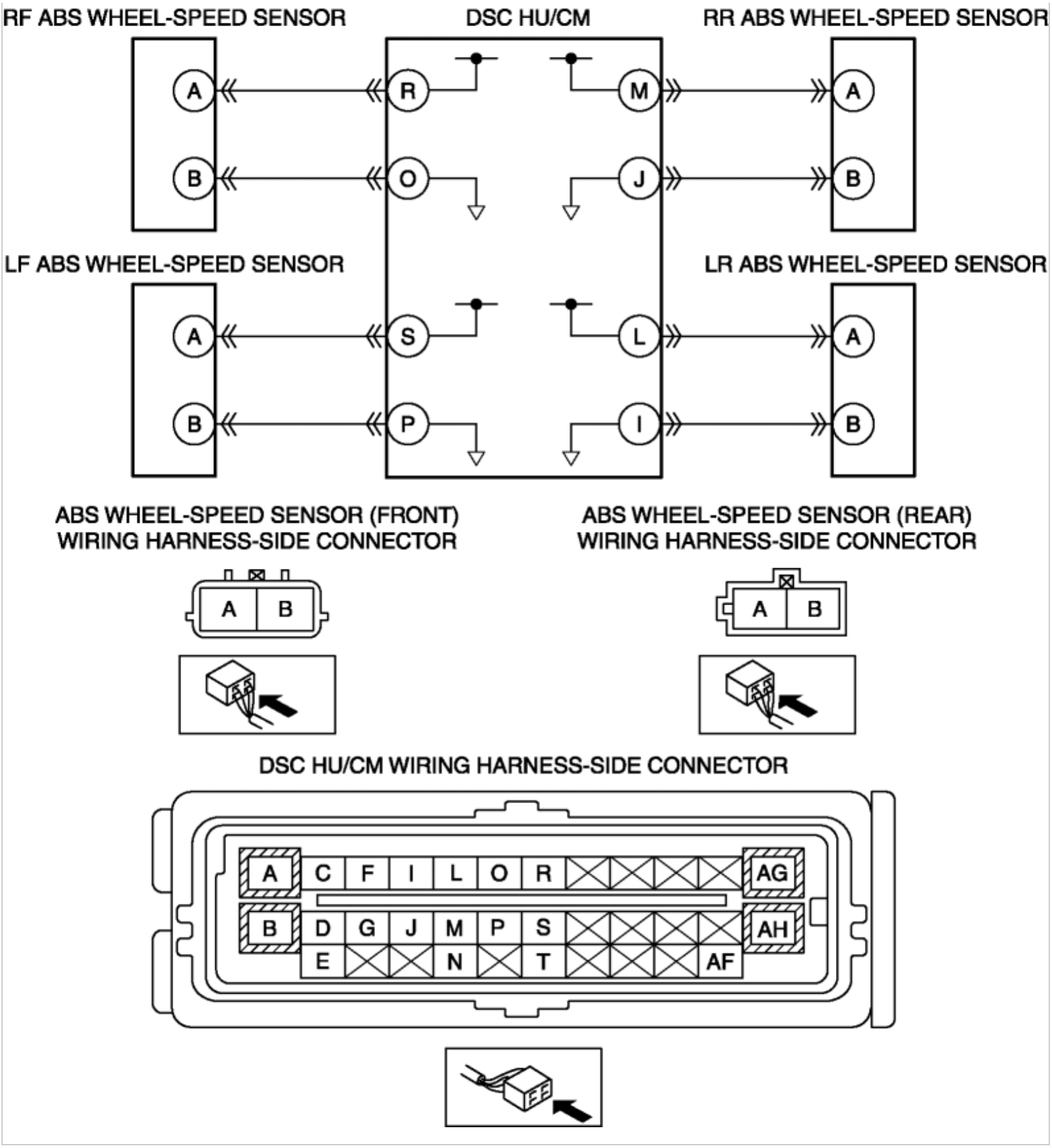
2012 - Mazda6 - Brakes

DTC C0031:01/ C0031:13/ C0034:01/ C0034:13/ C0037:01/ C0037:13/ C003A:01/ C003A:13 [DYNAMIC STABILITY CONTROL (DSC)]

