

PHOENIX



QUARTERLY MAGAZINE OF THE
HISTORICAL AIRCRAFT RESTORATION SOCIETY Inc.



SPRING 2010



HARS CONTACT DETAILS

Cover:
Aircraft display at RAAF Williamtown,
18-19 September 2010.
Photograph taken by Dick Simpson.

President

Bob De La Hunty, OAM
Phone: (02) 4257 4333
Home: (02) 9894 5775
Mobile: 0408 235 682
Fax: (02) 4257 4388
Email: delahunty@bigpond.com.au

Vice President - Marketing

John Brooker
Phone: (02) 9939 7513
Fax: (02) 9939 7513
Email: jwbrooker1@optusnet.com.au

Treasurer

Robert Greinert
Phone: (02) 4257 4333
Fax: (02) 9451 4369
Email: thunderboltaus@bigpond.com

Secretary

Maureen Massey
Home: (02) 9522 6028
Mobile: 0400 818 557
Email: mcmassey@tpg.com.au

Manager Engine Workshop

Kevin Taylor
Phone: (02) 9521 4349
Mobile: 0422 902 545
Email: kgemtay@ezylink.net.au

General Manager Maintenance

Malcolm Hallows
Phone: (02) 9868 4463
Mobile: 0410 498 081
Email: mha33269@bigpond.net.au

HARS Committee Members

Nicky Costigan
Mobile: 0408 674 166
Allan Brooker
Phone: (02) 4284 1334
Ben Morgan
Mobile: 0415 577 724
Bill Smith
Mobile: 0418 966 273
Julie Hourigan
Mobile: 0409 770 803

Administration

John Martin
Mobile: 0422 278 502

Tours and Guides

Glen Owens
Mobile: 0402 339 864

Chaplain

Pst Graeme Abrahams
Phone: (02) 4256 3724
Mobile: 0429 995 649

HARS sponsors

HARS gratefully acknowledges our sponsors, past and present, and welcomes new names to this honour roll:

Adecs (Aust); ADC Krone; Aero Club of Arizona; Aero Weigh; Air BP; Aircraft and Aerospace Magazine; Air Services Australia; Mr. Bill Andronicos; Ansett Australia; Anzol Paints; AOPA; Mrs. S. Arms; Australian Aviation Magazine; Australian Native Landscapes; Australian Steel Mill Services; Australian Timken; Aviation Trim & Upholstery; Barloworld Coatings; Barker Lawyers; Bartrans; Bellinger Instruments; the Family of the late Mr Ron Bennett; Ian Berryman; Blacks Engineering Pty Ltd; BlueScope Steel; BlueScope Water; Boom Logistics; Boral Portable Buildings; Mr G Boyd; Bristol Paints; Mrs J L Brooker; The late Phil Buckland, Buckland Auto Electrical Pty Ltd; Brinlay Paints; Cement Australia; Chemetall; Chevron Companies (Calif); Cleary Bros; John and Jenny Cleary; Coates Prestige Hire; Collins Avionics Sales & Service; Colourtrue Labels; Country Fire Services; Geoff Cuthbert; Daltrans; Capt R Darwell; Mr T Dean; Mr R De La Hunty; Mike De La Hunty; Mr N Dennett; Alan Doherty; Dual Electrical Services (Melbourne); Ecolab; Eric Fordham Engineering; Fish Internet; Flightpath Magazine; Frejak Constructions; Mr R George; GNB Battery Technologies; Mr W Goodhew; Goodyear Air Treads; Gossamer Threads; Graham John Signs; Mr R Greinert; Mrs M Greinert; Mal Hallows; Peter and Heather Hanneman; Hatch Associates; Hazelton Airlines; Capt R Heiniger; Hexcel Interiors; Julie and Michael Hourigan; Hurdis Plumbing; Icon Internet; IMB Foundation; Independent Locksmiths; Industrial Maintenance Systems; Jecani Pty. Ltd.; Jeremy Flynn Memorial Trust; Mr B Kelly; Mr S Kennard; Kiama Municipal Council; Joy and Allan Lever; Lockheed Aeromod Center Inc (Tucson); Mr G Loudon; Mr D Lowy; Lysaghts; Mr J McAlpine; Mainpac; Jim Marshall; Mascot Steel; Mrs M Massey; Gordon McDonald (Elect W'salers); Metro Products & Company; The late Capt B Millis; Minden Air Corp (Tucson); Geoff Morris; NCR Australia; Nostalgaair Models; Notebook Publications; Oilcheck; Olex Cables; Oxley Graphics; Pam Karcaji Signs; Mr G Paramour; Don Payne; Peter Ryan Earthmoving; R J Pettit; Pima Air & Space Museum (Tucson); Protector Safety; Qantas Airways; Qantas Flight Hostess Club; Qantas 20 Club; QBE Aviation; Reflex; Reliable Pest Control; Jim Ricketts; Rivers Locking Systems; Riverstone Printing; DC Roberts Aircraft Co; Robyn-Lea Services; Rockwell Systems Australia; NR Seals; Sharp Direct; Shell Australia; Shellharbour City Council; Miss T Smiley; Mr D Smith; William Smith; Snap Printing Auburn; 30 Squadron Beaufighters; Mr G Squire; Mr A Stinson; RR Szabo; Mr A Tait; Tattersalls; Taubmans Paints; Telstra; Geoff Timms; TPE Integrated Services; Transfield Constructions; Transfield Services; Triangle Refrigeration; Trimble Navigation; Trojan Workforce; Trump Property Maintenance; Valspar Corp (formerly Anzol Paints); Weekly Trading Post; Mr K Weldon; Weston Printing; White Knight Paints; John Whitmarsh; Ms Gina Wilson; Wiltshire Engineering; Wollongong City Council.

All correspondence

Secretary
HARS Inc.
Cnr Airport Road and Boomerang Drive
Albion Park Rail NSW 2527
Phone: (02) 4257 4333
Fax: (02) 4257 4388

Phoenix Editor

Julie Hourigan
Mobile: 0409 770 803
Email: mhour@inet.net.au
julie.hourigan@act.gov.au

www.hars.org.au

Associated web site
www.notebookpub.com.au

PRESIDENT'S REPORT

The Society held in June an Extraordinary General Meeting to ratify the Committee's proposition last year on the basis of succession planning to add an additional four ordinary members to help in governing the future of HARS.

Thankfully an overwhelming majority supported this move and we are now busy implementing the work programs for everyone on the Committee and after a lengthy delay we start the Business Plan which was delayed pending acceptance of a succession plan objective which is a major part of the Business Plan.

Change is always difficult and there is never any guarantee that it will work but if we don't take these steps we will never know and since there are a number of Committee members who are over 70 and have put in many years of hard work to bring us to where we are today. We need to recognise the need to support these Committee members who need to tick some of the boxes in life that HARS has absorbed for some time.

We are, as a part of the Business Plan, implementing a process to support all of our working divisions with new members joining and others who have been around for some time that are willing to share the workload and also are excited by our vision to save and preserve Australian aviation heritage.

The final part of the process is the appointment to the Committee of Nicky Costigan as our first dedicated Membership Secretary. This will be a challenging job and Nicky will need members patience as all of the important changes are implemented.

We are involved in many projects and whilst some people think there are too many and we are spread too thin, we are confident that by attaching more and more volunteers to each cell we need not fear growth but see it as a path to financial independence and a major contributor to the development of the Illawarra through tourism both national and international and the enormous spin off to the local community businesses.

We have very close working relationships now with the Air Force and Navy which is

gathering in momentum and will clearly strengthen in the future.

We are heavily committed to the Air Force Cadets, Air League and schools education programs and in fact four nights a week the restoration shop hosts Year 12 students preparing themselves for aviation careers and we are very proud to support this.

There is a huge amount of work going on each week and weekend by so many dedicated people. Our visitors and sponsors are amazed what has taken place and continues to do so. This has only been possible because so many are interested in preserving our aviation heritage and making things look good, work or fly.

When we started the Connie project we were able to attract sponsor dollars directly for that project but over time that becomes more difficult so we continue to take on ideas and projects to keep our cash flow coming in and reattracting interest in aircraft like the Connie. We were only able to get a Connie because we had Neptunes and an interested team with a proven track record. The expansion from that beginning resulted in finding funds to get a roof over our heads.

It does not stop there, we have still a lot of funds to find to finish the Hangar and Museum and to attract the funds to do that we must still have new projects no matter how weird and "impossible" they may seem.

That is why we are contemplating the Navy Historic Flight offer, a possible four engine flying boat project, the RAAF Cadets, Wings over Illawarra, Macchi, Southern Cross, Conference Centre, Research Centre, Library, Convair, two other overseas Connies etc.

The Canberra Bomber has given us a big leg up recently when we had high level visitors from Canberra. Should we obtain a Caribou the funds to take that on will be difficult to get, as the commercial interest is not there so lots of other resources will be needed to cover such a project.

A friend of mine recently made the statement "Vision without action is a



daydream. Action without vision is a nightmare." This statement by Gary Hand adequately reflects the work of your Committee and many of the team leaders, LAME's and others within our organisation. We can all be proud of our achievements and the recognition that we have gained and which is strengthening.

An exciting list of activities are listed below whilst others are under negotiation.

Bob De La Hunty

DATES FOR THE DIARY

Qantas 90th Anniversary:
6 November 2010. Connie to Mascot

Hawker deHavilland:
7 November 2010. Tiger, Drover and C47 in flyover

Lawrence Hargreaves Kids Kite Day:
10 November 2010. C47, Catalina and Connie

National Warbirds Conference, Sydney:
13 November 2010

HARS Annual General Meeting:
Saturday 4 December 2010, 2.30pm in the Museum

HARS Christmas Party:
4 December 2010. Tickets available from HARS Reception

Lord Howe Island fly-over:
January 2011

Wings Over Illawarra:
Sunday 27 February 2011

Avalon International Air Show:
3 to 6 March 2011

BRITANNIA WAVES THE RULES: The continuing story

Russ Eyers

In the summer edition of *Phoenix* John Brownjohn suggested I might regale my recollection of the repair to the Britannia nose steering problem that occurred during my time as a LAME with Qantas in Darwin, so here goes.

The aircraft arrived on a scheduled flight and on the taxi back off the runway the pilot reported that he had lost nose wheel steering control of the aircraft. The aircraft made it back to the ramp very gingerly using differential braking. Investigation found that within the nose steering control unit a metal diaphragm, which positioned the hydraulic valve that ported hydraulic pressure to the steering cylinders, had completely fractured.

I remembered that I had seen these tins of Hargraves pineapple juice (about 5 litres in size) in the serving area for the passengers' dining room. These tins were of light gauge metal with a bottom that had been stamped out with a series of raised annular radiating rings. The steering control unit was disassembled and the failed diaphragm removed and used as a template to cut the bottom of the pineapple tin to fashion a replacement part. The finished article looked for all like an original part. The annular grooves allowed the manufactured diaphragm to move up and down to port the hydraulic valve. We even gave it a coat of zinc chromate primer seeing as how it was located in the nose wheel well and exposed to all the crap that can get thrown up from wet runways.

