DTC	C0210/33	RIGHT REAR SPEED SENSOR CIRCUIT

DTC	C0215/34	LEFT REAR SPEED SENSOR CIRCUIT

DTC	C1238/38	FOREIGN MATTER IS ATTACHED ON TIP OF RIGHT REAR SENSOR

DTC	C1239/39	FOREIGN MATTER IS ATTACHED ON TIP OF LEFT REAR SENSOR

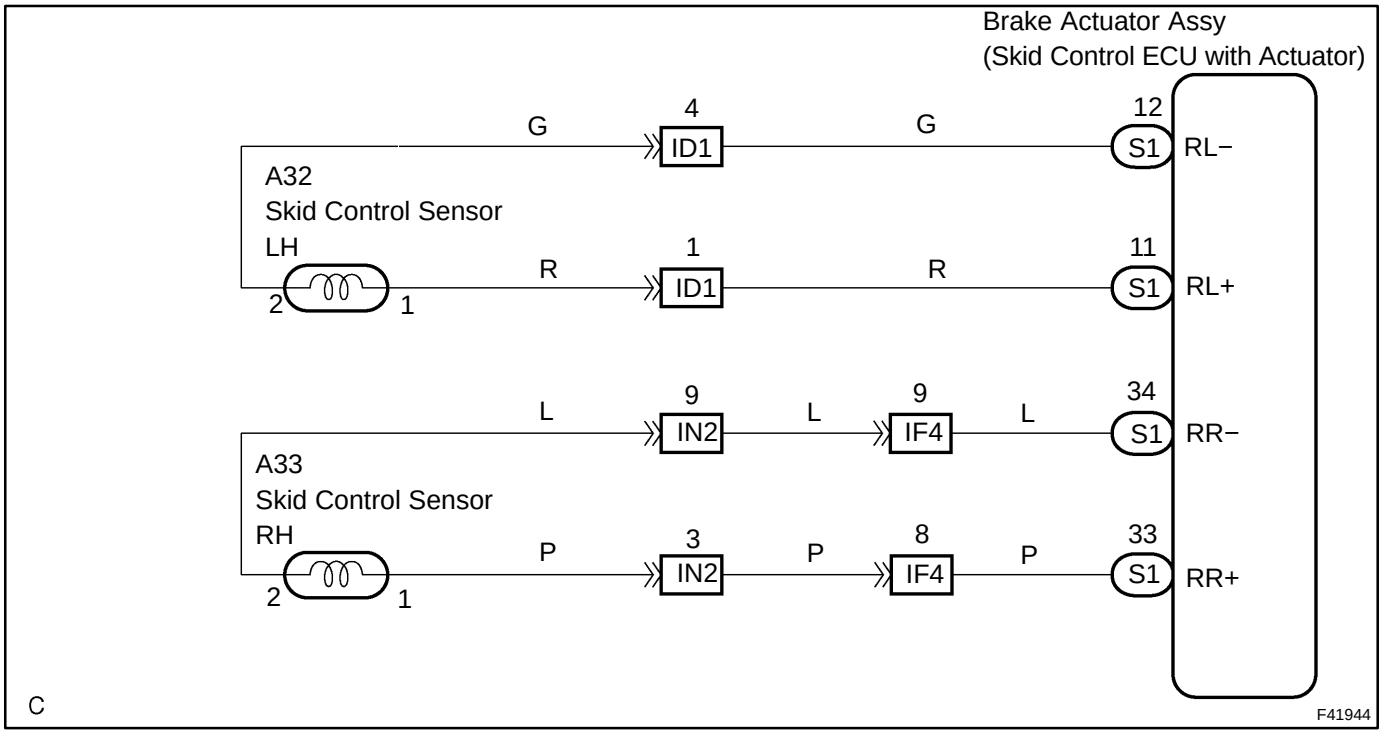
CIRCUIT DESCRIPTION

Refer to DTC C0200/31, C0205/32, C1235/35, and C1236/36 on page 05−947.

DTC No. C0200/	DTC Detecting Condition	Trouble Area
C0210/33 C0215/34	When any of the following (1 to 3) is detected: 1. With vehicle speed at 6 mph (10 km/h) or more, sensor signal circuit of faulty wheel is open or short for 1 sec. or longer. 2. Momentary interruption of sensor signal of faulty wheel has occurred 7 times or more. 3. Sensor signal circuit is open for 0.5 sec. or longer.	• Right rear, left rear speed sensor • Each speed sensor circuit • Sensor installation • Sensor rotor
C1238/38 C1239/39	Continuous noise occurs in the speed sensor signals with the vehicle speed at 12 mph (20 km/h) or more for 5 sec. or more.	• Right rear, left rear speed sensor • Speed sensor rotor

HINT:
DTC No. C0210/33 and C1238/38 are for the right rear speed sensor.
DTC No. C0215/34 and C1239/39 are for the left rear speed sensor.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Start the inspection from step 1 in case of using the hand−held tester and start from step 2 in case of not using the hand−held tester.

1	READ VALUE OF HAND−HELD TESTER(SKID CONTROL SENSOR)

(a) Select the item ”WHEEL SPEED RL (RR)” in the DATA LIST and read its value displayed on the hand−held tester.

(b) Check that there is no difference between the speed value output from the speed sensor displayed on the hand−held tester and the speed value displayed on the speedometer when driving the vehicle.

OK: There is almost no difference from the displayed speed value.

