



FOCA AltMoC

Alternative Means of Compliance

Multi Pilot Crew System on Single Pilot Certified Aeroplane

This document is an 'Alternative Means of Compliance' issued by FOCA



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Scope	Requirements of Multi Pilot Operations on Single Pilot Certified Aeroplanes
Applies to	Operators of aeroplanes certified for single pilot operations operating under EASA Part-CAT, Part-NCC or Part-SPO wishing to apply multi pilot crew operations
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This document is an
Alternative Means of Compliance (AltMoC) issued by FOCA

according to

Regulation (EU) No 1178/2011 (Air Crew), ARA.GEN.120, or
Regulation (EU) No 965/2012 (Air Operations), ARO.GEN.120

Preliminary Information

What is an AltMoC issued by FOCA?

The EASA homepage on the internet states (as of end 2016):

‘Since AMCs are non-binding, regulated persons may choose alternative means to comply with the rule. In this case, however, they lose the presumption of compliance provided by the EASA AMC, and need to demonstrate to competent authorities that they do comply with the law.

The implementing rules for Aircrew licensing, Air Operations, Aerodromes and Air Traffic Controller licensing describe the process to be used by regulated persons and competent authorities when they intend to use an AltMoC to comply with the rules.

Implementing Rules establish that the implementation of AltMoC by organisations is subject to prior approval by the competent authority and indicate what needs to be done in order to obtain the approval.

Implementing Rules also establish the obligations of competent authorities when giving the prior approval to an organisation and when they adopt themselves an AltMoC that can be used by the regulated organisations under their oversight.

One of the obligations stipulated in the Implementing Rules is to notify EASA of such AltMoCs. Competent authorities are requested to use the EASA prepared AltMoC Notification Form for notifying AltMoCs proposed by organisations or used by themselves.

For more information from EASA on AMC and AltMoC, please consult the [FAQ](#).’

To these statements FOCA would like to add the following additional information:

- AltMoCs may not only be issued as alternative to an already existing AMC. FOCA may as well publish AltMoCs that cover issues where no AMC is available. Therefore, the term *alternative* may be slightly misleading in some cases.
- AltMoCs may be seen as an administrative ordinance in traditional Swiss legal doctrine. However, conditions, issuing power and legal effects are pure products of Union legislation. Legal practitioners, attorneys and courts in Switzerland, therefore, should not attempt to categorise AltMoCs under traditional national principles of administrative law. They should always bear in mind that AltMoC are genuine legal instruments of the EU aviation safety regulation.

What are the effects of an AltMoC issued by FOCA?

AltMoCs issued by FOCA have basically the same legal status and effect as AMCs. Except that the author of AltMoCs is not EASA but FOCA. AltMoCs are not evaluated by EASA in advance but are reviewed within a short time after their publication by FOCA. Therefore, once released by FOCA, AltMoCs become immediately applicable to all parties under Swiss jurisdiction. In other words, they immediately may be used as an alternative to existing AMCs or they must be used if no such AMC is available. In either case they provide presumption of conformity with the essential requirements and the implementing rules.

However, AltMoCs do not have cross-border effect: an operator under foreign jurisdiction has no legal claim to his competent authority to allow use of an AltMoC issued by FOCA. And FOCA will not automatically accept in its jurisdiction the use of an AltMoC issued by foreign competent authorities.

Different matters are AltMoCs developed and requested by an ATO, operator or regulated person and which are not issued but only approved by FOCA. These have effect for the applicant only. Third parties must submit a complete application for their own including full proof that their AltMoC fulfils the legal requirements.

AltMoC may motivate EASA to initialise own rule making aiming an additional IR or additional AMC. The start of such rule making procedure does *senso stricto* not have any effect on the AltMoC until the time where a revised IR or a new AMC legally replaces the AltMoC. However, such rule making activities might increase the likelihood that competent authorities accept the underlying foreign AltMoC.

