

SOUTH AUSTRALIAN AVIATION MUSEUM

SIGNIFICANT AIRCRAFT PROFILES

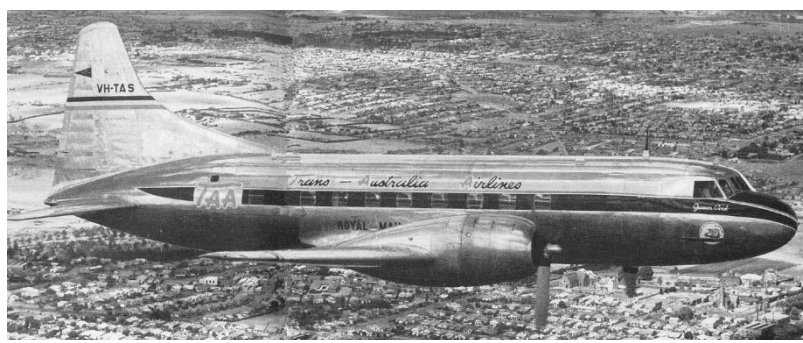
CONVAIR 240, 340 and 440 AIRCRAFT IN AUSTRALIAN CIVIL AVIATION

Following the end of WWII, a requirement soon became apparent to both airlines and aircraft manufacturers to meet the growing demands of the short to medium range market. Passenger traffic on Australia's domestic routes had grown threefold between 1945 and 1948. Several manufacturers in Europe and the United States, anticipating this need, already had plans well underway with general design work based on a twin piston engine aircraft with a capacity to uplift about 30 passengers. From the field that included Vickers and Airspeed (UK), SAAB (Sweden) and Martin and Convair (US), Convair's design emerged a clear leader with the potential for further development. Prior to its post-war name change to Convair, a division of General Dynamics, the company had been known during the war years as the Consolidated Vultee Aircraft Corporation, manufacturer of the B-24 Liberator and PBY Catalina flying boat.



Airlines of SA CV-440 VH-BZN taxiing at Adelaide Airport – January 1970

Convair responded initially to a specification from American Airlines for a DC-3 replacement with its model 110. However, as the sole 110 didn't meet American's requirements, a redesign led to the model 240, which first flew in March 1947. The Convair 240's innovative design included a pressurised cabin for 40 passengers, tricycle undercarriage, air stairs that could be located forward of the wing on either port or starboard side and a rear ventral air stair that retracted into the fuselage under the tail. The aircraft was powered by two Pratt & Whitney Double Wasp R2800-CA18 engines of 2,400hp, (the same power plant used in the P-47 Thunderbolt and F6F Hellcat) plus water methanol injection for brief bursts of additional power. Maximum takeoff weight (MTOW) was almost 42,000lb/19,050kg, cruising speed 235kt/436km/h, range 1,560nm/2,895km and ceiling 25,000ft/7,620m. Other innovations included hollow steel reversible pitch propellers and heated windshields. As the CV-240 introduction proved so successful, further development took place over



Trans Australian Airlines (TAA) Convair CV-240 VH-TAS. The type was introduced in 1948 and served until replaced by Turbo-prop Fokker Friendships in 1959. It set new standards, reflected both in passenger comfort and technical aspects.

the next few years resulting in the expanded models 340 and 440. When production ceased in 1959, in excess of 1,000 Convair aircraft had been built for both commercial operators and the US military.

Australia's involvement with Convair aircraft began in 1946 when the recently established

Trans Australian Airlines (TAA) placed an order for five Convair 240 aircraft, each costing \$US295,000. TAA's first CV-240 arrived in Melbourne in September 1948 and shortly thereafter flew on a demonstration flight from Melbourne to Sydney carrying 40 passengers in 1hr and 45min. This was the first pressurised air service in Australia. In the following month, October 1948, Convair services commenced on Australia's east coast. In the early days of the Convair becoming operational, the aircraft became the target of a negative campaign that cast doubts over the validity of various performance specifications. As a result, for reasons either political or commercial or both, Australian National Airlines (ANA) struggled on with its ageing DC-3/DC-4 fleet. Its "new" DC-6 aircraft did not arrive until 1953, by which time TAA had already signed a contract ordering six "next generation" Vickers Viscount aircraft.

