

LORD Fluid-Free Shimmy Dampers For Nose Wheel Applications

LORD Fluid-Free Shimmy Dampers offer high-performance damping solutions. Our nose gear shimmy damper uses surface-effect technology to provide consistent damping without maintenance. Instead of using fluids to resist motion, our shimmy damper features a unique rubber formulation with a high-tech lubricant to absorb nose wheel vibration. Designed to provide high performance without hydraulic fluid, our new damper can't leak.

Accelerated life testing of the LORD shimmy damper demonstrates that it performs in excess of 5,000 ground-air-ground duty cycles. This represents a product life of more than 10 years of usage on a typical, high-use, single-engine piston airplane.

Just 10 to 20 drops of leakage can cut the performance of a traditional, hydraulic damper in half. But, with our shimmy damper, vibration control remains constant. Due to its surface effect design, the shimmy damper's spring rate, force and energy dissipation can be precisely controlled over time and within a wide range of temperatures. This same patented technology is used every day on heavy-duty trucks and buses, where shock and vibration are severe.

Features & Benefits

Valuable – Simple design provides high reliability and lowers operating costs.

Efficient – Form, fit and function compatible. Simplicity of use (one-for-one replacement) and compatible with existing installation.

Reliable – Large diameter shaft increases durability and reduces wear of nose gear linkages. No performance degradation over time and use.

Versatile – Consistent damping from -30° to 150°F with no loss of damping at temperature extremes.



LORD Fluid-Free Shimmy Damper

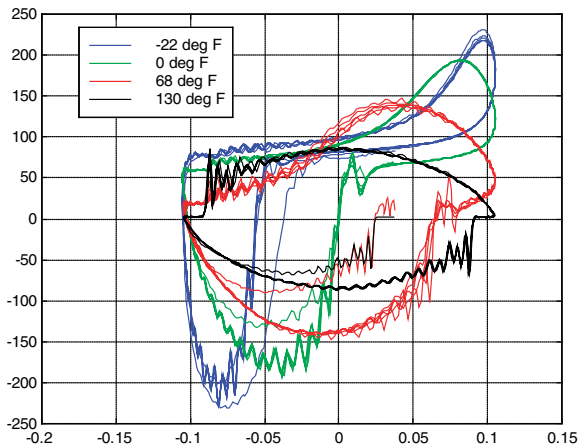
New Technology

The LORD shimmy damper uses surface-effect damping. Essentially, LORD has replaced the metal piston in the traditional damper with a rubber piston that presses out against the inner diameter of the damper housing. This rubber piston then rides on a very thin film of grease. The rubbing action between the piston and the housing provides the damping. And, since there is no hydraulic fluid to leak out, you won't need to service the damper.

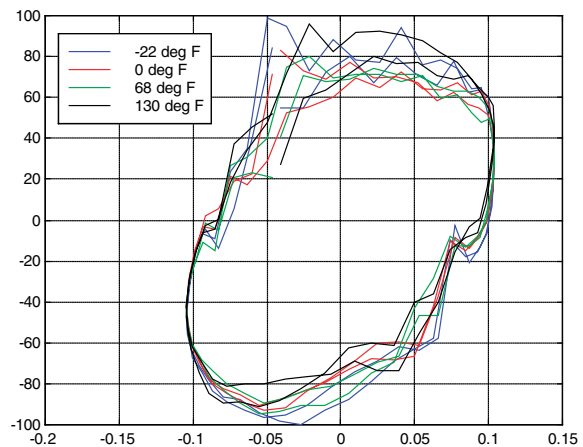
Testing and Results

Temperature insensitivity much better than OE damper and small displacement energy loss better than OE.

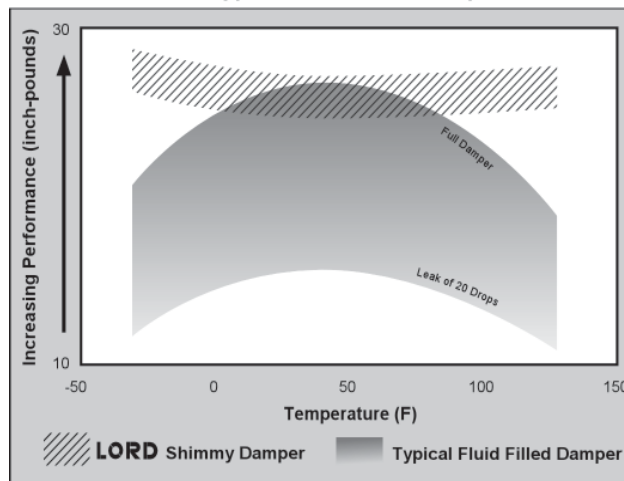
Force versus Disp. — OE Damper



Force versus Disp. — LORD Damper



Performance Range of Lord Shimmy Damper vs. Typical Fluid-Filled Damper



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LORD provides valuable expertise in adhesives and coatings, vibration and motion control, and magnetically responsive technologies. Our people work in collaboration with our customers to help them increase the value of their products. Innovative and responsive in an ever-changing marketplace, we are focused on providing solutions for our customers worldwide . . . Ask Us How.

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