ADF Serials Telegraph News

News for those interested in Australian Military Aircraft History and Serials

Volume 8: Issue 3: Winter 2018: *Editors and contributing Authors: John Bennett and Gordon R Birkett*

Message Starts: In this Issue**:**

Message Traffic Selections: Please address any questions to: question@adf-serials.com.au or https://www.facebook.com/groups/233552413412953/

News Briefs

General Traffic:

January -March 2018; The first two RAAF F-35As, **A35-001** and **A35-002**,after several years of operation, have been inducted into the USAF Ogden Logistics Centre for their first schedule service and Engineering Post Production Structural and software (3F)Modifications since being delivered. These aircraft were replaced in training by F-35A's **A35-003, A35-004 and A35-005** with the 61st Fighter Squadron, as the first Block 3F Software loaded RAAF Aircraft. Five more F-35A aircraft (**A35-006 to A35-010**) are scheduled for delivery now and to the end of 2018. *USAF FY Serials for latest AU-3 to AU-10 Batch are: FY 15-5211 to 15-5218. Two of these ten aircraft will be ferried to Australia later this year.*

May 2018: The RAAF at this stage was due to be receiving F-35As at the rate of one per month. Previously A35-006 was delivered to Luke AFB in March. However in April, the Pentagon stopped taking delivery of F-35s from Lockheed Martin, including at least one aircraft for Australia (probably A35-007), due to unresolved corrosion issues. The

corrosion reportedly resulted from a known production error in fasteners that hold composite exterior panels to the aircraft's airframe. The issue was discovered in 2017 during depot maintenance on aircraft delivered to date. As a result, the JSF Project Office (JPO) has suspended F-35 deliveries until an agreement can be reached with Lockheed Martin on how the cost of repairing the corrosion would be covered. By 18th April 2018, five F-35 deliveries have been put on hold (including the one for Australia). This temporary suspension on deliveries is not affecting production, with Lockheed Martin confident they will meet the planned deliveries of over 90 aircraft in 2018. A35-007 and A35-008 deliveries are imminent for training of 2OCU and 3SQN personnel at the USAF's 61st Fighter Squadron. No 3 SQN is planned to achieve an initial operational capability (IOC) back at RAAF Williamtown in 2019.

19th February 2018: The US Navy awarded Boeing a US$219.6 million contract to develop the conformal fuel tanks – or CFTs – for the Super Hornet airframe, covering the "design, development, test and integration" of the conformal fuel tank. The US Navy added conformal fuel tanks to its 'road map' for the EA-18G Growler, which shares the same basic airframe as the F/A-18E/F Super Hornet, in 2015.

The tanks have a combined fuel capacity of 1,600kg (3,500lb), do not increase the aircraft's subsonic drag, and increase transonic drag only equivalent to carrying an external centreline tank.

With some internal fuel system plumbing changes the CFTs were designed to be retrofitable to existing prior block built aircraft. *Per Boeing*[1]

26th March 2018: Schiebel has successfully demonstrated the heavy fuel variant of the CAMCOPTER® S-100 Unmanned Air System (UAS) as part of its customer acceptance program with the Royal Australian Navy (RAN).

The JP-5 (NATO F-44) heavy fuel powered CAMCOPTER® S-100, is equipped with a Wescam MX-10S payload and at operational ranges of up to 60 nautical miles as well as altitudes above 10,000 feet, presented its ability to deliver world-class imagery to commanders. This new model follows on from two previous purchased airframes, which have been lost.

2nd April 2018: Our last Spartan, A34-010 (USAF FMS s/n 12-27057), arrived at RAAF Richmond via a Pacific crossing from Waco Texas, to mark the delivery of the last aircraft for 35SQN. On 18th April, 35SQN held a formal ceremony at Richmond for the induction of the full complement of ten Spartans.

April 2018: KC-30A A39-006 of 33SQN RAAF Amberley has been noted flying in company in the restricted training airspace off the Qld and Northern NSW coast, carrying out mutual AAR. This is the RAAF's 6th MRTT, while the next (A39-007) is undergoing upgrade in Spain.

21st /22nd April 2018: TAVAS (The Australian Vintage Aviation Society) Great War Flying Display was staged at Caboolture Airfield. Many warbirds, plus new WWI replicas imported from the US only weeks ago, provided a unique spectacle. RAAF provided flyover displays with F/A-18F A44-221 (1SQN) and C-17A A41-213 (36SQN). Also there was much RAAF flyover activity on ANZAC Day, 25th April – great to see so much of our Air Force participating for all events.

A44-221 at Caboolture for the TAVAS 2018 Great War Flying Display

30th April 2018: A Royal Australian Air Force (RAAF) P-8A Poseidon maritime patrol aircraft will deploy to Japan to monitor North Korean vessels suspected of transferring prohibited goods in defiance of UN sanctions. The aircraft will operate out of the USAF' Kadena Air Base in Japan.

4th May 2018: In response to questioning from Liberal Senator David Fawcett, Air Marshal Davies confirmed Australia's Growlers, which is a fleet of 12; (including one grounded in the USA after an accident in January 2018) did not achieve its targets due to issues with infrastructure. *This referred to the RAAF EA-18G Growler Fleet's' 41 per cent flying shortfall for the 2016-17 year. No further news has arisen on the status of A46-311, concerning its possible repair or write-off.*

4th May 2018: Our seventh P-8A Poseidon, A47-007, arrived at RAAF Edinburgh after departing the USA on 1st May on ferry to Edinburgh (details listed below).

The Australian Government announced on 29th April the deployment of two Poseidons to a US airbase in Japan to assist in monitoring of UN sanctions covering North Korea. It is interesting that the previous one delivered – A47-006 in January – was delivered from the factory by a USN crew. Probably the resources at 92 Wing are stretched, with the wind-down of the AP-3C Orion, and training on the P-8A.

Meanwhile A47-008 is also ready for delivery, reportedly stored in the US at the Renton flight test facility. The initial 12 RAAF P-8As are being delivered under the $5.4 billion AIR7000 Phase 2B project, with an additional three to be acquired in the second half of the next decade. However, it is rumoured on PPRuNe that P-8 production will finish in 2022 (meaning any new orders would have to be made by Q2 2019) – but that is a *rumour network* and such speculation on the end of P-8 production seems improbable, as only some 100 have been built to date.

As usual, stalwart Rod Farquhar is on the scene for the arrival of Poseidon A47-007 at RAAF Edinburgh on 4th May

RAAF Serial	US Test Reg	msn	Line No.	Delivery Details
A47-001	N940DS	62288	5823	Delivered to 11SQN at Edinburgh 17 NOV 16.
A47-002	N956DS	62289	5993	Delivered to 11SQN at Edinburgh 9 MAR 17.
A47-003	N959DS	62290	6076	Delivered to 11SQN at Edinburgh 14 MAY 17.
A47-004	N974DS	62293	6216	Delivered to 11SQN at Edinburgh 7 AUG 17.
A47-005	N832DS	63179	6328	Delivered to 11SQN at Edinburgh on 14 NOV 17.
A47-006	N849DS	63182	6468	Delivered to 11SQN at Edinburgh on 15 JAN 18.
A47-007	N862DS	63187	6623	Delivered to 11SQN at Edinburgh on 4 MAY 18.
A47-008	N872DS	63191	6750	Stored at Renton, due delivery shortly.

Latest RAAF P-8A Deliveries

7th May 2018: Defence is looking for a capability to replace the Army's SHADOW 200 tactical unmanned aerial system (TUAS) current capability, under LAND 129 Phase 3.

May 2018 – Update on AP-3C Disposals

SAAM: AP-3C Orion **A9-756** (Bu160756) was received by the South Australian Aviation Museum on 10th December 2017, and by the time this is read, should be almost fully assembled and displayed. SAAM will then collect their new Mirage A3-115 from Edinburgh for display preparation.

QAM: 18th April 2018 AP-3C Orion **A9-760** (Bu160760) arrived Sunshine Coast Airport, Maroochydore, to be transported the 40km to Caloundra for display with QAM.

HARS: HARS Albion Park had already received **A9-753** (Bu160753) on 3rd November 2017 to fly as VH-ORI; meanwhile **A9-759** (160759) was with HARS at Parkes on 14th April 2018 for eventual display.

RAAFM: The RAAF Museum at Point Cook took charge of **A9-751** (Bu160751) on 16th November 2017.

RAAF Edinburgh: According to our *adf-serials* database, **A9-658** (Bu162658) which made its last flight in November 2016 is to be a gate guard at RAAF EDN.

AWM: **A9-659** (Bu162659) may be earmarked for the AWM in Canberra.

PC-21 Activity

21st May 2018. On 13th April 2018 both **A54-013 (as HB-HWM)** and **A54-014 (as HB-HWN)** departed Stans/Buochs in Switzerland for the 10-day delivery to Australia, arriving at Sale on 23rd April. Next pair **A54-015 (HB-HWO)** and **A54-016 (HB-HWP)** departed Stans on 11th May, arriving East Sale on 21st May. Thanks again to 'our Stans correspondent', Stephan Widmer, for his photographs and keeping us abreast of PC-21 activity.

RAAF Serial	Ferry Reg	msn	Delivery Details
A54-013	HB-HWM	246	**FTS markings**, depart Stans 13 APR 18, arrived ESL 23 APR 18.
A54-014	HB-HWN	247	**FTS markings**, depart Stans 13 APR 18, arrived ESL 23 APR 18.
A54-015	HB-HWO	248	**FTS markings,** prepared for ground running tests 29 NOV 17, test flying JAN 2018, departed Stans 11 MAY, arrived ESL 21 MAY 18.
A54-016	HB-HWP	249	**FTS markings,** departed Stans 11 MAY 18, arrived ESL 21 MAY 18.
A54-017	HB-HWQ	250	Noted at Stans 6 FEB 2018 with **ARDU markings.** Due Australia mid JUN 18.
A54-018	HB-HWR	251	First engine runs at Stans 28 FEB 2018 with Noted at Stans 6 FEB 2018 with **ARDU markings**. Due mid JUN.
A54-019	HB-HWS	252	16 MAR 2018 completing pre-flight testing, the first with **Roulettes markings.** Due JUL 18.
A54-020	HB-HWT	253	Noted at Stans 26 FEB 2018, **Roulettes,** leaving paint shop. Due JUL 18.
A54-021	HB-HWU	254	**Roulettes,** Due JUL/AUG 18.
A54-022	HB-HWV	255	Noted at Stans 26 FEB 2018, **Roulettes,** leaving paint shop. Due JUL/AUG 18.

ARDU: A54-017 (HB-HWQ msn 250) at Stans Feb 2018; A54-018 (HB-HWR msn 251) first engine runs, 28 February

Roulettes: A54-019 (msn 252) 19 February enters Stans final assembly; A54-020(253) coming from paint shop 26 Feb

16th March: A54-019 completing pre-flight checks 9th May: A54-015 and A54-016 being prepared to depart 11 May

A54-022 HB-HWV on 8 May 2018 – the 4th Roulette ready for final assembly

One More Thing

Below is a supposed "offending" marking on a 2SQN E-7A Wedgetail – Chief of Army, and CDF Designate, LTGEN Angus Campbell has made unfortunate PC comments on military "offensive"/skull/death symbols, which he intends to ban across the ADF. Unsure who we afraid of offending. "Offensive" nose art would perhaps make a future interesting article.[2]

RAAF AIRCRAFT MARKINGS SINCE 1950

SQUADRON MARKINGS – PART 8 – DROPPING THE FIGLEAF (3)

CAMOUFLAGED WWII AIRCRAFT INTO 1950's SILVER

John Bennett 2018

These recent editions have been looking at most of the RAAF aircraft from the war years through the 1950s, that had their camouflage stripped making overall aluminium the prevalent colour of the era. In our last issue we looked at more RAAF WWII silver aircraft that soldiered on through the 1950s after dispensing with their camouflage in 1945:

- Part 5 in the series covered the ubiquitous and transport stalwart the C-47 Dakota,[3] and
- Part 6 looked at the Mustang, Mosquito and Catalina.[4]
- Part 7 the Beaufighter and Wirraway.[5]

This instalment studies the Tiger Moth and Auster III/V/J-5G in *Aluminium* finish, generally referred to as 'silver'. Once again, thank you to all the contributors to our *adf-serials* imagery library which makes such a great reference resource.

The beautiful Tiger Moth – VH-BEN (A17-736) and VH-LJM (A17-561) representing 1950s Tiger Moths

Serial Numbers. RAAF Tiger Moths were serialled A17-1 to A17-760, but also RAF Tigers were imported to bolster the wartime training effort for the Empire Air Training Scheme (EATS). The primary role of the Tiger Moth was for basic training at the Elementary Flying Training Schools (EFTS). All Auster types were allocated the stores identifier A11.

Serial Number	Serial Policy [6]	Aircraft Mark	Remarks
Tiger Moth			
A17-1 to A17-760 [7]	Consecutive	D.H.82A	Plus 100 RAF 'N-', 'R-' and 'T-' serials under EATS.[8]
Auster			
A11-1 to A11-56	Consecutive	AOP.III	AOP WWII deliveries.
A11-60 to A11-61	Block	AOP.V	Mk.V for use by 91 Wing at Iwakuni.
A11-200 and -201	Block	AOP.6	AOP.6 for use by Antarctic Flt.
A11-300 and -301	Block	J-5G Autocar	Autocar for Navy at Nowra.

RAAF Colours. We will briefly look at the wartime markings of the Tiger Moth (basically trainer *Yellow* and various camouflage schemes) and the Auster III (*Dark Green/Dark Earth* camouflage on arrival from UK, then overall *Foliage Green*), before the policy of 1947-48 for overall application of *Aluminium*. As well as the wartime Auster III, also included are the Auster V of the Korean War, and the RAN's Auster Autocars from 1953 – the RAAF Auster AOP.6 will be part of a future instalment on Antarctic Flight aircraft.

de HAVILLAND D.H.82A TIGER MOTH

Tiger Moth in Service

The first Tiger Moths were introduced by Australian flying clubs in 1936, and when the type was selected by RAAF as the standard basic trainer, many more British-built DH.82s then followed for the EATS. In 1940 de Havilland Aircraft Pty Ltd at Mascot aerodrome commenced local production, constructing a total of 1,070 Australian-built Tiger Moths for RAAF and overseas customers. From 1946 military disposal Tigers became the mainstay of Australian private and club flying for over the next decade. Their low cost and plentiful spares also saw their extensive use for aerial agriculture, but with a high attrition rate. The retired DH.82 cropsprayers in the 1960s provided the basis of the boom in rebuilding Tiger Moths to immaculate original condition by antique aircraft enthusiasts.[9]

An evocative image of VH-GAV restored as A17-25

Like the Wirraway, colours for the Tiger Moth continually evolved over the war years, briefly summarised as follows:

- **1939** – initial deliveries were silver/*Aluminium,* but with the start of war in Europe, AGI C.11 in SEP 1939 introduced new schemes, but for the Tiger Moth the trainer finish was *Aluminium* (V.84).[10] Although Wirraway camouflage with blue/red roundels were introduced, there was no reference at this stage to the Tiger Moth.[11]
- **1940** – EATS Tiger Moths were arriving in RAF camouflage (and RAF serial numbers).[12] AGI C.11 *Issue 3* in OCT 1940 had added yellow training bands to the dark green/dark brown camouflage for training Wirraways in 'Scheme E.2',[13] and like the imported RAF Tigers, Australian-produced aircraft were changed to this scheme.
- **1941** – RAAF camouflage schemes identified as RAAF *Foliage Green* (K3/177) and *Earth Brown* (K3/178).[14]
- **1942** – AGI C.11 *Issue 4* in AUG 1942 introduced *Sky Blue* (K3/195) as the standard RAAF camouflage lower surfaces colour, and specified the trainer bands as *Yellow* (3/185).[15]
- **1944** – AGI Pt 3 (c) Instruction No.1 in MAY 1944, introduced overall yellow, but only specifically referred to one Tiger Moth scheme, Trainers as Appendix 'E' in overall *Yellow.* However, there was a proviso for aircraft sent to operational areas, and for the Tiger Moth this was overall *Foliage Green* 'Tac/R' as Appendix 'C'. [16]
- **1947** – wartime overall *Yellow* scheme for trainers was to be changed, with policy deliberations in AUG and SEP 1947 for a silver finish with yellow bands. [17]
- **1948** – DTS Special Instruction General 96 (SIG/96) of JAN 1948, formalised the above 1947 changes that Tiger Moths would now be *Aluminium*, no longer overall yellow, but with yellow trainer bands.[18]

FIRST AUSTRALIAN PROUCTION

The first twenty Tiger Moths were delivered from UK production and assembled at Mascot as A17-1 to A17-20 (c/n 82555 to 82574, DHA c/n 1 to 20). After three impressed aircraft (A17-21/23), Mascot production started at A17-24.[19]

A17-32 (c/n 29) at DHA factory Mascot in JUN 1940

A misinterpretation – in overall Yellow*, with 'Type-A' roundels and rudder stripes !!*

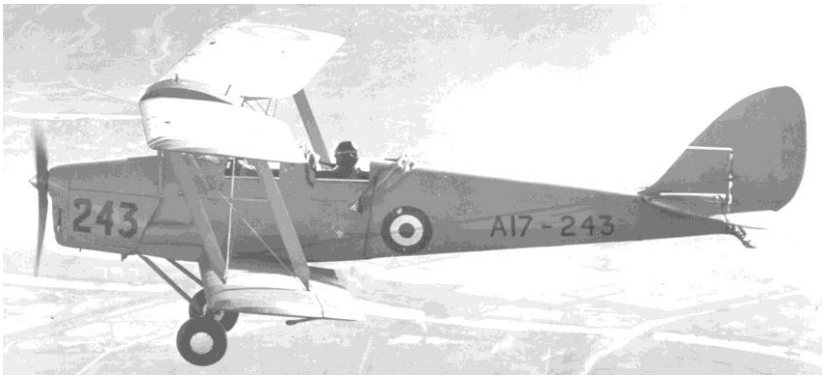
Rudder striping is unusual, as is the overall colour – both appear to be in apparent contradiction to the standing Instructions at that time.

- RAAF HQ AGI C.11 of 22 SEP 1939 para 1(a) had mandated 'Training Types' in overall *Aluminium (V.84),* with no requirement for any tail National Markings.
- By OCT 1940, RAAF HQ AGI C.11 *Issue 3* of 3 OCT 1940 para 1(a) offered two schemes for 'Training Aircraft' – **Scheme E.1** as a permanent scheme of overall *Yellow*, and **Scheme E.2**, an interim scheme with *Yellow* band three feet in width on the rear fuselage and mainplanes. Again, in 1940 there was no requirement for Tiger Moths to have tail National Markings – on the fin or the rudder.

No copy of the AGI C.11 *Issue 2* (presumably dated JUN/JUL 1940) exists.[20] But as there had already been Air Board discussion in APR 1940 about overall *Yellow* for elementary trainers,[21] it is assessed that *Issue 2* was about to be released in mid-1940 with details of the new E.1 scheme – it appears that DHA made a correct assumption and anticipated this, and the DHA Tiger Moth production line at Mascot was turning out the aircraft in overall *Yellow*. This was the scheme when A17-32 was rolled out at the end of JUN 1940.

A17 – WARTIME COLOUR SCHEMES

1939 – A17-1, A17-2 and A17-3, the first Tiger Moth production from DHA at Bankstown: overall *Aluminium K3/162,* iaw AGI C.11 in SEP 1939, with prewar 'Type-A' National Markings, but with rudder striping.



1940 – A17-243: overall *Yellow K3/185,* iaw AGI C.11 *Issue 3* in OCT 1940, in 'E.1' scheme for training aircraft, no tail national marking, serial number 'last three' (or 'last two') marked on nose.

1942 – A17-494 5thAF USAAF in Northern Territory, 1942-43: AGI C.11 *Issue 4* of AUG 1942 para.1(b) 'Second Line Operational Aircraft': *Foliage Green K3/177*, *Earth Brown K3/178,* undersurfaces *Sky Blue K3/195*, 3-foot bands *Yellow K3/185* on fuselage and mainplanes. Similar markings for 'Training and Communication Aircraft'.[22]

1944 – A17-76 in final wartime trainer markings: AGI Part 3 Sect(c) Instruction 1,[23] specified overall *Yellow K3/185,* and this continued in the training schools into 1946. There were exceptions for aircraft allotted to operational areas.

'Operational Areas' Exception

Although the scheme laid down in the 1944 AGI Part 3(c) only specified the Tiger Moth to be in the 'Training' scheme of overall *Yellow K3/185* ('Appendix E') scheme, there was an overriding requirement for '*Camouflage on Re-allottment of Aircraft*':

- Where aircraft are re-allotted from non-operational areas to operational areas, the camouflage must be converted for the new role before despatch.

At this stage, the 1944 standard operational camouflage for communication aircraft was overall *Foliage Green K3/177* ('Appendix C'). An example of this is shown below. A17-489 (c/n 912) received a long-range fuel tank in FEB 1945, then to 12 Local Air Supply Unit (12LASU) at Aitape as TA-L in MAY 1945. It was sold in New Guinea in 1946 as VH-AQT.

A17-117 (c/n 114) now in the USA as N17489 and restored to represent 'A17-489 TA-L' of 12 LASU[24]

Postwar

In 1947, RAAF HQ was considering changing the requirement of overall training yellow, to overall aluminium with yellow training bands. The reason cited was:

- "All over yellow finish was introduced during the heavy pressure war training to eliminate as far as possible collisions in the air and on the ground. Now that this high pressure period is past the deletion of all over yellow finish is recommended." [25]

Then to implement this:

- "If of wood and fabric construction to be painted with a silver finish; if of metal skin construction to be painted with aluminium and with the smoothest possible finish. In addition, a band of yellow is to be painted round the fuselage and each mainplane." [26]

This instruction was formalised by the 1948 SIG/96, which also introduced the red-white-blue National Markings, with the roundels in 1:2:3 'Type-D' proportions.

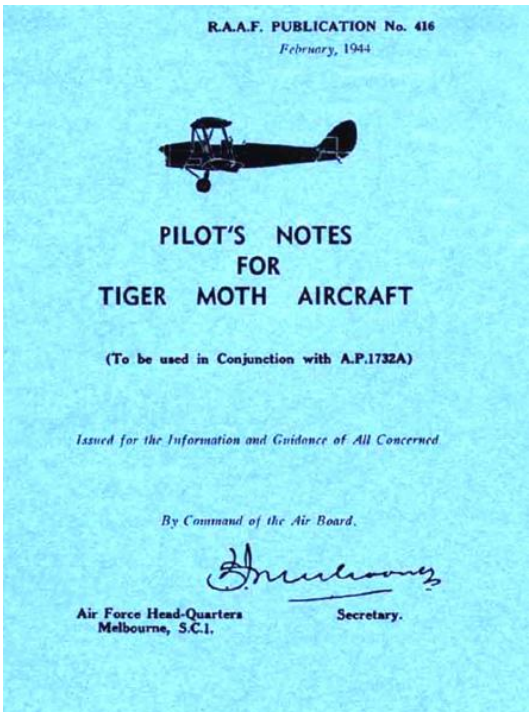
1951 – A17-671 in postwar markings, was not released from Tocumwal storage to its purchaser until APR 1959

A Summary of Postwar RAAF Flying Training

Postwar as Tiger Moths were released, many eventually were marked in a variety of ex-RAAF colours, including the camouflage and trainer yellow of wartime years.

As related with the Wirraway in our last instalment, there were major changes to RAAF flying training in the 1950s. The flying training units were: 1 Basic Flying Training School (1BFTS) at Uranquinty NSW, 1 Applied Flying Training School (1AFTS) at Point Cook, the RAAF College Flying Training Squadron, and 'university of the air' Central Flying School (CFS), which had moved from Point Cook to East Sale in 1947. At Point Cook Tiger Moths (and Wirraways) were on the strength of Base Squadron, for the basic flying training for cadets at the RAAF College, until withdrawal at the beginning of 1957. So over this period, the major reorganisation of RAAF flying training can be summarised as:

- postwar flying training started with No 1 Pilots' Course, and from 1952 basic training was centred on Uranquinty (near Wagga) with 1BFTS – No 8 Pilots' Course was the first 1BFTS course [27] and then completed training on Wirraway at 1AFTS Point Cook;
- these direct entry (or 'airman aircrew') courses were separate from the Point Cook RAAF College Flying Training Squadron courses, which had some 215 flying training hours spread over four years; [28]
- Tiger Moths and Wirraways were operated by 1BFTS at Uranquinty over 1953-56, with 42 Tiger Moths on strength for basic flying,[29] leading onto more advanced Wirraway training;
- 1BFTS Tiger Moths at Uranquinty were withdrawn at the end of 1955, replaced by the Winjeel;
- 1BFTS Winjeels moved to Point Cook in DEC 1958 - No 34 Pilots' Course was the last to fly from Uranquinty (to graduate from 1AFTS Pearce in SEP 1959);
- as Point Cook was unsuitable for jet operation, 1AFTS had moved from Point Cook to Pearce in MAY 1958 and re-equipped with Vampires;
- RAAF College Flying Training Squadron was disbanded at Point Cook at the end of 1958, and thereafter basic flying training was conducted by 1BFTS at Point Cook, with the applied flying phase at 1AFTS Pearce – No 8 College Course was the first to graduate on Vampires at Pearce in 1959; [30]
- in 1962 RAAF pilot training was combined, when No 12 College Course merged with No 46 Pilots' Course; and
- in 1969 1BFTS Point Cook was retitled 1FTS, and 1AFTS Pearce became 2FTS.


R.A.A.F. PUBLICATION No. 416

February, 1944

PILOT'S NOTES
FOR
TIGER MOTH AIRCRAFT

(To be used in Conjunction with A.P.1732A)

Issued for the Information and Guidance of All Concerned

By Command of the Air Board.

Air Force Head-Quarters
Melbourne, S.C.1.

Secretary.

Tiger Moth Pilot's Notes – RAAF AAP.416, FEB 1944

Tiger Moth AIRCRAFT

TIGER MOTH SUMMARY ACCIDENTS/INCIDENTS
JULY - SEPTEMBER 1955

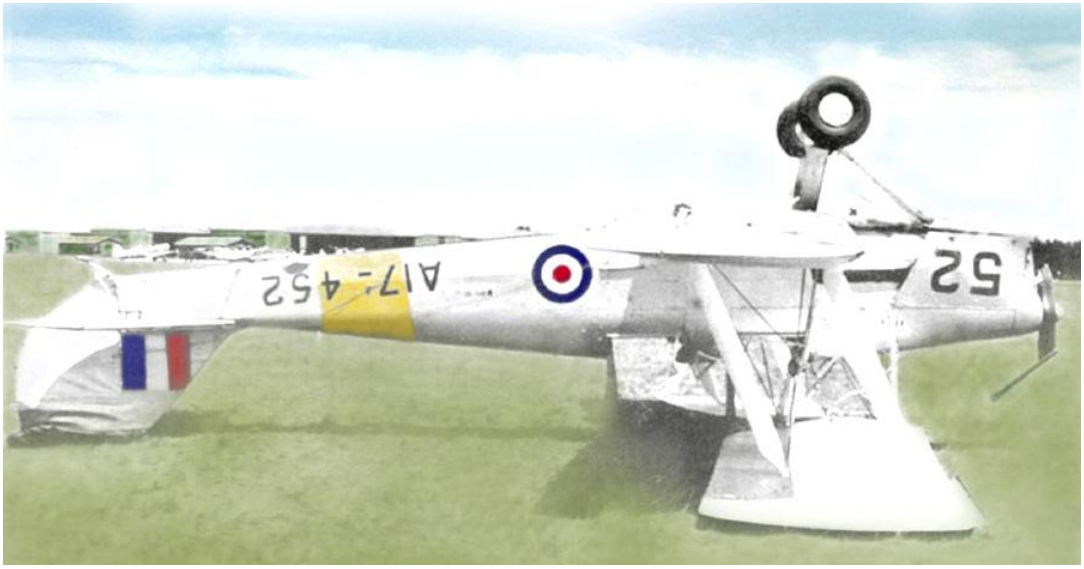
Cause			Stage	Acc.	Inc.
Pilot Error	-	Carelessness	Parked Landing	1 1	
	-	Error of Judgment	Landing	1	
Technical Defect	-	Engine	In Flight		1
Miscellaneous	-	Undetermined	In Flight		1
			TOTAL	3	2

TO PROFIT FROM GOOD ADVICE REQUIRES MORE WISDOM THAN TO GIVE IT.

CHURTON COLLINS.

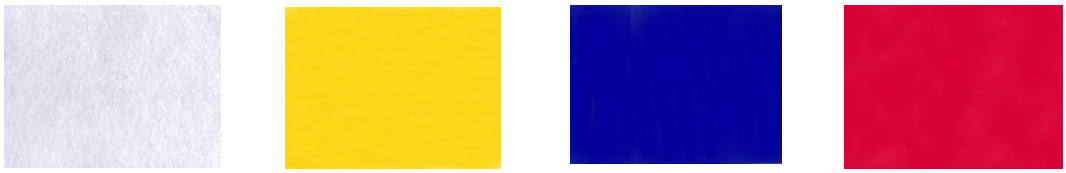
Directorate of Flying Safety (DFS) Tiger Moth Accident Summary, JUL-SEP 1955 [31]

POSTWAR TIGER MOTH MARKINGS – 1948-1957



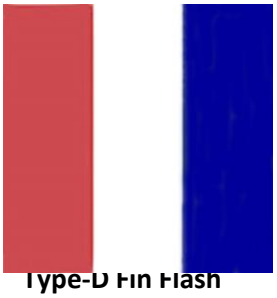
Colourised A17-452 at Uranquinty in FEB 1951 – repaired, then went into Tocumwal storage in 1956, sold in 1957

The large nose numbers would be the last two or three digits of the serial number. Placement of the serial number across the trainer band varied. Sometimes the 'last three' of the serial would be on the yellow band.