The operating crew were summoned and gave the aircraft an extensive series of taxi tests. All went well and away she went.

At the completion of repairs such as this which were not covered by the manufacturer's repair data a telex was compiled setting out the repair details and sent to engineering headquarters in London. Interestingly, a day or two later a request came from engineering London wanting us to confirm exactly what we had done. The aircraft had arrived in London fault free, transited and gone out on another service still with our manufactured diaphragm in place.

The Britannia was a very maintenance intensive aircraft. It did not like humidity and as John related the engines were great at making ice when operating in the tropics and as a consequence engine failures were frequent due to compressor damage. I was transferred to Singapore late 1957 and we had two station spare Proteus engines. I can remember one period when both our station spares had been used and we had an aircraft in the hangar with a bare firewall waiting for the Avro York carrying a spare engine to arrive from London. As soon as it arrived the spare was plugged straight into the vacant firewall to enable that aircraft to be returned to service.

The aircraft was an electrical nightmare and as John explained the empennage had electrically heated panels in the leading edge of the fin and horizontal stabiliser for de-icing. These panels were heated in a sequence controlled by a timer in the overhead panel in the flight station. Should any of the panels burn out during operation a red light would illuminate as the timer passed through its identified position during its sequencing. The MEL for the aircraft allowed a certain number of



the panels to be inoperative but to clear the aircraft for return to service the fuse for the faulty panel had to be removed and here starts another story of innovative repair.

The fuse panel for the empennage de-icing was located in the rear fuselage in the vicinity of the empennage and accessed through a removable panel underneath. Take one fairly large LAME type person (a wet greasy tarmac and hence greasy work boots) climbing up to remove fuses, slips and his big number nines take out the torque tube for the elevator control tabs.

Mr Bristol in his design decided to use a different type of baggage fence. In most aircraft of that era the fence installed to prevent items in the baggage hold from falling and inhibiting the hold doors from being opened consisted of poles with webbing stretching between the poles. The Britannia used a light gauge metal lattice between an aluminium alloy tubing supporting structure. The alloy tubing was found to be just the right internal diameter to slip neatly over the outside diameter of the broken elevator control torque tube. And so the damaged ends of the torque tube were cut and dressed, a section of the baggage fence support tube cut out and slipped over the outside of the ends of the torque tube to form a sleeve, riveted in place, painted red so as not to be missed and the aircraft returned to service sans one baggage fence.

John mentioned the fuel bags in his summary. There were eight fuel bags in each wing, numbering one to eight from inboard to outboard and any fuel leaks were detected by fuel running out of a series of drain holes on the wing underside at the wing root. Changing these fuel bags was one mongrel of a job. After changing fuel bags the aircraft had to be test flown before being released to service. On the occasion John refers to the aircraft was sent for test flight. Light aircraft, no passengers, light fuel load, Biggles at the controls, and when she rolls up to the ramp after the test flight guess what—fuel running out of the drain holes. Their escapades had successfully ruptured some more bags and we certainly did not need the practise in changing them. We had used the station spare holding of fuel bags so it had to wait until more could be sent out from London. I think that aircraft chalked up the longest mechanical delay of our time, seven days in all I think it was.

There was never a dull moment on Qantas Line Stations and during my eight years of line station experience I worked with and shared experiences with some great people, highly skilled in their craft whose friendship I still enjoy to this day.

TYLER WALLACE RECEIVES A SPECIAL CAR

We want to give a massive THANK YOU to the Executive Committee and all the members of HARS who contributed to the purchase and conversion of our new Kia Grand Carnival. The car is fantastic.

We are so grateful to have your love and support of our family. Having this car has made such an enormous difference to our lives. It is so much easier to put Tyler in the car now, and she is a lot more comfortable travelling in her wheelchair. Tyler loves looking out the window and can now see the cars and trucks going by!

We can't thank you all enough. We are so appreciative and will forever remember your generosity.

Yours sincerely

Katherine and Tyler Wallace xoxo



AIRSHOW

Sunday, 27 February 2011

**Illawarra Regional Airport,
ALBION PARK, NSW**

AVOID THE RUSH

Pre-paid tickets:

- Adults \$20
- Families \$40
- Concession \$10

Book on website

FUN FOR THE FAMILY!

- Military flying jet display
- RAAF Roulettes Aerobatic Team
- WW2 Spitfire and fighters
- Parachute Display Team
- Hot air balloons
- Car and bike displays
- Train rides
- Food stalls
- Children activities
and much more!

WINGS OVER ILLAWARRA 2011

HARS is looking forward to our Wings Over Illawarra 2011 with our first airshow. Previous events have been organised as fly-ins, with any true "display" aspects provided by our ADF, for which we are very grateful.

Our 2011 airshow provides us with a chance to show our true colours as we're able to display our magnificent collection of Australia's aviation heritage to its best advantage in a suitably controlled and safe fashion.

At last there has been some recent visible progress in the restoration of our ex-RAAF Vampire A79-637 (VH-FJW). On 2 July 2010 the fuselage of the Vampire was 'rolled out' of Rob Greinert's workshop with a brand new skin of fabric expertly applied by Mary Ellen Conrado under the supervision of our fabric-qualified LAME. The general consensus seems to be that Mary Ellen's work is of a much higher standard than was applied to the aircraft originally.

With the fuselage now back in Hangar 1, the Vampire team are now eagerly awaiting the arrival of new wing bag tanks (fuel cells) so that we can begin the process of re-assembly and completion of the major servicing schedule needed to bring our Vampire to flying condition.

In view of some recent questions on the whats and the whys of the Vampire restoration project, perhaps it's time to take a brief look at its earlier history, before mentioning recent work and our aspirations for the future.

Some Earlier History

Vampire A79-637 is a T35 trainer that was constructed at De Havilland Australia at Bankstown in 1958/59 and entered service with the RAAF in 1959. Its last RAAF flight was on 27 June 1969, having then flown a total of 1944 hours. One of the highlights of its RAAF career was that it was flown in the "Telstars" aerobatic team, the fore-runner to the "Roulettes", at the RAAF Central Flying School, East Sale.

A79-637 was sold at auction at RAAF Laverton in 1970. It and A79-649 were purchased by Sydney businessman, racing driver and aviator Arnold Glass, who had both aircraft ferried to Bankstown. After about ten years of attempts to get the Vampires airworthy and on the civil register he sold them to the late Father Jeremy Flynn.

Jeremy had A79-649 restored to flying condition at Bankstown and then sold it. That Vampire is still flying in New Zealand. He then turned his attention to A79-637 with the intention of restoring it to flying condition. Sadly, Father Flynn was killed in a tragic flying accident in



*Vampire A79-637 performing as part of the RAAF 'Telstars' over Laverton in September 1965.
Photographer: Wal Nelawkin*

1996 and the project languished for a while, before an arrangement was made between HARS and Father Flynn's estate that HARS would take over the work on A79-637 with the intent of restoring it to flying condition as a testament to the memory of Father Flynn. Since then, the Flynn estate, through the auspices of the family of the late Father Flynn, has kindly been sponsoring the project work on the Vampire.

Prior to the HARS move to the Illawarra Regional Airport, extensive restoration work was well underway on A79-637 at Bankstown, carried out mostly by HARS members under the supervision of a well-qualified project manager with an encyclopaedic knowledge of Vampires. Most of the work on the airframe components in the wings, tail section and the fuselage had been completed, including the refurbishment of all hydraulics components. Considerable electrical and instruments work had also been done. Unfortunately, not long after the Vampire was moved to Albion Park, the project manager was no longer able to continue with her excellent work on, and supervision of, the project.

Early 2009 until now

So what have our new Vampire team been doing since early 2009?

First we found that we needed to make sure that all of the restoration work has been, and is, properly documented to meet regulatory requirements. This is meaning that we are re-visiting some of the work already done—even though we are almost invariably finding it completed to a high standard. We have also been checking to make sure that we have met all of the requirements of the life of type extension (LOTEX) report prepared for us by an ex-Aeronautical Research Laboratories (ARL) aeronautical engineer who was involved in supervising the original fatigue testing of Vampire wings, carried out for the RAAF.

We began the work proper by again pulling 'De Havilland's jet-powered wooden wonder' apart—starting with removing the tail assembly, then the engine, followed by the wings. Next, we placed the port wing on the 'rollover' stand so that we could remove the cover panels from the fuel tank bays. This was necessary for two reasons. First, we needed to gain access to internal parts of the wing in order to carry out visual inspections at 10 times magnification, as required by the LOTEX report. We also had to inspect some work already done



Terry Wilson removing the bolts holding the boom in place and in the photo to the right he gives the thumbs-up on the successful removal of the wings.



on the tank bays, fuel and vent lines, etc. Secondly, we needed to prepare for the installation of new wing bag tanks, which we would need to have manufactured. These fuel tanks are of a thin-wall construction, being made of rubberised fabric that is only about .030" thick.

Looking at past paperwork, we found that a sample set of old unserviceable bag tanks had been sent to a fuel tank manufacturer in Queensland in 2004. It was with great trepidation that we contacted them and found out that they still had them! There followed a considerable delay while we obtained a quote for the manufacture of eight new tanks (there are four in each wing) and then sought funding to have them made. Again, the Flynn Estate very kindly came to the rescue and we were able to place an order in March of this year. However, life was not meant to be easy, as we have since found that the sample tanks have shrunk slightly meaning that they are not well suited as templates for new ones. This has now been overcome with the tank manufacturers visiting us last month to make templates of the actual fuel tank bays and tank cover panels. So now it is full steam ahead on manufacture of the new tanks and we are hoping to receive them soon.

In the meantime we have been working on a few other things. The first is the fuselage fuel tank which is made of aluminium, covered by doped canvas fabric. We have quite a few of these tanks, but most seem to have suffered from corrosion of sorts—only found after the fabric covering has been removed. Thankfully, the last expedition to our storage hangar at Parkes netted us a tank that we will be able to use, once we have been able to re-cover it with fabric. In addition, we have removed fuel booster pumps from some of the fuselage tanks and have delivered two of

the best pumps to an aviation enterprise at Bankstown to have them re-furbished.

Next, we have been attempting to have some of the vital wing and engine attachment components undergo non-destructive inspection (i.e. crack testing)—some of it required by the LOTEX report. This has now been done, with the exception of the wing attachment cross-tubes that we expect will be completed shortly.

Apart from that, other work has centred on preparing the fuselage for its fabric covering. This mostly involved much sanding back of a coat of single pack varnish that had been applied to the fuselage at some earlier time. It had served its purpose of protecting the wooden fuselage in the interim, but we now needed to apply two-pack varnish as a suitable base for the application of the modern Ceconite fabric in accordance with the procedures in its FAA-approved manual. This two-pack was duly applied thanks to the efforts of the Vampire team. And now, after the magnificent work of Mary Ellen, ably assisted by Geoff Cuthbert with his dope spraygun (and by others) the fuselage is now resplendent in its new fabric covering.



