DTC	C1779/79	Crankshaft Position Sensor Circuit

DTC	C1797/97	Crankshaft Position Sensor Circuit

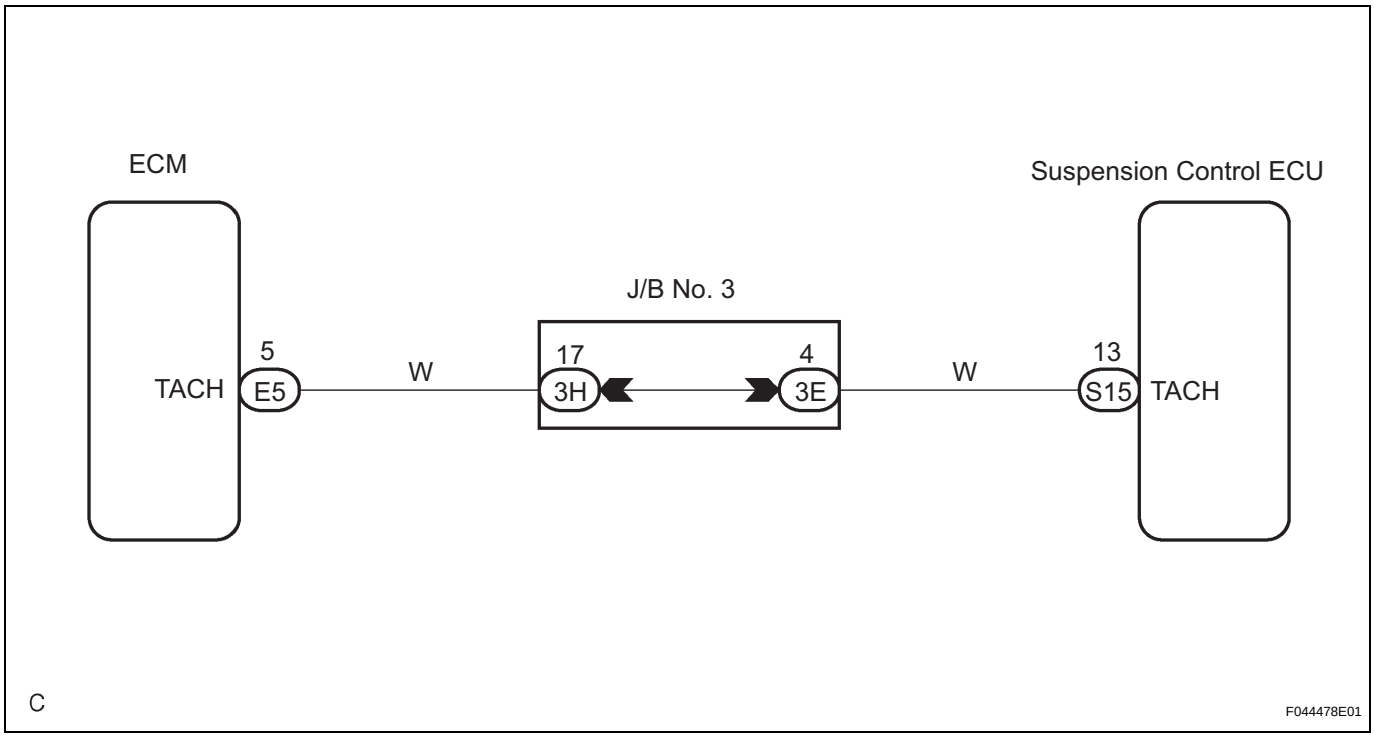
DESCRIPTION

The suspension control ECU receives the engine speed signal from the ECM.
When inspecting by test mode, the suspension control ECU scans changes in the signals. If there is no change, it outputs the test DTC (C1797/97).

