# Senior Reliability and Maintainability Engineer

## About Us

Crescent Systems, Inc. (CSI) is a leading aerospace technology firm that designs, develops, implements, tests, deploys, and sustains reliable and rugged electrical, software, and hardware systems solutions for complex problems in the aerospace industry. Our integrated solutions teams focus on delivering high-performance products and services to meet our clients' needs. Our core values of ethics, quality, and community guide every conversation, decision, and interaction.

## Job Description

By joining the CSI Specialty Engineering team you'll have the opportunity to design, develop and test/analyze product capabilities for a wide area of developmental equipment as well as existing solutions that are repackaged to meet the rugged environment in which our equipment is expected to operate. Our engineers develop and support custom systems at the board, middleware, and complete system levels. Our hardware designs range from simple microcontroller-based peripherals to complex secure and rugged processing and type accredited networked systems. CSI engineers work as a multidisciplinary team in order to optimize system design and analysis throughout the product lifecycle.

As part of a multidisciplinary team, the CSI Senior Reliability and Maintainability engineer will be engaged in all aspects of a program from bidding to delivery. It is also critical that the candidate exhibit strong communication skills and a desire to engage other engineers to both teach and learn. Candidates should be able to present compound problems to a broad audience that may not possess subject matter expertise or be intimately familiar with what reliability and maintainability encompasses.

- R&M engineers must apply their technical skills within the systems engineering framework (including production and support equipment design) and operating from a wholistic view of the programs they execute
- R&M engineers are responsible for developing, deriving, understanding, and assigning R&M requirements for all phasing of every program
- R&M engineers must be adept at writing guides, developing analyses, and modeling to address requirements at the component, subsystem, and system level
- R&M engineers design, prepare, and review documents in a format consistent with US Military DIDs and interact at the program level during multidisciplinary design reviews (internal and external)

R&M engineers are responsible for:

- Assessing Mean Time Between Failure (MTBF), Mean Time Between Critical Failure (MTBCF), Mean Time to Repair (MTTR), and Operational Availability
- Developing reliability predictions based on prediction methods for mechanical/electrical components, systems, and support equipment
- Reviewing engineering designs from other disciplines and approving changes to existing designs when applicable
- Developing reliability analyses based on root cause of failures experienced on the ground or in flight

- Conducting Failure Reporting, Analysis, and Corrective Action System (FRACAS) and driving failure investigations to root cause and corrective action
- Performing Failure Modes and Effects Analysis (FMEA), Failure Mode Effects, and Criticality Analysis (FMECA), Built in Test (BIT) development/demonstrations and effectivity analysis, and system level severity assessments for test program trends and failures at the component, interface, subsystem, and system level
- Establishing Environmental Stress Screening (ESS) procedures and performing Highly Accelerated Lifetime Testing (HALT)

## Essential Qualifications

- BS in Mechanical, Aerospace, or closely related technical discipline and 10 years of experience OR a MS and 8 years of experience
- DOD Secret clearance or higher (with a background investigation completed within 6 years of currently enrolled CE)
- 5 years of experience with reliability principles, practices, root cause analysis, prediction calculations IAW MIL-HDBK-217 and other associated standards
- Experience with MIL-HDBK-338 and/or MIL-HDBK 1629A
- Extensive knowledge of structural, mechanical, and electrical oriented Reliability Engineering field
- Experience with FMEA, FMECA, and FRACAS process
- Comfortable with fast pace and dynamic product development environments

## Preferred Qualifications

- Experience with DoD/aerospace practices, and programmatic experience with BOE, RFP, ROM
- The ideal candidate will be able to determine and execute the right evaluation method (quantitative or qualitative) for the question at hand
- Experience with probability, statistical concepts, and mathematical modelling, mechanical modelling, and simulation tools such as Windchill and/or approved prediction methodologies for mechanical and electrical designs
- Experience with electrical circuit analysis and schematics
- A wide breadth of experience in various aircraft systems
- Experience with environmental and reliability testing
- Ability to assess system level impacts based on component-level data
- Experience in system modeling tools (Cameo or similar MBSE tool)

## Why Work for Crescent Systems?

At Crescent Systems, Inc. (CSI), we have cultivated a company culture that revolves around community and collaboration. We believe in fostering a supportive and inclusive work environment where employees are encouraged to thrive both personally and professionally. We are an employee-owned company and provide free medical, dental, and LTD to each of our employees. As an organization, we value excellence in every aspect of our business, from our products and services to our relationships with customers and our staff.

Meeting company goals and fulfilling commitments is not just a priority but a source of pride, ensuring exceptional customer satisfaction.

If you're seeking to be part of a company that upholds strong values of ethics, quality, and community, then join us at Crescent Systems, Inc. We are always looking for dedicated individuals who share our vision and are ready to contribute their skills and expertise to our dynamic team.

Apply now to explore exciting career opportunities at Crescent Systems!

---

**Job Type: Full-time**

**Salary: From $120,000.00 per year**

**Experience level: 8 years**

**Schedule: 8-hour shift, Monday to Friday**

**Application Question(s):**

- This job requires obtaining and maintaining a US security clearance. US citizenship is a requirement to obtain a clearance. Are you a US citizen?

**Education: Bachelor's (Required)**

**Experience:**

- Structural, mechanical, and electrical oriented R&M field: 5 years (Preferred)
- MIL-HDBK-217 and other associated standards: 5 years (Preferred)
- Reliability and Maintainability Engineer: 8 years (Required)
- MIL-HDBK-338 and/or MIL-HDBK 1629A: 2 years (Preferred)

**Work Location: Onsite in Richardson, TX**