ADF Serials Telegraph News

News for those interested in Australian Military Aircraft History and Serials

Volume 7: Issue 5: Summer 2017 *Editors and contributing Authors: Gordon R Birkett and John Bennett*

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News Briefs

- **27th July 2017** Kaan Air Australia, Sikorsky, a Lockheed Martin company, and Star Flight Australia, have signed an agreement worth up to AUD $63 million to bring 10 Sikorsky UH-60 Black Hawk helicopters into Australia, with options for an additional 10 aircraft. These are ex US Army UH-60s, not any of the S-70A9 ex Australia Army Black Hawks.

- **7th July 2017** Our last four EA-18G Growlers, A47-309 to A46-312 (Bu169156 to Bu 169159, msn AG-9 to AG-12), which had been held in storage at the St Louis factory, arrived at Amberley for 6 Squadron. CAF, AM 'Leo' Davies stated: "Australian Growlers have already conducted successful weapons firings and integration flights with RAAF F/A-18F Super Hornets and US Navy EA-18G Growlers as operational test and evaluation."

6SQN EA-18G Growler at Amberley

- **7th August 2107:** Our fourth P-8A Poseidon, A47-004 (msn 62293, N974DS), arrived at Edinburgh for service with 11 Squadron, with the fifth A47-005 (msn 63179, N832DS) due by the end of this year. Aircraft six, A47-006 (msn 63182, N849S) is flying at the factory in the US, probably for delivery at the beginning of 2018. Initial Operational Capability (IOC) is due to occur in January 2018. An initial 12 P-8As are being delivered

under the $5.4 billion AIR7000 Phase 2B project. With the AP-3C due to be retired in 2019, the White Paper forecasts an additional three will be acquired in the second half of the next decade. JB

- **12th August 2017:** Official handover at RAAF East Sale of the PC-21 to the RAAF CAF, AM Davies. Present for the ceremony were the first six aircraft A54-001 to A54-006 (msn 234-239). This date coincided with the arrival in Darwin of the A54-009 and A54-010 on ferry to East Sale. 49 aircraft are being acquired by the RAAF (msn 234 to 282), with 42 for the training units BFTS and CFS at RAAF East Sale, and 2FTS Pearce. In addition, 3 are slated for ARDU at RAAF Edinburgh, and 4 for 4 Squadron for FAC use at RAAF Williamtown. Other deliveries over the period are:

RAAF Serial	Ferry Reg	msn	Delivery Details
A54-007	HB-HWG	240	16 FEB 2017 first flight, 22JUN noted fitted with ferry tanks, 8JUL arrived Darwin, estimated at East Sale 11JUL17.
A54-008	HB-HWH	241	23 MAR 2017 noted flying at Buochs, 22JUN fitted with ferry tanks, 8 JUL arrived Darwin, estimated at East Sale 11JUL17.
A54-009	HB-HWI	242	10 MAY 2017 noted flying at Buochs, 4AUG departed Buochs for Australia, 12AUG arrived Darwin, estimated East Sale 14AUG17.
A54-010	HB-HWJ	243	22 MAY 2017 noted flying at Buochs, 4AUG departed Buochs for Australia, 12AUG arrived Darwin, estimated East Sale 14AUG17.
A54-011	HB-HWK	244	13 SEP 2017 ground running, 10 OCT fitted with pair of underwing smoke generators, anticipate delivery to Aust DEC 17.
A54-012	HB-HWL	245	4 OCT 2017 noted ground running, 9 OCT first flight, anticipate delivery to Aust DEC 17.

A54-011 HB-HWK at Pilatus flight test Buochs in OCT 2017 with smoke generators

- **17th August 2017:** The third Australian F-35A Joint Strike Fighter, A35-003 has received its Australian made vertical tail as it nears production completion. Victorian based company Marand is an Australian company, one of which is the manufacture of vertical tails. Three of Australia's full time staff based at the Lockheed Martin F-35 production facility at Fort Worth, Texas. Meanwhile,..... the rolling off of 318th rear section for an F-35 Lightning II combat jet from the Samlesbury, Lancashire UK production line completes 10 per cent of the global requirement production on order or planned to-date.

- **31st August 2017:** The USA State Department has made a determination approving a possible Foreign Military Sale to Australia for an upgrade program for MH-60R Multi-Mission Helicopters. The estimated cost is $360 million.

- **1st September 2017:** The sixth Airbus Defence and Space KC-30A MRTT for the RAAF, A39-006, arrived at Amberley for service in 33 Squadron RAAF. The second of the two additional Airbus A330-203s, A39-007, is also in the process of being delivered, but is being modified with a VIP interior to support long-range government transport requirements.

- **13th September 2017:** After our previous report of delivery of the RAAF's sixth C-27J Spartan (A34-007, msn 4186) to 35SQN at RAAF Base Richmond on 25 JUN 2017, prior to delivery of A34-006 (msn 4185). Both A34-008 and A34-009 were noted at the L3 Waco plant for systems integration. Status of deliveries over the period are:

~~A34-008 at Turin~~

RAAF Serial	US FMS Reg	msn	Delivery Details
A34-006	12-27053	AUS06/4185	Delivered to Richmond this quarter
A34-008	12-27055	AUS08 (prob 4187)	Noted flying at Turin Italy as I-PTFN on 20 APR 2017. Seen at Waco on 13 SEP 17. Anticipate del DEC 2017.
A34-009	12-27056	AUS09 (prob 4188)	Left Turin on 24 JUL 2017 bound for Keflavik and onwards to Waco, test registration is I-EASF. Seen at Waco on 13 SEP 17. Anticipate del early 2018.
A34-010	12-27057	AUS10 (prob 4189)	First flight on 29 AUG 2017, left Turin for Keflavik 3 OCT 17, and onwards to Waco. Anticipate del early 2018.

- **23rd September 2017:** The first of three new Hobart class Destroyers (DDG), HMAS Hobart, was officially commissioned into Royal Australian Navy service.

- **4th October 2017:** The US State Department has approved a possible sale to Australia of GBU-53/B Small Diameter Bomb Increment II (SDB II) for US$815 million. The proposed sale of SDB II supports and complements the ongoing sale of the F-35A to the Royal Australian Air Force. The Government of Australia has requested a possible sale of up to three thousand nine hundred (3,900) GBU-53/B Small Diameter Bomb Increment II (SDB II), up to thirty (30) GBU-53/B Guided Test Vehicles (GTV), up to sixty (60) GBU-53/B Captive Carry Reliability Trainers (CCRT).Also included in this sale are Weapon Load Crew Trainers (WLCT), Practical Explosive Ordinance Disposal Trainers (PEST), containers, support and ground crew test equipment, site survey, transportation, warranties, repair and return, maintenance, publications and technical documentation, personnel training and training equipment.
- **12th October 2017:** Canada has taken the first formal step toward buying used Australian F/A-18A fighter jets, upping the ante in a trade dispute with U.S. defence giant Boeing. Public Services and Procurement Canada quietly posted notice on its website. The purchase, if it goes ahead, would mean there would be no need for the Liberal government to enter into a deal with the U.S. government to buy 18 advanced F/A-18E/F (8/10)Super Hornet jets. Defence Minister Harjit Sajjan said recently that air force staff looked at the possibility of buying used Kuwaiti FA-18s, but those warplanes aren't on the market. On 29th September, 2017, Canada submitted a formal declaration known as an expression of interest to Australia. Canada expects a response by the end of 2017 with details on the aircraft's cost and availability, according to a 9th October 2017 release from the Canadian government. But are ours for sale????
- **Redress 14th August-7th November 2017 ARH Tiger:**
    - Australian Army Aviation 's $1.5 billion Tiger attack helicopters have been grounded as a result of a incident whereby a German Army Version crashed while on a UN peacekeeping mission in Mali on July 26, killing both crew on board. Since entering service in 2004 Australia's 22 Tigers did not achieved Final Operational Capability, originally set for 2009 then until 18th April 2016.
    - **The Australian Army's fleet of 22 armed reconnaissance Tiger helicopters is still grounded, as of 7th November 2017: nearly 13 weeks.**
    - **After preliminary investigations, Tiger manufacture Airbus Helicopters put out a safety bulletin on 11th August 2017 basically saying that they had not yet identified a part or a reason for the blades to separate from the aircraft and could not say whether it was a design or manufacturing fault or a maintenance error that caused the crash.**
    - While the Airbus statement did not specifically 'ground' all Tiger helicopters, operators were left in a position where, when the manufacturer couldn't guarantee the safety of the equipment, they had little other choice **– and the ADF officially grounded its fleet on 14th August, 2017.**

Picture update on A35-003,..emerging from Lockheed Martin's Paint Shop

Now painted with No 3 Squadron's Motif

RAAF AIRCRAFT MARKINGS SINCE 1950

SQUADRON MARKINGS – PART 5 – DOUGLAS C-47 DAKOTA

John Bennett 2017

In this series so far we have looked at the RAAF's silver aircraft of the 1950s and into the 1960s, to cover the squadron markings of the Sabre, Canberra, Meteor and Vampire. The Vampire showed the introduction of fluorescent 'dayglo' orange into the RAAF, and that is a major theme too in this article covering the RAAF's Dakota transports and trainers. This theme will also flow into a future instalment, the larger silver RAAF transports that wore dayglo in the 1960s. However, some C-47s avoided dayglo, primarily the VIP Dakotas of 34SQN and Transport Support Flight (TSF, at Butterworth), and these aircraft maintained an overall aluminium scheme – similar to our all-grey aircraft of today – until in the 1960s receiving a white upper fuselage, coloured streamlines and 'airline-style' titling along the fuselage. We have previously discussed how tactical camouflage and colours were introduced by the RAAF from 1963, and now we will have a more in-depth study of the RAAF's love affair, and hatred, with fluorescent dayglo orange.

A rather bland – but still beautiful looking – bare aluminium RAAF C-47B Dakota in the early-1950s

Silver Dakota Markings

Having a large fleet of such an outstanding transport aircraft as the C-47, the RAAF was in a good position at the end of the War. Overall, 14 commercial DC airliners and 124 military freighter Dakotas were delivered, summarised as:

A30-1 to A30-14 DC-3 and DC-2.
A65-1 to A65-4 C-47 Dakota I.
A65-5 to A65-59 C-47A Dakota III.
A65-60 to A65-124 C-47B Dakota IV.[1]

RAAF Serials	Model	USAAF Numbers	Delivery to RAAF
A30-1 to A30-4	DC-3	ex-Australian National Airways	chartered SEP 1939
A30-5 to A30-14	DC-2	ex-Eastern Airlines	DEC 1940 – MAY 1941
A65-1 to A65-4	C-47-DL Dakota I	41-38713, 38690, 42-32786, 42-32881	FEB 1943 – MAR 1943
A65-5 to A65-59	C-47A-DL/-DK Dakota III	between 42-23423 and 43-48103	APR 1943 – AUG 1944
A65-60 to A65-124	C-47B-DK Dakota IV	between 43-48737 and 45-957	SEP 1944 – AUG 1945

Post war, the transport aircraft of choice was the Dakota, and in JUN 1946 a total of 109 aircraft were held with requirements for 53.[2] However, two months later the requirement for 60 Dakotas was determined, and these would primarily be C-47Bs distributed mainly between the three RAAF transport squadrons, with smaller numbers scattered at air force bases around Australia. The main user allocation as of **AUG 1946** was: [3]

36SQN Townsville – 15 aircraft,
37SQN Schofields – 13 aircraft, and
38SQN Archerfield – 11 aircraft.

The colours and markings of RAAF C-47s during WWII will not be covered here, as it is outside the scope of this series. For details of Dakotas camouflage and markings in WWII, refer to Ian Baker's *Aviation History Colouring Book* series.[4] Again, thank you to those who have contributed images to *adf-serials* imagery gallery, which makes it such a unique reference resource.

1951-54 – A65-69 served in Darwin at NWA HQ marked with the titling *NORTH WESTERN AREA H.Q. R.A.A.F.*

Korea

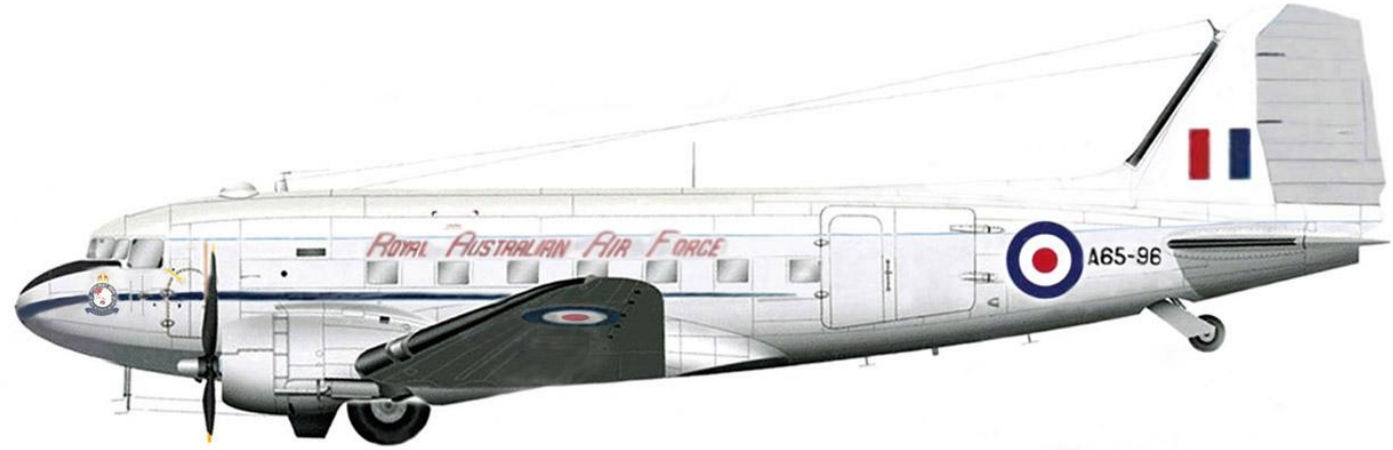
When the Korean War began in JUN 1950, 77SQN was based in Iwakuni Japan operating the Mustang within the British Commonwealth Air Command (BCAIR) structure. To support Iwakuni operations, 77SQN also operated several C-47B Dakotas – see the **A65-121** aircraft table, marked as **77 SQUADRON R.A.A.F.** As the Mustangs moved forward to Korea, in NOV 1950 the Dakotas were formed into No.30 Comms Unit, and together with 77SQN formed ***91 Composite Wing***). Other Dakotas that had been delivered in 1950 to 77SQN were **A65-96** and **A65-109**.

1950 – 77 SQUADRON R.A.A.F. Dakota fuselage titles

In NOV 1950 30 CU commenced operations supplemented by four extra Dakotas from 38SQN at Changi (which with 1SQN formed ***90 Composite Wing***). The 'airline' style titling on Dakota changed to the more generic 'transport' titles of ***ROYAL AUSTRALIAN AIR FORCE***. In NOV 1951, 30 CU became No.30 Transport Unit, and eventually in MAR 1953, 30 TU became 36SQN;[5] these units had a typical strength of 6-8 Dakotas (with VIP aircraft below shown in blue).

Unit	Date	Known Dakota Aircraft [6]
77 SQN	1949 – NOV 1950	A65-96, A65-109, A65-121; 2 a/c at one time
30 Comms Unit	NOV 1950 – NOV 1951	A65-63, -70, -74, -75, -86, -88, -91, -92, -93, -96, -97, -109, -122
30 Transport Unit	NOV 1951 – MAR 1953	A65-63, -70,-75, -84, -86, -91, -92, -93, -97, -101, -103, -108
36 SQN	MAR 1953 – MAR 1955	A65-73, -75, -76, -80, -84, -85, -86, -92, -93, -97, -98, -100, -101, -108, -119, -120, -121
Transport FLT Japan	MAR 1955 – JUL 1956	A65-75, -86, -100; 2 a/c in 1956 returned to Australia [7]

1951 – VIP A65-96 of 30 CU at Iwakuni (with Auster VI VF547 of 1913 AOP FLT), left Japan for Australia in JUL 1951



The Dakotas that formed these Iwakuni-based units for operations in Korea flew with these generic **RAAF** 'transport' titles and 86 Wing badges – and sometimes with **86 Wing** titles, which were never changed to '91 Wing' markings. Known aircraft which were flown by Iwakuni units were all C-47Bs and included: A65-63, -70, -73, -74, -75, -76, -80, -84, -85, -86, -88, -91, -92, -93, -96, -97, -98, -100, -101, -103, -108, -109, -119, -120, -121 and -122.

Malaya

In the Malayan Emergency, RAAF Dakota operations were flown by 38SQN from JUL 1950, based at Changi Singapore, and forming No.90 (Composite) Wing with 1SQN Tengah's Lincolns, as part of the Commonwealth's Far East Air Force. The complement was initially eight aircraft, which were marked in **86 Wing** markings. However, to support Korean operations four Dakotas were transferred in NOV 1950 to 30 CU at Iwakuni. Four Dakotas maintained 38 SQN ops from Changi and Kuala Lumpur until DEC 1952, when withdrawn to Australia. Known 38SQN aircraft in Singapore at Changi were: A65-64, -66, -70, -71, -73, -74, -76, -98, -102, -105, -112 and -120.[8]

1950 – A65-66 with a line-up of 38SQN Dakotas with *No.86 Transport Wing R.A.A.F.* title markings at Changi

Observations on Standard Dakota Markings

The omni-presence of bare metal silver or of aluminium enamel and dope over 1950 through to 1963 was covered in our *adf-serials* installment "Silver to Grey".[9] By 1959, however, as an anti-collision measure, high visibility dayglo orange was being applied to aircraft, primarily to transports and second-line trainers. Concurrent with the introduction of dayglo was the introduction, from 1962, of cooling white upper fuselages for crew comfort, on Canberras, Dakotas and Neptunes. Of course the trainers – Winjeels and Vampires – were obvious candidates for high visibility fluorescent treatment, and we have so far covered the Vampire in our last instalment.[10]

The Dakota operated through the 1950s and 1960s in overall aluminium and standardised National Markings as laid down in RAAF HQ Special Instruction General No.96 of JAN 1948, which essentially changed the *dull matt* roundel colours to *bright and glossy*. The contemporary markings applied through the 1950s to the Dakota fleet were:

- **Serial numbers** – black serial number either side of the rear fuselage in 8" characters; [11]
- **Transport titles** – red 'airline-style' titles above the window line, which became known as 'transport' titles, and these were typically ***ROYAL AUSTRALIAN AIR FORCE***, or ***NO.86 TRANSPORT WING R.A.A.F.***, or even in Japan/Korea ***77 SQUADRON R.A.A.F.***;
- **Streamline** – the blue 'streamline' along the fuselage *below* the windows, which replaced painted cheat lines *along* the windows;
- **Last twos** – large 'last two' trainer numbers on School of Air Navigation (SAN) aircraft repeated behind the cockpit (in two styles of 'last two', first the 32" high c 1955, and reduced in 1964 to 24");
- **Squadron markings** – prominent squadron markings appeared from 1958 with 2SQN at Butterworth (until Dakotas reformed as Transport Support Flight in 1967), but normally squadron "ownership" only saw a unit badge/crest on the forward fuselage; and
- **Dayglo** – a high-visibility dayglo fluorescent scheme from 1959.

These markings and examples are detailed chronologically below.

SAN Dakota A65-89 in 1955, overall bare metal, Type-D roundels and large trainer 32" nose 'last twos'

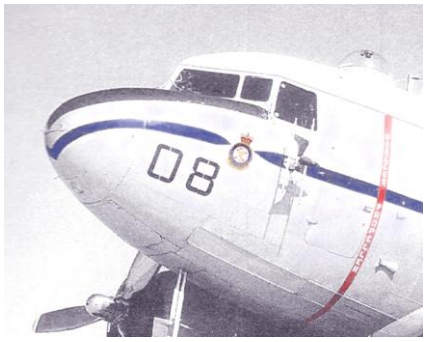
1234567890

Changes in Dakota markings from the 1950s were:

- **1959** – From MAY 1959, the first Dakotas were treated with dayglo at major servicings. Dayglo remained on most aircraft until disposal in 1968-69 (although ARDU calibration aircraft retained dayglo until 1979). Aircraft exempt from dayglo were VIP aircraft on 34SQN (although 34SQN freighters did have dayglo), 2SQN/TSF aircraft operating overseas from Butterworth, and the SAR 'Station Flight' Dakotas (post 1969, after Parafield had closed as the main RAAF major servicing depot for Dakotas).

- **1962** – Blue 'streamlines' (below the windows, which had been marked on some aircraft in the 1950s) were added across the whole fleet from 1962, at the same time as white upper fuselages, and the standard 10.5" red 'transport' ROYAL AUSTRALIAN AIR FORCE fuselage titling, which became a requirement for all RAAF

transport aircraft. Blue streamlines could vary slightly, for instance some extending under the nose on non-dayglo Dakotas for VIP and Central Flying School (CFS) aircraft, as shown below.

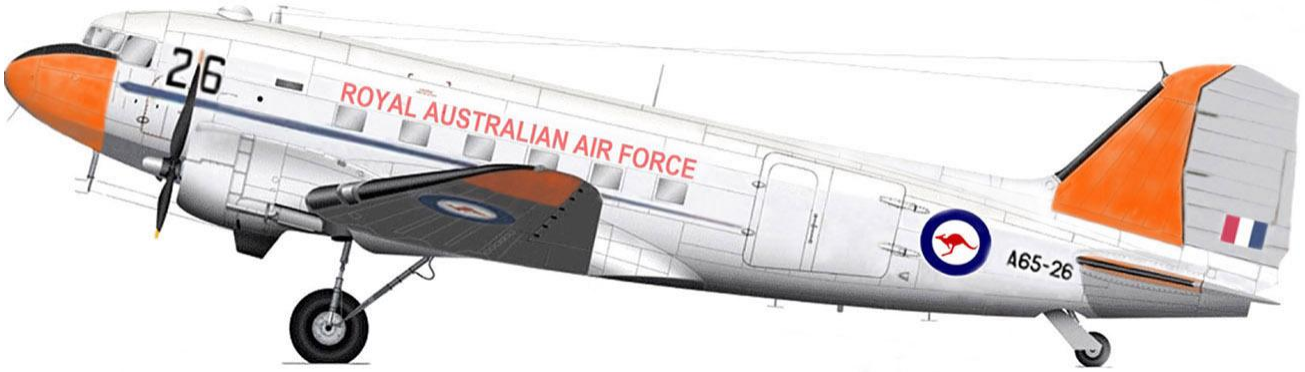


A65-108's style of blue streamline flowing under the nose varied – first with 34SQN and later CFS

The streamline was added with the red **ROYAL AUSTRALIAN AIR FORCE** *fuselage titling as a neat 'airline-style' livery for transport aircraft (and was carried over to the C-130s in 1958). The streamline was 4" wide near the nose, tapering to the cargo doors; if extended below the nose, the streamline could broaden to 8" width (above right). The colour was* 'Royal Blue' *BSI No.6 (also referred to as BS381:1943 No.6) in 1947, which the RAAF adopted the following year as K3/348.*[12] *See British Standards Institution (BSI) colour details below.*

- **1964** – the SAN large 'last two' or 'last three' trainer numbers were reduced in height from 32" to 24" to conform with the East Sale Vampire nose numbers in the same style as shown below (although there were slight variations with the number '8').

SAN C-47A Dakota A65-26 in 1966, dayglo, aluminium and white, kangaroo roundels and 24" nose 'last twos'



- **1969** – Coinciding with the Nav Trainers being withdrawn from SAN, major Dakota servicing finished at Airframe Repair Workshops (ARW) at Parafield, and the contract was awarded to HDH at Bankstown. There was now no further requirement for dayglo on Dakotas, as both 34SQN and 38SQN no longer operated the aircraft. The exception for maintaining dayglo was for the ARDU calibration aircraft. CFS had always operated SAN aircraft, but after 1969 had its own Dakotas (variously, A65-63, -67, -91, -100 and -108) for pilot aircraft type conversions until 1980, but CFS Daks were not marked in dayglo.

A65-69 in 1973 – TSF did not operate in dayglo, replacement aircraft had dayglo overpainted (here by white)

A65-69 served many years at NWAHQ and as the Darwin station Dakota before 2SQN at Butterworth, and then passing to TSF, where it stayed until TSF disbanded in JUN 1980, when it was allocated to the Berlin Airlift Memorial Museum at Gatow. Diplomatic restrictions meant it was ferried along the Berlin corridor marked as an RAF aircraft.

A65-71 in 2SQN 1963-65 with dayglo overpainted by aluminium

- **1980** – TSF continued operating the Dakota up until 1980, with major servicings conducted by HDH at Bankstown. As shown by the two aircraft above, Butterworth Dakotas had dayglo replacements over-painted. Common with many TSF Dakotas was, if specifically a VIP aircraft, a very thin 0.5" black delineation line between the aluminium and white upper surface.

Evocative pic of a Dakota in the Orient, 2SQN 1960s – with very unusual Butterworth dayglo markings

Now, a look at National Markings that changed with **SIG/96 of JAN 1948**, and how it impacted the Dakota.

BRITISH STANDARD INSTITUTION (BSI) COLOURS

BS381C

The RAAF had adopted RAF colours from its inception in 1921, and it was not until World War Two that RAAF-specified colours were required for camouflaging aircraft in our area of operations. The British Standard Institution (BSI) published the **BSI 381** in 1930, "*Colours for Ready Mixed Paints",* as the first colour Standard of a collection of individually specified colours – these were for identification, coding and other special purposes (such as camouflage), for use by government departments and industry.[13] In 1931 this became **BS381C**, with a 2nd edition in 1943, and 3rd in 1944. The 4th edition in 1948 was a significant revision as **BS381C** "*Colours for Specific Purposes"*, with the 5th revision in 1964 specifying *"for identification or other technical purposes"* [14] becoming synonymous as the Standard for military use. The range of standardised paint colours laid down in 1943 and 1944 included such colours (including examples we will look at shortly as its relevance to the RAAF Dakota) as: BS381C No.4 *Azure Blue*; No.6 *Royal Blue*; No.37 *Signal Red*; No.56 *Golden Yellow*; No.57 *Orange*.

Meanwhile during the war, Australian colours had been adapted for RAAF purposes in our areas of operations, and were identifed by the **RAAF 3K5 specification** with K3/### paint identifiers. RAAF HQ correspondence in NOV 1947 to the major Dakota maintenance unit, the Division of Aircraft Production (DAP) at Parafield, specified colours for brushing (badges, lettering, etc) for 86 Wing Dakotas as:[15]

Ident No.	BS381C Colour	BSI Colour No.	
K3/232	Azure Blue	4	which became BS381C-104
K3/235	Signal Red	37	which became BS381C-537
K3/237	Golden Yellow	56	which became BS381C-356
K3/231	Black	-	

Added were enamels that were not yet in the RAAF vocabulary, and required "mixing":

K3/232 [*Azure Blue*] add dash of K3/231 [*Black*] = *Royal Blue* No.6 [BS381C-106]

K3/237 [*Golden Yellow*] add dash of K3/235 [*Signal Red*] = *Orange* No.57 [BS381C-557]

In JUL 1948 the RAAF rectified these deficiencies by adding these two mixed colours to its stores, as K3/347 *Orange* and K3/348 *Royal Blue*.[16] These designators were ancillary to National Markings, being used for brushing insignias.

86 Wing Dakota BSI Colour Specifications at DAP Parafield

No 4 *Azure Blue* No 6 *Royal Blue* No 37 *Signal Red* No 56 *Golden Yellow* No 57 *Orange*

In UK, the BS381C:1948 revision discarded its original purpose of a miscellaneous selection of general colours for a diverse range of purposes, to colours "for specific purposes". Accordingly, colours were renumbered as follows:

100 to 199 blue, turquoise
200 to 299 green
300 to 399 yellow, cream, buff
400 to 499 brown, pink
500 to 599 orange, red
600 to 699 grey
700 to 799 purple, violet

Therefore, for example, BSI No 4 *Azure Blue* became BS381C-104 *Azure Blue*, No 6 *Royal Blue* became BS381C-106 *Royal Blue*, No 37 *Signal Red* became BS381C-537 *Signal Red*, No 56 *Golden Yellow* became BS381C-356 *Golden Yellow*, No 57 *Orange* became BS381C-557 *Orange*, and so on.

So over 1947-48 colour specifications and standards were changing, and National Markings were also changing over this period. Postwar, up until 1947 the national markings remained in the wartime 'dull' colours (and initially without red). In 1948, with the re-introduction of red to the RAAF roundel, 'bright' national markings were promulgated.[17] These changes were again mirroring the 1947 RAF policy, where RAF Air Publication A.P.119A-0601 had introduced gloss roundel colours *Post Office Red* (BS381C-538) and *Roundel Blue* (BS381C-110),[18] and where RAF AMO A.413/47 promulgated the 1:2:3 Type-D roundel.[19] But it was not until the 1964 revision that the RAF adopted fully integrated BS381C as its colour Standard, previously having used British Ministry of Aircraft Production (MAP) colour guides.

BRITISH STANDARD INSTITUTION (BSI) COLOURS

British Ministry of Aircraft Production (MAP) Colours

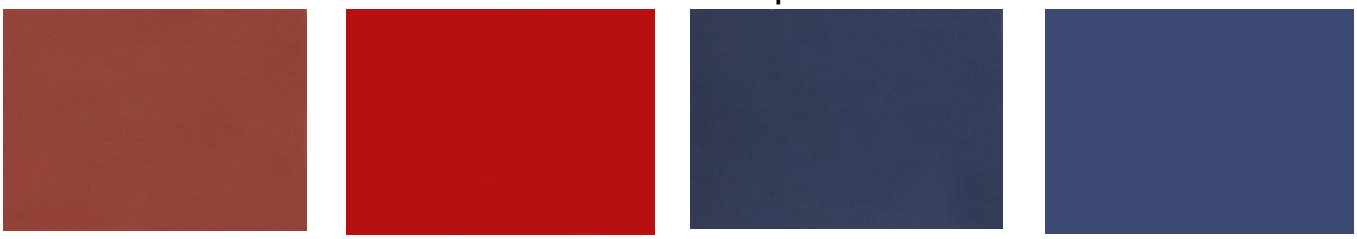
Rather confusingly, although UK had a perfectly good colour Standards system in place with BS381C, the RAF did not utilise this during the Second Word War, and reliance on this Standard did not become more widespread until the 1950s, with BS381C not being fully implemented as the RAF Standard until 1964.

