

AC Incorporated Quality Clauses

001. **Quality System:** The supplier shall maintain a Quality System that is in compliance with ISO 9001:2000, AS9100, MIL-Q-9858A or NADCAP AC7004 Inspection & test Quality System. Evidence of a recent Quality Manual must be produced if required. (Recent is within the last 5 years from the revision date of this Clause) 7-01-2009
002. **Supplier Control:** Suppliers shall conform to drawings and specification requirements. Suppliers system shall assure flow-down of all applicable quality and technical requirements, capabilities to produce hardware and adequate methods of assuring compliance. Suppliers shall ensure all flow-down of quality and technical requirements to sub-tier suppliers.
003. **Sub-Tier Supplier Approval:** The supplier CANNOT subcontract to a lower-tier facility without prior written approval from AC Incorporated unless the sub-tier is approved by our customer. (This is for the customer for whom work/process is being performed).
004. **System to Control Processes:** Seller is responsible for maintaining a system to control processes under this order at their facilities and processes performed at lower tier sub contractors. Seller shall perform systematic, periodic evaluations of equipment, methods and material required in performance of processes to assure positive control. Seller shall perform on-site surveys of subcontractor processes prior to initial performances of process activity and no later than every two years there after unless otherwise specified in this order.
005. **Lockheed Martin's QCS-001:** Processes being performed on this order are directly related to a Lockheed Martin Purchase Order. Therefore the supplier must be listed in Lockheed Martins QCS-001 supplier data base as an Approved Supplier for each process listed. **(PMS purchasing system business list)**
006. **D6-82479 Boeing Quality System:** Seller is required to maintain a Quality System in compliance with Boeing document D6-82479, BQMS Requirements for Suppliers and Appendix B to such document as each may be amended from time to time. AC Incorporated/Boeing reserves the right to conduct surveillance at seller's facility to determine that Seller's Quality System meets the requirements as set forth herein. A copy of Boeing Document D6-82479, BQMS Requirements for Suppliers, including all appendices and addenda can be obtained at the following website;
<http://www.boeing.com/companyoffices.doingbiz.supplier/>
007. **Calibration System:** The supplier shall have a calibration system which meets the requirements of MIL-STD-45662 or ISO 17025.
008. **Acceptance Test Procedure:** The supplier shall develop a separate detailed test procedure which encompasses the final acceptance/verification requirements of the specification(s) listed in the purchase order. This acceptance Test Procedure, and subsequent changes, shall be approved by AC Incorporated Product Assurance prior to use.
009. **Special Process Certification:** Suppliers engaged in the performance of special processes activity include but not limited to, Radiography, Ultrasonic, Magnetic Particle, Liquid Penetrant, Eddy Current, Heat Treat, Welding, Soldering, Chemical Conversions, Plasma Spraying, Plating, Physical Destructive Testing, Potting and Molding, Conformal Coating, Environmental Testing, Priming and Painting etc. Must submit an applicable procedure to AC Incorporated for approval prior to the initiation of production efforts.

