

THE DOUGLAS DOLPHIN IN RAAF SERVICE

By Geoff Goodall
and David Eyre

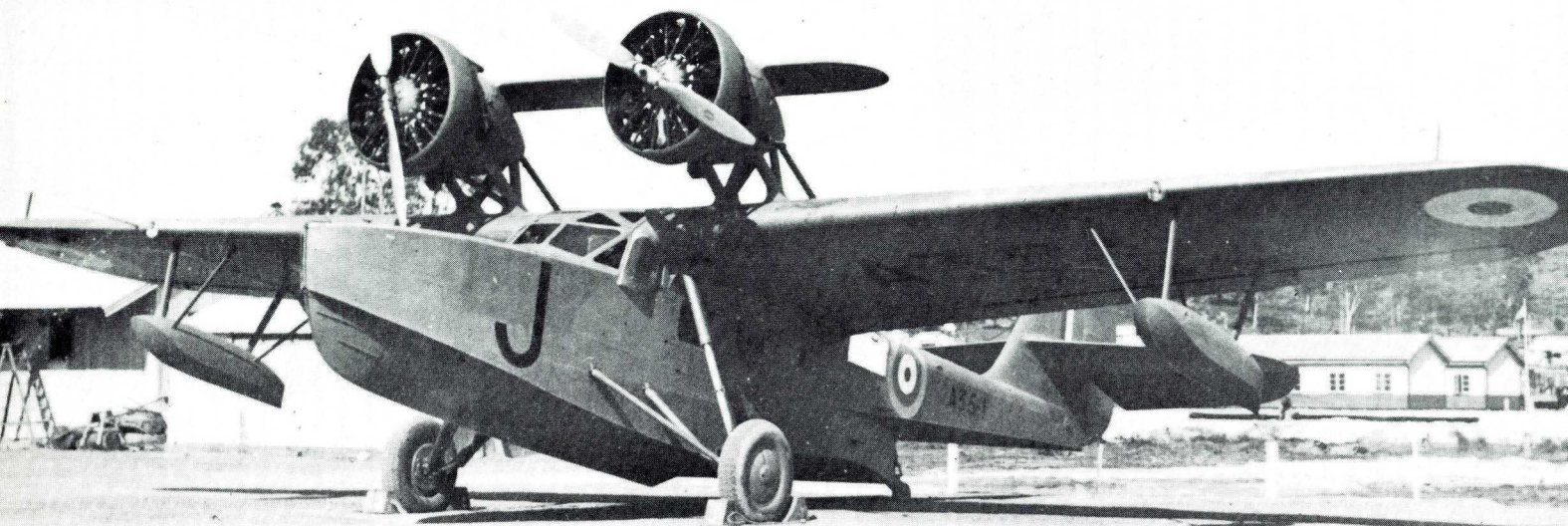


Photo: via Frank Smith

Many unusual aircraft types have been operated by the RAAF, particularly the varied civilian types impressed into military service in the early desperate days of World War Two, but none perhaps as unexpected as the twin-engined Douglas Dolphin amphibian.

Little has been written about the service life of the four Dolphins taken on RAAF strength during the war. More intriguingly, virtually nothing has been recorded of the circumstances in which these aircraft, which never saw Australian civil use, came to be acquired by the RAAF.

The Douglas Dolphin was evolved during the pre-Depression economic boom as a luxury air yacht for wealthy private owners. The prototype, a pure flying boat named the Sinbad, powered by two 300hp Wright Whirlwinds, was first flown in July 1930 from Santa Monica Bay, close to Douglas Aircraft Co's original works at Santa Monica, California. The production version was renamed the Dolphin and incorporated a number of design changes including an undercarriage to turn the aircraft into an amphibian. For water operations the main gear was raised to lift the wheels above the water line, while the tailwheel swung upwards against the hull.

The planned civil market was devastated by the Great Depression and it was only by the successful sale of Dolphins to the US military that Douglas managed to avoid a major financial loss on the type, their first venture into the field of commercial aviation.

