

### **Innovative truck tyre pressure monitoring system gives instant, in-cab warning of tyre problems, handles trailer changes automatically**

*Motor sport proven technology from BERU f1systems gives operators real time data on tyre conditions for better safety, economy and environmental performance*

Tyres are the second or third largest expense for most truck fleet operators. Proper management of tyre pressures has been demonstrated to play a significant part in reducing this cost. Tests by tyre manufacturers have shown that under-inflation by 15% reduces fuel economy by 2.5%. Incorrectly inflated tyres also wear faster and are more prone to premature failure. Now automotive engineering specialist BERU f1systems is helping truck fleets to improve safety on the road and economy across the fleet with its new Truck Tyre Pressure Monitoring System (TPMS).

The new system has been engineered specifically for the challenges of tyre pressure monitoring on large, multi-wheeled vehicles operating in fast-moving logistics environments. It is capable of automatically detecting trailer changes, and re-calibrating itself to keep the driver informed.

Sensors are fitted inside each wheel using a modified version of a standard valve. Each sensor measures tyre pressure and temperature every 5 seconds and transmits the status of the tyre wirelessly to antennae mounted on the vehicle, once every minute. If a sensor detects a sudden change in pressure, it reports its status once per second, allowing the system to analyse the situation and alert the driver to potential problems. Up to six antennae can be fitted to the vehicle in order to ensure reliable data collection from all wheels, in all conditions.

To assist with routine maintenance, Truck TPMS is also compatible with hand held support tools from BERU f1systems. These compact, rugged units allow technicians to see information about a particular tyre in a clear, easy to read format.

“Trucks are a tough environment for TPMS systems,” says senior application engineer, James Shingleton. “Their large size makes optimum RF reception difficult, while the high number of wheels and frequent trailer changes create set-up and calibration challenges. On top of that, you have to add long operating hours in difficult conditions. To produce the Truck TPMS we have taken all our experience of tyre pressure monitoring in motor sport, passenger car and bus applications and developed a new system specifically to meet the needs of the vehicle sector.”


Tyre pressure monitoring is becoming increasingly common as fleet operators try to reduce tyre wear and maintain highest possible fuel efficiency. Legislation is also leading manufacturers and operators to fit robust solutions. BERU f1systems' Truck TPMS will operate with either 12 or 24v electrical architectures and can be installed as a standalone system, or integrated into the vehicle using its CAN data communication network.

### **About BERU f1systems**

Founded in 1993 and since 2001, a specialist division of BERU AG, BERU f1systems offers advanced design and manufacturing facilities for vehicle wiring harness systems, tyre pressure monitoring, stress measurement and composites. Supplied to world championship winning cars in every major formula and every Formula 1 team, components from BERU f1systems are now available in military, road car, aerospace and nautical applications. In January 2007, BERU f1systems won the prestigious Autosport International Innovation of the show for its Wire in Composite technology.

## Photographs

Available from Nick Bailey by email (see below)

	<p><i>Incorrectly inflated tyres also wear faster and are more prone to premature failure leading to increased risk to other road users and more debris</i></p>
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