

Quality Assurance and Purchasing Requirements Revision 7

General requirements are applicable to all Purchase Orders

- 1: The supplier shall establish, maintain and make available to ECS BVR, ECS BVR's customers, the FAA, or the government, documentation that describes the design, inspection plans, work instructions, test plans and results, control process and equipment procedures that directly affect the quality of the parts ordered by ECS BVR.
- 2: The supplier shall guarantee that the personnel making and inspecting the parts are qualified to perform these tasks. Training records and experience information shall be made available to ECS BVR upon request.
- 3: Supplier shall maintain calibration for all inspection, measuring and test equipment traceable to a national standard (ISO 9001, ISO 10012, MIL-STD-45662A or ANSI/NCSS Z540) or as specified by the purchase order, where traceable to a national standard is not applicable.
- 4: Control of Quality. The supplier will maintain a system that complies with the specifications of AS9100, ISO9001, or the Quality system as approved for ECS BVR approved supplier list. Compliance to their specifications does not relieve the supplier of the responsibility to furnish acceptable supplies or services. Suppliers are required to retain all documentation for a minimum of 7 years from PO delivery date.
- 5: All parts and assemblies shall comply with the current revision (based on ECN effectivity disposition) of all ECS BVR documentation.
- 6: Report of Discrepancy – Deviations from drawings, specifications, or procurement requirements must be submitted to ECS BVR Buyer for deviation consideration on BVR's discrepancy material report form (DMR). The disposition must be approved by BVR Quality before shipment, unless otherwise directed by ECS BVR. One reproducible copy of the approved DMR must accompany each affected shipment (forms are available upon request).

NOTIFICATION OF ESCAPE – If a Supplier finds any non-conformance, which has any effects on delivered products, Supplier shall submit a disclosure report to BVR within 24 hours. The disclosure report shall include the following information: (1) Description of the non-conformance. (2) Part number and Traceability numbers which identifies the non-conforming parts (e.g. Serial number, Lot or Batch number). (3) Delivered quantity. (4) Containment efforts taken and immediate corrective action proposal. In addition, the Supplier shall report root cause and corrective action to BVR as soon as possible or within mutually agreed time frame.

- 7: Supplier shall provide notification in writing to ECS BVR's Quality Assurance Manager of significant product, process and/or sub-tier supplier changes, manufacturing location changes, and quality organization changes. Significant changes may require ECS BVR approval to proceed.
- 8: The supplier's facility and all applicable records for the parts on the purchase order are subject to inspection at the supplier's facility by ECS BVR and ECS BVR's customers, including the FAA and the Government.

- 9: Supplier shall provide a signed and dated Certificate of Conformance (C of C). The C of C shall include the supplier's letterhead and be signed by a company manager or designee. Each signature must have in print the name and company position of the signer. The C of C shall have, as applicable, the date of issue, the quantity shipped, the ECS BVR purchase order number, the manufacturer's part number and revision level, the ECS BVR part number and revision level, and a testament of conformance to meeting all of the ECS BVR purchase order instructions, purchase order requirements, drawings, specifications, and special process requirements.

All Electronic Components, off the shelf material, processes, and raw materials supplied to ECS BVR for the item delivered, must be traceable to the Original Manufacturer, and acquisition traceability as identified on the Purchase Order or Bill of Materials. Copies of these certifications and acquisition traceability ARE REQUIRED to accompany all shipments from Distributors. Authorized/Franchised Distribution sources, if identified by the Manufacturer, may waive this requirement only if all documents are maintained and available upon request.

Parts and Assemblies delivered to BVR shall not include Restocked Electrical Components without prior approval.

