



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



www.eaa.org.za

May 2016



Nico Brandt's Maule Rocket ZS-LLV that has recently been sold to Jayson van Schalkwyk
Photo by Garth Calitz Warlock Photography



Whassup!

Wed 11 May
Chapter 322 Meeting
Dickie Fritz MOTH Hall, Edenvale

Please note there is no
EAA Flying Legends Talk Show
In May

Fri 29 April - Sun 01 May
EAA National Convention 2016
Mossel Bay

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Chapter 1502 Meeting

- Chris Hicks

EAA Chapter 1502 held its April BS Session in Noel Drew's garage in Cowies Hill, Pinetown at 17h30 hours on Wed 13 April. Glorious mild weather conditions prevailed.

The purpose of this gathering was to socialise, display the project to wannabe builders, and inspect the excellent workmanship of Noel's third RV, this one a RV 3. Noel is being assisted ably by our Treasurer, Mervyn Roberts, who has also built 2 previous RVs. Mervyn and his son have built Noel's wings.

The very disappointing member turnout was a blessing in disguise. Most of those present were aircraft builders themselves, so the general discussion was intelligent and purposeful... until the lagers started taking effect.

Critical eyes were cast, so Noel and Mervyn were kept busy answering the whys, whats and wherefores for most of the evening, until the COMPULSORY hometime at 19h00.

One member, Jan Jefferiss, owner of an RV built by himself, with a Skybolt project under construction, travelled all the way down from Balgowan, approx 80 miles away, and returned home that evening.

Noel's project has been under construction for just over a year and is well down the track, but the completion date box has not been ticked yet.

All in all, a successful BS Session.

Other events coming up for 1502 members (and other interested parties) are:

-Vryheid Fly-in 19 to 21 May

- Glen Eland, a new venue in the Berg.

This visit could be taxing on some of the lower powered aircraft, as the runway elevation is in excess of 5,000 ft.

That's it for now. Fly safe.



Noel's RV under construction
Mervyn Roberts (assistant builder).



L to R
Alan Lorimer, Vagabond restorer,
Ian Becke, model aircraft flyer and instructor,
Grant Beattie, aircraft builder,
Mervyn Roberts, assistant builder.

Chapter 1502 Fly-in Breakfast

- Gerald Maddams, Chairman, Chapter 1502 East Coast

Chapter 1502 was kindly invited to a Fly-in breakfast at XL Farm Strip in the Underberg area by George Morphis and his family. The 17th April was chosen, because here in Natal usually enjoy great, clear flying weather at this time of the year.

The airstrip is a longstanding 'drome in the area, being on EasyPlan and in most of the airfield directories. It is close to both Himeville and Utopia Gliding Field, so diversions were easy if required.

George had arranged with some of the local farmers to get assistance in the cooking and ground organisation. The ladies certainly made the morning wonderful for those that managed to participate.

We had a week of that clear, windless weather - then Sunday dawned with low overcast from the beach to Howick Ridge. All airfields from Margate, Durban, PMB, Cato, Richmond, Ballito and anywhere east of PMB were socked in under a 3,500ft 8/8 cloud. Some attempted to find a passage out, but good airmanship and common sense prevailed, and everyone returned home to their respective departure points.

Those pilots from inland had CAVOK skies, and therefore the ladies and George eventually had some company and hungry mouths. They must have eaten well, as George always over-caters, and the arrivals were cut by plenty. 14 aircraft graced the field, and a few others drove to the site. Kokstad, Howick, Rosetta and elsewhere made it there. Well done, guys.

The members of Chapter 1502 thank George for the initiative, hard work and preparation that went into this event. Sonja (George's beautiful wife) has pronounced that the event will be repeated - and that we will be invited back.

Thanks, Morphis family. 1502 looks forward to the next occasion... and how about it, perhaps some Bethlehem and other over-the-border planes might join in?



Aero Commander Shrike ferry flight 1976

Part 2 - Brian Stableford (aka The General), Chapter 322

Tempus Fugit Continued from Part 1 - CONTACT! April issue

I landed at Dakar at midday after a 9 hour sector, and took off again within an hour. The Atlantic was flown with a compass and a clock, or, as they say, dead-reckoning. The Shrike had run like a Swiss watch, and it was the beginning of a love affair.

On account of the war raging in Guinea Bissau, I skirted this territory out to sea, and coasted in over Freetown, and on to Robertsfield, where the sun set for the second time on this journey. I landed at Abidjan at 2100 hours, after a 7.5 hour flight, some 27 hours after leaving St Johns.

I found myself at what passed for a hotel, where the room was only a metre wider than the bed, and the shower/loo was little more than a metre wide by two metres long. I guess the adrenalin was still in my system, because I was back at the airport by sunrise. The met office staff were asleep under the tables, so I just picked what I needed from what was pouring out of the teleprinters.

I was airborne from Abidjan around 07h30, and flew along the airway to Accra. From there, on a NDB back bearing, a direct track to Libreville. I decided not to trust the forecast winds out of Abidjan, and rather apply my wind lane theory. So when the wind direction changed, I altered heading. The proof of this pudding revealed itself when passing Principe, a small island to the north of Sao Tome. After some 500 nm of sea leg, I estimated I was about 5 nm off track to starboard. At this point the hazards of overflight clearances became apparent. I entered Libreville airspace, to hear the controller haranguing some hapless pilot, and telling him to exit his airspace. I held my breath as I made contact, and was relieved to overfly Libreville on track for Kinshasa. The next hazard confronting me, of which I had a brief encounter with on the leg from Freetown to Robertsfield and Abidjan: the ITCZ was crossing the equator, and so was I.

The track from Libreville to Kinshasa was a minefield of Cb's and I was most grateful for the colour radar. Most of the 500 nm leg had no beacons, and dodging the Cbs gave me little chance to see any cloud shadows on the ground. So I resolved to make alternate avoidance manoeuvres to both port and starboard. I eventually picked up the Kinshasa VOR, and landed around 16h00 after a 9 hour flight on the Friday afternoon.

