


WEATHERLY AIRCRAFT COMPANY 	WSQ-010 Supplier Quality Requirements
QUALITY SPECIFICATION	Rev: <u>NC</u> Date: <u>4/05/2021</u>

1. Purpose

This document defines requirements for suppliers providing materials, products and services to Weatherly Aircraft for aerospace. Supplier acceptance of a purchase order from Weatherly Aircraft referencing this specification indicates they understand it is the supplier's responsibility to adhere to the requirements described herein.


2. Reference

- 2.1. AS9120 - Quality Management Systems (Current to Latest Rev)
- 2.2. AS9100 - Quality Management Systems (Current to Latest Rev)
- 2.3. ISO9001 - Quality Management Systems (Current to Latest Rev)
- 2.4. AS5553 - Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition (Current to Latest Rev)
- 2.5. AS9102 - First Article Inspection Requirement (Current to Latest Rev)
- 2.6. WSQ-002 - Non-conformance Notification Form
- 2.7. Q-12 - Purchase Order Terms and Conditions
- 2.8. ANSI/ESD S20.20 - Protection of Electrical and Electronic Parts, Assemblies and Equipment (Current to Latest Rev)
- 2.9. AS9146 - Foreign Object Damage (FOD) – Foreign Object debris (FOd) Prevention Program (Current to Latest Rev)
- 2.10 AS6174 - Counterfeit Material, Assuring Acquisition of authentic and Conforming Material (Current to Latest Rev)

3. Quality Management System Requirements

3.1 General Requirements

Suppliers are required to complete at a minimum a Quality System survey and provide evidence of compliance to the appropriate QMS prior to being added to the Weatherly Approved Supplier List. Suppliers are subject to an on-site audit at the Weatherly Materials and/or Quality Manager's discretion at any time. Suppliers with a Quality System that is registered by a Third Party facility are preferred. Suppliers not compliant / certified / registered / accredited may be subject to removal from the Weatherly Aircraft Approved Supplier List (ASL). Weatherly Aircraft, at its discretion, may elect to continue a business relationship with the supplier based on the results of an on-site audit of their Quality if the supplier is showing a downward trend in the quality of their product delivered to Weatherly.

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3.1.1. Distributors

In addition to the requirements noted herein, Distributors shall have a Quality System compliant to the latest revision of AS9120, Quality Management System Aerospace Requirements for Aviation Space, AS9100 or ISO9001 Quality Management Systems Aerospace Requirements. NOTE: Distributors must have a system in place to notify Weatherly Aircraft of any manufacturing changes and or component obsolescence. (Reference para 3.6 for additional information on change notification.) Traceability to original equipment manufacturer (OEM) must be maintained.


3.1.1.1 Electronic Components or assemblies

Suppliers of Electronic components or assemblies shall be compliant with the AS 5553 Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition standard. Electronic components may be purchased from a distributor or from the manufacturer. Where Weatherly Aircraft drawings and part numbers are used, all print requirements, including sources must be followed. As required, customer approved sources, drawings and specifications must be met. NOTE: Manufacturers must have a system in place to notify Weatherly Aircraft of any manufacturing changes and or component obsolescence. (Reference para 3.6 for additional information on change notification.) Traceability to original equipment manufacturer (OEM) must be maintained.

3.1.2. Manufacturers

In addition to the requirements noted herein, Suppliers shall have a Quality System compliant to the latest revision of AS9100 Quality Management Systems Aerospace Requirements or ISO 9001 Quality Management Systems requirements.

- Suppliers of Electronic components or assemblies shall be compliant with the AS 5553 Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition standard. Electronic components may be purchased from a distributor or from the manufacturer. Where Weatherly Aircraft drawings and part numbers are used, all print requirements, including sources must be followed. As required, customer approved sources, drawings and specifications must be met. NOTE: Manufacturers must have a system in place to notify Weatherly Aircraft of any manufacturing changes and or component obsolescence. (Reference para 3.6 for additional information on change notification.) Traceability to original equipment manufacturer (OEM) must be maintained.

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- Weatherly requires that manufacturers use NADCAP approved suppliers as noted below for manufactured parts. Note: for product that has been classified as industrial by Weatherly, the use of NADCAP approved suppliers is not required.
- Commercial off the Shelf (COTS) part – A part which is offered by the manufacturer for sale to the public and is used without modification. Such parts are procured by CAGE code and Manufacturer part number only, or are defined by a manufacturer part number listed on the Weatherly Engineering Drawing for the part. In cases where a manufacturer part number is listed as material on an Weatherly Engineering Drawing and the final part is subsequently modified in accordance with the drawing, the material is a COTS part, the final part is not. Traceability to original equipment manufacturer (OEM) must be maintained.
- Specification Control Drawing – A drawing which defines a part by envelope, interface, and performance requirements instead of complete detailed dimensional, material and process requirements.


