

INDUSTRY TALK

with



LTS Brake Chamber, MGM's Answer to Solving Space Constraint Problems on Air Ride Vehicles

Commercial trucks and trailers equipped with air ride suspensions are more commonplace now with many truck fleets operating across the North America. Once considered a luxury option for over-the-road fleets, air ride suspensions have proven to be a valuable asset by providing a more secure, safer ride for the load being transported, while providing improved driver comfort and decreasing wear on vital suspension and wheel end components.

Air ride suspensions began primarily with trailers in the 1990's. Truckload fleets were always looking for ways to diminish transit freight damage, as shippers would file claims against carriers for damages that occurred during transit. It was determined that some of this freight damage occurred during normal road transportation from the shipper to the final destination, as many roads surfaces across North America are in marginal condition. Trailer manufacturers looked for ways to limit the movement of a trailer as it traveled along the roadways. Thus, the concept of having a load ride "on air", the air ride suspension was born.

Early air ride suspensions consisted of opposing suspension beams employing the use of air bags. These air bags would receive air supplied by the same air tank that supplies air to the brake system. Metering valves and special load-levelers would regulate the amount of air in each bag to assure proper stability for the trailer, no matter how full or empty the trailer was loaded. Use of these systems proved beneficial in decreasing freight damages. Later, air ride systems were introduced as a feature on over-the-road tractors to improve the ride of the tractor. This increased driver comfort and served to decrease fatigue on long haul/over-the-road routes.

Today air ride vehicles have evolved into the electronic age, utilizing computer modules to maintain and monitor the precise amount of air needed to maintain stability throughout the entire vehicle (tractor and trailer). The result of the utilization of air ride suspensions over the spring ride counterpart has led to improved tire wear, decreased brake shoe/pad wear, and in some instances, improved vehicle fuel economy.

Since the role of the modern-day air suspension has evolved from its earlier beginnings, the number of components that comprise the system has grown dramatically. Cross beams and bolster pads, along with the computer-controlled air bags take up plenty of space under the truck tractor or trailer. Braking systems are specially engineered on air suspension vehicles to work in a much closer confinement than that of spring suspension counterparts.

For many years, MGM Brakes marketed and sold the LTR-model brake chamber. This actuator is MGM's flagship long-life model, engineered to provide extended service life for the road truck and trailer. This chamber's main feature is the

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integral release bolt which is used to cage/uncage the unit at the time of maintenance or road repair. Because of this feature, the LTR's overall height is 13.0", which had served well with the previous generations of air ride suspensions. While it worked quite well for many road fleets over the years, the advent of the new air ride suspensions being developed with reduced space for brake components posed fitment issues for a chamber with this extended length. The new LTS-model chamber introduced by MGM Brakes in 2020 is designed to resolve this fitment conflict.

The LTS-model chamber is a long-life chamber, similar to the LTR. It also features an integral release bolt. The main difference: the LTS model is 3.0" shorter than the LTR (10.0" vs 13.0"), solving any constraint or fitment issues on complex air suspension trucks and trailers. This more compact design assures easier installation, allows for easier maintenance, and assures the long-life features that provide premium value for the fleet customer.

The LTS chamber is designed for truck, truck tractor, or trailer use. Its long stroke design assures stable braking even through consistent, repeated applications under any load condition. It is available with the standard 8" threaded push-rod for trailers and earlier trucks and tractors, and a welded clevis for later-model vehicles.

For more information on our LTS models, please contact your local MGM Brakes sales representative.

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