HOMEBUILT

JOURNAL OF THE EXPERIMENTAL AIRCRAFT ASSOCIATION OF SOUTHERN AFRICA

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ON THE COVER

After many years in gestation this fine looking Smith Termite is now providing its builder, "Tosh" Sillis, with lots of happy flying. Delta Victor is powered by a converted VW-1600 motor which offers a fuel consumption of only 10 litres per hour.

STATEMENT OF POLICY

The Experimental Aircraft Association of Southern Africa is a body representing individuals involved in the construction and operation of homebuilt aircraft and the restoration of antique aircraft.

Subscriptions of R4,00 per year include affiliated membership of the Aero Club of South Africa and quarterly issues of "Homebuilt".

Editor: S. Crutchley

CORRESPONDENCE

All correspondence to the Association should be addressed as follows:

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PIETERMARITZBURG.
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EDITORIAL

It is becoming ever more apparent that one of the greatest problems confronting our members is that of obtaining building materials. Nearly every key item in our aircraft has its origin many thousands of miles away in some foreign country. If the homebuilding movement is to prosper in South Africa the method of procurement of these materials must receive our serious attention.

If there is one thing guaranteed to stop a prospective homebuilder dead in his tracks it is the sudden realisation that some essential item is unobtainable in the country. The prospect of obtaining an import permit, finding an overseas source of supply and arranging shipping and insurance does not appeal to everyone. Besides, it is impractical to repeat this performance every time more building materials are required — and who can afford the outlay required to import everything in one hit?

There are undeniably a number of local sources of supply for items commonly used during the maintenance of commercially built aircraft, but when it comes to the materials so important to the homebuilder such as spruce, ply and so on, the picture is bleak.

Many of the old-timers have found devious ways of circumventing the obstacles encountered, but for the new member the whole business is confused and horrifying. It can be argued that the number of homebuilts flying proves that the snags are surmountable, but who would argue that the inconvienience, delay and frustration are a necessary part of producing a sound aircraft.

It is a sad fact of life that the several well established light aviation companies that we are forced through circumstances to deal with are highly profit-motivated. In many cases prices are arrived at, not on a basis of value, but on a basis of what the market will stand.

The smaller suppliers that are slightly more orientated towards the homebuilder are, for various reasons, unable to offer us the degree of service we demand. "Tell me what you want and I'll import it for you" and unanswered correspondence are not good enough.

The solution is clear; we must encourage local entrepreneurs to carry stocks of all our requirements even down to a selection of sets of plans. If we cannot achieve success by this means we must give serious consideration to forming our own company to cater for our needs.

Who knows better the requirements of the South African homebuilder than we do?

FOR SALE

Set of new Pazmany PL4A plans. Single-seat all metal VW-powered aircraft. R50,00. Contact J. M. Cohoe, Box 67416, Bryanston, Transvaal.

Set of Volksplane VP-1 plans. The ultra-simple single-seat VW-powered aircraft. R30,00. Also fair quantity of selected spruce for sale. Contact P. Jennings, 66 Carey Rd., Pietermaritzburg. Telephone 24619.

Set of Jodel D-9 plans (French version). Price R5. Apply through Secretary, E.A.A. of S.A.

Set of 4,00 x 4 aluminium wheels complete with tyres and tubes. Suitable for ultra-light homebuilt. R35,00. Contact B. B. Vivian, 4 Victoria Crescent, Westville, Durban.

WELDING

Welding on a homebuilt may be done by any experienced and skilled welder. The welds will be carefully examined by the inspector and only welding of the highest quality will be accepted.

THANKS

It is desired to express our sincere appreciation to Mr E. C. "Woody" Woods for his generous donation of two Super 8 documentary films to our Association. They are entitled "1972 E.A.A. Fly-In Homebuilts and Antiques" and "1972 E.A.A. Fly-In Warbirds and Aerobatics".

LETTERS TO THE EDITOR

Numerous letters have been received by the Secretary enquiring about a source of supply for spruce. In order to assist these members, and perhaps others as well, a letter was sent to a firm in the Cape who were reputed to have stocks of spruce available. Hereunder is the reply:

Wetton Timbers (Pty) Ltd.,
P.O. Box 8,
Kenwyn,
Cape.
(Telephone 71-1881)

Dear Sir,

In response to your enquiry regarding Sitke Spruce I wish to advise as follows:

We do stock Sitka Spruce and specialise in the supply for various end uses such as aero quality, boat building, masts and spars, etc.

Sizes of our limited present stock are, three inch thick by four to ten inch wide, by eight to fourteen feet long and quantity ± 300 cubic feet. Sitke Spruce on indent should arrive ± May 1974 when we will have a fair selection both quantity and quality wise. Present prices, depending on selection, are based on about R12,00 per cubic foot, but the new stock will be considerably more expensive, depending on exchange rates at time of shipment.

Packing for rail can amount to ± 5% of consignment value.

Selection of timber for specialised end use is carried out by experienced staff who have been performing this type of exercise for many years.

Attention is given to density of annual rings, slope of grain and general texture of the timber.

Moisture content however, is not considered vital, as the usual practice, when laminating, is to cut timber to thin sizes when it will air dry to 15% under ordinary normal temperatures.

Kiln drying is inclined to denature timber with consequent possible loss of strength.

Regarding the ability of our staff to select suitable timber for aircraft, we have no hesitation in replying in the affirmative and several of your members will confirm this. The policy of this company is to utilise the experience of our staff for the benefit of our customers, and it is our intention to continue to specialise in various timbers for specific end uses such as Sitka Spruce, Obechi (Wawa) also used in aircraft construction and many other species.

For your further information a new stock of Finnish Aircraft quality Birch Plywood from 1 mm to 3,5 mm thick will be arriving in about 2 months time. This plywood will have a Lloyds certificate of quality.

May we congratulate you on your most interesting magazine "Homebuilt" and trust it will go from strength to strength as it is fulfilling a great need.

Please do not hesitate to ask any further questions you feel we may be able to answer relating to the supply of aero material.

Yours faithfully,

S. Willmot

WETTON TIMBERS (PTY) LTD.

