



CHAPTERS: 322 575 592 778 843 870 973
1262 1500 1501 1502 1503 1504

Sling 4-4-40 Challenge completed.

Fly-by at Tedderfield on Monday in formation with Sling 2 tail dragger - photo The Airplane Factory.

Airspace Violations around Rand Airport

Rand Airport is being plagued by local traffic incurring airspace violations into the OR Tambo CTR. The main runway 03L/21R centreline at OR Tambo is extremely close to Rand Airport. The Rand Airport ATZ is not centred on the centre point of the airport and the Eastern Boundary is barely one runway (29/11) length distant. This requires a tight circuit to not encroach on the OR Tambo CTR. Similarly, the approach to Runway 35 also requires a short final approach path.



When using Rand Airport, ensure that you are familiar with the airspace boundaries and do not violate the OR Tambo CTR boundaries or the TMA. The incidence of violations has reached serious proportions and will not be tolerated as these seriously compromise safety.

Let us be proactive in avoiding these violations to maintain the safety standards we expect of our members and also avoid possible prosecution. - *Karl Jensen, Chairman, Chapter 322*

Whassup!

Wednesday 01 October
Chapter 322 Meeting
Dickie Fritz MOTH Hall
Edenvale

Sat 04 October
Vintage and Classic Fly-in
Petit Airfield

Saturday 18 October
Parys Time Trials Warbirds
CANCELLED

Sat 01 November
Christmas Fly-in, Panorama

Wed 05 November
EAA Chapter 322 AGM

Sat 08 November
Aero Club Annual Awards Dinner

Fri 14 or Sat 15 November TBC
EAA Chapter 322 Yr End Dinner

Sat 22 November
Combined EAA/SAPFA
Peter Hengst Memorial
Breakfast Fly-in & Fun Rally
Brits Airfield

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Bethlehem

Establishing an EAA Chapter in Bethlehem - Karl Jensen

On 06 September, our EAA of SA National President Paul Lastrucci, EAA of SA Young Eagles Convener Dr Mike Brown and I flew to Bethlehem from Fly Inn in my Cessna 170 and stayed overnight. The purpose was to address members of the recently formed Bethlehem Aero Club on forming an EAA Chapter at their behest.

There was much chatter and hilarity during the flight, with Paul having been stationed for a while at the Piet se Gat infantry camp near Bethlehem. We relived much of the humorous side of our military days with sayings of the 'korporaals'. Orders like 'kyk voor jou, die army kyk agter jou!' and flying over a farm owned by a Fanus... known as Foxtrot Anus, brought much mirth. Arriving shortly before sunset, my 170 was housed happily in Lucian Banitz' UAV factory hangar. Lucian will be a founder member of the new Chapter.

After a quick cleansing beer or two, we set up our presentation in Izak Venter's hangar. As arranged, I kicked off the proceedings by explaining what I perceive to be reasons for the ongoing success of our Chapter 322 Johannesburg. I then worked through an agenda as is used at 322 and which was adapted for Bethlehem.

Paul explained many of the legalities and the very basic requirements to be recognised as an official EAA of SA Chapter, such as the minimum number of members (10) who have to be paid up members of the Aero Club, regular structured meetings, recording of minutes, financial order and obligations and upholding the principles and aims of EAA with a safety awareness ethos. Paul, who is also Vice Chairman of Aero Club of SA, gave many examples of the work behind the scenes that is carried out to EAA's benefit in conjunction with Aero Club.

This is done to ensure our freedom of the skies and to keep an eagle eye on any proposed legislation or restrictions that would adversely affect recreational aviation.

Dr Mike Brown did an excellent presentation on EAA Young Eagles. In South Africa, we no longer regard a simple flight in an aircraft as qualifying as a Young Eagles air experience unless the young person has first written and passed a basic test. This and other essential detail is available on www.youngeagles.org.za with relevant study material that is free to any person between the ages of 14-18.

Our delegation was well received by the always hospitable 'Bethlehemers' who supplied us with an almost new luxury Kia SUV to get to and from the paid for B&B after they fed us.

There has been a great sequel to our expedition. Francois Marais, who is the very active PRO for the Bethlehem Aero Club, visited me at my home in JHB for a tut on Power Point and to obtain more detailed information on EAA. He informs me that the general reaction to forming an EAA Chapter in Bethlehem is a no-brainer with their correctly perceived advantages of being part of our organisation when one's Chapter functions with good governance. There have been issues at Bethlehem where the Bethlehem Flying Club has now ceased to exist and the clubhouse has been taken over by the Bethlehem Aero Club which will include the soon to be inaugurated EAA Chapter 1500 Bethlehem. At the time of writing, the proposed Chairman will be Phillip Jacobs with Vice Chairman Izak van Zyl and Francois Marais as PRO. We wish you all every strength for your new Chapter and remind you that there is much expertise in our organisation and help is as close to hand as your phone. Remember to have the Big F... and F is for FUN!

We are prepared to travel to any centre in SA where an EAA Chapter might be established and also to assist any Chapter which might be floundering.



