

**Gulfstream Aerospace Corporation
Savannah, Georgia**

Gulfstream Aerospace Corporation

Savannah Operations

**REPAIR FACILITY
SUPPLIER QUALITY ASSURANCE REQUIREMENTS
SQAR-0002 Rev. B**

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Purpose and Scope

This document establishes the Quality Assurance requirements for post production supplier's, repair or overhaul facilities (S.R.O) supplying products or performing work pursuant to Gulfstream Aerospace purchase orders or other contract documentation.

Repair Stations and overhaul facilities must comply with the requirements of FAR Part 145, in addition to the requirements of this document.

Applicability

This document shall apply when incorporated by reference into any contract to supplier's repair or overhaul facilities supplying products or performing work for Gulfstream Aerospace. Previous editions of this document are acceptable for use when specifically denoted on the contract or purchase order. When new contracts are placed, the current revision in effect shall apply.

In the event of a conflict between the content of this document and any supplier documents, the terms of this document shall apply.

If a supplier proceeds without a correct understanding of this document, Gulfstream reserves the right to interpret the contents of this document.

Gulfstream Audits, Surveys and Inspections

Prior to the award of a contract, an evaluation survey shall be conducted to assure required certifications, Quality Assurance Systems and product traceability. Upon completing of the initial survey, the supplier, repair or overhaul facility will be notified in writing of those areas of nonconformance. All documented nonconformances shall be resolved to Gulfstream Quality Assurance satisfaction prior to award of a contract.

Gulfstream reserves the right to conduct audits, surveys and inspections of the supplier, repair or overhaul facility's Quality Control System, and products to be furnished to Gulfstream. In addition, Gulfstream reserves the right to conduct audits, surveys and inspections of the supplier, repair or overhaul facility's subcontract Quality Control System and products to be supplied to Gulfstream. These surveys are in addition to, and shall not relieve a supplier, repair or overhaul facility of the responsibility to maintain a subcontract control system.

Gulfstream Representatives

Gulfstream may assign Quality Assurance, Purchasing, Engineering Representatives or any other personnel to the supplier, repair or overhaul facility during its performance under any Gulfstream contract. Reasonable facilities and equipment required to conduct business shall be provided to these representatives. This shall also apply to government representatives associated with Gulfstream contracts.

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Requirements

Program Management – The supplier, repair or overhaul facility must establish, document and maintain a Quality Program for the control of the quality and configuration. The documented program and all subsequent revisions shall be reviewed by Gulfstream Quality Assurance prior to implementation of Gulfstream contracts.

All supplier, repair or overhaul facility's must have an agreement with part manufacturer(s), for the distribution of all appropriate technical data, revisions and replacement parts for repairs or overhauls.

Purchase Order Review – Prior to issuance, all purchase orders that apply to Gulfstream contracts shall be reviewed by the supplier, repair and overhaul facility's Quality Organization to verify the inclusion of all applicable Gulfstream quality requirements, as a minimum.

Quality Audit – The supplier, repair or overhaul facility shall establish and implement a procedure to periodically audit the effectiveness of their Quality and Configuration Control System.

Subcontract Auditing System – The supplier, repair or overhaul facility shall maintain a system for evaluating their supplier's or subcontractor's performance in terms of quality. The system shall include an effective corrective action system to eliminate a supplier or subcontractor's unsatisfactory conditions.

Configuration Verification - Records shall be maintained to verify the configuration of each end item. The records must be adequate and current in the information they contain, and accompany the product through every phase of operation at the supplier, repair or overhaul facility.

Drawing and Specification Control – The supplier, repair or overhaul facility shall have a procedure, and designate a responsible organization for the distribution to internal shop areas and subcontractors, all current approved specifications, drawings, service / repair / overhaul manuals, and changes thereto. The procedure shall also provide for the removal of obsolete data from points of issue and use.

Tool Control – The supplier, repair or overhaul facility shall be responsible for ascertaining the correctness and accuracy of all tooling to accomplish the requirements of the contract.

Calibration – The supplier, repair or overhaul facility shall establish a system acceptable to Gulfstream Quality Assurance for the control and calibration of all inspection, measuring and test equipment used for acceptance inspection. Calibration shall be traceable to a national or international recognized standard such as the National Institute of Standards and Technologies (N.I.S.T.).

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Special Process – When special processes are specified by contract or specification, it will be the responsibility of the supplier, repair or overhaul facility to assure such processes are in accordance with the specified requirements.

These processes include but are not limited to; welding, X-Rays, magnetic, particle and fluorescent penetrant inspections, heat treating, plating, chemical coating, precision cleaning, etc., and require record or certification of the process to be retained.

Procurement Requirements – All Gulfstream Approved supplier's repair or overhaul facilities are responsible for maintaining a list of their approved subcontractors, and shall have it available upon request for review by Gulfstream Quality Assurance. All aircraft related parts used for repair or overhaul must be purchased from the part manufacturer, or from the manufacturer's authorized distributor.

