



DSAC

**DIRECTION GÉNÉRALE DE L'AVIATION CIVILE**  
FRENCH CIVIL AVIATION AUTHORITY

**CERTIFICAT DE QUALIFICATION DU SIMULATEUR  
D'ENTRAÎNEMENT AU VOL**

*FLIGHT SIMULATION TRAINING DEVICE QUALIFICATION CERTIFICATE*

**FR-212**

**En vertu du règlement (UE) n° 1178/2011 de la Commission et sous réserve des conditions spécifiées ci-dessous, la Direction Générale de l'Aviation Civile certifie par la présente que**

*Pursuant to Commission Regulation (EU) N° 1178/2011 and subject to the conditions specified below, the French Civil Aviation Authority hereby certifies that*

**AS332 L1 (SUPER PUMA MARK 1)**

Situé à: HELISIM Training Centre – MARSEILLE Airport – France  
*Located at:*

**a satisfait aux exigences de la qualification de la partie ORA, sous réserve des conditions de la spécification du FSTD en pièce jointe.**

*Has satisfied the qualification requirements prescribed in Part-ORA, subject to the conditions of the attached FSTD specifications.*

**Le présent certificat reste valide sous réserve que le FSTD et le titulaire du certificat de qualification continuent de satisfaire aux exigences applicables de la partie ORA, pour autant qu'il n'ait pas été restitué, annulé et remplacé, suspendu ou révoqué.**

*This qualification certificate shall remain valid subject to the FSTD and the holder of the qualification certificate remaining in compliance with the applicable requirements of Part-ORA, unless it has been surrendered, superseded, suspended or revoked.*

**Date de délivrance:**

*Date of issue:*

**03 avril 2019**

*03 April 2019*

**Pour la DGAC:**

*For the French Civil Aviation Authority:*





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**CERTIFICAT DE QUALIFICATION DU SIMULATEUR  
D'ENTRAÎNEMENT AU VOL FR-212**

FLIGHT SIMULATION TRAINING DEVICE QUALIFICATION CERTIFICATE

**FSTD SPECIFICATIONS – SERIAL NUMBER : DOCKING STATION 46 863 682  
AIRCRAFT MODULE 46 670 503**

A.	Type or variant of helicopter	Eurocopter AS332 L1 SUPER PUMA MK1
B.	FSTD qualification level	FTD level 3
C.	Primary reference document	JAR- STD 2H initial issue -Visual system: CS-FSTD H
D.	Visual system	ThalesView Visual System, 3 channels, Day, Dusk, Dawn, Night, F35 WQXGA projectors, FoV: 180 by 65 (+30 / -35), non-collimated
E.	Motion system	3 axes vibrant floor
F.	Engine fit	Turbomeca MAKILA 1A1
G.	Instrument fit	Engine : Analogue / Flight : Analogue
H.	ACAS	N/A
I.	Windshear profile available	N/A
J.	Additional capabilities	N/A
K.	Restrictions or limitations	None

L.	Guidance information for training, testing and checking considerations				
CAT I	RVR	550 m	DH	200 ft	YES
CAT II	RVR	m	DH	ft	N/A
LVTO	RVR	150 m			YES
Recency					N/A
IFR Training / check					YES/YES
Type rating					YES
Proficiency checks					YES
Autocoupled approach					YES
ACAS I/II					N/A / N/A
WX-Radar					YES
GPWS / EGPWS					N/A / N/A
Airborne Radar Approach (ARA)					YES
Night Vision Imaging System (NVIS)					YES
Ditching					YES
Ship Landing					YES
Rig Landing					YES
Elevated Platform Landing					YES
RNP APCH LNAV					NO
RNP APCH LNAV/VNAV					NO
RNP APCH LPV					NO
RNP AR APCH					NO
Other : cargo sling					

**Date de délivrance:**

Date of issue:

**03 avril 2019**

03 April 2019

**Pour la DGAC:**

For the French Civil Aviation Authority





Date: 02 & 03 April 2019

## DGAC FSTD EVALUATION REPORT

DGAC FSTD code : FR-212 / FR-399  
Helicopter Type and Variant : AS 332 L1 (Super PUMA Mark1)  
Engine Fit(s) Simulated : MAKILA 1A1

