# Stalling — In-flight Notes

*CASA Recreational Pilot License (Aeroplane) — Lesson 5*

# Language choices

> "***ease forward***" *rather than push down or forward.*

> "***reduce angle of attack***" *— reinforce the concept, not just the action.*

# 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 HASELL will be called before every stalling exercise

# After departing / established in the climb

- During transit to the training area, climb to established safe height for recovery by 3000 ft AGL
- Brief the slow flight coming up: "We'll slow the aircraft down to approach speed and just above the stall — you'll feel the controls become mushy. That's normal."

# Slow flight at approach speed (flaps retracted)

## Sequence

- Note control effectiveness at normal cruise
- Configure aeroplane for slow cruise - 10kt above stall
- maintain level slow cruise with power and attitude
- Note the control effectiveness at slow cruise
- Recover normal cruise
  - power up,
  - balance with rudder,
  - attitude and trim

# Slow flight — approach configuration (flaps extended)

## Sequence

- Configure aeroplane for slow cruise, check speed and extend flaps
- maintain level slow cruise (10 knots above stall) with power and attitude
- Note the control effectiveness at slow cruise
- Recover normal cruise
  - power up,
  - balance with rudder,
  - retract flaps when sufficient speed
  - attitude and trim

# Stall from straight and level — recovery without power

## Sequence - 200-300 ft loss of altitude

- HASELL - include carb heat check
- Power to idle, carb heat
- Maintain height with elevator, balance with rudder, ailerons neutral
- Note stall symptoms: airspeed sound, stall warning, shuddering, high nose
- Check attitude indicator
- When nose drops - Recover:
  - Ease nose forward, lower angle of attack
  - Prevent yaw and roll with rudder,
  - At safe speed, level wings with aileron
  - Once in a normal glide, full power, carb heat cold and regain altitude

# Stall from straight and level — recovery with full power

## Sequence - Approx 50 ft loss of altitude

- HASELL - include carb heat check
- Power to idle, carb heat
- Maintain height with elevator, balance with rudder, ailerons neutral
- Note stall symptoms: airspeed sound, stall warning, shuddering, high nose
- Check attitude indicator
- When nose drops - Recover:
  - Ease nose further forward to lower angle of attack
  - Apply full power smoothly, carb heat cold
  - Prevent yaw and roll with rudder,
  - At safe speed, level wings with aileron
  - Raise nose to attain level flight again then climb to regain as necessary.

# Stall from approach configuration (landing config stall)

## Sequence

- Configure aeroplane for slow cruise - flaps extended
- HASELL - include carb heat check
- Power to idle, carb heat
- Maintain height with elevator, balance with rudder, ailerons neutral
- Note stall symptoms: airspeed sound, stall warning, shuddering, high nose
- Note lower nose attitude due to flaps
- When nose drops - Recover:
  - Ease nose further forward to lower angle of attack
  - Apply full power smoothly, carb heat cold
  - Prevent yaw and roll with rudder,
  - At safe speed, level wings with aileron
  - Raise nose to attain level flight again, retract flaps and climb to regain as necessary.

# Wing drop / spin avoidance — instructor demonstration only

## Sequence

- HASELL - include carb heat check
- Power to idle, carb heat
- Maintain height with elevator, balance with rudder, ailerons neutral
- Note stall symptoms: airspeed sound, stall warning, shuddering, high nose
- Apply rudder to see wing drop during stall (check aircraft manual)
- Recovery
  - Power - ensure idle
  - Ailerons - ensure neutral
  - Rudder - opposite turn
  - Elevator - nose forward to unstall wings and establish normal flight
- Slowly ease out of the dive that follows
- When beginning to climb apply power, set carb heat cold

# Return to aerodrome