GENESYS AEROSYSTEMS
a Moog Company

Genesys Aerosystems Inc.
4001 Old International Airport Rd, Unit 10
Anchorage, Alaska 99502

60-000001

TITLE:

Quality Management System Manual

Process Owner	**RWISE**	Original Issue Date
Approver	**RWISE**	**September 21, 2016**

Revision History

Rev.	Date	Description of Change
H	9/21/2016	Complete re-write of manual to align with Title 14 CFR §21.137
J	12/13/16	Removed signature section from management approval; Added SOP- 8.3-05, Re-Issuance of 8130-3 for OEM Returned Articles; Added section 13.3 for a new process for SOP 8.3-05.
K	2/27/2017	Removed SOP-4.02-05 from referenced documents section and replaced SOP-4.02-05 in section 5.4.9 with 61-000006, Design Control Procedure
L	8/21/2018	Removed names from Figure 2, Organizational chart; corrected typos in sections 7.4.1, 8.2.1, 10.1.1, 10.2.2, 12.1.2, 12.2.1, 17.2.1; Updated 10.2.3 to reference SOP-7.5-05.; Added section 6.6; Added SOP-7.4- 10 to reference documents
M	2/05/2019	Correct document number in the footer
N	3//28/2019	Corrected org chart for SQA Engineer, Figure 2.
P	7/17/2019	6.5.3 Changed annually to bi-annually per SOP; Corrected minor grammatical errors throughout the document
R	6/16/2021	Minor grammatical corrections throughout document; Added section 7.5.3; Added SOP-7.5-17 to Reference Documents section
S	8/16/2021	Updated Figure 2 Organizational Chart
T	1/25/2023	Updated Reference Documents titles; Corrected reference 5.3.1; changed section 17.1.1 to align with regulation; minor grammatical corrections
U	See Below	Updated Section 18.1.1 To describe the process for authorizing individuals to issue Authorized Release Documents. Update Template.

STATUS:	**DATE:**
Released	**27 Jan 2025**

Management Approval

The Senior Staff of Genesys Aerosystems, Inc. affirms the commitment to uphold the established policies and procedures, which allows for the continuous improvement of our products, ultimately meeting our customers' expectations. By accepting electronically, we acknowledge our responsibility for the implementation and daily support of the Quality Management System.

Company Vision and Mission

The Genesys Vision

Enhancing aircraft safety and mission performance with leading solutions for avionics.

The Genesys Mission

- Lead in the application of technology and the flexibility, ease, and elegance of integration.
- Improve pilots' ability to fly the aircraft for the intended purpose.
- Sustain and grow the business.

1.0 INTRODUCTION AND QUALITY SYSTEM REQUIREMENTS

1.1 Quality Manual - Introduction

1.1.1 Genesys Aerosystems, Inc. holds Technical Standard Order (TSO) authorizations, and as a result, is a production approval holder (PAH). This quality manual was written to fulfill the requirements for such a manual as a PAH, as outlined in Title 14 of the Code of Federal Regulations Part 21, in "Quality manual" paragraphs §21.138, and §21.608.

1.1.2 This manual addresses the specific quality manual requirements as detailed in 14 CFR part 21, §21.137. This manual describes Genesys Aerosystems, Inc.'s Quality system, it is written in the English language, it is retrievable in a form acceptable to the FAA, and it must be approved by the FAA before use.

1.1.3 For the purposes of the FAA Certificate Management Section (FAA CMS), this is the quality manual that applies to Genesys Aerosystems, Inc. as a production approval holder for the manufacture of its FAA-approved articles.

1.2 Quality System – General

1.2.1 To the extent possible, this quality manual, as noted in 14 CFR §21.138, and §21.608, is organized in the order outlined in 14 CFR Part 21. For clarity and ease of review, the required elements of the quality system in this manual are found in the next sections of this manual, and they follow the order in 14 CFR Part 21 Subpart G, §21.137 "Quality system", which is called out as the quality system requirement of §21.607.

1.2.2 This manual is written to meet the requirements of 14 CFR Part 21, Subpart O, and "Technical Standard Order Approvals." The requirements, recommendations, and best practices of the documents listed in the reference section of this document were key inputs into the construction of Genesys Aerosystems, Inc.'s quality system and of this FAA quality manual.

1.2.3 This Quality Manual has been written to ensure the conformity of components and assemblies to Genesys Aerosystems, Inc. FAA-approved design data. The FAA Technical Standard Order approval (TSOA) programs are under the management of Genesys Aerosystems, Inc., with the Accountable Manager acting as the FAA's point of contact.

Company management recognizes it is fully responsible for the quality of its TSOA parts, whether manufactured in-house at Genesys Aerosystems, Inc. or subcontracted to outside suppliers.

1.3 This Quality Assurance (QA) Manual describes, for customers and employees, the Quality Management System (QMS) of Genesys Aerosystems, Inc. facility. This Manual, and by extension the QMS, is approved by the U.S Federal Aviation Administration (FAA). This manual references procedures and other documents where further details regarding specific topics may be found.

