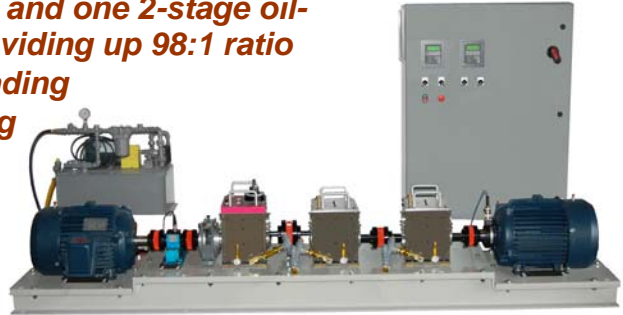


## SpectraQuest introduces the Drivetrain Prognostics Simulator (DPS)

- **Novel tool for Drivetrain diagnostics & prognostics research**
- **One 2-stage Planetary and one 2-stage parallel shaft test gearboxes of up to 125:1 ratio**
- **Load drive train consist of one 3-stage and one 2-stage oil-lubricated parallel shaft gearboxes providing up 98:1 ratio**
- **Torsional and radial variable speed loading**
- **Alterable backlash by replacing bearing mounting hubs to provide the desired clearance**
- **Develop diagnosis and prognosis techniques and advanced signal processing methods.**
- **Various application specific option kits and combination packages are available**



**Press Release, May 10, 2009**

SpectraQuest introduces Drivetrain Prognostics Simulator, an innovative test rig specifically designed to simulate industrial drivetrains for diagnostics and prognostics research. The DPS drivetrain consists of a two-stage planetary test gearbox and a two-stage parallel shaft test gearbox with rolling or sleeve bearings. These two test gearboxes can be arranged to apply the highest torque to either, a torque which is large enough to induce wear and damage in the gears. The two-stage parallel shaft gearbox can be configured with a gear ratio from 1 to 6.25. The two test gearboxes are attached to two parallel shaft load gearboxes and drive. Load drivetrain consist of one 3-stage and one 2-stage oil-lubricated parallel shaft gearboxes providing up 98:1 ratio. All elements of the DPS have been designed to maximize the number of drivetrain configurations to investigate gearbox dynamics and acoustic behavior, health monitoring, and vibration based diagnostic and prognostics techniques. It is robust enough to handle heady loads and spacious enough for easy gear placement, setup, and installation of monitoring devices.

The DPS design enables changing gearbox and bearing components quickly and easily. The parallel gearbox is adaptable to install either rolling element bearings or oil-impregnated sleeve bearings with either spur or helical gears. The modular design makes the introduction of faulted bearing and/or faulted gears an easy task. The effect faults like surface wear, crack tooth, chipped tooth and missing tooth can be demonstrated and induced on either spur gears or helical gears. Rolling element bearing faults like inner race, outer race, and ball damage can also be incorporated. Adjustable clearance to study backlash is possible as well. Drivetrain misalignment can also be introduced intentionally in the DPS. Any of these faults can be added to the drivetrain one at a time, or simultaneously to study fault interactions. Both torsional and radial loadings can be applied to study damage signature or propagation in gears and/or bearings. It also comes with a training book and complete operations manual & videos to assist with exercises and learning. Various high value combination packages are also available to fit customer requirements. Please download the brochure at <http://www.spectraquest.com/resources/downloads/> for more details.

## ***About SpectraQuest***

SpectraQuest is a leading developer and manufacturer of turnkey systems and products for enhancing reliability of rotating and reciprocating machinery. These products are ideal platform for research and education in machine fault diagnosis/prognosis, teaching dynamics and vibration courses, and wind turbine drivetrain studies. The distinguishing feature of SpectraQuest is a wide variety of Machinery Fault Simulators and Custom Designed Test Rigs which are sold in over forty five countries around the world. Further information is available at <http://www.spectraquest.com/>.

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