

# Purchase Order Quality Assurance Codes

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- Q01 INSPECTION SYSTEM** – At minimum the Supplier shall establish and maintain an effective system (MIL-I-45208) or (Mil-Q-9858) for the control of quality which will assure compliance with contractual requirements. The system shall be documented to assure control of quality throughout all phases of contract performance and shall provide for the prevention and ready detection of nonconformance as well as positive corrective and preventive action. All provisions therein apply to this Purchase Order and shall be made available to the Government/Aerostructures review upon request. If vendor is ISO and/or AS9100 accredited they meet the inferred minimum requirements for an inspection system.
- Q02 OBJECTIVE EVIDENCE OF QUALITY** – By delivery of items of this purchase order, Supplier certifies that all requirements of the specifications applicable to this order are complied with. Supplier shall make available to Exelis all inspection results and test data necessary to support evidence of such compliance.
- Q03 Aerostructures ACCESS CLAUSE** - Authorized representatives of buyer, and its customer, government or FAA when accompanied by Buyers representative, shall have the right to visit the Supplier's and its subcontractors facilities at any time during the performance of this purchase order. These visits are for the purpose of ascertaining progress, making inspections, performing surveillance and witnessing tests. The Buyer shall give prior notification of such visits, to minimize interference with the normal operations of Supplier's plant. Such visits by Aerostructures and/or its customer do not absolve the Supplier of the responsibility to provide acceptable product. Verification by Aerostructures's customer does not preclude subsequent rejection by Aerostructures of any nonconforming items.
- Q04 SUPPLIERS RECORD RETENTION** - The supplier is responsible to maintain all inspection records of products being delivered to Aerostructures. This includes travelers, material and plating certifications, electrical test data. Records shall be kept for (7) seven years from shipment of product. This information shall be made available to Aerostructures upon request.
- Q05 CERTIFICATE OF CONFORMANCE** - A Certification of Conformance (CoC) signed by the Suppliers Quality Representative shall be submitted with each lot of parts shipped to Aerostructures indicating compliance to each material, process and/or drawing requirement/specification, revision applicable to this Purchase Order. It must also include at a minimum the following items:

Purchase Order number & Purchase Order Line Item Number

Part Number & Part Number Revision

Quantity & Unit of Measure

Lot or Serial Number(s)

Expiration Date (if applicable)

Date of Manufacture (if applicable)

Date of Ship

Storage Temperature (if applicable)

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Additionally suppliers CoC certifies items delivered are original and not counterfeit.

- Q06 PACKING & PACKAGING REQUIREMENTS** - The items on this order shall be packed, packaged and preserved in such a manner as to assure adequate protection from deterioration and physical damage due to material handling or shipment. The material shall arrive at Aerostructures free of nicks, dents, gouges, scratches and undue oxidation. Parts subject to oxidation shall be packaged with a suitable preservation or an oxidation inhibiting paper such as non-rust paper. When required by the purchase order and/or referenced documents, the supplier shall pack and package supplies to specific packing and packaging specifications.
- Q07 REMOVED**
- Q08 PROPER REVISION LEVELS** - In the event there is a conflict from the stated purchase order drawing revision level and the drawing supplied to your facility, immediately notify the Buyer for resolution.
- Q09 CATALOG INFORMATION** - The Supplier shall furnish with shipment of material, a copy of the catalog specification sheets which describes, as applicable, the material requirements, envelope and interface dimensions and any operating characteristics necessary to inspect the item(s) at Aerostructures Receiving Inspection Department.
- Q10 SUPPLIER SUB-TIER CONTROL** - The Supplier is responsible for insuring all items produced from its subcontractors conform to all requirements of the purchase order. Supplier shall ensure all applicable provisions of this document are flowed down to its subcontractors, including the use of AS9102 for first article inspection.
- Q11 PRODUCT AND PROCESS CHANGE APPROVAL** - Supplier shall obtain approval from Aerostructures of changes in product and/or process definitions. Supplier shall notify Aerostructures 90 days prior to any intended change of location.
- Q12 CALIBRATION CONTROL** - Subcontractor's Calibrations Control system shall be compliant with ANSI/NCSL Z540 or ISO 10012 (latest revision) and all calibrated equipment/records shall be traceable to NIST or International system of Units (SI), in accordance with, manufacturer's specifications. Should the need for special instructions be necessary; special instructions shall be given.
- Q13 IN-PROCESS INSPECTION** – and/or audits are required at points selected by the Aerostructures Quality Assurance Representative and/or as specified by the Purchase Order, the drawing or applicable documentation.
- Q14 AEROSTRUCTURES PRE-CAP INSPECTION** - Buyer's representatives will perform pre-cap (in process) workmanship inspection at Supplier's Facility. Supplier must notify Buyer a minimum of five (5) working days prior to the date material will be available for pre-cap inspection. Final acceptance of material furnished hereunder will be made at Buyer's facility.
- Q15 FINAL INSPECTION AND/OR TEST** – Final inspection and/or test shall be performed prior to shipment in accordance with applicable drawings, product specifications, Purchase Order requirements and/or other applicable documentation.