Log of Revision (LoR)

Date	Issue	Revision	Highlight of Revision
09.05.2016	1	0	First Issue
01.04.2017	1	1	IFR operation clarification added
27.09.2017	1	2	Amendments in following chapters: <ul style="list-style-type: none"> - Ch. 2.3 Training and Checking Personnel Qualification: Table amended (Training – Complex SPA; SOE (Part-NCC) – Complex SPA) - Ch. 2.5 SPO to MPO or MPO to SPO Transition: First paragraph amended
30.05.2018	1	3 not published	Ch 0.3 AltMoC scope amended Ch 2.2 PIC crew qualification amended
13.02.2019	1	4 not published	Ch 2.2 Requirements corrected as per FCL.720.A(b)(2)(iii)
04.03.2019	1	5	Ch 4.6 Qualification requirements correction Ch 2.2 Experience requirements amended in reference to OSD
01.07.2019	1	6	Implementation of Part-SPO Operators

List of Effective Chapters

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ToC	ISS 1 / REV 5 / 04.03.2019	Ch. 5.3	ISS 1 / REV 2 / 27.09.2017
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List of Abbreviations

LoA ISS 1 / REV 6 / 01.07.2019

The following abbreviations are within this AltMoC:

Abbreviation	Definition	Abbreviation	Definition
(A)	Aeroplane	OM	Operations Manual
AltMoC	Alternative Means of Compliance	SD	Operational Suitability Data
AMC	Acceptable Means of Compliance	PIC	Pilot in Command
AOC	Air Operator Certificate	PICUS	PIC under Supervision
ATPL	Airline Transport Pilot License	PPL	Private Pilot License
CA	Competent Authority	SOE	Supervised Operating Experience
COPI	Co-Pilot	SP	Single Pilot
CPL	Commercial Pilot License	SPA	Single Pilot certified Aeroplane
CRE	Class Rating Examiner	SPO	Specialised Operations
CRI	Class Rating Instructor	TC	Training Captain
CRM	Crew Resource Management	TN	Technical Notice
EASA	European Aviation Safety Agency	TR	Type Rating
FCL	Flight Crew Licensing	TRE	Type Rating Examiner
FOCA	Federal Office of Civil Aviation	TRI	Type Rating Instructor
GM	Guidance Material		
HPA	High Performance Aeroplane		
ICAO	International Civil Aviation Organisation		
IFR	Instrument Flight Rules		
IR	Instrument Rating		
LC	Line Check		
LFUS	Line Flying Under Supervision		
MCC	Multi-Crew Co-operation		
MCCI	Multi-Crew Co-operation Instructor		
ME	Multi Engine		
MP	Multi Pilot		
MPA	Multi Pilot certified Aeroplane		
MPO	Multi Pilot Operation		
NCC	Non-Commercial Complex		

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0 Introduction

Ch. 0 ISS 1 / REV 6 / 01.07.2019

While the safety benefit of a proper multi-crew operation over other type of crewing has long been demonstrated, a clear framework for such an operational concept in single pilot certified aeroplane is lacking. Part-CAT mandates 2 pilots for performance class A single pilot certified aeroplane to cover pilot incapacitation, but does not define or propose a working concept. In the field of private operations as well as for aerial work operations the absence of legal operational framework made it difficult to regulate multi-crew operation on single pilot aeroplanes; this has changed with the introduction of Part-NCC and Part-SPO.

0.1 Legal References

Ch. 0.1 ISS 1 / REV 0 / 09.05.2016

To lay down a regulated framework for multi pilot operation in single pilot certified aeroplane for AOC holders and Part-NCC operators, and provide a mean to establish compliance with the relevant Implementation Rules.

This AltMoC developed by FOCA is meant to establish compliance with the following:

- AIR-OPS Regulation: Part-ORO - ORO.FC.100(a); ORO.FC.200 (c)
- Aircrew Regulation: Part-FCL - Appendix 9: part A, points 13-16; part B, point 5 (g); part B, point 6 (f) and (h); FCL.510.A (b)(1); FCL.720.A (3); FCL.725 (d); FCL.905.CRI (a)(1)

0.2 Approach

Ch. 0.2 ISS 1 / REV 0 / 09.05.2016

To permit a controlled multi-crew operation, and achieve a level of safety similar to a MPA operation, three key aspects should be addressed by the operator and be documented in the relevant operation manual:

- crew qualification, training and checking
- aircraft equipment
- operation procedures

0.3 Scope

Ch. 0.3 ISS 1 / REV 6 / 01.07.2019

This AltMoC applies to all operators under the oversight of FOCA for the following IFR or mixed IFR/VFR operations:

- operation of performance Class A single pilot certified aeroplane (SPA) under Part-CAT
- operation with 2 pilots of performance Class B complex SPA under Part-CAT
- operation with 2 pilots of HPA-Complex SPA under Part-NCC and Part-SPO

The types of operation defined above should be operated in the multi pilot crew system defined in this AltMoC. Additionnally this AltMoC could be used for operation with 2 pilots of SET-HPA, if voluntary operating under Part-NCC rules.

