ADF Serials Telegraph News

News for those interested in Australian Military Aircraft History and Serials

Volume 7: Issue 2: Autumn 2017 *Editor and contributing Author: Gordon R Birkett,*

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News Briefs

- **16th December 2016:** The small fleet of four Australian based C-27J aircraft of No 35 Squadron, RAAF , based at Richmond, NSW, has attained initial Operational Capability (IOC) on this date

- **18th December 2016: 0609hrs,** TNI-AU **C-130H A-1334** crashed, killing all 13 on board in the mountainous district of Minimo, Jayawijaya after taking off from Timika, West Papua Province. This particular aircraft was **Ex RAAF A97-005** which was handed over to the TNI-AU, only ten months prior, on the 8th February 2016. It was approaching runway 33 at the time of the accident. The aircraft went through the centre line of the final approach and impacted the south slope of the hills to the right of the centreline, about 0.9 NM from the runway threshold. The altitude of the site is about 5,700 ft, whereas Wamena airport is about 5,100 ft. The aircraft was reportedly engaged in a 5-day navigational exercise flight out of its base at Malang-Abdul Rachman Saleh Airport, Java. Sadly, a Controlled flight into the ground accident.

- **3rd February 2017:** The Pentagon and Lockheed Martin have come to an agreement on lot 10 of F-35 joint strike fighters procurement program, with the per-plane cost on the most common F-35A model dropping below US$100 million for the first time. The deal is a $728 million drop from the previous LRIP 9. The contract, known

as Low Rate-Initial Production lot 10 (LRIP 10), covers production for 90 of the stealth fighters. The Pentagon says the cost per plane represents more than a 60 percent price decrease for the conventional-takeoff-and-landing F-35A variant since the first LRIP contract. For LRIP 10, the per-plane price of an F-35A model sits at $94.6 million (7.3% reduction from LRIP 9), an F-35B jump-jet model used by the U.S. Marine Corps sits at $122.8 million (6.7% reduction from LRIP 9), and an F-35C carrier version is at $121.8 million (7.9% reduction from LRIP 9). Eight of the RAAF's F-35As (A35-03 to 10) are part of this Lot 10.

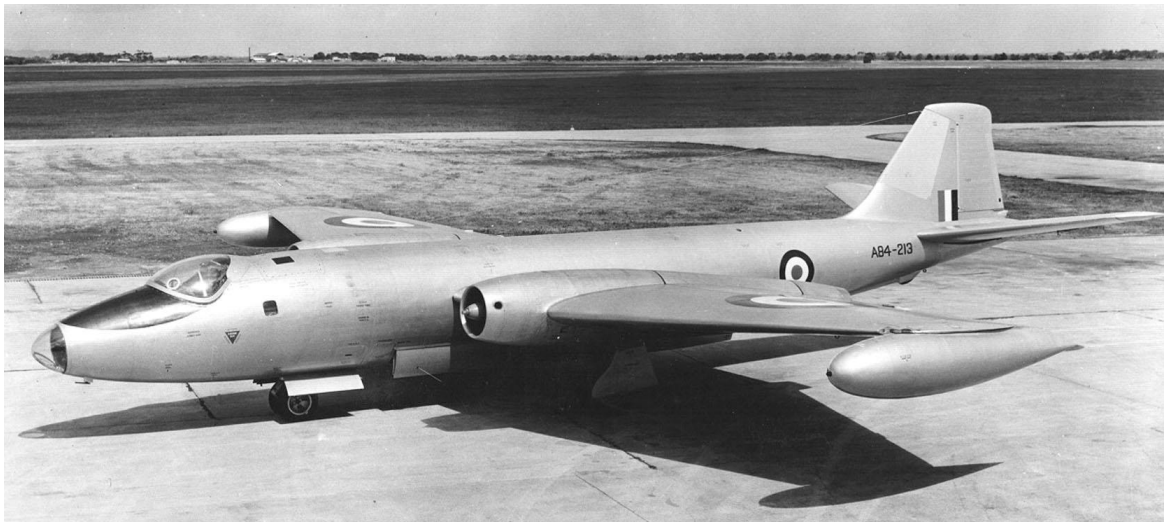
- **7th February 2017;** The F-35A Lightening is to make its first Australian debut at the Australian International Air Show March 2017; Minister for Defence, Senator the Hon Marise Payne, and Minister for Defence Industry the Hon Christopher Pyne MP, announced that Australia's two F-35A Joint Strike Fighters will make their first appearance in Australia at the Australian International Air Show. The Joint Strike Fighter will be joined at the Air Show by Australia's first EA-18G Growler that will be delivered around the same time. However, unlike the delivered EA-18Gs, these first two F-35A aircraft, AU-001 and AU-002 which will arrive at the air show on Friday 3rd March 2017, will be returning to the United States via RAAF Base Amberley following the show a few days later.
- **10th February 2017:** Twelve United States Air Force (USAF) LM F-22A Raptors have deployed to Tindal, Northern Territory for joint training exercises with the RAAF as part of the first Enhanced Air Cooperation. The 12 jets are from the 90th Fighter Squadron, 3rd Fighter Wing, from Joint Base Elmendorf-Richardson, Alaska, and arrived at a wet RAAF Base Tindal, Northern Territory.

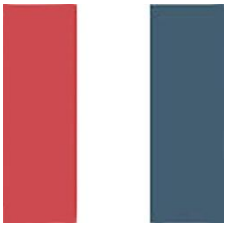
- As we complete this issue, "down south", things are happening over Avalon.
  RAAF Old Guard meets New Guard. Battlefield grey seems more suitable down low, then RAAF F/A-18A Greys

RAAF AIRCRAFT MARKINGS SINCE 1950 :SQUADRON MARKINGS – PART 2 – THE CANBERRA *John Bennett 2017*

As we have looked at in the past instalments, after 1950 RAAF aircraft were generally finished in silver until tactical camouflage finishes were introduced from 1963. Once again, I have prepared this with thanks to those who have contributed imagery to ***adf-serials*** to make it such a great resource.

Canberras were delivered in overall aluminium,[i] shown here by Australian-produced A84-213 on delivery at the Government Aircraft Factories (GAF), Avalon, in December 1954. The basic markings at that time were: national markings the current type-D roundels (RAF-style) and fin flash, standard black serial number in 8" figures, and a black anti-glare patch in front of the cockpit.



 **Aluminum**	 **Type-D 3:2:1 Roundel**	 **Type-D Flash**
K3/162 'Enamel Cellulose Aluminum'	Fuselage 33" (83.82cm) diameter [ii] Wings 84" (213.36) diameter	Height 24" (60.96cm) Width 24" (60.96cm)

A84-244 at Darwin c1960 overall silver – 1SQN yellow lightning flash and squadron badge

A84-1234567890

Standard RAAF serial numbering of the 1950s – figure height 8" (20.32cm), width 5", stroke 1"

After receipt in Australia of four UK-built Canberra B.2 bombers from RAF orders by mid-1953, the first Australian-produced Canberra Mk.20s were ready for delivery, and indeed the first two were entered as Australia's participants in the October 1953 London-Christchurch Air Race. Forty-eight bomber versions were built in Australia – the first batch **A84-201 to A84-227** as Avon Mk 1-powered variants of the UK B.2, and **A84-228 to A84-248** as Avon Mk 109-powered variants of the UK B.6.[iii] Some were later converted by GAF to Mk.21 trainer variants.[iv]

From 1960, a white upper surface was trialled on the all-over aluminium aircraft in an attempt to keep the cabin cooler in Australia's tropical climate – this was adopted across the fleet by 1962. The kangaroo roundel was introduced to the fuselage in 1956, and to main planes in 1965. Canberras were delivered to 2SQN in 1953, 6SQN in 1955, to 1SQN in 1958, and 1OCU in 1959. From 1963, initial camouflage was a lightish Dark Sea Grey (which soon faded in the Australian climate) and Olive Drab, with aluminium under surfaces. The deeper Extra Dark Sea Grey (EDSG) was substituted from 1967. Canberra trainers remained silver aluminium for their RAAF service.

Aircraft Type	Scheme and Colours [v]	Period	Remarks
Canberra	*Silver (Aluminium)* K3/162 'Enamel Cellulose Aluminium' K3/168 'Dope Finishing Cellulose Aluminium' K3/344 'Black Glossy'	1953-1963	Standard RAAF silver markings, gloss white top 1962; light camouflage from 1963 with silver under surfaces; trainer aircraft remained silver with white upper fuselage.
Canberra	*RAAF camouflage* BS381C-638 'Dark Sea Grey' BS381C-298 'Olive Drab'	1963-1967	The lighter 'Dark Sea Grey' (which faded to a 'Medium Sea Grey') upper with 'Olive Drab', silver undersides; large white side numbers.
Canberra	*RAAF grey/green* BS381C-640 'Extra Dark Sea Grey' (EDSG) BS381C-298 'Olive Drab' (OD)	1967-1983	EDSG replaced earlier silver undersides, and the upper lighter grey; no mainplane roundels and black side numbers. From late 1970s acrylic lacquer EDSG full gloss AS K185/640, and acrylic lacquer OD AS K185/298.

A84-245, devoid of squadron markings, in the early 1963 camouflage with aluminium under surfaces

Squadron markings for RAAF Canberras was a lightning flash, or bolt, across the tail in squadron colours described below. The flash was typically 60" (152.40cm) high, but this could vary. At various stages, the flash was carried on the fin only, but across the tail (fin and rudder) was more common.

THE UK CANBERRAS

Five Canberra B.2 bombers were allocated to Australia from the first UK production contract 6/ACFT/3520[vi], to assist with Australian training and familiarisation[vii], and also for weapons trials work at Woomera. The A84-group serial numbers were both scrambled (-307 and -125)[viii] and consecutive (-1, -2, -3). They were delivered to Australia in the order listed below.

#1 A84-307 (WD939) Canberra B.2 WD939 (c/n 71020) was diverted from an RAF contract and allocated A84-307 in DEC 1950 to become the first jet aircraft to fly from UK to Australia in **JUL 1951** – the flight totalled 10,235 miles (16,487km), covered in a flying time of 21hrs 41mins, an average speed of 477.62mph (768.63km/h). Handed over to ARDU in AUG 1951 and then to 82 Wing "Canberra Flight" in OCT 1951. From MAY 1953, a reserve aircraft with No 1 Long Range Flight at Laverton for the London-Christchurch Air Race. In DEC 1953 to 2SQN (the conversion unit) to enable Canberra training, damaged in an accident at Amberley in JUN 1955, Mk.21 conversion by GAF over 1956-58.

#2 A84-2 (WD942) WD942 (c/n 71024) was delivered in UK in SEP 1951 and was allocated for loan to Australia's Weapons Research Establishment (WRE) for weapons trials on behalf of the UK Ministry of Defence, and allocated RAAF serial A84-2. The aircraft was ferried to Laverton in **MAR 1952** (but probably still carrying *the WD942 number).* In MAY 1952 the aircraft was flown to Woomera to commence the *Blue Boar* TV-guided bomb trials (probably a forerunner of the Martel) and *may* have worn its A84-2 serial during this time. It was returned to UK charge in 1956, reverting to its RAF serial WD942. Returned to UK in 1957.

#3 A84-125 (WD983) WD983 (c/n 71053) was diverted from an RAF contract, allocated to the RAAF in MAR 1951 as A84-125, and was the third Canberra delivered to Australia in **APR 1952**. The delivery scheme was the same as A84-307 – overall aluminium with dark blue tail. From MAY 1953, A84-125 was used by No 1 LRF at Laverton in the preparations the October 1953 England to NZ Air Race, in which A84-201 and A84-202 competed. To 2SQN JAN 1954, 6SQN JUL 1955. Mk.21 1958-59.

#4 A84-3 (WH710) WH710 (c/n 71179) was loaned to WRE arriving at Woomera in **JUN 1953** and allocated A84-3 (but evidently not applied) for *Blue Danube* special weapons trials.[ix] Returned to the RAF in 1958, converted to a U.10 drone[x] over 1959-60, and returned to Australia to be destroyed by a missile at Woomera in MAY 1965.

A84-1 (WD935) WD935 (c/n 71015) was delivered to Vickers Armstrong's Guided Weapons Division in AUG 1951 and selected to be the missile launch platform for *Red Dean* missile trials. Allocated serial A84-1 in NOV 1951 pending its loan to WRE for the UK trials, missile modifications over 1953-54, it suffered landing damage in 1955, so remained in the UK. A84-1 serial never applied.

T.4 Trainers A84-501 and A84-502

Two T.4 trainers were diverted from RAF contract 6/ACFT/6445[xi] to assist Canberra crew conversions at 82 Wing at Amberley.

- WT491 (c/n 71468) was delivered to RAAF in **APR 1956** as A84-501.
- WT492 (c/n 71457) was delivered to RAAF in **MAY 1956** as A84-502.

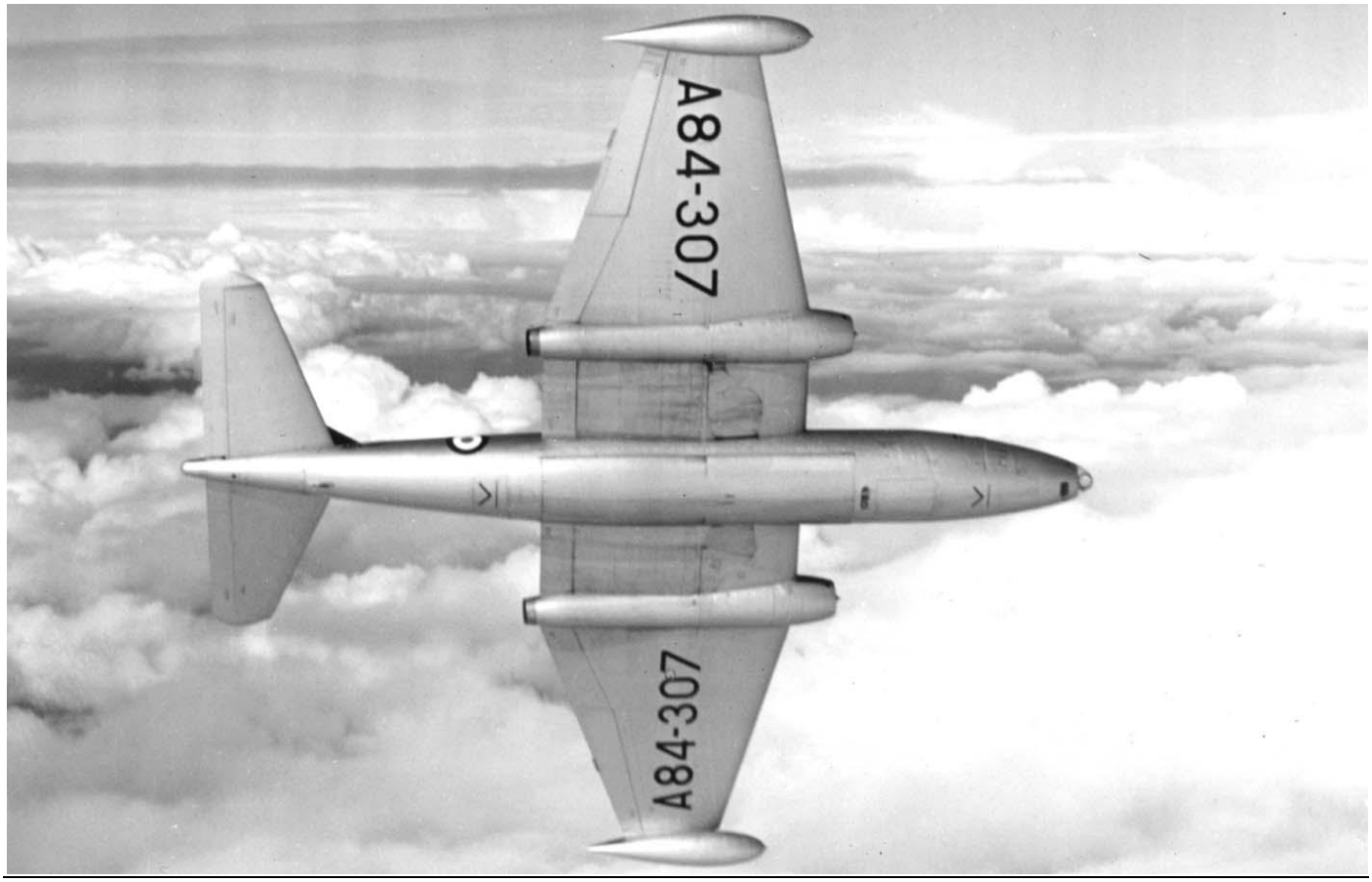
No 1 Long Range Flight (A84-201 and A84-202) [xii]

To assist the RAAF's entry into the October 1953 London-Christchurch Air Race, No 1 LRF was formed as part of ARDU at Laverton, with both A84-125 and -307, to prepare air and ground crews for the marathon flight. *A84-201 was delivered from the GAF factory in **JUL 1953**, and A84-202 in **AUG 1953**. It is remarkable that Australian industry in those days could achieve such a feat.*

A84-201 was to take second place in the Air Race, which started 8 OCT 1953 (crew SQNLDR Peter Raw DFC, FLTLT Noel Davis and FLTLT Bill Kerr) with a total time England to NZ of 24hrs 31mins, actual flight time was 22hrs 27mins (only 41 minutes behind the winner, RAF Canberra PR3 WE139). A84-202 (WGCDR 'Jel' Cuming AFC, FLGOFF Bob Atkinson and SQNLDR Col Harvey) was leading but blew a tyre on landing at Cocos Island, and was delayed for 2 days. Its actual flying time was 22hrs 23.5 mins.

A84-307 (WD939) – THE FIRST UK CANBERRA

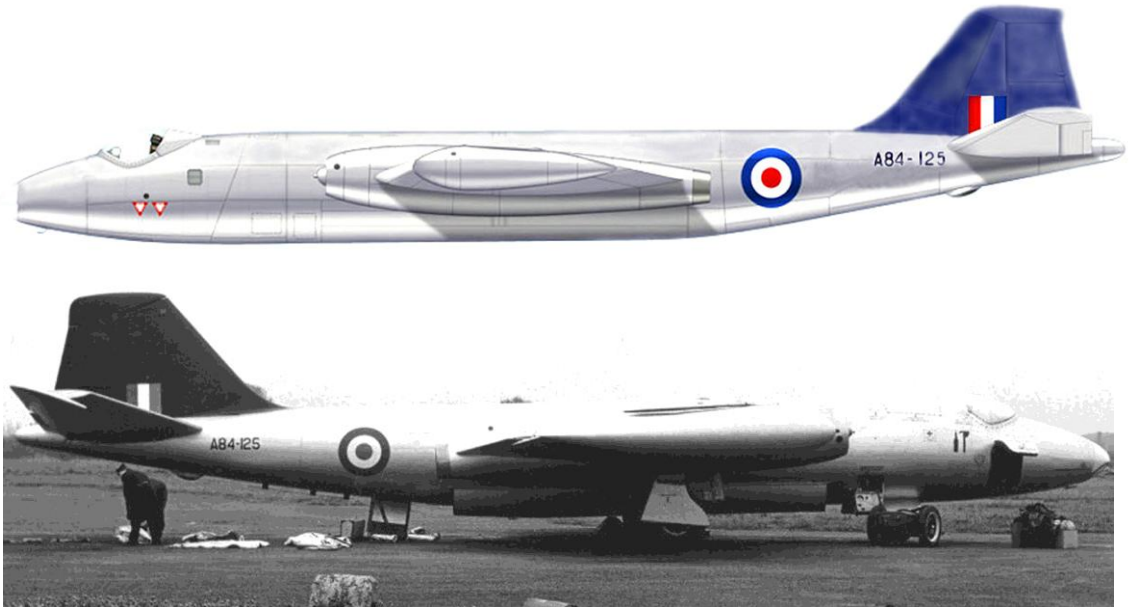
Canberra B.2 A84-307 was diverted from an RAF contract in 1950 to become the first jet aircraft to fly from UK to Australia in JUL 1951. Our first Canberras were delivered in overall aluminium – RAF termed this "High Speed Silver" – with 3:2:1 type-D 'target' roundels, 8" serial numbers, and a dark blue fin and rudder (the significance of which is unknown, perhaps the colour of the Australian flag).



