

RPC Flight Test/Review Oral

Introduction

This document provides information on subjects that are likely to be asked in the oral portion of a Flight Test or Flight Review for the issue or renewal of the Recreational Pilot Certificate (RPC) under the Recreational Aviation Australia (RAAus).

The information is provided in the format of a question, answer, references and links in the format below.

Question?
Answer
References
Links

Questions which are of importance to have a deep understanding are annotated with a red triangle symbol.

Question? 
Answer
References
Links

Supplied answers that describe the process to *derive the answer* (not the answer itself) have a light grey background.

Question?
Answer (process to derive the answer)
References
Links

Questions that are specific to an aircraft or engine type are annotated in a yellow font. Answer only those questions that are for your training aircraft or engine type.

Sling 2: Question?
Answer
References
Links

An applicant for RPC Flight Test or Review is typically not expected to have a thorough understanding of all the subjects outlined in this document to achieve a satisfactory result. Subjects which are not in this document may be reviewed during a RPC Flight Test or Review.

Good luck and study hard!

What are the drug & alcohol regulations?

CASR1998 91.520 (2)(b)

A crew member of an aircraft for a flight contravenes this subregulation if:

- (i) the crew member consumes alcohol at any time during the period of 8 hours ending when the flight begins; or
- (ii) if a test of a body sample of the crew member to determine the level of alcohol in the sample was taken at the time of carrying out the duty the test would reveal that the permitted level for alcohol (within the meaning of Part 99) is exceeded.

"permitted level" means:

- (a) for a testable drug a level of the drug specified in subregulation (2A) for the purposes of this paragraph; and
- (b) for alcohol a level of alcohol of less than 0.02 grams of alcohol in 210 litres of breath.

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Drugs and alcohol
- CASR1998 91.520 Crew members to be fit for duty
- CASR1998 91.525 Offensive or disorderly behaviour on aircraft
- CASR1998 91.780 Passengers—alcohol
- CASR1998 91.785 Crew—provision of alcohol
- CASR1998 91.790(1) Prohibiting person affected by psychoactive substances from boarding
- CASR1998 99.010 Definitions for “permitted level”
- CASR1998 99.010 Definitions for “applicable SSAA”
- CASR1998 99.015 SSAAs to which this Part applies
- CASR1998 99.115 Who may be drug or alcohol tested
- CASR1998 99.160 Initial drug test
- CASR1998 99.165 If initial drug test result is not positive
- CASR1998 99.170 If initial drug test result is positive
- CASR1998 Subpart 99.C—Drug and alcohol testing by CASA
- CASR 1998 Part 1 Definitions (*permitted level*)

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>
- CASR1998 Part 99
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part99.pdf>
- CASR 1998 Parts 1,2,3
https://air-law.systemf.com.au/extract/casr1998/casr1998-part1_part2_part3.pdf

What are the minimum VFR aircraft instrument requirements?

An aeroplane for a VFR flight by day must be fitted with equipment for measuring and displaying the following flight information:

- indicated airspeed
- pressure altitude
- magnetic heading
- time
- Mach number – but only for an aeroplane with operating limitations expressed in terms of Mach number
- turn and slip – but only for an aeroplane conducting an aerial work operation
- outside air temperature – but only for an aeroplane conducting an aerial work operation from an aerodrome at which ambient air temperature is not available from ground-based instruments.

Requirements:

- Pressure Altitude must:
 - have an adjustable datum scale calibrated in millibars or hPa
 - be calibrated in ft, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be calibrated in metres, or fitted with a conversion placard or device.
- Magnetic heading must be:
 - a direct reading magnetic compass; or
 - both:
 - a remote indicating compass; and
 - a standby direct reading magnetic compass.
- Time must:
 - display accurate time in hours, minutes and seconds.
 - Must be:
 - fitted to the aircraft; or
 - worn by, or immediately accessible to, the pilot for the duration of the flight.

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Aircraft equipment
- CASR1998 Part 91 Manual of Standards Chapter 26 Equipment

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR1998 Part 91 Manual of Standards Chapter 26 Equipment
https://air-law.systemf.com.au/extract/casr1998/part91-manual-of-standards/casr1998-part91-manual-of-standards-part91-manual-of-standards_chapter26-equipment.pdf

What are the Visual Meteorological Conditions minima in different airspace classes?

