## 1. Purpose

1.1 The purpose of this work instruction is to provide each supplier with a clear understanding of all requirements to supply products and services to Cascade Aerospace.

1.2 Flow down Cascade's Safety and Quality Policy to each Supplier.

1.3 Ensure each Supplier is aligned with the aviation standard definitions.

## 2. Scope

2.1 This work instruction will apply to all Suppliers, Engineering, Planning, Maintenance, Manufacturing, Supply Chain and Purchasing.

## 3. Responsibilities

3.1 It shall be the responsibility of the each functional department to ensure the Suppliers have all the requirements applicable to each product and the Supplier to ensure all requirements listed on the purchase order have been met before shipment of any product or service.

## 4. References

4.1 AS 9110 Quality Management Systems - Requirements for Aviation Maintenance Organizations, Section 7.4.2

## 5. Safety Policy

5.1 The Safety and Health of our employees and customers is an integral part of the way Cascade Aerospace conducts business and is achieved through the full support and dedication of every employee. Cascade Aerospace is committed to preserve the environment and to prevent or reduce any adverse environmental impacts from its operation. Safety is everyone's overriding responsibility.

## 6. Quality Policy

6.1 Cascade Aerospace is committed to providing quality products and services that meet or exceed the needs of our customers. By continuously monitoring and improving the system through Quality Management oversight our goal is to be known as a world leader in the field of aviation design, repair, and overhaul.

## 7. Definition of Terms

7.1 **Airworthy** - State of an article conforming to its type design and being in a condition for safe operation.

7.2 **Authority -** The aviation authority having jurisdiction over the manufacturer, aircraft owner/operator, or maintenance organization; the authority could be civil or military.

7.3 **Certificate of Conformance -** A document certified by a competent authority that the supplied good or service meets the required specifications. It is also called a certificate of compliance or certificate of conformity.

7.4 **Certified Personnel -** Personnel qualified by an external/internal competent body to carry out special tasks (e.g., non-destructive testing certified personnel, licensed maintenance personnel).

7.5 **Controlled Special Processes (ST-PR-002) -** Processes are required to be reviewed on a case-by-case basis. Controlled special processes TYPICALLY are processes covered by NADCAP and may include, but not limited to:

7.5.1 Heat treating of metals

7.5.2 CNC machining

7.5.3 Plating

7.5.4 Welding

7.5.5 Etching and conversion coating

7.5.6 Flame Spraying

7.5.7 Shot peening

7.5.8 Non-destructive testing

7.6 **Corrective Action (QA-PR-002) -** The purpose of this step is to identify all the corrective / preventive actions required to correct the root cause(s) to prevent the problem from occurring, or greatly reduce the probability that the problem will recur. Long-term corrective / preventive action has the broadest generic implications, they ensure safety, and are economically sound and have a high reliability to prevent occurrence or reoccurrence.

When deemed necessary, Cascade Quality may require Root Cause Analysis for an individual nonconformity or any systemic concerns that may be identified. If this occurs, the supplier may be contacted to provide the information or a Corrective Action Request" (CAR) may be issued. Examples of critical items include safety critical items, fracture critical items, mission critical items, airworthiness limitations items, key characteristics, and maintenance tasks critical for safety.

7.7 **Counterfeit Part -** An article produced or altered to imitate or resemble an "approved article" without authority or right to do so, with the intent to mislead or defraud by passing the imitation as original or genuine.

**NOTE:** Commonly referred to within the industry as a "bogus part."

7.8 **Critical Items (MF-PL-001) -** Critical Item: Those items (e.g., functions, software, parts, characteristics, processes) having significant effect on the product; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of Critical Items include safety critical items, fracture critical items, mission critical items, Key Characteristics, etc.

7.9 **Customer -** This term applies to Cascade Aerospace's direct customer. This may not be the end user of the item, and higher-level quality requirements from customers of Cascade Aerospace's direct customer may be flowed down by Cascade's customer.

