

JUNE 2020



**BRAKES ON.....
THROTTLE SET.....**

CONTACT!

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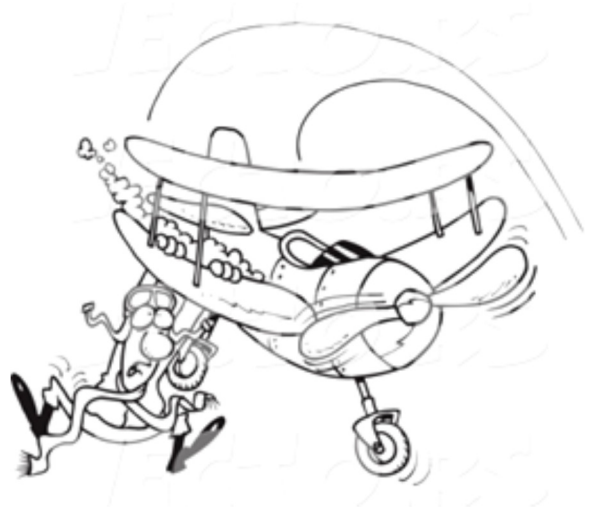
LETTERS

LAST WORD



FROM THE COCKPIT

SEAN CRONIN



Sean Cronin

PRESIDENT EAASA

I look up at the empty sky and wonder....where has it all gone. All the LOGIC.... Gone... just disappeared. Of course along with a bunch of aerics too that used to buzz around daily. What has happened!!

It seems as if the administrator has become the dictator. This is creating a mountain of paperwork for them on a daily basis just to enable people to fly their aircraft for safety reasons. All of this of course is at no cost to us. Fairly LOGICAL I presume. I feel there were so many easier ways to have gone about this but then again I am just one of the many puppets venting my frustrations.

Let's hope LOGIC returns one day and takes the driver's seat again because the current state of affairs will more than likely result in rogue pilots and this from pure fatigue from applying to a faceless entity.

Our annual AGM takes place on Saturday 23 May and will be an online meeting. This is a first for all of us and we can only hope that this goes smoothly.

Fly Solo. Fly high. Fly fast. Fly safe.

Sean Cronin

National President EAA

URGENT CHANGE



NOTICE OF EAA of SA AGM :23 MAY 2020 : 18H00 : ZOOM LINK

Dear EAA Members,

Please note that the AGM time has been moved to Saturday evening in response to a request to allow members to maximise daylight hours for personal time during lockdown. All members have been sent individual emails with the full details of nominations, voting facilities and access to the meeting. Please read through these details and submit your **NOMINATIONS** and **VOTE** !

DATE - Saturday 23 May 2020

TIME - 18h00 - 19h00 (Please note TIME CHANGE from morning)

NOMINATIONS – Your nominations are welcome for Exco, including : President, Vice-President, Honorary Treasurer & Honorary Secretary.

CONNECTION - This meeting will take place as a virtual meeting via Zoom.

VOTING - Please vote online before 18h30 on Saturday 23 May 2020

MACH POINTS - earn your 5 MACH Points for attending the AGM. A QR code will be available during the meeting for participants to access and earn points.

We look forward to receiving your nominations, accepting your vote and "gathering" with you for our EAA AGM on Saturday.

Best regards
Sean Cronin
President
EAA of South Africa
rsvp@eaa.org.za

Please send us an email if you would like to participate and you have not received the required information.



Aero Club Communique May 2020 #4

Status on lifting GA / RA flight restrictions

With reference to our May 2020 Communique #1 released on the 3rd May, just some progress regarding the lifting of GA / RA restrictions, the Aero Club has been part of an Industry Group convened by the CAA to deliberate proposals on how to lift flight restrictions going forward.

Since our initial proposal was submitted on the 1st of May, a more comprehensive document has been finalised which includes GA / RA which sets out the protocols of Aviation operations within the levels of lockdown from 4, 3, 2, 1, where we are recommending a return to flight under level 4 to cover specifically training operations and retaining proficiency of flight and maintenance. This is proposed as GA / RA has a very low risk profile and operations do not take place in a congested environment, where social distance measures can be easily maintained. As 2 weeks have passed since Level 4 was implemented, we trust our industry proposals will find favour with the authorities that we can progress back to some form of normality in Aviation.

Further to the maintenance related flight protocols established on the 7th May 2020 by the issuance of the CAA general notice allowing for positioning flights to carry out Maintenance, Maintenance Test Flights and Continued Airworthiness flights, this has now been operational for just over a week, where the CAA have granted permits in all 3 categories, and some of these flights have already taken place, with the added complication that each flight requires a flight plan to be filed. The volume of applications has been very high which is starting to delay permit issuances, as well as specifically for Continued Airworthiness the documentation required for engine / systems maintenance protocols. The CAA is very aware of these issues and is working on ways to improve this in the coming week, and hopefully will have some answers soon on what further can be expected.

Let's hope that all our inputs, submissions, engagements are seen to have merit, and that we can get to fly meaningfully soon, will keep you posted on further developments as it unfolds.



Aero Club Communique May 2020 # 5

Maintenance Related Flights – Aircraft Engine and System Health

With reference to the granting of flight requests related to maintenance activities since the 1st of May, the initial General Notice covered three scenarios, position flights for valid and expired CRS, and Continued Airworthiness Flights for those aircraft having engines and systems with a maintenance preservation protocol. The latter has resulted in a large demand on the CAA to process formal applications, to an extent that an opportunity was seen to streamline and simplify the process, to which the Aero Club together with CAASA and industry collaborated with the CAA to develop in record time a web based application to facilitate granting of flight requests with quick turn around times.

Since the idea was brainstormed on 14th May, development started on 16th May on a web based application tool with a working demo on the 19th May, to a final sign off and demo between all our collaboration partners on the 20th May, and now going live on the 21st May - this is in true spirit of finding a way to a solution in support of all GA & RA and a small step forward in re-opening the skies for us all. Given that the airspace is still governed under the rules of the National Command Council, we needed a way to ensure that the airspace is managed for our type of flights.

Thus a procedure was developed to allow us to carry out Continued Airworthiness flights at our home base to be flown within 3 nm of the airfield (essentially circuits) for +/- 60 min which can be done without a flight plan being filed, those aircraft required to stretch their legs for a longer distance that will find 3 nm to be constrained will need to file a flight plans with a defined route. The procedure has been written up and made available on the Aero Club of CAASA websites, with a link to the application tool. This will be live from the morning of the 21st May 2020.

This will be a no cost service to everybody in GA & RA, facilitated by the Aero Club and CAASA, and everybody is welcome to use it, the CAA however will still facilitate flight requests via their standard process should that be preferred. The application registers users (owners/pilots) to provide details of aircraft to be flown, upload documentation, whereby the Aero Club and CAASA staff will assist in checking validity prior to submission to the CAA who will provide approvals. Each step of the application process will keep the user informed on the status of the application by email and sms, where once approved, flight activation takes place within a 7 day window of approval date, whereby flight start and end is to be recorded which will reflect as a live link for the CAA & ATNS to observe. Please ensure that your Engine / Systems preservation maintenance protocol forms part of the documentation pack, and be in contact with your AMO / AP for expert input in this regard.

We trust this process will work out for all of us, and let us know if you have problems / issues - as you know a software system is never perfect or finished.

https://mcusercontent.com/24437079f4c5ef0b014ee3ae5/files/594d07cc-09bc-44f6-b991-4f28dd71629f/General_Notice_GAD_2020_001_COVID_19_original_.pdf

OPERATION LIFE FLIGHT

18 May 2020

Dear Fellow Aviator



OPERATION LIFE FLIGHT was set up and then presented to the State President on 25 March 2020.

The aim of this initiative was for the aviation community to serve our country in time of crisis. We offered to deliver urgent medical requirements (and allied aviation services) on a hub and spoke basis, to the outlying areas.

This initiative was established under the EAA banner in conjunction with the Aero Club of South Africa and the support of the CAA.

There were two other objectives: firstly, to demonstrate the important strategic nature of general aviation to the country and secondly, to show that the most important main road of any small town, is the town's runway.

Well, bar one flight done under this banner, we were not called to service.

There were many high-level discussions about this initiative and many phone conversations between us and various government committees and departments, but what we were offering was not utilized.

Although our primary objective was not achieved, namely, to give urgent assistance to the people of our country in time of crisis, we believe that the initiative was a success. We, the general aviation community were noticed and discussed by government in a positive manner.

Karl Jensen did Yeoman service over hundreds of hours, putting together the database and procedures.

The most wonderful aspect of this project is the 230 plus pilots and many other helpers who came forward willingly to volunteer, offering their aircraft, operating bases, skills, and services. We few aviators, came to the party offering whatever it would take to get the job done.

Clearly as the economy is opening, it is time for this initiative to close. Our database and procedures will be kept on ice for the future.

We salute and thank everyone most sincerely.

Brian Appleton



www.aeroclub.co.za

SAFETY MATTERS

Sterile cockpit.....by Dr Robert Clark

The first time I heard the term “sterile cockpit”, I got out the sanitizer and cleaned everything in the aircraft. Whilst that is not necessarily a bad thing to do from a hygienic perspective, especially during this COVID-19 pandemic, it is certainly not what is implied by the term “sterile cockpit”. If you do de-germ your aircraft, take note that sanitizers have a very high alcohol content and highly combustible.

Have you ever been on final approach, dealing with a strong cross wind component and had a passenger chatting non-stop about something non-flight related? It happens more often than not, and it is distracting you from performing a very important task.

So what is a “sterile cockpit” and more importantly, why is it necessary in aviation? It is common knowledge that the landing and take-off sequence demands your complete attention at all times. Equally important is the taxiing of the aircraft. Any lapse in concentration and you could end up causing significant and very expensive damage to your aircraft.....or worse, harm to you and your passengers.

When your attention is distracted from the task you are set out to perform, you stand the real chance of making a blunder. This applies to all tasks, whether of an inconsequential or serious nature. In the cockpit, any discussion that is unrelated to flight during the critical phases of flight, can result in an important task being over-looked. Let's look at a simple example:

You are busy with your pre-takeoff checks in the aircraft and your passenger asks you to explain all the information on the EFIS (Electronic flight Instrument system), at the moment you were going to select your flap position for take-off. A simple interruption like this could result in you seeing the end of the runway due to inadequate lift. Does this error happen on commercial flight operations with two highly trained pilots on board? Yes, it does. An example is, Delta Airlines Flight 1141, where they performed a take-off without flaps. In the Delta Airlines incident, the flight crew was distracted by a flight attendant who was talking about the upcoming presidential election, drink mixes and various other topics unrelated to the operation of the aircraft.

The "Sterile cockpit rule" essentially prohibits flight crews from performing non-essential duties or activities while the aircraft is involved in taxi, take-off and landing phases and all other flight operations conducted below 10,000 feet above ground level. In spite of the sterile cockpit ruling, accidents continue to occur in aviation. In most cases, the deviations from the sterile cockpit rule were unintentional.

If there is such a ruling for commercial flight operations, what about general aviation pilots? Is it realistic to ask all your passengers to be quiet once you join the downwind leg, or line up for take-off? Is it realistic to ask your passenger to be quiet during the critical phases of flight, especially when the passengers are experiencing their first flight in a small aircraft and are filled with excitement, or nervous energy?

For the general aviation fraternity, is it fair to state that only essential duties may be done during the critical phase of flight? Once the aircraft is levelled off in the cruise, even if it is at 1 500 ft above ground level, the sterile cockpit ruling would not apply. It would be totally impractical to ask your passengers to be quiet for the entire flight. That would destroy the fun of general aviation.

When I am pilot in command (PIC) of an aircraft, I ask my passengers to be quiet during the taxi, take-off and landing sequence. I do this as part of the safety briefing before entering the aircraft. I find it helps me concentrate on the task at hand, prevents unnecessary distractions and subsequently increases the level of safety of the flight. I have no objection whatsoever if the passenger identifies and notifies me of a safety related matter that could compromise the safety of passengers, or the aircraft. If we adopt a ruling that safety is everybody's business, could general aviation be safer?

On your next flight, consider the sterile cockpit rule and see if it works for you. If it improves the safety of general aviation, perhaps it should be mandated as a requirement for all critical phases of flight. General aviation should be enjoyable, but also safe. Small changes in safety can ensure that we all get pleasure from the sport that we love.

AS A MATTER OF FACT

Reproduced courtesy of RAFOC

SOME MOSQUITO HISTORY

MOSQUITO RECORD: 30 April - 1

A de Havilland Mosquito PR 34 (The PR stands for Photo Reconnaissance) flown by Squadron Leader H.B. 'Micky' Martin of 617 Squadron of "Dambusters" fame (later, Air Marshal Sir Harold Martin) and Squadron Leader E.B. Sismore established a new London-Cape Town record, covering a distance of 6,717 miles in 21 hours 31 minutes at an average speed of 279mph, and winning The Britannia Trophy, a British award presented by the Royal Aero Club for aviators accomplishing the most meritorious performance in aviation during the previous year. In 1911 Horatio Barber, who was a founder member of the Royal Aero Club, was given £100 for a commercial flight. Not wanting to tarnish his amateur status, he presented the money to the club for the trophy. The first award was presented in 1913 to Captain C.A.H Longcroft of the Royal Flying Corps for a non-stop flight from Montrose to Farnborough in a Royal Aircraft Factory B.E.2a. The trophy has not been awarded every year, particularly during the first and second world wars, and has been awarded jointly and to teams, as well as individuals.



THE "WOODEN WONDER"

The birth of the de Havilland DH 98 Mosquito was not an easy one. However, the result was a triumph of private enterprise over Government bureaucracy. Sleek and speedy, it was powered by the same Rolls Royce Merlin engines that powered the Hurricane and Spitfire. It was soon branded the 'Wooden Wonder' and became one of the most important Allied aircraft of the Second World War. In 1938, the de Havilland Aircraft Company (a successful manufacturer of commercial air passenger aeroplanes) proposed a new unarmed bomber to the British Government's Air Ministry. The bomber would forgo heavy armament for pure speed and was built from lightweight wood-laminates instead of metal. This meant it was much lighter and could outrun its enemies. The Air Ministry overlooked this initial proposal, as it did not satisfy their brief. They were looking for a well-armed, all metal bomber. Yet, rather than write it off as a failure, the project continued to be nurtured in secret by de Havilland. The prototype Mosquito was hand-built by skilled craftsmen at Salisbury Hall in Hertfordshire. The hangar was disguised as a farm building, as any information leaked to the British Government threatened to end the project. De Havilland's clandestine bomber first flew in November 1940. The Mosquito was an instant star performer. It had a top-speed of over 390mph, and at the time was the fastest operational aircraft in the world. The aircraft industry had to sit up and take note. The British Government made, and subsequently cancelled, their first order. However, following the British evacuation from Dunkirk, they were left with no choice. Despite initial indecision, and after evaluation at RAF Duxford, the Mosquito design was officially revealed by the Royal Air Force. The 'Wooden Wonder' was born. The Mosquito was thrown into action and became the RAF's fastest operational bomber. The original 'multi-role' aircraft, the RAF Mosquito served a mass of operational roles throughout the rest of the Second World War and after. It was not only a bomber, but a fighter, unarmed reconnaissance, anti-shipping, intruder, pathfinder, V-1 hunter, and trainer. Many daring operations were flown by RAF Mosquito crews during the course of the Second World War. They flew in Operation Jericho - the precision bombing raid on Amiens Prison in German-occupied France. They flew during Operation Carthage - the destruction of the Gestapo headquarters in Aarhus, Denmark. And they even flew as part of Operation Overlord, more popularly known as D-Day. It excelled in all roles, leading even Hermann Göring, Commander-in-Chief of the Luftwaffe, to covet the 'Wooden Wonder': "In 1940 I could at least fly as far as Glasgow in most of my aircraft, but not now! It makes me furious when I see the Mosquito. I turn green and yellow with envy...They have the geniuses and we have the nincompoops..."

AS A MATTER OF FACT

THE FIRST MAN TO LAND ON AN AIRCRAFT CARRIER AT SEA:

A South African holds a very prestigious place in the world of aviation firsts. Edwin Dunning was the first man to land an aircraft on a moving ship adapted to carry aircraft, a feat that at the time was near impossible, and the practice of landing aircraft even today on an aircraft carrier takes supreme skill and is reserved for the 'best of the best' pilots, such is the hazard. Unfortunately for his pioneering endeavour his efforts were to end in tragedy.

Edwin Harris Dunning was born in South Africa on the 17th July 1892, the second child of Sir Edwin Harris Dunning and was later educated at Royal Navy Colleges in the United Kingdom. A very skilled aviator, he took to pioneering naval aviation. He rose to a high rank within the Royal Navy's newly born Air Service or RNAS (which was to evolve into their 'Fleet Air Arm'). Squadron Commander Edwin Dunning, aged just 25, flying a Sopwith Pup biplane



marched into the history books at Scapa Flow, Orkney Islands, Scotland during test exercises in the Flow. He became the first person to land on a moving aircraft carrier at sea. He completed this landmark aviation feat on 2 August 1917. The landing was extremely perilous – whereas now arrestor wires would bring a plane to a halt, Dunning was relying on the deck crew of the Furious to grab the wings of his Sopwith Pup to bring it to a halt. Five short days later, after completing his milestone, Dunning endeavoured to do it again. However, tragedy struck during his third landing of the day. On approach, his aircraft stalled, and he came down on the deck of the Furious at too steep an angle. Dunning was knocked unconscious, his port wing lifted as the plane went over the side of the ship and he drowned in the cockpit. Edwin Dunning is buried at St Lawrence's Church, Bradfield in England. A plaque in the church says just about everything in recognition of his contribution to naval aviation. It reads: "The Admiralty wish you to know what great service he performed for the Navy. It was in fact a demonstration of landing an Aeroplane on the deck of a Man-of-War whilst the latter was under way. This had never been done before; and the data obtained was of the utmost value. It will make Aeroplanes indispensable to a fleet; & possibly, revolutionise Naval Warfare. The risk taken by Squadron Commander Dunning needed much courage. He had already made two successful landings; but expressed a wish to land again himself, before other Pilots did so; and in this last run he was killed. My Lords desire to place on record their sense of the loss to the Naval Service of this gallant Officer". A memorial stone was also unveiled at Swanbister Bay in Orkney in 1992 in recognition of Dunning's feat. On the occasion of the centenary of Dunning's feat the British marked the occasion in Orkney with a Hawk fly-past and a new plaque was unveiled. Lt Cdr Barry Insist, Commanding Officer of 736 Naval Air Squadron, paid tribute in August 2017 to mark the Centenary, he said:- "The event itself is of particular significance to the Royal Navy and Fleet Air Arm as it marks the first successful landing of a fixed-wing aircraft on a ship under way at sea; a moment that would be the genesis for the establishment of the pre-eminence of aircraft carriers. It is all the more poignant considering the current regeneration of the UK's carrier capability, with HMS Queen Elizabeth currently conducting sea trials not far from the location of Dunning's landing, with Merlin helicopters from 820 Naval Air Squadron operating from her flight deck." Conclusion: South Africa's lack of recognition to countrymen (like Smuts above) who attained greatness serving in the 'hated' British forces (as was the case with the old National Party) or in the case of the 'colonial' forces (as is the current case with the ANC), even if the feat was an international aviation milestone, is notorious. So Dunning's achievement passed unnoticed and no such flybys, plaque unveilings, awards, centenary mark or national salutes were given to our pioneering hero in South Africa – and that's more tragic than the tragedy itself.....Full article with more pics is well worth a read at: <https://samilhistory.com/2018/04/28/the-first-man-to-land-on-an-aircraft-carrier-at-sea-was-a-south-african/>

AS A MATTER OF FACT

Contribution by Dale de Klerk

10 Thoughts On 80 Years Of The Cub

The Cub is such an icon of light aviation that it's easy to forget some important things about the actual airplane

By Isabel Goyer

So it is with the Piper Cub, whose 80th birthday is being celebrated this year. And I've been thinking about the J-3, and reflecting upon its odd place in the aviation pantheon. So, in no particular order at all, here are 10 musings on the greatest muse in aviation history.