During the War, the RAF used MAP system of colours (shown below),[20] which were designated loosely by name only, and used the RAF 33B/ stores identification to specify particular paints against these MAP colours. The MAP Standard had commenced in 1939 with 18 camouflage colours, with more added. In 1946, the MAP was absorbed into the Ministry of Supply and the MAP colour Standard was issued as supplementary to BSI colours. While some MAP colours had been adopted in the BS381C, incredibly all BSI colours were not fully integrated until 1964[21] – often BS381C references are applied retrospectively, as it was an accurate and effective Standard.

COLOUR STANDARDS OF THE MINISTRY OF AIRCRAFT PRODUCTION (MAP)

Some of these MAP colours which became relevant to the postwar RAAF Dakotas, primarily with reference to National Markings, are shown below. **MAP *Red*** was a dull identification colour for national markings (used by the RAAF from 1942 as *Dull Red* K3/196), but when the RAF introduced the postwar roundel in 1947, MAP *Red* was replaced by *Bright Red*.[22] Similarly, **MAP *Blue*** was a dull roundel colour (used by the RAAF as *Dull Blue* K3/197), and replaced by the RAF from 1947 as *Bright Blue*. The BS381C designators for these new RAF 'bright' 1947 gloss roundels were No.38 *Bright Red* and No.10 *Bright Blue*; in the 1948 BS381C Standard these became **BS381C-538 *Bright Red*** or ***Post Office Red*** (close to FS 11140) and **BS381C-110 *Roundel Blue*** (FS 15056).[23]

RAF Roundel Colour Comparison 1947

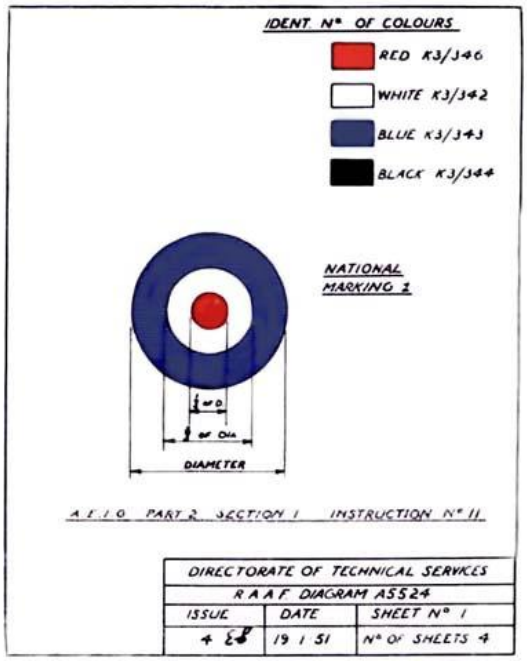


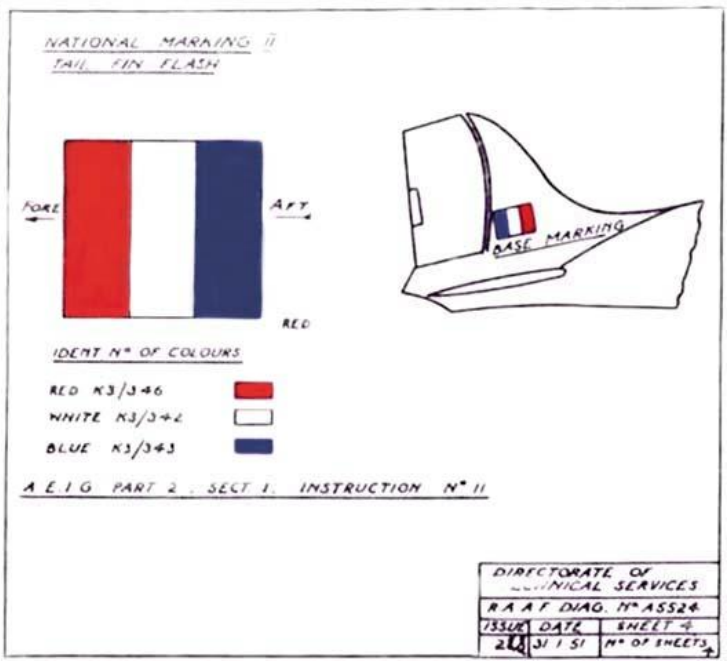
MAP *Red* | **BS381C-538 *Post Office Red*** | **MAP *Blue*** | **BS381C-110 *Roundel Blue***

RAAF STANDARD K3/ VOCABULARY COLOURS

Wartime. RAAF colours had been adapted from the British MAP colours, and then when aircraft were supplied from the US, some of those colours were adopted or adapted. The RAAF had specific requirements for its areas of operations and produced unique markings and colours. Below are some colours from the Spartan company complying to RAAF 3K5, e.g. *Bright Red* was **K3/169** "for ambulances only", and *Dull Blue* **K3/197**.

Postwar Markings. The RAF re-introduced prewar gloss red/white/blue national markings in MAY 1947 with the roundels in 1:2:3 proportions[24] (Type-D roundels). In the RAAF, Special Instruction General/96 issued in JAN 1948 directed the introduction of these roundels,[25] with the Type-D roundel referred to as "National Marking I", and the fin flash as "National Marking II", seen below in abbreviated Diagram A5524 Sheets 1 and 4, 19 JAN 1951.[26] This Diagram specified red and blue as **K3/346** and **K3/343** respectively, which differed slightly from those adopted by the RAF in 1947 (BS381C-538 *Bright Red* or *Post Office Red,* and BS381C-110 *Roundel Blue*).[27] These RAAF colours in 1948 were **K3/346 *Glossy Red*** (BS381C-538 *Bright Red*) and **K3/343 *Glossy Blue*** (BS381C-105 *Oxford Blue*).[28]





Directions to/fro DAP Parafield (the Dakota maintainers) with RAAF HQ provides advice on identifying other colours that were being applied as C-47 markings. K3/346 was specified as Dulux *Bright Red* 388-5302 (i.e. BS381C-538 *Post Office Red*).[29] After the earlier problems of mixing *Royal Blue*, in 1948 Dulux *Royal Blue* 388-041 was added to the RAAF 3K5 specification as K3/348 *Royal Blue* (i.e. BS381C-106 *Royal Blue*),[30] but for the blue in National Markings the RAAF had chosen BS381C-105 *Oxford Blue*, while the RAF had adopted BS381C-110 *Roundel Blue*. Confused?

RAAF DAKOTA BLUES

The wartime roundel *Dull Blue* was K3/197, and was used until gloss colours appeared in 1948, so this was the colour used in roundels and the 30' blue 'streamline' until 1947. But there were other blues in use, so here is a simple explanation of what was what.

Colourised 'streamline' – originally *Dull Blue*, which was changed from 1948 to become a *Royal Blue* streamline

- K3/197 *Dull Blue* – dull roundels and Dakota fuselage streamline until 1947; [31]
- K3/343 *Glossy Blue* (BS391C-105 *Oxford Blue*) – glossy **RAAF** roundels from 1948;[32]
- K3/348 *Royal Blue* (BS381C-106 *Royal Blue*) – introduced JUL 1948 for aircraft brush-painting badges and streamline. [33] Furthermore, *Royal Blue* was selected by **RNZAF** as its National Marking blue.[34]
- BS381C-104 *Azure Blue* (BSI No.4) had been used for the Dakota fuselage streamline by mixing it with black to produce Royal Blue (BSI No.6, BS381C-106);[35]
- BS381C-110 *Roundel Blue* – selected by **RAF** in 1947 as *Bright Blue* for its National Marking blue.[36]

In 1947, there was also a K3/232 *Synthetic Enamel Blue* for brush painting pipe lines, etc[37] – but not used for National Markings.

Confusing? Yes, but suffice to say that different blues had different purposes. A blue for the National Marking; a blue for secondary markings (streamline, badges); and an ancilliary blue (for hand-brushing pipes, services, etc). And different air forces (albeit closely aligned like the RAAF, RAF and RNZAF) all had different blues in their National Markings. Also over 1946-48, there was the practice of adding black or white to a blue to provide a different shade of blue! For example, "K3/232 (*Azure Blue* No.4) add dash of K3/231 (*Black*) = *Royal Blue* No.6".[38]

***Dull Blue* K3/197**	***Glossy Blue* K3/343 *Oxford Blue* BS381C-105**	***Royal Blue* K3/348 BS381C-106**	***Azure Blue* K3/232 BS381C-104**	***Roundel Blue* BS381C-110**

This 86 Transport Wing badge (ahead of AN/APN-2 Rebecca homing antenna) appears to be the same colour as the streamline, i.e. brush-painted in a *Royal Blue* No.6, derived from mixing *Azure Blue* with *Black*. There was no *Royal Blue* available through stores until K3/348 *Royal Blue* No.6 was obtained in JUL 1948.[39] The streamline was also brush painted. The 'mid' blue arrow through the badge was also mixed – *Azure Blue* No.4 with *White* K3/236.[40] 86WG HQ specified too the colours in the centre: "map of the world land is red, sea white, Long and Lat lines black".[41]

Detailed Dakota Markings

It is now appropriate to consider the variety of RAAF aluminium/silver C-47 markings employed from the late the 1940s into the early 1960s. Various RAAF Dakota operators at home and overseas marked their aircraft with their unit 'airline-style' titling along the fuselage, and also unit badges. The primary Dakota operator was 86 Wing which provided aircraft on courier runs to Australian forces in Asia from Schofields until 1952, and then from Richmond. These deployed RAAF units were 38SQN in Malayan operations in the Emergency (90WG at Changi, Singapore), and to 30 Comm Unit/30 Transport Unit/36SQN in Korean War operations (91WG at Iwakuni, Japan). In DEC 1952, 38SQN returned from Singapore to become a unit within 86WG at Richmond, with 90WG being disbanded.[42] The image below of 86WG Dakotas at Darwin in 1955 shows the aircraft marked with the 86WG titling and badge below the cockpit.

86 Wing C-47 transports at Darwin in 1955 – with 1948 colours and prior to kangaroo roundels (1956)

Transport 'Airline-style' Titles

Post-WWII, the RAAF Dakota fleet was stripped of camouflage markings, and in bare metal and aluminium were marked with a blue 'streamline' along the fuselage. The unit lettering above the windows, e.g. ***No.86 Transport Wing R.A.A.F.*** as shown above, was painted in *Bright Red* initially outlined in *Royal Blue*.[43] The WWII VH- tail radio callsigns were dropped, although the last three letters were retained on the fin over 1947, until completely removed in 1948.[44]

A65-73 86 Wing Dakota in FEB 1954 visiting Kimpo with the early generic *ROYAL AUSTRALIAN AIR FORCE* titles

While main users of the Dakota – such as 86 (Transport) Wing – would be obvious candidates for 'airline' style titles, some more obscure operators also used this system. 77SQN flew two C-47s in Japan in support of Mustang operations flown from Japan and Korea in 1950, with their aircraft in **77 SQUADRON R.A.A.F.** titles (see A65-121). The Dakotas were soon transferred from 77SQN command to a separate unit at Iwakuni, No.30 Communications Flight (and with 77SQN forming 91 Composite Wing), but were marked with 86 Wing titles. In NOV 1951, 30 CU became No.30 Transport Unit, then in MAR 1953 became 36SQN with a full complement of eight C-47s.[45] To support Meteor and Dakota operations, 491 (Maintenance) SQN was formed at Iwakuni on 20 OCT 1950, operating until 13 DEC 1954.[46]

Over this stage too, 86(T) Wing operations consolidated at RAAF Base Richmond, with the base at Schofields disbanded in APR 1953.[47] For standardisation, from 1962 all RAAF Dakotas were marked with a common **ROYAL AUSTRALIAN AIR FORCE** title. This became known as a 'transport' title and was marked in 'Arial Narrow' 10.5-inch characters.[48]

The standard ROYAL AUSTRALIAN AIR FORCE 'transport' titling and blue streamline

Blue Streamline

The 'streamline' is the 30'-long blue line below the windows on RAAF transport aircraft, not the line *along* the windows. As Ian Baker states: "The streamline has been described as being *'insignia blue'* which, at that time, meant *Dull Blue*, and the lettering was *'red'*. AHCB has assumed that red would have been the 'bright' (Red Cross) colour, although similar lettering in a c1948(?) colour photo of another 86 Wing Dakota does have the appearance of possibly having been *Dull Red* when compared with the red in the newly applied red-white-blue roundels."[49] However, from 1947 Division of Aircraft Production (DAP) Parafield were marking titling in gloss K3/235 *Signal Red.*[50]

The Air Force Headquarters' directives of 1947 to DAP at Parafield – amalgamated out of the wartime Dept of Aircraft Production on 1 NOV 1946[51] and conducted RAAF Dakota depot-level servicing – laid out the specifics for marking the 86WG titling, the unit badge and the blue 'streamline'. Briefly, the markings were to be hand-painted (spray painting had previously been defective), and colours used were to conform to the British BSI Standard 381C:1943, i.e. BSI *Bright Red* No.37 and *Royal Blue* No.6, with directions to "blend" other colours.[52] The image above shows what was to become the standard streamline – but there were variations.

A65-121 1950 77 SQUADRON RAAF titles with blue window line, outlined in red

A65-63 under-nose streamline

A65-124 ARDU c1968

A65-94 ARDU c1972

A65-108 ex-CFS RAAFM

A65-102 2FTS 1976

Dayglo Dakotas

The Need for High Visibility

Before daylo applications had been developed in the US in the 1950s, RAAF second-line aircraft requiring high visibility, such as trainers in the Second World War were painted in *'Yellow'* (K3/185).[53] Postwar, trainers had yellow training bands around the fuselage and mainplanes (in the RAF style), but these were generally ineffective for their primary purpose of collision avoidance. For target-towing, this last operational Beaufighter (below) shows a more effective lower surface black/yellow striping, which had been used during the war years too for aircraft in that role to emphasise their presence – quite useful for self preservation!

A form of high visibility – Beaufighter target-tower A8-357 at Woomera 1956-57, with yellow/black stripes

Other attempts at high visibility finishes were for the RAAF's first serious attempts at operations in the Antarctic. These aircraft were painted brightly not for collision avoidance, but for crew survivability if forced down in the unforgiving terrain. The all-yellow painted Gipsy Moth on floats A7-55 had sailed south in 1936 on board the *Discovery.* For the Australian National Antarctic Research Expedition (ANARE) over 1947/48 a yellow Kingfisher A48-13 had sailed aboard HMAS *Wyatt Earp*, accompanied also by a yellow Walrus HD874 (which was wrecked in DEC 1947 on Heard Island, and later recovered for restoration at the RAAF Museum).[54] However, it was not until the early 1950s which saw an annual RAAF decade-long involvement with ANARE until the early 1960s. This involved a serious use of all-over high visibility on Austers and Beavers (*'Yellow'* initially, then from 1956 *'International Orange'* designated by FS595a as FS12197). This was eventually supplemented from 1958 by the brighter **dayglo** *'Blaze Orange'* – an even brighter red orange hue in fluorescent paint – used on panels of Beavers A95-202 (in 1958, and later on A95-205) and from early 1959 also on the ANARE Dakota A65-81. An instalment on 'RAAF Antarctic Aircraft' is planned for the future. Below is a late 1958 image highlighting the lack of colours applied to RAAF aircraft of the era, and it was only the 'midnight blue' Neptune (in service throughout the 1950s) that differed from the silver norm.

A silver air force 1958 – RAAF Richmond in SEP 1958, with 78 Wing Sabre Mk.30, Winjeel, 36SQN C-130A Hercules, 38SQN C-47B Dakota, 22SQN Meteor, 'midnight blue' 11SQN P2V-5F Neptune, and a little colour from a USAF Hercules

The Use of Dayglo

The VIP Dakota below, **A95-90 in MAY 1956**, shows that every picture tells a story, and once again thank you for the contribution of images to *adf-serials* that makes this series possible. Some aspects that A65-90 shows are:

- the blue 34(VIP)FLT fuselage streamline under the nose with the 86 Wing badge, this streamline style would be retained by the VIP Dakotas, while freighters and trainers would vary;
- the white upper fuselage with a very thin 0.5" black cheat line between aluminium and white, which was only used VIP aircraft; and
- the Type-D National Markings, as it was another two months before kangaroo fuselage roundels were introduced in JUL 1956.

A65-90 of 34(VIP)FLT at Essendon Airport, in MAY 1956 for the arrival of Gen Jimmy Doolittle

It is worth bearing in mind too, that when dayglo was added *across the Dakota fleet* from 1959, that when dayglo was added to the fin, the *National Marking II* (tail flash) would be removed to the rudder.

All-silver A65-104, the 'Darwin Dak' in 1961, which was destroyed by Cyclone 'Tracy' in 1974

'Dayglo' was a brand name of the daylight fluorescent coating for pigments, and other products, that exhibited fluorescence in daylight. Fluorescence refers to a pigment that absorbs and reflects more light than conventional colours, resulting in brighter and more powerful shades. The colour spectrum moves from invisible, low-energy

infrared rays to high-energy ultraviolet (UV) rays. The 'visible light spectrum', or the colours that we see, are actually in the middle of the range.

Dayglo air force c1963 – Fairbairn with 34SQN Winjeel A85-404,[55] a visiting 36SQN A97-211, and 34SQN C-47s

Fluorescent Paints. Normal colour absorbs and re-emits a portion of the visible spectrum that matches its principal wavelength, while the remaining colours are absorbed and dissipated as heat. Fluorescent colours use a larger amount of both the visible spectrum and the lower wavelengths compared to conventional colours. They not only absorb and convert light energy of the dominant wavelength, but also the wavelengths of UV rays and other colours lower in the visible spectrum. As a result, the eye perceives a far more intense colour. *But fluorescent pigments will degrade from prolonged exposure to UV light, and the product had a limited shelf life,* and these factors influenced its durability. And the application, which took approximately two weeks, was a resource intensive process.

One-off RESCUE A2-384, silver/dayglo Richmond in 1962; at Fairbairn 1984 in what became standard UH-1B livery

RAAF Introduction of Dayglo. The first large silver aircraft to receive dayglo treatment in MAY 1959 appears to have been two C-47B Dakotas – A65-80 (a Navigation Trainer (NT) of School of Air Navigation), and A65-81 painted in preparation for its tour for the Antarctic 1959/60 expedition with the ANARE.

- 1960 – This previous 1959 activity set the benchmark for other Dakotas to adopt this scheme from 1960, primarily the Dakota NT aircraft with School of Air Navigation (SAN) at East Sale, ARDU at Laverton, 2 Air Trials Unit (2ATU) in support of the Woomera Range, 38 (Transport Training) SQN at Richmond, and the C-47 freighter aircraft with the 34SQN VIP unit at Fairbairn.
- 1961 – Trainers, Winjeels and Vampires, were 'daygloed' from 1961, which appears about the same time as the other large transport serving with 2ATU, the Bristol 170 Freighter. Also having been delivered over 1958-59, the 36SQN C-130A Hercules at Richmond – the RAAF's largest aircraft – were also treated with dayglo

Blaze Orange from 1961, coinciding with the other RAAF transport, the 34SQN VIP Convair Metropolitans at Fairbairn. There was the short experience in 1962 with the 'RAAF RESCUE' UH-IB Iroquois, but this disappeared almost immediately with a change of role. However, by 1965, dayglo was being removed from most aircraft.

The Application of Dayglo. Applying dayglo was time consuming, requiring two coats of white primer undercoat to provide the reflectivity, three of the fluorescent orange, and three clear sealer coats, each at prescribed intervals. The RAF Air Publication directions for the application of dayglo below provides details of this process.[56]

Application

Scheme A - bare metal surfaces

5. (1) Prepare and prime the surface as detailed for the overall finishing scheme.

(2) Spray two coats of white undercoat, thinned as detailed in Table 2. Allow to dry for a minimum of three hours.

(3) Spray three coats of finishing colour, thinned as detailed in Table 2. Allow one hour drying time between coats and sixteen hours for the final coat.

(4) Spray three coats of transparent finish, allow one hour drying time between coats and a minimum of two hours drying for the final coat before handling.

(5) On R.N. aircraft only, over areas that are subject to contamination by ester lubricants, spray one coat of ester lubricant resistant varnish and allow to dry.

Note...

(1) For R.A.F. aircraft the transparent finish is also ester lubricant resistant.

The dayglo process – a Winjeel prepared with white primer prior to application of coats of dayglo *Blaze Orange*

What was Dayglo

Bright orange colours were developed in the 1950s into a fluorescent bright colour light-reflective paint called 'dayglo'. Dayglo's fluorescent pigments, which were a new development of pigments based on fluorescent dyes and polymeric materials, were designed to absorb various light frequencies (visible and invisible to the human eye) and re-emit them, producing intense visible colors that appear to glow, even in daylight.

With such a bright colour, it was considered that dayglo would be readily visible and would prevent collision. Training aircraft (the Vampire has already been covered, and the Winjeel will be discussed in a further instalment) were particularly suitable for high visibility schemes for collision avoidance where many trainers could be airborne with student pilots in a relatively confined area. A secondary consideration was that the bright colour could also assist location of an aircraft in the unfortunate event of an accident. Aircraft visibility aiding crew survival was an advantage in remote and inhospitable locations where RAAF aircraft operated.

'Dayglo' was designated in the US Federal Standard FS595a vocabulary as FS28913 (semi-gloss) *'Blaze Orange'* or *'Fluorescent Red Orange'*. In the FS595 colour standards system, the first number designates gloss (1), semi gloss (2) or matt (3). The second number is the colour family, e.g. 3 is for yellows, 5 is blues, and in this case 8 is fluorescent

colours. The last three numbers of the designator are the shade, or reflectance. Therefore, FS28913 and FS38913 are the same shade of orange, only in semi gloss and matt respectively. UK introduced '*Dockerblaze Orange Red'* as its fluorescent orange (RAF vocabulary 33B-2202312) which, like the US colour, was applied over a white primer. Dayglo had first been introduced by the US armed forces during the mid-1950s. But generally, dayglo in the RAAF was relatively short-lived – ten to fifteen years for the trainers, and only about five years for the transport fleet. The reasons for this short chapter in RAAF aircraft colours and markings were several:

- Firstly, dayglo was complex to apply – requiring several coats of white primer, three coats of the bright and glossy fluorescent orange, then three coats of clear sealant. The problem was maintenance of dayglo as despite its protective finish it did not stay bright and glossy for too long – photographic evidence suggests that after approximately two years, the dayglo *Blaze Orange* became patchy and faded to a dull shade of yellow.

- Secondly, the process as well as being resource-intensive was expensive. As the paint was found to fade rapidly to a patchy shade of yellowish-orange, sometimes with a yellow-white hue. It needed fairly frequent refreshing, with time-consuming stripping and re-application, so other alternatives were pursued. For instance in the UK, both the RAF and RN soon adopted dayglo film as a tape, but that too required constant renewal.

Dayglo in the Operational Fleet

However, the bright reflectivity (luminescence) of dayglo was offset by the inconvenience of it fading quickly, as the fluorescent dayglo soon showed its very unstable pigmentation. Our only operational aircraft to receive the dayglo treatment was the C-130A Hercules, which had dayglo panels painted on the fin and the mainplanes from 1961. Although while a large percentage of the RAAF Dakota fleet received dayglo, many Daks did not.

Dayglo on the Dak

The Daks that did, more or less clumped in with Winjeels and Vampires as trainers, were those of SAN. So too were the Dakotas of ARDU, and 38 (Transport Training) SQN operating until the arrival of the Caribou in 1964. But other Dakotas were specifically not targetted – this includes 2SQN (which would become Transport Support Flight, or TSF, in 1967) and 34 SQN VIP aircraft. The 34SQN freighters did receive dayglo, presumably as they were interchangeable with 38(TT)SQN. Other RAAF Dakotas were those scattered aircraft at bases around the coastline – Darwin, Pearce and Townsville. These 'Station Daks' *generally* remained unmarked. Also noteworthy, the RAN Dakotas, which had been passed on by the RAAF, were not marked in dayglo. These Dakotas are covered later in this instalment.

Navigation Trainer (NT) aircraft were converted by the Division of Aircraft Production (i.e. DAP, a division within Department of Supply and Development) at Parafield in 1952 as a "flying classrooms" for navigation training at School of Air Navigation (SAN) at RAAF East Sale.[57] SAN Dakotas began receiving dayglo when they entered major 'E' Servicing at DAP Parafield from 1959 into 1962. As A65-68 (c1960 below) shows, dayglo was applied before the white upper fuselage was added in 1962.

SAN Dakota NT A65-68 shows the early dayglo *Blaze Orange* scheme c1960 before the white upper fuselage added

Specialist Dakotas

- **VIP** – VIP Dakotas in service with 34SQN and TSF were not marked with dayglo. They were generally recognised by a very thin black demarcation cheat line between the white and aluminium (and curtains in the windows!).
- **Trainers** – The Navigation Trainer (NT) with SAN, which being trainers conformed to the requirements for dayglo, and also freighter aircraft were marked with dayglo. The NT "flying classroom" upgrade undertaken by DAP at Parafield involved the following:
  - maintaining the navigator's and signaller's stations behind the flight deck, ahead of the cargo compartment;
  - two tables mounted at the front of the cargo compartment, the port desk for the trainee "Nav 1", the starboard for trainee "Nav 2", who would swap positions half way through the training sortie;
  - the Nav 1 position had added an Air Position Indicator (API) for air plot navigation, a radio compass (or ADF) for tuning into non-directional radio beacons (NDBs), a sophisticated drift meter for reading the aircraft's drift, and a periscopic sextant for astro navigation. (This was way before the days of Doppler and inertial navigation systems!)
- **Search and Rescue** – The scattered SAR 'Station Daks', at bases at Darwin, Townsville and Pearce generally did not have dayglo markings. They were normally in freighter configuration, but sometimes had VIP passenger seating. From WWII, the Dakota had the AN/APN-2 Rebecca homing receiver, which was modified in 1957 to enable these nose antennas to be used with SARAH (Search And Rescue And Homing) as a SAR location aid.[58]
- **Calibration and Trials** – Also operating freighter Daks was ARDU at Laverton (also used for Signaller training with School of Radio), and then at Edinburgh from 1977. However some aircraft had specialist roles in a variety of trials, such as the research synthetic radar fit for DSTO, and A65-78 in low-viz grey testing. The three specialist nav-aid calibration aircraft (A65-78, -95 and -114) retained particularly bright dayglo markings up until 1979. 2ATU Dakotas at Edinburgh also had trials and freighter roles.

ATU Dakota Operations at Edinburgh

Construction of RAAF Edinburgh had commenced in 1953 at Salisbury, on the northern edge of Adelaide, to replace the base at Mallala and became operational in 1955. Edinburgh was the RAAF's main South Australian hub as a support base for weapons development at the joint UK-Australian Weapons Research Establishment (WRE) at Woomera, and planned as the centre of RAAF flight test. Nearby Mallala wound down from 1955 until the base closed in May 1960, but it is useful to review the organisation of Woomera support to place the operation of the transport support and trials aircraft in context. From 1947, range support for Woomera had been conducted by 2 (Communications) Squadron, which was then replaced by 34(Comms)SQN in MAR 1948 (as the real 2SQN – a bomber unit in Amberley's 82 Wing – was reforming). 34SQN operated the Percival Prince, Bristol Freighter and C-47 Dakota transports, and then disbanded at Mallala in OCT 1955.[59] The aircraft on strength passed to Air Trials Unit (ATU) and based at Edinburgh. (34 SQN again features later, with its VIP duties at Canberra.)

Edinburgh tarmac 1955-56 – target Meteors and Canberras, a Valiant, Lincolns, Bristol 170s and Dakota pre-dayglo

Edinburgh opened in JAN 1955, and to service the mixed ATU fleet, Maintenance Squadron Edinburgh was formed on 31 OCT 1955 to conduct intermediate and deep level maintenance, until being disbanded on 1 JUN 1965 with its functions being passed to 2ATU.[60] The Woomera support flying units can be summarised as follows.

Unit	Date	Base	Aircraft	Remarks
2 (Comms) SQN	JUL 1947 – MAR 1948	Mallala	Viking, Bristol 170, Dakota	2SQN reformed from 21SQN at Amberley (part of 82WG) in FEB 1948, so the Mallala unit was re-titled 34SQN
34 (Comms) SQN	MAR 1948 – OCT 1955	Mallala	Viking, Prince, B170, Dakota	Then 34(VIP)FLT was formed at Canberra OCT 1955
ARDU Trials FLT	FEB 1954[61] – JAN 1955	Mallala	B170, Dakota	Undertook trials until ATU formed JAN 1955
Air Trials Unit (ATU)	JAN 1955[62] – APR 1958[63]	Woomera Edinburgh	B170, Sycamore, Dakota	ATU Det A at Edinburgh; ATU split into 1ATU and 2ATU
1 ATU	APR 1958 – SEP 1967[64]	Woomera	Beaver, Otter, Winjeel, jet targets, Sycamore	Privatised, taken over by Short Bros on contract to Dept of Supply
2 ATU	APR 1958 – NOV 1969	Edinburgh	Dakota, B170, Winjeel, Canberra	B170 A81-1, -3, -4 WFS JUL 1967; Daks A65-64, 70, 84, 86, 91, 103, 105, 106, 117

2ATU freshly applied dayglo in 1966 Dakota A65-105 – and a Bristol Freighter shortly before its 1967 retirement

Dakota VIP Operations at Canberra

Coinciding with Woomera support operations moving to RAAF Edinburgh in OCT 1955, was a unit reorganisation. The flying support would be Air Trials Unit, based at Edinburgh and Woomera, and the numberplate No.34 (Comms) SQN would pass to Canberra as 34(VIP)FLT:

- previously VIP operations had been undertaken from Canberra by the Governor-General's Flight, but this unit was now given a formal number;
- 34(VIP)FLT then underwent name changes itself, to first become 34 (Special Transport) SQN, then eventually 34SQN, as shown below.