- Class C ≤ 10000 ft AMSL
 - cloud vertical separation ≥ 1000 ft
 - cloud horizontal separation ≥ 1500 m
 - lateral visibility ≥ 5000 m
 - *see also Special VFR*
- Class D ≤ 10000 ft AMSL
 - cloud above vertical separation ≥ 500 ft
 - cloud below vertical separation ≥ 1000 ft
 - cloud horizontal separation ≥ 600 m
 - lateral visibility ≥ 5000 m
 - *see also Special VFR*
- Class G ≤ 3000 ft AMSL or ≤ 1000 ft AGL
 - cloud vertical separation, clear of cloud
 - cloud horizontal separation, clear of cloud
 - lateral visibility ≥ 5000 m
- Class G > 3000 ft AMSL and ≤ 10000 ft AMSL
 - cloud vertical separation ≥ 1000 ft
 - cloud horizontal separation ≥ 1500 m
 - lateral visibility ≥ 5000 m
- Special VFR
 - by day when VMC do not exist, by pilot request, special VFR clearance
 - will not unduly delay an IFR flight
 - can remain clear of cloud
 - lateral visibility ≥ 1600 m

- CASA Visual Flight Rules Guide (VFRG) Chapter 3 Visual flight rules
- CASR1998 Part 91 Manual of Standards Chapter 2 Definition of VMC Criteria

- CASA VFRG Chapter 3
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter3.pdf
- CASR1998 Part 91 Manual of Standards Chapter 2 Definition of VMC Criteria
https://air-law.systemf.com.au/extract/casr1998/part91-manual-of-standards/casr1998-part91-manual-of-standards-part91-manual-of-standards_chapter2-prescriptions-for-certain-definitions-in-the-casr-dictionary.pdf

What are the low flying regulations?

Over a populous area or a public gathering, the aeroplane must be flown 1000ft above the highest feature or obstacle within a horizontal radius of 600m of the point on the ground or water immediately below the aeroplane.

Over any other area, the aeroplane must be flown 500ft above the highest feature or obstacle within a horizontal radius of 300m of the point on the ground or water immediately below the aeroplane.

Exceptions are:

- the aircraft is taking off or landing
- the aircraft is engaged in a missed approach
- the aircraft:
 - is not carrying passengers; and
 - is engaged in a practice emergency procedure at an aerodrome
- or, the aircraft:
 - is not over a populous area or public gathering; and
 - is not carrying passengers; and
 - is engaged in a practice forced landing procedure with the consent of the person or authority having control over the land or water above which the procedure is carried out;
- the aircraft is performing training circuits at an aerodrome
- the pilot holds an approval for the purposes of regulation 91.180 (*air displays*)

“Populous area”: in relation to a flight by an aeroplane, means an area where, if the aeroplane’s engine failed, the aeroplane would not be able to glide safely clear of any occupied building.

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Minimum height rules
- CASR1998 137.010 Definitions for “populous area”
- CASR1998 91.265 Minimum height rules–populous areas and public gatherings
- CASR1998 91.267 Minimum height rules–other areas

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>
- CASR1998 Part 137
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part137.pdf>

What is a prohibited, restricted and danger area?

Prohibited, Restricted and Danger (PRD) areas fall under Special Use Airspace (SUA) as specified in the ERSA.

- Prohibited area: airspace within which the flight of aircraft is prohibited.
- Restricted area: airspace within which the flight of aircraft is restricted in accordance with specific conditions.
- Danger area: airspace within which activities dangerous to the flight of aircraft may exist at specified times.
- CASA Visual Flight Rules Guide (VFRG) Chapter 3 Prohibited, restricted and danger areas
- En Route Supplement of Australia (ERSA) Special Use Airspace (SUA)

- CASA VFRG Chapter 3
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter3.pdf
- ERSA Special Use Airspace
https://air-law.systemf.com.au/extract/aip/ersa/ersa_sua.pdf

What are the requirements for carrying emergency equipment?

When undertaking a flight more than 50 NM radius from the aerodrome of departure, you must carry a serviceable Emergency Locator Transmitter (ELT).

Exceptions:

- flights wholly within 50 NM of the aerodrome of departure
- single-seat aircraft
- a flight for the purposes of:
 - the aircraft's manufacture
 - preparing or delivery of the aircraft following the purchase or transfer of the operator
 - positioning of an Australian aircraft from a location outside Australia to any place at which any ELTs required to be fitted to the aircraft will be registered with AMSA
- an aircraft fitted with a radio or otherwise to alert and continuously communicate to an appropriate person relating to the emergency on the ground during the flight.
- the flight is for the purpose of moving the aircraft to a place to have an approved ELT fitted to the aircraft, or to have an approved ELT that is fitted to it repaired, removed, or overhauled, provided that:
 - an entry has been made in the aircraft's logbook stating the ELT make, model and serial number together with the date it was removed and the reason for doing so
 - a placard stating 'ELT not installed or carried' has been placed in a position visible to the pilot, and
 - not more than 90 days have passed since the ELT was removed.

