



AS9102 First Article Inspection Requirements

Author: Cody Coogan

Issue Date: 02/06/2023

Effective Date: 07/01/2024

1. Purpose / Scope

- 1.1. The purpose of this document is to define Collins Aerospace Mountainhome’s interpretation of the standard work to be performed for a FAI in accordance with AS9102 Rev C.
- 1.2. This document is applicable to all standard work FAIs performed by Collins Mountainhome or any of its suppliers to whom this document has been contractually flowed down to.
- 1.3. Additional FAI requirements beyond the scope of this document shall only be considered if they are specifically required by contractual agreement. Individual or organizational preferences are not considered to be requirements unless agreed upon by both customer and supplier and recorded in writing.
- 1.4. In the event of a conflict between this document and contractual requirements, the contractual requirements shall take precedence.
- 1.5. AS9102 Rev C always takes precedence over this document. Any additional or more stringent requirements within this document are intended to be in addition to those of AS9102 Rev C.
- 1.6. Collins Mountainhome shall share this document with customers and suppliers while negotiating contracts to help coordinate expectations from all parties.

2. Responsibility

- 2.1. It is the responsibility of all Collins Mountainhome personnel involved in planning or performing First Article Inspection activities to understand and adhere to this document.
- 2.2. It is the responsibility of Collins Mountainhome and its suppliers to flow down the requirements of this document to all sub-tier suppliers.
- 2.3. The Collins Mountainhome Quality Department is responsible for maintaining and updating this document.

3. References

- 3.1. AS9102 Rev C Aerospace First Article Inspection Requirements
- 3.2. COL-PRO-0024 First Article Inspection (FAI) Requirements
- 3.3. GT-PRO-4100 Jurisdiction Classification
- 3.4. GT-PRO-4200 Harmonized Systems Classification
- 3.5. GT-PRO-6200 Transfer of Intangible Items
- 3.6. MTH-MGT-PRO-0302 ITAR/Global Trade Compliance

NOTE: THIS DOCUMENT IS THE PROPERTY OF COLLINS AEROSPACE CONTAINS CONFIDENTIAL AND/OR PROPRIETARY INFORMATION. YOU MAY NOT POSSESS, USE, COPY OR DISCLOSE THIS DOCUMENT OR ANY INFORMATION IN IT, FOR ANY PURPOSE, INCLUDING WITHOUT LIMITATION, TO DESIGN, MANUFACTURE OR REPAIR PARTS, OR OBTAIN ANY GOVERNMENT APPROVAL TO DO SO, WITHOUT COLLINS AEROSPACE’S EXPRESS WRITTEN PERMISSION. NEITHER RECEIPT NOR POSSESSION OF THIS DOCUMENT ALONE, FROM ANY SOURCE, CONSTITUTES SUCH PERMISSION. POSSESSION, USE, COPYING OR DISCLOSURE BY ANYONE WITHOUT COLLINS AEROSPACE’S EXPRESS WRITTEN PERMISSION IS NOT AUTHORIZED AND MAY RESULT IN CRIMINAL AND/OR CIVIL LIABILITY.

Collins Aerospace Proprietary Information

Document may be subject to Export Control under EAR and ITAR

Printed, downloaded, or shared copies are considered **UNCONTROLLED** and are for **REFERENCE ONLY**. Verify current revision before use.



4. Definitions / Abbreviations

- 4.1. First Article Inspection (FAI): A planned, complete, independent, & documented inspection and verification process ensuring that all prescribed production processes have accurately produced a conforming item to engineering prints, specifications, and/or other applicable design documentation.
- 4.2. First Article Inspection Report (FAIR): The official report with supporting documentation of a component and/or assembly part number which certifies that each sample produced was inspected and validated in accordance with all internal/external customer's specifications.
- 4.3. Commercial off the Shelf (COTS): Ready-made products available to the general public. Products that are custom made or COTS items that have been modified are not considered to be COTS.
- 4.4. Standard Catalogue Item: A part or material that conforms to an established industry of national authority published specification, having all characteristics identified by written description or an industry/national/military standard drawing.
- 4.5. Digital Product Definition (DPD): A digital file (i.e. 3D models) used to define characteristics of a part. Digital files that do not introduce specific additional requirements are considered manufacturing aids, not DPD.
- 4.6. Design Characteristic: Dimensional, visual, functional, mechanical, and material features or properties, which describe and constitute the design of the product.

