

nyala

SOUTH AFRICAN AIR FORCE
AVIATION SAFETY MAGAZINE

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FOREWORD

By Chief of the Air Force, Lt Gen C. Gagiano.

Flying Safety is an inseparable part of many fields of aviation activity. In the aviation industry it is an important component of endeavours such as SHERQ (Safety, Health, Environment, Risk and Quality). It is furthermore a matter that is of vital importance to the Air Force, which cannot afford to lose aircrew who have been trained at great cost, or to replace aircraft or expensive equipment from an under-funded budget.



Lt Gen C. Gagiano

It is well known that there are certain factors at work which can affect flying safety, but which can be managed so as to promote it. For example, if the attitude of one's superiors and of one's colleagues sets the right example, and a culture of safety and excellence is entrenched in our everyday work, these can significantly promote flying safety.

It is also important for everyone concerned to accept safety in general, which, after all, is the goal of SHERQ, and flying safety in particular must become the dedicated concern of every member of the SAAF. Such involvement must become part of Air Force culture. I believe that this can be achieved by example and through adequate communication.

In this time of restricted budgets it therefore gives me pleasure to see the merging of Nyala and Ad Astra, so that these two publications can now join forces to reach a wider audience more cost-effectively. I wish them every success in their important venture.

Editor

Col Van den Berg

Assistant Editor

Lt Col Steenkamp

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The Editor - NYALA
Directorate Aviation Safety
Air Command
Private Bag X199
Pretoria
0001

Article Gathering:

Lt Col A.W. Steenkamp

WO1 A.J. Gerryts

Language Editing:

Ms K.J. Muller

Ms T. Brzek

Language Services, Air Command

Layout & Artwork:

WO1 A.J. Gerryts

Typing:

WO1 A.J. Gerryts

THE EDITOR'S SAFE SPACE

By Director Aviation Safety, Col M.J. van den Berg.



If not the most important, *NYALA* is definitely one of the most important communication tools regarding aviation safety in the SA Air Force. It is a generally accepted rule that communication has to be two-way to be truly effective. We came to the conclusion at Directorate Aviation Safety (DAS) that our two-way communication, as far as *NYALA* is concerned, needed some major improvement. We realised that we had to find a way to drastically increase our publication frequency in order to effectively open up the avenue for two-way communication in our magazine. In light of the omnipresent budget and personnel constraints, the only logical solution to the problem seemed to lie in joining forces with *AD ASTRA* magazine. With only a few minor problems that had to be overcome, we are proud to experience this first issue of *NYALA* incorporated with *AD ASTRA* magazine. We at DAS would like to take this opportunity to express our sincere appreciation towards the Chief of the SA Air Force for encouraging us to take this route. We would also like to thank Director Corporate Staff Services and the Editorial Staff of *AD ASTRA* magazine for their cooperation in this regard.

Now that we have opened up the two-way communication avenue, we will be relying heavily on our readers to generously contribute to *NYALA* in the form of articles, 'there I was' stories, photographs with captions, letters to the editor, etc, in order to keep our magazine

alive. Without contributions from you, the readers, it is doomed to be a dead duck. We and, for that matter, our readers as well, would prefer short, easy-to-read articles and stories rather than lengthy, very scientific and technical contributions. However, that our intention is not to discourage the scientifically or technically minded amongst us. Our aim is also to incorporate the very successful *AVIATION SAFETY UPDATE*, of which a few publications saw the light. Please let us know what your opinion is regarding the route that we have taken. We will publish your letters and comments in 'The Editor's Safe Space'.

Aviation Safety cannot be compromised and the only way to achieve the 'zero error' status is to manage it diligently and continuously, covering every possible area affecting it. This we have to do with all the means at our disposal. In the safety process the old adage 'prevention is better than cure' applies. Hence you will mainly find the proactive/preventative type measures and activities in Aviation Safety. When incidents or accidents occur, we attempt to take the lessons learnt to all role players downstream in order to prevent a reoccurrence. The articles in this *NYALA* aim to be proactive by accentuating the lessons learnt in the case studies. These articles were written by people like you and me, telling about real life experiences or issues that may be of value to all of us in our quest for excellence.

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SAFETY

SUPPORT SORTIES

Discipline In Times Of Need!

Capt F.S. Steyn, Oryx Pilot, 22 Sqn.



During a recent tour in Burundi I was privileged to spend plenty of time with a man who has a passion for aviation, the application of skills and knowledge and the transfer of things learnt from one generation to the next. His outlook on life and his outlook on aviation have a very important similarity, which is that the importance of both does not lie in what you have gathered and gained at the end of your journey, but in what you leave behind!

