GA FEEDBACK

No: 1 **September 1999**

ARE YOU PREPARED FOR FAILURE?

The Summer 1999 Edition of the Flight Safety Bulletin included an article 'Forced Landings in Light Aircraft' and emphasised the importance of practising forced landings.

The following report was received from a BCPL qualified pilot with less than 300 hrs Total Time.

I departed with one passenger on a local flight to ### *(a neighbouring airfield)*. Weather was CAVOK with a light North Easterly wind.

Approximately four miles from my destination the engine began making a very loud mechanical 'clanking' noise. This was accompanied by an immediate loss of power. Application of Carburettor Heat had no effect and the aircraft began to descend.

I considered trying to reach the airfield but quickly decided that I had insufficient height to do so with the reduced power. Furthermore the area between our position and the airfield appeared to have a considerable number of trees with no obvious area suitable for a forced landing.

I was aware that we had just flown over some large fields. I made a 180° turn to bring these fields into view whilst making a MAYDAY call. At the time that the engine lost power, we were at approximately 1000' agl. On completion of the turn we were about 700' agl. I selected large field that provided a landing into wind with a slight uphill slope.

I closed the throttle and landed approximately 1/3 into field. The field surface was dry and fairly firm, resulting in a normal touchdown and landing. The engine continued to run, albeit somewhat noisily. I shut down the engine and re-established radio contact with ### Approach, having our transmissions relayed via a helicopter in the vicinity. I confirmed that we had landed safely and that there were no injuries or damage to the aircraft. The helicopter orbited above the field and pinpointed our position.

I then contacted ### ATC by mobile telephone and confirmed that we were safe and that no fire or ambulance services were required. The police were on the scene within a few minutes.

A post-flight engineering inspection determined that the cause of the power loss was the failure of the intake valve in No.4 cylinder resulting in structural damage to the piston and cylinder.

Due to our relatively low height above ground level at the time of the power loss there was not very much time, nor a wide choice of fields, available for a forced landing. I consider that we were very lucky that such a suitable field was within gliding range.

I also consider that the successful forced landing can also be attributed to the recent training that I have undertaken. Since May 1997 I have completed the training and flight -tests for the award of the Basic Commercial Pilot Licence and Assistant Flying Instructor Rating. Both require regular practice in forced landing techniques and emergency drills. I am convinced that this played a considerable part in my ability to handle the situation**.**

If any lessons can be learned from this incident it is that pilots should regularly practice simulated engine failure and forced landing drills. Prior to undertaking the training mentioned I had not been in the habit of doing so except on very infrequent occasions.

HAND-SWINGING - A LUCKY ESCAPE!

It can never happen to me...or can it?

As the starter motor was not working the pilot decided to Hand-Swing the engine. The aircraft was not fitted with parking brakes, but neither had it been chocked. The throttle had been opened to draw in fuel. On starting the aircraft lurched forward towards the Fuel Bay from which it had just been pushed back. The pilot pushed forward on one wing and the aircraft turned across the taxiway coming to rest on its nose beside the taxiway - With the throttle still open!

GA FEEDBACK can also be accessed on the internet at http://www.chirp.dircon.co.uk

A General Aviation Safety Newsletter

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

CHIRP, FREEPOST (GI3439), Building F131, Room 129, Farnborough, Hants GU14 6BR Tel:(24 hrs) +44(0)1252 370768 Fax:+44(0)1252 394290

"OLD AND BOLD" - OR TEMPTING FATE?

The brakes on one of the club aircraft used for parachuting are poor, but the management have not allowed repairs to be made, on a cost basis. The manager is an 'old and bold' aviator who will not see the good sense in having brakes that work. Comments like "we operated for years without brakes" and "you don't need to use the brakes anyway" are answers or reasons for not repairing the brakes (a similar attitude extends to other parts of the a/c).

