SOUTH AUSTRALIAN AVIATION MUSEUM

SIGNIFICANT AIRCRAFT PROFILES

VICKERS VISCOUNTS IN AUSTRALIA

INTRODUCTION

Australia's first introduction to the Vickers Viscount occurred in October 1953, when Viscount V.700 prototype G-AMAV arrived in Melbourne. The aircraft, competing in a London to Christchurch, New Zealand air race, recorded the fastest time in the transport section. Viscounts operated with four prominent Australian domestic airlines and also with the RAAF (Royal Australian Air Force). The first of type to become operational in Australia arrived in October 1954, with the final service flown in 1970. During this period, nearly thirty Viscounts operated in Australia.

DEVELOPMENT

The Vickers Viscount was a product of the Brabazon Committee formed in 1942-43 to explore British post-WWII aviation requirements. Aircraft types to emerge from the Brabazon Committee included the Bristol Britannia, de Havilland DH106 Comet and, the most commercially successful, the Vickers Viscount. The committee's forward thinking seems quite bold in retrospect, when considering the technical advances yet to be acquired in the development and construction of pressurized airframes and turbo-prop/jet engines.ⁱ

In June 1945, Vickers responded to the Brabazon Committee with an initial design of a short haul aircraft, designated Type V.453. Powered by four turbo-prop engines and accommodating 24 passengers, the aircraft was based on an earlier Vickers design, the Vickers Viking. At this stage, three power plants were under development: Armstrong Siddeley's Mamba and the Napier Naiad, but the preferred choice of Vickers chief engineer George Edwards was the Rolls Royce (RR) Dart due to its rugged simplicity. A double bubble fuselage that allowed for under floor baggage loading had been proposed, but as this design did not incorporate pressurization, it was replaced with the more familiar circular cross section fuselage. In December 1945, Vickers publicity information regarding Type V.453 stated a gross weight of 35,000lbs/16,200kg, fuselage length 65ft 5in/19.94m, wingspan 88ft/26.4m, 4 x 1,000 shaft horse power Dart engines, giving a cruise speed of 256kt/474km/h. Range with a maximum payload including 28 passengers was 900nm/1665km.

In March 1946, Vickers signed a contract with the Ministry of Supply for the construction of two prototypes. Prior to signing, some government amendments were added, namely an increase in passenger capacity to 32. This required lengthening the fuselage by 9ft/2.7m and wing span by 1ft/.30m, with gross weight increasing to 39,500lb/17,935kg. Vickers named the aircraft Viceroy and designated it as Type V.609. Despite George Edward's insistence on both prototypes being Dart powered, the Ministry of Supply directed that Armstrong-Siddeley Mambas be installed. This was probably due to the slow progress during early Dart development. However in 1947, after flight trials first in the nose of a Lancaster bomber, then as the twin power source in a Wellington bomber, the Ministry of Supply requested that Darts be used in both prototypes. The aircraft was now designated as Type V.630.

Around this time, the aircraft's name was changed from Viceroy to Viscount, possibly reflecting political sensitivity surrounding India's move towards independence.



16 July 1948 and Vickers Viscount prototype V.630 G-AHRF becomes airborne on its maiden test flight. It would not be until April 1953 that a full Certificate of Airworthiness would be granted to the the type V.700 series, allowing production to begin [PD via D Robinson]

On 16 July 1948, the first prototype, G-AHRF, departed on its maiden flight. After 20 minutes, Captain "Mutt" Summers landed and stated it was the "smoothest and best I have ever known". The second Viscount prototype, G-AHRG/VX217, completed as a Type V.663, spent the majority of its life as an RAF (Royal Air Force) experimental test aircraft. Powered by two RR Tay turbojet engines, the aircraft first flew on 15 March 1950. Over the next ten years, its use was confined to military testing, including power controls for the Vickers Valiant bomber and other unrelated airline applications.

Despite the Viscount's successful test flight and appearances at both the Farnborough Air Show and in France, no orders were placed with Vickers. There were still doubts over the Viscount's passenger capacity and speed. Vickers then returned to their Type V.655 which had been on the drawing board for about a year, a "stretched" Viscount, powered by Rolls Royce's latest Dart variant, the R.Da.1 Mk504 engine, offering a 40per cent power increase. Other changes included the fuselage lengthened by 80in/2.03m and wingspan by 60in/1.52m, gross weight increased to 50,000lb/22,700kg, cruise speed to 269kt/498km/h and passenger capacity up to 53. The aircraft was designated as the Type V.700 series and the Ministry of Supply ordered one prototype in February 1949. Registered as G-AMAV, the aircraft first flew on 28 August 1950.