- 1) By convention, an antique is considered an item that's 50 years old or older. So, if the Cub seems antique to you today, it should. You might be surprised to learn, however, that it seemed that way to pilots of the day less than 10 years after it debuted. The pace of aviation innovation was rapid in the 1930s, so technologically speaking, the Cub got left in the wake of sleeker, faster planes from its inception. Consider that the Beech Bonanza came about just 10 years after the Cub and was twice as fast, carried twice as many people and could go three times as far as a Cub.
- 2) The Cub isn't a great flying airplane, though it's an airplane that's great fun to fly. It has a lot of what's known as adverse yaw, so when you make a turn in the plane, by its aerodynamic nature it gets uncoordinated, a condition that the pilot corrects for, as much as possible, with the rudder pedals. Adverse yaw can be largely designed out of an airplane, as it would be in the soon-to-come Bonanza and in countless Pipers that would come down the road as well. That all said, pilots love the flying manners of the Cubbie, quirky or not. In fact, some believe that the Cub's challenging flying manners make pilots into real pilots because they have to use their feet to fly the Cub. I wouldn't argue their point.
- 3) The first Cub featured a whopping 37 horsepower. The optional "high-performance" package boosted that to a mind-blowing 40 horses. Customers wanted more, and Piper kept on upping the horsepower, but 65 horses was all the J-3 would ever get. That was okay. Sixty-five ponies seemed just right.
- 4) Bowing to customer demand, Piper introduced new models of the Cub, some with side-by-side seating, others with improved entry and still others with shorter wings for better performance and better handling. Ultimately, the flagship Piper tube-and-rag taildragger wasn't a taildragger at all. The Piper Tri-Pacer had 160 horses, a claimed cruise speed of better than 130 mph, room for four and a nose gear. It's a pretty ungainly-looking bird, and, yes, it did take me a minute to come up with "ungainly" instead of the other "U" word. Sorry, Tri-Pacer fans.
- 5) Over the years, Piper built nearly 20,000 J-3 Cubs (counting military variants). That number would have been less than half had it not been for the 10,000 copies the military ordered for reconnaissance and pilot training. Had it not been for the war, Piper might have phased out the J-3 completely by the early 1940s. Despite the boost the J-3 got from the war, Piper cut the model from its 1948 lineup. Production lasted a decade. Compare that with the nearly 60-year life (and still going) of the Piper PA-28.
- 6) The truth is, the seating design of the J-3 is a disaster. It's probably not true that there are as many different techniques for getting into a Cub as there are Cub pilots, but it's not far off. The key is, you back into the thing through the odd barn door arrangement and then swing your legs in after you, if you can. More than a few pilots of the day timed out of their aviation careers not because they couldn't fly anymore but because they couldn't get into the Cub anymore.

AS A MATTER OF FACT



It's a Piper J3-F Piper built 4 different J3's J3-C. Continental engine and most popular. All others in SA are Continental J3-L. Lycoming engine & second most popular. None in SA J3-F. Franklin engine. Only one in South Africa. One in

7) Want to start a fight in an aviation forum? Just post a pic of a Cub and say that this is the “real Cub Yellow.” My research a few years back showed that over the years there have been as many as seven “official” Cub Yellow hues. Today, there are two pretenders to the throne, and they’re very different shades of yellow.

8) Okay, there are some who might disagree with me on this, but the Cub is at least in the conversation along with the aforementioned Bonanza and the Cessna Skyhawk, to name a couple of other contenders. For decades, non-aviation types referred to all light airplanes as “Cubs,” and the plane has been featured prominently in so many stories, films and hangar talk tales that it’s impossible to overstate the cultural importance of the bird.

9) Despite its quirks, or maybe because of them, I adore the Cub. The Cub was the first airplane I ever “flew” when, at the age of 12, my dad handed me the controls of a Cub we were borrowing from a neighbour and let me take it around the patch. I was convinced I would never get the hang of flying. But I did. The Cub was my first and best teacher, and remains that every time I get the chance to merge Sky Blue and Cub Yellow and take a little time—no hurry, as things happen slowly in a Cub—to reflect on the world below.

10) The main reason the cub was designed. In case you didn't know, the military put out a request for a plane that would take off from a short field and clear an obstruction in a certain amount of space. I don't remember the specs but it was something like take off in 600 feet and clear a 50 foot obstruction in 900 feet. Only two planes were built that met the specs, the Cub and the DeHaviland Beaver. The cub did it with a light plane with a light wing load. The Beaver did it with a light wing load and a massive 650 hp Pratt and Whitney wasp junior radial engine. If you spend much time in Alaska you'll find that those two planes make up the majority of Bush planes even today. That's a pretty good testament of how well they were designed for that purpose since they haven't been in production for 50 years or more!

To all our South African Cub owners – happy belated 80th birthday wishes for 3 May 2020. May you have many more enjoyable flying hours in these fine vintage aircraft.

PROJECTS

BUILDERS DETAILS

Builders Full Name : Dirk Booyesen

Email : dirk@dirkbooyesen.co.za

AIRCRAFT DETAILS

Aircraft Make & Model : Nieuport 28 full scale replica

Aircraft Build Number : CAA0348E

Aircraft Status / Type of build project : New Build

Aircraft structure category : Homebuilt : Kit Built

Start date of project : August 2019

Completion date : Hoping to complete by the end of 2020

Aircraft home : FAKR, Jack Taylor Airfield, Krugersdorp

Description and or history of aircraft :

Airdrome aeroplanes full scale WW1 Nieuport 28 replica. Tube, gussets and fabric construction.
Engine new Lycoming O-235 118 hp driving custom Culver wood propeller.

Video available on this build



Build Project
CAA0348E



ZENITH PROJECT

By Ant Harris



For the past few years, I've had the urge to start a new "build" project. While at Oshkosh, Neil and I looked at the Zenith and decided it would make a nice, easy build project as the kit was relatively simple, match hole drilled, all parts supplied etc. I had already bought second hand avionics and an engine. When lockdown was announced, it was all systems go – I knew this was the answer to spending time at home in one's garage – more than you could handle. So, luckily I had been having comms with Phil Cronje of Bundu Aviation and I knew he had a kit ready to go.



With one day to lockdown I borrowed the firm's truck and collected the "box" from Phil's place on the Thursday before. With the help of my gardener and a couple of his cousins, we managed to get it home without any issues.

I started by laying all the bits over my lawn and then putting them back in the box under their respective part numbers. That took all day, but hey, I had the time! Naturally I started with the vertical stab – a simple build that was finished in the first day. Then moving onto the rudder, horizontal



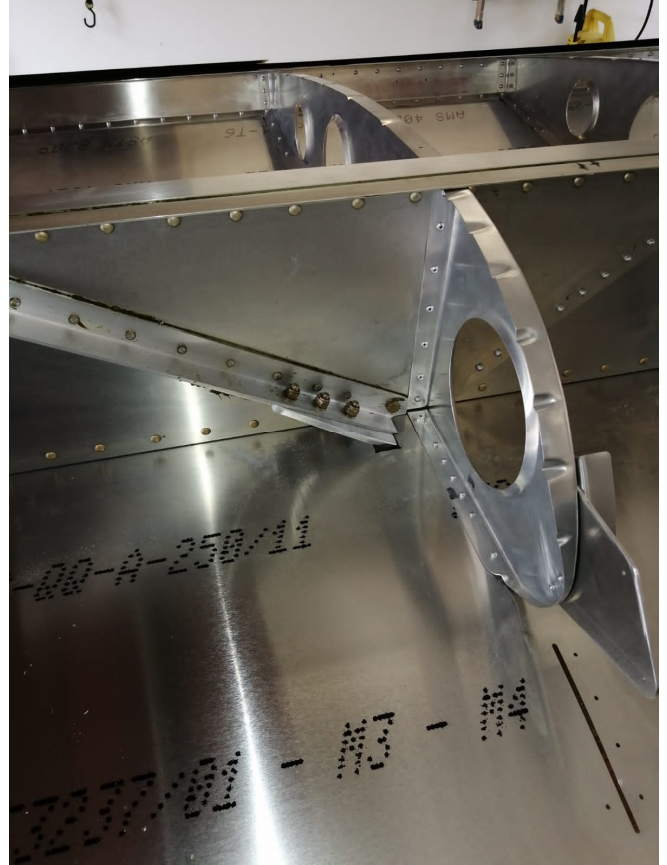
stab, leading edge slats, flaperons, elevator and then the wings.

I have just finished the second wing and had to admit that it's been pretty much "plane" sailing – I have made a few errors but quite easily fixable ones – the most time consuming part is the enlarging of the "matched" holesto rivet size, and then taking everything apart, deburring, clecoing and final drill size. (I believe "Sling" omit this procedure, all holes drilled to final size which would make the building much quicker).



ZENITH PROJECT

Anyway, the lockdown has been a blessing in disguise – loved every minute and now can recommend to anyone with a basic knowledge and some common sense – kit building is highly rewarding. Tools required are relatively simple. The most complicated being “clecos” – a couple of hundred required. Other than that – a decent battery drill and bits, ratchet straps and a pneumatic pop riveter essential - you don't want to pull 10 000 rivets by hand!

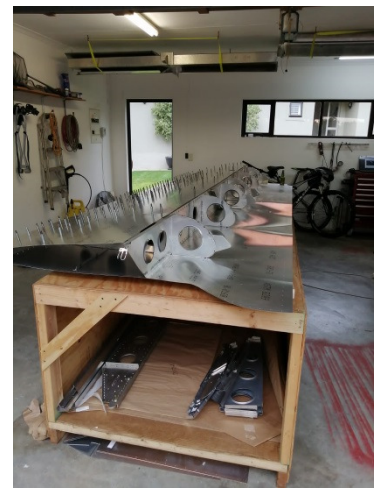


Starting on the fuselage tomorrow – a bit more work involved here. Couple of pics included.

Another thing, can be done mostly alone. Second person needed to help flip the wing over and that's about it.

Keep you posted on progress!

Ant "3/8th" Harris



PROJECT NIEUPOORT

NIEUPOORT N1354

By William (Bill) Leftwich

Ello down under..... Howzit ?

I've been spending time in my shop working on the Nieuport 11 Bebe project, finally.....

It's slowly coming together and the weather has been perfect for building and spray painting.



The *Nieuport 11* (or *Nieuport XI C. 1* in contemporary sources), nicknamed the *Bébé*, was a French World War I single seat sesquiplane fighter aircraft, designed by Gustave Delage. It was the primary aircraft that ended the Fokker Scourge in 1916.

The Nieuport 11 reached the French front in January 1916, and 90 were in service within the month.

This small sesquiplane outclassed the [Fokker Eindecker](#) in every respect, including speed, climb rate and maneuverability. It featured [ailerons](#) for lateral control rather than the Fokker's [wing warping](#), giving lighter, quicker roll response, and its elevator was attached to a conventional tail plane which provided better pitch control as opposed to the all-moving, balanced "Morane type" [elevators](#) of the Fokker.

The Fokker's sole remaining advantage was its [synchronized](#) machine gun, which fired forward through the arc of its propeller. At the time, the Allies lacked a similar system, and the Nieuport 11's [Lewis](#) machine gun was mounted to fire over the propeller, allowing uninterrupted forward fire. The Lewis was [not synchronizable](#), due to its [open bolt](#) firing cycle design which resulted in an unpredictable rate of fire. Clearing gun jams and replacing ammunition drums in flight were challenging though, and the drums limited ammunition supply.

During the course of the [Battle of Verdun](#) in February 1916, the combination of the Nieuport 11's technical advantages and its concentration in dedicated fighter units allowed the French to establish air superiority, forcing radical changes in German tactics. The impact of the Nieuport was so dramatic that in mid to late 1916 several captured examples were repaired, re-armed with a synchronised "Spandau" gun, and flown at the front. One of these was N1324, [BUILT JUST BEFORE THE FEATURE AERO-PLANE](#), briefly flown by [Kurt Student](#) in August 1916. Others were supplied by [Ldflieg](#) to a number of manufacturers, requesting copies be built which had considerable direct and indirect influence on German fighter design.

Some Nieuport 11s and 16s were fitted to fire [Le Prieur rockets](#) from the struts for attacks on [observation balloons](#) and [airships](#).

By March 1916 the *Bébé* was being replaced by both the [Nieuport 16](#) and the much improved [Nieuport 17](#), although Italian-built examples remained in first line service longer, as did Russian examples. Thereafter the Nieuport 11's continued to be used as trainers.

PROJECT NIEUWPORT

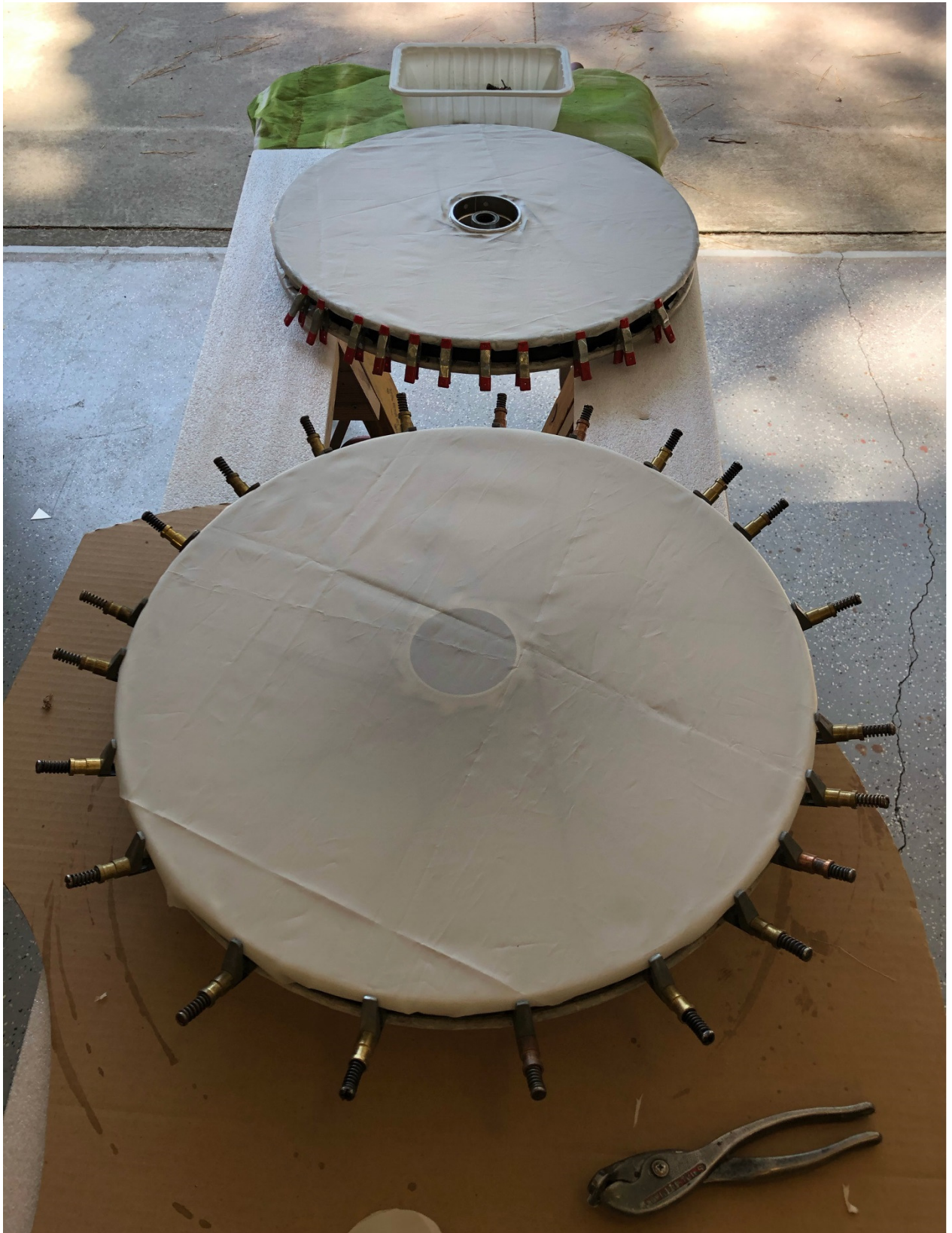


PROJECT NIEUWPORT

I'm almost done covering the wheels with fabric.

I could have left the wheels alone with the spokes showing but it looks more authentic with them covered.

First, I had to cut the fabric and glue it to the frame of the wheel.



I held the fabric in place with cleco clamps until I could glue everything in place.

PROJECT NIEUWPORT

Once the glue dried I was able to shrink the fabric with the monocoat iron.



After shrinking, I sprayed on a layer of Poly Brush.



After the Poly Brush dried, I sprayed on a layer of Poly Spray, the finished coat.



