

Last Modified: 11-13-2015	6.6 D	Doc ID: RM000001F0B09GX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE AND WHEEL SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING; 2016 MY Tacoma [08/2015 -]		

HOW TO PROCEED WITH TROUBLESHOOTING

1. DIAGNOSIS OF TIRE VIBRATION

1.	TIGHTEN WHEEL NUTS
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NEXT



2.	INSPECT TIRES INFO
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NG Go to step 3

OK Go to step 4

3.	REPAIR OR REPLACE TIRE(S)
----	---------------------------

NEXT



4.	INSPECT AND/OR ADJUST WHEEL BALANCE INFO
----	--

NEXT



5.	INSPECT FRONT AXLE HUB BEARING LOOSENESS AND AXLE HUB RUNOUT INFO
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NG Go to step 6

OK  Go to step 7

6.	REPAIR FRONT AXLE HUB BEARING LOOSENESS AND AXLE HUB RUNOUT INFO
----	--

NEXT



7.	INSPECT REAR AXLE HUB BEARING LOOSENESS AND AXLE HUB RUNOUT INFO
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NG  Go to step 8

OK  Go to step 9

8.	REPAIR REAR AXLE HUB BEARING LOOSENESS AND AXLE HUB RUNOUT INFO
----	---

NEXT



9.	PERFORM ROAD TEST
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NEXT  RETURN VEHICLE TO CUSTOMER

2. DIAGNOSIS OF IRREGULAR TIRE WEAR

1.	INSPECT TIRES INFO
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OK  Go to step 3

NG



2.	REPAIR OR REPLACE TIRE(S)
----	---------------------------

NEXT



3.	INSPECT AND/OR ADJUST FRONT WHEEL ALIGNMENT INFO
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NEXT



4.	PERFORM ROAD TEST
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NEXT  RETURN VEHICLE TO CUSTOMER



Last Modified: 11-13-2015	6.6 G	Doc ID: RM00000170W00SX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE AND WHEEL SYSTEM: INSPECTION; 2016 MY Tacoma [08/2015 -]		

INSPECTION

1. INSPECT TIRES

(a) Check the tires for wear and proper inflation pressure.

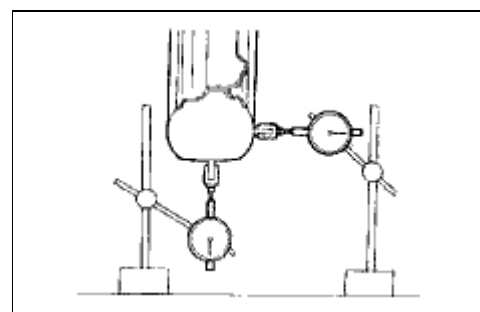
Standard Cold Tire Inflation Pressure:

TIRE SIZE	FRONT WHEEL KPA (KGF/CM ² , PSI)	REAR WHEEL KPA (KGF/CM ² , PSI)	SPARE WHEEL KPA (KGF/CM ² , PSI)
P245/75R16 109S	220 (2.2, 32)	220 (2.2, 32)	220 (2.2, 32)
P265/70R16 112T	210 (2.1, 30)	210 (2.1, 30)	210 (2.1, 30)
P265/65R17 110S	200 (2.0, 29)	200 (2.0, 29)	200 (2.0, 29)
P265/60R18 109H	200 (2.0, 29)	200 (2.0, 29)	200 (2.0, 29)

(b) Using a dial indicator, check the tire runout.

Standard Tire Runout:

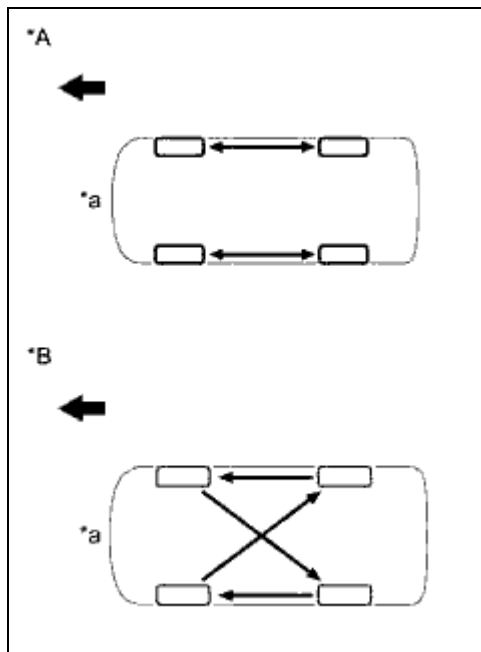
Vertical	3.0 mm (0.118 in.) or less
Lateral	3.0 mm (0.118 in.) or less



2. ROTATE TIRES

HINT:

Rotate the tires as shown in the illustration.



Text in Illustration

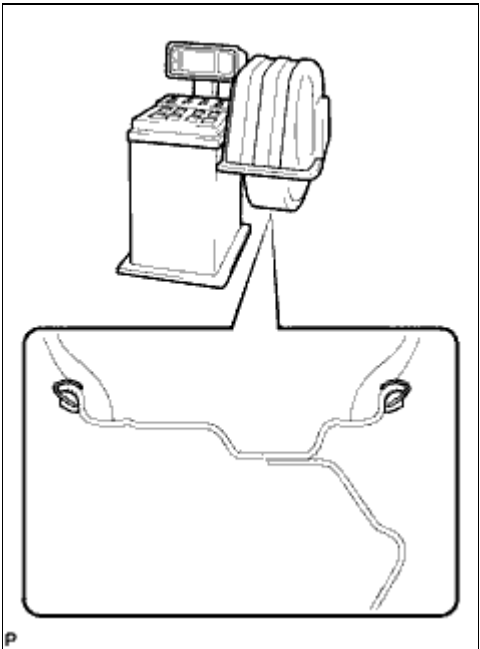
*A	for North America
*B	Except North America
*a	Overhead View
➡	Front of Vehicle

3. INSPECT WHEEL BALANCE

(a) Check and adjust the off-car balance.

(1) for Steel Wheel Type:

Maximum imbalance after adjustment:
8.0 g (0.0176 lb)



(2) for Aluminum Wheel Type:

Maximum imbalance after adjustment:

8.0 g (0.0176 lb)

NOTICE:

- Remove dirt, oil and water from the balance weight surface with cleaning detergent.
- Do not touch the adhesive part of the balance weight.
- Adhere the sticking type balance weight to the flat surface (A) shown in the illustration.

Width (A):

25 mm (0.984 in.)

- Push the balance weight securely with a finger to adhere it to the position.

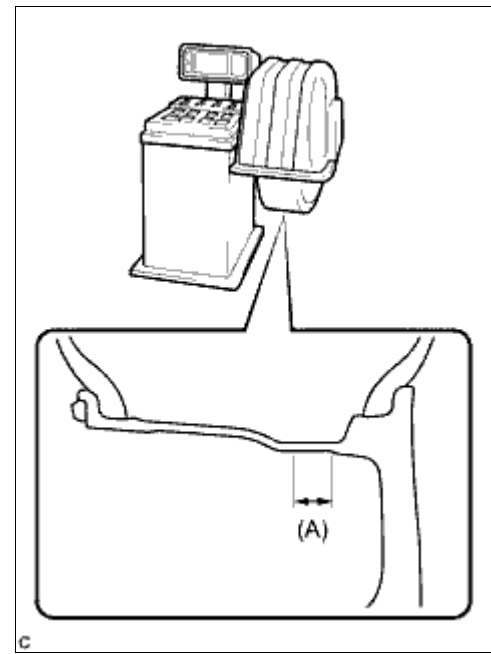
Pushing force:

10 kgf/more than 2 seconds

- Do not reuse the balance weight.

HINT:

The inner side balance weight should be installed by clipping it to the rim.



(b) If necessary, check and adjust the on-car balance.

Standard imbalance after adjustment:

8.0 g (0.0176 lb) or less

4. INSPECT FRONT AXLE HUB BEARING INFO

5. INSPECT REAR AXLE HUB BEARING INFO



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE AND WHEEL SYSTEM: PRECAUTION; 2016 MY Tacoma [08/2015 -]		

PRECAUTION

1. REMOVAL AND INSTALLATION OF TIRE PRESSURE WARNING VALVE AND TRANSMITTER

- When installing a tire, make sure that the tire pressure warning valve and transmitter does not interfere with the tire bead in order to prevent damage to the sensor.
- After completing the operation, remove the valve core to rapidly release air and check that the warning light comes on. If not, the system may have a defect.
- If there is air leakage, tighten the nut to 4.0 N*m (41 kgf*cm, 35 in.*lbf) and push the valve core 2 or 3 times to remove any dirt attached to the valve core. If there is still air leakage, replace the grommet, the washer and the nut all together.
- When installing the tire pressure warning valve and transmitter, check whether the rim, grommet, washer and nut are clean. Use a manufacturer-specified cap.
- When putting air into the tire, first install the tire pressure valve straight onto the stem of the tire pressure warning valve and transmitter.

2. TIRE AND WHEEL REPLACEMENT OR TIRE ROTATION

- When replacing the tires, be sure to check if the grommet of the tire valve is damaged. If so, replace the grommet together with the washer and nut.
- When the tires and wheels are replaced, make sure to register the transmitter ID.

NOTICE:

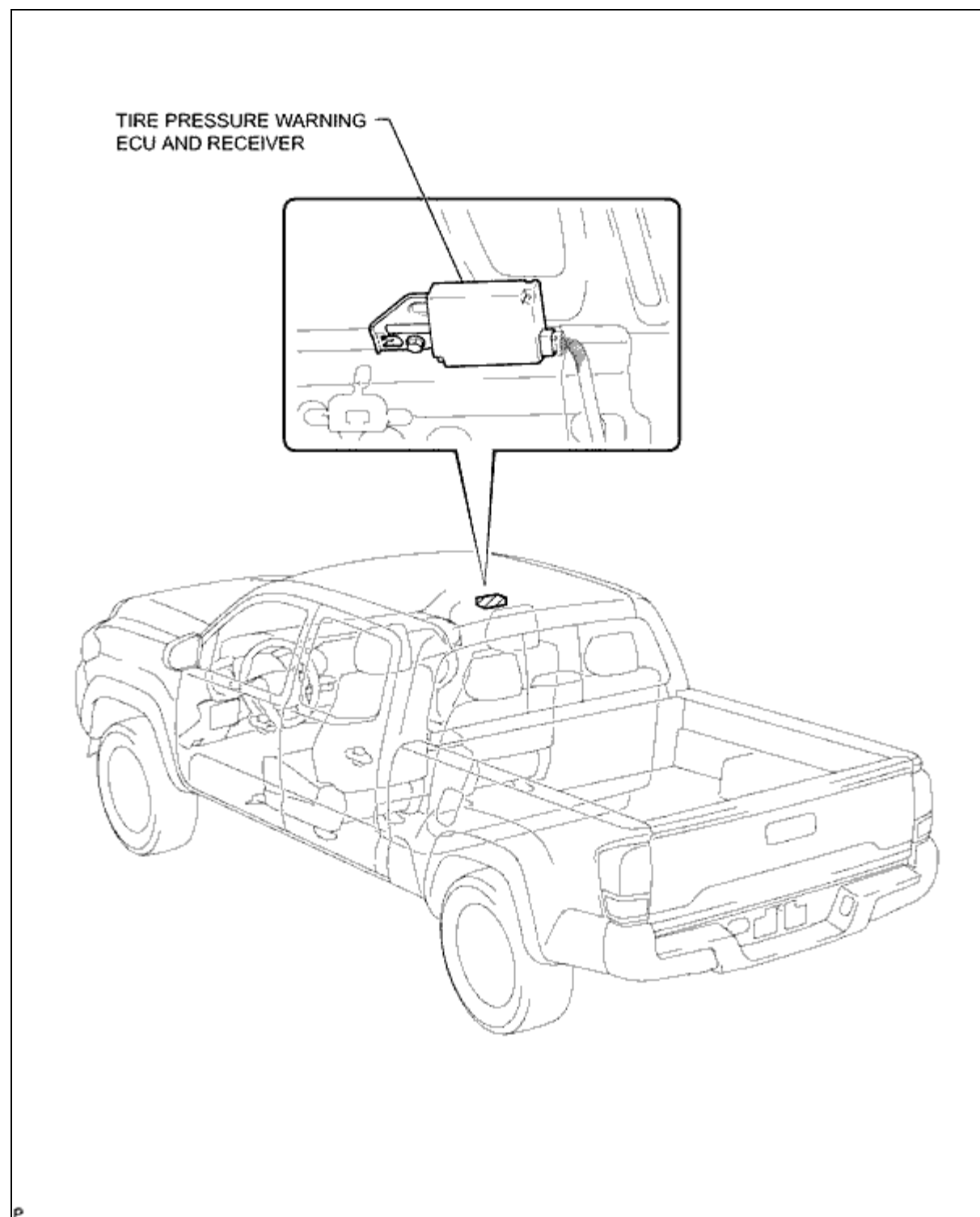
Transmitter IDs of all tires including the spare on the vehicle should correspond to IDs registered in the ECU.



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000001NZE00CX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING RECEIVER: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION





Last Modified: 11-13-2015	6.6 A	Doc ID: RM000001NZD00CX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING RECEIVER: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

1. INSTALL TIRE PRESSURE WARNING ECU AND RECEIVER

- (a) Install the tire pressure warning ECU and receiver with the nut.
- (b) Connect the connector.

2. INSTALL ROOF HEADLINING ASSEMBLY (for Double Cab)

INFO

3. INSTALL ROOF HEADLINING ASSEMBLY (for Access Cab)

INFO

4. REGISTRATION TRANSMITTER ID

INFO

5. PERFORM INITIALIZATION

INFO



Last Modified: 11-13-2015	6.6 A	Doc ID: RM000001NZF00CX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING RECEIVER: REMOVAL; 2016 MY Tacoma [08/2015 -]		

REMOVAL

1. SEPARATE ROOF HEADLINING ASSEMBLY (for Double Cab)

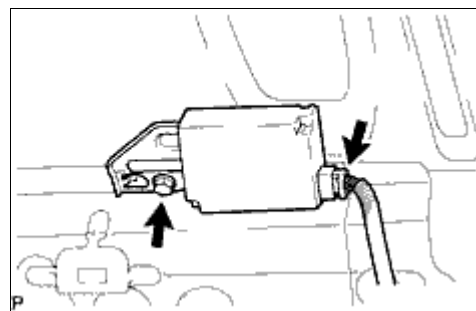
INFO

2. SEPARATE ROOF HEADLINING ASSEMBLY (for Access Cab)

INFO

3. REMOVE TIRE PRESSURE WARNING ECU AND RECEIVER

- Disconnect the connector.
- Remove the bolt and the tire pressure warning ECU and receiver.



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V94000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: B1247; Tire Pressure Monitor Receiver Communication Stop; 2016 MY Tacoma [08/2015 -]		

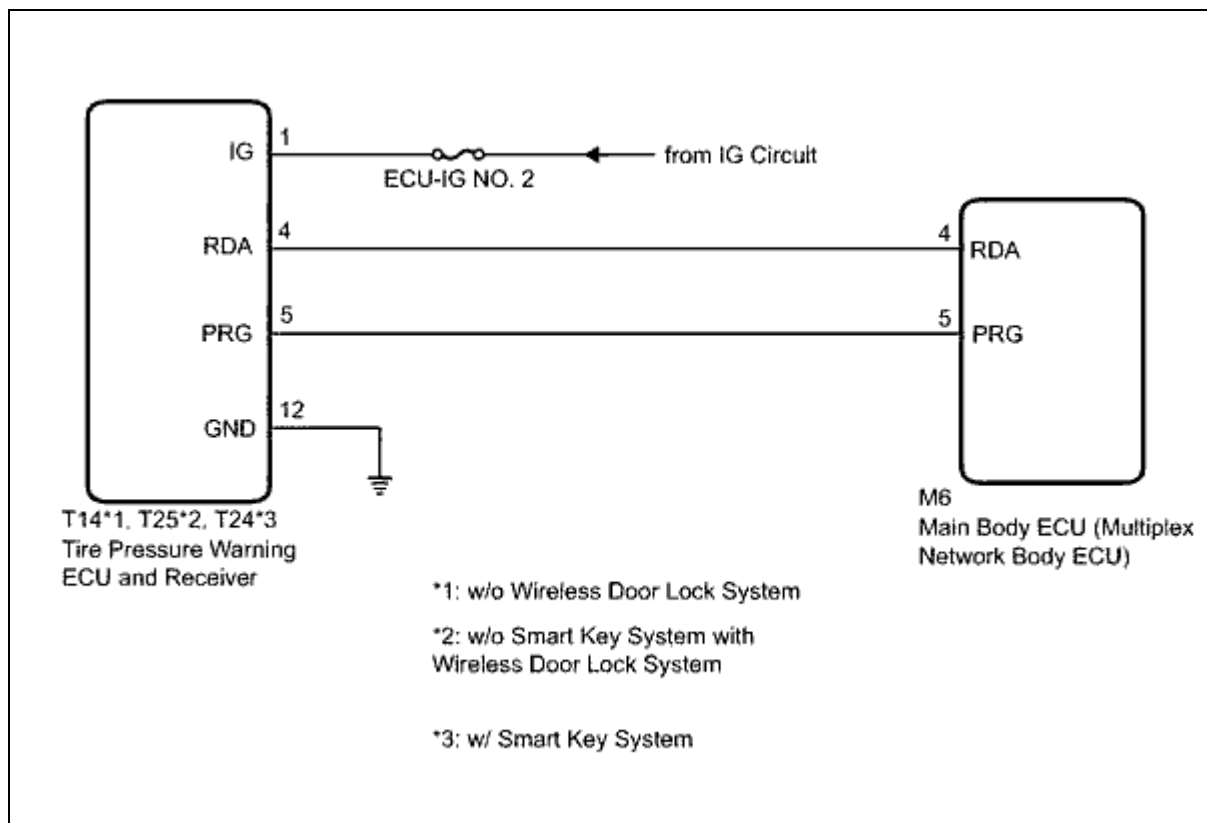
DTC	B1247	Tire Pressure Monitor Receiver Communication Stop
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DESCRIPTION

The main body ECU (multiplex network body ECU) and tire pressure warning ECU and receiver are connected using 2 direct lines that they use to communicate with each other.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
B1247	Tire Pressure Monitor Receiver Communication Stop	In diagnostic mode, an applicable RDA signal cannot be received within 10 seconds after a PRG signal is sent from the main body ECU (multiplex network body ECU).	• Tire pressure warning ECU and receiver • Wire harness or connector • Main body ECU (multiplex network body ECU)	This DTC is for main body ECU (multiplex network body ECU)

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization [INFO](#) after registration [INFO](#) of the transmitter IDs into the tire pressure warning ECU and receiver after the ECU has been replaced.
- If the main body ECU (multiplex network body ECU) is replaced, refer to Registration [INFO](#) .*

*: w/ Smart Key System

HINT:

Inspect the fuses for circuits related to this system before performing the following procedure.

PROCEDURE

1.

CHECK HARNESS AND CONNECTOR (MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) - TIRE PRESSURE WARNING ECU AND RECEIVER)

- Disconnect the T14*1, T25*2, T24*3 tire pressure warning ECU and receiver connector.
- Disconnect the M6 main body ECU (multiplex network body ECU) connector.
- Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
T14-4 (RDA) - M6-4 (RDA)*1 T25-4 (RDA) - M6-4 (RDA)*2 T24-4 (RDA) - M6-4 (RDA)*3	Always	Below 1 Ω
T14-4 (RDA) or M6-4 (RDA) - Body ground*1 T25-4 (RDA) or M6-4 (RDA) - Body ground*2 T24-4 (RDA) or M6-4 (RDA) - Body ground*3	Always	10 k Ω or higher

*1: w/o Wireless Door Lock System

*2: w/o Smart Key System with Wireless Door Lock System

*3: w/ Smart Key System

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

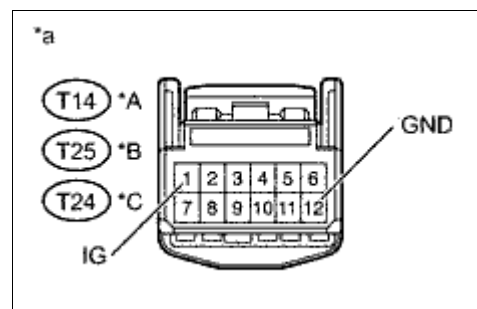


2.	CHECK HARNESS AND CONNECTOR (POWER SOURCE OF TIRE PRESSURE WARNING ECU AND RECEIVER)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
T14-12 (GND) - Body ground*1 T25-12 (GND) - Body ground*2 T24-12 (GND) - Body ground*3	Always	Below 1 Ω



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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
T14-1 (IG) - Body ground*1 T25-1 (IG) - Body ground*2 T24-1 (IG) - Body ground*3	Ignition switch ON	10 to 16 V

Text in Illustration

*a	Front view of wire harness connector (to Tire Pressure Warning ECU and Receiver)
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- *1: w/o Wireless Door Lock System
- *2: w/o Smart Key System with Wireless Door Lock System
- *3: w/ Smart Key System

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



3.	REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER
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- (a) Replace the tire pressure warning ECU and receiver  .

NEXT



4.	CHECK DTC OUTPUT
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- (a) Clear the DTCs  .
- (b) Turn the ignition switch off.
- (c) Turn the ignition switch to ON.
- (d) Check for DTCs  .

OK:

DTC B1247 is not output.

NG  **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

OK  **END**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V92000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2111/11-C2114/14; Transmitter ID1 Operation Stop; 2016 MY Tacoma [08/2015 -]		

DTC	C2111/11	Transmitter ID1 Operation Stop
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DTC	C2112/12	Transmitter ID2 Operation Stop
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DTC	C2113/13	Transmitter ID3 Operation Stop
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DTC	C2114/14	Transmitter ID4 Operation Stop
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DESCRIPTION

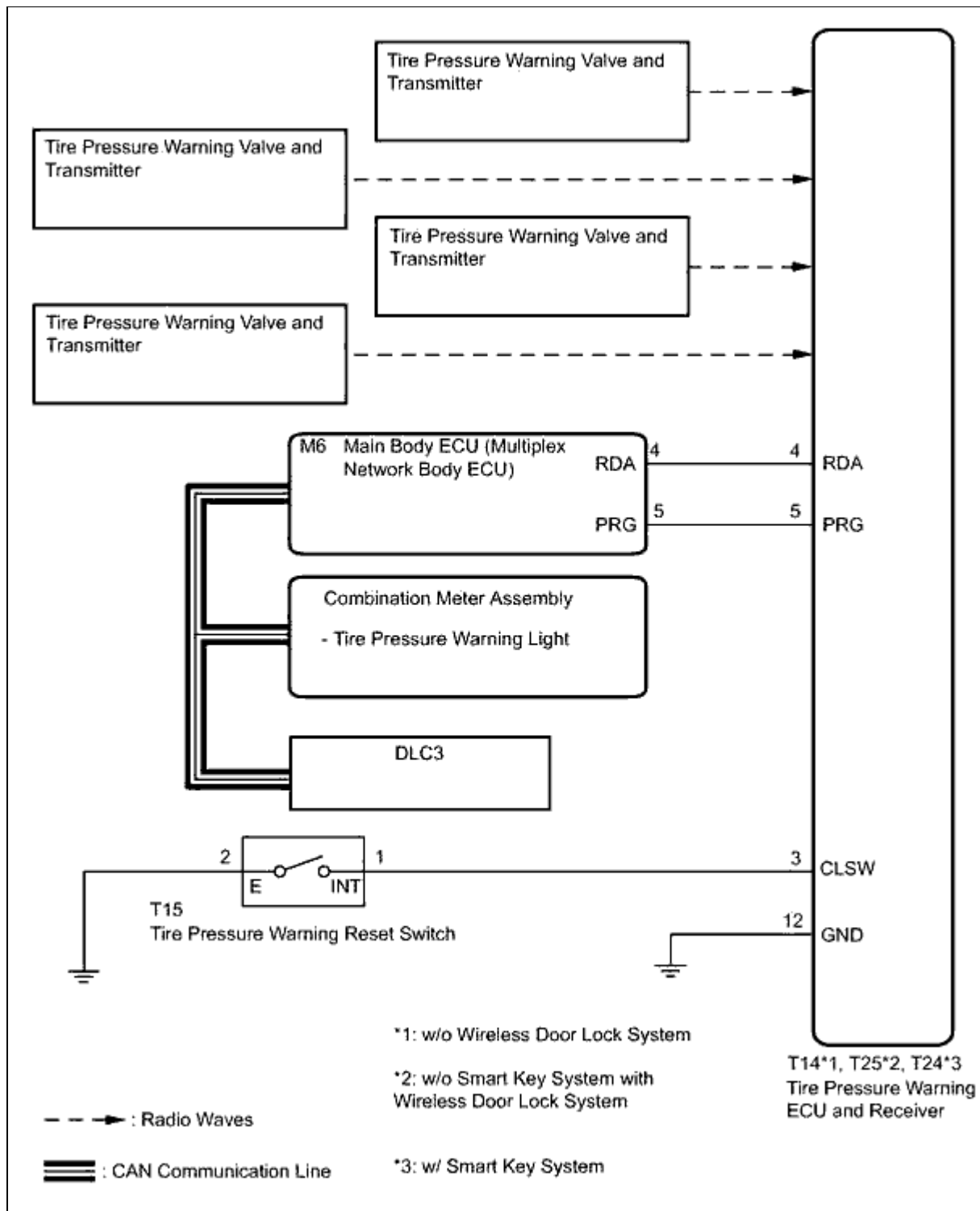
The tire pressure warning valve and transmitters that are installed in the tire and wheel assemblies measure the tire pressure of each wheel. The measured values are transmitted to the tire pressure warning ECU and receiver in the vehicle as radio waves. The ECU compares the measured tire pressure values with the tire pressure threshold. When the measured tire pressure value is less than this threshold, the warning light in the combination meter assembly illuminates. The tire pressure warning ECU and receiver stores a DTC when the tire pressure warning valve and transmitter stops transmitting signals. The signals can be forcibly transmitted by releasing the tire pressure rapidly. The stored DTCs are cleared when signal transmission resumes.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2111/11	Transmitter ID1 Operation Stop	Tire pressure warning valve and transmitters stop transmitting signals	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2112/12	Transmitter ID2 Operation Stop	Tire pressure warning valve and transmitters stop transmitting signals	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2113/13	Transmitter ID3 Operation Stop	Tire pressure warning valve and transmitters stop transmitting signals	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2114/14	Transmitter ID4 Operation Stop	Tire pressure warning valve and transmitters stop transmitting signals	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

HINT:

It is necessary to perform the following procedure to identify the tire pressure warning valve and transmitter that is malfunctioning because it cannot be identified by the output DTC.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1. PERFORM FORCED TRANSMISSION OF TRANSMITTER ID OF ALL WHEELS

- Set the tire pressure to the specified value  .
- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- Check the values by referring to the table below

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

*1: It may take a few minutes until the values are displayed. If the values are not displayed after a few

minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24

INFO

(h) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kgf/cm² , 5.8 psi) within 30 seconds.

(1) Check that each "ID Tire Inflation Pressure" value displayed on the Techstream has changed.

OK:

Each "ID Tire Inflation Pressure" value displayed on the Techstream changed to the actual tire inflation pressure value.

NOTICE:

- It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

(2) After confirming that all of the tire "ID Tire Inflation Pressure" values displayed on the Techstream have changed, set the tire pressure to the appropriate specified values.

HINT:

If an "ID Tire Inflation Pressure" value displayed on the Techstream has not changed after rechecking, inspect for another problem **INFO** .

NG ► **GO TO TRANSMITTER AND RECEIVER INSPECTION PROCEDURE**

OK ► **END**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9G000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2121/21-C2124/24,C2181/81-C2184/84; No Signal from Transmitter ID1; 2016 MY Tacoma [08/2015 -]		

DTC	C2121/21	No Signal from Transmitter ID1
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DTC	C2122/22	No Signal from Transmitter ID2
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DTC	C2123/23	No Signal from Transmitter ID3
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DTC	C2124/24	No Signal from Transmitter ID4 in Main Mode
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DTC	C2181/81	Transmitter ID1 not Received (Test Mode DTC)
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DTC	C2182/82	Transmitter ID2 not Received (Test Mode DTC)
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DTC	C2183/83	Transmitter ID3 not Received (Test Mode DTC)
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DTC	C2184/84	Transmitter ID4 not Received (Test Mode DTC)
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DESCRIPTION

The tire pressure warning valve and transmitters that are installed in the tire and wheel assemblies measure the tire pressure of each wheel. The measured values are transmitted to the tire pressure warning ECU and receiver in the vehicle as radio waves. The ECU compares the measured tire pressure values with the tire pressure threshold. When the measured tire pressure value is less than this threshold, the warning light in the combination meter assembly illuminates.

The tire pressure warning valve and transmitters constantly send radio waves to the tire pressure warning ECU and receiver.

Under the conditions below, the tire pressure warning ECU and receiver is unable to receive the signals from the tire pressure warning valve and transmitters, and a DTC is stored.

- Facilities or devices that use similar radio frequencies are located in the vicinity of the vehicle.
- Devices using similar radio frequencies are used in the vehicle.
- The ID of a tire pressure warning valve and transmitter is mistyped during registration.
- A tire, wheel and/or transmitter from a different vehicle is installed.

HINT:

When no transmitter ID is received from a tire pressure warning valve and transmitter for 20 minutes or more while the vehicle speed is more than 37 km/h (23 mph), a DTC from C2121/21 to C2124/24 is stored.

DTCs C2121/21 to C2124/24 can only be cleared by using the Techstream. DTCs C2181/81 to C2184/84 can be cleared when the tire pressure warning valve and transmitter sends a forced transmission signal or test mode ends. DTCs C2181/81 to C2184/84 are output only in test mode.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2121/21	No Signal from Transmitter ID1	When all conditions below are met: • Tire pressure warning valve and transmitter is not in stop mode. • Any transmitter ID is not received from tire pressure warning valve and transmitters. • Vehicle speed is more than 37 km/h (23 mph) or no vehicle speed signal is received for 20 minutes or more.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2122/22	No Signal from Transmitter ID2	When all conditions below are met: • Tire pressure warning valve and transmitter is not in stop mode. • Any transmitter ID is not received from tire pressure warning valve and transmitters. • Vehicle speed is more than 37 km/h (23 mph) or no vehicle speed signal is received for 20 minutes or more.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2123/23	No Signal from Transmitter ID3	When all conditions below are met: • Tire pressure warning valve and transmitter is not in stop mode. • Any transmitter ID is not received from tire pressure warning valve and transmitters. • Vehicle speed is more than 37 km/h (23 mph) or no vehicle speed signal is received for 20 minutes or more.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2124/24	No Signal from Transmitter ID4	When all conditions below are met: • Tire pressure warning valve and transmitter is not in stop mode. • Any transmitter ID is not received from tire pressure warning valve and transmitters. • Vehicle speed is more than 37 km/h (23 mph) or no vehicle	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
		speed signal is received for 20 minutes or more.		
C2181/81	Transmitter ID1 not Received (Test Mode DTC)	Test mode procedure is performed.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2182/82	Transmitter ID2 not Received (Test Mode DTC)	Test mode procedure is performed.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2183/83	Transmitter ID3 not Received (Test Mode DTC)	Test mode procedure is performed.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2184/84	Transmitter ID4 not Received (Test Mode DTC)	Test mode procedure is performed.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

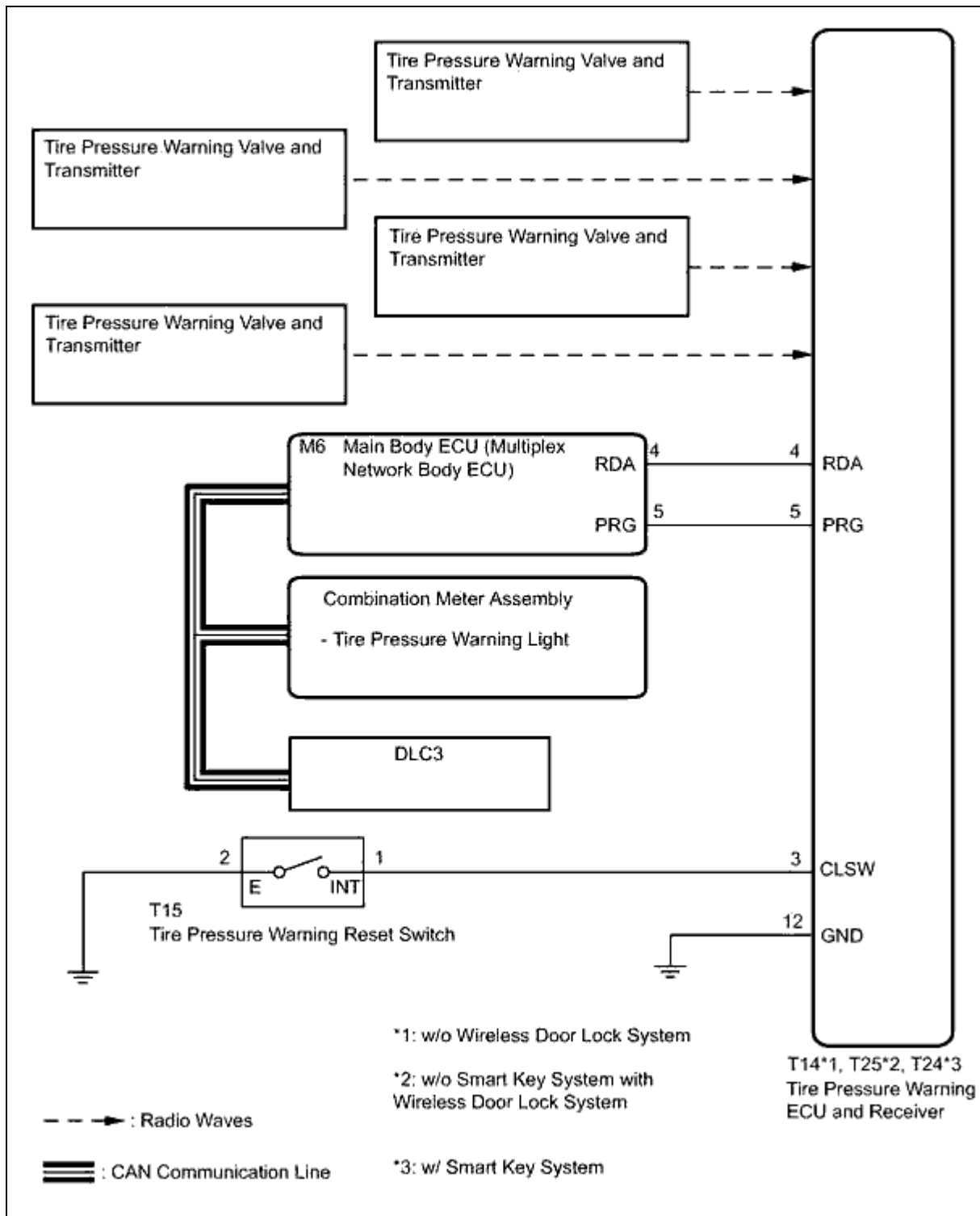
NOTICE:

When DTCs C2121/21 to C2124/24 are stored, DTC C2179/79 may be stored simultaneously. In such cases, troubleshoot DTCs C2121/21 to C2124/24 first, then troubleshoot DTC C2179/79.

HINT:

It is necessary to perform the following procedure to identify the tire pressure warning valve and transmitter that is malfunctioning because it cannot be identified by the output DTC.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU and/or one of the valve and transmitters has been replaced.

PROCEDURE

1. CHECK FREQUENCY RECEIVING CONDITION

(a) Check that the following conditions are not met:

(1) Facilities or devices that use similar radio frequencies are located in the vicinity of the vehicle.

HINT:

If the vehicle is located in an area such as the one described above, the tire pressure warning light may illuminate after blinking for 1 minute due to interfering radio frequencies.

(2) Devices using similar radio frequencies are used in the vehicle.

OK:

Facilities or devices that use similar radio frequencies are not located in the vicinity of the vehicle.

HINT:

Radio wave transmissions may be interrupted due to the surroundings or devices installed by the user.

NG  **CHECK IF ANY DEVICE IS INSTALLED BY USER**

OK



2. IDENTIFY TRANSMITTER CORRESPONDING TO DTC

(a) Set the tire pressure to the specified value .

(b) Turn the ignition switch off.

(c) Connect the Techstream to the DLC3.

(d) Turn the ignition switch to ON.

(e) Turn the Techstream on.

(f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(g) Display the "ID Tire Inflation Pressure" value for each wheel using the Techstream.

(h) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kg/cm², 5.8 psi) within 30 seconds. If the "ID Tire Inflation Pressure" value displayed on the Techstream does not change, the tire pressure warning valve and transmitter corresponding to the unchanged "ID Tire Inflation Pressure" value was the cause of the output DTC.

HINT:

- Identify the malfunctioning tire pressure warning valve and transmitter by repeatedly decreasing the tire pressure for each tire.
- Record which "ID Tire Inflation Pressure" value corresponds to each tire.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge)/ 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

*1: It may take a few minutes until the values are displayed.

(i) Check the Data List.

NOTICE:

- It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.
- Record the transmitter IDs and positions of transmitters that are normal.

(j) After confirming that the "ID Tire Inflation Pressure" value for one tire has changed, repeat this procedure one by one. Identify the transmitter that corresponds to the DTC.

Result

RESULT	PROCEED TO
One or more transmitter is abnormal.	A
All transmitters are normal.	B

A



3.	CHECK TRANSMITTER ID
----	-----------------------------

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) Check the values by referring to the table below.

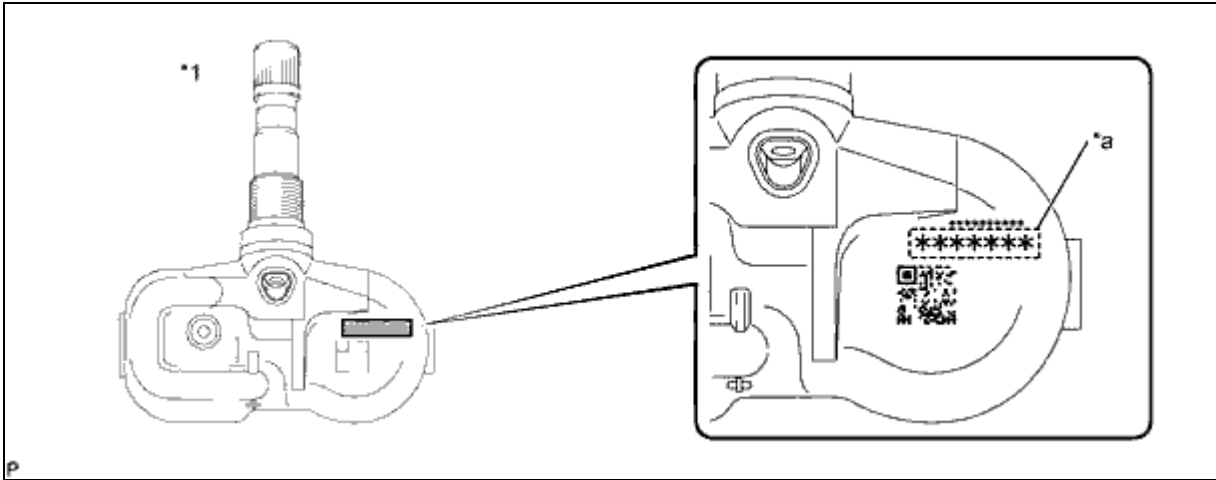
Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Registered ID 1 Code	Registered ID1 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID1 displayed	-
Registered ID 2 Code	Registered ID2 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID2 displayed	-
Registered ID 3 Code	Registered ID3 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID3 displayed	-
Registered ID 4 Code	Registered ID4 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID4 displayed	-

HINT:

*1: Displayed only when the ID No. is not registered.

- (g) Check the ID number on the identified transmitter by removing it from the tire and wheel.



Text in Illustration

*1	Tire Pressure Warning Valve and Transmitter	-	-
*a	Transmitter ID (7-digit Number)	-	-

(h) Confirm that the ID number on the transmitter and recorded transmitter ID match.

Result

RESULT	PROCEED TO
Match	A
Do not match	B

B **GO TO STEP 5**

A

4.	REPLACE TIRE PRESSURE WARNING VALVE AND TRANSMITTER
----	--

(a) Replace the tire pressure warning valve and transmitter .

NEXT

5.	REGISTRATION OF TRANSMITTER ID
----	---------------------------------------

(a) Perform registration .

NEXT



6.	PERFORM INITIALIZATION
----	------------------------

(a) Perform initialization  .

NEXT



7.	CONFIRM TIRE INFLATION PRESSURE (DATA LIST)
----	---

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) Check the values by referring to the table below.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)		
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

- *1: It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

Result

RESULT	PROCEED TO
Tire pressure values are not displayed.	A
All tire pressure readings are equal to specified values.	B

B  **END**

A  **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9I000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2126/26; Transmitter ID not Received in Main Mode; 2016 MY Tacoma [08/2015 -]		

DTC	C2126/26	Transmitter ID not Received in Main Mode
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DESCRIPTION

After all transmitter IDs are registered, DTC C2126/26 is stored in the tire pressure warning ECU and receiver and the tire pressure warning light blinks for 1 minute and then illuminates.

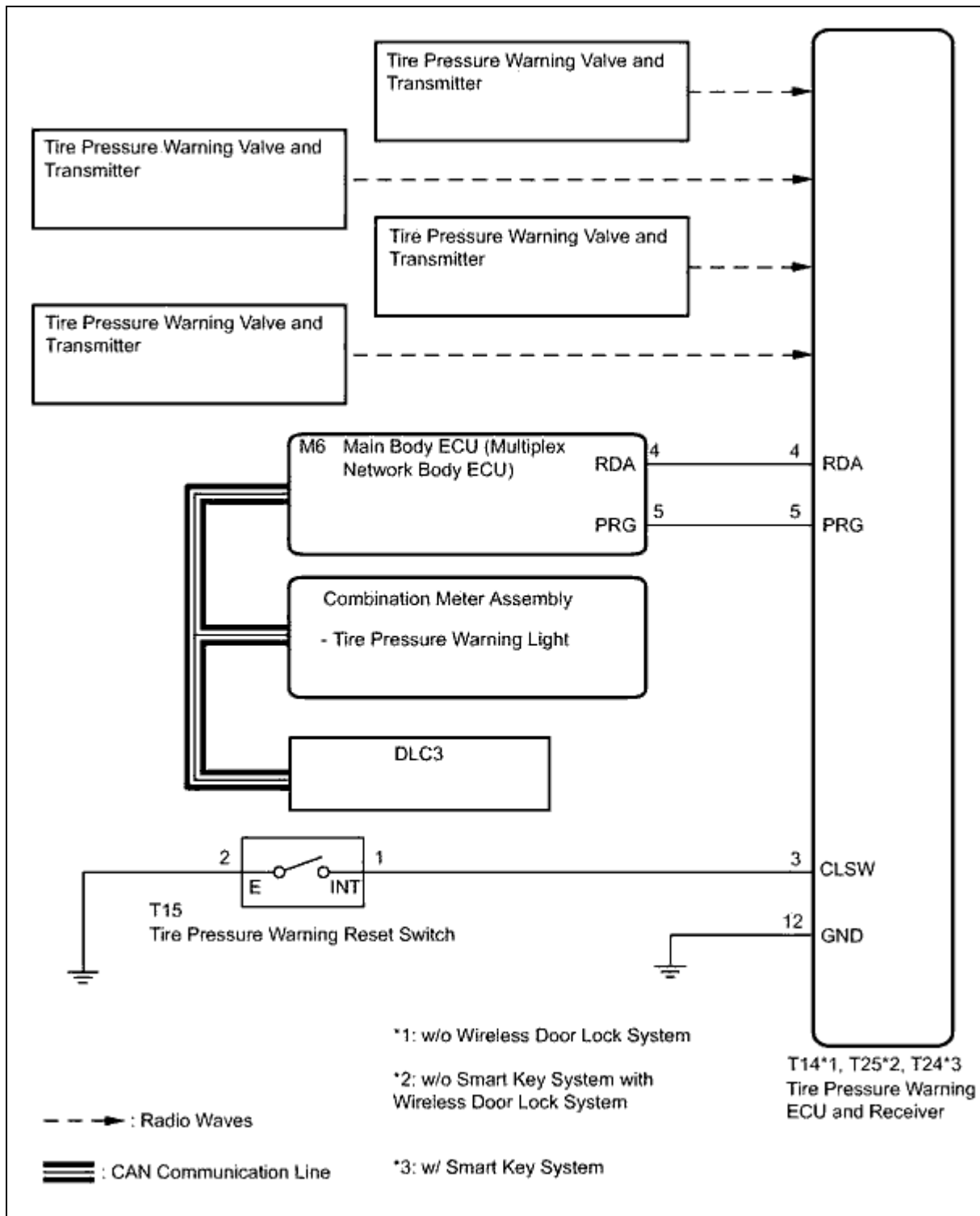
When the tire pressure warning ECU and receiver successfully receives radio waves from all the transmitters whose IDs are stored in the ECU, DTC C2126/26 is cleared and the tire pressure warning light goes off.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2126/26	Transmitter ID not Received in Main Mode	After transmitter ID registration is completed, ECU does not receive radio waves from transmitters whose IDs are stored in ECU.	• Transmitter ID registration failure • Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

HINT:

The purpose of this DTC is to help prevent delivering a vehicle that has incorrectly registered transmitter IDs. After all IDs are registered, DTC C2126/26 is stored and the tire pressure warning light blinks for 1 minute and then illuminates. If the tire pressure warning light does not go off after a little while, the transmitter IDs may be incorrectly registered.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU and/or one of the valve and transmitters has been replaced.