0010. **Special Process Re-Certification:** The supplier shall be responsible for any and all certification expirations. The Supplier shall notify AC Incorporated 6 months prior to certification expiration due dates so a survey can be initiated from AC Incorporated customers.
0011. **Government Inspection:** Government Inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government Inspection can be accomplished. The QAR shall be notified 48 hours in advance of the time hardware and materials are ready for Inspection or Test. The supplier shall furnish copies of purchasing documents to the QAR upon his request. In the event the QAR cannot be located, our purchasing agent should be notified immediately.
0012. **100% Inspection:** The supplier shall perform and record 100% inspection of all measurable characteristics (attribute data) for each part I.A.W drawing & specifications. This data shall be submitted to AC Incorporated and include allowable tolerance limits, actual measurements' and instrument used including an identifying number for the instrument.
0013. **First Article Inspection-AS9102:** The supplier shall maintain internal processes for the accomplishment of each First Article Inspection (FAI) in accordance with AS9102, latest revision. FAI's are to ensure delivered hardware is in compliance with requirements of the purchase order. If the supplier has delivered acceptable first article of the same configuration to AC Incorporated within 12 months the requirement is waived. The First Article Inspection Report must accompany the shipment.
0014. **Documentation Maintenance:** The supplier shall retain objective evidence of the hardware of the (manufacturing, assembly, inspection and special process records) for 7 years after the contract is complete. These records shall be made available to AC Incorporated upon request.
0015. **Life limited/Age Control:** All items with limited shelf life shall be clearly marked with the manufacture's name, type of material, shelf life date of manufacture and usability limiting date. A minimum of 50% of shelf life must be remaining on all items on this order. If items have no shelf life limitations, supplier shall so state in shipping documents.
0016. **Material Control:** Submit with each shipment one reproducible record of Actual chemical and or physical analysis and a certification of conformance to the applicable material specifications. The certification shall contain a list of the specification (s) including a revision letter(s) and identification by Heat, lot, or Melt number. If material is supplied by AC Incorporated, a copy AC shipping document must accompany your return shipment to AC along with a certification that all hardware was procured from the material supplied by AC. In either case all certifications must be dated and signed by an official of your organization. ALL unused material (including any drop) supplied by AC must be returned to AC identified with Purchase Order number and material type unless otherwise directed by AC buyer.
0017. **Packaging:** The supplier's Quality Control organization shall be responsible for ensuring that hardware/items of this procurement are packaged in such a manner the dimensional integrity is preserved, contamination and corrosion are prevented, and no physical damage occurs or, when specified, that packaging is in accordance with the applicable Packaging, Handling, Storage, and Transportation (PHS&T) and requirement documentation cited in and attached to the order.

0018. **Solder-ability:** Acceptance of materials procured by this purchase order will be predicated upon compliance with criteria for solder-ability testing as set forth in MIL-STD-202, Method 208; MIL-STD-750, Method 2026; MIL-STD-883, Method 2003 as applicable or IPC-A-610 electrical assemblies, IPC-A-620 wire harness, J- STD-001 soldered electrical and electronic assemblies.
0019. **Mercury Contamination:** Materials furnished by the supplier shall not contain mercury compounds and shall be free of mercury contamination. Materials furnished should not have come in contact with any mercury or mercury compounds or with mercury containing devices/equipment. Supplier shall issue a Mercury Free statement on Suppliers C of C.
0020. **Electrostatic Discharge Control:** The supplier shall be responsible for assuring that all hardware produced, handled and packaged is I.A.W DOD-STD-1686, DOD-HDBK-263 Class 2 or AFLCR 65-8 ESD program.
0021. **Electrostatic Discharge Control:** The supplier shall be responsible for assuring that parts are procured, handled and packaged I.A.W ESD DOD-STD-1686, and DOD-HDBK-263 Class 3 or AFLCR 65-8 ESD program.
0022. **Foreign Object Debris/Damage (FOD) Prevention:** The supplier shall maintain a FOD Program. Supplier's FOD prevention program shall include the review of design and manufacturing processes to identify and eliminate foreign object entrapment areas and paths through which foreign objects can migrate. Supplier shall ensure work is accomplished in a manner preventing foreign objects or material in deliverable hardware. Supplier shall maintain work areas and control tools, parts and material in a manner sufficient to produce the risk of FOD incidents. Supplier shall document and investigate each FOD incident and ensure elimination of the cause of each such incident.

Supplier FOD prevention program shall contain the following:

- A. Identify a FOD control person responsible for implementing FOD prevention, awareness and training.
 - B. Shall include periodic self assessment of its internal FOD prevention practices and measure effectiveness of program compliance to requirements.
 - C. Shall provide annual FOD training to its employees.
 - D. Shall have guidelines for closing inaccessible or obscured areas and compartments during assembly for the prevention of FOD entrapment.
 - E. Shall have a method to flow down these requirements to sub-tier suppliers.
 - F. Delivery of product shall be deemed as delivered FOD free.
0023. **Lockheed Martin's Special Process Approvals:** Processes being performed on this order are directly related to a Lockheed Martin Purchase Order. Therefore the supplier must be listed in Lockheed Martins supplier data base as an Approved Supplier for each process listed. **(CPS, purchasing system business list)**

0024. Lockheed Martin's COTS Requirement:

TCR821 This requirement applies to Non-Commercial Off The Shelf (COTS) items only. Seller agrees that the Work produced internally and/or the Work procured from sub-tier suppliers under this Contract shall comply with the following requirements unless a documented request for change is approved by the Lockheed Martin Procurement Representative.

