

SUPPLIER QUALITY COMMON SUPPLIER REQUIREMENTS	
Author: Supplier Quality	Issue Date: May 11, 2015 Effective Date: July 10, 2015

## 1.0 PURPOSE/SCOPE

- 1.1 This document is supplementary to AS9100 and ASQR-01 UTC Quality Requirements for Suppliers and details additional requirements applicable to UTAS suppliers who furnish product, material, processes and services, as cited by the UTAS Purchase Order or any other additional contractual requirements.
- 1.2 UTAS businesses may apply additional specific requirements.

## 2.0 RESPONSIBILITY

- 2.1 UTAS suppliers of product, material, processes, or services where this document is referenced on purchase orders are responsible to comply with all applicable requirements defined within this document.
- 2.2 It is the responsibility of the supplier to ensure that all UTAS purchase order requirements, including this document, are flowed down to the sub-tier supplier.
- 2.3 Recipients of UTAS purchase orders are responsible for contacting UTAS Supply Chain Management or Supplier Quality Representative(s) with questions or clarifications concerning this document.

## 3.0 REFERENCES

- Supplier Quality System Requirements (ASQR-01)
- Supplier Sampling Requirements (ASQR-20.1)
- Quality Management Systems – Requirements for Aviation, Space and Defense Organizations (AS9100)
- Aerospace First Article Inspection Requirements (AS9102)

**THIS DOCUMENT IS THE PROPERTY OF UTC AEROSPACE SYSTEMS. YOU MAY NOT POSSESS, USE, COPY OR DISCLOSE THIS DOCUMENT OR ANY INFORMATION IN IT, FOR ANY PURPOSE, INCLUDING WITHOUT LIMITATION, TO DESIGN, MANUFACTURE OR REPAIR PARTS, OR OBTAIN ANY GOVERNMENT APPROVAL TO DO SO, WITHOUT UTC AEROSPACE SYSTEMS'S EXPRESS WRITTEN PERMISSION. NEITHER RECEIPT NOR POSSESSION OF THIS DOCUMENT ALONE, FROM ANY SOURCE, CONSTITUTES SUCH PERMISSION. POSSESSION, USE, COPYING OR DISCLOSURE BY ANYONE WITHOUT UTC AEROSPACE SYSTEMS'S EXPRESS WRITTEN PERMISSION IS NOT AUTHORIZED AND MAY RESULT IN CRIMINAL AND/OR CIVIL LIABILITY.**

This document or file does not contain export controlled technical data or technology.

**\*\*Printed copies are considered UNCONTROLLED – Verify current issue before use\*\***



- Variation Management of Key Characteristics (AS9103)
- Quality Management Systems – Requirements for Aviation, Space and Defense Distributors (AS9120)
- Nadcap (AC7004)
- USC, Title 10, Section 2533a
- UTC Website (Form 3 SRI and Form 6 NOPQE)

## 4.0 Acronyms

CA – Corrective Action

CAD – Conditional Advanced Disposition

Cpk – a measure of process capability

FAI – First Article Inspection

FAIR – First Article Inspection Report

GIDEP – Government Industry Data Exchange Program

LTA – Long Term Agreement

MRB – Material Review Board

SBU – Strategic Business Unit

SRI – Supplier Request for Information

UTAS – UTC Aerospace Systems

## 5.0 REQUIREMENTS

### 5.1 General QMS Requirements

- 5.1.1 Suppliers certified to TS16949, ISO 9001, ISO 17025, Nadcap AC7004 or other pertinent certifications upon review may be deemed to have a system capable of meeting UTAS requirements. Suppliers that do not hold current third party certifications may be required to have their system assessed to determine their compliance with the requirements.



5.1.2 For suppliers without full compliance to the QMS requirements listed in ASQR-01 or above, identified gaps shall be subject to quality plans or remediation as deemed necessary to meet the requirements of this document in order to guarantee product quality.

## 5.2 Order of Precedence

5.2.1 In the event there is a requirement that appears to be in conflict with any other requirement, the supplier shall contact UTAS for clarification.

The order of precedence for documents is as follows:

- a) Contract (i.e. Purchase Order, Long Term Agreement, and this procedure)
- b) Drawing Referenced
- c) UTAS Specifications Referenced on Drawing
- d) Industry Specifications

## 5.3 Foreign Material and Production Requirements

5.3.1 Special requirements apply to material produced in company(s) located in a country other than the United States or Canada and the country does not have a Bilateral Airworthiness Agreement (BAA) for the product being supplied. Suppliers intending to purchase raw material stock, forgings, castings and standard hardware from sources outside North America shall notify and obtain concurrence from their assigned UTAS point of contact prior to commencing the procurement activity.

