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QUALITY ASSURANCE PROCEDURE:  
SUPPLIER QUALITY REQUIREMENTS

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**1. PURPOSE**

This document defines minimum quality requirements for suppliers of products or processes to Whelen Engineering Company, Inc. (“Whelen”), when the products or processes are used in the manufacture of our products.

**2. REFERENCE DOCUMENTS**

- 2.1 FAA – 14 CFR Part 21, §21.137(c)
- 2.2 Vendor Evaluation Form (Form 741.01)

**3. RESPONSIBILITIES**

- 3.1 Supplier – meet all requirements of Whelen purchase orders and applicable requirements of this document.
- 3.2 Whelen Purchasing – issue purchase orders and requirements to suppliers; point of contact for supplier.
- 3.3 Whelen Quality Department – approve suppliers; coordinate discrepancy management activities with suppliers.

**4. QUALITY REQUIREMENTS**

**4.1 Scope of Work**

Under no circumstances shall the supplier make changes in or deviate from the scope of work as described on the purchase order without prior approval (by Fax, e-mail or Purchase Order Amendments) from Whelen.

**4.2 Quality Program**

The supplier shall maintain a quality program which will ensure adequate control throughout the performance of the purchase order, including gage and measurement equipment calibration traceable to NIST where applicable.

Products and materials are subject to those inspection and or tests deemed necessary by Whelen to assure compliance with engineering specifications and purchase order requirements.

**4.3 Supplier Approval and Right of Entry**

Whelen requires suppliers to complete and return a Vendor Evaluation Form (Form 741.01) when requested. Suppliers with third-party quality system approvals or certifications will be asked to provide evidence of their approvals / certifications.

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Suppliers must notify Whelen Purchasing or Quality Assurance of any changes to their production or quality system that may impact approval status, including relocation of facilities (at least 60 days in advance), change of ownership, major changes to processes, changes to suppliers, or changes to third-party approvals or certifications.

Whelen reserves the right to perform surveillance of the supplier's quality system or articles supplied at the supplier's facilities during normal business hours. Right of entry also extends to Whelen's customers or representatives of the Federal Aviation Administration when required. Suppliers will be notified in advance if access is required.

**4.4 Configuration Control Items (Whelen Parts) and First Article Approval**

Suppliers producing or processing articles to Whelen drawings or specifications shall perform all work to the revision specified on the purchase order, unless otherwise approved by Whelen Purchasing. *Suppliers shall request drawings or specifications when necessary to satisfy purchase order requirements.*

Shipping documents must include the Whelen Purchase Order number, the Whelen part number and the Revision.

Suppliers are required to submit parts to Whelen for First Article Inspection and approval the first time an item is produced or processed for Whelen, or the first time an item is produced or processed after a drawing revision.

**4.5 Source Control / Qualified Parts List Items (Commodity Items)**

When a commodity part number and source (a Whelen Source Control item) is specified, the part or material and the source (manufacturer) shall be as identified on the drawing, specification or purchase order.

If a Qualified Parts List (QPL) item is specified, the part or material shall be the product of the supplier listed on the QPL.

Source Control and QPL parts or materials shall not be altered unless specified on the purchase order.

**4.6 Counterfeit Electronic Parts, Detection and Avoidance**

The supplier shall obtain electronic parts that are in production or currently available in stock from the original manufacturers or their authorized dealers, or from trusted suppliers who obtain parts exclusively from the original manufacturers or their authorized dealers. The supplier shall obtain electronic parts not currently in production or in stock only from trusted suppliers who have appropriate policies and procedures in effect to detect and avoid

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counterfeit electronic parts and suspected counterfeit electronic parts.

Any exception to this requirement must be approved by Whelen in writing.

#### **4.7 Hardware**

Hardware defined by Military Standard (MS), Air Force, Navy (AN), National Aerospace Standards (NAS), and other military/government specifications shall meet the requirements of the latest issued applicable specification unless otherwise specified.

Other hardware shall meet the requirements of the supplier's specification and/or Whelen specifications.

#### **4.8 Material Storage, Handling and Delivery**

Materials shall be stored, handled and packaged to protect against dents, scratches, contamination, corrosion, electrostatic discharge (ESD), foreign object damage (FOD), or deterioration during transit and during normal packed storage period of at least three (3) months.

Temperature sensitive materials must be stored per material requirements.

Electrostatic discharge sensitive components and assemblies shall be packaged to protect the product from ESD, to prevent physical damage and to maintain leads and terminals in manufactured condition. Packages must be labeled as ESD sensitive.

Unless otherwise specified, packing and packaging for domestic shipment shall be in accordance with commercial procedures.

#### **4.9 Age and Temperature Sensitive Materials**

Age sensitive products or materials (items with limited shelf life) shall have the expiration date clearly marked on each container where feasible.