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- Q16 PREVIOUSLY REJECTED ITEMS** – Supplier shall note on return shipping documents for items that Aerostructures has previously rejected whether these items have been reworked, replaced or repaired. Repairs shall not be performed without prior written approval from Aerostructures.
- Q17 NON-CONFORMING PRODUCT NOTIFICATION** - Supplier shall notify Aerostructures when nonconforming product has been produced prior to delivery.
- Q18 NON-CONFORMING PARTS OR MATERIALS**- Supplier shall not conduct material review disposition on materials incorporated into or on parts supplied to Aerostructures, unless written approval is obtained from Aerostructures QUALITY ASSURANCE. Shipping documents shall indicate the Discrepancy Report(s) covering the non-conformances.
- Q19 FOREIGN OBJECT DEBRIS** - The supplier shall employ appropriate housekeeping practices to assure timely removal of residue/debris generated, if any, during manufacturing operations and/or normal daily tasks. Sellers shall determine if sensitive areas that may have a high probability for introduction of Foreign Objects should have special emphasis controls in place appropriate for the manufacturing environment. The supplier shall determine the need for, and implement, FOD prevention awareness training programs.
- Q20 ACCEPTANCE SAMPLING PLANS** - Sampling inspection procedures used by the Supplier shall be in compliance with MIL-STD-105, MIL-STD-414, or ANSI/ASQC Z1.4 (latest revision). Aerostructures's Customer may require approval of Supplier's Acceptance Sampling Procedures Prior to allowing acceptance sampling.
- Q21 CERTIFIED PHYSICAL & CHEMICAL TEST REPORTS** - Certified Physical and/or Chemical Test Reports are required for each material of this purchase order. These reports shall be signed by a Quality Representative; this representative shall also state their title. The report shall bear the lot number and a separate report shall be forwarded for each lot.
- Q22 TENSILE TEST REPORT** – Supplier shall furnish with shipment of material, a report of tensile testing of three (3) test bars cast for each casting heat lot and heat treated with the castings. Test bars shall be as described in the material specification and may be cast separately.
- Q23 SPECIAL PROCESSES CERTIFICATIONS** - Any special processing performed, e.g., heat treatment, plating, paint, welding, etc., shall be certified individually and completely. Including related data such as thickness of plating, paints, temperatures, hardness results, etc...
- Q24 NONDESTRUCTIVE TEST (NDT) REPORT** - Unless otherwise specified by the order, drawing or specification, NDT shall be performed on 100% of the lot of products. With each delivery of products on the order, the supplier shall furnish a certified test and/or inspection report that shows the required NDT (i.e. radiographic, ultrasonic, magnetic particle, penetrant, etc.) test was performed on all delivered products. The certification shall be issued by the organization that actually performed the NDT and include: Exelis order number, applicable NDT specification, heat lot number, number of parts tested, accepted, rejected, the reason for rejection, the tester's/Inspector's name, certification level, date of expiration of certification, and date of inspection.
- Q25 TEST/INSPECTION DATA** - Verifiable quantitative test and/or inspection data is required with each part or lot shipped to Aerostructures.

