

DTC**C2191/91****Vehicle Speed Signal Error (Test Mode DTC)****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 20 km/h (12 mph) is detected for 3 seconds or more. This DTC is output only in test mode.

DTC Code	Detection Condition	Trouble Area
C2191/91	Speed sensor circuit malfunction	- Vehicle speed sensor - Combination meter - Wire harness or connector - Tire pressure warning ECU

WIRING DIAGRAM**INSPECTION PROCEDURE****NOTICE:**

- When replacing the tire pressure warning ECU, read the IDs stored in the ECU using the intelligent tester and write them down before removal.
- It is necessary to perform registration (see page [TW-13](#)) of the transmitter IDs into the tire pressure warning ECU after the ECU have been replaced.

1**READ VALUE ON INTELLIGENT TESTER**

- Turn the ignition switch OFF.
- Connect the intelligent tester to the DLC3.
- Turn the ignition switch ON, and turn the intelligent tester on.

- (d) Select the item below in the Data List, and read the value displayed on the intelligent tester.

Tire pressure warning ECU

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
VEHICLE SPD	Vehicle speed/ min.: 0 km/h (0 mph), max.: 255 km/h (158 mph)	Almost same as actual vehicle speed	-

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

OK:

The vehicle speed displayed on the tester changes depending on the actual vehicle speed.

NG

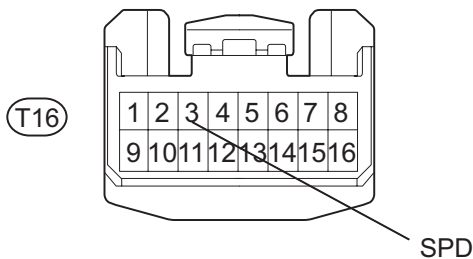
GO TO METER / GAUGE SYSTEM (See page ME-4)

OK

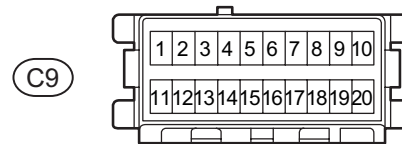
2

CHECK HARNESS AND CONNECTOR (ECU - COMBINATION METER)

Front view of wire harness connector:
(to Tire Pressure Warning ECU)



Front view of wire harness connector:
(to Combination Meter)



C150489E01

- (a) Disconnect the T16 ECU connector.
(b) Disconnect the C9 meter connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
T16-3 (SPD) - C9-5	Always	Below 1 Ω
T16-3 (SPD) or C9-5 - Body ground	Always	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE TIRE PRESSURE WARNING ECU (See page TW-78)

TW

Tire Pressure Warning Light Circuit

DESCRIPTION

If the ECU detects trouble, the tire pressure warning light blinks and the tire pressure monitor is canceled at the same time. At this time, the ECU records a DTC in the memory.

Connecting terminals TC and CG of the DLC3 makes the tire pressure warning light blink and output the DTC.

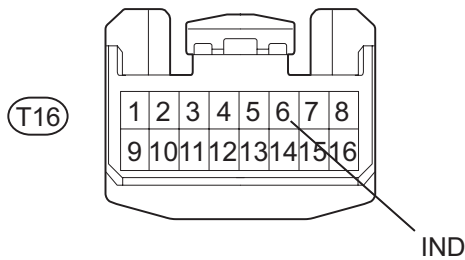
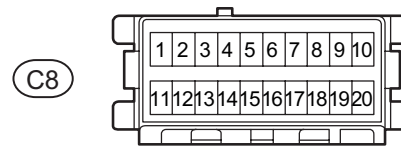
WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

It is necessary to perform registration (see page [TW-13](#)) of the transmitter IDs into the tire pressure warning ECU after the ECU has been replaced.

1**CHECK HARNESS AND CONNECTOR (COMBINATION METER - TIRE PRESSURE WARNING ECU)**Front view of wire harness connector:
(to Tire Pressure Warning ECU)Front view of wire harness connector:
(to Combination Meter)

C150489E02

- (a) Disconnect the C8 combination meter connector.
- (b) Disconnect the T16 tire pressure warning ECU connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard resistance

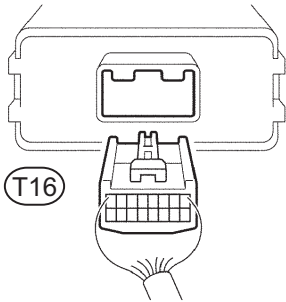
Tester Connection	Condition	Specified Condition
T16-6 (IND) - C8-1	Always	Below 1 Ω
T16-6 (IND) or C8-1 - Body ground	Always	10 k Ω or higher

NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****TW**

2

CHECK COMBINATION METER

Component without harness connected:
(Tire Pressure Warning ECU)



- (a) Disconnect the connector from the tire pressure warning ECU.
- (b) Turn the ignition switch ON, and check the condition of the tire pressure warning light illumination.

