JPQC V2.0 Iss.A

QUALITY AND PURCHASING TERMS AND CONDITIONS

1. GENERAL

1.1 Introduction

This document describes the minimum quality assurance and control activities to be undertaken by suppliers. The controls described in this document do not replace any part of the suppliers ISO 9001 or AS9100 series approved QMS. The Quality requirement ñ00xò codes as shown on JP Aerocom Purchase Orders are shown in Annex A of this document.

1.2 Applicability

This document is applicable to bidding, manufacture, inspection and test activities for all items to be supplied against purchase orders. The applicability of any section shall be agreed with the procurement authority. Where it is agreed that a section of this document is not applicable the Suppliers Quality Plan shall make a suitable statement.

1.3 Definitions

Supplier. The organisation with which the contract or purchase order is placed.
Customer. The end user or the organisation with which JP Aero-Com has a contractual relationship.
Procurement. JP Aero-Com procurement representative with overall responsibility for the contract or order.
Quality. JP Aero-Com Quality Representative with responsibility for all quality aspects of the contract or order.
Repair. Use of an approved process (salvage) designed to reduce but not completely eliminate the non-conformance and render the material fit for use.
Rework. Reprocessing of non conforming material to make it conform completely to contract requirements.

The following meanings apply in the text of this document
Shall. Expresses a mandatory requirement
Should. Expresses a recommendation or advice
Must. A legislative or regulatory requirement
Will. Expresses an assumption regarding an intention
May. Expresses a permissible practice. It does not express a requirement of this document.

1.4 Abbreviations

AQAP Allied Quality Assurance Publication
ASCII American Standard Code for Information Exchange
ANSI American National Standards Institute
FIR Failure and Incident Report
ICY Interchangeability
ITT Invitation to Tender
NDT Non Destructive Testing
PO Purchase Order
PQE Programme Quality Engineer (JP AERO-COM)
QMS Quality Management System
ST ANAG NATO Standardisation Document
VAS Verification by JP Aero-Com on the suppliers premises

2. QUALITY REQUIREMENTS

2.1 Quality Requirements

This document describes the quality requirements applicable to all contracts.
Any contract or order specific quality requirements in addition to those defined in this document shall be quoted in the ITT, enquiry, programme quality supplement, contract or purchase order. The set of ñ00xò codes that may apply to specific purchase orders is provided at Annex A.

2.2 Reference Documents

Any documents referenced by the Supplier shall be made available to JP Aero-Com for examination on request.

2.3 Government Quality Assurance Provision

Any government Quality Assurance activities will be in accordance with Def-Stan 05-61 Part 1 or ST ANAG 4107 and will be invoked on any purchase order using the relevant inspection condition codes.

2.4 Control of Sub-Suppliers

Suppliers shall pass on all applicable quality requirements placed on them by JP Aero-Com onto their own (2nd tier) suppliers and shall provide evidence that this has been done.

3. PLANNING

3.1 Contract Appraisal

At the earliest possible stage during the bidding / quotation process the Supplier shall conduct a complete review of the requirements of the JP Aero-Com request or contract. This is to ensure the timely development and/or provision of the special controls, standards, processes, test equipment, fixtures tooling and skills required for the efficient manufacture of compliant product.
The supplier shall provide evidence that the content of the supplied data pack and purchase order have been comprehensively reviewed. The supplier shall demonstrate that the requirements are fully understood and that fully compliant parts can be manufactured.

3.2 Quality Planning

If required the supplier shall submit a Quality Plan that shall address all of the relevant topics defined in this document and other items within the datapack.
The requirement for the document will be indicated on the quotation request and/or order.
Following initial acceptance no changes to the Quality Plan are permitted without written acceptance by JP AERO-COM .
The Supplier shall acknowledge the right of JP AERO-COM to conjunctively review any selected sub- suppliers contracted by, or to be contracted by, the supplier.

3.3 Planning Inspection and Test Stages

Inspection and the monitoring of processes, materials, or products shall be accomplished in a systematic manner selected and proven by the Supplier. Adherence to these methods for inspection and monitoring shall be as defined in approved work instructions.