What happened next, probably saved my life, as I was prepared to refuel and continue. An ATC controller sauntered up to the aircraft, and said my overflight clearance had expired! I had no idea of just how punch drunk I was. I have little recollection of that weekend in Kinshasa, except that I slept for about 24 hours.

When I got back to the airport, I was very relieved to see the same controller saunter up with my clearance. I could have kissed him, and gave him a fist full of dollars.

After filing the flight plan to Jan Smuts (Salisbury was out of the question) I was horrified to find that, on arrival, I had not

closed the transfer cocks to the ferry tanks, and the fuel gauge had dipped just below 138 Gals. Some 20 Gals had siphoned overboard. With only an eight-hour flight to Salisbury, I dared not call for the bowser and risk a delay, and calculated I now had minimum fuel.

My track took me direct to Lubumbashi via an NDB at Tshikapa, to keep me out of Angolan airspace, where the civil war was raging. My flight overland in Africa thus far, had been a dans macabre through canyons of Cbs, with little sight of the ground. For the first time I had a chance to map read, and the wisdom of the 4.5 million scale map came into its own. Such features on the map were clearly visible on the ground, though, since the Tshikapa NDB was not working. When I did pinpoint my position, I was well west of the beacon and in Angolan airspace and made a rapid course change.

I map-read my way to Lubumbashi and down the pedicle to the Copperbelt, which was uneventful, until I made contact with Lusaka. A very curt controller asked for my overflight clearance number. After about ten minutes of me mumbling, and pleading poor reception, a Zambian Air Force voice joined the conversation, and suggested that I be ordered to land at Lusaka. During the ensuing debate between them, I saw there was no reply light on my transponder, and therefore there was no secondary radar. I decided that, if ordered to land at Lusaka, I would politely agree to comply, and give a bloated ETA of my arrival. I would then descend rapidly to treetop height, to avoid any SAMs from the terr camps dotted around Zambia and make best speed to the border. The controller finally told me in no uncertain terms to vacate his airspace, and, muttering mock apologies, I crossed the Zambezi River twenty minutes later and landed at Salisbury after an hour.

It was dusk when I refuelled, and took off on the final uneventful leg to Jan Smuts to clear customs and then hop across to Lanseria. I arrived back at work after four days AWOL, and, when I reported for duty, a laconic Jack Mowatt said simply, "Go and sign for another four days leave." When I counted the remaining Travellers Cheques, there was \$1,100 remaining. At the then exchange rate of some \$1.15 to the Rand, I had over a month's pay for my troubles.

Jim Averill, who kindly helped me with the ferry, disappeared a year later, on a ferry flight. It was thought he was flying off the Angolan coast from Sao Tome to Windhoek. While doing my homework before leaving for the flight, I had spoken to 'Horse' Sweeney, a Korean War veteran and ex Air Rhodesia Viscount captain, who was then flying up in Africa. He gave me some sound advice, part of which was not to fly down the coast off Angola. He said the Russian fleet was in those waters, and if I overflew them, they would not hesitate to shoot me down.

N57130 was destined for Klerksdorp Engineering and became ZS-JUN. Thirty years later, it ended up in Dennis Jankelow's stable. The other Shrike, N81459, was not long in being repossessed by Rockwell, and I never saw it again.

Ferry flying is not for the fainthearted, and with the wisdom of hindsight, you can see the eyes of half a dozen needles that you flew through. You then realise that you had rushed in

where angels would fear to tread. It goes with the territory of adding 'Intrepid' to 'Aviator'.

But there were adventures yet to come. Flying a DC 4 to Europe, and, the following year, flying a DC 4 to New York for Swissair.

After the Berlin Airlift anniversary in 1998, flying a DC 4 from Berlin to Cape Town via Aden. The millennium brought more adventure, flying a DC 6 from Cape Town to Casablanca via Timbuktu.

The Ancient Mariner will be back.

Month / Year		MAR	1976		Day		Night		Day			Night				
Date	A/C Type	Reg.	Crew	Route	Dual	Solo	Dual	Solo	Dual	Capt	Co-pilot	Dual	Capt	Co-pilot	IF/AID	Instruct.
1	Ces 206	ZS-EDG	Self	GC-Matuba		3:00										3:30
2	Ces 206	ZS-EDG	Self	Matuba-GC		2:10										
4	PA 18 SCub	ZS-DGI	Self	Air test		0:30										
6	PA 18 SCub	ZS-DGI	Self	Local GC		1:00										
11	Ces 210	ZS-SKY	Self	GC-Lans-Salisbury		4:20										
11	Ces 210	ZS-SKY	Self	Salisbury-Lans-GC		1:00	3:10									
16	Ces 206	ZS-EDG	Self	GC-Vryburg		3:30										
16	Ces 206	ZS-EDG	Self	Vryburg-GC		1:00	2:40									
22	A-Comm 500	N57130	Self	Test flt-Okla-Tala-Ft Laud					1:30			5:00				
26	PA 23 Apache	N77TA	Self	Ft Laud-Verobeach-Ft Laud					1:30							
27	A-Comm 500	N81549	Self	Test flt-Okla-Tala-Ft Laud					2:10			4:20				
28	A-Comm 500	N57130	Self	Ft Laud-Bangor					5:40			3:50				
29	A-Comm 500	N57130	Self	Bangor-St Johns					4:50							
Type summary :-				A-Comm 500		27:20										
				Ces 206		12:20										
				Ces 210		8:30										
				PA 18 SCub		1:30										
				PA Apache		1:30										
				total:		51:10										
Prev Totals:-		130:35	Grand Total:-			6004:45										

						Single Engine				Multi-engine							
Month / Year		APR	1976			Day		Night		Day			Night				
						Dual	Solo	Dual	Solo	Dual	Capt	Co-pilo	Dual	Capt	Co-pilo	IF/AID	Instruct.
Date	A/C Type	Reg.	Crew	Route													3:30
1	A-Comm 500	N57130	Self	St John-Santa Maria							3:30			5:40			
2	A-Comm 500	N57130	Self	Sanat Maria-Dakar							5:20			3:40			
2	A-Comm 500	N57130	Self	Dakar-Abidjan							3:50			3:30			
3	A-Comm 500	N57130	Self	Abidjan-Kinshasa							8:50						
5	A-Comm 500	N57130	Self	Kinshasa-Salisbury							7:50						
5	A-Comm 500	N57130	Self	Salisbury-JS										3:50			
15	A-Comm 500	N81459	Self	Gc-Local										0:30			

Chapter 322 Meeting

Yet another great meeting - Gordon Dyne

A full house at the Dickie Fritz MOTH Hall on Wednesday 6 April greeted a suitably tanned Chairman Dr Mike Brown, fresh from his holiday in the fairest Cape.

