



Australian Government

Civil Aviation Safety Authority

I, TERENCE LINDSAY FARQUHARSON, Acting Director of Aviation Safety, on behalf of CASA, make this instrument under regulations 11.068 and 61.035 of the *Civil Aviation Safety Regulations 1998* and section 4 of the *Acts Interpretation Act 1901*.

[Signed T. Farquharson]

Terry Farquharson
Acting Director of Aviation Safety

13 August 2014

Part 61 Manual of Standards Instrument 2014

1 Name of instrument

- 1.1 This instrument is the Part 61 Manual of Standards for Part 61 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)*.
- 1.2 This instrument is called the *Part 61 Manual of Standards Instrument 2014*.
- 1.3 In this instrument, unless the contrary intention appears, a reference to “this MOS” or “the MOS” means the *Part 61 Manual of Standards Instrument 2014*.

2 Commencement

This instrument commences on 1 September 2014.

3 Scope

Under regulation 61.035 of CASR 1998, and for Part 61 of CASR 1998, this MOS sets out matters relating to:

- (a) flight crew licences, ratings and endorsements; and
- (b) the use of an ACAS; and
- (c) aeronautical radio operations; and
- (d) aeroplane taxiing; and
- (e) conditions on flight examiner ratings.

4 Condition on flight examiner ratings

For paragraph 98 (5A) (1) (a) and subsection 98 (5D) of the *Civil Aviation Act 1988*, and regulation 11.068 of CASR 1998, it is a condition on a flight examiner rating, issued before or after this MOS, that when conducting a flight test or a proficiency check the holder of the rating must comply with the requirements of, and take into account the recommendations in, the *Flight Examiners' Handbook* as in force and published on the CASA website at the time of the flight test or proficiency check.

5 Definitions

- 5.1 In this MOS, unless the contrary intention appears:
cell, for a column of a table in a Schedule of this instrument, means each individual, undivided unit into which the column is subdivided.

in accordance with published procedures, for carrying out an activity in relation to an aircraft, means carrying out the activity in accordance with the applicable requirements (if any) set out in each of the following:

- (a) the aircraft flight manual;
 - (b) the aircraft operator's operations manual;
 - (c) the Aeronautical Information Publication (AIP);
 - (d) another operational document applicable to the activity that is approved in writing by CASA or the operator.
- 5.2 In this MOS, unless the contrary intention appears, an abbreviation has the meaning given to it by the Dictionary of abbreviations in Schedule 1A.
- 5.3 Unless the contrary intention appears, if an abbreviation used in this MOS is not given a meaning under Schedule 1A, the abbreviation has the meaning that is given to it by the prevalent usage, custom and practice of the aviation industry.
- 5.4 To avoid doubt, in this MOS neither a unit code nor an examination code is an abbreviation within the meaning of subsection 5.2 or 5.3.

6 Recreational pilot licences — general English language proficiency standard

- 6.1 The general English language proficiency standard is as set out in Section 1 of Schedule 2.

Note See the Table of Contents at the front of Schedule 2 to find the general English language proficiency standards.

- 6.2 The assessment mentioned in subclause 5.1.1 of Section 1 of Schedule 2, and the requirement specified in subclause 5.1.2, are each part of the standard.
- 6.3 The general English language proficiency tests are as set out in paragraph 5.1.2 (f) of Section 1 of Schedule 2.
- 6.4 For subsection 6.3, achieving the minimum grade specified for each test is part of each test.

7 Aviation English language proficiency standards and maintenance of English language proficiency

- 7.1 The aviation English language proficiency standard is as set out in Section 1 of Schedule 2.

Note See the Table of Contents at the front of Schedule 2 to find the aviation English language proficiency standards.

- 7.2 The ICAO level 4, level 5 and level 6 aviation English language proficiency standards (rating scales) are as set out in Section 2 of Schedule 8.

Note See the Table of Contents at the front of Schedule 8 to find the ICAO level 4, level 5 and level 6 aviation English language proficiency standards (rating scales).

8 Units of competency for flight training, use of ACAS, aeronautical radio operations, and taxiing

- 8.1 The units of competency for each of the following matters are as set out in the Appendix of a Section in Schedule 1 that is for the particular matter:
- (a) a flight crew licence with an aircraft category rating, a flight crew rating on a licence, or an endorsement on a rating;
 - (b) a design feature endorsement or a flight activity endorsement;
 - (c) use of an ACAS;
 - (d) an aeronautical radio operator certificate;
 - (e) a certificate of competency for taxiing aeroplanes of a particular class or type rating.

Note See the Table of Contents at the front of Schedule 1 to find the reference to any particular matter listed in paragraphs (a) to (e) above.

- 8.2 For an Appendix mentioned in subsection 8.1, each unit of competency mentioned in a cell in column 2 of the practical flight standards table in the Appendix (the ***unit of competency***) has the unit code mentioned in the corresponding cell in column 1 (the ***unit code***).
- 8.3 For subsection 8.2, the requirements of the unit of competency are set out in the document whose unit code is mentioned in the cell in column 1 that corresponds to the unit of competency.
- 8.4 For subsection 8.3, the unit coded document containing the requirements of the unit of competency is the document in Schedule 2 which has the same unit code.

Note See the Table of Contents at the front of Schedule 2 for an alphabetical list of unit codes.

- 8.5 The competency required of a person by each unit of competency mentioned in Schedule 2 (the ***unit***) is the ability to do the following:
- (a) perform each of the elements mentioned in clause 2 of the unit:
- (i) according to the performance criteria mentioned for the element; and
 - (ii) within the range of variables mentioned in clause 3 for the unit; and
 - (iii) for practical flight — within the flight tolerances mentioned in the table in Section 1 of Schedule 8 that is for the category of aircraft (where applicable) and for the licence or rating; and
- (b) demonstrate the underpinning knowledge for each unit, as mentioned in clause 4 of the unit.

Note A unit of competency in Schedule 2 usually comprises: (1) the unit description, (2) its elements and performance criteria, (3) the range of variables across which these criteria are to be applied, and (4) the minimum underpinning knowledge for (2) and (3).

9 Other approved courses

RESERVED (CASR 61.040 and 61.210)

10 Aeronautical knowledge standards

- 10.1 The aeronautical knowledge standards for a flight crew licence with an aircraft category rating, a flight crew rating on a licence or an endorsement on a rating are as set out in the Appendix of a Section in Schedule 1 that is for the licence, rating or endorsement.
- Note* See the Table of Contents at the front of Schedule 1 to find any particular licence, rating or endorsement.
- 10.2 For an Appendix mentioned in subsection 10.1, each unit of knowledge mentioned in a cell in column 2 of an aeronautical knowledge standards table in the Appendix (the ***unit of knowledge***) has the unit code mentioned in the corresponding cell in column 1 (the ***unit code***).
- 10.3 For subsection 10.2, the requirements of the unit of knowledge are set out in the document whose unit code is mentioned in the cell in column 1 that corresponds to the unit of knowledge.
- 10.4 For subsection 10.3, the unit coded document containing the requirements of a unit of knowledge is the document in Schedule 3 which has the same unit code.
- 10.5 The standard of knowledge required of a person by each unit of knowledge mentioned in Schedule 3 is the ability to demonstrate, to the appropriate level, knowledge of the elements, topics and specific content described in each clause of the unit.
- 10.6 For subsection 10.5:
- (a) an element, generally identifying a knowledge area within the unit of knowledge, is indicated in bold, underlined print, and numbered as a clause; and

- (b) a topic (if any), further defining a knowledge area within an element, is indicated in bold print and numbered as a subclause; and
- (c) specific content, describing in detail the relevant content of the topic (if any), or the element, is indicated in plain print and numbered as subclauses, paragraphs, subparagraphs and sub-subparagraphs as the case may be.

