

# **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 suggestions provided by ITS on the best way to accurately test the TPMT.