



DIRECT TIRE PRESSURE MONITORING FOR LARGE OFF-ROAD VEHICLES

Product Overview

- TMS Sensors
- TMS Receivers
- TMS Operator Interface
- TMS Sensor Reader
- TMS Manager
- TMS Log Graph
- TMS Log Summary



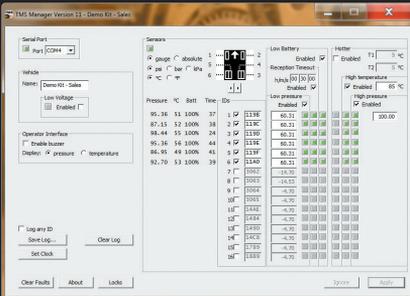
TIRE PRESSURE MONITORING-REAL TIME



1. TMS FITTED ON A CATERPILLAR 6 WHEEL RIGID DUMP TRUCK



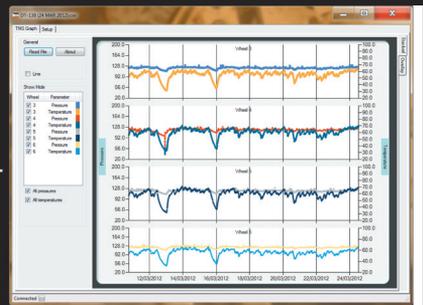
2. TMS OPERATOR INTERFACE DRIVER DISPLAY UNIT FITTED AND OPERATIONAL IN THE CAB



3. PRESSURE AND TEMPERATURE DATA PRESENTED FOR EASY ANALYSIS



4. TMS SERIAL DATA



INTEGRATION TO THIRD PARTY VEHICLE MONITORING AND TRACKING SYSTEMS

WHY MONITOR TIRE PRESSURE?

Good tire management will improve the profitability of your business as tire maintenance and repair are a significant part of your operating costs. Using Tire Monitor System can alert you in **real time** of any potential problems and help you avoid accelerated wear, improve fuel efficiency and reduce tire failures.



TMS technology offers complete visibility of the tire pressure data in real time so you can keep tires running at optimum performance.

BENEFITS OF TMS

The innovative Tire Monitor System (TMS) can help decrease your downtime and reduce your operating costs by giving you accurate tire pressure data. It can help you improve fuel efficiency, increase tire life and **keep you moving**.

TMS does this by presenting tire pressure information to the driver and manager:

- Real time, continuous display in the cab so your **drivers** can make decisions whilst on shift.
- Data is stored in memory with a time stamp so that your **managers** can download and view to see historical tire pressure data and a history of the alarms.

