

Avery Elliott

Manufacturing Engineer II, Aerospace Vehicle Integration

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STRENGTHS

- 🔧 **Build Planning**
Turned released engineering into clear sequences and inspection points. Technicians gained a practical path through difficult integration work.
- ⚙️ **Fixture Design**
Created Siemens NX fixture concepts around critical interfaces. Shop teams had repeatable locating methods when tolerance pressure increased.
- 🔗 **Bonding Control**
Supported surface preparation, adhesive cure, and inspection records. A careful preparation step often prevented larger rework later.
- 🔍 **Anomaly Resolution**
Used MRB evidence and root cause methods to move non conformances forward. Teams trusted decisions grounded in hardware history.
- 👥 **Cross Team Delivery**
Coordinated design, quality, fabrication, and shop partners during active builds. Clear handoffs kept subassembly readiness visible.

SKILLS

Aerospace manufacturing

Vehicle integration

Structural assembly Siemens NX

CAD Fixture design ASME Y14.5

GD&T Structural bonding

Composite assembly

Mechanical fastening

SUMMARY

Manufacturing engineer with more than three years of hands on aerospace hardware integration and structural assembly experience supporting high reliability flight systems. Builds controlled assembly sequences, work instructions, integration checklists, and configuration records that help technicians execute released engineering accurately on the floor. Designs fixtures and **ground support equipment** in Siemens NX, applying GD&T per **ASME Y14.5** to critical interfaces. Supports structural bonding, composite assembly, mechanical fastening, cleanroom preparation, and **Thermal Protection System** integration. Investigates non conformances through MRB, dimensional evidence, **root cause analysis**, and corrective action. Coordinates design engineering, quality, fabrication, part delivery, and integration teams during time sensitive builds. Practical experience with alignment checks, mass properties, system checkouts, avionics harness interfaces, and high pressure fluid hardware supports dependable vehicle production.

EXPERIENCE

Manufacturing Engineer II, Aerospace Hardware Integration

Pacific Orbital Works 📅 January 2025 - Present 📍 Long Beach, CA

Owns manufacturing planning and floor execution for aerospace hardware integration, supporting design engineering, technicians, quality, fabrication, bonding, inspection, and system checkout activities. Converts released engineering into controlled build records while resolving hardware issues with traceable technical evidence.

- Sequenced vehicle build instructions with inspection points, tooling needs, and configuration records for **floor execution**.
- Designed **Siemens NX** fixtures and GSE using ASME Y14.5 **GD&T** for critical locating interfaces.
- Supported structural bonding and **composite assembly** through surface preparation, adhesive cure, and inspection documentation.
- Resolved MRB non conformances with dimensional evidence, hardware history, and root cause analysis methods.
- Coordinated fabrication, bonding, **part delivery**, and subassembly readiness across quality, design, and shop teams.
- Completed alignment checks, **mass properties** activities, interface verification, and system checkout preparation.

Associate Manufacturing Engineer, Aerospace Structures

Redwood Flight Structures 📅 June 2023 - December 2024 📍 Hawthorne, CA

Supported production engineering for aerospace structural hardware, translating released designs into repeatable assembly plans and controlled shop documentation. Partnered with technicians, design engineers, quality personnel, and fabrication teams during bonding, integration, anomaly review, and acceptance activities.

- Converted released engineering into sequenced **work instructions**, inspection points, **tooling** requirements, and build records.
- Created Siemens NX fixture and GSE concepts with GD&T callouts for repeatable **structural assembly**.
- Documented composite **bonding preparation**, adhesive application, cure controls, and inspection evidence for production hardware.
- Investigated non conformances through **MRB** review, dimensional checks, hardware history, and **corrective action** tracking.
- Coordinated part delivery, fabrication, bonding, and subassembly readiness with production and quality personnel.

Configuration control

Spanish Intermediate

A donut chart with a light gray center and a light orange outer ring. The center contains the text "3.2 YEARS". The orange ring represents approximately 80% of the total, while the gray center represents the remaining 20%.

- Associate Manufacturing Engineer, Aerospace Structures at Redwood Flight Structures (1.5 Years)

- AVAILABLE ON REQUEST