A total of 58 Dolphins were built between 1931 and 1934, featuring no less than 17 different variants. They were produced in small batches for military orders, or custom built for each civil buyer. A range of radial engines, varying between 300hp and 550hp were offered.

Initial civil customers included William Wrigley, the chewing gum millionaire, who used a fleet of Dolphins for his Wilmington-Catalina Airline which flew the short 20 mile hop from the Los

Angeles mainland to the popular Catalina Island resort owned by his family. William E. Boeing of the Boeing Aircraft Co. purchased a Dolphin for his personal use and the millionaire business man William K. Vanderbilt had two, usually carrying a Dolphin on the stern of his yacht!

In US military service Dolphins were operated by the US Army Air Corps, US Navy and the Coast Guard. They flew as personnel transports, SAR and observation duties under a variety of military designations. One US Navy RD-2 version became the first presidential aircraft when fitted with a luxurious interior for the use of President Franklin Roosevelt. The Army Air Corps ordered eight YIC-21 models, intending them to accompany bomber squadrons on overwater flights as navigation and rescue aircraft, but the slow speed of the Dolphins caused this concept to be abandoned and the aircraft were assigned to observation and Air Sea Rescue duties in the Philippines, Hawaii and Panama Zone.

THE DOLPHIN IN AUSTRALIA

The Douglas Dolphin never appeared on the Australian Civil Register, despite a frustrated attempt postwar to put the sole RAAF survivor into airline service. How then did the RAAF come to operate four of these rather dated amphibians, whose performance on two engines could only be described as sedate and on one engine quite marginal?

The answer lies in the flurry of oil exploration activity in Papua New Guinea in the years leading up to the outbreak of World War Two. Amphibians and floatplanes were in demand to carry geologists to remote regions where they operated from rivers, and exploratory drilling began during 1937. The following year Australasian Petroleum Co, owned by British, Australian and American interest let a contract for a large scale aerial survey to US firm Fairchild Aerial Surveys Corp., and a KNILM Fokker trimotor was shipped to Port Moresby from Java to commence the survey.

On New Year's Day 1939 a Douglas Dolphin was unloaded from a ship at Brisbane to join APC's Papua survey. It retained its US civil registration and was flown to New Guinea by American Airlines Chief Pilot F.E. Secor, with Chief Engineer J.R. Lund and photographer Morgan Reynolds. A second Dolphin was also used and together with the Fokker they covered 28,000 square miles in what as described as "the most thorough and difficult scientific flying that had ever been carried out in New Guinea. The maps that resulted were the basis of the exploration work that followed."

The origin of the second Dolphin is obscure, but one unconfirmed report states that it was shipped from USA with the Sikorsky S-38B amphibian VH-UZE imported by Papuan Oil Development in early 1937. The Sikorsky was shipped to Brisbane and assembled there in March 1937 before flying to New Guinea to commence oil survey flying. Also unable to be confirmed is the theory that the registration VH-UZF was allocated to this Dolphin, but in the event it retained its US civil registration in New Guinea. Certainly the registration VH-UZF was not used in sequence in 1937, being eventually issued to a D.H. 84 Dragon three years later.

A photograph taken in New Guinea shows Dolphin NC14286 accompanied by Guinea Airways Stinson Reliant floatplane VH-ABJ and a Sikorsky S-38B during oil survey operations.

By 1940 the war situation was deteriorating and the RAAF had begun impressment of suitable civil aircraft for training and transport roles. The Australasian Petroleum Company's oil survey in New Guinea was nearing completion and the company presented both Dolphins to the RAAF as gifts. However the exact details of how they left New Guinea and why they were taken on RAAF strength over a year apart are not known. A possible explanation is another unconfirmed report that a Dolphin was dropped from slings during loading on board a ship at

Port Moresby and badly damaged. It was shipped to Sydney for lengthy repair by de Havilland Aircraft Pty. Ltd. at Mascot and handed over to RAAF on completion. This would logically refer to A35-2 but the authors have been unable to find any written references to these events.

