



# Customer Specific FAI Requirements

FAI\_APP-001 Rev. J 04/06/2018

**This document is to be used in conjunction with FAI\_STD-001  
and the LMI Supplier Quality Requirements Manual (SQRM)**

# FAI Appendix to FAI\_STD-001

## ◇ **Aviation Partners Boeing** (*APBP140-1, Q18, Rev. 02/15/2016*)

- Per AS9102 & LMI FAI\_STD-001
  - Form 2, Column 7: Enter Process Code, as listed on Boeing's D1-4426; if none, put "N/A".
  - Form 2, Column 8: MUST include Supplier Code, as noted on Boeing's D1-4426 APL, for Special Processes.

## ◇ **AIRBUS**

- Per AS9102 & LMI FAI\_STD-001
  - The FAIR shall include (In Comments; Column 13, Form 2) the actual weight and the last issue of the part, which can be located in the Part List of the drawing.

## ◇ **Bell Helicopter Products & Programs** (*SQRM-001 Rev. E, 10/31/2017; Bell Supplier FAI Guidelines for AS9102 Rev A, 03/22/2018*)

- Per AS9102 & LMI FAI\_STD-001
  - Technical Data Package (TDP) revision is required on Form 1 (when applicable) ; location is optional.
  - Date of Manufacture is required on Form 1; location is optional - inclusion in Box 9, with the Manufacturing Work Order number, is recommended.
  - Form 2, Column 8: Enter Special Process Supplier Code, along with full name and full address.
  - Provide Bell SMDAR Number, if applicable, on Form 3, Column 11.
  - If a Lapse in shipment of 2 or more years to Bell, provide a copy of the most recent FAI with parts.
  - When an FAI provided to Bell is "not Complete" (Marked in Field 19, Form1) due to disposition of nonconforming characteristics or authorized deferment of an attribute being documented on the FAI, a Partial FAI reflecting subsequent compliance of these characteristics shall be submitted to Bell with compliant product *no later than the item's second shipment to Bell unless authorized in writing by Bell Quality.*
  - Supplier shall uniquely identify each specified characteristic annotated within the digital data media (DDM) on a standard balloon drawing created by the supplier for the DDM.
  - The completed First Article Inspection Report for the purchased BHT Part Number shall accompany the FAI Unit. The container is to be identified "FIRST ARTICLE ENCLOSED" and the shipping document annotated accordingly. If the FAI Part is included within a shipment of other like parts, a tag or suitable method of identifying the FAI item is required.
  - Suppliers are required to maintain on file the applicable FAI reports for any product actively being provided to BHT.
  - Supplier FAI Report and associated certifications/documents shall be uploaded to the Enovia FAI application in the Sell2Bell portal per the requirements noted below or as required by purchase order.

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## ◇ **Boeing Products & Programs** (*SB15-045, Rev. B, 03/05/2015*)

- Per AS9102 & LMI FAI\_STD-001
  - Form 2, Column 7: Enter Process Code, as listed on Boeing's D1-4426; if none, put "N/A".
  - Form 2, Column 8: MUST include the Supplier Code, as noted on Boeing's D1-4426 APL, for Special Processes.

## ◇ **Bombardier** (*QD4.6-40, Section 7.5.1, Rev. 8, 10/2017, Amendment 0*)

- Per AS9102 & LMI FAI\_STD-001
  - Kits also require a FAIR – consisting of:
    - A list of all detail parts and / or sub-assembly part numbers.
    - A FAIR, in accordance with AS9102, for each detail part and/or sub assembly part number and the required quantity.
    - All hardware part numbers including the lot number and the required quantity.
  - **Note:** *For the Airbus program:* The FAIR shall include (In Comments; Column 13, Form 2) the actual weight and the last issue of the part, which can be located in the Part List of the drawing.

