Dayton T. Brown, Inc. has a rich history of testing aerospace structures and components for fixed wing and rotorcraft applications. Backed by an experienced, highly competent staff, DTB offers a broad range of engineering and testing support in aircraft structures, aircraft armament systems, aircraft life support systems, and aircraft components. You can benefit from our expertise in the following areas:

- Structural Analysis and Fatigue Testing
- EMI/EMC and Electrical Testing
- Dimensional Inspection Laboratory
- Instrumentation and Data Acquisition
- Ballistic/Suspension Equipment Performance Evaluation
- Environmental and Dynamic Testing
- Hydraulic Test Stands
- Metallurgical Investigation and Failure Analysis
- Engineering and Analysis
- Aviation Life Support Equipment/Systems Testing

You can count on DTB to provide testing to all aerospace specifications, including:

- MIL-STD-810
- RTCA/DO-160
- MIL-STD-461

Visit our web site at: www.dtbtest.com

A World of Engineering and Testing Under One Roof™

ISO 9001:2008

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NVLAP

* Please visit www.dtbtest.com for testing covered under our scopes of accreditation.
DTB's Test Stands and Test Systems are Manufactured to Support:

- Structural and Fatigue Testing:
  - Structural Fixture Design
  - Mechanical Systems Design
  - 2D and 3D Computer Aided Design
  - Fixed Wing and Rotary Fatigue/Structural Test
  - Complete Welding and Machining Capabilities
  - Aircraft Assembly per Specification
  - Automated and Manual Test Facility Design
  - Special Purpose Test Equipment
  - Prototype Development, Manufacturing, Testing, and Evaluation

- Environmental and Dynamic Testing:
  - Acceleration
  - Altitude
  - Combined Environments
  - Explosive Decompression
  - Explosive Atmosphere/Explosive Proofness
  - Fluidic Susceptibility
  - Fungus Resistance
  - Humidity
  - Iceing
  - Noise
  - Reliability
  - Salt Fog
  - Sand and Dust
  - Shock
  - Temperature
  - Vibration
  - Wind and Rain/Waterproofness

- EMI/EMC and Electrical Testing:
  - Electrical Power/Power Inputs
  - EMI/EMC
  - Lightning
  - Electric Static Discharge Testing
  - Shielding Effectiveness Testing
  - Magnetic Field Emissions and Immunity

- Test Stands and Test Systems.
  DTB's Test Stands and Test Systems are Manufactured to Support:
  - Hydraulic Components and Support Products
    - Pumps, Motors, Servo Valves, Actuators, Power Supplies, Calibration Carts
  - Fuel Components
    - Fuel Transfer Valves and Fuel Pumps
  - Pneumatic Components
    - Valves, Cylinders, Actuators, Reservoirs, Vacuum Pumps
  - Electrical-Mechanical Components and Assemblies
    - Solenoids and Solenoid Valves, Gear Boxes, Winches, Hoists

- Dimensional and Inspection Laboratory:
  - Starrett and Mitutoyo Coordinate Measuring Machines (CMM)
  - Leitz High Accuracy CMM
  - Surface Finish
  - Dimensional and Form/Finish of Part/Flight Surfaces
  - Contour Measurement
  - Gear Testing
  - Aircraft System Parts Evaluation (Fixed Wing/Rotary)
  - Complete Inventory of Dimensional Measurement Equipment
  - Coating Evaluation

- Root Cause Determination and Failure Analysis:
  - Scanning Electron Microscopy (SEM)
  - Fractographic Analysis (Macro and Micro)
  - Metallography
    - Optical Microscopy
    - Metallurgical Examinations
  - Digital Photography
  - Mechanical Properties Evaluation
    - ASTM Standard Tests
      - Hardness
      - Fatigue Strength
    - Corrosion Analysis and Testing
    - Arc/Emission Spectroscopy
    - Coating Analysis/Selection
    - Nondestructive Testing
      - Liquid Penetrant and Magnetic Particle

- Instrumentation and Data Acquisition:
  - Strain Gauging
  - Crack Wires
  - Deflection Measurements
  - Load Measurements
  - Servo Controlled Fatigue and Static Load Application
  - Automated Real Time Data Acquisition to 100 Channels
  - Electrical/Electronic Parameter Acquisition
  - Data Acquisition During Environmental Exposure

- Engineering and Analysis:
  - Loads and Spectrum Development
  - Finite Element Analysis (FEA)
  - Specification Development
  - Design Improvements/Parts Obsolescence Solutions
  - Test Plan/Procedure Development
  - Source Identification and Development
  - Reverse/Reengineering Programs
  - Life Extension and Aging Aircraft Programs
  - Fatigue and Crack Propagation Analysis
  - Logistic Support Analysis and Data Package Development
  - Qualification and Test of CSI and CAI Parts
  - Product Enhancements/QDR Solutions