0.4 Terms and Conditions

Ch. 0.4 ISS 1 / REV 0 / 09.05.2016

When used throughout the AltMoC the following terms shall have the meaning as defined below:

Term	Meaning	Reference
<i>shall, must, will</i>	These terms express an obligation, a positive command.	EC English Style Guide: Ch. 7.19
<i>may</i>	This term expresses a positive permission.	EC English Style Guide: Ch. 7.21
<i>shall not, will not</i>	These terms express an obligation, a negative command.	EC English Style Guide: Ch. 7.20
<i>may not, must not</i>	These terms express a prohibition.	EC English Style Guide: Ch. 7.20
<i>need not</i>	This term expresses a negative permission.	EC English Style Guide: Ch. 7.22
<i>should</i>	This term expresses an obligation when an acceptable means of compliance is to be applied.	EASA Acceptable Means of Compliance publications FOCA policies and requirements
<i>could</i>	This term expresses a possibility.	http://oxforddictionaries.com/definition/english/could
<i>ideally</i>	This term expresses a best possible means of compliance and/or best experienced industry practice.	FOCA recommendation

Note: To highlight information or an editorial note a specific note box is used.

- The use of the male gender should be understood to include male and female persons.

0.5 Definitions

Ch. 0.5 ISS 1 / REV 0 / 09.05.2016

'Acting without remuneration' – when the owner of an aeroplane under Part-NCC pilots his aeroplane for his own needs.

'Alternative means of compliance' - are those means that propose an alternative to an existing acceptable means of compliance or those that propose new means to establish compliance with the Basic Regulation and its Implementing Rules for which no associated AMC have been adopted by the Agency.

'Frozen ATPL' - is a Part FCL CPL/IR license with all the ATPL theoretical subjects passed

'High performance aeroplane' - is an aeroplane defined as HPA in the EASA aeroplane type rating and license endorsement list flight crew

'Multi pilot aeroplane' - is an aeroplane certified to be operated with a minimum crew of two

'Multi pilot operation' - is an aeroplane operation with a crew of two using MCC concept

'NCC operator' - is a legal or natural person operating a complex aeroplane for non-commercial purpose

'Performance class B aeroplane' - is an aeroplane powered by propeller engines with a maximum operational passenger seating configuration of nine or less and a maximum take-off mass of 5 700 kg or less.

'Pilot in command' - is the pilot designated as being in command and charged with the safe conduct of the flight

'Single pilot aeroplane' - is an aeroplane certified to be operated with a minimum crew of one

'Single pilot operation' - is an aeroplane operation managed entirely by a single crew

'Supervised operating experience' - means operating as pilot in command under the supervision of a Type Rating Instructor (TRI). The TRI should sign the applicants log book to document the SOE achieved.

'Training Captain' - is a term commonly used within AOC holders to refer to a suitably qualified commander nominated by the operator, conducting line flying under supervision and line check.

1 Operations

Ch. 1 ISS 1 / REV 0 / 09.05.2016

1.1 Multi Pilot Crew System Versus Single Pilot Operation

Ch. 1.1 ISS 1 / REV 0 / 09.05.2016

When a second pilot is carried in the cockpit during Single Pilot Operation (SPO), the operation remains single pilot and is not deemed to be multi pilot, in such case the second pilot either:

1. hold an appropriate flight crew licence entitling him to act as pilot on the flight and is deemed a safety pilot. This pilot is however not entitled to log any flight time, or
2. does not hold an appropriate flight crew licence entitling him to act as pilot on the flight and is therefore deemed to be a passenger and must not undertake any of the pilot's duties.

Operators wishing to carry people from the second category in a second pilot seat must ensure that they are fully briefed as to their passenger status, relevant restrictions and safety procedures. These passengers are not 'pilot assistants' or 'safety pilots'. They must not be allowed to operate the aircraft in any way. The operator shall ensure that such arrangement is compliant with the applicable regulation and is regulated in its Operation Manual.