Unit	Date	Aircraft	Details
Gov-Gen's FLT	APR 1945 – MAY 1947 [65]	York, Proctor	MW140 (to UK JUN 47) and NP336
1 Comm Unit	JUL 1947 – JUL 1948	Dakota	A65-85
Gov-Gen's FLT	JUL 1948 – OCT 1950	Dakota	A65-85; role to 36SQN
RAAF VIP FLT	APR 1955 [66] – MAR 1956	Dakota	A65-85, 90, 94, 98, 108, 114
34 (VIP) FLT	MAR 1956 – JUL 1959	C-47, Metropolitan	A65-85, 90, 94, 108, 122, 123
34 (ST) SQN	JUL 1959 – JUN 1963	Metropolitan, C-47	A65-85, 90, 94, 108, 118, 122, 123
34 SQN	JUN 1963 - current	Dakotas until 1967	1959-65 Vampire/Winjeel continuation flying

Fading Dayglo

Depot-level maintenance, i.e. major 1000-hourly 'E' Servicings, for the RAAF Dakota fleet was done at Parafield by DAP (which by OCT 1960 had become Airframe Repair Workshops, ARW). 'E' Servicing would take about six months to complete, and would occur roughly every three years. For the Dakota it was here that dayglo was added during major 'E' Servicings over 1959 through to 1962.

However, the main problem with dayglo was that it faded within about two years. Its maintenance involved stripping off the old dayglo and surrounding paintwork to provide a clean surface and prevent any paint build up – all this before the time-consuming re-application could begin. There were some 30 Dakotas across the RAAF fleet that required treatment with dayglo. From 1969 Dakota, major servicing was awarded to Hawker de Havilland (HDH) at Bankstown. As SAN, 34SQN and 86 Wing Dakotas had been withdrawn by this stage, only the non-dayglo TSF, CFS and ARDU aircraft now required 'E' Servicings, so from then the only dayglo requirement was for the ARDU calibration aircraft.

Fading dayglo – fresh application in 1965, with A65-103 fading and patchy in 1966; and C-130A examples

In the post-dayglo periods, other combinations of colours have shown to be effective for the high visibility required by training aircraft, but these have constantly changed as other scientific studies emerged. In the RAAF, the CT4 in 1975 was received in **dark green and yellow** (the DSTO-designed/ARDU high visibility colour scheme), only to be replaced in 1982 by **orange and white** on the Macchi 326H, and the later PC-9. This in turn has been replaced on the PC-9 (and now PC-21) with a **deep red and white** scheme. Meanwhile in UK, the RAF has embarked on a trainer scheme of **black** – so what is the most effective? Pick a colour!! Maybe the wheel will eventually turn back 75 years to *Trainer Yellow*.

But concurrently as dayglo was going out of favour in the transport fleet over 1964-65, tactical colours were entering service, with the Caribou and Iroquois introduced in olive green camouflage. From this stage, dayglo did not appear again on Hercules nor on VIP aircraft, and generally this just left the Dakota fleet, with the NT aircraft being withdrawn by 1969. The only exception to extend the life of dayglo was the ARDU C-47 navigation aid calibration fleet of three aircraft, which kept a high visibility scheme until 1979. So because of the deficiencies of dayglo paint, generally worldwide by the mid-1970s, fluorescent paint had been superceded by strips of dayglo *'Fire Orange'* fluorescent film (the 3M "Scotchcal" was one widely used). This was not adopted, however, by the RAAF.

Dayglo on Trainers

The main driver for introducing dayglo to trainers from 1961 was to avoid collisions between training aircraft, which operated in confined and congested airspace, often with novice trainee pilots. This required high visibility colours for visual deconfliction of nearby traffic. Accordingly, the basic training Winjeel at 1 Basic Flying Training School (1BFTS) RAAF Point Cook and the advanced training Vampire at 1 Applied Flying Training School (1AFTS) RAAF Pearce were among the first aircraft to receive this bright fluorescent orange enhancement. These markings extended also to the Winjeels and Vampires at the RAAF's Central Flying School (CFS) at RAAF East Sale from early 1961.[67] The trainers would be the longest serving dayglo aircraft in the RAAF, with the Vampire withdrawn from the training schools by 1969,[68] and the Winjeel by 1975.[69] Both Winjeels and Vampires received dayglo finishes in 1961.

- Winjeels were mainly in service at 1BFTS from the end of 1958, and by CFS. Other units too operated a single or a couple of Winjeels for continuity training – in the early 1960s these included 10, 21, 23, 24, 25, 34, 36 and 38SQNs, ATU (later 1ATU and 2ATU), and ARDU. Major servicing of the Winjeel was conducted by CAC at

Fishermen's Bend until transferring in late 1967 to the Airframe Repair Workshops (ARW) at Parafield. (ARW had been carrying out RAAF Dakota major servicing for several decades, but was closed in 1969 as this facility was to be no longer publicly funded. 1BFTS at Point Cook took over the responsibility of all Winjeel servicing; Hawker de Havilland – HDH – at Bankstown was contracted for Dakota major servicing.) For the application of dayglo to the Winjeel commencing in APR 1961, a CAC team attached to 1BFTS undertook this as Winjeel Modification 52.[70] The process took two weeks, and the other Winjeels flew into 1BFTS for the CAC treatment. Most aircraft were completed by the end of 1961, and later application of dayglo was at unit level.

- Vampires were mainly in service at 1AFTS Pearce, and by CFS East Sale. Other units too operated a single or a couple of Vampires for continuity training – in the early 1960s these included 21, 22, 23, 24, 25, 34SQNs, and ARDU. The markings of RAAF Vampire trainers is covered by instalment number 4 in the series.[71] Major servicing of the Vampire was conducted by de Havilland (DH) at Bankstown, which then became HDH in 1963. For the application of dayglo, DH as the prime servicer undertook this as Vampire Modification 332.[72] Like the Winjeel, the process took two weeks commencing in JUN 1961, and Vampires flew into DH at Bankstown for treatment. Most were completed by the beginning of 1962, and any renewal of dayglo was done at the unit.

The End of Dayglo

The C-130A had dayglo removed in 1965, and about the same time for the VIP Metropolitan. However, the Bristol Freighter still employed in Woomera Range support, retained its dayglo until withdrawn from service in 1967, and generally Dakota trainers and transports retained dayglo until 1969. ARDU calibration aircraft retained dayglo until 1979 and, as Vampire and Winjeel trainers had been withdrawn, were the last use of dayglo by RAAF aircraft.

Almost dayglo's last hurrah 1975 – ARDU calibration Dakotas A65-95, A65-78 (stbd), A65-114 (port) over Melbourne's Albert Park on 14 MAR 1975. The new green rudder design had been introduced in NOV 1974.[73] ARDU moved from Laverton to Edinburgh in DEC 1976. While most RAAF Dakotas had been offered for disposal from 1969, the Dakota was the last RAAF aircraft to retain dayglo by these ARDU calibration aircraft until 1979.

50 YEARS – great service to Australia by the Dakota

SEP 1989 – A65-78 marked with "***50 Years of Service***" to mark the DC-3 in the RAAF in SEP 1939

1994-99 – ARDU carried the "**50 YEARS YOUNG**" logo for 50 years of the C-47

DAP PARAFIELD – DAKOTA MAJOR SERVICING

The wartime Department of Aircraft Production (DAP)-Beaufort Division had produced the Beaufort, Beaufighter and by 1945 had started producing the Lincoln. As a restructure was required postwar, DAP became the Government Aircraft Factories (GAF) in NOV 1946, manufacturing the Lincoln, Canberra, Jindivik and Mirage.

A65-84 being refuelled at DAP Parafield in MAR 1954

- 1946 – at the beginning of NOV 1946, the DAP-Maintenance Division, which had major RAAF servicing contracts for their airframe workshops at Parafield, became the Division of Aircraft Production (DAP) within the Dept of Supply and Development,[74] which later became the Dept of Supply.
- 1952 – a major activity in 1952 was for DAP Parafield to modify Dakotas to Navigation Trainer (NT) configuration for SAN at East Sale, under Dakota Modification No.82.[75]
- 1960 – in OCT 1960, DAP Parafield became Airframe Repair Workshops (ARW), but maintained major RAAF Dakota servicing throughout the 1960s.
- 1969 – major Dakota maintenance finished at ARW, and the Dakota major servicing contract was awarded to Hawker de Havilland (HDH) at Bankstown.

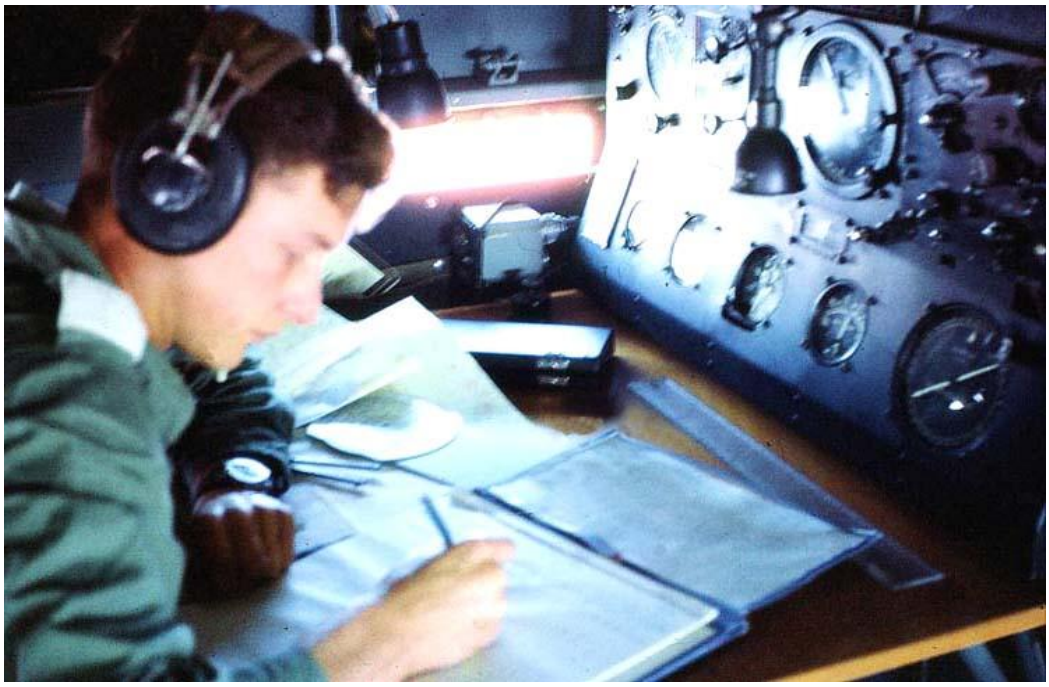
Parafield OCT 1965 – the two large Hangars 1 and 2 (at left with Dakotas) were known as the 'DAP hangars' [76]

Deep Dakota maintenance

DAKOTA CLASSROOMS

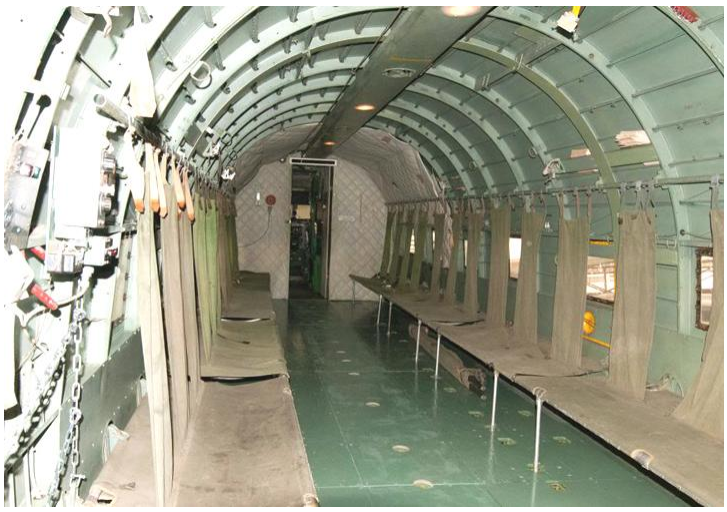
Navigator Training

In 1952, DAP Parafield modified Dakotas to Navigation Trainer (NT) configuration for SAN at East Sale. At the front of the cargo compartment were two desks for trainees, the port side was for “Nav 1”, the lead student in the sorties (below). His station was equipped with flight instruments, a main compass control, and a radio compass controller for use with Auto Direction Finding (ADF). To the right of this was an Air Position Indicator (API), fed by heading and airspeed, to provide air position (i.e. where the aircraft would be if unaffected by wind, so a wind vector was then required to plot the aircraft’s true position over the ground). Also Distance Measuring Equipment (DME-A) was fitted. To the starboard side was a B-5 drift meter for taking drift readings to determine wind, and a Kollsman D-1 periscopic sextant for astro fixes. The “Nav 2” desk was on the starboard side, beside Nav 1, and his duties were handling the radio and waiting for his navigation training during the second half of the sortie. In 1969, the Dak was replaced by the HS748 with more modern aids, such as a Doppler-fed Ground Position Indicator (GPI) and TACAN.



Signaller Training

The training of airborne signallers was conducted by RAAF School of Radio at Laverton throughout the 1960s, flying a specially configured ARDU Dakota with a bank of trainee consoles along the starboard side of the cargo compartment. The trainee signaller would operate SCR-187A HF ‘Liaison’ radios to hone morse skills. This changed to Air Electronics Officer (AEO) training, and moved to Sale with SAN in 1969 with the introduction of the HS748.



The Dakota’s standard cargo compartment, and (right) ARDU **A65-95** configured in 1963 for Signaller training, with the instructor at front left, and three trainee Sigs at the radios configured along the starboard side of the cabin.

RAAF Dakota Disposals

Postwar, many RAAF C-47A Dakotas went to the civil register as DC-3s to bolster Australia's growing airline industry. In addition, four Dakotas went to the Navy (C-47As A65-23, A65-43, and a decade later C-47Bs A65-90, A65-123, see below). Other Australian-registered Dakotas went to many regional air arms in PNG and Asia, even as far afield as Israel and Africa – for more details refer to the *adf-serials* database. Apart from the immediate postwar era, the main period of disposal was when the aircraft was being withdrawn from RAAF service over 1968-1971, however some of the earlier disposals were interesting.

1953/62 – ex QANTAS Disposals. 4 ex-RAAF C-47As via QANTAS to the Royal Thai and Netherlands (NEI) Air Forces.

RAAF Serial	USAAF Serial	Civil Reg	Date	Details
A65-36	42-108840	VH-EBF	1953	to Thai AF as L2-12/96, displayed at Chiang Mai
A65-45	42-93008	VH-EAK	1953	to Thai AF as L2-13/96, crashed 1980
A65-22	42-92197	VH-EAQ	1962	leased to Dutch AF in Indon as X-18 in JUL 1962
A65-57	43-48106	VH-EAO	1962	to Dutch AF in Indon as X-19 in SEP 1962

1960 – Commonwealth Disposals. Three ex-RAAF C-47Bs sold by RAAF in 1960 via Aeroquipment of Australia ended up with the Israeli Defence Force through different routes, and then went further afield.

RAAF Serial	USAAF Serial	Civil Reg	Date	Details
A65-76	44-76343	VH-CDA	1960	to Israeli DF as 4X-AOA; Portuguese AF 1961 as FAP6155; 1974 to Guinea Bissau Air Wing
A65-79	44-76337	VH-CDB	1960	to Cambodian AF 44-76337; to Israeli DF 1963 as 4X-FX?
A65-93	44-76761	VH-CDC	1960	to Israeli DF as 4X-AOB; Portuguese AF 1961 as FAP6156; 1974 to Guinea Bissau Air Wing

1968 – US Broker Sales. In MAY 1968 tenders were called for the disposal of seven retired RAAF C-47Bs at Parafield. In JUN 1968, a US broker Stan Booker (under the name Stanair Corp) won the tender for the following seven aircraft and received temporary US registrations for export – some were sold to Jetair, but all eventually ended up in Asia.[77]

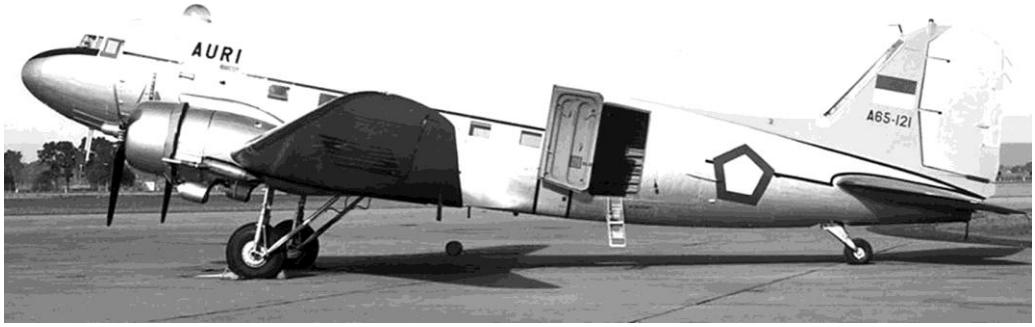
RAAF Serial	USAAF Serial	US Reg	Date	Details
A65-60	43-48737	N16891	1968	VH-EQN, AusAid 1971 9N-AAX Nepal Airlines
A65-70	43-49868	N16892	1968	later to Indonesia PK-JDC, PK-JDE, PK-EHC
A65-85	44-76546	N16130	1968	to Indonesia PK-JDB, PK-JDG
A65-101	44-76780	N16893	1968	to Indonesia PK-JDD
A65-117	44-77124	N16894	1968	to Indonesia PK-EHD, PK-JDA, PK-EHD
A65-118	44-77125	N16895	1968	Philippines PI-C1937, N16895
A65-119	44-77131	N16896	1968	VH-EQO, later AusAid 1971 to Laos AF 77131

Also A65-102 received a US-reg in 1980 as N65388, but then joined the Australian civil register as VH-PTS / VH-SPY.

A65-101 in faded dayglo prepared as N16893 at Parafield for disposal in 1969

1970 – Indonesian Air Force. In 1970, two C-47B Dakotas were given to the AURI (later TNI-AU) as navigation trainers, after conversion by HDH Bankstown.

RAAF Serial	USAAF Serial	AURI Serial	Date	Details
A65-82	43-49867	P-504	1970	14SQN AURI
A65-121	44-77120	P-505	1970	14SQN AURI



A65-121 marked for delivery in 1970 for P505 to Indonesia

1971 – Aus Aid. In early 1971, Australia made a humanitarian gesture to Southeast Asia by donating transport aircraft to those countries requesting assistance. The Foreign Affairs purchased the retired fleet of Jetair DC-3s (some of which had been Stanair), and RAAF Dakotas were also released. Subsequently overhauled as DC-3s, 13 were available under the auspices of Australian Aid and delivered in late 1971 to: Royal Lao Air Force (3), Cambodian Air Force (6), Philippine Air Force (2), and Royal Nepal Airways (2). Of these 13, the 12 below were ex-RAAF (including the Woomera KJ881).

RAAF Serial	USAAF Serial	Civil Reg	Date	Details
A65-14	42-23732	VH-AIG	1971	to Cambodian AF 71-594
A65-16	42-24136	VH-TAI	1971	to Royal Lao AF 998
A65-19	42-24139	VH-TAH, -SBN	1971	to Cambodian AF 24139
A65-26	42-92257	VH-EYB	1972	to Philippine AF 292257
A65-30	42-92292	VH-AIC	1971	to Cambodian AF 71-292
A65-60	43-48737	VH-EQN	1971	from Stanair, to Royal Nepal Airlines 9N-AAX
A65-80	44-76340	VH-AIQ	1971	to Cambodian AF 71-340
A65-88	44-76548	VH-AIX	1971	to Cambodian AF 71-548
A65-96	44-76765	VH-AID	1971	to Cambodian AF 71-765
A65-103	44-76962	VH-EYC	1972	to Philippine AF 476962
A65-119	44-77131	VH-EQO	1971	from Stanair, to Royal Lao AF as 77131
KJ881	43-48565	VH-EQB	1971	to Royal Lao AF 565

A65-26 Aus Aid DC-3 VH-EYB in 1972 after conversion by East West Airlines

1975 – PNGDF. The PNG Defence Force was formed after the country gained independence from Australia in 1975. Australia donated six ex-RAAF C-47B Dakotas – the first four in 1975 and a further two in 1981 – which during overhaul were recertified to civil DC-3 standard. (The first four were delivered with serial prefixes P65-, later changed to P2-.)

RAAF Serial	USAAF Serial	PNGDF Serial	Date	Details
A65-100	44-76777	P65-001	1975	re-serialled P2-001, sold 1994 VH-DNF
A65-84	44-76545	P65-002	1975	re-serialled P2-002, displayed at Jackson
A65-67	43-49377	P65-003	1975	re-serialled P2-003, to Aus 1993, displayed Moree
A65-68	43-49869	P65-004	1975	re-serialled P2-004, sold 1993 VH-ATO
A65-122	44-77123	-	1980	instructional airframe
A65-63	43-48740	P2-005	1981	sold 1994 VH-PWN
A65-65	43-49376	P2-006	1981	crashed at Nadzab 1987

A65-63 became P2-005 with the PNGDF in 1981

1997 – The Last ARDU Aircraft. ARDU moved from Laverton to Edinburgh in DEC 1976. One ARDU aircraft (A65-114) crashed on take-off at Edinburgh in 1986, and was passed to the SA Air Museum at Port Adelaide in 1992. The remaining four were the last RAAF Dakota disposals, when the type retired from ARDU at RAAF Edinburgh over 1997-1999, with A65-78 passing to the RAAF Museum in NOV 1999. Aircraft marked (*) remain airworthy.

RAAF Serial	USAAF Serial	Civil Reg	Date	Details
A65-78	44-76345	-	1999	RAAF Museum Point Cook
A65-86	44-76547	VH-NVD	1997	to Historic Flt HMAS *Albatross*, non-flyer VH-NVD
A65-94	44-76774	VH-EAF*	2000	flying HARS as VH-EAF
A65-95	44-76764	VH-EAE*	2000	flying HARS as VH-EAE, marked as 38SQN PK-L
A65-114	44-77128	-	1991	crashed on take-off Edinburgh OCT 1986, then sold to SA Air Museum NOV 1991

A65-94 looking in pristine condition with HARS as VH-EAF

Museum and Display Aircraft. In addition to the mentioned aircraft retired from ARDU, many other ex-RAAF Dakotas are in museums or on pole displays, and details are in the *adf-serials* database. Of particular interest are:

A65-72 which flies as a "Spooky" gunship in USAF SEA camouflage at Latrobe Valley; and **A65-44** displayed at QANTAS Founders Museum at Longreach as 'VH-EAP'. Other Dakotas (but not ex-RAAF A65- aircraft) are displayed at QAM Caloundra, and Moorabbin Air Museum.

N2-43, with radar nose, raised in position at FAA Museum at HMAS *Albatross*

A65-44 QANTAS Museum VH-EBY displayed at Longreach as 'VH-EAP' since 1982

A65-72 VH-AGU as a USAF Vietnam era "Spooky" gunship

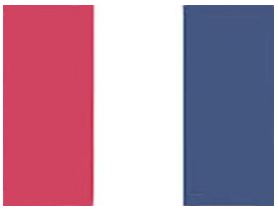
A65-119 – A TYPICAL RAAF C-47B DAKOTA

A65-119, Japan 1947 – still in RAAF WWII Pacific roundels and fin flash, before the 1948 policy re-adopting red/white/blue national markings.[78] Also marked on the fin are the last three letters of the radio callsign VH-**RGG**. ***No.86 Transport Wing R.A.A.F.*** titles, with an obvious **light blue** 'streamline' (possibly BS381C-104 *Azure Blue,* without being mixed with black to produce *Royal Blue*), and 86WG badge.

No 86 TRANSPORT WING R.A.A.F.

Type-D Roundel 1948-1956

Kangaroo Roundel 1956



Dakota Rudder Flash
24" wide x 18" high

Roundel sizes, diameter inches (cm): fuselage C-47 48" (122cm)[79], mainplanes 66" (168cm)
Rudder flash: 24" wide (8" each colour) x 18" high

A65-119 in a line-up of Dakotas c1967-68 being prepared for disposal. Dayglo introduced from 1959, kangaroos on the fuselage from 1956, white upper fuselages from 1962, kangaroos on wings from 1965. 24" 'last three' **119** behind the cockpit. Standardised **ROYAL AUSTRALIAN AIR FORCE** C-47 10.5" red 'transport' titles in Arial Narrow (shown below), with blue streamline below the windows. Many aircraft retained dayglo until retired over 1968-69.

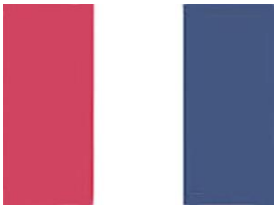
A65-85 – A VIP DAKOTA 1947-1967

A65-85 highly polished bare metal at Canberra in 1951 as part of the Governor-General's Flight, and as directed in SEP 1947 for the standard "to be painted on both sides of the fuselage as far forward towards the nose".[80] In OCT 1947, A65-85 was delivered from 1AD to the G-G's Flight of No.1 Comm Unit,[81] which later became the RAAF VIP Flight in APR 1955.[82] The **Governor-General's standard** was carried below the cockpit and incorporated the Tudor, or King's, crown (below), but later changed to the St Edwards, or Queen's, crown after the Coronation, JUN 1953.

In JUL 1959 the VIP Flight became 34 (Special Transport), then 34SQN in JUN 1963.

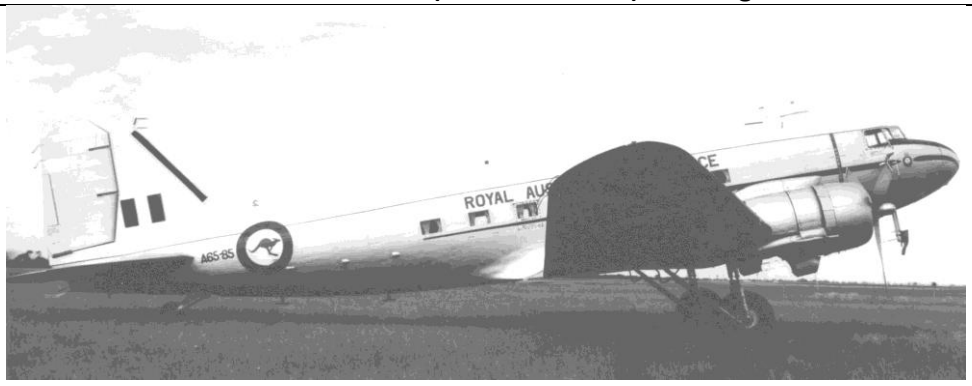
Type-D Fuselage Roundel until 1956

Kangaroo Roundel from 1956



Larger Dakota Fin Flash
36" wide x 24" high

Roundel sizes, diameter inches (cm): fuselage C-47 48" (122cm)[83], mainplanes 66" (168cm)
Fin flash: 36" wide (12" each colour) x 24" high



A65-85 in the standard VIP Dakota markings served with 34SQN until its Dakotas were retired in 1967.

A65-93 – 86 WING C-47B DAKOTA

A65-93 in 1955, shows the standard 86 Wing colours of the day. Type-D roundels and fin flash, 86 Wing airline style titles, an unofficial 24” high 86 WG badge below the cockpit. Standard size national markings, 48” fuselage roundels.

Type-D Roundels

Fuselage Kangaroo 1956

86 Wing badge ahead of Rebecca antenna

86 Wing provided C-47s to the deployed Dakota units in Singapore (38SQN) and Japan (30 Unit and later 36SQN) and maintained the transport supply Asian courier service from Australia until the arrival of the C-130A in 1958.

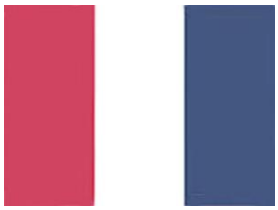
NO.86 TRANSPORT WING R.A.A.F. in 14” red characters, and 4” blue tapering ‘streamline’ below windows

A65-121 – 77 SQUADRON C-47B DAKOTA

A65-121 of 77SQN was based at Iwakuni, Japan, flying Mustangs and two C-47Bs when the Korean War broke out in 1950, within the British Commonwealth Air Command (BCAIR) structure. While the Mustangs moved forward to operate in Korea, the Dakotas – marked as **77 SQUADRON R.A.A.F.** – remained at Iwakuni and in NOV 1950 formed No.30 Comms Unit (with 77SQN forming 91 Composite Wing), to maintain their transport role in the region. Other C-47s that had been delivered in 1950 to 77SQN were **A65-96** and **A65-109**, in NOV 1950 passing to 30 CU. In NOV 1951, 30 CU became No.30 Transport Unit. Eventually in MAR 1953, 30 TU became 36SQN with extra Dakotas from 38SQN at Changi (with 1SQN at Tengah forming 90 Composite Wing) and from 86 Wing. Other aircraft operated by Iwakuni units included A65-63, 75, 76, 80, 85, 86, 92, 93, 97, 98, 100, 101, 103, 108, 119 and 120.[84]

Type-A BCAIR Roundel until 1951

Type-D Roundel from 1951



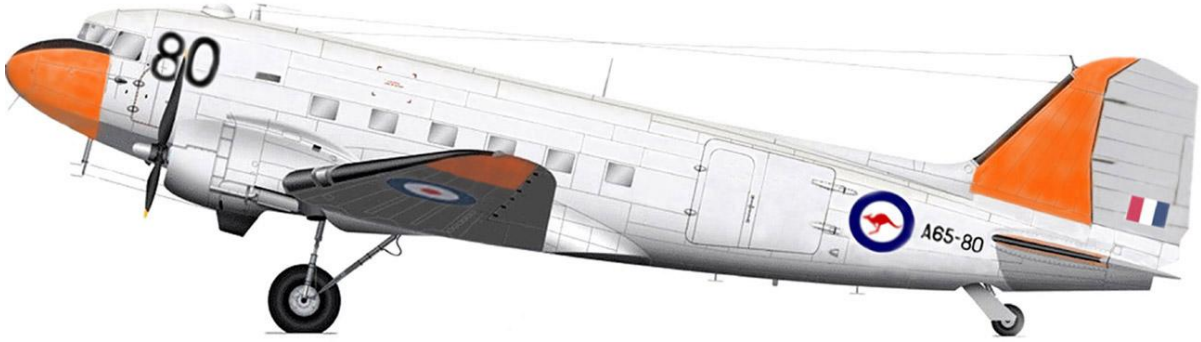
Dakota Fin Flash
36” wide x 24” high

A65-121 unloading Australian diggers in Korea in NOV 1950, showing 77SQN titles and the BCAIR Type-A roundel. The 77SQN painted ‘window line’ along the windows was probably *Royal Blue,* with red trim.

