

Jaxon Henry

Senior Mechanical Engineer, Systems Integration

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STRENGTHS

- ⚙️ **Systems Integration**
Connected structural, avionics, propulsion, manufacturing, and test interfaces during UAV programs. Teams gained clearer decisions and fewer late surprises.
- 🔧 **Production Design**
Moved machined, composite, fabricated, and sheet metal hardware into controlled release. Manufacturing partners found drawings easier to act on.
- ♥️ **Practical Analysis**
Used hand calculations, margin reviews, and FEA to compare support concepts. Higher risk cases received focused engineering attention.
- 🔧 **Configuration Control**
Managed BOMs, product structures, drawings, and baselines in PLM. Traceability stayed visible through prototype changes and production updates.
- 👥 **Technical Mentoring**
Guided junior engineers through CAD, GD&T, installation design, and tolerance stack up. Colleagues often brought difficult interface questions forward.

SKILLS

Aircraft systems integration

Mechanical integration

Subsystem packaging

Equipment mounting EWIS

Hydraulic systems Fuel systems

Pneumatic systems ECS routing

NX CAD CATIA Teamcenter PLM

GD&T ASME Y14.5

Tolerance stack up

SUMMARY

Senior Mechanical Engineer with 10 years of experience integrating aircraft and complex electromechanical subsystems from concept through production. Leads installation architecture, equipment packaging, mounting, EWIS and fluid routing, interface definition, drawing release, prototype support, and production issue resolution across structures, avionics, propulsion, manufacturing, stress, supply chain, systems, and test. Advanced CAD practitioner using NX and CATIA, with PLM experience in Teamcenter and strong command of GD&T, ASME Y14.5, **tolerance stack up**, BOMs, and **configuration control**. Designs machined, fabricated, composite, and sheet metal assemblies for UAV, aerospace, eVTOL, robotic, and electromechanical programs. Applies **structural hand calculations**, preliminary stress methods, FEA, and **engineering trade studies** to integration decisions. Provides technical leadership, mentors junior engineers, coordinates suppliers, and supports hardware through build, validation, MRB, and production release.

EXPERIENCE

Senior Mechanical Engineer, Systems Integration

Cascade Aeronautical Systems 📅 January 2023 to Present 📍 Kent, Washington

Leads UAV subsystem integration from architecture through production, coordinating structural, electrical, avionics, propulsion, manufacturing, supplier, and test interfaces. Owns **installation design**, product structures, drawing release, configuration control, prototype support, production issue resolution, and technical mentoring.

- Led UAV subsystem integration across structural, electrical, avionics, propulsion, manufacturing, and test interfaces.
- Developed installation architecture for avionics, power hardware, EWIS, cooling, and fluid routing provisions.
- Directed machined, composite, fabricated, and sheet metal design in NX using **ASME Y14.5 GD&T**.
- Governed **product structures**, BOMs, **installation drawings**, and configuration baselines through Teamcenter PLM.
- Supported prototype and production builds through issue resolution, MRB inputs, validation, and **supplier coordination**.
- Mentored junior engineers in CAD, interfaces, tolerance stack up, installation drawings, and manufacturability.

Mechanical Integration Engineer

Stratus Flight Technologies 📅 May 2020 to December 2022 📍 Everett, Washington

Integrated propulsion support and avionics subsystems for autonomous aircraft through flight test configuration. Developed CATIA installation layouts, performed structural assessments, released controlled drawings, and coordinated prototype resolution across manufacturing, stress, avionics, test, and suppliers.

- Integrated propulsion support and avionics subsystems for **autonomous aircraft** through flight test configuration.
- Created CATIA layouts for **equipment mounting**, harness **routing**, fuel lines, and pneumatic lines.
- Performed **structural hand calculations** and margin assessments for brackets and equipment support concepts.
- Produced part, assembly, and installation drawings with GD&T and **tolerance stack up** through **Teamcenter**.
- Resolved prototype discrepancies with Manufacturing, Stress, Avionics, and Test through controlled design updates.
- Coordinated supplier technical questions and delivery dependencies for fabricated and machined hardware.

