



AirSave

Tyre Pressure Control System



AirSave:

Installation and Trouble Shooting

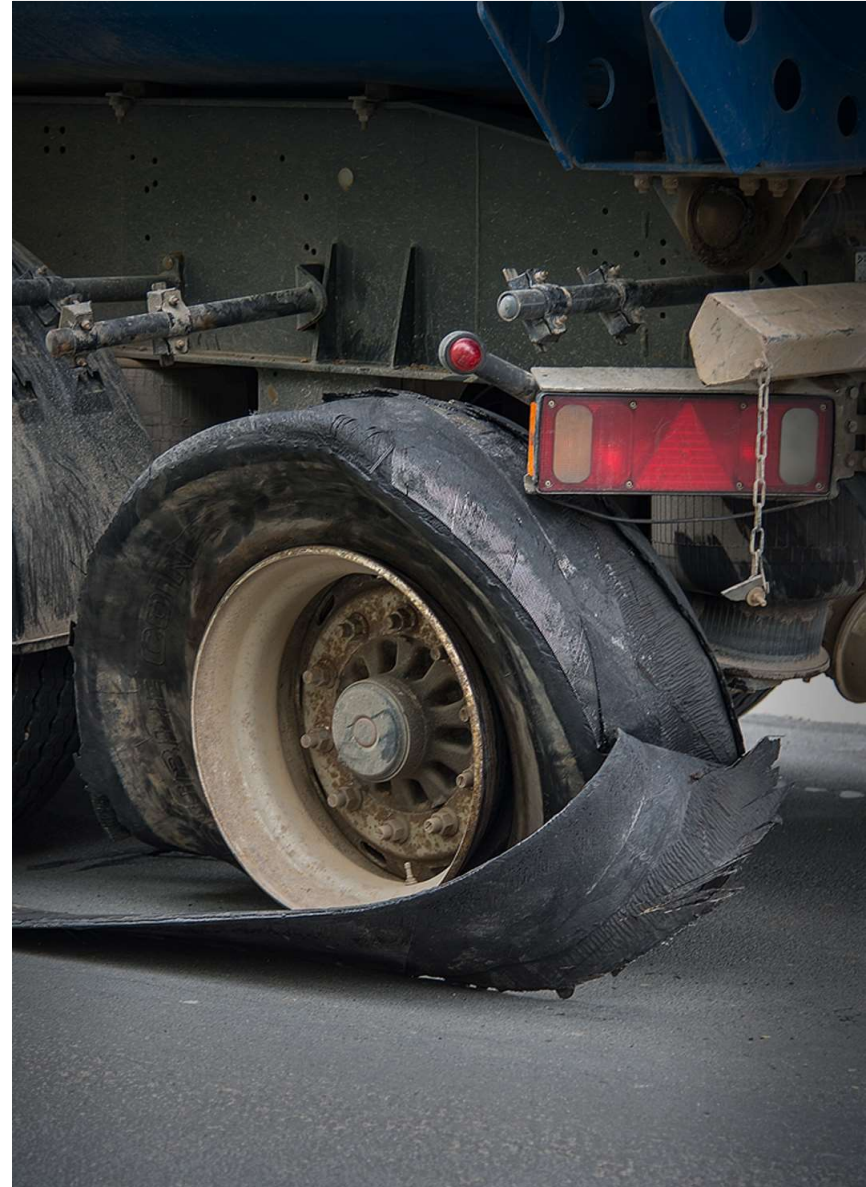


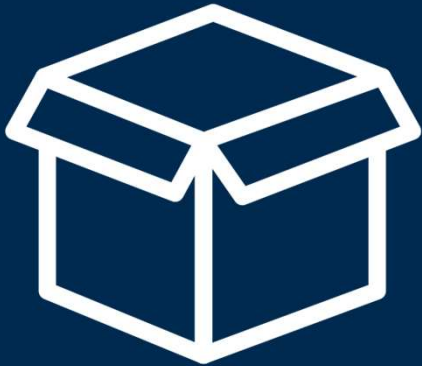
Agenda

- ❑ Overview – System
- ❑ Overview - Tools
- ❑ Installation Steps
- ❑ Initial Operation
- ❑ Trouble Shooting
- ❑ FAQ