Top photo shows John Moore and Max Brown in 'sanding' mode. Bottom photo shows John Moore applying the 2 pack varnish, supervised by Ken Baldwin.



Mary Ellen performing her magic on refabrication of A79-637.



OUR VAMPIRE RESTORATION PROJECT

continued from page 7

Looking Ahead

Where to from here?

There are still another 10 or so coats of various kinds of dope to be applied to the fuselage, followed by the final coats of silver paint and the artwork for the "Telstars" logo.

Our priority then is to install the new wing bag tanks once they are manufactured. After they are installed we will be able to re-fit the wings to the fuselage (with new wing bolts that we have confirmed are available from a source in Australia) followed by the complete tail assembly. After that the fuselage fuel tank will go in, and we will connect all of the controls, fuel lines and hydraulics. Also, once the assembled aircraft is back on its wheels, we will be starting on the remainder of the electrical and instrument work in, and around, the fuselage. From then on it will be a matter of finishing all of the inspections, tests, etc referenced in the Vampire major servicing schedule.

The other big question/challenge is what to do about the Vampire's jet engine? The engine we have earmarked for our Vampire is an ex-Swiss Air Force Goblin Mk 35B. This engine has the advantage of having two high pressure fuel pumps compared with the single pump on ex-RAAF Goblin Mk 35 engines—thus giving redundancy and a higher level of safety.

Unfortunately our ex-Swiss engine, while reputedly being 'zero time' since a major overhaul, did not come with any paperwork proving this. So, despite all visible evidence seeming to confirm that provenance, the engine will need to be subjected to a strip, inspection and re-build to establish its baseline condition and allow us to setup new documentation of its history and condition. This strip and re-build should not be a major overhaul as such.

Our preferred plan has been to have the engine strip and re-build done mainly by HARS members at the approved workshop of a fellow historic flying organisation, under their supervision. Fortunately, we have identified at least three HARS members so far who have experience working on jet engines of the Goblin's era. Any other volunteers with experience on the Goblin or similar engines will be warmly welcomed.

However, due to other demands on our fellow organisation's engine workshop, we are now looking at a possible alternative of doing the strip and re-build in-house in a special clean room that we will set up for the purpose. This is no small task and will involve HARS meeting all of the regulatory requirements for such an activity including those relating to qualified people, facilities, documentation and CASA approvals of the activity. Of course, if this in-house option does not work out, it will be back to "Plan A", which, unfortunately, may delay completion somewhat.

Finally, we will get to the time when we need to bring the two ejection seats back to operational status. For that we will again be looking to our fellow historical aircraft organisation for assistance.

And that about brings us up to date on where we have been, and where we hope to be going, with the HARS Vampire restoration project. We are always looking for help, particularly from any of you out there who may have previous experience working on Vampire jet trainers. The team is now looking forward to that stage of the project where we will all enjoy some more rapid progress, as we start re-assembling A79-637.

NEW TO THE RESTORATION SHOP

The Restoration Shop at HARS is pleased to advise of the appointment of Jason Cockayne to its engineering staff at Albion Park.

Jason started his engineering life with Qantas in 1993 where he worked through various departments before finally finishing up in their Heavy Maintenance department on 747s. After some 13 years with Qantas, he was recruited by the Temora Aviation Museum, where he was employed maintaining the Temora collections aircraft including Spitfires, Wirraway, Tiger Moth, Hudson, Canberra, Sabre, Meteor and other aircraft.

He has also had some interesting field experience in PNG where he was hand picked for a number of salvage recoveries including, the P47 recovered from the Finistiere Ranges at 8,500 feet. Jason is also restoring a P40E Kittyhawk



from the famous 49th Fighter Group USAF. A long term project as they say in the industry.

Following some long discussions, Jason has agreed to join our engineering staff. His depth of experience on vintage types is most welcome and we look forward to the input of his experience in the ongoing maintenance of historic aircraft.

Jason will be joining us at the beginning of May 2010 and please feel free to stop and say hello to him when you see him around the complex.

HARS Aviation-focus Day

Approximately 100 cadets attended the cadet activity 'HARS Aviation-focus Day' held on Sunday 27 June 2010. The main theme of the day was to acquaint cadets from the HARS-based 338SQN with those aircraft that they see every Wednesday Home Parade Night and to gain some understanding of what are the activities of HARS. One of the connecting elements of the day was two flights, each with 17 cadets/staff (including seven cadets from 3225QN Ryde) in the ex-RAAF Douglas C-47 (A65-94) over the region north to the Seacliff Bridge and south to Kiama.

Other activities on the day included climbing into and discovering the inside of the static display ex-RAAF P2 Neptune.

A repeat activity was held on Sunday 12 September 2010 for 338SQN and other Southern Region cadets/staff.

The next such aviation related activity will be held by 338Sqn on 27 February 2011 at the Wings over Illawarra Airshow.



The very first Lockheed Constellation took to the air in January 1943. At that time it was by far the most advanced airliner in the World, the only other long range airliners of any consequence being the Douglas DC4, the Boeing Stratoliner and the German Focke Wulf 200, each a fine aircraft in its own right, but no match for the Constellation. However, war had been raging for over three years and perhaps this prevented development of competing designs.

Although on top of the pile in 1943, the rapid advance of aviation technology should have resulted in the Constellation becoming hopelessly obsolete by the early 1950s, but, along with its only real competitor, the Douglas DC7, the Super Constellation was still the primary mode of long distance air travel until the late 1950s, 16 years after the first flight of the original Constellation.

By the late 1940s the jet engine and turboprop were rapidly maturing and military aircraft were almost exclusively turbine powered except where high speed was not a priority. Strangely, although the USA led the world with jet powered aircraft by 1950, the most significant examples being the Boeing B47 bomber and the North American F86 Fighter, the US did not give serious consideration to developing turbine powered airliners until the mid-1950s, by which time Britain had introduced the Viscount and Comet, and looked like having an unassailable lead in this field. But it was not to be ...

A turning point came in 1954 with the emergence of the Boeing 367-80 707/KC135 prototype. The Comet disasters had delayed the Comet until the late 1950s, and the Bristol Britannia turboprop airliner, following major engine problems, did not enter service until 1957. But Britain still had the opportunity to resume the lead because, in 1954, Vickers had completed the design and was cutting metal for the Vickers 1000 jet airliner, which would have arrived at the same time and competed with the Boeing 707.

I was working in the vast Vickers design office in 1954 (on Viscount performance calculations) when a loud cheer went up at the news that the Boeing 367-80

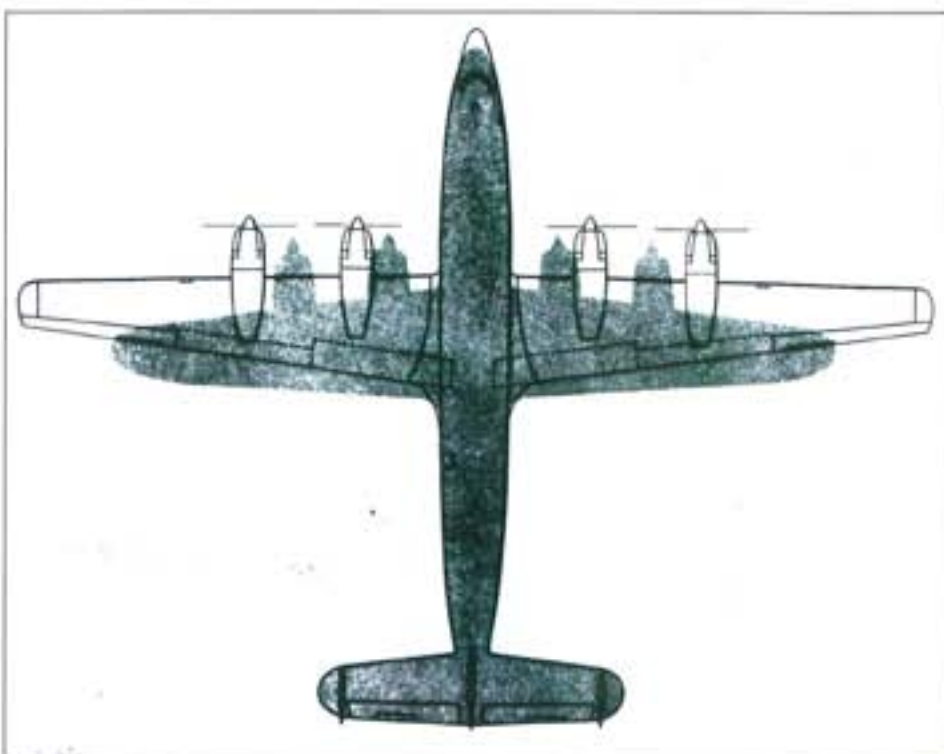
had experienced landing gear failure during pre-flight taxi tests. Vickers hoped that this would delay or eliminate the competitor to the Vickers 1000, but again it was not to be ...

The Vickers 1000, like all British aircraft projects at that time, was totally dependent on Government funding and this was withdrawn in 1956, so ending a potential competitor to the 707 outside the USA. Boeing too were partially dependent on the Government as the -80 was proposed as a refuelling tanker aircraft and, in this form, it received large orders as the KC135. The 707 followed.

With all this going on, it should have been obvious to Lockheed that the piston engine long range airliner was at the end of the road but, despite all the warning signs, Lockheed in 1955 commenced a major redesign of the L1049 Super Constellation. By 1955, the DC7C, the final model in the DC4/6/7 series, was regarded as superior in performance to the Super Constellation, and the primary Connie operator, TWA, pressured Lockheed into modifying the

Connie to exceed the performance of the DC7C. So Lockheed embarked on the design of the L1649 Starliner, which first flew in 1956. The L1649 utilised the same fuselage and Wright Cyclone engines as the L1049 but introduced a totally redesigned wing of 150 ft (46 metre) span. The accompanying diagram highlights the difference between the L1049 and L1649 wings, and this change was certainly successful in raising the performance of the Super Constellation to a new level.

