Type A	Type B	Type C	Type D	Type E	Type F	Type G	Type H	Type I	Type J	Type K	Type L	Type M
X	X											

QRS-108

Requirements for the Preparation of Supplier's Quality Assurance Plan

Issue Date: April 2015 **Issue:** 00

CHANGES LOG

Issue	Approval Date	Main changes	Interested Paragraphs
00	April 2015	First Issue	All

REFERENCE DOCUMENTS

Documents level	Document code (, paragraph) and title
Higher Level COS Documents	
	QRS-01 Quality Requirements For Suppliers

CONTENTS

1 Purpose

The Supplier is required to detail, in a Quality Assurance Plan (QAP), exactly how AgustaWestland (AW) contracted requirements are achieved via their Quality Management System (QMS), against the requirements QRS 01 (AgustaWestland Quality Requirements for Suppliers).

The primary purpose of the QAP is to highlight the results of any gaps identified between a Supplier's QMS and AW requirements in order to comply with QRS 01, specifically identified needs and/or the contract itself. The QAP must list in detail & explain any additional QA processes added, amended or modified to meet AW's Quality requirements.

The secondary purpose of the QAP is to document how the Supplier intends to fulfil AW Contractual requirements, as detailed in the QRS01 and QRS01A suite of modules, such as Organisational/Project family tree, Design and Development activities, Customer Internal Audit plan, Customer specific Key Performance Indicators etc.

Note - These additions may not have been identified as part of the gap analysis but are required by the Supplier to fulfil the AW Contract).

2 Applicability

This document is applicable to new or existing Suppliers.

The complexity of the QAP will be determined by the QRS modules applicable to the Supplier's Type Categorisation.

Once approved by AW, the QAP must be regularly reviewed by the Supplier to ensure it reflects their QMS and meets the contracted requirements. All QA activities stated within the QAP must be subject to Supplier Internal Audit. The Internal Audit schedule must be detailed in the QAP.

AW takes right to ask to its supplier a quality plan between themselves and their suppliers for acknowledgment.

3 Effective date

July 2015.

4 Ownership

The Supplier Quality Assurance (SQA) is responsible for coordinating the input of content to this QRS and any subsequent amendments supported by other relevant Departments/Functions as required.

5 Acronyms, definitions and abbreviations

AR – Analysis Report
AW – AgustaWestland
CDR – Critical Design Review
DDP – Declaration of Design and Performance
DR – Design Review
HW – Hardware
KPI – Key Performance Indicator
PDR – Preliminary Design Review
PSAC – Plan for Software Aspect of Certification
QA – Quality Assurance
QAP – Quality Assurance Plan
QMS – Quality Management system
QP – Qualification Plan
QR – Qualification Review
QRS – Quality Requirements for Suppliers
QTP – Qualification Test Procedures
QTR – Qualification Test Reports
RfP – Request for Proposal
SAS – Software Accomplishment Summary
SCR – Software Conformity Review
SoW – Statement of Work
SQA – Supplier Quality Assurance
SR – Similarity reports
SSR – System Specification Review
STD – Software Test Report
STR – Software Test Result
SVP – Software Verification Plan
SW – Software
TRR – Test Readiness Review
VDD – Version Description Document

6 Means of Understanding

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: deviations from such a requirement is not permissible without formal agreement,
- the word ***should*** in the text denotes a recommendation or advice on implementing such a requirement of the document; such recommendations or advice 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 and *shall* be complied with,
- the word ***will*** in the text denotes a provision or service or an intention in connection with a requirement contained in this document,
- the word ***may*** in the text denotes a permissible practice or action; it does not express a requirement contained in this document.

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

7 Procedure

A QAP is requested to those suppliers that need:

- To align their QMS to AW requirements (QRS01 and related procedures)
- Manufacture new articles under development
- Manufacture articles against approved data and are not approved under PART 21 G/J or equivalent
- Specific AW Program Requirements
- To establish a DO/(IPO)/PO Arrangement

AW can ask a dedicated quality plan even if none of the above mentioned situations occur.

