Royal Netherlands Air Force

Netherlands Ministry of Defence

Air Force Command Operations & Aircrew

Luchtmachtplein 1, Breda

MPC 92 A
Postbus 8762
4820 BB Breda
www.luchtmacht.nl

Contact

[redacted]

Date
27-09-2018

Our reference
CLSK 2018

Appendix

A Theoretical training compliance list

B Training course compliance sheet

C Academics to be trained during ATPL br dge course for ATPL(A)

Please quote date, our reference and subject when replying.

RNLAF Credit report Jet

PPL(A) or CPL(A) IR(A)-SE

1 Introduction

Due to new regulations introduced for civilian flight crew licensing, the AIC-B 16/04 policy between Defence and the civilian aviation authority for crediting a civilian license became invalid. To obtain the credits again for a civilian license, the military service checked the obtained knowledge, experience and skills gained in military services against the new civilian regulation. Credit for pilot licences obtained during military service is regulated by the civilian regulation in article 10 of the European;

COMMISSION REGULATION No 1178/2011
of 3 November 2011.
Up to
COMMISION REGULATION 2016/539
.

The knowledge, experience and skill gained in military service shall be given credit for the purposes of the relevant FCL requirements in accordance with the elements of a credit report established by the Member State in consultation with the Agency. This report describes the Credit report for jet pilots of the Royal Netherlands Air force to obtain the civilian PPL(A), CPL(A)/ IR. The credit report is set up according article 10 of the EC no 1178/2011 which covers the following items:

- Military requirements for issuing a Military Pilot License (MPL);
- The scope of the privileges of the Military Pilot License holder;
- Credits to be given;
- Limitations to be included on the Part-FCL licences;
- Additional licenses/certificates;
- Additional requirements to request ATPL(A);
- Copies of all documents to be sent in for military to civilian conversion.

The validity of the credit report in relation to the EASA and military regulation is set on 3 years. IL&T will extend the validity each time with three years when the theoretical and practical training still meets the EASA requirement.
To maintain compliant with the EASA regulations, every change in EASA and military regulation on training need to be checked if it affects this credit report. For EASA changes, the MLA and the ATO who is giving the theoretical course

inform the Defence organisation on the change, and the Defence organisation will inform MLA and the ATO when changes in military requirements are foreseen. If necessary the credit report will be amended to maintain in compliance with EASA.

This credit report is based on the Part-FCL AMC/GM amendment 4, and the referenced documents from the RNLAF.

An application for the conversion Military to Civilian license can only be done once. All civilian licenses requested by military pilots before 8 April 2013, which are currently still within the defence organisation are required to comply with this credit report.

When converted to civilian all other certificates or licenses are according EASA regulations, except when the civilian license is necessary for additional training within the defence organisation. Only in this case a special arrangement is created between the RNLAF and IL&T.

Netherlands Ministry of Defence

Royal Netherlands Air Force Command

Operations & aircrew

Date
27-09-2018

Our reference
CLSK 2018

2 Military requirements for issuing a Military Pilot License

2.1 Total overview military pilot training course

To obtain a Military Pilot License, the military student needs to pass successfully multiple flight training courses. When the Military Pilot License is received, the pilot needs to follow additional courses to become a fully mission capable flight crewmember.
This chapter describes the national requirements of which the military licences, ratings, certificates, authorisations and/or qualifications were issued.

The table below gives an overview of the courses required for the military pilot to the standard of limited combat ready.

In the next paragraphs the military training program is described through Military Pilot License Theoretical Knowledge, initial training fixed wing, Joint Jet Pilot Training T6A, Joint Jet Pilot Training T38C, Introduction to Fighter Fundamentals and F-16 Initial Qualification training for jet pilots. See table below for pilot specific courses:

Course	**location**
Military Pilot License Theoretical Knowledge (MPL TK)	NL
Elementaire Militaire Vlieg Opleiding (EMVO)	NL
T-6A Euro-NATO Joint Jet Pilot Training	USA
T-38C Euro-NATO Joint Jet Pilot Training	USA
T-38C Euro-NATO Joint Jet Introduction to Fighter Fundamentals	USA
F-16 Initial Qualification Training	USA