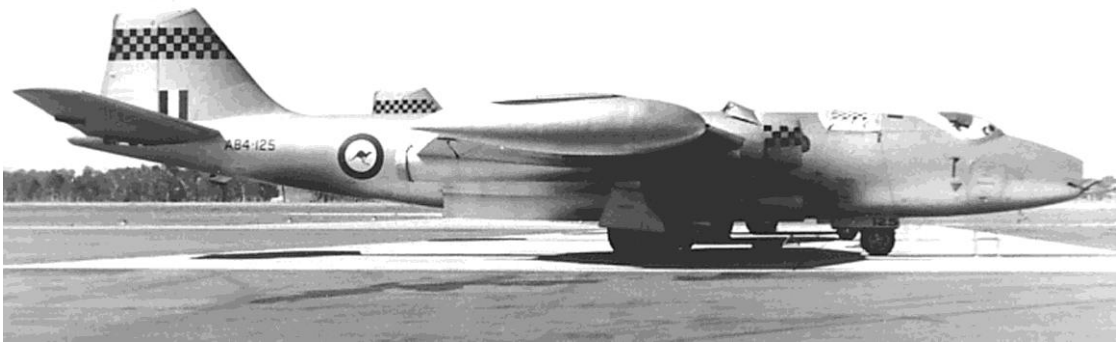
Under wing 48" RAF-style serial number markings, starboard side uppermost to leading edge (seen here), port side pointing to trailing edge.[xiii] Serving with ARDU, A84-307 went to 2SQN DEC 1953 to assist with Canberra training, but was damaged in an accident at Amberley in JUN 1955. Over 1956-58 it was converted into a Mk.21 trainer by GAF, and joined 1(B)OCU as the unit formed in 1959.

Post 1962, white upper fuselage, large squared side numbers, but still with type-D mainplane roundels (which would change in 1965). Both A84-125 and A4-307 – Canberra B.2 bombers from UK, converted by GAF to Mk.21 trainers – have been preserved. A84-307 is at the National Vietnam Veterans' Memorial at Phillip Island.

A84-125 (WD983) – ANOTHER LONG SERVING UK CANBERRA



WD983 was diverted from an RAF contract, allocated to the RAAF in MAR 1951 as A84-125, and was the third Canberra delivered to Australia in APR 1952 (the second had been A84-2 in MAR 1952). The delivery scheme was the same as A84-307 – overall aluminum with dark blue tail. To 2SQN JAN 1954, and 6SQN JUL 1955, then converted to Mk.21 trainer by GAF over 1958-59.1(B)OCU trainer 1959 (above) still with small 8" serial number, and from 1956 had kangaroo fuselage roundels. In the following year (below), A84-125 with large 'last three' 21" serial number, with curved figures. This would change in 1962 to large squared numbers and a white upper fuselage (bottom).



CANBERRA SQUADRON MARKINGS – *the lightning flash*

1SQN flight line at Amberley, 6SQN in the background, c1962-63

Squadron Colours

1 Squadron. 1SQN had a gold/yellow lightning flash on their silver Canberras from 1958. When the aircraft were camouflaged from 1963, this flash was sometimes only marked on the fin, and not the whole tail surface, and was notably shorter, probably 48" compared to the normal 60". Over 1966-67, 1SQN dispensed with the lightning flash (sacrilege!), and adopted a small shield above the national tail flash, with the 1SQN diving kookaburra from the badge. Dedicated Canberra flying ended in 1968 as 82 Wing crews deployed to the USA for the aborted F-111 pick-up, and afterwards flew a pool of aircraft from 1(B)OCU until arrival of the leased F-4Es in 1970.

2 Squadron. 2SQN had a red lightning flash on their silver Canberras from 1955, and deployed to their new base at Butterworth in 1958. When the aircraft were camouflaged from 1963, this was the initial lighter scheme with large white fuselage serial number. From 1966-67, the darker EDSG camouflage was adopted, and the aircraft deployed to South Vietnam in APR 1967. When 2 SQN finally returned to Amberley in JUN 1971, the red lightning flash was changed slightly to comply with the current RAAF Orders – any unit marking should include the centre of the official squadron badge, and the flash was moved forward to be marked only on the fin.[xiv]

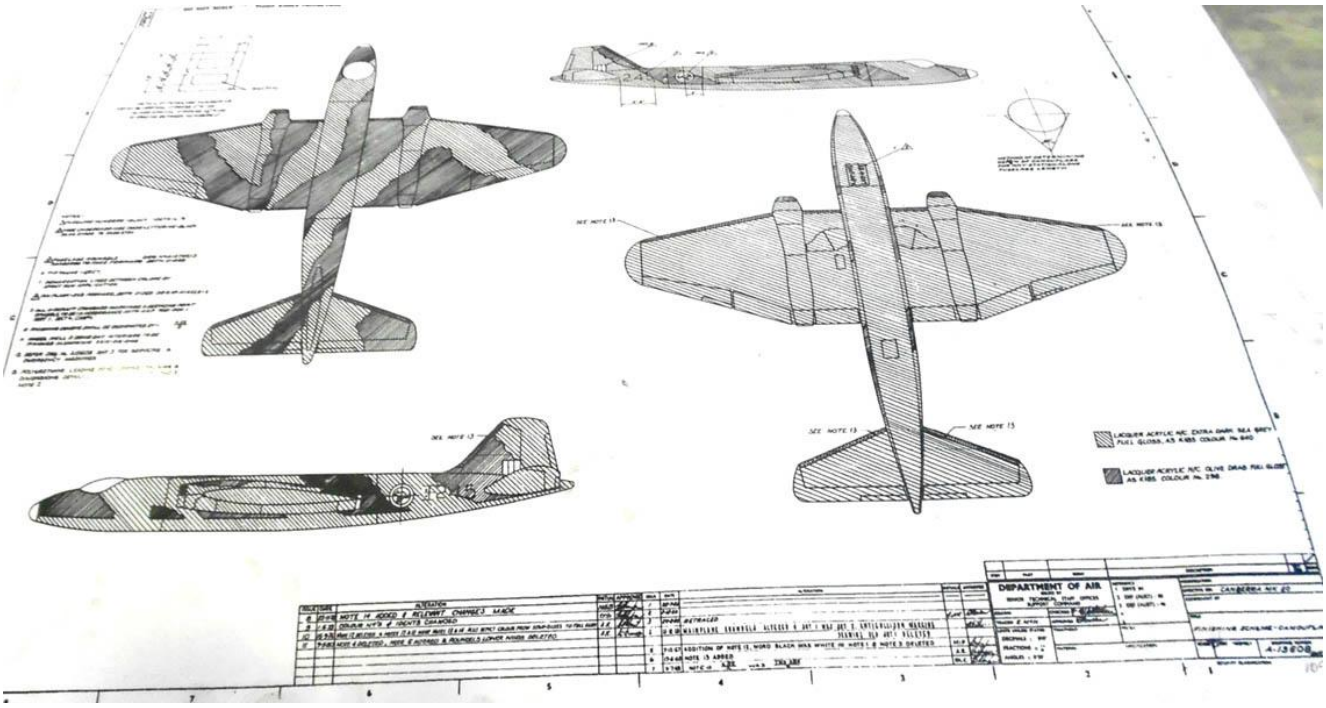
6 Squadron. 6SQN had a blue lightning flash on their silver Canberras from 1955, and also when the aircraft were camouflaged from 1963. Like 1SQN, 6SQN dedicated Canberra flying ended in 1968 as 82 Wing crews deployed to the USA for the aborted F-111 pick-up, and afterwards flew a pool of aircraft from 1(B)OCU until arrival of the leased F-4Es in 1970.

1 (B) Operational Conversion Unit. By 1958 with the introduction of jet fighters and bombers, the RAAF re-designated the Operational Training Units (OTU) as Operational Conversion Units (OCU) – so 2(F)OTU became 2(F)OCU and, for the bombers, 1(B)OCU was formed the following year.

1SQN A84-208 c1963 - changeover from silver to camouflage, with 84" type-D underwing roundels

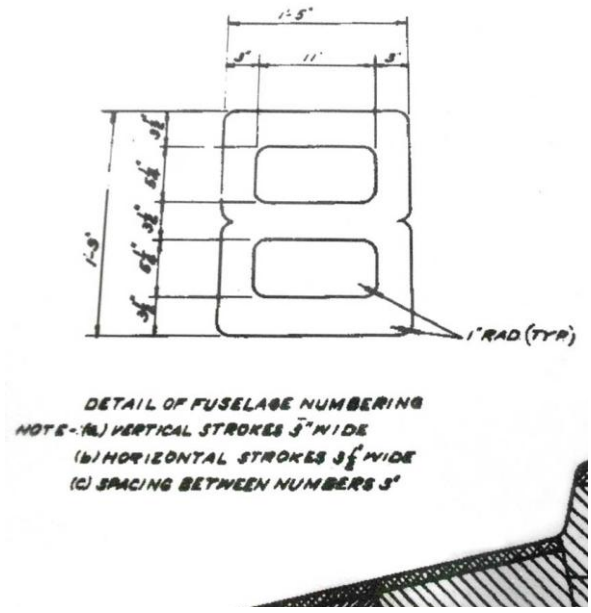
Camouflage pattern and side numbering

Below is the camouflage technical drawing used by RAAF surface finishers for the camouflage pattern from 1963 – the darker 1967 camouflage with dark sea grey used the same pattern. The two colours were in the British Standard BS381C-640 'Extra Dark Sea Grey' (EDSG, or AS K185/640 in the new Australian Standard system) and BS381C-298 'Olive Drab' (which became AS K185/298).



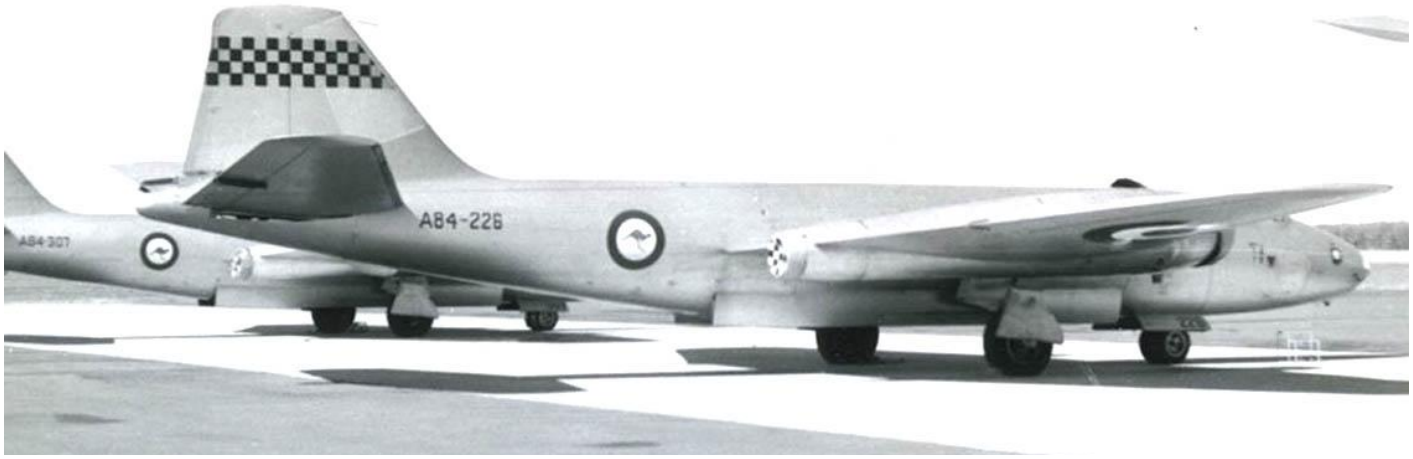
RAAF DEPT AIR Drawing A-13608

Large aircraft 21" side numbers had been adopted on Canberras from 1959-60 onwards, in a curved numeral style. This was standardised from 1962 in the squared number format shown below. On an aluminium K3/162 finish, the numbers were black; on the light camouflage of 1963 the numbers were in white, later to change in 1967 to black when the darker camouflage was introduced.



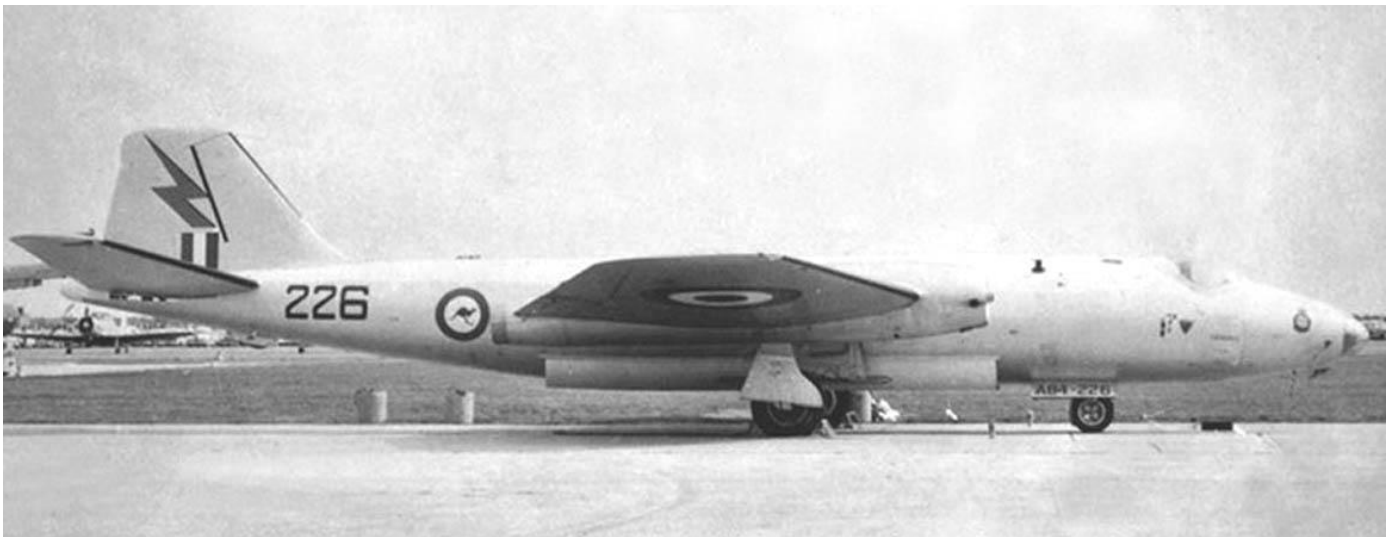
The side numbers were 1'9" high (53.34cm), 1'5" wide (43.18cm), with 3" vertical strokes (7.62cm), 3.5" horizontal strokes (8.89cm), curved corners using a 1" radius (2.54cm), with spacing between numbers at 3" (7.62cm).

A84-226 – EVOLUTION OF CANBERRA SERIAL NUMBER MARKINGS



1958 – A84-226 with 1(B)OCU, overall aluminium, small black serial number 8” high, 33” fuselage kangaroo roundel (from 1956), mainplane 3:2:1 type-D ‘target’ roundels 84” diameter (until 1965).

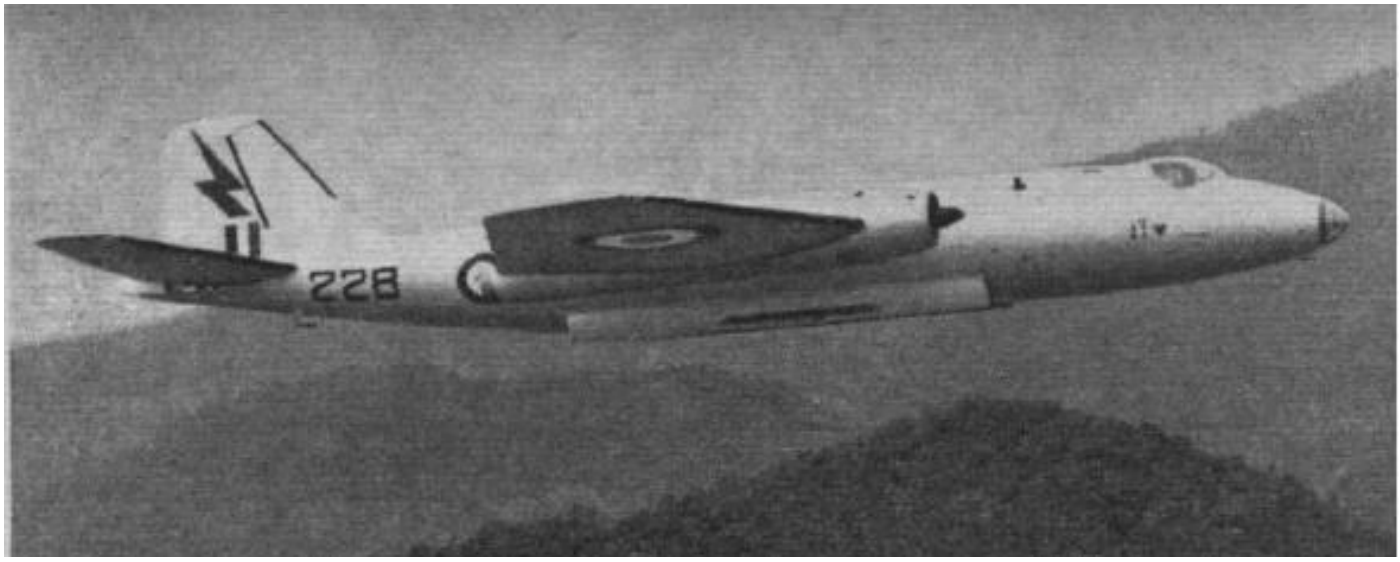
1961 – 1 Squadron, white upper fuselage, large ‘last three’ serial number 21” high figures but curved characters (introduced in 1959-60), 1SQN badge on nose, mainplane ‘target’ roundels.



1962 – 1 Squadron, white upper fuselage, large 'last three' serial number 21" high now the definitive squared-style numbering, mainplane 'target' roundels which will change in 1965.