Tomorrow, I will cut a hole on the opposite (inboard) side where the schrader valve is located for inflating the Tube.

Note: The Schrader valve is named after August Schrader who invented this valve in 1891 and is now used in every tire in the world.

PROJECT NIEUPOORT

I wanted to make sure the tubes were good so I put a little air in each one and let it sit for a day to see if there were any leaks. In the photo below are the tubes that were inside the tires.

Apparently the tube on the right was at one time employed by a circus.



Specifications (Nieuport 11 C.1)

General characteristics

- **Crew:** 1
 - **Length:** 5.500 m (18 ft 1 in)
 - **Upper wingspan:** 7.520 m (24 ft 8 in)
 - **Upper Chord:** 1.200 m (3 ft 11.2 in)
 - **Lower wingspan:** 7.400 m (24 ft 3 in)
 - **Lower Chord:** 0.700 m (2 ft 3.6 in)
 - **Wing sweep:** 3° 30'
 - **Height:** 2.400 m (7 ft 10 in)
 - **Wing area:** 13.3 m² (143 sq ft)
- Airfoil:** Type N
- **Empty weight:** 320 kg (705 lb)
 - **Gross weight:** 480 kg (1,058 lb)
 - **Undercarriage Track:** 1.600 m (5 ft 3.0 in)

Powerplant: 1 × [Le Rhône 9C](#) nine-cylinder air-cooled [rotary engine](#), 60 kW (80 hp)

- **Propellers:** 2-bladed Levasseur 450 wooden fixed-pitch propeller

Performance

- **Maximum speed:** 162 km/h (101 mph, 87 kn) at 2,000 m (6,600 ft)
- **Range:** 250 km (160 mi, 130 nmi)
- **Endurance:** 2.5 hours
- **Service ceiling:** 5,000 m (16,000 ft)
 - **Time to altitude:**
 - 8 minutes 30 seconds to 2,000 m (6,600 ft)
 - 15 minutes 25 seconds to 3,000 m (9,800 ft)

Armament

1 × .303" [Lewis](#) or [Hotchkiss](#) machine gun

8 × [air to air Le Prieur rockets](#) for use against [observation balloons](#) (optional)

SPECIAL FEATURE

HOLLYWOOD GOES FLYING (Part 1)

My ten favourite flying films and how they tell the story of aviation

By John Illsley



SPECIAL FEATURE

HOLLYWOOD GOES FLYING

THOSE MAGNIFICENT MEN IN THEIR FLYING MACHINES

I have always been fascinated by films that have flying as a central theme, not only because they are part of a lifelong interest in aviation, but also because if they are going to be done properly, they are technically difficult to make, ideally requiring the use of real aircraft. One of my pet hates is the ever more common use of CGI in aviation-related films, because despite the advances in the technology they still never seem to get it right and there always seems to be something false about what they convey. Of course, the film industry, like any other, is about making money and paying computer animators is far cheaper than putting real aircraft into the air together with camera ships. Achieving authenticity using flying aircraft has meant that film flying has written its own chapter into aviation history and those that made the flying sequences possible in “real” flying films deserve recognition in their own right.

What follows is a highly subjective selection of films that I think have been broadly successful in portraying an era or aspect of aviation. Collectively they tell the story of how aviation has evolved in both war and peacetime and the different roles it has come to serve. So, if you are looking for a distraction during this time of enforced lockdown, you could do worse than viewing some of these films.

Those Magnificent Men in their Flying Machines. (1965)

This comedy tells the story of a fictitious air race between London and Paris before World War One. Aviation was in its infancy and some races *were* staged between different centres, although not between these two European capitals. Entrants from across the world arrive to participate, which means that much of the humour is based on the stereotypes of America, English, French, German, Italian and Japanese characters.

Part of what makes this film remarkable is that although it was meant as light hearted entertainment centred on the escapades of the aviators and a love triangle involving the daughter of the sponsor of the race, a pompous English newspaper owner, much effort nevertheless went into making flying replicas of some of the actual aircraft types from this era. As a result, in the film you see Bristol Boxkites, an Antoinette, a Demoiselle, an aircraft based on a Bleriot XI and an Avro Triplane, amongst others. Some completely fictitious aircraft that barely make it off the ground, only to crash (or fly backwards to Scotland), also feature briefly but were not true flying aircraft, being suspended in cables for their The replicas mostly used modern engines although the Cirrus engine in the Avro was of 1930s vintage. The tiny Demoiselle could not be coaxed into the air on its Arden engine until a petit lady pilot called Joan Hughes tried it and she ended up doing the flying scenes.

The airfield where the race starts and where all the practice flying takes place is loosely based on Brooklands, (named “Brookley in the film) complete with a car race track and a sewerage farm. Needless to say, both of these are woven into the story, including a duel between two balloons over the latter. The “rotter” in the story was played by Terry Thomas and his attempts to sabotage his competitors and to win the race by means mainly foul, provides for much hilarity.

Amazingly some of the original Edwardian aircraft of the Shuttleworth Collection were used in ground scenes and came very close to being damaged in one scene involving a runaway aircraft with no tail! Appropriately, two of the six flying replicas from the movie still fly at Old Warden, namely the Boxkite and the Avro Triplane.

This film remains good harmless and amusing entertainment, but for today’s pilots its value also lies in showing just how crude were the first generation of powered aircraft. One can only admire those who pioneered flying and also those who flew the replicas in the film. Some original footage is used at the start of the film (although most of its is actually from the inter-war period) as well as Ronald Searle’s wonderful comic drawings and animations. There was also the irresistible catchy theme tune. All of this makes for an admirable reminder of how flying powered aircraft began, a little over a hundred years ago.

SPECIAL FEATURES

HOLLYWOOD GOES FLYING



Aces High (1976)



The First World War did much to accelerate the development of aviation as a new science. Several films have been made that are set against the backdrop of the air war with Hollywood starting to make such movies in the 1920s, when Howard Hughes produced "*Hells Angels*" not once, but twice (as a silent movie and then with sound), at huge expense. That film even used a number of WW1 aircraft that were acquired as war surplus. My choice of the best film relating to this era is a more recent one based on a story that was originally set in the trenches, namely "*Journey's End*" (itself recently made into a film).

SPECIAL FEATURE



HOLLYWOOD GOES FLYING ACES HIGH



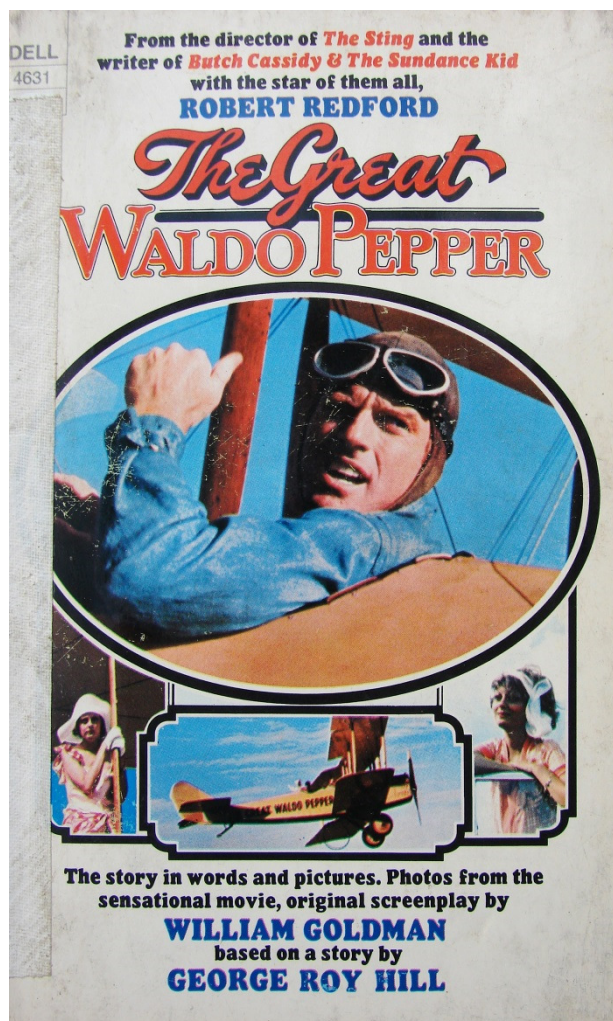
The fictitious squadron on whom the story revolves is an RFC unit somewhere on the Western Front. Malcolm McDowell played the hard-bitten commanding officer who has to try and ensure that his new pilots last longer than the two-weeks that was the average late in the war. Flying inflammable wood and fabric aircraft with no parachutes and facing enemy fighters and flack, the young pilots face daily hazards. Many of them die before they can acquire any useful experience and others start to crack under the psychological strain, an aspect well portrayed in Simon Ward's character.

The SE5a aircraft flown by the British squadron are all disguised Stampses and are reasonably convincing apart from the wheels. Using this aerobatic type allowed some spectacular dogfights to be staged for the cameras in the hands of such masters as Neil Williams. The German aircraft, apart from a good Fokker monoplane, are more modern types, including Tiger Moths. From a flying perspective, the film stands up far better to scrutiny than do the recent *Fly Boys* and *Red Baron* movies which both use CGI in an appallingly unrealistic and un-historic fashion.

A strong story line drives the film which touches on aerial reconnaissance; the dangers of shooting down observation balloons and the seemingly callous logic that went into depriving pilots of parachutes. It is these things which I believe make it a better portrayal of aerial warfare in this conflict than all others. However, I would probably be castigated if I didn't mention the *Blue Max* as another contender. The film benefitted from a number of good replicas of German WW1 types including Fokker Triplanes and Pfalz biplanes. Arguably, the story line is not as engaging or as plausible as *Aces High*, but there are some very good flying sequences. It is certainly a better film than *Von Richthofen and Brown*, made at the same time and using many of the same aircraft.

SPECIAL FEATURE

HOLLYWOOD GOES FLYING



The Great Waldo Pepper (1975)

The era that followed WW1 was in many countries one in which young men who had no other marketable skill apart from flying, bought up military surplus aircraft and went barnstorming as a way of making a living. This was most evident in the USA where the size of the country allowed for more of these enterprises than anywhere else. Barnstorming was based mainly on taking folks for a short flight although some basic aerobatics or “stunting” was frequently part of how crowds were attracted to the local farmers field from which the joyrides were offered.

This is the background to the film in which Robert Redford played the title character. The film used real and replica Curtiss Jenny and Standard J1 aircraft in much of the flying and this lends a very authentic feel as these were the most common type used in the 1920s. The story follows the rivalry between two barnstormers competing for trade in the same region and a sub-plot involves the attempt to build an aircraft that can be the first to complete an outside loop (spot the disguised Chipmunk). The hand-to-mouth and nomadic life of the barnstormers and them also performing at local shows are depicted in an authentic fashion. Some of the most spectacular stunt flying in the film relates to crashes into a pond and a fair ground, using expendable Tiger Moths disguised as Jenny or Standard aircraft. There is also an amazing piece of flying down a street and a wing-to-wing transfer between two biplanes by a very brave stuntman. The skills associated with pulling off these stunts are part of what make this such a good film for pilots to watch and appreciate.

The author of the original story, George Roy Hill, could not resist weaving in aerial combat from WW1. This was not achieved through flash back scenes, but rather the story takes Waldo Pepper to the west coast to fly for a film about an American squadron on the Western Front. This allows him to meet up again with an actual German ace who is flying in the same film. This not only allows for some mock (and ultimately real) combat but also weaves the role that pilots would play in the early movie industry as another way of making a living.

The climax of the film is when the pilots, flying a Sopwith Camel and a Fokker Triplane meet over the rolling hills of California. I won't give the end away, but suffice to say that it provides for a poignant ending.



SPECIAL FEATURES

HOLLYWOOD GOES FLYING

The Great Air Race (1990)

This one is a bit of a cheat as this was originally made as a mini-series for Australian television, but it was also released as a full-length film, so I have sneaked it in to my selection. The film tells the story of the 1934 England to Australia air race, often referred to as the "MacRobertson Race" after the Scots-Australian chocolate manufacturer, Sir Macpherson Robertson" who put up the £15 000 prize money. In many ways this is a story that was just begging to be made into a film, in part because the race was going to be a long, tough event and partly because it attracted some very colourful characters from that era of flying. In the latter category were the likes of Roscoe Turner and Jackie Cochrane from the USA; Amy and Jim Mollison from Britain, and Ray Parer from Australia.

Considering the array of landscapes that would be required in the film, it was filmed entirely within Australia which offered sufficient diversity to take the viewer from Europe through the Middle East and India to Australia. The starting point of the race, RAF Mildenhall was filmed at a RAAF base. Finding suitable aircraft was something of a challenge as almost no examples

of the competing aircraft were available "down under". Hence the KLM DC2 is represented by a DC3 (fair enough) and a Leopard Moth represents the Puss Moth of 20-year old Charles Melrose (again, a good stand in). Rather less easy to accept are a Stearman as a Fairey Fox; an Anson as a Boeing 247 (although the colour scheme is authentic) and a Harvard as a Granville Monoplane. One aircraft that is represented completely correctly was the Miles Falcon of which there was a flying example available for the film. An aircraft type that was central to the story and that could not be substituted because of the very distinctive shape, was the DH88 Comet. Three of these were built in record time by De Havillands to try and ensure a British victory in the race, particularly against the two airliners that had been entered. To overcome the problem of representing the aircraft that would be flown by the Mollisons ("Black Magic") and the winning aircraft, flown by Charles Scott and Tom Campbell Black ("Grosvenor House"), the producers had convincing replicas built which could be taxied for the ground scenes. Radio controlled models were used for flying shots.



SPECIAL FEATURE

HOLLYWOOD GOES FLYING

THE GREAT AIR RACE



Any race that spans a number of days will provide for its own drama, although the human interest in the film was based in part on the tensions within some of the crews. The tempestuous marriage of the Mollisons was a gift to the script writers. The KLM crew of Moll and Parmentier were at odds over whether to fly to the airline schedule or push the pace. HL Brook who flew the Miles Falcon had a paying passenger in a young English girl, which also

provides for a few interesting interludes in the film. Ultimately, for all the crews that finished, it was dogged determination that allows them to complete the race, fighting not only the vagaries of the weather and the problem of navigation in the absence of any electronic aids, but also sheer fatigue from limited rest at the stops.

Although this is one of the less readily available films, if you have an interest in the golden age of aviation and are not too critical of the substitute aircraft types, you will definitely enjoy this film.

[Two asides relating to the original race on which the film is based. HL Brook flew to SA twice during the 1930s, once in a Miles Falcon and once in a Praga Baby. His son still lives in Grahamstown. I own the engine and propeller of the Praga Baby that Brook used on the trans-Africa flight in 1936.

A current EAA member in SA had a grandmother on the KLM entrant in this air race and still holds a souvenir presented to the passengers, a very rare relic!]



SPECIAL FEATURE

HOLLYWOOD GOES FLYING

SPECIAL



EDITION

BATTLE *of* BRITAIN

HARRY ANDREWS

MICHAEL CAINE

TREVOR HOWARD

CURT JURGENS

IAN McSHANE

KENNETH MORE

LAURENCE OLIVIER

NIGEL PATRICK

CHRISTOPHER PLUMMER

MICHAEL REDGRAVE

RALPH RICHARDSON

ROBERT SHAW

PATRICK WYMARK

SUSANNAH YORK



SPECIAL FEATURE

HOLLYWOOD GOES FLYING

BATTLE OF BRITAIN

The historical context for the film is well known: in 1940, Britain stood alone against Nazi Germany which had invaded several countries, including France and now stood poised to launch an invasion across the Channel. Britain became the first country whose survival depended on the first line of defence being its air force. The people of that country would, in the summer of that year, actually be able to watch the conflict over the south of England on a daily basis that would determine their fate.

To make this film in the 1960s allowed for the use of several airfields that had changed very little since the war, but assembling an air fleet that could represent the RAF and the Luftwaffe would be a much greater challenge. In the case of the attacking force, most of the aircraft in the film were current types of the Spanish air force, namely Buchons (to represent the Me109) and Casa 2.111 bombers (to "play" Heinkel He-111) with some Casa 352 aircraft also appearing as the JU52.



With Luftwaffe markings these licence-built types were all reasonably close in appearance, although the first two, were, ironically, powered by Rolls Royce Merlin engines. This means that most of the aircraft in the film, be they attackers or defenders, are flying behind the same engine type! The Spanish air force provided some of the pilots during the film while British and Americans air crew made up the balance. Collectively, the assembled film "air force" constituted one of the largest fleets in the world at the time of the filming. Putting so many Spitfires back into flying condition for the film gave some impetus to the warbird preservation movement which is today a worldwide phenomenon.



SPECIAL FEATURE

BATTLE OF BRITAIN

Most of the German aircraft types used in the original battle, including Me 110, Ju88 and Do 17 aircraft, are not represented in the film. The Stuka was needed for scenes involving the bombing of radar stations and so a few Percival Proctors were disguised for this purpose and models were also used.

The biggest problem was finding flying Hawker Hurricanes and these were very rare by the time the film was made. This problem was partly overcome by making very realistic wood and fibreglass replicas that could be taxied and blown up in several scenes, starting with an early scene still set in the evacuation from France. Nevertheless, the paucity of Hurricanes meant that most flying sequences used Spitfires (some of them Griffon engine later marks) and this tends to perpetuate the myth that there were more of these being used by the RAF in the battle and that they achieved the most kills, neither of which is true.

The film chose to only portray by name three of the top commanders, Dowding (head of fighter command), Park and Leigh Mallory, two of his group commanders within the fighter sectors that were created to cover Britain's air defences. This allowed some of the politics within Fighter Command to be woven into the story line. Particularly the issue of using the "big wing" strategy favoured by Leigh Mallory. At squadron level, none of the characters carries the name of real pilots, although they were obviously modelled on some, including South Africa's "Sailor" Malan.

Judged from a historical point of view, I think that the film did a good job of covering most of the essential elements in the Battle. The tension and the battle fatigue of RAF pilots, called upon to fly several sorties a day, often with no combat experience, is effectively conveyed, as is the terror of burns suffered in aircraft that were set alight in combat. Other aspects that are recreated include the role of ground crew and WAAFs, the Blitz in London, the importance of radar and the attacks on the airfields which tried to deny the RAF its infrastructure. It was a scene that was used to show the latter that was to cause some controversy during filming. Shot at Duxford (which served as a base in the Battle) one of the historic hangars was destroyed. It certainly added to the realism of the scene, but afterwards there was much finger pointing as to whether this had been agreed to by the Ministry of Defence.