11 Aeronautical knowledge examinations, pass standards and time

- 11.1 The aeronautical knowledge examinations for a flight crew licence with an aircraft category rating, a flight crew rating on a licence, or an endorsement on a rating are as set out in the table in the Section of Schedule 4 that is for the licence, rating or endorsement (the *table*).
- 11.2 For subsection 11.1, the examination for each examination subject mentioned in a cell in column 2 of the table (the *subject*) has the examination code, the pass standard and the time limit mentioned in the cell in column 1, column 3 and column 4 (respectively) of the table that corresponds to the subject.

Note The examination codes mentioned in the cells in column 1 of the table are for examination administration purposes only.

12 Flight tests — competency standards

- 12.1 The competency standards for a flight test for a flight crew licence with an aircraft category rating, a flight crew rating on a licence, or an endorsement on a rating are as set out in the Appendix in Schedule 5 that is for the licence, rating or endorsement flight test.
- Note* See the Table of Contents at the front of Schedule 5 to find the reference to any particular flight test.
- 12.2 For subsection 12.1, the competency standards for a flight test mentioned in an Appendix in Schedule 5 comprise the following:

- (a) the flight test requirements mentioned in the Appendix for the test;
- (b) the knowledge requirements mentioned in the Appendix for the test;
- (c) the practical flight standards mentioned in the Appendix for the test, but within the flight tolerances mentioned in the table in Section 1 of Schedule 8 that is for the category of aircraft (where applicable) and for the licence, rating or endorsement.

Note For paragraph (c), the aircraft category is identified in the title of the relevant table in Schedule 8, and the licence, rating or endorsement is identified in the “Applicability” clause of the relevant table.

- 12.3 For an Appendix mentioned in subsection 12.1, each unit of competency mentioned in a cell in column 2 of the practical flight standards table in the Appendix (the *unit of competency*) has the unit code mentioned in the corresponding cell in column 1 (the *unit code*), subject to the modification (if any) specified in column 3.
- 12.4 For subsection 12.3, the requirements of the unit of competency are set out in the document whose unit code is mentioned in the cell in column 1 that corresponds to the unit of competency.
- 12.5 For subsection 12.4, the unit coded document containing the requirements of the unit of competency is the document in Schedule 2 which has the same unit code.
- Note* See the Table of Contents at the front of Schedule 2 for an alphabetical list of unit codes.
- 12.6 For a flight test, the competency required of a person by each relevant unit of competency mentioned in Schedule 2 (the *unit*) is the ability to perform each of the elements mentioned in clause 2 of the unit:
- (a) according to the performance criteria mentioned for the element; and
 - (b) within the range of variables mentioned in clause 3 for the unit; and
 - (c) subject to the modifications (if any) specified in column 3 of the practical flight standards table in Schedule 5.

Note For a flight test, the competency required of a person by a unit of competency does not require specific testing of the underpinning knowledge in Schedule 2.

13 Proficiency checks — competency standards

- 13.1 The competency standards for a proficiency check for a flight crew rating on a licence, or an endorsement on a rating are as set out in the Appendix in Schedule 6 that is for the rating proficiency check.

Note See the Table of Contents at the front of Schedule 6 to find the reference to any particular proficiency check.

- 13.2 For subsection 13.1, the competency standards for a proficiency check mentioned in an Appendix in Schedule 6 comprise the following:

- (a) the proficiency check requirements mentioned in the Appendix for the check;
- (b) the knowledge requirements mentioned in the Appendix for the check;
- (c) the practical flight standards mentioned in the Appendix for the check, but within the flight tolerances mentioned in the table in Section 1 of Schedule 8 that is for the category of aircraft (where applicable) and for the flight crew rating.

Note For paragraph (c), the aircraft category is identified in the title of the relevant table in Schedule 8, and the rating is identified in the “Applicability” clause of the relevant table.

- 13.3 For an Appendix mentioned in subsection 13.1, each unit of competency mentioned in a cell in column 2 of the practical flight standards table in the Appendix (the **unit of competency**) has the unit code mentioned in the corresponding cell in column 1 (the **unit code**), subject to the modification (if any) specified in column 3.

- 13.4 For subsection 13.3, the requirements of the unit of competency are set out in the document whose unit code is mentioned in the cell in column 1 that corresponds to the unit of competency.

- 13.5 For subsection 13.4, the unit coded document containing the requirements of the unit of competency is the document in Schedule 2 which has the same unit code.

Note See the Table of Contents at the front of Schedule 2 for an alphabetical list of unit codes.

- 13.6 For a proficiency check, the competency required of a person by each relevant unit of competency mentioned in Schedule 2 (the **unit**) is the ability to perform each of the elements mentioned in clause 2 of the unit, according to the performance criteria mentioned for the element, within the range of variables mentioned in clause 3 for the unit, but subject to the modifications (if any) specified in column 3 of the practical flight standards table in Schedule 6.

Note For a proficiency check, the competency required of a person by a unit of competency does not require specific testing of the underpinning knowledge in Schedule 2.

14 Flight reviews — competency standards

- 14.1 The competency standards for a flight review for a flight crew rating on a licence are as set out in the Appendix in Schedule 7 that is for the rating flight review.

Note See the Table of Contents at the front of Schedule 7 to find the reference to any particular flight review.

- 14.2 For subsection 14.1, the competency standards for a flight review mentioned in an Appendix in Schedule 7 comprise the following:

- (a) the flight review requirements mentioned in the Appendix for the flight review;
- (b) the knowledge requirements mentioned in the Appendix for the flight review;
- (c) the practical flight standards mentioned in the Appendix for the flight review, but within the flight tolerances mentioned in the table in Section 1 of Schedule 8 that is for the category of aircraft (where applicable) and for the rating.

Note For paragraph (c), the aircraft category is identified in the title of the relevant table in Schedule 8, and the rating is identified in the “Applicability” clause of the relevant table.

