lmi aerospace

SONACA GROUP

AS9102 FAI Report Guideline

FAI_STD-001 Rev. J 08/20/2018

FAI STD-001
Applies to all LMI locations and Suppliers

***

Review Appendix A
for Customer (OEM) deviations to AS9102 and/or this guide

Objective of the FAI Guideline

Provide objective evidence of compliance to **AS9102Rev B** and customer requirements.

Strive for a more consistent FAI process across all LMI facilities and their Suppliers

Reduce questions and confusion relative to completing FAI documentation.

Eliminate Customer rejections/returns of FAI packages.

Standard FAI Guidelines – Form 1

The most basic guide for the completion of a FAI is: ***the FAI is about "TRACEABILITY"***

FAI shall provide proof of compliance to specific Standardized and Customer requirements.

All information should be documented in order to provide a level of confidence that the requirements have been fully enacted.

Form 1 is also utilized to capture the details of an assembly, or a sub-assembly.

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Do not combine detail-part requirements and assembly requirements on one FAI, even if it is built on the same router. (see exception)
Detail-Part FAIs and Assembly FAIs must be completed independently, with their own complete individual FAI package. (see exception)
Exception: A scenario may exist whereas the engineering does not define the manufactured detail-part as an unique part/dash number, separate from the assembly. The engineering defines the detail-part and the installation of a component (such as a bushing or bearing) as one part/dash number; whereas the actual deliverable product is an assembly.
In this case, a single FAIR may be produced to encompass the complete process.

Standard FAI Guidelines – Form 1 (continued)

Non-modified Standard catalog items/COTS (Commercial Off The Self) are to be placed on Form 1, as noted per AS9102 Rev B.

When completing Field 15, “Part Number”, on **Form1**, enter the Part Number and the Standard catalog items/COTS Lot or Control number (examples provided on slide 15).

On **Net Inspect Form1,** Enter the Supplier/Distributor name into the “SUPPLIER” column.
Note: AS9102 “hardcopy” Form 1, does not provide a place to enter the supplier name.

All FAI packages shall be submitted through Net-Inspect.
Note: uploading documents in pdf format is preferred since it is the most accommodating format, and less subject to unintentional editing by other personnel.

It is acceptable to only complete the Net Inspect Form 1, in its entirety, and then upload (attach) the complete “hardcopy” FAIR package (FAI Forms 1, 2, 3, certs, engineering, supporting documentation, etc. . .) into Net-Inspect.

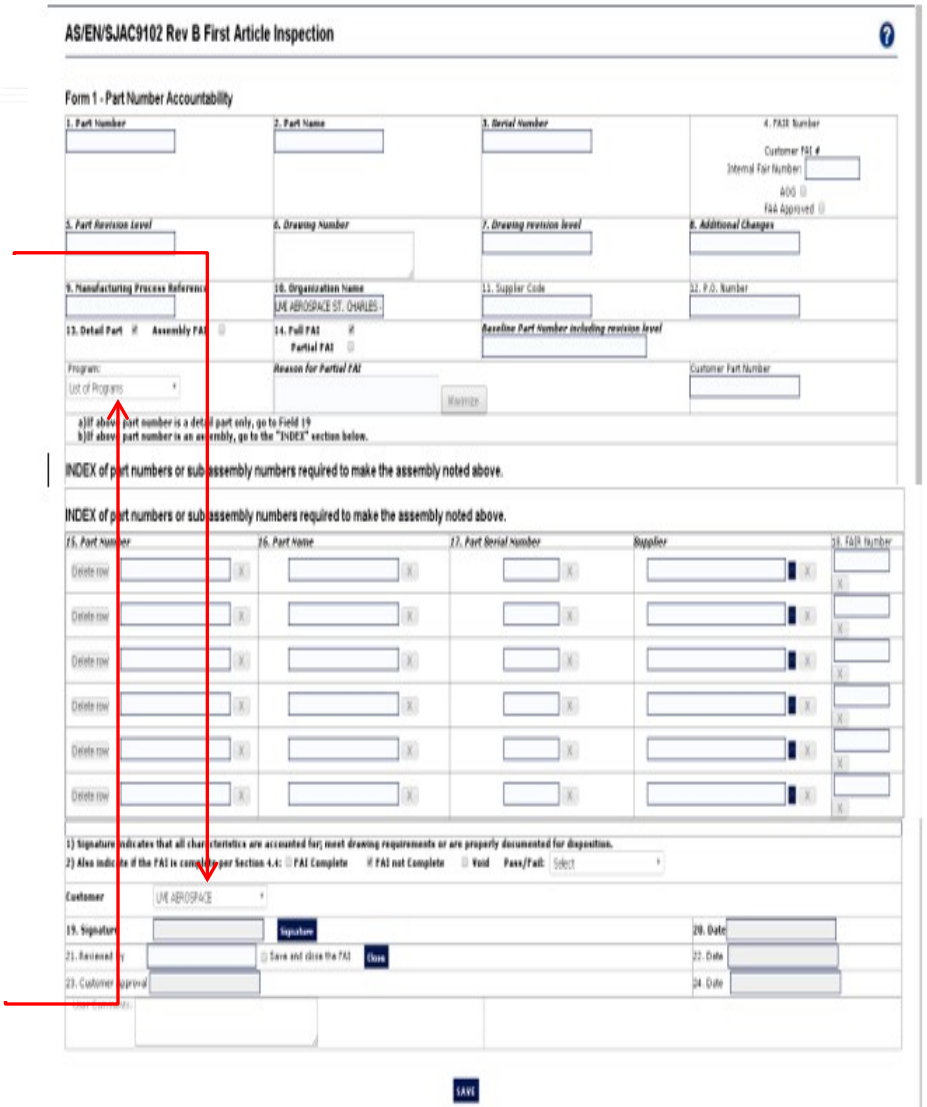
AS9102 FAI Guideline - Form 1

First Steps for Initiating a FAIR in Net Inspect

Customer: Select the customer from a drop-down list.
NOTE: See Slide #7 for instructions relative to LMI's internal FAI Reports being generated for Customers that do not receive FAIRs via Net Inspect.

LMI facilities – select the appropriate LMI customer
Suppliers – The customer selection is based on the location of the LMI facility that the product will be delivered to (LMI name and address on the PO).
Note: For "Drop Ship" locations, the LMI facility authorizing the "Drop Ship" is the customer.
[See Slide #8 for Guide on the LMI Purchase Order information]

Program Box: Select the appropriate program from the drop-down selection. If the correct program is unknown and/or unattainable, **No Program Assigned** is acceptable to select.



AS9102 FAI Guideline - Form 1

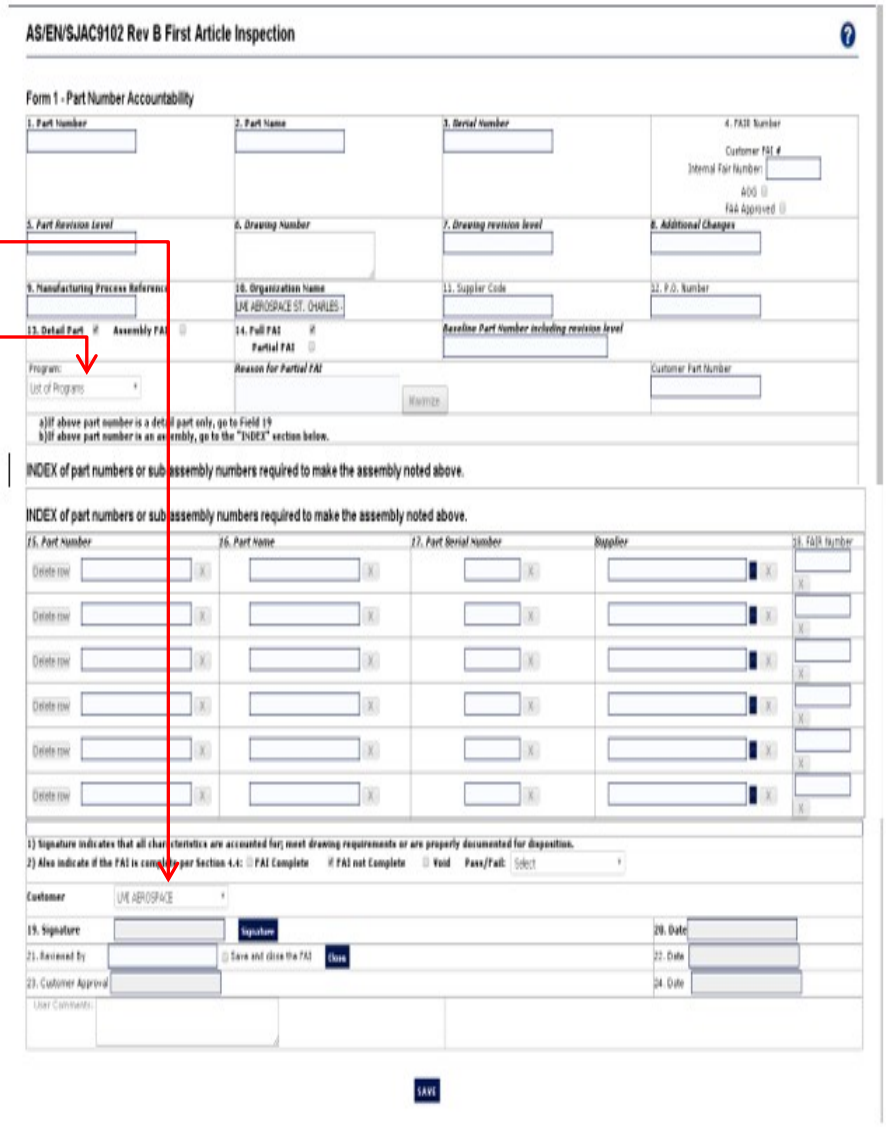
[This Slide is For LMI Internal Use Only]

Initiating a FAIR in Net Inspect when the LMI Customer Does Not Utilize Net Inspect

Customer: Select your (LMI) facility as the customer.

Program Box: Select the appropriate Customer's name from the drop-down section.
If the customer's name doesn't appear in the drop-down, contact your facility's Net Inspect Administrator. The Administrator can add the customer's name to the Program selection field, to make it available.
The Administrator must reset users' Program access by opening the user's file, selecting All Programs, then selecting Submit, at the bottom of the panel.

NOTE: Upon completion of the FAIR, perform the following steps (Net Inspect V5 works best for this operation; the entire FAIR will download as one file):
Select "Print"
Select "Download PDF"
Select "Desktop" and Save
Submit the PDF format of the FAIR to the Customer



