



VICTORIA FLYING CLUB

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VICTORIA FLYING CLUB

Forced Landing

- Review Descent, Approach and Landing
- Definition and Motivation
- **Forced Landing**
- Summary and Questions
- Pre-Flight Briefing



Review Descent, Approach and Landing

- Mentally perform a power-off descent and state all observations and required actions.
- What is the best glide airspeed and where do we find it?
- How do we visually determine our glide distance?
- What types of landing can we perform?
- Mentally perform a soft-field landing and state all observations and required actions.



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Definition and Motivation



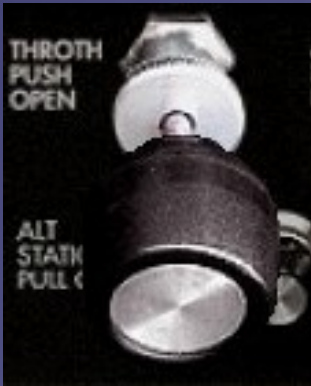
- *Unplanned* landing due to failure or other emergency
- **Aviate**, Navigate, Communicate, Manage
- Continue to **fly the airplane** has **highest priority**
- *Situations*: engine failure (mechanical, oil supply, fuel supply – contamination, air supply – icing, blockage)



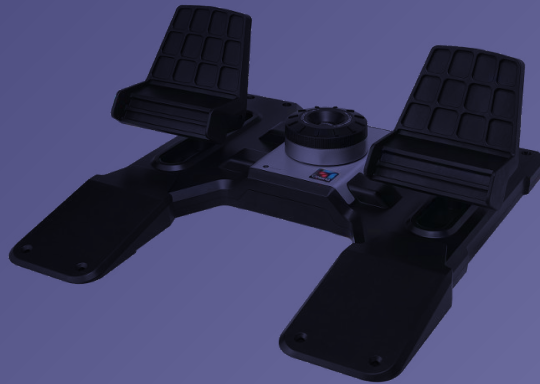
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Engine Failure During Take-Off

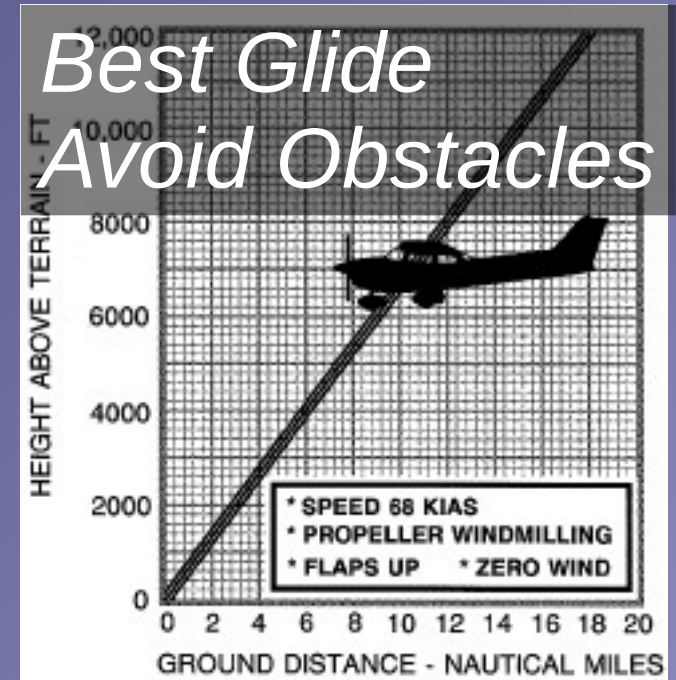
Power Idle



Apply Brakes



*Best Glide
Avoid Obstacles*



- *During Take-Off Run: power **idle**, apply **brakes***
- *Immediately after Take-Off: best glide airspeed (**68 KIAS**), avoid **obstacles***



Engine Failure at Low Altitude

- Establish **best glide** (*68 KIAS*) attitude and trim
- **Select** and head towards suitable **field**
- Seats, Seatbelts, Cockpit Hazards
- **Fuel Valve** - Off, **Mixture** - Off, **Ignition** - Off
- **Mayday**, **Squawk 7700**, **ELT On**
- **Flaps** as required
- **Master** - Off, **Doors** – Unlatch
- *MEMORIZE THIS PROCEDURE!*



