

# 8801 QS - Supplier Quality Assurance Requirements (SQAR)

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### 1.0 PURPOSE

This Quality document establishes the AvtechTye quality requirements for suppliers to ensure that information is flowed-down to the entire supply chain. It is our supplier's responsibility to ensure this information is flowed-down to their sub-tier suppliers.

AvtechTye understands that Quality Management System (QMS) types can vary among suppliers. The purpose of this document is to provide clear expectations to our suppliers that are in addition to what is normally required in an industry standard QMS and to state additional business requirements.

These general requirements shall apply to Suppliers whenever Quality Assurance Requirements are invoked by Purchase Order. The most recent version of this document, and others listed within, may be found on AvtechTye's website. Revision status of procured/deliverable items shall always be as specified in the Purchase Order.

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## 2.0 DEFINITIONS

**"Nadcap"**: Nadcap (formerly NADCAP, the National Aerospace and Defense Contractors Accreditation Program) is a global cooperative standards-setting program for aerospace engineering, defense, and related industries.

**"Repair"**: The subjection of nonconforming material to an approved process designed to reduce but not completely eliminate the nonconformance.

**"Rework"**: All work performed on articles with known deficiencies so as to bring such articles into full compliance with documented requirements

**"Sub-tier"** (supplier): A producer of a major system or sub-system with or without design responsibility. This includes suppliers that provide system integration, maintenance and/or overhaul services.

**"Supplier"**: means the vendor/supplier/distributor performing work and/or supplying materials, parts, assemblies, subassemblies, or services pursuant to the purchase order (physically or electronically).

## 3.0 Quality Management System

AvtechTye suppliers shall have a documented Quality Management System. The QMS should conform to the latest revision of AS9100. AvtechTye expects suppliers to be certified to a QMS that is appropriate to the type of items or services being furnished to AvtechTye. The documentation of the Supplier's QMS should be available to all necessary employees.

Quality Assurance responsibility shall be clearly designated within the Supplier's organization. Personnel having this responsibility shall have sufficient authority to assure that quality is not compromised.

If the Supplier's QMS is non-compliant to the applicable requirements, or if its QMS certification is renewed, revoked, suspended, changed, or will expire during the performance of the order, the Supplier shall notify AvtechTye in writing. Notification shall be made within 24 hours of the following: revocation, suspension, change, or expiration, and provide detail for the appropriate items in the list. All affected AvtechTye part numbers shall be listed in the notification. For Renewal, suppliers shall forward copies of certifications to AvtechTye's Quality representative within thirty days of receipt.

The Supplier shall immediately notify AvtechTye in writing of any change to its Quality Assurance System that may affect 1) the inspection, conformity, or safety of the product, 2) quality leadership, and/or 3) quality system status (e.g., Supplier converts to an ISO9000-based system or Supplier is no longer certified to AS9100).

### 3.1 Documentation

The Supplier's Quality Assurance system shall be implemented by written procedures, which adequately provide for compliance with the requirements herein. Manufacturers will either have a third party certified quality management system (i.e. AS9100, ISO9001) or have processes in place that comply with these industry specifications.

The Supplier shall submit all required quality data (e.g., supplier quality procedures, certificates, reports, or other similar data required by AvtechTye), correspondence and corrective actions responses in the English language (U.S.).

### **3.2 Records**

The Supplier is responsible for compliance with all certification requirements referenced on the Purchase Order and for the maintenance of quality control records evidencing compliance with such requirements, regardless of whether material was procured/produced and/or work was performed by the Supplier or their sub-tier suppliers.

When Certification of Compliance from the Supplier is based on Certifications of Tests and Inspections received from the manufacturer or another supplier, the Supplier ensures that these Certifications are received and retained, and that adequate traceability exists to the manufacturer of the products.

First Article Inspection Reports and related documented information shall be retained by the supplier for 10 years plus the current year and are required to be kept in the format in which they originated. All requested information shall be provided in the language required by the contract.

The Supplier shall retain all purchasing, production control, quality, manufacturing and manufacturing methods, test and other related documents associated with the item/service purchased, for a minimum of 10 years after order completion except documentation of Sikorsky Flight Safety manufacturing and quality compliance shall be retained a minimum of 40 years. The documented information shall provide evidence of conformity to requirements and to the effective operation of the supplier's QMS. Methods and records shall be available for review by AvtechTye's representatives, customers, and regulatory authorities.

At the expiration of the retention period, AvtechTye reserves the right to request delivery of such records. In the event that AvtechTye chooses to exercise this right, Supplier shall promptly deliver such records to AvtechTye at no additional cost, on media agreed to by both parties. If supplier retains quality records by electronic data, the supplier shall have adequate procedures to describe (1) the media, (2) the back-up method and frequency, and (3) the method of security.

U.S. suppliers, including all their sub-tier suppliers, performing maintenance or preventive maintenance of products for applicable Federal Aviation Administration (FAA)-regulated customers shall retain all records necessary to demonstrate compliance with the Department of Transportation FAA drug and alcohol regulatory requirements for a minimum of two years after conducting a required drug or alcohol test. Suppliers shall not destroy documented information (records) earlier than the required time period. However, the documented information (records) shall be destroyed in an irreversible manner that completely obliterates their contents and renders the documented information (records) unreadable and unusable.

