Tyre Pressure Monitoring System (TPMS)

- Lower fuel consumption
- Longer tyre life
- More safety

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Automated TPMS for safer and greener fleets

The three biggest challenges facing today's road transport industry are cost efficiency, safety and the environment. Bridgestone’s Tyre Pressure Monitoring System (TPMS) will help you make a step change improvement in meeting these challenges.

Under-inflated tyres are a threat to safety and ruin efficiency

A tyre is at its best when it runs at the recommended pressure. However, it can and does lose air in a number of ways. There is always a certain degree of natural air loss over time. Over one month, at least 3.5% will leak through the casing. This can increase if air leaks through the valve seals, or through the tyre/rim seal if the rim is not smooth and clean.

If the tyre is punctured, or if the valve leaks, the pressure will drop faster over just a few days.

UNDER-INFLATED TYRES:

• are bad for the environment (they increase rolling resistance, thus increasing fuel consumption and CO₂ emissions);
• can cause a tyre to overheat, break up and even blow out with potentially disastrous results;
• are expensive (a tyre inflated 20% below the recommended pressure only lasts 75% of its normal life).

About a quarter of all truck tyres are under-inflated. What about yours?

Bridgestone’s internal data shows that in many fleets about 25% of tyres are running at least 10% below the recommended pressure. Furthermore, about 5% of tyres are running at more than 20% below recommended pressure. Even with a daily visual inspection, drivers are unlikely to notice an issue until the pressure is at least 20% below recommended level, and the inner tyre on a dual fitment tends to be ignored altogether.

More safety
Optimum tyre pressure increases safety

Most roadside tyre breakdowns can be attributed to pressure loss over a longer period of time. Identifying punctures early could prevent the large majority of such cases; at best they are inconvenient and expensive. In some cases, the tyre may fail completely and throw tread and casing onto the road, posing a major hazard for other road users.

Lower fuel consumption
Optimum tyre pressure reduces fuel consumption

A truck tyre with recommended 9 bar, leads to an increased fuel consumption of 5% at 7 bar.

TPMS valves can be easily screwed onto the valve stem. Different designs are available to suit specific rim designs.

TECHNICAL DATA

- Pressure Range: 0-12 Bar
- Pressure Accuracy: ± 0.1 Bar
- Temp. Range: -40 to +125 °C
- Length: 40 mm
- Weight: 22 g
- Battery Life: 3 Years
- Transmission Frequency: 6 seconds
Bridgestone has designed and patented TPMS sensors with a unique Radio Frequency (RF) unit, especially developed for trucks and buses.

Bridgestone’s TPMS valves help you increase safety, reduce fuel consumption and gives your fleet a longer tyre life.

Automated TPMS enables immediate corrective action

- Bridgestone installs TPMS sensors on existing valves 1 (without having to remove the tyres), and 4 receiver posts at the gates of your truck park 2.
- The transmitter unit in each valve sends the tyre pressure, temperature and a unique identification number every 6 seconds.
- When a TPMS equipped vehicle drives through a gate equipped with receiver posts, the wireless signals are picked up and sent to Bridgestone’s fleet data server using the GSM network 3.
- The tyre pressures are directly evaluated in real time against the recommended pressures for the tyre. If the values are outside prescribed limits, an e-mail is generated for the fleet and the service provider (i.e. Truck Point).
- Immediate corrective action can then be taken.
- Apart from the immediate action e-mail, further automated reports are created to allow regular maintenance to correct natural air loss, identify high temperature (perhaps brake issues), report on running status, etc.
We were immediately interested when we heard about this system. Using this very simple device on all our Arla vehicles’ tyres in Denmark, Sweden and the UK saves us 350,000 liters of fuel and 945 tons of CO₂ emissions annually. It was an obvious decision to make. Furthermore, we can now detect punctures faster and avoid potential breakdowns on the road."

Peter Eriksen, technical manager at CDK, one of the first customers to use Bridgestone’s TPMS system.

"Optimum tyre pressure ensures a longer tyre life"

A tyre at 20% below recommended pressure only lasts 75% of its normal service life.