1.4 Quality Manual Revisions

1.4.1 This manual shall be revised as necessary to ensure the current requirements are addressed, and that current procedures are being followed in the company's quality system. All proposed manual revisions will be submitted to the local FAA Certificate Management Section (FAA CMS), which is responsible for the production certificate oversight of Genesys Aerosystems, Inc.

1.4.2 Applicable comments resulting from the FAA's review shall be incorporated and an updated preliminary version of the document shall then be resubmitted to the FAA Certificate Management Section (FAA CMS) for review. The proposed revision will not be released for use by the Genesys Aerosystems, Inc. quality system until written documentation approving the revision has been received from the managing FAA CMS.

1.4.3 Proposed updates will be submitted when considered necessary and will be submitted whenever revisions to this manual are necessary. The new revision will be identified by a revision letter and a revision date located within the document.

2.0 COMPANY LOCATION AND LAYOUT

2.1 Genesys Aerosystems, Inc. Facility

2.1.1 The manufacturing facility is located at 4001 Old International Airport Rd. Anchorage, Alaska 99502, is where Genesys Aerosystems, Inc. performs supplier evaluation, receiving inspection, final testing, and generation of airworthiness approval for Genesys Aerosystems Inc. products.

2.2 Notification of Change in Facilities

2.2.1 In accordance with Title 14 CFR § 21.609(b), FAA approval will be obtained before making any changes to the location of manufacturing facilities. The FAA will be notified immediately in writing of any changes to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of our products as per Title 14 CFR § 21.609(c).

2.2.2 For the Facility Layout and location of Inspection stations, please refer to Figure 1.

Facility Layout

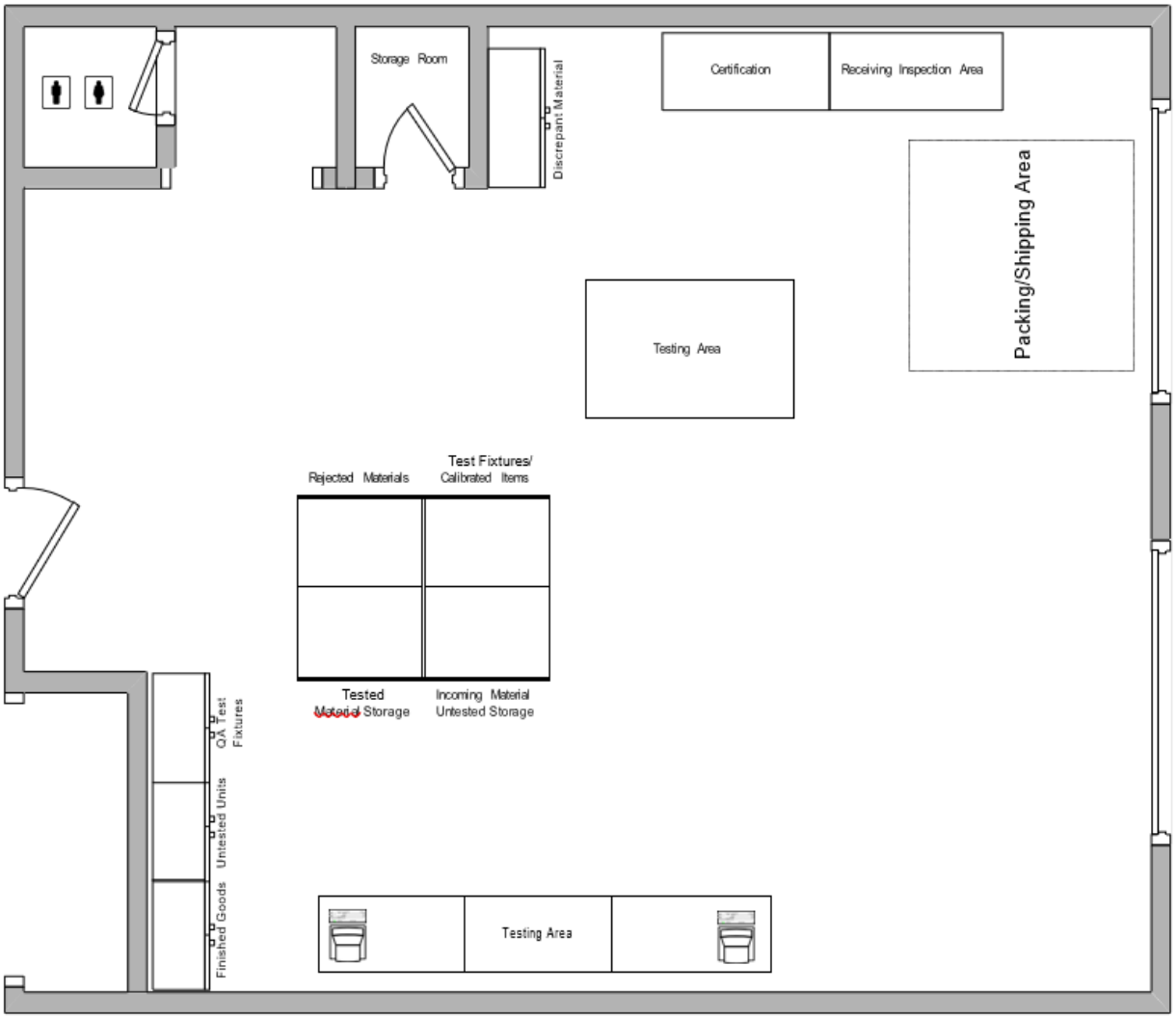


Figure 1

3.0 ORGANIZATION

3.1 Organizational Structure

3.1.1 The Genesys Aerosystems, Inc. organizational chart (figure 2) was included in compliance with Title 14 CFR Part § 21.605, the requirement to describe the functional relationship of those responsible for quality to management and other organizational components.