### **3.3 Training**

The Supplier should implement a documented training process to ensure that all personnel are qualified to their job duties. The Supplier shall maintain training and certification records for periodic audits. The Supplier shall take additional action to assure skill proficiency of personnel who build/assemble AvtechTye products.

The training process should include employee position specific on the job training, a schedule for on-going/repeat training, and re-training for revised procedures/processes

Where applicable, personnel directly involved in building the AvtechTyee's product shall be trained and certified to the current revision of IPC-A-610 Class 2 requirements.

### **3.4 Personnel Awareness**

The supplier shall ensure their employees and sub-tier suppliers are aware of their contribution to product or service conformity, to product safety, and the importance of ethical behavior.

### **3.5 Application of Acceptance Authority Media (AAM)**

Supplier shall comply with the AS/EN/JISQ 9100 requirements and 14CFR Part 21.2 regarding the application of the Acceptance Authority Media (AAM) requirements. Supplier shall, within its organization and its supply chain, ensure that the use of AAM is clearly defined within its QMS. Supplier shall, upon AvtechTyee request, be able to demonstrate evidence of communication to its employees and to its supply chain. Supplier shall maintain compliance to the AAM requirements by assessing its process and supply chain as part of its internal audit activities. The areas of focus of this assessment shall include but not limited to:

- A. Authority Media Application Errors (i.e. Omission, Typos, Legibility, etc.)
- B. Authority Media Application Untimely Use (i.e. Documentation is not completed as planned, "Stamp/Sign as you go", etc.)
- C. Authority Media Application Misrepresentation (i.e., Uncertified personnel, Falsification of documentation, Work not performed as planned, etc.)
- D. Authority Media Application Training Deficiencies (i.e. Ethics, Culture awareness, Proper use of authority media, etc.)

## **4.0 Supplier Management**

The Supplier is responsible for compliance with all certification requirements referenced on the Purchase Order and for the maintenance of quality control records evidencing compliance with such requirements, regardless of whether material was procured/produced and/or work was performed by the Supplier or their sub-tier suppliers.

The Supplier shall perform evaluation and selection of any sub-tier suppliers based on their ability to supply product or service which is compliant to the AvtechTyee's requirements.

### **4.1 Approval**

A minimum criteria for this evaluation and selection shall be established, including periodic review, to demonstrate the sub-tier supplier's ability to provide conforming material or service and mitigate risk to the customer. Records of this evaluation and review shall be maintained in accordance with the document retention requirements.

### **4.2 Approved Supplier List**

The supplier shall maintain a retrievable list of sub-tiers indicating which sub-tiers have been approved and continue to meet supplier's requirements.

### **4.3 Disqualification**

The supplier's system for monitoring and assessing sub-tiers should include a mechanism for removing a supplier's approval.

#### **4.4 Flow-down**

The Supplier is responsible for compliance with all certification requirements referenced on the Purchase Order and for the maintenance of quality control records evidencing compliance with such requirements, regardless of whether material was procured/produced and/or work was performed by the Supplier or their sub-tier suppliers. Supplier shall flow down applicable specifications, descriptions, requirements, and all requirements in this document to sub-tier suppliers.

The Supplier shall not subcontract in whole, or substantially in whole, performance of any order without prior written consent of AvtechTye. For all parts supplied per AvtechTye specifications, the Supplier shall notify AvtechTye and receive written approval prior to subcontracting a process, part, assembly or end item prior to invoking the change.

When critical or special processes are performed outside the Supplier's facility, it shall be the Supplier's responsibility to assure proper performance of all such processes. Restriction of process sources by customer or Nadcap approved sources may be invoked. When these restrictions are put in place, they must be flowed down to affected sub-tier suppliers. These processes may include, but are not limited to heat-treating, plating, and anodizing.

The Supplier shall maintain a system to assure that Supplier-procured materials and/or services conform to Purchase Order drawings and specification requirements. The Supplier's Quality Assurance system shall contain controls for assuring requirements are met by sub-tier suppliers, including flow-down of the most current component revision level requirement to the approved sources. The implementation of such controls shall be subject to surveillance by AvtechTye.

#### **4.5 Cyber Security**

Supplier shall ensure Safeguarding Covered Defense Information and Cyber Incident Reporting per DFAR 252.204-7012. If the AvtechTye subcontractor is for operation critical support or the subcontractor performance will involve covered defense information, including subcontracts for commercial items, without alteration, except to identify the parties.

The Contractor shall determine if the information required for subcontracting performance retains its identity as covered defense information and will require protection under this clause. If necessary, consult with the contracting officer. Supplier shall notify AvtechTye when submitting a request to vary from a NIST SP 800-171 security requirement to the Contracting Officer in accordance with this clause; and provide the incident report number, automatically assigned by the Department of Defense, as soon as practicable, when reporting a cyber incident to the Department of Defense as required in this clause.

### **5.0 Material**

#### **5.1 Verification**

When the applicable specification(s) establishes requirements for chemical and/or physical properties, the supplier shall include with the packing sheet for each lot in each shipment, test reports which provide evidence that the materials shipped possess the chemical and/or physical properties required by the applicable specifications.

Supplier shall periodically validate test reports for raw material accepted on the basis of test reports. That validation shall be accomplished by supplier or other independent party through periodic, scheduled tests of raw material samples.

Supplier shall implement written processes and procedures in support of this clause. Schedules for frequency of tests will be established by supplier based on historical performance of the raw material supplier.