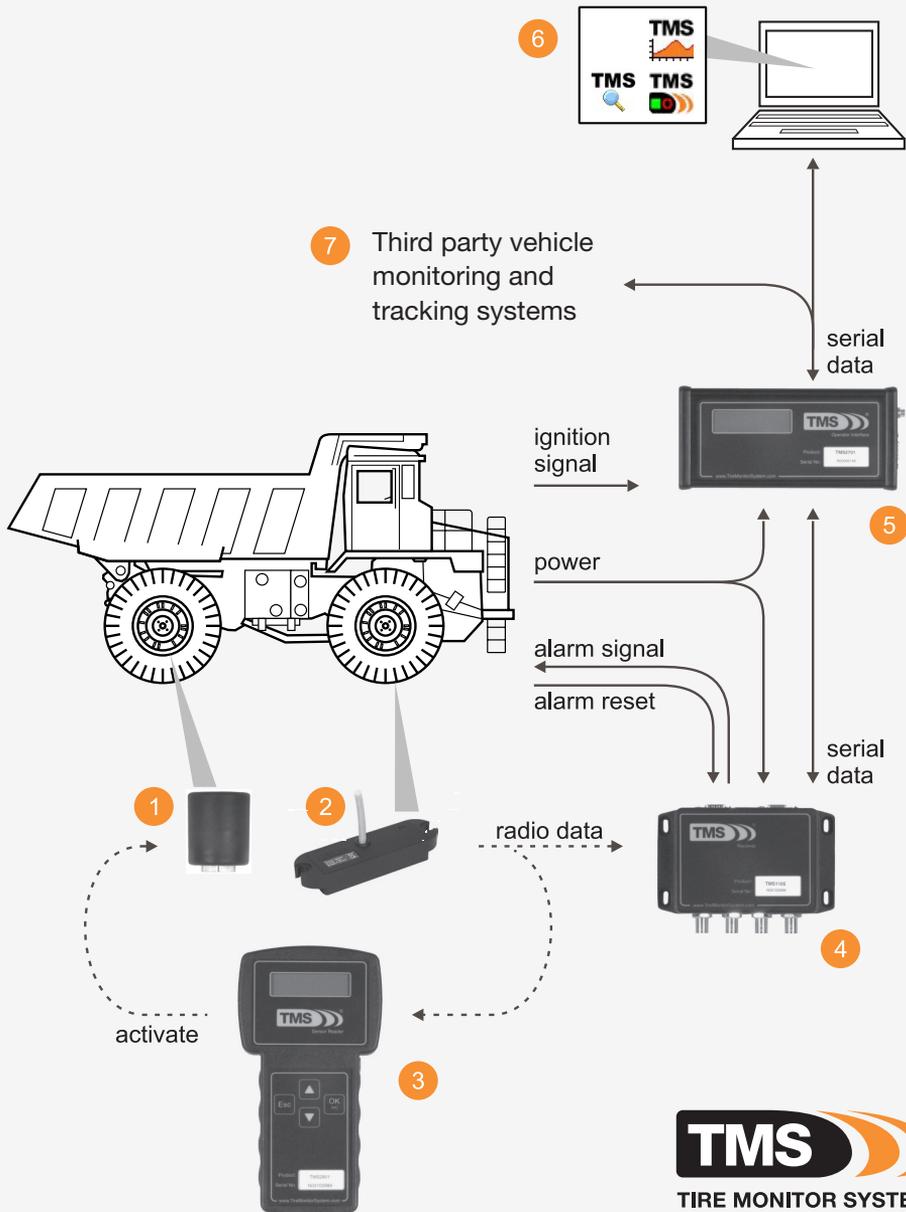
Showing real time data to drivers gives you some unexpected benefits - the driver will know whether or not a tire with a slow loss of pressure will **complete the shift**, or if there is sufficient pressure to drive to a convenient place for tire checking.

For more information on any of the products visit our website at

www.tiremonitorsystem.com



OVERVIEW



OVERVIEW

There are several types of battery powered TMS Sensors, either screwed onto the valve (1) or patched onto the inside of the tire (2). Sensors transmit tire pressure and temperature data periodically and when pressure changes. In addition, using the hand held TMS Sensor Reader (3) you can force a transmission in order to manually read a sensor. The TMS Receiver (4), fitted on the vehicle, collects the data from all sensors. The receiver can generate an alarm signal. You can view the data using the TMS Operator Interface (5) fitted in the cab. You may connect the vehicle's ignition to enable the backlight on the operator interface display. The operator interface can produce an audible alarm. You can connect TMS to your equipment or to your computer using RS-232 serial communication. The serial data lets you configure and collect data from the system. You can connect to the operator interface or directly to the receiver if you do not use the operator interface. From your computer (6) you can configure and view the system using the TMS Manager Windows application and examine and analyse historical data with the TMS Log Graph and Log Summary Windows applications. The TMS Serial data (7) protocol is shared to allow easy integration to vehicle monitoring and tracking systems.





TIRE MONITOR SYSTEM

STARTER KIT



All the system components you need in one starter kit to get you up and running. Kits are available EX STOCK and we supply globally from our business in the UK. Starter kits include a selection of internal and external sensors and TMS28 Sensor Reader to aid installation and verify performance of the sensors during your testing and evaluation phase.

- 6 TMS2A Sensors internal readable clean-dry
- 6 TMS24A Sensors external readable clean-dry
- 1 TMS11 Receiver standard
- 1 TMS27 Operator Interface
- 1 TMS28 Sensor Reader (including recharge power supply)
- 6 Patch & Toggle assemblies for TMS2A
- 6 Large bore T-fittings
- 3 BNC receiver antennas (5m, 8m and 16m)
- 1 3m harness
- 1 USB-serial convertor
- 1 Serial-serial 9 way convertor
- 1 Quick start guide

ORDER #: TMSKIT

INTERNAL SENSOR KIT



All the system components for a 6-wheel configuration for internal sensors, for clean-dry applications. We supply globally from our business in the UK.

