



# SUPPLIER QUALITY REQUIREMENTS MANUAL





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## 1 Purpose

The purpose of this document is to define the general requirements to be addressed to Suppliers involved in American Eurocopter (AE) programs.

These requirements are applicable in their entirety to all Services and Products allocated to an AE Supplier as well as to those attributed to the Supplier's contributing parties (sub-tier Suppliers under their control).

Acceptance of products is contingent upon compliance with the requirements. A waiver from the requirements may be requested. If approved by AE Quality, the waiver will be noted in the Purchase Order.

**The compliance of Services and Products with the requirements of American Eurocopter will be reviewed periodically.**

### General Procedure

AE applies procedures to ensure purchased products conform to the specified requirements which utilize the following characteristics:

- Evaluation and authorization of the Supplier
- Specification of the requirements applied to the Supplier, introduced in contracts and/or contractually in the purchase order
- Product/Process qualification, in particular, First Article Inspection monitoring
- Monitoring of the Supplier (measurement of the level of quality, e.g. rejection rate, periodic follow up, quality product audits, etc.)

All follow up activities of Suppliers (audits, quality reports, etc.) are tailored in accordance with the criticality of parts/equipment ordered, results of evaluation and surveillance audits, measurement of the level of quality and the possession of agreements and/or certifications.

- **Internal Audits**  
Suppliers are required to perform internal auditing to ensure product conformity. The level of auditing should be relative to the complexity of the product.

## 2 Definitions and Terminology

### 2.1 Definitions

The use of SHALL, SHOULD, MUST, WILL and MAY within this document shall observe the following rules:

- The word **SHALL** in the text denotes a mandatory requirement. Any departure is not permissible without a formal agreement
- The word **SHOULD** in the text denotes a recommendation or advice and is expected to be followed unless good reasons are stated for not doing so
- The word **MUST** in the text is used for legislative or regulatory requirements (e.g. Health and Safety) and shall be complied with
- The word **WILL** in the text denotes a provision, service or an intention in connection with a requirement of this document
- The word **MAY** in the text denotes a permissible practice or action. It does not express a requirement of this document

These means of understanding are applicable in the document's entirety.

## 2.2 Abbreviations

AE	American Eurocopter
AS	Aerospace Standard
ASL	Approved Supplier List
ATP	Acceptance Test Procedure
ATR	Acceptance Test Report
CA	Corrective Action
CAR	Corrective Action Request
CoC	Certificate of Conformity / Declaration of Conformity
EC	Eurocopter France
ECD	Eurocopter Germany
ESD	Electro Static Discharge
ETR	Engineering Test Report
ETS	Equipment Test Specification
FAA	Federal Aviation Administration
FAI	First Article Inspection
FAIR	First Article Inspection Report
FAR	Federal Aviation Regulation
FOD	Foreign Object Damage
IAQG	International Aerospace Quality Group
ISO	International Standardization Organization
MOA	Maintenance Organization Approval
NAA	National Airworthiness Authority
NADCAP	National Aerospace and Defense Contractors Accreditation Program
NDT	Non-Destructive Testing
NIST	National Institute of Standards and Technology
NoE	Notice of Escape (Disclosure)
OEM	Original Equipment Manufacturer
PC	Production Certificate
PMA	Parts Manufacturer Approval
POA	Production Organization Approval
PO	Purchase Order
PRI	Performance Review Institute
QAP	Quality Assurance Plan
QAR	Quality Assurance Representative
QMS	Quality Management System
SOW	Statement of Work
SP	Special Process
STC	Supplemental Type Certificate
TC	Type Certificate
TRS	Technical Requirements Sheet
TSO	Technical Standard Order