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- Q26 VARIABLE DATA** - The Supplier's variable data (measured values) for each item delivered shall show conformance to all inspections and/or tests specified by the applicable drawings, specifications, or Supplier's Acceptance Test Procedure as approved by Exelis Aerostructures.
- Q27 ATTRIBUTE DATA** – The Supplier's Attribute Data (Go/No-Go) for each lot delivered shall show conformance to all inspections / tests specified by the applicable drawings, specification or Supplier's Acceptance Test Procedure as approved by Exelis Aerostructures.
- Q28 FIRST ARTICLE INSPECTION (FAI) Non-AS9102** - First-Article Inspection (FAI) is required on the first shipment of a lot. One production part shall be identified with a tag as "First Article" and accompanied by a verifiable qualitative and quantitative test/inspection data, and submitted to Aerostructures for approval prior to shipment of the remaining parts of a lot. The Aerostructures Buyer shall notify the Supplier, in writing, of First Article disposition and information regarding shipment of the remaining parts.
- Q29 FIRST ARTICLE INSPECTION (FAI) AS9102** – The supplier shall furnish a First Article Inspection report that conforms to AS9102 requirements on the first production run of product. AS 9102 forms must be used. Material & Processing certifications are required. If you have performed a FAI on this part being procured within the past 2 years and the revision level the same, a FAI is not required at this time. (If after the 1st article has been approved, the supplier changes his method of production, Aerostructures shall be notified of these changes in order to determine if a new first article inspection will be required.) Also, per AS9102 section 5.3, the supplier shall perform a full FAI, or a partial FAI for affected characteristics, when any of the following events occurs:
1. A change in the design affecting fit, form, or function of the part.
  2. A change in the manufacturing sources(s), process(s), inspection method(s), location of manufacture, tooling or materials, that can potentially affect fit, form, or function.
  3. A change in the numerical control program or translation to another media that can potentially affect fit, form, or function.
  4. A natural or man-made event, which may adversely affect the manufacturing process.
  5. A lapse in production for two years or as specified by customer.
- Q30 EXELIS SOURCE INSPECTION (ESI)** - The inspections and tests indicated by the following subparagraphs are subject to Exelis Source Inspection when they are included as part of the Purchase Order. Supplier shall notify the Exelis Purchasing Department 5 days prior to the required inspection. Exelis reserves the right to perform in-process inspections and/or audits at any time during the life of this Order.
- Q31 SHELF LIFE MATERIAL**– The supplier shall mark material, space permitting, or if bulk material, the containers of the items of this Order with the shelf life expiration date and/or cure date as applicable. Include on packing list, the temperature at which the product(s) should be stored and maintained. A minimum of seventy-five percent of shelf life must be remaining on unit at date of shipment.

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- Q32 LOT SERIALIZATION** - Parts shall be lot serialized. Supplier's configuration record shall be maintained at all times by lot number.
- Q33 EXPIRATION DATE IDENTIFICATION** - Material shall be identified with Aerostructures purchase Order number, Date of Manufacture, Expiration Date, and applicable Military, Prime Contractor and/or Aerostructures specification number.
- Q34 CURE DATES** -Parts and Materials shall be coded with applicable cure date. Cure date certification, specifying applicable Military, Prime contractor and/or Aerostructures specification number, shall be provided with each lot shipped to Aerostructures.
- Q35 FASTENER QUALITY ACT** - Articles purchased on this Purchase Order must be produced in accordance with the Fastener Quality Act (FQA) of July 26, 1998. All test laboratories must be approved by NIST or their authorized designee and be listed on the NIST's list of Approved Laboratories. In addition to your company's Certificate of Conformance, Certified Test Reports are required to accompany this order. Additionally, Your Certificate of Conformance must include one of the following statements:
- (A) All fasteners meet the requirements of the FQA and records of compliance are maintained on file. Or,
- (B) All contained fasteners were produced PRIOR to the implementation of the FQA and are therefore exempt [if manufactured before July 26, 1998].
- Q36 SPECIAL PROCESS CONTROL** – The Supplier shall, as a minimum, demonstrate a degree of control over these processes to provide assurance that specifications are complied with detailed procedures. Copies of special process procedures and certifications shall be supplied to Aerostructures upon request. If the Supplier uses facilities other than his own, that facility is subject to the same conditions stated herein.
- Q37 VARIATION MANAGEMENT OF KCs** - The following requirements are applicable to Key Characteristics if identified on specification drawings:
- Supplier shall develop and maintain a Variation Management Program in accordance with AS 9103.
  - Supplier procedures shall include Process Control Documents (PCDs) which detail how key characteristics are manufactured, critical process steps identified, and how variation shall be analyzed, evaluated, and controlled. Supplier shall submit a procedure to Aerostructures Quality for approval prior to manufacture of parts.
  - Supplier shall submit to Aerostructures upon request, control charts, histograms and/or other analytical charts. Supplier shall provide evidence of analysis of data and actions taken in response to identified variations, outside of established statistical control limits.

Supplier shall flow down to sub tier suppliers the applicable requirements in the purchase order, including key characteristics, when the control; of key characteristics are a requirement of this order.