Following G-AHRF's maiden flight, the V.630 prototype continued a wide ranging flight testing program resulting in a Certificate of Airworthiness (CofA) being granted in September 1949. Further trials covered pressurization, thermal de-icing and tropical trials from hot and high airports. To improve take-off performance under hot climatic conditions, RR successfully introduced water methanol injection to their Dart engines. There followed a complete CofA being granted to G-AHRF in July 1950, a world first for a turbine engined aircraft. On the basis of G-AHRF's successful test program and proposed improvements to the Series V.700, BEA (British European Airways) converted an option to a firm commitment for 20, (later amended to 26) Series V.700 Viscounts. Vickers received the order three weeks prior to the prototype V.700's maiden flight in August 1950.

Apart from BEAs initial order, other Viscount suitors were still to emerge. Airline hesitancy stemmed from the fact that to this point only two prototype turbo-prop aircraft had flown. Airlines felt the new engines needed a longer period to prove themselves before placing orders. To allay these doubts, two BEA Dakotas were fitted with Dart 505 turboprop engines and flown on BEA freight routes over an 18 month period, amassing some 3,000 flight hours.

Meanwhile Viscount V.700 prototype G-AMAV underwent a similar testing regime to that of V.630 G-AHRF, finally gaining a full CofA in April 1953. A total of 6,000 flight hours were accumulated between the two Viscount prototypes and the two BEA Dakota, Dart powered aircraft.

Vickers management's confidence in the Viscount throughout the long development period was evident when they elected to build another 120 V.700s, despite initially only holding 20 firm orders. The following figures give an indication of the early slow order rate and then its acceleration with the Viscount's popularity:

To 30 November 1952	42 orders
To 31 December 1953	90 orders
To 31 December 1954	160 orders
To 31 May 1956	306 orders

In October 1953, Vickers would have been elated with the results achieved by Viscount V.700 prototype G-AMAV, competing in the London to Christchurch, New Zealand air race. The aircraft recorded the fastest time in the transport section of 40 hours and 41 minutes over a distance of 10,745nm/19,903km, averaging a speed of 278kt/520km/h. With a surge in orders, Vickers opened two assembly lines at Hurn near Bournemouth in 1955, in addition to its Weybridge plant. During 1956 and 1957, Viscount production peaked with Vickers building ten aircraft per month. When Viscount production ceased in 1964, a total of 445 (all series) had been built. Sold to over 60 operators in 40 countries, many continued to operate in various worldwide locations after refurbishment under new ownership. The final British Viscount service was operated by British World Airways in 1996.

TAA - TRANS AUSTRALIAN AIRLINES

TAA (Trans Australia Airlines) was founded in 1946 as a Federal government owned airline. TAA's early flights were operated by DC-3s, followed by DC-4s from the latter half of 1946



A mid-1950s advertisement featuring TAA's first V.720 VH-TVA. Sadly the aircraft was lost in a training accident soon after arriving in Australia. [PD-via D Robinson]

and Convair CV-240s from October 1948. TAA was led by Arthur Coles, who was highly regarded for his business management leadership skills and qualities. In August 1946, under instructions from Coles, a team led by John Watkins (TAA Technical Superintendent) departed for the US via England to manage the delivery of TAA's Douglas DC-4 aircraft." Coles also charged Watkins with keeping an eye out for any new aircraft development that would give TAA a

competitive advantage over rival airline Australian National Airways (ANA). In August 1948, Watkins departed the US on TAA's first Convair delivery flight via England. During the UK stopover, Watkins met with Vickers technical staff, including the company's Chairman, Sir Hew Kilner, who updated Watkins on the Viscount V.630's progress to date. The aircraft had made its maiden flight only the month prior. A year later, in 1949, Coles and Watkins were able to fly in the proto-type V.630 at the Farnborough Air Show, both being impressed by the experience the turbo-prop powered aircraft provided. A period of negotiations between TAA and Vickers followed, which culminated in Watkins signing a contract for TAA to order six V.720 Viscounts in August 1952.^{III} TAA was then only the fourth airline in the world to order the Viscount at a cost of A£217,000/A\$434,000 per aircraft.