7.10 **Distributor -** Suppliers who do not manufacture products, but instead purchase and distribute finished products to Cascade from other sources. This typically includes fastener hardware (nuts, bolts, rivets, etc.) chemicals for special processes (paint, sealants, etc.), and system components (connectors, tubes, valves, etc.). Raw material distributors are considered as Raw Material suppliers.

7.11 **ECS- Engineering Change Sheet -** Cascade's revision controlled document indicating the item's engineering data definition, special instructions and condition of supply if it deviates from the engineering definition. If the Purchase Order calls an ECS then the requirements of the ECS are supplemental to the Engineering requirements and in the event of conflicting requirements the ECS takes precedence.

7.12 **First-Article Inspection (MF-PR-006) -** AS 9102, complete inspection of ALL drawing dimensional characteristics and notes is required to ensure compliance to the applicable engineering drawings and specifications.

7.13 **Human Factors -** The study of human behavior (physically and psychologically) in relation to particular environments, products, or services and the potential effect on safety. Recognition that personnel performing tasks are affected by physical fitness, physiological characteristics, personality, stress, fatigue, distraction, communication, and attitude in order to ensure a safe interface between the personnel and all other environmental elements such as other personnel, equipment, facilities, organizations, procedures, and data.

7.14 **Key Characteristic (AS 9103*)* -** An attribute or feature whose variation has a significant effect on product fit, form, function, performance, or service life, that requires specific actions for the purpose of controlling variation.

**NOTE:** Special requirements and critical items are new terms and, along with key characteristics, are interrelated. Special requirements are identified when determining and reviewing requirements related to the product (see 7.2.1 and 7.2.2). Special requirements can require the identification of critical items. Design output (see 7.3.3) can include identification of critical items that require specific actions to ensure they are adequately managed. Some critical items will be further classified as key characteristics because their variation needs to be controlled.

7.15 **Maintenance (PG-PL-002) -** Means the overhaul, repair, required inspection or modification of an aeronautical product, or the removal of a component from or its installation on an aeronautical product, but does not include elementary work, servicing; or any work performed on an aircraft by the manufacturer prior to the issuance of whichever of the following documents is issued first:

7.15.1 certificate of airworthiness,

7.15.2 special certificate of airworthiness,

7.15.3 an export airworthiness certificate; (maintenance)

7.16 **Maintenance (another example) -** Performance of tasks required to ensure the continuing airworthiness of an article, including any one or combination of overhaul, inspection, testing, replacement, defect rectification, and the embodiment of a modification or repair.

**NOTE:** This term applies to the overhaul, repair, inspection, replacement, modification, or defect rectification of an article that is performed after completion of manufacturing and initial airworthiness certification by or on behalf of the relevant authority.

7.17 **Manufacture (PG-PL-002) -** Means the making, assembly and fabrication, other than the fabrication of parts as part of a repair, of aeronautical products, and includes, in the case of newly manufactured aircraft, any work performed on an aircraft prior to the issuance of the first certificate of airworthiness or export certificate of airworthiness by the manufacturer.

7.18 **MRB – Material Review Board (MF-PR-010) -** A cross-functional group that reviews production or purchased items on hold due to usability concerns and determines their disposition, which may include use, rework, repair, scrap, or returning to the supplier for further investigation.

7.19 **Non-Production Item Suppliers -** Suppliers other than Production Item suppliers as defined above. These would typically be suppliers of consumable shop and office supplies, tooling or production equipment, shop, computer and office equipment, etc.

7.20 **Product -** A physical object that comprises a final deliverable object or is an element of a final deliverable object. Suppliers who manufacture physical product that is contained in or on Cascade deliverables to customers. This supplier typically does not include consumable shop supplies that are not part of the customer deliverable but are used to manufacture the product. For example, a product supplier supplies the paint that is used on a deliverable product to the customer, but not the masking material for the paint operation. Product suppliers include suppliers who manufacture chemicals for special processes such as paint, anodizing, etc.

7.21 **Raw Material -** A special type of product supplier or distributor that provides raw material to Cascade which Cascade or their suppliers then converts into finished or semi-finished products. For example, sheet metal, plate, extrusions, rod, bar, plastic, forgings, castings, etc.