On the other side of the conflict, the initial arrogance of the Luftwaffe, fresh from victory over France, is well represented by its pilots; the actor representing Goering and a clever musical score (especially the piece entitled Aces High). As the film progresses this arrogance is replaced by hubris as the men who made up Churchill's "few" proved not to be a push over. Several Casa bombers were used as expendable film props to realistically convey the damage and destruction suffered by the German bombers.

At the risk of sounding overly cynical, one of the remarkable things about this film, made by an American company, was that it does not include American actors and characters, although there were some Americans who flew in the Battle of Britain. Given Hollywood's penchant for using big name American stars to make films marketable and their habit, in WW2 films, of giving the impression that it was the USA that won the war for the Allies, these are not elements that detract in this film. It probably also explains why the film, which ran well over budget, was not a box-office success.

The film has some of the finest dogfight scenes ever filmed and in terms of flying scenes, these are the highlight of the movie. But the broader historical elements and the human side of the conflict also help to make this a worthwhile place among the classic aviation films.

SPECIAL FEATURES

A VENTERSDORP CHRONICLE: NOU GAAN ONS VLIEG.....NOU!!

Manually Starting a DC3 Dakota Saga.

Brian Stableford and I flew a DC3 on a charter with a Boere rugby team to Ventersdorp for a challenge game and to overnight after their game. Ventersdorp was Eugene Terblanche's territory where not much English was spoken, or tolerated, as you can well imagine, especially in those days when he was heading the AWB.

We had an early departure from Rand Airport with these hefty rugby players on a chilly Saturday morning in mid-winter.

The Dak started, but only just, with what appeared to be a tired and not fully charged battery. The Dak had not flown for a while, so we figured that the battery would be fully charged again by the time we landed at Ventersdorp, about 40 minutes flying time from Rand.

The flight was uneventful with its heavy and jovial self-loading cargo that included a few hangers-on. It really does not matter who the team represented, but they were certainly a spirited bunch. The rugby match against a local team was part of a harvest festival, some sort of fertility rite, nagmaal, or a Kerkfees. I doubt if the result of the game was of any consequence, but all the traditions were fully observed.

The epic braai that followed included a lot of beer and 'Klippien en Coke' (Brandy and Coca Cola) met eisch. As often happens at these farming community events, there was much langarm (longarm) "tiekie draai" dancing in the adjacent shed with mielie meal sprinkled on the floor. All this to the throb of drums, the lilting tones of sakkie-sakkie concertinas and guitars, as the well-fuelled "Orkes" upheld their reputations, national traditions and honour.

Brian and I felt it was inappropriate that we join the melee for longer than was absolutely necessary, so with the with hostie (Cabin Attendant) in tow, we repaired to barracks, a B&B nearby.

During the evening revelries, it so happened that the manne, no doubt seriously influenced by skinfulls of "Dutch Courage", ordered a stripper from Johannesburg.

This artiste arrived around midnight accompanied by a burly pimp who was more threatening than an angry silverback lowland gorilla. He got the men out of bed to watch the show and pay the hefty bill – cash on the nail.

Early next morning, after a mega boere "brekfst" that probably pushed our cholesterol meters well into the red, we were all conveyed to the airstrip in 'Hardbody' double-cabs with the entire team, hangers-on, and baggage.

Naturally, those people would not be seen to load their own baggage while labour was available – on a Sunday, nogal. The loading was carried out through the Dak's baggage door situated high up ahead of the Dak's wing under our careful supervision and then secured with nets.

Our responsible intention the night before had been to get to the airfield ahead of the rugby team to allow us to pre-flight the aircraft and run up the engines.

Doors closed, we tried to start the engines - in vain. The battery was unable even to turn the cold engines.

It was flatter than a flounder looking for food in the shallows.

Brian, however, knew the secret manual start procedure that required a stout start strap which we perchance had on board.



SPECIAL FEATURES

A VENTERSDORP CHRONICLE: NOU GAAN ONS VLIEG.....NOU!!

One end of the strap was wound around the dome on the front of the prop hub as one would wind the string on a top. With about 8 of the rugby team on the strap tug o' war fashion, at Brian's command in the cockpit "MAG ON - CONTACT", I shouted 'TREK, MANNE' and swung the prop to get the engine to start turning.

The men pulled like crazy and as Brian engaged the start switch to energise the exciter coil 'Shower of Sparks' magneto, the engine turned about five blades and burst into life with clouds of smoke from the exhaust amidst hearty jubilation and mutual congratulations from participants and spectators.

The seriously hungover pax clambered aboard amid much banter. By the time everyone was seated, with the battery now partially charged, together with the genny of the running engine, a start on the No 2 engine was a non-event.

We took off in the crisp Highveld air and had a ride that was silky smooth.

Within minutes, all the passengers were fast asleep. Alles was heel rustig.... There was nary a chirp from them until our Dak's wheels softly squealed with a greaser landing back at Rand Airport that was smoother than melting ice, of course!

Karl Jensen

CHIPMUNK STORY:

Brian Appleton is the proud owner of this (ex-RAF) Chipmunk ZU-DXP. Here is the long arm of coincidence in these emails between Brian and Jon Adams.

"Hi Brian,

As a lot of people are doing, we were going thru many boxes of stuff and Angie came across my Logbook. I thought it was AWOL but obviously put away safely! Here are the pages that refer to the Chipmunk when I was in the RAF. Interesting to see if any numbers fit or you know the aircraft.

See you after lockdown. Cheers, Jon"

"Morning Jon

You are a very interesting man. YOU FLEW MY CHIPPIE IN 1973. What are the chances of that? So as soon as we are up and running let's do what we have been wanting to do for a long time and get you reacquainted with and old friend. What are the chances? Have you got an anniversary of flying to celebrate? Why don't we do it then and write an article. Have you got some old photos and we can include these in the article? Just fantastic. WP 871. Looking forward to hearing where you flew this chippie.

Warm greetings, Brian Appleton. Ps attached is how she looks today but you have seen her.

"Hi Brian,

That is a chance in a million is it not! I was at RAF Church Fenton in Yorkshire near Tadcaster AND WP871 is the aircraft I did my First Solo in on 9th January 1973. That's a chance in a can't even think of a number, and it was the only time I flew it and twice in one day! I will look at my logbook and try to find a date that has some memories, pity it was January that I flew it and not July!

Will be in touch.

Cheers, Jon"

More to follow after the flight.



SPECIAL FEATURES

Taildragger Operations

By Brian Stableford

The following contains suggestions that have worked for many pilots to subdue the taildragger

Rudder Usage

There is no mystery involved in the takeoff of a conventional gear airplane. There are, however, certain elements of ground and flight operations that may require the acquisition of new and more efficient piloting skills and techniques.

The directional control problems inexperienced pilots encounter during takeoff and landing of the taildragger most often happen because of the delay in making a correction when a turn or swerve develops. To make the taildragger submissive don't wait until the airplane nose has moved 10 degrees or more from its lateral alignment. Counteract any turn when the nose first begins to move. With experience you will develop the ability to recognize those predictable turns or swerves before they develop (such as the p-factor induced turn when raising the tail during takeoff).

The novice pilot usually waits too long before trying to rectify a swerve. More and more rudder pressure and often differential braking is required to cancel the swerve. The pilot uses prolonged application of rudder in the direction opposite the turn. The overabundance of rudder causes a swerve of greater magnitude in the opposite direction ... setting the pilot up for a ground loop.

The Problem

Taildraggers (this is actually a misnomer from the early days of aviation when airplanes had a tail skid instead of a tail wheel) are different from tricycle gear airplanes. You first notice this difference when taxiing and making turns. The initial turn from the parking space causes surprise when the turn continues until opposite rudder (and maybe some brake) is used to straighten the path.

Taildragger training requires study of other differences between the conventional gear and the tricycle gear airplane such as the CG (centre of gravity) being located behind the main landing gear. You also need to understand torque, p-factor, takeoff moment (downward force on the left tire causing greater friction), gyroscopic precession of the propeller (asymmetric thrust), the corkscrewing effect of the propeller slipstream, weathervane tendency and centrifugal force. These forces are the culprits that produce the airplane's tendency to swap ends.

Whenever operating a taildragger, the experienced pilot remains alert and wary "until the darn thing is tied down." The following rudder usage technique is used to transition from novice to experienced pilot without aircraft damage.

The Solution

A beginning pilot may recognize a swerve, but his reaction time may be too slow to neutralize the deviation. This may lead to overcorrecting with the rudders. With practice the pilot learns to anticipate swerves and makes a correction before the swerve begins. You will notice that experienced pilots maintain a straight line during the takeoff.

My greatest success in teaching pilots rudder usage in the taildragger comes from a technique of pushing on both rudders at the same time. Use equal pressure against each rudder pedal (push on both rudders simultaneously), and then move them back and forth, depressing each rudder about one to two inches. The two-inch depression will be referred to as the normal deflection.

Align the airplane to takeoff. Suppose we need to push the left rudder a bit for alignment. While the left rudder is pushed, the pressure is maintained on the right rudder. Prior to the desired alignment, lead the turn with opposite rudder.

As power is applied for takeoff, the rudders are moved back and forth, at a rate of about one or two depressions per second. This means that if the right rudder is depressed two inches, the left rudder is immediately depressed four inches. This is two inches of left rudder to reach neutral, and two more inches for the normal deflection.

When a turn or slight swerve is recognized, the rudder movement opposite this turn or swerve must be greater than the two-inch normal deflection—perhaps a three- or four-inch depression of the rudder.

Nevertheless, the technique requires the pilot to go back to the other rudder and depress it the normal two inches from the neutral position. If the turn has not been arrested, the greater rudder deflection opposite the turn is again effected with immediate return to the other rudder. This procedure cancels the tendency of holding rudder until the swerve has been corrected but the airplane darts off in the opposite direction.

If the swerve is enough that rudder movement does not straighten the airplane, do not hesitate to use full rudder pressure (to the stops or beyond) and some brake action along with the rudder deflection.

This method of making a correction and moving the rudders back to normal deflection prevents over correction where the pilot has to deal with a large swerve that develops in one direction, then switches to a larger swerve in the other direction.

After three or four flight lessons to develop a feel for the airplane, try a takeoff without the constant rudder movement, using the rudders when required.

As soon as the airplane begins to move in either direction, use opposite rudder. The amount of rudder is dependent on speed. At slow speeds the rudder deflection (application) may be one half to three quarters of the total that is available. At fast speeds, the rudder may be pushed about one quarter to one half of that available.

Regardless of the amount of rudder used, it is important to return to a neutral position before the airplane over reacts and starts a swerve in the direction opposite the original swerve.

SPECIAL FEATURES

Taildragger Operations

Runway Alignment

Normal takeoffs are made from the centreline of the runway. When taking off with a crosswind, try to align the airplane into the wind. If this requires alignment along the edge of the runway pointing toward the other edge, do it.

Some aircraft designs prevent forward visibility, in which case peripheral vision is used to maintain runway alignment.

Rather than move your head from side to side, scan the area with eye movement. This allows faster detection of turns or swerves.

Power Application

During takeoff a smooth application of power is necessary to prevent a swerve to the left caused by torque. Applying power smoothly will also protect the engine from internal damage.

Begin with the control stick positioned full aft. The heels are normally rested on the floor. The novice pilot may want to keep his feet close to the brakes.

Smoothly apply full power (observe power limitations on turbo/super charged engines). As the speed increases during the takeoff roll, relax the back pressure, eventually moving the stick forward of the neutral position to raise the tail. A rapid movement on the control stick from full aft to forward of neutral will cause the airplane to swerve left due to engine torque and the gyroscopic precession of the propeller.

Knowing the order of control effectiveness during the takeoff helps in maintaining control of the airplane. The order is A-E-R. Ailerons are the first to become effective, followed by the elevator, then the rudder. As the rudder becomes effective, smaller corrections (rudder deflections) are needed to control the aircraft's ground track.

Although the power application is made smoothly, it should also be made promptly. Two or three seconds from the idle position to the full power position should safeguard the engine from damage.

Swerving

If a pilot fails to recognize the beginning of a swerve in time to make a normal correction with rudder usage, the application of the brake may also be needed to straighten the plane.

When a swerve starts, some pilots have frantically reduced the power to idle, determined to straighten and stop the plane.

If the aircraft speed is slower than that required for the rudder to be effective, reduce power to idle and pull back on the control wheel to place weight on the tail wheel for more effective steering. Use the rudder, brakes and ailerons as required to regain control of the ground track.

When the airplane has accelerated to a speed where the rudder is effective in controlling the airplane and a swerve develops, it is usually best to leave the power on. The airplane is more controllable with power because there is a blast of air over the rudder.

If the speed is fast enough for the rudder to be effective, it is probably too fast to pull back on the control wheel to place weight on the tail for better steering. It is undesirable to pull back and rotate the airplane without sufficient lift to fly. In a crosswind this will cause skipping and will compound the problem.

If the aircraft speed is close to flying speed, the application of half of the flaps may allow you to fly out of the directional control problem. If flaps are used, it is important to immediately lower the nose to level flight attitude or slightly above level flight attitude and accelerate before climbing or retracting the flaps.

Flap Settings

The purpose of flaps is to allow the airplane to make a steeper approach angle during the landing approach without increasing the airspeed. They do so by increasing the camber of the wing and increase lift. Because lift and drag are directly proportional, the increased lift also increases drag. A side benefit of flaps is that they lower the stall speed and allow for a slower touchdown speed. This also means that the use of flaps during takeoff will result in a shorter takeoff ground roll and less exposure to rough ground.

Follow the manufacturer's recommendation on how much flap to use. Older airplanes may not have documentation or recommendations on the use of flaps. In this case, move the control wheel or stick to either side for full aileron deflection, then match the flap deflection as closely as possible to the aileron deflection. This will provide the maximum lift for the particular airfoil design of the airplane.

SPECIAL FEATURES

Taildragger Operations

Technique to Prevent The Ground Loop

The best technique for the new taildragger pilot to prevent a ground loop is the rudder usage technique explained at the beginning of this chapter. Use the rudder and brake as necessary to stop the swerve. The important thing is to neutralize the rudder immediately after the swerve is arrested; otherwise, the plane may swerve in the opposite direction. This is the reason for using the technique of moving the rudder pedals back and forth, with more deflection in the direction that is opposite the swerve.

Do not be hesitant about using the brakes when a swerve develops. The wear-and-tear on the brakes and tires may be less than the tear-and-wear on the airplane if a ground loop occurs.

Using everything available is important. Often the ailerons are forgotten as an aid in controlling the airplane. If the speed is fast enough for the ailerons to be effective in rolling the airplane, roll the wings level or opposite the swerve. This is instinctive, so don't think about it, just use them.

If the speed is too slow for the ailerons to be effective in rolling the plane, move the control wheel toward the swerve. You will have to think about this because it is not instinctive. The drag that occurs opposite the swerve from the deflected aileron -- lift and drag are directly proportional -- will have more effect than the lift from the aileron at slow speed and will assist in straightening the ground path.

NORMAL TAILDRAGGER LANDING

We established the premise that "the approach is all-important to making a good landing." Consistency is primary in making a good approach.

Downwind Leg

Consistency means flying the same distance from the runway at the same altitude each time.

Base Leg

Using a stabilized approach, that is, carrying partial power to cause an approximate 500-fpm rate of descent, allows the turn from the downwind leg to the base leg to be made with consistency. On the downwind leg, when the aiming point on the runway (the point where the flare is initiated) is midway between the wing tip and the tail, turn onto base.

When the turn from base to final is accomplished with the airplane aligned with the extended centreline of the runway, it is easy to detect wind drift.

Final Approach

Use the same indicated airspeed for a normal approach to landing regardless of density altitude. At high-elevation airports the air is thin. The thin air reduces the lift of the wings, reduces the power output of the engine and reduces the thrust of the propeller. But, the same thin air that affects the aircraft performance also affects the airspeed indicator. There is a built-in compensating factor. Remember the rule of thumb, the true airspeed is approximately two percent per thousand faster than indicated airspeed when flying above sea level.

Although the same indicated airspeed is used and a stabilized approach is used, it will be necessary to use a little more power during the stabilized approach to high-elevation airstrips to have the same rate of descent that is observed at sea-level strips.

Vision is important during the final approach and flare. Let your head assume a normal position. Rather than moving the head back and forth, use peripheral vision, or move the eyes.

When focusing on one spot on the ground, it is difficult to develop an altitude perspective. By slowly and constantly changing the focus from side to side and from the aircraft nose to the horizon, the brain, without one realizing it, chooses a number of points for comparisons. To change focus, move the eyes, not the head. This technique makes it possible to judge the height and movement of the airplane.

The approach speed of 1.3 V_{SO} is used for normal landings. This allows a margin of 30 percent above the stall speed to compensate for manoeuvring. The speed should be reduced to about 1.2 V_{SO} for the over-the-fence approach.

Over-the-fence is an expression used to explain the position on final when the aircraft crosses the runway threshold at approximately 20-30 feet AGL and in a position to make a normal landing.

SPECIAL FEATURES

Taildragger Operations

Flare

If the pilot uses attitudes for flying, the flare is easy to accomplish. Ideally, the flare should begin at 10 to 15 feet above the runway. There is a smooth transition from the glide attitude to the level-flight attitude. With reduced power and level-flight attitude, the airplane will begin to settle. As the airplane settles, begin a slow transition from the level-flight attitude to the landing attitude.

The glide attitude, that is, the position of the nose below the horizon, can be maintained and it will result in a constant performance. The airspeed indicator may be covered and with a minimum amount of practice the pilot can fly an exact airspeed, within one knot of that desired.

The level-flight attitude is the position of the nose below the horizon during level flight at cruise airspeed and cruise power setting. It is easy to remember and simulate this attitude.

The landing attitude approximates the normal climb attitude. During climb the nose will be above the horizon. Remember where the horizon intersects the side of the nose cowling for transition to the landing attitude.

Touchdown

The approach and flare are the same whether executing a three-point landing or a wheel landing.

Three-Point Landing

If there were such a thing as a “normal landing” in a taildragger, it would be the three-point landing. For a three-point landing the flare is continued to the landing attitude, that is, the attitude that results in the main wheels and the tail wheel all touching the runway surface at the same time.

Wheel Landing

The wheel landing is different only in the fact that the tail wheel is not as low as the three-point landing attitude. A wheel landing may be accomplished from the three-point landing attitude.