(Internal sensor kits do not include the TMS28 Sensor Reader).

ORDER #: **TMSKITAMB_B** Clean-dry

EXTERNAL SENSOR KIT



All the system components for a 6-wheel configuration for external sensors for large bore valves. We supply globally from our business in the UK.

(External sensor kits do not include the TMS28 Sensor Reader).

ORDER #: **TMSKITAMB_D**

For more information on any of the products visit our website at

www.tiremonitorsystem.com



TMS SENSOR - INTERNAL



TMS sensors measure pressure and temperature and estimate their own battery condition. Every sensor has a unique four-digit identity code (ID) printed on the product label. Periodically and on certain conditions, each sensor broadcasts its ID and measurements as a radio transmission.

- Mounted internally inside the tire on a tire patch
- TMS2A for use in clean dry gas filled tires
- Pressure range: 6 to 185psi absolute
- Pressure accuracy: +/-2psi up to 150psi, +/-3psi 150psi to 185psi
- Temperature range: -25 to +80degC
- Transmissions: every 5 minutes and on change of pressure
- ID code, pressure, temperature and sensor battery can be read using the TMS Sensor Reader
- 2 year battery life
- 112x31x18mm 60g
- 433.92MHz
- Compliant with EN 300-220

TMS SENSOR - EXTERNAL



- **TMS24A fitted externally by screwing onto large bore valve**
- **52x40mm 95g**
- **Using the brass T-fitting to attach the sensor to the valve allowing for air fill without removing the sensor**
- **For use with clean dry gas filled tires**
- **Pressure range & accuracy: as TMS2A**
- **Specification: as TMS2A**
- **Made from impact resistant material**

TMS SENSOR READER



A low frequency activator used to initiate a data transmission from the TMS sensors to check ID code, pressure, temperature and sensor battery. Rechargeable with power supply included.

- **English, Spanish and Russian**
- **In built altitude sensor to compensate pressure**
- **Displays cold calculated pressure at 18°C**
- **Used to hibernate sensors**
- **Stores 100 readings**

ORDER #: TMS28

For more information on any of the products visit our website at



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TMS OPERATOR INTERFACE



Displays tire pressure data for each allocated wheel and any alarm conditions. It logs tire data into memory for later recall and each record is time stamped. The unit is connected to the receiver via a 2m long cable so that it can be sited in the best position for the driver to see.

- Connects to TMS Receiver using the cable harness
- Displays the status of each tire including pressure
- Displays for up to 6 tires
- Logs receptions with real time stamp
- Configured through TMS Manager
- Supports alarms: low pressure, high pressure, high temperature, low battery and reception timeout
- 170x81x30mm 305g