- 14.3 For an Appendix mentioned in subsection 14.1, each unit of competency mentioned in a cell in column 2 of the practical flight standards table in the Appendix (the ***unit of competency***) has the unit code mentioned in the corresponding cell in column 1 (the ***unit code***), subject to the modification (if any) specified in column 3.
- 14.4 For subsection 14.3, the requirements of the unit of competency are set out in the document whose unit code is mentioned in the cell in column 1 that corresponds to the unit of competency.
- 14.5 For subsection 14.4, the unit coded document containing the requirements of the unit of competency is the document in Schedule 2 which has the same unit code.
- Note* See the Table of Contents at the front of Schedule 2 for an alphabetical list of unit codes.
- 14.6 For a flight review, the competency required of a person by each relevant unit of competency mentioned in Schedule 2 (the ***unit***) is the ability to perform each of the elements mentioned in clause 2 of the unit, according to the performance criteria mentioned for the element, within the range of variables mentioned in clause 3 for the unit, but subject to the modifications (if any) specified in column 3 of the practical flight standards table in Schedule 7.

Note For a flight review, the competency required of a person by a unit of competency does not require specific testing of the underpinning knowledge in Schedule 2.

Schedule 1A Dictionary of abbreviations

Abbreviation	Meaning
ACAS	Airborne collision avoidance system
ACN	Aircraft classification number
AD	Aerodrome
ADC	Air data computer
ADF	Automatic direction finder
ADIZ	Air defence identification zones.
AEL	Aviation English language
AFCS	Automatic flight control system
AFM	Aircraft flight manual
AFOR	Area forecast
AGL	Above ground level
AIC	Aeronautical information circular
AIP	Aeronautical information package
AIREP	Air report
AK	General aeronautical knowledge
ALA	Aerodromes and aeroplane landing areas
ALC	Approved load controlled
ALT	Altitude
AMP	Aerial application management plan
ANP	Actual navigation performance
AOA	Angle of attack
AOC	Air operator's certificate
AOM	Aerodrome operating manual
AP	Auto pilot
APU	Auxiliary power unit
ARS	Attitude retention system
ASI	Air speed indicator
AT	Auto throttle
ATC	Air traffic control
ATIS	Aerodrome terminal information service
ATPL	Air transport pilot licence
ATS	Air traffic service

AUW	All up weight
AVADS	Auto voice activated decision system
BAK	Basic aeronautical knowledge
BHP	Brake horsepower
CAAP	Civil Aviation Advisory Publication
CAO	Civil Aviation Order
CAS	Calibrated air speed
CASA	Civil Aviation Safety Authority
CASR 1998	<i>Civil Aviation Safety Regulations 1998</i>
CAT	Clear air turbulence
CBT	Computer-based test
CDFA	Continuous descent flight angle
CDI	Course deviation indicator
CDP	Climb descent procedure
CG	Centre of gravity
CHT	Cylinder head temperature
CP	Critical point
CPL	Commercial pilot licence
CRM	Crew resource management
CSU	Constant speed unit
CTA	Controlled airspace
CTAF	Common traffic advisory frequency
CTR	Control zone
CVR	Cockpit voice recorder
DA	Density altitude
DALR	Dry adiabatic lapse rate
DAME	Designated aviation medical examiner
DAP	Departure and approach
DFDR	Digital flight data recorder
DFE	Design feature endorsement
DME	Distance measuring equipment
EAS	Equivalent air speed
EET	Estimated elapsed time
EFIS	Electronic flight instrument system
EGT	Exhaust gas temperature

EICAS	Engine indication and crew alerting system
ELR	Environmental lapse rate
EPR	Engine pressure ratio
EPT	Effective performance time
ERC	En route chart
ERSA	En route supplement Australia
ETA	Estimated time of arrival
ETD	Estimated time of departure
ETI	Estimated time interval
ETOPS	Extended range twin operations
ETP	Equi-time point
FAE	Flight activity endorsement
FAF	Final approach fix
FD	Flight director
FIA	Flight information area
FIR	Flight information region
FMS	Flight management systems
FSTD	Flight simulation training device
g	Gravitational force
GAL	Gallon
G-LOC	G-induced loss of consciousness
GNSS	Global navigation satellite system
GPU	Ground power unit
GPWS	Ground proximity warning systems
GS	Ground speed
HDG	Heading
HF	High frequency
HLS	Helicopter landing site
HPAV	Horse power available
HPREQ	Horse power required
HUMS	Health usage monitoring system
H-V	Height-velocity
IAF	Initial approach fix
IAL	Instrument approach and landing
IAP	Instrument approach procedure

IAS	Indicated air speed
ICAO	International Civil Aviation Organization
ICTZ	Inter-tropical convergence zone
IELTS	International English language testing system
IFR	Instrument flight rules
ILS	Instrument landing system
IMC	Instrument metrological conditions
INS	Inertial navigation system
ISA	International standard atmosphere
IVSI	Instantaneous vertical speed indicator
JPT	Jet pipe temperature
KDR	Knowledge deficiency report
KG	Kilogram
KIAS	Knots indicated air speed
LA	Landing area
LB	Pound
LDA	Landing distance available
LDP	Landing decision point
LDR	Landing distance required
LG	Landing gear
LLZ	Localizer
LMT	Local mean time
LNAV	Lateral navigation
LPV	Localiser precision with vertical guidance
LRC	Long range cruise
LSALT	Lowest safe altitude
LSB	Lower side band
LTE	Loss of tail rotor effectiveness
LTR	Litre
LVC	Live, virtual and constructive (simulators)
MAC	Mean aerodynamic chord
MAPt	Missed approach point
MDA	Minimum descent altitude
MEL	Minimum equipment list
Met	Meteorology

MF	Medium frequency
MLS	Microwave landing system
MLW	Maximum landing weight
MOS	Manual of Standards
MP	Manifold pressure
MPL	Multi-crew pilot licence
MSA	Minimum sector altitude
MSL	Mean sea level
MTOW	Maximum take-off weight
MZW	Mid-zone weight
NDB	Non-directional beacon
NGT	Night
NM	Nautical mile
NOTAM	Notice to Airmen
NPA	Non precision approach
NVFR	Night visual flight rules
NVG	Night vision goggles
NVIS	Night vision imaging system
OAT	Outside air temperature
OCTA	Outside controlled airspace
OEI	One engine inoperative
OGE	Out of ground effect
OH&S	Occupational health and safety
PAL	Pilot-activated lighting
PAPI	Precision approach path indicator
PBN	Performance based navigation
PCN	Pavement classification number
PEC	Pressure error correction
PF	Pilot flying
PIF	Private instrument flight
PIFR	Private IFR rating
PIO	Pilot induced oscillation
PM	Pilot monitoring
PNR	Point of no return
POH	Pilot operating handbook
PPL	Private pilot licence