RAAF records show that their first Dolphin, A35-1, was received in June 1940 as a "Gift from Australasian Petroleum Co Ltd, late NC14286". The second, A35-2, was taken on charge in August 1941, the first entry on its aircraft history card being "Awaiting erection at Richmond ex USA". Both were used by the Seaplane Training Flight at Rathmines, NSW training aircrew in the vagaries of flying boat handling prior to their conversion on to Catalinas.

Over a year was to pass before the third Dolphin appeared, A35-3 being erected at Point Cook in October 1942 as "Received from RAF" but still carrying US civil registration NC982Y. In April the following year the fourth and last Dolphin joined the RAAF when A35-4 was received at Point Cook recorded as ex USA, late NC14204".

It seems likely that after receiving the first two Dolphins as gifts from APC, their use at Rathmines as light aircrew trainers for seaplane operations was considered so successful that RAAF HQ made an effort, even in the darkest days of the Pacific war, to acquire more of the type. Most of the US military Dolphins had been retired and the only obvious source was the civil market in USA from which two ex-civil examples were purchased and shipped to Australia.

The individual histories of the four RAAF Dolphins are now listed:

A35-1:

C/n 1282. Ordered from Douglas during 1934 by the Standard Oil Company of New Jersey as a Dolphin Model 136 with two 450hp Wasp Junior SB engines. Registered NC14286 and named "Essowing". Later shipped to Australia for New Guinea oil survey.

Taken on RAAF charge as A35-1 on 17 June 1940 when received in serviceable condition at RAAF Station Rathmines on Lake MacQuarie near Newcastle, NSW. Rathmines was to be the RAAF's principal flying boat home base during the war and was being prepared to receive the first Catalinas due for delivery from

Dolphin A35-1 at Rathmines.

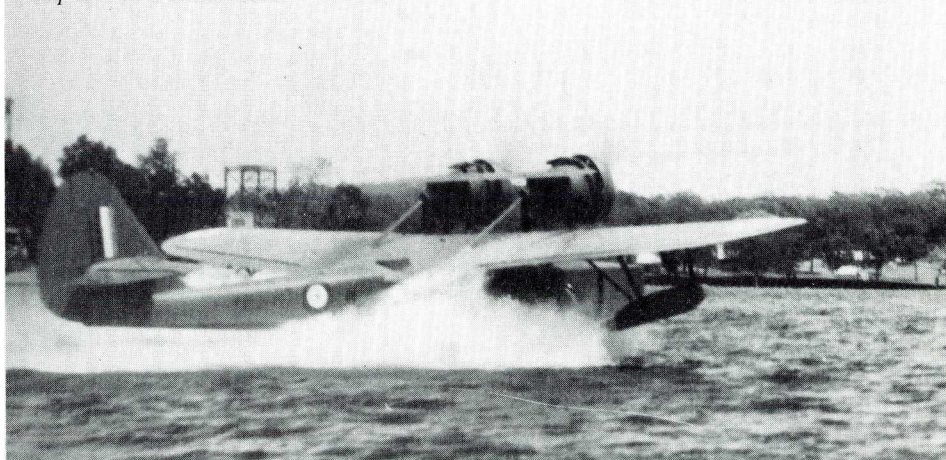


Photo: via Frank Smith

USA early in 1941. The Dolphin was allocated to the newly formed Seaplane Training Flight at Rathmines, under the command of Squadron Leader D. Connelly. A35-1 flew with the STF as well as being allotted for periods to 9 Squadron also at Rathmines, to fly communications duties alongside their Seagull amphibians until September 1941 when it was retired for a complete overhaul. One of its last flights was from Rathmines to Rose Bay, Sydney Harbour, on 9 August 1941, flown by Sqn. Ldr. Connelly. Work proceeded slowly in the station workshops at Rathmines, probably due to lack of spare parts, or corrosion problems, and the Dolphin remained dismantled until finally on 15 July 1943 approval was granted from RAAF HQ to convert the aircraft components.