### Contents

1. Flight simulator training device characteristics
2. Evaluation details
3. Supplementary information
4. Training, testing and checking considerations
5. Classification of items
6. Results
7. Evaluation team

### 1. Flight simulation training device (FSTD)

(a) Organisation operating the FSTD : **HELISIM**

(b) FSTD location : **Marseille Airport - FRANCE**

(c) FSTD Identification (Member state FSTD code/ EASA FSTD code) : **FR-212 / FR-399**

(d) FSTD Manufacturer and FSTD Identification serial number :

**Thales Training & Simulation (TT&S): Docking Station 46 863 682  
Aircraft Module 46 670 503**

(e) First entry into service (month/year) : **June 2008**

(f) Visual system (manufacturer and type): **ThalesView Visual System, 3 channels, Day, Dusk, Dawn, Night, F35 WQXGA projectors, FoV: (180x65) & (+30 x -35), Projected display.**

(g) Motion system (manufacturer and type): **3 axes vibrant floor**

(h) Aircraft type and variant : **Eurocopter AS332 L1 SUPER PUMA MK1**

(i) Engine fit(s) : **Turbomeca MAKILA 1A1**

(j) Engine instrumentation : **Analogue**  
Flight instrumentation: **Analogue**

### 2. Evaluation detail

(a) Date of evaluation :  
**02 & 03 April 2019**

(b) Date of previous evaluation :  
**17 May 2016**

(c) TYPE OF EVALUATION :  initial  recurrent  special

(d) FSTD QUALIFICATION LEVEL RECOMMENDED

FFS  A  B  C  D  AG  BG  CG  DG  SC

FTD  I  2  3

FNPT  I  II  III  MCC

BITD

Technical criteria primary reference document: **JAR-STD 2H (FTD) / JAR-STD 3H (FNPT)**  
Visual system: **CS-FSTD H**

Validation data roadmap (VDR) ID-No: **N/A**

### 3. Supplementary Information

Company representative(s)  
(FSTD operator, Main FSTD user)

Emilien BROCHARD (Certification Manager),  
Philippe DEBRAND (Training Director)  
Pierre ALGLAVE (Technical Director),  
Hervé SALVAT (CMM)  
Marc BARRIERE (AS332 TRI/TRE).

FSTD seats available

3 + 2

Visual databases used during evaluation

BIVM (12/30) - BIKF (10/28) - LFML (13L/31R)  
- Oil Rig 2

Other

Software Load reference / revision currently  
used in training : **TRA 842**

Flight Time

03h00

<b>4. Training, testing and checking considerations</b>			
CAT I	RVR 550 m	DH 200 ft	YES
CAT II	RVR m	DH ft	N/A
LVTO	RVR 150 m		YES
Recency			N/A
IFR Training / checks			YES / YES
Type rating			YES
Proficiency Checks			YES
Autocoupled approach			YES
ACAS I/II			N/A / N/A
WX-Radar			YES
GPWS / EGPWS			N/A / N/A
Airborne Radar Approach (ARA)			YES
Night Vision Imaging System (NVIS)			YES
Ditching			YES
Ship Landing			YES
Rig Landing			YES
Elevated Platform Landing			YES
RNP APCH LNAV			NO
RNP APCH LNAV/VNAV			NO
RNP APCH LPV			NO
RNP AR APCH			NO
Other : cargo sling			

## 5. Classification of Items

### **INACCEPTABLE - (UNACCEPTABLE)**

Un item qui n'est pas en conformité avec le standard requis et donc qui affecte le niveau de qualification ou bien la qualification elle même. Si ces items ne sont pas corrigés ou bien expliqués avant une certaine limite, la DGAC peut suspendre, modifier, restreindre ou bien retirer la qualification FSTD.

*An item that fails to comply with the required standard and, therefore, affects the level of qualification or the qualification itself. If these items are not corrected or clarified within a given time limit, the DGAC should have to vary, limit, suspend or revoke the FSTD qualification.*

### **RESERVE - (RESERVATION)**

Un point pour lequel la conformité avec le standard requis n'est pas clairement établi et dont la question sera traitée par une décision ultérieure. La résolution de ces points exigera soit :

1. une décision de principe de la DGAC
2. des justifications supplémentaires

*An item where compliance with the required standards is not clearly proven and the issue will be reserved for a later decision. Resolution of these items will require either:*

1. a DGAC policy ruling; or
2. additional substantiation.

