Brakes on, Throttle Set ...



...CONTACT!

October 2023



John Illsley's flight to Middelburg in his 1935 Aeronca C3

In this issue!

- Presidents Report
- EAA Chapter 322's October Gathering
- Silver Creek Pancake Day & Campover 2023
- Sun 'n Fun 2023, New Tempe All the Awards!
- To Middelburg and Back in a Two Pot Puddle Jumper by John Illsley
- A message from Holly and Bill, USA
- Machined Wheel Rims by Dr Robert Clark
- For Sale, Hire or Wanted









...CONTACT!

PRESIDENT'S COLUMN



Greetings!

As we head into the last quarter of 2023, in my last column I made mention of the Modernisation of Special Airworthiness Certification (MOSAIC) Notice for proposed rulemaking (NRPM) that is under review by the FAA in the USA. It was out for public comment and due to close on the 4th October 2023. The FAA has now granted a further 90 day extension and the new deadline for submitting comments is 22 January 2024.

The FAA granted this extension in response to a request by eight industry associations representing primarily the maintenance and repair communities.

These associations include the Aircraft Electronics Association, Aeronautical Repair Station Association, Aviation Suppliers Association, Aviation Technician Education Council, Helicopter Association International, International Air Response, Inc., Modification and Replacement Parts Association, and NATA (formerly known as the National Air Transportation Association).

EAA USA will utilize the additional time to coordinate relevant impacts with key industry stakeholders in the continued effort to understand the NPRM and provide support for the majority of the proposal while also offering alternatives in specific areas. The additional 90 days being added to the comment period during this time of potential disruptions in government and FAA operations will likely have little effect on the overall progress of the proposal. Recently, members of EAA USA Government Advocacy team provided an overview of the proposal as well as discussed a few areas for which EAA intends to provide comment via a webinar. I am watching this closely to see where we can add the advantages to our own local advocacy legislation and hopefully leverage to make flying a bit more affordable in these spheres locally.

Closer to home, the EAA Sun and Fun at New Tempe Bloemfontein has passed and there was mixed feelings in terms of attendance due to a few event clashes, however, the Bloemfontein Flying Club really have a splendid, well organised facility which has hosted many aviation events such as the PTAR and various other Nav rallies in the past. For those of us that attended, it was great fun as usual with a lot of hangar talk and rubbing shoulders with pals that share the same interest, it was done quaffing a host of liquid refreshments and great food as the wind was gusting many knots, rumour has it that in fact the wind was so strong, on an adjacent farm "there were chickens that laid the same egg three times", the only exception was the early morning and late afternoon flying during the day as the rest it was noticeably blustery.

The weather window was good however, the wind was one of the factors that did detract from having better numbers. And to all the exhibitors who go out of their way to showcase their products to our

members, many thanks! Also to all our members that made the effort to attend. A special thanks goes to Goitse Diale(board member AeCSA), an aviation enthusiast of dynamic proportions, who was present and jumped at the opportunity to host an impromptu tour of primary school children that were turned away from the main airport. Their principal made an impromptu request to us to "just take a look around our aircraft present". We could see there was huge enthusiasm bubbling amongst the assembled gathering, and we regaled and herded them around the shiny aircraft on the apron, something that they had never seen before, what a treat! I am sure a few seeds were planted amongst the very young who will one day experience the joys of flight.

Chapter 322 monthly gatherings at Rand Airport, since the change earlier this year from the Wednesday evening gatherings we had in the past to the Saturday morning format, has been hugely successful. Many thanks for the efforts of Chapter 322 Neil Bowden and team at the EAA auditorium. The October meeting was well attended that included a great safety topic, speaker Wouter Botes, author and host of the TV show Plane Wreck Hunters. Karl Jensen did a great presentations with spectacular visuals captured by his Go Pro on his unpainted and yet beloved Cessna 170 ZU VAL capturing the happenings at the Pancake Breakfast and RV Fly in in the last month, which is always very entertaining.

I had a great time flying across to Rand Airport from Krugersdorp Airfield early on Saturday morning with my brother Peter in his Tiger Moth, the weather was great for the early morning flight, and the vista of the area was spectacular en route and back again - this is what recreational flying is all about!

On 4th November 2023 Chapter 322 is hosting its AGM at the auditorium and we must bring in new blood into the Office Bearer positions of our prestigious fraternity of aviators.

As is commonly known the EAA is an organisation of people passionately committed to nurturing an environment in which innovation and the entrepreneurial spirit soars. The result is a powerful grassroots motivation capable of changing opinions, altering regulations, and building The Spirit of Aviation.

To continue to share this spirit with others and turn aviation dreams into reality, the EAA needs your participation. Whether volunteering time, giving services, the EAA offers many types of opportunities to those who share the vision to grow participation in aviation. Many members have been involved tirelessly for over 40 years at Chapter 322, so new blood, and with it new ideas and new energy are paramount.

Feel free to discuss any of the requirements with myself or any of the EAA Exco as we really need good representation to ensure continuity going forward. This is an urgent appeal from my side as the EAA National President, we are an ARO within our local regulations and this needs consistent support and reliable assistance to ensure we can grace the skies within the realms of the law besides all the fun stuff that takes place during the year.

Do it for a year, it goes by quickly, as they say in the athletic realm "Just DO it! " Get these nominations in to Neil Bowden as soon as possible. Remember the MACH draw in December - the lucky winner goes to the EAA Convention at Oshkosh. What a great initiative open to EAA members in South Africa.

In similarity to the wise words of JFK, It's not what the EAA can do for you; it's what you can do for the EAA! Is where I believe the success will prevail.

Chapter 322 October Gathering



A beautiful summer morning at the auditorium!



Warm summer weather, a good presenter and once again waived landing fees ensured that we had a good turnout for October's 322 gathering at Rand Airport.

The Saturday morning format now seems to have become the accepted norm, a big plus is that it gives members an opportunity to fly into the gathering – it was good to see Sean Cronin and Dean Nicolau fly in from Silver Creek in a Jabiru. Paul and Pete Lastrucci from Krugersdorp in a Tiger Moth, Francois Tollmay, also from Krugersdorp, in his newly acquired RV 7A, and Derek and Maureen Hopkins from Eagles Creek in an RV 8.



