# Flapless landings

CIRCUIT TRAINING

## Objective

To carry out a flapless approach and landing.

## Considerations

- In all cases, when faced with the unexpected
- **Aviate – Navigate – Communicate**

### Flap system

- Flap system operated by _____
- Electrical system diagrammatics
- Flap operating system diagrammatics

### Detection

- To help detection of this failure before getting airborne
- Thorough preflight inspection
- Sound systems knowledge
- Regular SADIE checks
- Probably won't detect it until base leg
- Once detected – go-around

### Causes

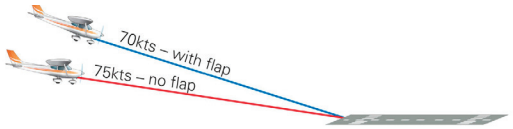
- Mechanical linkage failure (manual or electric flap)
- Electric flap motor failure
- Electrical current failure
- Overspeed – should never happen
- Always limit speed to below $V_{FE}$ before deploying flap


### Diagnosis

- Once in level flight, can then diagnose problem
- Check electrics for indications – master ON, CB set, battery output
- Visual check for indication failure

### Procedure

- Stall speed ↑ therefore approach speed higher (5 kts)
- Longer landing distance – P-charts have no detail
- Less power required
- Descent angle shallower
- Less visibility over the nose




## Air exercise

- Will simulate late downwind
- Carry out a go-around and position downwind

### Downwind

- Downwind checks and radio call
- Assess runway length
- Confirm appropriate approach speed
- Choose power setting for approach
- Extend downwind leg

### Base

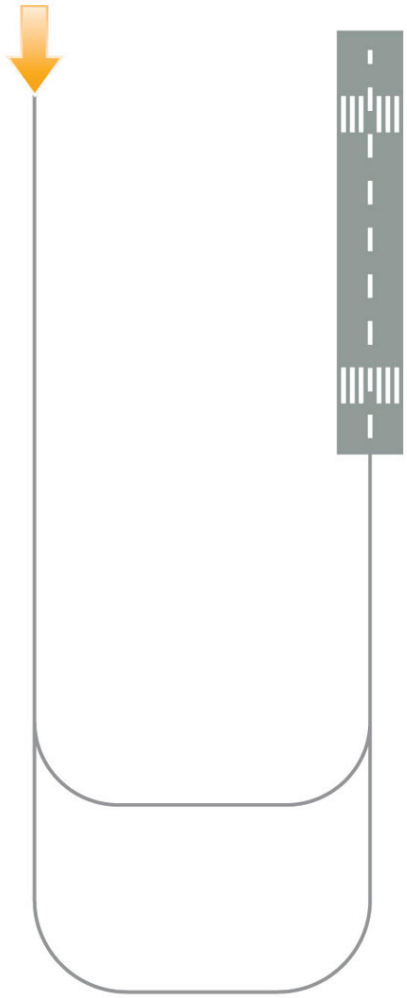
- Lower power
- Higher nose attitude
- Trim
- Anticipate turn onto final

### The approach

- Attitude to maintain higher approach speed
- Small power changes to adjust RoD
- Higher nose attitude – less forward visibility
- Attitude + Power = Performance

### Landing

- Less round-out
- Slight hold-off
- Do not over-flare – wait for touchdown
- Caution floating – may require go-around



## Airmanship

- Good systems knowledge
- SADIE checks
- Higher approach speed

## Aeroplane management

- Small power changes to adjust approach path

## Human factors

- Higher nose attitude causes illusion and acceleration