Note: Additional definitions can be reviewed in AS9102 as needed.

5. FAI Requirements

- 5.1. FAI shall be performed for each unique part number made.
 - 5.1.1. Even when no FAI is required by the customer, FAI shall still be performed and kept on file.
- 5.2. FAI shall cover all design characteristics defined within or flowed down from the Purchase Order.
 - 5.2.1. DPD characteristics are only required for FAI if the contents are specifically labeled as product definition and are not separately covered by drawing characteristics (i.e. general profile tolerances applied to features shown in a 3D model)
- 5.3. FAI is required when one of the following conditions are met. Some conditions will require full FAI while others require either full FAI or partial FAI if only certain characteristics are affected and a baseline FAIR covering the remaining characteristics is on file.
 - 5.3.1. Full FAI required:
 - 5.3.1.1. The organization is producing a part for the first time.
 - 5.3.1.2. At least two years have passed between the completion of the final production operation (typically final inspection) performed on one part and the following production operation (typically the first value added operation not including incoming inspection or kitting).
 - 5.3.2. Partial or full FAI required:
 - 5.3.2.1. A change in design that has the potential to affect fit, form, or function of the part. Examples include but are not limited to new or different design characteristics, drawing revisions, and modifications to contract requirements.
 - 5.3.2.2. A change in the manufacturing process that has the potential to affect fit, form, or function of the part. Examples include but are not limited to changing suppliers, modifying manufacturing methods or parameters, manufacture in a different facility within the same organization, and different tooling or materials used.



- 5.3.2.3. A change in numerical control program that affects fit, form, or function. Examples include but are not limited to use of a different style of cutting tool, changing a targeted dimension, removing additional material, and altering thermal/pressure “recipes”. Minor changes that do not have any impact on the characteristics of the part produced will not trigger FAI.
- 5.3.2.4. A natural or man-made event which impacts the manufacturing process. Examples include but are not limited to natural disasters damaging equipment used to produce the part, political conflicts restricting supply chain quality/availability, and labor shortages leading to inexperienced operators manufacturing the part.
- 5.3.2.5. The previous FAI was considered incomplete due to non-conformances. Partial FAI performed because of this trigger shall include all characteristics that were potentially impacted by corrective actions as determined by the manufacturer, not just the characteristics that are targeted by the corrective action.
- 5.4. FAI is not required for standard catalogue items or COTS products. Instead, they shall include a CofC certifying it meets all requirements. Standard catalogue items and COTS products referenced within a FAIR shall refer to the CofC number instead of a FAIR number.
 - 5.4.1. Modified standard catalogue items or COTS products require FAI. This FAI should use the original CofC as evidence for unmodified characteristics leaving only the modified ones to be inspected.
- 5.5. An existing FAIR should be provided if the same part is sold to multiple customers.
 - 5.5.1. A partial FAIR provided in this manner shall be accompanied by all historical FAIRs linking back to the point where all characteristics have been addressed.
 - 5.5.2. If requirements differ between the old and new customers, a partial FAI shall be completed to cover the differences.
 - 5.5.3. Customer sensitive information shall not be shared between customers. Portions of the FAIR that include such information shall be removed or redacted and a partial FAI shall be performed to cover the information removed (only if applicable).
- 5.6. All relevant certifications shall be reviewed and referenced by identifying number. The certification shall be included with the FAIR.
- 5.7. All FAIRs shall at a minimum, be composed of Forms 1, 2, and 3 as well as ballooned document(s).
 - 5.7.1. The template forms provided within AS9102 or equivalent custom forms containing all numbered fields shall be used in the FAIR.
 - 5.7.1.1. If a custom form rearranges the AS9102 template fields, the corresponding field numbers shall remain attached to the appropriate field as defined in AS9102.
 - 5.7.2. A ballooned document shall be generated containing a unique number for each design characteristic on Form 3.
- 5.8. FAI shall be performed on a part from the first production run.
 - 5.8.1. Prototypes are not considered representative of the first production run as they were not created in the same manner a real part would have been.
 - 5.8.2. First run “test” parts created using actual manufacturing techniques are not considered prototypes and shall be considered valid options for a FAI unit in addition to the first standard production run.
 - 5.8.3. FAI does not need to be performed on the actual first piece produced.