2.2 Military Pilot License Theoretical Knowledge

The aim of the theoretical knowledge training is to teach the student pilot the basic skills (theoretical) to fly safely in VFR and IFR conditions. The theoretical knowledge training is according Subpart Y 1 – Theoretical Knowledge for a Military Pilot License of the Military Aviation Requirement Flight Crew Licensing (MAR-FCL 1&2) with Instrument Rating, See reference 1. The pre-requirement for the military Pilot License Theoretical Knowledge course is the

ALO KOOV KLU Nieuwe stijl (PS 032301) or ALO 1 KLU (PS 029624) or OFF OPL LANG MODEL (PS 026034) : Military Officer training

The training consists of theoretical training to a level compared to the EASA ATPL level with additional military requirements in the following items:

- Air law
- Airframes, systems, powerplant
- Instrumentation
- Flight performance and planning
- Human performance

- Meteorology
- General Navigation
- Radio Navigation
- Operational Procedures
- Aerodynamics
- Flight Mechanics
- Communication

After completion of the theoretical course, the student pilot has obtained the following hours in theoretical training:

Course length : 19 weeks
Academic flight training : 567 hrs

For more in depth information see
Reference 2: Military Pilot License theoretical knowledge

2.3 Initial training

The aim of the course is to teach the student pilot the basic skill (theoretical and practical) to fly safely in VFR and IFR conditions in a single engine turbine airplane. The pre-requirements for the initial training “Elementaire Militaire Vlieg Opleiding” (EMVO) are;

1 Military Pilot License Theoretical Knowledge (034239)
2 G-Awareness Centrifuge Training(028135)
3 Initiële Hoogte Indoctrinatie (017177)
4 RadioTelephonie (RT) (026208)
5 Technische cursus PC-7 (034209)
6 Initial Survival Equipment Course PC-7 (024574)

The training consists of theoretical and practical training in accordance to the Military Aviation Regulations Flight Crew License (MAR-FCL). The MAR-FCL is based on the civilian Part FCL with additional military requirements. After graduation of the EMVO, the student pilot has obtained the following knowledge in pilot training:

Course length : 12 weeks
Academic flight training : 100 hrs
Flight training : 40 hrs

For more in depth information see
Reference 3: EMVO training manual

2.4 T-6A Euro-NATO Joint Jet Pilot Training

The aim of the course is to prepare student pilots for the ENJJPT Advanced Phase and for future responsibilities as military pilots and officers. This training includes the following:

a. Flying training to teach the principles and techniques used in operating an advanced aircraft.
b. Integrated ground training to supplement and reinforce flying training.
c. Officer development training as required by the Air Force of each participating country.

Entry Prerequisites — Qualified for entry by source country.

Status Upon Completion — Upon completion of this course, student pilots receive AETC Form 1122, “Summary Performance Report,” and proceed to the next designated phase of flight training.

The training consists of theoretical and practical training. After graduation of the ENJJPT, the student pilot has obtained the following knowledge in pilot training:

Course length	: 27 weeks
Academic flight training	: 340,3 hrs
Flight training	: 155,6 hrs

For more in depth information see
Reference 4: P-V4A-N(T-6) Apr 13

2.5 T-38C Euro-NATO Joint Jet pilot Training (track 3A)

The aim of the course is to qualify student pilots of participating NATO countries to perform the duties and assume the responsibilities of a pilot. This includes:

a. Flying training of sufficient scope and quality to attain the desired understanding of the principles and proficiency in the techniques of flying high-speed jet fighter-type aircraft.
b. Ground training of sufficient scope to augment and facilitate the flying training.
c. Officer training as required by the Air Force of each participating country.

Entry Prerequisites — Qualified for entry by source country.

Status Upon Graduation — Graduates of this course are awarded an aeronautical diploma, presented USAF pilot wings, RNLAF wings, and granted the aeronautical rating of pilot of their respective services.

The training consists of theoretical and practical training. After graduation of the T-38C ENJJPT 3A track, the student pilot has obtained the following knowledge in pilot training:

Course length	: 20 weeks
Academic flight training	: 123,4 hrs
Flight training	: 136,5 hrs

For more in depth information see
Reference 5: AETC P-V4A-N-3 (T-38C) Apr 13

2.6 T-38C Euro-NATO Joint Jet Introduction to Fighter Fundamentals (track B)

The objective is to graduate pilots with a basic understanding of fighter fundamentals. Emphasize developing wingman fundamentals with solid Cockpit / Crew Resource Management skills.

