

Supplier Quality Requirements

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NOTE: YELLOW HI-LITED AREAS IDENTIFY LATEST REVISION CHANGES.

QC-01 Quality Management Systems –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

AS9100 Suppliers: The supplier will as a minimum maintain and implement a documented quality management system, available in the English language, certified to AS9100 and/or ISO9001 (AS9120 is acceptable for distributors; ISO 17025 is acceptable for material test and calibration laboratories). This system is subject to review by AMT Quality Assurance.

Suppliers must provide AMT with written notification if certification/recertification is cancelled, has been rescheduled past the required certification date, or if there are any major or reoccurring findings as a result of certification/recertification.

Less than AS9100 Suppliers: Suppliers who do not maintain a quality system certified to AS9100 and/or ISO9001 must maintain documented procedures available in the English language which address the following:

1. Identification and Traceability
2. Control of Nonconforming Material
3. Control of Customer Property
4. Process Control
5. Measurement and Monitoring of Product
6. Training
7. Preservation of Product
8. Control of Quality Records
9. Internal Audit
10. Contract / Purchase Order Review

Additionally, suppliers must provide AMT with written notification of any changes in ownership and management representatives with assigned responsibility and authority for the quality system.

QC-02 Certifications –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Suppliers must provide a statement on the packing sheet certifying its quality assurance department has inspected the parts/processes and/or services and they adhere to all requirements, applicable drawings/specifications.

Purchased Complete Product - A certificate of conformance shall accompany each shipment including traceability (manufacturer's production order/lot number) to the product provided and a statement that the product provided meets the controlling engineering and purchase order requirements. The certificate of conformity shall also include a listing of special processes performed by supplier and the supplier's sub-tiers. This will include the special processor name and process designation (specification and revision, type, class, and/or grade, material condition, etc. as applicable).

Raw Materials and Standard Hardware – A legible certificate of conformance from the original product manufacturer shall accompany each shipment including traceability information (i.e. manufacturing date, production lot, batch number, heat lot, etc. as applicable) to the product provided and a statement that the product provided meets the controlling engineering and purchase order requirements. Distributors of hardware or raw material are required to include the name of the original product manufacturer and reference traceability

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information to the product provided on their pack slip. Certified physical and metallurgical test reports are to be provided where required by the controlling specification.

Processes - A certificate of conformance shall accompany each shipment including traceability (AMT's job/lot number, PO) to the product provided and a statement that the product provided meets the controlling engineering and purchase order requirements. The certificate of conformity shall also include a listing of special processes performed. This will include the process designation (specification, revision, PSDs, type, class, and/or grade as applicable). For primer and paint processes, the average coating thickness will be documented on the certificate of conformance. Certified physical and metallurgical test reports are to be provided where required by controlling specification.

QC-02A Electronic Certifications – Certifications are to be supplied electronically in PDF format upon production shipment to the following email address: suppliercerts@amtnw.com with the applicable AMT PO number as the subject line of the email.

QC-03 Shelf Life – The manufacturing and applicable expiration dates must be noted on each individual container and certification. Product must be shipped to AMT with a minimum of 60% of its certified shelf life remaining, unless otherwise approved by AMT Purchasing/Manufacturing and specified by the PO requirements.

QC-04 First Article –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Supplier shall perform First Article Inspection (FAI) on all supplied product in accordance with AS9102 (latest revision) and “AMT FAI Requirements for Suppliers” document available on the [AMT Supply Chain](#) webpage under Supplier Documents > Public folder. Unless otherwise approved by AMT, First Article Inspection Reports (FAIRs), including delta/partial FAIs, are to be documented and submitted to the customer “**SENIOR AEROSPACE AMT – ARLINGTON**” via web based Net-Inspect software (www.net-inspect.com) **prior** to shipment of all first article parts.

Note: Do NOT submit FAIRs directly to the end item customer in Net-Inspect. Additionally, hardcopy FAIRs submitted to AMT with shipping paperwork will not be accepted. Contact AMT Quality for alternate submittal methods and approval.

