



Facility Factsheet

Engine Environment Research Facility (EERF)

Description:

This facility supports research and development testing of the behavior of turbine engine lubricants, fuels and sensors in an actual engine environment. Research performed consists of qualifying candidate lubricants for field use, testing alternate lubrication approaches, investigating the effects of fuel additives and alternate fuels on engine performance and emissions, and testing the performance of advanced sensors. The facility is designed to operate the Allison T63-A-700 turboshaft engine at ground test conditions. The test cell is equipped with a computerized control system to control engine operation, oil temperature, and fuel additive concentration during the test cycle.

Purpose:

Conduct RDT&E on lubricants to determine performance suitability for use in aircraft and power generation equipment. Conduct RDT&E on alternate fuels and fuel additives to determine emissions characteristics for use in aircraft and power generation equipment. Conduct initial assessment of engine performance using environmentally friendly fuels. Conduct RDT&E on advanced sensors for monitoring engine health, oil quality, and engine exhaust emissions.

Products:

- Synthetic lubricants for use in air breathing propulsion and power systems
- Alternate fuels and fuel additives for use in air breathing propulsion and power systems
- Mechanical systems prognostics sensors and life predicting algorithms
- Engine exhaust emissions sensors and measurement methodology

Availability:

Primarily in-house and related DoD contractor research. Other U.S. Government agency, DoD contractor and commercial customer programs upon request. Contact: 937-255-4100.

