DTC	C0210/33	Rear Speed Sensor RH Circuit
DTC	C0215/34	Rear Speed Sensor LH Circuit
DTC	C1238/38	Foreign Object is Attached on Tip of Rear Speed Sensor RH
DTC	C1239/39	Foreign Object is Attached on Tip of Rear Speed Sensor LH
DTC	C1273/73	Low Output Signal of Rear Speed Sensor RH (Test Mode DTC)
DTC	C1274/74	Low Output Signal of Rear Speed Sensor LH (Test Mode DTC)
DTC	C1277/77	Abnormal Change in Output Signal of Rear Speed Sensor RH (Test Mode DTC)
DTC	C1278/78	Abnormal Change in Output Signal of Rear Speed Sensor LH (Test Mode DTC)

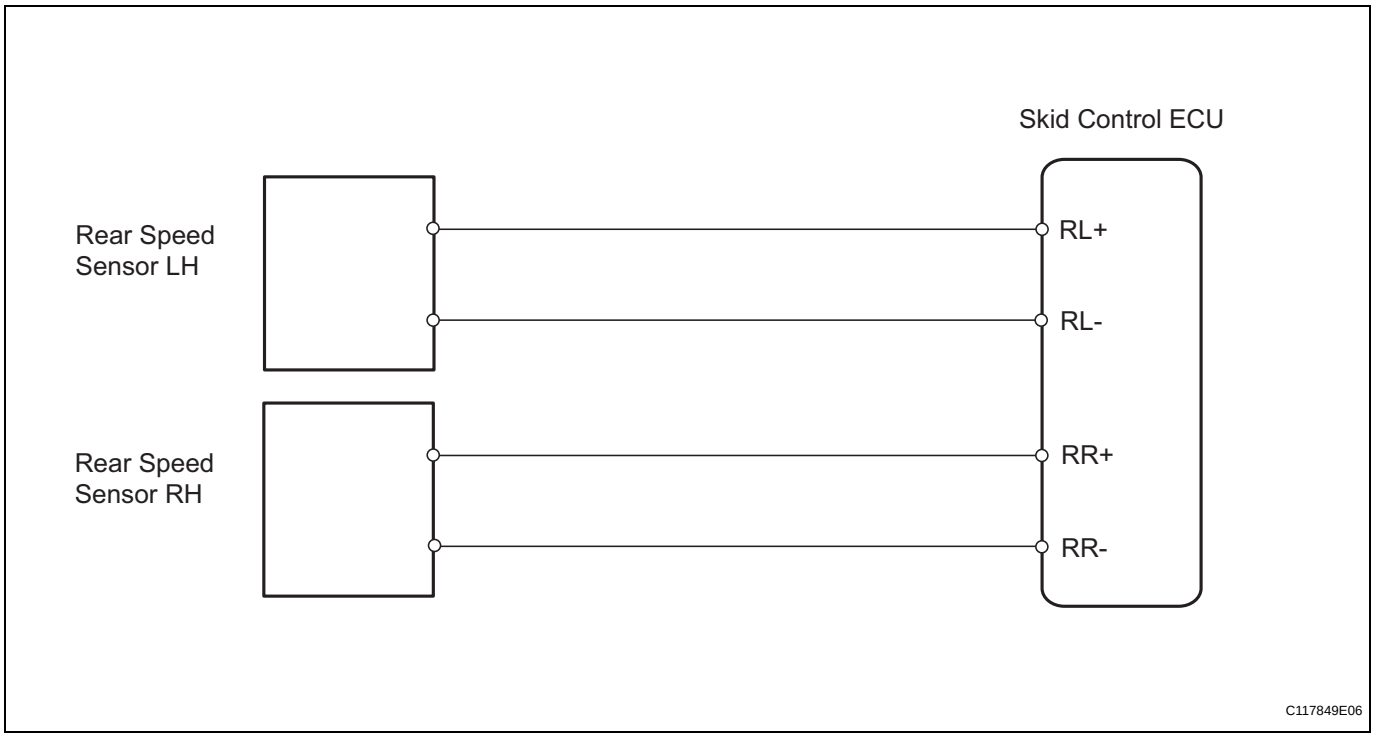
DESCRIPTION

Refer to DTC C0200/31 (See page BC-59).

