



## 1. PURPOSE

To effectively communicate Quality Control requirements to Suppliers.

## 2. SCOPE

This procedure defines Supplier quality control requirements necessary to ensure that all purchased product and material meet the required quality levels.

## 3. APPLICABLE DOCUMENTS

- 3.1 06.03.01 Supplier Deviation Request
- 3.2 06.03.01.01 Supplier Deviation Request Form
- 3.3 10.08.00.01b First Article Inspection Report

## 4. DEFINITIONS

- 4.1 Seller-Supplier: The manufacturer or distributor performing the work/ supplying the materials, parts, assemblies, subassemblies or services pursuant to the purchase order.
- 4.2 General Requirements – Requirements that apply to any purchase order for any part or material to be used as an integral part of a saleable item. The Seller is responsible for meeting all requirements unless relieved of these requirements by the purchase order.
- 4.3 Variable Requirements - Specific requirements that apply only when called out on the purchase order by specific code number.
- 4.5 Production Critical Airworthiness/Product Safety (AWPS) Requirement- Identifies specific methods of fabrication, assembly, inspection and/or tests which are required to assure that airborne equipment will be safe in normal operation, safe under conceivable emergency conditions, safe under conceivable personnel operational error, and will not fail in such a way as to create a hazardous condition. This designation invokes 100% inspection or certification of requirements noted on the drawing.
- 4.6 Supplier Deviation Request (SDR) - A process by which a Supplier may receive approval from Firstmark (and Firstmark's customer) to continue to process or to ship nonconforming hardware.



## 5. RESPONSIBILITIES

- 5.1 The Seller is responsible for meeting the requirements of this document in addition to any specific quality codes listed in section 7 which are directly imposed upon the Seller by the purchase order.
- 5.2 The Seller is responsible for flowing down to their sub tier suppliers the requirements of the drawing and purchase order and furnishing their sub tier supplier's current revision documentation to support the requirements of the drawing and purchase order.
- 5.3 The seller shall submit to Firstmark along with deliverable hardware all quality data required by each unique purchase order.
- 5.4 The seller shall retain all quality related records as required by each unique purchase order.

## 6. GENERAL REQUIREMENTS

- 6.1 **Engineering Change Notifications/Authorizations**
  - 6.1.1 For Seller owned design authority, changes to fit, form, or function shall not be made without written notification to the Buyer.
  - 6.1.2 For Buyer owned design authority, no changes shall be made without written authorization from the Buyer.
  - 6.1.3 For buyer owned design authority, the supplier agrees to notify Firstmark of any changes to sub tier suppliers which includes all special processing used to meet the drawing/PO requirements.
- 6.2 **Drawing and Change Control** - The Seller's system shall assure that the latest applicable drawings, specifications, technical requirements, purchase order information and changes thereto will be available at the time and place of Seller's acceptance of material and/or services. All changes shall be processed in a manner which will assure incorporation on the affected material, and/or services at specified effective points. On Buyer-designed parts, Buyer may require that the Seller's change control system be compatible with that of Buyer.
- 6.3 **Procurement by the Seller**-The Seller shall maintain a system to assure that Seller-procured materials and/or services conform to purchase orders, drawing and specification requirements. The Seller shall be responsible for



## Supplier Quality Control Requirements



flowing down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required. The implementation of such controls shall be subject to surveillance by Buyer

**6.4 Tool and Test Equipment Control (Buyer Furnished)** - All tooling and test equipment fabricated by the Seller at the Buyer's expense, or supplied by the Buyer for Seller use, shall be considered property of the Buyer and/or the procuring government agency. Calibrated, and controlled. Tool and test equipment controls shall be accomplished by the Seller with review and approval at Buyer's option.

6.4.1 The Seller shall be responsible for maintaining adequate records of all tooling and test equipment indicating compliance. Such records shall be readily available to the Buyer's Quality Assurance Representative and/or the Government Procuring Agency Representative.

6.4.2 The Seller shall have a system, which includes written procedures for control of all tooling and test equipment. Procedures shall be in accordance with the controls specified herein.

