

BRISBANE VALLEY FLYER

JULY- 2020



Watts Bridge Memorial Airfield, Cressbrook-Caboonbah Road, Toogoolawah, Q'ld 4313.

Rob Knight (Editor) Tel: 0400 89 3632



Flying Flea (Pou de Ciel), Zuccoli Classic Aircraft Collection, Toowoomba Airfield, QLD

Peter Ratcliffe (Pres.) 0418 159 429

Vern Grayson (Vice Pres.) 0431 465 874

Ian Ratcliffe(Treasurer) 0418 728 328

Jackie Daley (Secretary) 0438 783 740

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From the Club



Message from the BVSAC President

All BVSAC members please note that we will be having our next meeting on the first Saturday in July. Now that the social distancing requirements have been relaxed, it will be a fully attended meeting, and all members are welcome

Peter Ratcliffe

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Aircraft Accelerate in a Turn – or Don't They?

By Rob Knight

Some time ago I was party to a couple of pilots having a conversation over a cuppa at a local flying school in SEQ. Their amiable conversation was wandering but a particular discussion raised my interest – one pilot remarked that had overheard his instructor tell a student that aircraft were always accelerating when they were turning. He said, “That’s gotta be BS, my aircraft stays at the same airspeed all through the turn”.

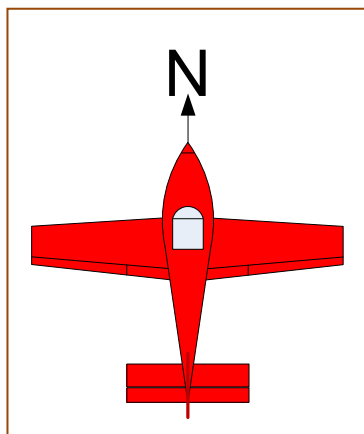
Sorry buddy – but your instructor is absolutely correct. Although you won’t see it on your ASI, your aeroplane will be accelerating every time and all the time that you are turning.

To understand this, let’s check a couple of definitions:

- Speed** The rate of change of something’s position.
E.G. an airplane is flying at a speed of 100 knots. This means the aircraft is changing its position by 100 nautical miles every 60 minutes.
- Velocity** The speed of something (or an object) in a given direction.
E.G. Surface wind velocity – 090/10. This is read as the wind blowing FROM 090 degrees (or east) at a speed of ten nautical miles per hour. This means the wind is coming from the east and passing across 10 nautical miles of surface every 60 minutes. Velocity is a vector quantity because it factors both speed and direction. Change either and the velocity changes
- Acceleration** The rate of change of velocity.

Thus, in flight, the airspeed indicator is indicating the rate at which the aircraft is passing *through the air*, and the direction of travel is not in the least bit relevant. This is what the pilot in the introduction above is talking about

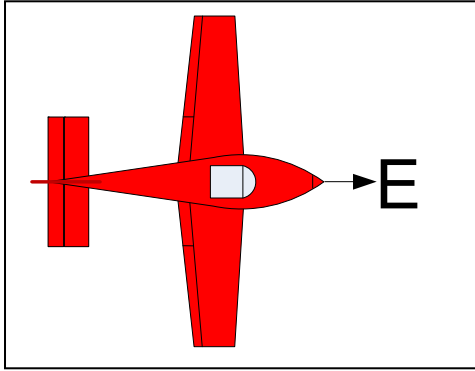
Herein lies the apparent confusion. Whilst the aircraft maintains a constant airspeed on the ASI, it is also both accelerating and decelerating at the same time, on every occasion that we turn. Let’s look at a picture of what I am talking about. Firstly, in straight flight heading north.



In this image the aeroplane is in straight and level flight, heading north at 100 knots IAS.

Its velocity could be said to be 360/100.

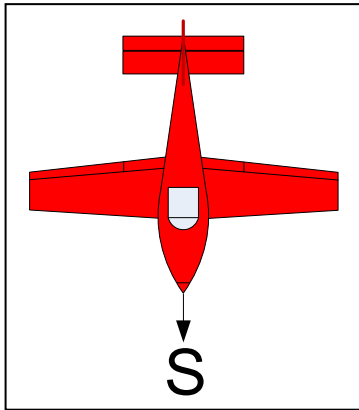
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The pilot, maintaining 100 knots IAS, makes a right turn onto East.

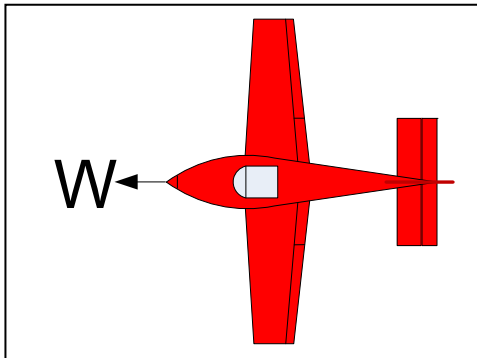
The aeroplane now has a velocity of 090/100.

In the previous illustration it was 360/100, It had no velocity along 090. Thus the aeroplane has accelerated during the turn by 100 knots. Its airspeed has not changed, but its velocity has. As it now has no velocity relating to 360 degrees, it this case it's velocity has diminished/decelerated from 100 knots to zero.



The pilot continues to turn right, onto and through 180 degrees – South.

Its velocity is now 180/100. As it had zero previous velocity on 180, again, it has to have accelerated through 100 knots, and, as it previously had 090/100 and it now has no velocity towards 090, it has decelerated through 100 knots.



