SQR 001

SUPPLIER QUALITY REQUIREMENTS

CTRM A Member of DRB-HICOM

Effective Date

01-June-2020

WARNING

Approval

Zahirah Shaik Dawood
Head of Department
Supplier Quality Assurance

Hisham Marjohan
Head of Division
Supplier Management

REVISION HISTORY

Revision	Date	Description of Changes
NC	13- August 15	Initial Release
A	17- October 16	Completely re-written and re-formatted – All paragraph
B	06- Nov – 2017	Add 1.3 – SQR 001 availability at CTRM website Add 3.0 – Communication/ Interaction Add 12.4 – NADCAP M & I for CMS Add 17.0 – Obsolescence Notification Add 18.0 – Calibration Services Requirements Add 20.2 & 20.3 – Counterfeit Part Add 21.3 – Delegation Verification Activity Add 21.4 – Design Responsible Supplier Add 22.3 – Metallic Raw Material Validation Add 32.1 till 32.5 – Training and Staffs Competencies Add 32.7 – Vision Requirements Add 35.0 – Foreign Object Damage (FOD) Add 45.1 & 45.2 – Escalation Process Add 46.2 – Verification And Validation Activities Add 48.0 – Critical Item And Key Characteristic Control
C	01-Jan - 2019	New Clause: Add 3.0 – Specific Requirements – By CTRM Ac's Customer Add 18.0 – Distributor Requirement Add 19.0 – Manufacturer of Standard Parts Add 23.0 – Delegation of Product Verification Add 25.0 – Test Specimens Requirement Add 26.0 – Validation and Control of Special Processes Add 27.0 – IM & TE Add 46.0 – Add Form 542 Add 47.0 – Add 47.3 – 47.6 Add 50.0 – Requirements for APQP Add 52.0 – NADCAP Certification Add 53.0 – Contingency Plans Add 54.0 – Supplier Performance Rating
D	01-Jun-2020	1.6 – Supplier Categorization 2.3 – Notification of QMS changes 3.0 - Special Process Requirements 7.0 - Zycus and Supplier Quality Assessment 8.2 – CTRM PO's contents 10.0 – Code of Conduct 12.0 – SQR-004 –DPD & MBD Quality Assurance Requirement for supplier 13.2 – Delta FAI for changes 19.4 – Distributor requirements 22.4 – Counterfeit Definition 25.4 – Validation of metallic raw material

		36.1 – Shelf Life Control 40.0 – Release Documents 55.0 – Supplier Performance Rating as per SQR 003 56.0 – Virtual Audit

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1.0 Introduction

1.1 The purpose of this document is to communicate the quality, delivery and other general requirements that CTRM AC expects from all of its suppliers. This document details the facilities and features of the supplier's quality system that will be assessed by CTRM AC's representatives prior to the placing of new orders and after the orders have been placed.

It will also be used as a standard for the development of existing relationships between CTRM AC and its current approved supplier. This document is not intended to replace any agreements or specifications, but serves as the minimum requirement upon which other requirements and expectations are built.

1.2 This document applies to all CTRM AC's purchase order for products and services used directly in CTRM AC's production. It is the supplier's responsibility to notify the Supplier Quality Assurance Department of any questions or concerns in complying with the requirements of this SQR 001.

1.3 APPENDIX A: Applicability Matrix contains keys to determine the applicability of CTRM AC's requirements to each supplier's categorization, and shall be used by the supplier as part of the supplier's quality planning function to ensure compliance with CTRM AC requirements.

1.4 Supplier shall comply by performing a documented gap analysis for each new revision of SQR 001 and ensure gap closure within 60 days from the document publication date unless otherwise notified by CTRM AC. Request for any deviation shall be documented and submitted to sqa@ctrm.com.my . Only the SQA Head of Department may authorize any deviations to the requirements included herein.

1.5 This SQR 001 document is available at the latest revision on CTRM AC's website at https://www.ctrm.com.my under the "SUPPLIER" section.

1.6 The Supplier Categorization used in this document are as follows:

Category	Definition
Design Responsible Supplier / Supplier Owned Design	Supplier of products defined by a design / drawing proprietary to that supplier and linked to a customer's part number through the use of a customer reference drawing and/or other purchase order requirements
Manufacturer for products assembly without design authority	Manufacturer produces product according to drawing set provided by CTRM AC. (Build to print)
Manufacturer for materials (Direct / Indirect)	Manufacture a material that shall comply with the specific parameters or characteristics according its operation or manufacturer based on standard.
Distributor / Stockist	Responsible for purchase, storage, splitting and sale of products without affecting product's conformance.
Service (Calibration / Testing)	An external organization demonstrating appropriate technical scope and competency of calibration on measuring & test equipment (M&TE) / testing by accreditation to an international accreditation body

2.0 Quality Management Systems (*AS9100 Clause 8.4.3*)

2.1 Suppliers shall have and maintain a Quality Management System suitable to the products and services provided to CTRM AC. QMS shall be certified by an IAQG accredited certification body (CB) and registered in OASIS with the latest revision. CTRM AC's requirements for QMS approval within its supply chain is as follows:

- Manufacturer — AS9100
- Stockist/ Distributor — AS9120
- Testing Laboratory — ISO 17025 or NADCAP or ILAC Accreditation
- Calibration — ISO 17025 or ISO 10012 or ANSI/NCSL Z540.3

2.2 Supplier will be required to provide objective evidence that demonstrates compliance with the applicable QMS and SQR 001.

2.3 The supplier shall notify CTRM AC of changes in the QMS, including NADCAP (certification / registration /suspension/ expiration / accreditation status or major audit findings) within 48 hours of receiving notification of the change or finding. Written notification shall be submitted to sqa@ctrm.com.my and to the respective CTRM AC's buyer.

3.0 Special Process Requirements

3.1 If supplier or its subtier is involved in one of the PRI/NADCAP AC7004 families of special processes recognized by CTRM AC, the supplier or subtier shall gain and maintain the PRI/NADCAP AC7004 accreditation.

3.2 In addition, supplier's subtier shall be approved by end customer and comply with end customer's requirements depending on the program. Any exception must be specifically agreed by CTRM AC. Supplier shall also ensure sub-tier's accreditations are current and valid. A list of NADCAP certified special processors can be found at eAuditNet.

3.3 The supplier is required to validate and control all special processes and shall maintain evidence that supports the ability of the processes to achieve the specified results. Validation includes but is not limited to defined process criteria, approved and trained personnel, approved equipment, specific methods or procedures specified by the design authority, retention of records, test reports, and re-validation plans. CTRM AC reserves the right to verify or validate by the special processes that are used on CTRM AC's products.

3.4 Design responsible supplier / Supplier owned design shall have a comprehensive special process management program in place for the special processes. The program shall include maintaining a list of qualified special process suppliers along with their NADCAP approval status. If special process suppliers do not hold NADCAP certification, design responsible supplier shall maintain an appropriate oversight of internal and supplier processes including, but not limited to, onsite special process audits, periodic testing of product, and other means to validate product integrity.

4.0 Specific Requirements – By CTRM AC's Customer (*AS9100 Clause 8.4.3*)

4.1 In addition to the requirements contained in this document, the following specific requirements in APPENDIX D are applicable to the following CTRM AC's customers. The supplier is required to access and review CTRM AC's Customer Portal for the latest Customer's documents. If supplier has difficulty to retrieve the documents from CTRM AC's Customer Portals, supplier shall inform SQA personnel.

4.2 Supplier shall comply with the latest revision of SQR 001, Customer's Specific Quality System Requirements, and all documents specified by this SQR-001.

4.3 These requirements shall be flowed down internally and communicated to any sub-tier supplier in the supply chain.

5.0 Communication/ Interaction (*AS9100 Clause 8.4.3*)

The supplier shall appoint personnel with organizational authority as a principle to resolve any issues related to supply chain. Names and positions of these personnel of contacts shall be communicated to CTRM AC's Buyer.

6.0 Right of Access (*AS9100 Clause 8.4.3*)

Suppliers shall provide the right of access to CTRM AC, CTRM AC's customer, statutory and regulatory authorities to the applicable areas of all its facilities and to applicable documented information, at any level of the supply chain.

7.0 Approved Supplier List

CTRM AC requires all suppliers to be approved prior to the issuance of purchase order. All suppliers must be approved by CTRM AC, regardless of approvals by customers or other entities. Suppliers are required to furnish CTRM AC with updated documents when necessary including current QMS certification and customer's approval (e.g. Airbus, Spirit, Collins Aerospace etc.)