Sean and Dean from silver Creek



Pete and Paul Lastrucci from Krugersdorp



Also from Krugersdorp, Francois Tollmay



... and Derek and Maureen from Eagles Creek

Thanks to our usual and always "willing to help" chefs, Ronnie, Cherice and Coen, who arrived early to light the braai - delicious boerie rolls were served topped off with a tomato and onion sauce specially prepared by Coen.

A big thanks must go to Belinda, Ronell and Roger who also came in early to help with the set up and catering.



Some of the crowd – photo Athol Franz



EAA merchandise - Ronell "mans" the table

A new introduction to our gathering was a mechanical squeezer, brought in from Türkiye, giving our members an opportunity to enjoy a freshly squeezed, healthy orange juice!

The Gathering kicked off slightly early, just before 9, with the usual 322 business. 36 members birthdays are being celebrated this month! Future events included next month's AGM at the November Gathering, 4th November, and the 322 Annual Awards and MACH draw at the December Gathering, 2nd December.



Chapter Vice President Alan Evan-Hanes getting a healthy dose of vitamin C

Our first presentation was by accident investigator, Wouter Botes. Wouter gave us an excellent presentation earlier in the year on the Rietbok Viscount accident, today's presentation was titled "Anatomy of an Aircraft Accident.

Wouter took us through the many factors leading to an accident, explaining how they are often interlinked, and the important timeline, sometimes starting years before the accident, which, unless broken, will lead to the accident.



Wouter presenting his engaging talk

One of the points that Wouter stressed was communication, we need to share experiences with fellow pilots – Wouter's talk sparked a good deal of this during his presentation with members keen to share their thoughts and debate some of the issues brought up, audience participation is always a sign of a good presentation!



Wouter presenting his engaging talk

talk followed Karl's Wouter's was by "Kykweer", a well prepared report back on some of EAA's recent activities. included the Pancake Breakfast at Silver Creek, the RV fly-in at Kitty Hawk and Sun'n Fun held recently New Tempe, Bloemfontein.

Karl included some great in flight GoPro footage. He also brought along the EAA mascot after it's recent trip to Bloemfontein!

mascot after it's recent trip to Bloemfontein!



Karl in action – notice the well travelled Aeroclub mascot Uhambo above him

During the gathering free JollyTank were handed out to those who had scanned the MACH QR code. These handy emergency fuel, water (or wine?) bags were kindly donated by EAA member Ant Harris. Please see Ant's advert on page 25



Scan the code and get a free JollyTank



Once again, a BIG thank you to our chefs, Ronnie, Cherice and Coen



John Illsley - EAA Chapter 322



John Illsley

I am writing this while sitting at 35 000 feet, cruising at around 900 kilometers per hours in an aircraft that is being kept perfectly on track and in trim by a sophisticated autopilot. It all contrasts rather starkly with a flight I did a few weeks ago to attend the annual EAA Convention, held this year at Middelburg airfield.

Because the event was being held about 60 miles from my home airfield of Petit, I decided that I would try and summon up the courage to fly there in my 1935 Aeronca C3, subject to a few conditions, chief of which was the weather. When you only have 37hp at your disposal and a large fuselage side area that tends to readily

weathercock if there is any significant cross wind component, I ideally needed no wind or a light breeze directly down runway 03. As they say, you can arrange everything but the weather. The "Airknocker" had been serviced, washed and refueled the week before the planned flight. Out to the airfield at first light, pull the plane out and wait for my trusty prop swinger to arrive.

While waiting for my volunteer "Armstrong" starter I study the windsock to see if one of the preconditions I had set myself for proceeding with the flight was falling into place. In mid-winter on the Highveld one can generally rely on calm conditions at dawn. However, Murphy was out early on this day and there was a noticeable breeze starting to be evident and what is more, it was blowing down runway 21. I decided that I had to revise my plan or abandon the flight. In the decade since the C3 undertook its first post-restoration flights, I have never once taken off on that runway. This is because it has a slight uphill slope and at the end of it lies a long line of Bluegum trees that can grow alarmingly tall if you haven't achieved a positive rate of climb by halfway down the strip. If you think I am overly cautious, I remind you, dear reader, that you really want the odds in your favor when you only have two cylinders and no real reserve of power! What I decided was that if I hadn't lifted off and started a gentle climb, by the time I drew level with the last row of hangars at the southern end, then I would abort the take off and go to Middelburg by road with my wife.

In the meantime, my hangar neighbor has arrived to do the honors with winding up the elastic band. Starting the JAP J99 engine is something of a threeperson job: one to handle the engine controls in the cabin; one to do the priming and the swinging; and a third to offer encouragement to the other two! Fuel is thrown into the air intake which is a circular air filter that surrounds the exhaust pipe so as to offer permanent carb heat once you have some heat being generated by the exhaust gasses. Suck in three blades with throttle full open and another three with it closed. Then set throttle, magnetos on both and hope that the old girl obliges on the first or second swing. The first swings are sometimes little more than indication of whether you have over or under primed, or on a cold winter's morning, that you have too little vaporization occurring. After bidding adieu to my wife, we carry out this starting drill and are rewarded with the distinctive rough throbbing sound that characterize big bore, two-cylinder engines. The first thing you have to ensure is that you don't let the throttle sit in the infamous flat spot in the carburation otherwise you may have the engine guit on you. This is only likely to happen during taxying or when chopping power to flare on landing. It can be alarming to the uninitiated, but is just a peculiarity that you need to be aware of when flying behind this engine-carb combination.

Taxy out to holding point for runway 21. Some trepidation as to whether the take-off is feasible in this direction. Two chaps in Kitfoxes clogging the radio frequency for Petit deciding where they should fly for breakfast. One of them is ahead of me at the holding point, the other is in the circuit. I wish they would reach a decision so that I can line up and attempt a take off! At last the reliability and power of Rotax prevails and they are both airborne.