6.4.3 Any tooling or test equipment furnished to the Seller by Buyer shall not be reworked or modified without prior written approval of the Buyer.

6.4.4 Government Furnished Materials is governed by Appendix B of Defense Acquisition Regulations (DAR) and/or Federal Acquisition Regulations (FAR 45) titled, Government Property in Possession of Contractors.

**6.5 Product Identification and Traceability** - The Seller shall have traceability for all raw materials, processes of production, inventory storage points, and within all levels of the supply chain back to the original source. All traceability documentation/certifications (i.e. material, heat treat, finish, etc) must accompany each shipment and must be legible.

*Note: All quality records delivered shall reference the appropriate Firstmark Aerospace/ABI purchase order number.*

**6.5.1 Counterfeit Parts** – No supplier or sub-tier will use counterfeit or fraudulent materials in the delivered product. Documentation must be available that authenticates and provides traceability of the origin of all materials. The suppliers receiving inspection shall utilize inspection or test methods, or both to detect potential counterfeit parts, materials or work. The supplier shall notify the



## Supplier Quality Control Requirements



buyer as soon as it becomes aware of any Counterfeit Supplies or suspected Counterfeit Supplies which may arise during fulfillment of any purchase order.

- 6.6 **Processing** - The Seller shall establish a system to assure that all processes, including those which cannot be readily verified by inspection, will conform to specification requirements. Those processes to which Government specifications apply are subject to the applicable requirements regarding certifications or approval by Government agencies.
- 6.7 **Inspection and Test** - The Seller shall provide and maintain suitable gages, instruments, and test equipment to measure and test all material for conformance to the Buyer's requirements. The Seller shall perform inspection and/or test on all end-items covered by the purchase order prior to delivery. Inspection/test of material, which cannot be readily examined in the end items, must be performed at the appropriate in-process stages of manufacturing. Records of inspections/tests must be maintained by the Seller.
- 6.8 **Inspection and Test Status** - The Seller shall maintain a system for identifying inspection and test status of material. Identification may be accomplished by means of stamps, tags, routing cards, labels, bar codes, electronic databases, or other control devices. Final acceptance stamps must provide the Seller with identification unless identification is provided on the product by other acceptable means. The Seller shall be responsible for maintaining procedures for governing the control of inspection authority and shall, upon request, forward a record of such authority to the Buyer.
- 6.9 **Material Review** - The Seller shall not exercise "Use As Is" Material Review authority on end items without written approval by the Buyer's Supplier Quality organization. Approval must be documented via a Buyer approved Supplier Deviation Request.
- 6.10 **Corrective Action** - The Seller's quality control system shall provide means for ready detection of discrepancies and for prompt and effective corrective action. Corrective action must be positive and specific, including firm effective points by serial number, part number, date, or other agreed methods. Corrective action records and information, such as pertinent data on defects and failures, shall be available. The Seller shall be responsible for conducting root cause analyses and for implementing subsequent corrective actions upon the receipt of a Buyer Supplier Nonconformance Notification. The Seller shall be responsible for prompt written responses to Buyer Supplier Corrective Action Requests, and implementation of the required corrective action