Organization – An organizational chart that describes the Quality Organization and the relationship of the inspection function to other groups within the supplier, repair or overhaul facility's organization shall be available for review by Gulfstream Quality Assurance.

Quality Control Procedures – The supplier, repair and overhaul facility shall have and use, as a basis of their Quality Control System, written procedures. These procedures shall provide for the control of quality and configuration of products or services performed by the supplier.

Supplier, repair or overhaul facility's which deal with Electrostatic Discharge (E.S.D.) sensitive components, shall establish and use written procedures to address handling, packing and identification of E.S.D. sensitive components and assemblies supplied to Gulfstream. These procedures and subsequent revisions shall be subject to review by Gulfstream Quality Assurance.

Receiving Inspection – The supplier, repair or overhaul facility shall assure that all procured items or services (raw material, hardware, processes, test, etc.) conform to drawing and specification requirements. When it is not practical or feasible to assure quality upon receipt, the supplier, repair or overhaul facility shall make provisions of source inspection or supplier surveillance. Regardless of the method used, the supplier, repair or overhaul facility is responsible for the quality and configuration of all procured items.

Stock Control – The supplier, repair or overhaul facility shall maintain control of products and material stored for use in Gulfstream parts and/or assemblies. Control shall cover such items as acceptance and identification of materials, methods of issue and age or obsolescence control. Procedures used shall be documented to ensure only acceptable parts are issued and used.

Final Inspection / Acceptance – Upon completion, all items shall be inspected to extent required to verify conformance to all applicable approved data, specifications and contractual requirements. Prior to delivery, the supplier, repair or overhaul facility shall identify the product which has been inspected and accepted, by stamping or other acceptable methods of marking.

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Quality Control Records – The supplier, repair or overhaul facility shall maintain records of all inspections and test associated with product acceptance for a **minimum of two (2) years** after final payment of the purchase order. These records shall be available to Gulfstream Quality Assurance for review. Signature stamps will not be accepted on any document or certificate of compliance.

Packing and Shipping – The supplier, repair or overhaul facility shall maintain a system that assures adequate control of the packing and shipping phase of their operation. The use of commercial packaging practices does not relieve the supplier, repair or overhaul facility of the responsibility for properly controlling the packaging and shipping function in a manner which will prevent damage in transit or handling.

Complete tear-down and repair reports, plus an FAA Form 8130-3, Airworthiness Approval Tag must accompany all equipment returned to Gulfstream regardless if no actual repair was accomplished (e.g. NCFR, “No Cause for Rejection”).

Government / Gulfstream Actions – Gulfstream approved supplier, repair or overhaul facilities are subject to visits by Government representatives. In addition, Gulfstream reserves the right to inspect the right to inspect all products or services being procured by Gulfstream at their point of origin. This inspection shall not constitute final acceptance, nor shall it in any way replace the supplier, repair or overhaul facility’s inspection, or relieve their responsibility to furnish an acceptable conforming end item.

Gulfstream Furnished Property – When material is supplied by Gulfstream to be used in conjunction with, or to be included in products or services supplied to Gulfstream, the supplier, repair or overhaul facility’s internal procedures and practices shall include the following:

- a) Examination of Gulfstream furnished material upon receipt for shipping or handling damage
- b) Conformance inspection to applicable drawings and specifications upon receipt.
- c) Functional testing to determine satisfactory operation.
- d) Periodic follow-on inspection to assure adequate storage condition.

Damage or discrepant Gulfstream furnished material shall be identified with a rejected tag and placed in a restricted area if physically possible. The Gulfstream Purchasing Department shall be notified immediately. Damage or discrepancies not identified at the time of receipt shall become the responsibility of the supplier, repair or overhaul facility.

Capabilities – The supplier, repair or overhaul facility shall establish and maintain a list of all maintenance functions performed to include F.A.A. approvals and ratings, and make such information available to Gulfstream Quality Assurance upon request. In addition, adequate facilities shall exist for the performance of the approved maintenance functions.

Personnel Requirements – The supplier, repair or overhaul facility shall make available to Gulfstream Quality Assurance, employment summaries of all personnel directly in charge of maintenance repair function, as well as inspection personnel involved in final acceptance and

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declarations of airworthiness. If the rating requires a certified repairman or mechanic, certificates shall be available for Gulfstream Quality Assurance review.

Facilities – The supplier, repair or overhaul facility shall provide adequate facilities to perform all activities for which it is approved. In addition, proper attention shall be given to protecting parts and assemblies during all phases of process. Special attention shall be given to prevent Foreign Object Damage (FOD) with parts or assemblies. It shall be the responsibility of the supplier, repair or overhaul facility to ensure contamination is not introduced into FOD sensitive components and assemblies while under their control.