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- Q38 NADCAP SUPPLIERS** - Supplier shall use NADCAP approved suppliers for special processes. Suppliers that are not NADCAP approved must be submitted to Aerostructures for approval.
- Q39 SIKORSKY AIRCRAFT PART** – The following statement “**THIS IS A SIKORSKY AIRCRAFT PART**” shall be clearly marked on all purchase orders issued by the supplier and any of its subcontractors. All Certificate of Conformance and process certifications shall also include the above statement.
- Q40 ORIGINAL SUPPLIER AND SPECIAL PROCESSOR CERTIFICATE OF CONFORMANCE** – Accompanying each shipment of items covered by this purchase order, the supplier and all of its special processors that are called out on the Sikorsky Aircraft Approved Source List shall submit an original Certificate of Conformance. The original certificate shall be signed and dated by an authorized representative of the company. Use Sikorsky Material and Process Specifications Index (SS7777) to determine the latest revision of specifications. Sikorsky Material and Process Specifications Index can be obtained from Exelis Aerostructures.
- Q41 SUPPLIERS RECORD RETENTION** – Sikorsky product records shall be kept for (10) ten years and (40) years respectively for Flight Safety/Flight Essential parts.
- Q42 SIKORSKY APPROVED PROCESS SOURCES ARE REQUIRED** - Sikorsky approved sources are required for plating, surface coating/ finishes, heat treat, welding, and Non-Destructive Testing. Sikorsky Approved Source List can be obtained upon request Any Sikorsky subcontractor or supplier, at any tier in the process, performing Non Destructive Inspection, shall submit part specific technique sheets. The technique sheets shall be submitted for approval by Aerostructures prior to any delivery.
- Q43 SIKORSKY FLIGHT SAFETY PARTS** – Flight Safety Parts shall be planned and produced in accordance with Sikorsky Aircraft Corporation specification SS9211.
- Q44 LM AERO APPROVED SPECIAL PROCESS SUPPLIERS** – Are required per QCS-001.
- Q45 LM AERO FOREIGN OBJECT DEBRIS/DAMAGE (FOD PREVENTION)**
- Q46 LM AERO SUPPLIER SHIPPING INSTRUCTIONS**
- Q47 BOEING APPROVED SPECIAL PROCESS SOURCES** - All processing on this purchase order to be processed in accordance with D1-4426 Boeing Approved Processors. The supplier and all of its sub-contractors shall use Boeing approved special processors as called out in the Boeing document D1-4426. If the source the supplier plans to use is not listed in the D1-4426, authorization must be obtained from Aerostructures prior to use.
- Q48 BOEING HARDWARE** - All hardware purchased on this Purchase Order must be obtained by an approved Boeing Manufacturer per Boeing D1-590. If Distributors are used, they must be approved by Boeing Distributors per Boeing D1-4426 section IIIb.
- Q49 REMOVED**
- Q50 BOEING D1-9000 FLOWDOWN** - Supplier is required to be BOEING approved to D1-9000 (Latest Revision), Basic Quality System Requirements for work performed on this contract. Proof of approval is required.

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- Q51 CAD/CAM QA SYSTEM FLOWDOWN** - Supplier is required to be BOEING approved to D6-51991 (Latest Revision), CAD/CAM Quality Assurance System Requirements for work performed on this contract. Proof of approval is required.
- Q52 GOVERNMENT OWNED SPECIAL TOOLING** – Tooling produced or used under this purchase order is property of the U.S. Government. The supplier shall conform to applicable requirements of DAR Appendix B “Government Property in Possession of Contractors” pursuant to this order.
- Q53 GOVERNMENT SOURCE INSPECTION** - Government Inspection is required prior to shipment from Suppliers facility. Upon receipt of this order, Suppliers shall be responsible to notify the Government Representative who serves the Suppliers facility so that planning for Government Inspection can be accomplished. If a representative’s office cannot be located, notify the Aerostructures Buyer for further instructions.
- Q54 GOVERNMENT RIGHT OF ENTRY** - All work on this order is subjected to inspections and tests by the Government at all times and places (including the complete performance period) and, in any event prior to shipment. The Government Representative who services the Supplier plant shall be notified at least forty-eight (48) hours in advance of the time articles are ready for inspections and/or tests.
- Q55 PART IDENTIFICATION** - Material procured by this Purchase Order shall be permanently identified with the part number, revision, Federal Manufacturer Code, in accordance with MIL-STD-130 and/or drawing and specification requirements.
- Q56 D.S.C.C. APPROVED CERTIFICATION** - By acceptance of this purchase Order, The Supplier certifies that a D.S.C.C. Approval Certificate number, covering material purchased herein, or evidence of QPL approval is available or in effect.
- Q57 PASSIVATION:** - Prior to passivation treatment per AMS-QQ-P-35, parts that have un-machined surfaces which have been subjected to any high temperature process such as, casting, forging, heat treating, or welding etc. must be mechanically descaled in accordance with ASTM A380, section 5.3 thru 5.3.4 to remove discoloration, oxidation and scaling. Aerostructures prefers the abrasive vapor blasting process with all close tolerance, holes, threads, machined diameters and surfaces masked to prevent impacting and or damage. Supplier shall flow down to sub-tier suppliers the applicable requirements in the purchase order, including special cleaning instructions.
- Q58 DOMESTIC SPECIALTY METALS** - If a U.S. Government Contract number is called out on the face of the purchase order, the supplier shall only use raw materials that are IAW DFAR Clause 252.225-7014, “Preference for Domestic Specialty Metals, Alt 1.” Metals must have been melted in the United States, its outlying areas, or a qualifying country listed in DFARS 225.872-1. These instructions must be flowed down to all sub-tier suppliers. Compliance certification shall be made available to Aerostructures upon request.
- Q59 HEAT LOT TRACEABILITY**- The Supplier shall legibly mark in a permanent manner, each part furnished under this Order with a heat lot code, number traceable to final heat treat, the mill heat lot number, forging heat number and/or casting heat number as applicable (or the Aerostructures assigned heat lot code number). Lots which have permanent Serial Numbers on all parts shall be traceable by Serial Number with correlation to certifications.

