



Revision Level R

Supplier Quality Assurance Requirements (SQAR's)

Revision Date: 01/12/2018

001 Customer Source Inspection @ Supplier

As specified in the Contract / Purchase Order, YF/TFC's customer representative shall be granted the right to verify at the subcontractors premises that subcontracted product and/or processes conform to specified requirements. Such verification will not be used by the supplier as evidence of effective control of quality. Verification by the customer does not absolve the supplier's responsibility to provide acceptable product nor will it preclude subsequent rejection by the customer. Contact YF/TFC's customer (minimum of 10 days prior to scheduled completion, for scheduling purposes). Release of product prior to customer source inspection is not allowed unless otherwise notified by YF/TFC and /or the customer scheduled to perform inspection.

002 YF/TFC Source Inspection @ Supplier

As specified in the Contract / Purchase Order, YF/TFC's representative shall be granted the right to verify at the subcontractors premises that subcontracted product and/or processes conform to specified requirements. Such verification will not be used by the supplier as evidence of effective control of quality. Verification by the customer does not absolve the supplier's responsibility to provide acceptable product nor will it preclude subsequent rejection by the customer. Contact YF/TFC (minimum of 10 days prior to scheduled completion, for scheduling purposes). Release of product prior to source inspection is not allowed unless you are otherwise notified by YF/TFC and /or the customer scheduled to perform inspection.

003 Manufacturer Quality System

Compliance with YFTFC001 Quality System for Manufacturers is required for this Purchase Order.

004 Machining Quality System

Compliance with YFTFC002 Quality System for Machining suppliers is required for this Purchase Order.

005 Processor Quality System

Compliance with YFTFC003 Quality System for Processors is required for this Purchase Order.

006 Raw Material Quality System

Compliance with YFTFC004 Quality System for Raw Material suppliers is required for this Purchase Order.



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007 Distributor Quality System

Compliance with YFTFC005 Quality System for Distributors is required for this Purchase Order.

008 Certificate Of Compliance

The YF/TFC supplier shall submit with each shipment a Certificate of Compliance, stating that products shipped against this Purchase Order are in compliance with all requirements and referenced specifications. This includes, for metallic parts and components, the use of domestic or DFARS compliant specialty metals as defined by the United States Department of Defense and is accessible on the Defense Procurement and Acquisition web site:

<http://www.acq.osd.mil/dpap/dars/dfars/html/current/252225.htm#252.225-7008>. The Certification shall include Purchase Order number and part number with revision level. When the supplier is not the Manufacturer, the Manufacturer's Certificate of Compliance is also required.

009 Re-Submission of Product

Reworked product being re-submitted for acceptance shall reference the Quality Action Request (QAR) number on the new Certificate of Compliance. If re-work involved replacement of materials, or any re-processing, appropriate new certifications are required.

010 Supplier Deviations / Waivers Request (SDWR)

Delegation of Material Review Board (MRB) authority by YF/TFC to its subcontractors is NOT PERMITTED. Requests for Deviations/Waivers and Frozen Process Changes must be submitted for disposition thru the YF/TFC Buyer, using the Supplier Deviation/Waiver Request and Frozen Process Change form (SDWR,FRM-QCP-007) and be dispositioned PRIOR to shipment or frozen process change. When disposition is granted via the SDWR form, the supplier shall enclose a copy of the signed request with each container shipment of the affected product. All nonconforming parts are to be tagged/identified, serialized (if applicable) prior to shipment to YF/TFC. If parts are not identified, they may be returned for proper identification.

011 Standard Package Marking

Shall consist of Purchase Order Number, Part Number, Revision, and Quantity, legibly marked on the outer shipping label on all packages. Additional marking may be required by YF/TFC customer and will be documented on the Purchase Order.

012 Material Safety Data Sheets (MSDS)

Seller/Supplier shall supply, with the material ordered, the most recent copy of the Material Safety Data Sheet (MSDS) as published by the original material manufacturer. Legible copies of the MSDS must be sent with the product and included with the packing list and required PO certifications.

013 Test Data

Performance test results, per drawing are required for each part/unit furnished on this Purchase Order.

014 Raw Material Certification (Metals)

The supplier shall submit a Certificate of Compliance from the producing mill showing actual chemical and physical properties. The manufacturer's Quality representative must sign all certificates. All reports must provide traceable heat numbers.

Suppliers should use all available means to obtain raw material melted in the United States. Raw material melted outside of the United States will not be used or provided as raw material unless the country of origin is a DFARS country as listed by the United States Department of Defense on the Defense Procurement and Acquisition web site http://www.acq.osd.mil/dpap/dars/dfars/html/current/225_8.htm#225.872-1. A test report from the DFARS country of origin must be provided. If the report is not written in English, a report from an accredited, independent laboratory within the United States showing actual chemical and physical test results is required.

