



Recent training saves a pilot in a dangerous situation.

### Douwe Swart

THE ALTIMETER WINDS DOWN TO 500 feet and my instructor gives the command to go around. Slowly increasing the throttle, I feel the engine surge with power allowing us to climb safely away. “Well done,” says my instructor, “if that had been a real forced landing you would have been fine.”

Several months later while completing my instructor rating, I was told the same thing: “That was good, you would have made it easily”. Feeling confident in every other aspect, I talked my instructor into heading down to the Oaks, and doing some more practice forced landings. Of course this was with the engine idling, but it was fantastic experience and gave me a better insight into exact glide distances and aircraft performance in low power arrangements.

On my first day as an instructor my student requested a flight in a Tomahawk. While the school mainly used Cessnas for

basic training we did have one Tomahawk, but it was flown very rarely. The aircraft had been in the corner of the hangar for as long as I could remember, but it had a valid maintenance release, so I prepared it for flight.

The student had a few hours flight time at another school, and was quite comfortable with the aeroplane. The lesson, a guided tour of the Bankstown training area was running smoothly. What a way to earn a living.

Heading into the Burragorang Valley I quickly scanned the instruments. All normal... except for the oil-pressure gauge, which dropped to zero in the space of two seconds – while I was watching it.

I took control of the aeroplane, and moved back over more hospitable territory. Closely monitoring the oil-temperature gauge, which did not move at all, I took the liberty of gaining some altitude. Apart from the oil pressure gauge, everything else appeared to be operating normally. I decided to head back to Bankstown, which was my first mistake.

Flying just to the south of Hoxton Park, I handed control back to my student thinking that the problem was with the gauge rather than the aeroplane and tuned the radio to Bankstown ATIS. Runway 11 was in use which meant we had to enter the Bankstown control zone at 1,000ft.

**Engine trouble:** As I looked at the houses ahead, and the lack of forced landing sites, I decided I would ask Bankstown Tower if I could enter the zone at 1,500ft due to possible engine trouble. We were about a mile south of 2RN at this stage at 1,250ft. As I held down the press-to-talk switch, the aeroplane shuddered fiercely, the engine and prop stopped, and the sound of silence filled the cabin.

I issued my mayday call and let the tower know my intentions. Hoxton Park was behind me, and it seemed the most logical choice for a landing. It seemed that it was too far away to glide, but it was my best hope.

Even with all the training I had done, only a few days before, well-rehearsed procedures were the furthest thing from my mind. I had been told so many times to always stick to the best-glide speed for the aeroplane, but dropping quickly and still having a distance to travel it was hard to keep the required nose-down attitude. Trust the experts when they say there is only one speed for best glide. I tried everything to extend the distance, but with the engine stopped, you quickly realise that they call it the best glide speed for a reason.

Communications with Bankstown tower continued throughout the incident. The crash railing and the fence, which is a few metres from the threshold of runway 34 at Hoxton, were looking very ominous. I looked around trying to find an alternative. There were none that would guarantee no loss of life or injury. My best option was still Hoxton.

My student was quiet. I looked at him, and briefed him quickly on the situation although it was already quite apparent what was going on. Sub-consciously raising the nose to extend the glide dramatically increased the rate of descent.

As we got closer to the field, I realised we were going to make it. The fact that the prop had physically stopped and wasn't windmilling helped our glide ratio to a huge extent. I briefed the student for the impact, maintained the glide speed, and went to change frequency to alert Hoxton. The knob fell off the radio, and left us on a frequency somewhere between Bankstown Tower and Hoxton CTAF.

We were on a short-final straight-in approach to Runway 34, with no radio calls and a failed engine. What about Hoxton traffic? Luckily there was none. We cleared the fence, and touched down about five metres after the threshold, right on the centre-line. Perhaps the best landing I have ever done,

or maybe it just felt that way.

I think luck was on our side that day. My student smiled at me and said "That's what we train for". To an extent it is, but how seriously do we really take our forced landing training. Is close enough good enough?

I learned a lot in that two or three minutes of silence. It is so hard to override your natural instinct to raise the nose to extend the glide. At 500ft a few knots either side of the glide speed may appear irrelevant, but when you get down low, and you are counting on converting every foot of height into the greatest distance, the glide speed is very important.

The reason for the engine failure was given as a blockage in the oil supply line. The conrods overheated and snapped under extreme pressure, friction and heat. The cause of the blockage was not found and no reason was ever given for the fact that the temperature gauge remained constant.

## ANALYSIS

### Hesitation and denial

Chris Markham

Confronted with a low oil-pressure indication in flight, the pilot gave himself two options – land as soon as possible or head for home. It takes a lot of will power to carry out a precautionary search and landing when you suspect the extent of your problems may be limited to a failed pressure gauge. However, given that there was a sealed aerodrome enroute to Bankstown, the choice should have been easier. Why didn't the pilot take the option

of going straight to Hoxton Park?

We should remember that real emergencies create a number of human responses which do not exist in training (or when typing a critique of an accident in your office). Disbelief and hesitation appear to have contributed significantly to the pilot's decision to continue the flight to Bankstown. Given that the first thing most pilots think when confronted with a serious emergency is "this can't be happening to me", it's quite easy to see how evidence suggesting "this isn't happening to me" could be given excessive credence.