PRD	Prohibited/restricted/danger areas
PUS	Permissible unserviceability
RA	Resolution advisory
RAF	Relative air flow
RAIM	Receiver autonomous integrity monitoring
RFM	Rotorcraft flight manual
RMI	Remote magnetic indicator
RNAV	Route navigation
RNP	Required navigation performance
ROC	Rate of climb
ROD	Rate of descent
RPL	Recreational pilot licence
RPM	Revolutions per minute
RRPM	Rotor rpm
RT	Radio transmission
RVR	Runway visual range
RVSM	Reduced vertical separation minima
SALR	Saturated adiabatic lapse rate
SAR	Search and rescue
SARTIME	Search and rescue time
SARWATCH	Search and rescue watch
SAS	Stability augmentation system
SID	Standard instrument departure
SIGWX	Significant weather
SOP	Standard operating procedures
SSB	Single side band
SSR	Secondary surveillance radar
STAR	Standard arrival route
TA	Traffic advisory
TAF	Terminal area forecast
TAS	True air speed
TAT	Total air temperature
TCAS	Traffic collision avoidance system
TEM	Threat error management
TGT	Turbine gas temperature

THP	Thrust horsepower
TIT	Turbine inlet temperature
TMG	Track made good
TODA	Take-off distance available
TODR	Take-off distance required
TOEFL CBT	Test of English as a foreign language computer-based test
TOEFL IBT	Test of English as a foreign language internet-based test
TOEFL PB	Test of English as a foreign language paper-based test
TOEIC	Test of English for international communication
TR	Track
TTF	Trend type forecast
TWS	Take-off warning system
UAS	Undesired aircraft states
UHF	Ultra high frequency
USB	Upper side band
UTC	Universal time coordinate
VASI	Visual approach slope indicator
VFR	Visual flight rules
VHF	Very high frequency
VIS	Visibility
VMC	Visual metrological conditions
VMO	Velocity maximum operating
VNAV	Vertical navigation
VNE	Velocity never exceed
VNO	Velocity normal operating
VOLMET	Metrological information for aircraft in flight
VOR	Very high-frequency omni-directional range
VS	Vertical speed
VSI	Vertical speed indicator
VTC	Visual terminal chart
W/V	Wind velocity
WAAS	Wide area augmentation system
WAC	World aeronautical chart
WX	Weather
ZFW	Zero fuel weight

Schedule 1 Directory of units of competency and units of knowledge

The following Table of Contents and Index of Competency Unit codes are for guidance only and are not part of the Schedule.

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Section B General**Language proficiency****Appendix B.1 General English language proficiency****Standards**

Unit code	Unit of competency
GEL	General English language proficiency

Appendix B.2 Aviation English language proficiency**Standards**

Unit code	Unit of competency
AEL	Aviation English language proficiency

Multi-crew cooperation**Appendix B.3 Multi-crew cooperation (MCC)****Aeronautical knowledge standards**

Unit code	Unit of competency
AHFC	ATPL Human factors

See relevant underpinning knowledge in the Unit of competency

Practical flight standards

Unit code	Unit of competency
MCO	Manage flight during multi-crew operations

Airborne Collision Avoidance System (ACAS)**Appendix B.4 Airborne Collision Avoidance System (ACAS)****Aeronautical knowledge standards – reserved****Practical flight standards**

Unit code	Unit of competency
CAS	Operate Airborne Collision Avoidance System (ACAS)

Aeronautical radio operator (CASR Part 64)**Appendix B.5 Aeronautical radio operator (CASR Part 64)****Aeronautical knowledge standards**

Unit code	Unit of competency
RARO	Aeronautical radio operation

Practical flight standards

Unit code	Unit of competency
C3	Operate aeronautical radio

Section G Recreational pilot licence (RPL)

Appendix G.1 Aeroplane category rating (RPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
RMTC	RPL Meteorology
PHFC	PPL Human factors
RBKA	Basic aeronautical knowledge – aeroplane

Practical flight standards – aeroplane category rating

Unit code	Unit of competency
C1	Communicating in the aviation environment
C2	Perform pre- and post-flight actions and procedures
C4	Manage fuel
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
A1	Control aeroplane on the ground
A2	Take-off aeroplane
A3	Control aeroplane in normal flight
A4	Land an aeroplane
A5	Aeroplane advanced manoeuvres
A6	Manage abnormal situations – single-engine aeroplanes
IFF	Instrument flight full panel

Appendix G.2 Helicopter category rating (RPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
PHFC	PPL Human factors
RBKH	Basic aeronautical knowledge – helicopter

Practical flight standards – helicopter category

Unit code	Unit of competency
C1	Communicating in the aviation environment

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
C4	Manage fuel
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
H1	Control helicopter on the ground – stationary
H2	Control helicopter in lift-off, hover and landing
H3	Taxi helicopter
H4	Take-off helicopter and approach to hover
H5	Control helicopter in normal flight
H6	Control helicopter during advanced manoeuvres
H7	Manage abnormal situations and emergencies – helicopter

Appendix G.3 Gyroplane category rating (RPL) – *Reserved*

Appendix G.4 Airship category rating (RPL) – *Reserved*

Appendix G.5 Controlled aerodrome endorsement

Practical flight standards

Unit code	Unit of competency
CTR	Operate at a controlled aerodrome

Appendix G.6 Controlled airspace endorsement

Practical flight standards

Unit code	Unit of competency
CTA	Operate in controlled airspace

Appendix G.7 Flight radio endorsement

Aeronautical knowledge standards

Unit code	Unit of competency
RARO	Aeronautical radio operation

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment

Unit code	Unit of competency
C3	Operate aeronautical radio

Appendix G.8 Recreational navigation endorsement

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment
IFF	Full instrument panel manoeuvres
NAV	Navigate aircraft
ONTA	Operate at non-towered aerodrome
OGA	Operate in Class G airspace

Section H Private pilot licence (PPL)

Appendix H.1 Aeroplane category rating (PPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
RMTC	RPL Meteorology
PHFC	PPL Human factors
RBKA	Basic aeronautical knowledge – aeroplane
PAKC	PPL Aeronautical knowledge
PFRC	PPL Flight rules and air law
PHFC	PPL Human factors
PNVC	PPL Navigation
PMTC	PPL Meteorology
POPC	PPL Ops, performance and planning
PAKA	PPL Aeronautical knowledge – aeroplane
PFRA	PPL Flight rules and air law – aeroplane
POPA	PPL Ops, performance and planning – aeroplane

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C4	Manage fuel
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NAV	Navigate aircraft
A1	Control aeroplane on the ground
A2	Take off
A3	Control aeroplane in normal flight
A4	Land an aeroplane
A5	Aeroplane advanced manoeuvres
A6	Manage abnormal situations – single-engine aeroplanes
IFF	Instrument flight full panel
RNE	Radio navigation – en route

Unit code	Unit of competency
ONTA	Operate at non-towered aerodrome
OGA	Operate in Class G airspace
OCA	Operate at a controlled aerodrome
CTA	Operate in controlled airspace

Appendix H.2 Helicopter category rating (PPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
PHFC	PPL Human factors
RBKH	Basic aeronautical knowledge – helicopter
PAKC	PPL Aeronautical knowledge
PFRC	PPL Flight rules and air law
PHFC	PPL Human factors
PNVC	PPL Navigation
PMTC	PPL Meteorology
POPC	PPL Ops performance and planning
PAKH	PPL Aeronautical knowledge – helicopter
PFRH	PPL Flight rules and air law – helicopter
POPH	PPL Ops, performance and planning – helicopter