7.1 QAP for Manufacturer

The Supplier shall produce a QAP highlighting the following information and how the supplier is going to manage them:

- *Chapter 1: List of acronyms and definitions* used in the Quality Plan
- *Chapter 2: Scope* of the quality plan and:
  - *Indication of contractor* (supplier name and address)
  - *Applicability* (list of all the PNs the Quality Plan is applicable to – AW P/N, Supplier P/N, Description, Procurement Spec/SCD)
- *Chapter 3: Applicable Documents*
  - *Contractual Documents* (such as Contract, SoW)
  - *Applicable Regulations* (EASA, FAA, TCCA, AQAP, etc.)
  - *AW Documents* (Technical Specification, SCD)
  - *List of Supplier applicable documentation* defined in the QAP (Quality Manual, Design Manual, internal procedures)
  - *Supplier Approvals* held (Civil Certifications, EN series, ISO series)
- *Chapter 4: Organization and responsibility Definition* (indicating at least Program Manager, Technical Director, Manufacturing Engineering Manager, Production Accountable Manager, Certifying Staff, Quality Manager/Quality Control Manager/ Manufacturing Manager).
  The Supplier shall also provide AW for acknowledgment the internal procedure related to the education, training, skills and experience for the above mentioned key personnel.
  The supplier shall clearly indicate the capability of people involved into design activities for AW programs in terms of required skills and experience.
- *Chapter 5: Planning:* documents reporting the schedule of all activities to reach final qualification. The supplier shall describe their capacity to address the requested scope of work. This might be done by providing the following:
  - Project planning
  - Work breakdown structure
  - Resource breakdown structure
- *Chapter 6: Focal Point:* Annex A can be used to indicate the list of all the Focal Points. AW will fill out AW Focal Points

- *Supplier Focal Points*
- *AW Focal Points*

- *Chapter 7: Documents Quality Requirements:*
  - *Issue* description of how the documentation is issued, approved, changed and managed
  - *Record Keeping* defining timing, location and applicability
- *Chapter 8: DO-PO Arrangement:*
  - *Approval* all of the procedures have to be approved by Supplier Engineering and by AW CPE
  - *Document Exchange:* description of how the documents are going to be exchanged between Supplier and AW.
- *Chapter 9: Configuration Management:*
  - *Change Classification and AW involvement:* describe how the Supplier is intended to manage major and minor modifications.
- *Chapter 10: Design and Development:* indicate design planning supplier procedure
  - *Design Control:* define the analysis method used to design parts
  - *Basic data and requirements of design:* managing of HW and SW requirements
  - *Software Quality Assurance:* indicate the Supplier SW quality assurance plan
  - *System Equipment List:* list the preliminary list of equipment and items agreed at the CDR
  - *Preliminary Design Data Set*
  - *Critical Part* indicate how the supplier is intended to manage critical and hazardous parts
  - *Forging and Casting Design Requirements* how the supplier is intended to manage forging and casting parts
  - *Special Processes* how the supplier is intended to manage AW special Processes
  - *Design Review* indicate the procedure the supplier follows to perform PDR, CDR, QR, SSR, TRR, DR and FQR/SCR as applicable
  - *Design Verification and Validation* describing how the supplier is intended to verify and validate design data
- *Chapter 11: Activities and Documentation for Qualification of Parts*
  - *Functional Qualification* the documentation to be issued to provide evidence of design/validation/qualification results is: QP, AR, SR, QTP, QTR, PSAC, SVP, STD, STR, SAS, VDD, DDP
  - *Manufacturing qualification* the documentation to be issued to provide evidence of manufacturing qualification is FAI, to be performed in accordance with QRS-101
- *Chapter 12: Inspection and Testing:* An ATP is expected to be prepared and approved by AW.
- *Chapter 13: Components designed by Subcontractors:* the supplier shall indicate how he is flowing down AW requirements to its suppliers. The supplier shall indicate the list of <u>all</u> of its suppliers involved in design activity

