



# AIR NEW ZEALAND

## THE DC-10 YEARS

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**IMAGES & PHOTOS** *DAC Via LIVESEY/  
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When the New Zealand Government took control of TEAL—Tasman Empire Airways LTD (TE)—from the Australian Government in 1961, it had big plans for the carrier. It wanted to ensure that passengers would know that TEAL was a New Zealand airline. And so, on April 1, 1965, a rebranding took place: TEAL became Air New Zealand.



**THE GOVERNMENT HAD PLANNED** to develop an international network; so, in 1962, it had signed a contract with American manufacturer Douglas for three DC-8-52s, the first of which arrived in early 1965, just before the name change. Air New Zealand went on to operate seven of the Douglas jets. Besides increasing the airline's trans-Tasman and Pacific Island services, the new jets opened up transpacific flights to Los Angeles (LAX) in 1965, and Hong Kong (HKG), and Singapore (SIN) in 1966.

By the decade's end, Air New Zealand was looking at bigger, more powerful aircraft to open routes beyond those

made possible by the DC-8. This was the dawn of the Jumbo Jet era. Wide-bodied airliners were offering passengers unprecedented comfort on long-haul services, including onboard bars and lounges. The Boeing 747 took to the skies in 1969, but TE management believed that the type was too big for its operation. Teething problems with the 747's entry into service elsewhere, including severe wear issues with its engines, deterred the airline from placing an order.

However, the airline's management knew that, to expand its network and erase the perception that Air New Zealand was merely a regional South Pacific carrier, TE would

need to upgrade and modernize its fleet. To this end, they first considered the new DC-8 'Super Sixty'. The upgraded jet had the additional range and capacity they believed Air New Zealand would need to keep up with future growth. It also offered the appeal of fleet commonality with TE's existing DC-8s. But the type was quickly becoming technologically obsolete.

And Douglas had already announced its intention to focus on its new wide-body tri-jet, the DC-10.

### **STICKING WITH DOUGLAS**

Some discussions with rival Lockheed over its L1011 Tristar

1 The DC-10s arrival coincided with the introduction of a smart new color scheme which included the Māori 'Koru.'



2 DAVID H. STRINGER COLLECTION

2 TE introduced the DC-8 in 1965, allowing the airline to begin transpacific flights to the United States and Asia.

3 Airline advertising 1970s style, highlighting the benefits of the new airliner.

4 The first DC-10 arrived at Auckland (AKL) on January 11, 1973.

5 TE heavily promoted its state-of-the-art new DC-10s.

6 TEAL - Tasman Empire Airways became Air New Zealand in 1965.

**in the Seventies**

## SPACE BEGINS AT ZERO FEET

The luxurious DC-10 aircraft in Air New Zealand's fleet bring a new dimension to Pacific travel.

Equipped with the most advanced flight and navigation systems, Air New Zealand's version of the DC-10 tri-jet is the long range Series 30 which can comfortably fly Air New Zealand's longest sectors, Auckland-Honolulu and Sydney-Hong Kong (each about 4,500 miles).

It has two aisles . . . a cabin width of 18ft. 11in. . . the biggest proportionate passenger window area of any jet . . . seats chosen for their comfort and leg room from eight designs submitted . . . carpet and decor in the colours of the South Pacific.

Three of the most powerful engines in the sky made by General Electric and developing 50,000 lbs. of thrust each, drive the DC-10 smoothly at 600 miles an hour. Despite their size and power they are quiet enough for the DC-10 to be dubbed the "Good Neighbour" jet.

3 DAVID H. STRINGER COLLECTION PRINTED IN NEW ZEALAND

came to nothing due to issues with that plane's development (mainly, delays to its Rolls-Royce engines due to the company's debts and subsequent receivership). Also, Air New Zealand was a long-time Douglas customer, and thus signed a contract for three of the longer-range -30s on September 15, 1970, with deliveries scheduled between January 1973 and January 1974.