A35-2:

C/n 1002. The fifth Dolphin built, delivered June 1932 to Wilmington-Catalina Airline as NC12212, powered by two 300hp Wright Whirlwinds. Re-engined by the airline with P&W Wasp Juniors and modified to carry 12 passengers, redesignated Dolphin Model 1 Special. Later shipped to Australia for New Guinea oil survey.

On 25 August 1941 it was taken on RAAF charge as A35-2 while awaiting

erection at Richmond, NSW. It was delivered to the STF at Rathmines the following month to replace A35-1 which went into the hangar for a major overhaul which was never to be completed. On 8 October 1941 A35-2 suffered serious damage to its mainplane during a ground-loop on landing, presumably on the short land runway at Rathmines. After repairs it was back in service with the STF and 9 Squadron at Rathmines early the following year. A forced landing on water was carried out at Fullerton Cove on 27 July 1942 when both engines failed at 3000 feet, but no damage was sustained and the Dolphin returned to Rathmines on the auxiliary fuel tanks. A35-2 was out of service for several periods in 1943 during extended maintenance caused by corrosion problems in the hull plates, but was flown by 9 Squadron and 3OTU at Rathmines until December that year when it went into the hangar for a complete overhaul. The corrosion and other maintenance problems were considered uneconomical to repair and on 14 February 1944 approval was given to convert to components.

A35-3:

C/n 1001. The fourth Dolphin, built as a Dolphin Model 3 and delivered in November 1931 as a luxurious air yacht for US industrialist Powell Crosley of the Crosley Radio Company. Powered by two 300hp P&W Wasp Junior A engines and fitted with a spacious cabin for just four passengers, registered NC982Y.

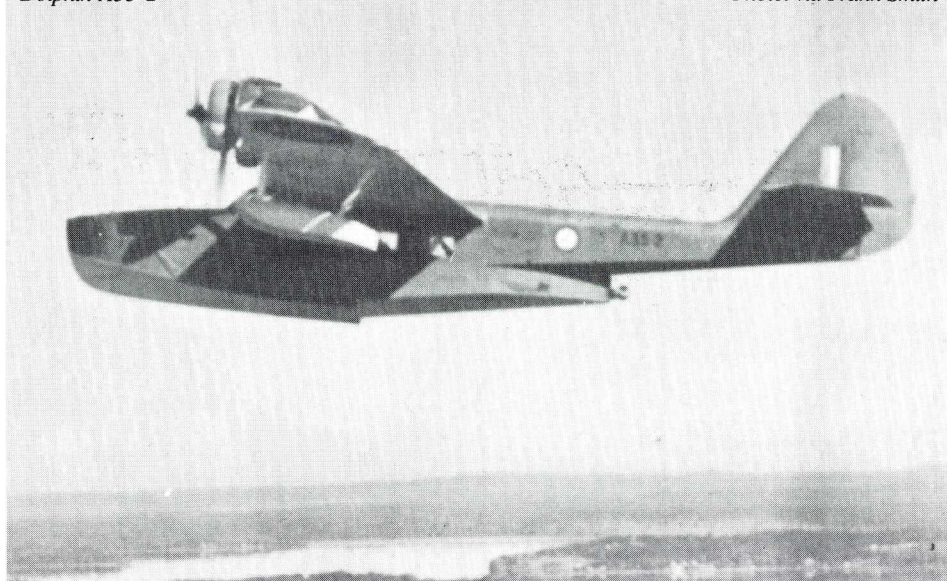
Subsequent civil career not known, but taken on RAAF charge 5 October 1942 when received at RAAF Station Point Cook and erection commenced immediately. Recorded as "Received from RAF", but the Dolphin was never used by RAF and no British serial numbers were ever allocated to the type. American civil registration NC982Y was still on the mainplane when assembled. RAAF engineering records state: "All previous history of this aircraft before RAAF acceptance is unknown. Airframe log books make no reference to previous hours flown."