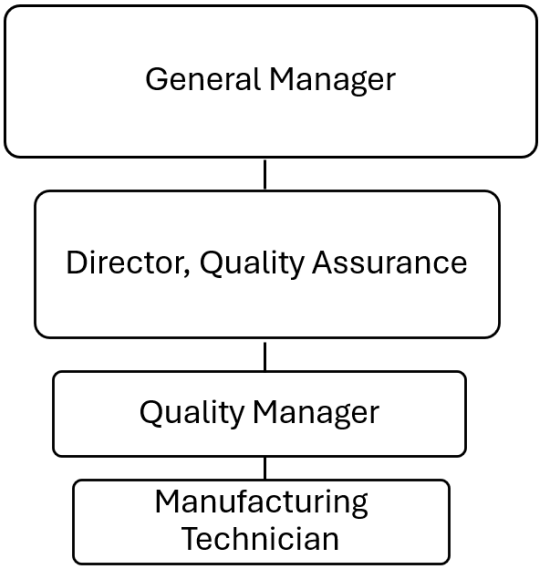
3.2 Management ensures compliance and demonstrates its commitment to meeting customer and Federal Aviation Regulatory requirements through the development and implementation of the quality management system and continually improving its effectiveness by:

- Creating an environment for awareness and fulfillment of customer requirements
- Following statutory and regulatory requirements
- Establishing a quality policy and quality objectives
- Establishing a Quality Management System that integrates all the business processes within the company
- Ensuring the availability of necessary resources

3.3 Accountable Manager

3.3.1 The Director of Quality is named here as the accountable manager for Genesys Aerosystems, Inc., responsible within this production approval holder's organization for, and has the authority over, all production operations conducted under Title 14 CFR Part 21, Subpart O and serves as the primary point of contact with the FAA. This authority has also been delegated to the Quality Manager, for the day-to-day operations of this facility.

Figure 2 Organizational Chart



4.0 QUALITY MANAGEMENT SYSTEM

4.1 General Requirements

4.1.1 Genesys Aerosystems, Inc. QMS has been established and implemented to meet the requirements of Title 14 Code of Federal Regulations Part 21 to enhance customer satisfaction through the effective application of the Quality Assurance System. The QMS ensures conformance to the customer and applicable regulatory requirements in an environment that promotes continual improvement.

4.1.2 The processes that comprise the QMS are described within this manual. Throughout this manual, there are references to other documents where additional information may be found regarding the applicable processes.

4.1.3 To ensure that the QMS is operating effectively, processes are managed and controlled as described in the Monitoring and Measurement of Processes, Analysis of Data, and Continual Improvement sections of this manual. Audits are performed to assess the conformance of each part of the Quality Management System (see section 15).

4.1.4 Outsourced processes that affect product conformity with requirements are identified within the QMS and are controlled as described in the Supplier Control section of this manual.

4.1.5 Rebuild, test, and/or alteration of articles for which Genesys Aerosystems Inc. holds TSO authorization will be accomplished in accordance with Title 14 CFR Part 43 using Genesys Aerosystems Inc. SOP-8.3-04, Rebuild and Alteration of TSO Articles.

4.1.6 Reissuance of articles for which Genesys Aerosystems Inc. holds TSO authorization will be conducted by the interaction of the departments responsible to produce TSO articles. All processes shall be carried out in accordance with the established Quality System accepted by the FAA.

4.1.7 Letter of Authorization (LOA) activities shall be governed by, and processes shall be performed following, the LOA Manual, 60-000186.

5.0 DOCUMENTATION REQUIREMENTS

5.1 General

5.1.1 QMS documents include the following:

- Quality Manual (60-000001)
- Documented Procedures, instructions, forms, drawings, and software related to the requirements of regulatory requirements and/or those needed by Genesys Aerosystems, Inc. to ensure the effective planning, operation, and control of processes.
- Records required by the Quality System

- Quality System requirements are imposed by applicable regulatory authorities.

5.2 Quality Manual

5.2.1 This Quality Manual has a high-level overview of Genesys Aerosystems Inc. QMS, outlining its structure, the interaction between its processes, and referencing procedures and other documents, where additional details may be found.

5.3 Design Data Control

5.3.1 Genesys Aerosystems, Inc. has set up a process for managing product hardware and software configuration in compliance with Title 14 CFR §21.137 (a). This process is outlined in 61-000006, *Design Control Procedure*.

5.4 Document Control

5.4.1 The document control system is in place to control QMS documents and ensure that the documents and changes to them are reviewed and approved before release, revision, or obsolescence as outlined in SOP-4.2-02, *Control of Documents*. Procedures will be reviewed on a maximum of a two-year review cycle. The procedures also ensure the use of the correct revision level documents, proper distribution of new releases and revised documents, and removal of obsolete documents.

