

## Theory Brief 11: Advanced Manoeuvres

### Forced Landing Without Power - Simulation Exercise

When you fly, you should always be looking for a suitable emergency field (every 3-4 minutes)

If in the unlikely event of an engine failure during flight,

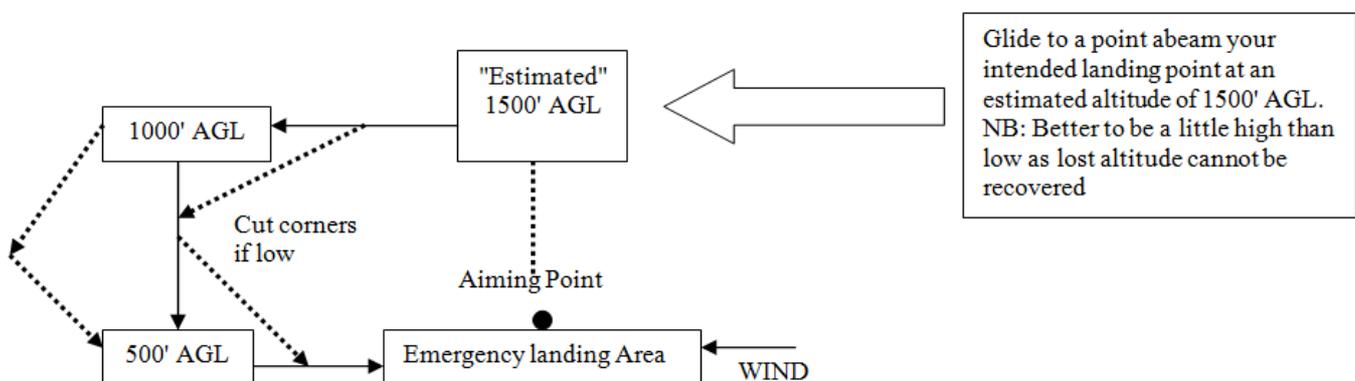
1. Conserve and gain altitude if possible. (Convert speed to height)
2. Maintain flying speed by lowering the nose into the glide descent attitude.
3. Select an emergency landing field using the 5 S's, and allowing for an into wind landing.

Remember that altitude provides you with more time to make decisions. In the Jabiru J160, for each 500 feet vertical AGL, you have about one minute of glide time, and nearly one mile flying distance available, but allow for wind as you will not glide as far into wind.

4. Check to see if the problem can be resolved, Fuel Pump "ON"/ Ignition "ON"/ Carb heat – ON, Open throttle fully to confirm if any power available. Carburettor icing, if the cause, will allow partial power and the carb heat will melt an ice, increasing the power after a short time.
5. If no power returns, and you are convinced of a power failure, Close the throttle. A motor that unexpectedly increases power, can be more of a problem than no engine at all.
6. If radio equipped, make a **MAYDAY** call.
7. Prior to landing, check if power has returned through carburettor icing having melted.
8. Ensure harnesses secure prior to touch down, and your passenger is in the **BRACE** position.
9. Use the starter motor to get the propeller horizontal.
10. Switch "off", all electrical systems prior to touch down to minimise the risk of fire.
11. Land using the soft field technique.
12. Evacuate the aircraft as soon as possible.

### GLIDE DISTANCE

All aircraft glide, but some glide further than others, so make a point of learning the glide distance of the aircraft you are flying. As a rule of thumb, use a 30 degree radius of glide all around your position for the J160. Note that when you apply flap, glide distance is greatly reduced. Delay using flap until you are sure you can make your intended field.



Key 1 – 1500' AGL abeam landing point

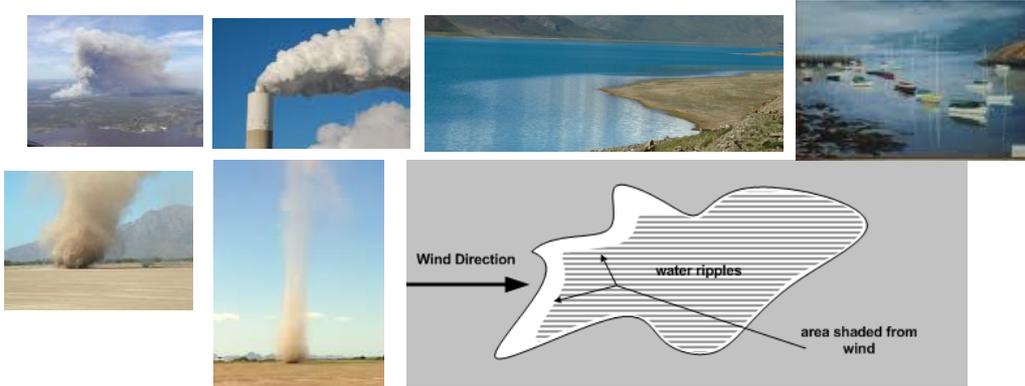
Key 2 – Late downwind at 1000' AGL

Key 3 – Short finals 500' AGL

# Theory Brief 11: Advanced Manoeuvres

## WSSSSS

### Wind - Strength and direction



### Size - Large enough to land and depart from.



### Surface- Grass, furrows, crop, bumpiness, stock, etc



### Surrounds - Obstacles on approach and departure especially power lines.



### Slope – Always Uphill landing, never down hill



### S - Civilisation - to receive assistance.



## Theory Brief 11: Advanced Manoeuvres



### Glide approach in the circuit

As per the Glide Approach practise as used in Theory Brief 10, Emergencies in the Circuit brief.

### Airmanship

Remember the important order of priorities when flying:

**Aviate**

**Navigate**

**Communicate**

### Air Exercise:

**NOTE:** For a practise forced landing, do not glide below 500ft AGL.

- Your instructor will set up FLWOP simulations with increasing degrees of difficulty.
- Don't forget your Mayday Call.
- Don't forget your pre landing actions.