This course is the transition course between Euro-NATO Joint Jet Pilot Training (ENJJPT) and formal fighter training units (FTUs). The Track B (dual role) with ACM course provides specialized training tracks based on follow-on training assignments for F-16.

Entry Prerequisites- Pilots must be graduates of ENJJPT T-38C Track 3A

Status Upon Completion — Graduates are qualified to attend USAF or NATO fighter formal training courses.

The training consists of theoretical and practical training. After graduation of the T-38C IFF track B, the student pilot has obtained the following knowledge in pilot training:

Course length	: 9 weeks
Academic flight training	: 82,5 hrs
Flight training	: 53,1 hrs

For more in depth information see
Reference 6: AETC BF-V5A-L Apr 13 IFF

2.7 F-16 Initial Qualification Training

The objective is to qualify pilots with a F-16A (MLU) type rating with IR. In addition the basic proficiency in Air-to-Air and Air-to-Surface mission tasks are trained.

Entry Prerequisites- Pilots must be graduates of T38C IFF track B course

Status Upon Completion — Graduates can fulfil all initial Qualification Training requirements with an instrument rating.

The training consists of theoretical and practical training. After graduation of the F-16 IQT, the student pilot has obtained the following knowledge in pilot training:

Course length : 28 weeks
Academic flight training : 207 hrs
Flight training : 233,4 hrs

For more in depth information see
Reference 7: IQT syllabus 6hzu final_tcm4-499588-1

After successfully passed the IQT, the pilot will than receive his Military FCL. For a total overview in flight hours and academics for the F16;

		F16
EMVO	Theoretical	703
	practical	40
T-6 ENJJPT	Theoretical	340,3
	practical	155,6
T38C ENJJPT	Theoretical	123,4
	practical	136,5
T38C ENJJPT IFF	Theoretical	82,5
	practical	53,1
F16 IQT	Theoretical	207
	practical	233,4
TOTAL	**Theoretical**	**1456,2**
	practical	**618,6**

Note: practical flight training is including flight training devices, simulators and practical flights. For more information see referenced courses.

Netherlands Ministry of Defence

Royal Netherlands Air Force Command

Operations & aircrew

Date
27-09-2018

Our reference
CLSK 2018

3 The scope of the privileges of the Military Pilot License holder

When the pilot successfully completes all the courses, he/she will be assigned to a squadron as a limited combat ready pilot in command. The scope and privileges are for all F16 pilots a Military Pilot license with type rating on the F16 for VFR day, IFR and night (aided/un-aided).

4 Credits to be given

The knowledge, experience and skill gained during flight training up to limited combat ready status in the military is compared to the civilian standards regulation 1178/2011.

Credits to be given, depending actual flight hours:

PPL(A)[1]
or
CPL(A) / IR(A)-SE,PBN (frozen ATPL theoretical)

The following Part- FCL regulations are used to compare the military training versus civilian requirement and training for the credits to be given for:

FCL.055 Language proficiency
FCL.300 CPL — Minimum age
FCL.315 CPL — Training course
FCL.515 ATPL— Theoretical knowledge examinations
Appendix 3 A. ATP integrated course — Aeroplanes
FCL.510.A ATPL (practical) see Chapter 6.

4.1 PPL(A) experience requirements and crediting

FCL.210.A states:
(a) Applicants for a PPL(A) shall have completed at least 45 hours of flight instruction in aeroplanes, 5 of which may have been completed in an FSTD, including at least:

(1) 25 hours of dual flight instruction; and
(2) 10 hours of supervised solo flight time, including at least 5 hours of solo cross-country flight time with at least 1 cross-country flight of at least 270 km (150 NM), during which full stop landings at 2 aerodromes different from the aerodrome of departure shall be made.

When a student passed the EMVO, T6 ENJJPT and the military bridge course, he/she has at least 114,1 hours instruction, 8,1 hours solo with 23,9 navigation were during out and back(s) multiple different airports are trained. Point B and C and D of FCL210.A are not relevant. The theoretical level for the student is based on the ATPL fixed wing, when the bridge course has been passed!