As a relatively inexperienced pilot I would like to have as many factors in my favour; if the brakes don't work I don't want to be patronised by "it'll make you improve your landings", particularly as the strip has no suitable undershoot area.

The no-brake situation concerned me, but as I was landing empty of parachutists I knew I could deal with it. Yesterday, however, was somewhat different. Due to the conditions at the surface I was told not to drop the parachutists but to land with all of them on board (not quite a full load). Fuel was just under a full load for our operation.

ATC gave me R/W ## which I felt gave me a tailwind, but they were sure it was the correct r/w. Regardless, I now was convinced that I had a tailwind, to land at almost max landing weight.

Deep breath, focus, concentrate. A good light landing, just past the touch down markers, and roll to a halt just over the half-way mark. Start breathing again.

I hope I don't have to repeat the experience.

Many accidents occur because normal safety margins are eroded on the basis of "It will be alright, because there's never been a problem before". Regrettably it doesn't always turn out that way.

If you think new brakes are expensive, try an accident!

****

A LEARNING EXPERIENCE!

Mental stress can prevent us from doing the simplest thing as this report shows:

I learned to fly on R-22 helicopters, relatively late in life. I come from a totally non-flying background and found it extremely difficult. With just over 20 hours TT, of which 2 hours was solo, I was sent off on my fifth solo sortie to practice autorotations in the local training area. I have always been under-confident, and was quite sure I would get lost, the more so since the final part of the exercise consisted in 360-degree turns, in autorotation - for me the ultimate exercise in disorientation. After 45 minutes, I still had my reference point in sight (a water tower), and had decided to do one more auto before returning. Predictably, I lost sight of my water tower and was immediately convinced I was lost. I set off on a northerly direction towards the airfield, and failed to locate it. As well as not wishing to announce to all and sundry that I was lost, I was also under-confident on the radio, so I pushed on, looking for clues. By now I had been flying for over an hour solo, on top of a similar time dual (with an hour's break). The duration of the flight combined with the difficulty of the exercise had taken its toll - I was knackered. Finally, by means of a series of low passes over some motorways, I was able to ascertain where I was. I turned onto what seemed like a good heading. In the far distance, directly ahead, was the water tower, which I had failed to locate earlier, even though it was obviously right next to me!

However, the nightmare had only just begun. I returned to the training area and called the airfield for joining instructions. I received no reply (I think there was a temporary fault on their radio), but continued to the field for landing. My addled brain indicated to me that since we had come out of the field in a southerly direction, this was obviously the way to return, i.e. on the reciprocal runway! Apparently my instructor spotted me at this point, and was concerned since I had not been taught downwind approach and landing procedures. However, the brain works in mysterious ways, and though I had not consciously made a downwind approach, I knew I had to finish up pointing the other way, and performed a flawless 180-degree turn and quickstop into wind, a manoeuvre I had not even heard of! It was the best thing I did all day. From then on it was all downhill - even worse to come.

By now in a state of extreme exhaustion, I hover-taxied over to the landing area, in front of the clubroom, and tried to land. At this point the tail began to turn to the left. I attempted to correct this with the pedals, but the rate of turn simply increased, so that I was pirouetting in front of the restaurant window, next to the fuel pump. I heaved on the collective so as to get above the pump and avoid smacking it with the tail, and, close to panic, continued the whirling dervish routine about 15 feet above the ground. My instructor, a very professional ex-military pilot, must have been in a state of shock by now, since he was heard to mutter "What's that silly ####### doing now?" Something must have still been functioning in my brain, since I was aware that, as the speed of rotation increased in response to pressure on the pedal, I had not actually lost control of the tail rotor i.e. these were not the classic signs of tail rotor failure. I forced my brain to follow through the correct steps: right foot on right pedal to stop the left turn. The rate of turn increased further. I knew I must be doing something wrong. In desperation I visually checked my feet. I was actually pressing with my LEFT foot on the LEFT pedal!

<u>Footnote</u>: Yes, they did let me have another go!

****