

The Tire Pressure Monitor Tool (TPMT) Operation

Overview

The TPMT transmits and receives RF signals with automotive components. These functions are anticipated to be performed in automotive repair shops and tire changing facilities.

Function

The TPMT transmits at one frequency: 125kHz. The TPMT can additionally receive two different frequencies: 315MHz and 433MHz. The TPMT also has three different clock sources.

125kHz Transmission

The 125kHz transmission can be generated as a pulsed signal or as a continuous wave signal. In other words it can create a 125kHz signal that is turned on and off at a rate of 4kHz with a variable duty cycle. It can also create a higher powered continuous wave signal.

315MHz & 433MHz Receptions

The TPMT is capable of receiving these two frequencies in either FSK or ASK styles.

Clock Sources

The TPMT utilizes a 4MHz ceramic resonator for the microcontroller, which in turn uses a PLL to generate an 8MHz internal use clock signal. The high frequency transmitters and receivers make use of crystals at the following frequencies: 10.178MHz; 13.225MHz.

Power Source

3 “C” cell alkaline batteries power the TPMT.

Testing

The operation of the TPMT during test will be dependent upon suggests provided by ITS on the best way to accurately test the TPMT.