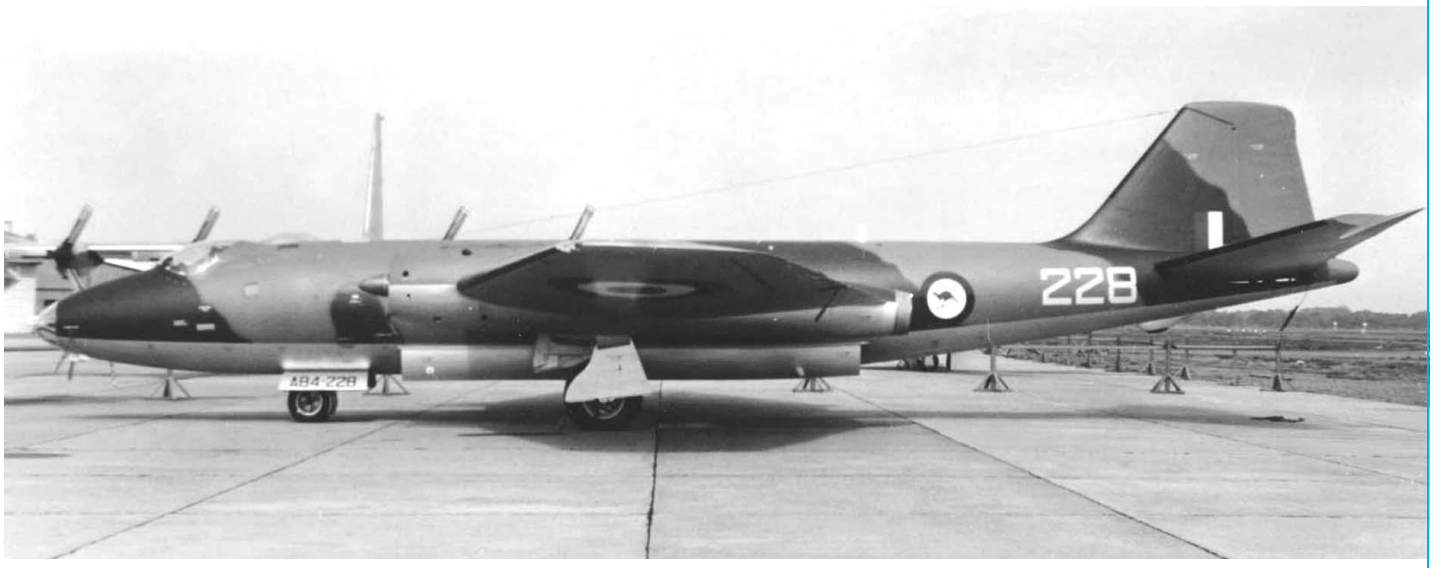
1965 – 1 Squadron, light fading Dark Sea Grey/Olive Drab camouflage, aluminum undersides, white 21" squared serial number, no over wing roundels – the camouflage would soon change to the darker EDSG/OD, black serial numbers, no mainplane roundels, and small fuselage roundels.

A84-228 – EVOLUTION OF RAAF CANBERRA CAMOUFLAGE



Dated circa 1959- but in Malaysia: A84-228 closes its bomb bay in flight

1962 – aluminium with white upper fuselage, large 'last three' serial number 21" high black figures in the definitive squared-style numbering , 33" diameter fuselage roundels and large 84" mainplane 'target' roundels.

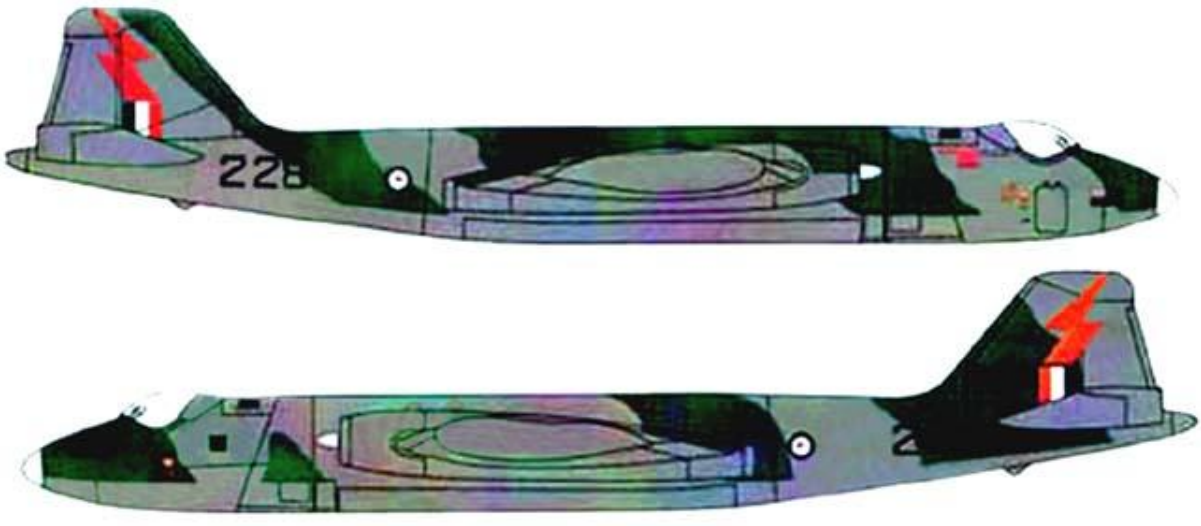


1963 – the first attempt at camouflage with the lighter Dark Sea Grey/Olive Drab and aluminum undersides. While newly painted, A84-228 looked truly pristine, but these colours soon faded, and white serials, large roundels, and aluminum undersides were not conducive to effective camouflage. So, note large 'last three' serial number 21" high in white, and large 84" mainplane 'target' roundels (which will change in 1965). By 1967, A84-228 had the darker camouflage with dark grey undersides, black side numbers, but retained the huge 84" under wing roundels (which now incorporated the kangaroo). Mainplane roundels were deleted completely before deploying to Vietnam, so as not to compromise the dark camouflage.

1969 – A84-228 served on 2 Squadron Vietnam over 1967-71. Markings were the darker Extra Dark Sea Grey/Olive Drab camouflage with EDSG undersides, black 21" side serial number, no wing roundels, small 18" fuselage roundels, national tail marking 24" square, and 2SQN lightning red flash 60" high. A84-228 was lost in March 1971, being shot down by a North Vietnamese SA-2 surface-to-air missile. Fortunately, the crew was rescued.

Roundel sizes

The Canberra's roundels changed with camouflage. The standard size had previously been 84" (213.36cm) diameter on the main planes and 33" (83.82cm) on the fuselage. With the 1963 lighter pattern, wing roundel sizes were reduced on upper surfaces but maintained on lower surfaces, and fuselage roundels remained the same. On the darker 1967 pattern, mainplane roundels were deleted completely (as seen below on A84-228) and fuselage roundels were reduced to 18" (45.72cm). The fin flash was 24" (60.96cm) square. The squadron colour lightning flash was typically 60" (152.4cm) high.



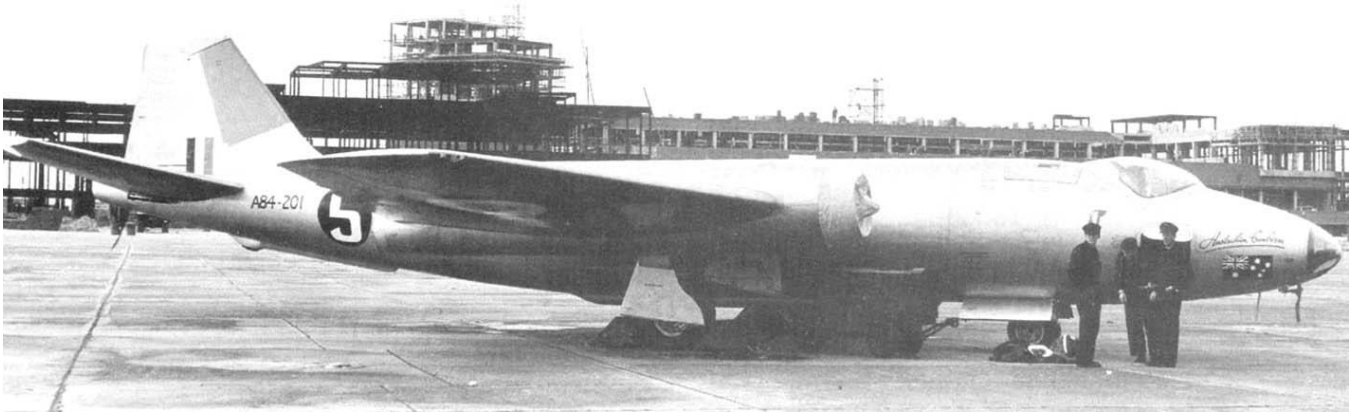
Other interesting Canberra markings

The First Australian Canberras – The London-Christchurch Air Race of October 1953 saw two RAAF Canberra Mk.20 entrants, A84-201 and A84-202, while the two imported B.2s (A84-125 and A84-307) were used for preparation and held in reserve. Both A84-201 and A84-202 were marked on their noses "*Australian Canberra*" – this nose marking was similar to when A84-201 had made its maiden flight marked as "*First Australian Canberra*", revived by 2SQN in 1974 for A84-201's 21st birthday! The Canberras were marked with their fuselage "race numbers", "5" for A84-201 and "4" for A84-202.

A84-201 gate guard at Amberley in 1OCU markings

A84-202 refuelling in Ceylon in 1953

Below are the two Australian Canberras in the October 1953 Air Race – truly a marvel that they were completed and delivered on time, and did so well in the race.



A84-201 "Australian Canberra" with its race number "5" on the fuselage

A84-202 with race number "4" in October 1953 at the under-construction Heathrow airport

1 SQUADRON

1 Squadron had operated Lincolns at Tengah, Singapore, until returning to Amberley in 1958 to become the RAAF's third Canberra squadron.

There had been no "squadron colour" on the Lincoln, the only examples of colour being different propeller spinner colours, such as red, black and blue.

But on return to Amberley – with 2 Squadron already having a red lightning flash on the tail, and 6 Squadron blue – 1 Squadron adopted a gold/yellow flash.

1SQN's flash was sometimes shorter (48") and marked on the fin only. In 1959, 1(B)OCU was formed as the 82 Wing training unit, and this unit adopted a yellow/black checkerboard band across the tail.

Early 1SQN Canberra Mk.20 A84-230 all-over aluminium, c1959-1960, with gold flash

A84-227 1SQN 1962 yellow flash

A84-213 1SQN 1965 (on the fin)

1SQN shield marking 1967

A lovely pic of 1SQN Canberra Mk.20 A84-227 (the last Avon Mk.1 aircraft) at Richmond, standard aluminium/white upper fuselage, and the large 21" rounded 'last three' serial number, c1962-1963

A84-244- in Darwin , note Sqn Badge on forwarded fuselage

A84-213 1SQN crashed at Darwin in April 1965

Above and below: 1SQN Canberras in early camouflage 1963-66, yellow unit flash on the fin only

A84-207- gives a good post 1965 view of the underwing roundels

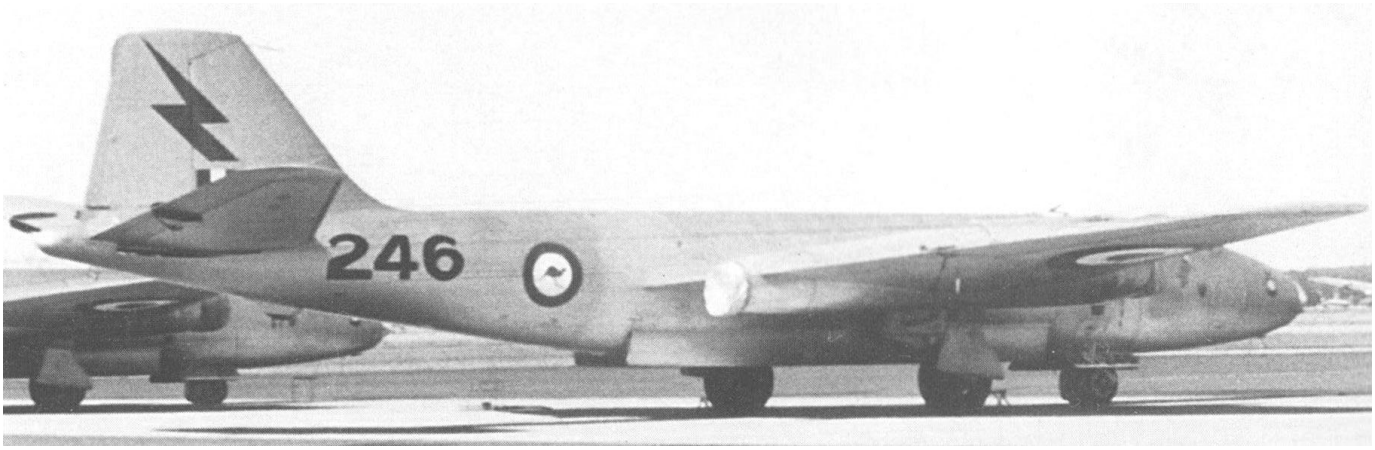
2 SQUADRON

2 Squadron was the first RAAF Canberra squadron in DEC 1953 when it received the two UK-built Canberra B.2s (A84-125 and A84-307), which had been delivered for training before Australian production of the Canberra Mk.20. Australian production supplied 2SQN over 1954 and 1955, and then 6SQN began to equip. A Canberra T.4 was operated by 2SQN from 1956, until transferred to 6SQN which inherited the training role for the Canberra force. From 1959, training was conducted by 1(B)OCU. The 2SQN marking was a red lightning flash on the tail (later in 1972 reduced to the fin only), and a red wingtip tank marking over the mid-1950s era.

Above and below, 2SQN Canberra T.4 trainer A84-502 in c1956-57

2SQN flash on silver 1956-63 2SQN flash on camouflage 1964-71 2SQN flash from 1972, fin only

A84-215 2SQN with a nose wheel collapse in 1955, note red wingtip tank marking



A84-246 Amberley 1958-59 with large rounded-style fuselage serial numbering

Butterworth the 2SQN silver years – 1958 to 1963, note white fuselage upper surface

2SQN Butterworth flight line 1966 – A84-204, a Mk.21 trainer, was not taken to Vietnam in 1967, but sent to ARDU; A84-242 recently arrived still with light camouflage and white numbers; other aircraft in dark EDSG camouflage, although A84-241 was still to receive its red 2SQN tail flash.

My pic of A84-231 heading for a bombing mission in the Mekong Delta, South Vietnam in 1970 – darker camouflage, black serials and wing walks, no mainplane roundels, small 18" fuselage roundels

A84-125 Canberra Mk.21 trainer 2SQN 1972, with the revised red flash only on the fin

2SQN A84-238 during 1970s to 1982, with the sight housing modification for the Wild RC10 survey camera. Other aircraft modified with this camera fit from 1973 were A84-230, -232, -233, -234 and -245. The aircraft finish had become full gloss acrylic lacquer (AS K185/640 EDSG and AS K185/298 OD).

6 SQUADRON

6 Squadron became the RAAF's second Canberra squadron in JUL 1955 as part of 82 Wing at Amberley. 6SQN eventually took over the training role from 2SQN, which in 1959 would pass to 1(B)OCU. 6SQN adopted a blue lightning flash on the tail, and unique blue intake markings. Some early aircraft also had blue markings on the wingtip fuel tanks – 2SQN had something similar in red (see earlier images of 2SQN Canberras A84-215 and A84-502).

A84-218 (above) and A84-220 (below) 6SQN Canberras in 1955, with blue edged intakes and blue lightning flash – the flash is sometimes referred to as a "lightning bolt", but by the RAAF as a "flash"

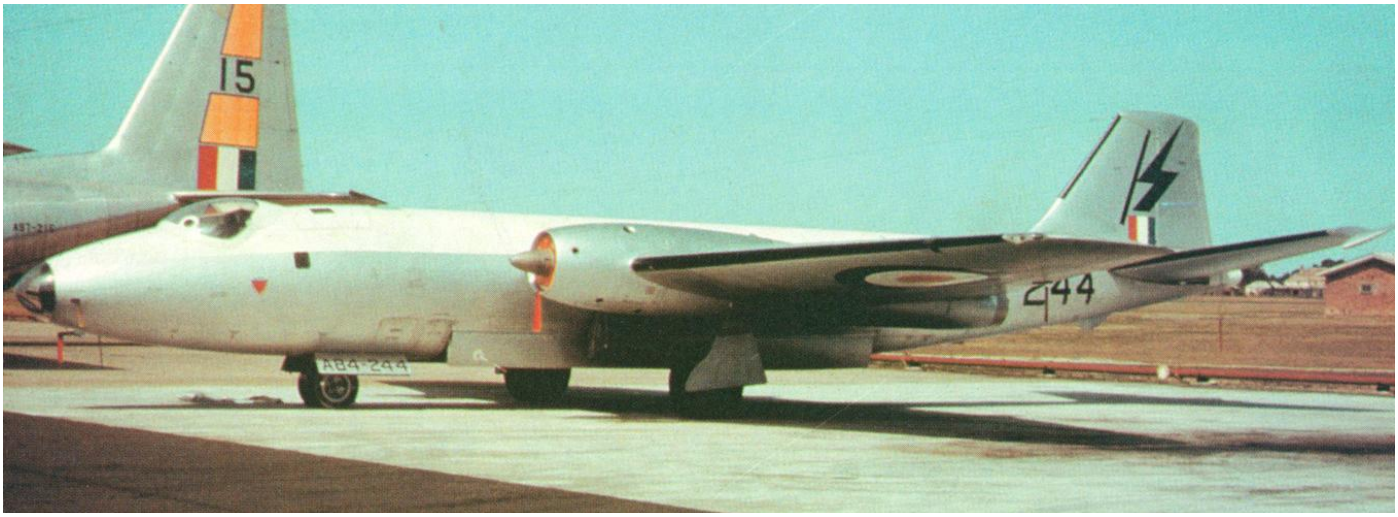
6SQN flash on silver 1955

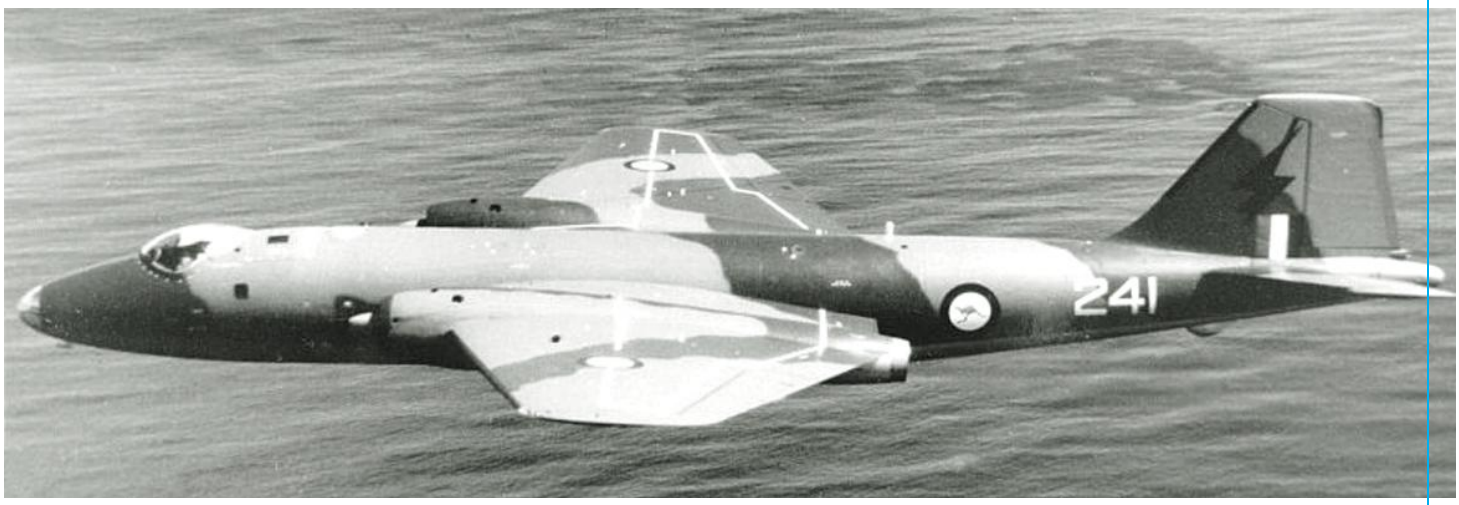
6SQN blue wing tank marking 1955

6SQN flash on silver/white 1962

A84-208 6SQN Canberra at Richmond Air Show, September 1960

Above and below, 6SQN Canberras 1962-63





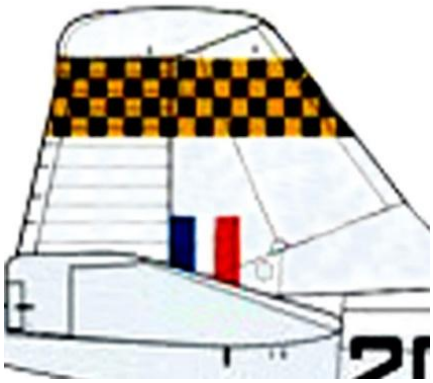
6SQN Canberra Mk.20 in 1965 – the initial lighter camouflage. Silver aluminium under surfaces, white side number, smaller mainplane (probably 18" diameter) roundels with white wing walk markings, but still large 33" fuselage roundels. Note that the blue 6SQN flash has been moved forward to be on the fin only, and not rudder – unusual for 6SQN.

