

CHAPTER 973 AUGUST GATHERING



Chapter 973 August Gathering

By TC Schultz

If you've ever watched the demonstration of a Rooivalk helicopter at an airshow, you'll realise the level of enthusiasm of over 50 Chapter 973 members on 8 August who were enthralled by a superb presentation by Colonel Trevor Ralston, SAAF, Retired. Trevor served as the Chief Test Pilot for Denel's Rooivalk attack helicopter project, which is recognised as one of South Africa's premier, world class weapon systems.

Trevor graduated from the SAAF Wings Course at Dunnottar in 1965, going on to fly Alouette

and Super Frelon helicopters, and served as an instructor in Harvards at Dunnottar. He was then selected to attend the Empire Test Pilot School at RAF Boscombe Down, after which he joined the Rooivalk project.

Trevor explained the mix of strategic considerations, including the growing threat along the border, the requirement that any airborne system be capable of joint operations with ground forces, ability to operate in a 'hot and high' environment, requirement for 'nap of the earth' low level flight, potential costs, etc., that factored into the decision to develop the Rooivalk.

Upon the decision being made to proceed with

design of an attack helicopter, Trevor detailed the constraints that drove programme development. South Africa was forced to rely solely on internal expertise, as UN Resolution 418 of 1977 had placed an international arms embargo on the country. Initially, a concept demonstrator was developed using an Alouette III airframe and engine; its success paved the way for the go ahead of full scale development. The Puma/Oryx helicopter was used as a baseline for the final design. Limited budget and import restrictions led to the employment of as much extant technology as possible; for example, the use of the Turbomeca Makila engines which powered the Super Puma. The UN embargo also meant that weapons, such as the Mokopa anti-tank missile, were by necessity developed by Kentron/Denel, as import of the US Hellfire missile were prohibited.



Colonel Trevor Ralston

Trevor described the challenges of the Rooivalk flight test programme, which began with the concept demonstrator and two additional engineering aircraft. Airframe vibration, ordnance carriage layout, stabilisation of the weapons cueing system, cockpit layout, and coordination between the pilot and weapon system officer were among the major developmental challenges. One interesting challenge, especially for fixed wing pilots, was the tradeoff in tail fin area necessary to balance the Rooivalk's forward top speed versus sideward flight capability.

Unfortunately, the Rooivalk's first flight on 11 February 1990 was completely overshadowed by Nelson Mandela's release from prison on

the same day. National and International media focus on Mandela's inauguration in May, 1994 and the new government's subsequent realignment of budget priorities continued to divert internal and global attention to, and interest in the Rooivalk.

Hoping to develop an international market for the Rooivalk, which would have drastically helped with absorption of the development costs, Denel commenced marketing efforts with several nations - Algeria, Australia, Brazil, Malaysia, Saudi Arabia, and the UK, among others.

Despite no international customers being developed due to many factors—Denel's lack of experience in international finance, tough competition from platforms such as the Boeing Apache, and the political manifestations mentioned above, Trevor regaled us with his exploits in demonstrating the Rooivalk, including aerobatics, at prestigious venues such as the Farnborough International Airshow, and Malaysian Air and Maritime show.

Trevor explained that several of the selected competing platforms, such as the French Tiger, and Italian Mangusta, lacked the overall capability of the Rooivalk, which would likely



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- FRIDAY - NAV RALLY, STOL COMPETITION, AIRCRAFT JUDGING, AVIATION WORKSHOPS & PRESENTATIONS**
- SATURDAY – AIRCRAFT JUDGING, AIRCRAFT DISPLAYS, AWARDS PARTY**
- CAMPING ON THE AIRFIELD, RENT A TENT OR BRING YOUR OWN, CARAVANS WELCOME**
- EXHIBITORS, FOOD STALLS AND LIVE MUSIC!**



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have been a better platform for the required mission sets. The Rooivalk's most serious competitor was the Boeing Apache, over 2,700 of which are in service in the UK, Australia, Saudi Arabia, and 15 other nations, and is still being manufactured.

The Rooivalk eventually proved its value in combat operations following deployment to the DRC in 2013 in support of UN peacekeeping forces. The three Rooivalks deployed conducted numerous combat operations against M-23 rebel positions, providing critical support to ground forces. Today, three Rooivalks remain in service with the SAAF. The prototypes are being restored for museum display.

Chapter 973 thanks Colonel Ralston for his marvellous presentation; we are indeed grateful to be able to have had him share the story of the birth and development of the Rooivalk and his unique experiences as its chief test pilot with us!



