…Contact!

September 2021

In this issue

- EAA activities
- Upcoming events
- Increasing Engine RPM, Dr Robert Clark
- The Lady goes GUCCI, Sean Cronin's Bearhawk
- Affordable flying, Part 103 aircraft
- EAA Market Place

President's Column

Paul Lastrucci

Greetings!

I reached a milestone this year by being a member of the EAA USA for thirty years and quite a lot longer than that an EAA 322 member. I have met many knowledgeable folk along the way that imparted a lot of fascinating technical information as well as learning to be safe when restoring/building or flying experimental and vintage aircraft.

It was really gratifying to see that the numbers at Oshkosh for 2021 were estimated to around 608 000 visitors, in a recent article, the EAA AirVenture organising team had a huge task on their hands to replicate over 50 years of conventions amidst a new set of totally unrelated circumstances.

The mandate for AirVenture this year must have been a priority to keep the vast population of flying enthusiasts safe in a time of a real pandemic and almost guess a situation of either a logistics decline due to lesser visit participation, or face a situation of sparse internal resources available, if they get the numbers wrong, needless to say a tight call in any organising teams books.

Through what I thought was a cleverly directed communication, the organisers came up earlier in the year with a theme of the "The Wait is Over" and it was widely communicated leading up to the convention, that was directed at mustering the aviation community, directed to best ensure that a huge contingent of the aviation community was ready to come to Oshkosh again and revel in the excitement that the world's largest aviation spectacle of like-minded enthusiasts have been able to take part in.

It quickly became The Wait was Worth it, as from what we could see here in South Africa in the virtual world as well as the fantastic overview that Charlie Becker EAA head of Chapters gave at the EAA 322 Zoom meeting in early August, there was joy and excitement throughout the grounds and it set the stage for the return of AirVenture, making everyone very excited for the future. More than 18.95 million people were reached by EAA's social media channels during Air Venture, with engagement of 1.08 million; EAA video clips during the event were viewed 3.48 million times.

More than 10,000 aircraft arrived at Wittman Regional Airport in Oshkosh and other airports in east-central Wisconsin. At Wittman alone, there were 16,378 aircraft operations in the 10-day period from July 22-31, which is an average of approximately 116 take-offs/landings per hour when the airport is open. It was the third time in Oshkosh history that the numbers surpassed the 600 000 attendance mark.

These are staggering numbers in a time where restrictions are everywhere, this just shows that The Wait is Over and we should be on track locally to resume our interactions as we knew them, albeit with some challenges.

By all accounts despite a few days of bad weather this year's 2021 Oshkosh Air Venture as always, was a roaring success.

Back home here we look forward to Spring and we are now full steam ahead with the planning for Sun n Fun 5 -7 November, we have seen an upswing in the breakfast Fly Ins, and there is a movie night coming up on the 17th and 18th of September at Silver Creek Gorge Airfield, so our activities are starting to resume again which is great.

Don't forget I love my RV which is taking place at Kitty Hawk. Our EAA members have also been invited to the Tiger Moths 90th birthday bash that is being held in Queenstown over the heritage day week-end in September.

This past month we held our EAA National committee meeting on the 24th August to take care of our planning and other regulatory requirements we need to expedite. Most of the advocacy requiring attention for the year is behind us now, and we can hopefully look forward to some fun flying events, building and restoring that

takes place amongst our valued members.
We are extremely proud to be members of this fraternity that continues to provide many an avenue to become involved in the passion for Flight and share the camaraderie that just seems to get stronger and stronger.
Please diarise the dates and come and join the events planned, the confined hiatus that has been the norm over the past 18 months is hopefully going to become a thing of the past.

Stay Safe
Paul

The Three Pillars of EAA

Paul Poberezny used to say that EAA is like a three-legged stool.
"It has an aviation component, or leg, a social component, or leg, and an education component, or leg. If any one leg of the stool is not in place, the stool falls over, and so does EAA," explained John Egan, EAA senior manager for Chapters and Young Eagles.
"For many years there has been an image of a stool that we've been using to promote this concept, and now we finally have an actual wooden stool of our own," John said. "We educate our chapter leaders on this subject matter, and we teach them that if they follow this rule, having an education, social, and aviation leg of their chapter, they will be successful."

These principles should always be borne in mind when making EAA decisions and when deciding content for our newsletters and gatherings. Chapter 322's and EAA SA activities address the three pillars in the following ways
We encourage our members to help us support all three pillars, whether it's contributing an article to Contact!, hosting a fly-in to your home airfield or arranging a pancake breakfast. These pillars are important to keeping EAA going and growing!
Aviation – Regular fly-ins and breakfasts at airfields around our membership area.
Social – our monthly gatherings, now Zoom, but also hopefully hybrid in the not too distant future. Fly-ins are also wonderful social events
Education – our monthly Safety talk at our gatherings and also regular educational articles in our newsletter.

EAA CHALLENGE!

We are looking for members to help us create an EAA 3-Legged Stool, unique to EAA South Africa and your local chapter. These stools will be taken to Oshkosh next year and be placed in the Blue Barn at AirVenture. Perhaps we can get other chapters from around the world to join our challenge!
EAA currently runs a challenge for chapters to build an Adirondack chair, perhaps the stool would be more practical for those chapters that cannot transport a big chair to Oshkosh? Volunteers needed!

Chapter 322 August Zoom Gathering

Our August gathering kicked off with an informal tribute to the late Bill Keil who passed away 5 years back. Bill was a legend in EAA, and his many stories and his colourful way with words will be long remembered by those that knew him.

Hugh Roderick "Bill" Keil
30 Nov 1929 - 23 July 2016

Bill's two sons, Andy and Nigel joined us for the memorial.

EAA President Paul Lastrucci then went on to present our gathering, starting with our mystery aircraft, a twin engine Corvair powered RV6. The aircraft was photographed at Oshkosh this year and unfortunately appeared in Charlie Becker's Oshkosh review during the gathering!

After covering all the usual 322 business, approval of minutes etc, we wished "Happy Birthday" to all our August birthday members, 22 in all!. Paul then touched on future EAA events which included the Brits Breakfast, Silver Creek Movie Night and Pancake Breakfast, Taildraggers and Sun 'n Fun at Brits in November.

Rob Brand then presented his monthly Safety talk, this month covering the dangers of scud running. In Karl's presentation, low flying and the risk of flying into powerlines was emphasised. Thank you Karl and Rob for two great presentations!

Our guest speaker was none other than Charlie Becker, EAA Director, Head of Chapters and EAA Communities. Charlie is the "face of EAA", being the presenter on the monthly Chapter Videos. Charlie was joined by EAA Museum Director, Chris Henry. Not only was it a great honour to have these two gentlemen give over their time to us, but it was also a very good recap of AirVenture 2021 that had just taken place. One thing that was very interesting was Charlie's comment that aircraft of the future will probably not look like the aircraft we know, referring to the Black Fly VTOL aircraft that flew at Oshkosh.