3.1.3. Special Processors

Special Process Suppliers shall achieve and maintain NADCAP (National Aerospace and Defense Contractors Accreditation) accreditation for the following special processes:

- Chemical Processing & Coatings (includes conversion coating, painting (prime and top coat), plating, anodize, passivation, etch and various other wet processing)
- Heat treating
- Non Destructive Testing
- Welding and Brazing
- Surface Enhancement (Shot Peening)
- Raw Material Testing

*Note: For product that Weatherly has identified as industrial does not require the use of NADCAP approved special process suppliers.

A waiver for NADCAP may be issued by the Purchasing Delegate, if approved by the Quality Manager or delegate, if contractually, or by customer agreement, it is not required. Requirements for using only Weatherly Aircraft customer approved special process sources is specifically identified by the Weatherly Aircraft purchase order and/or engineering drawing. More information about NADCAP, including a list of NADCAP approved processors, can be found at www.pri-network.org/nadcap

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3.1.4. Calibration

Calibration laboratories which are accredited to national/international standards are preferred.

3.2. Flow Down

Suppliers are required to flow down to sub-tier suppliers the requirements of Weatherly Aircraft Purchasing and Quality documents, including key characteristics where required.

3.3. Conflict Minerals Reporting

In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”) went into effect. Section 1502 of the Act requires all U.S. publicly traded companies to report to the U.S. Securities and Exchange Commission on their use of “conflict minerals” (tin, tantalum, tungsten and gold) in their products.

3.4. Right of Entry

Suppliers are required to provide the right of entry to Weatherly Aircraft personnel and regulatory authorities. Suppliers are also required to afford Weatherly Aircraft the right to verify supplied product conforms to specified requirements.

3.5. Notification of Changes


Suppliers are required to notify Weatherly Aircraft of any significant organizational or facility changes, such as, company name, location or senior management within two business days.

3.6. Notification of Product or Process Changes

Changes to COTS parts (see definition in section 3) which could impact the form, fit or function of the part requires that documented notification be provided to Weatherly prior to shipment. Changes to a non-COTS supplier controlled product design or a defined process which could impact the form, fit, or function defined on the Weatherly drawing requires documented approval by Weatherly Aircraft prior to incorporation of the change.

3.7. Design, Testing, Qualification, Inspection

Requirements for providing test specimens for design approval, inspection, investigation, or auditing are identified by the Weatherly Aircraft purchase order and/or engineering drawings. Requirements for design, test, examination, inspection, or related instructions for acceptance by Weatherly Aircraft are identified by the Weatherly Aircraft purchase order or engineering drawing and this document. Requirements for Weatherly Aircraft approval or qualification of product, material, manufacturing process or equipment to be used is specifically identified by the Weatherly Aircraft purchase order and/or engineering drawing.

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3.8. Eye Examination

Weatherly Aircraft requires individuals performing inspection of product for final acceptance have annual eye examinations with records for visual acuity and color vision administered by a medically trained/qualified person. Individuals shall have the following vision in at least one eye, either corrected or uncorrected: Near Vision – Snellan 14/18 or better (20/25 or better), Jaegar Type 2 at 14 inches or greater, Ortho-Rater 8 or equivalent. Color Vision – Must be able to distinguish & differentiate between colors used for which certification is required, process performed or inspection activity. Testing for color vision is required annually for each individual. Soldering personnel must successfully pass a training course administered by trained and accredited individual. Records of soldering personnel and training personnel must show compliance to a national/international accredited program.


3.9. Communication

All communication, including certifications, between the supplier and Weatherly Aircraft shall be in the English language. In cases where there is a conflict between native languages as well as in English language, the English language document shall take precedence.

3.10 First Article Inspection

First Article Inspections are to be performed by the supplier in accordance with the current revision of AS9102 Aerospace Standard. **Note:** First Articles are not required for standard catalog hardware (a part or material which conforms to an Industry or National specification). This Standard is available at the following website: <http://standards.sae.org> among others. The AS9102 First Article Inspection form or equivalent (see AS9102) shall be utilized to document the first article inspection. All characteristics, including reference and notes are required on the forms. Certifications are required for all material and processes identified on the drawing.

