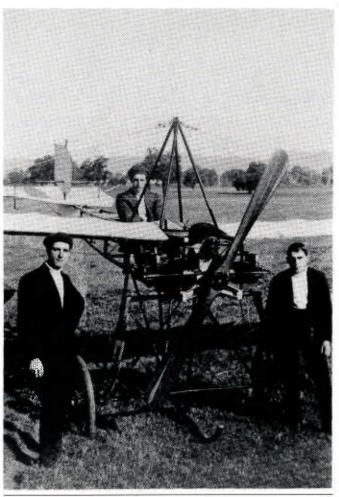
# AVIATION MUSEUMS

The Newsletter of the Australian Aviation Museums Association Inc.

## Museums Can Be Full Of Surprises!

Most readers will be familiar with those fabulous stories about dust covered aircraft and aero engines which reveal themselves only after some long-forgotten garage or barn door is prized open. It's often easy, and sometimes wise to dismiss these alleged discoveries as fictions but of course, every once in a while someone does make a remarkable discovery. It was only in the last issue of Aviation Museums, example, that we reported how the RAAF's oldest Tiger Moth had been rediscovered in a suburban garage, together with a Cirrus Major engine and sundry spares. What follows is a variation of the same classic tale, the 'barn' in this instance being the

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The Museum's engine seen here in 1913 fitted to the 'Albury Monoplane'.

Museum of Victoria in Melbourne.

In 1978 a Mr Donald Shanks from Bendigo called at the Museum in Swanston Street and handed over a large wooden crate containing a dismantled petrol engine. Formalities were completed and the box was later placed in storage where, inevitably, it's contents were soon forgotten.

The box lay undisturbed for fifteen years and might have remained so, were it not for a recent 'rediscovery'. A staff member was searching

through the Museum's computerised collection records when his attention was drawn to a tantalisingly brief record entry...'Aero engine, four cylinder, made in 1910 by Mr Aubrey Lock of Malvern'. If only it were true but no, it couldn't possibly be? For one thing, none of his colleagues could ever recall seeing an aero engine of that antiquity. This would have to be as old, if not older than Duigan's Tilley motor in which case, it was probably the oldest surviving example of an Australian built aero-engine. Surely a relic of such national importance would have been identified and exhibited long before now? Nothing for it but to take a walk through the Museum's labyrinthine state-of-the-art store and see just what, if anything, was held at that location.

What he found was an ancient wooden crate with strange bits of metal protruding at odd angles. Heaving the crate off its shelf was like swinging open that fabled barn door, for there was no doubting that the box did indeed contain a dismantled four cylinder engine. But just what sort of an engine, who was Aubrey

continued

Lock, and was his engine of any great importance? After month's of research the Museum has finally collected together all the jigsaw pieces.

The Museum's engine, it

transpired, had been built by two young Melbourne motor mechanics Azor D Robbins and Aubrey K Lock. The former worked at Dalgety's garage in Bourke Street while Lock was apprenticed to the Thomson Steam Car Company in Malvern. In 1910 they were approached by a Melbourne inventor, Lawrence Marshall, who contracted them to build him a 50 hp petrol engine for installation in a large biplane he had designed and constructed....'The engine was done on a part-time basis, initially in Richmond, and then at Dalgety's engineering shop on the site of the present Melbourne GPO, where one of the few milling machines capable of boring the cylinders was available. A total of forty cylinders was [sic] cast by an outside firm before the necessary total of four without sand holes were found, but eventually the engine bench-test stage was reached, whereupon the tops of the cylinders were blown at high power. Marshall then refused to complete payment for the engine which, for a weight of 145 pounds, was thought to be capable of delivering only 40 hp rather than the guaranteed 50. A four-cylinder horizontally-opposed overhead-valve unit, it had automatic inlet valves, an aluminium alloy crankcase, and steel cylinders and heads, machined in one piece from solid castings. Bore was about four inches, and stroke about four to five inches'.

The engine was later completed by Lock and sent to Albury (NSW) for fitment to a Bleriot-styled monoplane which had been built there by two local mechanics named Robbins and Porter, every part of the airframe having been manufactured locally. Although the latter flew on a number of occasions in late July 1913 the builders were soon forced by financial hardship to abandon the project. The 'Albury Monoplane' (illustrated) was then sold to the Blacklock Garage in Dean Street which was burnt down several years later, destroying the dismantled airframe. Albury Lock however managed to reacquire the salvaged engine which remained in his Armadale (Melbourne) garage until his death in 1966. It's not known how Mr Shanks then came to acquire the historic engine.