A.F.B. Swartkops,
P.O. Valhalla,
PRETORIA.

Dear Editor,

Firstly let me congratulate you on the September issue of Homebuilt. When I criticised the first issue sent out last year I did so in the hope that our magazine would improve. It certainly has, as the September 1973 issue testifies.

However, let me pose a question. Would we not improve our membership and help ourselves by getting news to our members through 'World Airnews' each month? Just about all aviation organisations are using it to their benefit.

Another suggestion. Why don't our members write to that magazine and tell about their aircraft so that the aviation world will be made more aware of our presence? I mention 'World Airnews' because it has always given a sympathetic ear to the homebuilding movement and there have been a number of articles on the subject in the past.

Come on members, let's hear your views on these suggestions. Don't send articles about your machine to one magazine, but to both!

Regards,

Peter Booth.

64 Erica Road,
GEORGE,
Cape.

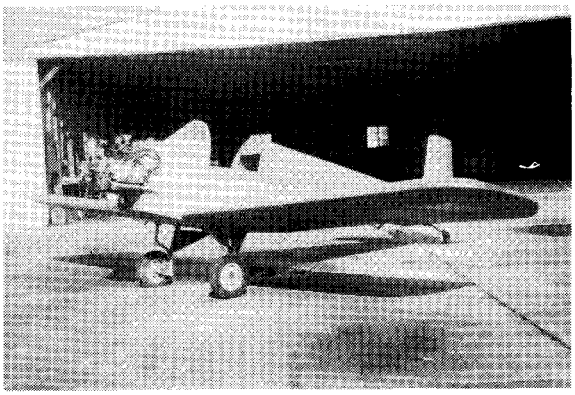
Dear Sir,

I am enclosing a snap of a Turbulent built here some years ago. It was never flown. I have taken it over from the previous owner and am busy stripping it for close examination. If it does not get permission to fly I shall build a new machine, making use of all the old fittings which appear to be perfectly sound, not to mention the engine, wheels and instruments.

We are rather out on a limb down here in the second section of the Southern Cape and welcome hearing news from areas where there is more activity.

Yours sincerly,

Stan Ohlsson.



EERSTE SAFARI MET TUISGEBOUDE VLIEGTUIE

deur Dr von Moltke

Ek weet nie wie eerste die idee gekry het nie; maar vir die laaste jaar wat ek aan my Fly Baby – ZS–UEA– gebou het, het Toy van Rensburg my kort-kort getelefoneer om te verneem wanneer ek dan tog klaar sal wees. Ons moet dan op safari gaan en ek moet net sê wanneer en waarheen – sy Mini Ace, ZS–UDW, en hy sal reg wees.

Die plan was aanvanklik om eers Oranjemund toe te gaan – maar ons is vriendelik dog dringend beveel om nie daar te land nie – tot nou toe weet ek nog nie waarom nie.

Toy het die vorige aand van Clocolan af vertrek en in Kuruman by my oornag. 'n Mens sal dink dat ons vreeslik sou werk aan vlugplanne, ens., maar tog was dit nie so nie. Ons wou ons nie bind aan 'n vaste skedule nie – dit sou baie van die avontuur wegneem. Die enigste probleem met so 'n safari in ons soort vliegtuie is pakplek! 'n Mens moet die verkyker tuis laat bly om nog 'n ekstra onderbroek in te pak. Vir padkos is daar nie plek nie; maar Toy het tog plek gehad vir 'n paar stukkies biltong wat hier rond gelê het.

Met eerste lig die volgende oggend wou ons hier opstyg. Ons het ook, maar die pers – Diamond Field Advertizer – was eers daar met die gewone vrae en fotos. Die eerste been was Upington – niks nuuts vir 'n ou Kalahari-man soos myself nie; maar tog mooi. Op Upington het ons tenks volgemaak en al met die Oranje-rivier gevlieg – oor die pragtige wingerde en lusernlande. So gaan dit vir omtrent 60 myl. Dan ewe skielik sien mens net swart klippe en rotse en daar is die Augrabies waterval. As mens so oor die plek vlieg en sien waar die toeriste staan en kyk – dan besef mens eers hoe min hulle sien. Ons het vir meer as 'n halfuur daar rondgevlieg en fotos geneem en laer gevlieg en fotos geneem en laer gevlieg ens. Op die stadium het ons ons eerste klein probleempie opgetel. As ons so rondvlieg dan verloor ons mekaar en dit is soms moeilik om mekaar weer te vind – selfs met die hulp van radios.

Van die Augrabiese watervalle af is ons toe reguit na Karasburg. Op hierdie been het ons die regte Suid-Wes begin leer: Baie warm, pragtige natuur, geen dorpe of vliegvelde op die pad en baie min checkpunte. Op Karasburg het ons weer brandstof ingeneem en 'n motorrit na die dorp gebedel. Dit was 'n Sondag en hulle kafee maak 10-uur toe. Ons het 5 minute gehad om twee koeldranke en vleispasteie te koop en toe moes ons op die sypaadjie sit en eet – wel dit was die lekkerste wat ons nog op 'n sypaadjie geëet het!

Vanaf Karasburg is ons reg wes. Na 80 myl kom ons toe skielik op die magtige Visrivier Canyon af. Geen foto of beskrywing kan reg laat geskied aan hierdie wonder van Suid-Afrika nie. Ek het alles gesien met my linker-oog. My regter-oog was die hele tyd op my oliedruk en olie-temperatuurmeter en op my tachometer. As mens oor sulke plekke vlieg gaan jou enjin mos in outomaties rof! Ek sal niemand aanraai om alleen daar te vlieg nie. As mens 'n noodlanding daar uitvoer en as jy nie dood is nie, sal jy nooit daar uitkom nie. Ek het altyd baie veilig gevoel met Toy se Mini Ace op my vlerkpunt en so het Toy oor my Fly Baby gevoel. Op die kaart vlieg mens 80 myl in die Canyon op maar in werklikheid vlieg mens baie meer want dit is op sommige plekke tot 10 myl breed en 'n mens wil dikwels weet hoe dit aan die anderkant lyk. Die Canyon hou op by Noute. Dit is op die kaart net 'n "siding" aan 'n spoorlyn maar nou is daar 'n groot dam. Daarvandaan nog 40 myl tot in Keetmanshoop.