5.3.2 All suppliers providing parts for U.S. Military programs shall conform to the applicable restrictions on foreign acquisition, as forth in DFARS Part 225.

## 5.4 Record Retention

5.4.1 If the supplier ceases business with UTAS, or the supplier is unable to maintain the quality records, the supplier shall provide the option



for UTAS to take possession of the records. Quality records are not to be destroyed without written approval from UTAS.

5.4.2 Quality records approved for destruction must be rendered unreadable.

## 5.5 Air Worthiness / Product Reliability Alerts

5.5.1 UTAS may provide quality alerts, GIDEPs or other notification to the supplier of potential serious issues impacting reliability and/or airworthiness of products. The supplier shall provide a prompt and accurate response as to the impact on any products they may have provided to UTAS.

## 5.6 Configuration Management

5.6.1 Where the Drawing refers to a material, process or inspection specification, drawing or standard that has been revised, cancelled or superseded, the following shall apply:

- a) If the Drawing refers to a specific issue or revision of the document, that issue or revision shall be used.
- b) In any other scenarios, contact UTAS for clarification via the SRI process and request direction.

## 5.7 Change Management

5.7.1 Supplier shall have a documented process to manage change in product and process. The change management process, at a minimum, shall include the following elements:

- a) Change documentation, including configuration control of manufacturing work instructions
- b) Evaluation of risk
- c) Risk mitigation action plan
- d) UTAS notification via SRI process
- e) UTAS change approval

5.7.2 Supplier shall notify UTAS of any changes per Table 1.



Table 1: When Change Notification is required

Requirement	Clarification or Examples
Use of other construction or material than was used in previously approved part of product.	For example, other construction as documented on a deviation or included as a note on the design record and not covered by engineering change.
Production from new or modified tools (except perishable tools), dies, patterns, etc., including additional or replacement tooling.	This requirement only applies to tools which due to their unique form or function, can be expected to influence the integrity of the final product. It is not meant to describe standard tools (new or repaired), such as standard measuring devices, drivers (manual or powered), etc.
Production following refurbishment of rearrangement of existing tooling or equipment.	<p>Refurbishment means the reconstruction and/or modification of a tool or machine or to increase the capacity, performance, or change its existing function. This is not meant to be confused with normal maintenance, repair, or replacement of parts, etc. for which no change in performance is to be expected and post repair verification have been established.</p> <p>Rearrangement is defined as activity which changes the sequence of product/process flow from that documented in the process flow diagram (including the addition of a new process).</p> <p>Minor adjustments of production equipment may be required to meet</p>

UTC AEROSPACE SYSTEMS PROPRIETARY.  
Subject to the restriction on the title or cover page.



	safety requirements such as installation of protective covers, elimination of potential ESD risks, etc. These changes can be made without customer approval unless the process flow is changed as a result of this adjustment.
Production from tooling and equipment transferred to a different plant location or from an additional plant location.	Production process tooling and/or equipment transferred between buildings or facilities in one or more locations.
Change of subcontractors for parts, non-equivalent material, or services (e.g. heat treating, plating, etc) that affect customer fit, form, function, durability, or performance requirements.	Suppliers are responsible for approval of subcontracted material and services that do not affect customer fit, form, function, durability or performance requirements.
Production produced after the tooling has been inactive for volume production for twelve months or more.	For product that has been produced after tooling has been inactive for twelve months or more; notification is requirement when the part has had no active purchase order and the existing tooling has been inactive for volume production for twelve months or more. The only exception is when the part has low volume, e.g. service or specialty vehicles.
Product and process changes related to components of the production product manufactured internally or manufacture by subcontractors that impact fit, form, function, performance and/or durability of the salable product. Additionally, the supplier shall concur with any requests by a subcontractor before submission to the customer.	Any change that affects customer requirements for fit, form, function, performance and/or durability requires notification to the customer.  Note: The fit, form, function, performance and/or durability requirements should be part of customer specification as agreed on during contract review.
Change in test/inspection method – new technique (no effect on acceptance criteria).	For a change in test method, supplier should have evidence that the new method provides results equivalent to the old method.

UTC AEROSPACE SYSTEMS PROPRIETARY.  
Subject to the restriction on the title or cover page.