Mechanical Design Engineer, eVTOL Systems

Orion Mobility Aerospace 📅 July 2018 to April 2020 📍 Portland, Oregon

LANGUAGES

English	Native
Spanish	Intermediate

MY CAREER

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MONTHS

Designed eVTOL equipment mounts and support assemblies from trade studies through prototype release. Combined NX modeling, production drawing development, routing studies, structural analysis, PLM control, and hardware testing to improve integration decisions and configuration traceability.

- Designed **eVTOL** equipment mounts and support assemblies from trade studies through prototype release.
- Modeled machined, sheet metal, and **composite components** in NX with **ASME Y14.5** production drawings.
- Developed harness and thermal management routing concepts with bend radius and access checks.
- Ran **static FEA** and hand calculations on brackets and equipment supports to identify stress concerns.
- Maintained BOM and **drawing release** data in **PLM** with configuration traceability across prototype changes.
- Supported assembly and hardware tests, documenting fit and interface findings that drove design revisions.

Mechanical Engineer, Electromechanical Products

Pacific Motion Systems 📅 June 2016 to June 2018 📍 Hillsboro, Oregon

Developed mechanical assemblies for robotic and electromechanical products across structures, electronics, cabling, manufacturing, and supplier interfaces. Created controlled SolidWorks designs, managed Windchill releases, investigated build issues, and incorporated manufacturability feedback into production updates.

- Developed assemblies for robotic and electromechanical products across structures, electronics, cabling, and manufacturing interfaces.
- Created **SolidWorks** models and drawings for machined and fabricated parts using **GD&T** and tolerance analysis.
- Designed mounts, enclosures, cable **routing** features, and service access provisions around thermal constraints.
- Managed BOM updates and drawing releases through **Windchill** as prototypes entered low rate production.
- Investigated build issues with manufacturing technicians using measurements and tolerance reviews for corrective actions.
- Supported supplier reviews and incorporated manufacturability feedback into controlled design updates.

PROJECTS

Autonomous Aircraft Integration Study 📅 2022

Defined equipment mounting, harness routing, fluid interfaces, maintainability access, and configuration controls for an autonomous aircraft integration study. Applied CATIA layouts, tolerance reviews, structural calculations, and controlled drawing practices.

eVTOL Equipment Support Design 📅 2020

Developed lightweight eVTOL equipment supports through concept trade studies, NX modeling, static FEA, hand calculations, prototype release, and hardware testing. Recorded interface findings that guided subsequent design revisions.

LEADERSHIP & AWARDS

- Aerospace Engineering Mentor, Regional Early Career Design Forum, 2024 to Present
- Recognition for cross functional UAV integration leadership, Cascade Aeronautical Systems, 2025

EDUCATION

Bachelor's Degree in Mechanical Engineering

Oregon State University 🎓 GPA: 3.5 📅 2016 📍 Corvallis, Oregon

Coursework: Aircraft systems integration, mechanical design, structural analysis, manufacturing processes

CERTIFICATIONS

- ASME Y14.5 GD&T Professional Fundamentals Certificate 📅 2021
- Siemens NX Design Professional Training 📅 2022

TECHNICAL SKILLS

- **CAD Systems:** NX, CATIA, SolidWorks
- **PLM Systems:** Teamcenter, Windchill, product structures
- **Aircraft Installation:** EWIS, hydraulic routing, fuel routing
- **Environmental Systems:** Pneumatic routing, ECS routing, cooling provisions
- **Geometric Dimensioning:** GD&T, ASME Y14.5, tolerance stack up
- **Mechanical Hardware:** Machined parts, fabricated parts, composite parts
- **Sheet Metal Design:** Sheet metal assemblies, bends, formed components
- **Engineering Analysis:** Structural hand calculations, margin assessment, preliminary stress analysis
- **Finite Element Analysis:** Static FEA, modal FEA, vibration analysis
- **Manufacturing Support:** Prototype builds, production support, MRB
- **Configuration Management:** BOMs, drawing release, configuration baselines
- **Interface Management:** Aircraft interfaces, interface control, maintainability
- **Technical Delivery:** Scope planning, schedule management, supplier coordination
- **Testing and Validation:** Hardware validation, assembly testing, flight test support

PROFESSIONAL AFFILIATIONS

- Regional Early Career Design Forum, Aerospace Engineering Mentor
- Oregon State University Mechanical Engineering Alumni Network

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST