

Q308 Outside Production/Purchased Equipment Quality Requirements - rev 4/26/01

1. Detailed fabrication and inspection planning shall be submitted to Boeing for review and imposition of mandatory inspection points prior to fabrication and shall contain the following as a minimum:
  - A. Nomenclature and identification of the article being machined and fabricated.
  - B. Drawing and specifications required.
  - C. Tooling, jigs, fixtures and other fabrication equipment to be utilized.
  - D. Detailed instruction for fabrication, inspection, and assembly of articles.
  - E. Characteristics and tolerances to be obtained.
  - F. Detailed procedures for controlling processes and cleaning, preservation and packing operations.
  - G. Special conditions to be maintained such as environmental controls, specific cleanliness levels and precautions to be observed.
  - H. Applicable workmanship standards.
  - I. Specific inspections and/or test operations to be performed during fabrication to provide verification of design characteristics.
  - J. Special handling equipment and protective devices. Configuration data, including parts lists, drawing changes, specifications, and identification data to ensure fabrication to design requirements.
  - K. Traceability to the individual performing the operation and to the inspection personnel verifying compliance.
  - L. Traceability to the critical item lists (CIL) where applicable.
2. Quality assurance shall verify, prior to acceptance, the accuracy of production jigs, fixtures, tooling masters, templates, patterns and other devices used for fabrication/inspection and establish a plan to periodically reinspect those tools used as a "media of inspection" to verify they maintain their design integrity. Records of verification of all activities shall be available for Boeing and/or government review.
3. The supplier shall establish and maintain a system for the calibration of all measurement and test equipment and measurement standards in compliance with mil-std-4566a.
4. Personnel performing or inspecting special processes shall be trained and certified. Evidence of personnel certification shall be available in the area where duties are being performed. Personnel shall be recertified as a result of unsatisfactory performance, changes in techniques or required skills, and/or extensive interruption of work performance. Records of training, testing and certification status of personnel shall be maintained and shall be available for review by Boeing.
5. A system for control of high strength threaded fasteners will be documented and implemented. High strength threaded fasteners are defined as 0.190 inch diameter or larger and 150 KSI or greater tensile strength. This system will provide for:
  - A. Approved manufacturers and distributors.
  - B. Lot traceability to true manufacturers.
  - C. Manufacturers/distributors material and test reports
  - D. Vendor certification documentation.
  - E. Physical and chemical testing at receiving inspection.
  - F. Fastener lot control and traceability through deliverable items.
  - G. Disposition of scrap and surplus fasteners.
6. Prior to release, applicable procurement documents shall be approved by quality personnel to ensure inclusion of appropriate quality requirements and associated documentation.
7. The supplier shall submit the procurement documents to the designated government quality representative for GSI determination prior to procurement release for the following purchase types: 1) purchases for products or services that are either complex or have critical application and which conformance to contract requirements cannot or should not, for economical reasons, be fully determined on receipt, or 2) purchases requiring shipment from the supplier to the government. However, procurement documentation for products or services for which conformance to contractual requirements may be adequately determined by the supplier upon receipt do not require submittal to the government quality representative prior to release, but shall be available for review. Source inspection performed by and for the convenience of the government shall not replace contractor source inspection or relieve the contractor of the responsibility for ensuring product quality.

8. Data shall be maintained for articles identified as having characteristics of quality degradation or drift with age and/or use. The date, time or cycle at which the useful life is calculated; the date, time or cycle at which the useful life will be expended; and the incurred operating time or cycles shall be recorded.
9. Controls shall be established for the handling, packaging, packing and storage of articles and materials. Specific procedures shall be provided for limited life articles and materials. These controls shall be specified on control documents, such as drawings, specifications and procedures, and shall be implemented throughout all contractor operations. Controls shall be established to prevent damage, deterioration, or improper substitution of articles or materials. Cleanliness levels for articles and materials shall be maintained as provided in the contract.
10. The supplier shall prepare, maintain and deliver an acceptance data package (ADP) for each contract end item per supplier data requirement ss-qa-214. Additionally, all dimensions of 4 decimal places or greater must be recorded and included in the ADP. Where a specification allows for the selection of an optional or substitute part or material, or selection of a part, material, or finish from a qualified parts list or qualified products list, the acceptance data package as-built configuration data shall detail the actual part, material, or finish used.
11. Records shall be retained in a safe, accessible location. This requirement shall apply to lower tier suppliers. Organizations shall be responsible for assuring that applicable records are not destroyed unless authorized in writing by Boeing.
12. Seller shall identify the true manufacturer's traceability number on each unit/package. Each packing slip and statement of certification shall identify the trace number as follows: "true manufacturing trace number \_\_\_\_\_". (trace number may be serial or batch numbers, dates, lot or heat codes or whatever relates the parts or materials to the manufacturing process. Type may be abbreviated, DC for date code, LC for lot code, HN for heat-treat number, etc.)
13. During first piece inspection all measurements must be recorded. Additionally, on all subsequent parts of the same configuration, critical/key characteristics must be recorded. This data shall be included in the acceptance data package.

For space station hardware, authorized markings are contained in and controlled by engineering drawings. No other markings, including acceptance stamps, date stamps, build paper numbers, are allowed to be stamped directly on space station hardware.