Despite the unwarranted criticism, TAA's CV-240 proved most successful. In fact, it has been claimed that this was the aircraft that established TAA, assuring a firm base from which to grow. Indeed, three years after the airline's establishment in 1946, TAA began returning a profit, no doubt helped by the CV-240's appeal. TAA retained its Convair fleet until the arrival of the Vickers Viscounts; the last Convairs were finally removed from TAA service in late 1959.

Ansett was the other major Australian airline to operate Convair aircraft, specifically the CV-340 and CV-440. Ansett purchased three CV-340s and six CV-440s between 1954 and 1959, no doubt having witnessed the success of TAA's CV-240s. Initially Ansett CV-340s operated on the Melbourne-Sydney-Brisbane trunk route but with the acquisition of ANA and its six DC-6/DC-6B aircraft in 1957, Ansett was in a position to utilise the Convairs on intrastate routes via its subsidiary airlines. Both passengers and Ansett were to reap the benefits of improved flight standards within the states and the potential for on-carriage to a final interstate destination.

The CV-340/CV-440 proved to be reliable and robust aircraft. To increase seating capacity, the CV-340 had a fuselage stretch of 4ft 6in/1.38m and the CV-440 6ft 10in/2.09m, resulting in accommodation for 44 and 52 passengers respectively. Within the CV-440 cabin, the first two rows either side of the aisle faced one another to form a family compartment. MTOWs for the CV-340/CV-440 were approximately 21,340kg/47,000lb and 22,290kg/49,100lb. Both aircraft retained the Pratt & Whitney R2800 power plant of 2,500hp/1875kw, which gave a cruising speed of 247kt/457kmh and 226kt/418kmh over a range of 1750nm/3240km and 1370nm/2540. One advantage for Ansett on acquiring ANA, was that both Convair/DC-6 aircraft were powered by the same Pratt & Whitney R2800 engine. When required, an engine change took about eight hours.

In early 1958, Ansett gained control of Butler Air Transport (BAT) based in Sydney NSW. Part of its fleet consisted of three Airspeed Ambassadors, which were returned to British European Airways (BEA) by mid-1958 and, in part, were replaced with CV-340s. In late 1959, BAT was renamed Airlines of New South Wales (ANSW), resulting in both CV-340 and CV-440 types operating throughout NSW. The last Convair service took place there in



In early 1958 Ansett gained control of Butler Air Transport (BAT) which in late 1959 became Airlines of NSW (ANSW). In this period Ansett CV-340 and CV440 aircraft flew throughout NSW with the name Butler added to the Ansett livery

July 1960.

South Australia's association with Convairs began in 1958. Following the Ansett acquisition of BAT in 1958, the latter airline continued operating a Sydney-Broken Hill-Adelaide return service with its Viscount aircraft. Adelaide based Guinea Airways, unable to operate on equal terms with Its DC-3s, elected to terminate its former ANA handling agreement, transferring it to TAA instead. As part of the arrangement, TAA positioned a CV-240, VH-TAR, into Adelaide to compete on the Broken Hill service, commencing on 28 July 1958.

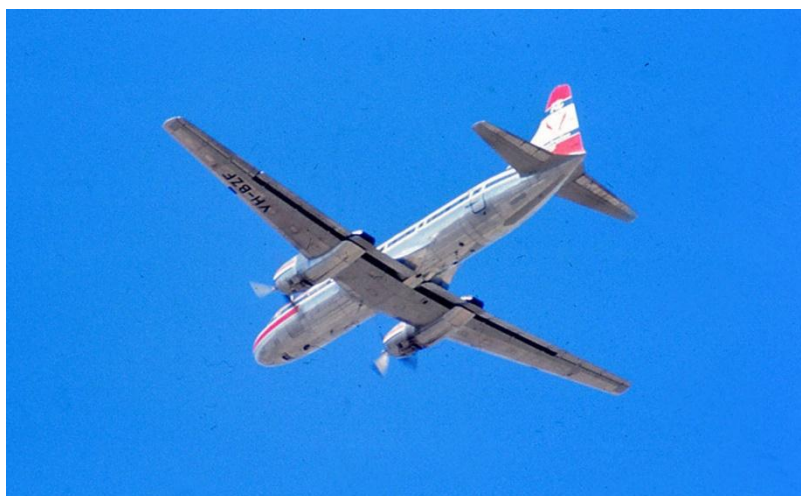


TAA CV-240 VH-TAR – This aircraft was leased to Guinea Airways in July 1958 to counter the Vickers Viscounts operated by Butler Air Transport on Adelaide-Broken Hill return services. In 1960, the recently formed Airlines of SA would operate its own Convairs to Broken Hill