A life jacket must be carried for each person on board if the aircraft flies over water beyond a distance from which it could reach and area of land

suitable as a forced landing area if the engine failed.

An aircraft must carry enough life rafts for each person being carried whenever the aircraft is operated more than the shorter of:

- the distance the aircraft would fly in 30 minutes at its normal cruising speed in still air
- 100 NM.

A flight where more than 1 life raft is carried to comply with requirements must:

- be fitted with an automatic ELT and carry a survival ELT; or
- carry at least 2 survival ELTs.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Flights over water
- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Emergency locator transmitter (ELT)
- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Life rafts
- CASR1998 Part 91 Manual of Standards Chapter 26 Equipment
- Civil Aviation Order (CAO) 95.55 (Exemptions from CAR and CASR – Certain Light Sport Aircraft, Lightweight Aeroplanes and Ultralight Aeroplanes)

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf
- CASR1998 Part 91 Manual of Standards Chapter 26 Equipment
https://air-law.systemf.com.au/extract/casr1998/part91-manual-of-standards/casr1998-part91-manual-of-standards-part91-manual-of-standards_chapter26-equipment.pdf
- CAO 95.55
<https://air-law.systemf.com.au/cao/cao95.55.pdf>

Perform a Weight and Balance for today's flight

Using the Pilot Operating Handbook (POH) for your aircraft, perform a Weight and Balance calculation for your flight.

CASR1998 91.805

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight begins the aircraft is loaded in a way that contravenes the aircraft's weight and balance limits.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight, the aircraft ceases to be operated in accordance with the aircraft's weight and balance limits.

- CASR1998 91.805 Loading of aircraft

- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>
- Briefing: Weight and Balance
<https://www.systemf.com.au/p/presentations/weight-and-balance/>

What is the fuel reserve required for today's flight?

30 minutes for day VFR in an aeroplane with a MTOW \leq 5700kg, plus any additional fuel prescribed by the flight school operations.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Fuel requirements
- CASR1998 Part 91 Manual of Standards Chapter 19 Fuel Requirements
- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf
- CASR1998 Part 91 Manual of Standards Chapter 19 Fuel Requirements
https://air-law.systemf.com.au/extract/casr1998/part91-manual-of-standards/casr1998-part91-manual-of-standards-part91-manual-of-standards_chapter19-fuel-requirements.pdf

What are the regulations relating to fuelling aircraft?

- During fuelling operations, the aircraft and ground fuelling equipment shall be so located that no fuel tank filling points or vent outlets lie:
 - within 5 metres (17 ft) of any sealed building; and
 - within 6 metres (20 ft) of other stationary aircraft
 - within 15 metres (50 ft) of any exposed public area
 - within 9 metres (30 ft) of any unsealed building in the case of aircraft with a maximum take-off weight not exceeding 5 700 kg (12 566 lb)
 - a sealed building is one which all the external part within 15 metres (50 ft) of an aircraft's fuel tank filling points or vent outlets or ground fuelling equipment is of non-flammable materials and has no openings or all openings are closed.
- The pilot in command must ensure that there is no person, who is not a crew member of the aircraft, is on the aircraft, is boarding the aircraft or disembarking the aircraft.
- A person must not operate equipment or electronic device within 15 metres of a critical fuelling point of an aircraft.
- The aircraft and the equipment used to fuel the aircraft must be electrically bonded.
- Two or more fire extinguishers must be on the fuelling equipment or positioned at a distance of not less than 6 metres and not more than 15 metres from the aircraft fuelling point and must be readily available for use by the person.
- A fire hazard must not be created within 15 metres of the aircraft or the equipment used to fuel the aircraft.
- If fuel vapour is detected during fuelling, the the fuelling operation must discontinue.

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Fuelling
- CASR1998 91.470 Fire hazards
- CASR1998 91.475 Fuelling aircraft—fire fighting equipment
- CASR1998 91.480 Fuelling aircraft—electrical bonding
- CASR1998 91.485 Equipment or electronic devices operating near aircraft
- CASR1998 91.510 Fuelling aircraft—persons on aircraft, boarding or disembarking
- CASR1998 91.515 Fuelling aircraft if fuel vapour detected
- Civil Aviation Order (CAO) 20.9 Section 4 Fuelling of aircraft

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>
- CAO 20.9
<https://air-law.systemf.com.au/cao/cao20.9.pdf>

When must a seat belt be worn?

At least one qualified and competent pilot must occupy a seat with the seatbelt securely fastened at all times.