Engine Failure at Safe Altitude

- Establish **best glide** (**68 KIAS**) attitude and trim
- **Select** and head towards suitable **field**
- **Cause check** (Fuel Selector, Fuel Valve, Mixture, Throttle, Engine Instruments, Fuel Pump, Magnetos, Primer)
- Attempt **restart**
- *If restart not successful, continue with low altitude procedures*
- **MEMORIZE THIS PROCEDURE!**



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Restart Procedure

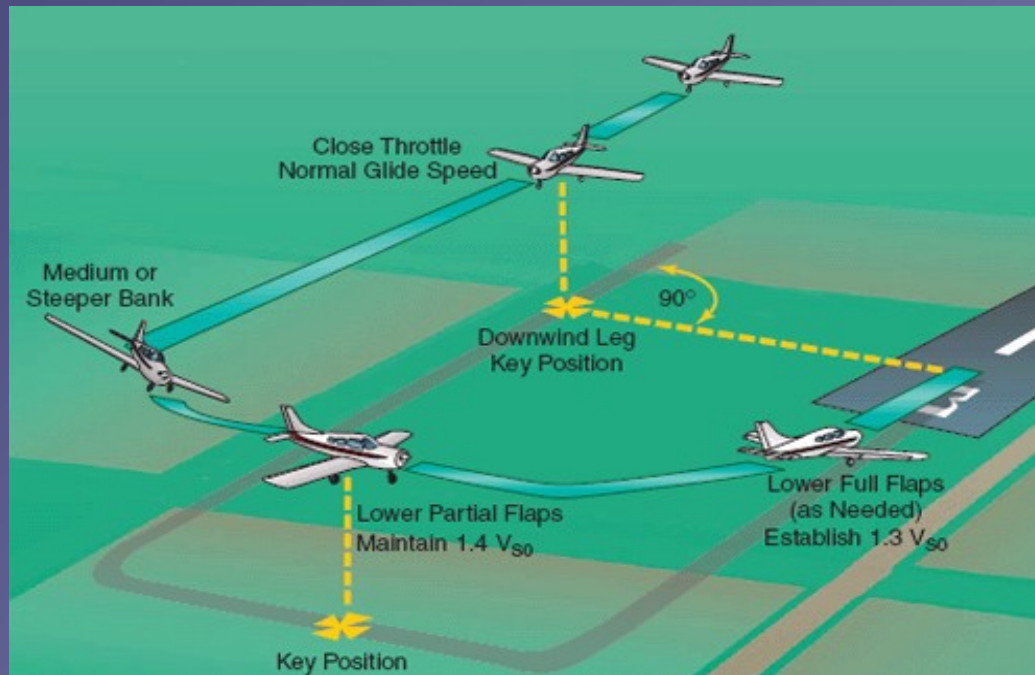
- **Fuel Valve – On**
- **Fuel Selector – Both**
- **Mixture – Full Rich**
- **Fuel Pump – On**
- **Ignition – Start**
- **Fuel Pump – Off (Consider On)**