The BlackFly Opener displayed at Oshkosh

Many thanks to all who attended the gathering, we had around 50 in all, not only from all over South Africa, but also many in the USA!

Our next gathering will take place on the 1st September and features Oshkosh presenter Larry Bothe who will be sharing his 22 tips on how to make flying easy and affordable!

Chapter 1502 News

Good news from Chapter 1502 at Baynesfield Estate Airfield KZN, is that their second hangar is up and now completed. Owner is Kevin Cox, a long-time member of Chapter 1502. 4 more aeries about to join the field.

It also looks like we may have a 3rd hangar on its way as well!

Celebrate Spring! 17/18 September

Silver Creek Overnight Campout and Pancake breakfast

The immaculate green grass setting on the airfield and wild game roaming around made for a really unique event. Where else in the world could you find this combination, it certainly something not to be missed!

A great family fly-in, fly-in or drive-in, just make sure you join Chapter 322 and our hosts, the Silver Creek Gorge Aviators

Those of you who attended last year's Silver Creek Pancake Breakfast will remember what a wonderful event this was. Those of you who did not attend need to come and witness the hospitality of these folk yourself!

The event will begin Friday 17th September with an overnight campout on the airfield and an outdoor aviation movie, braai and party. After a long and cold winter, what could be better than to enjoy the outdoors in a beautiful surrounding such as this!

Saturday morning sees a repeat of last year's Pancake Breakfast. These guys took our pancake breakfasts to a new level, with a hired machine to churn out the pancakes and fillings you won't find even in the best restaurants!

To help us plan catering and facilities, please RSVP us at contact.eaasa@gmail.com.

We need to know numbers for camping and numbers for breakfast!

AMERICA'S

Early Transcontinental Airmail Beacon System

Submitted by Alan Stewart

When I first read about this I was immediately intrigued and I have spent way too much time researching these arrows.
Below extract from How stuff works and Wikipedia, enjoy the read this is really fascinating.

Dotted across the American landscape in rugged, isolated places huge, mysterious concrete arrows lie like forgotten monuments against a pallet of sagebrush and sand, or on high hills against a backdrop of snow-capped mountains.
These giant cracked and edge-worn arrows do point toward history: They're the last vestiges of America's early transcontinental airmail beacon system – literally a highway of light – that guided early 1920s airmail pilots, in the days before radar and ground-to-air radio, safely to their destinations as they made night flights from coast to coast.
Nearly one hundred years before satellites, Siri and GPS made ace navigators out of even the most directionally challenged among us, pilots back in the day had to rely on their compass and terrestrial landmarks like mountains, lakes, rivers and railroad tracks to guide the way. Because their open cockpit biplanes had no lights and landing fields weren't illuminated, they could only fly by day, or risk almost certain death.
Consequently, early transcontinental airmail delivery was a hybrid situation that involved leapfrogging the mail around the country by air in the daytime and delivering it to trains that rumbled by night. Using this system, a letter zipping along as fast as possible in 1922 could take up to 83 hours to make it from New York to San Francisco. By 1926, however, when the lighted airway was in place, a letter could be delivered from New York to San Francisco in just 33 hours thanks to the advent of the beacon system. And yet, being a postman of the skies was still a dangerous and potentially deadly job: Of the some 230 men who flew for the Post Office Department (the predecessor of the United States Postal Service) between 1918 and 1927, 32 died in crashes – six in the first week of operation alone.

Ground-based Visual Navigation

In 1924, Congress approved funding for the U.S. Postal Service to build a ground-based visual navigation system. Under the direction of the Postal Service, the Airways Division of the Lighthouse Bureau created beacon stations with concrete arrows. In 1926, oversight passed to the new Aeronautics Branch. Here's how it worked: A series of horizontal 50 to 70-foot (15 to 21-meters) long concrete arrows painted bright chrome yellow were spaced approximately 10 miles (17 kilometres) apart.
At the centre of each giant arrow stood a 51-foot (16-meter) steel beacon tower topped with two rotating lights estimated at between 1.25 and 5 million candlepower which, in clear weather, could be seen by pilots for 10 to 40 miles (17 to 64

kilometres). Beneath the rotating lights, two course lights pointed forward and backward along the arrow – flashing a code which identified the beacon's number. Where no electricity was available, a generator shed, located at the tail end of the arrow, fuelled the acetylene gas-powered lights. The site number was painted on one side of the shed's roof and the airway on the other side. Each giant yellow arrow pointed to the next giant arrow in a system of sequentially numbered beacon stations that guided pilots safely along their routes.

By 1933, some 1,500 towers and beacons marked about 18,000 miles (29,000 kilometres) of varying routes across the nation.
Throughout the 1930s, advanced navigation and radio technologies replaced the visual land-based system and the high cost of operating the arrow and beacon system during the Great Depression finally rendered it outmoded and obsolete – although a handful of beacons continued to operate at minimum capacity into the 1940s. Once the program was defunded, the Department of Commerce decommissioned and deconstructed most of the towers for the badly needed steel that was in short supply during World War II, leaving a cross-country trail of big, lonesome, bright yellow concrete arrows to weather and fade for nearly a century out of context.
There is a group of enthusiasts that record and hunt these arrows - visit their Facebook page.
https://www.facebook.com/pg/Concrete-Arrows-and-Beacons-631104776971012/posts/

Today

Ninety years later, most of the towers have been dismantled. Many of the sites are long gone, victims of war, infrastructure growth, and aggressive private developers. During World War II, numerous concrete arrows were destroyed as well – so as to not help enemy pilots visually navigate the country.
Still, hundreds of the arrows remain. But today they lack the bright yellow paint, and the cracks in the concrete worsen with each winter freeze. Arrows on top of mountains are safe for now, but several along the highways have already been lost to redevelopment.

Sun 'n Fun Groblersdal September 1999 and right, Piet Retief 2021

CEX Change

From Z WKK to ZS CEX to ZU ITO

Late November 1998 I headed off to work feeling somewhat depressed. I had just sold my Pietenpol ZS VJA and was suffering seller's remorse. For the first time since I had bought my own aircraft in 1981, I had nothing to fly and wondered if this would be the end of my flying days.

Sitting down at my desk, I noticed a pile of post that had to be opened – these were the days when e-mail was only starting and most of our correspondence was still "Snail Mail"!

One envelope that caught my attention was a large white CV envelope with a Zimbabwe stamp. "Why would I be getting post from Zim?" I asked myself.

In the envelope was a 4 page photostatted news letter from The Harare Flying Club", a club that I was not even aware of its existence and a news letter I had never seen before, and in fact never seen again!

A small advert on the back page caught my eye – Piper Tripacer for sale. Zim $ 300 000 with a postal address in Banket, Zimbabwe. Conversion rate was at the time 6Z$ to the rand, a quick calculation showed it was below market price here in South Africa. A letter was popped in the post that morning and I wondered if I would hear from the seller?

About 2 weeks later my wife asked me if I had heard anything on the aircraft. "it was probably too good to be true" I replied.

