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QRS-107

Management of Non-Conformance, Deviation Permit and Continued Airworthiness

Issue Date: ~~April 2015~~ December 2014

Issue: 00

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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 Requirement For Suppliers

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1 Scope

This Quality instruction defines the methods which shall be used by AgustaWestland (AW) suppliers for the notification of “Non-Conformances” regarding material, Articles and assemblies destined to AW.

2 Applicability

This Quality Instruction is applicable to all AW Suppliers who deliver articles and/or assemblies, or perform operations on Articles or assemblies which are intended for installation or delivered as equipment in furtherance of any programme or contractual requirements.

This procedure applies to all the Legal Entities of AgustaWestland, where a non-conformity could be raised during the manufacturing process, including at supplier facilities.

It shall be used as base reference also for NH90 and AW609; in this case it can be integrated by specific programme procedures, in this case the program procedure prevails.

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

ATE	Authorized Technical Expert
AW	AgustaWestland Engineering Organization
AWPO	AgustaWestland Production Organization
CORIPRO	Commissione Riesame Prodotto
CoC	Certificate of Conformity
CO	Concession (Waiver)
CoMo	Coordination Memo
CPE	Chief Project Engineer
DP	Deviation Permit
HDO	Head of Design Organisation
ME	Manufacturing Engineering
MoD	Ministry of Defence
MP&C	Material Planning & Control
MRB	Material Review board
NC	Non Conformity
QC	Quality Control
QN	Quality Notification
RWO	Repair Work Order

SQA Supplier Quality Assurance
TC Type Certificate
WO Work Order

ATE

Person, appointed by the HDO, with the authority to classify the concessions and sign the dispositions in accordance with the requirements defined in Appendix A of the present document.

Concession (ref. EN ISO 9000)

Permission granted to a supplier to use or release a product that does not conform to specified requirements.

Coordinator

Inspector authorized to issue a concession.

Known Repair

Repair whose criteria:

- are contained in AW technical specification (e.g. STA, STAP, Repair manuals, etc.) applicable to the product line involved, that has been approved by the HDO or by the competent CPE, or
- have already been applied at least once to the P/N involved (a previous concession exists with specified repair approved by the competent CPE, in which the repair criteria have been described or a repair drawing in accordance with applicable procedure (e.g. NTA047R, WDM4192), has been quoted).

Specific Repair

Repair not covered by the known repair definition.

Performance

Characteristic of a part which impacts the operation of the aircraft.

Strength

Characteristic of a part that affects the structural safety margins and limits the use of the part in the framework of its operation.

Life or Duration

Characteristic of a part that affects the life/duration of the part, reducing it below the period envisaged as a part/specification requirement.

Reliability

Characteristic of the part that affects the product reliability requirements with a consequent increase in the frequency of the scheduled inspection and/or removal intervals, compared with what is contained in technical publications.

Maintainability

Characteristic of the part that has an impact on the maintenance activity envisaged by the scheduled inspections manual.

Testability

Characteristic of the part that has an impact on the ability of the part to reveal and isolate a fault and/or characteristic of the parameters detected on the basis of the test procedures envisaged by the applicable technical publications.

Interchangeability

Situation where two or more items are so similar in functional and physical characteristics that they are considered equivalent in performance and durability. Each is capable of replacing the other(s) without causing a need for alteration or adjustment to fulfil the same requirement.

For general definitions, please refer to EN ISO 9000 and to specific documents of Legal Entities, where applicable.

MRB

Official Board made up of the AW and Official Authorities and/or the Customer, tasked with the review, evaluation and disposal of non-conforming supplies and services and with ensuring all actions necessary to prevent a repetition of the discrepancies have been taken and are being implemented.

Non-Conformance

For the purpose of this procedure, Non-Conformance means a defect which cannot be removed by additional work processes, without deviating from the requirements contained in the technical documentation, but which can't be considered as scrap.

Concession (Waiver)-CO

This is the permission granted to a Supplier to use or release a limited quantity of material, components or equipment already produced but not conforms to the applicable "Built Standard" and/or detail drawings.

Deviation Permit –DP

A DP is issued when the Supplier asks authorisation either prior to manufacture of an item or to procure a service to deviate from a specification or requirement for a specific number of units, for a specific service or for an established time.