Pre-take off checks are very limited on this minimalist craft: check fuel is on and that seat harness and doors are secure. No flaps and no trimmer. I do a test of each magneto and check for full and free movement of controls. From the runup slab of concrete I do a "running start" to the threshold so as to gain some momentum as soon as possible and then apply full throttle. This slightly



En route to Middelburg – the mist confined to hollows and breaking up

increases the volume of the engine sound, but there is no dramatic kick in the back from rapidly increased thrust. Nevertheless, we are trundling along the glass and hoping we can get up to around 50 knots in a few hundred meters. The C3 will levitate into the air when it is ready and will not be rushed. On this morning, that point of lift off is a bit more critical because of the runway incline but the amazing little bird doesn't disappoint and we are into the air about halfway down the runway. With about fifty feet under the wings, I stick the nose slightly forward and initiate a turn out east over the mielie fields and away from the tree line.

With the Aeronca climbing slowly (at around 150 fpm) I sort out my bearing on a handheld GPS which is hanging on the map pouch which forms part of the leather-covered triangle on the back of the fuel tank. Ahead lies a low cloud bank and the smog from the local power stations. Again, some uncertainty as to whether the visibility is going to be sufficiently clear at my low cruising altitude. I have the C3 at about 1000 feet AGL and as I nudge closer to the Witbank area, the mist seems to be in the hollows of the landscape and breaking up, so I press on, skirting around the major power station of Kusile.

The air is almost dead calm and I can savor the experience of flying this simple and honest little plane with the sun catching the prop disc. It never fails to raise a chuckle looking at the partially exposed valve stems and springs working away and throwing occasional globules of lubricant into the slipstream and on to the windscreen. To my

surprise we are managing to cruise at around 65 knots true air speed, which can only mean that there is a slight tailwind component helping to nudge the speed up from the usual 60 knots.

This flight to Middelburg will be the longest undertaken since this aircraft was rebuilt. Captain Brian Stableford took it to a Rand Air Show a few years ago and I flew my Auster as the "chase plane". It was a very special day because this was the airport where David Llewellyn ended his 1936 flight from England and we were on the same site 81 years later.

As I flew the very same aircraft on the first cross country flight that I have ever undertaken in her, I can only gain new respect for Llewellyn having managed a trans-Africa flight in a light aircraft of such limited horsepower. As you trundle along at a mile-a-minute you cannot help but be impressed that he managed the flight in only 23 days. This a plane where most of the traffic on the Pretoria-Witbank highway that I flew over was overtaking me!

I have only ever flown this C3 as a single seat plane, but it was built as a two-seat type and Llewellyn had it kitted out with a second fuel tank in the right-hand seat and even a few blind flying instruments, including a heavy Sperry artificial horizon! All of this must have put him at close to the MAUW for the type. It also explains how he managed to do a landing in central Africa in a bush clearing at over 6000 feet (to sit out a storm) from which he couldn't take off again. He then managed, with the aid of a mere six tools, to fit a pair of high compression pistons and these saved the day.

In an era when the likes of Amy Johnson, Jim Mollison, Dick Bentley, Alex Henshaw and indeed even Llewellyn himself, were trying to set speed records to the Cape, the flight by the Aeronca was remarkable, not for speed, but for being completed on such a small engine, something of an unofficial record in its own right. It is shared with a Praga Baby, flown to Cape Town by HL Brook, also in 1936. (Incidentally I own the engine and the propeller of the Praga which survived until at least the 1950s as a glider in Cape Town and was then probably scrapped.)

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After digressing to fill in some history, back to the flight in hand. After traversing the smoggy surrounds of Witbank, the landscape becomes somewhat more interesting with some river valleys on the last leg to Middelburg. The thermal activity is also starting to become evident, which in an aircraft of such light wing loading can make for uncomfortable flying. So I am happy to be on the last ten miles of what feels like an epic undertaking, having spent a decade only taking the Aeronca up on late afternoon local flights. As they say, everything is relative, so flying into a neighbouring province seemed like a big deal!

I tune into the Middelburg frequency and can hear the radio patter of EAA members in the circuit. I am keen to get the landing over with, as this will be another first for me: landing this aircraft on a tar runway. I tuck into the circuit and hope that I will not be causing anyone behind me to have to overshoot due to the slow approach speed. Over the threshold and cut the power; trying to judge the height over an unfamiliar runway; add a touch of power, cut power to some popping from the engine as it goes through the dead spot in the carburetor and then hold off again, which puts one into the extended float that is another product of the low wing loading. Juggle elevator and throttle and then flare. As soon as the tail comes down she reveals that she doesn't like tarmac and in a flash is heading off to the weeds on the left side of the runway. I kick in some right rudder and the huge size of that control rectifies matters, saving me from an embarrassing arrival. The landing confirms that touching down on tarmac makes the

plane extremely twitchy on this type of surface. This was confirmed by the hugely experienced Brian Stableford from his sojourn into Rand Airport, so I take a little comfort from that and make a mental note to try and operate only off grass if possible. The addition of a tail wheel (as apposed to the original skid) introduces its own problems on tarmac.



After what felt like an epic undertaking, on the ground at Middelburg!

I taxy in to the area set aside for the display aircraft at the EAA Convention and join some interesting aircraft that had arrived the day before. Unravelling myself from the confines of the small cabin I am met by a host of fellow EAA members and day visitors from the district. They all have kind things to say about this curious shaped "Flying Bathtub" which is a unique sight in South Africa. I was pleased that I had made the effort to fly this plane into the convention and the interest displayed in it made it very worthwhile.



Parked in the area set aside for display aircraft

Enjoying the bonhomie of fellow aviation enthusiasts is cut short by Pierre van der Walt who reminds me that I volunteered to help with the judging of aircraft. The rest of the day is spent in

the pleasant company of the team of judges as we examine the efforts of homebuilders; the owners of warbirds and some new local designs.

Pierre insisted that the Aeronca must be judged in the antique aircraft category and for this I recuse myself while the other EAA judges pore over the oldest flying aircraft in the country. Sadly, there is no competition in this category as the event has not attracted any other vintage production aircraft. That evening at the awards dinner my efforts in rebuilding the Aeronca C3 (over a period of fourteen years) and bringing it to the convention are rewarded with the prize for "Best Antique Aircraft". I was very proud to receive the award, albeit in a one-horse race!