DTC No.	DTC Detecting Conditions	Trouble Areas
C0210/33 C0215/34	When any of following conditions detected: 1. At vehicle speed of 6 mph (10 km/h) or more, open or short in sensor signal circuit continues for 1 second or more. 2. Momentary interruption of sensor signal from abnormal wheel occurs 255 times or more. 3. Open in speed sensor signal circuit continues for 0.5 seconds or more. 4. With IG1 terminal voltage 9.5 V or more, sensor power supply voltage decreases for 0.5 seconds or more. 5. When vehicle driven at speed of more than 10 km/h (6 mph), one of wheel speeds below one-seventh of other wheel speeds for 15 seconds or more.	• Rear speed sensor • Rear speed sensor circuit • Sensor installation • Skid control sensor wire • Master cylinder solenoid (skid control ECU)
C1238/38 C1239/39	When either of following conditions (1 or 2) detected: 1. At vehicle speed of 12 mph (20 km/h) or more, noise in speed sensor signal continues for 5 seconds or more. 2. At vehicle speed of 6 mph (10 km/h) or more, noise detected as rotor turns, for 15 seconds or more.	• Rear speed sensor • Rear speed sensor circuit • Master cylinder solenoid (skid control ECU)

DTC No.	DTC Detecting Conditions	Trouble Areas
C1273/73 C1274/74	Detected only during test mode.	• Rear speed sensor • Rear speed sensor circuit • Sensor installation • Skid control sensor wire • Master cylinder solenoid (skid control ECU)
C1277/77 C1278/78	Detected only during test mode.	• Rear speed sensor • Rear speed sensor circuit • Master cylinder solenoid (skid control ECU)

WIRING DIAGRAM

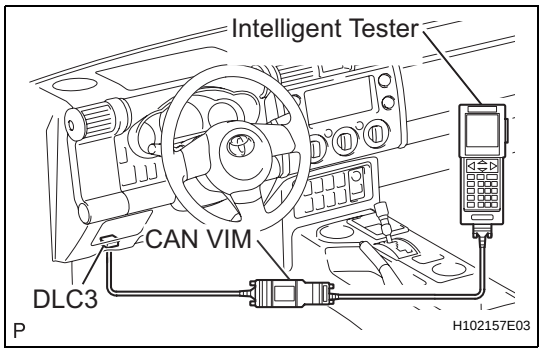


INSPECTION PROCEDURE

NOTICE:

- **When replacing the master cylinder solenoid, perform zero point calibration (See page BC-24).**
- **Check the speed sensor signal in test mode after clearing or replacement (See page BC-28).**

1	CHECK HARNESS AND CONNECTOR (MOMENTARY INTERRUPTION)



(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch on.
(c) Turn the tester on.
(d) Using the intelligent tester, check for any momentary interruption in the wire harness and connector of the speed sensor.

Select the following menu items: DIAGNOSIS / OBD/ MOBD / select vehicle / ABS/VSC / DATA LIST.

DATA LIST: ABS/VSC

Item (Display)	Measurement Item / Range (Display)	Normal Condition
SPD SEN RR	RR speed sensor open detection / OPN_DET or NORMAL	OPN_DET: Momentary interruption NORMAL: Normal
SPD SEN RL	RL speed sensor open detection / OPN_DET or NORMAL	OPN_DET: Momentary interruption NORMAL: Normal

OK:

There are no momentary interruptions.

HINT:

Perform the above inspection before removing the sensor and connector.

NG → **CHECK AND REPLACE HARNESS OR CONNECTOR**

OK

2	READ VALUE OF DATA LIST

(a) Connect the intelligent tester to the DLC3.
(b) Start the engine and drive the vehicle.
(c) Turn the tester on.
(d) Select the following menu items: DIAGNOSIS / OBD/ MOBD / select vehicle / ABS/VSC / DATA LIST.
(e) Select the item "RR (RL) WHEEL SPD" in the DATA LIST and read the value displayed on the intelligent tester.