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Engine Failure in Circuit

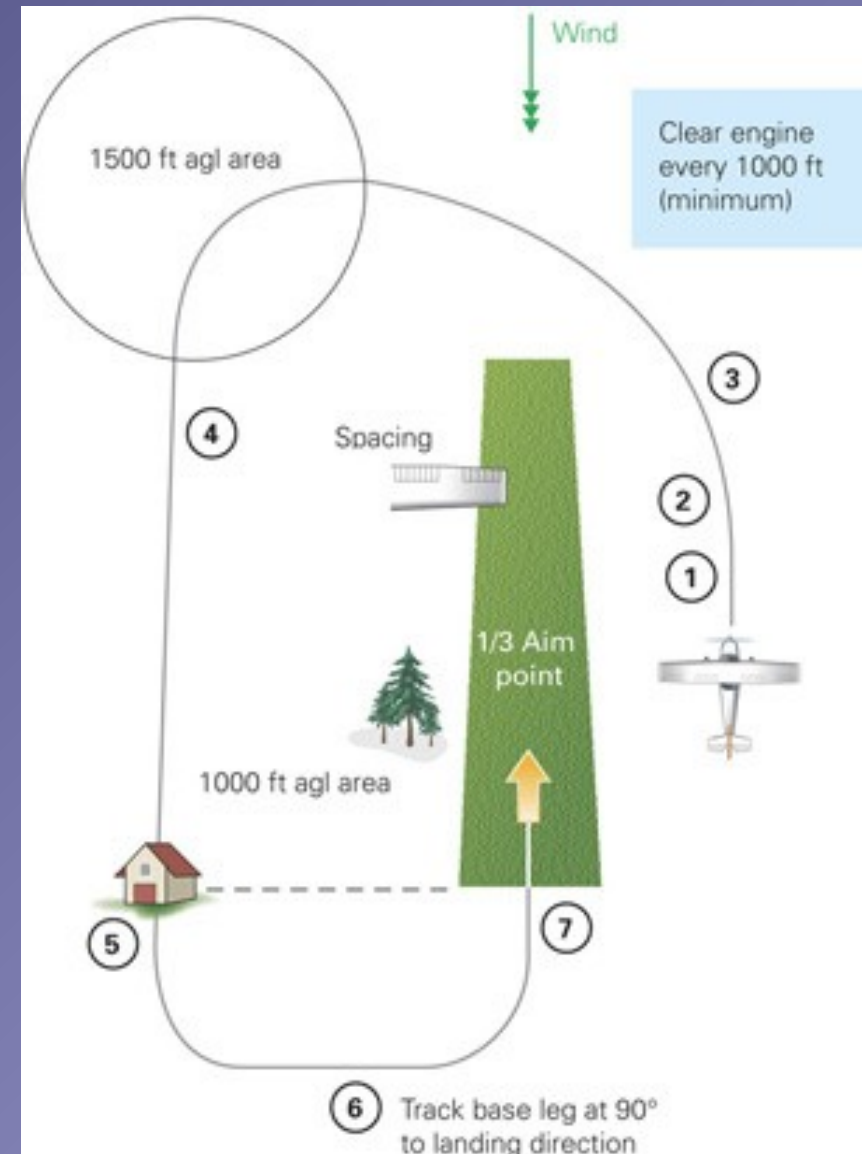


- Perform **power-off landing** *if* at **circuit altitude**
- Manage energy / airspeed and **plan** for each **leg** to final
- Consider **altitude**, **rate of descent** and **wind**
- Inform ATC (*request clearance beforehand if practicing*)



Forced Landing Approach

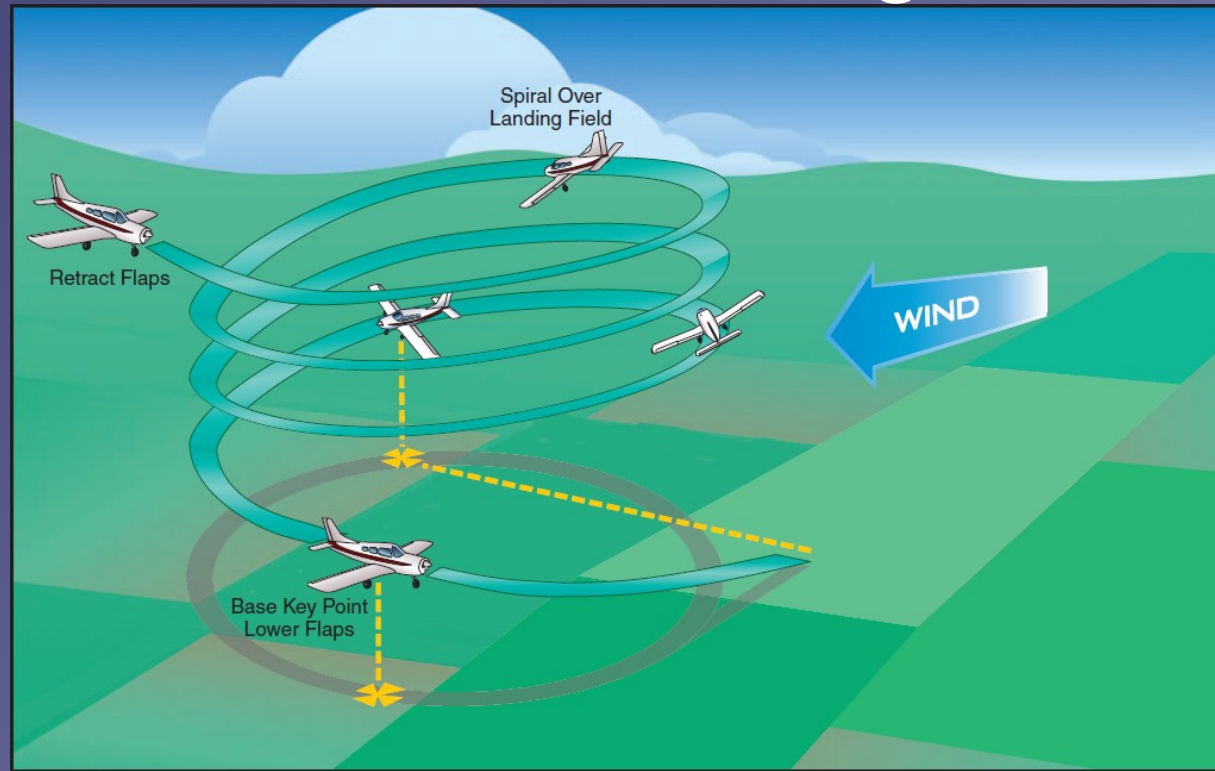
- Establish **key points**
- Organize **legs**
- Consider **altitude, rate of descent and wind**
- Approach *slightly high* and attempt to land in **first third** of the selected field
- Use **flaps** and **slipping** to increase rate of descent





