

Unitas Flying Club

Training Operations

Forced Landing Exercise

Fly
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Finals

Fly - *Fly the Aeroplane*

1. Convert speed to height
2. Trim for glide - (JTC - 70Kts)
3. Ensure airframe configuration is clean (no wheels, no flaps)

Field - *Select suitable landing field within safe distance of aircraft*

1. Try to decide which direction the wind is blowing (smoke, water, wind pumps, cloud shadows)
2. Choose a field within easy gliding distance of the aircraft, preferably into the wind, preferably NOT a freshly ploughed field, but one which seems to have been ploughed some time before. Previously ploughed fields are preferable to fields which have never been ploughed, because a ploughed field has less chance of containing holes, rocks and other obstacles. If such a field is not visible, try to choose a field which is clear of large obstacles such as trees, power lines, buildings or similar objects. If no other choice seems possible, choose a road. However, roads have far more obstacles than you may think. Be aware of this. A road should be your very last choice.
3. Decide on your plan of approach. Discuss various methods of approaching the field with your instructor. Whatever method you choose, you should try and allow yourself at least one checkpoint before you line up for the final approach, preferably a 1000 ft checkpoint at least.

Fault - *Try and locate the cause of engine failure.*

1. The most common cause of engine failure is fuel starvation. Check this first.
 - a. Fuel selector to fullest tank.
 - b. Fuel pump ON
 - c. Mixture full rich
 - d. Carb heat ON
2. Next, check magnetos on both. Try selecting first left then right magnetos individually if nothing else seems to help.
3. If no fault is found and engine still refuses to run, shut down fuel selector, fuel pump, mixture set to ICO, carb heat off, magnetos off.
4. Keep master switch on for radio calls and electric equipment that should still be allowed to operate, such as flaps.

Flaps - *Decide whether flaps should be applied at this stage.*

1. Be careful not to apply flaps too soon, they simply cause the aircraft to go down quicker. Only use them if it seems necessary in order to reach the field at a sensible height.
2. When executing a forced landing without power, you should always be aiming to do a short field landing, meaning full flaps. You should remain alert to the heavy drag this causes to the airframe, though, so that full flaps should only be applied at the very last portion of your final approach - once you are CERTAIN that you will reach your chosen field.

Mayday - Once you are complete with “flying the aircraft” and doing your navigation, do a mayday call. Remember to do this on the frequency of your nearest ATC and, failing to receive response, be ready to broadcast on the international emergency frequency (121.5 Mhz)

The mayday call should include all the following information:

- ‘Mayday mayday mayday’ (Three times)
- Your registration or call sign.
- Your predicament (Engine failure)
- Your position (Well known landmarks and your distance and direction from it)
- Your intentions (Executing forced landing on ploughed field)

Passenger Briefing - *Get your passengers up to speed on the situation*

1. Inform your passengers that you are about to make an unscheduled landing (!).
2. They should remove all sharp objects from pockets, remove glasses, false teeth and anything potentially hazardous in a heavy landing, and place it on the floor under the seat.
3. Rear passengers hold their ankles (foetal position). Front passenger brace against the glare shield and keep feet and hands away from the controls.
4. Ensure harnesses are tight.

Finals - *Prepare for the landing.*

1. You should execute a short field landing. Plan accordingly.
2. Aim to touch down about one third into the field.
3. Make sure all fuel supplies are closed down: fuel selectors off, pumps off, mixture leaned.
4. All electrics off once full flaps have been selected.
5. Hatches unlatched.

As soon as the aircraft is stationary, everybody should evacuate as quickly as possible and gather a safe distance from the aircraft. Use fire extinguisher if necessary, try to keep the first-aid kit handy. Remove the signalling strips from the aircraft as well, if possible. You may need them.

Once evacuation is complete, the first thing to do is assess the situation. Any injuries? Apply any first aid that may be required. Decide on which action is required to get help as soon as possible. It would be a good idea to move towards the closest signs of civilisation, if possible. If it seems necessary to move away from the vicinity of the aircraft by any appreciable distance, you should use signalling strips to indicate the direction in which you will be going. Rescue teams will first search closest to the aircraft.

Do not forget to inform the closest authorities about your mishap, and also inform ATC.

Tip: *Whenever flying anywhere more than 20 miles from your base, always carry water, something warm to wear and some provisions with you in the aircraft. Many people have regretted this omission when an emergency arose.*