



www.eaa.org.za

July 2016

BRAKES ON ... THROTTLE SET... CONTACT!



*Race for Rhinos at Kubu Island, Makgadikgadi Pan, Botswana.
Greg Clegg (Chapter 322) and Wendy Mills participated in a Sling 2.*

Whassup!

Wed 06 July
Chapter 322 Meeting
Dickie Fritz MOTH Hall, Edenvale

Fri 15 - Sun 17 July
EAA Taildraggers Fly-In
Nylstroom

Thurs 11 August
EAA Flying Legends Talk Show
EAA Auditorium Rand Airport
Guest: Petrie van Zyl

Inside this issue:

C-Wolf Project Visit	2
Last Man (Machine) In Town	6

Flying Legends	8
Chapter 322 Meeting	10
EAA Airmail	12

C-Wolf Project Visit

- Gus Brown, Chapter 322

Saturday 11 June saw about 35 Chapter 322 members and guests converge on Vormbaum Engineering in Johannesburg to inspect Wolfgang's C-Wolf project and enjoy some yummy breakfast rolls supplied by his wife Cheryl, ably assisted by Anja, Stefan, Ilse and Frik.

I first saw Wolfgang's C-Wolf concept at the 2012 AAD expo at Waterkloof AFB. After having received his build number in 2008 and starting to build in earnest since 2011 it was displayed there in bright orange to the public for the first time. The aircraft will again be displayed at the 2016 AAD Waterkloof, but this time as close to a flyable aircraft as they can get it 'without sacrificing quality'. Wolfgang says he intends to start with taxi trials and verifying the engine cooling shortly after the expo. He has already lined up the ex OC of the Test Flight Centre in Bredasdorp, James O'Connell, and Barry Zaayman as the flight test engineer. Test flying will happen as soon as they are ready at the Johannesburg Light Plane Club located at Syferfontein, aka Baragwanath airfield.

A company has been started, with Wolfgang's business partner André, to manufacture the aircraft, with Wolfgang heading up the design and development.

When asked why he started this project, Wolfgang said,

"I messed around with sketches of my ideal aircraft during the '80s and kept on doodling with it over the next twenty or so years. When my wife Cheryl burst my bubble and said that she would not sail around the world with me in a yacht I had bought the plans for, (a Dix 45' radius chine steel centre cockpit) but agreed to do it in an aircraft, the search was on for an aircraft I could build that could do what I had on my wishlist:

***1000lbs useable load,
40kts stall speed,
270 Degree view,
Stable flight characteristics
Cockpit at least 5' wide
Relatively low fuel consumption
Cruise speed of 120kts
Capable to land on rough runways.***

"I could not find anything that came even close to these requirements and, having designed and manufactured industrial machinery for various industries since 1985 (among others: vacuum formers, computerised rolling mill with 4 flying shears, cardboard slitting and creasing machine, rolling mill with integral decoiler and slitter, as well as punching and batching of components, touch screen operated heat sealer with folding, punching and slitting and batching of 6,000 packets an hour) I thought it was time I built something for myself for once. An aircraft is after all only a machine, admittedly a very different one, but it is governed by the laws of physics, just like everything else. The information is out there, it is just a matter of gathering it and sifting through a heck of a lot of it to make it happen.

"The initial design and calculations took me about 1,400 hours.

