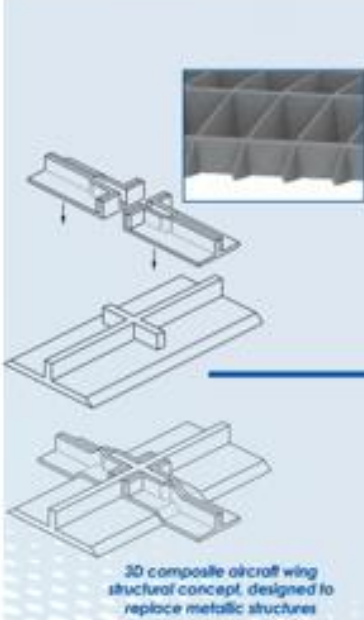


AEC Product and Service Provider Manual



our technology

-  3D Composites
-  Contour Weaving
-  Steered Weaving
-  2D Composites
-  Composite Sandwich (X-COR™, K-COR™, CTC™)
-  Liquid Resin Molding
-  Press and Autoclave Curing

AEC product and service providers; on time and on target.



ALBANY ENGINEERED COMPOSITES

Albany Engineered Composites Procedure

Number:	7400
Revision:	H
Effective Date:	08/14/2019
Page:	1 of 20
Function:	Supplier Quality

External Provider Manual

1.0 TABLE OF CONTENTS

1.0 TABLE OF CONTENTS 1

2.0 PURPOSE & SCOPE 2

3.0 POLICY 2

4.0 EXTERNAL PROVIDER 2

 4.1 Prohibited Practice 2

 4.2 Altering Document Data 2

 4.3 Contract Changes & Effectivity 2

 4.4 Certifications 3

 4.5 First Article Inspection Requirements (FAIR) 5

 4.6 Special Process 6

 4.7 Nonconforming Products & Material Review 7

 4.8 Statistical Product Acceptance Requirements per ARP9013 9

 4.9 Supplier Quality Management Systems 9

 4.10 Government Inspection (GI) 10

 4.11 Imported Product 11

 4.12 Counterfeit Parts Prevention 11

 4.13 Variation Management of Key Characteristics (KCs) 11

 4.14 FOD Control Program 12

 4.15 Packaging and Preservation 12

 4.16 Record Retention 12

 4.17 Shelf Life 12

 4.18 Environment 12

 4.19 Quality Codes 13

5.0 REFERENCE 18

 5.1 Documents: 18

 5.2 Forms: 19

2.0 PURPOSE & SCOPE

Establishes product assurance requirements for Albany Engineered Composites. Describes quality assurance requirements between an External Provider and AEC. Applicable to all contracts for procured aerospace product within the limitations described herein. Specific AEC customer contract requirements supersede those affected elements of this document.

3.0 POLICY

AEC has the right of access to the External Provider's and the External Provider's sub-tier facilities, to ensure compliance to all Contract requirements. AEC may request that the External Provider provide objective evidence of compliance.

4.0 EXTERNAL PROVIDER

4.1 Prohibited Practice

AEC prohibits the following unless approved in advance in writing. Violation may result in disqualification of the External Provider for future business. The External Provider flow's down the following requirements in sub-tier contracts for AEC related work.

The External Provider notifies AEC in writing prior to:

- Facility relocation
- Changes in ownership
- Changes in the Designated Management Representative
- Major component re-source or work transfer
- Changes affecting quality, integrity, or reliability

The External Provider must receive advance written authorization from AEC for:

- Product repairs & salvage
- Product substitutions or changes
- Non-conventional manufacturing methods

4.2 Altering Document Data

The External Provider does not obliterate original data on certifications, test reports, or other documents required by the Contract using correction fluids, correction tape, write-over, or other methods. Corrections may be made on records such as First Article Inspection Reports (FAIR), providing it is obvious that a correction was made and that it is signed (initialed) or stamped by an authorized and trackable individual, leaving the original data readable (e.g. A single line through the text, a stamp, a date, and the word "Void"). Product received at AEC represented by documents altered in an unauthorized manner, are subject to return to the External Provider at External Provider's expense.

4.3 Contract Changes & Effectivity

4.3.1 AEC Initiated Changes

The External Provider incorporates changes initiated by AEC contractually (formal or amended) at agreed upon effectivity points (examples of changes are: revised drawings, specifications, tests, inspection or fabrication methods, etc.). Changes can apply to products as well as to the External Provider's management systems.