Supplier shall retain test reports provided by the raw material supplier, as well as supplier's validation test results as quality records traceable to the conformance of material, as specified elsewhere in the order or contract.

## **5.2 Testing**

Suppliers of electronic components to AvtechTyee must submit a certificate of conformance showing configuration with actual values obtained during testing referenced by serial number with each shipment.

Test reports must provide, at a minimum, the manufacturer's name, manufacturer's part number, and AvtechTyee's order number. Certification of conformance to base material requirements is sufficient evidence only when provided by the manufacturer of the material.

When supplier utilizes test reports to accept supplier purchased raw material, test reports shall be checked to confirm 100% compliance against supplier's requirements and applicable specifications prior to shipment to AvtechTyee.

## **5.3 Handling**

All material for AvtechTyee shall be packed with suitable protection so as to prevent damage through handling, during storage at the Supplier, in transit, and during storage at AvtechTyee's facility before use. AvtechTyee may invoke special packaging and preservation instructions based on part specifications. The parts must be boxed, banded, or shipped in a manner that will ensure that no damage will occur. External threads must have special protection against damage.

All material intended for AvtechTyee shall be protected against the usual hazards of electrostatic discharge (ESD), corrosion, contamination, deterioration, or other spoilage at the Supplier's facility and in transit.

Components which are identified by the manufacturer as moisture sensitive must be handled as identified in IPC-SM-786A. If the manufacturer's standards for humidity level or exposure time limit have been exceeded, the parts should be baked per IPC-SM-786A.

## **5.4 REACH**

If raw materials, parts, or assemblies supplied contain substances of very high concern (SVHCs) as prescribed by EU No. 1907/2006, Registration, Evaluation and Authorization of Chemicals, identification shall be included in the shipment. This identification should list the SVHC- designated chemicals present in the purchased article and the conditions under which handling precautions should be taken.

## **5.5 Electro-Static Discharge**

Devices identified as electrostatic discharge sensitive shall be handled, stored, packaged, and shipped in such a manner as to preclude damage from electrostatic discharge. Electrostatic protection processes shall be compliant to ANSI/ESD S20.20 Protection of Electrical and Electronic parts,



Assemblies and Equipment or equivalent. Electrostatic protection requirements specified on the component specification, drawing, or elsewhere on the order take precedence over this paragraph.

#### **5.6 Solderability**

The lead finish allow for components on this order shall be (63/37) or (60/40) tin/lead, dipped or plated and fused. The manufacturer shall guarantee solderability for a period of 15 months following receipt of the components by AvtechTye. Waivers to this requirement shall be obtained from AvtechTye Supply Chain Management prior to shipment.

#### **5.7 Shelf Life Controlled Material**

The Supplier shall maintain a documented system for shelf life control items where acceptability is limited by maximum age. The system shall include a method of identifying and controlling such items. When environment is a factor in determining useful life, the identification shall include the storage conditions required to achieve the stated life (i.e., temperature, humidity, etc.). The Supplier is not authorized to utilize expired material nor may expired material be shipped to AvtechTye to fulfill an order. The Supplier shall submit all requests for expiration date extensions and/or use as is dispositions to AvtechTye for review and approval. As applicable, the cure date and/or temperature limitation must appear on each container. Any other exceptions to this standard will be communicated through individual purchase orders.

#### **5.8 Safety Data Sheets**

As applicable, the Supplier shall provide AvtechTye with a current Safety Data Sheet (SDSs) (formerly MSDSs or Material Safety Data Sheets) in compliance with the Occupational Safety and Health Administration's (OSHA) hazard Communication Standard (29 CFR 1910.1200) and Washington Administrative Code (WAC) 296-62-054. Submittal of the SDS shall be made at the time of initial shipment or receipt. Thereafter, the Supplier shall provide AvtechTye with the SDS for the material only if the formulation of the material is modified from that previously supplied. The submitted SDS shall be dated and include the name of the preparer. In the event that the Supplier's point of contact is different than the preparer, then that individual shall also be named in the SDS.

#### **5.9 Domestic Product**

When a line item on an AvtechTye purchase order has the part number identified as XXX-DFARS the supplier agrees to comply with Defense Federal Acquisition Regulation Supplement DFAR 252.225-7014 (Alt. I). Preference for Domestic Specialty metals when this clause is specified in the purchase order. Use of foreign specialty metals may only be made with the written authorization from AvtechTye. Country of melt must be identified on certification.

#### **5.10 Substitution**

The supplier shall not deviate from the Bill of Material requirement on the purchase order without prior approval from AvtechTye Engineering and Quality Engineering departments.

Regarding commercial off the shelf material, the Supplier shall not substitute "equivalent" items in place of those items specified on the Purchase Order. If an equivalent item to a specified material is to be supplied, it is offered with supporting documentation prior to the shipment. All changes relating to part number, drawing specification, delivery or price must be in agreement by AvtechTye and confirmed by a change to the Purchase Order.

### **5.11 Customer Approved Sources**

Restriction of process sources by customer or Nadcap approved sources may be invoked. When these restrictions are put in place, they must be flowed down to affected sub-tier suppliers. These processes may include, but are not limited to heat-treating, plating, and anodizing.