Op Keetmans – die enigste plek met onvriendelike en ongemanierde lughawe personeel – het ons by vriende van my oornag. Die volgende skof was om petrol in te neem op Marienthal. Dis 140 myl, en nie veel om te rapporteer nie.

Marienthal is snaaks. Eerstens is daar 'n vreeslike groot dam wat nie op die kaart aangetoon is nie – die Hardap dam. Dit is in die bopunt van die Visrivier en baie groot. Tweedens moet jy van die lughawe af telefoneer vir brandstof en jy moet 'n 5-sent muntstuk vir die telefoon beskikbaar hê of jy praat met niemand nie! (In Kuruman is dit gratis!) Derdens is daar 'n groot boek wat lyk soos 'n "visitors-book". Moet dit nie teken nie want dan stuur hulle vir jou 3 maande later 'n rekening van -75c vir landingsfooie.

Die volgende skof was regtig harig maar 'n wonderlike vlug. Afstand 255 myl reguit na Swakopmund. (Die Fly Baby kan 300 myl doen – dan sal daar 'n reserwe wees om 'n sigaretaansteker mee vol te maak). As u op die kaart kyk sal u sien daar is geen checkpunte nie – net hoë berge en hulle punte was in wolke. Op dié stadium het ek en Toy besluit dat die kaart nie baie akkuraat is nie want die paadjies loop nie soos hulle moet nie. Ek voel 'n mens moet nooit 'n kaart se akkuraatheid betwyfel nie – miskien was dit die anoxia of iets want ons het hoog gevlieg – maar ons was oortuig ons was reg. Ons was nie. Toe ons oor daardie lewelose berge kom was ons in die Namib woestyn. Die pragtigste waaisandduine wat 'n Kalahari-boer nog gesien het; maar dit was nie vir ons snaaks nie, want ons is mos oor die woestyn. Toe ons by 'n droë rivier kom het ons begin twyfel aan ons posisie. Noord van die rivier was daar *geen* sandduine nie. Dit blyk toe dat ons op die Kuiseb rivier is. Dit skei die Namib -woestyn in twee – Suid is dit net sandduine en noord is daar geen duine nie – harde grond en klippe. Toe voel ek dat die Fly Baby krag verloor – 'n vlugtige kyk na die Tachometer bevestig dit! Gou – check gas-arm: reg – check carbheat: reg – probeer sluk: – geen spoeg! Vertel vir Toy: Stilte. Vertel weer vir Toy: Toy sê probeer carbheat – ha-ha-ha. Kyk rond vir moontlike noodlandingsplek. Reg onder my is 'n pragtige vliegveld: weer op die radio: Toy, ek gaan land – hier is 'n vliegveld onder my. Stilte. Toy sê: Dok, ek dink jy moes te lank in die son gesit het in jou vliegtuig (Dit het nie 'n dak nie) Daar is nie vliegvelde in die Namib nie. Teen daardie tyd was ek op eindnadering vir die enigste aanloopbaan, mooiste aanloopbaan in die wêreld as 'n mens moet land in die woestyn. Nie te lank nie of 'n Jeep kom in 'n stofwolk by ons tot stilstand. Die plek se naam is Gababeb. Dit is werklik 'n vliegveld en hulle is 'n navorsingstasie van die WNNR. Die Fly Baby word goed nagegaan en natuurlik is alles in orde. Ons oriënteer onsself – 40 myl van Walvisbaai en 60 myl van Swakkop. Toe kom die kus. Die weskus het

'n permanente temperatuur inversie. Daarom is daar altyd mis en nooit reën nie. Die Fly Baby het weer krag verloor maar ek was nie veel daaroor bekommerd nie; want toe was ek oor 'n nuwe probleem bekommerd; brandstof. Ons moes laag vlieg om onder die mis te bly en sou geen keuse van landingsplek gehad het as die enjin gaan staan sonder petrol nie. Wel ons het Swakkop se vliegveld gehaal en ek het selfs nog genoeg brandstof gehad om na die vasmaakplek te ry en toe was daar nog een pint oor!

In Swakkop het ons by my broer gekuier. Ons het in die volgende 3 dae net een maal gevlieg – vir ± 1½-uur. Toe het Toy siek geword. Hy het viskoors gekry. Net omdat ons vriende is, en net omdat hy my linker magneto herstel het moes ek ure en ure aanmekaar sit en kyk, in vreeslike koue, hoe hy vis vang.

Ek het self ook 'n paar gevang; maar ek gee voorkeur aan vliegtuie, vrouens en drank – in daardie volgorde. Na 3 dae en net soveel partytjies is ons weg van Swakkop af – reg noord na die Brandberg.

Die afstand is 100 myl. Brandberg is die mees fantastiese berg in Suid-Afrika. Dis nie deel van 'n reeks berge nie. Dis omtrent rond in omtrek – omtrent 15 myl deursnit en 8550 voet bo seespieël. Wat dit so fantasties maak is dat die hoogte van die omliggende wêreld slegs 1500 voet bo seespieël is. Stel u voor – 'n berg van 7000 voet hoog. Toy en ek het met ons vliegtuie al langs die berg gevlieg. Dit was ± 12 uur en die lugstrome was vreeslik sterk. Ons kon glad nie vir een oomblik op dieselfde hoogte vlieg nie en op ± 8000 het ons besluit dat die berg wel 8550 voet hoog kan wees. Dit lyk nie so as mens die Brandberg nader nie. Omtrent 10 myl oos van die berg is daar 'n myn waar ons geland het. Die myn het 'n Radiostasie (123.5). Dis 'n tinmyn en die bestuurder was 'n ou maat van my – ons het saam radio-modelle gebou in die ou tyd. Omtrent al die blankes van Uis (dis die Myn se naam) was daar – hulle sport is sweeftuie – moet wees met daardie vreeslike thermals.

