■SYSTEM OPERATION

1. General

The operation of the tire pressure warning system includes a warning function, initial check operation, initialization mode operation, and a diagnosis function.

2. Warning Operation

The Tire Pressure Warning ECU has two warning methods that are used, depending on the condition detected.

Tire Pressure Warning Light	Detection Condition
Turns ON	The Tire Pressure Warning ECU has detected that a tire inflation pressure becomes lower than the threshold. The threshold varies according to the initialization value.
Turns on after blinking for one minute	The Tire Pressure Warning ECU has detected a malfunction in the system.

- If the tire pressure warning light turned on, adjust the tire inflation pressure.
- If the warning light turns on after blinking for one minute, it can be turned OFF by repairing the malfunction in the system.
- The tire pressure warning light may blink for one minute and turn on due to electric wave interference at the same frequency.

3. Initial Check Operation

After the ignition switch is tuned ON, the Tire Pressure Warning ECU lights up the tire pressure warning light for three seconds to check the warning light circuits.

4. Initialization Mode Operation

The warning threshold is calculated from the tire inflation pressure and memorized in the Tire Pressure Warning ECU. Therefore, the Tire Pressure Warning ECU should be initialized after:

- Specified value change of the tire inflation pressure according to the instruction of the weight or speed condition or different size of tire.
- Tire rotation
- Replacement of a Tire Pressure Warning ECU or the tire pressure warning valve and transmitter.

Service Tip

The Tire Pressure Warning ECU can be initialized as follows:
(1) Set the tire inflation pressure for all tires to the specified value.

Tire Size	Tire Inflation Pressure kPa (kgf/cm^2, psi)	
	Front	Rear
255/70R18	210 (2.1, 30)	230 (2.3, 33)
275/65R18		
275/55R20		

(2) Keep the tire pressure warning reset switch pressed for three seconds or more with the ignition switch ON.
(3) The tire pressure warning light blinks three times and the initialization mode starts.
(4) The initialization is completed when signals from all the tire pressure warning valve and transmitters are received.
(5) After the initialization has been completed, turn the IG OFF and then ON again, and check the pressure of all tires using the hand-held tester or Techstream*.

NOTE:
- Turning the ignition switch OFF does not cancel the initialization mode.
- Reset switch cannot operate while driving.

*: Techstream is the name for the diagnostic tester in the North America, but other countries will continue to use the hand-held tester.

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5. Diagnosis

If the Tire Pressure Warning ECU detects a malfunction in the system, the Tire Pressure Warning ECU will make the tire pressure warning light blink at 1Hz for one minute then remain on to warn the driver. It will also store the DTCs (Diagnostic Trouble Codes) in memory.
- 5-digit DTCs can be read by connecting a hand-held tester or Techstream* to the DLC3.
- 2-digit DTCs can be read by connecting the SST (09843-18040) to the Tc and CG terminals of the DLC3 and monitoring the blinking of the tire pressure warning light.
- The test mode can be selected using a hand-held tester or Techstream* that is connected to DLC3.

For details, see the 2007 TOYOTA TUNDRA Repair Manual (Pub. No. RM04E2U).

*: Techstream is the name for the diagnostic tester in the North America, but other countries will continue to use the hand-held tester.

■TIRE PRESSURE WARNING SYSTEM OPERATION PRECAUTIONS

If any of the conditions listed below exists, the tire pressure warning system may not operate properly.
- Facilities or devices that use similar radio frequencies are located in vicinity of the vehicle.
- A radio device operating on a similar frequency is used in the vehicle.
- A lot of snow or ice is stuck to the vehicle, especially onto the wheels and around the wheel wells.
- The battery of the sensor has been depleted.
- Wheels without tire pressure warning valve and transmitters are used.
- Non-genuine wheels are used.
- Tire chains are used.
- Depending on the type of tire, the tire pressure warning system may not operate properly even when Toyota genuine wheels are used.

NOTE:
When the system returns to normal, the tire pressure warning light will go off.