## 2.3 Terminology

### 2.3.1 Supplier Classification

**Depending on the situation, Suppliers can be the following:**

<b>Manufacturer</b>	Responsible, in accordance with a contractor specification, in-house specification for development and/or production, overhaul/repair of equipment items or sub-systems, assemblies, sub-assemblies or blank parts (Design and manufacturing tasks).
<b>Manufacturer of Standards</b>	Responsible, in accordance with standards (e.g. ANSI, AS, EN, ISO, ...), suppliers standards approved by the TC (EC/ECD) or STC (AE) holder) for the manufacture of parts and raw materials.
<b>Manufacturer of On Ground Equipment</b>	Responsible for manufacturing non-airborne products (test benches, tooling...simulators, etc.).
<b>Systems Integrator</b>	Responsible, in accordance with a contractor specification or with an in-house specification for development and/or production, in addition, possibly overhaul/repair of aircraft systems and to integrate these into the aircraft by possible coordination of different Suppliers.
<b>Subcontractor</b>	Responsible, in accordance with a TC (EC/ECD) or STC (AE) holder definition file for the manufacture and/or overhaul/repair of parts or assemblies (Manufacturing tasks).
<b>Repair and Overhaul</b>	Responsible for only overhaul/repair of parts/products in accordance with a contractor definition file, Original Equipment Manufacturer (OEM) or an in-house file or data approved by the authorities.
<b>Service Provider</b>	Responsible in accordance with a service definition for providing a service ordered by AE.
<b>Distributor</b>	Responsible for purchase, storage, splitting and sale of products without affecting product conformance ordered by AE.
<b>Broker</b>	Responsible for purchase, possible storage but <u>not</u> the splitting, sale of products without affecting product conformance, ordered by AE. A specific kind of Distributor which doesn't have a fixed or recurring business with entities where the products are bought.

### 3 American Eurocopter's Quality Policy for Suppliers

The Supplier shall comply with the following requirements. Any exceptions must be specifically agreed to by AE.

#### 3.1 Certification of the Quality Management System

The Supplier's Quality Management System (QMS) must comply with the requirements of ISO 9001:2000, AS/EN9100, AS/EN9110 or AS/EN9120 depending on the activity. Also, Advisory Circular 00.58 is an acceptable accreditation. To demonstrate compliance, the Supplier shall have a QMS certified by a certification registration body accredited by IAQG or equivalent. AS9100 series certifications registered in OASIS shall be valid (see [www.sae.org/iaqg](http://www.sae.org/iaqg) and [www.iaqg.org/oasis](http://www.iaqg.org/oasis)).

The Supplier's QMS must also comply with AE's requirements which amplify the details noted in ISO 9001:2000, AS/EN9100, AS/EN9110 or AS/EN9120. Any exceptions must be specifically agreed to by AE in writing.

A Quality Plan will be implemented for the manufacturing, repair and overhaul of products and accepted by AE and the Supplier, if necessary and requested by AE.

#### 3.2 Airworthiness Regulations Compliance

Suppliers of safety critical, important parts and equipment or "major assemblies" (structural elements that affect safety-of-flight) shall have a fabrication inspection system complying with one of the following:

- Federal Aviation Administration (FAA) standard i.e. CFR 14 Part 21 (PC, PMA, TC, TSO), or
- European Aviation Safety Agency (EASA) standard i.e. PART 21 G, or
- Recognized equivalent by the FAA (e.g. bi-lateral agreement with NAA), or
- Equivalent

The compliance must be demonstrated by means of an official approval. Arrangements between EC/ECD (as TC holder) or AE (as STC holder) as state-of-design and the Supplier as state-of-production shall be implemented. The PMA (Parts Manufacturer Approval) procedure will be followed for Suppliers under FAA supervision.

All Original Equipment Manufacturers (OEM) and other Suppliers providing maintenance activities shall have either a Maintenance Organization Approval (MOA) or a certificated Repair Station approval compliant with Federal Aviation Administration (FAA) standard CFR 14 Part 145 or Part 43. The compliance must be demonstrated by means of an official approval.