TAA's first Viscount, VH-TVA, arrived in Australia on 5 October 1954. Prior to commencing scheduled airline service, the aircraft was engaged in crew training. Tragically, on Saturday,



Viscount V.816 VH-TVP "John Gould", delivered in May 1959 operated TAA's last passenger and freight flights in August 1970. The aircraft was finally scrapped in Indonesia in the mid-1990s. [NK Daw 26/01/1970]

31 October 1954, VH-TVA was destroyed when carrying out a three-engine take-off from Mangalore, Victoria, when simulating an engine failure. Of the eight occupants on board, three (pilots) were killed. Fortunately for TAA there was no loss of faith in the airline by the travelling public, as the loss was described as being an unfortunate training accident. Regular Public Transport (RPT) services commenced on 18 December 1954 as the remainder of TAA's initial Viscount order began to arrive, including an additional aircraft to replace VH-TVA. TAA management no doubt would have been pleased with the results being achieved by the small Viscount fleet at the end of March 1955. Load factor was 85 per cent, with an average daily aircraft utilisation figure of between seven and nine hours per aircraft.

With the successful Viscount introduction, TAA began removing DC-4/CV-240 aircraft from Australia's busiest triangular route, Melbourne – Sydney - Brisbane, to those of a more

secondary nature. The Viscount, with its faster flight times, not only began displacing pistonengine aircraft, but also enabled increased service frequency. To expand on the success being achieved by the initial batch of Viscounts, TAA ordered a further seven V.756Ds.^{iv}

While TAA were delighted with the performance of their Viscounts in the nation's eastern regions, operating the 1200nm/2220km Adelaide-Perth route proved a different matter. The Viscount was never designed as a long-range passenger aircraft, resulting in cabin numbers being restricted to 32 on this sector, with no freight and only personal baggage. Flying into the prevailing westerly wind, Viscounts at times were required to land at



A beautiful photograph taken in 1959 of two TAA Viscount V.720s on the tarmac at Adelaide Airport. The central piece of lawned area has not long been planted and today is a long-term car park. [EW Daw via NK Daw]

Kalgoorlie for additional fuel. VH-TVF, TAA's sixth V.720, carried an additional 230 gal/1,045lt built into an internal inner-wing fuel tank, which still left a fuel shortfall. At Vickers' suggestion, TAA became the first Viscount operator to specify the use of external "slipper" tanks with an additional fuel capacity of 290gal/1,315lt. VH-TVF's "slipper" tanks were attached outboard of the outboard engines and were stored at Adelaide Airport ready to be fitted when required. Two additional V.720s, VH-TVD and VH-TVE, were similarly configured, enabling TAA to cycle these aircraft through Perth rotations. In comparison, ANA DC-6 and DC-6Bs had no such restrictions, being able to operate direct to Perth, carrying a full load of passengers, baggage and freight. John Watkins stated "that although the payload on Perth-bound Viscount flights was not an adequate long term proposition, nevertheless, the Viscount had done a valuable interim job pending the arrival of TAA's Electras in July 1959".

TAA continued ordering Viscounts. Two Type V.816s arrived in mid-June 1959 and a Type V.745D, built for US operator Capitol Airlines but not taken up, was leased from Vickers

between March 1958 and January 1959. The last Viscount to be ordered, a Type V.818, VH-TVR, formerly ex Cubana, arrived in June 1962 and was converted to V.816 standard.^v

The travelling public continued displaying their faith in the Viscount. By 1957, 70 per cent of TAA's passengers were being flown in its 11 Viscounts, which represented less than a third of the fleet. It was quickly becoming evident that passenger preferences were now leaning towards the faster, quieter and smoother ride offered by turbo-prop aircraft as opposed to piston engined types. Not to be overlooked was the reliability of the Dart engines that could make or break airline schedules. TAA reported that as at 30 June 1956, the Darts had flown a total of 94,000 hours without a single inflight failure. The average daily utilisation rate for each Viscount was 10 hours. Overall, TAA's Viscounts served the airline well. Apart from the early loss of VH-TVA, the only other incident in TAA livery occurred on 10 October 1968, involving VH-TVK. On landing in Sydney, the nose wheel assembly would not extend, resulting in the aircraft skidding on its nose. All four propellers were damaged and all engines removed for overhaul. Nobody was injured.