The DC-10 offered Air New Zealand several benefits over rival aircraft. It had lower operating costs than the 747 and could carry more passengers and freight than the DC-8. Yet, ushering in the wide-body era was a big gamble; the aircraft was a significant investment for such a small airline. Due to the country's remoteness, Air New Zealand also felt the need to purchase a comprehensive spares package from the manufacturer to ensure that it could deal swiftly with any maintenance issues. The arrival of its new flagship airliner provided the perfect opportunity for TE to introduce a new livery. The dark blue and turquoise TEAL colors remained, forming a cheat line that began



DAVID H. STRINGER COLLECTION 4

5 DAVID H. STRINGER COLLECTION

**1940-1946** When AIR NEW ZEALAND, then Tasman Empire Airways Limited, was formed in 1939 it had three shareholders, the Governments of New Zealand, Australia and Britain. It ordered three S-30 Empire-class flying-boats, but because of war, only two were delivered. Carrying 19 passengers at 138 miles an hour for a scheduled 9 hour flight from Auckland to Sydney, the S-30s maintained the only regular contact between New Zealand and the outside world throughout World War II. TEAL made its 1,000th crossing of the Tasman in June, 1944.

**1946-1949** In its first re-equipment, TEAL took delivery of three S-25 Tasman-class Sandringham flying-boats in 1946 and a fourth the following year. Carrying 30 passengers at 172 miles an hour, their time for the Tasman crossing was 8 hours.

**1949-1954** Four Mark IV Solent-class flying-boats delivered in 1949, and a fifth in 1951, reduced the Tasman crossing to 6½ hours, carrying 45 passengers at 200 miles an hour. They were also used for TEAL's first route expansion. This included a pioneer service to Tahiti and regular Wellington-Sydney flights on the Tasman. During this time, DC-4 landplanes under charter to TEAL introduced a service between Christchurch and Melbourne.

**1954-1959** Following the withdrawal of British interests from TEAL in October, 1953, the airline re-equipped with 56-seat DC-6 aircraft – its first landplanes. Flying at 265 miles an hour, they cut the Tasman crossing to 5½ hours. They were used to start new services to Sydney and Melbourne from Christchurch and Wellington, and to bring Brisbane on to the route structure.

**1959-1972** Three jet-prop Electra Internationals were delivered to TEAL in 1959 and, carrying 76 passengers at 400 miles an hour, they crossed the Tasman in 4 hours. On April 1st, 1961, New Zealand bought out Australia's holding in the airline, making TEAL wholly New Zealand owned. This step was followed four years later by a change of name, when TEAL became AIR NEW ZEALAND.

**1965** Three new DC-8 fanjet airliners were introduced late in 1965. Carrying 129 passengers at nearly 600 miles an hour, they offered flights to Australia in 2½ to 3 hours. They also made possible a major programme of route expansion, with new services to Los Angeles, Hong Kong and Singapore, more than doubling the route mileage in less than six months.

**1973** The DC-8s (now six in number) were joined by 600 miles an hour DC-10 tri-jets carrying 241 passengers.

APRIL–JUNE 1965

# AIR NEW ZEALAND

## TIMETABLE

**AIR NEW ZEALAND**  
previously named **TEAL**

6 DAVID H. STRINGER COLLECTION

at the nose and continued along the fuselage to the top of the tail. There, it met the 'Koru', the Māori symbol now synonymous with the airline. Dark blue 'Air New Zealand' titles were placed on the upper fuselage. The livery would remain largely unchanged until 1996.

On January 11, 1973, Air New Zealand's first DC-10 (ZK-NZL) arrived at the carrier's Auckland (AKL) hub after a delivery flight from Long Beach, California (LGB). Following crew training, the aircraft was put into

service on the Auckland-Sydney (SYD) route on February 3, 1973. A short while later, the type was introduced onto TE's Nadi, Fiji (NAN) route, then extended across the Pacific to Los Angeles via Honolulu (HNL). Air New Zealand initially flew this service thrice weekly. The second airframe (ZK-NZM) arrived on September 14, 1973. This one enabled the airline to increase the frequency of its Auckland-Los Angeles schedule by one, with this flight stopping in Papeete (PPT). Four months later, on January 22, 1974, the



third DC-10 (ZK-NZN) arrived and replaced the DC-8 on its rotations to Hong Kong, Los Angeles, and Singapore.

