



The Joystick

NEWSLETTER of the SOUTH AFRICAN POWER FLYING ASSOCIATION

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LETTER FROM THE CHAIRMAN

The year is well on its way and at this stage there is still some work to do. We must continue to represent our members in the arena of recreational flying, which includes competitive and fun flying.

The Air BP South African Flying Team has competed in the World Championships with mixed success. We did not bring any medals home but are happy that we did as well as we could under the circumstances. See article elsewhere in the magazine.

The President's Trophy Air Race was held at Polokwane with some new innovations introduced by organisers Chris and Dries Briers. I would like to know what you felt about the changes. Should they be permanent? **Please let us know!!** Thank you Chris and Dries for a very successful event!

On the regulation side we have had few new attacks on general aviation. There is still the drive on to make transponders compulsory and the issue of the weather charges is still up in the air. SAPFA will continue to keep abreast of new changes and make sure they are in the best interests of aviation.

We have had no calls for assistance in organising flying events. If you feel that there is a need for a flying event in your area then give us a call.

The Speed dash events have been put on hold. The test event we held did not achieve the objectives we set viz a fun competitive event that has spectator value. We will be looking at this again over the next few months.

Fly safely!

Chris Booysen
CHAIRMAN



P.O. Box 27 013, Greenacres, 6057



SAPFA EVENTS 2004

<u>DATE</u>	<u>VENUE</u>	<u>EVENT</u>
21 August 2004	Grand Central	Fun and Training Rally Beginner Pilots Welcome (Contact – Nigel Hopkins - hopkins2@mweb.co.za)
4 September 2004	Port Elizabeth	Club Precision Competition (Contact – Dave Perelson – jdi@iafrica.com)
2 October 2004	Cato Ridge	KZN Inter-provincial Precision Flying Competition (Contact – Barry de Groot - barry@specializedmouldings.co.za)
20 November 2004	Port Elizabeth	E Cape Inter Provincial Rally Competition (Contact – Dave Perelson – jdi@iafrica.com)
20 November 2004	Port Elizabeth	SAPFA AGM
16-18 June 2005	Tempe	President's Trophy Air Race (Contact – Jack Onderstal – jack@cp.bftn.co.za)

For a comprehensive calendar of all flying events – see the African Pilot Calendar (updated regularly) at <http://www.africanpilot.co.za/calendar.php>

President's Trophy Air Race - 10 to 12 June 2004



Executive Turbine (Pty) Ltd

The 2004 President's Trophy Air Race was run from the Pietersburg Civil Airfield (FAPI). The change of venue from Tempe was a refreshing one. While, for some, it was a long trip to get to Pietersburg the flight was worthwhile. The change of venue also introduced the race to a number of new competitors from the far north of the country. Organisers Chris and Dries Briers had instituted some drastic amendments to the format of the race. These included a major reshuffle of the handicaps with most being reduced, the attempt to give some real benefit to sponsors and reduce the vast and growing

number of trophies that were awarded.

For those that have entered the race before pre-race day was a routine event with arrival, efficient registration with Antionette from Naturelink, and scrutineering. The refuelling was also a pleasure with the Naturelink "valets" parking the aircraft for you. This also enhanced safety, as there were very few turning props in the parking area. Unfortunately we arrived just after Race 25, the Piaggio Albatross of the Marx brothers, which meant

there was a considerable delay in the fuelling. At one stage I was worried that they would use all the fuel in the underground tanks. After all this was handled it was off to the hotel to grab a few minutes of shut eye (or a few beers) before the briefing.

Briefing started at 6:00 as promised and covered the normal welcome, safety issues, procedures, weather, ATC, start and the route for Friday. This would take the crews from Pietersburg to Giyani (74,5 miles), Messina (66,9 miles), Alldays (55 miles), Mokopane (formerly

Potgietersrus - 93,5 miles) and then home to Pietersburg (33,2 miles).

Pictures of all turning points were provided. Some very generous sponsored prizes were drawn in a lucky draw. These included vouchers of R5 000, fuel for the race paid and some "goodie bags".

After the briefing supper was provided and then most crews rushed off to plot and study the route. The main discussion in our hotel was the options on the Alldays-Mokopane leg. A decision had to be made whether to go over or around the large mountain that someone had put directly on track. Consensus was that the best option was probably to go right of the mountain down the valley but we decided to wait and see when we got there.