Chapter 322 Johannesburg Meeting

Another great evening with EAA Chapter 322 last Wednesday 03 September - *Gordon Dyne*

Not quite the record turnout we had in August, but nevertheless a very respectable audience of almost one hundred members and friends turned up at the Dickie Fritz MOTH Hall last Wednesday evening 03 September. It was almost a waste of time for, when I and countless others arrived at the MOTH Hall after struggling through intense traffic and power cuts in the entire Edenvale area, we found that our destination was in complete darkness apart from improvisation by our wonderful barman Wally Ferreira. Necessity is the mother of invention and Wally had rustled up some candles and a Cadac gas bottle complete with light! However, without power there would not be any way the microphones nor the laptop with its marvellous power-point presentation would work. The catering ladies with the spirit reminiscent of the Blitz still managed to feed many hungry people with delicious pies and coffee. Thank you ladies.

However, as Chairman Karl Jensen and I were supping coffee at the bar (and if you believe that then you will believe anything!) Karl assured me that he had friends in high places and that power would be restored at precisely 19h00! I was busy scoffing at that remark when the power miraculously returned and the aviation hungry audience took its places in the now well lit hall. I will never doubt Karl's word again not doubt his ability to work miracles!

The usual formalities were run through. Welcome, apologies, Chairman's report, finance, Young Eagles, Auditorium, Teddy-build project, happenings past, present and future, Annual Aero Club and EAA dinner, AAD at Air Force Base Waterkloof and flight safety. The last mentioned item covered a method to determine increased runway length required for take-off and degradation in climb performance with summer approaching and with it increased temperatures. Ignore high density altitude at your peril! This was a very interesting

discussion and very thought provoking. Thank you Karl and General Brian Stableford for your input. Your 54 years' flying experience is invaluable.

322 member Jean-Pierre Duponsel, an electrical boffin, discussed the electrical system in the Teddy-build project and his inexpensive Optifuel management instrument which is rapidly gaining popularity. Merci beaucoup Monsieur Duponsel. *Tres interesant!*

After a 20 minute break for more hangar talk and the charging of our glasses, we returned to our seats to listen to our guest speaker Rob Jonkers. Rob, a member of 322 and enthusiastic aviator, is Programme Director of AeroSud and is famous for building a Boeing 737-800 simulator at his home. Quite amazing! Rob gave an illustrated presentation on his and the South African team's performance at the World Precision Rally Flying Championships which were held in Poland in August. This was an amazing talk. A strange country, different language, shocking weather with gale force winds, hiring unfamiliar aircraft and being up against the world's best! However despite all these setbacks South Africa was placed fifth! A marvellous effort. Well done Rob, Team Captain Frank Eckard and the remaining South Africans.

So ended another tremendous evening with EAA Chapter 322. Thank you Chairman Captain Karl Jensen for your never-ending enthusiasm and endless stream of risqué jokes. It is wonderful news and a great relief to everyone present that you will stand again as Chairman of 322 at the forthcoming elections. You are likely to be returned unopposed! Thank you. We are all delighted.

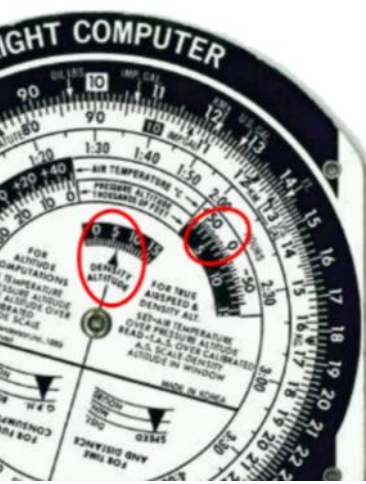
Our next meeting will be Wednesday 01 October. Hope to see you there. Remember everyone is welcome. For more information on EAA 322 - South Africa's biggest and busiest EAA Chapter - please contact our wonderful PR lady Trixie Heron on editor@afskies.co.za. Thank you.

Density Altitude

Adapted from an FAA document on Density Altitude

- Karl Jensen

Summer is thankfully approaching and with it higher ambient temperatures. Although density altitude is not a common subject for 'hangar flying' discussions, pilots need to understand this topic. Density altitude has a significant (and inescapable) influence on aircraft and engine performance, so a pilot needs to thoroughly understand its effects. Hot, high, and humid weather conditions can cause a routine takeoff or landing to become an accident in less time than it takes to tell about it.



Density Altitude Defined - Types of Altitude

Pilots sometimes confuse the term 'density altitude' with other definitions of altitude. To review, here are some types of altitude:

- Indicated Altitude is the altitude shown on the altimeter.
- True Altitude is height above mean sea level (AMSL).
- Absolute Altitude is height above ground level (AGL).
- Pressure Altitude is the indicated altitude when an altimeter is set to 1013 hPa. It is primarily used in aircraft performance calculations and in high-altitude flight.
- Density Altitude is formally defined as 'pressure altitude corrected for nonstandard temperature variations'.

Why does Density Altitude Matter?

High Density Altitude = Decreased Performance.

The formal definition of density altitude is certainly correct, but the important thing to understand is that density altitude is an indicator of aircraft performance.