## Supplier Quality Control Requirements



- 6.11 **Preservation and Packaging** - In addition to specific preservation and packaging requirements invoked in the purchase order, the following apply:
- 6.11.1 All material intended for the Buyer shall be protected against the usual hazards of electrostatic discharge (ESD), corrosion, contamination, and deterioration, or other spoilage at the Seller's facility and in transit.
  - 6.11.2 All material intended for the Buyer shall be packed with suitable protection so as to prevent damage through shipping, handling and during storage at the Buyer's facility.
- 6.12 **Age Control** - The Seller shall maintain a documented system for age control items where acceptability is limited by maximum age. The system shall include a method of identifying and controlling such items.
- 6.13 **FOD (Foreign Object Damage) Control** - The seller shall ensure work is completed on assemblies in a manner that minimizes the risk of foreign objects or material. This will include maintaining work areas, and the control of tools, parts, and materials in such a way as to minimize the risk of incorporating FOD.
- 6.14 **Notification of Problems** - The Seller must notify the Buyer if there may be a form, fit, function, usability, or reliability problem with material that has been delivered. The Seller shall not knowingly ship non-conforming material without written authorization via an approved Supplier Deviation Request.
- 6.15 **English Language Requirement** - The Seller shall submit all quality data, correspondence, drawings, and corrective action responses in the U.S. English Language.
- 6.16 **Surveys and Surveillance** - The Buyer may conduct a survey and/or perform surveillance of the Seller's quality control system to evaluate the degree of ability to comply with these and other applicable requirements, or to assist in the resolution of quality problems. As necessary, any tier of a Buyer's Customer may accompany the Buyer's Quality Assurance Representative.
- 6.17 **Supplier Assistance** - In the event that requirements are not completely clear, or where special assistance is needed, the Buyer will provide qualified personnel to consult with the Seller. Requests for assistance shall be made via the Buyer's Purchasing Department. If inquiries pertain to quality aspects of material or services being procured, a representative of the Buyer's Supplier Quality should be contacted.
- 6.18 **FAA Surveillance** - Materials and/or components supplied under the terms



## Supplier Quality Control Requirements



of the purchase order may be utilized in equipment, which has been or will be subject to Federal Aviation Administration type certification or Technical Standard Order Authorization/Parts Manufacturer Approval. The Seller's facility and quality system are subject to surveillance by authorized representatives of the Federal Aviation Administration. The Seller shall provide all reasonable facilities and assistance to the authorized FAA representatives, upon request.

- 6.19 **Characteristics Not Verifiable Upon Receipt** -The supplier shall provide adequate controls, within the quality system, to ensure that characteristics not verifiable upon receipt are adequately controlled.
- 6.20 **Sampling by the Buyer** - The Buyer reserves the right to use sampling plans for the acceptance or rejection of material and/or services. If a lot is rejected by the sampling procedure, the entire lot may be returned to the Seller or the rejected lot may be screened by the Buyer at the Seller's expense.
- 6.21 **Final Acceptance** - Inspection/test acceptance at the Seller's facility by the Buyer or the Government does not guarantee final acceptance. Final acceptance shall be at the Buyer's facility unless otherwise specified on the purchase order.
- 6.22 **Certification Requirements** - The Seller shall be responsible for compliance with all certification requirements referenced throughout the purchase order and maintenance of quality control records evidencing compliance with such requirements, regardless of whether work was performed by the Seller or lower-tier suppliers. The Seller shall maintain the information to create a "Certificate of Compliance" (code 12), on demand, for a minimum of (10) years for "Material", "Special Processes", and "Parts". The Seller shall make available to the Buyer evidence to support this certification upon request or audit. See section 6.5 for traceability requirements.
- 6.23 **Prohibited Practices** - The following practices are typical of those prohibited:
  - 6.22.1 **Unauthorized Repair** - Repairs (by welding, brazing, soldering, or the use of adhesives) of parts damaged or found faulty in the fabrication process; repairing holes in castings, forgings or other materials by plugging or bushing without authorization from Buyer's Supplier Quality.
  - 6.22.2 **"Use As Is" dispositions by Seller's MRB (Material Review Board). See section 6.9.**





## Supplier Quality Control Requirements



- 6.22.3 **Unauthorized Processing** - Addition, revision, or deletion of processes in manufacturing when those processes are subject to specification control by the Buyer.
  - 6.22.4 **Unauthorized Material Substitution** - Submission of material having known defects/problems to the Buyer without notification.
  - 6.22.5 **Improper Material Resubmittal** - Resubmission of material to the Buyer without material being clearly identified as resubmitted material.
  - 6.22.6 **Unauthorized Material and Information Transfer** - No supplier shall buy, sell, trade or transfer Firstmark related material, parts, devices, assemblies or end equipment for purposes other than the performance of Firstmark business, without prior written approval. No Firstmark part numbers, Firstmark customer's part numbers, or information related to those part numbers, shall be disclosed without prior written approval.
  - 6.22.8 **Reclaimed Material** - No supplier shall use reclaimed material without prior written approval from the Buyer.
- 6.23 **Qualification of Personnel** – Seller shall ensure that the personnel performing operations of producing product per the purchase order agreement are qualified to perform said operations.