To become CTRM AC's approved supplier, below listed stages need to be completed:

Category	Definition
Procurement	ZYCUS (e-Procurement) : https://zsn.zycus.com/guest/genericRegister/DRB803 All of our supplier registrations are in **ZYCUS, e-Procurement system**. Kindly **login into our system and register** at this link and follow the instruction.
Supplier Quality Assurance (SQA)	Supplier Quality Assessment Checklist – Form 705

CTRM AC Procurement and SQA will review the completed forms and notify the supplier regarding their approval status. QMS certification and customer's approval evidence may be used in place of the Supplier Quality Assessment, however CTRM AC may perform and onsite audit if necessary.

8.0 Compliance to Contractual Requirements

8.1 All products, process, and services shall comply with CTRM AC's requirements including approval of : *(AS9100 Clause 8.4.3)*

- products and services,
- methods, processes, and equipment.
- the release of products and services.

8.2 CTRM AC's Purchase order (PO), as per Appendix F contained following information, not limited to:

- PO No (AC000000) and revision (0, 1, 2, 3….)
- SQR-001 and revision (A, B, C, D, E….)
- General Terms and Conditions of Purchase Order
- Statement of Work (SOW) and issue –applicable to manufacturer for products / assembly
- Part no and description
- Drawing / specification and revision
- Due Date – Date supplier to ship out the products / material from their facility
- General terms and conditions of purchase order
- Location to ship (CTRM or CTRM's customer)

8.3 The supplier shall adhere to comply with all contract (e.g., engineering drawing, specification, SQR 001, SoW, purchase order) requirements. The supplier shall review CTRM AC's requirement stated on the PO to ensure supplier has the capability and resources to comply with the requirement.

8.4 The supplier shall reply to the PO by using the Purchase Order Acceptance Form, by returning the form within ten (10) working days from the receipt date of PO, failing which the PO shall be considered accepted and acknowledged at the expiry of the ten (10) working days period.

8.5 The supplier shall notify to CTRM AC immediately if they are unable to comply with the requirements. Any discrepancies or queries shall be resolved before the order or contract is accepted. Amendments to orders or contracts shall be formally reviewed. Records of contract review shall be maintained and documented.

8.6 Supplier shall only accept agreements and instruction in writing (e.g., PO, drawing, specification). Verbal agreements/instruction and email are not acceptable as approval and authorization.

8.7 When the supplier uses sub-tier sources to perform work on products and/or services for CTRM AC, the supplier shall flow down to its sub-tier, all of the applicable technical and quality requirements contained in CTRM AC's contract.

9.0 Language

The supplier shall ensure all written and oral communication must be in English, as well as supplier's procedure, specification, or reports.

10.0 Code of Conduct

Suppliers to adhere to and be bound by the following guidelines and policy, details of which are as set out in the link below:

- The VENDOR Code of Conduct
  https://www.drb-hicom.com/vendor-code-of-conduct
- DRB-HICOM Whistleblower Policy
  https://www.drb-hicom.com/whistleblower-policy

11.0 Protection of Proprietary Information

Any information received by the supplier from CTRM AC must be kept confidential and never be disclosed to any third party without the prior written consent of CTRM AC. The proprietary information can include, but is not restricted to all versions of electronic data, drawings and documentation, tooling and materials. The supplier shall not, under any circumstances make a direct approach to CTRM AC's customers in relation to agreed business dealings.

12.0 DPD / MBD Requirement

12.1 Datasets will be provided in the CATIA V5 format to supplier by CTRM AC via File Transfer Protocol (FTP) server. Data will be dispatched together with Engineering Dispatch Note (EDN) for the receiver to sign as an acknowledgement of receipt and the EDN shall be returned to the sender as mentioned within the EDN form.

12.2 The supplier shall comply with the latest SQR-004 –DPD & MBD Quality Assurance Requirement for supplier and flow down the requirements of applicable document to their subtier when data sets and data set derivatives are used based on workpackage reward by CTRM AC. Subtier supplier shall be audited and approved to DPD/MBD by the supplier prior to use of data for production.

12.3 The supplier shall develop and maintain comprehensive documented DPD /MBD processes and/or procedures that assure integrity of the product engineering and/or tooling and configuration is maintained throughout the supplier's DPD/MBD system from receipt of CTRM AC data through creation of derivatives to product acceptance and process improvement.

12.4 CTRM AC SQA representative shall be notified within 30 days of any changes to a suppliers' DPD/MBD process. CTRM AC reserves the right to survey and/ or review the supplier's DPD/MBD system to verify effectiveness of the supplier's DPD/MBD Quality Assurance Plan and procedures.

13.0 Notification of Company Changes *(AS9100 Clause 8.4.3)*

13.1 The supplier shall notify CTRM AC a written statement of any changes to processes, products, or services that would affect the product and/or service supplied including; change in top management, ownership, company name, manufacturing facility location, quality approvals, changes in product and/or process, changes of subtiers, and etc.

13.2 Changes to product manufacture or configuration shall be validated by a delta FAI and obtained CTRM AC approval prior to delivering the product.

13.3 Any changes as per Appendix B: Supplier Notification Changes Process may require CTRM AC SQA approval. Changes shall not be implemented by the suppliers without prior communication / agreement from CTRM AC.

The changes must be preceded by a completed Form 479 with details of affected CTRM AC part numbers and submitted to sqa@ctrm.com.my.

14.0 Environmental, Health & Safety (EHS) Compliance

14.1 The supplier is recommend to gain and comply with the Health and Safety Policy (accordance with OHSAS18001 or ISO 45001) and implement an Environmental Management System (EMS), based on ISO 14001 or any other similar standard, to manage the environmental issues related to its activities.

14.2 The Supplier shall be responsible for and comply with all importer obligations and requirements (European or other) applicable in connection with substances contained in the product to be delivered to CTRM AC.

14.3 Products supplied shall not contain any product, material or substance prohibited by the legislation or regulations applicable in the suppliers' countries, national and global.eg REACH, RoHS, ECHA, etc. The supplier is responsible in ensuring that CTRM AC is informed of presence in the product of substances to ensure a high level of protection of human health and the environment from chemical substances.

15.0 Conflict Mineral

Supplier shall provide CTRM AC with a written certification in the case of the presence of any "Conflict Minerals" contained in or used in the production of the items purchased by CTRM AC and the country of origin of such "Conflict Minerals" as defined by the Dodd-Frank Wall Street Reform and Consumer Protection Act. "Conflict minerals," or 3TG as defined in Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, are:

- Tantalum, tin, tungsten, & gold (3TG)

Any other derivatives or any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country. Suppliers are recommended to include a statement of compliance on Certificates of Conformance delivered to CTRM AC.

16.0 Documented Information Retention and Disposition (*AS9100 Clause 8.4.3*)

16.1 CTRM AC requires all quality records (hard copy, film media or electronic data) to be retained in accordance with EN9130 or customer requirements specified in APPENDIX C: Document Retention and Storage Matrix. Quality records include, but are not limited to, First Article Reports, Work Orders, Inspection Criteria, Test and Inspection Results, Nonconforming Material Documentation, and Certifications.

16.2 Records shall be readily available for review by CTRM AC, CTRM AC's customers, or statutory regulatory authorities. An English version (copy of the record) shall be available for all quality data and/or approved design data. In case of termination of contract or bankruptcy between CTRM AC and the supplier, the archives shall remain accessible to CTRM AC's representatives or transferred with prior authorization to CTRM AC.

16.3 At the expiration of the retention period, the supplier shall obtain a written permission / authorization from CTRM AC's SQA HoD prior to the destruction of any manufacturing or quality records related to CTRM AC. The supplier shall dispose the documents in accordance with CTRM AC's disposition.

16.4 Correction to documents shall be recorded, dated and traceable to the originator making the changes. All amendments shall be made by a striking through the original text using permanent ink, in such a way as to leave the original text legible. A stamp, signature and date shall be placed adjacent to that amendment.

17.0 Obsolescence Notification

The supplier shall be responsible for managing obsolescence over the entire period of the contract and notwithstanding any obsolescence issues or problems, the supplier remains responsible for complying all performance and other requirements of the contract. The supplier shall inform CTRM AC any potential, known or planned obsolescence within the next twelve months. The notification must be preceded by a completed Form 479 and shall be sent to sqa@ctrm.com.my and to the respective CTRM AC's buyer. The notification shall include:

- CTRM AC part number
- Part No. Details
- Reason for product discontinuation
- Last time buy date
- Last ship date
- Equivalent/Alternate material if available

Stability of ongoing supply based on minimum two (2) years future supply is required.

18.0 Calibration and Test Certification Requirement

18.1 Where calibration and test certification are issued by supplier or their subtier, information shall include the following as a minimum:

- Name of Calibration / Testing Organisation
- Certificate Serial Number
- Date of calibration / Testing
- Description of the equipment
- Equipment identification number
- Result of calibration / Testing
- Master/Standard used

18.2 Calibration / Testing certificate shall clearly state measurements traceability to National or International standard and shall be signed by the supplier's responsible person.

