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

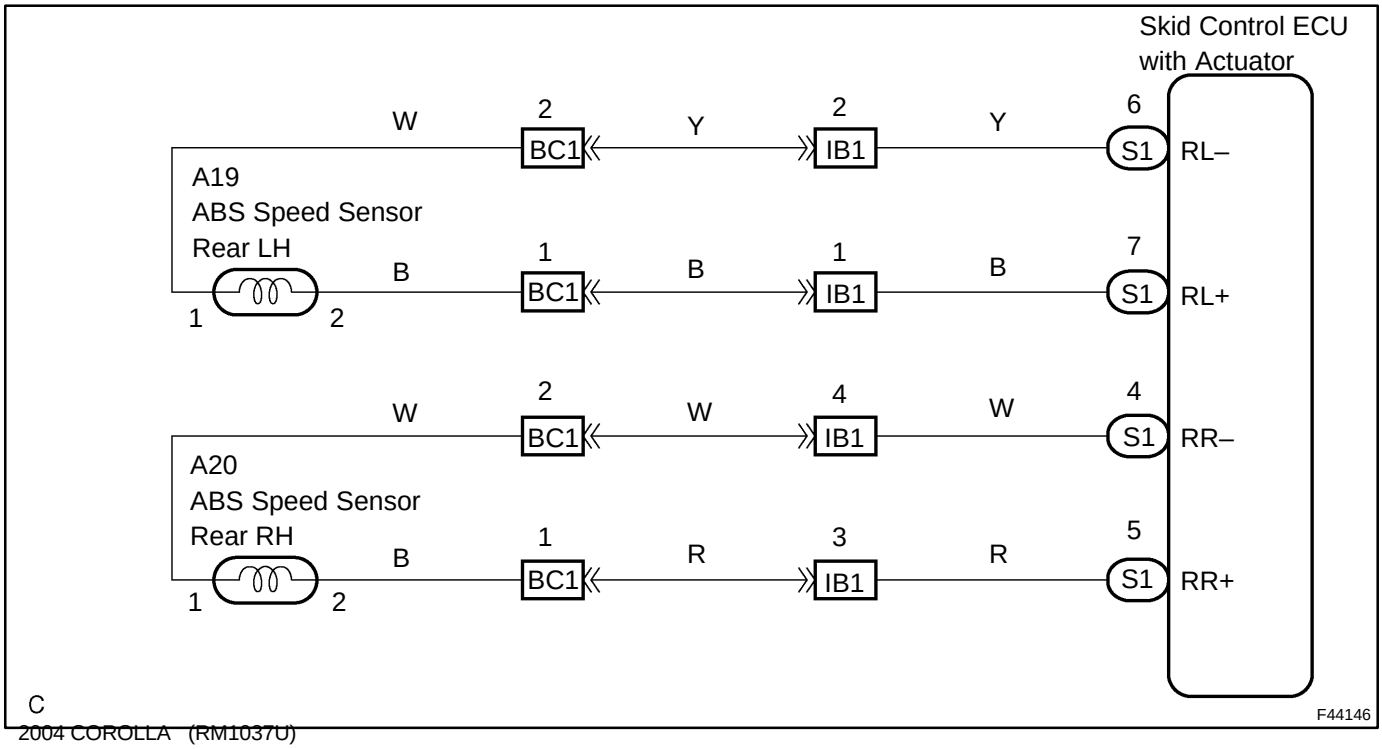
CIRCUIT DESCRIPTION

Refer to DTC C0200/31, C0205/32, C1235/35, C1236/36 on page 05–308.

DTC No.	DTC Detecting Condition	Trouble Area
C0210/33 C0215/34	Detection of any of conditions 1. through 3.: 1. At vehicle speed of 10 km/h (6 mph) or more, pulses are not input for 15 sec. 2. Momentary interruption of the speed sensor signal occurs at least 7 times in the time between switching the ignition switch ON and switching it OFF. 3. The condition that the speed sensor signal circuit is open continues for 0.5 sec. or more.	• Right rear and left rear speed sensor • Each speed sensor circuit • Speed sensor rotor
C1238/38 C1239/39	At the vehicle speed of 20 km/h (12 mph) or more, the condition that noise is included in the speed sensor signal continues for 5 sec. or more.	• Right rear and 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 the hand–held tester.

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

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

OK:

There is almost no difference in the displayed speed value.