Unit badges. Over 1949-1950, 77SQN did not have an official badge. Deployed Dakotas (e.g. 38SQN in Singapore) carried the unofficial 86WG badge (above left). Also in Japan, 30 Comms Unit/30 Transport Unit aircraft, although part of 91 (Composite) WG, carried this 86WG badge. When elevated to 36SQN in JUL 1953, the Iwakuni unit modified the 86WG badge to represent 36SQN (above centre). Finally, an official badge was approved for 86WG.

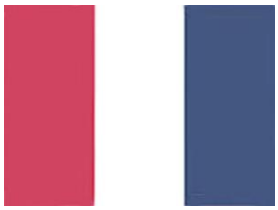
A65-80 – THE FIRST DAYGLO DAKOTA 1959

A65-80 from SAN was the first Dakota to receive dayglo in MAY 1959 during its major 'E' Servicing at DAP Parafield. Beginning maintenance in OCT 1958, A65-80 was handed back to SAN at the beginning of MAY 1959. The scheme over 1959-1962 was allover bare metal finish. At this stage there was no white upper fuselage, no blue 'streamline' below the windows, nor red airline style RAAF titling above the windows – all added in 1962. The large 'last two' or 'last three' of the serial number, here **80**, was marked in 32" numbers (later 24") immediately aft of the cockpit.



Type-D Roundel

Kangaroo Roundel 1956



Dakota Rudder Flash 24" wide x 18" high

32" Nose Numbers

A65-30 with SAN Dakotas (in early dayglo scheme pre-1962 with overall bare metal) taxies out at East Sale. In addition to A65-30 and A65-80, other SAN Dakotas in this early scheme c1961 were A65-14, 26, 64, 65, 67, 68, 84, 88 and 100. These large 36" nose numbers behind the cockpit were replaced by smaller 24" numbers from 1964.

A65-69 – A LONG-SERVING DAKOTA

43-49866 was received at 3AD from the US in FEB 1945, and serialled **A65-69 (VH-CUZ)** in standard USAAF colours of *Dark Olive Drab No.41* and *Neutral Gray No.43*. Wartime served with **37SQN (coded OM-Z)**, then to 38SQN.

A65-69 with NWA HQ RAAF titles at Darwin 1951-55, then 34SQN, ATU, ARDU, then returned to Darwin 1961-65.

A65-69 1961 with new dayglo – no national flash on the rudder, and no **ROYAL AUSTRALIAN AIR FORCE** titles.

A65-69 with 2SQN at Butterworth over 1966-67, wing kangaroo roundels

As with Butterworth C-47s, dayglo over-painted with aluminium. When 2 SQN deployed to Vietnam in 1967 the red lightning bolt was removed, and A65-69 remained to serve with TSF (see below) until retirement to Berlin in 1980.

A UNIQUE DISPOSAL – A65-69 to the RAF as ZD215 1980

A65-69 freshly painted at Butterworth for the flight, via UK, to Berlin in JUN 1980

The RAAF had contributed 10 Dakota crews to fly in the Berlin Airlift over AUG 1948 to OCT 1949, using RAF Dakotas. Flying from Lubeck in northern Germany to Berlin, the RAAF crews flew 2062 round trips in 6041 flying hours.[85] In 1980, RAAF Dakota A65-69 was donated to the Berlin Airlift Museum to commemorate this Australian participation.

JUN 1980 – RAF markings as ZD215 for the Berlin Corridor passage

For approval to fly the Corridor, A65-69 was required to belong to one of the occupying powers, so markings were changed to conform to those of an RAF Dakota. Type-D roundels were required in all six positions (having carried kangaroos in the six positions from 1965), the titling was changed to **ROYAL AIR FORCE**, and the RAF serial number **ZD215** was applied for the transit. This JUN 1980 ferry also had to be under the command of an RAF pilot as captain.

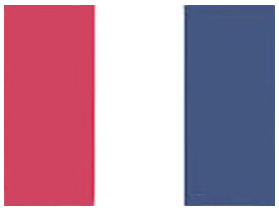
Displayed as A65-69 in RAAF markings at Berlin/Gatow "Airlift" Museum

A65-100 – SAN C-47B DAKOTA 1960-68

A65-100 trainer of School of Air Navigation (SAN) at East Sale in DEC 1960, bare metal with fresh application of dayglo on fin, nose, tailplane and wing panels. Large 32" **100** marked behind cockpit (in 1964 reduced to 24"), kangaroo fuselage roundels, Type-D on mainplanes, flash moved from fin to rudder. No white upper fuselage, no blue 'streamline' below windows, nor red RAAF titling characters (added 1962). SAN flew the Dakota in the dayglo scheme until 1969, including the following: C-47A A65-14, -26, -30; C-47B A65-65, -67, -80, -88, -89, and -100.[86]

Type-D Roundel until 1956

Kangaroo Roundel 1956



Dakota Rudder Flash
24" wide x 18" high

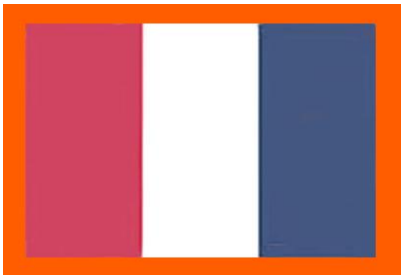
A65-100 at SAN c1963 shows the definitive Dakota dayglo finish used also by 38SQN at Richmond and ARDU Laverton, and sometimes by the various SAR flights scattered at bases around Australia – white upper fuselage, blue streamline, red **ROYAL AUSTRALIAN AIR FORCE** titles in 10.5" characters (below), Type-D wing roundels. The last three, **100** here, is 32", marked slightly lower than in the top image – but would change 1964 to 24" numerals.

A65-81 – ANTARCTIC DAKOTA (ANARE) 1959-60

A65-81 in 1960, with dayglo on fin, tailplane and wing panels – markings applied in MAY 1959 by 2AD at Richmond in preparation for the ANARE 1959/60 Antarctic Expedition.[87] Kangaroo roundels on fuselage moved forward to cargo door to allow installation of F24 oblique camera aft of roundel, Type-D roundels on mainplanes, flash on fin, airline style black **A.N.A.R.E.** 18" RAAF-style font characters, with "Ann Cherie" and penguin nose art.

Type-D Wing Roundels

Kangaroo Fuselage Roundel

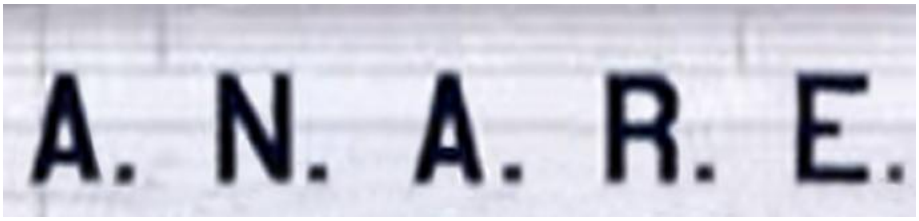


A65-81 Fin Flash

Roundel sizes, diameter inches (cm): fuselage C-47 48" (122cm), mainplanes 66" (168cm)

Fin flash: 36" wide (12" each colour), 24" high

A65-81 unloaded from MS *Thala Dan* in 1960 at Mawson on skis – fin and rudder in dayglo, as are wingtips and tailplane. After the normal expedition flying during early 1960, A65-81 was left tethered for the winter period. Unfortunately a severe blizzard struck on the night of 8 DEC 1960, destroying both A65-81 and Beaver A95-202.[88]

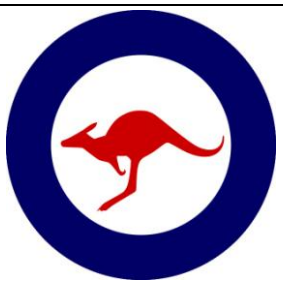


A.N.A.R.E. RAAF-style airline fuselage titles, in 18" black characters, and "Ann Cherie" nose art

A65-97 THE CSIRO DAK 1958-64

A65-97 had served with 30 Transport Unit, 36SQN, and later the RAAF Transport FLT Japan at Iwakuni over 1951-56, and the image below shows the result of an undercarriage malfunction on the tarmac in JUN 1954.

A65-97 later served on rainmaking (cloud-seeding) research for the CSIRO (Commonwealth Scientific and Industrial Research Organisation), firstly with ARDU from 1958, then with 38(TT)SQN from JUL 1961. A65-97 standard markings were – as for other ARDU and 38(TT)SQN C-47s – kangaroo roundels on fuselage, Type-D on mainplanes, dayglo probably applied at Parafield in 1962,[89] the national flash on the rudder, white upper fuselage, blue streamline, the 1962 10.5" red **ROYAL AUSTRALIAN AIR FORCE**, and nose art. In JUL 1963 38(TT)SQN reverted to its title 38SQN when re-equipping with Caribou – A65-97, like most of the other Dakotas, left the unit in 1964.



Kangaroo Roundel on fuselage

Type-D Wing Roundels to 1965

A65-97 Rainmaking Nose Art

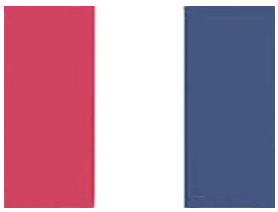
A 1973 image of A65-97 which became VH-RRA with CSIRO (from *'Friends of the RAAF C-47'*)

38 (TT) SQUADRON 1959-63

A65-103 of 38(TT)SQN beside the ARW hangars at Parafield. 38SQN was retitled 38 (Transport Training) SQN on 1NOV58, to act as transport lead-in for aircrew prior to proceeding to C-130s.[90] Standard RAAF markings from 1956 – kangaroo roundels on fuselage, Type-D on mainplanes, dayglo from 1959 with the national flash on the rudder. Post 1962, white upper fuselage, 30' blue streamline, and airline-style red **ROYAL AUSTRALIAN AIR FORCE**. 38(TT)SQN aircraft at various times were A65-63, 70, 71, 73, 78, 86, 87, 91, 92, 96, 97, 100, 101, 103, 104, 105, 108, 111, 114, 118 and 124.[91] In JUL 1963, the unit reverted to its title 38SQN in preparation for re-equipping with the Caribou. Several Dakotas (A65-65, -94 and -108) were operated by the 38SQN Comms Flight from JUL 1968 to 1973.

Kangaroo Roundel on fuselage

Type-D Wing Roundels to 1965



Dakota Rudder Flash
24" wide x 18" high

A65-96 in Darwin 1967, served with 38(TT)SQN over 1958-64, then at Darwin.

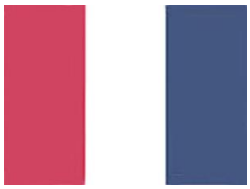
A65-101 served on 38(TT)SQN 1960-64, then served at Darwin until 1967. This shows the 1965 introduction of kangaroos on the mainplanes, and illustrates the dayglo underwing panels – at ARW Parafield for major servicing over 1966-67, prior to closure of ARW.[92] Dayglo was removed from most of the RAAF Dakota fleet by 1969.

A65-94 – 2 SQUADRON VIP C-47B DAKOTA 1958-62

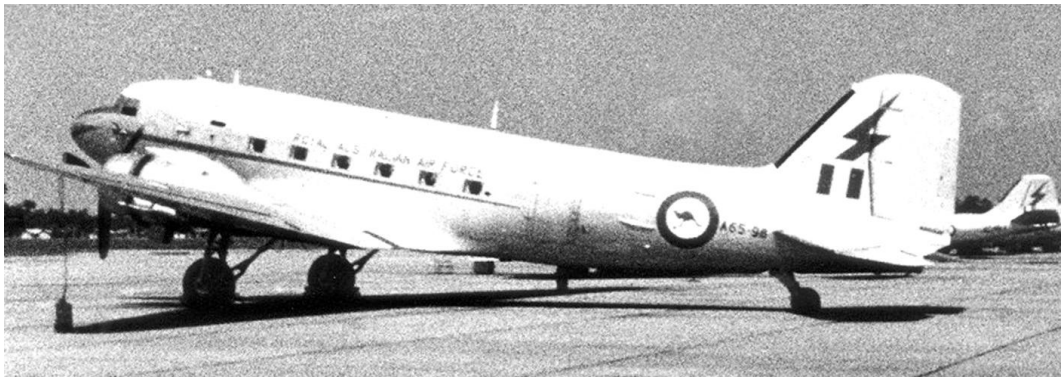
A65-94 2SQN 'C' Flight operated C-47Bs from Butterworth from 1958 until MAR 1967, and as 2SQN Canberras moved to Vietnam in APR 1967 the Dakotas passed to Transport Support Flight (TSF). In this image c1959, A65-94 had arrived from 34(VIP)FLT in VIP configuration, never having been marked with dayglo. The fin was white, carried the larger national fin flash, and 2SQN's red lightning bolt. The aircraft behind in still in overall aluminium. Aircraft with a previous dayglo fin carried the 2SQN marking on the rudder. Standard markings as other RAAF C-47s from 1956: kangaroo roundels on fuselage, Type-D on mainplanes (replaced by kangaroos from late 1965), national flash on the fin or rudder, white upper fuselage, 30' blue streamline below windows, red transport **ROYAL AUSTRALIAN AIR FORCE** title. 2SQN aircraft were: A65-63, 69, 70, 71, 73, 82, 91, 94, 98, 119, 122 and 124.[93] The 2SQN 60" red lightning flash is on the tail (the same size as that on Canberras), and was removed when aircraft passed to TSF.

Kangaroo Roundel on fuselage

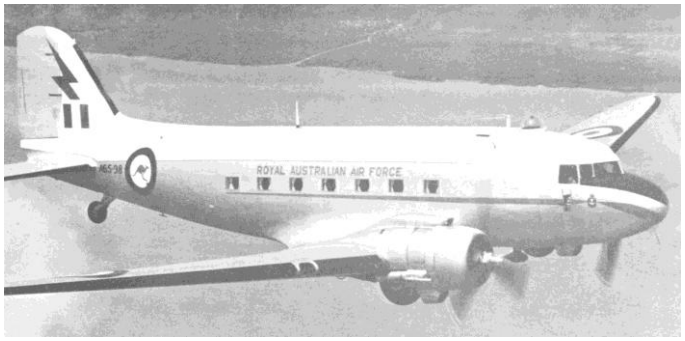
Type-D Wing Roundels to 1965



Different Tail Flashes:
Fin: 36" wide x 24" high,
Rudder: 24" wide x 18" high



A65-94 at Butterworth 1962 with red flash (like the Canberras, across the fin onto the rudder) left for Australia in APR 1962, to continue serving on VIP duties with 34SQN over 1963-67, then with 38SQN from JUL 1968.



A65-98 shows the 60" high 2SQN tail flash 1958-67

White (previous dayglo) fin, with rudder markings

A65-71 – THE WAR MEMORIAL DAKOTA

43-49870 was received at 3AD from the US in FEB 1945, and serialled **A65-71 (VH-CIN)** (standard USAAF colours of *Dark Olive Drab* and *Neutral Gray*). Wartime with **37SQN (coded OM-N)**, postwar to 86 Wing, and 90 Wing in Japan.

A65-71 2SQN at Butterworth 1965, clearly showing where dayglo on the fin has been overpainted

A65-71 served on 2SQN at Butterworth over 1963-1965, with **ROYAL AUSTRALIAN AIR FORCE** titles, and 2SQN flash on the rudder. Later returned to Butterworth with TSF over 1968-1980. In 1981, A65-71 was assigned to the Australian War Memorial, and in 1987 painted by 2AD Richmond in 37SQN WWII olive drab/grey colours as OM-N.

Painting of A65-71 at 2AD Richmond DEC 1987 [94]

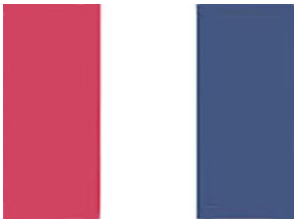
A65-71 restored to fly as OM-N in 1988 until retirement in 1997, and now stored at the AWM Treloar Centre

A65-122 – TRANSPORT SUPPORT FLIGHT (TSF) C-47B DAKOTA 1967-80

Transport Support Flight formed from 2SQN at Butterworth as an independent unit in MAR 1967,[95] and its Dakotas operated throughout Southeast Asia until JUN 1980. No dayglo was applied to these aircraft. Aircraft received in VIP configuration had white fins, such as A65-122 above (when with 34SQN 1963-66), and tail flash on the fin. Aircraft received as freighters had dayglo over-painted in white, and the fin flash remained on the rudder. RAAF standard C-47 markings: from 1965 kangaroo roundels in all six positions (Type-D on wings had been replaced by kangaroos), national flash on the fin or rudder, white upper fuselage, 30' blue streamline below windows, 10.5" red transport ROYAL AUSTRALIAN AIR FORCE. TSF aircraft at various times were A65-63, 64, 69, 71, 84, 91, 98, 122 and 124.[96]

Kangaroo Roundel in six positions from 1965

Type-D Roundels were carried in 1980 by A65-69 as it passed from TSF, to fly the Berlin corridor marked as RAF ZD215 – now displayed at Berlin/Gatow Airlift Museum.



Dakota Tail Flash
24" wide x 18" high
This smaller size on rudder also on fin of VIP aircraft.

Roundel sizes, diameter inches (cm): fuselage C-47 48" (122cm)[97], mainplanes 66" (168cm)
Fin or Rudder Flash: 24" wide (8" each colour) x 18" high

A65-122 at Tan Son Nhut, Saigon, JUN 1974 – this aircraft shows the standard blue 'streamline' as well as the thin black line deliniating the aluminium and the white upper fuselage, a characteristic of RAAF VIP-configured Dakotas.

A65-122 in JUN 1980 in the typical TSF colours when based at Butterworth, but with flash moved to the rudder [98]

CENTRAL FLYING SCHOOL (CFS) DAKOTAS 1973-80

A65-63 – CFS conducted Dakota pilot conversions and refreshers for SAN, ARDU, TSF and 34SQN, utilising the SAN fleet until 1969. Several ex-SAN Dakotas (A65-67 and A65-100) remained at Sale until passing to the PNGDF in 1975.

Aircraft on CFS strength until 1980 were A65-63, -91 and -108 – they carried a CFS 'torch' badge on the fin, within a 36" diameter blue circle. **A65-108** was displayed at the RAAF Museum Point Cook in these CFS markings.

CFS Dakota markings – no dayglo, CFS badge below cockpit, and CFS torch (from the badge) above the fin flash

A65-63 and A65-108 both served with CFS over 1973-80. A65-91 came to CFS from TSF for service over 1975-80, and then went to Radio School at Laverton as a training aid, later to be sold to fly again, as VH-TMQ.

A65-86 – 2ATU DAYGLO DAKOTA 1962-65

A65-86 served with 2 Air Trials Unit (2ATU) at Edinburgh in support of Weapons Research Establishment (WRE) activity at the Woomera Range, seen here in SEP 1963.[99] An unusual scheme – overall white, with *Oxford Blue* line along the windows; dayglo nose, fin, and wing panels; kangaroo fuselage roundels and D-roundels on the wings; tail flash at the the very base of the rudder; and black lower engine cowl. An RAF Dakota **KJ881**, also supporting WRE, flew in this same scheme, to probably alert their crucial trials calibration role. Serial number was raised above the window line, and the kangaroo fuselage roundel is smaller than the normal 48" diameter, at 36" diameter. Other 2ATU Dakotas (but not in this one-off scheme) included: A65-64, -70, -84, -87, -91, -103, -105, -106 and -117. The last Dakotas flying with 2ATU as the unit disbanded in late 1969 were A65-84, -86, -91, -103 and -105.

Roundel sizes, diameter inches (cm): fuselage C-47 36" (91.4cm), mainplanes 66" (168cm)
Rudder flash: 24" wide (8" each colour) x 18" high

A65-86 reverted more conventional colours later with 2ATU, then ARDU in the 1980s: dayglo had been removed from all Dakotas; fuselage roundel back to the standard 48" diameter; the national tail flash is on the white fin; and the ARDU green/yellow fin logo, which is 40" high. The titling is the standard RAAF transport style 10.5" red **ROYAL AUSTRALIAN AIR FORCE**, and the standard *Oxford Blue* streamline. With ARDU, undertook the stand-off synthetic aperture radar Project *Ingara* trials over 1994-1996, and then passed to the RAN Historic Flight at Nowra in 1997.

A65-95 – ARDU CALIBRATOR, THE ULTIMATE USE OF DAKOTA DAYGLO

A65-95 calibration aircraft of ARDU (in the same colours as **A65-78** and **A65-114**) in 1975. Other known ARDU Dakotas included A65-60, -65, -69, -73, -86, -94, -97, -98, -102 and -124.[100] In addition to the standard Dakota dayglo (nose, fin and wings) is a large fuselage band, to add to the aircraft's high visibility for deconfliction during airfield nav-aid calibration tasks. Standard fuselage markings of RAAF in red, and blue streamline below the windows. The rudder is the green (BS381C-224 *Deep Bronze Green*) and yellow (BSC381C-356 *Trainer/Golden Yellow*) ARDU marking introduced in 1974. Hi-vis bands widths are 40" (dayglo) and 50" (white).

Kangaroo Roundel from 1956

ARDU Dakota Fin Flash

ARDU Rudder Marking

Roundel sizes, diameter inches (cm): fuselage C-47 48" (122cm), mainplanes 66" (168cm)
Fin flash: 24" wide (8" each colour) x 18" high

A65-95 starboard side in 1975, before these bright calibration markings were removed in 1979. The 10.5" red ROYAL AUSTRALIAN AIR FORCE titling (in 'Arial Narrow') remained on RAAF Dakotas after the removal of dayglo. A65-95 was acquired by HARS in 2000 flying as VH-EAE, and from 2016 in wartime camouflage marked as PK-L.

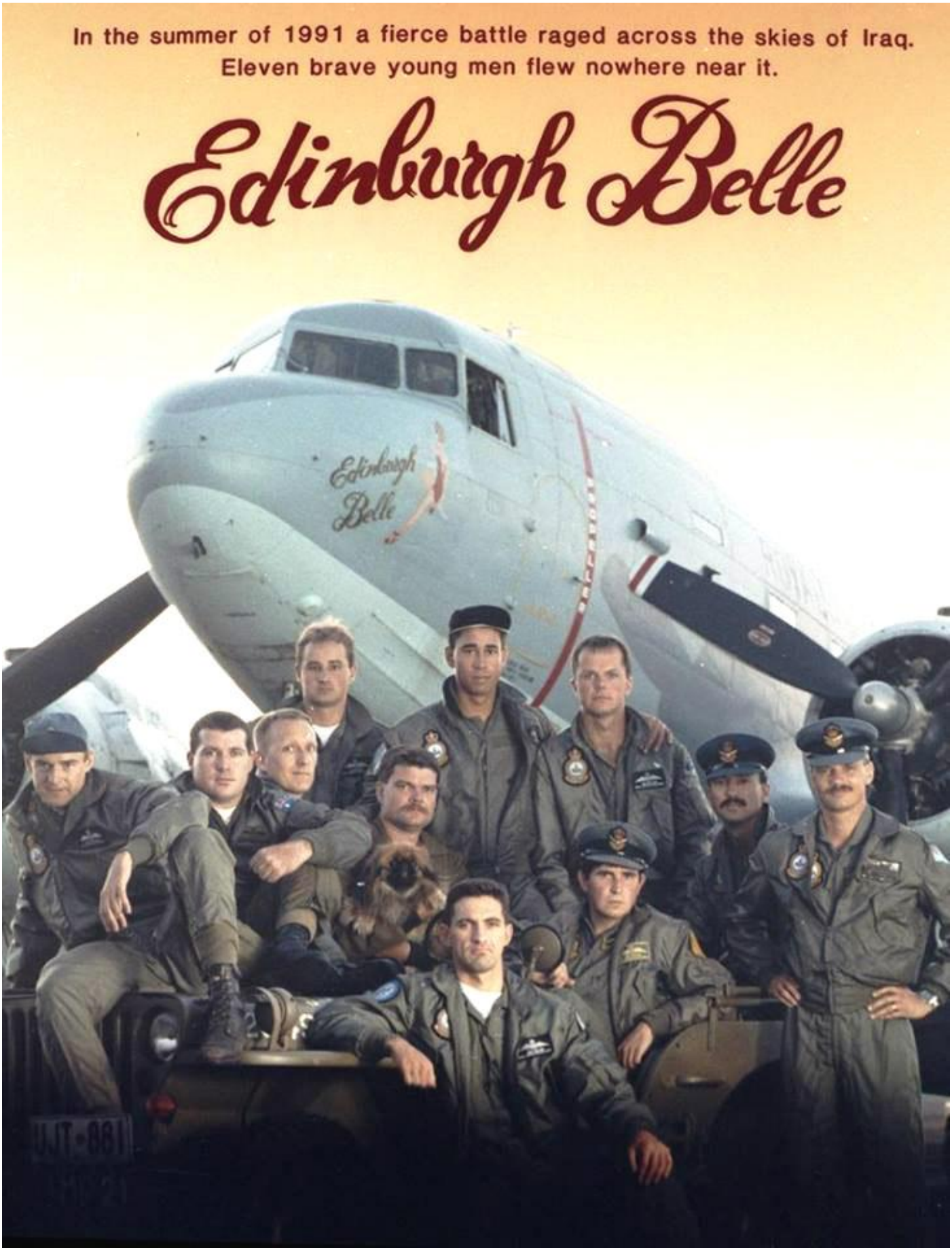
A65-78 – THE ARDU GREY DAKOTA 1985-94

A65-78, a long-time calibration Dakota of ARDU, was painted over 1985-1994 in F/A-18A air superiority grey colours as a trial for a new scheme for the P-3C Orion. The three shades of grey used (FS595a designators given below) resulted in this finish being referred to as the "Compass" scheme, after the similar colours of that short-lived airline.

***Gray Blue* FS35237 (top)**	***Lt Ghost Gray* FS36375 (sides)**	***Light Gray* FS36495 (lower surfaces)**

The sole national markings on A65-78 were black kangaroos (in six positions) and, consistent with contemporary policy on low visibility schemes, tail flashes were not required.[101] The standard 10.5" **ROYAL AUSTRALIAN AIR FORCE** titling was also in black – the only colour was the red propeller warning band. Later marked with ***"Edinburgh Belle"*** 1991 nose art, but reverted to standard Dakota colours in 1994, then to RAAF Museum storage in NOV 1999.

A65-78 *"Edinburgh Belle"* ARDU 1991



Navy Dakotas

The RAN inherited four ex-RAAF Dakotas, two C-47As and two C-47Bs.[102] C-47As, A65-23 and A65-43, were received over late 1949/early 1950.

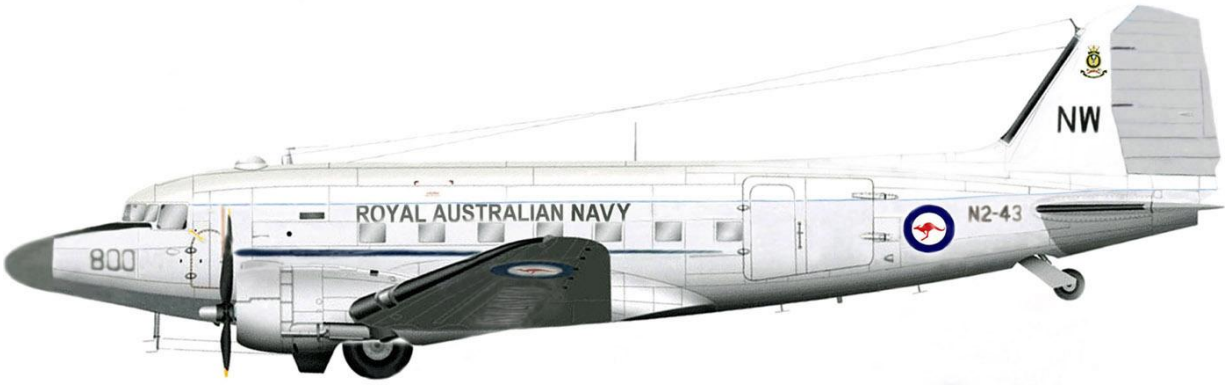
- **A65-43**, as the first aircraft delivered, was coded 900/NW (723SQN), later 860/NW (851SQN), and with 724SQN as 800/NW, and also marked with the radio callsign VJ-ORA. Serial numbers were changed in line with new RAN policy in 1964, to become **N2-43**. Modified with a Sea Venom radar nose by DH Bankstown, it was painted Oxford Blue by 1968, serving with 851SQN (VC851). It is now displayed back in its aluminium/white scheme at the FAA Museum at Nowra, marked as N2-43 coded 800/NW.
- **A65-23**, was the second Navy C-47 and coded 901/NW (723SQN), later 861/NW (851SQN), and with 724SQN as 801/NW, and also marked with the radio callsign VJ-ORB. In 1964 this aircraft became **N2-23**, then passed to VC851 in 1968 retired in 1977 and is now on display at West Wyalong, marked as RAAF A65-23.

