

**Sinclair Manufacturing Division****QUALITY CLAUSES-FLOW DOWN OF CUSTOMER REQUIREMENTS TO SUPPLIERS**

- 1) **Quality Management System:** The seller (herein referred to as Supplier) shall have a quality management system that meets the current ISO9001 standard.
- 2) **Quality/Inspection System:** The supplier shall maintain a quality/inspection system which is in conformance with the requirements of ISO9001 to include: Receiving, First Article Inspection, In-Process Inspection and Final Inspection including inspection and Test Records supplied to Sinclair Manufacturing Co. at the point of First Article Inspection (if requested on the Sinclair Mfg. purchase order) and upon completion and shipment of said order.
- 3) **Calibration System:** Supplier's calibration system shall meet the requirements of: ISO9001, ANSI-Z540 or MIL-STD-45662. The system shall ensure the timely recall and calibration of all company and employee owned measurement and test equipment used for product acceptance. Suitable records shall be maintained and be available for review.
- 4) **Certificate of Conformance Certification Statement:** (Cof C) attesting to the conformance of material (which shall include chemical and/or physical reports with "actual" or "typical" as contractually required results of tests conducted on all materials shipped, verifying conformance to a specification referenced on drawings and/or purchase orders) outside services performed, hardware, manufacturing, authenticity (and not counterfeit) etc.
- 5) **Certificate of Conformance Contents:** The C of C shall be signed and dated by an authorized representative of the Supplier and shall accompany an order upon receipt of said items to Sinclair Manufacturing. The C of C shall also contain: Manufacturer's name; Sinclair Part No.; Sinclair Revision level; Supplier/Distributor's name and address (when required by P. O.); Sinclair Manufacturing Co.'s name and address; Quantity of parts in the shipment; Date code and/or Lot number (may be omitted for Sinclair's contract manufacturing); Certification statement.
- 6) **Certificate of Conformance Origins:** The manufacturer and/or the distributor of its products shall complete a C of C or C of A and maintain them. On packaged devices when a Cof C is supplied by the manufacturer it shall be copied and passed through to the end customer. The Distributor's certificate shall also accompany each shipment of product to Sinclair Manufacturing Co. In no case shall the manufacturer's certificate be altered or show signs of alteration.
- 7) **Control of Special Processes:** In addition to the requirements of clause 3, both the supplier and any subcontractors used shall be a Sinclair Mfg. and/or Customer approved source for said Processes. These include operations subject to process controls such as: Coating, joining, heat treating, cleaning, non destructive test, etc. The supplier shall be approved as per above to perform specific required Special Processes, or use Special Processes suppliers acceptable to Sinclair Mfg. and Sinclair Mfg. customers. A list of such suppliers can be supplied upon request.
- 8) **Right to Entry:** With appropriate notice, Sinclair Mfg., Sinclair Mfg's customers and regulatory authorities shall be afforded the right of entry to all the supplier's premises at any level of the supply chain involved and the right to verify that the contracted work, all applicable records and material conforms to specified requirements. This clause shall not apply to cases where Sinclair Manufacturing Co. is procuring a supplier's standard item.
- 9) **Certifications:** Certification test data shall be traceable to the organization performing the testing, special processing and/or inspection(s) requested via Sinclair Mfg.'s purchase order. All factual information shall be included to demonstrate conformance of specification and/or purchase order requirements.
- 10) **Counterfeit Materials:** All product shipped to Sinclair must comply with AS5553 Counterfeit Electronic parts; Avoidance, Detection, Mitigation, and disposition.
- 11) **Report of Non Conformities or Inconsistencies with Product and/or Purchase Orders:** The supplier shall review the Purchase Order and product manufacturing, processing and/or testing requirements prior to its initiation. If errors or inconsistencies are noted with the PO, part and/or other document referenced by the PO, the supplier shall immediately notify Sinclair Mfg. or its acting delegation. Seller proceeding with work without written concurrence does so at his own risk. Product will not be accepted by Sinclair Mfg.'s Quality Assurance Department until the purchase order and all documentation referenced thereon properly describe the product delivered.
- 12) **Quality Flow Down to Sub Tier Suppliers:** The supplier's Quality System shall assure all relevant Purchase Order requirements are flowed down to their sub-tier suppliers. The supplier's sub-tier suppliers are responsible to comply with the same specifications and requirements specified on this Purchase Order.
- 13) **Requirement for the Qualification of Personnel:** The supplier's Quality System shall assure all relevant Purchase Order requirements are met and all applicable processes affecting the final quality of the product in the Purchase Order were rendered by qualified personnel.
- 14) **No Changes without Approval:** Except for first time purchases, items furnished under this purchase order shall be identical in form, fit and function to a product previously accepted by Sinclair Mfg. Any deviations from the design data shall be approved by a completed QF144-Supplier Request for Product or Process Change (SRFPPC).
- 15) **Component Substitution:** No component substitution is allowed without Sinclair Mfg. approval. Alternate or equivalent parts shall be approved by purchase order amended prior to shipment and acceptance by Sinclair Mfg. Quality and Purchasing Department.
- 16) **Notification of Obsolescence:** The supplier shall notify Sinclair Mfg. of any planned material or component obsolescence prior to the acceptance of any purchase order. In addition, the supplier shall notify Sinclair Mfg. of any plans to obsolete material on any and all existing orders with sufficient notice to facilitate, when applicable, an option for last time buy.
- 17) **Prohibition of Pure Tin:** No 100% Tin, Cadmium or Zinc is allowed. 4% Pb (Lead) by weight minimum required on any Tin/Lead Finish. Purchase orders should be rejected if the SCD/PNR or PO calls out 100% Sn. Supplier is to notify Sinclair Mfg. immediately to take corrective action.
- 18) **Shelf Life Materials:** Any product, substance or material that has a limited life shall have a minimum shelf life as defined in the source control drawing. The limited life period shall be identified on the product or supporting documentation. An MSDS sheet is to be provided with each shipment of product.

