

Q2A – First Article Inspection (FAI) – AS9102

* Revised

** Added

MAJOR RE-WRITE

NOTE: A hard copy of this document may not be the document currently in effect. The current version is always the version on the Lockheed Martin network.

The terms “Item” (plural “Items”), “PO”, “Buyer”, and “Seller” used herein shall have the same meaning as the terms “Work”, “Contract”, “LOCKHEED MARTIN”, and “SELLER”, respectively, as may be defined in another provision of the Purchase Order of which this Quality Clause Q2A is a part (“this PO”).

SCOPE:

First Article Inspection is defined as a verification of two key elements:

- Conformance to all engineering requirements
- Demonstration of stable, repeatable processes

GENERAL REQUIREMENTS:

- A. Seller shall establish and maintain internal processes for the accomplishment of each First Article Inspection (“FAI”) in accordance with AS9102 and Q2A. FAIs are performed to ensure delivered Items are in compliance with the requirements of this PO. Seller may obtain copies of AS9102 from the Society of Automotive Engineers at: www.sae.org. Forms can be obtained at: <http://www.sae.org/aagg/publications/AS9102-faq.htm>. References to AS9102 in this document refer to the revision in effect at the time of this PO or Seller may work to a more current version of AS9102, if desired, at no additional cost, price or fee of this PO.
- B. Buyer reserves the right to require Seller to perform an FAI, at Buyer’s request, at no additional cost, price or fee of this PO.
- C. Seller shall document completion of the FAI in the English language.
- D. For “Buyer-Designed Items”, Sellers procuring or manufacturing Items requiring AS9102 compliance shall contact Buyer’s assigned Supplier Quality Engineer a minimum of 5 days prior to Seller procuring Items or beginning any manufacturing activity for this PO. Buyer’s assigned Supplier Quality Engineer may elect to review or participate in Seller’s FAI process at any time throughout the FAI process based on the complexity/criticality of the Item and Seller’s performance to Buyer’s requirements.
- E. Distributors that procure Buyer-designed Items shall ensure that the manufacturer has performed FAI and that documentation is available upon request.

- F. For "Seller-Designed" Items associated with Buyer-released engineering definition (i.e. Buyer Source Control Drawing, Buyer Specification Control Drawing, Seller Interface Control Drawing), Seller, at a minimum, shall meet Buyer's FAI requirements. Seller shall document the results in the FAI report. Buyer shall have the right to request additional verification of the FAI process as may be required by Buyer's Program or other quality requirements. Seller shall contact Buyer's assigned Supplier Quality Engineer a minimum of 5 days prior to Seller procuring Items or beginning any manufacturing activity for this PO. Buyer's assigned Supplier Quality Engineer shall participate in the FAI process at any time from inception until the FAI is complete. The degree of Buyer's Supplier Quality Engineer participation will be dependent on the complexity/criticality of the Item and Seller's performance to Buyer's requirements.
- G. If and when Seller incorporates any engineering change (including software/firmware) that has the potential to affect form, fit, function, safety, or reliability, Seller, without further direction from Buyer, shall perform partial or full FAI as required by AS9102. Seller shall perform partial or full FAI, at no increase in the cost, price or fee of this PO, to ensure that the changes have had no adverse effect on Items delivered under this PO. This partial or full FAI requirement also includes changes to non-deliverable software and revisions in programming used in numerical controlled machines, test stations, coordinated measuring equipment, etc.

NOTE: Paragraph G augments the requirements of AS9102

Seller shall adhere to the requirements of Paragraph G and AS9102 which requires the performance of a full or partial FAI when any of the following events occur:

1. A change in design affecting fit, form, or function of the part.
 2. A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling or materials, that can potentially affect fit, form or function.
 3. A change in numerical control program or translation to another media that can potentially affect fit, form or function.
 4. A natural or man-made event, which may adversely affect the manufacturing process.
 5. A lapse in production for two years or as specified by the Customer (reference Para. B).
- H. Seller shall notify Buyer's assigned Supplier Quality Engineer a minimum of 5 days prior to creating or starting any changes identified in paragraph G above or AS9102 that affect Items delivered under this PO. Seller shall submit documentation of complete or partial FAIs accomplished as a result of such changes to Buyer's assigned Supplier Quality Engineer.
- I. The following Items shall not require FAI, unless otherwise directed by Buyer:
1. Standard hardware and electronic piece parts (AN, MS standard hardware, etc.),
 2. Items procured under this PO to Seller's part number,
 3. Commercial Off-the-Shelf ("COTS") Items,

