



CAPABILITY STATEMENT

OVERVIEW

TLG Aerospace has the capacity to support the entire iterative aircraft design cycle from product development to certification.

Our in-house, multidisciplinary team of engineers and DER's have the experience and tools necessary to get timely estimates needed to make business cases and design decisions at the beginning of a program, provide engineering to optimize your product during development, and generate the certification plans, analysis, testing and documentation needed to get your product to market.

ENGINEERING EXPERTISE

- Loads and Flutter
- Dynamics and Vibration
- Aerodynamic Design and CFD Analysis
- Stability and Control Analysis
- Metallic and Composite Analysis and Design
- Static, Fatigue and Damage Tolerance Analysis
- Bird Strike and Rotor Burst Impact Simulation
- Finite Element Analysis
- Industry Standard Design with CATIA V5
- Continued Airworthiness Documentation
- Support In-service Major Repairs and Alterations
- Ground and Flight Test Planning, Support and Analysis

AIRCRAFT EXPERIENCE

- Large Transport Airplanes
- Business and Commuter Aircraft
- General Aviation
- Space Launch Vehicles
- Personal Flying Vehicles
- UAV/Drone
- New Space Industry
- Military Aircraft and IS&R
- Supersonic/Hypersonic
- Agricultural

TLG AEROSPACE ENGINEERING

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DUNS: 946461006
CAGE: 5LNN4
NAICS: 541330, 541712
Small Business

CERTIFICATION EXPERIENCE

FAA (US)
EASA (Europe)
CAAC (China)
JCAB (Japan)
TCCA (Canada)
CASA (Australia)
Brazil (ANAC)
Chile (ANAC)
Argentina (ANAC)

CERTIFICATIONS

FAA Loads DER (14 CFR Part 23 and 25)
FAA Flutter DER (14 CFR Part 23 and 25)
FAA Structures DER (14 CFR Part 23 and 25)
Flight Analyst DER (14 CFR Part 23)

CONTACTS

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ENGINEERING SERVICES

AIRCRAFT LOADS, FLUTTER AND VIBRATION*

- Static and Dynamic Loads
- Flutter Analysis and Design
- Flight and Ground Testing
- Feasibility Studies and Product Development
- Engineering Project Management
- Simulation of Failure Modes
- Fuselage Decompression Loads
- Full Aeroservoelastic Calculation Capabilities

AERODYNAMIC DESIGN AND CFD ANALYSIS

- Senior engineers expert in applied aerodynamics
- Full CFD Capability, panel methods to Navier-Stokes
- Concept exploration, aircraft sizing and preliminary design
- Internal and external flows (subsonic, transonic, supersonic, and hypersonic) including chemical reacting non-equilibrium flows
- Design of airfoils, wings, control surfaces, high-lift devices, fairings, antennae, nacelles, struts, inlets, ducts, etc.
- Powerplant integration
- Thermodynamic and heat rejection analysis
- Scalable analysis using on-site and cloud based computing clusters
- Wind tunnel testing, low speed and transonic, quick reaction and production

PERFORMANCE, STABILITY AND CONTROL, AND HANDLING QUALITIES*

- Performance prediction, measurement and validation
- Mission analysis and optimization
- AFM-based performance modeling
- Classical and Non-linear stability and control analysis
- Flight dynamics simulation
- Aeroelastic and closed loop handling qualities
- Flight and ground test planning, support and analysis

STRESS AND DESIGN*

- Senior stress and design engineers
- Metallic and composite analysis and design
- Static, fatigue and damage tolerance analysis
- Bird strike and rotor burst impact simulation
- Industry standard analysis tools (PATRAN/NASTRAN/APEX)
- Finite element analysis experience includes:
- Industry standard design using CATIA V5
- Continued airworthiness documentation
- Support in-service major repairs and alterations
- Ground test planning, support, and analysis

FAA CERTIFICATION*

- Certification plans
- Agency certification coordination
- STC and TC certification documentation
- Test witnessing
- FAA DER approvals

