

Workshop Manual - Brakes

2013 - CX-5

On-Board Diagnostics

- DYNAMIC STABILITY CONTROL SYSTEM WIRING DIAGRAM [DYNAMIC STABILITY CONTROL (DSC)]
- FOREWORD [DYNAMIC STABILITY CONTROL (DSC)]
- ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]
- DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0001:01/C0002:01/C0003:01/C0004:01/C0010:01/C0011:01/C0014:01/C0015:01/C0018:01/C0019:01/C001C:01/C001D:01 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0020:11/C0020:12/C0020:13/C0020:71 [DYNAMIC STABILITY CONTROL (DSC)]
- 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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0040:64 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0044:01/C0044:28/C0044:54/C0044:64 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0051:62/C0051:64/C0051:67/C0051:85 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0061:54/C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C0062:76 [DYNAMIC STABILITY CONTROL (DSC)]
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- DTC C1031:54 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC C1031:68 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0001:88/U0100:00/U0101:00/U0114:00/U0131:00/U0155:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0151:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0401:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0402:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0420:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0423:00 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U0452:86 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U2101:00/U2300:52/U2300:54/U2300:55/U2300:56/U2300:64 [DYNAMIC STABILITY CONTROL (DSC)]
- DTC U3003:08/U3003:16/U3003:17 [DYNAMIC STABILITY CONTROL (DSC)]

Symptom Troubleshooting

- SYSTEM WIRING DIAGRAM [DYNAMIC STABILITY CONTROL (DSC)]
- FOREWORD [DYNAMIC STABILITY CONTROL (DSC)]
- PRECAUTION [DYNAMIC STABILITY CONTROL (DSC)]
- SYMPTOM TROUBLESHOOTING [DYNAMIC STABILITY CONTROL (DSC)]
- NO.1 ANY OF THE FOLLOWING LIGHTS DO NOT ILLUMINATE WITH THE IGNITION ON: (ABS WARNING LIGHT, BRAKE SYSTEM WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND/OR TCS OFF INDICATOR LIGHT) [DYNAMIC STABILITY CONTROL (DSC)]
- NO.2 ANY OF THE FOLLOWING LIGHTS STAY ON: (ABS WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND/OR TCS OFF INDICATOR LIGHT) [DYNAMIC STABILITY CONTROL (DSC)]
- NO.3 BRAKE SYSTEM WARNING LIGHT STAY ON [DYNAMIC STABILITY CONTROL (DSC)]
- NO.4 THERE IS A MALFUNCTION IN THE SYSTEM EVEN THOUGH ABS WARNING LIGHT, BRAKE SYSTEM WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND TCS OFF INDICATOR LIGHT DO NOT ILLUMINATE [DYNAMIC STABILITY CONTROL (DSC)]
- NO.5 ABS OR TCS*1 OPERATES FREQUENTLY/TCS DOES NOT WORK CORRECTLY *1: DSC SYSTEM FUNCTION CONTAINS TRACTION CONTROL FUNCTION, TCS/DSC INDICATOR LIGHT GOES ON AND OFF WHILE TCS OPERATES [DYNAMIC STABILITY CONTROL (DSC)]
- NO.6 DSC*2 OPERATES FREQUENTLY/DSC DOES NOT WORK CORRECTLY *2: TCS/DSC INDICATOR LIGHT GOES ON AND OFF WHILE DSC OPERATES [DYNAMIC STABILITY CONTROL (DSC)]
- NO.7 TCS/DSC INDICATOR LIGHT FLASHES (WHEN NEITHER THE TCS NOR THE DSC ARE OPERATING) [DYNAMIC STABILITY CONTROL (DSC)]
- NO.8 HILL LAUNCH ASSIST (HLA) OPERATES EVEN ON A DOWNHILL/HILL LAUNCH ASSIST (HLA) DOES NOT OPERATE ON A SLOPE [DYNAMIC STABILITY CONTROL (DSC)]

General Procedures

- **GENERAL PROCEDURES (BRAKE)**

Conventional Brake System

- CONVENTIONAL BRAKE SYSTEM LOCATION INDEX
- BRAKE FLUID INSPECTION
- BRAKE FLUID AIR BLEEDING
- VACUUM LINE INSPECTION
- VACUUM HOSE REMOVAL/INSTALLATION
- BRAKE PEDAL INSPECTION
- BRAKE PEDAL REMOVAL/INSTALLATION
- BRAKE SWITCH INSPECTION
- MASTER CYLINDER REMOVAL/INSTALLATION
- BRAKE FLUID LEVEL SENSOR INSPECTION
- POWER BRAKE UNIT INSPECTION
- POWER BRAKE UNIT REMOVAL/INSTALLATION
- VACUUM PUMP INSPECTION
- VACUUM PUMP REMOVAL/INSTALLATION
- FRONT BRAKE (DISC) INSPECTION
- FRONT BRAKE (DISC) REMOVAL/INSTALLATION
- DISC PAD (FRONT) REPLACEMENT
- CALIPER (FRONT) DISASSEMBLY/ASSEMBLY
- BRAKE HOSE (FRONT) REMOVAL/INSTALLATION
- REAR BRAKE (DISC) INSPECTION
- REAR BRAKE (DISC) REMOVAL/INSTALLATION
- DISC PAD (REAR) REPLACEMENT
- CALIPER (REAR) DISASSEMBLY/ASSEMBLY
- BRAKE HOSE (REAR) REMOVAL/INSTALLATION

Parking Brake System

- PARKING BRAKE SYSTEM LOCATION INDEX
- PARKING BRAKE LEVER INSPECTION
- PARKING BRAKE LEVER ADJUSTMENT
- PARKING BRAKE LEVER REMOVAL/INSTALLATION
- FRONT PARKING BRAKE CABLE REMOVAL/INSTALLATION
- REAR PARKING BRAKE CABLE REMOVAL/INSTALLATION
- PARKING BRAKE SWITCH INSPECTION

Dynamic Stability Control

- DYNAMIC STABILITY CONTROL LOCATION INDEX
- DSC SYSTEM WIRING DIAGRAM
- DSC HU/CM REMOVAL/INSTALLATION
- DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE
- DSC HU/CM INSPECTION
- FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION
- FRONT ABS WHEEL-SPEED SENSOR INSPECTION
- REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION
- REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD]
- REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD]
- BRAKE FLUID PRESSURE SENSOR INSPECTION
- TCS OFF SWITCH REMOVAL/INSTALLATION
- TCS OFF SWITCH INSPECTION

Technical Data

- BRAKES TECHNICAL DATA

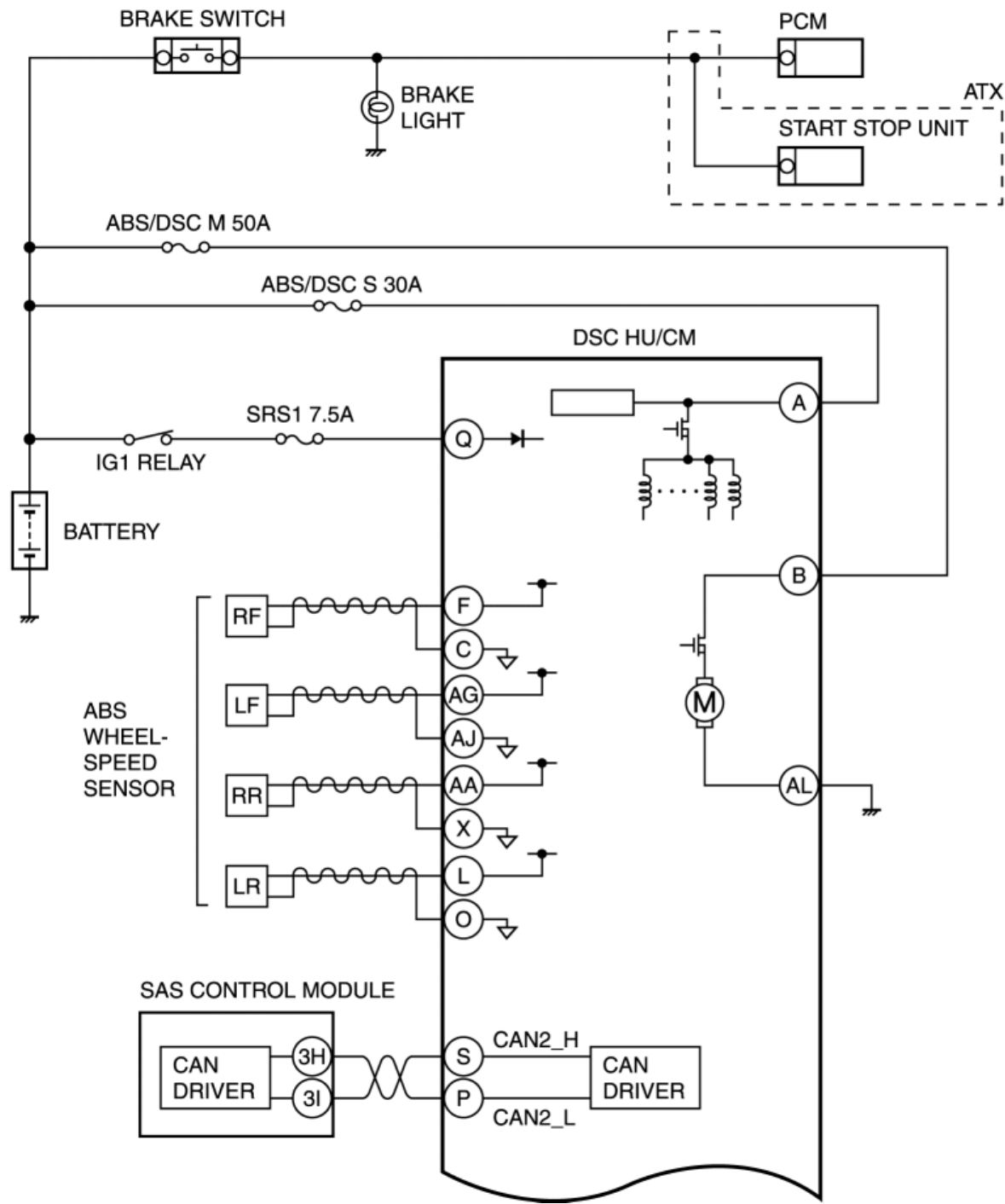
Maintenance/Service Tools

- BRAKES SST

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DYNAMIC STABILITY CONTROL SYSTEM WIRING DIAGRAM [DYNAMIC STABILITY CONTROL (DSC)]



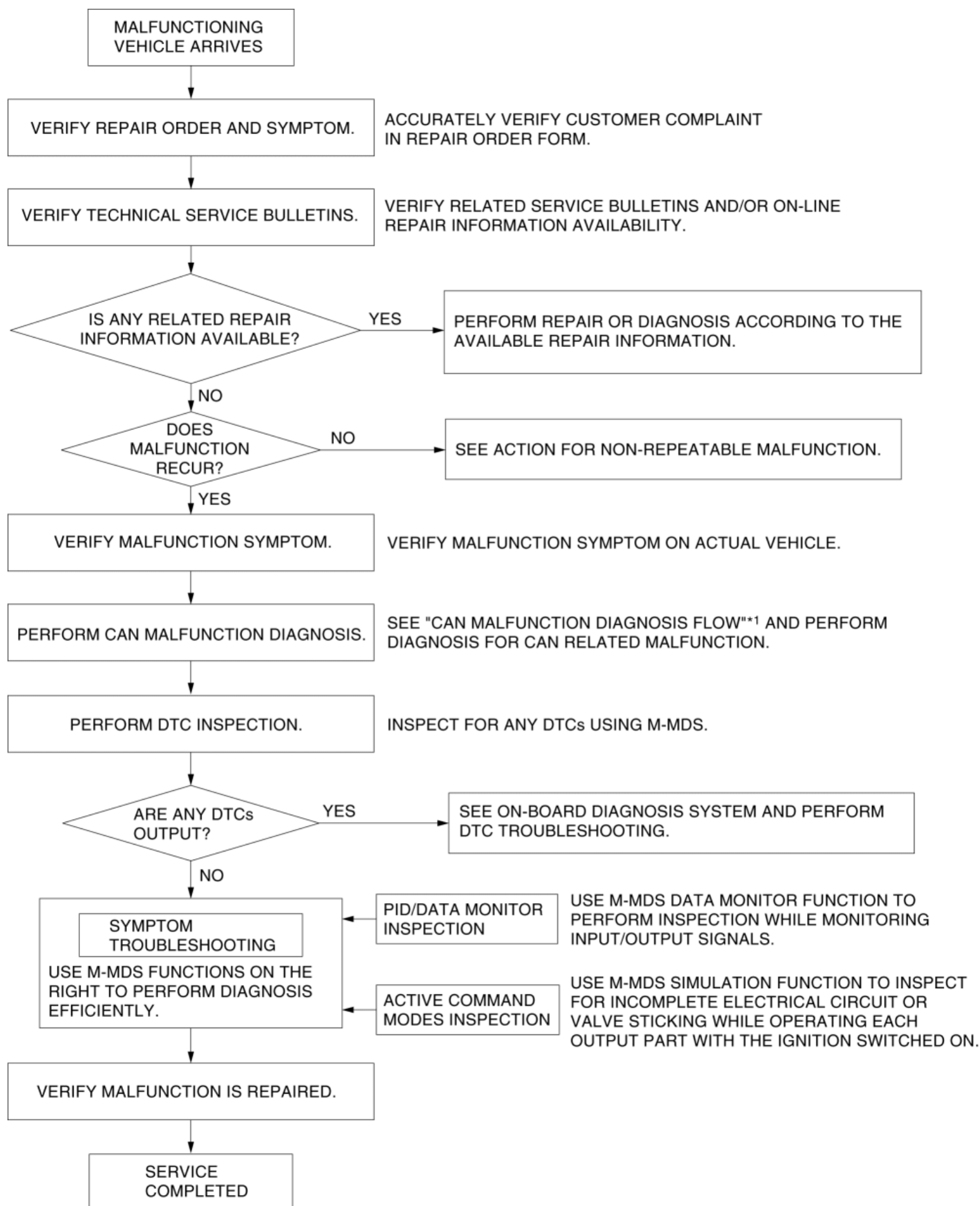
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FOREWORD [DYNAMIC STABILITY CONTROL (DSC)]

- If there is any vehicle malfunction complaint lodged by a customer, perform malfunction diagnosis according to the troubleshooting procedure.

Troubleshooting Procedure

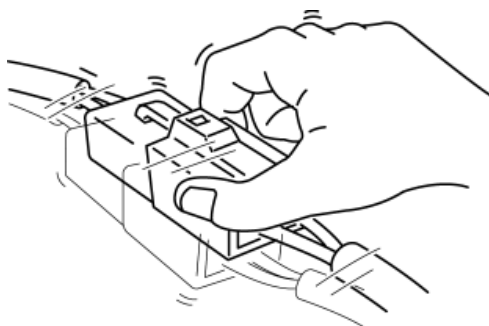


*1

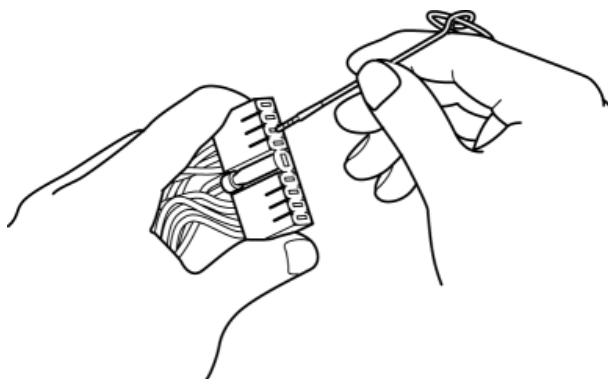
CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW

Action for non-repeatable malfunction

- If the malfunction does not recur, verify the malfunction cause by performing the following actions:
 - Verify that a DTC has been recorded in the memory using the M-MDS. (See [ON-BOARD DIAGNOSIS \[DYNAMIC STABILITY CONTROL \(DSC\)\]](#).)
 - Perform a simulation test in the simulation mode based on the repair order form, record the data at that time, and detect the malfunction cause.
 - Shake the wiring harness or connector of the electrical component which is suspected to be the cause of the malfunction, and inspect for the occurrence of any malfunction or DTCs.



- Inspect the female terminals for poor connection.



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

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.
 - a. Select "Self Test".
 - b. 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.
 - a. Select "Self Test".
 - b. Select "Modules".
 - c. 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.
 - a. Select "Self Test".
 - b. 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.
 - a. Select "Self Test".
 - b. Select "Modules".
 - c. 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.
 - a. Select "DataLogger".
 - b. Select "Modules".
 - c. 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.
 - a. Select "DataLogger".
 - b. Select "Modules".
 - c. 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.
 - a. Select "Self Test".
 - b. Select "All CMDTCs".
3. 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

×: Applicable-: Not applicable/not illuminated

DTC No.	ABS warning light	Brake system warning light (when parking brake is released)	TCS/DSC indicator light	TCS OFF indicator light	Tire pressure monitoring system warning light	Malfunction location	Fail - Drive safe	Drive cycle	Self test type	Memory function	Page
B10DF:46	-	-	Illuminated	-	-	DSC HU/CM (Internal malfunction)	×	-	C, D	×	(See DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)] .)
C0001:01											
C0002:01											
C0003:01											
C0004:01											
C0010:01											

C0011:01	Illuminated	Illuminated	Illuminated	-	-	DSC HU/CM internal malfunction (solenoid valve system)	x	-	C, D	x	(See DTC C0001:01/C0002:01/C0003:01/C0004:01/C0010:01/C0011:01/C0014:01/C0015:01/C0018:01/C0019:01/C001C:01/C001D:01 [DYNAMIC STABILITY CONTROL (DSC)].)
C0014:01											
C0015:01											
C0018:01											
C0019:01											
C001C:01											
C001D:01											
C0020:11	Illuminated	-	Illuminated	-	-	Pump motor, motor relay	x	-	C, D	x	(See DTC C0020:11/C0020:12/C0020:13/C0020:71 [DYNAMIC STABILITY CONTROL (DSC)].)
C0020:12											
C0020:13											
C0020:71											
C0030:07	Illuminated	-*2	Illuminated	-	Flashes*3	LF ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0031:07						LF ABS wheel-speed sensor/ABS sensor rotor					
C0031:11	Illuminated	-*2	Illuminated	-	Flashes*3	LF ABS wheel-speed sensor	x	-	C, D	x	(See DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0031:15											
C0031:29	Illuminated	-*2	Illuminated	-	Flashes*3	LF ABS wheel-speed sensor/ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0031:2F											
C0031:64											
C0033:07	Illuminated	-*2	Illuminated	-	Flashes*3	RF ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0034:07						RF ABS wheel-speed sensor/ABS sensor rotor					
C0034:11	Illuminated	-*2	Illuminated	-	Flashes*3	RF ABS wheel-speed sensor	x	-	C, D	x	(See DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0034:15											
C0034:29	Illuminated	-*2	Illuminated	-	Flashes*3	RF ABS wheel-speed sensor/ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0034:2F											
C0034:64											
C0036:07	Illuminated	-*2	Illuminated	-	Flashes*3	LR ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0037:07						LR ABS wheel-speed sensor/ABS sensor rotor					
C0037:11	Illuminated	-*2	Illuminated	-	Flashes*3	LR ABS wheel-speed sensor	x	-	C, D	x	(See DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C0037:15											
C0037:29	Illuminated	-*2	Illuminated	-	Flashes*3	LR ABS wheel-speed sensor/ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0037:2F											
C0037:64											
C0039:07	Illuminated	-*2	Illuminated	-	Flashes*3	RR ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C003A:07						RR ABS wheel-speed sensor/ABS sensor rotor					
C003A:11	Illuminated	-*2	Illuminated	-	Flashes*3	RR ABS wheel-speed sensor	x	-	C, D	x	(See DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)].)
C003A:15											
C003A:29	Illuminated	-*2	Illuminated	-	Flashes*3	RR ABS wheel-speed sensor/ABS sensor rotor	x	-	C, D	x	(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:29/C003A:2F/C003A:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C003A:2F											
C003A:64											

C0040:64	-	-	Illuminated	-	Flashes*3	Brake switch	x	-	C, D	x	(See DTC C0040:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0044:01	-	-	Illuminated	-	Flashes*3*4	Brake fluid pressure sensor	x	-	C, D	x	(See DTC C0044:01/C0044:28/C0044:54/C0044:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0044:28	-	-	Illuminated	-	Flashes*3						
C0044:54	-	-	Illuminated	-	Flashes*3*4						
C0044:64	-	-	Illuminated	-	Flashes*3						
C0051:62	-	-	Illuminated	-	Flashes*3	EPS CM	x	-	C, D	x	(See DTC C0051:62/C0051:64/C0051:67/C0051:85 [DYNAMIC STABILITY CONTROL (DSC)].)
C0051:64											
C0051:67	-	-	Illuminated	-	-						
C0051:85	-	-	Illuminated	-	Flashes*3						
C0061:28	-	-	Illuminated	-	Flashes*3	SAS control module system	x	-	C, D	x	(See DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0061:54	Illuminated*5	-	Illuminated	-	Flashes*3*4	DSC HU/CM system (unperformed initialization procedure)	x	-	C, D	x	(See DTC C0061:54/C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C0061:64	-	-	Illuminated	-	Flashes*3	SAS control module system	x	-	C, D	x	(See DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0062:28	Illuminated*5	-	Illuminated	-	-						
C0062:54	Illuminated*5	-	Illuminated	-	Flashes*3*4	DSC HU/CM system (unperformed initialization procedure)	x	-	C, D	x	(See DTC C0061:54/C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C0062:64	Illuminated*5	-	Illuminated	-	-	SAS control module system	x	-	C, D	x	(See DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0062:76	Illuminated*5	-	Illuminated	-	Flashes*3*4	SAS control module system	x	-	C, D	x	(See DTC C0062:76 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063:28	-	-	Illuminated	-	Flashes*3	SAS control module system	x	-	C, D	x	(See DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063:54	Illuminated*5	-	Illuminated	-	Flashes*3*4	DSC HU/CM system (unperformed initialization procedure)	x	-	C, D	x	(See DTC C0061:54/C0062:54/C0063:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C0063:64	-	-	Illuminated	-	Flashes*3	SAS control module system	x	-	C, D	x	(See DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C006B:00	-	-	Illuminated	-	Flashes*3	TCS/DSC control system	x	-	C, D	x	(See DTC C006B:00/C0072:68 [DYNAMIC STABILITY CONTROL (DSC)].)
C0072:68			-*8		-						
C0089:64	-	-	-	-	-	TCS OFF switch	-	-	C, D	x	(See DTC C0089:64 [DYNAMIC STABILITY CONTROL (DSC)].)
C1031:35	-	-	-	-	Flashes*3	Tire pressure monitoring system (TPMS) set switch	x	-	C, D	x	(See DTC C1031:35 [DYNAMIC STABILITY CONTROL (DSC)].)
C1031:41	-	-	-	-	Flashes*3	Tire pressure monitoring system (TPMS) system	x	-	C, D	x	(See DTC C1031:41 [DYNAMIC STABILITY CONTROL (DSC)].)
C1031:54											(See DTC C1031:54 [DYNAMIC STABILITY CONTROL (DSC)].)
C1031:68											(See DTC C1031:68 [DYNAMIC STABILITY CONTROL (DSC)].)
C1A08:1C	-	-	Illuminated	-	Flashes*3	DSC HU/CM (internal malfunction)	x	-	C, D	x	(See DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)].)
U0001:88	Illuminated	-	Illuminated	-	Flashes*3	CAN line	x	-	C, D	x	(See DTC U0001:88/U0100:00/U0101:00/U0114:00/U0131:00/U0155:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0100:00	Illuminated*5	-	Illuminated*5	-	Flashes*3*4						
U0101:00*6	-	-	Illuminated	-	Flashes*3						
U0114:00*7	-	-	-	-	Flashes*3						
U0131:00	-	-	Illuminated	-	Flashes*3						
U0151:00	-	Illuminated*5	Illuminated	-	Flashes*3*4	SAS control module system (CAN2 line malfunction)	x	-	C, D	x	(See DTC U0151:00 [DYNAMIC STABILITY CONTROL (DSC)].)
U0155:00	Illuminated*5	-	Illuminated*5	-	Flashes*3*4	CAN line	x	-	C, D	x	(See DTC U0001:88/U0100:00/U0101:00/U0114:00/U0131:00/U0155:00 [DYNAMIC STABILITY CONTROL (DSC)].)

U0401:00	-	-	Illuminated ^{*5}	-	Flashes ^{*3*4}	Abnormal message from PCM	x	-	C, D	x	(See DTC U0401:00 [DYNAMIC STABILITY CONTROL (DSC)] .)
U0402:00 ^{*6}	-	-	Illuminated	-	Flashes ^{*3}	Abnormal message from transmission/transaxle	x	-	C, D	x	(See DTC U0402:00 [DYNAMIC STABILITY CONTROL (DSC)] .)
U0420:00	-	-	Illuminated	-	Flashes ^{*3}	Abnormal message from EPS CM	x	-	C, D	x	(See DTC U0420:00 [DYNAMIC STABILITY CONTROL (DSC)] .)
U0423:00	-	-	-	-	Flashes ^{*3}	Abnormal message from instrument cluster	x	-	C, D	x	(See DTC U0423:00 [DYNAMIC STABILITY CONTROL (DSC)] .)
U0452:86	Illuminated ^{*5}	-	Illuminated	-	Flashes ^{*3*4}	Abnormal message from SAS control module	x	-	C, D	x	(See DTC U0452:86 [DYNAMIC STABILITY CONTROL (DSC)] .)
U2007:46	-	-	Illuminated	-	-	DSC HU/CM (internal malfunction)	x	-	C, D	x	(See DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)] .)
U2007:62	Illuminated	Illuminated	Illuminated	-	-	DSC HU/CM (internal malfunction)	x	-	C, D	x	(See DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)] .)
U2101:00	Illuminated	-	Illuminated	-	Flashes ^{*3}	Configuration data not recorded	x	-	C, D	x	(See DTC U2101:00/U2300:52/U2300:54/U2300:55/U2300:56/U2300:64 [DYNAMIC STABILITY CONTROL (DSC)] .)
U2300:52											
U2300:54											
U2300:55											
U2300:56											
U2300:64											
U3000:49	Illuminated ^{*5}	Illuminated ^{*5}	Illuminated	-	Flashes ^{*3*4}	DSC HU/CM (internal malfunction)	x	-	C, D	x	(See DTC B10DF:46/C1A08:1C/U2007:46/U2007:62/U3000:49 [DYNAMIC STABILITY CONTROL (DSC)] .)
U3003:08	-	-	-	-	-	Power supply system	-	-	C, D	x	(See DTC U3003:08/U3003:16/U3003:17 [DYNAMIC STABILITY CONTROL (DSC)] .)
U3003:16	Illuminated	^{*9}	Illuminated	-	Flashes ^{*3}		x				
U3003:17	Illuminated	Illuminated ^{*10*11}	Illuminated	-	Flashes ^{*3}						

^{*1} **C: CMDTC self-test, D: ODDTC self-test**

^{*2} **Illuminates when two wheels or more have a malfunction.**

^{*3} **Tire pressure monitoring system warning light illuminates after flashes.**

^{*4} **Not illuminated/flashed depending on malfunction content.**

^{*5} **Not illuminated depending on malfunction content.**

^{*6} **ATX only**

^{*7} **AWD only**

^{*8} **Turns on if the slip of a specific wheel is 10km/h {6.2 mph} or more.**

^{*9} **When power supply voltage is 7.9—9.6 V for 550 ms or more.**

^{*10} **When power supply voltage is 6.0—7.9 V for 630 ms or more.**

^{*11} **When power supply voltage is below 6 V for 50 ms or more.**

Fail-safe function malfunction contents

DTC No.	Fail-safe function								
	Control status								
	ABS control	EBD control	TCS Control		DSC Control	Roll over mitigation (ROM)	Brake assist control	Hill launch assist (HLA)	Tire pressure monitoring system (TPMS)
			Brake control	Engine control					
B10DF:46	Control enabled	Control enabled	Control disabled		Control disabled	Control disabled	Control disabled	Control disabled	Control enabled
C0001:01									
C0002:01									
C0003:01									
C0004:01									

C0010:01	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control enabled
C0011:01								
C0014:01								
C0015:01								
C0018:01								
C0019:01								
C001C:01								
C001D:01								
C0020:11	Control disabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control enabled
C0020:12								
C0020:13								
C0020:71								
C0030:07	Control disabled	Control enabled*1	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C0031:07								
C0031:11								
C0031:15								
C0031:29								
C0031:2F								
C0031:64								
C0033:07	Control disabled	Control enabled*1	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C0034:07								
C0034:11								
C0034:15								
C0034:29								
C0034:2F								
C0034:64								
C0036:07	Control disabled	Control enabled*1	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C0037:07								
C0037:11								
C0037:15								
C0037:29								
C0037:2F								
C0037:64								
C0039:07	Control disabled	Control enabled*1	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C003A:07								
C003A:11								
C003A:15								
C003A:29								
C003A:2F								
C003A:64								
C0040:64	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled
C0044:01	Control enabled	Control enabled	Control disabled*2	Control disabled*2	Control disabled*2	Control disabled	Control disabled*2	Control disabled*2

C0044:28	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C0044:54	Control enabled	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
C0044:64	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
C0051:62	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0051:64								
C0051:67	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control enabled
C0051:85	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0061:28	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0061:54	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
C0061:64	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0062:28	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled	Control enabled
C0062:54	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
C0062:64	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled	Control enabled
C0062:76	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled	Control disabled* ²
C0063:28	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0063:54	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
C0063:64	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0068:00	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
C0072:68	Control enabled	Control enabled	Control disabled	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled
C0089:64	Control enabled							
C1031:35	Control enabled						Control disabled	
C1031:41								
C1031:54								
C1031:68								
C1A08:1C	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
U0001:88	Control disabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
U0100:00	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
U0101:00* ⁴	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control disabled	Control disabled
U0114:00* ³	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control disabled
U0131:00	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
U0151:00	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
U0155:00	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
U0401:00	Control enabled	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²
U0402:00* ⁴	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control disabled	Control disabled
U0420:00	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control enabled	Control enabled	Control disabled
U0423:00	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control enabled	Control disabled
U0452:86	Control disabled* ²	Control enabled	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²	Control disabled* ²
U2007:46	Control enabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control enabled
U2007:62	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control enabled
U2101:00								
U2300:52								

U2300:54	Control disabled	Control enabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
U2300:55								
U2300:56								
U2300:64								
U3000:49	Control disabled* ²	Control disabled* ²	Control disabled	Control disabled	Control disabled	Control disabled* ²	Control disabled	Control disabled* ²
U3003:08	Control enabled							
U3003:16	Control disabled	Control enabled* ⁵	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled
		Control disabled* ^{6*7}						
U3003:17	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled	Control disabled

*1 **Control disabled when two wheels or more have a malfunction.**

*2 **Enabled depending on malfunction content.**

*3 **AWD only**

*4 **ATX only**

*5 **When power supply voltage is 7.9—9.6 V for 550 ms or more.**

*6 **When power supply voltage is 6.0—7.9 V for 630 ms or more.**

*7 **When power supply voltage is below 6 V for 50 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)	Pa, psi	Brake pedal depressed: Changes according to the brake fluid pressure	Inspect the brake fluid pressure sensor. (See BRAKE FLUID PRESSURE SENSOR INSPECTION.)
BRK_F_P_R (Raw Value)			
DDS_MODE	Not_Learned/Learning/Learned	- During initialization: Not_Learned - During learning: Learning - Learning completed*: Learned	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)	G	- Vehicle stopped or driving at constant speed: 0 G - Cornering to left: Changes 0 G—positive - Cornering to right: Changes 0 G—negative	Perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM] .) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM] .)
LAT_ACCL_R (Raw Value)			
LON_ACCL_C (Calculated Value)	G	- Vehicle stopped or driving at constant speed: 0 G - Vehicle is driving at an acceleration: Changes 0 G—positive - Vehicle is driving at a deceleration: Changes 0 G—negative	Perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM] .) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM] .)
LON_ACCL_R (Raw Value)			
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	Off/On	- Pump motor not activated: Off - Pump motor activated: On	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
PMP_MT_SP			
R_GEAR_SW	Off/On	Except shift/selector lever at R position: OFF	Inspect the PCM. (MTX) (See PCM INSPECTION [SKYACTIV-G 2.0] .)

		Shift/selector lever at R position: ON	Inspect the TCM. (ATX) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FW6A-EL, FW6AX-EL].)
STR_ANG_C (Calculated Value)	°	- Steering wheel in neutral position (not turned): 0° - Steering wheel turned to left: Changes 0°—positive - Steering wheel turned to right: Changes 0°—negative	Inspect the EPS CM. (See EPS CONTROL MODULE INSPECTION.)
STR_ANG_R (Raw Value)			
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	Off/On	- Solenoid valve not activated: Off - Solenoid valve activated: On	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
V_INLET_LR			
V_INLET_RF			
V_INLET_RR			
V_OUTLET_LF			
V_OUTLET_LR			
V_OUTLET_RF			
V_OUTLET_RR			
V_STB_LF/RR	Off/On	- Solenoid valve activated: On - Solenoid valve not activated: Off	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
V_STB_RF/LR			
V_TRC_LF/RR	Off/On	- Solenoid valve activated: On - Solenoid valve not activated: Off	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)
V_TRC_RF/LR			
VPWR_B_SOL	V	- Ignition switched ON (engine off): Approx. 12.2 V - Idling: Approx. 14.1 V	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.)
WSPD_SEN_LF	KPH, MPH	- Vehicle stopped: 0 KPH, 0 MPH - Vehicle running: Vehicle speed	Inspect the front ABS wheel-speed sensor. (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.)
WSPD_SEN_LR			Inspect the rear ABS wheel-speed sensor. (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD].)
WSPD_SEN_RF			Inspect the front ABS wheel-speed sensor. (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 [AWD].)
YAW_RATE_C (Calculated Value)	°/s	- Vehicle stopped or driving straight: 0 °/s - Cornering to left: Changes 0 °/s—positive - Cornering to right: Changes 0 °/s—negative	Perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].)
YAW_RATE_R (Raw Value)			(See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)

*
After ignition is switched off, switch it ON (engine off or on) and verify.

Snapshot Data Table

NOTE:

- 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	Definition	Corresponding data monitor items
AAT	°C, °F	Ambient air temperature	—

ABS	Inactive/ Active	Antilock braking system	—
APP_STATUS	Accelerator Pedal Off/ Under 20%/ Over 20%/ FAIL	Accelerator pedal position	—
AYC	Inactive/ Active	Active yaw control	—
BRK_F_P_R	Pa, psi	Brake fluid line hydraulic pressure (Raw Value)BRK_F_P_R	
BTCS	Inactive/ Active	Brake traction control system	—
CFG_STATUS	Config Complete/ Not Configured/ Config Error	Configuration status	—
ECT_STATUS	Under 0 degrees C/ 0 - Under 80 degrees C/ Over 80 degrees C/ FAIL	Engine coolant temperature status	—
EDC	Inactive/ Active	Engine drag control	—
IC_VPWR	V	Instrument cluster power supply	—
IG-ON_TIMER	hh:mm:ss	Times since ignition switch ON	—
LAT_ACCL_R	G	Lateral acceleration (Raw Value)	LAT_ACCL_R
LON_ACCL_R	G	Longitudinal acceleration (Raw Value)	LON_ACCL_R
PMP_MT	Off/On	Pump motor	PMP_MT
PWR_MODE_KEY	Key Out/ Key Recently Out/ Key Approved(Position 0)/ Post Accessory (Position 0)/ Accessory (Position 1)/ Post Ignition (Position 1)/ Ignition On (Position 2)/ Running (Position 2)/ Running - Starting In Progress (Position 2)/ Crank (Position 3)	Power mode key state	—
RPM_STATUS	Engine Stop/ Under 1500rpm/ Over 1500rpm/ FAIL	Engine RPM status	—
SHIFT_STATUS	P/N D/ R/ FAIL	Shift position status	—
STR_ANG_C	°	Steering wheel angle (Calculated Value)	STR_ANG_C
TCS	Inactive/ Active	Traction control system	—
TOTAL_DIST	km, ft, mi	Total distance	—
TOTAL_TIME	hh:mm:ss	Total time	—
VPWR	V	Power supply	VPWR
VSPD	KPH, MPH	Vehicle speed	VSPD
	Stop/		

VSPD_STATUS	0 - 10km/h/ Over 10km/h/ FAIL	Vehicle speed status	—
YAW_RATE_R	°/S	Yaw Rate (Raw Value)	YAW_RATE_R

Active Command Modes Table

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

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2013 - CX-5 - Brakes

DTC B10DF:46 / C1A08:1C / U2007:46 / U2007:62 / U3000:49 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	B10DF:46, C1A08:1C, U2007:46, U2007:62, U3000:49	DSC HU / CM (internal malfunction)
DETECTION CONDITION	• The DSC CM on-board diagnostic function detects control module internal malfunction.	
FAIL-SAFE FUNCTION	• B10DF:46, U2007:46 ▪ Illuminates the TCS/DSC indicator light. ▪ Inhibits the TCS, DSC, roll over mitigation (ROM), brake assist control, and hill launch assist (HLA) controls. • C1A08:1C ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls. • U2007:62 ▪ Illuminates the ABS warning light, brake system warning light and TCS/DSC indicator light. ▪ Inhibits the ABS, EBD, TCS, DSC, roll over mitigation (ROM), brake assist control, and hill launch assist (HLA) controls. • U3000:49 ▪ Illuminates the ABS warning light^{*1}, brake system warning light^{*1} and TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.) ▪ Inhibits the ABS^{*2}, EBD^{*2}, TCS, DSC, roll over mitigation (ROM), brake assist control^{*2}, and hill launch assist (HLA), *2	

	TPMS controls. • *1: Not illuminated depending on malfunction content. • *2: Enabled depending on malfunction content.
POSSIBLE CAUSE	• DSC HU/CM internal malfunction
SYSTEM WIRING DIAGRAM	—

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY NO DSC HU/CM MALFUNCTION • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Start the engine and drive the vehicle at 10km/h {6.2 mph} or more. • Are the same DTCs present?	YesReplace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		NoGo to the next step.
2	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	YesGo to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		NoDTC troubleshooting completed.

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2013 - CX-5 - Brakes

DTC
C0001:01/C0002:01/C0003:01/C0004:01/C0010:01/C0011:01/C0014:01/C0015:01/C0018:01/C0019:01/C001C:01/C001D:01
[DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0001:01, C0002:01	Traction control solenoid valve system
	C0003:01, C0004:01	Stability control solenoid valve system
	C0010:01	LF inlet solenoid valve system
	C0011:01	LF outlet solenoid valve system
	C0014:01	RF inlet solenoid valve system
	C0015:01	RF outlet solenoid valve system
	C0018:01	LR inlet solenoid valve system
	C0019:01	LR outlet solenoid valve system
	C001C:01	RR inlet solenoid valve system
	C001D:01	RR outlet solenoid valve system
DETECTION CONDITION		Malfunction detected in the DSC HU/CM solenoid valve or internal circuit by the DSC HU/CM on-board diagnostic function
FAIL-SAFE FUNCTION		- Illuminates the ABS warning light, brake system warning light, and TCS/DSC indicator light. - Inhibits the ABS, EBD, TCS, DSC, roll over mitigation (ROM), brake assist control, and hill launch assist (HLA), controls.
POSSIBLE CAUSE		- Open or short circuit in the DSC HU/CM internal solenoid valves - Solenoid valve malfunction
SYSTEM WIRING DIAGRAM		—

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY SOLENOID VALVE OPERATION - Switch the ignition to off. - Connect the M-MDS to the DLC-2. - Switch the ignition ON (engine off). - Access the active command mode for the solenoid valve using the M-MDS. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY	YesGo to the next step.
		NoReplace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)

	CONTROL (DSC)] .) Does the solenoid valve operate?		
2	VERIFY DTC TROUBLESHOOTING COMPLETED - Clear the DTC from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Start the engine and drive the vehicle at 10 km / h {6.2 mph} or more. - Gradually slow down and stop vehicle. - Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
3	VERIFY AFTER REPAIR PROCEDURE Are any other DTCs present?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

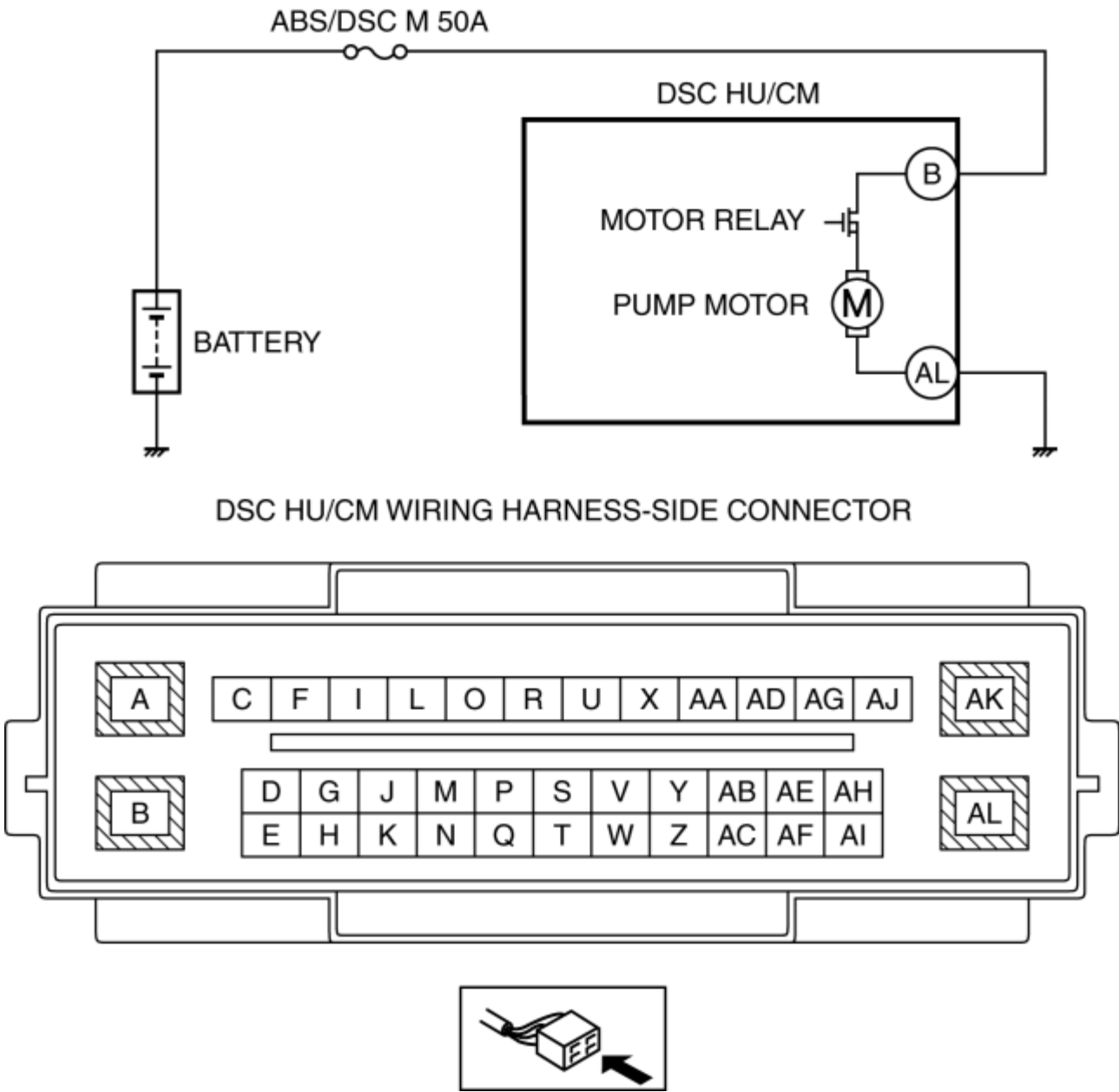
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2013 - CX-5 - Brakes

DTC C0020:11/C0020:12/C0020:13/C0020:71 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0020:11, C0020:12, C0020:13, C0020:71	Pump motor, motor relay
DETECTION CONDITION	• C0020:11 ▪ Motor relay signal does not correspond to DSC HU/CM OFF signal. • C0020:12 ▪ DSC motor monitor signal does not correspond to DSC HU/CM OFF signal. ▪ DSC motor monitor signal does not correspond to DSC HU/CM ON signal. • C0020:13 ▪ Motor relay signal does not correspond to DSC HU/CM ON signal. • C0020:71 ▪ DSC HU/CM motor monitor ON signal is not input within specified time limit or more when motor signal is switched from ON to OFF by DSC HU/CM.	
FAIL-SAFE FUNCTION	• Illuminates the ABS warning light and TCS/DSC indicator light. • Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, and hill launch assist (HLA) controls.	
POSSIBLE CAUSE	• Fuse (ABS/DSC M 50A) malfunction • Open or short circuit in DSC HU/CM internal motor relay, or stuck motor relay • Open or short circuit in DSC HU/CM internal pump motor, or frozen pump motor • Open circuit or short to ground in the wiring harness between the battery and DSC HU/CM terminal B • Open circuit in the wiring harness between DSC HU/CM terminal AL and body ground	

- Poor connection at connectors (female terminal)



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FUSE CONDITION • Is the fuse (ABS/DSC M 50A) normal?	YesGo to the next step.
		No Replace the fuse, then go to Step 6.
2	VERIFY PUMP MOTOR OPERATION • Switch the ignition to off. • Connect the M-MDS to the DLC-2.	YesGo to the next step.
		No Replace the DSC HU/CM, then go

	• Switch the ignition ON (engine off). • Access PMP_MT_SP active command modes using the M-MDS. • Does the pump motor operate?		to Step 6. (See DSC HU/CM REMOVAL/INSTALLATION.)
3	INSPECT MOTOR RELAY POWER SUPPLY FOR OPEN CIRCUIT • Switch the ignition to off. • Disconnect the DSC HU/CM connector. • Inspect for continuity between DSC HU/CM terminal B (vehicle harness-side) and the positive battery terminal. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 6.
4	INSPECT MOTOR RELAY POWER SUPPLY FOR SHORT CIRCUIT • Inspect for continuity between DSC HU/CM terminal B (vehicle harness-side) and body ground. • Is there continuity?	Yes	Repair or replace the wiring harness, then go to Step 6.
		No	Go to the next step.
5	INSPECT PUMP MOTOR GROUND FOR OPEN CIRCUIT • Inspect for continuity between DSC HU/CM terminal AL (vehicle harness-side) and body ground. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.
6	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Start the engine and drive the vehicle at 10 km/h {6.2 mph} or more. • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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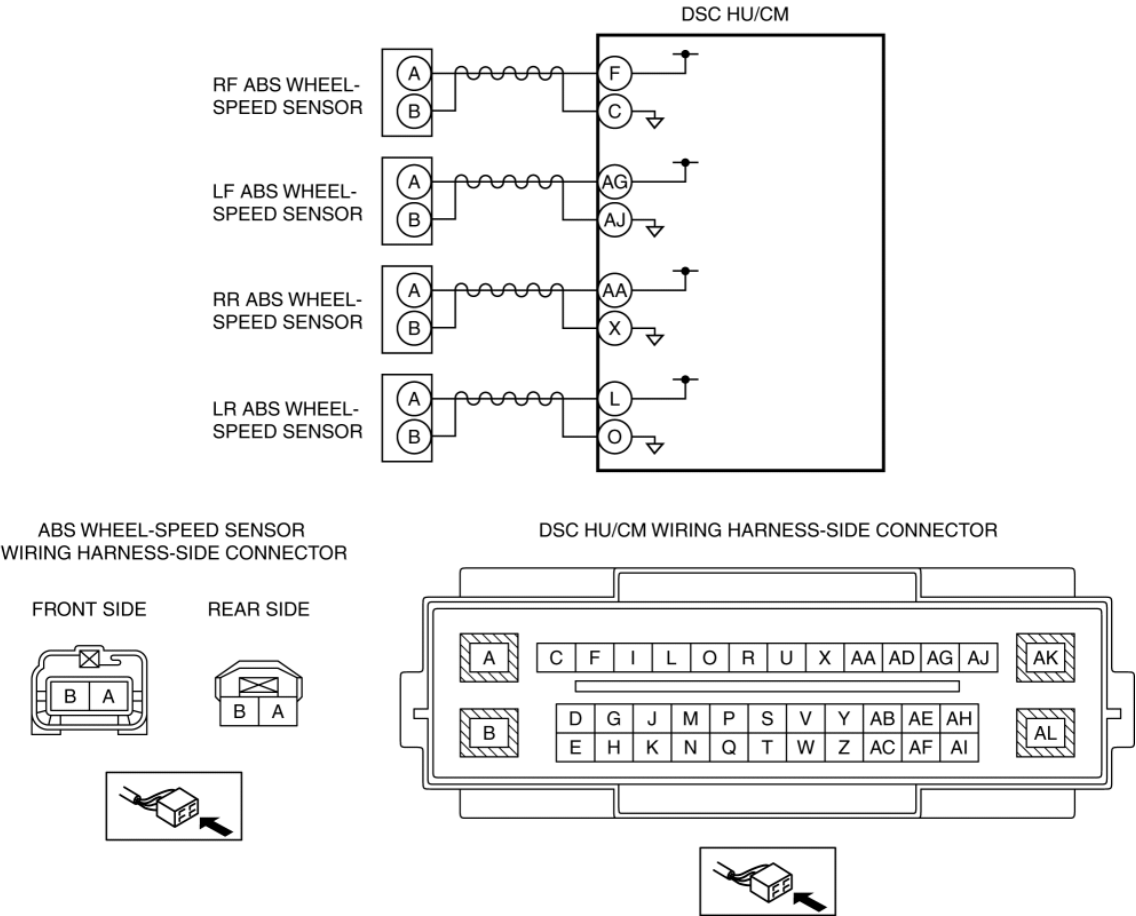
DTC
C0030:07/C0031:07/C0031:29/C0031:2F/C0031:64/C0033:07/C0034:07/C0034:29/C0034:2F/C0034:64/C0036:07/C0037:07/C0037:29/C0037:2F/C0037:64/C0039:07/C003A:07/C003A:29/C003A:2F/C003A:64
[DYNAMIC STABILITY CONTROL (DSC)]

NOTE:

- When only the driving wheels are rotated while the vehicle is jacked up, DTCs C0037:29 and C003A:29 are input to the memory.

