First Ansett-ANA Boeing 727 - VH-RME

Robert N. Smith

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Foreword

There were not many of the first Boeing 727 aircraft, the 100 series, to be seen in Australian service. Each major domestic airline - Trans-Australia Airlines and Ansett-ANA - acquired only six each. Nevertheless the type had a distinctive three engined design and they were affectionately known as "three holers" by those with an interest in the type. They took domestic aviation well and truly into the jet age, and the airlines were to acquire many more of the later and bigger series of the 727 which was produced in great numbers.

They came at the beginning of the two-airline policy which was a tightly regulated affair. This extended down to the smallest details. For these first jet aircraft for domestic service, the airlines were required to bring their aircraft into Australia virtually simultaneously, with the toss of a coin deciding which airline would be the first to land its new 100 series jet. In this instance, Ansett-ANA won the toss and the TAA aircraft arrived a few minutes later. They were parked together for the ceremonial welcome and public inspection which followed. They entered service a short while later in a carefully orchestrated manner.

They were favoured by the two airlines over the British-built de Havilland Tridents which had a similar three engine design. In a time when the 'buy British' policy still had an impact, the B-727 was favoured by the airlines and the tariff penalty against the American type was applied by the government. In service before environmental considerations assumed the importance they have today, they were dirty and noisy - they could be seen and heard a long way off to the delight of enthusiasts and photographers alike. Being the first of the series, they looked quite short.

These early Boeings had an impact on Australian domestic aviation greater than their numbers would suggest. While there was little difference between the aircraft and their two operators apart from the differing colour schemes, they moved the growing number of customers far more efficiently than their predecessors. In time they were joined and supplemented by the twin engined Douglas DC-9 and the later series of the 727 design in significantly greater numbers.

The significance of the 727-100 series in Australia is nicely demonstrated in this little book which is the latest in a series by Robert Smith. It nicely opens up an area of Australian domestic airline operation which has I believe been somewhat neglected until now. Notwithstanding the greater number of the later series which saw service in Australia, this first 100 series had a significant impact for the domestic airline traveller and enthusiast. I hope you an enjoy reading it as much as I enjoyed the draft.

Dr E. D. Daw. Canberra, October 2010.

Boeing 727 - Background Information

August 31, 2010 marked the end of an era when the last Boeing 727 registered in Australia was withdrawn from service. This aircraft was being used as a pure freighter and was the final derivative of an airliner that had been conceived by Boeing engineers back in the mid 1950s.

Even before Boeing had delivered its first Boeing 707 to launch customer Pan American World Airlines on August 15, 1958, four years after the first flight of the prototype, the company's engineers envisaged a need for a jet transport that could be utilised on medium length routes currently served by fleets of older piston-engined and early generation turboprop aircraft.

Early contenders for this market were the de Havilland DH-121 Trident and the Sud Aviation Caravelle jet transports while Vickers Armstrong with the Viscount and the soon to be released Vanguard and Lockheed with their Electra were actively marketing their turboprop airliners.

On May 6, 1958 Boeing established a team headed by Jack E. Steiner to investigate and design the 'Model 727' as the project was to become known. This study was to last some four and a half years and involved over 1,500 hours of wind tunnel testing the many varied aircraft configurations the team examined.

From the very beginning of this study it was decided that where possible as much tooling from the Boeing 707 project should be utilised, thus reducing the overall cost of the new aircraft. To this end the entire upper fuselage lobe of the 707 was used. Doing this would encourage passengers to subconsciously link the two aircraft types based on a familiar spacious cabin layout and function.

Existing 707 aircraft systems were also to be used unless it could be demonstrated that improvements would result in greater economy or safety

The vital question regarding the number of power plants to be used and their location occupied a considerable amount of time for the design team. Extensive consultation was undertaken with various airlines, not only with safety aspects in mind but also the economics involved in operating twin, tri or quad jet engined aircraft.

The actual engine type selected by Boeing to power the '727' was the direct result of one of its potential customers refusing to order the aircraft unless it was powered by an 'American' sourced engine. This ruled out Boeing's first choice of the Allison built Rolls-Royce Spey engine. Instead the Pratt & Whitney JT8D turbofan engine became the preferred powerplant.

Boeing envisaged that the 727 would operate into airports that were much smaller and less sophisticated than those to be serviced by the larger 707, and therefore this aircraft would need to possess better handling characteristics. This was achieved by designing a new wing that incorporated both leading edge slats and large slotted trailing edge flaps that extended virtually over the wing's entire span. This gave the 727 a landing speed that was below that of the turboprop Lockheed Electra while enabling it to operate safely from runways as short as 2000 metres under full loads.