Supplier shall attach FAI/delta FAI supporting documentation (material/processing certs, work orders, bubbled drawings/parts lists, CMM or other inspection data, etc.) as applicable.

Net-Inspect training presentations, along with published frequently asked question listings may be obtained from AMT, or through Net-Inspect.

QC-05 Source inspection – Source inspection is required by AMT Quality/Supplier Development Engineering or Designee. Supplier must contact the AMT Buyer prior to all shipments to AMT. All corresponding material/processing certifications, first article reports, and final shipping paperwork must be made available to AMT representative at the time of source inspection. Packerslips will be signed/stamped and dated by AMT Quality/Supplier Development Engineering or Designee as evidence the source requirement was met.

QC-06 Responsibility for Conformance

The supplier is responsible for furnishing products/processes and services that conform to the requirements of the purchase order, engineering & quality requirements and ensuring their personnel are aware of their contribution to product conformity and safety, and the importance of ethical behavior. Surveillance, inspections,

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and tests performed by AMT, AMT's customer, or the government does not relieve the supplier of this responsibility.

QC-07 Statistical Process Control – Statistical process control is required and shall be implemented on this order as defined on the purchase order.

QC-08 In-Process Inspection – In process inspection is required by AMT. The specific inspection point in the process will be specified on the purchase order. The supplier will contact the AMT Buyer and hold the product for in-process inspection by AMT Quality or AMT Supplier Quality Engineering.

QC-09 OBSOLETE

QC-10 Pre-production First Part Approval – The supplier shall submit the first part to AMT for inspection verification.

QC-11 Manufacturing Facility Location – Supplier is required to notify AMT of changes in manufacturing facility location. Upon review of the proposed changes, AMT may require additional information and/or approval prior to implementation.

QC-12 Parts identification – All parts must be identified per AMT PO requirements and controlling engineering and/or specification requirements including, at a minimum, the part number, manufacturer's lot or traceability number and manufacture date (as applicable). Deviations from drawing requirements in either the manner and/or location of this identification must be reviewed / approved by AMT Engineering and AMT Quality prior to shipment.

QC-13 Product Packaging – Product 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 supplied product must be segregated by part number and lot. In-process parts (-OP and -OV items) and/or packaging (whichever is more feasible) must be temporarily marked with the AMT job number or lot number to maintain traceability during shipping and receiving. As shown and opposite configurations should be packaged separately unless all pieces are clearly identified which configuration they represent.

QC-14 Right of Entry –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded. AMT and/or AMT's customer or government representatives will have the right to survey facilities and review all processes, subcontractors, contracted parts, procedures and records.

QC-15 Subcontracting/Work Transfer – Supplier is only authorized to subcontract special processes (as defined and controlled by AMT customer specifications) outside of supplier's capabilities. All other subcontracting or work transfer requires written consent from AMT Purchasing and approval by AMT Quality Assurance prior to any work movement. Supplier shall flow down to Subcontractors any/all applicable requirements in the purchasing documents, including key characteristics, where required.

Note: The supplier shall not relocate or subcontract work to a non-US country without written notification to and approval from AMT.

QC-16 Delegated Source Program – Supplier has been selected to perform delegated source inspection for AMT Quality Assurance. The supplier must conform to the requirements of AS9117 and QS 37401 Supplier Delegated Inspection Program. Supplier must notify AMT of any changes to personnel with delegated inspection authority. No deviation is allowed from these requirements unless written permission is granted from

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the AMT Director of Quality. This authority may not be delegated to the supplier's sub-tiers. AMT reserves the right to conduct surveillance at Supplier's facility to determine if the Supplier's quality system conforms to the requirements of AS9117.

QC-17 AMT Supplied Drawings / PCMs – All engineering drawings / PCMs provided by AMT are AMT property and must be returned with this order.