DTC	C0030:07	LF ABS sensor rotor
	C0031:07, C0031:29, C0031:2F, C0031:64	LF ABS wheel-speed sensor/ABS sensor rotor
	C0033:07	RF ABS sensor rotor
	C0034:07, C0034:29, C0034:2F, C0034:64	RF ABS wheel-speed sensor/ABS sensor rotor
	C0036:07	LR ABS sensor rotor
	C0037:07, C0037:29, C0037:2F, C0037:64	LR ABS wheel-speed sensor/ABS sensor rotor
	C0039:07	RR ABS sensor rotor
	C003A:07, C003A:29, C003A:2F, C003A:64	RR ABS wheel-speed sensor/ABS sensor rotor
DETECTION CONDITION	- C0030:07, C0033:07, C0036:07, C0039:07 - Periodic abnormality is detected in the signal wave pattern from the ABS wheel-speed sensors. - C0031:07, C0034:07, C0037:07, C003A:07 - While the vehicle is traveling at a speed of 10 km/h {6.2 mph} or more, no signal in any of the four wheels or an extremely low vehicle speed signal is detected. - C0031:29, C0034:29, C0037:29, C003A:29 - The wheel-speed signal is not input or an extremely low wheel-speed signal is detected from any of the four wheels when driving at a vehicle speed of 10 km/h {6.2 mph} or more - C0031:2F, C0034:2F, C0037:2F, C003A:2F - The wheel speed or acceleration speed in any of the 4 wheels is not within the specification. - ABS control continues to operate for 28 s or more. - C0031:64, C0034:64, C0037:64, C003A:64 - While the vehicle is traveling at a speed of 20 km/h {12 mph} or more, an extremely high vehicle speed signal in any of the four wheels is detected.	
FAIL-SAFE FUNCTION	- Illuminates the ABS warning light and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls. (Additionally, when any malfunction is detected in two wheels or more, EBD control is inhibited and the brake system warning light is illuminated.)	
POSSIBLE CAUSE	- ABS sensor rotor malfunction (missing ABS sensor rotor teeth due to foreign material obstruction) - ABS wheel-speed sensor or ABS sensor rotor installation malfunction (If the ABS sensor rotor is installed at an angle, it may cause output of abnormal wave pattern at high speeds.) - Excessive clearance between the ABS wheel-speed sensor and sensor rotor - ABS wheel-speed sensor malfunction	

- Continuous ABS operation



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT PID FOR ABS WHEEL-SPEED SENSOR OUTPUT ERROR USING M-MDS • Switch the ignition to off. • Connect the M-MDS to the DLC-2. • Select the following PIDs using the M-MDS: ▪ WSPD_SEN_LF ▪ WSPD_SEN_LR ▪ WSPD_SEN_RF ▪ WSPD_SEN_RR • Drive the vehicle. • Verify that the vehicle speeds detected by the four ABS wheel-speed sensors are approximately the same. • Are the vehicle speeds approximately the same?	YesGo to Step 3. NoGo to the next step.
2	INSPECT FOR SHORT TO GROUND BETWEEN ABS WHEEL-SPEED SENSOR CONNECTORS AND GROUND • Disconnect the ABS wheel-speed sensor connectors.	YesGo to the next step.

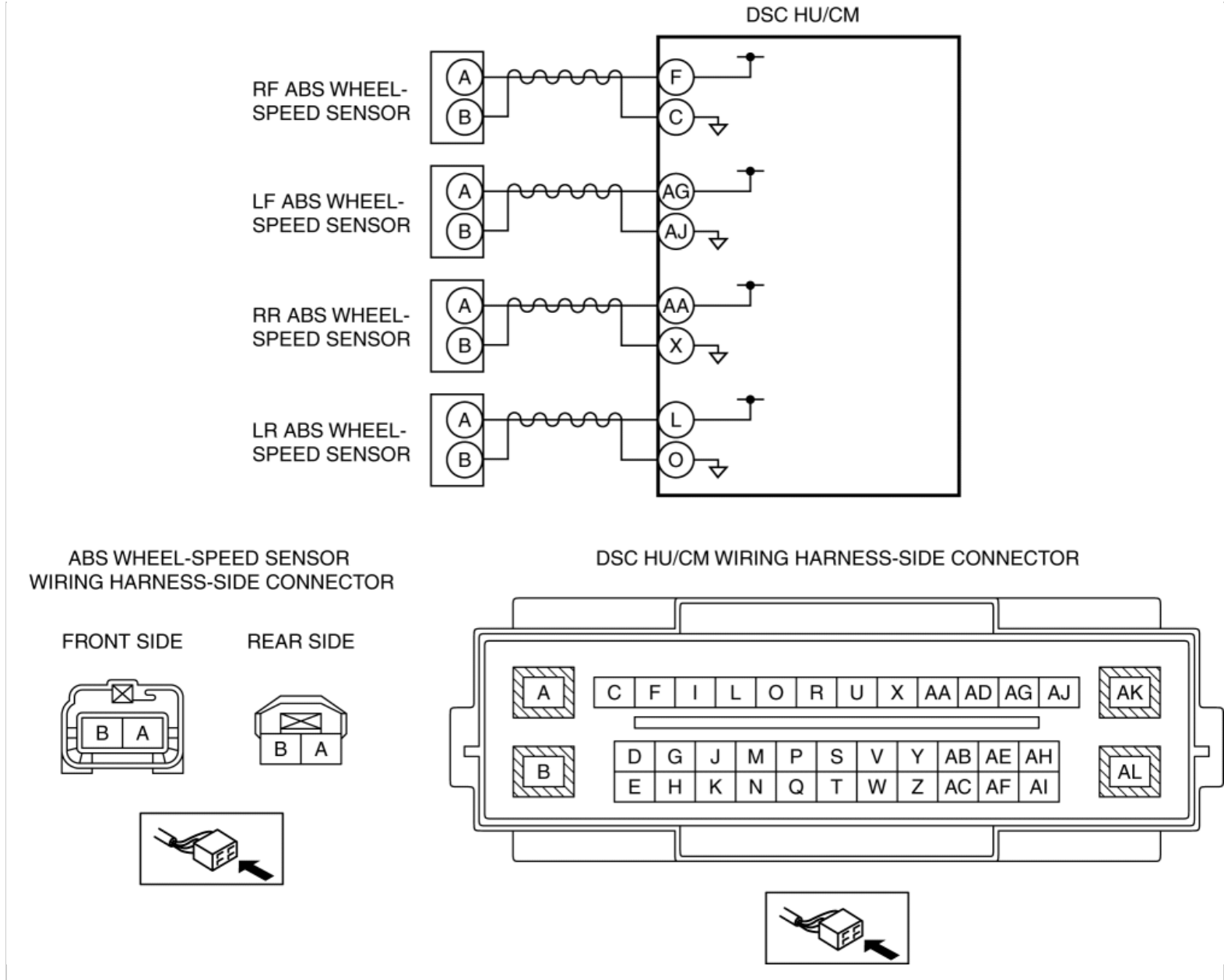
	- Inspect for no continuity between the following ABS wheel-speed sensor connector terminals (vehicle harness-side) and body ground: - ABS wheel-speed sensor (RF): B—Body ground - ABS wheel-speed sensor (LF): B—Body ground - ABS wheel-speed sensor (RR): B—Body ground - ABS wheel-speed sensor (LR): B—Body ground - Is the continuity normal?	No	Repair or replace the wiring harness, then go to Step 5.
3	INSPECT IF MALFUNCTION OCCURRED DUE TO IMPROPER SENSOR CLEARANCE. - Inspect the clearance between the ABS wheel-speed sensor and the ABS sensor rotor. (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD].) - Is the clearance normal?	Yes	Go to the next step.
		No	Replace the ABS wheel-speed sensor, then go to Step 5. (See FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION .) (See REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION .)
4	VISUALLY INSPECT ABS SENSOR ROTOR FOR FOREIGN MATERIAL ADHERING OR IMPROPER INSTALLATION Is the result normal?	Yes	Go to the next step.
		No	Repair or replace the ABS sensor rotor, then go to the next step. - Front ABS sensor rotor (front wheel hub) (See WHEEL HUB, STEERING KNUCKLE REMOVAL/INSTALLATION.) - Rear ABS sensor rotor (rear wheel hub (2WD) or shaft and ball joint component (AWD)) (See WHEEL HUB COMPONENT REMOVAL/INSTALLATION [2WD].) (See REAR DRIVE SHAFT DISASSEMBLY/ASSEMBLY.)
5	VERIFY THAT THE SAME DTC IS NOT PRESENT - Reconnect all disconnected connectors. - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Start the engine and drive the vehicle at 20 km/h {12 mph} or more. - Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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2013 - CX-5 - Brakes

DTC C0031:11/C0031:15/C0034:11/C0034:15/C0037:11/C0037:15/C003A:11/C003A:15 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0031:11, C0031:15	LF ABS wheel-speed sensor
	C0034:11, C0034:15	RF ABS wheel-speed sensor
	C0037:11, C0037:15	LR ABS wheel-speed sensor
	C003A:11, C003A:15	RR ABS wheel-speed sensor
DETECTION CONDITION		- C0031:11, C0034:11, C0037:11, C003A:11 - Short to ground has been detected in the ABS wheel-speed sensor wiring harness on any of the four vehicle wheels. - C0031:15, C0034:15, C0037:15, C003A:15 - Open circuit or short to power supply has been detected in the ABS wheel-speed sensor wiring harness on any of the four vehicle wheels.
FAIL-SAFE FUNCTION		- Illuminates the ABS warning light and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls. (Additionally, when any malfunction is detected in two wheels or more, EBD control is inhibited and the brake system warning light is illuminated.)
POSSIBLE CAUSE		- Open circuit or short to ground/power supply in the wiring harness between the following DSC HU/CM terminals and ABS wheel-speed sensor terminals: - DSC HU/CM terminal F—RF ABS wheel-speed sensor terminal A - DSC HU/CM terminal C—RF ABS wheel-speed sensor terminal B - DSC HU/CM terminal AG—LF ABS wheel-speed sensor terminal A - DSC HU/CM terminal AJ—LF ABS wheel-speed sensor terminal B - DSC HU/CM terminal AA—RR ABS wheel-speed sensor terminal A - DSC HU/CM terminal X—RR ABS wheel-speed sensor terminal B - DSC HU/CM terminal L—LR ABS wheel-speed sensor terminal A - DSC HU/CM terminal O—LR ABS wheel-speed sensor terminal B - Malfunction in the ABS wheel-speed sensor - Poor connection at connectors (female terminal)



	▪ LR ABS wheel-speed sensor (-): O • Is there continuity?		
2	INSPECT ABS WHEEL-SPEED SENSOR WIRING HARNESS FOR SHORT TO GROUND • Disconnect the ABS wheel-speed sensor connectors. • Inspect for continuity between the following DSC HU/CM connector terminals (vehicle harness-side) and body ground: ▪ RF ABS wheel-speed sensor (+): F ▪ RF ABS wheel-speed sensor (-): C ▪ LF ABS wheel-speed sensor (+): AG ▪ LF ABS wheel-speed sensor (-): AJ ▪ RR ABS wheel-speed sensor (+): AA ▪ RR ABS wheel-speed sensor (-): X ▪ LR ABS wheel-speed sensor (+): L ▪ LR ABS wheel-speed sensor (-): O • Is there continuity?	Yes	Repair or replace the wiring harness, then go to Step 5.
		No	Replace the ABS wheel-speed sensor, then go to Step 5. (See FRONT ABS WHEEL-SPEED SENSOR REMOVAL / INSTALLATION.) (See REAR ABS WHEEL-SPEED SENSOR REMOVAL / INSTALLATION.)
3	INSPECT FOR OPEN CIRCUIT IN ABS WHEEL-SPEED SENSOR WIRING HARNESS • Inspect for continuity between the DSC HU/CM connectors (vehicle harness-side) and the following vehicle harness-side connector terminals of the ABS wheel-speed sensors: ▪ RF ABS wheel-speed sensor (+): F—A ▪ RF ABS wheel-speed sensor (-): C—B ▪ LF ABS wheel-speed sensor (+): AG—A ▪ LF ABS wheel-speed sensor (-): AJ—B ▪ RR ABS wheel-speed sensor (+): AA—A ▪ RR ABS wheel-speed sensor (-): X—B ▪ LR ABS wheel-speed sensor (+): L—A ▪ LR ABS wheel-speed sensor (-): O—B • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.
4	INSPECT ABS WHEEL-SPEED SENSOR WIRING HARNESS FOR SHORT TO POWER SUPPLY • Inspect for voltage between the following DSC HU/CM connector terminals (vehicle harness-side) and body ground: ▪ RF ABS wheel-speed sensor (+): F ▪ RF ABS wheel-speed sensor (-): C ▪ LF ABS wheel-speed sensor (+): AG ▪ LF ABS wheel-speed sensor (-): AJ ▪ RR ABS wheel-speed sensor (+): AA ▪ RR ABS wheel-speed sensor (-): X ▪ LR ABS wheel-speed sensor (+): L ▪ LR ABS wheel-speed sensor (-): O • Is the voltage 1 V or less?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.
5	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory.	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the

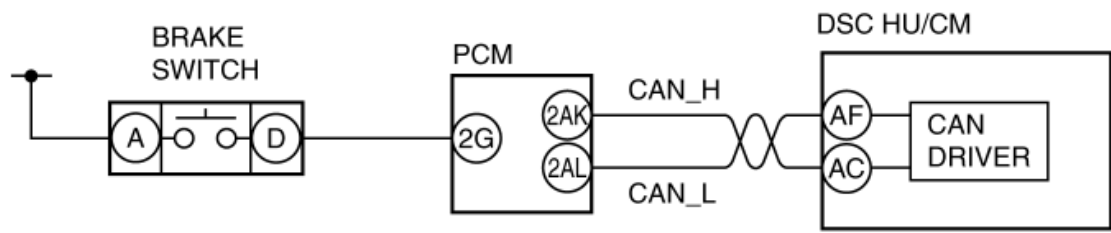
	(See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) Are the same DTCs present?		next step. (See DSC HU / CM REMOVAL / INSTALLATION.)
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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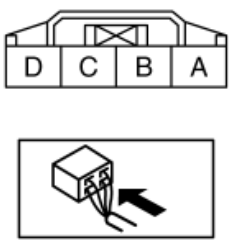
2013 - CX-5 - Brakes

DTC C0040:64 [DYNAMIC STABILITY CONTROL (DSC)]

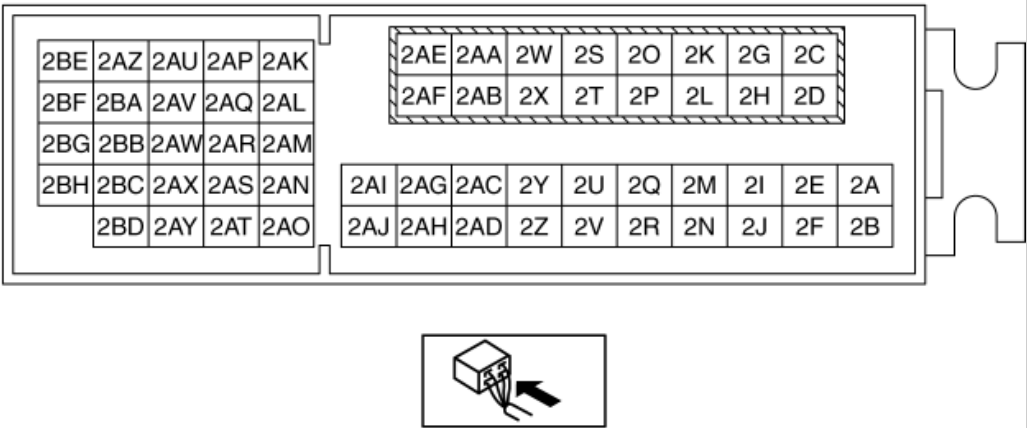
DTC	C0040:64	Brake switch
DETECTION CONDITION	- Brake switch ON signal is input for 6 min or more when driving at a vehicle speed of 20 km/h {12 mph} or more. - A brake switch ON signal is not input when the brake fluid pressure sensor signal reaches the specified value.	
FAIL-SAFE FUNCTION	- Illuminates the TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the brake assist control, hill launch assist (HLA), and TPMS controls.	
POSSIBLE CAUSE	- Open or short circuit in wiring harness between the brake switch and PCM terminal 2G - Brake switch malfunction - Poor connection at connectors (female terminal)	



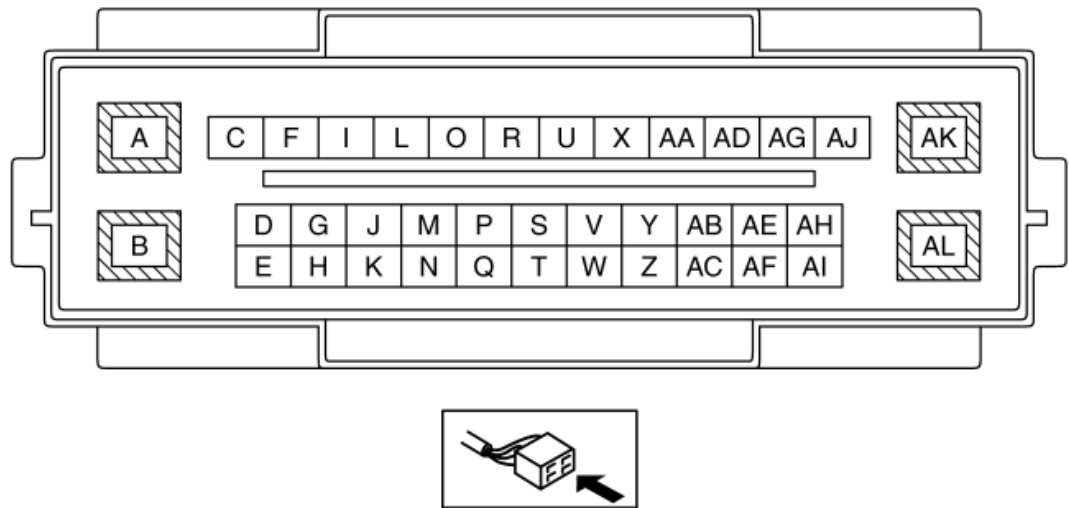
BRAKE SWITCH WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



DSC HU/CM WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY OPEN OR SHORT CIRCUIT IN BRAKE SWITCH SIGNAL - Switch the Ignition ON (engine off). - Measure the voltage between the PCM connector terminal 2G (vehicle harness-side) and body ground when the brake pedal is depressed and released. Voltage Brake pedal depressed: B+ Brake pedal released: 1 V or less	YesGo to Step 5. No If it is B+ under any condition, then go to the next step. If it is 1 V or less under any condition, then go to Step 3.

	Is the voltage normal?		
2	INSPECT BRAKE SWITCH SIGNAL FOR SHORT TO POWER SUPPLY CIRCUIT - Disconnect the brake switch connector. - Measure voltage between the brake switch connector terminal D (vehicle harness-side) and body ground. - Is the voltage 1 V or less?	Yes	Go to Step 4.
		No	Repair or replace the wiring harness between the PCM and brake switch, then go to Step 5
3	INSPECT BRAKE SWITCH SIGNAL FOR OPEN CIRCUIT - Disconnect the PCM connectors. - Disconnect the brake switch connector. - Inspect continuity between the PCM connector terminal 2G (vehicle harness-side) and brake switch connector terminal D (vehicle harness-side). - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness between the PCM and brake switch, then go to Step 5.
4	INSPECT BRAKE SWITCH - Inspect the brake switch. (See BRAKE SWITCH INSPECTION.) - Is the brake switch normal?	Yes	Go to the next step.
		No	Replace the brake switch, then go to the next step. (See BRAKE PEDAL REMOVAL / INSTALLATION.)
5	VERIFY THAT THE SAME DTC IS NOT PRESENT - Reconnect all disconnected connectors. - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Start the engine and drive the vehicle at 20 km / h {12 mph} or more. - Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC C0044:01 / C0044:28 / C0044:54 / C0044:64 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0044:01, C0044:28, C0044:54, C0044:64	Brake fluid pressure sensor
DETECTION CONDITION	• C0044:01 ▪ The voltage value from the brake fluid pressure sensor is not within specification. • C0044:28, C0044:64 ▪ The pressure from the brake fluid pressure sensor is not within specification. • C0044:54 ▪ The brake fluid pressure sensor detects the initialization procedure has not been perform.	
FAIL-SAFE FUNCTION	• C0044:01 ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.) ▪ Inhibits the TCS*, DSC*, roll over mitigation (ROM)*, brake assist control, hill launch assist (HLA)*, and TPMS* controls. • C0044:28, C0044:64 ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls. • C0044:54 ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.)	

	▪ Inhibits the TCS*, DSC*, roll over mitigation (ROM)*, brake assist control*, hill launch assist (HLA)*, and TPMS* controls. • *: Enabled depending on malfunction content.
POSSIBLE CAUSE	• The initialization procedure for the brake fluid pressure sensor has not been performed. • Brake fluid pressure sensor malfunction • Open or short circuit in the brake fluid pressure sensor circuit in DSC HU/CM
SYSTEM WIRING DIAGRAM	—

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY INITIALIZATION PROCEDURE • Was the brake fluid pressure sensor initialization procedure been performed?	YesGo to the next step.
		NoPerform the brake fluid pressure sensor initialization procedure, then go to the next step. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
2	VERIFY NO ABNORMALITY ON BRAKE FLUID PRESSURE SENSOR • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Start the engine and drive the vehicle at 10 km / h { 6.2 mph } or more. • Are the same DTCs present?	YesReplace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL / INSTALLATION.)
		NoGo to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	YesGo to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		NoDTC troubleshooting completed.

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DTC C0051:62/C0051:64/C0051:67/C0051:85 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0051:62, C0051:64, C0051:67, C0051:85	EPS CM
DETECTION CONDITION	• C0051:62 ▪ The difference between the steering angle calculated by each sensor and the steering angle from the EPS CM is the specification or more when the vehicle is driven in a straight line. • C0051:64 ▪ The difference between the steering angle calculated by each sensor and the steering angle from the EPS CM exceeds the specification. • C0051:67 ▪ The neutral position of the steering angle cannot be estimated from the signals from the ABS wheel-speed sensors and the SAS control module. • C0051:85 ▪ The EPS CM detects signal modulation or steering angle that exceeds specification.	
FAIL-SAFE FUNCTION	• C0051:62, C0051:64, C0051:85 ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the TCS, DSC, roll over mitigation (ROM), and TPMS controls. • C0051:67 ▪ Illuminates the TCS/DSC indicator light. ▪ Inhibits the TCS, DSC, and roll over mitigation (ROM) controls.	

POSSIBLE CAUSE	- Improper installation of the EPS CM - EPS CM malfunction - Connector or terminal malfunction
SYSTEM WIRING DIAGRAM	—

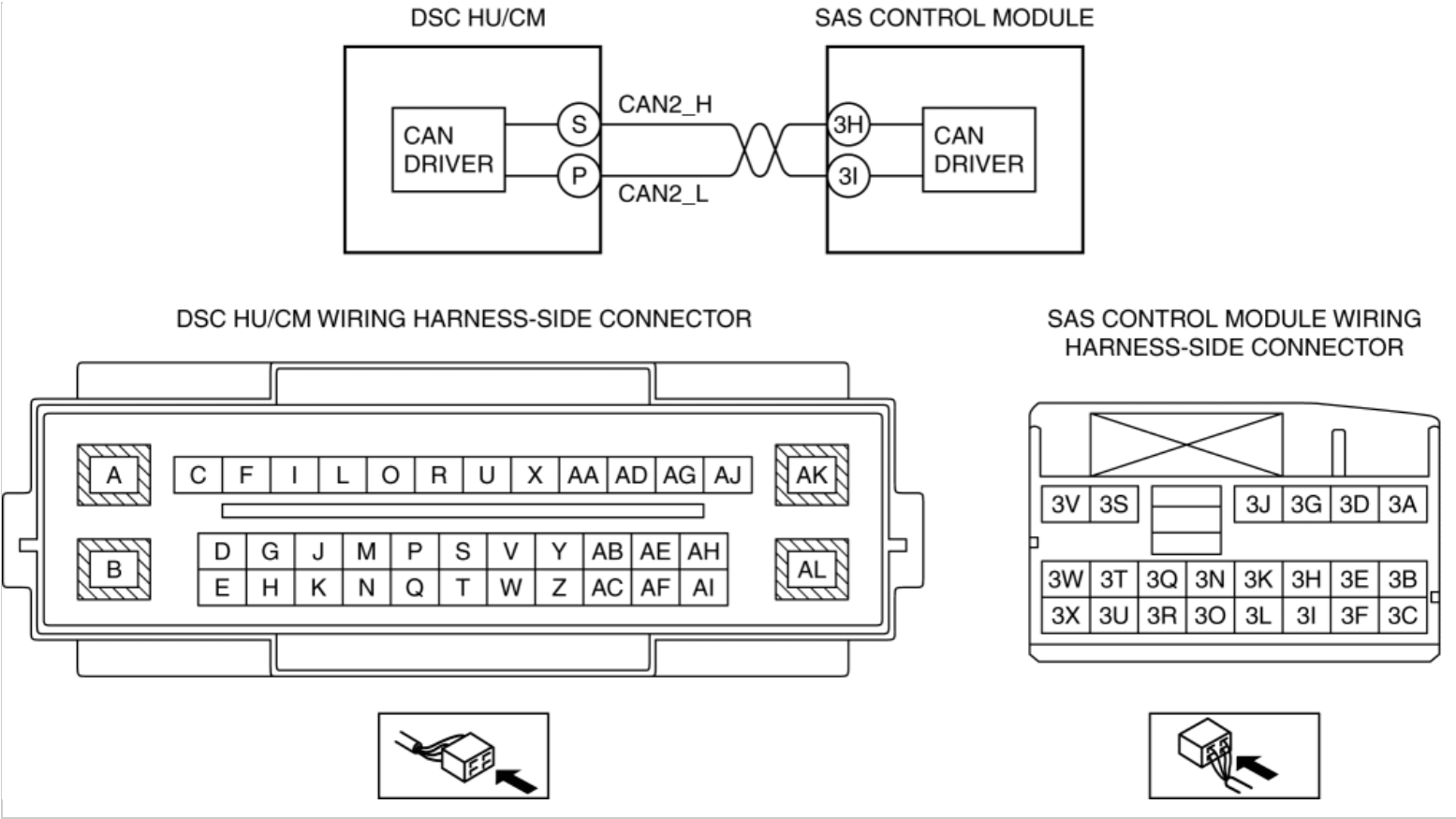
Diagnostic procedure

STEP	INSPECTION	ACTION
1	PERFORM EPS CM DTC INSPECTION Perform the EPS CM DTC inspection. (See ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS.)	YesGo to the applicable DTC inspection. (See ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS.)
	Are any DTCs present?	NoGo to the next step.
2	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Start the engine and drive the vehicle at 10 km / h {6.2 mph} or more. - Are the same DTCs present?	YesRepeat the inspection from Step 1. If the malfunction recurs, replace the EPS CM, then go to the next step. (See STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
		NoGo to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	YesGo to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		NoDTC troubleshooting completed.

2013 - CX-5 - Brakes

DTC C0061:28/C0061:64/C0062:28/C0062:64/C0063:28/C0063:64 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0061:28, C0061:64, C0062:28, C0062:64, C0063:28, C0063:64	SAS control module system
DETECTION CONDITION	NOTE: • The low-G sensor and the yaw rate sensor are built into the SAS control module. • C0061:28, C0061:64 ▪ Out-of-specification signal modulation or lateral-G value is detected from the low-G sensor. • C0062:28, C0062:64 ▪ Out-of-specification signal modulation or longitudinal-G value is detected from the low-G sensor. • C0063:28, C0063:64 ▪ Out-of-specification signal modulation or yaw rate value is detected from the yaw rate sensor.	
FAIL-SAFE FUNCTION	• C0061:28, C0061:64, C0063:28, C0063:64 ▪ Illuminates the TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the TCS, DSC, roll over mitigation (ROM), and TPMS controls. • C0062:28, C0062:64 ▪ Illuminates the ABS warning light*¹ and TCS/DSC indicator light. ▪ Inhibits the ABS*², TCS*², DSC*², roll over mitigation (ROM)*², brake assist control*², and hill launch assist (HLA) controls. • *¹: Not illuminated depending on malfunction content. • *²: Enabled depending on malfunction content.	
POSSIBLE CAUSE	• SAS control module malfunction • Open or short circuit in the CAN2_H wiring harness between DSC HU/CM terminal S and SAS control module terminal 3H • Open or short circuit in the CAN2_L wiring harness between DSC HU/CM terminal P and SAS control module terminal 3I • DSC HU/CM malfunction • Poor connection at connectors (female terminal)	



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT SAS CONTROL MODULE MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [STANDARD DEPLOYMENT CONTROL SYSTEM] .) (See DTC TABLE [TWO-STEP DEPLOYMENT CONTROL SYSTEM] .)
		No Go to the next step.
2	INSPECT SAS CONTROL MODULE SIGNAL (CAN2 LINE) FOR OPEN CIRCUIT - Disconnect the DSC HU/CM connector. - Disconnect the SAS control module connectors. - Inspect for continuity between the following DSC HU/CM connector terminals (vehicle harness-side) and SAS control module connector terminals (vehicle harness-side): - DSC HU/CM terminal S—SAS control module terminal 3H - DSC HU/CM terminal P—SAS control module terminal 3I - Is there continuity?	YesGo to the next step.
		No Repair or replace the wiring harness, then go to Step 4.
3	INSPECT SAS CONTROL MODULE SIGNAL (CAN2 LINE) FOR SHORT CIRCUIT - Inspect for continuity between the following DSC HU/CM connector terminals (vehicle harness-side) and body ground: - DSC HU/CM terminal S—body ground - DSC HU/CM terminal P—body ground - Is there continuity?	YesRepair or replace the wiring harness, then go to the next step.
		No Go to the next step.

4	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .) • Start the engine and drive the vehicle at 10 km / h {6.2 mph} or more. • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
5	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC C0061:54 / C0062:54 / C0063:54 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0061:54, C0062:54, C0063:54	DSC HU/CM system (unperformed initialization procedure)
DETECTION CONDITION	• C0061:54 ▪ DSC HU/CM detects that the initialization procedure has not been performed. (Lateral acceleration sensor) • C0062:54 ▪ DSC HU/CM detects that the initialization procedure has not been performed. (Longitudinal acceleration sensor) • C0063:54 ▪ DSC HU/CM detects that the initialization procedure has not been performed. (Yaw rate sensor)	
FAIL-SAFE FUNCTION	• Illuminates the ABS warning light*¹ and TCS/DSC indicator light. • Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flushed depending on malfunction content.) • Inhibits the ABS*², TCS*², DSC*², roll over mitigation (ROM)*², brake assist control*², hill launch assist (HLA)*², and TPMS*² controls. • *¹: Not illuminated depending on malfunction content. • *²: Enabled depending on malfunction content.	
POSSIBLE CAUSE	• Initialization procedure for the lateral acceleration sensor, longitudinal acceleration sensor or yaw rate sensor not performed • SAS control module malfunction • DSC HU/CM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	VERIFY INITIALIZATION PROCEDURE Was the DSC related parts sensor initialization procedure performed?	Yes	Go to the next step.
		No	Perform the DSC related parts sensor initialization procedure, then go to Step 3. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
2	INSPECT SAS CONTROL MODULE MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].) - Are any DTCs detected?	Yes	Go to applicable DTC inspection. (See DTC TABLE [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC TABLE [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)
		No	Go to the next step.
3	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Go to the next step.
4	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC C0062:76 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C0062:76	SAS control module system
DETECTION CONDITION	Error is detected in communication with SAS control module by CAN communication (CAN2).	
FAIL-SAFE FUNCTION	- Illuminates the ABS warning light^{*1} and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.) - Inhibits the ABS^{*2}, TCS^{*2}, DSC^{*2}, roll over mitigation (ROM)^{*2}, brake assist control^{*2}, hill launch assist (HLA), and TPMS^{*2} controls. ^{*1}: Not illuminated depending on malfunction content. ^{*2}: Enabled depending on malfunction content.	
POSSIBLE CAUSE	- Poor SAS control module installation - Low-G sensor malfunction in SAS control module	

STEP	INSPECTION	ACTION	
1	VERIFY IF SAS CONTROL MODULE IS CORRECTLY INSTALLED - Verify the SAS control module installation condition. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].) - Is the installation condition normal?	Yes	Go to the next step.
		No	Install the SAS control module correctly, then go to the next step.
2	INSPECT SAS CONTROL MODULE MALFUNCTION	Yes	Go to applicable DTC inspection.

	- Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)			(See DTC TABLE [STANDARD DEPLOYMENT CONTROL SYSTEM].)
				(See DTC TABLE [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)
3	PERFORM DSC RELATED PARTS SENSOR INITIALIZATION - Perform the DSC related parts sensor initialization for the PCM using the M-MDS. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.) - Is the DSC sensor initialization completed normally?			No Go to the next step.
				Yes Go to the next step.
4	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?			No Replace the DSC HU/CM, then go to the next step.
				(See DSC HU/CM REMOVAL/INSTALLATION.)
5	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?			Yes Repeat the inspection from Step 1.
				If the malfunction recurs, replace the DSC HU/CM, then go to the next step.
				(See DSC HU/CM REMOVAL/INSTALLATION.)
				No Go to the next step.
				Yes Go to the applicable DTC inspection.
				(See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
				No DTC troubleshooting completed.

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DTC C006B:00 / C0072:68 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C006B:00, C0072:68	TCS / DSC control system
DETECTION CONDITION	- C006B:00 - DSC control continues for a specified period of time or more - C0072:68 - Due to excessive braking, TCS control using braking is temporarily inhibited.	
FAIL-SAFE FUNCTION	- C006B:00 - Illuminates the TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TCS, DSC, roll over mitigation (ROM), and TPMS controls. - C0072:68 - Illuminates the TCS/DSC indicator light. (Turns on if the slip of a specific wheel is 10km/h {6.2 mph} or more.) - Inhibits the TCS (brake control) control.	
POSSIBLE CAUSE	This does not indicate a malfunction since constant TCS or DSC control over an extended period of time is inhibited to protect the DSC solenoid valve inside the DSC HU or the engine.	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY THAT THE SAME DTC IS NOT PRESENT	YesReplace the DSC HU/CM, then go to the

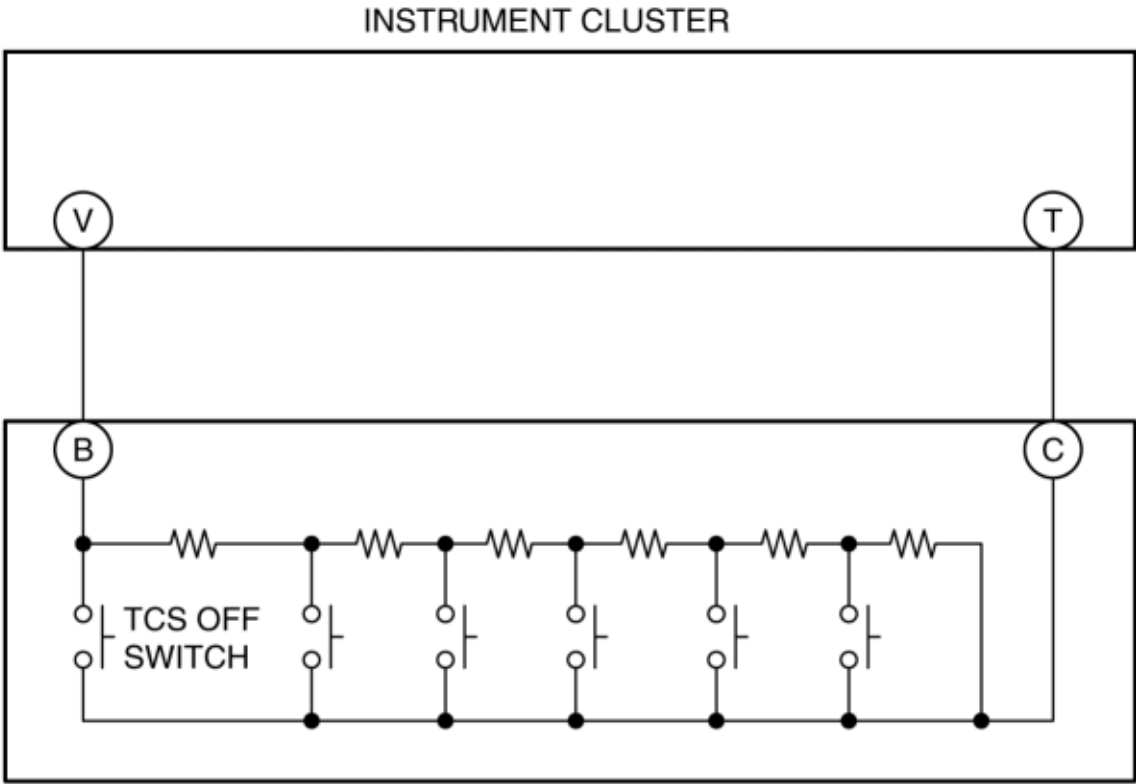
	• Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?		next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
2	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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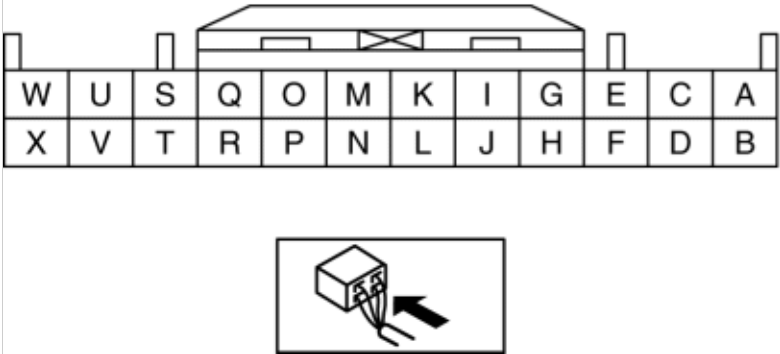
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DTC C0089:64 [DYNAMIC STABILITY CONTROL (DSC)]

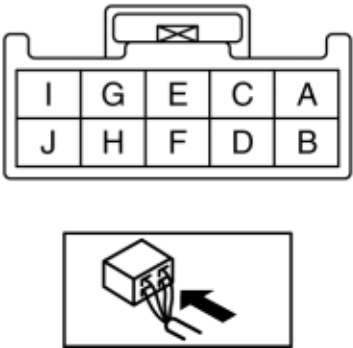
DTC	C0089:64	TCS OFF switch
DETECTION CONDITION	Continuous ON signal from the TCS OFF switch for 10 s or more is detected.	
FAIL-SAFE FUNCTION	Permits the control and does not illuminate each warning/indicator light.	
POSSIBLE CAUSE	- The driver pressed and held the TCS OFF switch for 10 s or more. - Short to ground in the wiring harness between the instrument cluster terminal V and TCS OFF switch terminal B - Open circuit in wiring harness between instrument cluster terminal T and TCS OFF switch terminal C - TCS OFF switch malfunction - Poor connection at connectors (female terminal)	



**INSTRUMENT CLUSTER WIRING
HARNESS-SIDE CONNECTOR**



**TCS OFF SWITCH WIRING
HARNESS-SIDE CONNECTOR**



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FOR INSTRUMENT CLUSTER MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the instrument cluster. (See DTC INSPECTION [INSTRUMENT CLUSTER].) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER].)
		NoGo to the next step.
2	INSPECT TCS OFF SWITCH SIGNAL CIRCUIT FOR SHORT TO GROUND	YesRepair or replace the

	• Disconnect the TCS OFF switch. • Disconnect the instrument cluster connector. • Inspect for continuity between the TCS OFF switch connector terminal B (vehicle harness-side) and body ground. • Is there continuity?		wiring harness, then go to Step 5.
		No	Go to the next step.
3	INSPECT TCS OFF SWITCH SIGNAL CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between the TCS OFF switch connector terminal C (vehicle harness-side) and instrument cluster connector terminal T (vehicle harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 5.
4	INSPECT TCS OFF SWITCH • Inspect the TCS OFF switch. (See TCS OFF SWITCH INSPECTION.) • Is the TCS OFF switch normal?	Yes	Go to the next step.
		No	Replace the TCS OFF switch, then go to the next step. (See TCS OFF SWITCH REMOVAL / INSTALLATION.)
5	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC C1031:35 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C1031:35	Tire pressure monitoring system (TPMS) set switch
DETECTION CONDITION	Continuous ON signal from the TPMS set switch for 60 s or more is detected.	
FAIL-SAFE FUNCTION	- Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TPMS control.	
POSSIBLE CAUSE	- The driver pressed and held the TPMS set switch for 60 s or more. - TPMS set switch malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY DTCs FOR INSTRUMENT CLUSTER - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the instrument cluster. (See DTC INSPECTION [INSTRUMENT CLUSTER].) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER] .)
		NoGo to the next step.
2	INSPECT TPMS SET SWITCH Inspect the TPMS set switch. (See TIRE PRESSURE MONITORING SYSTEM SET SWITCH INSPECTION.)	YesGo to the next step.
		NoReplace the TPMS set switch, then go to the next step. (See TIRE PRESSURE MONITORING SYSTEM SET

	Is the TPMS set switch normal?		SWITCH REMOVAL / INSTALLATION.)
3	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	Go to the next step.
4	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC C1031:41 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C1031:41	Tire pressure monitoring system (TPMS) system
DETECTION CONDITION	When the DSC HU/CM detects malfunction in the memory for storing a calculated tire pressure value.	
FAIL-SAFE FUNCTION	- Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TPMS control.	
POSSIBLE CAUSE	- DSC HU/CM internal error - DSC HU/CM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INITIALIZE A TPMS MEMORY - Switch the ignition to off. - Connect the M-MDS (IDS) to DLC-2. - After the vehicle is identified, select the following items from the initial screen of the IDS. - Select "Chassis". - Select "ABS/DSC". - Select "TPMS DTC Reset for ABS/DSC". - Perform the procedure according to the directions on the screen. - Is the initialization normally completed?	YesGo to the next step.
		No Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)

2	VERIFY THAT THE SAME DTC IS NOT PRESENT • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC C1031:54 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C1031:54	Tire pressure monitoring system (TPMS) system
DETECTION CONDITION	• Detects that tire such as temporary spare tire with outer diameter of considerable difference is installed • There is a large fluctuation in steering angle and acceleration/deceleration speed repeatedly over short intervals.	
FAIL-SAFE FUNCTION	• Tire pressure monitoring system warning light illuminates after flashes. • Inhibits the TPMS control.	
POSSIBLE CAUSE	• Diameter of currently installed tires differs from Mazda recommended tires • There is a large fluctuation in steering angle and acceleration/deceleration speed repeatedly over short intervals. • DSC HU/CM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	VERIFY THE TIRE • Verify that the currently equipped tire type (size, supplier, and type) conform to the Mazda recommendation. (See WHEEL AND TIRE SPECIFICATION.) • Is the tire type as specified?	Yes	Go to the next step.
		No	Replace the tire, then go to Step 3. (See WHEEL AND TIRE SPECIFICATION .)
2	MEASURE THE TIRE PRESSURE • Measure the tire pressure when the tires are cold. WHEEL AND TIRE SPECIFICATION	Yes	Go to the next step.
		No	Adjust the tire pressure to the specification when the tires are cold,

	(See .) • Is the pressure as specified?		then go to the next step. (See WHEEL AND TIRE SPECIFICATION.)
3	INITIALIZE THE TPMS • Initialize the TPMS. (See TIRE PRESSURE MONITORING SYSTEM INITIALIZATION PROCEDURE.) • Is the initialization normally completed?	Yes	Go to the next step.
		No	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)
4	VERIFY THAT THE SAME DTC IS NOT PRESENT • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC C1031:68 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	C1031:68	Tire pressure monitoring system (TPMS) system
DETECTION CONDITION	Error is detected in ambient temperature sensor from PCM via CAN communication.	
FAIL-SAFE FUNCTION	- Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TPMS control.	
POSSIBLE CAUSE	- Ambient temperature sensor malfunction - PCM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY DTCs FOR PCM - Switch the ignition to off. - Verify DTCs for the PCM using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) - Is the DTC displayed?	YesRepair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [SKYACTIV-G 2.0].)
		NoGo to the next step.
2	INSPECT AMBIENT TEMPERATURE SENSOR Inspect the AMBIENT TEMPERATURE SENSOR. (See AMBIENT TEMPERATURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].) AMBIENT TEMPERATURE	YesGo to the next step.
		NoReplace the ambient temperature sensor, then go to the next step. (See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)

	(See SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) Is the ambient temperature sensor normal?		(See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)
3	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
4	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC U0001:88/U0100:00/U0101:00/U0114:00/U0131:00/U0155:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0001:88, U0100:00, U0101:00, U0114:00, U0131:00, U0155:00	CAN line
DETECTION CONDITION	• U0001:88 ▪ Open or short circuit in CAN system wiring harness is detected. • U0100:00 ▪ Communication error with PCM is detected in CAN communication. • U0101:00 ▪ Communication error with TCM is detected in CAN communication. • U0114:00 ▪ Communication error with AWD control module is detected in CAN communication. • U0131:00 ▪ Communication error with EPS CM is detected in CAN communication. • U0155:00 ▪ Communication error with instrument cluster is detected in CAN communication.	
	• U0001:88 ▪ Illuminates the ABS warning light and TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls.	

FAIL-SAFE
FUNCTION

- U0100:00
 - Illuminates the ABS warning light*¹, and TCS/DSC indicator light*¹.
 - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flushed depending on malfunction content.)
 - Inhibits the ABS*², TCS*², DSC*², roll over mitigation (ROM)*², brake assist control*², hill launch assist (HLA)*², and TPMS*² controls.
- U0101:00
 - Illuminates the TCS/DSC indicator light.
 - Tire pressure monitoring system warning light illuminates after flashes.
 - Inhibits the TCS, DSC, roll over mitigation (ROM), hill launch assist (HLA), and TPMS controls.
- U0114:00
 - Tire pressure monitoring system warning light illuminates after flashes.
 - Inhibits the TPMS control.
- U0131:00
 - Illuminates the TCS/DSC indicator light.
 - Tire pressure monitoring system warning light illuminates after flashes.
 - Inhibits the TCS, DSC, roll over mitigation (ROM), and TPMS controls.
- U0155:00
 - Illuminates the ABS warning light*¹ and TCS/DSC indicator light*¹.
 - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flushed depending on malfunction content.)
 - Inhibits the ABS*², TCS*², DSC*², roll over mitigation (ROM)*², brake assist control*², hill launch assist (HLA)*², and TPMS*² controls.
- *¹: Not illuminated depending on malfunction content.
- *²: Enabled depending on malfunction content.