PTAR 2004 Medallists From Left to Right: Wessel Vermaas, Pieter Lordan, Harry Antel, Barry de Groot, Johan Rautenbach and Nico van den Berg.

Race Day 1 dawned with temperatures that reminded us of Tempe. No surface wind to speak of but a light easterly at about 7000 feet. This immediately started the debate on the necessity to climb on the Messina-Alldays leg and make use of the tail wind. We were also kind enough to show Race 5 (George and Wally Brink) the two mines on the first leg just before Giyani that were not marked on their 1:500 000 map. These mines would make it simple to find the Giyani field as you had to fly directly over both just before the turning point.

Aircraft were launched at 30 second intervals with the fastest aircraft off first. There were 70 aircraft on the start list, proof that the race is maintaining its popularity. Much to our disgust there was no sign of any mines and we almost missed the Giyani turning point. A number of other aircraft were not as lucky as when they popped over the mountain at Giyani the turning point was covered by a small cloud that made it invisible. At one stage there were three aircraft circling over the turning point but unable to see it. Race 23 (Dave Mandel and Rod Crichton) wasted at least four minutes looking for that red cone.

The route between Giyani and Messina required a small climb over some mountains. At this stage a few aircraft became visible and we had the frustration of an aircraft with a lower handicap breezing past us. Dare I mention the

handicapping now!!! Between Messina and Alldays the scenery was incredible. The "bosveld" at its best with thousands of enormous baobab trees.

After Alldays there was a large mountain to get over so the climb was started immediately. The view of the mountain cliffs was incredible. Once over that mountain the discussion of the previous night became irrelevant as it was obvious that the best option was to start a slow descent and pass to the right of the high mountain. Most aircraft chose this option. A notable exception was Race 4 (Jacques Vercueil and Chris Spencer-Scarr) who decided that the mountain was not marked on their map and that they would have to turn more and more to the left to get onto track. Once past the mountain there were enough features to make the run down the valley into Mokopane a straightforward affair.

After Mokopane the left turn took the aircraft back to Pietersburg. To avoid a big climb the best track was up the highway through the kloof. Thank heavens the power lines were well marked or there could have been an incident - or as we were told at the briefing "You could pick up some copper". Pietersburg runway is visible from a distance and so both the pilot and navigator could enjoy the last leg.

Results for the first day showed Race 52 (Jay Bartholomew and Lawrence Bettesworth in a Cessna 172) in the lead followed by Race 30 (Harry Antel and Barry de Groot in a Grumman), Race 53 (Nico van den Berg and Johan Rautenbach in a Cessna 172) and Race 43 (Adrian Tomaz and Llewellyn Potgieter in a SAAF Cessna 185). An error in the original handicap dropped Race 52 down the listing and the team of Antel and de Groot therefore took line honours for Day 1.

The briefing was a repeat of the Day 1 event with emphasis on the circuit

procedures that would become critical at the end of Day 2. The route started with a short leg to Tzaneen (46.5 miles), then to Lydenburg (76.8 miles), across to Warmbaths (114.5 miles) and then back home to Pietersburg (87.7 miles). The distance totalled 326.4 miles. What worried the contestants was the grin on the faces of Dries and Chris Briers when they announced the route. Once again clear colour pictures were given of each turning point. After the briefing the evening meal was again supplied courtesy of the sponsors.

Race Day 2 dawned with some high cloud cover and little wind to speak of - 3 knots - not a major factor for the days racing. The start times for Day 2 are determined to achieve a finish time of 13:00. In other words, if you fly at exactly your handicap speed for both days then you will finish exactly at 13:00. If you gained a minute on day one then your take off time would be determined by the time you need, at handicap speed, to cross the finish line at 12:59. This method can result in very close take off times. For example Race 38 and Race 19 (Hughes and Moos) took off only 3 seconds apart. While this sounds scary to new race participants the distance between the aircraft only increases on the take off roll. In fact, by the end of the runway the crew in the aircraft behind tend to feel if they did not start quick enough.