A constant issue requiring close monitoring concerned the construction of the aircraft. As John Watkins observed:

Where the Viscount fell down was in its structure. ...The Viscount was made of zinc bearing light alloys, which turned out to be rather prone to stress corrosion ... and also to have a rather poor fatigue life under repeated stress. ... The unfortunate fact is that you cannot be certain of the calculated safe life and this began to show up ... at a fairly early age and we had to change spar looms and all sorts of components. We changed some of them several times over. ... There was no way you could keep a Viscount operating indefinitely. It just became too expensive and time-consuming.^{vi}

Whether due to luck or high maintenance standards, TAA's Viscounts introduced to Australia and the travelling public a new form of air travel, offering improvements in speed, comfort and reliability. By 1958, TAA's Viscounts held 27 of the 28 available Australian speed records. TAA was Australia's largest Viscount operator, with a total of 18 V.700 and V.800 aircraft, including the ill-fated VH-TVA, in its fleet. The aircraft were engaged in RPT (Regular Public Transport) flying over a 16 year period from 1954 to 1970. The introduction of the Lockheed L188 Electra (1959), Boeing B727 (1964) and Douglas DC9 (1967), saw TAA begin to phase-out their Viscount fleet, with the final flight in late August 1970. TAA management, particularly John Watkins, would have felt vindicated with their 1952 decision to order six V.720 Viscounts.

BAT - BUTLER AIR TRANSPORT

Butler Air Transport (BAT) was founded in December 1934, following a successful tender by Arthur Butler to operate the mail section of the England-Australia air route between Charleville in Queensland and Cootamundra in New South Wales. With the termination of the mail contract in 1938, Butler relocated to Sydney and began to establish air services within the state.

During WWII, BAT services were limited as the majority of the company's efforts were directed to providing maintenance service for RAAF aircraft. At the end of the war, BAT

purchased three former United States Army Air Force (USAAF) Douglas C-47s, converting them to DC-3 standard. Over the ensuing years, BAT's fleet included Avro Ansons, de Havilland DH.114 Herons and Airspeed Ambassadors. By the late 1940s, BAT served 25 ports in New South Wales and carried 100,000 passengers per year. In December 1948, BAT acquired a 93per cent holding in a southern Queensland company, Aircrafts Pty Ltd, the operator then being renamed Queensland Airlines (QAL). Adding to Arthur Butler's problems, was the constant threat of takeover by the consortium composed of both the Holymans and their airline (ANA) investment arm Bungana Investments. From the early postwar period through to the mid-1950s, Holyman/Bungana purchased shares in BAT, eventually acquiring 51% but not a sufficient majority of voting shares.



VH-BAT, in company livery. The aircraft was one of two Viscount V.747s operated by Butler Air Transport primarily throughout NSW. [PD via D Robinson]

From the early 1950s, commercial aviation in Australia was growing, particularly in the triangle between Melbourne, Sydney and Brisbane. The two dominant carriers were TAA and ANA and, to a lesser extent, Ansett Airways. Butler believed with some foresight that there was no future for small airlines in Australia. and that ultimately only two major airlines would

dominate. Direct competition with BAT began when Ansett commenced operating Sydney -Coolangatta return flights with its new pressurised Convair CV-340 aircraft from late 1954. BAT, having pioneered the route in 1951 with DC-3s and observed its growing potential, then had to look on as passengers chose to travel on the more comfortable Convair. However, Butler had already decided on a new strategy for his airline. On previous visits to Britain, he had flown in the Viscount and was impressed with the aircraft's performance. In June 1954, Butler ordered two Viscount V.747s, with options on another four (that were not taken up). VH-BAT arrived in October 1955 and VH-BUT in September 1956, making BAT Australia's second Viscount operator.

Records from 1955 indicate a flow of correspondence between the Department of Civil Aviation (DCA) and BAT, regarding yet to be granted approvals in relation to Viscount operations. Issues surrounding country aerodromes and the aircraft's Operations Manual were of primary concerns. VH-BAT operated the company's inaugural Viscount flight to Coolangatta on 5 November 1955, but as the flight had not been approved by DCA, forward and returning passengers had their fares refunded. As a result of the publicity surrounding the issue, over a thousand people descended on Coolangatta airport to view the Viscount.

From mid-December 1955, BAT's single Viscount was scheduled over the course of a week to operate flights from:

- Sydney Wagga Melbourne Sydney, 0645-1125, daily except Sunday;
- Sydney Melbourne Wagga Sydney, 1545-2025, daily except Sunday;
- Sydney Dubbo Sydney, 1145-1420, Tuesday, Wednesday, Friday;
- Sydney Coolangatta Sydney, 1145-1525, Monday, Saturday;
- Sydney Coolangatta Sydney, 0830-1215, Sunday.
- From early May 1956, the twice-daily Melbourne services operated direct.



