



# **External Provider Quality Requirements Manual**

## **AEC-300**



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## **Introduction**

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This manual contains the contractual quality assurance requirements applicable to all Aerocon Engineering Company (Aerocon) Purchase Orders.

The **General Quality Assurance Requirements** in Section 1 of this document apply to all Purchase Orders specifying compliance to AEC-300.

Additionally, the Specific Quality Assurance Requirements in Section 2 of this document apply when the applicable Quality Code (Q1, Q2, etc) is specified on the applicable Purchase Order.

Questions or comments regarding these requirements should be directed to the buyer listed on the applicable Purchase Order.

**Daryoush Benny Younesi**

President

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## **Section 1 – General Quality Requirements**

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### **1 Sub-Tier Control**

The external provider shall be responsible for flow down of all the requirements of the Aerocon purchase order applicable to external provider's sub-tiers.

The external provider must apply appropriate controls to its direct and sub tier external providers to ensure that requirements are met.

The external provider must maintain record of its control of its direct and sub tier providers.

### **2 Facility Access**

During the performance of this purchase order, your quality control or inspection and manufacturing process are subject to review, verification and analysis by Aerocon, Aerocon customers, regulatory authorities, and or DOD representative. This requirement is applicable to the external provider's facilities where Aerocon products and services are processed as well as external provider's sub-tiers.

### **3 Reworked / Replaced Material or Product**

When returning previously rejected Material or Product to Aerocon, the external provider shall reference the Nonconformity Notice (NCN) number on the shipping document, and shall state if the items have been replaced or reworked.

### **4 Non-Conforming Material or Product**

Upon Notification from Aerocon that Material or Product furnished by the external provider is found nonconforming upon receipt, the external provider will notify Aerocon, in writing, of adequate and acceptable corrective action taken to eliminate the root cause of the nonconformity.

External provider must report to Aerocon if a Material or Product has been released from the supplier and subsequently found not to conform to the applicable design data.

### **5 External provider Variation Request**

For consideration by Aerocon, any departures from drawings, specifications, or other purchase order requirements must be recorded and submitted on an External Provider **Variation Request (EPVR)** and held in external provider's nonconforming Material or Product area pending written disposition instructions.

Material or Product shipped on a EPVR must be tagged with EPVR number or identified as directed by Aerocon quality control.

### **6 Preservation, Packaging and Handling, including Corrosion Protection**

The external provider shall assure that all Material or Product supplied to Aerocon is packaged and/or preserved, including the proper application of all corrosion preventative treatments, as necessary to prevent deterioration, corrosion, or damage during shipment, handling, and storage.

## **7 Record Retention**

The external provider shall maintain adequate records of all First Article, In Process Inspection, Receiving Inspection, Final Inspection and Tests. The records shall indicate the nature and number of observations made the number and type of nonconformity found, the quantities approved and rejected, and the nature of corrective action taken, as appropriate. The first Article Inspection Reports shall include all drawing dimensions, general notes, and tolerance range along with actual measurement results.

This information and all supporting documentation such as raw Material or Product certifications, special processing records and certifications, manufacturing records, operation / routing sheets / travelers, shall be retained by the external provider.

These records shall be maintained and available to Aerocon, Aerocon's customer, regulatory authorities, and or DOD for a period of not less than 2 years after closing of the purchase order, unless otherwise specified.

## **8 Statement of Conformity**

A statement of conformity shall be supplied with each shipment. The statement of conformity must certify that all inspections and tests have been performed and results of these inspections and tests have determined conformance to the approved design data.

## **9 Drawings Specifications and Quality requirements**

The external provider quality management system shall assure that the latest applicable drawings, specifications, and quality requirements are compatible with current purchase order. Unless otherwise specified, Military standards and specifications utilized shall be to the latest revision in effect on the date of the purchase order.

## **10 First Production First Article**

External provider is advised to submit a first article with a first article inspection report to Aerocon for evaluation and approval prior to commencing production.

## **11 Departure from Approved Design Data**

Aerocon customer, regulatory authorities, and or DOD have approved the design data that are communicated to external providers, through purchase orders and prints. No departure from the approved design data is allowed.

Any changes to the approved design data require Aerocon approval.