- CAN system wiring harness open or short circuit
- CAN system wiring harness open or short circuit with PCM

POSSIBLE CAUSE	• CAN system wiring harness open or short circuit with TCM • CAN system wiring harness open or short circuit with AWD control module • CAN system wiring harness open or short circuit with EPS CM • CAN system wiring harness open or short circuit with SAS control module • CAN system wiring harness open or short circuit with instrument cluster • instrument cluster malfunction
SYSTEM WIRING DIAGRAM	—

Diagnostic procedure

- Inspect according to diagnostic procedure in MULTIPLEX COMMUNICATION SYSTEM. (See [FOREWORD](#).)

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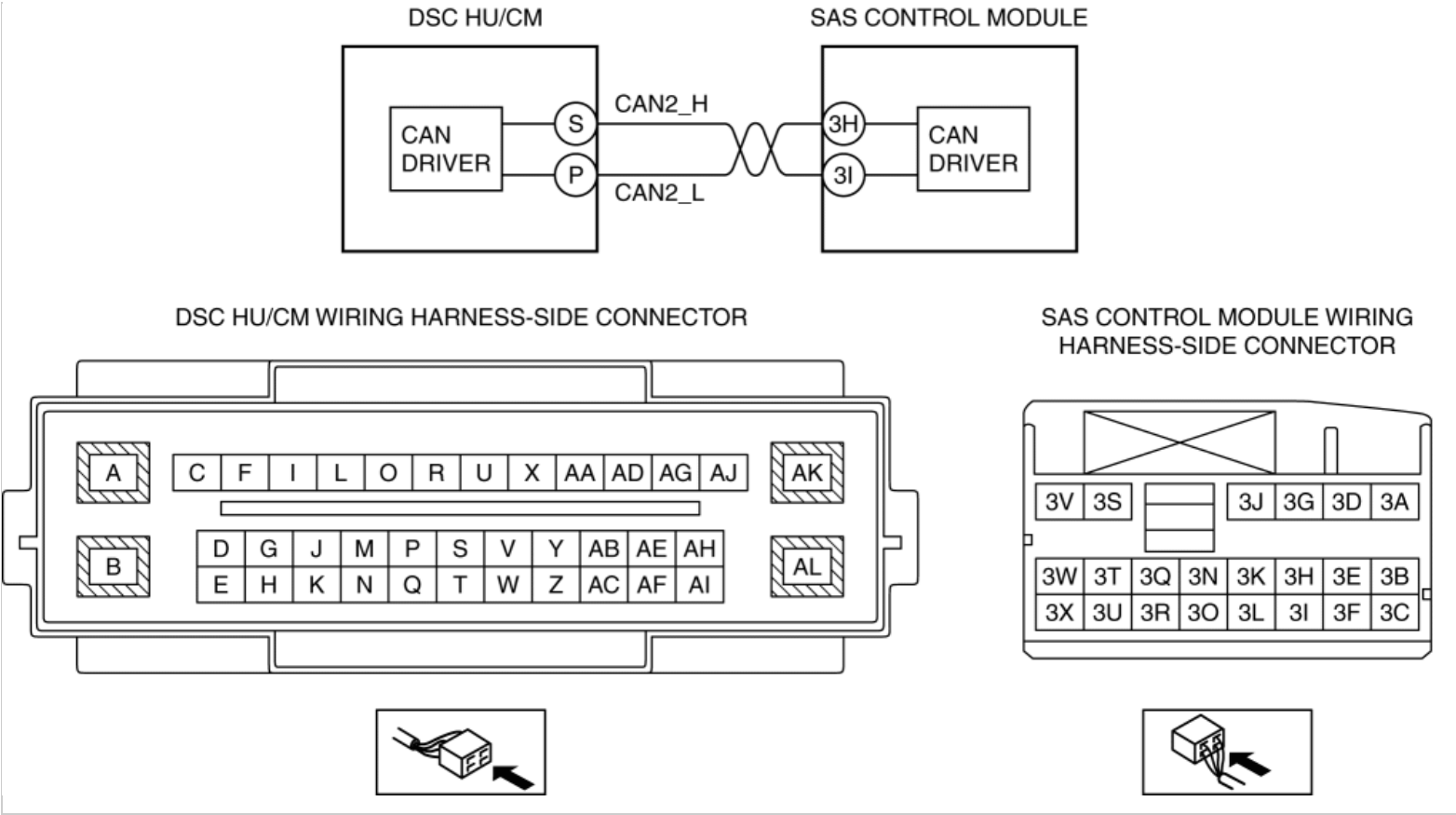
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DTC U0151:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0151:00	SAS control module system (CAN2 line malfunction)
DETECTION CONDITION	Communication error with SAS control module is detected in CAN communication.	
FAIL-SAFE FUNCTION	- Illuminates the brake system warning light*¹ and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flushed depending on malfunction content.) - Inhibits the ABS*², TCS*², DSC*², roll over mitigation (ROM)*², brake assist control*², hill launch assist (HLA)*², and TPMS*² controls. *¹: Not illuminated depending on malfunction content. *²: Enabled depending on malfunction content.	
POSSIBLE CAUSE	- SAS control module malfunction - Open or short circuit in the CAN2_H wiring harness between DSC HU/CM terminal S and SAS control module terminal 3H - Open or short circuit in the CAN2_L wiring harness between DSC HU/CM terminal P and SAS control module terminal 3I - DSC HU/CM malfunction - Poor connection at connectors (female terminal)	



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT SAS CONTROL MODULE MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC INSPECTION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [STANDARD DEPLOYMENT CONTROL SYSTEM] .) (See DTC TABLE [TWO-STEP DEPLOYMENT CONTROL SYSTEM] .)
		NoGo to the next step.
2	INSPECT SAS CONTROL MODULE SIGNAL (CAN2 LINE) FOR OPEN CIRCUIT - Disconnect the DSC HU/CM connector. - Disconnect the SAS control module connectors. - Inspect for continuity between the following DSC HU/CM connector terminals (vehicle harness-side) and SAS control module connector terminals (vehicle harness-side): - DSC HU/CM terminal S—SAS control module terminal 3H - DSC HU/CM terminal P—SAS control module terminal 3I - Is there continuity?	YesGo to the next step.
		NoRepair or replace the wiring harness, then go to Step 4.
3	INSPECT SAS CONTROL MODULE SIGNAL (CAN2 LINE) FOR SHORT CIRCUIT - Inspect for continuity between the following DSC HU/CM connector terminals (vehicle harness-side) and body ground: - DSC HU/CM terminal S—body ground - DSC HU/CM terminal P—body ground - Is there continuity?	YesRepair or replace the wiring harness, then go to the next step.
		NoGo to the next step.

4	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Start the engine and drive the vehicle at 10 km / h {6.2 mph} or more. • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
5	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC U0401:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0401:00	Abnormal message from PCM
DETECTION CONDITION	Correct data cannot be received from PCM	
FAIL-SAFE FUNCTION	- Illuminates the TCS/DSC indicator light*¹. - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.) - Inhibits the TCS*², DSC*², roll over mitigation (ROM)*², hill launch assist (HLA)*², and TPMS*² controls. *¹: Not illuminated depending on malfunction content. *²: Enabled depending on malfunction content.	
POSSIBLE CAUSE	PCM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FOR PCM MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the PCM. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0] .) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0] .)
		NoGo to the next step.
2	VERIFY THAT THE SAME DTC IS NOT PRESENT	YesRepeat the inspection from Step 1.

	• Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?		If the malfunction recurs, replace the PCM, then go to the next step. (See PCM REMOVAL / INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC U0402:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0402:00	Abnormal message from transmission/transaxle
DETECTION CONDITION	The DSC HU/CM received error signals from the transmission/transaxle for 1 s or more with the ignition switched ON (engine off or on).	
FAIL-SAFE FUNCTION	- Illuminates the TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TCS, DSC, roll over mitigation (ROM), hill launch assist (HLA), and TPMS controls.	
POSSIBLE CAUSE	- The transmission/transaxle could not send a normal signal temporarily. (DTCs are stored in the TCM.) - transmission/transaxle malfunction - DSC HU/CM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	VERIFY DTCs FOR TCM - Switch the ignition to off. - Verify DTCs for the TCM using the M-MDS. (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FW6A-EL, FW6AX-EL].) - Is the DTC displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [FW6A-EL, FW6AX-EL].)
		No	Go to the next step.
2	VERIFY THAT THE SAME DTC IS NOT PRESENT	Yes	Repeat the inspection from Step 1.

	Clear DTC for the DSC HU/CM using the M-MDS. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) Are the same DTCs present?		If the malfunction recurs, replace the TCM, then go to the next step. (See CONTROL VALVE BODY REMOVAL/INSTALLATION [FW6A-EL, FW6AX-EL].)
		No	Go to the next step.
3	VERIFY IF OTHER DTCs DISPLAYED Are any other DTCs displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC U0420:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0420:00	Abnormal message from EPS CM
DETECTION CONDITION	Correct data cannot be received from EPS CM	
FAIL-SAFE FUNCTION	- Illuminates the TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TCS, DSC, roll over mitigation (ROM), and TPMS controls.	
POSSIBLE CAUSE	EPS CM malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FOR EPS CM MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the EPS CM. (See ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS.)	YesGo to applicable DTC inspection.
		NoGo to the next step.
2	VERIFY THAT THE SAME DTC IS NOT PRESENT Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)	YesRepeat the inspection from Step 1. If the malfunction recurs, replace the EPS CM, then go to the next step. (See STEERING WHEEL AND COLUMN REMOVAL / INSTALLATION.)

	Are the same DTCs present?	No	Go to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC U0423:00 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0423:00	Abnormal message from instrument cluster
DETECTION CONDITION	Correct data cannot be received from instrument cluster	
FAIL-SAFE FUNCTION	- Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the TPMS controls.	
POSSIBLE CAUSE	Instrument cluster malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FOR INSTRUMENT CLUSTER MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the instrument cluster. (See DTC INSPECTION [INSTRUMENT CLUSTER].) - Are any DTCs detected?	YesGo to applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER] .)
		NoGo to the next step.
2	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?	YesRepeat the inspection from Step 1. If the malfunction recurs, replace the instrument cluster, then go to the next step. (See PCM REMOVAL / INSTALLATION [SKYACTIV-G 2.0] .)

		No	Go to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	DTC troubleshooting completed.

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DTC U0452:86 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U0452:86	Abnormal message from SAS control module
DETECTION CONDITION	Correct data cannot be received from SAS control module	
FAIL-SAFE FUNCTION	- Illuminates the ABS warning light^{*1} and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. (Not illuminated/flashed depending on malfunction content.) - Inhibits the ABS^{*2}, TCS^{*2}, DSC^{*2}, roll over mitigation (ROM)^{*2}, brake assist control^{*2}, hill launch assist (HLA)^{*2}, and TPMS^{*2} controls. ^{*1}: Not illuminated depending on malfunction content. ^{*2}: Enabled depending on malfunction content.	
POSSIBLE CAUSE	SAS control module malfunction	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT FOR SAS CONTROL MODULE MALFUNCTION • Switch the ignition to off. • Using the M-MDS, perform the DTC inspection for the SAS control module. (See DTC INSPECTION [STANDARD DEPLOYMENT CONTROL SYSTEM].) DTC INSPECTION [TWO-	YesGo to applicable DTC inspection. (See DTC TABLE [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See DTC TABLE [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)
		NoGo to the next step.

	(See STEP DEPLOYMENT CONTROL SYSTEM.) • Are any DTCs detected?		
2	VERIFY THAT THE SAME DTC IS NOT PRESENT • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the SAS control module, then go to the next step. (See SAS CONTROL MODULE REMOVAL / INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM].) (See SAS CONTROL MODULE REMOVAL / INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM].)
		No	Go to the next step.
3	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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DTC U2101:00 / U2300:52 / U2300:54 / U2300:55 / U2300:56 / U2300:64 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U2101:00, U2300:52, U2300:54, U2300:55, U2300:56, U2300:64	Configuration data not recorded
DETECTION CONDITION	DSC CM detects configuration data not record or data error	
FAIL-SAFE FUNCTION	- Illuminates the ABS warning light and TCS/DSC indicator light. - Tire pressure monitoring system warning light illuminates after flashes. - Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls.	
POSSIBLE CAUSE	- Module configuration procedure is not done properly - Correct data cannot be received from instrument cluster - Another vehicles control modules been installed	
SYSTEM WIRING DIAGRAM	—	

Diagnostic procedure

STEP	INSPECTION	ACTION
1	RECORD THE CAR CONFIGURATION DATA - Switch the ignition to off. - Switch the ignition ON (engine off) and wait for 10 s or more. - Switch the ignition to off and wait for 3 s or more. - Switch the ignition ON (engine off) and wait for 3 s or more.	Go to the next step.
	VERIFY THAT THE SAME DTC IS NOT PRESENT	

2	- Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	If the malfunction recurs, go to the next step.
3	VERIFY IF PARTS FROM ANOTHER VEHICLE INSTALLED TO INSTRUMENT CLUSTER, PCM OR DSC HU/CM - Verify if an instrument cluster, PCM or DSC HU/CM from another vehicle is installed. - Has an instrument cluster, PCM, DSC HU/CM or other vehicle part been installed to vehicle?	Yes	Install the correct instrument cluster, PCM or DSC HU/CM, then go to Step 1.
		No	(See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) (See DSC HU/CM REMOVAL/INSTALLATION.)
4	INSPECT FOR INSTRUMENT CLUSTER/PCM MALFUNCTION - Switch the ignition to off. - Using the M-MDS, perform the DTC inspection for the instrument cluster and PCM. (See DTC INSPECTION [INSTRUMENT CLUSTER].) (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) - Are any DTCs detected?	Yes	Go to applicable DTC inspection.
		No	(See DTC TABLE [INSTRUMENT CLUSTER].) (See DTC TABLE [SKYACTIV-G 2.0].)
5	VERIFY THAT THE SAME DTC IS NOT PRESENT - Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCS ARE PRESENT Are any other DTCs output?	Yes	Go to the applicable DTC inspection.
		No	(See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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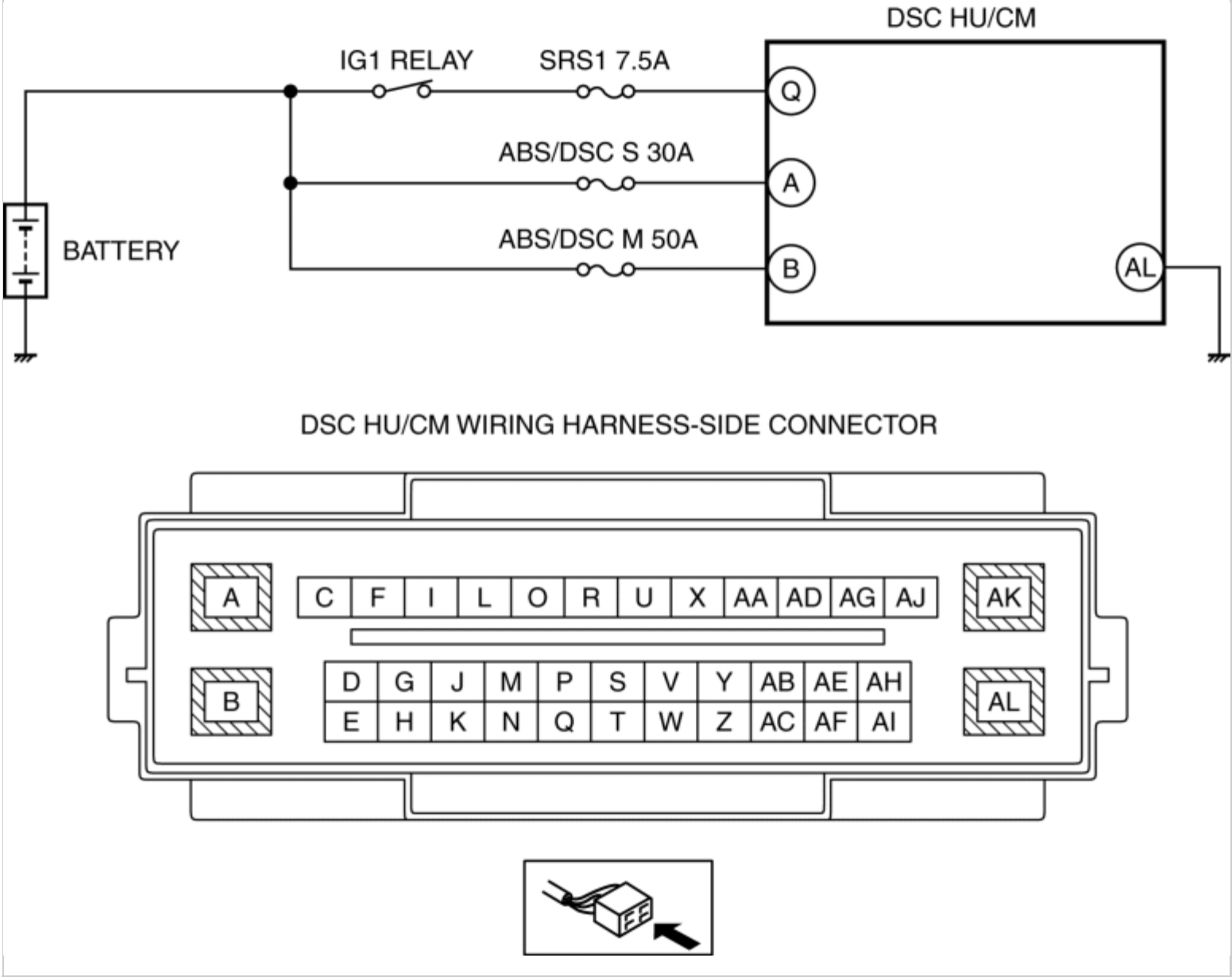
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DTC U3003:08 / U3003:16 / U3003:17 [DYNAMIC STABILITY CONTROL (DSC)]

DTC	U3003:08, U3003:16, U3003:17	Power supply system
DETECTION CONDITION	• U3003:08 ▪ While the vehicle is traveling at a speed of 10km / h {6.2 mph} or more, a CAN signal error caused by low power supply voltage is detected. • U3003:16 ▪ Low ignition voltage (7.9—9.6 V) is detected at the voltage monitor of the solenoid valve or motor monitor. (Except engine cranking condition) ▪ Low ignition voltage (6.0—7.9 V) is detected at the voltage monitor of the solenoid valve or motor monitor. ▪ Low ignition voltage (below 6.0 V) is detected at the voltage monitor of the solenoid valve or motor monitor. • U3003:17 ▪ High ignition voltage (17 V or more) is detected at the voltage monitor of the solenoid valve or motor monitor.	
	• U3003:08 ▪ Permits the control and does not illuminate each warning/indicator light. • U3003:16 ▪ Illuminates the ABS warning light and TCS/DSC indicator light. ▪ Does not illuminate the brake warning light.*1 ▪ Illuminates the brake warning light.*2*3 ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the ABS, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS	

FAIL-SAFE FUNCTION	controls. ▪ Permits the EBD control.*1 ▪ Inhibits the EBD control.*2*3 • U3003:17 ▪ Illuminates the ABS warning light, brake system warning light, and TCS/DSC indicator light. ▪ Tire pressure monitoring system warning light illuminates after flashes. ▪ Inhibits the ABS, EBD, TCS, DSC, roll over mitigation (ROM), brake assist control, hill launch assist (HLA), and TPMS controls. • *1: When power supply voltage is 7.9—9.6 V for 550 ms or more. • *2: When power supply voltage is 6.0—7.9 V for 630 ms or more. • *3: When power supply voltage is below 6 V for 50 ms or more.
POSSIBLE CAUSE	• Battery deterioration • Generator malfunction • Fuse (SRS1 7.5A, ABS/DSC S 30A, ABS/DSC M 50A) malfunction • Open or short circuit in wiring harness between DSC HU/CM terminal A and battery • Open or short circuit in wiring harness between DSC HU/CM terminal B and battery • Open or short circuit in wiring harness between DSC HU/CM terminal Q and battery • Open circuit in wiring harness between DSC HU/CM terminal AL and body ground • Poor connection at connectors (female terminal)



Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT BATTERY VOLTAGE Is the battery positive terminal voltage normal?	Yes Inspect for normal connection of the battery terminals. Go to the next step.
		No Charge or replace the battery, then go to Step 7. (See BATTERY RECHARGING [SKYACTIV-G 2.0].) (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)

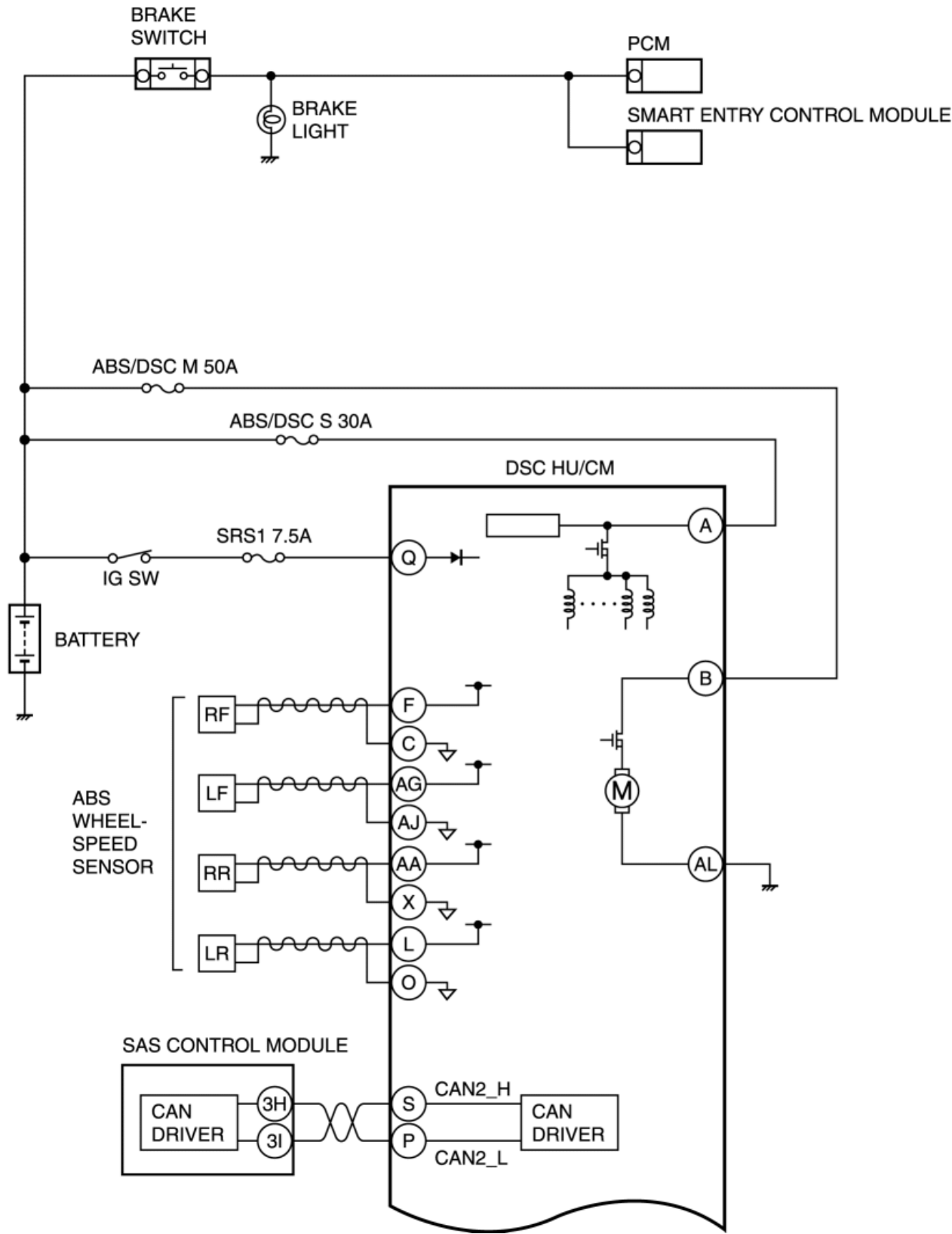
2	INSPECT BATTERY GRAVITY Is battery specific gravity as specified?	Yes	Go to the next step.
		No	Replace the battery, then go to Step 7. (See BATTERY REMOVAL / INSTALLATION [SKYACTIV-G 2.0].)
3	INSPECT CHARGING SYSTEM Are the generator and the drive belt tensions normal?	Yes	Go to the next step.
		No	Replace the generator and/or drive belt if necessary. (See GENERATOR REMOVAL / INSTALLATION [SKYACTIV-G 2.0].) (See DRIVE BELT REMOVAL / INSTALLATION [SKYACTIV-G 2.0].) Go to Step 7.
4	INSPECT FUSE CONDITION - Inspect the following fuses. - SRS1 7.5A - ABS/DSC S 30A - ABS/DSC M 50A - Is the fuse normal?	Yes	Go to the next step.
		No	Replace the fuse, then go to Step 7.
5	INSPECT DSC HU/CM POWER SUPPLY FOR OPEN CIRCUIT - Disconnect the DSC HU/CM connectors. - Switch the ignition ON (engine off). - Measure the voltage between following connector terminals of the DSC HU/CM (vehicle harness-side) and body ground: - DSC HU/CM: A—Body ground - DSC HU/CM: B—Body ground - DSC HU/CM: Q—Body ground - Is the voltage 10 V or more?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 7.

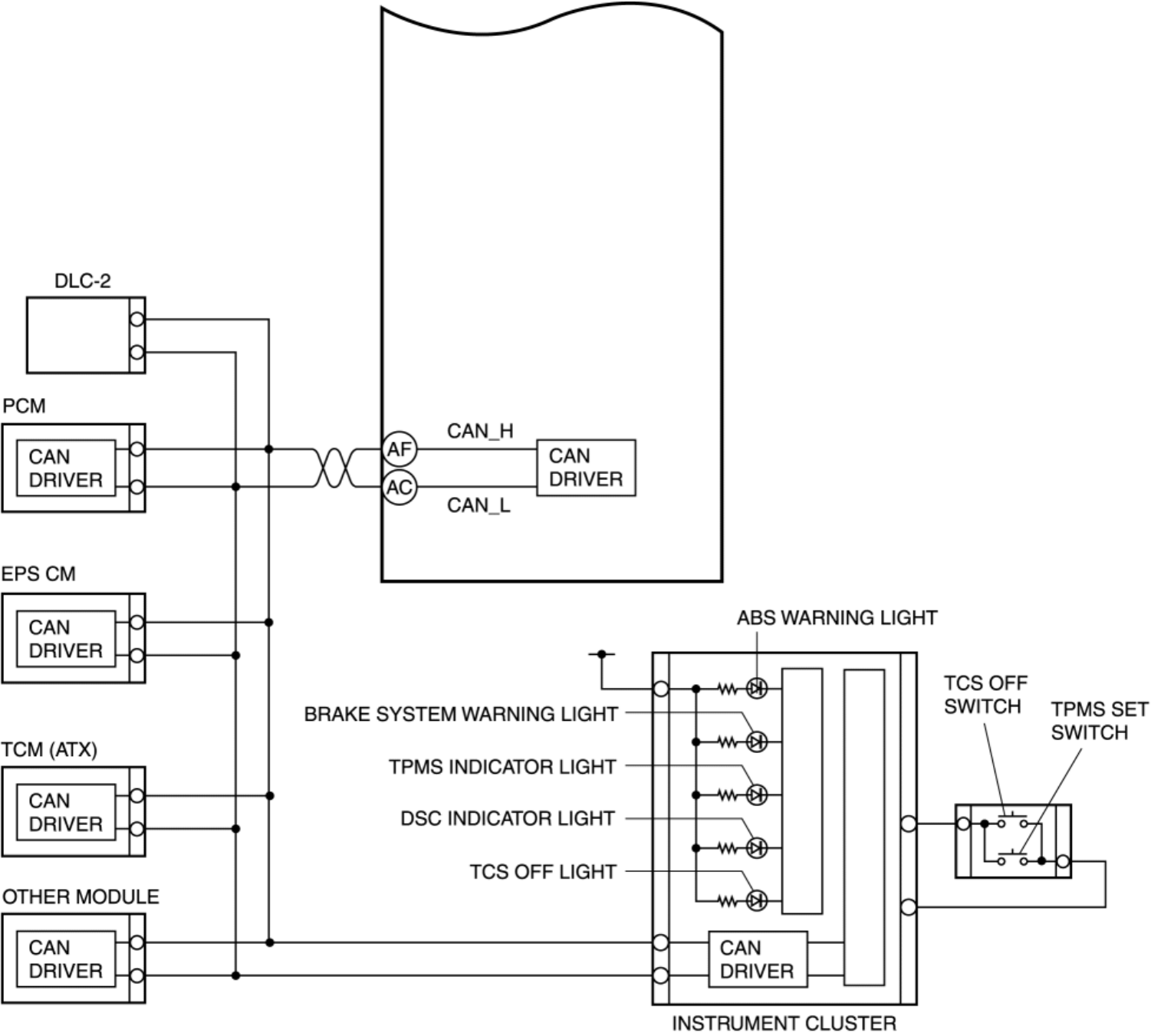
6	INSPECT DSC HU/CM GROUND FOR POOR GROUND OR OPEN CIRCUIT • Switch the ignition to off. • Measure the resistance between the DSC HU/CM terminal AL (vehicle harness-side) and body ground. • Is the resistance within 0—1 ohm?	Yes	Go to the next step.
		No	If there is open circuit: • Repair or replace the wiring harness, then go to the next step. If resistance is not within specification: • Repair or replace the poor ground part, then go to the next step.
7	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Clear the DTCs from the memory. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Start the engine and drive the vehicle at 20 km/h {12 mph} or more. • Are the same DTCs present?	Yes	Repeat the inspection from Step 1.
		No	Go to the next step.
8	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)
		No	DTC troubleshooting completed.

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SYSTEM WIRING DIAGRAM [DYNAMIC STABILITY CONTROL (DSC)]





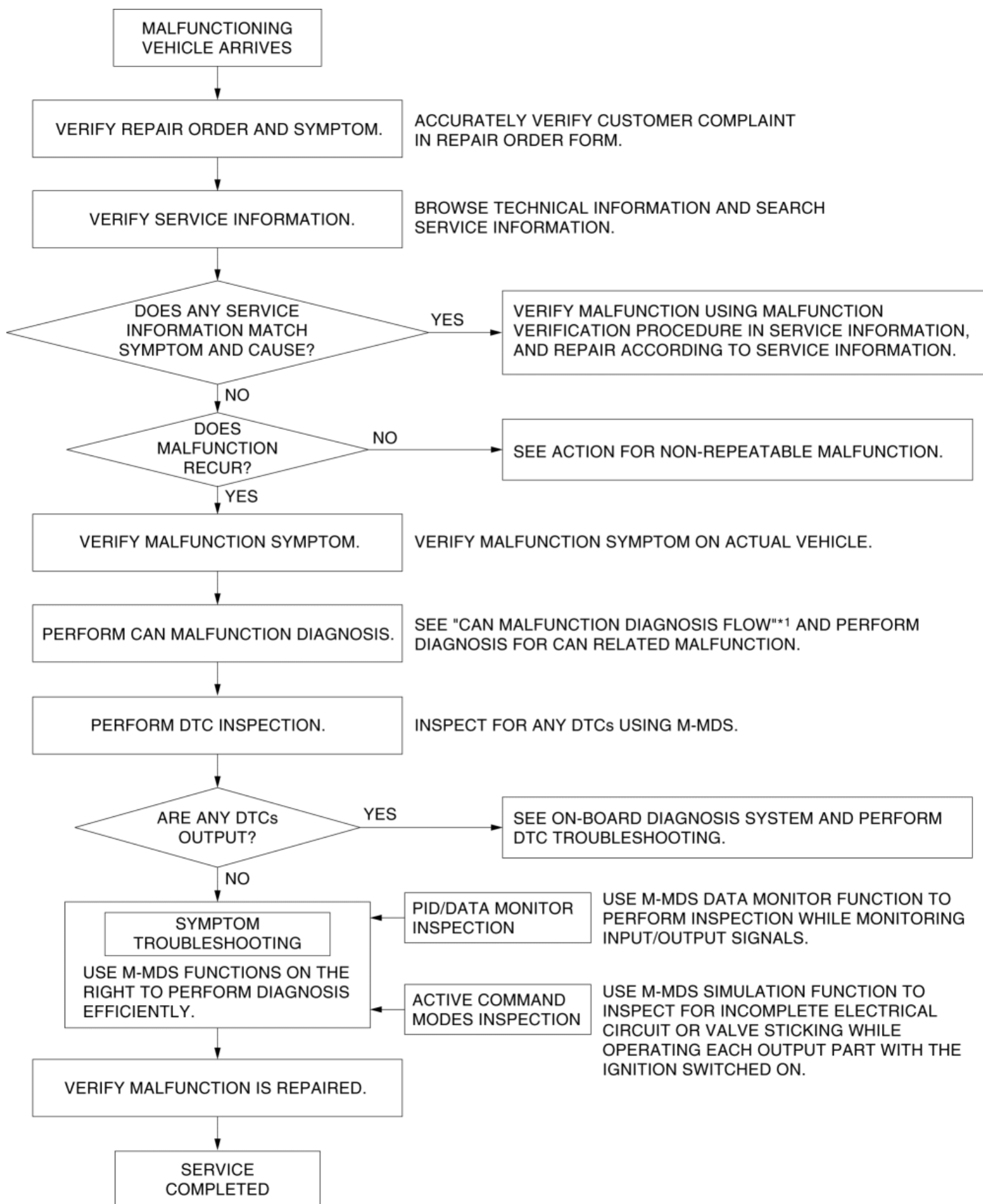
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FOREWORD [DYNAMIC STABILITY CONTROL (DSC)]

- If there is any vehicle malfunction complaint lodged by a customer, perform malfunction diagnosis according to the troubleshooting procedure.

Troubleshooting Procedure

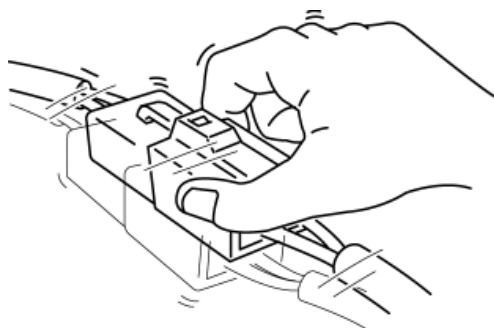


*1

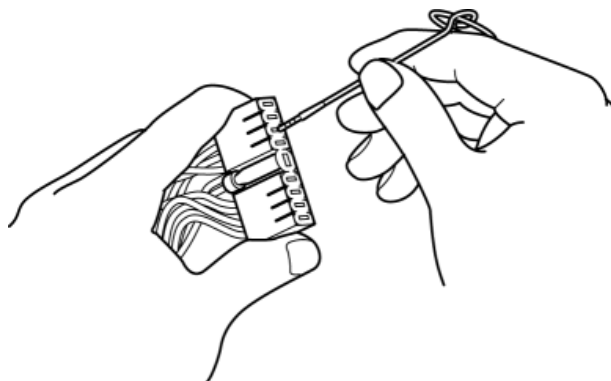
CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW

Action for non-repeatable malfunction

- If the malfunction does not recur, verify the malfunction cause by performing the following actions:
 - Verify that a DTC has been recorded in the memory using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.)
 - Perform a simulation test in the simulation mode based on the repair order form, record the data at that time, and detect the malfunction cause.
 - Shake the wiring harness or connector of the electrical component which is suspected to be the cause of the malfunction, and inspect for the occurrence of any malfunction or DTCs.



- Inspect the female terminals for poor connection.



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PRECAUTION [DYNAMIC STABILITY CONTROL (DSC)]

1. The ABS warning light and/or brake system warning light and/or TCS/DSC indicator light and/or TCS OFF indicator light illuminate even when the system is normal.

Warning lights/Indicator lights that may illuminate and/or flash	Cases in which the light may illuminate	Conditions in which the light will go out	ABS, EBD, TCS and DSC control
• ABS warning light • Brake system warning light (*1) • TCS/DSC indicator light	Only the front wheels rotate under the following condition while jacked up, stuck, or on the chassis dynamometer: • Detected 8 times for a continuous 20 s while at a vehicle speed of 20 km / h {12 mph} or more. (One detection period is when ignition is switched from ON to off.)	After turning off the ignition once and then restarting the engine, the vehicle is driven at 10km / h {6.2 mph} or more , and then normal operation is verified.	• ABS: Cuts control. • EBD: Cuts control. • TCS: Cuts control. • DSC: Cuts control.
	Parking brake is not fully released while driving.		
	Brake drag.		
	Sudden acceleration/deceleration.		
	Left/right or front/rear tires are different. (Size, radius, tire pressure, or wear is other than that listed on tire		

	label.)		
	Battery voltage at DSC HU/CM ignition terminal Y drops below about 9.5 V. (*2)	Battery voltage rises above about 9.5 V.	• ABS: Operates control. • EBD: Operates control. • TCS: Operates control. • DSC: Operates control.
Brake system warning light	Brake fluid amount is low.	Brake fluid level is with in the specification.	• ABS: Operates control. • EBD: Operates control. • TCS: Operates control. • DSC: Operates control.

*1

In case where the light may illuminate, only when DSC HU/CM detects that a wheel-speed sensor determines that more than two wheels are malfunctioning.

*2

If battery voltage drops below 10 V while vehicle speed is greater than 3 km/h { 2 mph }, DSC HU/CM detects DTC U3003:16.

2. Precautions during servicing of DSC. The DSC is composed of electrical and mechanical parts. It is necessary to categorize malfunctions as being either electrical or hydraulic when performing troubleshooting.

a. Malfunction in electrical system

- The control module has an on-board diagnostic function. With this function, the ABS warning light and/or brake system warning light and/or TCS/DSC indicator light and/or TCS OFF indicator light will come on when there is a problem in the electrical system.

Also, past and present malfunctions are recorded in the control module. This function can find malfunction that do not occur during periodic inspections. Connect the M-MDS (IDS) to the DLC-2. The stored malfunctions will be displayed in the order of occurrence. To

find out the causes of DSC malfunction, use these on-board diagnostic results.

- If a malfunction occurred in the past but is now normal, the cause is likely a temporary poor connection of the harness. The control module usually operates normally. Be careful when searching for the cause of malfunction.
- After repair, it is necessary to clear the DTC from the control module memory. Also, if the DSC related parts have been replaced, verify that the no DTC has been displayed after repairs.
- After repairing the ABS wheel-speed sensor or ABS sensor rotor, or after replacing the control module, the ABS warning light may not go off even when the ignition is switched to ON. In this case, drive the vehicle at a speed of **more than 10 km/h {6.2 mph}**, make sure the ABS warning light goes off, and then clear the DTC.
- When repairing, if the DSC related connectors are disconnected and the ignition is switched to ON, the control module will mistakenly detect a fault and record it as a malfunction.

CAUTION:

- When any DSC HU/CM (brake fluid pressure sensor), SAS control module (yaw rate sensor, low-G sensor) are replaced. Perform the sensor standard point installation of each sensor.
- To protect the control module, make sure the ignition is off before connecting or disconnecting the control module connector.

b. Malfunctions in hydraulic system

- Symptoms in a hydraulic system malfunction are similar to those in a conventional brake malfunction. However, it is necessary to determine if the malfunction is in a DSC component or the conventional brake system.
- The hydraulic unit contains delicate mechanical parts. If foreign materials get into the component, the DSC may fail to operate. Also, it will likely become extremely difficult to find the location of the malfunction in the event that the brakes operate but the DSC does not. Make sure foreign materials do not get inside when servicing the DSC (e.g. brake fluid replacement, pipe removal).

Intermittent Concern Troubleshooting

Vibration method

- If malfunction occurs or becomes worse while driving on a rough road or when engine is vibrating, perform the steps below.

NOTE:

- There are several reasons why vehicle or engine vibration could cause an electrical

malfunction. Some of the things to check for are:

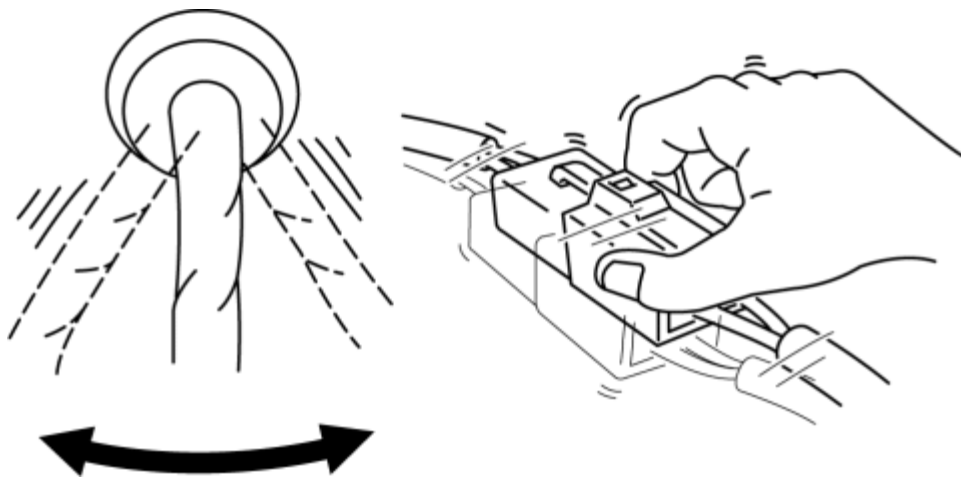
- Connectors not fully seated.
 - Wire harnesses not having full play.
 - Wires laying across brackets or moving parts.
 - Wires routed too close to hot parts.
- An improperly routed, improperly clamped, or loose harness can cause wiring to become pinched between parts.
 - The connector joints, points of vibration, and places where wire harnesses pass through the firewall, body panels, etc. are the major areas to be checked.

Inspection method for switch and/or sensor connectors or wires

1. Connect the M-MDS (IDS) to the DLC-2.
2. Switch the ignition to ON (engine off).

NOTE:

- If the engine starts and runs, perform the following steps at idle.
3. Access PIDs for the switch or sensor you are inspecting.
 4. Turn the switch on manually.
 5. Slightly shake each connector or wiring harness vertically and horizontally while monitoring the PID.



- If the PID value is unstable, inspect for poor connection.

Inspection method for switches and/or sensors

1. Connect the M-MDS (IDS) to the DLC-2.
2. Switch the ignition to ON (engine off).

NOTE:

- If engine starts and runs, perform the following steps at idle.
3. Access PIDs for the switch or sensor you are inspecting.
 4. Vibrate the sensor slightly with your finger.
 - If PID value is unstable or malfunction occurs, check for poor connection and/or poorly mounted sensor.

Malfunction data monitor method

1. Perform malfunction reappearance test according to malfunction reappearance mode and malfunction data monitor. The malfunction cause is found in the malfunction data.

Connector terminal check method

1. Check the connection condition of each female terminal.
2. Insert male terminal; fit female terminal size to female terminal and check to see whether malfunction is in female terminal or not.



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SYMPTOM TROUBLESHOOTING [DYNAMIC STABILITY CONTROL (DSC)]

- Verify the symptoms, and perform troubleshooting according to the appropriate number.

No.	Symptom
1	Any of the following lights do not illuminate with the ignition to ON: • ABS warning light • Brake system warning light • TCS/DSC indicator light • TCS OFF indicator light
2	Any of the following lights stay on: • ABS warning light • TCS/DSC indicator light • TCS OFF indicator light
3	Brake system warning light stay on
4	There is a malfunction in the system even though ABS warning light, brake system warning light, TCS/DSC indicator light and TCS OFF indicator light do not illuminate
5	ABS or TCS* ¹ operates frequently
	TCS does not work correctly
6	DSC* ² operates frequently
	DSC does not work correctly
7	TCS/DSC indicator light flashes (when neither the TCS nor the DSC are operating)
8	Hill launch assist (HLA) operates even on a downhill

	Hill launch assist (HLA) does not operate on a slope
--	--

X: Applied

	1	2	3	4	5	6	7	8
Troubleshooting item	Any of the following lights do not illuminate with the ignition to ON: (ABS warning light, brake system warning light, TCS/DSC indicator light and/or TCS OFF indicator light)	Any of the following lights stay on: (ABS warning light, brake system warning light, TCS/DSC indicator light and/or TCS OFF indicator light)	Brake system warning light stay on	There is a malfunction in the system even though ABS warning light, brake system warning light, TCS/DSC indicator light and TCS OFF indicator light do not illuminate	ABS or TCS*1 operates frequently/ TCS does not work correctly	DSC*2 operates frequently/ DSC does not work correctly	TCS/DSC indicator light flashes (when neither the TCS nor the DSC are operating)	Hill launch assist (HLA) operates even on a downhill/ Hill launch assist (HLA) does not operate on a slope
DSC HU/CM does not operate	X	X	X					
Communication error between DSC HU/CM and instrument cluster	X	X	X					
DSC HU/CM internal malfunction	X	X	X					
Instrument cluster malfunction	X	X	X					
Brake fluid amount is low			X					
DSC HU/CM detected malfunction (input and output device malfunction)		X	X		X	X		X
DSC HU/CM detects low voltage in power supply		X	X					

DSC HU/CM ground malfunction	X	X	X					
No connection at DSC HU/CM connector		X	X					
Parking brake does not release			X					X
Parking brake switch or brake fluid level sensor stuck on			X					
Short to ground in wiring harness between parking brake switch and instrument cluster			X					
Short to ground in wiring harness between brake fluid level sensor and front body control module (FBCM)			X					
There is a mechanical malfunction in system				X				
Incorrect ABS wheel-speed signal is inputted to DSC HU/CM		X			X	X		X
There is a difference in size, air pressure or wear conditions between front and rear tires					X	X		X
There is a malfunction in engine control system (TCS malfunction)					X			
Poor installation with SAS control module (yaw rate sensor, low-G sensor)						X		X
DSC HU/CM initial setting has not been performed after replacing DSC HU/CM		X				X		X
Input signal malfunction from instrument cluster (parking brake signal)			X					X
Input signal malfunction from PCM (reverse gear signal)								X
Communication error between DSC HU/CM and front body control module (FBCM)			X					X
Communication error between DSC HU/CM and PCM		X						X

Low-G sensor initialization has not been performed after replacing SAS control module		X					X	X
DSC HU/CM detects a malfunction (input/output device malfunction)		X						X
Center point of low-G sensor has deviated		X						X
PCM and/or instrument cluster detect a malfunction		X						X
Error input signal from PCM		X						X
Brake (foot brake/parking brake) drag								X

*1

DSC system function contains traction control function, TCS / DSC indicator light goes on and off while TCS operates

*2

TCS / DSC indicator light goes on and off while DSC operates

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2013 - CX-5 - Brakes

NO.1 ANY OF THE FOLLOWING LIGHTS DO NOT ILLUMINATE WITH THE IGNITION ON: (ABS WARNING LIGHT, BRAKE SYSTEM WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND/OR TCS OFF INDICATOR LIGHT) [DYNAMIC STABILITY CONTROL (DSC)]

1	Any of the following lights do not illuminate with the ignition to ON: (ABS warning light, brake system warning light, TCS/DSC indicator light and/or TCS OFF indicator light)
POSSIBLE CAUSE	• DSC HU/CM does not operate. • Communication error between DSC HU/CM and instrument cluster • Instrument cluster malfunction • DSC HU/CM internal malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY WHERE MALFUNCTION IS IN WARNING LIGHTS AND INDICATOR LIGHTS' COMMON POWER SUPPLY, OR IN OTHER WARNING LIGHTS AND INDICATOR LIGHTS • Connect the M-MDS (IDS) to the DLC-2. • Turn on all warning lights and indicator lights using the instrument cluster PID WL+IL of active command modes. (See ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].) • Do other warning and indicator lights illuminate?	Yes	Go to Step 5.
		No	If communication error message is displayed on the M-MDS (IDS) screen: • Go to the next step. If communication error message is not displayed: • Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
2	INSPECT INSTRUMENT CLUSTER POWER SUPPLY FUSE • Inspect the instrument cluster ignition power supply fuse. • Is the fuse normal?	Yes	Go to the next step.
		No	Inspect the blown fuse's circuit for short to ground. Repair or replace the wiring harness for a possible short to ground as necessary.