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- 19) **Traceability:** Material shall be traceable by part number, manufacture and batch/lot code and to the data supplied in accordance with its specification through the as-built configuration documentation (i.e. manufacturing records for each deliverable item.)
- 20) **Specialty Metals Clause Flow Down to Supplier:** Reference: DFARS 252.225-7014, DFARS Subpart 225.7002-2 and DFARS 225.872-1 (a) or (b). DoD's interpretation of this **specialty metals clause** is that it prohibits the contractor (including its suppliers at every tier) from incorporating into military parts, components, and/or items deliverables "**specialty metals**" (identified in the clauses, including titanium and stainless steel) which have been melted outside the United States, its possessions or Puerto Rico, unless certain limited exceptions set forth in the clause or DFARS Subpart 225.7002-2 apply. One such exception is for specialty metals melted in a qualifying country or incorporated into an article manufactured in a qualifying country. Those countries are listed at DFARS 225.872-1 (a) or (b). If a distributor or other sub tier supplier is the source of your material, ensure that the specialty metals clause requirements have been flowed down. Also take the necessary steps to ensure that your supplier provides only specialty metals (such as titanium or stainless steel) that have been melted within the United States or a qualifying country, and if required, proper certifications are issued.
- 21) **Corrective Action Request:** When a quality problem exists, Sinclair Manufacturing Co. shall request Corrective Action from the Supplier. Such requests require timely responses and shall be recorded on the Sinclair Mfg. form or equivalent. The supplier is encouraged to use the 8D problem solving format. Failure to comply could result in disqualification and removal from the Approved Supplier List.
- 22) **Nonconforming Material:** The supplier shall maintain a documented system to ensure nonconforming products are immediately identified as nonconforming and segregated from conforming products and withheld in a designated and controlled area for review and disposition. Any departures from drawings, specifications or other procurement requirements shall be submitted to Sinclair Mfg. purchasing for review and disposition. Any deviations from the design data shall be approved by a completed QF144. This may be obtained through Supplier Quality or Purchasing.
- 23) **FOD Foreign Object Damage Prevention:** To establish the requirements for the prevention of contamination or foreign objects from becoming entrapped in the supplier's product during manufacturing, assembly, testing or handling. This requirement applies to all manufacturing personnel and work areas pertaining to FOD prevention. It applies to all design and manufacturing processes, performance measurements, training, material handling and parts protection, housekeeping, tool accountability, hardware accountability, lost items and physical entry into FOD critical areas. FOD: Foreign object debris/damage is that damage which downgrades or renders the aircraft system or equipment unusable or unsafe for operation.
- 24) **Source Inspection:** If Sinclair Manufacturing inspection is required at the source of manufacture (Source Inspection) as noted on the Sinclair Mfg. purchase order, the following activities shall take place: Upon completion of the parts the supplier shall contact the Purchasing Agent to schedule Source Inspection. The supplier shall allow 48 hours for coordination and other paperwork. The suppliers shall make available any required drawings, specifications or other related documents. The supplier shall make available any tools, gages, or other inspection instruments necessary to establish conformance of the articles. This includes personnel with the requisite skills to operate such devices. The supplier shall provide reasonable assistance and facilities to Sinclair Mfg. representatives engaged in the activities related to Sinclair Mfg. procurement.
- 25) **Record Retention:** All records of test and inspection results, and administrative quality documentation required by contract or subordinate specifications (quality records) shall be retained by the supplier for a period of not less than 12 years after the creation of the record unless a longer period is specified on the Sinclair Mfg. purchase order. If the supplier subcontracts the record creation (for example: the supplier sending a part out for radiography), the supplier shall impose the same record retention on their subcontractor.
- 26) **Rework Limitations:**
  - a. Production travelers or similar documentation such as the complete manufacturing history, including rework, shall be recorded.
  - b. Rework qualification. Devices containing any unqualified rework shall not be shipped until the rework has been successfully qualified.
  - c. Qualification of rework. If any rework is to be qualified, and unless otherwise allowed, the manufacturer shall build a qualification lot of reworked devices in which certified rework processes are performed. Qualification of rework by this method shall require Sinclair Mfg. approval of the test plan and submission of rework samples for evaluation.