

Northwest UAV

PROPULSION & PAYLOAD
INTEGRATION SPECIALISTS

A GLOBAL COMPANY

MOBILE ENGINE TEST STAND (MTS)



Where Precision and Reliability Soar!

From single components to entire propulsion systems – Our main focus is in propulsion solutions, 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 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"/5.08 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)

Aft 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

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.



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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