

## Quality Management System Procedure

### PURPOSE

This document defines Nortech Systems Inc's (NSI) Supplemental Supplier Quality Requirements (SSQR) used on NSI's purchase orders.

### SCOPE

These requirements are used on all materials incorporated into product configuration and realization.

### TERMS & CONDITIONS

These requirements apply to all NSI purchase orders. These requirements do not replace but supplement the specific Quality Codes.

1. Certifications of Compliance/Conformance (C of C) are required with each shipment. The C of C shall include: NSI's company name, NSI's purchase order number, any applicable drawings (including revision levels), shipment quantity, the supplier's name, and a signature by an authorized supplier representative. If you are a distributor, a C of C must be supplied from the manufacturer. If you are providing an assembly, a C of C is required for all materials and sub-level assemblies. Commercial off the Shelf (COTS) items do not require FAI documentation.
2. Supplier is responsible to verify and demonstrate compliance to all contract requirements, including work performed by sub-tier contractors.
3. Supplier must identify if sub-tier(s) will be used and what work will be performed by sub-tier(s).
4. Unless otherwise specified by the Contract or in the absence of a specific revision level shown on a drawing and/or specification, the supplier shall comply with the latest revision(s) of all Industry, National, and International, Federal, US Government documents, drawings, and specifications. The supplier is responsible for obtaining copies of Industry, National, International, Federal, US Government and all other documents applicable to and considered part of contract requirements.
5. **Counterfeit Parts Avoidance.** Unless approved in writing from buyer, seller shall use only original equipment manufacturer or original component manufacturers or their authorized franchised dealer or distributor. The supplier shall verify the procurement source and associated certifying documentation. Supplier will be required to provide evidence of authenticity. Suppliers and sub tiers shall maintain a counterfeit risk mitigation process using SAE AS5553 as a guide.
6. **Foreign Object Damage.** The Seller shall establish and maintain an effective Foreign Object Damage (FOD) Prevention Program to reduce FOD using NAS412 as a guideline. The Seller's program shall utilize effective FOD prevention practices. The program shall be proportional to the sensitivity of the design of the product(s) to FOD, as well as, to the FOD generating potential of the manufacturing methods. The written procedures or policies developed by the Seller shall be subject to review and audit by the Buyer and/or government representative, and disapproval when the Seller's procedures or policies do not accomplish their objectives.

### SPECIFIC QUALITY CODES

These requirements apply only when specifically listed on the NSI's Purchase Order:

- Q10:** The supplier shall implement and maintain a quality management system that complies with ISO 9001, AS9100, QS9000 or ISO/TS 16949. Compliance Monitoring Right of Access to your facility and your supplier's facility is an explicit requirement of the AS9100 standard and includes right of access to all relevant records associated with the products and services provided to NSI.
- Q20:** The supplier shall be registered to ISO9001, AS9100, QS9000, ISO/TS 16949 or industry equivalent. Compliance Monitoring Right of Access to your facility and your supplier's facility is an explicit requirement of the AS9100 standard and includes right of access to all relevant records associated with the products and services provided to NSI.