19.0 Distributor Requirement

19.1 Supplier shall ensure:

- only purchase from the manufacturer's listed in QPL (Qualified Product List)
- supplied only from AS9120 certified distributors
- authorized distributor by the Original Equipment Manufacturer (OEM)
- where intermediary distributor are involved, shall clearly traceable and identified
- Customer's Approved Source

19.2 Distributor is not authorized to alter/modify the products in any ways. With each shipment, the distributor shall send its own certificate of conformance (C of C) additional to manufacturer's C of C.

19.3 Distributor will be responsible for the quality of all products purchased from the manufacturers, and must define the necessary actions to be taken when dealing with the manufacturers that do not comply with the requirements. The distributor shall also prevent the purchase of counterfeit/suspect unapproved product.

19.4 Distributor shall conduct:

- Incoming inspections, as appropriate
- Performance measurements of their manufacturer sites
- Reporting of manufacturer's performance to CTRM AC upon request
- Alert / inform CTRM AC in case of significant events or identified risks with potential impact on CTRM AC

20.0 Manufacturer of Standard Parts

The parts shall deliver with at least a C of C, unless contractually stipulated otherwise. Furthermore, the documentation shall be delivered according to the standard for the component.

21.0 Quality Assurance Plan (QAP)

For those suppliers who are required by CTRM AC to establish a Quality Assurance Plan (QAP), this QAP must be submitted and approved by CTRM AC. The QAP shall include all the processes of the quality management system and the resources to be applied to comply with requirements applicable to the workpackage and contract. Any deviations from these requirements shall be reflected in the QAP which shall be in line with ISO10005, unless specifically agreed by CTRM AC.

Where the QAP relates to the supply of parts or request by CTRM AC, the QAP shall define all items to be supplied (including part numbers and description).

22.0 Counterfeit Part

22.1 The supplier shall prevent use of counterfeit parts. (*AS9100 Clause 8.4.3*)

22.2 Supplier and all members in their supply chain, including distributors, shall comply with the requirements of AS5553 for Electronic Components and AS6174 for Non–Electronic Component, where applicable. Suppliers shall purchase material directly from original equipment manufacturers (OEM), original component manufacturers (OCM), or their authorized distributors.

22.3 Counterfeit parts delivered or furnished to CTRM AC are deemed nonconforming. Supplier shall notify CTRM AC's SQA personnel and appropriate buyer within 24 hours or less if supplier is aware or suspects that it has furnished counterfeit part to CTRM AC to ensure timely notification to CTRM AC's customer.

22.4 The supplier shall be liable for costs related to the replacement of counterfeit parts and any testing or validation necessitated by the installation of authentic parts after counterfeit parts have been replaced. The supplier bears responsibility for procuring authentic parts or items from its subcontractors and shall ensure that such subcontractors comply with these requirements.

Note: *Examples of a counterfeit part can be include, but not limited to, the false identification of marking or labeling, grade, serial number, date code, documentation, performance characteristics, or unauthorized rework / repair.*

23.0 Control of Subtier Suppliers

23.1 The supplier shall be responsible for the quality of all products purchased from suppliers, including customer-designated sources. The supplier shall effectively evaluate, select, monitor and maintain an up to date list of the suppliers and the supplier's subtier (including distributor and manufacturer) used on CTRM AC Workpackage and submit to CTRM AC upon request. List shall include at minimum:

- Name of Supplier
- Address
- 3rd party Approval (Customer, CB)
- Part Description, Specification, Special Process & NADCAP

23.2 The supplier and supplier's subtier shall utilize only approved suppliers and/or special processors listed on the CTRM AC's customer's ASL as per Appendix D. (*AS9100 Clause 8.4.3*)

23.3 The supplier shall flow down to its subtier all the applicable CTRM AC's technical (such as P/N drawing, spec) and quality requirements including this SQR 001.CTRM AC and its customer reserve the right of entry to subtier's facilities.

23.4 Supplier shall apply appropriate controls to their direct and subtier supplier to ensure requirements contained in this SQR 001 are met. Subtier control can include:

- Ensure supplier's subtier accreditation certificates are current including NADCAP.
- Verifying and documenting all products and services purchased from subtier for use in products for CTRM AC comply with CTRM AC's and CTRM AC's customer specifications.
- Inspection and periodic audit at the subtier's premises.
- Ensure that products delivered by distributors are manufactured by approved sources and are qualified. The supplier shall be responsible for the product delivered by distributors with the required delivery documentation.

24.0 Delegation of Product Verification

24.1 Where the supplier delegate inspection activities to the sub-tier supplier, the requirement for delegation shall be defined and maintain the delegation list. Delegation verification activity is a process whereby a supplier has been delegated the authority to act on behalf of the delegating organization to verify and release products/services. Supplier shall notify CTRM AC prior to the implementation of a delegation inspection program. Supplier's delegation verification program shall comply with the requirements of AS9015, AS9117, or AS13001 where appropriate.

24.2 This clause is applicable to the CTRM AC's DQR (Delegated Quality Representative)

Suppliers who have been delegated the authority to act on behalf of CTRM AC to verify and release products/services via an Authorization Letter by CTRM AC as CTRM AC's DQR, shall comply with the latest revision of AS9117, AS9015 and SQR 002.

25.0 Verification and Validation on Purchased Products

25.1 Suppliers shall comply, control, perform and document all applicable test, inspection and verification activities (including production process verification) required to deliver conforming product. (*AS9100 Clause 8.4.3*)

25.2 For raw material acceptance, test report shall 100% checked against applicable specification. Supplier shall ensure raw material is procured to the latest revision unless requested by engineering.

25.3 Supplier shall periodically validate test reports for raw material accepted on the basis of test reports. That validation shall be accomplished by supplier or other independent party through periodic, scheduled tests of the raw material samples. Supplier shall retain test

reports provided by the raw material supplier, as well as supplier's validation test results as quality records traceable to the conformance of goods.

25.4 Applicable for Collins Aerospace (CA) Program. Supplier shall validate physical and chemical properties of metallic raw materials at a minimum frequency of one test per material per supplier within a 12 month period using a laboratory holding A2LA, NADCAP accreditation or by a CA approved supplier.

26.0 Test Specimens Requirement *(AS9100 Clause 8.4.3)*

When test specimens are required, supplier is required to provide test specimens for design approval, inspection/verification, investigation, or auditing, upon request by CTRM AC.

27.0 Validation and Control of Special Processes

The supplier is required to validate and control all special processes and shall maintain evidence that supports the ability of the processes to achieve the specified results. Validation includes but is not limited to defined process criteria, approved and trained personnel, approved equipment, specific methods or procedures specified by the design authority, retention of records, test reports, and re-validation plans. CTRM AC reserves the right to verify or validate by the special processes that are used on CTRM AC's products.

28.0 Inspection, Measuring & Test Equipment Requirement (IM & TE)

28.1 Supplier (including supplier subcontracts for their calibration services) IM&TE shall comply to ISO 10012 or ISO 17025 or ANSI/NCSLZ540.3.

28.2 SQA CTRM AC shall be notified within 24 hours at sqa@ctrm.com.my from the time the supplier is aware where IM&TE which have been used for final acceptance are found to be out of calibration by an amount greater than 25% of the product tolerance, when product tolerance is known, or when measured error of the measuring equipment is greater than two times the calibration tolerance when product tolerance is not known.

28.3 These conditions require documented review of impact on quality and notification to CTRM AC if it is suspected that shipped product may have been accepted by the suspect IM&TE.

29.0 First Article Inspection Report (FAI)

29.1 FAI shall be performed by supplier in accordance with AS9102 and customer's requirements as a guideline where applicable. The supplier shall perform a FAI for a new product representative of the first production run to verify that all dimensions, futures and product attributes comply with the specified requirements.

29.2 FAI report must be submitted for review and approval by CTRM AC's SQA personnel prior to the first production shipment. No serial deliveries are allowed before acceptance

of FAI by CTRM AC's SQA unless otherwise agreed by CTRM AC. Suppliers of product of their own design are not required to furnish the FAIR with shipment of product to CTRM AC. However, the documents shall be made available to CTRM AC upon request.

29.3 The supplier is responsible for flowing down FAI requirements to sub-tier suppliers. Supplier shall be responsible of the review and approval of subtier's FAIR.

29.4 CTRM AC and CTRM AC's customer reserves the right to witness / buy off the FAI onsite at the supplier premises. FAI does not apply to standard catalogue hardware parts and raw materials.

29.5 FAI report shall be completed in English language.

30.0 Engineering Query Notes, EQN

The supplier shall use Form 045 for any design queries that the supplier may encounter. The supplier shall register and track each EQN issued and replied.

31.0 Change Note, CN

In the event there is modification required to the design, process or etc., CTRM AC will notify supplier using Form 191 in order for the supplier to review the changes and its impact.