- 5.8.4. If the first production run does not yield a conforming FAI unit or if for any other reason FAI was not performed on the first production run, a part from the next available production run shall be used instead.
- 5.9. It is permissible for the FAI unit to be assembled from sub-components that are not FAI units representing that respective sub-component. Upper level and lower level FAIs are conducted independently from one another.
- 5.10. FAI should be performed fully on a single part whenever practical.
- 5.10.1. If the original unit is damaged outside the scope of standard production, the FAI should be continued on a second equivalently produced unit. The details of this exchange shall be explained in the FAIR.
- 5.11. Parts shall not be shipped to the customer until the FAIR has been accepted, unless otherwise specified per contractual requirements.
- 5.11.1. It is recommended to submit the FAIR at least 10 working days (Mon-Fri except holidays) before expected shipment to avoid delays.
- 5.11.2. Late shipments due to delayed FAIR customer review are the fault of the supplier up to 10 working days after submission unless otherwise specified per contractual requirements.
- 5.12. Upon acceptance, customers shall return a signed copy of the FAIR to the supplier for their records.
- 5.13. Suppliers shall not provide final acceptance of FAIs for sub-tier parts or sub-assemblies that are specifically defined by the customer.
- 5.13.1. FAIRs for sub-tier parts and sub-assemblies that are given a customer defined part number and specified characteristics for that part number shall be accepted by the customer which defined the part/sub-assembly. This sub-tier part and sub-assembly FAIR shall be attached to the assembly FAIR.
- 5.13.1.1. It is acceptable to submit sub-tier part and sub-assembly FAIRs at the same time for customer approval.
- 5.13.2. FAIRs for supplier defined parts and sub-assemblies shall be accepted by the supplier which defined the part/sub-assembly (even when they are later assembled to produce a customer defined part).
- 5.14. All measurements shall be taken at a point in the manufacturing process which is representative of the end condition of the part.
- 5.14.1. If characteristics cannot be measured in the end condition, they should be measured at the latest available stage in the manufacturing process.
- 5.15. Any required or conditionally required field shall be populated and not left blank.
- 5.15.1. If one of these fields is not applicable, it shall be populated as such to indicate that it has been considered and not missed.
- 5.15.2. It is permissible to leave optional fields blank.
- 5.16. All measurements on the FAIR shall be reported using the same units of measure as they are defined in the drawing.
- 5.17. Collins Aerospace Mountainhome suppliers shall identify the piece(s) used in the development of the FAI process. Identification shall not impact the form, fit, or function of the piece(s).