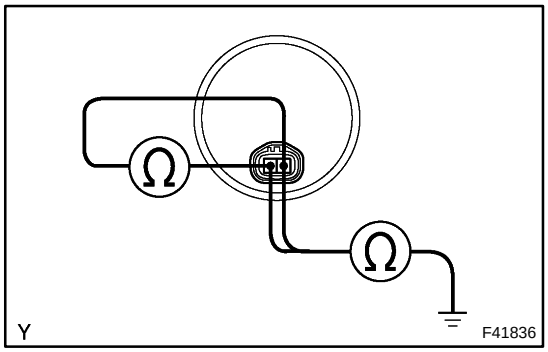
HINT:

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

OK → **Go to step 5**

NG

2	INSPECT SKID CONTROL SENSOR



(a) Disconnect the skid control sensor connector.

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

OK:

Resistance: 2.2 kΩ or less

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

OK:

Resistance: 1 MΩ or higher

NG → **REPLACE SKID CONTROL SENSOR**

NOTICE:

Check the speed sensor signal last (See page 05–297).

OK

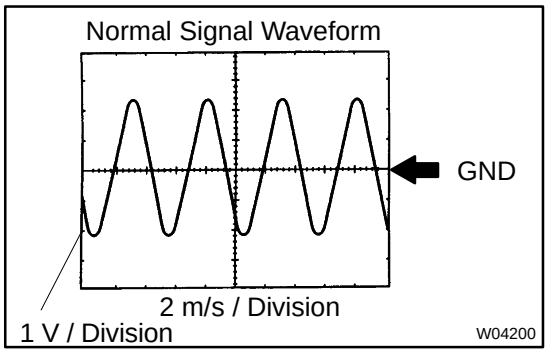
3	CHECK HARNESS AND CONNECTOR(SKID CONTROL SENSOR – SKID CONTROL ECU)

(a) Check for open and short circuit in harness and connector between each skid control sensor and skid control ECU (See page 01–30).

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

OK

4 INSPECT SENSOR AND SENSOR ROTOR SERRATIONS



(REFERENCE) INSPECTION USING OSCILLOSCOPE

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

(b) Drive the vehicle at about 30 km/h (19 mph), and check the signal waveform.

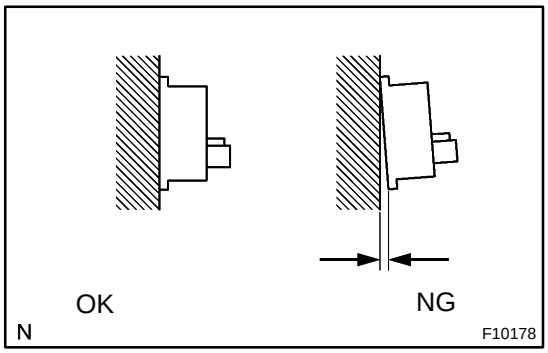
HINT:

- As the vehicle speed (wheel revolution speed) 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 BRAKE ACTUATOR ASSY**

NG

5 INSPECT SENSOR INSTALLATION



(a) Check the 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 last (See page 05–297).

OK

6 INSPECT SKID CONTROL SENSOR TIP

(a) Remove the skid control sensor (See page 32–46).

(b) Check the sensor tip.

OK:

No scratches or foreign objects on the sensor tip.

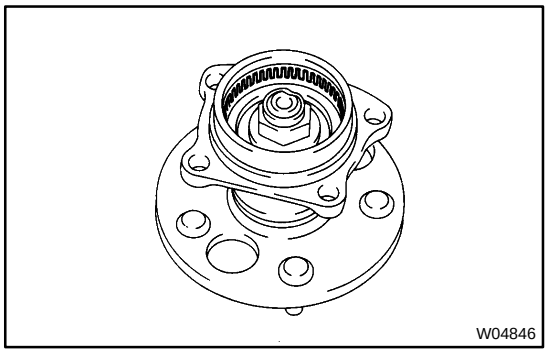
NG → **CLEAN OR REPAIR SKID CONTORL SENSOR**

NOTICE:

Check the speed sensor signal last (See page 05–297).

OK

7	INSPECT SENSOR ROTOR



(a) Check the sensor rotor serrations.
OK:
No scratches, missing teeth or foreign objects.

NG → **REPLACE REAR AXLE HUB & BEARING ASSY RH**

NG → **REPLACE REAR AXLE HUB & BEARING ASSY LH**

NOTICE:
Check the speed sensor signal last (See page 05–297).

OK

CHECK AND REPLACE BRAKE ACTUATOR ASSY (See page 05–306)

NOTICE:
Do not reuse skid control sensor.