

Robert Pratt

Mechanical Parts Engineer, Bearings and Bushings

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📍 Mesa, AZ 85201

STRENGTHS

🔍 Failure Analysis

Combined inspection records, test results, drawings, and process history to find defensible causes. Teams sought help on difficult component issues.

🔧 Laboratory Testing

Built practical test plans and traceable reports for materials and components. Hands on work made findings easier for reviewers to trust.

👥 Supplier Resolution

Clarified technical expectations with suppliers and verified corrective evidence. A direct conversation often moved stalled quality actions forward.

♥️ Technical Documentation

Turned requirements, standards, and test evidence into usable specifications. Clear writing helped production and maintenance teams act with confidence.

☰ Project Control

Used Excel, Microsoft Project, and milestone tracking across concurrent engineering work. Simple visibility kept tests, reviews, and deliverables moving.

SKILLS

Bearings Bushings Fasteners

Tribology Materials Testing

Test Plan Development

Test Execution Technical Reports

Failure Analysis

Root Cause Analysis

Corrective Actions

Engineering Drawings

Part Standards

SUMMARY

Mechanical Parts Engineer with eight years of aerospace and precision manufacturing experience spanning bearings, bushings, fasteners, lubricants, tribology, **materials testing**, and **production support**. Hands on laboratory work includes qualification testing, test plan development, test execution, data review, and technical report writing. Career growth progressed from manufacturing engineering foundations into ownership of research and development programs, failure investigations, **engineering requirements**, supplier resolution, and production decisions for flight critical components. Regularly reviews engineering drawings, part standards, **process specifications**, and manufacturing records, then translates findings into corrective actions and practical improvements. Coordinates with design, quality, manufacturing, maintenance, suppliers, and customers through Excel, Microsoft Project, milestone tracking, and structured project controls. Prepared to contribute sound engineering judgment, clear documentation, and dependable technical support in an on site aerospace environment.

EXPERIENCE

Senior Mechanical Parts Engineer, Aerospace Components

Stratos Flight Technologies 📅 July 2023 - Present 📍 Phoenix, AZ

Leads technical evaluation of bearings, bushings, lubricants, and related parts for aircraft subsystem programs. Connects laboratory evidence with design, production, fleet support, supplier, and customer decisions while coordinating cross functional engineering deliverables.

- Evaluated **bearings**, bushings, **lubricants**, and aircraft parts for design and production decisions.
- Developed wear, friction, dimensional, material, and component qualification tests for engineering reports.
- Investigated bearing and bushing failures using inspection, test data, drawings, and supplier records.
- Reviewed drawings, **part standards**, and **process specifications** before manufacturing and maintenance release.
- Guided supplier **corrective actions** through documented requirements and verified closure evidence.
- Managed Excel and **Microsoft Project** milestones, risks, resources, schedules, and engineering deliverables.

Mechanical Parts Engineer, Aerospace Hardware

Desert Aerospace Components 📅 May 2021 - June 2023 📍 Tempe, AZ

Owned engineering support for bearing, bushing, and fastener families used in aerospace assemblies. Converted design intent into manufacturing criteria, laboratory evidence, **engineering specifications**, supplier improvements, and practical quality decisions.

- Translated bearing, bushing, and fastener requirements into manufacturing and inspection criteria.
- Planned material and component qualification tests with traceable procedures and **technical reports**.
- Investigated recurring discrepancies through **root cause analysis**, **drawing review**, and physical evidence.
- Drafted specifications for parts, materials, tools, and **manufacturing processes** using approved standards.
- Resolved supplier manufacturability and quality issues through clear requirements and inspection findings.
- Evaluated bearing materials, lubricants, and **production** methods through controlled technical studies.

