# Supplier Quality Requirements Document

Supplier Quality Requirements Document – Quality Clause

Textron Aviation Wichita, KS

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This document is an integral part of the contract (purchase order), which calls it out. The revision in effect at the time the purchase order was placed applies.

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# Contents

# **Revision History**

Rev. No.	Revision Date	Release Date	Description
D	11/16/07	11/16/07	A table of content was added for quick reference. All Sections: General content reorganization, added additional quality information as a result of Quality Clause implementation, removed Supplier Delivery Requirements Specification. Attachment 1 – Type Design and Change Authority Guide was added. Completely re-formatted. Change bars removed for clarity.
E	06/01/10	06/03/10	Completely rewritten. Change bars removed for clarity.
F	10/07/11	10/10/11	Entire document was rewritten to organize, be more concise, and eliminate duplicated requirements flowed to the supplier through other means (e.g., AS9100, AS9102, PO Quality Clauses, engineering, process specifications, and PO Terms and Conditions). Change bars removed for clarity.
G	06/18/12	06/18/12	Removed HBC's Quality Policy from the title page.
Н	10/15/12	10/15/12	Revised to reflect current requirements and clarify items as found necessary.
I	09/10/13	09/11/13	Removed all references to Aerospac and WI 04-04- 029.
J	02/19/14	02/19/14	Supplier notification requirements due to changes to business now include process and suppliers. Requirements added for Beechcraft owned tooling.
K	12/11/14	12/12/14	Update links and web addresses.
L	12/14/16	12/14/16	Updated delivery information and other text changes including web addresses.
М	03/29/17	03/29/17	Added paragraph 4.11 for part Identification.
N	08/29/17	08/29/17	Added AS5553 for counterfeit parts consideration to para.2.1 and 4.3.
0	03/21/18		Removed requirements for AS9016 and Data Submittal Form. Removed references to Supplier Integration Tool, 3-03-005, and WI 04-04-016. Updated links throughout.

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# 1 Scope

# 1.1 General

This document establishes requirements for suppliers providing product or services for incorporation into Textron Aviation's aircraft.

This document flows down the quality system requirements of Title 14 of the Code of Federal Regulations (CFR), 21.137 and defines Textron Aviation's additional quality requirements. It also advises suppliers that their quality system, facilities, and those of any sub-tier suppliers are subject to onsite evaluations by Textron Aviation, Textron Aviation's customers, and regulatory agencies.

# 1.2 <u>Applicability</u>

This document applies when specified by inclusion on Textron Aviation's purchase order or contract. These requirements are not applicable to suppliers that only provide product, which is ready-made and available for sale to the general public and not specifically designed for the aerospace industry (this product is also known as commercial off-the-shelf (COTS)).

This document is intended to explain and supplement, but not to replace or nullify any specifications, standards, terms and conditions, purchase agreements or other contractual agreements.

Management of Textron Aviation's Supply Chain Quality Assurance department must approve deviations to the requirements included herein. Requests for deviations shall be documented and submitted to Textron Aviation Supply Chain Quality Assurance. Requests are to be submitted at: <u>scm\_qa@txtav.com</u>.

# 2 Applicable Documents

# 2.1 SAE International Standards

- AS5553 Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition
- AS9100 Quality Management Systems Requirements for Aviation, Space and Defense Organizations
- AS9102 Aerospace First Article Inspection Requirement
- AS9120 Quality Management Systems Aerospace Requirements for Aviation, Space and Defense Distributors

# 2.2 <u>Textron Aviation</u>

130450 – Standard Practice Notes

BS25691 – Control of Product Manufacturing Processes for Suppliers and Outside Production

BS392875 – Reprocessing Specification for HBC Parts

# 3 Quality System Requirements

3.1 <u>General</u>

Suppliers' quality systems shall comply with the latest revision of the applicable quality systems standard (see para 3.2 - 3.4) along with the Textron Aviation specific quality requirements within

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this document. However, preference for approval will be given to suppliers who maintain third-party accredited quality systems.

Documented evidence of compliance to the appropriate quality management system (QMS) standard along with a successful quality audit is required prior to approval for production. Evidence may be in the form of registration by an accredited registrar who is approved for registrations to the required aerospace standard and listed in the Online Aerospace Supplier Information System (OASIS) database (www.iaqg.sae.org/oasis).

All written and oral communications with the supplier shall be in English. Quality records provided to Textron Aviation shall be in English. These quality records will be available for review by regulatory authorities. Any documents for internal use by the supplier may be in English or supplier's native language. Translation of supplier's documents to English shall be done if required by Textron Aviation.