All Heat Treat, NDT and Coatings subcontracted by AvtechTye must be performed by an AvtechTye Customer Approved Processor. AvtechTye supplier is responsible for verifying their approval status prior to any processing being performed. AvtechTye customers name and PO number is referenced on all AvtechTye processing purchase orders for this approved process verification. Supplier shall inform AvtechTye of any suspension or revocation of approval status within 24 hours any time subsequent to first purchase order from AvtechTye.

## **6.0 Product**

### **6.1 Traceability**

The Supplier shall maintain documented procedures for identification of product from receipt and during processes of production and delivery. The procedures shall address unique identification of individual product or batches; this identification shall be recorded. For Tye parts; all parts must be identified with the drawing number and vendor number. The manner and location of this identification shall be agreed upon by AvtechTye Engineering and or Quality Engineering.

When Certification of Compliance from the Supplier is based on Certifications of Tests and Inspections received from the manufacturer or another supplier, the Supplier ensures that these Certifications are received and retained, and that adequate traceability exists to the manufacturer of the products.

### **6.2 Process Control**

The Supplier shall establish a system to assure that all processes, even including those which cannot be readily verified by inspection, will conform to specification requirements. When critical or special processes are performed outside the Supplier's facility, it shall be the Supplier's responsibility to assure proper performance of all such processes. Those processes to which Government specifications apply are subject to the applicable requirements regarding certifications or approval by Government agencies.

The Supplier shall maintain a system for identifying inspection and test status of material. Identification may be accomplished by means of stamps, tags, routing cards, labels, bar codes, electronic databases, or other control devices. Final acceptance stamps must provide the Supplier with identification unless identification is provided on the product by other acceptable means.

The supplier must submit for review and approval, detailed test and inspection method, which will be used to ensure that the requirements of this order have been satisfied. This information shall include the procedures and identification of the description of the equipment to be used.

Prior to production start-up, the supplier shall produce limited quantity (as specified on the purchase order) of pieces to confirm consistency of quality and performance. This information will be flowed to the supplier either through a drawing or will be noted on the purchase order. No revision to the tooling, programming or inspection can be done without AvtechTye consent.

Any exceptions to the requirements in this document shall be authorized in writing by AvtechTyee. In addition, the supplier shall maintain a copy of any approved exceptions and make available for review by AvtechTyee's representative.

### **6.3 Change Control**

The Supplier's Quality Assurance system shall assure that the latest applicable drawings, specifications, technical requirements, Purchase Order information and approved changes will be available for the Supplier's acceptance of material and/or services.

The supplier shall not deviate from the Bill of Material requirement on the purchase order without prior approval from AvtechTyee.

Upon acceptance of the first article, the supplier shall make no changes to the method of manufacture, equipment used, tooling, programming materials, sub-tier suppliers, or processes which may affect interchangeability, function, dimensions, performance, or finishes. Suppliers are required to obtain written approval from AvtechTyee prior to any change(s). Suppliers are required to maintain record of all such approvals and have them available upon request.

Suppliers with design authority shall notify AvtechTyee of any changes of fit, form, function, or safety of product and obtain approval prior to manufacture and delivery. Suppliers shall submit proposed changes to AvtechTyee in writing.

Suppliers are required to inform AvtechTyee prior to shipping material or products with changes in product, processes, components, sub-suppliers / sub-contractors, manufacturing facility locations, packaging, shipping method, or outside processors. The supplier shall notify AvtechTyee in writing, providing detail for the appropriate items. All affected AvtechTyee part numbers must be listed in the notification.

The supplier shall inform AvtechTyee of all items that will become obsolete within the next twelve months. AvtechTyee requires suppliers to notify their representative regarding obsolescence with lead time sufficient so as not to disrupt delivery schedules. The supplier shall notify AvtechTyee in writing. Provide detail for the appropriate items in the list. All affected AvtechTyee part numbers must be listed in the email notification. The supplier shall maintain regular communication with sub-tier suppliers with regard to possible raw material or component obsolescence. The supplier shall have a documented obsolescence management plan/process in place to mitigate delivery risk for all items that could become obsolete.

### **6.4 Workmanship**

Suppliers shall document workmanship plans and acceptance standards in accordance with the performance and reliability requirements of AvtechTyee specifications. For electrical parts, reference IPC-A-610 (Class 2) Acceptability of Electronic Assemblies and AvtechTyee's document WI00044 Audio/Airborne Electronics Visual Acceptance Criteria. Other part types shall have workmanship standards in accordance with the relevant drawings, specifications, and the supplier's QMS. Workmanship requirements specified on the component specification/drawing or elsewhere on the contract or purchase order shall take precedence over this paragraph.

## 6.5 Tooling

The Supplier shall have a system which includes written procedures for control of all tooling and test equipment. Procedures shall be in accordance with the controls specified herein. The Supplier shall be responsible for maintaining adequate records of all tooling and test equipment indicating periodic inspections and calibrations. This system shall assure that the inherent accuracy of the equipment is comparable with the requirements of the unit being tested, and that required measurements are adequately performed. The system shall include appropriate calibration schedules and records. Such records shall be readily available to AvtechTyee's Quality Assurance Representative and/or AvtechTyee's Customer and /or FAA representatives. If not otherwise specified, all equipment that is used to determine acceptance of material will be subject to, as a minimum, an initial inspection and calibration, and periodic re-inspection and re-calibration.

