

14153 QAP-CSI003774116
DTD 8 JULY 08

DEFENSE SUPPLY CENTER PHILADELPHIA
QUALITY ASSURANCE PROVISION

NSN: 5306-00-377-4116
P/N: 4001684

This Quality Assurance Provision (**QAP**) is to be used in conjunction with any orders/contracts for the cited NSN

FIRST ARTICLE REQUIREMENTS		1. DATE
<i>(AFMCI 64-110, AFMCI 23-102 AND FAR Part 9, Sub Part 9.3) (Additional instructions on page 3)</i>		5 Jan 07
2. PR/MIPR NUMBER	3. PART NUMBER 4001684	4. NSN 5325-00-377-4116
5. FIRST ARTICLE QUANTITY THE FIRST ARTICLE IS <u>3</u> UNIT(S) OF LOT/ITEM <u>1</u> AND WILL BE: <input type="checkbox"/> PART OF PRODUCTION QUANTITY <input checked="" type="checkbox"/> IN ADDITION TO PRODUCTION QUANTITY		
6. ARTICLES <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT SERVE AS MANUFACTURING STANDARD		7. LONG LEAD TIME ITEMS <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> NOT REQUIRED <i>(See FAR 52.209-3 or -4, alternate II)</i>
8. SPECIAL REQUIREMENT/PRODUCTION FACILITIES <i>(See FAR 52.209-3 or -4 Alternate II)</i> <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED "The First Article offered must be manufactured at the facilities in which that item is to be produced under contract, or if the First Article is a component not manufactured by the contractor, such component must be manufactured at the facilities in which the component is to be produced for the contract. A certification to this effect must accompany each First Article which is offered."		
9. TEST/INSPECTION REQUIREMENTS A. <input checked="" type="checkbox"/> CONTRACTOR TESTING <input type="checkbox"/> GOVERNMENT TESTING Performance or other characteristics which the First Articles must meet are <u>identified in drawing 4001684 and specifications identified therein.</u> B. The detailed technical requirements for First Article approval tests are contained in <u>Block 12 of this form and LPE-QAR-003.</u> <i>(Cite Spec and Para number)</i> C. <input checked="" type="checkbox"/> TEST PLAN REQUIRED (1) DD Form 1423 ELIN <u>A001</u> (2) Delivery due <u>30</u> calendar days from date of contract. (3) Number of days for government approval/disapproval <u>45</u> days. D. Contractor's notification to ACO and <u>PCO</u> <i>(Requesting Activity)</i> of test time and location due <u>10</u> days prior to start of testing. E. <input checked="" type="checkbox"/> TEST REPORT REQUIRED (1) DD Form 1423 ELIN <u>A002</u> (2) Due <u>175</u> calendar days from date of contract. (3) Forward to <u>PCO and 448 MSFC/COMDEP, 3001 Staff Dr., Suite 1AB85A, Tinker AFB, OK 73145-3041 Attn: FA Monitor</u> (4) Government written notice of approval/disapproval due <u>60</u> days after receipt of contractor's report.		F. FIRST ARTICLE DELIVERY: (1) Due within _____ calendar days from date of contract. (2) Notify _____ calendar days prior to shipment. (3) Delivered to government at _____ <i>(Set Forth Consignee and Address)</i> (4) Government written notice of approval/disapproval within _____ days after receipt of first article package. G. Estimated cost of government testing/inspection evaluation. \$ <u>800</u>
10. DISPOSITION OF FIRST ARTICLES <input checked="" type="checkbox"/> Approved First Articles will be forwarded to Air Force Supply. <input checked="" type="checkbox"/> <u>1</u> <i>(insert quantity)</i> First Articles will be expended in testing. Residual components of disapproved First Articles <input type="checkbox"/> will be returned to the contractor/ <input type="checkbox"/> will be retained by _____ pending disposition instructions from the contractor. <input type="checkbox"/> First Articles will be installed on aircraft/equipment to determine Proper fit/function. Approved article will remain on the aircraft/equipment and will not be forwarded to USAF Supply, but will be considered part of the contract quantity. <input type="checkbox"/> Disapproved First Articles will be returned to the contractor/ <input type="checkbox"/> will be retained by _____ pending disposition instructions from the contractor. <input type="checkbox"/> On purchase requests designated as direct shipments, the following disposition will apply. (NOTE: Always applicable on Foreign Military Sales (FMS)). a. Approved First Articles will be returned to the contractor for shipment with production item. b. Disposition of disapproved First Articles will remain the same as marked above. <input checked="" type="checkbox"/> Other Disposition: <u>See Block 12 of this Form.</u>		

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11. CONDITION(S) FOR WAIVER OF FIRST ARTICLE APPROVAL

- a. Offerors who have previously furnished production quantities of the same or similar article to the prime contractor for delivery to the X Government, X DoD, X Air Force.
- b. Offerors currently in production of the same or similar article for a _____ Government, _____ DoD, _____ Air Force contract and who have received First Article approval under the existing contract.
- c. Offerors who have previously furnished production quantities of the same or similar article to the X Government, X DoD, X Air Force, provided articles thus furnished, have exhibited satisfactory performance in service in the opinion of the Air Force.
- d. Provided not more than 36 months have elapsed since completion of the contract.
- e. First Article testing will not be waived.
- f. See Remarks in block 12 below.