PROCEDURE

1. IDENTIFY TRANSMITTER NOT RECEIVED

- (a) Set the tire pressure to the specified value  .
- (b) Turn the ignition switch off.
- (c) Connect the Techstream to the DLC3.
- (d) Turn the ignition switch to ON.
- (e) Turn the Techstream on.
- (f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (g) Display the "ID Tire Inflation Pressure" value for each wheel using the Techstream.
- (h) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kg/cm² , 5.8 psi) within 30 seconds. If the "ID Tire Inflation Pressure" value displayed on the Techstream does not change, the tire pressure warning valve and transmitter corresponding to the unchanged "ID Tire Inflation Pressure" value was the cause of the output DTC.

HINT:

- Identify the malfunctioning tire pressure warning valve and transmitter by repeatedly decreasing the tire pressure for each tire.
- Record which "ID Tire Inflation Pressure" value corresponds to each tire.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

*1: It may take a few minutes until the values are displayed.

(i) Check the Data List.

NOTICE:

- It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.
- Record the transmitter IDs and positions of transmitters that are normal.

(j) After confirming that the "ID Tire Inflation Pressure" value for one tire has changed, repeat this procedure one by one. Identify the transmitter that corresponds to the DTC.

Result

RESULT	PROCEED TO
One or more transmitter is abnormal.	A
All transmitters are normal.	B

B  **END**

A



2.	CHECK TRANSMITTER ID
-----------	-----------------------------

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(f) Check the values by referring to the table below.

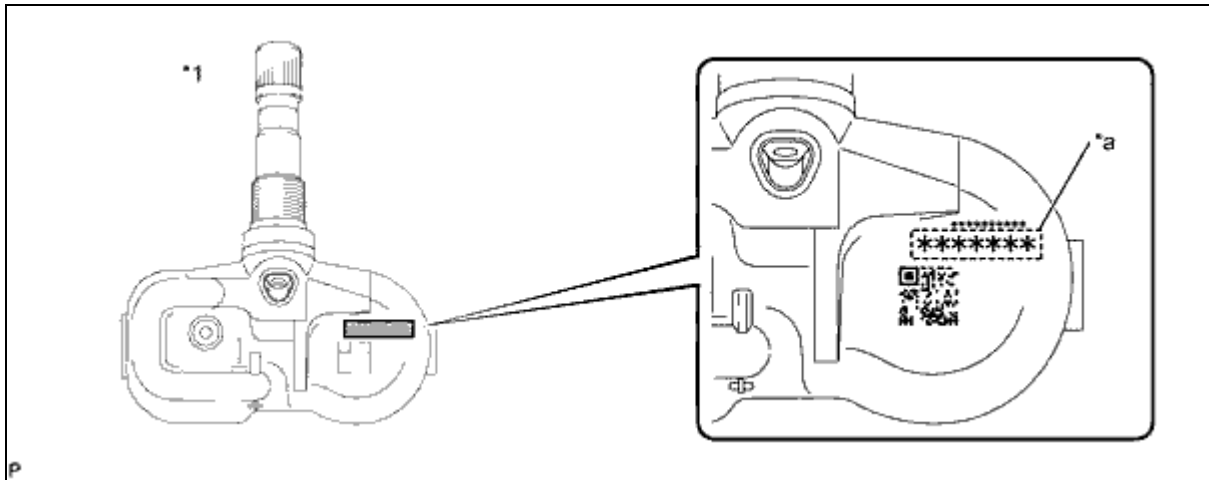
Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Registered ID 1 Code	Registered ID1 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID1 displayed	-
Registered ID 2 Code	Registered ID2 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID2 displayed	-
Registered ID 3 Code	Registered ID3 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID3 displayed	-
Registered ID 4 Code	Registered ID4 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID4 displayed	-

HINT:

*1: Displayed only when the ID No. is not registered.

(g) Check the ID number on the identified transmitter by removing it from the tire and wheel.



Text in Illustration

*1	Tire Pressure Warning Valve and Transmitter	-	-
*a	Transmitter ID (7-digit Number)	-	-

(h) Confirm that the ID number on the transmitter and recorded transmitter ID match.

Result

RESULT	PROCEED TO
Match	A
Do not match	B

A



3.	REPLACE TIRE PRESSURE WARNING VALVE AND TRANSMITTER
-----------	--

(a) Replace the tire pressure warning valve and transmitter  .

NEXT



4.	REGISTRATION OF TRANSMITTER ID
-----------	---------------------------------------

(a) Perform registration  .

NEXT



5.	PERFORM INITIALIZATION
-----------	-------------------------------

(a) Perform initialization  .

NEXT



6.	CONFIRM TIRE INFLATION PRESSURE (DATA LIST)
-----------	--

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) Check the values by referring to the table below.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

- *1: It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

Result

RESULT	PROCEED TO
Tire pressure values are not displayed.	A
All tire pressure readings are equal to specified values.	B

B  **END**

A  **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V93000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2141/41-C2144/44; Transmitter ID1 Error; 2016 MY Tacoma [08/2015 -]		

DTC	C2141/41	Transmitter ID1 Error
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DTC	C2142/42	Transmitter ID2 Error
------------	-----------------	------------------------------

DTC	C2143/43	Transmitter ID3 Error
------------	-----------------	------------------------------

DTC	C2144/44	Transmitter ID4 Error
------------	-----------------	------------------------------

DESCRIPTION

The tire pressure warning valve and transmitters that are installed in the tire and wheel assemblies measure the tire pressure of each wheel. The measured values are transmitted to the tire pressure warning ECU and receiver in the vehicle as radio waves. The ECU compares the measured tire pressure values with the tire pressure threshold. When the measured tire pressure value is less than this threshold, the warning light in the combination meter assembly illuminates.

When the internal circuit of a tire pressure warning valve and transmitter is malfunctioning, one of these DTCs is output.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2141/41	Transmitter ID1 Error	If an "ERROR" signal is received 3 times consecutively, the tire pressure warning valve and transmitter will be judged as defective and a DTC will be output. This will happen in situations where the inflation pressure is outside the specified range (0 to 380 kPa (0 to 3.9 kgf/cm ² , 0 to 55 psi)), the temperature inside the tire is outside the specified range (-40 to 120°C (-40 to 248°F)), or an error occurs in the tire pressure warning valve and transmitter.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2142/42	Transmitter ID2 Error	If an "ERROR" signal is received 3 times consecutively, the tire pressure warning valve and transmitter will be judged as defective and a DTC will be output. This will happen in situations where the inflation pressure is outside the specified range (0 to 380 kPa (0 to 3.9 kgf/cm ² , 0 to 55 psi)), the	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
		temperature inside the tire is outside the specified range (-40 to 120°C (-40 to 248°F)), or an error occurs in the tire pressure warning valve and transmitter.		
C2143/43	Transmitter ID3 Error	If an "ERROR" signal is received 3 times consecutively, the tire pressure warning valve and transmitter will be judged as defective and a DTC will be output. This will happen in situations where the inflation pressure is outside the specified range (0 to 380 kPa (0 to 3.9 kgf/cm ² , 0 to 55 psi)), the temperature inside the tire is outside the specified range (-40 to 120°C (-40 to 248°F)), or an error occurs in the tire pressure warning valve and transmitter.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-
C2144/44	Transmitter ID4 Error	If an "ERROR" signal is received 3 times consecutively, the tire pressure warning valve and transmitter will be judged as defective and a DTC will be output. This will happen in situations where the inflation pressure is outside the specified range (0 to 380 kPa (0 to 3.9 kgf/cm ² , 0 to 55 psi)), the temperature inside the tire is outside the specified range (-40 to 120°C (-40 to 248°F)), or an error occurs in the tire pressure warning valve and transmitter.	• Tire pressure warning valve and transmitter • Tire pressure warning ECU and receiver	-

HINT:

It is necessary to perform the following procedure to identify the tire pressure warning valve and transmitter that is malfunctioning because it cannot be identified by the output DTC.

INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization INFO after registration INFO of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU and/or one of the valve and transmitters has been replaced.

PROCEDURE

1.	IDENTIFY TRANSMITTER CORRESPONDING TO DTC
-----------	--

(a) Set the tire pressure to the specified value INFO.

(b) Turn the ignition switch off.

(c) Connect the Techstream to the DLC3.

- (d) Turn the ignition switch to ON.
- (e) Turn the Techstream on.
- (f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (g) Display the "ID Tire Inflation Pressure" value for each wheel using the Techstream.
- (h) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kg/cm² , 5.8 psi) within 30 seconds. If the "ID Tire Inflation Pressure" value displayed on the Techstream does not change, the tire pressure warning valve and transmitter corresponding to the unchanged "ID Tire Inflation Pressure" value was the cause of the output DTC.

HINT:

- Identify the malfunctioning tire pressure warning valve and transmitter by repeatedly decreasing the tire pressure for each tire.
- Record which "ID Tire Inflation Pressure" value corresponds to each tire.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

*1: It may take a few minutes until the values are displayed. If the values are not displayed after a few minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24

INFO

(i) Check the Data List.

NOTICE:

- It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.
- Record the transmitter IDs and positions of transmitters that are normal.

(j) After confirming that the "ID Tire Inflation Pressure" value for one tire has changed, repeat this procedure one by one. Identify the transmitter that corresponds to the DTC.

HINT:

When all of the "ID Tire Inflation Pressure" values have changed, identify the malfunctioning tire pressure warning valve and transmitter using the recorded ID numbers and output DTCs.

Result

RESULT	PROCEED TO
One or more transmitter is abnormal.	A
All transmitters are normal.	B

B  **END**

A



2.	REPLACE TIRE PRESSURE WARNING VALVE AND TRANSMITTER
-----------	--

(a) Replace the identified tire pressure warning valve and transmitter with a new one  **INFO** .

HINT:

- Before installing a new tire pressure warning valve and transmitter, read and write down its transmitter ID.
- The IDs for the tire pressure warning valve and transmitters which are not replaced should be checked using the Techstream and recorded.

NEXT



3.	REGISTRATION OF TRANSMITTER ID
-----------	---------------------------------------

(a) Perform registration  **INFO** .

NEXT



4.	PERFORM INITIALIZATION
----	------------------------

(a) Perform initialization  .

NEXT



5.	CONFIRM TIRE INFLATION PRESSURE (DATA LIST)
----	---

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) Check the values by referring to the table below.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)		
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

- *1: It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

Result

RESULT	PROCEED TO
Tire pressure values are not displayed.	A
All tire pressure readings are equal to specified values.	B

B  **END**

A  **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9H000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2171/71; Transmitter ID not Registered; 2016 MY Tacoma [08/2015 -]		

DTC	C2171/71	Transmitter ID not Registered
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DESCRIPTION

The IDs of each tire pressure warning valve and transmitter are registered to the tire pressure warning ECU and receiver.

When the ECU detects that a transmitter ID code is not registered in the ECU, this DTC is stored.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2171/7	Transmitter ID not Registered	Transmitter ID code is not registered. (When an ID code is unregistered for 3 minutes or more)	Tire pressure warning ECU and receiver	-

INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU has been replaced.

PROCEDURE

1.	CONFIRM REGISTRATION CONDITION (REGISTERED ID CODES)
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- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- Check the values by referring to the table below.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Registered ID 1 Code	Registered ID1 code/ min.: 0 max.: FFFFFFF*1	ID No. registered for transmitter ID1 displayed	-

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Registered ID 2 Code	Registered ID2 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID2 displayed	-
Registered ID 3 Code	Registered ID3 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID3 displayed	-
Registered ID 4 Code	Registered ID4 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID4 displayed	-

HINT:

*1: Displayed only when the ID No. is not registered.

OK:

The registered transmitter ID codes are displayed on the Techstream.

NG ► **GO TO STEP 2**

OK ► **TIRE PRESSURE WARNING ECU AND RECEIVER**

2.	PERFORM REGISTRATION (TRANSMITTER ID)
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(a) Perform registration  .

NEXT



3.	PERFORM INITIALIZATION
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(a) Perform initialization  .

NEXT



4.	CONFIRM TIRE INFLATION PRESSURE (DATA LIST)
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(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(f) Check the values by referring to the table below.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

- *1: It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

Result

RESULT	PROCEED TO
All tire pressure readings are equal to specified values.	A

RESULT	PROCEED TO
Tire pressure values are not displayed.	B

B ▶ REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER

A ▶ END



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9C000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2176/76; Receiver Error; 2016 MY Tacoma [08/2015 -]		

DTC	C2176/76	Receiver Error
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DESCRIPTION

Tire pressure warning valve and transmitter signals are transmitted to the tire pressure warning ECU and receiver in the vehicle as radio waves.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2176/76	Receiver Error	Malfunction in the tire pressure warning ECU and receiver internal circuit	Tire pressure warning ECU and receiver	-

INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU has been replaced.

PROCEDURE

1.	CHECK AND REPLACE DTC OUTPUT (C2176/76)
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- (a) Clear the DTCs **INFO** .
- (b) Turn the ignition switch off.
- (c) Turn the ignition switch to ON and check for DTCs **INFO** .

OK:

DTC C2176/76 is not output.

NG ► **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**

OK ► **END**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9F000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2177/77; Initialization not Completed; 2016 MY Tacoma [08/2015 -]		

DTC	C2177/77	Initialization not Completed
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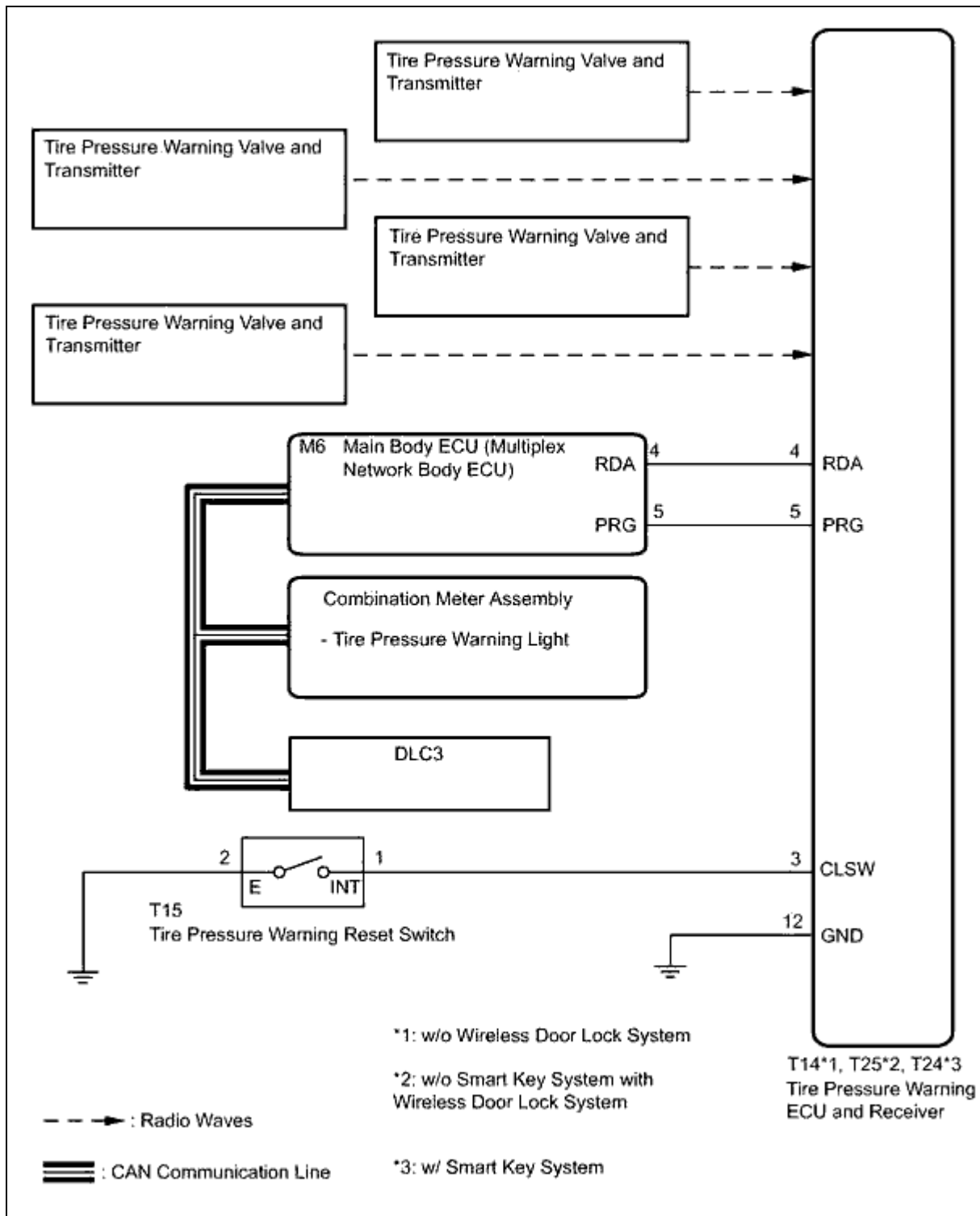
DESCRIPTION

Initialization is necessary if one of the following occurs:

- The tire pressure warning ECU and receiver is replaced.
- A tire pressure warning valve and transmitter is replaced.
- Tires with different standard tire pressures are installed.
- The tires are rotated.
- A new vehicle is delivered.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2177/77	Initialization not Completed	All conditions below are met: • During initialization • Tire pressure warning valve and transmitter is not in stop mode • Signal is not received from tire pressure warning valve and transmitter for 20 minutes or more • Vehicle speed is more than 37 km/h (23 mph) for 20 minutes or more	• Tire pressure warning valve and transmitter • Wire harness or connector • Tire pressure warning ECU and receiver	-

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU and/or one of the valve and transmitters has been replaced.

PROCEDURE

1. CHECK FREQUENCY RECEIVING CONDITION

(a) Check that the following conditions are not met:

(1) Facilities or devices that use similar radio frequencies are located in the vicinity of the vehicle.

HINT:

If the vehicle is located in an area such as the one described above, the tire pressure warning light may illuminate after blinking for 1 minute due to interfering radio frequencies.

(2) Devices using similar radio frequencies are used in the vehicle.

OK:

Facilities or devices that use similar radio frequencies are not located in the vicinity of the vehicle.

HINT:

Radio wave transmissions may be interrupted due to the surroundings, or devices installed by the user.

NG  CHECK IF ANY DEVICE IS INSTALLED BY USER

OK



2. PERFORM INITIALIZATION

(a) Perform initialization  .

NEXT



3. CONFIRM TIRE INFLATION PRESSURE (DATA LIST)

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(f) Check the values by referring to the table below.

Tire Pressure Monitor

TESTER	MEASUREMENT ITEM/RANGE	NORMAL	DIAGNOSTIC NOTE
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DISPLAY		CONDITION	
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID 3 Tire Inflation Pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID 4 Tire Inflation Pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

HINT:

- *1: It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

Result

RESULT	PROCEED TO
All tire pressure readings are equal to specified values.	A
Tire pressure values are not displayed.	B

B ► GO TO DTC (C2121/21 TO C2125/25)

A ► END



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000005V9J000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2179/79; Tire Pressure Monitor ECU Communication Stop; 2016 MY Tacoma [08/2015 -]		

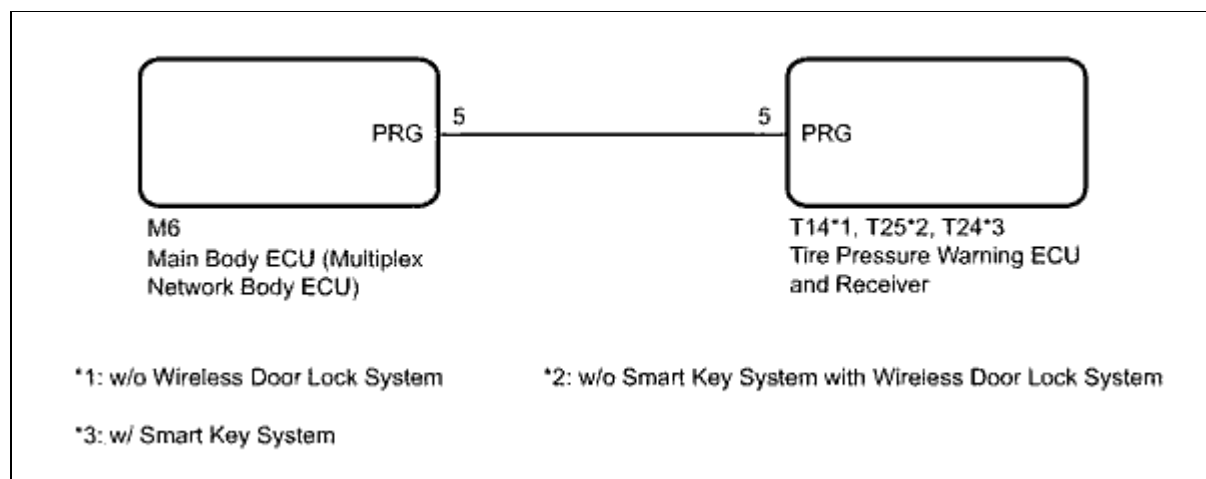
DTC	C2179/79	Tire Pressure Monitor ECU Communication Stop
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DESCRIPTION

The main body ECU (multiplex network body ECU) sends signals to the tire pressure warning ECU and receiver via a direct line.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	NOTE
C2179/79	Tire Pressure Monitor ECU Communication Stop	Communication between the main body ECU (multiplex network body ECU) and tire pressure warning ECU and receiver is interrupted for 10 seconds or more.	• Main body ECU (Multiplex network body ECU) • Wire harness or connector • Tire pressure warning ECU and receiver	-

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver after the ECU has been replaced.
- If the main body ECU (multiplex network body ECU) is replaced, refer to Registration **INFO** .*

*: w/ Smart Key System

PROCEDURE

1.

CHECK HARNESS AND CONNECTOR (TIRE PRESSURE WARNING ECU AND RECEIVER - MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU))

- (a) Disconnect the T14*1, T25*2, T24*3 tire pressure warning ECU and receiver connector.
- (b) Disconnect the M6 main body ECU (multiplex network body ECU) connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
T14-5 (PRG) - M6-5 (PRG)*1 T25-5 (PRG) - M6-5 (PRG)*2 T24-5 (PRG) - M6-5 (PRG)*3	Always	Below 1 Ω
T14-5 (PRG) or M6-5 (PRG) - Body ground*1 T25-5 (PRG) or M6-5 (PRG) - Body ground*2 T24-5 (PRG) or M6-5 (PRG) - Body ground*3	Always	10 k Ω or higher

*1: w/o Wireless Door Lock System

*2: w/o Smart Key System with Wireless Door Lock System

*3: w/ Smart Key System

NG  REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



2.

REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER

- (a) Replace the tire pressure warning ECU and receiver  .

NEXT



3.

CHECK DTC OUTPUT

- (a) Clear the DTCs  .