After the usual formalities were completed, Mike handed over to Sven Kreher from Bateleurs the considerable amount of money raised by the Chapter's intrepid Marie Reddy, from sponsorship on her solo flight to Mossel Bay in December. It was an amazing effort by this dark-haired beauty, who by her own admission is not an experienced pilot. She puts many of we 'long time' pilots to shame. Well done, Marie. Sven then gave us a brief talk on what the Bateleurs association is and what it does. Thank you Sven for all the great work your team does, aided by many volunteer pilots and their aircraft.

Following this interesting talk, the new General Manager of the Aero Club, Richard Becker, accepted his ex-officio honorary membership of Chapter 322 and then gave us a brief overview of the Aero Club and why we must support it.

After the break, a very thorough working session took place on the do's and don'ts on our various flights to Mossel Bay on 28/29 April for the EAA of SA National Convention. This excellent session was run brilliantly by Mike Brown with his Power Point presentation. He was aided admirably by experienced instructors Tony Kent and Wayne Powell.

Both men have taken many such trips. Added to the 'mix' were many tips from well known Riaan Olivier from the Air Traffic Navigation Services (ATNS). Hopefully nobody will now get lost! I am looking forward to seeing many friends at Mossel Bay. Fly carefully please.

So ended another amusing, but very serious EAA 322 meeting. We all learn something new about the wonderful world of aviation at every meeting. Thank you very much, Chairman Mike Brown, for your terrific enthusiasm.

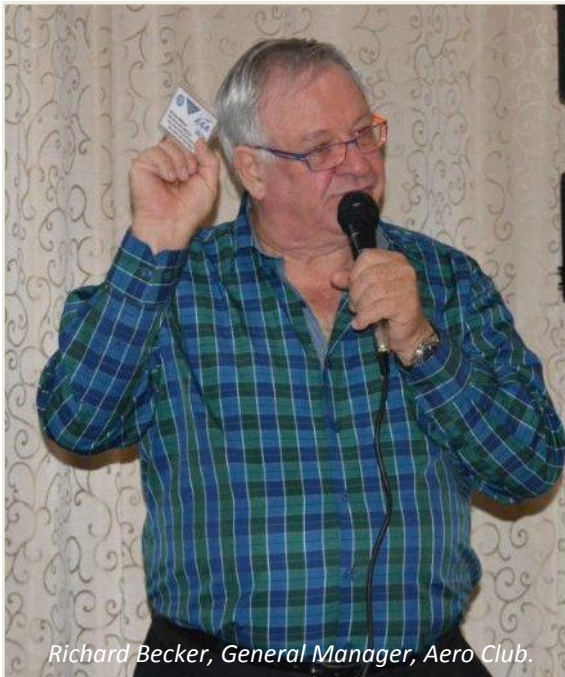
For more information on EAA Chapter 322 please visit the www.eaa.org website.

Please note that our next meeting will be on Wednesday 11 May and NOT on Wednesday 4 May as one might expect - the amended date is to accommodate members returning from the EAA Convention in Mossel Bay.

Many thanks.

Gordon

For more information about the Bateleurs, go to www.bateleurs.org.za



Richard Becker, General Manager, Aero Club.



Marie Reddy and Sven Kreher.



Mike Brown, Tony Kent, Wayne Powell and Riaan Olivier.

Flying Legends

The Royal Air Force's (RAF) Flt. Lieut. James Iain Harris graced the stage as a 'Flying Legend' at the EAA Auditorium last Thursday 14 April - Gordon Dyne, Chapter 322 Johannesburg

What an honour it was for me to host our EAA Flying Legends Talk Show last Thursday. The guest was Flt. Lieut. James Harris RAF, who has been on loan from the Royal Air Force to the South African Air Force (SAAF) since June 2014, based at Air Force Base (AFB) Makhado, where he has been instructing our young SAAF pilots on the venerable BAE Hawks.

Following in the footsteps of our normal talk show host Mike Brown, and his predecessor Karl Jensen, always leaves me quivering in my boots, but interviewing a pilot with the pedigree of James Harris was very simple because he did all the talking!

Resplendent in his Royal Air Force tropical formal uniform, complete with his medals and wings, and the Union flag adorning the wall behind him, James gave the knowledgeable audience a thorough discourse on his amazing career. A serving member of the world's oldest air force talking to an audience from the country which gave the world its second oldest air force. Amongst the audience were two South African pilots Brian Stableford and Geoff Fish who as pilots served with the RAF, albeit half a century ago! Also in the audience were at least twenty former members of the SAAF. So all in all, a real 'who's who' of two great air forces.

James had attached to the wall a number of military maps of Great Britain showing the location of a number of the air force bases at which he had served and what aircraft were stationed where.

Joining the RAF, after obtaining his degree in Mechanical Engineering at Liverpool University and flying with the University Air Squadron, James completed his flying training on Jet Provosts and Hawks before being streamed to the Panavia Tornados. This aircraft was jointly developed and manufactured by Italy, Germany and England. The first Tornado flew in 1974, but surprisingly enough, although it is more than 40 years since its introduction into the RAF, it is still the RAF's main frontline fighter aircraft. The Tornado, despite its age, is more capable in certain roles than the newer Eurofighter Typhoon introduced into the RAF in the late 1980s. The Tornado is not destined for oblivion until the 2020s.

