

Forced landing without power – pattern

ADVANCED MANOEUVRES

Objective

To be able to select an appropriate landing site and carry out the pattern for a forced landing without power.

Considerations

Configuration

- Best L/D ratio, idle power, prop windmilling, _____ kt
- Effect on range

Wind indicators

Work out direction from:

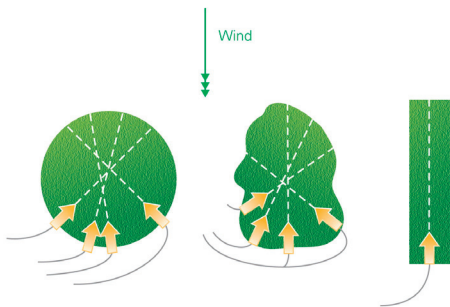
- Smoke
- Dust
- Crop movements
- Tree / leaf movement
- Wind lanes
- Waves and ripples
- Wind shadow
- Cloud shadow
- Drift
- Local knowledge

Landing site

7 Ss, C & E

- Size
- Shape
- Slope
- Surface
- Surround
- Stock
- Sun
- Communication
- Elevation

Consider all shapes of landing sites



Situational awareness

- Always keep an eye out for forced landing options
- Know what the surface wind is, and the better landing areas

Air exercise

From a cruising altitude...

Immediate actions

- Carb heat HOT, close throttle
- Convert speed to height
- Set glide attitude and trim
- Confirm wind and choose landing site
- Make the plan
- MAYDAY call (if reception is a consideration)

Trouble checks

- F** Fuel Selector ON, fuel pump ON, change tanks (touch)
- M** Mixture RICH, carb heat HOT, primer LOCKED (Alternate air)
- I** Ignition LEFT, RIGHT or BOTH. Ts and Ps
- P** Partial power check

Make the plan

① Choose reference points

- Landing aim point – 1/3 way into field
- 1000 ft AGL area – 90° from threshold area, but closer
- 1500 ft AGL area – 500 ft back from 1000 ft AGL area

② Convert heights to altitudes

③ Positioning

- Assess the aeroplane's position and its ability to make it into the 1500 ft area

④ Ask regularly

- "Am I confident of making it to the 1500 ft area"

Airmanship

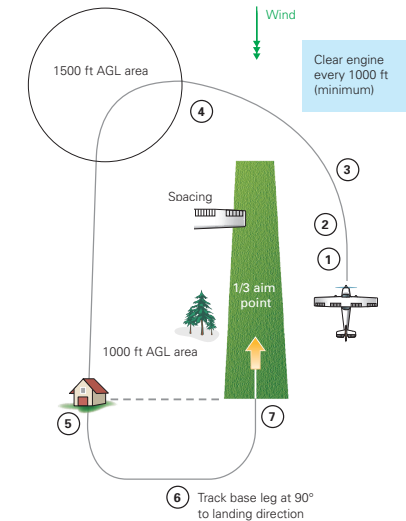
- Checks, including touch checks
- No pax and solo limitations
- "Simulating" to begin with
- Go around – landings later
- Legal limitations

Aeroplane management

- Ts and Ps stable
- Engine warming 1000 ft
- Fly the aeroplane

Human factors

- Don't turn your back on paddock
- Practice will make it easier
- Concentrate on pattern
- Re-evaluate decisions to avoid mindsets



⑤ After 1500 ft area reached

- Spacing downwind

⑥ Approach starts at 1000 ft area

- Constant assessment of approach by reference to 1/3 aim point
- Can adjust base turn – but not 1000 ft area
- Offset drift
- Ask "Can I reach the 1/3 aim point?"
- Position at 500 ft so can touchdown at 1/3 aim point without flap
- Use flap to bring 1/3 aim point back towards threshold

⑦ Landing phase covered in next lesson