SMOOTHING OUT THE BUMPS

MOR/RYDE RE SYSTEM SUSPENSION KIT IMPROVES TRAILER RIDE QUALITY

Text & photos by Jeff Johnston

Leaf-spring trailer suspension systems have been in use for decades. They're simple, cheap, easy to repair and mostly reliable. However, product refinement seems to have halted years ago. Many brand-new trailers with leaf-spring setups ride harshly, bounce unnecessarily and, in a worse-case scenario, can cause accelerated wear and tear for the trailer structure and its contents on rough roads.

Meanwhile, MOR/ryde International has been producing rubber suspension systems for trailers, motorhomes and tow vehicles that cover a wide variety of original equipment and aftermarket applications. The company's newest product, the RE System, is designed to augment a trailer's leaf springs and provide superior ride characteristics.

The stock shackle mount (top) is removed and the RE System (bottom) is welded in place. The system consists of a rubber block fused to a pair of steel plates; one plate mounts to the frame, the other is part of the moving suspension component.

Our evaluation of the new RE System verified the manufacturers' claims.

RE System Components

MOR/ryde's suspension systems are based on the company's unique suspension element which incorporates a rubber block, tensioned in shear, that's fused to a pair of steel plates. One plate is fixed, typically to the vehicle's frame as part of the suspension-system mount, while the other plate is part of the moving suspension component. Each RE unit includes a pair of the rubber block elements.

This new system is designed to be

welded to the trailer frame in place of the stock leaf-spring equalizing-beam shackle mount. It comes equipped with a pair of shock absorber mounting eyes that help make it easier to retain the stock shocks, or to add shocks as a further suspension upgrade. The RE is available for two or three-axle trailers with axles that have gross axle weight ratings (gawr) between 4,500 and 7,000 pounds.

By suspending the stock leaf spring equalizing beam from the MOR/ryde RE rubber setup instead of the stock fixed mount, the RE is able to absorb much of the shock transmitted via the leaf springs. The springs still provide as much suspension as they did before, but with the shackle end mounted to the rubber RE System, the harshness is reduced at the vehicle chassis.

Installation is an easy process. The old equalizing-beam shackle mount is torched off the frame, the RE System is installed and welded in place, and the stock spring shackles bolt to the appropriate RE System mounting points. While the welding aspect effectively eliminates the RE from being a shade-tree mechanic project, virtually any RV shop with a qualified welder on staff can retrofit an existing trailer model with an RE System.

A variety of trailer manufacturers are also fitting some of their products with the RE System as original equipment. Carriage, King of the Road, Newmar, Teton and Nu Wa are among the companies using the RE System.

The cost for the average MOR/ryde RE two-axle System, purchased as an aftermarket add-on component, is $700. A three-axle setup typically runs $1,100. Due to the variety of manufacturer pricing schedules, the cost of the RE System as original trailer equipment will vary greatly.

THE BUMP-AND-GRIND TEST

We tried out a MOR/ryde RE setup on a Carriage Cameo LXI 29-foot fifth-wheel trailer, equipped with factory-stock shock absorbers, towed by a Ford F-250 pickup. First, we covered a loop of typical midwest roads approximately 10 miles long near the MOR/ryde factory. Included in the loop drive were seamed and cracked concrete, aged rough asphalt, railroad crossings and other typical poor-road conditions. Our vehicle speeds were held to the posted limit and duplicated as closely as possible for the stock and modified runs.

The RE System was tested on a 29-foot Carriage Cameo LXI fifth-wheel trailer, towed by a Ford F-250 pickup. The test route covered ten miles of broken pavement, rough asphalt and other poor road conditions.

One loop was driven with the stock trailer suspension, and the second was done with the RE System suspension installed. We had our observers riding in the trailer note ride quality, noise and so on. MOR/ryde also used a computer-based accelerometer, fastened to the trailer frame between the axles, to monitor g-force inputs for later analysis.

The first loop drive was as we'd expect in a conventional leaf-sprung trailer. Even with the new factory shocks, there was a distinct bouncy buckboard sensation over the axles as the aft end of the unit fairly well flung itself up and down over serious impacts. Each impact was heard, and felt, as a jarring bang-bang noise near the axles that was transmitted throughout the trailer.

With the RE parts securely in place, we duplicated the loop drive and were pleasantly surprised at the results. The change is not as evident as if we'd completely replaced the leaf springs with a MOR/ryde AE independent suspension system, but the RE is also far more economical. While the leaf spring bounce is still there, the impact force is less intense and the shock is dulled considerably. What originally was heard and felt as a bang-bang effect had become a thump-thump, and the trailer's cabinets and moving parts that react to highway roughness were more quiet.

Boiled down for easy consumption, the test instrument revealed there was a solid 30-percent reduction in acceleration inputs to the frame. That's a considerable reduction in bumps and impact harshness, and a figure verified by our ride-along observations.

The MOR/ryde RE System appears to do a good job of smoothing a trailer's ride by softening its suspension characteristics. The system is fairly inexpensive, easy to install and based on a totally reliable component series with a long history of successful RV applications. If rough ride is an unwanted part of your RV trailering experience, the MOR/ryde RE may be a fine, and affordable, solution to your problem. TL

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