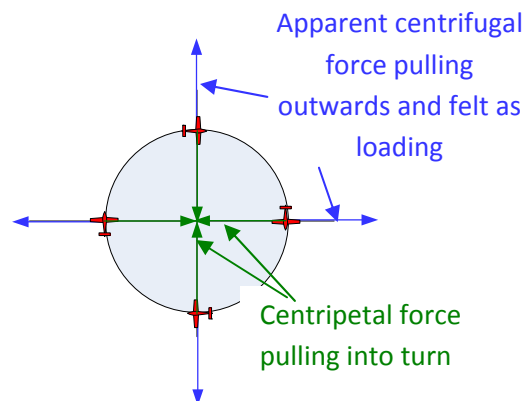
Continuing the right turn, the pilot now turns through 270 degrees, onto West and guess what?

The aircraft accelerates 100 knots to have a velocity of 270/100, accelerating 100 knots onto 270 and decelerating 100 knots on 180

And so it continues. As long as the aeroplane is turning, it is accelerating. If the pilot keeps turning, they keep accelerating, even though their airspeed is constant.

The force that provides this acceleration is called **Centripetal force**, the **force** that is necessary to keep an object moving in a curved path and that is directed inward toward the centre of rotation.

As every action has an equal and opposing reaction, an apparent force called **Centrifugal force** is felt by an object moving in a curved path that acts outwardly and away from the centre of rotation.



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This centrifugal force is the cause of the increased loading in a turn and the tighter the turn, the more centripetal force must be applied and thus a correspondingly larger centrifugal force is generated. As centripetal force is generated through the lift force by the wings, more lift is therefore required to turn an aeroplane. In level flight, the lift generated must now equal the weight AND provide the horizontal centripetal force required to turn – that horizontal component of lift your instructor raved about in your training. With the additional lift provided by increasing the angle of attack, the stall speed rises in the turn. Now where have I heard that before?

As a small boy I swung a billy of water in a 360° arc over my head - as did most people, I'm sure. The water never fell out of the billy when it was over my head because centrifugal force, the reaction to the centripetal force my arm was providing, held it firmly in place. And – the faster I swing that billy, the firmer it stayed in place. The turning aeroplane is exactly the same except in a horizontal arc instead of the vertical arc of the billy. The centripetal force my arm produced provide an acceleration towards the centre of the circle the billy was scribing so all the way around the arc that billy was accelerating. Without that acceleration, I would have had an impromptu shower

So the answer is a resounding YES. Turning objects are always accelerating even though their speeds might remain constant.

Happy Flying



SHORT FIELD LANDINGS

By Kev Walters

Introduction.

Short field landings are an extension to our never ending quest to better ourselves as pilots. In R.A. Aus we are limited in this because we can't fly at night, or conduct instrument flying, or aerobatics, or do crop dusting. Nevertheless when we tackle something like short field work, we still have to learn a new art and apply the same diligence as other ratings.

So what's the big deal about short field landings compared to normal landings. Well, let's go back to school. We all remember that on approach we control airspeed with attitude, and rate of descent with power. And as we fly the base leg we would select one stage of flap, then on final we select another stage of flap and maybe get to full flap on mid final. At each stage the airspeed would vary and we might even reduce the speed as we approach the threshold before the flare. In all this our aircraft is feeling a little different at each stage, and we normally have to fiddle around with the trim and changes in attitude. In our training days that's what we were taught to do. Now we have to break a long held habit and basically control airspeed AND rate of descent with power with only miniscule changes in attitude.

Now back to our first lesson in flying. Effects of Controls. Your instructor would have demonstrated the effects of airspeed in slow flight with power applied. That's right, the rudder and elevator are very effective and the ailerons pretty well not so effective and almost dangerous. Then later we went on to stalling and found a similar thing. We were taught to pick up a wing with rudder, NOT aileron although in some aircraft types you MAY get away with such misuse of aileron. Then we were taught that power reduces the stalling speed, and more flap reduces the stalling speed. So with all that knowledge we tackle the short field landing.

The Flying Lesson.

To learn the short field technique we need:

1. A suitable field clear of obstructions.
2. A calm day.
3. A suitably QUALIFIED instructor.
4. A mind set to change what you have previously practised.

After completing our pre landing check, including checking we have brake pressure, we enter base leg and set the aircraft up with full flap and a little lower glide path than the normal. Don't forget to trim. Speed at first attempt should ideally be about 10 knots above the normal clean, power off stall speed. Without power this would see you landing well short of the threshold. Without changing the attitude, add power to maintain a slightly lower than normal glide path. Trim the aircraft. The rule is if you are low on the glide path or low in IAS, add power and if you are high on the glide path or high in IAS, reduce power. A common mistake at this stage is to pitch the nose up or down, out of habit, to restore the airspeed. Remember- ATTITUDE + POWER = PERFORMANCE. Also have faith in the fact that with power and full flap applied there is a good reduction in stall speed. In the first lesson we are not interested in

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where you touch down, (As long as it's on the airfield 😊) but in the technique. As we fly down base and final we are getting used to how the aircraft feels in this configuration. Also the instructor is advising you not to overuse the aileron but have further reliance on the rudder both to keep the wings level and stay on the centre line. We are never perfect but the aim is to come down the glide path without altering power or attitude, right to the touch down point. When we take the power off the aircraft will touch down. Rarely is this achieved and we have to be prepared to gently use power with miniscule changes in attitude to maintain the glide path. Once this technique is achieved then we can practice the real deal.

One must imagine that we have a very short strip. It's one way, with no hope of a go around, and 70 ft gumtrees on the far end. Approach is done in the above described manner, with a lower glide slope and close to the stall speed. We are kept from stalling by virtue of our full flap and as large amount of power as practicable to overcome the drag. The wings must be level at all times as anything else will increase the stall speed. We have selected our touch down point and when the aircraft is at that point, ideally 1 foot off the ground, we close the throttle. In some instances we may have to pitch the nose up, or down, a little to attain the correct 3 point attitude. (tail wheel aircraft).