- (b) Turn the ignition switch off.
- (c) Turn the ignition switch to ON.
- (d) Check for DTCs  .

OK:

DTC C2179/79 is not output.

NG  **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

OK  **END**



Last Modified: 11-13-2015	6.6 C	Doc ID: RM000004SNQ034X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: C2198/98; Initialization Switch (for Test Mode DTC); 2016 MY Tacoma [08/2015 -]		

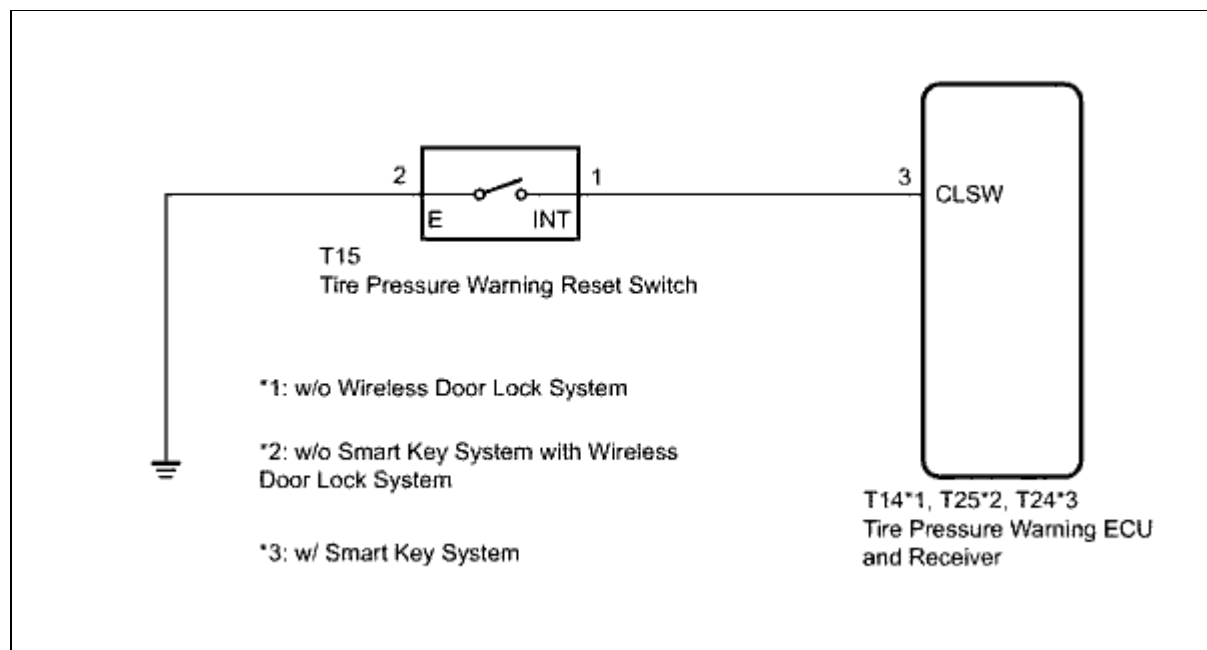
DTC	C2198/98	Initialization Switch (for Test Mode DTC)
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DESCRIPTION

During test mode, when the tire pressure warning reset switch is on, the tire pressure warning light comes on and when the tire pressure warning reset switch is off, the tire pressure warning light blinks at 0.125 second intervals.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
C2198/98	Test mode procedure is performed.	• Tire pressure warning reset switch • Wire harness or connector • Tire pressure warning ECU and receiver

WIRING DIAGRAM



INSPECTION PROCEDURE

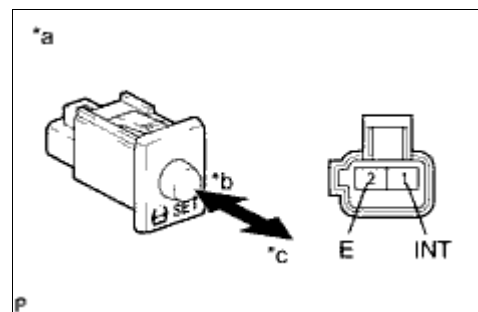
NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU has been replaced.

PROCEDURE

1. INSPECT TIRE PRESSURE WARNING RESET SWITCH

- (a) Disconnect the T15 tire pressure warning reset switch connector.



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (INT) - 2 (E)	On	Below 1 Ω
	Off	10 k Ω or higher

Text in Illustration

*a	Component without harness connected (Tire Pressure Warning Reset Switch)
*b	On
*c	Off

NG  **REPLACE TIRE PRESSURE WARNING RESET SWITCH**

OK



2. CHECK HARNESS AND CONNECTOR (TIRE PRESSURE WARNING RESET SWITCH - TIRE PRESSURE WARNING ECU AND RECEIVER)

- (a) Disconnect the T15 tire pressure warning reset switch connector and T14 tire pressure warning ECU and receiver connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
T14-3 (CLSW) - T15-1 (INT)	Always	Below 1 Ω
T14-3 (CLSW) - Body ground	Always	10 k Ω or higher
T15-2 (E) - Body ground	Always	Below 1 Ω

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ► **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**



Last Modified: 11-13-2015	6.6 U	Doc ID: RM000005V9A000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: DATA LIST / ACTIVE TEST; 2016 MY Tacoma [08/2015 -]		

DATA LIST / ACTIVE TEST

1. READ DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) According to the display on the Techstream, read the Data List.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Mode Status	Tire pressure warning system mode/ NORMAL or TEST	NORMAL: Normal mode TEST: Test mode	-
Main Tire	Number of main tire ID to be registered/ 4 or 5	4 displayed	-
2nd Tire	Number of 2nd tire ID to be registered/ 4 or 5	4 displayed	-
Initialization Switch	Tire pressure warning reset switch/ OFF or ON	OFF: Switch off ON: Switch on	-
Vehicle Speed	Vehicle speed reading/ min.: 0 km/h (0 mph) max.: 255 km/h (158 mph)	Actual vehicle speed	Speed indicated in the combination meter assembly
Registered ID 1 Code	Registered ID1 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID1 displayed	-

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Registered ID 2 Code	Registered ID2 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID2 displayed	-
Registered ID 3 Code	Registered ID3 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID3 displayed	-
Registered ID 4 Code	Registered ID4 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID4 displayed	-
Registered ID 5 Code*3	Registered ID5 code/ min.: 0 max.: FFFFFFFF*1	ID No. registered for transmitter ID5 displayed	-
ID 1 Temperature in Tire	ID1 temperature in tire/ min.: -40°C (-40°F) max.: 120°C (248°F)	Actual tire temperature	If -40°C (-40°F) is displayed, data has not been received.
ID 2 Temperature in Tire	ID2 temperature in tire/ min.: -40°C (-40°F) max.: 120°C (248°F)	Actual tire temperature	If -40°C (-40°F) is displayed, data has not been received.
ID 3 Temperature in Tire	ID3 temperature in tire/ min.: -40°C (-40°F) max.: 120°C (248°F)	Actual tire temperature	If -40°C (-40°F) is displayed, data has not been received.
ID 4 Temperature in Tire	ID4 temperature in tire/ min.: -40°C (-40°F) max.: 120°C (248°F)	Actual tire temperature	If -40°C (-40°F) is displayed, data has not been received.
ID 5 Temperature in Tire*3	ID5 temperature in tire/ min.: -40°C (-40°F) max.: 120°C (248°F)	Actual tire temperature	If -40°C (-40°F) is displayed, data has not been received.
Initialization Switch Info	Tire pressure warning reset switch setting information/ WITHOUT or WITH	WITH	-
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*2
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0	Actual tire inflation pressure	If N/A is displayed, data has not been received.*2

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)		
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*2
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*2
ID 5 Tire Inflation Pressure*3	ID5 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*2
Threshold of Low-pressure (Lower Limit)	Threshold of low pressure (Lowerlimit)/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Specified tire pressure warning threshold lower limit displayed	-

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Initial Threshold of Low-pressure	ID1 initial threshold of low-pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Tire pressure after initialization	-
ID 2 Initial Threshold of Low-pressure	ID2 initial threshold of low-pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Tire pressure after initialization	-
ID 3 Initial Threshold of Low-pressure	ID3 initial threshold of low-pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Tire pressure after initialization	-
ID 4 Initial Threshold of Low-pressure	ID4 initial threshold of low-pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Tire pressure after initialization	-
ID 5 Initial Threshold of Low-pressure*3	ID5 initial threshold of low-pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi),	Tire pressure after initialization	-

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)		
Sensor ID Status	Sensor ID Status/ Main or 2nd	Status of ID selection	-
Sensor ID Switch Function	Information on whether there is ID switching function or not/ Without or With	Without: ID switching function is not equipped With: ID switching function is equipped	-
ID1 Tire Position	ID1 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID1 tire position is displayed	• w/ Tire Inflation Pressure Display Function • If no tire position information is stored, "No Information" will be displayed.
ID2 Tire Position	ID2 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID2 tire position is displayed	• w/ Tire Inflation Pressure Display Function • If no tire position information is stored, "No Information" will be displayed.
ID3 Tire Position	ID3 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID3 tire position is displayed	• w/ Tire Inflation Pressure Display Function • If no tire position information is stored, "No Information" will be displayed.
ID4 Tire Position	ID4 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID4 tire position is displayed	• w/ Tire Inflation Pressure Display Function • If no tire position information is stored, "No Information" will be

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
			displayed.
ID5 Tire Position*3	ID5 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID5 tire position is displayed	• w/ Tire Inflation Pressure Display Function • If no tire position information is stored, "No Information" will be displayed.
ID1 - FL Wheel Speed Synchronization Count	ID1 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID1 - FR Wheel Speed Synchronization Count	ID1 - FR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID1 - RL Wheel Speed Synchronization Count	ID1 - RL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID1 - RR Wheel Speed Synchronization Count	ID1 - RR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID2 - FL Wheel Speed Synchronization Count	ID2 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID2 - FR Wheel Speed Synchronization Count	ID2 - FR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID2 - RL Wheel Speed Synchronization Count	ID2 - RL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID2 - RR Wheel Speed Synchronization Count	ID2 - RR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID3 - FL Wheel Speed Synchronization Count	ID3 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID3 - FR Wheel Speed Synchronization Count	ID3 - FR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID3 - RL Wheel Speed Synchronization Count	ID3 - RL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID3 - RR Wheel Speed Synchronization Count	ID3 - RR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID4 - FL Wheel Speed Synchronization Count	ID4 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID4 - FR Wheel Speed Synchronization Count	ID4 - FR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID4 - RL Wheel Speed Synchronization Count	ID4 - RL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID4 - RR Wheel Speed Synchronization Count	ID4 - RR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID5 - FL Wheel Speed Synchronization Count*3	ID5 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID5 - FR Wheel Speed Synchronization Count*3	ID5 - FR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID5 - RL Wheel Speed Synchronization Count*3	ID5 - RL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function
ID5 - RR Wheel Speed Synchronization Count*3	ID5 - RR Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	w/ Tire Inflation Pressure Display Function

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Number of Trouble Code	Number of DTCs recorded/ min.: 0 max.: 255	min.: 0 max.: -	-

HINT:

- *1: Displayed only when the ID No. is not registered.
- *2: It may take a few minutes until the values are displayed. If the values are not displayed after a few minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24 .
- *3: This item is displayed on the Techstream, however, it is not used for this vehicle.

2. PERFORM ACTIVE TEST

Using the Techstream to perform Active Tests allows the relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Combination Meter / Active Test.
- Check the operation by referring to the table below.

Combination Meter

TESTER DISPLAY	TEST PART	CONTROL RANGE	DIAGNOSTIC NOTE
Indicat. Tire Pressure Warning System	Tire pressure warning light	OFF or ON	Confirm that the vehicle is stopped with the engine idling.



Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005V97000X
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Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: DIAGNOSIS SYSTEM; 2016 MY Tacoma [08/2015 -]		

DIAGNOSIS SYSTEM

1. CHECK WARNING LIGHT

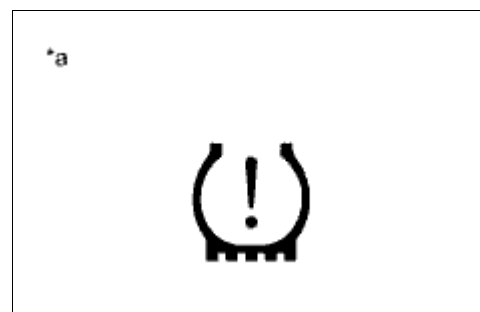
NOTICE:

- When there is a problem with the tire pressure warning system, the tire pressure warning light blinks at 0.5 second intervals, and illuminates after 1 minute.
- When the malfunction has been corrected, the tire pressure warning light goes off.
- When the tire pressure warning light illuminates, immediately check the tire pressure of the tires and adjust them to the specified value.
- After the ignition switch is turned to ON, the tire pressure warning light illuminates for 3 seconds and then goes off. If the warning light does not illuminate for 3 seconds, proceed to the troubleshooting for the tire pressure warning light circuit **INFO**.

(a) Turn the ignition switch to ON.

Text in Illustration

*a	Tire Pressure Warning Light
----	-----------------------------



(b) Check that the tire pressure warning light illuminates for 3 seconds.

2. WHAT TO CONSIDER WHEN TIRE PRESSURE WARNING LIGHT ILLUMINATES

- When the tire pressure warning light does not go off, or when it illuminates during driving, check the tire pressure. If the tire pressure warning light illuminates within several hours after adjusting the tire pressure, a tire may have a slow air leak.
- The system is disabled under the following conditions (when the condition returns to normal, the system will work properly).
 - When all of the tire and wheel assemblies that have tire pressure warning valve and transmitters registered with the tire pressure warning ECU and receiver have not been installed.
 - When all of the transmitter ID codes are not registered with the tire pressure warning ECU and receiver.
 - When the tire pressure is abnormally high (absolute pressure: 480 kPa (4.9 kgf/cm² , 70 psi) or more; relative pressure: 380 kPa (3.9 kgf/cm² , 55 psi) or more).
 - When the tire pressure warning valve and transmitter battery is depleted.
- The system may become disabled under the following conditions (when the condition returns to normal, the system will work properly).
 - When electric devices or facilities using similar radio frequencies are nearby.
 - When a wireless device or other equipment operating at a similar frequency is in use in the vehicle.
 - When a window tint that affects radio wave signals is installed.

- (4) When there is a lot of snow or ice on the vehicle, in particular, around the wheels or wheel housing.
- (5) When non-genuine wheels are used.
- (6) When tire chains are used.
- (7) When aftermarket tire repair sealant is used.

CAUTION:

After use of tire repair sealant, replacement of the tire pressure warning valve and transmitter is required to ensure normal system operation. (Normal system operation cannot be ensured by only repairing or replacing the tire.)

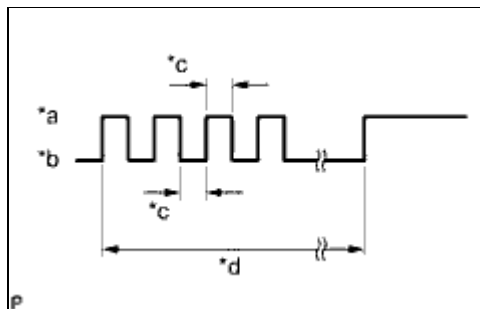
3. TIRE PRESSURE WARNING LIGHT AND INDICATOR CHART

HINT:

The table below indicates the state of the tire pressure warning light after the ignition switch is turned to ON.

	IMMEDIATELY AFTER TURNING THE IGNITION SWITCH TO ON	ALWAYS			
		WARNING LIGHT OUTPUT PATTERN			
	ILLUMINATES FOR 3 SEC.	GOES OFF	ILLUMINATES	BLINKS	OUTPUTS DTC
Normal	○	○	-	-	-
Low tire pressure	○	-	○	-	-
System failure	○	-	-	*1	-
Test mode (signal check mode)	○	-	-	*2	-
Initialization	○	-	-	*3	-
ECU connector poorly connected	-	-	-	*4	-
TC grounded (DTCs are output)	○	-	-	-	○
TC grounded (DTCs are not output)	○	-	-	*5	-

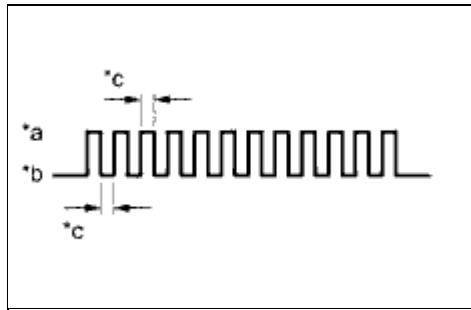
*1: Blinks at 0.5 second intervals, and remains illuminated after 1 minute.



Text in Illustration

*a	ON
*b	OFF

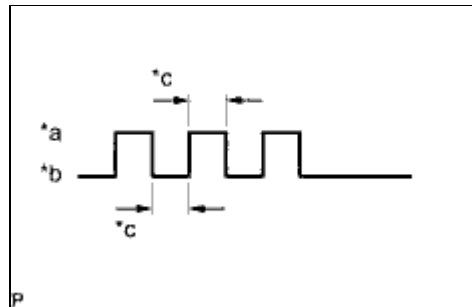
*c	0.5 sec.
*d	1 minute



*2: Blinks at 0.125 second intervals.

Text in Illustration

*a	ON
*b	OFF
*c	0.125 sec.

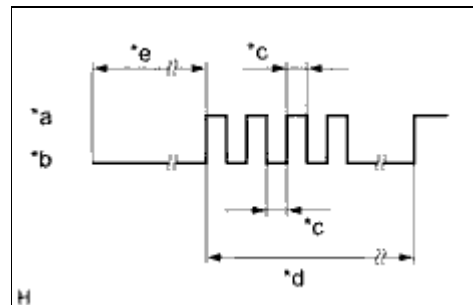


*3: Blinks 3 times at 1 second intervals.

Text in Illustration

*a	ON
*b	OFF
*c	1 sec.

*4: Goes off for 10 seconds to check the connection of the ECU connector, and then blinks at 0.5 second

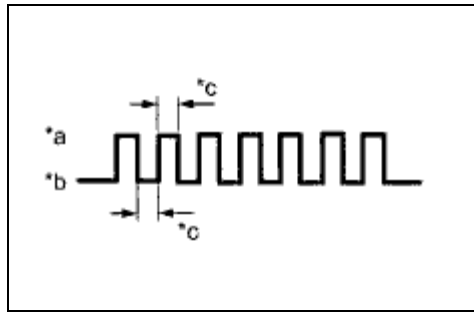


intervals, and remains illuminated after 1 minute.

Text in Illustration

*a	ON
*b	OFF
*c	0.5 sec.

*d	1 minute
*e	10 sec.



*5: Blinks at 0.25 second intervals.

Text in Illustration

*a	ON
*b	OFF
*c	0.25 sec.

4. NORMAL MODE DTC

- (a) DTCs are stored in the tire pressure warning ECU and receiver and output by blinking the tire pressure warning light or by using the Techstream [INFO](#) .

5. TEST MODE (SIGNAL CHECK MODE) DTC

- (a) By switching from normal mode into test mode (signal check mode), the tire pressure warning ECU and receiver, each tire pressure warning valve and transmitter and tire pressure warning reset switch can be inspected [INFO](#) .

6. FAIL-SAFE FUNCTION

- (a) When a malfunction occurs in the tire pressure warning system, the tire pressure warning light illuminates after blinking for 1 minute to inform the driver of the system failure.
- (b) As a result of this, tire pressure monitoring is disabled and a DTC is stored in the tire pressure warning ECU and receiver.



Last Modified: 11-13-2015	6.6 S	Doc ID: RM000005VTI000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: DIAGNOSTIC TROUBLE CODE CHART; 2016 MY Tacoma [08/2015 -]		

DIAGNOSTIC TROUBLE CODE CHART

HINT:

If a trouble code is displayed during the DTC check, inspect the trouble area for that code. For details of each code, refer to the relevant page listed under respective "See page" in the DTC chart.

Tire Pressure Warning ECU and Receiver

DTC CODE	DETECTION ITEM	SEE PAGE
C2111/11	Transmitter ID1 Operation Stop	INFO
C2112/12	Transmitter ID2 Operation Stop	INFO
C2113/13	Transmitter ID3 Operation Stop	INFO
C2114/14	Transmitter ID4 Operation Stop	INFO
C2121/21	No Signal from Transmitter ID1	INFO
C2122/22	No Signal from Transmitter ID2	INFO
C2123/23	No Signal from Transmitter ID3	INFO
C2124/24	No Signal from Transmitter ID4 in Main Mode	INFO
C2126/26	Transmitter ID not Received in Main Mode	INFO
C2141/41	Transmitter ID1 Error	INFO
C2142/42	Transmitter ID2 Error	INFO
C2143/43	Transmitter ID3 Error	INFO
C2144/44	Transmitter ID4 Error	INFO
C2171/71	Transmitter ID not Registered	INFO
C2176/76	Receiver Error	INFO
C2177/77	Initialization not Completed	INFO
C2179/79	Tire Pressure Monitor ECU Communication Stop	INFO
C2181/81	Transmitter ID1 not Received (Test Mode DTC)	INFO
C2182/82	Transmitter ID2 not Received (Test Mode DTC)	INFO
C2183/83	Transmitter ID3 not Received (Test Mode DTC)	INFO
C2184/84	Transmitter ID4 not Received (Test Mode DTC)	INFO
C2198/98	Initialization Switch (for Test Mode DTC)	INFO
U0129/29*	Lost Communication with Brake System Control Module	INFO

*: w/ Tire Inflation Pressure Display Function

Main Body ECU (Multiplex Network Body ECU)

DTC CODE	DETECTION ITEM	SEE PAGE
B1247	Tire Pressure Monitor Receiver Communication Stop	INFO



Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005V98000X
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Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: DTC CHECK / CLEAR; 2016 MY Tacoma [08/2015 -]		

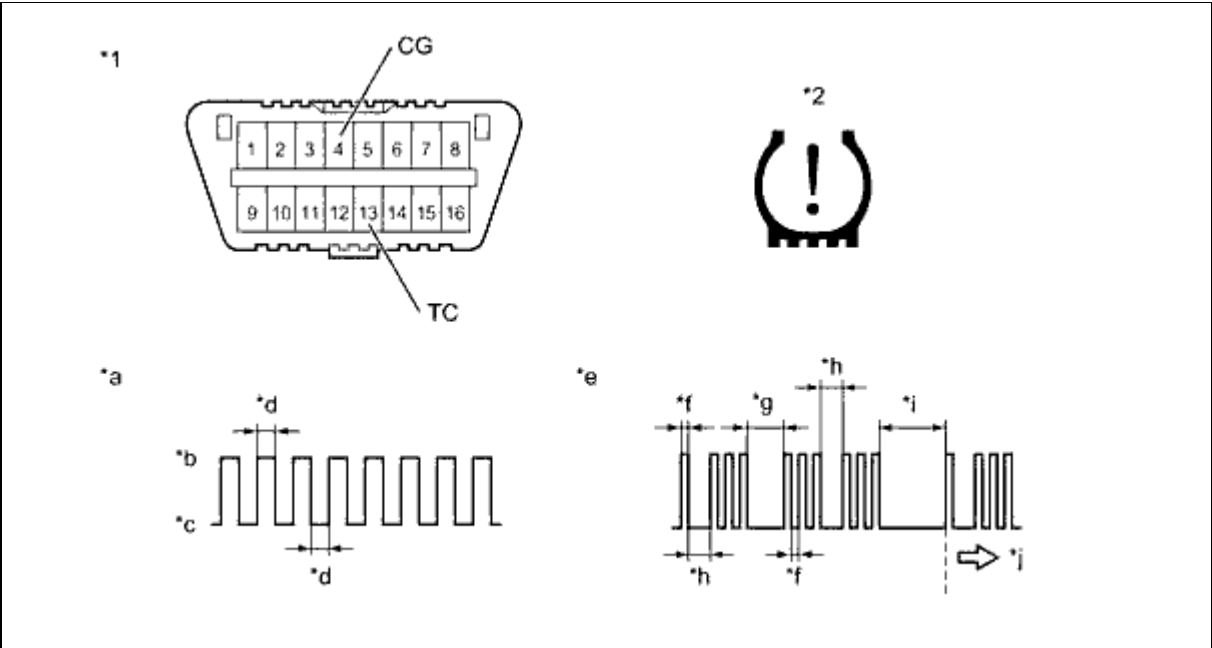
DTC CHECK / CLEAR

1. CHECK DTC (for TIRE PRESSURE WARNING ECU AND RECEIVER) (USING TECHSTREAM)

- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Chassis / Tire Pressure Monitor / Trouble Codes.
- Read the DTCs.