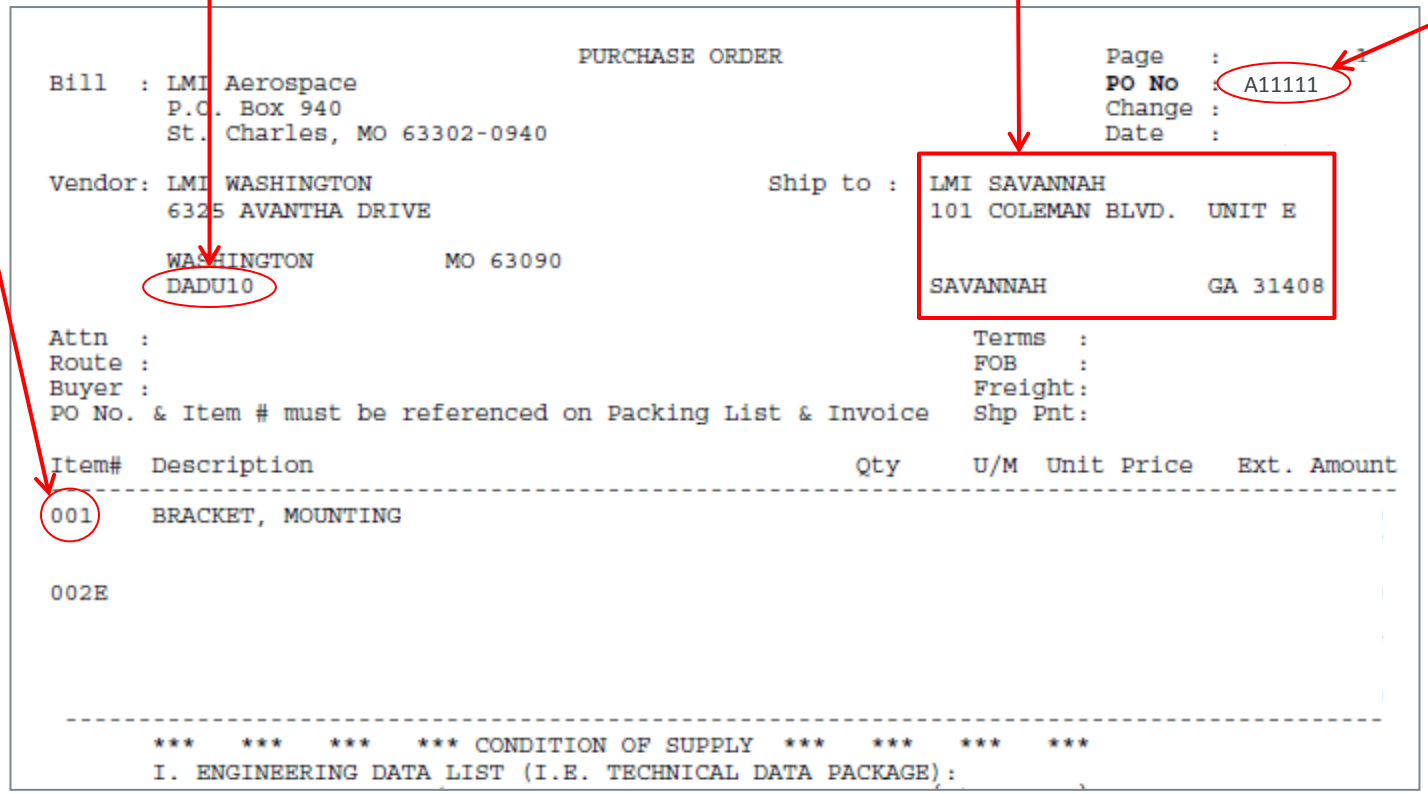
Guide on LMI Purchase Order Information

Supplier Code Number

Customer Location

PO Line Item

PO Number



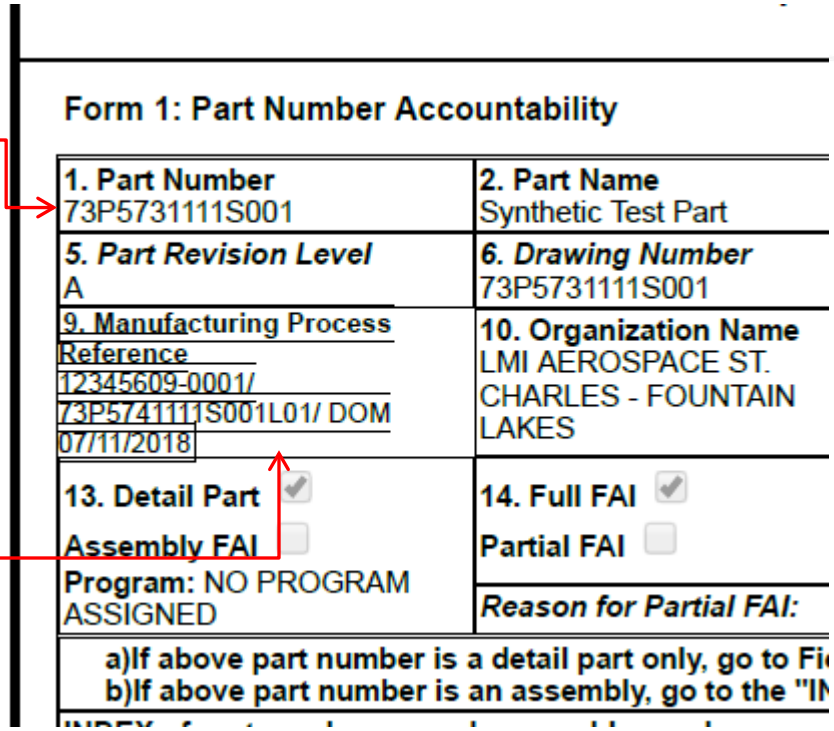
```
                                   PURCHASE ORDER                          Page   :  1
Bill  : LMI Aerospace                                                      PO No  :  A11111
        P.O. Box 940                                                       Change :
        St. Charles, MO 63302-0940                                         Date   :

Vendor: LMI WASHINGTON                                  Ship to :  LMI SAVANNAH
        6325 AVANTHA DRIVE                                         101 COLEMAN BLVD.  UNIT E

        WASHINGTON          MO 63090                               SAVANNAH           GA 31408
        DADU10

Attn  :                                                            Terms  :
Route :                                                            FOB    :
Buyer :                                                            Freight:
PO No. & Item # must be referenced on Packing List & Invoice       Shp Pnt:

Item#  Description                                    Qty     U/M  Unit Price   Ext. Amount
-------------------------------------------------------------------------------------------
001    BRACKET, MOUNTING

002E

-------------------------------------------------------------------------------------------
       ***   ***   ***   *** CONDITION OF SUPPLY  ***   ***   ***   ***
       I. ENGINEERING DATA LIST (I.E. TECHNICAL DATA PACKAGE):
```

AS9102 FAI Guideline - Form 1

Guide for Box 1 and Box 9 for LMI
"Synthetic Part Numbers"

Box 1: Part Number
Part Number of the Detail, Assembly or Kit per PO line item. NOTE: Do not enter a LMI "Synthetic Part Number", in this field.
"Synthetic Part Number": This encompasses an engineering part number having either a prefix or suffix added to it, to provide an LMI-internal level of identification at the manufacturing site.

Box 9: Manufacturing Process Reference: The work order number (release/work order number or router number) shall be entered here.
When a LMI "Synthetic Part Number" exists, it shall be posted in this box, as well.
The inclusion of the Date of Manufacture (DOM) is for demonstrating the capacity of this field.
NOTE: DOM is a customer specific requirement, only.



Form 1: Part Number Accountability

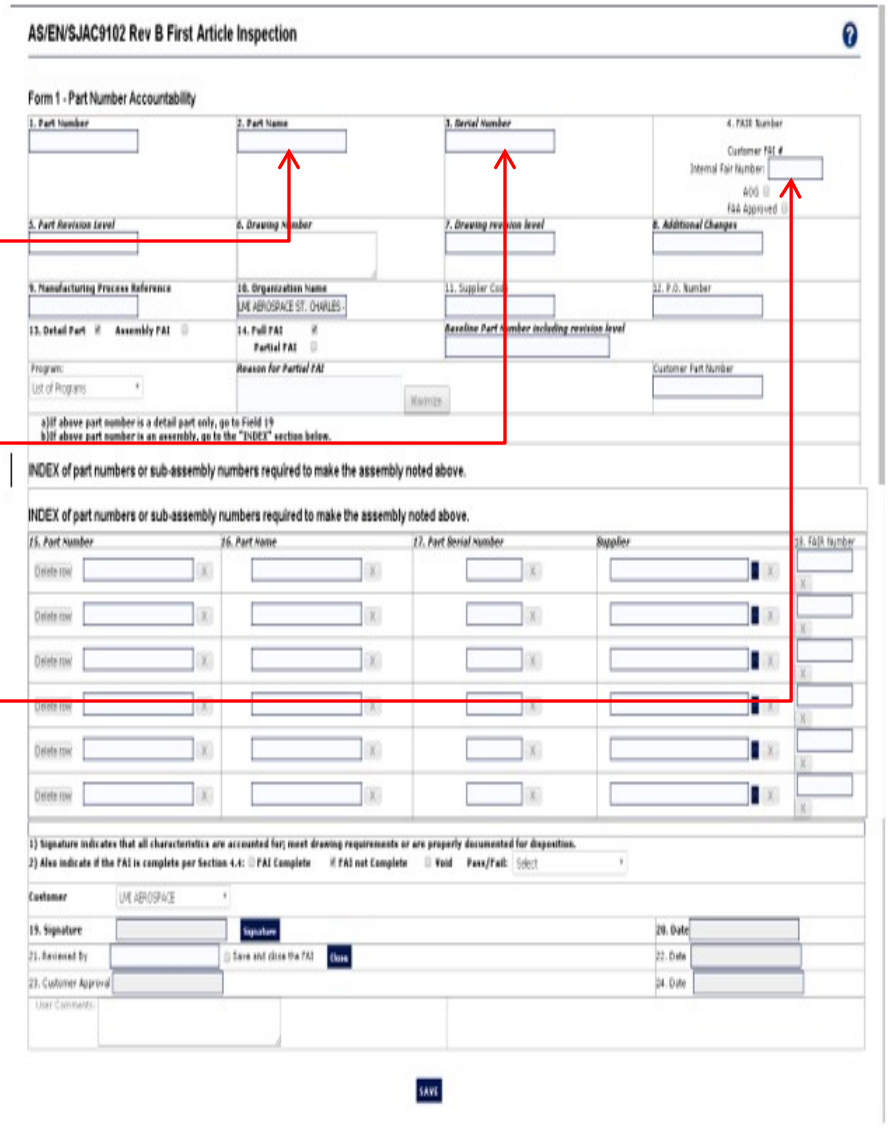
1. Part Number 73P5731111S001	**2. Part Name** Synthetic Test Part
5. Part Revision Level A	***6. Drawing Number*** 73P5731111S001
9. Manufacturing Process Reference 12345609-0001/ 73P5741111S001L01/ DOM 07/11/2018	**10. Organization Name** LMI AEROSPACE ST. CHARLES - FOUNTAIN LAKES
13. Detail Part ☑ **Assembly FAI** ☐ **Program:** NO PROGRAM ASSIGNED	**14. Full FAI** ☑ **Partial FAI** ☐ ***Reason for Partial FAI:***
a)If above part number is a detail part only, go to Fi **b)If above part number is an assembly, go to the "IN**	

AS9102 FAI Guideline - Form 1

Box 2: Part Name
Name of the Part as shown on the Drawing or PO line item.

Box 3: Serial Number
Serial Number of the part, as assigned by the Customer or Organization if applicable.
***NOTE**: "N/A" if not applicable.*

Box 4: FAIR Number
Unique FAI Report Number required on all forms in Box 4 (This is auto-generated in Net Inspect)



AS9102 FAI Guideline - Form 1 (continued)

Box 5: Part Revision Level

Parts List Revision – Revision should be recorded as listed on Engineering Parts List. (See Appendix for specific Customer Requirements)

Box 6: Drawing Number

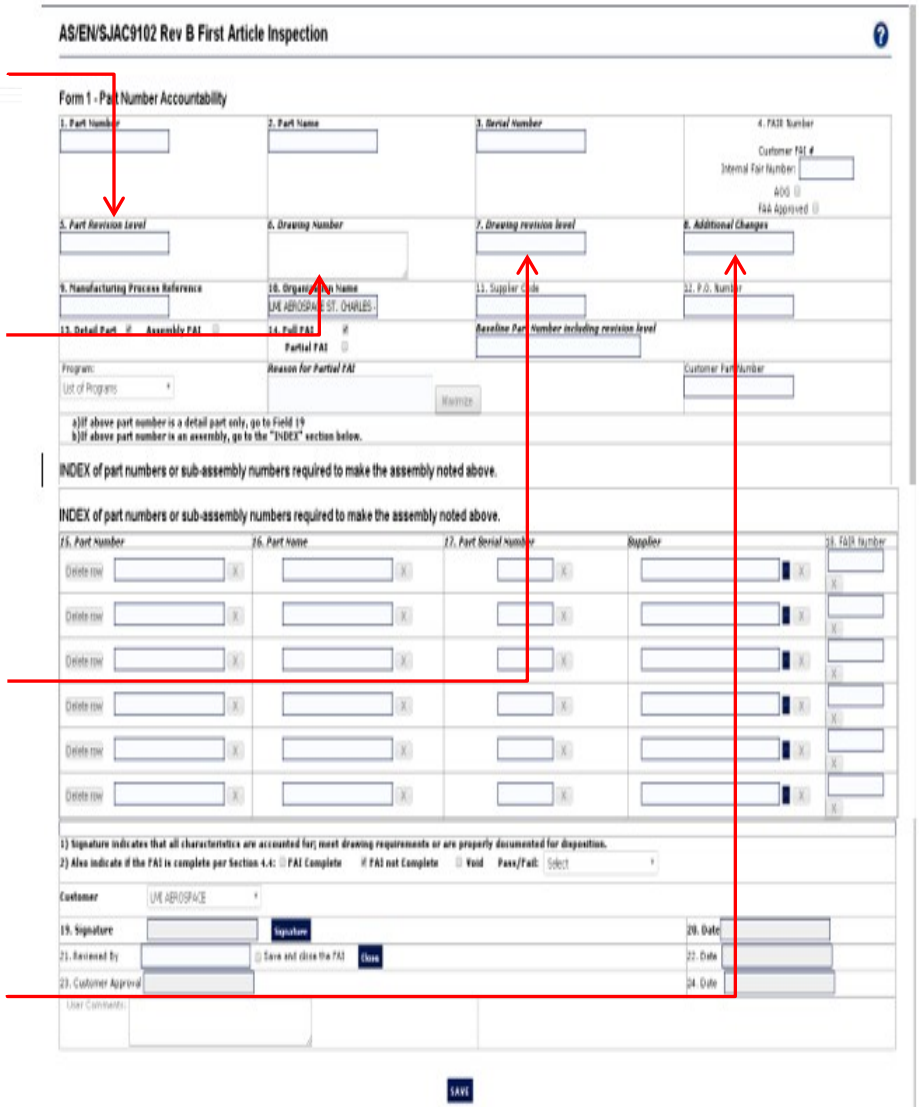
Record the basic drawing number and/or authority dataset file name associated with the FAI part. There may be multiple base drawings (part and spray dot) list all that apply. Include any build-to standard drawing(s). Include any DL, MPL, etc.