32.0 Stop Note

If for any reason, CTRM AC requires the supplier to cease working on a particular product or operation, Form 138 will be issued.

33.0 Design and Development Control (*AS9100 Clause 8.4.3*)

When design responsible, the supplier shall have design and development procedure that defines a process for identifying, recording, verifying, validating and approving design changes. The review of design and development changes includes an evaluation of the effect of the changes on constituent and delivered product. Records are maintained to show the results of the review and any necessary actions identified during the review.

34.0 Statistical Techniques for Product Acceptance *(AS9100 Clause 8.4.3)*

For in-process and final inspection, the supplier shall perform 100% inspection for all characteristics, unless reduced inspection through statistical techniques has been approved in writing by CTRM AC. Where supplier wish to use sampling plans or Statistical Process Control (SPC) techniques, the supplier:

- Shall submit a written inspection sampling procedure for approval. Written Inspection Procedure shall include adequate description of the sampling plans, frequencies,

acceptance levels, etc. Written instructions must also contain provisions for tightened and reduced sampling plans based on inspection results.

- Shall be in compliance with the requirements of AS 13002 or internationally recognized Standard.

35.0 Training and Staff Competencies (*AS9100 Clause 8.4.3*)

35.1 The supplier shall it's ensure employees competence including any required qualifications.

35.2 The supplier shall ensure that all activities regarding contract or purchase order fulfillment are performed by skilled and trained staff including temporary staff and contract staff.

35.3 The supplier shall identify critical skills to undertake works for CTRM AC is qualified and experienced to deliver the assigned work and shall maintain associated competencies. A cross reference list of critical skills by product or activity shall be implemented and updated.

35.4 Final test, inspection, and release shall be carried out by operators authorized by the supplier's quality department.

35.5 If special processes are carried out (NDT tests, Welding, Painting) operators shall be certified / qualified in accordance with requirements established on drawings specifications and contract or purchase order. These provisions also apply to sub-tier suppliers.

35.6 The Supplier shall ensure its personnel are aware of: (*AS9100 Clause 8.4.3*)

- Their contribution to product or service conformity
- Their contribution to product safety
- The importance of ethical behavior

35.7 Eye Test shall be conducted for personnel whose conducting product verification / inspection that require visual acuity.

36.0 Shelf-Life Control

36.1 With each delivery of materials or products that have a limited or specified shelf life, the supplier shall provide data that shows the manufacture date, expiration date or shelf life, lot or batch number, applicable special handling and storage requirements. For chemicals, suppliers shall ensure that chemical delivered to CTRM AC as per contract requirements and if none defined, > 50%of shelf life from expiry date takes precedence. Meanwhile for other commodities such as prepreg and adhesive, the shelf life shall have at least 75% of their shelf life remaining upon received at CTRM AC unless authorized by CTRM AC.

36.2 The supplier shall identify the material and the Certificate of Conformance with the date of expiration, including out-times requirements (if applicable). Dates on certification should be in the format of DD/MM/YYYY or format the month spelled out for example, January 01, 2018.

37.0 Packaging

37.1 Products to be delivered to CTRM AC shall be packaged sufficiently to ensure they deliver in good condition, optimal protection and free from damage – commensurate with the mode of transport; air, land and sea. Packaging of the products shall be accomplished in such a manner as to prevent physical damage to or degradation of the packed products during delivery to the shipping destination. It shall be the prerogative of CTRM AC to return damaged products, at supplier's expense, when such damage is attributable from improper packaging or inadequate protection.

37.2 Supplier who supply chemicals to CTRM AC is required to provide a current Safety Data Sheet (SDS), developed in accordance with the requirements of the Occupational Safety and Health (Classification, Labeling and Safety Sheet) Regulation 2013 at the time of every delivery of the hazardous chemical to CTRM AC. Packaging and label must be in compliance with the GHS (Globally Harmonized System of Classification and Labelling of Chemicals).

38.0 Foreign Object Damage / Debris (FOD)

The supplier shall document and implement a program for the prevention, detection and removal of Foreign Object Damage/Foreign Object Debris (FOD) in accordance with AS9146. The supplier shall establish FOD prevention program and flow down the requirements of applicable document to their subtier.

39.0 Delivery

39.1 Supplier shall deliver to CTRM AC conforming products in the quantities set forth in the purchase order on or no earlier than three (3) business days before, the delivery date specified. In the event of early delivery, CTRM AC may at its discretion either to accept delivery or store the products at supplier's expense and CTRM AC's obligation to pay is based on the delivery date stated on purchase order, unless the delivery in advance of the contractual commitment date is expressly authorized by CTRM AC. A quantity tolerance of +/-5% for all materials inclusive chemical except for prepreg & adhesive at +/-10% shall be allowed by CTRM AC.

39.2 In case of delivery issues (early, late, incorrect quantity, undeliverable shipments, etc.) supplier is required to communicate with the appropriate CTRM AC's buyer immediately on the reason for the delay and provide a recovery schedule.

39.3 Upon CTRM AC's request, supplier shall at its own expense, ship via air or other expedited routing to avoid or minimize the delay. Supplier is responsible to acknowledge CTRM AC's buyer once shipment is ready for pick up within +/-3 days from the agreed date.

40.0 Release Documents

40.1 Release documentation shall be furnished with each shipment according to the following list:

Product	C of C	Test Report	FAI	Special Process Certification	Safety Data Sheet SDS)
Core	✓	✓	NA	NA	✓
Prepreg	✓	✓	NA	NA	✓ First shipment
AGS	✓	NA	NA	NA	NA
Chemical	✓	✓	NA	NA	✓ First shipment of new material
Metallic / Non-Metallic	✓	NA	✓ If required	✓ If applicable	NA
Indirect Material	✓	NA	NA	NA	NA

Note: Certificate of Conformance (Original C of C from manufacturer is mandatory and shall traceable throughout the supply chain)

40.2 Delivery documents shall be written in English.

40.3 A Certificate of Conformity (C of C) shall be provided with all deliveries and shall contain the following as a minimum where applicable:

- Supplier CoC unique number
- CTRM AC's purchase order
- Manufacturer's name & address
- Part number, description, serial/lot /batch number, quantity
- Drawing / specification with revision number
- Date of manufacture / expiration (if applicable)
- Signature of authorized representative, and date (signature/ electronic signature, stamp, etc.)
- Statement of certification example, "I hereby certify the materials/service supplied was produced in accordance with the purchase order, applicable drawings and specifications.

40.4 Supplier shall maintain a list of authorized signatures for the product release with:

- Name
- Function
- Signature (may be replaced by stamp)

A list of authorized signatures shall be provided to CTRM AC annually or upon request.

41.0 Monitoring Temperature and Humidity Control Material

41.1 Supplier shall ensure all temperature recorders are in good working condition throughout the delivery to CTRM AC. The temperature recorders shall be used to check the temperature during transportation including intermediate transports and storages.

41.2 For air freight shipments, supplier is responsible to ensure the temperature setting on freezer container is at -24°C before release to forwarder. In order to maintain temperature throughout the journey, supplier shall advise forwarder on the dry ice requirement. Supplier must not put the temperature recorder nearby the dry ice to ensure temperature recorder will capture material's reading instead of dry ice.

41.3 Supplier shall pack, load and count the temperature recorder before pick up by the appointed forwarder to ensure quantity shipped as per requirements. Temperature recorder quantity per container required is minimum 2 and maximum is 4.

TOTAL QUANTITY OF ROLLS PER CONTAINER	QUANTITY OF TEMPERATURE RECORDER REQUIRED
1-9	2
More than 10	4

Note: *In any addition that CTRM AC received more than required temperature, CTRM AC will not liable to pay the extra quantity of temperature recorder.*

42.0 Concession

No concession is allowed unless stated and agreed otherwise by CTRM AC. Upon agreement by CTRM AC, supplier have to ensure only completed application with sufficient data and correct format submitted otherwise CTRM AC will not entertain the concession and return back for amendment or total rejection.

43.0 Direct Shipment Requirement

This clause is applicable when the supplier is authorized to ship directly to CTRM AC's customer(s) on behalf of CTRM AC. Shipments that require a First Article Inspection are not authorized for direct shipment unless approval granted by CTRM AC. The supplier shall:

- Direct ship the products

- Comply any special CTRM AC and customer requirements
- Maintain evidence of direct shipment authorization granted by CTRM AC
- Maintain evidence of direct shipments made on behalf of CTRM AC
- Provide with the shipment a signed direct ship declaration
- Provide with the shipment a signed/stamped statement of conformance (C of C) certifying that the article conforms to approved data
- Provide with the shipment traceability to CTRM AC's customer purchase request

44.0 Transfer of Work

44.1 Suppliers shall not transfer any work awarded by CTRM AC without the prior written approval from CTRM AC, including changing route after FAI. When transfer approval is granted, the supplier shall ensure only approved sub-contractors by CTRM AC or customer is utilized. The supplier shall ensure that sub-contractors are evaluated and selected on their ability to comply with the specified requirements. A list of approved subcontractors/sub tiers shall be maintained.

