Aerox Aerospace Group

Aviation Oxygen Systems, Bonita Springs, FL

Fluid Power, Hudson, OH

Supplier Quality Requirements Manual

SQRM:001

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Introduction

1) Purpose:

This Supplier Quality Requirements Manual (SQRM:001) is issued to outline the minimum Quality System requirements for our suppliers. This effort recognizes that communication and understanding of goals and expectations are key elements to a successful operation.

2) Applicability:

This SQRM is applicable to all activities allocated to Suppliers described in ***Quality Assurance Provisions*** in this manual in accordance with the Contract / Purchase Order and/or any other associated documentation and *shall* be flowed down to all Sub-tier Suppliers involved in fulfilment of the Contract / Purchase Order**.**

3) Responsibility:

Suppliers are responsible for complying with the requirements of this Supplier Quality Requirements Manual. Failure to meet the requirements may result in the loss of existing or restriction of future Aerox business.

NOTE: All documented communications from the Supplier to the Buyer shall be in the English Language.

4) Means of Understanding

a) In this Supplier Quality Manual, the following verbal forms are used:
b) ***Shall*** indicates a requirement;
c) ***Should*** indicates a recommendation;
d) ***May*** indicates a permission;
e) ***Can*** indicates a possibility or a capability.

Quality Management System (QMS) Requirements

Unless otherwise amended by Quality Assurance, all current and potential Suppliers to Aerox AOS and Aerox Fluid Power, here-in referred to as "*Buyer*" *shall* be able to demonstrate with objective evidence that they have implemented and maintained an effective Quality Management System (QMS). Registration to AS9100, ISO 9001 or a comparable international standard is a requirement. Registration, or lack of, *may* impact selection of suppliers during quote evaluations. The effectiveness of the supplier's QMS *shall* be assessed by the Buyers Quality Assurance. A Supplier Survey *shall* be completed prior to the issuance of a purchasing agreement and an On-Site Audit *may* be required. Certain suppliers *may* be considered without registration based on proprietary processes, materials, technologies, etc. on a case-by-case basis with the approval of Quality, Purchasing, and Engineering. (Note: Approved suppliers to the Buyer, prior to 10/15/2014, *may* be exempt from the registration requirement, although will expect the supplier to strive toward achieving registration.) When requested, the Supplier *shall* demonstrate compliance to national

and/or international standards and regulations for health, safety and environmental impact relative to its business.

5) Supplier Improvement, Retention and Removal:

A Supplier's performance is subject to measurement as necessary to assure confidence in their ability to provide quality products, economically, on-time.

When necessary, supplier performance *shall* be evaluated for performance. Supplies shall be notified in writing, when their performance is impacting their ratings as an Approved Supplier.

Suppliers who are rated as probationary for more than 3 consecutive months *shall* be expected to develop a supplier improvement plan. Suppliers who fail to improve and provide products that put end user product safety, reliability, quality and/or delivery at risk shall be moved to In Active in the manufacturing planning system Vendors Listing.

6) Abbreviations & Acronyms

AQMS	Aerospace Quality Management System
CA	Corrective Action
CAR	Corrective Action Request
CB	Certification Body
CFR	Code of Federal Regulation
C of C	Certificate of Conformity
COTS	Commercial Off the Shelf
DOA	Design Organization Approval
D.O.D.	Department of Defense
EASA	European Aviation Safety Agency
FAA Form 8130-3	Release Certificate FAA Federal Aviation Administration
FAI	First Article Inspection
FAIR	First Article Inspection Report
GSE	Ground Support Equipment
IAQG	International Aerospace Quality Group
IAQG-OASIS	International Aerospace Quality Group On line Aerospace Supplier Information System (www.iaqg-sae.org/oasis)
ICOP	Industry Controlled Other Party
ISO	International Standardization Organization
NADCAP	National Aerospace and Defense Contractors Accreditation Program
OEM	Original Equipment Manufacturer
PMA	Parts Manufacturer Approval
POA	Production Organization Approval
PO	Purchase Order
QMS	Quality Management System
QPP	Quality Program Plan
SP	Special Process
STC	Supplemental Type Certificate
TC	Type Certificate
TSO	Technical Standard Order

7) Definitions

Article - Raw material, processes, tooling, gauging, equipment, detail parts, sub-assemblies, assemblies, avionics, software, CAD/CAM/CATIA media etc.