What is clear however is that the Museum was in possession of something much more important than just a box full of bits and

pieces. This in fact was the first air-cooled horizontal format engine to be flown in Australia and with a 40 hp rating, it was - at the time also the most powerful aero engine ever produced here. Its construction reflects a degree of technological skill which was quite remarkable for the time, particularly given the relative infancy of internal combustion technologies. Moreover, it represents a significant departure — in terms of its design and construction — from the automotive engineering solutions that were more commonly used then. Up until then most of the aircraft which had flown in Australia were powered by imported production engines. Even Duigan's Tilley motor was a conventional design that owed much to the automotive industry. The Lock-Robbins engine must have seemed then like a radical design solution, a turn of the century Sarich rotary that was also proven to work. We can recognise with the vantage of hindsight however that the

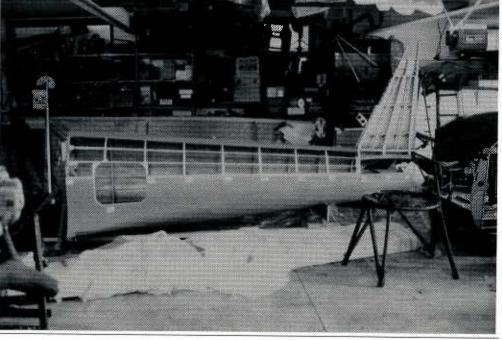
Lock-Robbins engine was nothing less than visionary as nowadays, the skies are filled with horizontal format air cooled engines. Indeed, every piston aero engine in production today, outside of the former Soviet bloc countries, is of the opposed type. The engine's 'rediscovery' has caused more than just a ripple of excitement as there are indications now that this could even be the world's first successful horizontal format aero engine.

The Museum is presently negotiating for the engine to be conserved by staff at the RMIT's School of Aeronautical Engineering.

(Thanks to Keith Meggs and Desmond Martin) ■

## Where Does It End?

How often have you seen people wince at the mere



The rear fuselage of the former AWM Mk.II Oscar seen here after it had been flown to

Aviation Museum 2, November 1993



This Zeke 52 at RAAF Fairbairn was scrapped in the early 1950's because it was 'deficient of parts' and judged to be 'beyond the possibility of any reasonably economic reapir'.

mention of the exotic aircraft once owned by the Australian War Memorial, subsequently sold off at scrap metal rates? Some, like the Me109G were fortunate enough to survive the axe. Others though were less fortunate, and invariably ended up making the journey over the hill (from RAAF Fairbairn) to Martin's scrapyard in Queanbeyan. Included in this sorry parade Anson MG984. were Hampden AE384 and the prototype Wirraway A20-3, sold in 1955. Martin had originally offered the Memorial £4 which elicited the response that, as this is 'not being [sic] worth accepting we would probably bulldoze them into the ground'. Also sold off in 1954 for £150 was the Memorial's unique Mk.1 Oscar (c/n 750). Such losses might have been reconcilable were it possible to demonstrate that they were one-offs, the victims of a momentary bureaucratic lapse. Sadly, this does not

appear to be the case. Two years prior to these events the finance Memorial's committee received recommendation that the 'two [ATAIU SEA] Zekes and one Betty [sic] aircraft' at Fairbairn be written off on the basis that they were 'deficient of parts' and 'beyond the possibility of any reasonably economical repair'. These actions might be said to mark beginning of rationalisation cycle which, even today, is continuing to leach away at this once unique collection. If we jump again to 1956 we find the Board approving a further two disposals on the basis that these aircraft had been 'rendered unfit for display by "vandalism and exposure to the weather". The casualties on that occasion were Beaufort A9-580 which had flown over 100 missions, and the Ki-21 Sally which had flown operational missions over Darwin. Fortunately the cycle took another seven years to run its course.

