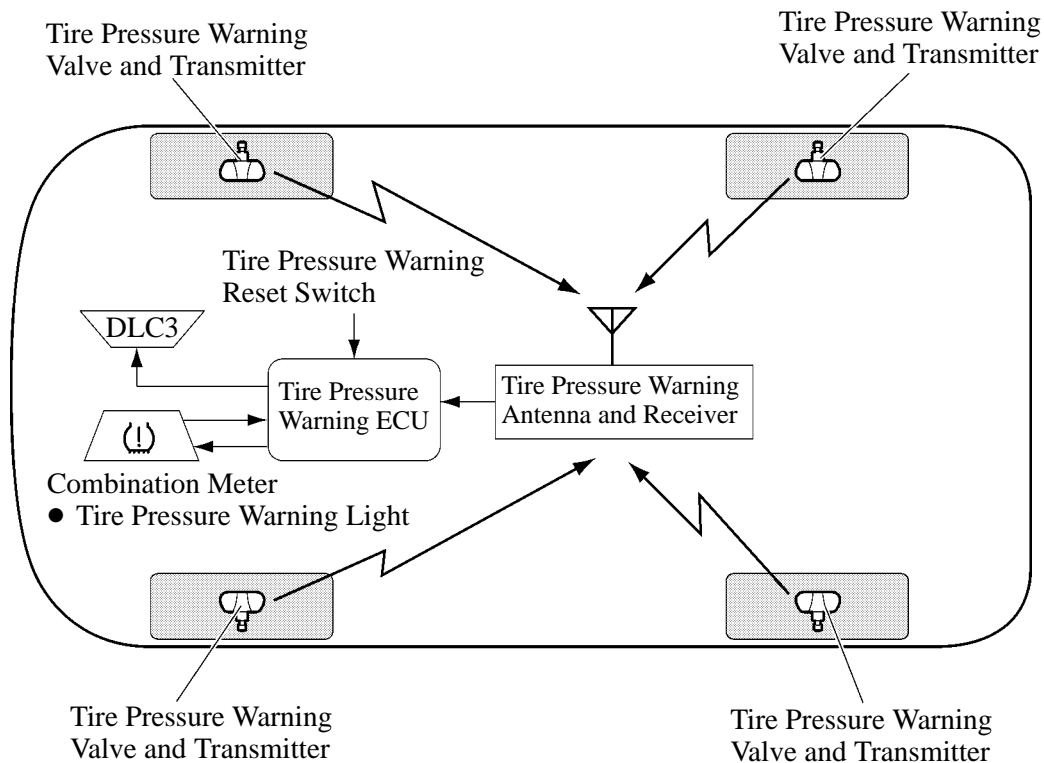


TIRE PRESSURE WARNING SYSTEM

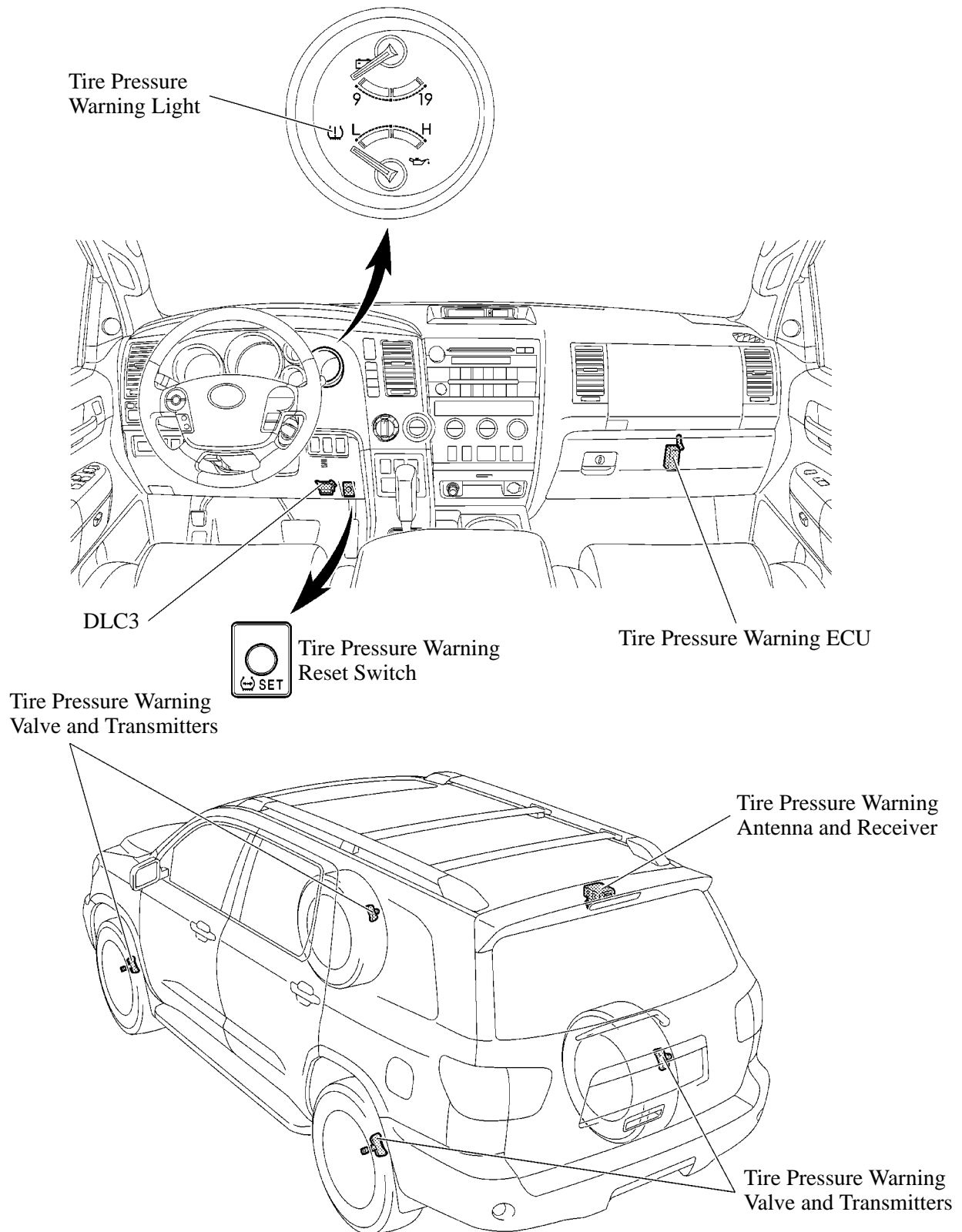
■ DESCRIPTION

- When the tire pressure warning system detects that the pressure of a tire becomes lower than the threshold, it will turn ON the tire pressure warning light to warn the driver.
- The tire pressure warning antenna and receiver receives the tire pressure, temperature, and ID code information from the 4 tire pressure warning valve and transmitters and transmits this information to the tire pressure warning ECU.
- The tire pressure warning ECU monitors the tire pressure warning valve and transmitters to detect the low tire pressure of 4 tires except for spare.