Overview - System





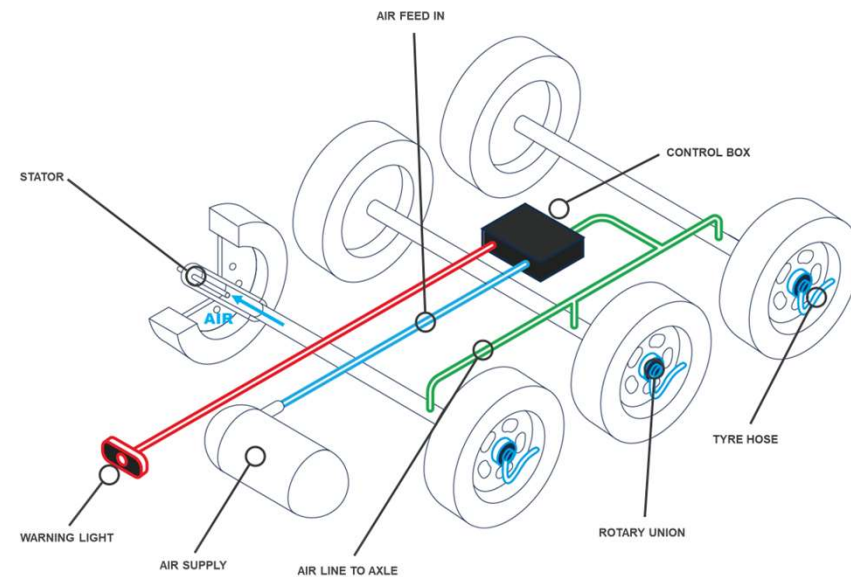
Overview – System

+ AirSave basic system kit

- Control box
- Warning light (violet)
- Reducer 8-6 mm*
- Blind plug 8 mm**
- T-piece 6 mm***

+ AirSave basic kit hubcap

- Rotor
- Tyre hose
- Hubcap adapter



* Not necessary with the new T-piece (1x 8 mm inlet/2x 6mm outlet)

