DTC	C0210/33	RIGHT REAR SPEED SENSOR

DTC	C0215/34	LEFT REAR SPEED SENSOR

DTC	C1332/38	FOREIGN MATTER IS ATTCHEDON TIP OF RIGHT REAR SENSOR

DTC	C1333/39	FOREIGN MATTER IS ATTACHED ON TIP OF LEFT REAR SENSOR

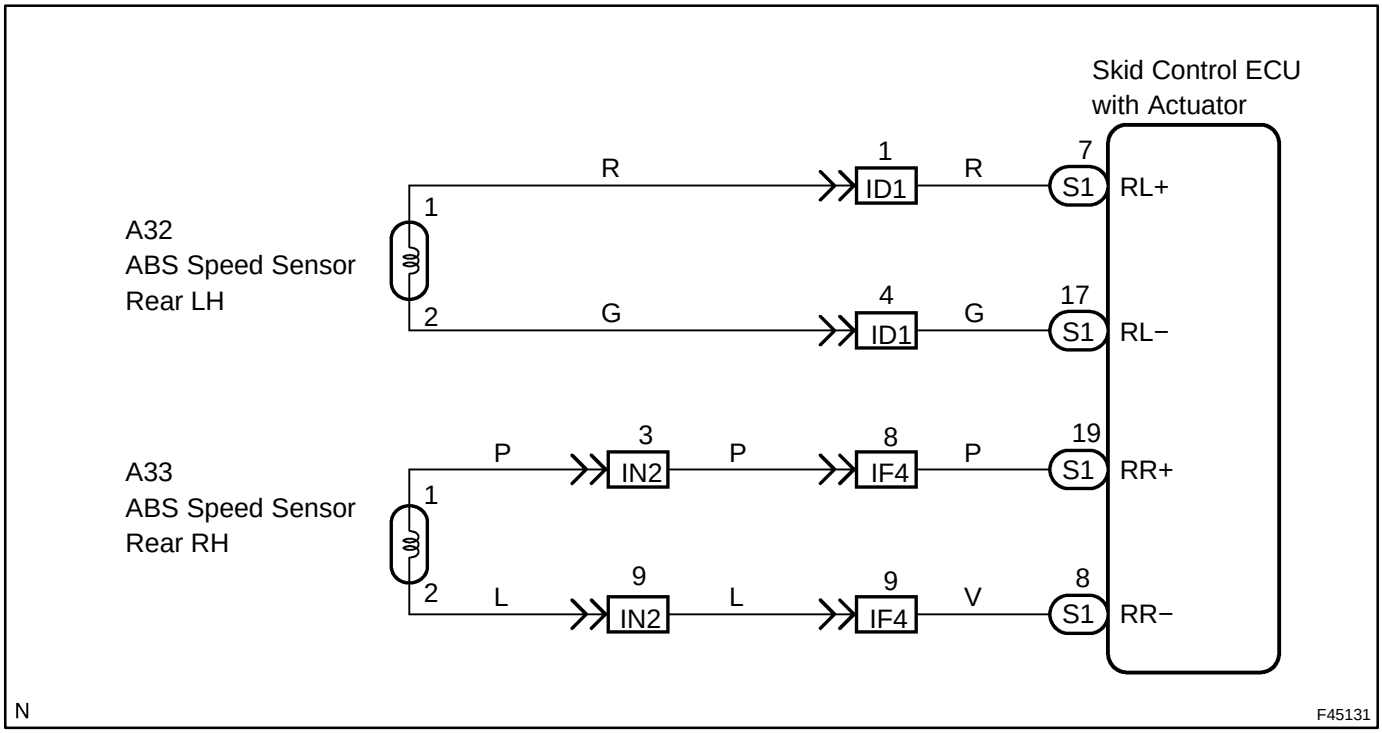
CIRCUIT DESCRIPTION

Refer to DTC C0200/31, C0205/32, C1330/35, C1331/36 on page 05−884.

DTC No.	DTC Detecting Condition	Trouble Area
C0210/33 C0215/34	When any of the following 1 to 3 is detected : 1. Non−plausible high frequent signal, high wheel acceleration or high gradient for 20 sec. with the brake pedal applied or for 5 sec. when the brake pedal is not applied. 2. After the initial start or restart and when the vehicle speed has reached 7 mph (12 km/h), the wheel speed of 0 mph (0 km/h) is detected. 3. Deviation of 2 wheel speed.	• Right rear and left rear speed sensor • Speed sensor rotor • Sensor installation
C1332/38 C1333/39	Detecting abnormality in the resistance value of each speed sensor.	• Right rear and left rear speed sensor • Speed sensor circuit • Sensor installation

HINT:
DTC No. C0210/33, C1332/38 are for the right rear speed sensor.
DTC No. C0215/34, C1333/39 are for the left rear speed sensor.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

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

1	READ VALUE OF HAND−HELD TESTER(REAR SPEED SENSOR)

(a) Connect the hand−held tester to the DLC3.