## **12 Certification Form and Content**

External provider must provide certification for every shipment made to Aerocon. Certifications shall be traceable to the Material or Product submitted and shall contain the signature and title of the authorized representative of the external provider. Certifications shall contain, at a minimum, Aerocon's purchase order number, Aerocon's part number, revision letter, and lot/batch/serial number(s) of the parts making up the shipment.

### **13 Product Marking**

Each Product supplied to Aerocon shall be permanently and legibly marked with the following information, at a minimum, unless otherwise specified by Purchase Order:

- The letters “MFR:” followed by Aerocon’s FSCM/CAGE Code: “09ME2”
- The Product’s part number
- The Product’s lot, batch, or serial number as applicable.

If the a part is too small or that it is otherwise impractical to mark a part with any of the above-required information a tag attached to the part or its container must include the information that could not be marked on the part.

### **14 Inspection Sampling**

Unless otherwise specified in the purchase order, the external provider may use sampling procedures when tests are destructive or when quality history, inherent characteristics or operation repeatability due to numerically controlled machine justify less than 100% inspection. Sampling plan shall be according to ANSI/ASQ Z1.4-1993 or later. All sample plan shall be modified to a zero based acceptance. Accept=0 Reject=1.

### **15 Foreign Object Damage & Debris (FOD)**

The external provider shall assure that Material or Product supplied to Aerocon is free from FOD and protected against FOD.

### **16 Software Control**

The external provider shall implement appropriate controls when external provider use computer-aided manufacturing (CAM), computer-aided-inspection (CAI) or computer-aided-testing (CAT) software and related digital input/output data for deliverable product and services.

### **17 Control of Customer Property**

The external provider shall be responsible for managing the care of customer property while it is under external provider’s control or being used by external provider. This can include, but not limited to, intellectual property, including customer furnished data used for production, and inspection, packaging, and shipping.

- 1- Examples of customer property:
  - a- Returned product
  - b- Tooling
  - c- Test programs
  - d- Packaging containers (boxes)
  - e- Product undergoing service
  - f- Test equipment
  - g- Inspection and test gages
  - h- Labels

- 2- External provider shall identify, verify, protect and safeguard customer property provided for use or incorporation into the product.
- 3- External provider shall be responsible for reporting to Aerocon any customer property lost, damaged or otherwise found to be unsuitable for use.

### **18 Customer Designated or Approved External Providers**

The external provider shall use Aerocon Customer Designated or Approved External Provider including process sources, such as special processes.

The external provider should notify Aerocon of nonconforming processes, products, services and obtain approval for their disposition.

### **19 Counterfeit Parts Prevention**

The external provider should have a process in place appropriate to the external provider and the products for the prevention of counterfeit or suspected counterfeit part use and their inclusion in Aerocon products delivered to Aerocon and or to Aerocon's customer.

### **20 Employees Awareness**

20 The external provider should ensure that its employees are aware of their contribution to product or service conformity, product safety, and importance of ethical behavior.



## **Section 2 – Specific Quality Requirements**

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### **Q1A – Q1F Quality Control System Requirements**

The external provider must maintain the appropriate level of Quality Management System as defined below.

Q1A: External provider must maintain an Inspection System in accordance with MIL-I-45208A.

Q1B: External provider must maintain a Quality Management System in accordance with ISO 9001, latest revision.

Q1C: External provider must maintain a Quality Management System in accordance with ISO 9002, the latest revision.

Q1D: External provider must maintain a Quality Management System in accordance with ISO 9003, the latest revision.

Q1E: External provider must maintain a Quality Management System in accordance with AS9100, the latest revision.

Q1F: External provider must maintain a Quality Management System in accordance with AS9100, the latest revision, with the exception of Section 7.3 “Design and Development.”

Q1G: External provider must maintain a Quality Management System in accordance with Title 14 CFR Part 145

### **Q2 Verification of Material or Products: Source Inspection, at External Provider Facility**

Evaluation / acceptance of Material or Product will be performed at the external provider’s facility by Aerocon quality representative. This will include inspection of the external provider’s systems, procedures, and facilities. The external provider shall provide at no cost, the necessary facilities and equipment, provide data, and perform tests as required by applicable drawings, specifications, and Inspection Instructions under observation of the Aerocon External provider Quality representative.

