

MANDATORY QUALITY ASSURANCE PROVISIONS

P/N: (77272) 107R3588-4
NOMEN: SHOULDER,BOLT
NSN: 5306-00-780-9627

APPLICABLE CLAUSES:

Articles to be furnished hereunder shall be manufactured, tested and inspected in accordance with drawing number (77272) 107D3588, Revision "E" or latest revision and all details and specifications referenced therein.

I. Process/Operation Sheets Revision "E" or latest revision date shall be utilized in manufacture of the articles to be furnished hereunder.

II. Quality/Inspection Requirements

- A. MIL-I-45208 applies or ISO 9000 equivalent.
- B. MIL-Q-9858 applies or ISO 9000 equivalent.
- C. First Article testing applies. (Government Testing)
- D. Production Lot Testing applies. (Government Testing)
- E. Site Survey required.

III. Supplemental Requirements

- A. Additionally, paragraphs 3.1-3.5, 5.1-5.2, and 6.1-6.2 of MIL-Q-9858 apply or ISO 9000 equivalent applies.
- B. The contractor shall identify on the process/operation sheets, a tracking method that is traceable to the contract, all manufacturing sources performing processes/operations outside of their facilities. These sheets shall not be revised or altered after the successful completion of First Article or Production Lot Testing without approval from the ESA located at the Naval Air Depot, Cherry Point, North Carolina, via the PCO.
- C. The Inspection Method Sheets, which list the characteristics of each item produced under the contract shall have serial number traceability to the raw material, casting, or forging. The tracking method used on the inspection/method sheets shall be traceable to the contract. In addition, the contractor is responsible for providing completed inspection method sheets showing the actual dimensions taken of all critical characteristics.

MANDATORY QUALITY ASSURANCE PROVISIONS continued

D. The contractor shall provide all certificates of compliance for any material purchased or any processes performed by a sub-vendor, i.e. heat treat, NDI, plating, painting, etc. All material and/or process sub-vendors shall be OEM approved sources.

E. Markings should be I/A/W MIL-STD-130 latest revision, paragraphs 5.3.3(a), (b), (c) and (g). Method and location shall be I/A/W drawing.

IV. Mandatory Inspection Requirements

During production, mandatory inspection is required to be accomplished by the contractor as follows:

A. Level of Inspection (LOI).

1) Critical Characteristics: 100% inspection shall apply

2) Major and Minor Characteristics - LOI shall be I/A/W sampling plan acceptable to the QAR

B. Critical Characteristics **Boeing Drawing (77272) 107R3588:**

1) Note 3 – Shot peen per MIL-S-13165 & Vertol process Spec. MS 21.01, shot size-S70, Arc Height .008 to .012, A2, 200% coverage.

2) Note 5 –Magnetic Particle inspect per Boeing process Spec BAC-5424 class A non-critical.

3).6243 +.0000 Dia. After shotpeen
-.0005

4) 5/16-24UNF-3A Threads

5) Material Analysis: 17-4 PH CRES per AMS 5643 COND PCPT HDN

6) Heat Treat to 180,000-200,000 UTS

C. Major and Minor Characteristics

1) Shall be defined by the contractor subject to QAR concurrence, unless defined on applicable drawings and associated specifications.

FIRST ARTICLE TEST REQUIREMENTS (GOVERNMENT TESTING)

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I. First Article Inspection/Test Criteria:

The tests to be performed under the First Article approval clause of the contract are:

A. Compliance with **Boeing Drawing (77272) 107R3588, Revision "G" or latest revision** and all specifications referenced therein.

B. Identification: Verification and certification that the parts are serialized and identified per the requirements of **Boeing Drawing (77272) 107R3588, Revision "G" or latest revision** and all specifications referenced therein.

C. Packaging and Preservation: Verification that the parts have been packaged and preserved per the requirements of the contract.

D. Verification and certification of the overall workmanship of the First Article Sample(s).

E. Dimensional: 100% dimensional.

F. Non-Destructive Inspection: Verification and certification of Magnetic Particle Inspection per BAC 5424.

G. Fit/Form: Verification and certification of fit/form to the next higher assembly, H46 Lower Ring P/N (77272) 107R3599.

H. Material Analysis of the First Article Sample(s):

1) Destructive material analysis to verify material composition of 17-4 PH CRES per AMS 5643 Cond. PCPT HDN.

2) Verification of compliance with heat treatment to 180,000-200,000 UTS.

3) Verification of compliance with shotpeen per MIL-S-13165 & Vertol process Spec. MS 21.01.