1.2 Mixed Multi Pilot and Single Pilot Operation

Ch. 1.2 ISS 1 / REV 6 / 01.07.2019

Mixed multi pilot / single pilot operations are not encouraged by FOCA, and are generally not approved for Part-CAT operations.

For AOC holders conducting non-revenue flights in single pilot role (e.g. ferry flight), in addition to multi pilot Part-CAT operation, pilots shall be additionally trained and qualified in accordance with Part-FCL for single pilot operation and meet the specific operator requirements laid down in its Operation Manual. In addition, the OM should contain the necessary relevant standard operating procedures to ensure safe single pilot operation.

Part-NCC and Part-SPO operators conducting mixed multi pilot and single pilot operation have to ensure that the pilots are also trained and qualified in accordance with Part-FCL for single pilot operation. The Operation Manual shall define the decision rules for multi pilot/single pilot operation and the conditions to carry out a flight in single pilot operation. In addition, the OM should contain the necessary relevant standard operating procedures to ensure safe single pilot operation.

2 Requirements

Ch. 2 ISS 1 / REV 1 / 01.04.2017

2.1 Aeroplane Equipment

Ch. 2.1 ISS 1 / REV 6 / 01.07.2019

As a prerequisite to use a single pilot certified aeroplane in multi pilot operation, the cockpit equipment has to meet the requirements set forth for multi pilot certified aeroplanes in accordance with:

- TM 02.050-10 & Annex
- Part-CAT - CAT.IDE.A.125(b); CAT.IDE.A.130(h); CAT.IDE.A.170; CAT.IDE.A.235(b)(1); CAT.IDE.A.245(a)(1)&(e); CAT.IDE.A.325; CAT.IDE.A.335, or
- Part-NCC – NCC.IDE.A.125(c); NCC.IDE.A.155; NCC.IDE.A.195(c)(1); NCC.IDE.A.240, as applicable
- Part-SPO – SPO.IDE.A.125(c); SPO.IDE.A.135; SPO.IDE.A.170(c)(1); SPO.IDE.A.210, as applicable

2.2 Crew Qualification for IFR or IFR/VFR Operations

Ch. 2.2 ISS 1 / REV 6 / 01.07.2019

	Part-CAT	Part-NCC / Part-SPO
PIC	700 h on aeroplane, of which 400 h as PIC, 100 h IFR and 40 h ME CPL(A) with ME IR ATPL theory or HPA course or holding additionally an ICAO ATPL or an ICAO CPL/IR with ATPL theory ²⁾ MCC course ³⁾ valid TR in MPO as PIC on relevant type Meet operator OM-A qualification requirements ⁴⁾ Meet operator OM-D training/checking requirements ⁴⁾	200 h on aeroplane or as per the applicable OSD, whichever is higher; of which 70 h as PIC CPL(A) ¹⁾ with ME IR ATPL theory or HPA course or holding additionally an ICAO ATPL or an ICAO CPL/IR with ATPL theory ²⁾ MCC course ³⁾ valid TR in MPO as PIC on relevant type Comply with ORO.FC.105(b), 115 and 120 Has completed a command course Comply with ORO.FC.135 if also operating as COPI Complete the required SOE if applicable
COPI	200 h on aeroplane, of which 70 h as PIC CPL(A) with ME IR ATPL theory or HPA course or holding additionally an ICAO ATPL or an ICAO CPL/IR with ATPL theory ²⁾ MCC course ³⁾ valid TR in MPO as COPI on relevant type Meet operator OM-A qualification requirements Meet operator OM-D training/checking requirements	200 h on aeroplane, of which 70 h as PIC CPL(A) ¹⁾ with ME IR ATPL theory or HPA course or holding additionally an ICAO ATPL or an ICAO CPL/IR with ATPL theory ²⁾ MCC course ³⁾ valid TR in MPO as COPI on relevant type Comply with ORO.FC.115 and 120

- Notes:
- 1) if the pilot is acting without remuneration a PPL(A) license is suitable
 - 2) this requirement is only applicable to operation of HPA or Complex-HPA aeroplanes
 - 3) or equivalent as laid down in FCL.720.A(d)(4)
 - 4) cannot be lower than OSD requirements for PIC

