

DTC**C2177/77****Initialization not Completed****DESCRIPTION**

The initialization procedure starts when the tire pressure warning reset switch is pressed for 3 seconds or more with the ignition switch in the ON position.

The tire pressure warning ECU registers the tire pressure data by the signals from the tire pressure warning valve and transmitter, and start the tire pressure warning light blinking 3 times at 1 second intervals.

DTC No.	DTC Detection Condition	Trouble Area
C2177/77	Initialization not complete after vehicle driven at 5 mph (8 km/h) or more for total of 20 minutes or more.	<ul style="list-style-type: none"> Tire pressure warning valve and transmitter Tire pressure warning ECU

NOTICE:

- When replacing the tire pressure warning ECU, read the IDs stored in the ECU using the intelligent tester and note them down before removal (See page TW-28).
- It is necessary to perform initialization (See page TW-15) after registration (See page TW-11) the transmitter IDs into the tire pressure warning ECU after the tire pressure warning ECU and/or tire pressure warning valve and transmitter have been replaced.

1**CHECK DTC**

(a) Check for DTCs (See page TW-26).

Result

Result	Proceed to
DTC C2177 output with another DTCs	A
Only DTC C2177 output	B

TW**HINT:**

- When the tire pressure warning ECU receives no signals for several minutes after the initialization procedure has finished, a DTC is output.
- When only DTC C2177 is output, refer to the other troubleshooting procedure (See page TW-37).

B

GO TO OTHER PROBLEM (MALFUNCTION IN TRANSMISSION OR RECEPTION)

A

INSPECTION PROCEDURE RELEVANT TO OUTPUT DTC

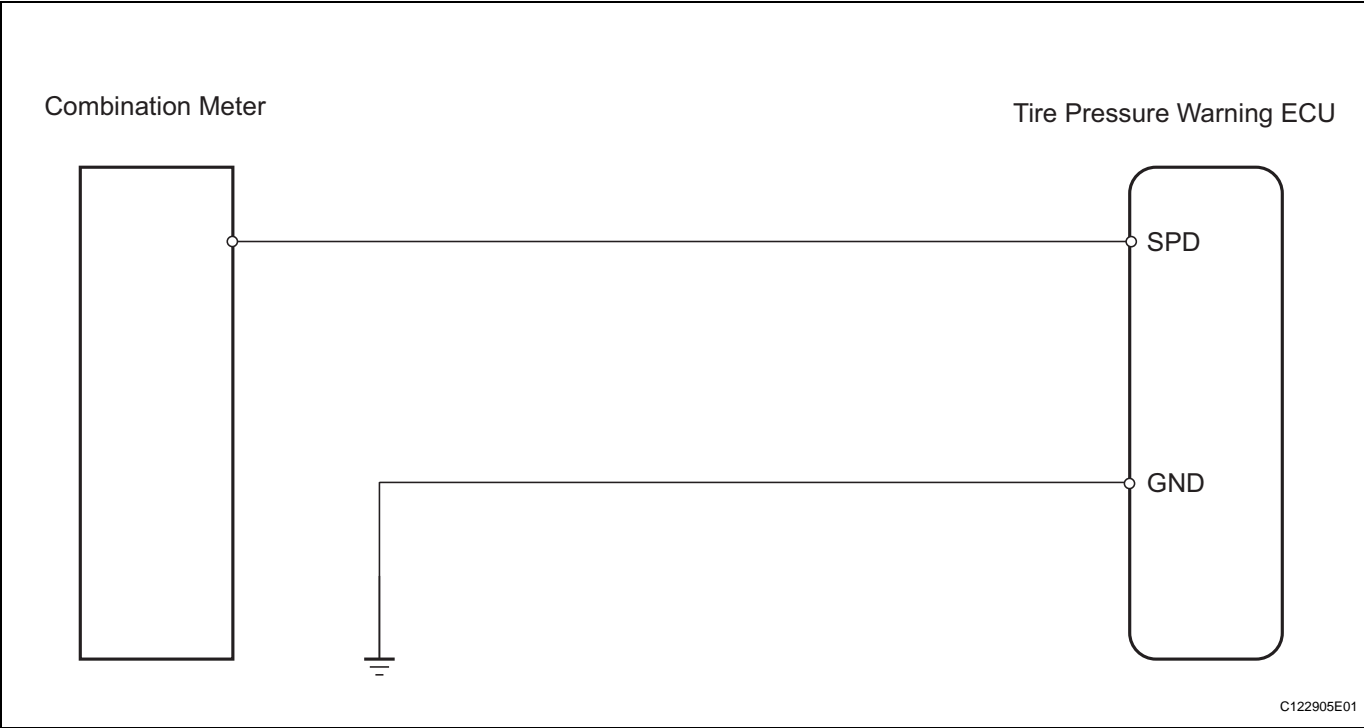
DTC	C2191/91	Vehicle Speed Signal Error (Test Mode DTC)
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DESCRIPTION

The tire pressure warning ECU receives a speed signal from the combination meter. This DTC is stored upon entering test mode, and cleared when a vehicle speed signal of 12 mph (20 km/h) is detected for 3 seconds or more. The DTC is output only during test mode.