Batch Number (Lot) - A unique number allocated to a definite quantity of items produced to the same design at one time, under conditions that are considered uniform.

Buyer - The entity issuing a Contract or a Purchase Order.

Catalogue Part - A proprietary part specified in the Manufacturer's own publication which contains sufficient technical data for the user to select and confirm that the part/product satisfies the design intent and end user application.

Commercial Off the Shelf (COTS) - A ready-made article available for sale, lease, or licensed to the public.

Contract (**Purchase Order) -** A legal agreement, independently of the format (paper or electronic) or the designation (order, contract, delivery order), between the Supplier and the Buyer to provide articles, materials and/or services.

Counterfeit Part - An unauthorized copy, imitation, substitute, or modified part (e.g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer. Examples of a counterfeit part can include, but are not limited to, the false identification of marking or grade, serial number, date code, documentation, or performance characteristics.

Critical Part - An article, the failure of which could have a catastrophic effect upon the aircraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity.

Critical Items - Those items (e.g., functions, parts, software, characteristics, processes) having a significant effect on the provision and use of the products and services; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of critical items include safety critical items, fracture critical items, mission critical items, key characteristics, etc.

Designee - A representative of the customer or agency having designated authority over any aspect of contractual performance.

Deviation Request – A request to depart from a drawing, process, or program requirement. A request for deviation is considered a planned event.

Key Characteristic - An attribute or feature whose variation has a significant effect on product fit, form, function, performance, service life, or producibility, that requires specific actions for the

purpose of controlling variation.

Product - An aircraft, aircraft engine, or propeller.

Product Safety - The state in which a product can perform to its designed or intended purpose without causing unacceptable risk of harm to persons or damage to property.

Qualified Part - an article for which the ability to fulfil specified requirements is demonstrated by documentation.

Risk - A probability or threat of damage, injury, liability, loss, or any other negative occurrence that is caused by external or internal vulnerabilities, and that may be avoided through preemptive action.

Risk Management - The identification, analysis, assessment, control, and avoidance, minimization (mitigation), or elimination of unacceptable risks.

Serial Number - a unique number or alpha-numeric code that is one of a series, used to provide identification of an article to enable traceability.

Special Requirements - Those requirements identified by the customer, or determined by the organization, which have high risks of not being met, thus requiring their inclusion in the operational risk management process. Factors used in the determination of special requirements include product or process complexity, experience, and product or process maturity. Examples of special requirements include performance requirements imposed by the customer and the industry's capability, or requirements determined by the organization to be at the limit of technical or process capabilities.

Standard Part - A part manufactured in complete compliance with a government or an established industry specification. I.e. AN, AS, MS, etc.

Supplier - A company (according to the different types and categories) that receives a Purchase Order/Contract and/or Agreement from the Buyer.

Waiver - A request to waive a drawing, process or performance requirement due to an article's inability to meet those requirements. A waiver is considered an unplanned planned event.

Quality Assurance Provisions

The following provisions apply to all procured articles:

8. **Right of Access**
   Given reasonable notice, the Buyer, its agents, customers, or regulatory authorities *shall* have the right to access to any supplier involved with contracted articles, included any sub-tier supplier. Such access *shall* be used to verify the Quality Assurance activities being undertaken, meets the requirements of the contract/order.

9. **Drawing Requirements**
   The seller *shall* meet all requirements and specifications provided by the buyer's drawing. The seller shall notify the buyer in writing of any requirement that cannot be met. The buyer *shall* provide an amended purchase order or an approved concession (see paragraph 29. a) when those conditions exist.

10. **Purchasing Process**
    The Supplier *shall* be responsible for all Sub-Tier Suppliers activities. A Product Quality Plan *shall* be provided when required by the Buyer. The buyers' requirements *shall* be flowed down to, understood and implemented by Sub-tier Suppliers prior to commencing any work. Suppliers, including dealers and distributors, are responsible for ensuring that the applicable requirements of this purchase order are imposed on lower-tired procurements for raw material, components or process services being used in the manufacture of products or services being provided.

