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 C1236/36 on page 05–464.

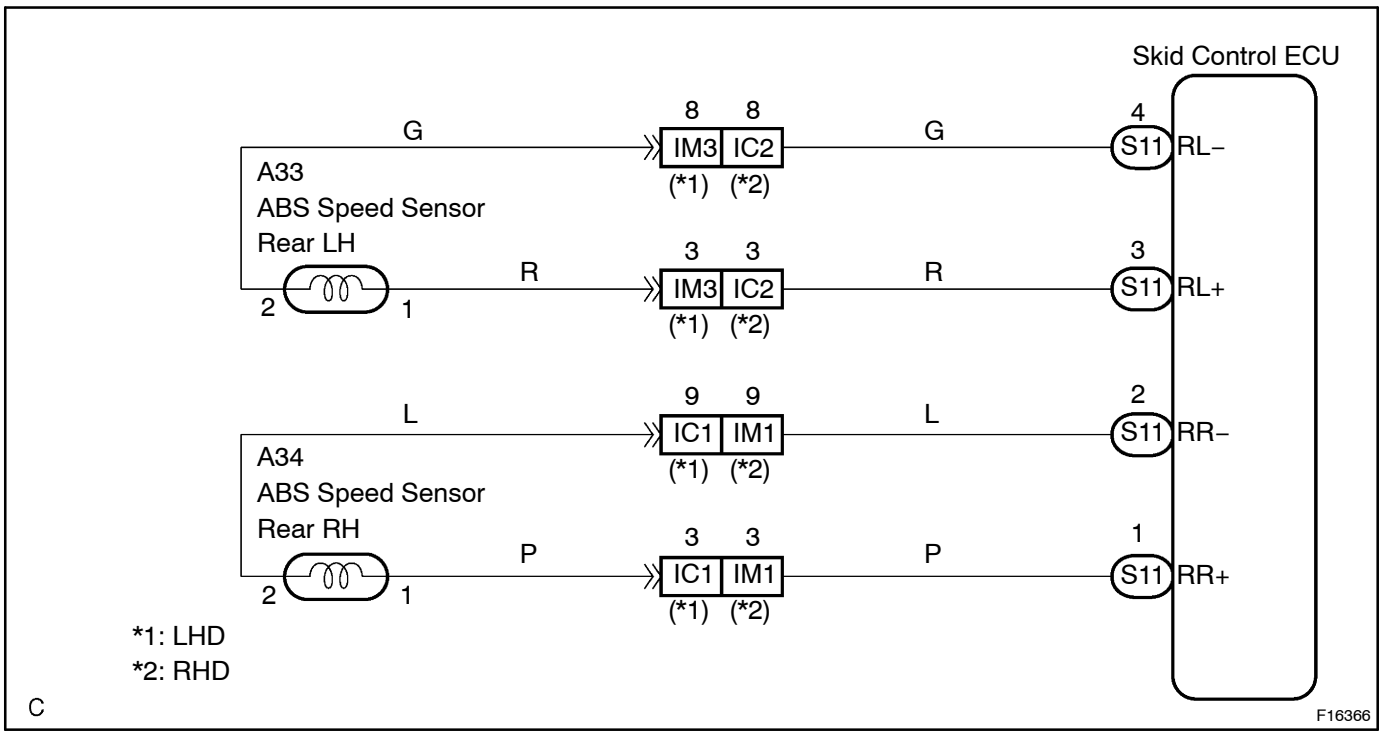
DTC No.	DTC Detecting Condition	Trouble Area
C0210/33 C0215/34	Detection of any of conditions from 1. through 4.: 1. With vehicle speed at 10 km/h or more, sensor signal circuit of faulty wheel is open or short for 15 sec. or longer. 2. Momentary interruption of sensor signal of faulty wheel has occurred 7 times or more. 3. With vehicle speed at 20 km/h or more, sensor signal of faulty wheel generated noise for 5 sec. or longer. 4. Sensor signal circuit is open for 0.025 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 to the speed sensor signals with the vehicle speed at 20 km/h (12 mph) or more continues for 5 sec or more.	• Right rear, left rear speed sensor • Speed sensor rotor

HINT:

DTC No. C0210/33, C1238/38 is for the right rear speed sensor.

DTC No. C0215/34, C1239/39 is 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 hand–held tester.

1	READ VALUE OF HAND–HELD TESTER(SPEED SENSOR OUTPUT VALUE)

(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.