EAA Sun 'n Fun South Africa: A New Chapter

The story of EAA Sun 'n Fun begins with the spirit of the Experimental Aircraft Association (EAA), founded in 1953 in Milwaukee, Wisconsin, by aircraft designer and aviation pioneer Paul Poberezny. EAA began as a grassroots organisation for people who loved designing, building, restoring and flying their own aircraft. That same enthusiasm eventually found a home in Florida.

The first Sun 'n Fun fly-in was held at Lakeland Municipal Airport, Florida, in January 1975. It grew from the efforts of local aviation enthusiasts and EAA members.

The Sun 'n Fun concept was embraced enthusiastically in South Africa, where EAA has a long and proud history. South African aviators readily identified with the ethos of homebuilding, restoration, recreational flying and, above all, the camaraderie that lies at the heart of EAA.

Until now, however, South African Sun 'n Fun has always been hosted at a "visitor" airfield—a venue that welcomes the event but is not itself home to an EAA chapter. This year marks an important departure from that tradition.

For the first time, Sun 'n Fun will be hosted at an airfield where an EAA chapter is actually based: EAA Chapter 973 at Krugersdorp.

This is significant because the Krugersdorp Flying Club recognised the potential of the event and embraced the vision from the outset.

The objective is not simply to stage another fly-in, but to establish Sun 'n Fun as an annual event, growing and improving it with each year.

With that in mind, a long weekend in September was identified as the perfect opportunity to make EAA Sun 'n Fun an event that offers something for everyone—and we intend to make every moment count!

The excitement kicks off on Thursday, 24 September, with a movie night, before the weekend takes to the skies with a navigation rally and STOL competition. We are also proud to launch Level 1 of the Aviation Youth Development Programme, inspiring the next generation of aviators and giving young people an opportunity to discover where aviation can take them.

For those who love learning, there will be hands-on workshops and fascinating talks from industry professionals, while the social side of aviation is well represented with a lively quiz night.

Throughout the weekend, visitors can get up close to some fantastic aircraft, enjoy aircraft displays and judging, and soak up the unique atmosphere that makes aviation events so special.

And then, on Saturday evening, 26 September, we bring it all together with an Awards evening, accompanied by live entertainment - the

perfect finale to a weekend packed with flying, learning, competition, friendship and fun.

We are especially grateful to all our sponsors, for believing in the vision and embracing the opportunity to help us build something that can become a lasting part of South Africa's aviation calendar.



Sun 'n Fun 2025

SUN 'N FUN TALKS & WORKSHOPS

TIME	FRIDAY 25 SEPTEMBER	SATURDAY 26 SEPTEMBER
08h30	Air Navigation Rally plotting and briefing with SAPFA EAA 973 Hangar E10	Live Stream from Alaska- Jon Kotwicki: Float Planes and Back Country Flying EAA 973 Hangar E10
10h00	Century Avionics - New Garmin Axis followed by Q & A EAA 973 Hangar E10	Megan Stevenson - Factors Impacting Human Performance EAA 973 Hangar E10
11h00	Aviation Youth Development Launch and Workshop Sponsored by ExecuJet EAA 973 Hangar E10	Aviation Displays
13h00	Pieter Geldenhuys -Axella Aeronautical Engineering: Composite Workshop Hangar E29	Niren Chitoki - Comet Aviation Supplies: Best fuel for Rotax, Maintenance Schedules Carburetor Synchronisation Workshop Hangar E29
15h00	Pilot Briefing for Orion STOL EAA 973 Hangar E10	Talk by Kevin Hopper, developer of the Orion Cub, and factory tour



New CHAPTER 973 PROJECT!

A big thank you must go out to Lance Rademeyer for the donation of an almost complete aircraft, an SNS-8 Hyperlight. Chapter member, Pete Lastrucci, collected the project this month and brought it through to Jack Taylor.



The Hiperlight on it's way to Jacks

973 Technical Director, Kevin Hopper and Geoff Springer wasted no time in getting to work on the carburetor and preparing the engine, a Rotax 503, for an initial engine run.

An inspection of the airframe showed that the fabric on the wings and tailfeathers is still good, a few minor patches required and perhaps a respray.

The fuselage needs some work, perhaps strip down, inspect and re cover. Chapter 973 are



Ant Harris and Pete Lastrucci inspecting the aircraft

looking at a supervised "covering party" to perform this task, and ideal way to give all members a hands-on experience covering an aircraft.

For those out there who want to get involved in getting this aircraft back in the air, please step forward, we are looking forward to many (but not too many) social work Saturday mornings at the airfield. This will also give members a chance to learn some of many aspects involved in aircraft building, repair and maintenance. All work will be under the watchful eye of EAA experts, a great opportunity for those planning aa future project!