## 7 VARIABLE REQUIREMENTS:

- 7.1 **CODE 5 - This procurement involves either Airworthiness/Product Safety Critical, or Flight Safety Critical items or materials.** Parameters requiring critical items or materials documentation are specified on the Buyer's drawings, specifications, or purchase orders. These parameters shall be quantitatively documented in detail, and shall be positively traceable to the materials, parts, or services supplied against this Buyer's purchase order. In the interest of air safety, and if/when so required by Buyer, the Seller shall assist in the analysis of materials that are involved in accident investigations. **Strict compliance is mandatory.**
- 7.2 **CODE 6 - A First Article Inspection (FAI) is required prior to delivery of the first production unit.** Parts supplied against this purchase order must have a First Article Inspection (FAI) performed by the Seller prior to the first shipment in accordance with the requirements of 3.3. The FAI data package shall be submitted to Firstmark for review and approval. The FAI data package shall include objective evidence of conformance of all characteristics on the face of the top drawing.
- 7.3 **CODE 10 - Age Limit: Date of Manufacture** – The items supplied under this



## Supplier Quality Control Requirements



order are subject to age and/or temperature control. A certified report showing cure date, manufacturer's name, compound number, and the specification the material meets shall be supplied by the Seller with each shipment. The cure date (for elastomer or rubber or rubber-like products) or shelf life (for perishable items) and/or temperature limitation (for perishable items) must appear on each container. The remaining shelf life (if applicable) for perishable items as received must equal or exceed 75% of the manufacturer's shelf life. The date of receipt for items requiring a cure date must be within 3 months of the manufacturer's cure date.

Frozen items must be shipped in a cold pack capable of sustaining the necessary temperature for 72 hours with an additional 24-hour buffer. If the material is frozen, a freeze sticker is required on the outside of the shipping container with the following information included:

- 1) Date and time contents are shipped from the supplier.
- 2) Freeze or refrigeration temperature requirements.

**7.4 CODE 12 - Certified Statement Of Conformance** A certified signed statement that material/parts conform to applicable specifications shall accompany shipment and be enclosed with packing slip. See Certification Requirements, section 6.22.

7.4.1 Certifications from distributors must establish traceability to the original manufacturer. The preferable method is to provide a copy of the original manufacturer's certification along with a certification from the distributor. Identifying the original manufacturer on the distributor's certification is acceptable. .

7.4.2 When material is supplied by the Buyer, the supplier's Certificate of Conformance shall include a statement that the components (Buyer's part number and serial numbers) have been fabricated from material supplied by the Buyer.

**7.5 CODE 13 – Material Certification** - Material producer's original certificate for raw material shipped to Buyer and/or used against this purchase order must accompany shipments and be included with the packing slip. Reports must validate compliance to current raw material procurement. See Certification Requirements, section 6.22.

**7.6. CODE 14 – Special Process Certification** – The Seller shall supply Certificates of Compliance for all special processes performed as part of this Purchase Order. See Certification Requirements, section 6.22.