I remember the call well from the owner. It was the 16th of December, a public holiday in South Africa. I was enjoying a day with family at the Hartbeespoort Dam when the phone rang. The owner wanted to know if I was still keen on buying the aircraft. I replied I was, but could only get up to Harare on Saturday morning. I did not want to travel up there and find its sold, so he gave me his word that I would have first option.

Ant Harris and Mark Couzyn, two friends I regularly flew with were keen to come into the deal with me, so it was arranged that I would fly to Harare and check out the plane. The owner also agreed to fly it into Harare International to make things easier for me.

The British Airways flight out of O R Tambo was badly delayed. On arrival in Harare, I thought I would have good hour to check out the plane, as I was catching the return flight home. I informed the cabin crew that I needed to view an aircraft on the airport and was told "you'd better hurry, because of the delay in Johannesburg, we are turning this flight around straight away".

Running to the arrivals hall, I found the owner waiting for me. We ran together across to the TriPacer. All I hade time to do was a quick look in the cabin, I asked him if it had an engine, to which he replied " I flew it here!". That was good enough for me. I handed him an envelope of money for a deposit, said I would be in contact with him on Monday morning, and dashed back to the plane which was about to close its doors.

Late December is not a good time to do business. We had to arrange for funds to be transferred to the owner's account. Our seller was quite anxious to get the deal done, he told me he needed the money to keep his tobacco farm going. I had to tell him that we would probably only conclude the deal when business gets back in January. I often wonder how things went for him and his farm – was he one of the lucky ones that escaped the farm invasions?

Came January things went pretty smoothly. The transfer was done, the plane de-registered in Zimbabwe (with a bit of money changing hands to expedite the process), and before we knew it, we were ready to collect our new aircraft. The Zim

dollar had slid against the Rand and the price in Rand terms was quite reduced from when we had started the process.

Kenny MacIver, a friend of ours, offered to fly us up to Charles Prince in his Seneca. Ken was instrument rated so weather on the 9th January 1999 was not a problem. We remained on top of cloud all the way, only clearing about 50 miles south of Harare.

On the way to our hotel we asked the taxi driver if he could take us to a steakhouse for lunch. We felt like millionaires with our powerful rand and requested that he waits for us to eat before we head to the hotel. "I can" he replied, "but will have to keep the meter running". No problem, we ate well and spoilt ourselves with a few extra beers! The taxi fare and tip seemed like nothing, we now knew what it's like to be an American spending dollars in South Africa!

Next day we met the owner at Charles Prince. The deal would be that I do a few circuits in Z WYY with an instructor as I had not flown a TriPacer before, and then we would drop off the owner at his farm strip, return to Charles Prince and then head back to Johannesburg.

I felt sorry for the owner, we dropped him off, taxied back to the threshold and took off. As we flew down the runway I watched him walking back to his house, he did not even stop of look up at us as we departed. This had been his baby for the past 20 years!

Ant Harris and myself climbed in the TriPacer, Ken and Mark took the Seneca back. We had to head to Bulawayo for fuel. The flight there could only be described as "scud running" and the radio hardly worked. In Bulawayo we refueled, filling also the auxiliary tank under the back seat. We weren't sure if the system was working, a pump would transfer the fuel from this tank to the right main in the wing. We had an idea it was working as we could hear the pump. However, we thought it would be better to file to Pietersburg (Polokwane) in case we had fuel issues.

Getting airborne out of Bulawayo was great, the weather had cleared and we had wonderful views of the Matopos Hills south of Bulawayo. About an hour out, we had burned off enough fuel to start the transfer from the auxiliary tank. We hit the switch and watched the gauge, slowly but surely the right tank filled. The system worked and we requested direct to Lanseria!

To our surprise, and without asking for it, the CAA gave Z WYY its original South African registration that it had when new – ZS CEX. We hangered the plane at Baragwanath and flew it in its tatty condition for about a year, before deciding to have it totally refurbed by Errol Ferreira in Bloemfontein. Besides the engine, it was a ground up rebuild. The airframe was totally stripped, X-rayed, painted and recovered. Numerous bullet holes and wasp nests were found in the airframe. The previous owner had flown missionary flights in the aircraft during the war there and I'm sure himself and the plane had many stories to tell! Upholstery was new leather and the paint scheme was original.

Back in Johannesburg, we had to meet some people for a meeting at Krugersdorp. We flew in from Bara in our shiny rebuilt plane to Jack Taylor and parked it in front near the restaurant. Getting back to the plane after our meeting was done, we noticed a small crowd of older men gathered around the aircraft. Our thought was that they were admiring the fine work done by Errol and his team in Bloem. We were wrong! "Where did this plane come from? We haven't seen it for over 20 years." It turned out that this was the first plane to ever land at Jack Taylor, flown in and owned by Jack himself to celebrate the opening of the aerodrome with its 650 meter graded strip. I couldn't help notice tears in one or two of those old guys eyes!

Not long after that we parted with ZS CEX when we were made an offer we could not understand. It was a great surprise when Eugene Couzyn sent me photos of the aircraft repainted and with a new ZU registration in Piet Retief. Eugene was unaware that we were previous owners of the aircraft – thank you for that Eugene and hopefully we will see the ZU ITO soon at one of our fly-ins!

DIY Adjustable Rib Centrelines Marking Tool

By Dan Vance & KitPlanes Weekly

As a new builder (of a Panther), I came quickly to the step of needing to mark rib centrelines to align the ribs with the predrilled holes in the skin. Reading ahead in my manual, I saw that I would also need to mark some flanges at a specific distance from their edges (not on centre). I wanted to come up with a marking method that was adjustable and that led to the simple DIY marker holder shown here.

As a quick side, I know there are commercially available tools that do a similar task, but I like mine because it rests flat on the work table, so it's very secure. I made this to fit Sharpie Ultra Fine Point markers, which seem to be the most popular, but you can change the holder dimensions to fit your preferred marker.

Marker Holder

Cut the aluminium rod to length and deburr/finish the ends as needed. Drill the 0.422-inch (27/64) hole through the rod as shown. Then drill the 0.437-inch (7/16) only partway through (about three-fourths of the way). This stepped hole will give a nice repeatable "stop" for the marker. Drill a 0.106 (#29) hole through the centre of the rod, into the larger hole, and tap this hole for a #6-32 screw.

Clamping Block

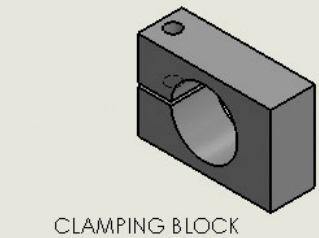
Cut the acetyl plate to 1.5×1.0 inches. Deburr and finish surfaces as desired. Drill the 3/4-inch hole through the face of the block. Then drill the hole for the locking screw as shown: First drill 0.136 (#29) through, then drill the screw clearance hole (0.166, #19) halfway through the block. Tap the hole #8-32. Note that this hole is drilled before cutting the slot, which keeps the block stable for drilling and tapping. Now cut the slot (hacksaw or bandsaw) at the midpoint of the block as shown.