An early image of both Adelaide Airport and a Butler Air Transport Viscount V.747. By this stage (1958), Butler was soon to be absorbed into Ansett-ANA and be renamed Airlines of NSW [NK Daw]

The relationship between Arthur Butler and Ivan Holyman had soured by the end of 1955, given Holymans'/ANA Bungana Investments' continuing attempted takeover of BAT. At the time, ANA's financial losses from the early 1950s had been arrested, although by 1955 other factors had come into play. Ansett and BAT had begun operating their Convair and Viscount aircraft on trunk routes flown by ANA and TAA, the latter reporting a record number of passengers carried and an almost doubling of profit (for year ending 30 June 1955). With Bungana Investment's holding in BAT falling below 50 per cent, Butler felt he was now independent of ANA/Holyman. Paradoxically, Holyman initially approved Butler's Viscount flying into Melbourne, although later reversing his decision while still providing ANA ground handling services for Butler at Essendon Airport.

With the arrival of Butler's second Viscount, VH-BUT, in 1956, both aircraft were soon averaging a high utilisation rate of nine hours, eight minutes a day, a record at the time. In that year, BAT Viscount services were also scheduled from Sydney to Adelaide (via Broken Hill), Bourke, Cunnamulla, Coffs Harbour, Dubbo, Parkes and Wagga. Despite Arthur Butler's best efforts to ensure the success of his airline, there were obstacles. The arrival of TAA's tenth Viscount in July 1956 and additional Ansett CV-340s operating Sydney-Melbourne return services from November 1956, added further competition. Furthermore, a Ministerial policy announcement in October 1955 warned that a number of NSW airports were of insufficient length or strength for Viscount use. Accordingly, in mid-February 1957, the

Department of Civil Aviation (DCA) advised BAT that Viscount operations would be prohibited at Coffs Harbour due to runway cracking. With no future upgrades envisaged due to a lack of funding, Viscount services to a number of NSW airports were withdrawn.^{vii} To help alleviate this problem, Butler purchased three former British European Airways (BEA) Airspeed Ambassadors that arrived in June 1957.^{viii} The intent was to use the aircraft to replace all DC-3 services and operate from unsealed country airports not suitable for Viscounts, but the Ambassadors' time was to be short-lived.

ANA began to unravel following the sudden death of Sir Ivan Holyman in January 1957, compounding the company's existing financial difficulties. This situation created a takeover opportunity that was seized by the ambitious Reg Ansett. Following protracted negotiations, Ansett emerged successful, with the new entity, Ansett-ANA, commencing operations on 21 October 1957. Included in the takeover was Bungana Investments' almost a 48per cent holding in BAT, which in turn owned 93per cent of QAL. Ansett then engaged in an all-out legal battle to secure outright ownership of BAT, with some questioning his tactics. On 5 February 1958, Ansett achieved his goal, gaining complete control of BAT and QAL. Despite being offered a seat on the board of Ansett Transport Industries (ATI), Arthur Butler refused the offer.

Following Ansett's takeover, BAT continued operations over its route structure with several aircraft types over varying periods, including DC-3s, Amabassadors,^{ix} Viscounts and Ansett's Convair CV-440s. In December 1959, the company was renamed Airlines of New South Wales. QAL continued to operate in southern Queensland until early December 1966 when it was absorbed into Ansett-ANA's route structure. Former BAT Viscounts, VH-BAT and VH-BUT, were transferred into the Ansett-ANA fleet and re-registered as VH-RMO and VH-RMP, respectively, in September 1958. They were the first Viscounts to be operated by Ansett-ANA.

ANSETT-ANA / ANSETT AIRLINES OF AUSTRALIA

Ansett-ANA was а latecomer to operating Vickers Viscounts. Ansett Airways Pty Ltd was founded in January 1936 with a single aircraft, a Fokker F.XI Universal monoplane. Over the following years growth was slow, the dominant Australian carrier being ANA. As noted above, in 1957 Reg Ansett secured ownership of the larger airline, primarily as a result of ANA's financial difficulties. He consolidated his position



Ansett Viscount VH-RML during a turnaround at Adelaide Airport on a winter's day in 1968. The aircraft was originally ordered by Cubana in 1959 and sold to Ansett-ANA in 1962 [D Robinson]

with control of BAT and QAL in February 1958, including the acquisition of BAT's two Viscount aircraft.