3.10.1. First article inspection report is required for all first time deliveries to Weatherly. The supplier is responsible for determining when a First Article is to be re-accomplished. *see 3.10.4 below.

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- 3.10.2. For First Article Inspection of Weatherly or Weatherly's Customer Designed product, a ballooned (bubbled) drawing is required to provide traceability to the characteristics inspected. Material and processing certifications are required.
- 3.10.3. First Article Inspection Reports require the inspection of all design requirements specified by the engineering drawing and reference specifications.
- 3.10.4. Partial or re-accomplishment of First Article Inspection shall be provided by the supplier in accordance with AS9102. (Drawing change, process change, tooling change, supplier change.) NOTE: If there has been a lapse in delivery over two years and requirements of AS9102 do not pertain to the lot being supplied, the supplier shall provide a copy of the First Article Inspection Report for the lot manufactured. Product will not be accepted until First Article Inspection Reports are received if it is determined by Weatherly that one is required. This delay may affect the delivery performance of the supplier.
- 3.10.5. Request to waive or to conduct AS9102 First Article Inspection reports at Weatherly will be submitted in writing to the Quality Manager for approval. All material and processing certs will be required if FAI is to be conducted at Weatherly.
- 3.10.6. Product will be held at incoming inspection if First Article Inspection Reports and certifications are not received at the time of shipment. This will result in a late delivery and will negatively affect the supplier performance.

3.11. Supplier Performance

Weatherly will provide on a regular basis a supplier scorecard depicting the supplier quality and delivery performance. It is the supplier's responsibility to maintain the accuracy of the scorecard. Any discrepancies should be discussed with the Weatherly Buyer. Suppliers are expected to continually improve their Quality and Delivery Performance.

- 3.11.1. Quality performance is (Total pieces received - nonconforming pieces) / Total pieces received)
- 3.11.2. Delivery performance is Total deliveries received on time* / Total deliveries received.
*On time deliveries are those deliveries received within a seven days of the due date.
- 3.11.3. Supplier Composite Performance is the average of the on time delivery and quality performance.

Weatherly's Supplier Management goal is to develop alliances with suppliers to determine appropriate actions which will result in mutually beneficial results. Supplier performance records are used to classify suppliers. This classification identifies exemplary performance as well as where actions are needed to improve performance.

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Classification	Percentage	Action Required
Outstanding	100 - 99	Meets or exceeds **
Good	98 - 96	Generally acceptable, may require improvement to specific areas
Marginal	95 - 93	Requires improvement
Unacceptable	92 and below	Immediate attention required

**Suppliers in this classification will be given first opportunity to support new business.


Corrective action may be requested as deemed required by the Quality Manager, Materials Manager or their delegates. If improvement is not seen within a reasonable amount of time, the supplier is placed on probation and notified in writing. Continued deficient performance may result in removal of the supplier from the Approved Supplier List.

3.12. Control of Non-conforming Product

Suppliers are required to notify Weatherly Aircraft of all nonconforming products prior to shipment to Weatherly. Suppliers should utilize the Non-conformance Notification form (form # WSQ-002) which is available on our website at www.flyweatherly.com. All non-conforming products, even if approved by Weatherly Engineering, will affect the Quality Performance Rating of the supplier. Corrective action may be requested. Delivery is only permissible after written approval by Weatherly Engineering. The approved request shall accompany each shipment until the approved quantity has been shipped complete and shall be noted on the packing slip. Supplier shall notify Weatherly within 24 hours in the event a Non-conformance to applicable design data applies to product that has been shipped to Weatherly. Notification should include a clear description of the nonconformity, affected product identification, quantities and delivery dates as well as root cause and corrective and preventive action.

3.13. Control of Records

Supplier records shall be established to provide evidence of conformance to requirements and of effective operation of the Quality Management System. Records shall be controlled. Supplier shall establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records. These records, including but not limited to, material certifications, special process control records and certifications, inspection and first article inspection records, statistical process control records and build records shall be maintained by the supplier for a minimum of 10 years from ship date or as specified by purchase order. Should Weatherly make a request for certifications for any reason, the supplier must make them available within 48 hours.