- *Chapter 14: Product identification and traceability:* product will be identified, traced and delivered according to the requirements stated in applicable Drawings , Applicable Technical Specifications, Applicable QRS-series procedures. The supplies shale report on each deliverable unit:
    - Supplier name
        - Supplier PN
        - Supplier SN
        - Modification Status
    - Main "sub-tiers"
        - AW P/N
        - Equipment/Part description
        - Manufacturing date
        - Manufacturing quality stamp
        - Identification code of applicable concession/deviation permit
- *Chapter 15: Supplier DDS Approval*
- *Chapter 16: Control on Non-conforming Product:* the supplier is expected to manage non-conforming products in accordance with QRS-107 requirements.
- *Chapter 17: Delivery Documentation:* the supplier is expected to manage delivery documentation in accordance with QRS-106 requirements.
- *Chapter 18: Maintenance Manual:* the supplier is expected to manage Maintenance Manual in accordance with QRS-122 requirements
- *Chapter 19: Continued Airworthiness:* the supplier shall explain how he is going to manage any defect in order to ensure to inform AW within **24 hours** since the discovery of the defects involving airworthiness and/or safety, **1 week** for defect involving qualification or product characteristics and **1 month** for the other cases.
- *Chapter 20: Corrective and Preventive Actions:* please explain preventive and corrective actions procedure to be applied.
- *Chapter 21: Quality Audits:* the supplier shall monitor AW requirements by planning and executing internal and external surveillance activity.
- *Chapter 22: Design Process analysis and improvement:* the supplier shall plan and implement monitoring, measurement, analysis and improvement methods particularly related to the design process.
- *Chapter 23: Access: [MANDATORY].* "AgustaWestland has access to Supplier that will permit the access to AgustaWestland representatives, AW Customers, Civil and/or Military Authorities accompanied by AgustaWestland personnel, furthermore, the supplier shall guarantee the access to Subcontractor facilities.
- *Annex A: Focal Point:* detail all Supplier and AW focal points.
- *Annex B:* Compliance Matrix to the applicable QRS procedures.
- *Annex C:* Applicability

The supplier is requested to maintain the chapter numbering above mentioned. In case of not applicability of requirement, "N/A" indication is accepted
All of the procedures shall comply with QRS01 and related procedures listed in QRS01A.

7.2 QAP for Subcontractor

The Supplier shall produce a QAP that shall highlight the following aspects related to the parts he produces:

- *Chapter 1:* Introduction
  - *List of acronyms and definitions* used in the Quality Plan
  - *Order/Contract* list helicopters object of the supplies
  - *Contractual Documents* (such as Contract, SoW)
  - *Applicable Regulations* (EASA, FAA, TCCA, AQAP, etc.)
  - *AW Documents* (drawing number)
  - *List of Supplier applicable documentation* defined in the QAP (Quality Manual, Design Manual, internal procedures)
  - *Supplier Approvals* held (Civil Certifications, EN series, ISO series)
  - Right of access
- *Chapter 2: Scope* of the quality plan and:
  - *Indication of contractor* (supplier name and address)
  - *Applicability* (list of all the PNs the Quality Plan is applicable to – AW P/N, Supplier P/N, Description, drawing number and issue)
  - *Scope of the quality plan* describing the purpose of the document
  - *Exclusions* reference to design activities in charge of AW
  - *Validity of the Quality Assurance Plan:* define the situation that can cause a decay of the quality plan
- *Chapter 3: General*
  - *Company Organization*: defining the department involved for the deployment of the activity requested, in terms of responsibility definition (indicating at least Program Manager, Technical Director, Manufacturing Engineering Manager, Production Accountable Manager, Certifying Staff, Quality Manager/Quality Control Manager/ Manufacturing Manager).
    The Supplier shall also provide AW for acknowledgment the internal procedure related to the education, training, skills and experience for the above mentioned key personnel.
  - *Organizational Chart*
  - *Quality Management System overview:* reference to quality manual and list of procedures covering company processes.
  - *Supplier responsibilities:* reference to the responsibility of the supplier in terms of communication of non-conformities, answer to non-conformities, contract review to AW
  - *Responsibility Matrix:* matrix indicating the department involved into internal processes and clearly stating whether the department is responsible or only for collaboration.
  - *Planning*: define how the supplier manages planning of the activities with timescale.
  - *Quality Management System*