Each flight crew member must occupy their station and have their seatbelt and shoulder harness securely fastened during take-off, landing or at any other time directed by the Pilot in Command.

The pilot and the operator must not assign a seat (or berth) that is not fitted with a seatbelt or shoulder harness.

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Seating and carriage of persons, cargo, animals and firearms
- CASR1998 91.545 Seating for persons on aircraft
- CASR1998 91.550 Seating for flight crew members
- CASR1998 91.570 Passengers—safety directions by pilot in command

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>

What is the meaning of NCD, FEW, SCT, BKN, OVC, NSC, CAVOK?

- NCD: No Cloud Detected
- FEW: 1 to 2 OKTAS
- SCT: 3 to 4 OKTAS (Scattered)
- BKN: 5 to 7 OKTAS (Broken)
- OVC: 8 OKTAS (Overcast)
- NSC: Nil Significant Cloud
- OKTA is a fraction of the sky covered by cloud expressed in eighths
- CAVOK: Cloud and visibility OK
 - visibility of 10 km or more
 - nil significant cloud, that is, no cloud below 5,000 ft or below the highest 25 NM minimum sector altitude, whichever is greater, and no cumulonimbus or towering cumulus at any height, and
 - nil significant weather.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Meteorology
- CASR1998 Part 91 Manual of Standards Chapter 1 Preliminary

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf
- CASR1998 Part 91 Manual of Standards Chapter 1 Preliminary
https://air-law.systemf.com.au/extract/casr1998/part91-manual-of-standards/casr1998-part91-manual-of-standards-part91-manual-of-standards_chapter1-preliminary.pdf

What are the conditions on today's METAR and TAF reports?

- METAR are routine reports of meteorological conditions at an aerodrome. METAR are normally issued on the hour and half hour.
- Aerodrome forecasts (TAF) are a statement of meteorological conditions expected for the specified period in the airspace within a radius of 8km (4.31NM) of the aerodrome reference point.

Using the NAIPS Internet Service, obtain and interpret the METAR and TAF information for your aerodrome.

- Airservices Australia NAIPS Internet Service
- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Aerodrome forecasts and reports

- Airservices Australia NAIPS Internet Service
<https://www.airservicesaustralia.com/naips/>
- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

What is a six-figure group?

A six-figure group is a time format consisting of six digits ABCDEF:

- AB: The date of the month
- CD: The hour
- EF: The minute

The timezone for a six-figure group is Zulu.

For example, the six-figure group 250100 indicates the time 1am (Zulu) on the 25th of the current month. The six-figure group is used in METAR and TAF reports.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Time

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

At what validity periods are GAFs issued?

GAFs are issued with the 6-hour validity periods:

- 2300Z – 0500Z
- 0500Z – 1100Z
- 1100Z – 1700Z
- 1700Z – 2300Z

GAFs are issued no later than 30 minutes before the commencement of the validity period of the first GAF.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Graphical area forecasts (GAF)

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

How many images are available on a GAF?

At each GAF issue, two GAFs are issued covering a total of 12 hours validity.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Graphical area forecasts (GAF)

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

What do the rows mean in each grid-point in a Grid Point Wind Forecast?

Each grid in a GPWT contains six rows, indicating three values at different flight levels. The three values are:

- Wind direction in tens of a degree, relative to True north
- Wind speed in knots
- Temperature in degrees celsius

The six flight levels in each grid-point are:

- 14000ft
- 10000ft
- 7000ft
- 5000ft
- 2000ft
- 1000ft

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Grid point wind and temperature (GPWT) forecasts

- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

What is magnetic variation?

Magnetic variation is the difference between the true north (also known as geographic north) and magnetic north. True north is where lines of longitude converge. Magnetic north is where a magnetic compass points. Magnetic north varies depending on location, and so the variation between true and magnetic north also varies depending on location.

In other words, true north is the direction pointing to the northern intersection with the Earth surface of its rotational axis. Magnetic north is the direction that a magnetic compass will point north at a given location, and this direction will vary for a given location due to the Earth's magnetic field. Magnetic variation is the difference between the true north and magnetic north for a given location.

- Read *Basic Aeronautical Knowledge (BAK)* text book on Magnetic Variation

What is the magnetic variation at your home airport?

The magnetic variation for an airport is provided in the ERSA Facilities document for that airport. The variation is specified in an amount of degrees either east (E) or west (W) toward the top of the document.

For example, at Brisbane Archerfield Airport (YBAF), the magnetic variation is "11 degrees east."