			Install appropriate amperage fuse.
*3	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN INSTRUMENT CLUSTER POWER SUPPLY AND INSTRUMENT CLUSTER FOR CONTINUITY) OR ELSEWHERE - Switch the ignition to ON. - Measure the voltage at the instrument cluster terminal 2S (wiring harness-side). - Is the voltage approx. 12 V?	Yes Go to the next step.	No Inspect for open circuit between instrument cluster and ignition. Repair or replace the wiring harness for a possible open circuit as necessary.
*4	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN INSTRUMENT CLUSTER AND GROUND FOR CONTINUITY) OR INSTRUMENT CLUSTER - Switch the ignition to off. - Disconnect the instrument cluster connector. - Inspect for continuity between instrument cluster terminal 2K (wiring harness-side) and body ground. - Is there continuity?	Yes Replace the instrument cluster. (Open circuit in the instrument cluster) (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)	No Repair or replace the wiring harness for a possible open circuit and poor contact in GND point.
5	CONFIRM DSC HU/CM DTC - Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)	No If communication error message is displayed on the M-MDS (IDS) screen: - Go to the next step. If communication error message is not displayed: - Go to Step 9.
6	INSPECT DSC HU/CM POWER SUPPLY FUSE - Inspect the DSC HU/CM ignition power supply fuse. - Is the fuse normal?	Yes Go to the next step.	No Inspect the blown fuse's circuit for short to ground. Repair or replace the wiring harness for a possible short to ground as necessary. Install appropriate amperage fuse.
*	VERIFY WHETHER MALFUNCTION IS IN WIRING	Yes Go to the next step.	

7	HARNESS (BETWEEN DSC HU/CM POWER SUPPLY AND DSC HU/CM FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to ON. • Measure the voltage at the DSC HU/CM terminal Q (wiring harness-side). • Is the voltage approx. 12 V?		No Inspect for open circuit between DSC HU/CM and ignition. Repair or replace the wiring harness for a possible open circuit as necessary.
*8	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM AND GROUND FOR CONTINUITY) OR ELSEWHERE • Switch the ignition to off. • Disconnect the DSC HU/CM connector. • Inspect for continuity between DSC HU/CM terminal AL (wiring harness-side) and body ground. • Is there continuity?	Yes	Replace the DSC HU/CM. (Open circuit in the DSC HU/CM) (See DSC HU/CM REMOVAL/INSTALLATION.)
9	CONFIRM INSTRUMENT CLUSTER DTC • Retrieve the instrument cluster DTC using the M-MDS (IDS). (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER].)
		No	Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)

- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

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2013 - CX-5 - Brakes

NO.2 ANY OF THE FOLLOWING LIGHTS STAY ON: (ABS WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND/OR TCS OFF INDICATOR LIGHT) [DYNAMIC STABILITY CONTROL (DSC)]

2	Any of the following lights stay on: (ABS warning light, TCS/DSC indicator light and/or TCS OFF indicator light)
POSSIBLE CAUSE	• No connection at DSC HU/CM connector (When DSC HU/CM connector comes off, ABS warning light, brake system warning light, TCS/DSC indicator light, and TCS OFF indicator light illuminate.) • DSC HU/CM detected malfunction. (Input and output device malfunction) • DSC HU/CM detects low voltage in power supply. • DSC HU/CM ground malfunction (When DSC HU/CM ground is not securely connected, ABS warning light, brake system warning light, TCS/DSC indicator light, and TCS OFF indicator light illuminate but diagnostic trouble code does not display.) • DSC HU/CM does not operate. • PCM detected malfunction. • Error signal input from PCM • Communication error between DSC HU/CM and instrument cluster • Communication error between DSC HU/CM and PCM • Communication error between DSC HU/CM and EPS CM • After replacing SAS control module low-G sensor and yaw rate sensor initialization have not been performed. • After replacing DSC HU/CM brake fluid pressure sensor initialization has not been performed. • Non-completion of module configuration (When module configuration does not carried out, after replacing DSC HU/CM, ABS warning light will stay on.) • DSC HU/CM internal malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
	CONFIRM DSC HU/CM DTC	

1	- Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No	If communication error message is displayed on the M-MDS (IDS) screen: - Go to the next step. If communication error message is not displayed: - Go to Step 6.
2	INSPECT CONNECTION OF DSC HU/CM CONNECTOR - Inspect for connection of the DSC HU/CM connector. - Is the DSC HU/CM connector connected securely?	Yes	Go to the next step.
		No	Connect the DSC HU/CM connector securely, then go to Step 6.
3	INSPECT DSC HU/CM POWER SUPPLY FUSE - Inspect the DSC HU/CM ignition power supply fuse. - Is the fuse normal?	Yes	Go to the next step.
		No	Inspect the blown fuse's circuit for short to ground. Repair or replace the wiring harness for a possible short to ground as necessary. Install appropriate amperage fuse.
*4	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM POWER SUPPLY AND DSC HU/CM FOR CONTINUITY) OR ELSEWHERE - Switch the ignition to ON. - Measure the voltage at the DSC HU/CM terminal Q (wiring harness-side). - Is the voltage approx. 12 V?	Yes	Go to the next step.
		No	Inspect for open circuit between DSC HU/CM and ignition. Repair or replace the wiring harness for a possible open circuit as necessary.
*5	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM AND GND FOR CONTINUITY) OR ELSEWHERE - Switch the ignition to off. - Disconnect the DSC HU/CM connector. - Inspect for continuity between DSC HU/CM	Yes	Replace the DSC HU/CM. (open circuit in the DSC HU/CM) (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring

	terminal AL (wiring harness-side) and body ground. Is there continuity?		harness for a possible open circuit and poor contact in ground point.
6	CONFIRM PCM DTCs - Retrieve the PCM DTCs using the M-MDS (IDS). (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	Go to the next step.
7	VERIFY IF MALFUNCTION CAUSED BY INITIALIZATION PROCEDURE FOR MODULE NOT PERFORMED - Verify if malfunction caused by initialization procedure for brake fluid pressure sensor not performed. - Has the initial setting for the brake fluid pressure sensor been performed after replacing the DSC HU/CM?	Yes	Go to the next step.
		No	Perform the brake fluid pressure sensor initial setting. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
8	VERIFY IF MALFUNCTION CAUSED BY INITIALIZATION PROCEDURE FOR LOW-G SENSOR NOT PERFORMED - Verify if malfunction caused by initialization procedure for low-G sensor not performed. - Has the initial setting for the low-G sensor been performed after replacing the DSC HU/CM and the SAS control module?	Yes	Go to the next step.
		No	Perform the low-G sensor initial setting. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
9	VERIFY IF MALFUNCTION CAUSED BY INITIALIZATION PROCEDURE FOR YAW RATE SENSOR NOT PERFORMED - Verify if malfunction caused by initialization procedure for yaw rate sensor not performed. - Has the initial setting for the yaw rate sensor been performed after replacing the DSC HU/CM and the SAS control module?	Yes	Go to the next step.
		No	Perform the yaw rate sensor initial setting. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
10	VERIFY WHETHER MALFUNCTION IS IN INSTRUMENT CLUSTER OR DSC HU/CM - Connect the M-MDS (IDS) to the DLC-2. - Turn off and on all warning light and indicator lights using the instrument cluster PID WL+IL of active command modes. (See ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].) - Do the ABS warning light, brake system warning light, TCS/DSC indicator light and DSC OFF	Yes	Replace the DSC HU/CM. (Internal malfunction) (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)

	indicator light turn on and off according to the active command modes?		
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- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

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2013 - CX-5 - Brakes

NO.3 BRAKE SYSTEM WARNING LIGHT STAY ON [DYNAMIC STABILITY CONTROL (DSC)]

3	Brake system warning lights stay on
POSSIBLE CAUSE	• Brake fluid amount is low. • Parking brake does not release. • Parking brake switch or brake fluid level sensor stuck on. • Short to ground in following circuit: ▪ Between parking brake switch and instrument cluster ▪ Between brake fluid level sensor and front body control module (FBCM) • No connection at DSC HU/CM connector (When DSC HU/CM connector comes off, ABS warning light, brake system warning light, TCS/DSC indicator light, and TCS OFF indicator light illuminate.) • DSC HU/CM detected malfunction. (Input and output device malfunction) • DSC HU/CM detects low voltage in power supply. • DSC HU/CM ground malfunction (When DSC HU/CM ground is not securely connected, ABS warning light, brake system warning light, TCS/DSC indicator light, and TCS OFF indicator light illuminate but diagnostic trouble code does not display.) • DSC HU/CM does not operate. • Front body control module (FBCM) detected malfunction. • DSC HU/CM internal malfunction • Instrument cluster detected malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT BRAKE FLUID AMOUNT AND VERIFY THAT PARKING BRAKE RELEASED	YesGo to the next step.
	• Inspect the brake fluid amount and verify that the parking brake released.	NoAdd the brake fluid or release the parking brake lever.

	- Is the brake fluid amount normal? - Is the parking brake lever released?		If the brake fluid refilled: Inspect and repair the brake line for leakage.
2	CONFIRM DSC HU/CM DTC - Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)	
		No If communication error message is displayed on the M-MDS (IDS) screen: - Go to the next step. If communication error message is not displayed: - Go to Step 4.	
3	INSPECT CONNECTION OF DSC HU/CM CONNECTOR - Inspect for connection of the DSC HU/CM connector. - Is the DSC HU/CM connector connected securely?	Yes Go to the next step.	
		No Connect the DSC HU/CM connector securely, then go to the next step.	
4	CONFIRM INSTRUMENT CLUSTER OPERATION RECORD - Retrieve the warning system operation history using the M-MDS (IDS). (See INSTRUMENT CLUSTER OPERATION RECORD.) - Is the brake system warning light illumination history recorded?	Yes If the Brake Warning Lamp recorded: - Go to Step 5. If the Brake Warning Lamp (Brake fluid low) recorded: - Go to Step 6. If the Brake Warning Lamp (Parking Brake ON over 20 km/h or 12.4 mile/h) recorded: - Go to Step 8.	
		No Go to Step 10.	
5	VERIFY WHETHER MALFUNCTION IS IN INSTRUMENT CLUSTER OR ELSEWHERE - Connect the M-MDS (IDS) to the DLC-2. - Turn off and on all warning light and indicator lights using the instrument cluster PID WL+IL of active command modes. (See ACTIVE COMMAND MODES	Yes Go to Step 10.	
		No Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)	

	INSPECTION [INSTRUMENT CLUSTER].) Do the ABS warning light, brake system warning light, TCS/DSC indicator light and DSC OFF indicator light turn on and off according to the active command modes?		
6	INSPECT WHETHER MALFUNCTION IS IN BRAKE FLUID LEVEL SENSOR OR ELSEWHERE - Inspect the brake fluid level sensor for continuity. (See BRAKE FLUID LEVEL SENSOR INSPECTION.) - Is the continuity condition normal?	Yes	Go to the next step.
		No	Replace the malfunctioning part. (See MASTER CYLINDER REMOVAL/INSTALLATION.)
*7	INSPECT FOR SHORT TO GROUND IN WIRING HARNESS BETWEEN FRONT BODY CONTROL MODULE (FBCM) AND BRAKE FLUID LEVEL SWITCH - Inspect for short to ground in the following circuit: - Between brake fluid level switch and front body control module (FBCM) terminal 2Q - Is the short to ground detected?	Yes	Repair or replace the wiring harness for a possible short to ground.
		No	Retrieve the front body control module (FBCM) DTC using the M-MDS (IDS). (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) If the DTC remains: - Go to the applicable DTC inspection. (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].) If the DTC does not remain: - Replace the front body control module (FBCM). (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.)
8	INSPECT WHETHER MALFUNCTION IS IN PARKING BRAKE SWITCH OR ELSEWHERE - Inspect the following parts for continuity: - Parking brake switch (See PARKING BRAKE SWITCH INSPECTION.) - Is the continuity condition normal?	Yes	Go to the next step.
		No	Replace the malfunctioning part. (See PARKING BRAKE LEVER REMOVAL/INSTALLATION.)
	INSPECT FOR SHORT TO GROUND IN WIRING		

*9	HARNESS BETWEEN INSTRUMENT CLUSTER AND PARKING BRAKE SWITCH - Inspect for short to ground in the following circuit: - Between parking brake switch and instrument cluster terminal 2X - Is the short to ground detected?	Yes	Repair or replace the wiring harness for a possible short to ground.
		No	Retrieve the instrument cluster DTC using the M-MDS (IDS). (See DTC INSPECTION [INSTRUMENT CLUSTER].) If the DTC remains: - Go to the applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER].) If the DTC does not remain: - Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
10	INSPECT DSC HU/CM POWER SUPPLY FUSE - Inspect the DSC HU/CM ignition power supply fuse. - Is the fuse normal?	Yes	Go to the next step.
		No	Inspect the blown fuse's circuit for short to ground. Repair or replace the wiring harness for a possible short to ground as necessary. Install appropriate amperage fuse.
*11	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM POWER SUPPLY AND DSC HU/CM FOR CONTINUITY) OR ELSEWHERE - Switch the ignition to ON. - Measure the voltage at the DSC HU/CM terminal Q (wiring harness-side). - Is the voltage approx. 12 V?	Yes	Go to the next step.
		No	Inspect for open circuit between DSC HU/CM and ignition. Repair or replace the wiring harness for a possible open circuit as necessary.
*12	VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN DSC HU/CM AND GROUND FOR CONTINUITY) OR ELSEWHERE - Switch the ignition to off. - Disconnect the DSC HU/CM connector. - Inspect for continuity between DSC HU/CM terminal AL (wiring harness-	Yes	Replace the DSC HU/CM. (open circuit in the DSC HU/CM) (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness for a possible open circuit and poor contact in

	side) and body ground. • Is there continuity?		ground point.
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- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

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2013 - CX-5 - Brakes

NO.4 THERE IS A MALFUNCTION IN THE SYSTEM EVEN THOUGH ABS WARNING LIGHT, BRAKE SYSTEM WARNING LIGHT, TCS/DSC INDICATOR LIGHT AND TCS OFF INDICATOR LIGHT DO NOT ILLUMINATE [DYNAMIC STABILITY CONTROL (DSC)]

4	There is a malfunction in the system even though ABS warning light, brake system warning light, TCS/DSC indicator light and DSC OFF indicator light do not illuminate
POSSIBLE CAUSE	There is a mechanical malfunction in system.

Diagnostic procedure

STEP	INSPECTION	ACTION
1	CONFIRM DSC HU/CM DTC - Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .)
		No Go to the next step.
2	VERIFY SOLENOID VALVE OPERATION - Switch the ignition to off. - Connect the M-MDS (IDS) to the DLC-2. - Switch the ignition to ON (engine off). - Access the active command mode for the solenoid valve using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Does the solenoid valve operate?	Yes Inspect the conventional brake system. If there is a malfunction: Repair or replace any malfunctioning parts according to the inspection result.
		No Repair or replace any malfunctioning parts according to the inspection result.

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2013 - CX-5 - Brakes

NO.5 ABS OR TCS*1 OPERATES FREQUENTLY/TCS DOES NOT WORK CORRECTLY *1: DSC SYSTEM FUNCTION CONTAINS TRACTION CONTROL FUNCTION, TCS/DSC INDICATOR LIGHT GOES ON AND OFF WHILE TCS OPERATES [DYNAMIC STABILITY CONTROL (DSC)]

5	ABS or TCS*1 operates frequently TCS does not work correctly *1: DSC system function contains traction control function, TCS/DSC indicator light goes on and off while TCS operates
POSSIBLE CAUSE	• There is a difference in size or air pressure between front and rear tires. • Incorrect ABS wheel-speed signal is inputted to DSC HU/CM. • There is a malfunction in engine control system. (TCS malfunction)

Diagnostic procedure

STEP	INSPECTION	ACTION
1	CONFIRM DSC HU/CM AND PCM DTC • Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) • Retrieve the PCM DTC using the M-MDS (IDS), if the traction control function has problem. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) (See DTC TABLE [SKYACTIV-G 2.0].)
		No Go to the next step.
2	INSPECT TIRE SIZE AND AIR PRESSURE • Inspect tire size and air pressure. • Tire size and air pressure as specified?	Yes Go to the next step.
		No Replace with specified tires and adjust tire air pressure.
	INSPECT ABS WHEEL-SPEED SENSOR OUTPUT	

*3 PULSE - Perform the Voltage Pattern Inspection for each ABS wheel-speed sensor. (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD].) - Is the output voltage pattern normal?	Yes	Found malfunctioning part according to the "INTERMITTENT CONCERN TROUBLESHOOTING". (See PRECAUTION [DYNAMIC STABILITY CONTROL (DSC)].)
	No	ABS wheel-speed sensor installation inspection: - Inspect the ABS wheel-speed sensor for looseness and confirm it is securely adhered. ABS sensor rotor installation inspection: - Inspect the ABS sensor rotor for poor installation. Repair or replace any malfunctioning parts according to the inspection result.

- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

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2013 - CX-5 - Brakes

NO.6 DSC*2 OPERATES FREQUENTLY/DSC DOES NOT WORK CORRECTLY *2: TCS/DSC INDICATOR LIGHT GOES ON AND OFF WHILE DSC OPERATES [DYNAMIC STABILITY CONTROL (DSC)]

6	DSC*2 operates frequently DSC does not work correctly *2: TCS/DSC indicator light goes on and off while DSC operates
POSSIBLE CAUSE	- DSC HU/CM detected malfunction. (Input and output device malfunction) - There is a difference in size or air pressure between front or rear tires. - Poor installation with SAS control module (yaw rate sensor, low-G sensor) (If SAS control module is poorly installed, DSC may operate intermittently.) - When replacing DSC HU/CM initialization is not performed. (If initialization is not performed correctly, DSC may not work correctly.) - Incorrect ABS wheel speed sensor is inputted to DSC HU/CM.

Diagnostic procedure

STEP	INSPECTION	ACTION
1	CONFIRM DSC HU/CM DTC - Retrieve the DSC HU/CM DTC using the M-MDS (IDS). (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) No Go to the next step.
2	VERIFY THAT SAS CONTROL MODULE IS INSTALLED - Verify that each sensor is installed. - Is SAS control module (yaw rate sensor, low-G sensor) securely installed?	Yes Go to the next step. No Install the malfunctioning sensor securely.
3	VERIFY THAT BRAKE FLUID PRESSURE SENSOR IS INITIALIZED	Yes Go to the next step.

	• Verify that each sensor is initialized. • Has the initialization for the DSC HU/CM been performed after replacing the DSC HU/CM and the SAS control module?	No	Perform the initialization procedure. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
4	INSPECT TIRE SIZE AND AIR PRESSURE • Inspect tire size and air pressure. • Tire size and air pressure as specified?	Yes	Go to the next step.
		No	Replace with specified tires and adjust tire air pressure.
5*	INSPECT ABS WHEEL-SPEED SENSOR OUTPUT PULSE • Perform the Voltage Pattern Inspection for each ABS wheel-speed sensor. (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD].) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD].) • Is the output voltage pattern normal?	Yes	Found malfunctioning part according to the "INTERMITTENT CONCERN TROUBLESHOOTING". (See PRECAUTION [DYNAMIC STABILITY CONTROL (DSC)].)
		No	ABS wheel-speed sensor installation inspection: • Inspect the ABS wheel-speed sensor for looseness and confirm it is securely adhered. ABS sensor rotor installation inspection: • Inspect the ABS sensor rotor for poor installation. Repair or replace any malfunctioning parts according to the inspection result.

- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

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2013 - CX-5 - Brakes

NO.7 TCS/DSC INDICATOR LIGHT FLASHES (WHEN NEITHER THE TCS NOR THE DSC ARE OPERATING) [DYNAMIC STABILITY CONTROL (DSC)]

7	TCS/DSC indicator light flashes (when neither the TCS nor the DSC are operating)
POSSIBLE CAUSE	Non-completion of DSC related parts sensor initialization. (If the initialization is not carried out after replacing the DSC HU/CM and/or SAS control module, a TCS/DSC indicator light will flash. In this case, the DSC is not detected.)

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT CONNECTION OF DSC HU/CM AND SAS CONTROL MODULE CONNECTORS - Inspect for connection of DSC HU/CM and SAS control module (yaw rate sensor, low-G sensor) connectors. - Are DSC HU/CM and SAS control module connectors connected securely?	Yes Perform the initialization procedure. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.) No Perform the initialization procedure after connect the suspected connector securely. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)

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2013 - CX-5 - Brakes

NO.8 HILL LAUNCH ASSIST (HLA) OPERATES EVEN ON A DOWNHILL/HILL LAUNCH ASSIST (HLA) DOES NOT OPERATE ON A SLOPE [DYNAMIC STABILITY CONTROL (DSC)]

8	Hill launch assist (HLA) operates even on a downhill Hill launch assist (HLA) does not operate on a slope
POSSIBLE CAUSE	NOTE: - HLA operates on an up slope of about 3% or more when the shift lever is in a position other than the reverse (R) position. (MTX) - HLA operates on an up slope of about 6% or more when selector lever position is in a forward gear. (ATX) - HLA operates on a down slope of about 3% or more when shift lever is in a reverse (R) position. (MTX) - HLA operates on a down slope of about 6% or more when selector lever is in a R position. (ATX) - HLA operates for a maximum of 2 s after releasing brake pedal. - DSC HU/CM detects a malfunction (Input/output device malfunction). - PCM and/or instrument cluster detect a malfunction. - SAS control module installation malfunction (If there is a malfunction resulting from SAS control module removal, HLA may not operate at desired inclination angle.) - Tire malfunction (Differing air pressure on four wheels, use of tires with differing conditions of wear) - DSC HU/CM initial setting and low-G sensor initialization have not been performed after replacing DSC HU/CM and SAS control module. (If initial setting and initialization are not performed, HLA may not operate at desired inclination angle.) - Center point of low-G sensor has deviated. - Input signal malfunction from ABS wheel-speed sensor - Input signal malfunction from PCM (Engine torque signal, engine speed signal, accelerator pedal position signal, reverse gear signal, and clutch pedal signal) - Input signal malfunction from instrument cluster (Parking brake signal) - Input signal malfunction from TCM (Selector lever position signal)

- Communication error between DSC HU/CM and PCM
- Communication error between DSC HU/CM and instrument cluster
- Brake (foot brake/parking brake) drag

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY DTC FOR RELATED MODULES • Retrieve the DSC HU/CM, PCM, TCM (ATX) and instrument cluster DTC using the M-MDS. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FW6A-EL, FW6AX-EL].) (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)] .) (See DTC TABLE [SKYACTIV-G 2.0] .) (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [FW6A-EL, FW6AX-EL] .) (See DTC TABLE [INSTRUMENT CLUSTER] .)
		No Go to the next step.
2	VERIFY IF FALSE DETECTION OF INCLINATION ANGLE CAUSED BY MALFUNCTIONING SAS CONTROL MODULE INSTALLATION • Inspect the SAS control module installation condition for the following: ▪ Is the module installed with any twisting? ▪ Is the module installed correctly?	Yes Go to the next step.
		No Repair the SAS control module installation condition. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM] .) (See SAS CONTROL MODULE REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM] .)
3	VERIFY IF MALFUNCTION CAUSED BY INITIALIZATION PROCEDURE FOR LOW-G SENSOR NOT PERFORMED • Verify if malfunction caused by initialization procedure for low-G sensor not performed. • Has the initialization for the low-G sensor been performed after replacing the DSC HU/CM and the SAS control module?	Yes Go to the next step.
		No Perform the initialization procedure. (See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE .)
4	VERIFY IF MALFUNCTION CAUSED BY TIRE MALFUNCTION PERFORMED	Yes Go to the next step.

	- Inspect the tire pressure and condition. - Are tire pressure and condition normal?	No	If the pressure is incorrect, adjust the tire pressure to the specification. If the tires are worn, replace the tires.
5	INSPECT RELATED MODULES FOR MALFUNCTION CAUSED BY FALSE SIGNAL - Access the following DSC HU/CM, PCM and instrument cluster PIDs using the M-MDS: (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) (See PCM INSPECTION [SKYACTIV-G 2.0].) (See ON-BOARD DIAGNOSTIC SYSTEM PID/DATA MONITOR INSPECTION [FW6A-EL, FW6AX-EL].) (See PID/DATA MONITOR INSPECTION [INSTRUMENT CLUSTER].) DSC HU/CM - BRAKE_SW (Brake signal) - LON_ACCL_C (Low-G sensor (longitudinal G) calculated value signal) - LON_ACCL_R (Low-G sensor (longitudinal G) raw value signal) - BRK_F_P_C (Brake fluid pressure calculated value signal) - BRK_F_P_R (Brake fluid pressure raw value signal) - WSPD_LF (ABS wheel-speed sensor (LF) signal) - WSPD_RF (ABS wheel-speed sensor (RF) signal) - WSPD_LR (ABS wheel-speed sensor (LR) signal) - WSPD_RR (ABS wheel-speed sensor (RR) signal)	Yes	Inspect the following: - Brake (foot brake/parking brake) drag - Engine output malfunction Repair or replace any malfunctioning parts according to the inspection result.
		No	Inspect the related parts and wiring harness. Repair or replace any malfunctioning parts according to the inspection result.

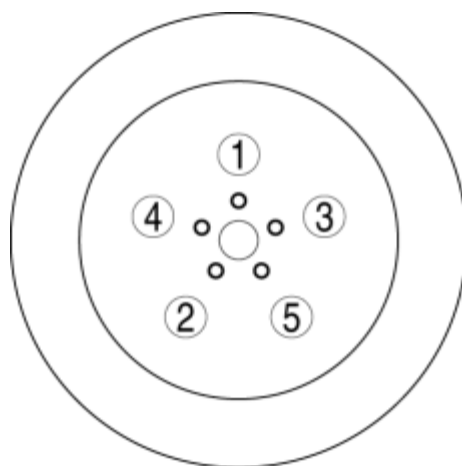
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GENERAL PROCEDURES (BRAKE)

Wheel and Tire Installation

1. When installing the wheels and tires, tighten the wheel nuts in a criss-cross pattern to the following tightening torque.



Tightening torque

- 108—147 N·m {12—14 Kgf·m, 80—108 ft·lbf}

Brake Lines Disconnection

1. If any brake line has been disconnected during the procedures, add brake fluid, bleed the brakes, and inspect for leakage after the procedure has been completed.

CAUTION:

- Brake fluid will damage painted surfaces. Be careful not to spill any on painted surfaces. If it is spilled, wipe it off immediately.

Brake Pipe Flare Nut Tightening

1. Tighten the brake pipe flare nut using any commercially available flare nut wrench.

Connector Disconnection

1. Disconnect the negative battery cable before performing any work that requires handling of

connectors. (See **NEGATIVE BATTERY CABLE DISCONNECTION / CONNECTION [SKYACTIV-G 2.0].**)

DSC Related Parts

1. Make sure that there are no DTCs in the DSC memory after working on DSC related parts. If there are any DTCs in the memory, clear them. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].**)

DSC Related Part Sensor Initialization Procedure

WARNING:

- If the initialization procedure is not completed, the DSC will not operate properly and it might cause an unexpected accident. Therefore, when replacing or removing the following parts, make sure to perform the initialization procedure to insure proper DSC operation.
1. When replacing or removing the following parts, perform the initialization procedure. (See **DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.**)
- DSC HU/CM

Tire Pressure Monitoring System Initialization Procedure

CAUTION:

- If the tire pressure monitoring system initialization procedure is performed with the tire pressures not to specification, the system may not operate normally. Therefore, always inspect and adjust the tire pressure of all 4 tires before performing the tire pressure monitoring system initialization procedure.

NOTE:

- Perform the tire pressure monitoring system initialization when the following operations have been performed: (See **TIRE PRESSURE MONITORING SYSTEM INITIALIZATION PROCEDURE.**)
 - Tire pressures have been adjusted
 - Tires or wheels have been replaced
 - Tires have been rotated
 - DSC HU/CM replaced
 - DSC HU/CM connector disconnected
 - Battery replaced
 - Negative battery cable is disconnected

1. Perform the tire pressure monitoring system initialization procedure when the tire pressure monitoring system warning light illuminates. (See **TIRE PRESSURE MONITORING SYSTEM INITIALIZATION PROCEDURE.**)

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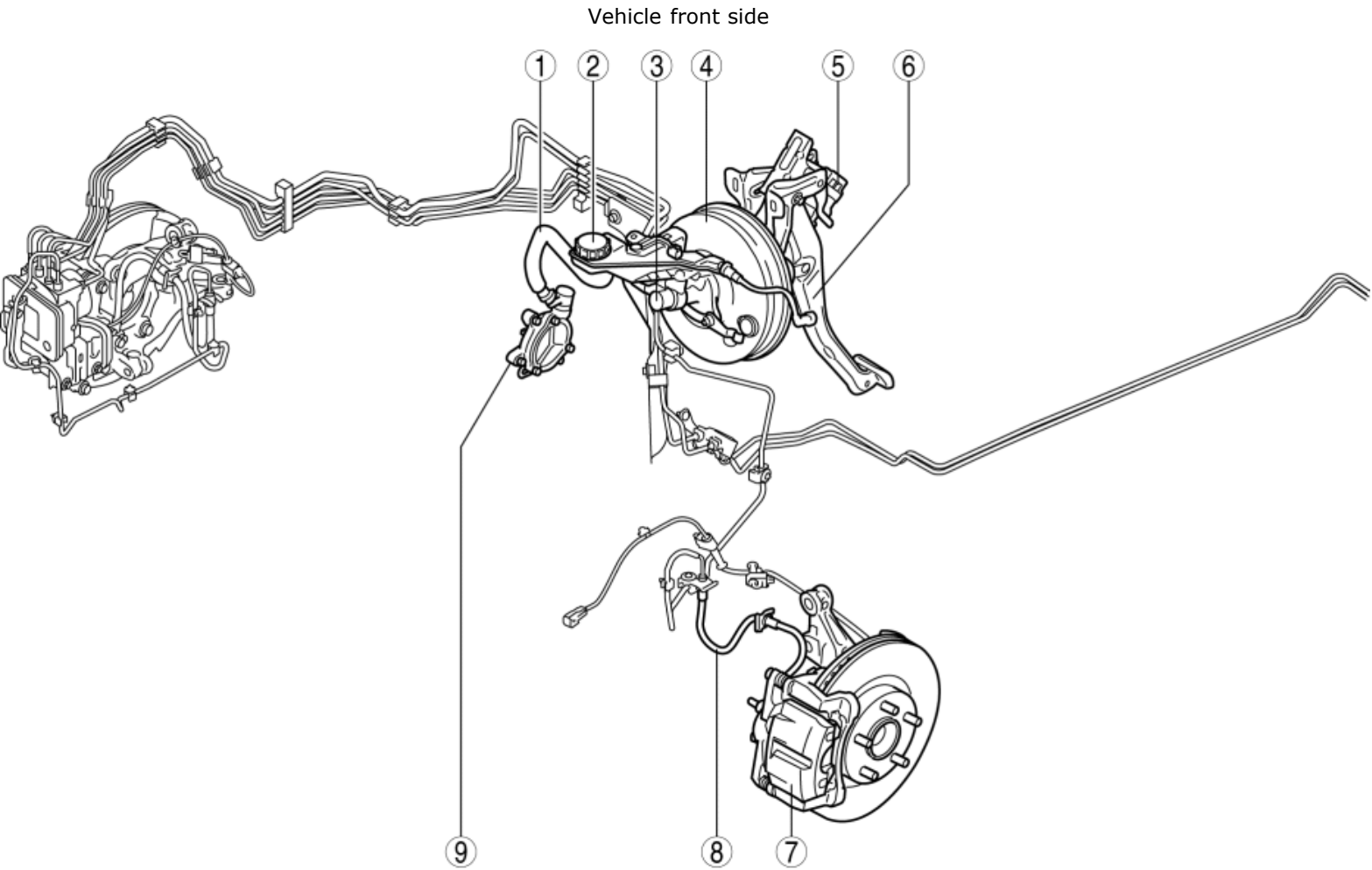
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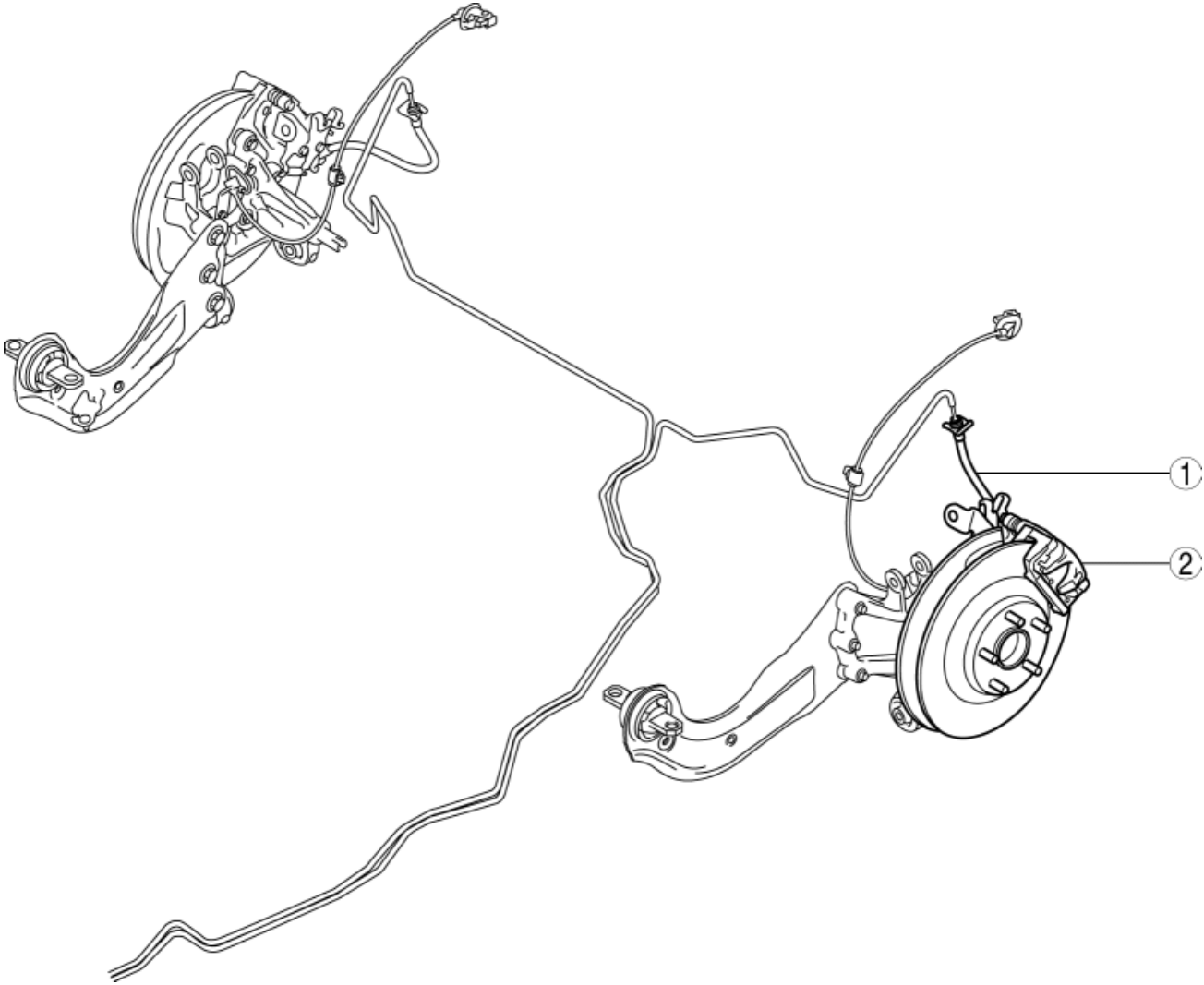
CONVENTIONAL BRAKE SYSTEM LOCATION INDEX



1	Vacuum line (See VACUUM LINE INSPECTION.) (See VACUUM HOSE REMOVAL / INSTALLATION.)
2	Brake fluid (See BRAKE FLUID INSPECTION.) (See BRAKE FLUID AIR BLEEDING.)
3	Master cylinder (See MASTER CYLINDER REMOVAL / INSTALLATION.) (See BRAKE FLUID LEVEL SENSOR INSPECTION.)
4	Power brake unit

	(See POWER BRAKE UNIT INSPECTION.) (See POWER BRAKE UNIT REMOVAL / INSTALLATION.)
5	Brake switch (See BRAKE SWITCH INSPECTION.)
6	Brake pedal (See BRAKE PEDAL INSPECTION.) (See BRAKE PEDAL REMOVAL / INSTALLATION.)
7	Front brake (disc) (See FRONT BRAKE (DISC) INSPECTION.) (See FRONT BRAKE (DISC) REMOVAL / INSTALLATION.) (See DISC PAD (FRONT) REPLACEMENT.) (See CALIPER (FRONT) DISASSEMBLY / ASSEMBLY.)
8	Front brake hose (See BRAKE HOSE (FRONT) REMOVAL / INSTALLATION.)
9	Vacuum pump (See VACUUM PUMP INSPECTION.) (See VACUUM PUMP REMOVAL / INSTALLATION.)

Vehicle rear side



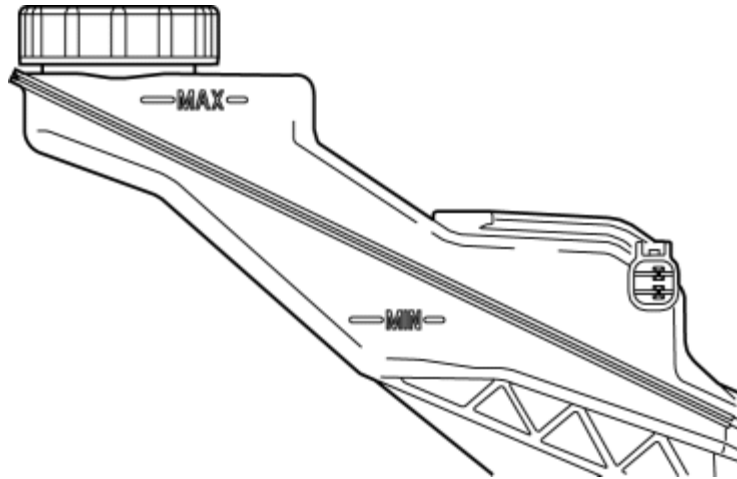
1	Rear brake hose (See BRAKE HOSE (REAR) REMOVAL/INSTALLATION.)
2	Rear brake (disc) (See REAR BRAKE (DISC) INSPECTION.) (See REAR BRAKE (DISC) REMOVAL/INSTALLATION.) (See DISC PAD (REAR) REPLACEMENT.) (See CALIPER (REAR) DISASSEMBLY/ASSEMBLY.)

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BRAKE FLUID INSPECTION

1. Verify that the brake fluid level in the brake fluid reserve tank is between the MAX and MIN marks.



- If the brake fluid level is below the MIN mark, add brake fluid.

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BRAKE FLUID AIR BLEEDING

CAUTION:

- Brake fluid will damage painted surfaces. Be careful not to spill any on painted surfaces. If it is spilled, wipe it off immediately.

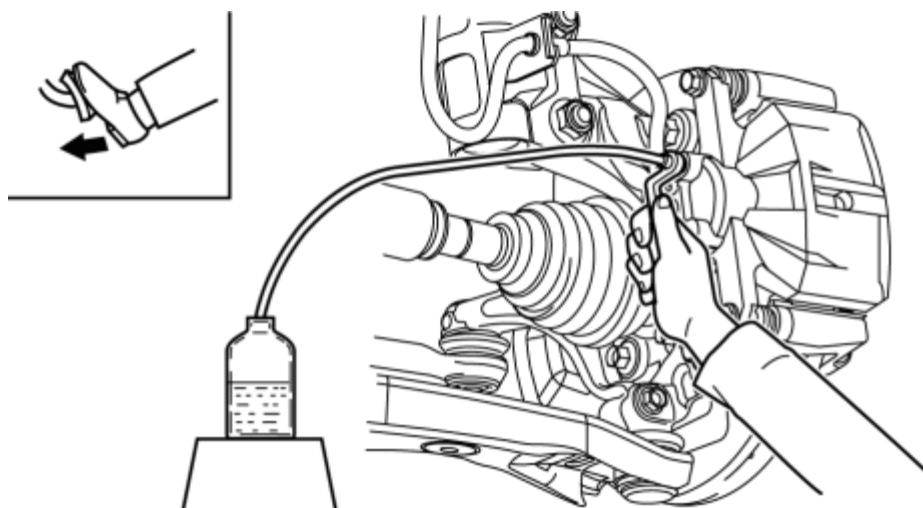
NOTE:

- Keep the fluid level in the brake fluid reserve tank at 3/4 full or more during the air bleeding.
- Begin air bleeding with the brake caliper that is furthest from the master cylinder.

Brake fluid type

- SAE J1703 or FMVSS116 DOT-3

1. Remove the cap from the brake fluid reserved tank and add brake fluid.
2. Remove the bleeder cap on the brake caliper, and attach a vinyl tube to the bleeder screw.
3. Place the other end of the vinyl tube in a clear container and fill the container with fluid during air bleeding.
4. Working with two people, one should pump the brake pedal several times and depress and hold the pedal down.
5. While the brake pedal is depressed, the other should loosen the bleeder screw using a commercially available flare nut wrench, drain out any fluid containing air bubbles, and tighten the bleeder screw.



Tightening torque

- 6.9—9.8 N·m {71—99 kgf·cm, 62—86 in·lbf}

6. Repeat Steps 4 and 5 until no air bubbles are seen.

7. Perform air bleeding as described in the above procedures for all brake calipers.

8. Clean the brake calipers.

9. After air bleeding, inspect the following:

- Brake operation
- Fluid leakage
- Fluid level

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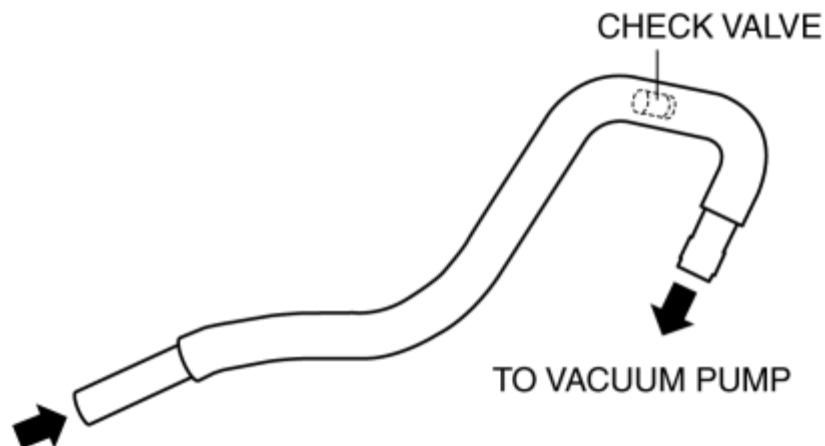
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VACUUM LINE INSPECTION

1. Remove the vacuum hose. (See [VACUUM HOSE REMOVAL / INSTALLATION.](#))
2. Verify that air can be blown from the power brake unit side of the vacuum hose towards the vacuum pump side, and that air cannot be blown in the opposite direction.



- If there is any malfunction of the inner check valve, replace it together with the vacuum hose as a single unit.

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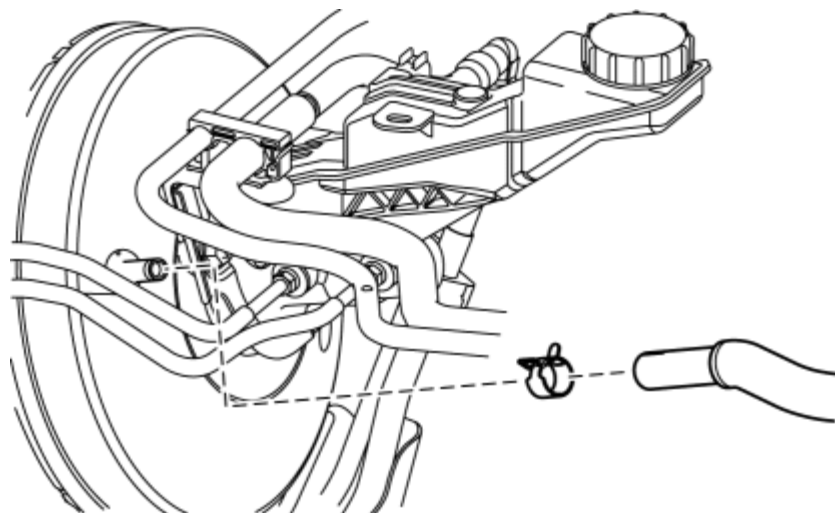
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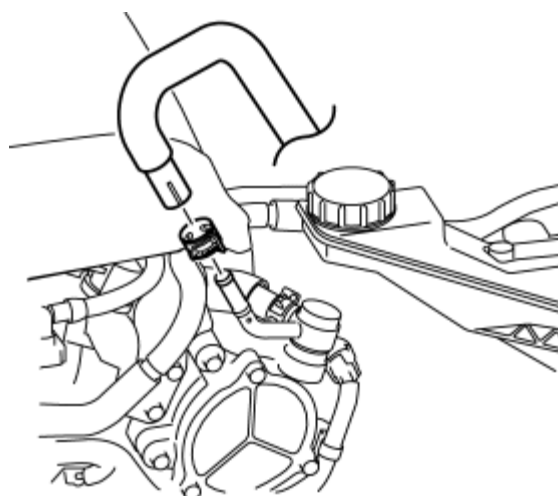
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VACUUM HOSE REMOVAL/INSTALLATION

1. Pinch open the clamp using pliers and disconnect the vacuum hose.



2. Pinch open the clamp using pliers and disconnect the vacuum hose.



3. Remove the vacuum hose.
4. Install in the reverse order of removal.

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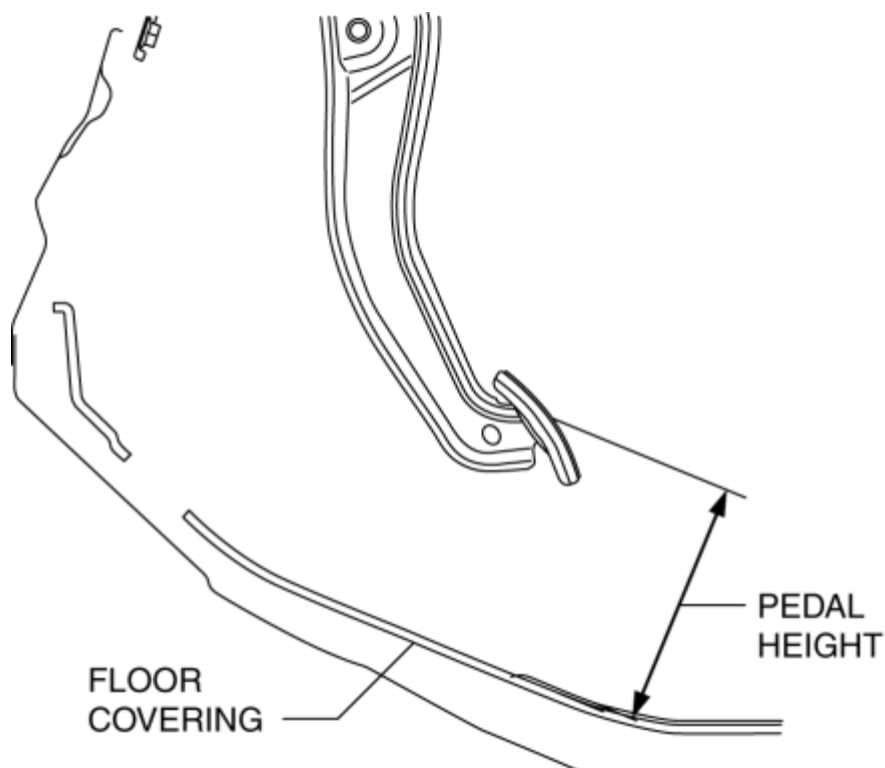
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BRAKE PEDAL INSPECTION

Pedal Height Inspection

1. Measure the distance from the center of the upper surface of the pedal pad to the insulator and verify that it is as specified.



- If not within the specification, inspect the following items and repair or replace the applicable part if there is any malfunction.
 - Power brake unit installation condition
 - Deformation of or damage to the power brake unit fork
 - Brake pedal installation condition
 - Clevis pin wear
- If there is no malfunction in the above items, replace the brake pedal.

Brake pedal height (reference value)

- 136 mm {5.35 in}

Pedal Play Inspection

1. Pump the pedal several times to release the vacuum in the power brake unit.
2. Gently depress the pedal by hand and measure the pedal play.
 - If not within the specification, inspect the wear of the clevis pin. Replace it if there is any malfunction.