7.22 **Release Certificate -** Document attesting that a product is released for use (release/return to service) and certifying that the activities performed, and the results achieved, conform to established organization, regulatory, and customer requirements with no known nonconformities that would endanger flight safety.

7.23 **Repair -** Action taken to restore a non-conforming item to a serviceable condition that does not comply with drawing/specification requirements. Repair conditions typically require MRB approval.

7.24 **Rework -** Action taken to bring a non-conforming item into compliance with the drawing/specification requirements. In many cases rework may be authorized by specifications without requiring prior approval, however if not clear, authorization shall be requested prior to performing rework.

*7.25* **Risk -** An undesirable situation or circumstance that has both a likelihood of occurring and a potentially negative consequence.

7.26 **Services -** Suppliers who perform contracted services other than special processes that require an elevated level of quality control. Examples include, but not limited to:

7.26.1 Engineering services

7.26.2 Calibration services performed on production measurement equipment

7.26.3 Mechanical tests or chemical analysis for production process verification or certification requirements.

7.27 **Special Process (PG-PL-002) -** Process where the resulting output 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.

7.28 **Supplier (PG-PL-002) -** Any external agent that is performing aircraft maintenance or manufacturing work under a contract issued by Cascade Aerospace in accordance with this policy, or performing test equipment calibration in accordance with TO-PL-001. This does not apply to maintenance or manufacturing performed by the Original Equipment Manufacturer (OEM) of the aeronautical product or an organization holding Parts Manufacturer Approval (PMA) for the aeronautical product.

7.29 **Suspected Unapproved Part (ST-PL-001, ST-PR-004) -** SUP Suspected unapproved part. Any part, component, or material that has not been manufactured in accordance with the approved procedures in Chapter 561 of the Airworthiness Manual, or repaired in accordance with CAR 571, or their foreign equivalences, that may not conform to an approved type design, or may not conform to an established industry specification for standard parts.

**NOTE:** This includes: (1) parts shipped to an end user by a supplier who does not have direct delivery authorization from the approved production organization; (2) new parts that do not conform to the approved design/data; and (3) parts that have been intentionally misrepresented, including counterfeit parts.

Non-conforming new parts received from the approved Original Equipment Manufacturer (OEM) are not SUP and are to be tagged with form QA-FR-003 Unserviceable Tag and disposed as instructed by the owner of the part. SDR Service Difficulty Report in accordance with CAR 521.

7.30 **Technical Data (MF-PR-006) -** The applicable technical data in the approved type design provides the information regarding dimensions, materials, manufacturing processes and inspection requirements necessary to manufacture an aeronautical product in conformance with the approved type design. The applicable technical data includes:

7.30.1 the drawings and specifications and a listing of those drawings and specifications necessary to define the dimensions, materials, parts and assembly of the product;

7.30.2 the manufacturing process specification; and the inspection and testing requirements.

## 8. Quality Clauses

8.1 For Cascade's Quality Clauses, refer to PG-PL-006 Cascade Supplier Quality Manual.

# 9. Cascade Quality System Interfaces

9.1 Cascade Policies

- 9.1.1 MF-PL-001 Civil Manufacturing Standards Policy
- 9.1.2 PG-PL-002 Sub-Contracted Operations Policy
- 9.1.3 PG-PL-006 Cascade Supplier Quality Manual
- 9.1.4 ST-PL-001 Material Management Policy

9.2 Cascade Procedures

- 9.2.1 MF-PR-006 Manufacturing Production Procedure
- 9.2.2 MF-PR-010 Material Review Board Procedures
- 9.2.3 PG-PR-001 Purchased Materials and Services Procedure
- 9.2.4 QA-PR-002 Sub-Contractor Qualification and Audit Procedure
- 9.2.5 ST-PR-002 Stores and Material Handling Procedures
- 9.2.6 ST-PR-004 Suspected Unapproved Parts Procedure

9.3 Cascade Forms

- 9.3.1 PD-FR-006 Outside Service Request Form