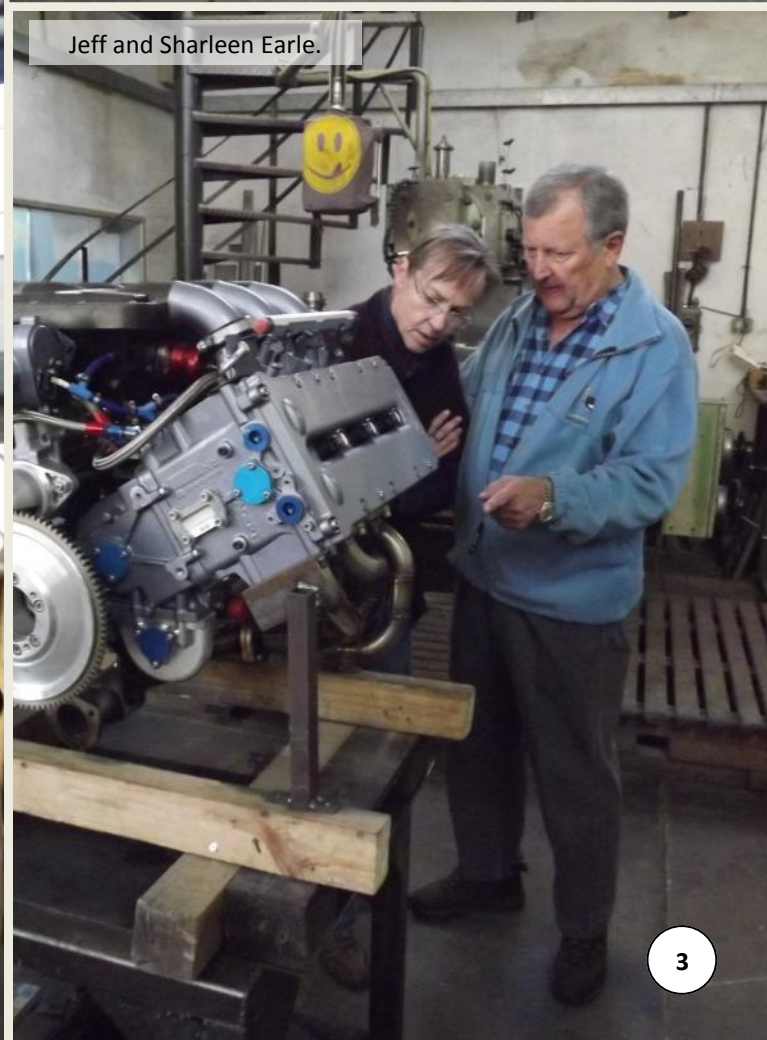
"Once I started the design and did the calculations and drew and redrew the lines and layouts, the large tyres, (850 x 6s) created a lot of drag. To reduce this, I put large spats on them. When I added a beefy strut to support the wheels, it started to look very much like some of the old Dorniers, and I was tempted to investigate the possibility of making it amphibious. The weight penalty was not all that frightening, but the added safety of the massive structure under the cabin to take the pounding of the water made me decide to take the concept further.



Stephen Theron and Jeremy Woods.



Jeff and Sharleen Earle.



The supports for the undercarriage morphed into a wing, which generates 12% of the total lift and at the same time works well in ground effect on the water, as well as protecting the propeller from spray and possibly stones. The spats then changed into pontoons and the concept became all the more complicated with retracts being planned for the water landings. The added benefit of this massively strong hull is that, when not if, someone one day forgets to extend the undercarriage on a runway landing, the built in plastic rubbing strip in the main hull will merely skid across the tarmac and the aircraft will tilt onto one of the pontoons at the end of the runway. The engine and propeller will be completely unscathed. The aircraft merely needs to be lifted, the undercarriage extended, and the red faced pilot can fly again without too much ado."

When asked if he was still happy he started the project he replied,

"Yes definitely, I just wish it would come to an end now, so can start enjoying and selling it. I can't wait to fly it to Namibia or one of the Portuguese Islands, and then further afield."

Wolfgang has always been a lateral thinker, having developed machines for customers as far away Belgium and Nigeria, and he loves coming up with new solutions to mechanical issues, even though the process seems to drive his wife Cheryl nuts at times. So it's not surprising that the airframe has a number of interesting innovations – I recommend that, should you get a chance to see the aircraft at AAD, you go and inspect them for yourself.

The C-Wolf uses a 320hp turbocharged V6 locally developed engine supplied by ADEPT Airmotive (Pty) Ltd at Virginia Airport, Durban, founded in 2003. The first engine flew on a Ravin aircraft and, while the company went through some turmoil in 2014, it seems to be back and supporting what is probably going to be the first production engine to fly. The C-Wolf's engine was delivered to the project in March 2014 and then sent back to the factory to have the stainless steel exhaust system manufactured, and for the engine to be dyno tested under load. It easily produced the advertised 320hp, and has run 30 hours on the dyno since without any issues and performing as expected, with the fuel burn figures being right in the ballpark of what was promised.

Wolfgang's closing comments,

"A new engine and a new airframe is a notoriously difficult thing to get right, so we are doing whatever we can to minimise the risk."

"I'm looking forward to checking how quickly it spins up that five-bladed MT Prop, seeing it has in excess of 1000Nm of torque."

