

# LORD® Zero-Maintenance Shimmy Dampers



LORD Zero-Maintenance Shimmy Damper

The LORD® fluid-free shimmy damper offers high-performance damping and vibration control with a zero-maintenance design. It uses surface-effect technology to provide consistent damping for fixed and retractable landing nose gears. Instead of using fluids to resist motion, the shimmy damper features a unique elastomer formulation to absorb nose wheel shimmy. Since there is no fluid, this damper will never leak.

Actual life testing of the shimmy damper in a flight school environment demonstrates that it performs consistently in excess of 20,000 ground-air-ground duty cycles. This represents a product life of more than 15 years of usage on the typical high-use aircraft (fixed landing gear models only).

Just 10 to 20 drops of fluid leakage can dramatically decrease the performance of a traditional, hydraulic damper – by as much as 50 percent. But, with the LORD 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 patented technology has been proven with more than 15 years of service use in the General Aviation market.

## Features & Benefits

**Efficient** – Zero-maintenance, simple to use (two bolt connection) that is compatible with many existing installations.

**Valuable** – Patented, long-lasting design provides high reliability and lower total operating or maintenance costs.

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

**Versatile** – Consistent damping in a wide range of temperatures from -40° to 150°F.

## Surface-Effect Technology

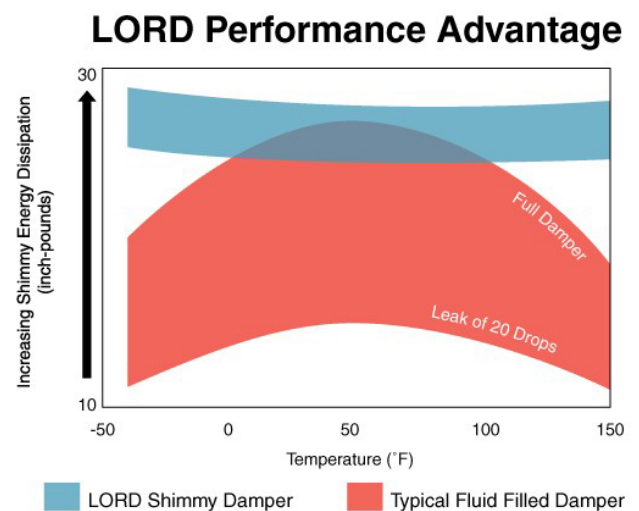
The shimmy damper utilizes surface-effect technology, replacing the hydraulic piston in the traditional damper with a fully-bonded natural rubber or specially-blended elastomer compound piston that presses out against the inner diameter of the housing. This piston rides on a very thin film of lubricant and it is this movement between the piston and the housing that provides the damping. Since there is no hydraulic fluid to leak, there is no need to service the damper—the part is completely fluid free and maintenance free. Aircraft on Ground time for scheduled maintenance, repair or replacement is no longer necessary. The technologically superior design provides consistent and reliable performance.

## Models Served

Shimmy dampers are available for a wide range of general aviation aircraft. Please see the list of applicable aircraft in the table below.

## Warranty Information

Testing demonstrates that the shimmy damper will perform consistently for 20,000 ground-air-ground duty cycles or more with an expected product life of more than 15 years of usage on the typical high-use aircraft (fixed landing gear models only) and is warranted for 5 years.



LORD surface-effect dampers operate consistently in the -40° to 150° Fahrenheit range while traditional hydraulic dampers only provide peak energy dissipation in the 20° to 80° Fahrenheit temperature range.

# LORD PRODUCT INFORMATION

## Shimmy Damper Aircraft Applicability

LORD PART NUMBER	AIRCRAFT APPLICABILITY	PMA SUPPLEMENT
<b>SE-1051-2</b> Replaces Cessna P/N 0442512-1 and 0542119-1 for models listed	CESSNA 150G, H, J, K, L, M F150G, H, J, K, L, M, A150K, L, M, FA150K, L FRA150L, FRA150M 152 (ALL) 1978 thru 1985 (no letter designators) F152 (ALL) 1978 thru 1984 (no letter designators) A152 (ALL) 1978 thru 1985 (no letter designators) FA152 (ALL) 1978 thru 1984 (no letter designators) 172, 172 A, B, C, D, E, F, G, H, I, K, L, M, N, P, Q, R, S F172D, E, F, G, H, K, L, M, N, P P172D, FR172E, F, G, H, J (REIMS ROCKET) R172K, FR172K 175, 175A, B, C 182B, C, D	102
<b>SE-1051-3</b> Replaces Cessna P/N 0442512-2 and 0542119-2 for models listed	CESSNA 150, 150A, B, C, D, E, F	67 Amendment 1
<b>SE-1068-5</b> Replaces Cessna P/N 0743624-1 for models listed	CESSNA 182K, L, M, N, P, Q, R, S, T, T182T	91
<b>SE-1069-3</b> Replaces Cessna P/N 0743624-2 for models listed	CESSNA 206H, U206B, U206C, U206D, U206E, U206F, U206G, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, TU206H, P206B, P206C, P206D, P206E 207, 207A, T207, T207A 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, T210K, T210L, T210M, T210N, P210N, P210R	83
<b>SE-1070-7</b> Replaces Cessna P/N 2643090-3 for models listed	CESSNA C208, C208A, C208B	96
<b>SE-1088-1</b>	CESSNA CARDINAL 177, 177A, 177B	112
<b>SE-1090-1</b> Replaces Cessna P/N 0842410-2 for models listed S/N 0001-0710 for 182 models	CESSNA 310, 310B, 310C, 310D, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, T310P, 310R, T310R, 320, 320A, 320B, 320C, 320D, 320E, 320F, 335, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425, 404, 406, 441, R182, TR182, FR182	104
<b>SE-1508-2</b> Replaces Piper P/N 456-015 for models listed	PIPER PA-28, PA-28-140, PA-28-140B, PA-28-140C, PA-28-140D, PA-28-140E, PA-28-140 Cruiser, PA-28-150, PA-28-150B, PA-28-150C, PA-28-151, PA-28-160, PA-28-160B, PA-28-160C, PA-28-161, PA-28-161 Warrior II, PA-28-161 Warrior III, PA-28-180, PA-28-180B, PA-28-180C, PA-28-180D, PA-28-180E, PA-28-180F, PA-28-180G, PA-28-180 Challenger, PA-28-180 Archer, PA-28-181, PA-28-181 Archer II, PA-28-181 Archer III, PA-28-181 Archer LX, PA-32-301 Saratoga, PA-32-301T Saratoga, PA-32-301XTC, PA-32-301FT 6X	124
<b>SE-1076-1</b> Replaces Hawker Beechcraft P/N(s): 35-825145, 35-825145-2, and 35-825145-6	TEXTRON AVIATION (Formerly Beechcraft) 58P, 58TC 35-33, 35-A33, 35-C33A, E33C, F33, F33A, F33C, G33, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 36, A36, A36TC, B36TC 95-55, 95-A55, 95-B55, 95-C55, 95-C55A, G58, D55, D55A, E55, 58 35, A35, B35, C35, D35, E35, F35, G35	103

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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.

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