Political intervention around the time of ANA's demise resulted in federal legislation that would shape Australian aviation until October 1990. It was known as the Two Airline Policy. In September 1958, the *Airlines Equipment Act* introduced changes to Australia's two mainline operators. Effectively, TAA and Ansett were required to remain in concert with one another over a wide range of areas, from aircraft types to departure times. A host of ironclad controls virtually guaranteed profits, particularly to Ansett-ANA.



Mid-1960s, Adelaide Airport, Ansett-ANA Viscount V.832, VH-RMH. The 52-seat aircraft arrived in Australia in 1959. Sold to a Taiwanese operator in 1970, the aircraft was scrapped in Indonesia in 1981. [D Robinson]

Reflecting the new legislation, Ansett-ANA ordered four 52-seat Viscount V832s that began to arrive in March 1959. Reg Ansett had never been keen on British aircraft, his preference for US types being reflected in a fleet that comprised Douglas DC-3s, DC-4s and Convair CV-340s and CV-440s. Under the Act's "fleet equality" requirement, also known as the Cross Charter Agreement, TAA controversially and reluctantly transferred three Viscount V720s to Ansett-ANA in exchange for two DC-6Bs in March 1960. TAA argued that the Cross Charter Agreement caused them to lose both market share and aircraft flexibility due to a reduction in Viscount fleet numbers. Consequently, Ansett-ANA's load factor increased. Two additional Viscounts were purchased, a former Continental Airlines V.812 in September 1960, and a former Cubana V.818 in March 1962, expanding both Ansett-ANA's fleet size and destinations served. Apart from Australia's capital cities, Viscount schedules included Mackay, Townsville, Cairns, Mt Isa, Alice Springs, Tennant Creek, Coolangatta, Cooma, Devonport, Launceston, Wynyard and Mt Gambier. Frequency varied, depending on location, season and traffic. At times, Ansett-ANA Viscounts were scheduled to operate Canberra-Sydney, 41 times per week, and Brisbane-Long Reach-Mt Isa, once a week. Further extending his reach, in November 1968 Reg Ansett secured outright ownership of MacRobertson Miller Airlines (MMA), a company formed in 1927 in Perth, Western Australia. MMA had grown to dominate that state's aviation market, but a rapid rise in exploration and mining activity in the early 1960s resulted in increasing movements of passengers and freight between Perth and the State's northwest. In an effort to cater to these demands, two Ansett-ANA Viscount V.700s were dispatched to MMA. The Viscounts operated primarily over the Perth-Port Headland route between 1968-1969, terminating unfortunately in disaster following the loss of VH-RMQ. As a consequence, all Australian registered V.700 type Viscount aircraft were grounded temporarily, pending the outcome of an investigation. Change was already underway in the west, however, when Reg Ansett announced in December 1968 the leasing of one Fokker F-28 Fellowship, a twin engine, jet powered aircraft. More were to be purchased over the next few years.



VH-RMJ Viscount V.832. One of four V.832s ordered in 1959, the aircraft arrived as 52-seaters, later converted to 63 seats. On 16 Aug 1965, enroute from Canberra to Melbourne, No1 engine caught fire resulting in an emergency landing at Mangalore. [NK Daw 1967]

Ansett-ANA's association with Viscount aircraft could be described as one of mixed blessings. Although the airline operated 12 of the type, six were the result of company acquisition/purchase or government legislation, i.e., two ex BAT - one purchased ex TAA and three from TAA via the Cross Charter Agreement. Three fatal crashes, involving two V.720s and a V.832, led to the eventual withdrawal of all Ansett-ANA Viscounts between 1968-1970. Apart from issues relating to Viscount ageing and ongoing engineering costs by the late 1960s, other factors had come into play. From 1959 a number of new aircraft began arriving in Australia. They included Lockheed L188 Electras, Fokker F-27 Friendships, Boeing B727s, Douglas DC-9s, and Fokker F-28 Fellowships. Viscounts, which had gradually supplanted piston engine types from the mid-1950s, were, in turn, relegated to secondary routes by the more advanced aircraft. After a career spanning 12 years in Ansett-ANA livery, those remaining Viscounts suffered the usual fate of retired aircraft, being sold, broken up or becoming a training aid for airport "fireys".

ANSETT-ANA VISCOUNT LOSSES

During Ansett-ANA's 12-year association with the Viscount, three of the type were involved in fatal crashes, with no survivors. Two were under mainline livery and the third while operating with a subsidiary company.