3.4 Manufacturing Data Pack

The preparation, maintenance of, and compliance with work instructions shall be monitored by the Suppliers Quality Manager.
The Supplier shall establish and maintain control of all documentation essential to the accomplishment of work. Applicable drawings and work instructions shall be available at

the time and place of manufacture and inspection. The Suppliers Quality Control system shall include methods and procedures to ensure that all production / manufacturing operations are accomplished under controlled conditions.
Where an assembly requires the use of detail parts for which the supplier has issued his own drawing, copies of these drawings shall be provided to JP AERO-COM .
The suppliers manufacturing data pack defines the production standard and comprises as a minimum: -

a. Manufacturing drawings
b. Items Lists
c. Procurement Specifications
d. Test Specifications
e. Process Documents
f. Work Instructions
g. Quality Criteria

3.5 Risk

The supplier shall identify and advise JP AERO-COM of risks to the programme. Any programme specific Risk Management requirements will be advised separately.

3.6 Authorised Signatories

The supplier shall provide a list of authorised signatories for all documentation pertaining to the purchase order together with samples of signatures.

4. ACCESS

The Supplier shall provide JP AERO-COM and/or end user representatives with reasonable accommodation, facilities and assistance, at mutually agreed times, in order that the product quality requirements may be monitored. This may extend to sub-contractors.

5. CONFIGURATION MANAGEMENT

The supplier shall control the configuration of all data that are required to manufacture the contracted items. Examples are tooling drawings, machine software, work instructions and processes.
The Supplier must maintain traceability from the original Technical Baseline to the current manufacturing standard.
Change proposals that affect JP AERO-COM defined features and change proposals that would affect the current product qualification shall be forwarded to JP AERO-COM for assessment and approval.

6. QUALITY ASSURANCE OF MANUFACTURE

6.1 General

The Supplier shall define and implement a co-ordinated programme of activities directed toward the demonstration of the achievement of a repeatable manufacturing standard that is compliant with the manufacturing data pack.

6.2 Control of Purchased Supplies and Sub-Suppliers

The Supplier must be able to demonstrate that all materiel he either proposes to use, or uses in the manufacture of items to be delivered to JP AERO-COM are in accordance with the specified requirements. All materiel shall be procured with a Certificate of Conformity unless otherwise agreed.

6.3 Receipt Control

The Supplier shall define and implement a System for the controls to be applied for the receipt of each bought-out item to ensure traceability to the suppliers certification / documentation

6.4 Process Control

The Supplier must be able to demonstrate that all processes used in the manufacture of items to be delivered to JP AERO-COM are in accordance with the specified requirements and are adequately defined either by standard specifications or specialist procedure documentation.

6.4.1 Process Qualification

JP AERO-COM requires that all suppliers demonstrate their ability to produce product that is compliant with the given requirement. Process Qualification should include but is not restricted to:

a. Demonstration of process capability with a goal that C_p and C_{pk} are > 1.3 for quantifiable features.
b. Process Failure Mode Analysis
c. Implementation of a satisfactory SPC system with evidence of capability studies that justify the selection of control features
d. Process Management
e. Minimised Process Set-up
f. Operator Training and self inspection
g. Provision of proven tooling and test equipment
h. Continuous Improvement
i. Zero Defects Goal
j. Demand based manufacturing.

Process qualification shall be reviewed as part of the first article inspection described in section 6.17.

Suppliers shall provide evidence of process qualification. Parts and assemblies manufactured using qualified processes may be considered for 'direct delivery' that removes the requirement for VAS.

6.5 Traceability

Traceability is intended to enable the location of individual items of a batch of products, materials and electronic components to be known throughout their life cycle (production, storage, use etc.)
All suppliers to JP AERO-COM where required and their own suppliers shall take measures at their level to ensure unambiguous traceability in an efficient manner. In addition and where applicable Life Expiry details shall be provided. .