(b) Start the engine.

(c) Select the DATA LIST mode on the hand−held tester.

Item	Measurement Item / Range (Display)	Normal Condition
WHEEL SPD RR	Wheel speed sensor (RR) reading / min.: 0 km/h (0 MPH, max.: 326 km/h (202 MPH)	Actual wheel speed
WHEEL SPD RL	Wheel speed sensor (RL) reading / min.: 0 km/h (0 MPH, max.: 326 km/h (202 MPH)	Actual wheel speed

(d) 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.

Standard:

There is almost no difference in the displayed speed value.

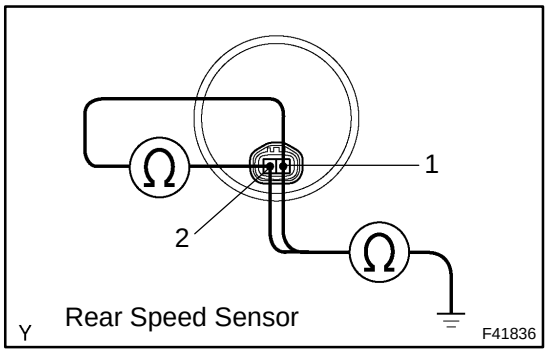
HINT:

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

OK → **Go to step 4**

NG

2 INSPECT REAR SPEED SENSOR



(a) Disconnect the rear speed sensor connector.
(b) Measure the resistance according to the value(s) in the table below.

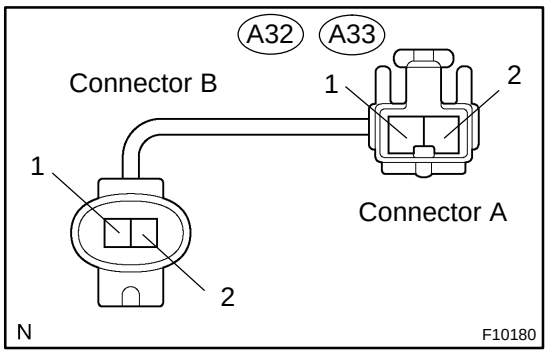
Standard:

Tester Connection	Specified Condition
1 − 2	1.3 to 1.6 kΩ at 20 °C

(c) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
1 − Body ground	10 kΩ or higher
2 − Body ground	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 connector's locking part and connecting part of the connector.
(c) Measure the resistance between terminal 1 and 2 of connector A and terminal 1 and 2 of connector B.

Standard:

LH:

Tester Connection	Specified Condition
(A32) 1 − 1	1.0 Ω or less
(A32) 2 − 2	1.0 Ω or less
(A32) 1 − (A32) 2	10 kΩ or higher

RH:

Tester Connection	Specified Condition
(A33) 1 − 1	1.0 Ω or less
(A33) 2 − 2	1.0 Ω or less
(A33) 1 − (A33) 2	10 kΩ or higher

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

Standard:

LH:

Tester Connection	Specified Condition
(A32) 1 − Body ground	10 kΩ or higher
(A32) 2 − Body ground	10 kΩ or higher

RH:

Tester Connection	Specified Condition
(A33) 1 − Body ground	10 kΩ or higher
(A33) 2 − Body ground	10 kΩ or higher

NOTICE:

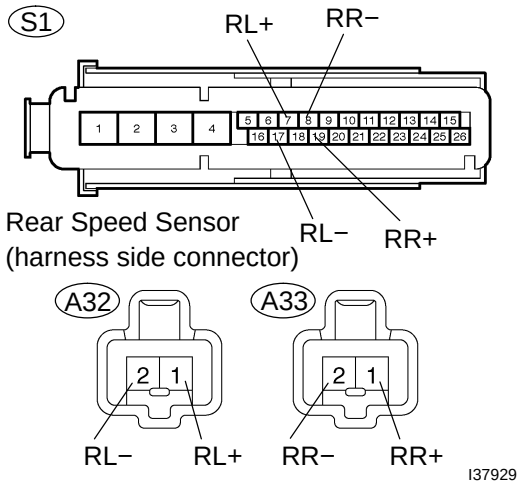
Check the speed sensor signal after replacement (See page 05−873).

