



**“Houston, we  
have a tire leak.”**

**“Copy that...  
We’re keeping  
an eye on it.”**



**Real-Time Tire  
Pressure Monitoring  
and Off-Truck  
Communication  
Integration for Fleets**



## Doran 360™ Tire Pressure Monitoring Systems

### Overview

- Continuously monitor tire pressure and temperature data transmitted from wireless, valve-stem mounted tire pressure sensors, displayed on PeopleNet Driver Terminal, Blu.2 or TABLET devices.
- Doran systems designed for truck only, “married” truck & trailer and truck/trailer “drop & hook” applications which can monitor up to 38 wheel positions.

### Installation, programming and operation

- The Doran monitor utilizes 12-24 volt power and has patented sleep mode by wiring with constant power, ignition/switched power and ground.
- Using a simple, patented programming method, the last three digits of a laser etched serial ID number on each sensor are entered to a specific wheel location on the monitor.
- The baseline tire pressures are programmed into the monitor and can be unique for each wheel position to accommodate different optimal pressures for steer, drive and trailer tires.
- Multiple built-in alert settings provide warnings to protect against FastLeak™ rapid deflation events, prolonged driving on underinflated tires and excessive heat conditions.
- An external antenna, mounted on the rear bumper of the truck, ensures consistent RF signal reception from each tire pressure sensor to the in-cab monitor.

### Integration

- The Doran monitor transmits TPMS data to the PeopleNet OBC through J1939 or J1708 data connection.
- J1939 Connectivity
  - Doran provides each TPMS monitor with pre-wired OEM specific J1939 harness that is used to connect to the backbone of the CANbus.
- J1708 Connectivity
  - Doran offers a converter box and wiring harness that will transfer TPMS data and alarms through the J1708 network on older trucks.

### Trailer Tire Monitoring

- Using the Doran 360 SmartLink™ monitor in the truck and SmartLink™ transceivers on trailers enables fleets to monitor all truck and trailer tire pressures in “drop & hook” fleet operations.



Doran 1939 monitor with OEM specific wiring harness and connectors”



Doran 1708 monitor



SmartLink™ transceiver for trailers

## PEOPLENET TPMS INTEGRATION

### Overview

- TPMS integration with Doran is available on PeopleNet Driver Terminal, BLU.2 and TABLET devices.
- Driver can access tire pressures and temperatures through the PeopleNet in-cab display.

### Tire Status, Real-Time Tire Pressure and Temperature Alerts

Alarms are displayed on the screen using a GUF message with additional details on real-time tire pressure and alarm status in the TPMS screen.



### TPMS Status Conditions:

- **Normal:** all tire positions are communicating properly, and tires are inflated to within 12.5% of programmed baseline pressure.
- **Tire Leak Detected (FastLeak™) warning:** a patent pending alarm that is triggered when tire pressure drops 2.8 psi within 12 seconds regardless of the actual inflation or programmed baseline tire pressure.
- **Under Pressure (Level I low pressure) warning:** initiated when a 12.5% drop from the programmed baseline tire pressure occurs.
- **Extreme Under Pressure (Level II low pressure) warning:** activated with a 25% drop from the programmed baseline tire pressure.
- **High Temperature Alarm:** alarms when a tire pressure sensor captures a temperature of 175 °F. Provides early warning to potential wheel end problems.
- **Extreme Over Pressure (High Pressure) Alarm (optional):** can be set to provide warnings with a 25% increase over the baseline tire pressure.
- **Lost Signal:** indicates a temporary interruption of RF signal reception, or if continual condition persists, the tire pressure sensor should be replaced.



J1939 backbone connection



## TPMS Alarms & Reporting Through PFM

### Alarms

- PFM settings enable tire monitoring alarms at the Vehicle/Group
- Alarms can be configured to send an urgent data call
- Users can setup e-mail alerts when tire alarms are generated
- Alarm data includes Alarm Type, Location, Axle, Tire, Pressure, Temperature, Set Point Pressure and Vehicle Speed

### PFM - Tire Monitoring Alarm Reports

- Alarm Report displays historical tire monitoring events
- Filter by Driver / Vehicle
- Alarm data includes Alarm Type, Location, Axle, Tire, Pressure, Temperature Set Point Pressure & Vehicle Speed

### Example e-mail alert message

From: <pfmsystem@peoplenetonline.com>  
8/11/2013 3:57:25 PM

To: Fleet ABC Maintenance Manager

Subject: \*\*\* Tire Monitoring alarm on vehicle 1234

On Aug 11, 2013 at 15:56 a Tire Monitoring alarm was generated on vehicle 1234

Doran - BLU.2 demo unit

Extreme Under pressure - axle:2, tire:3, 44.0 mph, 81 psi, 79 F, set point:100 psi

## GUF MESSAGES



## TIRE PRESSURE DATA



**About Doran Manufacturing, LLC:** Cincinnati, OH-based Doran Manufacturing has been supplying high quality transportation safety products for over 35 years. In addition to tire pressure monitoring systems, Doran supplies LED and incandescent Exterior Light Monitors, Sleeping Child Checks®, Emergency Exit Monitors and a full range of LED lighting products to the school bus market. Doran continues to manufacture customized electric terminals and terminal boards in the original factory that was established in 1954.

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