Van Uis af net 125 myl na Otjiwarongo. Vir my was dit 'n herontmoeting met my ou Aeronca 7AC Champ ZS–AXJ wat ek aan my vriende die Von Baum – gesin – verkoop het. Na ete is Toy in UDW en ek en mevrou Von Baum in AXJ in die lug na die wonderlike Waterberge. Daar is ek weer met thermals al langs die berge op – die enigste manier om hoogte te kry in 'n Champ met 'n omgewing hoogte van 6000 voet. Vir my was dit amper 'n sentimentele rit, want omtrent 50 myl van die Waterberge af het ek groot geword op my pa se plaas.

Daardie aand braaivleis en 'n paar bottels toebroodjies tussen die gaafste Duitssprekende Afrikaners denkbaar. Die volgende oggend 100 myl Noordwes na Okaukuejo – die ingang van die Etosha wildtuin.

Mens vlieg net Suid van die enorme Etosha pan – en wild is vollop te sien. Dis natuurlik teen die wet om laer as 'n sekere hoogte oor 'n wildtuin te vlieg – ha-ha-ha! Die wildtuin is 70 myl lank maar met al die draaie ens., moes ons seker tweemaal 70 myl gevlieg het om te gaan land by Fort Namutoni. Mens taxi van die vliegveld af met die pad langs tot by die ou Fort. Toe ons daar kom was daar reeds 6 ander vliegtuie! Die Fort is nou 'n toeriste aantreklikheid maar in die ou tyd die enigste verdediging wat die Duitse Troepe teen die inboorlinge gehad het. Dis 'n ware Fort op dieselfde lees geskoei as die forte in die Franse Vreemdelings Legioen. Dit was verskriklik warm en ons het weer geëet en nog 'n bottel toebroodjies – yskoud – gehad. Tsumeb is 'n mooi dorpie en ons sou langer bly, maar die vriende wat my daar sou ontmoet was met vakansie. Toe weer 125 myl terug na Otjiwarongo.

Die volgende dag deur van die pragtigste dele van Suid-wes na Windhoek. In Windhoek het ons 'n motorkar tot ons beskikking gehad – weer met die komplimente van die vriendelike Von Baum's van Otjiwarongo. Ons het Windhoek goed gesien en 'n ligte rooi kleur geverf en die volgende oggend daar vertrek. Ons het weer op Marienthal geland vir petrol maar weer nie die boek geteken nie.

Van Marienthal af het die weer interessant geword. Ons wou by 'n baie ou vriend van my en my vader oornag – Hy is oud-senator Eben Nel. Sy plaas se naam is Sandheuwel en dit is in die Auob-rivier omtrent 15 myl wes van die grens van die Kalahari-Gemsbokpark. Dis maklik om te kry – die vierde rooidakhuis vanaf waar die Auob en die Olifantsrivier saam vloei en die mense land sommer in die droë rivierbedding – Dis soos Oom Eben dit per telefoon aan my verduidelik het. Ons het toe so gevlieg en toe ook daar aangekom. Ons het 'n baie aangename aand daar deurgebring – lekker vleis geëet en ook weer 'n paar bottels toebroodjies gehad.

Die volgende oggend het Oom Eben vir ons motorkar-brandstof geskenk en ons het opgestyg op ons laaste skof na Kuruman. Die eerste deel is weer oor 'n wildtuin, maar dis net sandduine op sandduine. Dan moet 'n mens regs draai om nie oor die Suidelike punt van Botswana te vlieg nie – want dis onwettig – ha-ha-ha. Na bogenoemde onwettigheid was ons weer in my kontrei en na nog ± 150 myl was ons terug in Kuruman.

Ons was baie moeg en hoogs gelukkig. Ons het ook gedoen wat ons altyd sal onthou. Ons het iets gedoen wat niemand kan doen nie – behalwe as hy eers sy eie vliegtuig gebou het! Ons het omtrent 40 uur gevlieg teen 'n kruissnelheid van net onder die 100 m.p.u. Ons was in drie koerante en ons het nuwe vriende gemaak wat ons altyd sal onthou.

Die volgende oggend is Toy terug huistoe. Ek dink hy het dit nog meer geniet as ek want Suid-Wes was vir hom iets wat hy nog nooit gesien het nie en ek het daar groot geword. Ons het die volgende voornemens gemaak. Eerstens: Ons moet dit weer doen – liefs met nog 'n groter vloot vliegtuie en; Tweedens: Man, ek moet nog 'n canopy op my Fly Baby sit.

A HAIRY EGSPEERIENCE

by Pookie

Like my maatie says," A bird in the hand is worth two in the back seat! "

If you are taking your favourite bird for a ride in a vliegie this weekend, just take a few tips from a ou who is vastly egspeerienced in this field. As one can imagine, this can be a lekker pass-time, just so long as you don't get no 'komplikashuns'.

Now when it comes to 'komplikashuns' I am more egspeerienced than the telephone department.

So I meet this mooi chick at a party that me and my maat has gate-crashed and some ou is telling her how he can do a ton on his 'iron', so I ups and sez I can do more than a ton in a vliegie and she lights up, so we make a date.

Now I can tell a babe whats got class quicker than most, and when I sees she even wipes the top of the dop bottle before she takes a swig, then I'm sure she's got the sort of charm my old ma always talked about. And she aught to know because she got a blackbelt and a couple of Dans from the charm school at Blikkiesdorp.

By the time this little cherrie has hitched to the airport I am already there and making like I'm taking the greatest care to ensure that the vliegie I borrowed is in the best of condition.

It so happens that I have been lucky enough to get a china of mine to borrow me his plane on account that it's been standing for a long time and is all to do with some ou whats called a Messenger of the court, all of which hasn't got nothing to do with me.

Well, after I has stamped down the khaki-bos and cactus thats grown up around the vliegie, I commences to do a pre-flight check. A careful walk around satisfied me that the engine, propellor, wings and tail are all there, and a closer inspection shows that even small details like the wheels and spars are all where they should be, although the former is a beitjie flat and the latter is a beitjie bent.

After we clears the cobwebs from all the clocks and dials and dusts down the inside a bit, I get this nice little cherrie of mine to get in while I sommer makes an arrangement with a local to give the prop a swing.