The term comes from the fact that the density of the air decreases with altitude. A 'high' density altitude means that air density is reduced, which has an adverse impact on aircraft performance. The performance criteria in the Pilot's Operating Handbook (POH) are generally based on standard atmospheric conditions at sea level (15°C and 1013 hPa). Your aircraft will not perform according to 'book numbers' unless the conditions are the same as those used to develop the published performance criteria.

An extreme example: If an airfield whose elevation is 500 AMSL has a reported density altitude of 5,000 feet, aircraft operating to and from that airfield will perform as if the airfield elevation were 5,000 feet.

High, Hot, and Humid

High density altitude corresponds to reduced air density and thus to reduced aircraft performance. There are three important factors that contribute to high density altitude:

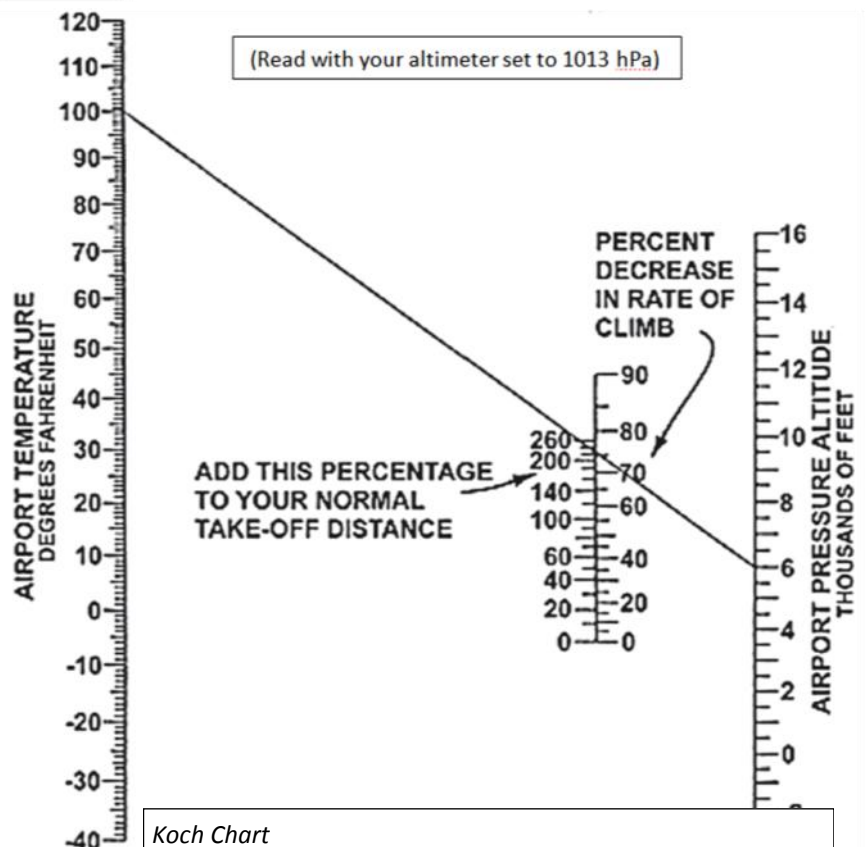
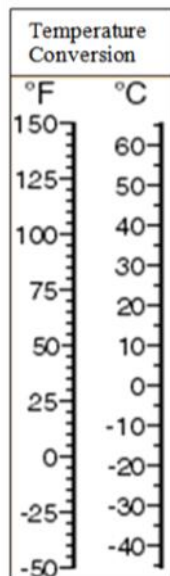
1. **Altitude:** The higher the altitude, the less dense the air. At airports in higher elevations, high temperatures sometimes have such an effect on density altitude that safe operations are impossible. In such conditions, operations between midmorning and midafternoon can become hazardous. Even at lower elevations, aircraft performance can become marginal and it may be necessary to reduce aircraft gross weight for safe operations.
2. **Temperature:** The warmer the air, the less dense it is. When the temperature rises above the standard temperature for a particular place, the density of the air in that location is reduced, and the density altitude increases. Therefore, it is advisable, when performance is in question to schedule operations during the cool hours of the day (early morning or late afternoon) when forecast temperatures are not expected to rise above normal. Early morning and late afternoons or evenings are sometimes better for both departure and arrival.
3. **Humidity:** Humidity is not generally considered a major factor in density altitude computations because the effect of humidity is related to engine power rather than aerodynamic efficiency. At high ambient temperatures, the atmosphere can retain a high water vapour content. For example, at 35°C, the water vapour content of the air can be 8 times as great as it is at 05°C. High density altitude and high humidity do not always go hand in hand. If high humidity does exist, however, it is wise to add 10 percent to your computed takeoff distance and anticipate a reduced climb rate.

Check the Charts carefully! Whether due to high altitude, high temperature, or both, reduced air density (reported in terms of density altitude) adversely affects aerodynamic performance and decreases the engine's

horsepower output. Takeoff distance, power available (in normally aspirated engines), and climb rate are all adversely affected. Landing distance is affected as well; although the indicated airspeed (IAS) remains the same, the true airspeed (TAS) increases. From the pilot's point of view, therefore, an increase in density altitude results in the following:

- Increased takeoff distance.
- Reduced rate of climb.
- Increased TAS (but same IAS) on approach and landing.
- Increased landing roll distance.