1948 Colours: *Aluminium* K3/162, *Trainer Yellow* K3/185, *Glossy Blue* K3/343, *Glossy Red* K3/346

Type-D Fuselage Roundel from 1948

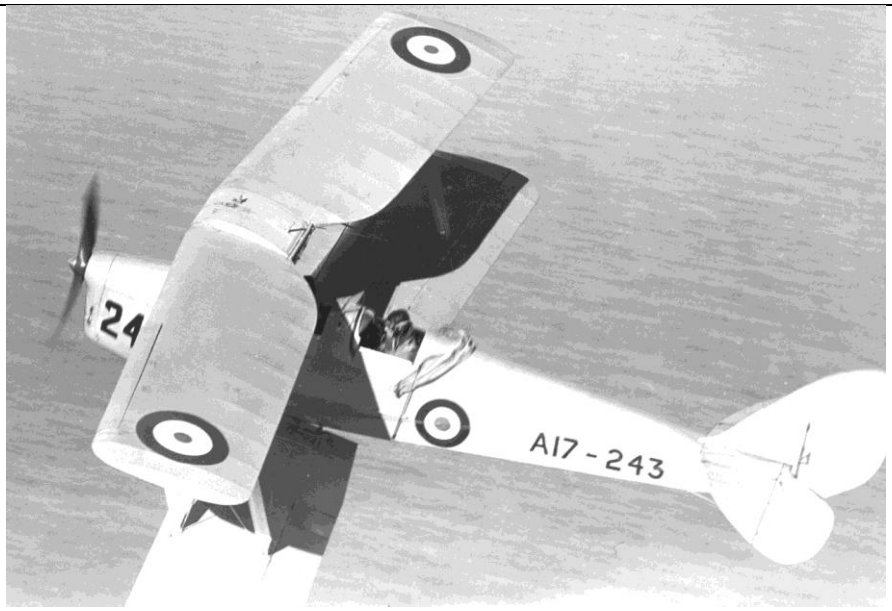


Type-D Fin Flash
18" wide x 18" high

Roundel sizes, diameter inches (cm): fuselage 18" (457.2cm), mainplane 36" (914.4cm)
Fin flash: 18" wide (6" each colour) x 18" high Serial number: 8" x 5" Large nose number: 12" x 8"
Trainer bands: fuselage 24" wide, mainplane 36"

A17-243 – AN INTERESTING SCHEME

A17-243 apparently in postwar markings post 1948 roundels? No, not what it may appear. Not in overall *Aluminium,* but in *Yellow*, with apparently 'Type-D' fuselage roundels, and proper pre-war 'Type-A' wing roundels.



There is no fin flash, no trainer bands. Apparently the fuselage roundels were painted with the red a slightly larger diameter! **A17-243 was with 4EFTS Mascot in 1941.** The images are from the collection of the late GPCAPT Sir Raymond Garrett, whom I interviewed in 1993 for my book on the history of 2SQN.[32] Garrett was CO of 4EFTS over JAN-JUN 1941 when these images were taken over Sydney.[33] This was the 1940 'E1' allover *Yellow* trainer scheme.[34]

A17-734 – POSTWAR SCHEME

A17-734 (c/n 1065) with post-1948 national markings, but no yellow trainer band. So where and when? In the background is Vampire F.30 A79-375 (fitted with an ejection seat, this mod being carried out by DH Bankstown at the beginning of 1956), and then A79-375 went to 23SQN fitted with target-towing gear. A17-734 was at 1BFTS Uranquinty over 1951-54, to DH Bankstown repairs 1955-56, and then to Tocumwal storage in SEP 1956. All aircraft with engine covers removed should give the clue, and 'Hangar B' does not suggest RSTT at RAAF Wagga! This is at the DH plant at Bankstown in mid-1956 as both aircraft were undergoing major servicing and modification.

VH-BEN restored as A17-736 in the standard RAAF postwar training scheme

Commonwealth Disposals Commission

The Commonwealth Disposals Commission (CDC) was established by the Federal Government to administer the sale of war assets, including aircraft, by public tender. Towards the end of the war, large numbers of surplus aircraft were stored at flying bases and Care and Maintenance Units (CMUs) were formed throughout the country to manage the storage, maintenance and disposal of aircraft over 1944-47. For instance, the CMU at Tamworth was established in DEC 1944 to store Tiger Moths from 1EFTS Tamworth and 8EFTS Narrandera – by JAN 1945, 120 Tiger Moths were in storage.[35] By early 1946 when the sale of surplus aircraft was underway, more Tiger Moths had been received from the CMU at Evans Head and from 11EFTS. An interesting observation by Tamworth CMU was in AUG 1946, that: "all RAAF markings obliterated from 28 aircraft sold by CDC". Maintenance of the stored aircraft was a major requirement for the CMU – the last entry in Tamworth CMU records was in MAR 1947, when the last 12 Tiger Moths were ferried to 2AD, and in all, 47 Tiger Moths were transferred to 2AD to enable DH Bankstown to refurbish them for return to RAAF service.

Below is a summary of just the major CMUs around Australia, emphasising the number of Tiger Moths that were offered in the disposal process. In total, 516 Tiger Moths were sold by the CDC over 1945-47.[36]

Care & Maintenance Unit	Dates	Tiger Moths	CDC Sales [37]
Tamworth CMU, NSW	12 DEC 44 – 5 JUL 47	125 Tiger Moths allotted; 85 1EFTS Tamworth, 29 from 8EFTS Narrandera	71 sold DEC 45-1947; 47 to 2AD for DH refurb
Western Junction CMU, Tas	1 JUN 45 – 9 DEC 46	86 allotted from 7EFTS	All 86 sold and issued MAR-OCT 1946
Cunderdin CMU, WA	17 OCT 45 – 26 MAY 47	69 were from 9EFTS, stored by 86OBU	74 sold 1946
Benalla CMU, Vic	1 MAR 46 – 15 OCT 48	76 from 11EFTS	67 sold 1946-47
Temora CMU, NSW	12 MAR 46 – 30 JUN 47	122 from 10EFTS	79 sold 1946-47; 46 to 2AD from MAY 1947 for DH refurbishing

Major CMU Tiger Moth Activity 1945-1947 [38]

Other major CMUs of interest regarding aircraft types stored included Oakey and Tocumwal:

- 6AD at Oakey held 544 aircraft (mainly Kittyhawks and Spitfires) by DEC 1945, and in FEB 1946 became CMU Oakey to maintain the aircraft and facilities, and supervise the disposal of assets.
- 7AD at Tocumwal, which became CMU Tocumwal in FEB 1946, held 398 aircraft (Liberators, Wirraways and Tiger Moths). [39]

During the first year of its operation the CDC sold 182 Tiger Moths.[40] Individual prices ranged from £30 ($60) to £500 ($1000); [41] aircraft were generally sold at a 50% discount to aero clubs[42], and 238 Tiger Moths were purchased by or on behalf of aero clubs.[43]

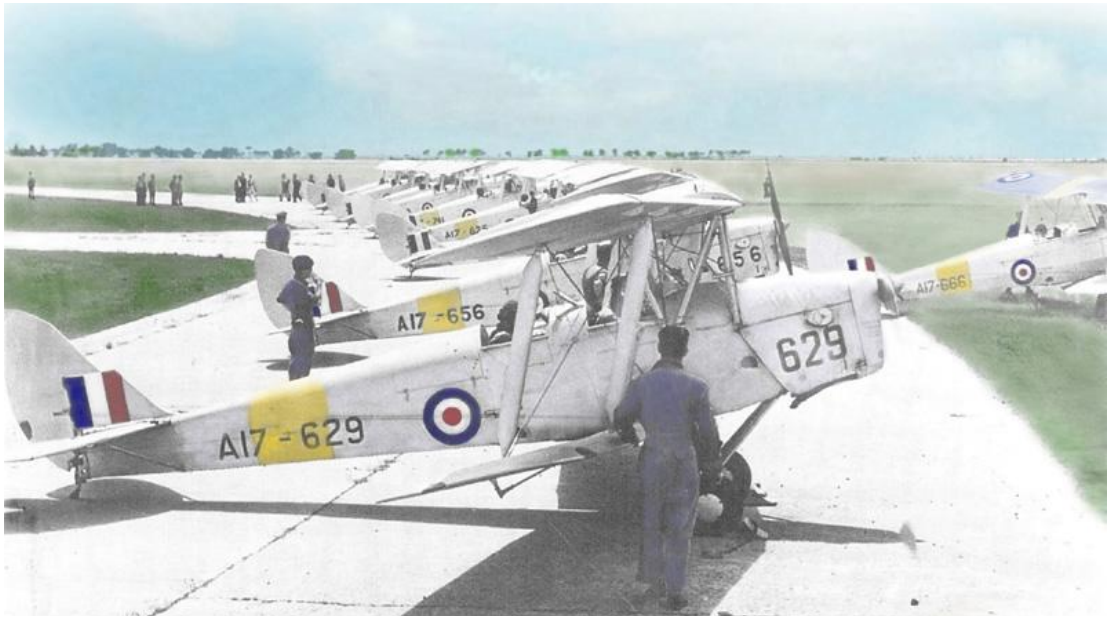
No 1 Aircraft Depot Detachment B (1AD Det 'B') was formed at Tocumwal in JUL 1949[44] and became the RAAF's primary disposal and scrapping base during the 1950s. 86 Tiger Moths were allotted for storage between AUG 1951 and FEB 1957.[45] 1FTS, then 1BFTS from 1953, was the primary RAAF Tiger Moth operator in the immediate postwar years.[46] As the Tiger Moth being was retired from service from 1BFTS at Uranquinty, large quantities were flown to Tocumwal:

- 13 Tigers were flown from 1BFTS in MAY 1956;
- the last mass formation was planned for ten aircraft from Point Cook to Tocumwal on 9 JAN 1957;[47]
- the maximum number of stored Tiger Moths on charge at Tocumwal had been 44 aircraft over NOV-DEC 1956;[48]
- in total 86 Tiger Moths were allotted for storage at Tocumwal between AUG 1951 and FEB 1957.[49]

In addition to the earlier sales by CDC, as the Tiger Moth was deemed to be more suitable for public release rather than scrapping, more aircraft were sold from Tocumwal as the type was gradually retired from RAAF service. As Tiger Moths were not considered warplanes and suitable for sale, they were allotted as "category B storage", meaning within months they would be listed for disposal.

LAST TIGER MOTHS FROM POINT COOK

These last ten Tiger Moths flown to Tocumwal in JAN 1957 are detailed below, as they are typical of the 1950s disposal process through 1AD Det 'B' and acceptance on the Dept of Civil Aviation civil register. In addition to these ten, the last two aircraft released from storage at Tocumwal were A17-616 and A17-671, which were not collected by their purchasers until APR 1959.



The last formation preparing for departure from Point Cook 9 JAN 1957 – visible are A17-629, 666, 656, 625 and 741

RAAF Serial	C/n	Arrival at Tocumwal	Disposal and Civil Registrations
A17-538	973	9 JAN 1957	sold 3/58 Port Macquarie Flying Club **VH-BAP**
A17-579	1014	9 JAN 1957	sold 9/58 McKenzie Flying School, Moorabbin **VH-GME**
A17-588	1023	9 JAN 1957	sold 6/58 McKenzie Flying School **VH-GMF**; 9/61 to **VH-RIN***
A17-625	438	9 JAN 1957	sold 1/58 Wagga Air Taxi and Flying School **VH-WFF**
A17-629	859	9 JAN 1957	sold 3/58 Darling Downs Aero Club **VH-DDS**; 9/67 **VH-SJC***
A17-656	806	9 JAN 1957	sold 3/58 Royal Aero Club NSW **VH-RSD**; 6/60 to **VH-PSD***
A17-666	816	9 JAN 1957	sold 3/58 Townsville Aero Club **VH-SNO**
A17-704	836	9 JAN 1957	sold 6/58 Aero Club of Southern Tasmania **VH-ABF**
A17-741	1072	10 JAN 1957	sold 4/58 to Griffith NSW **VH-FSS***
A17-759	1090	9 JAN 1957	sold 3/58 Royal Vic Aero Club **VH-RVE**; 5/63 to **VH-COA***

Disposal of the last 10 Tiger Moths flown from Point Cook (* current registration [50])

The last formation from the other end of the line at Point Cook – aircraft visible are A17-538, A17-588 and A17-704

RAAF AIR BOARD ORDER E. 12/8
19 MARCH 1945

E. 12/8. Conversion of Airframes and Aero Engines to Instructional. Equipment.

(73/6/1130.)

1. When an obsolete or crashed aircraft or aero engine is reduced by decision of the Air Board to instructional equipment (either as a whole or as assemblies), the following procedure is to be observed :–

(*a*) It is to be marked in accordance with paragraph 15 of A.F.O. 19/B/20.

(*b*) In addition, the number is to be erased and it will no longer be accounted for under its original identity.

(*c*) However, a complete airframe or aero engine (as defined in paragraph 2) is to be allotted an instructional number by Air Force Head-Quarters (D.E.A.).

(*d*) It is to be struck off the records by conversion voucher bringing on charge an instructional airframe or engine instead, under the instructional number as allotted, e.g., Instructional Merlin No. 7.

(*e*) In the event of there being any serviceable or repairable accessories or valuable components liable to theft attached to the item (see A.B.O. E. 11/8 (1), they are to be accounted for as articles-in-use, or stock, as the case may be.

2. Instructional airframes and aero engines are defined as follows :—

(*a*) An instructional airframe is that item of equipment which has been converted to instructional purposes by the authority of the Air Board and shall consist of fuselage, mainplanes, tail plane and ailerons, elevator rudder and the controls thereof.

(i) If fitted with an engine or engines for ground running, it may include all instruments and controls necessary for that purpose.

(ii) Portions of the fuselage such as a cockpit fitted for cockpit drill are not to be considered as instructional airframes.

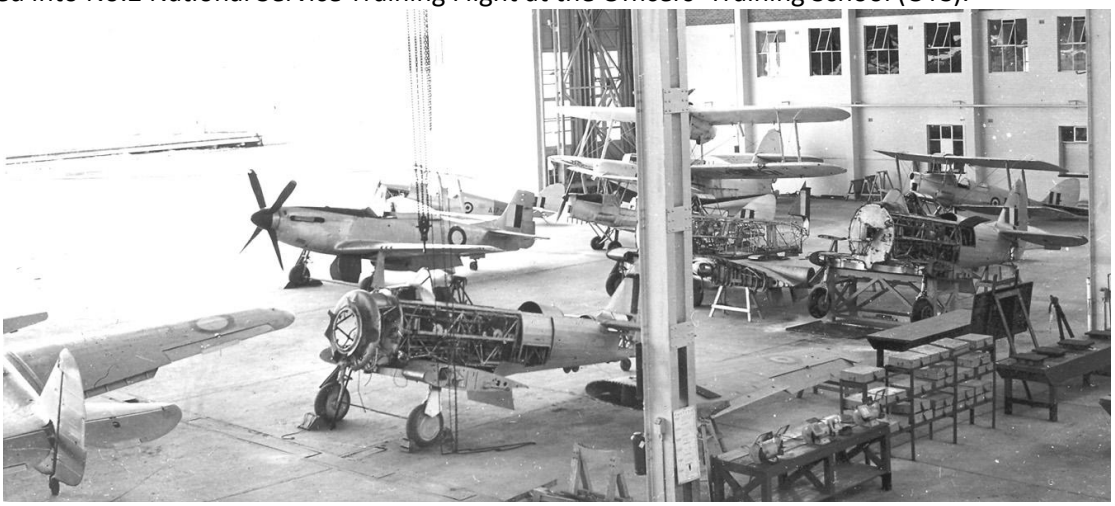
(*b*) An instructional aero engine is that item of equipment which has been converted to instructional purposes by the authority of the Air Board. An instructional engine may be " sectionised " so as to demonstrate cross sections and portions otherwise concealed. In this case it may be issued as a " machine " (see A.B.O. E.2/40, paragraphs 26 and 28) and may be issued less magnetos and carburettors, &c. It is normally to be issued complete with these items and with the necessary controls if required for ground running and the training of personnel in maintenance duties.

3. When an instructional airframe or engine has no further training value in the holding unit, Air Board authority is to be sought for re-allotment to another unit, or for reduction to produce as may be appropriate.

19th March, 1945.

TIGER MOTH INSTRUCTIONAL AIRFRAMES

17 RAAF Tiger Moths were converted to Instructional Airframes (I/A) during the war and up to 1954. These were required initially for technical training at the Engineering School, Ascot Vale Melbourne; later at the Ground Training School (GTS, which later became the RAAF Technical College – RTC) at Wagga; and then RTC Det 'A' at Rathmines, which merged into No.2 National Service Training Flight at the Officers' Training School (OTS). [51]



Rathmines hangar in 1954 – three I/A Tiger Moths and four Wirraways are visible

I/A Serial	RAAF Serial	c/n	Unit
I/A 1	A17-11	11	Eng School 10/40
I/A 2	N-6901	82145	Eng School 7/40
I/A 3	N-6905	82149	Eng School 7/40
I/A 4	A17-6	6	Eng School 4/40
I/A 5	A17-420	595	10 EFTS Temora 11/43
I/A 6	A17-282	301	5AD Wagga 11/43
I/A 7	A17-532	967	1 Eng School 10/44, RTC Det'A' Rathmines 8/51
I/A 8	A17-345	380	1 Eng School 9/44, RTC
I/A 9	A17-576	1011	1 Eng School 11/44, RTC
I/A 10	A17-283	302	1 Eng School 11/44, RTC
I/A 11	A17-677	3632	CFS Point Cook 8/45
I/A 12	A17-507	930	GTS Wagga 1/47, OTS Rathmines 2/54
I/A 13	A17-574	1009	1FTS Point Cook 1/47
I/A 14	A17-516	939	GTS Wagga 1/47, RTC
I/A 15	A17-631	861	RTC Det 'B' Canberra 11/53
I/A 16	A17-660	810	OTS Rathmines 9/54
I/A 17	A17-593	1028	OTS Rathmines 9/54

Tiger Moth I/A 17 (A17-593) at Rathmines 1954-58, with Wirraway I/A 20 (A20-550) and a Mustang

Wirraway I/A at Rathmines

I/A 14 A20-161 (2/54), **I/A 15** A20-446 (6/54), **I/A 19** A20-546 (10/51), **I/A 20** A20-550 (1/54)

Mustang I/A at Rathmines

I/A 11 A68-74 (11/53), **I/A 20** A68-56 (5/54), **I/A 21** A68-96 (5/54)

NAVAL TIGER MOTHS

The Navy acquired tree Tiger Moths on free issue from the RAAF over 1948-1954.[52] These were:

- **A17-382** RAN on 13 OCT 1948, deleted 12 JUL 1957 sold to RQAC
- **A17-590** RAN on 25 FEB 1949, fate not known
- **A17-692** RAN on 30 MAR 1954, 8 AUG 1958 sold to Tamworth Aero Club

A17-692 became VH-TWA with Tamworth Aero Club in 1958, and later VH-AWA, now with RAAFM as A17-692

The Navy imported Kiwi NZ1485 and repainted it as VH-NVT 'A17-692', however without the yellow trainer bands

In addition, A17-168 (c/n 169) was on display at the Fleet Air Arm Museum at *Albatross*, currently flying as VH-DDA

TIGER MOTHS TO CIVIL REGISTER

Their release from "category B storage" meant that within months the aircraft would be listed for disposal; **A17-719** was a typical example:

- In APR 1956 allotted 1AD 'cat B' storage ex 1BFTS; MAY 1956 received 1AD Det 'B' (Tocumwal); AUG 1956 listed for disposal; JAN 1957 sale completed.[53]
- A17-719 was then registered **VH-BOK** on 29 MAR 1957 (CofR number 2989) to Goulburn Aero Club.[54]

In 1995 there were 159 Tiger Moths registered in Australia, and at least a further 100 said to be undergoing restoration.[55] By early 2018, there were 186 Tiger Moths on the CASA VH- register.[56]

R-5261 VH-UYE 2016

Serpentine airfield, 40km south of Perth, is a popular base for restored Tigers
Here VH-NIG (N-9129) leads VH-WFN (A17-649), VH-DWD (A17-201) and VH-BTP (A17-744)
The home for Tiger Moths in the east is Luskintyre, 40km NW of Newcastle, where many restorations have occurred, with "luxuries" such as brakes, tail wheels, and intercom.

CIVIL REGISTER – PAINTED IN POSTWAR ALUMINIUM SCHEMES

Ex-RAAF Tiger Moths on the civil register faithfully restored in postwar aluminium finish

A17-57 (as 'A17-54') VH-BGC c/n 54

A17-194 VH-YYI c/n 195

A17-397 VH-ASC c/n 441

A17-561 VH-LJM c/n 996

A17-640 VH-NMD c/n 870

A17-647 VH-BGR c/n 797

A17-649 VH-WFN c/n 799

A17-667 VH-HSH c/n 817

A17-736 VH-BEN c/n 1067

A17-741 VH-FSS c/n 1072

CIVIL REGISTER – OTHER TIGER MOTHS WITH VH- REGISTRATIONS

While this is by no means a complete listing, here are other Tiger Moths that also made the civil register

A17-117 as 'A17-489' TA-L now N17489 c/n 114

A17-613 in typical WWII yellow VH-BNI c/n 1048

A17-692 RAAF Museum VH-AWA c/n 824

NZ1485 VH-NVT as Navy NW/'A17-692' c/n DHNZ 165

Some Kurt Finger images of N-9129 VH-NIG (c/n 82248) at Serpentine airfield…

…and a nostalgic view by Rod Farquar, A17-159 VH-AUZ at Goolwa in 2005

AUSTER III / V

A total of 56 Air Observation Post (AOP) Auster IIIs were delivered to the RAAF over 1944-46, and if time and resourced permitted, were camouflaged in overall *Foliage Green* (K3/177) with A11- serial numbers applied. The wartime image below shows the British 'Type-C1' roundels and *Dark Green* and *Dark Earth* scheme. This was the delivery scheme of RAAF Austers at 2AD Richmond – one image shows these markings for a short while on A11-44 with 2AD c1946.

WWII RAF Auster III MT441 with cam and 'Type-C1' roundel, the way RAAF Austers were delivered over 1944-46

Serial Number	Serial Policy	Aircraft Mark	Remarks
A11-1 to A11-56	Consecutive	AOP.III	AOP WWII deliveries.
A11-60 to A11-61	Block	AOP.V	Mk.V for use by 91 Wing at Iwakuni.
A11-200 and -201	Block	AOP.6	AOP.6 for use by Antarctic Flt.
A11-300 and -301	Block	J-5G Autocar	Autocar for Navy at HMAS *Albatross*.

Wartime Air Observation Post (AOP)

That some RAAF Austers were pressed into immediate service in their British camouflage is evidenced by A11-8; this image in FEB 1945 is well known for its 'sharkmouth' marking, but still the previous British camouflage is apparent, in the same standard green/earth as MT441 (above).[57] In late 1944, two AOP Flights were formed as 2AD received the already war-weary Austers from UK, often turning them around in weeks for delivery to the units – 16 AOP FLT for operation in New Guinea and 17 AOP FLT for operation in Bougainville, with seven Austers each. The AOP Flights were to provide "elevated observation for officers to carry out shoots or reconnaissance".[58]

A11-8 of 17 AOP FLT FEB 1945 in Bougainville, with 'sharkmouth' and still in the delivery UK camouflage

Other roles soon were added – casualty evacuation, supply dropping, ammunition resupply, air searches and comms.

- **16 AOP FLT** was in 83 (Army Co-op) Wing RAAF in support of HQ First Army at Lae, and moved forward a detachment to Tadji in JAN 1945.
- **17 AOP FLT** had moved from Cairns in DEC 1944, as part of 84 (Army Co-op) WG, to Torokina in support of HQ 2 Australian Corps in Bougainville.[59]

With the Auster deployment north from Australia, the tropical rain, humidity and muddy conditions quickly took wear and tear on the fabric airframes. By the end of 1944, the susceptibility to tropical conditions grounded 17 AOP FLT pending all aircrafts' complete recovering with fabric.[60] In early 1945, 16 AOP FLT's aircraft had all fabric replaced by 10 Repair and Salvage Unit (RSU)[61] – it would have been at this stage with the re-fabric that aircraft were completely painted in *Foliage Green*. Aircraft unserviceability had necessitated that the Flights be expanded to 12 Austers each.[62] The Repair and Salvage Unit – which all had a title change on 1 JAN 1945 to Repair and *Servicing* Unit – was to repair, maintain and modify equipment beyond the capacity of the operational unit.[63] During 'OBOE', 16 AOP FLT Austers were supported by 14 RSU at Morotai, 11 RSU at Tarakan, 1 RSU and 22 RSU at Labuan, and 18 RSU at Balikpapan.[64]

Operation 'OBOE'. In MAR 1945, 16 AOP moved to Morotai (NEI), which had been recaptured in SEP 1944 as the first island-hop for 'OBOE' – the joint amphibious operation for retaking Borneo over MAY-JUL 1945:[65]

- **OBOE ONE**. The invasion convoy departed Morotai on 27 APR 1945 and the assault on **Tarakan Island** (off NE Borneo) commenced on **1 MAY 1945,** with the objective to seize the airfield to enable further air operations. Although an Air HQ was established on 5 MAY, and 16 AOP FLT was to have been operating from Tarakan by 7 MAY with 78WG P-40s, the boggy airstrip was unsuitable for any operations until the following month.
- **OBOE SIX.** OBOE SIX, the assault on **Labuan Island-Brunei Bay** (NW tip of Borneo), had been brought forward to precede OBOE TWO (Balikpapan), and was to ensure air and naval operations to seize the oilfields. The main convoy departed Morotai on 4 JUN, and unopposed landings made on **10 JUN 1945**. Six Austers accompanied the assault party and conducted operations after the beach-head was secured, and as the airstrip was readied quickly, P-40s were deployed there on 17 JUN. From the experience learnt in OBOE ONE, Gen MacArthur was to claim "the operation was flawless".[66]
- **OBOE TWO.** The assault convoy on **Balikpapan** (in eastern Borneo), consisting of 200 Allied vessels, landed on the beach-head on **1 JUL 1945**, to occupy Balikpapan Harbour and the airstrips. Air support was flown from Labuan and Tarakan, the latter when the runway became usable from 28 JUN. On 1 JUL, a 40-minute bombardment preceded the assault, and the beach-head was secured within 15 minutes. Austers were ashore on the first day,[67] and the six aircraft directed artillery fire, short-range reconnaissance and essential comms.

RAAF offensive air operations ceased on 15 AUG 1945. 'OBOE' was the first time that substantial operations were conducted involving joint Australian forces as the main force, with some support from the Allies.[68]

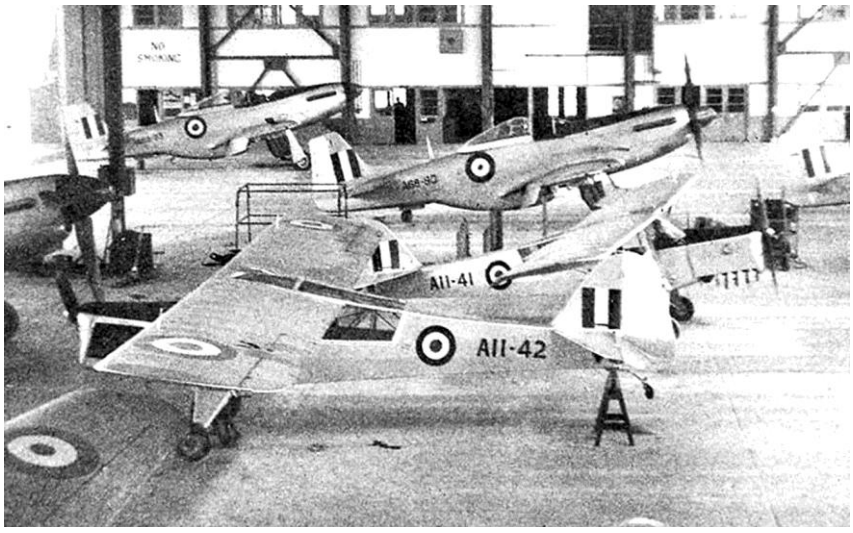
Postwar

AOP AUSTERS IN AUSTRALIA		
Unit	**Dates**	**Remarks**
4 SQN	FEB 1947 - MAR 1948	equipped with Mustangs and Auster IIIs, retitled 3SQN
3 SQN	MAR 1948 - OCT 1953	ex-4SQN, Austers to 16 AOPF 1953 (3SQN to Williamtown 1956)
16 AOP FLT	OCT 1953 - JUL 1959	last flight by Austers A11-41 and A11-53 on 24 JUL 1959

A11-20 1947 with Pacific roundels, serving with 4 SQN at Canberra

While some aircraft still had British camouflage in 1945-46, they had eventually been changed by 1947 to the standard RAAF Tac/R *Foliage Green* – but then the Instruction was issued to replace the overall *Foliage Green* scheme with overall *Aluminium* in AUG 1947.[69] A11-20 (above) shows an interesting *Aluminium* scheme after camouflage removal immediately postwar, before the 1948 red-white-blue 1:2:3 'Type-D' roundels. This only was applied to some aircraft: *Foliage Green* largely remained over 1947-48, and *Aluminium* into the early 1950s in 3SQN until 1953.

A11-49 in a 3SQN line-up c1948 at Canberra of six Auster IIIs, in overall *Foliage Green* and Pacific roundels



c1949 - A11-41 and A11-42 in 3SQN's Canberra hangar with Mustang Mk.23s A68-90 and A68-83

Mustang markings are interesting: A68-90 with BCAIR 'Type-A' roundels and A68-83 with the 1948 policy 'Type-D' markings; 3SQN photo recon Mustangs typically had fuselage roundels marked more forward, as there was a window for an oblique camera on the starboard side

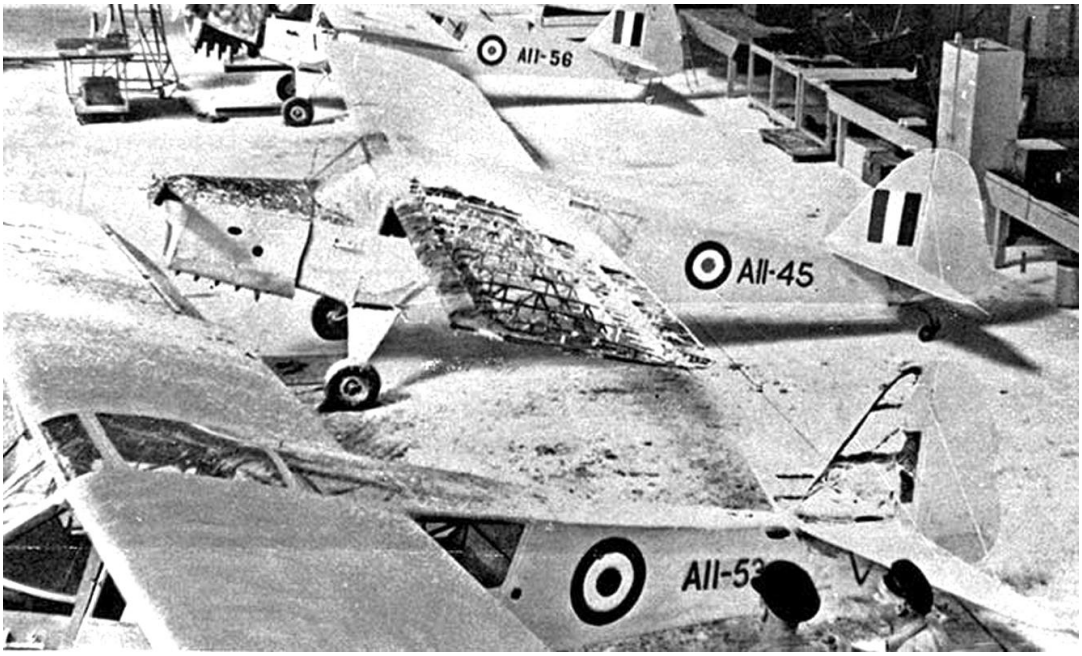
Army

The Army's flying in the 1950s was by 16 AOP FLT, which took control of the role from the RAAF in 1953 – Army Austers being inherited from 3SQN were then generally overall *Aluminium,* and operated from Canberra and Bankstown until JUL 1959. However, at least one aircraft, A11-45 and possibly more, was flown in overall *Foliage Green*. The RAAF was responsible for the technical maintenance (servicing) of the aircraft.