Awaiting their fate on that occasion (i.e.1963) were the Me163 and the Me109, the claim being that 'there is no significant interest in either of these aircraft'. There followed a long period of grace until last year when the Memorial revived the now familiar pattern by revealing its intention to try and sell the B-25. But maybe this is stretching the point because after all it is nearly thirty years since the last garage sale and besides, the Mitchell sale may be just an isolated case (deja vu). If only that were true. Having invested considerable money and resources in its restoration the Memorial decided in May this year to also get rid of its Mk.II Oscar (sans wings). There are indications that the two damaged Oscars which the AWM recovered from Alexishafen (PNG) in 1985 may have also gone the same way. We might do well to ask, just where does it end? ■

## Pacific Museum's Survey

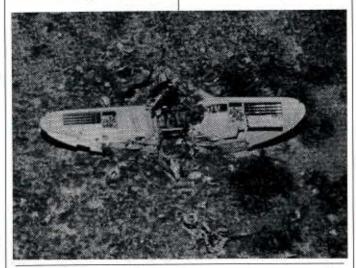
The University of NSW provided grant funding earlier this year to assist staff in the University's School of Architecture to carry out the first comprehensive survey of aviation museums in the Pacific region. The survey was designed to assess a range of performance indicators, and to gain an initial understanding of existing facilities and possible future industry requirements. Organisers of the survey, which involved fifty museums and public collections from Australia, Papua New Guinea and New Zealand, were overwhelmed by the 90% response rate. Survey results are presently being analysed and will be reported in full at next year's Wigram conference.

## Federal Election '93

The March Federal election caused the usual flurry of National Aviation Museum (NAM) fervour, now so characteristic of these triennial affrays. This year's contest was particularly memorable however for the new depths of farce plumbed in the leadup to the election. The catalyst on this occasion was Tourism Hawkesburys push to gain support for a NAM to be developed on land RAAF adjoining the Richmond airbase. To this end they sought the involvement of the Coalition's Shadow Defence Minister, Alexander Downer, who expressed strong support for the Richmond NAM proposal. The Federal President of the Labor Party Barry Jones immediately responded with a press release claiming that "The Federal Government would continue to support a National Air and Space Museum in the seat of Lalor [Werribee]", dismissing Mr Downers comments as an "absurdity". It should be pointed out here that the Opposition had every good reason to target the Federal electorate of Macquarie (which covers Richmond-Hawkesbury region) as this was (and still is) one of the country's most marginal seats. The Federal Sport's Minister, Ros Kelly, had tried earlier to shore up the Labor Party's electoral stakes in that area by promising to spend \$200,000 on a new sporting complex. Problems arose for Alexander Downer when an angry Werribee Council sent him a 'please explain' letter, reminding him that he had previously endorsed the NASMA-Laverton proposal. The Senator replied to the Council in the following terms, which may help to explain what the Prime Minister means when he so the often refers to Opposition's duplicity'.... "I have not reversed my position... I see no reason not to support the establishment museum there [Richmond] which should in no way compromise the Laverton proposal. The country is surely large enough to support two [national] museums with a similar focus."

But don't think for a moment that the Hawkesbury NAM proposal has been put to bed. Despite the election outcome supporters of the museum proposal conducted a formal launch in April and have since held discussions with relevant State and

- documentation for their planned second stage expansion.
- In a similar vein, Airworld has advertised for expressions of interest to design and install new interactive displays at the



One of the two wrecks on Duyfken Point near Weipa (Qld), now the subject of an NCHC export application.

Federal politicians. Sydney's success in securing the Olympics will no doubt add weight to their proposal, and let's not forget that they also have a very supportive State Arts Minister up that way (Peter Collins provided the funding which allowed us to hold our first national in 1989). conference all Overriding these considerations however is the fact that Macquarie remains a very marginal Labor seat. Somehow I don't think we've heard the last of the Hawkesbury NAM proposal.

#### News

 Melbourne design consultant Norman Heath has been contracted by the RNZAF Museum at Wigram to prepare initial Wangaratta Museum.

- The B-24 Liberator Memorial Fund Inc. has been allocated a WWII hangar at the Werribee Farm complex on Melbournes outskirts where they plan to begin work on their massive restoration task. The hangar has been provided by the City of Werribee and originally formed part of a wartime satellite field.
- The W.A. Air Force Association Museum at Bull Creek has re-established the salaried curatorial position formerly occupied by Grahame Horne. The new incumbent is Al Clark.
- From the west has come word of yet another new aviation museum. The West Australian Aviation

Heritage Museum understood to have strong FAC and aviation industry support with hopes of establishing a new facility at Jandakot where they have already been allocated a site by the FAC. No other details the new about organisation have yet come to hand.