Press the rod into the hole in the block. (If the fit is too tight, install the #8-32 screw and tighten just enough to close the saw gap slightly, then redrill the 3/4-inch hole.) Insert the marker "tail-first" into the larger hole in the rod. Lock it in place with the #6-32 screw. Be careful not to overtighten as this could crack the marker.

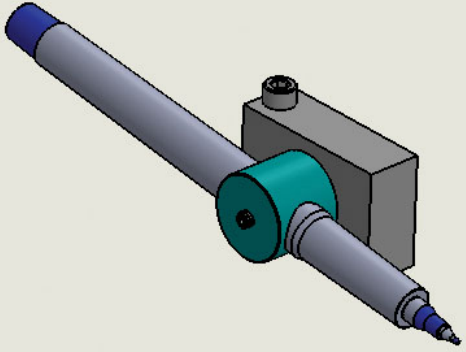
In Use

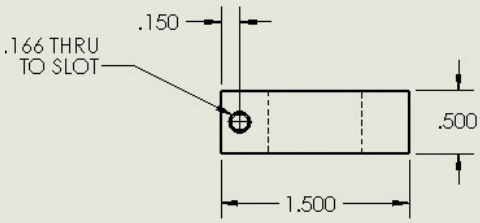
Use a ruler or machinist's square to set the tip of the marker to the correct height by rotating the rod. Once set, tighten the #8-32 screw to lock the position. To get a little fancier, press a thumbscrew cap on the head of the clamp screw.

To use, you can either keep the holder stationary on a flat surface and drag the rib along the tip of the pen, or, hold the rib stationary on the flat surface and drag the pen around the rib. Note that you can leave the marker in the holder and still put the cap back on, so it doesn't dry out. Besides the advantage of adjustability, this technique also eliminates having to compensate for the pen-tip width that would be needed using a straightedge.

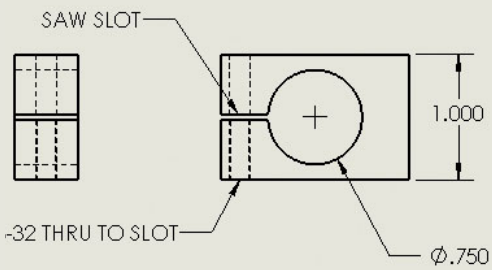


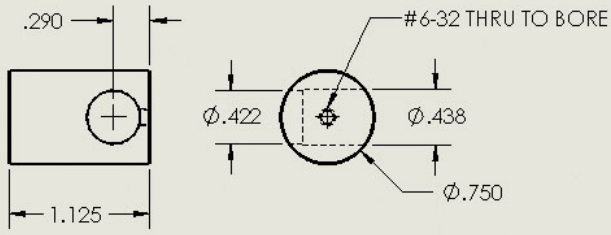
CLAMPING BLOCK





MARKER HOLDER





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Shopping List

- **1/2-inch-thick acetyl (Delrin or Nylon) plate, 1.5×1.0 (38 x 25 mm)**
- **3/4-inch-diameter aluminium rod, 1-1/8 inches long**
- **#8-32 x 3/4-inch socket-head cap screw**
- **#6-32 x 1/4-inch screw (any head)**

Calendar of EAA Events

Wednesday 1st September
EAA Chapter 322 Monthly Meeting Zoom
Join Zoom Meeting
https://us02web.zoom.us/j/86900765391?pwd=RGMzZkdIWGIzaS80WGpHbWtwbktpQT09

Friday / Saturday 17th & 18th September 2021
Movie Night & Pancake Breakfast (Overnight Camping) Silver Creek Airfield

Wednesday 6th October
EAA Chapter 322 Monthly Meeting Zoom or Face to Face depending on Covid situation!

Friday to Sunday 8th to 10th October
Taildraggers at Bela Bela

Friday to Sunday 5th to 7th November
Sun 'n Fun Weekend Fly-in Brits Airfield

Congratulations to Arnie Quast, President EAA Chapter 932 and regular visitor to our zoom gatherings! Arnie has just finished his B 787 type rating in Denver Colorado.

United Airlines use the 787 on their new Newark Johannesburg route. It's likely we will see Arnie here in Johannesburg in the not too distant future.

Well-done Arnie and we at 322 wish you all the best in your exciting new future!

Breakfast at Brits

Informal Breakfast Fly-out to Brits

Karl Jensen

In the annals of EAA USA, it is often mentioned that 'pancake breakfasts' and informal fly-outs to meet up with pals, are a perk of our wonderful association. We have been rather hog-tied for flying activity with the cursed Covid invasion, which sadly is not retreating as we might've expected.

William (Mooselet) Woods, Barbara Frieboese, Moose

Some of us tried to put together a fly-out to ever popular Brits Flying Club for a breakfast on Saturday 14 August after the bracing cold and

Andrea Antel, Ed Des Champs, Gavin Harrison, Nigel Musgrave.

expected high winds at the beginning of August. During the week prior to that Saturday, I had flown around locally on 3 separate days and encountered most unpleasant turbulence. When flying purely for pleasure, why subject yourself to uncomfortable flying? We decided to postpone the Brits visit for a week to 21 August.

The Saturday broke with low cloud and poor visibility. My aerie lives in my happy Pilot Cave at the Fly Inn Estate. My guest was to be Neil Fenton (EAA 322) and Nigel Musgrave (EAA 322 Member and our Safety Officer) who was to be collected at Kitty Hawk for the fun excursion. It is a 47Km drive from my home to my happy hangar. Departing

EAA National President Paul Lastrucci and Irene Naude

home, the weather was broken cloud with light north westerly winds and as I got nearer to Fly Inn, the weather markedly deteriorated. We waited for an improvement for about an hour and determined that it would not be a good idea to fly directly to Brits with poor visibility and low cloud towards the west. Weather at Kitty Hawk was fine and with clearance from ever co-operative Waterkloof ATC, we took off with about a 600' cloud base which soon cleared on the short hop to Kitty Hawk, landed there and Nigel joined us.

Pilot Cave at Brits

Waterkloof permitted us to fly through their CTR to the north of the Pretoria CBD and south of the Magaliesberg remaining in sight of the ground. The flight was not ideal but hopefully very interesting for my pals. Passing over Pretoria where I grew up, I could give a Cooks Tour commentary. When clear of the WKF CTR, we crossed the Magaliesberg with the weather wide open for the rest of the way to Brits.

I was initially disappointed at the poor turn-out at Brits, but on reflection, it was commendable that many of our members from other Gauteng

The Badass, but beautifully built Bearhawk

airfields chose not to venture out in the poor weather. Conditions improved only much later in the day. We preach SAFETY at EAA and this display of diligence by our members deserves this mention. Thomas Morell, an 18th century scholar wrote "The first great gift we can bestow on others is a good example." Well-done Chaps and Chapesses!

Anton von Willich's immaculate Gazelle

Hans Schwebel past chairman Brits FC and Aero Club Board Member

Bearhawk Patrol built by the late Wayne Giles and completed at TAM

Sean Cronin's Bat Hawk and William Woods J5

Moose Woods with his Wayne Giles' prototype Bearhawk Patrol.

