Fuel Control Unit (FCU) Test Stand with DAS

DESCRIPTION

The **CEL Model 50202** Fuel Control Unit Test Stand is designed to test mainly FCU using Engine Fuel Pump, tooling and adapters as per the applicable CMM. With the right configuration, the **CEL Model 50202** Fuel Control Unit Test Stand can also test different LRUs like Fuel Metering Unit (FMU), Fuel Pump, Acceleration Control, and Flow Divider.

The basic function of the Test Stand is to read a flow of calibration fluid through the FCU for a pre-determined pressure and liquid temperature and to verify the proper operation of the FCU.

Typical Fuel Control Unit Test Stand with DAS under test

MAIN FEATURES

The **CEL Model 50202** Fuel Control Unit Test Stand includes all the necessary Controls, Pump Drive and Gauges to allow for comprehensive Performance Testing of the FCU. The Stand allows the operator to accomplish tests at specific drive speeds and fluid flows at the required pressures and temperatures that may vary for the components of each engine model.

- ✓ **FCU Drive:** is comprising of an electrical variable speed motor and controller to accommodate the fuel pump/fuel control drive requirements. An in-line torque meter is provided to permit measuring the drive torque as required by the test procedure.
- ✓ **Fluid Flow System:** supply fluid at the required flows and pressures for the purpose of component testing. The operator will have control over the fluid delivery flow and pressure via the Control Console.
- ✓ **Scavenge System**: includes a gravity based scavenge system to return the Calibrating Fluid to the tank.
- ✓ CE (European Conformity) compliant

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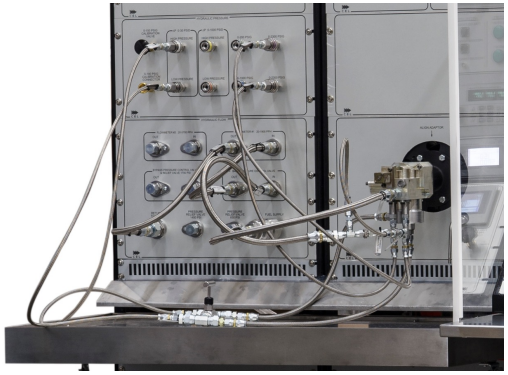
SECURITY DEVICES

- ✓ Interlock devices which monitor the Stand sub-systems and shut the Stand down in case any sub-system performance falls outside defined specifications, for example:
  - Calibration Fluid Levels (Low)
  - Calibration Fluid Reservoir Temperature (High)
  - Heater Function (Pump On/Off)
- ✓ Temperature Control System that will provide secure Supervisory Control of the liquid as per the CMM requirements
- ✓ All rotating components (pump shafts) are covered by guards
- ✓ All switches are latched such that in a power failure situation, they will revert to a “fail-safe” condition



Typical Fuel Control Unit hydraulic / electric & pump interface

DATA ACQUISITION SYSTEM (DAS)

The main role of the DAS is to reduce time and errors during testing and is integrated with the Test Stand.

The operator can predefine each step of a test sequence and select them by a simple click during the test. The DAS will provide controls for the main power of the stand, the drive speed setting and low-pressure pump actuation while monitoring safety aspects of the test stand. Following proper training, due to **CELDAS Fuel Control Unit software**’s flexibility and friendly user interface, the test manager will be able to add new CMMs in the DAS independently, without any external support.

DAS FEATURES

- ✓ Multiple user account with various permissions
- ✓ Manuals (CMMs & ESR) selection with various version
- ✓ Test step list with details on test completion
- ✓ Test step details available on main test screen
- ✓ Easy test step & limits editing and easy addition of new version of manuals
- ✓ Auto monitoring of test limits
- ✓ Auto recording and Auto report with passed/failed details
- ✓ Calibration screen