If equipment is moved to a new location within a facility.	If equipment that is critical to the process is moved to a different location within the same facility, the supplier should have evidence that there has been no negative impact to the process and its output.
--	---

5.7.3 UTAS approval of a change does not relieve the supplier of responsibility to meet fit/form/function requirements.

**5.8 Supplier Designed Product/Source Control/Engineered Items**

5.8.1 All changes to supplier designed material will be approved by UTAS prior to incorporation, or as modified by prior contractual requirements.

5.8.2 Product designs shall have UTAS review and approval unless stated in the contractual requirements or with UTAS engineering consent.

5.8.3 Where UTAS approval is not required, the supplier may be still be required to provide:

- a) Qualification test procedures & reports
- b) Acceptance test procedures and current revisions to a top-assembly or final product engineering drawing / model(s)
- c) SPC data (run charts, Cpk, etc.) on all critical to quality characteristics (KPC or CTQC)

5.8.4 Approval verifies UTAS agreement with design and testing concepts for the intended application. Approval does not, however, relieve the supplier of responsibility to meet form/fit/function requirements.

5.8.5 Suppliers do not have any MRB authority without prior written consent from that UTAS business unit.

5.8.6 For suppliers with MBR authority, supplier shall have an approved and current MRB plan on file as acknowledged per a UTAS letter of delegation

5.8.7 Design Authority suppliers are responsible for sub-tier processor plan validation and approvals.

**5.9 First Article Inspection Report**

**UTC AEROSPACE SYSTEMS PROPRIETARY.**  
Subject to the restriction on the title or cover page.



5.9.1 Complete FAIRs, including lower level assemblies and details, shall be made available to UTAS or UTAS representatives for approval and or acceptance of completion.

## 5.10 Product Inspection Certification

5.10.1 A Certification of Conformance / Compliance (CofC) shall accompany each shipment. A Certificate of Analysis may replace a CofC for raw materials and chemicals that assures conformance to all applicable material specification requirements.

5.10.2 When required, either an 8130 tag or EASA Form 1 shall be included with the provided hardware.

5.10.3 Chemical / Raw material certifications shall reflect actual values (not range), including mill data, unless the product is UTAS supplied material.

5.10.4 All UTAS furnished material (e.g. forging, castings, etc.) shall be accompanied by a certificate of conformance.

5.10.5 The first tier supplier shall verify product compliance from the certification received from processors.

5.10.6 The Certificate of Conformance shall provide a statement of conformity (e.g. "I hereby certify the materials / service supplied was produced in accordance with the Purchase Order, applicable drawings and specification.") and as a minimum include when applicable:

- a) Supplier name and address
- b) Signature and title of authorized supplier representative
- c) Date of certification
- d) Country of origin
- e) Part number (part number ordered if not the same as the supplier's internal part number)
- f) Part name or description
- g) Serial, batch or lot numbers (as applicable)
- h) Date of manufacture (DOM) and/or Cure Date for elastomeric products (not needed for energy products)
- i) UTAS purchase order and line item number (as applicable)
- j) Quantity of parts
- k) Engineering (drawing) revision
- l) Export Jurisdiction/Classification

UTC AEROSPACE SYSTEMS PROPRIETARY.  
Subject to the restriction on the title or cover page.





- m) HTS Classification for Regulatory Compliance
- n) CAGE Code if applicable

5.10.7 Non-conforming report number or deviation/waiver title (subject), date and the deviation/waiver number as applicable.

5.10.8 Supplier must provide all required product information and documentation to UTAS promptly necessary to obtain government import permits or other applicable authorizations

## 5.11 Monitoring and Measurement of Product

5.11.1 The supplier shall have processes in place to ensure compliance with control of critical and key characteristics consistent with ASQR-01 and ASQR-20.1, as appropriate.

5.11.2 The supplier shall have processes in place to ensure all characteristics are within specifications and programs are in place to ensure processes are capable of consistently meeting requirements. This program includes the use of statistical process control methods consistent with the requirements of AS9103 - Variation Management of Key Characteristics.

5.11.3 The suppliers process must include considerations for the following:

- a) SPC methods to be applied
- b) Process capability studies
- c) Sample size and frequency of measurements as well as criteria used when modifying sample size and frequency
- d) Determining the need for corrective action for out of control/tolerance conditions
- e) Records and documents
- f) Gage R & R (Repeatability and Reproducibility) studies
- g) Machine capability studies

## 5.12 Use of UTAS Approved Suppliers

5.12.1 If required by purchase order or drawing, suppliers must only use UTAS approved suppliers for procurement of product. This may include authorized distributors or source designated manufacturers.