"I would like to thank my wife Cheryl, for taking (most) of my ...; my partner André, for having the patience for me to do things right; our draughtsman Elrick, for his beautiful renderings and drawing; my son Stefan, for his diligent work and clever ideas; Anja, his girlfriend, for putting her plans to study on hold to help us complete the project in time."

Here's wishing Wolfgang and his team everything of the best for completing the C-Wolf project as planned.



Project Update:

The vertical stabiliser skin and ribs have been bonded to the twin spars, the moving surfaces have been cut, the radii on the leading edge of the rudder and airbrake have been installed and are being faired.

The main wing has its ribs installed, the fuel caps are ready to get glassed in. The spar box has been installed in the fuselage and the glassing in is presently being undertaken. (20 layers of glass). The structure supporting the main spar and the parachute attachments will be bonded and glassed thereafter. Each individual mounting for the chute has to be able to withstand a force of 10 tons! Once this is cured, and the structure is strengthened in this manner, the engine installation can begin in earnest.

While the engine installation is being undertaken, the wings will be removed once more and aligned in its assembly jig for the flap mechanisms and ailerons to be installed and the fuel tanks to be sealed before the bottom skin is bonded on to close up the wing.



The second seat is being machined and assembled, ready for glassing.

The instrument panel is being reinforced in various places to support the instruments.

All the instruments and various other electrical goodies have arrived and the wiring loom is being designed, mostly 24V.

A new set of windows is also being manufactured.

Wolfgang Vormbaum, Chapter 322



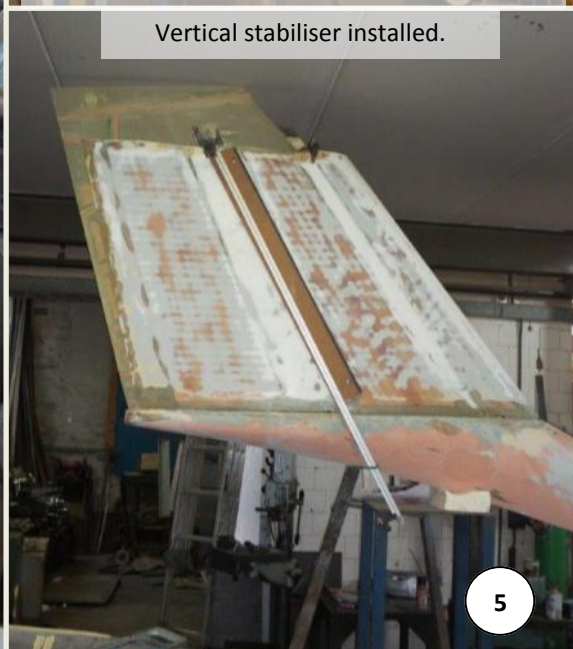
Spar box tube with phonolic blocks for bolts and parachute mounting.



Main wing fitted for bonding of spar box to fuselage.



Vertical stabiliser with airbrake mechanism.



Vertical stabiliser installed.

Last Man (Machine) In Town

- Dave Lister, Chapter 322

I approached Bryan Belcher with regard to flying down to Mossel Bay for the 2016 EAA Convention. After our discussion, we decided to go on Friday 29 April and return on Monday 02 May. We would get airborne at 09h00, stop for fuel at Kimberley, change pilots, and arrive at FAMO at approximately 15h00.

Simple plan of action... yes – well? This is what transpired.

I drove out to FAKR at 08h00 on Thursday 28 April, as the weather on Friday would close FAMO. Bryan arrived late and we still needed to fuel up. Take-off was eventually at 11h00. It was on the approach to FAKM, when I asked Bryan to select main tanks for landing, that I was aware of him making some extra adjustments to the settings on the fuel selector, using the cross-feed. After parking, Bryan started to check the selection situation, while I organised fuel and landing fees. He put the selector on main tank only, and we also decided to make an extra stop at Beaufort West. After take-off I turned onto heading, when Bryan said we were losing fuel pressure, again cross-feed was used. We decided to head for New Tempe, as Bryan said; we needed 'tools'. ATC were very helpful during this time and even called the AMO to tell them we were on our way. Once we had landed, the guys got to work, removing the front seats and selector box to sort out the damaged cable. It was 2 ½ hours later when Bryan fired up the engines. We took off at 18h00 for George, as there was reported broken cloud on the coast and we had not been able to establish if the runway lights at FAMO were operational. After climbing to FL 100 and in the cruise, Bryan asked me to take the controls so that he could study the Let Down at FAGG. He left me there for the next 2 hours, flying through the dark, but it was nice to refresh my night rating. As we got near to FAGG we did not see any cloud, but could make out the black silhouette of the Outenique Mountains. I switched my GPS to FAMO and, when we established a clear line of sight, headed for the Mossel Bay lights and, as I am familiar with the area, guided us to the airfield for an excellent landing in high winds made by my pilot; it was now 21h45, the last aircraft before the weather moved in.



