



# Propulsion Systems Evaluation Facility

PATUXENT RIVER, MARYLAND

- 55 Test Facilities
- 125 Engineering/Technical Specialists
- Full Range Propulsion Systems Test & Evaluation

Rotor Spin Facility  
Engine Outdoor Test Sites  
Fuels & Lubricants Performance Lab

Gyroscopic Test Stand  
Variable Attitude Test Stand  
Helicopter Drive System Test Facility  
Engine Fuel Control System Test

Secondary Power Systems  
Fuels & Lubricants Chemistry Lab

**PSEF**  
**Propulsion Systems Evaluation Facility**

Naval Air Warfare Center Aircraft Division  
Propulsion Systems Evaluation Facility (PSEF)  
22229 Elmer Road, Building 2360  
Patuxent River, MD 20670

(301) 757-3420, Fax (301) 757-3614  
E-Mail: [WeissTA@navair.navy.mil](mailto:WeissTA@navair.navy.mil)  
<http://www.nawcad.navy.mil>

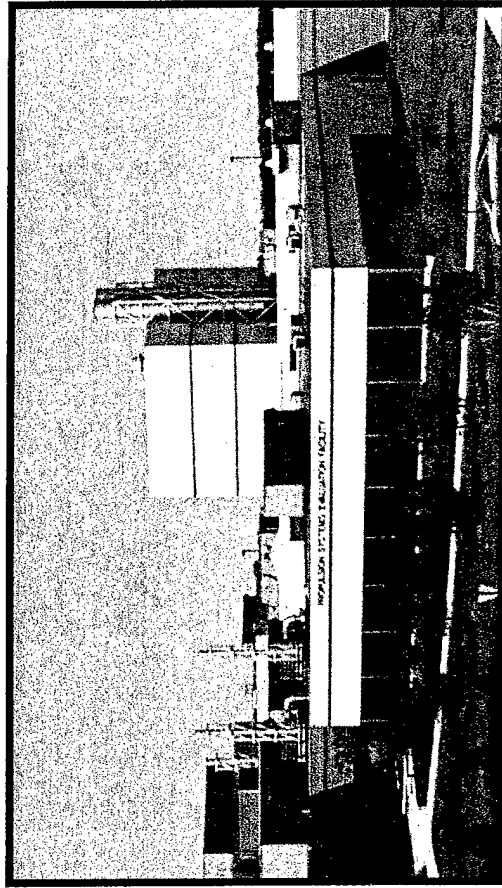
Approved for public release; distribution is unlimited.

FUELS & LUBRICANTS

SECONDARY POWER

AIRCRAFT ENGINES

DRIVE SYSTEMS



NAVAL AVIATION SYSTEMS  
**TEAM**

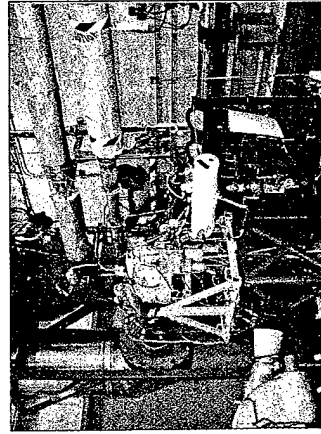
## FUELS & LUBRICANTS LABORATORY



- Vapor Pressure
- Density & Acidity
- Surface Tension
- Foaming Tendency
- Chemical Stability
- Chemical Constituents
- Viscosity
- Distillation
- Flash Point
- Pour Point
- Heating Value

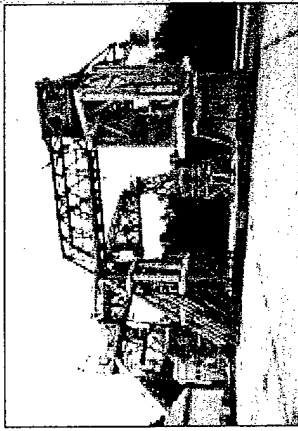
- 8000 Horsepower
- Main & Tail Rotor Loading
- 700 Data Channels
- Main Transmission Thrust
- Accessory Loading