It is not necessarily a tidy landing but when you are doing it for real, you have no option. I have used this technique many thousands of times whilst aerial topdressing in Southern Tasmania where the airstrips in hilly country can be quite challenging. It has never let me down apart from the odd close scrape. The trusty De Havilland Beaver is a forgiving aeroplane. As soon as the throttle is closed the aircraft will touch down so make sure your height is correct. Basically there is no flare as such. Use brakes judiciously. Relying on brakes in a short field situation rather than established proper technique is fraught with danger. On at least one occasion in Tasmania there was dew on the grass strip and the brakes locked very easily and I had virtually no braking at all.

Common Mistakes and Myths.

1. Use same technique as basic training but come in slower. This can result in loss of control on short final and /or heavy landing.
2. Long landing due to fiddling with flaps, airspeed and trim on final.
3. Long landing or loss of control due to fiddling with flaps after touchdown. It is a long held myth that taking off flap after touch-down increases braking performance. It is debatable at best. Consider this: Unless you have manual flaps and a nose wheel and fixed gear, you might get away with it, however any landing involves the most concentration in flying. Raising flaps cycles through maximum lift and minimum drag and at some stage this is going to increase your landing distance. Lack of concentration, particularly with tail wheel aircraft can result in loss of control on the ground. Waving your hand around the cockpit after touch -down is not recommended in any landing.
4. Anything but wings level and flying in balance is out the window.
5. Tackling a short field landing in inappropriate weather conditions.

An important aspect of Short Field Landings is a phenomena called "flying behind the drag curve" What does this mean? Well since we are approaching to land just above the stall we

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notice that the aircraft's rate of descent is increasing so we apply power until we arrive at full throttle but we are still descending . The total drag has overcome the lift and we begin to stall.

I had a rather scary moment at our strip where I was demonstrating the short field technique to a student in the Drifter.(No gauges in the back.) As I approached the fence the rate of descent increased and after applying full power we knew that we were going to go through the fence. The only thing that was going to save the day was to decrease the angle of attack to reduce the induced drag. This we did by throwing the stick forward to hit the mainwheels onto the ground before the fence and bounce over it. This was successful but we still snagged the top strand with the tailwheel. On another occasion I was demonstrating to an Ag student in a FU-24 Fletcher the appropriate time to dump a load with super spreading operations. The demonstration was almost a disaster as I started to dump the load approaching high ground and the aircraft was starting to fly behind the drag curve. Dumping the load is inhibited if the aircraft is also descending at the same rate as the load is being dumped. Another close shave with short field landings. Don't try to teach yourself or you might find that the ground is very hard.

Kev Walters
(CFI/Instructor/Pilot Examiner)

Editor's Note

Kev makes an extremely valid point in his piece above. You need to get some dual BEFORE you try any short field work in any aeroplane where you are the PIC. I watched a pilot demonstrating his STOL skills at Raglan in New Zealand where he removed both his mainwheels and the top rail of the wooden boundary fence at Raglan Airfield. His nickname immediately became, "Shorty".

On another occasion I, too, was giving instruction to a budding AG pilot when the Cessna 150 he was doing his short field training in flew through the 15 foot high pampas grass barrier on the airfield boundary. On reflection it was a little bit funny, but at the time, I saw no joke as MY aircraft burst through the wall of grass in a explosion of seeds, seed heads and stalks to "fall" onto the grass before the runway began. There was a fair bit of dual required before I could trust this man again. Unfortunately, he met his maker doing exactly the same thing in a Cessna 188 Agwagon on a steep strip with a bluff on the approach, about a year later. Flying behind the drag curve is definitely non-habit-forming.

There is a VERY definite limit as to how slow you can go. Be Warned! Take it too far and you are history in the making. DON'T BE A FOOL - GET SOME DUAL

Rob

Pakistan accuses one in three pilots of having fake licences

About 150 pilots in Pakistan have been grounded after an investigation revealed they cheated exams and obtained fraudulent licences to fly.

Pakistan's state-run airline says it will ground 150 pilots, accusing them of obtaining licences by having others take exams for them, an accusation that followed a probe into last month's crash that killed 98 people in Karachi.

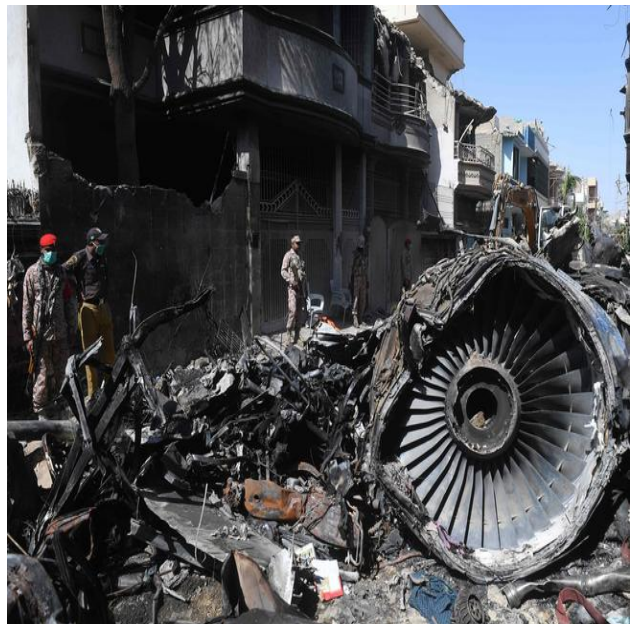
Abdullah Hafeez, a spokesman for Pakistan International Airlines, did not give additional details about the alleged cheating but said a process to fire the pilots had been initiated. "We will make it sure that such unqualified pilots never fly aircraft again," he told The Associated Press. He said the safety of passengers was the airline's top priority.

Alarmed over the situation, the International Air Transport Association said it was following reports from Pakistan "regarding fake pilot licences, which are concerning and represent a serious lapse in the licensing and safety oversight by the aviation regulator". The global airline organisation said it was seeking more information.