James has been stationed in many weird and wonderful places and has helped many air forces with the training of their pilots on Hawks, Tucanos, Mushshaks (in Pakistan) and more. James and his young family were stationed in Pakistan when terrorists apparently emanating from Pakistan 'hit' the Twin Towers of the World Trade Centre on 9/11. With the world's eyes on this nuclear power, James evacuated his family back to England and followed himself a few weeks later.

We heard many tales, including James' participation in Operation Southern Watch and Operation Enduring Freedom. We heard about japes in the officers' mess, bird strikes, survival exercises, The Queen's birthday fly-pasts and many more adventures which made our mouths fall open.

I was green with envy when I compared James' amazing career, with my dull, quiet life in suburbia.

I had to draw the evening to a close at 22h20 as we were in danger of going on until midnight. Not that anybody would have really cared. The 17th April was James 50th birthday. To honour this milestone, we had purchased a very large 50th birthday card and everyone present at the talk show signed it. James was very touched. He was also presented by Jeremy Woods, the Talk Show convenor, with the book 'Vlamgat' - the story, by Brigadier General Dick Lord, of the Mirage fighter aircraft's service in the South African Air Force. I know James will enjoy this book and be able to make comparisons between his Tornado and the Mirage, both of the same era. This wonderful book features amongst others, our very own EAA 322 treasurer Mark Clulow, who completed more than 2,000 hours on this iconic fighter whilst serving with the SAAF in the 1980s. Another hero in our midst.

So ended our evening with Flying Legend James Harris. On the morning of our Talk Show, James received emails from the Ministry of Defence in London, advising him of his new posting when he returns to England in June. He has been posted to RAF Lemming in Yorkshire near to his family home where, subject to his continued good health, James will be able to go on flying until he is 60! My! How times have changed. When I applied to the RAF in 1964 (and was rejected!) a pilot was retired at 38 years of age or after 16 years of service, whichever came first. So great news James! Top prize for you! Well deserved. We wish you, Teresa, Clare, Tom, Robert and Emily all good wishes for the future. Come out to our beautiful country again soon and experience some proper flying with members of EAA Chapter 322!

Thank you very much, Jeremy and Anne-Louise Woods, Trixie Heron, the three braai musketeers and the barmen for making the evening such a great success.

Finally, enormous thanks to the knowledgeable audience which makes the evening so worthwhile.

For more information on the EAA Flying Legends Talk Show please contact talkshow@icon.co.za



Creation of the Cozy



- Barend du Plessis, Chapter 322 Johannesburg

For the past three and a half years, my wife Sarie and I have been building Cozy MkIV rotary turbo aircraft. Now, only four weeks away from completion, we look forward to starting the taxi and flight testing to confirm that everything works as planned in a safe and reliable manner.

Our journey started in October 2011 when we bought the plans from Aircraft Spruce in America. We initially began the building process with the fuselage and smaller components in our garage at home, and then, as the aircraft progressed, moved it to our hangar at Wonderboom. Kevin Hopper, the CAA AP from the Experimental Aircraft Association has been invaluable throughout the process; guiding us, carrying out inspections and making sure that all the components we built from scratch complied with the quality and technical specifications.

There are approximately 300 Cozy MkIV's worldwide, with our aircraft being one of four Cozys built in South Africa. The unique safety features, excellent performance figures, four- seat ability and futuristic looks of the Cozy convinced us that this is the only aircraft for us.

The Cozy MkIV was originally designed by Burt Rutan, the creator of the Virgin Space Ship One. Unlike a conventional aircraft, the Cozy will not stall mid-flight; instead, it automatically lowers its nose and flies faster if the plane is being flown too slowly. This immediately eliminates one of

the primary reasons of a potential accident. With its exceptional design, the aircraft comfortably seats four people and can carry up to 440kgs. It has a cruise speed of 320kph, a range of 1800kms and only weighs 476kg.

This has been an amazing journey for both my wife and me and we are proud of what we have achieved with the help and support of the EAA.





During the building process of our Cozy, we realised the exceptional design, safety and performance abilities of this aircraft, and decided to explore the possibilities of marketing and selling this amazing aircraft in the Southern Africa region. We made contact with Aero Canard in the United States that produces various plans and Kit options for the Aerocanard aircraft range, a derivative of the Cozy MKIV. Aero Canard awarded the Southern Africa region agency to us, and we will now be able to offer several options to future builders, ranging from plans, building material, quick-build kits and technical support from an approved AMO at Wonderboom airport to fit in with any potential builders' budget and technical ability.

Any interested parties can view the kit and aircraft options on our website at www.aerocanard.co.za or contact Barend at 071 305 5752 for more details.

At the Wonderboom airshow from 9-11 June we will formally launch this amazing line of Aerocanard aircraft and build options.



Jim Davis on Safety

On 15 July 2004 at approximately 0520Z, the pilot, accompanied by 3 passengers and a hunting dog, departed from Rand Aerodrome (Johannesburg) to Brosterlea farm, which was located approximately 36nm South of Aliwal North. The aircraft was refuelled to full capacity of 90 (89 US. Gal. useable) fuel prior to the flight.

According to available information, the pilot first landed at Gariep Dam en route to Brosterlea farm without uplifting any fuel into the aircraft. The pilot and passengers then departed from Gariep Dam and landed at Brosterlea farm. The pilot then departed from Brosterlea farm to a farm near Carnavon (Sterkstroom) approximately 20nm away in order to visit family members before returning to Brosterlea farm.

On 18 July 2004, the pilot, accompanied by the three passengers and the hunting dog, departed from Brosterlea farm on a return flight to Rand Aerodrome. An Instrument Flight plan was filed (IFR). According to radar information the aircraft was tracking 033°M at FL 110 at a ground speed of 150kt.

At 0851Z the pilot requested permission to descend to FL090.

