

# Safety alert

## Long stroke brake chambers and brake balance

Nov 2015

**Priority:** Urgent  Necessary  For Information

**SA # 2015-4**

**Circulate:** Driver  Operator  Workshop  Parts  Fleet Manager

### The incident or issue:

The ATA Industry Technical Council (ITC) has reviewed the National Heavy Vehicle Inspection Manual (NHVIM) and is creating a Technical Advisory Procedure for roller brake testing. This work has highlighted concerns about the frequent occasions where replacement brake parts on an axle may not be identical to the original and particularly, the components may vary from LHS to RHS across the axle. Any variation in componentry from left to right within the axle's brake groups, even the brand and age of component, will negatively impact brake balance.

Over recent years, long stroke brake chambers have become standard on a range of models. These are not easily identifiable and a mismatch will also lead to an imbalance issue. Suppliers always recommend fitting matching chambers and other componentry.

### Incident cause:

Brake imbalance can create vehicle stability issues. The fewer the axles in a group, the more important brake balance becomes, with a short wheel base 4x2 prime mover being the most susceptible to poor balance induced stability issues. Operators frequently receive defects for brake imbalance, as confirmed by an ATA survey of trucking operators.

### Solution:

Ensure components are identical across an axle and, optimally, within an axle group.

Identify long stroke brake chambers by two of the following methods:

- Trapezoidal shaped tag with the stroke information detailed (figure 1)
- Square boss around the chamber's air supply port or ports (figure 2)
- Embossed or cast-in service instruction advising chamber details (figure 3)

Figure 1



Source Haldex

Figure 2



Haldex

Figure 3



BPW Transpec

### Follow-up actions:

- Safety related replacement parts should be either original or certified as being equivalent to original parts
- Identical parts must be used across an axle and, optimally, within an axle group
- Ensure parts and workshop staff can identify long stroke brake chambers.

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