Because high density altitude has particular implications for takeoff/climb performance and landing distance, pilots must be sure to determine the reported density altitude and check the appropriate aircraft performance charts carefully during preflight preparation. A pilot's first reference for aircraft performance information should be the operational data section of the aircraft owner's manual or the Pilot's Operating Handbook developed by the aircraft manufacturer. In the example given in the previous text, the pilot may be operating from an airport at 500 AMSL, but he or she must calculate performance as if the airport were located at 5,000 feet. A pilot who is complacent or careless in using the charts may find that density altitude effects create an unexpected - and unwelcome - element of suspense during takeoff and climb or during landing. If the aeroplane flight manual (AFM)/POH is not available, use the Koch Chart to calculate the approximate temperature and altitude adjustments for aircraft takeoff distance and rate of climb. At power settings of less than 75 percent, or at density altitude above 5,000 feet, it is also essential to lean normally aspirated engines for maximum



Koch Chart

To find the effect of altitude and temperature, connect the temperature and airport altitude by a straight line. Read the increase in takeoff distance and the decrease in rate of climb from standard sea level values.

power on takeoff (unless the aircraft is equipped with an automatic altitude mixture control). Otherwise, the excessively rich mixture is another detriment to overall performance.

Note: Turbocharged engines need not be leaned for takeoff in high density altitude conditions, because they are capable of producing manifold pressure equal to or higher than sea level pressure.

For example, the diagonal line shows that 230 percent must be added for a temperature of 38C and a pressure altitude of 6,000 feet. Therefore, if your standard temperature sea level

takeoff distance normally requires 1,000 feet of runway to climb to 50 feet, it would become 3,300 feet under the conditions shown in the chart. In addition, the rate of climb would be decreased by 76 percent. Also, if your normal sea level rate of climb is 500 feet per minute, it would become 120 feet per minute.

This chart indicates typical representative values for 'personal' aircraft. For exact values, consult your AFM/POH. The chart may be conservative for aircraft with supercharged engines. Also, remember that long grass, sand, mud, or other runway contamination can easily double your takeoff distance.

Flying Legends Talk Show

Yet another unsung South African Air Force (SAAF) Hero graces the EAA Auditorium stage for a classic EAA Flying Legends Talk Show - Gordon Dyne

Last Thursday 11 September, another 'full house' at the EAA Auditorium at Rand Airport greeted Major General 'Hap' Potgieter SAAF (retired).

The Auditorium's long running electrical problems and those of its refrigerator had been continuing for the previous week and we thought they were solved after the visit of talented African technician Harry from Amalgamated Beverage Industries (ABI). However, when organiser Jeremy Woods arrived early on Thursday afternoon, the auditorium was in darkness and the fridge had been 'off' for probably a day or two. Ugh! The prospect of warm beers galvanised Jeremy and his team into action and dustbins full of iced water into which dozens of tins of beer and similar were cast, soon solved the problem. Luckily by process of elimination Jeremy found the faulty circuit *et voila!* - power was restored!

Master of Ceremonies Dr Mike Brown, a commercial pilot of note himself with three beautiful aircraft in his stable, was soon in full stride and in his usual inimitable unflappable style was coaxing some amazing stories from the General who was immaculately turned out in suit and tie as one would expect from such a high ranking officer. The only other tie visible in the auditorium was worn by aspiring pilot young Freddie Jacobs. That young man will go far!

As usual, our guest's exploits are far too numerous to mention here. This précised report is just to make you guys and gals out there who failed to attend the talk show to rue missing the opportunity to listen to a flying legend. Major General Potgieter was commissioned from the Military College in 1962 - before most of the audience was born - and retired from the SAAF in 2000. During the General's illustrious career he served as a pilot and Flight and Squadron Commander as well as operational Air Force Commander flying numerous types of aircraft including Harvards, Impalas, C185s, Pumas, Alouettes, Super Frelons and many Reserve Force Civilian fixed wing types. General Potgieter has approximately 10,500 hours, 4,000 of which were giving instruction and 4,000 hours on helicopters. Quite a record!

The General's CV reads like a 'thriller'. Moving from battlefield to boardroom, to Operational Commander of various Combat Command Posts, University Lecture halls and UN Missions all



over the world. Quite amazing.

If I had achieved in my lifetime half what the General had achieved in his, then my head would be so big I would never fit through any door!

The good Dr Brown did an amazing job in extracting from the General so much of his incredible career in the time allowed, but frankly if the truth be known, then Mike barely scratched the surface of this 'unsung unassuming hero's flying career'! It was a shame when the curtain finally came down at 22h30.

Thank you very much General Potgieter for travelling to Rand Airport from your home in the Eastern Transvaal to tell us of your many and varied flying adventures. Please put pen to paper so we may all read of your career at our leisure. We wish you, sir, many happy years of retirement and hope that some of your grandchildren, inspired by tales of your exploits told to them on your knee, will follow you 'into the air!' Your life was spent protecting your country from others who might wish to harm it. Thank you and your SAAF colleagues for letting us sleep peacefully in our beds.