#### 3.3 Special Process Accreditation

Special Processes called out in the TC/STC Holder's approved design data will be compliant to PRI Nadcap accreditation requirements or have governing NAA approval. Additional requirements may be requested by the TC/STC Holders. Any exception must be specifically agreed by AE in writing.

#### 3.4 Deployment of IAQG Standards

AE may impose the following IAQG standards depending on the scope of activity:

- 9102 First Article Inspection
- 9103 Variation Management of Key Characteristics
- 9131 Non Conformance Documentation
- 9134 Supply Chain Risk Management Guideline

### 3.5 Sub-Tier Suppliers

Suppliers are required to flow-down to their sub-tier Suppliers AE's requirements and inform AE of any deviations.

Suppliers with an approved or AE accepted QMS shall evaluate and select their sub-tier Suppliers based on their ability to supply products in accordance with AE's requirements. The Supplier is responsible for evaluating, selecting and monitoring its sub-tier Suppliers, including SP's and provide AE with an Approved Supplier List (ASL) upon request. The Supplier is limited to one level of subcontracting for the contracted item.

**NOTE: Suppliers that perform safety sensitive functions (defined in 14 CFR Part 121, Appendix I and J) for AE are required to participate in an FAA Approved Drug and Alcohol Testing program. This requirement includes any subcontractors utilized by Suppliers and their subcontractors.**

### 3.6 Supplier Approval and Products/Supplier Qualification

Certified Quality Management Systems, PRI Nadcap special process accreditation and Airworthiness Regulations Compliance are prerequisites for any contract award and execution. In addition, the Supplier shall comply with all AE or EADS-NA Customer requirements depending on the program.

## 4 Categorization of Suppliers

### 4.1 Suppliers with Approval by a Civil Authority

These are Suppliers that manufacture, overhaul or repair devices, components or subassemblies according to specifications from the TC or STC holder and have their own approval by a civil authority as an aviation organization (CFR 14 Part 21, PMA, EASA Part 21G, CFR 14 Part 145, etc.).

The Supplier shall manufacture/maintain the supplied item under the supervision of its responsible civil aviation authority. They will take steps to ensure all activities are recorded on their limitations record or capability list for official approval.

The Supplier will have approved design data and authorization from the design holder to manufacture the product. Each time the Supplier is involved with a deviation from a certified but undelivered product, the Supplier must re-certify the product under its [approval\[e1\]](#).

#### 4.1.1 Documents Delivered to AE for Application under CFR 14 Part 21 (Production Certificate)

Parts will always be delivered with an Authorized Release Certificate, "approved design data" (EASA Form 1/FAA 8130-3/TCCA Form 24-0078) or equivalent according to bilateral agreements.

Before Type Certification (TC) or Supplemental Type Certification (STC), an authorized release certificate "non-approved design data" shall be delivered along with an Acceptance Test Report (ATR). If this is not possible, a Certificate of Conformity (CoC) is to be delivered with the ATR.

A First Article Inspection (FAI) is to be performed on the initial configuration or when subsequent changes in design or processes affect the product. The First Article Inspection Report (FAIR) will be available for review by AE Quality personnel but retained at the Supplier's facility.

#### 4.1.2 Documents Delivered to AE for Application under CFR 14 Part 145 (Repair Station)

When maintaining parts that are already in service, an Authorized Release Certificate "Release to Service" or "Dual Release to Service" (FAA 8130-3) is to be delivered according to CFR14 Part 43. The Supplier must have the related maintenance documentation and respective approval according to CFR 14 PART 145 or CCAR-145.

#### 4.2 Suppliers without Approval by a Civil Authority

These are Suppliers that have documentation approved by the TC or STC holder, that may manufacture, overhaul or repair devices, components, sub-assemblies or parts not approved by a civil authority.

The Supplier works under the responsibility of AE. AE may approve the Supplier's technical documents, production plans and inspection instructions as necessary.