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3.14. Terms and Conditions

Purchase Order Terms and Conditions (form # Q-12) is available on our website at <http://www.flyweatherly.com/>

3.15. Electrical Discharge Machining

Electrical Discharge Machining (EDM) is not permitted on any Weatherly product (effective 10/29/10), unless otherwise noted on the Weatherly Drawing. Request from Purchasing to waive this requirement will be submitted in writing to the Director of Engineering or Engineering delegate for approval.

3.16. Supplier Control

Weatherly requires approved suppliers have a supplier control program in place for their suppliers which includes at a minimum: Evaluation, approval and surveillance of suppliers; corrective action programs when a problem is identified; Flow down of all quality requirements; Risk analysis; and Control of documentation and records as specified herein.

3.17. Periodic Raw Material Validation

Suppliers are required to periodically validate test reports for raw material. A waiver for this requirement may be issued by the Purchasing Delegate, if approved by the Quality Manager or delegate, if contractually, or by customer agreement, it is not required.

3.18. Control of Customer Property

Suppliers are required to exercise care with property supplied by Weatherly or Weatherly's customers. Customer property includes tooling as well as technical documents. Supplier shall identify, verify, protect and safeguard customer property provided for use or incorporation into the product. If customer property is lost, damaged or otherwise found to be unsuitable for use, the supplier shall report it to the customer. Supplier shall return customer property upon written request from the customer.

3.19. Electrostatic Sensitive Devices (ESD)


Suppliers shall have an ESD program that complies with S20.20, Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) for applicable part numbers.

3.20. Foreign Object Damage/Debris (FOD)

Supplier shall develop and maintain a FOD program that complies with the requirements of AS9146 or equivalent to identify, eliminate and protect against foreign object debris or damage.

4. Certification Requirements

- 4.1. All documentation submitted must be traceable to the Weatherly Aircraft P.O. Number and Weatherly Part number. When specific standards are required, the Certificate of Conformance must explicitly state the standard and revision letter the product/material conforms to, purchase order number, supplier name and address, heat lot number, cure dates, etc.

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4.2. Suppliers are responsible for understanding and complying with the DFARS specialty metals clause(s) and exceptions. It is the supplier’s responsibility to determine if the product being supplied is/or contains a specialty metal and if it is DFARS compliant. If additional information is required concerning DFARS Specialty Metals clause(s) and exceptions call 703-602-0328 or 703-602-0131. A waiver for DFARS may be issued by the Purchasing Delegate if contractually, or by customer agreement, it is not required. Refer to Appendix A for DFARS Clauses.

4.3. Certification requirements for Suppliers

A Certification of conformance (C of C) is required for all product delivered to Weatherly providing traceability to the product being delivered. Each C of C shall include, at a minimum, the following information:


- Supplier name and address
- Date
- Weatherly Purchase Order
- Quantity
- Part number, description and revision (both ET and supplier when applicable)
- Serial number, date code or lot number, when applicable
- Statement of conformance stating compliance to all purchase order and design data requirements, including specifications
- Signature of authorized supplier representative
- Shelf life data when applicable
- Ref 4.3.6 and 4.3.7 below also for bearings and O rings items.

4.3.1. Distributors

Suppliers of miscellaneous hardware items such as nuts, bolts, fasteners, studs, inserts, terminals, etc, that are purchased under a national standard or supplier part number may be from either the actual manufacturer or a distributor. In either case, the supplier shall provide a specific Certificate of Conformance statement referencing all drawing, purchase order requirements (including part number), and quantities shipped. For items with a Weatherly part number/ drawing, original manufacturer’s certifications are required. *Refer to note in paragraph 4.3.3.

4.3.2. Manufacturer’s

Raw material (physical, chemical analysis and test reports) and special process certifications must accompany all shipments of product to Weatherly. Certifications submitted with the first shipment of material on a purchase order do not cover subsequent shipments. NOTE: DFARS specialty metals clause applies and NADCAP approved suppliers must be used when applicable in accordance with the drawing. COTS (Commercial off the shelf) and Specification Control Drawing parts are excluded from this requirement.

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NOTE: Suppliers (Distributor or Manufacturer) of Electronic Component and assemblies including Printed Circuit Boards, shall provide a Certificate of Conformance statement with test results in addition to statement indicating drawings and specifications and customer approved sources, as applicable, have been met. Original manufacturer's certifications are required with all shipments.

4.3.3. Special Processors

Specific Certificate of Conformance's shall be provided for all special processes performed on production material. If the purchase order or drawing lists a specific controlling specification for the process, that specification shall be referenced in the Certificate of Conformance, including specification revision level and date. If no controlling specification is referenced, the Certificate of Conformance shall indicate the general parameters of the process performed. All special process Certificate of Conformance's shall reference a specific purchase order, part number, and quantity.