About this time she says that she's not so keen on aviation after all and maybe we can go to the Bio instead, and it takes me a time to calm her down and assure her that she is about to have the egspeerience of a lifetime. Also, that the carpet is not moving and it's her imagination and excitement.

So after some negotiation with the ignition and the fuel system, the whole box-of-tricks comes to life and it is not long before we are romantically climbing into the 'wide blue yonder'. Such lekker weather and good visibility makes the whole scene seem like it's my special day.

It's about now that the komplikashuns set in.

Suddenly this popsie makes a grab for me that makes me think that I am about to become president of the 'Mile-

high' club. So I shouts to her where's her manners? We are not even outside the circuit yet and to wait till we are at cruising altitude, – like 500 feet!

Then I notice she is crouching on the seat and there on the floor-plank is the biggest spider you ous ever saw. Man, this thing is like a soup plate and he's got hair like a pop singer. And a pair of eyes like a DCA inspector.

So suddenly the rubber peddals become surplus to my flying requirements and I am also crouching on the seat. In the next few minutes you ous must understand that there was a certain amount of confusion aboard. Like this dollie is all for leaving for home right now-now. Also that my hairy friend disappears back under the seat and comes up at the back of the seat like he wants a better view. Then he's gone again and the next time we sees him he's half way up the stick. Strange how a ou can fly on the trim only when the need arises!

He soon gets tired of this perch and makes off under the panel. Now all eyes are on the clocks and sure enough, I can see a long hairy leg appear behind the glass on the D.I.. Then the fuel gauge, - then here, then there . . .

Man, I can tell you it takes courage to put your hand on the throttle when you got a ou like this maybe watching from just behind the friction nut!

Now fortunately our airststrip is sommer long and smooth. The landing was sort of a makeshift arrangement with Isac Newton, with whom I have seldom had such a brief transaction. All this fancy talk you ous hear about "Kindly-remain-seated-until-the-aircraft-is-stationary" is strictly for those big fumigated primus stoves.

Long before the third bounce the doors is open and this little dollie is off like its half-price day at the O.K. When she catches up with me she says some words that I haven't heard since my maat caught his braces in the emergency-chain down at the shunting yards. So maybe she doesn't got culture like I was telling you ous about.

So like I sez to my maat over the second bottle of dop that evening,

YOU GOTTA LOOK UNDER THE CARPET WHEN DOING A PREFLIGHT CHECK!

HOEKIE'S TURBULENT

by Steve Crutchley

When a true craftsman such as Mr N. R. (Hoekie) Baldwin builds something the result is bound to be impressive. Having built one of the finest Smith Termites flying today Hoekie turned his hand to the humble Turbulent and the result is nothing short of startling. And apart from racy looks and all-round evidence of superb workmanship this aircraft has a performance that many aircraft with greater horsepower cannot equal.

One wonders why a man who has built and still owns a very presentable Termite should even consider building another aircraft – especially when one reasons that the second aircraft is basically very similar to the first; both being VW-powered single-seaters of all wood construction. Well Hoekie is one of those creative people who must always be occupied with a project. In fact after he had completed the Smith Termite he embarked upon the construction of a 47 foot ferro-cement yacht. However, when he discovered that a heavy tax would be levied on the yacht upon completion, he abandoned the project and started looking at the various sets of aircraft plans that were circulating in the Port Elizabeth area.

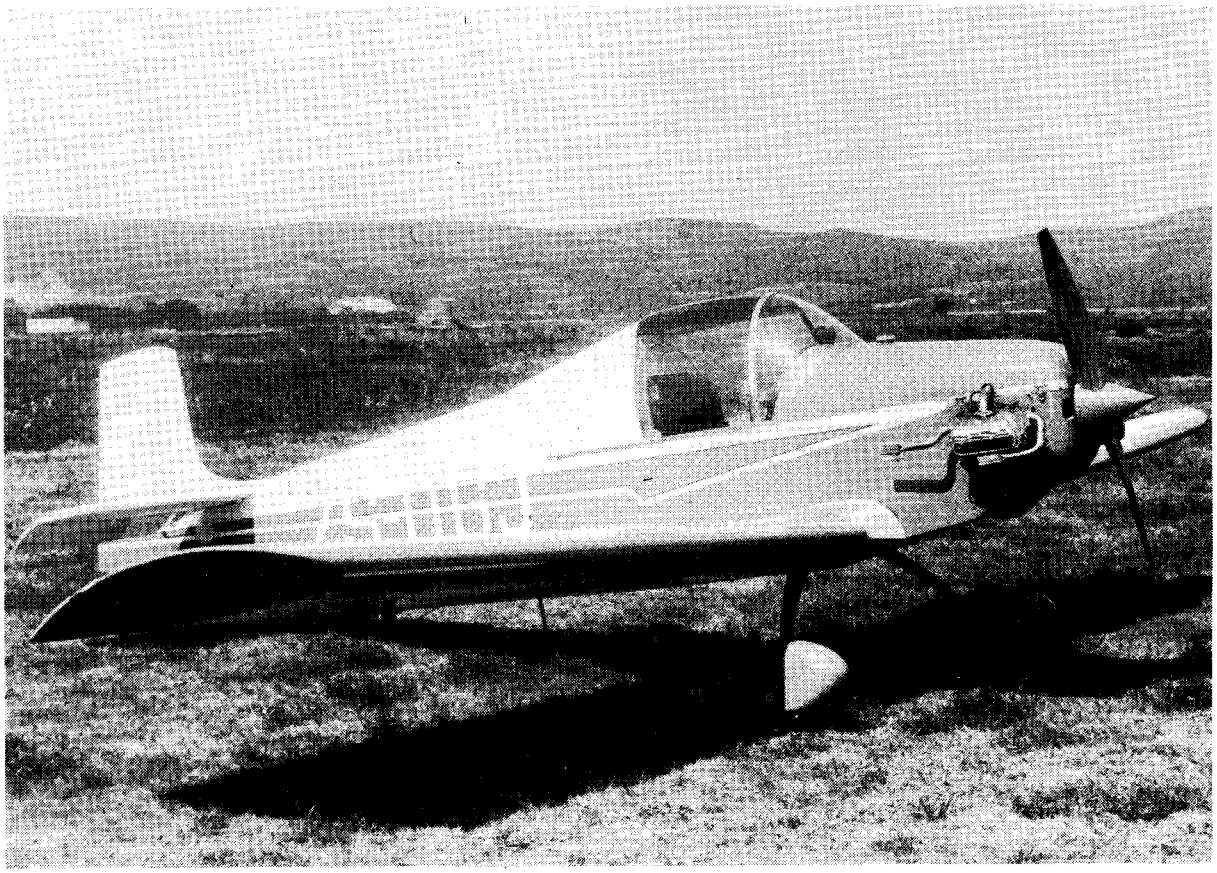
The field was eventually narrowed down to just two designs, the Taylor Monoplane and the Turbulent. After careful consideration Hoekie chose the latter as he felt it offered greater potential.