#### 3.2 <u>Distributors</u>

In addition to other requirements within this document, distributors shall employ a documented quality system that is compliant to (AS/EN/JISQ) 9120 Quality Management Systems Aerospace Requirements for Aviation, Space and Defense Distributors or (AS/EN/JISQ) 9100 Quality Management Systems – Aerospace – Requirements. Copies of the AS standards can be obtained from SAE International at <u>www.sae.org</u>.

# 3.3 Manufacturers

In addition to other requirements within this document, Textron Aviation requires manufacturers of materials, parts, and assemblies to maintain a quality management system that complies with (AS/EN/JISQ) 9100 Quality Management Systems – Requirements for Aviation, Space and Defense Organizations. Copies of this standard can be obtained from SAE International at www.sae.org.

#### 3.4 Special Processors

Suppliers must be authorized by Textron Aviation SCQA to perform special processing on Textron Aviation designed product. A listing of special processes that require Textron Aviation approval is available on the following website: <u>ww2.txtav.com/Supplier/</u>.

A list of suppliers approved for special processing can be found at the following website: <u>ww2.txtav.com/Supplier/</u>.

In addition to other requirements within this document, special processors shall maintain a quality management system that is compliant to (AS/EN/JISQ) 9100 Quality Management Systems – Aerospace – Requirements. Special processors shall achieve and maintain Nadcap accreditation in the following disciplines: chemical processing, coatings (e.g., prime & topcoat, solid lubricants), composites fabrication, heat-treating, non-destructive testing (NDT), non-conventional machining, welding, and surface enhancement (e.g., shot peening).

Suppliers may learn more about Nadcap on the Nadcap website: <u>http://www.prinetwork.org/nadcap/</u>.

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# 4 Textron Aviation Supplemental Requirements

# 4.1 Raw Material Suppliers

Only Textron Aviation approved metallic mills shall be used for Textron Aviation designed product. A list of these suppliers can be found at the following website: <a href="http://www.textro.com/Supplier/">www.textro.com/Supplier/</a>.

#### 4.2 First Article Inspection

Suppliers shall comply with AS9102 – Aerospace First Article Inspection Requirement for all first article inspections.

Suppliers of product of their own design are not required to furnish the First Article Inspection Report (FAIR) with shipment of product to Textron Aviation. However, the documents shall be made available to Textron Aviation upon request.

#### 4.3 Counterfeit Parts Prevention

Suppliers that provide electrical, electronic, and electromechanical components shall develop and implement a counterfeit control plan for such parts. The control plan shall comply with AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition. This standard can be obtained from SAE International at www.sae.org.

#### 4.4 <u>Tooling</u>

Suppliers who possess Textron Aviation owned tooling shall notify Textron Aviation regarding the status and location of Textron Aviation owned tooling. Causes for notification include the following:

Initial receipt

- Repair
- Movement outside of the supplier's facility
- Remastering and Calibration

• Final disposition

Suppliers fabricating Textron Aviation owned tooling shall identify the tools as directed by Textron Aviation. For tooling that involves independent component parts, each part shall bear a unique serial number. The serial numbers for the component parts shall be listed on the main body of the parent tool. Digital pictures of the completed tool, tool identification placard, and location of the placard on the tool shall be provided to Textron Aviation Tooling.

#### 4.5 Quality Records

Unless otherwise specified, all quality records shall be maintained by the supplier for a minimum of ten years after product shipment. Quality records include, but are not limited to, first article reports, work orders, inspection criteria, test and inspection results, nonconforming material documentation, and certifications. Records shall be made available to Textron Aviation on request.

# 4.6 <u>Nonconforming Product</u>

# 4.6.1 Letter of Disclosure (LOD)

Upon discovery of nonconforming or suspected nonconforming product that has been shipped to Textron Aviation, the supplier shall notify Textron Aviation and submit a formal written LOD as soon as practical. Written notification shall be submitted simultaneously to both Textron Aviation

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SCM (Buyer) at email address <u>scm\_info@txtav.com</u> and SCQA at email address <u>scm\_qa@txtav.com</u>.

The written notification will consist of the following information as applicable:

- Part number and description
- Non-conformance description
- Suspect lot number range (e.g., serial numbers, lot numbers, POs, delivery dates, dates of manufacture)
- Potential effect to performance, reliability, and safety
- Recommended disposition (production and field)
- Containment plan
- Replacement part availability schedules
- Preliminary root cause and corrective action

#### 4.6.2 Variation Request

If the supplier has reason to believe that product does not conform to Textron Aviation purchase order requirements, but may be acceptable for use, the supplier shall complete a Variation Request (VR) via the SCM website. Nonconforming product shall not be shipped unless Textron Aviation Engineering and SCQA approve the request. If approved, a copy of the approved request shall accompany each shipment until the approved quantity has been shipped complete. Training for using and for obtaining a login for the web-based VR can be found on the following website: ww2.txtav.com/Supplier/

Product, which has been repaired or modified, may not be submitted to Textron Aviation without an approved Variation Request.

