

Innovative tyre pressure monitoring system solves installation and environmental challenges for new Nova LFS Artic bus

Motorsport proven technology from BERU f1systems improves reliability, safety and reduces tyre wear.

Automotive engineering specialist BERU f1systems has developed a specific bus Tyre Pressure Monitoring System (TPMS) for Canadian firm Nova Bus and their new Nova LFS Artic bus. BERU f1systems, well known for robust and reliable TPMS technology, designed a system that solves key durability and performance issues for bus operators in harsh environments.

“Implementing a TPMS on a 62 foot (18.9m) articulated bus presents a number of unique design challenges,” says senior application engineer, James Shingleton. “Achieving good radio frequency (RF) coverage along the full length of the bus requires robust technology and clever component packaging.” In this particular instance the harsh operating conditions of the vehicle was another major consideration as components must be protected from the elements.

“In car applications, antennae are normally positioned on the underside of the vehicle because it provides the best RF reception,” explains Shingleton.

“However, with the exception of the front antenna, which is mounted behind a splash shield at the front of the vehicle, this was not feasible for Nova Bus due to potential damage caused by winter road conditions. To solve this problem, the middle antenna is located inside the cabin, while the two rear antennae are raised to a higher position in the chassis. The performance of our system, which is proven in some of the harshest motorsports environments, allows it to function reliably, even in these shielded locations.”

Nova bus vehicles are used across Canada all year round and operating conditions can become very severe. In winter, incredibly cold temperatures,

huge snowfalls and very heavily salted roads create an extremely destructive environment for external components. The TPMS must function with minimal maintenance for the entire life of the vehicle, which can be up to 20 years. BERU f1systems' existing solution, tested in all environments on rally cars, has achieved the required durability standards.

The Nova LFS Artic bus TPMS consists of four DGA+ antennae mounted on the vehicle (two for the rear axle, one for the middle axle and one for the front axle), eight wheel sensors (four on the rear axle, two on the middle axle and two on the front axle) and the new BERU f1systems 24V TPMS Bus ECU.

Tyre pressure monitoring is becoming increasingly common as fleet operators try to reduce tyre wear and maintain highest possible fuel efficiency.

Legislation and increasing passenger safety requirements are also leading manufacturers and operators to fit robust solutions. BERU f1systems TPMS offers retrofitting possibilities either standalone or through a CAN 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.

Nova LFS Artic Overview

Articulated Transit Bus ideally suited for high-traffic routes

55 seat (total capacity of 116)




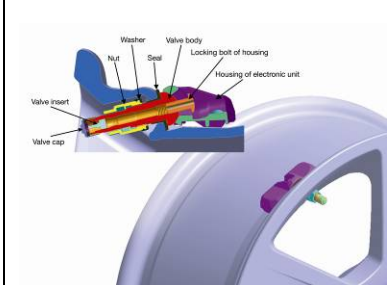
Length 62ft (18.9m)

Centred powertrain T-drive (Cummins ISL 330HP Engine, ZF, Voith or Allison Transmission options)

Highly flexible articulation with turning radius 40.8ft (12.44m)

Photographs

Available from Nick Bailey by email (see below) or www.Autopresspoint.com

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