Well done Mike Brown on another great evening. Your gentle probing and bedside manner is worthy of a much larger stage than our humble auditorium.

Grateful thanks to Jeremy and Anne-Louise Woods for putting together another amazing evening. From where you keep finding these Flying Legends I will never know. A huge thank you to your team of volunteers who are at your side every month to ensure that the audience goes home fully satisfied.

For more information on the Flying Legends Talk Show please contact Jeremy Woods at eaatalkshow@icon.co.za
Thank you.

SA Rally Flying in Poland

Torun Poland – The 19th FAI WRFC 2014 – Rob Jonkers

The Navigation Rally Flying World Championship happens every two years and is hosted by one of the participating nations. This time Poland hosted the 19th World Championship in the town of Torun some 200 km north west of Warsaw.

The crews chosen to represent team SA were Frank & Cally Eckard, Adrian Pilling & Mary de Klerk, Hans Schwebel & Ron Stirk with the newbies Rob Jonkers & Martin Meyer. Jacques Jacobs was chosen as the Team Manager with Arddyn Moolman as International Judge. Unfortunately, Adrian & Mary unfortunately had to withdraw, leaving only three crews to represent SA.

Week 1 – Practice Week & Opening

Most of the team had arrived in Poland by Monday 11 August having flown Emirates via Dubai. On Tuesday everybody had to sign the aircraft rental agreements and attempt to get their local Polish flying licence validations done. This turned out to be a mission despite all the pre-planning that had gone into this expedition, so flying was not yet possible and most of Tuesday was spent familiarizing ourselves with the four practice routes that had been made available.

The team then decided to take the first practice route and plot it out with plenty time on the ground to share notes on how each of the navigators found the turning points. It was desperately frustrating to be grounded without licences and with only one aeroplane as yet being available. The second plane was not yet at the airfield, having been held up by weather somewhere up north.

By Wednesday all the licence validations were at last sorted out. Hans and Ron were first to fly Practice Route One, followed by Frank and Cally. Rob and Martin were last off, all in the same Cessna 172 SP-GIT, so a full day of flying was had in clear but windy weather conditions. The wind here seems to blow constantly; mostly between 10-20 kts, and at higher altitudes even more. This is not something we see often in Gauteng, where compass directions can be reliably used. Here the compass is a more or less directional tool: the wind offset can easily be up to 30 degrees, so following ground features is the only real way to navigate.

Newbies Rob and Martin had their very first flight in a strange country with a foreign registered aircraft... A nerve-wracking take-off for sure, but after levelling out at altitude and mentally settling into rally mode, it became easier. Hitting that first Start Point on time at least made the rest of the route simpler, with both pairs of eyes out of the cockpit looking for the en-route photos.

After a good debrief and logger downloads, everybody was satisfied the route went reasonably well, this being the easiest of the practice routes..... On Thursday the team tackled practice route 2, probably the most difficult of the practice routes with three arcs to plot and fly, and it had a Bermuda point on a specific leg with both Rob and Frank drifting off track. Part of the competition was also



to do spot landings and our crews, used to the hot and high conditions of the South African Highveld, were presented with a challenge to flare onto the demarcated spot, at the sea-level conditions with higher air densities. Here the aeries tend to float much longer and it is all too easy to overshoot the two metre landing target.

From a flying perspective, terrain features in this flat area make for tough navigation, to say the least. There are no visible gradients and no hills by which to reference. Looking at the far field is not much use; navigation and ground recognition must be done in close-up, no more than two nautical miles from the track. Many turning points are in forests where roads are not easily seen until one is right above them. In fact many roads and rivers are hidden by trees and so it becomes important to recognize the shapes of features.

There are also plenty of lakes and dams which can be good references to go by, but some are shown on the map as bodies of water while they are in fact only marshy areas. The maps are very busy and plotting requires magnifying glasses to make sure particular features are well recognized.

Sunday was the opening ceremony, and everybody toggged up in their Green & Gold uniform for the parade of nations and opening speeches, thereafter a short airshow laid on by the local club, very professionally staged with a minimum of fuss.

Thereafter a sunset team photo session with the two aircraft and then and early night to rest for the competition day ahead.

Week 2 – Competition week

The Competition week started Monday 18 August. There were 56 crews registered: 34 in the advanced class and 22 in the unlimited class.

This has been the first year where there are two classes in this sport. In the past the competition was only run on the unlimited class rules. The key difference between the two classes lies in the photo recognition and plot sequence. Photos in unlimited are random in two groups, and turning points could be true or false or from any direction. Plotting could reference later turn points to work out previous turn points.

In the advanced class, all turning point photos are correct and in line of flight, and en-route photos are in sequence as is the plot. Although nominally easier, the route planners make photo recognition features difficult.

There are teams representing 17 countries, mostly European. SA is the only Southern Hemisphere entrant. The big teams are France, Germany, Poland, Czech Republic and Slovakia. Most of these do this as a professional sport backed by their Government and fully sponsored. These teams train every week, even during the snowy winter months.