44.2 In case of work transfer (from one Supplier facility to another, from the Supplier to sub tier's supplier, from one major supplier sub-tier to another supplier sub-tier), the supplier shall notify to CTRM AC's buyer at least 3 months before the beginning of the transfer. Suppliers shall have a documented process in place to manage its transfer of work.

44.3 The supplier will submit a transfer plan in compliance with the supplier's work transfer procedure. This plan shall address at least the following activities:

- Purpose of transfer
- Master and detailed schedules including milestones (external and internal)
- Special process qualification
- Transfer risk assessment and mitigation plan
- Production Process Verification or equivalent (including First Article Inspection, and First Design Acceptance where applicable).
- Delivery continuity / overlap plan
- Strategy for demonstrating the continuous ability of its manufacturing system to produce conforming items in serial mode

44.4 The supplier is responsible for the quality of product delivered by their sub-contractors and shall notify CTRM AC if their sub-contractor has lost of its approval or poor in performance that can affect the conformity products. Supplier shall notify CTRM AC of any changes on its subcontractors/sub tiers that may have impact on the product.

45.0 Last Article Inspection (LAI)

In the case of transfer of work activity, the supplier shall perform a Last Article Inspection (LAI) upon CTRM AC's request in accordance to the method provided by or agreed by CTRM AC.

46.0 Control of Non – Conforming Product

46.1 The supplier shall notify CTRM AC of nonconforming processes, products, or services and obtain CTRM AC approval for disposition. (*AS9100 Clause 8.4.3*)

46.2 The supplier shall ensure that products, which do not conform to product requirement, are identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with non-conforming product shall be defined in a documented procedure including recall method. Nonconforming products that are received by CTRM AC will be processed using the nonconforming procedure. In addition, nonconforming products may be returned to the supplier at supplier's expense.

47.0 Notification of Escape (NoE)

47.1 Supplier shall notify CTRM AC within 24 hours when a non-conformance is determined to exist, or suspected to exist on the product already delivered to CTRM AC that may affect the reliability or safety.

47.2 NOE shall be preceded by a completed Form 542 and send to both sqa@ctrm.com.my and the respective CTRM AC's buyer.

48.0 Goods Discrepancy Report (GDR) / Service Discrepancy Report (SDR)

48.1 Form 297 will be issued to the supplier as a result of, but not limited to documentation issue, late/early delivery, communication, shortage, and defect. Form 004 will be issued to suppliers on any quality discrepancies encountered during Incoming Quality Inspection. Suppliers are responsible to note for replacement/reworked/GDR product in their C of C, Invoice, etc. (where applicable).

48.2 Containment action shall be completed and submitted to CTRM AC within 24 hours. The supplier is required to respond to the GDR/SDR within seven (7) working days indicating their agreement to the recommended disposition and corrective action to be taken.

48.3 If supplier requires products to be return, the supplier shall provide Courier Account Number and RMA (Return Merchandise Authorization) if applicable. Supplier shall make every effort to immediately expedite the delivery for replacement upon rework completion.

48.4 If supplier required products to be scrap, the supplier shall provide Credit Note within 3 to 5 working days. Supplier shall make every effort to immediately expedite the delivery for replacement of new product, ahead from normal lead time.

48.5 If you fail to provide authorization on products disposition between 48 hours at normal circumstances, CTRM AC will return the rejected products under CTRM AC account. CTRM AC then will issue a debit note to you, which shall be deducted from the next payment to avoid defect product held in CTRM AC without disposition.

48.6 Should there in any circumstances that required products to be rework to avoid line stop and protect end customer interest, CTRM AC shall proceed the rework internally or externally and issue a debit note to you, which shall be deducted from the next payment.

48.7 Supplier shall have documented process in place that 100% inspection to be performed on the deviated characteristic for the minimum next three (3) shipments after implementation of the corrective action to ensure detected non-conformance has been eliminated. CTRM AC reserves the right to review the verification record at the supplier's site or have the data submitted to CTRM AC for review.

49.0 Supplier Corrective Action Report (SCAR)

The SCAR process shall be initiated whenever a condition warrants an investigation to determine if corrective or preventive action is required by the supplier. Corrective or preventive actions requests shall be documented using Form 329 and processed electronically or via hard copy in accordance with this document.

The supplier shall document all actions to rectify the nonconformity including utilizing 8D or AS13000 methodology upon request.

50.0 Verification and Validation Activities (*AS9100 Clause 8.4.3*)

CTRM AC's representatives and CTRM AC's customers shall have the right to carry out verification and validation activities at the supplier's site (and if necessary at supplier's subtier site). These activities may include but not limited to:

- Inspection and audit at supplier's premises
- Witness / verify FAI Product
- Supplier conformity to requirements specified in this document
- Supplier's Quality Management System (QMS)
- Capacity Risk Assessment
- Conformity of product or processes to specified requirements
- Implementation of any corrective action required.
- inspection of products or verification of services
- Validation includes, but not limited to define process criteria, approved and trained personnel, approved equipment, specific methods or procedure, test reports, etc.

51.0 Continual Improvement (CI)

The Supplier shall define, deploy and maintain during the life of the Contract a process to perform risk analysis in line with Process Failure Mode and Effects Analysis (PFMEA) methodology in accordance with AS13004. The Supplier shall provide the results of its PFMEA to the CTRM AC upon request.

The supplier shall have a Control Plan that takes into account the output from the FMEA and defines all methods used for process monitoring and control of special process characteristics.

The suppliers shall support CI based on CTRM AC's requirements. This exercise is beneficial and has mutual gain for both parties. For example Quality Clinic, LWW (Lean Waste Way), SQIP (Supply Chain and Quality Improvement Programmer) or any other tools.

When specified by CTRM AC, the supplier shall deploy APQP (Advanced Product Quality Planning and Production Part Approval Process) in accordance with AS9145.

52.0 Special Requirements, Critical Item and Key Characteristics (*AS9100 Clause 8.4.3*)

52.1 The supplier shall comply with all special requirements, critical items or key characteristics.

52.2 The supplier shall establish, implement and maintain appropriate methods to control critical items, including process controls and/or inspections, where key characteristics have been identified in the engineering documentation. The supplier shall formalize and record actions implemented in order to reduce, mitigate or monitor critical risk. On request, these actions should be reviewed with CTRM AC. The supplier shall manage its Product Key Characteristics and process Key Characteristics (if any) in line with AS9103.

53.0 NADCAP Certification

When required by CTRM AC via Customer Mandating Plan the supplier shall obtain and maintain NADCAP certification for all NADCAP families applicable to the supplier's scope of work in accordance with customer mandating plan.

54.0 Contingency Plans

Supplier shall maintain a contingency plan to satisfy CTRM AC requirements in order to maintain continuity of quality product delivery in the event of an emergency. These plans are to be made available upon request by CTRM AC.

Emergencies may include but not limited to natural or human disasters, utility interruptions, labor shortages, raw material or sub-component shortages, cyber-attacks, key tooling or equipment failures and field returns. Contingency plans shall consider communication methods and contacts necessary to facilitate a timeliness exchange between the supplier and CTRM AC.

55.0 Supplier Performance Rating

Details and explanation on the Supplier Performance Rating please refer to the SQR 003

56.0 Virtual Audit

In any an unexpected crisis or event (i.e., pandemic outbreak, unresolved on mutual agreement for the onsite audit date etc.) where the possibility to conduct onsite audit at the supplier site is not possible, CTRM AC may conduct a virtual audit session with supplier.

The audit duration is typically similar with an onsite audits and the commitment to the plan remains the same. Virtual audit will be conducted in accordance to IAQG as a reference, but not limited to the following.

- Email External Audit Checklist. Supplier shall provide copies of policies, procedures and work instruction prior to audit.
- Virtual audit through live streaming such as zoom, webex or video conference. Session and attendance to be recorded.
- Supplier is responsible to ensure their data is secured and protected against any cyber-attacks. Information security is vital.
- In between session, there will be a wrap-up meeting to clarify the finding each day.
- The post audit activities will remain the similar like onsite audit.