Box 7: Drawing Revision Level

Record drawing sheet number and revision, authority dataset revision level, engineering doc revisions, etc. There may be multiple base dwgs. (part and spray dot) list all that apply.

Box 8: Additional Changes

Record supplemental Engineering documents or Condition of Supply documents, and their revisions, that are incorporated into the product but not reflected in referenced Drawing/Part Revision level (e.g. LSCP, TSSP, E.O., etc…).



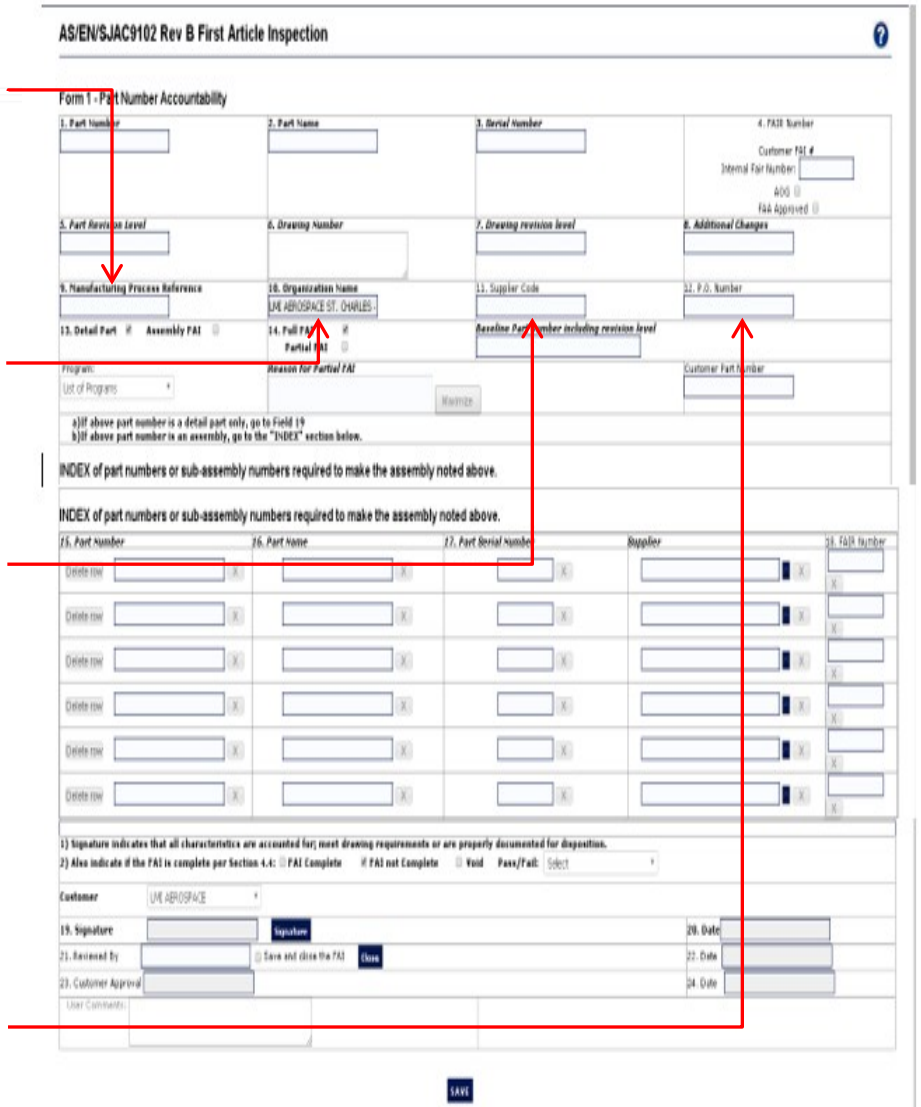
AS9102 FAI Guideline - Form 1 (continued)

Box 9: Manufacturing Process Reference: The work order number (release/work order number or router number) shall be entered here. See slide 8 for LMI "Synthetic" Part Numbers.

Box 10: Organization Name
Name of company/organization performing the FAI.
Note: Net Inspect auto-populates this field

Box 11: Supplier Code
Supplier Code is a unique number assigned by the Customer. It is sometimes referred to as Vendor Code, Vendor Identification Number, Supplier Number, etc.
LMI assigns a 6-character Supplier Code to their suppliers; which can be seen on the LMI PO, below the supplier name and address.

Box 12: P.O. Number
Customer Purchase Order (P.O.) number, P.O. Line Item number, Change number (if other than "ORIG"), and Contract Number (if applicable).



AS9102 FAI Guideline - Form 1 (continued)

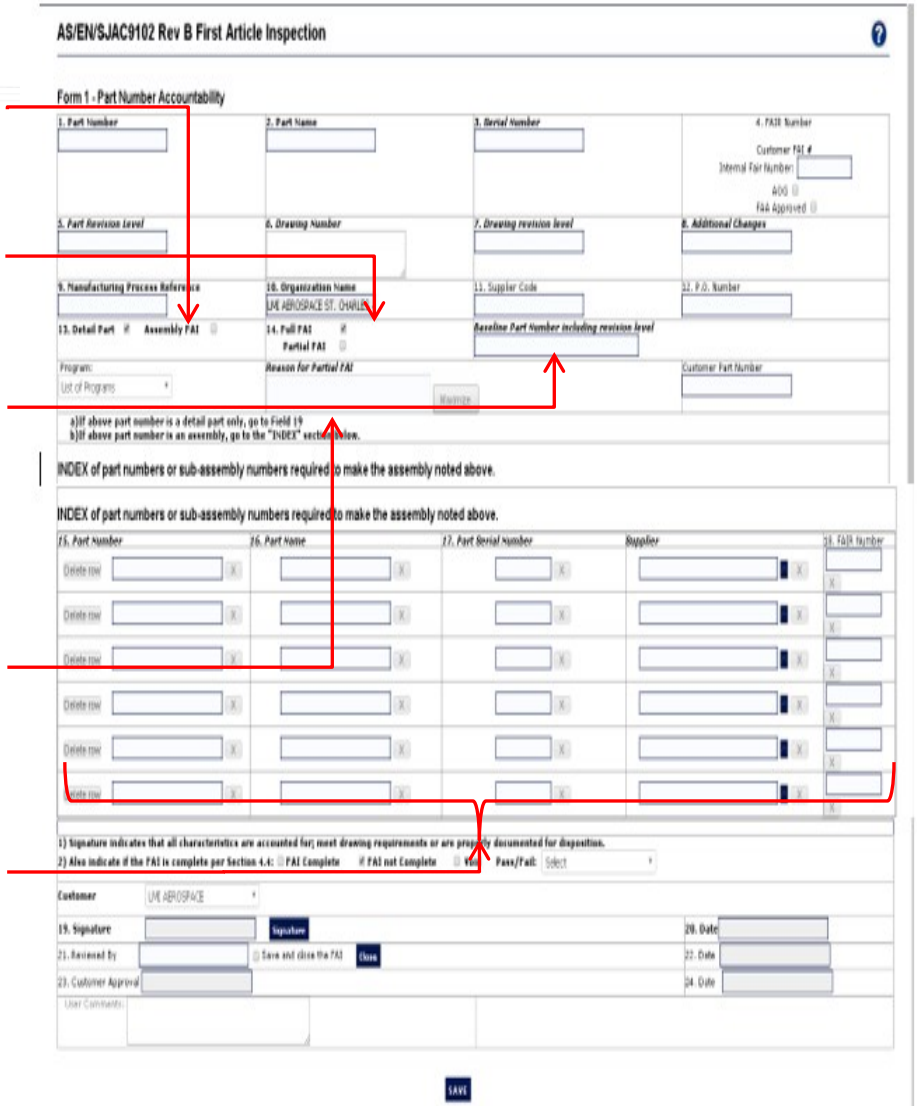
Box 13: Detail Part or Assembly FAI: Check as appropriate

Box 14: Full FAI or Partial FAI: Check as applicable

Baseline Part Number Including Revision Level
For a partial FAI list the previous FAI Part number and its revision. When completing a Partial (Delta)FAI, the Baseline Part Number and Revision Level **MUST** be filled in for previously accepted FAI.

List the reason for the Partial FAI

BOX 15, 16, 17, 18
These sections are required ONLY if Assembly FAI is checked in Field 13. ***NOTE:*** Net-Inspect will not allow You to enter anything in these boxes if *Detail FAI* is checked.
[See next slide for the entry of “Hardware/COTS”]



AS9102 FAI Guideline - Form 1 (continued)

Guide to Itemizing Unmodified Standard Catalog Items/COTS (see next slide for example)

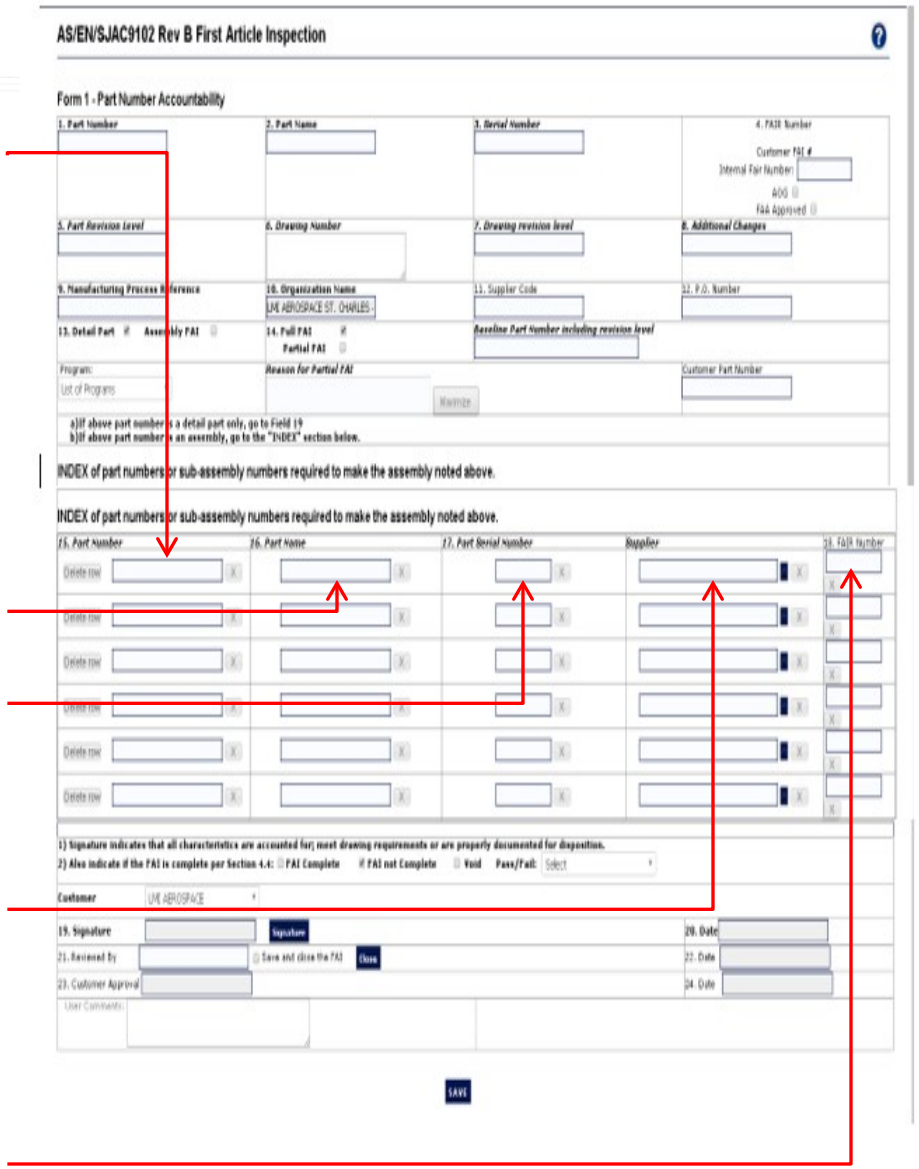
Box 15: Part Number: Enter the part number, along with the Lot number or the Control Number.
If the item doesn't have either a Lot or Control number, provide an associated traceable number to the item (CofC #, Shipper #, Bill of Lading #, etc…)
Examples:
NAS6204-4/Lot#84547
NAS6204-4/Ctrl#2017C36515

Box 16: Part Name: Enter name of item

Box 17: Part Serial Number: If the item has a manufacturer S/N, enter that number; otherwise, enter N/A.

Supplier: Enter the supplier/distributor name (Net Inspect, only)
Note: AS9102 "hardcopy" Form 1, does not provide a place to enter the supplier name.

Box 18: FAIR Number: Enter N/A



AS9102 FAI Guideline - Form 1 (continued)

Guide to Itemizing Unmodified Standard Catalog Items/COTS

Example of entering the Standard catalog items and/or COTS
Note: Net Inspect does not recognize the symbol "#".

AS/EN/SJAC9102 Rev B First Article Inspection

Form 1: Part Number Accountability

1. Part Number: 312A3123-12	**2. Part Name:** Test Part	***3. Serial Number:*** N/A	***4. FAIR Number: 5298***
5. Part Revision Level: A	***6. Drawing Number:*** 312A3123	***7. Drawing Revision Level:*** A	***8. Additional Changes:*** LSCP/RevA
9. Manufacturing Process Reference: 123456-0001	***10. Organization Name:*** LMI AEROSPACE ST. CHARLES - FOUNTAIN LAKES	11. Supplier Code: JIST07	12. P.O. Number: A11111/001
13. Detail FAI: ☐ **Assembly FAI:** ☑	**14. Full FAI:** ☑ **Partial FAI:** ☐ ***Baseline Part Number (Including Revision Level)***		
	Reason for Partial:		AOG ☐ FAA Approved ☐

a) If above part number is a detail part only, go to Field 19
b) If above part number is an assembly, go to the "INDEX" section below.

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number	***16. Part Name***	***17. Part Serial Number***	***Supplier***	***18. FAIR Number:***
NAS6204-06/Lot84547	Rivet	N/A	Aero Fastener Co., 76 Servistar Ind. Way, Westfield, MA 01086	N/A
NAS1605-05/Ctrl2017C36515	Rivet	N/A	KLX 88289 Expedite Way, Chicago, IL 60695	N/A

1) Signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.
2) Also indicate if the FAI is complete per Section 4.4:

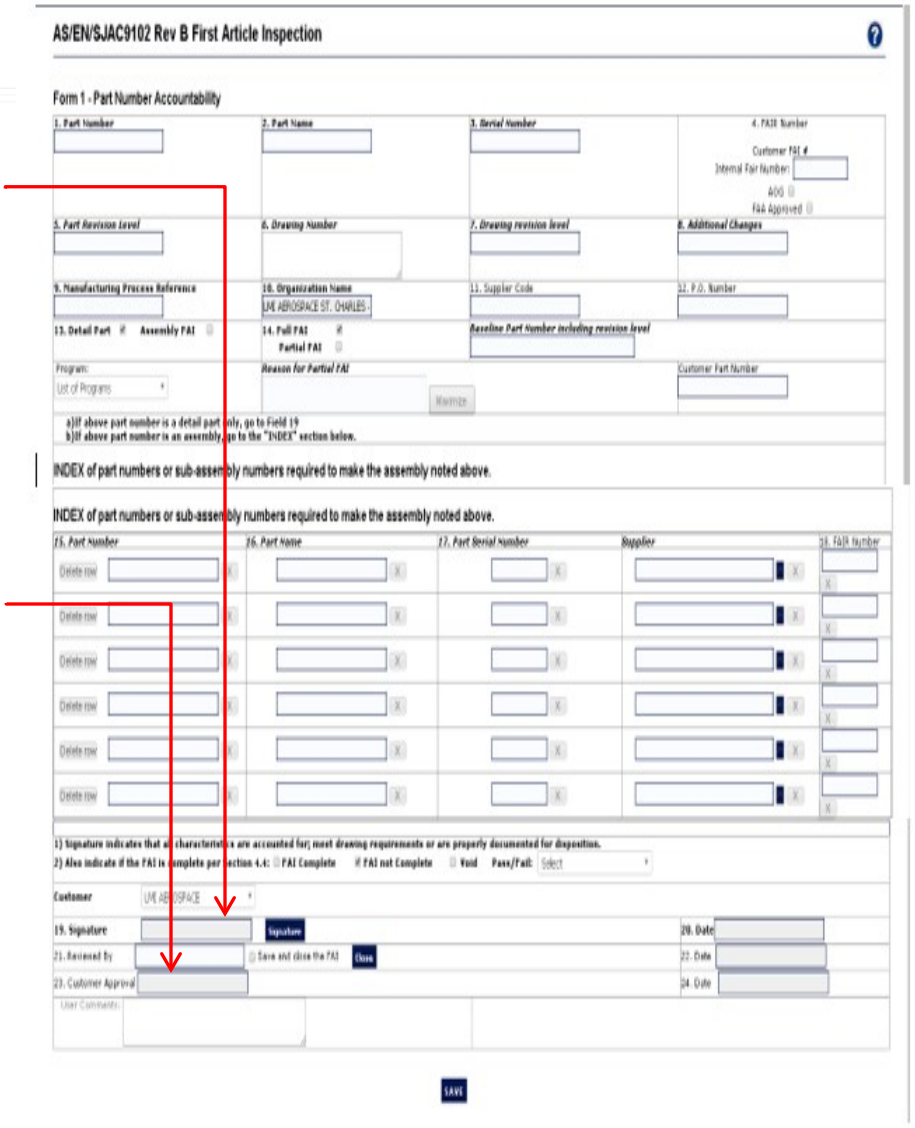
AS9102 FAI Guideline - Form 1 (continued)

Box 19, 20, 21, and 22

Net-Inspect will automatically fill in these boxes when you sign and submit the FAI to the customer. The **Signature** and **Reviewed by** signature fields should be completed by two different individuals. These must be completed in order for Net Inspect to activate the Customer approval fields.

Box 23 and 24

These boxes will remain open until the customer approves and signs the FAI electronically on their end.



Standard FAI Guidelines – Form 2

Form 2 will capture materials, processes and functional testing applicable to the First Article part or assembly. These processes shall be listed in chronological order as they appear in the manufacturing process.

Form 2 shall address all materials, processes and specifications where the resulting output cannot be verified by subsequent monitoring or measurement.

If a substitution material and/or process is used per customer substitution documentation, that substitution MUST be recorded on Form 2.

Evidence of traceability between the material cert and work order / traveler should be maintained and furnished.

Material requirements contained in the Engineering definition should be reflected on the material certification.

- **EXAMPLE:** .200” sheet AMS-QQ-A-250/12

At a minimum, the Material Cert package will consist of the Material Supplier C of C, and the Manufacturer Cert and Test Report.

Standard FAI Guidelines – Form 2 (continued)

Processing Certifications shall reference relative part number; if not, a copy of the referenced work order/traveler must be attached to show traceability.

Process Codes are NOT the same as Finish Codes. Column 7 of Form 2 is for the Codes associated to "Special Processes".

Example: Boeing's "Finish Code" F-18.05 is for "Sealed" Chromic Acid Anodize Finish, in accordance with BAC5019. The "Process" code for "Sealed" Chromic Acid Anodize is 304 per Boeing's D1-4426.

The code "304" is the what should be entered in Column 7 of Form 2.

NOTE: engineering notes depicting the Finish Codes shall be bubbled and recorded on Form 3.

When Engineering requires Heat Treatment and / or Aging

Both Heat Treat and Age condition(s) are to be recorded on Form 2 as a "Special Process" in accordance with the Customer Approved Supplier Processor List (ASPL). A reference to the certification shall be included on Form 3.

Hardness and Conductivity Requirements

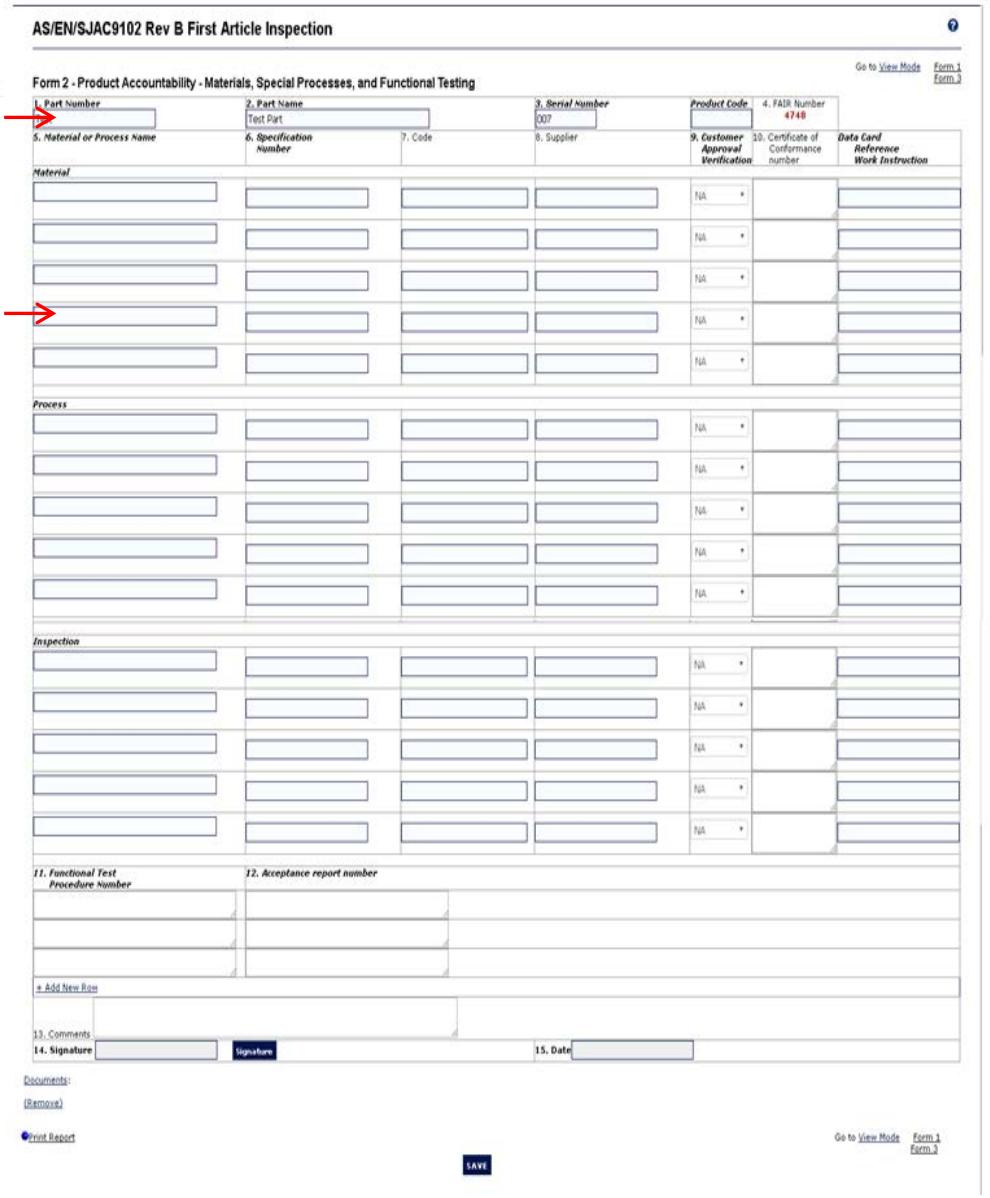
If hardness and conductivity is listed as a Special Process, it shall be listed on Form 2, with the requirements and results posted on Form 3.

AS9102 FAI Guideline - Form 2

Box 1, 2, 3 & 4 and Sheet Number(s):
Net-Inspect will automatically fill in these boxes for Form 2.

Column 5: Material or Process
Enter the name of the materials used and the “special” processes performed. For metallic material, include alloy (2014, 2024, 7075, etc.) temper, or condition of the material (ex: “7075-T3511 Aluminum”)

Include all materials that are incorporated into the FAI part, (e.g. weld / braze filler, sealant, etc.).
Do not include processing material such as acid etchants.



AS9102 FAI Guideline - Form 2 (continued)

Column 6: Specification

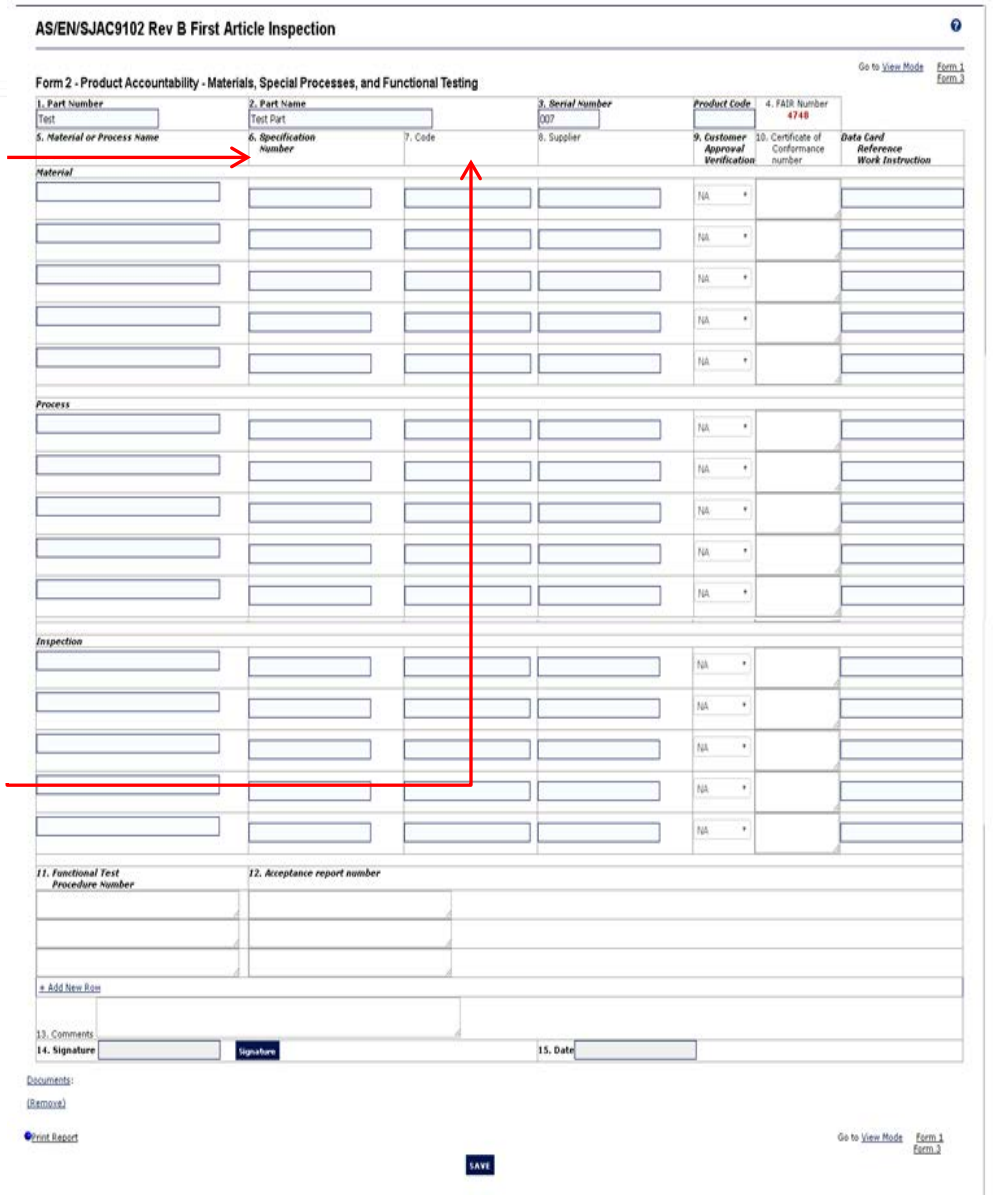
Enter material or process Specification Number, ***including Specification revision level and relative Amendment(s) as required*.** Include permitted alternates, if used and its governing document, Class and material form (e.g. sheet, bar, etc.). At a minimum, identify all specifications (and their revisions) that are called out directly on the build documentation (Engineering Drawing).

Column 7: Code

Enter Customer assigned material or process code per, as applicable per customer requirements.

NOTE: If none required, list "N/A".

See Sheet 18 for explanation.



AS9102 FAI Guideline - Form 2 (continued)

Column 8: Supplier

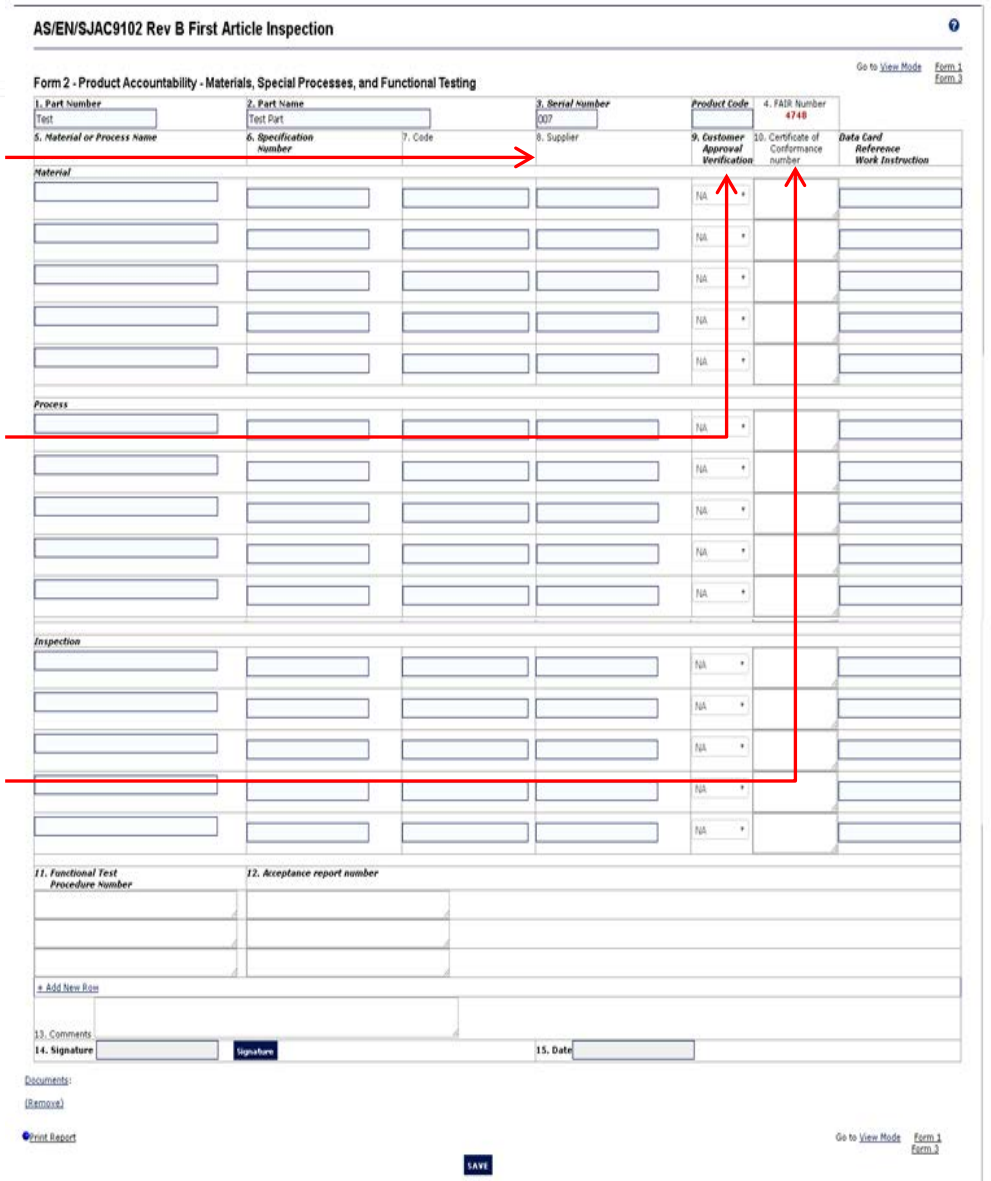
Customer given ***supplier code*** (found in the customer ASL) and the ***name and address*** of the organization supplying the material to your facility, or performing the special process.

Column 9: Customer Approval Verification

Indicate YES if the special process or material source requires to be approved by the customer. Enter "N/A" if customer approval is not required. **NOTE:** DO NOT enter NO.

Column 10: Certificate of Conformance Number

Number of the Certificate of Conformance (e.g. heat lot number, raw material test report number, special process Certificate of Compliance number, PO number, traceability number, etc …).



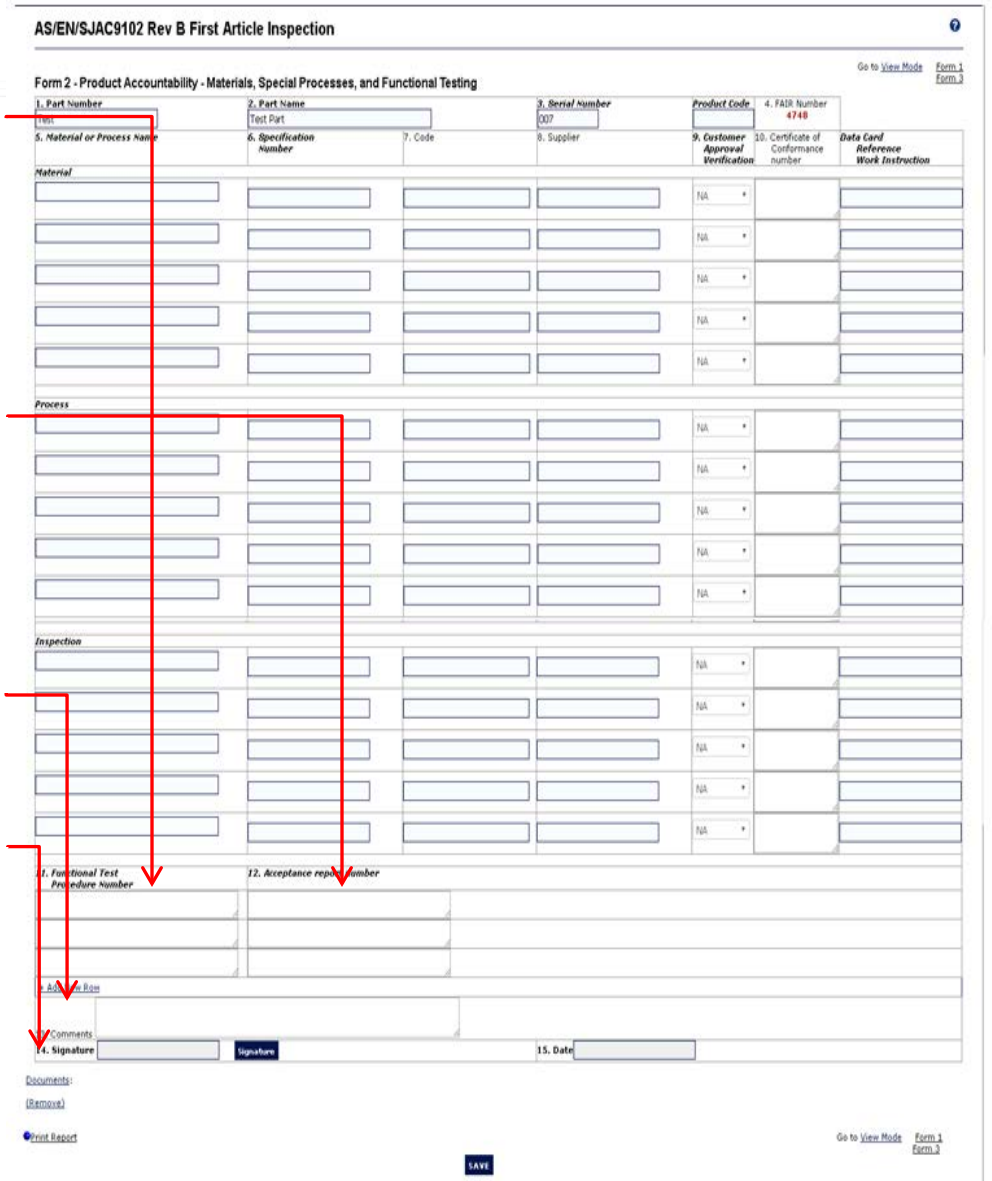
AS9102 FAI Guideline - Form 2 (continued)

Box 11: Functional Test Procedure #
Complete if a Functional Test Procedure is called out as Design Requirement.

Box 12: Acceptance Report Number
The functional test certificate indicating that test requirements have been met.
NOTE: Enter “N/A” if no data.

Box 13: Comments
Enter Comments as applicable.

Box 14, 15: Prepared By and Date
These are Auto Generated in Net-Inspect once the FAI has been saved / Signed.



Standard FAI Guidelines – Form 3

Stock Material Thickness shall be included on Form 3

Stock Material Temper shall be included on Form 3

Grain Direction (where specified in Engineering) shall be included on Form 3

All dimensions shown on drawing face must be bubbled and reported on Form 3. Referenced Dimensions are NOT required, but may be bubbled – see FAI APP-001 for Customer Requirements (ex: Sikorsky's SSQR)

Unless verified by CMM, Romer Arm, Scanner, etc.; un-dimensioned features from Customer supplied models will be supported by Conventional Inspection Sheet/Model Based Drawing showing dimensions and tolerance and must show evidence of QA validation.

All GD&T controls will be bubbled on drawings and reported on Form 3. This also applies to the supporting BASIC dimension, UNLESS it is reported via the CMM report attached to the FAI.

Standard FAI Guidelines – Form 3 (continued)

Engineering established Datum Systems and/or targets must be demonstrated in CMM alignment reporting.
Be aware of restraining requirements for datum.

CMM report coordinate data must be reported in the same format as the coordinate system established by the Model as required.

Non-modified features of extrusion drawings shall also be recorded on Form 3.

The Part Mark specification/requirement will be bubbled and recorded on Form3

When attaching a nut plate to a detail, bubble and record:

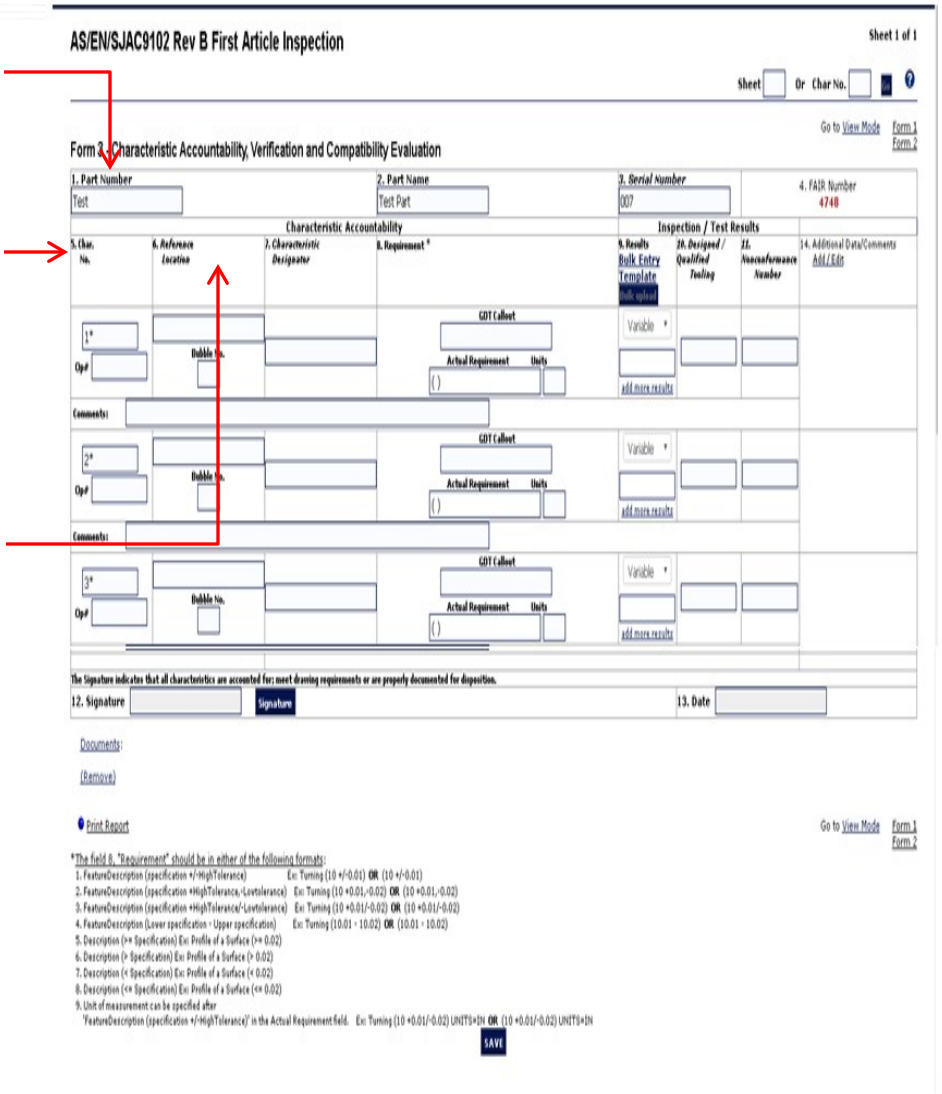
- Hole to Hole dimensions (as required in the nut-plate spec)
- All reportable dimensions for installed rivet (requirements are found in the installation spec).
- For Detail parts, record Rivet attach hole diameter & countersink size
- For Assemblies, record the Flushness requirement and actual.

AS9102 FAI Guideline - Form 3

Box 1, 2, 3 & 4 and Sheet Number(s):
Net-Inspect will automatically fill in these

Column 5: Characteristic Number
Unique assigned number for each Design Characteristic. Must correlate with the "bubbled" engineering characteristics.

Column 6: Reference Location
Location of the Design Characteristic (e.g. drawing zone, page number and section, specification, etc. If the Eng. Is divided into zones, it is required by all our customers to list the sheet and zone that the characteristic falls within. It is also required to provide the Section/View label when applicable.
[See next sheet for Column 6 Examples]



AS9102 FAI Guideline - Form 3 (continued)

Column 6: Reference Location - Examples

If the engineering is divided into zones, it is required by all of our customers to list the sheet and zone that characteristic falls in. It is also required to provide the cutout view label when applicable.

- **EX:** Sheet 2, Zone B3 would be listed as "**2B3**"
- **EX:** Sheet 4, Zone E2, Cutout View would be listed as "**4E2A-A**"

Specification controlled features like lightening holes or heads should list the specification that controls the feature.

- **EX**: A hole called out as "**SS5100-4**" on Sheet 1 zone C5 should list "**SS5100-4**" for the dimensions specific to the spec and for location of the hole itself note "**1C5**"

For characteristics that extend past one particular zone, list the range on the drawing.

- **EX:** Sheet 2, Zone B3 and B4 could be listed as "**2B3-4**" or "**2B3/B4**", etc.

If the engineering is not divided into zones, at least provide the sheet number on which the part is shown.

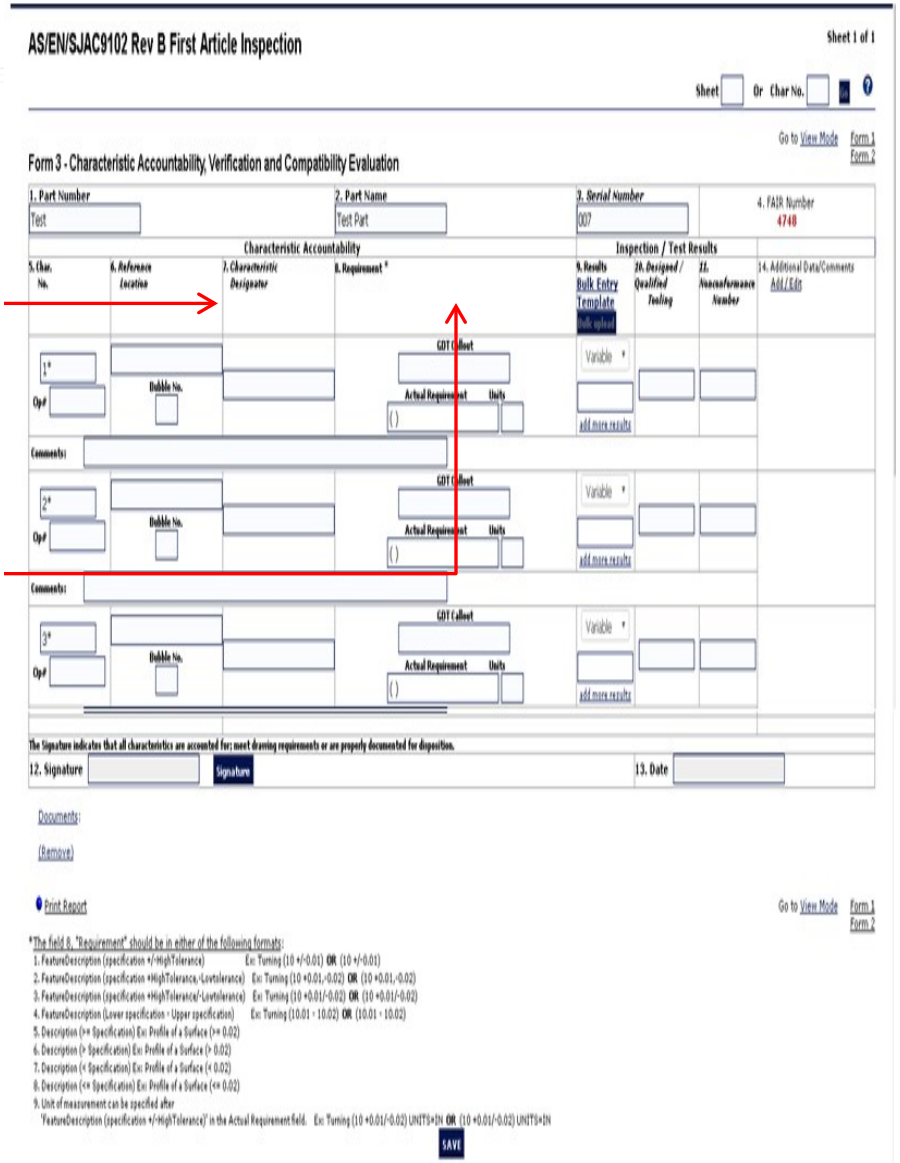
For characteristics defined by designed tooling, try to list the drawing zone if possible. Be sure to list the designed tool used to inspect that feature in Column 10.

For characteristics that originate from the PO, list "PO"; from a TSSP - list TSSP/Rev and its page number; from an E.O. - list the E.O. number and page number; etc…

AS9102 FAI Guideline - Form 3 (continued)

Column 7: Characteristic Designator
Key Characteristics, Flight Safety, Critical, etc …
NOTE: “N/A” is preferred, for features not specifically defined by the customer or organization.