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 REQUIREMENTS

7.1 Supplier Organization

All Suppliers shall submit to AW any non-conformity for approval/disposition according to the category of their AW approval.

For the activities and the requirements specified in this document, the Supplier's Organization shall formally document:

- A process for approval of non-conformities on manufactured Articles
- A process for classifying the severity of the non-conformities and the control of the use of non-conforming products in finished Articles
- A process for continuing airworthiness
- A process for Sub-suppliers management.

According to the category of AW approval the following paragraph applies:

CATEGORY	PARAGRAPH
Manufacturer	9
Subcontractor	10

7.2 MANAGEMENT OF CONCESSION AND DEVIATION PERMIT

7.2.1 General

If during the production phase a non-conformity/deviation to design data is discovered by the supplier, an application to AW shall be made by submitting a Concession or a Deviation Permit.

In case the non conformity is detected after production a **Concession** will be raised

In case the deviation is prior to manufacturing a **Deviation Permit** shall be raised.

A Deviation Permit shall be used also in the event it will involve a specific number of units or specific service, for an established time of production

Anytime an item is affected by several non-conformities, the relevant classification will be the highest one assigned among each single non-conformity.

Non-conformities classification and management process shall be performed as follows:

- When the Supplier detects any non conformity at the end of the manufacturing process, a "Concession" shall be issued using the form in Appendix A. This does not apply to NH90 program for which program procedure QD S000N0805E01 (Concession Procedure) applies.

The following cases are identified:

- A. Supplier classified as Manufacturer:** the "Concession" form shall be signed by the Supplier's Design, Quality and Engineering representatives and forwarded to AW Quality

Control of the AW plant that is destined to receive the part. An engineering evaluation and proposal is requested to the supplier (ref: form QRS.107.F01)

B. Supplier classified as Subcontractor: the “Concession” form shall be signed by Supplier’s Quality representatives and forwarded to the AW Quality Control of the AW plant that is destined to receive the part.

Once approved and classified by AW, the “Concession” will be returned to the supplier, in order to proceed with item delivery; in case of Major classification, the AW “concession” identification code shall be marked on the relevant item.

- When the Supplier needs to ask for a deviation to the approved data, a “Deviation Permit” shall be issued using the form in appendix B. For NH90 program procedure QD S000N0805E01 (Concession Procedure) applies.

7.3 PROCESS FOR MANUFACTURER

7.3.1 Non Conformities Classification and Approval

During production, the supplier shall give evidence of any non-conformity to the applicable technical data, reporting the relevant reference in the "Declaration of Conformity".

The findings shall be managed according to the supplier procedures, recognized by AW.

Except in cases where the supplier decides to scrap the part, the supplier shall:
Classify the non-conformity as:

- **"Major"** or **"Minor"**, with the concept defined in Appendix C.

And fill the concession form with the corrective actions proposed and/or the decision to use; the form shall be sent for AW approval to AW Quality Control of the AW plant that is destined to receive the part.

Ensure that for all the non-conformities the following are addressed:

- the traceability
- the identification of the root cause is done
- the evidence of management of any corrective actions taken
- Refer on the "Declaration of Conformity" the minor and major non conformities and the applicable repair drawings, attaching a copy of the documentation
- Mark on the equipment/part the Concession or Deviation Permit number in case of a Major Concession

7.4 PROCESS FOR SUBCONTRACTORS

If the Supplier detects a non conformity, the AW approval is required.

A “Concession” shall be issued, using the form QRS.107.F01 without the page dedicated to MANUFACTURER only.

The “Concession” form shall be signed by Supplier’s Quality representatives and forwarded to the AW Quality Control Manager of the AW plant that is destined to receive the effected Articles.

Once approved, the “Concession” will be returned to the supplier, in order to proceed with items delivery; in case the Concession is classified as Major by AW, identification code shall be marked on the relevant item.

7.5 Application of Concession/Deviation Permit Procedure

- Each item can be covered by only one “Concession”, reporting all non conformities identified during the manufacturing process. The same rule shall be followed in case of “Deviation”.
- If an item has non conformities associated both to a DP and a CO, then two forms shall be issued; one for the DP and one for CO.
- Every CO/DP request form revision shall be subjected to a new approval process.

7.5.1 Defect discovered by AW

In case of a non-conformity detected by AW, the affected item will be isolated until the end of evaluation, prior to ship it back to the Supplier.