11. **Prohibited Sources**
    Sellers and sub-tier sellers are prohibited from using any source listed on the US government Excluded Parties List System (EPLS) in the production of products to be delivered to Buyer.

12. **Counterfeit Parts Protection** - The seller *shall* have a program in place to prevent the delivery of counterfeit parts and materials to Buyer. All parts, materials and assemblies (electrical, mechanical, raw material) included in the hardware delivered to Buyer *shall* be procured only from a franchised distributor, OEM (Original Equipment Manufacturer) or OCM (Original Component Manufacturer). The seller is responsible for the flow down of this requirement to its sub-tier contractors and their compliance to it. Further guidance on counterfeit parts avoidance can be found in SAE documents AS5553 (Electronics) and AS6174 (Material).

13. **Record Retention** – Unless otherwise specified on the Purchase Order, the Seller shall retain Quality Records for a minimum of (20) years from the date of shipment. Quality records include, but are not limited to, the following: Approved Certificates of Conformity, Test Reports, Raw Material Certifications, Special Process Certifications, FAIR's, Route Cards/Travelers, and Calibration Records. This data *shall* be made available to Buyer upon request, at no extra charge. Records *shall* be

appropriately identified in accordance with customer, regulatory and company defined requirements. Storage facilities provide suitable environments to prevent deterioration or damage and to prevent loss. Records in storage *shall* be protected from unauthorized access. The nature of the information in the records, as well as its format, dictates the method by which records shall be destroyed. When records contain sensitive information, they *shall* be disposed by irreversible destruction methods such as shredding, or erasure/reformatting for electronic/magnetic media.

14. **Tooling, Gaging and Measuring Equipment Control** - Calibration of measuring and test equipment used for product acceptance *shall* be traceable to established international or national measurement standards (e.g., BSI, NIST, UKAS, and NAMAS). Procedures for periodic calibration, certification, maintenance of tools and equipment, and an action plan, should measuring and/or test equipment be found to be out of calibration, *shall* be established and followed.

15. **Inspection System** - Sellers *shall* develop inspection procedures and maintain records of inspection. Records *shall* include evidence of inspection for all attributes (e.g. AS9102 first article inspection) of products/processes supplied to Buyer, show the product has been inspected and/or tested during all stages of manufacturing, identify the name of the individual (i.e. with stamps, etc.) who certified the results, and where applicable include the results of the inspections and tests.

16. **Changes to Process or Location** - Buyer *shall* be notified prior to any changes in product, manufacturing location, or process definition that were not requested by Buyer. The notification should describe the changes or changes that have been made or are being proposed. Buyer reserves the right to require its approval of the product, manufacturing location or the process change before the Seller forwards the product. The seller *may* be required to submit a new or delta first article inspection report, if the change(s) affects any of the existing approved first article inspection report characteristics.

17. **Training** - Sellers *shall* ensure that all personnel performing activities on Buyer product affecting quality have been suitably trained. Personnel performing assigned tasks *should* be qualified based on appropriate education, training, and/or experience. The seller *shall* ensure that training records are maintained and available upon request.

18. **Process Integrity** - Sellers *shall* maintain a control mechanism that directs procedures appropriate for the control of quality and configuration through all stages of production. When stated as a condition of the purchase order, for Buyer designed hardware, when Buyer changes the part number(s), dash number(s), or part number revisions AND there is work in process (WIP) for a given contract, the rework instructions *shall* be submitted to the Buyer to obtain Buyer engineering approval prior to rework.

19. **Traceability & Product Identification** - Seller *shall* ensure that individual articles and materials and lots thereof are identified and segregated from all other articles, materials, and lots always. Records

for articles *shall* indicate the part number, revision level, lot number and if applicable the serial number and associated detailed information. Records for materials *shall* indicate type, applicable serial numbers, lot numbers, heat numbers, batch, date code, cure date and any other pertinent information. Material or articles furnished by Buyer for outside operations *shall* remain identifiable by the Buyer's supplied lot or serial number.