The External Provider's business management system includes appropriate controls and records. The External Provider's business management system includes controls of External Provider's sub-tier sources. The systems provide objective evidence of Contract required changes. Objective evidence of changes are in the form of date, lot, serial number, revision letter, or other positive control. Records of changes are subject to AEC on-site verification.

4.3.2 External Provider Initiated Changes

The External Provider does not make Class 1 changes in product design, drawings, performance specifications, nor data. Materials or processes (EIA-649, Configuration Management Requirements for Defense Contracts) are not changed unless directed in writing, in advance, by AEC. The External Provider flows this requirement down as applicable. The External Provider may make Class 2 changes on product under their proprietary engineering design control (EIA-649, Configuration Management Requirements for Defense Contracts). The External Provider notifies AEC in writing with a copy of the Class 2 change, prior initial delivery of affected product.

4.4 Certifications

4.4.1 Delivery Certification

When the External Provider delivers product used on end item aerospace product, or product that can affect the safety, fit, form, or function (e.g. production tooling, sealant, adhesives used on the product, etc.) to AEC, they must certify that those products or services are in compliance with the Contract and that this is supported by retained objective evidence per paragraph 4.16 - Record Retention. This may be in the form of a Certificate of Conformity or a Certificate of Analysis as appropriate.

4.4.2 Certification Requirements

The External Provider furnishes all certifications, test reports, and other documents (certifications) from the External Provider or its sub-tier External Providers as required by the Contract. The External Provider ensures that all provided certifications are complete, legible, reproducible, accurate, and in compliance with Contract requirements.

With each delivery of product, the External Provider includes a written statement titled "Certificate of Conformance" worded substantially as follows:

"This certifies that all products or services delivered on this contract (number) and packing list/shipper (number) are in compliance with all requirements of the contract. Objective evidence to support this certification is available to AEC upon request."

Company Name:

Address:

Title of Authorized Individual:

Signature/Stamp: _____

Date: _____

AEC may return supplied products at the External Provider's expense when the certifications are incorrect.

4.4.3 Certification Language & Content

All Certifications are in English and at a minimum include:

- a) Name and address of the issuing External Provider and/or sub-tier.
- b) Part number and revision. Revision level is not always required for catalog items and/or standard parts, or off-the-shelf electronic components (see contract)
- c) Quantity delivered,
- d) Lot or batch number (when applicable),
- e) AEC Contract number,
- f) Title and signature of the authorized official of the issuing organization,
- g) External Provider sub-tier certifications meeting the requirements of (a), (b), (c), (d), and (f)

In addition to the above, for limited shelf life material include the following:

- h) Manufacture and/or packaging date,
- i) Cure and/or expiration date/shelf life,
- j) and as applicable, special storage/handling requirements.

4.4.4 Acceptable Signatures

Certifications and test reports include signature and title of the authorized company official in at least one of the following methods:

- a) Signatures of the authorized company official written in ink;
- b) Facsimiles of actual signatures of the authorized company official (e.g. rubber stamps)
- c) Machine or computer graphics generated signatures of the authorized company official.

4.4.5 Electronic Signatures

When used, electronic signatures comply with the following:

- a) The electronic signature is under direct control of the person whose name appears on the document,
- b) The electronic signature is only applied at the location or facility where the individual is located.

- c) Use of electronic signatures is governed by the External Provider's documented procedures.
- d) Through application, the External Provider certifies that the signature was applied by the authorized company official in compliance with (a), (b) & (c) above
- e) If an electronically generated certificate does not contain a signature but is source directed and a signature is not mandated by the end use customer, exceptions can be made at the discretion of the Receiving Inspector provided all other content establishes and maintains traceability and meets the minimum requirements of 4.4.3.

4.5 First Article Inspection Requirements (FAIR)

The External Provider submits a First Article Inspection (FAI) per the current revision of 9102 for new product and when any of the following occur:

Note: See www.sae.org/iaqg and select the Supply Chain Management Handbook for aerospace FAI help.

- A change in design affecting fit, form, or function of the part.
- A change in any manufacturing source, processing source, process, inspection method (Including functional test requirements), location of manufacture, tooling, or materials, that can potentially affect fit, form, or function.
- A change in numerical control program or translation to another media that can potentially affect fit, form, or function.
- A natural or man-made event, which may adversely affect the manufacturing process.
- A lapse in production for two years for any characteristics that may be impacted by the inactivity. This lapse is from the completion of last production operation to the actual restart of production.
- An AEC drawing referencing a standard hardware item (e.g., "NAS," "MS") modified from the original purchased configuration and/or with additional characteristics. In this case, the FAIR includes data for only those characteristic(s) that were changed and/or added.
- When requested by either internal/external customer.
- When the revision of the drawing is changed, even if it has not affected the specific configuration.