### LONDON BOUND

With the Pacific routes performing well, Air New Zealand now looked toward Europe, specifically London, to become the next point on its expanding route map.

However, the airline struggled to gain the fifth-freedom traffic rights it needed to launch the service, mainly because the British government, seeking to protect its long-haul flag carrier BOAC (BA), balked at granting permission for the route.

Meanwhile, BOAC had been forced to drop its unprofitable westbound service from London Heathrow (LHR) to



Melbourne (MEL), which routed via New York (JFK), Los Angeles, Honolulu, Nadi, and Sydney. BA management thus looked toward the ambitious Air New Zealand, proposing a mutually beneficial interchange agreement between Auckland, LAX, and LHR.

Negotiations ensued between the airlines, the governments, and the UK's Civil Aviation Authority (CAA). On December 13, 1973, these yielded a deal, known as the 'Through Service Agreement' (TSA), that covered all aspects of the interchange.

The pact would see Air New Zealand and British Airways coordinate their services to provide a daily flight between Auckland and London, linking up in Los Angeles, which was known as the 'through point'. Air New Zealand crews would operate the transpacific leg of the journey before British Airways flight and cabin crews would take over the DC-10 in Los Angeles for the onward sector to LHR.



7 As more DC-10s arrived, TE used them to replace the DC-8 on many transpacific routes.

8 The DC-10 was put into service on the AKL-SYD route in February 1973.

9 Once the DC-10 had settled into the Pacific routes, TE looked towards London for its next destination.

10 All three airframes from the initial order were delivered by January 1974.



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It took almost two years for BA crews to be trained on the DC-10 and for agreements to be reached between the Pilot, Flight Attendant, and Flight Engineer unions. This was due to the length of the flight duty period; eventually, a third flight crew member was added as a 'relief officer'. When the inaugural 'interchange service', operated by ZK-NZP, touched down at London Heathrow on February 17, 1975, BOAC had become British Airways (BA) after merging with British European Airways (BE) in 1974. Air New Zealand later signed a deal to purchase two DC-10s to fulfill the new agreement and to enable the further expansion of its network. The airline also benefitted by purchasing two additional units in 1979 at the same price as their earlier orders.

*Zulu Papa*, Air New Zealand's fourth DC-10, arrived on December 13, 1974. The airframe was the 182nd DC-10 off the production line. It was also



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the first to be fitted with the new General Electric CF6-50C engines. This power plant offered an additional 2,000lb (8.9kN) of thrust compared with the earlier engines, each providing 51,000lb (227kN). TE would later retrofit its first three DC-10s with these powerplants.

The airline would make much of the new 'super-powered' engines in its promotional materials. Foreshadowing today's push towards sustainable aviation, Air New Zealand included the following statement in *Jetaway*,

its then in-flight magazine: "Air New Zealand... introduce this special part of the world [the Pacific] to their passengers with a special kind of pride. And they do everything possible to care for it. That's why Air New Zealand chose General Electric CF6 engines for their fleet of DC-10s. They knew these engines would help keep the skies over the Pacific clean and quiet ... would leave no trail of smoke ... produce much less noise than narrow-body jet aircraft ... and consume 25% less fuel."

#### **GROWING NETWORK TO GROUNDING**

The fifth DC-10 (ZK-NZQ) landed in Auckland on February 20, 1975. Its arrival enabled TE to increase rotations to the United States to eight per week. Air New Zealand also launched a new service from Christchurch (CHC) to Los Angeles via Auckland, Nadi, and Honolulu.

As the final three airframes joined the fleet, the DC-10

continued to open up new destinations, including Noumea (NOU) in New Caledonia and Rarotonga (RAR) in the Cook Islands. It also enabled Air New Zealand to commence non-stop flights from AKL to SIN and increase its LAX rotation to 10 per week.

The sixth DC-10 for Air New Zealand (ZK-NZR) arrived on October 2, 1975. The seventh (ZK-NZS) touched down on June 7, 1976, and the eighth and final aircraft (ZK-NZT) joined the fleet on November 10, 1977. By the time this last DC-10 arrived, British Airways had begun to outgrow the Interchange Agreement by introducing the Boeing 747 on its West Coast routes. However, the TSA stipulated that the DC-10s had to remain on the Los Angeles rotations twice a week, so BA was forced to use the Air New Zealand tri-jet on other routes, including a five-weekly service to Miami (MIA) and a thrice-weekly flight to Montreal (YUL). This state of affairs continued until the agreement's expiry, in April 1979.

