MOBILE ENGINE TEST STAND (MTS)

Where Precision and Reliability Soar!

From single components to entire propulsion systems – Our main focus is in engines, modular components and support solutions for any UAV or unmanned system.
The NWUAV Mobile Test Stand (MTS) can be used to operate, test, develop and record engine performance data for various engine configurations. The MTS is customizable to meet the application and testing required.

Mobile Test Stand Capabilities

The following is a list of some of the highlights of the analysis and testing that can be performed with the MTS:

- Engine durability testing
- Engine endurance testing
- Engine performance testing
- Exhaust analyzers – 5 gas
- Fuel flow transmitters – minimum 1cc/min
- Engine fuel mapping
- In-Cylinder pressure mapping @ 100 KHz when properly equipped (custom option)
- FAR 33 based engine testing

MTS Custom Built for your Application

NWUAV’s MTS can be custom built for your specific application and to your requirements.

We offer delivery and setup worldwide and will train your personnel how to perform engine testing with the MTS. The MTS is approved for export.

Purchase or Lease the MTS

On-site turn-key engine test solutions, with NWUAV operators available.

MTS Hardware

Inside the MTS there is access to the battery, fuel system, data acquisition units, power supply blower system and laptop, with space for engine storage. A Power/Data Acquisition box contains all the power supply components and data acquisition units, which provide the interface between the engine sensors, stand sensors, starter and the laptop software. The main power panel provides power to the run stand using external 240-volt power, and includes a main on/off switch and two 110-volt outlets. The propeller guard is removable and installs on the back of the stand.

MTS Software

The LabVIEW NWUAV DAQ software included with the laptop is used to control and monitor the running engine, and can be configured for specific engine and/or targeted diagnostic tests.

SPECIFICATIONS & EQUIPMENT

Mobile Test Stand

Dimensions w/propeller guard vertical (WxLxH)
57.5x130.5x76 inch / 146.05x331.47x193.04 cm
Class III 2”/5 cm Hitch
1 Spare wheel and tire (P185/70R14)
4 Stabilizer Jacks
1 Stabilizing tongue jack
LED Caution Light
Forward access panel (57x34 in / 144.78x86.36 cm)
Alt access panel (57x19 in / 144.78x48.26 cm)
Propeller guard (37 in / 93.98 cm dia)
Power: (1) 4-Wire 240-volt
(2) 110-volt outlets
12-Volt battery
Maximum tow speed 55 MPH
Panasonic Toughbook Laptop
NWUAV Data Acquisition
Data interface: Ethernet
On Board Engine Cooling
12-Gallon On Board Fuel System

Engine Indicators (running)

Torque
Thermocouples
Cylinder Head Temperature
Analog Input Channels
Fuel Flow
Fuel Pressure
Tachometer
Digital I/O Channels
Throttle Position

Run Room Atmosphere Condition Indicators

Ambient Pressure
Ambient Air Temperature
Humidity

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