Spending time with such a man can only lead to a number of life-changing conclusions, one of which has been eluding me and many (if not all) of the young pilots in the new Air Force.

Times in the Air Force have changed and financial and logistical restraints have totally changed the 'growing up' and development of young pilots such as me. The lack of flying hours (compared to the previous century), the lack or non-existence of operational flying and the tremendous loss of experienced mentors are probably our biggest concern. We (the young guns) spend hours complaining about this predicament as we spiral deeper and deeper into this hole of stolen opportunities.

If you share the same concern and feel that you are not given sufficient time or mentoring to become what you would like to be in this diverse world of aviation, you need to ask yourself this question:

Did you land from any one sortie during 2005 in which you merely flew from point A to point B, following only the normal procedures and usual route, and had the sensation that you just flew a nice and relaxing flight with no debrief on such a routine flight?

If your answer is yes, you definitely need to carry on reading!

Just like me you need to start disciplining yourself to work harder and stop wasting precious time and opportunities. In the times in which we fly there is not one sortie to waste and not one 0.1 in the logbook to lose.

So what am I saying? We need to start using the time and resources that we have available to the fullest. Every flight could be and should be used for maximum learning.

How do we go about doing that? Easy! A normal routine flight can be turned into an amazing training experience by putting in a bit of effort and planning. The only thing preventing us from turning a ferry flight from point A to point B into a tactical navigation with a bit of precision navigation on a 1:50 000 map is the discipline to do a few hours of preparation. A routine

IF training flight can become an eye-opener by flying limited panel, followed by an approach without the autopilot. A properly planned IF routing changing to VFR at destination instead of the easy low-level 'don't have to talk to anyone', takes a bit of effort but offers a lot of learning. Catch my drift?

So where do we get the GEN? Easy! It's everywhere. Go and look for it. Like me, you will be overwhelmed by the amount of information floating around in the Defence Force. Don't try and reinvent the wheel. It has been done a long time ago and the procedures and information were captured in literature and on the internet. It has all been written down somewhere, left behind by previous generations and probably honed and etched by the blood and sweat of others, so that we merely have to take it and improve it even more. All we have to do is to stop sitting in the crew room complaining about these difficult times and start reading. Unplug the Playstation and plug in the intranet. Catch my drift?

How you go about implementing this into your everyday flying depends on whom you are and what you are trying to achieve. For me the following works pretty well:

1. Before each flight you need to establish and set clear-cut objectives that you want to achieve during the flight.
2. Create a scenario with the area and mission available.

Simulating a night flight in dark-moon conditions from your base to the point you pick up your first pax on a beautiful clear day will show you how much you need to learn!

3. The sky is the limit. Work as hard as you can. Change from Lats and Longs to UTM, plan a quick diversion and try to fly as accurately as possible.

4. Debrief on completion of each flight. Revise your objectives and establish what you have learned.

5. Go and sit down and write down what you have learned in your own words. Keep it close to you; you might need it some day!

There is more than enough time and resources available for us youngsters to reach and hopefully better the standards and knowledge of those idols we fly with and read about. The only difference between them and us is that we won't get there without disciplining ourselves to work harder with the available opportunities.

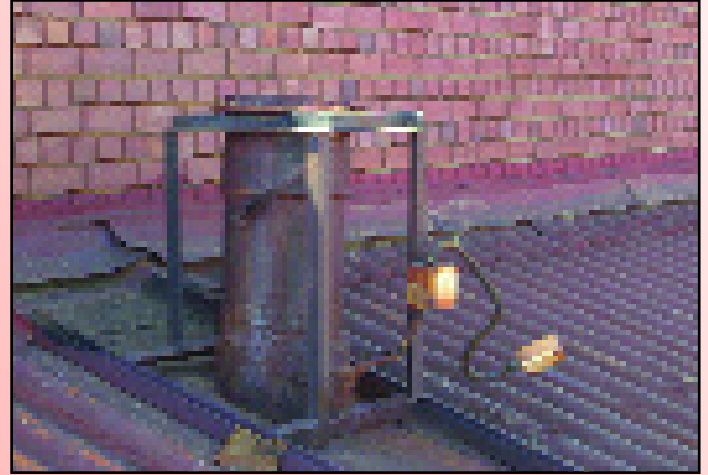
And like one of those idols once told me: "Every time you fly you must work as hard as you can in the dream of one day landing from a difficult flight, climbing out of the aircraft and saying to yourself the following word: **Faultless**".