4.2 Language proficiency

The RNLAF has a letter of agreement with the NL-CAA that pilots with a Military Pilot License have a LPE level 4 equivalence (reference 8: Verzoek gelijkstelling LPE-4 voor militaire vliegers).

1 PPL(A) can be requested when successfully passed the EMVO, 6-ENJJPT and the military bridge course.

4.3 Minimum age

FCL.300 CPL states: An applicant for a CPL shall be at least 18 years of age. For military pilots the MAR-FCL 1&2.215 _Military Pilot License- Pre-requisites states: 1) be at least 18 years of age.The military minimum age criterion is compliant with the civilian requirement of FCL.300 CPL.

4.4 Theoretical knowledge examinations

FCL 515 ATPL states that an applicant for a CPL/ATPL shall demonstrate a level of knowledge appropriate to the privileges granted in the following subjects:

- Air Law,
- Aircraft General Knowledge — Airframe/Systems/Powerplant,
- Aircraft General Knowledge — Instrumentation,
- Mass and Balance,
- Performance,
- Flight Planning and Monitoring,
- Human Performance,
- Meteorology,
- General Navigation,
- Radio Navigation,
- Operational Procedures,
- Principles of Flight,
- Visual Flight Rules (VFR) Communications.
- Instrument Flight Rules (IFR) Communications.

The pass mark for all civilian exams must be at least 75%.
For comparison between the military and civilian theoretical training the following acceptable means of compliance was used: AMC1 FCL.310; FCL.515 (b); FCL.615 (b). The MAR_FCL 1&2.920 Theoretical knowledge Training and examination states the pass mark of 75% in the following subjects:

- AIR LAW AND ATC PROCEDURES
- AIRCRAFT GENERAL KNOWLEDGE AIRFRAME
- AND SYSTEMS, ELECTRICS, POWERPLANT, EMERGENCY EQUIPMENT
- AIRCRAFT GENERAL KNOWLEDGE INSTRUMENTATION
- FLIGHT PERFORMANCE AND PLANNING
- MASS AND BALANCE – AIRPLANES/HELICOPTERS
- PERFORMANCE – AIRPLANES
- FLIGHT PLANNING AND FLIGHT MONITORING
- PERFORMANCE – HELICOPTERS
- HUMAN PERFORMANCE AND LIMITATIONS
- METEOROLOGY
- NAVIGATION
- GENERAL NAVIGATION
- RADIO NAVIGATION
- OPERATIONAL PROCEDURES
- PRINCIPLES OF FLIGHT
- PRINCIPLES OF FLIGHT – AIRPLANE
- COMMUNICATIONS
- VFR COMMUNICATIONS
- IFR COMMUNICATIONS

The result of the comparison of all items of FCL 515 ATPL to the Military Theoretical Knowledge Training course is presented in reference 12: Compliance checklist (amendment 4, 18 april 2018)..
When the bridge course presented in Appendix A: Academics to be trained for ATPL(A) is completed, the military academic flight training fulfils the theoretical requirement of FCL.515 ATPL (A).

4.5 Training course
The military flight training courses are compared to:
AMC1 to Appendix 3 Training courses for the issue of FCL.315 CPL/IR or FCL.515 ATPL/IR.
The results are presented in appendix B: Training course compliance sheet.
The military training course is compliant for FCL.315 CPL/IR training requirement with some alternative compliance methods.

4.6 PBN compliance
For civilian Instrument ratings as of Aug 2018 a Performance based Navigational (PBN) training is required. The RNLAF operates according the PBN principles. The requirement for PBN and the RNLAF compliance to this training is presented in appendix C PBN compliance sheet.

4.7 Conclusion
The military training course up to “limited combat ready” fulfils the civilian requirement of the FCL.300.CPL, FCL.515 ATPL(A) theoretical knowledge and FCL 315 CPL(A) with IR rating when the military bridge course is passed.

The total academic hours required for ATPL(A) is 750 hrs, the military pilot received 1456,2 hours of academic flight training.

The total flying hours required for CPL(A)/IR is 180 hrs and for ATPL(A)/IR it is 195 hrs. The military pilot (jet) will have minimum 618,6 hours.