57.0 Reference Documents

DOCUMENTS	TITLE
AS13000	Problem Solving Requirements for Suppliers
AS13002	Requirements for Developing and Qualifying Alternate Inspection Frequency Plans
AS9015	Supplier Self Verification Process Delegation Programs
AS9100	Quality Management System – Requirements for Aviation, Space, and Defense Organizations
AS9102	Aerospace First Article Inspection Requirement
AS9103	Variation Management of Key Characteristics
AS9117	Delegated Product Release Verification
AS9120	Quality Management System – Requirements for Aviation, Space, and Defense Distributors
AS9130	Quality System Record Retention
AS9145	Requirements for Advanced Product Quality Planning and Production Part Approval Process
AS9146	Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations
Form 004	Good Discrepancy Report (GDR)
Form 045	Engineering Query Note (EQN)
Form 138	Stop Note
Form 191	Change Note (CN)
Form 297	Service Discrepancy Report (SDR)
Form 329	Supplier Corrective Action Report (SCAR)
Form 479	Supplier Request for Change Form
Form 542	Supplier Notice of Escape (NoE)
Form Compliance	Compliance Matrix Form
SQR 002	Supplier Quality Requirement - Delegated Quality Representative Program (DQRP)
SQR 003	Supplier Rating System
SQR 004	DPD & MBD Quality Assurance Requirement for Supplier
ANSI/NCSL Z540.3	Requirements for Calibration of Measuring and Test Equipment
ISO 10005	Quality Management Systems - Guideline for Quality Plans

ISO 10012	Measurement Management Systems Requirements for Measurement Processes and Measuring Equipment
ISO 14001	Environmental Management Standards
ISO 17025	General Requirements for the Competence of Testing and Calibration Laboratories
ISO 9001	Quality Management System Requirements
OHSAS18001	Occupational Health and Safety System

58.0 Abbreviations

ASL	Approved Supplier List
APQP	Advanced Product Quality Planning and Production Part Approval Process
C of C	Certificate of Conformance
CA	Collins Aerospace
CI	Continual Improvement
CN	Change Note
DQR	Delegated Quality Representative
DPD	Digital Product Definition
ECHA	European Chemicals Agency
EQN	Engineering Query Note
FAI	First Article Inspection
FMEA	Failure Mode and Effects Analysis
FOD	Foreign Object Damage / Debris
FTP	File Transfer Protocol
GDR	Goods Discrepancy Report
IAQG	International Aerospace Quality Group
ILAC	International Laboratory Accreditation Cooperation
IM & TE	Inspection, Measuring & Test Equipment
KC	Key Characteristic
LAI	Last Article Inspection
MBD	Model Based Product Definition
MDI	Maintained Documented Information
NADCAP	National Aerospace and Defense Contractors Accreditation Program
NoE	Notification of Escape

OASIS	Online Aerospace Supplier Information System https://www.iaqg.org/oasis/login
OEM	Original Equipment Manufacturer
OTD	On Time Delivery
PO	Purchase Order
PPM	Parts Per Million
QAP	Quality Assurance Plan
QPL	Qualified Product List
RDI	Retained Documented Information
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
RoHS	Restriction of Hazardous Substances Directive
SCAR	Supplier Corrective Action Report
SDR	Service Discrepancy Report
SDS	Safety Data Sheet
SOW	Statement of Work
SPC	Statistical Process Control
SQIP	Supply Chain and Quality Improvement Programmer

APPENDIX A: Applicability Matrix

CLAUSE	Content	Sub-Clause	Manufacturer for parts/ assembly (without design authority, tooling)	Design Responsible Suppl`ier / Supplier Owned Design	Manufacturer for materials (direct/indirect e.g. chemical, AGS)	Distributors/ Stockist (Any Product Type)	Service (Calibration, Testing)
2.0	Quality Management Systems	2.1	✓	✓	✓	✓	✓
		2.2	✓	✓	✓	✓	✓
		2.3	✓	✓	✓	✓	✓
3.0	Special Process Requirements	3.1	✓	✓	✓	NA	✓
		3.2	✓	✓	✓	NA	✓
		3.3	✓	✓	✓	NA	✓
		3.4	NA	✓	NA	NA	NA
4.0	Specific Requirements – By CTRM AC's Customer	4.1	✓	✓	✓	✓	✓
		4.2	✓	✓	✓	✓	✓
		4.3	✓	✓	✓	✓	✓
5.0	Communication/ Interaction	5.0	✓	✓	✓	✓	✓
6.0	Right of Access	6.0	✓	✓	✓	✓	✓
7.0	Approved Supplier List	7.0	✓	✓	✓	✓	✓
8.0	Compliance to Contractual Requirements	8.1	✓	✓	✓	✓	✓
		8.2	✓	✓	✓	✓	✓
		8.3	✓	✓	✓	✓	✓
		8.4	✓	✓	✓	✓	✓
		8.5	✓	✓	✓	✓	✓
		8.6	✓	✓	✓	✓	✓
		8.7	✓	✓	✓	✓	✓
9.0	Language	9.0	✓	✓	✓	✓	✓
10.0	Code of Conduct	10.0	✓	✓	✓	✓	✓
11.0	Protection of Proprietary Information	11.0	✓	✓	✓	✓	✓
12.0	DPD / MBD Requirement	12.1	✓	NA	NA	NA	NA
		12.2	✓	NA	NA	NA	NA
		12.3	✓	NA	NA	NA	NA
		12.4	✓	NA	NA	NA	NA
13.0	Notification of Company Changes	13.1	✓	✓	✓	✓	✓
		13.2	✓	✓	✓	✓	✓
		13.3	✓	✓	✓	✓	✓
14.0	Environmental, Health & Safety (EHS) Compliance	14.1	✓	✓	✓	✓	NA
		14.2	✓	✓	✓	✓	NA
		14.3	✓	✓	✓	✓	NA
15.0	Conflict Mineral	15.0	✓	✓	✓	✓	NA
16.0	Documented Information Retention and Disposition	16.1	✓	✓	✓	✓	✓
		16.2	✓	✓	✓	✓	✓
		16.3	✓	✓	✓	✓	✓
16.0	Documented Information Retention and Disposition	16.4	✓	✓	✓	✓	✓
17.0	Obsolescence Notification	17.0	NA	✓	✓	NA	NA
18.0	Calibration and Test Certification Requirement	18.1	✓	✓	✓	✓	✓
		18.2	✓	✓	✓	✓	✓
19.0	Distributor Requirement	19.1	✓	✓	✓	✓	NA
		19.2	✓	✓	✓	✓	NA
		19.3	✓	✓	✓	✓	NA
		19.4	✓	✓	✓	✓	NA
20.0	Manufacturer of Standard Parts	20.0	NA	NA	✓	NA	NA
21.0	Quality Assurance Plan (QAP)	21.0	✓	NA	NA	NA	NA
22.0	Counterfeit Part	22.1	✓	✓	✓	✓	NA
		22.2	✓	✓	✓	✓	NA
		22.3	✓	✓	✓	✓	NA
		22.4	✓	✓	✓	✓	NA
23.0	Control of Subtier Suppliers	23.1	✓	NA	NA	NA	NA
		23.2	✓	NA	NA	NA	NA
		23.3	✓	NA	NA	NA	NA
		23.4	✓	NA	NA	NA	NA
24.0	Delegation of Product Verification	24.1	✓	NA	NA	NA	NA
		24.2	✓	NA	NA	NA	NA
25.0	Verification and Validation on Purchased Products	25.1	✓	✓	✓	✓	NA
		25.2	✓	✓	✓	✓	NA
		25.3	✓	✓	✓	✓	NA
		25.4	✓	✓	✓	✓	NA
26.0	Test Specimens Requirement	26.0	✓	✓	✓	NA	NA
27.0	Validation and Control of Special Processes	27.0	✓	✓	✓	NA	NA
28.0	Inspection, Measuring & Test Equipment Requirement (IM & TE)	28.1	✓	✓	✓	NA	✓
		28.2	✓	✓	✓	NA	✓
		28.3	✓	✓	✓	NA	✓
29.0	First Article Inspection Report (FAI)	29.1	✓	✓	NA	NA	NA
		29.2	✓	✓	NA	NA	NA