## ◇ **Embraer** (*EQRS-Rev J, dated 12/2016, Section OPR 7.511.09*)

- Per AS9102 & LMI FAI\_STD-001
  - Supplier shall plan, conduct, and record Last Article Inspection (LAI) and First Article Inspection (FAI) according to AS9102

## ◇ **GKN** (*Supplier Quality Manual, Rev B, Dated 04/04/2017; Procurement Clause 16*)

- Per AS9102 & LMI FAI\_STD-001
  - Packages with FAI's must be clearly marked stating "FAI Enclosed" visible on the outside of the package. All paperwork must be placed inside an envelope within the shipping container clearly identified stating "FAI Documentation Enclosed".
  - When requested by GKN the supplier must send the appropriate tooling.
  - When a drawing, model, tool, mylar (etc.) is needed to make the FAI and the supplier has it in their possession, the supplier must send the appropriate material with the First Article part, detail, subassembly (etc.). After GKN has accepted the FAI, the material will be promptly returned if requested.
  - FAI reports shall identify ALL notes and characteristics as identified on the blue print and customer supplied documentation. Each line item shall have the blue print zone, method of inspection, equipment used and actual results recorded. Certifications shall be provided identifying all materials, processes performed and specification used (specification must meet customer requirements) and results. All process certs must have an original signature on the copy of the certification acknowledging that the process is accepted as correct for the particular FAI parts submitted. An accompanying copy of the report must be attached to packing bill. Inspection shall be at the Supplier's House as

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## ◇ **GKN** (continued)

designated by GKN Supplier Quality. Supplier shall notify GKN supplier quality no less than two weeks in advance of FAI completion so that GKN supplier quality may determine the need for source inspection at the supplier site.

- Counterfeits Parts Prevention and Control: As part of the FAI review and approval, the verification and validation of all raw material and associated details shall be conducted and authenticated in a manner that would prevent the introduction of counterfeit material or product. If any product is found to be suspect it shall be brought to the attention of GKN procurement with a detailed explanation of any suspect product shipped, inventory in-house or in process. Suppliers shall flow this requirement down to their sub-tier suppliers.

## ◇ **gogo Air** (*Supplier Quality Requirements D14521, Rev. M 09/28/2017*)

### ○ Per AS9102 & LMI FAI\_STD-001

- The First Article Inspection along with applicable material or test data/certifications (e.g. painting, plating, composition, x-ray, functional testing, etc.) shall be submitted electronically to [AviationQuality@gogoair.com](mailto:AviationQuality@gogoair.com)
- The supplier shall forward the partial (delta) First Article Inspection along with applicable material or test data/certifications (e.g. painting, plating, composition, x-ray, functional testing, etc.) with the lot of parts and to [AviationQuality@gogoair.com](mailto:AviationQuality@gogoair.com) for review and approval.

## ◇ **Gulfstream** (*AS9100 Quality System SQAR-9100, Section 6.1, Rev A, Dated 08/19/2005*)

### ○ Per AS9102 & LMI FAI\_STD-001

- Form 2, Column 7; Finish and Process Codes per Part List
- Form 2, Column 8: MUST include the Supplier Code, as noted on GAC's APL, for Special Processes.
- When requested by the customer, the First Article(s) may be performed on prototype articles to determine conformance status to available data.

## ◇ **Honda Jet** (*HACI P 10-1, Section 5.2.3, Rev A, Date 10/19/2015*)

### ○ Per AS9102 & LMI FAI\_STD-001

## ◇ **Israeli Aircraft Products & Programs** (*CAG 9000, Rev 13, Section 15.2/8.5.1 and Appendix B, 10/2017*)

### ○ Per AS9102 & LMI FAI\_STD-001

- The First Article process shall be repeated for a lapse in production of over 2 years.
- Mark the item "First Article" or "FAI" with rubber stamp next to the part number identification.
- Attach a serviceable tag or CoC to the article, with statement "First Article" and the "first Article" report number.
- The First Article Inspection report shall accompany the shipment of First Article items delivered to IAI-CAG. An additional copy shall be stored with the manufacturing documentation.
- Upon IAI-CAG request, the supplier shall scan the FAI reports and forward the data to IA in digital media.