Zenith 750 ZU TEL

Brits FC Chairman and EAA 322 Member Roel Jansen

Super Cub that Gavin Harrison acquired in Tripoli while delivering a DC9 for 1time Airline. The Super Cub original bill of sale was to Osama Bin Laden who had a road construction company in North Africa

Ed Des Champs RV10 and Rod Tink's Zim registered Carbon Cub

Increasing Engine RPM

by Dr Robert Clark

Have you ever heard the saying *"Fly it like you stole it".* Let me explain.

Besides the enormous privilege of flying an aircraft, I love going to an airfield to watch aircraft land and take off. Kitty Hawk airfield, on the eastern side of Pretoria is always a great venue, especially in the summer. My wife and I sit there, have a great breakfast and watch aircraft. The afternoons are also great at Kitty Hawk; we normally have a strawberry milkshake whilst listening to the chatter of pilots and their families.

It is during these experiences that I have noticed there are two very distinct ways of advancing the throttle, once the aircraft is lined-up on the runway;

The first way is *"Fly it like you stole it".* This is when the Pilot in Command opts for the option of ramming open the throttle, and get to maximum power as quickly as possible.

The second way is when the Pilot in Command opts for a nice smooth transition, from idle to full throttle in about three or four seconds.

Which one is correct, or, are they both correct? Aircraft carburetors need to be at wide-open throttle (WOT) to develop full power, which is a requirement for take-off in the shortest possible time. As there is only a finite amount of runway at an airfield, pilots, as part of their take-off checks, ensure the engine is developing full power during the take-off sequence.

The carburettor is the device that mixes the air and fuel in the correct ratio (normally 14.7 to 1) for combustion to take place in an internal combustion engine. The term "wide-open throttle" in an internal combustion engine is when the butterfly valve within the carburettor is at the fully open position, allowing the maximum intake of air and fuel into the engine. In the case of a car, it would be depressing the accelerator pedal to the floor, hence the term, "flooring it".

Carburetors on motor vehicles have a plunger that squirts fuel into the carburetor, in the event of a sudden opening movement of the butterfly valve. This added fuel prevents a lean mixture cut of the engine. Car engine carburetors are advanced pieces of technology. They ensure the correct air / fuel ratio at all times to deal with multiple transient differences in the throttle position. Take a five-minute drive to the shops in your car and think about how many different throttle positions your carburettor butterfly was at, in this short period of time.

The majority of aircraft engine carburetors are different in this regard, as the butterfly valve is essentially in a static, or quasi-static position for 95% of the flight. Aircraft engines are the pinnacle

of engineering design, for the 1950's. Not much has changed since then. As the carburetors on some aircraft do not have a plunger that squirts fuel into the carburettor during a rapid opening of the throttle, the possibility of a lean cut is always possible during a rapid dynamic shift of conditions through the carburettor. The sudden additional air into the engine could lean the mixture too far, and result in an engine splutter, or stoppage!

Opting for a rapid throttle transition can be harmful to your aircraft for the following reasons:

Have you ever rammed open the throttle on the runway and found yourself rapidly going to the left hand side of the runway. There is a good reason for that (actually four very good reasons for that). They are as follows:

Gyroscopic procession: A propeller is essentially a large spinning disc, which creates gyroscopic forces. Gyroscopic precession, in simple terms means that a force applied to a gyroscope is manifested 90 degrees in the direction of rotation. A slow opening of the throttle allows time for the pilot to perform a smooth transition to full power, whilst gradually applying rudder input to maintain the centerline of the runway. The gyroscopic procession would be very noticeable on a high-powered tail dragger, should the throttle be advanced too rapidly. You could lose directional control and explore parts of the airfield, normally restricted for lawnmowers.

P factor: The P factor is the asymmetrical thrust caused by the downward moving blade that generates more thrust than the upward moving blade. How is this possible? The downward sweeping blade is at a higher angle of attack than the blade moving in the upwards direction. With a higher angle of attack, the downward moving blade generates more lift (or thrust), which makes the aircraft yaw to the left.

Torque: Sir Isaac Newton's (1643 to 1727) third law of motion states that for every action, there is an equal and opposite reaction. Most modern aircraft have propellers that rotate clockwise, when viewed from the cockpit. The right turning propeller forces the left side of your aircraft downwards, thus, creating more drag on the left wheel.

Corkscrew action: The final reason for going to the left-hand side of the runway is the spiraling slipstream generated by the propeller. The corkscrew action of the air passing over the left hand side of the vertical stabilizer, and causes the plane to yaw left.

A smooth transition would always induce less wear and tear on the throttle cable, links and plungers. Less wear means improved reliability and less maintenance costs.

Some aircraft have a change in propeller pitch when the throttle is opened. A smooth opening of the throttle allows for a more refined control input to the propeller control mechanism.

Aircraft engines are antiquated machines. Any rapid throttle movement could result in an engine splutter, or, engine stall. Either of these situations would require your full attention.

Some aircraft engines have pendulum dampers on the crankshaft, patented in 1937. Dampers reduce torsional vibration and pulsations. Rapid throttle transients can overload the dampers and end up "de-tuning" them.

There will always be situations where a rapid transition to WOT will be required, like a short field take-off, or, when the stall warning is screaming in your ears and asking you to take immediate action. Failure to take appropriate action will change stalling into expensive falling; and that is something all pilots want to avoid!!!

If you do not accelerate rapidly in your car every time you pull away from a stop street, why would you treat your aircraft engine any different. Even if you are flying a rental aircraft, there is merit in respecting the engine and avoiding a rapid transition from idle to WOT. *"Fly it like you stole it"* could be fun, but it could also be detrimental to you and your aircraft, should you have a lean mixture engine cut, with insufficient altitude to recover.

There is never any good that comes from abuse! Smooth power transitions is something your passengers, wallet and aircraft engine will appreciate.

EAA 322 Monthly Meeting

Time Sep 1 2021 06:00 PM Johannesburg

Join Zoom Meeting

https://us02web.zoom.us/j/86900765391?pwd=RGMzZkdlWGlzaS80WGpHbWtwbktpQT09

Meeting ID: 869 0076 5391
Passcode: EAA322

The Bear goes GUCCI

Sean Cronin's amazing scratch-built Bear Hawk project

The exciting time has arrived....Dressing the lady.

The interesting part is continually thinking 5 steps ahead. When the dress is on.....you're done trying to get to anything. Taking loads of pictures and double checking myself. Pete Lastrucci is doing the inspections and this will help him tremendously.

I started with the belly of the plane. Covered from just in front of the pilots seat to the start of the tailwheel. Making sure the fabric was wrapped 75% around the fuselage frame. Next was making sure every aluminium panel was secured with no sharp points protruding. We laid the fuzz on its left side and laid the fabric on top to rough cut the form. The RH and LH side is covered in full from the Vertical stab to the bottom fuzz frame. Fits perfectly on the roll of fabric. The gluing takes a bit of time but like anything....just keep chewing away.