CLAUSE	Content	Sub-Clause	Manufacturer for parts/ assembly (without design authority, tooling)	Design Responsible Suppl`ier / Supplier Owned Design	Manufacturer for materials (direct/indirect e.g. chemical, AGS)	Distributors/ Stockist (Any Product Type)	Service (Calibration, Testing)
		29.3	✓	✓	NA	NA	NA
		29.4	✓	✓	NA	NA	NA
		29.5	✓	✓	NA	NA	NA
30.0	Engineering Query Notes, EQN	30.0	✓	NA	NA	NA	NA
31.0	Change Note, CN	31.0	✓	NA	NA	NA	NA
32.0	Stop Note	32.0	✓	NA	NA	NA	NA
33.0	Design and Development Control	33.0	NA	✓	✓	NA	NA
34.0	Statistical Techniques for Product Acceptance	34.0	✓	✓	NA	NA	NA
35.0	Training and Staff Competencies	35.1	✓	✓	✓	✓	✓
		35.2	✓	✓	✓	✓	✓
		35.3	✓	✓	✓	✓	✓
		35.4	✓	✓	✓	✓	✓
		35.5	✓	✓	✓	✓	✓
		35.6	✓	✓	✓	✓	✓
		35.7	✓	✓	✓	✓	✓
36.0	Shelf-Life Control	36.1	NA	NA	✓	✓	NA
		36.2	NA	NA	✓	✓	NA
37.0	Packaging	37.1	✓	✓	✓	✓	NA
		37.2	✓	✓	✓	✓	NA
38.0	Foreign Object Damage / Debris (FOD)	38.0	✓	✓	✓	✓	✓
39.0	Delivery	39.1	✓	✓	✓	✓	NA
		39.2	✓	✓	✓	✓	NA
		39.3	✓	✓	✓	✓	NA
40.0	Release Documents	40.1	✓	✓	✓	✓	NA
		40.2	✓	✓	✓	✓	NA
		40.3	✓	✓	✓	✓	NA
		40.4	✓	✓	✓	✓	NA
41.0	Monitoring Temperature and Humidity Control Material	41.1	NA	NA	✓	✓	NA
		41.2	NA	NA	✓	✓	NA
		41.3	NA	NA	✓	✓	NA
42.0	Concession	42.0	✓	✓	✓	NA	NA
43.0	Direct Shipment Requirement	43.0	✓	✓	NA	NA	NA
44.0	Transfer of Work	44.1	✓	✓	✓	NA	NA
		44.2	✓	✓	✓	NA	NA
		44.3	✓	✓	✓	NA	NA
		44.4	✓	✓	✓	NA	NA
45.0	Last Article Inspection (LAI)	45.0	✓	✓	NA	NA	NA
46.0	Control of Non – Conforming Product	46.1	✓	✓	✓	✓	✓
		46.2	✓	✓	✓	✓	✓
47.0	Notification of Escape (NoE)	47.1	✓	✓	✓	✓	✓
		47.2	✓	✓	✓	✓	✓
48.0	Goods Discrepancy Report (GDR) / Service Discrepancy Report	48.1	✓	✓	✓	✓	NA
		48.2	✓	✓	✓	✓	NA
		48.3	✓	✓	✓	✓	NA
		48.4	✓	✓	✓	✓	NA
		48.5	✓	✓	✓	✓	NA
		48.6	✓	✓	✓	✓	NA
		48.7	✓	✓	✓	✓	NA
49.0	Supplier Corrective Action Report (SCAR)	49.0	✓	✓	✓	✓	✓
50.0	Verification and Validation Activities	50.0	✓	✓	✓	✓	NA
51.0	Continual Improvement (CI)	51.0	✓	✓	✓	✓	NA
52.0	Special Requirements, Critical Item and Key Characteristics	52.1	✓	✓	NA	NA	NA
			✓	✓	NA	NA	NA
53.0	NADCAP Certification	53.0	✓	✓	✓	NA	NA
54.0	Contingency Plans	54.0	✓	✓	✓	✓	✓
55.0	Supplier Performance Rating	55.0	✓	✓	✓	✓	✓
56.0	Virtual Audit	56.0	✓	✓	✓	✓	✓
	Remark : ✓ Supplier shall comply : NA Not applicable						

APPENDIX B: Supplier Notification Changes

The purpose of this process is to define the procedure that the supplier must follow when requesting for a change to location, product, process, equipment or any other component which may directly or indirectly impact cost, delivery, performance, appearance or otherwise alters the condition of the material as agreed in the original standard, print, specification or purchase order.

This policy protects and strengthens the partnership between CTRM Aero Composites and its suppliers. Significant changes may have no effect on the product, however it may affect CTRM Aero Composites. Changes to any of the item listed in the table below that required CTRM Aero Composites' approval must be communicated to and approved by CTRM Aero Composite in advance of the change.

CHANGE CATEGORY	EXAMPLE	CTRM AC APPROVAL REQUIRED
Manufacturing Plant Environmental Conditions	Change to or addition of production plant / sites that will be manufacturing CTRM AC's products	Yes
	Changes in the work environment that could affect the manufacturing or storage condition of CTRM AC's products. Example: excessive humidity	Yes
	Changes in the work environment that do not affect CTRM AC's product. (Example : lighting change)	No
Manufacturing Processes, Equipment & Tooling	Change of production line layouts. Example : physically moving a packaging machine	Yes
	Shift changes	No
	Maintenance of work standards Preventive Maintenance	No
	Change of production method	Yes
	Adding , deleting , changing to / from automated manufacturing processes	Yes
	Addition, modification, repair / transfer or jigs, tools or fixtures	Yes
	Changes to processing conditions or methods	Yes
	Lapse in production for two years or more	Yes
	Adding new equipment that will be used to manufacture CTRM AC's product	Yes
Materials / Supply Base	Change or addition of subtier supplier, for critical material / controlled and special process	Yes
	Any changes that will affect the fit, form, function or appearance of a material that is or is not specified on a drawing	Yes
	Obsolescent Material. (End of Life Notice) When the material will no longer be available at some future date. (Minimum notice is one (1) year.	Yes
Inspection / Calibrated Devices	Changes to the in-process or raw material sampling methods, number of inspection points, inspection items or ratios	No

	Changes to final inspection sampling plans, number of inspection points, inspection items or ratios without having data to substantiate the changes	Yes
	Changes to or the inability to recalibrate gages or equipment used to validate CTRM AC products prior shipment	Yes
Packaging / Warehouse conditions	Changes to packaging	No
	Physical location change of warehouse / storage area	Yes
Certification / Approval	Any certification and/or customer approval that expired, revoked or discontinue	Yes

APPENDIX C: Document Retention and Storage Matrix

No.	Customer	Reference Document	Longest archive time (years)/ Filing/ Storage	Type of Document
1	ADS	CASA-1033	Shall keep on file during the period required by FAA / EASA whichever is greater (and at least 7 years)	All the documents and certification of the product
			Shall be retain during the operational life of the product +3 years.	FAI and Qualification Reports
		CASA-1201	Table 1 CASA-1201 is a guideline to identify the records to be archived and for which duration.	
2	Spirit US	MAA1-10042-1	Shall be retained in accordance with customer and regulatory requirements.	FAI and quality records of the product
3	Airbus	A1001.0 & A1001.0 Appendix A	The A1001.0 Appendix A is a guideline to identify the records to be archived and for which duration.	
4	Airbus Helicopters	ER070 16-01	Annex 6 is a guideline to identify the records to be retained/ archived and for which duration.	
5	GKN DE	QSV0034	Minimum period of 30 years and after the sale of the last Aircraft of the A350 model for another 5 years	All contract related documentation including (production plans, heat treatment charts, inspection protocols including test results and shipping documents)
6	COLLINS AEROSPACE	ASQR-01	As per Retention Table: 40 years - Flight Safety Parts, Safety Parts, Flight Critical Parts 30 years - Manned Space Program Hardware 10 years - All other parts	Retention periods for retained documented information, needed to provide evidence of conformance.
7	KAL	SQAR-BQF-002	Min 11 years from the end of contract	Quality records traceable to the conformance of product / part numbers
			11 years past final delivery of the last product	FAI Records Note: Any disposal of records shall notify KAL

No.	Customer	Reference Document	Longest archive time (years)/ Filing/ Storage	Type of Document
8	SPIRIT SUBANG	SAA-ALL-QU-SC-ALL-011	Shall be retained in accordance with in accordance with Design Organization Approval (DOA) requirements and EN9130	All quality records
			Applicable to Boeing Program: Min 10 years from the date of shipment.	Quality Assurance Record
			10 years from manufacturing date of the last parts produced / Process.	Records of special qualification of product, equipment, facility or process ***Note:*** *At expiration of such period, Spirit reserves the right to request delivery of such records and shall be notified in writing prior to disposal.*
9	SPIRIT EUROPE	AERO-ALL-QU-SC-ALL-125	10 years after final payment	Financial, Quality & Production Data
			10 years past final delivery of the last Product covered by FAI	First Article Inspection Report (FAI)
			The life of the aircraft plus six (6) years.	Nonconforming quality Records ***Note:*** *At expiration of such period, supplier will notify Spirit prior destroy such records.*

APPENDIX D: Customer's Applicable Requirements Matrix

Refer to the attachment

APPENDIX E: Terms and Definition

Terms defined in ISO standards, IAQG standards and IAQG Dictionary are to be considered