1(B) OCU

1(B)OCU was formed in 1959 as the Canberra force training unit, as in 1958 2(F)OTU had been re-designated as 2 (F)OCU. 1(B)OCU adopted a yellow/black checkerboard band across the tail, 24" wide comprising four rows of 6" squares.[xv] See below, this was later reduced to only cover the fin.

1(B)OCU Canberras 1962-1965

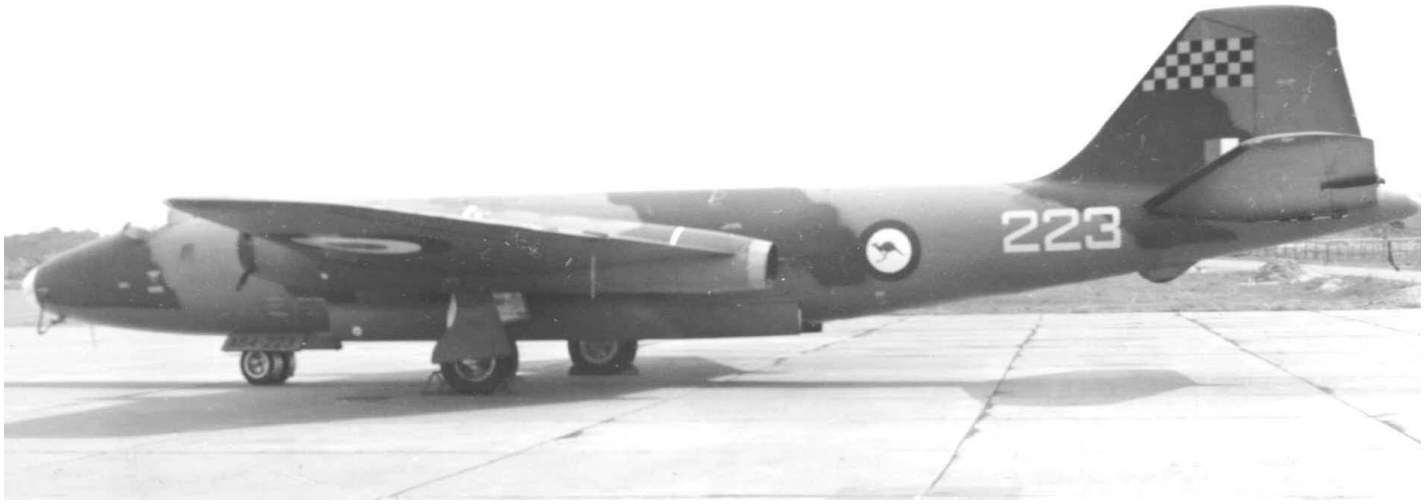
A84-125 Canberra Mk.21 1OCU



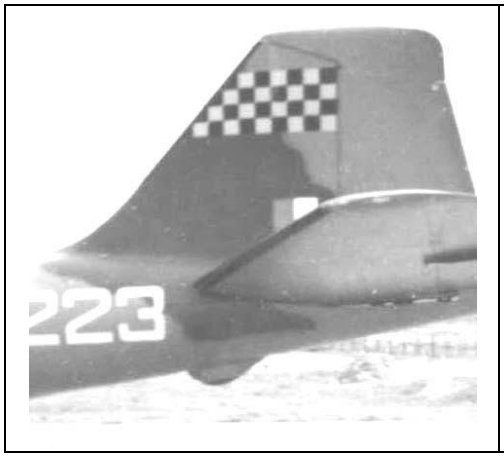
1OCU checkered 24" band

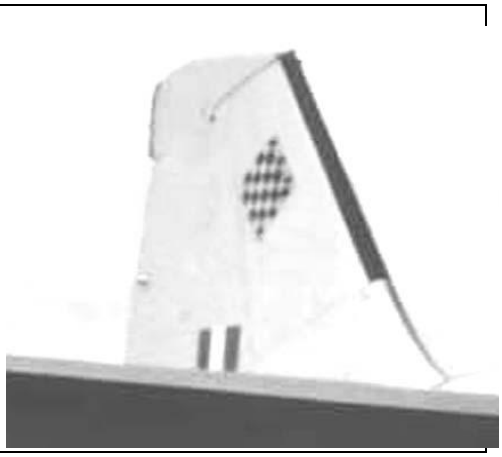
A84-218 later fin marking in 1966

A84-218 in 1965-66, still with the large 'target'-type wing roundels prior to the kangaroo

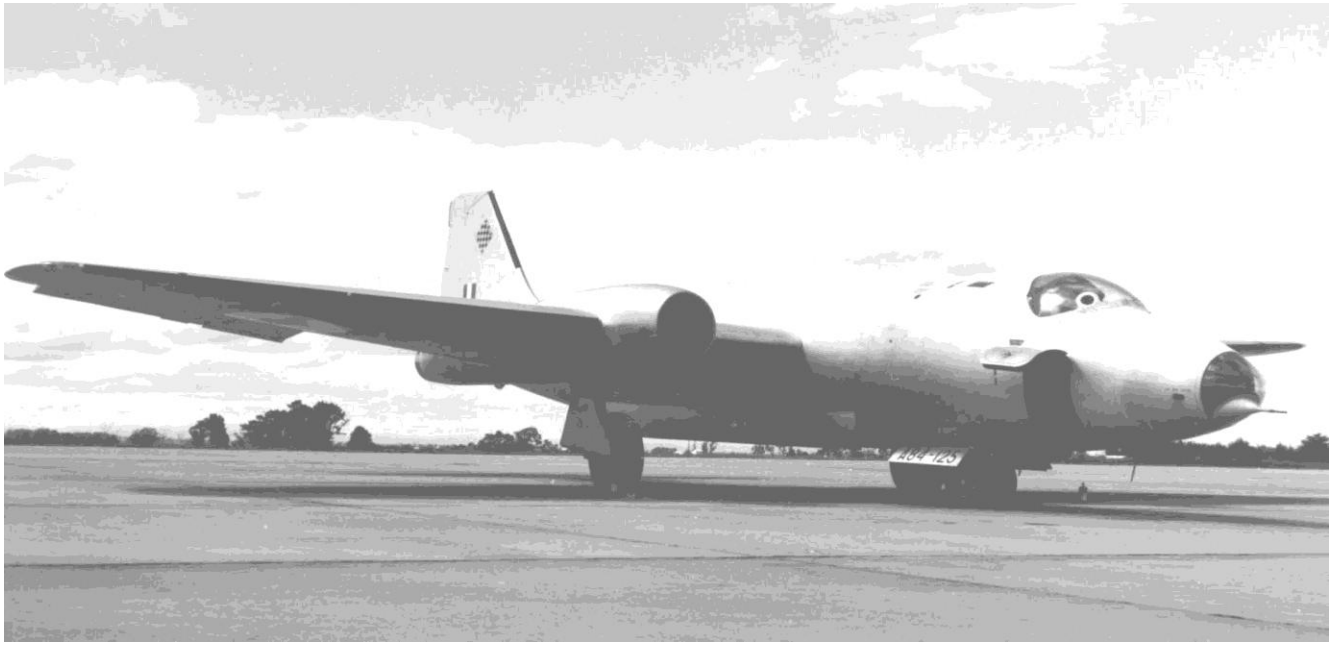


1OCU A84-223 camouflaged Canberra Mk.20 c1965 – still marked with large type-D 84" (213.36cm) 'target'-type underwing roundels, lighter grey camouflage with large 21" white 'squared' side numbers, 33" (83.82cm) fuselage kangaroo roundels, and 24" OCU checked band on the fin only.





A84-223 Canberra Mk.20 c1965 **A84-125 1OCU diamond checks 1968**



1OCU Diamond. During 1968 a diamond fin marking on an aluminium-coloured trainer, A84-125, appeared. The diamond was yellow and black checks, apparently the same 1OCU 6”-sized checks, with six checks per side of the diamond. This would make the diamond 50” in diameter/or width across. The diamond marking was apparently not carried by any other aircraft.

ARDU

At RAAF Base Laverton the Aircraft Research & Development Unit adopted a stylised “ARDU” shape in a green and yellow diamond. The overall green and yellow colours had been introduced in the early 1970s for calibration and tracking of their test Mirage aircraft.

A84-240 camouflaged Mk.20 **A84-229 aluminium/white** **A84-237 green/yellow ARDU tail**

A84-229 in 1966 with ARDU's unique marking of camouflage and white upper fuselage. Of interest are the white side number, the white wing walk markings, and small 18" mainplane roundels.

A84-237 ARDU Canberra Mk.20 in 1978 – large wing roundels and the unique fin flash position

A84-237 ARDU Canberra Mk.20 -another shot, this time stored in 1982.

Central Flying School

Central Flying School (CFS) at East Sale operated both the T.4 trainers, A84-501 and A84-502.

- **WT491** was built in SEP 1955 and delivered to RAAF in APR 1956 as A84-501 for service with 6SQN (at that stage the conversion unit). Went to CFS in 1959, then storage in 1963, issued to Melbourne Lord Mayor Portsea Holiday Camp NOV 1966, and ultimately scrapped.

- **WT492** built in OCT 1955, delivered to RAAF in MAY 1956 as A84-502. Arrived MAY 1956 at 2SQN and then to 6SQN in APR 1957, forced landing at Amberley SEP 1958, then to CFS NOV 1962. Storage 1963, then in OCT 1966 to RSTT Wagga as Instructional Airframe No.1. Later stored, then purchased by HARS for restoration and currently **displayed at HARS Albion Park.**

A84-502 / WT492 CANBERRA T.4

Colour scheme for both T.4s was overall aluminium, and when in squadron service carried squadron markings (see A84-502 with 2SQN). At CFS, both aircraft were marked in the high-visibility training colours of the day - dayglo nose, fin, outer wing and outer mainplane panels, and wingtip tanks. Standard fuselage roundels were 33” diameter kangaroos; mainplane roundels 84” diameter type-D; and the type-D fin flash was 24” square (each colour being 8” wide) which was uniquely relocated to the rudder. Standard 8” serial number on the fuselage, large “502” on forward fuselage both sides, and stencilled numbers on the dayglo wingtip tanks.

CFS Canberra T.4 A84-502 in 1963 with overall silver aluminium with “dayglo” While these markings were carried in CFS service up to 1963, the aircraft were then allocated to storage at 1AD Laverton, where A84-502 appeared on static display in SEP 1964 at the annual RAAF Air Force Week Open Day.

Aluminum High Speed Silver	**Dayglo**	**Kangaroo Roundel**

The Losses of Coomalie 43; it Could Have Been a Lot Worse

Garry Shepherdson

Line up of 31Sqn RAAF Beaufighters 1942.

Operation Coomalie 43 of December 29th, 1942, was a strafing attack directed at huts in the vicinity of the near coastal village of Betano, on the south coast of Portuguese Timor, just to the east of the mouth of the Sue Rio (Sue River), by four Beaufighters of Number 31 Squadron, Coomalie Creek.

Of the four details that made up Coomalie 43 – duties 1, 2, 3 and 4 – Coomalie 43 duty 4 (COO43/4) turned back around an hour after take-off due to failure of that aircraft's intercom and W/T equipment; the remaining three duties continued on to the target, through at times very poor weather.[xvi]

After eventually locating the target, COO43/1 [Greenwood* and Thompson in A19-70 / W] commenced their first pass followed by COO43/3 [Wilkins and Byrnes in A19-71 / X] and then COO43/2 [Gabb and Webb in A19-20 / D].

> COO. 431 observed 433 following him when he turned right for the second run and also observed COO. 432 as he finished his second run – COO. 432 was then flying E at about 1000 feet about 2 miles E of the target. It is suggested that 433 followed 431 on number 1 and 2 runs then[,] thinking COO. 432 was the leader[,] followed him to the E. COO. 433 and 432 were not again sighted by COO. 431 …[xvii]

Duty 1, who after making a 3rd strafing run across the target in a south westerly direction, continued on that course and then made for base having to again contend with very poor weather over the Timor Sea.[xviii]

A few huts were strafed with cannon and machine gun, with no observable results.[xix] Very little activity was noticed and no anti-aircraft fire was reported.[xx] Of the three Beaufighters that attacked, only one made it back to base.

The weather across most of the Timor Sea was diabolical with heavy rain and zero visibility typically associated with a monsoonal trough and, given the lack of activity in the target area, the logical assumption would have been that the two missing aircraft had either become lost or had crashed as a result of the weather.

However, Coomalie 43 duty 2 "*… was apparently hit by A.A. fire over TIMOR and was forced to land in the sea close to the shore. The crew … escaped uninjured and were picked up by the A.I.F. on TIMOR ISLAND. They returned to their unit on 10th January …*"[xxi]

Certainly a succinct paraphrasing of the crew's experience! Here is a more comprehensive version:

> COO 432 following COO 433 in the first run over the target at 0220/29/Z, flying in northerly course at 100 feet height, fired three bursts of cannon and machine gun at some native huts. COO 432 finished this run by turning to the West and is was then that the observer observed the tail fin smashed by fire either from mortar or bofors gun (Observer saw red ball go through tail of aircraft) – the aircraft was also holed in several places in the tail. At the same time the port motor cut out and although the reason was unknown, it is considered it was caused by A/A (no A/A was observed either before or after the smashing of the tail fin). The Pilot then turned the aircraft in an easterly course, and the Observer threw out propaganda pamphlets as instructed. The Pilot was unable to maintain height or speed, and after crossing the Kelan River headed the aircraft out to sea. At this time the speed had decreased to 100 knots and the temperature of the starboard engine had increased to 280° and the controls were acting erratically. The Pilot then crashed landed on the sea about a quarter of a mile out to sea off Cape Netiboot. The tail of the aircraft hit the water first and then the engines – the Observer and the Pilot had braced themselves for this crash, the Pilot also had moved the gun sight out of the way, and the crew quickly escaped through the two top hatches. They climbed onto the wings which were then waist deep, and then swam to the shore. Both Pilot and Observer had Mae Wests and the Pilot also had his revolver. The aircraft sank in about 20 seconds, front going down first followed by the tail – it is estimated that the aircraft sank in 40 feet of water, at low tide about a quarter of a mile off the shore near Cape Netiboot. The Pilot and Observer after swimming ashore, followed a track into the scrub and then camouflaged themselves [with branches?]. Attempting to cross Kelan River, but found mud to be knee deep. Then stopped at river to wash and observed "Nate" approaching at 6000 feet, they made for cover but did not think "Nate" was looking for them, as it flew an even course. The time was now 0430/29/Z, about two hours since the aircraft landed in the sea. Later they crossed the Kelan River higher up, and came to deserted native village – they looked round for food and were successful in finding five eggs which they ate raw. They decided to sleep in one of the huts and were not disturbed during the night. The next day they spent in pushing further inland, the going was heavy, owing to mountainous condition of the country, and they could not find any food – there was plenty of water available from springs and streams. They passed through native huts all of which were deserted, and finally reached a Poste House, which was probably at Fatucuac. They spent the night here and again were undisturbed, although they later heard Japs were only one or two miles away from Fatucuac. The third day, the crew pushed further inland over a creek called "Bamboo Creek", and here they found palm leaf shelters, built by A.I.F. this fact was deducted by writings on posts and tobacco tins. They then climbed hills endeavouring to locate A.I.F. and subsequently came across two natives – these natives after a lot of gesticulations, which the Australians could not understand, made off, and the two Australians also made off thinking that the natives might be hostile. Continuing the journey inland they came across a very old native in a hut who gave them a meal of boiled maise and eggs. This native and our chaps managed to talk with sign language the native calling them "Australie Soldato". Then the two natives returned, one of them producing a note signed by a member of A.I.F. and saying that these natives were friendly and would lead them to the A.I.F. By collaboration with the old native and with many signs and Australian slang words our chaps were made to understand they must first have a good meal, and then they would be taken to the A.I.F. Our chaps then had a good meal of rice, soup and eggs, had a short sleep and then were taken some miles to the A.I.F. After a meal of rice our chaps enjoyed a good nights rest. The next day they rested at the A.I.F. camp at which there were a lot of natives – these natives were all working for the A.I.F. The following day our chaps escorted by member of A.I.F proceeded inland and after seven hours hike, arrived at Head Quarters for tea – here they had a good meal, including Tomatoes and fresh beans. The next day they, and all the A.I.F members left this position

> and proceeded toward the coast, and after days hiking stopped for the night at a place near Fatoe Luilik. The next morning the party left early, and after hiking all the morning had lunch at a native village near the coast. After lunch they proceeded to the coast arriving there about 2 P.M. The party which had grown to 200 (including Portuguese) then dispersed under cover of the scrub just off the beach and waited for the ship, which was to take them off the Island. The ship arrived at 11.30 PM at night and 4 ½ hours was spent in getting the two hundred odd personnel on to the ship. This was not easy as the surf was heavy. After everyone was aboard, the ship left the coast of Timor, just before dawn, making an uneventful journey to Darwin where she berthed at about 7PM.[xxii]

By today's standards, that was still a laconic and grossly understated account of what must have been a harrowing and totally exhausting experience with the constant fear of capture and possible execution. It is interesting to note the events that were upper most in the minds of the two members during their evasion: food and sleep.

Prior to their ditching, they might well have felt that they were in deficit of these two commodities as a normal course of their day to day existence due to the primitive conditions that they were living in at Coomalie Creek. But their new experiences must certainly have opened their eyes. The old gentleman in his hut freely gave what food he had as well as shelter and the two others, who went and notified the local AIF forces and then led Gabb and Webb to their current location all willingly did what they could to help, nourish and protect the two airmen at what must have been great personal risk. Even the AIF provided what they could of their own limited rations and resources.

If the two airmen thought that they had been doing it tough at Coomalie Creek they now had a glimpse of an alternative existence which must have made Coomalie suddenly seem like a safe and luxurious place to be.

But what about Wilkins and Byrnes as Coomalie 43 duty 3? As it turned out, their aircraft, A19-71, had also been hit (either by ground fire or perhaps a ricochet from A19-20, which was following them on their strafing run) jamming the elevators causing obvious control difficulties as related below.

