

Prototype Integration Facility
SUPPLIER QUALITY SYSTEM
REQUIREMENTS

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PIF Supplier Quality System Requirements

REVISIONS TO PIF Supplier Quality System Requirements

RELEASE DATE	DESCRIPTION	REVISION
02-28-07	Initial Release	----
02-26-08	Revised Para. 2.4 Process Controls to accommodate Changes in Tin/Lead composition of components.	A
06-09-08	Revised Para. 2.4, last paragraph to ensure First Articles are performed and that their inspection. Reports are delivered to the PIF along with their MTR's. Also to ensure F/A's are flowed down to Sub-tier suppliers.	B
07/10/08	Clarified that only material purchased for the use on Product for the PIF shall require Certificates of Conformance. (Paragraph 2.8) and Clarification that Workmanship in the referenced standards shall be to Class 3 unless otherwise defined in the TDP.	C
07/21/09	Revised Paragraph 2.3 to reference DA PAM 738-751(TAMMS-A) and the Serial Number Report Requirement (SNRR) requirements. Added second paragraph to 2.9 Addressing traceability of CSI records.	D
09/08/09	Removed paragraph 2.12 "Buy American" from document Since it is already included in Terms & conditions on all Purchase orders.	E
02/23/2011	Revised document to make Non-Contractor specific	F

FORWARD

The Aviation and Missile Research Development and Engineering Center (AMRDEC) Prototype Integrated Facility (PIF) is a Government Owned, Government Operated (GOGO) organization concentrated on meeting the needs of the U.S. Army Aviation and Missile Command (AMCOM), Department of Defense (DoD), and ultimately the war fighter. Customers buy solutions; therefore the GOGO PIF concept focuses on assembling and integrating the necessary Government and Industry expertise to render a true rapid response.

Though the PIF is a GOGO facility, it operates by contracting a great deal of its management, production, and purchasing operations to various industry partners. This unique relationship requires that Government and contractor personnel work together under the same Quality Management System and operating procedures. When "The PIF" is used as a standalone statement in this document its intent is to mean both Government and Contractor.

The elements contained in this document are those employed by the PIF team to achieve its basic quality goals, which are probably best described as fundamental to any form of management or quality system. This document shall serve as both a requirement and a general guide to the extent of quality control that the PIF team anticipates from suppliers.

The PIF team will assist the supplier in any reasonable manner to establish an understanding of and compliance with our purchase order requirements. The supplier must be particularly cautioned that no departure from any specification is permitted without an approved deviation request. Clarification of this or any other document affecting purchase order compliance may be obtained through the PIF's Purchasing Department.

It is not anticipated that these requirements will add costs to the supplier or the PIF. The concepts of having an effective Quality Management System in place should result in reducing costs by reducing waste and increasing efficiency.

1.0 GENERAL

1.1 Intent.

The intent of this document is best defined as GOOD BUSINESS MANAGEMENT PRACTICE. When viewed in this context, the requirements herein can be readily and economically satisfied by competent military suppliers and subcontractors.

1.2 Applicability.

When specified in the contract or purchase order, the requirements contained in this document must be adhered to by the supplier or the supplier shall, submit to PIF Quality team, a time phased implementation plan as to when they will meet these requirements. The plan shall be subject to the PIF Quality team and purchasing approval. In the event a supplier desires an exception to the requirements contained herein, a request delineating the exception must be submitted for PIF Approval prior to acceptance of a purchase order. If a conflict exists between the provisions of this document and those of the purchase order, the purchase order shall take precedence.

1.3 Supplier Qualification.

Qualified suppliers will be determined by capability surveys, product evaluation, and compliance of procured material with purchase order requirements, Quality System audit, and the promptness and effectiveness of

corrective action taken by the supplier. Continued qualification will be contingent upon continued quality of performance and the satisfactory results of periodic audits.

Supplier ratings, based on the aforementioned elements, will provide comparative measures for determination of procurement sources.

1.4 Surveys and Audits.

Supplier facilities and operations may be surveyed either before or after the placement of purchase order. The capabilities to meet requirements and to supply a product of consistent quality will be evaluated. Audits will be periodically conducted to determine compliance with our purchase requirements and the requirements of this document.

1.5 Source Inspection.

The purpose of Source Inspection is to assist the supplier in determining conformance with the contract and the specification requirements. Source Inspection neither guarantees final acceptance nor does it relieve the supplier of his responsibility to furnish an acceptable article.

When Source Inspection is specified by the purchase order, the supplier shall notify the PIF Quality team five (5) working days before the final inspection or testing of the contract end products in order that a PIF Quality Assurance representative may be present to witness the inspection/test. However, final acceptance of all material will be made at the PIF.