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## ◇ Lockheed (Quality Clause Q2A, Rev 14, 12/14/2017)

### o Per AS9102 & LMI FAI\_STD-001

- In the case of a conflict between AS9102 and Quality Clause Q2A, the Quality Clause takes precedence.
- Document completion of FAI shall be in the English language, as shall the record of requirements and results in the units specified on the drawing, DPD or specification.
- Seller shall complete the FAI on the first production part – Exceptions or deferrals beyond the first production part will only be allowed with written authorization from the Buyer’s assigned Supplier Quality Engineer (SQE).
- Seller shall perform a partial or full FAI for any changes required by AS9102 and any of the following changes:
  - Any change to programming that is used in numerical controlled machines, test stations, coordinated measuring equipment, etc.
  - A lapse in production for over two (2) years has occurred
  - Any physical location changes of manufacturing or inspection equipment or relocation of tooling
  - Nonconformance(s) to Buyer requirements discovered after completion of an FAI (see next paragraph )
- Any non-conformance(s) to LM Aero requirements that are discovered **after the FAI completion**, a root cause and corrective action shall be performed by Seller, and Seller shall accomplish a partial FAI for all characteristics affected by the nonconformance(s).  
Note: Nonconformance(s) caused by uncontrollable special causes (e.g., power outage, weather events, etc.) do not require full or partial FAI. Documentation on uncontrollable special cause determination shall be made available upon request.
- Seller shall notify Buyer’s assigned SQE, in writing, minimum of (5) business days prior to Seller procuring items or beginning any FAI Planning activity for the PO. Buyer’s assigned SQE may elect to review or participate in Seller’s FAI process at any time throughout the FAI process. Seller shall also notify Buyer’s assigned SQE, in writing, minimum of five (5) business days prior to creating or starting any changes for a partial/delta FAI that affect items delivered under the PO.
- Zero non-conformances allowed during the FAI.
- Successful manufacture, test and inspection of three (3) consecutive parts from three consecutive and different lots/batches after the FAI item (FAI item plus 3 subsequent items). Validation is accomplished by the test and inspection of 3 parts from 3 consecutive and different lots/batches with no defects to Buyer’s requirements. A full FAI report is not required for these subsequent parts. However, objective evidence for the successful completion of these subsequent items is required. For the purposes of this Quality Clause, “different lots/batches” means that machines, tooling and fixture setups are torn down and re-setup, between production runs. Failure of any of the three (3) consecutive items will require root cause and corrective action (RCCA), and a successful full or partial FAI on the affected characteristics, followed by three (3) consecutive parts from three (3) consecutive and different lots/batches.

## ◇ Mitsubishi Aircraft Corporation (MITAC) Products and Programs (MSJ4064, Rev. NC, 10/18/2014 Section 3.2.5)

### o Per AS9102 & LMI FAI\_STD-001

# FAI Appendix to FAI\_STD-001

## ◇ Northrop Grumman Products and Programs (SQAR Revision Date 12/20/2017; Section 3.1)

### o Per AS9102 & LMI FAI\_STD-001

- Form 1, Fields 11, 12, 21, 22, 23 and 24 are considered mandatory for Northrop Grumman. All Conditionally Required (CR) fields on FAI Report Forms 2 and 3 SHALL be completed.
- Any FAI report form generated shall not contain open fields. To ensure each field of the FAI has been reviewed, the supplier shall mark all open or unused fields “N/A”.
- The FAI Report will remain open (Not Complete) if Qualification Testing is required per Engineering and not accomplished at time of FAI part verification.

**Note 1:** When standard note I1005 is specifically referenced in the PO, Northrop Grumman’s FAI review and approval is required for the 3 step FAI activities. Supplier shall contact their assigned QFE a minimum of 14 days prior to the supplier beginning any manufacturing activity. NGAS’ QFE may elect to review and/or participate in supplier’s FAI activity throughout the process.

**Note 2:** This section does not apply to JSTARS Overhaul Items, Project ID:

JSTAR, and TSSRX. However, JSTAR Modification parts that are manufactured by the supplier as part of a JSTAR overhaul require a documented FAI.