NOTE TO BUYER: UNDER CONDITIONS A AND C ABOVE, THE COGNIZANT ENGINEERING ACTIVITY WILL DECIDE WHETHER OR NOT THE ITEM HAS EXHIBITED SATISFACTORY PERFORMANCE IN SERVICE AND PREPARE AND RETAIN SUPPORTING DOCUMENTATION TO FULLY JUSTIFY THE DECISION. The buyer must solicit dual prices *that is, both with and without requirement for first article approval* AND MUST FURNISH THE COGNIZANT ENGINEER ACTIVITY WITH THE FOLLOWING INFORMATION ON THE PREVIOUSLY SUPPLIED ARTICLE:

A. PROCURING OFFICE	B. CONTRACT NUMBER	C. DATE OF CONTRACT	D. SPECIFICATION NUMBER AND REVISION
_____	_____	_____	_____

12. REMARKS

9.B. First article test requirements shall be per LPF-QAR-003 and the following:

- a. All three first articles shall be inspected in accordance with the requirements of paragraphs 3.1, 3.2, 3.3, 3.4, and 3.5 of LPF-QAR-003.
- b. After completion of inspections per 9.B.a above, one article shall be destructively tested/evaluated in accordance with the requirements of paragraph 3.6 of LPF-QAR-003.

10. Disposition of first Articles:

- a. Approved first article(s) will be retained at the contractor's facility for reconditioning (if necessary) with final acceptance the same as for production items. If a first article is expended in testing, approval of first article will constitute acceptance.
- b. Disapproved first article(s) shall be retained at the contractor's facility, unless specified otherwise by the PCO.

11. The cognizant Government engineering authority shall be the final authority for determining if a contractor meets the conditions of waiver identified in 11.a or 11.c.

First article testing is waived if the offeror is the prime contractor, Pratt & Whitney.

This is a critical part used in the F100 series turbine engine. Poor quality parts will have an adverse effect on mission capability and system safety. For this reason, First Article Testing is required to insure first time manufacturers or manufacturers that have not produced the item within three years manufacture parts in accordance with the drawing and specification requirements.

13. COGNIZANT ENG ORGANIZATION RESPONSIBLE FOR CONDUCTING AND/OR APPROVING TEST (Name, Organization, Phone)	14. PR INITIATOR (Name, Organization, Phone)
Lt. Ben Schoenbauer, 540 CBSS/GBEAA, (405)734-8698	



U.S. AIR FORCE

**LPF-QAR- 003
LPFR QUALITY ASSURANCE
REQUIREMENTS
FOR**

FIRST ARTICLE TEST PLANS & REPORTS



1. This document provides guidelines for the preparation of first article test plans/test reports for F100 engine parts where referenced within the first article data of a contract.

2. **FIRST ARTICLE QUANTITY.** The quantity of first articles shall be per the contract. The quantity of articles allowed for destructive testing, in accordance with the contract, shall be tested per the first article procedure in its entirety, to include the destructive testing. The remaining articles shall only be tested per the nondestructive portions of the procedure.

3. **TESTING REQUIREMENTS.**

3.1. Testing shall consist of, but shall not be limited to, the verification of the following.

3.1.1. Dimensional conformance including finish requirements.

3.1.2. Conformance to non-destructive inspection requirements (FPI, Ultra-sonic, Eddy Current, X-ray, visual)

3.1.3. Conformance of material properties to include mechanical, metallurgical and chemical.

3.1.4. Conformance to other required processes, specifications, and standards listed on the drawing including sub-tier specifications and standards, special requirements as described in the engineering instructions (EI), quality plans, etc.

3.2. First articles shall be serialized. Serial Numbers are to be identified prior to commencement of testing unless otherwise specified.

3.3. **Dimensional Inspection.**

3.3.1. All dimensions, as listed on the assembly drawing and detail drawings, to include drawing notes, shall be measured where possible on all first articles 100% (no sampling allowed).

3.3.2. A tabular format shall be used with drawing dimension, tolerance, measurement, and instrument/gage/tooling/serial number used.

