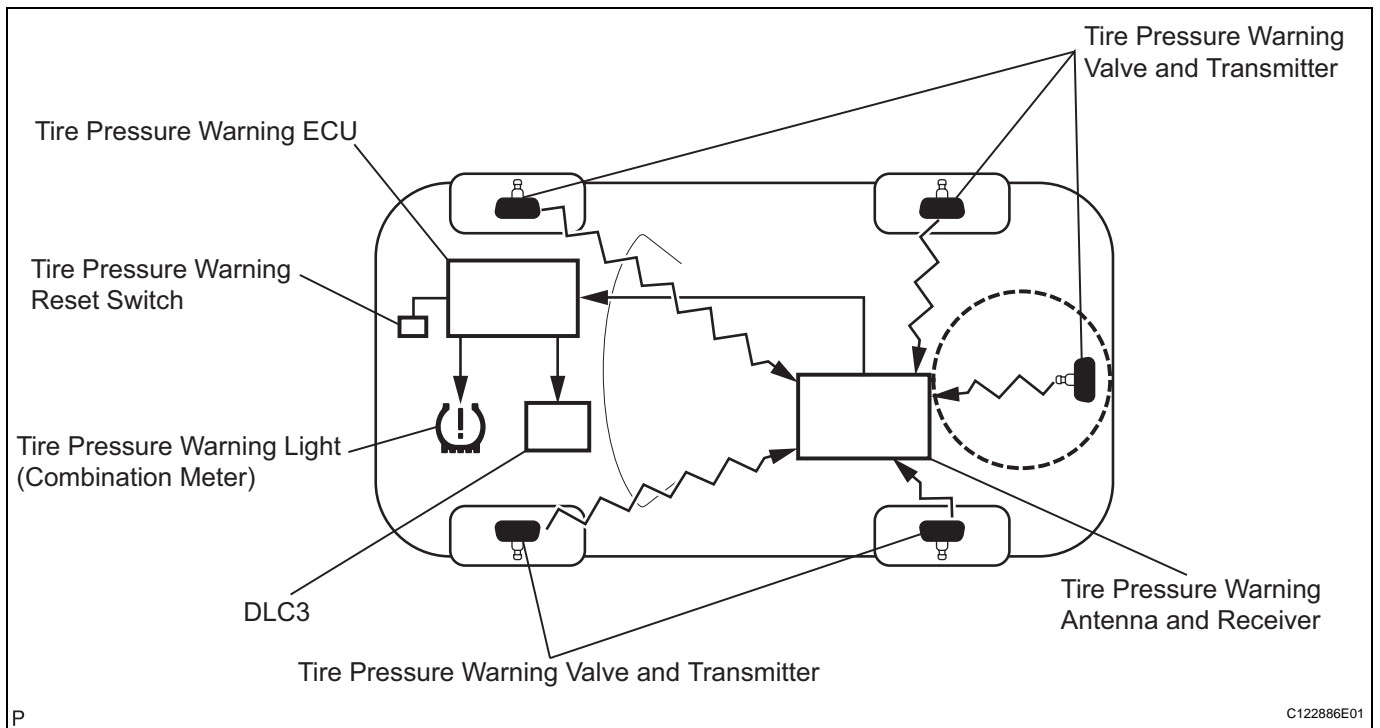


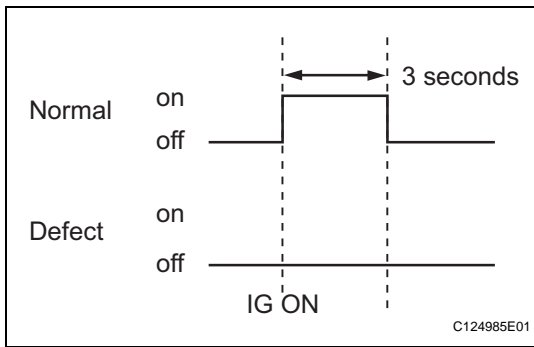
## SYSTEM DESCRIPTION

### 1. DESCRIPTION OF SYSTEM

- (a) Tire pressure sensors (pressure warning valves and transmitters) are installed in tire and wheel assemblies. The sensors measure the air pressures and internal temperatures of the tires. The measured values and transmitter IDs are transmitted to the tire pressure warning antenna and receiver on the body as radio waves and then sent to the tire pressure warning ECU. The ECU compares the measured air pressure values with the air pressure threshold. When the measured air pressure value is less than this threshold, the tire pressure warning light in the combination meter comes on.
- The tire pressure warning reset switch has been adopted in order to reset the warning threshold in accordance with variant tire pressure settings due to tire types and installation positions.
  - The tire pressure warning valves and transmitters may not be used on wheels other than those originally fitted on the vehicle due to the air valve angle of the tire pressure warning valve and transmitter.



- (b) After removing and installing the ECU or a tire pressure warning valve and transmitter, check that the normal code is output.