At 1023Z, the pilot initiated an orbit at Rand aerodrome at an altitude of 7000ft AMSL and was cleared by the Air Traffic Controller (ATC) to join on a right-hand downwind and final approach for landing on Runway 17 at Rand Aerodrome.

At 1033Z, the pilot reported to the Air Traffic Controller: "KVV, lost my..." There was no further communication between the ATC and the pilot.

According to an eye-witness/pilot that was facing north of the taxiway for take-off from Runway 17, the pilot made a 'Mayday' call, the ATC requested the pilot to repeat his statement and it appeared that he pulled the aircraft into a nose up attitude and stalled. The aircraft entered a right-hand incipient spin and collided with two buses at the Marco Polo bus depot and nose dived into the ground.

Probable Cause

It appears that when the pilot executed a right hand turn (base leg), turning onto final approach for landing on Runway 17 at Rand aerodrome, the fuel flow to the engine was interrupted from the fuel tank due to an unbalanced turn with the tank containing less than 1/4 full. This caused the engine to fail. Following the engine failure the aircraft stalled and entered an incipient spin. Due to the low altitude the pilot was unable to recover and collided with the ground.

Jim's Analysis

I have only been in two aeroplanes where the pilots stalled accidentally. This may seem strange as I have spent most of my life instructing - which means that the majority of my flying has been with new, low-hour people who are learning how to fly. And I don't remember one of them ever stalling an aeroplane by mistake. The two accidental stalls were both with commercial pilots. Isn't that amazing?

The guy in this accident had 1300 hours, but he stalled accidentally. And I read of another experienced pilot recently who also stalled accidentally after an engine failure.

And goodness knows how many have stalled and spun trying to turn back to the field following an EFATO.

So accidental stalls aren't the things that happen at 4000'agl just after you have done your HASELL checks, applied the carb-heat and throttled back. In my experience they are things that happen when you are thinking about something other than flying the aeroplane. And what better other thing to grab your attention, than an engine failure?

This means that when anything unexpected happens the first, second and third things on your to-do list should be "Fly the effing aeroplane".

Yes, of course we all give lip service to Aviate, Navigate, Communicate. But it seems this is not enough - it should read: Aviate, Aviate, Aviate and continue to Aviate until you have the beast safely on the ground. Then, while still aviating, and only when you have time - Navigate, and when you really have nothing better to do - Communicate. It's no use bleating 'Mayday' if you haven't got the aviating bit under control. The guy in the tower can't help you while you are entering an incipient spin.

And don't think aviating is going to come naturally. When the chips are down, and everything is going wrong you have to consciously think, "Right, now I have got to ignore the smoke and the gear-warning hooter, the flashing lights and the vomiting kids, and fly this damned aeroplane all the way down to the ground."

One Airline Pilot recently shut down the (wrong) engine on a twin, and then, out of habit, undid his seat belt. Because that's what he was used to doing after shutting down. So there's no telling what you might do in a sudden emergency if you have not consciously briefed yourself to fly the aeroplane - above all things (in both senses of the term).

SOUTH AFRICAN CIVIL AVIATION AUTHORITY ACCIDENT REPORT - EXECUTIVE SUMMARY

Reference Ref: 7834

Date of Accident 18 July 2004

Time of Accident 1033Z

Aircraft Registration ZS-KVY

Type of Aircraft CESSNA 210N

Commercial Licence Valid yes

Age 55

Total Flying Hours 1338.0

Hours on Type 55.0

Last point of departure Brosterlea farm approximately 36nm South of Aliwal North

Next point of intended landing Rand aerodrome (FAGM) Johannesburg

Location of the accident site 1 nm North of the threshold of Runway 17 at Rand aerodrome.

Meteorological Information The weather was fine (CAVOK)

Number of people on board 1 + 3

No. of people injured None

No. of people killed 1 + 3

Okay, that's part of the problem with this accident. The other part is to do with fuel - well, not the fuel itself, but the C210's appalling fuel system. I have no information on which of the fuel problems caused the engine to stop, but let me tell you about known problems that have beset various models of 210s, and killed countless people.

Crossfeeding

Most, if not all, Cessna singles will crossfeed from one tank to the other, both on the ground and in the air. This can be extremely dangerous. I have bitched about this before, but here it is again.

Let's say you fill the tanks to the brim for an early start the next morning. Both tanks will still be full in the morning only if the aircraft is absolutely level where it is parked. Even a level hangar floor is not good enough - if you have a soft tyre the fuel will transfer to the lower tank and overflow on to the floor. If you are outside it will disappear in the grass and you won't notice anything until the engine stops an hour early.

You have the same problem in the air, if you fly with the ball slightly out of centre, or maybe the ball is centred but the instrument hasn't been fitted exactly plumb in the panel.

But even if everything is 100% and the ball is spot in the centre, the fuel still crossfeeds to the less-full tank. The result is that if you get 2.5 hours out of one tank you will probably only get about 1.5 out of the other. This is particularly distressing for Piper pilots who are used to timing their fuel consumption exactly and knowing precisely how much is left in each tank. You simply can't do that in a Cessna.

Killer Caps

Cessnas have a history of fuel cap problems - the recessed ones on the 210s are referred to by the Cessna Pilot Association as 'Killer Caps'. They are famous for sucking water into the tanks.

You may think that this could have nothing to do with an engine failure near the end of a long flight. Wrong - because if these caps are fitted to the earlier models (with struts) you can be in all sorts of trouble. The problem is that the strutted 210's had bladder tanks, and the tanks got wrinkles in the bottom, which allowed water to form little dams there.

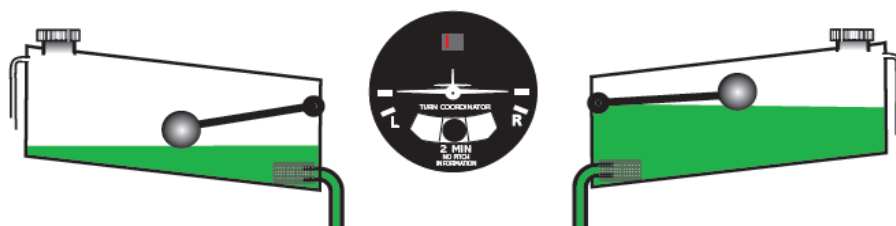
It's quite possible to have a situation where a dam might hold water while the tanks are in the climbing and level flight attitudes, but tip the water out when the nose goes down for the descent. There have been a number of 'unexplained' engine failures with 210s during the descent - which could have been caused by damming.