2.3 Training and Checking Personnel Qualification

Ch. 2.3 ISS 1 / REV 2 / 27.09.2017

	HPA-Complex SPA	Complex SPA
Training	relevant type (MPO) with IR TRI(SPA) with relevant type (MPO) valid MCC1 ¹⁾ 1500 h experience in MPO	relevant type (MPO) with IR CRI with relevant type (MPO) IRI (if combined with IR renewal) privilege to instruct in MPO under JAR-FCL, or hold a 14(4) exemption to instruct in MPO
Checking	Instructor requirements as above TRE(SPA) with relevant type (MPO)	Instructor requirements as above CRE with relevant type (MPO) IRE (if IR check is required)
LFUS (Part-CAT)	Company Training Captain (refer to relevant FOCA Guidance Material)	
SOE (Part-NCC)	relevant type (MPO) with IR TRI(SPA) with relevant type (MPO) valid MCC1 ¹⁾	relevant type (MPO) with IR CRI with relevant type (MPO) privilege to instruct in MPO under JAR-FCL, or hold a 14(4) exemption to instruct in MPO

Notes: 1) or hold or has held a TRI(MPA)

2.4 Training and Checking

Ch. 2.4 ISS 1 / REV 6 / 01.07.2019

The training and checking shall meet both the relevant AIR-OPS requirements and the applicable Part-FCL requirements for multi pilot operation (MPO). If applicable, single pilot training and checking requirements shall additionally be fulfilled.

Multi pilot training and checking shall be conducted as follows:

1. The operator and/or type rating conversion course shall be conducted in multi pilot operation.
2. For all type rating training, testing and checking the training and checking personnel shall have available the operators multi pilot operation SOPs, and conduct the training/checking according to those SOPs.
3. Type rating training in MPO shall be conducted by a type rating instructor, respectively class rating instructor, qualified to conduct training in multi pilot operation according to the requirements set under 2.3.
4. Type rating tests/checks in MPO, and if applicable operator proficiency checks in MPO, shall be conducted by a type rating examiner, respectively class rating examiner, qualified to conduct test/check in multi pilot operation according to the requirements set under 2.3.
5. Training and checking shall integrate, and be conducted according to, the operator multi pilot SOPs.
6. The type rating training and checking programme in MPO shall be in compliance of the provisions laid down in the Operation Suitability Data for the relevant type.
7. The applicant for a multi pilot operation type rating shall have completed a MCC course before commencing flight or simulator training. The MCC course may also be combined with the type rating course when the training is conducted in a FSTD, if the combined course is approved.
8. Line checks required under Part-CAT are to be performed in multi pilot operation by a training captain accepted by FOCA and trained to assess CRM/MCC.
9. Commanders whose duties also require them to operate in the right hand seat and carry out the duties of a co-pilot or commanders required to conduct training (TRI/CRI/TC) or checking (TRE/CRE/TC) shall complete the pilots' qualification to operate in either pilots' seat as specified in the operation manual.
10. Crew operating under Part-CAT shall comply with the LFUS requirements set in the operator's operation manual. PIC operating under part-NCC shall comply with the Supervised Operating Experience requirements.

Additional single pilot training and checking requirements:

1. The operator and/or type rating conversion course shall additionally cover single pilot operation.
2. Single pilot additional type rating training shall be conducted by a type rating instructor, respectively class rating instructor, qualified to conduct single pilot training under Part-FCL.
3. Single pilot type rating tests/checks, respectively the testing/checking of the additional single pilot items, shall be conducted by a type rating examiner, respectively class rating examiner, qualified to conduct single pilot testing/checking under Part-FCL.
4. Training and checking shall integrate, and be conducted according to, the operator single pilot SOPs.
5. The additional single pilot type rating training and checking programme shall be in compliance with the provisions laid down in the Operation Suitability Data for the relevant type.
6. PIC operating under Part-NCC / Part-SPO shall comply with the Supervised Operating Experience requirements.