> At 0220/29/Z COO 433 followed COO. 431 to attack native huts at BETANO COO. 431 [sic] fired burst at native huts on point on coast at Betano on northerly run and after having fired the burst the port elevator became U/S which in turn locked the elevator controls …[xxiii]

The pilot described that this …

> … caus[ed] the aircraft to climb steeply … [a]s the aircraft was almost vertical[,] left rudder brought the nose down and turned the aircraft on to course 180. I reported trouble to the Observer, and asked him to look around and see if he could locate the cause. After trying the trimming tabs to no effect, I found the position of the nose would respond to the use of throttle and managed to recover from the resultant dive. About this time the Observer reported that the port elevator had pulled away and was sticking up at an angle of 45° to the tail plane. I then told him to bring [his] parachute and come up to the front in an endeavour to assist [in] trimming the aircraft.[xxiv]

As they found that they were able to roughly control altitude with throttle, it was decided that they might be able to reach home and so the pilot turned on to a course of 120° and headed back.

Direction was difficult to control accurately with heading deviations of up to 40° occurring and without any elevator control, any deviation in pitch (nose up or down) had to be corrected with power: reduce power – nose drops; increase power – nose rises. So, if for any reason the nose started to dip slightly, power had to be applied – which will tend to make the nose rise, but only after accelerating in the direction that the nose was pointing and therefore losing altitude. About thirty minutes after coming off target they entered cloud at around 500 feet and remained in cloud for the next thirty minutes until they broke out at 5000 feet into relatively clear air with light precipitation. Pitch control with throttle still took variations of between 500 and 1000 feet of altitude to regain control.

Forty minutes after clearing the worst of the weather, they sighted Bathurst Island ahead in the distance, some 120 kilometres away (visibility during the wet season, especially after rain, can be exceptionally good). As they got closer they could see a vessel off Cape Helvetius (*PATRICIA CAM*), the pilot knew the approximate location of the radar station [38 Radar Station], so the possibility of rescue on the ground was near, also knowing that a landing was going to be impossible and that no useful purpose would be served by continuing on beyond this first land fall and also that "… the island seemed a good place to let her go without doing any damage ...", it was decided that they would bail out over Bathurst Island as close to the beach as possible.[xxv]

The observer opened the forward hatch and shortly after crossing the coast, jumped. After a pause, he pulled the ripcord and the parachute opened immediately. Shortly afterwards he saw the pilot leave the aircraft and open his chute. He watched the pilot descending and wondered why he though, seemed to be drifting out to sea and not losing any height.

The observer watched as the pilot made his landing not far in from the beach and, still thinking that he was several thousand feet up in the air, suddenly became aware that he was actually very close to the water and, trying to undo his harness, hit the water before doing so. He estimated that he was probably a mile and a half out to sea so tried to make for shore but was unable to do so, saying that at one point he "… was almost able to catch hold of the wreck [of the *DON ISIDRO*] but a big wave washed me back …".[xxvi]

About a minute [probably quite a bit less] after the observer dropped out of the aircraft, the pilot abandoned the aircraft (at 1500 hours local and at 5000 feet) and deployed his parachute immediately. Landing about a mile inland from the beach and concerned that the observer had drifted out to sea, the pilot unfastened his dingy and began the half hour walk to the beach coming out near the wreck of the *Don Isidro*.

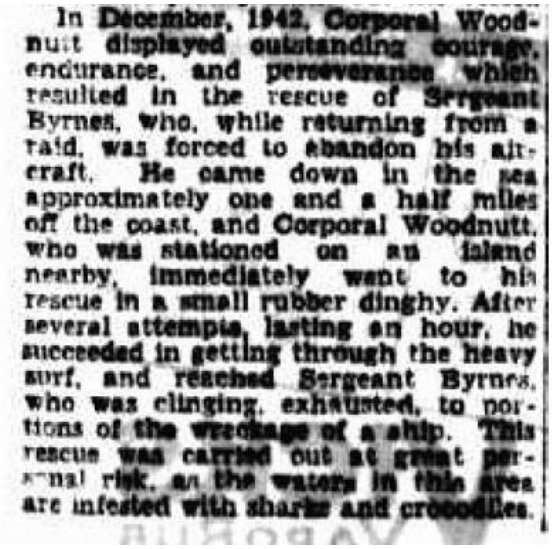
"Don Isidro RAAF Aerial 1942" Source: ris.environment.gov.au*

Not able to see his crewmate, he walked south along the beach towards Cape Fourcroy and after 45 minutes was met by RAAF Corporal Woodnutt and a party of Tiwi Islanders from 38 Radar Station the time was now 1615 hours local. The group then began to search for the observer and at 7pm, saw him in the water about a mile off shore. Corporal Woodnutt immediately grabbed the pilots rubber dinghy and paddled out to the rescue.[xxvii]

Exhausted, the observer saw the figures on the beach and knew that they had seen him and whilst he continued to drift, Corporal Woodnutt had started out in the rubber dinghy. Finally reaching the floating Sergeant Byrnes, Woodnutt got him into the little rubber boat and then commenced to swim to shore, towing it behind him.[xxviii]

It was 8:30pm when they finally reached the shore – an hour and a half of exhausting, selfless and courageous effort by Corporal A.E. Woodnut through shark and crocodile infested waters. After reaching the beach, the observer, in the dinghy, was carried a further 5 miles by the Tiwi Islanders down the beach to another boat that Corporal Woodnut had used to traverse the inlet immediately to the east of Cape Fourcroy, was placed in it and taken across the creek and on to the radar station camp.[xxix]

Alfred Edward Woodnutt was awarded the British Empire Medal for "… Courage & endurance [in] rescuing [a] comrade from [the] sea …"[xxx]



In December, 1942, Corporal Woodnutt displayed outstanding courage, endurance, and perseverance which resulted in the rescue of Sergeant Byrnes, who, while returning from a raid, was forced to abandon his aircraft. He came down in the sea approximately one and a half miles off the coast, and Corporal Woodnutt, who was stationed on an island nearby, immediately went to his rescue in a small rubber dinghy. After several attempts, lasting an hour, he succeeded in getting through the heavy surf, and reached Sergeant Byrnes, who was clinging, exhausted, to portions of the wreckage of a ship. This rescue was carried out at great personal risk, as the waters in this area are infested with sharks and crocodiles.

A paragraph in the Sydney Morning Herald's article HONOURS FOR AIRMEN, April 24th, 1943. (*The Sydney Morning Herald* April 24th, 1943, p9 via http://nla.gov.au/nla.news-article17845744)

Coomalie 43 duty 4, A19-29/G of 31 Sqn RAAF, pictured later in her career. RAAFAWA

Beaufighter A19-71, fell out of the sky and burst into flames on hitting the ground and blew up a few minutes later.[xxxi]

The official description of the loss merely noted that:

> After being apparently hit by A.A. fire over TIMOR ISLAND, the aircraft was flown back accross [sic] TIMOR SEA in a partially uncontrollable state to BATHURST ISLAND. The crew baled [sic] out, and are now safe and uninjured …[xxxii]

Whilst it was right and proper that Corporal Woodnutt's actions were recognised, we should not forget the three indigenous Timorese. Their actions were every bit as brave as anyone else who accepted and harboured downed airmen during the war in that or any other part of the world.

The consequences of detection by occupying forces, or by other members of their own society with different allegiances, would have been equally fatal. Whilst the occupancy of these Australian's in Timor was very brief, the indigenous population had to keep living there. Had it not been for the selfless bravery of the three Timorese, of Corporal Woodnutt and the assistance of those Tiwi Islanders, and of course the members of Lancer Force, the outcome for Gabb, Webb and Byrnes could very easily have been very, very different.

*

Coomalie Creek, NT. 20 January 1943. A group portrait of pilots and observers of No. 31 Squadron RAAF standing on and in front of a Squadron Bristol Beaufighter aircraft. Left to right: front (standing): Pilot Officer Cormie; 260740 Flight Lieutenant John Alfred Madden; Squadron Leader G. W. Savage; Sergeant Barnett; Squadron Leader E. Cook; **Flight Lieutenant G. A. Greenwood**; Flight Lieutenant P. E. Beven; Flying Officer J. D. Entwhistle; Flying Officer D. Delaporte. In front Sergeant B. Agnew (holding a dog). Note the mascots, a Joey (young kangaroo) in front of the group and the dog held by Sergeant Agnew.

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Striking the Japanese, before and after the Doolittle Raid, without the B-29, and a Aussie witness to the big Bomb **Gordon Birkett @2017**

(Not a real RAAF Story, but a back drop to the next article in next issue)

It's a slip of Historical Record that the Air War against Japan really started and finished at Nagasaki, with the Republic of China Air Force conducting a single attack with two aircraft on the Japanese home islands during the Second Sino-Japanese War*,..... if only with paper leaflets.....* on the 19th May 1938.

These aircraft dropped propaganda leaflets on Nagasaki, Fukuoka, Kurume, Saga, and other locations in Kyushu. These leaflets did not have any effect on Japanese civilians, but demonstrated that China could potentially conduct small scale air attacks on the area.

The Japanese military wrongly assessed that the ROCAF had aircraft capable of mounting attacks at a range of 1,300 miles (2,100 km) from their bases, and took precautions against potential raids on western Japan, when Chinese forces launched an offensive during 1939. This offensive failed.

Two years on, in the Philippines, **an opportunity lost**,.... when at 5.30am on the 8th December 1941, MacArthur received a cable from Washington directing him to execute the Rainbow 5 war plan at once.

Washington had amended the Rainbow 5 war plan on 19th November 1941 to include orders for the planes of the Far East Air Force stationed in the Philippines to attack any Japanese forces and installations within range at the outbreak of hostilities. *Updated on the 27th November 1941, with to attack in response of any " direct hostile acts".*

The Japanese airbases and harbour installations on Japanese territory of Formosa,(a Japanese colony since the Treaty of Shimonoseki which was signed on 17th April 1895,at the end of the First Sino-Japanese War), were within range of MacArthur's 19the Bomb Group consisting of approximately thirty five B-17C/Ds.

The most extraordinary aspects of this day was MacArthur's failure to obey both the amended Rainbow 5 war plan and the war order transmitted from Washington at 5.30am.

Major General Brereton was aware of the Japanese propensity to launch surprise attacks at dawn, and he wanted to persuade MacArthur to mount a bombing attack on the Japanese airbases on Formosa.

The Japanese bombed the American seaplane tender William B. Preston in Davao Bay on the southern Philippine island of Mindanao. In response to this "direct hostile act" against an American warship in Philippine waters, Brereton asked Sutherland to permit him to see MacArthur or approve bombing of the Japanese airbases on Formosa himself. Sutherland refused both requests.

Fearing that his aircraft would be caught on the ground by the Japanese and destroyed, Brereton finally ordered them aloft to circle their airfields. It was not until 11.00 a.m. that MacArthur finally approved a bombing attack on the Japanese airbases. Brereton ordered all of his aircraft to land so that they could be refuelled and the bombers armed. As most of Brereton's aircraft were sitting on their airstrips when Japanese bombers and fighters arrived overhead at Clark AAB, about 12.20pm on 8th December 1941 and took them by surprise.

No Offensive Bombing took place that day, and the Japanese whittled down the Far East Air Force by the end of that day, with the surviving B-17C/Ds being withdrawn to Australia by mid December 1941.

Avenging Pearl Harbour; The Doolittle Raid

After the bombing of Pearl Harbour, Hawaii, and dire situation on Bataan Peninsula, the Philippines, the US Army Air Force with US Navy Help in an effort to raise moral and to avenge the attacks, conducted their bombing attack on Japan on the 18th April 1942.

On this day, sixteen B-25B Mitchell medium bombers with volunteer crews from the 17th Bomb Group (Medium), were launched off aircraft carrier USS Hornet, and then proceeded to individually bombed targets in Tokyo, Yokohama, Yokosuka, Nagoya and Kobe.

Lt Col Doolittle takes off from the USS Hornet in B-25B 40-2344

Initial planning called for twenty aircraft to fly the mission, and twenty-four of the group's B-25B Mitchell bombers were diverted on the 19th February 1942, to the Mid-Continent Airlines modification centre in Minneapolis, Minnesota to be modified for the mission, including modifying two aircraft as camera ships for the raid.

The twenty four crews selected picked up the modified bombers in Minneapolis and flew them to Eglin Field, Florida, beginning on the 1st March 1942.

There, the crews received concentrated training for three weeks in simulated carrier deck takeoffs , low-level and night flying, low-altitude bombing and over-water navigation, operating primarily out of Eglin Auxiliary Field #1.

Lieutenant Henry L. Miller, a U.S. Navy flight instructor from nearby Naval Air Station Pensacola, supervised their Carrier takeoff training . One B-25B was written off in a landing accident on 10th March 1942 and another was heavily damaged in a takeoff accident on 23rd March 1942.

On 25th March 1942, the remaining twenty-two B-25Bs took off from Eglin for McClellan Field, California. They arrived two days later at the Sacramento Air Depot for inspection and final modifications.

A total of sixteen B-25Bs were subsequently flown to NAS Alameda, California, on 31st March 1942.

Fifteen made up the mission force and the sixteenth, by last-minute agreement with the Navy, was loaded so that it could be launched shortly after departure from San Francisco to demonstrate to the Army pilots that sufficient deck space remained for a safe takeoff. Instead, that bomber was made part of the mission force.

Continuing on, the mission was executed on the 18th April 42 and after the raid, the crews of 15 bombers reached China and had either bailed out or crash-landed there.

The only surviving aircraft was the one that landed at Soviet airfield in the vicinity of Vladivostok. In accordance with the wartime neutrality laws, the Soviet authorities interned its five crewmembers. Some captured crews weren't so fortunate, with two, being executed following a sham Japanese trial. [xxxiii]

The weak state of the country's air defences greatly embarrassed the Japanese military leadership, and four fighter groups were transferred from the Pacific to defend the home islands.

President Franklin D. Roosevelt also, following the attack on Pearl Harbor, ordered the Army Air Forces to mount retaliatory raids on the Japanese Home Islands.

B-25B 40-2242, of Capt. Edward J. York, 3rd Flight Leader, landed at Kamchatka airfield , Vladivostok. It would be mid 1943 before they made it back to the USA via Persia

"HALPRO" .....The Halverson Project

A task force, commanded by Colonel Harry E. Halverson and composed of 231 officers and enlisted men and 23 B-24D-CO Liberator bombers, was assembled at Fort Myers Army Airfield, Florida during February 1942. The unit was given the code name "HALPRO" for Halverson Project. *Their a/c were from the first B-24D-CO (San Diego Plant)and B-24D-CF (Fort Worth Plant) Liberator production aircraft built and delivered to the USAAF and Royal Air Force(as Liberator III) and more importantly, first B-24 to be qualified for combat.*

This project, was commenced in January 1942, within a month of the attack at Pearl Harbor. Initially, it was designed to be a sequel to the most famous bombing mission of World War II, the Doolittle raid over Tokyo, taking off from advanced Chinese mainland bases, where the Doolittle Raiders were to land at.

"HALPRO" Air Group departed the United States on 20th May 1942 over the southern Air Transport Command route though the Caribbean and Natal, Brazil and across Central Africa and arrived at RAF Lydda in British Palestine. The Group's last leg was to have been the flight into Zhejiang, China, from which they hoped to bomb Tokyo.

However, before the group could depart for India from Palestine and begin attacks on Japanese targets from a base located in China, the Japanese Army had conducted the Zhejiang-Jiangxi Campaign on the 11th May 42 so as to capture the airfields in central China at which the Doolittle Raiders had intended to land. This offensive achieved its objectives and resulted in the deaths of 250,000 Chinese soldiers and civilians. The 10th US Air Force , the China Burma and India Theatre, first designated commander , Colonel Harry A Halverson, thus never even reached the theatre.

The Halverson Project was dissolved and the organization was renamed the 1st Provisional Bombardment Group and was quickly diverted from its original mission to a new one: interdictory raids from airfields in Egypt against shipping and North African ports supporting Axis operations as part of United States Middle East Air Forces (USMEAF) on 20th June 1942, a quickly assembled organization based in Cairo.

Pictured later in Libya is one of the original HALPRO Liberators: B-24D-CO 41-11591 ex #9 "Queen Bee" now as #45 "Lorraine" with the 513th BS, 376th BG.

Meanwhile, down under....though not a attack on Japan rather first Long Range Bombing Mission.

The Doolittle Raid was by no means the only planned Raid on the April/May 42 on Japanese Forces, for lower down towards the Philippines another B-25/B-17 Raid had been in progress a few days before.

The Royce Mission consisting of ten B-25Cs from the 3rd BG(Lt) and three B-17Es (19thBG) after staging through Darwin Australia, to Del Monte Airfield on Mindanao, the Philippines, flew bombing strikes over three days against the Japanese in Manila, Cebu, and Davao, between the 12th and 13th April , 1942. *All of the aircraft, except one B-17E (41-2447 was destroyed on the ground at Del Monte Airfield), returned to Australia without the loss of one flyer, and they had brought out a number of important military and diplomatic personnel who had gathered at Del Monte to await evacuation.*

The group of planes was led by General Ralph Royce; hence the name "Royce Mission."

Lead 3rd BG B-25C Crew in review after the Royce Raid April 1942 at Charters Towers

The 3rd BG(Lt) had arrived in Australia during March 1942, and had absorbed the remnants of the 27th BG(Lt) A-24s Banshee Dive Bomber Force. With some A-20s and reposed Dutch B-25s, it was the first mission of the Group.

It flew the A24s until insurmountable losses in PNG during July 1942. The type was withdrawn from front line service by the USAAF against the Japanese ,..or so it was thought .....The rest is history till the B-29 Bombing Raids, or was it?

North to Alaska..,..and the second B-25 USAAF Raid on Japan

The IJA wished to occupy the western Aleutians (the islands of Adak, Attu and Kiska) to place the Japanese home islands out of range of U.S. land-based bombers based in Alaska following the Doolittle Raid.

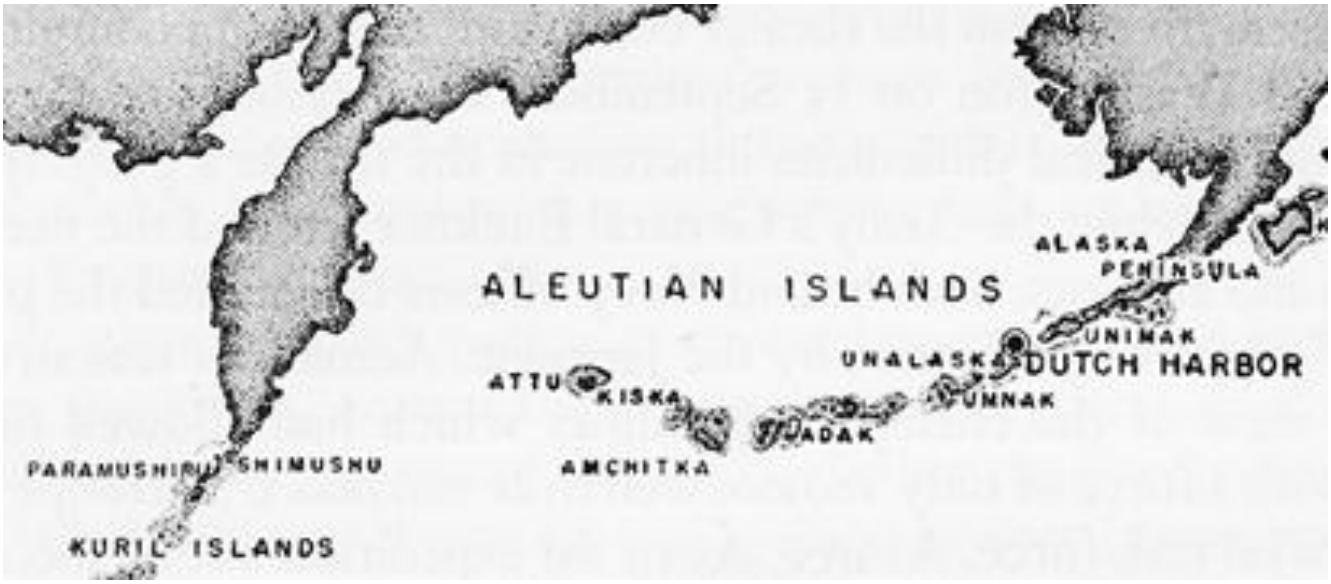
The Japanese did not know that the B-25 aircraft had taken off a carrier, nor did the American public, until 1943. They speculated that a hidden air base existed on the western tip of the Aleutian Islands, thereby sparking interest by the Japanese High Command in capturing the island chain.