20. Certificate of Conformance - The seller *shall* provide to Buyer, for each shipment, at time of delivery a statement of conformance. Additionally, specific Quality Requirements may also be included in the body of the Purchase Order for each item which shall also be provided with each shipment.

In addition, the seller *shall* be able to furnish information on their source(s) of supply that could include items such as serial numbers, lot numbers, heat numbers, batch, date code and cure dates and QPL approval status as applicable.

21. Inspection Reports/Test Reports/Material Certifications - When required on the body of the Purchase Order, the seller *shall* provide to Buyer copies of First Article, final inspection reports, acceptance test reports, and/or raw material certifications and process certifications with Product delivery.

a) **First Article Inspection –** For articles that are required to meet Aerox design and/or specification control drawings, First Article Inspection (FAI) *shall* be performed in the following instances:
   i) New product received from a Supplier.
   ii) Existing product received from a new Supplier or Supplier for which there is no history of having produced the product.
   iii) Drawing revision level change.
   iv) Change(s) in manufacturing process or location.

b) First Article Inspection (FAI) *shall* be recorded on AS Form(s) 9102 or equivalent.

c) Unless otherwise agreed upon in writing, completed 9102s (FAIRs) *shall* be submitted to Aerox Quality Assurance for approval prior to article delivery.

d) A FAI representative article *shall* be selected and inspected as follows;
   i) All dimensional drawing features *shall* be measured and recorded.
   ii) Each drawing note *shall* be verified and the means of verification annotated.
   iii) All processes *shall* be assured via process certifications.
   iv) All material requirements *shall* be assured via material certifications.
   v) Process & Material Certifications shall be attached to the FAIR.

22. Certifications - The seller *shall* maintain on file all original material, raw material, process certifications and inspection/test reports for all items provided in the performance of this Purchase Order. These certifications or their copies *shall* be made available to Buyer upon request.

23. Reference to EN 10204, Metallic *products – Types of Inspection documents*

a) Articles submitted where document compliance with EN 10204, Para 2.2 is required, shall accompany each lot of items with a Certificate of Compliance from the seller **stating that** all required material certifications, process certifications, and inspection/test reports are on file and shall be made available for review upon request.

b) **Articles submitted where document compliance with EN 10204, Para 3.1 is required,** shall accompany each lot of items with a Certificate of Compliance from the seller as well as all raw material certifications, process certifications, and inspection/test reports. These certifications and reports shall include a documented reference (via stamp or legible handwriting) to the Aerox Part Number, Aerox Purchase Order Number and Supplier Job Number on the body of each certificate and report.

24. **Industry Specifications and Standards** – Unless otherwise defined in the contract, all Military, Federal, and Industry specifications and standards, the seller *shall* comply with the revision in effect at the time the Buyer purchase order is issued. Buyer reserves the right to request a different revision that would be specified on the purchase order.

25. **Responsibility for Conformance** - Acceptance of product *shall* not be used as evidence of effective control of quality by the seller and *shall* not absolve the seller of responsibility for acceptable products or preclude subsequent rejection by Buyer customers.

26. **Source Inspection -** At the discretion of the Buyer, the items covered by the purchase order *may* be subject to Source Inspection and/or tests prior to shipment from Supplier's plant.

27. **Age Dated Material** - The seller *shall* provide the cure date and shelf-life expiration date for all elastomers and chemical compounds subject to age deterioration. No elastomeric materials *shall* be received or accepted where the date of manufacture exceeds one (1) year from the cure date at the time of receipt at Aerox unless specifically authorized in writing by Purchasing.

28. **Non-Conforming Articles** - Sellers *shall* ensure all articles that do not, or may not conform to specified requirements are not shipped to the Buyer without proper concession. Dispositions of Use as Is or Repair for products under Buyer design control require a written authorization prior to shipment. Sellers *shall* notify Buyer within 24 hours of discovering any nonconformance that could potentially affect hardware that has previously been shipped to Buyer.

