



# General Quality Document

GQD-003

SUPPLIER QUALITY REQUIREMENTS  
AND SUPPLEMENTARY PURCHASE ORDER CONDITIONS

Revision 12

## GE Aviation Systems

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**REVISION RECORD SHEET**

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## PREFACE

The information contained in this document is the property of GE Aviation and shall be used only by the recipients for the purpose for which it has been supplied and shall not be disclosed to any third party without the written consent of GE Aviation.

Holders of this document shall ensure they are working to the appropriate revision.

Suppliers shall discard superseded versions when no longer required for open orders, or upon receipt of an updated manual. Internal users shall discard superseded versions upon receipt of an updated manual.

To verify currency of the manual or to make suggestions for improvement, contact GE Aviation Systems Purchasing.

Deviations to the conditions contained within this document must be agreed in writing with GE Aviation Systems Quality Department. Such deviations will be detailed in a supplier Quality Plan unless agreed otherwise.

## GENERAL QUALITY SYSTEM REQUIREMENTS (QSR-001)

### 1. SCOPE

This specification requires the establishment of a quality programme by the supplier to assure compliance with contractual requirements set forth by GE Aviation. It is based upon AS9100, and other requirements that are flowed down by the nature of the product and/or process.

If the supplier has an AS9100 approved quality system and is listed in the OASIS database, then it is assumed that they are automatically compliant with the quality system requirements defined in this section.

### 2. APPLICABLE DOCUMENTS

AS9110 Quality Management Systems - Aerospace - Requirements Document

ISO10012 Measurement Management Systems - Requirements for Measurement Processes and Measuring Equipment

### 3. APPLICABILITY

This specification is applicable when referenced on a Purchase Order or Contract from GE Aviation.

### 4. QUALITY MANAGEMENT

#### 4.1. General Requirements (EASA 145.A.65)

The supplier shall establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the requirements described in QSR-001.

Where the supplier chooses to outsource any process that affects product conformity with requirements the supplier shall ensure control over such processes.

#### 4.2. Documentation Requirements (EASA 145.A.70)

##### 4.2.1 General (EASA 145.A.30, EASA 145.A.45, EASA 145.A.65)

The supplier's quality management system shall include the following documentation: -

- a) Documented Statements of a Quality Policy and Quality Objectives
- b) A Quality Manual as defined in §4.2.2 of the AS9100 Standard
- c) Documented procedures required by QSR-001
- d) Documents needed by the supplier to ensure the effective planning, operation and control of its processes
- e) Records required by QSR-001
- f) The supplier shall ensure that its employees have access to quality management system documentation and are aware of relevant procedures. GE Aviation and/or its customers and/or regulatory authority's representatives shall have access to the quality management system documentation upon request.

#### 4.2.2 Quality Manual (EASA 145.A.65)

The supplier shall establish and maintain a quality manual that includes: -

- a) The scope of the quality management system
- b) The documented procedures established for the quality management system, or reference to them
- c) A description of the interaction between the processes of the quality management system.

#### 4.2.3 Control of Documents (EASA 145.A.45, EASA 145.A.55, EASA 145.A.65)

The supplier shall establish a document to define the controls needed to: -

- a) Approve documents for adequacy prior to issue
- b) Review and update as necessary and re-approve documents
- c) Ensure that changes and the current revision status of documents are identified
- d) Ensure that relevant versions of applicable documents are available at points of use
- e) Ensure that documents remain legible and readily identifiable
- f) Ensure that documents of external origin are identified and their distribution controlled
- g) Prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose
- h) The supplier shall coordinate document changes with GE Aviation in accordance with contract or regulatory requirements.

#### 4.2.4 Work Instructions (EASA 145.A.45, EASA 145.A.55, EASA 145.A.65)

The supplier shall establish and maintain work instructions which: -

Assure that all work affecting quality (including such things as purchasing, handling, machining, assembling, fabricating, processing, inspecting, testing, modifying, installing, and any other treatment of product, facilities, standards or equipment from the ordering of materials to the dispatch of shipments) be prescribed in clear and complete documented instructions of a type appropriate to the circumstances.

Work instructions shall: -

- a) Provide criteria for properly trained personnel to perform work functions
- b) Be compatible with acceptable criteria for workmanship
- c) Serve as media for supervising, inspecting, and managing work
- d) Provide for and monitor the preparation and maintenance of work instructions.

#### 4.2.5 Control of Records (EASA 145.A.35, EASA 145.A.55, EASA 145.A.65)

The Supplier shall establish and maintain records to provide evidence of conformity to requirements and of the effective operation of the quality management system.

A documented procedure shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

Records shall remain legible, readily identifiable and retrievable. Records shall be available for review by GE Aviation, its customers and/or regulatory authorities upon request and shall be retained in a safe, accessible location protected from environmental damage (Fire, Flood, Dust, etc...) for a period of 7 years after date of delivery or as defined in the contract.



The supplier's records associated with the manufacture of serialised or lot-controlled articles will provide for continued traceability of serial numbers or lot number identification through all phases of manufacture, commencing with the raw material and continuing through final acceptance of the end item.

Records held for the required retention period shall not be destroyed without GE Aviation's written approval.

#### 4.3. Configuration Management

The organisation shall establish, document and maintain a configuration management process appropriate to the product.

**NOTE:** Guidance on configuration management is given in ISO 10007.

## 5. MANAGEMENT RESPONSIBILITY

### 5.1. Management Commitment

(EASA 145.A.30, EASA 145.A.47, EASA 145.A.60, EASA 145.A.65, EASA 145.A.70)

The supplier shall provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by: -

- a) Communicating within its organisation the importance of meeting customer as well as statutory and regulatory requirements
- b) Establishing the quality & safety policies
- c) Ensuring that quality & safety objectives are established
- d) Conducting management reviews
- e) Ensuring the availability of resources.

### 5.2. Quality Policy (EASA 145.A.30, EASA145.A.65)

The supplier shall ensure that the quality policy: -

- a) Is appropriate to the purpose of the organisation
- b) Includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system
- c) Provides a framework for establishing and reviewing quality objectives
- d) Is communicated and understood within the organisation
- e) Is reviewed for continuing suitability.