** Necessary, when the trailer has less than 3 axles

*** Only for trailers with more than 3 axles



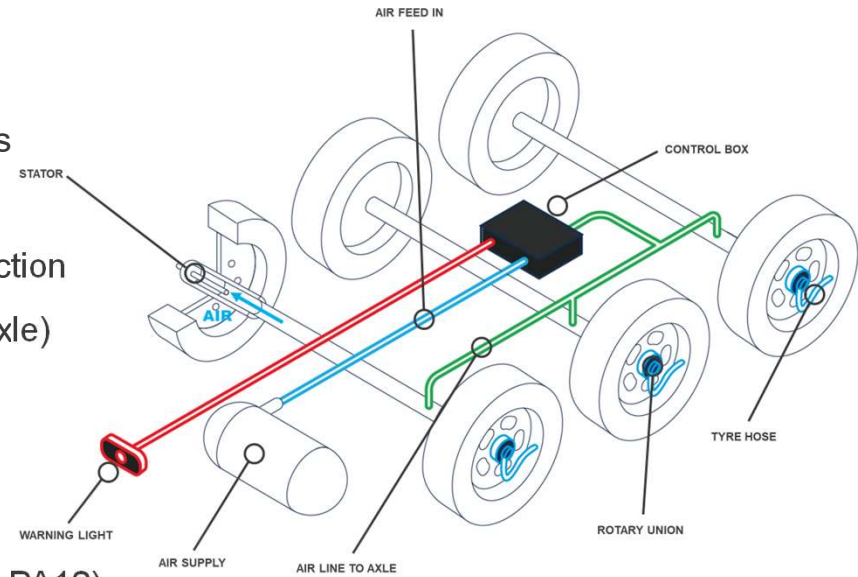
Overview – System

+ Pre-assembled components

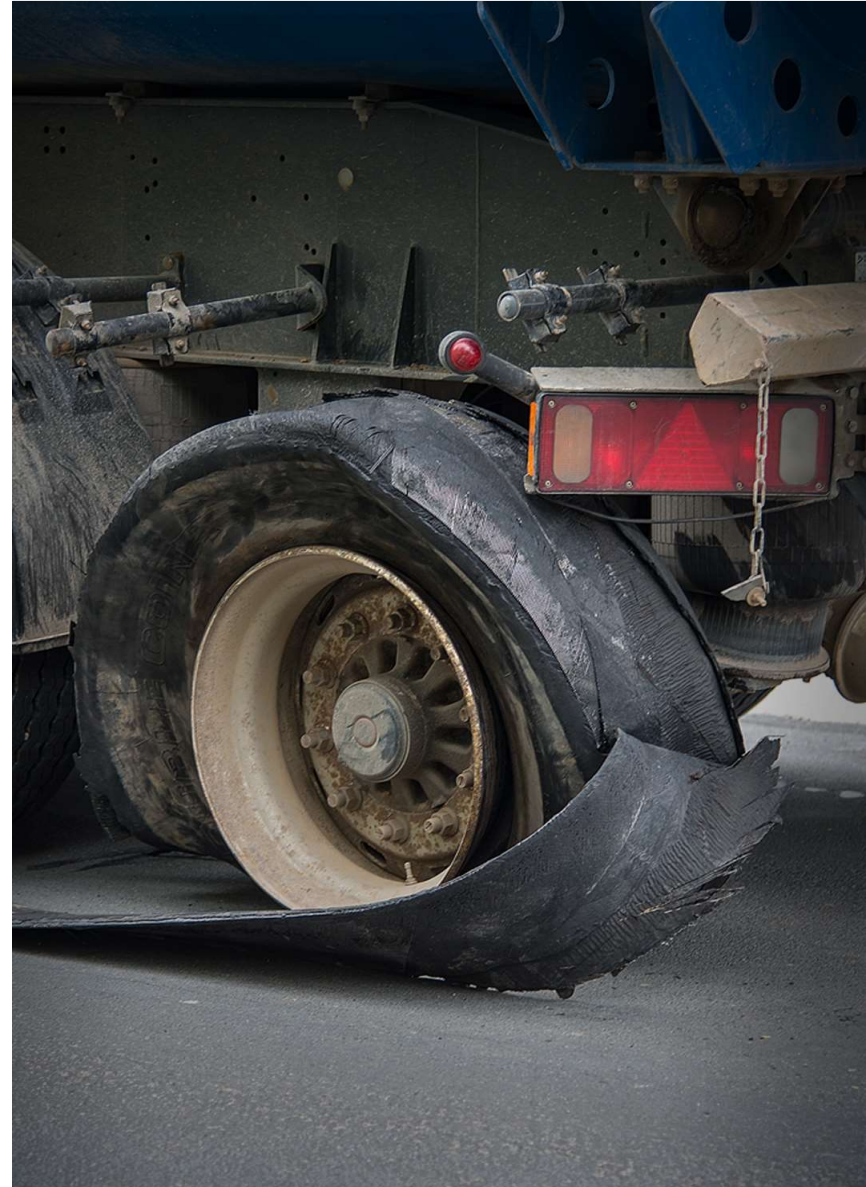
- Stator
- Strain relief/kink protection
- Flexible tube (inside axle)
- T-Piece