Brake pedal play

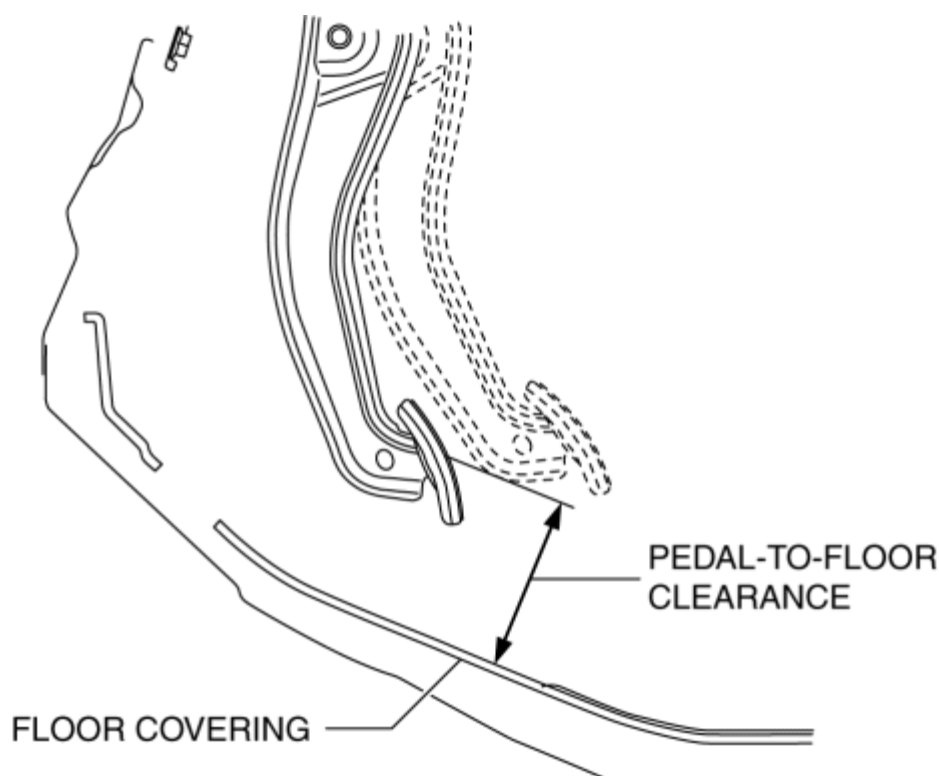
- 3—5 mm {0.12—0.19 in}

NOTE:

- If there is no malfunction in the clevis pin, there is a possibility that the power brake unit has some malfunction. Verify that there are no malfunctions, and replace it if necessary.

Pedal-to-floor Clearance Inspection

1. Start the engine and depress the brake pedal with a force of **147 N {15.0 kgf, 33.0 lbf}**.
2. Measure the distance from the center of the upper surface of the pedal pad to the floor covering and verify that it is as specified.



- If it is less than the specification, inspect for air in the brake line.

Brake pedal-to-floor clearance (Brake pedal when depressed at 147 N {15.0 kgf, 33.0 lbf})

- 95 mm {3.7 in} or more

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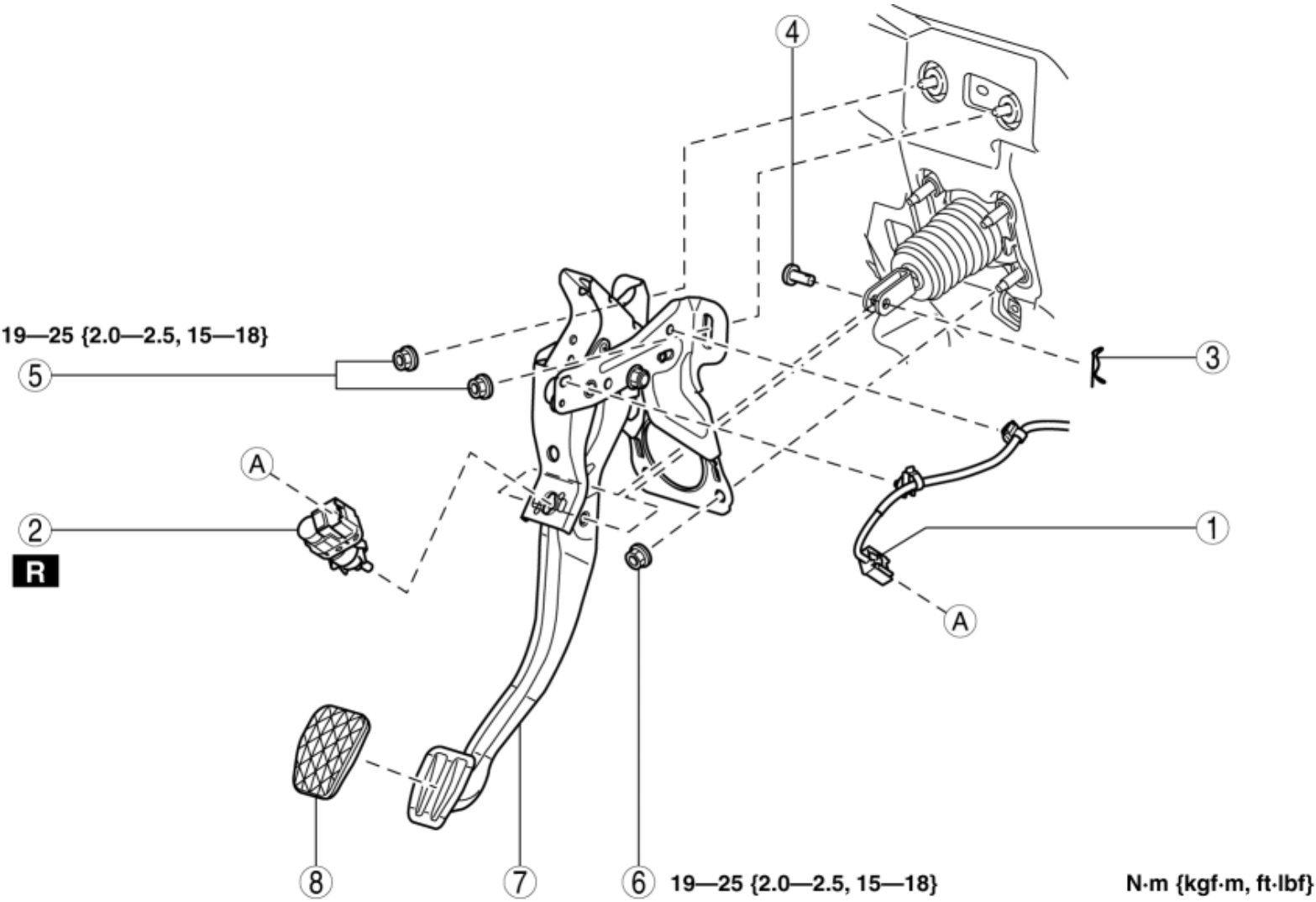
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BRAKE PEDAL REMOVAL / INSTALLATION

CAUTION:

- The clearance between the brake switch and the brake pedal is automatically adjusted to the correct amount when the brake switch is inserted into the installation hole on the brake pedal and rotated to fix in place. If the brake switch is not properly installed, the clearance may be incorrect, causing a brake light malfunction. Therefore, always verify that the brake pedal is properly installed and fully released before installing the brake switch to the pedal.
- Once the brake switch clearance has automatically been adjusted, it cannot be adjusted again. Therefore, replace the switch with a new one when replacing the power brake unit or the pedal, or performing any procedure that changes the pedal stroke.

1. Remove the battery. (See [BATTERY REMOVAL / INSTALLATION \[SKYACTIV-G 2.0\].](#))
2. Disconnect the brake pipes from the master cylinder. (See [MASTER CYLINDER REMOVAL / INSTALLATION.](#))
3. Disconnect the clutch reserve hose from the master cylinder. (MTX) (See [MASTER CYLINDER REMOVAL / INSTALLATION.](#))
4. Remove the side wall (driver side). (See [SIDE WALL REMOVAL / INSTALLATION.](#))
5. Remove the front heat duct (LH). (See [FRONT HEAT DUCT REMOVAL / INSTALLATION.](#))
6. Remove in the order indicated in the table.
7. Install in the reverse order of removal.
8. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See [BRAKE FLUID AIR BLEEDING.](#))



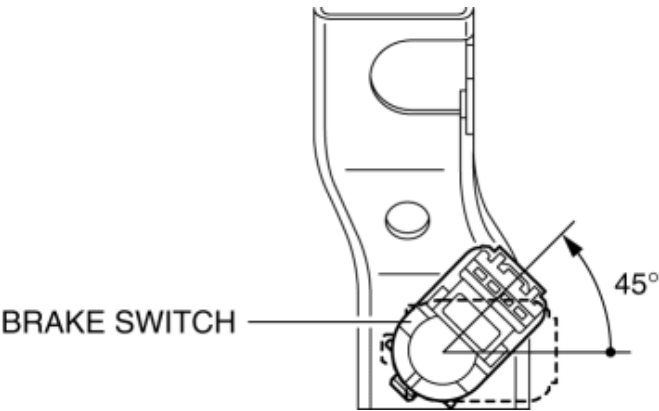
1	Brake switch connector and wiring harness
2	Brake switch (See Brake Switch Installation Note.)
3	Spring pin
4	Clevis pin
5	Nut
6	Nut
7	Brake pedal (See Brake Pedal Removal Note.)
8	Pedal pad

Brake Pedal Removal Note

- 1. Move the power brake unit to the vehicle front where the power brake unit fork does not interfere with the brake pedal arm.
- 2. Remove the brake pedal.

Brake Switch Installation Note

- 1. Inspect the brake pedal. (See [BRAKE PEDAL INSPECTION.](#))
- 2. With the brake pedal fully released, insert a new brake switch into the installation hole on the brake pedal.
- 3. Secure the brake switch by turning it counterclockwise **45°**.

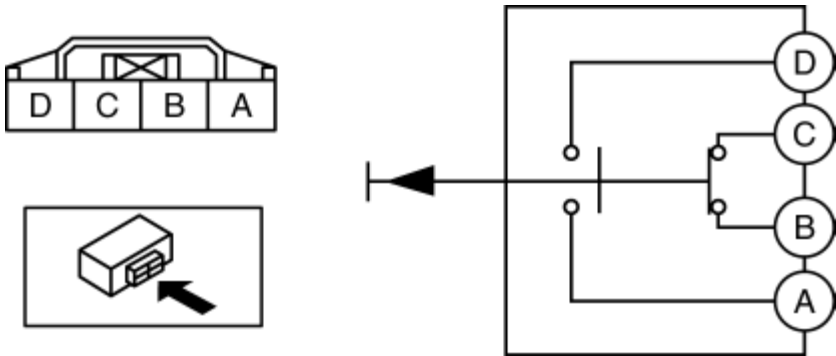


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BRAKE SWITCH INSPECTION

CAUTION:

- Inspect the brake switch with it installed to the brake pedal, otherwise the brake switch may not operate normally. If the brake switch is removed from the brake pedal, replace the brake switch with a new one.
1. Remove the lower panel. (See LOWER PANEL REMOVAL / INSTALLATION.)
 2. Remove the front heat duct (LH). (See FRONT HEAT DUCT REMOVAL / INSTALLATION.)
 3. Disconnect the brake switch connector.
 4. Verify that the continuity is as indicated in the table.



- If not as indicated in the table, replace the brake switch. (See BRAKE PEDAL REMOVAL / INSTALLATION.)

○—○ : Continuity

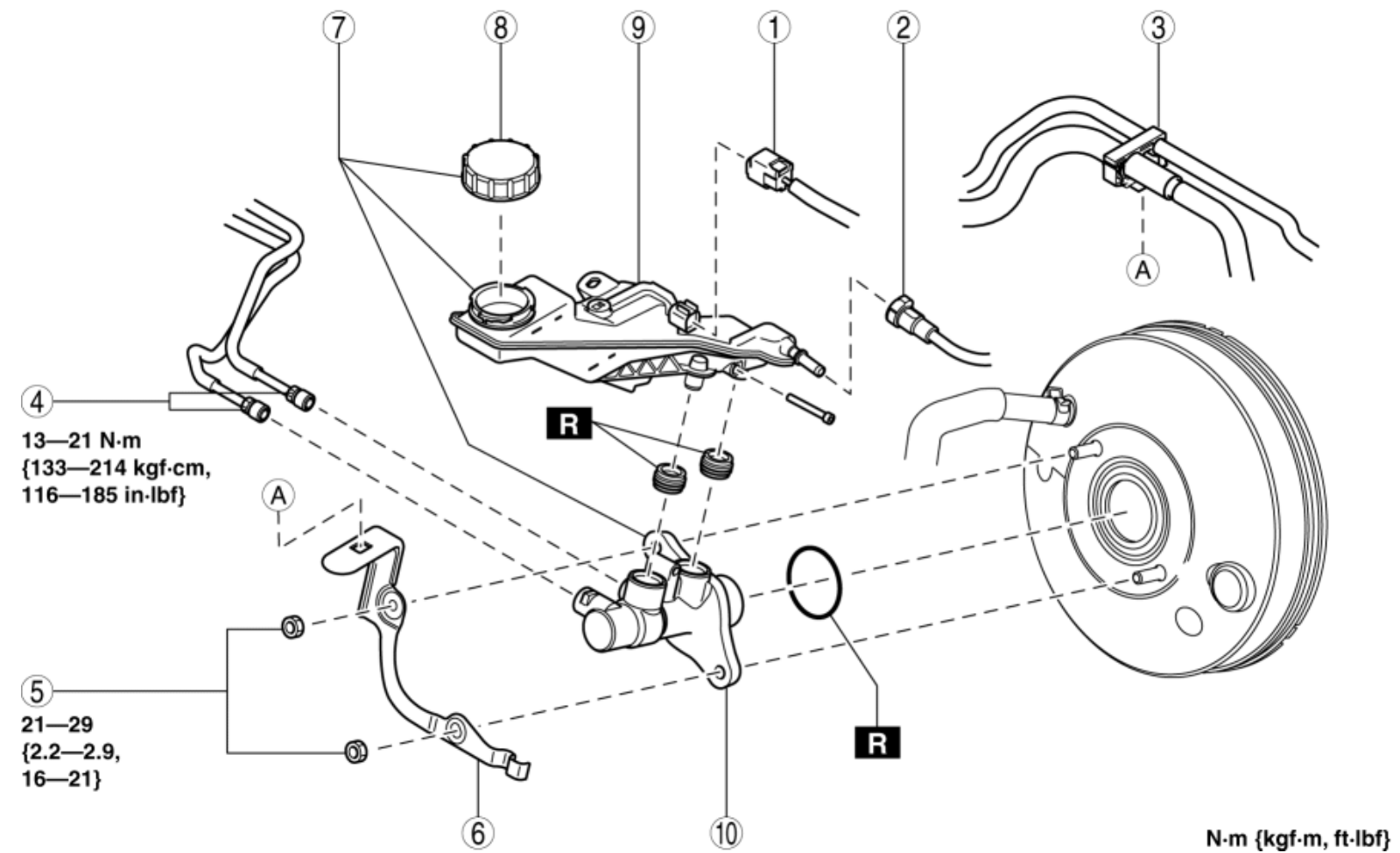
Condition	Terminal			
	A	B	C	D
When the brake pedal is depressed	○	—	—	○
When the brake pedal is not depressed		○	—	○

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MASTER CYLINDER REMOVAL / INSTALLATION

- 1. Remove the battery. (See [BATTERY REMOVAL / INSTALLATION \[SKYACTIV-G 2.0\]](#).)
- 2. Remove in the order indicated in the table.
- 3. Install in the reverse order of removal.
- 4. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See [BRAKE FLUID AIR BLEEDING](#).)

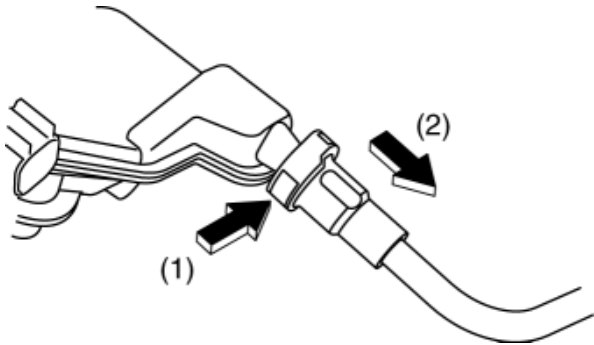


1	Brake fluid level sensor connector
2	Clutch reserve hose (MTX) (See Clutch Reserve Hose Removal Note (MTX) .) (See Clutch Reserve Hose Installation Note (MTX) .)
3	Hose holder

4	Brake pipe
5	Nut
6	Bracket
7	Master cylinder
8	Cap
9	Brake fluid reserve tank
10	Cylinder component

Clutch Reserve Hose Removal Note (MTX)

- 1. Disconnect the clutch reserve hose in the order shown in the figure.



Clutch Reserve Hose Installation Note (MTX)

- 1. Insert the clutch reserve hose to the master cylinder.
- 2. Pull the clutch reserve hose to verify that it does not come off, and reinsert it completely.

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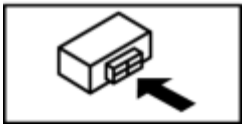
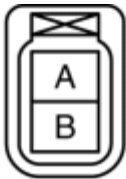
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BRAKE FLUID LEVEL SENSOR INSPECTION

- 1. Disconnect the brake fluid level sensor connector from the master cylinder.
- 2. Inspect for continuity according to fluid level between the brake fluid level sensor terminals.



- If not as indicated in the table, replace the reserve tank. (See [MASTER CYLINDER REMOVAL / INSTALLATION.](#))

○—○: Continuity

Condition	Terminal	
	A	B
Above MIN	○—○	○—○
Below MIN		

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POWER BRAKE UNIT INSPECTION

NOTE:

- The following inspection methods are simple inspection methods to judge the function of the power brake unit.
- If there is any malfunction in the power brake unit, replace the power brake unit as a single unit.

Without Using SST

Operation inspection

1. With the engine stopped, pump the pedal a few times.
2. With the pedal depressed, start the engine.
3. If the pedal moves down slightly immediately after starting the engine, the unit is normal.

Vacuum function inspection

1. Start the engine.
2. Stop the engine after driving the vehicle for **1—2 min.**
3. Depress the pedal with normal force.
4. If the first pedal stroke is long and becomes shorter with subsequent strokes, the unit is normal.
 - If a problem is found, inspect for damage to or improper installation of the check valve and vacuum hose. After repairing, inspect again.

Vacuum loss function inspection

1. Start the engine.
2. Depress the pedal with normal force.
3. With the pedal depressed, stop the engine.
4. Hold the pedal depressed for **approx. 30 s.**
5. If the pedal height does not change during this time, the unit is normal.

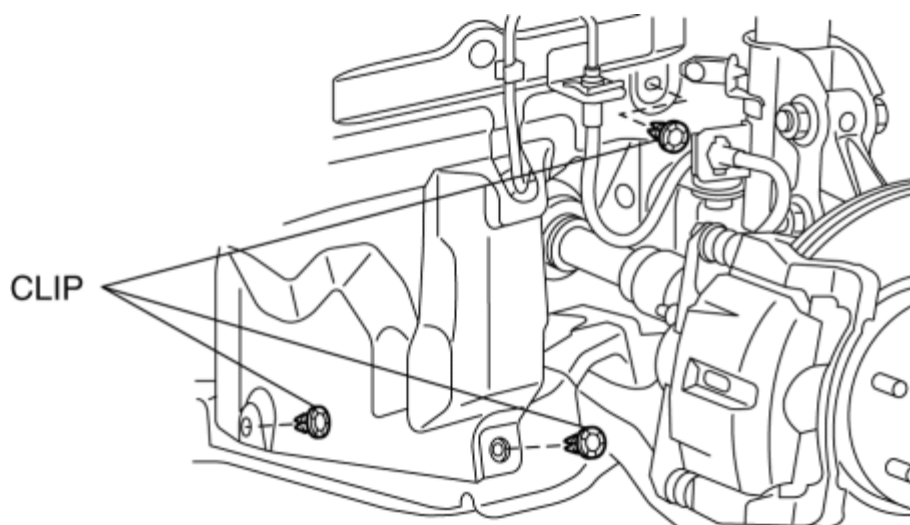
Using SST

NOTE:

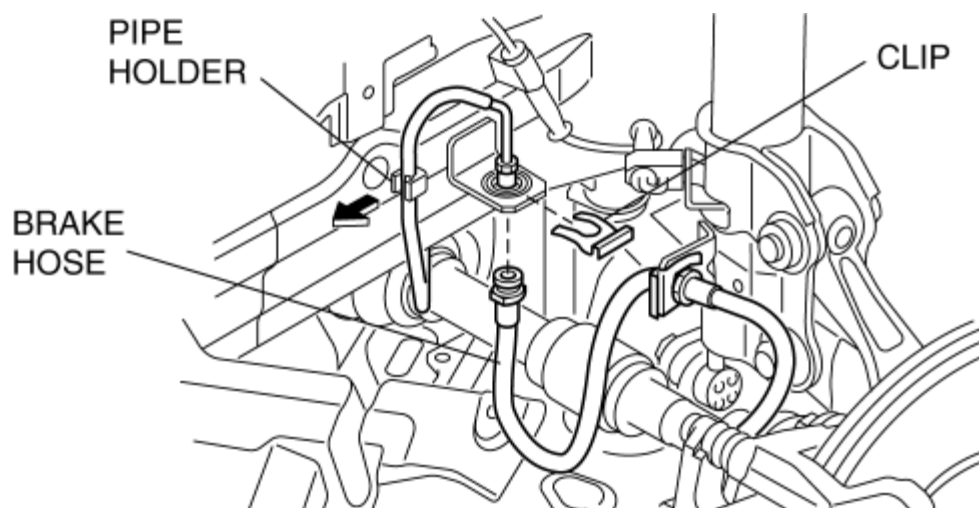
- When performing the inspection using the **SST**, inspect the brake pipe on the left or right front wheel.
- The following procedure and figures show the inspection for the brake pipe on the left front wheel.

Pre-inspection preparation

1. Remove the clips.

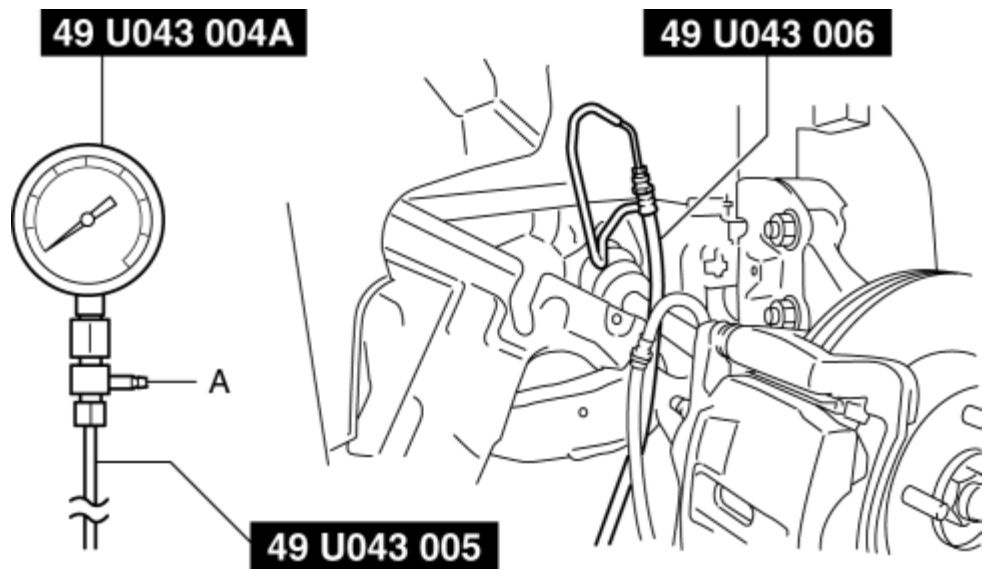


2. Set the splash shield out of the way.
3. Disconnect the brake pipe from the brake hose.



4. Remove the clip.
5. Remove the brake hose from the bracket.
6. Detach the brake pipe from the pipe holder.

7. Install the **SST** to the brake pipe as shown in the figure.



- 8. Bleed the brake line and the **SSTs** of air. Bleed the air form the **SSTs** using bleeder screw A.
- 9. Install the pedal force gauge to the brake pedal.
- 10. Connect the vacuum gauge to the vacuum line.

Vacuum loss inspection

- 1. Start the engine.
- 2. Depress the brake pedal with a force of **200 N {20.4 kgf, 45.0 lbf}**.
- 3. Stop the engine when the vacuum gauge reading reaches **68 kPa {510 mmHg, 20 inHg}** with the pedal depressed.
- 4. With the engine off, observe the vacuum gauge for **15 s**.
- 5. If the gauge has dropped **3.3 kPa {25 mmHg, 1.0 inHg}** or less, the unit is normal.

Lack of hydraulic pressure inspection

- 1. If the pedal force and fluid pressure correlation is within the specification with the engine stopped and a vacuum amount of **0 kPa {0 mmHg, 0 inHg}**, the system is normal.

Master cylinder fluid pressure

Vacuum amount at 0 kPa {0 mmHg, 0 inHg}	
Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbt}	630 kPa {6.42 kgf/cm ² , 91.4 psi} or more

Hydraulic pressure inspection

- 1. Start the engine. Depress the brake pedal when the vacuum reaches **66.7 kPa {500 mmHg, 19.7 inHg}**.
- 2. At this time, apply the indicated pedal force and if the fluid pressure is within the specification, the unit is normal.

Master cylinder fluid pressure

Vacuum amount at 66.7 kPa {500 mmHg, 19.7 inHg}	
Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbt}	6,900 kPa {70.36 kgf/cm ² , 1,001 psi} or more

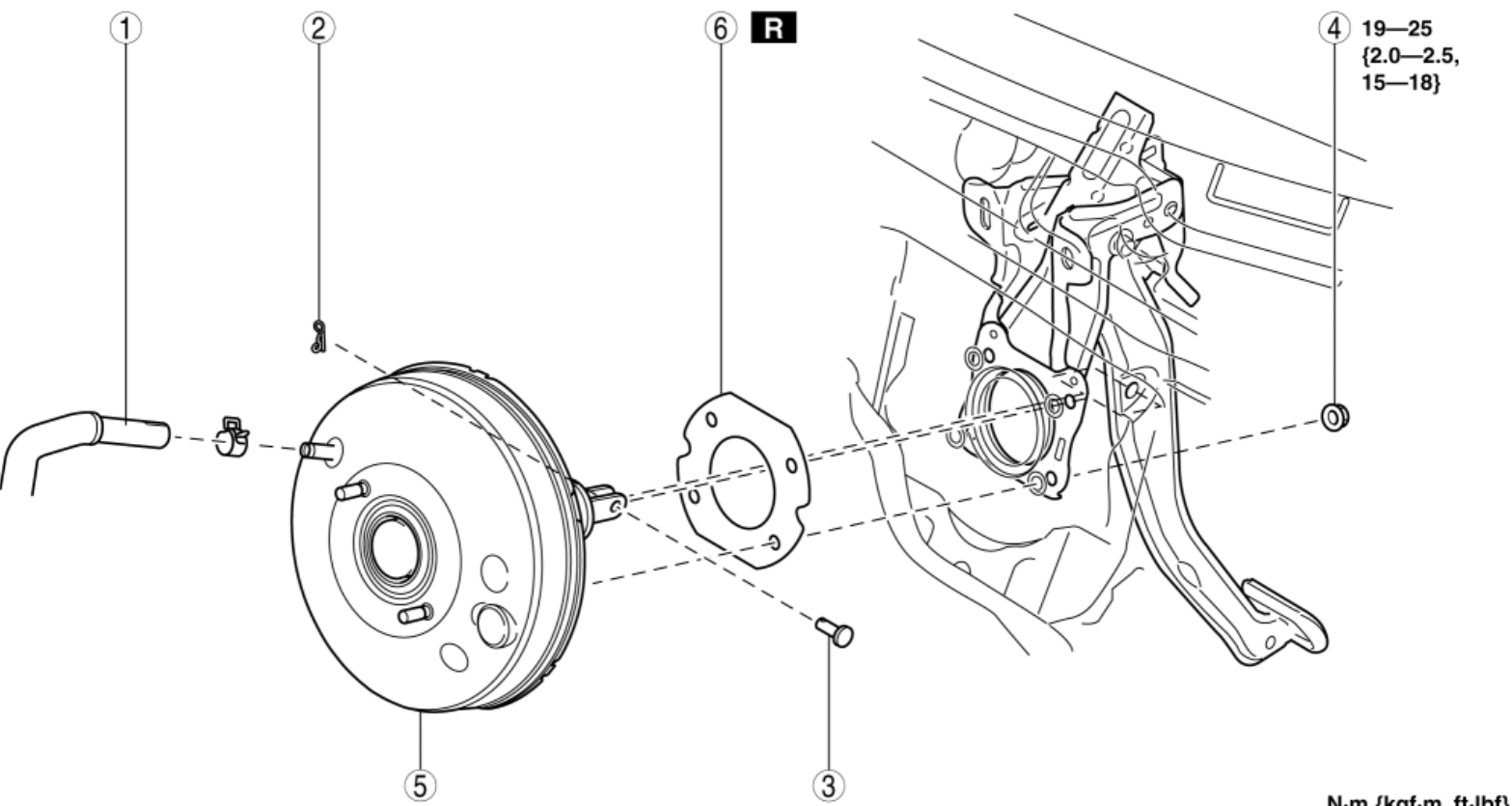
After-inspection procedure

- 1. After the inspection, remove the **SSTs**, install the brake hose, clamp, and brake pipe to the original positions, and then bleed the air from the brake line. (See **BRAKE HOSE (FRONT) REMOVAL/INSTALLATION.**) (See **BRAKE FLUID AIR BLEEDING.**)

POWER BRAKE UNIT REMOVAL/INSTALLATION

CAUTION:

- Once the brake switch has automatically been adjusted, it cannot be adjusted again. Therefore, replace the switch with a new one when replacing the power brake unit or performing any procedure that changes the pedal stroke.
1. Remove the battery and battery tray. (See **BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0]**.)
 2. Remove the windshield wiper arm and blade. (See **WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION**.)
 3. Remove the cowl grille. (See **COWL GRILLE REMOVAL/INSTALLATION**.)
 4. Remove the windshield wiper motor and link. (See **WINDSHIELD WIPER MOTOR AND LINK REMOVAL/INSTALLATION**.)
 5. Remove the cowl panel. (See **COWL PANEL REMOVAL/INSTALLATION**.)
 6. Remove the master cylinder. (See **MASTER CYLINDER REMOVAL/INSTALLATION**.)
 7. Remove in the order indicated in the table.
 8. Install in the reverse order of removal.
 9. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See **BRAKE FLUID AIR BLEEDING**.)
 10. Remove the brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION**.)
 11. Inspect the brake pedal. (See **BRAKE PEDAL INSPECTION**.)
 12. Install a new brake switch. (See **BRAKE PEDAL REMOVAL/INSTALLATION**.)



1	Vacuum hose
---	-------------

2	Snap pin
3	Clevis pin
4	Nut
5	Power brake unit
6	Gasket

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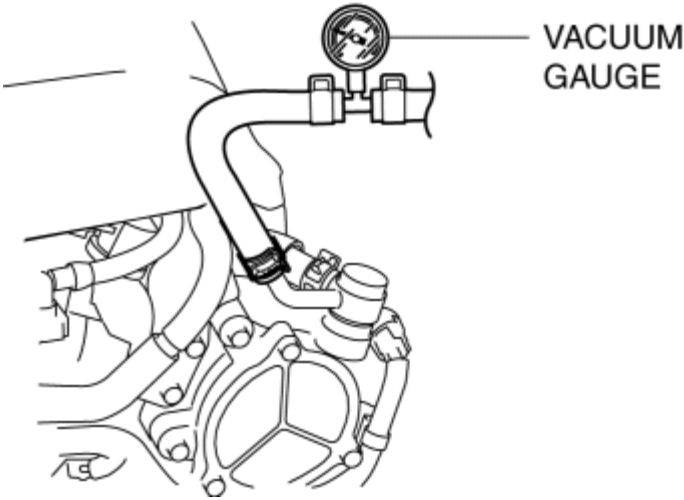
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VACUUM PUMP INSPECTION

1. Pinch open the clamp using pliers and disconnect the vacuum hose from the vacuum pump.
(See [VACUUM HOSE REMOVAL/INSTALLATION.](#))
2. Install the vacuum gauge as shown in the figure, then check the vacuum.



3. Warm up the engine.
- If the pressure is less than the specification, inspect for the following.

▪ Malfunction of the vacuum pump

▪ Shortage of the lubrication oil pressure

Vacuum pump vacuum specification (reference value)

Measurement condition		Specification
Engine speed	Change in vacuum amount	Period of time change in vacuum amount condition met
While idling (520—700 rpm (reference value))	From 60 kPa {450 mmHg, 18 inHg} to 67 kPa {503 mmHg, 20 inHg}	8 s or less

Vacuum pump maximum vacuum specification (reference value)

Measurement condition	Specification
While idling (no time designation)	93.3 kPa {700 mmHg, 27.6 inHg} or more

4. Install in the reverse order of the removal.

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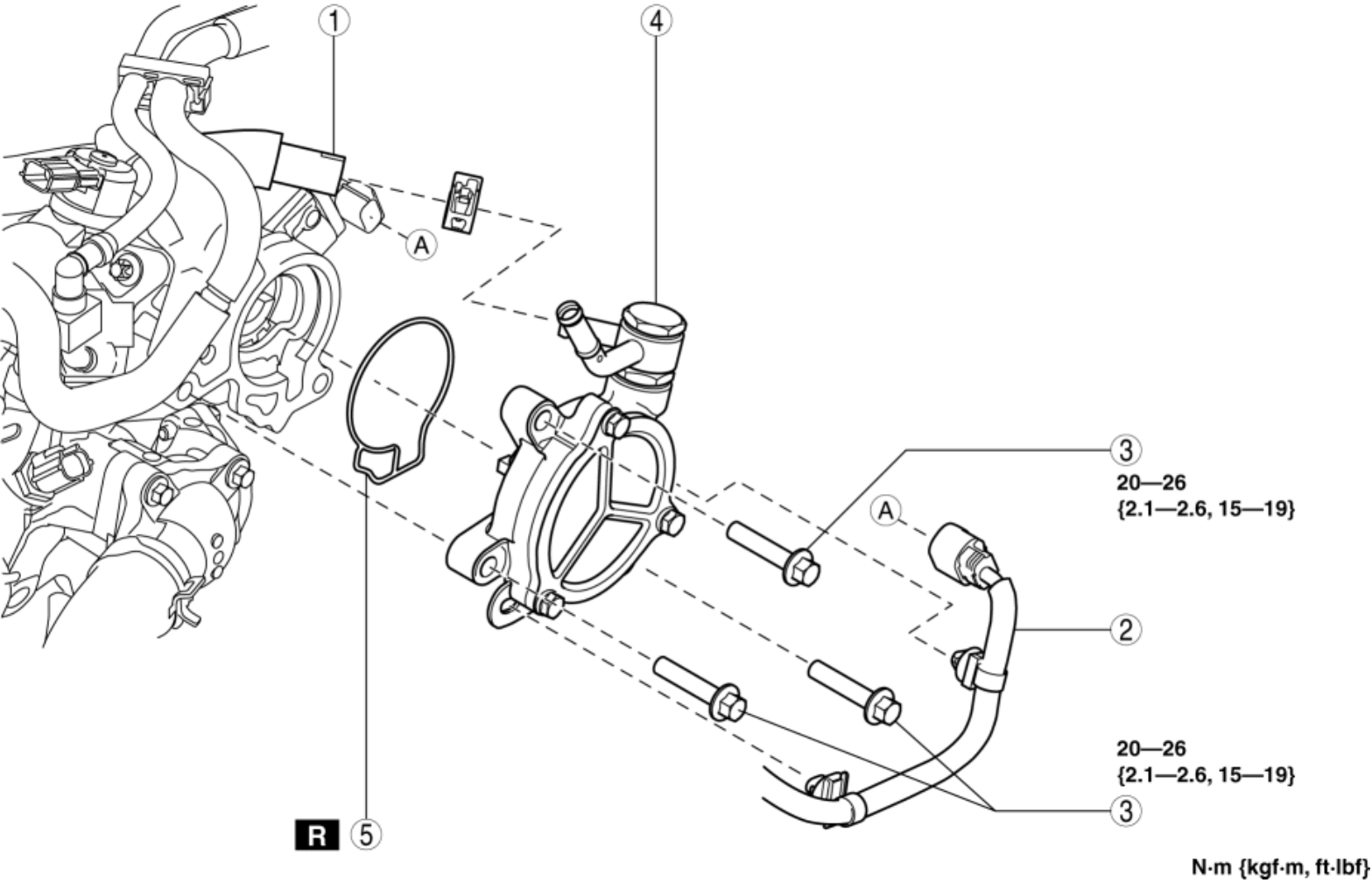
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2013 - CX-5 - Brakes

VACUUM PUMP REMOVAL/INSTALLATION

- 1. Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.0\].](#))
- 2. Remove the battery. (See [BATTERY REMOVAL/INSTALLATION \[SKYACTIV-G 2.0\].](#))
- 3. Set the PCM wiring harness out of the way.
- 4. Disconnect the vacuum hose from the vacuum pump. (See [VACUUM HOSE REMOVAL/INSTALLATION.](#))
- 5. Remove in the order shown in the table.
- 6. Install in the reverse order of removal.



1	Vacuum hose
2	Exhaust CMP sensor connector and wiring harness
3	Bolt
4	Vacuum pump

	(See Vacuum Pump Removal Note.)
	(See Vacuum Pump and O-ring Installation Note.)
5	O-ring
	(See Vacuum Pump and O-ring Installation Note.)

Vacuum Pump Removal Note

1. When removing the vacuum pump, place a rag under the installation surface of the vacuum pump so that engine oil does not get on other parts.
2. Remove the vacuum pump.

Vacuum Pump and O-ring Installation Note

1. Rotate the vacuum pump by hand to drain the remainder of the engine oil in the vacuum pump.
2. Degrease the O-ring installation groove and installation surface.
3. Install the new O-ring to the vacuum pump.
4. Install the vacuum pump.

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2013 - CX-5 - Brakes

FRONT BRAKE (DISC) INSPECTION

Brake Judder Repair Hints

Description

1. Brake judder concern has the following 3 characteristics:

Steering wheel vibration

1. The steering wheel vibrates in the rotation direction. This characteristic is most noticeable when applying brakes at a vehicle speed of **100—140 km/h {62.2—86.9 mph}**.

Floor vibration

1. When applying the brakes, the vehicle body shakes back and forth. The seriousness of the shaking is not influenced by vehicle speed.

Brake pedal vibration

1. When applying the brakes, a pulsating force tries to push the brake pad back. The pulsation is transmitted to the brake pedal.
2. The following are the main possible causes of brake judder:

Due to an excessive runout (side-to-side wobble) of the disc plate, the thickness of the disc plate is uneven.

1. If the runout is **more than 0.04 mm {0.002 in}** at the position **10 mm {0.39 in}** from the disc plate edge, uneven wear occurs on the disc plate because the pad contacts the plate unevenly.
2. If the runout is **less than 0.04 mm {0.002 in}**, uneven wear does not occur.

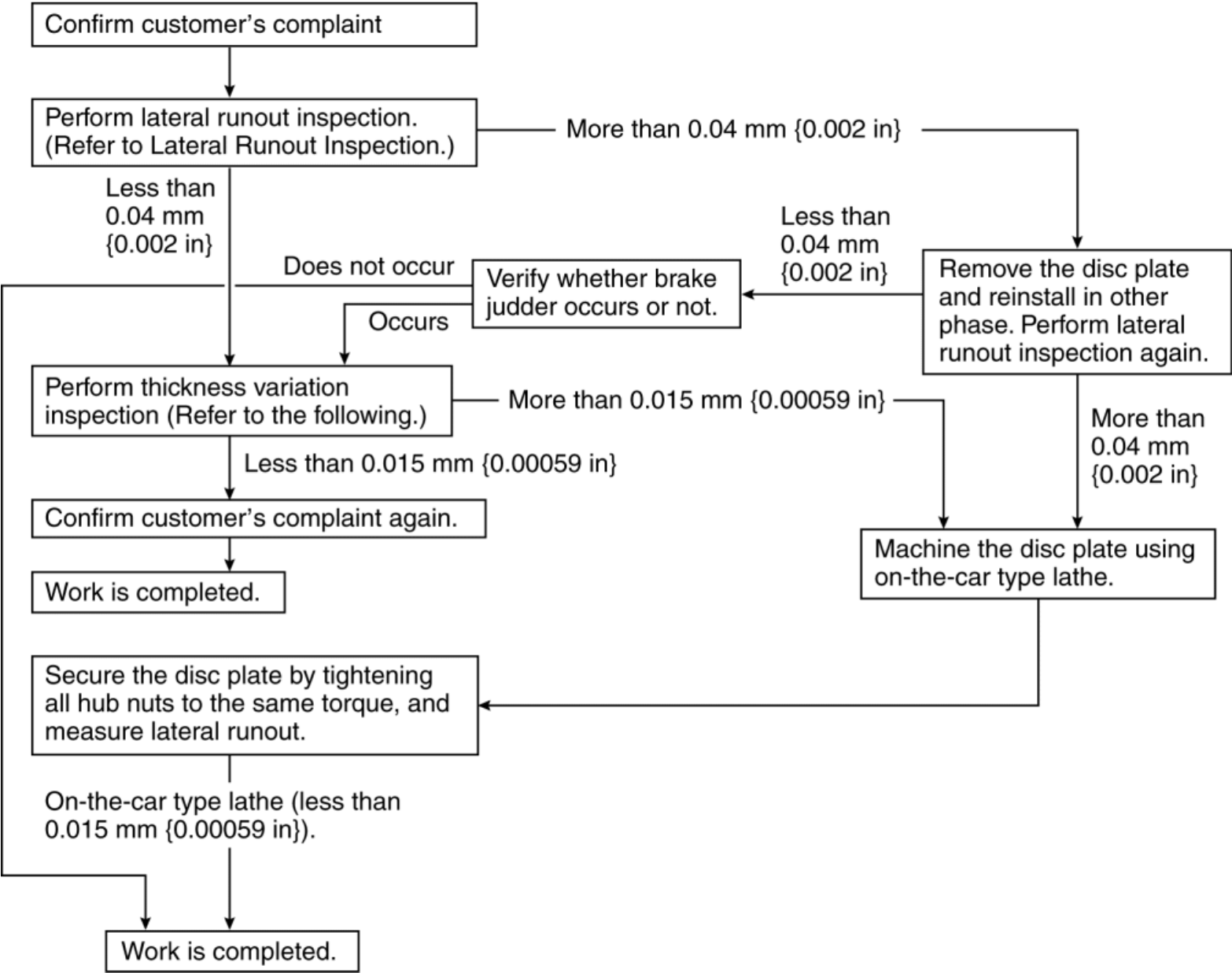
The disc plate is deformed by heat.

1. Repeated panic braking may raise the temperature in some portions of the disc plate by **approx. 1,000 °C {1,832 °F}**. This results in a deformed disc plate.

Due to corrosion, the thickness and friction coefficient of the disc plate change.

1. If the vehicle is parked in damp conditions for a long time, corrosion occurs on the friction surface of the disc plate.
2. The thickness of corrosion is uneven and sometimes appears like a wave pattern, which changes the friction coefficient and causes a reaction force.

Inspection and repair procedure

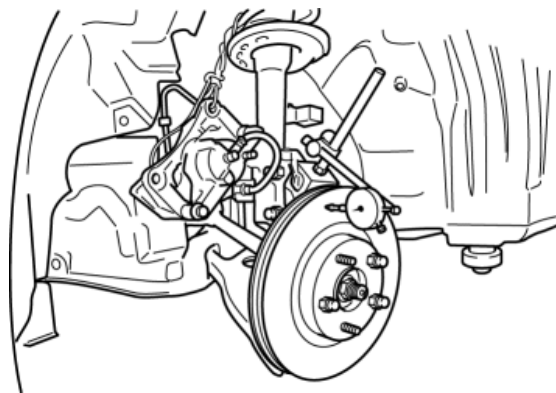


Lateral runout inspection

1. To secure the disc plate and the hub, insert the washer (thickness **10 mm {0.39 in}**, inner diameter **more than 12 mm {0.47 in}**) between each hub bolt and the hub nut, then tighten all the hub nuts.

NOTE:

- The component parts of the **SST** (49 B017 001 or 49 G019 003) can be used as a suitable washer.
2. After tightening all the hub nuts to the same torque, put the dial gauge on the friction surface of the disc plate **10 mm {0.39 in}** from the disc plate edge.



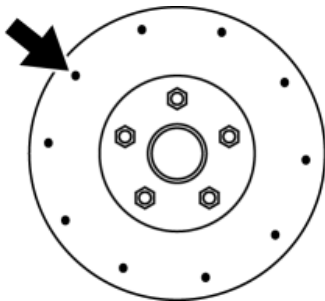
3. Rotate the disc plate one time and measure the runout.

Front disc plate runout limit

- 0.04 mm {0.002 in}

Thickness variation inspection

1. Clean the disc plate-to-pad friction surface using a brake cleaner.
2. Measure the points indicated in the illustration using a caliper (micrometer).



3. Subtract the minimum value from the maximum, and if the result is not within the specification, machine the disc plate using a lathe.

Thickness variation limit

- 0.015 mm {0.00059 in}

WARNING:

- Do not exceed minimum disc plate thickness.

Disc Plate Thickness Inspection

CAUTION:

- Excessive runout may result if the disc plate is removed from the vehicle then machined. Machine the disc plate while installed on the vehicle.
1. Measure the thickness of the disc plate.
 - If the thickness is not within the specification, replace the disc plate.

Minimum front disc plate thickness

- 26.0 mm {1.02 in}

Minimum front disc plate thickness after machining using a brake lathe on-vehicle

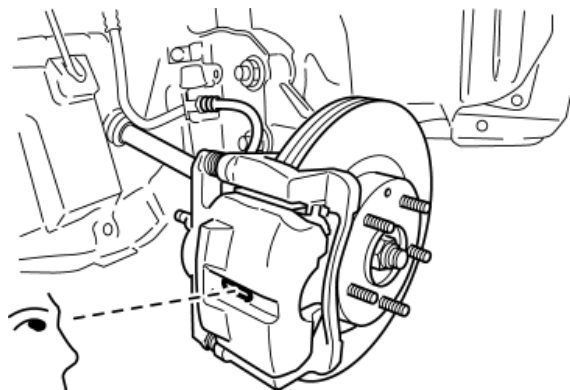
- 26.8 mm {1.06 in}

Disc Pad Thickness Inspection

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove the wheels and tires.
3. Verify the remaining thickness of the pads.

Minimum front disc pad thickness

- 2.0 mm {0.079 in} min.
4. Replace the pads as a set (right and left wheels) if either one is at or less than the minimum thickness.