I. Review of documentation as provided under DD 1423 requirements.

FIRST ARTICLE TESTS REQUIREMENTS (GOVERNMENT TESTING) continued

In addition to the above tests, the First Article(s) to be delivered hereunder shall also be subjected to those tests, which will demonstrate that the articles comply with contract requirements. The contractor shall be responsible for providing necessary parts and repair of the First Article(s) during testing.

II. Samples to be submitted for testing:

A. Quantity 2 each.

B. Estimated Cost: T.B.D.

III. Special Instructions:

A. Upon successful first article inspection all processes are to be frozen. Any changes to the manufacturing process will be cause for a new First Article Inspection.

B. One sample will be destroyed during testing and will not be returned to the contractor. One sample may be considered as production items under the contract provided the sample could be refurbished to ready for issue (RFI) condition and provided the sample has inspection approval of the cognizant QAR. Sample(s) may be shipped as production items only after all other units required under the contract have been produced and are ready for shipment.

C. Waiver of the destruction of the First Article test piece may be granted if the contractor provides a certified test coupon that is of the same material and has undergone the same special processes as the First Article test piece.

D. One sample is to be unpainted and all corrosive areas are to be coated with a light preservative on both samples.

Notification of Shipment of Material for Government Testing

A. Fourteen (14) days prior to shipment of the First Article Sample(s) the contractor shall notify the designated test facility, in writing of the anticipated shipping date, with an information copy to the PCO, ACO, and QAR. The contractor shall also arrange for preliminary inspection of test sample(s) by the CAO/QAR. The First Article Sample(s) shall be forwarded to the following First Article point of contact at the designated test facility:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
Bldg. 159, Door R-4
Cherry Point, NC 28533-0021**

FIRST ARTICLE TESTS REQUIREMENTS (GOVERNMENT TESTING) continued

B. Upon shipment of First Article Sample(s), two (2) copies of the Material Inspection and Receiving Report (DD Form 250), bearing the QAR's signature and indication of preliminary inspection, shall be forwarded to the PCO/ACO DSCR Code DSCR-VC, and the designated test facility. In addition, the contractor must supply all detailed process/operation sheets, Inspection Method Sheets, First Article Test Report (Signed by the QAR), and all Certificates of Compliance for material (including chemical analysis), **Magnetic Particle Inspection** and any out-sourced process conducted on the First Article Sample(s). These forms and documentation may either be placed in the shipping container with the sample(s) or sent separately, however the envelopes shall be clearly marked, "DO NOT OPEN IN MAILROOM." These forms and documentation shall be sent to the following point of contact:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
Bldg. 159, Door R-4
Cherry Point, NC 28533-0021**

Within 120 days after receipt of the sample(s) the test site shall complete testing/evaluation and submit a copy of their test report with conclusions and recommendations to DSCR-VC.

FIRST ARTICLE APPROVAL (GOVERNMENT TESTING)

NSN: 5306-00-780-9627

P/N: (77272) 107R3588-4

NOMENCLATURE: SHOULDER, BOLT

APPLICABLE CLAUSES:

A. The contractor shall deliver unit(s) of lot/item within 180 calendar days from the date of this contract to the activity listed below for the purpose of partial inspection/testing and preparation of test report per the requirements specified in MIL-HDBK-831 prior to forwarding sample(s) with report to the Government designated test facility listed below:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
PSC Box 8021
Cherry Point, NC 28533-0021**

B. The contractor shall deliver 2 unit(s) of lot/item within 180 calendar days from the date of this contract to the Government Marking of test sample(s) shipping container: "FOR FIRST ARTICLE TESTING. NOT RFI MATERIAL. DO NOT TAKE UP IN STOCK. CONTRACT NUMBER:For First Article Test, the shipping documentation shall contain this contract number and the lot/item identification. The characteristics that the First Article must meet the testing requirements are specified elsewhere in this contract.

C. Within 120 calendar days after the Government testing facility receives the First Article Sample(s), the QAR's signed Material Inspection and Receiving Report, DD Form 250 and all detailed Process/Operation Sheets, Inspection Method Sheets, First Article Test Report (Signed by the QAR), and all Certificates of Compliance for material (including chemical analysis), **Magnetic Particle** Inspection, any out-sourced process conducted on the First Article Sample(s) and all technical data used to manufacture the First Article Sample(s), the contracting officer shall notify the contractor, in writing, of the conditional approval, approval or disapproval of the First Article. The notice of conditional approval or approval shall not relieve the contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the contractor. A notice of disapproval shall cite reasons for the disapproval.