A11-41 one of the last 1959 Army Austers – 'Type-D' national markings, restored at Oakey Museum in 1991

Cessna 180s were acquired later in 1959 for the AOP role, and with the arrival in 1960 of Bell 47G helicopters, 16 AOP FLT was renamed 16 Army Light Aircraft (ALA) Squadron as a joint Army-RAAF unit. The new 16(ALA)SQN moved to Amberley, and in 1965 as an Army unit. By 1962 16 ALA SQN still had 117 RAAF personnel in its Technical Flight.[70]

Army aviators had become accustomed to the RAAF airworthiness regime of constant technical maintenance in aircraft servicing cycles. 'A' and 'C' Servicings were conducted every 7 and 28 days respectively. 'D' Servings were every 100 flying hours for the Cessna 180s, 50 hours for rotary wing (Bell 47s). 'E' Servicings were 800 hours for Cessnas, 1200 hours for Bell 47s.[71] However, Army upper headquarters had to adapt to this maintenance regime, and become more flexible in organisation, new trades, stores, training, transport requirements, and new terminology. In Army trades, an engine or airframe fitter became an 'Artificer Aircraft (Mechanical)'; electricians and instrument fitters became 'Artificer Aircraft (Electrical)'.



1955 – 16 AOPF hangar fire at Canberra on 8 DEC 1955 which damaged A11-45 and A11-53, both repairable

RAAF Auster Retirement. The final Auster IIIs retained by the RAAF were A11-1 and A11-38, station communications aircraft at Richmond and Rathmines respectively, that were sold in 1960. Other Australian military Austers were:

- Two **Auster Vs** (A11-60/TJ249 and A11-61/TW372) were also acquired from the RAF for 77SQN / 91WG use in Japan over 1949-52.
- Two **Auster AOP.VIs** for Antarctic service, which will be a future instalment in this series.
- The RAN also operated a pair of **Auster J5/G Autocars** at HMAS *Abatross* over 1953-63.

RAAF's first Auster A11-1 (post 1956 with the kangaroo roundel) operated by ARDU Det B until 1960 at Richmond

CAMOUFLAGED AUSTERS

A11-44 delivered to 2AD in OCT 1945, was re-serialled A11-44 and kept stored for postwar use, later flying with 3SQN at Canberra. For immediate use RAAF Pacific markings replaced the fuselage 'Type-C1' markings and 'Type B' mainplane roundels – often British *Dark Green*/*Dark Earth* camouflage was retained until a major servicing.[72]

A11-44 (MZ247) initially retained its British scheme in 1945 with the 'Type-C1' fuselage roundels and flash [73]

18" 'Type-C1' Roundel[74]

RAF *Dark Earth* 33B-190[75]

RAF *Dark Green* 33B-193

RAAF *Foliage Green* K3/177

A11-45, 1957, flown by the Army pilots of 16 AOP FLT from Bankstown – overall *Foliage Green* with kangaroo

SILVER AUSTER AOP.IIIs

A11-20 4 SQN at Canberra 1947, with 16” Pacific roundels and 18”x18” fin flash

A11-45 with the post-1948 18” ‘Type-D’ roundel

A11-38, a long-term Rathmines hack in the late 1950s with 18” kangaroo roundels, sold OCT 1960

‘Type-D’ and kangaroo roundel sizes: diameter inches (cm): fuselage 18” (457.2cm), wing 36” (914.4cm)
Rudder flash varied: 18” wide (6” each colour) x 18” high; or 15” wide (5” each colour) x 15” high

RAAF Auster AOP.V in Japan

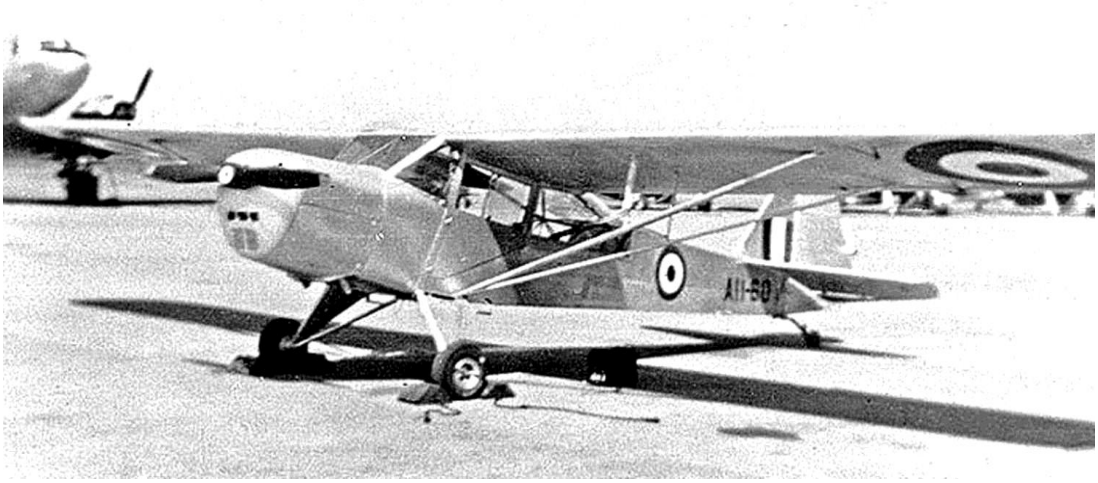
The RAF 'Type-C1' roundels, shown here, were replaced by the BCAIR 'Type-A' roundels c1948, then 'Type-D'

- **A11-60** (ex-RAF **TJ249**) our first Mk.V served with 1315 Flight RAF before being transferred on 23 DEC 1948 to 77SQN RAAF. It was damaged beyond repair when it crashed at Matsuyama, Shikoku, Japan, on 26 APR 1952.
- **A11-61** (ex-RAF **TW372**) crashed on 26 APR 1951 at Yamaguchi, Shikoku, the aircraft burnt and conversion to components was approved 4 JUN 1951.

A11-60 Auster V TJ249 in Japan in 1948 before marked as A11-60

These two Auster AOP.V images from Geoff Goodall's *'Australian Military Austers'* site [76]

AUSTER AOP.Vs JAPAN

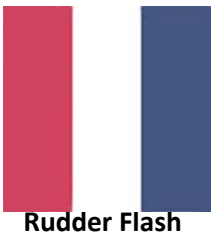


A11-60, 77SQN Iwakuni 1949 – initially the BCAIR 'Type-A' roundels, and later 'Type-D', replaced the RAF 'C1'

The RAAF operated two Auster Vs from Iwakuni, 77SQN 1949-50, then 91WG 1951-52 – A11-60 (TJ249), below at Iwakuni with 'Type-D' roundels c1951, crashed in APR 1952; A11-61 (TW372) crashed in APR 1951.

18" BCAIR Type-A Roundel 1949-1951

18" 'Type-D' Roundel 1951-52



Rudder Flash
18" wide x 18" high

NAVY AUSTER J-5G AUTOCARS

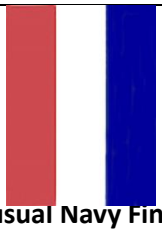
Two Autocars were delivered to the RAN in 1953, both served with 723, 724 and 725 Sqn. Fin flashes and 'Type-D' national markings were carried from 1953 until the RAN introduced the kangaroo roundel in all positions in 1956, at which stage the fin flashes on the Autocars were removed. **NAVY** was marked under the starboard wing.

A11-300 (c/n 3059): carried codes 930, then 856, and was sold in OCT 1963 as VH-MBF, and returned to HMAS Albatross after 37 years to AMOF. Restoration commenced at FAA Museum, and continues at HARS at Albion Park.

A11-301 (c/n 3064): was coded **931** (above) then **857** (below) in 9" x 6" figures, and sold in OCT 1963 as VH-MRD, but was fitted with a horizontally opposed engine that changes the appearance and remains airworthy.

'Half-size' RAN serials: 1956 RANAMO gives tiny 'half-size' serial number fonts as 4" x 2.5" (0.6" stroke). [77] Nowra code numbers were more legible: code numbers 9" x 6" (1.25" stroke), "NAVY" 7" x 5" (1").

18" 'Type-D' Roundel 1953-1956



An unusual Navy Fin Flash
18" wide x 24" high, until 1956

723 SQN Badge

AUSTER III DISPOSALS

Like many deliveries received by the RAAF in 1945, the number of aircraft held would be more than postwar requirements. Of the 56 Austers delivered over 1944-45, the RAAF determined its postwar requirement would be for 32 aircraft in-use and in-reserve for the AOP and light communications roles. Accordingly, from late 1945, Austers not in immediate use were stored at 2 Aircraft Deport (2AD) at Richmond, and in OCT 1946 a number were selected for Category 'C' storage for disposal from early 1947. To further support postwar requirements, it had already been identified back in NOV 1944 – as the RAAF and CDC considered disposal of D.H.60 Gipsy Moths with the DH Gipsy Major I engine – that stocks of these engines would still be required for Auster aircraft. In 1945 the Auster was still being delivered, and at that stage there was no intention that these aircraft would be surplus.[78]

The Auster III – like the Tiger Moths before them – was deemed suitable by DCA as light aircraft for the public and aero clubs. CDC released Austers to the public in two major tranches, the first in JAN 1947 for those surplus at 2AD Richmond, and the next in NOV 1959 from Tocumwal storage as the type was withdrawn from RAAF and Army service. In all, 25 ex-RAAF Auster IIIs received a VH- registration mainly from these disposals, but there was the odd aircraft rebuilt from components.

The first CDC disposal from 2AD Category 'C' storage at Richmond – all aircraft sold to the public over the next months.

AUSTER DISPOSAL FORM 2AD RICHMOND AIR/3437 – LISTED 13 JAN 1947			
Aircraft Offered	**Date of Sale**	**Purchaser**	**Aircraft**
9 Austers from 2AD	JAN-APR 1947	private buyers and aero clubs	A11-17, 18, 30, 32, 33, 36, 37, 39, 40.

- **A11-13** had missed this cut-off for the CDC disposal, and was offered the following month on List **AIR/3585**, and sold in JUN 1947.
- **A11-27** while earlier selected for disposal was deemed unsuitable and reduced to components – its scrap was subsequently released to be rebuilt and registered VH-BYJ in MAY 1954.
- **A11-34** was withdrawn from disposal, and issued free of charge under **AIR/7206** in DEC 1947 to DCA as VH-BKK.

Ex-DCA A11-34/VH-DSJ (left) and A11-48/VH-MBB at Caboolture JUN 2017 awaiting restoration

With the withdrawal of the Army's 16 AOP FLT in JUL 1959, the RAAF also retired its few remaining Austers. The RAAF had operated Austers in the ARDU Trials Flight at Woomera (A11-47 and A11-48) until 1956, A11-1 with ARDU at Richmond until AUG 1959, and A11-38 at Rathmines until FEB 1960. With the retired 16 AOP aircraft, 13 Austers were offered for disposal at Tocumwal in NOV 1959 by TOC 21/59, and were sold to aero clubs and private buyers in the first months of 1960.

AUSTER DISPOSAL FORM 1, TOC LIST 21/59 – LISTED 4 NOV 1959			
Aircraft Offered	**Date of Sale**	**Purchaser**	**Aircraft**
13 Austers from Tocumwal	FEB-APR 1960	private buyers and aero clubs	A11-1, 38, 41, 42, 45, 47, 48, 49, 52, 53, 54, 55, 56.

TOC 21/59 was the last major release of RAAF aircraft by tender for use by the public.

CIVIL REGISTER – POSTWAR DISPOSALS

The Auster III provided an excellent opportunity for civilians to enter the civil flying community and was popular too with aero clubs, and proved a successful glider tug. When RAAF Austers were made available for disposal, 25 entered the Australian civil register, listed below – these were all Auster IIIs, of which 12 remain airworthy.[79]

RAAF Serial	C/n	Civilian Registration
A11-1	238	9/60 VH-SNI *
A11-13	365	4/49 VH-BGI, 9/65 VH-DQN
A11-17	363	4/49 VH-BGU, 7/52 VH-FAE; to RAAF Museum 2015
A11-18	644	11/47 VH-GAE, 12/49 VH-DAE
A11-27	333	5/54 VH-BYJ
A11-30	492	11/48 VH-BBS
A11-32	430	3/48 VH-BDL, VH-MAD, 8/54 VH-FED
A11-33	639	8/49 VH-BDM *
A11-34	373	12/47 VH-BKK, /49 VH-CAJ, 4/61 VH-DAJ, 5/93 VH-DSJ *
A11-36	613	5/47 VH-BCQ, 849 VH-BOQ *
A11-37	654	3/47 VH-BHA, 9/51 VH-PCR
A11-38	320	10/60 VH-RCT, 8/61 VH-BED *
A11-39	601	4/47 VH-BCF *
A11-40	615	5/47 VH-BCG *
A11-41	413	6/61 VH-CYH
A11-42	330	9/60 VH-WAJ, 3/97 VH-DCU *
A11-45	483	3/62 VH-WAI, 3/66 VH-FBA
A11-47	531	3/62 VH-RKA *
A11-48	455	4/60 VH-BVX, 1/62 VH-MBB
A11-49	635	3/60 VH-MHT *
A11-51	660	7/59 VH-PRW, 1/01 VH-MRR *
A11-53	436	11/60 VH-MBA
A11-54	271	9/60 VH-SNS *
A11-55	293	8/59 VH-ALS
A11-56	258	6/60 VH-GCV

Civil Registered RAAF Auster IIIs (current aircraft on register marked*) [80]

In *Foliage Green*…for that WWII AOP look, A11-33 VH-BDM in 2014 and A11-36 VH-BOQ 1981

A11-38 VH-BED in 1977 (left), and in 2005

CIVIL REGISTER – IN POSTWAR ALUMINIUM SCHEMES

Auster IIIs that are/or were on the civil register restored in postwar aluminium finish

A11-33 VH-BDM (c/n 639) in 2007

A11-40 VH-BCG (c/n 615) in 1988

A11-41 ex-VH-CYH (c/n 413) on display at MAAF 2008

A11-49 VH-MHT (c/n 635) in 2014

A11-55 VH-ALS (c/n 293) in 1982

A11-48 one of the last RAAF Auster IIIs used by the Army's 16 AOP FLT, sold in 1960 became VH-BVX

Getting the RAAF Numbers right in WW2 Part 3; the 1943 transition **by Gordon R Birkett @2018**

Background

At the end of 1942, the RAAF had an instigated a Seventy –One Squadron Force Expansion Plan to ensure the viable defence of Australia and additionally, to provide an offensive force for operations in the South West Pacific and Netherlands East Indies(SWPac and NEI) of a further Sixty- Six Squadrons. [81] This was an expansion from its current thirty Squadron Air Force. *This excluded two RAAF Squadrons in service with the RAF overseas, No 3 and No 10 Squadrons RAAF. Total would be actually Seventy-three Squadrons.*

That totalled a combined force of one hundred and thirty-seven Squadrons and a grand total of three thousand, four hundred and eighty-three aircraft (In use Establishment aircraft numbers with one third wastage for twelve months).

Original Scheme Totals and Type	Defensive Squadrons	Aircraft Numbers	Offensive Squadrons	Aircraft Numbers	Totals in Aircraft
Fighter Interceptors	12	432	5	160	**592**
Fighter Long Range	7	252	10	360	**612**
Heavy Bomber	9	243	20	540	**783**
Dive Bomber	9	243	None	0	**243**
General Recon (Flying Boats)	5	65	None	0	**65**
General Recon (Torpedo/Medium)Bombers	11	297	None	0	**297**
Fleet Co-operation	1	27	None	0	**27**
Army Co-operation	6	162	18	432	**594**
Transport(Land)	10	113	9	102	**215**
Transport(Seaplane)	1	12	4	43	**55**
Totals: Sqns and Aircraft with 1/3 Reserves	**71**	**1846**	**66**	**1637**	**3483**

It mainly depended on regular and secure aircraft supplies from source countries and the training of enough pilots and crews through both the RAAF Training Scheme and whether some of the Article 15 EATS Scheme personnel could be returned after their first operational tour, back to Australia from various RAF theatres worldwide.

It was a grand scheme based on going it alone in the SWPac and NEI Operational Area.

It was to be eventually culled back to the Seventy-one Squadron plan a month later, in consideration of an existing Sixty-four Squadron USAAF SWPac commitment within the 5th Army Air Force, USAAF.

Aircraft supply was more of a concern given the new supply arrangements (*albeit it better then early to mid 1942)*. Requirements were presented in cases to compete against other theatres and their operational needs*. An intermediate plan was formed to increase the RAAF to a forty-five Squadron Force by late 1943. Local production, though acclaimed by the government as first class and building up in tempo, were not considered by the RAAF Command as first class when compared against newer types on offer from overseas production.*

So case by case, those aircraft to be delivered ex USA and UK were also affected by events happening throughout the "World War", from the Desert War (DAF), Russia, Europe to as far away as the China, Burma and India (CBI) theatres, thus local production aircraft (DAP Beaufort ,CAC Boomerang, CAC Wirraway, DH Tiger Moth and Wackett) filled in for Squadron establishments and training requirements till more Munitions Assignment Committee (Air) *(MAC(Air))*Aircraft Case requests were allotted, then shipped and delivered.

Events and aircraft supplies would eventually reduce this grand scheme to a smaller expansion of a combined.

"Planned 1942 and eventual 1943" Examples:

- The DH Mosquito was originally being delivered to an OTU in April 1943, followed by the establishment of the first Fighter (Long Range) Squadron, No 80 Squadron in August 1943, then to be followed by No 93 Squadron in October 1943, then No 95 Squadron in December 1943, then No 96 Squadron in February 1944, with No 92 Squadron forming in April 1944. Two further undesignated Number Squadrons were to be formed by December 1944, thus completing the Seven Fighter (Long Range) Squadron Structure. *In actual event, No 1 Squadron was first formed on the type, along with the PRU, with only one more final Squadron established, No 94 Squadron RAAF in 1945. The intermediate Long Range type in service by early 1943 was the Bristol Beaufighter in No 30 and No 31 Squadrons RAAF.*
- The CAC Boomerang was actually issued to the first two Army Co-operation Squadrons and an OTU; these being No 4 and No 5 Squadrons RAAF, however two further Squadrons, No 49 and No 74 Army Co-operation Squadrons, were never formed on the type. Two further squadrons were in fact re-equipped in 1943 pending the supply of Curtiss P-40Ns for No 84 and No 85 Fighter (Interceptor) Squadrons, in lieu. *Other Fighter (Interception) Squadrons did receive the type (No 25 and No 83 Squadrons RAAF in 1943).*

Fighters 1943-1944 Period

On an examination of Operational Aircraft Status as at the 1st February 1943 [82] the current Squadron strength of the nineteen RAAF Squadrons in the SWPAC theatre were noted to be not up to the establishment strength, with the exception of those equipped with Spitfires.

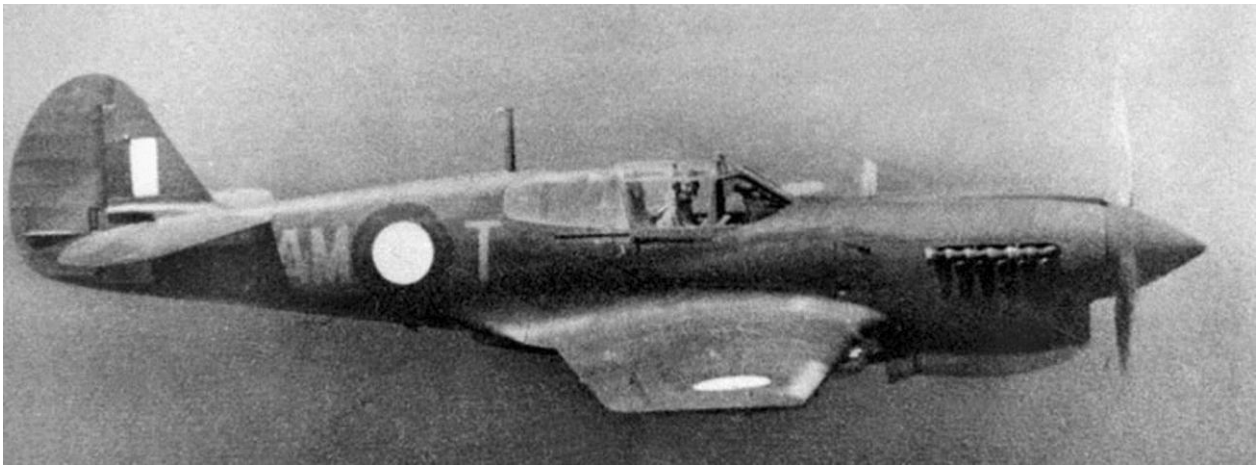
RAAF Frontline Kittyhawk fighter aircraft were of a particularly grave concern, with deliveries of P-40E-1s and preloved USAAF P-40E/E-1s having dried up by July and September 1942 respectively.

Remaining Production of P-40E-1s went in priority to DAF, Russia and China.

A request for one hundred and sixty-three aircraft was approved in Washington DC under MAC (Air) Case 126 on the 20th August 1942.

These would be shipped in batches of thirty-five monthly allotted aircraft from October 1942 to February 1943 (only twenty-three aircraft on final month, the first P-40N-1/5s).Competing for the same aircraft type in the SWPAC was the USAAF 49th Fighter Group, who after diverting their remaining Pool Aircraft Reserves to the RAAF as a result of RAAF Losses at Milne Bay, received the only supply Kittyhawk aircraft (35 x P-40K-1s) in October 1942 to make up its in use establishment (Table of Equipment in USAAF parlance) of one Squadron worth for the 7th Fighter Squadron. Quantity Deliveries of this P-40K-1 version was mainly made to the Desert Air Force and to Units in Alaska.

Deliveries of Bell P-39D-1/3 Airacobras were received from August 1942 in SWPac to replace the earlier attrition and wastage of P-39D/Fs and P-400s of the 8th and 35th Fighter Groups, USAAF[83].



P-40K-10 A29-168 AM-T of No 77 Squadron RAAF

With the promise of a steady supply of interceptor aircraft in early 1943 as the war machine wound up, the RAAF embarked on an expansion plan to increase the current three squadrons equipped with Kittyhawk aircraft to seven squadrons by the end of 1943.

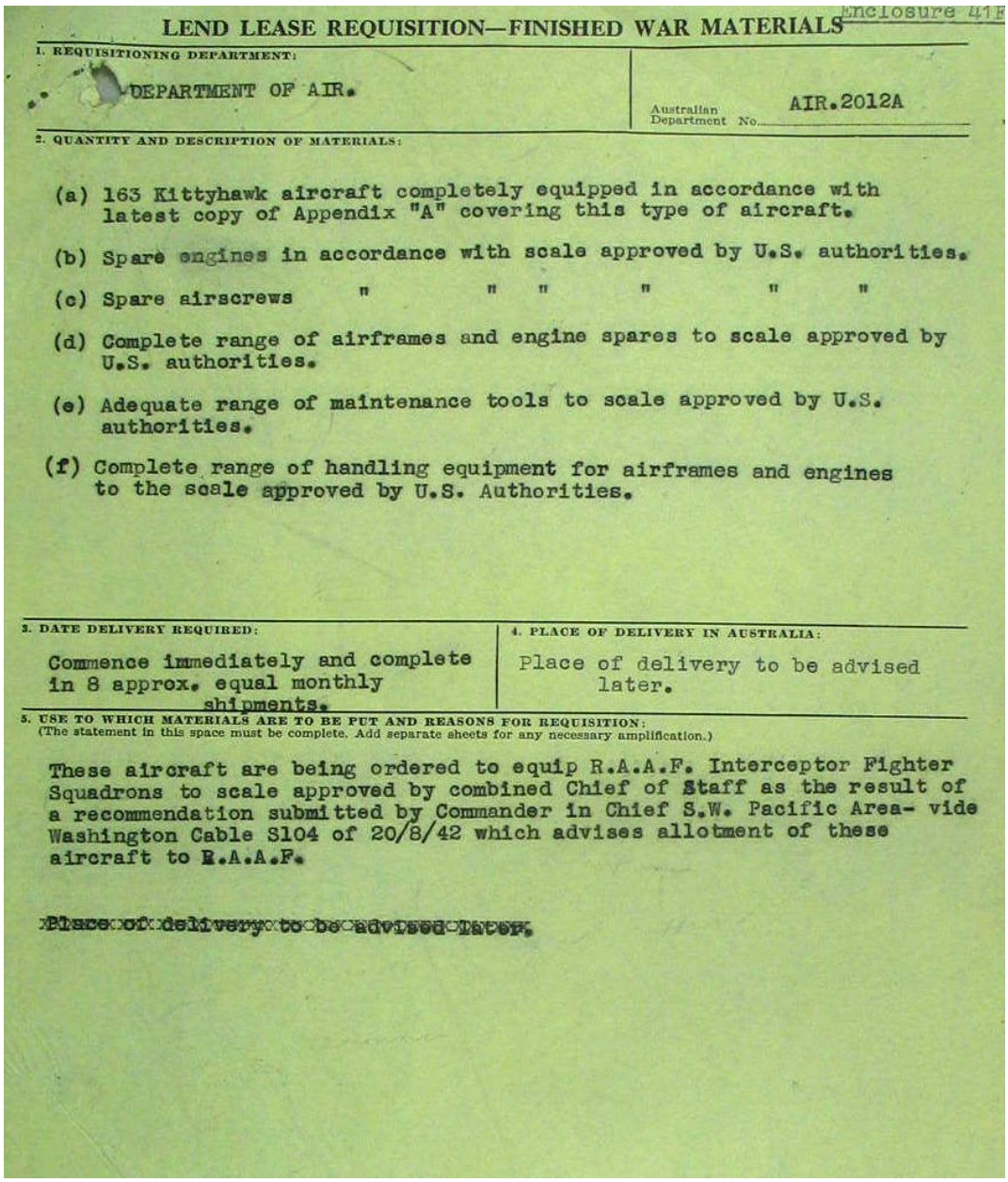
The RAAF were advised that its first shipment of seventeen P-40K-10 Kittyhawk aircraft under Diversion 146 (Aus 1) were being delivered for shipping from the late October 1942 Allotment under Combined Munitions Assignment Board (MAC(Air)) Case 126 Aus1 . They would load on a ship ex Vancouver Canada by the second week of December 1942.

Its second crated shipment of a further fourteen P-40K-10's under Aus 2 Allotment were ready for shipping by mid November 1942 after being delivered by rail to the United Nations Depot No 3 located at Long Beach California.

These aircraft arrived during in January and February 1943 after their Trans pacific sea voyage, the first allotted Kittyhawk deliveries under MAC (Air) Case 126 (Indent 2012). *Included in the last shipment of Kittyhawk P-40K-10 Aircraft, were twenty-six P-40M-1 aircraft.*

By late February 1943, No 77 Squadron (F) RAAF, following its withdrawal from the Northern Territory in January 1943, was solely re-equipping with this version at Amberley prior to its departure to PNG. A few examples went to 2OTU.

No 77 Squadron (F) RAAF surplus P-40E/E-1 aircraft would be "thrown up" and used to rehabilitate No 76 Squadron (F) RAAF, with some 11 aircraft allotted and delivered after being refurbished by 3AD. The balance would be ferried up to No 75 Squadron (F) RAAF as attrition reserves. Those unfit for frontline service would be used to increase the establishment of 2OTU Kittyhawk strength after refurbishment.



LEND LEASE REQUISITION—FINISHED WAR MATERIALS

Enclosure 41F

1. REQUISITIONING DEPARTMENT:

DEPARTMENT OF AIR.

Australian Department No. AIR.2012A

2. QUANTITY AND DESCRIPTION OF MATERIALS:

(a) 163 Kittyhawk aircraft completely equipped in accordance with latest copy of Appendix "A" covering this type of aircraft.

(b) Spare engines in accordance with scale approved by U.S. authorities.

(c) Spare airscrews " " " " " "

(d) Complete range of airframes and engine spares to scale approved by U.S. authorities.

(e) Adequate range of maintenance tools to scale approved by U.S. authorities.

(f) Complete range of handling equipment for airframes and engines to the scale approved by U.S. Authorities.

3. DATE DELIVERY REQUIRED:

Commence immediately and complete in 8 approx. equal monthly shipments.

4. PLACE OF DELIVERY IN AUSTRALIA:

Place of delivery to be advised later.

5. USE TO WHICH MATERIALS ARE TO BE PUT AND REASONS FOR REQUISITION:
(The statement in this space must be complete. Add separate sheets for any necessary amplification.)

These aircraft are being ordered to equip R.A.A.F. Interceptor Fighter Squadrons to scale approved by combined Chief of Staff as the result of a recommendation submitted by Commander in Chief S.W. Pacific Area- vide Washington Cable S104 of 20/8/42 which advises allotment of these aircraft to R.A.A.F.

Place of delivery to be advised later.

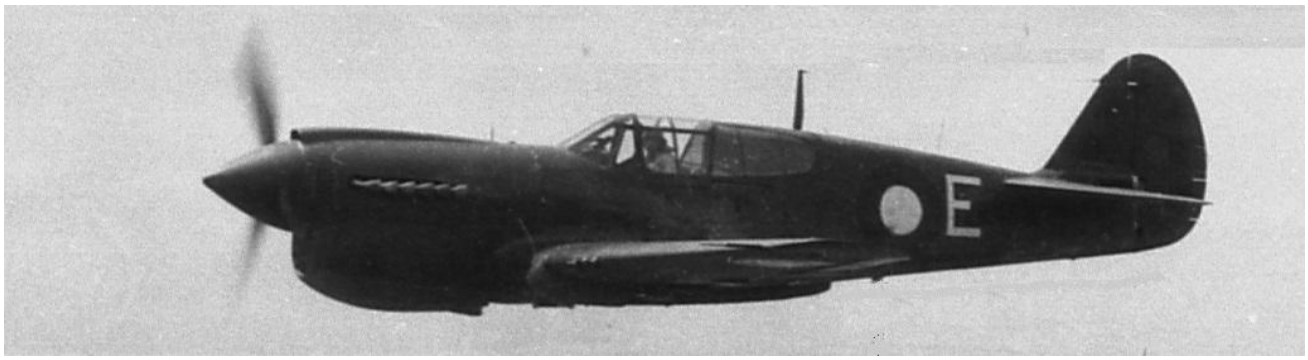
The actual Lend Lease Requisition for our Case 126 Kittyhawk P-40K/M/Ns Request in October 1942.