5.4.2 External documents, such as drawings, procedures, specifications, and standards not generated by Genesys Aerosystems Inc. that are referenced in the company's QMS documents, are controlled either by the originating organization and/or by adding to the Genesys document control system and SOP-4.2-03, *Control of Records*.

5.4.3 If customer-furnished data is used for design, production, and/ or inspection, Genesys Aerosystems Inc. controls it is following the customer requirements.

5.4.4 When required by customer contracts and/or regulatory requirements, the incorporation of changes is coordinated with the customer and agency. Records of the incorporation of changes are kept. Customer and regulatory authority representatives have access to QMS documentation as needed.

5.4.5 The Quality Assurance department handles ensuring that suppliers receive and return copies of current revision-level documents and software as required.

5.4.6 A real-time list of all objects, records, and files (Configuration Items) held under Genesys Aerosystems, Inc. SOP-7.3-07, *Hardware Configuration Management for Programmable Logic Devices,* and their current revision levels can be accessed through the Proquis document system.

This system is a searchable relational database and is the method used to control and release documents; reports of existing documents are generated through this system.

5.4.7 In cases where electronic access to documents is made available to employees, the access to employees who are unauthorized to make changes will be "read-only" and be password protected as described in the database users' manual or other company procedures.

5.4.8 The Information Technology department handles system backups as described in the SOP-4.2-10, *Server and Data Backup Procedures.*

5.4.9 When work instructions and other similar documents are restricted in scope within a single department or function, they may be controlled locally, as described in the 61-000006, *Design Control Procedure*. Otherwise, they must be managed through the electronic database document control system.

5.5 Control of Quality Records

5.5.1 Genesys Aerosystems Inc. ensures that quality records, including records created by and/or kept by suppliers, are maintained to demonstrate the effective implementation of the QMS. SOP-4.2-03, *Control of Quality Records* describes the process used for record maintenance.

5.5.2 Each department handles the identification, collection, storage, and disposal of QMS records and the records to be maintained are to be identified in each process document. The preferred method for all documents in electronic and hard copy records that may be scanned in with the electronic record then being the official one. SOP-4.2-03, *Control of Quality Records* describes the process used for record maintenance.

5.5.3 Employees are responsible for ensuring that records are complete, accurate, and legible. Records are readily retrievable and available to customers or regulatory authorities as required. The storage methods used should minimize or prevent damage, deterioration, or loss, and ensure that records maintain identification to the corresponding product as applicable as per SOP-4.2-03, *Control of Quality Records.*

5.5.4 Records maintained on electronic media are password protected to prevent tampering or loss. The Information Technology department is responsible for backups per SOP-4.2-10, *Server Backup, and Restore Procedure*.

6.0 SUPPLIER CONTROL

6.1 General

6.1.1 Genesys Aerosystems, Inc., suppliers/subcontractors are reviewed and approved through the Supplier Management Board (SMB) with members consisting of representatives from Production, Quality, and Engineering.

6.2 Contractual Requirements

6.2.1 Contractual requirements are communicated to suppliers via the Genesys Aerosystems, Inc. purchase orders (PO) and Procurement Quality Requirements (PQR) to ensure all products and articles conform to company design data and requirements.

6.3 Purchase Orders

6.3.1 Company purchase orders are generated and maintained through SyteLine, a local server-based manufacturing enterprise resource planning (ERP) software through the purchasing department.

6.3.2 Genesys Aerosystems, Inc. issues a purchase order to the supplier for subassembly/details. Once the subassembly/details unit, from the supplier, is received at Genesys Aerosystems, Inc., the final assembly unit configuration is completed, and the TSOA article is then evaluated to fulfill the customer order.

6.4 Procurement Quality Requirements (PQR)

6.4.1 Procurement Quality Requirements (PQR) are used to communicate terms and conditions to suppliers. These requirements include but are not limited to, first article inspections, documentation, traceability, special processes, etc.

6.5 Supplier Approval and Monitoring

6.5.1 The Quality department is responsible for supplier completion of the supplier survey form and the review of the potential new supplier. A supplier is approved after concurrence from the Quality department and successful completion of a first article inspection, except for calibration services. The type and extent of a supplier's approval are dependent upon the type of service/product provided and are recorded in a Quality Survey Master List (see SOP-7.4-01, *Supplier Evaluation*).

6.5.2 The supplier reporting process used for notifying Genesys Aerosystems, Inc. of products, articles, or services that have been released from or provided by the supplier and subsequently found not to conform to the production approval holder's requirements is handled via the Supplier Nonconformance Disclosure Form, EFRM 8.3-01-05 and dispositioned through the Material Review Board process as outlined in SOP-8.3-03, *Material Review Board* (see also Section 11 for Control of Nonconforming Product) to comply with Title 14 CFR § 21.137(c)(2).