ORDER #: **TMS27**

TMS RECEIVER

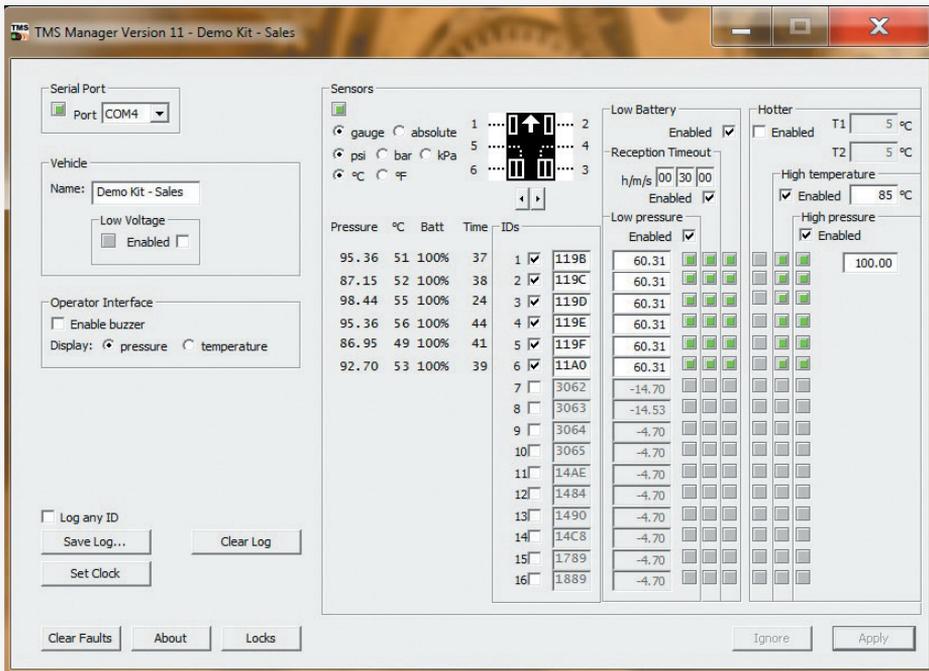


The receiver is mounted in the vehicle and can receive data from up to sixteen sensors. It's powered by the vehicle supply and it monitors the data from each sensor, reporting any alerts.

- Comms: RS232
- Transmission frequency: 433.92MHz
- Voltage supply: +10 to +36V DC
- Current consumption: 30mA typically
- 126x82x44mm 355g
- Protected against reverse connection and voltage transients. Fused.
- Operating temperature: -10 to +55degC
- Configured through TMS Manager

ORDER #: **TMS11**

TMS MANAGER



TMS Manager, a **PC program**, enables you to set the alarm conditions for each tire and to monitor results. TMS Manager can also be used to download the data logged by the Operator Interface and display it graphically.

The latest version of TMS Manager can be downloaded from our web site www.tiremonitorsystem.com/downloads

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LOG SUMMARY

TMS Log Summary

File Preferences Help

Log files Summary Detail

Vehicle ID	Wheel	Sensor ID	High Pressure	Low Pressure	High Temperature	Hotter	No Fix
DT-137	1: Front left	1DCF					
DT-137	2: Front right	1DCC					
DT-138	2: Front right						
DT-138	3: Rear outer-right	20C2					
DT-138	4: Rear inner-right	20C3		1			
DT-138	5: Rear inner-left	209E					
DT-138	6: Rear outer-left	20AF					
DT-164	1: Front left	20FC					
DT-164	2: Front right	20FE					
DT-180	3: Rear outer-right	20D5					
DT-180	4: Rear inner-right	20D6					
DT-180	5: Rear inner-left	20D4					
DT-180	6: Rear outer-left	20D3					
DT-194	1: Front left	1E26					4
DT-194	2: Front right	1DCC					4
DT-194	3: Rear left	20D1					5
DT-196	2: Front right						
DT-196	3: Rear outer-right	20A1					
DT-196	4: Rear inner-right	2140					
DT-196	5: Rear inner-left	20C6					4
DT-196	6: Rear outer-left	20A2					
DT-208	3: Rear outer-right	2137					
DT-208	4: Rear inner-left	2136					

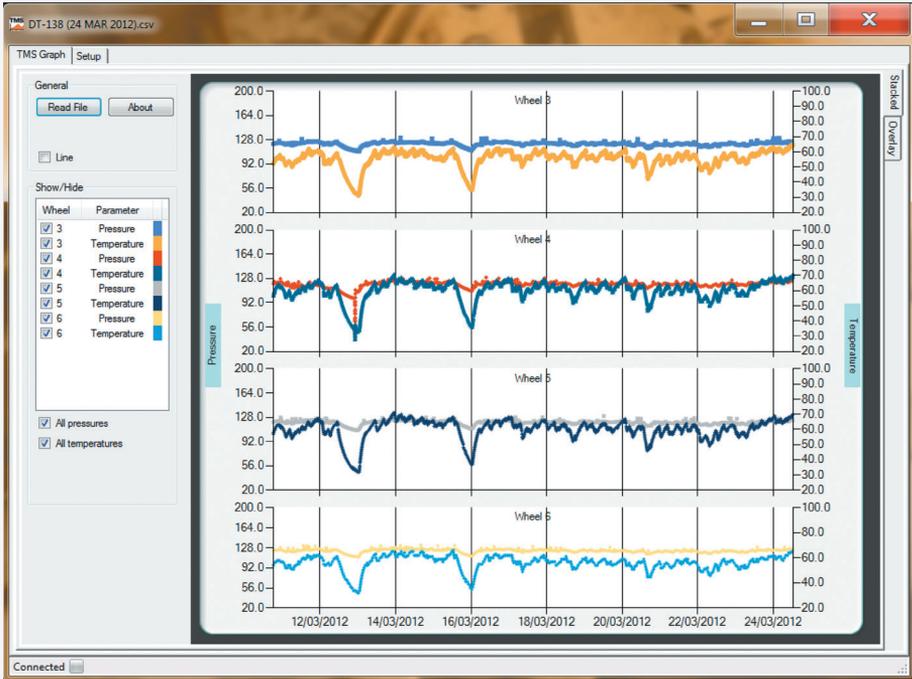
Click highlighted values to view alarm details