Somewhere along the way during the transition from tricycle gear to convention gear, pilots develop the attitude that they do not have to know the wheel landing. Whether this is an omission in training, or due to hangar flying or wife's tales, it is a fallacy.

There are two trains of thought concerning the crosswind landing. One is that the three-point landing is preferred because the airplane touches down at the minimum possible speed. This reduces the centrifugal force of swerving. The other is that the wheel landing allows the touchdown at a smaller angle of attack at a faster speed, affording the pilot a safe out by easily making a go-around.

Occasionally, when the approach speed is too fast, the airplane will float along. The wheels are only a couple of inches above the ground, but the airplane doesn't want to land. Making the airplane land provides moments of excitement or apprehension. A trick that works well in tail draggers (or airplanes with training wheels—singles and twins), is to roll the aircraft slightly to one side or the other with a maximum wing tip deflection of six inches from the level position. This will not work if the airplane is more than several inches above the runway.

After-landing Roll

After the touchdown, it is important to use the ailerons to maintain a wings-level attitude. The nervous student, in a crosswind, often applies full aileron toward the wind once he is on the ground. This increases the ground loop tendency by rolling the plane into the wind and creating a downward force on the upwind tire that leads to extra drag.

Feel what the airplane is doing. Use the ailerons to maintain the wings level. As the airplane slows, the ailerons become less effective. The pilot must use more and more aileron deflection as the speed decreases.

Once on the ground the elevator control should be “sucked into your gut,” that is, it is held back firmly as far as it will go. This places weight on the tail wheel and provides more steering authority. If the airplane touched down in the three-point attitude, moving the elevator control full aft will prevent bouncing or skipping.

SPECIAL FEATURES

Taildragger Operations

EFFECT OF FLAPS

Extracting maximum performance from an airplane is something each pilot can do, no matter what airplane he flies. Flap management is an important factor in obtaining that performance.

Lift and drag are directly proportional. If lift is increased, drag is increased. The addition of the first 50 percent of flaps causes more lift than drag in most airplanes because of the power available.

The addition of the last 50 percent of the flaps causes more drag than lift. During the execution of a go-around, the flaps should initially be retracted to 50 percent. The remaining flaps should not be retracted until the airplane has sufficient speed to sustain flight without sinking or stalling.

If the flaps are retracted prematurely (insufficient airspeed), the lift coefficient of the “clean” wing probably cannot support the airplane.

In making the transition from “dirty” to “clean” configuration, three changes take place:

The reduction in camber by flap retraction changes the wing pitching moment—for most airplanes—and requires re-trimming to balance the nose-up moment.

The retraction of flaps causes a reduction in drag that improves the acceleration of the airplane.

The retraction of flaps requires an increase in the angle of attack to maintain the same lift coefficient. Thus, if airplane acceleration is slow through the flap retraction speed range, lower the nose to increase airspeed before flap retraction to prevent sinking. Consider “milking” the flaps, that is, retract them slowly, a bit at a time.

Flap management requires prior thought on the consequence of flap extension and retraction. Extending flaps causes the following changes to occur:

Lowering the flaps changes the camber of the wing, requiring re-trimming to balance the nose-down moment change.

Lift and drag are directly proportional. Increase lift and drag increases. The increase in drag requires a higher power setting to maintain a constant airspeed at a constant altitude.

The angle of attack required to produce the same lift coefficient is less with the addition of flaps and will cause the airplane to balloon.

Excessive airspeed—above V_{FE} —when lowering flaps for landing, or exceeding the airspeed limitation when flaps are extended, may cause structural damage of the wing.

Flaps for Landing

The FAA created a controversy many years ago when they advocated the use of full flaps for landing, even in crosswinds. They did their best to educate pilots about the benefits of such landings in crosswinds, but did not use all their ammunition.

Some pilots feel a no-flap landing is easier to execute and more controllable. The following information is presented, not in an attempt to convert anyone, but to provide a method for logical experimentation. In this way, the pilot can choose flap or no-flap landings, based upon knowledge rather than myth.

To learn the degree of controllability of an airplane with and without flaps, try this experiment. At some speed less than the maximum flap operating speed, roll the airplane into a 20- to a 30-degree bank. Due to the inherent stability of the plane, it will tend to roll back to wings-level flight without maintaining aileron pressure. While holding the bank constant, extend one-quarter flaps. Then try half-flap and full-flap extension. If the bank becomes noticeable steeper, it suggests the addition of flaps increases the aileron’s ability to control the airplane about the roll axis.

It is true. The airplane has more “air control” with the addition of flaps. It is also true the airplane has less “ground control.”

The flaps, being behind the main gear, allow any crosswind to create more weather vane tendency once the airplane is in contact with the runway. This is why some pilots are hesitant to use flaps during crosswind operations.

Proper technique calls for retracting the flaps once on the runway and continuing to fly the airplane on the ground by making crosswind corrections with the ailerons.

When a pilot uses the proper technique of aileron control and flap retraction after the touchdown, the use of flaps will provide for a safer landing in crosswinds. This is due to the decrease in centrifugal force if a swerve is encountered. Centrifugal force increases as the square of the speed where it starts.

Retract the flaps—not the gear—immediately upon becoming established as a ground vehicle. This improves braking ability by placing more weight on the wheels and reducing the natural weather vane tendency.

When the airplane starts to weather vane, a swerve is created. Suppose one has a choice of a touchdown at 70 KIAS without flaps and 50 KIAS with flaps. Seventy squared is 4,900; while 50 squared is 2,500. So any swerve encountered at 70 would be nearly twice as strong as at 50 KIAS.

If an airplane is placarded against slips with flaps extended, it is because the flaps direct the airflow away from the tail. If a slip is initiated, then the pilot makes a rapid recovery to coordinated flight, the tail may stall and the nose may pitch down steeply. For example, slipping to the left causes the right horizontal stabilizer/elevator to be blanked. A rapid recovery causes the left horizontal stabilizer/elevator to be blanked, before the right can gain airflow. With the normal negative lift of the tail removed because of the lack of airflow (stall) the nose pitches down rapidly.

SPECIAL FEATURES

Taildragger Operations

Flaps or No Flaps?

So are you going to use flaps for your landing? That's up to you. Over the years I have developed my personal preference. Winds less than 15 knots, use flaps. Crosswind of more than 15 knots, don't use flaps.

SIMPLIFIED LANDING

It is human nature to make an excuse for a 'botched,' or at least a less-than-perfect landing. Excuses are just that. When I find myself making excuses, it's time to analyze what is happening.

Some instructors advocate that the approach is all-important to making a good landing. Not many pilots will argue this point, but without the proper flare and touchdown, the landing will not be acceptable.

Sometimes a bad approach can result in a good landing—if it does not involve a compromise of safety. For example, appropriate adjustments for being too high or too low may result in a poor approach, yet with the proper flare and touchdown the landing is salvaged.

ATTITUDE - SIGHT PICTURE

Perhaps the only way to make consistently good landings, especially when flying different airplane types, involves basic attitude flying; that is, use the relation of the nose of the airplane to the horizon. When flying in mountainous terrain with a lack of a horizon, the pilot must learn to use the base of the mountains some six to eight miles away as the natural horizon.

To develop the sight picture of the required attitudes for making a perfect landing, climb to a safe altitude. First, determine the attitude for level flight. Look at the horizon and notice where it intersects the windshield. This will probably be about three to four inches up from the base of the windshield. Next, learn the attitude for climb at the best rate of climb airspeed. The horizon will intersect the side of the cowling below the nose. Memorize the position of the nose with respect to the horizon for these two attitudes. These are the **level attitude** and the **climb attitude**.

Next, cover the airspeed indicator, and make the transition from level attitude to climb attitude. Check the airspeed indicator. If the airspeed is not within one knot of the best rate-of-climb speed, practice some more. Change back to level-flight attitude. Check the instruments to see the indications show level flight.

Practice these transitions—from level-flight attitude to climb attitude and back—until the airspeed can be nailed within one knot. It will take much less time than one imagines, five to 10 minutes at most.

Next, go through a pre-landing check and establish the normal approach airspeed. Trim the airplane to maintain the approach airspeed. Learn this **approach** (or glide) attitude. Practice making the flare to level-flight attitude, pause, then continue the flare to the climb attitude. This practice should be accomplished with and without flaps.

Move to the traffic pattern. After making the perfect approach for the landing, transition to the level-flight attitude at five to 20 feet above the runway. When sinking is detected, make a slow transition to the climb attitude. The transition to the climb attitude must be made at a rate that will not cause a balloon. The climb attitude must be reached before the actual touchdown, but not while the airplane is more than one foot above the runway.

Students, having a hard time developing the perspective on height above the runway, will find this technique helps establish the viewpoint necessary for landing.

Experienced pilots will find this technique valuable in eliminating the “thumpers” that inevitably sneak up on us all.

Brian Stableford

LETTERS

Steve Crutchley to Marie Reddy

Hi Marie

shcrutchley@gmail.com

Re: IAN LEWIS AND THE *AIRCRAFT BUILDERS ASSOCIATION*

Ian Lewis was a school teacher in Natal. He had a great interest in aviation, with a particular interest in building himself a light aircraft. He realised that there were others with similar ambitions and decided to form an association for their mutual benefit. Thus was born the Aircraft Builder's Association / Vliegtuigbouersvereniging. The exact date of birth of the ABA is not known but it was almost certainly sometime in the mid nineteen sixties. It soon became clear that finding suitable building materials was going to be a problem so he formed Aircraft Builder's Supplies and sourced materials locally and from abroad for members of the ABA. In addition to building his Fly Baby he produced a regular newsletter to keep members informed, but unfortunately fate determined that Ian would produce only two newsletters.

In July 1968 he was a passenger in an aircraft that was being demonstrated at Umzinto on the Natal South Coast. Anecdotal evidence is that the aircraft was an RSA 200 and that on a low pass it collided with trees at the edge of the field. Both occupants were killed. The pilot was an instructor who ran a part-time flight training operation at Rand Airport. (He was in fact the instructor that sent me on my first solo in January 1965).

Of course Ian's death left a huge void in the ABA, not to mention in his family. In due course Gus Edwards, a member of the ABA living in Durban, stepped forward to steady the ship in what he thought would be a temporary capacity. Gus did such a good job that he found himself elected as Chairman at the next AGM, and then at consecutive AGMs too, until the pressure from his business activities forced him to step down and the leadership was placed in the hands of a group of ABA members in Pietermaritzburg, led by Tony Wills – also a teacher, and who had been a very close friend of Ian's from their days at Pietermaritzburg University. Gus looked after Aircraft Builder's Supplies until the last orders had been filled and then closed it down.

I joined the ABA in late 1968, soon after Ian's tragic death. The first newsletter that I received was dated November 1968 and was the third ABA newsletter – but the first produced by Gus Edwards. I subsequently received ABA newsletters up to number eight – which was the last. Sadly number 6 has somehow gone astray. I regret not having tried to obtain copies of Ian's first two newsletters, as well as number 6.

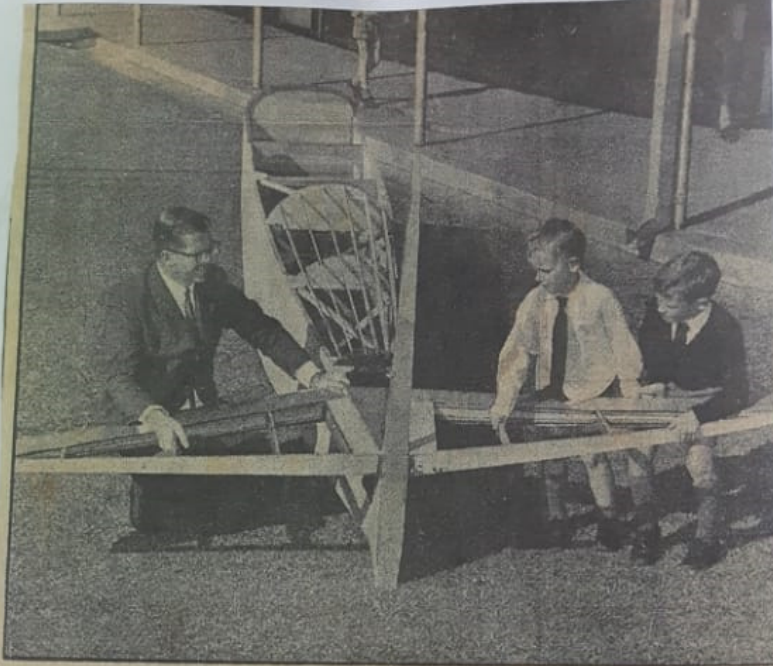
The affairs of the ABA continued under the guidance of Tony Wills and the small group of homebuilders in the Pietermaritzburg area until the watershed gathering held at Oribi Aerodrome in mid-1972, when the EAA of SA was formed to represent and unite the members of the ABA as well as the many EAA members scattered around our country.

I thought this information might be of interest to you. I hope I haven't bored you with it!

Steve

LETTERS

Steve Crutchley to Marie Reddy



"FLYING" SCHOOL PRINCIPAL Ian Lewis with the "Fly Baby" he is building in his time. With him are two of his pupils at the Umzinto Government School, Garry Barker and Melville Watson.

School Principal Makes His Own Plane

AFTER nearly 20 years flying, Umzinto school principal Mr. Ian Lewis has one of his strongest ambitions "off the ground"—to build his own aircraft.

In fact, he has gone a step further and has interested several other "flying types" who have followed his example and they will soon have their own "home-builder squadron" scattered about South Africa.

"I really started about two years ago but have put in only about three months' real work because I have been struggling to get the right parts," he said.

"But now that I know where to get them, things will move a little quicker and I am passing on what I know to the others—one of them regularly visits me from Port Elizabeth."

'LIKE A BOAT'

His craft, a Bowers-Lewis "Fly Baby," was designed by a Boeing engineer and there are about 50 in operation all over the world.

Mr. Lewis, who paid for his flying lessons through spare-time jobs while at university

in Pietermaritzburg, says there is nothing complicated about building an aircraft—"It's just like building a boat, only there's a little more to it."

The only components which come ready made in his are the wheels, instruments and engine.

SINGLE-SEATER

"This is a single-seater—I didn't think anyone would want to come with me—but as soon as it's finished I'll build a two-seater," he said.

He already has a factory-built aircraft.

He hopes to have the "Fly Baby" ready by the next Durban Air Pageant in two years and thinks it will cost between R1,000 and R2,000.

"It's like any other hobby. You must be keen and it has its benefits. My wife always knows where I am, but she's not looking forward to the day I fly it."

SPECIAL FEATURES

By Roy Watson

Plane Poker

Some years ago my son, Courtney and I went in my Stinson on the Inaugural Poker Run organised by John Reeder.

As you well-know, poker is a card game where each player collects 5 cards and the player with the highest number of points wins. So, translating the game into an airborne activity, we had to make our way across the Highveld stopping at various airfields to collect individual cards.

We started at Baragwanath, picked up our first card, and took off. Our next stop was the old Bobby Oltoff strip, now Teddersfield. There we had to stop and collect another card and take off on the next leg towards Orient where we collected card number 3. From there we made our way to HMS Krugersdorp.

When we landed on 08 and turned off the runway, as on the other stops, there was a chap at the clubhouse giving out a card to each participant. We then took off on the last leg to Brits. After turning off the runway we were marshalled to park next to the clubhouse to collect our final card.

We were then treated to a lovely lunch and we all presented our cards. Our hands were all compared and the winner was announced. It was a super event particularly flying in the Magaliesberg area and if I recall correctly we had over 20 aircraft.

Some years later when Courtney was chairman of EAA322, he organised another Poker Run, on the same lines and similar route. I took Tiggy, our Tiger Moth and Patrick (my other son) took the Cessna 140. We ended up at Rand Airport for the prize giving, another great event. We left the Auditorium to go back to our bases.



Courtney doing the introduction at Bara

SPECIAL FEATURES

Plane Poker

I saw Patrick going towards the Cessna 140 and I followed him. As he got in to the aircraft with his passenger, I snuck up behind the aircraft. I must explain that I have always had a slight mischievous streak and I had decided to do something that my sons had never seen, but was often done in our flying days gone past.

So, I lay on the grass behind the 140 and gripped the tailwheel firmly with both hands. He then opened up the throttle and was surprised that the aircraft would not move. Patrick moved the rudder from side to side, and shifted back and forth in his seat to try and free the aircraft, without success. I was slowly getting dragged behind the 140 as Patrick took on more and more power. At nearly full tilt, I let go and Patrick screamed forward. He was shaking his head uncomprehendingly as Karl, myself and the rest of the crowd laughed loudly at his expense!



At the finish at Rand

SPECIAL FEATURES

By Roy Watson

Palmietfontein becomes a race track

I grew up in a family very interested in motoring. My father was a founder member of the Sports Car Club and also the chief scrutineer. As a result I was always with him at the race tracks.

In my early years we were at the Palmietfontein race track. It had been closed down as the international airport and was converted into a race track. The 2 runways were the major part of the track with both split with barriers down the centre. The cars then went in opposite directions on each side, doing a sharp U-turn at the ends. They then turned onto the next runway at the convergence and there was a loop joining the other halves.

There were always a good number of entrants. Most were local but from time to time there were overseas entrants and I remember sitting in a single seater Ferrari that had broken a rear axle. I think the drivers name was Whitehead. Pierre Kelfkens was a friend who was always driving the Bugatti with a Ford engine, as was Hugh Gearing with his Alfa Romeo. I enjoyed watching the cars tear down the straights and do the wild U-turn at the end and come screaming back on the other side.

One day Dad was driving a 3 wheel car. I think it was a Reliant, with one wheel in the front. Very strange, you turned the steering wheel until the wheel faced back to reverse the car. You could just get the nose moving sideways if you turned the steering half way to reverse.

The race track then closed and we then moved to the Grand Central track, next to the airport. The first event that I remember getting ready for was the 9 hour race in 1958. The track had never been used at night, and at the practice the drivers were getting blinded by the lights at the pits as they turned onto the straight. As a result Pierre had got some cats eyes and I was helping make holes on the side of the track for them. I remember working in the lights of Vincent's Invicta with the messy tar while the race cars tore behind us.

The next day the race was on. Pierre gave me a pile of programs to sell to all the spectators. I enjoyed it as it was a way of getting around to see the race from all over. As I was too young to count the money I just held out my hand full of change and the customers just helped themselves. Each time I got back Pierre said that I was his best seller as I always got more cash than he expected!!