Once we parked, I shot out of the cockpit, as I only saw one vehicle in the car park. On entering the clubhouse, I was greeted by the Barman and his wife and one other guy. In no time we were helped to reposition the aircraft for suitable parking, and they then got the hotel on the line so I could confirm our booking. After a quick beer, we were taken down town to check into our accommodation. What a welcome from the Mossel Bay club members, which continued for the rest of the weekend.

A wonderful time was spent with a well organised programme of events, and concluded for us by the Awards Dinner, which was expertly run by Mike Brown.

We decided to leave on Sunday 01 May. A check (chick) navigator joined us on our flight to Saldanha via the coastline, past Agulhas, Hermanus, around False Bay, Cape Point, Robben Island, and finally to FASD for the night stop at Shelly Beach.

The following day we flew direct from FASD to FAKR in 5 hours with our chick navigator watching our progress from the back row of seats. We landed at sunset and, as we were unloading the aircraft, a 'weatherbeaten' Ricardo De Bonis, who had only arrived from Makwassie 15 minutes before us, helped push the aircraft into the hangar.

What a great Convention weekend, and thanks to all who made it possible.

Aircraft: 1959 Piper Apache Reg. No. N4217P
Pilots: Bryan Belcher & Dave Lister
Chick Navigator: Trixie Heron
Total flying hours: 15.7

PS – It was fun, fun, fun! There are no words to express my thanks and appreciation to Bryan Belcher and Dave Lister for an unforgettable flight. We got breathtaking close-up views of every nook and cranny of the coastline, all the way from Mossel Bay to Saldanha, followed by mountain views and wide open vistas that seemed to reach to eternity, all the way from Saldanha back to Krugersdorp. No wonder my head was floating in the clouds for days afterwards!

– Trixie, aka 'the chick navigator'.