        - *Control of documentation*: reference to supplier internal procedure to manage documentation received and internal flow down.
        - *Control of records:* reference to supplier internal procedure to manage record retention in accordance with QRS-112
        - *Control of configuration:* define how the supplier manages any discrepancy from the approved design data
    - *Management Responsibility*
        - *Management review*: describe how supplier management monitor quality objectives.
    - *Monitoring and Measurement:* supplier shall define internal KPI focused on customer satisfaction
        - *Analysis of data:* supplier shall analyse KPI and take adequate actions to improve them
- *Chapter 4: Product Realization*
    - *Planning of Product Realization:* supplier planning shall comply with requirements defined by AW Manufacturing Engineering.
        - *Critical Parts*: describe how the supplier is intended to manage critical parts
        - *Manufacturing Equipment*: explain how the supplier manages equipment involved into the manufacturing process.
        - *Special Processes*: Identify all the processes and related AW approval. In case of subcontracting of such processes, identify the suppliers of these processes.
        - *Critical operations*: all the critical operations shall be identified with the letter "C".
    - *Purchasing Process*: the purchasing process shall comply with EN9100 series requirements. Raw material can come from AW or authorized source. Special processes shall be only addressed to approved suppliers (DQP shall be available)
        - *Purchasing information*: the supplier shall clearly flow down AW recruitments to its suppliers.
        - *Verification of purchased product*: supplier shall check the purchased product in order to verify compliance with AW requirements.
    - *Delivery Documentation:* procedure QRS-106 shall apply.
    - *Production and Service Provision*
        - *Production documentation:* the supplier shall have a work order that recalls the steps to be followed.
        - *Control of Production Process Changes:* describe how the supplier keeps under control and communicate to AW Production Process Changes.
        - *Control of Production Equipment, tools and Software Programs:* supplier shall indicate how he keeps under control all the equipment in use with related responsibilities.

- *Post-Delivery Support*: the supplier shall provide assistance to AW or its customers upon request within contractual clauses with AW.
- *Identification and traceability*: the supplier shall indicate how traceability and identification of all the articles are granted.
- *First Article Inspection*: the supplier shall comply with QRS-101.
- *Control of non-conforming product*: the supplier shall comply with QRS-107

7.3 QAP for transfer of Production Plant

The Supplier shall produce a Transfer Plan that shall highlight the following aspects related to this movement.

- Details of the old and new facility including information on transfer of staff, equipment etc.
- Timeline for re-location
- The list of AW Part Numbers involved in the transfer and their grade of criticality
- A planning of FAI for each AW Part Number
- Re-qualification of any special/critical process: how do you intend to proceed with this, timescales etc.?
- Quality certifications of the transferred activities to the existing facility – how is this being managed?
- Identification of Risks associated with this transfer and planned mitigation actions e.g. containment action put in place to avoid the risk of delivery disruption to AW (e.g. provision of buffer stock) etc.

8 Transmission of Quality Plans

QAP for Manufacturer shall be addressed to SQA that will forward it to engineering department for review.
QAP for transfer of production plant shall be addressed to SQA for approval.
QAP for Subcontractors shall be addressed to the Quality Control of the receiving plant.

9 Forms

N/A

10 Annexes/Supplements

N/A

11 Appendixes

N/A