3.3.3. All tooling and gaging used for inspection and acceptance/rejection of first articles shall have calibrations from a laboratory traceable to NIST and in

accordance with ISO 10012-1 (formerly MIL-STD-45662), listed in a (tooling & gaging table) table, table shall include nomenclature, serial number, calibration frequency, next calibration date, range, least increment, and accuracy. Listing shall also include alignment tools and constraint fixtures.

3.3.4. Inspection results shall be presented in a table showing the feature measured, dimension and tolerance, actual reading and gage serial number used.

3.4. Nondestructive Inspections (NDI), including Fluorescent Penetrant Inspections (FPI), Ultrasonic Testing (UT), Eddy Current (EC), Radiographic Testing (x-ray), and visual inspections, shall comply with LPR-QPR-018 and meet the following:

3.4.1. All first articles shall receive 100% of the inspections identified on the QAD. Sampling shall not be allowed.

3.4.2. NDI shall be per the applicable specification(s).

3.4.3. Sources used shall be Pratt & Whitney approved per the OC-ALC/LPFR letter granting source approval to the contractor.

3.4.4. NDI results shall be presented in a table showing the feature inspected, acceptance/rejection criteria used, results and gage/master serial number used. In cases where photographic standards within a VIS specification are applied to an NDI, the inspection report shall include a copy.

3.4.5. Inspection Masters/Transfer Masters shall have current calibrations. A copy of the calibration(s) shall be included into the report.

3.4.6. Level III or Level II inspectors, as applicable, shall be required. A copy of the inspector's certification(s) shall be included into the report.

3.5. Visual Inspections shall include:

3.5.1. Specific visual inspections per a Pratt & Whitney Visual Inspection Standard (VIS) document shall be called out of the applicable VIS and cited as specific inspections.

3.5.2. Visual inspection results shall be presented in a table showing the feature inspected, acceptance/rejection criteria used, results, and gage/master serial number used (as applicable).

3.5.3. In cases where photographic standards within the VIS are used, the inspection report shall include a copy.

3.6. Material properties testing shall include mechanical properties, metallurgical properties, and chemical composition tests, as applicable, per the material specifications and the following:

3.6.1. Composition, heat treat condition, and other characteristics/properties, as listed in the technical requirements section, acceptance section, and/or quality sections of the specification(s) so as to verify that the materials and processes are sound, clean, and free of imperfections detrimental to the performance of the part or assemblies.

3.6.2. In some cases a material suppliers certification will not be sufficient and the Contractor shall have redundant testing performed.

3.6.3. Metallurgical microanalysis, as applicable, for raw materials, welds, brazings, and coatings shall be conducted. Results shall include the complete laboratory report including photomicrographs.

3.6.4. Mechanical testing, as applicable, per manufacturing specifications and the drawing(s).

3.6.5. In cases where the applicable specifications require test reports, these shall accompany the First Article Test Report (FATR).

4. SUBMITTAL.

4.1. The First Article Test Plan (FATP) shall be delivered to the Contracting Officer in accordance with the schedule as listed in the contract, or Form DD1423. The FATP shall provide a detailed description of specific testing instructions to be used. Generalized instructions will not be acceptable.

4.2. The First Article Test Report (FATR) shall be delivered to the Contracting Officer in accordance with the schedule as listed in the contract, or Form DD1423. All laboratory test results, including those resultant from testing conducted at the contractor's facility and including sub-vendor testing, shall be provided with the FATR in their complete form as provided by the testing laboratory(ies).

5. DISPOSITION OF PARTS.

5.1. When required by the contract, the remnants from destructive testing shall be delivered with the First Article Test Report.

5.2. When required by the contract and following the completion of non-destructive testing, one article shall be delivered to the Contracting Officer and packaged in accordance with contract requirements. Marking on the package shall be

UNSERVICEABLE - Condition Code "R". Deliver this part with the First Article Test Report. The other(s) shall be handled in accordance with the contract.

6. GENERAL REQUIREMENTS.

6.1. All First Articles and all Production Articles shall be fabricated from material whose metallurgical state is in compliance with the drawing requirements, as well as all sub-tier specifications and standards referenced therein.

6.2. All First Articles and all Production Articles shall be new manufactured under this contract. No items manufactured under previous contracts shall be delivered without approval.

6.3. The subcontractors previously identified by the contractor as sources to be employed, to include laboratory testing, shall be the only sources used. If the contractor wishes to employ a subcontractor other than previously identified, they shall substantiate that the new source is OEM approved for the specific testing required. A change in the address of a source shall be construed as a change of source. Employment of alternate sources shall only be authorized by OC-ALC/LPFR.

Engineering Instructions shall take precedence over all other technical instructions.



GRIZELDA LOY-KRAFT, Chief
F100 Engineering Source Approval
Fighter Propulsion Division
Propulsion Directorate