The pilot wisely decided to climb after noticing the apparent oil-pressure loss, however the aircraft could have been climbed higher without infringing controlled airspace, and higher still with an airways clearance. In this situation, the higher the better.

**Best glide speed:** The pilot rightly points out the importance of adhering to the correct glide speed. This is published in the flight manual and may be a single speed or a range of speeds for different weights. In most light aircraft, the weight range is small and so best glide speed varies at most by a few knots. Larger aircraft, having a greater weight range, will have a correspondingly broader glide-speed range. Whether the aircraft has one specified glide speed or a range, it is absolutely essential that the aircraft is flown at precisely the right speed. Flying at any other speed, even by just a couple of knots, will greatly reduce your glide distance.

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**Glide performance:** In addition to knowing the correct glide speed(s), it is equally important to know the glide performance of your aircraft. This will allow you to quickly and accurately estimate a realistic glide distance. While the best glide speed can be extracted from the pilot's operating handbook, glide performance is best obtained from practice approaches.

Time spent practising forced landings is never wasted. Remember that all pilots will suffer a degree of hesitation and denial when confronted with an unusual situation. Prepare yourself by asking "what is the worst thing that could happen now and how would I cope with it?" If something does go wrong you will be better equipped to respond quickly and appropriately.

If you suspect engine trouble, assume the worst is about to happen. It may be embarrassing to make a precautionary landing in a perfectly serviceable aircraft (albeit with a faulty gauge), but, as this pilot found out, it may be better than the alternatives.

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The wrong airspeed steepens the glide angle. To maximise glide distance, fly at the glide speed recommended in the aircraft flight manual. If you are flying at the recommended airspeed and it looks like you will not reach the desired landing point, resist the temptation to raise the nose – it will decrease your glide distance.

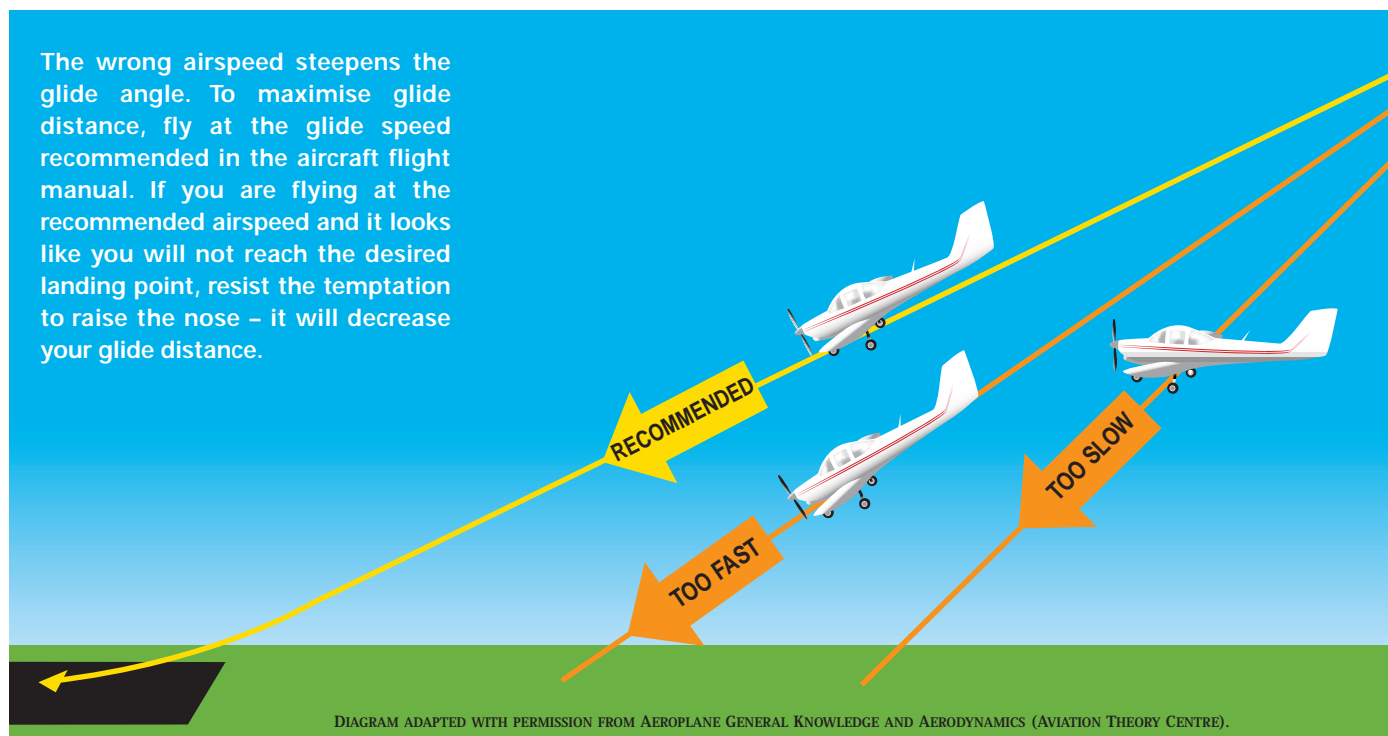


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