

| | | | |
|---|----------------------------|--------------|------------|
|  | <h1>TASK REQUIREMENTS</h1> | DOCUMENT NO: | P-03-01-02 |
| | | ISSUE: | 24 |
| <h2>Supplier Quality Requirements</h2> | | | |

This document is applicable only to suppliers of Production Items as defined below and their sub-tier suppliers. Non-Production Item suppliers are not subject to this document.

This document specifies the quality requirements applicable to items purchased from the supplier as called in the Purchase Order issued by Avcorp. Any deviations from this document, as part of a contractual agreement with the supplier, shall be reviewed and approved in writing by the Quality Leader or delegate prior to contract execution. This document is supplemental to any and all contractual agreements with the suppliers. In the event of a conflict or inconsistency between any of the terms contained herein and other documents, the negotiated contract or Purchase Order will take precedence.

Definitions of Terms:

Controlled Special Processes

Processes which are defined by the customer as requiring prior approval to perform the process. Processes like anodizing, painting, non-destructive testing, casting, forging, heat treating, welding, plating, surface finishing, coating, and testing (NDT, chemical, physical, etc.) swaging, shot peening, etc.

Item(s)

The contracted material, product, service, part, goods, kit, or report that is provided to Avcorp by the supplier. Items may be non-physical such as a contracted service.

OPSD – Outside Production Specification Document

Avcorp revision-controlled document indicating the item’s engineering data definition, special instructions and condition of supply if it deviates from the engineering definition. If the Purchase Order calls an OPSD then the requirements of the OPSD are supplemental to the Engineering requirements and in the event of conflicting requirements the OPSD takes precedence.

Repair: Action taken to restore a non-conforming item to a serviceable condition that does not comply with drawing/specification requirements. Repair conditions typically require MRB approval.

Rework: Action taken to bring a non-conforming item into compliance with the drawing/specification requirements. In many cases rework may be authorized by specifications without requiring prior approval, however if not clear, authorization shall be requested prior to performing rework.

There are two major categories of suppliers Production Items and Non-Production Items.

A) Production Item Suppliers provide an item that is a raw material, defined special process, semi-finished or finished component that is an element of the deliverable item to the customer, or provide a critical service as defined below. Services – Suppliers who perform contracted services such as sub-contracted machining, assembly, calibration services, mechanical tests or chemical analysis.

B) Non-Production Item Suppliers are typically suppliers of consumable shop and office supplies, tooling or production equipment, shop, computer and office equipment, etc.

Supplier Quality Requirements

- Q.1 Quality Management System Requirements:** Supplier shall maintain a QMS in accordance with recognized industry standards as AS9100 (Usually Manufacturer), AS9110 (Maintenance) or AS9120 (Distributor), AS9146 (FOD) as applicable which Avcorp may audit for compliance.
Supplier & Special process sub-tiers shall meet customer requirements such as Boeing D6-82479, [X31764](#), D1-4426, Bombardier QD 4.6-40, BAE BAE/AG/QC/SC1, Quality Management Requirements for Suppliers and BAES-JSF-QMS-141-03-DV, Supplementary Quality Requirements for Suppliers to the F-35 Lightning II Program, as well as applicable program quality plans as applicable.
Suppliers shall notify Avcorp within three working days of any loss of registration/certification (or notification of loss of registration/certification) of quality system approvals or customer process approvals, including NADCAP. This requirement to notify is also applicable to sub-tier loss of registration/certification.
Suppliers to access Avcorp FTP at <https://ftp.avcorp.com/> site for any customer specification changes.
- Q.2 Responsibility for Conformance:** Supplier is responsible for furnishing product that conforms to the requirements of the purchase order, engineering & quality requirements and ensuring their personnel is aware of their contribution to product conformity and safety, and the importance of ethical behavior. Surveillance, inspections, and tests performed by Avcorp, Avcorp's customer, or the government does not relieve the supplier of this responsibility.
- Q.3 Control of Records:** Suppliers shall prepare & retain verifiable and lot-traceable quality records evidencing inspection & conformance of all items including raw material used, relevant chemical, physical and mechanical test reports, special processes performed, as well as dispositions of non-conforming articles & scrap. These records shall not be discarded without prior Avcorp written approval. Records may be retained in electronic or hard copy format at the suppliers' discretion unless otherwise specified.
- Q.4 Access to Facilities:** Avcorp and our customers reserve the right to enter your facility for observation, inspections, evaluation, audits and tests. The FAA or applicable equivalent foreign civil aviation authorities or any other regulatory body may review your facility, data, equipment, personnel or products as necessary.
- Q.5 Suppliers & Sub-tiers:** Suppliers shall contact Avcorp for agreement on using any sub-tier sources and applicable manufacturing processes. Suppliers shall notify Avcorp in advance of changes in the manufacturing facility location of the items at sub-tier suppliers, including processes (conventional and special processes) performed. Suppliers shall not relocate or subcontract any work without prior Avcorp written approval.

