

Re: Certification for Schrader-Bridgeport
Remote Tire Pressure Transmitter
PN: 70503020
FCC ID: MRXTSR200
CANADA:

GENERAL PRODUCT INFORMATION

The device for which Authorization is pursued, has been developed under supervision of:

Schrader-Bridgeport International, Inc.
1609 Airport Road
Moroe, NC 28110

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The device will be manufactured at:

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NORTHERN IRELAND

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Customer Service will be provided by:

Schrader-Bridgeport International, Inc.
1609 Airport Road
Moroe, NC 28110

Description of RTPM Transmitter (SRF) Features

The Aftermarket RTPM system has been developed to monitor a vehicle's tire pressures and display real-time pressure values or warning messages/indications to the driver of the vehicle. An electronic unit inside each tyre, mounted to the valve stem, periodically measures the tyre pressure and by means of radio waves transmits the pressure value to a passenger compartment mounted receiver. This receiver controls a display which can be configured to indicate the real time pressure in each wheel or display an alarm condition when the tyre pressure falls below a certain pre-defined threshold.

In this system, each wheel unit consists of a low profile enclosure mounted on the back of a conventional clamp-in tyre valve on the inside of the wheel and tyre. The enclosure houses an electronic unit consisting mainly of a battery, pressure sensor, roll switch, control electronics and a radio transmitter. The entire assembly is fully potted to protect the electronics from the environment. The overall size and weight are kept to a minimum and the entire enclosure locates down inside the drop well centre. This ensures that tyre fitting and tyre removal problems do not arise.

The wheel units measure tyre pressure and report the information to the dashboard receiver via radio wave communication. To conserve battery power, the pressure is sampled periodically, typically once every 30 seconds. Also, the RF transmissions are made on a periodic basis of typically every minute, provided the tyre pressure is not changing rapidly. Rapid changes of tyre pressure, of greater than 1 psi in a 30 second period are detected by the pressure measurements and immediately reported to the dashboard receiver. This ensures the driver is warned of a hazardous pressure level immediately if it occurs.

A roll switch which detects vehicle movement is used to further save battery power. While the vehicle is in motion at a speed greater than typically 20 mph the device behaves on the above described manner regarding pressure sampling and RF transmissions.

Each wheel unit has a unique identity code which is programmed into the transmitter at assembly. Up to 2 million identity codes are available to prevent crosstalk between vehicles. Each RF transmission contains pressure information and the identity code of the particular wheel, to allow the receiver to both know which of the four wheels has reported and to reject all reports from other

vehicles with a similar system fitted in close proximity. This completely avoids false pressure reports from adjacent vehicles.

The RTPM transmitter has the following modes of operation:

1. OFF Mode

This is the state the devices leave the Schrader factory. In this state the devices do not sample pressure or transmit any information.

2. LEARN Mode

This mode is when a magnet is placed close to the transmitter for more than 5 seconds. When this occurs, the device transmits a 5 second burst of 8 words every second with the function code set to LEARN (Ref. Data Protocol Diagram). This mode is used for both testing and to allow the system receiver to memorise the transmitter identity codes.

3. SLEEP Mode

This mode of operation is when the device is operating normally on a vehicle and is neither sampling pressure or transmitting. The device is simply waiting for a time period to end, such as the 30 seconds between each pressure sample while driving.

4. Pressure Sample Mode

This mode is when the device is actually powering up the pressure sensor and measuring the tyre pressure. This occurs once every 30 seconds, only while driving.

5. RF Transmit Mode

In this mode the device is transmitting the measured pressure and wheel identity code to the vehicle receiver. This occurs over a 1 second period with 8 bursts of data (Ref. Data Protocol Diagram). Normally the device transmits once every minute while driving. However, when a pressure change of more than 1 psi since the last transmitted pressure is measured, an extra transmission is made.

EXHIBIT F

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