2.5 SPO to MPO or MPO to SPO Transition

Ch. 2.5 ISS 1 / REV 2 / 27.09.2017

The operator should determine the necessary training to transition from SPO to MPO or vice-versa, unless otherwise specified in the relevant OSD. When determining the training required, the following elements can be taken into consideration:

SPO to MPO Transition

MCC procedures should be defined in the operations manual and be introduced during the transition training. The transition course should start with theoretical training (4 hours) to address the following subjects:

- multi pilot psychology, decision making, communications and limitations;
- multi pilot task, resource and workload management and organization, MCC procedures;
- multi pilot operation and management of the avionic system;
- differences between SPO and MPO in handling abnormal and emergency procedures;
- emergency phraseology;
- multi pilot operations in icing conditions.

The flight training, normally using a FSTD (2 hours as PF and 2 hours as PNF) should address the following subjects, as applicable:

- use and setup of the integrated avionics, PFD and MFD, including selection of display;
- use of FD and AP, monitoring of modes;
- MCC procedures;
- operation of TCAS and EGPWS;
- 'Golden' failures, which cause secondary failures and CAS messages;
- pressurisation malfunctions and emergency descent procedures;
- instrument flying on standby instruments;
- trim system malfunctions;
- smoke procedures, including smoke removal;
- stall warning system, stick pusher system, relation with de-icing system;
- engine fire procedures, in flight and on ground;
- emergency evacuation.

MPO to SPO Transition

The transition course should start with theoretical training (4 hours) to address the following subjects:

- single pilot psychology, decision making, communications and limitations
- single pilot task, resource and workload management and personal organization
- single pilot operation and management of the avionic system
- differences between MPO and SPO in handling abnormal and emergency procedures
- emergency phraseology
- single pilot operations in icing conditions.

The flight training, normally using a FSTD (4 hours SPO) should address the following subjects, as applicable:

- use and setup of the integrated avionics, PFD and MFD, including selection of display;
- use of FD and AP, monitoring of modes;
- engine failure after take-off
- in flight restart of failed engine
- operation of TCAS and EGPWS
- 'Golden' failures, which cause secondary failures and CAS messages
- pressurisation malfunctions and emergency descent procedures;
- instrument flying on standby instruments
- trim system malfunctions;
- smoke procedures, including smoke removal
- stall warning system, stick pusher system, relation with de-icing system;
- approaches/landing with reduced flap setting
- approaches/landing with failed engine
- engine fire procedures, in flight and on ground;
- emergency evacuation.

3 Operation Manual Content

Ch. 3 ISS 1 / REV 0 / 09.05.2016

Instructions detailing the multi pilot operations on single pilot certified aeroplanes are to be integrated in the operator's Operation Manual as follow:

3.1 AOC Holders

Ch. 3.1 ISS 1 / REV 6 / 01.07.2019

OM-A, Chapter 4 'Crew Composition' - The composition of flight crew and respective function shall be described in compliance with the defined operation concept.

OM-A, Chapter 5 'Qualification Requirements' - The crew qualification requirements, covering pilots, instructors and examiners, have to meet or exceed those laid down under 2.2. «Crew Qualification». For operators conducting as well non-revenue flights in single pilot operation, the specific single pilot qualification requirements shall be defined.

OM-A, Chapter 8 'Operating Procedures' - The operating procedures are to be established according to the multi pilot operation concept. For operators conducting as well non-revenue flights in single pilot operation, the additional specific single pilot operating procedures and relevant operating limitations shall be described in subchapter 8.7.

OM-B 'Aeroplane Operating Matters - Type Related' – The limitations and operating procedures for the specific aeroplane type, including crew station duties assignments are to be defined according to the multi pilot crew concept. For operators conducting as well non-revenue flights in single pilot operation, the additional specific single pilot operating procedures and relevant operating limitations shall also be described; the structure and content of the OM-B shall clearly define these two concepts of operations, one apart from the other.

OM-D, Chapter 2 'Training Syllabi and Checking Programs' – Conversion, command course and recurrent training and checking programs including the associated syllabi are to be established according to the multi pilot crew concept and in compliance with the requirements laid down under 2.4. «Training and Checking». For operators conducting as well non-revenue flights in single pilot operation, at least the additional specific CRM training and Part-FCL training and checking requirements shall additionally be described.

OM-D, Chapter 3 'Procedures' - The processes related to the organisation and conduct of training and checking shall include the provisions of the operating concept.