6. FAI Planning

- 6.1. This section covers the FAI planning section of AS9102 as it applies to Collins Aerospace Mountainhome. Other organizations shall use this FAI plan or an equivalent FAI plan to satisfy this section if all requirements are still met.
- 6.2. All FAI planning activities shall be performed before production of parts to ensure all FAI activities are possible and completed during the first production run.
- 6.3. Engineering shall identify all design characteristics traceable to the PO and produce routing instructions accordingly.
 - 6.3.1. If DPD is applicable, it shall be extracted and presented in a directly functional format for use by manufacturing and quality personnel. These extracted design characteristics shall be saved alongside the part drawing.
 - 6.3.2. Routing shall be created and reviewed for coverage of all design characteristics before production begins.
- 6.4. Engineering shall identify all objective evidence needed to prove compliance to all design characteristics.
 - 6.4.1. When a design characteristic is determined to be non-measurable in the part's end condition, a specific inspection step shall be included within the routing at a time where the characteristic would be measurable.
 - 6.4.2. If characteristics are not measurable by the manufacturer, routing shall include a step for measurement by an outside source.
 - 6.4.3. Part specific measurement tools such as Go/No-Go fixtures should be identified and designed before production of the part begins.
 - 6.4.4. Key characteristics and other similar critical items shall be identified and reviewed for additional requirements applied to them.
- 6.5. Engineering and Purchasing shall identify manufacturing processes and suppliers before determination of whether FAI is required.
 - 6.5.1. If any changes to processes or suppliers have been made after this decision, the need for FAI shall be reconsidered and the FAI plan shall be re-evaluated.
 - 6.5.2. Customer specified processes or sources shall always be used when required.
- 6.6. Quality should generate forms 1, 2, 3, and the ballooned document(s) before production begins. All information available at this time should be populated.
 - 6.6.1. Engineering should review forms 1, 2, 3, and the ballooned document(s) against the production process to verify that planning activities have been fully accounted for.

7. AS9102 Forms

- 7.1. Form 1: Part Number Accountability
 - 7.1.1. Field 1: Part Number
 - 7.1.1.1. Required
 - 7.1.1.2. Part number as defined by customer PO if available. If a PO or other customer document does not define a part number, the manufacturer part number should be used instead.
 - 7.1.2. Field 2: Part Name



7.1.2.1. Required

7.1.2.2. Part name as defined by customer PO if available. If a PO or other customer document does not define a part name, the manufacturer part name should be used instead.

7.1.3. Field 3: Serial Number

7.1.3.1. Required only if the part is serialized. If a date code is marked on the part, it shall be used in the absence of a serial number.

7.1.3.2. Unique identification number used to identify the part. This may be a number assigned by the customer or manufacturer. Serial numbers of sub-components shall not be listed here.

7.1.4. Field 4: FAIR Identifier

7.1.4.1. Required

7.1.4.2. The FAIR number is generated by the manufacturer. It shall be a unique identifying number that represents this FAI.

7.1.5. Field 5: Part Revision Level

7.1.5.1. Required only if provided.

7.1.5.2. This is the revision level of the part number defined above. It is taken from the same location as the part number.

7.1.6. Field 6: Drawing Number

7.1.6.1. Required only if provided.

7.1.6.2. This is the identifying number of any 2D drawing or DPD from which design characteristics are taken. Do not include specifications or similar documents in this section as they do not contain design characteristics.

7.1.7. Field 7: Drawing Revision Level

7.1.7.1. Required only if provided.

7.1.7.2. This is the revision level of any 2D drawing or DPD as defined above. It is taken from the same location as the drawing number.

7.1.8. Field 8: Additional Changes

7.1.8.1. Required only if applicable.

7.1.8.2. Include the reference number of any form of communication with the customer that modifies the definition of design characteristics in any way outside of the typical PO traceable documents. Examples include but are not limited to engineering changes, waivers, exclusions from drawing requirements, and written clarifications from the customer. A copy of all documents referenced in this field shall be included in the FAIR as they act as an extension to the standard design characteristics.

7.1.9. Field 9: Manufacturing Process Reference

7.1.9.1. Required

Collins Aerospace Proprietary Information

Subject to the restriction on the title or cover page.

Document may be subject to Export Control under EAR and ITAR



7.1.9.2. This is a unique reference number that can be used to provide traceability to the specific work performed on the part. This is typically a Job Number taken from an ERP system.

