



Captor Corporation

AS-9102 Rev B Training Material

THE MATERIAL CONTAINED HEREIN HAS BEEN PROVIDED TO SHOW EXAMPLES OF AS-9102 FAI AND THEIR ASSOCIATED REPORTS. PLEASE NOTE THAT EACH FAI IS DIFFERENT AND MAY REQUIRE ADDITIONAL SUPPORTING EVIDENCE OTHER THAN WHAT IS SHOWN IN THE FOLLOWING EXAMPLES.

Purpose/Intent of AS-9102 FAI's

- ▶ A FAI is performed to provide objective evidence that:

All engineering, design, contractual and specification requirements are correctly understood, accounted for, verified and recorded.

Materials, tooling, processes, documentation and personnel are capable of consistently producing compliant hardware.

Part/assembly is 100% compliant, defined, base-lined and repeatable.

Form 1: Part Number Accountability

(R) = Required (CR) = Conditionally Required (O) = Optional

The following numbers align with the cell numbers found on AS-9102 Compliant Forms

1. (R) Part Number: Enter the number of the part (FAI part).
2. (R) Part Name: Enter the name of the part as shown on the drawing.
3. (CR) Serial Number/*Lot Number: Enter the serial number/Lot number of the part.
4. (O) FAI Report Number: Enter the reference number that identifies the FAI. This may be an internal report number. **Captor Encourages the use of Supplier Controlled FAI Report #'s.**
5. (CR) Part Revision Level: Enter the latest part revision that affects the part being first article inspected and include the parts list revision level as needed. 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. (R) Drawing Number: Enter the drawing number associated with the FAI part.
7. (R) Drawing Revision Level: Enter the revision level of the engineering drawing. If there is no revision, indicate as such by inputting "-".

NOTE: Specify parts list revision level (if applicable) in addition to the drawing revision level

8. (CR) Additional
9. (R) Manufacturing Work Order Number: Enter a reference number that provides traceability to the manufacturing record of the FAI part (e.g., router number, manufacturing plan number, etc.).

Form 1: Part Number Accountability Continued

10. (R) Organization/(O)Program Name: Enter the name of the organization performing this FAI and program name if available.

11. (CR) Supplier Code: Enter the supplier code which is a unique number provided by Captor to the Supplier.

12. (CR) P.O. Number: Enter the Customer Purchase Order number/Item number, if applicable or required.

13. (R) Detail FAI or an Assembly FAI: Check as appropriate. **Example: A Detail FAI is derived from 1 single material (Machined Aluminum Housing); An Assembly FAI is when two or more pieces are used to make a piece part (Cable Harness that contains, connectors, wire, lugs, etc...).**

14. (R) Full FAI or Partial FAI: Check as appropriate.

*NOTE: 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. **Suppliers are required to notify Captor in advance of changes in process, materials, substitutions of materials or manufacturing locations.***

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

NOTE: This entry is required only if the part number in field 1 is an assembly requiring lower level parts to be installed into the assembly.

16. (CR) Part Name: Enter the part name as shown on the drawing.

17. (CR) Part Serial Number/*Lot number: Enter the serial number (or lot number) of the part that is installed in the assembly, when applicable.

Form 1: Part Number Accountability Continued

18. (O) FAI Report Number: Enter the FAI report number for detail part.

NOTE: This entry is required only if the part number in field 1 is an assembly requiring lower level parts to be installed into the assembly.

19. (R) Quality Engineer/Supplier Quality Engineer Signature: Name and signature of the person who prepared FAI Form 1 (may be an electronic signature). The preparer may be the Supplier. **Captor also request that a printed name and tittle accompany the signature.**

20. (R) Date of Preparation: Enter the date when this FAI Form 1 was prepared.

21. (R) Reviewed by (Quality Management or Designee): Enter the name of the person who approved the FAI report and check the appropriate FAI status box. **Captor also request that a printed name and tittle accompany the signature.**

22. (R) Date of Approval: Enter the date when the FAI report is approved.