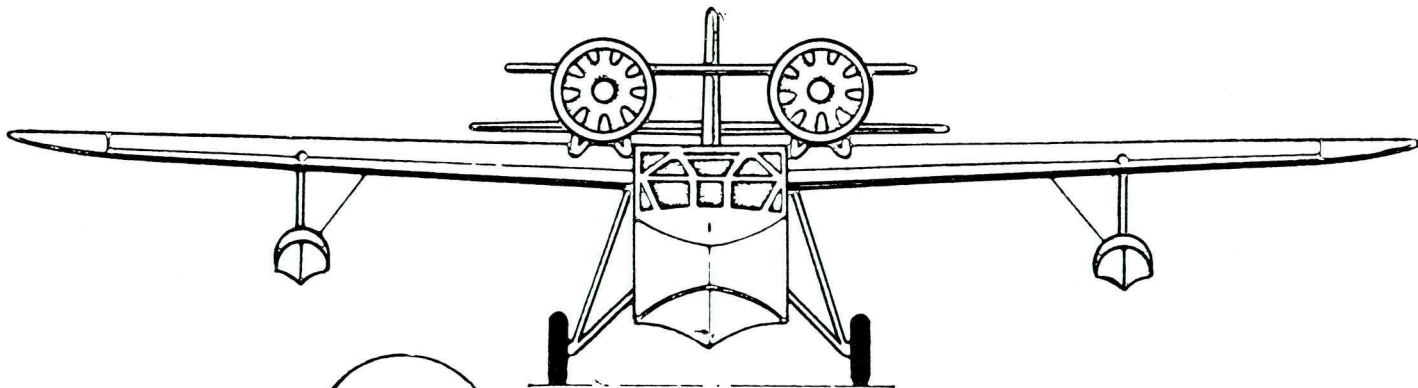
Erection at Point Cook was delayed while awaiting spare parts, but was completed on 9 November and the aircraft test flown 17 November and flown to Rathmines to enter service with 9 Squadron and 3OTU. Fitted P&W Wasp Junior SB1 radials.