DTC No.	DTC Detection Condition	Trouble Area
C2191/91	Speed sensor signal circuit malfunction.	<ul style="list-style-type: none">Combination meterVehicle speed sensorTire pressure warning ECUWire harness or connector

WIRING DIAGRAM



NOTICE:

- When replacing the tire pressure warning ECU, read the IDs stored in the ECU using the intelligent tester and note them down before removal (See page TW-28).
- It is necessary to perform initialization (See page TW-15) after registration (See page TW-11) the transmitter IDs into the tire pressure warning ECU after the tire pressure warning ECU and/ or tire pressure warning valve and transmitter have been replaced.

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 turn the intelligent tester on.

- (c) Select the item shown in the table below from the DATA LIST, and read the value displayed on the intelligent tester.

HINT:

Enter the following menus: Chassis/TPWS/DATA LIST

VEHICLE SPEED

Item	Normal Condition
VEHICLE SPEED	Actual vehicle speed

- (d) Check that the values indicated on the tester and on the combination meter are the same.

OK:

Vehicle speed displayed on the intelligent tester indicates the actual vehicle speed.

OK

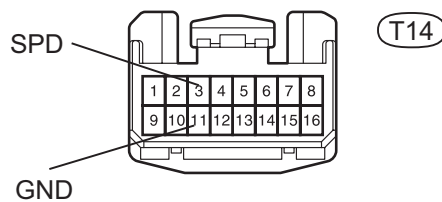
REPLACE TIRE PRESSURE WARNING ECU

NG

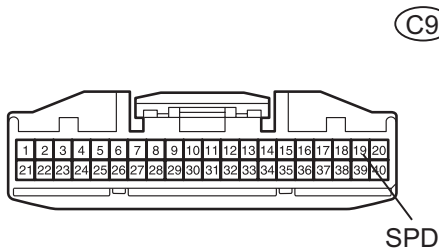
2

CHECK HARNESS AND CONNECTOR (TIRE PRESSURE WARNING ECU - COMBINATION METER)

Tire Pressure Warning ECU
(harness side):



Combination Meter (harness side):



C124992E01

- (a) Disconnect the connectors from the combination meter and tire pressure warning ECU.
(b) Measure the resistance.

Standard resistance

Tester Connection	Specified Condition
SPD (T14-3) - SPD (C9-19)	Below 1 Ω
SPD (T14-3) - Body ground	10 k Ω or higher
GND (T14-11) - Body ground	Below 1 Ω

Reconnect the connectors.

NG

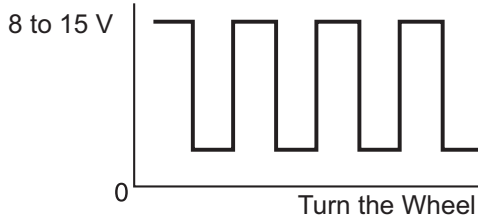
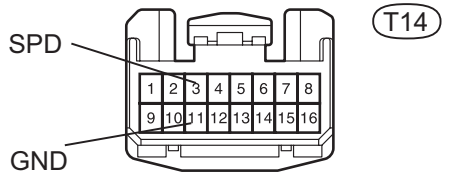
REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

TW

3 INSPECT TIRE PRESSURE WARNING ECU

Tire Pressure Warning ECU
(harness side):



C124993E02

- (a) Disconnect the connector from the tire pressure warning ECU.
- (b) Check the voltage
 - (1) Move the shift lever to the neutral position.
 - (2) Jack up one of the rear wheels.
 - (3) Turn the ignition switch to the ON position.
 - (4) Measure the voltage between terminals SPD and GND of the tire pressure warning ECU as the rear tire is turned slowly.

OK:

Voltage is generated intermittently.

HINT:

As the vehicle speed (wheel revolution speed) increases, the cycle of the fluctuation in the waveform becomes faster.

NG

CHECK COMBINATION METER (SPEED SIGNAL CIRCUIT)

OK

REPLACE TIRE PRESSURE WARNING ECU