3.2 NCC Operators

Ch. 3.2 ISS 1 / REV 0 / 09.05.2016

Subpart (g) Standard operating procedures (SOPs) - The limitations and operating procedures for the specific aeroplane type, including crew station duties assignments are to be defined according to the multi pilot crew concept. For operators conducting as well single pilot operations, the specific single pilot operating procedures and relevant operating limitations shall also be described; the structure and content of the chapter shall clearly define these two concepts of operations, one apart from the other.

Subpart (m) Personnel qualifications and training – The crew qualification requirements have to meet or exceed those laid under 2.2. «Crew Qualification», for operators conducting as well single pilot operations the specific single pilot qualification requirements shall also be defined.

Conversion, command course and recurrent training and checking programs including the associated syllabi are to be established according to the multi pilot crew concept and in compliance with the requirements laid down under 2.3. «Training and Checking». For operators conducting as well single pilot operations, at least the additional specific CRM training and Part-FCL training and checking requirements shall additionally be described.

3.3 SPO Operators

Ch. 3.1 ISS 1 / REV 6 / 01.07.2019

OM-A, Chapter 4 'Crew Composition' - The composition of flight crew and respective function shall be described in compliance with the defined operation concept.

OM-A, Chapter 5 'Qualification Requirements' - The crew qualification requirements, covering pilots, instructors and examiners, have to meet or exceed those laid down under 2.2. «Crew Qualification». For operators conducting as well single pilot operation, the specific single pilot qualification requirements shall be defined.

OM-A, Chapter 8 'Operating Procedures' - The operating procedures are to be established according to the multi pilot operation concept. For operators conducting as well single pilot operation, the additional specific single pilot operating procedures and relevant operating limitations shall be described and be clearly distinctable from the multi pilot parts.

OM-B 'Aeroplane Operating Matters - Type Related' – The limitations and operating procedures for the specific aeroplane type, including crew and task specialist station duties assignments are to be defined according to the multi pilot crew concept. For operators conducting as well single pilot operation, the additional specific single pilot operating procedures and relevant operating limitations shall also be described; the structure and content of the OM-B shall clearly define these two concepts of operations, one apart from the other.

OM-D, Chapter 2 'Training Syllabi and Checking Programs' – Conversion, command course and recurrent training and checking programs including the associated syllabi are to be established according to the multi pilot crew concept and in compliance with the requirements laid down under 2.4. «Training and Checking». For operators conducting as well single pilot operation, at least the additional specific CRM training and Part-FCL training and checking requirements shall additionally be described.

OM-D, Chapter 3 'Procedures' - The processes related to the organisation and conduct of training and checking shall include the provisions of the operating concept.

4 Licensing

Ch. 4 ISS 1 / REV 0 / 09.05.2016

The Part-FCL test/check and the respective license endorsement is specific to, and shall be relevant for, the operation concept used. When a crew does not meet all the applicable requirements defined under 2.2 a restriction will be entered for the respective license endorsement.

Unless otherwise specified, all licenses, ratings and certificates referred to in the present AltMoC are deemed to be those established according to the Aircrew Regulation.

4.1 Test/Check Form

Ch. 4.1 ISS 1 / REV 0 / 09.05.2016

FOCA form 60.526 shall be used for MPO test/check on SPA complex HPA, respectively form 60.527 for MPO test/check on SPA complex (non-HPA) or SPA HPA non-complex.

To extend the MPO privilege to SPO, the mandatory single pilot items shall additionally be flown at the end of the MPO test/check and the section MPO to SPO extension shall be filled.

4.2 License Endorsement

Ch. 4.2 ISS 1 / REV 0 / 09.05.2016

Multi pilot privilege: aeroplane type followed by MPO (e.g. DHC6 MPO)

Single pilot privilege: aeroplane type followed by SPO (e.g. DHC6 SPO)

A pilot with both the multi pilot and single pilot privileges will have both entries (e.g. DHC6 MPO and DHC6 SPO)

4.3 Endorsement Restriction

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PIC undertaking SOE: «with TRI only»

Pilot not meeting PIC requirements: «co-pilot only»

Pilot not meeting Part-CAT requirements: «Part-NCC only»

Restriction shall be lifted when the pilot meets the applicable requirements

4.4 Landing Recency

Ch. 4.4 ISS 1 / REV 6 / 01.07.2019

The provision to extend the landing recency period up to a maximum of 120 days set under FCL.060(c)(1) is strictly only applicable to Part-CAT operation; this provision is not applicable to Part-NCC / Part-SPO operators.