Result

Condition	Proceed to
Illuminates	A
Does not illuminate	B

B

REPLACE COMBINATION METER (See page ME-59)

A

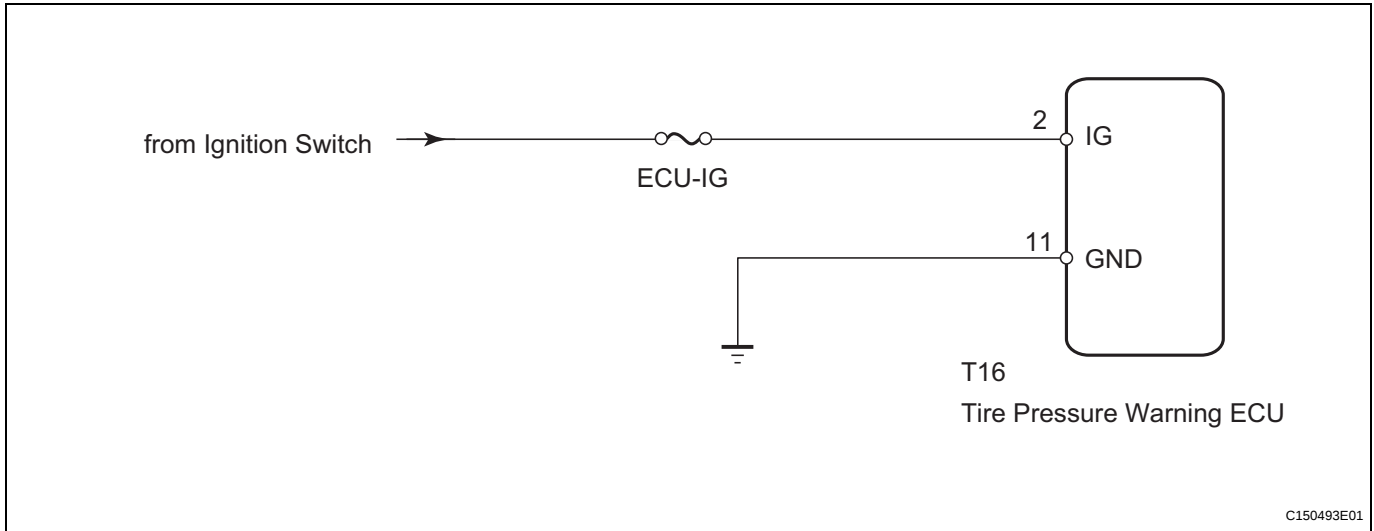
REPLACE TIRE PRESSURE WARNING ECU (See page TW-78)

ECU Power Source Circuit

DESCRIPTION

This is the power source for the tire pressure warning ECU.

WIRING DIAGRAM



TW

INSPECTION PROCEDURE

NOTICE:

It is necessary to register an ID code after replacing the tire pressure warning valve and transmitter and/or the tire pressure warning ECU (see page [TW-13](#)).

1 INSPECT FUSE (ECU-IG)

- Remove the ECU-IG fuse from the instrument panel junction block.
- Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
ECU-IG fuse	Always	Below 1 Ω

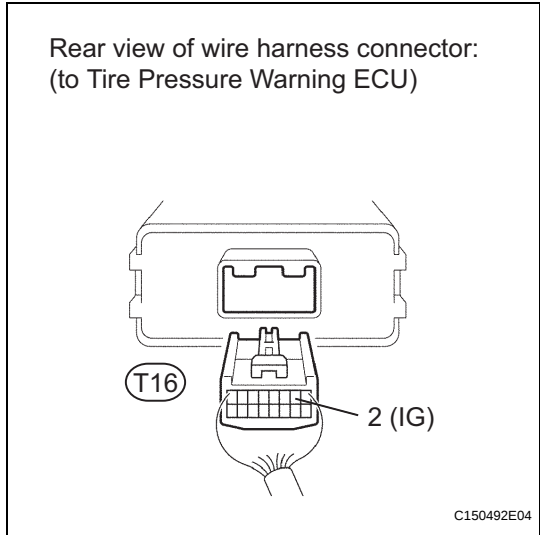
NG

Go to step 4

OK

2

CHECK HARNESS AND CONNECTOR (ECU - BATTERY AND BODY GROUND)



- (a) Disconnect the T16 ECU connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Switch Condition	Specified Condition
T16-2 (IG) - Body ground	Ignition switch ON	10 to 14 V
	Ignition switch OFF	Below 1 V

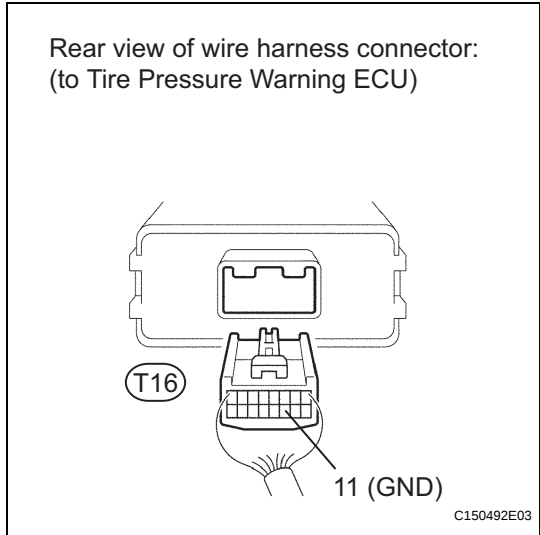
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

3

CHECK HARNESS AND CONNECTOR (ECU - BODY GROUND)



- (a) Disconnect the T16 ECU connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
T16-11 (GND) - Body ground	Always	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

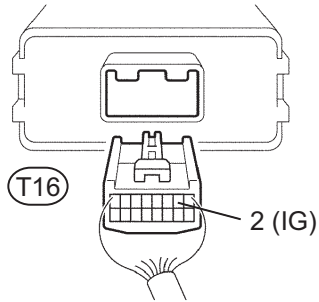
OK

REPLACE TIRE PRESSURE WARNING ECU (See page TW-78)

4

CHECK HARNESS AND CONNECTOR (ECU - BODY GROUND)

Rear view of wire harness connector:
(to Tire Pressure Warning ECU)



C150492E04

- (a) Disconnect the T16 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
T16-2 (IG) - Body ground	Always	10 k Ω or higher

NG

**REPLACE FUSE AND REPAIR OR REPLACE
HARNESS OR CONNECTOR**

OK

REPLACE FUSE

TW