### 5.3. Safety Policy (EASA 145.A.30, EASA 145.A.65)

The supplier shall ensure that the safety policy: -

- a) Is appropriate to the purpose of the organisation
- b) Provides a framework for establishing and reviewing the safety policy and safety objectives
- c) Is communicated to and understood within the organisation and that personnel have access to the policy

#### 5.4. Planning (EASA.A.30, EASA 145.A.45, EASA 145.A.47)

Planning shall be performed in the earliest practical phase of contract performance. The supplier shall maintain procedures which: -

- a) Identify and make timely provision for the special controls, processes, test equipment, fixtures, tooling, and technically skilled and trained personnel required to assure product quality
- b) Assure the necessary research to update inspection and testing techniques, instrumentation and correlation of inspection and test results with manufacturing methods and processes
- c) Assure adequate review and timely action to maintain compatibility of manufacturing, inspection, testing, and documentation.
- d) The company shall take into account Human Performance Limitations when planning and conducting repair activities.

#### 5.5. Management Representative (EASA 145.A.30, EASA 145.A.35, EASA 145.A.60)

The supplier shall appoint an employee who, irrespective of other responsibilities, shall have responsibility and authority that includes: -

- a) Ensuring that processes needed for the quality management system are established, implemented and maintained
- b) Reporting to top management on the performance of the quality management system and any need for improvement
- c) Ensuring the promotion of awareness of customer requirements throughout the organisation
- d) The organisational freedom to resolve matters pertaining to quality.

**NOTE:** The responsibility of a management representative can include liaison with external parties on matters relating to the quality management system.

#### 5.6. Changes affecting an Organisation (EASA 145.A.85)

The supplier shall inform the customer of any changes concerning their business: -

- a) High rejection rate of service provided
- b) Change in scope of approval
- c) Change in ownership
- d) Change of company name/address
- e) Technical or Quality matter.

## 6. RESOURCE MANAGEMENT

#### 6.1. Human Resources (EASA 145.A.30, EASA 145.A.35, EASA 145.A.36, EASA 145.A.50)

The supplier shall ensure that personnel performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience by: -

- a) Determining the necessary competence for personnel performing work affecting product quality
- b) Providing training or taking other actions to satisfy these needs
- c) Evaluating the effectiveness of the actions taken
- d) Ensuring that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives
- e) Maintaining appropriate records of education, training, skills and experience in accordance with §d).

## 6.2. Infrastructure (EASA 145.A.25)

The supplier shall determine, provide and maintain the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable: -

- a) Buildings, workspace and associated utilities
- b) Process equipment (both hardware and software)
- c) Supporting services (such as transport or communication).

## 6.3. Work Environment (EASA 145.A.25)

The supplier shall determine and manage the work environment needed to achieve conformity to product requirements.

**NOTE:** Factors that may affect the conformity of the product include temperature, humidity, lighting, cleanliness, protection from electrostatic discharge, etc.

# 7. PRODUCT REALISATION

## 7.1. Purchasing (EASA 145.A.42, EASA 145.A.75)

The supplier shall ensure that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product on subsequent product realisation or the final product.

The supplier shall be responsible for the quality of all products purchased from suppliers, including customer-designated sources.

The organisation shall evaluate and select suppliers based on their ability to supply product in accordance with the organisation's requirements. Criteria for selection, evaluation and re-evaluation shall be established. Records of the results of evaluations and any necessary actions arising from the evaluation shall be maintained (see §d).

The supplier shall: -

- a) Maintain a register of approved suppliers that includes the scope of the approval
- b) Periodically review supplier performance; records of these reviews shall be used as a basis for establishing the level of controls to be implemented
- c) Define the necessary actions to take when dealing with suppliers that do not meet requirements
- d) Ensure where required that both the organisation and all suppliers use customer-approved special process sources
- e) Ensure that the function having responsibility for approving supplier quality systems has the authority to disapprove the use of sources
- f) Flow down applicable GE Aviation requirements for the supplier to sub-tier suppliers in the purchasing documents, including key characteristics where required

### 7.1.1 Verification of Purchased Product (EASA 145.A.42)

The supplier shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.

Purchased product shall not be used or processed until it has been verified as conforming to specified requirements unless it is released under positive recall procedure.

Where the supplier utilises test reports to verify purchased product, the data in those reports shall be acceptable per applicable specifications. The supplier shall periodically validate test reports for raw material: -

- a) Marking and labelling including safety warnings
- b) Shelf life control and stock rotation
- c) Special handling for hazardous materials.

The organisation shall ensure that documents required by the contract/order to accompany the product are present at delivery and are protected against loss and deterioration.

## 7.2. Production and Service Provision (EASA 145.A.42, EASA 145.A.75, EASA 145.A.80)

### 7.2.1 Control of Production and Service Provision

(EASA 145.A.40, EASA 145.A.45, EASA 145.A.47 EASA 145.A.48)

The supplier shall plan and carry out production and service provision under controlled conditions. Controlled conditions shall include, as applicable: -

- a) The availability of information that describes the characteristics of the product
- b) The availability of work instructions, as necessary
- c) The use of suitable equipment
- d) The availability and use of monitoring and measuring devices
- e) The implementation of monitoring and measurement
- f) The implementation of release, delivery and post-delivery activities
- g) Accountability for all product during manufacture (e.g., parts quantities, split orders, nonconforming product)
- h) Evidence that all manufacturing and inspection operations have been completed as planned, or as otherwise documented and authorised
- i) Provision for the prevention, detection, and removal of foreign objects
- j) Monitoring and control of utilities and supplies such as water, compressed air, electricity and chemical products to the extent they affect product quality
- k) Criteria for workmanship, which shall be stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations).

### 7.2.2 Production Documentation (EASA 145.A.45, EASA 145.A.50, EASA 145.A.65)

Production operations shall be carried out in accordance with approved data. This data shall contain as necessary: -

- a) Drawings, parts lists, process flow charts including inspection operations production documents (e.g., manufacturing plans, routers, work orders, process cards); and inspection documents
- b) A list of specific or non-specific tools and numerical control (NC) machine programs required and any specific instructions associated with their use.

