Advanced Active Damper Designed by Rod Millen Special Vehicles Survives Grueling Military Endurance Testing

HUNTINGTON BEACH, Calif. Â Rod Millen Special VehiclesÂ (RMSV) advanced Magnetorheological Fluid-based active damper design successfully passed another technical milestone in 2004. A well-known Department of Defense vehicle manufacturer contracted RMSV to deliver an MR damper for use in a U.S. Army-specified military off-road vehicle life simulation. A 2nd generation MROADS damper was designed and manufactured for the contract. The test cycles the damper 1 million times through a variety of speeds and travel lengths, subjecting the damper to high vertical and thermal loading for days at a time to emulate 5000+ miles of abusive off-road vehicle travel.

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The damperÂs controllable force-velocity envelope was characterized before testing, at the halfway point of 500,000 cycles, and again at the testÂs completion after more than 1 million cycles. Data showed that the damper held up extremely well through the test, showing virtually no degradation in performance. A post-test teardown of the device revealed that all critical parts, including MR Fluid from the Lord Corporation, were in good condition and were cof working well beyond the 1 million cycle requirement. Â This successful 3rd party test affirms that our high performance MR damper doesnÂt sacrifice reliability or robustness to offer great improvements in mobility and ride,Â noted RMSV Project Manager Peter LeNoach. Â It demonstrates that we have been able to keep the design simple, yet highly functional, which is critical as we progress towards successful commercialization of the product.Â

MROADS Damper endured a 1 million cycle military vehicle life simulation Rod Millen Special Vehicles continues development of advanced MR Damper suspensions on other applications, including the retrofit of 3rd generation MROADS damper hardware and controls onto the U.S. ArmyÂs Stryker 8-wheeled, 20-Ton armored vehicle. Testing is scheduled for the fourth quarter of 2004.

Rod Millen Special Vehicles designs and develops vehicles and advanced mobility solutions for the U.S. armed forces and commercial customers. Headquartered in Huntington Beach, California, the Rod Millen family of companies is a diverse engineering and prototype business principally engaged in the research, design, development, manufacture, integration, and testing of advanced technology solutions for manned and unmanned military vehicles, high performance concept cars, race vehicles, and rides for major theme parks.

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