Increasing the span while keeping the chord the same increases the 'aspect ratio' (span divided by chord.) Since very early days of aircraft design, it has been known that increasing aspect ratio reduces wing drag, but the advantages have to be balanced against some of the disadvantages such as structure weight, and mundane matters like hangar width. Increasing aspect ratio reduces what is known as 'induced drag'. All parts of an aircraft generate 'parasite' or 'profile' drag which is that caused by shape (a fat fuselage has more drag than one with a



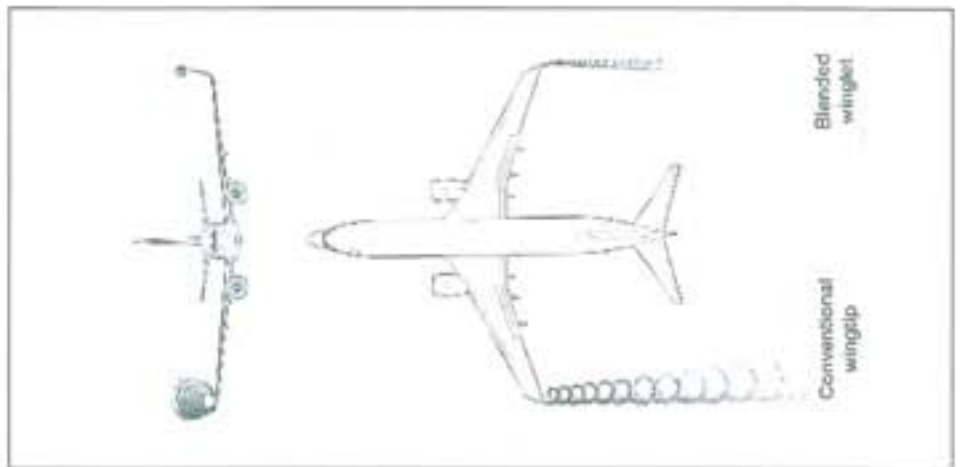
The Lockheed L1649 Starliner superimposed on Connie. Wing span increased from 123 feet (37.5 metres) to 150 feet (46 metres) and, as a result of increased wing area, maximum weight increased from 62.4 to 72.5 tonnes. Introduced by TWA in May 1957, the L1649 was only two years ahead of the 707 and only 44 were sold.

slim, streamlined shape) plus that caused by bumps and protrusions, but induced drag is the penalty paid for producing lift.

At the wing tip, the lower pressure on the upper surface and higher pressure on the lower try to exchange places, the result being a spiral of air known as a 'vortex' extending back from the wing tip. It is sometimes visible on a humid day and can be a hazard to smaller following aircraft.

Formation of the vortex produces the induced drag. Increasing aspect ratio reduces the strength of the trailing vortex and so reduces induced drag.

It was known from aviation's earliest days that induced drag could be greatly reduced if an enormous vertical 'end plate' was fitted to the wing tip to prevent the mixing of the upper and lower air flows. This is obviously impractical, but fitting devices such as wing tip tanks can have an 'end-plate' effect and reduce induced drag to a minor degree. In recent years, designers striving for any means to reduce drag have looked closely at the wing tip and started fitting 'winglets', which are a substitute for increased aspect ratio and are intended to reduce the strength of the vortices. Probably the most extreme example of 'winglets' are those on the latest model Boeing 737, which are actually an increased span wing with the ends turned upwards. There are now a bewildering variety of winglets used by all manufacturers



A diagram illustrating but exaggerating the reduction in the strength of the wingtip vortex on the late model Boeing 737 with 'winglets'. While reducing induced drag (see text), winglets generate 'profile' drag which must be taken in to account in the design.

with conflicting claims as to their benefit, ranging from a doubtful 3 to 4% reduction in fuel consumption, down to negligible advantage.

However, back to the L1649 Starliner which was introduced by TWA in May 1957. It was certainly a magnificent aircraft and the pinnacle of piston engine airliner design, but by then it was too late. Only 44 were built, the main customers being TWA and Air France. It might have been more successful if fitted with turboprop engines, but even that is in doubt because, by the early 1950s, the fitment of fan engines to the 707 and

DC8 proved the jet airliner to be the way of the future for long distance travel.

Lockheed survived the 1960s with its successful medium range turboprop Electra (used by Qantas to South Africa) but then made a disastrous attempt to reenter the long distance market with the Tristar, and soon disappeared as an independent company.

An L1649 Starliner is being restored in the USA for the Lufthansa Historic Flight which already flies a Junkers Ju.52. The L1649 is expected to fly in 2012 and should then be seen around the airshow circuit in Europe.



The fuselage of the Lockheed L1649A Starliner being restored in the USA for the Lufthansa Historic Flight. It is expected to return to flight status in 2012.

THE MOST FAMOUS FOKKER AIRCRAFT OF ALL

Researched and compiled by
Julie Hourigan

There is no doubt that the *Southern Cross* was the most famous of Fokker aircraft. The equally famous Australian aviation pioneer Charles E. Kingsford Smith (Smithy) used this machine to make several historical flights. The flights by this and other F.VIIb-3ms, made the design Fokker's best selling pre-war airliner. It has often been said that the F.VIIb-3m was a development of the F.VIIa-3m. However logical this may seem, it is not correct. The two variants were designed almost simultaneously, but the F.VIIb-3m was actually built at a later date. In the November 1925 issue of the Fokker Bulletin magazine, a trimotor version of the F.VII was offered with an enlarged wing. This wing was the most important difference between the F.VIIa-3m and the F.VIIb-3m.

When in 1925 the F.VIIa was converted to the F.VIIa-3m for the Ford Reliability Tour, the wing remained basically the same except of course for the provisions for the additional engines. It was clear to the designer however that the fuselages of both the F.VIIa and F.VIIa-3m could carry far more load provided certain changes were made. Important among these were more powerful engines—which were already under development—and an increased wing area. The solution to this last requirement was simple. The portion of the wing that was situated above the fuselage was of constant chord (i.e. a constant distance between leading and trailing edges), while the remainder of the wing tapered towards the tips. By extending this constant chord section by 7 ft 10.5 in, the span was increased to 71 ft 2 in, and wing area from 630 ft² to

728 ft². While this made the wing larger, it did not make it stronger—this was done later. The designation F.VIIb-3m was first used in 1928. Prior to that it was F.VII-3m for both the 'a' and 'b' versions. This temporary identification has been a source of confusion ever since, not only in publications but even in the type designations as painted on the fuselages, e.g. F.VII3m, F.VII3M, F.VIIa3m, F.VIIb3m, F.VIIb-3m etc.

Arctic aerial exploration

(sourced from AVIATION PATHFINDERS www.century-of-flight.net/Aviation%20history/pathfinders/Byrd%20Bennett.htm)

Exploration of the uncharted areas of the globe by aeroplane and airship became very active in the 1920s for a variety of reasons. Looking forward to the establishment of aerial transportation from continent to continent, it was necessary to know what aircraft were capable of, whether aerial navigation techniques were adequate, and whether or not ground support could be provided en-route. These reasons, combined with the general adventurousness that pervaded the 1920s, led to many path-finding flights across oceans and continents, but an additional set of reasons came into play in motivating aerial exploration of the Arctic and Antarctic regions.

In the late twentieth century, it is difficult to believe that as late as the mid-1920s there was thought to be land north of the Alaska in middle of the Arctic Ocean, in an area known as the 'blind spot', in

the middle of which was the 'Pole of Inaccessibility', a point equidistant from all land masses and about four hundred miles (643.5km) south of the North Pole. On official charts, it was called Crocker Land or Keenan Land, and appeared with question marks and purported outlines, arrived at from unreliable sightings and calculations based on measured anomalies of the currents passing through the Bering Strait.

Three teams were deeply involved in the aerial exploration of the Arctic: the Norwegians, led by the famed explorer Roald Amundsen, who had reached the South Pole over land in 1912; an American team headed by Richard E. Byrd, a Lieutenant Commander in the U.S. Navy; and a group led by the Australian George H. Wilkins, who sought and accepted help from many sources.

First out of the gate was Amundsen. After being forced into bankruptcy in 1924 through mismanagement on the part of a ship broker who had failed to purchase planes for a flight over the North Pole (after all other provisions for the flight were bought and paid for), he teamed up with a wealthy American who simply called him in his New York hotel room and offered to finance the expedition to the North Pole, if he could come along.

This was how Lincoln Ellsworth, by then a man of over forty and with virtually no connection to flying (he had flown some in the war) and no Arctic experience, entered the annals of Arctic aerial exploration. Amundsen had the resources now to purchase the planes he needed.



He and Ellsworth acquired two Dornier-Wal all-metal boat planes with two powerful Rolls-Royce engines arranged in tandem atop the wing. Amundsen and Ellsworth took off in May 1925 in two planes, the N-24 and the N-25, each with a crew of three, from King's Bay, Spitsbergen.

Both planes were forced down short of the Pole. In one of the most dramatic feats of perseverance and survival on record, all six crew members managed to survive for three weeks, repair one of the planes (the N-25), and make it back to Spitsbergen on 15 June 1925. Amundsen and Ellsworth were determined to try for the Pole again, and in 1926 they purchased a semi-rigid dirigible, the N-1, from the Italian designer Umberto Nobile. While they were preparing the dirigible—renamed the *Norge* (or “Norway”), much to the consternation of the Italians—for flight, an American team arrived at King's Bay.

The Americans had tried an over-the-pole flight two years earlier, using three Loening amphibian biplanes with open cockpits. The team, headed by Captain Donald P. MacMillan and Richard E. Byrd, was sent by the navy to find Crocker Land (or whatever was out there) and to perform a flying feat that could diminish some of the lustre of the army's Douglas World Cruisers. However, it was clear from the start that the planes were not nearly durable enough, especially their landing gear, and MacMillan abandoned the project.

But Byrd and his very able pilot, Floyd Bennett, sought private funding for

another try. With the help of Edsel Ford, Byrd purchased a Fokker Trimotor and named it the *Josephine Ford* (much to Anthony Fokker's consternation).

The third group to arrive in 1926 was George Hubert Wilkins, an Australian-born American. Wilkins started preparations for a flight to the North Pole under sponsorship from the *Detroit News*. He too had a talented pilot at his disposal, a North Dakotan named Carl Ben Eilson who had become the foremost Alaskan bush pilot. Wilkins was more interested in exploring the ‘blind spot’ than in making an over-the-pole flight, but the newspaper publishers who were his

backers insisted that he try for being the first to fly over the pole.

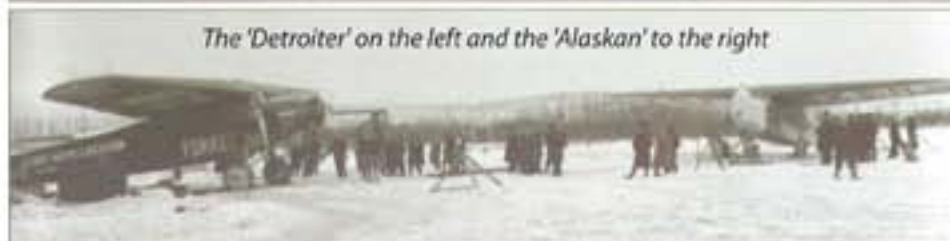
For this, the *Detroit News* Arctic Expedition, he ordered both a single-engine F.VIIa, named the ‘Alaskan’, and a trimotor F.VII. During contract negotiations, Wilkins learned that a larger wing could be fitted. As Wilkins wanted to take as much fuel and cargo as possible, he ordered the larger wing version. He thus became the first customer for the F.VIIb-3m, although the aircraft had not yet been given that designation.