The Government reserves the right to inspect any or all of the materials included in this order at the vendor's facility. (FAR 52.256-2)

1.6 Deviations and Substitutions.

The supplier is required to comply with the requirements of the purchase order. No deviations and/or substitutions in material, design, specifications, or operating performance are permissible unless documented by a purchase order change or an approved deviation request.

2.0 Quality System Requirements.

There are 21 basic elements that a supplier of components & services used in military fabrication products are reasonably expected to have implemented and documented in its quality program.

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| 1. Management Responsibility | 2. Quality System |
| 3. Contract Review | 4. Design Control |
| 5. Document Control | 6. Purchasing |
| 7. Purchaser Supplied Product | 8. Product Identification & Traceability |
| 9. Process Control | 10. Inspection and Testing |
| 11. Inspection, Measuring and Test Equipment | 12. Inspection and Test Status |
| 13. Control of Nonconforming Product | 14. Corrective Action |
| 15. Handling, Storage, Packaging and Delivery | 16. Quality Records |
| 17. Internal Quality Audits | 18. Training |
| 19. Servicing | 20. Statistical Techniques |
| 21. Quality Improvement Program | |

The basic elements have been obtained from ISO-9001:2000 (ANSI/ASQC Q9001) standards. As a minimum the requirements of ISO-9001 shall apply to the supplier's quality system as applicable. AS9100 may be required if noted on the purchase order. It is therefore necessary for the supplier to be familiar with ISO-9001 / AS9100 requirements. In addition, the subsequent paragraphs provide enhancements that shall also apply.

2.1 Quality System

DISTRIBUTION STATEMENT F. Further distribution only as directed by the Prototype Integration Facility, 03/10/2011; or Higher DoD Authority.

The quality system shall be documented and shall be in a quality manual and traceable to documented subset procedures/work instructions.

All workmanship and engineering specifications shall be documented.

Each inspection or testing activity shall have documentation that describes detailed requirements such as parameters to be checked, statistical methods, sampling plan, nonconformance criteria, etc.

2.2 Design Control (When applicable).

A program shall be established and operational to ensure that all design changes are implemented in a smooth and timely manner and do not adversely affect quality or reliability.

A documented procedure shall exist to inform customers when a design change affects product features and performance.

The quality system shall ensure that drawings and specifications establish a thorough design definition.

For those suppliers developing drawings for the PIF, all drawings shall be in accordance with the design specifications and standards referenced in PIF Operating Procedure POP-730-01.

The quality system shall include a process that ensures products are initially tested and periodically retested to assess the product's ability to meet all design requirements.

2.3 Purchasing.

Vendors shall be subjected to requalification on a periodic basis. The requalification may be based on review of incoming inspection data or other analyses of performance.

The supplier is required to assure that their suppliers maintain an adequate inspection / Quality System to assure product conformance.

Acquisition/overhaul of new/replacement aviation parts will be IAW DA PAM 738-751 (TAMMS-A) and the Serial Number Report Requirement (SNRR), as applicable. Supplier must flow down all requirements, including the aforementioned on the purchase order, including key characteristics, to their sub-tier.

2.4 Process Control.

Inspection and testing results shall be recorded and analyzed using control charts or a similar technique as appropriate for the purpose of identifying problem areas and monitoring the effectiveness of the quality system. Each time any change is made in the established operation (for example, a new operator, new machine, new technique), a critical examination shall be made of the first unit(s) processed after the change is implemented. If noted in the purchase order JVYS Quality shall be notified of the change.

Workmanship Standards shall comply with IPC J-STD-001 Class 3, IPC/WHMA-A-620 Class 3, IPC-A-610 Class 3, and IPC-A-600, as applicable unless otherwise specified. Electrostatic Discharge protection shall comply with ANSI/ESD-20.20 as applicable.

Where welding processes are utilized the supplier shall adhere to the requirements of the American Welding Society. Where supplier generated Workmanship Standards are to be used the supplier shall submit, to the PIF Quality team, a copy for review.

All points to be welded shall meet the welding requirements defined in ANSI / AWS D1.1 and / or D14.3, D1.2, D1.3 and ANSI / AWS B1.11 as applicable.

Electronic Components being procured for use at the PIF are exempt from "Lead Free" directives being pursued by commercial entities, therefore, only components whose part finishes (Leads, Packaging, or Contents) with greater than 95% tin (Sn) and greater than 3% lead (Pb) shall be accepted. Solder shall include at least 30% lead (Pb), unless otherwise approved by the PIF Quality. "Tin-Lead" dipped leads shall conform to

all military solderability requirements. When components can only be procured from "Lead Free" sources the supplier shall obtain concurrence from JVYS purchasing in writing prior to shipping the product. The packaging must clearly identify the part as being "Lead Free".