1. Work shall not be moved from the original location of manufacture to another location of manufacture within a production facility or to any other production facility.
2. Where first article inspection is required, work shall not be moved from the original location where the Work was produced at the time of first article inspection acceptance.
3. No changes shall be made to the design, manufacturing processes, materials or activities that affect fit, form or function.
4. A fit, form or function analysis shall be performed documented, and included with any request for change.
5. A documented process shall be in place to review, identify and submit a request for changes to the Lockheed Martin Procurement Representative.

A documented request for change shall be submitted to the Lockheed Martin Procurement Representative 30 days prior to planned implementation. The change will not be implemented unless approved by the Lockheed Martin Procurement Representative.

QUALITY TERMS FOR PURCHASE ORDERS

Source Inspection

- 0025.** The Government has the right to perform Government Quality Assurance at the Supplier's plant as may be necessary to determine contract requirements on all supplies or services included in this contract.
- 0026. NASA Government Source Inspection:** All work on this contract is subject to inspection and test by the Government at any time and place. The Government quality representative who has been delegated NASA quality assurance functions on this contract shall be notified immediately upon receipt of this order. The Government representative shall be not notified forty-eight (48) hours in advance of the time items are ready for inspection or test.
- 0027. DOD Government Source Inspection:** Notice- Government Inspection required prior to shipment from your plant. Upon receipt of this contract, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government Inspection can be accomplished.
- 0028. DOD Source Inspection:** Copy- on receipt of this contract, promptly furnish a copy to the Government Representative who normally services your plant, or if none, to the nearest Army, Navy, Air force, or defense Logistics Agency Inspection office. In the event the representative or office cannot be located, our purchasing agent should be notified immediately.
- 0029. Customer Right of Inspection:** AC's customer has the right to inspect any or all work included in this contract at the supplier's facility.

- 0030. Customer Mandatory Source Inspection:** Source inspection by AC's customer is required on this contract.
- 0031. AC's In-Process Source Inspection:** All work performed under this contract requires in-process AC source inspection. Notify the AC buyer as work planning is identified and seventy-two (72) hours prior to product work initiation and seventy-two (72) hours prior to final inspection being performed for possible in-process and final source inspection requirements. Evaluation of personnel, equipment, methods, and items may be concluded to determine compliance to the contract requirements.
- 0032. AC Final Source Inspection:** All work performed under this contract requires AC inspection and test verification at the Supplier's facility. Notify the AC buyer at least seventy-two (72) hours in advance of the item being ready for final source inspection.

Control/ Performance

- 0033. General Compliance:** The Supplier shall provide a written and signed Certificate of Compliance to the effect that all materials, processes, and/or furnished items supplied under this contract are as specified.
- 0034. Specific Compliance:** The Supplier shall specifically sign and certify that all parts, materials, processes, and finished items supplied under this contract were inspected, tested, and found to comply with the requirements of this order. Inspection and test data shall be maintained and are subject to AC's examination. All applicable drawing and/or specifications and their revision level shall be referenced.
- 0035. Statement of Quality:** The Supplier shall certify, in a Statement of Quality, that all required inspections and tests have been performed and found to comply with the requirements of this contract. The certification must be signed and the signer's position or title given. The certification must identify the serial number, lot number, date of manufacture, etc. of the delivered item, state the specification or drawing number and revision, whether inspection records give attributes or variable data, and the location and date of the inspections and tests. Inspection and test data shall be maintained for seven (7) years (if not otherwise specified) and are subject to AC's examination.
- 0036. Qualified Products Requirements:** Parts shall be procured only from manufacturers (or their authorized distributors) that are listed on the Qualified Products Lists (QPL's).
- 0037. Inspection and Test Reports (Actual):** The supplier shall submit signed inspection reports with actual results proving conformance to the applicable drawings and specifications for items shipped under contract.
- 0038. Material Test Reports (Actual):** The supplier shall submit a signed chemical and physical test report per the applicable specification for the material shipped under this contract with the actual test results from samples of this specific material.
- 0039. Physical Test Reports (Actual):** The supplier shall submit a signed physical test report per the applicable specification for the material shipped under this contract with actual test results from samples of this specific material.
- 0040. Chemical Test Reports (Actual):** The supplier shall submit a signed chemical test report per applicable specification for the material shipped under this contract with actual test results from samples of representative of this material.