Last flown by RAAF 6 December 1944 at Rathmines, then retired and held by

Dolphin A35-2

Photo: via Frank Smith





DOUGLAS DOLPHIN

Span: 60 feet

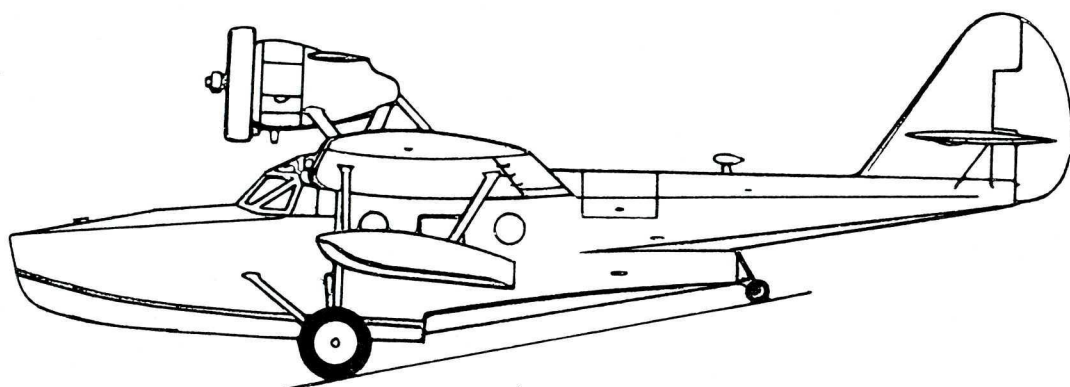
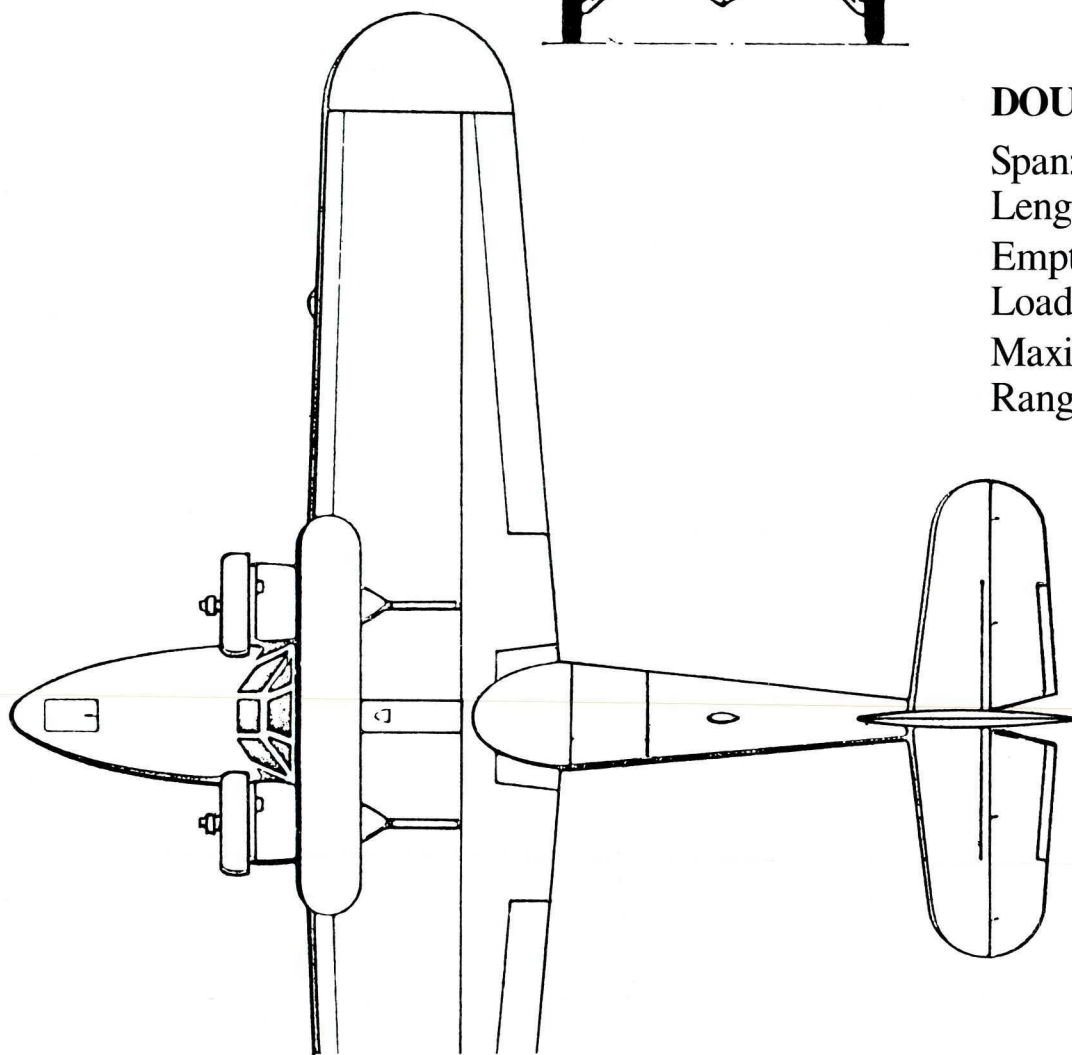
Length: 43 feet

Empty Weight: 5,861 lb

Loaded Weight: 8,583 lb

Maximum speed: 150 mph

Range: 550 miles



3OTU pending a decision on its disposal. A Survey Report dated 13 December state its general condition is good although brakes are u/s so only airworthy for water operations until brakes are repaired. A35-3 flew a total of 145 hours 25 minutes in RAAF service. The report recommends that the aircraft be handed over to Commonwealth Disposals Commission for civil disposal and notes: "This aircraft being the only one of its type in RAAF is most uneconomical from both the service and maintenance point of view as replacement parts are impossible to procure."

In March 1945 A35-3 was sold to Mr. M. Whittle of Sydney for £750.