BRISBANE/ARCHERFIELD		ELEV 65	
AVFAX CODE 4002			
QLD		UTC +10	YBAF
273413S	1530029E	VAR 11 DEG E	CERT

Figure 1: screenshot of ERSA Facilities document for YBAF

This means that a compass at Brisbane Archerfield Airport pointing north is pointing to 011° true north.

- Read *Basic Aeronautical Knowledge (BAK)* text book on Magnetic Variation
- En Route Supplement Australia (ERSA) Facilities

- ERSA Facilities
https://air-law.systemf.com.au/extract/aip/ersa/ersa_fac.pdf

Are runway headings relative to true or magnetic north?

Runway headings are relative to magnetic north in tens of degrees. For example, the direction of Runway 28 is approximately 280°M. When on final for Runway 10 in nil wind, your magnetic compass should read within 5° of 100°.

The precise runway direction can often be found in the ERSA Facilities document for the airport. For example, Runway 28R at Brisbane Archerfield Airport has a heading of 277°M.

- Read *Basic Aeronautical Knowledge (BAK)* text book on Runways
- En Route Supplement Australia (ERSA) Facilities

- ERSA Facilities
https://air-law.systemf.com.au/extract/aip/ersa/ersa_fac.pdf



What is situational awareness?

Situational awareness is the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future.

citation: Naderpour, Mohsen, Jie Lu, and Etienne Kerre. "A conceptual model for risk-based situation awareness." Foundations of Intelligent Systems. Springer, Berlin, Heidelberg, 2011. 297-306.

- Read Basic Aeronautical Knowledge (BAK) text book on Human Factors: Situational Awareness

When is last civil twilight today at your home airport?

Last civil twilight can be found, for a given location, by two different methods:

Using the latitude/longitude and the charts in the CASA Visual Flight Rules Guide, calculate last civil twilight.

Using the Airservices NAIPS Internet Service, enter the latitude/longitude (or airport code), which will provide the first and last civil twilight for that location.

- CASA Visual Flight Rules Guide (VFRG) Chapter 2 Daylight and darkness
- Airservices Australia NAIPS Internet Service

- Airservices Australia NAIPS Internet Service
<https://www.airservicesaustralia.com/naips/>
- CASA VFRG Chapter 2
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter2.pdf

What is the meaning of the International Standard Atmosphere (ISA)?

The International Standard Atmosphere (ISA) is a standard datum for reference against which to compare the actual atmosphere.

Air pressure at sea-level: 1013.25 hPa (*approximated to 1013 hPa*)

Outside Air Temperature at sea-level: +15°C

Outside Air Temperature lapse rate: +1.98°C per 1000ft

Air Density at sea-level: 1.225 kg/m³

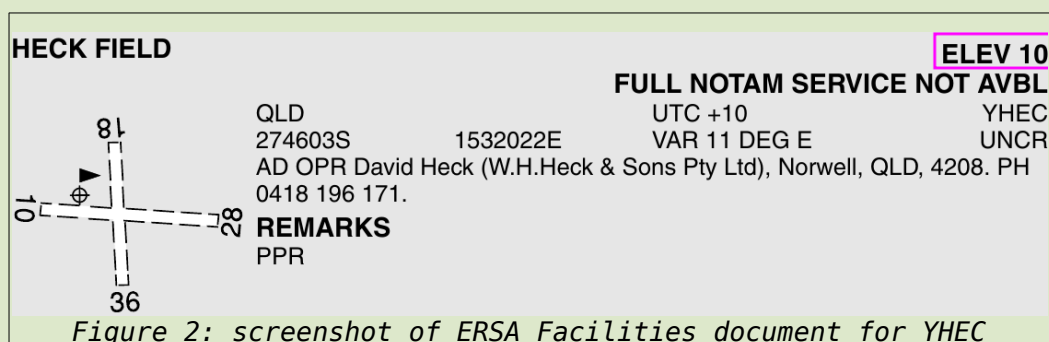
- Read Basic Aeronautical Knowledge (BAK) text book on International Standard Atmosphere

What is the pressure altitude at your home airport with a QNH of: [1020, 1009, 1013, 1014]?

The pressure altitude is the altitude that would be indicated on an altimeter if the subscale is set to the ISA air pressure (1013 hPa). If the QNH for a given time and location is 1013 hPa, then the pressure altitude is the same as the field elevation. An altimeter indicates an increase/decrease of approximately 30ft per 1 hPa increase/decrease in the QNH. Therefore, if the QNH for a given time and location is 1015 hPa, then the altimeter reads the field elevation with the subscale setting 1015. Decreasing the subscale by 2 hPa to 1013, the altimeter will read the field elevation minus 60ft and the would now read the pressure altitude.