### 7.2.3 Control of Production Process Changes (EASA 145.A.45)

Persons authorised to approve changes to production processes shall be identified. The supplier shall identify and obtain acceptance of changes that require GE Aviation approval.

Changes affecting processes, production equipment, tools and programs shall be documented. Procedures shall be available to control their implementation. The results of changes to production processes shall be assessed to confirm that the desired effect has been achieved without adverse effects to product quality.

### 7.2.4 Preservation of Product (EASA 145.A.25, EASA 145.A.42)

The Supplier shall preserve the conformity of product during internal processing and delivery to the intended destination. This preservation shall include identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.

Preservation of product shall also include, where applicable in accordance with product specifications and/or applicable regulations, provisions for: -

- a) Cleaning
- b) Prevention, detection and removal of foreign objects
- c) Special handling for sensitive products.

### 7.2.5 Identification and Traceability (EASA 145.A.42)

The supplier shall identify the product by suitable means throughout product realisation.

The supplier shall maintain the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.

The supplier shall identify the product status with respect to monitoring and measurement requirements.

When acceptance authority media are used (e.g., stamps, electronic signatures, passwords), the organisation shall establish and document controls for the media.

The organisation shall control and record the unique identification of the product.

## 7.3. Control of Monitoring and Measuring Devices (EASA 145.A.40)

The supplier shall maintain procedures which: -

- a) Assure that the calibration of gauges or any Measuring and Testing Equipment (M&TE) meet the requirements of ISO 10012, '*Requirements for Measurement Processes and Measuring Equipment*,' or UKAS (United Kingdom Accreditation Service).
- b) Assure that gauges and other M&TE necessary to verify product conformance to purchase order/contract requirements are maintained. This applies to both supplier or employee owned M&TE used for product acceptance of GE Aviation product.

### 7.3.1 Advanced Metrology Requirements

The supplier shall maintain procedures which assure that: -

- a) The request for proposal or purchase order/contract is reviewed to determine if any unusual precision measurements or other testing is required
- b) GE Aviation is notified of the inability to perform any required precision measurements or other testing prior to completion of negotiations and signing of the purchase order/contract.

#### 7.4. Final Inspection and Testing (EASA 145.A.50, EASA 145.A.55, EASA 145.A.75)

The supplier shall maintain procedures which: -

- a) Assure that complete items are subject to a final inspection and/or test
- b) Require documented inspection procedures that include accept/reject criteria
- c) Assure that all product and/or services presented to GE Aviation for acceptance conform to purchase order/contract requirements
- d) Maintain inspection records and resulting documentation, and make available for review upon request
- e) Assure that final testing verifies that product performance is in compliance with purchase order/contract requirements
- f) Provide for documentation and follow-up of discrepancies detected at final inspection and/or testing
- g) Assure reporting to designers or applicable personnel any unusual difficulties, deficiencies or conditions
- h) Assure that re-inspection and/or re-set of all items that have been reworked, repaired or modified after final inspection and/or testing is performed on affected characteristics.

#### 7.5. Inspection at Supplier's Facility

The supplier shall: -

- a) Provide GE Aviation representative(s) with the necessary facilities, equipment and personnel when on site verification of purchase order/contract conformance is required
- b) Allow GE Aviation Customers or Regulatory Authorities access to all of the supplier's facilities involved in the order and to all applicable records, when an on-site verification of purchase order/contract conformance is required.

### 8. MEASUREMENT, ANALYSIS AND IMPROVEMENT

#### 8.1. Corrective Action (EASA 145.A.60)

The supplier shall maintain procedures which: -

- a) Take prompt action to correct assignable conditions that have resulted or could result in the submission of nonconforming product or services to GE Aviation
- b) Assure that GE Aviation is informed about any nonconforming product that has been shipped by the supplier to GE Aviation within 72hrs of identifying the non-conformance
- c) Extend corrective action to the performance of all suppliers
- d) Are responsive to data and product provided or returned by customer/users
- e) Provide for analysis of data and examination of scrapped or reworked product to determine extent and root cause(s) of non-conformance
- f) Provide for analysis of trends in processes or in the performance of work to prevent product non-conformances from occurring/recurring
- g) Provide for initial review of the adequacy and monitor the effectiveness of the corrective action taken as a result of the analysis.

## 8.2. Inspection Documentation (EASA 145.A.55)

Measurement requirements for product or service acceptance shall be documented. This documentation may be part of the production documentation, but shall include: -

- a) Criteria for acceptance and/or rejection
- b) Where in the sequence measurement and testing operations are performed
- c) A record of the measurement results
- d) Type of measurement instruments required and any specific instructions associated with their use.

Test records shall show actual test results data when required by specification or acceptance test plan. Where required to demonstrate product qualification the organisation shall ensure that records provide evidence that the product meets the defined requirements.

## 8.3. First Article Inspection

The organisation's system shall provide a process for the inspection, verification, and documentation of a representative item from the first production run of a new part or following any subsequent change that invalidates the previous first article inspection result.

**NOTE:** See (AS) (EN) 9102 for guidance.

## 8.4. Control of Non-Conforming Product (EASA 145.A.42, EASA 145.A.60)

The supplier shall ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product shall be defined in a documented procedure.

The supplier's documented procedure shall define the responsibility for review and authority for the disposition of nonconforming product and the process for approving personnel making these decisions.

The supplier shall deal with nonconforming product by one or more of the following ways: -

- a) By taking action to eliminate the detected nonconformity
- b) By authorising its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer
- c) By taking action to preclude its original intended use or application.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained (see §4.2.4). When nonconforming product is corrected it shall be subject to re-verification to demonstrate conformity to the requirements.

When nonconforming product is detected after delivery or use has started, the organisation shall take action appropriate to the effects, or potential effects, of the nonconformity.

