



# Open Aviation Solutions

## Crosswind Circuits – In-flight Notes

*CASA Recreational Pilot License (Aeroplane) – Lesson 19*

# Language choices

***"into-wind aileron"*** rather than "upwind" or "into crosswind" – more precise and consistent.

***"track the centreline"*** not "fly toward the runway" – distinguishes ground track from heading.

***"align with rudder"*** when removing a crab at the flare – not "straighten up."

***"go around"*** – say it early, without hesitation, and without explanation needed.

## Demonstration-Performance

For the sequence of each activity, choose whether you use:

- Demonstration-Performance: Explain, Demonstrate, Performance and Monitor, Evaluation
- DDM: Demonstrate, Direct, Monitor

or some other preference. Each in-flight activity just describes the sequence to be demonstrated and performed, regardless of the method you use.

# Before starting the plane

- Confirm today's AWIS / ATIS: wind direction \_\_\_\_\_ ° at \_\_\_\_\_ kt; crosswind component \_\_\_\_\_ kt
- Confirm crosswind within aircraft, operator, and personal limits
- Check fuel – C4.3 applies today: student observes or performs refuel as required
- Confirm go-around threshold agreed in the pre-flight brief

| Record | Start | End |
|--------|-------|-----|
|--------|-------|-----|

Tacho

Maintenance

Time

## During taxi

- During taxi, point out the **windsock** and note the crosswind direction
- Brief the upcoming circuit: "You'll see the aircraft drift toward downwind on the crosswind leg — we'll apply a heading correction to square it up. Same as previous circuits, just more deliberate."
- Check weather and AWIS for any change since pre-flight if necessary

# Crosswind take-off

## Sequence

- Line up on the runway centreline
- Apply **full into-wind aileron** before power
- Smoothly apply full power; maintain centreline with rudder
- During roll – **gradually reduce aileron** as speed and control effectiveness build
- At rotate speed – allow aircraft to fly off; **do not force early liftoff**
- After liftoff – **establish crab angle** into wind to track runway extended centreline
- Climb-out: track the centreline; note heading required vs runway heading

# Crosswind circuit and approach

## Sequence

- **Crosswind leg** — turn from upwind; adjust heading to track square across the runway
- **Downwind** — apply heading offset to track parallel to runway; note wind effect on groundspeed
- **Final turn** — turn **earlier** if the wind is pushing you toward the runway on base, **later** if it is pushing you away; watch the aim point
- **Final** — engine-assisted approach required in crosswind conditions; establish **crab** (heading into wind, wings level) to track the centreline; note the windsock before turning final

## Approach and landing

- Crab to track centreline; resist the temptation to align with the runway heading too early
- In the flare: **apply rudder smoothly to align the nose with the runway**, and **drop the upwind wing slightly** to hold the centreline; touch down on the upwind wheel first (align earlier → more wing-low; align later → less)
- At touchdown: aircraft tracking **straight down the runway**; nose wheel firmly on the ground for directional control
- Landing roll: **rudder and brakes to prevent weathervaning; increase into-wind aileron** as speed falls; full aileron by taxi speed
- If approach is not stabilised, or at threshold in doubt — **go around**

# Go-around in a crosswind

## Sequence

- Decide early – call it at the threshold, not after
- **Full power** – simultaneously
- **Maintain runway heading** briefly, then **crab to track centreline** on climb-out
- Retract flap as appropriate to speed
- Call on CTAF: re-join circuit
- Debrief before next approach: what triggered the go-around, and what would change

# Engine failure after take-off (simulated) – review

## Sequence

- During initial climb, at a pre-briefed point – instructor closes throttle
- Student confirms **power failure**, calls: "Engine failure – landing ahead"
- **Lower nose** – maintain airspeed
- **Best landing area** – select straight ahead or within 30° (no turn back below circuit height)
- If passengers: **brace position**, harness security brief (A6.1g – standard 3)
- At safe height – restore power; climb away; debrief.



# Engine failure in the circuit area (simulated) – review

## Sequence

- During circuit (downwind or base), instructor closes throttle
- Student confirms power failure; assesses position relative to runway
- **Configure for glide** – best glide speed; carb heat
- **Call position and intention** on CTAF
- Brief passengers: flight situation, brace position, harness (A6.2g – standard 3)
- Adjust circuit as needed to reach runway threshold
- At safe height – restore power; climb away; debrief. Or if engine out landing safe, land or touch-and-go.

# Radio – non-standard situations

CASA performance criteria C1.2b and C1.2l: communicate effectively in **stressful or non-standard situations**.

Brief the student before the circuit:

- What to say if a go-around is called at short notice
- What to say if EFATO is practised and you need to declare intentions
- Position report format for the aerodrome used today: \_\_\_\_\_

*Standard phraseology first; plain English if standard doesn't fit the situation.  
The key is **communicating your position and intentions clearly**.*

## Final circuit – full-stop landing

- Announce "last circuit" to the student; brief who is handling the landing
- Check windsock for any wind change since the session began
- Fly a normal full-stop landing (instructor or student as agreed)
- After clearing the runway: student taxi back to parking
- Shutdown and debrief: crosswind component achieved, best circuit, what to consolidate