- RAAF Museum research has confirmed that its second UH-1B A2-1020 held at RAAF Laverton participated in the now famous Battle of Long Tan.
- In a similar vein, the Museum of Victoria has established that its Gipsy Major engine (c/n T1) is the first Australian built example of the type made by GMH at Fisherman's Bend. Research has also shown that the Museum's Rolls Royce Merlin is the same engine that was fitted to BS181 which (on 15.2.43) became the Spitfire to destroy an enemy aircraft over Australia. ■

## On The Move

The former Geoterex Catalina, VH-EXG, was dismantled mid-year by the RAAF and removed to Victorian various locations as a prelude to the commencement of an airworthy restoration. The fuselage was towed (on its undercarriage) Laverton while the wings engines and are understood to have been relocated to East Sale and Point Cook, respectively. The Catalina, which is jointly owned by the RAAF Museum and the Museum of Victoria, is to be reconfigured to military PBY-5 standard with the bulk of the fuselage restoration work being undertaken at the Broadmeadows TAFE.

- The Museum of Victoria's Wirraway, A20-651 made a rare and welcome reappearance in September when it was wheeled out of storage for inclusion in a temporary exhibition at the new Scienceworks facility at Spotswood. The Wirraway is to remain on public display until February 1994.
- Hercules A97-205, for many years a static resident at RAAF Laverton, has also been removed - by road - to the Army's Holsworthy barracks on Sydney's southern outskirts. The thirty year old transport, now little more than a hulk, is to be used by the Army as a ground training aid. A97-219 is also used for ground instructional purposes at RAAF Richmond while the RAAF Museum still has A97-214 on its books at Laverton.

#### Sales

 Noted in the August 1993 issue of Aeromart (UK) was an advertisement for Australia's last airworthy Anson, VH-BAF. Owned by Terry Brain of

- Melbourne, the MK.1 carries a \$US250,000 price tag.
- Another rarity on the market also airworthy
  — is the West Australian based Comper Swift
  VH-ACG. Owned for many years by Douglas Muir the diminutive Swift was for a time used as a static exhibit in the Air Force Association's Bull Creek Museum. The Swift may also be advertised overseas should local interest prove to be insufficient.
- Sotheby's of Melbourne auctioned a British built Clerget 9 rotary at their June antique automobile auction. Formerly owned bу the late Bob Chamberlain (of Chamberlain Tractor fame) the engine appeared to require considerable restoration work. It sold to a Melbourne collector for around \$8,250.
- The first aircraft of post-WWI manufacture imported into Australia was Farman Sport, G-AUBV. The Sport was fitted with an Anzani five cylinder radial engine which has recently been restored to running order. The engine is now being offered for sale and interested parties are invited to Keith Morgan on 03-5715869
- The Indonesian air freight carrier, Bayu, have advised that they have two DC-6A's (PK-BAX & PK-BAY) and a CL-44D PK-BAW) available for purchase. BAX is disassembled at Kemayoran and BAY is

ready for flight testing and delivery. The Canadair, also at Kemayoran, is not fitted with engines or propellers. Further details from Mark on 03-6946185 (bh).

## Acquisitions

- The Australian War Memorial in Canberra has taken delivery of a genuine Mikoyan Mig-15. The acquisition, which was first foreshadowed in the October 1991 issue of Aviation Museums, is thought to have been negotiated through the Russian Aviation Museum in Moscow. Unconfirmed reports suggest that the Mig has no operational history which, if correct, would give rise to further questions about the Memorial's B-25 sale epic. Readers might recall the Memorial used the lack-of-service-history argument to help justify its actions in trying to dispose of the Mitchell.
- Two CT4 trainers have been transferred to the RAAF Museum, these being A19-027 and A19-077. The former has been repainted in its original green/gold paint scheme and is to remain as a static exhibit. 077 has been placed on loan to the ANAM at Nowra and may eventually become a flying exhibit at Point Cook.
- The Museum of Victoria has acquired a

comprehensive collection of Compass Airlines materials relating to both the Mk.1 and Mk.II episodes. The collection includes a complete wardrobe of Flight Attendant and ground staff uniforms, together with the company's entire video reference library which records many of the news broadcasts and televised debates that occurred throughout that troubled period. The Museum began negotiating with the airline's liquidators, Price Waterhouse, immediately after the announcement that the receivers had been appointed. The collection also contains a large selection of printed and advertising materials, together with items (such as printed balloons) relating to the 'Save Compass' public appeal and street march campaigns. The Powerhouse Museum, the Queensland Museum and the Oueensland Air Museum have also taken steps to establish representative Compass collections, and it's understood that the South Australian History Trust may also be giving consideration to the matter.

