RMA Tasks

1. Establish quantitative RMA requirements.
   a. Design goals
   b. Specifications
2. Allocate (apportion) the RMA requirement to system elements.
3. Apply reliability design methods.
   a. Parts and material selection
   b. Derating
   c. Stress-strength analysis
   d. Identification of alternative technologies
   e. Simplification (e.g., reduce parts count)
   f. Redundancy
4. Apply maintainability design methods.
   a. Fault isolation
   b. Diagnostics
   c. Parts standardization and interchangeability
   d. Modularization
   e. Accessibility
   f. Repair versus replace
5. Perform reliability analyses.
   a. Reliability block diagram analysis (RBDA)
   b. Failure-modes-effects and criticality analysis (FMECA)
   c. Fault tree analysis (FTA)
6. Perform maintainability analyses.
   a. Maintenance and spares provisioning
   b. Preventive maintenance intervals
   c. Predictive maintenance
   d. Ergonomics.
7. Participate in concurrent engineering activities.
   a. FMECA reviews
   b. Design reviews
8. Perform RMA predictions or demonstrations.
9. Establish RMA test procedures and analyze test data.
    a. Analyze field data
    b. Identify failure-root cause