Column 8: Requirement
Specified requirement for the Design Characteristic (e.g. drawing dimensional characteristics with nominal and tolerances included, drawing notes, specification requirements, etc.
[See next sheet for Column 8 Examples]



AS9102 FAI Guideline - Form 3 (continued)

Column 8: Requirement - Examples

A flag note in the PL states that flange heights should be within +/- .01 The flange height S/B .75; The requirement in the FAI should then be written as ".75 +/- .01

For tooling controlled features (MTX, form block, set-back router jig, etc.), list the tool used to inspect and list the tolerance afterwards. **Ex: "Contour per HPB ± .03"**

A general design feature that applies to multiple locations may be recorded as one characteristic number.
5X .098 - .103
.25R TYP
R .50 4Places

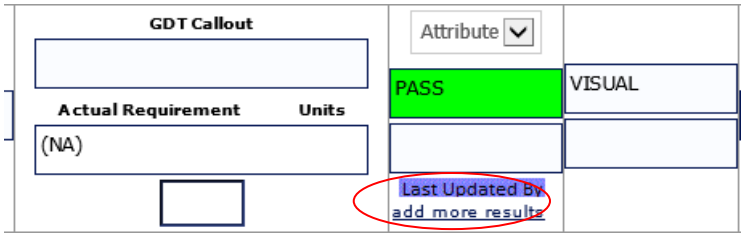
NOTE:. Any general notes or flag notes for a specific dimension or feature shall be listed on Form 3. It is acceptable to reference back to Form 2 for special process results. Notes that do not apply to the FAI part should be listed on Form 3 as N/A and may be grouped on one line.

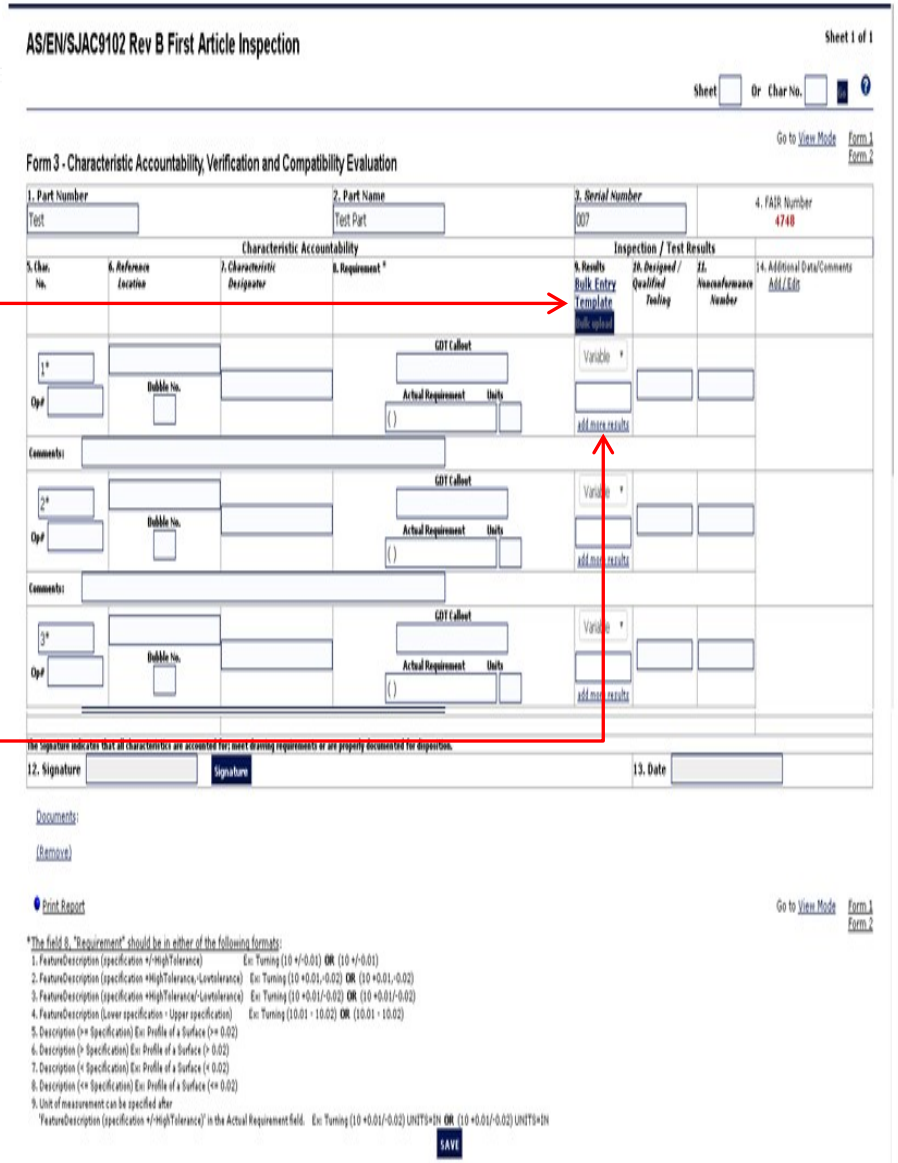
AS9102 FAI Guideline - Form 3 (continued)

Column 9: Results

List measurement(s) obtained for the Design Characteristics. All measurements shall be listed in the same units of measure as indicated on the drawing.

For Multiple Characteristics, list each characteristic as individual values or list once with the minimum and maximum of measured values attained. You can click the "add more results" button in Net-Inspect on Form 3.





If one of the multiple characteristics is found to be non-conforming, then that specific characteristic must be listed separately with the measured value noted.

[See next sheet for Column 9 continuation]

AS9102 FAI Guideline - Form 3 (continued)

Column 9: Results - continuation

Example of a result with a range: A .75 flange running .72 at bottom and .76 at top should be listed as "**.72 to .76**".

All resulting measurements shall be listed in the same units of measure as indicated on the drawing.

For metallurgical characteristics with visual verification requirement that are rated against standard photographs, color chip or surface chip, list the photo number of the closest comparison. A statement of conformance is acceptable (record the reference number in this field).

For processes that require verification per Designed/Qualified Tooling, results shall be accept or a range of value relative to the method of verification.
Ex: *For verification with* Qualified Tooling such as a *Check-fixture vs. gap/profile req't, Block 9 should depict the range of measurement (such as, "**.010 to .015**").*
Ex: *For verification with* Designed Tooling *such as a ¼-28 UNJF Thread Gage, Block 9 should be **PASS**.*
NOTE: be sure to post the Gage or Tool in Column 10

AS9102 FAI Guideline - Form 3 (continued)

Column 9: Results - continuation

For part marking, ensure that marking is legible, correct in content and size and properly located, per applicable specification.

For attribute data, use the verbiage “PASS” or “FAIL” to record the result.

If a Design Requirement requires verification testing, then the actual results will be recorded on form 3. If a laboratory report or certificate of test is included in the FAIR, then these results need not be written on the form, record PASS OR FAIL in Box 9 and add “See Form 2” in the Comments Block. The laboratory report or certificate of test must show specific values for requirements and actual results.

AS9102 FAI Guideline - Form 3 (continued)

Column 10: Designed/Qualified Tooling

If a specially designed tool(including NC programming) is used as a media of inspection, record the tool identification number. When Qualified Tooling (e.g. go/no go gages, thread gages, radius gages) is used for attribute acceptance, record the gage value or range (e.g. minimum/maximum value), as applicable, and its tool identification number.

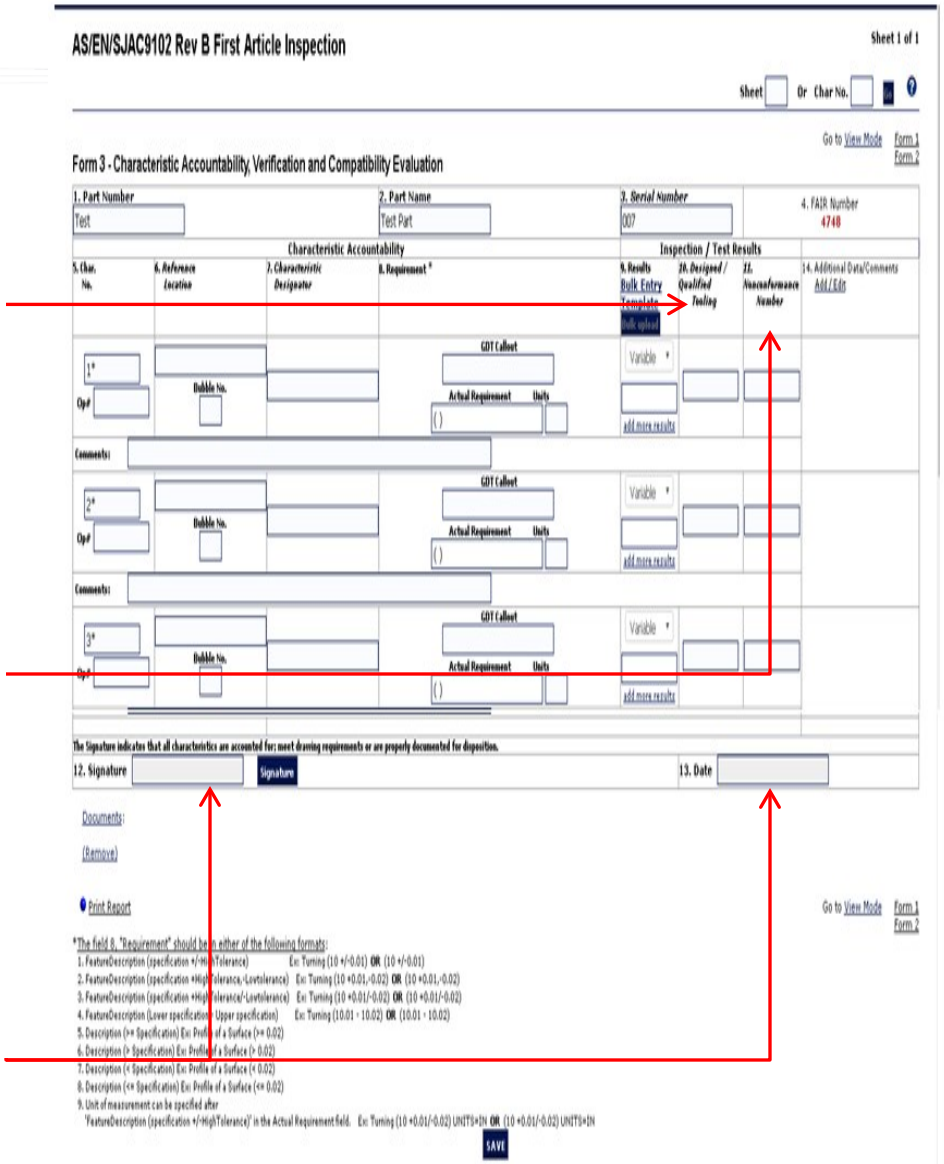
NOTE: Posting/inclusion of standard inspection gages is not cause for FAIR rejection; Column 14 is the preferred location for posting standard inspection gages and their serial number (traceable to their calibration record).

Box 11: Non-conformance Number

Record both the customer and internal LMI non-conformance document reference number if the characteristic is found to be non-conforming. A delta FAI for the non-conforming characteristic(s) will be required on the next run of parts.