The two C-47Bs, A65-90 and A65-123, were delivered in FEB 1968 to 724SQN and immediately issued with N2- serials.

- **N2-90** (ex A65-90) was coded 802/NW with 724SQN as N2-90, and then with VC851. Retiring to be an instructional airframe in 1974, it passed to the Naval Historic flight in 1985 (painted in *Oxford Blue* in 1988), and flew as VH-NVZ marked as N2-90. Flew until about 2006.
- **N2-123** (ex A65-123) was coded 803/NW with 724SQN as N2-123, later with VC851, and was retired in 1973 and sold, eventually going to the US.

N2-23 801/NW 724SQN with early flash-style window-line, post-1956 kangaroo roundels and small RAN titles

The Dakotas had been scheduled to be replaced from the end of the 1960s having long service in the RAN (the first was delivered in 1949) as freighters, VIP transports and observer training. One aircraft, N2-43, was specifically modified with a Sea Venom nose for observer training using the AI.17 air intercept radar. The Dak's operational career ended in 1973 when VC851 took delivery of two HS748s, for observer training and later as Electronic Warfare trainers. When ARDU retired Dakota A65-86 in 1997 it was passed to the Historic Flight, and replaced N2-90 VH-NVZ, as VH-NVD.



N2-43 and the training radar nose, in VC851 service (badge on fin) with RAAF-standard streamline and titles

Navy Dakota Markings

National Markings. The RAN adopted the leaping kangaroo in all six position from 1956 – the RAAF delayed introduction on the wings until 1965. Roundels sizes under wings were reduced from the RAAF 72" to 60", and moved outboard to allow underwing 60" **NAVY** titles. (Below, Museum N2-43 has even smaller 48" underwing roundels with the 60" **NAVY** titles.) Fuselage roundels on some aircraft were also later reduced, from 48" to 36" (see N2-43 below). RAN aircraft did not carry the national tricolour fin flash, normally reserving the fin for the "ship" the aircraft was attached to – in the case of the Dak, this was **NW** for Nowra (HMAS *Albatross*). When aircraft were in Oxford Blue, the roundel was a "cutting circle", so that the colour of the *Oxford Blue* roundel could be separated from its similar background colour. The cutting circle was the white surround of the roundel, specified as 1/15th of the diameter of the annulus (the outer blue ring) – "Optional white (or contrasting colour) cutting circle may be added when the background colour of the aircraft does not contrast with the annulus of the insignia".[103]

Serial Numbers. On Dakotas, both **A65-** and **N2-** numbers were marked in standard RAAF 8" characters – the "N" series had been started in 1964, and were applied to the first two aircraft as N2-23 and N2-43. When two more aircraft were received in 1968, these became N2-90 and N2-123. On the *Oxford Blue* aircraft, serial numbers were marked in white.

Naval Dakota Code Numbers. Nowra (NW) side codes (900 and 901, 723SQN) were changed in 1954 to 860-series codes (851SQN), which in turn in 1959 changed again to 800-series codes (724SQN), which subsequently were retained when passed to 851SQN again.

900 – 901	723 Squadron	1952-54
860 – 861	851 Squadron	1954-58
800 – 801	724 Squadron	1959-68
800 – 803	VC851	1968-73

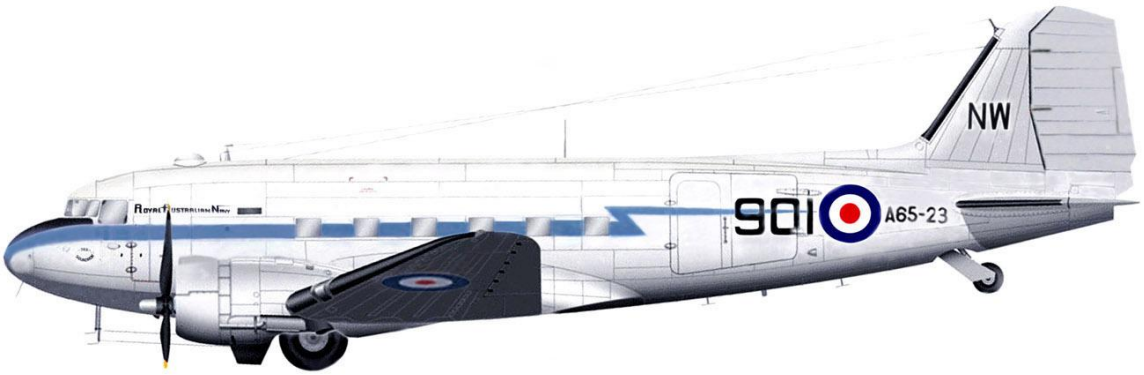
The code numbers varied in size – initially large 24", later a smaller 18". On the *Oxford Blue* aircraft, no code number was carried – instead having a **NAVY** title on the nose. The **NW** fin code remained 24". **NAVY** was marked below the wings, typically in 60" characters.

N2-43 800/NW restored by the Museum at HMAS *Albatross*, now mounted high in the hangar display

Naval Dakota Squadron Badges. The badges of the Navy Dakota units – 723, 724 and 851 SQNs – are shown below. Initially the first two aircraft went to Station Flight at Albatross until 723SQN took the aircraft. 723SQN had a stylised "723 SQUADRON" marking in an oval shape on the nose. When Squadron badges were carried, on 723SQN this was near the cockpit, and 851SQN on the fin.

Blue Streamline and Titles. The first naval streamline was in mid-blue, running along the window line, with a flash at the rear ahead of the cargo door (see N2-23). Later the RAAF-style streamline below the windows was adopted (presumably as the RAN Dakotas were undergoing major servicing with RAAF aircraft at Parafield). On the *Oxford Blue* aircraft the streamline was in white. With titles, initially several styles of small script were used on the forward fuselage immediately behind the cockpit (including one like this – Royal Australian Navy – on A65-43 VJ-ORA, when probably with *Albatross* Station Flight c1950). This later changed to a **ROYAL AUSTRALIAN NAVY** title in 8" (serial number) font above the windows, and eventually this standard 10.5" RAAF-style **ROYAL AUSTRALIAN NAVY** in black.

AN EARLY NAVY DAKOTA A65-23 (N2-23)

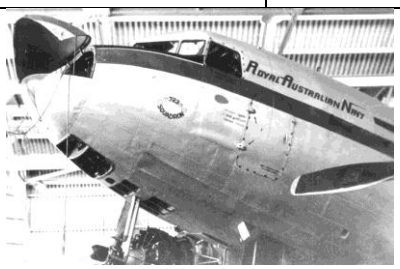


A65-23 901/NW 723SQN c1952-53, overall aluminium, Type-D roundels (pre-1956), mid blue window-line, 24" code **901/NW**, early titling, 723SQN logo on nose. RAAF style titling later adopted in black **ROYAL AUSTRALIAN NAVY**.

Type-D Roundels until 1956

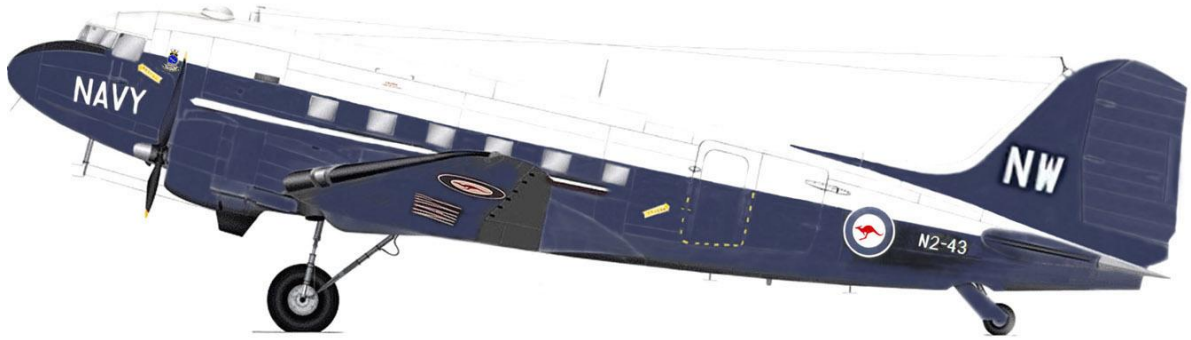
RAN Kangaroo Roundel from 1956

723 SQN Logo



N2-23 c1964 801/NW with kangaroo roundels in all positions, interim RAN 8" titling, mid-blue Navy window-line.

NAVY 'OXFORD BLUE' DAKOTAS



N2-43, the first Dakota in *Oxford Blue* (BS381C-105, K3/343), was later modified with a radome housing the AI.17 radar to train Sea Venom observers, c1968 (below). VC851 badge behind cockpit. In 1988, a freighter Dakota N2-90 (bottom) was painted *Oxford* – note silver cowls and no streamine. Fuselage cutting roundels 36" diameter (blue outer ring), and the 24" (600mm) **RESCUE** arrow, located near the emergency canopy and hatch release controls.[104]

Cutting Circle Roundel

723 SQN Badge

724 SQN Badge

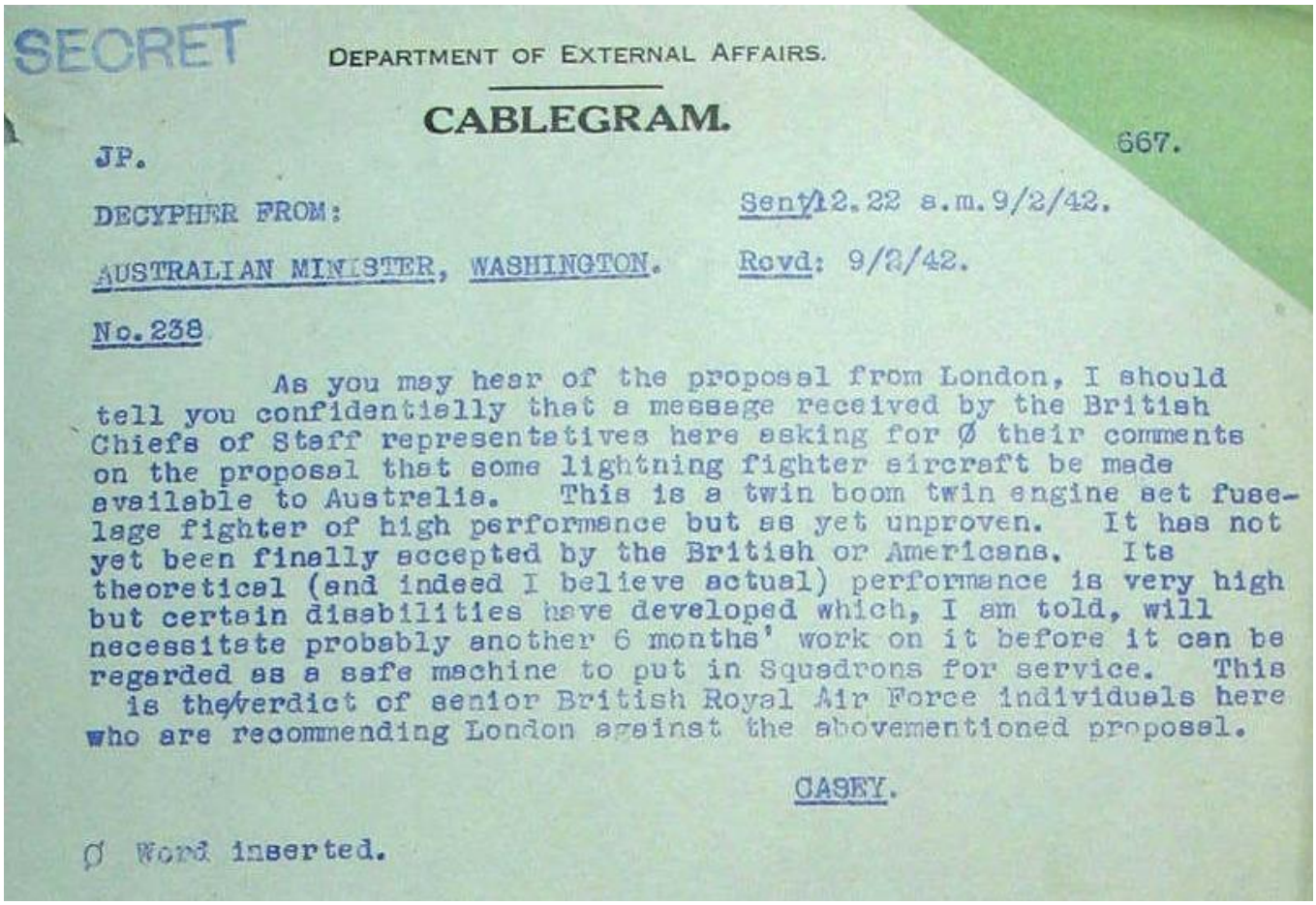
851 SQN / VC851 Badge

N2-90 flew with the RAN Historic Flight over 1985-2006. Differences in N2-90 markings from N2-43: emergency access marking on port fuselage, no streamline (but added later), and no squadron badge behind the cockpit.

Lightning Strikes the RAAF three times Gordon R Birkett@2017

First Lightning strike,..... With the pending introduction of the Lockheed Martin F-35A into RAAF Service it must be noted that RAAF Pilots have had a pedigree link with all produced *named* Lightning aircraft for over seventy-five years.
In fact in early dark period of 1942, the RAAF was offered the P322 Lightning in quantity, as a long range fighter for its urgent requirement when Japan entered the war.

Lockheed Lightning P322 , AE978, ordered on BPC Contracts: These had reduced performance due to Supercharger removals on their Allison's.



SECRET

DEPARTMENT OF EXTERNAL AFFAIRS.

CABLEGRAM.

667.

JP.

DECYPHER FROM: Sent 12.22 a.m. 9/2/42.

AUSTRALIAN MINISTER, WASHINGTON. Rcvd: 9/2/42.

No. 238

As you may hear of the proposal from London, I should tell you confidentially that a message received by the British Chiefs of Staff representatives here asking for Ø their comments on the proposal that some lightning fighter aircraft be made available to Australia. This is a twin boom twin engine set fuselage fighter of high performance but as yet unproven. It has not yet been finally accepted by the British or Americans. Its theoretical (and indeed I believe actual) performance is very high but certain disabilities have developed which, I am told, will necessitate probably another 6 months' work on it before it can be regarded as a safe machine to put in Squadrons for service. This is the verdict of senior British Royal Air Force individuals here who are recommending London against the abovementioned proposal.

CASEY.

Ø Word inserted.

The permeation of a idea that resulted in neither service getting the P322 Lightning Mk1.

Early April 1942 saw the arrival in Australia the first four F-4 Lightning aircraft arrive in Australia. (These were F4's: 41-2123/41-2124/41-2125/41-2126)

A second F4 batch arrived in August 1942 and two were assigned to the RAAF (41-2158 and 2159).
One of the fourth batch would see eventual RAAF service as A55-3 (41-2122).

A55-1 as originally painted. Sometime in 1943. Bob Alford

From late 1942 to 1944, two RAAF Units actually flew the F-4 Photographic Model of the Lockheed P-38E Lightning. A total of five F-4s were used by the RAAF : three owned RAAF F4s with 1 PRU and two borrowed USAAF F-4s with 75 Sqn RAAF.

In use: one of two assigned 75 Squadron RAAF F4's,....this one is 41-2220 in late 1943. Geoff Atherton Collection

No 75 Squadron RAAF was by mid August 1943, the last RAAF frontline operational P-40E/E-1 equipped Unit in SWPAC theatre with 24 Aircraft. Four Pilots underwent a conversion course at Port Moresby during the first weeks of August 1943.

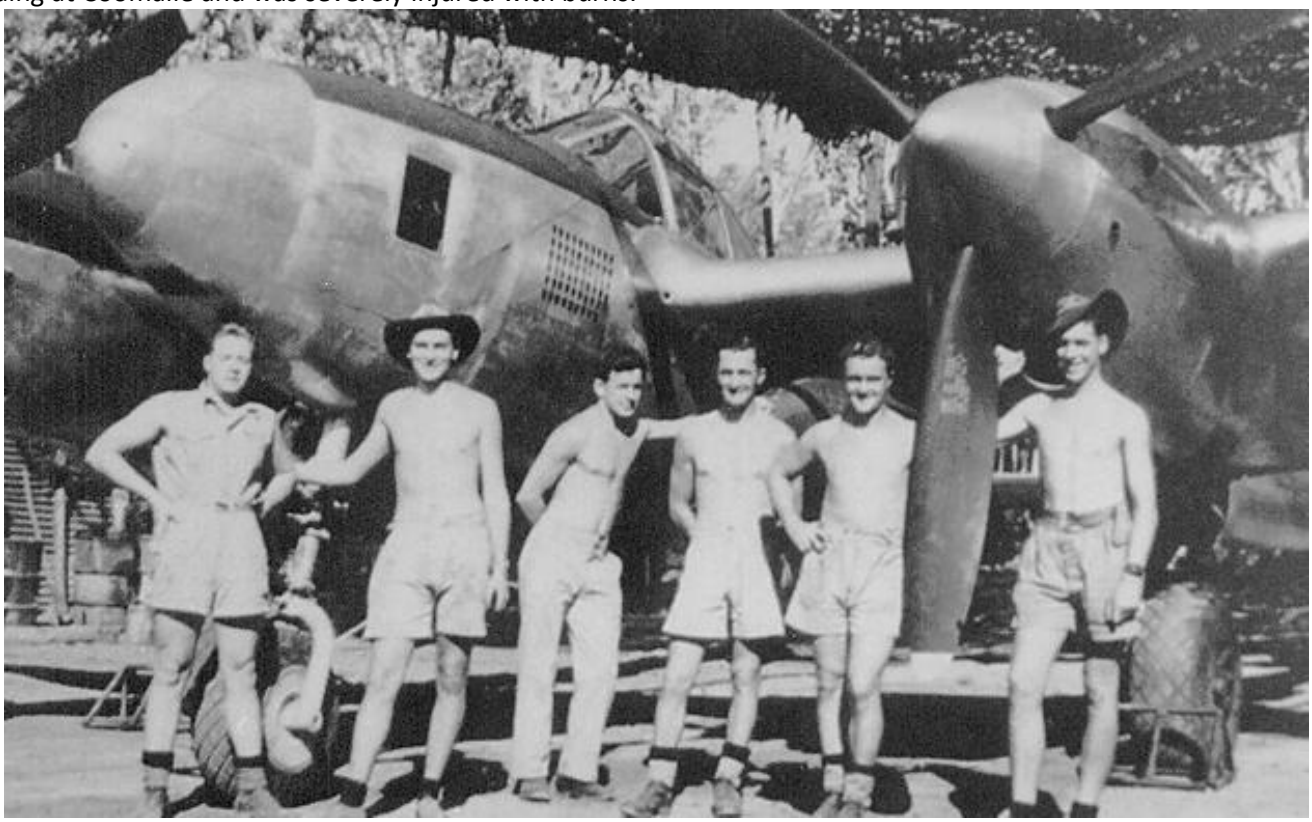
On the 16th August 1943, Sqn Ldr Geoff Atherton and F/Lt B E Brown landed in F-4 41-2156 and 41-2220 respectively to create a F-4 Photographic Flight within the Squadron on orders from No 9 Operational Group, to perform Photographic missions over Gasmata.

The borrowed F-4s flew over a three month period of service several unescorted Photographic Missions over Enemy Territory (Trobriands/Garvoe Island/Simpsons Harbour/Oro Bay/Shortland Island/Wabigi and Didiwagi Missions/Ablingi Harbour/Moewe Harbour/ Montague Harbour/Cape Shirlitz/Talasea/Vahsel Harbour/Cape Dampier/Palmalmal/Kamagaman/ Gasmata/Arawe to name a few places)and over local areas such as Goodenough Island and Milne Bay.

Operations with the 1PRU RAAF F-4's commenced on the 30th October 1942 when the first two arrived at Hughes Strip after departing Laverton.

Despite dismal serviceability problems, they remained in service for nearly two years ranging all over the NEI theatre of operations and local areas of Northern Australia.

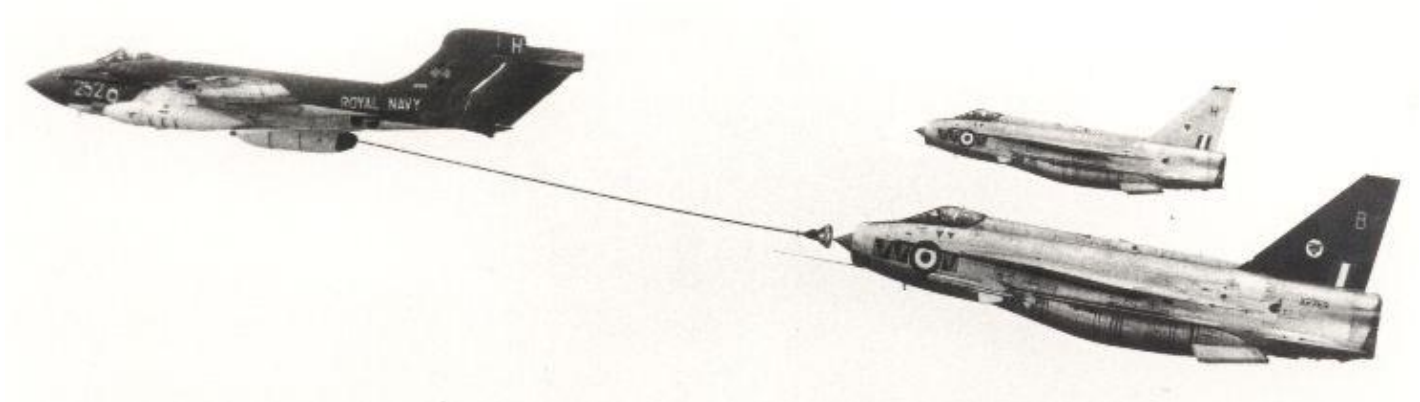
Operations were concluded on the 1st September 1944 when A55-1 returned from intended Timor Area Recce after only a half hour flight with Squadron Leader Green at the controls experiencing Flight Instrument serviceability problems,..but later that day with F/Lt Rush at the controls on a test flight post repair, he crashed the aircraft on landing at Coomalie and was severely injured with burns.



A55-1 in its final guise in 1944 , el natural metal. Bob Alford

By the 9th September 1944, both RAAF F4 and 1PRU had passed into history. [105]

Second Lightning Strike, perhaps a glancing strike..... That original link was now disconnected with the name "Lightning,....,...but it would emerged with a possible purchase of a English Electric Lightning which failed to materialise,...and then continued during the sixties and through to the eighties, when a few select RAAF exchanged Pilots flew the English Electric Lightning Fighter. During 1967-71, at its service peak, the RAF's Lightning force comprised nine fighter squadrons. One, No 74 Squadron, was based at Tengah Air Base in Singapore from 1967 to 1971.



Air to Air refuelling in FEAF extended to the RNFAA visiting Carriers. Here EE Lightning XR769 "B" is being refuelled by a RNFAA Sea Vixon in 1969:

In June 1967, on three successive days, all thirteen single-seat aircraft of 74 Squadron (RAF) were flown out to Tengah under the banner of Operation “Hydraulic”, staging through Akrotiri, Cyprus, Masirah, Oman and Gan in the Indian Ocean. These were XR768-773, XS893, XS895-897, XS920-921 and XS927, coded ‘A’ to ‘N’ in order, excluding ‘I’.

The first six aircraft left Leuchars on 4 June, with five the following day and the final two on the next day, these arriving at Tengah on the 11th. Seventeen Victor tankers were involved in this mission, which at the time was the longest ferry flight carried out by the RAF involving air-to-air refuelling.

The one trainer variant on strength, T.5 XV329, went by sea as it could not be fitted with over wing tanks, had a ventral tank of only 250 gallon capacity compared with the 600 gallon tank fitted to the F.6 variant. After four years in Tengah, the Tigers disbanded on 25th August 1971. Their Lightnings were flown to Cyprus where they were taken on charge by 56 Squadron.

Of special note, one of these aircraft, would have a RAAF connection some decades later with one of these ex-FEAF deployed EE Lightning F6s aircraft and even a reformed 74 Squadron (RAF), now flying Phantom F-4J(UK)s. That "Lightning" connection, was that a RAAF exchange Pilot, F/Lt Richard "Dick" Coleman, had the indistinct honour of performing the last operational ejection from a English Electric Lightning Interceptor in 1988, just before the type was withdrawn from Squadron Service.

The 11th April 1988 sortie (Lightning call sign 'Schubert Formation') was planned as a 4 v 4 affiliation training exercise with air to air refuelling from Victor K2 tankers from 55 Sqn over the North Sea. The targets for the mission were two Phantom F-4J(UK)s from No 74 (Tiger) Sqn at Wattisham and two Royal Norwegian F-16 Fighting Falcons on squadron exchange at Wattisham. Sqn Ldr Ian Black was flying XS901, an ex-5 Sqn aircraft, and my Number 2 was Flight Lieutenant Dick Coleman, an exchange officer from the Royal Australian Air Force flying Lightning coded BB but only partially marked. Flt Lt Al Page and F/O Derek Smith flew XS903 and one other.

Sqn Ldr Black had considered taking BB himself, giving Flt Lt Coleman XS903, the black-finned F6, thus generating the chance of a photograph of the black-tailed Lightning and the Phantoms on the tanker together.

However, he flew XS901 ,...Sqn Ldr Black continues[106]

"As I was leading the mission, I had planned two refuelling brackets for the Lightnings. After take-off, we would head straight for the tanker, fill to full, then start the affiliation exercise. After twenty minutes or so it was planned that both the Phantoms and Lightnings would take on fuel as and when required. The briefing and departure all went as planned. Airborne from Binbrook, we climbed up to 28,000 feet and headed straight for the tanker 100 miles north-east to refill our tanks to full prior to our rendezvous with the F-16s and F-4s. Twenty miles off the coast, the day was clear with little or no cloud. Leaving the tanker, we descended to 10,000 feet and set up a racetrack pattern waiting for the targets.

We quickly had contacts on the radar, twenty miles away and slightly above us. By ten nautical miles we could see a faint dot on the horizon heading directly for us. Kicking the burners in, we accelerated to 500 kts before the merge. As an F-4 passed down my left side I pulled hard upwards and to the left, which he quickly countered. Back up at 20,000 feet, we passed each other beak to beak. Time to grab more energy. I unloaded the aircraft and began a left-hand descending turn then, as I looked left, I heard a garbled Mayday call and saw a Lightning 2-3 miles away streaming white vapour.

He was pulling up towards me, being hotly chased by an F-4J. I called a stop on our frequency and asked who had put out the Mayday. 'Schubert 2'. 'Roger, I acknowledge visual with you'. Barrelling round him to kill my speed, I closed up on his left side for a visual inspection about four wingspans out. I asked the GCI (ground radar) for a vector to Binbrook and told them to get the Leconfield Wessex airborne.

Having sat in crew rooms for some time listening to 'war stories', Lightnings and fire don't mix, so I knew things didn't look good. Flames were licking the side of his fuselage under his port wing. As we neared Binbrook, his fuel state became dangerously low, which meant that an attempt to land at Binbrook over populated areas with the fire still burning could have been disastrous. Dick headed east out over the sea and prepared for his ejection.

I moved back and to the right to avoid being hit by his canopy. In addition, I wasn't sure what the aircraft would do once he was out, so I kept my distance. Like watching an action replay, the canopy flew off, followed by the pilot in his seat which tumbled momentarily before I looked back and saw the green, orange and white 'chute billow and disappear into cloud. I then closed up on 'BB' without its pilot before it performed a gradual left turn and dived into the sea ten miles east of Spurn Head. The Martin Baker seat worked perfectly, and within 20 minutes of my landing back at base, Dick was flown in by a No 22 Sqn Wessex, wet but in perfect health." Flight Audio from RAF Lightning F6, XR769 fire and subsequent ejection can be heard [107] Copy of report[108]

That 'BB' aircraft, was English Electric Lightning F6 XR769. It crashed into the North Sea five miles off Easington, Humberside after the in flight fire. At least twenty four Lightning aircraft have been lost due to in flight fires. This was the last Lightning to be lost in RAF service.

Earlier days below: XR769 as "J" with No 11 Squadron RAF in the late 70's

XR769 as "J" with No 11 Squadron RAF in the early 80's's

The third lightning strike,.....Fast forward to 2018

The first two Australian pilots selected to undergo F-35A training in the United States were announced by the Deputy Chief of Air Force, Air Vice Marshal Gavin (Leo) Davies. Squadron leaders Andrew Jackson and David Bell, currently based at RAAF Base Williamtown in New South Wales, were selected for their operational flying skills, extensive experience and leadership.

Squadron Leader Andrew Jackson has become the first Australian to qualify as an F-35A Lightning II pilot. SQNLDR Jackson (Now Wing Commander)concluded his training with a final mission at Eglin Air Force Base on 23rd April 2015, after his initial flight in the aircraft on 17th March 2015 made him the first Australian RAAF Pilot to fly the F-35A (On USAF F-35A FY11-5024).

F-35As A35-001 and A35-002 touched down at Avalon, Vic, approximately 1140am on Friday, 3rd March 2017, flying in from RAAF Base Amberley where they had landed on the previous Monday after their trans-Pacific ferry flight.

A35-002 (callsign Bolt 2) was the first to land, piloted by SQNLDR David Bell, followed by WGCDR Andrew Jackson, the first RAAF pilot to qualify on the aircraft, in A35-001 (Bolt 1).

Australia's next eight F-35A Lightning II Joint Strike Fighters are in production at prime contractor Lockheed Martin's Fort Worth final assembly plant ahead of delivery to the RAAF in 2018.and the first squadron, Number 3 Squadron, will be operational in 2021. [109]

The step from the above F4 to the below F-35A,.....The Lockheed (Martin) Lightning is back in RAAF inventory in 2018!!!