There was still some spruce and ply in the garage, left over from the Termite project, and with careful cutting this was soon transformed into wing spars and longerons.

The construction started in 1970 and by November, 1972, the aircraft was ready for test-flying. Various structural modifications had been made, including beefed-up wing spars and thicker ply in certain areas. In addition the cable control system for the elevators was replaced by a push-pull tube system as Hoekie felt that it would be more positive and less likely to develop play in service.

Other modifications made were a re-location of the firewall one inch forward of the position shown on the plans, and re-location of the rudder pedals four inches further forward. The original design apparently catered for short-legged pilots only.

To facilitate the fitting of a sliding canopy the turtle-deck was raised, and to further streamline the aircraft the normal tubular truss undercarriage was replaced by a spring leaf gear with spats over the wheels. Although rather heavy this type of undercarriage offers a substantial reduction in drag.



The wheels are of the pressed steel implement type and are 12 inches in diameter. Standard motor scooter drum brakes are welded to the wheel rims.

The conventional rounded wing tips were replaced by Hoerner tips which are theoretically more efficient. Hoekie also felt that there would be increased stability due to the dihedral effect of the upswept lower wing surfaces. These were found easier to make than rounded tips as there are no compound curvatures to deal with. The wing/fuselage junction is faired-in with a set of extremely neat metal fillets.

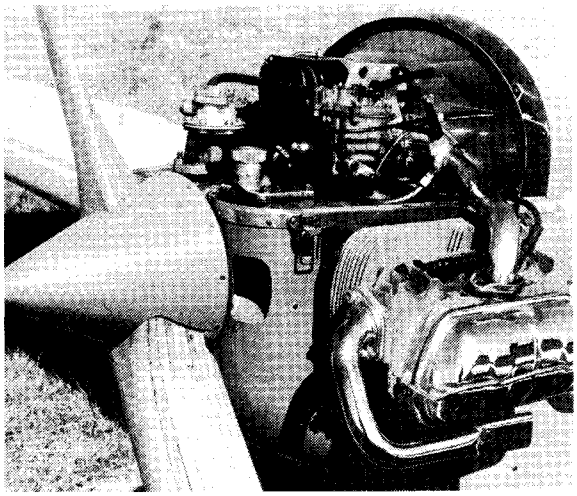
The aircraft is powered by a standard VW-1600 motor with a Lucas magneto driven by a toothed belt from the flywheel end of the crankshaft. Hoekie opted for this method in preference to the motorcycle-chain type as it is quieter, does not require lubrication and is less likely to develop slack.

In order to cool the engine oil and at the same time assist in preventing carburettor icing a heat-exchanger jacket was formed around the induction manifold. Hot engine oil is passed through the exchanger and this is cooled by the reduced temperature of the fuel-air mixture as it passes from the carburettor to the cylinders. At the same time the induction system is warmed by the oil which in turn helps to prevent carburettor icing. This system has been found successful to the extent that neither a conventional oil-cooler nor a carburettor-heat system are necessary. A similar arrangement is employed with equal success on the Termite.

The engine cowling gives an overall impression of good streamlining even though the cylinder heads are exposed. In spite of the compound curvature the construction is of aluminium formed entirely by hand.

The propeller is home-carved from glued-together beech laminations and it has a 54-inch diameter and 40-inch pitch.

The suitcase catches used with such effect on the cowling of the Termite are also evident on this aircraft – in this instance on the cowling and the sliding canopy as well. These catches are light, cheap and convenient to use.



When the aircraft had been completed it was transported to the Uitenhage airstrip on a glider trailer and re-assembled. In Hoekie's own words things went like this:

"I did a few taxi runs and encountered a problem with the brakes. They were rather a tight fit and were inclined to bind, but I figured that with a few more runs they would free themselves. However, the drums got so hot that the rubber of one tyre actually melted and I had a blow-out. The aircraft spun around and I ended up facing in the opposite direction. Fortunately there was no damage.

I had fixed the tyre by the next weekend and I removed the wheel spats and also the canopy before lining up at the end of the runway. This was 19th November, 1972. I opened the throttle wide and after about a hundred yards I was airborne and that was it. What a joy to be up there sitting in your very own creation. It is something to be experienced, believe me! I had been deprived of this privilege with the Termite as I was only a student pilot at the time, and I had a commercial pilot do the test flying for me. I had said at the time that if ever I were to build another aircraft this privilege was going to be mine, and so it was.

The maiden flight lasted about twenty five minutes during which time I put the aircraft through some stalls and also some full throttle level flight. The maximum level speed was 120 mph. I then landed and after the usual round of hand-shaking and photograph taking I fitted the sliding canopy and took it up again. This time at full throttle the maximum level speed was 138 mph. I was amazed at the improvement as I had only anticipated a marginal increase in speed.

I landed again and this time fitted the wheel spats. This brought the full throttle level speed up to 143 mph, and I feel this is saying a lot for what one might call a humble Turbulent.

The normal cruising speed is 130 mph and I bring it in "over the fence" at 60 mph. The actual stall occurs at about 40 mph. The initial rate of climb at sea level is 1 000 fpm and during the flight testing programme a climb from sea level to 12 000 feet took 23 minutes.