All suppliers and sub-tiers performing special processes shall comply to customer source lists in accordance with Boeing D1-4426, Bombardier QD 4.6-40, BAE BAE/AG/QC/SC1, Quality Management Requirements for Suppliers and BAE/AG/QC/SC1 Parts 1 to 7, BAES-JSF-QMS-141-03-DV, BAES-JSF-QMS-3510-07-UG (Guidance for Subcontractors to the F-35 Lightning II Program) , and require Avcorp approval prior to manufacturing process execution.

In addition, raw material and hardware sub-tier suppliers and distributors shall be verified against end-customer approved source lists. Only approved sources of those materials shall be used when such a list exists.

- Q.6 Certificate of Conformance (COC):**

Supplier Quality Requirements

Not applicable to suppliers of calibration or test services.

An original COC must accompany each shipment, and must contain the purchase order number & line number, a certification statement, a listing of specifications etc. with revisions levels as called out on the purchase order, supplier name & address, signed & dated.

Wherever "Material certificates" are required the COC shall have a traceable link to the Material Certificate. In addition for "Raw Materials" & Special Processes" identify the following (not required for standard catalogue fasteners)

For Raw materials

- Raw material description,
- Raw material specification number and revision (as noted in Material Certificate)
- Name of special processors used to process and test raw material

For any special processes

- Special process name, description or type
- Special process specification-number

Assembly or Kitted Parts:

When certification calls out an assembly or kit, the COC shall include all detail part numbers listing the same information as noted above. Standard catalogue parts such as bushing, fasteners or similar items are not required to be listed on the C of C.

Avcorp recommends to suppliers to use the Avcorp COC template.

Q.7 **Material Test Reports:**

Applicable only to product and raw material suppliers.

Not applicable to standard catalogue hardware items.

Unless otherwise authorized by Avcorp, suppliers shall provide Avcorp and retain on file relevant material test reports for raw material used to manufacture the items showing quantitative physical, chemical, mechanical and metallurgical properties traceable by lot number to the applicable Avcorp product.

Supplier shall implement a process to evaluate the data in the test reports to confirm that the product meets requirements.

Q.8 **Special Processes:**

Applicable only to product or raw material with controlled special processes performed.

Not applicable to standard catalogue hardware items.

In addition to the summary of special processes performed noted on the COC, the supplier shall retain certifications for any and all controlled special processes used to manufacture the items traceable by lot number to the applicable Avcorp product.

Q.9 Part Marking: Unless otherwise specified by customer specification and related documents, it's a best practice to have identification & traceability on the part as Part #, serial number (If applicable), country of origin (Only if manufactured outside of USA) & traceability to the COC.

Q.10 Rework & Nonconformance: Rework of items to drawing configuration, or scrap of non-conforming items may be made without prior Avcorp approval where permissible in the drawing/specification. Non-conforming items

Supplier Quality Requirements

shall not be repaired or used by the supplier or its sub-tiers without first receiving explicit repair or use instructions from Avcorp’s Material Review Board (MRB), unless the supplier has received delegated MRB authority from Avcorp.

Non-conforming items shall be identified with the applicable Avcorp non-conformance number and/or customer non-conformance number as directed. Signed copy of the non-conformance report (NCR) dispositioned by Avcorp as rework or use-as-is indicating completion shall be included with the COC for verification on delivery to Avcorp.

Non-conforming items identified by the supplier or its sub-tiers after the items have been shipped to Avcorp are required to be disclosed in a day from the time the scope of the disclosure (Notice of Escape) has been identified internally at supplier manner prior to further item processing or shipping via a disclosure letter to Avcorp.

Q.11 Identification & Traceability: The supplier is responsible to ensure full traceability of all activities and goods under Avcorp Contract / Order that ensures tracking of the supply chain back to the manufacturer or service provider. All technical/quality requirements applicable to the goods and services under the Contract / Order should be traceable to the time and place of production. Records should provide the degree of traceability required to enable verification, at any point from raw material to final product, of all aspects of material, manufacturing, and documentation.