For all rejected items (including on site repairs) and all the incidents in which the supplied item is involved, the Supplier will receive a Defect Report/Quality Notification.

At the end of investigations, the Supplier shall return to AW the Defect Report/Quality Notification, attaching the investigation report and corrective actions implemented.

7.6 Management of Non-Conforming Products

7.6.1 General requirements

The Supplier shall ensure the compliance with the following requirements:

- “Non-Conforming” item(s) affected by CO/DP shall be duly identified and separated from the items in production until resolution of the pertinent document has been provided;
- the Supplier shall ensure that the “Non-Conforming” item is clearly identified until the final acceptance phase or, in any case, up to the last operation within Supplier’s responsibility;
- Articles and/or assemblies covered by Major Concession shall be marked with the Concession number. In addition to recording on the delivery documentation, a copy of the Concession report shall be included with the shipment;
- the Supplier **shall not deliver Articles with pending (open) Concession without AW explicit authorisation**, and this status shall be recorded on the delivery documentation (e.g CoC).

7.6.2 Marking requirements

In all cases where the Concession marking is required the Supplier shall:

- Identify the “non-conforming” material, accepted by AW. by marking the Concession number nearby the Part Number (using the same marking method required for the Part Numbering) prior to the delivery to AW, and in any case, after the execution of the finishing treatments; or as mandated by the AW.
- If the marking is required by vibrating pen, Concession number shall be marked at any material processing stage

7.6.3 Document submission

The AW Department to which the ORIGINAL copy of the Concession form has to be sent in is

AGUSTAWESTLAND QUALITY CONTROL OF THE RECEIVING PLANT

The same AW Department is also responsible for returning the copy of the document as released by AW back to the Supplier.

7.7 Non conformities and Continuous Airworthiness

7.7.1 General

In case the Supplier identifies a design or manufacturing defect related to Articles already delivered, then corrective actions shall be taken by the Supplier and AW is to be informed using the most expedient method or as agreed in the dedicated Quality Plan and respecting the following time limits:

- **maximum 24h in case of defects that have impact on airworthiness or the safety;**
- 1 week in case of defects impacting the qualification or the characteristics of the product;
- maximum 1 month for others cases.

If not differently agreed (for example in the Quality Plan), a Technical Bulletin ~~or an equivalent document~~ shall be sent to the following AW departments to:

- AW HDO
- Product Support
- Quality Control of the plant receiving the part

7.7.2 Non conformities

The Supplier shall periodically record failures and investigations occurred during manufacturing and any testing of the equipment.

Copies of these records shall be made available to AW on request.

In case of recurrence of the same defect, covered by CO/DP, the Supplier shall perform an investigation in order to generate a modification to design or manufacturing process to avoid the non conformity recurrence.

The Supplier shall, on trend basis, establish a system showing the quality level and the defect level through the use of dedicated indicators (KPI) for the purpose of demonstrating the progress obtained in the Quality Improvement.

When required, the Supplier shall provide AW with the defect level and trend reports.

7.7.3 On-site Repair

When the Supplier's technical representative repairs items "on-site", the repaired item shall be released after validation of the repair by the Quality Manager of the Supplier.

For this purpose the Quality Manager of the Supplier shall send the above written authorization to AW Quality Control Department of the receiving Plant. All the required delivery documentation (CoC, Log Card, ATR, etc.) shall be reissued and tested by the above-mentioned representative.

The relevant repair report will become an attachment to the applicable "Defect Report", for information.

8 FORMS

The following forms shall be used by the supplier for the management of Concessions and Deviation Permits:

QRS.107.F01 Concessions

QRS.107.F02 Deviation Permits

<i>Manuf. Doc. N.</i>	<i>1</i>	<i>Date</i>	<i>2</i>	<i>AW Doc. N.</i>	<i>3</i>	<i>Purchase Order</i>	<i>4</i>
<i>AW P/N</i>	<i>5</i>	<i>S/N / Batch Number</i>	<i>6</i>	<i>Grade</i>	<i>7</i>	<i>AW Drawing Issue</i>	<i>8</i>
<i>Description</i>	<i>9</i>			<i>Batch Q.ty</i>	<i>10</i>	<i>Defective Q.ty</i>	<i>11</i>
<i>Manufacturer</i>	<i>12</i>			<i>Model</i>	<i>13</i>		