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- Q30:** Material certification(s) must accompany the shipment. These reports must include appropriate specifications by the lot or specific heat number and with reference to material type or specification.
- Q35: Shelf-Life Control:** If the supplier provides materials subject to shelf-life control, information regarding the shelf life shall include manufacturer's lot/batch number or date code and expiration date. The supplier shall establish a shelf life and storage control program to ensure that no material which has exceeded its shelf life is used in the assembly of product supplied to the Buyer.
- Q40:** Material must be RoHS Compliant.
- Q50:** Certificate of Analysis (COFA) must accompany the shipment. These reports must contain attributes, measurement/test method, acceptance criteria and results. These reports must include appropriate specifications by the lot or specific heat number and with reference to material type or specification.
- Q60:** Material for this order must be compliant to Defense Federal Acquisition Regulation Supplement (DFARS) 252.225.7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals. See <http://www.acq.osd.mil/dpap/dars/dfars/pdf/r20120724/252225.pdf> for further details.
- Q70:** A First Article Inspection (FAI) is required. The supplier's standard form will be acceptable. All drawing notes and tolerance dimensions must be listed on the FAI. A ballooned drawing is required.
- Q80:** A First Article Inspection (FAI) compliant with current AS9102 revision is required.
- Q90:** Source inspection is required. Coordinate with NSI prior to production to make arrangements.
- Q100:** This material or product utilizes a special process and must have a suitable certification of the special process's compliance with drawing, specifications, or purchase order requirements. Certified test reports for special processes must be supplied with the material shipment.
- Q105:** The Supplier shall maintain a documented system for managing continuous process improvement and determining root cause and corrective action, where required. The supplier shall respond to all buyer Supplier Corrective Action Requests (SCAR), to include containment, impact to delivered product, root cause, corrective action, and measured effectiveness of actions taken, within the timeframe indicated on the SCAR. Failure to respond within the allotted timeframe, or an unacceptable response may impact both the supplier's rating and approval status.
- Q110:** Product serialization is required.
- Q120:** Supplier is required to rubber stamp or includes a special note on the certificate of conformance replicating the following verbiage: "Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) Issued Production Certificate 700." This requirement must also be flowed down to any sub-tier suppliers, such as raw material or special processing providers.
- Q130:** The Certification of Compliance/Conformance (C of C) must include the date of manufacture for the material.
- Q140: Special Processes:** All special processes for Heat Treat, Non-Destructive Testing, Chemical Processing (including Paint, Primer, and Passivation), Composites, Welding, Coatings, Non-Conventional Machining & Surface Enhancement, and Materials Testing Labs must be fulfilled by Nadcap certified processors. For Nadcap information, including certified processors, access the PRI Home Page (<http://www.pri-network.org>), click on "Nadcap".
- Q150: In Process Reports:** The supplier shall furnish the reports (e.g., run or control charts) for measurements of equipment, environmental conditions or product taken in process, with each shipment. The report shall list the actual recorded readings for any temperature, chemical, electrical, dimensional, or mechanical inspection performed in process.
- Q160: Final Test Reports:** The supplier shall furnish a report of tests made during final product acceptance, with each shipment. The report shall list the actual recorded readings of any electrical and/or mechanical tests performed.

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- Q170: Final Inspection Reports:** The supplier shall furnish a report of actual measurements of drawing dimensions made during final product acceptance, with each shipment.
- Q180: Lot/Batch Traceability:** All parts, materials and related documents shall be segregated and identified by a manufacturing lot or batch number by the supplier. Documentation shall be maintained on file to permit traceability from the delivered product back through its manufacture and inspection to the procurement records on its basic parts and materials.
- Q190: Part Traceability:** All parts and related documents shall be segregated and identified by a serial number. Documentation shall be maintained on file to permit traceability from the delivered product back through its manufacture and inspection to the procurement records on its basic parts and materials.
- Q200: Export Control Regulated:** This purchase order is subject to **International Traffic in Arms Regulations (ITAR)**. These regulations restrict the flow of certain materials, devices and technical information related to such materials and devices outside the United States or to foreign nationals.
- Q210: Export Control Regulated: Export Administration Regulations (EAR):** These regulations restrict the flow of certain materials, devices and technical information related to such materials and devices outside the United States or to foreign nationals.
- Q215:** The Supplier shall participate in the Government Industry Data Exchange Program (GIDEP) in accordance with the requirements of GIDEP S0300-BT-PRO-010 and S0300-BU-GYD-010 Supplier shall be responsible for monitoring and reporting GIDEP alerts for impact to items delivered to Buyer and shall take action to eliminate or mitigate and negative affect to an acceptable level. The Supplier shall generate the appropriate failure experience data reports(s) (GIDEP ALERT, GIDEP SAFE-ALERT, GIDEP PROBLEM ADVISORY) whenever failed or nonconforming items are discovered during the PO.
- Q220: Conflict Minerals:** The Supplier must commit to complying with Section 1502 of the Dodd-Frank Consumer Protection Act and its implementing regulations. Supplier must commit to having in place a supply chain policy and process to determine if conflict materials (Tin, Tantalum, Tungsten, and Gold) from the Democratic Republic of the Congo and adjoining countries were sourced for this material.
- Q230: Prohibited Materials for Spaceflight:** All material for this order shall be free of plating, coatings and claddings composed of pure tin, solder with greater than 97% tin, cadmium, selenium, brass, or zinc. Seller shall certify that the supplied product does not contain any of these prohibited materials.
- Q235: No Pure Tin:** All material for this order shall be free of plating, coatings, or claddings composed of greater than 97% tin.
- Q240: Repair Inspection:** 100% inspection of each dimension which is affected by the repair/fixed processes are required.
- Q250:** Suppliers of Printed Boards (PB), Printed Board Assemblies (PBA) and Cables & Harnesses (C&H) may be audited and will be approved to the appropriate specification as outlined below. However, Suppliers will process and certify hardware to specification(s) contractually flowed down.
- Rigid Printed Boards (PB) {a.k.a. PWB}: IPC-A-600 (latest) Class 3 and IPC-6011/6012 (latest)
  - Printed Board Assemblies (PBA) {a.k.a. CCA}: J-STD-001 (latest) Class 3
  - Flex / Rigid Flex PB: IPC-A-600 (latest) Class 3 & IPC-6011/6013 (latest)
  - Cables & Harnesses (C&H): IPC/WHMA-A-620 Class 3
  - Sub-tier Suppliers that perform specific sub-processes used in the manufacturing of these three commodities (PBs, PBAs, and C&H) will be managed and approved by the respective commodity Suppliers as part of their overall quality management system.
- Q260: Prohibited Packaging:**
- Newspaper wadding, loose-fill dunnage, macerated (shredded) paper, peanut foam, eco-foam, shredded materials, discarded paper, and broken or recycled foam-in-place are not acceptable as packing (dunnage) materials in any container.