On Day 2 it becomes apparent on how important it is to do well on the first day. It is very disconcerting seeing aircraft with handicap speeds equal or greater than yours taking off earlier than you. You know you will never see them until the end unless they get lost. This method means that the bulk of the slowest aircraft take off first. The first leg to Tzaneen was similar to Day 1. The heading was only a bit greater. The turning point was well hidden behind a hill making for some sharp action to make sure you cleared the red cone shaped beacon. Then the big climb over the Drakensberg. The

scenery was stunning and the navigation fairly easy as in the zero wind conditions it was a simple "stay on heading" type of exercise. Some local knowledge made homing in to the airfield at Lydenburg a straightforward affair and then a steep turn and into the climb over the mountain. We turned with two other aircraft and each headed off in a different direction. When this happens the normal discussion with the navigator starts with predictable results. "Of course they are wrong and we are right!"

The "2 minute" calls now start indicating that the field is starting to bunch. The calm was suddenly shattered by a Mayday call. Race 43 was doing a forced landing with engine trouble. While on the subject of radio calls the low point of the race was some disgusting comments broadcast by one of the race participants. Unfortunately the culprit was protected by the anonymity of a radio broadcast.

The turn at Warmbaths required some care as it was approximately 130 degrees and the traffic was getting denser. Normally the last leg is busy. Just after Warmbaths we passed a gaggle of Cherokee 140's and other slower aircraft and then seemed to hit a "bare" patch and do not see any slower aircraft. Once again the question to the navigator as to his ability and, once again, the predictable reply.

First Crew



Second Crew



Third crew



First Aircraft



Second Aircraft



Third Aircraft



The last leg was a little more difficult than indicated on the map, as the main road was not really close enough to help for accurate navigation. The little rivers, farmhouses and roads etc had to be used to keep perfectly on track. Pietersburg runway came into view fairly far off and then it was over to the aircraft to make sure you passed more aircraft than passed you. The circuit was busy with approximately 20 aircraft in the circuit at any time. By following the briefing instructions, i.e. keep approx 100 knots and space yourself, meant that the whole procedure was safe and efficient.

Day 2 (only) saw Race 30 (Antel and de Groot) in the lead, followed by Race 53 (Nico van den Berg and Johan Rautenbach) and Race 19 (Sean Hughes and Harry Moos).

This meant that Harry Antel and Barry de Groot were first overall followed by Nico van den Berg and Johan Rautenbach.

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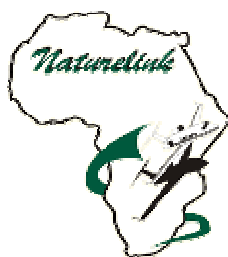
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Third overall was Race 38 piloted by Wessel Vermaas and navigated by Pieter Lordan.

The banquet was a smart affair at the Casino in Polokwane. Speeches were made by dignitaries and sponsors and the appropriate thank you's were made. The Awards were presented to the top three teams and other deserving participants. The number of awards was limited as promised by the organisers.

The overall conclusion? A Great Race!!! The venue, the organisation, routes and functions were fantastic. The handicaps - the jury is still out in that one. See you all again next year.

Thanks to major sponsors Imperial Bank, Executive Turbine and Naturelink!!!



Historic Data

We are trying to accumulate articles and pictures of historic significance to SAPFA and competition power flying in South Africa.

If you have any magazines (especially old editions of Aero News), pictures or other documents please contact Chris Booysen.

All documents received will be returned once copied.

Have a look at the web site. A large amount of historical information has been accumulated there.

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Run Away Propeller

Most pilots know that a run away propeller is extremely dangerous and has caused many fatal accidents. In order to understand it better, one has to have a basic knowledge of the variable pitch propeller (without counterweights) associated with your single engine constant speed system.

First basic concept:

Pressure is needed to increase the pitch on your propeller. If you lose the CSU or the piston seal inside the prop hub or you happen to lose the oil pressure inside the system, then your propeller will return to its fine pitch setting (up against the fine pitch stop).

The big question!

Is your aircraft's fine pitch setting, set up correctly? Will it create sufficient thrust (within a range of marginal RPM over speed) for you to maintain altitude?

If your fine pitch stop is course enough, (i.e. correctly set up) then you will be able to continue (at a reduced power setting) the flight to your nearest airfield or precautionary landing site.

This setting is theoretical and is based on what the propeller, manufacturers believe they can achieve. When your propeller assembly is overhauled or assembled by your local prop shop, they will set your blade angles to the manufacturer's recommendation.

Pitch stops.