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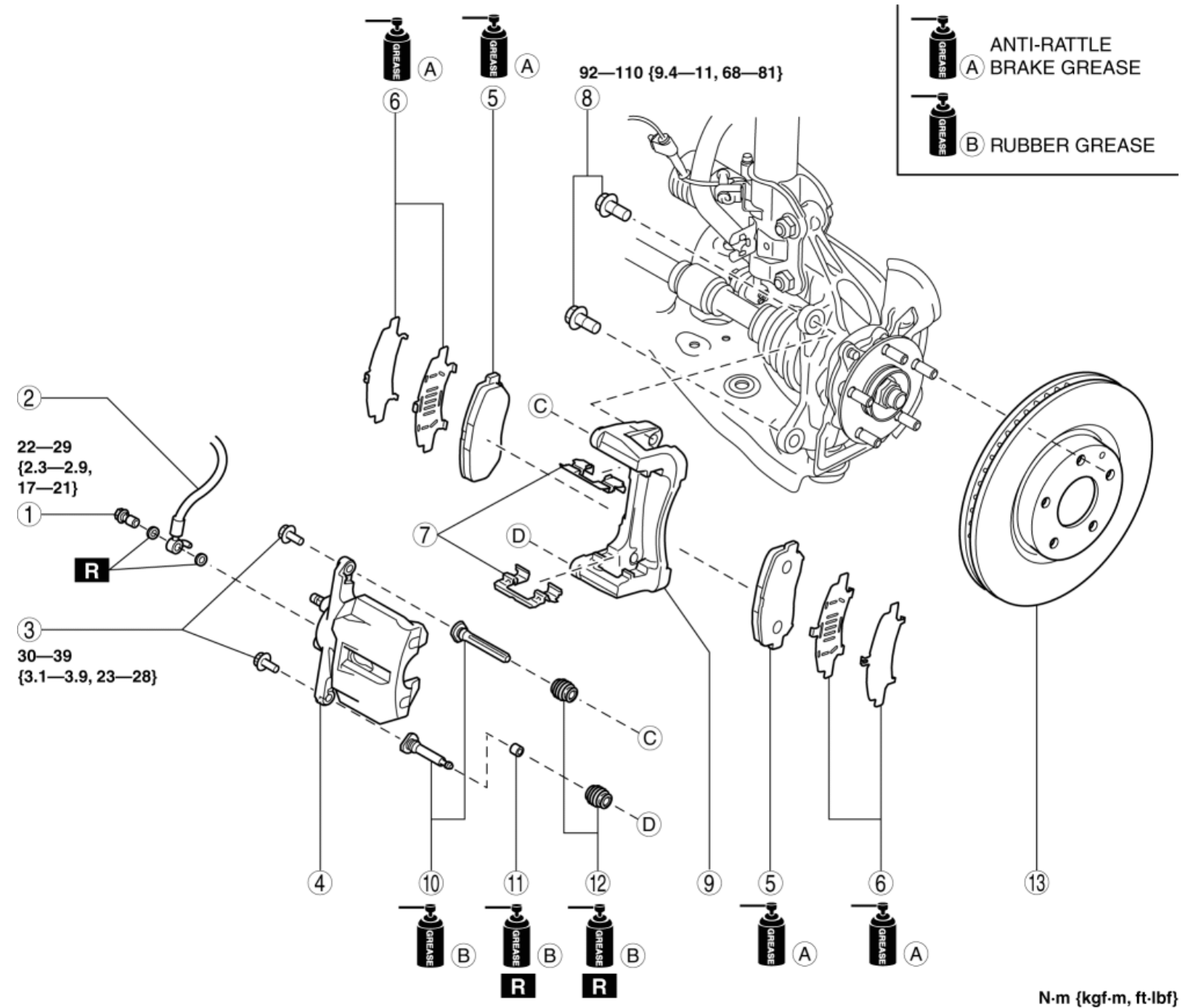
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2013 - CX-5 - Brakes

FRONT BRAKE (DISC) REMOVAL / INSTALLATION

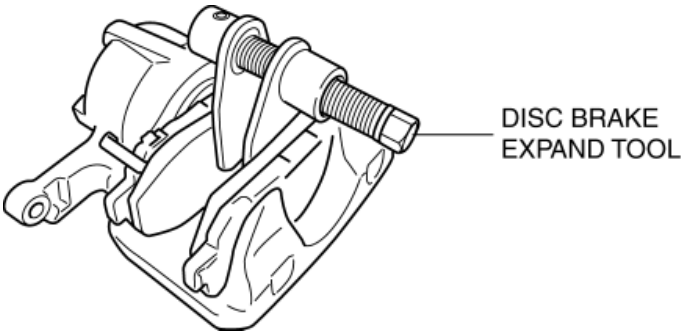
- 1. Remove in the order indicated in the table.
- 2. Install in the reverse order of removal.
- 3. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See BRAKE FLUID AIR BLEEDING.)
- 4. Depress the brake pedal a few times, rotate the wheel by hand, and verify that the brake does not drag.



2	Brake hose
3	Bolt
4	Caliper (See Disc Pad Installation Note.)
5	Disc pad (See Disc Pad Installation Note.)
6	Shim
7	Guide plate
8	Bolt
9	Mounting support
10	Slide pin
11	Bushing
12	Dust boot
13	Disc plate

Disc Pad Installation Note

- 1. Clean the exposed area of the piston.
- 2. Push the piston in using the commercially available disc brake expand tool.



- 3. Install the disc pads to the mounting support.

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DISC PAD (FRONT) REPLACEMENT

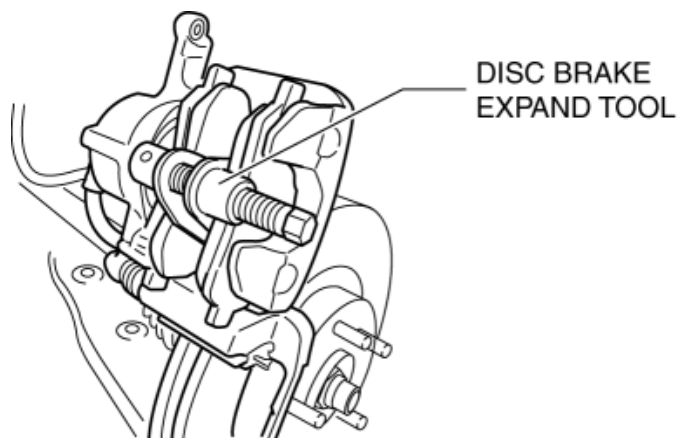
-
- 1 30—39 {3.1—3.9, 23—28}
- 2
- 3
- 4
- 5
- ANTI-RATTLE
BRAKE GREASE
- N·m {kgf·m, ft·lbf}

1 Bolt
2 Caliper
3 Disc pad
(See Disc Pad Installation Note.)

4	Shim
5	Guide plate

Disc Pad Installation Note

1. Clean the exposed area of the piston.
2. Push the piston in using the commercially available disc brake expand tool.



3. Install the disc pads to the mounting support.

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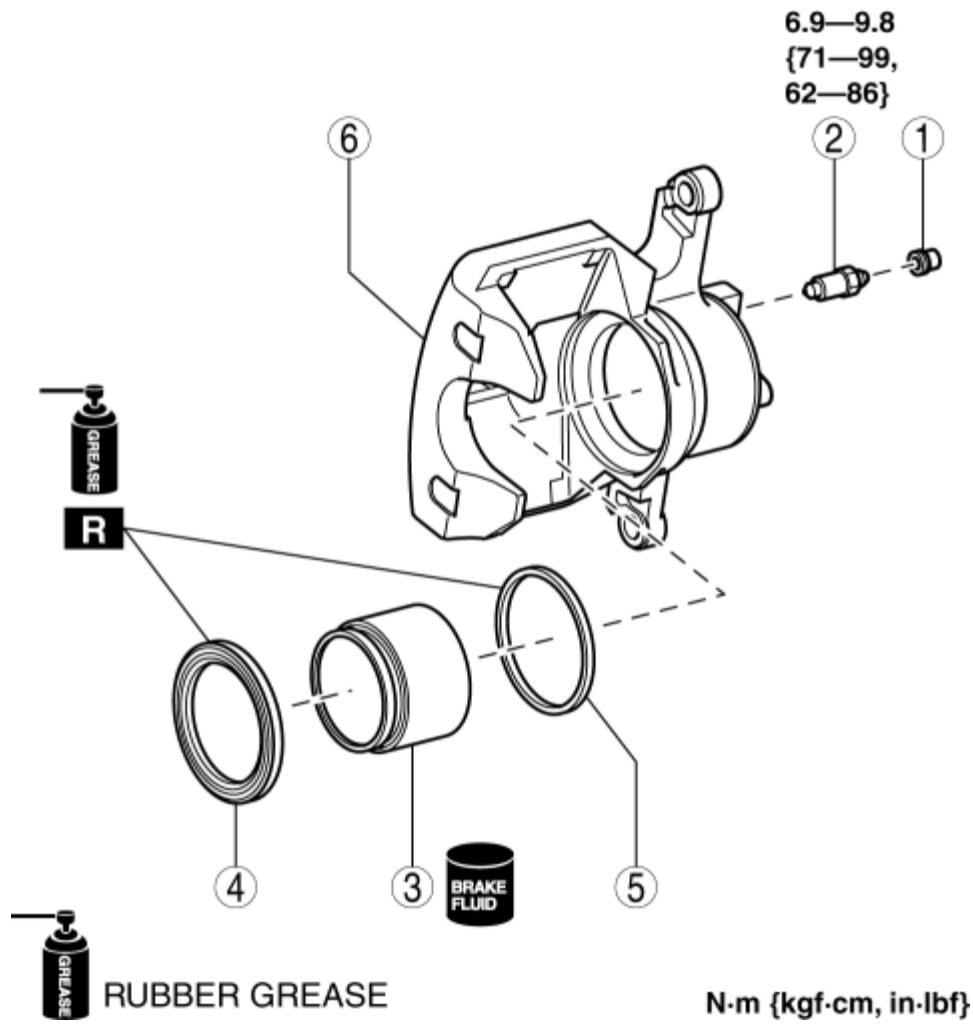
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2013 - CX-5 - Brakes

CALIPER (FRONT) DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.



1	Bleeder cap
2	Bleeder screw
3	Piston (See Piston Disassembly Note.)
4	Dust seal

5	Piston seal
6	Caliper body

2. Assemble in the reverse order of removal.

Piston Disassembly Note

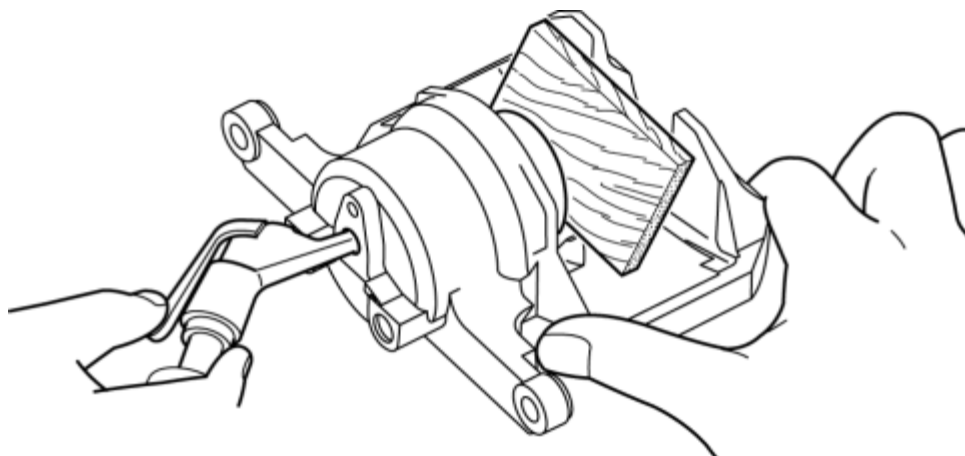
WARNING:

- When compressed air is blown into the caliper body, injury to a finger or other part from pinching could result from the piston springing up. When blowing in compressed air, do not place your fingers between the piston and caliper body when performing the work.

CAUTION:

- The piston could be damaged if blown out with great force. Blow the compressed air slowly to prevent the piston from suddenly popping out.

1. Insert a piece of wood in the caliper as shown in the figure and blow compressed air through the hole to remove the piston from the caliper body.



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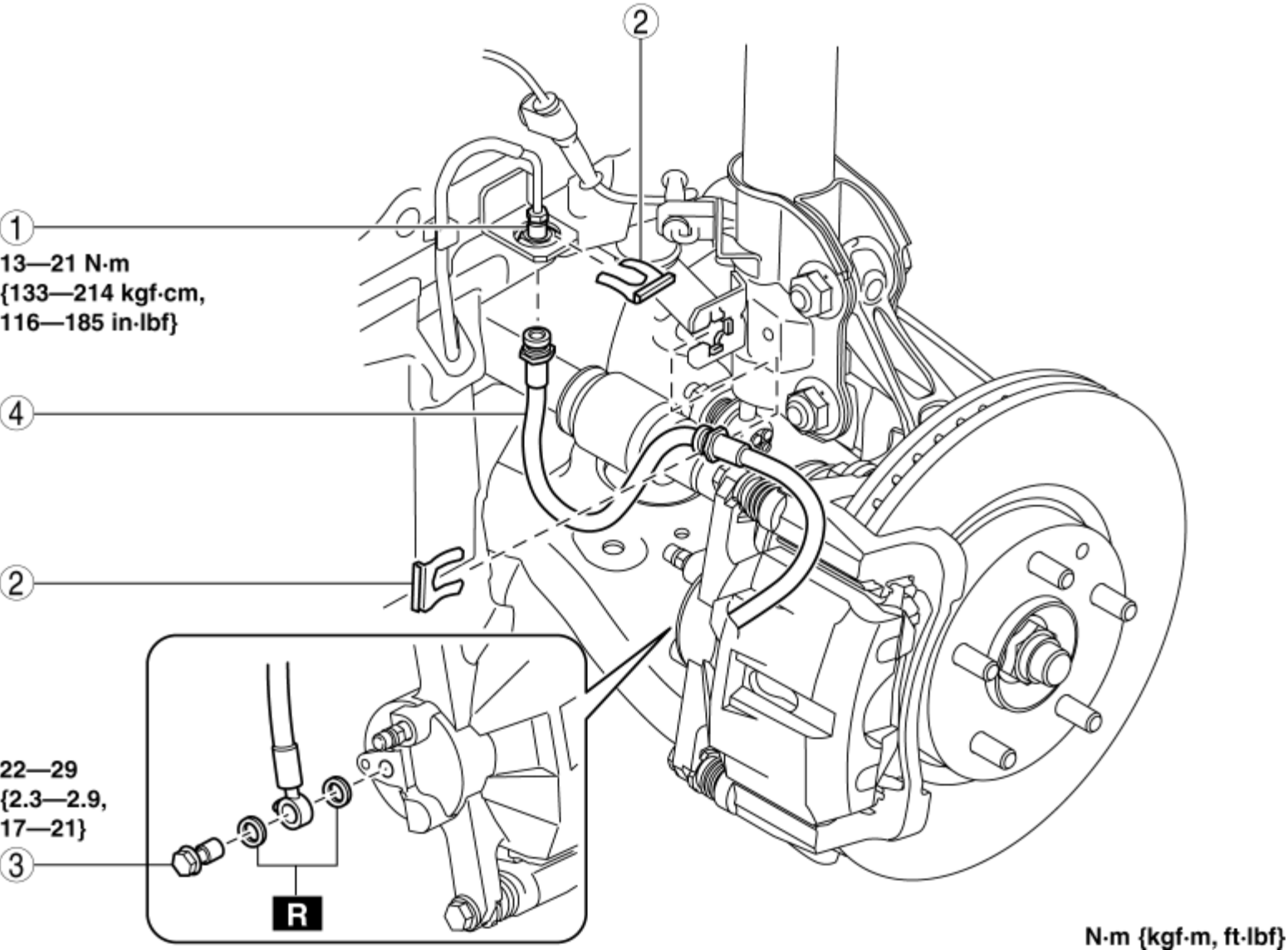
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BRAKE HOSE (FRONT) REMOVAL / INSTALLATION

- 1. Remove in the order indicated in the table.
- 2. Install in the reverse order of removal.
- 3. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See **BRAKE FLUID AIR BLEEDING.**)



1	Brake pipe
2	Clip

3	Bolt
4	Brake hose

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2013 - CX-5 - Brakes

REAR BRAKE (DISC) INSPECTION

Brake Judder Repair Hints

Description

- 1. Brake judder concern has the following 3 characteristics:

Steering wheel vibration

- 1. The steering wheel vibrates in the rotation direction. This characteristic is most noticeable when applying brakes at a vehicle speed of **100—140 km/h {62.2—86.9 mph}**.

Floor vibration

- 1. When applying the brakes, the vehicle body shakes back and forth. The seriousness of the shaking is not influenced by vehicle speed.

Brake pedal vibration

- 1. When applying the brakes, a pulsating force tries to push the brake pad back. The pulsation is transmitted to the brake pedal.
- 2. The following are the main possible causes of brake judder:

Due to an excessive runout (side-to-side wobble) of the disc plate, the thickness of the disc plate is uneven.

- 1. If the runout is **more than 0.05 mm {0.002 in}** at the position **10 mm {0.39 in}** from the disc plate edge, uneven wear occurs on the disc plate because the pad contacts the plate unevenly.
- 2. If the runout is **less than 0.05 mm {0.002 in}**, uneven wear does not occur.

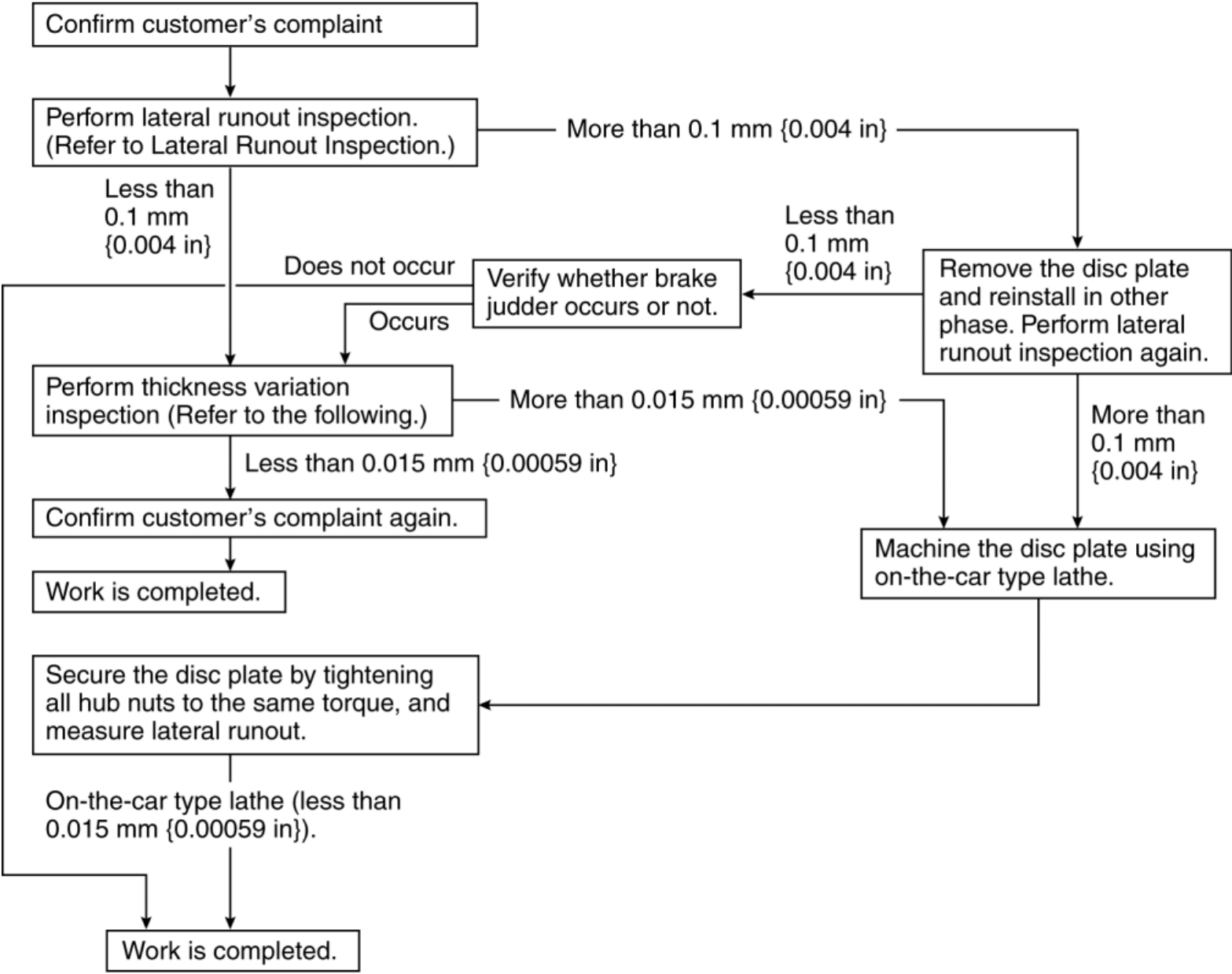
The disc plate is deformed by heat.

- 1. Repeated panic braking may raise the temperature in some portions of the disc plate by **approx. 1,000 °C {1,832 °F}**. This results in a deformed disc plate.

Due to corrosion, the thickness and friction coefficient of the disc plate change.

- 1. If the vehicle is parked in damp conditions for a long time, corrosion occurs on the friction surface of the disc plate.
- 2. The thickness of corrosion is uneven and sometimes appears like a wave pattern, which changes the friction coefficient and causes a reaction force.

Inspection and repair procedure

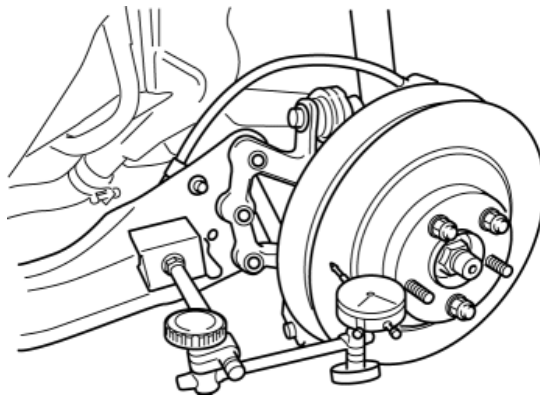


Lateral runout inspection

1. To secure the disc plate and the hub, insert the washer (thickness **10 mm {0.39 in}**, inner diameter **more than 12 mm {0.47 in}**) between each hub bolt and the hub nut, then tighten all the hub nuts.

NOTE:

- The component parts of the **SST** (49 B017 001 or 49 G019 003) can be used as a suitable washer.
2. After tightening all the hub nuts to the same torque, put the dial gauge on the friction surface of the disc plate **10 mm {0.39 in}** from the disc plate edge.



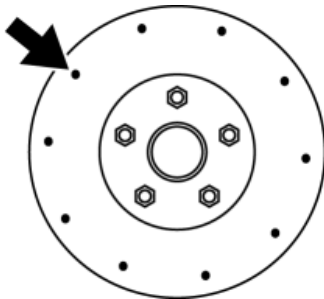
3. Rotate the disc plate one time and measure the runout.

Rear disc plate runout limit

- 0.1 mm {0.004 in}

Thickness variation inspection

1. Clean the disc plate-to-pad friction surface using a brake cleaner.
2. Measure the points indicated in the illustration using a caliper (micrometer).



3. Subtract the minimum value from the maximum, and if the result is not within the specification, machine the disc plate using a lathe.

Thickness variation limit

- 0.015 mm {0.00059 in}

WARNING:

- Do not exceed minimum disc plate thickness.

Disc Plate Thickness Inspection

CAUTION:

- Excessive runout may result if the disc plate is removed from the vehicle then machined. Machine the disc plate while installed on the vehicle.
1. Measure the thickness of the disc plate.
 - If the thickness is not within the specification, replace the disc plate.

Minimum rear disc plate thickness

- 8.0 mm {0.31 in}

Minimum rear disc plate thickness after machining using a brake lathe on-vehicle

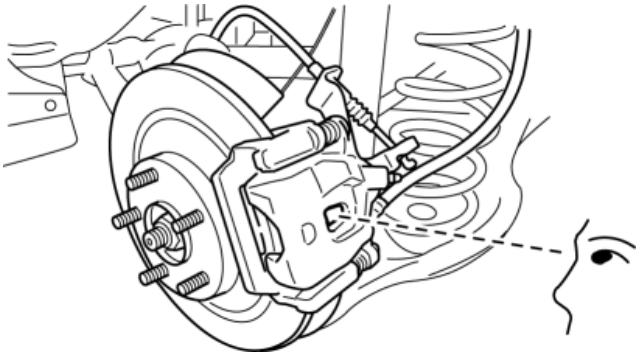
- 8.8 mm {0.35 in}

Disc Pad Thickness Inspection

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove the wheels and tires.
3. Verify the remaining thickness of the pads.

Minimum rear disc pad thickness

- 2.0 mm {0.079 in} min.
4. Replace the pads as a set (right and left wheels) if either one is at or less than the minimum thickness.



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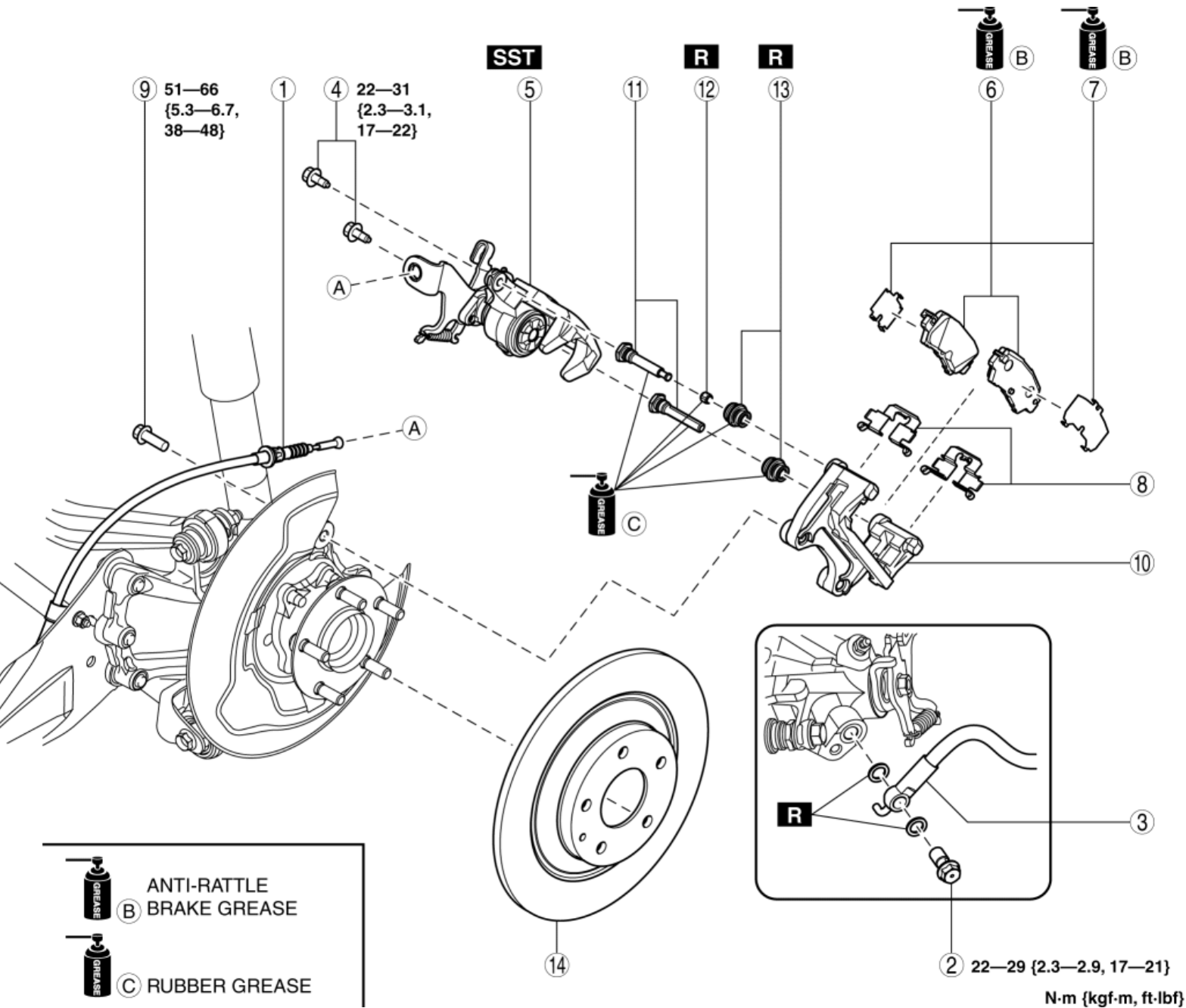
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2013 - CX-5 - Brakes

REAR BRAKE (DISC) REMOVAL/INSTALLATION

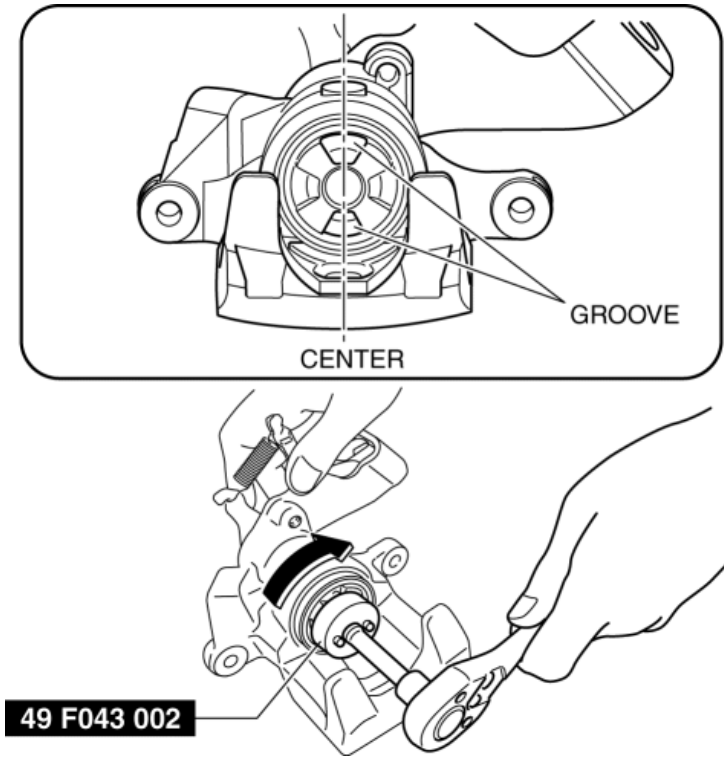
- 1. Loosen the adjusting nut. (See [PARKING BRAKE LEVER ADJUSTMENT.](#))
- 2. Remove in the order indicated in the table.
- 3. Install in the reverse order of removal.
- 4. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See [BRAKE FLUID AIR BLEEDING.](#))
- 5. Pump the brake pedal a few times and inspect the following:
 - The disc pad projection is securely installed to the piston groove
 - Parking brake lever stroke
 - Brake drag



1	Rear parking brake cable (See Rear Parking Brake Cable Installation Note.)
2	Bolt
3	Brake hose
4	Bolt
5	Caliper (See Caliper Installation Note.)
6	Disc pad
7	Shim
8	Guide plate
9	Bolt
10	Mounting support
11	Slide pin
12	Bushing
13	Dust boot
14	Disc plate

Caliper Installation Note

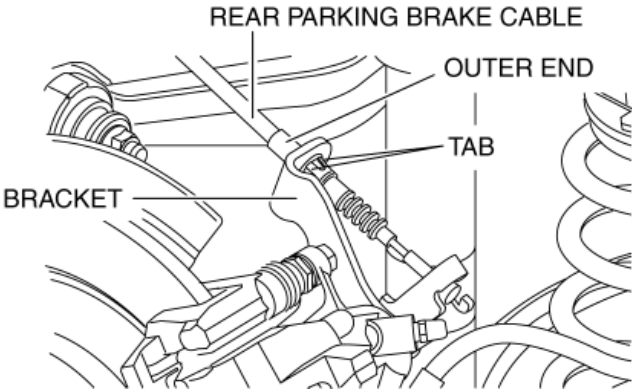
- 1. Clean the exposed area of the piston.
- 2. Rotate the piston clockwise slowly using the SST and push the piston completely until the piston grooves are in the position shown in the figure.



3. Install the caliper.

Rear Parking Brake Cable Installation Note

1. Install the rear parking brake cable to the rear caliper.
2. Verify that the outer end tabs of the rear parking brake cable is securely engaged with the bracket.

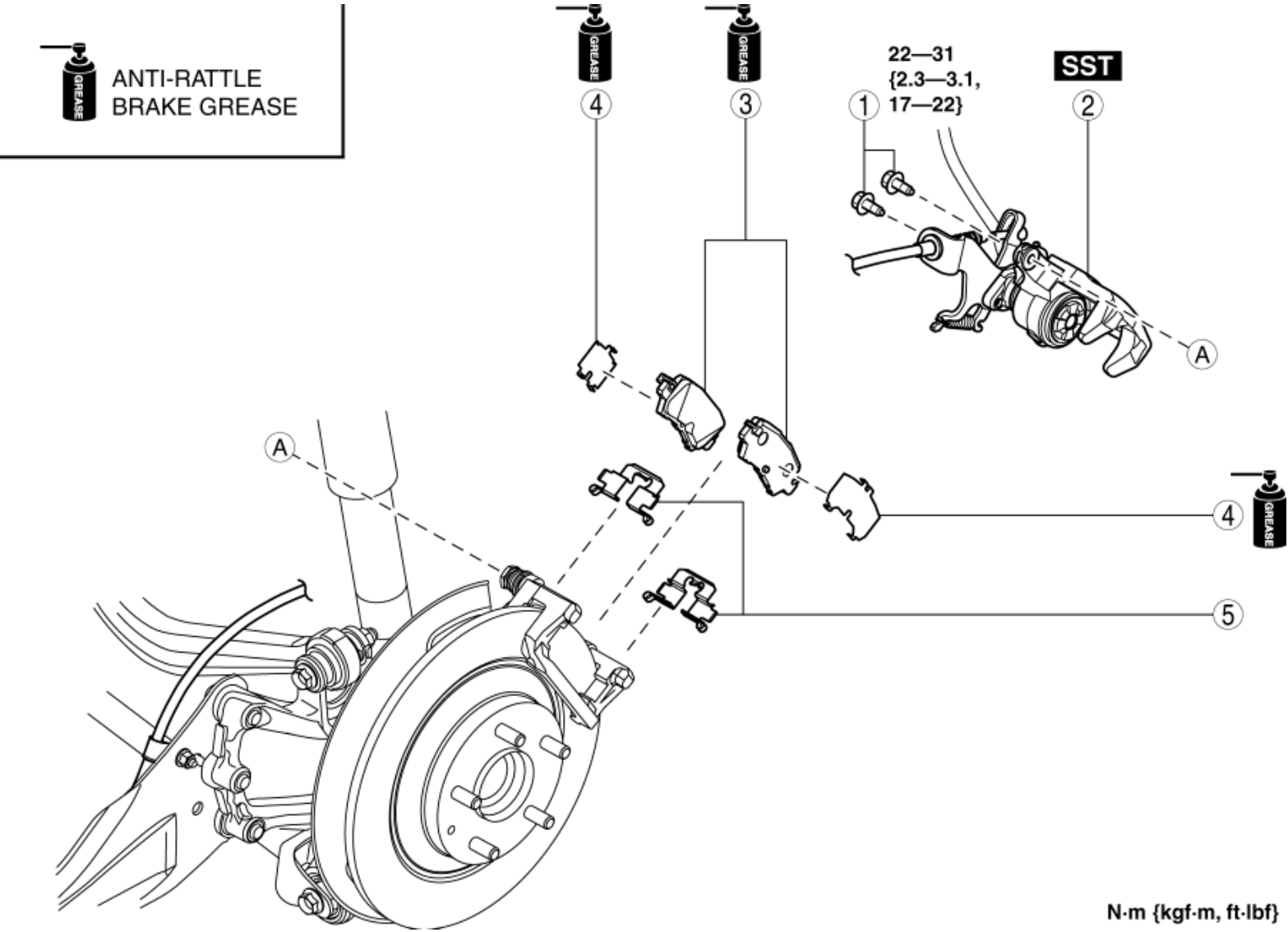


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DISC PAD (REAR) REPLACEMENT

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.
3. After installation, pump the brake pedal a few times and inspect the following:
 - The disc pad projection is securely installed to the piston groove
 - Parking brake lever stroke
 - Brake drag



1 Bolt
2 Caliper

	(See REAR BRAKE (DISC) REMOVAL/INSTALLATION.)
3	Disc pad
4	Shim
5	Guide plate

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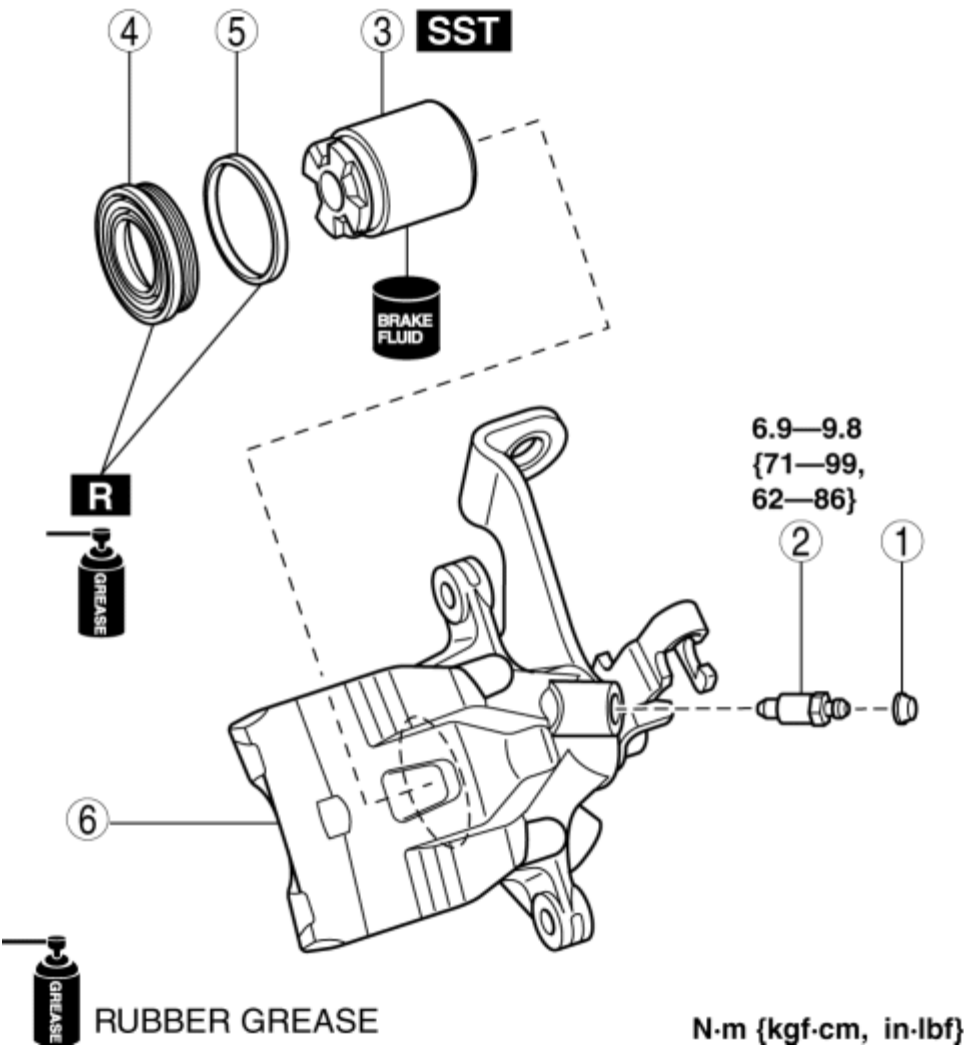
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CALIPER (REAR) DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.



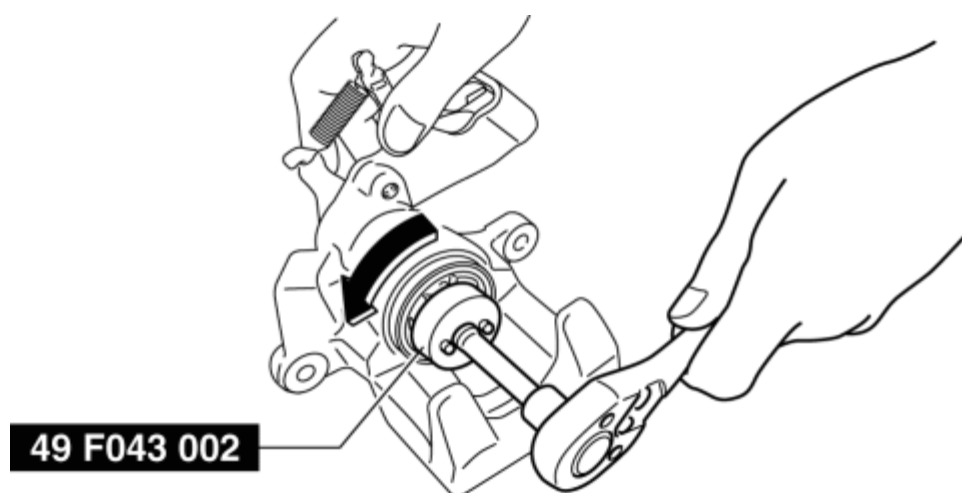
1	Bleeder cap
2	Bleeder screw
3	Piston
	(See Piston Disassembly Note.)
	(See Dust Seal, Piston Assembly Note.)

4	Dust seal (See Dust Seal, Piston Assembly Note.)
5	Piston seal
6	Caliper body

2. Assemble in the reverse order of removal.

Piston Disassembly Note

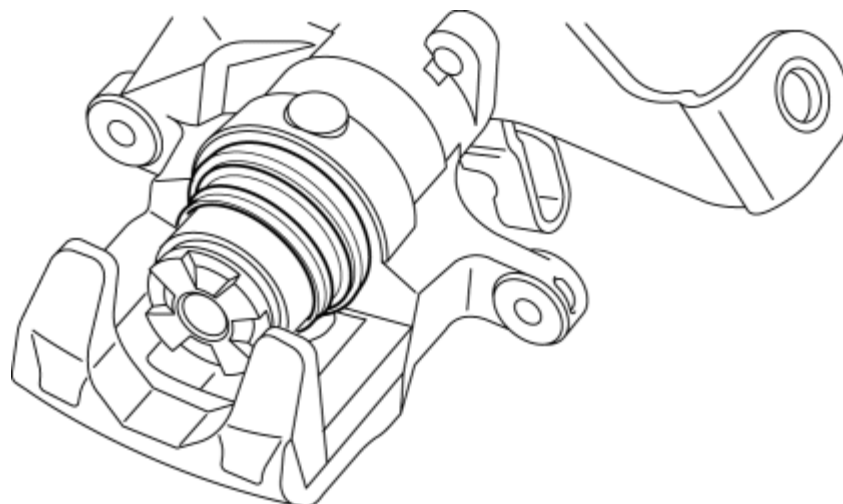
1. Rotate the piston counter-clockwise using the **SST**, remove the piston from the caliper body.



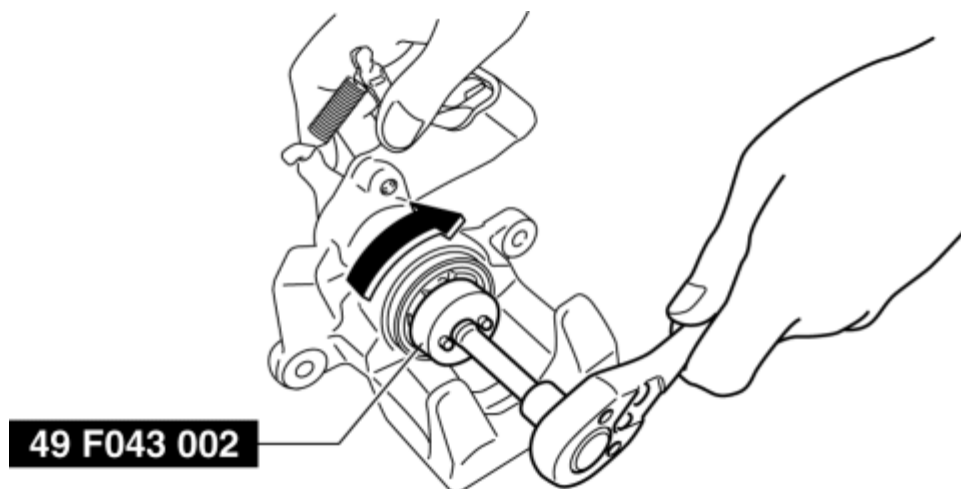
Dust Seal, Piston Assembly Note

1. Assemble the dust seal to the piston.

2. Assemble the lip of the dust seal to the groove of the caliper body with the dust seal is assembled to the piston as shown in the figure.



3. Rotate the piston clockwise using the **SST** slowly and push the piston inwards completely.



4. Verify that the dust seal is installed into the groove of the piston securely.

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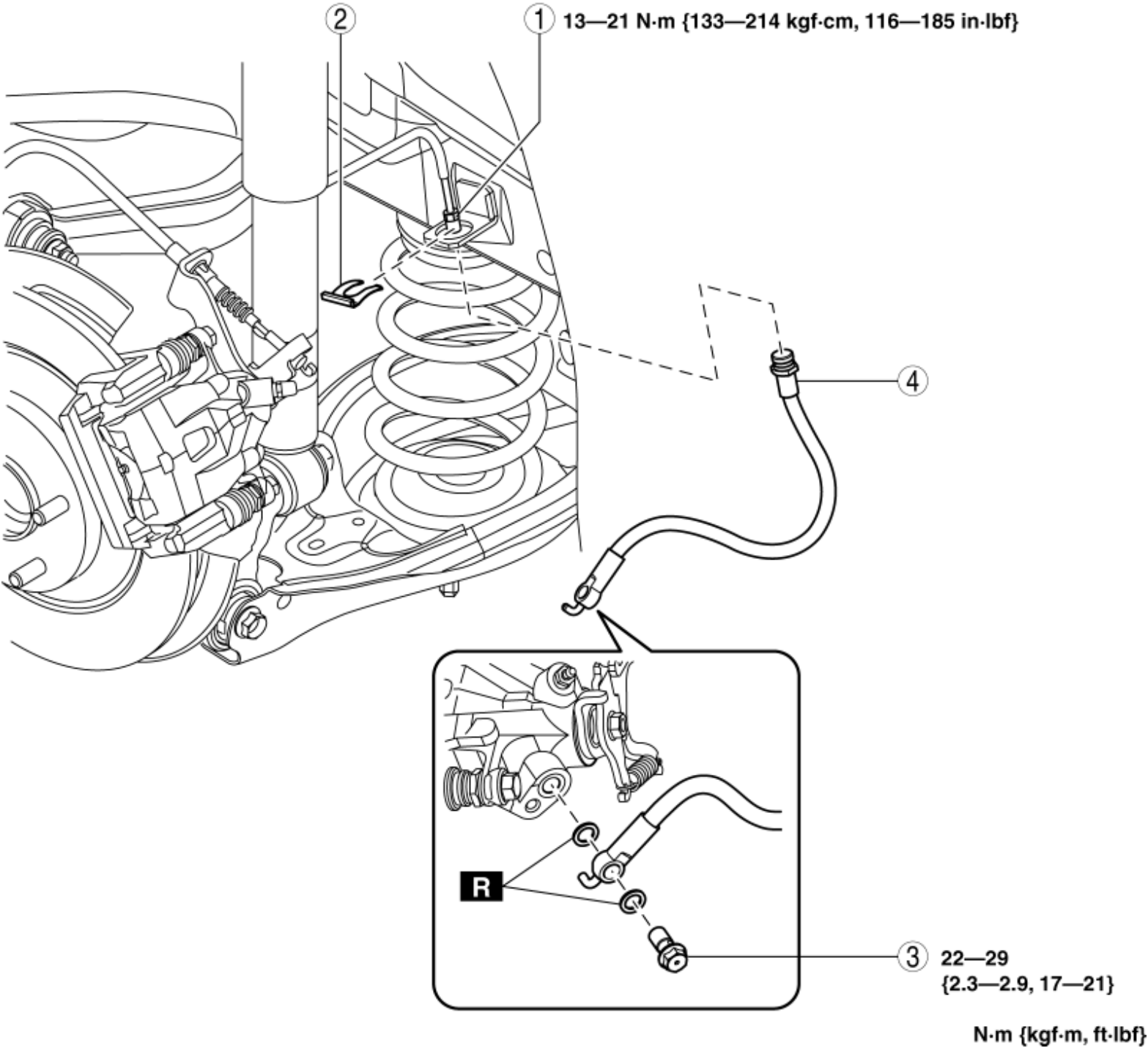
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BRAKE HOSE (REAR) REMOVAL / INSTALLATION

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.
3. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See [BRAKE FLUID AIR BLEEDING](#).)