If material is not melted in the United States or a DFARS country, the supplier must request and obtain approval from the YF/TFC Buyer through a Purchase Order or Purchase Order Amendment prior to the use or release of material to YF/TFC. A report from an accredited, independent laboratory within the United States showing actual chemical and physical test results is required. Any exceptions will be at the discretion of Tactair and will be handled on a case-by-case basis. If the supplier has any questions about these requirements, the YF/TFC Buyer should be contacted immediately.

014a Raw Material Certification (Non-Metallic)

The supplier shall submit a Certificate of Conformance from the raw material manufacturer. The manufacturer's Certificate of Compliance shall include the manufacturer's name, address, lot number, name of the compound/material and its date of manufacture and must be signed by an authorized Quality representative.



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015 YF/TFC Supplied Material

Supplier shall furnish certification that any material furnished by YF/TFC was used in the manufacture of the hardware. The supplier must provide complete traceability for all YF/TFC owned materials, including work order number and Purchase Order number on the supplier's Certificate of Conformance.

016 Age Control Materials

Certificate of Compliance shall include manufacturer's name, address, cure date, batch number and compound type with each shipment of O-rings, seals, gaskets and other shelf-life controlled items. All such items must have been manufactured within the last (8) quarters.

016a Age Controlled Materials

Certificate of Compliance shall include manufacturer's name, address, cure date, batch number and compound type with each shipment of O-rings, seals, gaskets and other shelf-life controlled items. All such items must have been manufactured within the last (4) quarters.

016b Age Controlled Materials

Certificate of Compliance shall include manufacturer's name, address, cure date, batch number and compound type with each shipment of O-rings, seals gaskets and other shelf-life controlled items. The shelf life of all such items shall comply with ARP5316 section 8.1 and shall have at least 80% of the maximum storage life remaining.

016c Age Controlled Materials

Adhesives, paints, sealants and other items that require MSDS sheets shall have a minimum of 75%, or as noted on the Purchase Order, of their shelf-life remaining from the Date of Manufacture (DOM). The expiration date must be marked on the outside of all containers.

017 Special Process Certification

The supplier shall provide certification of all special processes performed for Chemical Processing, Coatings, Heat Treating, NDT, Surface Enhancement and Welding. The supplier shall use ONLY processors who hold a current certification from NADCAP for each process being performed. A list of special processors can be found at eAuditNet at the following link <https://www.eauditnet.com/eauditnet/eau/user/login.htm>

017a Customer Approved Processors

When this code appears on the Purchase Order, use of current YF/TFC customer approved suppliers is required. The name of the YF/TFC customer will be identified on the face of the Purchase Order (i.e. Boeing, Lockheed, Sikorsky, Rolls Royce).

If you are unable to determine whom the appropriate customer approved suppliers are, contact your TFC Buyer for assistance.

017b DELETED (See SQAR 017)

018 Use of Sub-Tier Suppliers

To ensure traceability, all certifications provided to the YF/TFC supplier from their raw material and sub-tier suppliers must contain linkable control numbers such as heat number, batch number, work order number or job number. The YF/TFC supplier's Certificate of Compliance must contain the YF/TFC purchase order number and a way to link to the raw material and sub-tier control numbers; there must be no gaps in the trail of documents. A preferred method is for the YF/TFC supplier's Certificate of Compliance to list their material suppliers and sub-tier suppliers with respective control numbers.

019 First Article Inspection

Supplier shall perform a complete First Article Inspection (FAI) in accordance with the current revision of AS9102. The supplier may use their own forms, as long as they contain all required information as outlined by AS9102. The First Article Inspection Report (FAIR) shall include 100% inspection of one part subassembly or assembly, and a record of all actual dimensional measurements, drawing notes and part specific Purchase Order requirements. Certifications for material and all special processes required by blueprint and/or Purchase Order notes must also be included. When performing FAI on any item produced from multiple cavities; i.e.: casting, molded component, etc.; a FAIR is required for each mold or cavity. The First Article part(s) shall be identified/tagged and submitted with the FAIR(s).

020 Radiographic Inspection

All items requiring radiographic inspection shall be submitted to a NADCAP accredited X-Ray laboratory and be processed in accordance with specifications and standards noted on the drawing or Purchase Order. Parts will be processed in accordance with a specific X-Ray examination technique, approved by a qualified and certified Level III for radiography. All findings shall be reported in a suitable format and shall contain the specifications, traceability to the part(s) examined, disposition of the part(s) (accept/reject), the reason for rejection and the examiner's identification. The report will be submitted, with each shipment of material, to the purchaser. Supplier will retain all X-ray film and will only ship film if instructed to do so by YF/TFC.