- Airworld took delivery in September of an RAAF Bell 47G, A1-402. The Sioux had been used for years as a ground instructional machine at RAAF Wagga and is now on loan from the RAAF Museum.
- The Museum of Victoria has recently acquired an Ikara anti-submarine

missile (c/n P218) and a Turana pilotless target (c/n P1-012), both of which have been donated by ASTA (formerly GAF). Both items are expected to be on-loaned to the Naval Aviation Museum at Nowra. The Museum also took delivery of the company's entire film library which dates back to the second world war, and contains comprehensive coverage (both colour and b&w) of all GAF and DAP aircraft, including the Beaufort and Beaufighter programmes. Examples of the Ikara and Malkara (anti-tank) missiles were loaned to Airworld at the same time.

#### Philatelic

Australia Post has announced details of a new four stamp historical aviation series due to be released in September 1994. The release will comprise a comprehensive package of related publications that will include a hard-cover history of Australian aviation, Maxi-cards (i.e. illustrated postcards) and First Day Cover packs. Subiects to be featured in the new series are Sir Ross and Keith Smith's 1919





Recently spotted on the Princes Highway near RAAF, Laverton.

England-Australia epic (again!), Hargrave's boxkites (and again)!, Goble and McIntyre's 1924 circumnavigation of the continent and Freda Thomson, who in 1934 became the first Australian woman to fly from England. In a welcome return to style Australia Post has decided to reintroduce for this series the intaglio (opposite to cameo) printing process which hasn't been seen here in ages.

- Australia Post have also foreshadowed plans to produce a commemorative postmark to coincide with the arrival next year of the restored NASMA-HARS Lockheed Constellation.
- Aeronautical Museum (W.A.) has successfully negotiated (with Australia Post) the introduction of another pictorial postmark featuring its unique Silver Centenary exhibit. The Silver

Centenary, which first flew in 1930, was the State's first privately built biplane. The postmark (above) was officially introduced in April of this year.

## 1994 NZ Conference

Association members at last year's Bundaberg (Qld) conference voted overwhelmingly to accept the RNZAF Museum's proposal to host the next AAMA Conference at Wigram, Christchurch in 1994. The trans-Tasman move was seen as a step in the right direction for the Association whose activities are now well reported in a number of overseas countries. The Association's national conference has consistently attracted eminent speakers from most of the world's leading aviation museums.

1994 promises to be no exception in this regard with the Director of Paris's famous Musee de l'Air et de l'Space, Antoine Dumas, having readily accepted the AAMA's invitation to deliver the keynote address. Guest speakers from the PNG National Museum, MOTAT, the Powerhouse Museum, the Alpine Fighter Collection and the Ferrymead Aeronautical Society are also expected to attend the three day conference which begins on April 5th, immediately following the Wanaka Airshow

Intending delegates are urged to register early as seating is limited (to about 60) and we anticipate considerable interest from within New Zealand. Registration brochures should be ready for distribution in November. Those Australians thinking of attending should bear in mind that a New Zealand return ticket from one of the eastern states can be cheaper than an internal domestic airfare.

It was also decided at Bundaberg the that Association would break with tradition by not scheduling an end of year conference for 1993. An AGM has been scheduled however to coincide with the the opening of the new RAAF Museum facility at Point Cook on Sunday November 14th. The meeting will commence at 4.00 pm in the former 1 FTS HQ building and all members are invited to submit nominations for Committee appointments, all of which will become vacant at that time. ■

## NASMA Point Cook

The NASMA Working Party Chaired by the Director of the Museum of Victoria, Mr Graham Morris, has released details of a revised NASMA-Point Cook development proposal which

it plans to pursue in conjunction with the RAAF Museum. The decision to transfer from the preferred Laverton site was partly brought about by continuing delays and uncertainties concerning the future of that airfield, and the RAAF Museum's acquisition of an additional 10,000 m<sup>2</sup> of potential display space (i.e. the 10 northern Bellmans) at the historic Point Cook location.

The proposal is understood to have been well received by relevant State and Federal politicians with a formal government response expected before the new year.

## Heritage Listings

 Victoria's Historic Buildings Council (HBC) has formally registered



Recently classified by the National Trust (Tas.)