The credits for a civilian PPL(A) license can be requested after successfully passed the EMVO, T-6 ENJJPT, and the military bridge course with a valid (MPL) FCL license. However an application can only be done once!
The credits for a civilian CPL(A)/IR license can be requested maximum one year after leaving the military services!

An overview of credits are presented in the table below.

	CPL(A)/IR	Aerobatic rating	TP cat 1	Theoretical ATPL(A)	PPL(A)
EMVO	x	x	x	x	x
T-6 ENJJPT	x	x	x	x	x
T38C ENJJPT	x	x	x	x	
T38C ENJJPT IFF	x	x	x	x	
F16 IQT	x	x	x	x	
Test pilot school			x		
Military bridge course FW	x	x	x	x	x

5 Limitations to be included on the Part-FCL licences

Within the scope of PPL(A) or CPL(A) operation, no limits need to be included.

When IR is requested, it must be valid. If IR rating is expired within 7 years, the requirement is recurrence training at an ATO and an IR profcheck to regain the IR.

Within the scope of ATPL(A), the practical experiences are unsatisfactory without additional flying experience.

Netherlands Ministry of Defence

Royal Netherlands Air Force Command

Operations & aircrew

Date
27-09-2018

Our reference
CLSK 2018

6 Additional licenses/certificates

In addition to the aircrew license (PPL(A),CPL(A)), the next certificates comply to the EASA regulations or compliant to these regulations. These additional trainings are performed under EASA regulations:

1) Test pilot, EASA accredited schools (ETPS,EPNR,USNTP,NTPS or other certified Test pilot ATO's)

6.1 Additional aerobatic rating when PPL(A) or CPL(A) is requested

During the training courses EMVO/AETC P-V4A-N-3(T-38C), the student fulfils the requirements for aerobatic training according to AMC1 FCL.800 Aerobatic training

THEORETICAL KNOWLEDGE AND FLYING TRAINING	FIXED WING
(a) The aim of the aerobatic training is to qualify licence holders to perform aerobatic manoeuvres.	AETC P-V4A-N-3(T-38C)
(b) The ATO should issue a certificate of satisfactory completion of the instruction to licence endorsement.	Course completion EMVO/AETC P-V4A-N-3T(T-38C)
(c) Theoretical knowledge	EMVO/AETC P-V4A-N-3(T-38C)
The theoretical knowledge syllabus should cover the revision or explanation of:	
(1) human factors and body limitation:	X
(i) spatial disorientation;	X
(ii) airsickness;	X
(iii) body stress and G-forces, positive and negative;	X
(iv) effects of grey- and blackouts.	X
(2) technical subjects:	
(i) legislation affecting aerobatic flying to include environmental and noise subjects;	X
(ii) principles of aerodynamics to include slow flight, stalls and spins, flat and inverted;	X
(iii) general airframe and engine limitations (if applicable).	X
(3) limitations applicable to the specific aircraft category (and type):	X
(i) air speed limitations (aeroplane, helicopter, TMG and sailplane, as applicable);	X
(ii) symmetric load factors (type-related, as applicable);	X
(iii) rolling Gs (type-related, as applicable).	X
(4) aerobatic manoeuvres and recovery:	X
(i) entry parameters;	X
(ii) planning systems and sequencing of manoeuvres;	X
(iii) rolling manoeuvres;	X
(iv) looping manoeuvres;	X
(v) combination manoeuvres;	X
(vi) entry and recovery from developed spins, flat,	X

accelerated and inverted.	
(5) emergency procedures:	X
(i) recovery from unusual attitudes;	X
(ii) drills to include the use of parachutes (if worn) and aircraft abandonment.	X
(d) Flying training	
The exercises of the aerobatic flying training syllabus should be repeated as necessary until the applicant achieves a safe and competent standard. Having completed the flight training, the student pilot should be able to perform a solo flight containing a sequence of aerobatic manoeuvres. The dual training and the supervised solo training flights should be tailored to the category of aircraft and limited to the permitted manoeuvres of that type of aircraft. The exercises should comprise at least the following practical training items:	
(1) confidence manoeuvres and recoveries:	
(i) slow flights and stalls;	x
(ii) steep turns;	x
(iii) side slips;	x
(iv) engine restart in-flight (if applicable);	simulator
(v) spins and recovery;	x
(vi) recovery from spiral dives;	x
(vii) recovery from unusual attitudes.	x
(2) aerobatic manoeuvres:	x
(i) Chandelle;	x
(ii) Lazy Eight;	x
(iii) rolls;	x
(iv) loops;	x
(v) inverted flight;	x
(vi) Hammerhead turn;	x
(vii) Immelmann.	x