Note: Except as noted below, a FAI is submitted by the External Provider for each drawing or process revision. If multiple revisions are incorporated, they may be documented on one FAI but must include an update of all characteristics changed for each separate revision.

Exceptions not requiring a FAI include:

- Parts and assemblies rejected on a previous FAI do not require another full FAI.

- Standard hardware, proprietary off the shelf material whose characteristics are established 100% by non-customer drawings (e.g., NAS, MS), or deliverable software.
- Contractually excluded parts/assemblies.

The FAIR data package includes a ballooned drawing (see www.sae.org/iagg and select the Supply Chain Management Handbook for a ballooned drawing example) and completed 9102 forms as follows:

- Form 1 - a list of the applicable detail drawings;
- Form 2 - a list of the standard parts, material or processes; and
- Form 3 - the actual results for each drawing dimension and notes.

Excess products remaining from a previous production lot may not be used to fulfill the FAIR requirements.

The External Provider furnishes a copy of the completed FAIR results with the initial delivery of products on the contract.

4.6 Special Process

4.6.1 Qualified Process Sources & Certifications

The External Provider only uses AEC/AEC Customer (including Government) approved sources for special processes, otherwise AEC may return products at the External Provider's expense as unusable. The application of chemical, metallurgical, nondestructive or any other special manufacturing, joining, or inspection processes, controlled by federal, military, US government, Industry (i.e. Boeing, General Electric, Airbus, etc.), National, International, or other specifications is a special process.

Prior to use of a process controlled by a proprietary specification developed by the External Provider or its sub-tiers, the External Provider provides a copy of the specification and/or sufficient technical data to allow AEC to determine whether adequate process controls exist to ensure that the proprietary process will yield products that meet all AEC technical and quality requirements. The External Provider notifies AEC when changes to the process are planned to allow time for AEC product impact evaluation.

For all special processes required by the Contract or reference documents, the External Provider provides Process Certifications (certification/test report issued by the company that actually performed the process) with delivery of the product.

External Provider provided certification contains the requirements of 3.3 herein and include a complete description of the special process performed, including:

- a) The process name, applicable specification and revision, type, class, grade, etc.;
- b) when applicable, a statement that the process was performed by certified operator(s), and;

- c) if the product has had AEC approved rework, repair, and/or salvage, the External Provider provides a description of the process used and the quantity of parts subjected to the process.

4.7 Nonconforming Products & Material Review

4.7.1 Identification, Segregation & Control

The External Provider identifies, segregates, and reworks or replaces any products found to be nonconforming to AEC or AEC Customer drawings, specifications, Contracts, or other applicable requirements prior to delivery to AEC. AEC may reject and return any nonconforming product to the External Provider at the External Provider's expense.

4.7.2 Preliminary Review Authority

The External Provider is authorized to conduct Material Review and disposition nonconforming products identified by the External Provider using the following disposition alternatives:

- a) Rework to applicable requirements.
- b) Scrap.
- c) Return to (the External Provider's) sub-tier source for rework or replacement.

A nonconforming product is any product that fails to meet AEC's or its Customer's engineering drawing, specification, Contract or other approved product description (including products under the External Provider's proprietary design control that fail to meet requirements established and controlled by the External Provider or the External Provider's sub-tier sources). The External Provider may formally request a "use-as-is" or repair (salvage) disposition from AEC through their AEC Buyer in accordance with the requirements defined in section 3.6.4 herein.

For items that AEC has previously rejected, the External Provider notes on the return shipping documents whether these items have been reworked, replaced, or repaired. Repairs are not performed without prior written approval from AEC.

The External Provider and their sub-tiers make their Material Review and nonconforming product disposition records available for on-site verification by AEC to ensure compliance.

The External Provider has a documented system for risk mitigation when performing rework and return dispositions, to ensure that reworked parts fully comply requirements and process stability (e.g. Process FMEA analysis of the rework methods).

4.7.3 External Provider Material Review Authority (MRB)

None granted by AEC. The External Provider submits all nonconforming material requests for MRB disposition to AEC for review and approval/denial.