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360° Forced Landing Pattern



- Proceed to selected **key point** at altitude – **high key**
- **Descend** to lower altitude **circling** – **low key**
- Initiate **final approach** from low key point



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Distress Communication

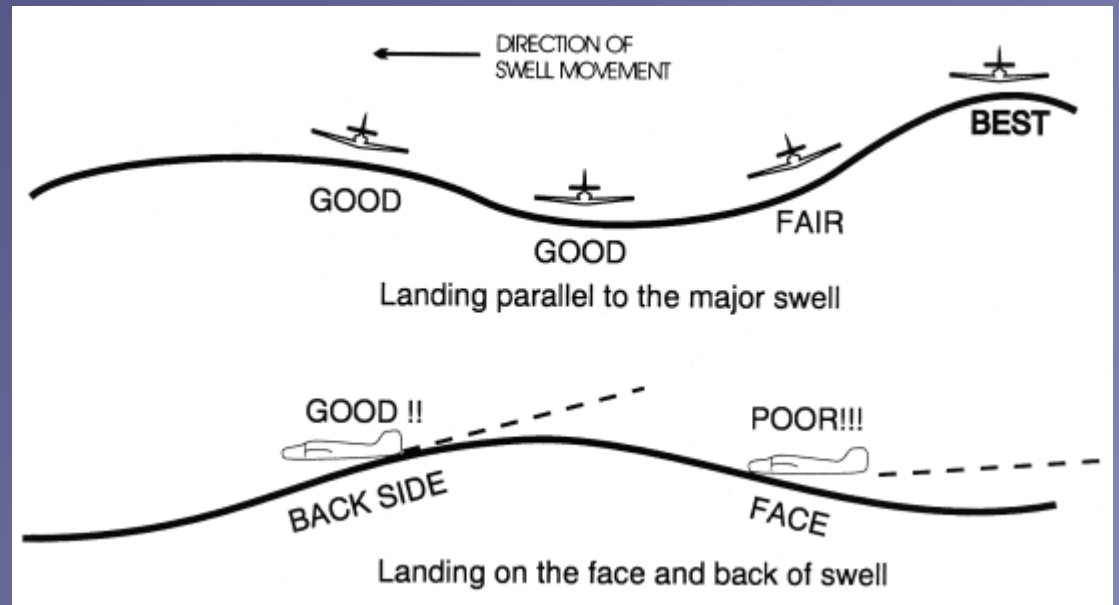
- Current frequency or **121.5**
- Mayday, Mayday, Mayday
- 3 x Callsign
- **Position**, Altitude
- **Problem**
- **Intentions**
- Callsign
- Squawk 7700, ELT On





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Hills, Mountains, Forest, Water



- *Hills / Mountains:* **land uphill**
- *Forest:* assume **tree tops** as landing surface
- Roads (traffic, power lines, obstructions)
- *Water:* ditching and evacuation – **swell, wind**



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Safety Considerations

- Remain clear of obstacles
- Clear engine every **1000'**
- Go around at **500' AGL** (**1000'** over civilization)



Summary / Quiz

- What situations may lead to a forced landing?
- How does altitude affect the type of forced landing?
- Mentally perform a forced landing from a safe altitude within farmland countryside.
- Simulate a Mayday call reporting an engine failure and state your intentions.
- What other means of communication are available in an emergency?



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Pre-Flight Briefing

- Exercise
- Training Area
- Departure and Arrival Procedures
- Weather Briefing / NOTAMs
- Aircraft and Documents
- Time and Fuel Requirements
- Safety Considerations and Responsibilities



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Forced Landing (Ex. 22, LP. 24)

- Objective
- Review
- Motivation
- Howto
- Summary / Questions
- Preflight Briefing