The F.VIIb-3m was built in Amsterdam, bulk stripped and shipped to the USA, where it was reassembled at the

Photos below are reproduced with permission from the Archives, University of Alaska Fairbanks.



The 'Detroit'



The 'Detroit' on the left and the 'Alaskan' to the right



The 'Detroit'



The 'Detroit' had a bad landing resulting in a broken undercarriage

Below: George Wilkins



Atlantic Aircraft Corporation, Fokker's American factory. Three Wright J-4 Whirlwind engines of 200 hp each were installed. To avoid any confusion about the sponsorship, 'Detroit News Arctic Expedition' was painted in large letters on the fuselage sides and the aircraft was named the *Detroit*. Together with the F.Vila *Alaskan*, the *Detroit* was transported by ship to Alaska.

Thus, as May 1926 dawned, the three teams were preparing to fly in to the Arctic region. However, things began to go wrong for the Wilkins team. First someone was killed when he walked into the rotating propeller of the *Detroit*, then the *Alaskan* made a bad landing and broke its wing. The next incident was a bad weather landing by the *Detroit* resulting in a broken undercarriage. These setbacks, together with the resulting delays were sufficient to persuade Wilkins to cancel the expedition.

The newspapers promoted the notion that a race was about to start, but in fact, the two remaining teams assisted one another throughout the preparations.

At 12:37am on 9 May 1926, Byrd and Bennett took off in the *Josephine Ford* and flew toward the North Pole. They

reached the Pole (by Byrd's calculations) at 9:02 and circled for fifteen minutes taking pictures. They had intended to return by way of Cape Morris Jesup on the northwestern corner of Greenland, but an oil leak prompted them to take no chances and they returned directly to Spitsbergen, arriving at 4:07pm.

Amundsen and Nobile took off two days later, although some of the crew felt that there was little point in even making the flight now that Byrd and Bennett had reached the Pole. But Amundsen and Nobile were determined not to let their countries be deprived of the honour that was due to the nation that sponsored the first crossing of the Arctic Ocean. The team passed over the Pole and made it to Teller, Alaska, in just under 71 hours.

Wilkins' interest in the North Pole appeared undiminished for a year later, he and Eilson were back for another try. This time they flew one of the first Lockheed Vegas produced. The plane performed excellently and the flight—which began on 15 April and ended six days later because of a five-day storm that the fliers waited out on the ground—was hailed as one of the great Arctic flights of the period. Wilkins was knighted and the pair became international

celebrities. Their flight had accomplished a number of things. It demonstrated the capabilities of the Vega, a plane that was to become a favourite of long distance fliers for years to come. It put to rest once and for all the notion that there was any landmass between Alaska and the North Pole. And it demonstrated that trans-Arctic flights might not be as dangerous as once thought, which meant that great circle air routes from North America to Europe and Asia should be seriously considered for commercial aviation when planes improved.

Back to the Wilkins' *Detroit*

Wilkins left the broken wing of the *Alaskan*, but shipped the rest of the aircraft and the *Detroit* in large crates to Seattle. There, while the *Detroit* was being repaired by Boeing, Wilkins met Charles Kingsford Smith 'Smithy' and his friend and colleague Charles Ulm. Smithy and Ulm had travelled to the United States in search of an aircraft. This meeting led to them buying the *Detroit* for \$3,000. Kingsford Smith ordered the engines to be replaced by J-5 Whirlwinds of 220 hp, and also had the undercarriage reinforced and the tankage increased to 1,267 gallons.

Detroit renamed *Southern Cross*



Southern Cross

Barely six months later, at 8:54am on 31 May 1928, Smithy took-off on another ambitious flight. Together with Harry Lyon, Charles Ulm and James Warner, he departed from San Francisco to make the first crossing of the Pacific Ocean from America to Australia. His aircraft had meanwhile had a name change. No longer called the *Detroit* the aircraft was baptised *Southern Cross*. The risks involved in the flight were considerable. During 1927 alone, 19 people had lost their lives while attempting to fly the Atlantic Ocean. But Smithy was more successful. After two stops, in Honolulu, Hawaii and Suva, Fiji, the *Southern Cross* landed in Brisbane on 9 June after approximately 7,400 miles total flight. And just like Lindbergh the year before, Smithy became famous overnight.

From Brisbane, the *Southern Cross* flew to Sydney where a large crowd greeted the crew as heroes. Fokker of course also benefitted from this publicity, the more so because the flight had been made by a standard airliner and not a purpose-built aircraft. In those days, the majority of record attempts—successful

or otherwise—used specially-designed aircraft which had little or no further use or application. In this case it was different and the flight of Smithy and his crew had a marked effect on the sale of Fokker airliners. Smithy did not stop there to make headlines. On 8 and 9 August 1928, he flew non-stop over Australia from Melbourne to Perth. On 10 and 11 September he became the first man to fly over the Tasman Sea to New Zealand, again in his *Southern Cross*.

On 25 June 1929, he took off for England. He reached London in the record time of 12 days and 18 hours. Then on 24 and 25 June 1930 with KLM Captain Evert van Dijk as copilot, he made the first flight from London to New York. From there he flew the *Southern Cross* to San Francisco. He thus became the first person to have flown around the world via Australia. (The first flight around the world via Alaska had been made by a Douglas World Cruiser in 1924).

Smithy seemed unstoppable, but in the early morning of 8 November 1935 his luck finally ran out. While flying a Lockheed Altair in an attempt to set a new England-Australia record, he

disappeared over the Gulf of Bengal. No trace of him or his aircraft was ever found.

Some months earlier he had donated his 'old bus' (as he used to call the *Southern Cross*) to the people of Australia. It flew again in 1945 for a film about the life of its owner who had been posthumously knighted as Sir Charles Kingsford Smith. After this, the *Southern Cross* never flew again but was exhibited in the Sir Charles Kingsford Smith Memorial in Brisbane, where it still remains today.

Late in the 1970s, plans were made to build a flying replica of this famous aircraft. Australia has great pride in the *Southern Cross* which forms an important part of the country's aviation heritage and was considered as too precious and too old to take to the air again. And so the costly and time-consuming project of building a replica was initiated. Construction was completed in August 1987, and as well as the original non-flying *Southern Cross*, Australia now also has a flying replica the *Southern Cross II*.

The *Southern Cross* was the first of some 140 to 160 F.VIIB-3ms to be built. None of the others ever became as famous as the 'old bus'.



SOUTHERN CROSS TAKES OFF FROM SEVEN MILE BEACH

Story from page 8 of
The Argus,
Wednesday 11 January 1933

TASMAN FLIGHT.

SOUTHERN CROSS READY.

REGULAR WIRELESS SIGNALS.

SYDNEY, Tuesday - Piloted by Air-Commodore Sir Charles Kingsford Smith, the Southern Cross will leave the Seven Mile Beach, at Gerringong, at 3 o'clock tomorrow morning for New Plymouth (N.Z.) unless unfavourable weather reports are received. Preparations for the flight of 1,400 miles are complete.

The Southern Cross is loaded with 600 gallons of petrol. Equipment and rations are aboard, and the machine has been hauled to the beach, facing the northerly

wind, ready for the take-off. The aviators should see the snow-capped peak of Mount Egmont rising above the horizon about half-past 3 o'clock to-morrow afternoon (New Zealand time). They will then still be 250 miles from the New Zealand coast, but they should land at the New Plymouth aerodrome about dark. In the event of delay, a powerful lamp fitted to the under-carriage will illuminate the aerodrome as the Southern Cross lands.

Wireless signals from the aeroplane will be sent at frequent and regular intervals, and will be relayed to a central station at Kuribilli. The Southern Cross carries no boat or other emergency gear.

Pilot Confident

Sir Charles Kingsford Smith said that he did not expect difficulty in "taking the old 'bus across in one piece". Those in the aeroplane are Sir Charles Kingsford Smith (pilot), Captain P. G. Taylor (co-pilot and navigator), Mr. S. E. Nelson (secretary of the New Zealand and New Plymouth Aero Clubs), Mr. J. Stannage (wireless operator), and Mr. J. Percival.

Hundreds of people made the Seven Mile Beach their goal for holiday excursions today. Most of the visitors were on foot. They had to walk three miles through sand to reach the Southern Cross. The Southern Cross landed safely on the beach at 30 minutes to 2 o'clock, and taxied to the petrol-filling station. Some of the visitors narrowly escaped being struck by the propellers.

Photographs courtesy of the
National Library of Australia



WIRRAWAY A20-99 ADVANCES

Rosemary Szabo

Wirraway A20-99 continues to advance under the guidance of Rob Greinert and a small team of volunteers. To date the main thrust of the project has been to refurbish the wing centre section and the installation of fuselage systems.

The wing centre section overhaul has included non destructive testing (NDT) inspection of the wing attach angles and overhaul of fuel and hydraulic systems. It is hoped to have the centre section out of the jig by the end of May.

HARS volunteers have taken on many aspects of the project; Geoff Forest has been tackling the complex engine cowls while Geoff Cuthbert has been trawling through all the boxes that arrived stuffed with parts, looking for the missing 'little bits'. Whilst the project is ably supported by full time engineering staff—Jay Lazarus, Jack Smid and Rob Greinert—the input of the volunteers is vital to the rapid progress of the project.

The engine is still underway with Peter Brook of Historic Aircraft Engines (Brisbane) and the propeller will be shipped to Eric Weston at Bankstown Airport later this year. To date some \$60,000 in expenditures has been incurred or committed to a rebuild that is starting to emerge as one of the really beautiful restorations of 2010.

Our 'spares network' continues to save time and money, the most noticeable being the recent assistance of Geoff Eastman of Geelong. Geoff has provided crucial replacement/missing castings and a replacement port fabric panel. Hundreds of hours in manpower have been saved and allowed the team to move on.

Mary Ellen Conrado from Tucson, Arizona arrived and attended to the last of the fabric work required for the aircraft. Many of you will recall Mary Ellen's last visit where she fabric covered the DC4 controls.





Bob De La Hunty OAM

President and Chief Pilot

Bob has been a member of HARS since 1982 and President since 1990.

Bob comes from a background of both insurance and investment with the Colonial & Commonwealth Bank Group, having sold his practice in 2007.

As a commercial pilot Bob "had his cake and ate it too" by flying as a backup pilot for the Rural Medical Health Service and various charter firms while still maintaining his mainstream business and through that business developed corporate and individual relationships that have helped HARS grow over the years with financial support and assistance.

Bob has been involved with the Temora Aviation Museum at Governing Committee level and is a Director of Aviation Development Limited, the company that organises the Avalon Airshow.

As recognition to historic aviation he was awarded an Order of Australia Medal (OAM) some years ago and is a Fellow of the Australian Institute of History & Arts and prior to retirement was a Certified Financial Planner through Deacon University.