DTC No.	DTC Detecting Condition	Trouble Area
C1779/79	TACH signal is not sent to suspension control ECU, and the vehicle is driven for 10 sec. or more at the speed of 30 km/h (19 mph) or higher.	• Crankshaft position sensor • Crankshaft position sensor circuit • ECM • Suspension control ECU

HINT:
When DTC C1797/97 is output, follow the same procedure as that of DTC1779/79.

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.

SC

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position, and push the intelligent tester main switch on.
(c) Select the item below in the DATA LIST, and read its value displayed on the intelligent tester.

AIRSUS

Item	Normal Condition
ENGINE SPD	Actual engine speed

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

OK:

There is almost no difference in the displayed engine speed values.

HINT:

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

NG → **Go to step 2**

OK →

REPLACE SUSPENSION CONTROL ECU

2 CHECK DTC OUTPUT

(a) Check if the normal code is output by SFI system (See page ES-4).

OK:

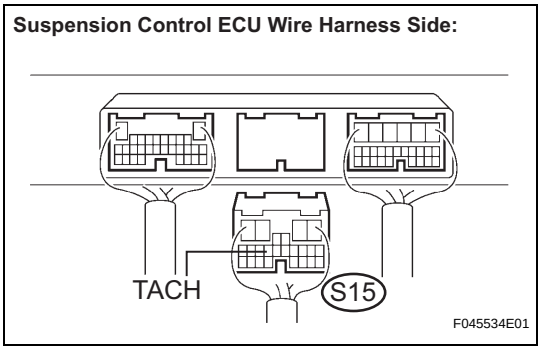
No DTC output from SFI system.

NG → **REPAIR CIRCUIT INDICATED BY OUTPUT CODE**

OK →

3 CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - ECM)

Suspension Control ECU Wire Harness Side:



(a) Disconnect the suspension control ECU S15 connector.

(b) Disconnect the ECM E5 connector.

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

Resistance

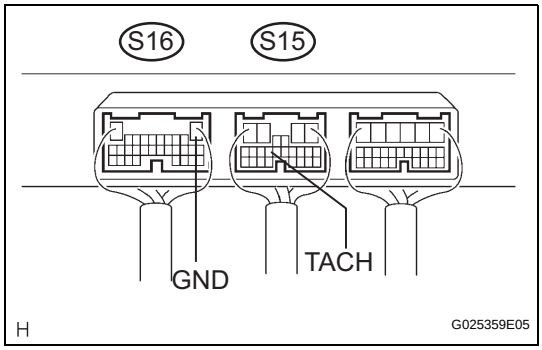
Tester Connection	Specified Condition
S15-13 (TACH) - E5-5 (TACH)	Below 1 Ω
S15-13 (TACH) - Body ground	10 kΩ or higher

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

OK →

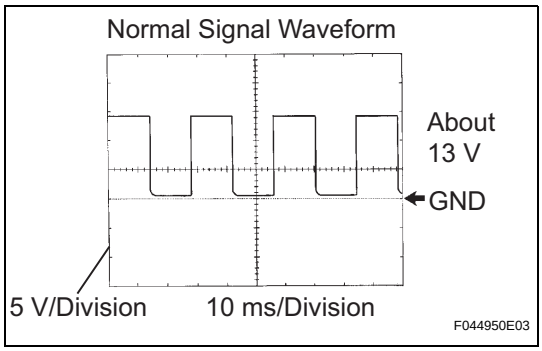
SC

4	INSPECT SUSPENSION CONTROL ECU (TACH)



(a) Connect the suspension control ECU S15 connector.
(b) Connect the ECM E5 connector.
(c) Remove the ECM with connector being connected.
(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 below.

Tester Connection
S15-13 (TACH) - S16-1 (GND)



(2) With the engine idling, check the output waveform.
OK:
The output waveform appears as shown in the illustration.

Item	Contents
Tool setting	5V / DIV, 10 ms / DIV
Vehicle condition	When engine idling

HINT:
As the engine speed becomes higher, the waveform cycle gets shorter.

NG → **REPLACE ECM**

OK

REPLACE SUSPENSION CONTROL ECU