C0031:01 **C0031:13**	LF ABS wheel-speed sensor
C0034:01 **C0034:13**	RF ABS wheel-speed sensor
C0037:01 **C0037:13**	LR ABS wheel-speed sensor
C003A:01 **C003A:13**	RR ABS wheel-speed sensor
DETECTION CONDITION	**C0031:01/ C0034:01/ C0037:01/ C003A:01** • Detects a drop in the power supply voltage ON signal from the ABS wheel-speed sensor for a continuous **0.53 s**. **C0031:13/ C0034:13/ C0037:13/ C003A:13** • Detect the signal of open circuit for **0.53 s** from the ABS wheel-speed sensor.
	• Connector or terminal malfunction • Short to ground in wiring harness between following terminals: ▪ LF ABS wheel-speed sensor terminal A and DSC HU/CM terminal S ▪ LF ABS wheel-speed sensor terminal B and DSC HU/CM terminal P ▪ RF ABS wheel-speed sensor terminal A and DSC HU/CM terminal R ▪ RF ABS wheel-speed sensor terminal B and DSC HU/CM terminal O

POSSIBLE CAUSE	▪ LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L ▪ LR ABS wheel-speed sensor terminal B and DSC HU/CM terminal I ▪ RR ABS wheel-speed sensor terminal A and DSC HU/CM terminal M ▪ RR ABS wheel-speed sensor terminal B and DSC HU/CM terminal J • Open circuit in wiring harness between following terminals: ▪ LF ABS wheel-speed sensor terminal A and DSC HU/CM terminal S ▪ LF ABS wheel-speed sensor terminal B and DSC HU/CM terminal P ▪ RF ABS wheel-speed sensor terminal A and DSC HU/CM terminal R ▪ RF ABS wheel-speed sensor terminal B and DSC HU/CM terminal O ▪ LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L ▪ LR ABS wheel-speed sensor terminal B and DSC HU/CM terminal I ▪ RR ABS wheel-speed sensor terminal A and DSC HU/CM terminal M ▪ RR ABS wheel-speed sensor terminal B and DSC HU/CM terminal J • ABS wheel-speed sensor malfunction • DSC HU/CM malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
	INSPECT ABS WHEEL-SPEED SENSOR CONNECTOR	

1	**CONDITION** • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the following connector: ▪ C0031:01/C0031:13 • LF ABS wheel-speed sensor ▪ C0034:01/C0034:13 • RF ABS wheel-speed sensor ▪ C0037:01/C0037:13 • LR ABS wheel-speed sensor ▪ C003A:01/C003A:13 • RR ABS wheel-speed sensor • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	Go to the next step.
2	**INSPECT DSC HU/CM CONNECTOR CONDITION** • Disconnect the DSC HU/CM connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	C0031:01/C0034:01/C0037:01/C003A:01 • Go to the next step. C0031:13/C0034:13/C0037:13/C003A:13 • Go to Step 4.
3	**INSPECT ABS WHEEL-SPEED SENSOR CIRCUIT FOR SHORT TO GROUND** • Inspect for continuity between the following terminals and body ground: ▪ C0031:01 • LF ABS	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 5.
		No	Go to the next step.

wheel-speed sensor terminal A (wiring harness-side)

- LF ABS wheel-speed sensor terminal B (wiring harness-side)

- C0034:01
  - RF ABS wheel-speed sensor terminal A (wiring harness-side)
  - RF ABS wheel-speed sensor terminal B (wiring harness-side)
- C0037:01
  - LR ABS wheel-speed sensor terminal A (wiring harness-side)
  - LR ABS wheel-speed sensor terminal B

	(wiring harness-side) ▪ C003A:01 • RR ABS wheel-speed sensor terminal A (wiring harness-side) • RR ABS wheel-speed sensor terminal B (wiring harness-side) • Is there continuity?		
4	**INSPECT ABS WHEEL-SPEED SENSOR CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between the following terminals: ▪ C0031:13 • LF ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal S (wiring harness-side) • LF ABS wheel-speed sensor terminal B and DSC	Yes	Replace the malfunctioning ABS wheel-speed sensor, then go to the next step. (See **FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION**.) (See **REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION**.)
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

HU/CM terminal P (wiring harness-side)

- C0034:13
    - RF ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal R (wiring harness-side)
    - RF ABS wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal O (wiring harness-side)
- C0037:13
    - LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L (wiring harness-side)
    - LR ABS

	wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal I (wiring harness-side) ▪ C003A:13 • RR ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal M (wiring harness-side) • RR ABS wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal J (wiring harness-side) • Is there continuity?		
5	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the DSC HU/CM	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**.)