+ Not included

- + Flexible tube (6x1 mm PA12)
- + Inlet air supply



Overview Tools

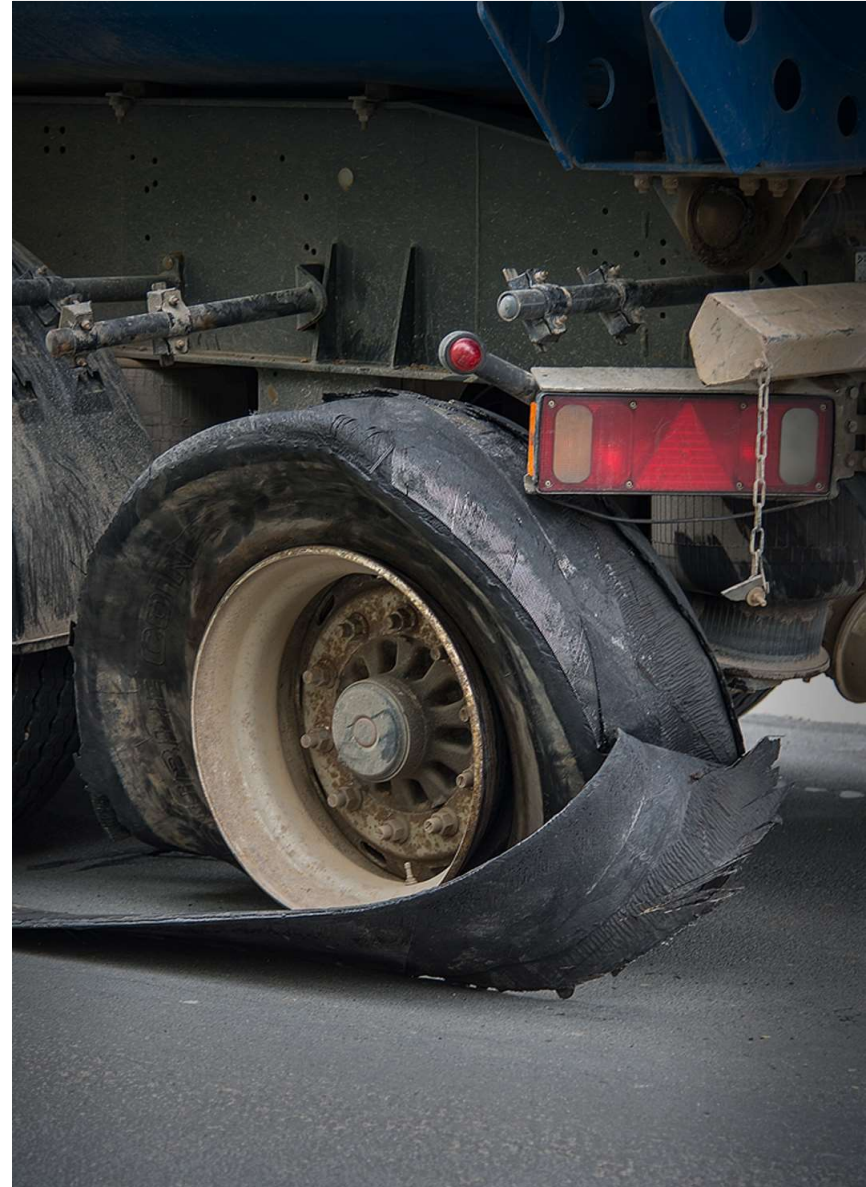




Overview – Tools

	Used tool	Sizes	Torque specs
Stator	Torque Wrench	16 mm	40 Nm ± 5 Nm
Rotor	-	-	Handtight (5 Nm)
Tyre hoses	Wrench	11 mm	Handtight + ½ turn
Control box; Warning light	Cross Tip Screwdriver	Standard/Small	Handtight
PG11-adaptor	Slotted Screwdriver	Small	Handtight
Strain relief	Wrench	12/24 mm	Handtight
Air line	Cutter	-	-
Control box	Drill	9 mm	-
Warning light	Drill	3/11 mm	-
Pressure check	Pressure Gauge	Tyre valve adapter / 8 mm hose connector	-

Installation Steps



Installation Steps



**Control
Box**



**Warning
Light**



**Air
Connection**



Stator



Rotor



Tyre Hose

Partly pre-installed at the BPW factory



Control Box

Installation Steps

- + Look for an suitable location on the trailer
 - Preferably before the first axle
 - Protected but still accessible
 - Enough space to open the lid
 - Ensure 5 cm gap between the outlets and the trailer
 - Stop cock should be accessible in order to open and close air supply (ON/OFF of system)

- + Install the control box
 - Mark the position for the bore holes
 - Drill Ø 9 mm holes
 - Mount the control box with the delivered screws



Warning Light

Installation Steps

- + Look for an suitable location on the trailer
 - Visible in the rear view mirror of the truck
- + Install the warning light
 - Mark the position for the cable gland
 - Drill Ø 11 mm hole
 - Mount the warning light with the delivered screws
- + Connect the warning light with the control box
 - Use a extension cable if necessary
 - In case of an ADR vehicle, use a ADR approved extension cable:
 - 02.0130.17.30 - warning light + super seal connector
 - 02.1819.04.10 - extension cable + super seal connector



Air Connection

Installation Steps

- + Install the air connection under the trailer
 - From the air supply to the control box and from the control box to the axle
 - Use a 6x1 mm PA12-hose
 - The existing air lines can be used as a guideline
 - Avoid damages, kinking or rubbing against other lines
 - Ensure enough slack of the air line, at the axle, for the spring extension and compression