John Brooker

Executive Vice President - Marketing

John has a background in senior management in a large American multi-national corporation, predominantly in marketing.

John has been responsible for the marketing of HARS for a good many years. In addition, he is also the General Manager of Historic Aircraft Restorations Pty Ltd, a company which has been specifically established to generate revenue for HARS. In this capacity, John has developed a restoration department that was contracted to restore vintage aircraft such as the North American P47 Thunderbolt for a South African consortium. In addition, Historic Aircraft Restorations Pty Ltd was also contracted to restore the Australian War Memorial's WW2 Beaufort Bomber.



David Neaves

Treasurer

David is a local resident, having grown up in the large 1870s house 'Ravensthorpe' abeam the threshold of runway 34.

David has a Bachelor of Commerce, majoring in Accountancy from the University of Wollongong. He has been about 30 years in Public Practice, the last 15 years as Principal.

David is a Fellow of the Australian Society of CPAs (FCPA). He is also a member of: the National Tax Agents Association; the Australian Taxpayers Association; Sports Aircraft Association of Australia; SAAA Chapter 4 Illawarra; the Illawarra Flyers Association; Illawarra Flyers Aircraft Storage Inc; and a member of HARS for about five years.

David has had the usual addiction to model aircraft since an early age. He gained his private pilot license in 1989 and has about 380 hours to date.

David has been building a Vans Aircraft (RV6A) for the last 10 years, and will be for another few years.

David is the owner of Piper Cherokee VH-IAV (the one in Hangar 3) and a PA28-180 that lives in the AirAg Hangar.

David is also a member of the Macchi syndicate.



Maureen Massey
Secretary

Maureen was in Senior Management at Boeing Hawker de Havilland for 31 years, before semi retiring in 2008.

Her background has always been in aviation and engineering, filling the role of Corporate Communications Manager before transferring to Engineering Design until retiring.

Maureen is widely versed in computer applications including financial, engineering and technical publications.

She is the Manager of the de Havilland Aviation Heritage Collection, which has been transferred to HARS for long term preservation. This collection includes four historical aircraft, the DH3A de Havilland Drover and DH82A Tiger Moth which are airworthy, and the CA27 Sabre and DH110 Vampire.

Maureen was the HARS Treasurer for ten years, before changing to the Secretary role 3 years ago.



Malcolm Hallows
General Manager Maintenance

Malcolm commenced working with Qantas in 1956 as an apprentice Aircraft Maintenance Engineer. On completion of his apprenticeship he gained Engine Licence on L1049 Super Constellation.

In following years Malcolm gained experience on numerous aircraft types, Qantas owned and operated plus other airline aircraft, eg. DC3, DC4, L749, Beaver, Otter, Electra, Britannia, Comet, B707 etc.

Malcolm participated in the establishment of, and in later years the Supervisor of, a Military Contract Project for the Major Maintenance of RAAF C130 Hercules, which ultimately included C130A, C130E, and C130H models. He obtained Signatory Approval (similar to AME Licence) on all three types in engine and airframe categories. Additional Military Contracts saw the inclusion of the RAN A4G Skyhawk aircraft and the RAAF B707. He obtained Signatory Approval for A4G engine and airframe plus B707 airframe.

Malcolm joined the Maintenance Planning Division as Supervisor with responsibility for planning the major maintenance for the Qantas fleet plus the RAAF C130 and B707 aircraft. Additionally his position absorbed the Qantas fleet Aircraft Allocation and Scheduling as well.

Malcolm later transferred back to production to manage the Major Maintenance activity of the Qantas fleet and the RAAF contract aircraft.

Malcolm was seconded for six months to manage the recruitment of overseas aircraft trade applicants from various countries with acceptable trade skill standards to Australia. He then transferred to manage and develop the Engine Overhaul, Component Overhaul and Aircraft Maintenance work that Qantas Engineering and Maintenance accomplished for many other Airlines.

Malcolm retired 1997.



Kevin Taylor
Engine Workshop Manager

Kevin has a long history in Qantas engine overhaul from 1959 to 1994. He returned on secondment in 2000 to overhaul T56 Hercules engines during the Timor Crisis.

Kevin worked in the assembly and recification areas on small piston engines (Beaver); the Rolls Royce Dart to R3350 Connie engines; to the large jet engines from Pratt Whitney and Rolls Royce for the 707 and 747—more than 14 types of engines, both military and customers.

Kevin went into engine planning at the start of the computer age developing paper work, statistics and methods fault finding. He was sent to Pratt Whitney Training School in Hartford, USA on the PWA JT9D-7R4E engines for the 767. During his last five years in Qantas he handled all the input of RAAF military engines into the EOC Workshop.

Kevin has been in HARS since the early 1980s, having had the privilege of being the first Qantas engineer to join HARS. He has been on recovery missions to Tahiti (566), Wagga (Canberra), and from the first trip to Tucson for the recovery of Connie.

Through his connections in Qantas, Kevin was able to secure the old York motors; army hangars in Kent Rd Jet Base for storing parts and later all the engine workshop and Robert's restoration facility.

Kevin looks forward to the exciting new engine workshop of Peter Brooks to be built.



Julie Hourigan
HARS Committee Member

Julie has over 37 years experience in graphic design and publication management. She commenced work for the Australian Government Publishing Service (AGPS) in 1973 as a base grade Graphic Designer and over the next 22 years worked her way up to become the AGPS Design Studio Manager, managing the latest design and editorial studio in Australia at that time. During this period she was also responsible for taking the Studio from a fully government funded organisation to a full cost recovery business enterprise.

In 1997 Julie became the Manager of AGPS Press, the commercial publishing arm of the Commonwealth Government. As part of the AGPS Senior Management team she was responsible for business planning and budget preparation as well as managing million dollar contracts.

Unfortunately the late 1990s early 2000s saw the Commonwealth Government outsourcing many activities previously produced inside. One such organisation was AGPS. Julie took a redundancy package in June 2000 and the next day commenced work as a Publications Manager with the ACT Government on a three months contract. She has been there ever since.



Nicky Costigan
HARS Committee Member

Nicky has over 30 years administration and managerial experience in a varied range of areas including: insurance, finance, construction, education and law.

Currently, Nicky is employed with the Department of Education and Training in roles including:

- Committee Member and Administration Manager with the Gifted and Talented Students of the Shellharbour Area (involving 18 schools and 490 students).
- Administration Manager and Administration Officer.

Nicky was approached by the Named Partner of a local solicitor/attorney and offered a position with his firm, and she accepts work as required.

For ten years, Nicky successfully applied and received government grants to plan and teach art to adults in disadvantaged areas.

Nicky has maintained and updated her qualifications that include, Administration and Financial Management, Computer Applications and she holds a Trade Certificate in Showcard & Ticketwriting.



Ben Morgan
HARS Committee Member

Ben joined HARS in late 2008, having met Robert Greinert and becoming involved in the CAC Boomerang project.

Ben started his business experience at the age of 19, forming a handheld technology distribution business, serving clients such as the Airports Corporation and the Australian Stock Exchange.

At the age of 21 he negotiated the purchase of an Apple Computer retail dealership, becoming the youngest person to own and operate such a business worldwide. His business grew to become one of Australia's most recognised Apple retail brands with a revenue by 2008 in excess of \$130 million.

During his time as an Apple retailer he was awarded multiple dealership and excellence in retail awards, with his business being listed on the BRW top 500 in 2005.

In late 2004 Ben formed a digital learning and education centre, which would grow to become the third largest computer education business in Sydney.

Ben has experience in product design manufacturing and distribution, having created a range of computer laptop bags and external hard-drive enclosures. His bag designs are still manufactured and sold worldwide.

In late 2008, Ben established aviationadvertiser.com.au, a website which provides the Australian aviation industry with online aircraft classifieds and aviation news and editorial.

Ben is a respected industry advocate for general aviation and has produced multiple industry reports on the effects of airport privatisation and general aviation regulation.

During the past 2 years, Ben has acquired an Ex-RAAF Macchi MB326H jet trainer and has formed a restoration syndicate to see it returned to flight.



Bill Smith
HARS Committee Member

Bill is a licensed aircraft engineer LAME in the airframe and engine trades

Bill joined HARS in September 1990 with his first job being painting the prop blades of Neptune 273. His membership number is #14.

Bills first flight in 273 was to Archerfield on 22 September 1990 (one of the most memorable).

Bills first overseas trip was to Tucson to work on the Connie for 2 weeks. In addition to Connie he has worked on the following HARS aircraft recovery projects as an engineer: both C47s; Winjeel; Wirraway; Tracker; Firefly; Ceres; B17 (biggest adventure ever thanks Rob); and the DC4 (most draining ever).

Since joining HARS Bill has worked as an engineer on almost every HARS aircraft. He hopes to acquire his large radial engine licence i.e. 1830 and 3350 in the near future as this will become important to HARS in the coming years.

Bill acquired from HARS the Ceres VH-55F aircraft fulfilling a life wish to own his own historic aircraft. All he has ever wanted was to work on aircraft, the older the better, and HARS gives him this opportunity not to mention that it has also given him great friends, like minded aviation people, and travel both here and overseas.

Bill is currently working on returning to flight a Texan, Tracker, 566, Me108, Ceres and Morava. All it takes is time.

Bill hopes to bring to the committee another engineering capable person to learn for the future flying of our aircraft.



Robert Greinert
Senior Management Team

Rob decided during the year that the position of Treasurer needed professional involvement and recommended to the Committee that he step down as Treasurer and that we accept his recommendation to appoint our current Auditor as the Treasurer.

The Committee agreed to this recommendation and Rob continues in a senior management role as the manager of numerous HARS projects. These projects are vital to our future development and include:

- completion of the HARS building program at Albion Park
- finalisation of the RAAF Cadet Facility
- the construction of the Engine Overhaul Shop
- the Beaufighter project; the Convair project; the Wirraway project; and the P47 project.

Apart from managing all these projects, Rob finds time to manage his restoration shop.

Information on Allan Brooker will be provided in the next edition of *Phoenix*.

Allan Brooker
HARS Committee Member

WISDOM FROM TRAINING MANUALS

As the test pilot climbs out of the experimental aircraft, having torn off the wings and tail in the crash landing, the crash truck arrives.

The rescuer sees the bloodied pilot and asks, 'What happened?'

The pilot's reply: 'I don't know, I just got here myself!'

'If you see a bomb technician running, try to keep up to him!'

Infantry Journal

The Historical Aircraft Restoration Society's Cessna 180C, VH-WGD (painted to represent A065-043), was built by the Cessna Aircraft Company of Wichita, Kansas, USA in 1960 as a Cessna Model 180C with Serial No. 50739. The aircraft was fitted with O-470-L engine manufactured by Continental Motors Corp, Muskegon, Michigan, USA and was delivered new to a private customer in the USA in May 1960 with the registration N9239T.