## 8.5. Statistical Quality Control and Analysis

The supplier shall: -

- a) Submit any sampling plans used for product acceptance to GE Aviation for approval prior to use. This requirement is applicable to the supplier and to the supplier's sub-tier contractors. Sampling is not permitted until the sampling plans have been approved.
- b) Utilise sampling plans when tests are destructive or when the records, inherent product characteristics, or the non-critical application of the product, indicate that a reduction in inspection or testing can be achieved without jeopardising quality.

## **GENERAL QUALITY SYSTEM REQUIREMENTS (QSR-002) - ADDITIONAL INSPECTION & RELEASE SYSTEM REQUIREMENTS FOR REPAIR SUBCONTRACTORS**

### **1. SCOPE**

This specification requires the establishment of a quality programme by the Subcontractor to assure compliance with contractual requirements set forth by GE Aviation. It is based upon the requirements of (UK)CAA/ EASA / FAR 145 / CAAC / Mil 145 and will apply to those companies who repair equipment that do not have the required (UK)CAA/ EASA / FAA / CAAC / Mil 145 approvals or are repairing items that are not listed on their (UK)CAA/ EASA / FAA / CAAC / Mil 145 capability lists.

### **2. APPLICABILITY**

This specification is applicable when referenced on a Purchase Order or Contract from GE Aviation.

### **3. REQUIREMENTS**

#### **3.1. Storage (EASA 145.A.25)**

The supplier shall have a secure storage facility provided for components, equipment, tools and materials. Segregation is required for serviceable and unserviceable components, tools and materials.

The storage of goods and materials shall be in accordance with the Original Equipment Manufacturer's recommendations with special attention being paid to shelf life items.

#### **3.2. Personnel (EASA 145.A.30, EASA 145.A.35, EASA 145.A.42, EASA 145.A.65)**

The company shall have controls of authorised signatures and / or stamps (Sample copies of the signatures / stamps to be supplied to GE Aviation upon request). The company shall also ensure that employees responsible for final inspection are able to read, write and understand English.

The company shall take into account Human Performance Limitations when planning and conducting repair activities.

#### **3.3. Components (EASA 145.A.42)**

Component held by the subcontractor should be classified and appropriately segregated into one of the following categories: -

- Satisfactory condition
- Unserviceable

No part of any repair order may be further subcontracted without prior written agreement with GE Aviation. This includes the inter-company movement of repair work to different facilities.



**3.4. Maintenance Data** (EASA 145.A.45)

The organisation shall use up-to-date maintenance data in the performance of maintenance.

All maintenance data should be available at the point of use when required by employees.

Work cards (or equivalent) are to contain the relevant maintenance data (accurately transcribed) or make precise reference to the particular tasks in the maintenance data itself. Work cards should include inspection stages, materials used authorisation, etc.

**3.5. Product Release** (EASA 145.A.35, EASA 145.A.50)

Release to Service certificates are to be issued by appropriately authorised certifying staff.

## **GENERAL QUALITY SYSTEM REQUIREMENTS (QSR-003) - MINIMUM INSPECTION & RELEASE SYSTEM REQUIREMENTS (DISTRIBUTORS/STOCKISTS ONLY)**

### **1. SCOPE**

This specification requires the establishment of a quality programme by the supplier to assure compliance with contractual requirements set forth by GE Aviation.

### **2. APPLICABILITY**

This specification is applicable when referenced on a Purchase Order or Contract from GE Aviation.

### **3. REQUIREMENTS**

#### **3.1. Responsibility for Inspection**

The supplier shall perform, or have performed, all inspection necessary to substantiate that the material or services offered for acceptance conform to purchase order/contract requirements.

#### **3.2. Corrective Action**

The supplier shall take prompt action to correct assignable conditions that have resulted, or could result in, the submission of non-conforming product or services to GE Aviation.

#### **3.3. Inspection Equipment**

Inspection/test equipment used by the supplier shall provide valid measurements (i.e. calibrated to national standards).

#### **3.4. Quality Verification**

GE Aviation and/or customer quality representative reserves the right to verify, at GE Aviation or the supplier's facility, conformance of the material or service to purchase order/contract requirements.

#### **3.5. Non-Conformance**

Non-conforming materials shall be identified and segregated from conforming material. Non-Conforming material shall not be supplied to GE Aviation without written approval in advance from GE Aviation quality department. Non-conforming material, having received approval, shall be segregated and the specific non-conformance clearly identified.

#### **3.6. Accommodation and Assistance**

When on-site verification of purchase order/contract conformance is required, the supplier shall: -

- Provide the equipment, facilities, and the personnel necessary for GE Aviation representatives to verify conformance
- Allow GE Aviation Customers or Regulatory Authorities access to all of the suppliers' facilities involved in the order and to all applicable records.

#### **3.7. Original Certificate of Conformity**

A copy of the manufacturer's Certificate of Conformity for each part supplied shall be included with each delivery.

### 3.8. Moisture Sensitive Components

All moisture sensitive components shall be handled, packaged, shipped and used in accordance with J-STD-033. All moisture sensitive components shall be dry sealed (with no punctures) in moisture sensitive bags with the appropriate clearly labelled moisture sensitivity labels.

## SUPPLEMENTARY PURCHASE ORDER CONDITIONS (SPOC) & QUALITY NOTE

### 1. SCOPE

The individual requirements require the establishment of supplementary quality conditions by the supplier to assure compliance with contractual requirements as determined by GE Aviation and its customers. It is based upon the AS9100 series and other requirements that are flowed down by the nature of the product and/or process.

### 2. APPLICABILITY

The requirements are applicable when referenced on a Purchase Order or Contract from GE Aviation. The requirement shall be referenced by the number of the (SPOC) on the purchase order/contract.

### 3. REQUIREMENTS

#### 100 ISO9001 CERTIFICATION

The organisation shall have a quality management system that complies with International Organisation for Standardisation document ISO 9001 – Quality Management System Requirements. Independent certification/registration is not required.

#### 101 AS9100 CERTIFICATION

The supplier shall have a quality management system that complies with Society of Automotive Engineers (SAE), AS9100 Quality Management Systems - Aerospace - Requirements. Independent certification/registration is not required.