	memory using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Perform the DSC DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Is the same DTC present?		
		No	Go to the next step.
6	**VERIFY AFTER REPAIR PROCEDURE** • Are any 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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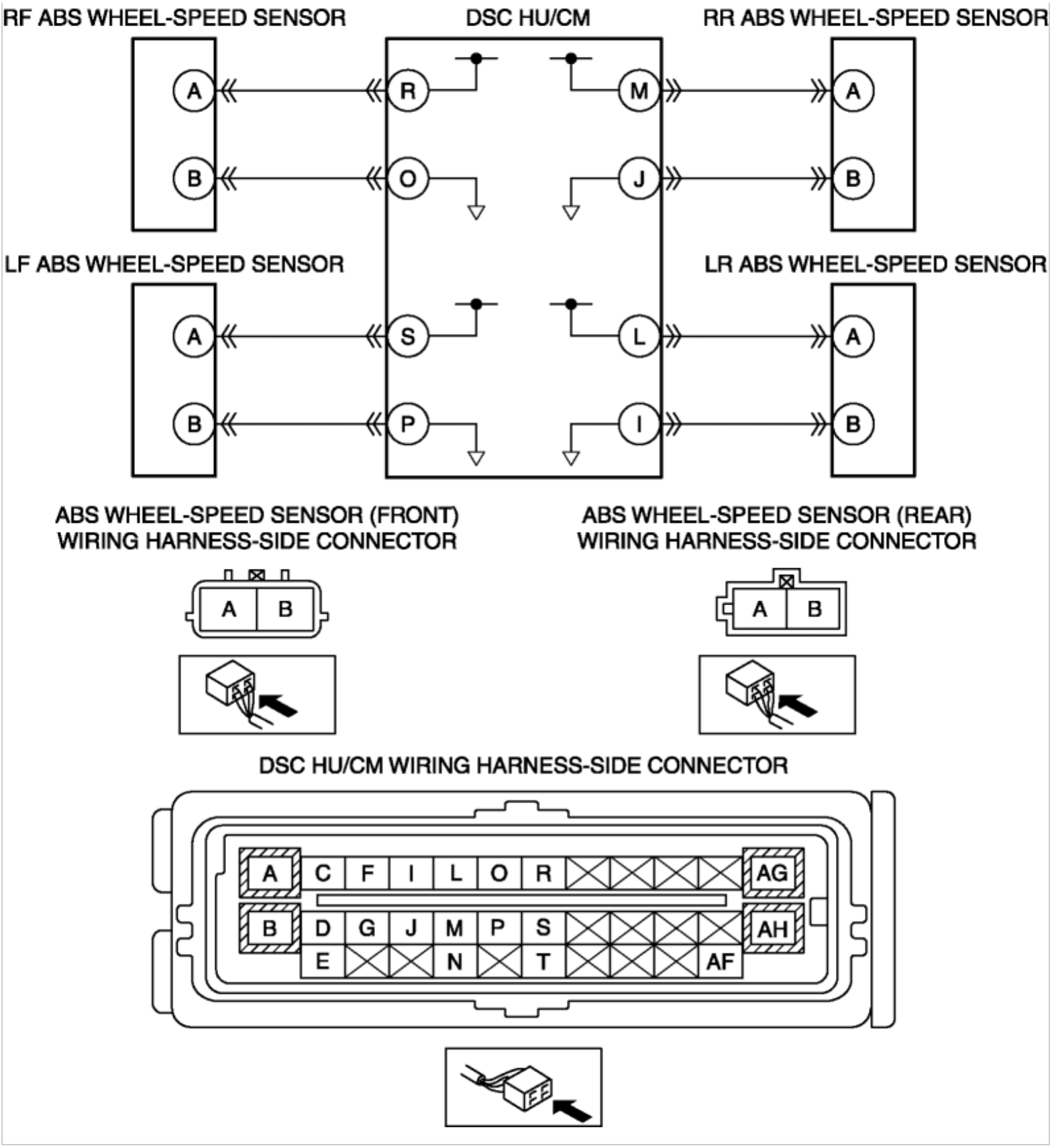
DTC C0031:01/ C0031:13/ C0034:01/ C0034:13/ C0037:01/ C0037:13/ C003A:01/ C003A:13 [DYNAMIC STABILITY CONTROL (DSC)]