Items returned to the supplier three or more times may not be shipped back to Textron Aviation without VR approval from SCQA. Extensive failure investigation and analysis to determine root cause and corrective action will be required prior to approval.

**NOTE**: Re-processing of material must be accomplished in accordance with BS392875 – Reprocessing Specification for HBC Parts.

#### 4.6.3 <u>Material Review Board (MRB) Authority</u>

For product used on Textron Aviation aircraft, the authority to evaluate and disposition parts that are nonconforming (MRB authority) resides solely with Textron Aviation, except that suppliers holding a Production Approval (PC, TSOA, PMA) for the product supplied have MRB authority for that product. For all other suppliers, this authority is only delegated with an approved MRB Plan.

#### 4.7 <u>Supplier Performance</u>

Textron Aviation expects all suppliers to monitor their performance on the Supplier Rating System (SRS). This can be found at: <u>ww2.txtav.com/Supplier/</u>.

SRS data will be refreshed at the end of each month. Suppliers who have reason to contest individual Quality Notifications shall do so prior to the 15<sup>th</sup> day of the month in which the data are released. It is the supplier's responsibility to maintain the accuracy of their SRS rating. Discrepancies should be resolved with the Textron Aviation buyer.

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Poor performing suppliers may receive additional intervention and surveillance from Textron Aviation. Failure to achieve an acceptable performance level may result in an onsite audit, source inspection, or additional oversight. In the event of recurring or very serious issues impacting Textron Aviation's business, these measures may be at the supplier's expense. Under such circumstances, Textron Aviation reserves the right to debit or invoice supplier accounts to compensate for inspection or related activities that take place as a result of Textron Aviation directed inspections.

# 4.8 Communication with Textron Aviation

Contact information for Textron Aviation's SCQA organization as well as other departments can be found on the following website: <u>ww2.txtav.com/Supplier/</u>.

#### 4.9 Configuration Control

All Design Responsible suppliers (having responsibility for design, validation, and service of a product) must inform Textron Aviation of proposed changes to their product. All changes at any level of the deliverable bill of material shall be supplied to Textron Aviation for approval.

- **NOTE**: TC (Type Certificate) and STC (Supplemental Type Certificate) holders are not required to submit minor changes (no appreciable effect on weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product) for approval.
- **NOTE**: Federal regulations require that the airplane type certificate holder approve all changes to the type design of components installed on their aircraft. Suppliers shall not make any configuration changes to the articles defined on the Purchase Order or ship any parts not meeting the drawing definition of the Purchase Order without the written consent of Textron Aviation. Notification and approval of configuration changes, includes parts which are superseded.

Data shall be submitted through the Textron Aviation website at ww2.txtav.com/Supplier/.

4.10 <u>Purchasing Information</u>

Supplier's purchasing information (e.g., purchase order to sub-tier supplier) for Textron Aviation designed product shall include identification of Textron Aviation as the end-user where special processing (see para.3.4) is involved.

- **NOTE**: If applicable, purchasing information shall include identification of previous or subsequent processing that could have a bearing on the outsourced activities.
- **NOTE**: BS25691 Control of Product Manufacturing Processes for Suppliers and Outside Production is applicable to specific Textron Aviation programs and therefore, shall be included as part of the supplier's purchasing information if applicable. This specification is stipulated in 130450 – Standard Practice Notes. Engineering document 130450 is applicable when called out on a Textron Aviation engineering drawing or

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through inclusion in the applicable Model Index of Specifications.

#### 4.11 <u>Delivery Documentation</u>

The supplier shall provide, as applicable, copies of the following original documents with each shipment of product to Textron Aviation.

- Certificate of Conformance (C of C) A statement by the Supplier Quality Representative certifying that shipment complies with all Textron Aviation purchase order requirements.
- Identity of actual manufacturer (manufacture of origin) if the end item manufacturer is a company other than themselves.
- List of part serial numbers, when applicable.
- Textron Aviation Engineering approved Variation Requests (see para.4.6.2).

In addition to the documents above, shipments containing the first article of Textron Aviation designed product, shall include copies of the following original documents as applicable.

• First Article Inspection Report (FAIR) – for partial FAIRs, only documentation associated with the cause of the partial FAIR is required.

Example: FAIR generated for a change in source of a plating operation - the supplier is required to provide the certification from the new plating source, not a complete set of certifications for all materials and processes.