## ◇ PRIMUS – (SQR, Rev H, 09/25/2017, Document # :30504U, Section Q09); PCC Aerostructures SQRM SQR-10000, Section 7.14, Release D, 12/26/2017)

### o Per AS9102 & LMI FAI\_STD-001

- First Article Report must be re-accomplished under the following circumstances.
  - Document changes (drawing, Parts List, Specs, etc.) including relevant drawing or flag notes.
  - Any part which has not been produced by Supplier for a period longer than 24 months. (Or as designated by site specific requirements)
  - Changes to Supplier facility including; moving, expansion, change in manufacturing sources, inspection method, or substantial renovation, and significant management changes.
  - Change in manufacturing process or equipment use.
  - Change to the Bill of Materials (material, material specs, details, etc.)
- FAI will not be performed on any prototype parts, or parts manufactured using methods not representative of the normal production process, or non- production parts unless specified in the contract.
- When requested by Buyer, a Last Article Inspection (LAI) shall be performed on a part or assembly prior to reallocation of the manufacturing site. LAI consists of full FAI activities content including all activities necessary to capture all manufacturing and inspection activities.

**Note:** All Supplier generated First Article Records shall be retrievable and accessible within 24 hours notification from Buyer or Buyer customers upon request.

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## ◇ PRIMUS - Walden's Machine, LLC (QRS 1.06-2, Section 7.10, Rev AA, 02/23/2016)

### o Per AS9102 and LMI FAI\_STD-001

- Unless otherwise arranged, the supplier's FAI must be accepted before product is shipped to Walden's.
- Hardware suppliers who are producing parts to standard configurations are exempt from submitting AS9102 First Article Inspection Reports but are still responsible for inspecting each lot of material to ensure it complies with engineering requirements. If modifications are made to standard hardware items to create unique configurations (such as P01 configurations), First Article Inspections shall be performed and submitted.

## ◇ Sikorsky (SSQR-01, Revision 1, 01/01/2017; Section 7.5.1.1, SSQR-01 Main Text, Rev. M, 09/30/2016, Section B)

### o Per AS9102 & LMI FAI\_STD-001

- Contents of SSQR-01 "Main Text" contains requirements for First-time and Subsequent deliveries, in addition to supporting FAI requirements.
- All RDD & MBD parts will require a Sikorsky approved Inspection Plan (Inspection Checklist (ICL) ) prior to documenting the part inspection, for FAI. Evidence of inspection plan approval will be a part number revision specific "approval letter". See SSQR-01 "Main Text" for specifics. **Note:** The Supplier shall submit their Inspection Plan approval letter, the Inspection Checklist (ICL) , "Validation Points" package, and any other required documentation, per SSQR-01 "Main Text", with the FAI.
- A full or partial FAI shall be performed for affected characteristics unless otherwise specified by Sikorsky when any of the following occurs:
  - Change in design
  - Change in manufacturing source(s), process(es), inspection method(s), location(s) of manufacture, tooling or material(s).
  - Change in numerical control program or translation to another media.
  - Natural or man-made event, which may adversely affect a manufacturing process.
  - Lapse in production for two years or as specified by the customer.
- A replication of product part mark (via photograph or sample) that represents production marking shall be included within the FAI Report.
- Additional requirements for AS9102 FAI Form 3:
  - Field 14, for each characteristic: Record FAI Inspection Measuring Equipment used as a media of inspection. Record FAI Inspector Identification (e.g. signature, stamp, electronic authorization, etc.) used to signify the person that accomplished the inspection.
- All documentation MUST reference the Sikorsky part number and revision level.
- Handwritten documentation is NOT acceptable.

## ◇ Spirit (MAA 1-10042-2B, 2/17/16; MAA 1-10042-2C, 4/2/14)

### o Per AS9102 and LMI FAI\_STD-001

- The CMM/Faro Arm report does not need to be bubbled, but does need to correspond to the Engineering feature listed on Form 3 (i.e. profile Bubble #17, See CMM Report 92-114).