Associate Mechanical Engineer, Aircraft Components

Copper State Aviation Systems 📅 June 2019 - April 2021 📍 Chandler, AZ

Supplier Engineering

Project Management

LANGUAGES

English Native

Spanish Intermediate

MY CAREER



● Senior Mechanical Parts Engineer, Aerospace Components at Stratos Flight Technologies (3.2 Years)

● Mechanical Parts Engineer, Aerospace Hardware at Desert Aerospace Components (2.1 Years)

● Associate Mechanical Engineer, Aircraft Components at Copper State Aviation Systems (1.8 Years)

● Manufacturing Engineer, Precision Components at Sonoran Precision Manufacturing (11 Months)

Supported mechanical component engineering for aircraft maintenance and production programs. Built laboratory, documentation, failure analysis, and project coordination experience while working with senior engineers across materials, quality, manufacturing, and supplier activities.

- Supported bearing, fastener, material, and process engineering for aircraft programs.
- Conducted supervised laboratory tests and prepared traceable observations for formal reports.
- Reviewed drawings, specifications, component condition, and manufacturing records for engineering dispositions.
- Organized failure evidence for senior engineers and supported corrective action recommendations.
- Maintained requirements for **tools, materials**, parts, and processes across shop operations.
- Coordinated tests, supplier inputs, documentation, and review dates with **Excel** trackers.

Manufacturing Engineer, Precision Components

Sonoran Precision Manufacturing 📅 June 2018 - May 2019 📍 Gilbert, AZ

Supported aerospace fastener and bearing related **manufacturing processes**, building practical experience in process control, drawing review, material testing, technical documentation, nonconformance analysis, and production **milestone tracking**.

- Supported aerospace fastener and bearing component manufacturing with process control reviews.
- Reviewed shop drawings, dimensions, and instructions with **quality** and manufacturing personnel.
- Analyzed nonconformances using inspection records, process history, and material information.
- Coordinated specimen preparation and mechanical testing with internal laboratory personnel.
- Updated work instructions and process documents after approved engineering changes.
- Tracked engineering actions, supplier questions, and production **milestones** in Excel.

PROJECTS

Bearing Qualification Test Program 📅 2024

Planned laboratory qualification work for bearing and bushing materials, covering wear, friction, dimensional condition, component performance, test evidence, and technical reporting.

Supplier Corrective Action Framework 📅 2022

Structured supplier issue resolution around drawing requirements, process specifications, inspection evidence, root cause analysis, corrective actions, and documented closure.

LEADERSHIP & AWARDS

- ASQ Certified Quality Engineer, recognized for applied quality engineering practice in aerospace manufacturing, 2022.
- Senior technical lead for bearing and bushing failure investigations, supplier resolution, and production engineering decisions, 2023.
- Trusted cross functional contributor for laboratory qualification planning, technical reports, and engineering requirement reviews, 2021.

EDUCATION

Bachelor of Science in Mechanical Engineering

Arizona State University 🎓 GPA: 4.0 📅 2018 📍 Tempe, AZ

Coursework: *Materials science, mechanical design, manufacturing processes, engineering materials*

CERTIFICATIONS

- ASQ Certified Quality Engineer 📅 2022
- Bachelor of Science in Mechanical Engineering 📅 2018

TECHNICAL SKILLS

- **Bearing and Bushing Engineering:** Bearings, Bushings, Failure Mechanisms
- **Materials and Tribology:** Tribology, Lubricants, Materials Testing

- **Laboratory Testing:** R&D Testing, Qualification Testing, Test Execution
- **Test Documentation:** Test Plans, Test Reports, Technical Reports
- **Quality Engineering:** Root Cause Analysis, Corrective Actions, Preventive Actions
- **Engineering Documentation:** Engineering Drawings, Part Standards, Process Specifications
- **Manufacturing Engineering:** Fasteners, Manufacturing Processes, Production Support
- **Project Management:** Excel, Microsoft Project, Milestone Tracking
- **Supplier Engineering:** Supplier Resolution, Supplier Quality, Manufacturability
- **Aerospace Maintenance:** Aircraft Design, Fleet Maintenance, Product Quality
- **Requirements Engineering:** Engineering Requirements, Technical Requirements, Engineering Specifications
- **Materials Research:** Emerging Technologies, Material Evaluation, Component Studies

PROFESSIONAL AFFILIATIONS

- ASQ professional community, quality engineering and corrective action practice.
- Aerospace engineering community, mechanical parts, materials, and production support.

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST