GA FEEDBACK

No: 11 **March 2002**

LIFE RAFT EMERGENCY

It was early morning, half light, and I was checking my aircraft for a flight to Holland. I was going to take two friends with me; they were across at the car park next to the flying club some 75 metres away. I finished my normal internal and external checks and placed life jackets on the seats. I removed my life raft from the storage area behind the rear seats via the luggage door and climbed onto the wing kneeling on the front seat reaching over to place it between the front and rear seats. However, on the life raft, which is a square red package, there are two black tapes. One is the carrying handle and the other is the 'PULL' release. In the half-light the tapes looked the same. Unfortunately, as I was placing the raft, I lifted with the wrong tape. The raft exploded in less than a second completely filling the cockpit trapping me underneath. I was pushed in a vice-like grip unable to move and any movement I made every breath I took only made matters worse, as the raft continued to expand into any available space. I was completely trapped, unable to shout, move, breathe, resigned to the fact that I was suffocating to death.

The only things exposed hanging out of the plane were my feet. My two friends, who were completely unaware of my demise, ambled over towards me, my feet being on the opposite side to them. They eventually found me and punctured the raft, which took some time, as they are not that easy to punch a hole in. If they had not arrived when they did, I know that I would not have lasted more than another couple of minutes. Afterwards they said it looked like a sketch from Benny Hill with my feet waving about.

It turned out all right in the end but upon reflection what would have happened if this had occurred when we were in flight? The pressure of the raft would have pushed everything down and the controls forward into a steep dive killing all on board.

I now have the 'PULL' tape Sellotaped with just a small piece of tape exposed, to stop any accidental pulling. A case of once bitten twice shy, not a CAA Approved modification, but definitely approved by me.

I also keep a penknife in the pocket of the aircraft along with the checklist, just in case.

It is most important that life rafts are immediately available in an over-water emergency, however, this report is a good reminder of the inherent danger of an inadvertent inflation in a confined space.

Some readers might recall that military flight crew, many of whom sit on dinghy packs, carry a knife on their flight-suits so that it is readily available for this kind of eventuality. Not a bad idea - perhaps?

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STRIP INSPECTION

airstrip is approximately 1,800ft in length, orientation is east/west. The centre 900ft is relatively flat, but both ends slope noticeably and the ends of the strip are considerably lower than the centre.

Recently, I walked from the centre of the strip towards the eastern end. The ground was firm, but the surface was greasy and the short grass was still wet from the heavy rain on the previous day. Subsequently, I departed ### on a cross-country flight. On the return trip to ### I listened to the ATIS broadcast of an en route airfield, which was using the southwesterly runway with the wind at 230° . There is a small windsock at ### airstrip (which is not really active at low wind speeds) but on arrival this did indicate there could be a crosswind.

I landed on the westerly runway about 450ft into the runway (there are trees and a hedge on the threshold and I was thinking that landing short could result in a heavy landing into rising ground). I braked lightly and the aircraft started to slow. A slide started and I was into the slope at the other end of the runway. To avoid the hedge at the end of the runway, I slewed left and the aircraft entered the rough at the side of the runway. The nose wheel entered a deep rut (possibly a tractor track), the propeller dug into the ground and stopped instantly. I exited the aircraft, which was at an angle approaching 45°, (the field at this stage slopes downwards and to the side) and the propeller was about 3 inches into the ground. I lifted the front end of the aircraft and saw that there was damage to both tips of the propeller. It was clear that the western slope of the strip had not drained off, as had the rest of the strip, and there was an inch of mud on the surface.

A General Aviation Safety Newsletter

from the **C**onfidential **H**uman **F**actors **I**ncident **R**eporting **P**rogramme

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What I have learned from this is that when the surface of the runway is suspect, it is essential to walk the whole strip (not just the part used for the take off roll) and be extra cautious with a crosswind.

Operating from or into strips requires special consideration. Two important factors are what is the actual length and what is the condition of the surface along the entire length? Other precautions and considerations are detailed in the CAA General Aviation Safety Sense Leaflet No.12C - Strip Sense.

Remember, approximately one third of GA Reportable Accidents in the UK occur during take off or landing at unlicensed aerodromes.

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TRIM TAB TROUBLE

The aircraft, which I lease back to a club, had completed two one-hour flights, immediately before, both with instructors on board and no faults reported by either when I left them in the clubhouse. The first instructor had completed the 'A Check' before flight.

In view of the above, I checked the fuel and oil, walked round waggling the moveable bits but did not examine the exterior in as much detail as on a first flight of the day.

When seated, I checked for full movement control and noticed that with the trim wheel in its usual position I could see through the back window that the tab was slightly down, so I altered it to streamline with the elevator.

Mistake - I assumed this was simply due to a slight change in rigging following a recent service.

On takeoff the aircraft seemed to unstick rather quickly and climb a little steeply and I re-trimmed hastily to avoid any risk of stalling after takeoff.

Mistake - I assumed this was due to my own mishandling, as I had not flown very recently.

I then flew to an area about 20 miles away where I carried out some performance checks, including several brief sessions of high-speed cruising Straight and Level at full throttle. After this I set off back, and soon noticed that I was having to apply full nose-down trim and a little forward yoke pressure to maintain Straight and Level at normal cruise setting. I managed to curb the desire to get back to base as fast as possible and reduced throttle so that the nose dropped naturally, thinking that this would also reduce any stress on the empennage. I flew back at around 80kts, called for a downwind join instead of the usual overhead and reported that I was having to fly with full trim (in case I needed to request priority over other traffic). Subsequently, there was no problem with the approach, flare or landing.

Perhaps I should have diverted to a small airfield only 10 miles away, but it was not one I was familiar with. The reduced power seemed to solve the immediate problem, but perhaps I should have declared a PAN in case it got worse.

After landing I inspected the trim tab and discovered that the actuating lever below it was bent upwards, pushing the tab down and reducing the upward travel available. This may have been exacerbated by my high-speed performance checks.

The previous instructor had noticed the over-rotation but put it down to his inexperienced student. He had to push quite hard to correct it (and had meant to mention it to me!)

Lessons Learned:

On noticing the discrepancy between trim wheel and tab positions I should have investigated further before flying.

On over-rotating I should have done a couple of touch and goes to check my own competence and recency.

As the reporter notes, if you discover any discrepancy before take off, get it checked immediately unless you are absolutely sure of the cause and any effect on either handling or performance.

If an unusual characteristic is noted after take off, don't hurry to get the aircraft back on the ground at the expense of flying accurately. The safe course of action is to land as soon as practicable, after carrying out a slow speed handling check (not a stall check) in the landing configuration at a safe height, if the controllability of the aircraft at normal approach speed is in any doubt.

Finally, don't carry out touch and go landings unless you are sure that the problem is you and not the aircraft.

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FORMATION - FRIEND OR FOE?

It was a nice autumn day with frost on the ground and I had taken the opportunity to fly a cross-country to visit a colleague. On the way back in the late afternoon, autumn sunshine, long shadows, good visibility except into sun, I spied an aircraft about 6 or 7 miles ahead doing aerobatics. I was down at 1,000ft trying to get out of the wind and it was operating between perhaps 1,500ft and almost exactly at my height at the bottom of the loops and rolls. It turned out to be a biplane and looked very pretty in the yellow light of late afternoon. I thought about how to ensure we did not conflict but since it was not operating in a 'box' and moving randomly around the sky I decided to watch it like a hawk. I didn't want to go lower because I was soon to pass over a heavy industrial area. As it started to

disappear behind my right wing it was perhaps about 2 miles off. I kept raising the wing to take another peek and it started to come in more behind and above me now at about 4 or 5 o'clock. Not much to do but keep going. I then decided to take one last look not expecting to be able to see it. To my horror it was now at around 5 o'clock, under the flap but still above me, not far off, diving at my tail. I was not sure if it was getting speed for its next loop, or had seen me and was coming for a closer look.

At the time I was not sure what to do. Any turn would increase the relative closing speed and might be a move into his actual path. It is very hard to see an aircraft back there. My actual action was to ease forward very slightly and open the throttle and for a few seconds I waited for the crash. It scared the life out of me and I don't know what I would do differently another time. I was receiving a Flight Information Service from a military controller at the time, so I called him and told him my problem. The biplane then appeared coming from behind on my left side at the same altitude. The controller asked if I could identify it. My first response was yes, then I said "I can give you its registration". It was clear by this time that the pilot was coming to be friendly.

So after landing I made a number of telephone calls including to the other pilot. I asked him did he understand why I was so upset? His answer was "Yes and no". He said HE COULD SEE ME fine! He did not seem to have the imagination to understand that although he could apparently see me fine, for perhaps three seconds I sat there waiting for the impact. He was very apologetic but I remain concerned that he can't see that diving at another aeroplane is not good for the heart. I don't want to spoil his love of flying but I never want him flying like that again.

There is a final irony. I was upset the rest of the way home. On finals into my short strip, as I pulled the power back, I realised the prop was slowing more than usual. I gave it a bit more throttle to ensure I got in and then pulled it back to idle as I came over the hedge interested to see what was going to happen. It promptly stopped! Something it has NEVER done before. I rolled to a halt and tried to restart, but without success. I waited a couple of minutes and sat there wondering what had changed and then realised that in my distracted state I hadn't put on Carburettor Heat - something I ALWAYS do.

The requirements of the Rules of the Air No.17(b) and (c) are unequivocal:

17(b) An aircraft shall not be flown in such proximity to other aircraft as to create a danger of collision.

17(c) Aircraft shall not fly in formation unless the commanders of the aircraft have agreed to do so.

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AIRSPACE INFRINGEMENTS

Why they shouldn't happen:

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I thought it maybe worth writing in with regard to airspace infringement. I would not call myself a very experienced pilot but I would hope that I have been flying long enough to have some input on the subject.

My view is that with all the navigation aids available to the GA pilot, there is no reason why infringements should ever happen. I have only been flying a relatively short time compared to a lot of others, approximately three years with around 130 hours logged. However, so far, I have never infringed Controlled Airspace. I have only entered Controlled Airspace when I have been given specific clearance to do so.

I have one or two theories as to why infringements happen. Firstly, route planning. Pilots not planning their routes properly around Controlled Airspace. By not giving themselves enough room, so that if they stray a little off track, they still remain clear of the airspace. To save time and therefore money, I have seen several pilots track their routes far too close to Controlled Airspace. A fraction off track and they would infringe.

Of course, another reason is not knowing exactly where they are. I for one, believe very much in GPS. A moving map GPS. I invested in one and I have found it invaluable. Providing that regular checks are done on its accuracy during the flight and that the database is current, the GPS is an invaluable friend. The accuracy should always be regularly checked against prominent ground features. Having a reliable and accurate GPS will, I believe, avoid infringing Controlled Airspace because it aids accurate flying and thereby you should know exactly where you are at all times. However, it is important to point out that the GPS must always be used in conjunction with a current chart and the route should always be drawn onto the chart for a visual reference.

I believe also that pilots forget that altitude can take them into Controlled Airspace. A very good example of this is over the Channel. Again it comes down to good planning and being aware of what is around the route you have chosen. Maybe, what I have stated here is a bit obvious but if that is the case, why are there so many unnecessary infringements?

I hope that my thoughts on the matter may help others to give just a little bit more forethought to the problem and spend a little bit more time on their route planning, so that we all can enjoy the freedom of the skies without having ATC seek additional restrictions or the CAA on our backs because of a certain few.