23 and 24: Captor will review and approve the FAI and keep a signed form 1 on file. You may request a copy of form 1 signed a back for your records.

This concludes the form 1 Part Number Accountability Section. If you have questions please contact Captor Corporation.

You may also find additional information on the IAQG Website:

<http://www.sae.org/iaqg/organization/9102.htm>

Form 2: Product Accountability – Raw Material, Specifications, Special Processes and Functional Testing

1. (R) Part Number: Enter the number of the part (FAI part).
2. (R) Part Name: Enter the name of the part as shown on the drawing.
3. (CR) Part Serial Number/*Lot Number: Enter the serial number/lot number of the part.
4. (O) FAI Report Number: Enter the reference number that identifies the FAI. This may be an internal report number. **Captor Encourages the use of Supplier Controlled FAI Report #'s.**
5. (CR) Material or Process: Enter the name of material or process.
NOTE: List material certifications and any special process referenced on the engineering drawing.
6. (CR) Specification & *Revision Level: Enter all material and/or process specification numbers (include permitted alternates, if used), as listed on the engineering drawing and/or parts list and revision level.
7. (O) Process Code: Enter any required code from the Customer for material or process listing.
8. (CR) Special Process Supplier Code: Enter the Customer given Supplier code for the organization performing special process(es) or supplying material, as applicable.
9. (CR) 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/*Compliance (Yes/No): Record the number of the certificate, if available. (e.g., special process completion certification, raw material test report number, Standard Catalog hardware compliance report number, traceability number, P.O. number, lot number, job number etc.).

Form 2: Product Accountability – Raw Material, Specifications, Special Processes and Functional Testing Continued.

11. (CR) Functional Test Procedure Number: Enter the Functional Test Procedure
12. (CR) Acceptance Report Number: Enter the functional test certification indicating that test requirements have been met.
13. (O) Comments: Enter and comments as applicable.
14. (R) Prepared By: Enter the name of the person who prepared this form.
15. (R) Date: Enter the date when this form was completed.

Notes: Form 2 may be divided into 3 sub-categories (see Captor example provided).

Section 1– List all raw materials, including both “make from raw materials” and any other added Part Numbers to the assembly (Example: Cable Harness that contains, connectors, wire, lugs, etc... will have the wire, connectors and lugs listed in the material section1)

Section 2 - List all Special Processes employed. Special processes include but are not limited to Painting, Brazing, Welding, Plating, etc....

Section 3 – List all Referenced Documents, Inspections and any other Applicable Specification that is governed by the Item's drawing or technical data package.

This concludes the form 2 Part Number Accountability Section. If you have questions please contact Captor Corporation.

You may also find additional information on the IAQG Website:

<http://www.sae.org/iaqg/organization/9102.htm>

Form 3: Characteristic Accountability, Verification, and Compatibility Evaluation

1. (R) Part Number: Enter the number of the part (FAI part).
2. (R) Part Name: Enter the name of the part as shown on the drawing.
3. (CR) Part Serial Number/*Lot Number: Enter the serial number/lot number of part.
4. (O) FAI Report Number: Enter the reference number that identifies the FAI. This may be an internal report number. *Captor Encourages the use of Supplier Controlled FAI Report #'s.*
5. (R) Item Number: Enter the unique assigned number for each Design Characteristic.

Ballooned Drawings: Every Characteristic (Including all Notes, Material and Finish Requirements MUST have a Characteristic Number Assigned to them (ballooned).

