



MGM Brakes

A Division of Indian Head Industries, Inc.

TECHNICAL BULLETIN

SUBJECT: Mixing Standard & Long Stroke Chambers

1.0 Scope

Installing and replacing brake chambers with different rated strokes – specifically long stroke versus standard stroke.

2.0 Recommendation

MGM Brakes recommends replacing chambers with the same stroke rating across an axle. When servicing a truck/trailer equipped with either standard stroke or long stroke chambers, it is crucial that replacement of the chambers be like for like. For example: if a 3-inch stroke chamber is to replace a 2.5-inch stroke chamber, both chambers on that axle must be upgraded to 3-inch chambers.

CAUTION: When upgrading from standard stroke to long stroke chambers, be sure there is 1) adequate clearance for the increased stroke of the pushrod, yoke, and slack adjuster at full stroke and 2) adequate clearance of the longer chamber at the worst case suspension and steering articulation. Approval from the original vehicle manufacturer for proper clearance is recommended.

3.0 Background

The heat generated by the contact of the lining against the drum, especially during hard or continuous braking situations, causes the drum to "grow", or expand. The ability of a 2.5-inch "standard" stroke chamber to provide adequate pressure of the lining against the ever-expanding drum is limited by the stroke and performance characteristics of the brake. As the 2.5-inch stroke chamber exceeds 2-inches of travel, the operator will begin to sense the "brake fade" phenomenon, which will become more prevalent as the chamber moves closer to its maximum travel position, at which point the brake will cease to provide any braking capability.

However, the performance and operational characteristics of the MGM 3-inch "long stroke" chamber provides braking force beyond the point where the 2.5-inch "standard" stroke chamber ceases to provide braking. The 3-inch "long stroke" chamber provides the same force-output at 2.5-inches of stroke as provided by the "standard" chamber at 2-inches of stroke.

Therefore, due the difference in operational characteristics of the chambers, an imbalance may exist in the stopping capability of the vehicle when the "standard stroke" chamber exceeds its recommended (2-inch) readjustment limit. This may result in the vehicle being "pulled" toward the side of the "long stroke" chamber, which is doing the majority of the braking. This may go unnoticed by the driver during "normal" brake applications, but could cause vehicle instability during "emergency" braking.