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And why they do:

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My usual flying is based on a detailed flight plan, the use of radio and radio aids (VOR, DME, NDB) backed up by GPS. So on this day that had a clear blue sky but with some haze at around 1,500ft, I decided on some self training in VFR map reading and planned a triangular navigation exercise without the assistance of the above aids. Approaching my first turning point, a town, I could see the ### Lakes out to port and what looked like the buildings of the town ahead. But I had misjudged the distance from the lakes and strength of the Easterly tailwind and then realised that this was ###, not my intended turning point. Turning sharply to starboard, I located my intended turning point in the haze. At a height of around 2,000ft QNH I was probably far enough off track to be a few hundred feet inside the lower part of ###'s Class D airspace, so immediately went to below 1,500ft feeling a complete idiot at the same time.

The rest of the Navex and return to base was completed without incident, although the visibility for ground observations into the haze and sun was not great.

A salutary lesson which highlights the need to keep the basic navigational skills up to scratch. Flight planning for this flight should have been much better and the en route checking from map to ground observations, especially to check the drift, more accurate.

Clearly a skill that needs some polishing.

It is very easy to forget some of the basic principles of visual navigation. The CAA Safety Sense leaflet No. 5C 'VFR Navigation' contains reminders on the planning and conduct of a VFR cross-country flight.

Remember, Controlled Airspace is defined in the UK Aeronautical Information Publication and the VFR Guide; these are available on the NATS AIS website.

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FUEL CHECKS

Observing a pilot pre-flight a C150, two other flying colleagues commented, "Will he check his fuel visibly or not?" It was no surprise that he didn't. He then taxied to the holding point of the active runway, lined up and then taxied back to the holding point where he waited for 30 minutes.

Half an hour later the crash call was made - "Run out of fuel four miles SW of the field".

Not particularly surprising; the aircraft had already flown a long sortie without being refuelled.

The biggest surprise was reading the pilot's AAIB report - spontaneous engine failure - well I suppose it did ...!

Many clubs/associations record refuelling details on the Authorisation Sheet. This information together with the flying hours permits the fuel remaining to be estimated with reasonable accuracy. Where appropriate, use a dipstick to confirm contents

Too many GA accidents indicate that some pilots treat aircraft like cars - climb in, start the engine and go. Insufficient fuel may not only ruin your day; it could be the last mistake you make.

A final thought. If you notice something might be wrong, why not mention it? Flight Safety is a pro-active process

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NEAR MISS INCIDENT

I was returning to ###, which is situated close to Controlled Airspace, and was receiving a Radar Information Service from a nearby airfield. I had read back my squawk (correctly) and had also transmitted IDENT. The controller was very busy, so busy in fact that another light aircraft ahead of me and also inbound to ### had asked for a Flight Information Service (FIS) five or six times and didn't get a reply.

I was above the cloud but flying intermittently in rising cloud tops. A twin turboprop was receiving a FIS and I was aware he was in my general location. Without warning the twin-engine aircraft popped out of cloud to my left and only 20ft below. He passed just below me (literally). I contacted the controller immediately and reported a near miss. The controller didn't reply and I was spoken to about 40 seconds later by another controller. The rest of the flight was uneventful, but once I had landed, after discussing the incident, I telephoned the ATS unit. The Duty Controller stated that both the other aircraft and I had been given the same squawk code and that there had been a possible conflict (i.e. two aircraft in the same place, at the same height, at the same time, squawking the same code). I was asked if I wanted to report a near miss but as the other aircraft had decided not to report a near miss I decided not to proceed with one.

This incident falls within the definition of an Airprox and should have been reported as such.

It is important to understand that investigations of incidents reported to the UK Airprox Board are aimed at determining what happened and what were the main causal factors, assessing the risk levels involved and, where appropriate, making recommendations to prevent a recurrence of an incident. Depersonalised reports are published to permit lessons to be learned.

The UK Airprox Board does not apportion blame or liability.