



# **Electrical Systems Engineer**

## **Job Description**

**Department: Engineering**

**Reporting to: Director of Engineering**

### **Job Purpose:**

The electrical systems engineer works in conjunction with the engineering team and the executive team to design, develop, test and certify the electrical aspects of Precise Flight's extensive line of products and systems. This engineering position is also responsible for identifying new products and product improvement opportunities to modernize existing system and subsystem designs, evaluating and bringing to fruition new product ideas in a systematic and timely manner, assist in the preparation of proposals, high level design documentation, prototype and final product development, debugging designs, integration, testing, and lifecycle support. Apply knowledge of electrical engineering principles, design, manufacturing processes and limitations, and conventional and computer aided drafting techniques and procedures. Demonstrate teamwork and leadership while coordinating the electrical aspects of projects for both new and existing products. Additional engineering support may include project management and design for projects and production support including accomplishing company technician level work, inspections, assembly, and repair as appropriate to support the needs of the repair stations and production line. This position reports to the Director of Engineering.

### **Essential Duties and Requirements:**

- Minimum Education: BS in Aerospace or Electrical Engineering from accredited university, or equivalent apprenticeship.
- Minimum two years' work experience directly working within an aircraft and/or manufacturing environment.
- Software Knowledge: Microsoft Windows, Microsoft Office, Altium, AutoCAD, AutoDesk Inventor, Solidworks, or equivalent.
- Familiarity with RTCA DO-160 testing and Aircraft Mechanical and Electro-mechanical systems
- Working knowledge of aircraft systems, EMI, RFI, Lightning, aircraft construction, aircraft maintenance, and aircraft operation
- Must be able to work in a team environment and be willing to help other team members in order to complete projects on time
- Be able to quickly analyze complex situations and determine the best solution
- Possess exceptional mathematical and critical thinking skills, as well as excellent communication abilities
- Possess technical writing skills and experience writing technical documents (i.e. Test Procedures, Test Reports, Failure Analysis, etc.)



- Be able to set and meet realistic deadlines and goals
- Be able to travel when needed to meet job and customer requirements

## **Organizational Core Competencies:**

- Take pride in the quality of your work assignments and maintain a positive attitude about the company and all of its customers
- Perform assigned duties in a self-motivated, self-starter, organized, time structured manner
- Maintain the highest ethical standards at all times
- Report any and all conditions affecting customer satisfaction
- Learn and understand the principles of lean manufacturing and 6s always working to the standard of "Relentless Elimination of Waste"
- Continually pursue lean manufacturing principles through education and continual implementation
- Become and remain expert in knowledge with the company's quality management system and continually put into effect the quality management system throughout operations
- Become and remain expert in knowledge with the company personnel policy and expected standards of employee conduct
- Become and remain expert in knowledge level of the company Repair Station manual
- Safely operate, maintain, clean and store, tools and equipment necessary for the production of company products
- Ensure that all tools and equipment in use have a current calibration record and identification before using
- Ensure that all equipment, tool and machine areas are kept clean and hazard free
- Ensure that all work areas and tools are kept clean, organized, and clutter free
- Immediately advise supervisor or higher authority, of all delays, potential delays, work stoppages, potential work stoppage, quality control problems, anticipated quality control problems, shortages, new item or process requirements, perceived design deficiencies, observed parts failure patterns, substandard work previously accomplished on items being worked on.

## **Engineering Job Specific Duties:**

- Electrical and Electro-Mechanical component and system design including prototype design, drawing, 3D modeling, aircraft integration, component sourcing/selection, documentation, troubleshooting, repair, and customer service
- Prepare layouts, assembly, and detail drawings for new or improved products, specifically electrical component and system prototypes, test equipment, tools, and fixtures
- Research and development of new product design and integration including 3D modeling, prototype development, coordination with vendors, customers and production for a timely development into final products.
- Plans and directs the construction of prototypes to meet internal and customer requirements.
- Provide operations with a sophisticated bill of materials in order for operations to be able to create an educated pricing structure for any given product.
- Working knowledge of RTCA DO-160 test requirements, FAA Certification/Regulation, Aircraft system design experience/knowledge



- Prepare documentation of design changes, including background of change, reasons for changes, and impact of designs to assist the director of engineering with documentation and correspondence with customers, suppliers, internal production staff, and the FAA
- Analyze various design requirements and recommend possible solutions or alternate constructions
- Prepare and evaluate tolerance stack-ups for mechanical and electrical components
- Support customer quality assurance programs by performing failure analyses on failed parts, documenting root cause and identifying corrective actions. This involves an expert understanding of the Precise Flight Quality Resolution Program (QRP), maintaining good communication interdepartmentally, and timely clear communication with customers.
- Prepare customer proposals outlining the functionality and basic design of new products as directed by marketing and engineering
- Working knowledge of aircraft systems, EMI, RFI, Lighting, aircraft construction, aircraft maintenance, and aircraft operation
- Must be cost conscious, electrically and mechanically inclined, and able to use ingenuity and imagination to solve complex design and production problems
- Check drawings, schematics, manuals, directives and any other material for compliance to appropriate governing agencies and/or company standards
- Write and review technical documents including instructions for detailed assemblies, fabrication, modification, installation and repairs; test procedures, specification documents, and manuals. Insure accuracy of materials and processes. Use precise definitions, standards, and tolerances as are published in PFI drawings, installation instructions, and such other documents as may pertain. In the event that discrepancies or errors are found, document them in writing and bring them to the attention of the supervisor.
- Able to identify qualified new and existing suppliers to meet production or development needs
- Must be able to work in a team environment and be willing to help other team members in order to complete projects on time.
- Work with all interdepartmental teams in a professional manner to accomplish given tasks.
- Manage, and work as the lead engineer on projects to ensure a high quality product, on time, and within budget.
- Work with the director of engineering for scheduling and resources
- Provide management status updates on projects
- Utilize the engineering work order request database, including logging in new EO's, maintaining, and documenting the system to ultimately provide a timely method for new product, sustaining product support, and general work flow through the engineering department.
- Control, prepare, maintain, and update all information concerning product development, drawings, assembly procedures, repair procedures, test procedures, Supplemental Type Certificates (STC), Approved Flight Manual Supplements (AFMS), Parts Manufacturing Authorization (PMA), Instructions for Continued Airworthiness, and Repair Station Documentation

#### Compensation:

1. Annual Bonus Opportunity: Up to 20% based upon year over year company sales growth.
2. Annual Paid Time Off (PTO): 15 days during first 3 years, 20 days during years 4 and 5 and 25 days from 6 years and on.
3. Annual Paid Holidays: 9 per year
4. Fully Paid Medical Insurance for employee and pre-tax 125C plan employee paid coverage of dependents



5. Retirement Plan: 401(k) Plan company match on 100% of employee contributions up to a maximum of 4% of base pay.
6. Out of Pocket Dental/Vision Reimbursement: Up to \$600 year reimbursement for out-of-pocket dental and vision expenses.
7. Wellness Benefits: Up to \$25/mo reimbursement for qualified expenses such as memberships to health clubs, yoga studios, etc.

TO APPLY FOR THIS POSITION, PLEASE EMAIL COVER LETTER AND RESUME TO  
[JOBS@PRECISEFLIGHT.COM](mailto:JOBS@PRECISEFLIGHT.COM)

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