

# **SUPPLIER QUALITY ASSURANCE**

## **First Article Inspection**

### **AS 9102 A & ASQR-08.2**



Allen LaPoe

Logan Lathem

# Completion of FAI Forms

The FAI forms shall be completed IAW AS 9102 and ASQR-08.2 instructions.

Each field in the forms is designated with a unique reference number.

Each field is also identified as:

- (R) Required: This is mandatory information.
- (CR) Conditionally Required: This field must be completed when applicable (i.e., when there exists a Customer requirement, then this field must be filled in).
- (O) Optional: This field is provided for convenience.



# Completion of FAI Forms

- The fields in the forms are color-coded for convenience. Use of black-and-white forms are acceptable.
- Forms other than those contained in AS9102 may be used, however they must contain all “Required” and “Conditionally Required” information and have the same field reference numbers.
- All forms shall be completed either electronically or in permanent ink.
- Continuation sheets using the same form are acceptable or insert additional rows if completing electronically.



# Completion of FAI Forms

- **Characteristic Accountability:** The Organization shall verify every Design Characteristic during FAI and record the results. Every Design Characteristic shall have its own unique characteristic number.
- **NOTE:** Reference characteristics may be omitted from the FAI.
- **NOTE:** Use more than one line if needed for any characteristic.
- **NOTE:** Characteristics not measurable in the final product shall be verified during the manufacturing process (as long as they are not affected by subsequent operations) or by destructive means. Characteristics verified at the detail level may be referenced in the assembly-level FAIR.



# Completion of FAI Forms

- Results from inspection of design characteristics shall be expressed in quantitative terms (Variables Data) when a Design Characteristic is expressed by numerical limits.
- Record the results in the units specified on the drawing or specification, unless otherwise approved by the Customer.
- Attribute Data (e.g., go/no-go) may be used if no inspection technique resulting in Variables Data is feasible. Attribute Data is permitted when the Design Characteristic does not specify numerical limits. It is also permitted where qualified tooling is consistently used as a check feature and a go/no-go feature has been established for the specific characteristic.





# Form 1: Part Number Accountability

- 1) **(R) Part Number:** Number of the part (FAI part).
- 2) **(R) Part Name:** Name of the part as shown on the drawing.
- 3) **(CR) Serial number:** Serial number of the part.
- 4) **(O) FAI Report Number:** Reference number that identifies the FAI. This may be an internal report number.
- 5) **(CR) Part Revision Level:** Latest part revision that affects the part being first article inspected. If there is no revision, indicate as such. Note: The latest drawing revision (Field 7) does not always affect all parts contained on a drawing.
- 6) **(CR) Drawing Number:** Drawing number associated with the FAI part.
- 7) **(CR) Drawing Revision Level:** The revision level of the engineering drawing. If there is no revision, indicate as such.
- 8) **(CR) Additional Changes:** Provide reference number(s) of any changes that are incorporated in the product but not reflected in referenced drawing/part revision level (e.g., change in design, engineering changes, manufacturing changes, deviation or exclusion from certain drawing requirement, etc.).



# Form 1: Part Number Accountability

- 9) **(R) Manufacturing Process Reference:** A reference number that provides traceability to the manufacturing record of the FAI part (e.g., router number, manufacturing plan number, etc.)
- 10) **(R) Organization Name:** Name of the Organization performing this FAI.
- 11) **(R) Supplier Code:** Supplier Code is a unique number given by Customer to the Organization. It is sometimes referred to as Vendor Code, Vendor Identification Number, Supplier Number, etc.
- 12) **(R) P.O. Number:** Enter Customer Purchase Order number.
- 13) **(R) Detail part or an Assembly FAI:** Check as appropriate .
- 14) **(R) Full FAI or Partial FAI:** Check as appropriate. For a partial FAI, provide the baseline part number (including revision level) to which this partial FAI is performed and the reason for it. For example, changes in design, process, manufacturing location, etc.

**(R)** Required per ASQR-08.2



# Form 1: Part Number Accountability

15, 16, 17 and 18: This section is required only if the part number in Field 1 is an assembly requiring lower level parts to be installed into the assembly.

**15) (CR) *Part Number:*** Detail or next level sub-assembly part number to be included in the assembly.

**16) (CR) *Part Name*** , as shown on the drawing.

**17) (CR) *Part Serial Number*** of the part that is installed in the assembly, when applicable.

**18) (O)** FAI Report Number for detail part.



# Form 1: Part Number Accountability

**19) (R) Signature:** Name and signature of the person who prepared FAI Form 1.

Note: The signature on this form certifies the following two things:

- 1) that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.
- 2) if this FAI is complete. Check as appropriate.

**20) (R) Date** when this FAI Form 1 was prepared.

21) (O) Name of the person from the Organization who approved FAI report

22) (O) Date when the FAI report is approved.

