

Summary of Changes

095870 Supplier Quality Assurance Manual (SQAM)

This serves as notification that our BAE Systems Supplier Quality Assurance Manual (SQAM) has been updated. Please see the following changes/additions/deletions:

Legend:

- Addition
- Change
- Deletion

Deleted pp 9.4 Age Sensitive Materials and added pp 9.4 Supplier Qualification / First Article Testing:

9.4 Age Sensitive Materials

For elastomeric products (such as natural and synthetic rubbers), potting compounds, shrinkable tubing, epoxies, adhesives, sealants, paints, and other like product which have a manufacturer-specified shelf life, the following requirements apply:

- Permanently mark the product (or packaging if marking the product would damage it), in a manner that is not detrimental to its form, fit, or function, with the date of expiration or “best if used by” date and lot traceability information (i.e. lot number, date of manufacture, batch number, etc.) The method of marking is optional unless otherwise specified
- The product must be received by BAE Systems with a minimum of 50 % of its shelf life remaining or as directed by contract.
- For kits containing age-sensitive materials, the outside of the kit’s container shall be marked with the “Earliest Expiration Date” and the earliest expiration date of the materials contained in the kit (ex. Earliest Expiration Date 04/2015)

Assemblies containing age sensitive materials, where those materials are fully consumed, shall not be subject to age control marking unless otherwise specified

9.4 Supplier Qualification / First Article Testing

Many components or assemblies may require the application of either or both Qualification Testing or First Article Testing prior to delivery. Examples include but are not limited to Electronic Line Replaceable Units (LRUs), Motors, Hydraulic Pumps, Control Assemblies, Seals, Filters, Actuators etc. This testing is described in Technical Data Package (TDP) within Drawing Notes, Performance Specifications and /or Quality Assurance Provisions (QAPs). These tests are performed to validate either the design of product capability to meet design specifications or production process capability to meet design specifications.

Typical reasons components governed by these requirements must be tested include:

- First time ever manufactured by supplier (Includes non-approved source attempting to provide source controlled parts)
- Change in design, configuration, component or sub component parts whether directed by BAE Systems/PM-AFV or supplier since initial test
- Significant change in manufacturing process (manufacturing line is moved, introduction of a new manufacturing technique, etc.) since initial test
- Change in manufacturing facility location since initial test
- Lapse in production of component greater than 24 months

These are significant tests that may require BAE Systems and or Government witness. Supplier shall submit plans which include all testing to be performed and associated dates in advance of initiating any testing within 30 days of PO issuance. Supplier shall submit Final Test Report to BAE Systems and obtain approval of same prior to shipping any representative product.

The supplier shall, upon receipt of any request for quote (RFQ), review all associated TDP to determine if component has any Qualification and or First Article Testing required within the TDP. Upon determination that components do have Qualification and or First Article Testing required the supplier shall determine if testing is actually required due to any of the conditions noted above.

The supplier shall prominently annotate in the response to RFQ the following:

- Whether the component being quoted does or does not have any Qualification and/or First Article Testing required within the TDP
- If component does have Qualification and or First Article Testing required within the TDP do any of the conditions listed above exist that would drive testing and if so annotate which condition applies and final date of last production run for component
- If testing is required provide ROM Pricing for execution of testing required

Added definitions for applicable CAS Business Units to pp 2.0:

2.0 Introduction

This manual is applicable to all PO, Contracts, Subcontracts/Statements of Work (SOW), and IWO in which it is referenced; these documents shall be collectively referred to as "Purchasing Agreements" in this manual. The applicable revision of this manual shall be identified in the body of the Purchasing Agreement. This manual defines the expectations and requirements with which suppliers and their sub-tier suppliers **must** comply when providing material and/or services under this purchasing agreement. **Acceptance of any Purchasing Agreement which references this manual constitutes acceptance of all requirements contained herein.** Some sections of this manual may only apply to specific commodities or situations and will be identified as such.

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All communications relative to the requirements of this purchasing agreement, its associated technical data package, or this manual shall be directed to the appropriate BAE Systems APR.

As used in this manual, the terms "Supplier", "Seller", "Vendor", and "Subcontractor" shall have the same meaning and may be used interchangeably.

Combat Vehicles is defined as York, Elgin, Sterling Heights, San Jose, Aiken, Phoenix and Anniston

Weapon Systems is defined as Minneapolis, Louisville and Aberdeen.

Changed pp 6.1 third party to sub tier supplier:

6.1 Sub-tier Management

The Supplier assumes all responsibility for the end-item deliverables and any associated documentation. In the event that a **sub-tier supplier** is used in the execution of this purchasing agreement, the Supplier is responsible to:

- manage that sub-tier supplier
- ensure that, where required by paragraph 7.1 and its subparagraphs, that only **suppliers approved by BAE Systems Platforms and Services or by an accredited third party, such as NADCAP**, are used for special processes
- flow down the requirements of this manual and all relevant/directed purchasing agreement requirements
- provide sub-tier documentation upon request by BAE Systems
- ensure timely response from the sub-tier supplier if corrective action becomes necessary

At no time will BAE Systems actively engage a sub-tier supplier without first notifying the Supplier.