- **You must have an output (verified) for each location. Example: 8 X 4-40 Insert should have 1 balloon for each location. This can be expressed at Balloon # 9.1, 9.2, 9.3, 9.4, etc...**
- **Basic Dimensions are not required to be ballooned.**
- **Feature Control Frames must be ballooned (with applicable quantities for each verified positional tolerance). The use of the FCF (Feature Control Frame) tolerance must be used, not the standard +/- tolerance specified on the drawing for linear dimensions.**
- **Every Sheet of the drawing (when multiple sheets are present) must be satisfied and ballooned. You can not pick and choose what characteristics and sheets you want to balloon.**

6. (CR) Reference Location: Enter the location of the Design Characteristic (e.g., drawing zone (page number and section), specification, etc.). *If the print has zones identified, they are required to be present on form 3 column 7.*

Form 3: Characteristic Accountability, Verification, and Compatibility Evaluation - Continued

7. (CR) Characteristic Designator: If applicable, enter the characteristic type (e.g., key characteristic, flight safety, critical, major, etc.) Column 7 should be entered as N/A, unless a Key Characteristic is called out on the drawing or technical data package.

8. (R) Requirement: Enter the specified requirement for the Design Characteristic (e.g., drawing dimensional characteristics with nominal and tolerances included, drawing notes, specification requirements, etc.).

9. (R) Results: Enter measurement(s) obtained for the Design Characteristics. Marking justification (Objective Evidence) should include a photo of the actual part marking.

Characteristics: Two main types of characteristics exists (Variable and Attribute).

Variable – These characteristics can be measured and the associated results must be reordered.

Example: 2 X 1.00 +/- .030 - The results column (9) would be recorded as 1.021, 1.018

Reminder: You must have a result for each location and the balloon # should be split (9.1, 9.2, etc.).

Attribute – These characteristics can not be measured but the associated results should be recorded as pass or fail (accept or reject).

Example: - Mark the Assembly IAW MIL-STD-130.

Reminder: If marking is in multiple locations, each location should have it's own results recorded.

10. (CR) Designed Tooling: If a specially designed tooling (including Numerical Control (N/C) programming) is used as a media of inspection, enter the tool/N/C identification number and revision level. Captor also request that measuring tool or asset be recorded into column 10 (even if it is not specifically designed (i.e. calipers, micrometers, scale, etc.).

Form 3: Characteristic Accountability, Verification, and Compatibility Evaluation - Continued

11. (CR) Non-Conformance Number: Record a non-conformance document reference number if the characteristic is found to be non-conforming.

NOTE: Any non-conformances must be dispositioned and closed out per internal requirements (i.e. MRB, RC/CA, etc.). Supporting documents should be added to FAI package. MRB authority must be granted by Captor Corporation prior to delivery.

12. (R) Prepared By: Enter the name of the person who prepared this form.

13. (R) Date: Enter the date when this form was completed.

14. (R) Notes (Compliance Statements) Use this column to add additional notes for justification or compliance.

Example: Mark IAW MIL-STD-130; Column 14 would read as “Validated Marking – refer to the attached photo of the part marking for compliance”.

This concludes the form 3 Part Number Accountability Section. If you have questions please contact Captor Corporation.

You may also find additional information on the IAQG Website:

<http://www.sae.org/iaqg/organization/9102.htm>

Sheet 1 of 1

AS-9102 Form 1 Example

First Article Inspection Report

Sheet 1 of 1

Form 2: Product Accountability - Raw Material, Specifications & Special Process(es) and Functional Testing