- 0041. Material Test Reports (Typical):** The supplier shall submit a signed chemical and physical test report for all material shipped under this contract. The report may include typical results from samples representative of this material.
- 0042. Shelf Life Data:** The supplier shall state, in writing, the starting date, shelf life, and expiration date for all limited shelf life items supplied under this contract. All items shall have 75% or more of their shelf life remaining at the time of shipment to AC.
- 0043. Inspection and Test Plan:** An inspection and test plan for control of articles furnished in accordance with the Purchase Order shall be prepared and specifically written to outline the product flow from receipt of materials through fabrication, assembly, and test operations. The plan shall define the inspection points throughout the manufacturing sequence and describe the inspections. A general description of procedures and records used will be adequate. Two (2) copies of the plan shall be forwarded to the buyer before work described begins unless otherwise specified.
- 0044. Quality Manual:** A copy of the supplier's Quality Manual, or equivalent, shall be submitted for review before the work on this contract begins.
- 0045. Supplier Inspection Requirements:** The supplier is responsible for performing, or having performed, all inspection and test necessary to substantiate that the items furnished under this contract conform to contract requirements, including any applicable technical requirements for specified manufacturer's parts.
- 0046. Supplier Inspection of Supplies:** The supplier shall provide and maintain an inspection system covering items under this contract and shall tender to AC for acceptance only items that have been inspected in accordance with the inspection system and have been found by the supplier to be in conformity with contract requirements. As part of this system, the supplier shall prepare records evidencing all inspections made under the system and the outcome. These records shall be kept complete and made available to AC during performance and for as long afterwards as required by contract. AC may perform reviews and evaluations, as reasonably necessary, to ascertain compliance. These reviews and evaluations shall be conducted in a manner that will not unduly delay the work under this contract.
- 0047. Inspection Program (Department of Defense):** The supplier's inspection program shall be in accordance with Mil-I-45208; "Inspection System Requirements", latest revision unless otherwise specified.
- 0048. Inspection Program (NASA):** The supplier's inspection program shall be in accordance with NASA Quality Publications NHB 5300.4 (1C) "Inspection System Provisions for Aeronautical Space System Material, Parts, Components, and Services."
- 0049. Quality Program (Department of Defense):** The suppliers Quality Program shall be in accordance with Specification Mil-Q-9858, "Quality Program Requirements", latest revision unless otherwise specified.
- 0050. Calibration Certificate:** A signed calibration certification is required with each item certifying it has been calibrated and that its accuracy is traceable to the National Institute of Standards and Technology (NIST). The certification shall give the applicable NIST report number(s) to which accuracy is traceable.

- 0051. Traceable Certification:** A signed certification shall be submitted with each shipment identifying the manufacturer (and his location) that applied to the lot code or serial numbers of the items. If the items are not marked with these codes, certification or labels shall provide this data. Also, this data shall provide traceability to these and like item's manufacturing records.
- 0052. Traceability:** All items furnished on this contract shall have documentation on file to permit traceability from the delivered item back through it's manufacture and inspection to the procurement records on it's constituent parts and materials. These records shall be sufficient to prove conformance to all applicable specifications and drawings and shall provide means for identifying all like items. Records shall be retained for a period of time specified in applicable item specifications, or seven (7) years if not otherwise specified in this contract.
- 0053. Record Retention:** Retain all item records pertaining to materials or services provided under this contract for a period of five (5) years.
- 0054. Record Retention:** Retain all item records pertaining to materials or services provided under this contract for a period of ten (10) years.
- 0055. Radiographic Testing:** All microcircuit and semiconductor cavity devices shall undergo radiographic inspection in accordance with Method 2020 of Mil-Std-833 (microcircuits) or Method 2076 of Mil-Std-750 (semiconductors). All acceptable parts shall be marked with a blue dot of ink conforming to Mil-I-43553.
- 0056. Particle Impact Noise Detection (PIND) Testing:** All microcircuit and semiconductor cavity devices shall be PIND tested in accordance with Method 2020 of Mil-Std-833 (microcircuits) or Method 2076 of Mil-Std-750 (semiconductors). All acceptable parts shall be marked with a blue dot of ink conforming to Mil-I-43553.
- 0057. Possible ESD-Sensitive Devices:** Devices susceptible to ESD must be packaged so that no static damage can occur during shipment to AC. Suppliers shall identify items as ESD-sensitive with proper markings on the packaging and/or containers. (Ref. DOD-HDBO-263 and Mil-Std-1686).
- 0058. Known ESD-Sensitive Packaging:** All devices provided under this contract on which this Quality Term is imposed shall be packaged so that no static damage can occur during shipment to AC. Suppliers shall these items as ESD-sensitive with proper marking on packaging and/or containers. (Ref. DOD-HDBO-263 and Mil-Std-1686).
- 0059. Hazardous Material Data:** A Material Safety Data Sheet shall be provided with hazardous material when delivered to AC.