Deliveries of a further five Kittyhawk P-40K-15 (a further four being lost in transit[84]) and twenty-six Kittyhawk P-40M-1/ P-40M-5 aircraft (all under MAC (Air) Case 126 Aus 2*)* would see now No 76 Squadron (F) RAAF re-equipped with the P-40M-1/5 model. Further deliveries under MAC (Air) Case 126 Aus 3 would see No 86 (F) Squadron established on P-40M-1/5s on the 4th March 1943 at Gawler, South Australia.*MAC (Air) Case 126 Aus 4 and Aus 5 Allotment requests in December 1942 for a further seventy P-40M aircraft did not get approved, as was not MAC (Air) Case 126 Aus 8 in January 1943.*

The last shipment of thirteen P-40M-10 Kittyhawk aircraft would be ready to leave the USA ob the 9th April 1943, and would take nearly ten weeks to arrive by ship to Sydney by the 20th June 1943.Some two hundred and three aircraft had been allotted til the 30th April 1943, but a balance of sixty-three remained outstanding since that number had been diverted to Russia, with a further six lost by U-Boat.

A tired P-40M- 5 A29-361 in flight (Note Port Wing Roundel has no white in it?)

Shipments of P-40N-1/5's that started to arrive in mid July 1943 and that would see the establishment of a fifth frontline RAAF Squadron, No 78 Squadron (F) RAAF. This was the first P-40N equipped Squadron of the RAAF in SWPAC. By May 1943, No 75 Squadron (F) RAAF would be the last frontline RAAF Squadron to use the P-40E/E-1 operationally in SWPAC, with P-40N-1s (Under MAC (Air) Case 126 Aus 9, completing the original Case 126 aircraft requirement of 163 Kittyhawk Fighters of October 1942) replacing them in September 1943. This would complete the target of Seven Kittyhawk Squadrons to be formed by year's end. No 84 Squadron (F) RAAF converted from Boomerangs to P-40N's in September 1943*, in lieu of No 83 Squadron (F) RAAF then based at Strathpine Qld*. They were tasked with the air defence of North West Australia (Townsville and a detachment at Horn Island)



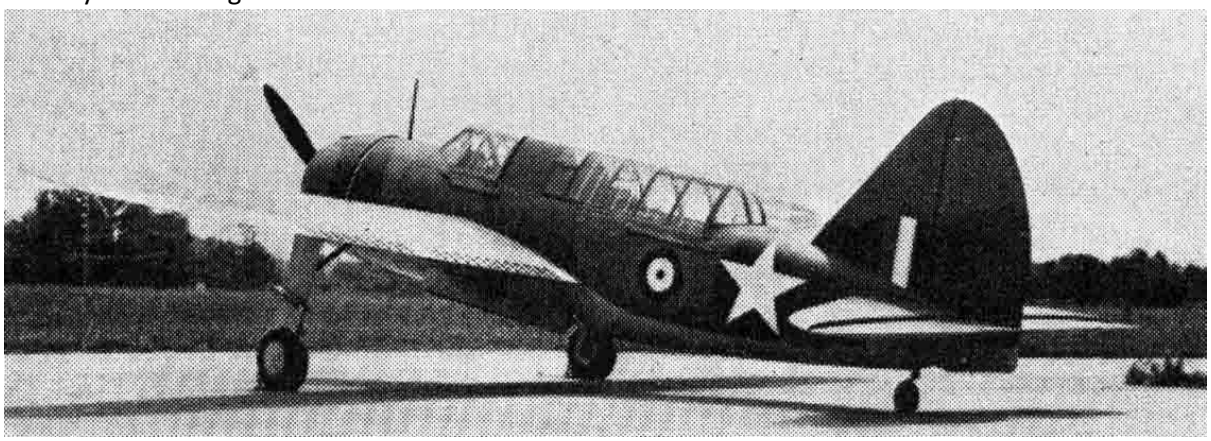
A third unit on the type, No 80 Squadron (F) RAAF, formed during October 1943. This completed the planned formation of seven Kittyhawk Squadrons in 1943, but an additional eighth squadron was formed on the type, No 82 Squadron...for training. *No 82 Squadron (F) RAAF was at the time equipped with eight P-39D/F aircraft, but had already leveraged some four P-40Ms for conversion training (**A29-315/319/321/375**) and a single P-40E (**A29-79)** earlier from June 1943.*

These ex 75 (F) Squadron P-40E/E-1 aircraft thrown up would be the initial aircraft on establishment for No 82 Squadron (F) RAAF, in October 1943.

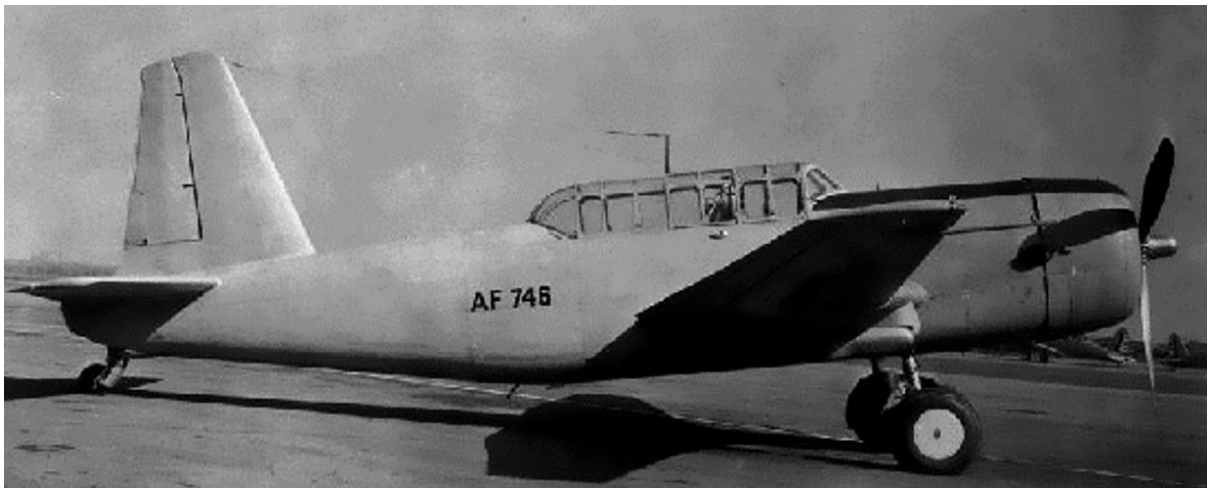
Dive Bombers 1942-1944

The successful use of German dive bombers against troops, static defence positions and interdicting supply lines was an experience the British Expeditionary Force had in Belgium and France. This gave way to a RAAF requirement in late 1940 for a Dive Bomber. Deliveries of the required aircraft were to start after May 1941 with the first Squadrons, No 27 and No 28 (DB) Squadrons RAAF formed in June 1941, with No's 30, 31, and 26 (DB) Squadrons forming by year's end.

Having originally ordered Brewster Bermuda Dive Bombers in 1941 to fulfil that role[85], development delays placed delivery back to August 1941.



The order was then cancelled due to its ongoing development issues and a replacement type with the promise of success was ordered instead; the Vultee Vengeance.

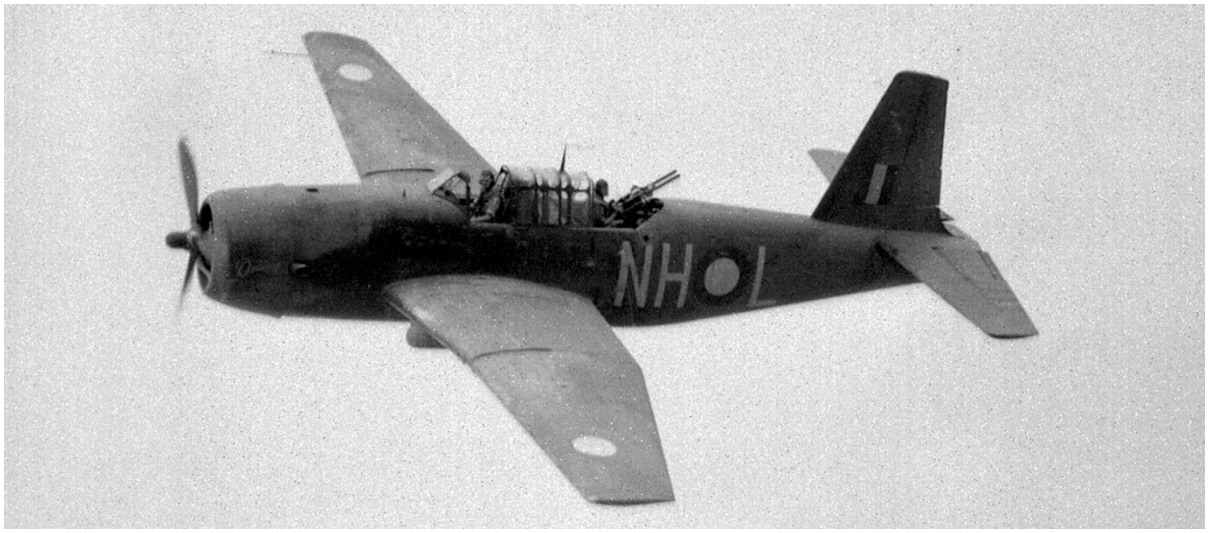


However, the immaturity and manufacture of the later design also saw its delivery schedule extended well out into mid- 1942, with the initial supply of fifteen aircraft, only arriving by late May 1942.

In the RAAF Statement of Aircraft Requirements dated 16th October 1941, some two hundred and ninety Seven Vengeance Mk 1 aircraft were required. This eleven Squadron Requirement for Dive-bombing and Army-Co-operations roles, was for an In-use and Reserve Establishment of one hundred and ninety eight aircraft (12 x IE/ 6 x IR), with a further ninety-nine aircraft required for wastage for three years (50% wastage).

The Eleven Squadrons to be formed on the type and basing (in parenthesis) were to be, as of the 5th December 1941, just days away from the Pacific War were: No 21(Malaya), No 27 (Hobart Tas), No 28 (Williamtown NSW), No 26 (Gawler WA), No 12 (Darwin), No 22 (Bankstown NSW, No 25 (Pearce WA), No 23 (Amberley QLD), No 24 (Townsville QLD) and No 4 and No 5 (Canberra ACT).

The RAAF eventually ordered some two hundred and forty-three Vultee V-72 Vengeance Mk1/1A[86] (Later designated A-31s by the USAAF) in late October 1941 for delivery from January 1942, based on a reduced requirement of six squadrons and one Operational Training Unit. The Order excluded a twenty-one aircraft requirement of the last mentioned Unit.



Surprisingly, with the latter development issues known, a further one hundred and fifty aircraft order for a different type, the Curtiss Wright A25 Shrike/Hell Diver, were also assigned in 1943 by US Presidential Decree via a request by Dr H.V. Evatt under Case 200. Establishment of each Dive Bomber Squadron would have been increased to twenty-four aircraft (18 x IE/6 x IR). With ten aircraft delivered[87], the balance of this third aircraft order type was cancelled in January 1944. Sadly for our RAAF crews, the Wirraway, our jack of all trades, was being modified as an intermediate Dive Bomber.

The Commanding General of the 5th Air Force, USAAF stated in May 1943 that he did not care for the employment of dive bombing aircraft in the SWPac. *This may have been borne out of their past experience of Douglas A24 Banshee aircraft use by the 3rd Bomb Group in early to mid 1942, where losses decimated the force over several months.*

With the RAAF forward echelon Squadrons soon to be equipped with Vengeances from 1943, it seemed against his wishes that they would be used in the SWPac theatre. He felt that current single fighter types with six or more 0.50 cal guns or armed additionally by 20mm canon(P-39D-1)firing directly on "attack" missions into targets and skip bombing by twin engine types (on shipping)was more accurate, devastating and efficient.

It must be pointed out that in relative terms, RAAF doctrine and USAAF Doctrine differed. Use of the Vengeance was deemed "Close Support" as opposed to USAAF terminology of "Attack". The use of dive bombing was in fact a tactical technique, not the Squadron's role in general, that was providing "Close Support".

The RAAF decided to base its first formed and equipped Vengeance Squadron, No 12 Squadron RAAF in the Darwin Area from December 1942. The Unit Initial Establishment was twelve in use and six in use reserve aircraft in 1942. *(From 1943 this would be increased to sixteen IE and eight IR for a total of six Squadrons)*

Not widely known is that No 12 Squadron RAAF conducted the first operational dive bombing on the 18th June 1943 when eleven squadron Vengeance aircraft, escorted by Beaufighters of No 31 Squadron RAAF, bombed Japanese occupied Lingat and Werain villages some three hundred and fifty miles north of Darwin, in the Tanimbar Islands in

the Netherlands East Indies. Carrying a 1000lb bomb load, all eleven aircraft returned safely to Batchelor, Northern Territory.

This was also the first single engine aircraft mission that precluded the 1st Fighter Wing's Spitfire V Mission in 1944.
Author: I stand corrected by myself!

The following month, the Squadron would move to Merauke, in the Dutch New Guinea by the 8th July 1943. One was lost on the way up, A27-217[88] at Port Douglas. However it would be December 1943 before they were based there, after a lengthy stay at Cooktown Forward Operational Base.

In the Seventy Three Squadron plan, a total of nine squadrons were to be formed, along with additional twelve months wastage of eighty-one airframes, making a total of two hundred and forty-three on order for operational needs. Added to this figure was an addition twenty-one airframes for the OTU, inclusive of its twelve month wastage.

In total, some two hundred and sixty-four aircraft were on order prior to the Pacific War in 1941 and post 1942 Lend Lease Mac (Air) Case requests. By War's end, some two hundred and forty two were delivered in country, with a further fourteen lost or damaged before shipment in the USA, making a total of two hundred and fifty-six aircraft.

By April 1943, of the one hundred and eighty-one Vengeances allotted to the RAAF, some one hundred and forty-five had been shipped, with most assembled and taken into service; thirty-six remained in USA modification centres (including five rebuilds from accidents) and a further two written off during post production testing or ferrying.

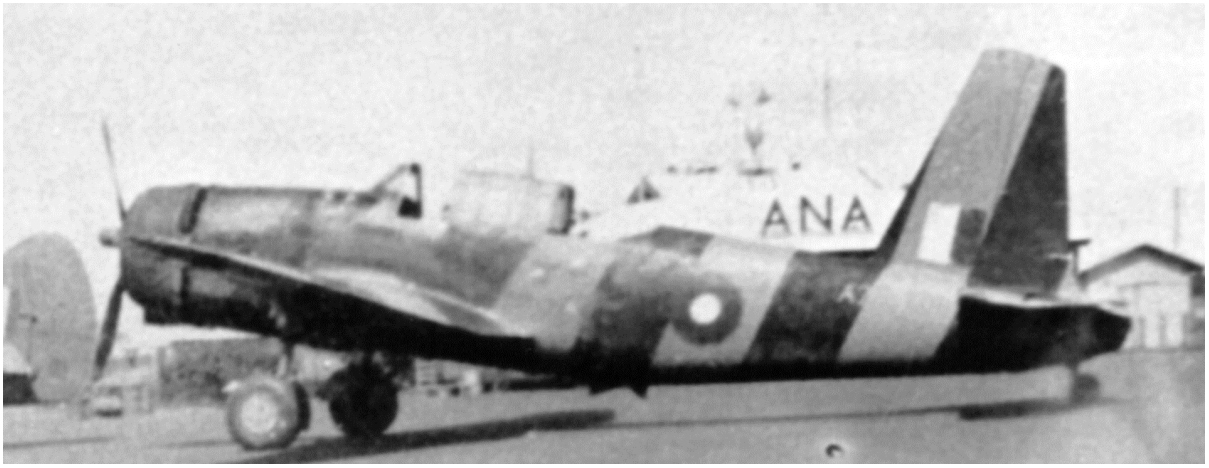
Vengeance A35-A 41-31231, after some preloved USAAF Service was crated to Australia and became A27-409 with 3CU

Vengeance A31 (V-72) AF902, later A27-316 in RAAF Service from January 1944, was previously assigned with 55thBS/48thBG USAAF when it was involved in landing accident at Key Field, Mississippi USA 25/01/43. Pilot 2nd Lt Edward Hayes, USAAF was not injured.

Due to the delays in those post production modifications, diverted deliveries made to the RAF/ Indian Air Force in the India/Burma theatre and the re-allotment of completed aircraft to US A Based Units, the RAAF was offered some pre-loved Vengeance's MK2a (A-31s) in place of new production A35 aircraft. All of these were serialed in the late A27-2** and early A27-3** series.

Several squadrons would be established, one short of the original number, with most employed in combat in PNG and Dutch New Guinea, despite General Kenny's reservations and opinions, using the original 0.303cal machine gunned arm A31 Mk1A model. (Nos. 12, 21, 23, 24 and 25 Squadrons). *All but No 25 Squadron served briefly in the New Guinea campaign.* They returned to Australia and either went into storage or used in Communication Units (No 3/4/5/6/7 and 9 CU's), Station Target Towing flights and/or other limited no-operational roles.

Hopes on replacing the earlier type with the A35-A-VN version, the Vultee Vengeance Mark IV, armed with four forward firing 0.50cal machine guns in wings and a further one in rear gunner's position were expressed as early as May 1943. This up gunned USAAF Model A35-A-VN's seemed to be the answer to some, if not all of General Kenny's criticism. These A35-A-VNs were in the A27-400 series, but as pointed out on reassembly of the first batch of twenty-one A35-As that arrived in July 1943 in Australia, they were noted "Deemed not suitable for operations" on their RAAF E/E -88 Individual Record cards.



A35-A-VN 41-31246 became A27-419 (TT) with Hi Vis Stripes with the Special Duty Flight (SDF) here pictured at Maylands WA.

No 25 Squadron RAAF, based in Western Australia, was the only operational Vengeance Squadron to be fully re-equipped [89]with a later A-35B-5-VN model after turning in their A31's. RAAF Vengeances flew their last operational sorties on the 8th March 1944, as they were considered less efficient than fighter bombers, having a short range and requiring a long runway, and were withdrawn to allow more effective fighter bombers to move into the forward area.

However the number plates of these Squadrons would carry on, *albeit with the four engine and multi crew Consolidated Liberator, while the Vengeance in its later form would soldier on in secondary roles.*

The Mediums ...Hudson Replacements 1943-45

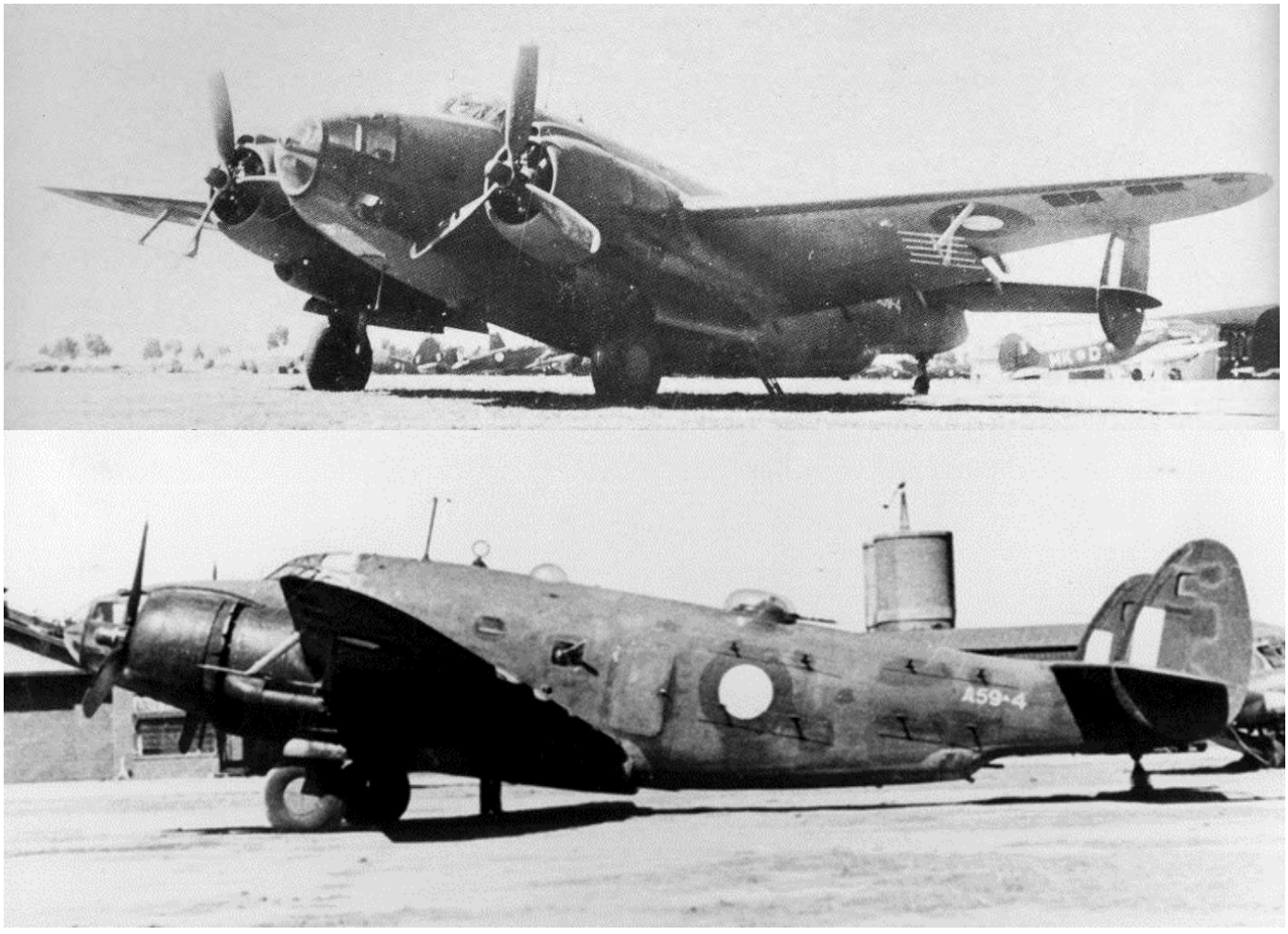
Lockheed Ventura

With the supplies of Lockheed Hudsons drying up by mid 1942, a new improved type, the Lockheed Ventura B-34 was in series production. Under Overseas Indent 2094A for forty-three aircraft to be allotted and delivered by December 1943. This figure was reduced to just thirty-four aircraft for the same period. By May 1943, a total of some twenty-two B-34 Ventura Aircraft had been allotted to the RAAF with only ten flown and/or delivered.

This model incorporated all lessons learnt in the Hudson, and was by *natural* selection, the follow-on for the RAAF to replace Hudson losses in General Reconnaissance (Bomber) Squadrons.[90] The main reason why this type was sourced was because of the conversion of the nine DAP Beaufort General Reconnaissance (Bomber) Squadrons to General Reconnaissance (Torpedo) Squadrons from late 1942.

This meant that there was an operational shortfall, both in squadrons and aircraft numbers in RAAF of Medium Bomber Aircraft, at least until the arrival of Heavy Bombers as a replacement, to strike Enemy Supply installations and storage, enemy cargo ships in port and attack Airfields and other primary targets in NEI and PNG areas.

Therefore with the decline of Hudson Mk III and Mk IVs, the requirement of replacing this B-34 type with Ventura's in a least two Squadrons was paramount.



A59-4 ex B-34-VE 41-38060, fitted with ASV Radar.

In any event only twenty B-34 aircraft would be delivered.

The main type ordered thereafter and delivered under Cases 200/500 was the Ventura PV-1 Model, with some fifty-five examples allotted, issued from A59-50 onwards, and with all delivered by the 11th July 1944.

Under the new adjusted delivery plan, March 1943, the first Operational Unit to convert was to be No 2 Squadron RAAF, in November 1943, followed by No 13 Squadron RAAF December 1943, then No 7 Squadron RAAF in June 1944. Unit Establishment strength was to be sixteen Immediate Establishment and eight Immediate Reserve.

As noted historically, No 2 Squadron RAAF did not reequip with the type, and would wait until the B-25D arrived. No 13 Squadron's surplus Hudsons went to No 2 Squadron RAAF to maintain establishment until then.

In October 1943, No 13 Squadron RAAF was withdrawn from operations to convert to Ventura.

In May 1944, RAAF Command had considered and revised the disposition of units and proposed a rearrangement for the North Eastern Area (other than those units in Dutch New Guinea) and the Eastern Area. This revision was partly based on initial indications from RAAF Headquarters that there would be enough Lockheed PV-1 Venturas available to equip two RAAF squadrons.

No 32 Squadron RAAF was designated to be equipped with Venturas and was at that time equipped with Beauforts, operating with one flight from Lowood and one flight from Bundaberg.

No 13 Squadron RAAF was already equipped with Venturas by this time and was to commence operations from May 1944 from Cooktown. It was originally thought that No 13 Squadron RAAF would replace No 32 Squadron RAAF at Lowood but Venturas could not operate from Bundaberg unless extensive works were undertaken to extend the aerodrome and provide satisfactory airstrips.

Based on a combine establishment of 29 aircraft, a maintenance reserve of 12 aircraft, reinforcement reserve of 2 aircraft and twelve month wastage of 6 aircraft, it would be acceptable.[91]

RAAF Command proposed that 7 Squadron at Higgins, (an air strip already suitable for Venturas) would convert from Beauforts to Venturas instead of 32 Squadron RAAF equipping, with that squadron remaining in Eastern Area and continuing to operate from Lowood and Bundaberg.

The actual conversion depended on the supply of aircraft which by May 1944 was drying up, but No 7 Squadron RAAF would receive its first three Ventura Aircraft for one flight (B Flight) only on the 7th June 1944. The total number of Venturas expected to be available to the RAAF by the end of 1944 was 53.

This number was considered insufficient to maintain two full squadrons to the end of that year; however, the estimated requirements of 49 aircraft for one and a half squadrons could be satisfied.

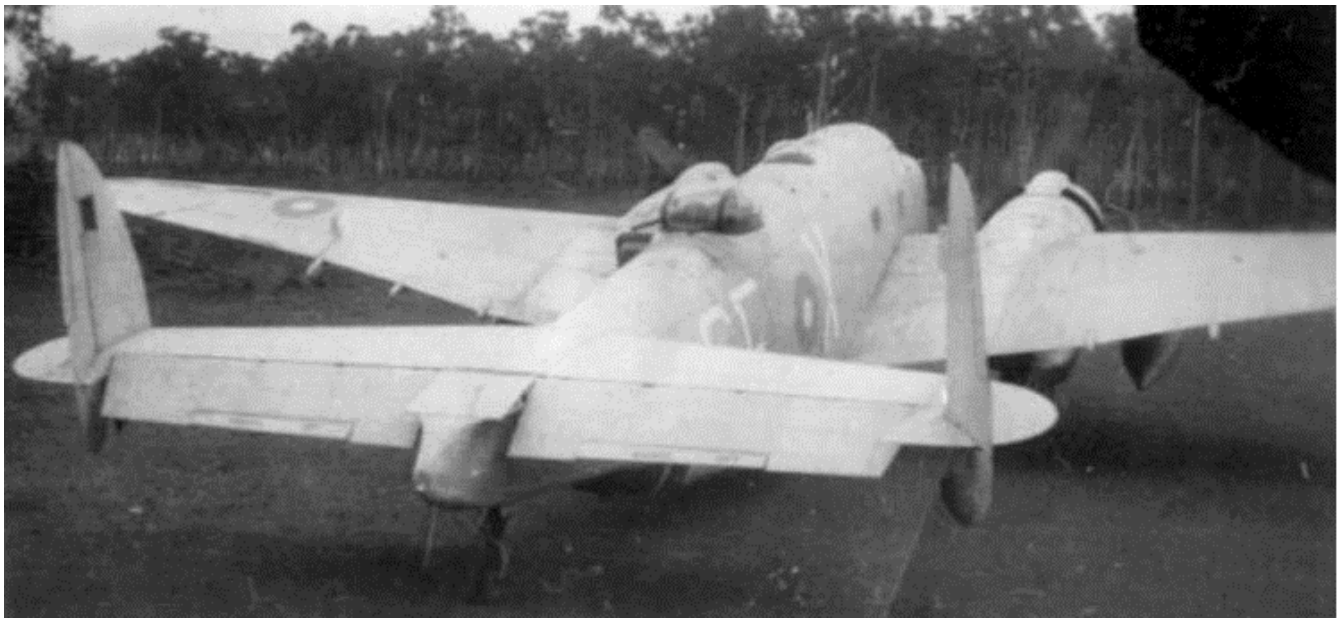
RAAF Command was asked whether it would agree to rearm one flight only of 7 Squadron to begin with, the remaining flight continuing to operate Beauforts until such time as a further allocation of Venturas became available from overseas. Ventura Case Requests to the USA were, as advised by the US, would not be approved due to the need of these aircraft by the US Navy

This was not deemed workable, for ten days later on the 17th June 1944, they were re-allotted out of the Squadron. All surviving Venturas were required to provide reserves for wastage to the sole operational Squadron, No 13 Squadron RAAF, out to June 1945.

Both No 7 and No 32 Squadrons RAAF the third designated Squadron, would remain a Beaufort equipped unit.

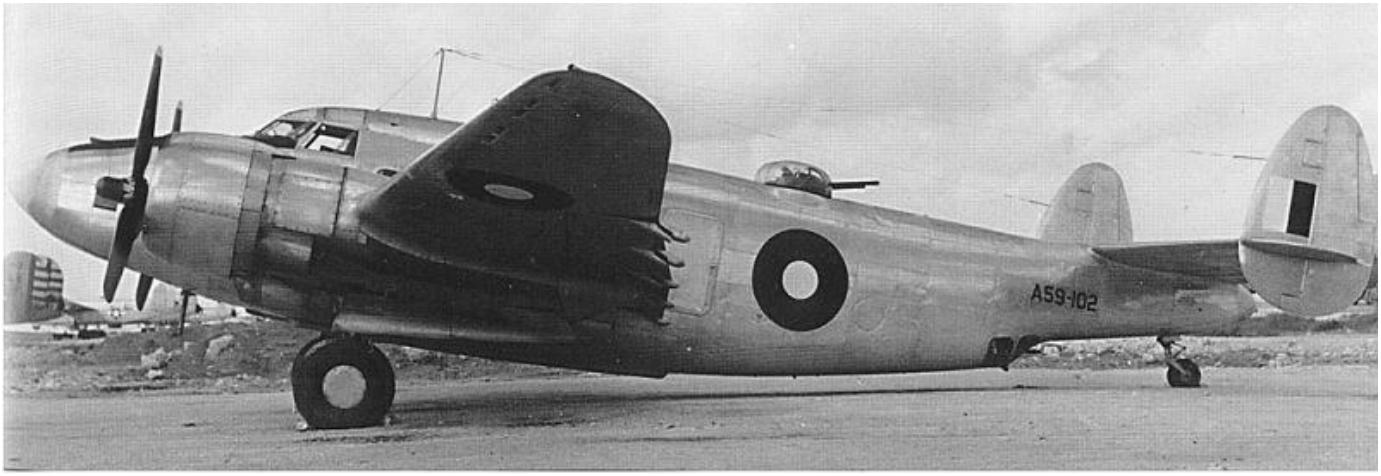
Actual RAAF E/E-88 Carded Deliveries or allotments to all three Squadrons.