QC-18 NADCAP – Supplier must be NADCAP approved as applicable for the processes being performed. NADCAP approval is required for the following processes:

- Heat Treating (AC 7102)
- Welding (AC 7110)
- Chemical Processing (AC 7108)
- Non-Destructive Testing (AC 7114)
- Surface Enhancement (AC 7117)
- Composites (AC 7118)
- Material Testing (AC 7101)

QC-19 OBSOLETE

QC-20 Quality Records –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded. Supplier shall maintain records in the English language and have available on a timely basis (upon request), lot traceable quality records evidencing inspection & conformance of all product, processes and services delivered to AMT throughout all stages of manufacturing including (where applicable); raw material used, relevant chemical, physical and mechanical test reports, special processes performed, CMM and dimensional inspection reports created during the inspection process, as well as dispositions of nonconforming product & scrap. No quality records shall be destroyed without the written consent of AMT Quality. Reference additional customer specific retention requirements as applicable below.

QC-21 OBSOLETE

QC-22 OBSOLETE

QC-23 Revision Control – Unless otherwise specified on the PO, latest revision applies on all engineering and specifications used in product manufacture. Documents shall be provided to you by your AMT Buyer upon request. Engineering requirements and AMT Condition of Supply (COS) revisions/requirements are listed directly on the AMT PO. POCs will be provided to you by your AMT Buyer as required. Specification revisions are available on the AMT Website and will be provided to you by your AMT Buyer upon request.

QC-24 ITAR Requirement –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded. IMPORTANT/CONFIDENTIAL: This PO (and any drawings and/or attachments accompanying it) may contain confidential information, including information protected by United States Government. The information is intended only for the use of the intended recipient(s). Delivery of this PO to anyone other than the intended recipient(s) is not intended to waive any privilege or otherwise detract from the confidentiality of the PO. If you are not the intended recipient, or if this PO has been addressed to you in error, do not read, disclose, reproduce, distribute, disseminate or otherwise use this information, rather, please promptly notify the sender by phone or e-mail, and then destroy all copies of the PO and its attachments, if any.

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QC-27 Inspection Options –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded. Supplier shall inspect or otherwise verify that all Products or Services, including those components procured from or furnished by subtier suppliers, subcontractors or the customer, comply with the requirements of the purchase order prior to shipment. Supplier shall be responsible for all tests and inspections of the product during receiving, manufacture and final inspection. Supplier agrees to furnish copies of test and/or control data to AMT Buyer/Quality Representative upon request.

Supplier shall perform 100% in-process and final inspection for all product/processes and services.

OR

Suppliers performing statistical sampling must obtain written approval from AMT Quality Assurance that their process/procedure conforms to the requirements of AS9138 "Aerospace Series – Quality Management Systems Statistical Product Acceptance Requirements" with minimum protection levels meeting SAE AS9138 Table A1 and C=0 unless otherwise noted, **prior to** implementing sampling on any AMT product. AMT reserves the right to disallow a supplier's statistical methods for product acceptance for specific programs, parts or characteristics, and to conduct surveillance at Supplier's facility to assess conformance to the requirements of AS9138. Any characteristics identified in the design documentation as "Safety" or "Critical" (or similar) shall not be accepted using statistical product acceptance methods.

If Supplier uses an Operator Self-Verification (OSV) program, Supplier shall comply with the requirements set forth in SAE industry standard AS9162, "Aerospace Operator Self Verification Programs". AMT reserves the right to conduct surveillance at Supplier's facility to determine that Supplier is compliant to the requirements of AS9162.

QC-28 Nonconforming Product and Notification of Escapement (NOE) –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Nonconforming Product - In-process product (including any product with customer furnished material and/or issued to an AMT manufacturing order) that is determined to be nonconforming at the Supplier must be identified/tagged and returned to AMT Purchasing/Quality with a description of the nonconformance and any work performed/not performed in accordance with the applicable purchase order. Nonconforming product not identified and tagged by the supplier will be documented through AMT's process for control of nonconforming product and dispositioned at AMT discretion.

The Supplier shall not use dispositions of use-as-is or repair on nonconforming product.

Note: Rework of purchase complete product to drawing configuration, or scrap of nonconforming product may be made without prior AMT approval where permissible in the drawing/specification.

Authorization to Ship – In the event nonconforming product cannot be reworked to engineering requirements, supplier must submit the discrepancy/discrepancies to AMT Quality to receive authorization to ship prior to releasing/shipping the product.