When the first signs of a possible Japanese attack on the Aleutians were known, the Eleventh Air Force was ordered to send out reconnaissance aircraft to locate the Japanese fleet reported heading toward Dutch Harbor and attack it with bombers, concentrating on sinking Admiral Hosogaya's two aircraft carriers, IJNS Junyō and Ryūjō .

Once the enemy planes were removed, US Navy Naval Task Force 8 would engage the enemy fleet and destroy it.

The Japanese invasion of the Aleutian (Operation AL) became known on the 2nd June 1942, some two days before the Battle of Midway, when a US Naval patrol plane spotted the approaching Japanese fleet; reporting its location as 800 miles southwest of Dutch Harbor.

Eleventh Air Force was placed on full alert. Shortly thereafter bad weather set in, and no further sightings of the fleet were made that day.



A WW2 Map of Alaskan Theatre

Making use of weather cover, the Japanese first raided the naval base at Dutch Harbor on 3rd June, 1942. The striking force was composed of Nakajima B5N2 "Kate" torpedo bombers from the carriers. However, only half of the striking force reached their objective. The rest either became lost in the fog and darkness and crashed into the sea or returned to their carriers. [xxxiv]

Seventeen Japanese planes found the naval base, the first arriving at 05:45hrs. As the Japanese pilots looked for targets to engage, they came under intense anti-aircraft fire and soon found themselves confronted by Eleventh Air Force P-40E fighters of the 11th FS sent from Fort Glenn Army Air Field on Umnak.

Startled by the American response, the Japanese quickly released their bombs, made a cursory strafing run, and left to return to their carriers. As a result, they did little damage to the base.

On the 4th June 1942, the Japanese returned to Dutch Harbor. When the attack ended that afternoon, the oil storage tanks were left burning, the hospital was partly demolished, and a beached barracks ship was damaged. Although American pilots finally located the Japanese carriers, attempts to sink them failed.

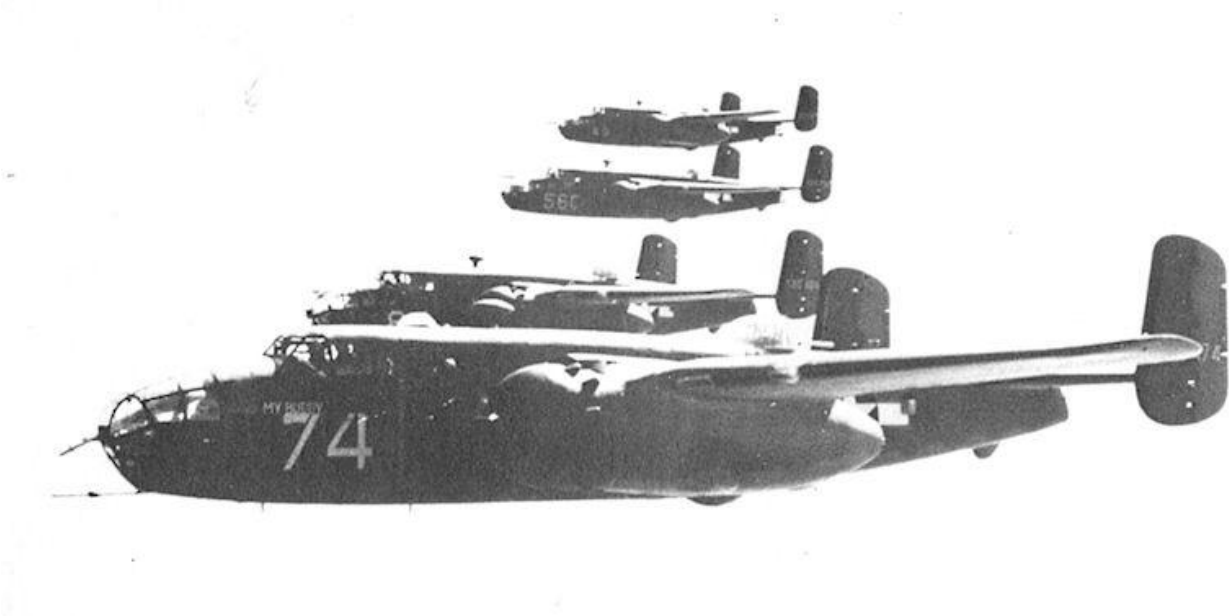
11th FS P-40Es, including P-40E FY40-597, idling on the alert strip at Unmak. This a/c survived the war and was scrapped on 03/10/45.

Bad weather again set in, and all contact with the enemy fleet was lost. Foul weather forced the cancellation of Japanese plans to invade Adak. The Japanese invasions of Kiska on the 6th June 1942 and Attu on the 7th June 1942 initially met little resistance from the local Aleuts. Much of the native population of the islands had been forcibly evacuated by the US military before the invasion and interned in camps in the Alaska Panhandle.

A Japanese Zero, D1-108, piloted by Petty Officer Tadayoshi Koga, was captured intact by U.S. forces after being discovered in July 1942 on Akutan Island, that crashed following the Dutch Harbor Attack on the 3rd June 1942. It became the first flyable Zero acquired by the United States during the Second World War.[xxxv]

In August 1942, the U.S. Army established an air base on Adak Island and began bombing Japanese positions on Kiska with LB30, B-26 and B-17Es. U.S. Navy submarines and surface ships also began patrolling the area. Kiska Harbor was the main base for Japanese ships in the campaign and several were sunk there, some by warships but mostly in air raids.

A battle to reclaim Attu Island was launched on 11th May, 1943 and completed by the 29th May 1943. *One unit involved in the aerial bombardment of Kiska Island was the 635th Bombardment Squadron (Dive), who were equipped with FY42 A24B Banshees . After being withdrawn from active service by 5thAAF Command due to heavy losses, it seems strange that they were used here, and in the Gilbert Island Campaign.*



77th BS B-25C/D's flying in formation: 1943

As part of the preparations for the liberation of Kiska Island in the Aleutians, the Eleventh Air Force conducted a series of raids against the Japanese Kurils Islands to suppress the Japanese air units stationed there. [xxxvi]

On the 15th August 1943, an invasion force landed on Kiska Island only to discover that the Japanese had withdrawn from the island by the 29th July 1943.

The Second B-25 Raid on Japan; *the first bombings of a Japanese Home Islands post Doolittle Raid of April 1942.* [xxxvii]

The first of several attacks was made against southern Shumshu and northern Paramushiru Islands, by eight B-25s carrying four 500lb GP Bombs, led by Captain James L Hudelson from the 77th Bomb Squadron (Medium) of the 28th Composite Group, on 10th July 1943. A distance of 1600 miles and nine and a half flight hours, return.

The Kurils Islands were attacked again on 18th July 1943, this time by six 404th BS B-24D Liberator Bombers .

This caused the Japanese to divert some of her air power to that northern area, weakening Japanese opposition to Allied forces to the south between April 1944 – August 1945.

Plans by the 11thAAF to base four Groups of B-29s to strike Japanese targets from Adak were discussed:

In contrast with this policy of probable retrenchment in the near future, the Joint War Plans Committee argued for a long-term strengthening of the area regardless of the progress of the war--whether the Paramushiru operation jelled, whether Russia entered the war against Japan, or whether indeed "Russia or Japan or both are strong or weak, friendly or unfriendly in the post-war period." Specifically, the committee recommended development of an Army base at Adak and of VLR bomber bases in the area.

At QUADRANT the AAF had announced the early combat readiness of the B-29, with four groups probably available early in 1944, and the planners suggested that two groups constitute the first--though not the ultimate--VLR contingent ,.....As for immediate air operations, nothing more than harassing raids against the northern Kurils had been intended for the one B-24 and one B-25 squadron remaining to the Eleventh. This token force was further diminished by heavy combat losses sustained in a mission on 11th September 1943. [xxxviii]

The USAAF attacks were broken off for five months following a raid on 11th September 1943 when three of the eight B-24s and five of the twelve B-25C/Ds dispatched (less one abort)were lost after being attacked by some twenty enemy fighters and heavy AAA .

The B-25s, led by Major Salter, who himself was shot down on this mission , were on low level strafing of enemy shipping in the Paramushiru Straits. [xxxix] *Actual US losses were 1 B-24 (41-23890, Mission Cdr, Maj. Frank T. Gash* some *50 miles to the east of Cape Arahata on the northeast coast of Paramushiru) and 3 B-25 shot down, and 2 B-24 and 5 B-25 landed in Petropavlovsk.* [xl]

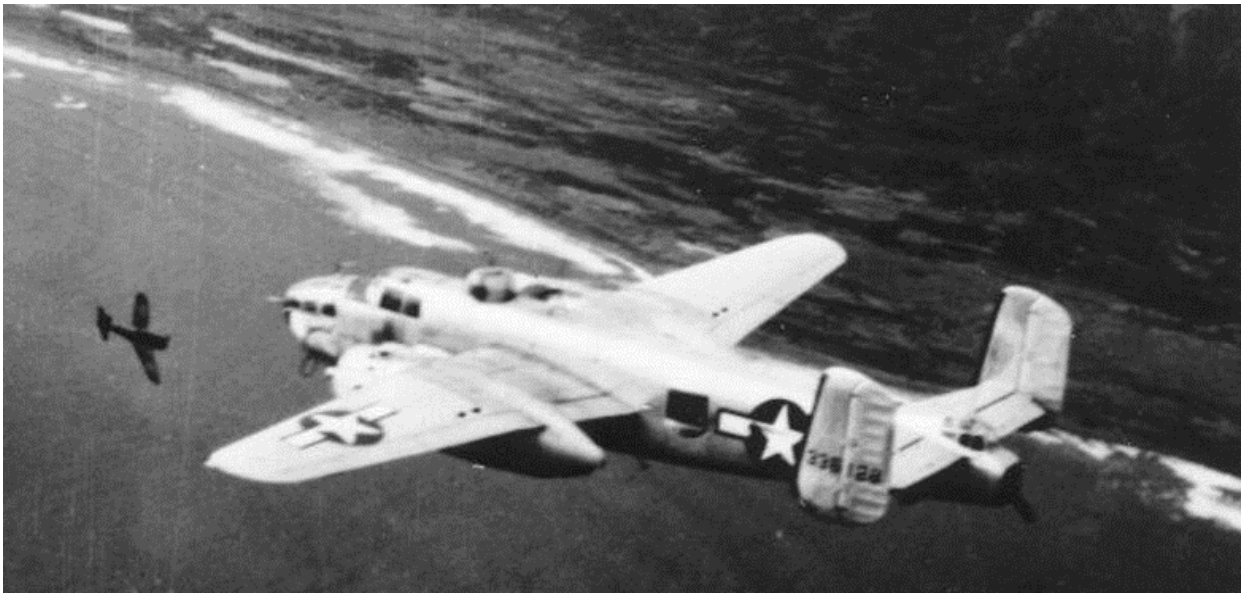
Missions by US Navy PBY Catalina's and PV-1 Ventura's from VP45, 61 and VB/VPB-131, 135, 136, 139, 199 continued. *See Appendix A for insight.*

In response to the American attacks, the IJN established the North-East Area Fleet in August 1943, and in November 1943, Japanese fighter strength in the Kurils and Hokkaidō peaked at some 260 aircraft.

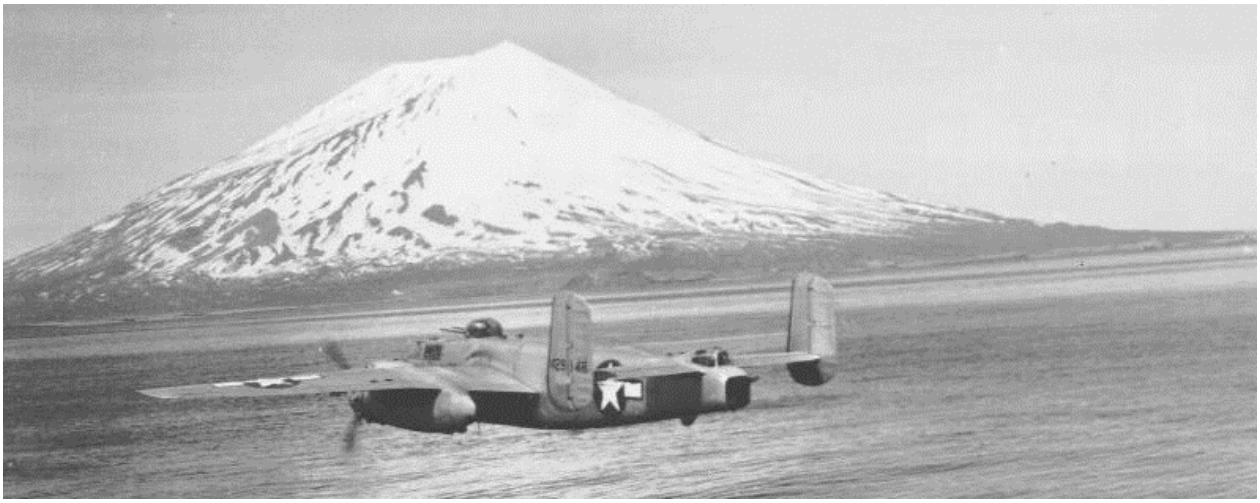
A long range Japanese Bombing Force of ten Betty Bombers mounted a raid and dropped nine bombs dropping on Attu on the 13th October 1943. This was the forward operating and refuelling base for the Bombing Missions to Kurils.

The Eleventh Air Force resumed its offensive in February 1944 after it had been reinforced with two squadrons of P-38 Lightning escort fighters, and it continued to attack targets in the Kurils until June 1945.

Losses included during this time period, some thirty-two battle-damaged American bombers (B-24, B-25, and US Navy PV-1 types) that carried out emergency landing at Kamchatka, USSR during the campaign.



B-25J-10-NC 43-36128 of the 77th BS witnesses a Japanese Oscar SSF pass by over the Kurils. This aircraft was lost on another raid on the 29th December 1944



B-25J 44-29148 of the 77th BS nears Kurils. On the 9th June 1945, this aircraft was shot down by Soviet AAA over Kamchatka with Capt E.J. Irving and five Crew KIA. Ref : MACR 14612 .

This resulted in the internment of 242 American crewmembers, as the USSR was not at war with Japan. This does not include Aircraft and crews shot down my Soviet Forces. By the closing months of the war some 1,500 sorties were flown against the Kuriles by the Eleventh Air Force and US Navy PBY and PV-1 Ventura units on the Kuril Islands.

Pictured in mid 1943, Aleutian based USN PBY-5A and PV-1's

While causing little damage in the Kurils, they did divert Japanese planes and ground troops (Japanese 91st Division)in its defence.

The distance750 miles,.. is daunting considered when flying a twin engine aircraft in 194 and returning, above photo is Kurabu Cape Aerodrome, Kurils Islands, often attacked in 1944-45.

The USAAF Air War had already effectively finished with the dropping of the second Atomic Bomb on Nagasaki on the 9th August 1945.

The Australian Connection: a Aussie Eyewitness from POW camp 14 at Nagasaki: one of 22 AIF and 3 RAAF POWs at the Mitsubishi Ship Yard on the day; *"There was this almighty flash like lighting, then an orange explosion, then the blast. I was thrown right across the bridge, covered in dust and glass, and a couple of my mates took me to the big air-raid shelter in the dockyard ... when I was told that one bomb had killed 100 000 people and that Nagasaki had just disappeared,..... I could only say 'bullshit'".*[xli]

News of the end of the war spread on 10th August , 1945. The Japanese had sent word that they accepted the terms of the Potsdam Declaration.

Finally, on the 11th August 1945, the Soviet Union entered the Pacific War, and by the 18th August 1945, commenced the invasion of Shumshu in the Kuril Islands, as the first stage of the Soviet invasion of the Kuril Islands, planned between August–September 1945 as one of the last battles of the war.

The 11th AAF flew its last World War II bombing mission on the 13th August 1945, but continued reconnaissance operations in the Kurils into September 1945.

Although other B-29 bombing missions were initially cancelled after Nagasaki while negotiations continued with the Japanese, up to and on 13th August , 1945. The 58th, 73rd and 313th Bomb Wing's B-29s were placed on standby to strike three more targets -- Hikari Naval Arsenal, Osaka Army Arsenal, and the Marifu Railroad Yards. The Mission was to be flown.

The Japanese Imperial Palace Guards were frightful that this raid was the cover for a third A Bomb.....to be dropped on Tokyo. The Emperor was sent to his Bomb Shelter, perhaps not helping the Surrender Signing timeline.

The briefing officer explained that the word "Apple" would be sent in Morse code as soon as the United States received word of the Japanese surrender. The radio operators were ordered to monitor their frequency from the time engines were started. That would be the order for the 315th Wing to salvo their bombs and return to base.

When the B-29 formation approached Kodama at 2400hrs, 13th August 1945, some 37 miles west/northwest of Tokyo, thirty-six airplanes from the 27th Air Corps (Japanese) took off.

It was approximately 1:18am local time, 14th August 1945; Bombs away for the last bombing mission of the USAAF in WW2!

Some Two hours and 18 minutes after Japan's acceptance of peace had been transmitted to the allies. [xlii]

In the northern islands,....The Japanese forces on Shumshu, Paramushiru, and Onekotan finally signed an unconditional surrender agreement at 1800Hrs on the 19th August 1945 with the Russians, some five days after. However, some isolated fighting on Shumshu continued to flare up until 23 August 1945, when at last, the Japanese on the island finally surrendered.

Appendix A: Excerpts from USN VP61 Patrol Logs, who performed Anti-Sub/Surface/Anti Radar and ASR

18 July 1943: Special night flight to bomb Japanese Naval installations at Paramushiro, Kurile Islands.

22 July 1943: Lt. HOLT, Lt. ATHERTON, Lt. HEINS, Lt(jg) CONDON, Lt(jg) YODER and Lt(jg) DUGGAN and crews proceeded with four (4) planes to Adak Island for temporary duty.

24 July 1943: Lt. WEHMEYER's plane was damaged by machine-gun fire over Nikolski Village and landed at Saranna Lake, Komandorski Islands, (Russian Territory) destroying plane there. He was rescued by Lt(jg) EVANS from Patrol Squadron FORTY-FIVE.