2. CHECK DTC (for TIRE PRESSURE WARNING ECU AND RECEIVER) (USING SST CHECK WIRE)

- Turn the ignition switch off.



Text in Illustration

*1	DLC3	*2	Tire Pressure Warning Light
*a	Normal System Code	*b	ON
*c	OFF	*d	0.25 sec.
*e	Code 13 and 33	*f	0.5 sec.
*g	2.5 sec.	*h	1.5 sec.
*i	4.5 sec.	*j	Repeat

- Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3.

SST: 09843-18040

- (c) Turn the ignition switch to ON.
- (d) Read and record any DTCs indicated by the tire pressure warning light in the combination meter assembly. Refer to the illustration for examples of a normal system code and codes 13 and 33.

HINT:

- If the tire pressure warning light does not indicate any DTCs or the normal system code, inspect the tire pressure warning light circuit or TC and CG terminal circuit.

TROUBLE AREA	LINK
Tire pressure warning light circuit	INFO
TC and CG terminal circuit	INFO

- If 2 or more malfunctions are indicated at the same time, the lowest numbered DTC is displayed first.
- (e) Refer to Diagnostic Trouble Code Chart for DTC information [INFO](#).
 - (f) After completing the check, turn the ignition switch off and remove SST from the DLC3.

3. CHECK DTC (for MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU))

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Body Electrical / Main Body / Trouble Codes.
- (f) Read the DTCs.

4. CLEAR DTC (for TIRE PRESSURE WARNING ECU AND RECEIVER)**HINT:**

After repairing the malfunctions, clear the DTCs.

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Turn the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Trouble Codes.
- (f) Clear the DTCs following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

5. CLEAR DTC (for MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU))**HINT:**

After repairing the malfunctions, clear the DTCs.

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Turn the ignition switch to ON.

- (d) Turn the Techstream on.
- (e) Enter the following menus: Body Electrical / Main Body / Trouble Codes.
- (f) Clear the DTCs following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.



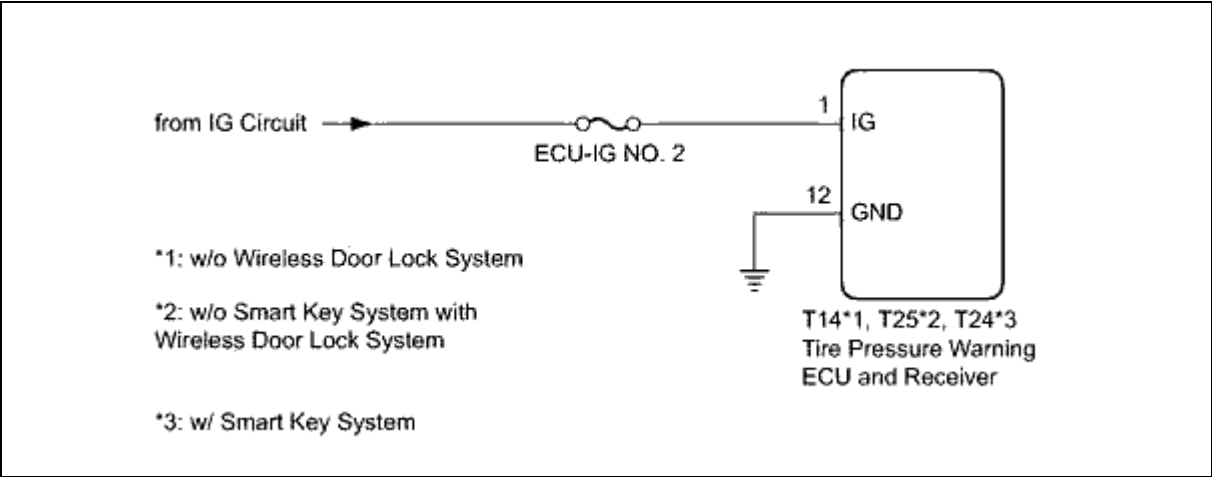
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000005V90000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: ECU Power Source Circuit; 2016 MY Tacoma [08/2015 -]		

ECU Power Source Circuit

DESCRIPTION

The IG circuit is the power source for the tire pressure warning ECU and receiver.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

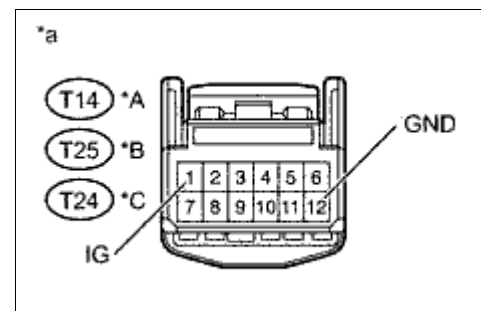
- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization INFO after registration INFO of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU has been replaced.

HINT:

Inspect the fuses for circuits related to this system before performing the following procedure.

PROCEDURE

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



(a) Disconnect the T14*1, T25*2, T24*3 tire pressure warning ECU and receiver connector.

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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
T14-1 (IG) - Body ground*1	Ignition switch ON	10 to 16 V
T25-1 (IG) - Body ground*2	Ignition switch off	Below 1 V
T24-1 (IG) - Body ground*3		

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
T14-12 (GND) - Body ground*1	Always	Below 1 Ω
T25-12 (GND) - Body ground*2		
T24-12 (GND) - Body ground*3		

Text in Illustration

*a	Front view of wire harness connector (to Tire Pressure Warning ECU and Receiver)
----	---

*1: w/o Wireless Door Lock System

*2: w/o Smart Key System with Wireless Door Lock System

*3: w/ Smart Key System

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ► REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER



Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005V8W000X
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Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING; 2016 MY Tacoma [08/2015 -]		

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedure to troubleshoot the tire pressure warning system.
- Make sure that the wireless door lock control system has exited diagnostic mode before performing the following procedure.
- *: Use the Techstream.

1.	VEHICLE BROUGHT TO WORKSHOP
-----------	------------------------------------

NEXT



2.	CUSTOMER PROBLEM ANALYSIS
-----------	----------------------------------

(a) Interview the customer to confirm the problem.

HINT:

It is important to collect as much specific information as possible from the customer to allow for a quick repair.

NEXT



3.	ADJUST TIRE PRESSURE*
-----------	------------------------------

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(e) Adjust all tire pressures to the specified value 

NOTICE:

Make sure the tires are cool when adjusting the tire pressure.

(f) Display "ID Tire Inflation Pressure" in the Data List and check that the tire pressure values match the adjusted pressure amount.

HINT:

It may take a few minutes until the values are displayed.

(g) Perform initialization  .

Result

RESULT	PROCEED TO
Tire pressure warning light remains on	A
Tire pressure warning light goes off	B

B  **END**

A



4.	CHECK ECU CONNECTED TO CAN BUS*
-----------	--

(a) Check the ECUs connected to the CAN bus  .

Result

RESULT	PROCEED TO
No malfunction appears	A
Malfunction appears	B

B  **GO TO CAN COMMUNICATION SYSTEM**

A



5.	CHECK FOR DTC (CAN COMMUNICATION SYSTEM)*
-----------	--

(a) Check for DTCs  .

Result

RESULT	PROCEED TO
CAN system DTCs are not output	A
CAN system DTCs are output	B

B  **GO TO CAN COMMUNICATION SYSTEM**

A



6.	CHECK FOR DTC*
-----------	-----------------------

(a) Check for DTCs  .

Result

RESULT	PROCEED TO
DTCs are output	A
DTCs are not output	B

 **GO TO STEP 8**

A



7.	DTC CHART
-----------	------------------

(a) Refer to Diagnostic Trouble Code Chart  .

NEXT  **GO TO STEP 10**

8.	PROBLEM SYMPTOMS TABLE
-----------	-------------------------------

(a) Refer to Problem Symptoms Table  .

NEXT



9.	CIRCUIT INSPECTION*
-----------	----------------------------

(a) Refer to Electronic Circuit Inspection Procedure  .

NEXT



10.	REPAIR OR REPLACE
------------	--------------------------

(a) Repair or replace parts based on the diagnosis result.

NEXT



11.	CONFIRMATION TEST*
------------	---------------------------

(a) Check the Data List to confirm that the tire inflation pressure has been received [INFO](#) .

(b) Perform initialization [INFO](#) .

(c) Confirm that the initialization has been completed.

NEXT  **END**

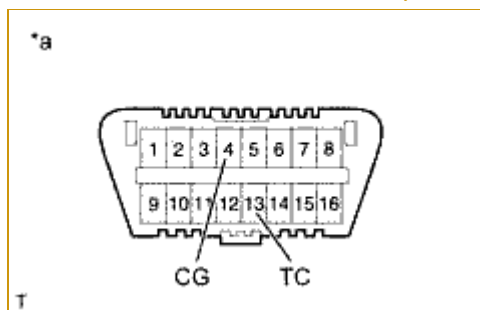


Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005V9B000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: INITIALIZATION; 2016 MY Tacoma [08/2015 -]		

INITIALIZATION

NOTICE:

- Initialization can only be performed for vehicles with a tire pressure warning reset switch.
- If initialization is performed, the existing tire positions will be cleared, but will be automatically identified when the vehicle is driven at 37 km/h (23 mph) or more for 10 minutes or more.
- Initialization can be confirmed through the tire pressure warning light.
- The order in which the data is received is random.
- If the signals from all the tire pressure warning valve and transmitters are received, initialization is completed.
- Initialization is completed when the Data List "ID Tire Inflation Pressure" display shows the correct pressures INFO.
- Initialization is normally completed within a few minutes.
- It may take a few minutes until the values are displayed. If the values are not displayed after a few minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24 INFO.
- If initialization has not been completed successfully, DTC C2177/77 is stored after a vehicle speed of 37 km/h (23 mph) or more is detected for 20 minutes or more.
- During test mode (sensor check mode), the system will not change to initialization mode even if the tire pressure warning reset switch is pushed.
- Initialization can be terminated by connecting terminals 13 (TC) and 4 (CG) of the DLC3.



Text in Illustration

*a	Front view of DLC3
----	--------------------

1. BEFORE INITIALIZATION

- Make sure that the tires are cool.
- Set the tire pressure to the specified value INFO.

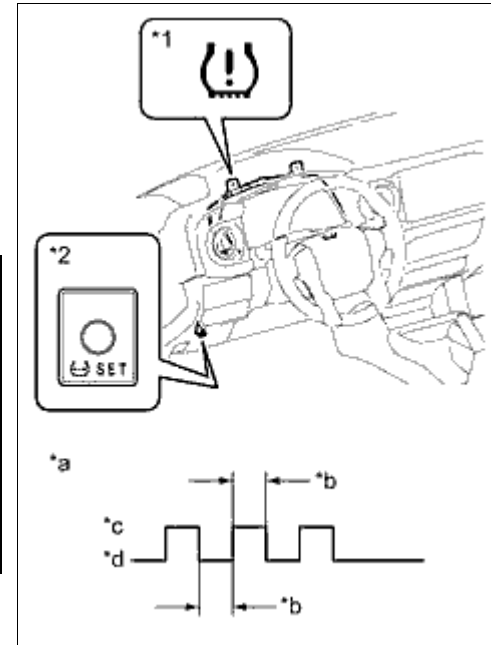
2. INITIALIZATION PROCEDURE

- Turn the ignition switch to ON.

- (b) Press and hold the tire pressure warning reset switch for 3 seconds or more until the tire pressure warning light blinks 3 times.

Text in Illustration

*1	Tire Pressure Warning Light
*2	Tire Pressure Warning Reset Switch
*a	Tire Pressure Warning Light Output Pattern
*b	1 sec.
*c	ON
*d	OFF



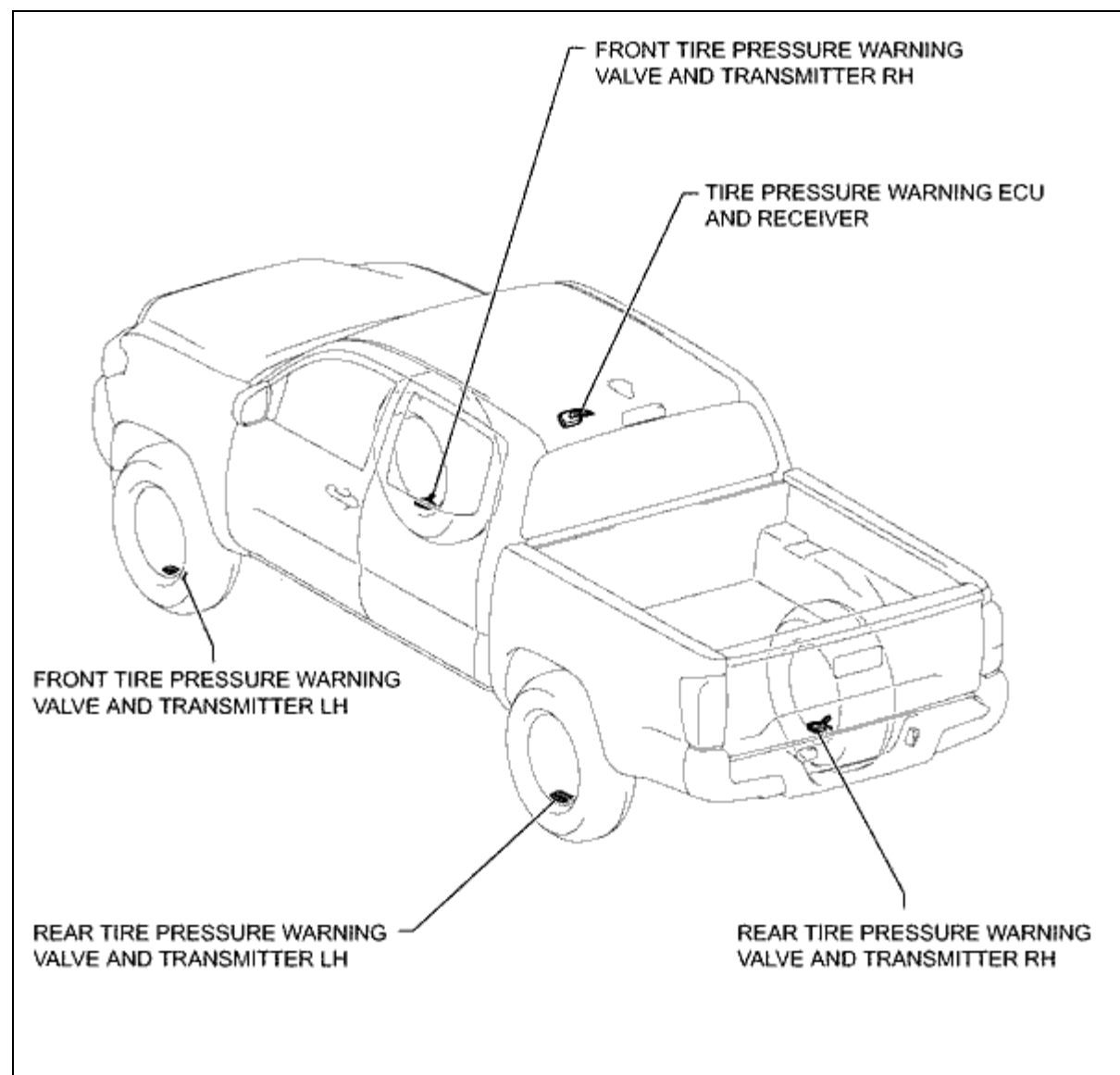
- (c) Turn the ignition switch off.
- (d) Connect the Techstream to the DLC3.
- (e) Turn the ignition switch to ON and turn the Techstream on.
- (f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (g) Check that initialization has been completed.
- (h) Confirm that the tire pressure data of all tires is displayed on the Techstream screen.



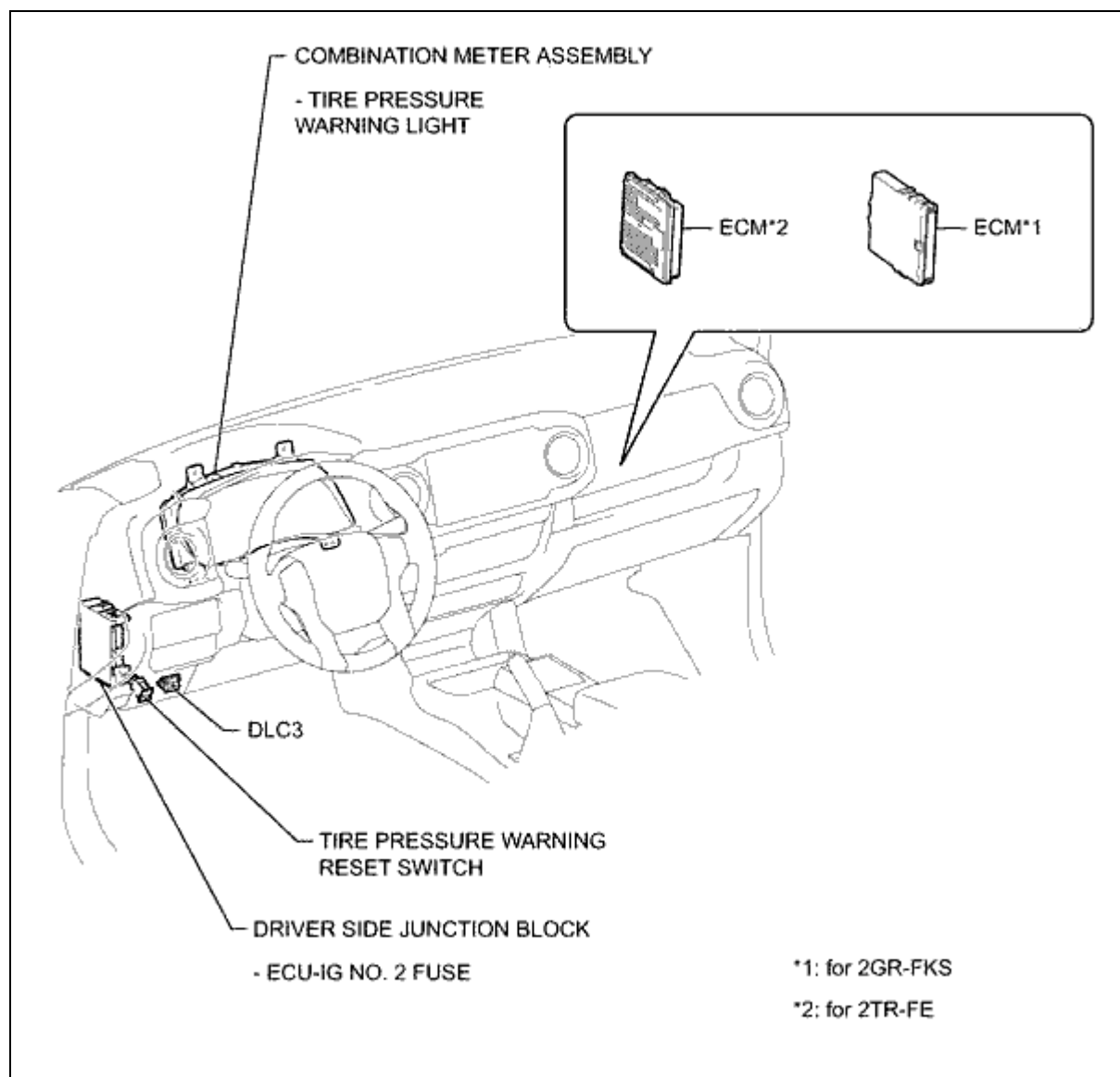
Last Modified: 11-13-2015	6.6 R	Doc ID: RM000005V8X000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: PARTS LOCATION; 2016 MY Tacoma [08/2015 -]		

PARTS LOCATION

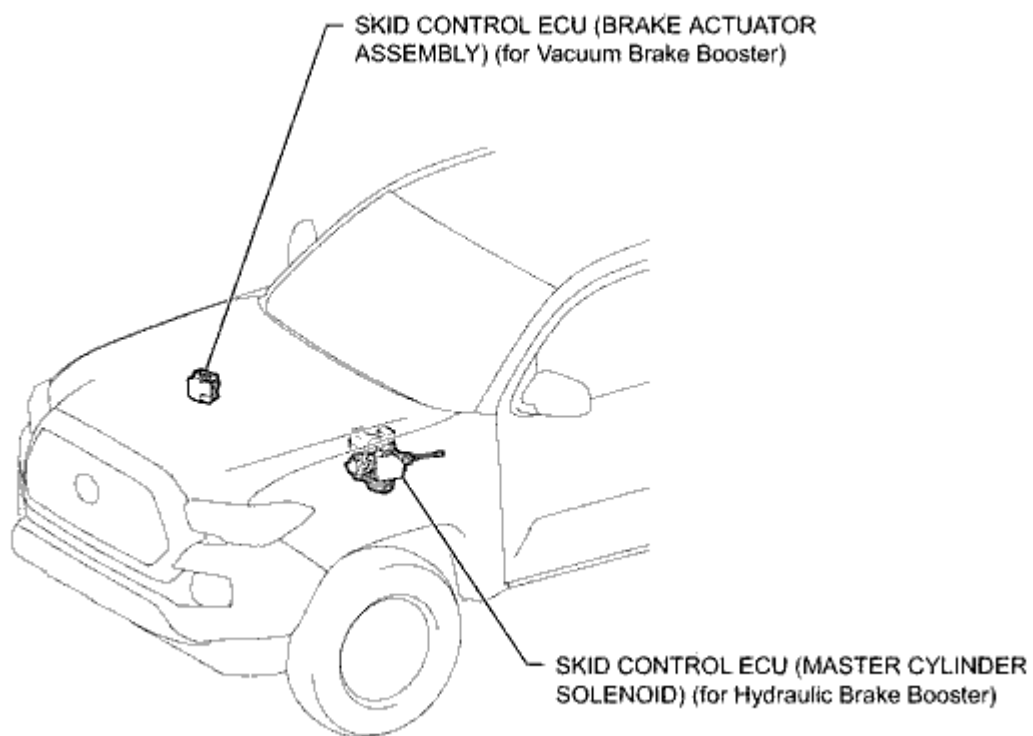
ILLUSTRATION



ILLUSTRATION



ILLUSTRATION



Last Modified: 11-13-2015	6.6 L	Doc ID: RM000005V8V000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: PRECAUTION; 2016 MY Tacoma [08/2015 -]		

PRECAUTION

1. IGNITION SWITCH EXPRESSION

HINT:

The type of ignition switch used on this model differs depending on the specifications of the vehicle. The expressions listed in the table below are used in this section.