Punchline by DAS: Achieve the highest level of competency in a relaxed environment by simulating a high stress environment.

SHERQ Chamber of Horrors



SHERQ Comment: Improper materials and procedures will cause an unhealthy SHERQ environment.



SHERQ Comment: Extractor ducting vents not correctly maintained allow water to enter the system, causing rust, dampness and danger to electrical wiring and DB boards.



SHERQ Comment: Lack of maintenance and concurrent inspections can lead to a hazardous and a dangerous situation for employees in the workplace.



SHERQ Comment: Long-term negligence causes damage and degradation of facilities.

SHERQ: “ADAPT OR DIE”

*WO1 Anton Smith (Registered Occupational Safety Practitioner),
18 Deployment Support Unit*

The past few decades have been characterised by a worldwide upsurge in safety, health and environmental awareness. This awareness was first stimulated by the tragic demise of the ‘unsinkable’ Titanic and has since led to escalating pressure caused by public opinion, as well as more effective occupational health and safety and environmental legislation. The enforcement and implementation of more effective legislation has resulted in a general increase in occupational health and safety awareness, as well as environmental awareness, and has stimulated interest among those in the defence arena. Governments, industries and citizens around the globe have become increasingly aware of safety, health and environmental issues and are concentrating on finding ways in which to manage these issues effectively.

The ‘waiting iceberg’ featured in the tragic Titanic saga may be used to symbolise the astounding degree of ignorance that prevails in the world and the acts of negligence, unsafe behaviour, pollution and destruction of natural resources that are still being committed around us. The SHERQ (safety, health, environment, risk and quality) function was introduced in order to assist in pre-

venting the ‘Titanic’ (symbolising a complacent world) from colliding with the ‘waiting iceberg’. The integration of the aforesaid five elements aims to ensure sustainable management of all activities and facilities within the parameters of relevant legislation, and to establish safe, healthy and environmentally friendly workplaces for our employees, coalition members, neighbouring industries, etc, as well for the surrounding community.

There are still people who regard SHERQ as a function of secondary importance, not realising what their responsibilities towards themselves, their fellow employees and the environment are. By regarding SHERQ only as a secondary function or a low priority function in our daily lives, we expose the resources at our disposal to considerable danger. How can we expect success in our operations and/or even in the execution of our core functions if our most valuable resource, our people, are ill, hospitalised or even dead? If we look at the statistics for 2005, we see that the cost of having employees booked off from work (3 502 hours) for minor and major injuries escalated to R289 884 50 in the SAAF alone, and this does not include medical expenditure. As regards other resources at our disposal,

many of these have been quietly damaged, lost or caused to become extinct. Research in America has shown that between 25% and 62% of losses as a result of theft or damage originate within the organisation, the main causes being poor salaries, a desire to take revenge and refusal to abide by standard processes and procedures. Even the smallest thing, that we normally regard as ‘nothing to worry about’, can become a fatal factor in that it could cause the Titanic to collide with the ‘waiting iceberg’.

The culture of the workplace must change and SHERQ must, as far as is reasonably practicable, be seen as a matter of common interest and concern, rather than an opportunity for confrontation between workers and management. Workers are getting no respite from workplace fatalities, injuries and illnesses, and the environment is getting no respite from continual pollution and endangering of wildlife and vegetation. Therefore we cannot afford to take a rest from our responsibility to protect our fellow employees, our environment and ourselves. A safe, healthy and environmentally friendly workplace is one that provides us with quality of life and this leaves us with one choice only: ‘Adapt or Die’.

DAS SSO Update

SSO LIFE SUPPORT SYSTEMS LT COL ANDRE STEENKAMP

Since the last update, the Life Support Systems (LSS) office has made progress on old assignments and has also ventured into some new initiatives.

The documentation of the to-be 'Project Rhesus' (Survival Equipment Upgrade), such as the Requirement of Operational Capability (ROC), as well as the Staff Target (ST), has been presented and approved by various councils, boards and committees. The Project Officer will be appointed soon and this will be followed by the project studies. The acquisition phase should be completed by FY 07/08.

The evaluation of the envisaged '3-day survival pack' will be conducted within the next couple of months. Watch this space for future feedback!!!