<i>Defect(s) Description</i>			
<i>14</i>			
<i>Department</i>	<i>Inspector</i>	<i>Signature</i>	<i>Date</i>
<i>15</i>	<i>16</i>	<i>17</i>	<i>18</i>

<i>Defect(s) Cause</i>			
<i>19</i>			
<i>Department</i>	<i>Inspector</i>	<i>Signature</i>	<i>Date</i>
<i>20</i>	<i>21</i>	<i>22</i>	<i>23</i>

<i>Corrective Action</i>		<i>Complete Before</i>	<i>24</i>
<i>25</i>			
<i>Department</i>	<i>Inspector</i>	<i>Signature</i>	<i>Date</i>
<i>26</i>	<i>27</i>	<i>28</i>	<i>29</i>

For “MANUFACTURER” SUPPLIERS ONLY
ENGINEERING evaluation and proposal

Engineering evaluation

Investigation report

n.....

Compliance report

n.....

Defect effects			Limitations
	Before any repair	After any repair	
	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes (specify) <input type="checkbox"/> no
Safety	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Life	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Strength	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Performances	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Interchangeability	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Reliability	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Maintainability	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Installability	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Testability	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Only aspect	<input type="checkbox"/> yes	<input type="checkbox"/> yes <input type="checkbox"/> no	
Repair Proposal			Decision to use <input type="checkbox"/> Use repaired with specific repair <input type="checkbox"/> Use repaired with known repair <input type="checkbox"/> Use as is <input type="checkbox"/> Use repaired for tests (see Limitations) <input type="checkbox"/> Use as is for tests (see Limitations) <input type="checkbox"/> Scrap
Concession Classification	<input type="checkbox"/> Major <input type="checkbox"/> Minor	Submit after repair	<input type="checkbox"/> yes <input type="checkbox"/> no

Box Number	
1	Manufacturer reference number
2	Date
3	AgustaWestland reference number
4	Agusta Purchase Order number
5	Part Number
6	Serial/Batch Number
7	Criticality of the part
8	Revision of the referenced AW technical document (drawing)
9	Description and name of the part
10	Total number of manufactured parts
11	Number of non-conforming parts / assemblies
12	Manufacturer name
13	Helicopter Model Number (Eg. A-109, EH-101, etc.)
14	Detailed description of the defect
15	Department of the inspector who detected the problem
16	Name of the inspector who issues the document
17	Signature of the Inspector who issues the document
18	Issue date
19	Detailed description of the causes of the defect
20	Department of the inspector who detected the problem
21	Name of the inspector who detected the cause
22	Signature of the Inspector who detected the cause

Box Number	
23	Defect cause issue date
24	Corrective Actions foreseen implementation dates
25	Description of the Corrective Action
26	Department of the inspector who defined the corrective action
27	Name of the inspector who who defined the corrective action
28	Signature of the Corrective Action responsible
29	Corrective Action issue date

<i>Manuf. Doc. N.</i>	1	<i>Date</i>	2	<i>AW Doc. N.</i>	3	<i>Purchase Order</i>	4
<i>AW P/N</i>	5	<i>S/N / Batch Number</i>	6	<i>Grade</i>	7	<i>AW Drawing Issue</i>	8
<i>Description</i>	9			<i>Batch Q.ty</i>	10	<i>Defective Q.ty</i>	11
<i>Manufacturer</i>	12			<i>Model</i>	13		

<i>Deviation(s) Description</i>
14

<i>Department</i>	<i>Inspector</i>	<i>Signature</i>	<i>Date</i>
15	16	17	18

<i>Deviation(s) Cause</i>
19

<i>Department</i>	<i>Inspector</i>	<i>Signature</i>	<i>Date</i>
20	21	22	23

<i>Effect on costs</i>	24	<i>Effect on programme</i>	25	<i>Effect on delivery</i>	26
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Box Number	
1	Manufacturer reference number
2	Date
3	AgustaWestland reference number
4	Agusta Purchase Order number
5	Part Number
6	Serial/Batch Number
7	Criticality of the part
8	Revision of the referenced AW technical document (drawing)
9	Description and name of the part
10	Total number of manufactured parts
11	Number of non-conforming parts / assemblies
12	Manufacturer name
13	Helicopter Model Number (Eg. A-109, EH-101, etc.)
14	Detailed description of the deviation
15	Department of the inspector who asks for deviation
16	Name of the originator
17	Signature of the originator
18	Issue date
19	Detailed description of the causes of the deviation
20	Department of the originator who detected the cause of the deviation
21	Name of the originator who detected the cause of the deviation
22	Signature of the originator who detected the cause of the deviation