The reason for covering the RH side first is that the vertical stab has a 19mm offset to the port side. This to reduce aerodynamic sideslip and increase stability. This means the fabric has quite an angle to cover. I have got this right thank goodness.

Tomorrow will be the start of the LH side.

That's my story for now!

Sean Cronin


CHAPTER 322
PILOT
CAVE


GLUTEK


GLUTEK

SILVER CREEK

Pancake Day

& Movie Night Weekend

17 & 18 September '21

Friday: Camp Over & Movie
Saturday: Pancake Day Festivities

Frequency: 124.80 | Runways: 08 - 26
Elevation: 4,300 | All Circuits - South
Be aware of animals on runway

SUN 'N FUN
EAA
Brits 2021

EAA's Sun 'n Fun Weekend

Please join us for a weekend of flying, camaraderie and fun!

Brits Airfield Friday 5th to Sunday 7th November 2021

Camping – Book a tent or bring your own
B'B's in town near the airfield
Flying Competitions
Aircraft Judging
Look out for further details!
Neil 084 674 5674 or contact.eaasa@gmail.com

African Pilot Serious about flying
Flightline Weekly
PILOT'S POST
ONLINE AVIATION MAGAZINE IN SOUTH AFRICA
WWW.PILOTSPOST.COM

Recommended "Hang-out"

Brakpan Aero Club

The restrictions may have been lifted but the weather has kept us on the ground for much of August. Spring is almost here and we can look forward to calmer winds as we ease into Summer. If you are heading out west, Brakpan Aero Club has a fabulous facility to stop over for coffee or breakfast.

The Clubhouse is open Tuesday to Thursday 10h00-17h00 and Friday-Sunday 08h00-14h00. Kitchen closes 30 minutes before closing time.

Breakfast is available from R30.00-R80.00 per person and lunches from R45.00 per person.

We have lots of EAA friends at this airfield. Please do drop in and enjoy the Clubhouse when you are in the area.

Joining Procedure

From the South – Visual Flight Rules (VFR)

- Enter the buffer zone at or below 6000' on FAJS QNH
- Call FAJS information on 119,5 MHz overhead ERGO slimes dam:S 26 21,1 E 028 19,9
- Call FABB traffic on 122,7
- Join overhead at or below 6000' turn East and join left hand downwind for runway 18 (remain South of the Benoni Brakpan railway line) or right hand downwind for runway 36
- **From the East**
  Enter the buffer zone at or below 6000' on FAJS QNH
- Call FAJS information on 119,5 MHz overhead Jan Smuts dam S 26 13,4 E 028 22,0
- Call FABB traffic on 122,7 If the runway in use can be determined by means of radio communication join left hand downwind for runway 18 (remain South of the Benoni Brakpan railway line) or right hand downwind for runway 36.
- If the runway in use can not be determined by means of radio communication then join overhead at or below 6000' to check the wind direction, turn back East immediately without going to the West of the airfield and join left hand downwind for runway 18 (remain South of the Benoni Brakpan railway line) or right hand downwind for runway 36.

Departure

- Squawk 2000 mode C
- Depart via Jan Smuts dam to the East or ERGO slimes dam to the South.
- Call FAJS information on 119,5 MHz once clear of the circuit.
- Remain at or below 6000' until clear of the buffer zone.
- Once clear of the buffer zone VFR go 125,4 MHz (Below FAJS TMA East) or on an IFR flight plan go 124,5 MHz (FAJS approach S&E

ICAO	FABB
C0-ORDS	-26.23946, 28.30218
FREQUENCY	Contact FAOR 119.50MHz inbound. FABB uncontrolled 122.7MHz. Johannesburg Special Rules East 125.4MHz
RUNWAY	18/36 1440 x 15m
ELEVATION	5300ft Based in FAOR CTR.
JOIN	700ft AGL (6000ft Alt). No circuits to West
Fuel	Yes

Weathercam

http://iweathar.co.za/cams/view_cam?s_id=747

Open for breakfast and lunch most week days (except Mondays) and weekends

Clubhouse Contact Patricia 066 044 6144

https://www.brakpanaeroclub.co.za/

Breakfast Fly-in

23 October 2021

Panorama Airfield

- **First 10 arrivals Free Breakfast**
- **Lucky draw (Introductory Flight)**

Runway Info

02/20 Grass 900m Recommended

Frequency 124,40

S26 19 40 E028 04 00

Helicopter General Flying Area

Listen out for Other Aircraft

Look out for Other Aircraft

Contact 083 702 3680 , info@jhbflying.co.za , www.tailwheel.co.za

Panorama Airfield

HOW TO CLEAN AIRPLANE WINDOWS

Posted by Cessna Owner Organization, submitted by Marie Reddy

When you clean your dusty, buggy, Plexiglas Cessna airplane windows, do you grab a paper towel, spray down your window with Windex, and wipe it down in big wide circles? Ouch!

If you have spent either the money, time, or both to install new windows in your airplane, nothing will be more worth your time and increase the longevity or your new (or old) windows than taking a minute to learn the basics on proper care

1. No Paper Towel

First off, never use any type of paper towel, no matter how soft — even tissue is extremely abrasive and will scratch aircraft windows. Always opt for a clean (preferably new) microfiber towel. These are often available in bulk for under $1 each if you do some searching. After they have been used on Plexiglas, they can be used for bugs on leading edges, and then finally to clean the belly, then thrown out. They are a minor expense and an invaluable insurance policy to protect your aircraft's finishes.

2. No Ammonia

Next, never use any type of household cleaners with ammonia as an ingredient (such as Windex). Ammonia can craze plastic and Plexiglas; always make sure any cleaner you use is Plexiglas safe, and preferably use aircraft windshield cleaner like Prist or Kleer to Land, available at most aircraft supply houses and FBOs.

3. No Circles

Also, never use a circular motion when wiping your windows. Always use a back-and-forth motion that aligns with the airflow over the surface. This will reduce scratches in multiple directions and reduce glare when flying into the sun.

4. Finish With Water

Finally, if your window is noticeably dusty, grab a hose and use copious amounts of water to rinse the dust and dirt off before using mechanical means to clean the window. Any particles that don't wash away in the water will be softened and release easier when you do take a cloth to the surface, thus reducing scratching.

THE GATHERING OF MOTHS

24 - 25 SEP 2021

QUEENSTOWN AIRFIELD | 09:00

· Vintage Aircraft · Model Aircraft · Vintage Cars & Tractors
· Food Stalls · Jumping Castle · Craft Stalls · Pub and more...
· EXPERIENCE FLIGHT - *have a flip around Komani.*

Queenstown Automobile Club

Queenstown Flying Club

ROUNDTABLE Queenstown No. 16

FOR MORE INFORMATION:

Giel: 082 555 4418
Mark: 082 921 2872

Queenstown Flying Club

COVID-19 COMPLIANCE IS COMPULSORY

SUBJECT TO COVID REGULATIONS

Bush Flying

For the adventurous ones

Some of the most exciting, yet challenging flying that I've had the opportunity to do (so far) has been in the 'bush,' or some version thereof. Searching for unmanned airfields, often not on the charts. Or pushing the carb heat to the wall in preparation for a *'chop and drop'* approach into a meandering river. It's always a matter of keeping the options open. You never know what might be waiting when the wheels, or floats hit the deck.