SSO AS TECHNICAL LT COL JOSEPH DICKS

Good day to all you wonderful technical staff out there. Being appointed as the Aviation Safety Technical Senior Staff Officer for the Air Force is a real privilege that, it goes without saying, carries the huge responsibility of overseeing all technical activities in relation to aviation safety. We, as technical staff, be it aviation-related or the general technical environment, are responsible for supporting the safe take-off and safe landing of each aircraft in the SAAF. Please be diligent in what you do and remember that you have the lives of other individuals in your hands. It is a God-given responsibility and privilege to live and let live. Till we talk again – enjoy the one life you have.

SSO AVIATION FACILITIES LT COL JACO NEL

Greetings from the Aviation Facilities Section. This section does the management, maintenance and production of the Flight Information Manual (FIM). In light of the various problems experienced during 2005, we are regaining the integrity of the manual. FIM users might have noticed that the backlog of amendments have been sorted out. As part of the effort to continuously improve our service, we adapted to the ICAO-recommended amendment cycles. As from January 2007, thirteen amendments, spaced 28 days apart, will be produced. We would appreciate any feedback and comments that may assist us to deliver an even better product.

SSO AS FLYING LT COL HANS ZIMMER

Safety greetings to all from your new SSO AS (Flying). Two US National Guard (NG) members visited SA over the period 08 – 12 May 2006. These members briefed DAS and local Squadrons on the Operational Risk Management (ORM) and Private Risk Assessment (PRA) forms in use in the USAF. The data on these forms provide essential information on the inherent risk of the mission at hand. This concept will be communicated with all aircrew before the Aviation Safety Work Group Session to be held at Air Force Base Ysterplaat over the period 01 - 02 November 2006. The bird deterrent programme will be given a boost when a presentation by Environmental Management on the use of the Border Collie is presented to CDFP at the end of July/August for funding. We will keep all informed of the latest

bird-deterrent developments as soon as DAS is informed.

SSO SHERQ LT COL WAYNE OLIVER

The SHERQ section at DAS has the mandate to proactively promote, manage and monitor all SHERQ activities relating to Aviation Safety and Ground Safety. Through our initiatives and constant interaction with industry and clients, the SHERQ section strives to maintain all standards relating to Aviation Safety. The equate study regarding the SHERQ Management Post Structure in the SAAF was completed and is being approved by the Secretary for Defence. This entails that SHERQ will remain the driver of all OHS activities in the SAAF. Through effective implementation and management of SHERQ at all FSEs, Bases and Units, standards should not be compromised and continuous improvement be encouraged. Officers Commanding must ensure that all SHERQ activities spelt out in the OHS Commanders Manual (DODI JDP) be addressed to ensure compliance. DAS SHERQ have generated a comprehensive SHERQ Management CD System to assist all SHERQ Practitioners with compliance audits, risk registers and Hazard Identification Risk Assessments (HIRA) procedures. SSO SHERQ, Lt Col W.R. Oliver, will be hosting an annual SHERQ Work Session on 21 – 22 November 2006 to roll out the SHERQ Management System. It is requested that members continue to report all SHERQ injuries/accidents to DAS (AIRCOMD 25) for the statistic database. Go well and keep up the good SHERQ performance in the SAAF.

A NORMAL DAY IN AVIATION IN AFRICA

Article by Lt D. Deetlefs (Caravan Pilot in Africa)

I had a bad experience at Lagos International Airport, Nigeria, whilst flying for Solenta Aviation on a DHL contract. We had to fly into Lagos on a daily basis to deliver freight from Ghana. I never really felt comfortable flying into Lagos owing to the quality of Air Traffic Control Services. This, together with the high intensity of traffic, including the major airlines of the world, felt like everybody was arriving there at the same time. The parallel runways add to the workload and confusion of the controllers.

This situation demanded a high level of situational awareness from the crew. Flight Safety is not everyone's agenda, especially not in Africa, but we made it ours. Our mindset on safety probably saved the day for us.

The previous day, while flying from Lagos to Port Harcourt (Nigeria), prior to take off, we were cleared for lineup and hold. As we looked for traffic on base, finals and the runway, we noticed a Boeing 727 on short finals. We asked the ATC if he was aware of the situation prior to releasing our brakes. Such an incident had happened once before.

On this particular day we had to return to Lagos because of the amount of freight. We were parked on the holding point waiting for a Virgin A340 to land. Behind us were Egypt Air and a Ross Air ATR 42, also in DHL colours. After the A340 had landed we were told to line up and wait, which we did after making very sure that all was clear; after our previous experiences we were uneasy. The A340 used the

entire runway for its after-landing run. This caused us to wait on the runway for approximately 3 minutes.