A35-4:

C/n 1279. Ordered by Wilmington-Catalina Airline during 1934 as a Dolphin Model 114 powered by two 550hp P&W Wasps and fitted for 13 passengers. Registered NC14204, remained in service on the Catalina Island run until after Pearl Harbour when the airline, now renamed Catalina Air Transport, ceased operations for the duration. Photographed in full service at Catalina Island in June 1941. Purchased by RAAF and shipped to Australia. Taken on RAAF charge 8 April 1943 at Point Cook.

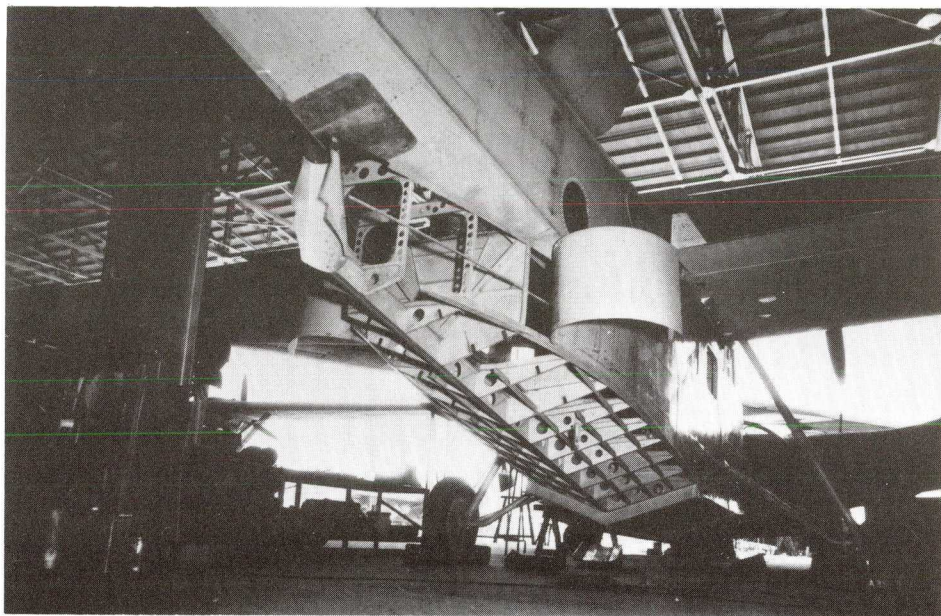
After assembly the aircraft was delivered to 3OTU Rathmines on 22 May 1943, before being issued to No.4 communications Flight, Archerfield Aerodrome, Brisbane on 8 July. A35-4 thus became the only RAAF Dolphin to be issued to an operational unit rather than used for pilot training at Rathmines. However its life on communications flying was destined to be very short, because after pilot familiarisation with 4CF with a series of dual pilot sea landing exercises during July, it crashed during its first travel flight and was written off.

On 29 July 1943, A35-4 was scheduled to operate a flight from Archerfield to Rose Bay Flying Boat Base, Sydney. Crew were Squadron Leader Wood and Flying Officer Forbes and passengers were Air Commodore Summers and Flight Lieutenant Ebeling. The Dolphin Departed Archerfield at 12.20pm and reached Rose Bay at 4.45pm when it crashed on landing in the water although the occupants were not injured. The cause was found to be a faulty hydraulic line which allowed the main wheels to extend for the water landing. The airframe was badly damaged and the wreckage was taken to RAAF Rathmines for inspection report before being authorised for conversion to components on 8 August 1943.

To summarise RAAF use of the Dolphin:

A35-1:	June 1940	—	Sept. 1941	Rathmines
A35-2:	Sept. 1941	—	Dec. 1943	Rathmines
A35-3:	Nov. 1942	—	Dec. 1944	Rathmines
A35-4:	May 1943	—	July 1943	Rathmines
				4CF, Archerfield

RAAF Maintenance men at Rathmines showed a great degree of skill and ingenuity to keep the Dolphins airworthy with very few spare parts available. After the war, Donald Douglas, who had personally designed the Dolphin, commended the Rathmines effort in virtually rebuilding A35-3 to keep it in service during 1943/44, using many parts from A35-1 & -2.