Two blade angles are set for the fine and course pitch stops. How is it possible that this fine pitch stop blade angle could be too fine for your aircraft? Surely a pitch stop is there to protect you? Accidents do happen. Protect yourself, test your own propeller

and satisfy yourself that your fine pitch stop is set correctly.

I have recently had a propeller piston hub seal collapse and found it was not possible to maintain altitude without a RPM incursion. The propeller on my aircraft was set to the exact blade angles as recommended by the factory. I now have a fine pitch blade angle that is 2 to 3 degrees course than what the factory recommended.

If you read up in your propeller owner's manual you will probably discover that it is a pilot's responsibility to ensure that the propeller can restrain (contend with) your engine's ability to produce power at a full fine pitch setting. When your pitch control fails you end up with a fixed pitch prop, in full fine mode.

The objective:

Get back on the ground safely without over speeding your engine by reducing your power settings to stay within the RPM over speed limitations and be able to maintain altitude.

Overspread limitations:

For most engines and propellers 10 % over maximum RPM is in an acceptable range, which would allow you up to 2970 rpm. Between 10 and 20 % over maximum will require a TBO and beyond 20% most will call for a US category. (scrap)

Basic propeller Control

For flight operation, an engine is demanded to deliver power within a relatively narrow band of operating rotation speeds. During flight, the speed sensitive governor of the propeller automatically controls the blade angle as required to maintain a constant rpm. Three factors tend

to vary the rpm of the engine during operation. These factors are power, airspeed, and air density. If the rpm is to maintain constant, the blade angle must vary directly with power, directly with airspeed, and inversely with air density. The speed-sensitive governor provides the means by which the propeller can adjust itself automatically to varying power and flight conditions while converting the power to thrust.

Fundamental Forces:

Three fundamental forces are used to control blade angle. These forces are:

1. Centrifugal twisting moment, centrifugal force acting on a rotating blade that tends at all times to move the blade into low pitch,
2. Oil at engine pressure on the outboard piston side, which supplements the centrifugal twisting moment toward low pitch, and
3. Propeller Governor oil on the inboard piston side, which balances the first two forces and move the blades toward high pitch.

Constant speed:

The constant speed propeller utilizes a hydraulically or electrically operated pitch changing mechanism which is controlled by the governor. The pilot adjusts the setting of the governor with the rpm lever in the cockpit. During operation, the constant speed propeller will automatically change its blade angle to maintain a constant engine speed. If engine power is increased, the blade angle is increased to make the propeller absorb the additional power while the rpm remain constant.

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If the engine power is decreased, the blade angle will decrease to make the blades take less bite of air to keep engine rpm remain constant.

Testing your assembly:

The test is necessary to ascertain that your propeller (and not the csu) is able to restrain the full power of your engine in a full fine position (i.e. up against the fine pitch stop).

Bear in mind you don't want to damage your blades or aircraft so tie it down, hold it back and sweep the area.

Put your propeller into constant speed for at least a few minutes to subject the seals to a high-pressure test and to establish that the constant speed system is operating correctly.

Extract from MT owners manual

Usually there are only two kinds of problems:

- static rpm is too low and/or
- rpm in flight is too high.

First, you have to find out whether the governor or the propeller limits the engine. (you want 80 to 100 RPM below your engine's RPM limit at full power).

Proceed as follows.

Propeller control to max. rpm and power lever to max. power. Pull propeller control back until rpm drops approx. 25 rpm. If there is sufficient free travel (free range) before the rpm drop, then the pitch of the propeller will limit the static engine rotational speed. In other words, make sure that you have say 15 to 20 mm of free range on your pitch control knob.

Advance power lever and propeller lever to full fine and full power. The static rpm must be limited by the propeller and should

be 50 - 100 rpm lower than the max. rpm limit of your engine.

If static rpm is too low:

Reduce pitch with the check nuts on the piston guide. Turning loose nut by ¼ turn will increase rpm by approx. 100 rpm.

Rpm in flight too high:

If the static rpm is within the limits, but the governor allows over speed in flight. Adjust rpm to the desired value in flight and turn the stop screw in after landing until it touches the governor lever.

Important:

Do not change position of the rpm control during final approach.

Functional check. (putting your system into constant speed mode on the ground)

Adjust power lever for approx.