- No 2 Squadron was allotted the following ten airframes from the 10th October 1943 before they were cancelled: A59- 1, 3, 4, 5, 6, 7, 8, 9, 10 and 14.
- No 32 Squadron, based at Lowood, had been allotted the following fifteen airframes from late March 1944 then cancelled in April/May1944: A59-61, 64, 66, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, and 81.
- No 7 Squadron RAAF (to be located at Higgins FOB) had been allotted the following seven airframes for one flight in June 1944 and in some cases received some of the following before they were returned: A59- 70, 71, 75, 83 Dual Control, 84, 89 and 92.

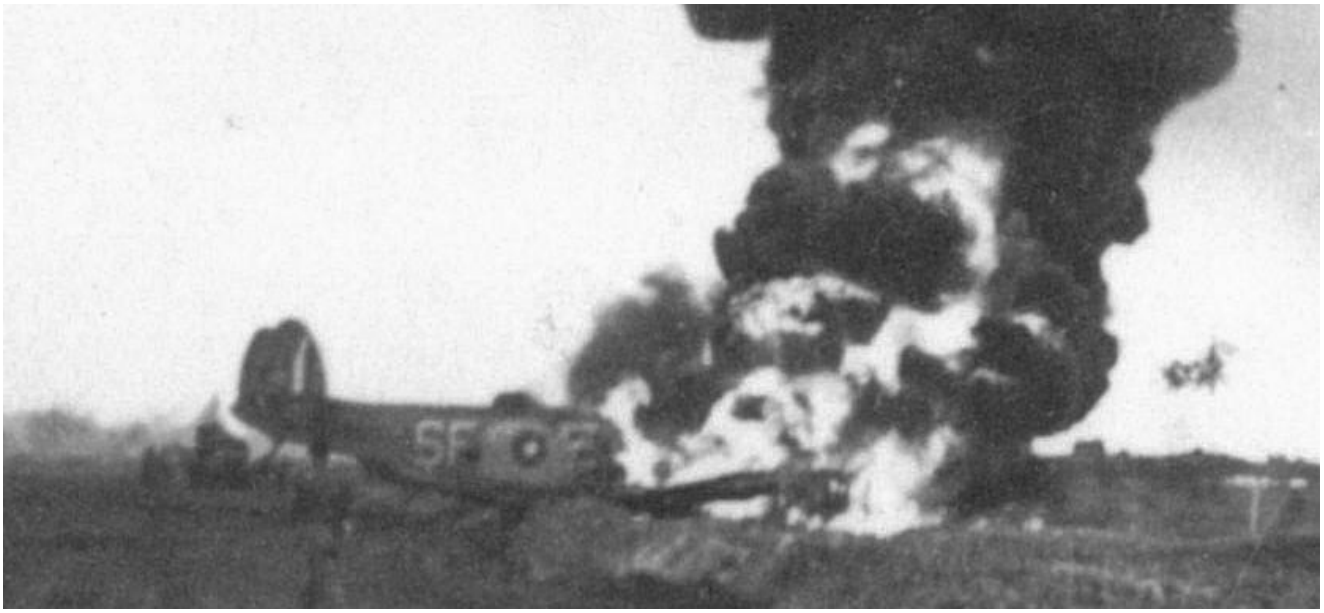


Ex-32 Squadron's allotted Ventura A59-61 SF-X of 13 Squadron at Gove: Credit Hon PM Gough Whitlam

However, aside from No 13 Squadron RAAF using the type operationally, the other units did fly or hold the Ventura aircraft on their establishment at one time or another: No 7 Squadron, APU (1AD), 1AD Test and Ferry Flight, 1OTU, 2 Aircraft Park Test and Ferry Flight, 2 Aircraft Depot Test and Ferry Flight, 1 AOS (Air Observers School, Evans Head), Central Flying School and No 4 Communications Unit (Single example: A59-102 below: RAAFM).



Ex No 7 Squadron's A59-70 (Molesworth Collection)



Ex 32 Sqn's A59-72 SF-E's fate in November 1945. GRB Collection

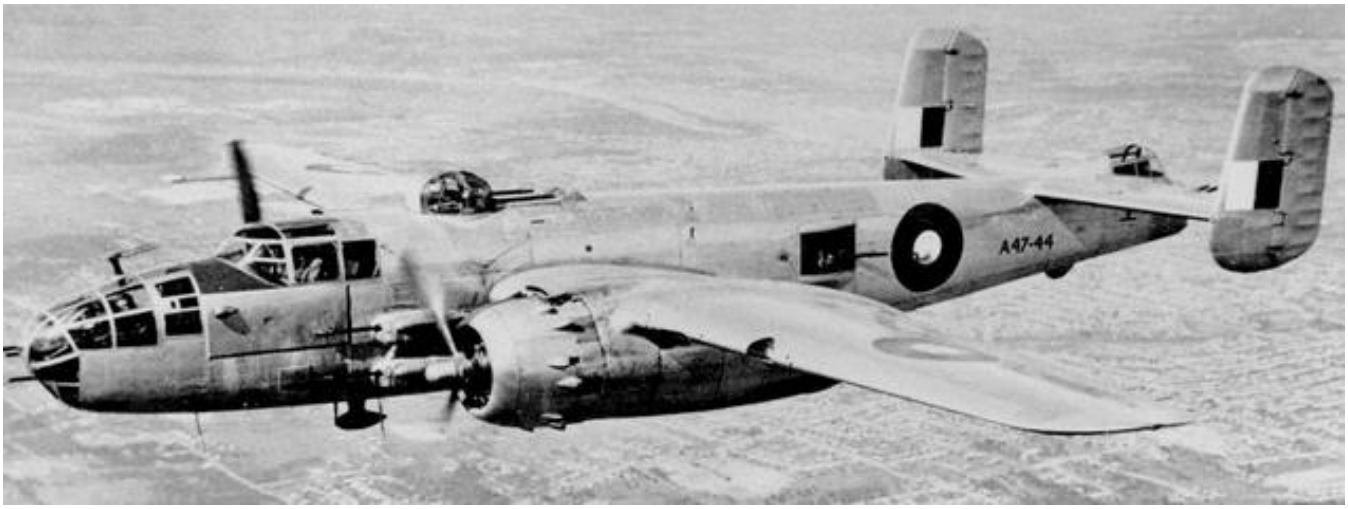
The B-25D/J Mitchell Bomber

No 2 Squadron RAAF would finally receive a replacement for the Hudson Bomber. From the 17th April 1944, it would receive eighteen out of twenty-five B-25D-20-NC/B-25D-30-NC/B-25D-35-NC Aircraft held at the NEIAF Pool ex Canberra under Receipt Voucher AS30881. Only a eighteen aircraft pool from the last two late models were accepted to make up A47-1 to A47-18 numbered aircraft. Unit Establishment strength was to be twelve Immediate Establishment and six Immediate Reserve.

Another twenty-one airframes would be transferred from the NEI Pool up to and including **A47-39** by the 19th September 1944. It would be some seven months before deliveries would re-commence. The numbers only allowed for one squadron establishment and wastage to be maintained.

Under Overseas Indent 2414, a request to supply eighty-one B-25 or A-20 types with a fifteen aircraft monthly wastage supply was made in 1944. However, only nine B-25 aircraft were on order from December 1944 after a bid for fifteen was culled. This was indirectly attributed because of a revised calculation regarding attrition up to that date by No 2 Squadron RAAF. This smaller direct RAAF contract for nine aircraft did commenced delivery from April 1945, with three arriving, then May 1945 seeing a further three with this trickle ending in early June 1945 with one more. Further in August 1945 an additional two B-25Js were delivered in August 1945 (**A47-49** and **A47-50**), but by then wholesale cancellations of Australian RAAF Aircraft Orders had commenced.

Only two of the original B-25J's would enter No 2 Squadron's Establishment (**A47-41** and **A47-43**).

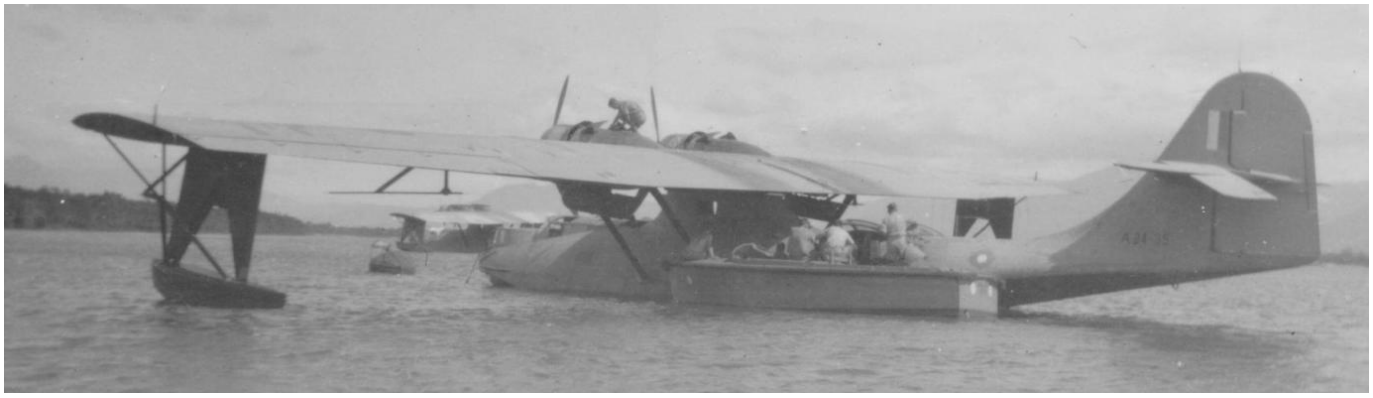


Some were allotted to 4 Communications Unit and even to the CFS following the war, but all went into storage and all were eventually scrapped. One lingered for a year as an Instructural Airframe with the ATS at Amberley before being consigned to DAP for disposal in the late forties.

Flying Boats and Amphibians 1942-1943

By the end of 1942, the two Flying Boat (GR) Squadrons (No 11 and No 20) shared with 3OTU some seventeen surviving Catalina's in various versions.

At the start of the Pacific War, the Unit Establishment was for six aircraft (4 x IE/2 x IR), with a further four (3 x IE/1x IR) with the 3OTU. Nine ex Canadian Catalina's were delivered as well as a couple of refugee PBYs ex NEI/USN. Promises of supply for late 1942 to March 1943 of some twenty-eight aircraft, resulted in consideration and action to increase the Squadron Establishment from six to nine aircraft (6x IE/3x IR).



A24-35, ex BuNo8161 pictured in February 1943, was one of the first new replacements that arrived in early 1943, after a gap of nearly nine months after nine Canadian Vickers Ltd built PBY-5 were delivered by April 1942.

By the end of April 1943, those twenty-eight had been dispatched from the USA by sea or air, with another five being prepared within the next month. The OTU would also increase its establishment figure from three to twelve (9 x IE/3 x IR) from March 1943. As more Catalina's arrived, a further two Squadrons would be raised in 1943; No 42 and No 43 Squadrons with establishment of twelve aircraft (9 x IE/3 x IR).

A24-60 ex BuNo8404 as delivered to Cairns July 1943 to 20 Squadron RAAF, and coded RB-N.

Meanwhile the single Fleet Co-operational Squadron establishment, No 9 Squadron RAAF, was maintained at eighteen Walrus Amphibians (12 x IE/6 x IR) with regular supplies ex United Kingdom.

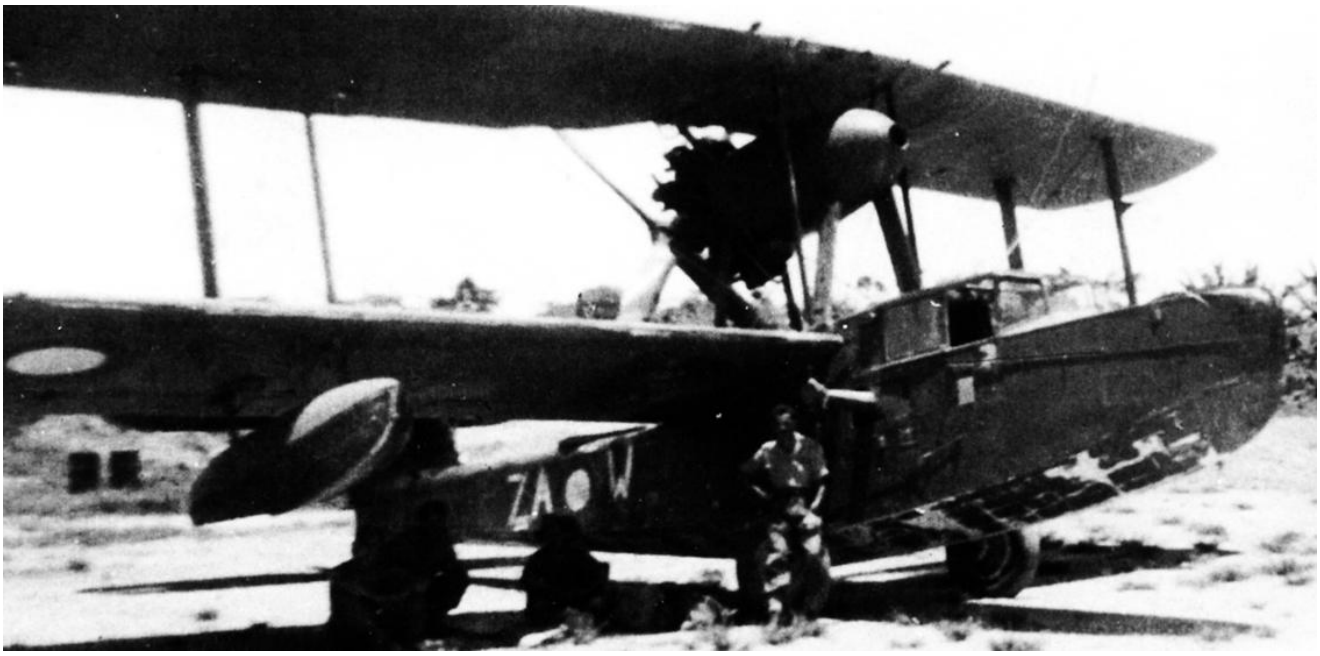
The supply of Walrus replacements for RAAF Seagull V and Walrus lost through attrition during the first two years of war was compounded by urgent requirements to replace the Royal Navy and RAF Walrus losses up to 1941, first. The single source production from a stretched single company; Supermarine, ensured that it was difficult to maintain the attrition supply. Saunders-Roe Ltd would be tasked with opening a second production line for Walrus, with the first delivered in May 1941.

However, a snapshot of July 1943 showed only ten (3 x Seagull MkV and seven x Walrus) on strength of No 9 Squadron RAAF. Even so, some thirteen Walrus aircraft were requested by the RAAF for delivery for 1942, but only three were dispatched by March 1942 due to the entry of Japan into the war.

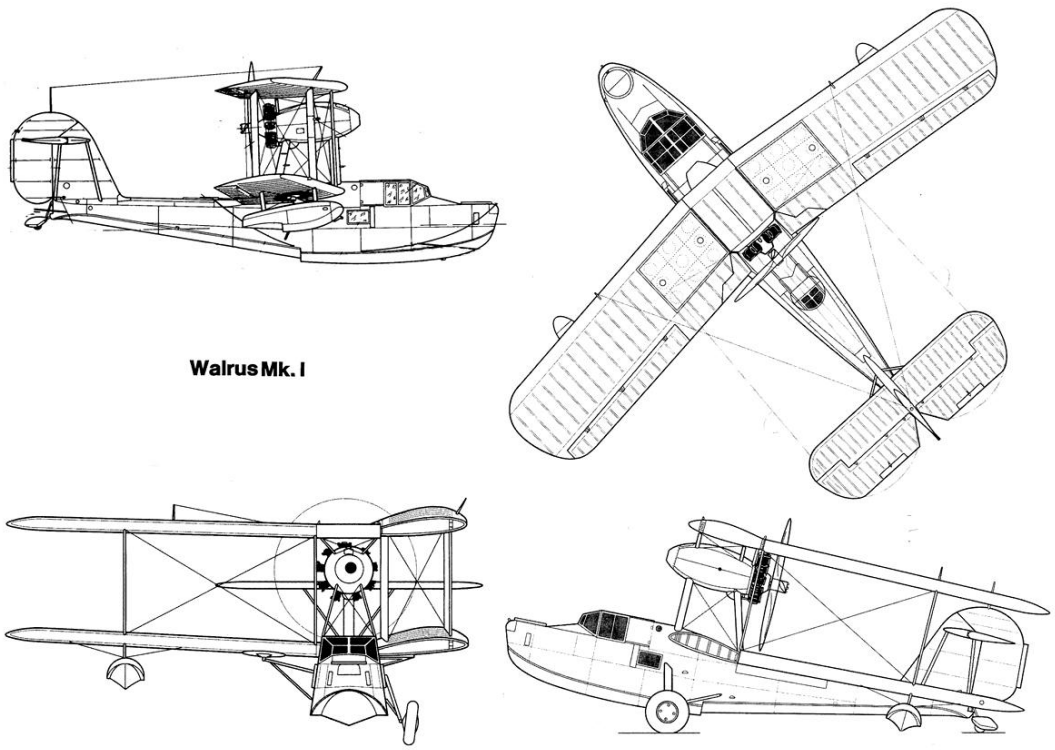
These would merely offset only some of the attrition incurred from November 1941 to March 1942. However, supplies resumed from late 1942 and were completed by April 1943. Additional single aircraft flights were also added and used in Communication Units (No 5 Comms Unit had a single Walrus, W2705 KF-A, on strength in July 1943).

By 1944, the issue was mute as the aircraft would be withdrawn from the RAN Cruisers (Four single aircraft flights) as they were considered obsolete. They were by that stage, generally replaced by radar then installed on the RAN Cruisers and by the abundance of land based Catalina coverage. Another twenty-two were held either in maintenance or service, or pending write-off. The Survivors would continue to prove sterling service in Communications and Air Sea Rescue Flights until the arrival suitable replacement types and in the later role, of assigned Catalina ASR Flights in 1945.

Seagull A2-6 YQ-J of No 9 (Fleet Co-op) Squadron



No 8 Communications Unit's Walrus P5664 (?) ZA-W



Heavy Bombers 1942-1943

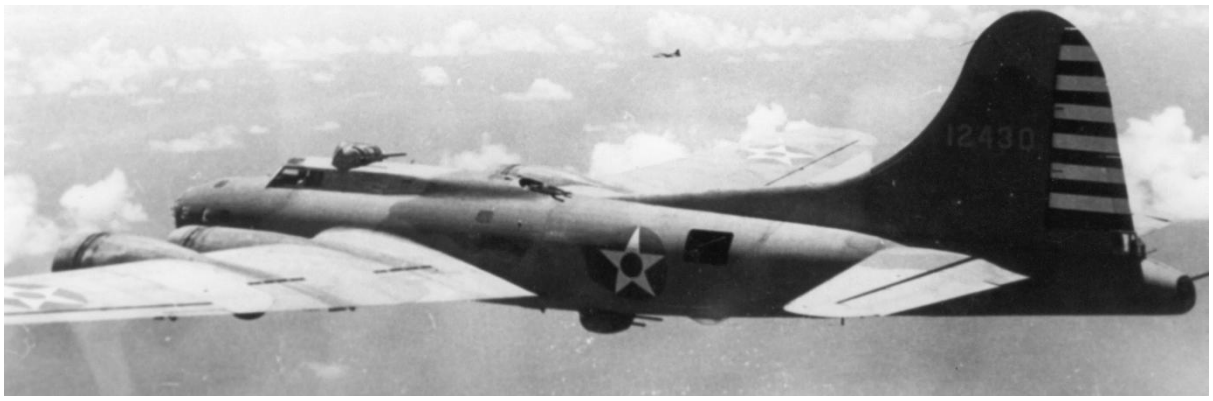
In late 1941 and early 1942 in the face of overwhelming advances by the Japanese in Malaya, Netherlands East Indies and locally in New Britain, the need to reconnoitre and then strike back at the enemy's air and sea bases to thwart the gathering of enemy bombers and ships that posed a threat to Australia and its Territories, became a concern.

The only operational RAAF land based bomber, the twin engine Lockheed Hudson, just did not have the range to strike that far. Two Aircraft were fitted with long range tanks and would reconnoitre some of those possible targets (A reconnoitre *to the main forward Japanese Naval Base in Truk from flown from Rabaul in mid January 42, before the RAAF Base was lost on the 21st January 1942)*

The RAAF Catalina, the only surviving aircraft in its dwindling inventory with the range and bomb load that continued to bomb and harass under the cover of night the Japanese forces in Rabaul, New Britain was the only RAAF aircraft that could reach the target with an appreciatable bomb load.

During the first fortnight of February 1942, word was received that a squadron of twelve USAAF B-17E Bombers was being released from the Hawaii Air Defence Command (HAD) for use in Australia.

Through misleading, fragmented and the vagueness of communications between the USAAF Far East Air Force (formally based in the Philippines, but now centred in Java under ABDA Command), the RAAF received a cablegram from the RAAF Liaison, London, on the 15th February 1942 stating that these aircraft were to be diverted and ferried to Australia, with its ground crews conveyed by US Navy flying boats.



B-17E 41-2430, 88th RCS, 7th BG (Attached 19thBG till March 1942) photographed on the first mission to Rabaul.

It was stated in the cablegram that these twelve B-17E aircraft were to be replaced in USAAF Inventory by a similar number of British B-17E "Fortress Mk 1A" Allotments, previously destined under Lend Lease to equip an RAF Coastal Command Squadron. These twelve transpacific B-17Es were in fact owned and operated by the 7th Bomb Group, USAAF, previously held in Hawaii for two months following the bombing of Pearl Harbour for seaward patrols. Originally they were destined to form a second Bombardment Group in the Philippines alongside the 19th Bombardment Group back in December 1941.

Twenty plus of this Group's B-17Es and LB-30's had in fact arrived in Java after ferrying across the Project X Africa Route via India during the period January to February 1942. Others had arrived via the Project X Pacific Route, recently opened after Island Strips were completed and protected by deployed P-39D aircraft (Canton/Christmas/Fiji/New Caledonia) following the loss of the original route via Wake Island and Guam. So they were not, by USAAF account, to be ours.

In mid February 1942, the RAAF had already stated to the Air Ministry (UK) that it would accept a squadron of Liberator Mk1A Bombers (LB-30) if offered, providing there were further deliveries ex RAF as they become available. Unit equipment for our first squadron would be for twelve aircraft (9 x IE/3 x IR).

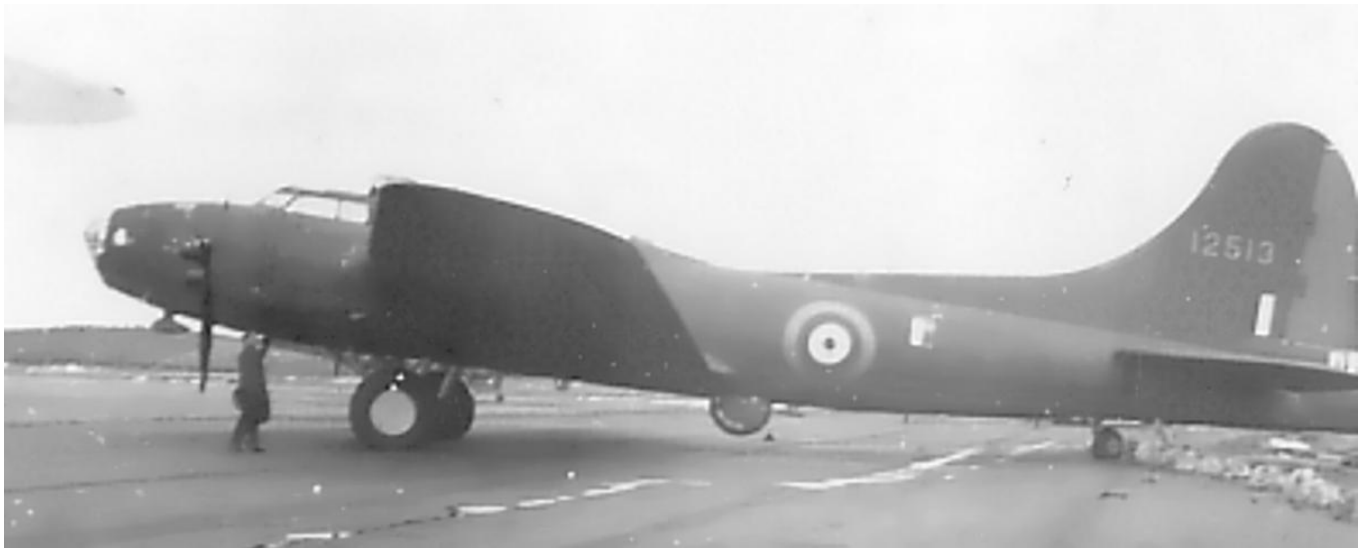
RAF LB-30A Liberator

This requirement would be foregone however, if eighteen C-53 type transports, now in dire need to ferry supplies within SWPac theatre, would be diverted in their place, with the first batch of six hopefully arriving in March 1942, and the last of the required eighteen by April 1942.

Neither requested Heavy Bomber/Transport Types ex UK or USA happened in 1942, mainly due to emergent requirements in other theatres, including the Battle of the Atlantic, whereupon all long range four engine American types in RAF Service or on order (Lend Lease B-17E/Fs and B-24D's) were required by the RAF Coastal Command.

Up to this stage, pre- 1941, aside from direct contracts on North American Aircraft Companies (IE: first 100 Hudsons from Lockheed Aircraft Company / the first 18 Catalina's from Consolidated Aircraft Company), the remaining aircraft supplies had come directly ex United Kingdom as allocations on British Purchasing Commission Contracts or supplied ex Air Ministry(UK) via EATS (Ansons, Battles and Oxfords)or part of Direct RAF Contracts (No 21 Squadron RAAF's Brewster Buffalo/ No 10 Squadron Sunderland aircraft) and diverted.

Prior to the entry of the Japanese in to the war, Britain, under Lend Lease Act of 1941 was to receive some 43% of North American Aircraft Production under the Arnold-Portal Agreement. This changed to a case by case allotment following the 8th December 1941. This conflagration of who to place orders with would not be ironed out in full until August 1942 when Australia became a Lend Lease Customer. As part of the RAAF intermediate plan of forty-five Squadrons subject to the Seventy-One Squadron Plan attained, a total of nine Heavy Bomber Squadrons were to be formed out of a inventory of two hundred sixty-one aircraft (Including ninety-nine Reserves), with a requirement of at least twenty aircraft to be supplied each month to maintain establishment strengths.

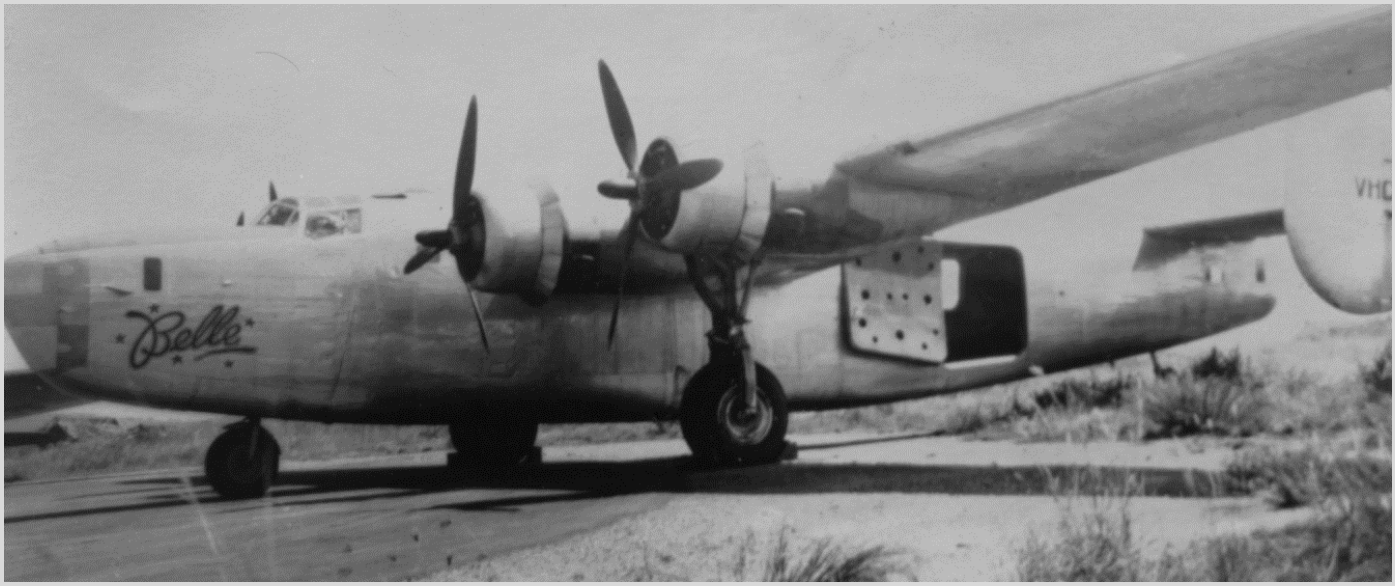


One of the same: B-17E 41-2513 pre-delivery in standard USAAF Scheme February 1942 and later in RAF Coastal Command became FK184 late 1942[92]. Possibly, had the Atlantic Convoy War had not heated up, her and a few sisters may have become RAAF Diversions of RAF Lend Lease Contracts. NB: The Bendix Remote Belly Turret replaced from B-17E 41-2506 onwards, and retrofitted on some earlier surviving models of the 19th BG in Australia.

An initial order under Overseas Indent 2026A for one hundred and forty-three B-17E type Four Engine Heavy Bombers (RAAF Stores number, A26) was requested by February 1942, having been forwarded through the United Kingdom as allocation diversions on existing British Purchasing Commission Lend Lease Contracts[93].

Had it gone forward from late 1942, No 6 Squadron RAAF was to be converted as our first Heavy Bomber Squadron by December 1942, due to the drying up of Hudson Mk 111 aircraft held in establishment[94].

However, it would be early 1944 when the first four engine Bombers arrived to form Heavy Bomber Squadrons in the RAAF in the shape of B-24J/L and Ms. More surprisingly, these Heavy Bombers would be used to replace the Vultee Vengeance Dive Bomber in front line service.