While going around I was also enjoyed watching the flying activity next to us as we were really close to the airfield. I saw Dad periodically but they were all very busy so had to do my own thing till the race was over at night.

It was also in 1958 that I spent some time with my aunt in Durban. My room was in a loft in the roof, with a window looking out on the bay. From there I could see the place where the sea planes were moored. Rather lucky because I think they all went soon afterwards. I also had a bit of a naughty streak and I recall being in a small boat in the harbour, on my own paddling along in between the huge boats all around me, I remember Dad's photos of the flying boats on the Vaal when he had a flight.

We had many races at Grand central and I think it was in 1962 that the racing was moved to Kyalami.

I remember Bobby Oulthof racing his huge Galaxy on many occasions and once we went to his strip, now Teddersfield. In the hangar adjoining his house was a sea plane that I have not seen since, one wonders where it is. Shortly thereafter I started flying training with Nick Turvey and I got my licence in Sept 1965

SPECIAL FEATURES

SEAPLANES IN DURBAN

When looking at images of Seaplanes in Durban on the internet, I came across this short article which seemed appropriate given Roy's reference to seeing these in Durban in his youth, and of course, the fact that Tom Chalmers provided the photo just made it even better.

Marie Reddy



Extract from Facts About Durban |Source : <https://www.fad.co.za/> with permission of Allan Jackson

Aircraft from 262 Squadron attacked a surfaced U-boat (U-859) 300 miles South West of Durban of Durban on July 5, 1944. It was later found that the U- boat had been seriously damaged in the attack with one crew member being killed and three wounded. So many South African pilots joined the squadron that it was eventually assimilated into the South African Air Force as 35 Squadron with the Zulu motto Shaya Amanzi (Strike at the Water). The squadron received the Short Sunderland V (a military version of the Empire C-Class Flying Boat) in 1945 and continued to fly out of Durban until 1957 when all maritime reconnaissance duties were taken over by land-based Avro Shackletons at the Cape.



Picture courtesy World Air News. This picture was taken by Tom Chalmers on the last occasion a Sunderland took off from Durban Bay.

My informant Tom Chalmers took the picture on the left in 1957 on the day before the last official Sunderland flight was to take place from Durban. By coincidence he was to be a passenger on the last flight but it never occurred because two of the engines failed on take-off and the aircraft swung in towards the quay knocking off the end of her wing on a bollard and making a number of fishermen jump for their lives in to the bay. [\[Read his story about the incident\]](#)

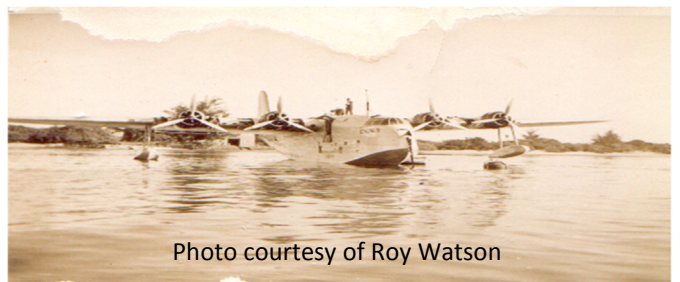


Photo courtesy of Roy Watson



SPECIAL FEATURES

Palmietfontein becomes a race track

By Roy Watson

I grew up in a family very interested in motoring. My father was a founder member of the Sports Car Club and also the chief scrutineer. As a result I was always with him at the race tracks.

In my early years we were at the Palmietfontein race track. It had been closed down as the international airport and was converted into a race track. The 2 runways were the major part of the track with both split with barriers down the centre. The cars then went in opposite directions on each side, doing a sharp U-turn at the ends. They then turned onto the next runway at the convergence and there was a loop joining the other halves.

There were always a good number of entrants. Most were local but from time to time there were overseas entrants and I remember sitting in a single seater Ferrari that had broken a rear axle. I think the drivers name was Whitehead. Pierre Kelfkens was a friend who was always driving the Bugatti with a Ford engine, as was Hugh Gearing with his Alfa Romeo. I enjoyed watching the cars tear down the straights and do the wild U-turn at the end and come screaming back on the other side.

One day Dad was driving a 3 wheel car. I think it was a Reliant, with one wheel in the front. Very strange, you turned the steering wheel until the wheel faced back to reverse the car. You could just get the nose moving sideways if you turned the steering half way to reverse.



Cover image courtesy of progcovers.com

The race track then closed and we then moved to the Grand Central track, next to the airport. The first event that I remember getting ready for was the 9 hour race in 1958. The track had never been used at night, and at the practice the drivers were getting blinded by the lights at the pits as they turned onto the straight. As a result Pierre had got some cats eyes and I was helping make holes on the side of the track for them. I remember working in the lights of Vincent's Invicta with the messy tar while the race cars tore behind us.

The next day the race was on. Pierre gave me a pile of programs to sell to all the spectators. I enjoyed it as it was a way of getting around to see the race from all over. As I was too young to count the money I just held out my hand full of change and the customers just helped themselves. Each time I got back Pierre said that I was his best seller as I always got more cash than he expected!!

While going around I was also enjoyed watching the flying activity next to us as we were really close to the airfield. I saw Dad periodically but they were all very busy so had to do my own thing till the race was over at night.

We had many races at Grand central and I think it was in 1962 that the racing was moved to Kyalami.

I remember Bobby Olthof racing his huge Galaxy on many occasions and once we went to his strip, now Teddersfield. In the hangar adjoining his house was a sea plane that I have not seen since, one wonders where it is. Shortly thereafter I started flying training with Nick Turvey and I got my licence in Sept 1965.

On Mon, 4 May 2020 at 16:51, marie reddy (new) <marie.reddy@gmail.com> wrote:

Hi,

We have a gent that has written a short article on Palmietfontein early racing days for our local club newsletter. He does not have any images available on the early days but I have found this on line and would like your permission to include this with his article please.

Please advise.

Cheers and regards

Marie Reddy

Hi Marie,

Thanks for your email and for kindly asking permission. Please feel free to use the image in your newsletter. It's a lovely cover. If you are happy to put a credit for the image of progcovers.com I would be grateful.

Out of interest what is your club and would you mind sending the newsletter onto me afterwards? I would be interested in reading more about Palmietfontein.

Regards,

Malcolm

SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

RESTORATION PROJECT

By Andy Lawrence EAA322

Many, many years ago, I completed my tailwheel conversion on a Piper Super Cruiser. So I suppose it's always been a "first love" story – I have always wanted one. Another contributing factor was that there is quite a large contingent of Cruisers at Krugersdorp where I am based. At present, there are six Cruisers, with only two currently flying. Hopefully mine will be the third.

So, way back in 2010, I was browsing through "Trade a Plane", the American marketplace magazine and I saw a Cruiser for sale at a reasonable price. So I called the seller, asked him some questions and for some pictures. It didn't take me long to decide to buy the plane unseen, so I called him again and told him that I wanted to buy his plane. His response took me by surprise – he said No, he couldn't sell the plane to me. His reason was that he didn't know how he would get his money from someone in Africa! I told him it was no problem – he must just give me his bank details and I would "wire" the money to him. He wasn't convinced, but he nonetheless gave me his bank details. I paid him \$20k which, in those days, was around R130k. Around a week later, my phone rang and I heard this amazed American voice saying "Hey, Andy, I got your money!" Well, he was so pleasantly surprised by this amazing feat, that he offered to disassemble it for me and hire a "U Haul" and drive it from St George in Utah to Vacaville in California (11 hour trip) where the late Jeff Sharman lived – all for free!! Jeff shipped the plane out to me, together with a whole lot of spares that I purchased as I had already decided that she would be a refurbish project.



SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

Finally in June 2011 the container arrived at my hangar. The plane was tatty to say the least, paintwork was bad, fabric unknown condition, panel butchered, seats torn, roof lining stuck together with duct tape, and more oil on the outside of the engine than in but I loved her. She was straight, undamaged and complete! Pete Lastrucci (my AP) has said time and time again, that this Cruiser is the most original one that he has ever seen!



Talking of originality, I have got every single logbook for this plane right from the original first one issued by Piper, to now. I also have the original first weight and balance certificate as well as the original factory records for the plane detailing the factory rollout date as 14 February 1947.



So anyway, I assembled the plane and made it safe. Then went through the laborious task of getting it onto the SA register and finally she became ZU-FPU.

SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

I flew her for a while, but only around the patch, and when the roof lining fell on my head and the crankshaft oil seal popped out, I decided that this plane was “talking to me” and it was time to ground it and do a complete refurb. The only problem was I was still busy building my RV10 and there was no way I would start a new project without first finishing the current one. This, combined with a family tragedy, resulted in the Cruiser languishing in a corner of my hangar gathering dust and cobwebs for over four years!

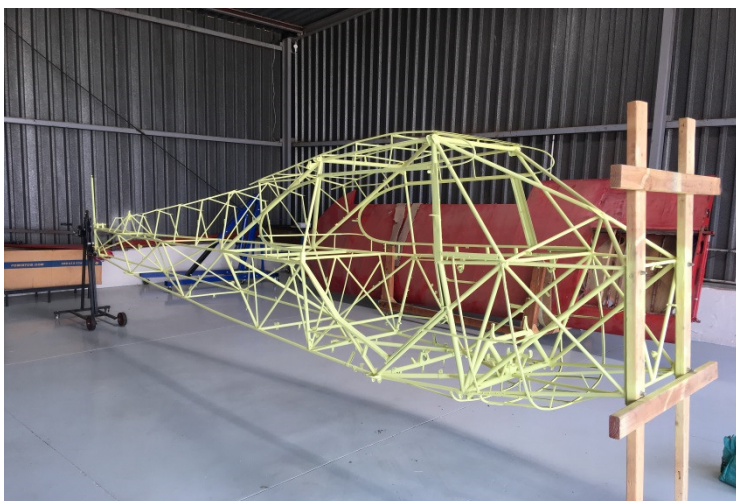
September 2016 saw me finally starting the job. I removed the engine, wings and empennage, which I stored in the hangar. All my plane building is done at home in my garage, with final assembly done in the hangar. It's much more comfortable at home as my tea is served to me! There are two people I need to thank at this point – my wife, Margie who has served countless cups of tea during my previous three plane builds, and now this plane restoration. Second person is my friend, Pete Lastrucci, who not only is my AP, but also often assists me to drink the tea.

So the fuselage was loaded on a trailer and taken home.

Stripping was a messy and slow job. Detailed photos were taken of every step. Those later proved invaluable as there is no assembly manual and the memory bank's faded! A spreadsheet was created to list all the different fasteners as they come off. They were sized, photographed and bagged.

Later, when the last nut and bolt was taken off the plane, they were all sent for re-plating and then checked. Damaged ones were replaced with new.

Nine months later, the completely stripped airframe was sandblasted, repairs were completed where required and it was sprayed with primer – now ready to be reassembled.



I did all the spray-painting in a spray booth that I constructed in my hangar – so while the airframe was in the hangar, and I had space at home, I took a wing home and started work. The process was obviously the same for both wings.

SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

I first carefully measured and marked out the old fabric where all the inspection holes and openings were.

I then used the old fabric as a template so I could get the right positions on the new fabric. After the fabric was removed, the wing skeleton was pressure washed, inspected and new components installed. All leading-edge skins were replaced (old ones badly dented), new wiring installed, new control cables fabricated and installed, new bellcrank bushes and bolts installed and new aluminium fuel tanks were fabricated. I then covered the wings using the Poly Fibre system, rib stitched and taped and then moved the wing back to my hangar spray-booth for painting. I stuck to the original 1947 colour and paint scheme with the exception of changing the wings to cream instead of red, due to our hot climatic conditions. At this point I must also



thank Val Jensen (Karl's better half) as I regularly invaded her paint shop bearing tins of paint under my arm and took over her paint shaking machine so that my paint was properly mixed.

The empennage and gear legs were all done in the same way, then bubble wrapped and put into storage together with the wings.

Then late in 2019 the fuselage frame was again transported back home for reassembly. Without going into too much boring detail, the following was replaced with new:

- Wiring
- Fuel lines
- Control cables
- Wheels and brakes
- Tail wheel
- Windscreen and plexiglass
- Floorboards (thanks to my woodworking friend, John Runciman)
- Interior roof-liner, panels and seat covers
- Instrument panel

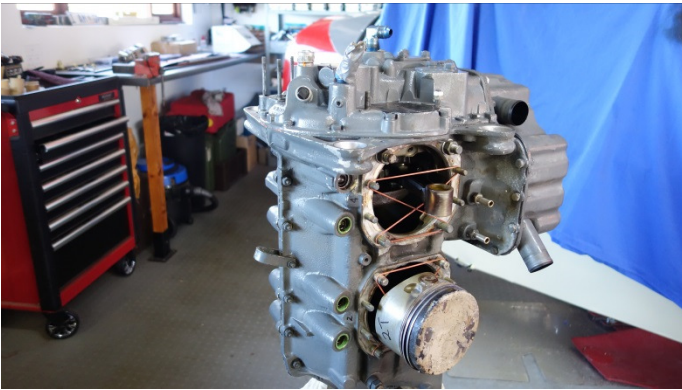


SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

I decided to try and keep the aircraft as original as possible, so I have kept the panel pretty much as it was in 1947 with the cream-faced instruments and instrument overlays. I sent my instruments to the USA for refurbishment (thanks to Tony Bailes, SAA captain who transported the instruments for me). Many other items are all original as well, such as battery box, switch panel, Grimes navigation lights, starter button and placards and markings have been religiously replicated and put back on.

Then it was time for the engine. I decided to give it a top overhaul, so I pulled the cylinders off and sent them in to an engineering shop to get cleaned up and re-honed, etc. I was not happy when I received a call telling me that all four cylinders were unserviceable due to hairline cracks. Luckily, my friend in the engine business (who is also my AP) found an almost new set of pistons and I managed to find a suitable set of cylinders at Wonderboom (Thank you AEP). AEP then put the whole lot together with new rings and I reinstalled those cylinders and pistons onto the engine. In addition, I installed a new set of Slick magnetos, a new Skytec starter, a factory remanufactured carburettor and the old generator was replaced with a new alternator.



The engine was installed and new engine baffles were fabricated.



SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

The last thing that was done at home was the interior which is finished off in a light & dark grey to match the panel. Seats are covered a soft black Napa leather.



SPECIAL FEATURES

MY PIPER PA12 SUPER CRUISER

Then shortly before we went into lockdown, the aircraft did its (hopefully) last road trip back to the hangar for final assembly.



In the time I have had and now with the relaxed lockdown restrictions, I have now completed the final assembly and bar a few fairings that still have to go on, the plane is now finished (3 years, 7 months since I started).

The sad part is that now I have to wait for Covid 19 restrictions and CAA before I can get the required paperwork to fly. Because of this, I have not started the engine yet and will only do so when I know when I will be permitted to fly.

I, of course, will send an update to Contact, when that happy event occurs!



SPECIAL FEATURES

David Toma Article



SPECIAL FEATURES

David Toma Article

As I sit down and write this I know it has been 30 days one hour and 45 minutes since I pulled that mixture all the way through and watched the propeller come to a stop as I sat there in between the hangars in the darkness. Knowing what I know now I kick myself for not flying a few more hours that evening for I had fuel, the storms had already cleared up, the wind was calm and the conditions as smooth as silk other than my touch down! In my mind back then was the fact that it would have only been three weeks before I could redeem myself from that little bounce I had, a gentle reminder from the Pacer that the small wheel is in the correct place on this aircraft. To tell the truth I had over a year's worth of admin to catch up on and maybe the stars had finally aligned and I was left with little choice but to catch up.

Here I find myself like everyone else with my wings clipped for what feels like an eternity. I am however adamant that I am only temporarily unaware of the position of my marbles as compared to having completely lost the plot! I am however about 70% through my admin and I have started studying again for a change but one thing for sure is that I can't wait to fly again. I even have a line-up of the planes that I want to fly first not so much of where I would take them because the way I feel now even circuits at FAWB will be fine. I would even promise to fly Boeing circuits like everyone else that side of the world and even hold back my usual complaint about that fact to ATC this time! More than likely though my first mission would be to take the Pacer and go and meet up with Greg, then we would take it from there making noise at an airspace near you. The admin however falls under the category of future David problems and will be addressed at a much later stage.

So we are finally going flying again, here is what I have in mind after what has become my longest non-flying gap in nearly six years! The mission is simple, take the Pacer out, get the oil temperature to within the normal operating range and keep it there for at least an hour whilst practicing safe social distancing the way any aviator would (I am sure that we will all exceed the hour mark after this break). The flight can be broken down to the usual phases, namely:

Pre-flight preparation (night before or on the way to the airport): There is no better time to plan your flight than before your flight without any of the other distractions such as actually flying the plane and chatting on the radio. I go through my flows and my checks, my speeds and my briefings just to get the juices going.

Pre-flight inspection: I like to think that my pre-flights are generally pretty thorough and this one shall be no different. The plane hasn't been flown for a while though so I will first disconnect the trickle charger and check that my battery is up to the task. The rest is the usual, I check the paperwork as well as the inspection reminder, select one of the fuel tanks and extend the flaps, remove all the covers, check all the liquids (fuel quantity + quality and the oil) and do my usual walk around. This time however I am looking for signs of other creatures who kept the aircraft company during my time away. Bird's nests in the cowlings or a wasp's nest covering the oil cooler at the back, pretty much anything that will ruin my long awaited flight.

Start and taxi: The start is the same procedure that I have always followed and I will test my brakes as soon as I get a chance to avoid the embarrassment of parking the Pacer into the hangar next door.

Engine run up and before take-off checks: I waited quite some time for this flight as it is so I don't struggle to give the engine a chance to warm up before I do my usual run up checks followed by my before take-off checklist.

Before take-off briefing: There is a reason that this gets a bullet of its own because in my eyes you can never stress your before take-off briefing enough especially after not having flown for a while. Here I prepare myself for a multitude of events that can occur on the ground before rotation, after rotation with sufficient runway, after rotation with insufficient runway and I am low or after rotation with sufficient runway and enough altitude to try fault find. This should include possible emergency fields on your take-off path so that if it was to happen you had already done the thinking previously and recently as to what you would do.

The actual take-off: Other than the usual tail wheel tap dance/ juggle of the swing factors and keeping the nose as far ahead as possible from the tail, I will keep all of my senses at the ready for any sign of an abnormality. Whether be it a smell, a sound or hereby lack of, a new vibration or a lack of performance. The last thing you want to do is to ignore signs of an impending problem and end up taking it to the air.