VH-TVC

On 30 November 1961, Viscount V.720 VH-TVC, one of three ex-TAA aircraft exchanged under the Cross Charter Agreement, departed Sydney as flight AN325 at 1910 for Canberra. On board were four crew and 11 passengers. Sydney that day had experienced poor weather conditions, heavy rain, strong wind, thunderstorms and lightning. Following take off, the aircraft climbed to 3,000ft/914m, then made a left hand turn "over the field" at not less than 5,000ft/1524m as instructed. After acknowledging an ATC (Air Traffic Control) request to report altitude and offered track selection, no more was heard. The following morning wreckage was found in Botany Bay, subsequently identified as that of VH-TVC.

Investigators later concluded, that despite a lack of actual evidence as to what had caused VH-TVC's loss, the most probable explanation was that the aircraft met with "unseen turbulence of extreme magnitude", adding that the load stress encountered as being beyond design limits.

VH-RMI

On 22 September 1966, Viscount V.832 VH-RMI departed Mt Isa as flight AN149 for Brisbane via Longreach with an eta of 1330. On board were four crew and 20 passengers including two children. Nine minutes prior to arrival at Longreach, the aircraft called that it was on "emergency descent". Shortly after, the crew advised Longreach Flight Service Unit (FSU) of fire warnings on No1 and 2 engines. A TAA DC-3 then relayed a message from the Viscount crew that there was a "visible fire" in No2 engine and that they were "diverting to Winton below 5,000ft/1524m". Witnesses reported hearing various noises or observed smoke in the sky and objects falling. VH-RMI had come down on a station 12nm/22km west of Winton Airport.

Strewn wreckage indicated disintegration of much of the fuselage before the aircraft impacted the ground. The investigation team found the aircraft's No2 cabin pressurisation blower failed. Escaping oil quickly caught fire extending into the port wing containing the No2 wing tank. Fire weakened the wing spar, leading the wing to separate from the aircraft and at the same time, the No2 fuel tank to ignite.

VH-RMQ

This was one of two Viscount V.700 aircraft leased to Perth based MacRobertson Miller Airlines (MMA) in 1968/1969, to provide additional capacity. The aircraft, formerly (VH-TVB), one of six V.720 Viscounts originally ordered by TAA, had arrived in Australia in November 1954. Ansett-ANA purchased the Viscount in October 1962 as a replacement for VH-TVC, which had been lost in Botany Bay in November 1961, and re-registered the aircraft VH-RMQ.

On 31 December 1968, VH-RMQ departed Perth at 0830 for Port Hedland as flight MV1750 with four crew and 22 passengers, with an estimated flight time of three hours. Approximately eight minutes prior to arrival and following a routine inbound transmission, no more was heard from the aircraft. Shortly after, wreckage was found 28nm/52km south of Port Hedland. Investigators determined a fatigue crack in the starboard inner main spar lower boom had led to the separation of the starboard outer wing including the No4 engine installation.

ROYAL AUSTRALIAN AIR FORCE - RAAF

In addition to Australian domestic airlines, two Viscount aircraft operated in a VIP role with 34 Squadron RAAF, based at Fairbairn, Canberra, ACT (Australian Capital Territory). The aircraft were built in 1960 and 1961 as V.816 models, having originally been ordered by TAA, but not taken up. At the time of the Federal Government's purchase announcement in July 1964, the Viscounts were based in the US and Iran respectively. Both aircraft arrived in Australia in August/September 1964 and were allocated RAAF serial numbers A6-435 and A6-436, joining two Convair CV-440s and Douglas C-47 Dakotas. The turbo-prop Viscounts offered their VIP travellers an improved standard of service, by way of faster flight times and cabin comfort with seating reduced to a 32-seat VIP passenger layout. Prior to operating the new aircraft, RAAF aircrew had undertaken training with Ansett-ANA and TAA.

Both aircraft served in 34 Squadron until withdrawn in 1969, having performed well in their VIP role. As demand grew for international travel, the Viscounts' short range proved restrictive. To help overcome this problem, two new British Aircraft Corporation BAC-111s were introduced to 34 Squadron in 1968, enabling the Viscounts to operate fewer expeditionary trips. On retirement in November 1969, both aircraft had recorded fewer than 5,000 airframe hours while in RAAF service. As a comparison, most Australian commercially operated Viscounts, when withdrawn from service, had accumulated between 22,000 and 30,000 airframe hours.