In all its versions, a total of 6 193 Cessna 180s were manufactured. Additionally, in 1960, Cessna introduced a heavier, more powerful sibling to the 180, the conventional gear Cessna C185. For a time, both versions of the design were in production. Though the tricycle gear 182 displaced some of the general demand for the 180, 180s continue to be valued for their capabilities as utility aircraft.

At the time of delivery, the aircraft was fitted with the standard two-bladed Hartzell constant speed propeller with an 84 inch diameter. N9239T was subsequently sold to Airlines of Goroka, New Guinea and given the registration of VH-GKD.

By 1963, the aircraft was imported to Australia and had the registration changed to VH-WGD. It began operating in Australia as an agricultural aircraft with Hazair Agricultural Services of Albury NSW and later with Hazelton Air Services of Cudal, NSW. With both operators, it was operated as a spray aircraft with an external 'belly tank' for the chemicals and spray booms fitted to the wings. Most C180s on agricultural work were flown sans spinners.

By the mid 1970s VH-WGD was operated by Grasslands Aviation out of Albury, NSW. As all Cessna C180 aircraft were delivered in full passenger configuration, an agricultural operator would have authorised and/or modified the C180Cs into either a fertilizer or sprayer configuration.

The fertilizer version would have a large internal hopper fitted and the rear seats removed. These aircraft would then become the normal two-seat agricultural configuration with the standard pilot



VH-WGD operated by Hazelton Air Services on the job at Narromine in 1963.
Photo acknowledgment: Bob Neate © 1963 – Ed Coates Collection

seat, and a seat squab only on the front passenger seat. This was due to the shape of the hopper that was used on all C180 Ag aircraft projecting a little further forward on the passenger side with the front of the hopper forming the passenger seat backrest. An aperture loading hole would be cut into the roof and through the floor to permit the loading and disposal of solid and/or liquid fertilizer respectively. A manually operated hopper control handle (with a jettison function) would be attached to the floor adjacent to the manual flap handle.

Conversion to the sprayer version could use either the internal hopper, or an underslung belly tank. Both spray configurations (internal or external hopper) would have an air driven (fan) pump, fitted with a brake, plumbing and spray booms fitted under the wings and spray controls fitted in the cockpit.

There was also a third configuration used by a small number of operators and that was for 'seeding' only. The seed was carried in 'tear shaped pods' slung under both wings and controls added to the cockpit roof similar to a dual throttle control. Rear passenger seats could be retained in the external spray hopper and seeding configurations.

The aircraft retained its Australian domestic registration of VH-WGD for all subsequent operators.

Subsequent owners

After agricultural service with Hazair, Hazeltons and Grassland Aviation, VH-WGD moved into private ownership at Warrandyte VIC before ownership finally changed to the current owner and Historical Aircraft Restoration Society member, Gina Wilson. The aircraft currently resides at Albion Park, Wollongong NSW as part of the HARS fleet.

Although WGD is a 'C' Model, the 'warbird' livery was added to represent the Australian Army Cessna O-1G A98-043 (a 'D' Model) which had the Army radio callsign of "Possum 43" and saw service with Army Aviation 161 Recce Flight before being lost in Vietnam in 1968.

History of army Cessna 180 A98-043

Only seven Cessna 180s were deployed to South Vietnam for operational service with No. 161 Independent Reconnaissance Flight (161 Recce Flt) from September 1965 until February 1971.

The first two Cessnas to go to Vietnam were A98-043 and A98-045. The aircraft were off-loaded from HMAS Sydney off the coast of Vung Tau on 28 September 1965 by a US Army CH-34 Choctaw helicopter to Vung Tau Airfield, where they were re-assembled before being flown to Bien Hoa on 1 October 1965.



A98-043 (Photograph by Ross Goldspink, via Len Avery, 161 Recce Flight Association taken at Port Moresby Airfield, PNG, January/February 1965)

Both of these aircraft had major 'E' Servicing (1200hrs) carried out on them by members of 161 (Indep) Recce Flight at Vung Tau at the end of 1966 and early 1967.

Only three of the seven Cessnas were lost or destroyed whilst in Vietnam, and no pilots were lost whilst flying Cessna 180s. In 1971 the Cessnas were finally replaced in Vietnam by the Pilatus Porter and the last flight of an Australian Cessna 180 in Vietnam was carried out on 14 February 1971. The pilot was Dennis Coffey and with an escort of Porter aircraft, flew in formation to mark the end of the Cessna's service in Vietnam.

The last pilot to fly A98-043 in Vietnam was Steve Tizzard. While flying the aircraft in September 1968 Tizzard experienced an engine shutdown due to a fractured propeller link which sent one blade fully fine, the other fully course—a situation which would result in the engine quickly shaking loose from its mounts. After transmitting a Mayday call, then shutting down the engine, Steve elected to put the

aircraft down in a water filled paddy field twenty kilometres north of Nui Dat near Route 2 in the vicinity of the Courtenay rubber plantation. The touchdown was perfect, however, the starboard wheel struck a hidden stone-pile beneath the water (probably the only one in the field). The resulting "water-loop" ripped off the gear strut.

Steve, along with Dick Schafer the ARDF operator and their highly classified equipment were later extracted under the protection of US helicopter gunships and an SAS protection patrol, which arrived within minutes of the forced landing. Subsequently, it was discovered that the aircraft came to a stop on the EW antenna pod after its undercarriage collapsed in the crash landing. The EW equipment was undamaged in the incident.

Cessna A98-043 was slung beneath a Chinook and taken back to Nui Dat where, during the landing approach, rotor recirculation caused load instability. The load had to be cut loose and A98-043's last flight was straight down for about 100ft.

Cessnas A98-043, A98-044, A98-045 and A98-063 were all D Models while A98-146, A98-148 and A98-150 were E Models. Whilst in Vietnam the seven Cessnas flew a total of 16,150 hours and carried out 11,169 sorties. The Army Cessna fixed wing aircraft were acquired in the late 1950s to replace the obsolete Auster Mark III. Along with the Bell 47 helicopter, the Cessna became the first Army owned and army operated aircraft since the formation of the Air Force in 1921.

Although it was primarily a civilian aircraft adapted for military use, the Cessna proved to be a valuable and versatile asset, operating extensively throughout Australia, Papua New Guinea and South Vietnam. A total of 19 Cessnas were purchased and delivered to the Army between 1959 and 1962. The models were all extremely similar, and had essentially been made military by a coat of green paint.

Later in its service, several modifications were made so that the aircraft was able to perform in its military role.

Cessnas flew a total of 16,146 hours in South Vietnam and were used for many different roles including visual reconnaissance, liaison, courier runs, target marking, leaflet dropping, convoy cover and the postal service. From November 1969 the Pilatus Turbo Porter gradually replaced the Cessna. The last Cessna left Vietnam in 1971 and the type was officially retired in September 1974.

Note: The HARS replica of A98-043 'Possum 43' is a 1960 Cessna 180 C Model and has seen all its service life in Australia as either an agricultural or a private aircraft.

A98-043 after its crash
(Photo from Denis Hare's collection)



HARS Cessna 180C VH-WGD
(Photo: Mike Hourigan)



Before the use of very sophisticated flight simulators, airlines used to do what was known as "base training". This was where an airliner was taken out of revenue service and used to do circuits-and-bumps. Qantas did most of its base training at Avalon Airport near Geelong Victoria. Sometimes the aircraft would remain overnight and this required a Qantas Security Officer to remain with the Aircraft. Of course those days are long gone.

It was on such an occasion that I first met Qantas Security Officer Cliff Raatz. He was brand new to Qantas having been with the RAN for a long time. We clicked straight away and have been mates ever since. Cliff and wife Barbara are avid travellers. Cliff is also a born collector of anecdotes. Over twenty years ago he showed me a part of a hand written letter that told of a story of an air journey in the former USSR. It read like a Paul Theroux novel. I asked for a copy. Cliff was happy to give me a copy on the condition that I never allowed it to "go public". It was, after all, part of a private letter.

I have used the letter over the years to pacify many disgruntled passengers who think they are the only people who have ever been delayed on an aircraft. Some of the Captains of Australian Industry have read this letter and, subsequently, counted their blessings. Many have wanted a copy and been denied.

I have wanted to publish this letter several times but have reminded myself of my commitment to Cliff. Recently Cliff and I were talking and I asked him if he remembered the identity of the author. Cliff did indeed remember. It is a man called Peter Curtis, an ABC cameraman of some renown. He was working for the ABC's "Foreign Correspondent" when he took this journey. Through Cliff I contacted Peter in Tasmania seeking his permission to publish his story through our magazine. He was delighted to give permission.

It is interesting to note that I only have pages 9 to 13, which only concerns the airline portion of the journey. The full hand written A4 letter must have quite a tome! Before the days of laptops! The journey took place on the 15 August 1992

So here is Peter's story of that flight...

"The ship was a bit slower (by several hours) than we'd expected due to one engine needing repair. Consequently we needed to rush a bit to drive the 30 or so kilometres from the port on Sakhalin to the airport. We arrived on time and relaxed as we waited for the plane that we had been told was only ½ an hour away. After one hour we were told they'd got it wrong and that the plane actually hadn't left Moscow yet due to lack of fuel. As it is a 14 hour flight, we were advised to come back the following morning in time for a lunchtime flight.

One cold night in bed and an icy shower later we arrived back at the airport to be greeted with the news that the flight still hadn't left Moscow and had in fact been cancelled. Oh well, we'd just get the 4pm flight instead and be a mere 2 days late. Ha, ha, ha!

It was raining at 4pm; just a bit of a shower really, so we were rather surprised when we heard the plane was stuck at another airport—one hour away, until the weather got better. This was due to the airport we were at having a broken radar guidance system so vision needed to be better than 2kms for a pilot to find the runway and land. There was a short break in the weather so the plane landed safely around 7.30pm. It then started to pour so we counted ourselves lucky as we ran the 500 metres or so to the plane, that it had actually got there.

After sitting on the plane for over an hour it became apparent that not much seemed to be happening. The Captain spoke on the intercom and said this was due to the fact that none of the luggage had yet made it to the plane. He thought it was because the one and only machine at the airport that could lift the containers up to the plane was broken. After about another ½ an hour, about 20 or so inquisitive passengers left the plane and wandered through the rain in search of the luggage section to see how the fast repairs were going. What they found were 3 drunk baggage handlers with a perfectly operational container lift, who just couldn't be bothered working in the rain. They decided to work the moment

the passengers threatened to beat them up and, with the passengers help, had the plane loaded in ½ an hour. Nick, our interpreter, was with them and didn't think he'd seen our "Intourist - foreigners only" container. He found it, at the back of the luggage area. The handlers thought it was empty and Nick had to get the airport security guy to unlock and open it to prove our gear was in it before they loaded it.