Curtiss Corner: P-40E-1-CU A29-120 Gordon Birkett @2017

Built at Curtiss Wright Buffalo Plant, New York in early March 1942, as the 483rd P-40E-1-CU. The aircraft was shipped out of the Port of New Orleans after a rail journey down the eastern sea board of the USA. On the Sea by the 4th April 1942 on the SS Bintang, steaming to its destination, Sydney Australia and arriving on the 31st of May 1942. It was one of 13 P-40E-1's loaded on board as part of a RAF Diversion of Britain (RAF)Defence Air 3 Contract for the defence of Australia. [110]

Delivered to and received at 2 Aircraft Depot, based at Richmond, NSW on the 01/06/42. Assembled and test flown, it was allotted to 76 Sqn RAAF , then based at Weir Strip Townsville. Issued to No 2 Aircraft Park on the 06/06/42, and flown up. On strength with 76 Sqn RAAF by mid June 1942 and coded **"V".**

On the 24th June 1942, it was flown by Sqn Ldr Keith "Bluey" Truscott [111] during a Squadron Formation Flight over Townsville (His normal aircraft after this, was **A29-93 "P"** (P for Puddin, his nick name)during July August 1942).

During Milne Bay in conjunction with 75 Sqn RAAF, 76 Sqn RAAF had an addition Sqn Identifier added in the form as a prefix "I*". Bluey would fly **A29-120**, now coded as **" IV",** in combat air patrols from the 11th August to the 19th August 1942. *High on the cowls above the exhaust stacks were the faded painted words **"Spit Kitty"** ,..a derogative term of Bluey being a Spitfire Ace, now flying the heavy P-40E Kittyhawk.*

During the early hours on the 26th August 1942, the Japanese arrived by sea. P/O J Rutherford flew the aircraft in strafing attacks on Barges landing infantry and tanks, expending some 1460 0.50 cal rounds.

In the afternoon, Sgt L Loudon flew it in strafing attacks on barges in the Falls River area at altitudes of 50 to 1000 feet, firing some 1500 0.50 cal rounds. F/Lt W. J. Meehan, its third pilot of the day, flew it on a strafing sortie later that afternoon, expending additional 1400 0.50 cal rounds at targets.

On taking over 76 Sqn RAAF, following the death of Sqn Ldr Peter Turnbull in **A29-92 "IW"** on the 27th August 1942, the aircraft carried the name of *"Peter's Revenge"* on the starboard lower side and *"Still Squirtin"* on the Port Side sometime after this day.

On the 28th August 1942, P/O P Grosvenor flew it on an attack on a Japanese Stores location near Ngibaria, Milne Bay, and expending some 1320 0.50 cal rounds on it.

The same day, F/Lt W. J. Meehan flew it later that day in a six aircraft flight to escort USAAF 22nd BG B-26 Bombers in bound in attacking Japanese shipping in the bay. Nil enemy aircraft engaged.

Bluey flew it again on the 29th August 1942 as part of a five aircraft flight, each loaded with a single 250lb Bomb, on an attack on the Japanese Convoy . The convoy was not found and Bluey jettisoned his bomb north west of the trip on his return. However, the escorting 75 Sqn RAAF P-40Es, advised that they had finally discovered its location. Too late. This was further hard to swallow when **A29-106 "IOu**" *"Gretcha"* crashed on return, killing its pilot, P/O Davis.

On the 30th August Bluey flew it on Patrol.

P/O J Rutherford flew the aircraft on the 4th September 1942, loaded with a 250lb Bomb, in bombing attacks on Japanese held Houses at Kaloi Village. The following day, P/O J Rutherford flew it again with a 250lb bomb carried, along with four other P-40Es on Japanese troop and stores build ups east of the creek near coded location "Wagga Wagga". A quick re-arming and refueling turnaround at Gilli Gilli, Bluey flew it later that day, again loaded with a 250lb, to attack positions near Lilihai. *Bomb was jettisoned when mission was cancelled in flight.*

On the 7th September 1942, Bluey flew it again in an eight aircraft attack on enemy shipping; this time IJN Ships (including a cruiser and destroyers), in conjunction with two 30 Sqn RAAF Beaufighters, six 100Sqn RAAF Beauforts and three 6 Sqn RAAF Hudsons.[112]

Bluey would again fly it on the 8th, 20th and 21st September 1942 , whereupon the Squadron had transferred to Straus Strip near Darwin by the 24th September 1942. In the between time, he would also fly **A29-142 "ID"** regularly and on a lesser extent, also **A29-80.** Given the August/September 1942 examples of a few pilots who flew her, she went to the 43rd Material Squadron USAAF located at Adelaide River , NT, for a 240 hour overhaul on the 4th October 1942.[113]

He flew it back from Adelaide River, and on the 11th October 1942 did a practice intercept on a 2 Sqn Hudson**.** Then flew it again on the 19th and 20th October 1942. Then again on the 20th November 1942 as his last flight in her.

At 2330hrs on the 19th December 1942, F/Sgt E.W Marsh Serv#400005, on the return from a night Interception Exercise over Darwin, experienced difficulty in landing and effected a heavy landing , causing the starboard leg to collapse, forcing a ground loop, damaging the left mainplane and flaps.

The aircraft was transferred to 4 Repair and Salvage Unit who repaired it and returned it to 76 Sqn RAAF by the end of the following month on the 20th January 1943.

From there it would accompanied 76 Sqn RAAF to Onslow WA (Potshot). Received by 17 Repair and Salvage Unit at RAAF Pearce, on the 24th April 1943 for a 240 hourly, and was later flown by P/O E. G. Reynolds Serv#402541, from 17RSU Pearce RAAF on the 22nd September 1943, arriving at 2 Operational Training Unit at Mildura by the 26th September 1943. Coded now as A-W.

Unidentified Airman Pilot entering "Still Squirtin" at Potshot WA, 1943. USAAF Serial Block states 41-35936, identifying this as A29-120.

On the 28th November 1943, the aircraft had a incident where it was damaged or,... had an inspection that has no documentation, but was inspected and found to have several issues, including airframe, airscrew, front fuselage, cockpit and centre section, port and starboard wing slightly damaged.

If it was an accident, the pilot may have been in the 25th Fighter Operational Training Kittyhawk Course that ran from mid November 1943. However the airframe was tired thus could have been a inspection issue per airworthiness. Curtiss Wright Technical Representative, Mr R G Bowman visited the unit on the 13th January 1944 per this general reason in reference to airframes.

In due course it was repaired and was back again flying with 2OTU.

Training at 2OTU certainly wore out the remaining life of many a P-40E/E-1: Some were rebuilt over and over again, including several *P-40Es fitted with P-40E-1 wings by 5AD.*

On the 15th February 1944, the aircraft was damaged when a Pupil on his second day of his course, landed tail high at Mildura which place a excessive load on the starboard gear, which then collapsed. The airframe at this time, had flown only 220 hours, with only some 22 hours after the above repair. The pilot, P/O Ian Ibenthal McDonald Serv#418041 *28th Fighter Operational Training Kittyhawk Course,* was not injured. He would be withdrawn from course and be posted out to 1ED on the 1st March 1944. The aircraft was repaired in Unit.

On the 19th June 1944, at 1125hrs, the aircraft crashed for some unexplained reason some 7 miles west south west of Mildura and burst into flames. The Pilot who was still strapped in the cockpit, Sgt Frank Foster Rees [114] Serv#433859 *32nd Fighter Operational Training Kittyhawk Course,* was killed instantly. He was later buried at Mildura War Cemetery (Grave#CB9) on the 21st June 1944.

Group Captain Allen of the Air Accidents Investigation Board arrived on the 20th June 1944 to inspect the crash.

The airframe ruminants' were received by 5CRD ex 2OTU on the 27/06/44. AMSE Approval to write-off per RAAF File #9/16/1739.

The Sad tale of Two USAF Canberras in Victoria: 1962

compiled Gordon Birkett @2017

Laverton RAAF Base held its "Open Day" on Sunday, the 16th September 1963 from 0900hour, with the weather being ideal and the crowd attendance swelling to 60,000. Both the display of equipment at No 1 Aircraft Depot, static aircraft displays(both RAAF and USAF)and the flying display was deemed exceptional,....but sadly the following day.....a tragic accident would mar the celebrations[115].

At approximately 1136Hrs on Monday the 17th September 1962, a United States Air Force Martin RB-57B Canberra from the 57th Weather Reconnaissance Squadron[116], Call sign "Equip One", FY52-1496[117], crashed 0.6 miles west of Laverton shortly after take-off from Runway 23. The aircraft was temporary at Laverton RAAF Base for display, away from Avalon Airstrip[118]"

RB-57B 42-1496 at Laverton: Photo Credit: Kurt Finger

What's not widely known is that the flight actually started earlier,.....some one hour and forty minutes earlier, when at approximately 0900hrs, that "Equip One" had started its engines on the southern tarmac.

It called the Tower to request clearance to travel the short distance home to Avalon Airstrip[119] nearby. It was cleared to taxi via the eastern taxiway to Runway 23. The pilot commenced his taxying, turning right, when he radioed to the Tower that his Port throttle had become disconnected.

The Tower requested Equip One to taxi left and get off the taxiway, to which the pilot stated *"negative"* as the aircraft on one engine would not turn and would have to taxi straight further then the northern branch of the taxiway, into the southern part of the resident ARDU tarmac to turn around.

In order to facilitate this wide turning circle of the RB-57B, the ARDU duty ground crews, with their own tractor, removed a parked ARDU Vampire, (either A79-627 or A79-656), out of the way. The two RB-57B Crewman then shut down and got out of the aircraft. They were soon joined by some USAF ground crew who travelled over and commenced working on the aircraft's issues.

At 1125hrs, with its two USAF crew members aboard, the aircraft was started up again. The pilot radioed *"Equip One, taxi, travel to Avalon".* With approval, they taxied north up the taxiway in front of the Tower, during which the pilot raced the throttle up four to five times, then turned onto the eastern taxiway to approached the threshold of Runway 23.

The aircraft lined up, Tower cleared the aircraft for flight, pilot acknowledged *"Roger".* The aircraft lingered for some time while the pilot rechecked his controls and engines.

The pilot then called the Tower, *"Laverton Tower, "Equip One" , will I be cleared for a low pass over the airfield after take-off?"* With no other traffic, the Tower replied *"Equip One, you are cleared for a low pass after take-off".*

Further instructions by the Tower were that were to be relayed was for a right turn after take-off and for the pass to be made over the northern side of the airfield clear of the buildings. The Tower decided to delay these until after take-off.

The RB-57B, throttled up, started rolling down the runway, emitting dense black smoke, and became wheels unstuck after a 3000 feet roll. Instead of climbing, the aircraft continued on being held near the ground until it cleared the runway threshold, whereupon it climbed away at an abnormally steep angle to about 800 feet in altitude.

At this height, the aircraft commenced a slow barrel roll to port. It was viewed by the Tower to be abnormally large, and not well executed, which resulted in the aircraft becoming wings level only at about 400-450 feet altitude with a 30 degree nose down pitch.

It continued to barrel roll to port, and was losing more altitude, before it impacted, bursting into flames.

RAAF Early Rescue and fire trucks were on the scene within three minutes, along with a RAAF Ambulance. Flight Sergeant W A Clark, Senior Fireman with assistance, entered the burning wreck to try and save the crew, but tragically, it was for no avail.

Sadly its crew of two, Captain Paul H. Palmer (Pilot) and Captain Joseph W. Ivins, had been both killed instantly. *It would seem that the original Port throttle problem had reoccurred on take-off, with fatal consequence.*

Meanwhile,...from the 14th October 1962, for fourteen days,...the world experienced the Cuban Missile Crisis.

The world was on the brink of nuclear war.....

On the 16th October 1962 tragedy would strike the 57th Weather Reconnaissance Squadron again when another aircraft from the Squadron crashed nearby, after taking off from Avalon Air Strip.

Martin RB-57C-MA Canberra FY53-3826 with two crew aboard, had dived and crashed into the sea some two miles off Aireys Inlet inlet, 56 miles south west of Avalon.

No emergency radio transmission or Mayday was ever heard.

In original markings, RB-57C 53-3826 prior to Deployment without the tail "Weather" cloaking: Photo Credit :USAF

A single ARDU Dakota was dispatched to the general area to search for any survivors. After some five hours on station and with light fading, it returned to Laverton unsuccessfully.

The following days, the Royal Australian Navy and elements of 2 Commando Company, Australia Army (CMF) also searched the area and adjoining beaches for survivors or wreckage. But again, with no success.

On the 3rd November 1962, the search was terminated eighteen days after it went missing. Three days later, Lt Colonel J R Keel USAF and party who had arrived at Laverton to investigate the crash back in October , returned to Hawaii by aircraft.

The crew of Martin RB-57C-MA Canberra FY53-3826, 1st Lt Glenn Sprague(Pilot) and 1st Lt Bobby Galbrecht were declared missing, presumed dead.

One further USAF death did occur on the 28th December 1962. Whilst retrieving a softball off the roof of Hanger #88 at Laverton, Staff Sergeant L Hatcher fell through the roof and was killed instantly.

No further fatal aircraft accidents were experienced by this unit towards the end its stay in 1966.[120]

Editor: I'm not sure to this day if any or part of the wreckage was ever found?

Martin's B-57 Canberra

Overall, the B-57 was not easy to fly. Moreover, prior to modification of its longitudinal control and stabilizer systems, the B-57 was uncontrollable if 1 of its 2 engines failed during takeoff or landing.

In 1958, after completion of all possible modifications, the US Air Force ascertained that 50 percent of the major accidents resulted from pilot errors, with 38 percent of the accidents occurring upon landing. Yet, while the number of B-57 accidents was high 129 major and minor accidents as of 1958, the rate compared "favorably" with that of the B-47 and some other aircraft.

The United States Air Force first got interested in the Canberra, as well as many other aircraft, in 1950 when it was looking for a replacement for the aging Douglas B-26 Invader. The Air Force was to make its final selection for the replacement aircraft after a final demonstration in February of 1951.

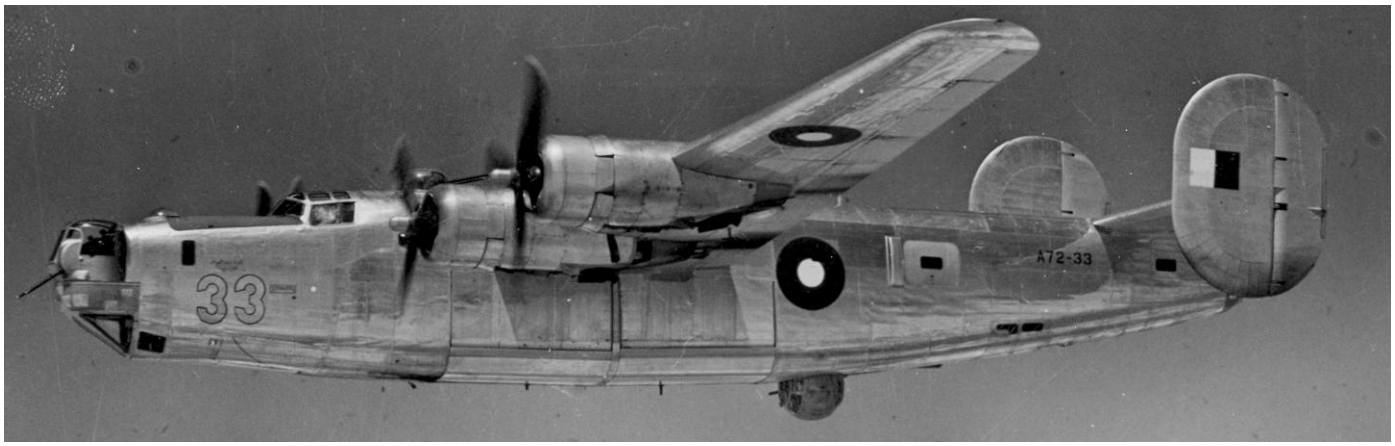
The B-57 was flown in by the Royal Air Force for the demonstration, making the flight across the Atlantic in four hours and forty minutes, setting an unofficial record time for the crossing in either direction.

This was also the first unrefueled Atlantic crossing by any jet-powered aircraft. Coming into the demonstration flight with such fan-fare, the Canberra easily stole the show, and won the contract.
The US Air Force accepted a grand total of 403 B-57s, all of which were produced in Baltimore, Maryland, by the Glenn L. Martin Co.

Specifically, the B-57 program comprised 8 B-57As, 202 B-57Bs, 38 B-57Cs, 68 B-57Es, 67 RB-57As, and 20 RB-57Ds. Other B-57s, such as the B-57Gs, RB-57Fs and WB-57Fs, were the result of extensive post production modifications. Production ended in early 1957, but at the close of the year USAF records showed that 47 of the 403 aircraft had been destroyed in major accidents.[121]

Martin B-57's in their 1950's heydays

The story of two A72-38 B-24Js in the RAAF: compiled Gordon Birkett 2017



Above: B-24J-160-CO FY44-40110 A72-33 which was the preceding sister ship of A72-38

At a cost of $315,000 per example at the time of delivery, getting two B-24Js for the price of one was a rare thing for the RAAF in May 1944(RAAF Indent 2275A, Div 805 Aus 42 Project #52608).

Well so it seemed, until the acquittal on arrival

Excerpt from the B-24 Liberator Squadrons of Australia Newsletter - Issue 63 (March 2003)[122]

Some confusion still exists concerning Liberators A72-38 and A72-38A which leads one to believe that some fiddling must have been done with the aircraft numbers. Only a search of 24 Squadron records could solve this problem and reveal the true aircraft number of A72-38A.

Some years later, Bob Livingstone was also intrigued by this seemingly doubled numbering of A72-38 on two B-24Js. Doing some contract research on 1944 Deliveries of C-47As, I came across communication messages per a seemingly bungled double issue of the RAAF A72-38 Serial. This I passed onto Bob.

It all stemmed back in the US of A during late April 1944, when the delivery of the initial batch of B-24Js were delivered to the Consolidated Vultee Modification Centre at Tucson, Arizona, and marked (Inscribed per RAAF parlance) with RAAF A72 Numbers.

B-24J-160-CO FY 44-40411 and **B-24J-170-CO 44-40650** were by accident or neglect, *both were marked* **A72-38** before they left for Tucson. The aircraft were completed with their RAAF modifications on the 28th April 1944 and 2nd May 1944 respectively, with preparation being made to ferry them to the RAAF Detachment at Fairfield Army Air Field, California .

WL 212A 2 JUNE

SECRET (.)

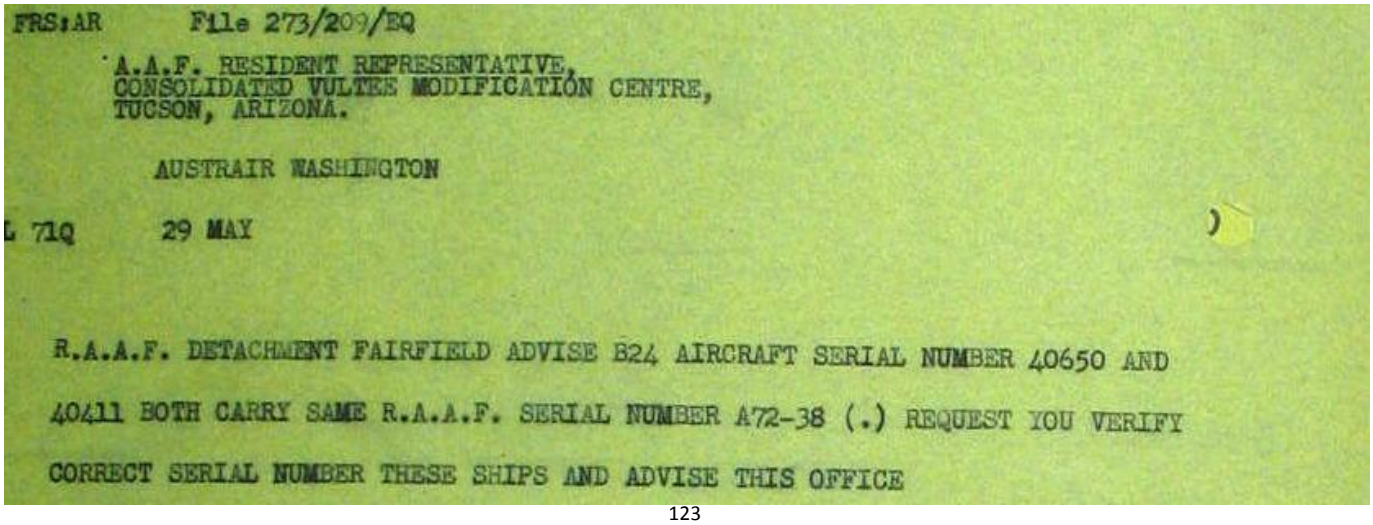
FLIGHT DELIVERY LIBERATOR B24-J AIRCRAFT (.) REQUEST YOU CONFIRM ARRIVAL SECOND FOUR AIRCRAFT SERIAL NUMBERS 40252 (,) 40408 (,) 40411 AND 40654 DEPARTURE OF WHICH ADVISED MY WL 70A MAY TWENTY NINE (.) REQUEST ALSO IMMEDIATE REPLY MY IMMEDIATE WL 95A MAY THIRTY

The first A72-38, B-24J FY44-40411 was accepted by RAAF Detachment on the 12th May 1944. This aircraft, was to be ferried to Hawaii by P/O Southwell and Crew on the 25th May 1944. The second A72-38, B-24J FY44-40650 was to follow a few days later on the 30th May 1944 with F/Lt Ray and Crew.

A72-38 B-24J FY44-40411 actually departed on the 29th May 1944 from Hickham, and arriving at Amberley RAAF, on the 1st June 1944. A72-38, B-24J FY44-40650, departed Hickham Army Air Field later on the 5th June 1944 with P/O Brugman and Crew for Amberley RAAF. The aircraft arrived on the 9th June 1944.

A72-38 B-24J FY44-40411 due to unserviceablity, did not depart Fairfield until the 27th May 1944, with the same crew. The second A72-38, B-24J FY44-40650, actually left later than planned on the 4th June 1944 also and both arrived soon after at Hickham Field Hawaii bearing the number A72-38 within a eight day window.

It is at this time that the RAAF Detachment at Fairfield Army Air Field, California, advised and requested AustrAir Washington DC to provide the correct Serial Numbers for these ships, on the 29th May 1944, though this was well after they had left the continental US of A.



FRS:AR File 273/209/EQ

A.A.F. RESIDENT REPRESENTATIVE,
CONSOLIDATED VULTEE MODIFICATION CENTRE,
TUCSON, ARIZONA.

AUSTRAIR WASHINGTON

L 71Q 29 MAY

R.A.A.F. DETACHMENT FAIRFIELD ADVISE B24 AIRCRAFT SERIAL NUMBER 40650 AND 40411 BOTH CARRY SAME R.A.A.F. SERIAL NUMBER A72-38 (.) REQUEST YOU VERIFY CORRECT SERIAL NUMBER THESE SHIPS AND ADVISE THIS OFFICE

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It seems when the aircraft were received at 3AD Amberley,..the Serial did not go unnoticed on the arrival of the second A72-38 on the 9th June 1944.[124] A simple fix was simply add a "A" after the serial to differentiate the two aircraft. Thus B-24J FY44-40650 was marked **"A72-38A"**[125], on the 3rd July 1944…….a simple fix until the powers that be, could resolve this issue.

On the 19th June 1944, B-24J FY44-40411, **A72-38**, was received by 24 Sqn RAAF and was coded **GR-G**.

Following damage from a bomb drop on the 16th September 1944, caused perhaps by a wayward 0.50cal burst over the target, it was allotted to 7OTU in October 1944.

Possibly 44-40411 A72-38 GR-G at Amberley June 1944

It suffered a further incident, this time a forced landing at Fenton on the 21st October 1944, before arriving at 7OTU on the 10th December 1944. It spent its remaining flying time with 7OTU before being stored with 7AD on the 23rd November 1945.

Excerpt from the B-24 Liberator Squadrons of Australia Newsletter - Issue 63 (March 2003) continues:

Ross Nicol, a former 24 Squadron bombardier and who has A72-38 and A72-38A entries in his log book believes that they were separate aircraft.

Ross writes that on 14th July 1944 in 24 Squadron RAAF his crew, skippered by F/Lt Richard Overheu, made the first of their 20 flights in A72-38A when they tested the A.F.C.E. at Manbulloo in the Northern Territory. On 29th July they delivered A72-38A to Pell Strip for modifications to permit the dropping of secret agents behind enemy lines.

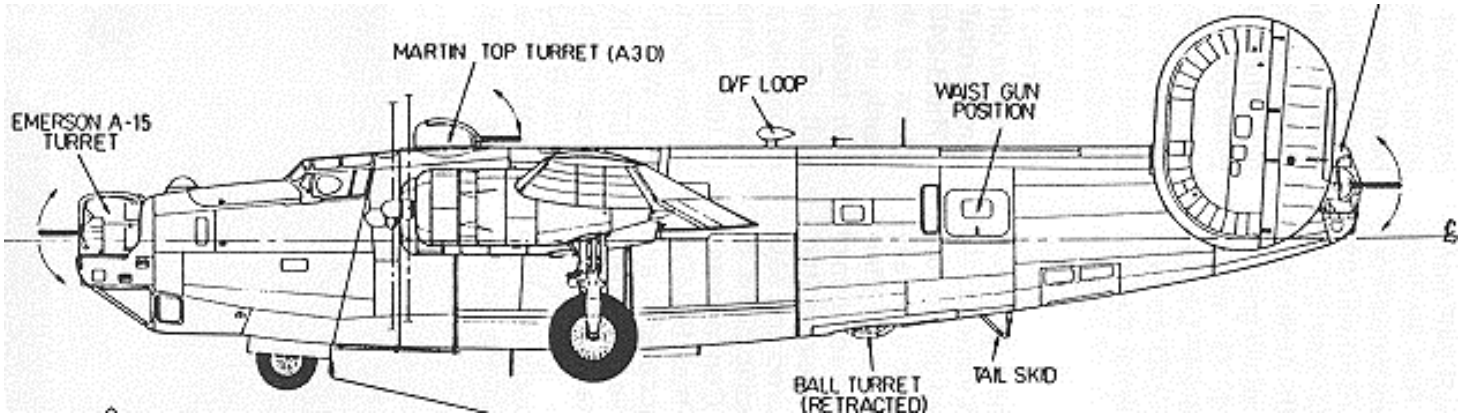
Their training exercises then involved the dropping of dummy men by parachute followed by a live drop of the four parachutists in the Adelaide River area. As bombardier, Ross had to invent a "Bombsight" to enable him to nominate the direction of travel and the moment of release. This he did by placing strips of sticking plaster both fore and aft and crosswise on the perspex at the front of the bombardier's compartment. [deletion]….they were able to deliver their parachutists and their supplies with reasonable accuracy.

On 10th August 1944 they took off for Hollandia in Dutch New Guinea, taking with them the four Aussie secret agents together with their supplies. Two days later they headed for a clearing in the very inhospitable Vogelkop area, south west of Manokwari, where they successfully dropped their four parachutists together with nine "biscuit bombs" in an operation which lasted nine hours. Subsequent advice was that the undertaking had profitable results.

During the next couple of weeks they flew A72-38A on a few reconnaissance operations over Dutch New Guinea and Timor before resuming normal bombing operations in other aircraft.

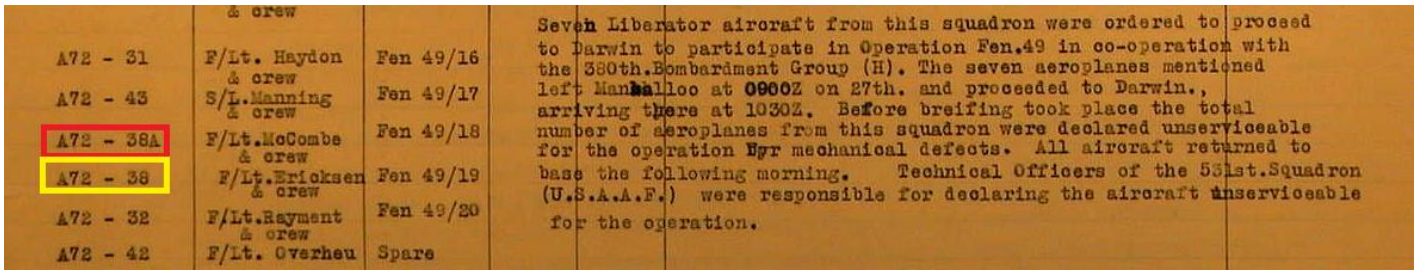
Ross Nicol's log book shows that B-24 A72-38 with F/Lt Overheu as pilot and he as navigator was delivered from Amberley to Manbulloo on 10th June 1944. The article in Newsletter #59 shows that A72-38A was delivered six days later on the 16th June 1944 from Amberley to Manbulloo by F/Lt Napier. The same article shows that A72-38 was flown by the Napier crew on 6th, 7th and 8th August 1944. On those very same days F/Lt Overheu crew flew A72-38A on two training flights and an operational flight to Hollandia.

It would seem we have two distinctly separate aircraft.



B-24J FY44-40650 **A72-38A** was received by 24 Sqn RAAF on the 6th July 1944 and was coded GR-H.