One LB-30 did operate in the RAAF in the SWPac; ex 7thBG/ 19thBG AL570 by No 36 Sqn RAAF

***Re-visiting an Old Friend*: The Wirraway Position: 1943-1944**
Advanced Trainer/Fighter/Dive Bomber and Army Co-op Aircraft

The last of Six-hundred and twenty-two Wirraways ended on the 21st June 1942 when the production of the Wirraway Interceptor, the Boomerang, commenced series production.

The production of the later also spelt the end of a proposed agreed production of some two hundred and fifty EATS funded Wirraway trainers from mid 1942.

It was felt that sufficient Wirraway aircraft for establishment and wastage was adequate for the gap before production restarted in late September 1943 on the completion of the intermediate Boomerang Interceptor, then capped at two hundred aircraft.

At the time of this decision in March 1942, some eighty-three airframes had already been lost, either through training wastage or by operational loss. Another seventy-nine were to be produced and delivered by the time Boomerang Series production started. A request for two hundred and fifty Wirraway CA-16s to follow-on from the conclusion of the Boomerang was approved. It was anticipated that a total of eight Hundred and seventy- two were to be built by December 1946.

This was to take Establishment and wastage requirements out to the end of 1946 with a surplus held of one hundred and fourteen airframes. *This included a further one hundred and eight Wirraways that was considered in 1943, subsequently reduced to one hundred, with a production break clause should conditions or requirements change.*

The first of an eventual one hundred and thirty-five Wirraway CA-16 Attrition airframes to be delivered to the RAAF, A20-623, was delivered on the 23rd November 1943 to 1AD before serving in No 5 Service Flying Training School.

At this juncture, previously some two hundred and twenty-two Wirraway airframes had been struck off charge for a variety of reasons. (5SFTS *A20-152 pictured July 1944 after a bird strike*)

Unit (June 1944)	Establishment				
Training		**Operational Use**		**Reserves**	
No 5 SFTS	135	16 x Fighter Squadrons @2 each	32	Maintenance Reserve @ 10%	43
No 7 SFTS	135	No 4 Sqn Army Co-Op	6	Reinforcement for No 4 Sqn AC	2
Central Flying School	22	No 5 Sqn Army Co-Op	3	Establishment Total	**430**
Air Armament and Gas School	6	Sub-total	**41**	Sub-total	**45**
Central Gunnery School	2	**Miscellaneous Units**		**Total Establishment and Reserves**	**475**
Parachute Training Unit	1	No 1 PRU	1	Wastage for twelve months	85
School of Army Co-op	7	Air Performance Unit	1	**Grand Total**	**560**
No 2 Operational Training Unit	4	No 1 Aircraft Depot	2		
No 8 Operational Training Unit	67	No 2 Aircraft Park	1	On Hand 08/06/1944	411
Sub-total	**380**	No 3 Communications Unit	1	On Order ex CAC yet to be delivered	223*
* 135 + 15 +100 contracted minus 27 delivered since Sept 43 = 223		No 9 Communications Unit	3		634
		Sub-total	**9**	**Surplus 1946**	**-85**

The end of the war would reduce this production run to one hundred and thirty-five, along with completed components to produce a further fifteen Wirraways that were never assembled or delivered.

The last Wirraway CA-16 to be built and delivered, A20-757, was received ex CAC and went straight into 1AD Storage at Tocumwal on the 12th July 1946.

Document Sources: [95]

Old and new post war schemes,...Wirraways with another 15 years of service to come.

Author Note: Next Parts in the future; will include Transport Aircraft: 1942 to 1945, and the Period 1944-1947.

Operation Pakistan Assist; Blackhawk in Central Asia 2005 @ Gordon Birkett 2018

Over the past decade it has been often questioned as to the reasons or assumed limitations why the Australian Aviation Regiment's S-70A9 Blackhawks were never used operationally in Central Asia (specifically Afghanistan).

There were good reasons why that was so,...from leveraging on emplaced US Army or Marine Aviation Assets that were more specifically equipped for the Special Forces Roles that could support our SOTG Rotations in singular or joint operations, or perhaps because of the agreed niche roles we played with our Deployed Forces under Task Force 633, that would not warrant our own centric Aviation Assets, aside from embedding two CH-47D+ aircraft from "C" Squadron, 5th Aviation Regiment in theatre. However, four Australian Army Blackhawks have indeed served nearby in Pakistan in 2005-2006 in simular environments under command of Task Force 632.

On the 8th October 2005 a devastating earthquake sent a shock wave through South Asia. Some seventy-three thousand lives were lost, with a further seventy thousand plus injured in an area surrounding the Dhanni Region in Pakistan, including the City of Muzaffarabad. The United States and several other countries offered and sent urgently help in the form of Medical teams, and to aid transportation and logistical support, Aviation Units.

On 11th November 2005, the Australian Defence Force (ADF) deployed a contingent of medical specialists to provide medical assistance to the people of the Dhanni region.

Its allotted Aviation Support, in the form of four Blackhawk Helicopters from "B" Squadron, 5th Aviation Regiment, were tasked, then broken down, prepared and transported in two AN-124 Transports from Townsville on the 16th November 2008 to Islamabad.

Delivered at Islamabad, A25-222 is towed backwards towards the reassembly point where A25-112 gets its other two Blades attached.

Here they were unloaded and ferried over to Qasim Army Air Base, on the outskirts of the City of Rawalpindi to commence disaster relief on assembly with daily tasking made by the Disaster Assistance Centre, Pakistan (DACPAK), under the Radio Call Sign:"Gasnavi"[96].

Two Blackhawks were tasked and airborne in pairs thereon, which continued throughout the entire deployment.

Under Operation Longreach, they were in support of the Australian Joint Task Force 632 (with the main ADF Medical base located at Camp Bradman near the village of Dhanni, Pakistan); however, they also provided support to Operation Outreach, supporting the US Army's 212 Mobile Army Surgical Hospital (MASH) moving teams to outlying areas.

Another effort, this time in aero medical evacuations was also provided during daylight hours. This resulted in some forty-two missions. Added further in the mix were VIP Transportation Flights and United Nations Joint Logistical Centre Flights, and United Nations Humanitarian Aviation Services.

Developed Shuttle services soon gained the nickname “Eagle Express”. Soon after arriving, all aircraft soon adored in the Australian Flag on their engine cowlings and, a Boxing Kangaroo Artwork on the both pilot’s doors. (Artwork done by Cpl Tony Ebdon (Fitter 5AAV))

Australian medical personnel receive a safety and procedural briefing, prior to their practical winch training, from Trooper Bradley Shelton (left) of 5 Aviation Regiment.

Helicopter maintenance crews always are first out of bed -- often long before first light -- and among the last to cease work for the day. They work throughout the day, inspecting, refuelling and maintaining aircraft after each sortie. Late into the night after the last flights have landed, the maintenance crews keep working to prepare aircraft for the next day of flying. They check and double-check maintenance to the highest standards to ensure that aircraft were safe and able to fly on schedule in the mountainous terrain of northern Pakistan and Kashmir.

The Serviceability Rate was therefore near 100% throughout the deployment, a testament to those maintenance crews who looked after all four deployed Blackhawks (**A25-112/219/222/225**).

On 8th March 2006, the Australian Medical contingent departed and returned to Australia after completing a successful primary health mission. During their deployment ADF personnel had successfully treated nine thousand and fifty-four patients and had put in place an immunisation program for the children of the Dhanni Region.

The Chief of the Australian Defence Force, Air Chief Marshal Allan Grant "Angus" Houston, in January 2006 visited the men and women deployed on Operation Pakistan Assist

The Black Hawk Helicopters and supporting elements remained to continue with humanitarian aid, until they were withdrawn and broken down for air shipment back to on 8th April 2006. They arrived home on the 9th April 2006 at Garbutt RAAF, Townsville after some five months (Some 878.5 Hours flown by all four Blackhawks) of operations.

Serial	C/n	History
A25-112	70-1067	20/05/89 - first flight.27/05/89- Delivered to 5 Avn Regt. 13/07/89 - Manbullo N T - in service with "A" Sqn, 5 Avn Rgt.10/07/01 - RAAF Amberley QLD.11/05 - RAAF Townsville QLD in service with 171 Sqn, 5 Avn Rgt. 22/02/06 - Muzafferbad, Pakistan during humanitarian duties following an earthquake in October 2005. An Australian Flag was painted on the Starboard engine intake and a yellow boxing Kangaroo wearing red gloves also painted on the Starboard cockpit door. 21/10/06 - Bankstown NSW.12/11/06 - embarked aboard HMAS Kanimbla during Peacekeeping duties off Fiji.21/03/07 - Avalon VIC Air show 20/11/2009 - Noted with 6th Aviation Regiment on counter terrorism exercise Brisbane CBD 08/2014 - Named "Saracen"
A25-219	70-1410	30/08/90 - first flight. 11/09/90 - Delivered to 5 Avn Regt. 1/10/91 - RAAF Richmond Air show. 07/03/02 - Bundaberg QLD - in service with 5 Avn Rgt. 24/06/04 - RAAF Williamtown NSW. 10/11/05 - RAAF Townsville QLD - Tech Support Section, 5 Avn Rgt. 23/02/06 - Muzafferbad, Pakistan during humanitarian relief duties following the Oct 2005 earthquake. An Australian Flag was painted on the Starboard engine intake and a yellow boxing Kangaroo wearing red gloves also painted on the Starboard cockpit door. 8/03/09 - RAAF Point Cook VIC. 12/08/09 - RAAF Richmond NSW; being deployed to PNG to assist in the search for a missing Twin Otter near Kokoda. 08/2014 Named "Harlequin"
A25-222	70-1427	24/10/90 - first flight. 08/11/90- Delivered to 5 Avn Regt.10/05/99 - RAAF Pearce W A - in service with 5 Avn Rgt. 0/07/01 - RAAF Amberley QLD. 2/03/05 - Avalon VIC Air show. 10/11/05 - RAAF Townsville QLD in service with "B" Sqn, 5 Avn Rgt.11-12/2006 - Muzafferbad, Pakistan during humanitarian relief duties following the Oct 2005 earthquake. An Australian Flag was painted on the Starboard engine intake and a yellow boxing Kangaroo wearing red gloves also painted on the Starboard cockpit door. 17/10/06 - Coolangatta QLD. Named "Sabre"
A25-225	70-1444	14/01/91 - first flight. 30/01/91 - Delivered to 5 Avn Regt.20/08/00 - Hervey Bay QLD - in service with 5 Avn Rgt. 23/03/03 - Alice Springs N T. 16/03/05 - Avalon VIC Air show. 10/11/05 - RAAF Townsville QLD in service with "B" Sqn, 5 Avn Rgt. 23/02/06 - Muzafferbad, Pakistan during humanitarian relief duties following the Oct 2005 earthquake. An Australian Flag was painted on the Starboard engine intake and a yellow boxing Kangaroo wearing red gloves also painted on the Starboard cockpit door. Named "Bold"

Here in 2018 ...the Blackhawks still soldiers on.

During 2014-15, the operational fleet was reduced to 18 aircraft and optimised to ensure that the smaller fleet provides the required level of operational availability until Black Hawk is replaced by the MRH90 in SOCOM.

Now operated by the 171st Aviation Squadron and 173rd Aviation Squadron in the 6th Aviation Regiment, SOCOM, based at Holsworthy Army Barracks at Luscombe Field, NSW, most if not all operational Blackhawks were updated several years ago with RHAWS and ECM[97]. Pictured here is A25-206.

Two further 6 Aviation Regiment Blackhawks are A25-219 and A25-225[98].

As for A25-112, she was the first Blackhawk to be 3D scanned! [99] *Note Pictures are all ADF*

The first “in flight” F-111 Capsule Ejection by Gordon R Birkett 2017

By courtesy of “Mac”

On the 19th October 1967, two General Dynamics Contractor Crew Members performed the first Successful emergency Module Ejection from an F-111A Aircraft in flight, high over Texas[100].

Test Pilot Dave J Thigpen (USN Reserve[101]) and Flight Test Engineer Max Gordon (USMC Reserve)were performing load tests on the speed brake at 39000 feet at Mach 1.77 when the speed brake slammed shut, causing hydraulic problems that eventually lead to a loss of control. The Aircraft crashed and exploded in Jacksboro, North Texas. A few short minutes earlier at 27640 feet and at 288 knots(480mph) air speed, both crew members escaped the impending crash, not from wearing a parachute or using an ejection seat, but for they utilised for the first time, a McDonnell Aircraft Corporation designed, developed and produced environmental protection system.

Initial sled testing with a dummy was carried out in the early sixties: Credit: McDonnell Aircraft Corporation[102]

The development of the high-speed F-111 aircraft caused the need for an improved egress system. The USAF wanted tandem seating, while the USN wanted a side-by-side seating for improving crew co-ordination sharing the large radar display to launch missiles (like the A-6 Intruder, which had side by side seating, but conventional ejection seats). The reason the ejection capsule was included was that USN believed that it would give better chances of survival in case of ejection over sea (where it was to function as a life raft) and in high speed ejection.

The crew module escape system is made up of many systems which work together during an ejection.

These systems can be divided into three categories: pre-ejection, ejection, and post-ejection. The pre-ejection category consists of the ejection initiators, guillotines, emergency oxygen, mechanical explosive interrupt, a radio beacon, a 3.0-second TDI, chaff, and a .35-second TDI.

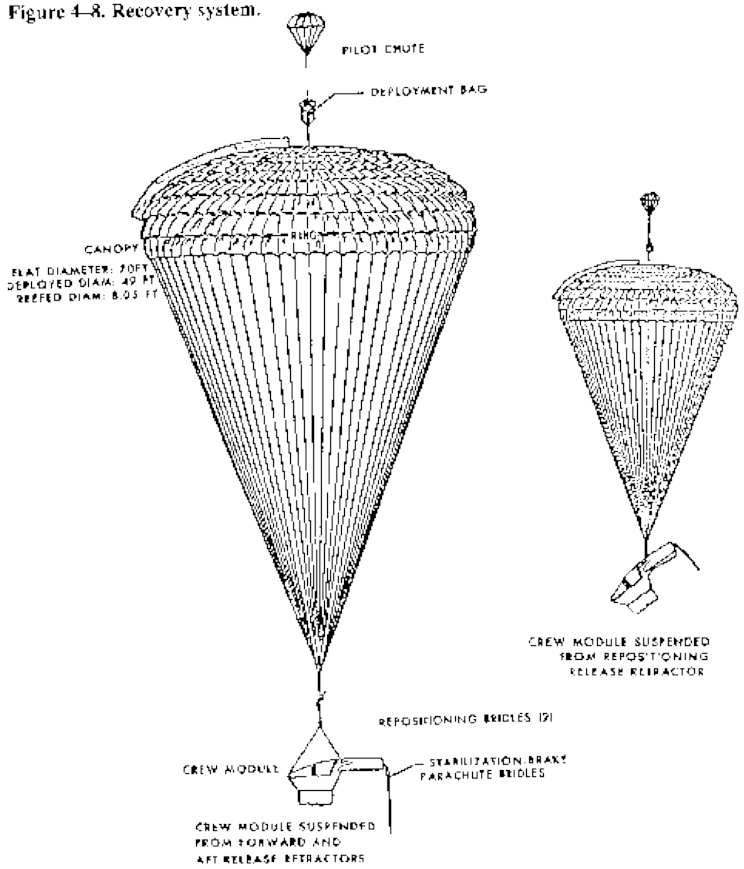
An ejection initiator on each side of the centre console is within easy reach of both crewmembers and permits either crewmember to start the crew module ejection sequence. The following events then occur.

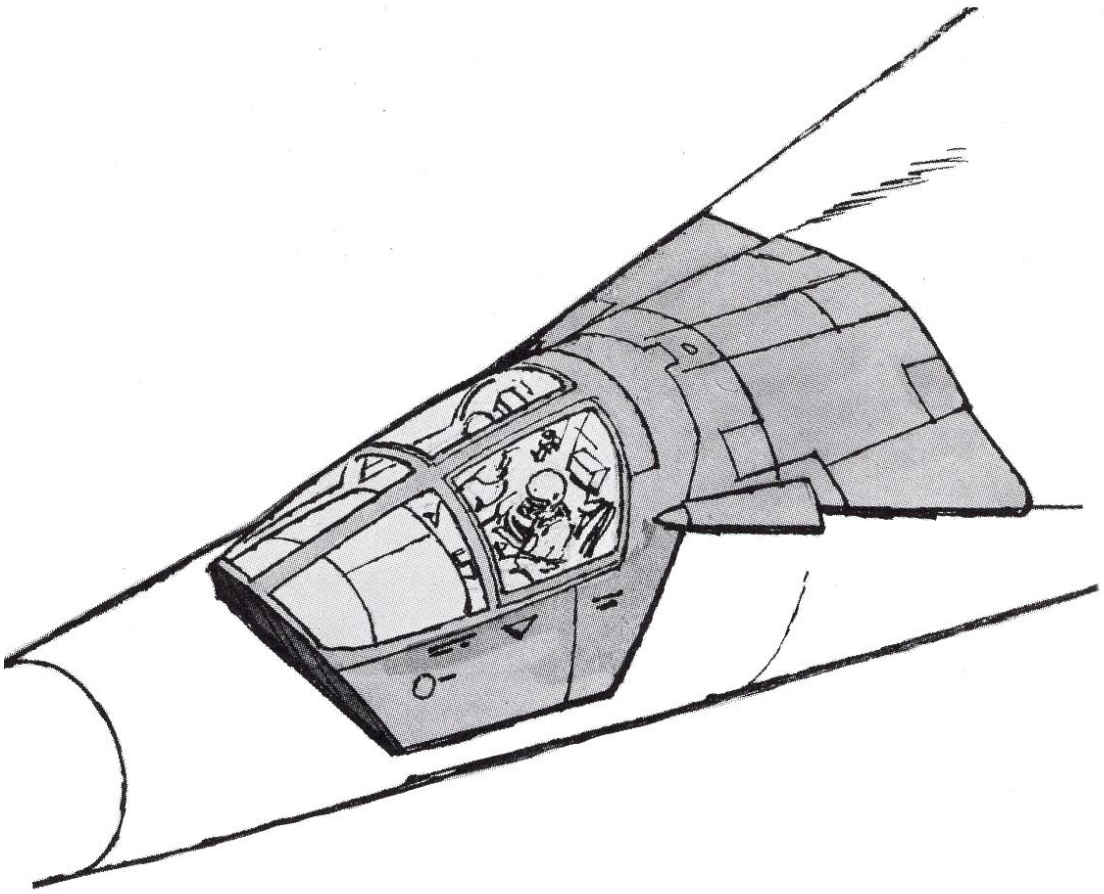
1. Both powered inertia-lock retraction devices fire to retract the upper restraint harness restraining the crewmembers.

2. The secondary controls guillotine is actuated to sever secondary control cables and the normal oxygen hose, the blade antenna leads guillotine is actuated to sever the coaxial antenna leads, and the leading edge antenna leads guillotine is actuated to sever the leading edge antenna leads in the wing.
3. The emergency oxygen system is activated.
4. The propagation of SMDC continues to the mechanical explosive interrupt which allows or stops the propagation as the crewmember desires. If the unit is closed then propagation is stopped. The chaff dispenser and emergency radio beacon are not activated. If the unit is open, then propagation continues and activates the emergency radio beacon and a 3.0 second time-delay initiator. The time-delay initiator gives the crew module time to clear the aircraft before it fires, actuating the chaff dispenser.
5. The 0.35-second time-delay initiator is activated. This time-delay initiator delays firing of the rocket motor and severance of the crew module until steps a through e have occurred. Severance. After an interval of 0.35 second, the time-delay initiator fires, causing the following events:
6. The 0.15-second time-delay initiator is activated delaying firing of the stabilization/brake parachute catapult until after the crew module has left the aircraft.
7. The rocket motor is ignited.
8. The backup SMDC to the guillotines, emergency oxygen system, and chaff dispenser is detonated. This portion of the system is provided in the event of failure of the SMDC when ejection is initiated.
9. The FLSC is detonated, severing the crew module mating devices from the aircraft and the stabilization/brake parachute severable cover from the crew module. At the same moment the FLSC severs the crew module from the aircraft, the 1.6 and 4.4-second time-delay initiators are activated. At this point, the dual-mode, q-actuated selector determines which route the SMDC takes. The q-actuated selector senses aircraft speed and determines whether the aircraft speed is above or below 300 knots so that it can select the appropriate time delay.
10. Separation. When the module is completely severed from the aircraft, the rocket propels the crew module up and away from the aircraft. After a 0.15-second delay, the stabilization/brake parachute catapult is fired and deploys the parachute.

By all accounts, if in the Capsule's parameters, the crew survives.

Figure 4–8. Recovery system.





Crew Module. For crew comfort and safety, the F-111 is equipped with a special crew module that essentially is a self-contained vehicle within the aircraft. Developed by McDonnell Aircraft Corporation as a subcontractor to General Dynamics, the module serves as an operating compartment for the crew. If required, it also can serve as an escape system and as a survival shelter.

The module is pressurized and air conditioned to permit the crew to operate in a "shirt sleeve" environment without pressure suits or other special flight clothing. If the crew is forced to abandon the aircraft, an explosive cutting cord shears the module from the airplane and a rocket motor powers it clear. It then parachutes to the surface where it can serve as a survival shelter on land or in the water. It can separate while the aircraft is under water, while the airplane is motionless on the ground or at any point in the aircraft's performance spectrum.

The RAAF's Pre Capsule Ejection Seat equipped F-111A

Our only F-111A that was equipped with two Ejection Seats. FY 63-9768 (The third Built) was delivered to Australia, but despite its historical significance, it was scrapped and buried at Swanbank near Ipswich by the RAAF in November 2011.

No more Ejections, but almost....could have been one more in the RAAF?

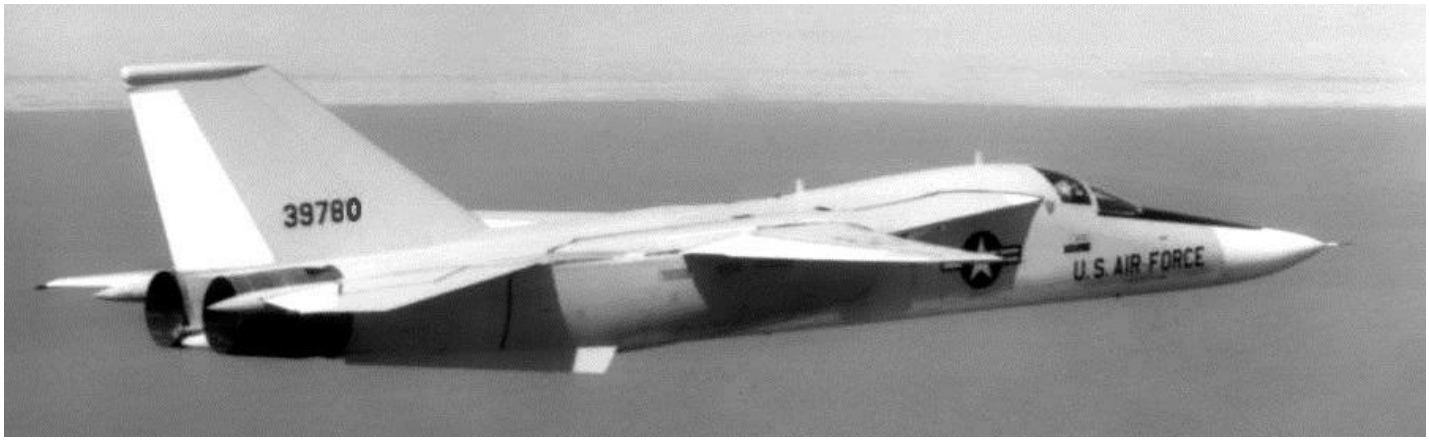
Possible last F-111 ejection could and would have by all account been performed on the 18th July 2006 when the RAAF's A8-143 of No 6 Squadron RAAF had lost its port main wheel after take-off.

After much discussion and a lot of simulator time checking the possibility of it, the decision was made, rather then abandoned the aircraft in flight, to perform a controlled belly landing. If it went awfully at any moment, the crew would use the Capsule Escape System (Renamed).

They successfully belly landed the Pig; a first and in doing so, sidestepped the possible last F-111 Ejection!!!

BTW: She never flew again!

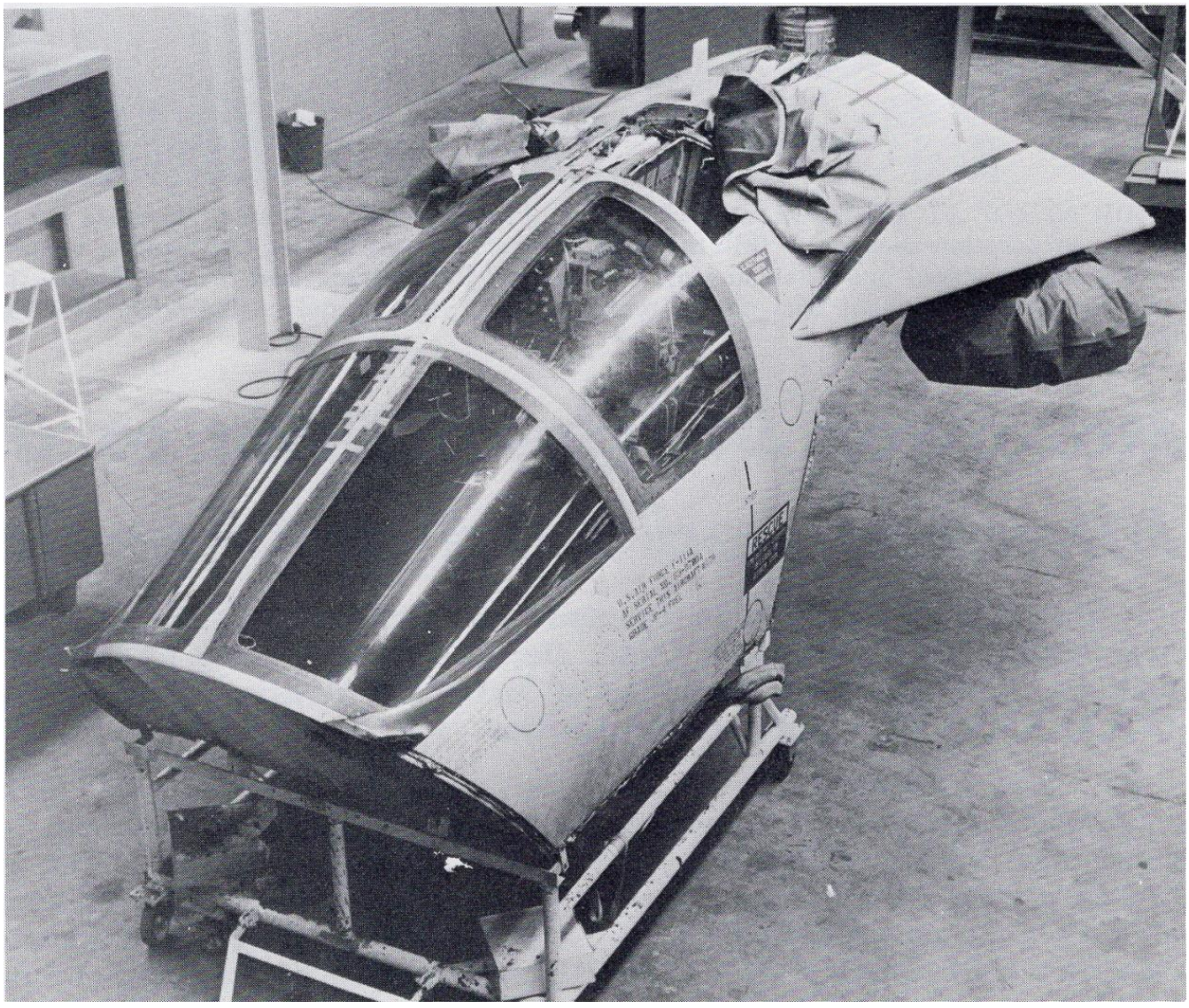
Back to the 15th Developmental F-111A, 63-9780.



A rendition of the said aircraft is shown. F-111A 63-9780 Vis GRB Slunk Works

They were flying supersonically at an altitude of 40000 feet when a malfunction occurred after some 55 minutes of routine Category 1 test flight. Test Pilot Dave Thigpen continues, *"It was soon obvious that we'd have to leave the ship, so I told Max to go ahead and pull the ejection handle, which he did"*

Linear shaped charges literally sliced the capsule away from the aircraft. Microseconds later, the capsule's rocket motor blasted the capsule and its crew from 300 to 500 feet upward in a high "G" arch.



The Module of F-111 63-9780, soon after its use.

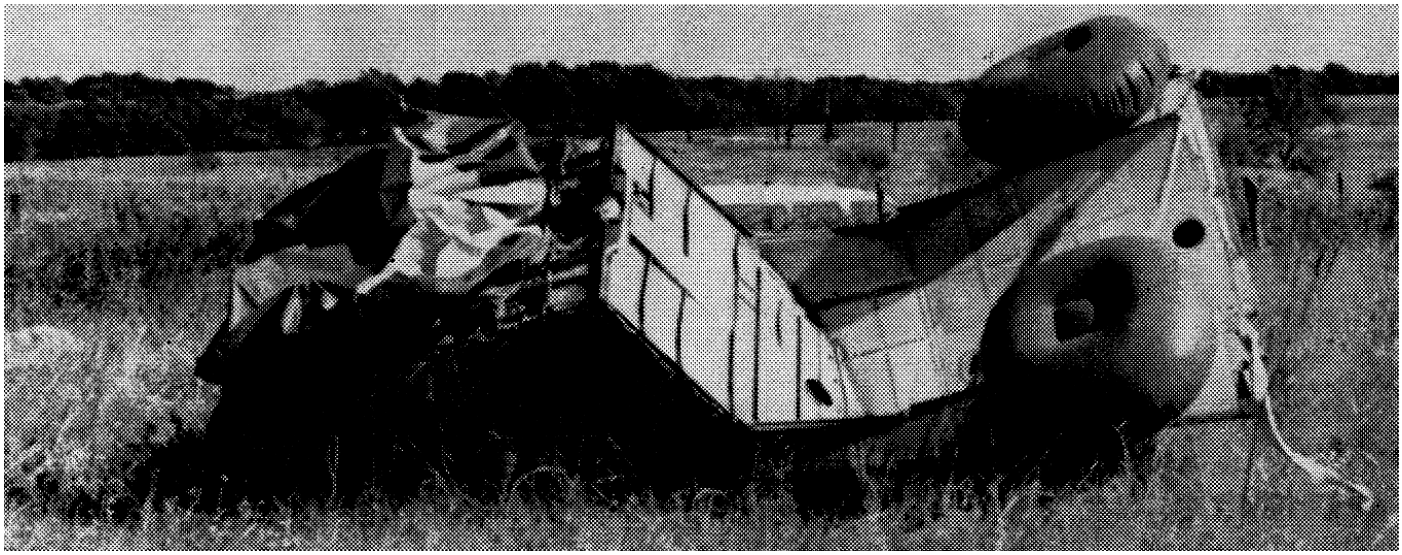
As the module entered the slipstream, a stabilization chute deployed. The Capsule then assumed an exciting, but not uncomfortable nose down attitude and free fell to 15000 feet.