#### 102 AS9100 CERTIFICATION WITH INDEPENDENT CERTIFICATION

The supplier shall have a quality management system that complies with Society of Automotive Engineers (SAE) AS9100 Quality Management Systems - Aerospace -Requirements. Independent certification/registration is required under the Aerospace Industry controlled AS9104 process.

Organisations that obtain certification/registration to AS9100 and subsequently changes certification/registration bodies (CRB), loses its registration status, or is put on notice of losing its registration status, shall notify its customer's procuring organisation(s) within three days of receiving such notice from the organisation's registration body (CRB).

#### 103 NOTIFICATION OF NON-CONFORMING HARDWARE

The supplier shall provide prompt, written notification to GE Aviation when non-conforming products or processes are discovered that may affect product already delivered. Notification shall include a description of the discrepancy, parts affected (by serial number, lot number, etc.) delivery dates and the corrective action for the discrepancy. Additionally, the supplier shall provide prompt, written notification of failures that may affect fit, form, or function of the product, which may affect product already delivered. Notification shall be made attention: Quality Manager, GE Aviation Systems, Maintenance Organisation, Bishop's Cleeve, Cheltenham, Gloucestershire, GL52 8SF, United Kingdom. Email [aviation.fleetsupport@ge.com](mailto:aviation.fleetsupport@ge.com)

**104**     **CALIBRATION OF EQUIPMENT AND GAUGES OWNED BY GE AVIATION**

Equipment and Gauges owned by GE Aviation that is calibrated by external suppliers shall be performed to controlled process and according to ISO9001 and/or ISO 10012 which replaces MIL-STD-45662A.

Calibration certificates shall at a minimum include the following: -

- Name and address of the calibration company
- Make, model, serial number, and description of the equipment for calibration
- Date of the calibration
- The calibration interval
- Procedures used to calibrate the equipment
- Environmental conditions during the time of calibration
- Increments of test, before adjustment, after adjustment, and upper/lower tolerances
- Percentage of the tolerance that the equipment is calibrated for
- The certificate shall state if the equipment was received in tolerance or out of tolerance
- The master equipment used for calibration. The manufacturer, model and, serial number, description, calibration date and interval shall be noted on the certificate
- All reference standards used shall be traceable to UKAS (United Kingdom Accreditation Service) or equivalent standard. The reference standards shall be noted on the certificate
- A signature of the companies authorised person to perform the tests
- Equipment and gauges shall be adequately stored and protected to prevent damage or corrosion. Rework, repair or disposal shall not be performed without written approval from GE Aviation. Contact the buyer if equipment or gauge drawing or other information is required
- If the calibration of an item has been further subcontracted a copy of the calibration certificate provided by the calibrator shall also be attached to the supplier's Certificate of Conformity.

**105**     **AGE CONTROL OF SHELF LIFE ITEMS**

Certification is required with each shipment that specifies if the products furnished under this order are shelf life limited (i.e., age sensitive). It shall also be identified if there are specific environmental storage conditions that affect the shelf life. The supplier shall also ensure that a minimum of 80% of the shelf life is remaining at date of shipment, unless directed otherwise by the Purchase Order.

**106**    **CERTIFICATE OF CONFORMITY REQUIRED**    EASA 145.A.55

Supplier shall provide a certificate of conformity with each shipment, signed and dated by an authorised supplier representative.

Certification shall include: -

- Purchase Order number
- Part number and revision letter
- Quantity and if applicable, serial numbers
- Manufacturer's name and if applicable, manufacturer's part number
- Applicable date code or lot number
- Fixed process number and revision, if applicable
- A statement that the parts or materials supplied conforms to the applicable drawing, specifications, and purchase document requirements
- Material Safety Data Sheet, if applicable, shall be provided with the product
- Supporting documentation, with quantitative results of all testing required by the applicable specification, shall be maintained by the supplier.

If the supplier is not the manufacturer of the item being shipped then a copy of the manufacturer's Certificate of Conformity shall also be supplied.

Fastener Certifications: Fasteners (nuts, bolts, screws, threaded inserts, etc.) ordered to government or industry specifications (AN, MS, N AS, SAE, etc.) require certifications that provide quantitative results of testing required by the applicable specification.

**107**    **OFFSET CREDIT**

This Purchase Order is issued with the intent of qualifying for offset credit under existing or future commitments of our customers, affiliates, subcontractors, or third parties.

**108**    **EXPEDITED DELIVERY CHARGE**

An expedited delivery charge is authorised by GE Aviation on this order. The payment of such expedited delivery charge(s) is contingent upon receipt of acceptable units on or before the specified promise delivery date. Failure to meet this expedited delivery date will result in non-payment of the expedited delivery charges on non-delivered units.

**109**    **RECEIPT OF CLASSIFIED MATERIAL**

By signing and returning the acknowledgment copy of this purchase order, supplier acknowledges receipt of furnished classified material along with the obligation to treat such material in accordance with Government Security regulations.

**110**    **CONTROL OF DOCUMENTS**

Acceptance of this contract/purchase order will require any changes that are made to the supplier's quality system documentation to be reviewed and approved by the GE Aviation. The exact document(s) that must be approved is subject to agreement between GE Aviation and the supplier.

**111 SOURCE INSPECTION**

Work under this purchase order/contract is subject to government or customer surveillance/inspection at the supplier's facilities and sub-tier supplier's facility. If a surveillance/inspection is to be conducted by the government or customer, the organisation will be notified prior to this event.

**112 CUSTOMER SOURCE INSPECTION**

Customer source inspection is required prior to shipment of articles from the supplier's facility. Upon receipt of this order and prior to commencing work, promptly notify the GE Aviation purchaser assigned to the supplier's facility so the appropriate inspection plan can be coordinated.

In the event that a GE Aviation purchaser does not normally service the supplier's facility, immediately notify the GE Aviation to obtain a point of contact for the appropriate GE Aviation purchaser assignment. Source inspection shall be conducted by the customer at the supplier's facility or where designated in the order. The supplier shall notify GE Aviation a minimum of 5 working days in advance of the time the articles or materials are ready for inspection or test.