Once on the ground the 727 had to be self sufficient. Rear ventral airstairs permitted access to the passenger cabin from behind. An optional forward set of airstairs that retracted into its own compartment below the forward passenger door was also available. An APU was also fitted to ensure that ground handling and engine starts could be accomplished independent of ground support where necessary.

By February 1960 the design of the 'Model 727' had been frozen. It was an elegant aircraft featuring three turbofan engines grouped at the rear of the fuselage under a 'T' tail. This design and the supporting data was presented to Boeing's Board of Directors along with the estimated cost of around $US 100,000,000 to cover the necessary tooling and production costs. Given that at this point in time Boeing were some $US 200,000,000 in the red as a result of the Boeing 707 project, the prospect of a successful launch did not seem immediately feasible.

The Boeing Board realised that as this project seemed to offer what airlines were looking for in this sector of the market, it was decided to give provisional support to it with the stipulation that before the '727' could be officially launched 100 airframes had to have been ordered and holding deposits received before December 1, 1960.

The Boeing Sales Team hit the road, knocking on airline executive doors to solicit the required orders. Finally on November 30, 1960 both Eastern and United Airlines confirmed orders for 40 aircraft each. Five days later Boeing's President formally announced that the Boeing 727 would enter production, and thus was born Boeing's second jet legend.

The prototype Boeing 727, registered N7001U was rolled out to an admiring audience at Renton on November 20, 1962. It flew for the first time on February 9, 1963 crewed by Lew Wallick as pilot-in-command, Dix Loesch as co-pilot and Marvin Schulenberger as flight engineer. When the aircraft landed at Paine Field some 126 minutes later with a landing roll of around 1,000 metres everyone watching was impressed.

The F.A.A. granted type approval on December 24, 1963, with deliveries to the airlines taking place shortly thereafter. Eastern Airlines had the honour of inaugurating the first Boeing 727 service on February 1, 1964 when it placed the aircraft on the Miami-Washington-Philadelphia route.

Australian airline executives were able to get up-close and personal with the 727 when Boeing carried out a world demonstration tour with N7003U in 1963. This aircraft arrived in Sydney on September 29, having flown in from Darwin. During its visit it flew to Canberra and Melbourne performing limited demonstration flights as required.

Both Ansett-ANA and T.A.A. were impressed with the new aircraft and sought Australian Government approval to initially order two airframes each. This approval was granted on November 19, 1963 but then things took a turn for the worse when the Department of Civil Aviation got involved, flexing its muscles under the guise of 'safety requirements'.

Firstly it deemed that with only one over-wing emergency exit fitted in accordance with the design, Australian registered 727s could only carry 109 passengers in an all-economy seating configuration instead of the 130 proposed by Boeing.

Secondly passenger seats capable of withstanding loads of 12 g, instead of the Boeing designated 9 g seats, had to be fitted.

Thirdly, and this was the most ludicrous safety requirement stipulated by D.C.A., all passenger seating had to be rearward facing!

Signing the contracts covering the purchase of these aircraft was put on hold while in-depth discussions were held between the Australian airlines and Boeing on the one hand, and between the airlines and D.C.A. on the other took place.

One of the first problems noted by both Ansett-ANA and T.A.A. was that under its current configuration the 727 lacked the range to effectively operate the East-West crossing of the Australian continent even under favourable weather conditions with a full payload. Boeing responded by increasing the gross weight and fuel capacity of the aircraft to suit Australian conditions. This also required the fitment of larger tyres to accommodate the increased weight.

Both airlines agreed to the D.C.A. requirement to fit seats capable of withstanding 12 g, although this increased the overall cost of each airframe. When the over-wing emergency exits were discussed Boeing had already foreseen this as a problem and were studying the reengineering of this area to accommodate two exits at their own expense. In the end, Ansett contributed some $US 58,000 towards this modification with Boeing picking up the rest of the cost. This modification enabled the 727 to carry 140 passengers.

With regard to the rearward facing seats, sanity finally prevailed and this 'safety' requirement was dispensed with. Had it not then Australia would have become the 'laughing stock of the aviation world' with the only passenger jet-engined airliners, albe it a Boeing product, with such seating!

The contracts to purchase two aircraft each were signed by the airlines on February 1, 1963 with the delivery dates set for October and November 1964, just in time for the Christmas holiday period. As the airlines had additional equipment installed on their aircraft to meet Australian safety and operational conditions, Ansett stated that with spares the two aircraft would cost around $US 5,500,000 each.

When Ansett-ANA and T.A.A. placed their orders for the Boeing 727 there were many politicians and bureaucrats in Australia and England who still believed that Australian airlines should buy British manufactured aircraft even if these products did not fully meet the airline's specific requirements - close enough was good enough. This blinkered approach to the economic realities of running a profitable airline just to support a 'buy British' mentality at all cost, reared its ugly head in this case.