Pakistan said it would ground 150 pilots on charges they obtained their pilot licences by having others take exams for them. The move by PIA to ground the pilots comes a day after the country's aviation minister, Ghulam Sarwar Khan, said 262 out of 860 Pakistani pilots had "fake" licences. He made the revelation while presenting preliminary findings of a probe to parliament into the May 22 Airbus A320 crash.

The announcement stunned politicians present in the National Assembly and shocked family members of passengers who died last month when Flight PK8303 went down after departing from the eastern city of Lahore, crashing in a congested residential area in Karachi. The crash killed 98 people, including 97 passengers and crew, as well as a girl on the ground. There were only two survivors on board the plane. The investigation follows the May crash of a Pakistan International Airlines aircraft in Karachi. Neither Mr Khan nor Mr Hafeez released additional details about the alleged methods used by the pilots to wrongfully obtain licences to fly commercial planes.

Mr Khan said only that they did not take examinations themselves to get the required certificates, which are issued by the civil



Sorting wreckage of Flight PK8303

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aviation authority. But officials familiar with the process involved in issuing licences said an unspecified number of people who had the skills to fly a plane but lacked technical knowledge had in the past bribed qualified persons to take exams for them. They didn't elaborate.

The officials, who spoke on condition of anonymity because they were not authorised to discuss the matter, said Pakistan International Airlines learned about the scandal two years ago and fired at least four pilots at the time on accusations of falsifying exams to obtain a licence from the civil aviation authority.

Mr Hafeez said notices were being issued to all those pilots who he believed had tainted licences.

Shortly after the May 22 crash, Pakistan announced it would investigate the incident and share its findings.

In presenting preliminary findings of the probe to parliament on Wednesday, Mr Khan said the pilot, before making his first failed landing attempt, did not pay attention to warnings from the air control tower when he was told the plane was too high to land. However, he said the pilot and co-pilot were medically fit and qualified to fly.

The crash took place when the plane attempted to land a second time. At that point, air traffic control told the pilot three times that the plane was too low to land but he refused to listen, saying he would manage, Mr Khan said. The minister added that, for its part, air traffic control did not inform the pilots about damage caused to the engines after the plane's first failed landing attempt.

"The engines of the plane were damaged when they scraped the runway but the air traffic control did not inform the pilot," he said.

Author's note:

This situation is not unique to Pakistan. As the CFI of the Rukuhia Flying Club at Hamilton in New Zealand, I was offered a substantial sum of money by a non-New Zealand citizen having difficulty passing the NZCPL theory subjects. He asked me outright to sit the exams in his name. He brought it up in the hearing of a number of other pilots and I made a joke about how easy that would make it to get the qualifications. Then I took him aside and we had a brief and very blunt one-sided chat after which he left the RFC not to return.

Several years later I got an evening phone call from a fellow examiner and close friend who asked me if I would provide him with a personal character reference. When I asked, he informed me that he was being sued for racism and unprofessional conduct because he had failed a candidate on his CPL flight test. The candidate was the same non-New Zealander that had approached me about sitting his theory exams for him.

I related the episode to my colleague and the following day I got a request to provide an affidavit from his lawyer. After presenting the affidavit, the said non-New Zealander promptly withdrew his charge and left New Zealand for South America. The last I heard was that he'd crashed a Piper Aerostar. He had been seriously injured and NZ CAA was being approached about his claim to CPL training in New Zealand.

They do walk among us.

The Flitfire Cub: Piper's Little Known Pre-WWII Contribution

Supplied by Mal McKenzie

Piper Built Special Cubs to Aid Royal Air Force War Veterans

Photo courtesy of Amy Adams, North Carolina Aviation Museum.

By T.S. "Max" Platts, VAA Lifetime #722088

When speaking of the brave Royal Air Force (RAF) pilots who repelled the Nazi invasion of their homeland, British Prime Minister Winston Churchill said that "Never was so much, owed by so many, to so few." The Battle of Britain was a major victory for Britain, but a costly one. In the course of the battle, the RAF and Fleet Air Arm lost 1503 aircrew killed during the Battle of Britain. An organization that worked to address this enormous human toll was the RAF Benevolent Fund, which was established in 1919 after the end of World War I. This organization took care of wounded RAF personnel and supported their families. During World War II, the people of Britain banded together to support the men who rescued them from their darkest hour, along with an aircraft manufacturer in the United States.



Photo courtesy of Amy Adams, North Carolina Aviation Museum

The people of the Piper Aircraft Corporation in Lock Haven, PA were inclined to agree with the words of Churchill. Looking for a way to give back to these brave men, William Piper and Bill Strohmeier, Piper's Sales and Promotion Manager, decided create a raffle-type fundraiser that would involve their very popular Piper J-3 Cub. A total of fifty Cubs were donated by Piper to support his raffle, one for each

state in the Union and the two territories, Alaska and Hawaii. Strohmeier enlisted the help of Piper dealers across the country to buy the fifty Cubs. Each dealership in each state would get one Cub to raffle off. The Cubs were nicknamed "Flitfires" because they bore the same markings as the famed Supermarine Spitfire.

The first Flitfire was a Franklin-powered J3F-65, serial number 6600, registered as NC1776. The registration number was chosen to reflect House Resolution 1776, which enacted the Lend Lease Act between the United States and its allies. The remaining forty-nine Cubs were fitted with a combination of Continental, Lycoming and Franklin engines. The airplanes were painted silver rather than the signature yellow of most Cubs, and given a unique British flourish. The workers at Piper painted Royal Air Force roundels on the wings and fuselage along with the red, white, and blue fin flash on the vertical stabilizer. They

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also emblazoned each airplane with the words “Royal Air Force Benevolent Fund” on the fuselage to the rear of the RAF roundel. The Flitfires were completed at Piper’s Lock Haven, PA factory between April 10 and 22, 1941.