The pressure altitude is a measurement for use in calculating performance in runway take-off and landing distance. A higher pressure altitude indicates lower performance (longer runway distance required). Therefore, a higher QNH and lower field elevation indicates higher performance.

The elevation for an airport can be found in the ERSA Facilities document for that airport. For example, the field elevation at Heckfield (YHEC) airport is 10ft.



Given a field elevation (ele) and QNH (q), the pressure altitude (PA) can be calculated as follows:

- $PA(q) = (1013 - q) \times 30 + ele$
- $PA(1020) = (1013 - 1020) \times 30 + ele = -270 + ele$
- $PA(1009) = (1013 - 1009) \times 30 + ele = 120 + ele$
- $PA(1013) = (1013 - 1013) \times 30 + ele = ele$
- $PA(1014) = (1013 - 1014) \times 30 + ele = -30 + ele$

• Read *Basic Aeronautical Knowledge (BAK)* text book on Pressure Altitude

- Pressure Altitude from QNH and Elevation online practice drills
<https://www.systemf.com.au/p/software/practice/pressure-altitude/>

What is a carburettor and what does it do?

- A carburetor is a device that mixes air and fuel for internal combustion engines to a desired air and fuel ratio for combustion.
 - Carburetor heat redirects air flow from an alternate air intake vent that passes by a heat exchange (often, the exhaust manifold), to assist in melting ice that may have built up in the carburetor throat/intake
 - Fuel tank vents equalise the outside pressure with the pressure inside the fuel tank. This prevents tank rupturing and assists in the flow of fuel from the tank to the fuel system for the engine.
- *Read Basic Aeronautical Knowledge (BAK) text book on Aircraft Systems (Engines)*

What is the minimum medical standard for RPC?

Applicants for the issue of a Certificate are required to have a health standard equivalent to that required for the issue of a private motor vehicle driver licence in Australia.

Any conditions or restrictions that apply to a member's driver licence or medical certificate must also be complied with when operating a recreational aircraft.

Forward to RAAus Headquarters:

- a signed RAAus medical declaration that they meet the health standard, or an RAAus approved equivalent; or
- if an applicant's medical status includes one of the following conditions, the person must provide RAAus with a statement from their doctor (GP) of meeting the health standard, or provide a copy of a valid motor vehicle or heavy vehicle General Medical Assessment Report from an Australian road and transport authority, whatever called, or provide a copy of the CASA Recreational Aviation Medical Practitioner's Certificate (RAMPC) or higher medical certificate;
 - Epilepsy; or
 - Diabetes (Type 1 or 2); or
 - A heart condition / disease or paralysis; or
 - Mental illness (medicated or otherwise); or
 - Becoming 75 years of age or older; or
 - Any other medically significant safety related condition.

- RAAus Operations Manual 2.01 Pilot Certificate – Group A and B
- RAAus Operations Manual 2.06 Student or Converting Pilot Certificate
- RAAus Operations Manual 2.07 Pilot Certificate – Group A and B
- RAAus Operations Manual 2.16 Medical Requirements

- RAAus Operations Manual 2.01
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.01-pilot-certificate-group-a-and-b.pdf
- RAAus Operations Manual 2.06
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.06-student-or-converting-pilot-certificate.pdf
- RAAus Operations Manual 2.07
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.07-pilot-certificate-group-a-and-b.pdf
- RAAus Operations Manual 2.16
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.16-medical-requirements.pdf

What is the minimum aeronautical experience to obtain RPC?

Prior to undertaking a flight test for the issue of a Group A or B Pilot Certificate, an applicant must:

- have completed a minimum of 20 hours flying training, including no less than 5 hours as pilot in command, in a recreational aircraft of the same Group in which the flight test is to be conducted; and
 - passed theory examinations specified in Section 3.03 of the RAAus Operations Manual; or
 - if having recognised flight time or qualifications, satisfy the requirements of Section 2.13 paragraphs 5 - 7 inclusive of the RAAus Operations Manual.
- RAAus Operations Manual 2.07 Pilot Certificate – Group A and B (Aeronautical Experience)

- RAAus Operations Manual 2.07
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.07-pilot-certificate-group-a-and-b.pdf

How often must a RPC holder perform a flight review?

Every 24 months (2 years)

- RAAus Operations Manual 2.01 Pilot Certificate – Group A and B

- RAAus Operations Manual 2.01
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.01-pilot-certificate-group-a-and-b.pdf

What are the minimum requirements to exercise the privileges and limitations of the RPC?