It was used on operations as marked, culminating in a joint mission on the 27th July 1944 ex Fenton with both A72-38 (Duty Fen 49/18) and A72-38A (Duty Fen 49/19)


& crew

A72 - 31	F/Lt. Haydon & crew	Fen 49/16
A72 - 43	S/L.Manning & crew	Fen 49/17
A72 - 38A	F/Lt.McCombe & crew	Fen 49/18
A72 - 38	F/Lt.Ericksen & crew	Fen 49/19
A72 - 32	F/Lt.Rayment & crew	Fen 49/20
A72 - 42	F/Lt. Overheu	Spare

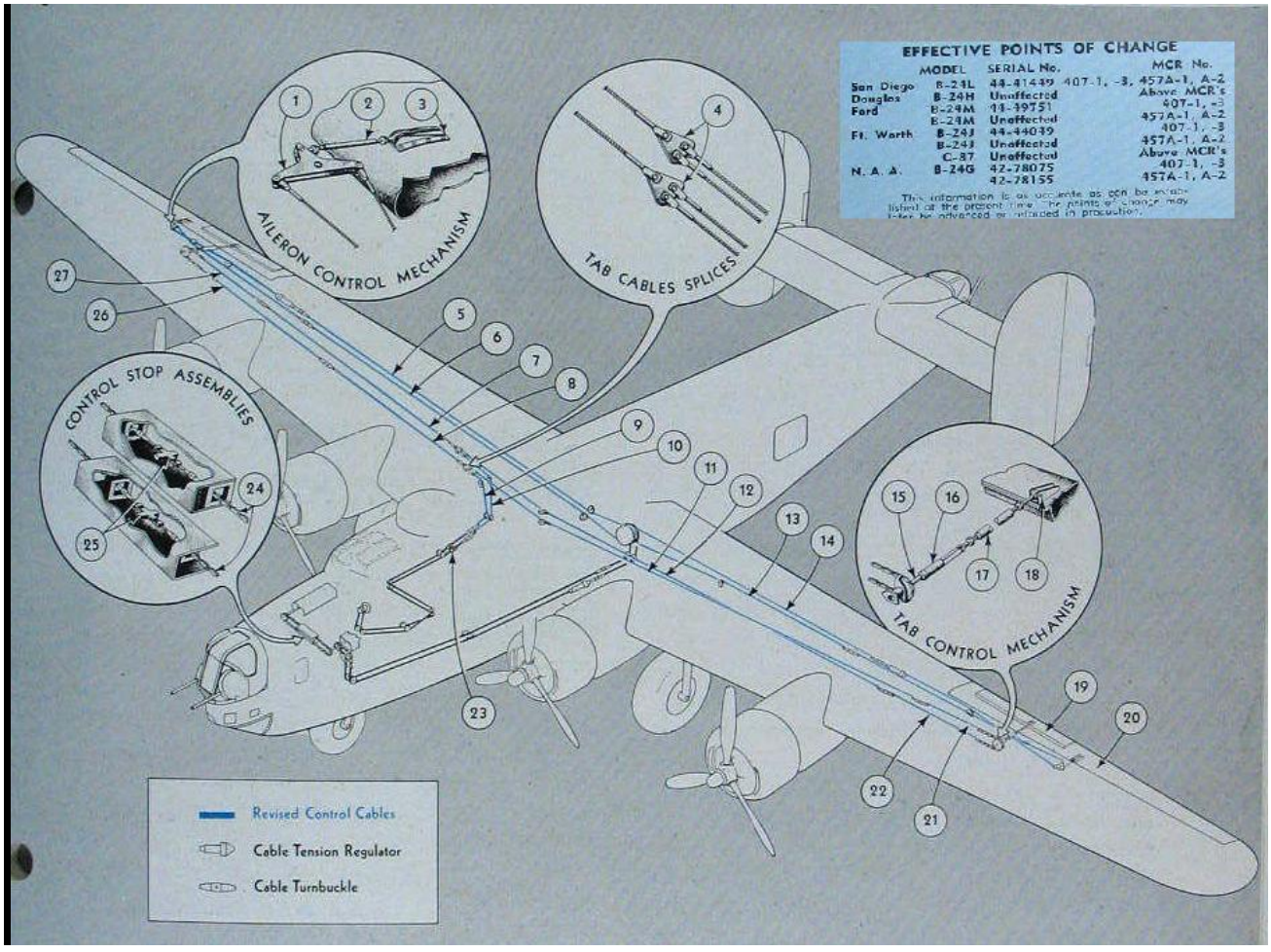
Seven Liberator aircraft from this squadron were ordered to proceed to Darwin to participate in Operation Fen.49 in co-operation with the 380th.Bombardment Group (H). The seven aeroplanes mentioned left Manbulloo at 0900Z on 27th. and proceeded to Darwin., arriving there at 1030Z. Before breifing took place the total number of aeroplanes from this squadron were declared unserviceable for the operation for mechanical defects. All aircraft returned to base the following morning. Technical Officers of the 531st.Squadron (U.S.A.A.F.) were responsible for declaring the aircraft unserviceable for the operation.

As highlighted, both A72-38s flew on the same mission:

It was not until on its return to 24 Sqn RAAF, following its visit to 4RSU for a service from the 31st July 1944, that RAAF Officialdom caught up. E/E-88 Card records that the Aircraft was reserialled from **A72-38A** to **A72-44** and recorded as such per entry dated 26th August 1944.

It too would spend its remaining flying time with 7OTU before being stored with 7AD on the 19th November 1945.

A72-44 ex A72-38A at Fenton September 1944



Odd Shots: Good to Bad


Lincoln A73-44 in flight , and final resting place near Rosewood Qld, 1950


Caribou A4-134 up and away,..and down at Nowra NSW, a few minutes later,..July 1964


F-111C A8-137 running along the runaway, and later at the end of the run, August 1979.

CH-47C Chinook A15-001 just entering RAAF Service, and later, after crash in 1985

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

Special thanks to John, Buz and Anthony on their inclusion of articles, advice and contributions: Many Thanks

End Notes:

End Notes: RAAF AIRCRAFT MARKINGS SINCE 1950 SQUADRON MARKINGS – PART 5 – DOUGLAS C-47 DAKOTA

John Bennett 2017

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[1] The Australian 'Pilot's Notes' were introduced to the RAAF as *Australian Air Publication (AAP) 336*, which referred to the aircraft by their RAF designators, Dakota I and Dakota III. This was the *A.P.2445A&C (Twin Wasp R1830-92 engines), Pilot's Notes Dakota I & III,* and was simply re-badged as an RAAF AAP. ABO N.155/1951, of 18 MAY 1951 refers. The RAF PN for C-47B was *A.P.2445D (Twin Wasp R1830-90C)*, *Pilot's Notes Dakota IV*. The RAAF equivalent was *AAP.821*.

[2] NAA CRS A1196/36/501/589, cited in A Stephens, *Going Solo*, AGPS, Canberra, 1995, p.13.

[3] Disposition of C-47 13 AUG 1946, NAA CRS A705 '*Disposal of Surplus Dakota Aircraft'* 9/86/166(2A).

[4] Ian K Baker, *Aviation History Colouring Book,* number 22, Melbourne, 1995, and number 74, 2011.

[5] 30 TU became 36(T)SQN 19 MAR 1953, ABO N.198/1953 of 22 JUN 1953.

[6] 30 CU, 30 TU and 36SQN Unit A.50s 1950-1955, and RAAF Status Cards A65 E/E.88.

[7] Stephens, p.242.

[8] 38SQN Unit A.50 1950-52, and RAAF Status Cards A65 E/E.88.

[9] For 'Silver to Grey' see *adf-serials Telegraph* Vol.6 Issue 6, Summer 2016:
http://www.adf-gallery.com.au/newsletter/ADF%20Telegraph%202016%20Summer.pdf

[10] See *adf-serials Telegraph* Vol 7 Issue 4, Spring 2017, for Vampire article no.4 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202017%20Spring%20.pdf

[11] 'Helvetica Medium' serial number font had been adopted from the RAF standard; RAF AP.119A-0601B Ch 9-0-1 para 2.

[12] RAAFHQ Postagram TS.1831 1/501/329(55A) of 24 NOV 1947 lists the RAAF colours vocabulary for DAP Parafield hand painting insignia of 86 Wing Dakotas*: Royal Blue* was to be mixed with K3/232 *Azure Blue* by "adding dash of K3/231" *Black*. This colour was adopted as *Royal Blue No.6* K3/348 in TS.1(D) note of action 9/1/1595 of 30 JUL 1948, for hand-painted insignia (such as badges) and lettering.

[13] BS381C:1943; http://patrickbaty.co.uk/2011/10/05/wartime-camouflage-colours

[14] British Standard Colours; http://cpwstonehouse.com/colour-systems-part-2-british-standard-colours

[15] RAAF Postagram TS.1831 1/501/329(55A) of 24 NOV 1947.

[16] RAAFHQ File TS1(D) note of action 9/1/159(30A) of 30 JUL 1948.

[17] RAAF HQ DTS Special Instruction Gen/96, TS.1840, File 9/1/1595, para.D(8a), 14 JAN 1948.

[18] RAF A.P.119A-0601-1E p.22 addresses roundel colours *Post Office Red* (BS381C-538) and *Roundel Blue* (BS381C-110). These colours can be approximated to the later US Federal Standard FS595a as gloss FS11140 and FS15056. P Lucas, Scale Aircraft Monographs Camouflage and Markings, *RAF Fighters 1945-1950 UK Based*, Guideline Publications Ltd, Luton UK, 2000, p.92.

[19] The RAF Type-D 1:2:3 roundel was promulgated by RAF Air Maintenance Order (AMO) A.413/47, para.18, of 15 MAY 1947.

[20] J Tanner, *British Aviation Colours of WWII*, RAF Museum Vol.3, Arms and Armour, London, 1986.

[21] P Lucas, *Camouflage & Markings No.2*, Scale Aircraft Monographs, Guideline Publications, Luton, Beds, 2000, p.84.

[22] Lucas, p.88.

[23] The US Federal Standard (FS) numbers in the FS595 standard are approximated 'close' matches. Lucas, p.88.

[24] RAF directive AMO A.413, para.18, 15 MAY 1947.

[25] AEIG Part 2, Sect 1, Instruction 11, RAAF HQ DTS Special Instruction Gen/96, TS.1840, File 9/1/1595, para.D(8a), 14 JAN 1948.

[26] RAAF DTS Diagram A5524, Sheet 1, Issue 4, 19 JAN 1951.

[27] Initially the red and blue were introduced as wartime matt colours; RAAF Support Cd (HQSUPCOM) Minute 1/501/329 (56) of 20 NOV 1947; and RAAF HQ Signal TS.1831, File 1/501/329, 24 NOV 1947. (These were identified as K3/235 and K3/232; AGI 3(c) Instruction No.19, of 30 AUG 1946, but are <u>not</u> considered to be *red* and *blue* for *National Markings*, only ancillary paint colours.) However, the 1942 wartime colours had previously been identified as K3/196 *Dull Red* and K3/197 *Dull Blue;* a listing of RAAF K3 colours up to K3/324 is provided by P Malone & G Byk, *Understanding RAAF Aircraft Colours*, Red Roo, Melbourne, 1996, pp.38-9.

[28] AEIG Part 2, Instruction No.9, Sect 1, Sheet 5, App D of 31 MAY 1951, provides the National Marking K3/ identification numbers, the colour names, and the BS381C equivalents. *Bright Red* K3/346 was similar to the wartime K3/169.

[29] *Bright Red* was *Post Office Red* BS381C-538, and later became *Cherry*. Lucas, p.88. These red and blue hues were maintained by the RAAF in National Markings, becoming *Post Office Red* (AS K185-538) and *Oxford Blue* (AS K185-105) in 1975; DEF(AUST)572 '*Insignia (Defence Aircraft)*', MAR 1975, A/L 1 JUL 1977, Fig.1. In 2011, these same colours are defined in the AAP.7021.004-1(AM1) as Australian Standard (AS) R15 *Crimson,* and AS B13 *Navy Blue;* AAP.7021.004-1(AM1) *Aircraft Finishing*

Schemes, Material and Processes, Sect 2, Chap 1, Ann G diagram p.1G-1, dated 4 JUL 2011 - this authority lists the following equivalents standards for our roundel colours: AS R15 *Crimso*n, BS381C-538 *Cherry Red*, FS595-11136; AS B13 *Navy Blue*, BS381C-105 *Oxford Blue*, FS595-15048.

[30] Other K3/ colours introduced in JUL 1948 were K3/347 *Orange* and *Royal Blue,* K3/348, for brush-painting insignias and lettering; RAAFHQ File TS1(D) note of action 9/1/1539(30A) of 30 JUL 1948.

[31] Ian K Baker, *Aviation History Colouring Book,* number 80, Melbourne, 2014, p.17.

[32] AEIG Part 2, Instruction No.9, Sect 1, Sheet 5, App D of 31 MAY 1951.

[33] These Dulux identifiers used by DAP Parafield for painting "Insignias and Lettering" were Dulux *Bright Red* 388-5302, Dulux *Royal Blue* 388-041, and Dulux *White* 388-026. RAAFHQ File 1/501/329(54A), c1947-48.

[34] D Muir, *Southern Cross Mustangs*, Red Roo, Melbourne, 2009, p.92.

[35] Adding K3/231 *Black* to K3/232 *Azure Blue* No 4 (later BS381C-104) produced *Royal Blue* No.6 (BS381C-106); RAAFHQ Postagram TS.1831 1/501/329(55A) of 24 NOV 1947.

[36] RAF A.P.119A-0601-1E p.22; Lucas p.92.

[37] P Malone & G Byk, *Understanding RAAF Colours*, Red Roo, Melbourne, 1996, p.39.

[38] HQRAAF T.S.1A Minute 1/501/329 (56) of 20 NOV 1947.

[39] HQRAAF T.S.1 note of action 9/1/1595 (20A) of 30 JUL 1946, which added two new colours to the stores identifiers: K3/347 *Orange* (BSI No.57), and K3/348 *Royal Blue* (BSI No.6).

[40] "*Mid Blue* [mix] Dulux *White* 388-026 and Dulux *Royal Blue* 388-041 (Blue No.6)"; DAP Parafield note 1/501/329 (54A) cNOV 1947.

[41] 86WG HQ Postagram T.1040 2102/1/ENG, on RAAF HQ file 1/501/329 (53A) of 16 OCT 1947.

[42] 38SQN moved from Changi to Richmond on 8DEC52, and became part of 86WG on 11 DEC 1952 which was the same date that 90WG in Singapore disbanded, ABOs N.8/1953 and N.9/1953 of 19 JAN 1953.

[43] RAAFHQ Postagram TS.1831 1/501/329(55A) of 24 NOV 1947, with DAP Parafield Resident Technical Officer (RTO) attachment "*Insignia Painting and Lettering*" (54A).

[44] Baker, *AHCB* number 80, pp.7, 17.

[45] 30 CU, 30 TU and 36SQN Unit History A.50s 1950-53.

[46] *Units of the RAAF, A Concise History, Vol 7 Maintenance Units*, RAAF Historical Section, Canberra, 1995, pp.72-3.

[47] RAAF Schofields disbanded on 30 APR 1953, ABO N.199/1953 of 22 JUN 1953.

[48] RAAF DEPAIR AIR ENG signal TEF.951, 4101/261 of 1 NOV 1965 specifies reference of AAP 729.21 of "all transport aircraft to have words ROYAL AUSTRALIAN AIR FORCE applied in 10.5" red letters to upper sides of fuselage". Drawings A13286 sheets 1 & 2 are referred to in the AAP 729.21 Vol 1 Ch 1 Sec 9. In addition, RAAF AAP 7002.046 Air Logistics SPO drawing nos. ALO1009-06-01 and -05-01 of 2001 refer.

[49] Baker, *AHCB* 80, p. 17.

[50] DAP Parafield note 1/501/329 (54A) c NOV 1947 gives the red as Dulux *Bright Red* 388-5302. RAAFHQ Postagram TS.1831 1/501/329(55A) of 24 NOV 1947 refers to K3/235 *Signal Red* BSI No.37 (which would become BS381C-537) for brush painting 86WG aircraft.

[51] N Parnell & T Boughton, *Flypast*, AGPS, Canberra, 1988, p.183.

[52] RAAF HQ signal TS.1782 1/501/329 of 26 SEP 1947; AFHQ TS.1A Minute 1/01/329(56) of 20 NOV 1947; RAAFHQ Postagram TS.1831 1/501/329(55A) of 24 NOV 1947. Specified were colours *Red* No.37 (RAAF Ident K3/235), *Black* (K3/231), *Blue* No.4 (K3/232), but as this last colour was a lighter blue, needed to be darkened with a black "dash of K3/231, = *Royal Blue* No.6".

[53] K3/185 was the Australian stores identifier for the yellow that had been used by the RAF as '*Yellow*' for trainer aircraft and roundels as Aircraft Finish No.2 and then Aircraft Finish No.405. Although the British Standard BS381 had included '*Golden Yellow*' since its first issue in 1930, it was not until 1964 that the Ministry of Supply colours of all RAF aircraft were included into BS381C standard and although a close match, the RAF standard became '*Golden Yellow*' BS381C-356. P Lucas, *Camouflage & Markings Vol.2*, Scale Aircraft Monographs, Luton, Beds, 2000, p.88.

[54] '*Yellow*' K3/185 was a close approximation to BS381C-356, and in the US Federal Standard FS95a system as semi-gloss FS23538. B Pattison, *Kingfisher in the Antipodes*, Red Roo, Melbourne, 1995, p.54.

[55] Winjeel A85-404 served on 34(ST)SQN over OCT 1960-JUL 1964, E/E.88 for A85-404. Vampires flown by 34(ST) SQN included T.35As A79-801, -805, -818, -823, -825, -834 and -835, T.35s A79-651 and -665, most of which had dayglo applied JUL-DEC 1961.

[56] RAF Air Publication (A.P.) 119A-0601-1D A/L9, MAR 1972, 'Application' para.5.

[57] The Navigation Trainer (NT) modification was Dakota Order No.82, undertaken by DAP in 1952 to A65-14, -26, -30, -67, -88, -89, and -100, and also A65-80 in 1955; E/E.88 A65 Status Cards.

[58] A65-99 of ARDU appears to be the first Dakota modified by DAP with the SARAH capability over JAN-FEB 1957.

[59] 34(Comms)SQN disbanded at Mallala on 26 OCT 1955, Air Board Order (ABO) N.726/1955 of 19 DEC 1955.

[60] *Units of the RAAF, Vol 7 Maintenance Units*, AGPS, Canberra, 1995, pp.125-6.

[61] Formed as ARDU 'Det C' on 4 FEB 1954, ABO N.131/1955 of 9 MAR 1954.

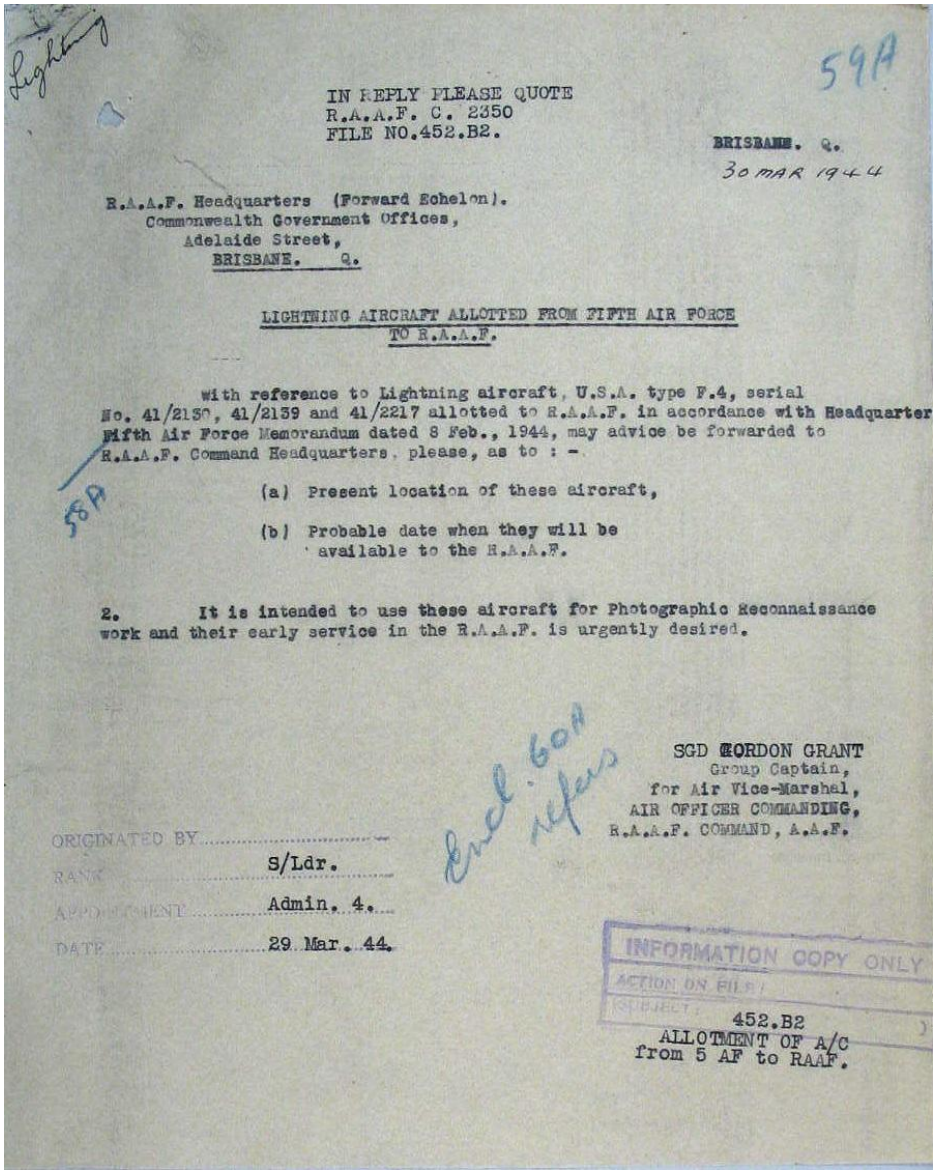
[62] ATU formed on 17 JAN 1955, ABO N.123/1955 of 28 FEB 1955.

[63] ATU 'Det A' formed at Edinburgh 31 OCT 1955, ABO N.695/1955 of 28 NOV 1955. Then in APR 1958, ATU Det A became 2ATU: the parent unit was 1ATU at Woomera, and 2ATU at Edinburgh; Stephens, p.447.

[64] 1ATU disbanded Woomera 30 SEP 1967, ABO N.55/1967, of 2 NOV 1967.

[65] G-G FLT disbanded 20 MAY 1947, NAA A9186/66 G-G Flt A.50 Unit History.
[66] RAAF VIP FLT formed 1 APR 1955 as an independent unit in 86WG, ABO N.265/1955 of 2 MAY 1955.
[67] For trainers, application of dayglo took about two weeks. The Winjeel work was carried out by "CAC team at 1BFTS" over APR to JUN 1961, while Vampire dayglo application was undertaken by de Havilland at Bankstown from JUN 1961. RAAF E/E.88 A85 and A79 cards.
[68] See *adf-serials Telegraph* Vol 7 Issue 4, Spring 2017, for Vampire article no.4 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202017%20Spring%20.pdf
[69] A Webber, *CT4 Airtrainer in Service with the RAAF*, 1992.
[70] E/E.88 A85 Status Cards. The two-week modification is annotated by Modification and Purchase Order numbers as "Mod52 P.O.751229". Several aircraft cards are annotated "by CAC working team" at BFTS (cards A85-424, A85-445).
[71] See *adf-serials Telegraph* Vol 7 Issue 4, Spring 2017, for Vampire article no.4 in this series:
http://www.adf-serials.com.au/newsletter/ADF%20Telegraph%202017%20Spring%20.pdf
[72] E/E.88 A79 Status Cards. The two-week modification is annotated as "Mod332 P.O.764962".
[73] A65-78 was the first Dakota with the new ARDU tail design at Laverton on 5 NOV 1974; ARDU Unit History A50 NOV 1974.
[74] Parnell & Boughton, p.183.
[75] E/E.88 A65 Status Cards for 1952 modification to Dakota NT. Other NT modifications were: Dakota NT Mod 103, *Installation of Movable Equipment*, NAA CRS A705 150/8/1365; there is also a file Dakota NT Mod 115*, Fitment of Hughes Periscopic Sextant*, NAA CRS A705 150/4/9413, which presumably was later replaced by the Kollsman periscopic sextant in the 1960s.
[76] Geoff Goodall's Aviation History Site;
http://www.goodall.com.au/australian-aviation/seasianaustdeliveries-3/seasianaustdeliveries%20-3.html
[77] Geoff Goodall's site.
[78] RAAF HQ DTS Special Instruction Gen/96, TS.1840, File 9/1/1595, para.D(8a), 14 JAN 1948.
[79] Dakota fuselage roundels 48" diameter, RAAF DEPT AIR HQ Canberra 579/3/264, undated c1960.
[80] RAAF HQ signal TS.1769 1/501/329 of 17 SEP 1947 specified "Special marking for VIP Dakota aircraft A65-85. Replica of Governor-General's flag to be painted on both sides of fuselage as far forward towards the nose of the aircraft as practicable. No other markings except usual service markings required."
[81] E/E.88 Status Card for A65-85. The aircraft had been modified by 1AD with an office, lounge suite and kitchenette; "Governor-General's Plane Ready for Service", in *The Advertiser*, Adelaide, 11OCT47, p.1.
[82] RAAF VIP Flt formed at Canberra as an independent unit of 86WG on 1 APR 1955. ABO N.265/1955 of 2 MAY 1955.
[83] Dakota fuselage roundels 48" diameter, RAAF DEPT AIR HQ Canberra 579/3/264, undated c1960.
[84] 30 CU, 30 TU and 36SQN Unit A.50s 1950-1955.
[85] Stephens, pp.195-202.
[86] Author's flying logbook for 1968; and RAAF Status Cards A65 E/E.88.
[87] *Adf-serials* database entry for A65-81 and E/E.88 Status Card for A65-81; and 2AD Unit History A.50 APR 1959.
[88] NAA CRS A703 400/1/10/P1(16) of 26 OCT 1961.
[89] A65-97 underwent 'E' Servicing at ARW (previously DAP) Parafield over the second half of 1962; E/E.88 Status Card for A65-97.
[90] 38(TT)SQN Unit History A.50s NOV58-JUN63; this entry in NOV58 states: "On 1NOV58 38(T)SQN became 38(TT)SQN as the major transport tasks will be carried out by 36(T)SQN with C-130s. 38(TT)SQN formed for the purpose of carrying out aircrew Dakota training and air movements training, in addition to some transport tasks to give experience to aircrew prior to C-130s."
[91] 38(TT)SQN Unit History A.50s NOV58-JUN63; and E/E.88 A65 Aircraft Status Cards.
[92] RAAF Dakota major servicing at Parafield passed from Division of Aircraft Production (DAP) to Airframe Repair Workshops (ARW) in late 1960, and then when ARW closed in 1969 this task passed to Hawker de Havilland (HDH) at Bankstown.
[93] J Bennett, *Highest Traditions, History of 2SQN RAAF*, AGPS, Canberra, 1995, p.404-5.
[94] RAAF Surface Finishers Richmond website: https://sites.google.com/site/raafsurfacefinishers/richmond-units
[95] TSF was formed as an independent unit at Butterworth on 1MAR67, ABO N.15/1967 of 17 APR 1967.
[96] E/E.88 A65 Aircraft Status Cards, and imagery.
[97] Dakota fuselage roundels 48" diameter, RAAF DEPT AIR HQ Canberra 579/3/264, undated c1960
[98] The final five Dakotas on TSF in JUN 1980 were A65-64, -69 and -71 (freighters), and A65-98 and -122 (VIPs).
[99] Geoff Goodall's Aviation History Site; http://www.goodall.com.au/photographs.htm
[100] ARDU Unit History A.50 1960-1968.
[101] DI-AF OPS 4-21 para.2b of JUN 1990 stated: roundel colours may be consistent with the overall scheme of those aircraft having a camouflage or low visibility requirement (as detailed in DEF AUST 572); fin flashes are [only] to be applied to those aircraft bearing the red-white-blue roundels. The later AAP 7021.004-1, Sect 2, Ch 1, p.7 was more explicit: "variations to the standard roundel for aircraft with tactical or camouflage schemes are permitted, and with approval, a black kangaroo silhouette without the circumscribed ring can be used; fin flashes do not form part of a low visibility paint scheme."
[102] J Bennett, 'Aircraft of the ADF – N2 Dakota', in *Australian Aviation*, AUG 1995, p.71.
[103] The "cutting circle" was 1/15th (0.07) of the diameter of the outer blue ring of the roundel – this made the roundel 1:2:3:3.2. AAP7021.004-1 (AM1) *Aircraft Finishing Schemes, Material and Processes*, Ann G diagram p.1G-1, dated 4 JUL 2011.
[104] AAP 7021.004-1 Sect 2 Chap 1, diagram 1C-4.

[104] Source: http://www.lightning.org.uk/jun04sotm.html
[104] : https://www.youtube.com/watch?v=cX_m_Vg6KYM
[104] http://adbr.com.au/next-eight-raaf-f-35as-on-track-for-2018-delivery/
105 What has come to light is the intent to supply an additional three F4 airframes under local Lend-lease a few months later that had become surplus to requirements. It seems that when we were down to **A55-1** and a few Wirraways at 1 PRU in early 1944; discussions were started in obtaining more airframes considered surplus by the recent introduction in theatre of F5 Lightnings for the 5th AAF. Several surplus F4 airframes had now become available that were in storage at Port Moresby. Three were identified by the 5th AAF by serial and advised in writing, the RAAF, of their intent to supply during early February 1944. Those earmarked originally were **F4-1-LO Lightnings: 41-2130, 41-2139** and **41-2217 . Some of which are in this 8th Photo Sqn 1944 Pic**



Lightning

59A

IN REPLY PLEASE QUOTE
R.A.A.F. C. 2350
FILE NO.452.B2.

BRISBANE. Q.
30 MAR 1944

R.A.A.F. Headquarters (Forward Echelon).
Commonwealth Government Offices,
Adelaide Street,
BRISBANE. Q.

LIGHTNING AIRCRAFT ALLOTTED FROM FIFTH AIR FORCE TO R.A.A.F.

With reference to Lightning aircraft, U.S.A. type F.4, serial No. 41/2130, 41/2139 and 41/2217 allotted to R.A.A.F. in accordance with Headquarter Fifth Air Force Memorandum dated 8 Feb., 1944, may advice be forwarded to R.A.A.F. Command Headquarters, please, as to : -

58A

(a) Present location of these aircraft,

(b) Probable date when they will be available to the R.A.A.F.

2. It is intended to use these aircraft for Photographic Reconnaissance work and their early service in the R.A.A.F. is urgently desired.

