



Circulaire

CIR/FCL 23

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Objet : Formation MCC.

Betreft: MCC Opleiding.

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Arrêté royal du 4 mars 2008 réglementant les licences civiles de pilote d'avions. Art. 64, §4.

Ref. :

Koninklijk besluit van 4 maart 2008 tot regeling van de burgerlijke vergunningen van bestuurder van vliegtuigen. Art. 64, § 4.

JAR-FCL 1.261(d)
App. 1 to JAR-FCL 1.261(d)
AMC-FCL 1.261(d)
App 1 AMC-FCL 1.261(d)

JAR-FCL 1.261(d)
App. 1 to JAR-FCL 1.261(d)
AMC-FCL 1.261(d)
App 1 AMC-FCL 1.261(d)

Le Directeur général a.i.,
De Directeur-generaal a.i.,

L'édition 2 comprend
De 2^{de} uitgave bevat

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blz. gedagtekend

FCL 23

Cette circulaire décrit le programme et les procédures qui sont d'application pour la formation au travail en équipage (MCC).

Elle comprend :

- App. 1 to JAR-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane)
- AMC-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane)
- App 1 AMC-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane) -
Certificate of completion of MCC training

FCL 23

Deze circulaire beschrijft het programma en de procedures die van toepassing zijn voor de opleiding onderlinge samenwerking van de bemanning (MCC).

Zij omvat:

- App. 1 to JAR-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane)
- AMC-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane)
- App 1 AMC-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane) -
Certificate of completion of MCC training

Appendix 1 to JAR-FCL 1.261(d)
Multi-crew co-operation course (Aeroplane)
(See JAR-FCL 1.261(d))
(See AMC FCL 1.261(d))

1 The aim of the course is to become proficient in multi-crew co-operation (MCC) in order to operate safely multi-pilot multi-engine aeroplanes under IFR and, for that purpose, to ensure that:

- a. The pilot-in-command fulfils his managing and decision-making functions irrespective whether he is PF or PNF.
- b. The tasks of PF and PNF are clearly specified and distributed in such a manner that the PF can direct his full attention to the handling and control of the aircraft.
- c. Co-operation is effected in an orderly manner appropriate to the normal, abnormal or emergency situations encountered.
- d. Mutual supervision, information and support is ensured at all times.

INSTRUCTORS

2 Instructors for MCC training shall be thoroughly familiar with human factors and crew resource management (CRM). They should be current with the latest developments in human factors training and CRM techniques.

THEORETICAL KNOWLEDGE

3 The theoretical knowledge syllabus is set out in AMC FCL 1.261(d). An approved MCC theoretical knowledge course shall comprise not less than 25 hours.

FLYING TRAINING

4 The flying training syllabus is set out in AMC FCL 1.261(d).

CERTIFICATE OF COMPLETION

5 On completion of the course, the applicant may be issued with a certificate of satisfactory completion of the course.

CROSS-CREDITING

6 A holder of a certificate of completion of MCC training on helicopters shall be exempted from the requirement to complete the theoretical knowledge syllabus as set out in AMC FCL 1.261(d).

AMC FCL 1.261(d)

Multi-crew co-operation course (aeroplane)

See JAR-FCL 1.261(d)

See Appendix 1 to JAR-FCL 1.261(d)

MULTI-CREW CO-OPERATION TRAINING

1 The objectives of MCC training are optimum decision making, communication, division of tasks, use of checklists, mutual supervision, teamwork, and support throughout all phases of flight under normal, abnormal and emergency conditions. The training emphasises the development of non-technical skills applicable to working in a multi-crew environment.

2 The training should focus on teaching students the basics on the functioning of crew members as teams in a multi-crew environment, not simply as a collection of technically competent individuals. Furthermore, the course should provide students with opportunities to practice the skills that are necessary to be effective team leaders and members. This requires training exercises which include students as crew members in the PF and PNF roles.

3 Students should be made familiar with inter-personal interfaces and how to make best use of crew co-operation techniques and their personal and leadership styles in a way that fosters crew effectiveness. Students should be made aware that their behaviour during normal circumstances can have a powerful impact on crew functioning during high workload and stressful situations.

4 Research studies strongly suggest that behavioural changes in any environment cannot be accomplished in a short period even if the training is very well designed. Trainees need time, awareness, practice and feedback, and continual reinforcement to learn lessons that will endure. In order to be effective, multi-crew co-operation training should be accomplished in several phases spread over a period.