The supplier shall make available to the GE Aviation representative all applicable drawings, specifications, procedures, statements of work, Customer's Order, test software, and changes thereto, related inspection and/or test equipment, and such other information as may be required to satisfactorily perform the inspections and tests required under this Order.

**113 CHANGE AUTHORITY**

This procurement is for a product, part or process that is critical in nature to the end item or vehicle. The Organisation shall provide in writing advance notification to the Customer of any change(s) to tooling, facilities, materials or processes of the delivered item including sub-tier supplier changes. This includes, but is not limited to, fabrication, assembly, handling, testing, facility location or introduction of a new sub-tier supplier.

**114 ELECTROSTATIC DISCHARGE (ESD) PROTECTION PROGRAMME**

The organisation shall document and implement an ESD Control Programme in accordance with ANSI/ESD S20.20, ESD Association Standard for the Development of an Electrostatic Discharge Control Programme for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices). Parts must be properly packaged and identified as required in ANSI/ESD-S20.20. All goods will be placed in conductive or static-dissipative packages, tubes, carriers, conductive bags, etc., for shipment. The packaging must be clearly labelled to indicate that it contains electrostatic sensitive goods. Electrical parts that may be used or shipped in conjunction with ESD sensitive parts shall be treated as ESD sensitive.

**115 FOREIGN OBJECT DAMAGE**

For articles, particularly components and assemblies susceptible to foreign object damage, the organisation shall ensure articles are free from foreign objects and foreign object damage resulting from processing or assembly and packaging operations. Use of NAS 412 standard for guidance is recommended.

**116**     **FIRST ARTICLE INSPECTION**

The organisation is required to perform first article inspection on the items in this contract/purchase order. First article inspections shall be in accordance with AS9102. The inspection records and data shall be per AS9102 and shall identify each characteristic and feature required by design data, the allowable tolerance limits, and the actual dimension measured as objective evidence that each characteristic and feature has been inspected and accepted by the organisation's quality and/or inspection function. When testing is required, the parameters and results of the test shall be recorded in the same manner.

The first article inspection report must show evidence of acceptance by the organisation's quality assurance representative. The first article(s) shall be produced on production equipment and using processes which will be utilised on production runs.

Additionally, the organisation shall perform subsequent FAI(s) per the requirements of AS9102 (i.e., following every major tooling, every design change, and subsequent to any evident quality degradation for a specified part or article). Records of all first article activity will be documented as required in AS9102, treated as quality/acceptance records, and made available to the customer if requested.

The supplier shall provide 1 reproducible copy of the first article records and first article report accompanied by variables data with the initial shipment.

**117**     **NADCAP SPECIAL PROCESS CERTIFICATION**     EASA 145.A.55

Fulfilment of this contract requires performance of special processes. Special processes shall be performed only by sources that have been surveyed and qualified/approved, by Nadcap (National Aerospace and Defence Contractors Accreditation Programme). The supplier shall provide to GE Aviation upon request all documentation showing evidence of qualification of use of Nadcap approved special processes. A special process certification shall be provided with each shipment of item(s) delivered on this contract.

Special Process Certifications may be in supplier format and shall include the following: -

- Customer's Order number
- Part number(s)
- Serial and/or lot numbers, of the hardware processed (if applicable)
- Special process specification and revision
- A certification stating the special process was performed per the applicable drawing/specification requirements
- Nadcap Approval
- Supplier's name and address
- When special processor is other than the Supplier, provide a certification of compliance from the special processor stating the special process was performed per the applicable drawing/specification requirements. Certifications must include the processor's name, address, Nadcap approval and be signed and dated by a company official
- Each certification must be signed and dated by a company official of the Supplier and/or Processor attesting to the acceptance of the processes performed to the required specification(s)

The supplier shall retain all records associated with the selection and approval of supplier approved special process providers. Per contract or regulatory agency requirements, these records shall be



made available to the Customer and/or regulatory agencies upon request. The supplier shall notify the Customer prior to destruction of records relative to this contract.

**118**     **CERTIFICATE OF CONFORMITY REQUIRED - REPAIRS**     EASA 145.A.55

The subcontractor shall provide a certification with each shipment to attest that the parts, assemblies, subassemblies, or detail parts conform to the manufacture / repair order requirements. When applicable, the true manufacturer or repair organisation lot, heat, batch, date code, and /or serial number must appear on the certification.

Certification must contain the following: -

- Customer's order number
- Line number
- Part number
- Name and address of repair, manufacturing or processing location
- Manufacturer's or subcontractor's lot, heat, batch, date code, and/or serial number (if applicable)
- Quantity and unit of measurement each, box, case, gallons, etc.)
- Be signed and dated by an official of the company
- For subcontracted repairs releases to service certificates are to be issued by appropriately authorised certifying staff.

In addition, if Quality Note QN002 is requested on the Purchase Order the following statement shall be included on the certificate: -

*"The applicable material test results, process certifications, repair records and inspection records are available upon customer's request. Inspections necessary to determine the acceptability of all articles under this order were completed. All articles submitted in this order are subject to final acceptance by the customer."*

**119**     **EASA145 RELEASE – REPAIRS**     EASA 145.A.50, EASA 145.A.55

An EASA Form 1 Authorised Release Certificate is required to release each repaired part into service.

**120**     **FAA 145 RELEASE - REPAIRS**

An FAA form 8130 -3 Authorised Release Certificate is required to release each repaired part into service.

**121**     **DUAL EASA / FAA 145 RELEASE - REPAIRS**

Under the bilateral agreement between the FAA and EASA a dual Authorised Release Certificate is required to release each repaired part into service.

**122**     **CAAC 145 RELEASE - REPAIRS**

A CAAC Form 1 Authorised Release Certificate is required to release each repaired part into service.

**123     EASA or FAA RELEASE – SPARES     EASA 145.A.50, EASA 145.A.55**

An EASA Form 1 or FAA form 8130-3 Authorised Release Certificate is required for each part supplied.

**124     WORKSHOP / TEST REPORT**

A workshop report and test results are to be supplied with the repaired item.