Vapour Locks

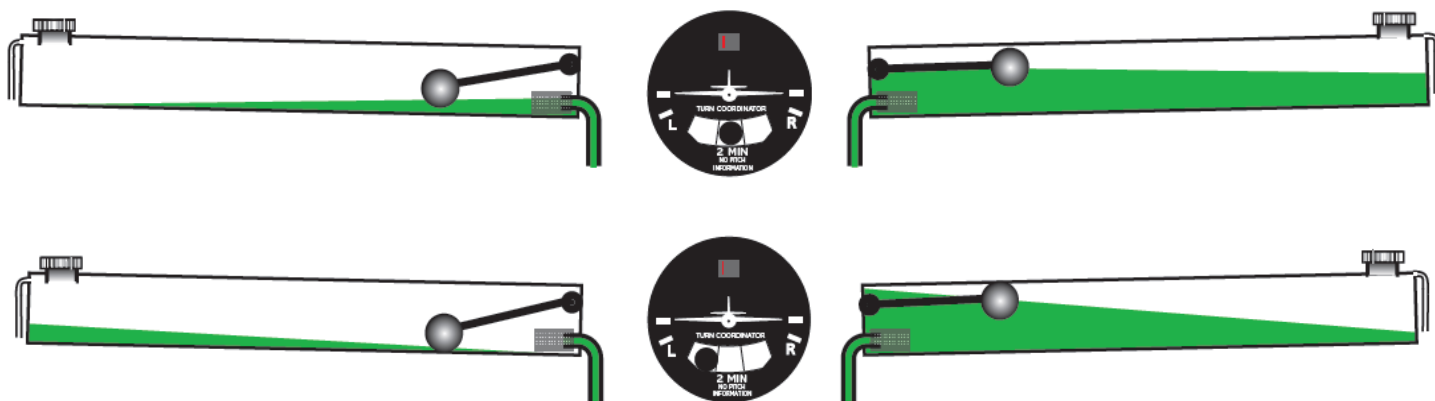
But these failures could also have been due to problems with vapour in the two reservoir tanks under the floor. The Cessna Pilot Association says:

The Centurion has a history of fuel flow fluctuations and, in a few cases, engine stoppage due to vapor locks. This has been most prevalent in turbocharged 210s from the early 1970s through the 1981 model year. The problem occurs when the reservoir tanks become filled with fuel vapor instead of liquid fuel. Turbocharged aircraft are more vulnerable because they climb rapidly to altitude and have higher engine compartment temperatures. Normally-aspirated 210s seldom develop this vapor lock problems in-flight. If they do, it is usually an indication of a mechanical problem within the fuel system.

How do you like the statement that normally-aspirated 210s 'seldom' develop this vapour lock problem in-flight? Once is more than enough for me.



A large dihedral and short tanks keep the fuel at the outlet ports



A small dihedral and long tanks allow easy unporting when the ball is not centred. Note: the fuel always moves in the same direction as the ball - regardless of bank.

Is It Full?

The bladder tanks were dropped with the struts - in other words, the accident aircraft didn't have bladders it had long thin tanks. These have their own problems: (a) It is very difficult to get a gauge to work accurately when large fuel quantities are represented by small float movements - particularly when the fuel is sloshing in turbulence. (b) High wing aircraft rely on pendulous action for lateral stability, so they don't need much dihedral. This means that when you are refueling, the aeroplane must be dead level laterally, and the nose strut must be pumped such that the aircraft sits in a slightly nose high attitude - 4.5° to be exact. You now have to fill both tanks to the brim and then wait for 'several minutes' before topping them up again. If you don't get all this exactly right you can be 40 litres short when you think the tanks are full. This wipes out your 45 minute reserve.

Unporting

This is a condition where the fuel, due to the ball not being in the middle, moves away from the tank's outlet port. This allows air to be sucked into the pipe instead of fuel, and it naturally causes the engine to stop. Obviously the lower the fuel level, and the smaller the dihedral, the more likely it is for unporting to happen.

This is what the accident investigators believe happened here. I am not convinced - it could just as easily been a vapour-lock, or water, or just plain shortage of fuel.

Unporting is one of the reasons for not doing a 'rolling takeoff' - meaning just swinging on to the runway and opening the throttle. The fuel can surge away from the outlet and the engine is likely to die just after you leave the ground. The Bonanza handbook particularly warns against this.

It seems to me that this poor pilot has fallen victim of one or more of the 210s many known fuel problems.

Why an incipient spin?

Let's think what happens when the engine stops. You get a hell of a fright, lose a bit of airspeed - head for the field, trim for the glide and bleat on the radio that you are in trouble. While this is happening there is a sudden surge of power because the vapour lock has partially recovered, or the unporting has temporarily stopped, or the engine has finished eating water. The power comes on with a blast and the nose goes way up - it does this extremely powerfully in a Cessna that is trimmed for the glide - the airspeed decreases rapidly -

probably in the turn. And before you know it she has stalled and started to spin.

I have no way of knowing exactly what happened in this cockpit - but it seems that this is the most probable sequence of events.

What Can We Learn?

1. Fuel problems are the number one cause of engine stoppages - notice we are not talking of engine failures. If the engine just suddenly stops it is almost certain that it's not getting fuel. This means it is your first and second and third duty to understand the fuel system above all other systems. And to always personally supervise refuelling, dipping tanks checking breathers and securing caps. I can't state this strongly enough.

2. Your immediate reaction to ANY emergency must be fly the aeroplane - we all know this, but it's easy to forget that you must KEEP flying the aeroplane while you deal with the emergency.