## ACCESSORY TEST AREA



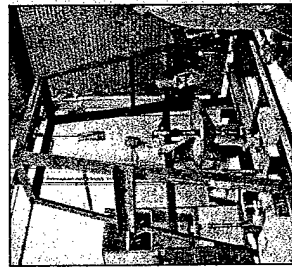
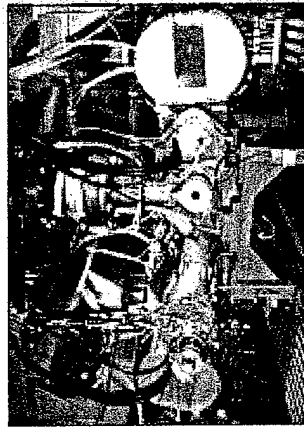
- Starters & Control Valves to 600 HP
- 3pps., 400psig., 1200°F Air Supply
- 2500°F Burner Rig
- T63 Engine Test Facility
- Auxiliary Power Units

## OUTDOOR TEST SITE LAKEHURST, NJ



- Outdoor Thrust Runs
- Gyroscopic Test Loads
- Attitude, Pitch & Roll
- Thrust Engine Correlation

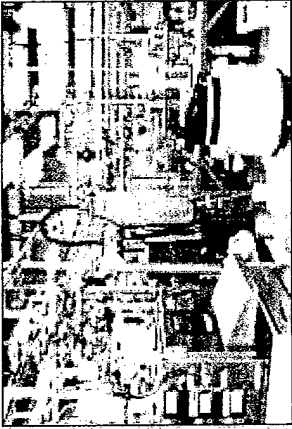
## HELICOPTER TRANSMISSION TEST



## FUEL COMPONENT TEST

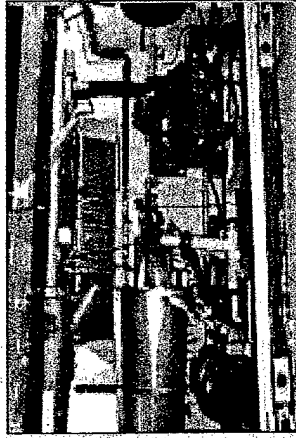
- Fuel Controls
- Drives up to 300 HP
- Explosion Proof
- Fuel & Air Tempering
- Refueling Nozzles

## FUELS & LUBRICANTS TEST AREA



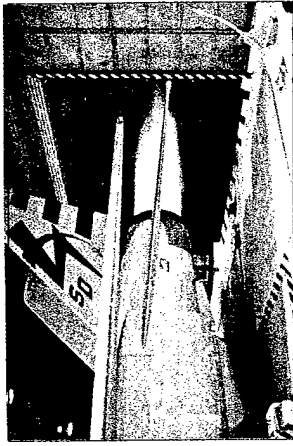
- Fuel & Lubricant Specification
- Performance Evaluations
- Filter & Coalescer Performance
- High Temp Lube Characteristics

## UNMANNED AIR VEHICLE ALTITUDE TEST CELL



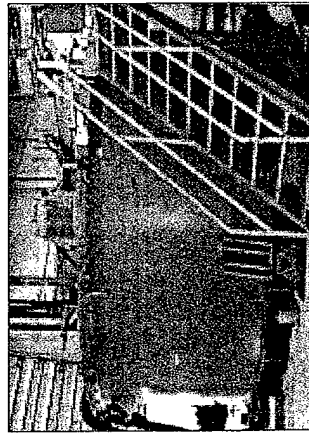
- 0 - 25,000 Ft Altitudes
- -25°F to 125°F Air Temperature
- -80°F & 140°F Soaks
- 530 Data Channels
- Dynamometers up to 3000 HP

## AIRCRAFT TEST & EVALUATION FACILITY



- Aircraft High Power
- Noise Attenuation Facility
- Night Vision
- Weight & Balance
- Thrust Measurement
- Wind, Rain & Heat
- T&E & Maintenance Support

## ROTOR SPIN FACILITIES



- Spin Testing of Turbines & Compressors
- 4 Chambers
- 110 in. Dia. Max
- 150,000 RPM
- Heated
- Evacuated
- 24 Hr. Ops