6 May 1944: Lt. W. L. PERRY, (86183), U.S.N., flew special night mission over enemy installations at Paramushiro and Shimushu Island of the Kurile Island chain for investigation of enemy radar. Robert P. Owen, ARTlc, flew as an observer and made special tests of the Japanese radar installations.

On the night of 13 June, Lieut. Comdr. Charles J. EASTMAN flew a mission similar to Lieut. PERRY'S over the Northern Kuriles for the investigation of enemy radar installations. Twenty ANP Mk. 41 fragmentation bombs were also dropped over Kashiwabara Wan, Paramushiro by radar. Results of the bombing were unobserved. Radar Technican Robert R. OWEN again flew as special observer and operated special radar receivers. Excellent information was again obtained from the interception of the enemy radar signals over Paramushiro and Shimushu Islands.

9 September 1944: Lt. R. L. ASHCRAFT, A-V(N), USNR (112537) flew special rescue mission for Army B-25 crew shot down off Karabu Zaki, Paramushiro. Signals were received from army crew but they were picked up by Japanese patrol boat before rescue could be effected.

On 16 June 1944, Lieut. Frank A. WOODY, A-V(N), USNR, 104380, Squadron Operations Officer, in PBY-5A, Bu. No. 48427, failed to return from all night search for a PV-1 airplane of Patrol Squadron ONE HUNDRED THIRTY-FIVE, which was lost on a bombing mission over the Northern Kurile Islands. Weather was extremely bad with heavy fog closing in around the base so all aircraft were instructed by Fleet Air Wing FOUR base radio to return to base. Other aircraft returned as instructed, but Lieut. WOODY was not heard from again after acknowledging receipt of the base message.

On 9 September 1944, Lieut. R. L. ASHCRAFT, A-V(N), USNR, 112537, and crew flew a special rescue mission from N.A.S., Attu to Karabu Zaki, Paramushiro, Kurile Islands to search for an Army B-25 crew which had been shot down while making a low level attack on an enemy picket boat.

Lieut. ASHCRAFT departed N.A.S., Attu at 1800 local time and arrived 20 miles off Karabu Zaki at sunset. A square search was conducted within visual sight of the enemy airfield at an altitude of 50 feet for the army personnel until total darkness. Altitude was then increased to 500 feet and square search continued by radar.

At this time, distress signals were picked up on 550 kcs. by the Automatic Direction Finder, and homing procedure was started. Signals seemed to orginate in an area between Karabu Zaki and Suribachi Wan Airfield, Northern Kurile Islands. As the plane passed two or three miles off-shore from Karabu Zaki Airfield, shore batteries opened fire. An immediate turn was made away from the field and all shells fell short. Automatic Direction Finder signals were still loud and clear and the PBY made another attempt at homing by proceeding North and making an approach along Suribachi Wan. The radar gear was four (4) miles. An enemy picket boat, which was undetected by radar, was sighted visually three (3) miles south of Suribachi Wan. A turn was made away from the picket boat because the plane was not carrying any bombs. The Japanese picket boat was headed for the area where the S.O.S. signals originated and, it is believed, they captured the Army flyers. The signals ceased when the PBY made the turn away from the picket boat and were not picked up again.

Search was continued for a total time of 2 hours and 40 minuted. Another flight was made over Karabu Zaki airfield and it was sighted visually at an altitude of 700 feet.

When the radar gear ceased to operate, Lieut. ASHCRAFT departed for N.A.S. Attu. Total time of flight was 13.8 hours.

From 11 December 1944 to 23 December 1944 all 18 crews and 12 PBY-5A aircraft of Patrol Bombing Squadron SIXTY-ONE were flown from N.A.S. Kodiak to N.A.S. Seattle, Washington. Scouting Squadrons FORTY-NINE; FIFTY-SIX and SEVENTY consisting of 48 OS2U aircraft and crews were escorted from Kodiak to Seattle, Washington at the same time. Upon reaching Seattle, all naval aviators and crews were reclassified and given 30 days leave.

The fatigue failure of seemingly minor components:

Loss of F-111C A8-136 compiled by G R Birkett 2016

The fatigue failure of seemingly minor components can be equally catastrophic, as follows in two separate F-111C accidents in the 1970's. The RAAF lost the first of its F-111 strike aircraft on this day, when A8-136 of No 6 Squadron caught fire and crashed near Guyra, NSW.

The accident was the result of fatigue cracking, caused by incorrect welding processes, which led to an explosion of fuel vapour. The crew were able to eject safely and became the first aviators in Australia to abandon an aircraft using the revolutionary device of an ejection module which did not even require them to leave their seats.

Although the module worked successfully, Clarkson sustained a back injury when it impacted heavily with the ground. The squadron experienced a second such incident 18 months later, when A8-141 caught fire during an exercise off Auckland, New Zealand. The crew of that aircraft also used the module to eject safely over the sea.

Following the official acceptance by RAAF Washington Detachment A on the 1st July 1973, F-111C A8-136 was delivered to the RAAF on Australia on the 26th July 1973 with FLTLT R.T. Sivyer (P) and FLTLT P.W. Growder (N) as crew .

On 28th April 1977, the pilot of F- 111C A8-136 noted a hot oil warning light for the starboard engine. Engine lubricating oil passes through a heat exchanger in which fuel is used as the coolant. Normal procedure for a hot oil light is to select afterburner, the increased fuel flow will then cool the oil and the light should go out.

On this occasion, selection of A/B 1 on the starboard engine, with the port engine throttled back, caused the light to go out only to come on again when power was reduced. The process was repeated three times with increasing afterburner required on each occasion.

On the final occasion, A/B 4 was required and it apparently never occurred to the pilot that something might be wrong and that the starboard engine should be shut down, The entire sequence occupied about ten minutes with the aircraft accelerating to about 540 knots with the successive applications of afterburner.

As the aircraft passed over Armidale, NSW at approximately 5500 ft altitude, eyewitnesses noted nothing obviously amiss. However, about six miles further on, the pilot reported an explosion within the aircraft, then a fire warning light, followed by a complete loss of control.

Eyewitnesses observed the aircraft streaming fuel from the forward fuselage followed by a small fire which spread rapidly until it enveloped the entire aircraft aft of the wing leading edge. As the aircraft commenced rolling uncontrollably to starboard, both crew members ejected successfully.

This was the RAAF Ejection number 49 with both No 6 Sqn RAAF Crew; Captain (Pilot) William. H. Baker USAF (Serv# 437-62-4489) and Flt Lt (Nav) David .A. Clarkson Serv#0117121 RAAF, both surviving the ejection successfully. Although the module worked successfully, Clarkson sustained a back injury when it impacted heavily with the ground.
Capt William "Billy" Baker had another F-111C incident, on the 24th January 1978 when piloting A8-145 it suffered a engine failure off Nowra, necessitating a diversion to Williamtown AFB.
His RAAF Exchange Tour ended on the 2nd June 1978 and he returned to the USA after completing his last F-111C flight on the 24th May 1978.

USAF Exchange Pilot, CAPT Billy Baker and Navigator, FLTLT Dave "Noddy" Clarkson, being interviewed after their successful F-111C ejection: QTQ Channel Nine

The wreckage of the A8-136 was found in three distinct groups:

- The first group, six miles from Armidale, consisted of panels from the port saddle tank and pieces of the fin leading edge. The port saddle tank is an integral fuel tank which sits above the port engine in the rear fuselage and it was quickly obvious that some of its panels had struck and dislodged the fin leading edge. The panels showed no sign of fire or explosion indicating that the tank had ruptured through being over pressurised.
- The second group, seven miles further on, consisted of the crew module and various fuselage items which had separated during the ejection sequence.
- The third group comprised the impact crater, containing the main body of the aircraft, surrounded by sundry debris which had been thrown clear during ground impact.
- Both TF30-P3 engines s/n P658905 and P658862, were destroyed.

Site of where the crew module of A8-136 landed. RAAF

An inspection of the starboard engine revealed that the duct which bleeds air from the 16th compressor stage had failed by separating from its bolting flange, Fig. 1

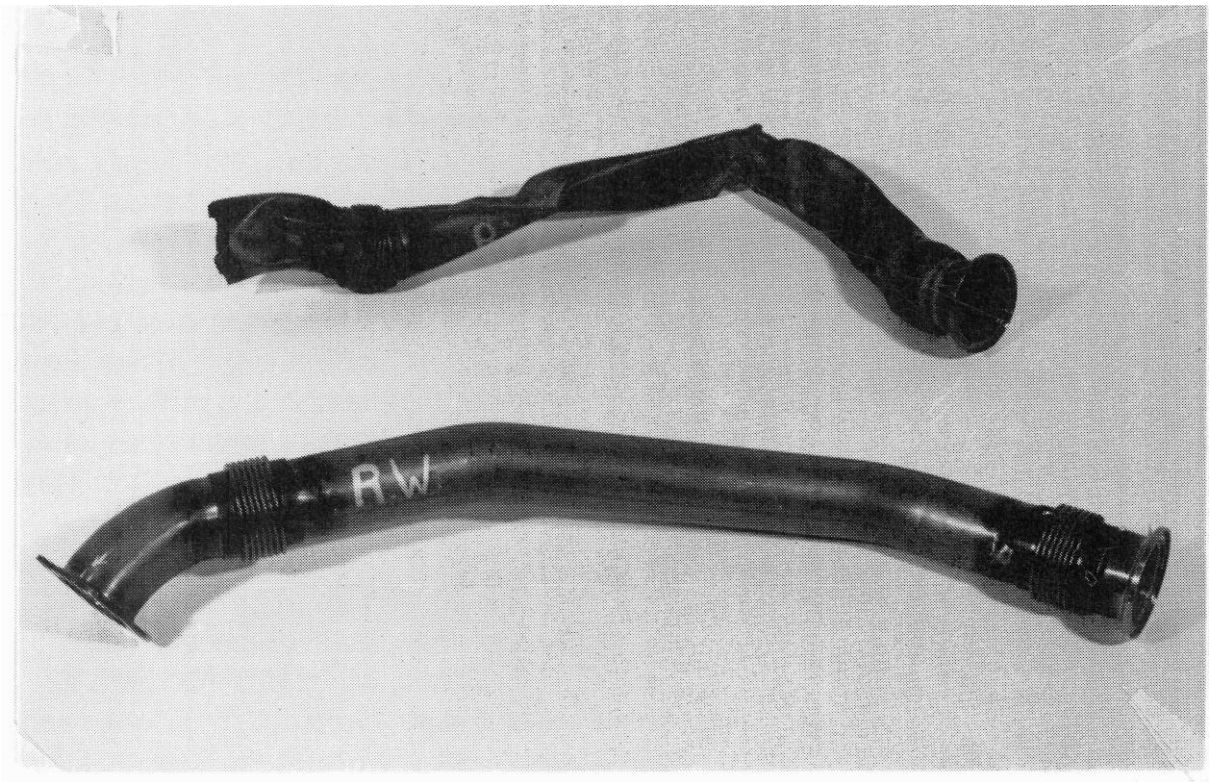


Fig 1 Hot air duct from A8-136 as recovered compared with a new duct

As originally designed, the duct was butt welded to the flange with an external fillet weld.
Because of problems with the welds cracking in service, the junction had been reinforced by the later addition of an internal weld. Detailed metallurgical examination showed that the welds had failed in fatigue. Cracking began in a region where incomplete fusion had produced a weld-parent metal lap. This formed a re-entrant surface in which oxide material was trapped and from which crack growth had initiated.

Pressurisation of the duct to 250 psi during the engine start-stop cycle is the main source of alternating stresses in the welds. An examination of the engine log books showed that the starboard engine of A8-136 had experienced at least 100 such cycles during 186 hours of operation since the reinforcement weld was made.

However, standard procedure is to start the starboard engine first, then to use bleed air from this engine to start the port engine. This procedure doubled the number of major load cycles applied to the duct of the starboard engine to something over 200, compared with the figure of approximately 300 estimated from fatigue crack progression marks.

When the duct failed, hot air was directed on the engine bay heat shield. This situation was reproduced in the ARL combustion test facility where it was demonstrated that, under these conditions, the heat shield had a life of approximately one minute.

Once the heat shield failed, the hot air impinged on the saddle tank wall, the fuel system over pressurised, resulting in multiple failures in the fuel system. This probably was the source of the explosion reported by the pilot and explains why fuel was observed emanating from the forward fuselage. It also explains why the fire spread so rapidly.

The loss of A8-136 was not an isolated event. Had the fix been made quicker, the next loss may not have occurred!

On 25 October 1978, another F-111C crew were forced to eject when A8-141 suffered an in-flight fire off the coast of New Zealand.

Fig 2 A8-141 being recovered

Again, the problem was traced to failure of the 16th stage bleed air duct so that a solution to the problem was becoming urgent. The manufacturer's cure was to extend the neck of the bolting flange, thus moving the problem about one quarter of an inch without entirely solving it. The ARL solution was to redesign the bolting flange by machining, from a solid block of heat-resistant nickel alloy, a modified flange incorporating a tubular extension which embraced the end of the duct.

This eliminated the butt weld and the risk of hot tearing, but waiting for it to be rectified resulted in the cost of another expensive F-111C Hull loss.

Sources:

- Extract from AIRCRAFT ACCIDENT INVESTIGATION AT ARL, THE FIRST 50 YEARS by J.L. KEPERT 1993 AR-007 -134
- http://www.pigzbum.com/accidents/a8-136-2.html
- A50 History No 6 Squadron RAAF Dec 61 - May 88
- ADF Serials Data and photo Holdings

Curtiss Corner: P-40E-CU A29-78

P-40E 41-5564 was broken down and crated at Sacramento Air Depot on 17/12/41 after delivery from Buffalo new York. Assigned Project"X" on 27/01/42, it was shipped to Australia and arrived on the SS Mormac Star at Geelong on 22/02/1942, and was received in its crate at No 4 Aircraft Depot (USAAF) on 05/03/42 at Geelong.

A29-78 was previously to be 41-5612 which was assigned that serial but was replaced by 41-5564, 05/04/42 with the former becoming A29-29 (*Refer P-40 Operations in Australia Supplementary #6 per A29 Numbering duplications*)).

Originally allotted to 77 Sqn RAAF 22/03/42 based at Pearce WA, , that was cancelled 27/03/42 and re-allotted to 76 Sqn RAAF on 31/03/42, then based at Townsville.

Before Milne Bay, with Mount Louisa in background...LAC D.F. Steer and F/O Col. W. Lindeman loading 50 cal. ammo into A29-78 July 1942: AWM

It was then ferried up to Archerfield on 10/04/42 and issued to 76 Sqn RAAF on 13/04/42. It was coded "R". When 76 Sqn RAAF moved up to Milne Bay(Code Name: Fall River) in July 1942, it was coded "IR" by adding a "I" to the front of every 76 Sqn P-40E/E-1 to differentiate its aircraft from co-located 75 Sqn RAAF.(*75 Sqn RAAF codes remained alphabetical and sans Sqn identifier, though aircraft were borrowed by each Sqn when losses forced them to*).

AUSTRALIAN WAR MEMORIAL OG0061A

A 32 Sqn RAAF Hudson negotiates the Milne Bay mud on take-off. Such were the conditions, that the mud obliterated the nation markings. AWM

A rather sobering sight of A29-78 post accident, with the starboard main demolished. Note: period Milne Bay Red/White/Blue Roundels, in use until late September 1942. Atherton Collection

Accident 0900hrs 16/08/42 Fall River Strip with 32Sqn A16-218* waiting to take-off when a 76 Sqn P-40E Kittyhawk, A29-78 "IR" "Bloody Mary", suffered a portside tyre burst on take-off , which caused it to veer off strip towards A16-218 that was waiting to take off on a test flight. After trying to "hop" over A16-218, A29-78 collided. Both Aircraft were written off. Rec 15 RSU Converted to components. Crew F/O Henry Archdale Robertson Serv# 667 (Injured) ;Sgt (Then Cpl) Patrick John Ellis Serv#15680 (Killed); LAC Frederick Joseph Russell Serv#20627(Injured).

Port side of "Bloody Mary",.. Buz Collection

The Pilot, F/O Colin Wellesley Lindeman Serv#816 ** also injured. Both aircrafts per received by 15 Recovery and Salvation Unit (12RSU) on 11/09/42. SOC 05/11/42. Both converted to components. AMSE Approval to write-off per File# 09/16/482 and 09/16/519 dated 21/09/42 and 25/11/42 respectively.

Starboard side Atherton Collection

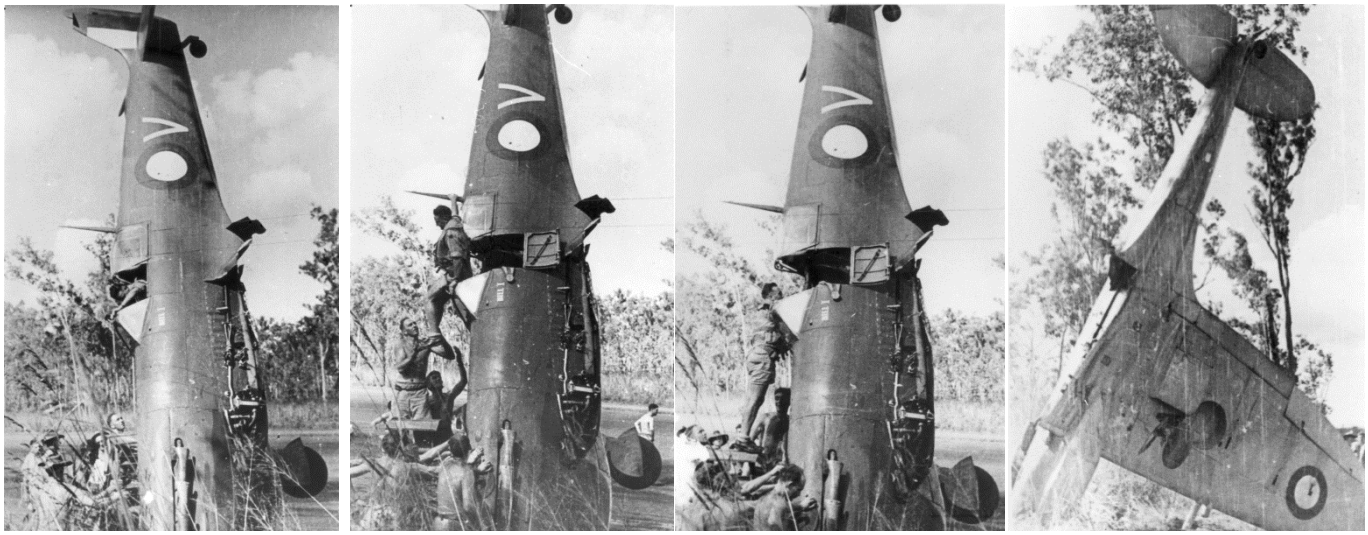
The hulk of A16-218 being stripped for usable parts. Atherton Collection

Notes:

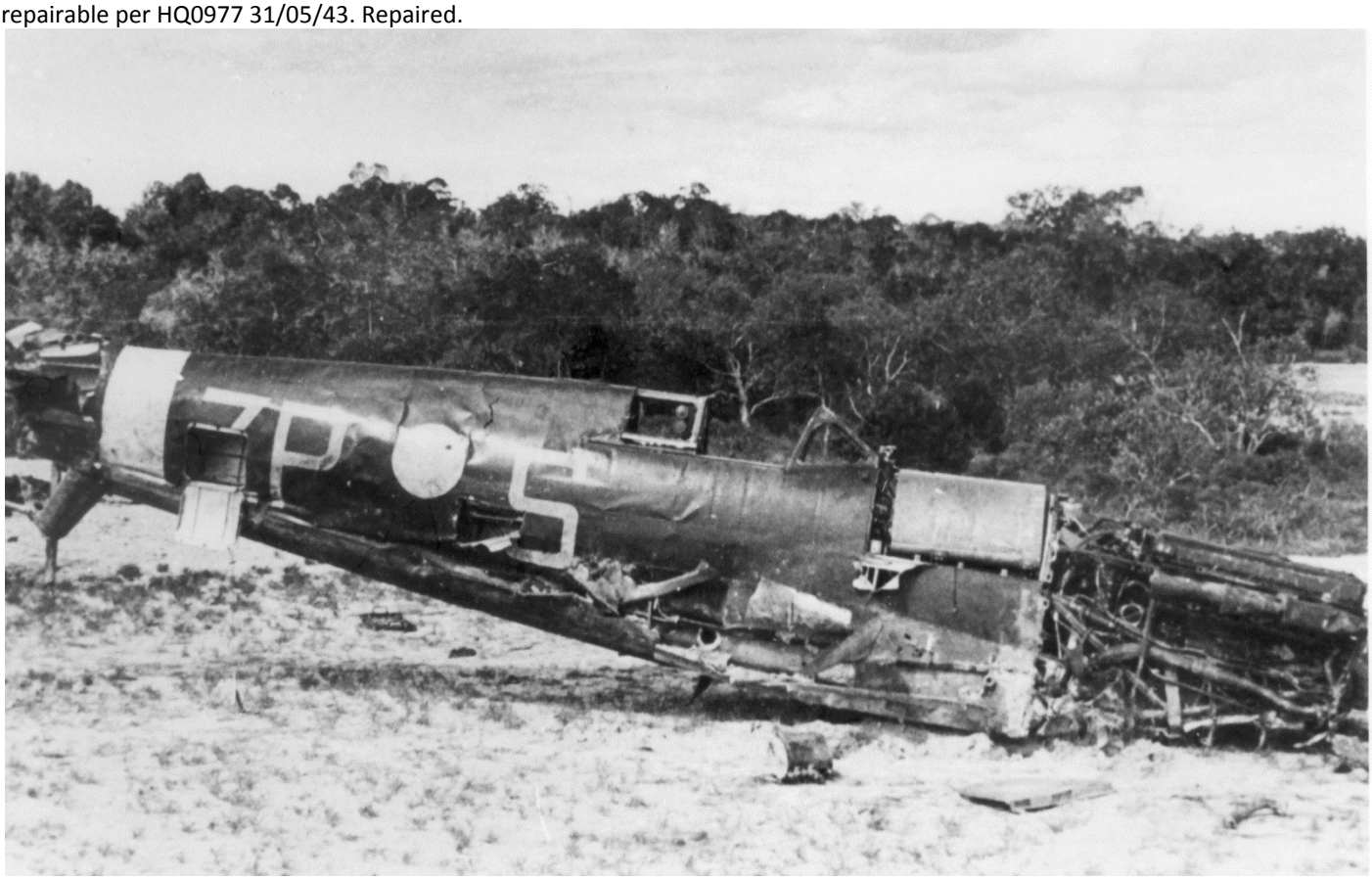
* Hudson A16-218 (c/n6484 USAAF 41-36995 RAF Serial FH194) was shipped to Australia as part of Defence Aid RAAF Order Indent 911:Rec USAAF as a RA-29, and consigned ex USAAF to Australia on 10/02/42. Received at 1 AD Laverton ex USA on 17/04/42. Allocated 32 Sqn RAAF 16/05/42. Rec 32 Sqn RAAF 15/06/42. Rec 3AD ex 32Sqn RAAF 29/06/42. Issued 32 Sqn RAAF 14/07/42. Deployed to Fall River in July 1942.

** Later Collin would have another accident at 2OTU, as a Sqn Ldr, in P-40K A29-178 CD-U (*coincidence that its last two was "78" as well?*) that was forced landed following a engine failure in flight 03/12/43. Pictured below is A29-178 in its service.

Odd Shots Special: Supermarine Spitfire MkVc RAAF Crack ups



A58-33 "Bill 1". Accident 1700hrs 13/03/43, written off on landing at Livingstone NT following a non-operational flight. Aircraft had violent swing to the left off strip and crashed into high ground and trees , with port wing being ripped off and aircraft ending on nose. Cause attributed to retracted left flap. Pilot; P/O Alfred Henry Blake Serv#400458 was not injured. Rec 7RSU ex 457Sqn RAAF 15/03/43. AMSE Approval for conversion File#9/16/720 Minute 4 05/04/43. 29/05/43 AMSE approved that aircraft was repairable per HQ0977 31/05/43. Repaired.



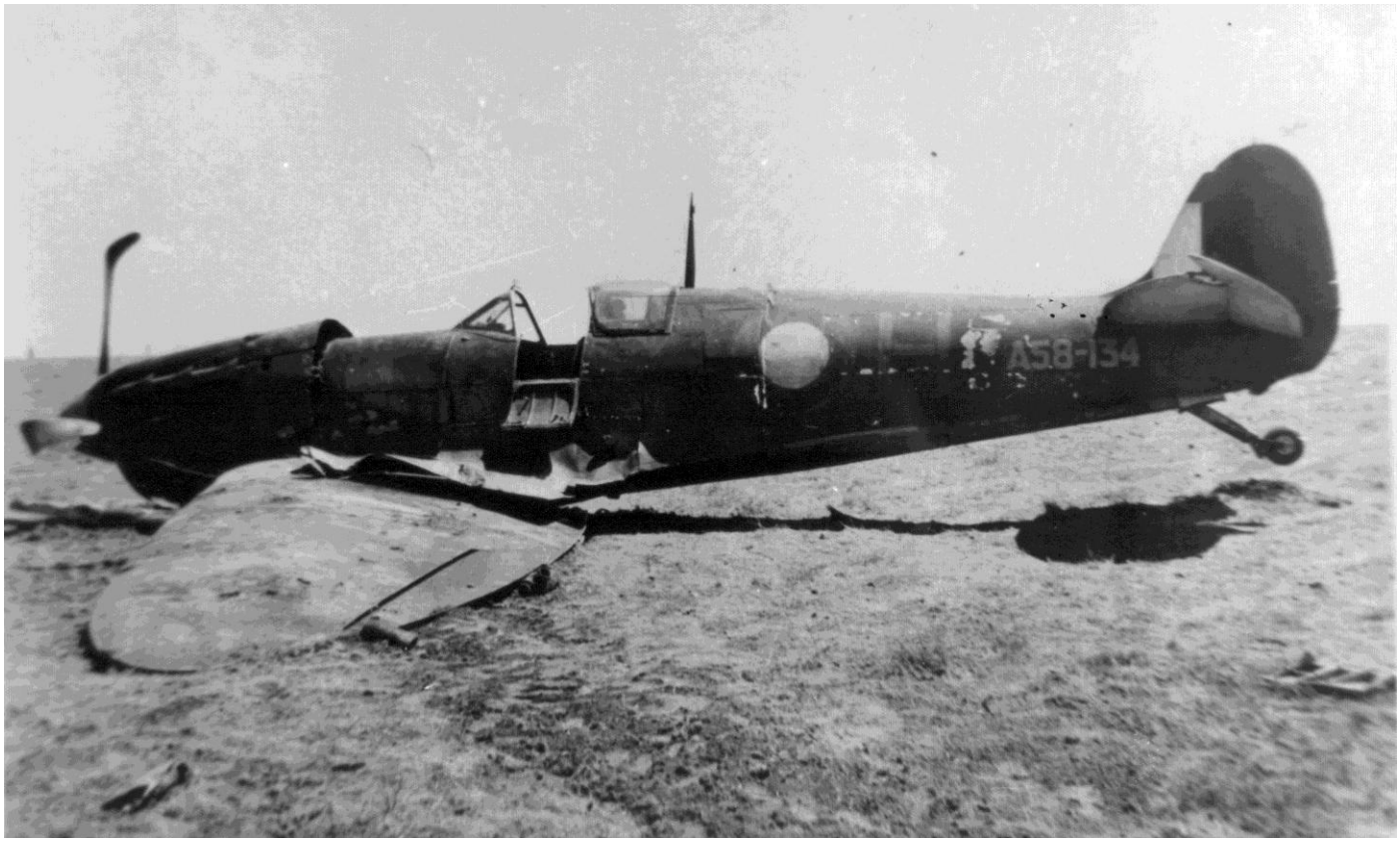
A58-81: Operational loss 0910hrs 10/05/43 when Millingimbi detachment of 5 Spitfires scrambled to intercept an enemy raid with 9 enemy Zekes approaching 9000 feet. During the intercept, two Zekes were shot down with a probable destruction of another by pilot of BS199. On returning to base and landing (with damage to his trim by e/a previously) he discontinued his landing roll and took off again when he saw approaching flight of 3 Zekes. He had a dogfight with the trailing Zeke which lasted some 10 minutes between 100 and 300 feet above the aerodrome. During his last manoeuvre, after taking his eyes off the Zeke, he realised his aircraft was approaching the ground from 200 feet and at 160mph. HIs aircraft's air scoop hit the ground and caused the aircraft to somersault 3 times, roll, losing both wings, airscrew and tail. Pilot; P/O B Little Serv#403521 was injured, but managed to walk back the three miles to the aerodrome. Issued 7RSU ex 457Sqn RAAF 13/05/43. AMSE Approval to convert to components per File#9/16/827 Min#9 07/06/43. May 1998, remains held by Robert Eastgate, Point Cook, Australia.

A58-71: Accident 1545hrs 09/07/44 when engine failed in flight during shadow shooting exercises along the western side of Sattler strip, forcing pilot to perform forced landing, wheels up at Sattler Strip. Aircraft crashed onto the strip and was extensively damaged. Pilot; F/Sgt G.G. Marks Serv#427603 was injured with lacerations and fractured spine.

A58-90⊗Never carried the serial, rather it retained RAF#BS226. Operational loss 1045hrs 02/05/43, when during Darwin Raid #54 when after interception, aircraft, running low on fuel, was returning from combat low level. Forced landed 10 miles short of base with wheels up. Pilot; F/Sgt W.E. Nichterlein Serv#416104 not injured.

A58-109: Accident following test flight 1620hrs 24/03/43, when pilot noticed that engine was not performing per speed and boost setting. On approach to landing at Straus Strip, with only one flap working, he decided to make a no flap landing after three tries to get both down. With a landing speed of 140mph, he attempted to stop his aircraft by steering down the dispersal path, some 40 degrees off the landing strip. Running out of room, he performed a ground loop. The Pilot: F/O J.H. Bisley DFC Serv#402720 was not injured.

A58-113: Accident on night of 03/09/43 when this 54 Sqn RAF pilot misjudged his height on landing during night practice flying and flew into ground at Night Cliff near Darwin. Pilot; F/Sgt C Harker Serv#655530(RAF) was not injured.



A58-134: Accident 14/12/44 on take-off when engine failed at Uranquinty. Aircraft made wheels up landing. Pilot; W/O R G Tait not injured.

A58-171: Accident 0800hrs 23/05/44 when operating as Yellow 3 at Drysdale as part of 452Sqn RAAF Detachment carrying out an Air to ground Gunnery exercise, the airscrew went into coarse pitch at 4000 feet. As the aircraft could not maintain height, so pilot glided south towards Government Island to make a wheels up landing on the beach. The aircraft stopped after skidding 30 yards on the beach. Pilot; Sgt H S Mac Neil Serv#432834 not injured.

A58-150: Accident 1120hrs 10/08/45 when this 85Sqn RAAF aircraft forced landed 5 miles south of Rockingham WA after engine failure. Pilot; F/Sgt R J Dunn Serv#14783 was not injured.

A58-211: Accident 02/10/43 on take-off following a Glycol leak, pilot abandoned take-off half way through take-off, forcing his aircraft off strip, causing undercarriage to collapse after hitting a shallow ditch at southern end of Strauss. Pilot; F/Sgt A R Richardson Serv#411644 uninjured.

Editor's Notes: **Contributors are most welcome to provide written articles or even topics to be covered by others.**
Special thanks to John and Shep on their inclusion of articles: Many Thanks

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End Notes : RAAF AIRCRAFT MARKINGS SINCE 1950 SQUADRON MARKINGS – PART 2- The Canberra: by John Bennett

[i] 1947-48 policy had stated that day fighters and day/night bombers would be finished in "aluminium and with the smoothest possible finish (K3/162 or K3/168)." *Standard Finishes and Markings of Aircraft – Policy*, RAAF HQ 9/1/1755 enclosure 5A, 30 SEP 1947; RAAF HQ 9/1/1595 DTS Special Instruction Gen/96, 14 JAN 1948. See *ADF Serials Telegraph* Vol 6 Issue 6, Summer 2016.
http://www.adf-gallery.com.au/newsletter/ADF%20Telegraph%202016%20Summer.pdf

[ii] Canberra fuselage roundel 33" (83.82cm) diameter, RAAF DEPT AIR HQ Canberra 579/3/264, undated c1960; mainplane roundel 84" (213.36cm) diameter *High Planes* No. D4806 guide Canberra Mk.20, p.4.
AAP 7021.004-1 Part 1 Sect 6, of 17 NOV 1971, provides drawing number A-12762-2 for the 33" roundel, and A-12762-6 for 84" roundel.

[iii] *The Canberra in the RAF*, RAF Historic Society, Windrush Group, Oxford, 2009, p.51.

[iv] RAAF Aircraft Status Cards, E/E88, A84 series.

[v] *ADF Serials Telegraph* Vol.6 Issue 6, Summer 2016, p.18.
http://www.adf-gallery.com.au/newsletter/ADF%20Telegraph%202016%20Summer.pdf

[vi] R Jackson, *CANBERRA - The Operational Record*, Airlife, Shrewsbury, 1988, p.141.

[vii] C Stafrace, *English Electric Canberra*, Warpaint Book Series No.60, Bletchley UK, p.50. The author emphasises the point: "No pattern Canberra aircraft were provided by English Electric contrary to what is so commonly believed. The contract signed on 20 DEC 1950 included the delivery of two Canberra B.2 bombers to provide training and familiarisation for RAAF crews before Australian production of the Canberra could get underway."

[viii] Re 'scrambled', 'consecutive', and 'century' block serials, see *ADF Serials Telegraph* Vol.5 Issue 3, Spring 2015.
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202015%20Spring%20Vers%20Fin.pdf

[ix] Jackson, p.70.

[x] The U.10 unmanned variant comprised 18 Canberra B.2s modified over 1959-62 into pilotless drones for use at Woomera as missile targets. Stafrace, p.77. Details are available at *adf-serials* A84.

[xi] Jackson, p.158.

[xii] J W Bennett, *Highest Traditions, History of 2SQN RAAF*, AGPS, Canberra, 1995, p.262.

[xiii] RAF Canberras carried underwing 48" (121.92cm) serial numbers in 6" (15.24cm) strokes. The two RAAF B.2s (A84-307 and A84-125), diverted from RAF production, were similarly marked with 48" RAAF serial numbers. These were the only RAAF Canberras so marked, and eventually received 84" underwing type-D roundels.

[xiv] RAAF HQ 430/5/110, *Aircraft Identification Markings*, para 2c(2), 29 NOV 1971.

[xv] Squadron marking sizes calculated from image scaling mensuration.

End Notes : The Losses of Coomalie 43,it Could Have Been a Lot Worse

Striking the Japanese, before and after the Doolittle Raid, without the B-29, and a Aussie witness to the big Bomb Gordon Birkett @2017

[xvi] No. 31 Squadron Air Attack Report No. 19 dated 30-12-42 in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xvii] Ibid.

[xviii] Ibid.

[xix] Ibid.

[xx] RAAF Form A50 Operations Record Book of Thirty-One Squadron entry for COO 43 of 29.12.43 in RAAF Unit History Sheets Number 31 Squadron Aug 42 to Aug 45; NAA: A9186, 61.

[xxi] Confirmatory Memorandum – Casualty A19-20 in Beaufighter A19 Accidents Part 1; NAA: A9845, 11.

[xxii] 31 Squadron Supplementary Report to Air Attack Report No. 19, dated 11th January, 1943 in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xxiii] Supplementary Report to Air Attack Report No. 19 (nd) in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xxiv] Appendix "A" to Supplementary Report to Air Attack Report No. 19 Narrative by pilot Flight Sergeant Wilkins in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xxv] Appendix "A" to Supplementary Report to Air Attack Report No. 19 Narrative by pilot Flight Sergeant Wilkins in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xxvi] Ibid.

[xxvii] Ibid.

[xxviii] Ibid.

[xxix] Appendix "A" to Supplementary Report to Air Attack Report No. 19 Narrative by Observer Sergeant Byrnes in Attack Reports No. 31 Squadron; NAA: A11312, 4/1/INT/C.

[xxx] Citation for award of British Empire Medal awarded to 20750 Corporal Alfred Edward Woodnut; AWM RCDIG1068964.

[xxxi] Appendix "A", above n 14.

[xxxii] Memorandum Aircraft Casualty – A19-71 in Beaufighter A19 Accidents Part 4; NAA: A9845, 14.

End Notes: Striking the Japanese, before and after the Doolittle Raid, without the B-29, and a Aussie witness to the big Bomb
Gordon Birkett @2017

[xxxiii] Hollywood made a WW2 film called "The Purple Heart" in 1944, with Dana Andrews as Capt. Harvey Ross as one of the captured Doolittle Pilots.
[xxxiv] MacGarrigle, George L. Aleutian Islands. The U.S. Army Campaigns of World War II. United States Army Centre of Military History. CMH
[xxxv].Rearden, Jim. Koga's Zero—An Enemy Plane That Saved American Lives. Invention and Technology Magazine. Volume 13, Issue 2, Fall 1997
[xxxvi] Perras, Galen Roger (2003). Stepping Stones to Nowhere, The Aleutian Islands, Alaska, and American Military Strategy, 1867 - 1945. Vancouver British Columbia: University of British Columbia Press. ISBN 1-59114-836-7.
[xxxvii] **Staff Sgt Charlton Heston**, (Of Ben Hur, Moses, El Cid, Planet of the Apes fame and many more Movies) flew as a radioman and gunner with the 77th Bombardment Squadron B-25 Mitchells in the Aleutians from 1944-45 on some of these hair raising missions.
[xxxviii] http://www.ibiblio.org/hyperwar/AAF/IV/AAF-IV-11.html#fn191
[xxxix] 77th BS History 1941-1943
[xl] http://www.norpacwar.com/japanese-air-forces-kurile-islands
[xli] John King quoted in Hugh V. Clarke, Twilight Liberation: Australian prisoners of war between Hiroshima and home, Sydney, Allen & Unwin, 1985, Page 119
[xlii] http://www.jahitchcock.com/mission/b29.htm

Hoped you enjoy this issue. the next will be even more larger.

Next Issue, ADF-Telegraph "Winter 2017" will be out circa June 2017

Stories to include:

- **RAAF AIRCRAFT MARKINGS SINCE 1950 SQUADRON MARKINGS – Part 3**
- **RAAF Longest Combat Missions: To China Shores 1945**
- **and more**

Thanks to John and Garry for their extensive contributions for this issue and we hope to see more people contributing.