- + Connect the air connection with the control box
 - Use a hose cutter to ensure a straight cut
 - Connect the air line with the push-in connector



Stator*

Installation Steps

- + Remove the hub cap
 - Install the inner air line
 - Install the kink protection on the axle beam

- + Install the stator
 - Ensure a straight cut of the end of the air line
 - Connect the stator with the internal air line
 - Screw in the stator with a torque of 40 Nm



*Pre-installed at BPW



Rotor

Installation Steps

- + Install the hub cap with integrated hubcap adapter*
 - Use a new O-ring for the installation
 - Screw on the hubcap with the required torque (300Nm)

- + Install the Rotor
 - Check, if a white PTFE ring is installed on the rotor**
 - Screw in the rotor with a torque of 5 Nm
 - Align the rotor with the hubcap adapter

*Pre-installed at the BPW factory

**Only available with the original BPW rotors (grey)



Tyre Hose

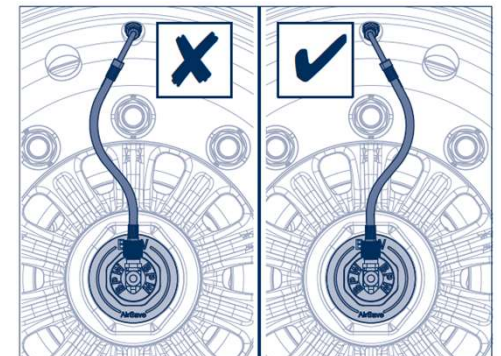
Installation Steps

+ Installation of the tyre hose at the tyre valve

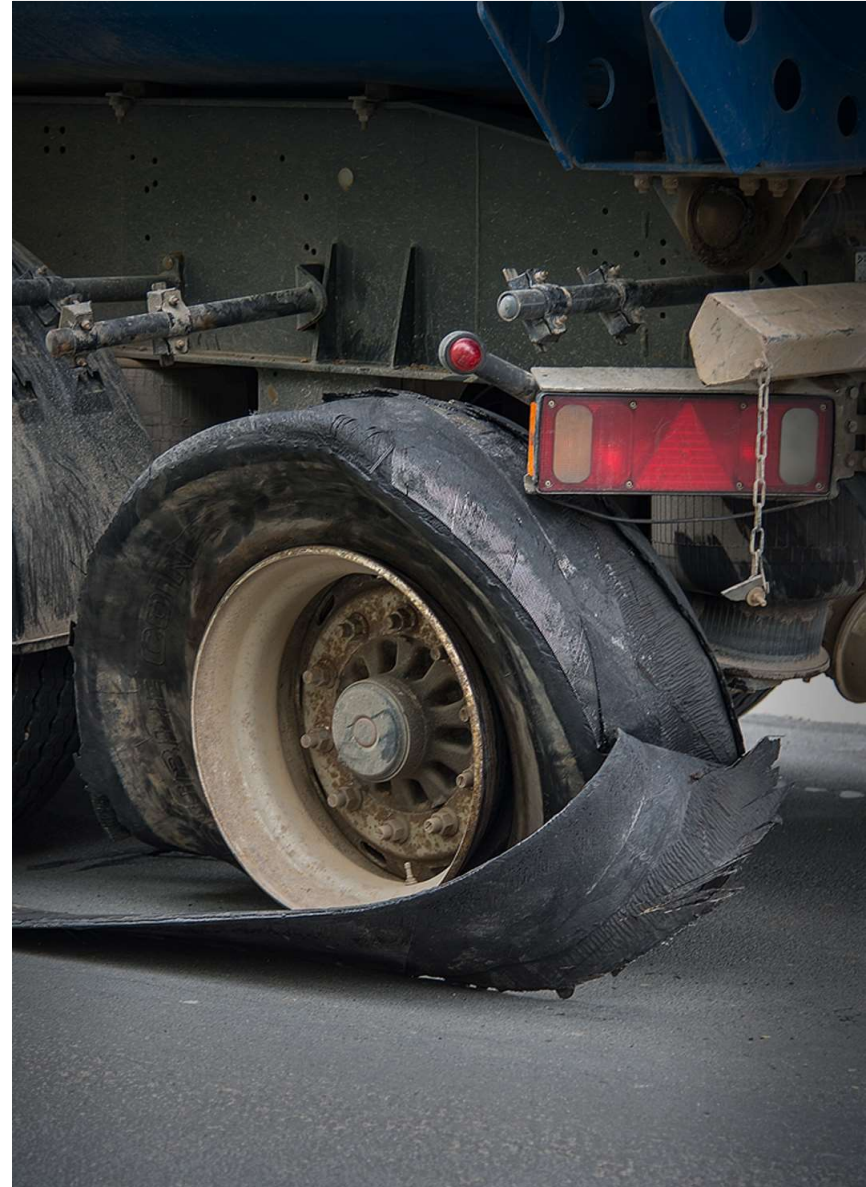
- Install the tyre hose handtight at the tyre valve
- Tighten the tyre hose with $\frac{1}{2}$ a turn of a wrench at the tyre valve
- Make a function test of the tyre hose

