Process Map *Work Instruction* ✔ *Production Processes*

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Date	*Change History*
CURRENT JULY 2017	**AS PER CHANGE REQUEST WIN002, WIN003, WIN004, WIN005, WIN014, WIN024, WIN029, WIN033, WIN034,**

France ☐ Germany ☐ Italy ☐ Nordic ✔ UK ☐

PDCA Cycle:
DO – 8.4.3

Operating Function

Quality ✔ ☐ Safety, Health & Environmental

Subject:	**SUPPLIER QUALITY REQUIREMENTS**
Purpose:	**TO PROVIDE AN UNDERSTANDING OF THE QUALITY REQUIREMENTS OF SUPPLIERS TO GLENAIR.**
Process Objectives: *Each of the objectives listed opposite are part of the process outcomes.*	**Engagement and competence of people** Employees' outputs influence the image and profitability of the company, as well as resulting in customer satisfaction. Their contribution towards this is recognised and their experience and competencies are utilised and developed in accordance with the business objectives, which are interpreted into departmental and individual needs. **Process approach** Processes are dynamic. They require inputs, which subsequently produce outputs. Processes, therefore, need to be managed effectively if the desired output is to be realised. This approach applies to all activities irrespective of the department. **Improvement** Sustainable improvement results from the progressive application of resolute business management. Continuous improvement is not concerned with fixing problems; that is the purpose of corrective actions, which is part of the process control activity. **Informed decision making** The right decisions are based on facts. Key performance indicators or other reliable system information enables this approach to be effective. **Relationship Management** To generate and maintain value, suppliers are viewed as an integral part of meeting the business objectives. Like people, they too have an impact in achieving customer satisfaction. Therefore, our understanding and mutually agreed interrelationship with them enhances the ability for both to create added value.

Process Owners			
Overall:	**Country & Departmental Managers**	***Direct:***	**Purchasing**
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Related Documents to be read in conjunction with this Process
4.06/21 - Purchasing

This document provides Quality, Health, Safety & Welfare or Environmental information. In some instances the instructions are legal requirements and shall be complied with.

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ASSOCIATED DOCUMENTS

AS/EN 9100
Society of Automotive Engineers: Quality Management Systems - Requirements for Aviation, Space and Defence Organisations

AS/EN 9102
Society of Automotive Engineers: Aerospace First Article Inspection Requirements.

AS/EN 9120
Society of Automotive Engineers: Quality Management Systems - Aerospace Requirements for Stockist Distributors

BS EN ISO 9001
Model for Quality Assurance in Design, Development, Production, Installation and Servicing.

INTRODUCTION

1 GLENAIR QUALITY ASSURANCE POLICY

Glenair and our customers require assurance at all times of satisfactory product quality. Airworthiness legislation and customer contractual requirements necessitate a positive and continued implementation of stringent quality disciplines.

This document therefore establishes requirements designed to ensure that each supplier operates a Quality System that effectively controls all aspects of product quality.
Suppliers who demonstrate and continue to maintain compliance with these requirements will be eligible to receive Glenair Purchase orders.

2 PROCEDURAL COMPLIANCE

This document defines the procedures for obtaining and maintaining Glenair approval and specifies the requirements for an acceptable Quality System and adequate product/process control.

If any inconsistencies exist between the Contract/order or its general provisions and the requirements specified, the Contract/order and general provisions shall prevail.
This document will be issued to approved Suppliers; its content must be adhered to in furtherance of all purchase orders.

3 APPROVAL PROCEDURE

The Q.A. Department may conduct an on-site assessment to evaluate a Suppliers ability to comply with the requirements defined in this document. When satisfied that the Supplier satisfies our requirements our system will register a suppliers approval to the expiry of their 3rd party approval.

4 MAINTENANCE AND AMENDMENT OF APPROVALS

Glenair reserves the right to withdraw its approval at any time.
Continued approval is dependent upon evidence of continued compliance with these requirements and satisfactory product quality performance.
The Q.A. Department must be advised immediately in writing of any proposed changes, especially change to their scope of approval on which approval has been established.
Glenair reserves the right to review continuance of approval as a result of any changes.