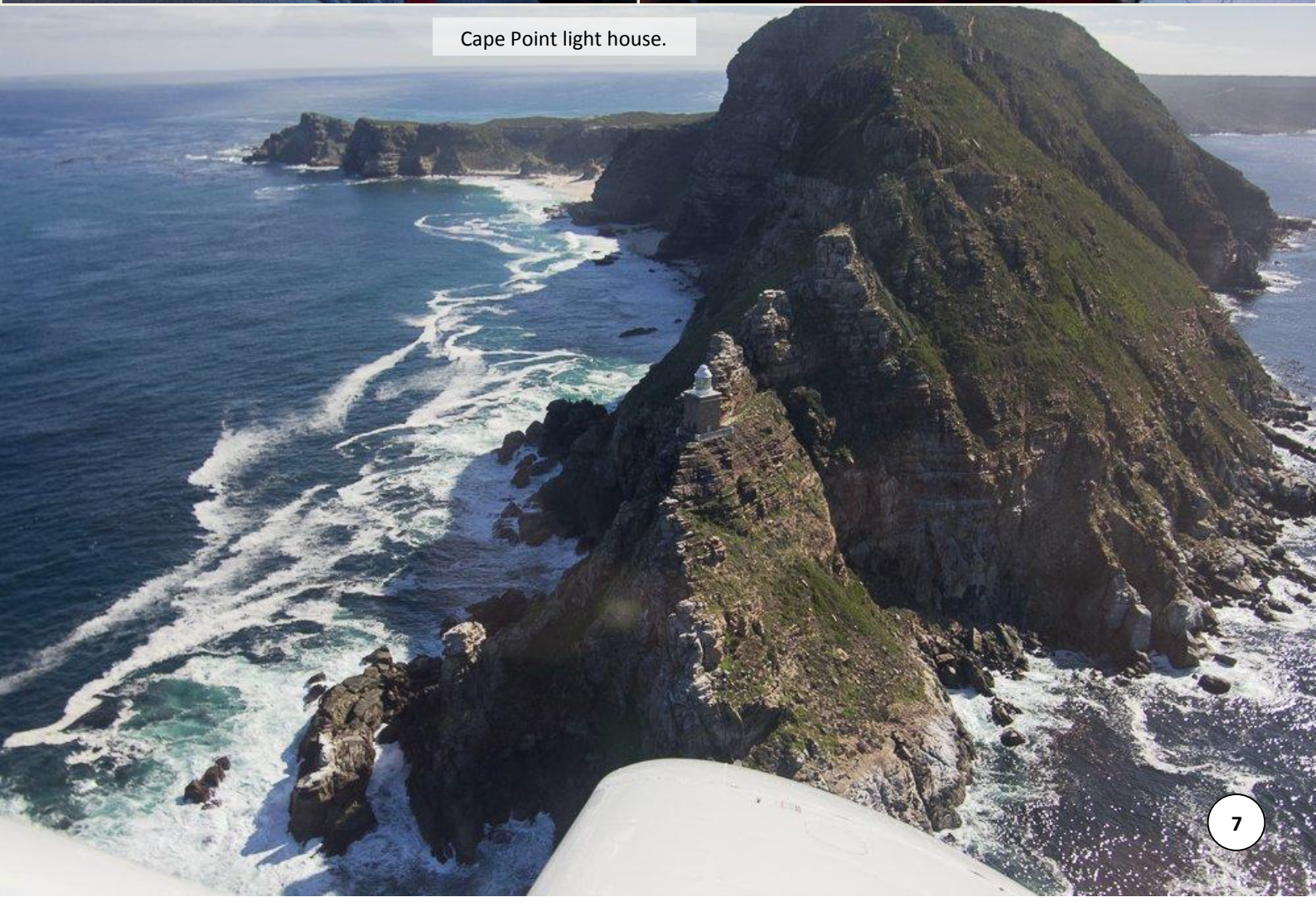




Dave Lister.



Trixie Heron.



Cape Point light house.

Flying Legends

A 'Flying Legends Talk Show' with a Difference

- Gordon Dyne

On Thursday evening 09 June, a packed EAA Auditorium at Rand Airport welcomed as its guest to the 'Flying Legends Talk Show', well known aeronautical engineer Rob Jonkers. The Master of Ceremonies (MC) was well known helicopter pilot, the relaxed and charming Eugene Couzyn, who was making his debut in the 'hot seat'. It was appropriate to have a chopper pilot interviewing Rob, for Rob's talk was mainly centred on the world class Rooivalk helicopter, which he was instrumental in designing. Eugene has been flying helicopters for decades and presently owns and flies a stunning Aerospatiale Alouette II and an Aerospatiale Gazelle, both of which saw action with the French Army as it dealt with uprisings in France's troublesome African colonies in the 1960s and 1970s.

Why do I say a Talk Show with a difference? Well, over the ten or more years that the 'Flying Legends Talk Show' has been in existence, the vast majority of our guests have been – well literally – 'Flying Legends'. We have had Spitfire pilots from World War II, South Africans in the Royal Air Force, Korean War veterans, probably some Vietnam veterans, Gulf War heroes, airline pilots, aerobatic pilots, South African Air Force pilots from all of South Africa's conflicts and even a number of pilots from overseas, mainly England and the United States of America. The list is endless. The common denominator is that almost every man was a top class pilot with a pedigree to prove it! I cannot remember if we have ever had any female pilots, but we did once have an insurance broker! So tonight the focus was on a man who 'built a legend'.

So, although Rob is primarily a brilliant aeronautical engineer who builds simulators at home in his spare time, he is also a pilot who flies a Cessna 210 and a Rheims Rocket, and has also been awarded his Springbok colours for rally flying on many occasions. What a great all-rounder!