While the DC-10 had helped Air New Zealand to spread its wings, several high-profile incidents led the US Federal Aviation Administration (FAA) to ground the type on June 6, 1979.

Issues with its cargo door design, which saw the traditional inward-facing plug door replaced by an outward-opening swing one, began with an explosive decompression onboard American Airlines (AA) Flight 96 on June 12, 1972. Then came the hull loss of Turkish Airlines (TK) Flight 981 outside Paris less than two years later. Three hundred and forty-six souls onboard perished.



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11 TE would order a further four DC-10s, leading to a total of seven being operated.

12 The fourth DC-10 to arrive was fitted with new General Electric CF6-50C engines.

13 The TE/BA agreement saw the latter operate TE's DC-10 from LAX to LHR.

14 TE began Antarctic sightseeing flights with Qantas in 1977, and they quickly proved popular with the public.

McDonnell Douglas changed the door design, and the airliner remained incident-free until May 25, 1979. During AA Flight 191's take-off roll at Chicago (ORD), the left engine separated from the wing. Seconds later, the aircraft plummeted into a field less than one mile from the end of the runway. All 273 on board were killed.

The grounding of the type stranded hundreds of passengers on both sides of the Pacific; so,

Air New Zealand chartered a Pan Am (PA) Boeing 747 to operate six round trips between Auckland and Los Angeles. The airline also utilized its three remaining DC-8s, which it had begun retiring in March 1976, to maintain its overseas operations.

The grounding lasted just 37 days. But, for Air New Zealand, the damage was severe, as passengers began actively avoiding those airlines that operated the DC-10. The airline



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now found itself in a precarious situation, for it relied solely on the trijet for many of its services. Indeed, it would cite this state of affairs as a primary factor behind its US\$15.4 million loss for the 1979/1980 financial year. But an even bigger tragedy was to come.

### **MOUNT EREBUS**

In 1977, Air New Zealand joined Qantas (QF) in offering special sightseeing flights to

the Antarctic. The trips proved incredibly popular, even with minimal advertising. One of the airline's DC-10s would depart AKL in the morning, overfly the Auckland and Balleny Islands near the Antarctic coast, then continue down the coast of Victoria Land to McMurdo Sound and the South Pole regions of Antarctica.

The routing would depend on the day's weather conditions during the southern-polar summer/daylight season. The

jet would return to Auckland via Christchurch, landing after around 11 hours, having covered nearly 5,400 miles (8,700km).

The first flight departed from Auckland on February 15, 1977, under the command of Captain Ian Gemmell. Flight Attendants served passengers meals, refreshments, and a complimentary bar service. An 'experienced Antarctic guide' was onboard, offering detailed insights into the area's geology, history, and environmental conditions. On many flights, the commentary was complemented by contact with personnel on the ground or with US Navy Pilots airborne in the vicinity, played via the PA system.

On November 28, 1979, Flight TE 901 departed AKL on schedule for its sightseeing trip. In command of ZK-NZP was Captain Jim Collins, joined by First Officer Greg Cassin and Flight Engineer Gordon Brooks. Onboard were 237 passengers and 20 crew members. At 12:49 local time (23:49 the previous





day GMT), *Zulu Papa* struck the lower slopes of Antarctica's Mount Erebus, leaving no survivors. It is still New Zealand's worst aviation disaster in terms of lives lost.

The ensuing investigation became incredibly fraught. New Zealand's Civil Aviation Authority's Chief Inspector, Ron Chippindale, initially blamed the Pilots, who had decided to descend to 1,500ft (460m), well below the 6,000ft (1,800m) minimum safe level. However, flight crews had done this same thing countless times before with the authorization of the US ATC at McMurdo Station

In April 1981, a subsequent investigation by the Royal Commission of Inquiry concluded that the airline itself was to blame for the crash.