EXPRESSION	IGNITION SWITCH (POSITION)	ENGINE SWITCH (CONDITION)
Ignition Switch off	LOCK	Off (Lock)
Ignition Switch ACC	ACC	On (ACC)
Ignition Switch ON	ON	On (IG)
Engine Start	START	On (Start)

2. TIRE PRESSURE WARNING ECU AND RECEIVER EXPRESSIONS

- (a) The type of tire pressure warning ECU and receiver used on this model differs depending on the specifications of the vehicle. The expressions listed in the table below are used in this section.

VEHICLE SPECIFICATION	PART NAME IN MANUAL	ACTUAL PART NAME
w/o Wireless Door Lock System	Tire pressure warning ECU and receiver	Tire pressure monitor receiver assembly
w/o Smart Key System with Wireless Door Lock System		Door control and tire pressure monitoring system receiver assembly
w/ Smart Key System		Electrical key and tire pressure monitoring system receiver assembly

3. TIRE PRESSURE WARNING SYSTEM PRECAUTION

- (a) It is necessary for the tire pressures to be adjusted periodically because tire pressure decreases naturally over time.
- (b) In winter, tire pressure may decrease due to low ambient temperatures (tire pressure decreases by approximately 10 kPa (0.1 kgf/cm² , 1.5 psi) for every 10°C (18°F) drop in the ambient temperature). Therefore, the tire pressure warning system is more likely to indicate a warning if the tire pressures are not adjusted appropriately. If the daily temperature variation is large, increase the pressure of the tires so that the tire pressures are suitable under cold conditions. As a result, unnecessary tire pressure warning operations should decrease.
- (c) Depending on the tire type, the system may not function properly even if the specified wheels are used.
- (d) To prevent damage to the tire pressure warning valve and transmitter, make sure that the tire pressure warning valve and transmitter does not interfere with the tire bead when installing or removing a tire.
- (e) To prevent damage to the tire pressure warning valve and transmitter, before disengaging the tire bead or removing the tire from the wheel, drop the tire pressure warning valve and transmitter into the wheel.
- (f) Always use a new grommet and valve core when installing a tire pressure warning valve and transmitter to ensure the sealing performance.
- (g) When one or more of the tire pressure warning valve and transmitters or the tire pressure warning ECU

and receiver is replaced, the transmitter IDs for all of the tire pressure warning valve and transmitters must be re-registered. Before registering the transmitter ID of the new tire pressure warning valve and transmitter, check the Data List and record all of the transmitter IDs that are already registered.

- (h) Use only a specified cap. If an unspecified cap is used, it may seize to the tire pressure warning valve and transmitter.
- (i) The system is disabled under the following conditions (when the condition returns to normal, the system will work properly).
 - (1) When all of the tire and wheel assemblies that have tire pressure warning valve and transmitters registered with the tire pressure warning ECU and receiver have not been installed.
 - (2) When all of the transmitter ID codes are not registered with the tire pressure warning ECU and receiver.
 - (3) When the tire pressure is abnormally high (absolute pressure: 480 kPa (4.9 kgf/cm² , 70 psi) or more; relative pressure: 380 kPa (3.9 kgf/cm² , 55 psi) or more).
 - (4) When the tire pressure warning valve and transmitter battery is depleted.
- (j) The system may become disabled under the following conditions (when the condition returns to normal, the system will work properly).
 - (1) When electric devices or facilities using similar radio frequencies are nearby.
 - (2) When a wireless device or other equipment operating at a similar frequency is in use in the vehicle.
 - (3) When a window tint that affects radio wave signals is installed.
 - (4) When there is a lot of snow or ice on the vehicle, in particular, around the wheels or wheel housing.
 - (5) When non-genuine wheels are used.
 - (6) When tire chains are used.
 - (7) When aftermarket tire repair sealant is used.

CAUTION:

After use of tire repair sealant, replacement of the tire pressure warning valve and transmitter is required to ensure normal system operation. (Normal system operation cannot be ensured by only repairing or replacing the tire.)

- (k) w/ Tire Inflation Pressure Display Function:

The tire inflation pressure display function displays the position and pressure of each tire on the multi-information display. If the position and pressure of each tire are not displayed, the problem may be alleviated by driving the vehicle to a location where the signal reception is better.



Last Modified: 11-13-2015	6.6 T	Doc ID: RM000005V8Z000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: PROBLEM SYMPTOMS TABLE; 2016 MY Tacoma [08/2015 -]		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Tire Pressure Warning System

SYMPTOM	SUSPECTED AREA	SEE PAGE
Tire pressure warning light does not illuminate despite tire pressure decreasing	Initialization	INFO
	Check Data List (ID Tire Inflation Pressure)	INFO
	ID code check (Registration)	INFO
Tire pressure warning light remains illuminated (Goes off during initial check)	Tire pressure warning light circuit	INFO
Tire pressure warning light remains illuminated (Illuminates during initial check)	Check Data List (ID Tire Inflation Pressure)	INFO
	Tire pressure adjustment	INFO
	ID code check (Registration)	INFO
	Initialization	INFO
Initialization cannot be done	Tire pressure warning reset switch	INFO
DTC check cannot be done using SST check wire	TC and CG terminal circuit	INFO
	ECU power source circuit	INFO
Tire position not identified*	Tire pressure warning valve and transmitter	INFO
	Main body ECU (Multiplex network body ECU)	-

*: w/ Tire Inflation Pressure Display Function



Last Modified: 11-13-2015	6.6 M	Doc ID: RM000005V9E000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: REGISTRATION; 2016 MY Tacoma [08/2015 -]		

REGISTRATION

1. BEFORE REGISTRATION

NOTICE:

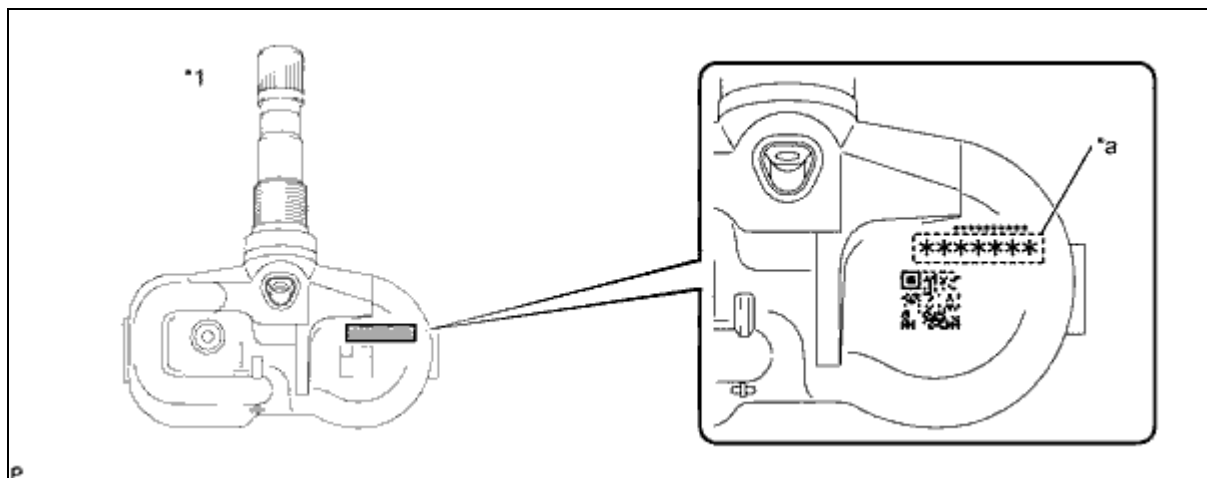
The transmitter ID is written on the tire pressure warning valve and transmitter. It is not possible to read the transmitter ID after installing the tire onto the wheel. Therefore, make a note of the transmitter ID before installing the tire.

(a) In case of tire pressure warning ECU and receiver replacement:

- (1) Read the registered transmitter IDs that are stored in the old ECU using the Techstream and write them down.
- (2) If reading the stored transmitter IDs is impossible due to malfunctions of components such as the tire pressure warning ECU and receiver, remove the tires from the wheels and check the IDs located on the tire pressure warning valve and transmitters.

(b) In case of tire pressure warning valve and transmitter replacement:

- (1) Take a note of the 7-digit number (transmitter ID) written on the tire pressure warning valve and transmitter.



Text in Illustration

*1	Tire Pressure Warning Valve and Transmitter	-	-
*a	Transmitter ID (7-digit Number)	-	-

2. REGISTER TRANSMITTER ID (USING TECHSTREAM)

HINT:

- The previously registered IDs will be cleared from memory when registration is completed.
- If the ID registration step is not completed within 300 seconds, ID registration will be canceled.

(a) Set the tire pressure to the specified value INFO.

(b) Turn the ignition switch off.

- (c) Connect the Techstream to the DLC3.
- (d) Turn the ignition switch to ON and the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Utility / ID Registration.
- (f) Perform the procedure displayed on the Techstream.

3. CONFIRMATION OF TRANSMITTER ID REGISTRATION

NOTICE:

- It may take a few minutes until the values are displayed. If the values are not displayed after a few minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24 .
- If the transmitter IDs have not been registered, DTC C2171/71 is stored in the tire pressure warning ECU and receiver after 3 minutes or more.
- If normal pressure values are displayed, the transmitter IDs have been registered correctly.
- If the tire pressure values are not displayed after a few minutes, the transmitter IDs may be incorrect or the system may have a malfunction.
- After all transmitter IDs are registered, DTC C2126/26 is stored in the tire pressure warning ECU and receiver and the tire pressure warning light blinks for 1 minute and then illuminates. When the tire pressure warning ECU and receiver successfully receives signals from all the transmitters whose IDs are stored in the ECU, DTC C2126/26 is cleared and the tire pressure warning light goes off.

- (a) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/ cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*1

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)		

HINT:

*1: It may take a few minutes until the values are displayed. If the values are not displayed after a few minutes, perform troubleshooting according to the inspection procedure for DTCs C2121/21 to C2124/24.

- (b) Reduce the tire inflation pressure of each tire 40 kPa (0.4 kgf/cm² , 5.8 psi) or more within 30 seconds, and check that the "ID Tire Inflation Pressure" data is updated and that the actual tire inflation pressures are displayed.
- (c) After confirming that all of the tire inflation pressure values (except the compact spare tire) have been updated, adjust the tire inflation pressure to the specified value, press the tire pressure warning reset switch and perform initialization.

4. TIRE POSITION IDENTIFICATION (USING TECHSTREAM) (w/ Tire Inflation Pressure Display Function)

- (a) Set the tire pressure to the specified value  .
- (b) Turn the ignition switch off.
- (c) Connect the Techstream to the DLC3.
- (d) Turn the ignition switch to ON and the Techstream on.
- (e) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (f) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kgf/cm² , 5.8 psi) within 30 seconds.

NOTICE:

- It may take a few minutes until the values are displayed.
 - When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.
- (g) Read the "ID Tire Inflation Pressure" value and identify the tire with reduced pressure, and record the corresponding tire pressure warning valve and transmitter (ID1 to ID4).
 - (h) Repeat for each tire.
 - (i) Set the tire pressure to the specified value  .
 - (j) Enter the following menus: Chassis / Tire Pressure Monitor / Utility / Tire Position Write.
 - (k) Perform the procedure displayed on the Techstream.

5. TIRE POSITION IDENTIFICATION (NOT USING TECHSTREAM) (w/ Tire Inflation Pressure Display Function)

- (a) Set the tire pressure to the specified value  .
- (b) The tire position can be automatically identified using any of the following 2 methods:
 - (1) Perform initialization to clear the existing tire position information, then drive the vehicle at 37 km/h (23 mph) or more for 10 minutes or more until each tire position is automatically identified.
 - (2) Without performing initialization, drive the vehicle as normal until each tire position is automatically updated.

NOTICE:

- Identifying the tire position automatically without performing initialization by driving the vehicle as normal may take longer than other methods.
- The previous tire positions will be displayed until they are automatically updated.

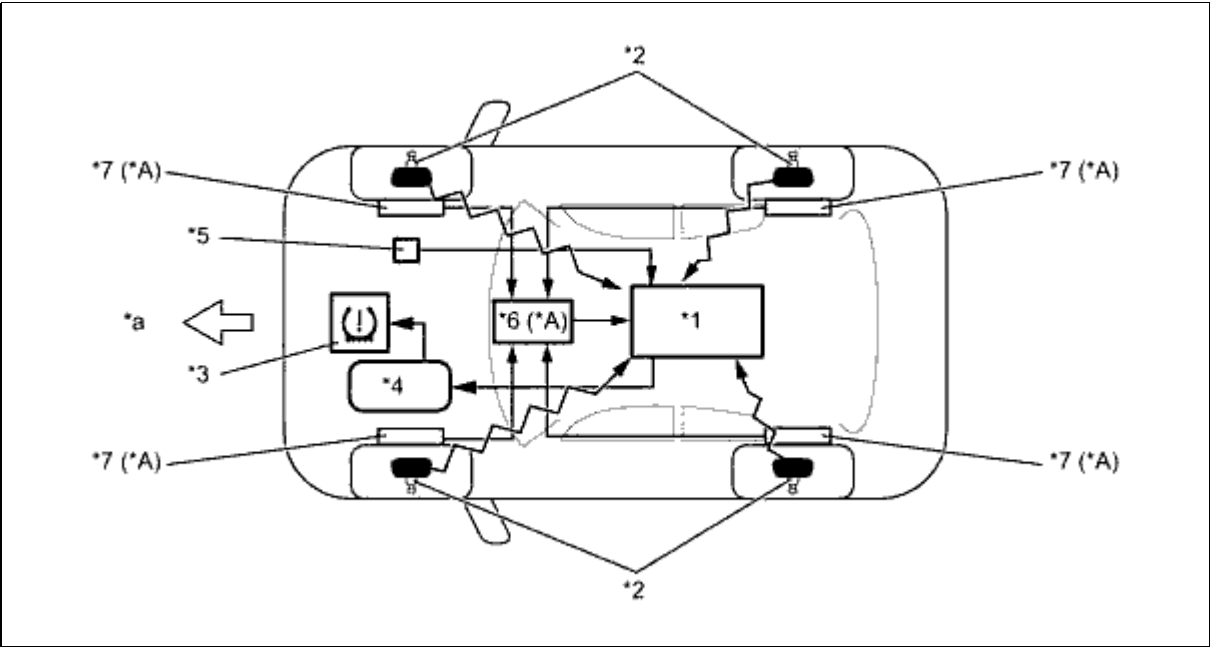


Last Modified: 11-13-2015	6.6 D	Doc ID: RM000005V96000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: SYSTEM DESCRIPTION; 2016 MY Tacoma [08/2015 -]		

SYSTEM DESCRIPTION

1. DESCRIPTION OF SYSTEM

- (a) When the tire pressure warning system detects that the tire pressure of a tire is lower than the threshold, it will inform the driver using a warning light.
- (b) The tire pressure warning ECU and receiver receives the transmitter ID, temperature and tire pressure information from the tire pressure warning valve and transmitters shown in the following illustration. This information is used to determine when the pressure in one of the tires has dropped.



Text in Illustration

*A	w/ Tire Inflation Pressure Display Function	-	-
*1	Tire Pressure Warning ECU and Receiver	*2	Tire Pressure Warning Valve and Transmitter
*3	Combination Meter Assembly - Tire Pressure Warning Light	*4	Main Body ECU (Multiplex Network Body ECU)
*5	Tire Pressure Warning Reset Switch	*6	Skid Control ECU
*7	Speed Sensor	-	-
*a	Front	-	-

2. DESCRIPTION OF TIRE POSITION IDENTIFICATION FUNCTION (w/ Tire Inflation Pressure Display Function)

- (a) The tire inflation pressure display function displays the position and pressure of each tire on the multi-information display.
- (b) The tire position can be identified using any of the following 3 methods:

- (1) Using the Techstream, manually enter the tire position for each transmitter ID.
- (2) Perform initialization to clear the existing tire position information, then drive the vehicle at 37 km/h (23 mph) or more for 10 minutes or more until each tire position is automatically identified.
- (3) Without performing initialization, drive the vehicle as normal until each tire position is automatically updated.

NOTICE:

- Identifying the tire position automatically without performing initialization by driving the vehicle as normal may take longer than other methods.
- The previous tire positions will be displayed until they are automatically updated.

3. DESCRIPTION OF REGISTRATION

- (a) When tires and wheels are replaced, always ensure that each transmitter ID is correctly registered.
- (b) When one or more of the tire pressure warning valve and transmitters or the tire pressure warning ECU and receiver is replaced, the transmitter IDs for all of the tire pressure warning valve and transmitters must be re-registered. Before registering the transmitter ID of the new tire pressure warning valve and transmitter, check the Data List and record all of the transmitter IDs that are already registered.

4. TIRE PRESSURE WARNING RESET SWITCH

- (a) By operating the tire pressure warning reset switch, the tire pressure warning ECU and receiver can be set to issue a warning at an inflation pressure that corresponds to the type of tires fitted to the vehicle. Therefore, the warning threshold must be set to the proper value in order to comply with local regulations.
- (b) Operate the tire pressure warning reset switch only after the inflation pressures of all tires (except the compact spare tire) have been adjusted on the vehicle.

5. DESCRIPTION OF INITIALIZATION

- (a) During initialization, the tire pressure warning valve and transmitters measure the inflation pressure of the tires, and register the signals that are transmitted into the tire pressure warning ECU and receiver at a frequency of about once per minute. The initialization process is completed when signals from all tires (except the compact spare tire) have been received.
- (b) Perform initialization in the following cases:
 - (1) Before delivery of a new vehicle.
 - (2) After replacement of the tire pressure warning ECU and receiver*.
 - (3) After replacement of a tire pressure warning valve and transmitter*.
 - (4) When the specified tire pressure changes due to the use of a different size or type of tire.
 - (5) When the specified tire pressure changes due to a change in the vehicle load, the speed range that the vehicle will be used in, etc.
 - (6) When a tire rotation is performed and the specified tire pressures are different for the front and rear of the vehicle.

HINT:

*: Perform initialization after the transmitter ID registration is completed.

6. FUNCTION OF MAIN COMPONENTS

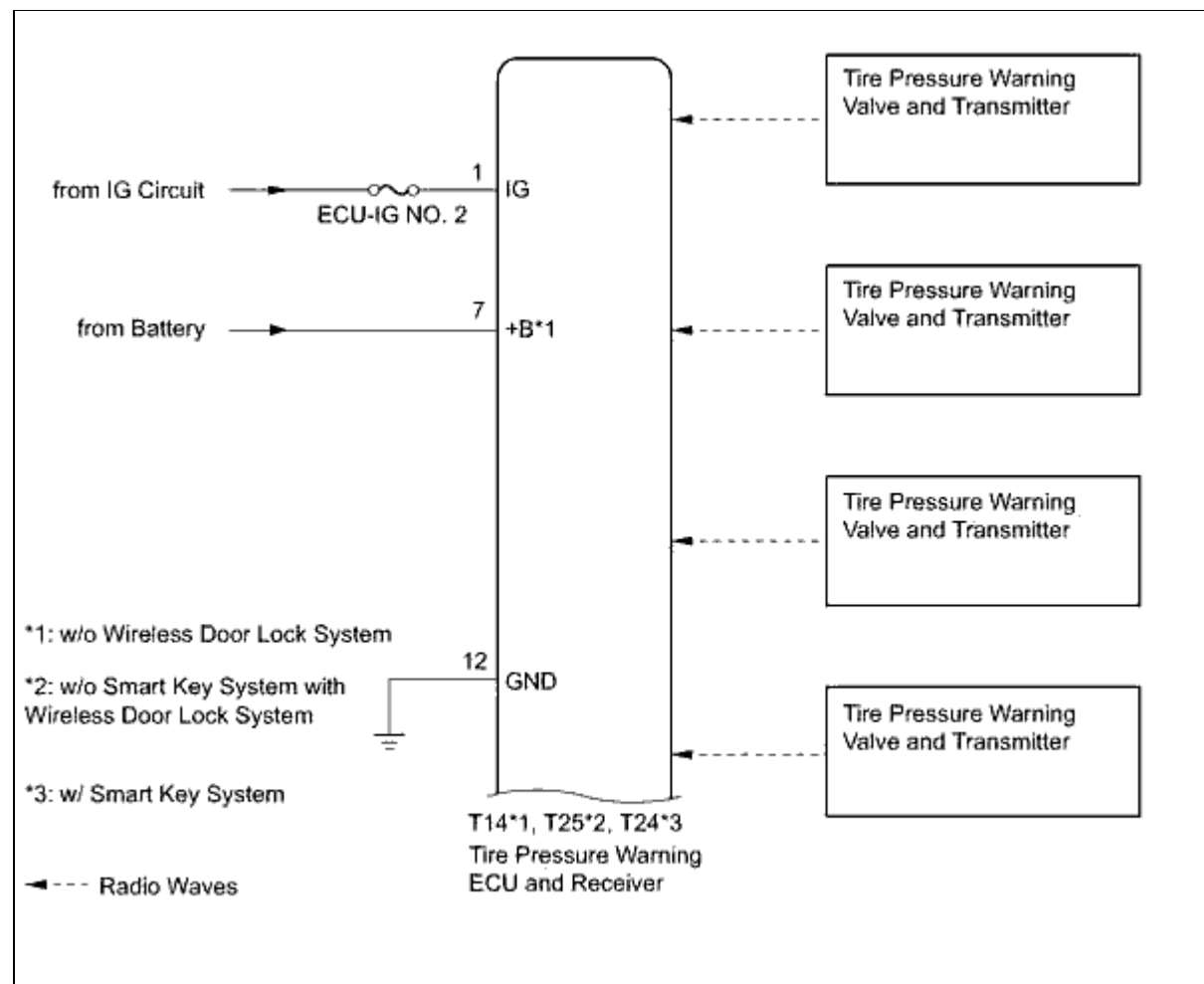
COMPONENT	COMPONENT
Tire Pressure Warning ECU and Receiver	• Receives data from each tire pressure warning valve and transmitter and monitors the tire pressures.