7.1.10. Field 10: Organization Name

7.1.10.1. Required

7.1.10.2. This is the legal name of the entity that manufactured the part. For example, the legal name for Collins Aerospace Mountainhome is J. A. REINHARDT & CO., INC.

7.1.11. Field 11: Supplier Code

7.1.11.1. Required

7.1.11.2. If a supplier code is provided on the PO, it shall be used in this field. If no supplier code is provided, the supplier's Cage Code shall be used instead.

7.1.12. Field 12: Purchase Order Number

7.1.12.1. Required unless the part is sold to multiple customers.

7.1.12.2. The PO number is taken from the PO associated with this part. This is always the customer provided identification number associated with the PO. Do not use any supplier generated number for the PO.

7.1.13. Field 13: Detail Part / Assembly FAI

7.1.13.1. Required

7.1.13.2. This field is used to identify whether the part is a standalone detail part made from raw material or an assembly of other defined parts such as COTS products, subassemblies, or other part numbers. Select Assembly if the BOM or PO call out any parts that make up this part or if a part has been purchased from a supplier and later incorporated into the final part. Selecting Assembly will require inputs in form 1 fields 15-18.

7.1.14. Field 14: Full FAI / Partial FAI

7.1.14.1. Required

7.1.14.2. This field indicates whether a full or partial FAI has been performed. See paragraph 5.3 for conditions where full or partial FAIs are required. If Partial FAI has been selected, the part number and revision to which the previous FAI was performed shall be included. Also, a reason shall be provided for performing a partial FAI.

7.1.15. Field 15: Part Number (of assembly component)

7.1.15.1. Required only when form 1 field 13 indicates this is an Assembly FAI.

7.1.15.2. Part number of each part used to produce the Assembly. Only include here if the part is a required component of the Assembly as called out by number in the BOM or drawing. Raw materials or parts that are not called out by number shall be included in form 2.

7.1.16. Field 16: Part Name (of assembly component)

7.1.16.1. Required only when form 1 field 13 indicates this is an Assembly FAI.



7.1.16.2. Name of each part used to produce the assembly. The part name should match the name used on the BOM if applicable. Otherwise, use the drawing name.

7.1.17. Field 17: Part Type (of assembly component)

7.1.17.1. Required only when form 1 field 13 indicates this is an Assembly FAI.

7.1.17.2. Enter whether the part is a detail part, sub-assembly, software, standard catalogue item, of COTS (or equivalent).

7.1.18. Field 18: FAIR Identifier (of assembly component)

7.1.18.1. Required only when form 1 field 13 indicates this is an Assembly FAI.

7.1.18.2. This field contains the identifying number contained in form 1 field 4 of the referenced part. All FAIs referenced shall be attached to this FAIR if needed. FAI is not required for standard catalogue items or COTS products. Instead, a CofC shall be reviewed and referenced by identifying number.

7.1.19. Field 19: Does FAIR Contain a Documented Nonconformance(s)?

7.1.19.1. Required

7.1.19.2. When a nonconformance(s) has been documented in the FAIR, check "YES".

7.1.19.2.1. If "YES" is checked, the documented nonconformance shall be identified in form 3 field 11 for the applicable nonconformance(s).

NOTE: If a nonconformance is detected during FAI, the design characteristics not affected by the nonconformance are still valid, regardless of the product nonconformance disposition (e.g., scrap).

7.1.20. Field 20: FAIR Verified By

7.1.20.1. Required

7.1.20.2. This field contains legible identification of the person(s) verifying the evaluation activities in Section 6.0 were completed.

7.1.20.3. Electronic identification is acceptable.

7.1.21. Field 21: Date (of verification)

7.1.21.1. Required

7.1.21.2. This field contains the date on which form 1 field 20 was populated.

7.1.22. Field 22: FAIR Reviewed/Approved By

7.1.22.1. Required

7.1.22.2. This field contains legible identification of the person from the organization who reviewed and approved the FAIR.