Methods of Supplier (S.R.O.) Control

In order to fulfill the responsibility with regard to the ultimate conformity and condition for safe operation of each completed aircraft or part thereof, Gulfstream shall exercise supplier control by one or combination of the following methods:

- a) Initial and periodic surveys of the supplier, repair or overhaul facility's Quality Control System.
- b) Technical Standard Order (T.S.O.) verification and audits.
- c) Gulfstream source inspections.
- d) In-house inspections and/or functional tests.
- e) Certifications, test reports.

Supplier (S.R.O.) Responsibility

The supplier, repair or overhaul facility's Quality Organization shall provide for a failure analysis and corrective action program. All request from Gulfstream for a failure analysis by the Quality Organization will be at no charge to Gulfstream or its' customers. Each type of non-conformance shall be documented, investigated and appropriate corrective action implemented.

To maintain effective control of quality throughout phases of the program, the supplier, repair or overhaul facility shall be responsible for performing analysis of rejected data forwarded by Gulfstream Quality Assurance. Failure to respond in writing to such correspondence within the prescribed time will have a direct impact on the supplier's overall rating. Gulfstream supplier, repair or overhaul facilities are responsible to ensure that both they and their subcontractors are in compliance with the requirements of this specification.

Gulfstream Notification

The supplier, repair or overhaul facility will notify Gulfstream Quality Assurance within a practical time frame, when one of the following conditions exist:

- a) The supplier, repair or overhaul facility relocates or changes their physical location.
- b) A change is made to the list of functions the facility performs.
- c) A change in ownership of the facility.
- d) Suspension, expiration, surrender or revocation of any FAA certification.
- e) Any change to the facility's FAA ratings.

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Documentation

A copy of the supplier, repair overhaul facility's FAA certificate must be displayed within their facility available to Gulfstream Quality Assurance.

It is the responsibility of the supplier, repair or overhaul facility to ensure that all manufacturers' specifications, to include FAA Air Worthiness Directives, Customer Bulletins, etc., are current and available to all personnel.

Definitions:

The following is a list of selected terms and their meanings, as they relate to the requirements of this procedure:

Certification	A supplier or S.R.O facility's Certificate or Compliance attesting that the item was repaired overhauled in accordance with and meets the requirements of the drawing and specification.
Deficiencies	A general term covering any defect, failure, discrepancy or other lack of conformance to specification.
Electrostatic Discharge (ESD)	A transfer of an electrostatic charge between bodies at different electrostatic potentials caused by direct contact or inducted by an electrostatic field.
Electrostatic Discharge Sensitive (ESDS)	Electronic parts, assemblies and equipment that is sensitive to ESD voltage of 15,000 volts or less.
FAA Certification	Authority and responsibility granted by the Federal Aviation Administration to businesses and individuals for specific functions and capabilities.
F.O.D	Foreign object debris in any aircraft part
Gulfstream Representative	A representative of Gulfstream from a department other than Quality Assurance.
Gulfstream Quality Assurance Representative	A representative of Gulfstream Quality Assurance Department, i.e., Inspection, Supplier Control, Tool Inspection, Quality Laboratory.

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Inspection	The examination and/or testing of supplies, repairs or services to determine whether the supplies, repairs or services conform to requirements which include all applicable drawing, specifications, Airworthiness, Directives, Gulfstream Customer Bulletin's and purchase descriptions.
Major Deviation	A departure from the drawing or specification which may affect interchangeability of the article, safety, strength, stiffness, performance, flight characteristics, weight, balance, service life or installation of subsequent next assembly.
Minor Deviation	Any departure from the drawing or specification which does not affect interchangeability of the article, safety, strength, stiffness, performance, flight characteristics, weight, balance, service life or installation of subsequent next assembly.
Product	A general term used to define supplies, material, parts, components, intermediate assemblies, equipment and end products.
Quality Control	A planned and systematic pattern of all actions necessary to provide adequate confidence that a product will conform to established requirements.
Replaceable	Replaceability applies to parts considered as serviceable items but which, in order to be replaced, may require filling, trimming, etc.. When replacing one by the other, the parts must be structurally and functionally interchangeable. NOTE: Non-replaceable items are considered to be parts which are permanently fastened or welded in place.
Scrap	Scrap material, detail parts, assemblies or components that have been rejected and are non-repairable due to spoilage, damage, wear or other authorized reasons.
Supplier (S.R.O)	A business contract by Gulfstream to supply parts or perform maintenance, preventative maintenance, alterations, completions, overhauls and inspections of airframes, power plants, appliances and parts thereof.

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Technical Rejection

A modified rejection notice which does not call for the immediate return of material but does debit the supplier, repair or overhaul facility's account. Used where documentation requirements, as specified by the purchase order, have not been met.

Traceability

The capability to track individual raw stock items from the producer to the fabricator to the distributor; or a supplier to a specific product.

Traceable Items

Parts and assemblies that require traceability

T.S.O.

A Technical Standard Order (T.S.O.) authorization is issued by the FAA, and is a minimum performance standard for specified articles (material, parts, processes or appliances)