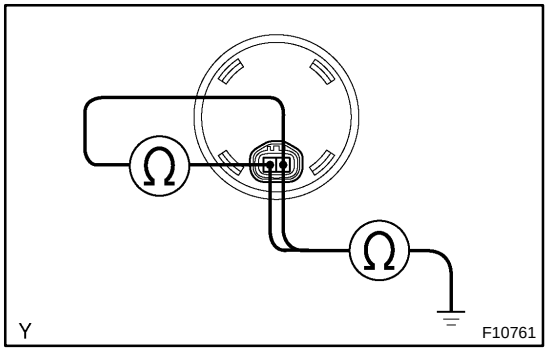
HINT:

There is tolerance of ± 10 % in the speedometer indication.

OK	CHECK AND REPLACE BRAKE ACTUATOR ASSY (SEE PAGE 32−58)

NG

2	INSPECT SKID CONTROL SENSOR



(a) Make sure that there is no looseness at the locking part and connecting part of the connector.

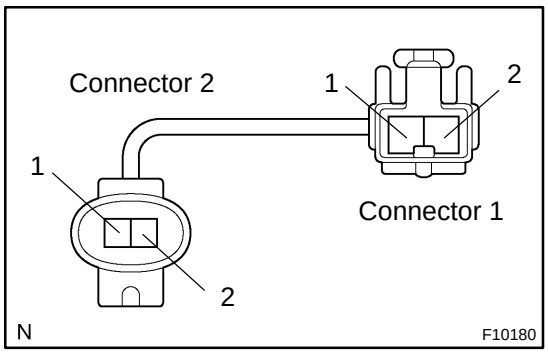
(b) Disconnect the skid control sensor connector.

(c) Measure the resistance between terminals 1 and 2 of the skid control sensor connector.

Standard: 1.3 to 1.6 kΩ at 20°C

(d) Measure the resistance between terminals 1 and 2 of the skid control sensor connector and body ground.

Standard: 10 kΩ or higher



Skid control Sensor Sub−Wire Harness:

(a) Remove the seat cushion and seatback.

(b) Make sure that there is no looseness at the locking part and connecting part of the connector.

(c) Measure the resistance between terminal 1 of connector 1 and terminal 2 of connector 2.

(d) Measure the resistance between terminal 2 of connector 1 and terminal 1 of connector 2.

Standard: 1 Ω or lower

(e) Measure the resistance between terminals 1 and 2 of speed sensor connector 1 and body ground.

Standard: 10 kΩ or higher

NG	REPLACE SKID CONTROL SENSOR OR SUB−WIRE HARNESS

NOTICE:

Check the speed sensor signal after replacement (see page 05−933).

OK

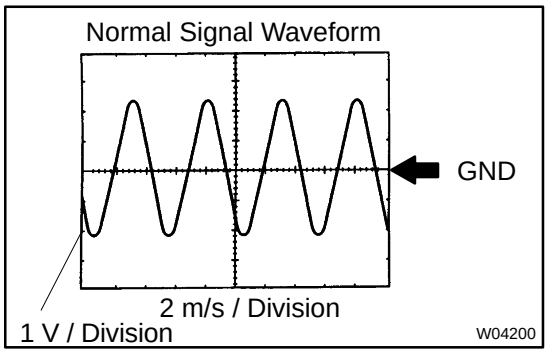
3	CHECK HARNESS AND CONNECTOR(SKID CONTROL SENSOR − BRAKE ACTUATOR ASSY)(SEE PAGE 01−32)

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4	INSPECT SENSOR AND SENSOR ROTOR SERRATIONS

(REFERENCE) INSPECTION USING OSCILLOSCOPE



(a) Connect the oscilloscope to terminals RR+ − RR− or RL+ − RL− of the skid control ECU.

(b) Drive the vehicle at about 12 mph (20 km/h) and check the signal waveform.

OK:

A waveform as shown in the figure should be output.

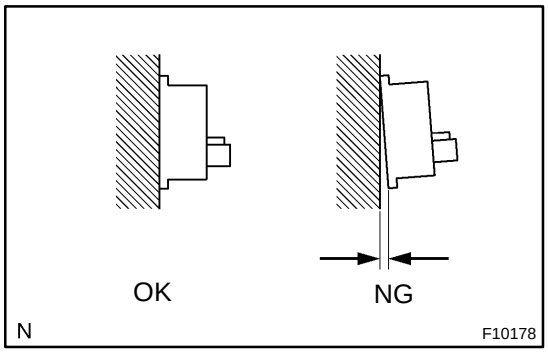
HINT:

- As the vehicle speed (rpm of the wheels) increases, a cycle of the waveform narrows and the fluctuation in the output voltage becomes greater.
- When noise is identified in the waveform on the oscilloscope, error signals are generated due to the speed sensor rotor's scratches, looseness or foreign matter attached to on it.

OK → CHECK AND REPLACE BRAKE ACTUATOR ASSY

NG

5	INSPECT SKID CONTROL SENSOR INSTALLATION



(a) Check the skid control sensor installation.

OK:

There is no clearance between the sensor and rear axle carrier.

NG → REPLACE SKID CONTROL SENSOR

NOTICE:

Check the speed sensor signal after replacement (see page 05−933).

OK

6	INSPECT SPEED SENSOR ROTOR AND SENSOR TIP

(a) Remove the skid control sensor (see page 32−68).
(b) Check the sensor tip.
OK:
No scratches or foreign matter on the sensor tip.
(c) Check the sensor rotor serrations.
OK:
No scratches, missing teeth or foreign objects.

OK → **CHECK AND REPLACE BRAKE ACTUATOR ASSY (SEE PAGE 32−58)**

NG

CLEAN OR REPLACE SPEED SENSOR AND SENSOR ROTOR

NOTICE:
Check the speed sensor signal after replacement (see page 05−933).