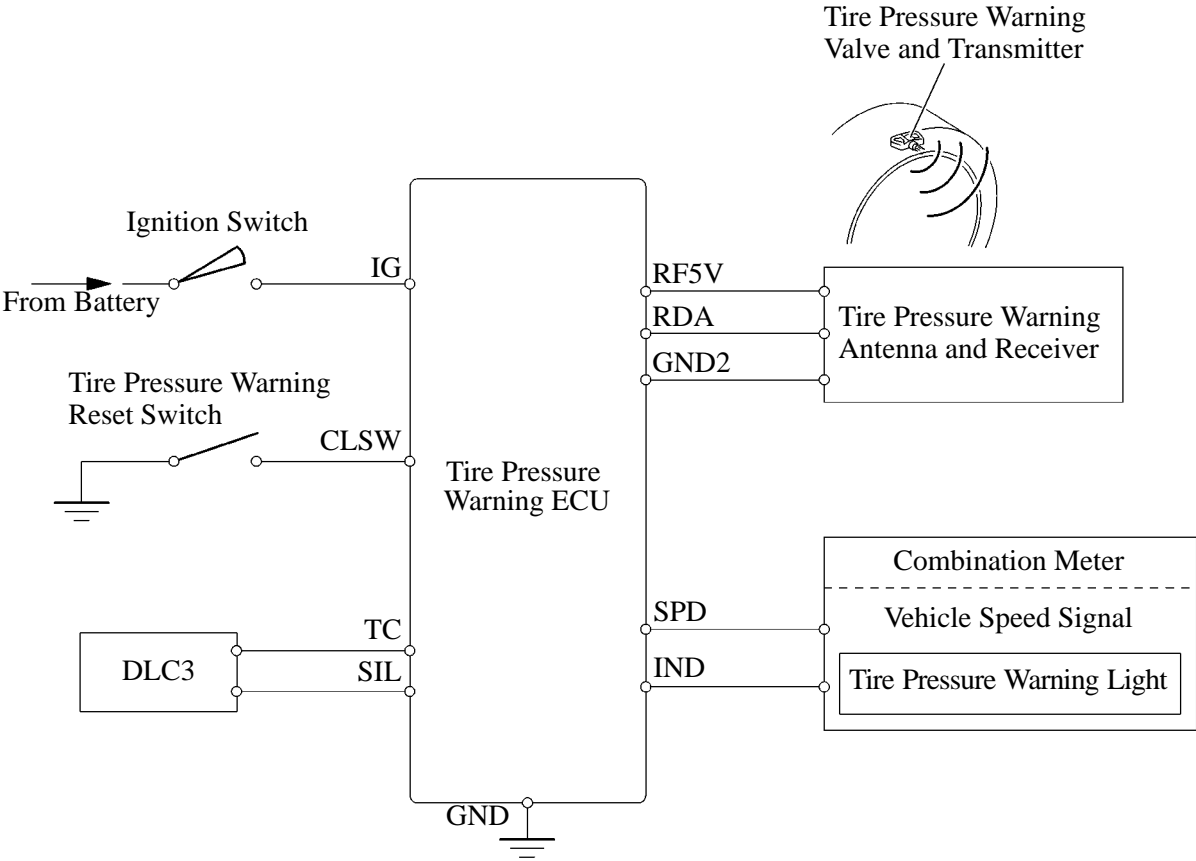
► System Diagram ◀



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■ LAYOUT OF MAIN COMPONENTS

■ WIRING DIAGRAM



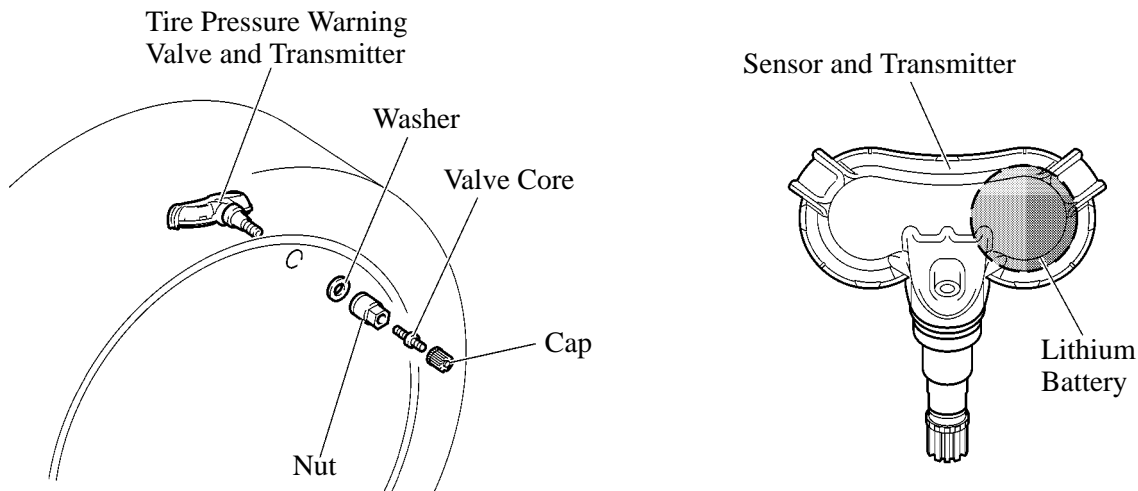
■ FUNCTION OF MAIN COMPONENTS

Component		Outline
Combinatio Meter		Transmits the vehicle speed signal to the tire pressure warning ECU.
	Tire Pressure Warning Light	<ul style="list-style-type: none"> ● Turns ON or turns ON after blinking for one minute to warn the driver in accordance with the signal from the tire pressure warning ECU. ● Display the 2-digit DTCs (Diagnostic Trouble Codes).
Tire Pressure Warning Reset Switch		The appropriate pressures of the tires currently mounted on the vehicle are stored in the tire pressure warning ECU by operating the tire pressure warning reset switch.
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 antenna and receiver.
Tire Pressure Warning Antenna and Receiver		Receives the tire pressure warning valve and transmitter signal and transmits this data to the tire pressure warning ECU.
Tire Pressure Warning ECU		<ul style="list-style-type: none"> ● Receives the data from the tire pressure warning antenna and receiver and monitors the tire pressure. ● When the tire pressure warning ECU detects a drop in the tire pressure, a system malfunction, or initialization mode, it outputs the respective signal to the combination meter.