The manufactured products or the tests/services performed (with provided production plans) can only receive airworthiness approval from AE. If all features can be inspected after delivery to AE, the inspections can take place at AE's site upon successful completion of the First Article Inspection (FAI).

For products produced under a Production Certificate, the Supplier is responsible for maintaining the same standard in serial production that was frozen at the FAI. AE must be informed if the approved process is changed and an approval for the new process must be obtained. EUROCOPTER must approve sub-contracting.

AE will monitor serial production by means of routine audits. The audit frequency depends on the following:

- Type of product
- Production process
- Third-party monitoring results
- Quality of delivery

#### 4.2.1 Documents for Delivery to AE for application under CFR 14 Part 21 (Production Certificate)

Parts from these Suppliers shall always be delivered with a CoC and an ATR (if applicable).

A First Article Inspection (FAI) is to be performed on the initial configuration or when subsequent changes in design or processes that affect the product's form, fit or function. The First Article Inspection Report (FAIR) will be available for review by AE Quality personnel but retained at the Supplier's facility.

#### 4.2.2 Documents for Delivery to AE for application under CFR 14 Part 145 (Repair Station)

Parts from these Suppliers shall always be delivered with a CoC and an ATR (if applicable).

#### 4.3 Suppliers without Approval by a Civil Authority, AE Approval or a Certified QMS

As a general rule, it is not possible to deliver parts to AE under these circumstances, but Suppliers can be approved on a case-by-case basis for limited deliveries. In this case, AE Quality will conduct a Quality Systems Audit and will approve based on the results [e2].

#### **4.4 Manufacturers of Parts with their Own Approval (TC/TSO/ETSO/STC and FAA PMA)**

For parts that the Supplier owns the design responsibility and is the holder of the approval, the Supplier is obligated to manufacture the item under the supervision of its aviation authority and the regulations of its organizational approval. AE is to be informed immediately if this approval is surrendered, suspended or revoked. Parts are generally delivered with an authorized release certificate which indicates the approval number.

Each time the Supplier corrects a deviation from an already certified, previously undelivered product, the Supplier must re-certify the product under its approval.

When maintaining parts that are already in operation, an authorized release certificate is delivered according to CFR14 Part 43. The Supplier must have the related maintenance documentation and CFR14 Part 145 approval or equivalent.

#### **4.5 Manufacturer of Standard Parts**

The Manufacturer/Supplier is obligated to comply with ISO 9001:2000 requirements. Parts will be delivered with a CoC unless otherwise noted. Furthermore, the documentation shall be delivered according to the standard for the component.

#### **4.6 Manufacturer of On Ground Equipment**

The Supplier's Quality System shall comply with the ISO 9001:2000 requirements.

#### **4.7 Distributors**

The Supplier's Quality System must comply with the AS/EN9120 (Aerospace series – Quality Management Systems – Requirements for Stockist Distributors – based on ISO 9001:2000) requirements or equivalent.

#### **4.8 Service Provider**

For Suppliers providing a service (logistic support, design sub-contracts, documentation, procurement etc.) that could have an effect on the quality of the product delivered to an end customer or to his level of satisfaction, the requirements of AS/EN9100 (or ISO 9001 as a minimum) shall be fulfilled and the Supplier shall be certified.

### **5 Right of Access**

The Supplier shall grant AE and/or Customer representatives access to his facilities and documentation and provide them with the necessary means, in accordance with the confidentiality rules, for performing the supervisory actions, including checking for conformity to a contract and/or to a product, and surveys on the functioning of the Quality Management System organization. In cooperation with the Supplier, this right of access is extended to sub-tier Suppliers.

The Supplier is also subject to oversight by the Civil and/or Military Official Authorities according to the stipulations on the order, or on the contract. The Supplier must comply with the rules for safety and confidentiality in accordance with AE's General Purchasing Conditions.