### **HORS SERVICE – (UNSERVICEABILITY)**

Un équipement qui est temporairement inopérant ou bien fonctionnant en dessous de son niveau nominal.

*A device that is temporarily inoperative or performing below its nominal level.*

### **LIMITATION – (RESTRICTION)**

Un item qui empêche l'utilisation complète du FSTD, pour répondre aux besoins de l'entraînement d'un test ou bien d'une vérification, à cause d'équipements ou de systèmes inutilisables, même partiellement

*An item that prevents the full usage of the FSTD according to the training, testing and checking considerations due to the unusable devices, systems or parts thereof.*

### **RECOMMANDATION D'AMELIORATION – (RECOMMENDATION FOR IMPROVEMENT)**

Un point qui satisfait au standard requis mais pour lequel une amélioration significative est fortement recommandée.

*An item that meets the required standard, but where considerable improvement is strongly recommended.*

### **COMMENTAIRE – (COMMENT)**

S'explique de lui même

*Self explanatory*

### **Period of Rectification**

Comme mentionné dans l' AMC2 ARA.FSTD.100(a)(1) point 'b) :

Après une évaluation, il est possible qu'un certain nombre de défauts soient identifiés. Généralement, ces défauts devraient être rectifiés et l'autorité compétente notifiée d'une telle action dans les 30 jours. Des défauts importants, qui affectent la formation des équipages, les tests et les contrôles, peuvent amener à dégrader immédiatement le niveau de qualification, ou si n'importe quels défauts restent sans surveillance sans bonne raison pendant une période plus longue que 30 jours, la rétrogradation consécutive peut être prononcée ou la qualification FSTD pourrait être révoquée.

*As set out in AMC2 ARA.FSTD.100(a)(1) point 'b) :*

*Following an evaluation, it is possible that a number of defects are identified. Generally, these defects should be rectified and the competent authority notified of such action within 30 days. Serious defects, which affect flight crew training, testing and checking, could result in an immediate downgrading of the qualification level, or if any defect remains unattended without good reason for a period greater than 30 days, subsequent downgrading may occur or the FSTD qualification could be revoked.*

## 6. Findings

### 6.1 Subjective/Functional

#### A Unacceptable

-	None
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#### B Reservation

1	The high wind start procedure is not operational (inadequate cabin motion / Rotor rotation too slow / Torque = 0%)
2	The ignitions of excessive deviations of the upper AFCS modes are not correctly calibrated
3	The landing gear cannot be lowered in emergency following the hydraulic failure LH H HP
4	NADIR POS warning was lighted during half time of the evaluation
5	During sampling test P2 , the T4 of the engine not in charge increases by 10°C
6	The landing light is far too weak

#### C Unserviceability

-	None
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#### D Restriction

-	None
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#### E Recommendation for improvement

1	The time needed to cage the emergency ADI is far too long (3' to 4')
2	During the test of the ice detector, the "ICE" indicator lights up as soon as the test begins, this before the yellow range of icing is reached
3	The unilateral braking actions has no directional effect
4	The OEI climb performances at $V_{\text{loss}}$ (45 kts) are overestimated by about 200 ft/min
5	The ENG 1 pressure indicator needle is always shaking
6	With 15kts cross wind, the VOR capture capacity is unconvincing
7	Even if airfields are generic, the shores should appear on the visual for coastal aerodromes

#### F Comment

-	None
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## 6.2 Objective

### A Unacceptable

-	None
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### B Reservation

-	None
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### E Recommendation for improvement

-	None
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### F Comment

1	All the tests 4e, 5a and 5b have been rerun. 35 tests have been reviewed, including 12 Fly-out from 2016 to 2019. All results were found to be satisfactory.
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## 7. Evaluation Team

Name	Position	Organisation
Simon LABRUNIE	Flight Inspector	DGAC/OCV
Jacques THISSELIN	Technical Inspector	DGAC/DSAC/FOR

Next evaluation will take place in the last 60 days before :  
FR-399 31 May 2022

Signed:.....For the competent authority