D. If the First Article is disapproved, the contractor, upon Government request, shall submit an additional First Article for testing. After each request, the contractor shall make any necessary changes, modification, or repairs to the First Article or select another First Article for testing. All costs related to these tests are to be borne by the contractor, including any and all costs for additional tests following disapproval. The contractor shall furnish any additional First Article to the Government under the terms and conditions and within the time specified by the

FIRST ARTICLE APPROVAL (GOVERNMENT TESTING) continued

Government. The Government shall act on this First Article within the time limit specified in paragraph B above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

E. If the contractor fails to deliver any First Article on time, or the contracting officer disapproves any First Article, the contractor shall be deemed to have failed to make delivery within the meaning of the default clause of this contract.

F. Unless otherwise provided in the contract, the contractor

1) May deliver the approved First Article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing and;

2) Shall remove and dispose of any First Article from the Government test facility at the contractor's expense.

G. If the Government does not act within the time specified in paragraph B or C above, the contracting officer shall, upon timely written request from the contractor, equitably adjust under the changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

H. The contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the, First Article during any First Article Test.

I. Before First Article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the contractor. Before First Article approval, the costs thereof shall not be allocable to this contract for

1) progress payments, or

2) termination settlements if the contract is terminated for the convenience of the Government.

J. The contractor shall produce both the First Article and the production quantity at the same facility and shall submit a certification to this effect with each First Article.

K. The contractor shall provide specific written notification to the procuring contracting officer informing him of the shipment of any; article(s) furnished in accordance with this clause. Such notification must be addressed to the attention of the ACO with copies to DSCP-VC and to the testing activity. Failure to provide such notification shall excuse the Government from any delay in performing First Article Testing and informing the contractor of the results thereof.

PRODUCTION LOT TESTING REQUIREMENTS (GOVERNMENT TESTING)

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NOMEN: SHOULDER, BOLT
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QUANTITY: 2

The material produced under contract shall be accepted by the cognizant CAO/QAR upon the successful completion of these requirements.

I. Production Lot Test Requirements

A. The cognizant CAO/QAR shall select the applicable number of items at random from the production lot per the ANSI/ASQC Z1-4 Sampling Procedures and Tables for Inspection by Attributes. In addition the QAR shall select the applicable number of items at random from each successive lot or portion thereof per the ANSI/ASQC Z1-4 Sampling Procedures and Tables for Inspection by Attributes.

B. Production Lot Testing to be completed during production after First Article Approval.

C. Sample(s) are to be unpainted. Corrosive areas to be coated with a light preservative.

D. If sample(s) are not destroyed during testing, they will be put into Defense Logistic Agency stock.

II. The tests to be performed under the Production Lot Sample testing provisions of the contract are:

A. Compliance with Boeing Drawing (77272) 107R3588, Revision "G" or latest revision and all details and specifications referenced therein.

B. Identification: Verification and certification that the parts are serialized and identified per the requirements of Boeing Drawing (77272) 107R3588, Revision "G" or latest revision and all details and specifications referenced therein.

C. Packaging and Preservation: Verification that the parts have been packaged and preserved per the requirements of the contract.

D. Visual: Verification and certification of the overall workmanship of the Production Lot Sample(s).

E. Dimensional: Verification and certification of 100% dimension check of finished Production Lot Sample(s).

F. Non-Destructive Inspection: Verification and certification of Magnetic Particle Inspection per BAC 5424.

PRODUCTION LOT TESTING REQUIREMENTS (GOVERNMENT TESTING)

G. Fit/Form/Function: Verification and certification of fit/form/function to the next higher assembly, H46 Lower Ring P/N (77272) 107R3599.

H. Material Analysis of the Production Lot Sample(s). NOTE: A destructive material analysis can be waived **ONLY** if a destructive material analysis was conducted by the Engineering Support Activity (ESA), AIR-4.3.4.1, Naval Air Depot, Cherry Point, NC during a successful First Article Inspection. However, all applicable material certificates of compliance will have to be provided for the production lot for verification of the material.

1) Destructive material analysis to verify material composition of 17-4 PH CRES per AMS 5643 Cond. PCPT HDN.

2) Verification of compliance with heat treatment to 180,000-200,000 UTS.

3) Verification of compliance with shotpeen per MIL-S-13165 & Vertol process Spec. MS 21.01.

I. Review of documentation as provided under DD 1423 requirements.

In addition to the above tests, the Product Lot Sample(s) to be delivered hereunder shall also be subjected to those tests that will demonstrate that the sample(s) comply with contract requirements.

III. Testing Location

A. The contractor is to ship sample(s) and all required documentation and technical data to:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
PSC Box 8021
Cherry Point, NC 28533-0021**

B. The shipping container marking: "FOR PRODUCTION LOT TESTING. NON RFI MATERIAL. DO NOT TAKE UP IN STOCK. CONTRACT NUMBER _____."

