

Built on WABCO
Technology



Park Release Valve

Trailer Park Brake Control Valve with Single-Button Design



The Difference

- Park Release Valve (PRV) – new generation Trailer Park Brake Control Valve for safe parking and trailer shunting is an integral part of ZF’s Intelligent Trailer Braking Platform
- Patented one-button design with easy 3-step push/pull operation of Park, Drive, and Release functions
- Trailer emergency brake function is incorporated within the iEBS modulator – the trailer spring brakes are automatically activated when detaching the supply line between truck and trailer

Value to Customers

- Single-button design for intuitive, one-hand push and pull operation helps improve control of trailer (un)coupling procedures
- Compact design requires 50% less room for easier mounting where trailer side panel space is limited
- Silencer helps protect operators and compliance with forthcoming noise regulations
- Push-to-connect fittings fully integrated for quicker tube installation
- Robust composite material provides corrosion resistance

Operation

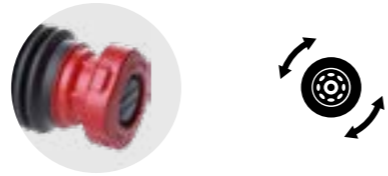
Park (P)

Red button pulled out to top position
Parking brake applied, trailer spring-brakes are safely activated on a coupled or uncoupled trailer.



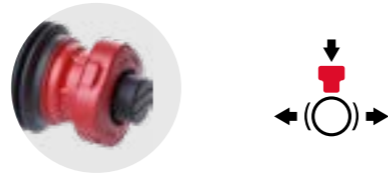
Drive (D)

Red button set to middle position
Parking brake released, trailer is ready for drive-off.



Release (R)

Red button pushed in to bottom position
Parking brake of an uncoupled trailer released for towing/shunting without external air supply.



Product Variants

Variant number	971 003 001 0	971 003 003 0	971 003 029 0
Supply port	8x1 mm tube	10x1 mm tube	8x1 mm tube
Delivery port	8x1 mm tube	8x1 mm tube	8x1 mm tube
Reservoir port	8x1 mm tube	8x1 mm tube	8x1 mm tube with pressure test connection (M16x1.5)

Technical Features

Parking brake applied (Park)

When the red button is pulled to parking position, delivery “port – 2” connects with the exhaust port, leading to the application of the parking brake. The parking brake can be applied on both coupled and uncoupled trailers.

Parking brake released (Drive)

Coupled trailer: When the red button is set to driving position, supply “port 1-1” (pressure from red supply line) connects to delivery “port – 2”, leading to the release of the parking brake. Trailer is ready for drive-off.

Uncoupled trailer (Release)

When the red button is pushed to release position, the reservoir “port 1-2” connects to delivery “port – 2”, leading to the release of the parking brake. The uncoupled trailer can now be towed / shunted without requiring an external supply of compressed air.

Protection of air reservoir pressure

Integrated check valve protects the reservoir air pressure in case of supply line rupture/pressure drop.

Automatic switch to drive (after release)

When the red supply line is connected, the device will automatically switch from release/shunt position to drive position without any manual intervention.

Protection from unintended engagement of release position

When the trailer is coupled, a pneumatic engagement mechanism prevents the unintended actuation of the release/shunt function.

Emergency brake function

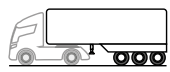
In case of leakage/rupture of the supply line during driving or uncoupling of the trailer, delivery “port – 2” will be exhausted, and simultaneously, the iEBS modulator automatically activates the trailer spring brakes.

Technical Specifications

Dimensions	200x92x109 mm
Operating Temperature	-40°C to +65°C
Permissible Medium	Air
Nominal Working Pressure	9 Bar
Maximum Working Pressure	12 Bar

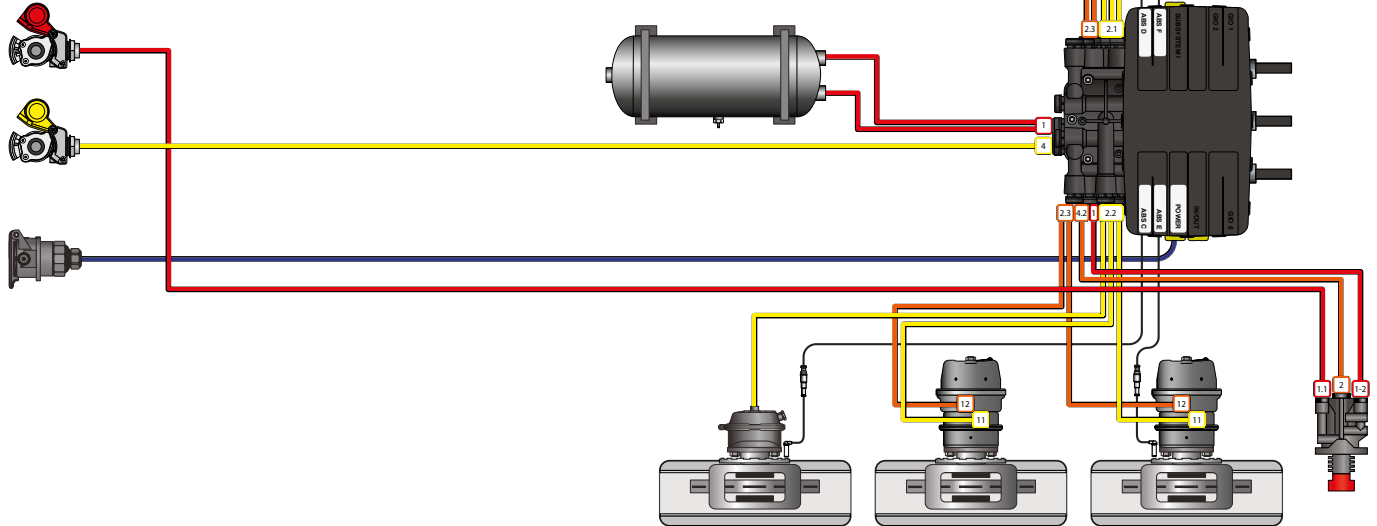
Park Release Valve (PRV) – System Scheme for iEBS

Example Layout for 3-Axle Semi-Trailer



Legend

- Supply
- Control/Service Brake
- Parking Brake Lines
- CAN lines (ISO 11992)
+ Power supply (ISO 7638)



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About ZF

ZF, which acquired WABCO in Spring 2020, is a global technology company supplying advanced mobility products and systems for passenger cars, commercial vehicles and industrial technology. Its comprehensive product range is primarily aimed at vehicle manufacturers, mobility providers and start-up companies in the fields of transportation and mobility. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate as well as enhancing safe mobility. Alongside the automotive sector – passenger cars and commercial vehicles – ZF also serves market segments such as construction and agricultural machinery, wind power, marine propulsion, rail drives and test systems.

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