5 RIGHT OF ENTRY

Our customers and Airworthiness and Regulatory Agencies may ask to assess our suppliers Quality System and processes, and the quality of supplied products or services at the supplier's premises. Reasonable notification will be given prior to any such activity should this request be made.

6 QUALITY MANAGEMENT SYSTEM

In addition to the requirements of the recognised international and regulatory standards that are applicable to individual supplier categories the following are mandatory requirements.

7 GENERAL REQUIREMENTS

Compliance with this document is an integral part of achieving & maintaining Glenair Supplier Approval.
It forms part of the procedurally documented Quality Management System associated with Supplier Control and as such supports International, National, Airworthiness Authorities and Customer Approvals.

8 DOCUMENTATION REQUIREMENTS

Records shall be available for scrutiny by Glenair representatives, Customers or relevant Airworthiness Authorities.
They shall be retained for a minimum of 7 years or longer if required by contract and in no case are they to be disposed of without the prior approval of Glenair

9 CUSTOMER RELATED PROCESSES

Contract Review shall particularly include specific scrutiny of all Glenair requirements, (e.g. drawing instructions, process specifications, purchasing requirements etc.) to ensure that appropriate controls are flowed-down and incorporated into the Supplier's own documented Working Procedures.
The Supplier shall only undertake work covered by the scope of their 3rd party Approval.

10 PURCHASING

Purchasing Process
Purchasing Information
Verification of Purchased Product
Work Transfers

Suppliers must not subcontract any part of our purchase orders without prior approval.

Where the Supplier utilises further sub-contract facilities such facilities must meet the requirements defined in this document and be flowed down to them as a contractual requirement.

Where the Supplier purchases materials for use in parts and assemblies manufactured to Glenair drawings and/or specifications and controlled by our purchase order, those materials must be sourced from a 3rd party approved suppliers.

Any deviation from this arrangement will only be accepted following written agreement with the Glenair Q.A. Department and if required Sub-tier Purchase Orders raised by the Supplier shall instruct their Supplier to certify in accordance with the terms of their 3rd party scope of Approval and shall provide for right of access by representatives of Glenair its Customer or Airworthiness Authorities should the request ever be made.

11 PURCHASE ORDER CONDITIONS

The following are basic Glenair purchase order conditions that will be stipulated against specific parts / order requirements.
Any purchase order may contain more than one of the stated conditions.
These conditions are to be recognised by the supplier and adhered to as part of acceptance of the purchase order.
Failure to comply with the conditions assigned to any applicable purchase order will result in the associated parts being rejected.

11.1 Purchase Order Conditions

Each delivery of goods to be supported by an Advice Note/Certificate of Conformance clearly marked with the Order Number. Prior to delivery, the buyer, the buyers customers and Regulatory Agencies shall be entitled to inspect the vendors product and product organisation at the site of the vendors plant. In no case shall such an inspection imply acceptance of the product by the Buyer. Where the option for source inspection is to be exercised, relevant terms and conditions would be indicated on the Purchase order. This is a rare occurrence but could be invoked by our customers.

11.2 Sub contract by the supplier

No work on the order may be sub-contracted by the supplier, nor shall the supplier assign any of its obligations hereunder without first obtaining the written approval of Glenair.
All subcontracts shall be the responsibility of the supplier, and shall where applicable be placed subject to the same terms and conditions of those contained in the order.

12 PRODUCTION

Control of Production
Validation of Production Processes
Identification and Traceability
Customer Property
Preservation of Product

Materials if provided by Glenair shall be used only in fulfilment of the Contract / Order for which they were supplied, unless otherwise formally authorised by the Glenair Q.A. Department.

12.1 Traceability

Raw materials procured by the supplier to fulfil a Glenair order shall have batch traceability to source. Batch and Serial Numbers and any other identification allocated by Glenair shall be maintained.