6.6 Inspection and Testing

If applicable the Supplier shall include as part of a Inspection and Testing Process, documentation which references

a. Inspection / Test Equipment
b. Inspection / Test Specification
c. Inspection / Test Procedures .
d. Personnel Skills and Competence
e. Statements of Measurement Equipment Uncertainty

6.6.1 First Off Inspection

When specified the supplier shall undertake and provide evidence of 'first off assessment prior to the commencement of manufacturing batches. For "Process Qualification" the first off inspection report shall record measurements of all features. The evidence shall comprise as a minimum :

a. Compliance with drawing or specification.
b. Functional performance. (If appropriate)
c. Work Instruction configuration.
d. Data pack configuration.
e. Manufacturing software configuration
f. Implemented modifications

g. Authorised concessions, production permits and waivers
h. Operator Training Review
i. Measurement results for all drawing and specification features

6.6 Inspection and Testing

The Supplier shall include as part of the Quality Plan or as a separate document referenced in the Quality Plan - the Inspection / Test Policy and Plan for each major stage of hardware manufacture. For the purposes of this document test shall be deemed to include measurement.
The supplier shall provide an Inspection / test plan that references:

a. Inspection / Test Equipment
b. Inspection / Test Specification
c. Inspection / Test Procedures .
d. Personnel Skills and Competence
e. Statements of Measurement Equipment Uncertainty

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e. Manufacturing software configuration
f. Implemented modifications
g. Authorised concessions, production permits and waivers
h. Operator Training Review
i. Measurement results for all drawing and specification features

6.6.2 Sampling Inspection

Sampling inspection techniques using approved sampling plans may be used. Sampling schemes shall be based upon nationally approved standards that are declared in the Quality Plan.

6.6.3 Environmental Stress Screening

All electrical and electronic assemblies shall be subjected to an ESS programme prior to testing. The ESS programme shall be defined by JP AERO-COM . If no ESS programme is defined or if the supplier wishes to use an alternative this shall be agreed with JP AERO-COM in writing. Procedures or methods that describe the management of ESS shall be referenced in the Quality Plan.

6.6.4 Single Operation Device Batch Acceptance Testing

Single operation devices shall be subject to a Batch Acceptance Test, after all have been subjected to the tests and inspections required by the relevant production and design documentation. The batch sample test plan shall be agreed between JP AERO-COM and the supplier. The plan shall include sample size, test conditions, accept / reject criteria and definitions of relevant failures.

6.6.5 Non Destructive Testing (NDT)

Grade A parts or grade B parts as defined by JP AERO-COM, shall be subjected to NDT as defined by the drawing. The Quality Plan shall describe NDT procedures and methods to be used. All methods shall be traceable to national standards. All personnel undertaking X-Ray or Ultrasonic assessment shall be correctly certified and the current certification referenced in the training section of the Quality Plan.

6.6.6 Interchangeability (ICY)

The supplier shall define in the Quality Plan how any ICY parameters highlighted in the

data pack drawings by a lozenge shaped box are to be verified. Verification may be by 100% measurement of the feature or by ongoing process control. Where ongoing process control is used then a minimum process capability of 1.33 C_{pk} shall be achieved with a goal of 2.0 C_{pk}. The supplier shall include the results of ICY features with each delivery.

6.7 Inspection, Test Equipment and Tooling

The Supplier shall ensure that all inspection and test equipment is calibrated in accordance with the agreed QMS baselines. The validation of equipment shall include interface checks on special-to-type test gear, test aids, breakout boxes, cableforms, etc.
Where automatic test equipment is used, the Supplier's Quality Department shall ensure that Test Software, once verified and validated, is adequately controlled, and that unauthorised changes cannot be made.
The Supplier shall identify the inspection and test activities required and ensure that the equipment proposed will meet the requirements in respect of quality and throughput.
The Supplier will provide and maintain a Test Equipment and Tooling register acceptable to JP AERO-COM . The Supplier will formally commission all discrete items of inspection and test equipment. This commissioning will be notified to JP AERO-COM .

6.8 ESD Precautions

When defined in the data pack the supplier shall demonstrate and maintain compliance with the requirements of BS EN 61340 series latest issue . Records of regular test and calibration activities shall be available for examination at all times. ESD precautions shall be referenced in the Quality Plan.

6.9 Workmanship Standards

The Supplier shall clearly define Workmanship Standards. All relevant standards shall be readily available to manufacturing, quality and engineering personnel, at their place of work.

6.10 Training

The supplier shall provide evidence that all staff involved with manufacture and technical support are properly trained and competent to carry out their assigned tasks, evidence may be in the form of skills / training matrices. Internal procedures shall be referenced in the Quality Plan. Training records shall be available for examination by JP AERO-COM .