The British Board of Trade made representation to the Australian Government that Ansett-ANA and T.A.A. should be forced to purchase the de Havilland DH-121 Trident as this was a comparable aircraft. Much has already been published by other aviation writers on the subject, and can be pursued by those who desire to become fully acquainted with the topic. Suffice to say that at the end of the day the Australian Government hit each airline with a 7.5% duty on each aircraft as they considered that a 'suitably equivalent British aircraft was reasonably available'. Despite legal appeals the duty was imposed on all Boeing 727s imported into Australia.

Finally the great day arrived - October 16, 1964. As both airlines were required to bring their aircraft into the country at the same time, a coin was tossed to determine which airline should have the right to land first at Melbourne's Essendon Airport, the headquarters of both airlines. Ansett-ANA won. VH-RME under the command of Capt A. Lovell landed first, with T.A.A.'s VH-TJA under the command of Capt D.A. Winch arriving a few minutes later. Both aircraft were then put on display for invited guests, airline employees and their families to inspect.

Regular passenger services commenced on November 2, 1964 between Melbourne and Sydney, and later to other capital cities as more aircraft were taken on strength. Australia's association with the Boeing 727 had commenced, one that was to last some 46 years. During that time both Ansett and Trans Australia purchased four more Boeing 727-100 series aircraft before graduating to the larger and more efficient 200 series aircraft.

World airlines benefitted by the involvement of Australian airlines in the 727 project as the two over-wing emergency exits became standard on all 727 aircraft, and all series 100 aircraft manufactured after the Australian order had the increased fuel capacities and the higher gross weight as standard.

Boeing developed and improved the 727 over the ensuing years, eventually building a total of 1831 airframes. The final aircraft rolled off the production line on August 14, 1984, a dedicated freighter for FedEx. While the 727 has disappeared from Australian skies it still flies in limited numbers in other parts of the world. Like all good early generation airliners its days are numbered due to the cost of maintaining and operating them in the first place and ever increasing noise limitations placed on such aging jet aircraft. In its day it was an outstanding success both in Australia and in the rest of the world.

History of Ansett-ANA Boeing 727-77 VH-RME

This was the first of two aircraft ordered new by Ansett-ANA on February 1,1963 and was the first jet engined airliner to be ordered by the airline. It was officially entered onto the Australian Aircraft Register as VH-RME on September 1, 1964 before being flown for the first time at Renton, Washington on September 21, 1964.

Having been accepted by Ansett representative it departed Seattle on its delivery flight to Australia on October 13, 1964 arriving at Melbourne's Essendon Airport on the afternoon October 16, 1964. This was a carefully stage-managed event. The right to have the first aircraft of this type to land had been determined by the toss of a coin between the two Australian operators. The delivery route was Seattle-San Francisco-Honolulu-Canton Island-Nadi-Melbourne.

The flight crew for this flight consisted of Ansett Capts A. Lovell, J. McRobbie, A. McNaughton, Navigator W. C. Kennedy, Flight Engineers M. Perry and A. Williams while the Boeing flight crew consisted of Capts S. L. Wallick, B. Allsop and E. Hartz.

This flight was very significant as it was the first tri-engined aircraft to cross the Pacific Ocean since Charles Kingsford-Smith and Charles Ulm's flight in the Fokker 'Southern Cross' had departed the United States on May 31, 1928.

After its arrival it was used for pilot training and performing promotional flights to various capital cities around Australia. It entered revenue service when it flew Melbourne-Sydney on November 2, 1964 thus making the introduction of jet-engined aircraft to the Australian domestic market.

It operated its final revenue service when it flew Brisbane-Melbourne as AN55 on September 12, 1978. Withdrawn from use it was stored at Melbourne's Tullamarine Airport having flown some 43,110 hours.

It was sold to International Air Leases in January 1979. Prepared for its delivery flight to the United States by Ansett it departed Melbourne for the last time on January 18, 1979. The delivery route flown was Melbourne-Tontouta-Pago Pago-Hilo-Los Angeles-Miami where it arrived on January 20. The Ansett crew for this flight were Capts M. Wheaton and E. Mackay, Flight Engineer J. Crago and Navigator B. S. McEwen. It was formally cancelled from the Australian Aircraft Register on January 25, 1979.

It was then entered onto the Mexican Aircraft Register as XA-MEG on June 6, 1979 as it was leased to Compania Mexicana de Aviacion SA (Mexicana). It was returned to International Air Leases on November 6, 1981, and then prepared for a new leased to Transbrasil SA Linhas Aereas which commenced on December 20, 1981. During this lease it was entered onto the Brazilian Aircraft Register as PT-TCE.