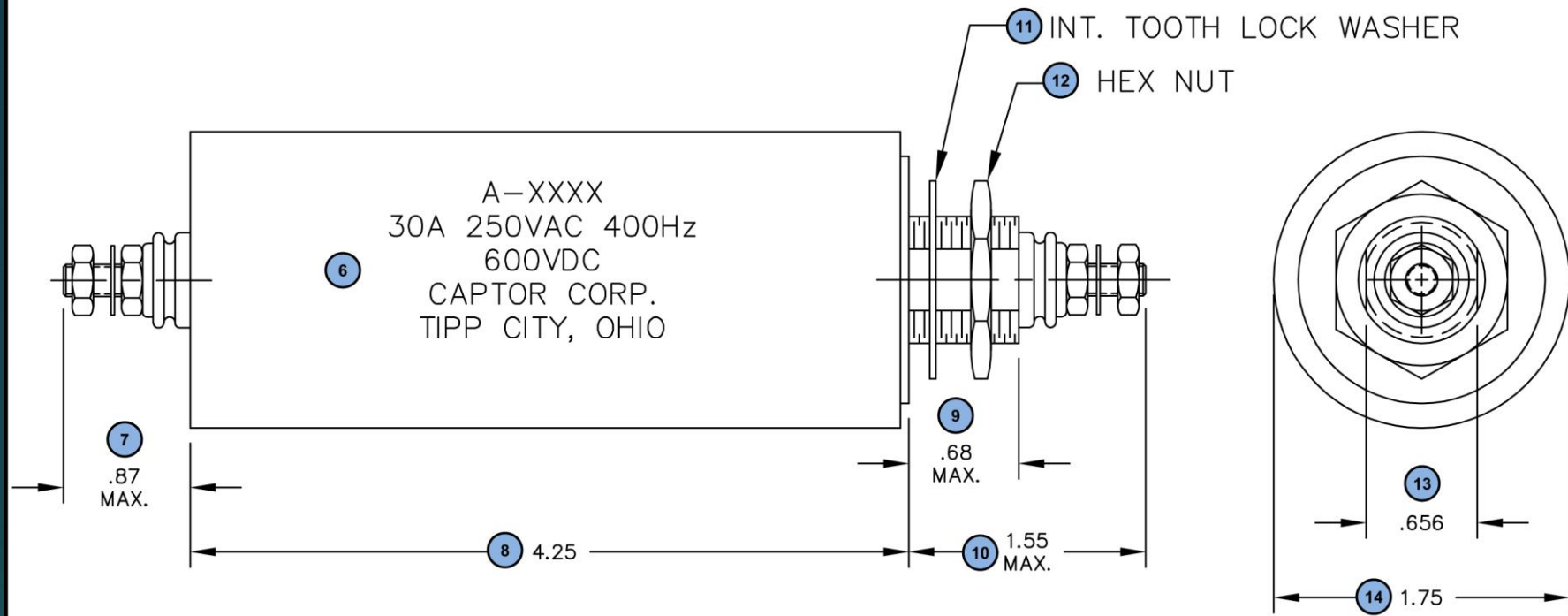
1. Part Number A-XXXX		2 Part Name EMI FILTER		3. Serial / Lot Number 1234		4. FAI Report Number AS2017-XXX					
5. Material or Process Name		6. Specification Number & Revision No.		7. Code		8. Special Process Supplier Code		9. Customer Approval Verification (Yes/No/NA)		10. Certificate of Conformance number	
Materials											
Case Material		.030 " Cold Rolled Steel IAW ASTM A 1008		N/A		N/A		N/A		C of C from ACME STEEL PO # XXXX	
Internal Tooth Lock Washer		MS1234		N/A		N/A		N/A		C of C from ACME Hardware PO # XXXX	
Hex Nut		MS5678		N/A		N/A		N/A		C of C from ACME Hardware PO # XXXX	
Special Processes											
Copper Plate		AMS 2418		N/A		N/A		N/A		C of C from ACME Plating PO # XXXX	
Electro-Tin Plate		ASTM B 545		N/A		N/A		N/A		C of C from ACME Plating PO # XXXX	
Inspections, Referenced Documents & Other Applicable Specifications											
DEPARTMENT OF DEFENSE STANDARD PRACTICE: IDENTIFICATION MARKING OF U.S. MILITARY PROPERTY		MIL-STD-130		N/A		N/A		N/A		C of C from ASME Marking Company PO # XXXX	
11. Functional Test Procedure Number				12. Acceptance report number, if applicable							
Add test Document here (when required)				Add test Document Report here (when required)							
13. Comments											
14. Prepared By John Doe						15. Date 2/16/2017					

AS-9102
Form 2
Example

First Article Inspection Report
Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