Notwithstanding the provision of this clause, all Material and Products shall be subject to inspection and acceptance by Aerocon and / or customer representative after delivery. Acceptance of Source Inspection constitutes the External provider’s authorization to ship the Product and a copy of the Source Inspection Report must accompany each shipment.

### **Q3 Domestic Specialty Metals**

Domestic Specialty Metals requirements in Defense Acquisition regulation supplement (DFARS) 252.225-7014 Alternate 1 is applicable to this order. Original manufacturer certification required. Certification must list country where Material or Product was smelted.

### **Q4 Metallurgical First Article**

The external provider must provide evidence that all Material or Product qualification test and inspection have been performed and results meet the applicable Material or Product specification and drawing.

**Q5 AS9102 First Article Inspection**

First Article must be performed in accordance with AS9102.

First Article Inspection reports must be included with shipment.

First Article products must be identified as “First Article”.

### **Q5A External provider First Article Inspection**

First Article must be performed using the external provider's established method.

First Article Inspection reports must be included with shipment.

First Article products must be identified as "First Article".

### **Q6 Certificate of Conformance**

Each shipment must be accompanied by a legible copy of a Certificate of Conformance.

At a minimum, the certificate must include the following:

- External provider Name and Address
- Aerocon P.O. number and quantity shipped
- Part Number
- Drawing/Part revision
- Serial Number, Batch Number, Heat Number, or Cure Date as applicable.
- Signature and Title of Authorized Representative.

The certification of conformance must contain a statement that all inspection and tests have been performed as required by drawing specification or purchase order. Material or Products controlled by heat number, batch number, or cure date etc; must be linked to the certificate by the applicable controlling number. Blanket statements of conformance are unacceptable as are statements of belief rather than fact.

Whenever possible, the original certificate as signed by the external provider's Authorized Representative should be submitted.

### **Q7 Casting / Forging Material or Product Requirements**

External providers shall be responsible for casting / forging Material or Product requirements.

Castings / forgings shall be procured from Approved Aerocon external providers. Applicable documentation shall be made available to Aerocon upon request.

Casting / forging tooling shall not be reworked or relocated to another facility without prior permission.

### **Q8 Process Approvals**

(Use of Aerocon or NADCAP approved sub tiers)

Special processes such as welding, heat-treating, plating, coating, nondestructive evaluation, etc; may require Aerocon / and or Aerocon customer approval of process equipment, procedures, and personnel as applicable.

The current approval status of processing sub tiers must be confirmed with Aerocon prior to performing the process.

### **Q9 Physical and / or Chemical Test Reports as Applicable**

Each shipment must be accompanied by a physical / chemical test report as required by the applicable Material or Product specification. The report must contain the specification revision and the signature and title of the authorized representative of the facility performing the tests. Unless otherwise specified, Material or Product used to complete this order shall be of current revision of the specification at the time of the purchase order acceptance. Material or Product certifications that only report “typical” chemistry or physical property values are unacceptable. The certification shall assure specification conformance.

### **Q10 Functional Test Certification**

Each shipment must be accompanied by a legible and reproducible copy of the external provider’s certification identifiable with submitted Material or Product for which test reports are on file and available for examination. This certification must contain the signature and title of the authorized representative and assure conformance to specified requirements.

- Actual test report required.
- Test Certificate of Conformance

### **Q11 Process Certification**

Each shipment must be accompanied by a legible and reproducible copy of a certificate containing the signature and title of an authorized representative for all processes used, such as; heat treating (including time, temperature, date processed and quantity processed), welding, plating, non-destructive examination etc...

The certificate shall include the process used, the applicable specification and revision, and the name of the facility that performed the process or test. The certification shall be traceable to the external providers manufacturing documents.

### **Q12 External provider Inspection Report**

The External provider shall provide with each shipment a detailed inspection report. Each characteristic (including drawing notes) inspected or tested shall be listed as a single line entry and shall indicate the acceptability of that characteristic, including all actions taken in connection with an identified discrepancy. Inspection and testing records shall, as a minimum, indicate the nature of the observations together with the number and type of the nonconformities found.

Inspection / testing records shall, as a minimum, include the following:

- External provider’s Name
- Purchase Order Number
- Drawing or Plan Revision
- Quantity Inspected
- Quantity Accepted
- Quantity Rejected
- Characteristic Inspected
- Note: See General Requirements Section 1 for minimum AQL