

EIGHT HEAVY DUTY TRANSMISSION COMPONENT TEST STANDS

SwRI Project: 08-13910

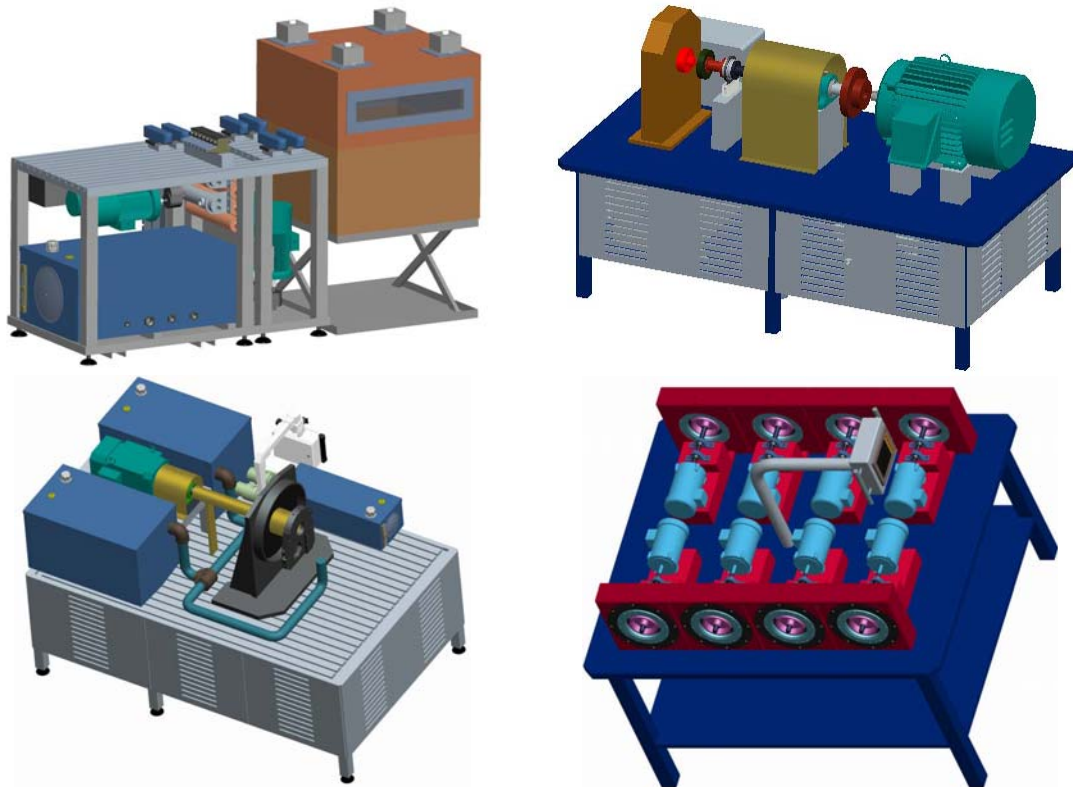
Client: Confidential

Project Brief

This manufacturer of transmissions used in heavy duty vehicles, required a total of eight new test benches that could be used to test a wide variety of transmission components used in different sized transmissions. The type of test stands included the following:

- Clutch
- Pressure cycle
- Pump
- Seal
- Speed sensor
- Thrust application
- Burst
- Environmental

The turndown ratio of the test stands had to accommodate components ranging in size from 1-125 hp, speeds from 0-6500 rpm, pressures from 50-800 psi, cycle times from 150 milliseconds to 10 seconds, and temperatures from 100°-325°F. SwRI developed the specification for all of the components used, sized the components, evaluated the equipment available from industry, obtained competitive costs, prepared a complete drawing package—mechanical, electronics and electrical, and conducted the fabrication. In addition, data acquisition and control software was created to operate the stand. Some representative models of the stands are shown in the figures below.



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