4.7.4 Submittal for AEC MRB Review

The External Provider documents all nonconforming material in compliance with AS9131 and submits the information to their AEC buyer, unless otherwise specified in the Contract. AEC MRB will not disposition any product that can be reworked to meet drawing or specification requirements, or that are obviously scrap. After review and disposition by AEC MRB, a copy of the form describing the MRB disposition will be returned to the External Provider. A 'use-as-is' or 'repair' (salvage) disposition by MRB does not relieve the External Provider of the legal responsibility and liability for their product.

4.7.5 Notification of Nonconforming Products Delivered to AEC

The External Provider provides initial notification to the AEC buyer in writing (receipt acknowledged email or other positive receipt method) within 24 hours of determining delivery of nonconforming product(s) to AEC. Initial notification includes the following information:

1. External Provider name
2. AEC Contract number
3. Part number and description
4. Affected quantity and serial numbers (if known)
5. Dates delivered (if known)
6. Brief description of the nonconforming condition

The External Provider follows the initial notification within five days of the initial notification with a formal Disclosure Letter delivered to the AEC Buyer.

In addition to 1) through 5) above, the Disclosure Letter includes the following information:

- a) Complete description of the nonconforming condition(s)
- b) The affected quantity of products (including serial numbers when applicable) and dates delivered to AEC
- c) Potential effect of the nonconformance on the performance, reliability, safety and/or usability of the product(s) if known
- d) Recommendations for AEC action including recommendations for products that AEC may have already delivered to its customers
- e) Immediate action taken by External Provider to contain the nonconformance and nonconforming products
- f) Root cause analysis of the nonconforming condition in A-3, 8D, 10 Step, or other standard and thorough analysis format
- g) Root cause corrective action plan and schedule
- h) The plan and schedule for verifying the effectiveness of the corrective action

When (a.) through (h.) above are incomplete after the 6 day allowance stated above (24 hours plus 5 days), the External Provider contacts the AEC Buyer and requests permission to submit an interim disclosure letter. When allowed by the AEC Buyer, the External Provider provides as much information as possible, a deadline (date) for completion of the investigation, and a date for the final disclosure letter receipt by AEC. AEC may participate in the nonconforming product investigation at the facilities of the External Provider or its sub-tiers.

4.8 Statistical Product Acceptance Requirements per ARP9013

AEC External Providers using statistical methods for product acceptance comply with ARP9013 Statistical Process Acceptance unless otherwise specified by Contract. The External Provider submits their proposed statistical product acceptance method to AEC for review and concurrence prior to use.

4.9 Supplier Quality Management Systems

The External Provider uses and complies with the current revision of the appropriate system (4.9.2-4.9.6) for their product and process, unless otherwise stated in the Contract. The applied Quality Management System is subject to audit, verification, approval and/or disapproval by AEC or its designated representative(s) including AEC customers, the US Government and/or other regulatory agencies. Audit by AEC or others does not relieve the External Provider's responsibility to furnish conforming products and/or services.

4.9.1 Applicability

The choice of QMS is based on the type of products or services provided by the External Provider. External Providers may establish, implement and maintain a higher Quality Management Systems than the minimum applicable system.

The External Provider notifies AEC immediately upon loss of Quality Management System certification.

4.9.2 Quality Management System – Requirements for Aviation Maintenance Organizations per 9110

External Providers performing work to ensure continuing airworthiness of an article, including any one or combination of overhaul, inspection, testing, replacement, defect rectification, and modification or repair, use 9110 - "Quality Management System – Requirements for Aviation Maintenance Organizations", certified by an accredited certification body in accordance with 9104-001, and listed on the SAE OASIS data base.

4.9.3 Quality Management Systems – Requirements for Aviation, Space and Defense Distributors per 9120

External Providers procuring parts, materials and/or assemblies for resale to AEC, including organizations that procure products and split them into smaller quantities (including those that coordinate a customer controlled service on the product), use 9120 – "Requirements for Aviation, Space and Defense Distributors". Organizations performing product rework or repair use 4.9.4.

Distributors procuring Source Control Drawing (SCD) parts, materials and assemblies manufactured, assembled and tested to AEC Source Control Drawing drawings and/or specifications and reselling these products to AEC, require assessment to compliance with the applicable elements of 9100 “Quality Management Systems – Requirements for Aviation, Space and Defense Organizations” by AEC.