This leaves us South Africans very much humbled to be part of a sport with such high calibre teams. Most bring their own aircraft and therefore getting familiar with a strange aircraft is no issue to them. European terrain with the detailed maps being all relatively similar puts them easily in a comfort zone, whereas we South Africans are more used to wide open spaces with sparse map details. The busy European landscape is challenging to us, whereas they have problems with the lack of detail in our landscape when they visit us.

The wind conditions became very much a determining factor in all the flights. It was over 15 knots on all three competition days, with gusts of up to 25kts, thus making navigation and timing very difficult, not to mention landing! The runway set up for landing measurements was 90 deg to the wind component, making landing very much a spectator sport. In any event the first day's flight had the landings cancelled, the winds exceeding most aircraft's allowed crosswind component.

For the SA team, the navigators did a good job of getting all the turning points plotted and within the time frame of the pilot's needing the next map, mostly needing only two maps to plot with which saved time in transferring key points.

The pilots, however, had to deal with the challenging wind conditions, headings fluctuating up to 20 deg, which meant that only ground features could be used to maintain the required ground track.

All the teams were able to fly the routes successfully with the navigators having finished plotting at around half way in the course.

The final results of team SA was Frank & Cally 11th, Hans & Ron 17th, and Rob & Martin 24th, with a good proportion of the score made up of the tough landing tests. Overall the final results for the Unlimited class were France (first), Poland (second & third).

For the Advanced class, Czech Republic (first), Germany (second), Slovakia (third). Team SA was placed 5th overall out of 13 countries taking part in the Advanced class.

Thereafter, a banquet was held in the hotel which ended with the tradition of the various countries' teams exchanging gifts and keepsakes in a spirit of friendly camaraderie. And so ended an excellent and safe competition. Now for planning the next one being held in Santa Cruz in Portugal two years from now!



AAD 2014

Africa AeroSpace and Defence (AAD) 2014 Airshow at Air Force Base (AFB) Waterkloof was a shadow of its former self
- Gordon Dyne

On Saturday 20 September, I and a number of friends gathered at Springbok Classic Air's Offices at Rand Airport, at the unholy hour of 0545 hours, for our flights to AFB Waterkloof for the biennial AAD airshow. The weather was very cold and the cloud base was almost on the deck. Captains Lorrie Raath and Rodney Chinn, commanders respectively of the DC3 (Dak) and the Beech 18 in which we were travelling, were concerned because the South African Air Force (SAAF) personnel running the Waterkloof airshow had been adamant with their instructions that both aircraft had to have their wheels on the tarmac at Waterkloof by 0700 hours, otherwise permission to land would be refused as there were not any landing slots available after this time.

However, there was a break in the weather at 0715 hours and with Air Traffic Control (ATC) at Waterkloof having a change of heart, the two venerable old 'ladies' left Rand Airport from Runway 11. After a very relaxed 30 minute flight the DC3 in which I was travelling, flown by Lorrie and his SAA Captain son Deon kissed the tarmac and we were there! Such a beautiful landing. There is no substitute for experience. I am told that the Beech 18 did not have such a perfect landing, but I blame Commercial Pilot Dr Mike Brown (the flying doctor) who was acting as co-pilot alongside Captain Chinn!

After we disembarked, both aircraft were towed to the far end of the airport. Another strange decision by the Air Force was that neither of these aircraft would fly during the airshow! An inexplicable decision by people who do not really understand aircraft or aviation. These two aircraft are classics and everyone loves to see them fly. They fly a superb two ship formation.

A huge crowd, possibly near to a hundred thousand, watched the airshow. The United States Air Force (USAF) had a large static display including a C-17 and C-130J freighter. Strangely enough there were neither air displays from the USAF nor from any other foreign Air Forces. Having recently heard about the Harare airshow where the Zimbabwe Air Force put on quite a good show despite its size, I was surprised that it was not there as it had displayed aircraft at previous AAD airshows. However, having painted a pretty poor picture of the organisation and the officiousness of certain little military men with big egos, I must say the airshow itself was pretty good, although sometimes there were long gaps between the displays, due to many of the aircraft being based at AFB Swartkop and not at Waterkloof.

The best displays were undoubtedly the 'Save the Rhino' demonstration, the SAAF Museum's helicopters, the SAAF Vampire, the Rooivalk, P51 Mustang Sally, the T28 Trojan, the Auto Gyro, the PAC 750 XSTOL, the Tiger Moth, the mini war which was superb, the aerobatic teams and of course the superb SAAF formation team of the Silver Falcons. Every airshow needs fast Jets, if only to awake those in the crowd who have been imbibing too much or have had too much sun!

The BAE Hawk, the SAAB Gripen (only one out of how many purchased by the SAAF?) and the still stunning Cheetah-D (Atlas Aircraft), not the Rainbow Cheetah, did not disappoint us and the crowd roared its great appreciation of these 'Top Guns'! Mango's Boeing 737-800, captained by the one and only Scully Levin and Kulula's 737-800 captained by Glen Warden brought the crowd to its feet as these beauties roared past and then crawled by at almost stalling speed with undercarriages down! Marvellous stuff!