## 6 General Requirements

### 6.1 Top Management Responsibility

The Supplier must notify AE of any major change in the following:

- Production location
- General organization
- Distribution of production among their plants
- Distribution of production among their suppliers
- Organization of their quality control
- Procedures for ensuring product conformity

### 6.2 AE Material Provided to the Supplier

Upon receiving the delivery, the Supplier must visually inspect the material and review the accompanying documents. All determined defects are to be indicated to AE in an inspection report. Unused or unserviceable material is to be returned or scrapped as authorized by AE.

### 6.3 Supplier Surveillance

A Self-Assessment form will be sent to the Supplier for completion and serve as a basis for evaluation of their QMS.

AE may conduct surveillance of the Supplier's QMS at their facility to evaluate and assure product integrity. The surveillance does not relieve the Supplier of his contractual responsibilities. The Supplier shall provide such facilities and assistance as may be reasonably required by AE. It is the responsibility of the Supplier to obtain AE approval for any materials and/or processes not defined in the approved purchasing specifications.

### 6.4 Modifications and Rework/Repair

#### 6.4.1 For Products Ordered from the AE CFR 14 Part 21 Organization

Prior to returning modified or reworked products to AE, the Supplier shall ensure that products have all required tests and established standards of quality and workmanship unless authorized in the AE Purchase Order. All rework must be accomplished in accordance with approved design data such as TC/TSO holder standards.

#### 6.4.2 For Products Ordered from the AE CFR 14 Part 145 Organization

Prior to returning modified, reworked or repaired products to AE, the Supplier shall ensure that products have all required tests and established standards of quality and workmanship unless otherwise authorized in the AE Purchase Order. All rework/repairs must be accomplished in accordance with approved technical data such as Maintenance/Overhaul Manuals or drawings from the Original Equipment Manufacturer (OEM) or Air Carrier as appropriate.

### 6.5 Tools, Gage and Test Equipment

The Supplier shall be responsible for providing and ascertaining the accuracy and stability of tools, gages and test equipment to assure supplies conform to contractual requirements.

AE owned tooling should be protected and periodically re-inspected. Objective evidence indicating accomplishment shall be available for review by AE. A listing of AE owned tooling should be available and furnished upon request.

## 6.6 Electrostatic Discharge (ESD) Sensitive Products

ESD sensitive delivered products, including replacement assemblies, shall be physically identified by label or permanent marking. The delivered items shall be packaged for ESD protection and appropriately marked. Individual packages and shipping containers shall be identified as containing ESD sensitive material.

## 6.7 Packaging and Preservation

The Supplier shall maintain controls to assure accomplishment of preservation, packaging and shipping requirements. The Supplier is responsible for packaging in a manner that will ensure receipt of supplies at AE in an acceptable condition. Unless otherwise specified, bulk packaging of common screws, bolts, nuts, washers, and standard fasteners is limited to quantities of no greater than 100 per package and bulk packaging of rivets is limited to 500 per package unless otherwise specified by AE. Unless otherwise specified, raw aluminum sheet metal shall be protected on both sides with protective paper.

## 6.8 Foreign Object Damage (FOD)

The Supplier shall maintain a system enabling FOD prevention and detection according to the industry standard and applicable to the scope of products supplied. All delivered products shall be free of foreign material (i.e., loose fasteners, wire clippings, metal shavings, loose solder, etc.).

## 6.9 Identification, Traceability and Assignment of Parts to Manufacturing Plans

The Supplier shall set up a system capable of tracing products that includes at least the following:

- Identification of products according to the applicable design documents (e.g. traceability according to the related safety classification of the product)
- Identification of shipped product to the AE Purchase Order on the shipping documents and certificate
- Continuous record keeping, which allows uniform cross-referencing of manufacturing documents and parts.
  - Parts not approved for bulk packaging or that are too small or otherwise impractical to mark shall be individually tagged or bagged with the identification markings applied to the tag or bag.
  - Fasteners shall be identified with the manufacturer's lot number. Additional identification requirements will be as specified on the Purchase Order.