4.9.4 Quality Management Systems – Requirements for Aviation, Space and Defense Organizations per 9100

External Providers manufacturing, assembling, and/or testing product provided to AEC and/or performing rework or repair to AEC design use 9100 - “Quality Management Systems – Requirements for Aviation, Space and Defense Organizations”. Providers are certified by an accredited certification body in accordance with 9104-001, and listed on the SAE OASIS data base.

4.9.5 Requirements for the Calibration of Measuring and Test Equipment per ANSI/NCSL Z540.3

Suppliers performing calibration services use the current revision of ANSI/NCSL Z540 (Systems meeting or exceeding Z540 like ISO/IEC 17025 are acceptable). The supplier's calibration system is subject to audit, verification and approval and/or disapproval by AEC or its representative(s).

4.9.6 Other Quality Systems as Directed by AEC Contract

The following Quality Management Systems apply when directed by contract, regardless of compliance to 4.9.2 through 4.9.5:

- **Quality System** – FAA-PMA Holder
- **Quality System** – Production Certificate (FAA-PC) Holder
- **Quality System** – FAA-TSOA Holder
- **Inspection System** – per NASA NHB 5300.4(1c) Inspection System Provisions for Aeronautical & Space Materials, Parts and Services
- **Quality System** – per EASA Part 21
- **Inspection System** – per US 14 CFR 145
- **Inspection System for Maintenance Organization** – per EASA Part 145
- **Other** – Any other full or partial system as agreed through contractual requirement

4.9.7 Removed see change log

4.9.8 Removed see change log

4.9.9 Removed see change log

4.9.10 Removed see change log

4.10 Government Inspection (GI)

Imposed by the US Government at any time.

GI is not dependent on performance ratings. Applies when required by the AAE purchase order.

4.11 Imported Product

The External Provider permanently, legibly, and conspicuously marks product imported into the U.S., in English, "Made in [foreign country]." Product imported in a package, box, bag, etc., is marked on the outside of the box. The outer packing crates and shipping boxes in which products enter the U.S. should also be legibly and conspicuously marked "Made in [foreign country]."

4.12 Counterfeit Parts Prevention

The External Provider establishes and maintains a Counterfeit Parts\Material Prevention and Control Plan using per AS6174 to ensure that counterfeit goods are not delivered to AEC. AEC vendors notify their AEC buyer per the Vendor Quality Requirements procedure when they are aware or suspect that Counterfeit Goods have been furnished. Vendors eligible for utilization of the Government-Industry Data Exchange Program ("GIDEP") use the GIDEP process to alert the industry of encountered counterfeit parts. Albany SLC is an active member and utilizes GIDEP as part of their supplier monitoring process. In any instance where an alert is issued against a supplier that is common to other AEC sites, they will be notified.

Purchased products have supporting certifications and documentation verifying traceability to OCM/OEM; OCM/OEM authorized distributor chain, aftermarket manufacturer, or authorized reseller identifying the name and location of all the supply chain intermediaries from the part manufacturer to the direct source of the product.

The External Provider's Certification of Conformance represents that the shipment does not contain any 'suspect' or 'known' Counterfeit Part, Material, or Work and ensures that parts, material or work are procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their Franchised Distributors or Authorized External Provider. Any use of other than an Authorized External Provider requires AEC written approval prior to procurement and use and that authorization delivered in each shipment with the product data package.

The External Provider verifies the procurement source and associated certifying documentation. The External Provider receiving inspection process utilizes incoming inspection or test methods, or both, to detect potential counterfeit parts, material or work.

The External Provider flows this clause in its entirety or equivalent (replacing "AEC" with "External Provider") down to all lower tier subcontracts to prevent the inadvertent use of Counterfeit Parts, Material or Work. When an Authorized External Provider is not utilized by the External Provider's lower tier, the External Provider provides a copy of the risk assessment and their written approval from AEC within the deliverable data package.

4.13 Variation Management of Key Characteristics (KCs)

When applicable:

- Variation Management Programs are per AS 9103.
- The External Provider has Variation Management procedures detailing how key characteristics are manufactured, critical process steps identified, and how variation is analyzed, evaluated, and controlled.
- The External Provider submits their Variation Management procedure to AEC Quality for approval prior to manufacture of parts.
- The External Provider submits control charts, histograms and/or other analytical charts to AEC upon request. The External Provider provides evidence of analysis of data and actions taken in response to identified variation outside of established statistical control limits.
- The External Provider flows requirements, including key characteristics, to sub-tier(s) when control of key characteristics are a requirement of the AEC purchase order.