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## ◇ Spirit (continued)

- Form 1, Field 2 – Part Name MUST be as per schedule / BOM / PL.
- Form 1, Field 6 – This field contains the Part Revision Level of the FAI part.
- Form 1, Field 18 – For standard catalogue items, this field is reserved for the Certificate of Conformance (CoC) number (e.g., raw material test report number, compliance report number, traceability number) assigned by the manufacturer of the standard catalogue item. Distributor certs must contain this number as assigned by raw Material manufacturer.
- Form 2, Field 7 – Not required
- Form 2, Column 8: MUST include the Supplier Code, as assigned by the O.E.M. customer , for Special Processes. Include all leading zeros.
- Form 3 - When a design requirement requires verification testing, then the actual results will be recorded on the form. Record the process checks (Rockwell Hardness and conductivity, edge break or tape test results, etc.) when required by the end- item customer.
- FAI requirements may be satisfied by previously approved FAIs performed on identical characteristics of similar parts produced by identical means. A partial FAI that addresses differences between the current configuration and prior approved configurations may be completed using only the affected fields in the FAI forms.
- When requested by Spirit, a Last Article Inspection (LAI ) shall be performed on a part or assembly prior to reallocation of the manufacturing site. LAI consists of full FAI activities content including all activities necessary to capture all manufacturing and inspection activities which are not formalized in the LAI packet.
  - The Last Article Inspection Record shall consist of (as a minimum): The completed leader sheet, a marked up drawing or CMM print out, and a copy of the engineering with every operation and tool verified as being correct for content and sequence.

## ◇ Triumph – Vought Aircraft Product & Programs (SQR-011 Rev. F, 03/07/2018)

- Per AS9102 & LMI FAI\_STD-001
  - Suppliers who have demonstrated poor first time-yield on FAI reviews will be required to complete the Net Inspect check sheet.
  - The following items/documents (as applicable) shall become a part of the electronic record and shall be referenced and attached to the electronic FAI file for the applicable part number:
    - Material Certifications
    - Process Certifications
    - Test Reports/ Results
    - CMM Reports – **point maps and set-up instructions are mandatory**
    - Copy of **COMPLETED** shop traveler that represents the manufacturing process
    - Copy of all rework travelers
    - Copy of the Triumph furnished TSSP
    - Unique Characteristic Accountability – must correspond with unique identifier on bubbled drawing/sketch
    - Photos (as applicable)
    - Casting / Forging approvals (as applicable)



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## ◇ **Triumph – Vought Aircraft Product & Programs** *(continued)*

- Weld maps (as applicable)
- NDI/NDT techniques
- Manufacturing plan approvals (as applicable)
- Withholding Tags (as applicable)
- Supplier Information Request (SIR) (as applicable)
- The FAI requirement can be satisfied by either a dimensional report of the part or a dimensional report of the Check Fixture tool being used as a means of product acceptance. This dimensional report of the Check Fixture tool will ensure that all critical features of the part are being validated. The following are required to use the tool to satisfy the dimensional verification of the part and/or assembly:
  - The tool will be identified
  - The tool will be validated by dimensional report to ensure that all critical features of the part and/ or assembly will be validated
  - The tool will be called out in the supplier's planning
  - The tool will be periodically re-valuated to assure it still complies with engineering requirements

## ◇ **Triumph Fabrications – Hot Springs Specific Requirements** (SQAM001 App A Rev. E (QADF7.4.1.6.1.1 H rev E))

- o Per AS9102 & LMI FAI\_STD-001
  - Along with the First Article report, the supplier shall include “all supporting documentation”, as required per Triumph Business Unit purchase order or Quality Requirement.
  - When the engineering is based on Digital Product Definition the following guidelines shall be taken into account:
    - All features that are defined by the 3-D model must be included in the product acceptance plan and accounted for as part of the FAI documentation.
  - First Article Parts shall be identified as First Article.
    - Suppliers are required to identify the part tagging or packaging by a suitable means that conspicuously identifies the First Article part as such.