The Supplier's calibration system for tooling, measuring, and test equipment used for product acceptance or in-process control shall be checked at established intervals against suitable higher level standards which, in turn, will be checked by reference to National Institute of Standards Technology (NIST) or equivalent certified primary standards. The Supplier shall maintain records or other conclusive evidence that proper control is being maintained. AvtechTyee may conduct, in the Supplier's facility, an evaluation of the Supplier's standards, measuring/testing devices, and calibration/maintenance personnel and methods to establish correlation between AvtechTyee's and Supplier's measurements.

Test equipment calibration service providers, testing and inspection laboratories shall be compliant to one of the following standards: ISO 10012, ISO 17025, ANSI/NCL Z540.3 or Nadcap AC 7006 or an equivalent standard.

All tools and test equipment, unless size or use prohibits, shall be identified, as applicable, with the following information:

- A. Property of AvtechTyee, Inc.,
- B. Part Number of Tool/Test Equipment,
- C. Inspection Date,
- D. Re-inspection Due Date,
- E. Calibration Date, and
- F. Re-calibration Due Date.

All tooling and test equipment fabricated by the Supplier at AvtechTyee's expense, or supplied by AvtechTyee for Supplier use, shall be considered property of AvtechTyee. Any tooling or test equipment furnished to the Supplier by AvtechTyee shall not be reworked or modified without prior written approval of AvtechTyee. Such tooling and test equipment shall be controlled, and inspected/calibrated per a regular, documented calibration schedule.

Supplier and their sub-tier(s) must have a documented tool preventative maintenance process that must keep the tool in a serviceable condition. Supplier shall monitor tool features for excessive wear in order to consistently meet product specifications and drawings. Additionally, the supplier shall take actions to address worn tool.

Special tooling that is not unique to any specific contract or purchase order and is used to support production of AvtechTyee parts or assemblies on multiple products and/or programs. As such these tools are seller maintained assets. Configuration control and condition of seller's tools remain the

responsibility of the seller and must be maintained in accordance with application quality and procedure system requirements.

**6.6 Special Processing**

The Supplier shall establish a system to assure that all processes, even including those which cannot be readily verified by inspection, will conform to specification requirements. When critical or special processes are performed outside the Supplier's facility, it shall be the Supplier's responsibility to assure proper performance of all such processes. Those processes to which Government specifications apply are subject to the applicable requirements regarding certifications or approval by Government agencies.

The supplier is required to validate and control all special processes and shall maintain evidence that supports the ability of the processes to achieve the specified results. Validation includes, but is not limited to, defined process criteria, approved and trained personnel, approved equipment, specific methods or procedures specified by the design authority, retention of records, test reports, and re-validation plans. AvtechTye reserves the right to verify or validate by any means necessary the special processes that are used on AvtechTye parts or products.

Restriction of process sources by customer or Nadcap approved sources may be invoked. When these restrictions are put in place, they must be flowed down to affected sub-tier suppliers. These processes may include, but are not limited to:

1. Plating/Electro-Deposition	7. Dry Film Lubrication	13. Material and Chemical testing
2. Anodizing	8. Welding	14. Radiographic Testing
3. Painting	9. Brazing	15. Penetrant Inspection
4. Passivation	10. Heat Treating	16. Magnetic Particle Inspection
5. Chemical Conversion Coatings	11. Annealing	17. Ultrasonic testing
6. Chemical Cleaning/Milling	12. Hot Iso-Static Pressing	18. Eddy Current Testing

Mechanical build-to-print parts (sheet metal, machined metal, castings, plastic & rubber and hardware) shall utilize Nadcap accredited processes listed above when specified by the contract, unless otherwise directed in the contract or on the drawing. This requirement will be flowed through the terms of the contract or the PO.

**6.7 Nonconformance**

The Supplier shall not knowingly ship nonconforming material without authorization from AvtechTye. Parts to be returned that are determined by an AvtechTye supplier to be nonconforming will be sorted 100% for discrepant parts. Also, all parts to be returned must be identified with a discrepant part tag or other means of identification that indicates quantity and nature of nonconformity. AvtechTye parts found to be nonconforming during or after testing/inspection services should have a discrepant part tag that includes nature of failure.

The AvtechTye Supplier shall provide a written notification of nonconformities, both potential and confirmed, that may have affected parts or services delivered to AvtechTye within 48 hours of discovery. AvtechTye will be notified if there may be a form, fit, function, usability, or reliability

problem that is discovered in the supplier's processes, components, or assemblies for any product already delivered.

The discrepancy documentation must include a clear and concise description of the discrepancy as well as:

- A. Lot/batch information and/or date of manufacture, as applicable,
- B. AvtechTyee part number(s) impacted including vendor part number(s),
- C. AvtechTyee Purchase Order number,
- D. Quantity,
- E. The date the parts were delivered to AvtechTyee,
- F. Immediate corrective action / containment, and
- G. Root cause and corrective action.

The Supplier's material review authority may include rework, but shall not extend to "repair" or "use-as-is" without prior documented approval from AvtechTyee. Supplier shall submit to AvtechTyee all requests for variance from contract, order, specification, or drawing requirements. This applies only to material that is AvtechTyee-designed and/or design controlled to AvtechTyee's specifications. Supplier shall not submit requests for variance to the AvtechTyee customer.

The supplier will be contacted about, and will have 48 hours to respond to, any nonconforming parts or processes found during inspection at AvtechTyee. AvtechTyee can decide to return the parts to the supplier for inspection. AvtechTyee also has the option to not return the parts to the supplier and debit the supplier for the costs associated with the discrepancy.

