

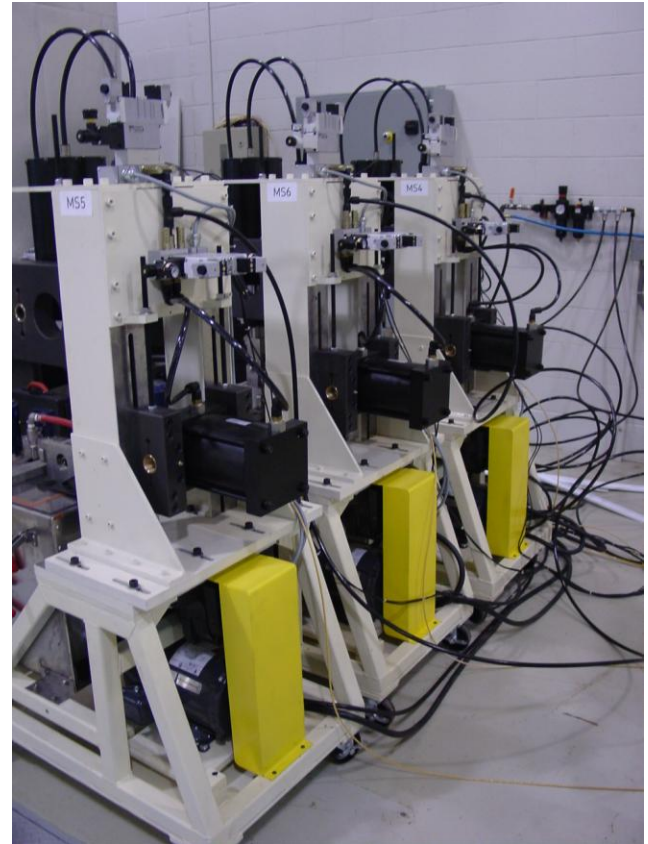
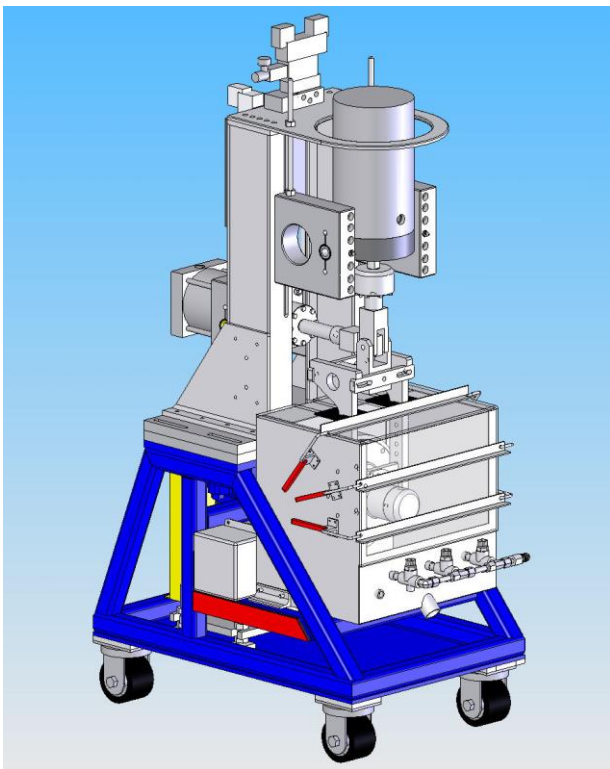
## Bearing Seal Test Stands

### Dynamic Testing of wheel bearings under load with salt and slurry exposure

DTE has successfully constructed several custom designed wheel bearing testers to perform GM specification GMN 5357, sections 5.3.2 and 5.3.3. The machines are able to operate with the following performance:

- 2500 RPM max speed
- 3 hp drive motor
- Vertical loading 0...4000 lbs
- Horizontal loading 0...2000 lbs
- Slurry system
- Ability to operate bearing at -20° C

These machines are compact and mobile, so that they can easily be moved in and out of an environmental chamber.



DTE specializes in manufacturing highly accurate, yet extremely low friction air cylinders. These actuators have no seals and depend upon a labyrinth seal for both the rod ends and piston seal. This form of construction provides an extremely long life since there are no seals or diaphragms to wear out. The piston rod is supported by air bearings which prevents any metal-to-metal contact.

The control of the force will be controlled by a manual precision pressure regulator.

Labview system controls:

- VFD for drive motor
- Digital control of each slurry pump.
- Digital control of the mixer motor
- Opto-couplers for control of air valves