6.5.3 Monitoring of approved suppliers is conducted by an on-site survey/audit which is performed bi-annually at either the supplier's location or through a completed survey. Monitoring of a supplier's quality is performed on an ongoing basis by Quality Management. Engineering and/or Quality

Management are responsible for determining requirements for each product or article and the inspection plan requirements (see SOP-7.4- 01, *Supplier Evaluation*).

6.6 Direct Ship Authorization

6.6.1 Direct Ship Authorization is written authorization granted by Genesys Aerosystems, Inc. (PAH), with responsibility for the airworthiness of an article, to an approved supplier to ship articles produced in accordance with the PAH quality system (SOP-7.4-10, *Direct Ship Authorization*), directly to end-users without the parts being processed through the PAH's facility. Genesys Aerosystems, Inc. may only grant such authorizations for approved suppliers after having met the following:

- The candidate supplier has approved quality procedures that will compensate for the absence of inspections normally conducted at the PAH's facility.
- Successful onsite evaluations of the candidate supplier, if not previously conducted.
- Procedures are in place concerning direct ship authorization for suppliers.
- Notification/Approval from the local FAA Certificate Management Section (FAA CMS) as per Title 14 CFR §21.620 notification of changes in the quality system in writing.
- Generate a direct ship authorization letter to the supplier.

6.6.2 The candidate supplier, if approved, will be obligated to perform the following:

- Direct ship the article
- Meet any special customer requirements accepted by the PAH
- Maintain evidence of direct ship authorization
- Maintain evidence of direct shipments made on behalf of PAH
- Provide a signed/stamped statement of conformity certifying the article conforms to approve design data (C of C or FAA form 8130-3)
- Provide traceability of shipment to the customer purchase request
- Provide evidence with the shipment that acceptance/inspection has been accomplished through delegated inspection authority.
- Provide a statement with the shipment that delegation of inspection authority has been granted by the PAH, and that the inspection was performed on behalf of the PAH when delegated inspection is used.

7.0 MANUFACTURING PROCESS CONTROL

7.1 General

7.1.1 Genesys Aerosystems, Inc. must have procedures for controlling manufacturing processes to ensure that each product and article conforms to its FAA-approved design and requirements.

7.2 Manufacturing Processes

7.2.1 Manufacturing is controlled through Genesys Aerosystems, Inc. supplier's Manufacturing Work Procedures and Procurement Quality Requirements (PQR).

7.3 Work Procedures and Revisions

7.3.1 All work Instructions and revision controls are maintained at the Supplier's facility. All final test procedures are maintained, and revision controlled through an electronic repository by the product line. These procedures are reviewed periodically and approved by the Engineering, Manufacturing, and Quality departments, in accordance with the approved design data. Change requests can also be submitted to request any necessary changes to the Engineering procedures.

7.4 Traceability

7.4.1 All materials received go through the supplier's receiving inspection and are issued a lot number for traceability by the supplier. The issued lot number is traceable back to the purchase order for that material. Once the material is accepted the material istransferred either to the supplier's stock room and/or issued to the supplier's job order where the issued lot number is recorded in the individual job order. This process is contained in SOP-7.4-03, *Verification of Purchased Product*.

7.5 Software Usage

7.5.1 The development, design, verification, and control of software (both airborne and non-airborne) complies with Genesys Aerosystems, Inc., customer, and government regulatory requirements. The procedures and established processes are contained in document 9431.29, *Software Quality Assurance Plan for Generic* (SQAP) to be used as part of the Software Life Cycle Data.

7.5.2 The SQAP document presents general software quality assurance procedures for Genesys Aerosystems Inc.'s software programs. The software quality assurance procedures comply with the objectives of DO-178 for all the software level definitions.

7.5.3 When supporting customers that have taken delivery of TSOA articles (black-labeled), it becomes necessary to provide prototype software with new or updated features for customer evaluation in a test environment, whether airborne or field loadable that is unapproved the process outlined in SOP-7.5-17, *Quality Management System Manual* will be followed with Software Quality Assurance (SQA) oversight.

7.6 Software Quality Assurance

7.6.1 All Software Quality Assurance personnel report directly to the Director of Quality and have full authority and responsibility for the oversight of all software releases and related digital input/output data used for product acceptance as outlined in the applicable company/supplier Software Quality Assurance Program (SQAP), SOP-7.1-01, *Software Quality Assurance*.

8.0 INSPECTION AND TESTING

8.1 General

8.1.1 Genesys Aerosystems, Inc. must have procedures for inspections and tests used to ensure that each article conforms to its FAA-approved design and/or contractual requirement. A functional test will be performed on each unit produced. All work is performed at the facility as described in Section 2, Figure 1.

8.2 Inspection Procedures

8.2.1 Each article produced is subjected to an in-process and final assembly inspection at the supplier's facility, to the company's manufacturing work procedures, and final inspection. Tests are conducted at the company's facility in accordance with product-specific final inspection and test procedures to ensure each article conforms to its FAA-approved design as outlined in SOP-8.2-05, *In-Process Inspection,* and SOP-8.2-06, *Final Inspection*.

8.2.2 Completion of each stage of the process is identified by a stamp/label on the unit as evidence of the process completion. One identifies the manufacturing completion of article/unit/assembly and one tamper-proof inspection label with the inspector's number is applied to each article/assembly after successful completion of the inspection process as outlined in SOP-8.2-05, *In-Process Inspection*.

