TMG Exercise 9e / 10e: Circuit emergencies

Version 0.2

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Aim

To know how to deal with all likely emergencies that could be experienced during the circuit

Pre-requisite exercises

Other than go arounds; cover these exercises after Ex 9 & 10 are complete

Competency elements and performance standards

ELEMENT	PERFORMANCE STANDARD
Decision making	• **Using a power pilot's mentality for avoiding awkward situations eg unstable approaches**
Workload management	• **Using an effective take off brief and thinking ahead**
Decision making	• **Knowing when to reject a take off and being clear up until when this is possible**

Key messages

Going around from an unstable approach is the right thing to do

Ensure your brain has been to any place before the TMG gets there!

Lesson planning and conduct

Briefing

A) Abandoned take-off

Rule of thumb – if not at 2/3 of lift off speed after 1/3 of take-off run. Reject is safe

Anytime during the ground run with any engine instrument anomaly or strange noise; rejecting is sensible: Close the throttle, look ahead & steer straight and consider gentle braking

B) Engine failure after take-off

- Select attitude for safe speed
- Focus on the flying – don't be distracted with engine management or comms
- Turning back < 500' is extremely hazardous

C) Go around for unstable approach, or mis-landing, or any other reason

One major difference with a TMG is the ability to go around. It can't be stressed highly enough that landing a powered aeroplane off an unstable approach is like shooting yourself in the foot!

Going around is NOT a failure.

Reasons for being unstable include:

- Misjudgement of the circuit and approach
- Distraction caused by anything (internal or external)
- Sudden change of conditions
- Concern about your configuration
- Realisation that you've chosen the wrong approach speed or aiming point

Further reasons to go around include:

- Blocked runway
- Uncertainty of whether the runway is clear
- Realisation that you won't land within your chosen touch down zone
- Poor visibility (eg into sun or misting canopy)

Go Around Procedure:

- Close the spoilers
- Change hands
- Full power
- Carb Heat COLD
- Pitch to a climb attitude
- Closely monitor the speed (min 50 kts)
- Then move away from the runway in case of a winch launch (best to turn right slightly to run the runway on your left
- Then call "Going Around"

Should your landing go wrong; a balloon or high bounce; follow the same procedure and hold the three point attitude until safely clear of the ground & with safe speed

D) PIO recovery

Hold a three point attitude, close the spoilers and gently apply full power. Then follow the G/A and Missed Approach

E) Missed approach

- The Go Around is the procedure to safely get you clear of the ground and climbing away. The Missed Approach is the routing following the G/A.
- Never make an approach without a clear missed approach. Example, tall trees at the end of the field mean that you have to commit to landing earlier during the approach. To commit, you MUST be completely stable
- BGA views go-arounds and missed approaches as routine, not emergencies

Flight exercises

- Go arounds will have already been taught. As the lesson to progress allow the trainee to make these decisions for themselves. Should nothing untoward happen - pretend that an obstruction (eg vehicle) has arrived
- Tell the trainee before the take-off that for example the static RPM is low (say 2500 RPM)
- EFATO: Reduce the power to idle on at least two take-offs to allow the trainee to explore safe options

Practical hints

- Check where the trainee is scanning during the take-off roll
- If the trainee omits a take-off brief, ask for one
- During an EFATO the instructor must “command” the go around
- Enquire what the trainee knows where other airfield users are to test their SA

Debrief

As required

Threat and Error Management

Turning back low can be hazardous - not below 500 ft or with strong winds, and careful speed monitoring required

Don’t turn back (for practice) if there’s any possibility of a launch behind you

Confirm that none of these exercises are to be practiced solo