7.1.22.3. Electronic identification is acceptable.

7.1.22.4. This review shall not be conducted by the same person identified in form 1 field 20.

7.1.23. Field 23: Date (of review)



- 7.1.23.1. Required
- 7.1.23.2. This field contains the date on which form 1 field 22 was populated.

7.1.24. Field 24: Customer Approval

- 7.1.24.1. Required only when requested by customer.
- 7.1.24.2. This field contains legible identification of the customer representative who reviewed and accepted the contents of this FAIR. This identification indicates customer approval of this FAIR.
- 7.1.24.3. Electronic identification is acceptable.
- 7.1.24.4. Required for FAIRs where Collins Aerospace Mountainhome is the customer.
 - 7.1.24.4.1. A copy of the final FAIR with Customer Approval shall be returned to the Collins Aerospace Mountainhome supplier.

7.1.25. Field 25: Date (of customer approval)

- 7.1.25.1. Required only when form 1 field 24 is populated.
- 7.1.25.2. This field contains the date on which form 1 field 24 was populated.

7.1.26. Field 26: Comments

- 7.1.26.1. Optional
- 7.1.26.2. Provide any supporting comments (e.g., associated nonconformance information, identification of associated documentation).

7.2. Form 2: Product Accountability

7.2.1. Field 1: Part Number

- 7.2.1.1. Same as form 1 field 1

7.2.2. Field 2: Part Name

- 7.2.2.1. Same as form 1 field 2

7.2.3. Field 3: Serial Number

- 7.2.3.1. Same as form 1 field 3

7.2.4. Field 4: FAIR Identifier

- 7.2.4.1. Same as form 1 field 4

7.2.5. Field 5: Material or Process Name

- 7.2.5.1. Required only if applicable.
- 7.2.5.2. Name of material or process used during manufacture of the part. Do not include materials here that were included as parts in form 1 field 15.

7.2.6. Field 6: Specification Number



- 7.2.6.1. Required only if a specification is called out as a characteristic for a material or process.
- 7.2.6.2. Identifying number of the specification the material or process has been certified to. This number comes directly from the certification and shall match the specification called out on the applicable design characteristic.
- 7.2.6.3. If multiple specifications are listed in the certification, only record the ones that match the applicable design characteristic(s).

7.2.7. Field 7: Code

- 7.2.7.1. Required only if a code is specified for the material or process and is defined by contractual requirements.

7.2.8. Field 8: Supplier

- 7.2.8.1. Required
- 7.2.8.2. Include the full name, address, and supplier code (if applicable) of the supplier. The information recorded here shall be sufficient to identify and contact the supplier if needed.

7.2.9. Field 9: Customer Approval Verification

- 7.2.9.1. Required only if form 2 field 5 is populated.
- 7.2.9.2. This field indicates whether the material source or process has been approved by the customer. Select yes if approval is required and has been received from the customer. Select no if approval is required but has not been received. Select N/A if approval is not required by the customer.
 - 7.2.9.2.1. A “No” shall be handled as a nonconformance and shall be communicated accordingly.

7.2.10. Field 10: Certificate of Conformance Number

- 7.2.10.1. Required only if form 2 field 5 is populated.
- 7.2.10.2. This field contains the identifying number of the document that certifies the material or process meets the specification recorded in form 2 field 6 (i.e. PO number or CofC number).
- 7.2.10.3. The document referenced in this field shall be reviewed as part of the FAI. The referenced document shall be attached as part of the FAIR.

7.2.11. Field 11: Functional Test Procedure Number

- 7.2.11.1. Required only if functional testing is defined as an independent design characteristic. Not required if the testing is covered by form 2 fields 5-10.
- 7.2.11.2. Identifying number of the governing procedure used to perform the testing.