Box 12, 13: Signature / Date

These will be auto generated when signed and submitted



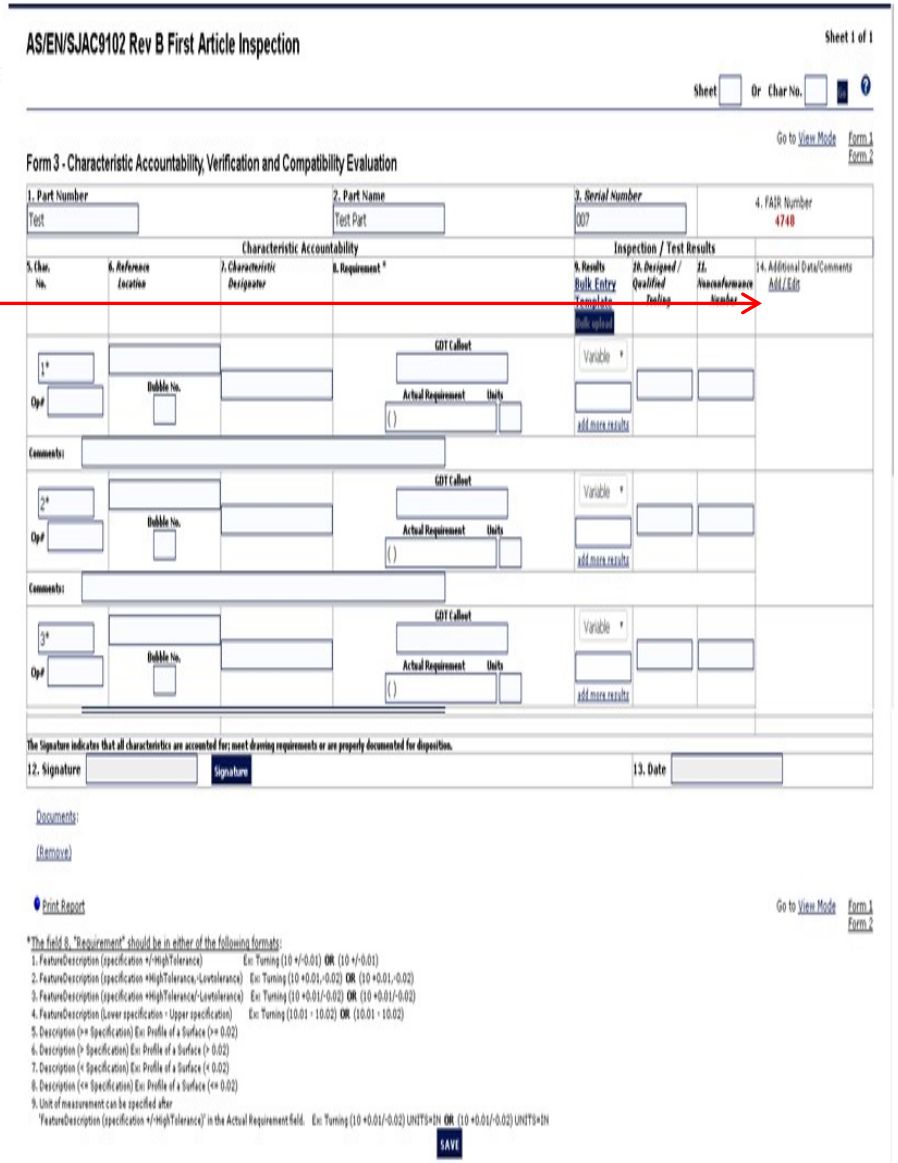
AS9102 FAI Guideline - Form 3 (continued)

Column 14: Additional Data / Comments

This field area is reserved for optional fields as deemed necessary by the organization. Add additional columns as required by the Organization or Customer.

Preferred Method is to list Standard Inspection Gage name and serial number (a number traceable to their calibration record) in Column 14. (See customer requirements)

9. Results Bulk Entry Template Bulk upload	10. Designed / Qualified Tooling	11. Nonconformance Number	14. Additional Data/Comments
Variable			
.7989	N/A		Gage Used
Last Updated By add more results			CALIPERS 0000654



AS9102 FAI Guideline - CMM Reports

Identify CMM reports to reflect the FAI Report Number, Drawing Number, Revision, Model Release and Manufacturing Process Reference.

Create report headers that clearly identify each point group targeting a specific part feature or characteristic including Datum or targets used for alignment, all GD&T controls and supporting BASIC dimensions. Consider use of drawing identifiers as reflected on the Engineering to tie the maps and CMM reports back to the Engineering.

Provide specific Point Maps, **if required** (See customer requirements) – A sufficient number of mapped views should be provided to illustrate point placement for features and surfaces inspected. Maps are to be clearly labeled including alignment points to the drawing established Datum System.

Datum or target origin X, Y & Z values identified on Engineering, must be clearly identifiable on report and alignment maps. Maps do not need to show or list every point taken in the report, but do need to visually demonstrate placement of point groups. Maps provide the reviewer with a visual perspective of the measurement process and features inspected.

AS9102 FAI Guideline - FAI Package

FAI PACKAGES SHALL INCLUDE THE FOLLOWING AS APPLICABLE AND BE TRACEABLE TO THE FAI

Bubble drawing, model screen shot or sketch denoting design characteristics / parts list showing all of the unique part characteristics including all drawing, general and flag notes. This must include your approval and traceability to the authority dataset.

Unique characteristic accountability – must correspond with unique identifier on bubbled drawing / sketch / screen shot or link to CMM report.

- Material Certifications
- Process Certifications
- Completed FAI Forms
- Non-Conformance documents
- Test reports / results
- Casting / Forging approvals
- Completed Work Order and Re-Work Orders that represent the manufacturing process as required
- Copy of the Customer Condition of Supply (e.g. TSSP, etc.) as required
- Photos

AS9102 FAI Guideline - FAI Package (continued)

FAI PACKAGES SHALL INCLUDE THE FOLLOWING AS APPLICABLE AND BE TRACEABLE TO THE FAI

Customer Approval of Frozen planning

Outside Data Sheet (Outside Processor) or Manufactured Engineering Planning Instruction Control Number

Supplier Information Requests (SIR)

Other fabrication records as indicated

CMM Reports – point maps and set-up instructions, as required

Along with the Part Number, a unique identifier should be logged on the supporting document(s), such as:

- FAI Report Number
- Manufacturing Process Reference Number

AS9102 FAI Guideline - FAI for "Pass-Through" parts @ LMI

Definition of "Pass-Through" product: *A LMI facility retains a contractual agreement for delivery of a product with a customer. The LMI facility has no role in its production. The product is manufactured completely at a source outside of the LMI facility. The LMI facility receives the product, creates a "cover" FAI, and delivers the product to the customer.*

As always, LMI Aerospace is responsible for providing a FAI Report to its customers.
To facilitate that effort, with "Pass Through" product, the following information will assist in attaining a standard method that meets the customers' and AS9102 requirements:

Step 1: the LMI facility that has been designated as the owner of the "Pass Through" product will initiate FAI Form 1, in Net Inspect. The difference in completing Form 1 is that the LMI PO number, associated with the Supplier, will be used in Field 9 (and Field 4, where applicable).
A note is to be added, referencing the Supplier's FAI number as well (see subsequent pages).
Step 2: attach a copy of the complete FAI package received from the Supplier (i.e. Form 1-2-3, material certs, process certs, CMM/Inspection reports, supporting documentation, etc…)

◆ ◆ ◆

The purpose of the following two pages are to provide a guide as to how to complete Form 1, in Net Inspect, and what should be provided to ensure the customer that their FAI requirement and AS9102 is met.
A "hard copy" of Form 1 can also be generated and attached in Net Inspect, for customers that require the use of the standard AS9102 Form(s).

Note: This is being presented as a "best practice" for compliance to AS9102, in this scenario. The customer may mandate a different approach, which could override some or all this section.

AS9102 FAI Guideline - FAI for "Pass-Through" parts @ LMI (Continuation)

The following is the suggested method for the creation of the LMI FAI for "Pass-Through" product.

Field 4 : As with all FAIs, it is acceptable to also use the Manufacturing Process Reference number, in Field 9, as the Internal FAI Number (Field 4).

Field 9: With consideration of "Pass Through" parts, a work order/traveler is not generally issued. Therefore, it is acceptable to utilize the LMI Purchase Order, to the LMI Supplier, and Line Item number as the traceable number.

Field 14: Enter Select **Full FAI**

Field 11: Enter the Customer's assigned Supplier Code for the appropriate LMI facility.

Field 12: Enter the Customer's PO and Line Item number

User Comments Field: Add reference to Supplier and their FAI number in Form1 and Form 2 Comment sections.
NOTE: Net Inspect V.5 requires use of Form 2 Comment section

AS/EN/SJAC9102 Rev B First Article Inspection

Form 1: Part Number Accountability

1. Part Number Test	**2. Part Name** Test Part	***3. Serial Number*** N/A	4. FAIR Number 4748 Internal FAI Number: Y00000/001
5. Part Revision Level -	***6. Drawing Number*** Test	***7. Drawing revision level*** Test	***8. Additional Changes*** Test
9. Manufacturing Process Reference Y00000/001	**10. Organization Name** LMI AEROSPACE ST. CHARLES - FOUNTAIN LAKES	11. Supplier Code Hxxxxxx	12. P.O.Number 0000000/001/Rev00
13. Detail Part ☑ **Assembly FAI** ☐ **Program:** NO PROGRAM ASSIGNED	**14. Full FAI** ☑ **Partial FAI** ☐ ***Reason for Partial FAI:***	***Baseline Part Number including revision level***	Customer Part Number

a)If above part number is a detail part only, go to Field 19
b)If above part number is an assembly, go to the "INDEX" section below.

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number	***16. Part Name***	***17. Part Serial Number***	***Supplier***	18. FAIR Number

1) Signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.
2) Also indicate if the FAI is complete per Section 4.4: FAI not Completed

Customer LMI AEROSPACE	
From Division- **To Division -**	
19. Signature	**20. Date**
21. Reviewed By	22. Date
23. Customer Approval	24. Date

User Comments: NOTE: This is a Purchased Part from supplier "My Machine Center Inc" See attached FAI 000000

AS9102 FAI Guideline - FAI for "Pass-Through" parts @ LMI (Continuation)

The following is the suggested format for the standard AS9102 Form 1

Field 4 : The only difference from the Net Inspect version of Form 1, is to add a reference to the Net Inspect FAI number in Field 4.

Reason For Partial FAI field:
Enter "N/A"; then follow up with the NOTE referencing the Supplier and their FAI number.
(NOTE: this NOTE is placed in the USER COMMENTS field of Net Inspect's Form 1 – see previous slide).

SAE International **AS9102B** **Sheet 1 of 1**

Form 1: Part Number Accountability

1. Part Number : Test	2. Part Name: Test Part	*3. Serial Number:* N/A	*4. FAI R Number:* Y00000/001 (Net Inspect #4748)
5. Part Revision Level: Rev X	*6. Drawing Number:* 000X0000	*7. Drawing revision level:* Rev X	*8. Additional Changes:* INST X, Rev X
9. Manufacturing Process Reference: Y00000/001	10. Organization Name: LMI Aerospace St. Charles – Fountain Lakes	11. Supplier Code: Hxxxxxx	12. P.O. Number: 000000000/001/Rev00
13. Detail FAI ☒ Assembly FAI ☐	14. Full FAI ☒ Partial FAI ☐ Baseline Part Number(including revision level): Rev Reason for Partial FAI: N/A NOTE: This is a Purchased Part from supplier "My Machine Center Inc"; See attached FAI 000000		

a) if above part number is a detail part only, go to Field 19
b) if above part number is an assembly, go to the "INDEX" section below.

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number	*16. Part Name*	*17. Part Serial Number*	*18. FAI R Number*

Review of the FAIR

The FAI Report review will be performed in accordance with the requirements of AS9102 and LMI FAI STD-001.

Communicating with Source Inspector

When there is an interpretation of requirements that differs from FAI STD-001 (AS9102), politely request that the source inspector provide the basis for the different of requirements.
If needed, involve the Quality Manager and/or Quality Engineer in the discussion.

Appendix A

The following pages contain
Customer Specific FAI Requirements

AS9102 FAI Guideline

◊ **Aviation Partners Boeing** *(APBP140-1, Q18, Rev. 02/15/2016)*
- o 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**
- o 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)*
- o 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 there's a Lapse in manufacturing of 2 or more years, a Full FAI is required.
  - If there's 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.

◊ **Boeing Products & Programs** *(SB15-045, Rev. B, 03/05/2015)*
- o Per AS9102 & LMI FAI_STD-001

AS9102 FAI Guideline

◊ **Boeing** (continued)
- 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)*
- o 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)*
- o 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)*
- o 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 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

AS9102 FAI Guideline

◊ **GKN** (continued)

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)*

- o Per AS9102 & LMI FAI_STD-001
  - The First Article Inspection along with applicable material or test data/certifications (e.g. paining, plating, composition, x-ray, functional testing, etc.) shall be submitted electronically to **AviationQuality@gogoair.com**
  - The supplier shall forward the partial (delta) First Article Inspection along with applicable material or test data/certifications (e.g. paining, plating, composition, x-ray, functional testing, etc.) with the lot of parts and to **AviationQuality@gogoair.com** for review and approval.

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

- o 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)*

- o Per AS9102 & LMI FAI_STD-001

◊ **Honeywell** *(SQR-004, Rev 16, Date 05/13/2009)*

- o 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)*

- o 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.

AS9102 FAI Guideline

◊ **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

AS9102 FAI Guideline

◊ **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.

AS9102 FAI Guideline

◊ **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).

AS9102 FAI Guideline

◊ **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*)

o 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)

◊ **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.