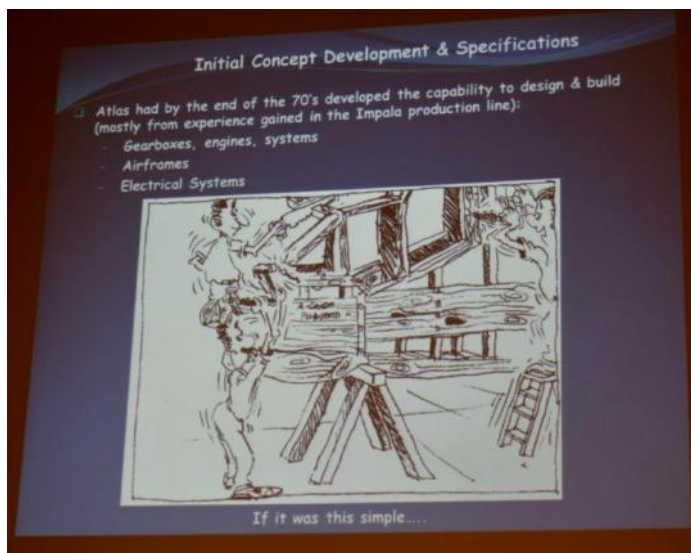
Eugene gave the attentive audience a resume of Rob's early career, elaborating on his amazing education, before allowing Rob free rein to concentrate on the task which focused Rob's brain and skills for almost 25 years – the design and building of South Africa's own world class attack helicopter, the Rooivalk. Rob was part of a team of almost 1,250 people who gathered at Atlas Aircraft Corporation (now Denel) in the early 1990s, of which approximately 500 were engineers. Those were the days when our universities turned out brilliant young aeronautical engineers. Sadly, not so many students focus on this discipline today. South Africa was still isolated from the 'real world' due to its continuing apartheid policies, but, thanks to the genius of men such as Rob, the brilliant Rooivalk was created. Rob's outstanding talk was punctuated by some superb videos and photos of this amazing aircraft. Sadly, as we all know, without labouring the point, despite some tremendous marketing, advertising and brilliant stunt flying at many airshows and in many countries over the next decade or so, the Rooivalk never quite 'took off' on the world market. Rob took part in most of these overseas trips and one can only imagine the heartache and frustration for Rob and his team, having a world class helicopter, but no significant sales to show for their incredible efforts and the ingenuity of this amazing machine. One can blame politics and the Americans, who frequently threatened retaliations if countries chose the Rooivalk over their own Apache, and possibly the non-availability of spares and 'back up' in a country whose political landscape was changing by the day.



L-R: Jeremy Woods, Eugene Couzyn, with Vera, Rob and Jenny Jonkers.

There was not one Air Force in the world that had a history with the Rooivalk, which was a stumbling block, and it was some time before the South African Air Force's (SAAF) 16 Squadron (which had been disbanded in 1990 after a long and distinguished history) was reformed in 1999 and now flies the Rooivalks. Only 16 were ever built. One I believe crashed, two are in the Democratic Republic of the Congo (DRC), and the remaining thirteen are with 16 Squadron. However, one wonders how many of these are in flying condition, when one reads about the fate of the Saab Gripens and the BAE Hawks.

Oh, I almost forgot! The Chinese wished to buy just ONE Rooivalk, but Denel politely and correctly said 'No!' Denel knew that the Chinese just wanted to buy one Rooivalk to reverse-engineer it and then probably sell the finished product back to South Africa for half the price! Do you remember how the Russians reverse-engineered a Boeing B29 Super Fortress which fell into their hands in 1944, and then produced an exact look-alike, known as the Tupolev TU-4 'Bull', which served as Russia's front line bomber for the next twenty years?



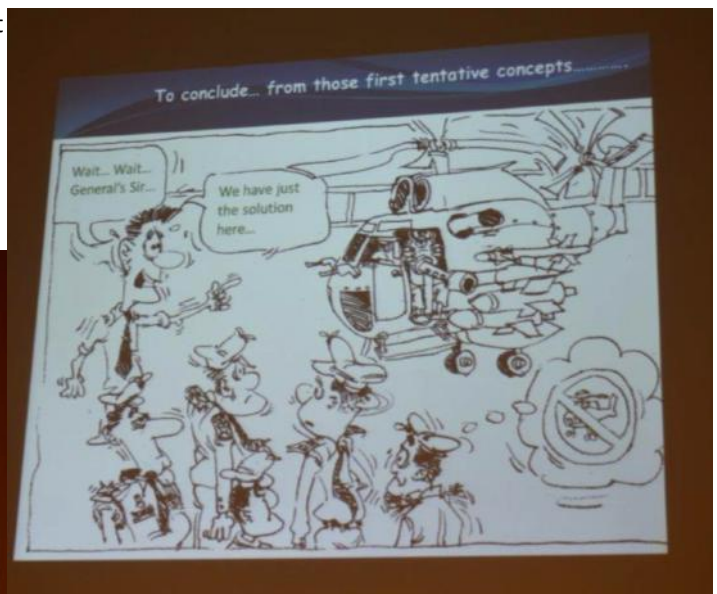
Today, the only two Rooivalks flying outside South Africa are flying for the United Nations (UN) in the Democratic Republic of the Congo (DRC) and are crewed and maintained by members of the SAAF. These two amazing craft, flying in white UN colours, have surprised the M23 rebel forces on several occasions – and those rebels who have not been killed have disappeared into nearby Rwanda, wondering "Where the hell did that fire storm come from which destroyed most of our armoured vehicles and killed many of our comrades?" Rob told us that the UN would like Denel to reintroduce a production line for the Rooivalk, but that is just not possible today. Most of the early engineering team are long gone, the cost would be prohibitive, and the technology is more than twenty years old.