1	Brake pipe
2	Clip
3	Bolt
4	Brake hose

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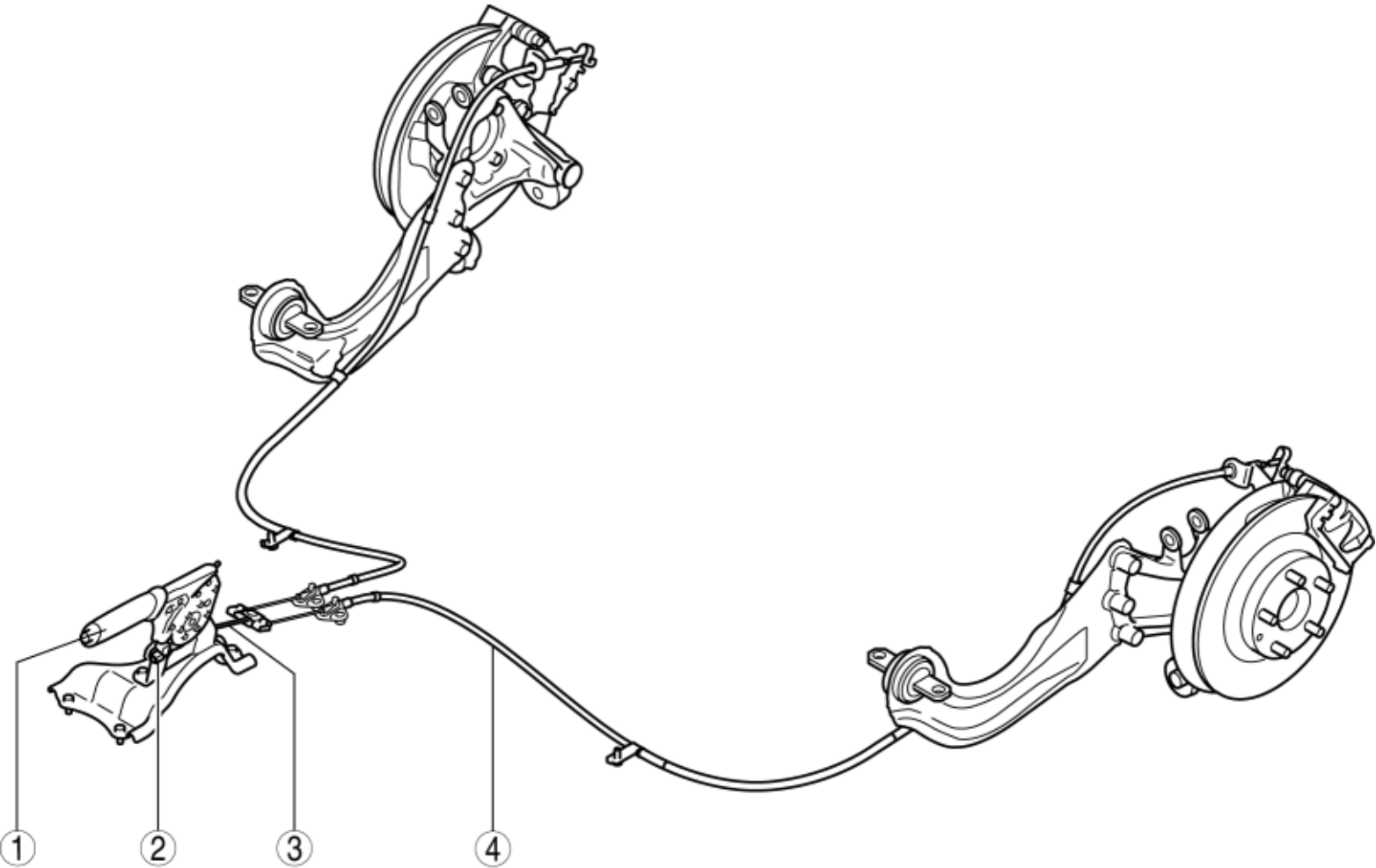
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PARKING BRAKE SYSTEM LOCATION INDEX



1	Parking brake lever (See PARKING BRAKE LEVER INSPECTION.) (See PARKING BRAKE LEVER ADJUSTMENT.) (See PARKING BRAKE LEVER REMOVAL / INSTALLATION.)
2	Parking brake switch (See PARKING BRAKE SWITCH INSPECTION.)
3	Front parking brake cable (See FRONT PARKING BRAKE CABLE REMOVAL / INSTALLATION.)

4Rear parking brake cable

(See **REAR PARKING BRAKE CABLE REMOVAL / INSTALLATION.**)

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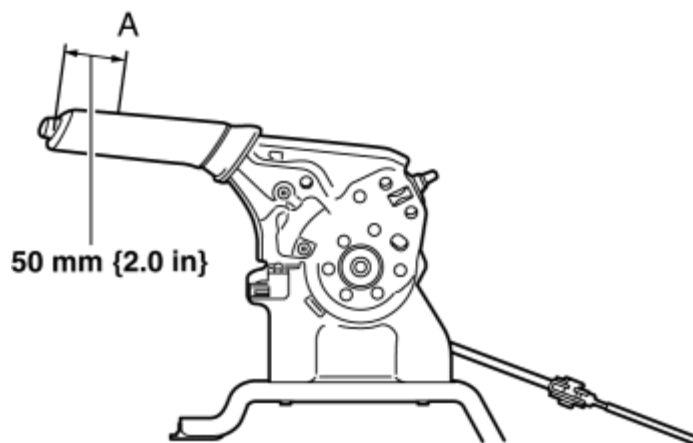
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2013 - CX-5 - Brakes

PARKING BRAKE LEVER INSPECTION

Stroke Inspection

1. Pump the brake pedal a few times.
2. Pull the parking brake lever two to three times.
3. Inspect the parking brake stroke by slowly pulling at point A **50 mm {2.0 in}** from the end of the parking brake lever with a force of **98 N {10 kgf, 22 lbf}** and counting the number of notches (clicking sound).



- If not within the specification, adjust the parking brake lever.

Parking brake lever stroke when pulled at 98 N {10 kgf, 22 lbf}

- 2—3 notches

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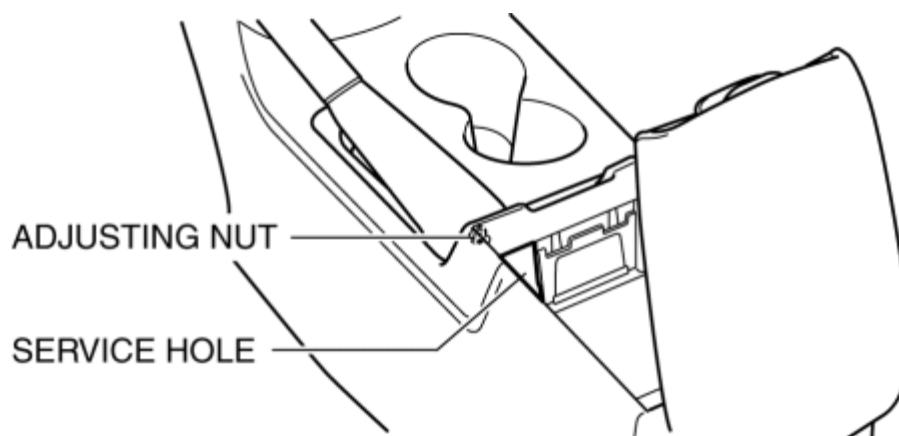
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PARKING BRAKE LEVER ADJUSTMENT

1. Pump the brake pedal a few times.
2. Remove the upper console and put it out of the way. (See [REAR CONSOLE DISASSEMBLY/ASSEMBLY](#).)
3. Turn the adjusting nut and adjust the parking brake lever.



4. After adjustment, pull the parking brake lever one notch and verify that the parking brake warning light illuminates.
5. Verify that the rear brakes do not drag.

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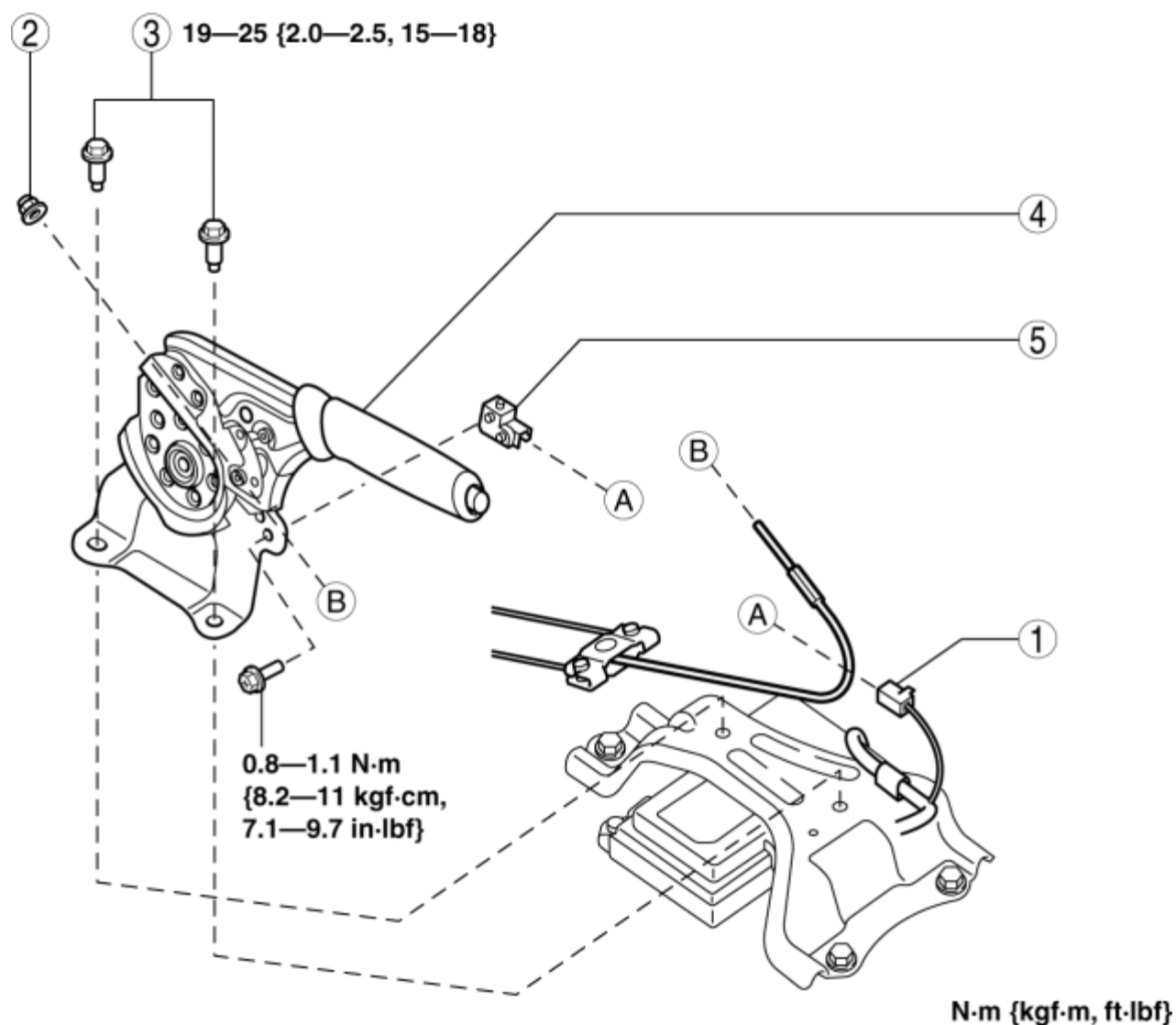
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PARKING BRAKE LEVER REMOVAL / INSTALLATION

1. Remove the front console box. (See [FRONT CONSOLE BOX REMOVAL / INSTALLATION.](#))
2. Remove the shift lever knob. (MTX) (See [MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL / INSTALLATION \[C66M-R\].](#))
3. Remove the shift panel. (See [SHIFT PANEL REMOVAL / INSTALLATION.](#))
4. Remove the upper panel. (See [UPPER PANEL REMOVAL / INSTALLATION.](#))
5. Remove in the order indicated in the table.
6. Install in the reverse order of removal.
7. After installation, inspect the parking brake lever stroke. (See [PARKING BRAKE LEVER INSPECTION.](#))



1	Parking brake switch connector
2	Adjusting nut
3	Bolt
4	Parking brake lever
5	Parking brake switch

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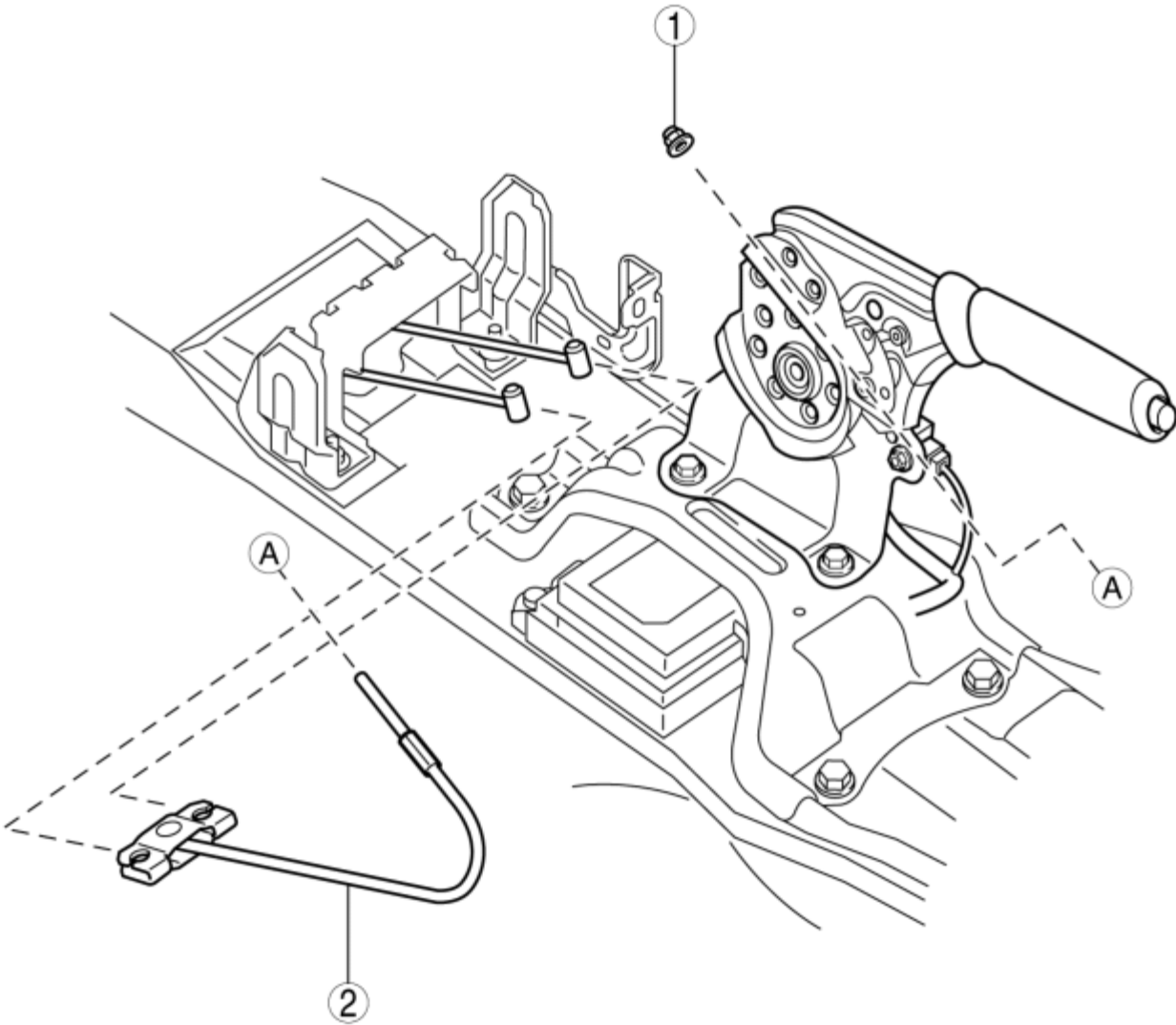
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FRONT PARKING BRAKE CABLE REMOVAL/INSTALLATION

1. Remove the front console box. (See [FRONT CONSOLE BOX REMOVAL/INSTALLATION.](#))
2. Remove the shift lever knob. (MTX) (See [MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION \[C66M-R\].](#))
3. Remove the shift panel. (See [SHIFT PANEL REMOVAL/INSTALLATION.](#))
4. Remove the upper panel. (See [UPPER PANEL REMOVAL/INSTALLATION.](#))
5. Remove the rear console. (See [REAR CONSOLE REMOVAL/INSTALLATION.](#))
6. Remove in the order indicated in the table.
7. Install in the reverse order of removal.
8. After installation, inspect the parking brake lever stroke. (See [PARKING BRAKE LEVER INSPECTION.](#))



1 Adjusting nut

2 Front parking brake cable

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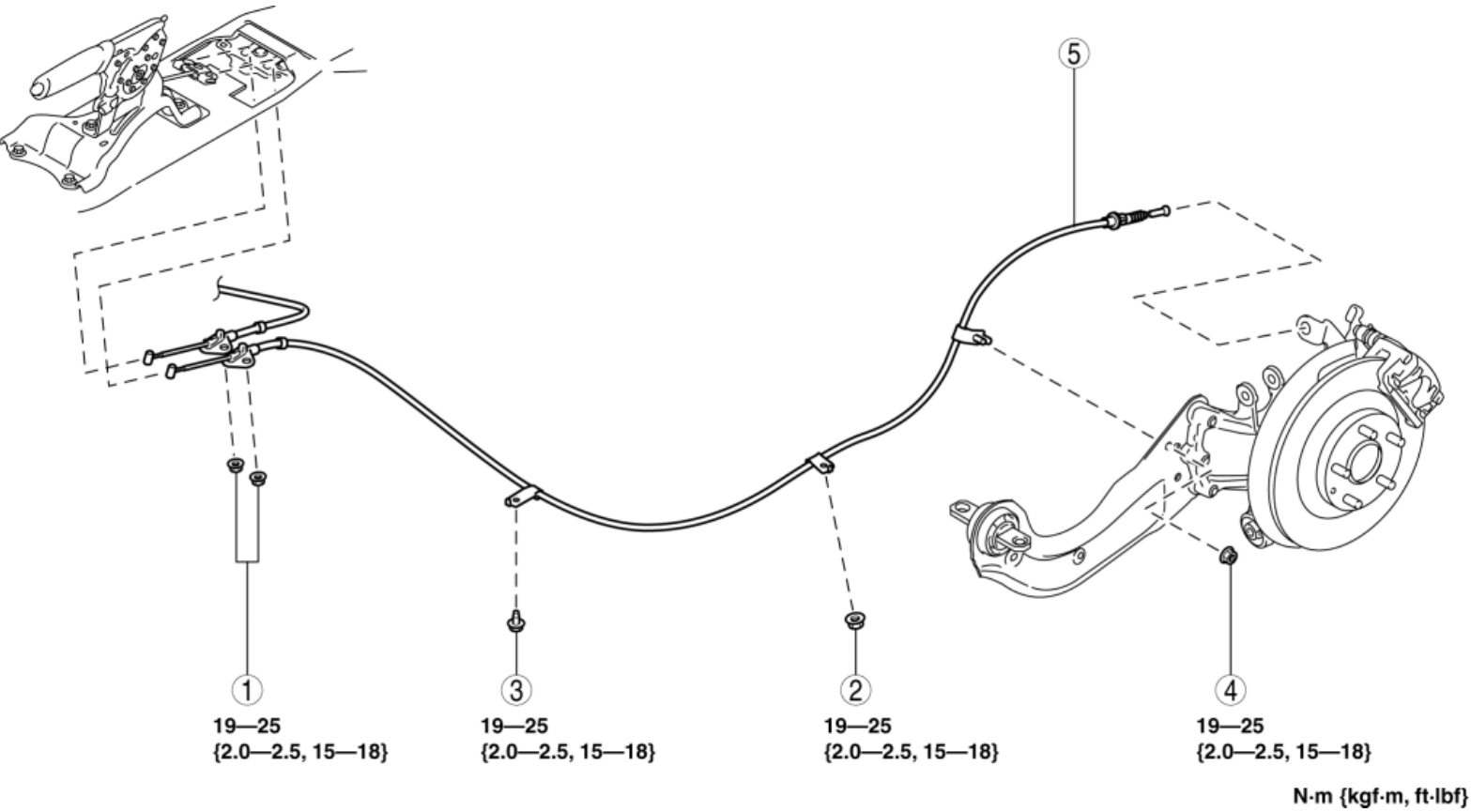
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REAR PARKING BRAKE CABLE REMOVAL/INSTALLATION

- 1. Remove the front console box. (See [FRONT CONSOLE BOX REMOVAL/INSTALLATION.](#))
- 2. Remove the shift lever knob. (MTX) (See [MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION \[C66M-R\].](#))
- 3. Remove the shift panel. (See [SHIFT PANEL REMOVAL/INSTALLATION.](#))
- 4. Remove the upper panel. (See [UPPER PANEL REMOVAL/INSTALLATION.](#))
- 5. Remove the rear console. (See [REAR CONSOLE REMOVAL/INSTALLATION.](#))
- 6. Loosen the adjusting nut.
- 7. Remove the floor under cover No.2. (See [FLOOR UNDER COVER REMOVAL/INSTALLATION.](#))
- 8. Remove in the order indicated in the table.
- 9. Install in the reverse order of removal.
- 10. After installation, inspect the parking brake lever stroke. (See [PARKING BRAKE LEVER INSPECTION.](#))



1	Nut
2	Nut
3	Bolt
4	Nut

5Rear parking brake cable

(See [Rear Parking Brake Cable Removal Note.](#))

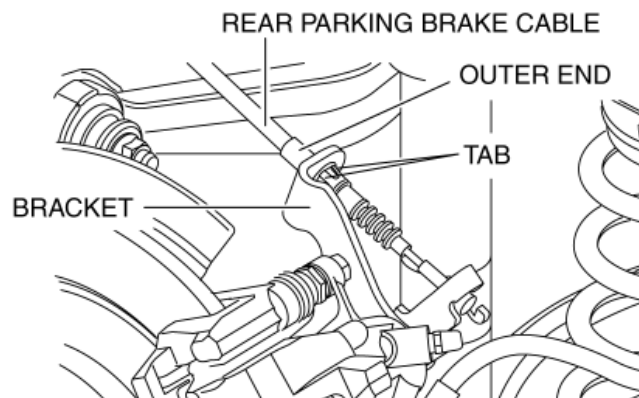
(See [Rear Parking Brake Cable Installation Note.](#))

Rear Parking Brake Cable Removal Note

1. Remove the rear parking brake cable from the front parking brake cable. (See [FRONT PARKING BRAKE CABLE REMOVAL/INSTALLATION.](#))
2. Remove the rear parking brake cable from the rear caliper.
3. Remove the rear parking brake cable.

Rear Parking Brake Cable Installation Note

1. Install the rear parking brake cable to the rear caliper.
2. Verify that the outer end tabs of the rear parking brake cable is securely engaged with the bracket.



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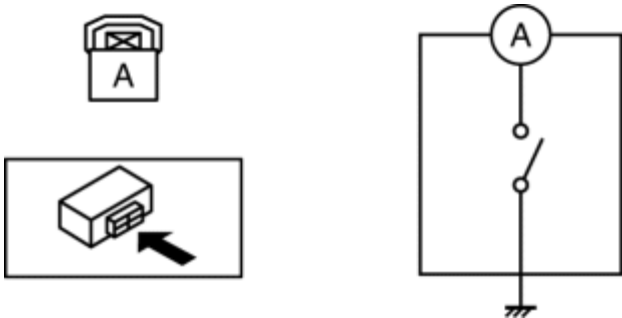
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PARKING BRAKE SWITCH INSPECTION

- 1. Disconnect the parking brake switch connector.
- 2. Verify that the continuity is as indicated in the table.



- If not as indicated in the table, replace the parking brake switch.

○ — ○ : Continuity

Condition	Terminal	
	A	Body ground
Parking brake lever pulled	○ — ○	
Parking brake lever released		

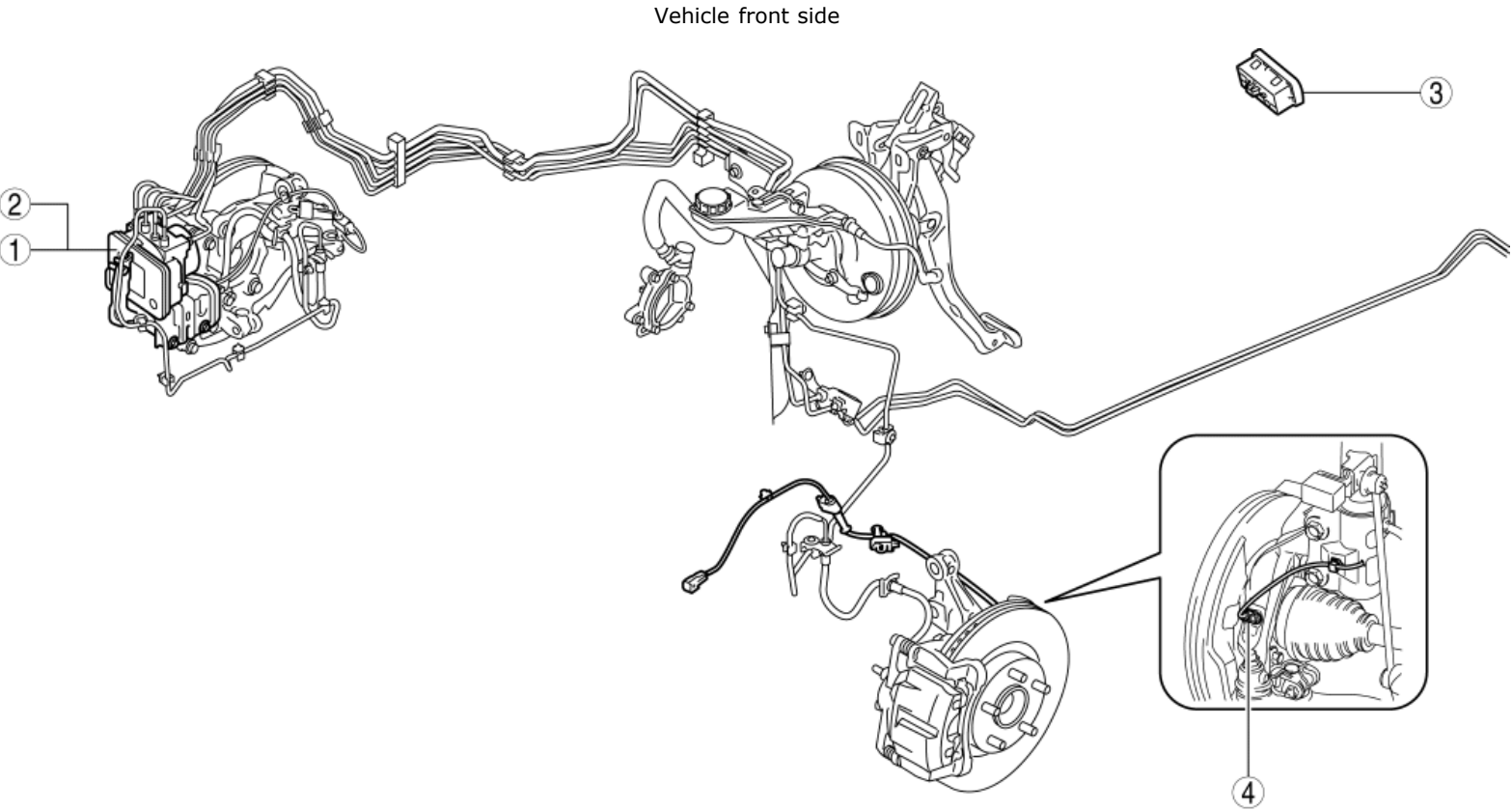
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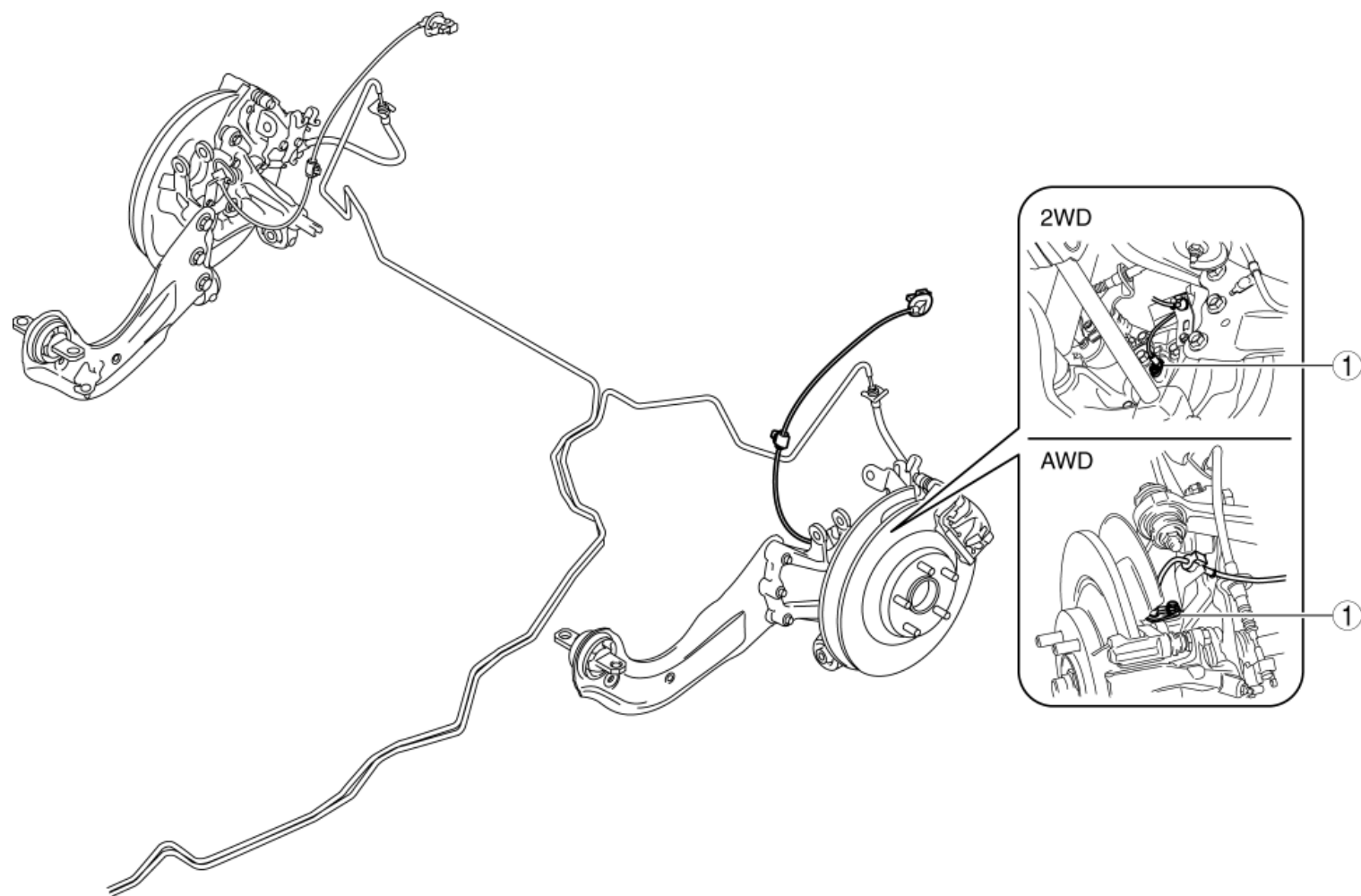
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DYNAMIC STABILITY CONTROL LOCATION INDEX



1	DSC HU/CM
	(See DSC HU/CM REMOVAL/INSTALLATION.)
	(See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
	(See DSC HU/CM INSPECTION.)
2	Brake fluid pressure sensor (built-into DSC HU/CM)
	(See BRAKE FLUID PRESSURE SENSOR INSPECTION.)
	(See DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE.)
3	TCS OFF switch
	(See TCS OFF SWITCH REMOVAL/INSTALLATION.)
	(See TCS OFF SWITCH INSPECTION.)
4	Front ABS wheel-speed sensor
	(See FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION.)
	(See FRONT ABS WHEEL-SPEED SENSOR INSPECTION.)

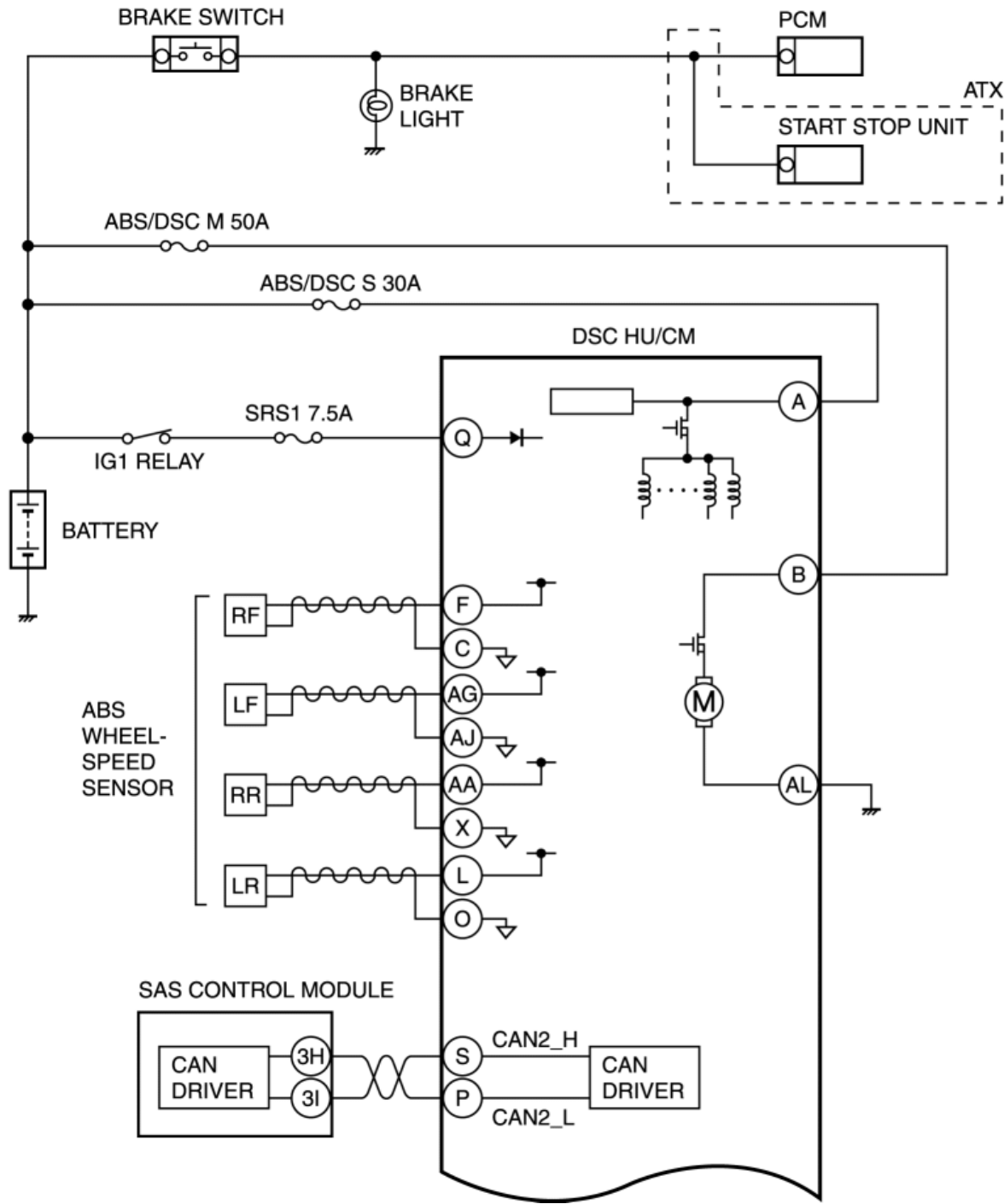
Vehicle rear side

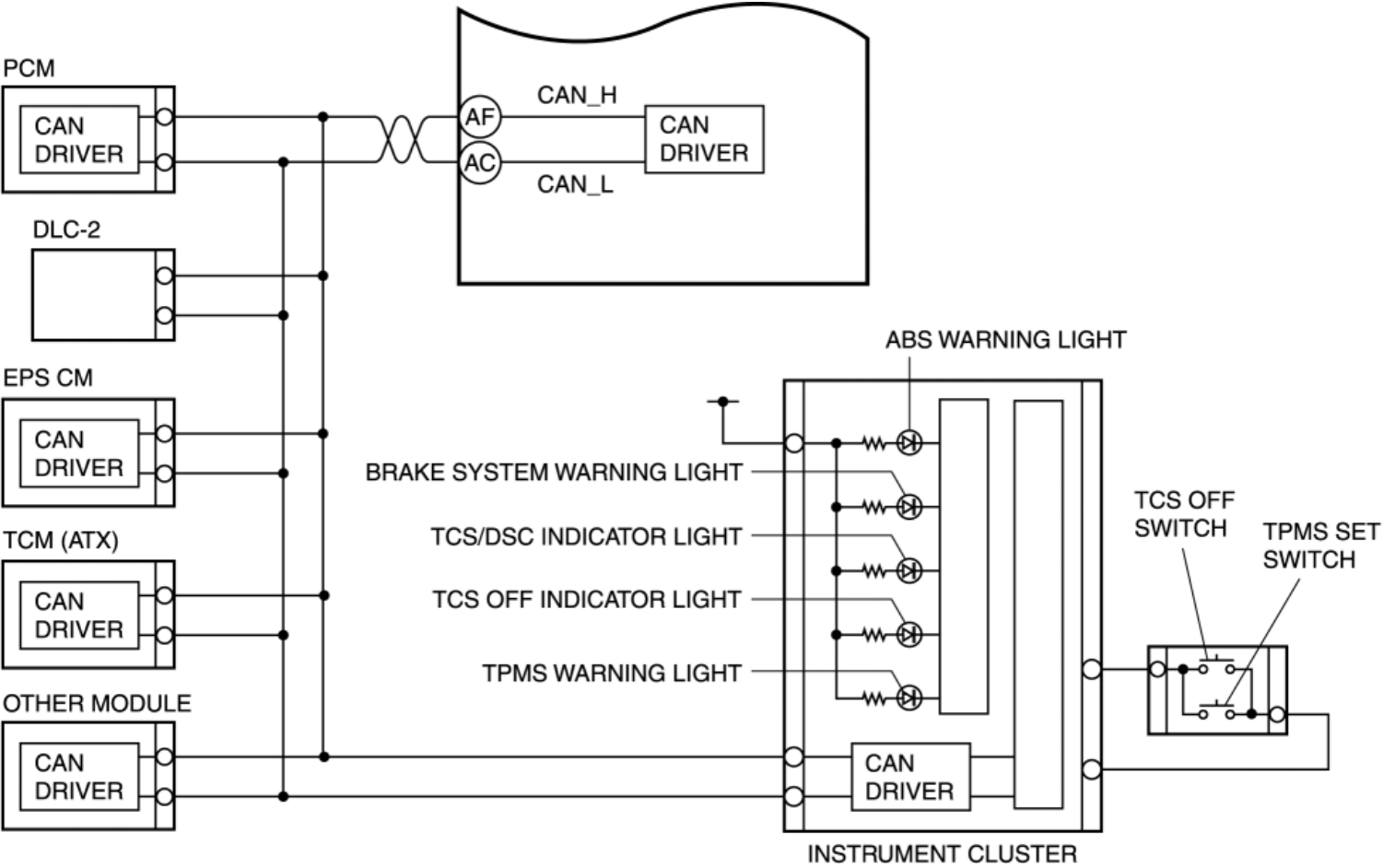


- 1Rear ABS wheel-speed sensor
- (See [REAR ABS WHEEL-SPEED SENSOR REMOVAL / INSTALLATION.](#))
- (See [REAR ABS WHEEL-SPEED SENSOR INSPECTION \[2WD\].](#))
- (See [REAR ABS WHEEL-SPEED SENSOR INSPECTION \[AWD\].](#))

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DSC SYSTEM WIRING DIAGRAM





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DSC HU/CM REMOVAL/INSTALLATION

WARNING:

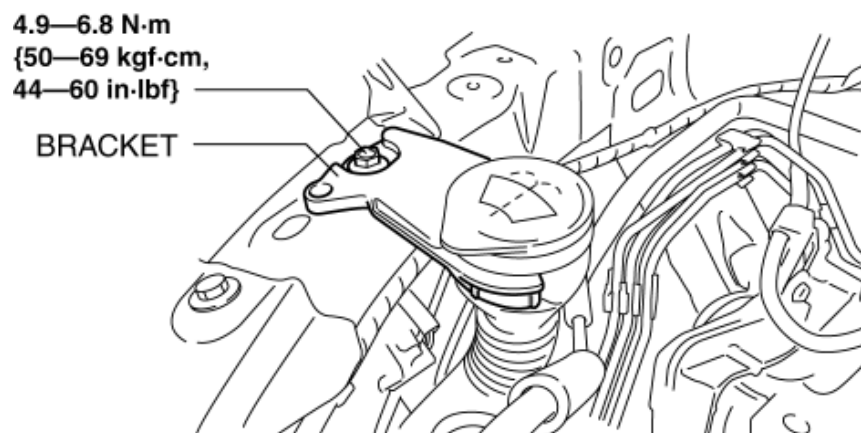
- If the DSC HU/CM configuration is not completed, it could result in an unexpected accident due to the DSC being inoperative. If the DSC HU/CM is replaced, always use the automatic configuration function so that the DSC operation conditions are correct.
- If the DSC related parts sensor initialization procedure is not completed, the DSC will not operate properly and it might cause an unexpected accident. Therefore, after replacing or removing the DSC HU/CM, make sure to perform the DSC related parts sensor initialization procedure to insure proper DSC operation.

CAUTION:

- The internal parts of the DSC HU/CM could be damaged if dropped. Be careful not to drop the DSC HU/CM. Replace the DSC HU/CM if it is subjected to an impact.

NOTE:

- When the ignition is switched to ON or the engine is started after the DSC HU/CM have been replaced, the DSC CM reads data from the instrument cluster via CAN communication to perform automatic configuration.
 - The DSC HU/CM prior to replacement stores the vehicle specification information.
 - A new DSC HU/CM does not store any vehicle specification information.
1. Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.0\]](#).)
 2. Remove the bracket. (See [WASHER TANK REMOVAL/INSTALLATION](#).)



3. Remove in the order indicated in the table.
4. Install in the reverse order of removal.
5. After installation, add brake fluid, bleed the air, and inspect for fluid leakage. (See [BRAKE FLUID AIR BLEEDING](#).)
6. Perform the following procedure to implement the DSC HU/CM automatic configuration.
 - a. Switch the ignition ON (engine off) and wait for **10 s or more**.
 - b. Switch the ignition to off and wait for **3 s or more**.

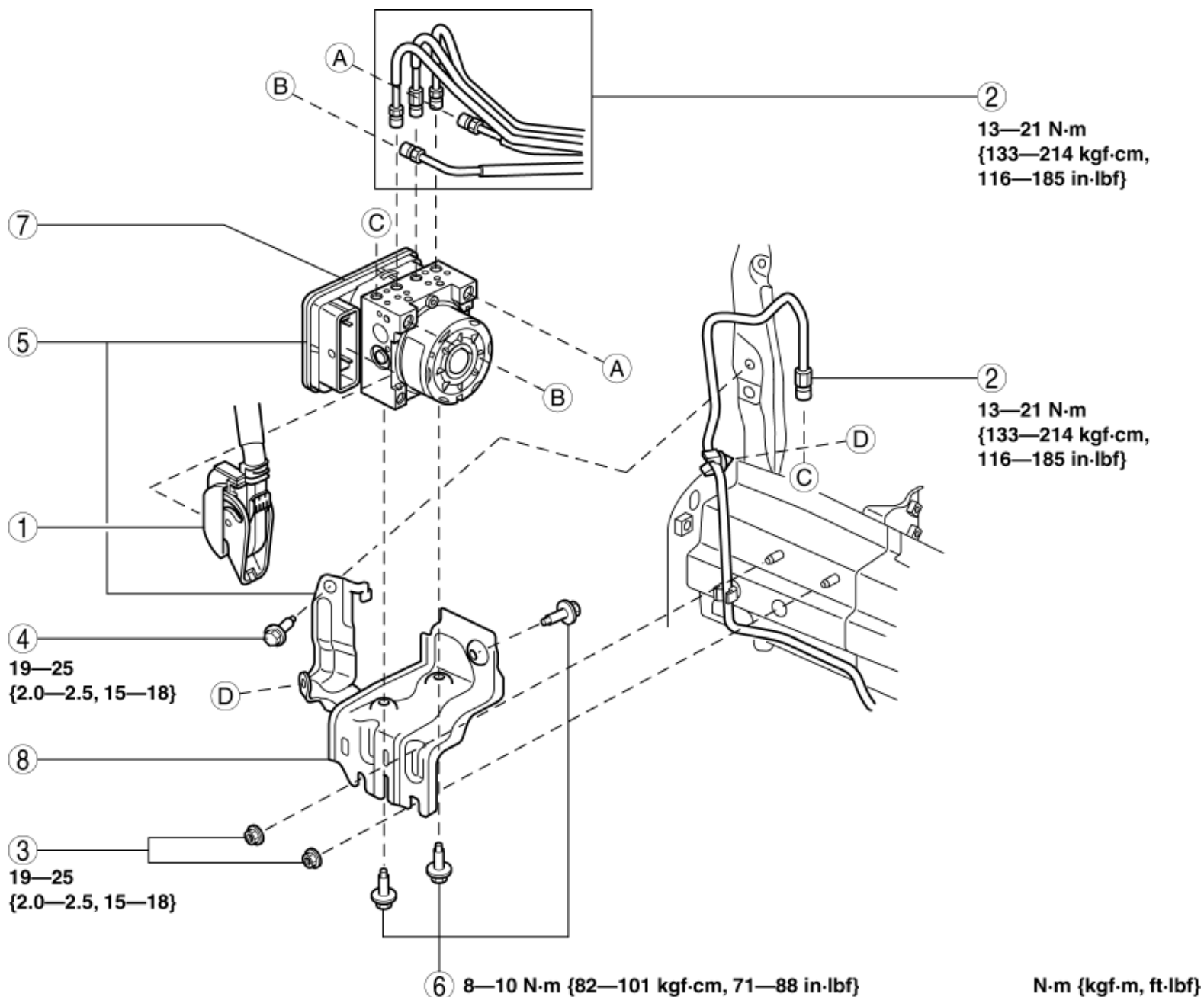
c. Switch the ignition ON (engine off) and wait for **3 s or more**.

d. The automatic configuration procedure is completed.

7. Perform the DSC related parts sensor initialization procedure. (See **DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE**.)

8. Perform the tire pressure monitoring system initialization procedure. (See **TIRE PRESSURE MONITORING SYSTEM INITIALIZATION PROCEDURE**.)

9. Clear the DTCs from the memory. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.)



1 DSC HU/CM connector

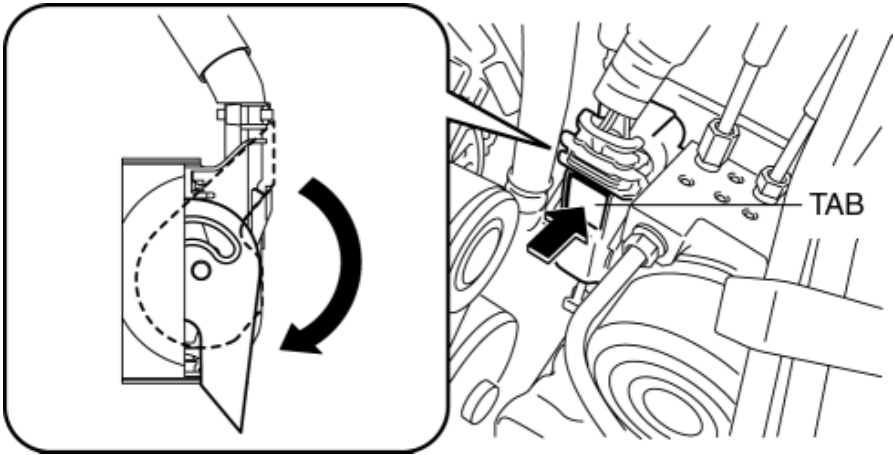
(See **DSC HU/CM Connector Removal Note**.)

(See **DSC HU/CM Connector Installation Note**.)

2	Brake pipe
	(See Brake Pipe Removal Note.)
	(See Brake Pipe Installation Note.)
3	Nut
4	Bolt
5	DSC HU/CM component
6	Bolt
7	DSC HU/CM
8	Bracket

DSC HU/CM Connector Removal Note

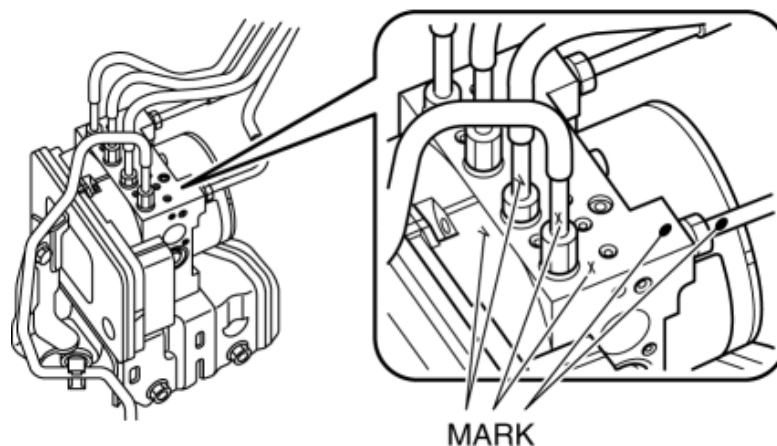
- 1. Pull the lock lever down in the direction of the arrow while pressing the tab of the connector cover.



