ELECTRONIC REVISION

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1. Purpose

This procedure shall be used by Rosen Aviation, LLC (Rosen) suppliers as supplemental guidelines to the requirements in ISO 9001 and AS 9100. Additionally, suppliers shall comply with the requirements listed in Rosen's Terms and Conditions (T&Cs) document.

Rosen serves the aviation industry, as such all applicable Federal Aviation Administration (FAA) regulations and aviation customers' requirements must be complied with. This includes product qualification testing to ensure aviation safety (e.g., EMI, Flammability and other requirement). The requirements outlined herein are critical in ensuring compliance to these requirements. Please review this document, then sign and return the Acknowledgement page as confirmation of your compliance to these requirements.

2. Terms and Definitions

Term	*Definition*
Build-to-Print Supplier	A supplier contracted by Rosen to supply a Rosen designed part (per Rosen drawing)
C of C	Certificate of Conformance, as evidence that a shipment meets all the requirements
CAPA	Corrective Action and Preventive Action
EMI	Electro-Magnetic Interference (testing)
FAI	First Article Inspection
Delta FAI	An FAI focused only on changes implemented by revision to product requirement
FOD & FOd	Foreign Object Damage and Foreign Object Debris
QMS	Quality Management System

3. Scope

This procedure establishes the Quality Assurance Requirements for all Rosen Suppliers and is applicable to all Rosen Purchase Orders (POs).

4. Quality Management System Requirements

4.1 Certification

Rosen strongly recommends suppliers obtain ISO 9001 and/or AS 9100 certification of their Quality Management System (QMS) through a third-party certification body. For suppliers without certification, a long-term plan toward building a QMS that meets the requirements is preferred.

4.2 Continual Improvement

Continual Improvement shall be part of the QMS activities. ZERO defects and 100% On-Time-Delivery are the goals. Suppliers shall work with Rosen closely for better communication and performance.

4.3 Quality Record Retention

Quality records, including part testing, inspection, material traceability, material certification, and quality assurance activities, shall be retained for a minimum of 10 years or the lifetime of the program, whichever is longer. Electronic files/data shall be regularly backed-up. Records shall be maintained in such a manner as to prevent loss and deterioration and shall be readily available/retrievable upon Rosen request. After the retention period, these records may be disposed of in such a manner as to not compromise existing confidentiality/non-disclosure agreements.

4.4 Making Parts to Rosen's Drawings

**** For Build-to-Print suppliers, all parts delivered must meet the requirements of Rosen's drawing(s). Any deviations to drawing requirements, must be formally requested via a Supplier Change Request Approval form (SCM-5-15), and shall not be implemented until Rosen's approval is received.**

5. Supplier Selection

Rosen's process for Supplier Selection is defined by a separate document (Supplier Management, SCM-3-03).

6. Suppler Performance and Monitoring

6.1 First Article Inspection (FAI)

FAI shall be performed per the requirements in AS 9102 and Rosen supplementary guidance (First Article Inspection, CM-3-10). First Article Inspection reports shall be submitted to Rosen for the first production shipment of a new part number and for subsequent revision if required by Purchase Orders. FAI report must demonstrate compliance to the Rosen drawing requirements. Suppliers will not submit a FAI report where requirements are not met without a clearly communicating the nonconformance(s).

A delta FAI is required when changes to form, fit, function or tightening of requirements occurs. A delta FAI is also required when significant changes to process are made.

As part of and after FAI, suppliers shall provide a Certificate of Conformance (C of C) with each shipment that clearly states compliance to Rosen's requirements. For Build-to-Print suppliers the C of C shall list the materials used to manufacture the parts (including manufacturer and manufacturing part number as required).

6.2 Quality Control and On-Time Delivery

Zero Defects and 100% On-Time Delivery are the goals. Rosen will work with suppliers to continually improve towards these goals.

Supplier shall maintain Quality and On-Time Delivery metrics that demonstrate a positive trend. Supplier shall notify Rosen of any foreseeable interruptions for delivering quality products on-time.

Suppliers falling below 97% Quality (Defect-Parts-per-Million (DPPM)) or On-Time Delivery for 3 consecutive months may be issued a Supplier Corrective Action Report (SCAR) to drive improved performance. If the issues cannot be resolved within 6 months, the supplier may be placed on probation.

6.3 Nonconforming Material Control

Nonconforming material must be identified, documented, evaluated, segregated, and dispositioned per supplier procedures. Only material that complies with the specified requirements shall be shipped to Rosen. The supplier is responsible for flow down of this to lower level suppliers and for verification of compliance to this requirement. For all Rejection Notices (RNs), parts involved shall be

reworked, repaired, or replaced by the supplier. A disposition of "use as is" for Rosen designed parts and articles requires a written authorization from Rosen's Engineering. Any reworked parts must be inspected and tested, to assure conformance to requirements, prior to shipment.