7 Copies of all documents

To obtain the civilian license, the following documents need to be send to KIWA;

Request form CPL(A)/IR
(valid) Passport copy
Flight Logbook
Current civilian flight medical
Copy of Military Pilot License
Copy list of functions which indicates the date when placed on an operational squadron.

Checklist for sending in application EASA FCL

Document	**Remark**
KIWA request form PPL(A)/CPL(A)/ATPL(A)	Download application on: https://www.kiwaregister.nl/aanvraagformulieren vliegend personeel/
Passport copy	Valid passport
Flight logbook	PDF of flight logbook (OMIS) To check flight experience and IR prof check
Copy Flight medical	Civilian (from CML)
Copy military Pilot license	
Copy of functions	PDF of personal file (peoplesoft) To check training curriculum.
Military bridge course certificate FW	Check for successful completion of the bridge course.

Netherlands Ministry of Defence

Royal Netherlands Air Force Command

Operations & aircrew

Date
27-09-2018

Our reference
CLSK 2018

Reference 1: MAR FCL Aeroplanes Helicopters issue 2.0 01 December 2013
Reference 2: MPL theoretical knowledge
Reference 3: EMVO training manual
Reference 4: P-V4A-N(T-6) Apr 13
Reference 5: AETC P-V4A-N-3 (T-38C) Apr 13
Reference 6: AETC BF-V5A-L Apr 13 IFF
Reference 7: IQT syllabus 6hzu final_tcm4-499588-1
Reference 8: Verzoek gelijkstelling LPE-4 voor militaire vliegers ILT-2012/18636 CLSK 2012/015641
Reference 12: Compliance checklist (amendment 4, 18 april 2018).

Royal Netherlands Air Force

Netherlands Ministry of Defence

Air Force Command Operations & Aircrew

Luchtmachtplein 1, Breda

MPC 92 A
Postbus 8762
4820 BB Breda
www.luchtmacht.nl

Contact

[redacted]

Date
27-09-2018

Our reference
CLSK 2018

RNLAF Credit report Jet

PPL(A) or CPL(A) IR(A)-SE

Appendix: A Academics to be trained during ATPL bridge course for ATPL(A)
Appendix: B Training course compliance sheet
Appendix: C PBN compliance sheet

Appendix

A Theoretical training compliance list
B Training course compliance sheet
C Academics to be trained during ATPL br dge course for ATPL(A)

Please quote date, our reference and subject when replying.

Appendix A Academics to be trained for ATPL(A)

010.01.02.01	The International Air Services Agreement
010.01.02.02	The International Air Transport Agreement
010.01.02.03	Suppression of unlawful acts against safety of civil aviation
010.01.02.05	International Private Law
010.01.03.00	World Organisation
010.01.03.01	The International Air Transport Association (IATA)
010.04.01.01	Differences between ICAO Annex 1 and JAR-FCL
010.04.02.04	Airline Transport Pilot Licence - ATPL
010.07.02.03	ATS system capacity and Air Traffic Flow Management
010.10.02.00	Entry and Departure of aircraft
010.10.02.01	General Declaration
010.10.02.02	Entry and departure of crew
010.10.02.03	Entry and departure of passengers and baggage
010.10.02.04	Entry and departure of cargo
010.12.01.00	Essential defenitions in ICAO Annex 17
010.12.01.01	Essential defenitions in ICAO Annex 17
010.12.02.00	General principles
010.12.02.01	General principles — Objectives of security
010.12.03.00	Organisation
010.12.04.00	Preventive security measures
010.12.04.01	Preventive security measures
010.12.05.00	Management of response to Acts of Unlawful Interference
010.12.05.01	Management of response to Acts of Unlawful Interference
010.12.06.00	Operators security programme
010.12.06.01	Operators' security programme — Principles
010.12.07.00	Security procedures in other documents
010.12.07.01	ICAO Annex 2, Attachment B
010.12.07.02	ICAO Annex 6, Chapter 13, Security
010.12.07.03	ICAO Annex 14, Chapter 3, Physical characteristics
010.12.07.04	ICAO Document 4444
021.06.01.01	Piston engine air supply
021.08.01.00	Piston engine