On April 29th, all fifty Flitfires were flown to New York’s La Guardia Airport for a dedication ceremony and fundraiser. Their arrival at the then-busiest air terminal in the United States was the largest such mass landing ever attempted. The arrival of the Cubs was accompanied by New York City socialites, fashion models and



Flitfires lined up at Lock Haven in 1941. Credit: Roger Peperell collection

Royal Navy officers whose ship, the H.M.S. Malaya, was undergoing maintenance in the states. New York City Mayor Fiorello LaGuardia was the master of ceremonies for the event. Each of the airplanes had a balloon fastened to the propeller and were christened by the attending fashion models by popping the balloons.

The evening festivities were held at the local airport café. The event was complete with dinner and a show followed with cocktails, games, and raffles to continue to raise funds for the British war effort. The games, hosted by fashion models and New York socialites, included: a garter toss; a unique machine that allowed the guests to “Bomb Berlin for a Buck!”; along with a multitude of other challenges to entertain the guests.



NC1776 in Lock Haven, PA 1941 Credit: Roger Peperell collection

The next day the Flitfires departed LaGuardia for the respective states and as the saying goes, “the rest is history.” Some of the

Flitfires were sold to flight schools across the country and continued to support the war effort by training pilots in the Civilian Pilot Training Corps. NC1776 was flown by Orville Wright all over the United States in 1943 on a War Bond tour. After the war many of the Silver Flitfires vanished into obscurity. Today eight of the original fifty Flitfire Cubs are known to exist.



Restored Flitfire

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Another restored Flitfire

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Harry's Joke:

I was talking over the fence to my neighbour the other day and he told me he and his wife had been more than a little embarrassed by their 6 year old daughter. She had come home from school after the lockdown and, whilst her mother had been cooking tea, had asked where she came from.

Mum said, "Wait until later and your Dad and I will tell you all about it".

The neighbour said that his wife had warned him that THE subject was now a live topic and after tea the three of them sat down and they told her everything that they thought she might understand about the birds and the bees.

At the end, their daughter looked at them, very puzzled and obviously very nonplussed and confused.

"What's the matter? Mum asked the daughter. "What aren't you sure about?"

"I have a new friend at School", the daughter replied. "She comes from Toowoomba. Where do I come from?"

Harry

IF ONLY... THE FRIENDS I'VE LOST IN AIRPLANE ACCIDENTS

by Mark Jarratt

I've struggled with writing about this tragedy for a long time. I wanted so much to give other pilots a glance at this image, hoping a few might take a moment before a flight to see if there were any gotchas they missed amid their haste and distractions. But I recoiled against the prospect of telling a very personal, painful, and graphic story about a good pilot buddy. Finally I decided to just start writing rather than let this opportunity die along with him, though I must protect his anonymity. I'm certainly not a writer, nor have I ever written anything for public consumption. I may never again. This is straight from the heart.

Hundreds and hundreds of people. Family, friends, business associates, and employees. Every seat in the large church sanctuary filled. Others standing along the walls. The foyer and hallways so crowded that more stand around outside, roasting in the sun, straining to hear the memorial service being broadcast on speakers. All the parking lots filled, with illegally parked cars choking the roadway for hundreds of yards in both directions. No dry eyes. So many lives so profoundly impacted. So many futures changed forever. If only...

My friend and his passenger died in an airplane crash.

"This has become a far too frequent occurrence for me."

I've seen turnouts like this before, when young men die suddenly and violently while living life to the fullest. These gentlemen were well known and respected in their community and businesses, and served others for most of their time on this earth. They were humorous, articulate, and responsible. They loved and provided well for their families, friends, and employees. In our busy age it's a great tribute that so many have made the effort to pay their respects and offer comfort and condolences to the suffering families as they start dealing with their own grief.

This has become a far too frequent occurrence for me, and I'm getting a little tired of it. I've lost sixteen friends and numerous acquaintances in aircraft mishaps. So far. Of my friends, four died in military training and combat, and all the rest in general aviation. Nearly all were highly skilled, with decades of experience in all sorts of aircraft and conditions. And I miss these good men and women every single day.

Oddly enough, I don't personally know anyone who survived a GA crash where others died. This might be due to the nature of flying in a part of the country with very challenging terrain and weather. But records show that terrible, life-altering injuries are frequent. A common trait among pilots is a highly developed sense of responsibility for protecting our passengers. I can't begin to imagine the lifelong load of guilt a pilot must have to carry after killing or maiming people who trusted their lives to them.

So how do qualified, well-trained pilots lose their lives? My friends perished due to various causes: continued VFR into IMC, midair collision, severe turbulence in mountains, flight control malfunction, low altitude stall/spin, descending below approach minimums in IMC,

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flying up blind canyons, attempting a go-around from a one-way strip, and catastrophic engine failure. There was no hotdogging, buzzing, or overt recklessness involved. These all should've just been normal flights.

Come to think of it, I've only known one person who died in a traffic accident, and he was on a motorcycle. Anyone who tells you that flying is safer than driving is probably talking about airline flying. Either that or they're misinformed. And in this instance at least, the old flying adage holds true: "... if you crash because of weather, your funeral will be held on a sunny day."

Please don't get the wrong impression. I love aviation. I've been completely passionate about it since I was a toddler. In fact, the first thing I want to do after coming home from work (if you can call it "work" — I fly for a living) is go flying in little airplanes. Hey, I'm sick! I need help!

But these losses have changed me. I find myself double checking so many mundane things, and kicking myself if I discover anything I've missed. Much of the time that I used to take to enjoy the view is now crowded out by going over the "what ifs." I experienced an engine failure a few years ago, and now I hear my inner monologue saying things like, "There's a good place to deadstick it in! There's another! And another!" But I know that I can't possibly account for everything that could bring me down.

