

DTC	C1776/76	Speed Sensor Circuit
DTC	C1784/84	Right Rear Speed Sensor Circuit
DTC	C1785/85	Left Rear Speed Sensor Circuit

DESCRIPTION

The speed sensor monitors the speed of a wheel, and sends an appropriate speed signal to the suspension control ECU through the brake actuator assembly (skid control ECU).

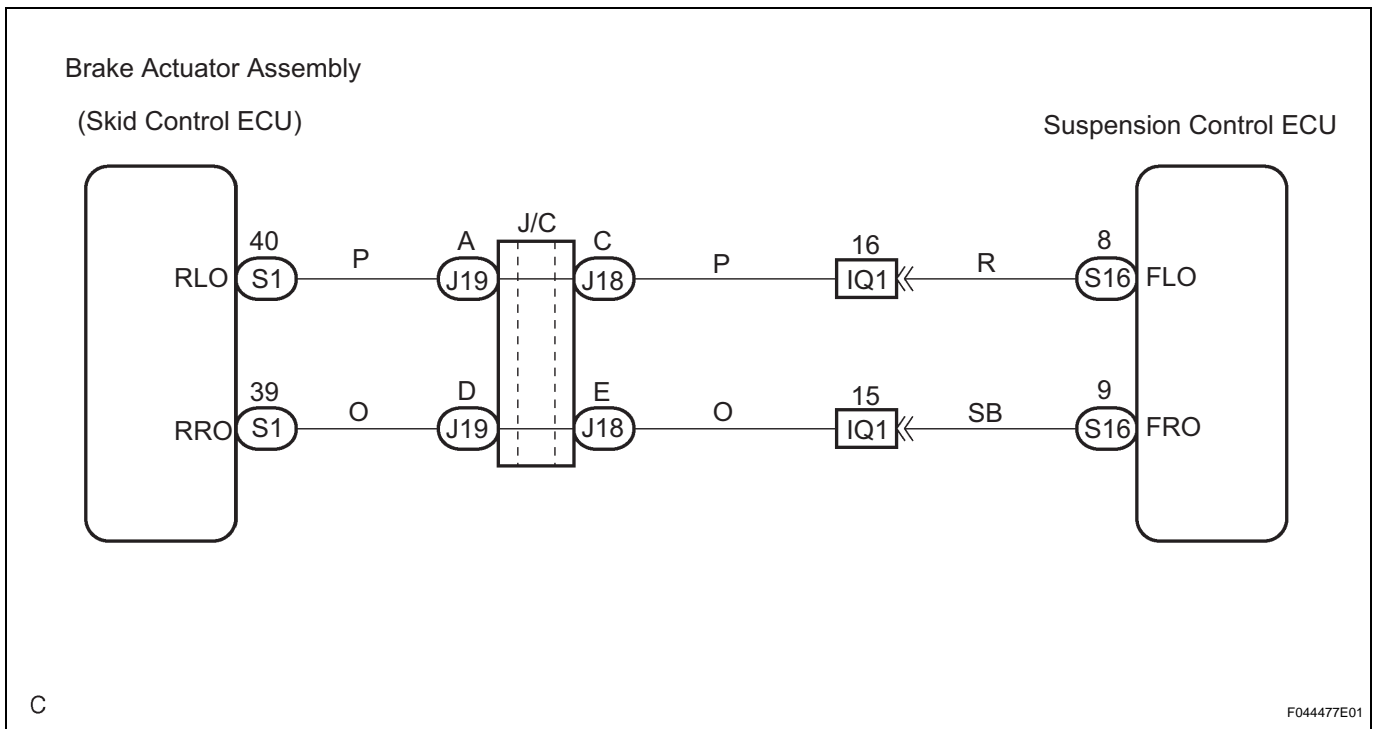
If trouble occurs in the either right rear speed sensor or left rear speed sensor, the DTC (C1776/76) is output. When inspecting by test mode, the suspension control ECU scans changes of the signals. If there is no change, it outputs the test DTC (C1784/84, C1785/85).

DTC No.	DTC Detecting Condition	Trouble Area
C1776/76	Speed sensor circuit malfunction.	<ul style="list-style-type: none"> Speed sensor Speed sensor circuit Brake actuator assembly (Skid control ECU) Suspension control ECU

HINT:

When DTC C1784/84 and C1785/85 are output, follow the same procedure as DTC 1776/76.

WIRING DIAGRAM



HINT:

Start the inspection from step 1 when using the intelligent tester, and start from step 2 when not using the intelligent tester.

1	READ VALUE OF INTELLIGENT TESTER
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(a) Connect the intelligent tester to the DLC3.