7.2.12. Field 12: Acceptance Report Number

- 7.2.12.1. Required only if form 2 field 11 is populated.
- 7.2.12.2. This field contains either the identifying number or title of the report containing results from the procedure in form 2 field 11. In some cases, the procedure and report are the same document.



7.2.12.3. If unique identifying information is not included in this field, the referenced document shall contain a job number, serial number, or other similar information to maintain traceability.

7.2.12.4. The referenced acceptance report shall be attached as part of the FAIR.

7.2.13. Field 13: Comments

7.2.13.1. Optional

7.2.13.2. This field is typically used to clarify any unclear or atypical circumstances associated with this FAI. Information included here is not necessary for acceptance of the FAIR.

7.3. Form 3: Characteristic Accountability, Verification, and Compatibility Evaluation

7.3.1. Field 1: Part Number

7.3.1.1. Same as form 1 field 1

7.3.2. Field 2: Part Name

7.3.2.1. Same as form 1 field 2

7.3.3. Field 3: Serial Number

7.3.3.1. Same as form 1 field 3

7.3.4. Field 4: FAIR Identifier

7.3.4.1. Same as form 1 field 4

7.3.5. Field 5: Characteristic Number

7.3.5.1. Required

7.3.5.2. This field contains a unique characteristic number to identify each applicable design characteristic. Partial FAIs shall only include the characteristics to which the FAI was performed.

7.3.5.3. A ballooned copy of all documents containing design characteristics shall be included with Form 3. Each characteristic located in this field shall have a corresponding balloon on one of these documents. Ballooned copies of these documents shall not include balloons for characteristics that have not been addressed in this field.

7.3.5.4. Automated inspection methods/tooling measurement report/results shall be clearly linked to the characteristic number in form 3 field 5, ballooned document(s), and associated measurement report/results.

7.3.6. Field 6: Reference Location

7.3.6.1. Required only when the characteristic within field 5 can be identified by some locating feature of the document it is contained within.



7.3.6.2. This field is used to reference the zone, page, and/or section number where the characteristic is located. If multiple documents are used to define the characteristics, enough information should be given to identify which document is being referenced as well.

7.3.7. Field 7: Characteristic Designator

7.3.7.1. Required only when a characteristic is specifically classified as a designation other than minor (or similar) as defined by AS9100 or the customer.

7.3.7.2. This field is used to identify which designation applies to each characteristic. Characteristics identified here shall meet any additional requirements placed on such critical items in addition to the requirement this characteristic is calling out.

7.3.8. Field 8: Requirement

7.3.8.1. Required

7.3.8.2. This field contains the requirement associated with the design characteristic number. This shall be a verbatim restatement of the requirement as it is written.

7.3.8.3. When a dimension or feature is applied in multiple specific locations, the number of locations shall be included in this field. Broadly applicable characteristics such as paint locations or general surface finish do not require a number of locations to be recorded unless a specific number is written as part of the characteristic.

7.3.8.4. All applicable tolerances shall be recorded in this field. This shall include the maximum and minimum values as well as the dimensions with general tolerances defined separately from the requirement.

7.3.9. Field 9: Results

7.3.9.1. Required

7.3.9.2. This field contains the measurements and/or determinations made according to the design characteristic. The following information is required depending on the type of characteristic.

7.3.9.3. Record measurements or values when inspection of a quantifiable attribute is possible.

7.3.9.4. Indicate acceptance or rejection of an attribute using “Accept”/”Reject”, “Conforms”/”Does Not Conform”, “Pass”/”Fail”, or other equivalent wording for attributes that are non-quantifiable and for review of a document containing results.

7.3.9.5. Characteristics with multiple repeated measurements within it shall be reported as either individual measurements or as the minimum and maximum values. If two values are included in this field, it is to be assumed that they are maximum and minimum values representing the range of measured values. If any of the measurements are out of tolerance, all measurements for that characteristic shall be listed individually.