- Hardware certifications.
- Raw material test reports/certifications metallic raw material test reports/certifications must be from the approved mill (see para.4.1).
- Special processing certifications (see para.3.4).
- For Textron Aviation furnished materials, a copy of the Textron Aviation shipping document.
- Suppliers of product of their own design are not required to furnish the First Article Inspection Report (FAIR) with shipment of product to Textron Aviation. However, the documents shall be made available to Textron Aviation upon request.

#### 4.11.1 Alternate Delivery Methods

In lieu of supplying hard copies of the documentation listed above with the shipped product, Textron Aviation prefers suppliers to provide them electronically utilizing a secure online repository, Aerospac. Aerospac contact information is available at <u>www.aerospac.com</u>.

Textron Aviation has employed a preferred method of submitting FAIRs. The process utilizes an internet-based first article inspection system facilitated by Net Inspect. The use of this system is at no cost to the supplier. Requests for Net Inspect access need to be submitted to Textron Aviation Supplier Quality at <u>scm\_qa@txtav.com</u>.

#### 4.12 Part Identification

All parts delivered to Textron Aviation must be identified with the part number listed on the purchase order.

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Products having an insufficient or unsuitable surface to be individually identified will be bundled, if possible, or placed in an identified container. An identification tag, with all required information, shall be attached to the bundle or the container.

Parts that are not Textron Aviation design-controlled shall have the supplier part number applied. Part marking shall be accomplished by permanent ink stamping of the parts when the identification method is not specifically regulated by the drawings, specifications, or other documents.

McCauley Engineering design-controlled part numbers shall be positively identified. This identification shall include McCauley part number, PO number or serial number, date of manufacture and inspection stamp.

# 5 Textron Aviation Supplier Oversight

#### 5.1 <u>Supplier Approval</u>

A supplier's initial approval will be contingent on a successful QMS audit. Approval does not infer in any way an obligation for Textron Aviation to issue a purchase order.

#### 5.2 <u>Surveillance</u>

Textron Aviation SCQA may perform surveillance activities with suppliers during their approval duration. These activities may include, but are not limited to:

- Quality Management Reviews (QMRs)
- Onsite audits
- Supplier development activities

#### 5.3 <u>Re-approval</u>

Supplier re-approval is required on a periodic basis. A risk-based approach will be used to determine the type and frequency of reviews with the criteria being part/process criticality, supplier performance and supplier noncompliance impact.

#### 5.4 Changes – Business and QMS

It is the responsibility of the supplier to provide Textron Aviation a written statement of changes in the supplier's:

Management

Processes (significant changes only)

Ownership

Suppliers (significant changes only)

Location

Quality system (significant revisions only)

If uncertain if notice is required, the supplier should counsel with Textron Aviation. Notice is required at the earliest possible juncture of facility relocation; an advance notice of six months is normally adequate as a minimum; however earlier notification should be provided depending on the complexity of the product and nature of the move. Notification shall be sent to Textron Aviation Supply Chain Management with a copy provided to Textron Aviation Supply Chain Quality Assurance at scm\_qa@txtav.com notification shall be submitted simultaneously to both Textron Aviation SCM at scm\_info@txtav.com.

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# 5.5 Supplier Delegated Inspection Authority (DIA)

Delegated inspection authority may be granted to suppliers based on the needs of the business and the supplier's performance. Textron Aviation Supply Chain Quality Assurance is responsible for the final approval of all DIA candidates. This authority is not given without an official notification from Textron Aviation declaring the type and extent of delegation.

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#### Table I – Quick Link References

Website Quick Links

**Textron Aviation Supplier Portal** 

- Quality and delivery performance data and user's guide
- Department contacts, phone numbers, addresses, and email
- Submit nonconforming product to Textron Aviation's MRB for review and disposition
- Information commonly referred to on Textron Aviation's Purchase Orders (including PO Quality Clauses)
- Submit engineering changes to Textron Aviation
- Current listing of Textron Aviation approved special processors and raw material suppliers
- Access to technical data required to manufacture product
- Shelf life limitations
  - Training for various topics
- ww2.txtav.com/Supplier/

# Aerospac

www.aerospac.com

#### Aero Spec

www.aerospecllc.com

International Aerospace Quality Group, Online Aerospace Supplier Information System (OASIS) <u>www.iaqg.sae.org/oasis</u>

International Organization for Standardization (ISO)

https://www.iso.org/home.html

# Nadcap

http://p-r-i.org/NADCAP/

# Net-Inspect

# https://www.net-inspect.com/

- Fill out the online "Request an Account" form
- Select "other" in the field to the right of "Customer Name(s)," then type "Textron Aviation" in the free text field below the "Other"
- Net-Inspect will provide the user with logon information and training

#### SAE International

www.sae.org

Email Quick Links

Textron Aviation Supply Chain Quality Assurance scm\_ga@txtav.com

Textron Aviation Tooling

TXTAVvendortooling@txtav.com

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