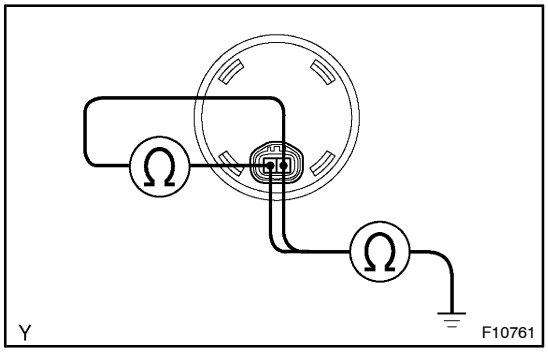
HINT:

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

OK	CHECK AND REPLACE SKID CONTROL ECU ASSY

NG

2	INSPECT SKID CONTROL SENSOR



Skid Control Sensor:

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

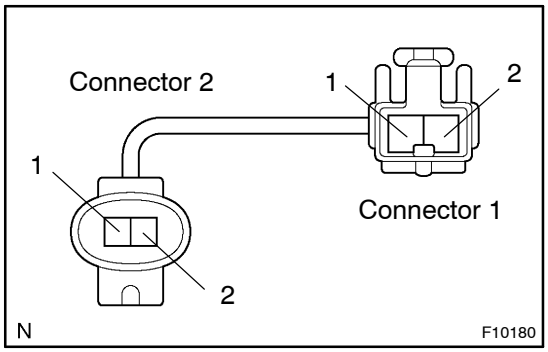
(b) Disconnect the sensor connector.

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

OK: 1.2 – 1.6 kΩ at 20°C

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

OK: 1 MΩ or higher



Rear Speed Sensor Sub–Wire Harness:

(a) Remove the seat cushion and seatback.

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

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

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

OK: 1 Ω or lower

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

OK: 10 MΩ or higher

NG	REPLACE SKID CONTROL SENSOR OR SUB–WIRE HARNESS

NOTICE:

Check the speed sensor signal last (See page 05–451).

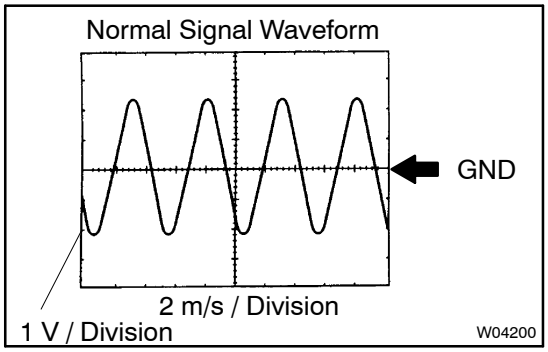
OK

3	CHECK HARNESS AND CONNECTOR(SKID CONTROL SENSOR – SKID CONTROL ECU ASSY)(See page 01–31)

NG	REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

4 CHECK SENSOR AND SENSOR ROTOR SERRATIONS



(REFERENCE) INSPECTION USING OSCILLOSCOPE

(a) Remove the skid control ECU with connectors still connected.

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

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

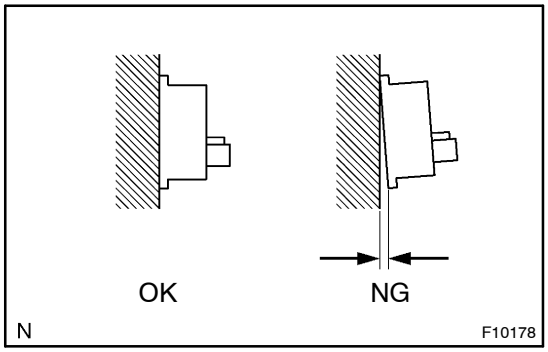
HINT:

- As the vehicle speed (rpm of the wheels) increases, a cycle of the waveform becomes shorter 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 deposited on it.

OK → **CHECK AND REPLACE SKID CONTROL ECU ASSY**

NG

5 CHECK SKID CONTROL SENSOR INSTALLATION



(a) Check the sensor installation.

OK:

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

NG → **REPAIR OR REPLACE SKID CONTROL SENSOR**

OK

6 CHECK SPEED SENSOR ROTOR AND SENSOR TIP

NG → **CLEAN OR REPLACE SPEED SENSOR AND SENSOR ROTOR SERRATIONS**

NOTICE:

Check the speed sensor signal last (See page 05–451).

OK

CHECK AND REPLACE SKID CONTROL ECU ASSY