Practical flight standards

Unit code	Unit of competency
C1	Communicating in aviation environment
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C4	Manage fuel
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NAV	Navigate aircraft
H1	Control helicopter on the ground – stationary
H2	Control helicopter in lift-off, hover and landing
H3	Taxi helicopter
H4	Take-off helicopter and approach to hover

Unit code	Unit of competency
H5	Control helicopter in normal flight
H6	Control helicopter during advanced manoeuvres
H7	Manage abnormal situations and emergencies – helicopter
IFF	Instrument flight full panel
RNE	Radio navigation – en route
ONTA	Operate at non-towered aerodrome
OGA	Operate in Class G airspace
OCA	Operate at a controlled aerodrome
CTA	Operate in controlled airspace

Appendix H.3 Powered-lift category rating (PPL) – Reserved**Appendix H.4 Gyroplane category rating (PPL) – Reserved****Appendix H.5 Airship category rating (PPL) – Reserved**

Section I Commercial pilot licence (CPL)

Appendix I.1 Aeroplane category rating (CPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
RMTC	RPL Meteorology
PHFC	PPL Human factors
RBKA	Basic aeronautical knowledge – aeroplane
PAKC	PPL Aeronautical knowledge
PFRC	PPL Flight rules and air law
PHFC	PPL Human factors
PNVC	PPL Navigation
PMTC	PPL Meteorology
POPC	PPL Ops, performance and planning
PAKA	PPL Aeronautical knowledge – aeroplane
PFRA	PPL Flight rules and air law – aeroplane
POPA	PPL Ops, performance and planning – aeroplane
CAKC	CPL Aeronautical knowledge
CADC	CPL Aerodynamics
CFRC	CPL Flight rules and air law
CHFC	CPL Human factors
CNVC	CPL Navigation
CMTC	CPL Meteorology
COPC	CPL Ops, performance and planning
CAKA	CPL Aeronautical knowledge – aeroplane
CADA	CPL Aerodynamics – aeroplane
CFRA	CPL Flight rules and air law – aeroplane
COPA	CPL Ops, performance and planning – aeroplane

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C4	Manage fuel
C5	Manage passengers and cargo

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NAV	Navigate aircraft
A1	Control aeroplane on the ground
A2	Take-off aeroplane
A3	Control aeroplane in normal flight
A4	Land aeroplane
A5	Aeroplane advanced manoeuvres
A6	Manage abnormal situations – single-engine aeroplanes
IFF	Instrument flight full panel
IFL	Limited instrument panel manoeuvres
RNE	Radio navigation – en route
ONTA	Operate at non-towered aerodrome
OGA	Operate in Class G airspace
OCA	Operate at a controlled aerodrome
CTA	Operate in controlled airspace

Appendix I.1 Helicopter category rating (CPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
PHFC	PPL Human factors
RBKH	Basic aeronautical knowledge – helicopter
PAKC	PPL Aeronautical knowledge
PFRC	PPL Flight rules and air law
PHFC	PPL Human factors
PNVC	PPL Navigation
PMTC	PPL Meteorology
POPC	PPL Ops performance and planning
PAKH	PPL Aeronautical knowledge – helicopter
PFRH	PPL Flight rules and air law – helicopter
POPH	PPL Ops, performance and planning – helicopter
CAKC	CPL Aeronautical knowledge
CADC	CPL Aerodynamics
CFRC	CPL Flight rules and air law

Unit code	Unit of knowledge
CHFC	CPL Human factors
CNVC	CPL Navigation
CMTC	CPL Meteorology
COPC	CPL Ops, performance and planning
CAKH	CPL Aeronautical knowledge – helicopter
CADH	CPL Aerodynamics – helicopter
CFRH	CPL Flight rules and air law – helicopter
COPH	CPL Ops, performance and planning – helicopter

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C4	Manage fuel
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NAV	Navigate aircraft
H1	Control helicopter on the ground – stationary
H2	Control helicopter in lift-off, hover and landing
H3	Taxi helicopter
H4	Take-off helicopter and approach to hover
H5	Control helicopter in normal flight
H6	Control helicopter during advanced manoeuvres
H7	Manage abnormal situations and emergencies – helicopter
IFF	Instrument flight full panel
IFL	Limited instrument panel manoeuvres
RNE	Radio navigation – en route
ONTA	Operate at non-towered aerodrome
OGA	Operate in Class G airspace
OCA	Operate at a controlled aerodrome
CTA	Operate in controlled airspace

Appendix I.3 Powered-lift category rating (CPL) – *Reserved***Appendix I.4 Gyroplane category rating (CPL) – *Reserved*****Appendix I.5 Airship category rating (CPL) – *Reserved***

Section J Multi crew Pilot Licence (MPL)**Appendix J.1 Aeroplane category rating (MPL)****Aeronautical knowledge standards**

Unit code	Unit of knowledge
BAKC	Basic aeronautical knowledge
RFRC	RPL Flight rules and air law
RMTC	RPL Meteorology
PHFC	PPL Human factors
RBKA	Basic aeronautical knowledge – aeroplane
PAKC	PPL Aeronautical knowledge
PFRC	PPL Flight rules and air law
PHFC	PPL Human factors
PNVC	PPL Navigation
PMTC	PPL Meteorology
POPC	PPL Ops, performance and planning
PAKA	PPL Aeronautical knowledge – aeroplane
PFRA	PPL Flight rules and air law – aeroplane
POPA	PPL Ops, performance and planning – aeroplane
CAKC	CPL Aeronautical knowledge
CADC	CPL Aerodynamics
CFRC	CPL Flight rules and air law
CHFC	CPL Human factors
CNVC	CPL Navigation
CMTC	CPL Meteorology
COPC	CPL Ops, performance and planning
CAKA	CPL Aeronautical knowledge – aeroplane
CADA	CPL Aerodynamics – aeroplane
CFRA	CPL Flight rules and air law – aeroplane
COPA	CPL Ops, performance and planning – aeroplane
AAGC	ATP Aircraft general knowledge – common
AAGA	ATP Aircraft general knowledge – aeroplane
AFRC	ATP Flight rules and air law – common
AFRA	ATP Flight rules and air law – aeroplane
AHFC	ATP Human factors
ANVC	ATP Navigation – common
ANVA	ATP Navigation – aeroplane

Unit code	Unit of knowledge
AMTC	ATP Meteorology – common
AMTA	ATP Meteorology – aeroplane
AFPC	ATP Flight planning – common
AFPA	ATP Flight planning – aeroplane
APLC	ATP Performance and loading – common
APLA	ATP Performance and loading – aeroplane
IREX	Instrument rating

Practical flight standards

Unit code	Unit of competency
C1	Communicating in the aviation environment
C3	Operate aeronautical radio
C2	Perform pre- and post-flight actions and procedures
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
C5	Manage passengers and cargo
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NAV	Navigate aircraft
RNE	Radio navigation – en route
MCO	Manage flight during multi-crew operations
CIR	Conduct an IFR flight
TR-MEA	Type rating multi-engine aeroplane
IAP2	Conduct an instrument approach 2D
IAP3	Conduct an instrument approach 3D