SGD GORDON GRANT
Group Captain,
for Air Vice-Marshal,
AIR OFFICER COMMANDING,
R.A.A.F. COMMAND, A.A.F.

Encl. 60A refers

ORIGINATED BY
RANK S/Ldr.
APPOINTMENT Admin. 4.
DATE 29 Mar. 44.

INFORMATION COPY ONLY
ACTION ON FILE
SUBJECT

452.B2
ALLOTMENT OF A/C
from 5 AF to RAAF.

[106] Source: http://www.lightning.org.uk/jun04sotm.html
[107] : https://www.youtube.com/watch?v=cX_m_Vg6KYM

MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

16/88

November 21, 1988

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE LIGHTNING F6 XR769

Date: 11 April 1988
Parent Airfield: RAF Binbrook
Place of Accident: North Sea, 5 miles off Easington, Humberside
Crew: One
Casualties: One slight

CIRCUMSTANCES

1. One the morning of 11 April 1988 the pilot of XR769 was carrying out a routine training mission as the No 2 of a formation of 4 Lightnings. The sortie proceeded without incident for the first 1 hr 30 min. At this point the pilot, having just cancelled reheat, slowly retarded the throttles in the cold power range. A series of loud bangs ensued and the pilot immediately advanced the throttles slightly and initiated a pull up in an attempt to clear the condition. However, the FIRE 1 caption illuminated and a small amount of fumes and smoke entered the cockpit but these quickly cleared. He declared a MAYDAY, continued a steep climb and closed down the No 1 engine. He requested a visual inspection from the formation leader and levelled the aircraft at approximately 10,000 ft heading towards Binbrook. The formation leader reported what appeared to be fuel venting from the aircraft.

2. When the aircraft was some 53 miles north east of Binbrook the FIRE 1 caption extinguished. However, the Formation leader reported a visible fire issuing from the port side of the fuselage above and aft of the Rad Top drill round. The fire continued to spread and the pilot turned the aircraft away from the coast, completed his pre-ejection drills and initiated ejection. The pilot's ejection was successful and he was rescued by helicopter after only 15 minutes in the sea.

CAUSE

3. The Investigation considered that the evidence was sufficiently compelling to discount all but that of persistent fire and structural damage as a result of an uncontained failure of the No 1 engine following a severe surge as the probable cause of the accident. However, in the absence of any wreckage, a degree of conjecture was inevitable concerning the exact cause of the surge.

Issued by: Public Relations
(Royal Air Force)
Ministry of Defence
Main Building
Whitehall
London SW1A 2HB

Tel: 01-218 3253/4

[108]

[109] http://adbr.com.au/next-eight-raaf-f-35as-on-track-for-2018-delivery/

[110] The USAFIA (USAAF) passed on loan to the RAAF ex their P-40E/E-1 orders a total of 119 aircraft during the early part of 1942(March to June). Out of 125 P-40E-1 against our own orders received, a total of 86 P-40E-1 aircraft were returned to the USAAF in re-payment. This left the RAAF in debt to the USAAF of 33 aircraft as of March 1943. So there was 119 P-40E/E-1s plus the 33 not repaid equalled 152 aircraft, plus another 11 Pool aircraft taken on strength August 1942. Missing are three P-40E-1s that the USAAF had taken over without paper work.

These were 41-36090(ET736), 41-36171(ET817) and 41-36235 (ET881). All in all there were 163 RAAF P-40E/E-1s taken on strength.

So in 1945, the reco was 126 plus 3 additional taken by USAAF (discovered post war) plus 14 sunk (SS Montreal) equals 143 per charged 9 out of 18 NEI Allocated P-40E-1s, and that makes 152 Plus further 11 (A29-153 to A29-163) ex reserve pool aircraft in separate agreement at no charge The RAAF saga with getting Modern fighter started in January 42, and finally became in being on the 6th March 42 when 25 loaned P-40E/E-1s were allocated from USAFIA reserves for the RAAF.

End Notes: Curtiss Wright Corner: P-40E-1-CU A29-120 "Spit kitten/Peters Revenge/Still Squirtin" Gordon Birkett @2017

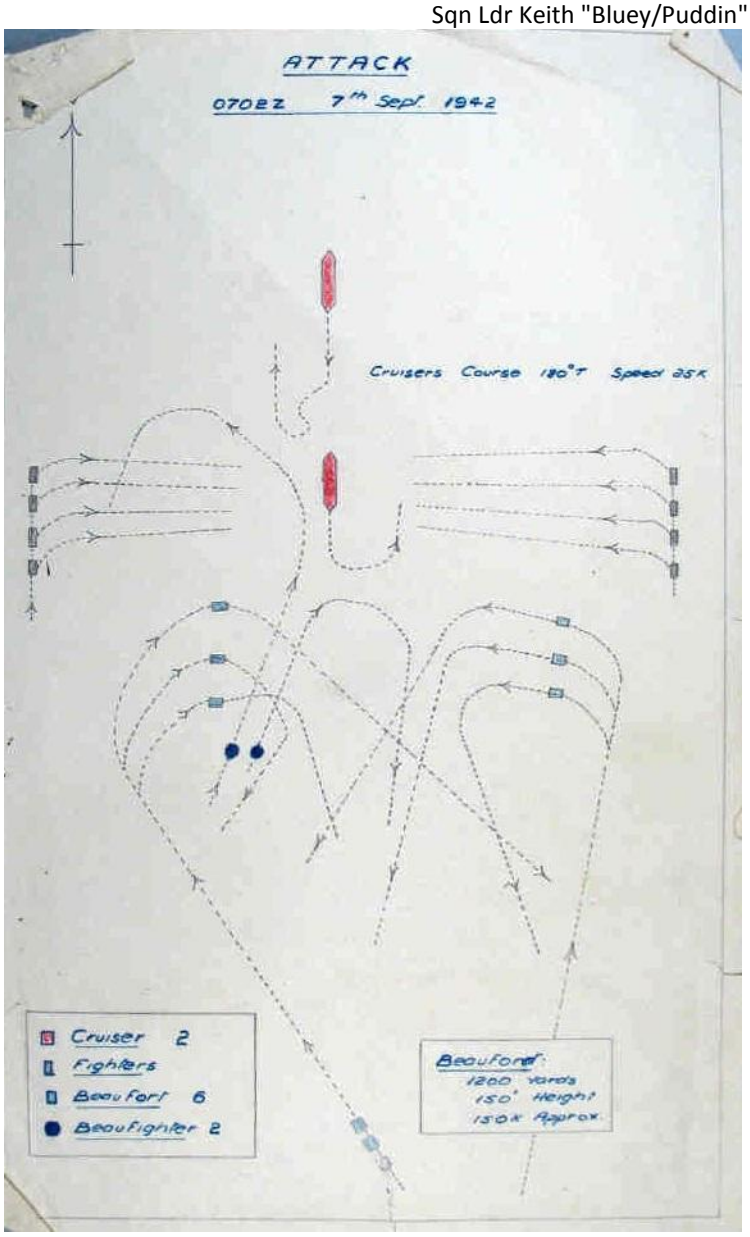
The USAFIA (USAAF) reconciliation, they passed on loan to the RAAF ex their Project X/Sumac P-40E/E-1 orders a total of 119 aircraft. This includes two lots; one lost before delivery, 41-24817 (A29-73) and the 18 Ex NEIAF P-40E-1s (FY 41-25163 to 41-25185), that they say we got. However, the RAAF actually handed 9 of the later back over to the 49thFG in April 42, some even after being allocated an A29 serial (hence why there are twins IE A29-100 &A29-101etc)
So what does the USAAF Reco of 119 work out to? Well take 86 repays away,...that leaves 33 outstanding owed to the USAAF that was not paid, so that balances.

Further to this, if we agree on the 86 as both sides agree, and then we add together what the RAAF agreed to receiving of new RAF BPC P-40E-1s, a total 57 **of them.....we get the same 143 number

The agreement which the US and RAF came to in order to supply the RAAF with 250 Kittyhawk aircraft, was to re-allocate and ship 125 aircraft from each own allotments (125 USAAF and 125 RAF).

So over the years the common theme has been that the RAF did not meet its requirements and that the US supplied all 163 Kittyhawk P-40E/E-1's to the RAAF, even though some of them were decidedly second hand. RAF did meet its requirements, per Order BSC-322 in sending a total 143 P-40E-1 aircraft to the RAAF, most of these directly from their contracts and shipped direct from the US of A.

111 Sqn Ldr Keith "Bluey/Puddin" Truscott DFC.



112

[113] Example of Blue's Log Book: Sept 1942

No 76 Squadron - Gurney Field - Milne Bay - NEW GUINEA.

Year	Month	Date	Aircraft Type	Aircraft No.	Pilot, or 1st Pilot	2nd Pilot, Pupil or Passenger	Duty (Including Results and Remarks)	Single-Engine Aircraft Day Dual (1)	Single-Engine Aircraft Day Pilot (2)	Single-Engine Aircraft Night Dual (3)	Single-Engine Aircraft Night Pilot (4)	Multi-Engine Aircraft Day Dual (5)	Multi-Engine Aircraft Day 1st Pilot (6)	Multi-Engine Aircraft Day 2nd Pilot (7)	Multi-Engine Aircraft Night Dual (8)	Multi-Engine Aircraft Night 1st Pilot (9)	Multi-Engine Aircraft Night 2nd Pilot (10)	Pas-senger (11)	Instr/Cloud Flying Hood, in cols. (1) to (10) Dual (12)	Instr/Cloud Flying Hood, in cols. (1) to (10) Pilot (13)
			—	—	—	—	— Totals Brought Forward	63.10	510.05	3.10	18.20	1.00						1.05	17.55	16.00
September	1	Kittyhawk	A29-142	Self	Solo	Operational Attack On Jap. Submarine. No Incident		.20												
	5	Kittyhawk	A29-120	Self	Solo	Operational Bombing + Strafing Jap Targets		.20				Japanese Lines Strafed + Bombed.								
	7	Kittyhawk	A29-120	Self	Solo	Operational Escort. 6 Beaufort, 2 Beaufighters Attack on Jap Cruisers. Not Sighted. No Incident		2.20												
	11	Kittyhawk	A29-120	Self	Solo	Operational Escort 6 Beauforts, 2 Beaufighters. Attack on Jap Cruisers.		1.10				Japanese Cruisers Machine-Gunned + Many Strikes Observed on Decks								
	8	Kittyhawk	A29-120	Self	Solo	Operational Recco. Oogura Mission. Jap Headquarters - Goodenough Is. Strafed.		1.45				Japanese Headquarters Machine-Gunned.								
	9	Kittyhawk	A29-142	Self	Solo	Operational Aerodrome Defence Patrol		1.35												
	10	Kittyhawk	A29-142	Self	Solo	Operational Interception No Incident		1.20												
	11	D.H. 82.	A229	Self	Lt. Connely.	Reconnaissance. Milne Bay		.45												

[114] Frank Rees was born in 1922 and was a NSW Department of Education Teacher before joining in May 1943. File: REES, Frank Foster - (Sergeant); Service Number - 433859; File type - Casualty - Repatriation; Aircraft - Kittyhawk A29-120; Place - Mildura, Victoria; Date - 19 June 1944

End Notes : The Sad tale of Two USAF Canberras in Victoria: 1962: *Gordon R Birkett@2017*

[115] A month before,....15th August 1962, Six pilots and four aircraft from the RAAF Red Sales Aerobatic Team crashed in formation practicing for the "open Day" at East Sale, Victoria.

[116] The 57th WR Squadron Forward Echelon arrived at Laverton RAAF on the 11th June 1962, with the bulk of the Unit arriving, under command of Lt Colonel T A Aldrich USAF, on the 12th September 1962, along with a U2 Detachment(Major J King commanding). A C-124 Globemaster arrived on the following day carrying nine Officers and forty-two enlisted men.

[117] It was one of two B-57B aircraft (Before WB57B Modifications with the other being 52-1498) used for special weapons testing at Kirtland Air Force Base, N.M in 1954. On a typical mission, the NB-57B was loaded with one or more external weapons and flown to evaluate to stability of the ordnance while being carried and the performance of the weapon after release. Various types of bombs, missiles and rockets were tested at the White Sands Missile Range, N.M. beginning in the fall of 1954.

[118] Operation Crowflight was to collect, from the sky over the Southern Ocean, a rare gas called krypton-85 with which the US hoped to calculate the size of the Soviet Union's nuclear arsenal.

[119] From 14th Sep 1962 Crowflight aircraft were permanently based in Australia for two and a half years thereon until February 1966 as a “an urgent requirement … to acquire representative air samples between 40 and 45 degrees south latitude, using aircraft operating from a site preferably in the Melbourne area”. The proposed flights would extend some 800 kilometres south of Melbourne, some 160 kilometres south of the southernmost point of Tasmania. **Some 45 flights a month on average were flown by aircraft based, initially at Laverton, Victoria RAAF base to 29th September 1965, and <u>from the 30th September 1962, the Department of Supply airfield at Avalon, Victoria.</u>** The usual compliment of aircraft on temporary duty was on average, a two aircraft U2 detachment and a flight of four RB-57s.

National Archives of Australia Files:
Title: USA [United States of America] - General [includes correspondence, articles, draft articles and photographs; draft articles include 'Australia's role in the tracking of satellites and deep space probes', 'Project Hibal', 'Operation Crowflight' and 'The significance of American scientific projects in Australia'] Contents date range 1956 - 1963 ,Series number M1148,Control symbol USA - GENERAL
Citation NAA: M1148, USA - GENERAL ,Item barcode 31415823, Location Melbourne
Access status Open Records authority class number 1017412

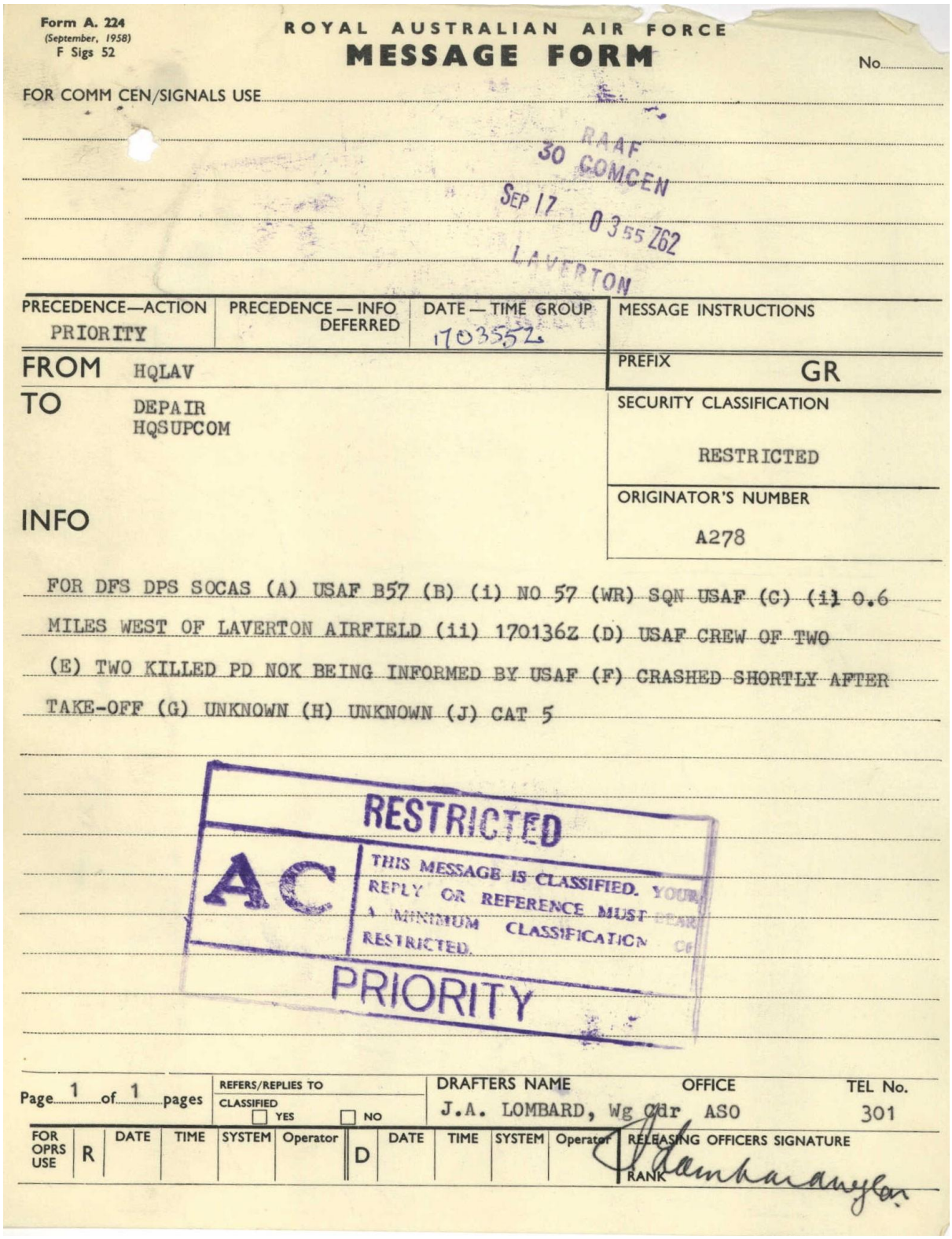
Title: Crash of USAF aircraft ,Contents date range 17 Sep 1962 - 05 Nov 1965
Series number B94 Control symbol 33/AIR/7/PART 1
Citation NAA: B94, 33/AIR/7/PART 1 Item barcode 4350195 Location Melbourne
Access status Open Date of decision 17 Oct 2011

Other sources:

Laverton RAAF A50 History Sheets 1962-1963

ATOMIC SPIES IN SOUTHERN SKIES: Operation Crowflight–United States high altitude radiological sampling in Australia 1960-1966.

https://nautilus.org/napsnet/napsnet-special-reports/atomic-spies-in-southern-skies-operation-crowflight/



Form A. 224
(September, 1958)
F Sigs 52

ROYAL AUSTRALIAN AIR FORCE
MESSAGE FORM

No.....

FOR COMM CEN/SIGNALS USE

RAAF
30 COMCEN
SEP 17 0355Z62
LAVERTON

PRECEDENCE—ACTION	PRECEDENCE — INFO	DATE — TIME GROUP	MESSAGE INSTRUCTIONS
PRIORITY	DEFERRED	170355Z	

FROM HQLAV

TO DEPAIR
HQSUPCOM

INFO

PREFIX GR

SECURITY CLASSIFICATION
RESTRICTED

ORIGINATOR'S NUMBER
A278

FOR DFS DPS SOCAS (A) USAF B57 (B) (i) NO 57 (WR) SQN USAF (C) (ii) 0.6 MILES WEST OF LAVERTON AIRFIELD (ii) 170136Z (D) USAF CREW OF TWO (E) TWO KILLED PD NOK BEING INFORMED BY USAF (F) CRASHED SHORTLY AFTER TAKE-OFF (G) UNKNOWN (H) UNKNOWN (J) CAT 5

RESTRICTED
AC
THIS MESSAGE IS CLASSIFIED. YOUR REPLY OR REFERENCE MUST BEAR A MINIMUM CLASSIFICATION OF RESTRICTED.
PRIORITY

Page 1 of 1 pages | REFERS/REPLIES TO | CLASSIFIED ☐ YES ☐ NO | DRAFTERS NAME | OFFICE | TEL No.
J.A. LOMBARD, Wg Cdr | ASO | 301

FOR OPRS USE	R	DATE	TIME	SYSTEM	Operator	D	DATE	TIME	SYSTEM	Operator	RELEASING OFFICERS SIGNATURE

RANK

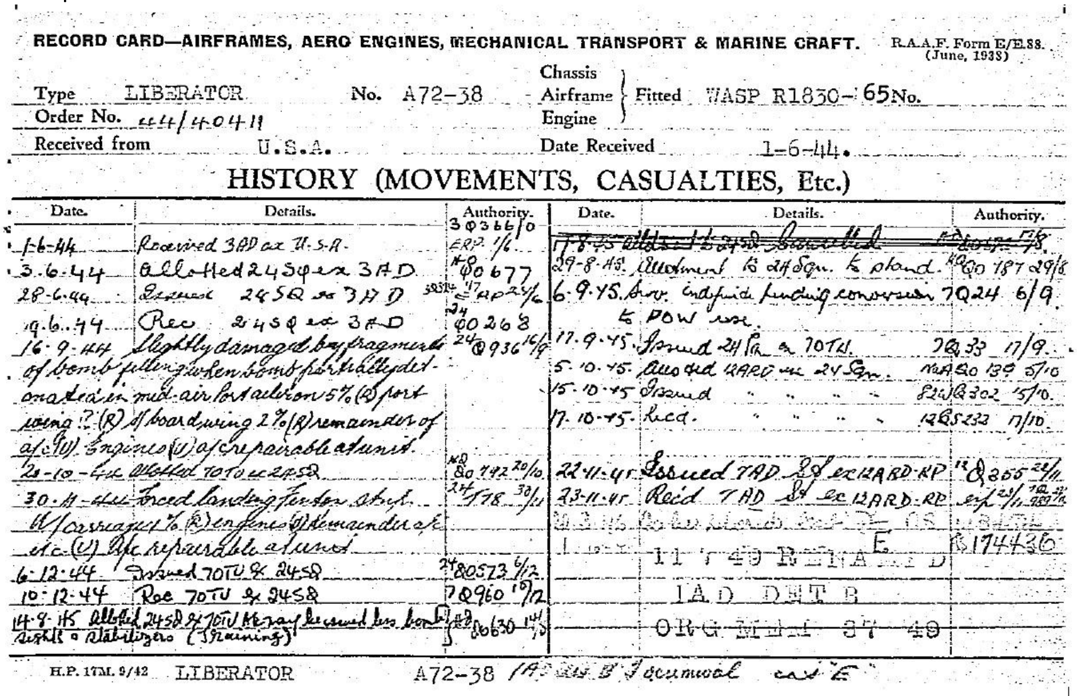
120 <u>NB:</u> *There is mentioned that one RB-57B landed with a undercarriage fault (the left main landing gear would not come down due to electrolysis in one of the door rods having metal fatigue)at Avalon Airstrip. Any details would be welcomed: Editor.*

121 ***<u>Even if you manage to get the aircraft back on finals,.....Watch</u>*** You tube footage: B-57 SINGLE ENGINE LANDING - B57 Canberra Aircraft Landing and Crash Landing (One safe, one fatal) 33084: https://www.youtube.com/watch?v=cHXxhmpwCxo

End Notes :The story of two A72-38 B-24Js in the RAAF: compiled Gordon Birkett 2017

122 http://www.b24australia.org.au/

123 File: NAA : 1944. Acquisition of Aircraft for RAAF



RECORD CARD—AIRFRAMES, AERO ENGINES, MECHANICAL TRANSPORT & MARINE CRAFT. R.A.A.F. Form E/E.88. (June, 1938)

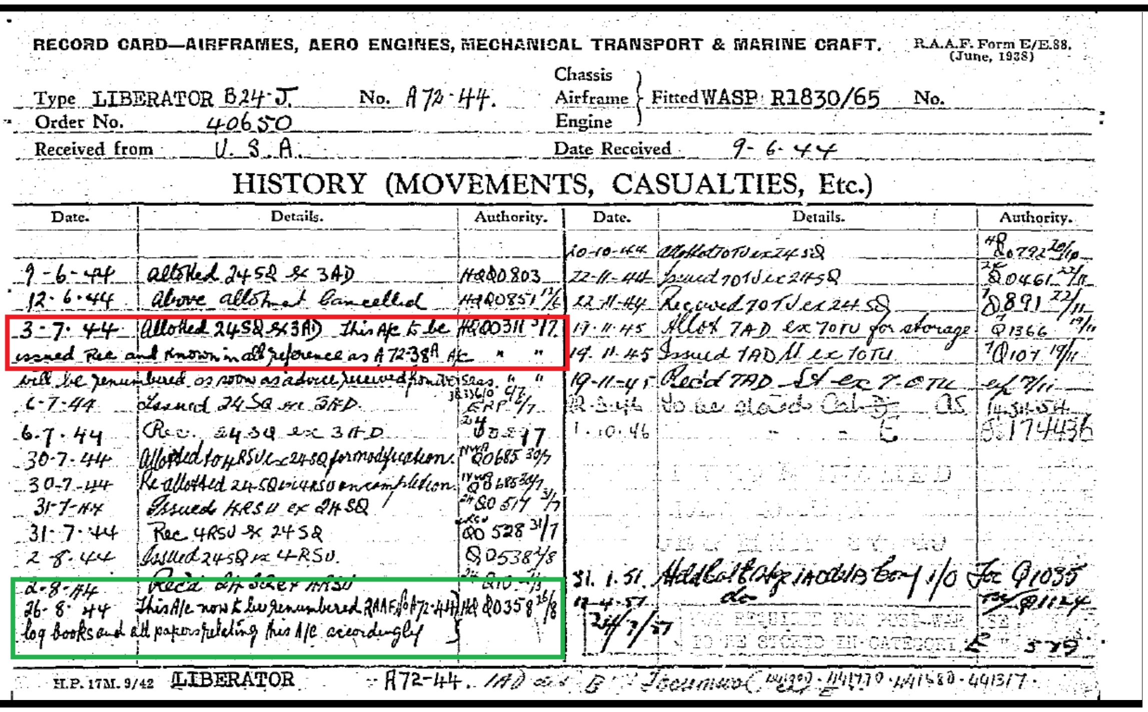
Type LIBERATOR No. A72-38 Chassis / Airframe / Engine Fitted WASP R1830-65 No.
Order No. 44/40411
Received from U.S.A. Date Received 1-6-44.

HISTORY (MOVEMENTS, CASUALTIES, Etc.)

Date.	Details.	Authority.	Date.	Details.	Authority.
1-6-44	Received 3AD ex U.S.A.	ERP 1/6	~~7-8-45~~	~~Allotted ... cancelled~~	
3.6.44	Allotted 24Sq ex 3AD	80677	29-8-45	Allotment to 24 Sqn. to stand	Q0 187 29/8
28-6-44	Issued 24SQ ex 3AD	AP 28/6	6-9-45	Appr. cndfied landing conversion	7Q24 6/9
19.6.44	Rec 24SQ ex 3AD	Q0268		to POW use.	
16-9-44	Slightly damaged by fragments of bomb falling when bomb fortuitously detonated in mid-air. Port aileron 5% (R) port wing ? (R) S/board wing 2% (R) remainder of a/c (U). Engines (U) a/c repairable at unit.	Q936 16/9	17-9-45	Issued 24 Sq ex 7OTU	7Q 33 17/9
			5-10-45	Allotted 12ARD ex 24 Sqn.	Q0 139 5/10
			15-10-45	Issued	8Q302 15/10
			17-10-45	Recd.	12S232 17/10
21-10-44	Allotted 7OTU ex 24SQ	80 742 20/10	22-11-45	Issued 7AD SA ex 12ARD-RP	Q 355 22/11
30-11-44	Forced landing Fenton strip. U/carriage % (R) engines (U) Remainder of a/c (U) A/c repairable at unit	578 30/11	23-11-45	Recd 7AD SA ex 12ARD-RP	23/11
6-12-44	Issued 7OTU ex 24SQ	80573 6/12		To be stored ... OS	S17443G
10-12-44	Rec 7OTU ex 24SQ	7Q960 10/12		11-7-49 RE ... E ... D	
14-8-45	Allotted 24SQ ex 7OTU. Ac may be used for bombing trials and stabilizers (Training)	80630 14/8		1AD DET B	
				~~ORG ... 37 49~~	

H.P. 17M. 9/42 LIBERATOR A72-38 1AD ... B Document ... E

124



RECORD CARD—AIRFRAMES, AERO ENGINES, MECHANICAL TRANSPORT & MARINE CRAFT. R.A.A.F. Form E/E.88. (June, 1938)

Type LIBERATOR B24-J. No. A72-44. Chassis / Airframe / Engine Fitted WASP R1830/65 No.
Order No. 40650
Received from U.S.A. Date Received 9-6-44

HISTORY (MOVEMENTS, CASUALTIES, Etc.)

Date.	Details.	Authority.	Date.	Details.	Authority.
			20-10-44	Allotted 7OTU ex 24SQ	80792 20/10
9-6-44	Allotted 24SQ ex 3AD	Q0803	22-11-44	Issued 7OTU ex 24SQ	80461 22/11
12-6-44	Above allotment cancelled	Q0851 12/6	22-11-44	Received 7OTU ex 24SQ	Q891 22/11
3-7-44	Allotted 24SQ ex 3AD. This A/c to be issued RAAF and known in all references as A72-38A A/c	Q0311 3/7	17-11-45	Allot 7AD ex 7OTU for storage	Q1366 17/11
	will be renumbered as soon as above received ...	"	19-11-45	Issued 7AD SA ex 7OTU	Q107 19/11
6-7-44	Issued 24SQ ex 3AD	ERP 6/7	19-11-45	Recd 7AD SA ex 7OTU	7/11
6.7.44	Rec. 24SQ ex 3AD	Q0527	3-5-46	To be stored Cat. E OS	45/454
30-7-44	Allotted to 4RSU ex 24SQ for modification	80685 30/7	1-10-46	E	S17443G
30-7-44	Re allotted 24SQ ex 4RSU on completion	80685 30/7			
31-7-44	Issued 4RSU ex 24SQ	80514 31/7			
31.7.44	Rec 4RSU ex 24SQ	Q0528 31/7			
2-8-44	Issued 24SQ ex 4RSU	Q0538 2/8	31.1.51	Allotted to 1AD ex 1/0	Q1035
2-8-44	Recd 24SQ ex 4RSU		13-4-57	do	Q1124
26-8-44	This A/c now to be renumbered RAAF A72-44. Alter log books and all papers relating this A/c accordingly	Q0358 26/8	24/7/57	... TO BE STORED IN CATEGORY E	379

H.P. 17M. 9/42 LIBERATOR A72-44. 1AD ... B Document ...

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