Any changes to the supplier's materials and/or processes shall be reported to the PIF Quality team prior to use on any product. Unless otherwise specified, the supplier must notify PIF Quality of all non-conformances prior to delivery.

First Article Inspection shall be performed on all items. Upon completion of first articles the supplier shall notify the PIF Quality team a minimum of 72 hours in advance to allow opportunity to perform first article

inspection at the supplier's facility. First Article inspection reports shall be delivered to the PIF along with their material test reports. This requirement shall be flowed down to sub-tier suppliers.

2.5 Inspection, Measuring and Test Equipment.

The Quality Organization shall audit the records/equipment to ensure that no "out-of-date" equipment is being used during testing and inspections.

Tools, gauges, test equipment, etc., that are inactive or do not require calibration, shall be so identified.

All test equipment shall be validated to assure that they have the accuracy and resolution to measure the parameters being tested. The test equipment shall maintain repeatability within their allowable tolerances.

2.6 Control of Nonconforming Product.

Records shall be reviewed and analyzed for repetitive discrepancies and when noted they shall be brought to the attention of management for corrective action.

2.7 Corrective Action.

Completed corrective action reports shall be maintained in a recurrence file. Whenever it is suspected that a quality problem may be a recurrence of a similar problem on which corrective action has been completed, the recurrence file shall be examined.

2.8 Handling, Storage, Packaging and Delivery.

Areas used for handling, storage, packaging, inspection and test of products or services shall be clean, safe, and well organized to ensure that they do not adversely affect quality or personnel performance. Where applicable, the transporting of material shall be such as to avoid damage to the material and/or installed/completed equipment. Each container should have a consistent number of parts except the final container may have a quantity difference. Each container shall be identified with the part number, revision, and quantity.

All raw material, included plate, bar, extrusion, sheet, etc., of aluminum, steel, or other material, must be identified per the applicable specification. Identification Purchase Order Number is also required.

Where the possibility of spoilage exists, items in storage shall be date stamped/coded, etc., and used on a First-in First-out basis.

Static sensitive parts will be packed in a conductive frame or with leads inserted in conductive elastomer or foam to protect them against electrical charges. External labels shall identify the package on at least two sides as containing static sensitive devices.

Packaging, and marking, must allow for the administration of FIFO (First In - First Out) inventory control. It is preferred that all suppliers separate and identify lots containing multiple date codes. Product marking shall be in accordance with drawing requirements and MIL-STD-130. (Reference paragraph 5.3.1 through 5.3.4 of the standard.)

On all Critical and Limited Life Items the date of manufacture or shelf life must be supplied with each limited life item. Limited life items must have a minimum of 50% of their shelf life remaining when received by the PIF.

All deliveries to the PIF, purchased for use on product and delivery to the Government, shall be accompanied with a Certificate of Conformance signed by a member of the suppliers management staff authorized to assure conformity to the purchase order requirements. Raw material deliveries shall be accompanied by Material Test Reports (physical & chemical) providing evidence that the material used meets the requirements of the drawing.

Customer acceptance does not absolve the supplier from providing acceptable product nor shall preclude subsequent rejection by PIF Quality.

Materials are to be shipped in containers in keeping with good commercial practices to preclude any damage, or loss, being incurred during shipping and storage at PIF facilities. Materials in boxes shall be shipped in boxes rated for the weight contained. Materials received in broken boxes may be repackaged, by PIF - JVYS personnel, in appropriate containers and consideration expected of the supplier.

2.9 Quality Records.

Quality records shall be maintained and as a minimum include product identification; quantity of product inspected; inspection procedures followed; inspector, tester, quality representative; date of inspection, and number, type, and severity of defects found.

All records relating to Critical Safety Items (CSIs) shall be traceable to the date and place of production/M&O. Records shall provide the degree of traceability required to enable subsequent verification of all aspects of material, manufacture, special processes, personnel certification, variability control charts, assembly and inspection of Critical Characteristics (CCs).

Quality reports shall be prepared at regular intervals and summarize inspection and test results.

Quality records shall be tailored and distributed to specific audiences including upper management. The PIF may periodically request specific information regarding Quality Records.

When a quality deficiency is noted in the reports, specific actions are required from appropriate levels of management.

The quality system shall include the collection and analysis of field performance data.

2.10 Statistical Techniques.

The supplier shall include, as required, training in statistical techniques, process capability studies, statistical sampling, data collection and analysis, problem identification, problem analysis, and corrective action. When applicable, the Quality Organization shall follow-up to assure the effectiveness of the training.

2.11 Quality Improvement Program.

The supplier shall establish and maintain a Quality Improvement Program to improve the quality and reliability of the processes/product. The program shall be active and contain a prioritized list of scheduled quality issues being addressed.