4. Metallic (plate, bar, rod, etc.) and non-metallic (paints, sealants, adhesives, etc.) raw materials,
 5. Engineering models, design/concept prototypes, etc...
 6. Items that have been manufactured and delivered to the U.S. Government where Seller has objective evidence of either:
 - a. a FAI performed, within the past two (2) years from date of this PO, for the U.S. Government to the same configuration as required by this PO, or
 - b. documented U.S. Government acceptance, within the past two (2) years from date of this PO, to the same configuration as required by this PO,
 7. Items that have been returned by Buyer for repair, or
 8. Items procured to Buyer's part number where Buyer has not developed drawings and/or specifications controlling the Item's physical and functional requirements.
- J. Seller shall ensure discrepancies and non-conformances, if any, discovered during the FAI are documented and dispositioned by the appropriate Material Review Board ("MRB") actions, (i.e., Seller's MRB for Seller design and Buyer's MRB for Buyer design).
- K. Seller shall comply with the forms usage and completion requirements stated in AS9102. Seller shall complete all fields, but may mark a field as not applicable by indicating "N/A", if appropriate.
- L. Seller shall present FAI documentation records for validation to Buyer's assigned Supplier Quality Engineer, if requested by such Supplier Quality Engineer, for subsequent lots.
- M. Seller shall maintain documentation of FAI results on each deliverable end Item for the period specified by this PO. Seller shall provide to Buyer, within 48 hours of a request by Buyer, a complete copy of FAI reports at no increase in the cost, price, or fee of this PO.
- N. Seller may use Quality Clause Q2A Revision 7 to meet FAI requirements in any other PO with prior versions of Quality Clause Q2A imposed between Buyer, acting for and through Lockheed Martin Aeronautics Company, and Seller, provided that Seller does so at no increase in price, cost or fee of this PO.
- O. Seller shall comply with AS9102 for all Items where Seller completed the initial FAI to the requirements of Quality Clause Q2A.

DETAILED REQUIREMENTS:

FAI Entrance Criteria

- Buyer-designed items: FAI documentation requirements begin once development is complete and production begins with released, baseline engineering. Exceptions or deferrals will be per Buyer direction.

- Seller-designed items: FAI requirements begin once development, Safety of Flight, and Qualification are complete, Buyer's Supplier Quality Engineer has been notified, no variances exist for the purchased part and production begins with released, baseline engineering and approved Acceptance Test Procedure(s) ("ATP"). Exceptions or deferrals will be per Buyer direction.

FAI Exit Criteria

- Buyer-designed items: FAI will be declared complete upon:
 - Collection of adequate, representative first pass data to prove internal rework defect counts of:
 - Less than 5 per part for parts greater than \$5,000 on this PO for a minimum of (6) consecutive parts; or,
 - Less than 2 per part for parts less than \$5,000 on this PO for a minimum of (6) consecutive parts
 - Initiation of no more than two (2) SQAR documents requiring MRB action for the minimum (6) consecutive parts
 - Completed FAI documentation (AS9102 form or equivalent)
 - Documented evidence of adherence to PM-5010 "Supplier/Seller Shipping Instructions" and PM-801 "Seller Packaging, Handling, Storage and Transportability Instructions for Direct Shipment of Items to the U.S. Government via Wide Area Work Flow"(when applicable).

Note: Exceptions or deferrals will be per Buyer direction.

- Seller-designed items: FAI will be declared complete upon:
 - Validation of each element of the applicable time-bound FAI package (to include process controls for key parameters) with supporting objective evidence
 - Successful completion of first-pass final ATPs for item / system on (3) consecutive production units.
 - Completed sub-tier FAI documentation, as applicable
 - Validation of sub-tier assembly/detail FAI(s) with supporting objective evidence
 - Completed FAI documentation (AS9102 form or equivalent)
 - Documented evidence of adherence to PM-5010 "Supplier/Seller Shipping Instructions" and PM-801 "Seller Packaging, Handling, Storage and Transportability Instructions for Direct Shipment of Items to the U.S. Government via Wide Area Work Flow" (when applicable).

Note: Exceptions or deferrals will be per Buyer direction.