#### **6.7.1 Return Material Authorization**

If AvtechTyee requires that a Return Material Authorization (RMA) reference number is to be provided, Supplier must respond within 48 hours from the date of the request. AvtechTyee may arrange for return of nonconforming product to be reworked, replaced or to receive credit for the product.

Nonconforming product may be found upon receipt at AvtechTyee or product found to be defective during in-process production or became defective while under warranty. AvtechTyee reserves the right to use sampling plans for the acceptance or rejection of material and/or services. If a lot is rejected by the sampling procedure, the entire lot may be returned to the Supplier or AvtechTyee may screen the rejected lot at the Supplier's expense.

Upon receipt of the Supplier's RMA number, AvtechTyee will issue an RMA PO. The Suppliers RMA number will be used for return package identification. Suppliers will be asked to cover freight charges. Suppliers are expected to acknowledge rework or replacement of nonconforming product as soon as possible and no later than 30 calendar days. The Supplier's return packing slip, Certificate of Conformance, and invoice should reference AvtechTyee's RMA PO.

If Supplier fails to respond to an RMA request within 48 hours, AvtechTyee reserves the right to issue credit against outstanding invoice of product without further notice and ship nonconforming product back to Supplier without further notice. Failure to respond

could also result in a Supplier Correction Action Request (SCAR) to be issued for response and documentation.

## **7.0 AvtechTye Supplier Management**

### **7.1 Notification**

The Supplier shall adhere to all notification requirements detailed in this document. The Supplier shall also notify AvtechTye within 24 hours in writing of any change to top management, ownership, QMS, enterprise/material resource planning/management software, any software that could affect the quality/compliance/delivery of product, manufacturing facility location, a major change in the number of employees, or resources used to provide AvtechTye's products or materials. All affected AvtechTye part numbers must be listed in the notification.

### **7.2 Scorecards**

Supplier performance is reported periodically and derived from Supplier responsibilities to deliver within the agreed upon delivery window, deliver acceptable material and/or services, and provide acceptable documentation as required by the Purchase Order. Expectations for suppliers are 99% or higher for On Time Delivery and Quality. Performance expectations and additional information regarding performance reports can be found on AvtechTye's website. AvtechTye will provide performance scores for any supplier upon request from the supplier.

### **7.3 Surveillance/Audits**

AvtechTye may conduct a survey and/or perform surveillance of the Supplier's Quality Assurance system to evaluate the degree of ability to comply with these and other applicable requirements, or assist in the resolution of quality problems. All requests for updated quality questionnaires, surveys, certifications, etc. must be given timely and adequate responses. As necessary, a representative of AvtechTye's Customer may accompany the AvtechTye's Quality Assurance representative.

The AvtechTye and/or AvtechTye's customers may, at their discretion, provide resident or itinerant Quality Assurance personnel whose function shall be to survey Supplier operations, assist the Supplier in the resolution of quality problems, and witness at any stage (subject to proprietary considerations) the manufacture, processing, test, and inspection of items being manufactured for AvtechTye. Copies of applicable specifications and documents shall be made available to the AvtechTye's Quality Assurance representative.

### **7.4 Supplier Corrective Action Requests**

The Supplier's Quality Assurance system shall provide means for ready detection of discrepancies and for prompt and effective corrective action. Corrective action must prevent reoccurrence, including firm effectivity points by serial number, part number, date, or other agreed methods. Corrective action records and information, such as pertinent data on defects and failures, shall be available. The Supplier is responsible for initiation of prompt replies to AvtechTye's corrective action requests, and implementation of required corrective action.

A Supplier Corrective Action Request (SCAR) may be issued if nonconforming material is received, on time delivery has suffered, or other nonconforming processes are discovered. The SCAR process requires the following:

- A. An Immediate Action plan within 48 hours of notification including details on containment and immediate correction,

- B. A Cause response within 10 days of notification that address the direct and root cause as well as the cause for non-detection,
- C. Upon acceptance of the Cause response by AvtechTyee, an Action Plan should be in place within 20 days of notification that addresses each of the Cause types,
- D. In general, within 60 days the Supplier should confirm completion of the Action Plan with evidence.

All supplier responses are rated for Measure of Effectiveness (MoE). This grading scale is available upon request. Failure to provide acceptable and timely responses to SCARs may be subject to escalation of notification to supplier's senior management or possible cause for revocation of business.

Failure to comply with the rules of this SCAR process may jeopardize AvtechTyee's determination of supplier's compliance to the contract requirements. If the supplier fails to remedy the nonconformance as required by the SCAR, or if the supplier fails to make prompt and continued progress towards corrective action until it is satisfactorily resolved, AvtechTyee may exercise any rights and remedies available in the terms and conditions of the contract or order between AvtechTyee and the supplier. When corrective action progress is insufficient, AvtechTyee may place a supplier on probation status. Suppliers on probation status will not be considered for new procurement activity.

#### **7.5 Right of Access**

AvtechTyee or anyone designated by AvtechTyee, including cognizant government agencies and representatives of AvtechTyee's Customer, shall have access to all applicable areas of supplier's facilities. This includes suppliers at any level of the supply chain involved in the order and to all applicable records. This right shall also extend to the supplier's sub-tier suppliers and verification that subcontracted product conforms to specified requirements. The supplier shall be given reasonable advance notice by AvtechTyee to host such events. Failure to meet schedule, quality, or program requirements may cause long-term placement of AvtechTyee personnel or their representatives at the supplier location.