Then I looked at the co-pilot and we knew something was amiss; our gut feeling had been right! "Caravan on the runway! There's an aircraft on final approach. Get off the runway now!" Those were the exact words of the ATR 42 captain, screaming.

I instantly opened power to rush off the runway and simultaneously turned the Caravan to the left, the side I was sitting on, to get a visual of the British Airways 747-400 on approach, executing a go-around. The B747's altitude was approximately 600ft.

We could not taxi off at the holding point because Egypt Air moved forward as we taxied onto the runway. What we could not understand was why the 747 was not on tower frequency. We had a word with the ATC on another frequency to clarify why this had happened, but he could only apologise. We did not want to keep him busy talking to us; it would probably have been dangerous for the next aircraft lined up, unaware that someone might land on it.

Flight safety might not be other people's priority, but make it yours. Get into that mindset today, before it's too late.

Punch line by DAS: "Complacency and the lack of proper procedures can be a killer. In this situation extreme situational awareness will be required to save the day."

A Comedy Of Errors

Lt P.S. Willcock

One glorious day in the southern hemisphere, 3 aircraft from the same squadron converged on a small civilian airfield, home to a flying school with impressionable young pilots. What followed almost ended in disaster...

The crew of the 3 converging aircraft consisted of 2-man crews ranging in experience from 300 to 3 000 hours. Two of the aircraft were on identical medium level navigational exercises. The third aircraft had departed from a different airfield on a low-level exercise.

As the third aircraft approached the small airfield for the approach and go-around, the two aircraft on the medium-level nav were in radio contact and decided to form up in formation to fly a low-level initial and break at the airfield. The third aircraft was also approaching the airfield, monitoring the squadron operational frequency. He monitored the intention of the two aircraft and asked if he could join the formation. The leader approved the request.

At that point the 2-ship formation, due to difficulty in getting a visual of each other, were late in descending. Once formed up they had to fly at higher ROD and speed than normal, putting extra workload on the leader of the formation.

The ATC was now experiencing a high workload owing to the formation joining together with the single aircraft requesting a non-standard joining with the formation. The ATC then cleared the 2-ship formation for an initial over active runway 06. Owing to the high workload of manoeuvring a formation, speaking on the radio, trying to find the third aircraft and being at an unfamiliar airfield with multiple runways, the leader now lined up the formation on runway 09 with his No 2 on his left-hand side.

The singleton was still adamant about trying to join the formation and was on a late downwind for active runway 06. Having heard his squadron colleague call at initial for 06, he was desperately looking for the formation on 5 nm initial point of 06.

The formation was now running in on a heading of 090 at 200 kts and the singleton on a downwind heading of 240, both at 1000 AGL. The radio chatter on the squadron frequency became very intense with all three aircraft now trying to find each other. The wingman of the 2 ship saw the singleton first and now desperately tried to alert his leader of the impending head on collision with the singleton. His leader was transmitting at the same time and didn't hear the call from the wingman, who by now had drifted into a much wider and higher position in an attempt to avoid the approaching aircraft.

At this point the singleton looked up and saw the other two aircraft straight ahead and closing at high speed. He descended to avoid the collision, passing below them by roughly 300 ft.

The leader of the formation, surprised by the near miss, looked to his left to find his wingman. He could not see him as his No 2, having taken evasive action, was about 200 ft high and wide. Assuming his No 2 had broken away without informing him, he now proceeded to fly the initial. He now confirmed with the ATC for the break to the left. The No 2 was now getting back in position. Hearing the leader's request, he now was expecting the command to move across to the

leader's right for the left break, unaware that the leader now no longer was leading a formation. Seconds before the break the No 2 realised that being on the left of the leader during a break was not the place to be and moved to the leader's right.

The leader checked just before the break, saw it was clear and broke left, unaware of the near disaster.

Needless to say, all 3 aircraft recovered separately after a few choice words on the radio and very fast heartbeats.

Some lessons learnt are obvious:

1. Never fly in a formation without attending a comprehensive briefing on the ground before a sortie.
2. Never rush into anything in the air – if you haven't been briefed on something, don't do it until you have been briefed!
3. Prepare yourself properly to know all the airfields' details that you will be visiting.
4. If in doubt, ask where all other aircraft are. Never assume!
5. Do not allow an error to develop into a bigger one or a series of errors.
6. If not sure, ask about or cancel your intentions until such time as you are absolutely sure of the real situation.
7. Never execute an unauthorised manoeuvre.