Notification of Escapement - Supplier shall provide written notification to AMT within one (1) business day when a nonconformance is determined to exist, or is suspected to exist, on product already delivered to AMT under any order. **All information related to an escapement presenting possible safety of flight issues must be submitted immediately without delay.** Written notification shall include:

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- A. Affected process(es) or product number(s) and name(s)
- B. Clear description of the nonconforming condition and the affected engineering requirement (i.e., what it is and what it should be per xxxxx)
- C. AMT purchase order/line item/release, manufacturer lot number, quantities, and dates shipped to AMT.
- D. Nonconforming parts received from outside services are to be identified/tagged with a description of nonconforming condition.

Request for Containment and Corrective Action - When AMT notifies Supplier of a detected nonconformance, Supplier shall immediately take action to contain and eliminate the nonconformance on all products in the Supplier's control. Supplier shall also maintain verification that the root cause corrective action has occurred and has resolved the subject condition. AMT reserves the right to review the verification data at Supplier's facility or have the data submitted to AMT.

When Supplier is requested to submit a formal containment and/or corrective action response, the response shall be submitted within the time allotted and format specified. In the event Supplier is unable to respond within the allotted time frame the supplier shall submit a written request for extension, subject to AMT approval. The request for extension shall include the reason for the extension and the additional time needed to complete the corrective action response. Requests for corrective action shall be timely and effective. Failure to do so may result in removal or approvals and/or additional monitoring as deemed appropriate.

QC-29 Excess Inventory – The Supplier shall strictly control all inventory of customer proprietary product that is in excess of contract quantity in order to prevent product from being sold or provided to any third party without prior written authorization from AMT.

QC-30 Foreign Manufacture – Part Marking

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

All foreign manufactured items furnished under the Purchase Order, must be legibly marked with the English name of the country of origin per U.S. Customs Regulation 19 CFR Part 134 Country of Origin Marking. Markings are to be legible, indelible, and as permanent as the nature of the article or container will allow.

QC-31 Counterfeit Parts –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Supplier shall have in place a documented program to avoid, detect, mitigate, disposition and disclose counterfeit parts and materials (reference AS6174 for guidance). Suppliers shall also flow down counterfeit parts programs requirements to their sub-tiers, especially but not limited to:

- Electronic parts suppliers
- Raw material suppliers
- Distributors

QC-32 Foreign Object Damage Control Program (FOD) –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

The supplier shall establish, document and maintain a program to control and eliminate FOD and/or contamination during the Supplier's manufacturing, assembly, test, inspection, packaging and shipping operations in compliance with AS9146 and NAS412. When applicable, the Supplier's FOD control program shall include controls to preclude FOD or contamination at the Supplier's sub-tier sources. The following basic elements shall be included in the Supplier's FOD control program.

- FOD prevention training
- Area designation and visual management systems
- Manufacturing planning consideration for FOD prevention

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- Work sequencing
- Cleanliness of work area
- Control of tools, personal items, consumables, hardware, scrap, etc.
- Protection from FOD during handling, packaging and shipping
- Periodic (At least annually) evaluation of the FOD control program for effectiveness

QC-33 Boeing Program Requirements –

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Boeing requires that the provisions/requirements set forth below be included in Seller's direct supply contracts as well as the obligation that they be flowed to the sub-tier supply chain. For the purpose of this note Supply Chain shall mean Seller's direct and indirect suppliers performing value-added activity on the products and services. It focuses on direct and lower-tier suppliers.

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 Quality Management System (QMS). Supplier shall, upon request, be able to demonstrate evidence of communication to its employees and to its supply chain; use of AAM must be considered as a personal warranty of compliance and conformity. 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 be limited to:

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

Acceptance Test Procedure (ATP) – Supplier ATPs are intended to provide reasonable assurance that a NEW part/component meets the minimum requirements for fit, form and function for its intended use. The ATP is insufficient as a standalone investigation tool for a specific documented nonconformance, unless a step within the ATP specifically accounts for/tests for the identified nonconformance.