BASIC MULTI-CREW CO-OPERATION COURSE

5 The contents of the basic MCC course should cover theoretical knowledge training, practice and feedback in:

- a. interfaces
 - examples of software, hardware, environment and liveware mismatches in practice
- b. leadership/'followership' and authority
 - managerial and supervisory skills
 - assertiveness
 - barriers
 - cultural influence
 - PF and PNF roles
 - professionalism
 - team responsibility
- c. personality, attitude and motivation
 - listening
 - conflict resolution
 - mediating
 - critique (pre-flight analyses and planning, ongoing-review, postflight)
 - team building
- d. effective and clear communication during flight
 - listening
 - feedback
 - standard phraseologies
 - assertiveness
 - participation
- e. crew co-ordination procedures
 - flight techniques and cockpit procedures
 - standard phraseologies
 - discipline

6 The use of checklists is of special importance for an orderly and safe conduct of the flights. Different philosophies have been developed for the use of checklists. Whichever philosophy is used depends on the complexity of the aircraft concerned, the situation presented, the flight crew composition and their operating experience and the operator's procedures as laid down in the Flight Operations Manual.

7 Mutual supervision, information and support.

a. Any action in handling the aircraft should be performed by mutual supervision. The pilot responsible for the specific action or task (PF or PNF) should be advised when substantial deviations (flight path, aircraft configuration etc.) are observed.

b. Call-out procedures are essential, especially during take-off and approach, to indicate progress of the flight, systems status etc.

c. Operation of aircraft systems, setting of radios and navigation equipment etc. should not be performed without demand by the PF or without information to the PF and his confirmation.

8 The contents of paragraphs 3 and 4 can best be practised by performing the exercises in IEM FCL 1.261(d) in simulated commercial air transport operations.

9 Practice and feedback of MCC with regard to the L-L (liveware-liveware) interface should also make provision for students for self and peer critique in order to improve communication, decision making and leadership skills. This phase is best accomplished through the use of flight simulators and video equipment. Video feedback is particularly effective because it allows participants to view themselves from a third-person perspective; this promotes acceptance of one's weak areas which encourages attitude and behavioural changes.

EXERCISES

10 The exercises should be accomplished as far as possible in a simulated commercial air transport environment. The instruction should cover the following areas:

- a. pre-flight preparation including documentation, and computation of take-off performance data;
- b. pre-flight checks including radio and navigation equipment checks and setting;
- c. before take-off checks including powerplant checks, and take-off briefing by PF;
- d. normal take-offs with different flap settings, tasks of PF and PNF, call-outs;
- e. rejected take-offs; crosswind take-offs; take-offs at maximum take-off mass; engine failure after V_1 ;
- f. normal and abnormal operation of aircraft systems, use of checklists;
- g. selected emergency procedures to include engine failure and fire, smoke control and removal, windshear during take-off and landing, emergency descent, incapacitation of a flight crew member;
- h. early recognition of and reaction on approaching stall in differing aircraft configurations;
- i. instrument flight procedures including holding procedures; precision approaches using raw navigation data, flight director and automatic pilot, one engine simulated inoperative approaches, non-precision and circling approaches, approach briefing by PF, setting of navigation equipment, call-out procedures during approaches; computation of approach and landing data;
- j. go-arounds; normal and with one engine simulated inoperative, transition from instrument to visual flight on reaching decision height or minimum descent height/altitude.
- k. landings, normal, crosswind and with one engine simulated inoperative, transition from instrument to visual flight on reaching decision height or minimum descent height/altitude.

Where MCC training is combined with training for an initial type rating on a multi-pilot aeroplane, the exercises (a), (b), (c), (f), (g) and (j) may be conducted in a FTD as part of an approved course.

REINFORCEMENT

11 No matter how effective the classroom curriculum, interpersonal drills, LOFT exercises, and feedback techniques are, a single exposure during the multi-crew co-operation course for the initial issue of a multi-pilot aeroplane type rating will be insufficient. The attitudes and influences which contribute to ineffective crew co-ordination are ubiquitous and may develop over a pilot's lifetime. Thus it will be necessary that the training of non-technical skills will be an integral part of all recurrent training for revalidation of a multi-pilot aeroplane type rating as well as of the training for the issue of further multi-pilot type ratings.

Appendix 1 to AMC FCL 1.261(d)

Multi-crew co-operation course (aeroplane) – Certificate of completion of MCC training

See JAR-FCL 1.261(d)

CERTIFICATE OF COMPLETION OF MCC-TRAINING

Applicant's last name:		First names:	
Type of licence:		Number:	State:
Multi-engine instrument rating:		OR	Multi-engine Instrument rating skill test:
issued on:		passed on:	
	Signature of applicant:		

The satisfactory completion of MCC-Training according to requirements is certified below:

TRAINING			
Multi-crew co-operation training received during period:			
from:	to:	at:	FTO /TRTO / operator*
Location and date:		Signature of Head of TRTO/FTO or authorised instructor*:	
Type and number of licence and State of issue:		Name in capital letters of authorised instructor:	

** Delete as appropriate*