I must compliment the organisers for the more than adequate number of porta-loos available to the crowd and although I felt there was nothing like enough waste bins, in fact where I was sitting I could not even see one, there were people walking amongst the crowd quite frequently with rubbish bags collecting rubbish lying around and from individuals. Rubbish is always my *bête noire* and it was good to see this problem being seriously addressed.

Certain friends told me of their long delays of more than one hour at the entrance to the air force base and the rough treatment they received at the hands of the officials who happily confiscated the alcohol they were carrying!

My party was asked to be back at the DC3 and the Beech 18 by 1530 hours, but as the two aircraft had been parked at the far end of the crowd line, it was impossible for them to be towed to the apron, and apart from that there was not a 'departure slot' until 1800 hours! We finally departed and were safely home at Rand by 1830 hours. We were all exhausted after a long, hot and very interesting day! Thank you very much Captains Raath, Raath and Chinn for looking after us so well and for making such a fuss of my guest and hero Lieutenant John Martin, 4 Squadron SAAF1943-1945 Spitfire Pilot! What a man! Particular thanks to Captain Chinn for allowing John to sit alongside him as co-pilot in the Beech 18 on the return journey from Waterkloof. John thoroughly enjoyed this honour! Thank you Captain Flippie Vermeulen, owner of Springbok Classic Air, for making your two beautiful aircraft available to us and thanks to your personal assistant the lovely Ronell Myburgh for 'putting it altogether'.

I would hope that military airshows have a future in South Africa, but unless there is a change of attitude by the 'top brass' in the SAAF and a huge increase in expenditure to keep the aircraft flying and to retain its top pilots and technicians, then I suspect the future is in jeopardy. Very sad for a once proud country which followed Great Britain in declaring war on Germany in 1939.



SA Industry Photo Shoot

14 September, AAD AFB Waterkloof - Gus Brown

If you are like me then you love those old air fleet photographs that are so popular with the US Air force and the likes of NASA. The best part is trying to identify the aircraft. There's even a great one of the 1960s SAAF fleet taken at Waterkloof floating around on the Internet somewhere.

So why not one of all the locally designed and produced aircraft? Good question indeed. With AAD just around the corner and all the ingredients within reach this was an opportunity not to be missed. A special thanks to Paul Potgieter (Jr) AHRLAC programme manager for the idea and following through to make it happen. Likewise without the help of AAD Liaison JP Truter this would not have happened at Waterkloof. I had the joy of spending most of Saturday tracking down an RSA authorisation number for Calle Hedberg so that he could land at FAWK. The SAAF was adamant, no authorisation no landing. Calle flew up all the way from the Cape on the morning of the photo shoot, so you can imagine his reluctance to start the journey without having the authorisation in place. But when you eventually get hold of the correct person in the SAAF you can get it done.

I am fortunate to be a part of the local AHRLAC development so I wasn't going to miss this, but let's face it light planes are more fun so I arranged to fly in to the shoot in the Safari. Okay, so I didn't give them much of a choice, but I am grateful nonetheless.

Unfortunately not everyone could bring their aircraft, for some it was too far and too expensive, others were not able to get CAA authorisations to fly or were scared away by the paperwork. Others we could not get hold of and some even forgot. To those who did make it, thanks.

The most impressive arrival was undoubtedly Uys Jonker in the JS1 'Jet' glider. Having been aero-towed all the way in from Potchefstroom they released the glider over the runway, popped the jet engine out and proceeded to do a fly-past.

We invited a number of aviation photographers but Athol Franz was given the prime seat in the EC-130 helicopter photo-ship. During the briefing we all agreed that this was a South African effort and that at least one of the photos taken would be freely available to all to use.

So how many of these local-is-lekker aircraft can you identify? Paul has undertaken to do this again in two years' time at the next AAD, so we hope to see a whole lot more aircraft there next time.



Proudly South African aircraft, download the photo from eaa.org.za



The briefing .



The EC-130 photo-ship, provided by Fortune Air.



Sling 4-4-40 Challenge

- Stephen Haupt, Images courtesy of TAF

Starting with flying the Sling 2 prototype around the world in 2009, The Airplane Factory (TAF) has consistently set higher milestones for itself through the years. The Sling 4, a four seat model of the original Sling, was first flown in 2011, and promptly flown around the world in the opposite direction, as one does with a prototype aircraft. In the same year, TAF decided to show the aviation community just how simple it is to build a kit Sling, by assembling a Sling 2 kit in 7 days, with 5 factory employees, and 5 people who had never touched a pair of pliers, no matter a rivet gun. The Africa Aerospace and Defence show, held at AFB Waterkloof this September, was the perfect setting for an even bigger challenge.

The Sling 4-4-40 challenge –

build a Sling 4 kit in 4 days with 40 factory staff, all in the midst of a world class airshow, far from the factory.