## 6.10 Delivery Documentation

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

- Certificate of Conformity (minimum requirement)
- Certificate of Airworthiness (8130-3 or equivalent)
- Log Card, if applicable
- Concession(s), non conformance(s), if applicable

- Acceptance Test Report, as specified
- Component Maintenance Manual, if applicable
- Flight Manual Supplement, if applicable
- Master Drawing Data Package, if applicable
- One (1) hard copy and/or one (1) CD-ROM of Product's Manual, if applicable

Beside the contractual documentation, the Supplier shall provide the documentation set that enables the Airworthiness Authorities to issue an airworthiness compliance certificate (FAA Form 8130-3) as required.

A Certificate of Conformance/Certificate of Airworthiness shall accompany each shipment of product and reference the Purchase Order number, part number and quantity.

A Certificate of Conformance is a validation statement by the Supplier's management that the delivered product/service and supporting documentation, as defined by the Purchase Order, conform to the technical and contractual requirements. Manufacturing certification documentation is required on all individual part shipments to AE.

#### **6.11 Shelf Life Limited Materials**

Materials that are shelf life limited such as adhesives, sealants, o-rings, paints, certain avionics equipment, etc. shall have an expiration date identified either on the individual container and/or in the certificates. Materials must have remaining, at the time of receipt at AE, as least 80% of the total shelf life unless pre-authorized by Quality and Engineering via Purchasing.

#### **6.12 Hazardous Materials**

Hazardous material must be supplied with a Material Safety Data Sheet (MSDS) for each shipment unless the current document is on file at AE. This shall be coordinated between the Supplier and the AE Purchasing Department at the time of order.

#### **6.13 First Article Inspection (FAI)**

If required by PO or contract, the Supplier shall perform a FAI in accordance with AS9102 or equivalent to verify the manufacturing process of an item is established and under control by means of:

- procedures
- tools and any equipment
- processes / special processes
- environment conditions
- qualified operators

A complete verification (physical and functional) of the item's conformity to the qualified product definition. The First Article Inspection Report shall include at a minimum the following data:

- identification parameters, i.e. supplier name, manufacturing unit, reference order, reference product specification and its revision, part number, serial number (if required), software version and release (if required)
- evidence of any special process approvals, as required
- identification of the used manufacturing resources
- validation status of specific tools/means

- identification of flight critical parts
- tests and inspections results (including Acceptance Test Report)
- nonconformities reported

The First Article Inspection Report (FAIR) will be available for review by AE Quality personnel and retained at the Supplier's facility.

#### **6.14 AE Inspection Acceptance**

Unless otherwise specified in the AE Purchase Order, final inspection will be upon receipt at the AE facility. Acceptable items will be subjected to continual testing, conformity and measurement during integration phases prior to delivery of the AE end item. Any items determined to be nonconforming during integration may be returned to the Supplier. Disposition of nonconforming items by replacement, repair, modification or otherwise, shall be in accordance with the provisions of the Purchase Order as applicable.

Unless otherwise authorized in writing by AE, the Supplier shall only furnish AE with articles that are in complete compliance with all technical and contractual requirements.

#### **6.15 Off-the-Shelf Items**

The following additional requirements apply to off-the-shelf items. They can be common aircraft parts, hardware, raw material and fabrics or any items not fabricated directly for AE or not aircraft specific. These items will be identified with the part number and AE Purchase Order number.

##### **6.15.1 Raw Material Test Data**

The Supplier shall furnish a certification with the chemical and/or physical properties test results, material type, and traceability for each lot, batch or heat number as applicable. The data furnished shall include AE Purchase Order number, part number and applicable specification.

##### **6.15.2 Hardware**

The Supplier shall provide documented proof of source of manufacture showing batch/lot number identification with each shipment.