COMPONENT	COMPONENT
	• When the tire pressure warning ECU and receiver detects a drop in the tire pressure, a system malfunction, or initialization mode, it outputs the respective signal to the combination meter assembly. • When the tire pressure warning ECU and receiver detects that the vehicle speed signal is lost, it determines that the vehicle is being driven. w/ Tire Inflation Pressure Display Function: • Identifies the tire position for each tire pressure warning valve and transmitter according to the wheel speed signals from the skid control ECU and acceleration rate signal from each acceleration sensor built into each tire pressure warning valve and transmitter. Displays each tire pressure on the multi-information display.
Tire Pressure Warning Valve and Transmitter	Detects the pressure and internal temperature of the tire and transmits the measured values and the ID code to the tire pressure warning ECU and receiver. w/ Tire Inflation Pressure Display Function: • Transmits the acceleration rate signal from the built-in acceleration sensor to the tire pressure warning ECU and receiver to identify tire position.
Tire Pressure Warning Reset Switch	Stores the warning threshold determined by the current tire pressure as the set pressure in the tire pressure warning ECU and receiver when operated.
Combination Meter Assembly	Transmits the vehicle speed signal to the tire pressure warning ECU and receiver.
Tire Pressure Warning Light	• Illuminates after blinking for 1 minute to warn the driver in accordance with the signal from the tire pressure warning ECU and receiver. • Displays 2-digit Diagnostic Trouble Codes (DTCs).
Main Body ECU (Multiplex Network Body ECU)	• The main body ECU (multiplex network body ECU) and tire pressure warning ECU and receiver are connected using 2 direct lines that they use to communicate with each other. • The main body ECU (multiplex network body ECU) is connected to the combination meter assembly via CAN bus. w/ Tire Inflation Pressure Display Function: • Stores the tire position information received from the tire pressure warning ECU and receiver and displays it on the multi-information display.



Last Modified: 11-13-2015	6.6 U	Doc ID: RM000005V99000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: SYSTEM DIAGRAM; 2016 MY Tacoma [08/2015 -]		

SYSTEM DIAGRAM



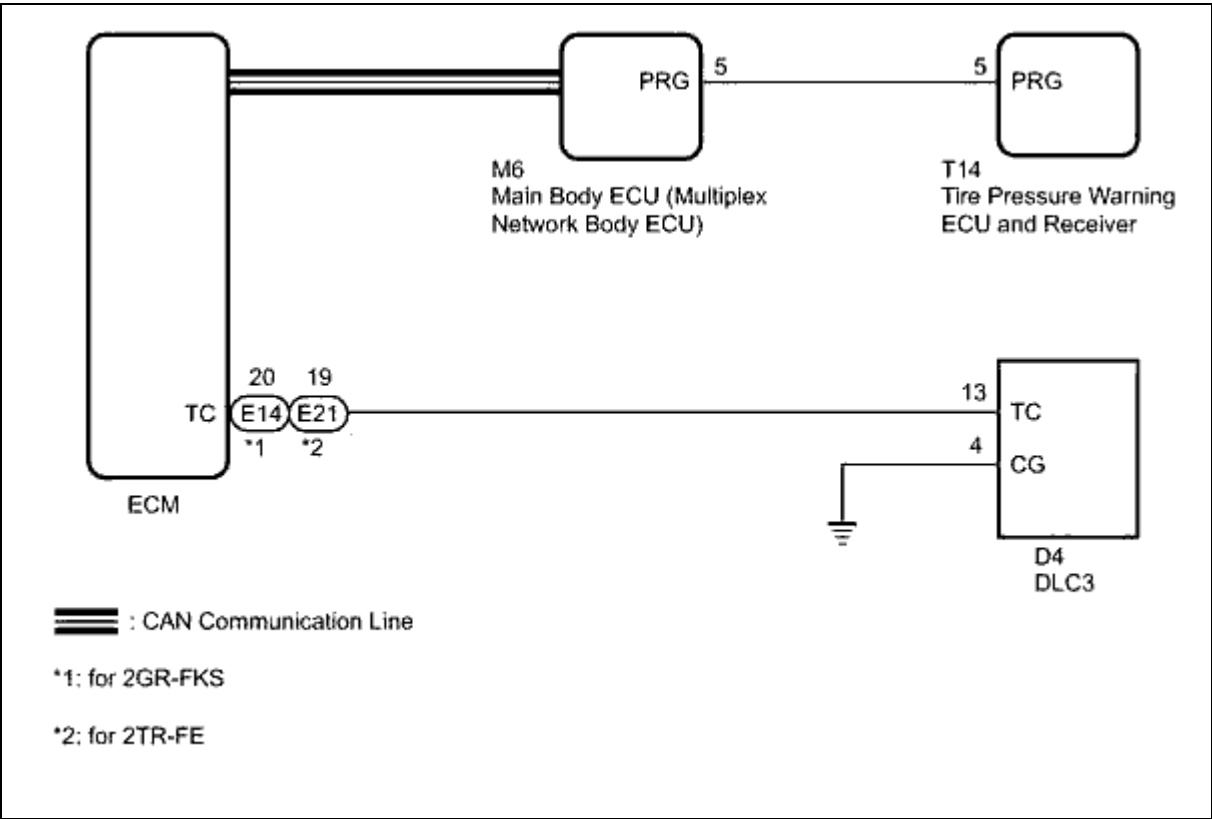
Last Modified: 11-13-2015	6.6 J	Doc ID: RM000005V95000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: TC and CG Terminal Circuit; 2016 MY Tacoma [08/2015 -]		

TC and CG Terminal Circuit

DESCRIPTION

Tire pressure warning system DTCs can be checked by connecting terminals 13 (TC) and 4 (CG) of the DLC3. The DTCs are indicated by blinking the tire pressure warning light.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1.	CHECK CAN COMMUNICATION SYSTEM
----	--------------------------------

(a) Check for DTCs INFO .

Result

RESULT	PROCEED TO
DTCs are not output.	A
DTCs are output.	B

B ► GO TO CAN COMMUNICATION SYSTEM

A
▼

2.	CHECK DTC (C2179/79)
----	----------------------

(a) Check if DTC C2179/79 is output INFO .

Result

RESULT	PROCEED TO
DTC C2179/79 is not output.	A
DTC C2179/79 is output.	B

B ► GO TO DTC (C2179/79)

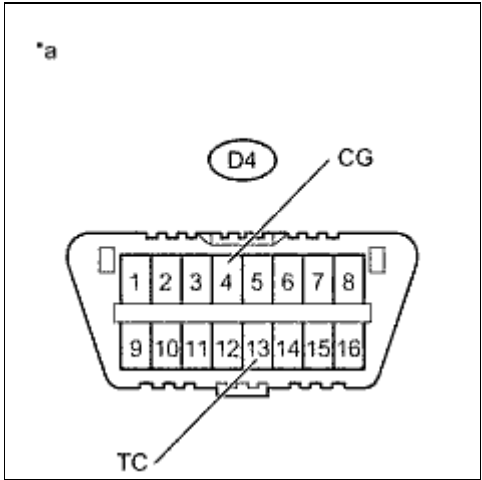
A
▼

3.	INSPECT DLC3
----	--------------

(a) Turn the ignition switch to ON.

Text in Illustration

*a	Front view of DLC3
----	--------------------



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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
D4-13 (TC) - D4-4 (CG)	Ignition switch ON	11 to 14 V

NG  GO TO STEP 5

OK

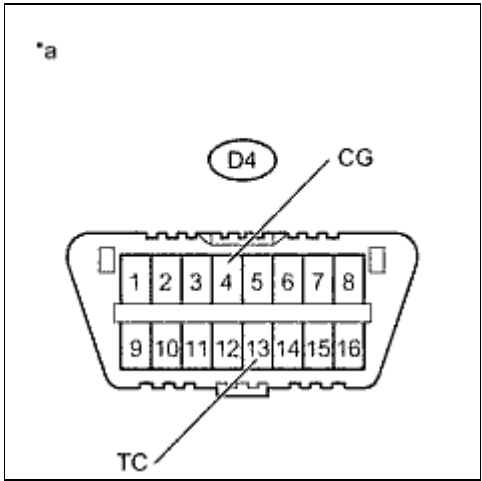


4.	REPLACE ECM
----	-------------

(a) Turn the ignition switch off.

Text in Illustration

*a	Front view of DLC3
----	--------------------



(b) Replace the ECM.

for 2GR-FKS: [INFO](#)

for 2TR-FE: [INFO](#)

(c) Using SST, connect terminals TC and CG of the DLC3.

SST: 09843-18040

(d) Check that the tire pressure warning light is blinking.

OK:

The tire pressure warning light is blinking.

HINT:

If troubleshooting has been carried out according to Problem Symptoms Table, refer back to the table and proceed to the next step before replacing the part [INFO](#) .

NG  PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE

OK  **END**

5. CHECK HARNESS AND CONNECTOR (TC of DLC3 - ECM)

(a) Disconnect the A43 ECM connector.

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

Standard Resistance:

for 2GR-FKS:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D4-13 (TC) - E14-20 (TC)	Always	Below 1 Ω
D4-13 (TC) or E14-20 (TC) - Body ground	Always	10 k Ω or higher

Standard Resistance:

for 2TR-FE:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D4-13 (TC) - E21-19 (TC)	Always	Below 1 Ω
D4-13 (TC) or E21-19 (TC) - Body ground	Always	10 k Ω or higher

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



6. CHECK HARNESS AND CONNECTOR (CG of DLC3 - BODY GROUND)

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

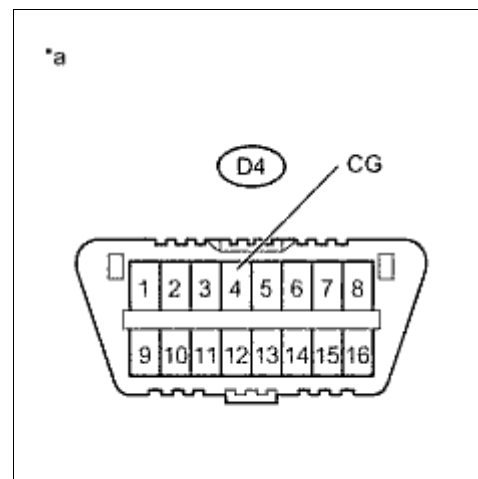
Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D4-4 (CG) - Body ground	Always	Below 1 Ω

Text in Illustration

*a	Front view of DLC3
----	--------------------

HINT:



If troubleshooting has been carried out according to Problem Symptoms Table, refer back to the table and proceed to the next step before replacing the part [INFO](#) .

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



7. REPLACE ECM

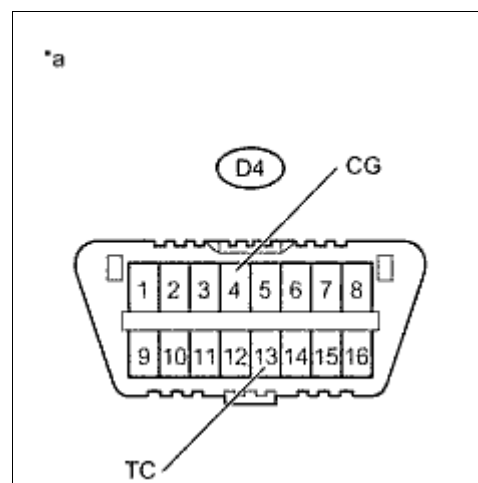
(a) Replace the ECM.

for 2GR-FKS: [INFO](#)

for 2TR-FE: [INFO](#)

Text in Illustration

*a Front view of DLC3



(b) Using SST, connect terminals TC and CG of the DLC3.

SST: 09843-18040

(c) Check that the tire pressure warning light is blinking.

OK:

The tire pressure warning light is blinking.

HINT:

If troubleshooting has been carried out according to Problem Symptoms Table, refer back to the table and proceed to the next step before replacing the part [INFO](#) .

NG  **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

OK  **END**



Last Modified: 11-13-2015	6.6 U	Doc ID: RM000005V8Y000X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: TERMINALS OF ECU; 2016 MY Tacoma [08/2015 -]		

TERMINALS OF ECU

1. CHECK TIRE PRESSURE WARNING ECU AND RECEIVER

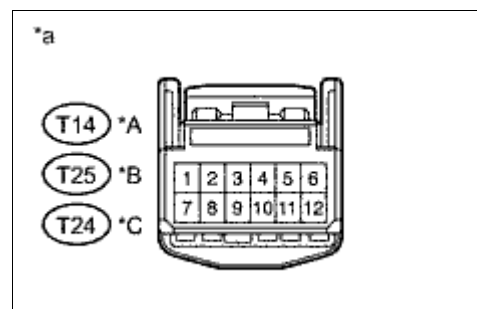
- (a) Disconnect the T14 tire pressure warning ECU and receiver connector and measure the voltage and resistance on the wire harness side.

Text in Illustration

*A	w/o Wireless Door Lock System
*B	w/o Smart Key System with Wireless Door Lock System
*C	w/ Smart Key System
*a	Front view of wire harness connector (to Tire Pressure Warning ECU and Receiver)

w/o Wireless Door Lock System

TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
T14-1 (IG) - T14-12 (GND)	LG - W-B	IG power source	Ignition switch ON	10 to 16 V
T14-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω



w/o Smart Key System with Wireless Door Lock System

TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
T25-1 (IG) - T25-12 (GND)	LG - W-B	IG power source	Ignition switch ON	10 to 16 V
T25-7 (+B) - T25-12 (GND)	BE - W-B	Power supply (from battery)	Always	10 to 16 V
T25-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

w/ Smart Key System

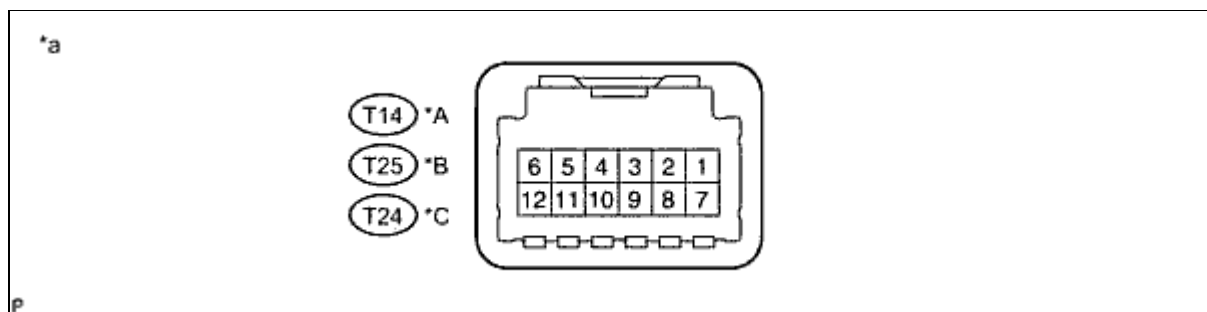
TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
T24-1 (IG) - T24-12 (GND)	LG - W-B	IG power source	Ignition switch ON	10 to 16 V
T24-7 (+B) - T24-12 (GND)	BE - W-B	Power supply (from battery)	Always	10 to 16 V
T24-12 (GND) - Body ground*1	W-B - Body ground	Ground	Always	Below 1 Ω

(b) Connect the T14*1, T25*2, T24*3 tire pressure warning ECU and receiver connector.

(c) Measure the voltage and resistance according to the value(s) in the table below. If the result is not as specified, the ECU may be malfunctioning.

HINT:

Measure the values on the wire harness side while the connector is connected.



TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
T14-3 (CLSW) - T14-12 (GND)*1 T25-3 (CLSW) - T25-12 (GND)*2 T24-3 (CLSW) - T24-12 (GND)*3	R - W-B	Tire pressure warning reset switch	- Ignition switch ON - Tire pressure warning reset switch on	Below 1.5 V
			- Ignition switch ON - Tire pressure warning reset switch off	8 to 15 V
T14-4 (RDA) - T14-12 (GND)*1 T25-4 (RDA) -	B - W-B	Output signals	Ignition switch ON	Pulse generation (see waveform 1)

TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
T25-12 (GND)*2 T24-4 (RDA) - T24-12 (GND)*3				
T14-5 (PRG) - T14-12 (GND)*1 T25-5 (PRG) - T25-12 (GND)*2 T24-5 (PRG) - T24-12 (GND)*3	GR - W-B	Input signals	Ignition switch ON	Pulse generation (see waveform 1)

*1: w/o Wireless Door Lock System

*2: w/o Smart Key System with Wireless Door Lock System

*3: w/ Smart Key System

(d) Using an oscilloscope, check waveform 1.

Waveform 1:

ITEM	CONTENTS
Terminal	T14-4 (RDA) - T14-12 (GND)*1 T25-4 (RDA) - T25-12 (GND)*2 T24-4 (RDA) - T24-12 (GND)*3 T14-5 (PRG) - T14-12 (GND)*1 T25-5 (PRG) - T25-12 (GND)*2 T24-5 (PRG) - T24-12 (GND)*3
Tool setting	5 V/DIV., 5 ms./DIV.
Vehicle condition	Ignition switch ON

*1: w/o Wireless Door Lock System

*2: w/o Smart Key System with Wireless Door Lock System

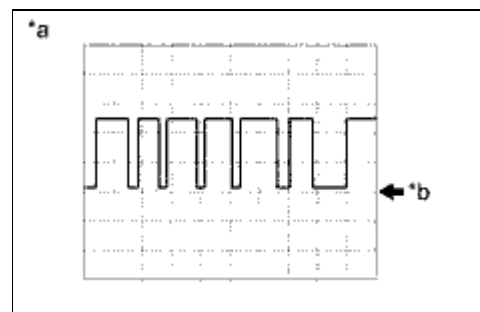
*3: w/ Smart Key System

Text in Illustration

*a	Example
*b	GND

HINT:

The waveform shown in the illustration is an example. If the tester displays a waveform that alternates between high and low, where high is a voltage that is between the IG power source voltage and a voltage 2.2 V lower than the IG power source voltage, and where low is a voltage of between 0 and 1.2 V, the ECU can be judged normal.



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Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: TEST MODE PROCEDURE; 2016 MY Tacoma [08/2015 -]		

TEST MODE PROCEDURE

1. TEST MODE (SIGNAL CHECK MODE) PROCEDURE

HINT:

- When entering test mode (signal check mode), the tire pressure warning ECU and receiver stores all the test mode (signal check mode) DTCs first.

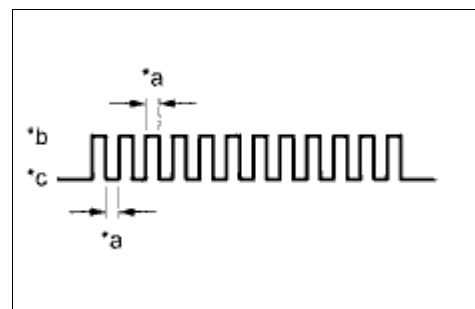
After the tire pressure warning ECU and receiver completes the signal check for each inspection item, the DTCs for systems that are determined to be normal will be cleared. The DTCs for other inspection items may not be cleared when only a certain signal is inspected.

- When test mode (signal check mode) returns to normal mode, all the test mode (signal check mode) DTCs will be cleared.
- Operation of the tire pressure warning reset switch can be checked in test mode (signal check mode).
- During test mode (signal check mode), the system will not be initialized by pushing the tire pressure warning reset switch. The circuit of the tire pressure warning reset switch can be inspected during this mode.

- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON and the Techstream on.
- Enter the following menus: Chassis / Tire Pressure Monitor / Utility / Signal Check.

Text in Illustration

*a	0.125 sec.
*b	ON
*c	OFF



HINT:

Every time the test mode (signal check mode) DTC clear conditions are satisfied, the tire pressure warning light illuminates for 1 second. Following this, the tire pressure warning light blinks at 0.125 second intervals.

- Press the tire pressure warning reset switch (DTC C2198/98).
- Wait for 1.5 minutes with the vehicle stopped, or drive the vehicle at a speed of 50 km/h (31 mph) or more for 1 minute (DTCs C2181/81 to C2184/84).

HINT:

The tire pressure warning valve and transmitters send signals to the tire pressure warning ECU and receiver once every 1.5 minutes while the vehicle is stopped and once every minute while driving.

- Check that the tire pressure warning system test mode (signal check mode) DTCs are cleared.

TEST MODE (SIGNAL	TEST SIGNAL	TEST MODE (SIGNAL CHECK MODE) DTC CLEAR
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CHECK MODE) DTC		CONDITION
C2181/81 to C2184/84	Transmitter Data	Data is received from the relevant transmitter which has a registered ID in the tire pressure warning ECU and receiver.
C2198/98	Tire Pressure Warning Reset Switch Signal	A signal is received indicating that the tire pressure warning reset switch is pressed.

(h) Result

HINT:

After the signal check is completed, check for test mode (signal check mode) DTCs to confirm the system status.

CONDITION	PROCEDURE
Test mode (signal check mode) DTCs are output	Repair the faulty part and enter Signal Check again
Test mode (signal check mode) DTCs are cleared	No problem

(i) End of test mode (signal check mode)

(1) After completing test mode (signal check mode), turn the ignition switch off and disconnect the Techstream.

(j) Test mode (signal check mode) DTCs

(1) If a trouble code is displayed during the test mode (signal check mode) DTC check, check the diagnosis procedure listed for that code. For details of each code, refer to Link below.

DTC NO.	DETECTION ITEM	TROUBLE AREA	LINK
C2181/81	Transmitter ID1 not received	• Tire pressure warning valve and transmitter • Wire harness or connector • Tire pressure warning ECU and receiver	INFO
C2182/82	Transmitter ID2 not received	• Tire pressure warning valve and transmitter • Wire harness or connector • Tire pressure warning ECU and receiver	INFO
C2183/83	Transmitter ID3 not received	• Tire pressure warning valve and transmitter • Wire harness or connector • Tire pressure warning ECU and receiver	INFO
C2184/84	Transmitter ID4 not received	• Tire pressure warning valve and transmitter • Wire harness or connector • Tire pressure warning ECU and receiver	INFO
C2198/98	Initialization switch error	• Tire pressure warning reset switch • Wire harness or connector • Tire pressure warning ECU and receiver	INFO



Last Modified: 11-13-2015	6.6 J	Doc ID: RM000005R4U008X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: Tire Position Not Identified; 2016 MY Tacoma [08/2015 -]		

Tire Position Not Identified

DESCRIPTION

The tire pressure warning ECU and receiver identifies the tire position for each tire pressure warning valve and transmitter according to the wheel speed signals from the skid control ECU and acceleration rate signal from each acceleration sensor built into each tire pressure warning valve and transmitter, and sends this information to be stored in the main body ECU.

INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization [INFO](#) after registration [INFO](#) of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU and/or one of the valve and transmitters has been replaced.