A Pilot Certificate authorises the holder to act as pilot in command of a recreational aeroplane when:
the requirements of Section 2.01 of the manual are met in respect of:

- medical fitness
- valid membership of the RAAus
- flight review currency
- pilot recency
- the aeroplane is of the same Group shown on the Pilot Certificate
- the pilot ensures their competency to operate the aeroplane type

In order to act as pilot in command of a recreational aeroplane at a distance greater than 25 nautical miles from the original point of departure a Pilot Certificate holder must hold a RAAus Cross Country (X) Endorsement. Note: Consecutive flights of 25 nautical miles do not comply with this requirement.

- RAAus Operations Manual 2.01 Pilot Certificate – Group A and B
- RAAus Operations Manual 2.06 Student or Converting Pilot Certificate
- RAAus Operations Manual 2.07 Pilot Certificate – Group A and B

- RAAus Operations Manual 2.01
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.01-pilot-certificate-group-a-and-b.pdf
- RAAus Operations Manual 2.06
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.06-student-or-converting-pilot-certificate.pdf
- RAAus Operations Manual 2.07
https://raaus-documentation.systemf.com.au/RAAus-Flight-Operations-Manual-issue712_2.07-pilot-certificate-group-a-and-b.pdf

What documents are required to be carried in flight?

- For each flight crew member:
 - the member's medical certificate; and
 - the member's flight crew licence or certificate of validation
- For each flight crew member, either:
 - a photographic identification document issued by a Commonwealth, State or Territory authority or agency; or
 - the member's passport
- The aircraft flight manual instructions for the aircraft
- If the aircraft is fitted with computerised navigation equipment—the operating instructions for the equipment
- any minimum equipment list for the aircraft
- For a flight ≥ 50 NM from the point of departure
 - the authorised aeronautical information for the flight
 - the flight technical log of maintenance release for the aircraft

- CASA Visual Flight Rules Guide (VFRG) Chapter 1 Documents to be carried
- CASR Part 91 General Operating and Flight Rules Plain English Guide (General Rules)
- CASR1998 91.100 Electronic documents
- CASR1998 91.105 Carriage of documents
- CASR1998 91.110 Carriage of documents for certain flights

- CASA VFRG Chapter 1
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter1.pdf
- CASR Part 91 General Operating and Flight Rules Plain English Guide (General Rules)
https://casa-documentation.systemf.com.au/plain-english-guide-part-91-new-flight-operations-regulations-print-version_general_rules.pdf
- CASR1998 Part 91
<https://air-law.systemf.com.au/extract/casr1998/casr1998-part91.pdf>

What special procedures apply at YKRY?

Using the ERSA Facilities document for Kingaroy aerodrome:

- Shared Glider operations on Runway 05/23
- Right hand circuits RWY 34 (H24)

- En Route Supplement Australia (ERSA) Facilities

- ERSA Facilities
https://air-law.systemf.com.au/extract/aip/ersa/ersa_fac.pdf

What does CTAF mean?

Common Traffic Advisory Frequency

At non-controlled aerodromes published on aeronautical charts, when you are operating in the vicinity of these aerodromes, you are to use 126.7 MHz or the discrete CTAF frequency as published on the chart.

- CASA Visual Flight Rules Guide (VFRG) Chapter 3, Common traffic advisory frequency (CTAF)
- CASA Visual Flight Rules Guide (VFRG) Chapter 8, Appendix: Abbreviations and Acronyms
- CASA Advisory Circular AC 91-10 Operations in the vicinity of non-controlled aerodromes

- CASA VFRG Chapter 3
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_chapter3.pdf
- CASA VFRG Chapter 8, Appendix: Abbreviations and Acronyms
https://casa-documentation.systemf.com.au/visual-flight-rules-guide_appendix_abbreviations_acronyms_definitions.pdf
- CASA AC 91-10
<https://air-law.systemf.com.au/advisory-circular/ac-91-10.pdf>

What is an example of a radio call at a uncontrolled aerodrome?

Read CASA Advisory Circular AC 91-10 Operations in the vicinity of non-controlled aerodromes, Chapter 8 Radio calls and usage (reports and broadcasts)

- CASA Advisory Circular AC 91-10 Operations in the vicinity of non-controlled aerodromes

- CASA AC 91-10
<https://air-law.systemf.com.au/advisory-circular/ac-91-10.pdf>

What is a private operation?