NOTE: NADCAP approved Suppliers must be used.

4.3.4. Calibration

The certificate of conformance statement for calibration services shall reference the procedures, processes, and equipment and indicate the results as acceptable or unacceptable as well as calibration due date. Traceability to National Institute for Standards and Technology (NIST) must be recorded on the certificate of conformance.


4.3.5. Shelf Life Items

All Shelf life items must have 80% or greater shelf life remaining at the time of receipt. Items made from elastomers such as gaskets, O-rings, seals, etc.; require a specific Certificate of Conformance indicating 80% or greater shelf life remaining. Items made from brand materials, such as Teflon or Viton, should reference these recognized materials and specific compounds. As applicable, the manufacturing date, cure date, expiration date and lot / batch number of such material shall be specified.

Paints, Varnishes, Adhesives require specific Certificate of Conformances referencing the appropriate specifications when products are ordered to controlling specifications (such as Military Standard or ANSI standards). The lot number and expiration date of such material as well as a statement indicating 80% or greater of the shelf life remaining shall be specified on the certification and affixed to each container

4.3.6. Bearings

Bearings require a certificate of conformance stating the manufacturer's name, the manufacturer's part number, the country of origin and verification of lubrication and bearing type. Purchasing will request test reports or chemical / physical analysis at time of quotation if required.

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5. Part and Component Protection

5.1. Material Classifications

The requirements for providing adequate protection of materials (materials, parts, components, and finished products) are dependent on the specific material classification. These include in-process, stored or transported materials. Weatherly has identified three broad classifications of materials each of which have basic packaging requirements which are specified herein. Refer to 5.2.3 for material protection requirements. These classifications are defined as follows:

5.1.1. Class 1 - Mechanical Parts and Components

Includes:

- Weatherly Aircraft designed parts and components
- Machined parts (partially or completely finished parts)
- Plated parts
- Castings
- Bearings
- Standard electrical parts (connectors, switches, etc)
- Any other materials not classified as Class 2 or 3

5.1.2. Class 2 – Electronic Components and Products


Includes:

- Electronic components (transistors, resistors, capacitors, etc)
- Electronic products (end products such as level sensors, controllers, assembled circuit boards)
- Reference ANSI/S20.20 for additional information.

5.1.3. Class 3 – Bulk Items and Raw Material

Includes:

- Bolts, nuts, screws
- Rivets, wire
- O-rings, gaskets
- Other items random packaged in bulk

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5.2. Material Protection Requirements

The use of staples and newspaper is prohibited on any packaging.

5.2.1. Class 1 - Mechanical Parts and Components

This class of materials requires individual protection of each item such that adequate protection (packaging or preservation) is provided to prevent physical damage or deterioration during handling, transporting, and storage.

- Seal pack packaging of one or more parts is acceptable if the parts do not contact each other.
- Multi-wrapping of smaller parts is acceptable if parts do not contact each other.
- Packaging must include appropriate precautions for preservation where needed (e.g. grease for bearings, desiccant to eliminate moisture, oiled for protection from rust/corrosion, etc.)
- Protection for exposed threads and splines to preclude damage, corrosion, and contamination.
- Shipping containers/packaging must be of an appropriate grade to provide adequate protection, in particular for fragile parts.
- Identification and traceability shall be maintained.


5.2.2. Class 2 - Electronic Parts and Components

This class of materials requires individual protection of each item such that adequate protection is provided to prevent physical damage during handling, transporting, and storage. The use of appropriate faraday containers is required. In addition, the packaging must provide protection from electrostatic discharge. Reference ANSI/S20.20 and ANSI/ ESDS541 for additional information on handling and packaging requirements.

- Multi-wrapping of smaller parts is acceptable if parts do not contact each other and if each part is contained in ESD protective packaging.
- Identification and traceability shall be maintained.

5.2.3. Class 3 – Bulk Items and Raw Material

Bulk items generally do not require any special protection. However, some bulk items (i.e. O-rings) should be bagged in small quantities (by batch number) to provide for adequate protection from damage, shelf life considerations or lot traceability. Identification and traceability shall be maintained.

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Record of Revision

Revision Letter	Date of Revision	Description of Revision
NC	4/05/2021	Original draft for the first WSQ-010 Supplier Quality Requirements

Approved by: _____
Quality Manager/ Date