Watch out for communications on this project, workdays and schedules will be announced shortly!

THE SORRELL HIPERLIGHT



The Sorrell Hiperlight is a family of single and two seat, negative stagger biplanes, designed for amateur construction.

The design was sold initially by Sunrise Aircraft of Sheridan, Oregon and as of May 2022 was produced by Thunderbird Aviation of Ray, Michigan.

Development

The single seat SNS-8 Hiperlight was designed by the Sorrell brothers in 1982 at the request of the US Rotax engine distributor to provide an enclosed cockpit aircraft design to utilize the 28 hp (21 kW) Rotax 277 engine. The resulting aircraft was a scaled-down version of the very successful Sorrell Hiperbiplane aerobatic cabin biplane and with an empty weight of 247 lb (112 kg) fit the US ultralight category. The series designation of "SNS" stands for Sorrell Negative Stagger. The aircraft is described as easy to fly, with light control forces and well balanced controls. The aircraft has full-span ailerons on the bottom wing that droop together when the stick is pulled back, giving the same effect as flaps in the landing flare. 28 hp (21 kW) is sufficient to power the design and it does not require larger engines. Since the Rotax 277 has been out of production for many years engines such as the 2si 460 or Hirth F-33 are often used.

Design

The aircraft features a welded steel tube forward fuselage, with a detachable aluminium tube aft fuselage. The



rear fuselage can be easily removed for transport or storage in ten minutes. The wings are also constructed from aluminium tubes and the whole aircraft is covered in aircraft fabric. The SNS-8 has a maximum pilot weight of 230 lb (104 kg).

The SNS-8 kit was estimated as taking 200–300 hours to assemble.

Sunrise Aircraft developed the single seat SNS-8 into the SNS-9 two-seater. The SNS-9 is minimally larger with a wingspan of 23.4 ft (7.1 m) versus the SNS-8's 22 ft (6.7 m), length increased from 15.6 ft (4.8 m) to 18 ft (5.5 m) and gross weight increased from 500 lb (227 kg) to 814 lb (369 kg). The SNS-9 uses the 50 hp (37 kW) Rotax 503 as its standard powerplant and had an optional Wankel engine available.





COFFEE @ JACK'S

Saturday Coffee Mornings at the 973 Hangar

Thanks to members, the 973 are proud of the fact that the facility has been open every Saturday morning since the chapter was re-established.

On Saturday 29 August we hosted Wolfgang from Germany. Wolf drives the oil buggy that supplies the show planes on the flightline with smoke oil at Oshkosh. This year Wolf offered many of our members a seat in the vehicle while he performed this important job!



Members pose with Wolf at Jack's



A welcome burger on a cold August morning!



Wolf with 973 member RD in the smoke oil buggy



Moose with his "Moose Crossing" sign fresh from Alaska



The ever popular coffee station at Jack's

A trip to Starbase Texas

After Oshkosh this year, we were lucky to visit the SpaceX Starbase facility in Boca Chica, Texas. Nice to see the iconic Starhopper which was the very first low-altitude prototype built for the SpaceX Starship development program, and the hundreds of Tesla Cybertrucks parked in the road outside the base, presumably all company staff vehicles.

The facility reminded me of just another industrial plant, security was only evident near the Mega Bay buildings and the beach road passes very close to the two launch pads. Disappointing was the fact that the Rocket Garden, where the used and some unused rockets were stored, is no longer open to the public. However, Rocket Garden is occupied by Ship 20 and Booster 12, viewable from the access road. We coupled this trip with a visit to the Johnson Space Centre in Houston, a good fix for any space junky!

Neil



The iconic “Star Hopper is parked next to the beach road for all to see and touch



Hundreds of Cyber Trucks (company cars) parked outside the SpaceX facility



This is how close you drive past the launch pad (2) – picture taken from our rental car window!

CHAPTER 973

Merchandise



Show your colours! EAA Chapter 973's **Merch Shop at the hangar** offers a range of bright golf shirts, caps, hats and *now!* – a range of warm hoodies in different colours for those crisp upcoming winter mornings. Cash or cards accepted, come and visit us @ **Jack's**, we're open every Saturday morning for coffee, camaraderie and perhaps a breakfast at 26 South!



JOIN OUR CHAPTER!

Become part of our dynamic EAA Chapter! Chapter 973, based at one of Gauteng's best run and most friendly GA airfields, Jack Taylor, Krugersdorp, is open for membership. Our homebase, overlooking the runway, offers a warm and friendly place to hang out with fellow aviators and aviation enthusiasts.



JOIN HERE