Supplier investigation of documented nonconforming product(s) must lead the supplier to "eliminate the cause(s) of the nonconformity, in order that it does not recur or occur elsewhere" (QMS AS/EN/JISQ 9100) or produce evidence that the supplier is not at fault.

Approved Process Sources (D1-4426) – The Supplier is required to maintain compliance with this document as may be revised from time to time. This document defines the approved sources for special processing, composite raw materials, composite products, aircraft bearings, designated fasteners, and metallic raw materials. All manufacturing and inspection processes which are controlled by D1-4426 shall be performed only by the sources specified in the document.

Approved Standards Sources (D-590) – The Supplier is required to procure standards from approved manufacturers as listed in Boeing Document D-590 as applicable. Distributors may be used as allowed.

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Clean Air Act – Ozone-depleting substances as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –

- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- (2) Class II, including, but not limited to hydro chlorofluorocarbons.

Supplier shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as applicable:

“Warning Contains * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.” or

“Warning Manufactured with * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.”

* *Supplier shall insert the name of the substance(s).*

Configuration Control – Supplier agrees not to make any change in materials, processes or design details of the product after Boeing qualification or approval without written approval from Boeing. This shall include changes in materials, processes or design details by subcontractors. In addition to these changes, changes which would affect the product or any component part thereof with regard to (a) part number identification, (b) physical or functional interchangeability, or (c) repair and overhaul procedures and processes and material changes which affect these procedures without prior written approval of Boeing is prohibited. If such approval is granted, all part numbers and the originals of all drawings and data shall be revised and provided to Boeing accordingly. Supplier will place the above clause in all its subcontracts supporting this Agreement.

Digital Product Definition – Suppliers utilizing AMT supplied Digital Product Definition (DPD) for the purposes of manufacturing and/or inspection of Boeing product must hold written approval from AMT for compliance to Boeing D6-51991.

FAA-Parts Manufacturer Approval (PMA) - Unless explicit direction is given to the contrary, no articles (or constituent parts thereof) ordered in support of Boeing programs shall contain any FAA-PMA markings. The articles shall not be certified under FAA-PMA approval and the accompanying paperwork (i.e. shippers, etc) shall not contain any FAA-PMA markings.

Additionally, suppliers shall place the following statement on all shipping documents:

"Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700 and no articles (or constituent parts thereof) or the accompanying paperwork (e.g., packages, shippers, etc.) contain any Federal Aviation Administration-Parts Manufacturer Approval (FAA-PMA) markings."

Metallic Raw Material Procurement - Metallic raw materials used for product must be procured from Boeing or a Boeing designated service provider (TMX) unless otherwise approved in writing by AMT. Commodities include: Aluminum sheet, plate, extrusion and coil as well as all wrought and unwrought titanium mill products. This requirement excludes stainless steel materials.

Manufacturing Planning - “Controlled” or “Approved” planning requirements are derived from the part specific Engineering requirements. Planning changes to “controlled” or “approved” planning requires compliance with the associated process prior to implementing proposed changes within Supplier’s production system and commencing manufacture. Supplier shall submit manufacturing planning

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changes to AMT in accordance with the requirements described within the associated process for approval/re-approval.

Engineering qualification/approvals include material & process approvals and quality engineering approvals (including but not limited to):

- Manufacturing plans (e.g. **D6-1276**, **D6-17781**, **BSS7085**)
- Part Qualifications (e.g. **BSS7029**, **BSS7082**, **BSS7119**)
- Process Control (e.g. **D6-36232**)
- Boeing Level 3 Approvals (e.g. **BAC5980**)
- Statistical Sampling Plans (e.g. **BSS7286**)

Production Certificate - The Supplier is required to place the following statement on all shipping documents:

“Seller hereby acknowledges that the parts and /or materials being shipped under this order are intended for use under Boeing’s Federal Aviation Administration (FAA) issued Production Certificate 700.”

The preferred location for the statement is on the shipping document next to or following the Certificate of Conformance (C of C). The statement may be printed, stamped or attached as a label or sticker to the shipping documentation. It is allowable to replace “Seller” with the company name or “We”.