The build was set to start on Wednesday 23 September, but the planning for this huge undertaking had taken weeks. The kit was packed at TAF's home base of Tedderfield Airpark, including some preparation such as prebuilt fuel tanks due to the drying time of the sealant. Mounds of paperwork was completed to allow this build to happen on an active air force base, and logistics had to be arranged to have catering for the staff available throughout each day, transport of the kit and all tools, as well as the daily transport of both day and night shifts of factory workers from Tedderfield to Waterkloof.

At 09h00 on Wednesday, the build was started inside a fenced off area under gazebos in the general aviation area of the show. Fantastic progress was made on day 1, with the centre and rear fuselage being constructed and joined, the undercarriage assembled, and the engine wired and awaiting assembly. During the half hour handover period between the day and night shifts, there were up to 32 people working on the aircraft at once! The night shift exceeded all expectations. During their 14 hour shift, the undercarriage was installed, the engine was mounted, and the wings three-quarters built.

Day 2 started with an inspection of the aircraft by Mike Blyth, who then called the staff together to announce that the build was so far ahead of schedule, that there was no need for a night shift that night.



The build continued with instrument panel and engine wiring, ballistic parachute installation, and huge progress was made on the wings and empennage.

Day 3 saw the wings and empennage being mated with the fuselage. The cowlings and spats were fitted, all fluids filled, and the lights and avionics tested. Hordes of people watched the build from behind the crowd control fences, all giving great words of support, and urging the team on. The aircraft was wheeled out of its fenced confines for a celebratory team photo. James Pitman gave the team words of encouragement, and emphasised how it had taken Mike and himself four years to build the first Sling. At this point, it was discovered that even after completing reams of paperwork, writing countless motivational letters, submitting test flight action plans and flight plans and actually receiving confirmation that the initiative is fully supported, the planned test flight on Sunday had not been put into the programme.

With day 4 being the first day of the public airshow, the team was surrounded by onlookers at all times. Both local and international media were vying for interviews with the team at all times, and publicity for the company went through the roof. A final inspection was done, the aircraft fuelled, leather interior installed, decals applied, and all paperwork issued. With Andrew Pitman's fantastic work, a slot was secured for an engine run that afternoon and for the test flight the following day. The Sling 4 was released from its cage again, and pulled through the crowd to show centre, where the key was turned and the engine burst to life to great cheers and applause from the crowds. A Sling 4 was born in 4 days!

The completed Sling 4 ZU-TES (a test registration assigned to the factory) was on static display on Sunday before the big moment. At arguably the biggest airshow on the African continent, James Pitman took to the skies before thousands of people to complete the first flight; the aircraft performed flawlessly.

Having a close look at ZU-TES, one will find that the quality of this aircraft is absolutely top notch. Throughout the build the team insisted that speed does not mean lack of quality, and this is definitely true considering that after returning to the factory for paint, this aircraft will be shipped to the USA to become the demonstrator aircraft for the US distributors in California.

Huge congratulations are in order for every one of the forty staff that contributed to this massive achievement, showing just how capable the South African aviation industry is.

Who will be the first EAA member to build a Sling 4?

Day 2



Andrew showing his excitement at being ahead of schedule.



Instrument panel installation.

Day 3



Fuselage being wheeled out to meet its wings.

Finished product, ready for its first engine run.

Day 4



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Feedback - Pietenpol ex-Chapter 322

The PBHS Aeronautical Society is making steady progress on the Pietenpol static restoration which EAA kindly donated to the school. We secured some sponsorship and so are trying to do most of the work with proper materials. Some of the centre sections seem to have gone astray (or were never made?) and so we are having to make those. We started fabric work a few weeks back, which the lads are enjoying - many have taken to the basic techniques very quickly. Watching boys doing something practical is very rewarding - many of them have, I'm sure, never handled any type of tools.

Unfortunately we probably won't be able to display the project at our Petit Fly-in, but will attempt to have it ready for several events next year. It would be good to affix a few EAA stickers on the plane when finished. - John Illsley



Condolences



Heartfelt condolences to Arthur Piercy on the passing on 27 September of his father Cyril Piercy, EAA Chapter 322 Member - Karl Jensen

I received the sad news of Cyril Piercy's passing from Stephen Theron, our EAA 322 Secretary. I did spread the sad news far and wide, because so many people know Arthur and would want to think of him at this time.

To Arthur, my friend, I can safely say that I speak on behalf of the EAA and many others who know you. We are deeply saddened at Cyril's departure to that big cockpit in the sky.

My short acquaintance of just a few years with Cyril showed us all that he was an extremely good person and an obvious pillar in your life. I hope that in his passing, the memory of him will be a celebration of a very strong man who had a big heart. We all saw the way he cared for you and supported your aspirations. I hope that I can be a person of such strength to my family if ever the need arises. You have our best wishes and condolences at this sad time.

With fond regards to you and Gerda. May Cyril's soul rest in peace.

CONTACT! Is the official newsletter of EAA of SA. This edition was compiled by Gus and edited with love and kisses by Trixie Heron. All material is gratefully received from Chapters, members and non-members alike. Remember that this is your newsletter, so please submit material as it happens to Gus (contact@eaa.org.za) or Trixie (editor@afskies.co.za). Our grateful thanks to all those who regularly support our newsletter and our EAA organisation.