

## SUBJECT: Replacing Piggyback Chambers – 2.5-Inch Stroke vs. 3.0-Inch Stroke

## 1. Scope

Replacement of piggyback chambers with different stroke ratings.

## 2. Recommendation

When servicing a truck/trailer/bus equipped with either standard stroke or long stroke chambers, it is crucial that replacement of the piggyback chambers be like-for-like. For example: A 2.5-inch stroke piggyback chamber must be replaced with a 2.5-inch stroke piggyback chamber.

**WARNING:** Never replace a 2.5-inch "standard" stroke piggyback with a 3.0-inch "long stroke" piggyback, or replace a 3-inch "long stroke" piggyback with a standard 2.5-inch stroke unit.

**WARNING:** When installing a piggyback LTR model chamber, ensure that the warning tag is removed from the release bolt before tightening. Failure to follow this instruction could lead to the release bolt backing out during use.

## 3. Background

Installation of a 3.0-inch "long stroke" piggyback in place of a 2.5-inch standard stroke piggyback may result in one or more of the following:

- 1) Failure of the NPC mounting base
- 2) The service pushrod may retract ½-inch further into the NPC adversely affecting the slack adjuster to pushrod angle
- 3) If the service pushrod is short, it may be too short to allow it to return to zero stroke (full retract). This would result in:
  - a) Reduced actuator stroke capability
  - b) Reduced parking force
  - c) Increased application timing
- 4) An imbalance of braking across the affected axle

Installation of a 2.5-inch "standard" stroke piggyback in place of a 3.0-inch "long stroke" piggyback may result in one or more of the following:

- 1) The service pushrod may extend ½-inch further out from the NPC adversely affecting the slack adjuster to pushrod angle
- 2) Reduced braking capability of the affected wheel during extreme braking situations
- 3) An imbalance in braking across the affected axle
- 4) Dragging brake