Section K Air transport pilot licence (ATPL)

Appendix K.1 Aeroplane category rating (ATPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
AAGC	ATP Aircraft general knowledge – common
AAGA	ATP Aircraft general knowledge – aeroplane
AFRC	ATP Flight rules and air law – common
AFRA	ATP Flight rules and air law – aeroplane
AHFC	ATP Human factors
ANVC	ATP Navigation – common
AMTC	ATP Meteorology – common
AFPC	ATP Flight planning – common
AFPA	ATP Flight planning – aeroplane
APLC	ATP Performance and loading – common
APLA	ATP Performance and loading – aeroplane
IREX	Instrument rating

Practical flight standards

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
RNE	Radio navigation – en route
MCO	Manage flight during multi-crew operations
CIR	Conduct an IFR flight
IAP2	Conduct an instrument approach 2D
IAP3	Conduct an instrument approach 3D
TR-MEA	Type rating multi-engine aeroplane

Appendix K.2 Helicopter category rating (ATPL)

Aeronautical knowledge standards

Unit code	Unit of knowledge
AAGC	ATP Aircraft general knowledge – common
AAGH	ATP Aircraft general knowledge – helicopter
AFRC	ATP Flight rules and air law – common
AFRH	ATP Flight rules and air law – helicopter
AHFC	ATP Human factors
ANVC	ATP Navigation – common
AMTC	ATP Meteorology – common
AFPC	ATP Flight planning – common
AFPH	ATP Flight planning – helicopter
APLC	ATP Performance and loading – common
APLH	ATP Performance and loading – helicopter

Practical flight standards

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio
C5	Manage passengers and cargo
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NAV	Navigate aircraft
RNE	Radio navigation – en route
MCO	Manage flight during multi-crew operations
HSE	Helicopter single-engine class/type rating
HME	Helicopter multi-engine type rating

Appendix K.3 Powered-lift category rating (ATPL) – Reserved

Section L Aircraft ratings and endorsements

Pilot class ratings and design feature endorsements

Appendix L.1 Single-engine aeroplane class rating

Practical flight standards

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
C4	Manage fuel
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
A1	Control aeroplane on the ground
A2	Take-off aeroplane
A3	Control aeroplane in normal flight
A4	Land aeroplane
A5	Aeroplane advanced manoeuvres
A6	Manage abnormal situations – single-engine aeroplanes

Appendix L.2 Single-engine helicopter class rating

Practical flight standards

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
C4	Manage fuel
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
H1	Control helicopter on the ground – stationary
H2	Control helicopter in lift-off, hover and landing
H3	Taxi helicopter
H4	Take-off helicopter and approach to hover
H5	Control helicopter in normal flight
H6	Control helicopter during advanced manoeuvres
H7	Manage abnormal situations and emergencies – helicopter

Appendix L.3 Single-engine gyroplane class rating

Practical flight standards

Unit code	Unit of competency
GSE	Gyroplane single engine
NTS1	Non-technical skills 1

NTS2	Non-technical skills 2
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Appendix L.4 Multi-engine aeroplane class rating

Practical flight standards

Unit code	Unit of competency
C2	Perform pre- and post-flight actions and procedures
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
A1	Control aeroplane on the ground
A2	Take off
A3	Control aeroplane in normal flight
A4	Land aeroplane
A5	Aeroplane advanced manoeuvres
IFF	Instrument flight full panel
AME	Operate multi-engine aeroplane

Design feature endorsements

Appendix L.5 Tailwheel undercarriage endorsement

Practical flight standards

Unit code	Unit of competency
DFE1	Tailwheel aeroplane

Appendix L.6 Retractable undercarriage endorsement

Practical flight standards

Unit code	Unit of competency
DFE2	Retractable undercarriage

Appendix L.7 Manual propeller pitch control endorsement

Practical flight standards

Unit code	Unit of competency
DFE3	Manual propeller pitch control

Appendix L.8 Gas turbine engine endorsement

Practical flight standards

Unit code	Unit of competency
DFE4	Gas turbine engine

Appendix L.9 Multi-engine Centreline thrust endorsement**Practical flight standards**

Unit code	Unit of competency
DFE5	Multi-engine centreline thrust aeroplane

Appendix L.10 Pressurisation system endorsement**Practical flight standards**

Unit code	Unit of competency
DFE6	Pressurisation system

Appendix L.11 Floating hull endorsement**Practical flight standards**

Unit code	Unit of competency
DFE7	Floating hull

Appendix L.12 Floatplane endorsement**Practical flight standards**

Unit code	Unit of competency
DFE8	Floatplane and amphibious aircraft

Appendix L.13 Float alighting gear endorsement**Practical flight standards**

Unit code	Unit of competency
DFE9	Helicopter float alighting gear

Pilot type ratings**Appendix L.14 Single-engine aeroplane type rating****Aeronautical knowledge standards**

Unit code	Unit of knowledge
TYPA	Type rating – single-engine aeroplane

Practical flight standards

Unit code	Unit of competency
TR-SEA	Type rating – single-engine aeroplane
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2

Appendix L.15 Single-engine helicopter type rating**Aeronautical knowledge standards**

Unit code	Unit of knowledge
TYPH	Type rating – helicopter

Practical flight standards

Unit code	Unit of competency
TR-SEH	Type rating single-engine helicopter
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2

Appendix L.16 Multi-engine aeroplane type rating**Aeronautical knowledge standards**

Unit code	Unit of knowledge
TYPA	Type rating – aeroplane

Practical flight standards

Unit code	Unit of competency
AME	Operate multi-engine aeroplane
TR-MEA	Type rating – multi-engine aeroplane
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2

Appendix L.17 Multi-engine helicopter type rating**Aeronautical knowledge standards**

Unit code	Unit of knowledge
TYPH	Type rating – helicopter

Practical flight standards

Unit code	Unit of competency
TR-MEH	Type rating multi-engine helicopter
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2

Appendix L.18 Cruise relief aeroplane type rating**Aeronautical knowledge standards**

Unit code	Unit of knowledge
TYPA	Type rating – aircraft

Practical flight standards

Unit code	Unit of competency
CRT	Cruise relief type rating
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2

Section M Instrument rating and endorsements

Appendix M.1 Instrument rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
IREX	Instrument rating
GNSS	Basic GNSS and en route GNSS navigation principles

Appendix M.2 Single-engine aeroplane instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
CIR	Conduct an IFR flight
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR – single-engine aircraft
IAP2	Conduct an instrument approach 2D

Appendix M.3 Multi-engine aeroplane instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
CIR	Conduct an IFR flight
NVR1	Conduct a traffic pattern at night
NVR3	Night VFR – multi-engine aircraft
IAP2	Conduct an instrument approach 2D

Appendix M.4 Single-engine helicopter instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
CIR	Conduct an IFR flight
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR – single-engine aircraft
IAP2	Conduct an instrument approach 2D