A private operation is the operation of an aircraft that is not one of the following:

- an operation under Part 119 (Australian air transport)
- an operation under Part 129 (Foreign air transport operator)
- an operation under Part 131 (Balloons and hot airships)
- an operation that is required to be conducted under the authority of an aerial work certificate under Part 138 (Aerial work operations)
- Part 141 flight training
- Part 142 flight training
- adventure flight for a limited category aircraft
- specialised balloon operation that is conducted for hire or reward
- an operation authorised by a New Zealand AOC with ANZA privileges that is in force for Australian operation under a permission under subsection 25(2) or (3) (non-scheduled flights by foreign registered aircraft) or section 27A (permission for operation of foreign registered aircraft without AOC) of the Act
- CASR 1998 Part 1 Definitions (*private operation*)

- CASR 1998 Parts 1,2,3
https://air-law.systemf.com.au/extract/casr1998/casr1998-part1_part2_part3.pdf

Sling 2: What is the Vne speed?

135 KIAS (Never exceed speed)

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the Vno speed?

110 KIAS (Maximum structural cruising speed)

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the Va speed?

91 KIAS (Maneuvering speed)

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Document Metadata

hosted at: <https://system-f.gitlab.io/documentation/flight-testing>
source hosted at: <https://gitlab.com/system-f/documentation/flight-testing>
last updated at time: 2025-07-07 00:55:37 UTC by Tony Morris <tonymorris@gmail.com>
revision: 31c6ab33d5a748dc2b6aa9319637f1314793e6ae
access control: public

Sling 2: What is the Vfe speed?

85 KIAS (Maximum flap extended speed)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the Vh speed?

116 KIAS (Maximum speed in level flight)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the Vs speed?

46 KIAS (Stall speed at MAUW)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the Vs0 speed?

42 KIAS (Stall speed with flaps)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What are the load factor limits (no flaps)?

+4g -2g

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What are the load factor limits (flaps)?

2g -1g

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum baggage weight?

35kg

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum angle of bank?

60°

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum engine speed?

5800RPM for 5 minutes

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum continuous engine speed?

5500RPM

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the total fuel capacity?

150 litres (2 x 75 litres)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the usable fuel capacity?

146 litres (2 x 73 litres)

- Sling 2 Pilot Operating Handbook
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: Draw the fuel system

Include

- Fuel tanks
- Fuel selector
- Fuel filter
- Electric fuel pump
- Mechanical fuel pump
- Fuel flow sensor
- Fuel pressure sensor
- Carburettors

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum demonstrated crosswind for take-off and landing?

15 knots

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the service ceiling?

12000ft

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Sling 2: What is the maximum take-off weight?

600 kg

- Sling 2 Pilot Operating Handbook

- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf

Eurofox 3K: What is the Vne speed?

124 KIAS (Never exceed speed)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the Va speed?

95 KIAS (Maneuvering speed)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the Vfe speed?

85 KIAS (Maximum flap extended speed)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the Vs speed?

43 KIAS (Stall speed at MAUW)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the Vs0 speed?

36 KIAS (Stall speed with flaps)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What are the load factor limits (no flaps)?

+4g -2g

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What are the load factor limits (flaps)?

+2g 0g

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum baggage weight?

20 kg

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum angle of bank?

60°

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum engine speed?

5800RPM for 5 minutes

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum continuous engine speed?

5500RPM

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the total fuel capacity?

85 litres (2 x 40 litres, 1 x 5 litres)

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the usable fuel capacity?

83 litres

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: Draw the fuel system

Include

Fuel tanks

Fuel drain valve

Fuel valves (x3)

Fuel filter

Electric fuel pump

Engine driven (mechanical) fuel pump

Carburettors

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum demonstrated crosswind for take-off and landing?

15 knots

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the service ceiling?

14760ft

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Eurofox 3K: What is the maximum take-off weight?

560 kg

- Eurofox 3K Pilot Operating Handbook
- Eurofox 3K Pilot Operating Handbook
<https://www.systemf.com.au/p/documentation/aircraft/manual/eurofox-3k-aircraft-manual/>

Rotax 912ULS: Describe the engine type and configuration

- Rotax 912ULS
 - four-stroke
 - naturally-aspirated, horizontally-opposed, 4 cylinder
 - centre camshaft with overhead valves
 - water-cooled cylinder heads, air-cooled cylinders
 - dry-sump oil lubrication
 - dual, electronic and capacitor flywheel magneto
 - Maximum power: 100hp
 - Maximum continuous power: 94hp
- Sling 2 Pilot Operating Handbook
 - Rotax Engine 912 Series Operators Manual
- Sling 2 Pilot Operating Handbook
https://system-f.gitlab.io/aircraft/manual/sling-2/Sling-2-POH-2.3-RSA-operating_handbook.pdf
 - Rotax Engine 912 Series Operators Manual
<https://www.systemf.com.au/p/documentation/aircraft/manual/rotax-912-manual/>