Where items require a History Card the supplier shall include the original History Card with the release documents for traceability. History Card shall record the key manufacturing and inspection activities. Per BAES-JSF-QMS-3607-07-FM.

Q.12 Time and temperature-sensitive materials: Time and temperature-sensitive materials shall be marked with date of manufacture. Not more than 25% of shelf life shall have lapsed at time of delivery to Avcorp unless otherwise authorized by Avcorp Procurement in an “Authorization to Ship” form waiver. Suppliers shall provide Avcorp with all pertinent information pertaining to shelf life and storage requirements, as applicable.

Q.13 Source Inspection: Avcorp and its customers reserve the right to have source inspection performed at the supplier’s facility or sub-tier supplier facilities prior to shipment of any items. The requirement for source inspection shall be identified on the Purchase Order or in writing from Avcorp Quality or Procurement.

Approval of items by Avcorp source inspection does not release the supplier of any of its obligations of item conformity, testing, inspection, quality control and associated documentation.

If source inspection is required, suppliers shall not ship items or perform the specified service without approval by an Avcorp-approved source inspector or prior written permission from Avcorp Procurement. Avcorp Procurement may waive the requirement for source inspection on a case-by-case basis through an Avcorp “Authorization to Ship” form.

Q.14 Raw Material Testing:

Applicable to product and raw material suppliers when material is not provided by Avcorp.

Suppliers shall undertake to have raw material certification testing performed by a customer-certified testing lab independent of the producing mill on at least one sample of each alloy of raw material used to manufacture

| | | | |
|---|----------------------------|--------------|------------|
|  | <h1>TASK REQUIREMENTS</h1> | DOCUMENT NO: | P-03-01-02 |
| | | ISSUE: | 24 |
| <h2>Supplier Quality Requirements</h2> | | | |

items supplied to Avcorp. (Testing of each temper is not required but is encouraged.) Such testing shall include verification of the materials physical, chemical and mechanical properties and shall be performed, as a minimum, on an annual basis. The supplier shall maintain records of item validation on file.

- Q.15 NADCAP Requirements:** All suppliers and sub-suppliers performing special processes and lab testing on items shall be NADCAP certified unless otherwise approved by Avcorp. The applicable special processes that require NADCAP certification can be found on PRI website.
- Q.16 Language of Documents:** The primary language of communication with Avcorp shall be English. Unless otherwise specified, all data shall be available in the English language. The supplier is responsible for the accuracy and provision of all translations to other working languages, unless otherwise agreed with Avcorp.
- Q.17 Key Characteristics:** Management of Key Characteristics that have been identified by Avcorp or Avcorp customers shall be monitored and controlled per AS9103 and applicable customer requirements. Acceptance plans may require Avcorp and/or customer approval, shall be statistically valid and shall preclude acceptance of item lots whose samples have known non-conformities. Key Characteristics may be product or process related. Evidence of product or process conformity to the acceptance criteria shall be maintained.
- Q.18 Tooling Suppliers:** Suppliers shall maintain a formal internal tool control system that allows for the proper segregation, care, upkeep and maintenance, and accountability of Avcorp and customer-owned tooling.

The supplier is responsible for compliance with the applicable Avcorp or end-customer tooling requirements per Boeing’s D33200 & D950-11059 documents & Bombardier QD 4.6-40. Prior written approval from Avcorp is required before modification or disposal of Avcorp or customer-owned tools.

It’s a best practice to control or check tools for the final configuration of deliverable items that are required to be inspected to engineering requirements a minimum of once per year.

- Q.19 Charges for non-conformities:** Upon completion of the investigation and agreement of liability between all; involved parties including Avcorp’s customer, the Supplier may be subject to charges associated with handling nonconformities as follows:
- Disposition of a rejection tag prior to product shipment to Avcorp – USD 250
 - Goods certification documentation incomplete – USD 50
 - Lot or batch of Goods rejected at Avcorp’s plant and dispositioned as scrap USD 250
 - Goods reworked or repaired – USD 250.00 per tag. Rework / repair / replacement costs and reliability claim are supplemental.
 - Nonconforming Goods Disclosure - The amount shall depend on the impact to the products. Charge items include all the costs associated with investigation done at Avcorp and the cost of disclosure to Avcorp customers.
 - Late response for Corrective Action - Supplier will be notified in writing by Avcorp Quality prior to the RCA due date. USD 500 (per RCA) if Supplier does not respond within 30 calendar days after the RCA due date
- Q.20 DPD / MBD:** Suppliers shall employ a Digital Data Control system, (DPD, MBD, etc.) so electronic data is controlled at a level to assure that integrity of item and/or tooling engineering and configuration and

Supplier Quality Requirements

manufacturing data is maintained throughout the supplier's Digital Data Control system from receipt of the electronic data through creation of derivatives, to item acceptance and process improvement. Any specific customer digital requirement will be listed in the relevant customer document (E.g.: D6-51991 for Boeing).