APQP	Refer to EN9145
Calibration Services	An external organization demonstrating appropriate technical scope and competency of calibration on measuring & test equipment (M&TE)
Code of Conduct	Sets of standards for business relationships and regulatory compliance.
C of C	Document issued by a competent authority that the supplied product and service meets the required specifications.
Competence	Ability to apply knowledge and skills to achieve intended results
Concession	Written authorization to use or release a product that does not conform to the specified requirements. A concession authorizes the internal/external supplier or subcontractor to ship a product that has specific non-conforming characteristics
Continual Improvement	Recurring activity to enhance performance.
Conflict Mineral	Raw materials (Tantalum, tin, tungsten, Gold (3TG) that come from a particular part of the world where conflict is occurring and affects the mining and trading of those materials
Correction	Action to eliminate a detected nonconformity.
Corrective action	Action to eliminate the cause of a nonconformity and to prevent recurrence
Counterfeit Parts	An unauthorized copy, imitation, substitute, or modified part (e.g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer.
Critical Items	Those items (e.g., functions, parts, software, characteristics, processes) having significant effect on the product realization and use of the product; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples include: safety CIs, fracture CIs, mission CIs, Key Characteristics (KCs), and maintenance tasks critical for safety (reference 9103 standard).
Customer	Person or organization that could or does receive a product or a service that is intended for or required by this person or organization
Design Responsible Supplier / Supplier Owned Design	Supplier of products defined by a design / drawing proprietary to that supplier and linked to a customer's part number through the use of a customer reference drawing and/or other purchase order requirements
Direct Shipment	Authorization given to supplier ship directly to CTRM AC's customer.
Disposition	Decision made by authorized representatives within an organization concerning future treatment of nonconforming material. Examples of dispositions are to scrap, use-as-is, retest, rework, repair or return to supplier.
Distributor / Stockist	Responsible for purchase, storage, splitting and sale of products without affecting product's conformance.
DQR	Suppliers who have been delegated the authority to act on behalf of CTRM AC to verify and release products/services
Escape	Escape is a non-conforming product that has reached to customer
Expired Date	Defined as the amount of time that it should remain in use after opening

FAI	A planned, complete, independent, and documented inspection and verification process to ensure that prescribed production processes have produced an item conforming to engineering drawings, DPD, planning, purchase order, engineering specifications, and /or other applicable design documents.
FMEA	A structured method for analyzing risk by ranking and documenting potential failure mode in a system, design, or process.
FOD	Any damage attributed to FOd that can be expressed in physical or economic terms, which could potentially degrade the product or system's required safety and/or performance characteristics.
FOd	Any FO that has entered and/or migrated into/on the product or system, and could potentially cause FOD, if not removed and controlled.
Inspection Plan	A document which defines the design characteristics to be inspected, the inspection method and equipment, sequence, inspection frequency, and who can undertake the inspection.
Key Characteristic	An attribute or feature whose variation has a significant influence on product fit, performance, service life, or producibility; that requires specific action for the purpose of controlling.
Manufacturer for materials (Direct / Indirect)	Manufacture a material that shall comply with the specific parameters or characteristics according its operation or manufacturer based on standard.
Manufacturer for parts assembly without design authority	Manufacturer produces part according to drawing set provided by CTRM AC. (Build to print).
Nonconforming outputs	Nonconforming outputs include nonconforming products generated internally, received from an external provider, or identified by a customer
Obsolescence	No longer produce / manufacture / design
Preventive action	Action to eliminate the cause of a potential nonconformity or other potential undesirable situation.
Product or service	Products and services intended for or required by CTRM
Product Safety	The state in which a product is able to perform to its designed or intended purpose without causing unacceptable risk of harm to persons or damage to property.
Regulatory	Legal requirement related to the product (e.g manufacture, handling, use, storage, import, transport).
Retention	Reliable access to and retrieval of records within minimum retention period required by customer or standard
Rework	Action on a nonconforming product or service to make it conform to the requirements.
Risk	Effect of uncertainty.
Sampling Plan	A statement of the sample size or sizes to be used and the associated acceptance and rejection criteria.
Scrap	Action on a nonconforming product or service to preclude its originally intended use.
Shelf Life	Shelf Life is the amount of time that a properly packaged and stored standard will last without undergoing chemical or physical changes, remaining within the specified uncertainty.
SPC	Statistical Process Control, the condition describing a process in which variation is controlled and monitored using appropriate control charts.
Special Process	Where the results of processes cannot be verified by subsequent monitoring or measurement and as a consequence, deficiencies become apparent only after the

	product is in use or the service has been delivered.
Special Requirements	Those requirements identified by the customer or determined by the organization, which have high risks of not being achieved, thus requiring their inclusion in the risk management process. Factors used in the determination of special requirements include product or process complexity, past experience, and product or process maturity. Examples of special requirements include performance requirements imposed by the customer that are at the limit of the industry's capability, or requirements determined by the organization to be at the limit of its technical or process capabilities
Standard Parts	Parts for which the design, manufacturing, inspection data, and marking requirements necessary to demonstrate conformity to the part are in the public domain and published/established as part of the officially recognized standards.
Statutory	Legal requirement related to laws passed by a state and/or central government
Subtier	Supplier of the CTRM Supplier. It can be a partner, subsidiary, subcontractor or other business unit of the same group
Supplier	Organization that provides a product or a service
Test Report	The acceptance test report, which have to be retained and shall contain at least the: - Material designation / product specification, - Applicable test specification - Applicable acceptance values for the test - All test results and required evaluation - Acceptance statement
Test Specimen	Test piece subject for testing in accordance with a defined Test Method.
Testing Laboratory Services	An external organization demonstrating appropriate testing by accreditation to an international accreditation body
Transfer of Work	CTRM definition, there are 3 different types of Transfer of Work: 1) Make to Buy transfer 2) Buy to Buy transfer 3) Buy to Make transfer
Validation	Validation is the final testing stage, through which a product or service must pass before it is provided to the customer.
Validation	Validation tests the product/service's ability to meet the overall requirements of the customer and effectively work as it was intended.
Virtual Audit	Audit performed off-site through the use of information and communication technology such as Webex, zoom, video conference Synonyms:eAudit, virtual audit
Verification	Confirmation by examination and provision of objective evidence that the specified requirements have been fulfilled.
100% Inspection	The process of performing inspection on each characteristic of every part using appropriate inspection techniques.

APPENDIX F: CTRM PO Template

PURCHASE ORDER

CTRM A Member of DRB-HICOM

Composites Technology Research (M) Sdn Bhd 311703
Correspondence:
Locked Bag 1028 Pejabat Pos
75150 Melaka Malaysia
Location:
Composites Technology City
Batu Berendam 75350 Melaka Malaysia
T • +606 317 1007 F: +606 317 1000
www.ctrm.com.my

Order Number : PO No (AC000000)
Order Date : Date of order
Print Date : Date of print

Revision : PO Rev (0,1,2,3..
Page : 1,2,3...

Ship to : Location to ship

CTRM AERO COMPOSITES SDN BHD
COMPOSITES TECHNOLOGY CITY,
BATU BERENDAM,
MELAKA 75350
MALAYSIA

Supplier : Supplier's Code (0A0000)
Supplier's Name
Supplier's address
CTRM Approval No: Supplier's Approval No
ATTENTION:

Supplier Tel : Supplier's Contact No
Supplier Fax : Supplier's Fax No
Credit Terms : Credit Mode
PR Number : CTRM's PR No
Remarks : Workpackage

Requestor : CTRM's requestor
Buyer : CTRM's buyer
Ship Via : Shipment mode
Incoterms : Commercial term

1) This order is in furtherance of CUSTOMER (AIRBUS, BOEING) name project. All activities carried out in order to support this order must be within supplier scope of CUSTOMER name approval.
2) Supplier to refer Statement of Work SOW, ISSUE 00 (if applicable) during manufacturing of the parts.
3) Supplier to comply with latest Supplier Quality Requirement, SQR 001.
This document can be accessed at https://www.ctrm.com.my
4) Contract No: Contract No (if applicable) or Bid Waiver No: CTRM Bid Waiver No (if applicable)
5) Supplier shall delivered products the same or more advance material revision level specified as per each PO line item. Supplier is prohibited from delivering products with earlier revision level without written consent from CTRM AC Supplier Quality Assurance.(Applicable for chemical, Prepreg & indirect materials)

Pur	Item Number	T	TxC	Due Date	QTy Open	UM	Purchase Cos	Extended Cost
---	----------	-	---	----------	----------	--	----------	----------

Part Number
Drawing Issue:
Description Ref: Iss:

Non-Taxable :
Taxable :
Tax Date :

Currency: USD Line Total :
Total Amount :
Total :

Prepared By: Reviewed By: Authorized By:

Supplier Acknowledgement

I acknowledge as a representative of my company, that we have received, reviewed, understand and agree to comply with the requirements defined in the CTRM AC Supplier Quality Requirement (SQR 001) Rev D.

Company Name:

Company Address:

Name Quality Representative:

Signature:

Date:

Note:

Supplier shall conduct a change review by using CTRM AC's Compliance Form and update all their requirements / documentations accordingly where applicable and make available upon request.

Supplier shall acknowledge receipt of SQR 001 Rev D by signing this form. The signed acknowledgement of receipt shall be emailed to nafisah.nawas@ctrm.com.my or sqa@ctrm.com.my