- 10: Supplier shall provide packaging and preservation in accordance with the best commercial packaging methods to ensure against surface scratches, denting, and damage to assemblies, moisture protection and for safety in handling during the shipping process.
- 11: Supplier shall be responsible for assuring that all of their sub-tier suppliers of products and/or services have in place the appropriate quality assurance and traceability programs necessary to meet ECS BVR requirements. A list of these sub-tier suppliers shall be made available to ECS BVR Quality Assurance upon request.
- 12: Chemical and Physical Test Reports: All purchase orders for chemicals must be accompanied by one legible and reproducible copy of all chemical and physical test reports. The report must contain the signature and title of conform to specifications. The purchase order number must be included on the report.
- 13: Product Identification and Traceability: The Seller shall maintain documented procedures for identification of product from receipt and during all processes of production and delivery. Traceability shall be maintained by the supplier to specific lots, including material types and shall make this information available to ECS BVR upon request.
- 14: First-Article Inspection: ECS BVR requires that all First Articles are fully compliant to AS9102. First-article samples must be accompanied by the supplier's first-article inspection report, showing results of "actual measurements, tests, and applicable drawing notes". New Parts (the first time a supplier is building a specific part) shall require ALL characteristics and notes. Updated parts (subsequent builds of a specific part by the same supplier) to a new configuration has the same requirements, however it may consist of only a delta first article or verification of changed characteristics and notes unless otherwise noted. In the event of a break in production exceeding 2 years, a new complete FAI will be required. The first article samples are to be tagged or otherwise identified. Material certifications for any raw material used and certifications for all outside processes must also be submitted with FAI report.
- 15: For Suppliers Using Metals: The supplier shall send a random sample of material to an independent laboratory for each material supplier annually to verify suppliers' certifications. This applies to materials suppliers used for ECS BVR products. This sample may be from any material type received from the material supplier within the year. The supplier must reconcile any discrepancies between the independent analysis and the suppliers' certification and notify ECS BVR of any issues.

- 16:** Identification of Shelf Life Material: Supplier must identify each item, package, or container of shelf life material with its cure or manufacture date, expiration date, and any special storage and handling conditions in addition to the standard identification requirements. The supplier must certify that a minimum two thirds of the useable shelf life is available at time of delivery.
- 17:** Product Obsolescence Requirements: As an approved ECS BVR supplier, you are required to notify ECS BVR if a part listed on this order or any of its material components, are planned for obsolescence by you or your sub-tier suppliers. All efforts must be made to keep ECS BVR informed of the future viability of the item(s) listed on this order.
- 18:** All material and/or processes must be performed to the latest revision of the specification including superseding specifications. All material and/or process certifications must show the revision of the applicable specification.
- 19:** The supplier shall employ appropriate measures to ensure that Foreign Object Debris (FOD) is controlled to prevent damage or degradation of deliverable product.

The following quality requirements will be applicable only when they are identified on the purchase orders:

- Q001:** For Electronic Part Distributors: A Counterfeit Electronic Part Prevention program letter shall be signed off by the appropriate supplier official.
- Q002:** For Electronic Parts: Items shall be shipped in electrostatic dissipative packaging and labeled as Electrostatic Discharge (ESD) sensitive items. If the device is not deemed ESD sensitive by the manufacturer, the devices may be shipped in the original manufacturing packaging. Items removed from the original manufacturing packaging shall be placed in electrostatic protective packaging for shipment.
- Q003:** Functional Test Reports: If functional test reports are required per the purchase order, the shipment must be accompanied by a legible and reproducible copy of the actual test results identifiable with the test parameters and products submitted. These reports must contain the signature and title of the authorized representative for the agency performing the test and must conform to specific requirements.
- Q004:** Printed Circuit Boards: A potted micro section reflecting complete manufacturing processes performed must be included with each lot of new date coded boards for all military orders only. All selective gold or gold plated boards shall be individually bagged so as not to be scratched, nicked or corroded from normal handling or storage. The packing material shall be anti-static and contaminate free.
- Q005:** The supplier shall have legible identifying marks on each part.
- Q006:** A test specimen (e.g. production method, number, storage conditions) shall be submitted for design approval, inspection, investigating or auditing. The purchase order will describe the test specimen requirements.
- Q007:** A flow down from ECS BVR's customer to the supplier that requires special consideration, including key characteristics. The requirements shall be detailed on the purchase order.
- Q008:** Special Process suppliers shall meet the requirements of SAE AS7003 by satisfactory audit to National Aerospace and Defense Contractors Accreditation Program (Nadcap) (AC) 7004. Audits are to be performed by PRI or AECMA-EASE.

Q009: Note: Purchase order is for United Technologies end product and the following requirements apply:

Special Process suppliers shall be certified / registered to AS/EN/JISQ 9100 or meet the requirements of SAE AS7003 by satisfactory audit to National Aerospace and Defense Contractors Accreditation Program (Nadcap) (AC) 7004. Audits are to be performed by PRI or AECMA-EASE.

Q010: For Government Contracts: Suppliers shall comply with the requirements of Department of Defense Federal Acquisition Regulations Supplement ("DFARS") 252.225-7014, "Preference for Domestic Specialty Metals" Alternate I (Apr2003). The supplier shall also flow this requirement down their supplier chain as necessary.