- (b) Turn the ignition switch to the ON position, and push the intelligent d tester main switch on.
- (c) Select the item below in the DATA LIST, and read its value displayed on the intelligent tester.

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Item	Normal Condition
RR WHEEL SPD	Actual right rear wheel speed
RL WHEEL SPD	Actual left rear wheel speed

- (d) Check that there is no difference between the speed value output from the speed sensor displayed on the intelligent tester and the speed value displayed on the speedometer when driving the vehicle.

OK:

There is almost no difference in the displayed speed values.

HINT:

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

NG → **Go to step 2**

OK

REPLACE SUSPENSION CONTROL ECU

2 CHECK CIRCUIT INDICATED BY OUTPUT CODE

- (a) Check if the normal code is output by VSC system (See page [BC-3](#)).

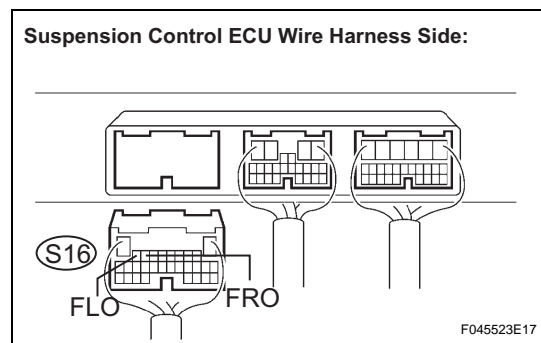
OK:

No DTC output from VSC system.

NG → **REPAIR DTC OUTPUT**

OK

3 CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - BRAKE ACTUATOR ASSEMBLY)



- (a) Disconnect the suspension control ECU S16 connector.
- (b) Disconnect the brake actuator assembly S1 connector.
- (c) Measure the resistance according to the values in the table below.

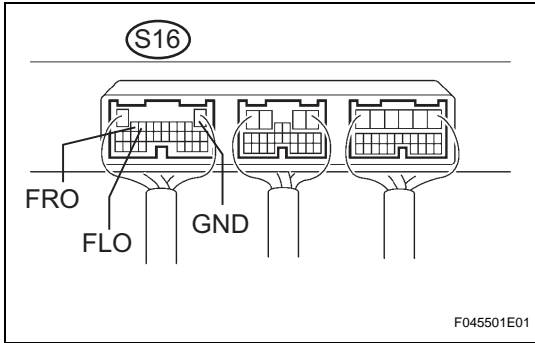
Resistance

Tester Connection	Specified Condition
S16-8 (FLO) - S1-40 (RLO)	Below 1 Ω
S16-29 (FRO) - S1-39 (RRO)	Below 1 Ω
S16-8 (FLO) - Body ground	10 kΩ or higher
S16-9 (FRO) - Body ground	10 kΩ or higher

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

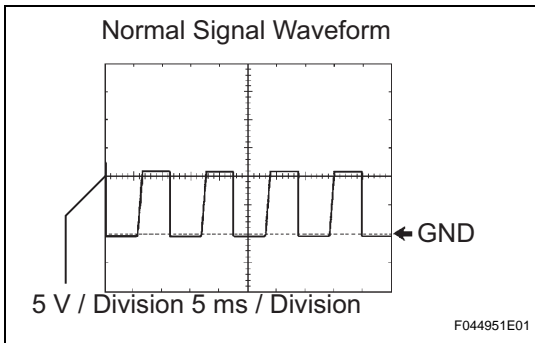
OK

4 INSPECT SUSPENSION CONTROL ECU



- (a) Connect the suspension control ECU S16 connector.
- (b) Remove the suspension control ECU with connector being connected.
- (c) Connect the brake actuator assembly S1 connector.
- (d) Turn the ignition switch to the ON position.
- (e) Check output waveform.
 - (1) Using an oscilloscope, connect the terminals, as shown in the chart.

Measure Point	Tester Connection
Rear RH	S16-9 (FRO) - S16-1 (GND)
Rear LH	S16-8 (FLO) - S16-1 (GND)



- (2) Drive the vehicle at about 20 km/h (12 mph), and check the output waveform.

OK:

The output waveform appears as shown in the illustration.

Item	Contents
Tool setting	5 V / DIV, 5 ms / DIV
Vehicle condition	When drive the vehicle at about 20 km/h 12 (mph)

HINT:

As the vehicle speed becomes higher, the waveform cycle gets shorter.

NG **REPLACE BRAKE ACTUATOR ASSEMBLY**

OK

REPLACE SUSPENSION CONTROL ECU