RIDEWELL SUSPENSIONS
Serving the Transportation Industry
Since 1967

For Immediate Release
October 17, 2003

Ridewell's Big Blue 4-Axis Test Rig Validates Engineering Efforts

Ridewell Corporation, Springfield, MO, has installed a state-of-the-art 4-axis test rig that was two years in the making. The company manufactures internationally-marketed suspensions for the truck, trailer, bus, R.V., and motorcoach industries.

With market demands for optimum strength vs. weight ratios, integration of working components, and speed in validating engineering efforts, Ridewell found that the investment in the proprietary fatigue test rig, dubbed Big Blue, would benefit the buyers and aftermarket users of the suspensions they engineer and build.

The Big Blue test equipment doesn't eliminate field testing, but enables Ridewell to put a suspension on the road with confidence that the product will meet durability and performance requirements. The computer-controlled system consists of 4 servo-hydraulic actuators capable of measuring and controlling force and displacement. This new equipment compresses test time by accelerating fatigue loading, increases accuracy of measured and controlled variables, and provides continuous or intermittent data acquisition of desired test measurands. The brains of the system are a Windows-based PC, a dedicated controller, and software capable of acquiring data and programming both block cycle and road load tests. Braking force, lateral loads, curb loads, and vibration are applied by overloading the suspension, thus accelerating the test. In this manner, most suspensions are tested to failure.

- more -

The Big Blue 4-Axis Test Rig includes these features:

Data Acquisition Capability:

- 16 channels, general
- 12 channels, dedicated strain gage with reduction to principle strains, stresses, and failure criteria such as Von-Mises
- Sampling rates up to 2048 samples/second

Test Execution and Control:

- Block cycle tests that repeat waveforms such as sine, square, and triangle
- Real time tests that replay events taken from actual vehicle data acquisition
- Control of displacement, force, strain, acceleration and other parameters

Test Hardware:

- 150 horsepower electric motor driving main 75 GPM pump with load sense
- 10 horsepower / 80 GPM continuous recirculation cooling and filtration loop
- 10 horsepower air to oil heat exchanger
- Qty (2) 5 gallon pressure accumulators used to supplement peak flow demands
- Qty (2) 1 gallon return accumulators used to reduce pressure spikes
- Qty (2) 35 kip actuators with 10” stroke, 50 kip load cell, and 60 GPM servo valve
- Qty (2) 28 kip actuators with 10” stroke, 25 kip load cell, and 15 GPM servo valve

By utilizing the Big Blue 4-Axis Test Rig, Ridewell will continue to apply weight savings and new materials to enhance product life and performance based on results.

For more information contact Jason Dillard, R & D Engineer, Ridewell Corporation, P.O. Box 4586, Springfield, MO 65808. (417) 833-4565, 800-641-4122, www.ridewellcorp.com

****

Media contact: Kristin Persson, 800-641-4122, ext. 136, kristinp@ridewellcorp.com