+ Installation of the tyre hose at the rotor

- Install the tyre hose handtight at the rotor
- Check for a correct alignment of the tyre hose



Initial Operation





Initial Operation

+ Check set-pressure

- Check the pressure via the check port and a pressure gauge
- Release air and measure again when the control box finished pumping and after a few minutes





Initial Operation

+ Check the system for airtightness

- Step 1:
 - Leave the system disconnected from the tyres
 - Set the system under pressure
 - Use leakage search spray on all connection and wheel end parts
- Step 2:
 - Connect the tyre hose with the rotary union

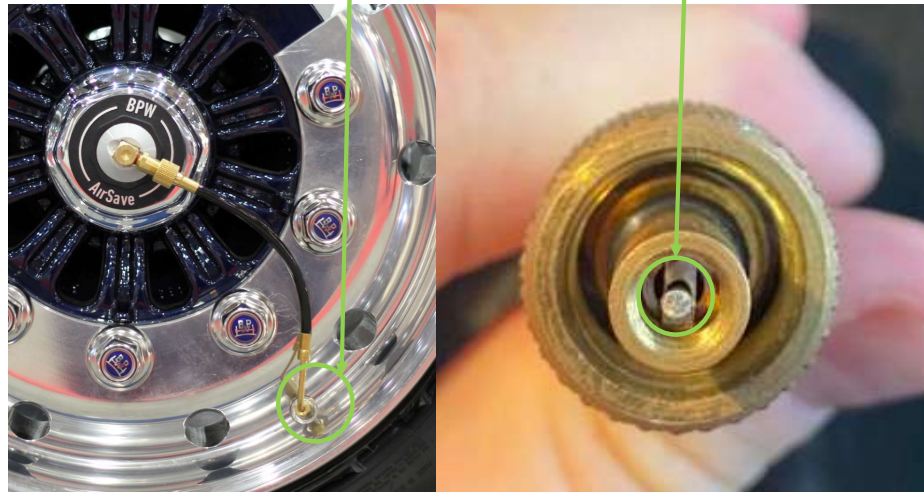




Initial Operation

+ Check the tyre hose

- Connect the tyre hose with the tyre valve of the tyre
- Push on the stem valve and check if tyre hose is releasing air