Receiving the award for "Best Antique Aircraft"

Thinking back to the golden years of the EAA Convention at Margate, I remember that one of the awards back then was for "Most Meritorious Flight to attend" and I wonder wryly whether I would have qualified for that prize, although Keaton Perkins in the Cvjetkovik Mini Ace, the only open cockpit plane to arrive, would almost certainly have been more deserving, given that this was mid-winter!



The Cvjetkovik Mini Ace flown in by Keaton Perkins

Next morning when I arrive at the airfield for an early departure, the overnight cold is very evident in the thick layer of frost on all the planes. We have to wait for the sun to do some natural "defrosting"

which allows for refuelling and a quick cup of coffee.



The C3 from below

Due to a radio issue on my hand held, Grant Timms agrees to taxy out and depart at the same time in his Aeronca Champ. He suggests that we back track up the runway so as to allow a downhill run for the take-off. He has 65hp and is flying alone, so I imagine that he would be fine to take off in either direction — this must be for *my* benefit! Downhill and on tar, the C3 gets off quickly and we set sail for the west. Grant flies formation with me and gets some nice photos as we make slow progress home.



The Aeronca formation – a Champ and a C3

There is a slight breeze on the nose and so the cruise speed is below 60 knots. Throttled back to stay with me, Grant is saving fuel and is happy to be my wing man all the way back to Petit. His Aeronca Champ is of 1947 vintage and we make a



En route home – heading to Witbank

bit of aviation history by being the first formation of these two variants in South Africa. On the flight home, I route overhead Witbank airfield which dates from before World War Two and which in the late 1930s had two Aeronca C3s based there as part of the fleet of Johannesburg Technical College, which owned four of them. A C3 hasn't been seen over this airfield since the late 1930s! Paul Lastrucci's father-in-law remembered the remains of both the C3s lying behind hangars after the war (in part because the SAAF saw no use for any of the C3s and so did not impress them into military service during the war) and he donated a turnbuckle to me that was salvaged from one of the wings.



Witbank Airfield – previously home to 2 C3s

The last leg of the flight home to Petit is in a wind that is gaining in strength and arriving overhead the airfield I see that there is a quartering wind for runway 03. One last challenge for the weekend is to contend with this, but it ends up being a nonevent and being grass, the strip aids in a gentle touch down. Grant flies on to Springs airfield and the "Aeronca Formation" comes to an end.



Safely home at Petit!

The weekend is a reminder of how far light aircraft have come since the 1930s but also a chance to experience a little of what flying this aircraft to South Africa from England must have taken 87 years ago. It was an opportunity for me to make some happy aviation memories. My thanks to all who made it possible: EAA of SA; my wife Thea who was the ground support, and Grant Timms for flying the "escort mission" on the way back.

Post Script

- In the article published in the previous edition of Contact, I mentioned that there was a plan to fly an Aeronca 100 from the UK to SA this year. Unfortunately, events in the Sudan have meant that the flight has been postponed indefinitely.
- If you are interested in the 1936 Llewellyn flight to SA in an Aeronca C3, a friend of mine has made a short film about this feat which is available on You Tube.



Brekkie@Trangs



Saturday 9th September 2023

Tranquilty Lodge and Spa, owned by Ray Scott, was the target for a small group of aviators from Fly-Inn Estate, Tedderfield and Krugersdorp, for a Saturday morning breakfast get away.



Breakfast on the deck

End of winter, before the rains, is not a good time visibility wise, but we all managed to get through without too much of a problem.

The group enjoyed a wonderful plated breakfast and, as usual, unbeatable EAA camaraderie before heading off home!



Fixed wings and Fling wings!

SILVER CREEK

CAMPOVER & PANCAKE BREAKFAST



Friday 15th to Saturday 16th September

The fun began on Friday! Arrivals began in the morning as aviators and their families started settling in for the traditional Friday night campover. The very hospitable Silver Creek community were busy setting up for what has now become a firm part of EAA's activity calendar — The Pancake Breakfast and Campover!

As usual the place looked immaculate – the green lawns were like a little oasis after crossing the very dry Magaliesberg Mountain range.



Friday lunch at "Moose's Café"

We set up the campsite behind the hangars on the eastern side of the clubhouse, while some elected to camp under the wing. The "clEAAn" showers and toilets, make for an easy stay over on the field. It was so good to chill with fellow aviators and friends that evening, a little bit chilly but around the braai, perfect!

Saturday morning the sky was clear with a bit of a wind picking up from the west. As far as spectator value was concerned, this was perfect, as arrivals poured in on Runway 26, right in front of the clubhouse!



Saturday arrivals on Runway 26 – great spectator value. Karl's C170 clearing the trees

Mike Visagie, Safety Officer, had devised a new streamlined arrival process, having taken inspiration from the "Fisk" arrival in Oshkosh. Radios calls were kept to a minimum and a flag system was used by marshals to direct aircraft on the ground.

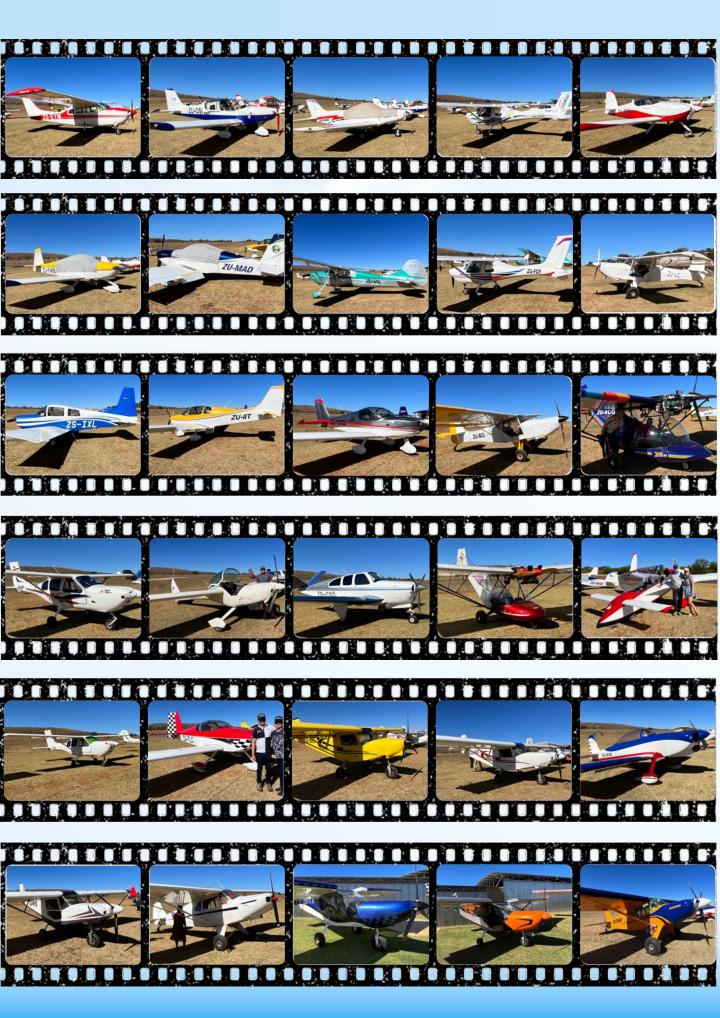
As before, a temporary tower was set up on the apex of the hill, giving visibility to the entire runway.