The hazardous material shall be labeled with:

- a. Chemical name, common name, or trade name
- b. Appropriate hazard warnings including exposure health hazards and first aid and emergency procedures.
- c. Name, address, and phone number of the manufacturer or other responsible party.

- 0060. Certificate of Transportability:** The subject hazardous material shall be certified to be air transportable as delivered to AC or shall state what additional actions are required to make it

air transportable. The Department of Transportation classification number (UN xxx, NA xxx, etc.) shall be provided on the item's container or in supplied data that accompanies the item.

- 0061. Part Identification, Packaging, and Shipping:** All items and sub-packages including raw materials (plate, bar, extrusions sheet, etc.) supplied under this contract shall be identified with complete nomenclature and part number as specified by the applicable drawing, specification, catalog, purchase order, etc. Materials are to be shipped in keeping with good commercial practices to preclude any damage during shipping to AC. Containers shall be identified on the outside with the AC purchase order number.
- 0062. Workmanship:** All items must conform to workmanship requirements as specified on applicable drawings and specifications. If no workmanship is specified, the items shall be fabricated and finished to normal industry acceptance standards.
- 0063. Product Nonconformance:** Items that do not conform to the requirements of this contract shall not be shipped to AC without prior written approval of AC Quality Assurance. Request approval for shipment through AC buyer. Failure to comply may result in return of shipment at the supplier's expense. Any material supplied under this purchase order or subcontract which is returned by AC Fabricated Products because of a nonconformance and is subsequently resubmitted by the supplier to AC must be accompanied by a written description of the rework accomplished to correct the nonconformance and corrective action taken to prevent recurrence.
- 0064. Process Control:** The supplier shall obtain AC approval of all special processes to be used in the performance of this contract. Special processes include plating, welding, nondestructive examination, finishes, soldering, chemical processes, etc. The supplier shall maintain objective evidence of process qualification and control in accordance with applicable specifications. The procedure(s) and qualification/certification data shall be submitted to AC Fabricated Products for approval prior to the work being processed by the vendor. If any changes in the certification, qualifications, and/or processes are made, resubmittal and re-approval is mandatory. An AC survey of operations may be required before approval is given.
- 0065. Configuration Control:** The supplier agrees not to make any changes in items delivered under this contract at anytime in the future which would affect physical or functional interchangeability, reliability, or repair and maintenance operations unless the part identification is changed.
- 0066. First Item Inspection:** The supplier must provide a sample first item for dimensional and functional approval prior to making the production item(s). The supplier is required to perform 100% inspection/test and to record the actual data for the first item of this contract. The records shall identify each characteristic, the allowable tolerance limits, and the actual value measured. The first item inspection report must accompany the first part shipment.
- 0067. Calibration:** Test and measuring equipment which is used for process control or inspection must be appropriately calibrated with traceability to the National Institute of Standards and Technology or natural standards. The supplier may use Mil-Std-45662 for compliance to this requirement.
- 0068. Raw Metals:** Raw metals (plate, bar, extrusions, sheet, etc.) must be identified by the producing mill identifying alloy and condition (if applicable). If not mill marked, actual

chemical test data is required except for aluminum. On aluminum, actual physical and typical chemical data is acceptable.

0069. Government Industry Data Exchange Program (GIDEP): On subcontracts exceeding \$500,000 the following shall be imposed.

0070. The subcontractor shall participate in the appropriate interchange of GIDEP. This program is an invaluable tool in the government's war against inefficiency and is limited to participating activities. Data entered is retained by the program and provided on a privileged basis. Compliance with this clause shall not relieve the subcontractor from complying with any other provisions of this contract.

0071. Defense Contract Management Command (DCMC) inspection is not required at your facility. DCMC inspection will be performed at AC Fabricated Products Receiving Inspection.