

# Appendix QX

## Supplier Quality Requirements

### REVISION RECORD

The latest issue to this document is the version that is available on the Lockheed Martin Aero website: <http://www.lockheedmartin.com/material-management>.

Revision	Date	Changes
Original Issue	03/28/2002	Completely revised / replaced QR to separate and clarify Program, Commodity, and General application of Quality Requirements based on Program application. This serves as a “pilot” version for other procurements. Adds Revision Record, Table of Contents, and Tables to enable supplier to identify the LM Program and understand which quality system and quality requirements apply based on his product (commodity) type.
Revision A	5/31/2002	Added definition of “Item or Items” in Document Overview paragraph; clarified First Article Inspection (FAI) requirements in paragraphs 2.3.1, 3.3, & 3.4; added the words “as applicable” to paragraph 2.3.6.1.8
Revision 2	8/11/2003	Changed revision scheme to numbers to align with LM AeroCode guidelines. Removed references to all other Programs to dedicate QX to F-35 JSF suppliers only. Added COTS to Table 2. Added Service Providers to Table 1. Added Test Items to Table 1 and incorporate self-deleting requirements for Test Items. Refined Deliverable Software requirements in Table 1. Enhanced FAI requirements in Para. 3.3 to include instructions for FAI in 3D Model Environment. Incorporated tooling quality requirements. Added Para. 3.5.4 prohibiting use of freeware, shareware, etc. without IPT approval. Aligned NCM control & QCS-001 sections with Appendix QR changes. Added F-35 JSF Critical Part categories to Para. 4.13. Added additional calibration references to Para. 4.19. Renumbered paragraphs and tables to align with changes. Updated web links to coincide with new websites.
Revision 3	2/13/2006	Removed references which limited the entire Appendix QX to F-35 (JSF) suppliers only – Appendix QX replaces Appendix QR in its entirety. Major re-alignment of paragraphs to enhance flow of quality requirements. Revised tables to include industry standards and program specific requirements. Added AS9100 requirement for F-35 (by 1 Jan 2010) and AS9120 for Distributors (by 1 Jan 2008). Added Service Centers to listing of “Commodity/Product” in Table 1. Re-worded and re-named section on “Selection, Control and Contract Flow Down to Quality Control Specification (QCS)-001 Sources” to flow requirements of Appendix QJ, where applicable.



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- \*\* Seller shall ensure its quality system is third party registered by an International Aerospace Quality Group / Americas Aerospace Quality Group approved registrar no later than January 1, 2011. Seller shall ensure its quality system is compliant with a currently maintained and published consensus industry standard quality system specification as appropriate to the Seller's activities.
- 1.1 **Quality System Changes & Relocation:** Seller shall notify Buyer, in writing, within 10 days of any (1) adverse change in its quality system status resulting in the loss of 3rd party registrar's

requirements of this PO. Seller shall provide Items under this PO that meet all applicable requirements. Seller shall annotate in the delivery package any exceptions, e.g. variances, Supplier Quality Assurance Report ("SQAR"), Advanced Engineering Authorization ("AEA"), etc. Seller shall include a copy of the CoC with Seller's product shipper.

**1.8 Records:** Seller shall maintain complete records of all manufacturing, process capability (if applicable), tooling controlled per TMS-MC-015, and inspection and test, including copy of CoC. Upon Buyer's request, Seller shall make records available to Buyer for at least three (3) years after completion of this PO and for longer periods as may be specified elsewhere in this PO. Upon Buyer's request, Seller shall forward specific records to Buyer at no additional cost, price, or fee to Buyer. Seller shall maintain records of all QCS-001 process control tests performed by Seller and inspection records of processed Items for at least seven (7) years after completion of this PO. Upon Buyer's request, Seller shall provide records of inspection tests of processed Items and process control tests to Buyer.

\*\* **1.9 Government/Industry Data Exchange Program ("GIDEP") Membership** – If Seller is eligible for GIDEP membership, Seller is required to be a member of GIDEP. If not currently a member, Seller shall obtain GIDEP membership no later than December 31, 2008.

**1.10 Notification:** Seller shall notify Buyer when Seller or Seller's sub-tiers are found to be non-compliant to Buyer specifications, Seller is disapproved by a Government agency, or GIDEP Alert is required or received affecting Buyer Items.

**1.11 Certified Materials:** Seller shall establish and maintain controls to prevent the use of non-certified materials when certified materials are required.

**1.12 Calibration:** Seller shall maintain a documented calibration system for the calibration and maintenance of tools, jigs, inspection and test equipment. Seller shall have and maintain a calibration system that is compliant to prevailing industry requirements in accordance with ISO 17025, ISO10012-1, ANSI Z540 or MIL-STD-45662.

**1.13 Tooling as a Media of Acceptance:** Seller shall utilize mandatory/required tooling provided by Buyer and designated as production type tooling to be utilized for Item manufacture as Seller's media of inspection and for Buyer source acceptance for those part features created by, or depicted by, such tooling, e.g., contours, hole locations, and profiles. Seller shall periodically validate Seller manufactured and/or owned tooling that is used as a media of acceptance to its control media.

**1.14 Buyer-Furnished, Seller-Manufactured or Seller-Owned Tooling:** Seller shall include in its documented quality system written procedures for the control, maintenance, and calibration of special tooling, jigs, inspection and test equipment, and other devices used in manufacturing processes.

**1.14.1 Buyer Furnished Tooling for Buyer or Seller-Design Items:** Seller shall comply with the requirements of Buyer's tooling manual (TMS-MC-015) concerning Buyer-furnished

**TABLE 1 – Quality System Requirements by Commodity**

Quality Management Systems	Fit Check	Software	FAI	FOD	Measurement Plan
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**2.1.1** – Seller shall provide, at no increase in price, cost or fee to Buyer, Buyer’s customers or regulatory agencies, suitable facilities at Seller and Seller’s subcontractors’ manufacturing locations for Buyer, Buyer’s customer and regulatory agency representatives to perform Item inspections, surveys or system surveillance.

**2.2** **Sampling:** Seller shall have the right to use sampling plans, provided the sampling plans are in accordance with existing industry, military or Government standards, or have been prior approved in writing by Buyer.

**2.3** **Control and Processing Nonconforming Material and Corrective Action:**

**2.3.1** - Seller shall implement and maintain a documented quality system that provides for identification, documentation, and disposition of nonconforming material. Seller shall ensure effective corrective action is taken (including repetitive nonconformances dispositioned “Use-As-Is” or “Repair” by Buyer’s or Seller’s Material Review Board [“MRB”] actions) to prevent, minimize, or eliminate nonconformances. Seller’s quality management system shall ensure that non-conforming material is not used for production purposes.

**2.3.2** -