Box Number	
23	Date
24	There are impacts on the cost (yes/no)
25	There are impacts on the programme (yes/no)
26	There are impacts on the delivery (new delivery date)

<p>Major Non-Conformity</p>	<p>A non-conformity <i>shall</i> be classified MAJOR when one or more of the following cases are met:</p> <p>Airworthiness & Safety Aspects</p> <ul style="list-style-type: none"> a) There <i>shall</i> be a considerable extent of new substantiation data with respect to the frozen data and/or a considerable degree of re-assessment or re-evaluation of the original data for the demonstration of compliance. b) The non-conformity alters the Airworthiness Limitation or the Operating Limitations, as previously stated for the part, system or equipment supplied to AW. c) The non-conformity introduces or affects functions having failure modes with catastrophic or hazardous effects. d) The non-conformity introduces an appreciable effect on the structural strength of the part, system, equipment or relevant installation on the aircraft. <p>“Fit” aspects</p> <ul style="list-style-type: none"> e) The non-conformity affects interchangeability, compatibility, maintainability, reparability within the supplied part, system, equipment or between it and the surrounding systems. <p>“Form” aspects</p> <ul style="list-style-type: none"> f) The non-conformity affects the external configuration of the supplied part, system, equipment (including visual impact, when it is a requirement) or any external interface characteristics between the supplied part and the surrounding area. g) The non-conformity provides material modifications that could impact interface characteristics between the supplied part, system, equipment and the surrounding systems. <p>“Function” aspects</p> <ul style="list-style-type: none"> h) The non-conformity affects the functions required in the Technical Specification or the performances of the supplied part, system, equipment beyond the defined limits. i) The non-conformity affects the operational characteristics of the supplied part, system, equipment or the pilot/system interfaces, including the input-output tolerances of operational parameters and/or the details which have direct effects on them. j) The non-conformity affects electromagnetic characteristics or signature. k) The non-conformity involves complex electronic hardware (Ref. to RTCA/DO-254).
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	<p>Environment aspects</p> <p>l) The non-conformity affects environmental interactions (e.g.: introduction of hazardous materials, change in compliance demonstration to environmental protection requirements)</p> <p>Mass property aspects</p> <p>m) The non-conformity introduces deviations on weight, balance, inertia, with respect to Technical Specification requirements.</p> <p>Reliability aspects</p> <p>n) The non-conformity introduces appreciable effects on reliability, durability, maintainability or serviceability.</p> <p>Drawing aspects</p> <p>o) The non-conformity results in allocation of a new part number which would result in a change to the associated Source Control Drawing.</p> <p>Traceability aspects</p> <p>p) The non-conformity affects the traceability of the part, system or equipment supplied to AW, including aspects related to part marking and tracking of delivered items.</p> <p>In-service effects</p> <p>q) The non-conformity involves actions on stocks, retrospective actions on in-service items, actions on manuals or instructional material which have been provided to AW and to operators.</p> <p>Manufacturability aspects</p> <p>r) The non-conformity affects frozen production process, in particular the special and critical processes and the possible sources as well the manufacturing site for the end item (First Article Inspection shall be partially or totally repeated; manufacturing processes shall be re-qualified)</p> <p>Test aspects</p> <p>s) The non-conformity affects production acceptance tooling or gages, including Acceptance Test Procedures (ATP).</p> <p>Cost/Delivery aspects</p> <p>t) The non-conformity negatively impacts contractual prices, fee costs, incentives, schedules or deliveries to AW.</p>
Minor Non-Conformity	A non-conformity shall be classified MINOR when no one of the cases leading to a "MAJOR" classification are met.

Major and Minor non-conformities that could require additional work to demonstrate compliance with the CS and environmental protection requirements shall be submitted to AW *for approval*.

Minor non-conformities that could not require additional work to demonstrate compliance with the CS and environmental shall be submitted to AW *for information*.