021.08.01.01	Fuel: Types, characteristics, limitations
021.08.01.02	Design, operation, system components, indications
021.10.01.00	General
021.10.01.01	Types of internal combustion engine
021.10.01.02	Engine: design, operation, components and materials
021.10.02.00	Fuel
021.10.02.01	Types, grades, characteristics, limitations
021.10.03.00	Engine fuel pumps
021.10.03.01	Engine-driven fuel pump
021.10.04.00	Carburettor/Injection system
021.10.04.01	Carburettor: design, operation, degraded modes, indications and warnings
021.10.04.02	Injection: design, operation, degraded modes, indications and warnings
021.10.04.03	Icing
021.10.05.00	Cooling systems
021.10.05.01	Design, operation, indications and warnings
021.10.06.00	Lubrication systems
021.10.06.01	Lubricants: characteristics, limitations
021.10.06.02	Design, operation, indications and warnings
021.10.07.00	Ignition circuits
021.10.07.01	Design, operation
021.10.08.00	Mixture
021.10.08.01	Definition, characteristic mixtures, control instruments, associated control levers, indications
021.10.10.00	Performance and engine handling
021.10.10.01	Performance
021.10.10.02	Engine handling
022.01.08.00	Synchroscope
022.01.08.01	Purpose, operating principle, display
022.06.04.00	Aeroplane: Flight mode annunciator
022.06.04.01	Purpose, modes, display scenarios
022.06.05.00	Autoland
022.06.05.01	Design and operation
022.09.01.00	Autothrust system

022.09.01.01	Purpose, operation, overcompensation, speed control
022.13.06.00	Electronic Flight Bag (EFB)
022.13.06.01	Purpose, certification, malfunctions
022.14.01.00	Cockpit Voice Recorder (CVR)
022.14.01.01	Purpose, components, parameters
022.14.02.00	Flight Data Recorder (FDR)
022.14.02.01	Purpose, components, parameters
031.06.01.00	Types of cargo
031.06.01.01	Types of cargo (general aspects)
031.06.02.00	Floor area load and running load limitations
031.06.02.01	Floor area load and running load limitations in cargo compartments
031.06.03.00	Securing of load
031.06.03.01	Securement of load (reasons and methods)
033.05.02.00	Repetitive flight plan
033.05.02.01	Repetitive flight plan
040.02.01.03	High altitude environment
050.09.07.00	Stratospheric conditions
050.09.07.01	Influence on aircraft performance
062.02.06.00	MLS
062.02.06.01	Principles
062.02.06.02	Presentation and interpretation
062.02.06.03	Coverage and range
062.02.06.04	
071.01.02.10	Cabin crew/Crew members other than flight crew
071.01.03.00	Long range flights
071.01.03.01	Flight management
071.01.03.02	Transoceanic and polar flights (ICAO Doc 7030 'Regional Supplementary Procedures — North Atlantic Operations and Airspace Manual')
071.01.03.03	North Atlantic High Level Airspace (NAT HLA)
071.01.03.04	ETOPS
071.02.04.02	Influence of the flight procedure (departure, cruise, approach)
071.02.04.03	Influence by the pilot (power setting, low drag)
071.02.05.01	Carburettor fire

071.02.09.00	Security
071.02.09.01	ICAO Annex 17 and Regulation (EC) No 300/2008
071.02.09.02	Use of SSR
071.02.09.03	Security (Regulation (EC) No 300/2008 and ICAO Annex 17)
071.02.10.03	Passsenger information
071.02.11.00	Fuel jettonising
071.02.11.01	Safety aspects
071.02.11.02	Requirements