4.14 FOD Control Program

The External Provider establishes, documents and maintains a program (ref. NAS-412) to control and eliminate Foreign Object Damage (FOD) and/or contamination during manufacturing, assembly, test, inspection, and packaging/shipping (e.g. use of FOD causing materials like Styrofoam packing beads) operations. The FOD control program includes controls at sub-tier sources.

4.15 Packaging and Preservation

The External Provider packages and preserves items to ensure protection from deterioration and physical damage. When required by the purchase order and/or referenced documents, the External Provider packages per specific packing and packaging specifications.

The External Provider identifies limited shelf life material per the drawing/specification requirements on the purchase order.

4.16 Record Retention

The External Provider maintains all inspection records of products delivered to AEC including travelers/routes/assembly orders, etc. per contract, or a minimum of (7) seven years from shipment of product. This information is available to AEC upon request.

4.17 Remaining Shelf Life

All limited-life items shall have remaining shelf life upon delivery as specified in the purchase agreement.

4.18 Environment

Albany Engineered Composites (AEC) believes that responsible stewardship of the natural environment is essential to our business success. This belief is articulated through our environmental health, and safety policy, which states:

“Our vision is to eliminate injuries, reduce impacts to the environment, and promote a culture of sustainability through our ‘Accept Only Zero’ philosophy. We will achieve this with every employee fully engaged in all aspects of environment, health, and safety within Albany Engineered Composites”

To provide structure and coordination for our environmental policy and actions the International Standard for Environmental Management Systems, ISO 14001 has been selected as the basis of our management system. This management system is based on four commitments:

- Compliance with relevant environmental legislation and regulations as a minimum performance standard;
- Prevention of pollution;
- Continual improvement of the Environmental Management System(EMS) to achieve improved environmental performance and
- Provision of adequate resources for effective environmental management.

4.18.1 What We Expect From Our Suppliers:

A. Compliance with all environmental legal requirements is mandatory. As a minimum, we expect our suppliers to maintain a strong commitment to:

- Responsible environmental management
- Elimination of environmental incidents;
- Waste minimization;
- Responsible resource utilization

B. We expect our supplier to make their employees aware of the following:

- Their contribution to product or service conformity;
- Their contribution to product safety;
- The importance of ethical behavior.

4.19 Quality Codes

The following codes are applicable only when referenced by the purchase order or contract.

Q01 through Q08 – Moved to body of document.

Q09 External Providers DQR - External providers meeting the requirements of CSP-SAC-03 may be permitted to obtain designated inspection authority to utilize internal Designate Quality Representatives (DQRs), on behalf of Albany Engineered Composites (AEC), for Sikorsky production detail parts and non-FAI sub-assemblies.

Q10 through Q12 – Moved to body of document.

Q13 In-process Inspection/Audit – Required at points selected by the AEC Quality Assurance Representative and/or as specified by the Purchase Order, drawing, or applicable documentation.

Q14 AEC Pre-cap Inspection - AEC pre-cap (in process) workmanship inspection required at the External Provider's facility. The External Provider notifies the AEC Buyer at least five (5) working days before the date material is to be available for pre-cap inspection. Final inspection/acceptance of material is at AEC receiving.

Q15 Removed

Q16 through Q20 – Moved to body of document.

Q21 Certified Physical & Chemical Test Reports - Certified Physical and/or Chemical Test Reports are required for each material on this purchase order.

Q22 Tensile Test Report – The External Provider provides a report of tensile testing consisting of three (3) test bars cast for each heat lot, heat treated with the castings, with each shipment of material. Test bars are as described in the material specification and may be cast separately.

Q23 Moved to body of document.

Q24 Nondestructive Test (NDT) Report – The External Provider performs NDT on 100% of the lot of products unless otherwise specified by the purchase order, drawing, or specification and maintains a certified test and/or inspection report (available upon request) as evidence that the required NDT (i.e. radiographic, ultrasonic, magnetic particle, penetrant, etc.) test was performed on all delivered products.

In addition to the certification requirements in 3.3.3, NDT certifications contain the following:

- NDT specification,
- number of parts tested, accepted, and rejected,
- when applicable, the reason for rejection,
- the tester's/inspector's name, certification level, and date of expiration of certification, and
- the date the inspection was performed.

Q25 Test/Inspection Data - Verifiable quantitative test and/or inspection data is required with each part or lot shipped to AEC.