8.2.3 These procedures are maintained on the supplier/company's intranet and/or electronic repository for all personnel to access and review. These documents are revision controlled and periodically reviewed for accuracy (e.g., Engineering Change Order (ECO).

8.3 Testing Procedures

8.3.1 Each article, unit, and or assembly produced is functionally evaluated to the company's functional test procedures to ensure each article, unit, and or assembly functions as per the FAA-approved design as outlined in SOP-7.5-05, *Inspection Test Status*.

8.3.2 Completion of the functional test stage of the process is identified by a stamp/label of the supplier or company personnel who performed the functional test of the unit.

8.3.3 These procedures are maintained on the supplier/company's intranet and/or electronic repository for all personnel to access and review. These documents are revision controlled and periodically reviewed for accuracy (e.g., ECO implementation).

8.4 Statistical Process

8.4.1 Genesys Aerosystems Inc. does not use a statistical process control standard since all units are inspected 100% to design requirements; however, our suppliers may choose to utilize a statistical process of their choosing as appropriate.

8.5 Nondestructive Testing

8.5.1 Not applicable.

8.6 Flight Test Procedure

8.6.1 Not applicable

9.0 INSPECTION, MEASURING, AND TEST EQUIPMENT CONTROL

9.1 General

9.1.1 Genesys Aerosystems, Inc. maintains a calibration system to ensure the accuracy of inspection, measuring, and test equipment that is used to verify the quality of products and materials and that they are uniquely identified. The Quality Assurance department is responsible for measurement and monitoring devices that can affect product quality and placing them in the calibration system.

9.2 Approval, Inspection, and Calibration Procedures

9.2.1 All monitoring and measuring equipment used for product acceptance or to calibrate monitoring and measuring equipment is approved, periodically inspected, and calibrated through the calibration system as contained in SOP-7.6-01, *Monitoring and Measuring Equipment*. Calibrations are conducted at established intervals that are based on usage, historical data, and the manufacturer's recommendations that are traceable back to standards acceptable to the FAA.

9.3 Tool Control Procedures

9.3.1 Inspection, measuring, and test equipment control is managed in accordance with SOP-7.6-01, *Monitoring and Measuring Equipment*, ensuring all equipment used for article acceptance are protected, maintained, and utilized in an acceptable environment. Calibrated measurement and monitoring devices are identified with a unique tool identification number and a label that reflects the current calibration status.

9.3.2 The process used to confirm the ability of test software to satisfy the intended application is defined in SOP-7.1-01, *Software Quality Assurance*.

9.3.3 When calibrated monitoring and measuring equipment is found not to conform to requirements or is past its due date, the item is immediately removed from service and identified with an "Out-of-Service" tag. The item is also identified in the calibration system as inactive. If articles were accepted using the out-of-tolerance equipment and moved to the next manufacturing area, then Quality will be notified and follow the non-conforming process as outlined in SOP-7.6-01, *Monitoring and Measuring Equipment,* and SOP-8.3-01 *Control of Non-Conforming Product*.

10.0 INSPECTION AND TEST STATUS

10.1 Procedures

10.1.1 The process for indicating inspection and test status is indicated by Quality stamping completed by manufacturing job travelers throughout the manufacturing cycle completion as defined in SOP-7.5-05, *Inspection and Test Status,* and section 7. All completed manufacturing paperwork becomes quality records once quality inspection personnel have stamped or affixed their mark on the completed Job Traveler. These records are considered quality records and are maintained as outlined in section 5.

10.2 Inspection

10.2.1 All operations and processes where the status of inspection and testing must be maintained to ensure that only product that has passed the required inspections and tests is stocked, dispatched, used, or installed.

10.2.2 It is the responsibility of all personnel to indicate the status of the product accurately as the product is processed through the manufacturing cycle.

10.2.3 The Quality Department has the responsibility of maintaining control of issuance, traceability, accountability, and removal of stamps from service. Also, document monthly inspections of all issued inspection and testing stamps, to ensure impression legibility and verify possession of

assigned stamps to appropriate personnel in accordance with SOP-7.5- 05, Inspection, and Test Status.

11.0 NONCONFORMING PRODUCT AND ARTICLE CONTROL

11.1 Procedures

11.1.1 The procedures for identifying, reporting, segregating, controlling, and processing non-conforming material found at any point during the manufacturing process are contained in SOP-8.3-01, *Control of Nonconforming Product*.

11.2 Disposition Determinations

11.2.1 Material Review Board members meet through either recurring meetings or on an as-needed basis to review and evaluate non-conforming material to determine if the acceptance of the nonconformance constitutes a major or minor change to the FAA-approved design data. If it is collectively determined to not accept the nonconformance the material will either be re-worked, scrapped, or returned to the supplier for replacement.

11.3 Data Analysis

11.3.1 Quality department senior management review and analyze nonconforming material data and dispositions to aid in detecting adverse trends and determining appropriate levels of corrective and preventative action as appropriate.