23) (O) Customer Approval. This field is used by Customer to record approval, if required.

24) (O) Date Customer approved this FAI form.





# Form 2: Product Accountability

- 1) **(R) Part Number:** Number of the part (FAI part).
- 2) **(R) Part Name:** Name of the part as shown on the drawing.
- 3) **(CR) Part serial number:** Serial number of the part.
- 4) **(O) FAI Report Number:** Reference number that identifies the FAI. This may be an internal report number
- 5) **(CR) Material or Process:** Enter the name of material or process.
- 6) **(CR) Specification:** Enter material or process specifications number (include permitted alternates, if used), class, and material form (e.g., sheet, bar, etc.). Include all “Make From” materials that are incorporated into the FAI part. For raw materials, include all materials that are incorporated into the FAI part, (e.g., weld/braze filler materials, balls for ball brazing, etc.), and Standard Catalog hardware (e.g., AN, MS fasteners); but do not include processing materials such as acid etchants.



# Form 2: Product Accountability

- 7) (O) **Code:** Enter any required code from the Customer for material or process listing, when required.
- 8) (CR) ***Special Process Supplier Code:*** Customer given Supplier code of the organization performing special process(es) or supplying material, as applicable. Also add, Special process supplier name and address.
- 9) (CR) ***Customer Approval Verification:*** Indicate if the special process or material source is approved by the Customer. Write NA if Customer approval is not required.
- 10) (CR) ***Certificate of Conformance number:*** Number of the certificate (e.g., special process completion certification, raw material test report number, Standard Catalog hardware compliance report number, traceability number)
- 11) (CR) ***Functional Test Procedure Number:*** Functional Test Procedure called out as Design Requirement.



# Form 2: Product Accountability

- 12) **(CR) Acceptance Report Number:** The functional test certification indicating that test requirements have been met.
- 13) **(O) Comments:** As applicable.
- 14) **(R) Prepared By:** Name of the person who prepared this form.
- 15) **(R) Date:** Date when this form was completed.





# Form 3: Characteristic Accountability

- 1) **(R) Part Number:** Number of the part (FAI part).
- 2) **(R) Part Name:** Name of the part as shown on the drawing.
- 3) **(CR) Part serial number:** Serial number of part.
- 4) **(O) FAI Report Number:** Reference number that identifies the FAI.  
This may be an internal report number.
- 5) **(R) Characteristic Number:** Unique assigned number for each Design Characteristic.
- 6) **(CR) Reference Location:** Location of the Design Characteristic (e.g., drawing zone (page number and section), specification, etc.)
- 7) **(CR) Characteristic Designator:** If applicable, record characteristic type (e.g., key, flight safety, critical, major, etc.).



# Form 3: Characteristic Accountability

- 8) **(R) Requirement:** Specified requirement for the Design Characteristic (e.g., drawing dimensional characteristics with nominal and tolerances included, drawing notes, specification requirements, etc.).
- 9) **(R) Results:** List measurement(s) obtained for the Design Characteristics.
- ✓ For Multiple Characteristics list each characteristic as individual values or list once with the minimum and maximum of measured values attained. If a characteristic is found to be non-conforming then that characteristic must be listed separately with the measured value noted.
  - ✓ If a Design Requirement requires verification testing, then the actual results will be recorded on the form. If a laboratory report or certificate of test is included in the FAIR, then these results need not be written on the form, record the reference number in this field. The laboratory report or certificate of test must show specific values for requirements and actual results.



# Form 3: Characteristic Accountability

- ✓ For metallurgical characteristics with visual verification requirement that are rated against standard photographs, 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 Design Characteristic, include statement of compliance (e.g., certification of compliance, verification indicator such as .accept., etc.).
- ✓ For part marking, ensure that marking is legible, correct in content and size and properly located, per applicable specification.



# Form 3: Characteristic Accountability

- 10) (CR) *Designed Tooling:*** If a specially designed tooling (including NC programming) is used as a media of inspection, record the tool identification number.
- 11) (CR) *Non-Conformance Number:*** Record a non-conformance document reference number if the characteristic is found to be non-conforming.
- 12) (R) **Prepared By:**** Name of the person who prepared this form.
- 13) (R) **Date:**** Date when this form was completed.



# Form 3: Characteristic Accountability

- 14) (R)** This field area is reserved for optional fields. Add additional columns as required by the Organization or Customer.
- 14a. **(R)** FAI Inspection Measuring Equipment: Listing of measuring equipment and/or tooling used as a media of inspection.
- 14b. **(R)** Production Inspection Measuring Equipment: Listing of measuring equipment and/or tooling used as a media of inspection.
- 14c. **(R)** FAI Inspector Identification: This identification (i.e., signature or stamp) is used to signify the person(s) who accomplished the inspection.

**(R)** Required per ASQR-08.2

