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ALL YOU EVER WANTED TO KNOW ABOUT DITCHING BUT WERE TOO SHY TO ASK!

What sort of life vest should you wear when flying over water? How do you pull an unconscious passenger into a life raft, or upend a life raft that has flipped over? You would have learned this and much more had you attended the ditching course organised by Mike Turner and the West London Fliers on Saturday 27 April at the Woking Municipal Pool. About 25 people, almost exclusively GA pilots (some with their families) spent their Saturday night listening to an hour's talk intercut with videos followed by a couple of hours messing about in the water. The instruction and equipment was provided by South Eastern Marine Services (SEMS) of Basildon and, although some of the material was more marine than aviation orientated, judging by comments afterwards it was all highly relevant .

Flying a single engine aircraft over water is a calculated risk at the best of times. Those of us who do so without the right equipment---or more likely with the equipment but with no experience of how to use it---are asking for trouble. Let me cast the first stone at myself. Although I carry a all the right gear, pride myself on briefing my passengers and keep my over-water legs high and short (mainly DVR-KOK), it was not until I found myself gasping for breath while trying to right a raft in a pool that I realised just how foolish one can be.

A rough figure for the "best glide" ratio of a light aircraft is 6:1; ie, in no-wind conditions you will cover 6000 ft (1 nm) for every 1000 ft of altitude lost. Hence if your aircraft is at 6000 ft when it suddenly becomes a glider, you can reach the coast provided you are no more than 6 miles out. The Channel is 25 nm wide at its narrowest point, so even if you cross it there you will be out of reach of land for about half the crossing. What happens if, for whatever reason, your single donkey gives up? Everyone knows the old chestnut about "the engine doesn't know it's over water" ; the fact is, engine failures may be rare these days but they still happen. So if you can't afford a twin and must cross water, the first rule of ditching is plan your legs such as to minimise the risk of having to do so. Light aircraft are simply not good gliders.

Let us assume the best of circumstances. Imagine a warm clear day in late summer when the water temperature is survivable, the sea smooth as glass and you have glided with sufficient leisure time to issue a distress call on 121.5. Assuming the aircraft stays upright upon reaching the water (don't stall the aircraft---fly it on slowly), that the door is open and everything at hand, you might manage to step out onto the (low) wing, get the raft into the water, inflate it and board without so much as getting your Biggles scarf wet.

If you have passengers, let us assume too that they are supremely fit scuba divers. You will need a handy knife to cut the painter so that the raft does not sink with the aircraft; then, activate your EPIRB (emergency locator beacon), stream out the sea anchor, close the raft entrance and keep the inside as dry as possible, if necessary shedding and wringing out any wet clothing and donning a survival blanket from the emergency stores.

You might even have time to let off a flare or two before a RN helicopter appears to winch up the lot of you. Sounds easy, eh?

Such are the conditions approximated by a pool. Believe me, jumping into a pool with a pair of coveralls, paddling a dozen yards towards the raft and struggling to get into a simple round raft with a life vest on nearly killed me, and I think of myself as being a reasonably good swimmer (Deflating the vest somewhat greatly assists crawling up and over into the raft.)

Now add some wind and waves and a couple of gulps of cold salt water. It is extremely difficult to jump into the water without some involuntarily breathing in, so you must hold your nose and mouth with one hand and keep the other arm across the front of the vest. Once you come up spurting and gasping, getting into a raft bobbing around in the waves may prove a good deal more difficult than it was in the pool---certainly in the average aircraft raft. Most rafts don't have proper boarding aids and ballast bags and many are single tube-affairs without a proper sea-anchor; ie, with several persons on board, the distance between the sea and the top of the raft (the freeboard) is going to be minimal. Moreover, unless you have proper boarding aids and ballast bags, the raft will tend to tip as you try to crawl into it. If the seas are high, the chances are that it is going to be impossible to get into your average raft unless it is extremely well designed (ideally octagonal, double chambered with ballast bags, a sea anchor and a self inflating cover).

The second rule of ditching is "have your equipment to hand, know how to use it and brief the passengers thoroughly before any over-water flight". Now add the colder, rougher seas of winter. Below is a chart (borrowed from a personal communications with Doug Ritter) on water temperature and survival times. In the North Sea in winter you can expect little more than 15-30 minutes of consciousness. Even if you get out of the aircraft and are wearing a good life vest, death from hypothermia may come within less than an hour. Add the chill effects of wind, sea spray and the early onset of darkness and it is clear that if you ditch with a poor raft, your chances of survival are statistically insignificant unless you are wearing an immersion suit.

Water Temp Degrees C	Onset of Exhaustion & Unconsciousness	Expected Time of Survival assuming life vest worn
0C	under 15 min	15-45 min
0-3C	15-30 min	30-90 min
3-9C	30-60 min	1-3 hrs
9-15C	1-2 hrs	1-6 hrs
15-21C	2-7 hrs	2-40 hrs
over 28C	Indefinitely	

What sort of vest one should buy (I use an Aerosafe "helicopter" type which is worn permanently), what sort to supply your passengers with (it should be quick donning and double chambered) and the relative merits of different rafts (mine comes out low on the

list) are subjects covered in three articles by Doug Ritter published in Aviation Consumer (1 April 94, 1 July 94 and 15 October 94) which can be ordered from Belvoir publications 75 Holly Hill Lane, Greenwich CT 06836-2626, USA (fax +1-203-426-9205). I strongly recommend ordering the back issues, though with one proviso. If you are interested enough in this question to read the material, go on a ditching course--- better yet, get SEMS to organise one for the Flying Club at your local pool. It may not be terribly realistic but---and this brings me to the third rule of ditching---if you have never gone into a pool, do so now.

The only thing worse than flying over water without the proper equipment is having the equipment but not knowing how to use it. If you ditch, you won't have time to read the instructions.

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