

VIGIA Mechanical Constant Tyre Inflation System

The VIGIA Constant Tyre Inflation System automatically regulates the tyre pressure of wheels fitted to BPW trailer axles, maintaining the preset cold pressure, even with small punctures and with the trailer in motion.

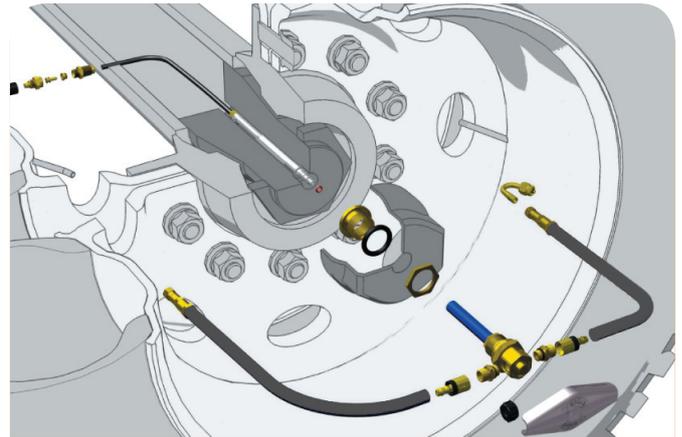
Vigia currently exports its trailer air pressure maintenance systems, which are dedicated to meet the most strenuous demands of the toughest of transport environments, to more than twenty countries.

Tyre pressure control systems are now a significant and reliable cost saving tool, given that tyre replacement costs and fuel are a significant expense in a trucking operation.

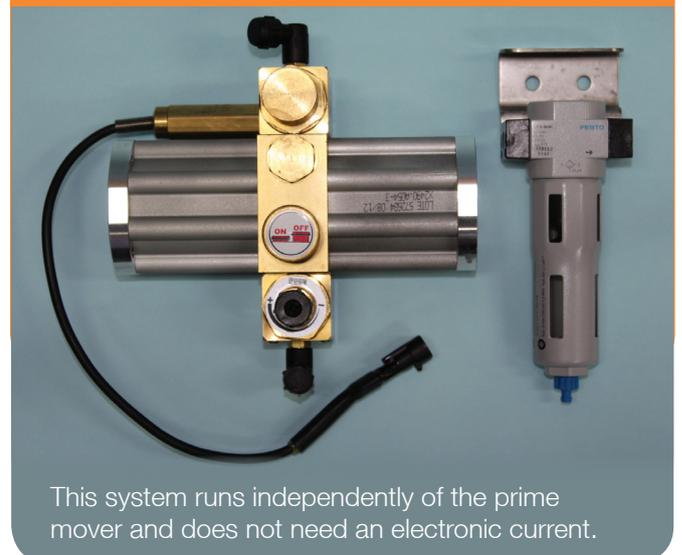
As most trucking operators are aware, improper tyre inflation accounts for many retread separations, premature and uneven wear as well as flats and blowouts. It can also add around one percent extra to fuel costs.

The Vigia System maintains a constant 'preset' tyre pressure and delivers instant, ongoing feedback to the driver regarding the status of the system. If the tyre requires inflation the driver is alerted while the tyre is automatically re-inflated.

Vigia greatly reduces the need for costly road service calls and expensive downtime, because if the tyre is punctured, Vigia will continue to inflate the tyre so the driver can continue to the journey safely, or plan a stop for service.



The Vigia system supplies air to the tyres from the brake system, via a Pressure Protection Valve, Filter and mechanically activated Pressure Elevator, to the air lines through the axle, to the Rotary Unions on the hubcaps, which are connected to the Delivery Hoses. One-way check valves on the end of the Delivery Hoses prevents air from returning out of the tyres.



This system runs independently of the prime mover and does not need an electronic current.



Under inflated tyres can also affect the handling of the vehicle, contribute to accidents and lead to premature bearing failure.

Correct tyre pressure provides proper side wall flexing and safe operating temperatures. Under inflation becomes a serious problem when one tyre on a set of duals loses pressure. In some cases both tyres can fail with very dangerous consequences.

Premature bearing failure can also occur due to different pressures over a set of dual tyres, reducing bearing life by up to 70 percent.

The Hidden Cost of Poor Tyre Maintenance

Apart from increased costs of fuel consumption and tyre wear, and the extra time it takes to check tyre pressures – if it is done at all – your wheel bearings life span can be reduced dramatically if dual tyre sets run at uneven pressures. The following inside/outside tyre pressure differentials reduce bearing life as illustrated below:

- ⦿ 0.34 bar (5psi) differential reduces bearing life by up to 10%
- ⦿ 0.69 bar (10psi) differential reduces bearing life by up to 20%
- ⦿ 1.38 bar (20psi) differential reduces bearing life by up to 40%
- ⦿ 2.41 bar (35psi) differential reduces bearing life by up to 70%

Self contained and exclusive for trailers, the Vigia system is designed to operate independently on any trailer configuration or make.

At all times the driver is advised of the status of both the tyres and the system, via LEDs mounted on the trailer, both on the Control Box, and on an independent LED status light that can be positioned to be in view of the driver.

Air to the tyres is supplied through conduits inside the axle. Exclusive and durable rotary valves are placed outside the hubcap preventing water and other contaminants from entering the hub.

One-way check valves are fitted to the tyre end of the Delivery Hoses, so a massive leak on one tyre will not cause all of the other tyres to deflate.

This highly durable system eliminates tyre worries and most importantly, reduces operating costs and down time, and is available as a factory fitted option on Australian-assembled BPW axles.



LED Status Light, designed to be fitted to the trailer so they can be seen by the driver.

No Light: System on and tyres at preset pressure.

Yellow Light blinking slowly: System inflating tyres to required pressure OR air leaking from system. Driver can continue trip and carry out repairs when time permits.

Yellow Light blinking quickly: Air leaking from system. Driver advised to stop and check out the problem.

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