The aircraft was subsequently sold to Transbrasil on April 1, 1986 before being sold to Corsair Inc on May 16, 1989. The aircraft was entered onto the U.S. Aircraft Register as N8140V to cover its positioning flight for its next lease.

Leased to Toros Airways, Turkey (t/a Torosair) on May 30, 1989 it was entered onto the Turkish Aircraft Register as TC-AJT. It acquired the aircraft name of 'Imre Hong' during its time in Turkey.

It was returned to Corsair when Torosair ceased operations in January 1990. On returning to the United States it was entered onto the U.S. Aircraft Register as N143CA. Ownership was transferred to Avengair in June 1990.

Next it was leased to Aerolineas Centrales de Colombia SA (t/a ACES Colombia) in 1991. For this lease it was entered onto the Colombian Aircraft Register as HK-3651X. It was returned to Avengair in April 1992.

The aircraft was advertised for sale and an intended sale to Hanair of Haiti in April 1992 did not eventuate despite the aircraft had being fully painted in Hanair livery at Miami.

It was subsequently leased to Servicios Aereos Rutas Oriente SA, Mexico (t/a SARO) on July 17, 1992. For this lease it was entered onto the Mexican Aircraft Register as XA-SDH.

Returned to Avengair in July 1993 it was then leased to Quassar de Mexico SA on August 1, 1993. Reregistered as XA-SIR it saw limited service until it was returned to Avengair and withdrawn from service at Miami on October 22, 1994.

Entered onto the U.S. Aircraft Register as N8140V it was registered to Avengair but was placed in storage at Opa Locka, Florida. It was never to fly again. It last sale was to Florida National Air Sales & Services on May 26, 1995 who subsequently scrapped it at Opa Locka, Florida during 1995.

Washington State, U.S.A.

Washington State, U.S.A. September 1964

Photographed during one of its test flights

Melbourne Essendon Airport. October 16, 1964

Ansett-ANA's first jet airliner arrives after successfully crossing the Pacific Ocean

Essendon Airport, Melbourne

Melbourne Essendon Airport. October 16, 1964.

Ansett employees and their families inspect the newly arrived aircraft

Essendon Airport, Melbourne

Melbourne Essendon Airport. October 1964

The aircraft is prepared for another pilot training mission before entering revenue service

Essendon Airport, Melbourne

Melbourne Essendon Airport. October 1964

The aircraft is prepared for another pilot training mission before entering revenue service the following month

Melbourne Essendon Airport. June 1967

This image clearly shows the modified livery where the emergency exits and doors have been outlined

Perth Airport. December 1967

Sydney Kingsford Smith Airport. May 1968

Tullamarine Airport, Melbourne

Melbourne Tullamarine Airport. December 1976

Photographed from the terminal in the new ‘delta’ livery

Tullamarine Airport, Melbourne

Melbourne Tullamarine Airport. May 1977

Melbourne Tullamarine Airport. January 1979

A ceremony was held to farewell Ansett's first jet airliner

Sao Paulo Airport, Brasil. March 1988

Registered as PT-TCE it was operated by the Brazilian airline Trans Brasil

Unknown airport. July 1989

Now registered as TC-AJT it was operated by the Turkish airline TorosAir

Miami Airport, Florida. May 1992

Registered as HH-JEC to Hannair it did not enter service

Miami Airport, Florida. October 1994

Registered as XA-SIR with the Mexican airline Qassar it saw very limited use before being withdrawn from use and scrapped

General Specifications

Boeing 727-100

Wingspan:	32.92 metres (108 feet 0 inches)		
Wing area:	157.9 square metres (1,700 square feet)		
Length:	40.59 metres (133 feet 2 inches)		
Height:	10.36 metres (34 feet)		
Weights:	Empty:	36,560 kg	(80,602 pounds)
	Maximum Take-off:	76,818 kg	(169,000 pounds)
	Maximum Landing:	62,400 kg	(137,500 pounds)
	Zero Fuel Weight:	45,360 kg	(100,000 pounds)
Engines:	3 x Pratt & Whitney JT8D-7 turbofan engines		
Engine Thrust:	62.3 kN (14,000 pounds)		
Fuel Capacity:	31,000 litres (8,186 US gallons)		
Range:	2,700 nm (5,000 km) with maximum payload		
Maximum Speed:	550 kts (1013 km / hr at 22,300 feet)		
Cruise Speed:	495 kts (917 km / hr)		
Maximum Ceiling:	12,801 metres (42,000 feet)		
Normal Cruise Height:	11,000 metres (36,000 feet)		
Seating:	94 in typical two class configuration, with maximum of 131 in all economy		
Crew:	Flight: 3	Cabin:	3 / 4
Cost new:	$US 5,500,000 approximately		

Acknowledgements

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