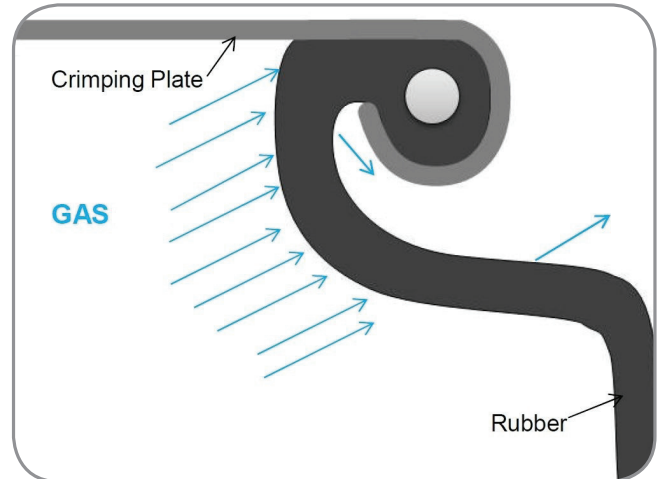
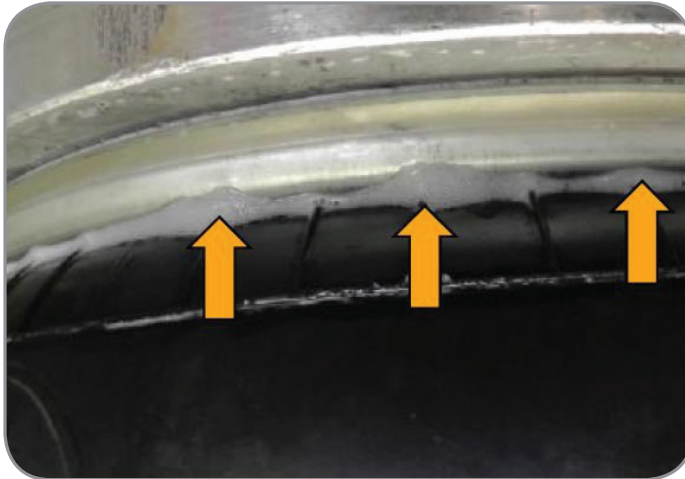


Checking BPW Airbag Pressure Tightness



Background

All airbags - even new ones - can leak small amounts of air through the rubber bellow - this minor leakage is known as uncritical air diffusion or technical diffusion

The rubber used in an airbag bellow is made up of four different layers:

1. An inner liner – which performs the sealing function.
2. Fabric layers (plies) – to keep the shape constant and carry the load forces.
3. A rubber matrix – To join the reinforcement material and separate the layers of fabric plies.
4. An outer liner – to protect the airbag from friction (mechanical) and chemical (environmental) factors.

The wall thickness of an airbag is typically 4 mm to 5 mm thick and is designed to achieve an optimum coverage of several and partially competing performance aspects - mechanical endurance of rubber material and rubber/fabric adhesion, temperature resistance, bellow rolling flexibility in low pressure conditions, air tightness etc.

Due to the natural gas permeability of elastomers (the rubber components), air is known to diffuse through the walls of an air spring bellow - even when new. And the higher the internal pressure the higher the rate of diffusion.

Technical diffusion is not related to production or material faults - it is product typical and does not indicate a technical leakage.

The correct test procedure is as follows:

1. Inflate the airbag to 3.5 bar (50 psi) and allow to stand for 12 hours.
2. The pressure should not drop below 3 bar (43 psi) in that time.
3. If the pressure drops below the low point the airbag needs to be replaced.

The foam leakage test is not applicable for rubber products like air springs (airbags). Small non-critical foam formation on the bellows might occur sporadically and do not indicate a technical leakage.

The airbags supplied by **BPW Transpec** for use in **Australia** have a special rubber compound with higher UV resistance for longer service life.

For more information consult the latest **BPW Operator's Manual** - available on request.

Victoria (Head office)

1-11 Cherry Lane,
Laverton North Vic 3026

Phone (03) 9267 2444

Fax (03) 9369 4826

New South Wales

10 Squill Place,
Arndell Park NSW 2148

Phone (02) 8811 7000

Fax (02) 8811 7050

Queensland

10 Bernoulli Street,
Darra Qld 4076

Phone (07) 3217 0877

Fax (07) 3217 0230

Western Australia

1021 Abernethy Road,
High Wycombe WA 6057

Phone (08) 9454 4000

Fax (08) 9454 4111

1300 651 652

info@bpwtranspec.com.au

bpwtranspec.com.au