Following Ansett's purchase of Guinea Airways in late 1959, the latter airline underwent a name change to Airlines of South Australia (ASA). In early 1960, two Ansett CV-440s were introduced into the existing ASA fleet of four DC-3s, all based at Adelaide airport. Both Convair aircraft gave good accounts of themselves over the next 12 years until their retirement. Scheduled services saw the Convairs operating to Broken

Hill, Kingscote, Port Lincoln, Whyalla and Edinburgh/Woomera. During the 1960s, Woomera in the State's north became the Australian focal point for military and civil programmes involving the launching of rockets/satellites, tracking and recovery, among other sensitive activities. In order to manage and staff these scientific programmes, large numbers of personnel, either from local or overseas sources, required transportation both to and from Woomera. The Weapons Research Establishment (WRE), now known as DSTO (Defence Science Technology Organisation) located at Salisbury SA, were highly involved with the movement of these personnel. Consequently, ASA's aircraft, particularly the Convairs, were contracted to carry vast numbers of passengers to and from their northern destination.

In late 1961, ASA's Convairs commenced operating a fortnightly service to Proserpine, North Queensland, via a refuelling stop in Charleville, Queensland. On arrival, Proserpine (PPN) destined passengers were ferried by launch to Ansett-owned Hayman Island with Adelaide bound passengers travelling in reverse. Unfortunately, this service ceased in August 1965, requiring South Australians to travel in future via the east coast with another carrier.



*Airlines of SA CV-440 VH-BZF flying over Adelaide's south-western suburbs
Circa 1970*

With the early 1970s dawning, time was beginning to run out for the two ASA Convairs, VH-BZF and VH-BZN, as they were the last of type still operating RPT (Regular Public Transport) air services in Australia. Both Ansett and TAA were now increasing the numbers of Fokker F-27 aircraft into their fleets, as jets and turbo-prop powered aircraft were becoming the new order of the day. A worldwide trend was underway, as major airlines began disposing of their piston engine aircraft. In February 1972, both Convairs were ferried to Melbourne for onward disposal. By the late 1970s they were reported as lying derelict in Bangkok, a sad but not untypical ending for many former passenger aircraft at the end of their working life.

The 14 Convair 240, 340 and 440 aircraft brought a new era in air travel to post-war Australia. Passengers appreciated both the aircraft's reliability and the comfort of a pressurised cabin, the first in Australia. More importantly, they were well regarded by the technical and cabin crew who flew them.

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SOURCES:

Eric Allen, *Airliners in Australian Service*

Barry Berkinshaw

Samuel Brimson, *Ansett: The Story of an Airline*

Nigel Daw, *Adelaide-West Beach Airport*

Jim Evans and Nigel Daw, *An Iconic Airline: The story of Airlines of South Australia*

Stewart Wilson, *Ansett: The story of the rise and fall of Ansett 1936-2002*

Peter Yule, *The Forgotten Giant of Australian Aviation*

Convair CV-240, CV0340 and CV-440 Specifications			
	CV-240	CV-340	CV-440
Powerplants	Pratt & Whitney RC-2800-CA18 2,400hp (1,800kW)	Pratt & Whitney RC-2800-CB16 2,500hp (1,875kW)	Pratt & Whitney RC-2800-CB17 2,500hp (1,875kW)
Normal Cruising Speed	234kt (434km/h)	247kt (457km/h)	226kt (418km/h)
Range	1,562nm (2,896km)	1,759nm (3,242km)	1,370nm (2,542km)
Weight empty	13,777kg (30,345lb)	14,709kg (32,399lb)	15,363kg (33,840lb)
Weight loaded	18,968kg (41,780lb)	21,338kg (47,000lb)	22,290kg (49,100lb)
Wingspan	27.98m (91ft 9in)	32.13m (105ft 4in)	32.13m (105ft 4in)
Length	22.77m (74ft 8in)	24.14m (79ft 2in)	24.76m (81ft 2in)
Height	8.21m (26ft 11in)	8.59m (28ft 2in)	8.59m (28ft 2in)
Wing area	76m ² (817ft ²)	86.6m ² (920ft ²)	86.6m ² (920ft ²)
Accommodation	40	44	44-52