**15** Much was made of the DC-10's 'environmental credentials', with the airline stating that its General Electric CF6 engines helped "keep the skies over the Pacific clean and quiet."

The night before the disaster, a correction had been made to the flight path coordinates without the Pilots' knowledge. This had directed the DC-10 directly toward Mount Erebus. The crew had also encountered a little-known meteorological phenomenon known as whiteout, which creates the illusion of a flat horizon far in the distance.

The argument dragged on for decades. In November 2019, the New Zealand government, led by Prime Minister Jacinda Ardern, Chairwoman Dame Therese Walsh, and Transport Minister Phil Twyford, offered apologies to the victims' families.

### **PACIFIC RESCUE**

Another intriguing incident had befallen one of Air New

Zealand's DC-10s, *Zulu-Sierra*, on December 22, 1978. Flight TE103 from Nadi had been cruising over the Pacific bound for Auckland under the command of Captain Gordon Vette. He was joined by First Officer Arthur Dovey and Flight Engineer Gordon Brooks, the same Flight Engineer who would later crew Flight TE 901.

Meanwhile, a Cessna 188, piloted by ex-US Navy Pilot Jay Prochnow, was being ferried from the US to Australia. The single-engine aircraft had departed Pago Pago (PPG) for Norfolk Island (NLK). When Prochnow had believed to have reached the point where NLK was located, he hadn't found the island and had realized that he was lost. He alerted ATC and declared an emergency, and the only assistance available in



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the region was Flight TE 103, the crew of which had dutifully agreed to assist.

After successfully establishing VHF radio contact, the Air New Zealand Pilots had begun to liaise to determine Prochnow's exact location. The crew had applied their expertise and knowledge through a series of navigational calculations, followed by precise sunset observations. The results obtained by the two aircraft had then been compared, which had enabled the DC-10 crew to approximate Prochnow's location.

In a further stroke of luck, Prochnow had sighted an oil rig, *Penrod*, being towed from Auckland to Singapore. This had enabled Vette and his crew to steer the Cessna directly toward NLK without

having actually spotted the stricken aircraft. Prochnow had eventually landed safely after having been airborne for over 23 hours. The DC-10 had continued to AKL. When it had arrived, hours later than its scheduled arrival time, the international media had hailed its crew as heroes.

### FLEET DISPOSAL

On April 21, 1980, Air New Zealand announced that it was to purchase five Boeing 747-200Bs. This order signaled the end of the DC-10 in the airline's fleet. In June 1981, less than 10 years after the DC-10 had crossed the Tasman Sea between Auckland and Sydney for the first time, the carrier's first new Jumbo Jet was put to work on the route. By the year's end, the 747s were

rapidly replacing the trijets across its network.

ZK-NZN was the first to leave, sold to International Lease Finance Corporation (ILFC) on April 14, 1981. The new owners then leased it to Western Airlines (WA), from where it went on to serve with Air Pacific (FJ) and later American Airlines (AA) in 1985. It remained with American until being withdrawn from use in December 2000.

AA would eventually take five of the eight Air New Zealand DC-10s: ZK-NZL, ZK-NZM, ZK-NZN, ZK-NZQ, and ZK-NZT.

From June 1982, TE leased two DC-10s (ZK-NZT and ZK-NZS) to LAN Chile (LA), which used them on its long-haul services. The four-year lease expired in mid-1986, and the aircraft were returned to Air New Zealand, which immediately sold them to ILFC.

During the late 1970s, there had been times when Air New Zealand had leased out its DC-10s. From March to August 1978, *Zulu Sierra* had flown with Malaysian Airline System (MH) and, from April to October 1979, National Airlines (NA). Sister ship *Zulu November* had also gone to MH in November/December 1978.

Air New Zealand's final DC-10 flight, operated by ZK-NZR, touched down at Auckland from Hong Kong on December 15, 1982. While the DC-10 fleet may have been small and lasted less than 10 years in service, it did have a significant impact on the airline; it enabled Air New Zealand to develop into the international airline we know today. 🍷

16 The arrival of the Boeing 747 in 1981 signalled the end for the DC-10 in the TE fleet. All were gone by 1982.