3. We all like to fly with the aircraft properly trimmed, but there are times when you must be prepared to put a lot of serious muscle into making the aeroplane do what you want. The classic case is a go-around. If you haven't practised it recently it's worth trying it at altitude. Get the aircraft trimmed in a glide, with full flaps, and then take full power. You need all your strength to stop the nose rising above the horizon - and running out of airspeed. And when you are pushing on the stick with both hands you can't let go to trim. Electric trim is the answer, if you have one.

4. If you only have a little bit of fuel in your aeroplane try to make sure it is all in one tank - even this means running tanks dry in the air. Have 20 litres in the tank you are landing on rather than five litres in each of 4 tanks.

If you have a Cessna with bladder tanks, checking for water can be quite an operation. First do it normally, then grab a wingtip and shake it vigorously up and down to slosh the water out of the dams, then drain again. Then get someone to pull the nose down and again wiggle the wings - and drain again, then get someone to hold the tail down and wiggle the wings and drain again. You will be amazed how much water you find.

About Jim Davis

Jim has a passion for flying training. He has over 15,000 hours including about 10,000 of flying instruction for both civilian and military pilots. He is the founder of South Africa's biggest and most respected flying school - 43 Air School, and has written several books on training and countless articles for flying magazines on two continents.



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EAA Convention Mossel Bay



We have just a few days to go before we will all meet in Mossel Bay. The final travel suggestions and NOTAM info will be distributed on Monday 25th April to assist all those flying in. Here follows an update that we trust will make your visit to Mossel Bay a little more convenient, if not a little more interesting

ATTENDANCE

Please register if you have not already. It helps us plan for your arrival and needs. Please link on the logo icon to access the online registration. Remember this is just for our information and does not cost you anything .

OUTING

A morning trip to <http://outeniquafarmersmarket.co.za/> is arranged for all those accompanying persons that would like to enjoy the location before going across to the Airfield. A vehicle is arranged to pick up at Diaz Beach Hotel at 07h00 on Saturday 30th April. You will be returned to the Hotel by 11h00. The market is open from 08h00-14h00 daily and looks like a great outing for crafts and market cuisine. Please arrange to meet at the Hotel reception area. For those not staying at the Hotel, if you indicate you will be joining this activity, please arrange to get to/from the Hotel. If you would like to join in this outing, please email rsvp@eaa.org.za with subject MARKET OUTING.

FLY-AWAY BREAKFAST

On Sunday morning 1st May, a flight across to Riversdale (approx. 40nm) can be enjoyed for the pilots and their passengers. Please put your name down for this at our Registration Desk if you intend to fly along. This will allow us the opportunity to let Riversdale know ahead of time. No booking will be made, but they will be able to ensure they are geared for the added numbers and avoid any inconvenience.

AWARDS DINNER

If you have not already registered for our Awards Dinner on Saturday 30th April, please do so immediately and indicate if you will be attending. This is a buffet dinner catered event at the Hotel and numbers need to be finalised in advance. We can of course always add a few extra people on at short notice, but we do encourage you to advise us asap please as we won't be able to add on a large number of people. We are fortunate to have Jim Davis opening this dinner.

The cost is only R185.00 per person for members and their accompanying persons and R225.00 for non-members and their accompanying persons. Everyone is welcome to join us.

DINNER BOOKING IS ESSENTIAL BEFORE 27TH APRIL 2016

BRAAI AT THE MOSSSEL BAY AERO CLUB CLUBHOUSE

On Friday evening 29th April, the Clubhouse will be catering for this as part of a welcome to all attendees. This will start at 17h00 and is at a cost of R85.00 per person. Please feel free to join us. Scheduled transport will be available between the airfield and the Diaz Beach Hotel for members booked there.

SAFETY BRIEFING

All pilots are requested to attend a Safety Briefing at the Airfield at 09h10-09h30 on Saturday 30th April 2016. Please plan around this.

CAMPING

Skydive Mossel Bay, based at the airfield, have offered their premises for camping, which includes a lawn area as well as male/female showers. Please indicate to us in advance if you plan to camp.

AIRCRAFT JUDGING

Our judging team, led by Chalkie Stobbart, will be on site on Saturday morning, judging from 09h00-15h00 and will schedule aircraft that have entered in advance. Chalkie has indicated that he is happy to accommodate any last minute entries in Mossel Bay, if time allows. We do encourage you to please register and indicate your entry in advance where possible, as this will allow the team to schedule your judging in advance.

NEW TEMPE, Bloem fly-through

New Tempe has agreed to waive all landing and parking fees and welcomes all pilots wanting to stop to stretch their legs, stop for a bite to eat or refuel. This offer is extended for all those travelling through to Mossel Bay on 28th to 30th April and returning on 1st to 2nd May. Fuel is available daily from 06h00-15h00 during the week, 06h00-14h00 on Saturdays and 06h00-10h00 on Sunday. Special arrangements can be made if required.

If the cafeteria is not open when you arrive, Westline offices do have snacks and some drinks available for sale.

MOBILE TOOL VAN

Frans Grotepas has kindly confirmed that he will have a fully equipped tool van and mobile workshop available at FAMO for anyone needing the use of these over the weekend.

TRANSPORT

Tours of South Africa are assisting us with scheduled shuttles between the Airfield and the Hotel as follows:

From 14h00-21h00 on 29th April between the Airfield and Hotel.

From 07h00-17h00 on 30th April between the Airfield and Hotel (special request for campers - please liaise with Marie Reddy on the day).

From 06h30-14h00 on 1st May between the Airfield and Hotel. Please liaise with Marie Reddy on site for special needs and if we are able to accommodate these, we certainly will.

Please remember. if you have not registered, we have not taken you into account for transport services.

GATCO

Thanks to Gatco, we will have the full Advisory Service to assist us at the Airfield on Friday afternoon as well as all day on Saturday.

