



Engineering confidence

MODERN trailer braking systems have evolved significantly over the past two decades. With the widespread adoption of ABS, EBS and advanced pneumatic control systems, the performance of air brake components is now more critical than ever. While major components such as valves, compressors and electronic control units receive most of the attention, smaller connections like air brake fittings are just as important in maintaining the overall integrity of the system.

Air brake fittings form the essential connection points between tubing, reservoirs, valves and control devices throughout the trailer air system. These fittings must withstand constant pressure cycles, vibration, temperature variation and harsh operating environments over many years of service. Even minor air leaks can reduce system efficiency, increase compressor workload and lead to inconsistent brake performance.

For this reason, engineering standards such as DOT FM-



DOT-marked push-to-connect air brake fitting. Images: GP Truck Products

VSS 571.106 provide critical benchmarks for the design and performance of air brake fittings and tubing. These standards define requirements for pressure retention, tube retention strength, vibration resistance and long-term durability. Compliance ensures that fittings can maintain a secure, leak-free connection under real-world heavy vehicle operating conditions.

GP Truck Products has long recognised the importance of supplying fittings that meet these demanding performance expectations. Working closely with manufacturers, trailer builders and workshops across Australia, the company provides air brake fittings and components designed specifically

for heavy vehicle applications. Their range includes push to connect fittings engineered to deliver reliable sealing performance while simplifying installation and maintenance.

Push to connect technology has become increasingly widely used in modern trailer air brake systems due to its combination of strength, reliability and installation efficiency. These fittings use an internal collet and sealing system that securely grips the tubing while maintaining a positive seal. This eliminates the need for traditional compression nuts and significantly reduces installation time.

The design also improves reliability by providing con-

sistent tube retention and sealing performance, even under vibration and dynamic loading conditions. For trailer manufacturers and service technicians, this reduces the risk of installation errors and helps ensure consistent system performance throughout the service life of the vehicle.

According to industry experience, properly engineered push to connect fittings can also reduce assembly complexity. In some cases, a single fitting can perform functions that previously required multiple components, improving efficiency while maintaining strength and reliability. This level of engineering refinement contributes to more dependable pneumatic systems overall.

GP Truck Products has built its reputation on supplying fittings that meet recognised international performance standards and perform reliably in demanding operating environments. Their fittings are used across a wide range of heavy vehicle applications, including trailer braking systems, suspension controls and auxiliary circuits. By focusing

on engineering quality and compliance, the company supports manufacturers and fleet operators in maintaining high levels of safety and reliability.

As trailer systems continue to evolve, maintaining air brake systems integrity remains essential. Every connection point represents a critical element in the overall brake system, and the use of standards-compliant fittings helps ensure consistent performance. Correctly specified and tested fittings reduce the risk of air leaks, minimise maintenance requirements and support the safe operation of modern braking systems.

With increasing emphasis on reliability, safety and operational efficiency, the importance of quality air brake fittings and components will continue to grow. Companies such as GP Truck Products play an important role in supporting the Australian transport industry by supplying tested, standards-compliant air brake fittings designed to meet the demands of modern trailer applications.



DOT fittings in service.



AIR BRAKE FITTINGS & COUPLINGS

D.O.T / S.A.E STANDARDS CONFORMANCE

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Huge range available. Approved to meet: Australian Design Rules ADR-38/05 DOT FMVSS 571.106, SAE J2494/3, SAE J1131 blanking plugs.

Brass Fittings
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