**125     LIMITED LIFE AND AGE CONTROLLED (SHELF LIFE) ITEM DOCUMENTATION AND PACKAGING**

Products on this Order require submittal of date of manufacture (Cure date) when shelf life is based on date of manufacture (Cure date), or date of shipment from the manufacturer when shelf life is based on date of shipment, as appropriate, based on specified method of shelf life determination.

Upon shipment, shelf life remaining shall meet the minimum shelf life specified on the order. If no shelf is specified, 80 percent of the shelf life shall be remaining on products on this order.

Certification must contain the following: -

- Customer's Order number
- Order part number
- Manufacturer's name, lot, heat, batch, date code, and/or serial number (as applicable)
- Date of manufacture (Cure date)
- Date of shipment from manufacturer (as specified on Order)
- Organisation name, and Organisation's point of contact
- Date
- If the supplier is not the manufacture of the item being shipped then a copy of the manufacturer's Certificate of Conformity shall also be supplied.

Rubber / Nitrile / Polyethylene products i.e. Gaskets "o" Rings, etc. must be individually packed and inspected to BS 3F 69. The part number, material specification, quarter and year of cure, life grouping, quantity in package, batch number and manufacturer's identity.

All bearings must be individually packaged and be marked with a full description of goods, GE Aviation part number, date of packing and grade grouping where required and shall specify shelf life category appropriate for Storage in accordance with BS 4F 68.

**126     CERTIFICATE OF CONFORMITY FOR RAW MATERIALS REQUIRED**

The supplier will include with each shipment the raw material manufacturer's test report (e.g., mill test report) that states that the lot of material furnished has been tested, inspected, and found to be in compliance with the applicable material specifications. The test report will list the specifications, including revision numbers or letters, to which the material has been tested and/or inspected and the identification of the material lot to which it applies.

When the material specification requires quantitative limits for chemical, mechanical, or physical properties, the test report will contain the actual test and/or inspection values obtained. For aluminium mill products (except castings), certifications for chemistry may indicate compliance within the allowed range. Certifications for physical properties will show actual values.

When organisation supplies converted material produced by a raw material manufacturer, the organisation shall submit all pre and post conversion chemical/physical tests reports.

**127 CERTIFICATE OF CONFORMITY FOR CALIBRATION**

The supplier shall submit for each item calibrated, one reproducible record of actual calibration results, including applicable graphic and tabular data. Records shall be traceable to the individual item tested, by part number, serial number and customer's order number for the item shipped. The supplier's calibration certificate shall include a unique calibration tracking number, tolerance range, and when applicable, environmental conditions for each parameter calibrated. The certificate shall also state the operating error per specification, the degree of correction of out of tolerance condition and remaining uncorrected out of tolerance condition, if applicable.

If the calibration of an item has been further subcontracted a copy of the calibration certificate provided by the calibrator shall also be attached to the supplier's Certificate of Conformity.

**128 ELECTRICAL WIRE AND CABLE TEST REPORT**

Organisation shall provide certification that each shipment of electrical wire or cable furnished under this contract conforms to the applicable specifications. For each lot or cable in each shipment, a certified test report or copy thereof shall be included with the packing sheet. The test report shall, at a minimum, include a record of the physical, chemical, or electrical (and in the case of RF cable, electronic) inspections and tests conducted to satisfy the acceptance requirements of applicable specifications, and shall include numerical results when applicable.

For cable shipments, these requirements apply to both basic and finished cable. When the specification requires other inspection or test data to be reported, it shall be included in the test report. Reports shall provide the organisation or supplier's name, the specification number and revision date or change letter, and other data required by the specification, and must be identified to or correlated with the lot shipped.

**129 ZERO LIFE REPAIR RELEASE (Part 21)**

An EASA Form 1 Authorised Release Certificate is required for each zero life repair.

**130 ANTI DRUG AND ALCOHOL MISUSE PREVENTION PROGRAMME  
– APPLIES TO ALL USA REPAIR FACILITIES**

The USA repair organisation shall have an approved Anti-Drug and Alcohol Misuse Prevention Programme.

**131 MAOS – (MAINTENANCE APPROVED ORGANISATION SCHEME)**

RA 4800 – General Requirements (MRP Part 145) applies to this order. A MOD Form 731 (with the MAOS sign off) is required to release each repaired item into service.

**132**     **SFAR 88**             EASA145.A.45

The component (LRU) that is detailed in this order is subject to Critical Design Configuration Control Limitations (CDCCL) as defined and controlled by specific Aviation Regulations. CDCCLs are a means of identifying design configuration items related to fuel tank ignition source prevention features.

Strict adherence to the configuration methods, techniques and practices prescribed in the Component Maintenance Manual (CMM) for the component being repaired is required to ensure the integrity of the CDCCL is maintained throughout the life of the component. ***Do not attempt to maintain, repair, rebuild, overhaul or remanufacture this unit or any of its components except in strict accordance with the methods, techniques and practices specified in the CMM.***

The CMM for the component being repaired is FAA approved for U.S. registered Airplanes. Any use of parts, methods, techniques or practices not contained in the CMM must be approved by the FAA Aircraft Certification Office.

***If during the repair process, you find that you cannot complete a task as stated in the CMM, stop the repair and notify GE Aviation immediately.***

Upon satisfactory completion of the work please ensure you enter a declaration on your release documentation that all CDCCL tasks have been accomplished.

**133**     **REPAIR REQUIREMENTS**             EASA 145.A.45 (Cancelled 04-Mar-2018, for reference only)

All repairs should be undertaken as far as practically possible in accordance with the requirements detailed in the latest Component Maintenance Manual (CMM) or Air Publication (AP). Repairs that have not been released against either of these documents will be checked At Goods Inwards. If it is subsequently found that a CMM or AP is available but has not been used, then the unit will be returned to the respective cell to be reworked and released against the applicable document.

**134**     **COMMERCIAL (C of C) RELEASE – REPAIRS**             EASA 145.A.50, EASA 145.A.55

For subcontractors, who do not have an NAA Approval, an appropriate New – (UK) CAA/EASA Form 1 or FAA 8130-3 Authorised Release Certificate is required for Civil Non-Standard Part (spare) items (build to print/spec) used in the repair of product.