1. Part Number A-XXXX				2. Part Name EMI FILTER				3. Serial/Lot Number 1234		4. FAI Report AS2017-XXX	
Characteristic Accountability				Inspection / Test Results						Other Fields	
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	8a. UoM	8b. Upper Limit	8c. Lower Limit	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. Notes	
1	Sample Drawing A-XXXX.pdf pg.1	N/A	1. CASE MATERIAL SHALL BE .030 COLD ROLLED STEEL IAW ASTM A 1008.	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Material Section for C of C Information	
2	Sample Drawing A-XXXX.pdf pg.1	N/A	2. MARK IAW WTH MIL-STD-130	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Ink Marked IAW MIL-STD-130, Visualed Marking, Refer to the attached photo of the part marking for compliance.	
3.1	Sample Drawing A-XXXX.pdf pg.1	N/A	3. CASE MATERIAL FINISH SHALL BE AS FOLLOWS:	EA	N/A	N/A	Accept	N/A	N/A	Compliant IAW the below applicable characteristics	
3.2	Sample Drawing A-XXXX.pdf pg.1	N/A	3A. Copper plate per AMS 2418	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Special Process Section for C of C Information	
3.3	Sample Drawing A-XXXX.pdf pg.1	N/A	3B. Electro tin plate per ASTM B 545	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Special Process Section for C of C Information	
4	Sample Drawing A-XXXX.pdf pg.1	N/A	INTERNAL TOOTH LOCK WASHER PN MS1234	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Material Section for C of C Information	
5	Sample Drawing A-XXXX.pdf pg.1	N/A	HEX NUT PN MS5678	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Material Section for C of C Information	
6	Sample Drawing A-XXXX.pdf pg.1	N/A	A-XXXX 30A 250VAC 400Hz 600VDC CAPTOR CORP. TIPP CITY, OHIO	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Visualed, Refer to the attached photo of the part marking for compliance.	
7	Sample Drawing A-XXXX.pdf pg.1	N/A	.87 MAX.	in	0.87	N/A	0.0857	Calipers	N/A	Compliant	
8	Sample Drawing A-XXXX.pdf pg.1	N/A	4.25	in	4.370	4.130	4.273	Calipers	N/A	Compliant	
9	Sample Drawing A-XXXX.pdf pg.1	N/A	.68 MAX.	in	0.68	N/A	0.667	Calipers	N/A	Compliant	
10	Sample Drawing A-XXXX.pdf pg.1	N/A	1.55 MAX.	in	1.55	N/A	1.542	Calipers	N/A	Compliant	
11	Sample Drawing A-XXXX.pdf pg.1	N/A	INT. TOOTH LOCK WASHER	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Material Section for C of C information- visualed lock washer on part.	
12	Sample Drawing A-XXXX.pdf pg.1	N/A	HEX NUT	EA	N/A	N/A	Accept	N/A	N/A	Compliant, Refer to form 2 Material Section for C of C information- visualed hex nut on part.	
13	Sample Drawing A-XXXX.pdf pg.1	N/A	.656	in	0.661	0.651	0.654	Calipers	N/A	Compliant	
14	Sample Drawing A-XXXX.pdf pg.1	N/A	1.75	in	1.870	1.630	1.752	Calipers	N/A	Compliant	
The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.											
12. Prepared By John Doe									13. Date 2/16/2017		

AS-9102
Form 3
Example




NOTES:

1. CASE MATERIAL SHALL BE .030 COLD ROLLED STEEL IAW ASTM A 1008.
2. MARK IAW WITH MIL-STD-130
3. CASE MATERIAL FINISH SHALL BE AS FOLLOWS:
 - 3A. Copper plate per AMS 2418
 - 3B. Electro tin plate per ASTM B 545

PARTS LIST:

4. INTERNAL TOOTH LOCK WASHER PN MS1234
5. HEX NUT PN MS5678

				 CAPTOR CORPORATION TIPP CITY, OHIO	TOLERANCES .XX = $\pm .120$ UNLESS OTHERWISE NOTED		DR.
							CH.
							ENG.
							DATE
REV.	REVISION RECORD	BY	DATE	TITLE EMI FILTER	SCALE	SIZE A	PART NO. A-XXXX

Ballooned
Print
Example