#### **6.16 Parts Fabricated Directly for AE**

The following additional requirements apply to items produced in accordance with AE or EC/ECD Engineering instructions or specifications.

##### **6.16.1 Supplier Incoming Material**

Supplier procured parts and material to be used on AE end items shall be subjected to an acceptance system that will assure conformance to drawing and specification requirements. Incoming raw material test data is to be maintained at the Supplier and/or available upon request.

##### **6.16.2 Nonconforming Material Review**

The Supplier may use their own nonconformance document and submit to AE for dispositioning and approval.

Before defective products are delivered, the approval must be obtained from the customer or an MRB report written up according to a QA plan. The nonconformance document, signed by AE or the TC holder must be included with the delivery. If AE detects defects previously unreported by the Supplier, the Supplier will be informed that the respective batch has to undergo a new conformity inspection according to suitable procedures. The costs that arise will be passed on to the responsible Suppliers. The rules for drawing up nonconformance requests are defined in agreement with AE.

The Supplier may request AE Quality disposition through Procurement. When the Supplier has received Quality written approval to ship nonconforming items, reference to that approval shall be recorded on the Supplier's CoC. Copies of the approval shall be included with the product when delivered.

Any material failing to meet AE contractual requirements upon receipt will be held and/or returned to the Supplier. The supplier shall provide for control, segregation and identification of all withheld or returned nonconforming supplies.

Any Corrective Action Request (CAR) issued by AE Quality Assurance against a particular product or service shall be answered by the Supplier within the timeframe specified on the CAR.

Parts and assemblies shall be identified as specified on the AE Purchase Order.

### **6.16.3 Source Inspection**

The Supplier's product/services may be subject to AE's acceptance. Any effort of this nature may have expenses imposed to the Supplier. The Supplier will accomplish their internal final acceptance prior to notifying the AE Buyer.

### **6.17 Configuration Management Plan**

The Supplier will adhere to the Configuration Management approach defined in the contract. The Supplier's Configuration Management Plan shall include and describe the obsolescence mitigation approach and ensure that all configuration changes are documented and visible to AE to ensure continual adherence to the performance requirements. The Supplier will notify and deliver all Product Service Bulletins and FAA Airworthiness Directives within 24 hours of development of the Service Bulletin or receipt of the FAA Airworthiness Directive. The Supplier will notify AE immediately of any Service Bulletins and FAA Airworthiness Directives which require aircraft grounding.

### **6.18 Risk Management Plan**

The Supplier shall develop and maintain a Risk Management Plan if required by contract or PO. This effort shall include identification of program risk elements and shall be updated on an iterative basis.

### **6.19 Equipment Test Specification (ETS)**

If required by the Contract, the Supplier shall provide an "Equipment Test Specification" (ETS) for the electric, electronic and/or optronic equipment. The ETS shall be written in accordance with the following:

- DO-160 – “Environmental Conditions and Test Procedures for Airborne Equipment”
- QDX042UI001E08A - "Environment Qualification Requirements for Equipment Installed on Eurocopter Helicopter”
- SPX240AV001E99 – "Helicopter Electrical Networks Characteristics and Equipment Requirements”
- EP 04-01 - "Equipment Management”

The ETS shall be approved by AE Engineering and will be part of the certification records that the future TC or STC holder has to provide to the certification authorities. The Engineering Test Report (ETR), should show the actual results of the qualification testing.

## **6.20 Acceptance Test Procedure/Acceptance Test Report (ATP/ATR)**

The Supplier will perform an Acceptance Test Procedure (ATP) if required. This ATP shall contain all of the functional tests conducted on each individual unit prior or during final test and acceptance by the Supplier. Based on the ATP, the Acceptance Test Report (ATR) documents the actual results of the conducted tests. A copy of the ATR shall be provided with each shipment if a test is specified by the drawing, manual, specification or PO. At a minimum, the ATR will contain the manufacturer’s name and part numbers, serial numbers, AE Purchase Order and part numbers, required test limits and actual measured values taken from inspection/test records for this material, with the original signature, date and title of the Supplier’s authorized agent.