Quality Records – All Quality records required and traceable to Boeing product/part number must be maintained and made available on a timely basis upon request. Records shall be retained for a minimum calendar year + 10 from the date of shipment and may not be destroyed without prior written approval.

Tooling – Suppliers utilizing Boeing owned tooling are required to comply with D33200-1, Boeing Suppliers’ Tooling Document.

Validation of Raw Material Test Reports – When the supplier utilizes test reports to accept supplier purchased raw material, the following requirements apply:

- Test reports shall be checked 100% against supplier’s requirements and 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. 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 product supplied.

QC-34 Spirit AeroSystems Additional Supplier Requirements – Boeing Programs

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Acceptance of Detail Parts – Final Product Acceptance for all detail parts and/or assemblies must include 100% inspection of temper (Conductivity and Rockwell Hardness) for aluminum alloys, and 100% Rockwell Hardness inspection for steel and CRES alloys. Inspection of temper must be accomplished after the final machining operation on fully tempered material and/or the final heat treatment operation, where applicable. The required range must be listed along with the range of measured values at the appropriate place on each work order and, where applicable, be transferred from process certifications. For clad materials, the type of instrument used to verify compliance must

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also be listed. Sampling of hardness inspections may be allowed for certain alloys or tensile strength ranges if permitted by the governing customer documents or the corresponding heat treatment specification. Actual values are to be recorded on the Certificate of Conformance.

Certifications – In addition to the requirements stated in QC-02, supplier shall provide AMT with all material, hardware and process certifications related to the product being provided to AMT.

Digital Product Definition – Suppliers utilizing AMT supplied Digital Product Definition (DPD) for the purposes of manufacturing and/or inspection of Spirit product must hold written approval from AMT for compliance to Spirit MAA1-10009-1.

First Article Inspection - Supporting documents shall be provided with FAI reports (attached as PDF files). Supporting documents shall consist of but are not limited to:

- Material Certifications
- Process Certifications
- Bubble Drawings
- Acceptance Data Reports
- Acceptance Test Results
- Production Planning
- Any additional documentation related to the FAI being inspected

Delta FAIs shall have applicable supporting documentation as necessary.

Tooling – Suppliers utilizing Boeing or Spirit owned tooling are required to comply with D33200, Boeing Suppliers' Tooling Document and STM-130030-1 Spirit AeroSystems, Inc. Tooling Requirements.

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QC-37 Subaru/Fuji Heavy Industries (FHI) – Additional Supplier Requirements

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Certifications – In addition to the requirements stated in QC-02, supplier shall provide AMT with all material, hardware and process certifications related to the product being provided to AMT.

Validation of Special Processes – Suppliers of Purchased Complete product shall periodically validate test reports for the special process conducted by their suppliers. These validity tests may include a verification of the part upon receipt, such as a tape adhesion test conducted to verify the quality of the surface treatment. These validity tests shall be implemented in an appropriate method and frequency to the special process of each sub-tier supplier. Upon AMT or FHI request, Supplier shall submit the results of these validity tests.

QC-38 Avcorp Additional Supplier Requirements – Boeing Programs

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Certifications – In addition to the requirements stated in QC-02, supplier shall provide AMT with all material, hardware and process certifications related to the product being provided to AMT.

Frozen Planning – 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 in writing by AMT Quality or Engineering.

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QC-39 Northrop Grumman – Additional Supplier Requirements

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Approved Process Sources (Northrop Grumman ASPL) – The Supplier is required to maintain compliance with this list as it may be revised from time to time. The ASPL defines the approved sources for special processing, composite raw materials, composite products, aircraft bearings, designated fasteners, and metallic raw materials. All manufacturing and inspection processes which are controlled by Northrop Grumman’s Approved Special Processor Listing and shall be performed only by the sources specified in the list. The list is located at:

<https://www.northropgrumman.com/suppliers/tools>

Certifications – In addition to the requirements stated in QC-02, supplier shall provide AMT with all material, hardware and process certifications related to the product being provided to AMT.

Frozen Planning – 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 in writing by AMT Quality or Engineering.