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- Q60 WELDER CERTIFICATION** – Welding shall only be performed by welders certified to the requirements of the welding specification listed on the drawing.
- Q61 ESD PROGRAM** - Supplier shall conform to the requirements of DOD-STD-1686 (latest revision), Electrostatic Discharge Control Program (ESD) for arts/materials on this Purchase Order. Certification of Compliance to ESD requirements shall accompany each shipment to Aerostructures. Ref: Implementation: MIL-HDBK-263 (Appendix K), MIL-STD-129 Marking for Shipment and Storage and paragraphs 5.1 and 5.3 through 5.10 of MIL-STD-1686.
- Q62 ESD PACKAGING** - Products susceptible to damage from static electricity shall be packaged in tubes, tape & reel, or containers constructed of waterproof, electrostatic protective, static dissipative material with no talc, or residues that would inhibit solder ability or contaminate leads or finish of product. Connectorized products shall be fitted with static shielding dust caps. When static shielding caps are not available for the product, selection of specific packaging material shall be the responsibility of the supplier providing aforementioned requirements.
- Q63 ELECTRICAL TEST CERTIFICATIONS** - Any electrical or physical tests required by specification and/or drawing shall be documented and certified.
- Q64 SOLDER CERTIFICATION** – The Supplier shall furnish with shipment of material, a certification stating that the soldered electrical and electronic assemblies were fabricated and inspected to the applicable requirements of and J-STD-001. Acceptability for electrical/electronic assemblies shall be in accordance with IPC –A–610.
- Q65 SOLDER PART MATERIAL FINISH** - Unless otherwise specified on the drawing, the base materials and surface finishes of all parts and materials used in the construction of the delivered items shall be free of pure tin, zinc or cadmium. Assembly solder finish shall be compatible with a tin/lead soldering process. Tin finishes, if used, must contain a minimum of 3 percent alloying elements by volume. If the item solder finish has been approved, the supplier changes the solder composition from tin/lead finish to lead free solder; Aerostructures shall be notified of these changes.
- Q66 TOOLING-** Tooling produced or used under this order shall comply to the following:
- Supplier to forward to Aerostructures Quality Assurance one copy of the tool design drawings.
  - Supplier is to permanently stamp or etch on a non-functional surface the part number and property number of the tool as assigned.
  - Supplier to forward to Aerostructures a copy of the actual tool inspection covering all dimensions affecting tool functions and product dimensions.
- Q67 ANNUAL INVENTORY-** The supplier shall provide Aerostructures with a yearly inventory of all tooling in their possession no later than 15 January. The inventory shall include:
- The date on which the inventory was conducted
  - The property number and Aerostructures tool number
  - A statement of tool condition.
- Supplier is also required to notify Aerostructures of any non-conformances associated with tooling.



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- Q68** **BYPASS RQC-** This code is by Aerostructures to by-pass Receiving Quality Control. Applies to general merchandize that is not utilized in an end item product to a customer.
- Q69** **OBSOLESCENSE** – The supplier shall immediately notify Aerostructures as soon as any part/product/item being procured or is required to be used in the manufacturing process is identified as obsolete or is scheduled to become obsolete.