4.5 Record of Flight Time

Ch. 4.5 ISS 1 / REV 0 / 09.05.2016

Multi pilot operation block time is recorded according to the following table:

	Activity	PIC Name	crew member log flight time as:			
			Pilot	Training Captain	Instructor	Examiner
Training	Class/Type rating course	instructor	DUAL		PIC	
	Class/Type rating difference training	instructor	DUAL		PIC	
	All other type of training	instructor	DUAL		PIC	
	Flight with Examiner	examiner	PIC/COPI ²⁾			PIC
	PICUS approved program (Part-CAT)	supervising PIC ³⁾	PIC			
LFUS SOE	Line Flying Under Supervision as PIC (Part-CAT)	pilot in command	PIC	PIC		
	Line Flying Under Supervision as COPI (Part-CAT)	training captain	COPI	PIC		
	Supervised Operational Experience (Part-FCL / OSD)	instructor	PIC		PIC	
Checking (examiner in pilot seat)	Class/Type rating skill test	examiner	PIC/COPI ²⁾			PIC
	Proficiency check for revalidation or renewal	examiner	PIC/COPI ²⁾			PIC
	Right seat qualification	examiner	PIC			PIC
	Line Check	pilot in command	PIC/COPI ²⁾	PIC		
Checking (examiner in jump seat)	Class/Type rating skill test	instructor	PIC/COPI ^{1) 2)}		PIC	
	Proficiency check for revalidation or renewal	instructor	PIC/COPI ^{1) 2)}		PIC	
	Right seat qualification	instructor	PIC		PIC	
	Line Check	pilot in command	PIC/COPI ⁴⁾			

- Notes:
- 1) if test / check is failed time shall be entered as DUAL
 - 2) PIC or COPI according to function in cockpit
 - 3) supervising captain log PIC as well
 - 4) both the PIC and COPI log according to function in cockpit

4.6 Flight Time Credit towards an ATPL

Ch. 4.6 ISS 1 / REV 5 / 04.03.2019

When a pilot qualified according to the present AltMoC flies in a complex aeroplane in a controlled multi pilot operation, in accordance with the present AltMoC, the following credit are applicable:

- Credit for multi pilot flight experience on aeroplane towards the 500 h multi pilot operation on aeroplanes required under FCL.510.A(b)(1)

- Credit for PIC time under supervision towards the PIC experience requirements on aeroplanes, as defined under FCL.510.A(b)(2)(i) and (iii), this only for AOC holders having an approved PICUS system

According to FCL.520.A the ATPL skill test shall take place on a multi-pilot certified aeroplane, therefore no credit is possible on that aspect.

5 Final Provisions

Ch. 5 ISS 1 / REV 0 / 09.05.2016

Final provisions for this AltMoC including the implementation, provisions for operators and the date of validity.

5.1 Implementation

Ch. 5.1 ISS 1 / REV 0 / 09.05.2016

AOC holders already operating SPA in a multi pilot system at the date of entry into effect of this AltMoC shall demonstrate compliance with this AltMoC within 90 days from that date. All other operators shall demonstrate compliance with this directive prior to the start of such operations. Any amendments or revisions of relevant chapters of the operations manual system shall be included in the next scheduled change.

Crew not holding a Frozen ATPL, that have been operating in a multi-crew system within an AOC holder before the entry into force of this AltMoC, respectively the former FOCA directive O-011 E, may continue to operate in multi-crew system on the aeroplane they are currently rated on.

5.2 Operator AltMoC

Ch. 5.2 ISS 1 / REV 0 / 09.05.2016

An operator subjected to this FOCA AltMoC may instead elect to develop its own AltMoC for multi pilot operation on single pilot certified aeroplane. In such case the operator shall demonstrate an equivalent or higher level of safety and compliance compared to the present FOCA AltMoC

5.3 Entry into Force

Ch. 5.3 ISS 1 / REV 2 / 27.09.2017

This AltMoC replaces FOCA operational directive O-011E «Multi Pilot Crew System on Single Pilot Certified Aeroplanes» dated 01 August 2008 and is valid from 27 September 2017.