- 2. Pull the connector toward the vehicle rear and remove it.

Brake Pipe Removal Note

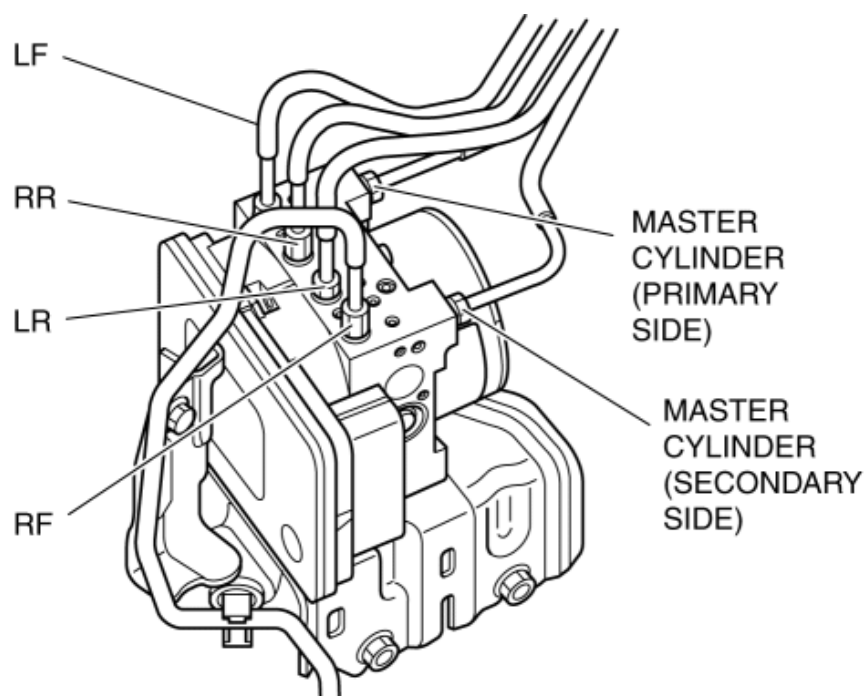
- 1. Place an alignment mark on the brake pipe and DSC HU/CM.



2. Apply protective tape to the connector to prevent brake fluid from entering.
3. Disconnect the brake pipes.

Brake Pipe Installation Note

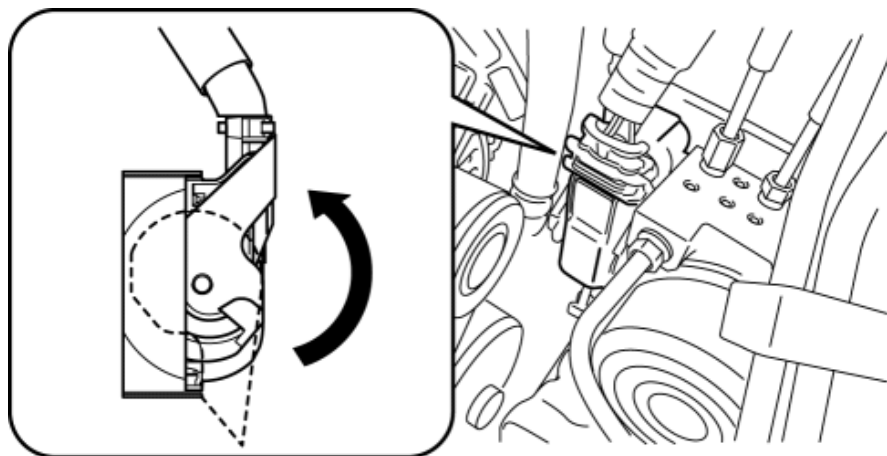
1. Align the marks made before removal and install the brake pipe to the DSC HU/CM and brake pipe joint referring to the figure.



2. Tighten the brake pipe to the specified torque using the commercially available flare nut wrench.

DSC HU/CM Connector Installation Note

1. Connect the connector and pull the lock lever up in the direction of the arrow.



2. After connecting the connector, verify that the connector cover is completely pushed in.

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DSC RELATED PARTS SENSOR INITIALIZATION PROCEDURE

WARNING:

- If the initialization procedure is not completed, the DSC will not operate properly and it might cause an unexpected accident. Therefore, after replacing or removing the DSC HU/CM or SAS control module, make sure to perform the initialization procedure to insure proper DSC operation.

1. Inspect the wheel alignment and the tire pressure.
 - If there is any malfunction, adjust the applicable part.
2. Position the vehicle on level ground.
3. Switch the ignition to off.
4. Connect the M-MDS (IDS) to DLC-2.
5. After the vehicle is identified, select the following items from the initial screen of the IDS.
 - Select "Chassis".
 - Select "ABS/DSC".
 - Select "Sensor Initialization".
6. Then, select an item from the screen menu.
 - "Brake fluid pressure sensor"
 - "Lateral Acceleration Sensor"
 - "Yaw Rate Sensor"
 - "Longitudinal Acceleration Sensor"
7. Perform the procedure according to the directions on the screen.
8. Drive the vehicle.
9. After **5 min or more** of driving, verify that the DSC system is normal.

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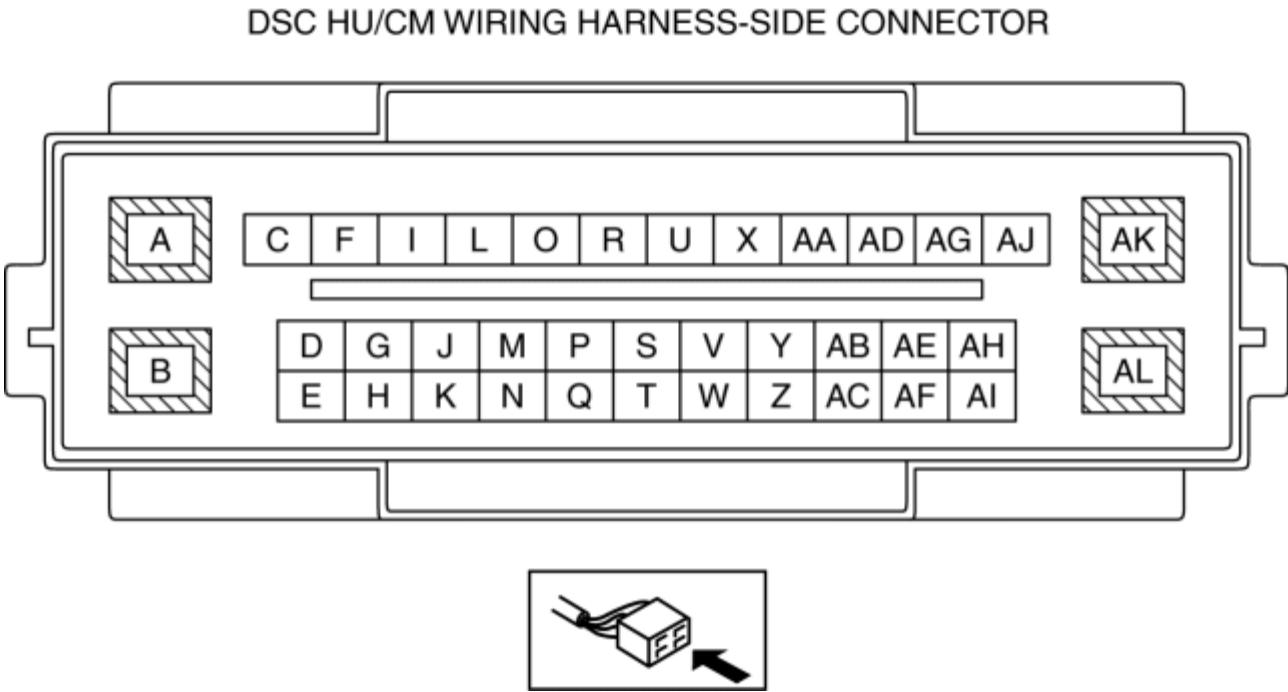
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DSC HU/CM INSPECTION

- 1. Disconnect the DSC HU/CM connector. (See [DSC HU/CM REMOVAL/INSTALLATION.](#))
- 2. Connect the negative battery cable. (See [NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION \[SKYACTIV-G 2.0\].](#))
- 3. Attach the tester lead to the DSC HU/CM wiring harness-side connector and inspect voltage, continuity, or resistance according to the standard (reference) on the table.

Standard (Reference)



Terminal	Signal name	Connected to	Measured item	Measured terminal (measurement condition)	Standard	Inspection item(s)
A	Power supply (solenoid operation)	Battery	Voltage	Under any condition	B+	Wiring harness (A—battery)
	Power					

B	supply (motor operation)	Battery	Voltage	Under any condition	B+	Wiring harness (B—battery)
C	RF wheel- speed (-)	RF ABS wheel-speed sensor	Continuity	C—RF ABS wheel- speed sensor terminal B	Continuity detected	Wiring harness (C—RF ABS wheel-speed sensor terminal B)
D	—	—	—	—	—	—
E	—	—	—	—	—	—
F	RF wheel- speed (+)	RF ABS wheel-speed sensor	Continuity	F—RF ABS wheel- speed sensor terminal A	Continuity detected	Wiring harness (F—RF ABS wheel-speed sensor terminal A)
G	—	—	—	—	—	—
H	—	—	—	—	—	—
I	—	—	—	—	—	—
J	—	—	—	—	—	—
K	—	—	—	—	—	—
L	LR wheel- speed (+)	LR ABS wheel-speed sensor	Continuity	L—LR ABS wheel- speed sensor terminal A	Continuity detected	Wiring harness (L—LR ABS wheel-speed sensor terminal A)
M	—	—	—	—	—	—
N	—	—	—	—	—	—
O	LR wheel- speed (-)	LR wheel- speed sensor	Continuity	O—LR ABS wheel- speed sensor terminal B	Continuity detected	Wiring harness (O—LR ABS wheel-speed sensor terminal B)
P	CAN2_L	SAS control	This terminal is used for communication and cannot be used for malfunction determination during terminal voltage inspection. Perform a			

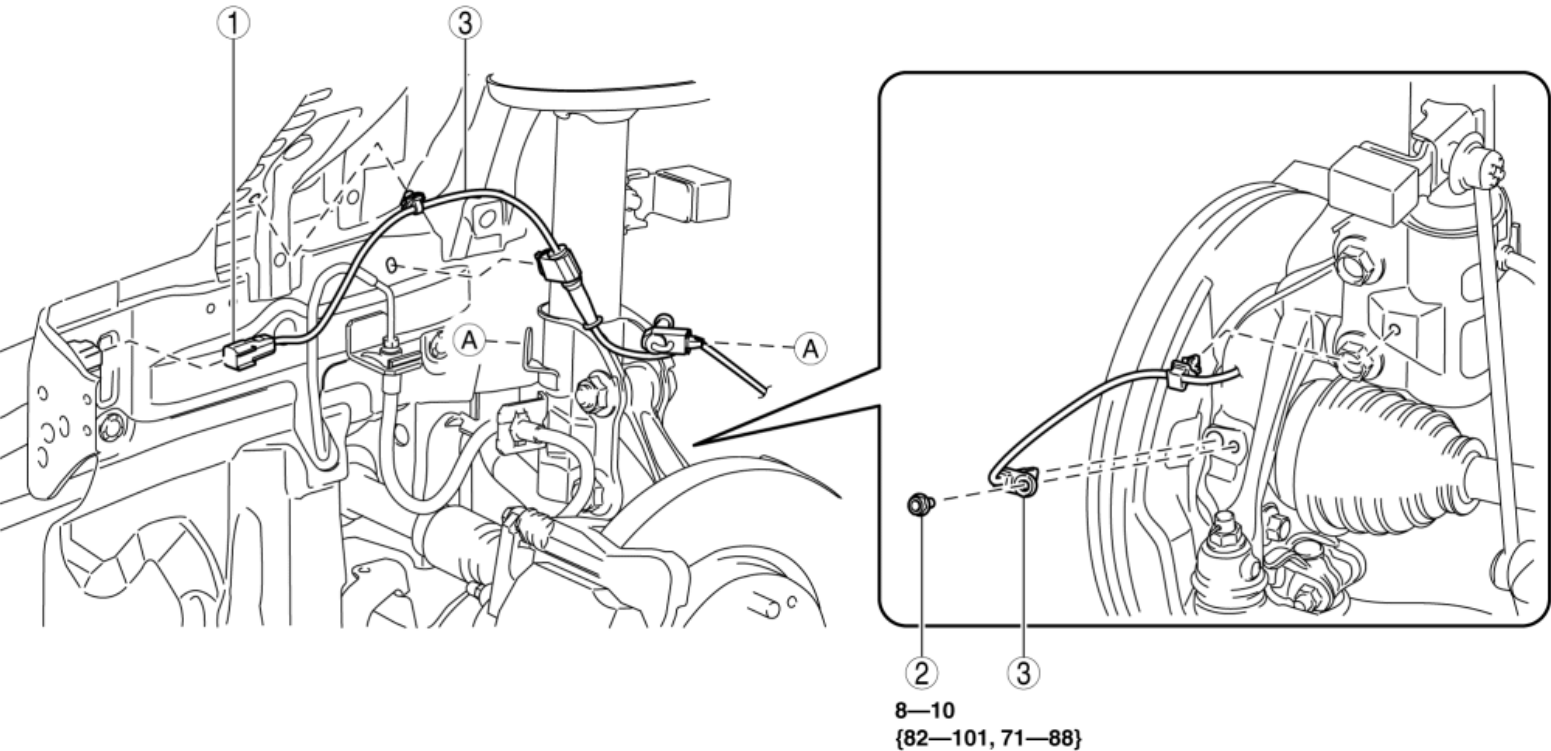
		module	DTC inspection.			
Q	Power supply (system)	Ignition switch	Voltage	Ignition switched ON (engine off).	B+	• Wiring harness (Q—ignition switch)
				Switch the ignition to off.	1 V or less	
R	—	—	—	—	—	—
S	CAN2_H	SAS control module	This terminal is used for communication and cannot be used for malfunction determination during terminal voltage inspection. Perform a DTC inspection.			
T	—	—	—	—	—	—
U	—	—	—	—	—	—
V	—	—	—	—	—	—
W	—	—	—	—	—	—
X	RR wheel-speed (-)	RR ABS wheel-speed sensor	Continuity	X—RR ABS wheel-speed sensor terminal B	Continuity detected	• Wiring harness (X—RR ABS wheel-speed sensor terminal B)
Y	—	—	—	—	—	—
Z	—	—	—	—	—	—
AA	RR wheel-speed (+)	RR ABS wheel-speed sensor	Continuity	AA—RR ABS wheel-speed sensor terminal A	Continuity detected	• Wiring harness (AA—RR ABS wheel-speed sensor terminal A)
AB	—	—	—	—	—	—
AC	CAN_L	CAN module	This terminal is used for communication and cannot be used for malfunction determination during terminal voltage inspection. Perform a DTC inspection.			
AD	—	—	—	—	—	—
AE	—	—	—	—	—	—

AF	CAN_H	CAN module	This terminal is used for communication and cannot be used for malfunction determination during terminal voltage inspection. Perform a DTC inspection.			
AG	LF wheel-speed sensor (+)	LF ABS wheel-speed sensor	Continuity	AG—LF ABS wheel-speed sensor terminal A	Continuity detected	Wiring harness (AG—LF ABS wheel-speed sensor terminal A)
AH	—	—	—	—	—	—
AI	—	—	—	—	—	—
AJ	LF wheel-speed sensor (-)	LF wheel-speed sensor	Continuity	AJ—LF ABS wheel-speed sensor terminal B	Continuity detected	Wiring harness (AJ—LF ABS wheel-speed sensor terminal B)
AK	—	—	—	—	—	—
AL	Ground	Ground point	Continuity	AL—ground point	Continuity detected	Wiring harness (AL—ground point)

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FRONT ABS WHEEL-SPEED SENSOR REMOVAL/ INSTALLATION

- 1. Remove the mudguard. (See [MUDGUARD REMOVAL/ INSTALLATION.](#))
- 2. Remove in the order indicated in the table.
- 3. Install in the reverse order of removal.
- 4. After installation, verify that there is no twisting in the front ABS wheel-speed sensor.



1	Connector
2	Bolt
3	Front ABS wheel-speed sensor

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FRONT ABS WHEEL-SPEED SENSOR INSPECTION

Sensor Output Value Inspection

CAUTION:

- Resistance inspection using other testers may cause damage to the ABS wheel-speed sensor internal circuit. Be sure to use the M-MDS to inspect the ABS wheel-speed sensor.
1. Switch the ignition to off.
 2. Connect the M-MDS to the DLC-2.
 3. Select the following PIDs using the M-MDS:
 - WSPD_SEN_LF (LF wheel-speed sensor)
 - WSPD_SEN_RF (RF wheel-speed sensor)
 4. Start the engine and drive the vehicle.
 5. Verify that the display of the M-MDS shows the same value as the speedometer.
 - If there is any malfunction, replace the ABS wheel-speed sensor.

Installation Visual Inspection

1. Inspect for the following:
 - If there is any malfunction, replace the part.
- a. Excessive play of the ABS wheel-speed sensor
- b. Deformation of the ABS wheel-speed sensor
- c. Deformation or damage of the ABS sensor rotor

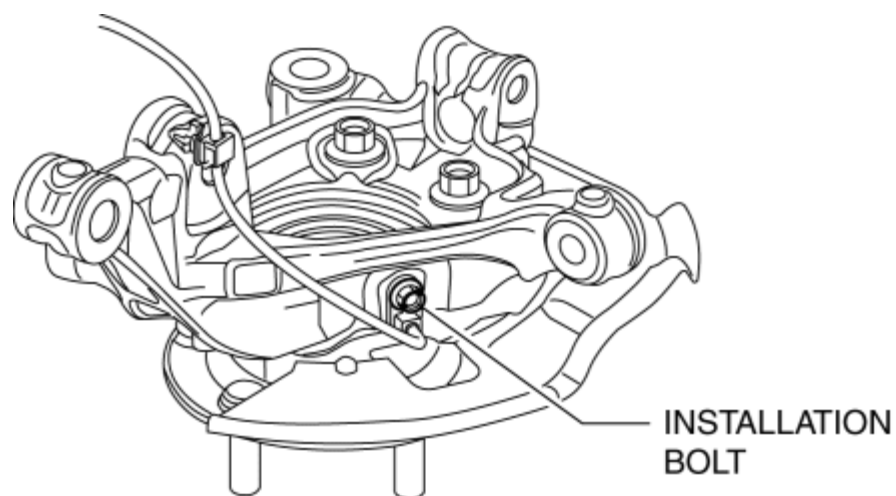
Clearance Inspection

Preparation prior to inspection

1. Remove the ABS wheel-speed sensor. (See [FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION.](#))

2. Remove the wheel hub and steering knuckle as a single unit. (See **WHEEL HUB, STEERING KNUCKLE REMOVAL / INSTALLATION**.)

3. Install the ABS wheel-speed sensor to the removed wheel hub, steering knuckle component, and tighten to the specified torque.

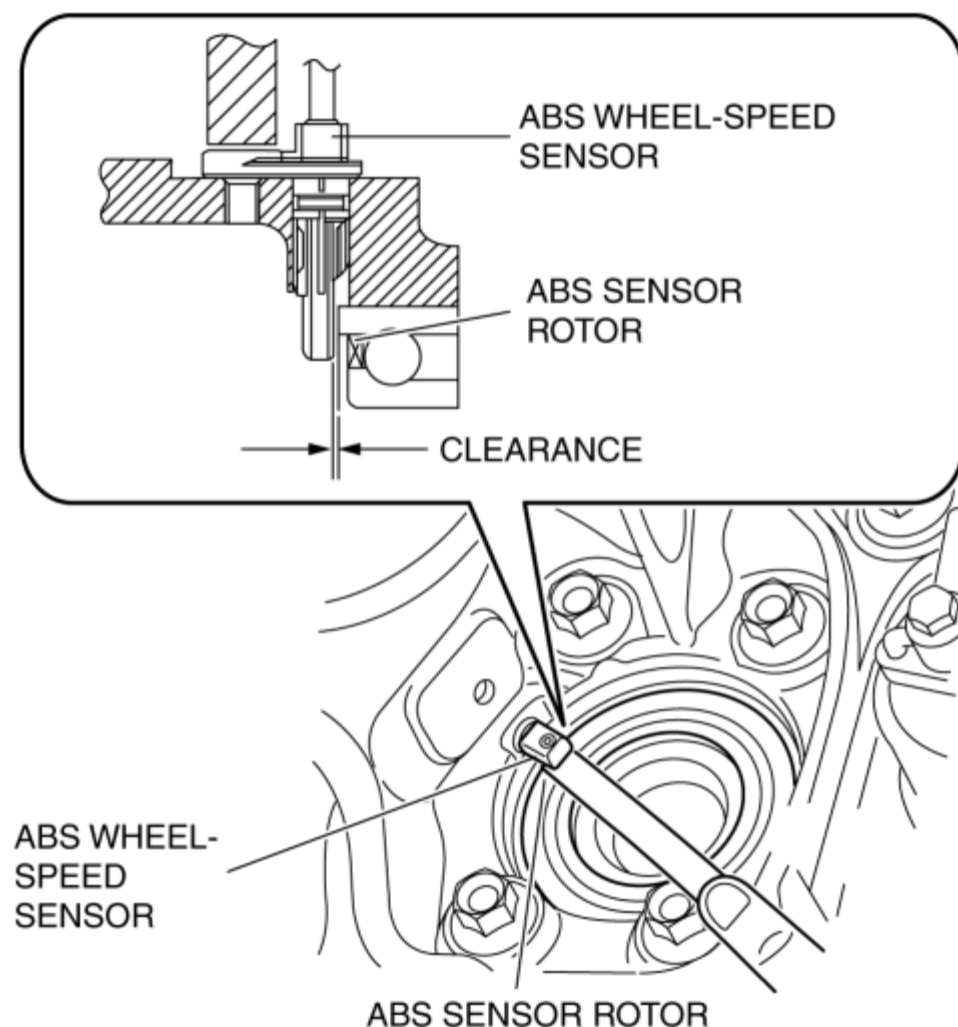


Tightening torque

- 8—10 N·m {82—101 kgf·cm, 71—88 in·lbf}

Clearance Inspection

1. Measure the gap between the ABS sensor rotor and ABS wheel-speed sensor using a feeler gauge.



- If not within the specification, verify the following items and repair or replace if necessary.
 - Is there deformation or damage to the ABS sensor rotor?
 - Is there deformation or damage to the ABS wheel speed sensor?
 - Is there foreign material adhering?

Clearance

- 0.87—1.53 mm {0.035—0.060 in}

Servicing after inspection

1. Remove the ABS wheel-speed sensor from the wheel hub, steering knuckle component.
2. Install the wheel hub, steering knuckle component. (See [WHEEL HUB, STEERING KNUCKLE REMOVAL/INSTALLATION.](#))
3. Install the ABS wheel-speed sensor. (See [FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION.](#))
4. Inspect the front wheel alignment. (See [FRONT WHEEL ALIGNMENT.](#))

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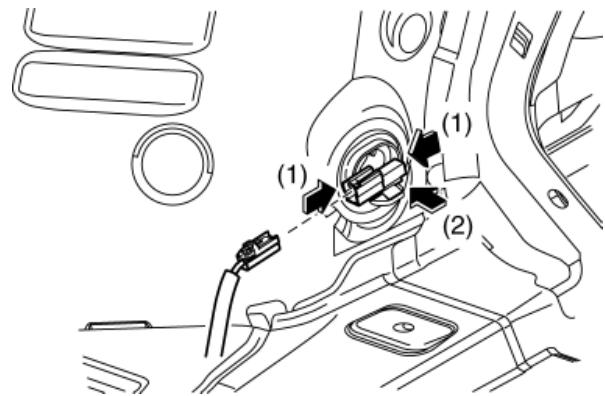
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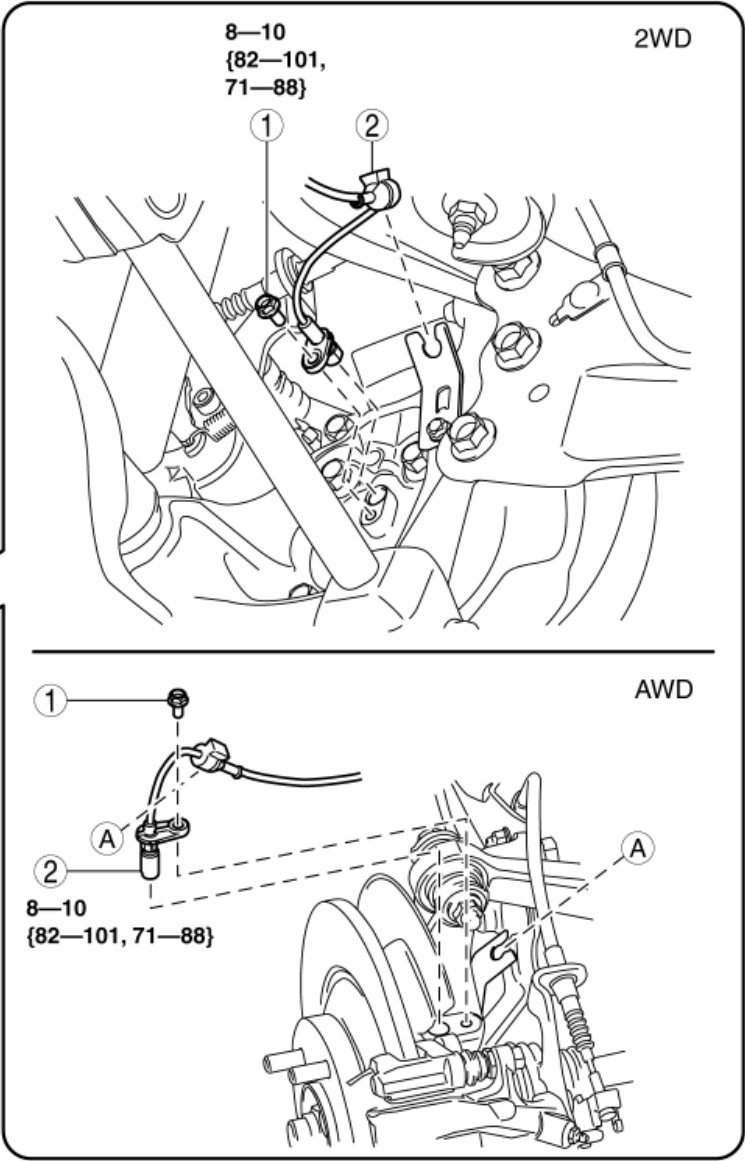
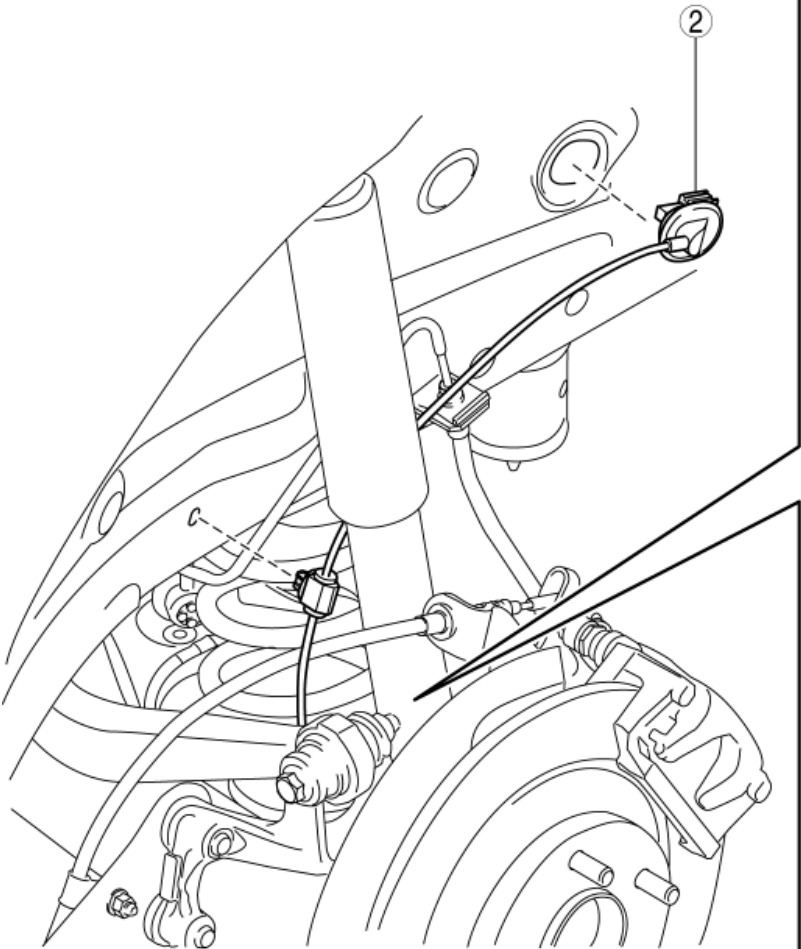
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REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION

- 1. Remove the trunk board. (See [TRUNK BOARD REMOVAL/INSTALLATION.](#))
- 2. Remove the trunk end trim. (See [TRUNK END TRIM REMOVAL/INSTALLATION.](#))
- 3. Remove the rear scuff plate. (See [REAR SCUFF PLATE REMOVAL/INSTALLATION.](#))
- 4. Remove the trunk side trim. (See [TRUNK SIDE TRIM REMOVAL/INSTALLATION.](#))
- 5. Disconnect the rear ABS wheel-speed sensor connector.



- 6. Press the rear ABS wheel-speed sensor tabs and press out the sensor toward the outside of the vehicle.
- 7. Remove in the order indicated in the table.
- 8. Install in the reverse order of removal.
- 9. After installation, verify that there is no twisting in the rear ABS wheel-speed sensor.



N·m {kgf·cm, in·lbf}

1 Bolt
2 Rear ABS wheel-speed sensor
(See Rear ABS Wheel-speed Sensor Removal Note.)

Rear ABS Wheel-speed Sensor Removal Note

- 1. Pull aside the mudguard and remove the rear ABS wheel-speed sensor.

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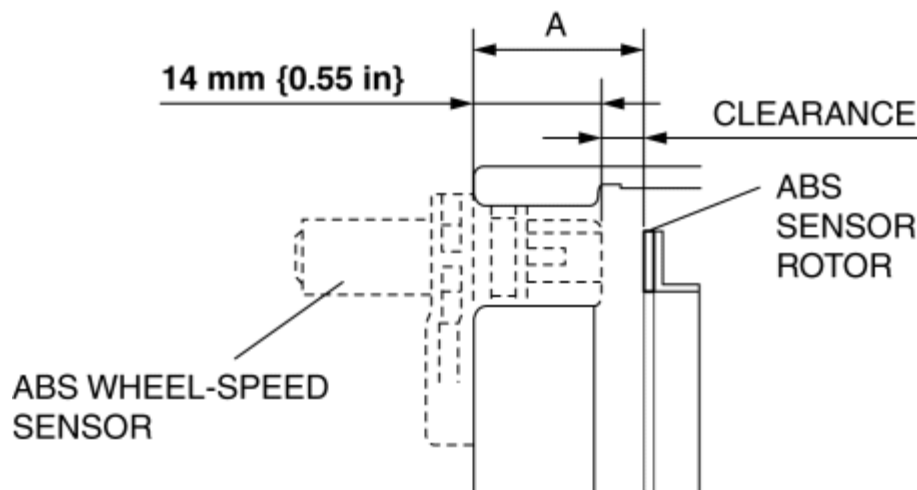
REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD]

Installation Visual Inspection

1. Inspect the following items:
 - If there is any malfunction, replace the applicable part.
 - a. Excessive play of the ABS wheel-speed sensor
 - b. Deformation of the ABS wheel-speed sensor

Clearance Inspection

1. Remove the ABS wheel-speed sensor.
2. Measure the distance between the ABS wheel-speed sensor installation surface and the ABS sensor rotor. This is dimension A.



3. Calculate the clearance between the front ABS wheel-speed sensor and the ABS sensor rotor using the following formula:
 - Clearance (mm {in}) = A-14 {0.55}
 4. Verify that the clearance between the ABS sensor rotor and the ABS wheel-speed sensor is as indicated below.
 - If there is any malfunction, replace it.
- Clearance**
- 0.28—1.17 mm {0.012—0.046 in}

Sensor Output Value Inspection

1. Switch the ignition to off.
2. Connect the M-MDS to the DLC-2.
3. Select the following PIDs using the M-MDS:
 - WSPD_SEN_LR (LR ABS wheel-speed sensor)
 - WSPD_SEN_RR (RR ABS wheel-speed sensor)
4. Start the engine and drive the vehicle.
5. Verify that the display of the M-MDS shows the same value as the speedometer.
 - If there is any malfunction, replace the ABS wheel-speed sensor.

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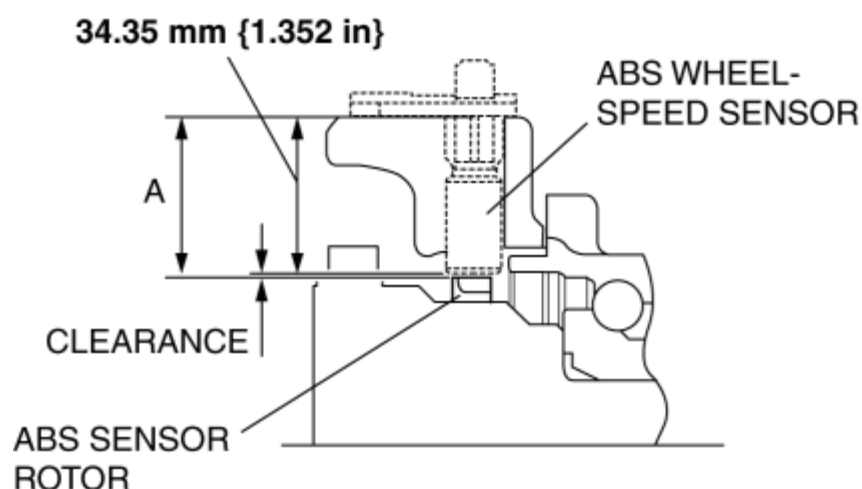
REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD]

Installation Visual Inspection

1. Inspect the following items:
 - If there is any malfunction, replace the applicable part.
 - a. Excessive play of the ABS wheel-speed sensor
 - b. Deformation of the ABS wheel-speed sensor
 - c. Deformation or damage of the ABS sensor rotor

Clearance Inspection

1. Remove the ABS wheel-speed sensor.
2. Measure the distance between the ABS wheel-speed sensor installation surface and the ABS sensor rotor. This is dimension A.



3. Calculate the clearance between the front ABS wheel-speed sensor and the ABS sensor rotor using the following formula:
 - Clearance (mm {in}) = A-34.35 {1.352}
4. Verify that the clearance between the ABS sensor rotor and the ABS wheel-speed sensor is as indicated below.
 - If there is any malfunction, replace it.

Clearance

- 0.3—1.4 mm {0.02—0.05 in}

Sensor Output Value Inspection

1. Switch the ignition to off.
2. Connect the M-MDS to the DLC-2.
3. Select the following PIDs using the M-MDS:
 - WSPD_SEN_LR (LR ABS wheel-speed sensor)
 - WSPD_SEN_RR (RR ABS wheel-speed sensor)
4. Start the engine and drive the vehicle.
5. Verify that the display of the M-MDS shows the same value as the speedometer.
 - If there is any malfunction, replace the ABS wheel-speed sensor.

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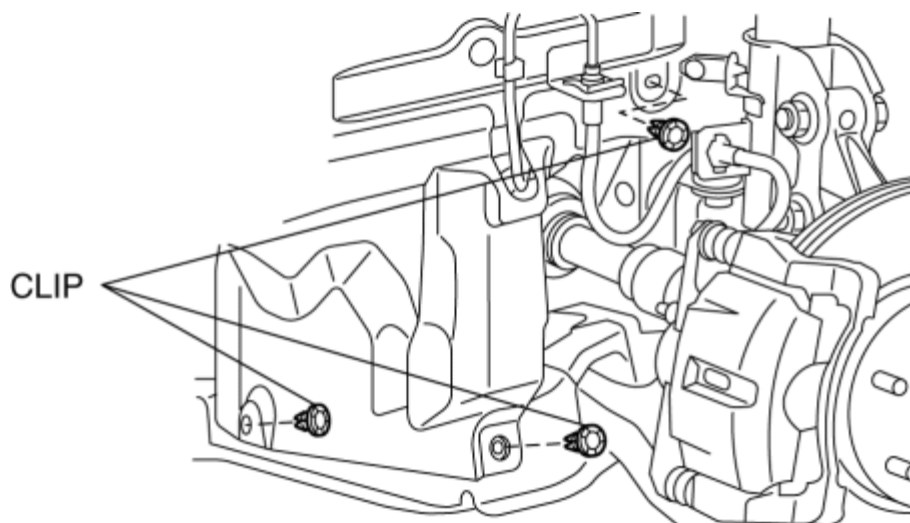
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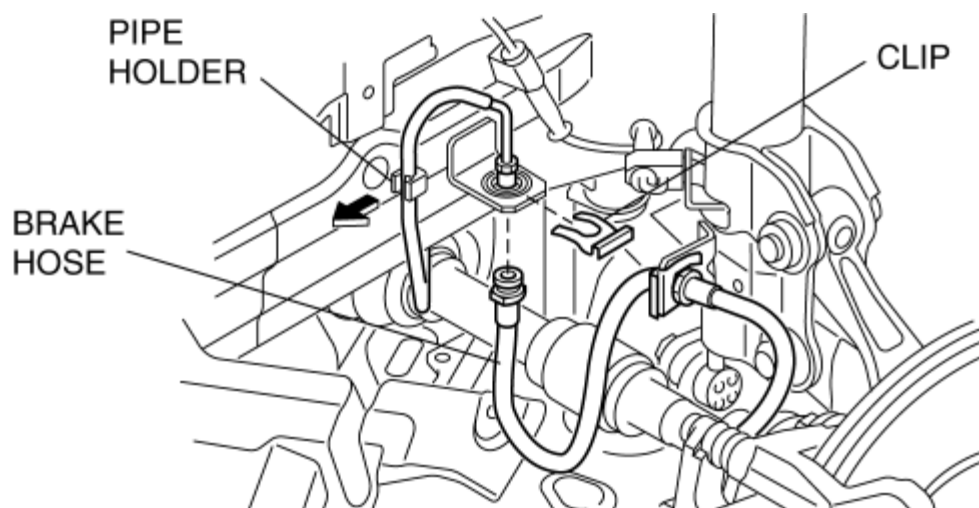
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BRAKE FLUID PRESSURE SENSOR INSPECTION

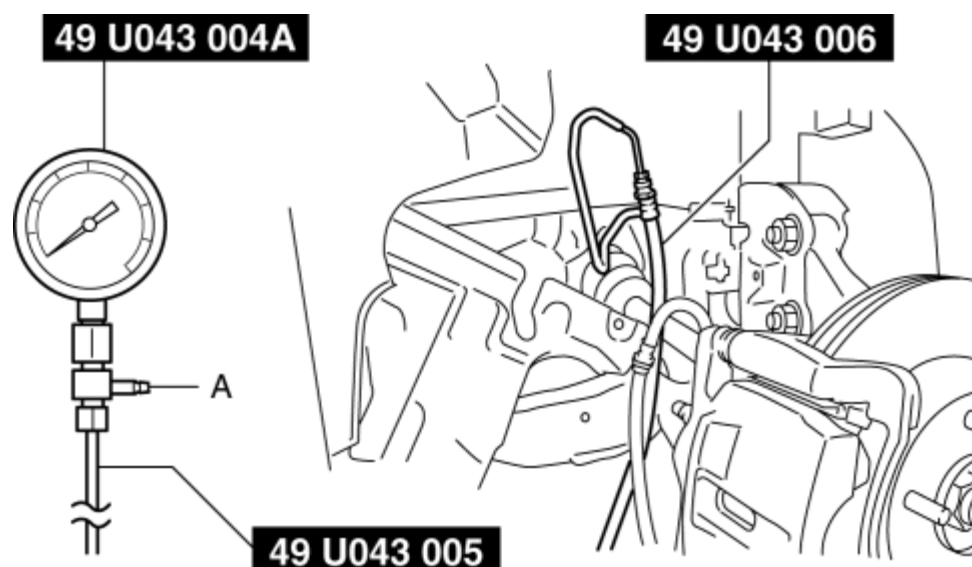
1. Switch the ignition to off.
2. Remove the clips.



3. Set the splash shield out of the way.
4. Disconnect the brake pipe from the LF brake hose.



5. Remove the clip.
6. Remove the LF brake hose from the bracket.
7. Detach the brake pipe from the pipe holder.
8. Install the **SST** to the brake pipe as shown in the figure.



9. Bleed the brake line and the **SSTs** of air. Bleed the air from the **SSTs** using bleeder screw A.
10. Connect the M-MDS to the DLC-2.
11. Select the "BRK_F_P_R" PID.
12. Start the engine.
13. Depress the brake pedal, and confirm that the fluid pressure value of the **SST** (Gauge) and the value shown on the M-MDS are equal
 - If the fluid pressures are different, replace the DSC HU/CM. (See **DSC HU/CM REMOVAL/INSTALLATION.**)
14. After the inspection, remove the **SSTs**, install the brake hose, clamp, and brake pipe to the original positions, and then bleed the air from the brake line. (See **BRAKE HOSE (FRONT) REMOVAL/INSTALLATION.**) (See **BRAKE FLUID AIR BLEEDING.**)

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2013 - CX-5 - Brakes

TCS OFF SWITCH REMOVAL / INSTALLATION

NOTE:

- The TCS OFF switch is integrated with the cluster switch.
 - Refer to SWITCH PANEL REMOVAL/INSTALLATION to remove the cluster switch.
1. Remove the cluster switch from the switch panel. (See [SWITCH PANEL REMOVAL / INSTALLATION](#).)
 2. Install in the reverse order of removal.

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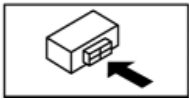
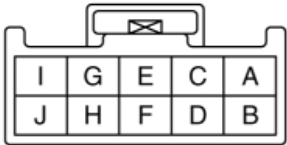
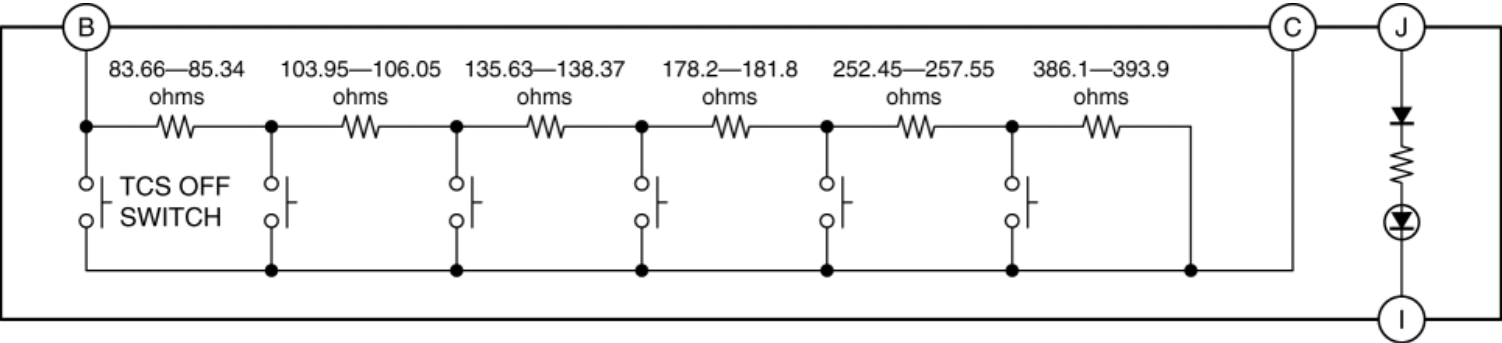
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2013 - CX-5 - Brakes

TCS OFF SWITCH INSPECTION

1. Remove the TCS OFF switch. (See [TCS OFF SWITCH REMOVAL/INSTALLATION.](#))
2. Verify that the resistance between the TCS OFF switch terminals B and C is as indicated in the table.
 - If not as indicated in the table, replace the TCS OFF switch.



TCS OFF switch specification

Terminal	Test condition	Resistance (ohms)
B—C	Switch pressed	0
	Switch released	1139.99—1163.01

3. Apply battery voltage to TCS OFF switch terminal J, and connect terminal I to ground.
4. Verify that the LED illuminates.
 - If there is any malfunction, replace the TCS OFF switch.

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2013 - CX-5 - Brakes

BRAKES TECHNICAL DATA

Item	Specification
Brake fluid type	SAE J1703 or FMVSS116 DOT-3
Brake pedal height (reference value)	136 mm {5.35 in}
Brake pedal play	3—5 mm {0.12—0.19 in}
Brake pedal-to-floor clearance (Brake pedal when depressed at 147 N {15.0 kgf, 33.0 lbf})	95 mm {3.7 in} or more
Front disc plate runout limit	0.04 mm {0.002 in}
Minimum front disc plate thickness	26.0 mm {1.02 in}
Minimum front disc plate thickness after machining using a brake lathe on-vehicle	26.8 mm {1.06 in}
Minimum front disc pad thickness	2.0 mm {0.079 in} min.
Rear disc plate runout limit	0.1 mm {0.004 in}
Minimum rear disc plate thickness	8.0 mm {0.31 in}
Minimum rear disc plate thickness after machining using a brake lathe on-vehicle	8.8 mm {0.35 in}
Minimum rear disc pad thickness	2.0 mm {0.079 in} min.
Parking brake lever stroke when pulled at 98 N {10 kgf, 22 lbf}	2—3 notches

Master cylinder fluid pressure

Vacuum amount at 0 kPa {0 mmHg, 0 inHg}

Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbt}	630 kPa {6.42 kgf/cm ² , 91.4 psi} or more

Master cylinder fluid pressure

Vacuum amount at 66.7 kPa {500 mmHg, 19.7 inHg}	
Pedal force	Fluid pressure
200 N {20.4 kgf, 45.0 lbt}	6,900 kPa {70.36 kgf/cm ² , 1,001 psi} or more

Vacuum pump vacuum specification (reference value)

Measurement condition		Specification
Engine speed	Change in vacuum amount	Period of time change in vacuum amount condition met
While idling (520—700 rpm (reference value))	From 60 kPa {450 mmHg, 18 inHg} to 67 kPa {503 mmHg, 20 inHg}	8 s or less

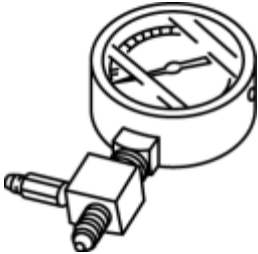
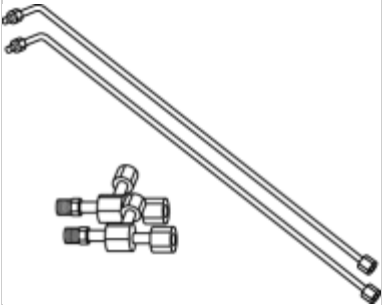
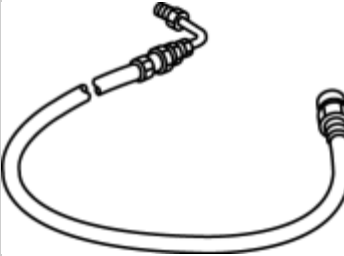
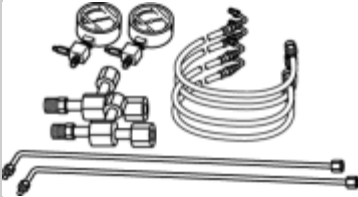
Vacuum pump maximum vacuum specification (reference value)

Measurement condition	Specification
While idling (no time designation)	93.3 kPa {700 mmHg, 27.6 inHg} or more

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BRAKES SST

49 F043 002 Wrench		49 U043 004A Oil pressure gauge (Part of 49 U043 0A0A)		49 U043 005 Joint (Part of 49 U043 0A0A)	
49 U043 006 Hose (Part of 49 U043 0A0A)		49 U043 0A0A Oil pressure gauge set		—	

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