5.12.2 Additionally, UTAS may provide part number specific approved sources where the parts may only be procured from these manufactures. Parts made at any other manufacturers require UTAS SBU approval.

UTC AEROSPACE SYSTEMS PROPRIETARY.  
Subject to the restriction on the title or cover page.



5.12.3 In cases where the parts are procured from authorized distributors; traceability back to the manufacturer shall be maintained. The supplier Certificate of Conformance shall also reference the approved manufacturer's catalog part number provided with the shipment.

5.12.4 Name changes are acceptable with proper documentation of link to the original design authority; and in compliance with trade laws and regulations, as applicable.

## 5.13 Special Processes

5.13.1 Suppliers which provide special processes shall not take exclusion to AS9100 clause 7.5.2.

5.13.2 Nadcap is not applicable to Commercial Off the Shelf (catalogue items) or raw materials.

5.13.3 Supplier designed equipment suppliers are required to have a comprehensive special process management program in place and will be subject to audits by UTAS, as required. The program shall include Nadcap certification as part of the requirements and/or where not possible, appropriate oversight of internal and supplier processes including, but not limited to, onsite special processes audits, periodic testing of product, and other means to validate process integrity.

5.13.4 In addition to the special processes listed in ASQR-01, suppliers and all members of their supply chain shall be Nadcap accredited which provide special processes for:

- a) Composites
- b) Conventional Machining (when invoked by SBU)
- c) Electronics (Bare boards, circuit card assemblies, cable and wire harness)
- d) Non-Metallic Material Manufacturing
- e) Non-Metallic Material Testing
- f) Electronic testing for counterfeit avoidance

## 5.14 Distributor Requirements for Procurement of UTAS Designed Parts (Build to Print)



- 5.14.1 The distributor shall have a process in place to ensure the latest UTAS requirements are flowed to sub-tier suppliers.
- 5.14.2 The distributor shall maintain a record of complete traceability and provide C of C from the original manufacturer.
- 5.14.3 First Article Inspections are to be performed per AS9102 and UTC requirements (ASQR-01, and all applicable references).
- 5.14.4 All hardware procured to a UTAS drawing (source not designated on drawing) shall be procured from UTAS-approved sources only.
- 5.14.5 Parts made to “build to print / detailed drawings” which have Part Number Approved Supplier List (ASL) must be procured from that supplier.
- 5.14.6 Distributors providing parts to “build to print / detailed drawings” with no ASL, shall have a process in place for the following:
  - 5.14.6.1 To ensure that raw material and/or detail product is procured from sources approved or qualified by UTAS.
  - 5.14.6.2 New sources require distributor to:
  - 5.14.6.3 Verify the new source is UTAS approved, if not perform new supplier assessment and request approval from UTAS.
  - 5.14.6.4 Conduct the transfer of work and document the activity using UTAS-FRM-0027 Supplier Managed Work Transfers.
- 5.14.7 If a distributor receives a purchase order/drawing stating the part is flight safety/flight critical, the distributor shall not proceed with the order and notify the UTAS buyer.

## 5.15 Obsolescence

- 5.15.1 Supplier shall incorporate and maintain processes a comprehensive obsolescence management program for all components of parts to, among others, preclude any part delivery disruption. Supplier shall use appropriate indicators to evaluate its own as well as its supplier base’s compliance with such a plan. Notification of any potential, known or planned obsolescence shall be made to the UTAS buyer immediately.

UTC AEROSPACE SYSTEMS PROPRIETARY.  
Subject to the restriction on the title or cover page.



5.15.2 Use of a broker to procure an obsolete part shall be approved prior to use to by the UTAS SBU supply chain representative.

## 5.16 Control of Nonconforming Product

5.16.1 Suppliers are not authorized to disposition non-conforming product unless material review authority granted in writing. Follow the UTAS SBU's requirements for guidelines for disposition and control.

5.16.2 Suppliers are responsible for administrative costs (unless specifically stated by contract) incurred by UTAS associated with the review and disposition of Supplier-manufactured nonconforming product which includes documentation errors. Once a Supplier non-conformance has been confirmed the following charges may be withheld for payment:

5.16.2.1 A debit may be accessed every confirmed quality escape within UTAS manufacturing process or UTAS customers.

## 5.17 Disclosure of Non-conforming Product

5.17.1 When a supplier has any reason to suspect or knows that non-conforming product which includes documentation has been delivered to UTAS, the supplier shall notify UTAS within 24 hours via UTCQR Form 6 "Notification of Potential Quality Escape (NOPQE)".