Nearly 50 aircraft attended the breakfast, a good number despite the calendar clash with the RV day at Kitty Hawk. However, some aircraft managed to visit both events. Aircraft types included a helicopter, gyros, Jabirus, Savannahs, RVs, Slings, a Lambada motor glider, Cessna's, Pipers, Beechcraft and a Grumman Traveler.

The food was once again fantastic, with organisers even offering gluten free options. A number of stalls were also set up adding to the carnival atmosphere of the event!

Thanks to the crew at Silver Creek for making this once again such an awesome event and thanks to all who attended!

Looking forward to the next one!!



Silver Creek Pancake Day 16 September 2023

















Sun 'n Fun 2023

New Tempe Airfield, Bloemfontein



29 September to 1st October 2023

When we were approached by the Bloemfontein Flying Club's Kassie Kasselman to consider holding our annual Sun 'n Fun Fly-in at New Tempe, we realized what a good opportunity this would be to accommodate our members from all the country. Bloem is about as central as you can get and the folk there are well versed in the art of hosting big aviation events.

The decision was made – we're going to Bloem!



The beautiful setting for socializing around the clubhouse

The city offers many accommodation options near the airfield – hotels, BnBs and camping on the field. So it was with great excitement that EAA Chairman, Paul Lastrucci and myself headed out to Jack Taylor, Krugersdorp for a first light flight to Bloem. Unfortunately this was not to be - as is often the case at FAKR, the cloud was on the deck. After a cup of coffee and some good conversation at the

clubhouse, it eventually cleared enough to get airborne. We boarded ZU OSH and set heading. The flight was there was great – two aircraft ahead of us, Fanie Bezuidenhout's Jodel ZS UJM and Christo and Chantel's Ercoupe ZS VCE were our company en route.

Arriving at New Tempe, we realized how suitable this venue is for an aviation event. Large tarred parking area with tie downs, the recently renovated club house and motivated aviation community.



Lunch at the Wimpy on the field

A steady trickle of aircraft followed our arrival. By nightfall the first row of parking was nearly full, A big plus of holding an event a longer distance from the big centers such as Gauteng, is that pilots are more likely to stay over.



Friday evening – a very respectable number of EAA aircraft on the apron

While we were busy tying down and covering our aircraft were allotted registration letters starting at aircraft, a bunch of school kids arrived on the airfield. Their teachers asked if they could look around at the aircraft. It turned out that they had travelled far for a school tour of Bloemfontein and had gone to the main airport where they were turned away. Undaunted and determined, the teachers headed for the next airport on the map -New Tempe Airfield. It was their luck that an event was happening and, with the help of Goitse Diale and a friend from Absolute Aviation (also an Aero Club Director), a tour of the EAA aircraft was set up.



Happy children, happy teachers!

A very festive evening ensued and it was wonderful to socialise with members and fellow aviators over a beverage or two!

The next morning was clear and sunny. A breeze was getting up and strong winds were predicted for the afternoon and it was decided to cancel the flying competitions for the day, instead, lots of hangar talk!

Again, aircraft continued to arrive. One of the first to arrive was Sean and Anthea's Cronin's Jabiru.

Paul and his judging team began the task of judging aircraft during the morning. It was good to see some of the older homebuilt and classic aircraft sporting ZS registrations. In the early days of EAA, homebuilt



Liquid cooled pilot and aircraft – Sean and Anthea Cronin

ZS UAA – these were referred to as "U" registered aircraft. Fanie's Jodel ZS UJM was an example of these at New Tempe.

Thanks to Lucas Wiese and his team who ran an onsite Wimpy and bar, our members spent a fun day in the well-maintained gardens and lap around the club house.



Future pilots Josh and Jess show off their planes!

Judging was completed by mid afternoon and certificates were prepared for the evening's award ceremony.

The next morning we arrived at the airport to find light winds and clear skies, tailwinds for those heading north!

Sun 'n Fun 2023 at New Tempe, although smaller in attendance to previous events, was in my opinion a quality EAA event, reminiscent of early EAA fly-ins. The central location of New Tempe is a big plus as it gives members from all over the country a chance to participate and is definitely something we can build on. A big thank you to Kassie Kasselman, Lucas Wiese, chief marshal Clive Louw and their teams who made the weekend such a great success! A big thanks also to EAA members who helped and attended, especially to our Safety Officer Nigel Musgrave who, without the help of ATC, kept things safe in the circuit!