This nagging understanding makes me refuse to take the chances that I might have in the past, like taking more than one grandchild up in my airplane at a time, or trusting that the destination weather will improve by arrival time. It also makes me less willing to fly hard IFR when I'm not at work. That's too much like work, anyway, and I bought my airplane for blue skies and beautiful days. Most of all it makes me realize that I'm not invincible. But if this risk aversion makes me a safer pilot, then it's all worth it.



Accident reports seldom convey just how awful an aircraft accident really is

We've all read the accident reports, full of terms like "high degree of energy dissipation upon impact" and "rapid descent into terrain." But this kind of cold, clinical language disguises the real aftermath: the disrupted, often destroyed lives of loved ones, the hardship and loss experienced by those left behind, and the horrors they can never forget. These reports seldom let us see through that veil, but we MUST look beyond and understand the massive consequences our actions or omissions might bring.

We've all seen or heard of bad examples of airmanship, ranging from ignorance to foolishness to false bravado. But in dealing with all my personal aviation tragedies, I've

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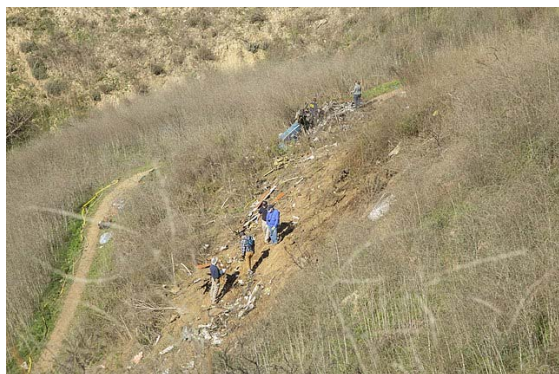
found some things common to most: complacency, overconfidence, inadequate planning, lack of qualification or competence, and lack of preparation. But the biggest contributor to my buddy's fatal crash: very poor judgment.

This is a difficult thing for me to say about my pal, especially since I had been something of a mentor to him. But I have to put it right out there in the hope that it might save a life someday. Besides, who among us hasn't displayed poor judgment at one time or another, especially when acting as a pilot?

Get-home-itis was the biggest link to the faulty judgment in this tragedy. It is a powerful force, so powerful that both men aboard were willing to risk single-engine flying over unlit mountainous terrain. In the middle of the night. Without a discernible horizon or an instrument rating. In smoke, clouds, and turbulence. With the moon adding all sorts of visual illusions. *And* with embedded thunderstorms along their route.

This combination of factors produced very unsurprising results: classic spatial disorientation followed by the inevitable graveyard spiral and final dive, terminating with high-speed vertical descent into terrain under full power. There was no in-flight breakup. The impact was so powerful that body parts were scattered up into surrounding trees, according to the sheriff's report. This ghastly image haunts me still, and I wasn't even one of the poor souls who had to clean up the mess. Human remains were so fragmented that no one could determine what belonged to whom. Even the credit cards in their wallets were shattered. And undoubtedly those who responded to this disaster will never be able to unsee what was laid out before them.

What haunts me even more is imagining what those last moments in the cockpit were like. I can hear the shrieking of the air rushing over the airframe at *well* over 200 knots, feel the



Even celebrities aren't immune to VFR-into-IMC accidents, as Kobe Bryant tragically learned.

disorienting g-loading, and sense the overwhelming terror that they must have experienced in the eternity of the last few seconds of their lives as they plunged into the blackness. I can only imagine how the thought of this must sicken their loved ones. The only upside? It didn't hurt for long.

Even celebrities aren't immune to VFR-into-IMC accidents, as Kobe Bryant tragically learned.

Disasters like this are far too common in general aviation. Some 40% of GA accidents are caused by spatial disorientation, yet it is not commonly understood. Remember JFK Jr? Ever hear of "The Day the Music Died?" What about Patsy Cline? Kobe Bryant?

As a matter of fact, my friend did call other pilot friends that night to get their advice, which he quickly disregarded. They begged him to spend the night and come home at first

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light. Now they will be forever plagued by thinking that they could have done more to convince him. But obviously he had his mind made up, and was only looking for affirmation. After all, both victims had non-refundable reservations for their families' vacation together starting the following day. If only...

Calling a "knock-it-off" would have cost them this vacation. Well, so did pressing on.

If only my buddy could have been given even a tiny glimpse into the future, he could have avoided the horrible results of his decision.

The real tragedy is that he *did* have the opportunity for that glimpse.

This outcome was *foreseeable*. His actions under these conditions had *predictable* results. But here's the worst thing: He had just come through these conditions on the same route as his ill-fated return flight, and he KNEW what was ahead!

Much of airmanship is managing risk. Of course, awful things just happen sometimes (i.e., catastrophic structural failures), but this disaster was caused by easily avoidable and well-known risk factors.

I plead with any of you who face the host of decisions that comprise every flight to take one moment and play the pessimist. I know we all hate to think about this, but how high will the cost be if not everything goes your way? Look at how all your people would be affected if something life changing, or life ending, were to happen on your flight. Think about how overall risk jumps when a few bad little things happen at about the same time. Have an escape plan for when things do go wrong. Can you divert? Is there landable terrain below you if you have to put it down? Are you properly equipped to survive the aftermath of a remote landing? Can you see well enough to land there? Can you flip a "U-ey" in time to get out of a bad situation? Where are the rocks? What about going tomorrow (or next week) instead? *Always* leave yourself an out.

Better yet, leave yourself *lots* of outs. Here are some examples: before you push up the power, take an extra minute to consider the worst case. Double check weather and NOTAMS. Consider your gross weight and performance. Ask for advice. Know where your possible divert fields are. Think about the true priorities. Learn about spatial disorientation and how insidious it is. Beware of overconfidence and complacency. Assess and manage your risk. Take your solemn responsibility for your passengers seriously. Realize that even if you're solo, you are risking the lives of your loved ones. Don't get in a rush. And never let yourself start thinking that you're bulletproof.