Just before we took off, a mere 5 ½ hours late, the Captain said that we'd be flying to an airport 1 hour away to fuel up as the runway in Sakhalin was damaged (potholes) at one end so he was carrying very little fuel so he could take off before he hit the damage. This didn't bother the cabin crew in the slightest who wheeled their trolleys down the aisles selling vodka, cognac and beers as the plane tore down the runway and took off! Several bottles of beer rolled past me as we climbed from the ground—they'd fallen from the trolley during the takeoff.

The refuelling took a mere 1½ hours before we headed westwards towards Moscow via Siberia for a passenger and fuel stop at Krasnoyarsk. Four hours later we landed and the Captain said sorry but we've been too long and by the time we got to Moscow it would be 2am and Moscow's airports would be closed. He and his crew were going to take a break so would we kindly leave the aircraft and sit in the terminal—he and the team would be back in 12 HOURS!!!!

Well to say this didn't go down too well with the passengers would be a bit of an understatement. 20 or 30 angry people immediately went to abuse the Captain and crew. This turned into a blockade and eventually a hostage situation. The Captain refused to fly and the passengers refused to release him. The co-pilot was allowed to leave with a passenger escort to see if another crew could be found. There were none. Some passengers spoke with the airport dispatcher who said it was no problem to request an airport in Moscow to stay open. In fact it was normal. This made the passengers even angrier and the Captain lost any chance he had of leaving the plane. We were told that another crew was being flown

from Moscow and we should release the Captain and move to the terminal. Nobody moved, and just as well as this turned out to be a lie.

At dawn, with still no sign of a crew, we went with about 50 angry male passengers to the terminal. There we discovered another flight was leaving for Moscow at 8:40 that morning. They demanded that 8:40 crew fly our plane or give us their plane instead. Whoever was in charge told us to wait on the tarmac till the airport manager arrived at work. In the meantime they promised not to board the local passengers onto the new plane.

It was very cold outside with a freezing wind howling across the Siberian plains. I'm glad we weren't there in winter. Anyway somebody went back inside to hear the boarding call for the new flight. Realizing they'd been betrayed the 40 or so men decided to take action. At

first they wanted to surround the other aircraft to stop people boarding but they realized we were too few to do it effectively. Instead they decided to block the runway. There were planes landing about every 5 minutes. The runway was very long (military use I suppose) and a couple of jets landed and could stop well short of us and taxi off before reaching us. Shortly after we hit the runway some security men and a fire truck with a snorkel arrived to clear us off the runway. It looked like things could get wet and nasty but then the airport manager arrived so we moved over to a taxiway just as 2 big jets landed which needed our patch of runway. The manager was a reasonable bloke and took two "delegates" from the passenger rebels with him to see what could be done while we went back to the warmth of our sweaty, smelly plane with 350 angry people and 4 or 5 dogs who had now been on the aircraft over 20 hours and flown only 5 of them.

The airport manager agreed to let us take the priority and move onto the new plane—the locals would have to wait. There was a short round of applause and the Captain was finally released from his cockpit as we swapped aircraft. However the story doesn't end there. The stewardess on the new flight didn't like a couple of drunkish people (celebrating our hard fought victory) being on board and called in the militia to remove them from the plane. But as they were dragged off the solidarity of the passengers remained strong and once more the band of revolutionaries left the plane, surrounded the police jeep outside and had their comrades released with a promise they wouldn't drink any more. Finally we left and flew uneventfully back to Moscow where we had a mere 2 hour wait to get our luggage. So a mere 4 days after starting our journey we arrived safety home."

A SPECIAL DAY FOR GRAHAME ABRAHAMS



On the 25 September our Chaplain Grahame Abrahams, who has been a commissioned Pastor in the Uniting Church for the past 21 years, was ordained. The church was packed to the rafters, with the local congregation, members of Grahame's previous churches, and HARS members.

We have noticed that around the hangar Grahame is still the same 'bloke' although a new nick name is starting to be heard, The Rev.

It was great to see the recognition of Grahame's long term ministry, after leaving a 20 year career in the NSW Ambulance Service, Grahame was appointed to minister/missionary in Nimbin among the hippie communities of the far North Coast. He was then transferred to Jindabyne where he established a chaplaincy to the NSW Ski Fields and was one of the principles chaplains during the disaster at Thredbo, providing chaplaincy support for the State Emergency Service, the local people of Thredbo, and victims' families.

After spending a short period on the Mid North Coast (where Grahame learnt to fly) he transferred to Shellharbour and was immediately attracted to the skeleton of a building called Hangar 1 and joined HARS.

It was soon recognised that Grahame's ability to quietly draw alongside people made him right to take on the chaplaincy, as HARS still felt the tragic loss of Father Jeremy Flynn 10 years before.

Grahame has been our chaplain for almost 6 years and we look forward to many more years of that close relationship with him.

Grahame is available for counselling if needed, but mostly many members have found it a blessing just to talk through issues with him. Grahame is available at any time just contact him on 0429 995 649 or 42563724 email gka004@gmail.com

Yet another dedicated team of HARS volunteers were privileged to embark on a 6 day adventure with the Connie to the Sunshine Coast and Williamtown.

Shell had kindly sponsored us to take the Connie as a feature of the opening ceremony of the annual RAAA Convention at Aeromil's hangar on Sunshine Coast airport. We followed Matt Hall's polished and spirited display by overflying at 1,000' into the setting sun with a magic sky as background, then completing a lazy descending right turn to runway 16. Apparently, the crowd were enthralled by the lighting effect of the evening light as we descended in the turn with Mount Coolum in the background!

Enthusiastic tours of the aircraft followed which proved something of a "bridge too far" as we dined in Coolum Beach at the Golden Arches [circa 2130] while using all modern means of electronic communication to work out where in the hell we were staying!??

As we flight planned the following morning with the laptop set up on the breakfast bar of the Sunshine Cafe, I rang Marj to tell her of the wonderful view of the beach. Her query as "Was that the beach on which you slept last night, Dear?"

Things looked up as we then winged our way down to Williamtown where we put the Connie to bed and had a couple of days off in Raymond Terrace to prepare for our two days the RAAF Williamtown Airshow.

For me, the flying display was one of the best military shows I've been to in 40 years! It was advantageous to us too!! However, all fun must end and so a delightful run down the coast passing everything in sight [especially Felix!] and home on time to present ourselves to the Germans for their training.

All photographs in this article were taken by Dick Simpson





Mr R De La Husty
President
Historical Aircraft Restoration Society Inc
Cnr Boomerang Road and Airport Drive
Illawarra Regional Airport NSW 2527

Bob,

On behalf of Chief of Air Force, please accept our thanks for the continued support of the Historical Aircraft Restoration Society at our major Air Displays.

On this occasion I would like to thank you and your crew for the fine Neptune display and could you also please pass on my thanks to Warren and his crew for their also fine display in the Catalina. Could you also pass on our thanks to sponsor of the Connie who made its appearance possible.

The recent Williamtown event is now at least the fifth occasion in recent times at which your Museum has supported us at a major Defence Force Air Display. I am sure there are more. I can assure you that we consider it a privilege every time you support us.

At Williamtown we had a crowd of more than 50,000 people over the two days who experienced the joy of seeing a wonderful selection of the old and new. Please pass on my congratulations to all your members, volunteers, technicians and staff who made it all possible.

I trust that all of your team involved enjoyed their experience as much as we in Defence did in having you participate.

Yours Sincerely,

David

David Pietsch
AIRCDRE
Head Air Operations
Williamtown Air Display



All airlines have their own fuel policy which must comply with international and domestic laws. The amount of fuel that is taken on each flight has to allow for all of the variables that can affect the flight on the day. Forecast bad weather at the destination means more fuel on departure, either to hold until the weather improves or to divert to an airport where the weather is good. Airlines do not like "filling the tanks" as it costs fuel to carry fuel—it is very expensive to do so.

On 15 September 1995 I commanded a flight from Sydney to Auckland and back to Sydney. A harmless day trip, with beautiful weather in Sydney and in Auckland. I had a great crew and it was going to be a fun day out. We flew over and had lunch on the ground in Auckland. We then went to flight planning already knowing that the weather in Sydney was "beaut". Indeed a new forecast confirmed this, so we decided to take "minimum fuel". This is minimum legal fuel with all the reserves. Plenty for the job. On the way back to Sydney the F/O was flying so I was doing the wireless. I got an updated forecast for Sydney. The world's largest un-forecast thunderstorm had decided to park itself over Sydney and we needed more fuel. A lot more fuel. So it was back to Auckland from about 2/3 the way across the Tasman. Needless to say nobody was happy about the situation but "them's the rules".

A quick transit of Auckland for fuel and several hours later we found ourselves blasting back across the Tasman trying to get to Sydney before curfew. It was after we had left Auckland that the Flight Service Director (FSD) entered the cockpit with a letter from a passenger. The FSD had received the letter on the ground in Auckland but had wisely decided to keep it until we were airborne lest I offload this creep. The letter, written pig-pen style and quoted as written, is as follows:



**"Dear Three Stooges
i.e. Captain, first officer and flight
engineer**

FROM: Greg L... 69D

—forgot to leave home without filling up with petrol eh?—please explain. I am curious that one would contemplate flying to Sydney without having 2 hours spare fuel on board.

If Sydney airport was closed for some reason then surely one must have enough fuel to fly to Brisbane or Melbourne in an emergency.

I'm afraid your explanation does not make any sense, especially since we would risk making it back to Sydney to avoid 11pm curfew.

I am on work assignment in New Zealand for 4 months. Every weekend I fly to Sydney and back with Qantas. Attached is my return ticket. Unless you are able to provide an adequate explanation for this "mishap" (NOW!!!!) on Sunday I will cancel my return ticket and also cancel the following bookings:

- return ticket (open)
- long weekend October
- 20th/21st October

I will in future fly Air New Zealand. Please explain why I should not cancel my business with Qantas ASAP. I want the fare for this sector refunded."

[End of quote]

I must say that this letter was barely legible and was riddled with spelling errors. I went down to 69D and had a short – sharp conversation with Mr "Greg". The man was a complete fool. I offered my ASIC card to him so that he could get the spelling of my name and staff number without errors for his letter of complaint. As I was speaking to him I noticed some nearby passengers with grins on their faces as, apparently, Mr "Greg" had put on quite a performance earlier. They were getting some satisfaction from the serve I was giving him.

One fact in life is that you should never upset a Scorpio. Scorpions don't get mad, they just get even! I managed to leave the aircraft early and hoof it down to the Customs hall where I showed the letter to some officials there. After a mutual round of laughter I left it to them. I have always wondered what happened after that.

The airport, by the way, had been severely damaged by the storm and I have never heard a word from the hierarchy over this matter.


Marketing Pty Ltd
57 Shoalhaven Street
PO Box 1520 Kiama NSW 2533
Telephone: (02) 4232 1999
Facsimile: (02) 4232 3185
Email: enquiries@westonprint.com.au