1700 rpm. Pull propeller lever back (out) until the rpm drops by 300 - 500. Push propeller lever full forward (in) for take off position and observe rpm increase. (The loss and gain should be very much the same)

Adjust power lever to approx. 2200 rpm, pull propeller lever back until rpm drops about 100 rpm. When the rpm is stabilized, increase manifold pressure by about 3in and observe the governor function. Rpm must stabilize.

Summary:

Low pitch stops can be adjusted in the field by varying the check nuts. High pitch stops can only be adjusted at a propeller overhaul facility.

It's the low pitch stop that is going to help to protect you in the event of loss of pitch control.

Jack Onderstal



Still wondering what to do with that expensive aircraft you own? Keen to do some fly-aways but don't have time to organise them? Maybe you would like to put some hours in the logbook while having some fun.

Dave Vanderspuy, a keen pilot, owns a commercial business that provides self-flying tours, aimed mainly at the upper end of the foreign tourist market.

Dave has started arranging flying tours for us locals (the so-called Wildebeest because we start jumping around wildly when flying is mentioned). This is not done on a commercial basis. Dave does use these tours for locals as "recce's" for his main business. He does also charge a small fee per aircraft to cover his costs of organizing security, transport, fuel, accommodation, etc, etc.

The first tour was held in May 2004. Nine aircraft took part and judging by the reports all had a great time.

Dave is now organising another tour starting on 23 September which will last for 6 days. This tour will start at a strip near Douglas and will cover the Karoo, some of the Garden Route and some mountain flying. The trip will also include some fun flying (finding photo's, clues etc.

If you are interested then give Dave a call on 011 462 4521 or visit his website.

<http://www.aerosafari.com/wildebeest/>

New Rules for Recreation Pilots in the USA

On 1 September the FAA will implement its most far-reaching rule since the statute of liability limitation, the Sport Pilot, Light-Sport Aircraft Rule.

With this new rule the FAA hopes to:

- Increase safety in the light-sport aircraft community by closing the gaps in existing regulations and by accommodating new advances in technology.
- Provide for the manufacture of light-sport aircraft that are safe for their intended operations.
- Allow operation of light-sport aircraft exceeding the limits of ultralight vehicles, with a passenger and for flight training, rental, and towing.
- Establish training and certification requirements for repairman (light-sport aircraft) to maintain and inspect light-sport aircraft.

The rule is designed to allow individuals to experience sport and recreational aviation in a manner that is safe for the intended operations, but not overly burdensome. By bringing these individuals under a new regulatory framework, the FAA believes this rule lays the groundwork for enhancing safety in the light-sport aircraft category.

This rule does not change existing aircraft certification or maintenance regulations for aircraft already issued an airworthiness certificate.

Light-sport aircraft are small, simple, low-performance, low-energy aircraft limited to:

- 1,320 lb. (600 kg), (1,430 lb. seaplanes) maximum takeoff weight
- 1 or 2 occupants
- single engine (non-turbine)
- maximum stall speed (without lift enhancing devices) of 45 knots
- maximum airspeed in level flight of 120 knots
- fixed landing gear and fixed pitch propeller.

According to the rule, "light-sport aircraft" are: airplanes, gliders, gyroplanes, balloons, airships, weight-shift-control, and powered parachutes. Helicopters and powered lifts are excluded because of complexity. Weight-shift-control aircraft and powered parachutes are also defined in the rule.

The FAA has created two new aircraft airworthiness certificates for:

Special Light-Sport Aircraft. A new special airworthiness certificate for a light-sport category aircraft that is "ready to fly" when the manufacturer determines the aircraft meets a consensus standard developed jointly with FAA and industry (gyroplane category is excluded).

- Aircraft holding this airworthiness certificate may be used for personal use and for compensation while conducting flight training, rental (similar to primary category), or towing (of light-sport gliders or unpowered ultralights).

Experimental Light-Sport Aircraft. Aircraft holding this certificate may be used only for personal use. There are three ways to earn this new certificate:

- 1) existing ultralight-like aircraft that do not meet the requirements for ultralight vehicles
- 2) aircraft assembled from eligible kits that meet a consensus standard
- 3) aircraft previously issued a special, light-sport category airworthiness certificate.

Certain type-certificated aircraft that meet the above criteria may also be operated with a light-sport pilot certificate.

