



Welcome to South Africa



The Soaring Society of South Africa would like to welcome you to South Africa and wishes you a safe and memorable gliding experience.

Although South Africa is known for great soaring, the same climate and weather conditions, which produce the best gliding conditions, can be harsh on the body.

To help you make the most of your stay, please read and adhere to the advice contained in the attached briefing notes. They contain useful aero-medical information as well as practical operational guidance.

The notes were compiled by the following experienced SSSA pilots:
Messrs. Brian Wilford, Oscar Goudriaan, Dave Mortimer, Dick Bradley and
Dr Mike Pascoe.

I am sure that the information will be of value to you and once again, on behalf of the Soaring Society of South Africa, I would like to wish you a SOARING good time in South Africa.

Fred Bebington
National Safety Officer
Soaring Society of South Africa

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BRIEFING NOTES FOR PILOTS, GLIDING IN SOUTH AFRICA, DURING THE SOUTH AFRICAN SUMMER SEASON

INTRODUCTION

The Soaring Society of South Africa would like to bring to the attention of all pilots, gliding in South Africa during the summer season, the various factors which could affect their safety and wellbeing; these being both medical and operational

Pilots, both new to South African conditions and regular visitors, are advised to read through these Notes in order to raise or refresh awareness of the topics covered.

SCOPE

The Briefing Notes cover:

- a. Aero-medical aspects.
- b. Operations Advice

BRIEFING

Aero-medical

Hypoxia– Critical Points.

Oxygen

Pre-flight – check cylinder pressure – do you have enough Oxygen for the proposed flight. Most systems will include a table of duration of supply at various cylinder pressures against height.

Use oxygen from 10000' (3000 m) AMSL. If you are older, overweight or unfit start oxygen sooner.

Set the system to supply oxygen for around 5000' higher than your actual height.

If anticipating flight above 20000' (unlikely in thermal conditions but possible in wave) ensure that the cylinder is full before start and that the pressure gauge is visible and monitored.

No grease around oxygen and NO SMOKING when using oxygen.

Dehydration - Critical Points

Dehydration may be insidious – you don't realise that you are dehydrated until you are very dry. Far better take too much fluid than too little

PLEASE REMEMBER, BY THE TIME YOU FEEL THIRSTY, YOU ARE ALREADY STARTING TO DEHYDRATE. (by about one litre)

Temperature changes in flight can exacerbate fluid loss.

Caffeine and alcohol containing drinks increase fluid loss

(Alcohol only after the glider is safely packed away)

The following are some of the symptoms which may present.

<u>Water Lost</u>	<u>Symptoms</u>
1,5 litre	Thirst
3 litres	Sluggishness, fatigue, nausea, emotional instability
4 litres	Clumsiness, headache, elevated body temperature, pulse, respiratory rate.
5 litres	Dizziness, slurred speech, weakness, confusion,

There are more drastic symptoms associated with further water loss, but I'm sure that you won't allow yourself to go that far.

A pilot is most at risk if he or she is dehydrated at the beginning of a flight. Among the causes of excessive water loss are: **consumption of alcoholic beverages, because alcohol's diuretic effects continue even after the blood alcohol level has decreased to zero; drinking coffee or tea, because they have similar diuretic effects; working in the heat before flying, because of the increase in perspiration; and failing to drink enough water.**

Temperature - Critical points

On the ground it will be HOT – temperatures in excess of 35° are not unusual.

Dressing lightly seems appropriate, however, during the climb the temperature drops – at the usual dry adiabatic rate (3°/1000').

A climb to 15000' from 4000' means the outside air temperature will drop by 33°. thus, if the surface temperature was 30°. by the time you reach cloud base it may be minus 3C or possibly even colder. (Do the maths for each height that you expect to reach.)

Something warmer may be useful, it is suggested that long trousers and a long-sleeved shirt be worn. Carry a light jacket within reach. (also, useful if you land out.)

If the “dew point” temperature is available in the forecast, this will be a good indicator of the expected temperature at cloud base.

The effect of cold during wave flight is well known, but cold may be a problem in high thermal flights.

Shivering is a natural response to cold, the muscles generate lots of heat by shivering, but use lots of oxygen as well.

Like dehydration, hypothermia is insidious in onset and can result in impaired mental function.

Sun Effects

Remember to use a high factor quality sun block – apply generously and reapply if necessary.

Wear a hat with a narrow brim which will protect face and eyes but will not block your upward vision.

Wear long sleeves, long trousers and gloves.

Wear sun glasses.

Operations

General Site Briefing.

For both regular and new visitors, a site briefing is essential.

Each site has unique requirements and local airspace and regulatory requirements, may have changed, which will necessitate a site briefing on arrival.

Ensure local site weather phenomena are covered in the site briefing.

On arrival in all instances a familiarisation flight is highly recommended, as is recurrent training for an aero tow should a pilot be out of recency in this aspect.

In the interest of safety and consideration for other possible flying activities at a gliding site, circuit procedures relating to the departure for and returning from, a cross country flight, must be thoroughly understood.

Be aware of the location of "Prohibited and Restricted Airspace" both in the vicinity of a gliding site and on or near planned cross country routes.

Density Altitude.

Most South African inland gliding sites are between 3500' (1050 metres) and 5000' (1500 metres) above sea level. With temperatures of 30 ° C typical density altitudes can rise to between 5000' and 8000' at these sites.

Both Tug and Glider performance, is accordingly adversely affected especially, engine power output.

This aspect deserves due and serious planning consideration. An approximate 10% improvement in True Airspeed is however a benefit.

Caution is nevertheless advised as the apparent speeds (higher True Airspeed) of the glider will be higher than the usual indicated airspeeds for take- off and landing, thus requiring longer take off and landing distances.

Cross country Planning.

It is strongly recommended that all visiting pilots be thoroughly briefed on the fact that South African terrain differs significantly from that of European and other Northern Hemisphere countries.

The choice and location of out landing sites is important, to ensure no damage to the glider in an out landing. As important is the location of diversion airfields.

The carriage of a mobile phone may be useful for possible communication with crew but being outside of mobile phone reception must be taken into consideration.

The selection of a landing site near a road or farm house is important.

Rest Days.

The need for a rest day on arrival is highly recommended.

Between long distance flights, rest days are vital; they contribute to the ability to remain alert, as well as to relax and adjust after a long, high altitude flight.

Nutrition.

Adequate nutrition is vital as this in turn ensures adequate levels of energy.

A good breakfast or substantial “brunch” is essential before undertaking a long flight.

An adequate supply of water for the flight is necessary to remain hydrated.

CONCLUSION

These Briefing Notes are intended to contribute towards the safety of all glider pilots, flying in the South African interior, during the summer months.

At all times, local expertise, gliding site information and procedures should prevail.

May this document be of use to all.

If language is problematic for the understanding of the content, please will a translator assist.