SPECIAL FEATURES

David Toma Article ctd

The flight: By now even I will be aware of the size of my grin whilst sightseeing and making noise over a few familiar residences to signal my return to the skies. I am fortunate that during the week leading up to lockdown I had taken a couple of students through their PPL renewals so the usual manoeuvres and procedures are still fresh but that still won't stop me playing with some slow flight manoeuvring at a safe altitude. I would first configure and slow the aircraft down to about 60 miles an hour (with power) whilst maintaining altitude and heading. Once I am fully setup and trimmed I would do a couple of turns making sure that I keep her in balance and roll out on my desired heading having maintained my altitude. I would then follow that up by an acceleration and clean up back to the cruise speeds whilst maintaining altitude and heading once again. Now I am ready for some long anticipated circuits and bumps.

Landings: I would most probably end up at FAKT for a few circuits to get my eye in again. There is no better time than now to fly the aircraft by the numbers and feel the aircraft which should jog my memory to this all too familiar aircraft. The goal is to always be ahead of the aircraft and anticipate the trim/power changes for any configuration change so that the aircraft isn't flying me around the pattern. Like any tail wheel the landing is easy, you just need to touch down straight, on centreline and at minimal energy state otherwise your attempt will be rejected through very simple physics and you will be sent up for another attempt. If you don't get the hint the above scenario will repeat itself until the untimely end of both your ego and your aircraft! So I prefer to not even touch down unless all my ducks are in a row with respect to the landing. Keeping in mind that it isn't over till the lock stops swinging on the hangar door I would start with a touch and go and then a full stop. If I am not happy with the quality of either and within limit I would do several more circuits up until I have enough courage to park up by the clubhouse and see who was watching my performance. Then will be a good time to do a walk around and see if I haven't sprung a leak or if I can spot anything that is out of the ordinary. Hopefully I did not have an "arrival" which would necessitate a more in depth and thorough inspection of the landing gear itself.

From here on after a meal and a cool drink I would be back to my normal and will most probably take-off again and go do some further sightseeing over the special rules area till I return to FAWB much later that afternoon having only just started catching up with all the flying that I missed. After I pull the aircraft in the hangar and complete the paperwork I sure won't forget to give Debbie a hug and a kiss for it has been far too long and even though I know how much I enjoy her already, this break reminded me even more so.



SPECIAL FEATURES

Dead Reckoning

By Brian Stableford

Before the days of GPS, we used to navigate by Dead-reckoning, i.e. Deduced Reckoning. This was first practised by ancient mariners, when with the aid of a sextant and Polaris (The Pole Star), were able to establish latitude. The latitude of all ports was known and thus a ship would first sail north/south and then maintain the latitude of it's destination by celestial navigation.

Before the advent of the chronometer, there was no way to establish longitude. Indeed, before Harrison perfected the chronometer and established Greenwich as the Prime Meridian, each country decreed their own prime meridian. Thus, maps would use Paris, Madrid etc, depending on the nationality.

During the mutiny on the Bounty, Captain Bligh and the non mutineers, were put into a longboat with provisions, a sail and a sextant. Knowing the latitude of Timor, Bligh undertook the seemingly impossible 3,618-nautical-mile voyage to Timor, in 47 days.

At Flight School, we were laboriously taught navigation by plotting True Tracks, in order to compute drift and arrive at True Headings and Ground Speed, because forecast winds were given in True Headings. Then we had to go through variation and deviation to arrive at a Magnetic Heading. A laborious process indeed. Forecast wind still remained the wild card and canny pilots soon found that cloud shadows would reveal actual wind direction and speed during the flight. The acid test, for me, was a transatlantic ferry flight I did, back in 1976.

Fast forward to the age of GPS. Early models, like the Garmin 100, would only give you Track, Groundspeed and Time, between two waypoints, without the later luxury of airspace data. But it did resolve the two unknowns in aviation, i.e. Track and Ground Speed. Sadly, this also resulted in the "Go To" button syndrome and the end of maps with tracks let alone flight plans.

By now you will be saying "and your point is?"

I used to fly Flippie's Beech 18 on a breakfast run to Mongena. It has an ancient Garmin GPS and the prospect of programming the route to Mongena, too daunting, so I would use my trusty hand held Garmin III. The route would be from Rand to Gerotek, to the meteorite crater near Hammanskraal and then around the military airspace to Mongena.

I decided one day, to plot the flight using "Skyvector" and fly the plan using only the onboard Garmin Track and G/S timing. I stuck to the tracks and leg times meticulously and as the seconds ticked away on the last southbound leg, I looked right and turned onto finals.

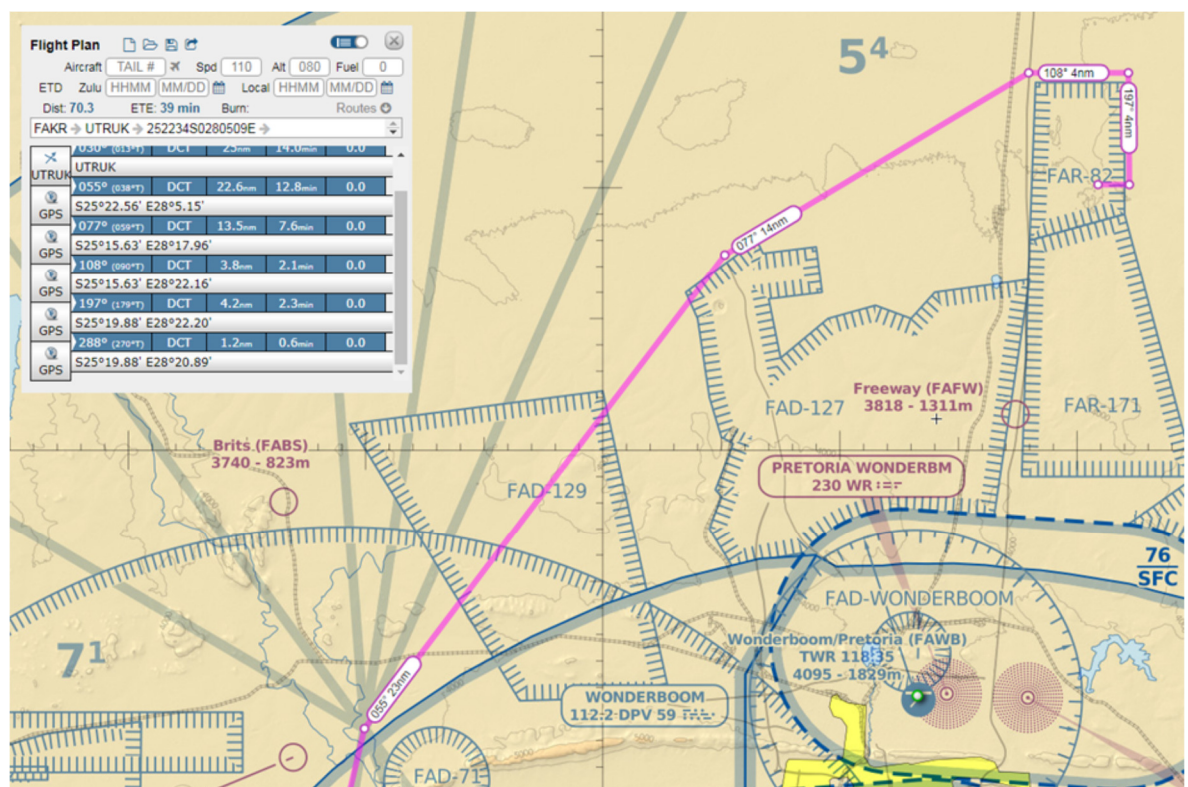
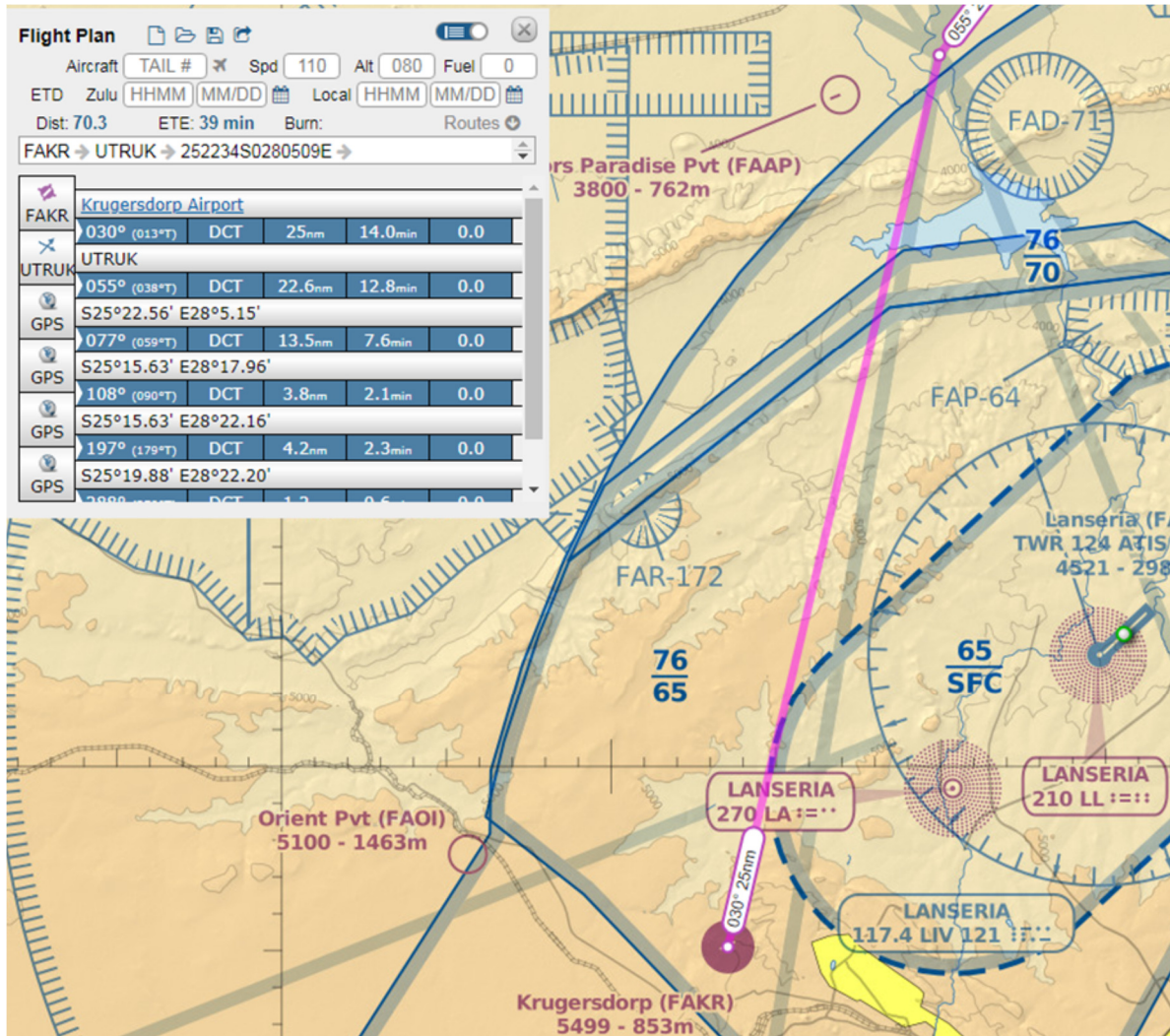
I have done a sample "Skyvector" plan, using Krugersdorp. The waypoints are created by slewing the map until the desired point is under the cross hair in the centre and then placing the cursor over the point and selecting GPS position.

Converting the Skyvector plan to a usable plan, needs expanding.

Brian Stableford

SPECIAL FEATURES

Dead Reckoning ctd



TECH TIPS

By Pete Lastrucci as told to Marie Reddy

TECHNICAL

During COVID-19 lockdown, most members have been restricted to their homes. Aircraft maintenance and upkeep of aircraft has been a major concern to all aircraft owners.

This information is provided as a guideline to assist members and general aviators. Although we endeavour to keep the information updated, the EAA of SA and its Chapters encourage members to ensure that all information is aligned with the SACAA, who are our regulatory body in South Africa.

Peter Lastrucci had provided a few of the pertinent docs (uploaded to www.eaa.org.za) and the following points, as mentioned during the 322 Monthly gathering Zoom meeting -

Environmental conditions are a big factor in determining preventative action against corrosion.

Both Continental and Lycoming advise against ground running engines for perceived corrosion relief.. this exacerbates the situation exponentially.

Flights should be for a period of an hour recommended by Lycoming and Continental, in order for the oil to “boil” off moisture that may have accumulated within the engine.

Don't turn the prop once engine is placed in storage.

If cylinders are to be “fogged” with inhibitor make sure it coats the entire internal surface, squirting an oil can through the plug hole will not suffice.

Plug openings to the atmosphere (exhaust and breathers especially) with a desiccant to prevent moisture ingress. Don't forget the red streamers to remove before flight!

If there is any doubt as to whether there may be corrosion, do not turn the engine and have a borescope inspection done first.

There is much info on the subject and direction should be taken from the manufacturers bulletins pertaining to the particular engine.

This information as well as the following information documents are available on the Technical page of our website (<http://eaa.org.za/technical/>).

Maintenance Flights and Activities in addition to regulations

ATF renewal and reissue information

Continental Engine presentation

Lycoming Engine preservation

Rotax Engine preservation

Thanks to -

Peter Lastrucci

Aircraft Engines and Accessories



LETTER TO THE EDITOR

By Marie Reddy

Dear Eugene,

I thoroughly enjoyed Neil Upfold's article on the Vagabond (CONTACT! May2020) and how he bought it back to restore after many years. Lovely story for an aerie. I recently found the attached article in HOMEBUILT Sept 1972 and thought it was interesting that this same aircraft was a feature article when it was first built. I also recently chatted to one of the five person syndicate that originally built this aircraft. After 50 years, I am amazed that we have been able to understand some of the aircraft's history through the reports published in EAA newsletters. It makes me wonder why you are not inundated with member builders sending you some kind of report or article during, or on completion. I'm the first to admit that I am not a builder myself, so I don't understand it - but if they were doing this in the 60's, 70's and a little in the 80's... what is different now that builders no longer want to publish the info? I think of it as recognition for their achievement and sharing of information that everyone can benefit from. What a brilliant way to promote an aircraft. We have

seen some great builds in the last few years, but I truly do not understand - are the builders of this century really too busy to share their achievements in order to encourage others?

I would appreciate you publishing this letter and article from 1972 (I cannot believe an aerie could only cost R1300?!) and ask that any builders that read this, respond as to why this is the case.

Cheers and stay safe

Marie Reddy



A CLASSIC AIRCRAFT

The Piper Vagabond — by Clive Dennison.

The Vagabond was first offered for sale in 1948 and the production run ceased two years later. This short period of manufacture was due more to the rush in the 1950's to produce a four-seater than to any short-coming in the design of this fine two-seater aircraft.

The PA-15, as it was known officially, used Piper Cub wings with three feet removed from the root of each panel, giving a span of 29 feet. The tail group was regular Cub structure. The fuselage was completely different due to the side by side seating arrangement used.

The emphasis of the design was on economy of manufacture. There was a door on one side only, no floor mat, no cabin heater, no primer, no mixture control, no dual control and no shock absorbers. Most of these items were available, however, as optional extras. The toe brakes which replaced the Cub's awkward heel brakes were a great improvement.

The early Vagabonds were equipped with the 65 horse power Lycoming motor of 145 cubic inch displacement. This was later replaced by the 65 horse power Continental motor of 175 cubic inch displacement. This

model was known as the PA-17, and most Vagabonds have since been fitted with the Continental motor due to the improved performance realised.

As two-seater aircraft go the Vagabond is very light, weighing only 646lb. empty and 1 100lb. at gross. This probably contributes significantly to the spritely performance, especially when propelled by 65 Continental-type horses.

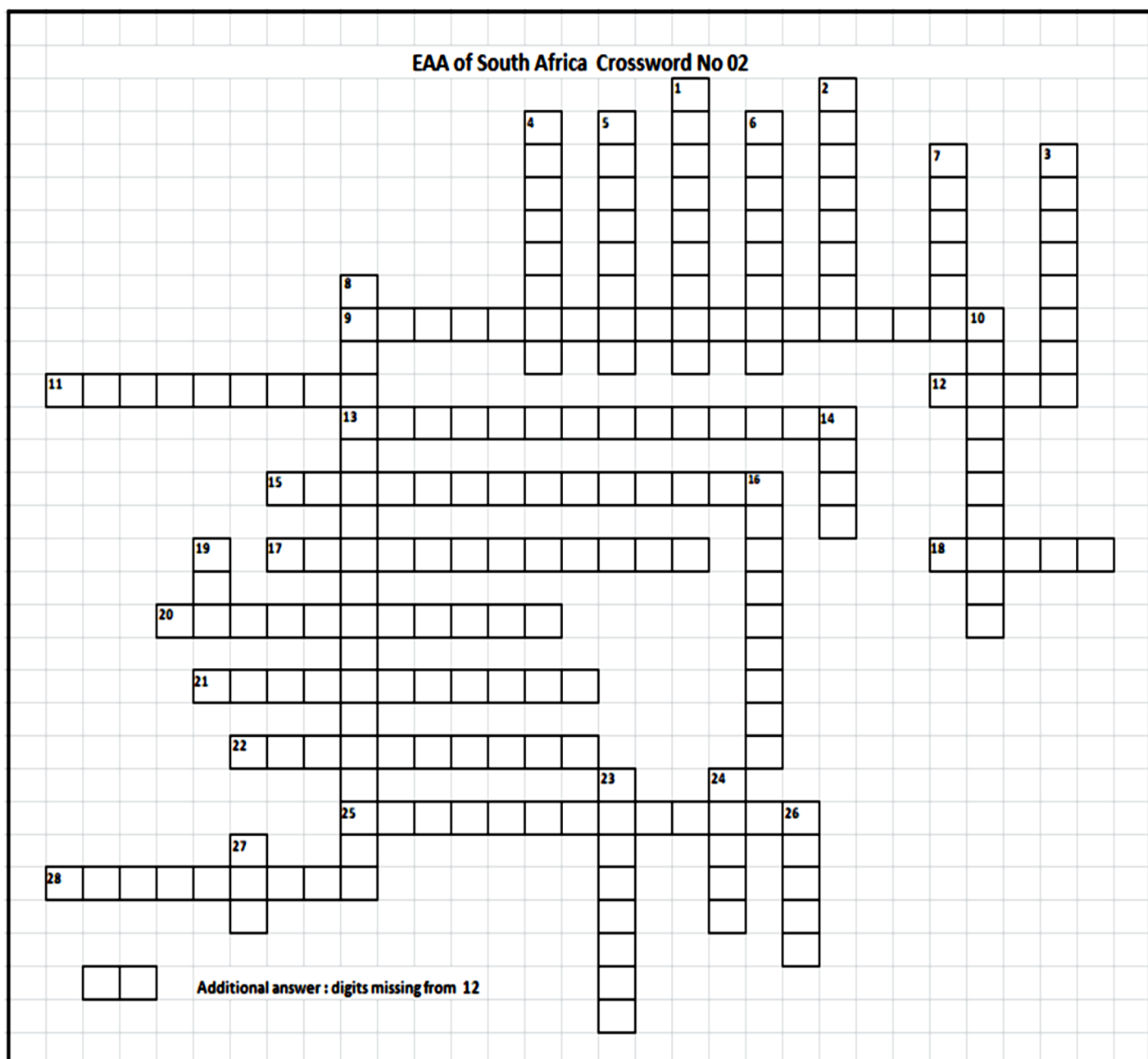
The PA-15 shown above was purchased for R1 300 and has flown two hundred hours during the past year at an average fuel consumption of only 2.9 gallons per hour. The oil consumption is negligible. As can be expected the performance is not of the Saturn V variety. Nevertheless, it breaks ground in two hundred yards during take-off and cruises at 80 m.p.h. at 2 300 r.p.m. The stall is gentle and occurs at 45 to 50 m.p.h. depending on power-setting and load aboard.