DATA LIST: ABS/VSC

Item (Display)	Measurement Item / Range (Display)	Normal Condition
WHEEL SPD RR	Wheel speed sensor (RR) reading : min.: 0 mph (0 km/h), max.: 202 mph (326 km/h)	Similar to speed indicated on speedometer
WHEEL SPD RL	Wheel speed sensor (RL) reading : min.: 0 mph (0 km/h), max.: 202 mph (326 km/h)	Similar to speed indicated on speedometer

(f) Check that there is no significant difference between the speed value displayed on the intelligent tester and the speed value displayed on the speedometer when driving the vehicle.

OK:

There is no significant difference in the displayed speed values.

HINT:

There is a tolerance of +- 10% in the speedometer indication.

NG → **Go to step 5**

OK

3	PERFORM TEST MODE INSPECTION

(a) Perform a TEST MODE inspection and check for DTCs (See page BC-28).

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 RECONFIRM DTC

(a) Clear the DTC(s) (See page BC-45).
(b) Start the engine.
(c) Drive the vehicle at a speed of 12 mph (20 km/h) or more for at least 60 seconds.
(d) Check if the same DTC(s) is output (See page BC-45).

Result

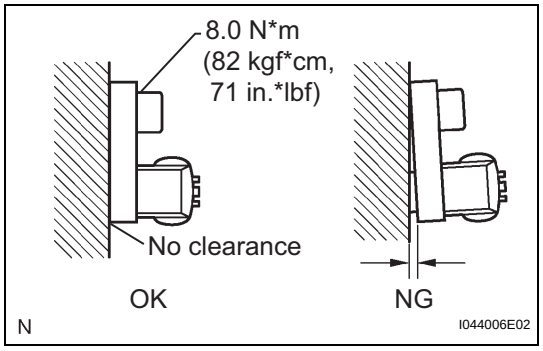
Result	Proceed to
DTC not output	A
DTC output	B

B → Go to step 11

A

END

5 CHECK REAR SPEED SENSOR INSTALLATION



(a) Check that the speed sensor installation bolt is tightened properly.
OK:
The installation bolt is tightened properly.
Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

NG → TIGHTEN BOLT PROPERLY

OK

6 CHECK REAR SPEED SENSOR

(a) Visually check the speed sensor for deformation and damage.
OK:
No deformation or damage.
There is no gap between the sensor and rear axle carrier.

NG → REPLACE REAR SPEED SENSOR

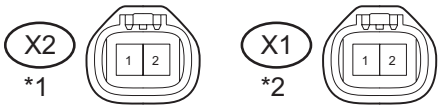
OK

7	INSPECT SKID CONTROL SENSOR WIRE

BC

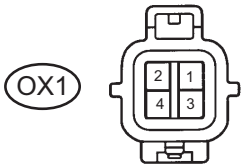
Skid Control Sensor Wire:

Sensor Side Connector:



*1: LH
*2: RH

Vehicle Side Connector:



C138457E01

(a) Disconnect the rear speed sensor wire.
(b) Measure the resistance.

Standard resistance (LH)

Tester Connection	Specified Condition
X2-2 - OX1-1	10 kΩ or higher
X2-2 - OX1-2	Below 1 Ω
X2-2 - OX1-3	10 kΩ or higher
X2-2 - OX1-4	10 kΩ or higher
X2-2 - Body ground	10 kΩ or higher
X2-1 - OX1-1	Below 1 Ω
X2-1 - OX1-2	10 kΩ or higher
X2-1 - OX1-3	10 kΩ or higher
X2-1 - OX1-4	10 kΩ or higher
X2-1 - Body ground	10 kΩ or higher