Appendix M.5 Multi-engine helicopter instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
CIR	Conduct an IFR flight
NVR1	Conduct a traffic pattern at night
NVR3	Night VFR – multi-engine aircraft
IAP2	Conduct an instrument approach 2D

Appendix M.6 Powered-lift aircraft instrument endorsement – *Reserved*

Appendix M.7 Gyroplane instrument endorsement – *Reserved*

Appendix M.8 Airship instrument endorsement – *Reserved*

Appendix M.9 IAP 2D instrument endorsement**Practical flight standards**

Unit code	Unit of competency
IAP2	Conduct an instrument approach 2D

Appendix M.10 IAP 3D instrument endorsement**Practical flight standards**

Unit code	Unit of competency
IAP3	Conduct an instrument approach 3D

Section N Private instrument ratings and endorsements

Appendix N.1 Private instrument ratings (PIFR)

Aeronautical knowledge standards

Unit code	Unit of knowledge
PIFR	Private IFR rating
GNSS	Basic GNSS and en route GNSS navigation principles

Appendix N.2 Single-engine aeroplane private instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
PIF	Conduct a private IFR flight

Appendix N.3 Multi-engine aeroplane private instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
PIF	Conduct a private IFR flight

Appendix N.4 Single-engine helicopter private instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
PIF	Conduct a private IFR flight

Appendix N.5 Multi-engine helicopter private instrument endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
PIF	Conduct a private IFR flight

Appendix N.6 Navigation – NDB private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.7 Navigation – VOR/LLZ private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.8 Navigation – GNSS private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.9 Departure – Single-engine aircraft private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.10 Departure – Multi-engine aeroplane private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.11 Departure – Multi-engine helicopter private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.12 Standard instrument departure private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.13 STAR private instrument endorsement

Practical flight standards

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.14 Approach – NDB private instrument endorsement

Practical flight standards

Unit code	Unit of competency
IAP2	Conduct an instrument approach 2D

Appendix N.15 Approach – VOR/LLZ private instrument endorsement

Practical flight standards

Unit code	Unit of competency
IAP2	Conduct an instrument approach 2D

Appendix N.16 Approach – DME or GNSS Arrival private instrument endorsement

Practical flight standards

Unit code	Unit of competency
IAP2	Conduct an instrument approach 2D

Appendix N.17 Approach – RNP APCH 2D private instrument endorsement

Practical flight standards

Unit code	Unit of competency
IAP2	Conduct an instrument approach 2D

Appendix N.18 Approach – RNP APCH 3D private instrument endorsement**Practical flight standards**

Unit code	Unit of competency
IAP3	Conduct an instrument approach 3D

Appendix N.19 Approach – ILS private instrument endorsement**Practical flight standards**

Unit code	Unit of competency
IAP3	Conduct an instrument approach 3D

Appendix N.20 Approach and landing – multi-engine aeroplane private instrument endorsement**Practical flight standards**

Unit code	Unit of competency
PIF	Conduct a private IFR Flight

Appendix N.21 Approach and landing – multi-engine helicopter private instrument endorsement**Practical flight standards**

Unit code	Unit of competency
PIF	Conduct a private IFR flight

Appendix N.22 Night private instrument endorsement**Practical flight standards**

Unit code	Unit of competency
PIF	Conduct a private IFR flight
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR — single-engine aircraft
NVR3	Night VFR — multi-engine aircraft

Section O Night VFR (NVFR) rating and endorsements

Appendix O.1 NVFR rating

Aeronautical knowledge standards – Reserved

Appendix O.2 Single-engine aeroplane NVFR endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR — single-engine aircraft

Appendix O.3 Multi-engine aeroplane NVFR endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NVR1	Conduct a traffic pattern at night
NVR3	Night VFR — multi-engine aircraft

Appendix O.4 Helicopter NVFR endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR – single-engine aircraft

Appendix O.5 Powered-lift aircraft NVFR endorsement – Reserved

Appendix O.6 Gyroplane NVFR endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
IFF	Full instrument panel manoeuvres
IFL	Limited instrument panel manoeuvres
NVR1	Conduct a traffic pattern at night
NVR2	Night VFR — single-engine aircraft

Appendix O.7 Airship NVFR endorsement – *Reserved*

Section P Night vision imaging system (NVIS) rating and endorsements

Appendix P.1 NVIS rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
NVIS	NVIS rating

Appendix P.2 Grade 1 NVIS endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NVI	NVIS operation

Appendix P.3 Grade 2 NVIS endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NVI	NVIS operation

Section Q Low-level rating and endorsements

Appendix Q.0 Low-level rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
LLLR	Low-level rating

Appendix Q.1 Aeroplane low-level endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-A	Aeroplane low-level operations

Appendix Q.2 Helicopter low-level endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations

Appendix Q.3 Powered-lift aircraft low-level endorsement – *Reserved*

Appendix Q.4 Gyroplane low-level endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-G	Gyroplane low-level operations

Appendix Q.5 Aerial mustering – aeroplane endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-A	Aeroplane low-level operations
LL-M	Aerial mustering operations

Appendix Q.6 Aerial mustering – helicopter endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations
LL-M	Aerial mustering operations

Appendix Q.7 Aerial mustering – gyroplane endorsement – *Reserved***Appendix Q.8 Sling operations endorsement****Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations
LL-SO	Sling operations

Appendix Q.9 Winch and rappelling operations endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations
LL-WR	Winch and rappelling operations

Section R Aerial application rating and endorsements

Appendix R.0 Aerial application rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
AAGR	Aerial application rating

Appendix R.1 Aeroplane aerial application endorsement

Aeronautical knowledge standards

Unit code	Unit of knowledge
AAGA	Aerial application rating — aeroplane

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-A	Aeroplane low-level operations
AA1	Aeroplane aerial application operation

Appendix R.2 Helicopter aerial application endorsement

Aeronautical knowledge standards

Unit code	Unit of knowledge
AAGH	Aerial application rating — helicopter

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations
AA2	Helicopter aerial application operation

Appendix R.3 Gyroplane aerial application endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
AA3	Gyroplane aerial application operation

Appendix R.4 Aeroplane firefighting endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-A	Aeroplane low-level operations
AA4	Aeroplane firefighting operation

Appendix R.5 Helicopter firefighting endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
LL-H	Helicopter low-level operations
AA5	Helicopter firefighting operation

Appendix R.6 Night aeroplane aerial application endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NVR2	Night VFR – single-engine aircraft
AA6	Night aerial application operation

Appendix R.7 Night helicopter aerial application endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NVR2	Night VFR – single-engine aircraft
AA6	Night aerial application operation

Appendix R.8 Night gyroplane aerial application endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
NVR2	Night VFR — single-engine aircraft
AA6	Night aerial application operation