View all vehicles/wheels View only vehicles/wheels with alarms

The TMS Log Summary application analyses multiple logs and provides a summary of any alarm conditions allowing you to quickly view the status of your fleet.

The latest version of TMS Log Summary can be downloaded from our web site www.tiremonitorsystem.com/downloads

LOG GRAPH



The TMS Log Graph software enables you to take the data from TMS Manager and automatically produce graphs and visual reports of the data logs, saving time and money producing your own excel files to analyse the data.

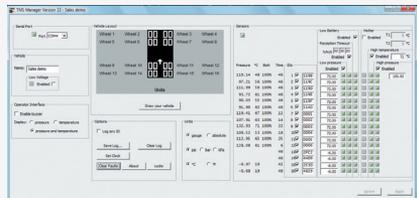
The latest version of TMS Log Graph can be downloaded from our web site
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TMS OPERATOR INTERFACE FOR UP TO 16 WHEELS



Designed for large off-road vehicles with more than 6 wheels, the TMS Operator Interface offers all the features of our standard operator interface but with the added benefits of displaying the tyre pressure for up to 16 wheels. There are many wheel layouts for multi-axle vehicles so the TMS Manager configuration software allows the user to allocate up to 16 wheels over 8 axles allowing the display to look like the vehicle so the driver can easily see at a glance the tyres that have low pressures or other alerts.

The multi-axle operator interface is compatible with the TMS Receiver and all the other TMS system components. The TMS software suite, TMS Log Graph and TMS Summary are also compatible.

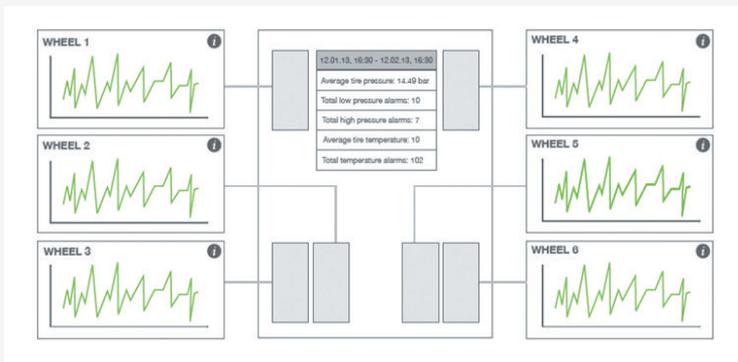
INTEGRATION

Providing real time tire pressure and temperature data and alerts to the driver of large off-road vehicles is proven to be beneficial by increasing tire life, reducing operating costs, decreasing downtime and improving fuel efficiency.

Not only does TMS provide this information efficiently for the driver but using the TMS serial data the system can be integrated to the vehicle monitoring system or to a third party telemetry system to allow the tire data to be sent off vehicle to remote monitoring locations.

The TMS serial data protocol is shared with our partners, customers, vehicle manufactures and telemetry suppliers to allow ease of integration.

Applications may dictate that no operator interface is used and that the tire pressure data is sent directly to a remote monitoring location, in which case only the TMS Receiver is installed on the vehicle.



Distributed by

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