CAPABILITIES: YOUR ONE STOP UAV SHOP

Northwest UAV

A GLOBAL COMPANY

Where Precision and Reliability Soar!

- Full Engineering Design & Development Services
- Complete Manufacturing Services
- Electrical Engineering & Wire Harness Shop
- Engine & Endurance Testing
- FAA Approved COA Flight, Analysis, & System Test Range (FAST)
- CONUS & OCONUS Deployable Maintainers
- Part 107 Drone Airman/Remote Pilots On-site
- Rental Space & RV Parking Available
- DCAA Compliant
Engineering Design & Development Services

Mechanical, electrical, aerospace and physics. Our versatile team of highly trained and skilled engineers are well-versed in UAV design, development and problem solving. Our team will make sure that any UAV component designed or refined by us, takes a total lifecycle approach. With attention to manufacturability and an emphasis on low impact maintainability, our team of engineers considers the impact of design well before your unmanned system is in the air and far after it lands on the ground. Our engineering services include:

• **MECHANICAL ENGINEERING** – Assisting with every aspect of unmanned design, from concept to production.
• **ELECTRICAL ENGINEERING** – Assisting in design, development and adjustment of circuit and electrical systems.
• **AEROSPACE ENGINEERS** – Assisting with in flight and propulsion dynamics.
• **PHYSICS** – Assisting with heavy-fuel propulsion for operation and optimization.
• **CONUS & OCONUS** field service maintainers available.

Full Service UAS Manufacturing Facility

UAV engines and components built to your specifications, for your purpose, with our expertise and superior equipment. Whether you’re interested in one of our COTS (commercial off-the-shelf) UAV engines or you need something custom and build-to-print … We have the expertise and AS9100 certified facility to build and manufacture the component for your unmanned system that fits your application. When we manage your manufacturing and production, we focus on:

• Engine design
• Engine vibration isolation and characterization
• Engine durability and endurance testing
• Environmental testing with altitude, temperature and humidity control up to 25,000 ft
• Electrical assembly
• Carbon fiber propeller design and manufacturing
• Propeller thrust
• Noise and torque characterization utilizing our propeller dyno

Electrical & Wire Harness Shop

From building to testing to repair, the NWUAV electrical and wire harness shop has the skill and experience to handle almost anything electrical in your unmanned system. Our diverse team can efficiently and effectively build temperature sensors, simple to multi-leg harnesses, and timing sensors, just to name a few. If you need testing instead, our shop is set up to test ignition coil endurance, harness continuity and shorts, timing sensors and lighting assemblies. As a FOD and ESD sensitive operation with AS9100 certification, you can rely on our team and our facility for clean, thorough electrical work, to get you flying, fast. Our electrical services include:

• Design, manufacture and testing of:
  ▶ Temperature sensors
  ▶ Harnesses – from simple to multi-leg complex
  ▶ Timing sensors
  ▶ Ignition coils
  ▶ Fueling systems
  ▶ Air inlet assemblies
  ▶ Lighting assemblies
  ▶ Fuel pumps
OUR ONE-STOP UAV SHOP

UAV Engine & Endurance Testing
Utilizing engine run-in stations and various dynos, Northwest UAV on-site engine testing allows you to test your propulsion system before it ever takes flight! Our advanced testing and analysis, and ability to control the testing environment, mean we can reduce flight risk significantly, saving you a substantial amount of time, money and resources. And our software systems allow you to access and test your running engine from anywhere! Whether your engine is big or small, or you want to run your tests in our facility or from the field, our testing facility can accommodate. NWUAV testing capabilities include:

- Engine durability and endurance testing
- Engine fuel mapping
- Engine break-in stations with digital acquisition systems
- FAR 33 based engine testing
- Accessories testing: Pumps, fuel tanks, injectors, camera’s and more
- Fuel flow transmitters – minimum 1 cc/min
- In-cylinder pressure mapping at 100 KHz
- Mass airflow flow bench
- Acoustical and Computational Fluid Dynamics Testing

FAA Approved COA FAST Test Range
With a Certificate of Authorization (COA) by the FAA, Northwest UAV offers our own Flight, Analysis, and System Testing (FAST) UAV Test Range just 12 miles south of our main campus. Fly up to 4,000 feet within a 5 nautical mile radius of airspace. With our own licensed private and unmanned vehicle pilot managing air traffic and field operations, you can rest assured that your flights will remain within FAA regulations and safe, for you, those around you, and your equipment. The best part? When your UAV has an issue or needs a quick rethink in design, you can send it down the road to NWUAV where the rest of our team is ready to help. Notable features of the FAST UAV Test Range include:

- Just 12 miles south of the Northwest UAV full-service facility
- Fly up to 4,000 feet in the air
- Fly within a 5 nautical mile radius
- UAS Pilots available from the NWUAV team
- Wi-Fi, power, and water available

AS9100/ISO9001 and DCAA Compliant
As an AS9100/ISO9001 Certified facility, you can be confident that Northwest UAV has the data reporting and continuous improvement processes - from training to internal auditing to supply chain management - and the certified suppliers to design, develop and manufacture reliable, consistent, cost effective propulsion systems and other UAV components. In an industry with quite a bit of uncertainty and inconsistency, Northwest UAV is proud to continuously work on holding ourselves to aviation-grade standards. Our quality team ensures that:

- We meet AS9100 certification standards annually
- We capture data and reporting on product conformance, customer satisfaction, calibration, internal auditing and document control
- We continuously improve with training programs, internal audit teams, and supply chain management
Finally, a one-stop-shop for those deploying UAVs professionally. From design to development to testing to manufacturing to finally flying – Northwest UAV has the team, the well-vetted suppliers, and the space to help you achieve your unmanned systems goal. Now, with the ability to fly at their FAST UAV Test Range just 12 miles south of their headquarters, Northwest UAV offers everything you need to get your UAV flying higher, faster. When reliability is key, you need Northwest UAV.

**ENGINEERING**
Specializing in unmanned systems propulsion development & design with a total lifecycle approach.

**BUILD-TO-PRINT**
At our technologically advanced facility we build engines. To your spec's, or contract to build.

**TECHNICAL WRITING**
We have a full-service team of technical writers, editors & illustrators – AS9100/ISO9001.

**MASTER DATA LISTS**
Bill of Materials (BOM) management system.

**TEST FACILITY**
State of the art Testing Facility. Engine performance & propeller testing. On-site, results can be controlled globally with internet access.

**PORTABLE TEST EQUIPMENT**
Small Mobile Test Systems (MTS) developed for engine testing anywhere you can drive a trailer.

**LOW NOISE TECHNOLOGY**
Unique solutions in muffler and propeller technology for quieter and faster flights.

**CUSTOM OPERATIONS SHELTER**
Custom Engine Test Cells (CETC) 20 & 40 ft. containers for your local engine testing.

**Northwest UAV campus accommodations include:**
- MRO and Repair Shop
- Engine Test Cell Availability
- 3D Print Manufacturing
- CNC Machine Shop
- Free WIFI
- RV parking, with hookups
- Facility office rental space up to 15,000 sq. ft.

With a campus spanning 10 acres and over 60,000 sq. ft. of manufacturing and office space, Northwest UAV offers visiting customers even more than the services already mentioned. We’re thrilled to be able to offer RV parking and hookups, facility space for rent, and free WIFI. We also have a MRO and repair shop on site for quick fixes, and our 3D printing sister company, Northwest Rapid Manufacturing, who prints some of our most important engine components.

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