#### **7.6 De-activation**

Failure to comply with the requirements of this document may jeopardize AvtechTyee's determination of supplier's compliance to the contract requirements. AvtechTyee may exercise its rights and remedies in accordance with the terms and conditions of all contracts or orders between AvtechTyee and the Supplier. This could include, but is not limited to, suspension or cancellation of the Supplier's status on AvtechTyee's Approved Supplier List.

#### **7.7 Prohibited Practices**

The Supplier shall abide by all restricted practices detailed in this document. In addition, the following general acts or practices are prohibited:

- A. Unauthorized Repair
  - a. Repairs (by welding, soldering, or the use of adhesives) of parts damaged or found faulty in the fabrication process: repairing holes in castings, forging or other materials by plugging or bushing without authorization from AvtechTyee Quality Assurance organization.



- B. Unauthorized Processing
  - a. Addition, revision, or deletion of processes in manufacturing when those processes are subject to specification control by AvtechTyee.
- C. Disregard of Approvals
  - a. Change in any process of quality control procedure that is subject to specific approval by AvtechTyee without proper notification and re-approval.
- D. Improper Material Submittal
  - a. Submission of material having known defects/problems to AvtechTyee without notification.
- E. Improper Material Re-submittal
  - a. Resubmission of material to AvtechTyee without material being clearly identified as resubmitted material.
- F. Unauthorized Material and Information Transfer
  - a. Buying, selling, or transferring AvtechTyee related material, parts, devices, assemblies or end equipment for purposes other than the performance of AvtechTyee's business, without prior written approval, or disclosing AvtechTyee part numbers, or information related to those part numbers, to entities other than AvtechTyee, without prior written approval. Any use of AvtechTyee drawings or specifications other than for manufacture of the ordered items is expressly prohibited.
- G. Reclaimed Material
  - a. Supplier using reclaimed material without prior written approval from AvtechTyee.
- H. Part Condition
  - a. Shipping product that is not new product. In no circumstance will parts which have been used, screened, repaired or otherwise refurbished be accepted.

## **7.8 Communication**

In the event supplier and/or specified requirements are not completely clear, or where special assistance is needed, AvtechTyee will provide qualified personnel to consult with the Supplier. Requests for assistance shall be made via AvtechTyee's Supply Chain Management department. If inquiries pertain to quality aspects of supplies or services being procured, AvtechTyee's Quality Assurance organization may be contacted.

When required, the Supplier may obtain copies of pertinent specifications through AvtechTyee's Supply Chain Management Department or the applicable government agency, if a government specification.

The Supplier shall maintain an open line of communication with AvtechTyee representatives. AvtechTyee expects the Supplier to contact AvtechTyee with any questions regarding the order and for the Supplier to respond promptly to requests for information, documentation, or actions.

## 8.0 Inspection

The Supplier shall perform inspection and/or test on end items covered by the Purchase Order prior to submission to AvtechTyee or prior to delivery. The Supplier must maintain records of inspection/tests.

Inspection/test of material, which cannot be readily examined in the end items, must be performed at the appropriate in- process stages of manufacturing. The Supplier shall provide adequate controls, within the quality system, to ensure that characteristics not verifiable upon receipt are adequately controlled.

The Supplier shall be responsible for maintaining procedures for governing the control of inspection authority and shall, upon request, forward a record of such authority to AvtechTyee. 100% visual inspection may be required with documented evidence presented with each shipment. This evidence will be shown through an inspection check or equivalent with the method stated as "visual".

### 8.1 Counterfeit Parts

AvtechTyee requires that all suppliers of electrical parts or assemblies shall document and implement a policy compliant to the current revision of SAE AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition. Suppliers of mechanical parts are to comply with similar methodology by adopting and implementing standard counterfeit mitigation processes applicable to their industry. Suppliers shall purchase material directly from original equipment manufacturers, original component manufacturers, or their authorized distributors.

All Suppliers are subject to the requirements defined in AvtechTyee Procedure 0701QS Counterfeit Parts Prevention, including parts purchased by contract manufacturers on a turnkey basis for use on AvtechTyee products. AvtechTyee has notified their supplier about zero tolerance for supplying counterfeit parts and the legal implications if doing so.

### 8.2 Sampling

AvtechTyee expects the default method to include 100% inspection and/or test. Any statistical sampling procedures used for inspection/test may be subject to approval by AvtechTyee. Acceptance sampling shall meet the requirements of AS9138, "Statistical Product Acceptance Requirements" With the exception noted herein Seller's statistical sampling procedure/plan conformance to AS9138 with minimum protection levels meeting SAE AS9138 Table A1 and C=0 will constitute AvtechTyee Quality approval subject to restrictions noted in AS9138, Section 4.3 Safety/Critical Characteristics, and part/product Design Data sampling requirements and/or prohibitions. AvtechTyee reserves the right to disallow a supplier's statistical methods for product acceptance for specific sites/ programs, parts or characteristics, and to conduct surveillance at Seller's facility to assess conformance to the requirements of AS9138.

### 8.3 Conformance Responsibility

The Supplier is responsible for compliance with all certification requirements referenced on the Purchase Order and for the maintenance of quality control records evidencing compliance with such requirements, regardless of whether material was procured/produced and/or work was performed by the Supplier or their sub-tier suppliers.