AWARDS





Best Homebuilt Aircraft ZU ITS Thatcher CX4 – Peter How





Derek Hopkins Best Homebuilt Metal Aircraft ZU NDH Vans RV 8





Best Light Sport Aircraft ZU IVS Orion Cub – Kevin Hopper





Best Ultralight Aircraft ZU EZJ SkyReach Bushcat – Sylvester de Beer



Runner-up Ultralight Aircraft 7U SAS Rainbow

Runner-up Ultralight Aircraft ZU SAS Rainbow Cheetah – Christo Smit



HO STU Company IROUT

3rd Runner-up Ultralight Aircraft ZU FAS Rainbow Cheetah - Hansie Peens





Jodel F12 – Fanie Bezuidenhout





Best Vintage Aircraft 25 VCE 1949 415-E Ercoupe – Christo Erasmus





Runner-up Best Vintage Aircraft ZU VAL Cessna 170B – Karl Jensen





Longest distance flown to the event Bristell ZU KDF – Kevin Fouche, Plettenberg Bay





Runner-up Best Certified Aircraft ZS LCW Beechcraft E33A Bonanza Coen Swart





3rd Runner-up Light Sport Aircraft ZU ESU Glasair Sportsman



Runner-up Best Homebuilt Aircraft ZU FRV Vans RV 4 - Niel Terblanche



Best Homebuilt Composite Aircraft ZU DCB Lancair Legacy



Best Certified Aircraft ZS OFI Cessna 182S Skylane Richard Moore



Lucas Wiese – Bloemfontein Flying Club, for hosting and arranging event



Kassie Kasselman – Bloemfontein Flying Club, for hosting and arranging event



Hello Neil, sure was good to be among all my "fellow" South Africans again at Oshkosh! The RAF, Recreational Aviation Foundation, is having another photo contest this month and the photo below is my submission. Before we left on our camping trip, Holly asked me is there was room in the Air Cam for her cello. I thought she was kidding.

The *Sport Aviation* magazine I'm holding is hiding the drone controller.

Cheers, Holly & Bill



Holly and Bill at the Plakkerfontein bar at Oshkosh

NOTICE

Annual General Meeting

4th November 2023 | Saturday | 09h00 EAA Auditorium, Rand Airport, Germiston

You are invited to attend the Experimental Aircraft Association's Chapter 322 Annual General Meeting. Please RSVP Ronell at ronelldance@gmail.com



CHAPTER 322

Brits Breakfast Fly-in, Saturday 28 October

HARTIES TURNS 100!



This month the Hartbeespoort Dam celebrates it's Centennial. Please join us in celebrating this important milestone at a Breakfast Fly-in at Brits Airfield Saturday 28 October 2023



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REGISTRATION ESSENTIAL!



LOW LEVEL FLYING

HOW LOW CAN YOU GO? 6' UNDER?



By Chris Kyle, plagiarised from Pilots Post (Thanks Willie!)

Amongst many that one can think up there are three confirmed useless B's that stand out in aviation. The first one is RUNWAY BEHIND YOU! The second one is MONEY IN THE BANK WITH NO FUEL IN THE TANK! The third one is BLUE SKY ABOVE WITH NONE BELOW YOU! (not necessarily in that order of priority).

The third B is the one for discussion here! Now there are many definitions for Low Level Flight but I think that this one makes sense.

Low level flight can be defined as: 'Operation of aircraft in such proximity to terrain and obstacles as to compromise the safety of the aircraft, its occupants and that of persons or property on the ground or surface of the water'

From this definition, the point is that although an aircraft might be flown with more than adequate terrain clearance and at a safe altitude while in its present position but what about its performance ability to clear obstacles and terrain in the immediate vicinity in terms of turn radius and

and climb performance with the energy at hand? That's something to think about and which may change your whole perspective of the term 'Low Level'!

Every day as pilots we're exposed to Low Level Flight and the associated threats and risks! For example, immediately after Take Off, as we climb to safety and then again on the Approach to Land as we descend from safety into the Low Level Environment!

Circle to Land Procedures from an Instrument Approach are notorious in the number of aircraft claimed - whv? Because the aircraft descended has into the Low Level **Environment** where it must be maneuvered VERY CAREFULLY to ensure terrain and obstacle clearance often done in somewhat reduced visibility.

The most crucial stage in an Instrument Approach is the decision to execute a Missed Approach - why? - Because it offers a way back to safety from the Low Level Environment to a safe height above terrain and obstacles.

Need more convincing? HEIGHT IS SAFETY and is like MONEY IN THE BANK. Height above terrain gives us time to think and strategise in the event of an emergency and offers us a way out from what could be a lethal situation! Height takes us into the realm of being able to perceive the picture below and affords us the time to make good decisions. Whereas flying at Low Level offers us a small band of opportunity and safety and is a place of basic survival.

Now let's take a think on what the Law states about Minimum Heights and reflect on the reasoning behind it. (Basic VFR by Day - go and do further recap regarding Night and IFR)

91.06.32 (1) Except when necessary for taking off, or landing, or except with prior written approval of the Director, no aircraft –

- (a) shall be flown over congested areas or over an open-air assembly of persons at a height less than 1 000 feet above the highest obstacle, within a radius of 2 000 feet from the aircraft;
- (b) when flown elsewhere than specified in paragraph (a), shall be flown at a height less than 500 feet above the ground or water, unless the flight can be made without hazard or nuisance to persons or property on the ground or water and the PIC Operates at a height and in a manner that allows safe operation in the event of an engine failure; and
- (c) shall circle over or do repeated over-flights over an open-air assembly of persons at a height less than 3 000 feet above the surface.

With reference to (b) above, here's a humorous tale about a farmer situated close to New Tempe airport which was the finishing line to the Presidents Trophy Air Race one year. His farm was based exactly on the inbound track to Tempe. A.T.C. Bloemfontein received a most verbal and colourful complaint from the farmer stating that "Some stupid 'donder' (thunder) has just flown so low by my farm past that all my 'Bulle' (cattle) is now scared and some is sore! Not only once he flew over here but @&## ** 65 times!"

Flying low over agricultural land and property can cause huge damage and injury to livestock! I also know a person that was once threatened by a farmer for damages to the tune of what most of us would not be able to afford for injuries caused to his ostriches!

Don't do this!!!!!