■ TIRE PRESSURE WARNING VALVE AND TRANSMITTER

The tire pressure warning valve and transmitters are integrated in the tire valves. Each tire pressure warning valve and transmitter consists of a lithium battery, sensor and transmitter.

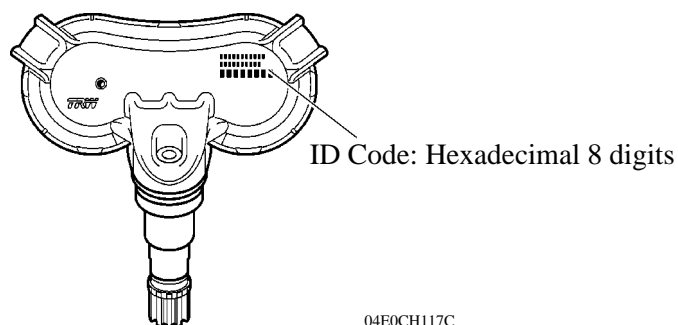
- If the tire pressure warning valve and transmitter battery voltage drops, the tire pressure warning valve and transmitter will be unable to transmit signals. This will cause DTCs (Diagnostic Trouble Codes) to be stored.
- The tire pressure warning valve and transmitter directly measures tire pressure and temperature.
- The tire pressure warning valve and transmitter transmits these measured values to the tire pressure warning antenna and receiver on a frequency of 315 MHz.



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Service Tip

- The lithium battery of the tire pressure warning valve and transmitter is a type that cannot be replaced. If the lithium battery is depleted, the tire pressure warning valve and transmitter assembly must be replaced.
- Make sure to install the tire pressure warning valve and transmitter in the wheel in accordance with the prescribed procedure. Failure to do so could result in the incorrect measurement of the tire pressure, damage to the sensor, or air leakage.
- The ID code is written on the tire pressure warning valve and transmitter.



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■ SYSTEM OPERATION

1. General

The operation of the tire pressure warning system includes a warning function, an initial check operation, an 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 pressure becomes lower than the threshold. The threshold varies according to the initialization value.
Turns ON after blinking for 1 minute	The tire pressure warning ECU has detected a malfunction in the system.

- If the tire pressure warning light turns ON, adjust the tire pressure.
- If the tire pressure warning light turns ON after blinking for 1 minute, it can be turned OFF by repairing the malfunction in the system.
- The tire pressure warning light may blink for 1 minute and turn ON due to electric wave interference at the same frequency.

3. Initial Check Operation

After the ignition switch is turned 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 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 pressure according to the instruction of the weight or speed condition or different size of tire.
- Tire rotation when the preset tire pressure differs between the front and rear.
- Replacement of a tire pressure warning ECU or the tire pressure warning valve and transmitter.

Service Tip

Perform the initialization after setting the pressure of all tires to the specified value.
For details of the initialization, see the 2008 Sequoia Repair Manual (Pub. No. RM08L0U).

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 1 Hz for 1 minute and then remain ON to warn the driver. It will also store the DTCs (Diagnostic Trouble Codes) in memory.

- 5-digit DTCs (Diagnostic Trouble Codes) can be read by connecting the 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 the Techstream that is connected to DLC3.

For details, see the 2008 Sequoia Repair Manual (Pub. No. RM08L0U).



■ TIRE PRESSURE WARNING SYSTEM OPERATION PRECAUTIONS

The system will be disabled in the following conditions:

(When the condition becomes normal, the system will work properly.)

- If tires not equipped with the tire pressure warning valve and transmitters are used.
- If the ID code on the tire pressure warning valve and transmitters are not registered in the tire pressure warning ECU.
- If the tire pressure warning valve and transmitter battery voltage drops. (Battery life: 10 years)

The system may be disabled in the following conditions:

(When the condition becomes normal, the system will work properly.)

- If electronic devices or facilities using similar radio wave frequencies are nearby.
- If a radio set at similar frequencies is in use in the vehicle.
- If a window tint that affects the radio wave signals is installed.
- If there is a lot of snow or ice on the vehicle, in particular around the wheels or wheel housings.
- If non-genuine wheels are used.
- If tire chains are used.

NOTE:

When the system returns to normal, the tire pressure warning light will go OFF.