5.17.2 The supplier will be expected to provide a corrective action to UTAS within 30 days, provide containment of suspect hardware within 24 hours and prioritize the expedition of qualified replacement products. The supplier must apply effective root cause analysis and corrective action to prevent recurrence. Evidence of this shall be provided in the form of a detailed Root Cause and Corrective action report when requested by UTAS.

5.17.3 Suppliers shall document and communicate the nonconformance per UTAS SBU's notification method. Documentation shall:

5.17.3.1 Contain a clear description of actual or suspect nonconformance



- 5.17.3.2 Reference a drawing / model or specification requirement
- 5.17.3.3 Include quantity, unique identification (e.g. serial numbers, lot/batch number), and shipment dates
- 5.17.3.4 Identify the prime contract number as noted on the purchase order and buyer, if applicable.
- 5.17.3.5 Containment actions shall be completed within 1 business day unless otherwise specified by the UTAS site.

5.17.4 The Supplier must complete the Corrective Action Request and return to the issuing UTAS location by the site-specified due date. If a response cannot be generated in this timeframe, the Supplier must request an extension from the issuing UTAS location.

5.17.5 Supplier should identify the level of mistake proofing applied as part of the corrective action. The levels are defined as follows:

- Level 1 – Prevents a mistake from happening
- Level 2 – Alerts that a mistake is happening
- Level 3 – Detects a mistake after it occurs.

## 5.18 Preservation of Product

5.18.1 Duplicate copies of the Supplier's packing lists are required with each shipment. One copy shall be located on the outside of the box and the second copy shall be located on the inside of the box in the event the outside copy is lost or destroyed during shipping.

5.18.2 Shelf life control items shall have a minimum remaining shelf life as defined by business unit flow down. Items with less than the minimum specified shelf life will only be accepted if written authorization is received prior to shipment

5.18.3 For shelf dated items, the Supplier shall require information regarding the recommended storage conditions, shelf life, expiration dates, date of manufacturing or pot life requirements, MSDS sheets and HAZCOM labels as applicable to the type of item purchased from the Sub-tier Supplier. This information should be located on either the container and/or requested certifications.



5.18.4 All solvents and chemicals shall be supplied only in a new container that has not been previously used to prevent contamination by residual material.

## 5.19 Delivered Tooling, Fixtures, Templates and Jigs

5.19.1 Suppliers that produce tooling, fixtures, templates and jigs used for the manufacture and/or measurement of product, that are produced per UTAS design data shall provide a certificate of conformance.

5.19.2 All tooling, fixtures, templates and jigs shall be inspected to UTAS design data requirements. Supplier shall provide an inspection report that validates all dimensions on drawing are conforming to print.

5.19.3 If marking requirements are not specified on drawing, tooling shall be marked in a permanent manner (stamped) when size permits with the following minimum information:

- Part number (with dash number) and revision level (XXXXX-X Rev. X)
- Date of Manufacture identified as: DOM MM-DD-YY
- Unique serial number consisting of the purchase order number appended with a two (2) digit unique sequence number based on quantity, i.e. PO #123456-01, PO #123456-02, etc.

5.19.4 Tooling shall not be worked on without prior UTAS consent all in the event that a UTAS supplier tool, gauge, or fixture produces nonconforming articles, the supplier shall immediately stop work and notify the UTAS buyer.

## 5.20 Supplier Performance

5.20.1 Where supplier performance falls below an acceptable standard may be subject to additional actions. Actions may include, but not be limited to:

- a) Increased level of inspection
- b) Request for a new full FAI



- c) Onsite oversight by UTAS designated third party (at supplier's cost)
- d) 100% inspection on identified features
- e) Senior management reviews
- f) Commitment to Sustainable Improvement Plans (SIP)

5.21 Any discrepancies in the shipment, such as overages, shortages, missing Country of Origin information, wrong Items against paperwork description, etc., affects the accuracy of UTAS' import declarations with customs. Non-US Suppliers are required to provide all pertinent information, including correction of paperwork, and otherwise support reconciliation efforts of UTAS with the US Government. The cost of correction stemming from the discrepancy caused by the Supplier will be borne by the supplier

6.0 SUPERSEDED DOCUMENT(S)

Supplier Quality Common Supplier Requirements (UTAS-SCM-PRO-0003-00)

7.0 FLOWCHART(S)

None

8.0 REVISION HISTORY

00	Initial Issue	Jan 19, 2015
01	Administrative change due to typographical error in spelling Nadcap (was "NADCAP").	May 11, 2015