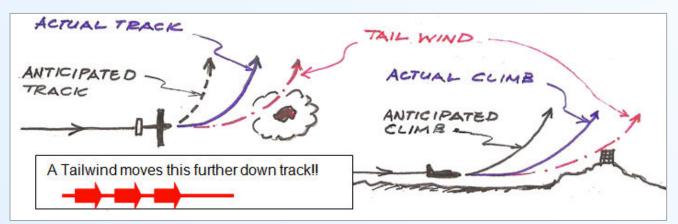
But Whichever way, if you fly for long enough you are going to at some time or another end up in the Low Level Environment - either by choice (not a good decision) or by being forced there by making poor pre flight or in flight decisions - also not good

By maintaining good situational awareness it

should be possible to avoid the unplanned operational need for low flying but pilots need to be familiar with Low Flying and the hazards involved should the inadvertent need arise. Good aviation practice dictates that a pilot should never need to fly lower than he/she must or lower than the law allows.

By setting personal limits well above the legal VFR minima (see previous article 'Whether to GO or not to GO?'), and then always having. Plan B and C as an escape to the nearest alternative airport is first prize. If these opportunities are left to slide by, then a Precautionary Landing is in order rather than pressing on. Pressing on has killed so many people!

NOW LET'S GO INTO THE LOW LEVEL SITUATION.



INERTIA

'A body in a state of rest or steady motion will remain so unless acted upon by an external force'. This is your aircraft flying at a constant speed and direction and so to change its' direction you need to apply a force by way of a control input but this change in direction cannot be expected to be immediate - there will be a time lag - the higher the speed the longer the lag. The effect of Inertia is hardly noticeable to the pilot at higher altitude but once close to the ground the significance becomes apparent.

Bear in mind that for a given angle of bank RADIUS OF TURN increases with an increase in TAS so to minimize the turn radius or space in which to turn you'd best slow down to a safe speed. By slowing down you are giving yourself more time to think and more clearly observe and anticipate hazardous obstacles such as power-lines.

Slowing down is best done by bringing the airspeed down to the white arc on the airspeed indicator and then applying the recommended flap setting for slow flight (aircraft type specific). Applying Flap in most aircraft will provide a slightly lower nose attitude in level flight offering better forward visibility to the pilot while at the same time will reduce the stalling speed too. It's important to know your aircraft well and by understanding that Power + Configuration + Attitude = Performance. In this case the performance sought is Airspeed and so to fly at a constant indicated airspeed there will be a power setting to do that in straight and level flight. This will reduce the work load on the pilot by negating the need or urge to make constant power changes except when turning or climbing which of course will need an addition of power to suit. We can call this the 'poor visibility configuration' which is a very good idea to adopt in the Low Level Environment! Also with Landing Lights On! The **EFFECT** of **WIND** at Low Level (especially a strong wind) can be profound and present the pilot with a number of powerful 'Visual illusions'. For example when flying into the wind Groundspeed will be low which could lead the pilot

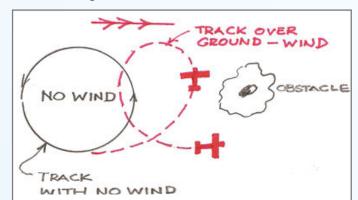
to either increasing power or lowering the nose or both. Conversely **flying out of the wind** the Groundspeed will be high leading the pilot to perhaps decreasing power thus reducing the Indicated Airspeed and also an urge to raise the nose. Either one of these two reactions or a combination of both could bring the aircraft to an **unsafe Indicated Airspeed**.

When **flying across the wind** - Drift will be most noticeable and so adequate Drift Correction must be made by the pilot in order to follow a desired track across the ground. There is a natural tendency for the pilot to want fly with crossed controls - this must be avoided and balanced flight must be maintained.

TURNING at Low Level can offer some challenges in a strong wind. See the diagram below which demonstrates how wind will alter the desired track covered over the ground.

The problem here is that in an attempt for the pilot to maintain the desired track produces a strong tendency for the pilot to increase the bank angle sometimes quite radically when turning from downwind into the wind because of the drift experienced. This can be very hazardous since we all know how Stall Speed increases with an increase in bank angle.

Conversely bank angle must be decreased when commencing a turn out of the wind to downwind.



On a day when there is a strong cross wind blowing observe how pilots tend to overshoot their turn onto Final Approach (Hammer Head) from a strong tailwind on Base leg and then watch how there is a tendency to over-bank in the turn onto Final Approach in order to regain an acceptable approach path to the runway. Not good!!!

There is also a Sensation of Skidding and Slipping. Slipping into the turn when turning from into the wind to downwind and skidding out of the turn when turning from downwind into wind the pilot must be aware of these sensations and illusions and by all means ignore them and very importantly maintain balanced flight with the ball in the centre.

turbulence, rotors and wind shear caused by surface friction, obstacles and topography will also make the Low Level Environment an uncomfortable and hazardous place to be. Turbulence is another good reason to slow down to a safe maneuvering speed.

Rotors and Strong Down drafts caused by terrain can be very strong and have been the cause of many accidents. By understanding the conditions that cause them, much can be done to anticipate them and plan around them.

Micro bursts and wind-shear in the vicinity of Thunderstorms is also an area of great concern and to be anticipated and watched out for.

CLEARING HIGH GROUND.

When there is ridge or rising ground ahead on track, how do you know that at your present height that you'll be able to clear it without climbing? The rule of thumb is that if you can see a horizon beyond then you'll probably be able to clear the terrain. But here you have to be very careful in discerning that what you see beyond is actually a horizon and not a mountain range, or more - higher terrain!

Be sure that the gradient of the rising ground ahead does not exceed the performance of your aerie! Don't get stuck in the situation where you can't turn away without still maintaining a positive rate of climb! You think I'm joking - just a little while ago a pilot practicing Precautionary Landing Procedures at fairly low level turned towards high ground and found that at full power he could not clear terrain and also could not turn (remember to turn you need more power to compensate for the additional drag in the turn). He made contact with terrain but fortunately was not hurt - the aerie however was a write off!

Don't ever stick your nose into a valley in marginal weather thinking you can make it through to the other side. Could be a boxed in valley with insufficient space to turn around - there could be power lines - rising ground in the valley could exceed the climb performance of the aircraft and could also lead you into cloud. NAVIGATIONAL PROBLEMS.