Relieved when the main chute opened, Thigpen stated he gave thumbs up gesture to express his satisfaction, whereupon Gordon grabbed his hand and shook it.

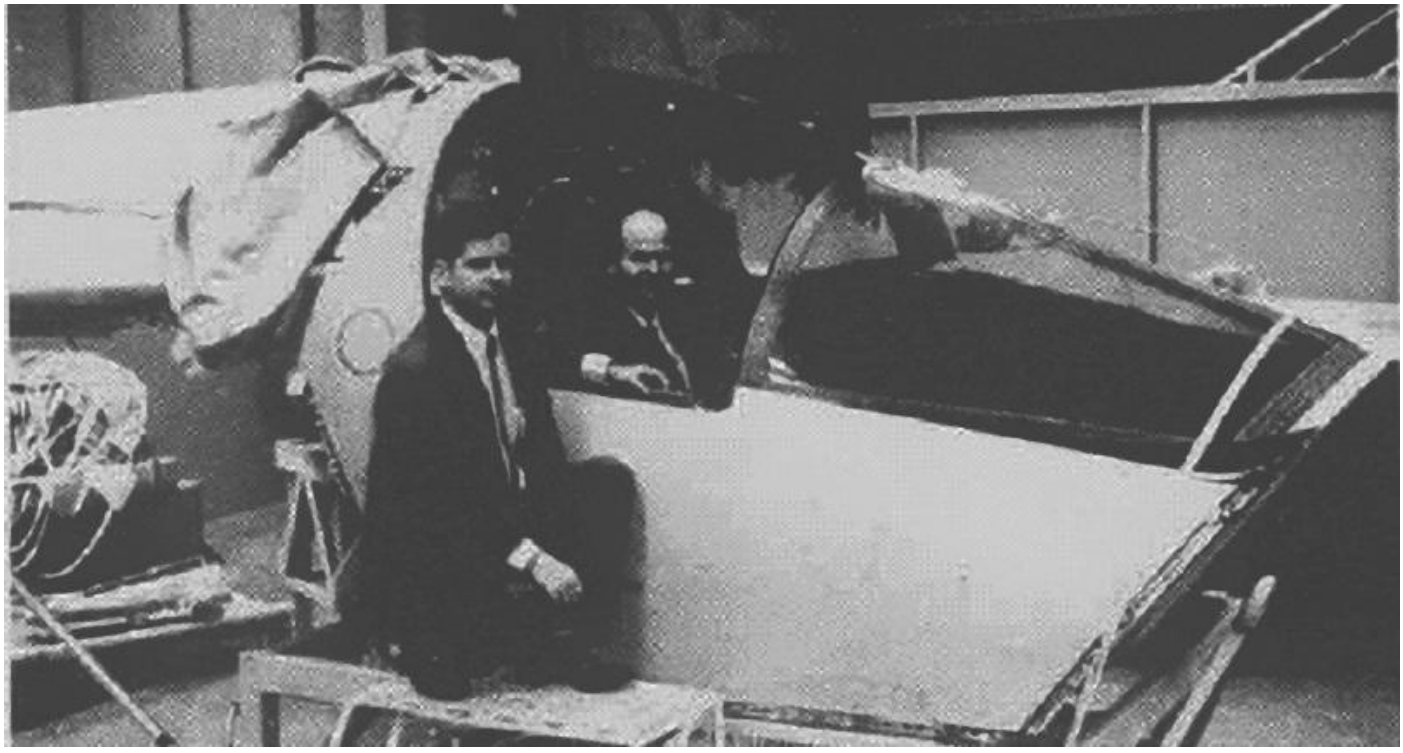
The opening of the giant main recovery chute (70 feet in diameter) happened, the impact attenuation bags deployed, and the repositioning of the capsule to the horizontal attitude was made smoothly. It was later described as being similar to a dip in a roller-coaster ride.

At this time, both crew members shook hands again. Then to clear the cockpit of residual smoke from ballistic system, they both opened their canopies and continued floating down under the main parachute. They landed, and the capsule rolled over to 130 degrees, as it drifted before the main parachute collapsed.

They had landed safe and well on a farm, 20 miles southwest of Bowie, in the west of Texas.



How it landed.



Some years after, a return visit by the crew to their life saving capsule.

The American Tigers: June 1942. Gordon R Birkett@2018

Pictured in colour, in the cockpit above is 2nd Lt Clyde "Smiley" Barnett, 8th Fighter Squadron, 49th Fighter Group.

A17-494 (DHA917 Eng# 540) was received at 2AD Richmond ex de Havilland Pty Ltd at Bankstown on the 18th May 1942, having been allotted previously to the 46th Air Base Unit, USAAF based at Daly Waters and Adelaide River (43rd Material Squadron) in the Northern Territory, on the 10th May 1942. Still with full November 1941 standard markings, it was issued to its USAAF ferry pilot on the 18th June 1942.

The aircraft was ferried up to Strauss Strip, Northern Territory for use as a "Hack" communications aircraft for the 8th Fighter Squadron of the 49th Fighter Group. It was used for search and rescue and crew flights.

A17-495 (DHA918 Eng#546) (pictured above)was also received at 2AD Richmond ex de Havilland Pty Ltd at Bankstown on the 15th May 1942, having been allotted previously to the 46th Air Base Unit, USAAF on the 10th May 1942. It was issued to its USAAF ferry pilot on the 18th June 1942.

So, along with A17-494, both of these were ferried up north. This particular aircraft was ferried up to Batchelor Strip, Northern Territory for use as a "Hack" communications aircraft for the 7th Fighter Squadron of the 49th Fighter Group. It too was used for search and rescue and crew flights. No further details as to their fate are at hand, or detailed uses, within the 49th Fighter Group are unavailable, sadly.

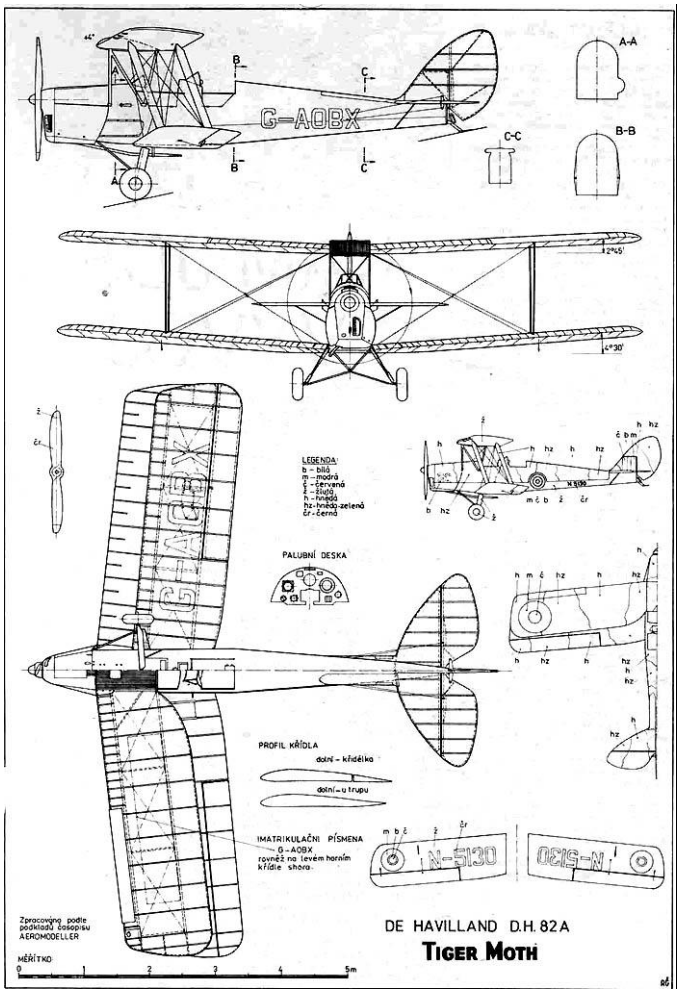
Several other de Havilland DH-82As were assigned, issued and used by the USAAF in Australia. These were painted and prepared in USAAF Colours and markings per below (*A rare picture of one at Garbutt, I think is DHA960 (refer end note), with a damaged Curtiss CW-22B and B-17F 41-24355, GRB Collection*).

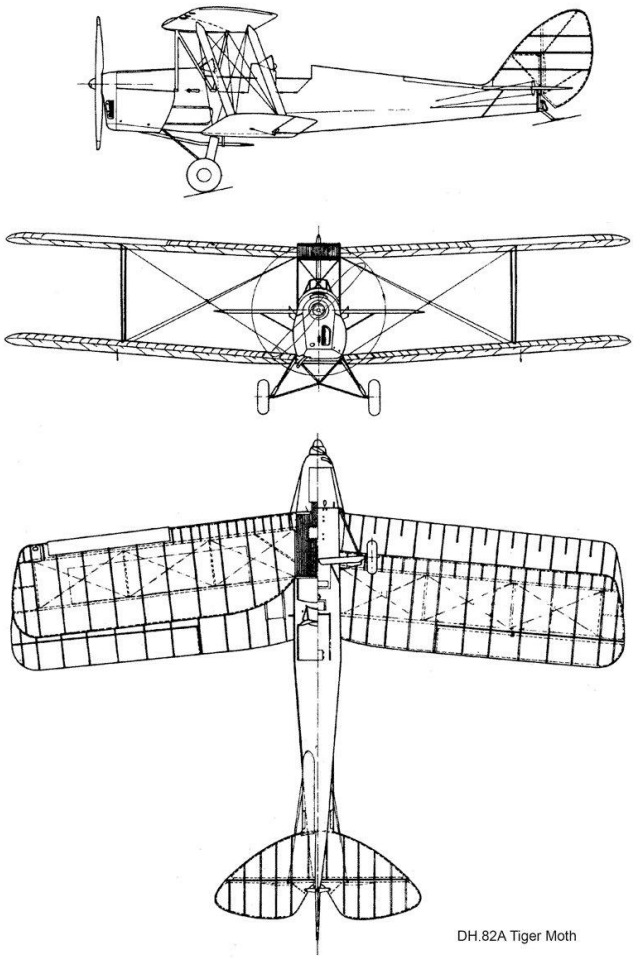
A further eighteen de Havilland DH-82As were issued to the USAAF, and actually wore full USAAF markings (Including "US Army" under wings) and Olive Drab/Neutral Grey schemes in Australia.[103]

One of these, DHA964, was used temporary by No 36 Squadron RAAF when based in Garbutt from the 7th August 1943, until it was returned back to the USAAF on the 3rd March 1944.

It was previously delivered to the 36th Air Base Group, USAAF, (49th Material Squadron) located at Tocumwal NSW, ex 2AD, on the 13th July 1942 as one of the first DH-82A under reverse Lend Lease aircraft by the Australian Government, (Eng#572) under RPV-135[104].

Another Townsville base Tiger picture below: Though perhaps not a USAAF Aircraft... photographed in late 1943 by an unidentified USAAF Serviceman. *Could it be the borrowed DH964 of No 36 Squadron RAAF or perhaps a No 5 Communications Unit Tiger without KF-* Codes applied?*





Curtiss Corner: P-40N-30-CU, A29-916 ex FY44-7297

The Aircraft was ordered on USAAF Contract W535-AC34423, under Project#41444.

This was the seventeenth of a Diversion 858-A (Aus 45) allotment of forty-five P-40Ns under RAAF Kittyhawk Indent 2270, vis RAF RFDA-322A. Marked in the factory with the A29 serial as A29-1331, with Block A29 numbers supplied by the Munitions Armament Commission (Air), it was shipped with fourteen other P-40N-30-CU aircraft (Including five NEIAF) on the *SS City of Yokohama*, ex New York.

It was renumbered as A29-916 from its MAC (Air) A29-1331 administratively on its created E/E88 Stores Card by 2AD, when the ship arrived in Sydney Harbour on the 17the July 1944.

The Aircraft was road transported to 2 Air Depot, based at Richmond NSW, on the 21st July 1944.

After test flying and running of its engine, it was delivered to No 15 Aircraft and Recovery Depot and placed in that Unit's Reserve Pool, pending allotment and delivery to an active Squadron, on the 29th August 1944.

Allotted and received at No 22 Repair and Salvage Unit's Reserve Pool on the 14th October 1944 pending allotment as one of attrition eight Reserve aircraft for one of the three associated Fighter Squadrons within its responsibility.

It was allotted and received at No 77 (F) Squadron RAAF as an Immediate Reserve aircraft on the 18th October 1944, with the Squadron Code of "AM" applied sans Individual code letter. *The unit was flying a mix of P-40N-25-CU (twelve) and P-40N-30-CU Versions (fourteen), with one Wirraway (A20-623, the first 1943 production run CA-16 Wirraway built) at the time.*

Used first "operationally" by the squadron 0730hrs 21st November 1944, when on a scramble with Pilot Officer C F Fivash Serv#54808 (The No 77 (F)Sqn RAAF Photographic Officer), on a search following a SOS report, vectored 000degrees North, some 35 miles from Kornasoren, with A29-921, piloted by F/Lt W.E. Miller Serv#416029, leading.

An Oil patch was located, along with a Naval dingy floating a mile from the oil slick. They landed at 0905hrs. Following the loss of A29-909, the aircraft became AM-R within "B" Flight.

Flying Officer C F Fivash Serv#54808 (The No 77 (F) Sqn RAAF Photographic Officer) later in "Norma", A29-908 AM-O

It was first used operationally on an eight aircraft bombing mission on the 3rd December 1944, being a water craft sweep from Sorong to Samate, again piloted by Pilot Officer Fivash.

Last flown operationally on a patrol over the Noemfoor area, on the 31st January 1945, by P/O Scott, the aircraft was due for its first major service. Received by No 22 Repair and Salvage Unit ex 77 Sqn RAAF, on the 14th February 1945, it was returned on the 25th March 1945 to the squadron.

Its second squadron service was short lived. Accident 1315hrs 14th April 1945, following the aircraft, then on a ferrying flight from Noemfoor to Wama strip, Morotai; whereupon on landing, the aircraft was being taxied to the service bays when on the R/T, the control tower told pilot to keep moving.

The pilot of A29-902, who mistook the radio call for him to move on, throttled his aircraft up and moved forward. Realising that A29-916 was stationary after viewing his port side of the canopy, he yalled to the right to overtake it, but it was too late. He collided with A29-916, resulting in his spinning propellers chewing the rear end of the aircraft, which continued the action almost up to the cockpit.

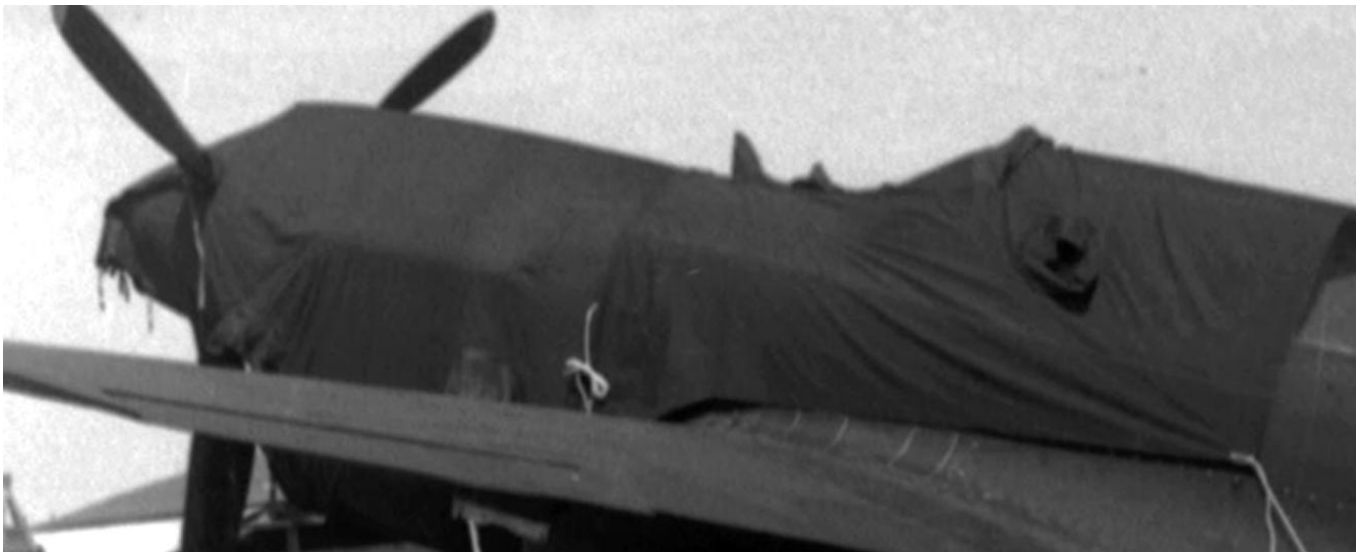
The R/T Call was in fact for A29-916's pilot to hurry up, not A29-902's pilot. The pilot of A29-902; W/O A R Proudfoot Serv#412266, was not injured. However, the pilot of A29-916; F/Sgt Gillian Serv#430806 did receive minor injuries.

The remains were received by No 14 Repair and Salvage Unit on the 6th May 1945 after AMSE Approval to Write-off per File#9/16/2535 was approved on the 4th May 1945. Conversion was completed by the 15th May 1945.

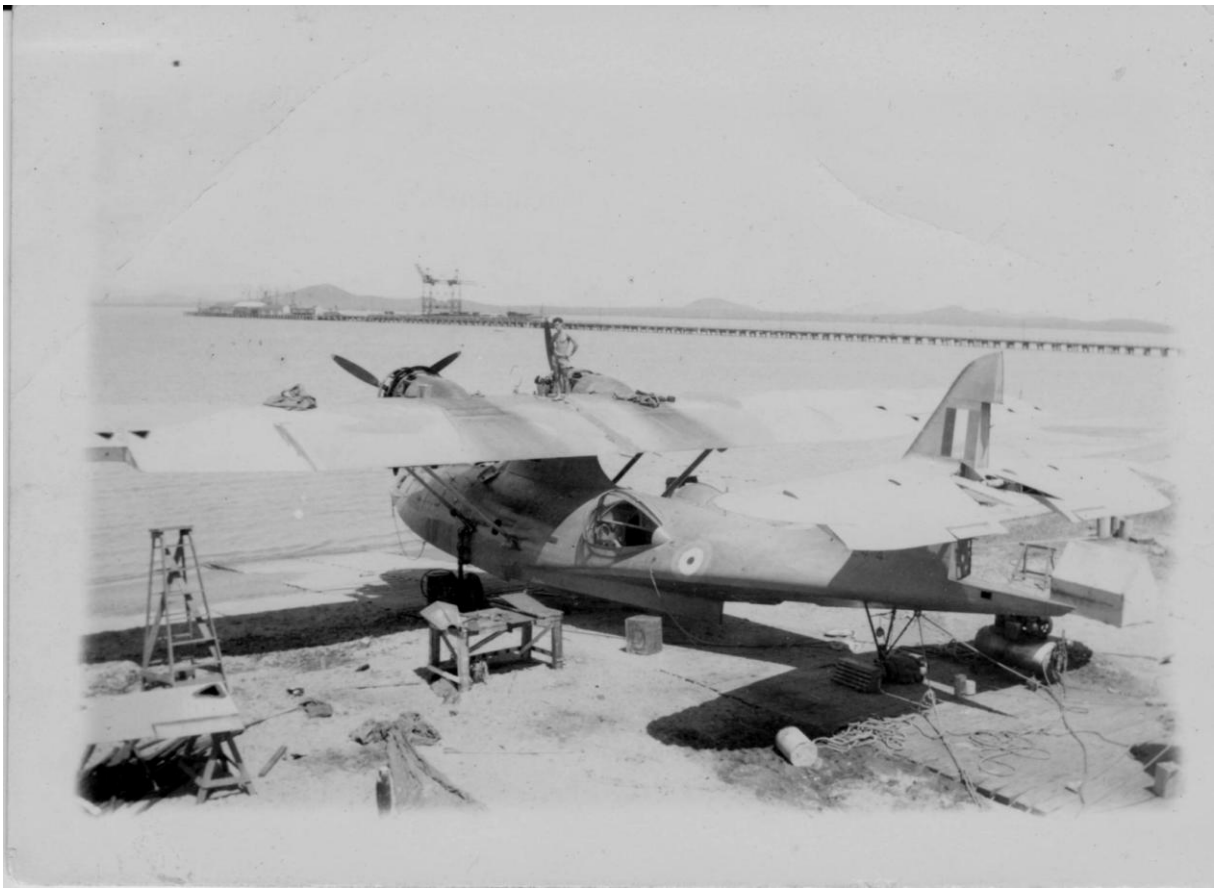
One interesting fact about the finish of this aircraft, which had no record of a main plane change by description or accident, was that it still had its port wing top, ***the USAAF Insignia***.

When assembled and marked by 2AD, did they miss applying the 36 inch RAAF Blue/White Roundel as pictured above? Or, did it have a Mainplane change when it was serviced by No 22 Repair and Salvage Unit? Are there any further photographic examples of the A29-9** Series P-40N-30-CU being left with USAAF insignias on top port wings?

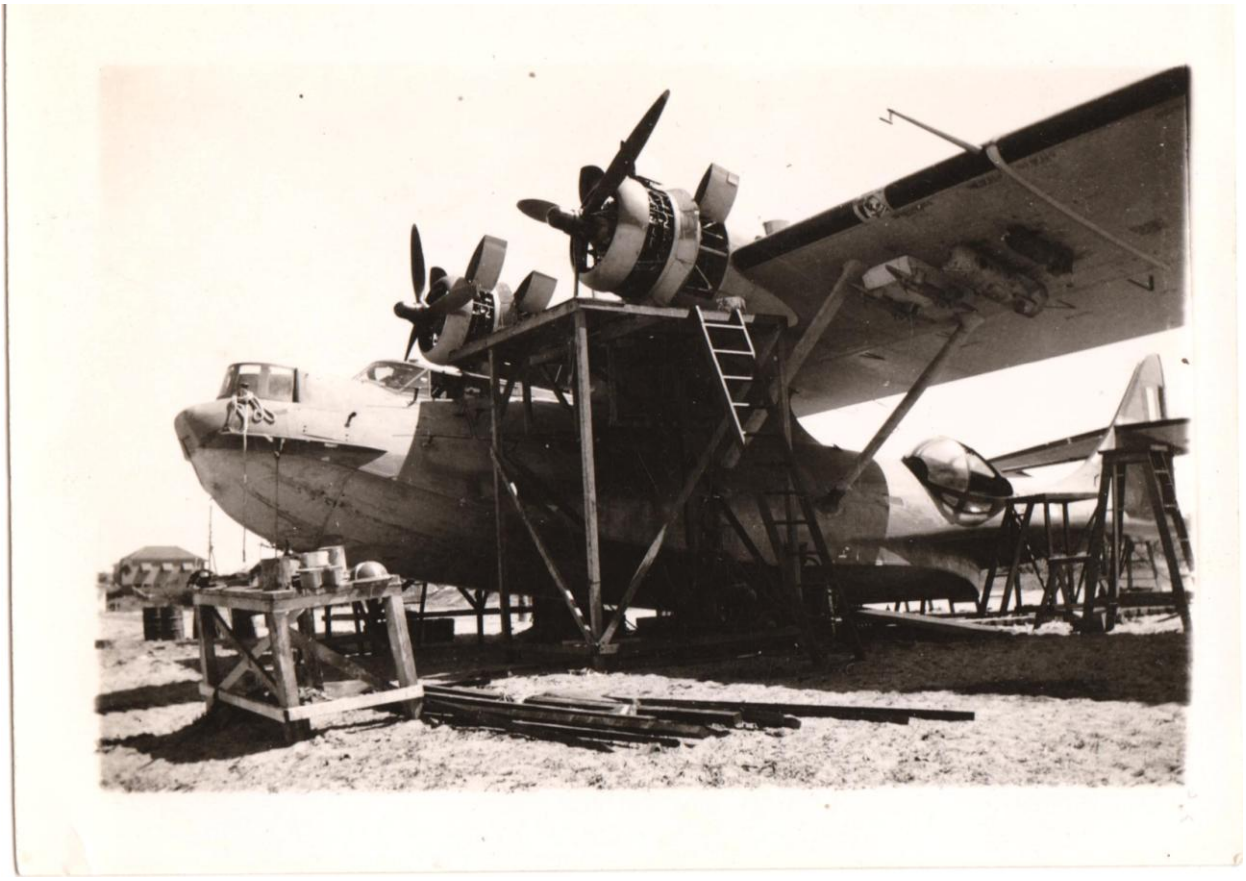
All Mac Air A29s arrived without RAAF Markings, as per post August 1944 seen here per a RAAF Kittyhawk P-40N-35-CU below: Then marked six points below per a 78 Sqn RAAF Example of a P-40N-15-CU below that.



Odd Shots: Cat Shots 1942-43: GRB's Edward Thitchener Collection

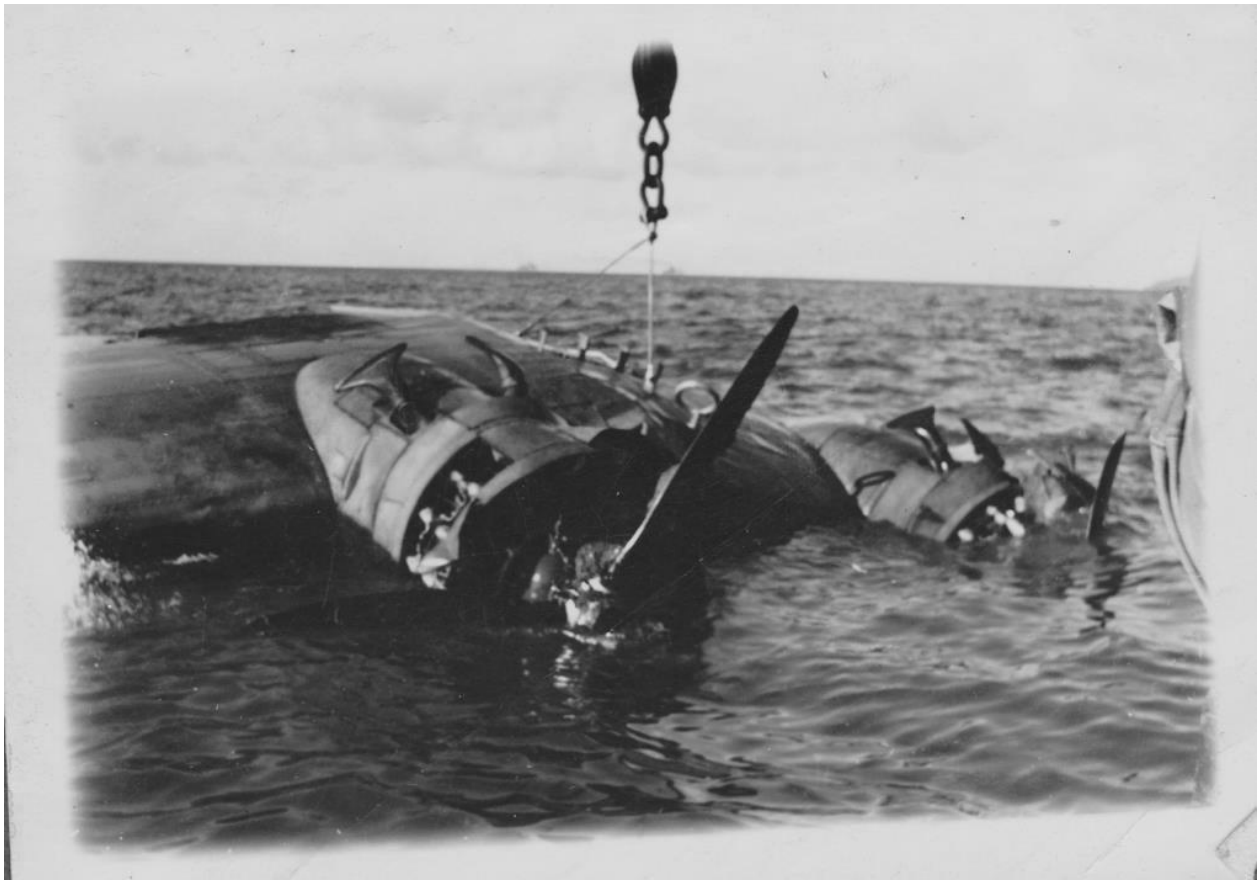


A24-4 on the beach at Cairns 1942



A24-6 on the beach at Cairns still armed.

Catalina A24-36, shown was being salvaged off shore. The Aircraft, an 11 Sqn RAAF Aircraft, was on loan to 20 Sqn RAAF when it crashed on landing after waiting some hours for a break in the weather. It did not receive a recall message to land during daylight. It crash in Cairns Harbour, on the night of 14th March 1943. Its crew of six perished.



Main Plane lift of A24-36, above and below

Though actually assigned the code letters FJ-G, during March 1943 when they were being introduced, it does not appear that this aircraft was marked as such.

FROM: No 20 Squadron, RAAF, CAIRNS,

TO: No.I.B.P.S.O, Group N. 820, RAAF, AFPO, 71, TOWNSVILLE,

DATE: 16/4/43,

REF: 16/16/AIR.

CONFIRMATORY MEMORANDUM -(AFO 18/E/2)
AIRCRAFT - FJ-G. (A24-36)

(1) Aircraft FJ-G on loan from No 11 Squadron, took off from CAIRNS at 11/2045Z to patrol the Southern area of the Gulf of Carpentaria to limit of endurance, returning to CAIRNS on completion or if instructed to return earlier; the objective, submarines and surface vessels.

At 12/0410Z an "F" message was broadcast to the aircraft to return to base before dusk. It appears this signal was not received. It was told at 12/1218Z to return to base immediately and the aircraft advised its E.T.A, as 12/1750Z, later to 1720Z.

From reports it appears the aircraft was circling CAIRNS some time before the crash, apparently waiting for a break in the weather. The aircraft had reported there was enough fuel to last till 1940. At 1837 it passed over a naval patrol launch just outside CAIRNS, and at 1838 the aircraft crashed in a position approximately (1) mile North of the river entrance.

Teddy himself above and below on the Cat waist guns (Twin Vickers Ks)

Editor's Notes: <u>Contributors are most welcome to provide written articles or even topics to be covered by others.</u>

Special thanks to John on the inclusion of his articles and News items, his advice and contributions:

We're into our eighth year of circulation...wow..... Many Thanks to past contributors and my dear solo co-editor!!