Within fifteen (15) days of completion of Production Lot Testing the CAO/QAR shall prepare and submit two (2) copies of their test report with conclusions and recommendations to the Contracting Officer.

PRODUCTION LOT TESTING REQUIREMENTS (GOVERNMENT TESTING) continued

Shipment and Distribution of Sample(s):

A. Fourteen (14) days prior to shipment of Production Lot Sample(s) the contractor shall notify the designated test facility, in writing of the anticipated shipping date, with an information copy to the PCO, ACO and the QAR. The contractor shall also arrange for preliminary inspection of test samples by the CAO/QAR.

B. Upon shipment of the Production Lot Sample(s), two (2) copies of the Material Inspection and Receiving Report (DD Form 250), bearing the QAR's signature and indication of preliminary inspection, shall be forwarded to the PCO/ACO DSCR (Code DSCR-VC), and the testing facility. In addition, the contractor shall provide all detailed Process/Operation Sheets, Inspection Method Sheets, First Article Test Report (Signed by the QAR), and all Certificates of Compliance for material (including chemical analysis), **Magnetic Particle** Inspection, any out-sourced process conducted on the Production Lot Sample(s) and all technical data used to manufacture the Production Lot Sample(s) to the testing facility. The envelopes shall be clearly marked, "DO NOT OPEN IN MAILROOM".

C. Production Lot Sample(s) may be considered as production items under the contract provided the sample(s) can be refurbished to Ready for Issue (RFI) condition and provided sample(s) have inspection approval from the cognizant DCMAO and the ESA engineer (H-46FST.3 (AIR-4.3.3)). Sample(s) may be shipped as production items **ONLY** after all other units required under contract have been produced and are ready for shipment.

D. Sample(s) will be returned to the contractor. The contractor must provide material disposition instructions to:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
PSC Box 8021
Cherry Point, NC 28533-0021**

E. The designated test facility and the contracting officer shall be notified as to all shipping data applicable to the sample(s), such as bill of lading number, method of shipment, etc. within fourteen (14) days prior to shipping.

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A. The Production Lot Samples shall be:

1. Selected at random by the cognizant government QAR. Such samples shall be submitted via the cognizant government inspector, and all transportation charges prepaid by the contractor to:

**Commanding Officer
Naval Air Depot
Attn: Code 3.3.2 (Mr. Steve Lundberg)
PSC Box 8021
Cherry Point, NC 28533-0021**

2. The samples shipping container and samples shall be identified by contract number, lot number and be clearly marked as follows:

**PRODUCTION LOT TEST SAMPLES
NON-RFI MATERIAL
DO NOT TAKE UP IN STOCK**

B. Such samples shall be delivered to the testing facility in sufficient time prior to the delivery date of the production articles to allow a 90 day period for testing and written notification by the contracting officer of the approval or disapproval of the samples. Within 120 days of the receipt of the samples, the testing facility shall notify the contracting officer, PCO/ACO of the results of the testing, together with the recommendation for approval or disapproval.

C. In the event the contractor does not receive written notification of approval or disapproval of the samples for a particular lot within 120 days from their submission for such testing, the contract delivery schedule shall be equitably adjusted as necessary.

D. If the contractor fails to deliver any Production Lot Samples for testing within the time or times specified, or if the contracting officer disapproves any Production Lot Samples, the contractor shall be deemed to have failed to make delivery within the meaning of the default clause of this contract, and this contract shall be subject to termination for default.

E. In order for a Production Lot to be acceptable, all samples representative of the lot must pass all the contract requirements. In the event a sample fails to pass such requirements, the lot will be rejected. In such event, the government may, at its option and at no additional cost to the government, (I) terminate all or any portion of this contract for default, (II) require the manufacture of a new Production Lot, or a rework of the rejected Production Lot if the means and procedures by the contractor for rework are acceptable to the government, or (III) require the

PRODUCTION LOT TESTING (GOVERNMENT TESTING) continued

submission of additional samples for test. The foregoing procedures shall apply to new or reworked Production Lots in the same way as they did to the original Production Lot.

F. For each additional sample or each resubmission of a modified sample which the contractor is required to submit for approval hereunder as a result of a failure of a previous sample to conform to the requirements of the specification, the contractor shall pay to the government the costs of reinspection, examination and retesting and the contractor and his sureties (if any) shall be liable for the amount of such costs.

G. The contractor must provide material disposition instructions to the First Article Coordinator at the Naval Air Depot, Cherry Point, NC (Mr. Steve Lundberg, Code 3.3.2) for the return of the production lot samples.

H. Nothing contained in the foregoing provisions of this clause, and not action of the government in accordance herewith, shall in any way prejudice the right of the government under this clause of this contract entitled default.