SPONSORS

Thanks to all our sponsors for your contributions to this event, including: Aviation Direct, Comet Aviation Supplies, Flightsure, PilotInsure, Sideslip Aviation Worx, Tours for South Africa and all the good people at Mossel Bay Aero Club.

We look forward to seeing you in Mossel Bay!

Sue Singleton Air Adventurer and Bat Hawk Owner

- Willie Bodenstein, Chapter 322 Johannesburg & Pilot's Post

The daughter of Brian 'Tubby' William Singleton DFC, Korean War hero who at the age of 20 was the youngest ever recipient of the DFC from the USA, it was a given that Sue Singleton would one day also get her wings. In 1987 she was sent solo by Tubby and signed out by and Russel Donaldson and currently has logged 5,200 hours.

Sue, an instructor with 25 years' experience and the first woman in South Africa to qualify as a Microlight instructor, is based at Hekpoort close to Hartbeespoort Dam and the owner of Valleyflights Microlighting.

Valleyflights not only operates as a flight school (ATO: CAA OO80) but also offers early morning and late afternoon flips along the scenic Magaliesberg mountain range, soaring with the Vultures.

Open Monday to Sunday from 05.30 to 11h00 (incl public holidays) first flight departs at 06h00. The second slot is at 07h15.

The current Valleyflights fleet consists of a Micro Aviation Bantam and Bat Hawk. Training takes place early in the mornings in the Bantam B22J or Bat Hawk, SA's most popular fixed wing light aircraft. Take-off is from Hekpoort on a lush, long and wide grass runway with training at Rustenburg's nice long tar runway and the Magalies General Flying Training area with its calm weather characteristics perfect for microlight lessons.



Sue said that she chose the Bat Hawk and Bantam because they are both fantastically safe aircraft with a very stable wing plan, perfectly suited for flying training, can handle a bit of weather and are the best value for money in their category.

The Bat Hawk, that is supplied ready to fly, is a proudly South African LSA (Light Sport Aircraft) designed in Africa for African conditions and built by Nelspruit based Micro Aviation SA.

Several important designs are incorporated into the Bat Hawk. Powered by a large six-cylinder Camit engine with substantial cheekplates and engine mountings it has an all up weight of 540 kg. Side by side seating with dual controls, comprehensive instrumentation and flying characteristics totally free of vices, make the Bat Hawk an ideal flight training aircraft.

A true STOL aircraft - the strong main gear, large 'bush' tyres and hydraulic disk brakes and high mounted propeller that reduces the risk of damage by grass, sticks, stones and sand make the Bat Hawk a true bush plane.

Its streamlined nose pod and a large windscreen and helicopter like visibility, large fuel tank capacity (80 litres), zip open/close luggage area and MGL Engine Monitoring System makes it a favourite in the surveillance and conservation industries.

A specialist theatre and veterinary nurse, Sue also has the distinction of having been only the second woman professional guide to be accredited by the Botswana Government. For six years, during the 80s, Sue, who was then a professional photographer for Screen Media, and her Dad conducted photographic safaris from a mobile camp in the Savuti and Moremi areas.

Sue's most memorable flight was a twenty hours solo ferry flight without ground crew. Flying a very tired Bantam from Addo Elephant Park back up to Nelspruit with a night stop, during which she slept in the aircraft, she returned to Addo with a brand new Super 6 Bantam. Whilst flying past the Maluti Mountains, she almost froze to death and, undoing her seat belt, got up and retrieved her sleeping bag from the luggage compartment. Once it was wrapped around her, she felt that she could survive the remainder of the flight.

With lots of fuel on board, including spare tanks on the seat and floor and equipped with an electric spare fuel pump for siphoning fuel from the spare tanks to the main tanks, she did one nonstop leg of seven hours. "I only stopped because I was almost out of fuel," Sue recalled.

Asked about her dream aircraft Sue said, "The Foxbat, it's got a fantastic wing, is the best all-rounder in its class, of quality workmanship and built to last."

A legend in her own lifetime, in 1998 Sue received an Outstanding Achievement Award from the Aero Club of South Africa and in 2003 the Solo Wings First Lady of Microlighting Award. In 1998 she was only the second woman in South Africa to Qualify as an AP (Approved Person), and in 2004 she became the first, and still is, the only female in the country to qualify as microlight crop sprayer pilot.

Flying, Sue said, is her life, and mother nature is her love.

Many thanks to Pierre Bothma GRD 2/A Instructor and the CFI (Chief Flight Instructor) of Rustenburg Flying School, who flew the Bantam as the camera ship for our early morning photo shoot.

For more info on Valleyflights go to www.valleyflightsmicrolighting.com

EAA Airmail

A few photos of my RV7 in Kenya... I am currently based here and enjoying the flying - some spectacular stuff!

Kind regards, Ralph Gunn, Chapter 322





I have a 600sq m hangar in good condition with a beam height of 4.8 m for sale in Heidelberg, Gauteng for R800,000. I also have a Cessna 175 project for sale, 50% completed, make me an offer on this one.

- Louis Wilken, 083 629 0751

EAA Airmail



Congratulations to members of EAA and SAPFA! The team to represent SA in Portugal at the World Rally Flying Championships later this year has been announced: Adrian Pilling and Mary de Klerk, Hans Schwebel and Ron Stirk, Frank and Callie Eckard, Rob Jonkers and Martin Meyer.

- Karl Jensen, Chapter 322 Johannesburg



Photo taken on 02 April of my Nanchang Dragon CJ6A ECE, from her sister ship ECD flown by Dusty Hughes.

- Gordon Dyne, Chapter 322 Johannesburg



This pic and the front cover shot were taken by Garth Calitz, who was riding with me in my 170 to Fly Inn after a visit to Sondela near Warmbaths (Bela Bela).

The Maule Rocket was being flown by Nico Brandt, who sold it to Jayson van Schalkwyk (ex 322 member and EAA National Young Eagles Convener). Jayson has moved to Himeville in KZN.

- Karl Jensen, Chapter 322 Johannesburg



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).

Our grateful thanks to all those who regularly support our newsletter and our EAA organisation.