6.11 Quarantine Areas and Bonded Stores

A Quarantine Area shall be provided, in which all supplies are held until an authorised Quality representative has agreed their compliance (or otherwise) with the requirements of the order, drawing or specification as applicable.
Bonded Store(s) shall be provided in which only those supplies accepted by the Suppliers Quality Assurance department shall be held, pending subsequent issue for manufacture, assembly or despatch.
Storage conditions must ensure that supplies held in store do not deteriorate. Strict control must be exercised to ensure that only supplies from this source are incorporated into manufacture.
The identity of all supplies shall be maintained. Material supplied by JP AERO-COM shall be used in fulfilment of the order for which it is supplied, unless otherwise authorised by the JP AERO-COM Quality Engineer or his nominee. Stores issues shall be on a "first in" - "first out" basis, unless otherwise specified.

6.12 Identification and Serial Numbering

6.12.1 Identification

Product shall be identified as described on the drawing using the prescribed method.
Items that are the subject of major concessions and production permits shall additionally be identified with the applicable reference.

6.12.2 Serial Numbering

All functionally tested assemblies, major structural items and units subjected to radiography tests shall be serially numbered. The format of the serial numbering shall be agreed with JP AERO-COM . Any other parts requiring serial numbering shall be defined by JP AERO-COM .

6.13 Certification of Manufacturing Acceptability

Where Supplier personnel are involved in testing and/or quality control of material and assemblies these staff should hold a stamp-mark or record label which clearly identifies the staff concerned. The Supplier must demonstrate that a system exists which enables an individual to be identified and associated with work which has received his attention. Inspection Stamps, heat treatment and test symbols and all other identification markings shall be applied by impress or rubber stamping, stencil, identity tags, etc. Where impress stamping is the method of marking allowed by drawing all stamps shall be of "U" cross-section.

6.14 Packaging, Handling and Cleanliness

The Quality Plan shall reference the means by which it shall be ensured that the materiel does not suffer any degradation or undue environmental stress whilst being manufactured, handled or stored.

6.15 Build Standard Certification

Prior to the delivery of each item, the Supplier's Quality Department shall certify that the "as built" configuration conforms to the data pack. Deviations shall be recorded as detailed in section 7.

6.16 Certificate of Conformity

Each delivery of articles from the Supplier shall be accompanied by a correctly completed Certificate of Conformity that fully reflects the requirements of the purchase order.
The Certificate of Conformity shall include serial numbers or batch traceability information. It shall also reference any major concessions or production permits that are authorised against the deliverable product.
The Certificate of Conformity shall be signed by the Company's duly authorised signatory, with a quality statement confirming that the supplies detailed have been inspected and tested, and unless otherwise stated conform in all respects with the requirements of the contract or order.

6.17 Acceptance

6.17.1 First Article Acceptance (by the Supplier)

The supplier shall generate a First Article Acceptance Plan for agreement by JP AERO-COM no later than 28 days before the scheduled delivery date or as agreed. The First Article Acceptance Plan shall define all of the datapack/product features to be verified, the specified limits and verification method for the physical and any functional parameters of the product.
On completion of the First Article Acceptance activity the supplier shall issue a First Article Acceptance Report. The report shall define the baseline configuration status of the JP AERO-COM datapack, relevant internal documents and processes and all inspection/test results and a summary/conclusion. The report shall be sent to the JP AERO-COM PQE for review, and acceptance.
No product is to be delivered in advance of the First Article Acceptance Report being issued by the supplier and agreed by JP AERO-COM

6.17.2 JP AERO-COM Verification at Source

JP AERO-COM reserves the right to audit all inspection and test results, build standards, deviations, major concessions and to witness the final test of the contract item(s) for which initial notice of 10 working days and final notice of 48 hours shall be given to the JP AERO-COM Quality Authority.
The Preliminary Acceptance package which shall be available for review on completion of

the final test, shall include:
a. The deliverable hardware (contract item(s)
b. Manufacturing Control Documentation
c. Statement of the as-built configuration
d. All major concessions and production permits (signed by JP AERO-COM)
e. Functional test and / or ICY measurement results.