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- Bags made from bubble wrap or grocery paper sacks will not be used as unit packs.
- Wood containers constructed from OSB wafer board, particle board, very thin plywood or any other manufactured wood product which is fragile and will not tolerate handling, stacking, and re-closing throughout the entire transportation system and subsequent supply chain handling and forwarding.
- Used containers or boxes unless specifically designed to be reusable and are in adequate shape.
- Parts that have contact preservation (oil), or have residual fluids or operating oils, will not be packed/wrapped in paper bags, bubble wrap, sheet foam, or Kraft paper.
- Skin packs that have film-to-film attachments under the item, making part removal difficult, or subjecting the item to damage during opening. Multi-compartment skins packs or blister packs unless they can be positively re-closed after opening and provide continued part protection.
- Any type of container closure, or lack of a closure, which will result in safety issues, damaged parts or unserviceable packaging when opened.
- Any packaging material which may cause Foreign Object Debris/Damage (FOD) or part contamination, part obstruction or leave non-preservation residue.

**Q270: Country of Origin:** Country of origin marking is mandatory to comply with Customs Regulations and/or customer requirements. Packaging of articles must be legibly, conspicuously, and permanently marked with the parts' country of origin. For a product to be called "Made in USA", or claimed to be of US origin without qualifications or limits on the claim, the product must be "all or virtually all" made in the U.S. The term "United States," as referred to in the Enforcement Policy Statement includes the 50 states, the District of Columbia, the U.S. territories, and possessions. "All or virtually all" means that all significant parts and processing that go into the product must be of U.S. origin. That is, the product should contain no - or negligible - foreign content. U.S. Suppliers should contact the Federal Trade Commission, Division of enforcement since the phrase "Made in U.S.A." is under their jurisdiction. This site <http://www.ftc.gov/bcp/online/pubs/buspubs/madeusa.htm> provides guidance. For this SPOC, the designation "U.S.A." is not adequate country of origin marking. It is the Supplier's responsibility to ensure that marking on the product reflects the true country of origin of the product and that no illegal transshipment through a third country has occurred. The Supplier must also ascertain that foreign Suppliers are familiar with the country of origin rules.

**Q280: Processing and Handling of Silver-Plated Wire and Cable:** The recommended procedures of SAE ARP6400 of latest revision shall be implemented when handling silver plated wire and cable. Elapsed time since date of manufacture shall not exceed 2 years when received at NSI.

**Q290: Plating/Anodizing Finishes:** The width of any scratch shall not exceed 1/8th of an inch. If a scratch penetrates the base metal, then it is rejectable. Scratches shall not occur more than once per square inch. The total amount on a part shall not exceed 5. If any of these items are exceeded, then this is a rejectable condition and parts will be returned to the Supplier.