ACKNOWLEDGEMENTS

Allen, Eric, *Airliners in Australian Service* (Vol 1), 1995 Allen, Eric, *Airliners in Australian Service* (Vol 2), 1996 Brimson, Samuel, *Ansett, The story of an airline,* 1987 Gunn, John, *Contested Skies, 1999* Kittle, Rayner GC, *The Vickers Viscount,* 2008 Job, Macarthur, *Air Crash* (Vol 2), 1992 Wilson, Stewart, *Ansett. The story of the rise and fall of Ansett 1936-2002,* 2002 Yule, Peter, *The forgotten giant of Australian aviation, 2001* Barry Berkinshaw, South Australian Aviation Museum Nigel Daw, South Australian Aviation Museum Photographs were sourced from the various publications above and the personal collections of Nigel Daw and Dean Robinson.

Dean Robinson History Group Member South Australian Aviation Museum December 2017

Endnotes

ⁱ The Brabazon Committee came up with four categories: Type I, through to Type IV. Type II aircraft were to be feeder liners. Type II was later split into two designs, IIA, piston engine and IIB, turbo-prop, from which came the Viscount.

ⁱⁱ Watkins was eminently qualified. He had studied mechanical engineering at the University of Adelaide. In 1931 he departed for England to complete a course of advanced studies in aeronautics. He was then employed at Vickers, Weybridge in Surrey in a junior capacity, working in a team that included Barnes Wallis.

ⁱⁱⁱ The various series type numbers, ie V.720, reflected each airline's individual requirements. In TAA's case, 44 seats and provision for two "slipper" tanks mounted under-wing, plus extra internal wing tanks.

^{iv} The "D" suffix was used for aircraft powered by the 1,576hp/1,175kw Dart 510 engine. These aircraft arrived between June 1956 and July 1958.

^v Further development of the Viscount by Vickers commenced with the V.810 series. The aircraft was
"stretched" by 1.16m/3ft 10in, engines 4xRR RD@7/1 Mk 525 1990 shp, Maximum Take Off Weight (MTOW)
32,915kg/72,500lb, pax accom 56-64, cruise speed 305kt/565km/h.

^{vi} Eric Allen, *Airlines in Australian Service*, Vol 2, Aerospace Publications Pty Ltd, Fyshwick ACT, 1996, p100.

^{vii} Most NSW airports had been built during WW2 and were not designed to support a Viscount's weight.

^{viii} The Ambassador was a high-wing, twin piston engine aircraft uplifting 47 passengers in a pressurised cabin; cruise speed 260kt/482km/h; max weight 52,000lb/23,500kg.

^{ix} The Ambassadors were withdrawn from service and resold to BEA at a loss in September 1958.

Specifications

	the second se	
	V.700	V.810
Powerplant	Rolls-Royce RDa3 Mk 505/506 1547ehp	Rolls-Royce RDa7/1 Mk 525 1990ehp
Span	28.58m (93ft 8°in)	28.64m (93ft 11in)
Length	24.96 (81ft 10in)	26.13m (85ft 8in)
Height	8.16m (26ft 9in)	8.16m (26ft 9in)
Wing area	89.56m ² (963sq ft)	89.56m² (963sq ft)
Weight empty, basic equipment Max zero fuel weight	16,734kg (36,859lb) 22,246kg (49,000lb) 27,240kg (60,000lb)	19,613kg (43,200lb) 26,105kg (57,500lb) 32,915kg (72,500lb)
Max landing weight	26,559kg (58,500lb)	28,148kg (62,000lb)
Economic cruising speed	262kt/485km/h (302mph [Mk505]) 274kt/508km/h (316mph [Mk506])	305kt/565km/h (351mph)
Max cruising speed	276kt/511km/h (318mph [Mk505]) 281kt/521km/h (324mph [Mk506])	308kt/571km/h (355mph)
Takeoff unstick speed at MTOW	115kt/212km/h (132mph)	118kt/219km/h (136mph)
Field length for takeoff to 35ft (11m) at ISA/sea level	1678m (5500ft)	1860m (6100ft)
Typical rate of climb at MTOW from sea level Service ceiling	1200ft/min 8693m (28,500ft) 842nm/1560km	1650ft/min 8235m (27,000ft) 1107nm/2051km
Desire analyfars fully deve	129kt (256km/b)	152kt (282km/b)
Design speed, flaps fully down	115kt/014km/b (122mpb)	110kt/220km/b (127mpb)
Approach speed with full hap at max landing weight	10.50 (and 10.50 (b)	
Accommodation	40-53 (some converted to	50-64 (Some converted to