Sometimes it's ankle-deep sand, with mole mounds littering the strip. Or stones as big as golf balls threatening to strike a leading edge. Mole hills and cow patties with tall trees choking the strip. Or half sunken debris with completely crazy hooligans jetting down the river, playing chicken with your prop. Palms sweating and heart beating a little faster just recalling some of these flights.

And that's just the strips. Throw some terrain, bad weather or a herd of buffalo into the mix and things start to get real interesting. **Pushing the envelope** here is a fine line between immense focus or testing your skill and reckless stupidity. Which is usually the result of multiple mistakes lining up at the right time ending in the wrong result. They've even got a name for it, the Swiss cheese model of accident causation.

Flying in the bush is about thorough planning and always giving yourself an out.

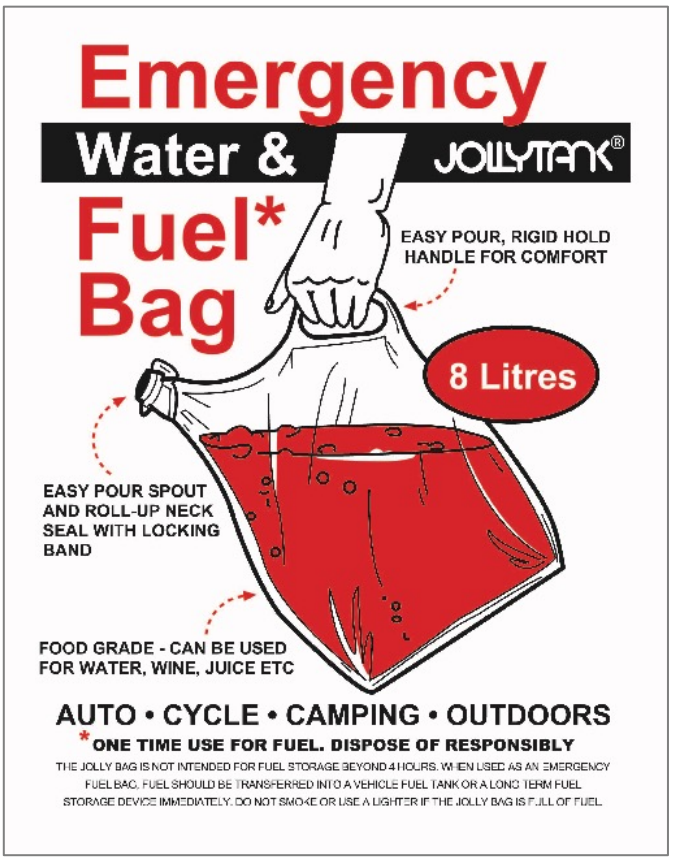
Even a little doubt, **remember the out.**

Member Services

This page is for the purpose of supporting our members who can offer a service related to aviation. If you would like to advertise please send your ad to contact.eaasa@gmail.com
Members only and "aviation" related!

HELP PREVENT PILES

Ant Harris imported a pile of these from Italy thinking they would "fly."
Useful for flights where fuel availability is unknown or unreliable for those using MOGAS. Each bag weighs 50g and is 100 x 100 x 5mm when empty. Holds 8litres. Has built in spout and handle - no pipes, tubes or funnels necessary for emptying.
Not meant for long distance liquid transportation, used primarily in an emergency.
Price R25 each or R200 for 10
Contact Ant Harris 072 380 6496



AIRCRAFT WANTED OR FOR SALE

Irene Naude has a number of interesting aircraft available. Please contact her for details
Irene 083 446 1393 974

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FLYING SERVICES

50% DISCOUNT FOR EAA MEMBERS!

Experienced Grade 2 ME IF Instructor
Whether for ab-initio or advanced training, Multi-engine or IF, I am available to assist you at half my normal rate.
Own or aircraft hire is possible.
Bush flying courses and flying safaris catered for.
Contact Tony Kent on 082 442 0866 for more information, or check out my website http://www.tonykentflying.co.za
or Facebook - Tony Kent Flying

AVIATION ART

My passion and love for the bush, wildlife and aviation have been with me since childhood.
I focus mainly on realism, and use art as my form of expression with these passions being my main subject focus.
Making people feel rather than think when looking at my artwork is what I strive for.
My passion for creating art, led me to my current profession in events and exhibitions. In my spare time I enjoy painting, drawing and building furniture
Dean Nicolau
Contact number 079 155 7462

Grassroots AVIATION

Affordable flying has always been a goal of EAA. Contact! will be featuring Part 103 aircraft as we see it as a way to bring youth into homebuilding and flying. This month we feature the Affordaplane

The following article reproduced from the Affordaplane website – Plans available $19.99! http://www.affordaplane.com/affordaplane-eagles-nest/

What is Part 103?

This part prescribes rules governing the operation of ultralight vehicles in the United States. For the purposes of this part, an ultralight vehicle is a vehicle that:

- Is used or intended to be used for manned operation in the air by a single occupant
- Is used or intended to be used for recreation or sport purposes only;
- Does not have any U.S. or foreign airworthiness certificate; and
- If unpowered, weighs less than 155 pounds;

If powered

- Weighs less than 254 pounds empty weight, excluding floats and safety devices which are intended for deployment in a potentially catastrophic situation;
- Has a fuel capacity not exceeding 5 U.S. gallons;
- Is not capable of more than 55 knots calibrated airspeed at full power in level flight; and
- Has a power-off stall speed which does not exceed 24 knots calibrated airspeed.

AFFORDAPLANE
THE AFFORDABLE AIRPLANE

Hi, I'm Dave Edwards. I designed and flew the Affordaplane ultralight airplane starting back in 1999, and my life's dream and mission has been to help people to fly. For over 20 years I have helped a whole lot of people build and fly their own airplanes. You are here probably because you want to fly, or are already flying and are looking for a safe, inexpensive airplane to explore the sky in. That is why I designed this aircraft.

I was a teenage airport kid back in the eighties when ultralights exploded on the aviation scene, and I was right in the middle of all that. To me, ultralights are the ultimate expression of freedom. You don't need a license to fly them, but you do need training. Give me a grass strip and a couple of bucks worth of gas, and I can go flying, any time I want. I don't need a radio, don't need an expensive transponder, and I do not need an annual inspection. I do all the inspecting myself. When you build it yourself it gives you invaluable

experience and confidence in the air that you just do not get by buying a completed airplane from someone else.

That's one big reason building an airplane is so appealing to people today. You know your aircraft. The other is money. You save a LOT of money when you do it yourself. And you can build as your budget allows. My airplane is all aluminium, and you can build a part then store it until you are ready for something else. It won't rust or rot. Speaking of money, Affordaplanes are a great investment and their value appreciates.