11.4 Disposition of Scrap and Salvageable Articles

11.4.1 Articles dispositioned as "Scrap" shall be either permanently marked or rendered useless for their intended purpose in accordance with SOP-8.3- 01, *Control of Nonconforming Product*. These articles are segregated from other articles by either being placed into a controlled scrap container or mutilated to ensure they are unusable for their original application and render them incapable of being reworked or camouflaged to provide the appearance of being serviceable. Any containers or shelves used to store scrap material to be used as set-up pieces shall be marked "NOT FOR PRODUCTION USE".

12.0 CORRECTIVE AND PREVENTIVE ACTION

12.1 Corrective Action

12.1.1 Quality management system processes are regularly reviewed by the organization to identify any possible failures or breakdowns, as well as opportunities for improvement. Actions necessary to address actual or potential problems and to improve the quality system are implemented through corrective and preventive actions and management improvement projects.

12.1.2 To aid in the elimination of nonconformities, quality system breakdown, or process failures Genesys Aerosystems, Inc. has developed and implemented a process that focuses on the

systemic issues and their root causes and identifying the best solutions in eliminating and preventing their reoccurrence. This process is outlined in SOP-8.5-02, *Corrective Action* which identifies when to use a Corrective Action Request (CAR).

12.1.3 When the need for a CAR has been identified, the creator will input all necessary information documenting the nonconformities, quality system breakdown, or process failure and the CAR will then be assigned to the responsible department or supplier identifying the specific nonconformity, quality system breakdown, or process failure requesting corrective action and root cause analysis to prevent the reoccurrence.

12.2 Preventive Action

12.2.1 The need for preventive action is determined when trends indicate decreasing quality capability and/or effectiveness of the quality system that creates a risk for a potential nonconformity. This could come from a potential issue, regarding the capability and performance of processes, product nonconformity rates, post-production experience feedback, service records, customer complaints, and quality system audit findings. This process is described in SOP-8.5-03, *Preventive Action*.

12.3 Monitoring of Actions

12.3.1 The responses and status of corrective and preventive actions are regularly reviewed for implementation and effectiveness through either email or scheduled meetings, as necessary.

13.0 HANDLING AND STORAGE

13.1 Procedures

13.1.1 Procedures to prevent damage and deterioration of each article, component, and sub-component during handling, storage, preservation, and packaging are contained in SOP-7.5-16, *Material Handling, Storage, and Shipment.* SOP-7.5-04, *Product Identification, and Traceability* outline how each is identified throughout the manufacturing process as required per Title 14 CFR § 21.137(j).

13.2 Storage, Handling, Manufacturing, and Assembly

13.2.1 All articles, assemblies, and sub-assemblies are managed and stored in a manner to prevent damage and deterioration in accordance with any special environmental controls to include during the manufacturing, assembly, or testing of articles, assemblies, or sub-assemblies. Additionally, all items that have a shelf-life or are environmentally sensitive are identified and controlled accordingly.

13.2.2 All items in the facility for storage or manufacturing are properly identified and separated as to their condition and status as identified in SOP-7.5-04, *Product Identification and Traceability.*

13.2.3 All shelf-life controlled articles, if any will be managed in accordance with SOP-7.4-09, *Age Controlled Material* by either labeling the expiration date of the material or by the manufacturer's

expiration date. Shelf-life-controlled material shall be removed from stores or assembly operations before the material's useful shelf life expires.

13.3 OEM Returned Articles with Zero Flight Time

Note: (ref: SOP-8.3-05, Re-Issuance of 8130-3 for OEM Returned Articles)

13.3.1 Articles returned from an Aircraft Original Equipment Manufacturer with zero flight hours will only be introduced back into the quality system with the following at a minimum:

- Return Material Authorization (RMA) from the Sales Department.
- Signed repairable/maintenance tag from OEM attesting to aircraft hours.
- An incoming inspection is performed by Quality Control personnel.
- All paperwork matches article that is being returned (i.e., part number, serial number, etc.).

14.0 CONTROL OF QUALITY RECORDS

14.1 Procedures

14.1.1 Quality records are established and maintained to provide evidence that materials and processes meet specified requirements and that finished products conform to the specification, and to ensure the quality system is operating in accordance with documented procedures and is effective. Where required, records will also provide traceability information. This process is contained in SOP-4.2-03, *Control of Records*.

14.1.2 Quality records to be retained include but are not limited to, inspection and test records, calibration records, supplier records, special process certifications, Material Review Board (MRB) records, and job travelers.

14.2 Record Retention Schedule

14.2.1 As a production approval holder, all quality records are maintained for a minimum period of five years in accordance with 21.137(k), unless a customer contract requires record retention for a longer period.

14.3 Record Disposition

14.3.1 Quality records will be retained electronically on the company network indefinitely after the required retention period as indicated in section 14.2.1.

15.0 INTERNAL AUDITS

15.1 Procedures

15.1.1 An internal audit program as outlined in SOP-8.2-02, *Internal Audits* assesses the conformance of each part of the Quality Management System to the requirements of this manual and associated Standard Operating Procedures (SOP) on a recommended annual cycle as outlined in the internal audit schedule. This schedule and the audit results are maintained in the company's network.