One highlight of the evening was a moment of great humour, when Rob showed us the damage caused to the windshield of a Rooivalk after being hit by a vulture during a very low night flight. There was some serious damage. A few seconds later the video switched to the Rooivalk firing all its missiles at a distant target and some 'wag' murmured quietly, "Was all that firepower aimed at the vulture?" Good one!

So ended another fascinating, albeit different, Talk Show. Thank you very much Rob, who was accompanied by his lovely wife Vera and daughter Jenny, for a terrific evening. I struggle to change a light bulb, so I am green with envy at your genius. If only I had studied harder at school...

Well done, Eugene Couzyn, on your debut as Master of Ceremonies. Brilliant!

Thank you to Jeremy and Anne-Louise Woods, Trixie Heron, the braaiers, the barmen and the helpers for putting together another tremendous 'Flying Legends Talk Show'. Thank you, too, to the regular audience who support us month in and month out.



There will not be a Talk Show in July, so our next date will be 11 August. This time our guest is another 'Flying Legend' in the form of Petrie van Zyl. Petrie is a former SAAF Mirage/Cheetah/Rooivalk pilot, a Denel test pilot, and he now spends his time teaching the Chinese how to fly helicopters. Petrie spoke to many of us at a forum during the recent EAA Convention in Mossel Bay. It was a brilliant talk, so do not miss Petrie in August.

Thank you.



Chapter 322 Meeting



- Gordon Dyne

As I predicted, Lt John Henry Joseph Martin (500 hours on Spitfires), 7 Wing 4 Squadron South African Air Force (SAAF) retired, lit up the 02 June meeting of EAA 322.

Thunderous applause greeted the return of flying legend John Martin to the centre stage at the Dickie Fritz MOTH Hall on Wednesday evening 01 June for the monthly meeting of EAA Chapter 322. It is amazing how much noise some 80 people can make. I thought the roof might come off! John celebrated his 93rd birthday the following day, and a rip-roaring 'Happy Birthday to you' filled the night sky. I presented John with a jumbo-sized birthday card, which everyone present had signed. My elder daughter, Victoria, had enhanced the card with some lovely artwork. I know John was very touched.

I had the honour of introducing John and his lovely younger daughter, Michelle Zuccolotis, to the meeting and, through a veil of tears, described how meeting this wonderful humble Christian former pilot and businessman had changed my life for the better. John spoke articulately and with loquacity for more than 45 minutes. He never missed a beat, and his memory was as good as it had been during those dark days of the Italian campaign during the latter part of the Second World War. Thank you, Captain Karl Jensen, for assisting John with your usual superb Powerpoint presentation.

Terrific show, Lieutenant! Thank you. We are all looking forward to your centenary! May you live forever.

During the first half of the meeting, 322's Chairman Dr Mike Brown had run through the usual formalities which are a necessary part of any club meeting. Mike's visual presentation was interspersed with some stunning pictures of Spitfires to prepare the audience for Lt Martin's talk after the break! Nice one, Mike! Thank you for making John so welcome. Unfortunately, our Hon. Treasurer and former Mirage pilot Mark Clulow was delayed in Cape Town, but the slides that he had prepared for the meeting showed clearly that EAA Chapter 322 is in a very healthy financial situation. Thank you to our members for paying your accounts so timeously, and to Mark for his fastidious work.