An ultralight is a vehicle that is manned by one occupant for recreation or sport purposes. It does not have a U.S. or foreign airworthiness certificate. If unpowered, it weighs less than 155 lbs. If powered, it weighs less than 254 lbs. empty, has a fuel capacity not exceeding five U.S. gallons, is incapable of more

than 55 knots airspeed in level flight, and has a power-off stall speed which does not exceed 24 knots.

There are maintenance and inspection requirements for light-sport aircraft certificated as an experimental light-sport aircraft or special light-sport aircraft. There are also new pilot training and certification requirements for:

- a sport pilot certificate,
- a sport pilot rating at the flight instructor certificate level,
- two category ratings — weight-shift-control and powered parachute, both with land and sea class ratings at the private pilot certificate level, and
- a repairman certificate — light-sport aircraft with an inspection or maintenance rating.

FAA certificated pilots and flight instructors exercising sport pilot privileges must hold a valid U.S. driver's license or FAA medical certificate.

The FAA is not establishing this rule with the intent of including or excluding specific aircraft but is trying to objectively determine where the line should be drawn while considering the appropriate level of safety and the complexity of the operation.

It is also worth noting that as a result of this new regulatory action, an estimated 15,000 persons operating ultralight-like aircraft now will be required to hold pilot certificates. In addition, persons performing work on light-sport aircraft will be required to hold repairman (light-sport aircraft) certificates. All existing unregistered ultralight-like aircraft and two-place ultralight training vehicles will now, as certificated aircraft, be required to display an "N" registration number.

While on the one hand this new rule opens up the possibility of more people obtaining a pilot's license it also brings more regulation to some sections of the aviation community, and possibly a greater level of safety.

Should the SA CAA be exploring these possibilities, you be the judge?

Glen Meyburgh



WORLD FLYING CHAMPIONSHIPS – 2004

**Herning, Denmark
16 to 25 July 2004.**

The Air BP South African Flying Team competed in the World Flying Championships in Europe.

Up to now the Precision Flying Championship has alternated each year with the Rally Flying Championships. It was decided that the two competitions be held together this year with the rally competition to be held first.

The RSA Protea team was selected at the National Championships held earlier this year. SAPFA had also run a combined rally and precision competition at the Brits airfield.

The team members had flown in very few competitive events since the last World Championships as the cost of attending regional competitions has become prohibitively expensive. Despite this, the team had high hopes after winning the gold medal in the World Rally competition, which was held in Pilanesburg and Rustenburg last year.

To compensate for the lack of practice a number of training camps were held between the national selection competition and the world event. Most of the team also arrived in Herning, Denmark five days before the event was due to start to allow for familiarisation of the area and practice.

The weather during the practice and competition period was not good. A number of cold fronts had passed over the UK and northern Germany, which brought cold and overcast conditions to Denmark.



***2004 Protea Flying Team in Herning – From Left to Right
Back: Mike Ehrman, Ernie Alexander, Dale de Klerk and Nigel Hopkins
Middle: Walter Walle, Jacques Jacobs (Judge) Frank Eckard, Chris Booysen
(Manager) and Quentin Taylor
Front: Hugo Stark, Jan Hanekom, Hans Schwebel, Ron Stirk, Barry de Groot
and Mary de Klerk***

Three team members had been participants in a World competition held in Denmark in 1995 and they had attempted to give the rest of the team some idea of what to expect. The landscape was still a surprise to team members. We are used to dry bushveld and wide-open spaces. Denmark is very flat and is a series of a large number of small squares of cultivated land of different shades of green and brown. Rivers marked on the map are no more than narrow irrigation furrows. This made it very difficult to identify photographs. The map used for the competitions was a 1:200 000 road map but was still extremely accurate.

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*2004 Protea Flying Team in Herning
Some team members waiting for a function to start*



Danish terrain – Grass runway and cultivated fields

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The South African team was the largest group at the competition and was always identifiable, as they tended to wear common team clothing. They could also be heard singing Shosholoza, the team war cry.

The 14th World Rally Flying Championships

The first event was the Rally Flying competition, which included 3 days of flying rally routes with 5 scored landings. Because of the detail of the maps the routes were not too difficult but the photograph recognition was a problem for the Protea teams. They accumulated a significant number of penalties in this area of the competition.