15.2 Reporting

15.2.1 The results of all internal audits are reported to the appropriate levels of management, and they are used for improving the quality system and/or articles, using the Corrective Action Reporting (CAR) system (section 12).

16.0 IN-SERVICE FEEDBACK

16.1 Procedures

16.1.1 Customer feedback, complaints, and internal customer support observations are managed through direct telephone calls, direct emails, trade shows, symposiums, and surveys. This complete process is outlined in SOP-7.2-03, *Customer Feedback, and Complaints*.

16.1.2 All complaints and reports of deficiencies that do not require notification to the Federal Aviation Administration (FAA) as a malfunction or defect or have an impact on the safety of flight shall be recorded in the SyteLine Enterprise Resource Planning (ERP) system. Complaints and reports deemed to be an FAA recordable malfunction and defect shall be executed in accordance with SOP 3.0-02, *Reporting of Failures, Malfunctions, and Defects*.

16.2 Corrective Actions

16.2.1 The Director of Customer Support reviews all submissions with the Quality Director and determines if an action is required. If an action is required, the Director of Customer Support shall issue either corrective action or preventative action requests to the appropriate department and/or personnel (see section 12).

16.3 Service Bulletins and Maintenance Manuals

16.3.1 Service bulletins and maintenance manuals are managed by the Supplier's Technical Publications department. When major type design changes are involved, the FAA or FAA Designee (as applicable) approval is required and only the type certification data will be indicated as approved. Approval will only be included when there is a regulatory basis for the approval. Each new or revised document (SIL, SL, or SB) must be signed by the Director, Manager, or designated alternate of the Requesting department before it will be released by the Technical Publications Department (see SOP-8.3-02, *Service Publications*).

17.0 QUALITY ESCAPES

17.1 Procedures

17.1.1 If it is discovered that the Company has released, from its Quality System, an article that does not conform to design data, or quality system requirements 14 CFR §21.137(n), then the following actions will be executed immediately. Article containment will be implemented by contacting the supplier to initiate the appropriate containment actions through the supply chain and production. The Quality department will then promptly notify the customer and a Corrective Action document will be issued to the appropriate party following the process outlined in SOP-8.5-02, *Corrective Action*. If it is determined that the nonconformance has or could result in any of the occurrences listed Title 14 CFR §21.3(c), then the process contained in SOP-3.0-02, *Reporting of Failures, Malfunctions and Defects* will be followed.

17.2 Analytical Tools

17.2.1 Statistical analysis is the method used to provide a means of determining process performance in conjunction with performance goals. This is accomplished using the corrective and preventative action system as addressed in section 12, and also by determining the root cause and corrective action implementation to prevent any reoccurrence.

17.3 Recalls

17.3.1 Notification to users of articles when those articles are recalled for a suspected or known nonconformance shall be accomplished through Service Publications or the Federal Aviation Administration's Airworthiness Directive process in coordination with the process in section 17.1.1

18.0 ISSUING AUTHORIZED RELEASE DOCUMENTS

18.1 Procedures

18.1.1 Genesys Aerosystems Inc. process for authorizing individuals to issue Authorized Release Documents (FAA Form 8130-3) is covered in SOP-8.3-06, *Process for Authorizing Personnel to Issue Authorized Release Documents*. This procedure describes how individuals in the Quality Department are selected, appointed, trained, managed, and removed from the company's roster of authorized individuals.

Reference Documents

Document	***Document Title***
SOP-3.0-02	Reporting of Failures, Malfunctions, and Defect
SOP-4.2-02	Control of Documents
SOP-4.2-03	Control of Records
SOP-4.2-10	Server and Data Backup Procedures
SOP-7.1-01	Software Quality Assurance
SOP-7.2-03	Customer Feedback and Complaints
SOP-7.3-07	Hardware Configuration Management for Programmable Logic Devices
SOP-7.4-01	Supplier Evaluation
SOP-7.4-03	Verification of Purchased Products
SOP-7.4-09	Age Controlled Material
SOP-7.4-10	Direct Ship Authorization
SOP-7.5-04	Product Identification and Traceability
SOP-7.5-05	Inspection and Test Status
SOP-7.5-16	Material Handling, Storage, and Shipment
SOP-7.5-17	Distribution of Unapproved Airborne Software
SOP-7.6-01	Monitoring and Measuring Equipment
SOP-8.2-02	Internal Audits
SOP-8.2-05	In-Process Inspection
SOP-8.2-06	Final Inspection
SOP-8.2-09	First Article Inspection Procedure for Sub-Assemblies/Completed Unit Assemblies
SOP-8.3-01	Control of Nonconforming Product
SOP-8.3-02	Service Publications
SOP-8.3-03	Material Review Board
SOP-8.3-04	Rebuild and Alteration of TSO Articles
SOP-8.3-05	Re-Issuance of 8130-3 for OEM Returned Articles
SOP-8.3-06	Process for Authorizing Personnel to Issue Authorized Release Documents
SOP-8.5-02	Corrective Action
SOP-8.5-03	Preventive Action
60-000186	Letter of Authorization (LOA) Manual
61-000006	Design Control Procedure
61-000137	FAA Change Reporting Procedure for TSOA or LOA Articles