There's already plenty of risk in this life. Aviation brings more, whether we like to admit it or not. Manage it well and you can enjoy a lifetime of fun sharing this great gift of flight!

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FLY-INS Looming

All awaiting current social distancing rules to be rescinded.

What the Hell is THAT - – Stipa Caproni



The Stipa-Caproni, also called the Caproni Stipa, was an experimental Italian aircraft designed in 1932 by Luigi Stipa and built by Caproni. It featured a hollow, barrel-shaped fuselage with the engine and propeller completely enclosed by the fuselage—in essence, the whole fuselage was a single ducted fan.

It featured a large cylindrical fuselage that enclosed the engine and propeller, so that the air thrust in the metal tube by the rotating blades could make the propelling system more dynamic. However, the craft's shape increased its drag and counteracted the benefits of the engine's heightened efficiency.

The Caproni-Stipa took off only for a brief series of test flights, and was demolished in 1933. However, a 3/5-scale replica of it was recently built in Australia, with full-color photographs attesting to some successful flights in October 2001.

The image above is of that 5/8 scale replica Stipa Caproni, displayed in the Zuccoli Aviation Museum in Toowoomba.

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Keeping up with the Play (Test yourself – how good are you, really?)

1. Proof of carburetor heat function during a run-up is a reduction in RPM. What causes that fall in RPM that is accepted as this proof of function?
 - A. The warmed air causes a richer mixture.
 - B. The warmed air causes a leaner mixture.
 - C. The warmed air increases the density of the air through the carburetor mouth.
 - D. The warmed air increases the air pressure and thus turbulence in the carburetor throat.

2. Closing the throttle on most aeroplanes will cause the nose to pitch.....?
 - A. Down, because the downwash on the tail plane is diminished.
 - B. Up, because the downwash on the tail plane is increased.
 - C. Down, because of the reduction in the power of the thrust-drag couple.
 - D. Up, because increasing the angle of attack causes the Centre of pressure move forward.

3. An aeroplane in level flight is in equilibrium where thrust = drag, and lift = weight. What, then, maintains the airspeed if thrust = drag?
 - A. It doesn't, thrust must exceed drag to maintain air speed.
 - B. The forward component of the total reaction.
 - C. Surplus horse power.
 - D. Inertia.

4. A pilot plans a flight where he intends to follow a track of 160° magnetic. Alas, he flies, instead, a track of 150° magnetic. His actual track of 150° magnetic is correctly called...
 - A. The correct track.
 - B. The track made good.
 - C. The actual track.
 - D. The track-in-practice.

5. When flying above 3000 ft AMSL and 1000 feet AGL, how close may a pilot fly to cloud and still comply with VFR minimums?
 - A. 500 metres.
 - B. 1500 metres.
 - C. 5000 metres.
 - D. Clear of cloud and in sight of ground or water

See answers overleaf

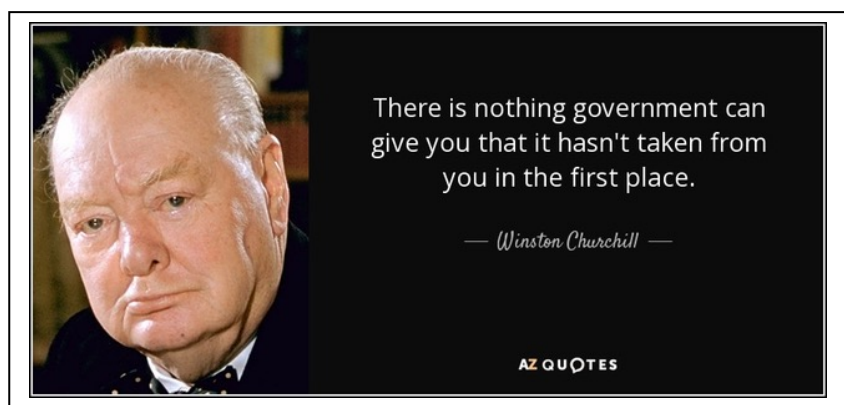
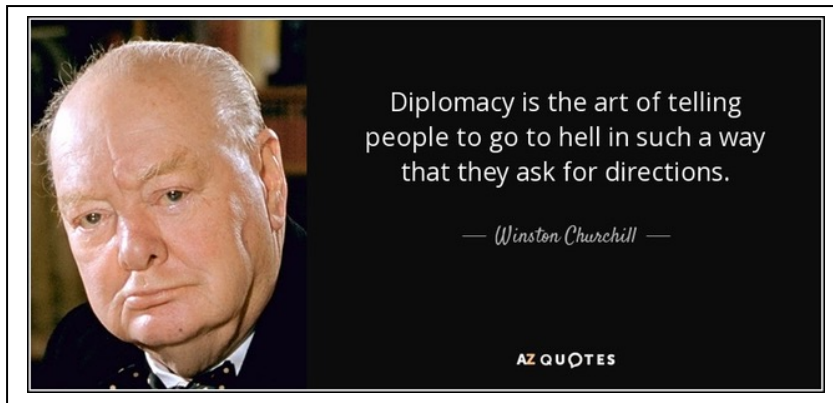
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Answers: 1, A, 2, C, 3, D, 4, B, 5, B.

If you have any problems with these questions, See Notes BELOW or call me (in the evening) and let's discuss them. Rob Knight: 0400 89 3632.

1. A is correct, the rest are rubbish.
2. C is correct. The nose pitch down in most aeroplanes is caused by the de=powering of the thrust-drag couple. Other options are fabrications.
3. D is correct – Inertia is what keeps the aeroplane moving. Remember that objects remain in a state of uniform motion unless acted on by an outside force. See Newton's laws of motion.
4. B is correct – The track-made-good is the track that the aircraft actually follows. And it doesn't have to be a straight line.
5. B is correct. See the VFRG, VMC, Non Controlled Airspace.