Pp 7.2 - rewrote the paragraph on Part Identification Marking:

7.2 Part Identification Marking

A. **Combat Vehicles**

The supplier shall ensure that items are legibly marked in accordance with the **order of precedence as listed in section 4.0**. If this identification is no longer visible after all finishing processes have been completed that info must be reapplied with the identification method to be determined by the supplier. Objective evidence must be made available upon request to support the original marking methods used. All parts must be marked with the part number listed on the P/O line item, and the Suppliers cage code, Site #, or Logo. The identification process cannot affect form, fit or function of the part.

For parts with a marking surface area less than 1.5" by .38" or radial surface with a diameter less than .25" and a 1.5" long marking surface, it is permissible to bag and tag each item unless directed by the drawing and / or specification to bag, and tag the lot. Items bag and tagged as a lot shall not exceed a package weight of 10 pounds, max quantity of 50 pieces, or a package size of 12" by 12", and packaging must be labeled with the part number listed on the P/O line item, and the Suppliers cage code, site #, or Logo.

- Age control applicable items must still be individually marked.

B. Weapons Systems

The Supplier shall ensure that Items are legibly marked in accordance with drawing requirements and the requirements of the Purchasing Agreement. If identification is not legible after all finished processes have been completed, the supplier must submit a VIR form requesting directions from BAE Systems Identification is required for any part that does not have an identification requirement referenced on either the drawing/specification; The identification method is to be a printed label and Bag, Tag or Box. The information contained on the label for the Bag, Tag or Box shall contain the following information: Part Number, Part name, Quantity, Purchase Order #, rev Level, and Supplier's Cage Code.

Pp 8.3 added First Article Test "Inspection", reformatted for clarity and removed extra CV sites from the list. Added bullets for Inspection Report and Balloon drawing

8.3 Inspection

The Supplier will inspect the first piece manufactured for this Purchasing Agreement to all drawing characteristics, drawing notes and Purchasing Agreement requirements and will maintain on file a report which includes the following elements (Note: If product under this purchasing agreement has been in continuous production and has not been changed since the last order, an additional first piece requirement is not required. Continuous production is defined as no break in production or process in excess of twenty-four (24) months, unless otherwise directed):

- Supplier's name and the manufacturing address
- Purchasing agreement number and line number
- Item number, description, and revision as they appear on the purchasing agreement
- Lot quantity
- Certificate of compliance for the delivered item (as defined by paragraph 8.5)
- Material certificates/ballistic firing records (where applicable)
- Special process certifications (where applicable)
- **Inspection Report**
- **Balloon Drawing**
- First Article Test/**Inspection reports** (where applicable)
- Production test reports (where applicable)
- Date of last control test and next control test, and, if a control test was performed on the current lot, a copy of the control test report (where applicable)
- Verification of all drawing notes, dimensions, and associated QAP/QAR/SQAP/Specification requirements, with the requirement and measured values recorded. **Variable data shall be recorded with actual values measured for each sample.** The supplier shall provide traceability from the measured value to the drawing characteristic (Ex. ballooned drawing (all characteristics, including drawing notes, numbered)
- For assemblies, verification of all component-level (those components identified on the top level drawing or are identified in the BOM listed on the top level drawing) drawing notes, dimensions, and

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associated QAP/QAR/SQAP/Specification requirements, with the requirement and measured values recorded. **Variable data shall be recorded with actual values measured for each sample**

- Inspector's name, signature, and date (electronic or digital signatures are acceptable)

The First Piece/First Article Inspection report will be submitted to BAE Systems as required by the Purchasing Agreement. BAE Systems reserves the right to request additional copies of First Piece/First Article and In-process inspection records at any time. Requests for records shall be fulfilled within five (5) business days.

Following the First Piece/First Article Inspection, the Supplier shall have a process in place which assures that all supplied product is compliant to all Purchasing Agreement requirements. This process shall consist of a C=0 sampling plan, SPC, or any other method which assures that the final shipped product is compliant. If required by contract the supplier may be required to submit a plan to BAE Systems for approval. Record of the plan approval shall be kept on file with the first piece acceptance documentation. If the first piece fails to meet the functional, dimensional or TDP requirements, a new first pc must be generated, tested and measured. Likewise, if the manufacturing process or design of the part changes, new parts must be obtained that represents this new process/design and a delta First Piece/First Article inspection is permissible with prior approval.

Inspection requirements for certain special processes, testing, and fasteners:

- Visual weld inspection shall be 100% or per applicable specification requirements
- Verification/validation of finishing processes shall be performed on each manufacturing lot unless a higher frequency is required by the relevant specification
- Non-Destructive Evaluation (NDE) / Non-Destructive Testing (NDT) as required by specification/contract.
- Frequency-based testing such as sample/quantity or sample/time period shall be followed.
- Documented/specified fastener quality assurance requirements shall be followed.

Parts for which the design is proprietary to the Supplier, or their sub-tier supplier, and which are ordered to the Supplier/Sub-tier Supplier's part number shall only require a certificate of conformance from the manufacturer.

The Supplier shall maintain records documenting product compliance to all applicable purchasing agreements, drawings, specifications, and standards for a period of seven (7) years after order completion. At the end of this period, if the Supplier desires to dispose/destroy the records, the Supplier shall contact BAE Systems and request disposition instructions, which may include authorization to destroy the records or instructions to forward the records to a BAE Systems facility.