NG → **REPLACE REAR SPEED SENSOR OR SUB−WIRE HARESS**

OK

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

Skid Control ECU Connector Front View



(a) Disconnect the skid control ECU connector and the rear speed sensor connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard:

LH:

Tester Connection	Specified Condition
A32–1 (RL+) – S1–7 (RL+)	Below 1 Ω
A32–2 (RL–) – S1–17 (RL–)	Below 1 Ω

RH:

Tester Connection	Specified Condition
A33–1 (RR+) – S1–19 (RR+)	Below 1 Ω
A33–2 (RR–) – S1–8 (RR–)	Below 1 Ω

(c) Measure the resistance according to the value(s) in the table below.

Standard:

LH:

Tester Connection	Specified Condition
A32–1 (RL+) – Body ground	10 kΩ or higher
A32–2 (RL–) – Body ground	10 kΩ or higher

RH:

Tester Connection	Specified Condition
A33–1 (RR+) – Body ground	10 kΩ or higher
A33–2 (RR–) – Body ground	10 kΩ or higher

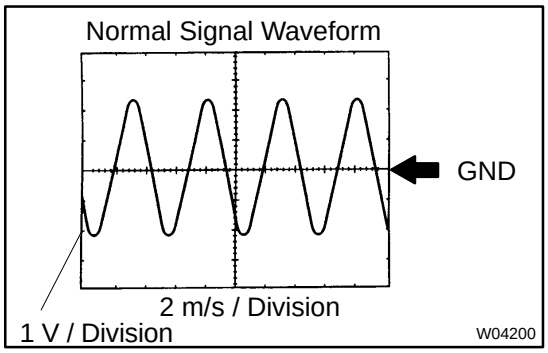
NOTICE:

Check the speed sensor signal after replacement (See page 05–873).

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

OK

4 INSPECT SENSOR AND SENSOR ROTOR SERRATIONS



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 19 mph (30 km/h), and check the signal waveform.

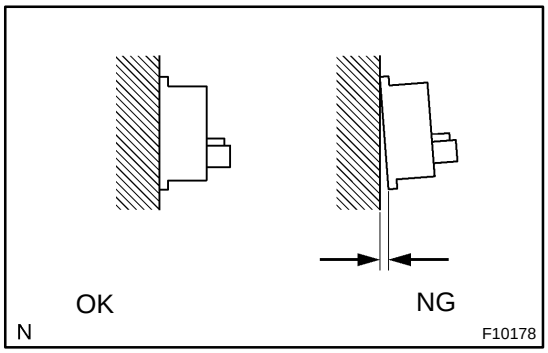
Standard:

- **As vehicle speed (wheel revolution speed) 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 it.**

OK	**REPLACE BRAKE ACTUATOR ASSY (See page 32−58)**

NG

5 INSPECT REAR SPEED SENSOR INSTALLATION



(a) Check the rear speed sensor installation.

Standard:

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

NOTICE:

Check the speed sensor signal after replacement (See page 05−873).

NG	**REPLACE REAR SPEED SENSOR (See page 32−68)**

OK

6 INSPECT SPEED SENSOR TIP

(a) Remove the skid control sensor (See page 32−68).

(b) Check the sensor tip.

Standard:

No scratches or foreign matter on the sensor tip.

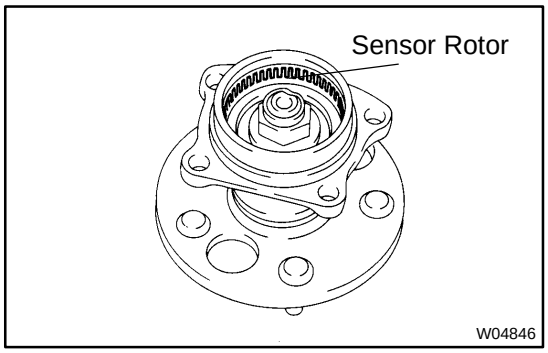
NOTICE:

Check the speed sensor signal after replacement (See page 05−873).

NG	**REPLACE REAR SPEED SENSOR (See page 32−68)**

OK

7	INSPECT SENSOR ROTOR



(a) Check the sensor rotor serrations.

Standard:

No scratches, missing teeth or foreign matter.

NOTICE:

Check the speed sensor signal after replacement (See page 05–873).

NG → **REPLACE REAR AXLE HUB & BEARING ASSY (See page 32–68)**

OK

REPLACE BRAKE ACTUATOR ASSY (See page 32–58)