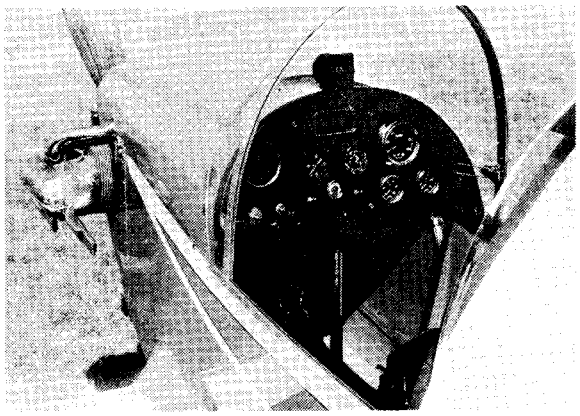
The maximum diving speed reached during testing was 180 mph, and I have pulled a maximum of 7,6 g which is only 0,4 g short of that required for the aerobatic category in this country. I had a reflex camera strapped around my neck to record the instrument readings during the pull-up but the acceleration was so severe that the camera malfunctioned.

I would recommend the Turbulent to anyone who cannot decide what to build. Without the various modifications I made it is easier to build than the Termite, and with the changes it has about the same complexity as the Termite. There is still plenty of scope for improvement and with a fully enclosed and well streamlined cowling it should be in the 150 mph class.

Another change I would seriously recommend is an increase in the rake angle of the cockpit rear bulkhead. This determines the back-rest angle and I feel that the added comfort would be most worthwhile on a long trip in that tiny cockpit. Another improvement would be a lengthening of the exhaust pipes so that they exhaust under the bottom of the fuselage. The racket they make when level with the cockpit is very unpleasant and radio communication is most difficult.

A retractable undercarriage could also be fitted to the Turbulent, but I will leave this to someone else. The tax on yachts has now been abolished and I must get back to work on my ferro-cement yacht."

	Standard Turbulent	**Hoekies Turbulent**
Wing Span	21'-7"	21'-7"
Wing Area	77 sq ft	77 sq ft
Empty Weight	395 lb	420 lb
Gross Weight	620 lb	680 lb
Powerplant	55 h.p. V.W. Ardem	V.W.-1600
Maximum speed	109 mph	143 mph
Cruising speed	100 mph	130 mph
Rate of climb	450 ft/min	1000 ft/min



TRIBUTE TO A MAN OF DETERMINATION

On 29th April, 1973, Dr John Buchan was landing his recently completed Jodel F-11, ZS-UFB, on a farm airstrip when disaster overtook him. One wheel struck a protruding rock on the threshold as the aircraft touched down and it veered off the runway and collided with a water trailer parked nearby. The starboard wing was reduced to matchwood, thus bringing to an end the fruits of four years of hard work, mostly under extremely uncomfortable working conditions that had tested John's tenacity to the limit.

Those who are familiar with the Jodel designs will know that the wing is built in a single piece from tip to tip and is in fact the backbone of the whole aircraft. A smashed wing on either side spells the end of the entire unit. Most of us who saw the wreckage believed that UFB would never fly again. However, we had not reckoned with the determination of Dr John Buchan.

He cancelled his forthcoming study trip overseas and promptly set about building a complete new wing and repairing the damage that the forward section of the fuselage had sustained. Those of us who had been impressed before by his ability to get stuck into the job at hand, were now filled with awe by his tremendous single-mindedness.

For six months he spent every off-duty moment in the hangar. The coldest nights of winter did not deter him.

At last, on 29th October, John wheeled out the completely repaired F-11, looking as good as new. Few people outside the fraternity of homebuilders would understand just what an achievement it had been to build a new wing unit and repair the damaged fuselage and undercarriage while at the same time conducting a time-consuming profession. All this had been possible only through his ability to drive himself hour after hour, usually at the expense of his few precious hours of sleeping time.

Exactly six months, to the day, after the accident the Lycoming was fired up and after the necessary checks the first take-off was initiated. At a point almost above the opposite end of the runway the motor faltered and stopped.

No one who saw the crash or examined the wreckage afterwards could fail to marvel that the pilot survived the impact that smashed Foxtrot Bravo to smithereens.

John, words cannot describe our admiration for the way in which you have always tackled every set-back and overcome every obstacle, and they cannot adequately express our feeling of shock and sadness at the tragic loss of your aircraft.

We hope you will soon recover from your injuries.

A BLISTER FOR "HOT PANTS"

by Bill Keil

"Hot-Pants", alias ZS-UGK is a Taylor Titch owned by 'Woody' Woods and yours truly. It was bought in Rhodesia and trailered to Johannesburg in 1972 and at that time had about twelve hours in its logbook.

On arrival it was stripped and is currently being re-built with various modifications. One of them being the fitting of a blister canopy which will give it the rakish look of a World-War-Three fighter (!)

Now you've probably heard tell of the fact that aerodynamicists have proven beyond doubt that the bumble-bee cannot fly because its frontal area is too great and its wing loading is too high.

However, the bumble-bee is unaware of this and it flies! Well, I guess the same applies to making a blister canopy.

When builders start contemplating this type of addition, no doubt the thought of either buying one from the U.S. or obtaining one from military surplus must pass through their minds. It certainly did with us.

However, the cost of the former and the weight of the latter influenced us to try our hand at making our own.

At the outset let me give full credit to the kindly co-operation and patience of the A.E. & C.I. personnel at their Modderfontein Plastics Laboratory. Messrs Christie and King of that institution provided the know-how and encouragement that were required after my eighth attempt!

There are always the 'prophets of doom' and the 'fundis' who will assure you that it cannot be done and we had our fair share of these.

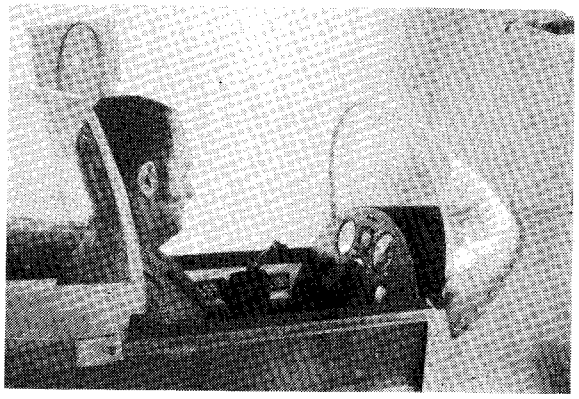
I was assured of visual defects, discoloration, stress-cracks, inherent stress, etc., etc.