Section S Flight activity endorsements

Appendix S.1 Aerobatics flight activity endorsement

Practical flight standards

Unit code	Unit of competency
FAE-2	Aerobatics — 3,000 ft AGL
FAE-8	Spinning

Appendix S.2 Aerobatics (1,500) flight activity endorsement

Practical flight standards

Unit code	Unit of competency
FAE-2	Aerobatics — 3,000 ft AGL
FAE-3	Aerobatics — 1,500 ft AGL
FAE-8	Spinning

Appendix S.3 Aerobatics (1,000) flight activity endorsement

Practical flight standards

Unit code	Unit of competency
FAE-2	Aerobatics — 3,000 ft AGL
FAE-3	Aerobatics — 1,500 ft AGL
FAE-4	Aerobatics — 500 ft AGL
FAE-8	Spinning

Appendix S.4 Aerobatics (500) flight activity endorsement

Practical flight standards

Unit code	Unit of competency
FAE-2	Aerobatics — 3,000 ft AGL
FAE-3	Aerobatics — 1,500 ft AGL
FAE-4	Aerobatics — 500 ft AGL
FAE-8	Spinning

Appendix S.5 Aerobatics (unlimited) flight activity endorsement

Practical flight standards

FAE-2	Aerobatics — 3,000 ft AGL
FAE-3	Aerobatics — 1,500 ft AGL
FAE-4	Aerobatics — 500 ft AGL
FAE-5	Aerobatics — Unlimited

F AE-8	Spinning
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Appendix S.6 Formation flying (aeroplane) flight activity endorsement

Practical flight standards

Unit code	Unit of competency
F AE-6	Formation flying aeroplane

Appendix S.7 Formation aerobatics flight activity endorsement

Practical flight standards

Unit code	Unit of competency
F AE-2	Aerobatics — 3,000 ft AGL
F AE-6	Formation flying aeroplane
F AE-7	Aerobatics (formation)
F AE-8	Spinning

Appendix S.8 Spinning flight activity endorsement

Practical flight standards

Unit code	Unit of competency
F AE-8	Spinning

Appendix S.9 Formation flying (helicopter) flight activity endorsement

Practical flight standards

Unit code	Unit of competency
F AE-9	Formation flying helicopter

Section T Pilot instructor rating and endorsements

Flight instructor rating

Appendix T.01 Flight instructor ratings

Aeronautical knowledge standards

Unit code	Unit of knowledge
FIRC	Instructor rating — common

Simulator instructor rating

Appendix T.02 Simulator instructor rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
FIRC	Instructor rating — common

Practical flight standards

Unit code	Unit of competency
SIR	Conduct training in a synthetic training device
FIR7	Conduct flight review

Training endorsements

Appendix T.1 Grade 1 training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.2 Grade 2 training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct a flight review

Appendix T.3 Grade 3 training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.3A Grade 3 training endorsement (aeroplane)

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.4 Multi-crew pilot training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR9	Multi-crew training endorsement

Appendix T.5 Type rating training endorsement (type specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR9	Multi-crew training endorsement

Appendix T.6 Multi-engine aeroplane training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.7 Design feature endorsement training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.8 Instrument rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.9 Night VFR rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.10 NVIS rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.11 Low-level rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.12 Aerial application rating (day) training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.13 Aerial application rating (night) training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.14 Instructor rating training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.15 Multi-engine aeroplane class rating instructor training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.16 Sling operations training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.17 Winch and rappelling operations training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FIR7	Conduct flight review

Appendix T.18 Spinning training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.19 Aerobatics training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.20 Formation (aeroplane) training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.21 Formation (helicopter) training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.22 Formation aerobatics training endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Appendix T.23 Glider towing training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Section U Flight examiner rating and endorsements

Appendix U.0 Flight Examiner Rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
FERC	Flight examiner rating – common

Appendix U.1 Private pilot licence flight test endorsement (category-specific)

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.2 Commercial pilot licence flight test endorsement (category-specific)

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.3 Air transport pilot flight test endorsement (category-specific)

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.4 Multi-engine aeroplane class rating flight test endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.5 Type rating flight test endorsement (type-specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.6 Instrument rating flight test endorsement (category-specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.7 Night VFR rating flight test endorsement (category-specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.8 NVIS flight test endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.9 Low-level rating flight test endorsement (category-specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

**Appendix U.10 Aerial application rating flight test endorsement
(category-specific)****Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.11 Flight instructor rating flight test endorsement (category-specific)**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FER	Conduct a flight test

Appendix U.12 English language assessment endorsement — Reserved

Section V Flight engineer licence, ratings and endorsements

Appendix V.1 Flight engineer licence

Aeronautical knowledge standards

Unit code	Unit of competency
FFRC	FE Flight rules and air law — all aircraft categories
FAGC	FE Aircraft general knowledge — all aircraft categories
AHFC	ATPL Human factors
RARO	RPL Aeronautical radio operator
CAKA	CPL Aeronautical knowledge — aeroplane
CMTC	CPL Meteorology — all aircraft categories

Practical flight standards

Unit code	Unit of competency
AEL	Aviation English language proficiency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
C2	Perform pre- and post-flight actions and procedures
C3	Operate aeronautical radio

Section W Flight engineer type rating**Appendix V.2 Flight engineer type rating****Aeronautical knowledge standards**

Unit code	Unit of competency
TYP A	Type rating

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FTM	Flight engineer type rating — all categories

Section X Flight engineer instructor rating**Appendix X.0 Flight engineer instructor rating****Aeronautical knowledge standards**

Unit code	Unit of knowledge
FIRC	Instructor rating — common

Appendix X.1 Flight engineer type rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
SIR	Conduct training in a synthetic training device

Appendix X.2 Flight engineer instructor rating training endorsement**Practical flight standards**

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
SIR	Conduct training in a synthetic training device

Section Y Flight engineer examiner rating and endorsements

Appendix Y.0 Flight engineer examiner rating

Aeronautical knowledge standards

Unit code	Unit of knowledge
FERC	Flight examiner rating — common

Appendix Y.1 Flight engineer type rating flight test endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FER	Conduct a flight test
SIR	Conduct training in a synthetic training device

Appendix Y.2 Flight engineer instructor rating flight test endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training
FER	Conduct a flight test
SIR	Conduct training in a synthetic training device

Appendix Y.3 Flight engineer examiner rating flight test endorsement

Practical flight standards

Unit code	Unit of competency
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
FIR1	Conduct aeronautical knowledge training
FIR2	Assess competence
FIR3	Conduct flight training

Unit code	Unit of competency
FER	Conduct a flight test
SIR	Conduct training in a synthetic training device

Appendix Y.4 English language assessment endorsement — *Reserved*

Section Z Glider pilot licence**Appendix Z.1 Glider pilot licence****Practical flight standards**

Unit code	Unit of competency
G1	Control glider on the ground
G2	Take-off glider
G3	Control glider in normal flight
G4	Land glider
G5	Glider advanced manoeuvres
G6	Manage abnormal situations and emergencies — gliders
G7	Navigation — gliders
NTS1	Non-technical skills 1
NTS2	Non-technical skills 2
PPF-G	Perform pre- and post-flight actions and procedures — gliders