Q26 Variable Data - The External Provider provides variable data (measured values) for each item delivered indicating conformance to inspections and/or tests specified by the purchase order, applicable drawings, specifications, or AEC approved External Provider Acceptance Test Procedure.

Q27 Attribute Data – The External Provider provides Attribute Data (Go/No-Go) for each item delivered indicating conformance to inspections and/or tests specified by the

purchase order, applicable drawings, specification, or AEC approved External Provider Acceptance Test Procedure.

Q28 through 29 – Moved to body of document.

Q30 AEC Source Inspection – AEC Source Inspection is required on this purchase order. The External Provider notifies the AEC Buyer at least five (5) business days prior to the required inspection.

Q31 Moved to body of document.

Q32 Removed see change log

Q33 through Q34 – Moved to body of document.

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 the company's Certificate of Conformance, Certified Test Reports are required to accompany this order. Additionally, the Certificate of Conformance must include one of the following statements:

- a) All fasteners meet the requirements of FQA and records of compliance are maintained on file, or if manufactured before July 26, 1998
- b) All contained fasteners were produced PRIOR to the implementation of FQA and are therefore exempt.

Q36 through 38 - Moved to body of document.

Q39 Removed

Q40 Original External Provider And Special Processor Certificate Of Conformance

The External Provider and all of its special processors called out on the Sikorsky Aircraft Approved Source List submit an original Certificate of Conformance with each shipment of items on this purchase order. The original certificate is 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. The Sikorsky Material and Process Specifications Index can be obtained from the AEC Buyer.

Q41 External Providers Record Retention – The External Provider retains Sikorsky product records for (10) ten years and Sikorsky Flight Safety/Flight Essential part records for (40) years.

Q42 Sikorsky Approved Process Sources Are Required - Sikorsky approved sources are used for plating, surface coating/ finishes, heat treat, welding, and Non-Destructive Testing. Sikorsky Approved Source List can be obtained upon request to the AEC Buyer. Part specific technique sheets are submitted by any Sikorsky subcontractor

or External Provider, at any tier in the process, performing Non Destructive Inspection. The technique sheets are submitted for approval by AEC prior to any delivery.

Q43 Sikorsky Flight Safety Parts – The External Provider plans and produces Flight Safety Parts per Sikorsky Aircraft Corporation specification SS9211.

Q44 Lockheed Martin Aero (LM) Approved Special Process External Providers – LM approved special external process suppliers are required per QCS-001.

Q45 Lockheed Martin external sub tier providers shall maintain a FOD prevention program as stated in the purchase order and Lockheed Martin requirements Q4R - Foreign Object Debris/Damage (FOD) Prevention document, which ensures delivering items are free from any foreign materials that could result in FOD.

Q46 Lockheed Martin sub tier providers shall follow packaging, labeling, and shipping guidelines outlined in PM-5010L and/or as directed by the purchase order requirements

Q47 Boeing Approved Special Process Sources – The External Provider performs all processing on this purchase order per D1-4426 Boeing Approved Processors. The External Provider and all of its sub-contractors use Boeing approved special processors per D1-4426 Boeing Approved Processors. The External Provider obtains prior authorization from the AEC Buyer in writing prior to use of any special process source not listed as approved in D1-4426 Boeing Approved Processors.

Q48 Boeing Hardware – The Produced purchases all hardware on this Purchase Order from an approved Boeing Manufacturer per Boeing D1-590, or an approved Boeing Distributor per Boeing D1-4426 section 3 b.

Q49 Removed

Q50 Boeing D1-9000 Flow down – The External Provider has and retains proof of approval to D1-9000 (Latest Revision), Basic Quality System Requirements for work performed on this contract.

Q51 CAD/CAM QA System Flow down - External Provider has and retains proof of approval to D6-51991 (Latest Revision), *CAD/CAM Quality Assurance System Requirements* for work performed this contract.

Q52 Government Owned Special Tooling – Tooling produced or used under this purchase order is property of the U.S. Government. The External Provider conforms 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 External Providers facility. Upon receipt of this order, the External Providers notifies the Government Representative serving the External Providers facility to facilitate Government Inspection. If a representative’s office cannot be located, the External Provider notifies the AEC 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 External Provider notifies the Government Representative servicing the External Provider's plant at least forty-eight (48) hours before articles are ready for inspection and/or test.