Surveillance, inspection, verification and/or test conducted by AvtechTyee or representatives of any customer or government agency at the Supplier's or AvtechTyee's facility shall not relieve the Supplier of their responsibility in meeting the quality requirements of the Purchase Order and providing acceptable product.

The use of an AvtechTyee's sub-tier supplier nor verification of product by AvtechTyee's Customer shall be used as evidence of effective control of quality.

AvtechTyee's (or their Customer's) source inspections or process verifications shall not preclude subsequent rejection by AvtechTyee or AvtechTyee's Customer.

Inspection/test acceptance at the Supplier's facilities by AvtechTyee does not guarantee final acceptance. Final acceptance shall be at AvtechTyee's facility unless otherwise specified on the Purchase Order.

#### **8.4 Foreign Object Damage/Debris**

The contamination of goods by foreign material or objects is not acceptable as it could eventually affect product appearance and performance. The supplier shall document and implement a program for the prevention, detection, and removal of Foreign Object Damage/Foreign Object Debris (FOD) in accordance with SAE AS9146 Foreign Object Damage (FOD) Prevention Program-Requirements for Aviation, Space and Defense Organizations. The program shall include training and the active involvement of employees. In addition, the supplier shall conduct audits and maintain records to demonstrate the program's effectiveness.

By delivering items to AvtechTyee, the supplier shall be deemed to have certified to AvtechTyee that such items are free from any foreign materials that could result in FOD.

#### **8.5 Certificate of Conformance**

The Supplier provides, with each shipment, a Certificate of Compliance traceable to the responsible Supplier contact by signature or printed name, which shows AvtechTyee's Purchase Order, AvtechTyee's part number and as applicable, the Supplier reference number. This document certifies that material or parts furnished have been produced, processed, and/or manufactured and verified in accordance with all applicable specifications as stated in AvtechTyee's Purchase Order. This document also certifies that objective evidence of inspection and testing verifications is on file and available for review.

When Certification of Compliance from the Supplier is based on Certifications of Tests and Inspections received from the manufacturer or another supplier, the Supplier ensures that these Certifications are received and retained, and that adequate traceability exists to the manufacturer of the products.

Test reports must provide, at a minimum, the manufacturer's name, manufacturer's part number, and AvtechTyee's order number. Certification of conformance to base material requirements is sufficient evidence only when provided by the manufacturer of the material.

A list of AvtechTyee defined special processes can be found in section 6.6. A supplier performing any of these special processes shall provide copies of the processor's certification of conformance and include it with each shipment of material. At a minimum the processor's certification of conformance shall include:

- A. AvtechTyee part number and revision,
- B. Quantity processed,
- C. Processor name and address,

- D. Specification and revision the parts were processed in accordance with,
- E. Processing date,
- F. Name of special process utilized,
- G. Signature of the quality representative from the processor,
- H. Conspicuous identification of the use of Nadcap accredited processes (e.g. Nadcap watermark, text identifying the job as Nadcap accredited, etc.)

When the applicable specification(s) establishes requirements for chemical and/or physical properties, the supplier shall include with the packing sheet for each lot in each shipment, test reports which provide evidence that the materials shipped possess the chemical and/or physical properties required by the applicable specifications.

The following table defines the conditions as to when a certification of conformance is required for material delivered to AvtechTyeec:

<b>Type of Certification Compliance</b>				
<b>Type of Material Purchased</b>	<b>Special Process</b>	<b>Base Material</b>	<b>QPL Material from QML Supplier</b>	<b>Manufacturer</b>
<b>COTS (Commercial-Off-the-Shelf) from Distributor</b>	N/A	N/A	Certified to be Manufactured by QML Certified Supplier	Certified to be manufactured by AvtechTyeec Approved Supplier
<b>QPL Material</b>	N/A	N/A	Certified to be manufactured by QML Certified Supplier	N/A
<b>Build-to-Print (buyer design):</b>	* Certified to be compliant to drawing defined Special Process Requirements	N/A	N/A	N/A
<b>Build-to-Print (buyer design) and Build-to-Spec (supplier design) with FAI (First Article Inspection)</b>	* Certified to be compliant to drawing defined Special Process Requirements	Certification from Base Material Manufacturer that drawing defined Base Material(s) are compliant to specification	N/A	N/A

When specific conformance documents are not requested as part of the order, the supplier's shipment of items to AvtechTyeec shall constitute certification that the articles were manufactured, processed, and inspected according to the requirements of the order.

## **8.6 First Article Inspection**

A First Article Inspection Report (FAIR) is required when specified by an AvtechTyee purchase order. A FAIR should be provided with the first shipment of a new or delta production lot, or if AvtechTyee's last order was more than two years ago. AvtechTyee disclaims responsibility for any parts shipped prior to approval of first articles and related documentation. The Supplier shall flow down this obligation to its sub-tier chain.

For all parts supplied per AvtechTyee specifications, first article inspection shall consist of 100% verification of compliance to the AvtechTyee drawing, including dimensional and functional data per AS9102 requirements.

Upon acceptance of the first article, the supplier shall make no changes to the method of manufacture, equipment used, materials, or processes which may affect interchangeability, function, dimensions, performance, or finishes. All changes must be approved by AvtechTyee Quality Engineering.