HINT:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	IDENTIFY TIRE POSITION FOR EACH TIRE PRESSURE WARNING VALVE AND TRANSMITTER
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- Set the tire pressure to the specified value [INFO](#).
- Turn the ignition switch off.
- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- Display the "ID Tire Inflation Pressure" value for each wheel using the Techstream.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID 1 Tire Inflation Pressure	ID1 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² ,	Actual tire inflation pressure	If N/A is displayed, data has not been received.*

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
	0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)		
ID 2 Tire Inflation Pressure	ID2 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*
ID 3 Tire Inflation Pressure	ID3 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*
ID 4 Tire Inflation Pressure	ID4 tire inflation pressure/ min.: Absolute pressure (abs) / 0 kPa (0 kgf/cm ² , 0 psi), Relative pressure (Gauge) / 0 kPa (0 kgf/cm ² , 0 psi) max.: Absolute pressure (abs) / 480 kPa (4.9 kgf/cm ² , 70 psi), Relative pressure (Gauge) / 380 kPa (3.9 kgf/cm ² , 55 psi)	Actual tire inflation pressure	If N/A is displayed, data has not been received.*

HINT:

*: It may take a few minutes until the values are displayed.

(h) Rapidly reduce the tire pressure for each wheel at least 40 kPa (0.4 kgf/cm², 5.8 psi) within 30 seconds.

NOTICE:

- It may take a few minutes until the values are displayed.
- When an "ID Tire Inflation Pressure" value has not changed, reset the tire pressure to the appropriate specified value and rotate the tire 90 to 270 degrees. Then rapidly release the tire pressure and recheck the value.

(i) Read the "ID Tire Inflation Pressure" value and identify the tire with reduced pressure, and record the corresponding tire pressure warning valve and transmitter (ID1 to ID4).

(j) Repeat for each tire.

(k) Set the tire pressure to the specified value  .

NEXT



2. PERFORM INITIALIZATION

- (a) Leave the vehicle with the ignition switch turned off for 15 minutes or more.
- (b) Perform initialization to clear the existing tire position information  .

OK



3. IDENTIFY TIRE POSITION DURING DRIVING

- (a) Turn the ignition switch off.
- (b) Connect the Techstream to the DLC3.
- (c) Drive the vehicle at 37 km/h (23 mph) or more for 10 minutes or more in 1 trip.
- (d) Turn left or right at least 3 times within the trip.
- (e) Turn the Techstream on.
- (f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.
- (g) Without turning off the ignition switch, check the tire position for each transmitter.

Tire Pressure Monitor

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID1 Tire Position	ID1 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID1 tire position is displayed	If no tire position information is stored, "No Information" will be displayed.
ID2 Tire Position	ID2 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID2 tire position is displayed	If no tire position information is stored, "No Information" will be displayed.
ID3 Tire Position	ID3 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID3 tire position is displayed	If no tire position information is stored, "No Information" will be displayed.
ID4 Tire Position	ID4 Tire Position/ No Information or FL or FR or RL or RR or Spare or Judging	ID4 tire position is displayed	If no tire position information is stored, "No Information" will be displayed.

RESULT	PROCEED TO
A transmitter with its tire position as "Judging" exists.	A

RESULT	PROCEED TO
No transmitter with its tire position as "Judging" exists, and no tire pressures are displayed on the multi-information display.	B
No transmitter with its tire position as "Judging" exists, and tire pressures are displayed on the multi-information display.	C

B ► **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

C ► **END**

A

4.	CHECK TIRE PRESSURE WARNING VALVE AND TRANSMITTER
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(a) Without turning off the ignition switch, check each transmitter with its tire position displayed as "Judging".

(b) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.

(c) Without turning off the ignition switch, check the number of times the transmitter signal and speed sensor signal have synchronized.

Tire Pressure Monitor (Example: Transmitter ID1 installed to front wheel LH)

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
ID1 - FL Wheel Speed Synchronization Count	ID1 - FL Wheel Speed Synchronization Count/min.: 0, max.: 255	Actual Synchronization Count	-

OK:

The transmitter signal and speed sensor signal have synchronized one or more times.

NG ► **REPLACE CORRESPONDING TIRE PRESSURE WARNING VALVE AND TRANSMITTER**

OK

5.	CHECK FREQUENCY RECEIVING CONDITION
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(a) Check that the following conditions are not met:

- (1) Facilities or devices that use similar radio frequencies are located in the vicinity of the vehicle.
- (2) Devices using similar radio frequencies are used in the vehicle.

OK:

Facilities or devices that use similar radio frequencies are not located in the vicinity of the vehicle.

HINT:

Radio wave transmissions may be interrupted due to the surroundings or devices installed by the user.

NG ► **CHECK IF ANY DEVICE IS INSTALLED BY USER**

OK ► **IDENTIFY TIRE POSITION DURING DRIVING AGAIN**



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Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: Tire Pressure Warning Light Circuit; 2016 MY Tacoma [08/2015 -]		

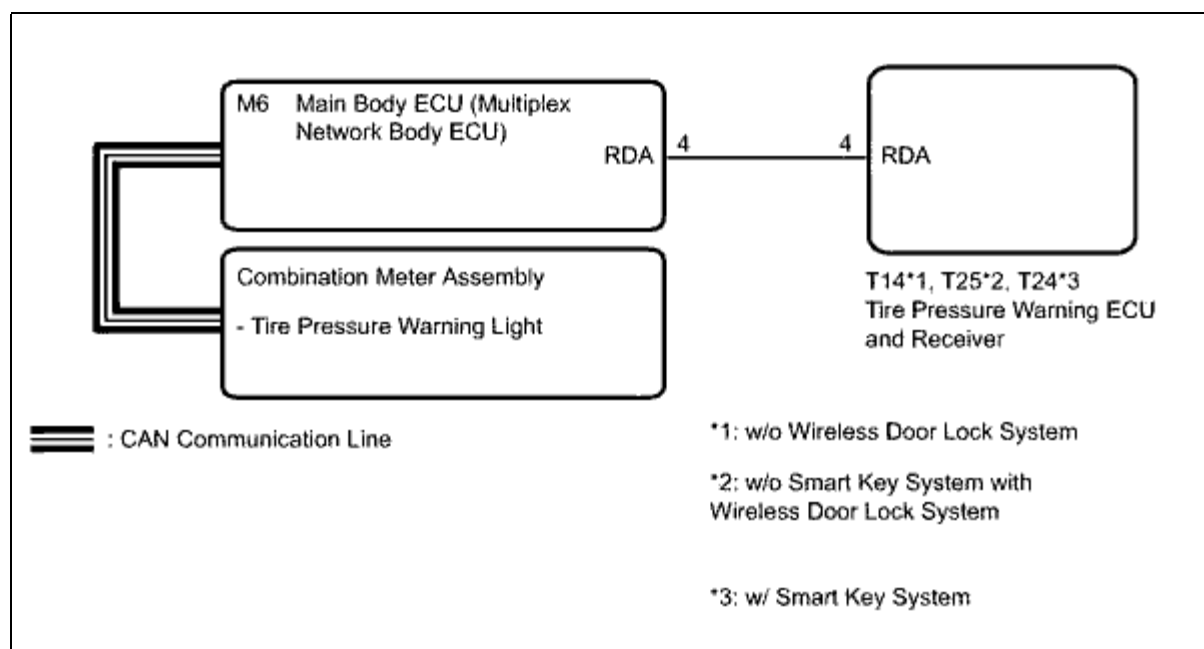
Tire Pressure Warning Light Circuit

DESCRIPTION

If the tire pressure warning ECU and receiver detects any problems, the tire pressure warning light blinks for 1 minute then illuminates, and tire pressure monitoring is disabled at the same time. At this time, the ECU stores a DTC in memory.

Connecting terminals TC and CG of the DLC3 makes the tire pressure warning light blink to output DTCs. The tire pressure warning ECU and receiver sends the tire pressure warning light illumination request signal to the main body ECU (multiplex network body ECU) via a direct line. The main body ECU (multiplex network body ECU) then sends the signal to the combination meter assembly via CAN communication.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

- When replacing the tire pressure warning ECU and receiver, read the transmitter IDs stored in the old ECU using the Techstream and write them down before removal.
- It is necessary to perform initialization **INFO** after registration **INFO** of the transmitter IDs into the tire pressure warning ECU and receiver if the ECU has been replaced.

PROCEDURE

1. CHECK FOR DTC (CAN COMMUNICATION SYSTEM)

(a) Check if CAN communication system DTCs are output  .

Result

RESULT	PROCEED TO
DTCs are not output.	A
DTCs are output.	B

B  **GO TO CAN COMMUNICATION SYSTEM**

A



2. CHECK DTC OUTPUT (B1247)

(a) Clear the DTCs  .

(b) Turn the ignition switch off.

(c) Turn the ignition switch to ON.

(d) Check for DTCs  .

OK:

DTC B1247 is not output.

NG  **GO TO DTC (B1247)**

OK



3. CHECK OPERATION OF TIRE PRESSURE WARNING LIGHT (ACTIVE TEST)

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / Combination Meter / Active Test.

(f) Check the condition of the tire pressure warning light using the Techstream.

Combination Meter

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Indicat. Tire Pressure Warning System	Tire pressure warning light	OFF or ON	Confirm that the vehicle is stopped with the engine idling.

OK:

The tire pressure warning light turns on or off in accordance with the Techstream operation.

NG ► **GO TO METER / GAUGE SYSTEM**

OK ► **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING SYSTEM: U0129/29; Lost Communication with Brake System Control Module; 2016 MY Tacoma [08/2015 -]		

DTC	U0129/29	Lost Communication with Brake System Control Module
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DESCRIPTION

The tire pressure warning ECU and receiver receives signals from the skid control ECU (brake actuator assembly) via the CAN communication system.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
U0129/29	Lost communication with skid control ECU (brake actuator assembly)	• CAN communication system • Skid control ECU (Brake actuator assembly)

INSPECTION PROCEDURE

PROCEDURE

1.	GO TO CAN COMMUNICATION SYSTEM
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(a) Go to CAN Communication System  .

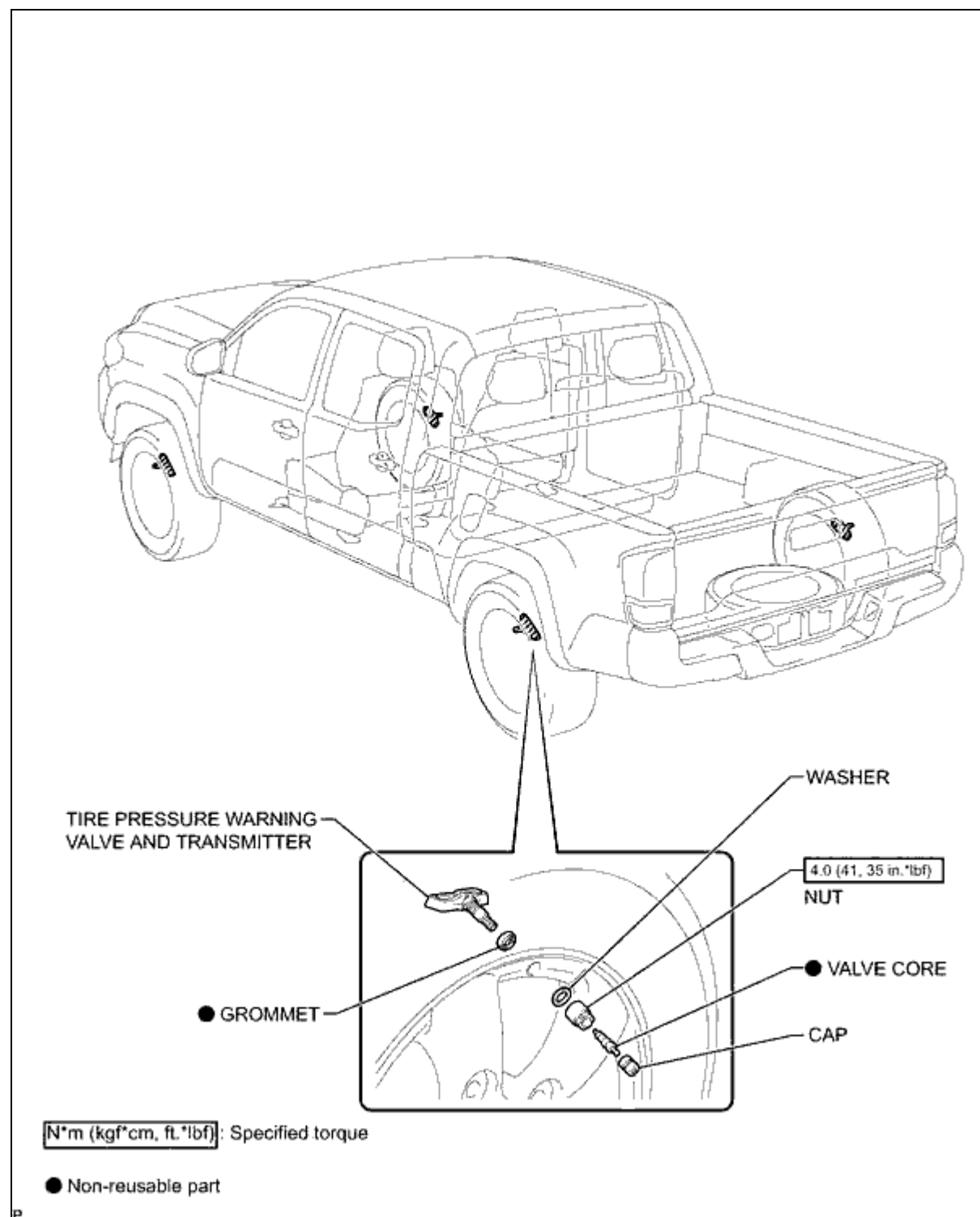
NEXT  **END**



Last Modified: 11-13-2015	6.6 K	Doc ID: RM000001NZI00BX
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING VALVE AND TRANSMITTER: COMPONENTS; 2016 MY Tacoma [08/2015 -]		

COMPONENTS

ILLUSTRATION





Last Modified: 11-13-2015	6.6 N	Doc ID: RM000001BJ7012X
Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING VALVE AND TRANSMITTER: DISPOSAL; 2016 MY Tacoma [08/2015 -]		

DISPOSAL

HINT:
The tire pressure warning valve and transmitter is powered by a lithium battery. When disposing of the tire pressure warning valve and transmitter, remove the battery and dispose of it correctly.

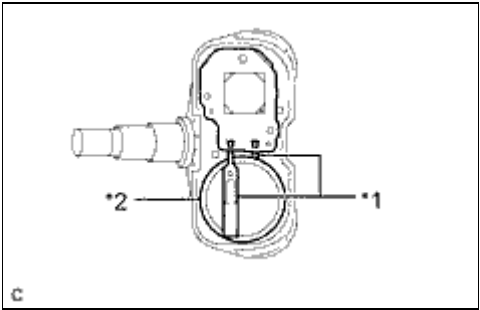
1. DISPOSE OF TIRE PRESSURE WARNING VALVE AND TRANSMITTER

- (a) Cut the 2 terminals that connect the battery to the base board to remove the battery.

Text in Illustration

*1	Terminal
*2	Lithium Battery

HINT:
The battery and base board are covered with silicone.



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING VALVE AND TRANSMITTER: INSTALLATION; 2016 MY Tacoma [08/2015 -]		

INSTALLATION

NOTICE:

- Always use a new grommet and valve core when installing the tire pressure warning valve and transmitter.
- Check that the washer and nut are not damaged, and replace them if necessary.
- If installing a new tire pressure warning valve and transmitter, write down the ID number before installation.
- Check that there is no oil, water or lubricant around the rim hole, tire pressure warning valve and transmitter, washer and nut. Failing to do so may result in improper installation.
- Use only a specified cap. If an unspecified cap is used, it may seize to the tire pressure warning valve and transmitter.

1. INSTALL TIRE PRESSURE WARNING VALVE AND TRANSMITTER

(a) Install a new grommet to the tire pressure warning valve and transmitter.

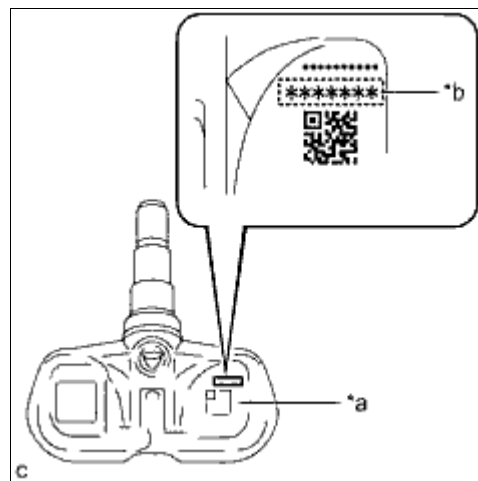
(b) Insert the tire pressure warning valve and transmitter into the valve installation hole. Insert it from the inside of the rim so that the printed surface can be seen.

Text in Illustration

*a	Printed Surface
*b	7-digit Number Transmitter ID

NOTICE:

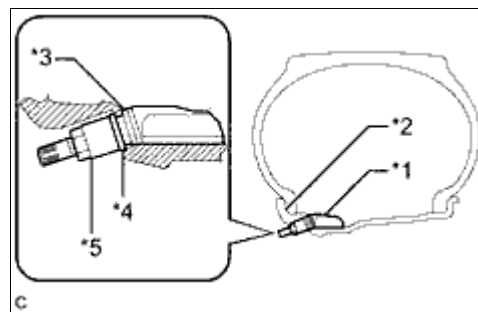
- Check that there is no visible deformation, damage, or other abnormalities on the tire pressure warning valve and transmitter.
- Check that there is no foreign matter on the grommet and around the rim hole.
- If the tire pressure warning valve and transmitter is installed upside down, it may be damaged or fail to transmit signals when driving at high speeds.



(c) From the outside of the rim, install the washer onto the tire pressure warning valve and transmitter, and tighten the nut.

Text in Illustration

*1	Tire Pressure Warning Valve and Transmitter
*2	Rim
*3	Grommet
*4	Washer
*5	Nut



Torque:

4.0 N·m {41 kgf·cm, 35in·lbf}

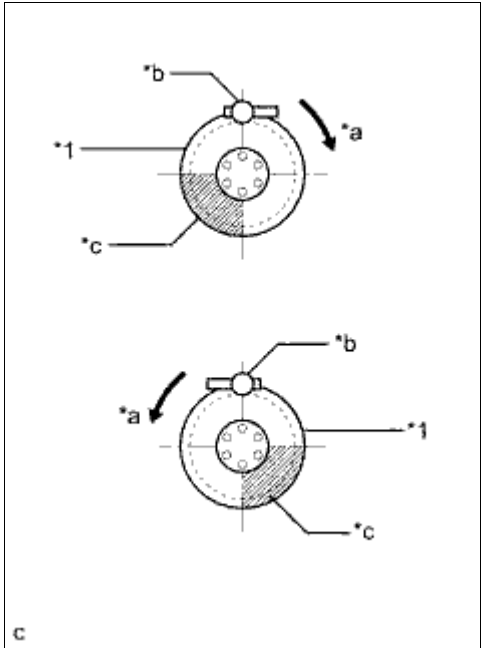
NOTICE:

- No further tightening is required once the nut is tightened to the specified torque.
- Check that there is no foreign matter on the washer and nut.

(d) Set the wheel onto the mounting machine and install the lower bead. Position the main body of the tire pressure warning valve and transmitter in the shaded area shown in the illustration.

Text in Illustration

*1	Rim
*a	Rim Rotating Direction
*b	Mount Tool of the Mounting Machine
*c	Area for Tire Pressure Warning Valve and Transmitter



NOTICE:

- If the tire pressure warning valve and transmitter is positioned outside this area, it will interfere with the tire bead and may be damaged.
- If the use of lubricant is required when installing the bead, do not apply lubricant directly to the tire pressure warning valve and transmitter.

(e) Install the upper bead.

NOTICE:

Make sure that the tire bead and tool do not interfere with the main body of the tire pressure warning valve and transmitter and that it is not clamped by the bead.

(f) Install a new valve core.

(g) After the tire is inflated, the valve nut may be loose. Retighten the nut to the specified torque.

Torque:

4.0 N·m {41 kgf·cm, 35in·lbf}

NOTICE:

No further tightening is required once the nut is tightened to the specified torque.

(h) Check for air leaks with soapy water. If there is air leakage, push the valve core 2 or 3 times to remove any dirt attached to the valve core. If air continues to leak, replace the grommet, washer and nut.

(i) Install the cap.

2. INSTALL FRONT WHEEL

Torque:

113 N·m {1152 kgf·cm, 83ft·lbf}

3. INSTALL REAR WHEEL

Torque:

113 N·m {1152 kgf·cm, 83ft·lbf}

4. INSPECT TIRES

INFO

5. REGISTER TRANSMITTER ID

INFO

6. PERFORM INITIALIZATION

INFO

7. INSPECT TIRE PRESSURE WARNING SYSTEM

INFO



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Model Year Start: 2016	Model: Tacoma	Prod Date Range: [08/2015 -]
Title: TIRE AND WHEEL: TIRE PRESSURE WARNING VALVE AND TRANSMITTER: REMOVAL; 2016 MY Tacoma [08/2015 -]		

REMOVAL

1. REMOVE FRONT WHEEL

2. REMOVE REAR WHEEL

3. REMOVE TIRE PRESSURE WARNING VALVE AND TRANSMITTER

- (a) Remove the cap and valve core to release the air from the tire.

NOTICE:

Keep the removed cap and valve core.

- (b) After ensuring that a sufficient amount of air has been released, remove the nut and washer used to secure the tire pressure warning valve and transmitter. Drop the tire pressure warning valve and transmitter with the grommet into the tire.

HINT:

The grommet may remain attached to the rim.

- (c) After dropping the tire pressure warning valve and transmitter into the tire, disengage the bead using the shoe of a tire remover.

Text in Illustration

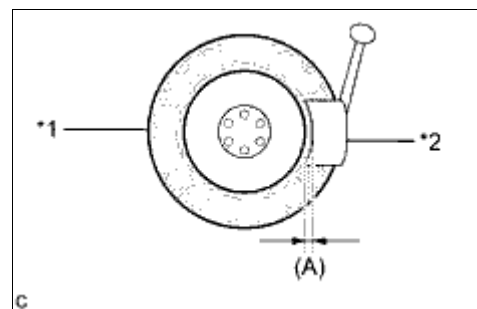
*1	Tire
*2	Shoe

NOTICE:

- Be careful not to damage the tire pressure warning valve and transmitter due to interference between the valve and the tire bead.
- Set the tire remover shoe as shown in the illustration.

Width (A):

10 to 20 mm (0.394 to 0.787 in.)



NOTICE:

Be careful as the tire pressure warning valve and transmitter may become damaged due to interference between the sensor and tire bead.

- (d) Separate the upper bead.
- (e) Take out the tire pressure warning valve and transmitter with the grommet from the tire and separate the lower bead.
- (f) Remove the grommet from the tire pressure warning valve and transmitter.