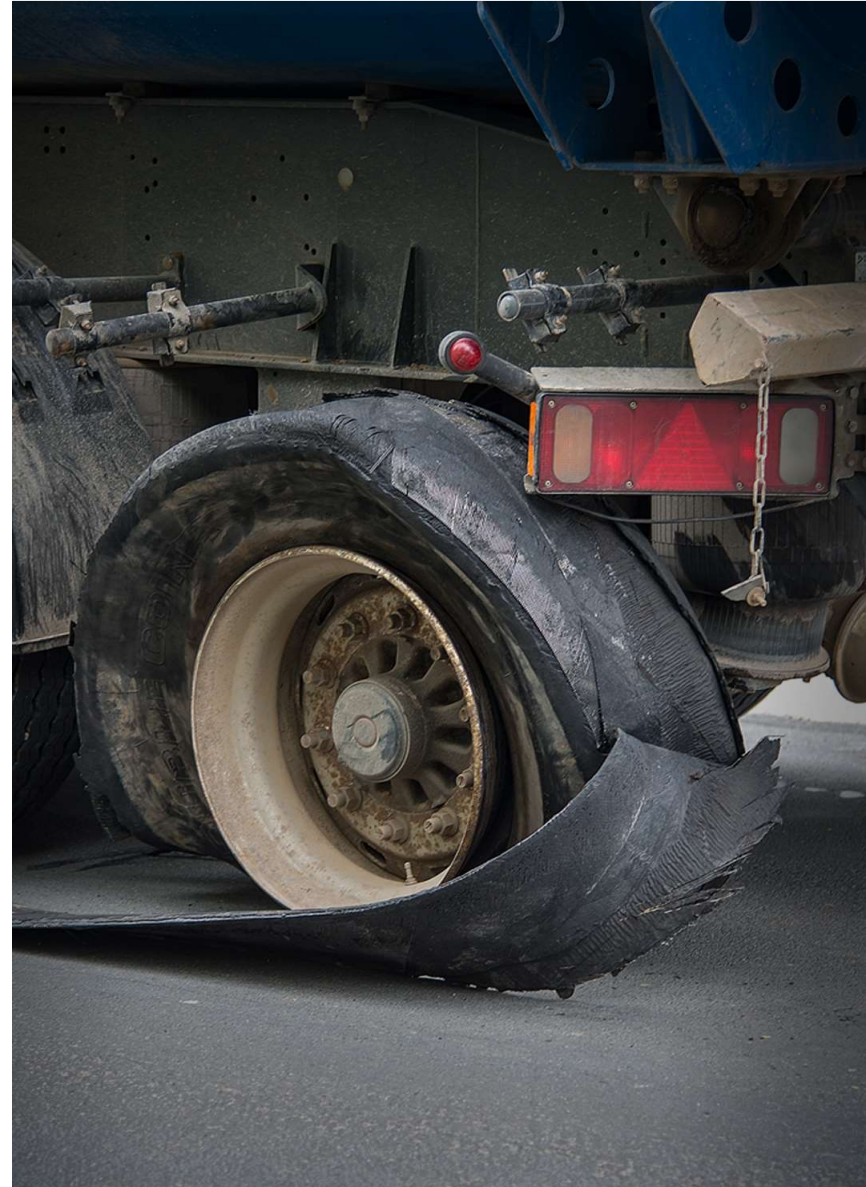


Initial Operation

- + Check warning light
 - Remove air via the check port
 - Control box should start pumping and warning light should be flashing (every pump stroke = 1 flash)



Trouble Shooting





Trouble Shooting

- + Control box is not working
 - Check if the air inlet is open → open the inlet
 - Check the inlet pressure → 6 bar is required to open the pressure security valve (it's closed at 5.4 bar)





Trouble Shooting

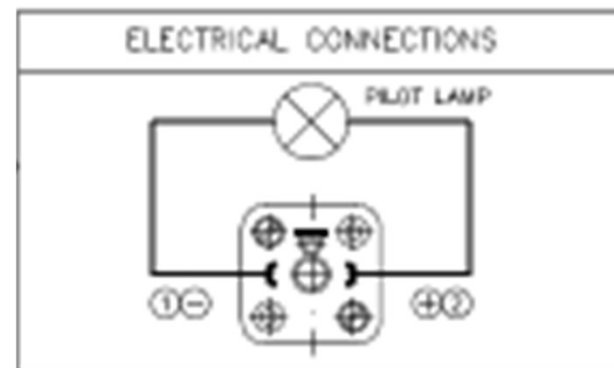
- + Push-in connection is leaking
 - Control all push-in connections with soapy water → re-connect the air line (pay attention for a straight cut)





Trouble Shooting

- + Warning light is not working, while pumping
 - Check if the correct poles are used
 - change the poles
 - cable colour: black (+) / white (-)!
 - Check connection of the extension cable → re-new connection
 - Check for damages → replace light or extension cable
 - Checking the generator by measuring the voltage → replace generator





Trouble Shooting

+ Rotor is leaking

- Check if the rotor is correct installed → re-install the rotor correctly





Trouble Shooting

- + Tyre Hose is not releasing air
 - Check the connection with the tyre valve → reconnect the hose
 - Check the function of the tyre stem valve → replace the stem valve





