

FSTD EVALUATION REPORT

FSTD ID Code : IT-060

FSTD Serial Number : H11-003

Aircraft Type and Variant : Generic Multi Engine Helicopter

Engine Version(s)
Simulated : Two generic Turboshift w/ FADEC

1. Flight simulation training device characteristics
2. Evaluation details
3. Supplementary information
4. Training, testing and checking considerations
5. Classification of items
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7. Evaluation team
8. Operator Representatives

The conclusions presented are those of the evaluation team. The competent authority reserves the right to change these after internal review.

Issue 1 of 15 December 2023

1. Flight simulation training device (FSTD)	
(a) Organisation operating the FSTD	Cavallino Rampante Srl
(b) FSTD LOCATION :	Via Ripe di Bagnara, 4 (RA) - Italy
(c) FSTD Identification (Member State FSTD code / EASA FSTD Code) :	IT-060
(d) FSTD Manufacturer and FSTD Identification serial number :	ENTROL H11-003
(e) First entry into service (month/year) :	January 2011
(f) Visual system manufacturer and type :	Entrol I.G based on X-Plane v. 11.34; 3-channels image projectors, DLP WUXGA Projectors BenQ TH671ST, direct projection on cylindrical display. Not collimated FoV: V 40 deg - H 150 deg
(g) Motion system :	N/A
(h) Aircraft type and variant :	Generic Multi Engine Helicopter (MTOW 2850 kg, based on EC-135)
(i) Engine fit(s)	Two generic Turboshaft w/ FADEC
(j) Engine instrumentation Flight Instrumentation	- VEMD/CAD EFIS (PFD/ND) / 1 three axys AFCS with Mode annunciator / 1 F/D with SAS / 1 ADF / 2 VHF-NAV / 2 DME / 2 VHF-COM / 1 Marker / 1 Trasponder / 1 Radar (WX & ARA) / 1 FMS based on UNS-1D with GPS
2. Evaluation details	
(a) Date of evaluation 14 December 2023	(b) Date of previous evaluation 13 January 2023
(c) TYPE OF EVALUATION :	<input type="checkbox"/> initial <input checked="" type="checkbox"/> recurrent <input type="checkbox"/> special
FSTD QUALIFICATION LEVEL RECOMMENDED :	
FFS A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> Grandfathered (G) <input type="checkbox"/>	
FTD I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/>	
FNPT I <input type="checkbox"/> II <input checked="" type="checkbox"/> III <input type="checkbox"/> MCC <input checked="" type="checkbox"/>	
BITD <input type="checkbox"/>	
Technical criteria primary reference document: JAR-FSTD H	
Validation data roadmap (VDR) Id: N/A	

3. Supplementary Information							
Company Representative(s)			see section 8				
FSTD Seats Available			- seats: 2 pilot 1 instructor (+1 obs. on demand)				
Visual Databases used during evaluation			LIPR (31); LIBP (22);				
Other			Software load used during the evaluation: 2.29				
4. Training, testing and checking considerations							
CAT I	RVR	550	m	DH	200	ft	YES
CAT II	RVR	N/A	m	DH	N/A	ft	N/A
CAT III (lowest minimum)	RVR	N/A	m	DH	N/A	ft	N/A
LVTO	RVR	-	m				N/A
Recency							N/A
IFR training/check							YES / N/A
Type rating							N/A
Proficiency checks							N/A
Autocoupled Approach							YES
Autoland / roll out guidance							N/A / N/A
ACAS I/II							YES / N/A
Windshear detection system / predictive windshear detection							N/A / N/A
Windshear reproduction							N/A
WX-radar							YES
HUD / HUGS							N/A
FANS							NA
GPWS / EGPWS							N/A / N/A
GPS							YES
RNP APCH LNAV							YES
RNP APCH LNAV/VNAV							N/A
RNP APCH LPV							N/A
RNP AR APCH							N/A
ETOPS Capability							N/A
Other : Airborne radar approach - floats - searchlight - ice detection system - FMS - automatically generated scenery.							

5. Classification of Items

UNACCEPTABLE

An item which fails to comply with the required standard and therefore affects the level of qualification or the qualification itself.

If these items will not be corrected or clarified within a given time limit (see 5.2 Period of Rectification), the *Competent Authority* may have to suspend, vary, restrict or revoke the FSTD qualification.

RESERVATION

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

1. A *Competent Authority* policy ruling or
2. Additional substantiation

UNSERVICEABILITY

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

RESTRICTION

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

RECOMMENDATION FOR IMPROVEMENT

An item which meets the required standard but where considerable improvement is strongly recommended.

