

Case Study - Oil System Development Rig with Data Acquisition



Background & Objectives

- Tier 1 customer required a bespoke test rig to be designed and built to support the development of a novel oil system.
- Tilting function to 45° in 2 directions.
- Required the capability to easily fit different engine sumps for performance evaluation.

Project Outcome

- Detailed rig specification agreed with customer.
- Rig designed, procured / manufactured in-house, constructed and commissioned.
- Bosch-Rexroth aluminium profile used – allows strong frames to be built quickly.
- Temperature of test oil controlled using a primary fluid via heat exchanger: -10°C – 120°C, maintainable at specified level during testing.
- Oil aeration measured with DSI Air-X equipment.
- Customer bought rig outright and Mathwall operated rig for first phase of project.
- Rig has now been successfully delivered to the customer to support further in-house R&D activities.

