



AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

DOC. No: QD S000N0817E01		Issue E	WBS. No : 40000			<b>Distribution list</b>  NHI GM/DGM NPM HPM ED OPS ILS QA  AG PM QA  EC PM QA  ECD PM QA  FK PM QA					
<b>TITLE: SPECIFIC TOOLS / MEANS VALIDATION PROCEDURE</b>											
<b>Summary:</b>  This document describes the principles adopted in order to achieve the validation of the specific means which are defined and produced/implemented under the Contract.  The validation activity shall be performed by Industry.											
					<b>Programme Archives</b> Page 1  <table border="1"> <tr> <td>AG</td> <td>EC</td> <td>ECD</td> <td>FK</td> <td>NHI</td> </tr> </table>		AG	EC	ECD	FK	NHI
AG	EC	ECD	FK	NHI							
<b>SDRG/LF</b> Prepared by (name) : Signature :  Approved by ( ) : Signature :					GUIGNARD 						
<b>Delegated authority(ies)</b> Authorized by : Signature :  Date :	PALIAGA   30/04/04  AG	MARTIN e-mail  22/04/04  EC	BRAUNER e-mail  30/04/04  ECD	MOORE e-mail  23/04/04  FK	GUIGNARD   30/04/04  NHI						



AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

Issue	Issue date	Affected pages	CHANGE REASONS / ORIGINATORS CHANGE PROPOSAL / N°	Companies / Departments	Signatures
A	13/09/00	ALL	FIRST ISSUE	NHI	GUIGNARD
B	25/01/01	5 & 6	Improvements	NHI	GUIGNARD
C	19/03/02	4 & 5	Correction of document reference Introduction of a new § "Duplication of tooling"	NHI	GUIGNARD
D	17/06/03	4 to 7	Tooling validation § more detailed Industry improvements (interchangeability §)	NHI	GUIGNARD
E	23/03/04	7	Tooling maintenance	NHI	GUIGNARD



AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

## TABLE OF CONTENTS

<b>1</b>	<b>Scope.....</b>	<b>4</b>
<b>2</b>	<b>Document reference .....</b>	<b>4</b>
<b>3</b>	<b>Validation of specific means.....</b>	<b>4</b>
<b>3.1</b>	<b>Definitions .....</b>	<b>4</b>
<b>3.2</b>	<b>Application .....</b>	<b>4</b>
<b>3.3</b>	<b>Specific means which are part of the Interchangeability chain .....</b>	<b>5</b>
3.3.1	Definition.....	5
3.3.2	Tooling conformity.....	5
3.3.3	Tooling validation .....	5
3.3.3.1	Organisation and responsibilities .....	5
3.3.3.1.1	Interchangeability focal points.....	5
3.3.3.1.2	Responsibility of System Design Responsible Company .....	5
3.3.3.1.3	Responsibility of System Manufacturing Responsible Company .....	6
3.3.3.1.4	Responsibility of Partner Company (ies) in charge to fit the item .....	6
3.3.3.1.5	Responsibility of NHIIndustries .....	6
3.3.4	Duplication of tooling.....	6
<b>3.4</b>	<b>Specific means which are used for the manufacturing process .....</b>	<b>6</b>
3.4.1	Definition.....	6
3.4.2	Tooling conformity.....	6
3.4.3	Tooling validation .....	8
<b>3.5</b>	<b>Functional testing means (test equipment).....</b>	<b>8</b>
3.5.1	Definition.....	8
3.5.2	Testing means conformity/validation .....	8
<b>4</b>	<b>Tooling maintenance .....</b>	<b>8</b>
<b>5</b>	<b>Labelling and marking.....</b>	<b>8</b>

AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

## 1 SCOPE

This document describes the principles adopted in order to achieve the validation of the specific means which are defined and produced/implemented under the Contract.  
The validation activity shall be performed by Industry.

## 2 DOCUMENT REFERENCE

Interchangeability demonstration: MD S000N2411E01

## 3 VALIDATION OF SPECIFIC MEANS

### 3.1 Definitions

- Validation

Validation is the final outcome of a process intended to demonstrate the compliance of the means used in relation to the requirements specified for the series production Items.

After the successful completion of the process, the validation is pronounced and a Quality attestation shall be issued within First Article Inspection achievement.

Any modification to these tools may result in a need to reconsider the validation status.

- Line Replaceable Unit (LRU)

Any item with characteristics of removal/installation ability and interchangeability which allow replacement during maintenance on- aircraft in the field at maintenance level 1.

- Industry

NHIndustries and the Partner Companies.

### 3.2 Application

The specific means used for the production of Items shall consist of manufacture and test tooling with their related instructions for use.

The manufacture and test tooling shall be subject to validation if they belong to one of the following categories:

- specific means which are part of the interchangeability chain,
- specific means used for the manufacturing process,
- functional testing means (test equipment).

For the conformity and the relevant validation for these specific means, Partner Company or supplier will use its own internal rules, including at least, the steps described in this procedure.

AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

### 3.3 Specific means which are part of the Interchangeability chain

#### 3.3.1 Definition

This refers to tooling which shall ensure interchangeability (class I according to the document "Interchangeability demonstration"):

- for manufacture:
  - tooling used to guarantee reproducibility (masters, jig references, ...),
- for assembly:
  - tooling used in the manufacture of sub-assemblies specified as "interchangeable"(cowlings, doors, structural interfaces, ...).

#### 3.3.2 Tooling conformity

In order to achieve conformity, the following steps shall be completed:

- establishment of a Definition File including, amongst others, a statement of requirements which takes into account the conditions of use, the acceptance procedure, as well as any specific requirements relating to interchangeability,
- internal acceptance under the conditions specified in the statement of requirements,
- establishment of an inspection report by Quality, certifying the conformity of the tooling.

#### 3.3.3 Tooling validation

The validation for interchangeability Items (class I) shall be gained in accordance with one of the following procedures chosen by Partner Company/supplier:

- assembly of three same serial numbered production items on a single next assembly,
- assembly of one serial item on three same numbered next assemblies,
- assembly of three likely successive serial items on three likely successive next assemblies.

For replaceable Items (class R according to the document "Interchangeability demonstration"), the validation will be gained on the successful fitting of this item on the next assembly.

##### 3.3.3.1 Organisation and responsibilities

###### 3.3.3.1.1 Interchangeability focal points

At NHI Industries and in each Partner Company, an "Interchangeability focal point" shall be appointed and known by Industry.

###### 3.3.3.1.2 Responsibility of System Design Responsible Company

The System Design Responsible Company shall define the exact list of interchangeability Items (at Variable Configuration Items or Line Replaceable Units level).

### 3.3.3.1.3 Responsibility of System Manufacturing Responsible Company

The System Manufacturing Responsible Company shall define the procedure for interchangeability demonstration as defined in the paragraph 3.3.3.

When Final Assembly lines are involved, the same procedure for interchangeability demonstration shall apply.

The “Interchangeability focal point” of the SMR shall:

- transmit to the Partner Company (ies) in charge to fit the Item the chosen procedure to be applied,
- receive from the Partner Company (ies) in charge to fit the Item, a report, attested by Quality department, stating the success of the request interchangeability demonstration.
- may request to PC interchangeability focal point to participate to interchangeability demonstration
- issue and distribute to NHIndustries the formal interchangeability declaration.

### 3.3.3.1.4 Responsibility of Partner Company (ies) in charge to fit the item

Having verified the possibility of the interchangeability demonstration, the Partner Company (ies) in charge to fit the Item shall perform the demonstration and inform the SMR of the results.

If deemed necessary, the System Manufacturing Responsible Company may participate to the interchangeability demonstration.

### 3.3.3.1.5 Responsibility of NHIndustries

NHIndustries is responsible for the overall compilation of System Manufacturing Responsible Company interchangeability declaration and to make it available to the Partner Companies.

## 3.3.4 Duplication of tooling

In case of tooling duplication (new production site) the tooling conformity and a First Article Inspection shall be performed.

## 3.4 Specific means which are used for the manufacturing process

### 3.4.1 Definition

These are tools whose design and manufacture determine and set the manufacturing process of the Item concerned.

The moulding tools for major composite material components are the most representative of this category.

### 3.4.2 Tooling conformity

In order to achieve conformity the following steps shall be completed:

- establishment of a Definition File including, amongst others, a complete set of drawings and a statement of requirements taking into account the conditions of use, the acceptance procedures, as well as the critical parameters of the manufacturing process,
- internal acceptance under the conditions specified in the statement of requirements, including in particular the checking of dimensional aspects as well as checking that the critical parameters of the manufacturing process have been taken into account,



AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

- establishment of an inspection report by Quality, certifying the conformity of the tooling.

AGUSTA

EUROCOPTER

EUROCOPTER DEUTSCHLAND

FOKKER

### 3.4.3 Tooling validation

The validation shall be gained on the first successful manufacturing of a production Item as attested by Industry (First Article Inspection).

## 3.5 Functional testing means (test equipment)

### 3.5.1 Definition

This refers to testing means allowing:

- either to verify the individual conformance of an equipment,
- or to demonstrate the operation of a system.

### 3.5.2 Testing means conformity/validation

In order to achieve conformity, the following steps have to be completed:

- establishment of a Definition File including, amongst others, a design specification and a statement of requirements taking into account the conditions of use, the acceptance procedures,
- acceptance under the conditions specified in the Contract,
- establishment of an inspection report by Quality, certifying the conformity of the testing means.

## 4 TOOLING MAINTENANCE

Industry or supplier shall set up necessary provisions to keep tools/means valid.

Each Tool Designer Responsible Company (Partner Company or supplier) shall define periodical inspections, responsibilities and follow-up of configuration modification(s).

Each user shall implement:

- a periodic surveillance, w.r.t. utilisation rate, utilisation time,...,
- a handling of incidents (related to the tool).

## 5 LABELLING AND MARKING

In addition to the tool reference, the identification plate shall be marked with the reference of the relevant Contract (no reference to the property).