South Africa had high hopes in the rally competition as they were the 2003 gold medallists (Individual and Team). The rest of Europe has however improved significantly over the past year. The score of the 2003 winning team (Nigel Hopkins and Dale de Klerk on 752 penalty points) would have resulted in 13th position this year. The Czech teams of the Filip brothers and Cihlár and Fiala filled the first two positions followed by the Polish team of Wieczorek and Skretowicz.



*Denise Booysen points out features on a photograph to team members (from L to R) Jan Hanekom, Chris Booysen, Hugo Stark, Ron Stirk and Hans Schwebel
(Picture courtesy Mike Ehrman Photography)*



*4th In the World Rally – Dale de Klerk and Nigel Hopkins
(Picture courtesy Mike Ehrman Photography)*

Nigel and Dale were the best Protea team finishing in 4th overall in the individual section. After adding the efforts of Barry de Groot and Mary de Klerk, South Africa were also 4th in the team results behind the Czech Republic, Poland and France.

The 16th World Precision Flying Championships

South Africa fielded a full team of eight pilots in the Precision event, most of who had flown in the rally competition. In the precision flying competition there is a theoretical section in a classroom environment where the heading, distance, groundspeed for each leg is calculated using a whiz-wheel. The route is also plotted on the map before the pilot enters the aircraft. The pilots from Poland turned in an incredible performance. The winner was K Wiczorek from Poland. He had scored only 71 penalty points over two days of flying and four landings. His total navigation penalty points was 30 which equates to a total of 10 seconds early/late at approximately thirty timed points over 300 nautical miles.

Polish and Czech Republic pilots filled thirteen of the top fifteen positions. The balance of the top fifteen were

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filled by Nigel Hopkins in 5th and a pilot from France in 10th. Our next best pilot was Jan Hanekom in 44th place. With these results Poland were first in the team section followed by the Czech Republic and France. South Africa was 7th in the team competition, which is based on the score of the top three teams of each country.

Thanks must go to sponsors Air BP, Algoa Flying Club, Shell, Aircraft Instruments, Darrel Lush, Wings 'n Tracks, Brits Flying Club, Jack Onderstal, African Pilot and Avimap.



Flying in Denmark

It was an interesting experience flying in an established first world country so that it could be compared with similar flying in South Africa.

Denmark has no general VFR frequency. Most uncontrolled fields have their own allocated frequency and aircraft would tune to this frequency when flying in the area.

There is very little talking on the radio. No radio calls are made in the circuit like we do in SA. It is surprising that in a small country (one 1:500 000 map covers the entire area) with a fairly large aircraft population that there is such little radio communication.

The pilots look out and fit into the traffic patterns.



C172 OY-AHY over Denmark
(Photo courtesy Mike Ehrman Photography)

Transponders are compulsory and are fitted in all aircraft. There is little controlled airspace and the country has TMAs at the major airfields. ATC's are friendly and seem more relaxed than their SA counterparts.

On one occasion, while flying under the Billund TMA at 1000ft agl we were called up by the ATC and told that an aircraft would be flying through underneath us at about 500ft. Sure enough a few minutes later we saw a helicopter below us. I am sure that in similar circumstances in SA one of us would have been diverted.



OY-AGL with Hugo Stark and Mike Ehrman

We were also amazed to see gliders being launched from a grass strip right next to the Billund airfield, in the CTR. (This field is similar in size to Port Elizabeth but much busier). I can imagine the reaction if you launched a glider in

the FAPE CTR.

No validation of licenses is required if you are going to fly in the country for less than 60 days. Our CAA should follow this as our validation prevents a large number of tourists from flying. This is to the detriment of our economy.

The sun sets at approx 10pm. It feels a bit unreal leaving at 6pm at night to deliver an aircraft to a field 2 hours away and planning to return before sunset.

PTAR "Green Numbers"

The Comrades marathon has the tradition of allocating permanent numbers to athletes that have completed in ten marathons. While it will be difficult for us to allocate these numbers we would still like to recognise the pilots that have taken part in 10 or more Races.

According to information received on entry forms this distinction has been achieved by:

- Dana Bensch
- Chris Booysen
- Koos Coetzer
- Ray Gleimius
- Cilliers Manser
- Ivan Marx (Dr)
- Martin Marx
- John Mayer (Snr)
- Robbie (C) Myburgh
- Robbie (L) Myburgh
- John Sayers
- Nigel Townshend
- Kobus van der Golt (Dr)
- Jannie Visser
- Walter Walle

Congratulations to these pilots.