**135**     **PREVENTION OF SUSPECTED UNAPPROVED PARTS**

Organisations must have a documented procedure to prevent the entry of unapproved parts into the business. This should cover awareness for: parts obsolescence, externally provided product control, traceability, verification and test methodologies for the prevention of suspect unapproved parts into product delivered to the customer.

**136**     **PREVENTION OF COUNTERFEIT PARTS**

Organisations must adhere to the relevant standards: AS 5553 *Counterfeit Electronic Parts, Avoidance, Detection, Mitigation and Disposition*, AS6081 *Fraudulent/ Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition-Distributors*, AS6174 *Counterfeit Materiel: Assuring Acquisition of Authentic and Conforming Materiel* and/or Defence Standard 05-135, *Avoidance of Counterfeit Material*.

**137**     **WORKSCOPE (Civil)**

Maintenance of Units/Components shall be maintained in accordance with the latest Component Maintenance Manual (CMM) or Air Publication (AP) without use of PMA parts and any deviation from the original CMM or AP.

**138**     **WORKSCOPE (Military)**

Maintenance of Units/Components shall be maintained in accordance with the latest Component Maintenance Manual (CMM) or OEM Specification/Drawings.

**139**     **FAA APPROVED DER REPAIRS-REF. FAA ORDER 8110-37 (latest rev)**

Any maintenance completed under FAA Approved DER (Delegated Engineering Representative) repair, must have the following statement added to Block 12 of the Airworthiness Release Certificate- **This repair has been completed i.a.w. an FAA approved DER process** (*Enter your DER Approved reference number*) **ref. FAA Order 8110.37\*** (*\*Enter current Revision*)

**140**     **PMA PARTS**

Only Approved parts listed in the IPL/IPC from a production Approval holder may be used for repair of components. Parts (including PMA parts) may only be substituted with GE Aviation written approval. Questions should be directed to the appropriate GE Aviation supplier management

**141**     **NO DER REPAIRS**

DER (Delegated Engineering Representative) repairs are not allowed.

**142**     **TIMES/CYCLES**

All documentation and certification supplied for maintenance performed on this line item must reference the times/cycles, as stated on the Purchase Order. Please ensure it is written as stated: e.g. TSN 17922:21 / CSN 3095.00

**143**     **SCRAP**

If Unit/Component is beyond economic repair, please do not return or scrap without authorisation. If authorisation is granted for local scrap, please send Certificate of Scrap

**144**     **SALVAGED PARTS PROCURED FROM AFRA (Aircraft Fleet Recycling Association) BUSINESS**

Documentation and Certification supplied must include:

- Bill of Sale stating the source aircraft parts removed from.
- Non-Incident statement.
- AFRA Removal Tag/ Certification From.
- Airworthy Part-145 Certificate (If item is serviceable)

**145 TRIPLE EASA/ FAA/ TCCA 145 RELEASE – REPAIRS**

Under the bilateral agreements between EASA - FAA and TCCA a Triple Authorised Release Certificate is required to release each repaired part into service.

**146 DELEGATION OF INSPECTION AUTHORITY**

Delegated inspection authority has been granted under this contract only, this authority may be revoked at any time by written notice or Purchase order change. The Seller and/or their sub-tier, shall have a documented process defining requirements for performing delegated inspection of goods procured by this purchase order. The Seller's process is subject to buyer assessment. If Delegated inspection is to be conducted the organisation will be notified prior to this event.

**147 DUAL CAA/ FAA 145 RELEASE – REPAIRS (UK Organisations only)**

Under the bilateral agreement between the (UK) CAA and FAA a dual Authorised Release Certificate is required to release each repaired part into service.

In addition, if Quality Note QN003 is requested on the Purchase Order please also provide an EASA Form 1.

**148 CAA 145 RELEASE – REPAIRS (UK Organisations only)**

An CAA Form 1 Authorised Release Certificate is required to release each repaired part into service. In addition, if Quality Note QN003 is requested on the Purchase Order please also provide an EASA Form 1.

**149 DUAL EASA / FAA and (UK) CAA 145 RELEASE – REPAIRS**

Under the bilateral agreement between the FAA and EASA, a dual Authorised Release Certificate is required, including an accompanying (UK) CAA 145 release (under the terms of the (UK) CAA requirement regarding a non-UK based holder of Part 145), for each repaired part into service.

**4. PURCHASE ORDER QUALITY NOTE**

**QN001** - Quality Note (QN) apply, QN001 Maintenance of this Unit/Component shall be maintained in accordance with the latest Component Maintenance Manual (CMM) ref.34-61-14 latest revision.

**QN002** - Quality Note (QN) apply, QN002 Additional statement under SPOC118 to be included on the Certificate of Conformity (C of C).

**QN003** - Quality Note (QN) apply, QN003 If your Maintenance Organisation is approved under an EASA 3rd Country 145 Approval - In addition, please also provide an EASA Form 1 Authorised Release Certificate under your EASA 3<sup>rd</sup> Country approval.

**APPENDIX A – Abbreviation and Acronyms**

The following abbreviations and acronyms are used in this General Quality Document.

AP	Air Publication
AFRA	Aircraft Fleet Recycling Association
(UK) CAA	(United Kingdom) Civil Aviation Authority
CAAC	Civil Aviation Administration of China
CDCCL	Critical Design Configuration Control Limitations
CMM	Component Maintenance Manual
CRB	Certification Registration Bodies
DER	Designated Engineering Representative
EASA	European Union Safety Agency
FAA	Federal Aviation Administration
FAI	First Article Inspection
ISO	International Organisation for Standards
LRU	Line Replacement Unit
MAOS	Maintenance Approved Organisation Scheme
MIL-STD	Military Standard
M&TE	Measuring and Test Equipment
NAA	National Aviation Authority
NAS	National Aerospace Standard
PMA	Part Manufacturer Approved
TCCA	Transport Canada civil aviation
UKAS	United Kingdom Accreditation Service