Most of the materials to build the A-Plane you buy locally. Nowadays you can get all your metal locally, even the windscreen came from Home Depot. Aircraft bolts you buy from an aircraft supply house. Your motor can come from many places, like eBay or Barnstormers.com. The fabric to cover the wings and tail come from Aircraft Spruce.

And the biggest 'secret' is that building an airplane like mine is easy. Really easy, like building a large model airplane. You just have to pay attention to details, and if you can follow a good set of plans, step by step, you've got it. Thousands of people since the Wright Brothers have done it, and you can too.

The A-Plane's fuselage is made of square aluminium tubing, with flat plate gussets bolted to them to hold it all together. I designed it this way for a number of reasons: One is that it's extremely strong but light. Gyrocopters have used this method for decades. Two is you can cut it with a chop saw or jigsaw, drill it and it is basically done. There is no welding involved at all with this airplane. You do not have to have welding equipment, and you never have to worry if your welds will hold. Plus everything is out in the open, there is nothing hidden that can cause problems. You don't even need to paint it.

I have helped many people build their fuselage in one single weekend, and that is unheard of in homebuilt aircraft construction. But that just shows how simple this airplane really is to build.

The wings and tail are made of round aluminium tubing, and is of the same type of construction as many other ultralight airplanes. They are covered with Dacron, shrunk with a clothes iron, and

painted with house paint. It looks great and holds

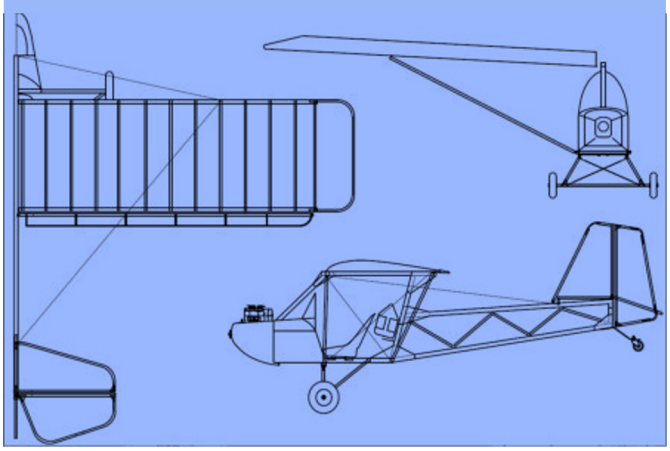
up for years. The airfoil used gives you the most performance out of 40 hp. The stall is gentle and straightforward. I designed full span ailerons for the wings. Crosswinds are no problem at all. She goes where you point her. And if there is one thing I am most proud of, it's how she flies. In a word: Great! All the pilots that have flown her say she is a very sweet flying airplane.

The Affordaplane is a solid, proven design that has been flying for over 20 years and has logged thousands of hours. If you build it as an FAR 103 legal ultralight, it comes out at 254 pounds. But many people now build it as a Light Sport Aircraft, because they can log hours in their logbook. So it's your choice.

The Affordaplane is a simple, fun airplane to build and fly. The construction plans are designed for beginner and expert alike, and contain everything you need to build this airplane. It's the input and feedback from my customers and friends who have made them as complete as they can be. And they are very inexpensive for what you get. Keep your flying dreams alive, they will never let you down. Have a great day. Blue skies!

Dave Edwards
Affordaplane Aircraft

Empty Weight: 254 pounds
Gross Weight: 540 pounds
Wing Span: 27.5 feet
Wing Area: 117 Sq. feet
Length 17 feet, 3 inches
Height: 5 feet
Fuel Capacity: 5 gallons
Engine: 35 to 40 hp
Stall: 27 mph
Cruise 65 mph
Vne: 85
Takeoff Roll: 150 feet
Landing Roll: 150 feet
Build Time: Approx. 250 hours



Tail-end tale

Lt Gordon Dyne

On Friday 28 May there was a 'Cash in Transit' heist just outside Brakpan airfield. I was given the following information by a bystander.

The van was rammed by a Mercedes and then armed men jumped from other cars armed with AK47s. The van was quickly blown up. How these guys do it so quickly I do not know. They are very professional. The van was utterly destroyed. The armed men grabbed what they could and fled off in other cars. A number of taxis stopped and the occupants leapt out and grabbed money floating about! The taxis then sped off!" One piece of debris hit a car parked outside the clubhouse - a distance of about 200 yards! A piece of armoured glass from the destroyed van's windscreen, about one foot square and weighing about 15 kilos, landed about 20 metres from my Mirage. About a hundred yards from the destroyed van. See pictures. Had it hit the Mirage it would have done considerable damage.

I had just turned my car into the airfield carpark when the explosion happened. I was lucky not to have arrived any earlier.

Welcome to Africa! Cry my beloved country!

EAA Market Place

For Sale, Wanted and For Hire

FOR SALE

Bendix magneto with harness - offers.
Lycoming flywheel with ring gear - offers.
3 inch Kollsman 150kt altimeter - offers.
Carb heat selector box for O-200, stainless steel - offers.

Contact Peter How 083 265 0581

FOR SALE

Ground Adjustable Eco Prop
R25k new...make an offer!

Dick Jacobs 082 441 4614

FOR SALE

New Flight Com Headset – offers?

Contact Geoff Sprenger 079 396 5304

WANTED

10 inch spinner for 2 blades.

Contact Peter How 083 265 0581

Condor D62/130Hp
R350k
Rebuild 2015. Franklin 130hp.

Contact Dicky 082 441 4614

EAA National

President	Paul Lastrucci
Vice President	David Toma
Treasurer	Mark Clulow
Secretary	**Keaton Perkins**

Committee Members

Membership	Mark Clulow
Young Eagles	Keaton Perkins
PRO	Karl Jensen
Website	Dean Fernandez
Newsletter	Neil Bowden
Safety Officer	Nigel Musgrave
Finance Asst	Brad Stephenson
AP Rep / Technical Officer	Peter Lastrucci & Andy Lawrence
Auditorium	Marie Reddy

EAA Chapter 322 Johannesburg

Virtual monthly gatherings until further notice 1st Wednesday of the month

Chairman	Neil Bowden
Vice-Chairman	Sean Cronin
Treasurer	Mark Clulow
Secretary	Geoff Sprenger
Shadow Treasurer	Brad Stephenson

EAA Chapter 1502 Durban

Chairman	Alan Lorimer
Vice-Chairman	Russell Smith
Treasurer	Robbie Els
Secretary	Mike Korck

Chapter 1262 East London

Meets last Saturday of the month Wings Park

Chairman :	Mike Wright
Vice-Chairman	James Wardle
Treasurer	Dave Hartmann

Chapter 870 Kroonstad

Chairman	Niel Terblanche
Secretary / Treasurer	Hennie Roets
Committee Members	Johan Mouton & Carl Visagie

Chapter 788 Port Elizabeth

Chairman	Brett Williams
Vice-Chairman	Russell Phillips
Treasurer	Deon Swanepoel