Manufacturing Planning - “Controlled” or “Approved” planning requirements are derived from the part specific Engineering requirements. Planning changes to “controlled” or “approved” planning requires compliance with the associated process prior to implementing proposed changes within Supplier’s production system and commencing manufacture. Supplier shall submit manufacturing planning changes to AMT in accordance with the requirements described within the associated process for approval/re-approval.

Raw Material Procurement - Raw material suppliers, or suppliers performing ultrasonic inspection of raw stock on behalf of raw material suppliers in accordance with AMS-STD-2154, AMS 2631, or ASTM B594, are required to either be listed on the Northrop Grumman ASPL or be Nadcap accredited for ultrasonic testing and listed on the PRI Qualified Manufacturers List (QML) on eAuditnet.

Metallic Raw Material Suppliers/Distributors shall include a copy of the original mill and any required secondary independent test laboratory certification(s) with the shipment of deliverable material. In addition, material must meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs.

Validation of Raw Material Test Reports – When the supplier utilizes test reports to accept supplier purchased raw material, the following requirements apply:

- Test reports shall be checked 100% against supplier’s requirements and applicable specifications.
- 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 product supplied.

QC-40 SpaceX – Additional Supplier Requirements

Under this contract, the supplier shall flow down the substance of this clause to all subcontracts awarded.

Approved Material Mill facilities (SpaceX AML) – The Supplier is required to maintain compliance with this list as it may be revised from time to time. The AML defines the approved mills for metallic raw materials. All manufacturing and inspection processes which are controlled by SpaceX Approved

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Verify revision with on-line BMS Master List / AMT Supply Chain Website (Supplier Documents), prior to use.

Supplier Quality Requirements

QS Document
QS 40025

Acceptable Mills Listing and shall be performed only by the sources specified in the list. The list is located at: <https://www.spacex.com/legal>

Approved Process Sources (SpaceX ASL) – The Supplier is required to maintain compliance with this list as it may be revised from time to time. The ASL defines the approved sources for special processing. All manufacturing and inspection processes which are controlled by SpaceX Approved Supplier Listing and shall be performed only by the sources specified in the list. The list is located at: <https://www.spacex.com/legal>

Certifications – In addition to the requirements stated in QC-02, supplier shall provide AMT with all material, hardware and process certifications related to the product being provided to AMT.

All Certifications must have all relevant specifications, Industry standard and/or SpaceX specifications noted

C of Cs must contain

- Part number
- Revision (if revision-controlled)
- Lot/Date code
- Serial number, as applicable
- Purchase order number and line
- Quantity

Certifications must be signed by the material Supplier's authorized quality representative, and indicate the representative's title. Certifications packages shall be included with their respective parts.

A hard copy of all required documentation shall be sent with each shipment.

Metallic Raw Material – Suppliers shall use metallic raw material sources as detailed in SPX-00035640, Acceptable Mills & Preferred Distributors, available at <https://www.spacex.com/legal>.

Inspection – In addition to the requirements stated in QC-27, supplier shall:

- 1) 100% visual inspection for the entire lot, regardless of sample size. The supplier shall also verify that all internal features are free of burrs.
- 2) The Seller shall inspect 100% of threaded features. Sampling is not permitted. Go/no-go gages shall be used to verify conformance on all threaded inserts that do not contain a thread-locking feature
- 3) Painted surfaces shall be smooth, continuous, adherent, and uniform in appearance. All surfaces shall conform to the specification for the paint process called out in the drawing and any deviations must be written up on a nonconformance report.

Standard Hardware – The Supplier shall notify AMT of any Commercial off the Shelf (COTS) acquired through the use of 3rd party distributors or any other non-OEM sources when such sources are not certified to AS9120. The supplier shall be able to provide full traceability of parts detailing the characteristics, original manufacturer name, original manufacturer part number, serial/lot number, and shelf life (if applicable).

Shelf Life – In addition to the requirements stated in QC-03, supplier shall provide full traceability of parts detailing the characteristics, original manufacturer name, original manufacturer part number, serial/lot number, and shelf life.

Supplier Quality Requirements

Verify revision with on-line BMS Master List / AMT Supply Chain Website (Supplier Documents), prior to use.