12.2 Process Planning

The Supplier shall ensure that all appropriate personnel are familiar with Glenair drawings and process specifications for work undertaken and that controlled copy drawings and specifications are made available.
On receipt of Glenair orders and prior to planning the work, the Supplier shall verify that all processes are within the scope of their 3rd party approval.

12.3 Special Processes

Definition: A special process is any production process that generates outputs that cannot be measured, monitored, or verified until after the resulting products have been used or services have been delivered.
In order to prevent output deficiencies, these special processes must be validated in order to prove that they can generate planned results. Suppliers must therefore ensure that these control measures are in place.

12.4 Process Critical Parts

Any parts that are identified as being ‘process critical’ are prohibited from any changes being made to a previously approved Glenair process control plan without prior written approval from the Glenair Quality Assurance Department.

12.5 Identification

The Supplier shall ensure identification of product inspection status during production, by suitable means. Such as inspection stamp at each inspection/test stage. It is recognised that the extent to which inspection and test status are identified during manufacture will vary depending upon the nature of the product.

12.6 Handling and Storage

The subcontractor shall use methods of handling product that prevents damage and deterioration.

12.7 Packaging, Preservation and Delivery

Packaging and preservation of product prior to return to Glenair must be protected from adverse atmospheric conditions and accidental damage as a result of handling.
All deliveries to Glenair must go directly to Goods Inwards Inspection. On time delivery is essential. If at any stage a job in progress is affected in a manner that may result in a delay, the Glenair buyer must be informed immediately.
All materials and supplies must be released under cover of the correct form of Release Document, e.g. a Certificate of Conformity, Approved Certificate or Release Certificate as appropriate and/or agreed with Glenair’s QA Department.

13 RISK MANAGEMENT

The supplier shall take actions to identify and manage risks in order to avoid any impact on the quality and delivery of products supplied to Glenair.

Such actions will apply to risk identification, assessment, likelihood, consequences, mitigation and acceptance.

14 OBSOLESCENCE MANAGEMENT

As part of the risk management process, the supplier shall assess whether any of the products supplied to Glenair are in danger of becoming obsolete.
It is inappropriate to apply obsolescence management to all products supplied to Glenair E.g. standard materials/parts, raw materials and Glenair designed parts are unlikely to become obsolete.

Any products or processes which may or are about to become obsolete, which are likely to become obsolete in the future, must be reported to our Purchasing Dept as soon as possible after being identified.

15 FOREIGN OBJECT DEBRIS/DAMAGE (FOD) PREVENTION

The supplier shall take actions to prevent foreign objects from being present in products supplied to Glenair. Such actions will apply to all aspects of product realisation including design considerations, manufacturing, handling, storage, packaging, preservation and delivery.

16 CONTROL OF MONITORING AND MEASURING EQUIPMENT

The Supplier shall control, calibrate and maintain, inspection, measuring and test equipment which demonstrates traceability to national standards. (Including test software where used)

17 MEASUREMENT, ANALYSIS AND IMPROVEMENT
Monitoring and Measurement
Monitoring and Measurement of Processes
Monitoring and Measurement of Product

The Supplier shall maintain inspection and testing activities in order to verify that Glenair's purchase order requirements are met.

18 First Article Inspection
First Article Inspection - AS/EN 9102 Definition

A complete independent and documented physical and functional inspection to verify that prescribed production methods have produced an acceptable item as specified by engineering drawings, planning, purchase order, engineering specifications, and/or other applicable design documents.

18.1 First Production Article Requirement - First Article Inspection Report (FAIR)

Where specified, the completion of a First Article Inspection Report in accordance with AS/EN 9102 requirements may be required. Where this is the case the F.A.I.R. must be completed in a format that is compliant with AS/EN 9102 requirements. The report may be on the suppliers' format

NOTE 1: First Article Inspection is to be carried out on a representative sample of the first production batch of a part or assembly.

NOTE 2: A First Article Inspection Report is not to be confused with any other type of pre-production report (dimensional or otherwise) that a supplier may submit in support of a contract, e.g. prototyping, tool proving, etc.