7.3.9.6. FAI only requires results to be reported in this field. CMM reports and similar measurement records shall be reviewed as part of the FAI and translated into this field but are not required to be attached as part of the FAIR. If such measurement records are not included, all values relevant to the characteristic shall be reported in this field.

7.3.9.7. If CMM reports or other documents containing results are included, indication of acceptance or rejection in this field is acceptable with reference to the attached report. If this is



done, the characteristics shall be labeled by characteristic number (if applicable), be clearly linked in the attached report, and shall be presented in the same format as the characteristic.

7.3.9.8. Visual inspection results determined using standard references shall report the closest matching standard or range of standards.

7.3.10. Field 10: Designed / Qualified Tooling

7.3.10.1. Required only when designed / qualified tooling is used to measure the characteristic.

7.3.10.2. Designed tooling only includes tools specifically designed for measurement of this part. Standard measurement tools such as calipers, profilometers, micrometers, and depth gauges are not considered designed tooling.

7.3.10.2.1. CMM programs are only considered designed tooling when a fixed program has been designed and is required. General use of a CMM is considered a standard measurement tool.

7.3.10.2.2. When designed tooling is used to determine acceptance, the tool's identification number shall be recorded in this field.

7.3.10.3. Qualified tooling includes pin gauges, radius gauges, color standards, go/no-go fixtures, and other similar tools. When qualified tooling is used to determine acceptance, the minimum and maximum gauge value(s) associated with the tool shall be recorded in this field.

7.3.10.3.1. Qualified tooling identification numbers are not required to be recorded in this field.

7.3.11. Field 11: Nonconformance Number

7.3.11.1. Required only when a characteristic is non-conforming.

7.3.11.2. This field contains the identifying number traceable to the non-conformance document which pertains to this characteristic.

7.3.11.3. Every non-conformance shall be reported in a non-conformance document which is to be submitted to the customer separately and not as part of the FAIR. This non-conformance report shall meet all customer requirements and is not covered in this document.

7.3.12. Field 12: Additional Data / Comments

7.3.12.1. Required only when additional information is required to represent the characteristic or its acceptance.

7.3.12.2. This field contains any additional information pertaining to the characteristic.

7.3.12.3. Additional information typically includes additional customer requirements to be reported for a characteristic or comments explaining measurement techniques or how a non-conformance was handled.

7.3.12.4. If an out-of-date specification is called out, a comment shall be added explaining what specification supersedes it.

8. Verification of Requirements

8.1. Prior to submission of the FAIR, a review is necessary. Verification of the requirements that would require an FAI to be performed should be done.



- 8.1.1. Requirements that need FAI to be performed (ref. section 5.3)
- 8.1.2. Verification that all forms are completed, all results are within the requirements, and no typos are present.
- 8.1.3. Verification that all certificates of conformance meet the requirements of the drawing or PO.



Revision History

Date	Revision	Section(s) Affected	Description of Change
02/06/2023	00	None	Initial Release
03/24/2023	01	7.3.7.1 & 7.3.7.2	Removed reference to “Critical Item” for clarity.
		7.3.10.2.2, 7.3.10.3, and 7.3.10.3.1	Changed definition of “Qualified Tooling” to match AS1902 and specified what information shall be recorded in the field.
		5.6 & 7.2.10.3	Added “unless otherwise specified within this document”.
		5.8.4	Reworded to clarify intent.
		5.15	Changed to require all required and conditionally required fields to be filled in.
		All	Changed to require all CofCs to be included with the FAIR
07/01/2024	02	Various	Updated entire document to align with AS9102 Revision C.

Document Sign Off

Prepared By & Date:
Safety Review and Date: N/A
Mfg. Engineering Review and Date:
Production Review and Date:
Quality Review and Date:

Collins Aerospace Proprietary Information

Subject to the restriction on the title or cover page.

Document may be subject to Export Control under EAR and ITAR

Printed, downloaded, or shared copies are considered **UNCONTROLLED** and are for **REFERENCE ONLY**. Verify current revision before use.