When a Supplier Corrective Action Report (SCAR) is issued, the supplier shall complete containment of the nonconformance and communicate the results of containment activities to Rosen within two business days of receipt. All other SCAR required activities will be completed and submitted to Rosen within 10 business days of receipt unless a request for extension is requested and approved by Rosen.

Rosen reserves the rights to seek financial remedies for supplier responsible nonconformances.

6.4 Notice of Escapes (NOE)

Suppliers are required to notify Rosen within 48 hours of detection any nonconformance (including material traceability information) that exist or that may exist on product that has been previously shipped to Rosen.

The notification must include the following information:

- Affected part numbers, affected process
- A description of the nonconformance and the affected requirements
- Quantities, dates, lots, and applicable purchase order numbers
- Root Cause and Corrective actions (if known)

7. Change Control

7.1 Request

Changes to product and/or process may be necessary and even desired (e.g., product change for eliminating defects, process change for higher productivity, location change, ownership change, changes to reduce cost, etc.). However, such changes must be performed in a controlled manner.

The supplier shall notify Rosen of any changes that may impact product quality and/or on-time delivery. Any change that affects conformance to design requirements requires submission and approval of a Supplier Change Request for Approval form (SCRA; SCM-5-15). Prior to implementing such a change, the suppliers shall complete and submit the SCRA to Rosen with supporting documentations.

No changes shall be implemented until Rosen approval is received by the supplier.

7.2 Approval

After receiving the SCRA form and supporting documents, Rosen will review the requested change and contact the supplier for any additional information that may be needed.

If acceptable the SCRA will be approved. The approval (signed form) will be sent to the supplier to authorize implementation of the planned change.

No changes shall be implemented until Rosen approval is received by the supplier.

8. Lower Tier Supplier Control

8.1 Vendor Qualifications

The supplier shall flow down Rosen's requirements to lower tier vendors, ensuring that requirements are understood and met with evidence of conformance, as appropriate. A qualification process for sub-tier vendor selection is recommended.

Sub-tier flow down requirements include but are not limited to quality, change control, ESD control, FOD prevention, counterfeit part prevention, purchase order or special requirements and quality codes.

Suppliers shall ensure that all components and materials received from lower tier vendors comply with Rosen drawing requirements. Any deviations from the requirements shall not be accepted until Rosen's approval is received by the supplier.

8.2 Pass-Through Defects Prevention

For all the purchased components and materials, the supplier shall ensure that requirements are met. Any product characteristics not verified (measured, tested, inspected, etc.) by the supplier must have evidence for conformance from the sub-tier available upon request.

9. Other Requirements

9.1 Special Process Requirements

A special process is any process where the resulting output cannot be verified by subsequent monitoring or measurement, such as (but not limited to) plating/coating, welding, optical bonding, and metal 3D printing. When a special process is listed in a Rosen drawing the supplier is required to ensure the processing source for these requirements, including those performed by the supplier,

meet the listed applicable standard (such as NADCAP). Rosen reserves the right to verify compliance to any special process listed in a Rosen drawing.

9.2 Identification and Traceability

Delivery documentation shall be provided for each part, product, component, material delivered according to the following list:

- Certificate of Conformance (C of C) required for all shipments referencing Purchase Order, Part Number, Revision and quantity

Note: For Build-to-Print suppliers the C of C shall list the materials used to manufacture the parts (including manufacturer and manufacturing part number as required).

- Test reports as required
- Material Certification for all raw materials (material called out on a Rosen drawing, including but not limited to Delrin, Aluminum, Stainless Steel or Rubber) specifying compliance to the applicable material standard
- Process Certification for all special processes performed (special processes called out on Rosen drawings, including but not limited to corrosion protection, anodizing, painting or heat treating) specifying compliance to the applicable process standard
- For articles that have been returned to the supplier as nonconforming, the articles shall be returned to Rosen with a tear-down report describing the findings, rework performed and subsequent verification activities

9.3 Delivery Documentation

Products made for Rosen shall be properly identified with labels, etc. Records for articles shall indicate part number, revision level, lot number and serial numbers as applicable. When Serial Numbers are applied, the supplier shall have a process in place to prevent the creation of duplicate serial numbers per part number.

9.4 Foreign Object Damage (FOD) and Foreign Object Debris (FOd)

The supplier shall maintain a FOD/FOd program for the prevention, detection, and removal of Foreign Object Damage/Foreign Object Debris (FOD/FOd) in accordance with SAE AS9146. In addition, the supplier shall conduct audits and maintain records to demonstrate the program's effectiveness.

9.5 Calibration

The measuring system a supplier has shall be calibrated per requirements. Monitoring and measuring devices used for in-process inspection and/or product acceptance shall be calibrated and traceable to ISO 10012, ISO 17025, or ANSI/NCSL Z540.3 standards.