Appendix B Training course compliance sheet

CPL/IR integrated course Aeroplane (Subject)	MilPL	Alternative AMC	Remarks
Appendix 3 - Training courses for the issue of a CPL and an ATPL			
The flying training, not including type rating training, shall comprise a total of at least 180 hours, to include all progress tests, of which up to 40 hours for the entire course may be instrument ground time. Within the total of 180 hours, applicants shall complete at least:	618,6		
(a) 80 hours of dual instruction, of which up to 40 hours may be instrument ground time;	280,5		
(b) 70 hours as PIC, including VFR flight and instrument flight time which may be flown as SPIC. The instrument flight time as SPIC shall only be counted as PIC flight time up to a maximum of 20 hours;	98,4		
(c) 50 hours of cross-country flight as PIC, including a VFR cross-country flight of at least 540 km (300 NM), in the course of which full stop landings at two aerodromes different from the aerodrome of departure shall be made;		1 year on sqaudron, this requirement will be met.	
(d) 5 hours flight time shall be completed at night, comprising 3 hours of dual instruction, which shall include at least 1 hour of cross-country navigation and 5 solo take-offs and 5 solo full stop landings; and		1 year on sqaudron, this requirement will be met.	
(e) 100 hours of instrument time comprising, at least:	162		
(1) 20 hours as SPIC; and	82,9		
(2) 50 hours of instrument flight instruction, of which up to:	62,5		
(i) 25 hours may be instrument ground time in an FNPT I, or			
(ii) 40 hours may be instrument ground time in an FNPT II, FTD 2 or FFS, of which up to 10 hours may be conducted in an FNPT I.			
(f) 5 hours to be carried out in an aeroplane certificated for the carriage of at least 4 persons that has a variable pitch propeller and retractable landing gear.		PC-7 has a variable pitch and retractable landing gear, however only two persons.	Flying time on the PC7 is at least 30 hours
SKILL TEST			
Upon completion of the related flying training the applicant shall take the CPL(A) skill test and the IRskill test on either a multi-engine aeroplane or a single-engine aeroplane.	4 skill tests are performed		

Appendix C PBN compliance sheet

	ALL	Jet
062 07 00 00 PBN	EMVO	
062 07 01 00 PBN concept (as described in ICAO Doc 9613)	EMVO	
062 07 01 01 PBN principles	EMVO	
062 07 01 02 PBN components	EMVO	
062 07 01 03 PBN scope	EMVO	
062 07 02 00 Navigation specifications	EMVO	
062 07 02 01 RNAV and RNP	EMVO	
062 07 03 00 Use of PBN	EMVO	
062 07 03 01 Airspace planning	EMVO	
062 07 03 02 Approval	EMVO	
062 07 03 03 Specific RNAV and RNP system functions	EMVO	
062 07 03 04 Data processes	EMVO	
062 07 04 00 PBN operations	EMVO	
062 07 04 01 PBN principles	EMVO	
062 07 04 02 On-board performance monitoring and alerting		AETC P4A
062 07 04 03 Abnormal situations		AETC P4A
062 07 04 04 Database management		AETC P4A
062 07 05 00 Requirements of specific RNAV and RNP specifications		AETC P4A
062 07 05 01 RNAV10		AETC P4A
062 07 05 02 RNAV5		AETC P4A
062 07 05 03 RNAV/RNP1/2		AETC P4A
062 07 05 04 RNP4		AETC P4A

062 07 05 05 RNP APCH		AETC P4A
062 07 05 06 RNP AR APCH		AETC P4A
062 07 05 07 A-RNP		AETC P4A
062 05 04 00 FMS and general terms		AETC P4A
062 05 04 03 Navigation data base		AETC P4A
062 05 04 06 Determination of the FMS-position of the aircraft		AETC P4A
062 06 00 00 GLOBAL NAVIGATION SATELLITE SYSTEMS	EMVO	AETC P4A
062 06 01 00 GPS/GLONASS/GALILEO	EMVO	AETC P4A
062 06 01 01 Principles	EMVO	AETC P4A
062 06 01 02 Operation		AETC P4A
062 06 01 03 Errors and Factors affecting accuracy	EMVO	
062 06 02 00 Ground, Satellite and Airborne based augmentation systems	EMVO	
Practrical	ALL	Jet
Practical skill test IR(A) PBN	Appendix 3 to MAR-FCL 2.320 Contents of the skill test for the issue and renewal of an IR(A)	