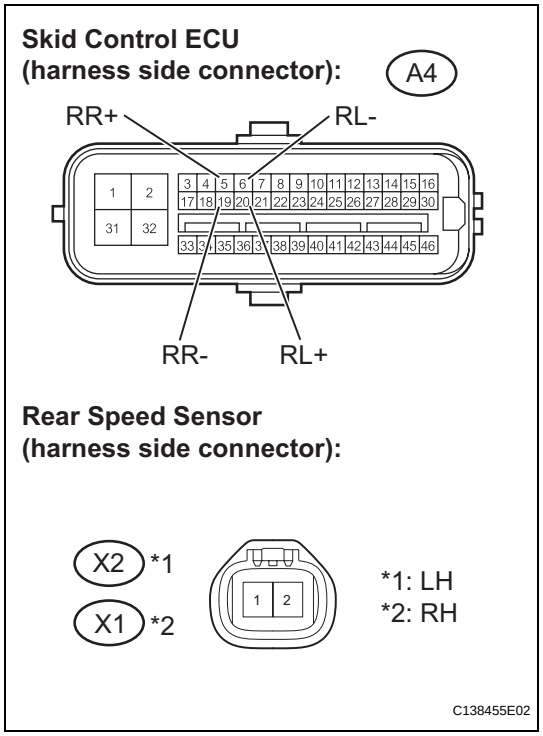
Standard resistance (RH)

Tester Connection	Specified Condition
X1-1 - OX1-1	Below 1 Ω
X1-1 - OX1-2	10 kΩ or higher
X1-1 - OX1-3	10 kΩ or higher
X1-1 - OX1-4	10 kΩ or higher
X1-1 - Body ground	10 kΩ or higher
X1-2 - OX1-1	10 kΩ or higher
X1-2 - OX1-2	Below 1 Ω
X1-2 - OX1-3	10 kΩ or higher
X1-2 - OX1-4	10 kΩ or higher
X1-2 - Body ground	10 kΩ or higher

NG → REPLACE SKID CONTROL SENSOR WIRE

OK

8 CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - SKID CONTROL SENSOR)



(a) Disconnect the skid control ECU connector.
(b) Disconnect the rear speed sensor connector.
(c) Measure the resistance.

Standard resistance (LH)

Tester Connection	Specified Condition
A4-20 (RL+) - X2-2	Below 1 Ω
A4-6 (RL-) - X2-1	Below 1 Ω

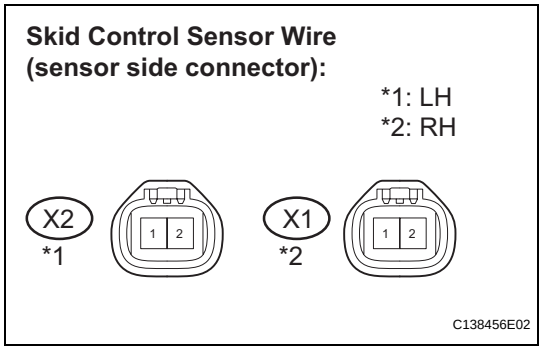
Standard resistance (RH)

Tester Connection	Specified Condition
A4-5 (RR+) - X1-2	Below 1 Ω
A4-19 (RR-) - X1-1	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

9 CHECK SKID CONTROL SENSOR (INPUT VOLTAGE)



(a) Disconnect the rear speed sensor connector.
(b) Turn the ignition switch on.
(c) Measure the voltage.

Standard voltage (LH)

Tester Connection	Specified Condition
X2-2 - Body ground	5.7 to 17.3 V

Standard voltage (RH)

Tester Connection	Specified Condition
X1-2 - Body ground	5.7 to 17.3 V

NG → **REPLACE MASTER CYLINDER SOLENOID**

OK

10 RECONFIRM DTC

(a) Clear the DTC(s) (See page BC-45).
(b) Start the engine.
(c) Drive the vehicle at a speed of 12 mph (20 km/h) or more for at least 60 seconds.
(d) Check if the same DTC(s) is output (See page BC-45).

Result

Result	Proceed to
DTC output	A
DTC not output	B

BC

B → END

A

11 REPLACE REAR SPEED SENSOR

(a) Replace the rear speed sensor (See page BC-198).

NEXT

12 RECONFIRM DTC

(a) Clear the DTC(s) (See page BC-45).
(b) Start the engine.
(c) Drive the vehicle at a speed of 12 mph (20 km/h) or more for at least 60 seconds.
(d) Check if the same DTC(s) is output (See page BC-45).

Result

Result	Proceed to
DTC output	A
DTC not output	B

B → END

A

REPLACE MASTER CYLINDER SOLENOID