## Supplier Quality Control Requirements



- 7.7 **CODE 16 - Certified Quantitative Test Results** - Certified copies of quantitative test results, obtained from all electrical or mechanical tests of each device covered by this purchase order, shall accompany each shipment. See Certification Requirements, section 6.22.
- 7.8 **Code 17 – Supplier Inspection Plan Required** – Seller will provide inspection data and or certification to specific inspection requirements listed in the PO. This code will also be used to convey information regarding previous rejections (Discrepant Material) in order to inform supplier of need for additional inspections prior to next shipment.
- 7.9 **Code 18 – Order Specific QMS (Quality Management System) Requirements** – To be provided to Seller by Buyer on PO's where this is required by Firstmark/ABI Customer.
- 7.10 **Code 19 – Sub Tier Supplier Approval Required** – Selection and use of sub-tier suppliers must be approved by Buyer at time of PO acceptance. Sub-tier supplier includes all special processing used to meet the drawing/PO requirements.
- 7.11 **CODE 21 - Solderability Requirement** — Electrical and Electronic Components on this order shall meet the solderability requirements of IPC/EIA J-STD-001.
- 7.12 **CODE 70 - ESD Requirement** — Articles must be packaged in individual containers or compartmentally packaged, protected against electrostatic discharge. Each container and outer pack shall be labeled “Caution: Contents Are Electrostatic Sensitive.”
- 7.13 **CODE 71 - Packaging Requirement** — Articles shall be individually or compartmentally packaged; bulk packaging prohibited.
- 7.14 **CODE 76 - - Original Manufacturer's Certification** - Certification is required and **must be from the actual manufacturer**. A dated and signed statement that articles conform to applicable specifications shall accompany hardware and shall be enclosed with the packing slip. See Certification Requirements, section 6.22.
- 7.15 **CODE 80 – Certified Test Report (Polyester Webbing)** – A signed test report for materials shipped to the buyer must include evidence that the material conforms to section 4 of SAE AS 8043 issue date 3-86. See Certification Requirements, section 6.22.
- 7.16 **CODE 81 – Certified Test Report (Nylon Webbing)** – A signed test report for material shipped to the buyer must include evidence that the material has a minimum breaking strength of 2250 lbs. See Certification Requirements,



# Supplier Quality Control Requirements



section 6.22.

- 7.17 **CODE 85 – Burn Test Certification** – A signed test report for materials shipped to the buyer certifying that the material conforms to FAR 25.853 (a), Appendix F, Part 1, Subsection (a)(1)(iv). See Certification Requirements, section 6.22.

## 8 RECORDS

Record Description	Form #	Minimum Retention	Responsible Dept.	Storage Location	Filing Sequence
All Quality Data Required by Each Unique Purchase Order Including But Not Limited to: Supplier Certifications, X-Rays, Test Coupons, Supplier Inspection and Test Records required by purchase order and maintained by supplier	N/A	10 Years for Non-AWPS items; Indefinite for AWPS items	Supplier	Supplier	As Defined by Supplier's Internal Quality System

### Revision History

<b>Revision letter</b>	<b>Details</b>	<b>Date</b>
A.	Added quality codes 54-59, 74. Deleted code 17. Modified codes 6, 13, 14, 22, 53, 76, 77, 78 and 85. Modified responsibilities and procedures sections to comply with current business practices	7/02/01
C.	Modified codes 50 and 76. Updated document to reflect new company name, Firstmark Aerospace.	11/4/02



## Supplier Quality Control Requirements



- D. Revised procedure to reflect current practices. 2/7/06
- E. Revised code 12, & 46 and removed code 22 – 27 mentioned 4/19/06
- F. Updated section 6.8.4 to include:  
Certifications from distributors must establish traceability to the original manufacturer. The preferable method is to provide a copy of the original manufactures certification along with a certification from the distributor. Identifying the original manufacture on the distributor’s certification is acceptable. Parts used in higher level parts supplied to the Buyer must be traceable as outlined above. See certification Requirements, section 6.7.28.
- G Updated SOP paragraphs to better comply with AS9100 Rev. B section 7.4.2 a – j. Para 6.7.17 verbiage was updated to better explain Seller role of not shipping non-conforming product. 01/08/08
- H Extensively revised and renumbered document to eliminate obsolete requirements and eliminate Firstmark internal only related requirements. Added ABI quality Codes so document may be used for both Firstmark Aerospace and Aircraft Belts Inc. 5/7/2013
- J Change Format of header/footer, add 6.1.3 notification of sub-tier changes, 6.5.1 Counterfeit parts, 6.13 FOD, Remove ASL from Code 14. 11/14/2014
- K Updated section 6.5, 6.22, added codes 17, 18, and 19. Added reference to section 6.22 in 7.14 – 7.17. 05/11/2016
- L Updated 6.5.1 to include sellers receiving inspection process in Counterfeit Parts detection program 7/21/2016