Copies of items c, d and e shall be despatched to JP AERO-COM with the applicable hardware. The supplier shall make available all personnel, documentation, instrumentation, gauges and test media that may be necessary.
Provided that the degree of notice required by this section is given, JP AERO-COM will give the supplier 48 hrs notice of the intention of the final user or JP AERO-COM 's customer to witness verification at source.

6.18 Delivery

6.18.1 Delivery Packaging
The Supplier must ensure that all supplies shipped, are packaged in accordance with the specified requirements and are sealed to prevent ingress of dirt and tampering. Where no specification is quoted, packaging must be undertaken to preclude transit damage.

6.18.2 Shipping Documentation
The following documentation shall accompany the item for delivery:
a. Certificate of Conformance including the as-built configuration standards.
b. Approved Major Production Permits and Concessions (Waivers and Deviations).
c. Copy of any Functional Test Results and/ or ICY measurement Results.

6.18.3 Supplier Deliveries other than to JP AERO-COM
When the Supplier is required to deliver the material to a place other than JP AERO-COM a mutually agreed plan shall be put in place.

7. NON-CONFORMANCE AND CORRECTIVE ACTION CONTROLS

7.1 General
The Supplier shall operate a comprehensive closed-loop system for the recording analysis and corrective action of all non-conformances that occur during manufacture, inspection and test, in accordance with a Non Conformance Control procedure defined in the Quality Plan.
The objective shall be to determine causes in order to prevent recurrence. As part of this system, the Supplier shall arrange for failure to be analysed by careful and controlled methods, whether the failure occurs in-house or at a sub-contractors. All reports shall be analysed and progressively correlated.
The Supplier's Procedure shall:
a. Define the methods to be implemented for the segregation and control of all non-conforming material.
b. Detail the procedures to be used to the acceptance, rework concession application or disposal of non-conforming hardware.
c. Forbid the improper use of Non-Conformance Procedures as a means of embodying modifications.
d Ensure that all non-conformances shall be reported at the lowest level of assembly or manufacture at which the non-conformance can be identified to JP Aerocom.

7.2 Concessions & Production Permits (Deviations & Waivers)
Product will not be accepted with deviations from the Data Pack requirements unless prior written authorisation has been obtained in the form of a JP AERO-COM approval for the deviation. Within the context of this procedure Concessions and Production Permits may be defined

as follows:

7.2.1 Concession (Waiver) and Production Permit (Deviation) Definition

Concession (Waiver)
A Concession application is a request by the Manufacturer or Repairer to the JP AERO-COM Quality Authority to use or release a limited quantity of materials or components or assemblies already manufactured but not complying with the specified technical requirements.
Production Permit (Deviation)
A Production Permit application is a request by the Manufacturer or Repairer to the JP AERO-COM Quality Authority, in advance of manufacture, to use or release a limited quantity of materials or make components or assemblies which differ from the specified technical requirements. Any change of location must be notified to and approved by JP Aerocom.

7.2.2 Classification

A non-conformance to specified technical requirements necessitating Concession or Production Permit application will be classified by JP AERO-COM into one of the two categories detailed below:

Major:
Those likely to effect adversely safety, Interchangeability, maintenance, strength, life, reliability or functioning of the item, or when cost to the customer or delivery date agreed is likely to be affected, or when the departure is readily apparent and might cause concern to JP AERO-COM .

Minor:
All other departures from the specified technical requirements which do not fall into the above categories.

Approval of applications classified as major may be subject to delay as it may be necessary to obtain customer approval for the deviation.

7.3 Concession/Production Permit Applications

The following information is required as a minimum to support a concession/production permit application on a form approved by JP AERO-COM and to be referenced in the Quality Plan.

a. Name and Address of Supplier making the application
b. Date & Serial Number of the application, (Serial numbers shall be identified with the Project No's) as defined by JP AERO-COM
c. Contract/Order/ITP (Instruction to Proceed) given to Suppliers to permit the reference number commencement of work prior to the Official Order
d. Description, part/drawing number, modification / issue number, lot / batch and serial number (if applicable) of non-conforming item
e. Complete description of non-conformity, quoting specification/drawing/test schedule reference and detailing the deviations thereto. Sketches should be used wherever possible and should be attached to the application form. Any attachment shall be identified by date, serial number and page reference of the relevant application and shall also be referenced on the application form
f. Cause of non-conformity
g. Action proposed to rectify
h. Action proposed to prevent recurrence
i. Assessed Effect on Customer (JP AERO-COM)
j. Number of previous occurrences of the non-conformity
k. Serial numbers of other concessions already granted on the same item

7.4 Repair and Rework of Non-conforming Product

7.4.1 Rejected Non-conformances

Where items have non-conformance applications rejected by JP AERO-COM the Subcontractor shall only undertake any repair or rework action once JP AERO-COM has given approval.