C0031:01 **C0031:13**	LF ABS wheel-speed sensor
C0034:01 **C0034:13**	RF ABS wheel-speed sensor
C0037:01 **C0037:13**	LR ABS wheel-speed sensor
C003A:01 **C003A:13**	RR ABS wheel-speed sensor
DETECTION CONDITION	**C0031:01/ C0034:01/ C0037:01/ C003A:01** • Detects a drop in the power supply voltage ON signal from the ABS wheel-speed sensor for a continuous **0.53 s**. **C0031:13/ C0034:13/ C0037:13/ C003A:13** • Detect the signal of open circuit for **0.53 s** from the ABS wheel-speed sensor.
	• Connector or terminal malfunction • Short to ground in wiring harness between following terminals: ▪ LF ABS wheel-speed sensor terminal A and DSC HU/CM terminal S ▪ LF ABS wheel-speed sensor terminal B and DSC HU/CM terminal P ▪ RF ABS wheel-speed sensor terminal A and DSC HU/CM terminal R ▪ RF ABS wheel-speed sensor terminal B and DSC HU/CM terminal O

POSSIBLE CAUSE	▪ LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L ▪ LR ABS wheel-speed sensor terminal B and DSC HU/CM terminal I ▪ RR ABS wheel-speed sensor terminal A and DSC HU/CM terminal M ▪ RR ABS wheel-speed sensor terminal B and DSC HU/CM terminal J • Open circuit in wiring harness between following terminals: ▪ LF ABS wheel-speed sensor terminal A and DSC HU/CM terminal S ▪ LF ABS wheel-speed sensor terminal B and DSC HU/CM terminal P ▪ RF ABS wheel-speed sensor terminal A and DSC HU/CM terminal R ▪ RF ABS wheel-speed sensor terminal B and DSC HU/CM terminal O ▪ LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L ▪ LR ABS wheel-speed sensor terminal B and DSC HU/CM terminal I ▪ RR ABS wheel-speed sensor terminal A and DSC HU/CM terminal M ▪ RR ABS wheel-speed sensor terminal B and DSC HU/CM terminal J • ABS wheel-speed sensor malfunction • DSC HU/CM malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
	INSPECT ABS WHEEL-SPEED SENSOR CONNECTOR	

1	**CONDITION** • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the following connector: ▪ C0031:01/C0031:13 • LF ABS wheel-speed sensor ▪ C0034:01/C0034:13 • RF ABS wheel-speed sensor ▪ C0037:01/C0037:13 • LR ABS wheel-speed sensor ▪ C003A:01/C003A:13 • RR ABS wheel-speed sensor • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	Go to the next step.
2	**INSPECT DSC HU/CM CONNECTOR CONDITION** • Disconnect the DSC HU/CM connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	C0031:01/C0034:01/C0037:01/C003A:01 • Go to the next step. C0031:13/C0034:13/C0037:13/C003A:13 • Go to Step 4.
3	**INSPECT ABS WHEEL-SPEED SENSOR CIRCUIT FOR SHORT TO GROUND** • Inspect for continuity between the following terminals and body ground: ▪ C0031:01 • LF ABS	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 5.
		No	Go to the next step.

wheel-speed sensor terminal A (wiring harness-side)

- LF ABS wheel-speed sensor terminal B (wiring harness-side)

- C0034:01
  - RF ABS wheel-speed sensor terminal A (wiring harness-side)
  - RF ABS wheel-speed sensor terminal B (wiring harness-side)
- C0037:01
  - LR ABS wheel-speed sensor terminal A (wiring harness-side)
  - LR ABS wheel-speed sensor terminal B

	(wiring harness-side) ▪ C003A:01 • RR ABS wheel-speed sensor terminal A (wiring harness-side) • RR ABS wheel-speed sensor terminal B (wiring harness-side) • Is there continuity?		
4	**INSPECT ABS WHEEL-SPEED SENSOR CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between the following terminals: ▪ C0031:13 • LF ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal S (wiring harness-side) • LF ABS wheel-speed sensor terminal B and DSC	Yes	Replace the malfunctioning ABS wheel-speed sensor, then go to the next step. (See **FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION**.) (See **REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION**.)
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

HU/CM terminal P (wiring harness-side)

- C0034:13
    - RF ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal R (wiring harness-side)
    - RF ABS wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal O (wiring harness-side)
- C0037:13
    - LR ABS wheel-speed sensor terminal A and DSC HU/CM terminal L (wiring harness-side)
    - LR ABS

	wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal I (wiring harness-side) ▪ C003A:13 • RR ABS wheel-speed sensor terminal A (wiring harness-side) and DSC HU/CM terminal M (wiring harness-side) • RR ABS wheel-speed sensor terminal B (wiring harness-side) and DSC HU/CM terminal J (wiring harness-side) • Is there continuity?		
5	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the DSC HU/CM	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**.)

	memory using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Perform the DSC DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Is the same DTC present?		
		No	Go to the next step.
6	**VERIFY AFTER REPAIR PROCEDURE** • Are any 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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