One aviator I had not expected to see that evening was our octogenarian pilot Claus Keuchel, who very sadly had lost his beautiful wife Edna, a true English rose, a few days previously. This lovely, well liked couple had been together for over half a century. Claus was very brave to attend as his grief must have been overwhelming, but I guess he sought solace with fellow aviators and longstanding friends. Claus participated in the meeting, and when Mike Brown suggested that someone here, with a few rand to spare, might care to buy a Spitfire, German-born Claus very quickly responded with, "If you buy a Spitfire, then I will buy a Messerschmitt!" Nice one, Claus!



Mike Brown presenting John Martin with the commemorative ash tray.



John Martin's daughter, Michelle Zuccolotis, with Clive King.

Well done! A perfect riposte!

Before the meeting closed, Mike Brown presented John Martin with a beautiful cut glass SAAF ashtray, which had belonged to Mike's late Dad, who had also served in 4 Squadron in Italy during World War II with a ground crew. Without these wonderful ground crews, whose work was critical to keeping the aircraft in the air, there would not have been any aircraft to fly. A great gesture, Mike. Thank you. It must have been very difficult to part with a memento which I am sure meant so much to you and your family.

So another tremendous evening with 322's aviation mad members drew to a close. Well done, as usual, Chairman Mike and your team. I must mention acting secretary Marie Reddy, who always lights up the stage with her beauty, efficiency, accuracy and competence. Thank you Marie. Of course 322 could not operate without Trixie Heron, our wonderful PR lady who runs almost everything and picks up any loose ends. The evening would never even 'get off the ground' without the good folk of the Dickie Fritz MOTH Hall in the shape of Eddie and Jean in the bar, quenching our enormous thirsts, and Wally and Anne Ferreira and their helpers in the kitchen, who keep our tummies full. This evening we enjoyed some delicious 'home made' quiche. Thank you all.

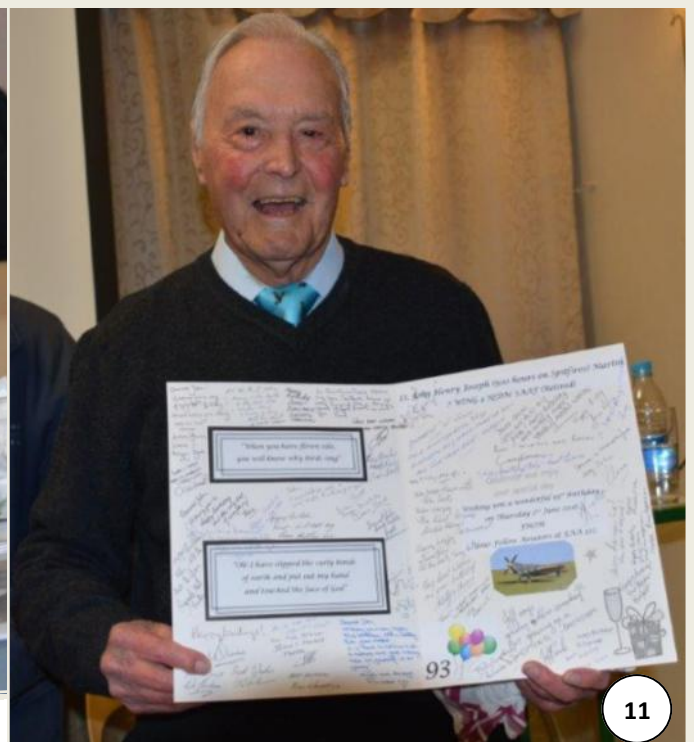
Our next meeting will be on Wednesday 06 July. Same time, same place. Hope to see you all there. For more information on South Africa's biggest, busiest and best EAA Chapter, please visit the website www.eaa.org.za Thank you very much.



John Martin and Gordon Dyne.



Clive King.



EAA Airmail



A special thanks to William Woods for the surprise flight in his immaculate classic Piper J5-A Cruiser. The J-5 was featured on the front page of CONTACT! in June 2015 .

- Gus Brown, Chapter 322



Karl Jensen with Eugene Couzyn and his magnificent Gazelle, at the foot of the incredible 120m high Tsitsa Falls in Pondoland, in June.

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 (news@eaa.org.za). We want your flying news! Our grateful thanks to all those who regularly support our newsletter and our EAA organisation.