Q55 Part Identification – The External Provider permanently identifies material on this Purchase Order with the part number, revision, and Federal Manufacturer Code, in accordance with MIL- STD-130 and/or drawing/specification requirements.

Q56 D.S.C.C. Approved Certification - By acceptance of this purchase Order, The External Provider 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 Removed

Q58 Domestic Specialty Metals - If a U.S. Government Contract number is called out on the face of the purchase order, the External Provider only uses raw materials per 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 External Providers. The External Provider makes compliance certification available to AEC upon request.

Q59 Heat Lot Traceability- The External Provider legibly marks 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 AEC assigned heat lot code number). Lots which have permanent Serial Numbers on all parts are traceable by Serial Number with correlation to certifications.

Q60 Welder Certification – Welding is only be performed by welders certified to the requirements of the welding specification listed on the drawing.

Q61 ESD Program - External Provider has an ESD program that conforms to the requirements of ANSI/ESD 20.20 (latest revision), *Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)* or DOD-STD-1686 (latest revision), *Electrostatic Discharge Control Program for Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)* on this Purchase Order.

The External Provider submits a Certification of Compliance to ESD requirements with shipment to AEC. The outside of packages containing ESD sensitive products clearly displayed an ESD warning label conforming to ANSI/EOS/ESD S-8.1. The same label is used to seal shielded bags.

Aerospace Electronic Products - Per IPC-A-610 – "*Acceptability of Electronic Assemblies*", and IPC/EIA J-STD-001 – "*Requirements for Soldered Electrical and Electronic Assemblies*" for Class 3 High Performance (Aerospace) Electronic Products.

Industrial Electronic Products – Per IPC-A-610 – “*Acceptability of Electronic Assemblies*” and IPC/EIA J-STD-001 – “*Requirements for Soldered Electrical and Electronic Assemblies*” for Class 2 Dedicated Service (Industrial) Electronic Products.

Q62 through Q63 – Removed

Q64 Solder Certification – The External Provider 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 Removed

Q66 Tooling - The Provider supplies the following to AEC for tooling produced or used under this order:

- One copy of the tool design drawings.
- Permanently stamped or etched assigned Part and Property Number on a non-functional surface of the tool.
- A copy of the actual tool inspection covering all dimensions affecting tool functions and product dimensions.

Q67 Annual Inventory - The External Provider provides AEC with a yearly inventory of all tooling in their possession no later than 15 January. The inventory includes:

- The date the inventory was conducted
- The property number and AEC tool number
- A statement of tool condition.

External Provider notifies AEC of any non-conformances associated with tooling.

Q68 Removed

Q69 Obsolescence – The External Provider notifies AEC 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.

Q70 Advanced Quality Planning, Production Part Approval Process (APQP) – APQP per AS9145 is required on this contract/shipment and applies to the External Provider and their External Providers. A level 3 PPAP submittal is required as default. Ref AS9145 and the IAQG Supply Chain Management Handbook for APQP/PPAP guidance:

<http://www.sae.org/iaqg/handbook/scmhtermsfuse.htm>

5.0 REFERENCE

5.1 Documents:

Table 1

Document	Title
8520	Corrective Action – Preventive Action
7410	Purchasing Process
7430	Receipt Inspection of Purchased Product
7511	First Article Inspection
7540	Customer Property Tooling
AS9117	Delegated Product Release Verification

5.2 Forms:

Table 2

Document	Title
8300	Control of Nonconforming Material

6.0 REVISION HISTORY

Revision	Date	Change Notes	Author
C to C	05-30-2018	Updated <i>Table of Contents</i> sections to match body of document for cross reference purposes in another document; no change to content of manual so no revision change.	E. Pendley
D	11/12/2018	Changed all references from AAC to AEC	B. DuFresne
E	12/04/2018	Added a new section 4.18.1B to address AS9100 requirement for supplier awareness.	S.Turner
F	08-14-2019	Removed Paragraphs 4.97 thru 4.9.10. The paragraphs dealt with Albany internal process of approving a supplier and maintaining approved suppliers list. Updated Section 4.17 Shelf Life to new remaining shelf life requirements. All other Shelf life requirements were removed because the requirements are controlled by the applicable material specification.	S.Turner
G	06-01-2022	Update Quality Code Q45, Q46, Change Table 2 from QP8300.1-3 to QP8300, and fixed numbering error in table of contents section 4.17.	J. Dennison
H	10-10-2022	Update Section 4.19, Q09 code to add process for supplier DQR.	J. Dennison