29. **Seller Request for Concession** - Sellers *shall* use Form 00817, Concession/Production Permit (CPP) for a review and approval of nonconforming material, change to drawings or specifications, or clarification of requirements. Non-conforming material shall not be shipped to Buyer without an approved Concession/Permit. In addition, all nonconforming products shipped to Buyer:
    a) *Shall* be clearly identified as non-conforming product and packaged separately from the acceptable product.
    b) *Shall* be accompanied by a copy of the approved CPP.
    c) The applicable CPP number *shall* be clearly listed on the packing slip and Certificate of Conformance. Note: Form 00817 is available from Aerox Purchasing.

30. **Corrective Action** – For Corrective Action requested, the seller *shall*:
    a) consider the details of the recorded non-conformance/corrective action and request clarification if necessary from the initiator of the request:

i) complete and respond to both the containment and whole corrective action requirements within the timeframe indicated on the non-conformance notification.
ii) provide an effective short term corrective action
iii) provide a plan for continuous improvement.

31. Statistical Techniques - Sellers are responsible for understanding and reducing variation within processes and are encouraged to use control-charting techniques. When control charting is not performed, sample inspection of all attributes shall be performed to ANSI/ASQ Z1.4 (MIL-STD-105), Level II 1.0 AQL, c = 0, BS6001 Part 1 in the US; ISO 2859-1 in the UK, or an equivalent plan approved by Buyer. Sellers using sample (including Buyer approved) inspection plans are not relieved from the responsibility for all attributes on the part/assembly.

32. Special Processes – Upon request, special process suppliers *shall* provide special processes approval/qualification documents in accordance with the regulatory standards that the process has been certificated. (i.e. ASTM, MIL, etc)

a) After validating a special process, a Certificate of Analysis (C of A) for the special process characteristics *shall* accompany the Inspection / Test data, and/or FAI documentation submitted to the Buyer.
b) All Certificates of Analysis *shall* be from a testing laboratory that has been certified to ISO 17025 (General Requirements for the Competence of Testing and Calibration Laboratories) by an accredited 3rd party certification body. The C of A (Certificate of Analysis) must contain the following information:
   i) Title: Certificate of Analysis
   ii) Name/Address/Phone Number of the testing facility / laboratory
   iii) Laboratory accreditation information including registration number and expiration date
   iv) Name/Address/Phone Number of the manufacturer
   v) Product ID and description
   vi) Description of testing performed
   vii) Test references/specifications
   viii) Test Results
   ix) Acceptance criteria
   x) Names and signature of personnel performing the testing
   xi) Name and signature of the person approving the test and associated results
   xii) Date testing was performed

33. Identification, Handling, Labeling, Cleaning, Packaging, & Preservation – Unless otherwise specified on the drawing or Purchase Order, the seller *shall* assure that the identification and packaging is adequate to protect the components during transportation, handling and storage. Packaging containers shall be appropriate for the size, weight, and fragility of the components being packed. Articles shall be received clean and free of damage as to allow for immediate repackaging and storage.

34. Federal Aviation Administration (FAA) Documentation - Where the Civil repair/overhaul contract is for Part 145 release, the Supplier *shall* have Part 145 approval with the correct scope to include the product, as defined by the applicable Controlled Capability List. The seller *shall* provide to Buyer an Air Worthiness Tag (8130-3) to accompany the referenced items shipped on this Purchase Order.

When requested, a copy of the 8130-3(s) or Direct Ship certification(s) shall be provided with the article to substantiate the approved origin of all replacement parts.

aerox®	**SUPPLIER QUALITY REQUIREMENTS MANUAL SQRM-001**	

Revision History

ISSUE	DESCRIPTION	DATE	APPROVAL
Orig	Initial submittal	8/10/2017	AJD/GAR
A	Updated para. 20 addressing Quality Requirements in the body of the Purchase Order. Removed references to Shaw. Update Supplier rating process.	16FEB2023	Devlin
B	Added Fluid Power, Hudson, Ohio to document, minor grammatical changes.	25FEB2025	Devlin

Acknowledgement

I acknowledge receipt of Aerox Supplier Quality Manual and undertake, unless agreed in writing, to meet all the requirements of its contents in the execution of existing and future orders issued by Aerox.

Name:_____ Title:_____

Company Name: _____

Signature: _____ Date:_____

Please return this acknowledgement to:

PURCHASING
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Bonita Springs, FL 34135

or
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