9.6 Statistical Techniques

It is recommended that suppliers use SPC (Statistical Process Control) tools for understanding and reducing variation of processes. Data collecting, analysis, and activities taken for process control are greatly encouraged.

9.7 Handling, Packing and Preservation

Suppliers shall review their manufacturing processes for the possibility of damage during production and transition. It is the supplier's responsibility to ensure that the packaging is adequate to protect the components from damage during transportation, handling and storage. Packaging containers shall be appropriate to the size, weight and fragility of the products being packed.

9.8 Employee Requirements

The supplier shall ensure that all personnel working for or on behalf of the supplier in activities relevant to the realization of product or service provided to Rosen, are aware of:

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

9.9 Electrostatic Discharge Protection

Static sensitive devices or static sensitive technology shall be properly handled, stored, packaged, and shipped in such a manner as to preclude damage from electrostatic discharge. Electrostatic protection processes shall be compliant to ASNI/ESD S20.20, Protection of Electrical and Electronic Parts, Assemblies and Equipment or equivalent.

9.10 Right of Entry

Rosen reserves the right to perform a review with the supplier of Rosen's PO and deliverable product requirements. When necessary, the Federal Aviation Administration (FAA) or other applicable Civil Aviation Authorities (CAAs) reserve the right to inspect applicable raw, in-process, or finished material at supplier's facility, with a minimum verbal or written notice of 24 hours.

9.11 Counterfeit Parts Prevention

As applicable, suppliers shall have a program in place that prevents the delivery of counterfeit parts and material to Rosen. All parts, material, and subassemblies (electrical, mechanical, raw material) included in the product delivered to Rosen shall be procured directly from the Original Equipment Manufacturer (OEM) or from the OEM authorized distributor. The supplier is responsible for flow down of this requirement to sub-tiers and for verification of compliance to this requirement. The programs shall be in compliance with SAE documents AS5553 (Electronics) and AS6174 (material) as applicable.

9.12 Conflict Minerals Compliance

When applicable, supplier must have policy and or traceability process in place to determine whether its products contain tin, tantalum, tungsten, or gold ("3TG") originating from the DRC (Democratic Republic of Congo) and adjoining countries.

9.13 Hazardous Materials

Hazardous Material must be supplied with Safety Data Sheets (SDS) for each shipment.

9.14 Shelf-life Limited Parts

As required by PO/Quality Code, materials with limited shelf life i.e. (epoxy, paint, adhesives, etc.) shall reflect the date of manufacturing, Lot number, and applicable specification on the container. The time lapse between cure or manufacturing date and date of scheduled receipt by the buyer under the purchase order shall not exceed 1/4 of the material's shelf life without prior written waiver of the Rosen buyer as to each shipment.

10. Rosen Aviation Quality Codes for Suppliers

Q01 Certificate of Conformance required with each shipment. Quality Assurance & Control Records used to substantiate conformance must be maintained for a minimum of 10 years.

Q02 Age sensitive material requires marking with date of manufacture. Additionally, material must have at least 75% of its useful life remaining at the date of receipt at Rosen.

Q03 Supplier guarantees the right of access to their facilities, quality related records, and quality related data, to the FAA, other applicable CAA's and Rosen. Quality Assurance & Control Records used to substantiate conformance must be maintained for a minimum of 10 years.

Q04 Electrostatic Sensitive parts shall be manufactured, handled, stored, packaged, and shipped in accordance with ANSI/ESD S20.20.

Q05 Material Certification required with each shipment.

Q06 First Article Inspection Report is required with first shipment from initial production run or initial run to new revision of design documentation. First Article Inspection acceptance is to be determined using Rosen design documentation.

Q07 Special process providers shall keep available for review the following data:

Report of process parameter controls (temperature, pressure, concentration, pH, hardness, conductivity, etc.) according to the limits and frequency specified in the specifications.

Calibration standards list (including calibration reference procedures and calibration frequency). List of qualified personnel.

List of qualified personnel; evidence of their qualification (training, knowledge, experience, skills).

Qualified materials list used in the process.

Q08 Quality Control Records are needed per the Key Characteristics worksheet. Control Records used to demonstrate process performance must be maintained for a minimum of 10 years.

***NOTE:** *Quality codes cannot be drastically updated or deleted; if no longer applicable, they are to be stricken through, dated, and acknowledged as such*

11. Acknowledgement

The requirements in this document have been reviewed and accepted.

Name: _____

Title: _____

Signature: _____ Date: _____

Company Name: _____

12. Revision History

Revision	Date	Sections Changed	Description of Change	Change Authority
A	06/16/22	All	Initial release (formerly SCM-5-11)	DC 22-0034