7.4.2 Rework
The Subcontractor shall ensure that any re-work does not prejudice the quality of the deliverable product. All re-work carried out shall be fully documented. Rework procedures.

7.4.3 Repair
The Subcontractor shall ensure that any repair does not prejudice the quality of the deliverable product. Repair or salvage schemes must be approved by the design authority before use.

7.4.4 Re-Submission
Re-submitted parts or lots shall be subjected to the same tests or proof as the original submission.

7.4.5 Acceptance Criteria
If it is not possible or permissible to take corrective action or if resubmitted parts or lots do not meet the agreed acceptance criteria, those parts or lots shall be excluded from delivery.

8. QUALITY AUDITS

8.1 Quality Audits by the Supplier
The Quality Plan shall require the Supplier Quality Organisation to perform Quality Audits of systems, procedures and materiel to a declared audit programme to ensure correct controls are being implemented.
The Quality Plan shall detail the nature, timing and the sample rates of audits to be applied

8.2 Quality Audits by JP AERO-COM
The Quality Plan shall acknowledge the right of JP AERO-COM to:

a. Carry out audits in the following areas:
   (i) Compliance with the agreed Quality Plan
   (ii) Product verifications of samples of project hardware.
   (iii) Focused audits as required.
b. Witness any of the Supplier internal audits
c. Witness any of the Suppliers audits of its sub - suppliers by arrangement via the Supplier.
d. Review at Suppliers the project related Quality Audit reports.
e. Receive confirmation of the satisfactory completion of corrective actions required as a result of JP AERO-COM Quality Audits.
f. Negotiate additional Quality Audits if considered necessary by JP AERO-COM .
g. Arrange for the customer or his agent to perform any Audit, witness any test or examine any materiel as agreed with JP AERO-COM .

9. RECORDS

9.1 Test and Measurement Results
All test and measurement results are to be maintained for a minimum period of 10 years from the completion of the Purchase Order. No records are to be destroyed without the express permission of JP AERO-COM . Results may be transferred to JP AERO-COM for archiving. Results may be stored on disk / tape / server in a readily retrievable format.

9.2 Manufacturing and Release Documentation

Documentation shall be retained for a minimum period of 10 years unless otherwise agreed in writing with JP AERO-COM . Further, on expiry of the contract period, the supplier is required, if so instructed by JP AERO-COM , to deliver designated records to JP AERO-COM for custody.

10. SURVEILLANCE

JP AERO-COM reserves the right to monitor Quality Assurance arrangements and to witness such inspections and tests as may be deemed necessary at the suppliers premises or at further suppliers premises via the supplier.

Any inspection or test activities carried out at the suppliers premises by representatives of JP AERO-COM or the end user shall not relieve the supplier of his responsibility to ensure product conformance, likewise such inspection or test shall not prejudice the right of JP AERO-COM to reject supplies subsequently found not to conform.

Annex A 00 Codes

INSPECTION CODES USED ON PURCHASE ORDERS ISSUED BY JP AERO-COM

CODE	REQUIREMENT
001.	JP Aero-Com requires that the supplies detailed heron have been inspected and conform in all respects to the requirements of the order, be fully batch traceable and be accompanied by your Certificate of Conformity. The company quality and inspection procedures must conform to ISO9001:2008 and AS/EN9120 if available.
002.	JP Aero-Com requires that the supplies detailed hereon conform in all respects to the requirements of the order and be accompanied by your Certificate of Conformity and/ or incoming documentation
	Additional / specific quality conditions may be included on the JP Purchase order by the use of Free Type or by reference to a specific clause in this document.

END OF DOCUMENT