COMMENT

Self explanatory

Period of Rectification

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. Results

6.1 Subjective /Functional

A Unacceptable

1	NIL
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B Reservation

1	HiGH NR pushbutton is not provided with a identification label
2	During night ILS approach the brightness unbalance is too evident between the three channels

C Unserviceability

1	TAS unserviceable
2	ARA approach not compliant: during oil ring approach the target is not identified by the weather radar

D Restriction/Limitation

1	Limitations in place: 1) 8,33 kHz spacing into the VHF COM systems n/a
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E Recommendation for improvement

1	Blend zones are too evident
2	Ice detection overhead switch "OFF" decal is missing
3	Twist grip labels are not visible

F Comment

1	<p>The subjective evaluation (uninterrupted flight) started on 13 December 2023 at hours 15:00 LT. Entity positioned at LIPR apron; GW 2818 kg; fuel 568 kg; QNH 1001 mbar; cockpit preparation; Engine 2 hot start; cleared; engine 1 hung start; cleared; engine 1 and 2 normal start; take off runway 31; weather conditions change: broken clouds, storm ahead; icing conditions; ice detection ok; moderate rainsnow; Cavok; oil engine #1 chips; engine #1 fire, extinguished, cleared; generator #2 overheat; cleared; direct to LIBP; approach RNAV rwy 22; during landing engine #1 governor fail, cleared ok; normal shut down; session stopped at 17:20 LT.</p> <p>The second and last evaluation flight took place on 14 December 2023 at 09:40 LT hours. GW 2800; fuel 500 kg; entity positioned at LIPR, QNH 1001 mbar; external temperature 5° C; Normal start; take off runway 31; direct to generic offshore operations; landing on platform; system reboot due to visual channel 2 degradation; repositioning on qualified platform ODPF; take off; ditching with emergency floats; crashed due to floats were not armed; the wheatear radar do not recognize the platform; repositioning on qualified platform ODPF; ditching with emergency floats; take off from sea; repositioning 14NM far form LIBP; direct to LIBP; CAT1 conditions set; night set; ILS on 22 runway; freeze on CAT1 minima; during night ILS approach the brightness unbalance is too evident between the three channels; search light check; repositioning on air at 2000ft; TAS check with level from the left intruder; TAS check with level frontal intruder; TAS unserviceable; tail rotor loss of thrust set; autorotation emergency landing; take off; loss control tail rotor; autorotation emergency landing; session stopped at 11:30 LT.</p>
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6.2 Objective

A Unacceptable

1	NIL
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B Reservation

1	There is no evidence of the last performed "Control System Mechanic Characteristic Cyclic and Collective" objective tests 2a1 and 2a2
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C Restriction

1	NIL
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D Recommendation for improvement

1	NIL
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E Comment

1	<p>During the FSTD Evaluation, the following tests were performed:</p> <table border="1" data-bbox="454 969 1200 1456"> <tbody> <tr> <td>1c2</td> <td>OEI continued take off</td> <td>Automatic</td> </tr> <tr> <td>2c3i</td> <td>Dynamic Stability Long Term Response</td> <td>Automatic</td> </tr> <tr> <td>2c3ii</td> <td>Dynamic Stability Short Term Response</td> <td>Automatic</td> </tr> <tr> <td>6a2_1</td> <td>Transport Delay Pitch axis</td> <td>Automatic</td> </tr> <tr> <td>6a2_2</td> <td>Transport Delay Roll axis</td> <td>Automatic</td> </tr> <tr> <td>2a2</td> <td>Control System Mechanic Characteristic Collective</td> <td>Manual</td> </tr> <tr> <td>5a</td> <td>Visual Ground Segment</td> <td>Manual</td> </tr> <tr> <td>5b5</td> <td>Manual Highlight Brightness</td> <td>Manual</td> </tr> </tbody> </table> <p>Relevant KPI related to IT-060 (from January 2023 to September 2023)</p> <p>Reliability declared data</p> <ul style="list-style-type: none"> - Total Device Hours: 382 - Training hours lost:0 - Availability 100% (except on August 2023: 95%) 	1c2	OEI continued take off	Automatic	2c3i	Dynamic Stability Long Term Response	Automatic	2c3ii	Dynamic Stability Short Term Response	Automatic	6a2_1	Transport Delay Pitch axis	Automatic	6a2_2	Transport Delay Roll axis	Automatic	2a2	Control System Mechanic Characteristic Collective	Manual	5a	Visual Ground Segment	Manual	5b5	Manual Highlight Brightness	Manual
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5b5	Manual Highlight Brightness	Manual																							

7. Evaluation Team	
Technical Inspector: <u>Francesco Lucisano</u>	Flight Inspector: <u>Massimo Di Graci</u>
Technical Inspector (OJT) <u>Giovanni Fiorenza</u>	Flight Inspector (OJT) <u>Salvatore Cabibbo</u>

8. FSTD Operator/Manufacturer Representatives			
Name	Position	Organisation	Signature
Oriano Callegati	FSTD Accountable mgr.	Cavallino Rampante Srl	
Antonio Baracca	FSTD CMS mgr.	Cavallino Rampante Srl	
Antonio Baracca	FSTD Safety mgr.	Cavallino Rampante Srl	
Antonio Ghetti	FSTD Technical mgr.	Cavallino Rampante Srl	
Roberto Bassi	SME Pilot	Cavallino Rampante Srl	
Roberto Bassi	IOS operator	Cavallino Rampante Srl	

Signed: _____ For the competent authority