NOTE 3: Any deviation to the First Article Inspection Report requirements stated above will only be accepted following written agreement with Glenair QA department and if necessary by our customer.

F.A.I.R Maintenance
All F.A.I.R.'s will be maintained in accordance with the following requirements:

- Engineering Change - F.A.I.R will capture the differences from the current approved configuration to the previously approved configuration.
- Process Change - F.A.I.R will capture all design features affected by the process change.
- Examples of process change are:
- Changes in manufacturing process(es)
- Changes in CNC Programs, including translation to another medium.
- Changes in source(s).
- Changes in Inspection method(s).
- Changes in location of manufacture.
- Changes in tooling and/or materials that have the potential to affect fit, form or function.
- Production Lapse - Any parts that have not been manufactured for a period of
- two years will be subjected to a full F.A.I.R. following the completion of any new manufacturing requirements

19 CONTROL OF NON CONFORMING PRODUCT

Non-conforming supplies shall not be submitted to Glenair unless:-

- A production permit or concession has been applied for and granted by Glenair
- Permission to deliver has been obtained in writing from the Glenair Q.A. Department.

N.B. The following definitions apply in the context of this document.

A PRODUCTION PERMIT is defined as authority to deviate from specified requirements BEFORE manufacturing has commenced. Such permits are restricted to the quantity/period quoted thereon and any extension that may be required must be subject to further application.

A CONCESSION is defined as authority to accept a limited quantity of material / parts already manufactured, that do not comply with specified requirements.

20 POST DELIVERY – NON CONFORMING PRODUCT

In the event that a supplier identifies non-conformities in products or services that have already been delivered to Glenair the supplier must take the following actions:

- Within 24 hours of the non-conformity being identified, the supplier must inform the

Glenair Purchasing and Quality Assurance departments in writing on the nature of the issue and the delivered product / service that is affected.

- If not included within the first notification, then within 72 hours of the non-conformity being identified, a written report must be sent to the Glenair Quality Assurance department stating the supplier recommendation for any remedial action required.
- If not included within any of the above submissions, within 14 days of the nonconformity being identified, the supplier shall submit to Glenair a formal Root Cause Analysis and Corrective Action Plan.

21 Corrective Action Preventive Action

When errors occur that are due to supplier actions, the supplier shall take action to correct the immediate problem and also to prevent recurrence of the error (Corrective Action).

The Supplier for future reference shall document both types of action to the Glenair Quality Assurance department.

A system shall be in place that examines potential non-conformities in order to eliminate them before they become actual non-conformities

A system shall be in place that examines potential opportunities for improvement to the quality management system, the product and its manufacture and customer satisfaction.

22 Work Transfers

Where products or services are sub contracted to another source e.g. plating this activity is undertaken only by those on your approved list of suppliers.

Where any other additional work transfer activity occurs by the sub contractor, additional quality control requirements are expected to be firmly in place prior to any work being contracted out.

23 Bogus/ Counterfeit Products/ Materials

As an approved supplier to Glenair we do not expect to receive any product that has originated from a suspect source. Your Purchasing controls are expected to identify all untraceable products/materials back to source with that source being an approved supplier to you.

Any bogus products/materials that have been found to be delivered to Glenair then these will be destroyed, we will assess the costs to our business and pass these on. Should it be necessary and no payment for them will be made.

In addition your supplier status would be temporarily suspended pending the outcome as to why bogus product/materials were supplied.

If there is no satisfactory explanation then the approved supplier status would be removed. If product has been delivered to our customer then we shall have no choice but to recall the product/material and they in turn may seek remedial actions and flow down the costs which we would have to pass on.

24 BUSINESS ETHICS

It is not for Glenair to dictate what a Suppliers Business ethics are and how they are managed.
However, Glenair expects its supply chain to take a “Best Practice” approach towards acceptable business practice practices. As per part 12 in the Supplier Evaluation Criteria. Our Ref QDN25