- the Strathbogie aerial navaid described in the September 1992 (No.4, p.4) edition of Aviation Museums. The registration, which was approved by the State's Minister for Planning in March 1993 (and Gazetted that same month) is thought to be the first of its kind in Australia. registration, unlike National Trust listing, provides the site (now known as Historic Building No.961) with effective legal protection. Registration acknowledges the the navaid's uniqueness and historical importance to Victoria.
- At its committee meeting on 25 February 1993 the Tasmanian Branch of the National Trust decided to upgrade its listing of the Launceston Holyman Building. Among the State's finest examples of art deco architecture, the 57 year old building has now been given full 'classified' status which simply means that Trust members might be prepared to 'fight' for its continued preservation. The classification move is seen as a direct response to the Australian Heritage Commission's June 1992 decision to Register the Hobart Holyman building (also reported in issue No.4 of Aviation Museums, p.6). The Launceston building, which is still occupied by Ansett, is thought to be the only Australian example of a building that has served continuously (since the 1930's) as an airline office.
- The School Architecture at the University of New South Wales has received funding to allow for a continuation of enormously successful graduate programme in aviation museum architecture. The intensive summer course, first trailed in 1992, is thought to be the first academic programme of its kind to focus on the very important design issues peculiar to aviation museums. The students, most of whom are practicing and/or qualified architects, are given a detailed client brief then asked to develop comprehensive design solutions (which includes models and conceptual drawing). The course has a strong practical emphasis with the results of last year's programme — focussing on the NASMA Laverton proposal — being placed on public display during March. The University was so impressed that it later decided to publish the results in book form.
- Copies of the latter can be purchase for \$20-00 from the course co-ordinator, Pf Peter Oppenheim, at the following address: P.O. Box 1, Kensington, NSW, 2033 (Ph: 02-6975272).

### **Exports**

• Dornier Do-27 VH-SHC, the last Australian example of the peculiar high wing monoplane, returned to Germany in August along with the extensively damaged remains of another ex-Australian Do-27, VH-UIE. Last operated from Devonport in Tasmania, VH-SHC is thought to have required major spar surgery. The two aircraft, which are to be used to provide spares for a club operation, were reportedly sold for \$A15,000. SHC was used extensively in Papua New Guinea by mission aviation interests and together with C170 VH-AMF (stored at Ballarat), is thought to be the oldest surviving example of a PNG missionary aircraft.

The National Cultural Heritage Committee in Canberra has received permit applications this year for the following aircraft:

- Waco EGC-8 VH-AAF which was for a time displayed at the Chewing Gum Field Museum near the Gold Coast. The Waco was used for 22 years (1938-60) by the well known Falkiner family, servicing their historic 'Haddon Ridge' (NSW) sheep property.
- An applicant from Illinois (USA) has requested permission to remove the



Australia's last Do-27 VH-SHC. The former PNG mission aircraft has since been sold back to Germany.

two 5th Air Force P-47 wrecks on Duyfken Point near Weipa, which he plans to reduce to salvage for utilisation in an airworthy restoration. The aircraft became lost in 1944 while flying from (PNG) Daru Townsville. Although relatively undamaged after their forced landings (one bent propellers), the Americans later demolished both aircraft with explosives. The well known wrecks now provide the only material mainland evidence of Thunderbolt operations.

- Sydney based company Valkyrie Aviation has applied for permission to export Nakajima **Ki-43-II** which, reported elsewhere in these pages (see Where Does It End?, p.?), was formerly owned - for half a century - by the War Australian Memorial. The applicant claims the Mk.II Oscar, one of only two examples left in existence, is to be restored to airworthy condition in England.
- Unrestored Mk.1 RAAF Anson ■

The sections, which were delivered to Richmond Air Force Base on board a USAF Starlifter, are currently being restored by HARS personnel who have been contracted by the USAF Museum to complete the restoration. Both items are expected to return to Dayton, Ohio next year. The move is indicative of the growing confidence and dialogue now occurring between American and Australian Museums, precipitated in large measure by the 1991 C-121C initiative. ■

## MEMBERSHIP AND SUBSCRIPTION INQUIRIES

Annual membership of the AAMA Inc. is open to all at the following rates: \$10 (student); \$20 (individual) and \$25 (institutional). Please bear in mind that the Newsletter is published on an occasional basis averaging two issues per year, and that memberships are due for renewal each November (i.e. AGM). Inquiries and remittances should be directed to the Secretary: P.O. Box 286, Williamstown, Victoria, 3016, Australia (Ph. 03-7871443; Fax: 03-7875281)

### **Imports**

 Returning to Australia last April after an absence of several years were the cockpit and centre fuselage of Bristol Beaufighter A19-43, formerly owned by the Moorabbin Air Museum.

#### Vale

It is with regret that record here the recent death of Fred Morton. Fred did much to help popularise our aviation history during the 1970's and 1980's with his distinctive self-published magazines, Aussie Air Stories, and Smithy.