There is one place a pilot must be absolutely sure of his position and the nature of the terrain he/she is pointing the nose of the aircraft toward and that is in the Low Level Environment especially in bad weather or reduced visibility. This requires a high standard of map reading and navigational ability. Map reading and visual navigation at low level can be tricky since you no longer have the advantage of a 'bird's eye view' of the area to be navigated over and requires some practice to be proficient at it.

The position of the Sun offers up a whole bag of hazards by reducing clear forward vision. Never fly close to terrain with your nose pointing toward the Sun - this is a big no - no!

Beware of the added confidence given by good G.P.S. navigational equipment here because it could just lead you further into trouble when the pilot's mindset is to push on!!!! (refer to previous article 'Go to Button'). By all means make use of this equipment but do so with care and vigilance. Remember too that the useful range of VOR and ADF equipment will be reduced and depending on the distance from beacons could become useless. An idea of the useful range of the VOR can be estimated by the formula:

Range (n.m) = 1.25 x the square root of the altitude of the aircraft - elevation of the transmitter (feet).

Also VHF radio range to an ATSU will be reduced making two way communication with ATC not possible.

When flying low over a body of water one needs to be particularly careful especially when there is no wind to add 'texture' to the surface by way of ripples or waves. Ones depth perception over a flat and consistently smooth surface is severely

compromised. So often pilots have simply flown into water with dire consequences! When following a Line Feature such as a railway line, road, coast line etc., make sure that you do so as the Law and good reasoning says you should and that is with the line feature on your left. This is for two reasons, one is that you, the pilot sitting on the left hand side of the aircraft will have a clear view of it and the other is that hopefully any other aircraft following the same line feature but in the opposite direction will apply the same rule and thus you'll miss one another. Remember that line features such as roads and railway lines tend to follow topographical contours through valleys but also go through tunnels through which aircraft cannot be flown!

EMERGENCY at LOW LEVEL

A very large number of forced landings are caused by fuel mismanagement, either running out of fuel completely or incorrect system status management.

The possibility of running a fuel bay dry at low level is high since the pilot is dealing with a high work load and his/her attention to fuel management can easily be compromised.

Think- an engine stoppage at 500' A.G.L. gives somewhere around one minute before contact is made with mother earth. The productive time to get on with emergency procedures and executing a forced landing is less than that because some time will be lost in realizing the actuality of the event. Then be sure the terrain over which you are flying offers a suitable patch of lawn to land on. So you see how fine you're cutting things at low level! Best to monitor and manage fuel supply and the health of the engine very carefully here and then forever be considering a suitable place to land as you cover the track flown and be extra alert to the event of an engine stoppage and the possible causes - don't forget the possibility of carburetor icing and also birds flying up into your path. Not to mention difficult to see traps such as the Earth Wire above the Power Lines and how and where to cross Pylons.

Low level flight indeed increases the work load on a pilot and offers a very narrow band of opportunity in the event of something going awry.

Besides all of the above there's the intentional LOW LEVEL FLY PAST or BUZZING. Ah - the ego - the Ace Pilot! Watch me! Should these words ever pop up in your mind - backtrack and ask the question, why - what for?

To wrap up then - before you stick your nose into the Low-level Environment.

- Know what you are letting yourself in for.
- Be sure that there will be a safe outcome.
- Make sure that your navigation skills are up to it.
- That you've been trained and are competent in the specific challenges.
- That you're prepared to take the full rap for your actions.

Remember that Height is like Money in the Bank and hey - who wants to be poor!

SO LET'S ENDEAVOUR TO ALWAYS KEEP A LOT OF BLUE SKY BELOW US AND IN SO DOING LIVE A RICH AND HAPPY LIFE!

Seen on the EAA WhatsApp Chat Group















covermelight@gmail.com



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MACHINED WHEEL RIMS

by Dr Robert Clark

My Jabiru 430 is a fantastic aircraft in the air. It's economical to operate, smooth running, comfortable. has exceptional performance statistics for a 120-horsepower aircraft and an absolute joy to fly. Ground operations. however, are not that pleasant. The aircraft has a constant wheel vibration on take-off and landing. No amount of balancing will ever solve the problem, as the cast rims on the main wheels rotate in an eccentric plain. Eccentricity is the offset between the axis of rotation and the axis of symmetry. I have gone to the expense of putting on aviation tyres, replaced brakes and discs. had the wheels professionally balanced but the problem persists, as the tyre merely accentuates the out-of-roundness of the rim. As there is no

shock absorber on the very rigid undercarriage system, any vibration gets transferred to the aircraft's fuselage.

I enquired on the Experimental Aircraft Association (EAA) WhatsApp group if there are machined rims for Jabiru main wheels, as the vibration on take-off and landing cannot auger well for the long-term health of the aircraft. Sean Cronin from Glutek Engineering makes some rather impressive components for a host of aircraft types, including machined rims for Jabiru's.

To contact Sean regarding his vast array of aircraft products, drop him an e-mail on address Sean@glutek.co.za or Seancro@gmail.com, or cell number 083 447 9895.











Long-EZ ZS VMX

- Engine 0235L2C
- 1386 hrs plus 400hrs upgraded pistons
- Airframe not quite 700 hrs
- Propellors is wooden a B&T
- Block speed 140 knots
- Best glide 80mph
- Best climb 80mph
- Rotate 80mph
- Stall unconventional 55mph depending on load.(just buffets a bit)
- Hangered at Springs at the moment.
- I am reluctantly selling as this aircraft is a dream to fly.
- Have landed in 30 knot cross winds.
- Standard VFR instruments (but a glass cockpit can be fitted say MGL would be great.)
- Can take on 54 us gallons 204 liters (27 gal each side in the wing stakes)
- At 25 liters an hour depending on cruise settings and Prop about 8 hours endurance.
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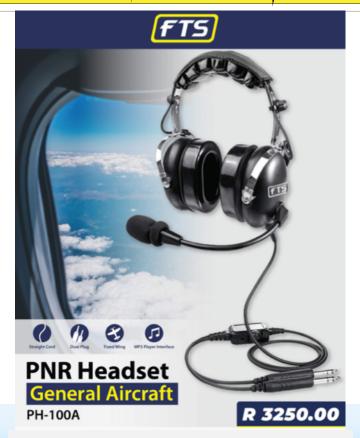
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