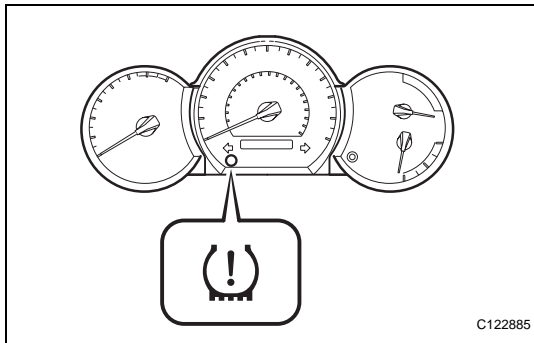
**2. INITIAL CHECK**

- (a) The tire pressure warning light comes on for 3 seconds after the ignition switch turned ON, and then goes off.

HINT:

If the warning light does not come on for 3 seconds, trouble shoot the tire pressure warning light circuit.

Trouble Area	See Procedure
Tire pressure warning light circuit	TW-61



**3. FAIL-SAFE FUNCTION**

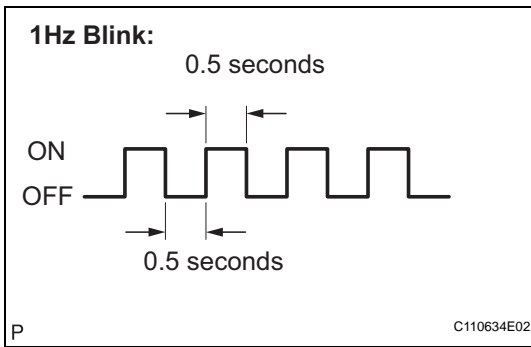
- (a) When a malfunction occurs in the tire pressure warning system, the tire pressure warning light blinks to indicate the system failure.
- (b) The result of this diagnosis is stored in the tire pressure warning ECU.

**4. TIRE PRESSURE WARNING LIGHT CHART**

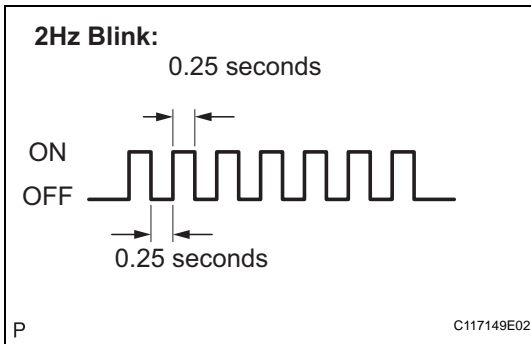
HINT:

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

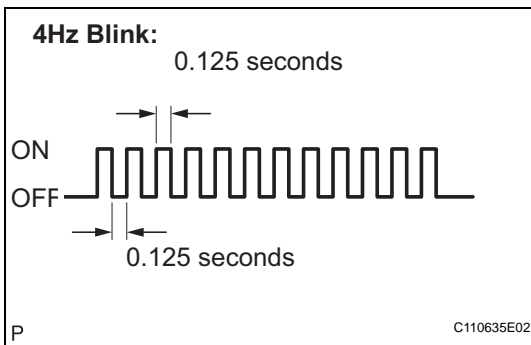
Condition	Immediately after IG turned ON	Always						
	Comes on for 3 seconds	Goes off	Comes on	Blinks (*1)	Blinks (*2)	Blinks (*3)	Outputs DTC	Comes on 3 times (1 second intervals)
Normal	○	○	-	-	-	-	-	-
Low tire pressure	○	-	○	-	-	-	-	-
System failure	○	-	-	○	-	-	-	-
ECU connector connection poor	-	-	○	-	-	-	-	-
TC grounded (no DTCs output)	○	-	-	-	○	-	-	-
TC grounded (DTCs output)	○	-	-	-	-	-	○	-
Test mode	○	-	-	-	-	○	-	-
Entering initialization	○	-	-	-	-	-	-	○



\*1: Blinks at 0.5 second intervals (1Hz).



\*2: Blinks at 0.25 second intervals (2Hz).



\*3: Blinks at 0.125 second intervals (4Hz).

**5. FUNCTIONS OF COMPONENTS**

TW

Components	Function
Tire pressure warning valve and transmitter	Consists of sensor, transmitter, and built-in battery. Measures tire pressure and internal temperature, transmits measurement values and transmitter ID to tire pressure warning antenna and receiver.
Tire pressure warning antenna and receiver	Receives signals from tire pressure warning valves and transmitters and transmits them to tire pressure warning ECU.
Tire pressure warning ECU	Receives signals from tire pressure warning antenna and receiver, and identifies them as vehicle's own signals. If measurement values less than standard or malfunctions occur in tire pressure warning system, transmits signals to combination meter to illuminate tire pressure warning light.
Tire pressure warning light	Located in combination meter, indicates decreases in tire pressure, high internal tire temperatures and system failures.
Tire pressure warning reset switch	Allows tire pressure warning system to enter initialization mode when tire or wheel replacement, or tire rotation performed.