My original plan was to suck the 'tear-drop' into a suitably built wooden box, but the strength of the box and the air-tightness thereof left much to be desired and this plan was abandoned after five attempts. In each case failure of the box to withstand the vacuum, despite tape and resin galore, rendered suction impossible. I therefore set about blowing a canopy. And it was here that I met most of the 'fundis'!

Well, to cut a long story short, all you need is a good warp-proof block-board, a good oven and plenty of nuts, bolts and penny washers, (and a fair amount of adrenalin!) You will also need a compressor and (I used) a 5/16" thick sheet of Perspex.

A wooden frame, (almost like a toilet seat!) was cut from block board, the inner dimensions of which conformed to the outer plan view of the canopy and this was placed on top of the Perspex and bolted onto a large sheet of blockboard. Prior to this a copper tube of 1/4" dia. had been fitted to the base-board at the point where the canopy was to be highest. By bolting the frame at 2" centres and heating the whole ball-of-wax in the oven, it is possible to introduce compressed air through the copper tube until the Perspex swells to the desired shape and size. If you don't believe me, have a look at the photo!

P.S.: There are a few more tricks to this which space doesn't permit an explanation of! But if you like, drop me a note and I'll send you the full details. (Box 283, Bergvlei, Transvaal)



DIRECTORY OF HOMEBUILDERS

With the steadily increasing membership of our Association it has been necessary to prevail upon Mrs Ruth Hobbs to up-date the directory of homebuilders which she so kindly prepared on behalf of E.A.A. of S.A. last year. The new version is now ready and it is definitely a most worthwhile item for every homebuilder to have. The directory lists approximately two hundred names, addresses and projects.

Anyone desiring a copy is requested to send a Postal Order or cheque to the value of fifty cents to Mrs R. Hobbs, Private Bag X18, Springbok, Cape.

WESTERN CAPE NEWS

by Ruth Hobbs

I had my first flight in a homebuilt this October when Doc Bergamasco and Kevin Powell took me up in BD-4 ZS-UAB. They have 58 hours on it now and it seems to be everything they expected: fast cruise, hands-off stability, low cabin noise level. There are things to be altered such as replacing the rather small nose wheel with a larger one for rough field work. The flip has made me most enthusiastic about the BD-4 design.

Andries van Dijk and Johnny Martin have nearly completed their Turbulent. Paint is on aft of the firewall and nothing more can be done until the engine arrives. Another Turbulent, just started, is that of Rick Leibbrandt who now has a house with a double garage to make the job easier. Two of the three VP-1's are ready (and passed) for covering. The third is not far behind.

We three Hobbs' plus PL-2 pieces are now established at Aggeneys field camp, seventy miles from Springbok. We have an airstrip on our doorstep. Visitors are welcome.

NATAL NEWS by Bruce Vivian

Durban

Bob Gainsford is making good progress on his Taylor Titch project and most of the structure has now been completed. The big hold-up is the VW-Revmaster 2 100 which has not yet arrived from the States. Don Ritson is busy making the metal fittings for his VP-2 and Neville Hart is cutting out the wing ribs for his own VP-2. Neville has some Velcro Tape available – it will stick upholstery on to just about anything.

Clive Rautenbach is modifying his Cassutt wing root fittings and the fuselage shows excellent workmanship. Pikkie's Turbulent is progressing well and it should be flying early in 1974. His Beta project is of course suffering from neglect at the moment. My own Turbulent is coming along nicely and I am at present busy covering the wing.

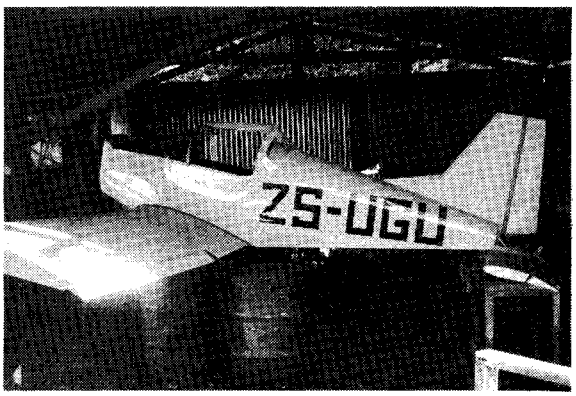
Pietermaritzburg

Len Cormac suffered a blow when his almost-completed Jodel F-9 was caught outside his workshop during a severe hailstorm. The paintwork on the top surfaces of the wings did not fare too well and he has had to strip them down and start again. Fortunately there was no other damage. The Fly Baby is continuing to provide Tony Wills and son David with countless hours of flying pleasure, and Owen Pilcher's Termite is also seen in the air more often than on the ground. Ian Parker and Dave Hocking are working steadily at their Taylor Monoplanes and the workmanship on both projects looks very professional. Don Harvey has bought a set of plans for the two-place Steen Skybolt aerobatic biplane and he has already welded up the tailplane, elevators and rudder. John Spencer is waiting impatiently for his BD-4 kit to arrive and has the workshop all cleared up and his work-table built. Eddie Ralph has bought a partially completed Fly Baby project and is enthusiastically pressing on with the construction.

Informal Chapter meetings are held on the first Tuesday night of each month in the Pmb. Aero Club starting at 7.30 p.m. All members are welcome to call in and have a chat.

Empangeni

Bill Campling reports that there is a lot of homebuilding activity in Empangeni, and that he himself has sent for a set of Thorp T-18 plans and will be starting construction soon. Hylton Sweetnam has a Fly Baby project and a Jeanies Teenie in progress. He also has a high wing side by side two seater at the taxi testing stage. The photograph opposite was taken by Bill and shows Hylton's Teenie. Peter Moir is making good progress with his VP-1 and we have heard from several sources that the workmanship is superb.



REMEMBER!

E.A.A. of S.A. ANNUAL FLY-IN 31 MAY 1974 TO 2 JUNE 1974.

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