021 Statistical Process Control

When a requirement for SPC or existence of characteristic has been identified on the drawing or Purchase Order, the following must be supplied with each shipment: (1) a statistical process control chart that was generated during the process which created the Key Characteristic, and (2) process capability (Cpk) data calculated by using data gathered during the process which manufactured the Key Characteristic. Key Characteristic processes that are not in control and/or not capable of producing Cpk values in excess of 1.33, must be 100% inspected for that Key Characteristic, prior to delivery. If the supplier does not provide control charts and capability data as required above, they must provide evidence of 100% inspection for the Key Characteristics.

022 Magnetic Particle Inspection

Non-Destructive Test requirements for Magnetic Particle Inspection as called out on the drawing or Purchase Order is required. The acceptance criteria will be the current revision of [ES 2013](#).
NOTE: If the process is to be performed to a YF/TFC customer controlled specification, the acceptance criteria contained in that document shall apply.

023 Penetrant Inspection

Non-Destructive Test requirements for Penetrant Inspection as called out on the drawing or Purchase Order is required. The acceptance criteria will be the current revision of [ES 2012](#).
NOTE: If the process is to be performed to a YF/TFC customer controlled specification, the acceptance criteria contained in that document shall apply.

024 Class 3 Threads

Traceability documentation of all Class 3 thread fastener products shall include the following:

- (1) Material Certification
- (2) Heat Treat Certification
- (3) Dimensional Inspection Report from the manufacturer of distributor
- (4) Manufacturers Certification
- (5) Special Process Certification, i.e. Plating, NDT, ect. (*The supplier may provide certification and/or specification reference numbers on their quality inspection documentation or test data sheet as proof of traceability. All certification / specification documents must be available for review when requested by the customer.*)
- (6) Certification of Conformance from the actual supplier

025 DELETED

026 Nameplates and Labels

When providing a specific nameplate for the first time, or from new drawings and/or revisions, the supplier shall submit a proof to the YF/TFC Buyer for approval, prior to production run.

When FED-STD-595 is called out on the YF/TFC drawing, document [SQPR-01 "Color Acceptance of Nameplates"](#) shall be used to determine color acceptance criteria of parts.

027 Electrostatic Discharge Protection (ESD)

An effective ESD program to ANSI/ESD S20.20 (latest revision) or equivalent is required. This document applies to activities that manufacture, process, assemble, install, package, label, service, test, inspect, transport or otherwise handle electrical or electronic parts, assemblies and equipment susceptible to damage by electrostatic discharges. Additional information can be found at: <http://www.esda.org>

028 Altered Items

MS, NAS and/or other hardware that has been altered and re-identified to a YF/TFC or customer part number must have a manufacturer's C of C which certifies that the unaltered part was in compliance with the specification for which it was manufactured.

029 AS9100 Quality Management System Requirements

Supplier must be AS9100 (Quality Management Systems-Aerospace- Requirements) certified by an accredited Certification/Registration Body (CRB).

029a ISO9000 Quality Management System Requirements

Supplier must be ISO9000 (Quality Management Systems Requirements) certified by an accredited Certification/Registration Body (CRB).

030 Foreign Object Debris/Damage (FOD) Prevention

The Supplier shall have a FOD prevention program that meets the intent of the YF/TFC FOD Prevention Program (see below) or complies with the National Aerospace Standard NAS-412 Foreign Object Damage/Foreign Object Debris (FOD) Prevention. Supplier may obtain copies of NAS-412 from IHS Inc. at www.global.ihs.com.

[TFC Foreign Object Debris/Damage \(FOD\) Prevention Program](#)

(The above file require Microsoft® Word® to view)

031 RESERVED

032 Special Designated Parts & Frozen Planning

Part is designated as Flight Safety, Primary, Critical, Fatigue Controlled, or Frozen Process and requires Frozen Planning. Prior to first receipt under this SQAR, a detailed listing of the documentation and its frozen revision level shall be submitted to the applicable buyer at YF/TFC for Planning Review Board (PRB) approval. All planning documentation such as manufacturing plans, processing plans, inspection check sheets, shop travelers, routers, flow process diagrams, operations sheets, operation sketches, CNC programs, outside process procedures, and any other documents necessary to manufacture the part/process must be frozen. Any changes to frozen planning require YF/TFC Planning Review Board approval through an SDWR submittal and may require YF/TFC customer approval. All sub tier suppliers must also be under the same frozen planning requirements as described above.



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033 Supplier Quality Plans

The supplier shall submit inspection results from the production lot. The mutually agreed to level of inspection and/or process controls shall conform to YF/TFC's Supplier Quality Plan for this part number. Any changes to the level of inspection and/or process controls will require YF/TFC revision of the Supplier Quality Plan.



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