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Aircraft Parts and Tools

Item	Condition	Price
VDO Volt Readout instrument	Brand New	\$70.00
Skystrobe Strobe light for Ultralight	NEW – IN BOX	\$75.00
Altimeter – non-sensitive with subscale in “Hg.	Brand new	\$50.00
Pipe bender (for 6, 8, & 10 mm tube)	Used but as new	SOLD
Torque Wrench, 3/8 drive ToolPro	Near new	\$60-.00

Headsets

AvCom headset. Functions perfectly	Excellent	\$160.00
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Contact Rob Knight at either kni.rob@bigpond.com, or call **0400 89 3632**.

Vehicles for Sale

Ute-back Trailer

The rear end of a Ford Courier ute, covered with a Courier fibreglass canopy. Very robust, good tyres, complete with spare - on Land Rover hubs and wheels.

Tows very well: Excellent condition.

For quick sale - **\$2100.00 ono**



Contact Rob Knight - **0400 89 3632**

ON SALE

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Closing Down Sale (All Ex Forest Hill Airfield)

Item		Sale Price
<p>Rover Rancher ride-on mower</p> <p>Superb - runs great and is complete with manual and new battery.</p>		\$650.00 ono
<p>Caravan for sale -</p> <p>Franklin. 12 foot, 1978 model. Currently registered. Good condition for age.</p> <p>Contact Rob Knight for more images – <u>0400 89 3632</u></p>		<p>\$2500.00 ono sold registered, or</p> <p>\$1500 unregistered as is.</p>
<p>Push mower, single stoke, very limited use.</p> <p>Not ideal for a septuagenarian hence sale. Complete with catcher.</p> <p>Contact Rob Knight <u>0400 89 3632</u></p>		\$40.00
<p>Makita four stroke. Starts easily, runs well.</p> <p>Comes with catcher and mulching frame. Needs blades sharpened.</p> <p>Contact Rob Knight <u>0400 89 3632</u></p>		\$120.00 ono
<p>Digital timer/hour meter.</p> <p>Acts and accumulates on operating vibration</p> <p>Contact Rob Knight 0400 89 3632</p>		\$12.00
<p>Chain saw, 25cc Ozito. Short blade, automatic blade oiling.</p> <p>Very good condition. Once very useful, now very surplus to requirements. Complete with fuel bottle fuel can, and oil.</p> <p>Contact Rob Knight <u>0400 89 3632</u></p>		\$70.00





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<p>Petrol Ryobi Weed Wacker. Runs well</p> <p>Contact Rob Knight <u>0400 89 3632</u></p>		<p>\$100.00 ono</p>
<p>Generator</p> <p>Power King 5 KVA</p> <p>Contact Ray Jones <u>0431 569 477</u></p>		<p>\$450.00 ono</p>

Aircraft Parts For Sale

Item		Sale Price
<p>Suzuki s G16 motor, modified to lay over at 55 degrees to fit inside aircraft cowling. Includes overhauled, balanced, painted motor, new injector carby, starter, alternator, fuel pump, distributor, coil, stainless steel exhaust, and SPG-3 gearbox. Contact Colin Thorpe 0419 758125</p>		<p>\$5700.00</p>
<p><u>Microtech Engine Management System</u></p> <p>Manage all engine parameters Data log in 3d Control timing, fuel, air-fuel ratios Set idle & wide open throttle rpm Monitor system voltages Paid \$1300. Contact Colin Thorpe 0419 758125</p>		<p>\$750.00</p>
<p>Pioneer Ballistic parachute.</p> <p>Includes explosive charge. For details and more illustrations -</p> <p>contact Colin Thorpe 0419 758125</p>		<p>850.00</p>

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<p>Bullit ballistic parachute - Spring loaded.</p> <p>For details and more illustrations</p> <p>Contact Colin Thorpe 0419 758125</p>		<p>\$280.00</p>
<p>3 Blade black Ivo prop.</p> <p>Ground adjustable, Dia. 1500mm</p> <p>Contact Colin Thorpe 0419 758 125</p>		<p>\$450.00</p>
<p>3 Blade blue Ivo prop.</p> <p>Ground adjustable, Dia. 1540mm</p> <p>Contact Colin Thorpe 0419 758 125</p>		<p>\$300.00</p>
<p>NEW - Cummins finished aluminium spinner, polished with shaped cut-outs</p> <p>Suit 3 blade prop, Dia. 243mm x 300mm high</p> <p>101.4mm pcd mounting holes</p> <p>Contact Colin Thorpe 0419 758 125</p>		<p>\$480.00</p>
<p>USED - Fibreglass spinner to suit 3 blade prop</p> <p>Dia. 215mm x 290mm high, 101.4mm pcd mounting hole.</p> <p>Contact Colin Thorpe 0419 758 125</p>		<p>\$80.00</p>
<p>Koger folding canopy sunshade</p> <p>Contact Colin Thorpe 0419 758 125</p>		<p>\$170.00</p>

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<p>K&N cone air filters, washable</p> <p>Brand new. 42 mm (1.65") mouth.</p> <p>Two of.</p> <p>Contact Rob Knight 0400 89 3632</p>		<p>\$15.00 each or \$20.00 for both</p>
<p>PROPELLER FOR SALE</p> <p>Prince P-Tip Carbon Fibre 74" x 42" propeller (6134P74AT42LK) – SAE 1 bolt pattern.</p> <p>Call Nick – 0435 992 136.</p> <p><i>Note – only the propeller is for sale in the image.</i></p>		<p>\$1850 ONO</p>

Aircraft for sale

¾ scale replica Spitfire

\$60,000



Powered by a 6 cylinder engine, this delightful aircraft has good performance and low hours. Available for immediate delivery.

It comes with a low flight time, excellent handling qualities, superb charisma, a brand new mechanical fuel pump and two jack stands.

For details contact Bill Watson. Tel., **0447 186 336**