## **6.21 Record Retention**

Objective records of Inspection, test, traceability and Quality Control activities shall be maintained and available for review by AE. The Supplier shall maintain quality records or have access to records for a period of (10) years after final payment on a Purchase Order or as otherwise specified.

## **6.22 Modification and/or Repair of Aircraft Components**

The following additional requirements apply to aircraft or aircraft components.

### **6.22.1 Aircraft Completion**

Aircraft completions by Suppliers shall be administered through the supplier contract referenced on the PO. Suppliers are responsible for return-to-service completed aircraft in accordance with FAA Regulation 43.9 as applicable. All FAA airworthiness directives and mandatory service bulletins must be identified and agreed upon by AE prior to the return-to-service of the individual aircraft. The Supplier is responsible for compliance to the purchase order and Federal Aviation Regulations for each alteration performed.

### **6.22.2 Painting of Aircraft**

The Supplier shall accomplish the aircraft painting as specified in the AE purchase order. Industry standards will be utilized at the paint supplier facility. Compliance to AE purchase order for proper paint mixture and color scheme by the Supplier is required. Supplier shall identify the paint color specification in the return to service documentation.

## 6.23 Inspection, Measuring and Test Equipment Calibration

The calibrating system shall meet the requirements specified in ANSI/NCSL Z540.3:2006: "Requirements for the Calibration of Measuring and Test Equipment" or equivalent. All inspection, measuring and test equipment items that can affect product quality are identified and qualified against their specification before their release for production. The Supplier shall be responsible for providing and ascertaining the accuracy and stability of inspection, measuring and test equipment to ensure supplies conform to contractual requirements and traceable to NIST or other recognized standards.

## 6.24 Improvement, Corrective Action and Preventative Measures

If a CAR is requested by AE, the Supplier will be required to document a cause and CA plan within ten (10) working days, unless a special extension is requested and approved by AE.

In the case of major defects, AE has the right to elect to have the parts reworked without returning to the Supplier. Costs will then be estimated and AE will notify the Supplier of expected incurred costs prior to proceeding. Expenses caused by nonconformances shall be debited to the Supplier.

## 6.25 Notice of Escapes (NoE) or Disclosures

### Notification of Escaped Defects

If a Supplier or sub-tier Supplier delivers a "safety-of-flight" issue on a product, they must disclose to AE within one (1) day of detection. Suppliers must inform AE of the result of any tests performed as well as CA measures taken and a completion date. Suppliers must routinely inform AE with regards to any progress of CA measures requested by AE.

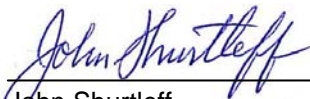
When the Supplier identifies or becomes aware of a suspect product/service that has escaped from the Supplier's facility to AE, the Supplier shall notify AE within (5) working days. The Notification shall be in writing, addressed to AE, on the Supplier's own letterhead.

The notification shall at a minimum contain the following information:

- (a) Supplier Name
- (b) AE Supplier Code number (if applicable)
- (c) Description of the defect
- (d) All affected part number(s)
- (e) P.O. number(s)
- (f) Quantities and Dates delivered
- (g) Date of Manufacture
- (h) Traceability information (serial number, heat lot number, batch number, etc.)
- (i) Attachment of all test/inspection data.
- (j) Information regarding rejection and containment
- (k) Root cause and corrective action or completion date for submittal. AE may require additional detail information to support internal investigations and/or customer requests.

Notifications of escape shall be sent via e-mail to the Sr. Director, Quality Assurance:

[John.Shurtleff@eurocopterus.com](mailto:John.Shurtleff@eurocopterus.com)



John Shurtleff  
Sr. Director, Quality Assurance

June 3, 2009

Date