Temperature sensitive items shall be clearly labeled with storage temperature requirements.

Whelen reserves the right to refuse or reject articles or materials with less than 80% of the usable shelf life remaining at time of delivery, unless specified on the PO, a PO Amendment or otherwise authorized in advance of shipment. A copy of any authorization must be shipped with the items.

Packing lists or certifications must identify shelf life requirements:

- Expiration Date (the last date the product usable)
- Cure Date, Manufacture Date, or Ship Date (as applicable)
- Shelf Life Duration (the length of time the product is usable).

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**4.10 Certifications, Test Reports, and Record Retention Requirements**

The supplier shall provide a Certificate of Compliance (C of C) that the parts, material or process meets the requirements of the applicable drawing or specification, or the provisions of the purchase order. Unless otherwise specified, certification is required for each lot of parts or material.

The supplier shall provide test reports or material certifications with raw materials shipped to Whelen, or used in the manufacture or processing of parts.

Inspection records and test reports that substantiate conformance to PO requirements must be available to Whelen upon request. Periodic audits may be performed to assure compliance to this requirement. Records must be available for no less than ten (10) years (or as specified on the purchase order).

**4.11 Notice of Quality Escapes**

Suppliers are required to have a process in place to notify Whelen should any product or material released to Whelen be subsequently found not to conform to applicable design data or required specifications.

Notification shall include all available order, shipment, marking or lot identification information.

**4.12 Corrective Action**

Whelen may request details of the cause of any discrepancy, and an accounting of corrective actions taken to prevent future occurrences. Whelen will notify the supplier and will establish a deadline for the response.

**4.13 Flow Down of Quality Requirements**

In addition to the requirements of this document, Whelen may flow quality requirements down to suppliers from our customers or regulatory agencies, including the FAA (Federal Aviation Administration).

Whelen may also flow down 'Production Parts Approval Process' (PPAP), 'International Material Data System' (IMDS), 'Regulation for Registration, Evaluation, Authorization and Restriction of Chemicals' (REACH), or other requirements to suppliers. Whelen representatives will contact suppliers to explain what is required and to request their participation and support. Distributors may be contacted to provide assistance obtaining IMDS information from the source manufacturers of items sold to Whelen.

**4.14 Sub-Tier Supplier Control**

The supplier is responsible to ensure that any sub-tier suppliers perform in accordance with Whelen purchase order requirements, the requirements of this

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document and any quality requirements we flow down from our customers.

**4.15 Conflict Minerals Reporting**

In accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act, Whelen requires suppliers of products containing tin, tantalum, tungsten and/or gold to have Conflict Minerals Policies in place ensuring compliance to the requirements set forth.

Whelen will survey suppliers and maintain records of supplier Conflict Minerals statements of compliance, and compliance information provided in established information databases.

Whelen will perform periodic audits of suppliers and related products sold to Whelen, for traceability down to the mining source/location.

**4.16 Nonconforming Product Disposition**

Should the supplier determine that product processed has been deemed nonconforming, the supplier shall obtain Whelen approval for nonconforming product disposition.

**4.17 Packaging of Product Sent Out and Received Back from Special Processing**

Product should be returned to Whelen in the original manner and packaging that it was received.

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REVISION HISTORY

REVISION	DATE	CHANGES / COMMENTS
A	02-25-11	<ul style="list-style-type: none"> <li>• Revised document format and expanded content.</li> <li>• Replaced <i>Supplier, Vendor or Contractor</i> with the term "Provider".</li> <li>• Added Charlestown, NH location to section 1.</li> </ul>
B	10-25-12	<ul style="list-style-type: none"> <li>• Title was "Purchasing Requirements".</li> <li>• Revised, expanded and reformatted.</li> </ul>
C	02-14-14	<ul style="list-style-type: none"> <li>• Added 2.2, 2.3</li> <li>• Added details about Vendor Self Evaluations in para. 4.3</li> <li>• Inserted 'changes to suppliers' in para. 4.3</li> <li>• Clarified in title of 4.10 'Record Retention Requirements'</li> <li>• Inserted REACH requirement</li> <li>• Added 4.15 'Conflict Minerals Reporting'</li> <li>• Added 4.16 'Nonconforming Product Disposition'</li> </ul>
D	3-5-15	<ul style="list-style-type: none"> <li>• 2.2: deleted</li> <li>• 2.3: renumbered</li> <li>• 4.3: deleted "Evaluations will be sent...and Approvals"</li> <li>• 4.4: deleted "as stated on the purchase order."</li> <li>• 4.9: revised 75% to 80%</li> </ul>
E	10-14-15	<ul style="list-style-type: none"> <li>• Added paragraph 4.17</li> </ul>