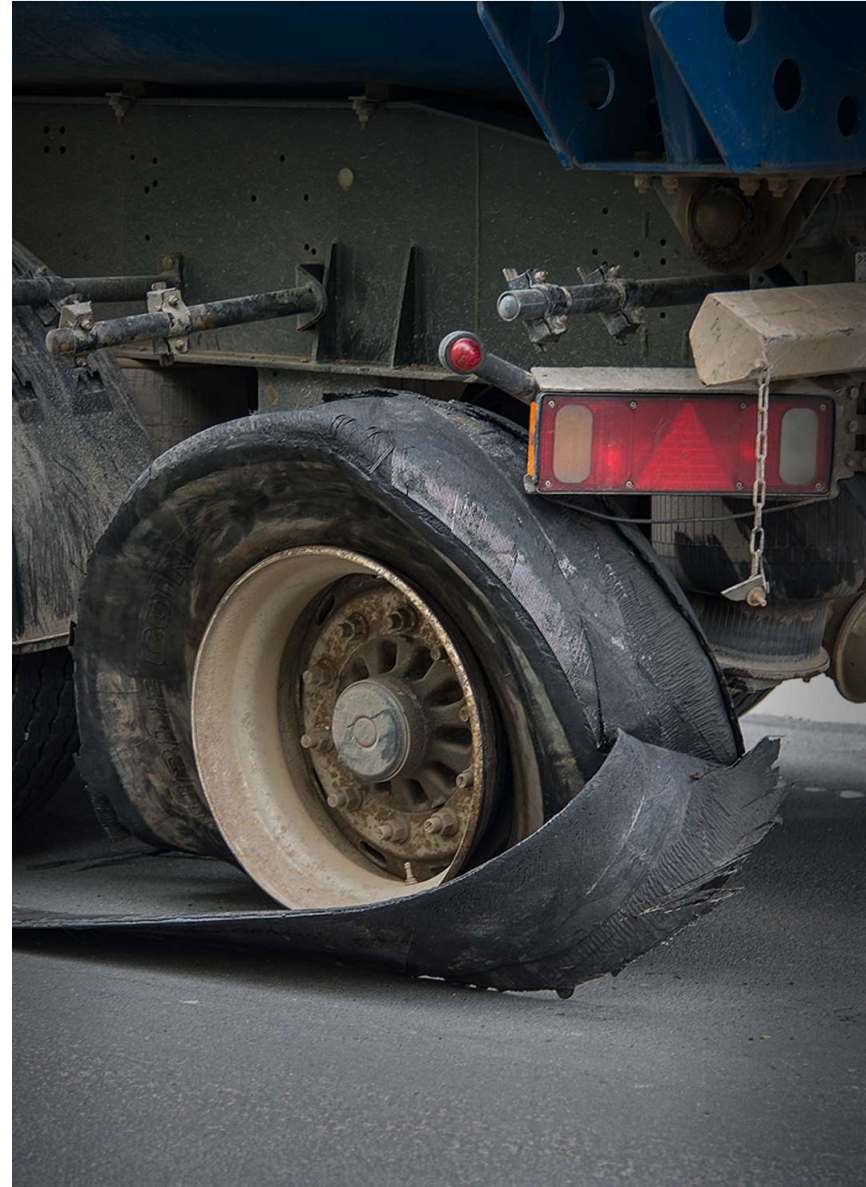
Trouble Shooting

+ Tyre Hose is leaking

- Check if the hose is fully screwed on the tyre valve → screw on the hose correctly (don't overtorque, max. hand tight and ½ turn with a wrench)
- Check if the hose is fully screwed on the rotor → screw on the hose correctly
- Check if the internal sealings are damaged → replace tyre hose



FAQ - frequently asked questions





FAQ

- + Are all necessary components for the installation are supplied by BPW?
 - NO, the following items are not supplied:
 - Air line (to connect the air supply with the control box and the control box with the axles)
 - Extension cable (for the warning light)
 - Inlet (for the air supply)

- + What is the pre-set pressure of the control box?
 - The system is pre-set on 9.3 bar



FAQ

- + The control box is leaking at one of the vents, while pumping?
 - This is a normal process of the control box. The excessive air, which is used to power the generator, is released via the vents.



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