The combination of tailwheel configuration and control stick instead of wheel make the Vagabond a pleasure to fly, and, coupled with its economy of operation, a most suitable aircraft for private ownership.

EAA of SA CONTACT!

CROSSWORD 02

This crossword uses common terms and references in the SA recreational aviation industry. EAA = EAA of South Africa



CROSSWORD CLUES

Clues

Down

- 1 where was the EAA Convention hosted in 2016
- 2 organisation made up of a group of peer volunteers who offer a confidential and compassionate support network to South African aviation licence holders
- 3 who is Pookie
- 4 for safety reasons, never land ...
- 5 where did the 'Mystery P-51pilot' experience take place
- 6 where was EAA AirVenture Oshkosh hosted in 1959
- 7 what telescope has been in Earth's orbit since April 1990
- 8 EAA support initiative proposed corona emergency assistance plan
- 10 'If you have time to spare, go by Mac Air' written by...
- 14 what is the EAA incentive scheme called
- 16 the first president of EAA of Southern Africa
- 19 abbreviated term for local aviation governing body
- 23 Neil Upfolds aircraft included in a recent issue of CONTACT!
- 24 essential item in your survival kit
- 26 what aircraft brand does The Airplane Factory manufacture
- 27 what aircraft celebrated it's 80th birthday on 3 May 2020

Clues

Across

- 9 what static display aircraft was donated to Pretoria Boys High by EAA Chapter 322
- 11 what national EAA executive role does Mark Clulow fill
- 12 what aircraft appears alongside ZU-ALO in CONTACT! May 2020
- 13 NASA program that aims to return astronauts to the Moon
- 15 A South African aviation navigation software company
- 17 who is our greatest helper in all things 'aviation search and rescue'
- 18 the aircraft that appeared on the cover of CONTACT! October 2016
- 20 where is the EAA Auditorium located
- 21 the home of EAA chapter 1502
- 22 which EAA 322 members owns a shiny silver and green C170
- 25 immediate past chairman of EAA 1502
- 28 what was the first EAA of Southern Africa newsletter called

CROSSWORD 02



PRIZE SPONSORED BY AVIATION DIRECT

The winner will receive a copy of Airfields Directory of Southern Africa AND your choice of an annual subscription of either Easy Plan or Easy Cockpit. Prize is not transferrable . Total value of this prize is R2150.00

Rules :

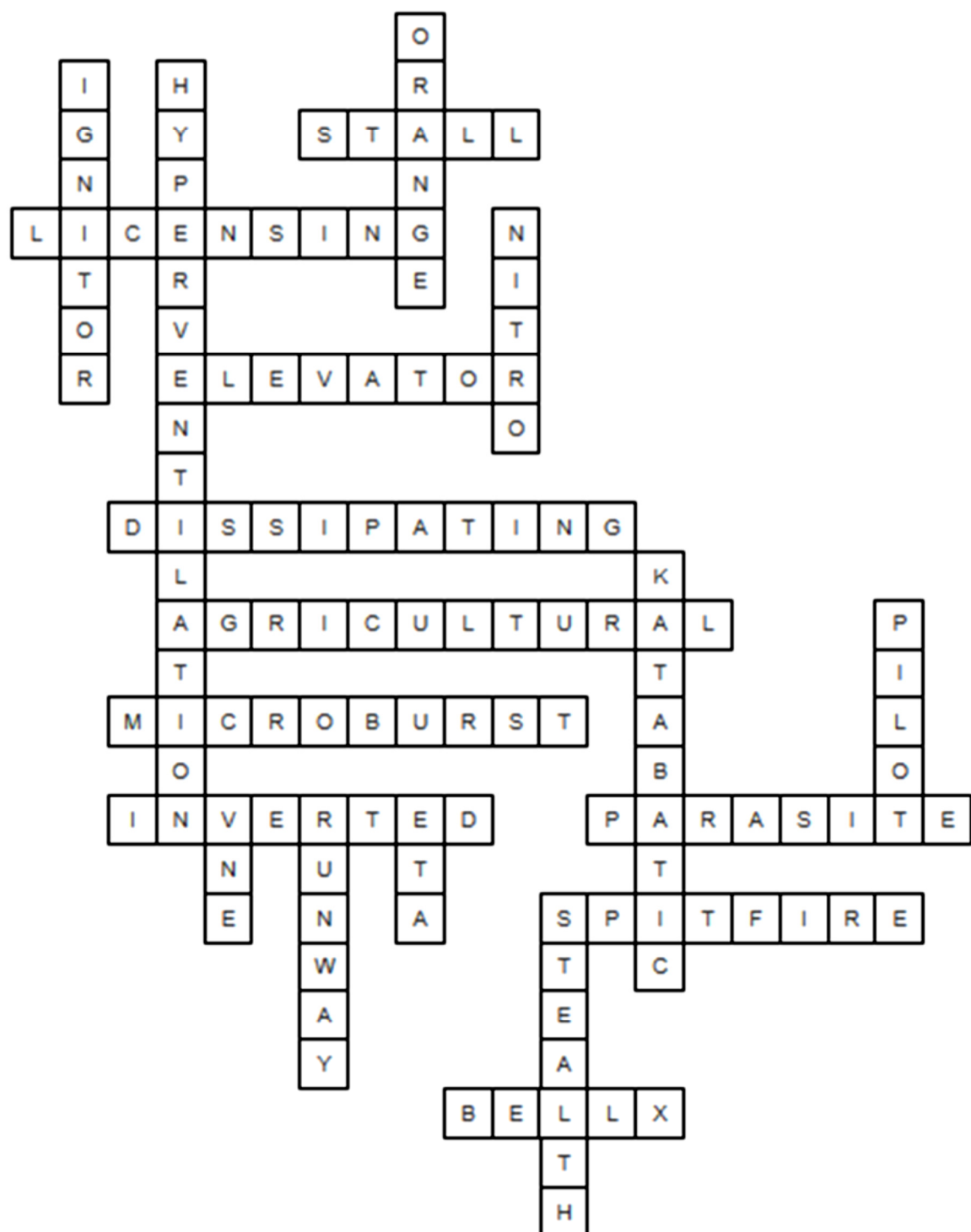
- In addition to the completed crossword, one of the answers is missing 2 digits. Please complete the "missing numbers" at the bottom of the crossword.
- Please submit your entry by reply email to rsvp@eaa.org.za before 20 July 2020 together with the added answer.
- The first correct entry received on email will be awarded the prize.
- The winner will be announced in the July2020 issue of CONTACT!
- No negotiations will be entered into for accuracy of the answers
- This prize is not transferable



ENTER AND EARN MACH POINTS

For members efforts in participating, entrants will be awarded 0.5 points and the Winner will be awarded 1 point.

CROSSWORD 01 Answers



TAILDRAGGERS

Taildraggers to Warmbaths 2020 EAA and Bela Bela Falcons

What to do with this Lockdown and how to plan around it?

The date was set for 10 to 12 July 2020 then came along this monster called Covert 19. what a spoil sport that changed the politics, economy and a lot of people's lifestyle and livelihood.

The Bela Bela Falcons Flying Club decided that we will carry on with the planning and preparations for the Fly in.

As no event of such magnitude has ever been hosted by the Flying Club and / or at Warmbaths airfield, a complete layout design had to be done. During 2019 the runway was repaired at great expense by the flying club and one of the members, Paul Van Vuuren, of Andre de Kock auctioneers.

Although it was a patch job, it was a huge amount of money for a small flying club on the Platteland.

The limited facilities have always been maintained to a high level indicating the passion the members have for their facility and their hobby.

Ground movements must be possible without interfering with aircraft on the runway so a taxiway was needed. Pieter Roux jumped in and took responsibility for the grounds. Termite mounds and subterranean nests had to be fixed.

So now we have a 1200m taxiway with 4 intersections.

Parking along the runway is a bit of a pain due to the distance pilots have to walk to their aircraft and the hassle with parking alongside a taxiway was alleviated by having a parking lot.

Here you can camp under your wing and it is close to everything. Grass was planted and it is being watered to eliminate dust. I hope it will be good during the first event. VIP Aircraft have special parking in front of the clubhouse area.

Still to be done:

ATC tower has to be built. 3x3 platform about 4m High and with a roof and electrical power.

Kitchen facility for the washing of dishes and preparation of food.

Bar facility has to be fenced and VIP area with a view of the runway to be erected.

Cutlery and crockery have to be obtained.

We are looking forward and will continue preparing as if the event will take place.

What if:

Lockdown still affects. Well then we are prepared for 2021. Some money lost but the worst is the lack of income this year.

Lockdown limits the size of event. Then you will have to pre-book so that we can limit numbers.

2021 will be the big one then.

If anybody has any donations towards the club it will be appreciated.

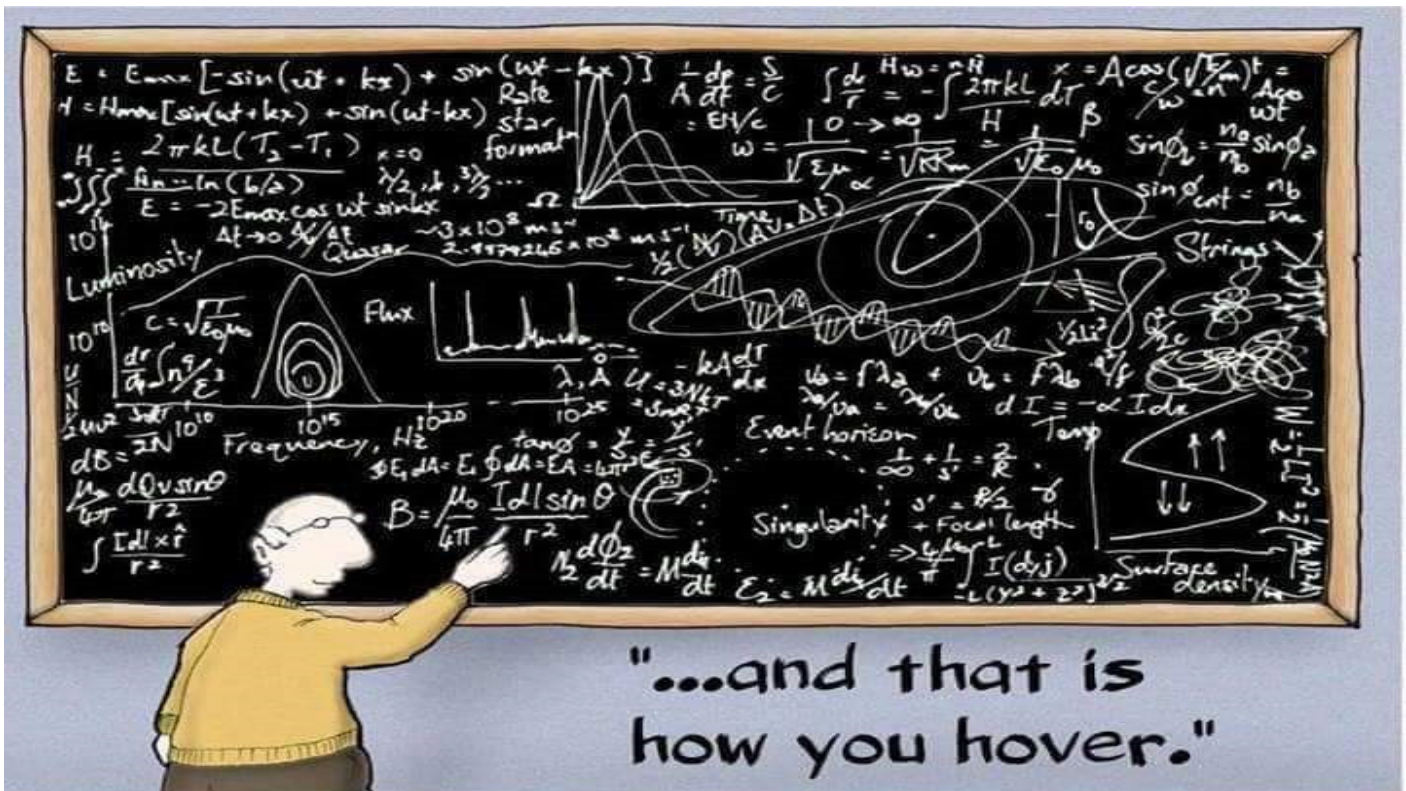
Hope to see you at FAWA EAA Taildraggers 2020

Richard Nicholson

Event Organiser

0824906227

AND FINALLY, JUST TO MAKE YOU SMILE



LAST WORD

Well, it's been 12 months and this is the 12th Newsletter since I agreed to edit 2 editions of CONTACT! whilst a suitable candidate was sought and established in the position.

It's been fun and I have learned a lot about a field I knew nothing about, but this is the last CONTACT! I will be compiling.

To the many people who have made it possible, I am eternally indebted. Your contributions have entertained and interested our members with aviation history, stories of experiences, build projects, technical advice, safety and humour, not to mention the supply of information relating to developments in Legislation around General Aviation in South Africa.

Your efforts to bring EAA news to the attention of our members is much appreciated.

With my limited aptitude in this field, CONTACT ! takes more time than I have available at the moment and I must hand the baton to someone else better placed to do it.

Neil Bowden has come to my rescue and CONTACT ! will be in his capable hands from July. He is no newcomer to Newsletters and I look forward to an exciting new chapter in this publication.

Thank you Neil. I really appreciate your jumping into the gap.

The AGM is upon us and this is an appropriate moment for me to withdraw from any responsibilities within EAA.

Thank you again for your support.

Fly safe (when we get to fly again)

Eugene Couzyn



www.eaa.org.za

Sean Cronin, President
President, EAA National
rsvp@eaa.org.za

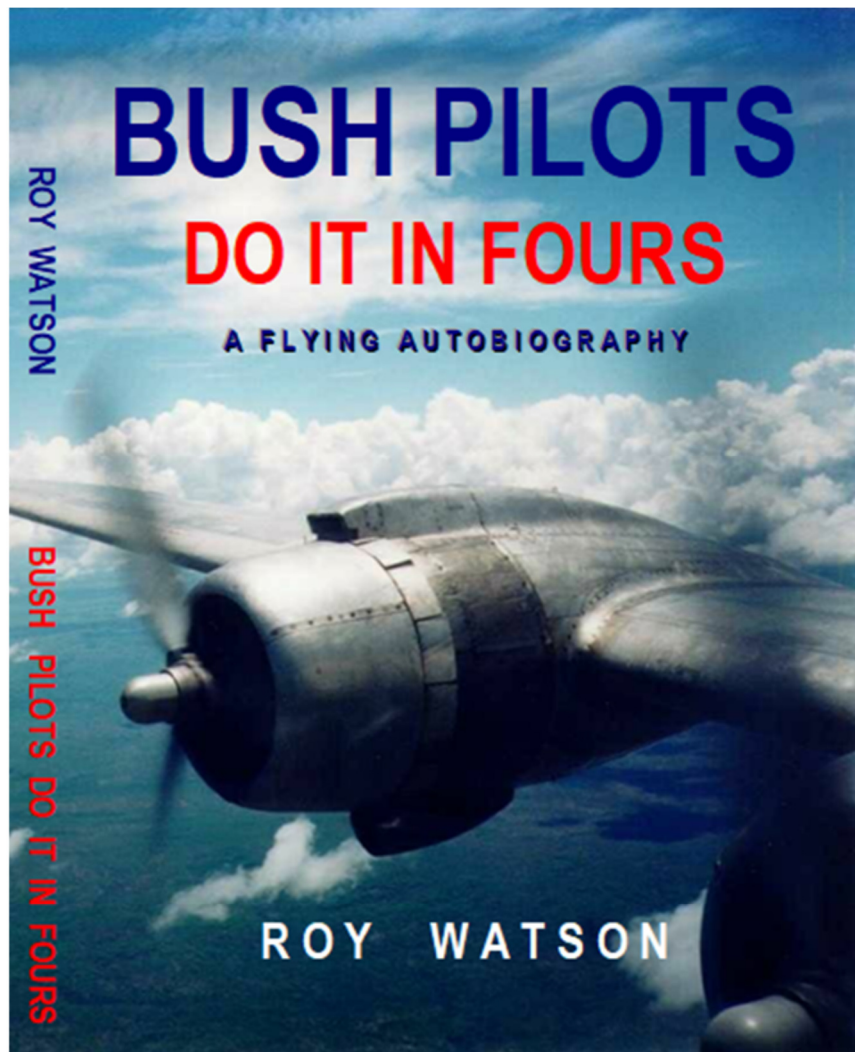
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SPECIAL FEATURES



Roy has written this book about his early years of flying. This book is available from Roy direct as follows:

Price : R160.00

Contact : arjay@iafrica.com / 011 7066924

Arrange collection or to meet or courier with Roy