
V_OUTLET_LF	LF outlet solenoid valve		Switch the ignition ON (engine off)
V_OUTLET_LR	LR outlet solenoid valve	Off/On	
V_OUTLET_RF	RF outlet solenoid valve		ON (engine on)
V_OUTLET_RR	RR outlet solenoid valve		
V_STB_LF/RR	LF/RR stability control solenoid valve		
V_STB_RF/LR			
V_TRC_LF/RR			
V_TRC_RF/LR	RF/LR traction control solenoid valve		

<sup>\*1 :</sup> The seconds may be indicated after the decimal point.
\*2 : Instrument cluster PID (See PID/DATA MONITOR TABLE [INSTRUMENT CLUSTER].)