Q.21 Suppliers of calibration or test services: The supplier shall submit for each item calibrated or tested a record of actual results. The following minimum information shall be provided:

- Part Identifier (part number and serial number or lot number as applicable)
- Applicable tolerance ranges
- Work performed and applicable specifications

Q.22 First Article Inspection: Applies only to product suppliers (including forgings/castings) and special process suppliers.

First Article Inspection (FAI) shall be done in accordance with AS/EN/SJAC 9102. First Article Inspection Reports are to be completed on new items using tooling and processes representative of the first production run, or as requested by Avcorp.

Partial First Article Inspections (often called "Delta FAI") shall be performed when any of the events noted in AS/EN/SJAC 9102 occur, including (but not limited to) changes in production tooling, NC programs, and item configuration.

If forms other than those contained in the standard are used, they must contain all "Required" and "Conditionally Required" information and have the same field reference numbers and information.

FAI or Delta FAI reports are required to be submitted to Avcorp and also retained by the supplier. These can be electronic or hard copy.

Q.23 Manufacturing Plan: The supplier shall provide Manufacturing Plans, which include product verification operations and sub-tier suppliers at specified locations executing the Manufacturing Plans to Purchase Order requirements. The Manufacturing Plans require Avcorp approval prior to manufacturing.

In addition, the selected items or processes may require qualification by Avcorp and/or the customer prior to production or during FAI. If certain items and processes require pre-approvals and qualifications by the customer, Avcorp shall be informed in a timely manner for concurrence to ensure pre-approvals and qualifications will be completed to Purchase Order before full scale production.

After the initial approvals were granted, subsequent changes will continue to require Avcorp approvals. The supplier shall notify Avcorp in advance of any proposed change to the production process and shall receive approval prior to implementing the change.

This requirement applies to all affected suppliers and their sub-tiers.

If "D6-1276 Control of Materials and Processes for Designated Parts and Components of Boeing Products" is called out by Engineering Drawing, Boeing approval of Manufacturing planning is required through the Procurement Representative prior to shipment.

Q.24 Counterfeit Parts: The suppliers shall implement counterfeit prevention programs to one or more the following standards, pending their scope of work:

- a) AS6174 - Supplier procuring materials / parts other than electrical, electronic, and electromechanical (EEE).
- b) AS5553 – Supplier procuring and/or integrating electronic parts and/or assemblies containing electrical, electronic, and electromechanical (EEE) items.

| | | | |
|---|----------------------------|--------------|------------|
|  | <h1>TASK REQUIREMENTS</h1> | DOCUMENT NO: | P-03-01-02 |
| | | ISSUE: | 24 |
| <h2>Supplier Quality Requirements</h2> | | | |

c) AS6081 – Distributor of electronic parts.

AS6462 – Verification criteria for AS5553 suppliers. This standard provides with a set of criteria to be utilized by the accredited certification Bodies (CBs) to establish compliance and grant certification to AS5553. At this time Avcorp does not require its suppliers to be AS5553 certified, however this will be considered in the future.

Q.25 Customer / Regulatory Audit & Inspection Activities: Avcorp, its customers and regulatory authorities shall have the right to perform activities as inspection & audits to provide conformance to this document. Supplier shall accommodate these activities without additional charge to any such parties.
Refer to customer documents Boeing D6-51991 & Bombardier BM4041.04.00.05 for compliance.

Q.26 Configuration Management: The supplier and its sub-tiers shall ensure that all applicable requirements including drawings, specifications, key characteristics, etc. under the contract with Avcorp are flowed down to all suppliers and sub-tiers performing work on Avcorp’s items. The supplier and its sub-tiers shall not make any configuration changes to any items, which could affect form, fit, function, performance, or price without Avcorp’s prior written consent. Notification and approval of configuration changes include those items which are superseded by another item. Any supplier configuration change requests shall be submitted to Avcorp Procurement in writing for approval prior to configuration change processing.