<u>But again</u>.....with <u>only two contributing authors</u>...though John and I have immense fun...it can be an effort at times. I'd like to do more in Aircraft histories but time is limited lately, hence the P-40 Updates are stagnating. Diversification of more historical (Old or modern) periods would be good for readers if others really want to contribute, if only small or large articles, we care not...But participation would be appreciated!!!

So it's a Call to arms (err pens or keyboards) and help contribute

End Notes:

End Notes:

[1] **End Note: News Briefs**

[2] I might add by presenting at least two Army SOTG Task Force 633 Rotations Shoulder Flag/Unit Patches; worn during Period 2010-2014 at Camp Russell, Afghanistan **with certain pride.**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End Notes :Story: RAAF AIRCRAFT MARKINGS SINCE 1950 SQUADRON MARKINGS – PART 8 – DROPPING THE FIGLEAF (3)CAMOUFLAGED WWII AIRCRAFT INTO 1950's SILVER by John Bennett @2018

[3] See *adf-serials* Vol 7 Issue 5, Summer 2017, for Dakota article no.5 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202017%20Summer%20.pdf

[4] See *adf-serials* Vol 8 Issue 1, Summer 2017-2018, for Mustang, Mosquito and Catalina article no.6 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202018%20Summer.pdf

[5] See *adf-serials* Vol 8 Issue 2, Autumn 2018, for Beaufighter and Wirraway article no.7 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202018%20Autumn.pdf

[6] For policy details of RAAF aircraft serial numbering, re 'consecutive' or 'block', see *ADF Serials Telegraph* Vol.5 Issue 3, Spring 2015:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202015%20Spring%20Vers%20Fin.pdf

[7] RAAF serials ran from A17-1 to A17-759. C/n 907 had been issued to USAAF 5th AF in 1942, and flown as '907'. It was transferred to the RAAF for disposal as A17-760 in AUG 1945, and sold DEC 1945. J Forsyth, *The D.H.82A Tiger Moth in Australia*, Skyline, Melbourne, 1995, p.147.

[8] J Forsyth, *The D.H.82A Tiger Moth in Australia*, Skyline, Melbourne, 1995, pp.344-5. C/ns of these UK-built machines were between 82137 (N6882) and 83250 (T5531).

[9] G Goodall, Aviation History Site, *D.H. Tiger Moth*.
http://www.goodall.com.au/photographs/tiger-moths/TIGER%20MOTHS1960s.html

[10] RAAF HQ AGI C.11 of 22 SEP 1939 para 1(a).

[11] RAAF HQ Aircraft General Instruction (AGI) C.11, 22 SEP 1939, had introduced 'Camouflage Scheme No.1' to the Wirraway, and blue/red 'Type-B' roundels to the fuselage and upper surfaces.

[12] Baker, No.68 (2009), p.20.

[13] RAAF HQ AGI C.11 Issue 3 of 3 OCT 1940 para 1(a)(ii). The definitions of green/brown camouflage are researched in Ian Baker's series. Baker, No.7 (1995) pp.3-4. Baker No.67 (2009) pp.18-19, refines this and refers to these colours as '*Camouflage Green'* and '*Camouflage Brown'*. Other colours sometimes referenced are *Dark Green* and *RAF Dark Earth*.

[14] RAAF HQ Directorate of Technical Services (DTS) 368/41, undated c mid-1941, file 150/4/852 (53A), appears to be the first mention of these RAAF camouflage colours to replace RAF *Dark Green* and *Dark Earth*.

[15] RAAF HQ AGI C.11 Issue 4 of 31 AUG 1942 para 1(a)(ii); also Baker, No.8 (1995) p.3. Furthermore, in 1941 other colour terminology was standardised: *Camouflage Green* became K3/177 *Foliage Green* (BALM colour S13983), and *Camouflage Brown* became K3/178 *Earth Brown* (BALM 13982), Baker, No.68 (2009) p.8.

[16] AGI Pt 3 Section (c) Instruction No.1 of 26 MAY 1944, Appendix A; Baker, No.77 (2013) p.6.

[17] RAAF HQ T.S.1 Minute 12 to DTS, file 9/1/1595 '*Aircraft Markings - General Technical File, 1945-50'*, para.5, of 4 AUG 1947; and RAAF HQ file 9/1/1755, D Ops memo '*Standard Finishes and Markings of Aircraft - Policy*', to DCAS, of 30 SEP 1947, para.2(vii).

[18] RAAF HQ file 9/1/1595, SIG/96 of 14 JAN 1948, para.D(6); Baker, No.82 (2014) p.4.

[19] A17-21 c/n 3689, A17-22 3515, A17-23 3746. Then DHA production A17-24 c/n 25, A17-25 c/n 21, A17-26 c/n 22, A17-27 c/n 23, A17-28 c/n 24, A17-29 c/n 26 and consecutive to A17-143 c/n 140. Forsyth, p.340

[20] C.11 *Amendment List 6* was issued on 15 MAR 1940, so C.11 Issue 2 had not been released by this stage; RAAF HQ Air Board Order ABO N.120 of 15 MAR 1940. RAAF HQ AMOE letter 1/501/329 (39A) to various HQs of 9 MAY 1940 states that "AGI C.11 will be amended in due course". We can therefore assume – as *Issue 3* was issued in OCT 1940 – that AGI C.11 *Issue 2* was released at this stage in mid-1940. However, it is unlikely that *Issue 2* would have introduced rudder striping, and this appears to have been a carry-over from the imported UK airframes (A17-1 to A17-20) that interpreted RAF markings.

[21] RAAF HQ AMOE Minute 1/501/329 (35A) to CAS of 27 MAR 1940; RAAF HQ CAS Minute 1/501/329 (36A) to AMOE of 29 MAR 1940; RAAF HQ DTS Minute 1/501/329 (37A) to AMOE of 5 APR 1940; RAAF HQ DCAS Minute 1/501/329 M.3 to CAS of 18 APR 1940. This is a discussion where AMOE (Williams) is against changing the silver scheme for trainers, and the CAS (Burnett) and DCAS (Bostock) opinion is that trainers should by yellow – no surprise that the CAS view won out.

[22] RAAF HQ AGI C.11 Issue 4 of 31 AUG 1942 specifies K3/178, K3/179, K3/195 and K3/185.
Baker, No.67 (2009) pp.18-19, refers to the upper camouflage colours as '*Camouflage Green'* and '*Camouflage Brown'*. Other colours sometimes referenced are *Dark Green* and *RAF Dark Earth*.
Baker, No.68 (2009) p.8 explains that in 1941 *Camouflage Green* became K3/177 *Foliage Green* (BALM colour S13983), and *Camouflage Brown* became K3/178 *Earth Brown* (BALM 13982).

[23] RAAF HQ AGI Part 3, Sec (c), Instruction 1 of 16 MAY 1944.

[24] 

Here's a real picture of A17-489 ; Source AWM Pictures. 096549/096551. Editor

[25] RAAF HQ T.S.1 Minute 12 to DTS, file 9/1/1595 '*Aircraft Markings - General Technical File, 1945-50'*, para.5, of 4 AUG 1947.

[26] RAAF HQ file 9/1/1755, D Ops memo '*Standard Finishes and Markings of Aircraft - Policy*', to DCAS, of 30 SEP 1947, para.2(vii).

[27] http://www.radschool.org.au/Course%20Photos/Pilots/Pilots.htm

[28] NAA CRS A705 40/4/537 (11A), of OCT 1955. RAAF College flying training in the 1950s comprised: First Year (or the 4th Class) 11.5 hours flight grading (later deleted), Second Year (3rd Class) nil flying, Third Year (2nd Class) basic flying training – 30 hours Tiger Moth, 30 hours Wirraway, and Fourth Year (1st Class) applied flying training – 145 hours Wirraway.

[29] Forsyth, p.213.

[30] R Frost, *RAAF College and Academy*, RAAF, Canberra, 1991, p.42.

[31] NAA A705 32/15/1454 (5A), JUL-SEP 1955.

[32] J Bennett, *Highest Traditions, History of 2 Squadron RAAF*, AGPS, Canberra, 1995, p.104.

[33] 4EFTS Unit History A.50, 1941.
[34] RAAF HQ AGI C.11 Issue 3 of 3 OCT 1940 para 1(a)(i).
[35] CMU Tamworth Unit History A.50, 31 JAN 1945.
[36] Forsyth, p.216.
[37] Forsyth, p.xxxv. In addition 38 were sold from Point Cook from 1945; Forsyth, p.225.
[38] Forsyth, pp. 247-252.
[39] *Units of the RAAF, A Concise History*, Vol.7 Maintenance Units, AGPS, Canberra, 1995, pp.20, 21.
[40] N Parnell & C Lynch, *Australian Air Force since 1911*, Reed, Sydney, 1976, p.156.
[41] Forsyth, pp.xxxiv-xxxv.
[42] NAA CRS A705 73/21/1050 (64A) of 12 SEP 1945.
[43] Forsyth, p.xxxv.
[44] E/E.88 aircraft status card A20-285, stamped 11 JUL 1948 IAW renaming of Organisation 37/48. While often referenced as 1AD Det 'B' Uranquinty, in 1950-51 terminology was generally adopted as 1AD Det 'B' Tocumwal; "Closure of Air Base Today", in Canberra Times, Canberra 14 OCT 1960, p.12 states: "1AD Detachment B was formed on 26 JUN 1950", but E/E.88 documents still refer to 1AD Det 'B' Uranquinty until late 1951.
[45] Forsyth, p.203.
[46] Uranquinty has been the wartime flying training base for 5SFTS – 5 Service Flying Training School under the EATS plan – which was one of eight SFTSs for intermediate and advance flying training. In FEB 1946, the postwar 1 Flying Training School (1FTS) was formed from 5SFTS; subsequently 1BFTS was formed from 1FTS in 1953, then transferred to Point Cook in DEC 1958.
[47] This comprised A17-538, A17-579, A17-588, A17-625, A17-629, A17-656, A17-666, A17-704, A17-741, and A17-759; however, to mar its final flight, A17-741 was damaged taxying at Point Cook, and did not reach Tocumwal until the following day! E/E.88 aircraft status cards for A17 Tiger Moths. In addition, A17-736 was at 2AD, and was ferried to Tocumwal on 12 FEB 1957.
[48] Forsyth, p.203.
[49] Forsyth, p.203.
[50] https://www.casa.gov.au/aircraft-register/xls?search_api_views_fulltext=&vh=COA&field_ar_serial=&=Search
[51] *Units of the RAAF, A Concise History, Vol 8 Training Units*, AGPS Canberra, 1995. **Engineering School** was formed at Ascot Vale on 1 MAR 1940, and by 1941 had become 1ES; 1ES reformed at Wagga as **Ground Training School (GTS)** 4 MAR 1946 (initially referred to as GTU); renamed as **RAAF Technical College (RTC)** 1 MAY 1950; renamed **RAAF School of Technical Training (RSTT)** on 1 DEC 1952. RTC Det 'A' was formed at Rathmines in 1950, which became part of OTS.
[52] R Gillett, *Wings Across the Sea*, Aerospace Publications, Canberra, 1988, p.135.
[53] E/E.88 aircraft status card for A17-719.
[54] Forsyth, p.136.
[55] Forsyth, p.xxxvii.
[56] https://www.casa.gov.au/aircraft-register
[57] A11-8 appears to be not the only RAAF Auster with a 'sharkmouth'. 17 AOP's A11-8 was written off in Bougainville in FEB 1945. An AWM image (OG3319) shows a sharkmouthed 16 AOP FLT Auster at Labuan being serviced, dated AUG 1945.
[58] NAA A12123 1/1/AIR PT.1 (10A), *First Australian Army Operation Instruction No.53*, 30 NOV 1944, paras. 2 and 5(a).
[59] *Units of the RAAF, A Concise History*, Vol.4 Maritime and Transport Units, AGPS, Canberra, 1995, pp.169-172.
[60] *Units of the RAAF, A Concise History*, Vol.4 Maritime and Transport Units, p.172.
[61] E/E.88 A11 aircraft status cards.
[62] NAA A12123 1/1/AIR PT.1 (14A), message Q40 of 23 DEC 1944.
[63] *Units of the RAAF, A Concise History*, Vol.7 Maintenance Units, p.111.
[64] E/E.88 A11 aircraft status cards.
[65] G Waters, *OBOE – Air Operations over Borneo 1945*, APSC, Canberra, 1995.
[66] Waters, p.59.
[67] The temporary landing field near the beach was unsuitable, so operations had to wait for Sepinggan airfield to be repaired, which enabled sorties on 3 JUL 1945. Waters, p.133.
[68] Waters, p.207.
[69] RAAF HQ Memo 9/1/1595 (12) of 4 AUG 1947 directed the new tactical scheme as: "Tac/R (including AOP) unpainted and/or aluminium finish".
[70] Army HQ file 41/441/100 (36) 14 MAR 1962.
[71] Army HQ file 41/441/100 (23) 16 FEB 1962.
[72] RAF AP2656A Vol 1 Sect 6, *Chapter 1 Camouflage Schemes, Air Observation Aircraft*, stated both upper surfaces and undersurfaces be camouflaged with Dark Green and Dark Earth, cited in *British Aviation Colours of WWII*, RAF Museum Vol 3, Arms and Armour Press, London, 1986, p.42. The disruptive pattern appears to be based on the 'B' scheme shown in *Air Diagram 1160 (AD1160) - Camouflage Scheme for Single Engined Monoplanes – Army Cooperation Aeroplanes and Fighters*, cited in P Lucas, *Camouflage & Markings No.1, RAF Fighters 1945-1950*, Scale Aircraft Monographs, Guideline, Luton UK, 2000, p.6.
[73] Image from Geoff Goodall's Auster website:
http://www.goodall.com.au/australian-aviation/austers-mil/austmilitaryausters.html

[74] AP2656A Vol 1 Sect 6, *Chapter 2 Identification Markings* refers to the 'National Marking III' as the fuselage roundel introduced in 1942, which has since been generally accepted as the 'Type-C1'. For a "small" aircraft such as the Auster or Tiger Moth, outer diameter of the roundel was 18": i.e. yellow 18" diameter, blue 16", white 8", and red 6". Mainplane roundels were the National Marking II, or 'Type-B'. Fin flashes for "small aircraft' were 18" wide (8" red, 2" white, 8" blue) and 24" high. Cited in *British Aviation Colours of WWII*, pp.49-55. However, with the small fin of the Auster Mk.III, the fin flash was restricted to 18" x 18". Later model Austers with the taller fin (e.g. Autocar) had 24" x 18" flashes.

[75] The RAF 33B- numbers are a stores vocabulary system in the 'DTD 308' specification – while they identify the colour of paint, they also identify the quantity. There are three numbers for each colour for a 0.5 gallon (2.27 LT), 1 gal (4.54 LT), and 5-gallon (22.73 LT) tins, and provided is the number for 1-gal: *Dark Earth* is identified as 33B/189 (0.5-gal), 33B/190 (1-gal) and 33B/191 (5-gal), and similarly *Dark Green* as 33B/192, 33B/193 and 33B/194. DTD 308 was the Material Specification for the cellulose ('C') based material consisting of a pigmented primer suitable for direct application to metal or timber, and a pigmented cellulose finishing coating for applying over the primer by brush or spray. DTD 314 was the Material Specification for a synthetic ('S') finishing material. P Lucas, *Camouflage & Markings No 2*, Scale Aircraft Monographs, Guideline, Luton UK, 2000, pp. 78-9.

[76] http://www.goodall.com.au/australian-aviation/austers-mil/austmilitaryausters.html

[77] RANAMO General/A8 1956 for Vampire, see Vampire article in Spring 2016 Telegraph: http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202017%20Spring%20.pdf

[78] NAA CRS A705 73/21/1050 (18A) of 24 NOV 1944.

[79] In addition, Auster AOP.6 A11-201 became VH-RCT(2). The two RAN Autocars A11-300 and -301 became VH-MBF and VH-MRD.

[80] http://www.goodall.com.au/australian-aviation/austers-mil/austmilitaryausters.html
https://www.casa.gov.au/aircraft-register/xls?search_api_views_fulltext=&vh=SNI&field_ar_serial=&=Search

[81]

End Notes: Getting the RAAF Numbers right in WW2 Part 3; the 1943 transition

Referenced per NAA File: Position of Operational Aircraft 18.02.1943

[82] RAAF Form E/E 141 Operational Aircraft Status : Beaufort/Beaufighter/Hudson/Vengeance/Boston/Catalina/Spitfire/Kittyhawk and Boomerang. 705 of all types on strength, with only 268 actually in operational Squadrons.

[83] The K-1 aircraft were ordered in Oct 1941 (FY42). They were ordered to Curtiss Spec Number 98-610-13 to Specification 7437A however this was updated to Spec 7437KF (showing the change in engine), the initial order being 600 aircraft. The remaining aircraft were ordered on 15th June 1942 along with some of the L models and M models in place of the proposed Curtiss P-60. This was after the decision was taken not to proceed with the P-60 thus not holding the factory line from producing aircraft as would have happened if the plants had to re-jig and re-tool for the P-60. A Further order for 1299 P-40K aircraft was also cancelled. One of the main reasons for the difference in the serial numbers was that the first 600 K models were actually ordered as Defence Aid (DA) W535-AC22714 for the Chinese. A further 900 were ordered on subsequent contracts. So what you get is 600 aircraft for Chinese taken into lend lease (hence the later serials), then the K-5's (with the earlier serials as they were for lend lease) being delivered from Aug to Sep 42, then K-10 being delivered from Sep to Nov 42 and finally the K-15 with the last being delivered 7th Nov 1942.

[84] These four were P-40K-15s FY42-10424,42-10425,42-10428 and 42-10429 which were sunk on the 29/01/43 in Caribbean, on ship ATS CH61 266 after leaving Charleston, Destination Brisbane, by German U-Boat

[85] In the RAAF context, desperately short of modern types in 1941, some 243 Brewster Bermudas were to be initially ordered to equip several squadrons. The British Purchasing Commission ordered 750 examples of the Model 340 in July of 1940 as the Bermuda, and the Dutch government ordered 162 similar examples for the Netherlands East Indies. On December 24, 1940, the US Navy ordered 140 (later increased to 203) examples as the SB2A Buccaneer. Throughout 1941 and 1942 handling and production problems caused lengthy delays, and the USN had decided that there was no need for a new dive-bomber when the SB2A finally became available. Deliveries were halted after only two SB2A-1 aircraft were produced. The Curtiss Helldiver would fulfil their requirement of both a land based and carrier based Dive-bomber. The A-34 USAAF designation was assigned for contractual purposes to the Lend-Lease version of the Brewster SB2A-2 intended for delivery to Great Britain. The Brewster SB2A dive-bombers the KNIL ordered had been built, but in event, the Japanese occupation of the Netherlands East Indies overtook the deliveries of the aircraft. All 162 NEIAF aircraft were taken over by the US Marine Corps and were marked as SB2A-4's. These aircraft had cockpits still label in Dutch. Those Bermudas built were eventually used as target tugs, while others were scrapped straight from the production line. At the conclusion of production, a total of 1052 Brewster Bermudas had been built.

[86] V-72 Mk1 were built by Vultee and the Mk1A was built by Northrop. A27-1 to A27-15 aircraft were Mk1's and A27-16 to A27-199 were Northrop Built. Aircraft A27-200 to A27-399 were A-31's (Vultee Built). Aircraft A27-400 to A27-499 were A-35A-VUs (Vultee Built), and the remaining, A27-500 to A27-559 were A-35B-5-VN (Northrop Built) A27-560 to A27-599 were A-35B-10-VN and A27-600 to A27-640 were A-35B-15-VNs.

[87] The ten Curtiss Wright A25A Hell Diver (Shrike) supplied to RAAF were: Manufacture's Block 15-CS, Curtiss Wright Sequence Numbers 4583 to 4592, USAAF Serials: 42-79683 to 42-79692. Only one aircraft was erected and flown. Five aircraft were returned to the 5th AAF USAAF at Townsville on the 18/12/44 and the balance to the same location on the 01/02/45. A69-29

Pictured in flight in the USA. It never left the country.

[88] was from Allotment Aus Case 126 V72/A-31 Vengeance BPC#AF940 Aircraft #30 and was coded NH-K

[89] No 12 Squadron Based at Merauke DNG did get a few A-35As sent up, including one that was lost when being returned to Australia: A27-534

[90] Two other RAAF Article XV Squadrons flew the type already, No 459 Squadron (Mediterranean) and No 464 Squadron (In the UK), with the later suffering devastating losses on first large scale operations.

[91] Further consideration perhaps was the combat record of the early B-34 Ventura Mk 1 (Medium Bomber) from Europe, specifically No 464 Sqn RAAF's use and losses per 3rd May 1943 when some 11(44 Crew) Ventura's were lost on one mission to Amsterdam, Holland. AJ209/AE916 (on Ret)/ AE731/ AE713/ AE684/ AJ200/ AE780/ AE716/ AJ478/ AE956/AE798.

[92] B-17E 41-2513 shown later as FK184.

[93] This would be the same format of the February 1942 Overseas Indent 2012 per 250 Kittyhawks. An initial 143 P-40E-1s were diverted from February 1942 under RAF Lend Lease BSC-322 Contracts on RAF Account, to the RAAF.
Fourteen of these were lost at sea, three more administratively lost until 1945.
The reason for this payback were that the USAFIA (USAAF) passed on loan to the RAAF eighty-one P-40E/E-1's from their existing USAFIA inventory. Out of 125 P-40E-1 against our own orders received, a total of 86 P-40E-1 aircraft were returned from late March 1942 to the USAAF in re-payment of this initial supply. This included 9 out of 18 NEI Allocated P-40E-1s charged to the RAAF ex NEI Refugee Cargo. This left the RAAF in debt to the USAAF of 33 aircraft as of March 1943.

[94] Did you know that the first American (USAF) combat mission of the Korean War in 1950 was flown by a B-17G (actually a F9 photographic Recce Aircraft)? So to be fair, the type flew in three wars, including the 1948 War of independence of Israel!! Given the record of keeping some aircraft in service longer than other air forces, would the RAAF kept it in service for Malaysian Emergency per 1951???

[95] NAA Sources: (Green primary)

Acquisition of Aircraft for the RAAF. Part 1

Series number	Control symbol	Contents date range
A1695	6/205/EQ PART 1	1942 - 1943

Access status	Location	Barcode
Open	Canberra	139380

Title

Acquisition of aircraft 1943 Case 126 Part 2.

Series number	Control symbol	Contents date range
A1695	6/205/EQ PART 2	1943 - 1943

Access status	Location	Barcode
Open	Canberra	139381

Title

Acquisition of Aircraft for the RAAF - 1943 Case - 200 Pt.1

Series number	Control symbol	Contents date range
A1695	7/205/E PART 1	1943 - 1943

Access status	Location	Barcode
Open	Canberra	139390

Title

1944. Acquisition of Aircraft for RAAF

Series number	Control symbol	Contents date range
A1695	16/205/EO	1944 - 1945

Access status	Location	Barcode
Open	Canberra	139427

Title

Aircraft Assignments to RAAF - Operational Aircraft Part V.

Series number	Control symbol	Contents date range
A1196	1/501/466 PART 5	1942 - 1945

Access status	Location	Barcode
Open	Canberra	19908

Title

Aircraft Assignments - (1943) - to RAAF from Overseas (Operational Aircraft) Part II

Series number	Control symbol	Contents date range
A1196	1/501/466 PART 2	1942 - 1943

Access status	Location	Barcode
Open	Canberra	199084

Title

Aircraft to Australia Copies of orders only.

Series number

A2908 Control symbol

A75/1 <http://naa12.naa.gov.au/scripts/ItemDetail.asp?M=0&B=1160440>

Contents date range

1942 - 1942

Access status

Open Location

Canberra Barcode

1160440

Title

Delivery Rates of Aircraft - Formation of New Units and re-arming of Existing Squadrons.

Series number	Control symbol	Contents date range
A1196	1/501/389 PART 1	1941 - 1943

Access status	Location	Barcode
Open	Canberra	199056

Title

Availability of Operational Aircraft.

Series number	Control symbol	Contents date range
A1196	1/501/481	1942 - 1943

Access status	Location	Barcode
Open	Canberra	199095

Title

ARNOLD-SLESSOR-TOWERS Agreement - provision of aircraft

Series number	Control symbol	Contents date range
A7941	36	1942 - 1942

Access status	Location	Barcode
Open	Canberra	637141

Title

File No 1. Re-disposition of Empire Air Forces. (Following outbreak of War with Japan). Provision of Aircraft for Australian Defence. (To Organisation of SWPA Command April 1942)

Series number	Control symbol	Contents date range
A5954	229/1	1941 - 1942

Access status	Location	Barcode
Open	Canberra	23926

Title

Provision of Aircraft for Southwest Pacific Area. (Following outbreak of War with Japan). Provision of Aircraft for Australian Defence. (From Organisation of SWPA Command, April 1942) File No 2.

Series number	Control symbol	Contents date range
A5954	229/2	1942 - 1942

Access status	Location	Barcode
Open	Canberra	645089

[96] **End Notes: Operation Pakistan Assist; Blackhawk in Central Asia 2005** by Gordon Birkett 2018

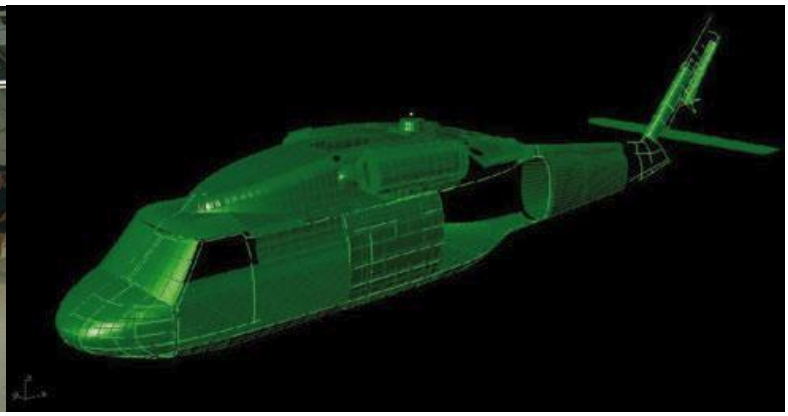
Gasnavi or Ghauri, was a Central Asian Muslim king Mahmud Ghaznavi who invaded India from Afghanistan. In 1001 CE, he marched on to Punjab after defeating Hindu king, Jayapala, in a battle in what today is Peshawar in Pakistan. It was a fierce battle which ended in the defeat of Jayapala, who then set himself on fire after his army, was defeated.

[97] It was advised eight years later that the Australian Army did not deploy Black Hawks to Afghanistan because the then-defence chief, Angus Houston, advised the government that the aircraft lacked armour and self-defence systems. Source: The Australian; Article 29th November, 2014; Black Hawk combat choppers denied Afghan Aussie troops.

[98]

[99] A25-112, (Also a October 1994 Operation Lagoon Veteran, of Bougainville, pictured below) undergoing a service and repaint in 2008, was also used for 3D scanning: BAE Systems Australia was asked to upgrade the electronic technology for the Australian Army's fleet of Black Hawk helicopters.

As part of this project BAE Systems Australia needed to establish 3D CAD information which accurately reflects the current state of build of the airframe and ancillary equipment. It was decided that the quickest and most efficient method was to digitize an actual aircraft so that real 3D data is captured as a factual basis for design and installation upgrade. BAE Systems Australia contracted MOSS / Scan-Xpress to undertake 3D Photogrammetric and 3D Scanning of the aircraft. Both external and internal data was required.



A25-112 is perhaps the best Blackhawk to be the most suitable AWM candidacy?
Six Black Hawks of the Australian Contingent Aviation Group, United Nations Transitional Authority in Cambodia (UNTAC) were flown to Cambodia in May 1993 inside USAF C-5A Galaxy transports. The Black Hawks were painted white with UN markings. Some also carried a Boxing Kangaroo on the front door. The serial numbers of the Black Hawks involved were A25-103, 106, 108, 202, 212 and 218.

[100] **End Notes : The first "in flight" F-111 Capsule Ejection** by Gordon R Birkett 2017
Not the first loss as the following had occurred by this time
:

- **General Dynamics F-111A 63-9774** 19/01/67 Crashed due to incorrect wing sweep setting during landing. Crew not injured, but the pilot went around to unfasten the WSO (WSO Donovan I. McCance). The pilot (MAJ Herbert F. Brightwell) was standing in a pool of JP4 fuel which ignited and killed him. The resultant fire severely burned WSO Donovan L McCance
- **General Dynamics F-111B BuNo151973** 21/04/67 Grumman Test pilot Mr Ralph H "Dixie" Donnel and Mr Charles E "Buck" Wangeman both Killed. Crashed and destroyed after a double engine failure on takeoff from the Grumman Flight Test Facility at Calverton, Long Island, NY, at the start of a test flight. Both test pilots on board when killed

[101] 9th January 1965 **USN Vought F-8A Crusader BuNo143748** from VF-701 based at NAS Dallas in USA - this was the first incident involving Naval Air Reserve Crusader with LT T. Dave J. Thigpen ejecting by Martin-Baker Seat. For Max Gordon, it was his first.
[102] F-111 Crew Escape Module Development Report c1965 US Air Force - General Dynamics F-111 Aardvark
https://www.youtube.com/watch?v=9gyIhOGyGA8

[103] **End Notes: The American Tigers: June 1942**. Gordon R Birkett@2018
They were identified by their construction number: Following on from the RAAF's A17-484 (DHA901), came the USAAF Rev Lend Lease DH-82A's DHA902, DHA903, DHA904, DHA905, DHA906, DHA907, then a gap following A17-530 (DHA953)the USAAF Rev Lend Lease DH-82A's DHA954, DHA955, DHA956, DHA957, DHA958, DHA959, DHA960, DHA961, DHA962, DHA963, DHA964 and DHA965. A further six direct transfer ex RAAF , A17-547, A17-580, A17-581, A17-582, A17-583 and a seventh, A17-609 which was to be later returned to RAAF Service after crashing on delivery.

[104] *DHA960 (Eng#573) and DHA963 (Eng#575) were the first actual two de Havilland DH-82As issued on the 30th June 1942, to be issued...to the USAAF with the 35th Air Base Group in Townsville under RPV-321. One of these Townsville Tigers was lost on the 10th September 1942, when piloted by Captain James J. "Hoot" Bevlock ASN#. 0-420568), a 8th FG Airacobra Pilot, when giving a S/Sgt Herman Weiss of Philadelphia a joy ride. The Tiger Moth went out of control and crashed into Halifax Bay. Assuming that DHA960 lasted until it crashed on the 20th January 1944, it is seemingly certain that the aircraft involved would be DHA963.*
Refer: https://www.ozatwar.com/ozcrashes/qld133.htm