Dolphin A35-3 being rebuilt at Rathmines in 1944 using parts from A35-2.

Photos: via Frank Smith

A POSTWAR DOLPHIN

The final chapter in the story concerns the only Dolphin to survive wartime RAAF Service, A35-3 Sold by Commonwealth Disposals Commission in March 1945 to Mr. M. Whittle of Sydney, the aircraft was in airworthy condition and ferried from Rathmines to Mascot in early May.

During May Mr. Whittle, a former RAAF pilot, advised the Department of Civil Aviation of his plans for the Dolphin. A new company, New Castle Safety Airways, had been formed by Stuart F. Doyle Enterprises to operate the aircraft on a scheduled daily passenger service from Sydney to Newcastle landing at coastal towns en route. DCA allocated civil registration VH-AGE on 4 May but later that month wrote to Whittle to advise him that it had been decided that a CofA would not be issued to the Dolphin for passenger work because of concern over its airworthiness and

flight performance. Whittle objected strenuously but the Department remained firm, stating that the type had never been on the Australian Civil Register and no performance figures for such an old aircraft were available, but quoting a pre-war performance report that gave ceiling with one engine out as "sea-level"!

In June Whittle requested approval to ferry the Dolphin from Mascot to Essendon for civil conversion, but DCA refused. Whittle then advised the Department that because of their refusal to give the aircraft CofA he was in serious financial situation and threatened legal action against CDC who had sold him the aircraft as airworthy. DCA wrote to CDC suggesting they take the Dolphin back and have it scrapped. Meanwhile Whittle attempted to sell the aircraft, but a possible sale to a Queensland buyer who considered using it to fly tourists from Gladstone to Heron Island was thwarted by the



same CofA ruling. E.J. Connellan of Connellan Airways, Alice Springs, was interested in the two Wasp Junior engines as spares for his Beech 17 and planned Beech 18 acquisitions.

Veteran aviator Sid Marshall of Marshall Airways, Sydney, purchased A35-3 from Whittle in August 1945 and began a lengthy battle with DCA to have a CofA issued for joyriding, freight work and private flying. It was agreed that DCA would consider a CofA for non-passenger flying subject to satisfactory perfor-

mance flight testing and a date was set of October 3 at Mascot when DCA airworthiness officers were flight testing the first Avro Anson to be converted for civil use, Adastra Airway's VH-AGG.

However Marshall decided not to go ahead with the flight testing because his main intention for the Dolphin was joyriding and the Department insisted that it would not consider a CofA for any form of passenger flying. The Dolphin sat alongside Marshall Airways' hangar at Mascot

for several years, still wearing its olive drab military paint scheme, until it became derelict and was carted away as scrap metal about 1950. The registration VH-AGE was never formally added to the Register, and was reallocated to a CAC Wackett Trainer.

If any readers can add to the story of the RAAF Dolphins, the authors would be pleased to hear from them.

A35-3 at Mascot in 1946.

Photo: via Keith Isaacs





FOOTNOTE

Only one Douglas Dolphin survives today, NC14205, owned by vintage aircraft collector Colgate W. Darden of South Carolina, USA. He also supplied the Douglas DC-2 which flew from England to Australia in early 1984 painted as KLM's PH-AJU "Uiver" to retrace the route of the 1934 MacRobertson Air Race for a Dutch TV documentary.

This sole remaining Dolphin was originally built in 1934 as a private air yacht for Williams E. Boeing as NC14205 named "Rover". It went on to a long career flying passengers in Alaska and California as NC26, NC26K and finally N26K before being acquired by Darden and repainted into its original blue and silver colour scheme with its original registration.

Top and Below: Douglas Dolphin N26K at San Rafael Sky Harbour, California on 9th September 1962 prior to being re-registered NC14205.

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- Squadron Diaries.

