



The DC-8 lifts off from Long Beach airport in California on its first-ever flight, 50 years ago last month, as smoke emanates from the airplane's Pratt & Whitney JT3C engines.

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# Welcome to the jet age

## Douglas Aircraft's DC-8 made its first flight 50 years ago last month

By PATRICIA M. MCGINNIS

The morning was slightly overcast at Long Beach (Calif.) Municipal Airport on May 30, 1958—50 years ago last month.

It was a special day—and not just because it was Memorial Day (which at the time was always commemorated in the United States on May 30). On that day, Douglas Aircraft—one of the companies that makes up the Boeing of today—joined the commercial jet age, as the DC-8 jetliner made its first flight.

Thousands of people began to arrive at the airport hours before the scheduled 10 a.m. flight time. To allow the maximum number of employees and their families to witness the event, it was planned for the holiday.

With company President Donald W. Douglas Sr., news media and a record crowd (estimated at 95,000 spectators) watching, the large airplane began to roll down the runway. Chief Pilot A. G. “Heimie” Heimerdinger was at the controls, accompanied by co-pilot William Magruder, systems operator Paul Patten, and flight engineer Bob Rizer.

The DC-8 lifted off the runway at 10:11 a.m. Exhaust smoke plumed from the airplane’s four Pratt & Whitney JT3C engines. There were noticeable gasps amongst cheers from the crowd as the plane ascended. As it lifted off, Douglas quietly said, “Well, she’s up.”

The DC-8 reached a cruising speed of approximately 350 mph during the 2 hour, 7 minute flight to Edwards Air Force Base in California, where testing was to continue.

Donald Douglas Sr. saw the value in jets but was reluctant to enter the commercial jetliner business. At the start of 1953, Douglas Aircraft had a backlog of more than \$2 billion in orders. Military sales were at an all-time high. The propeller-powered DC-7C commercial jetliner was in production and scheduled for delivery in early 1956; that airplane would become the first commercial transport able to fly nonstop westbound across the United States against the prevailing winds.

Douglas wanted the DC-7Cs delivered and in service before investing millions in new, unproven jet technology. However, Douglas established a special project office in 1952 to study a commercial jet, and by the end of the year the company had invested \$1 million in preliminary jet design and study.

In 1954, Douglas was delivering aircraft to nearly half the world's airlines. When Boeing's jet-powered Dash 80 airplane rolled out that year, Douglas continued the DC-8 study with customer input. On June 7, 1955, the company decided to take the same leap of faith in the potential of the jet age that Boeing President Bill Allen took on the Dash 80: The decision was made to build the DC-8, and first flight was set for December 1957. To cut costs, the company chose to use the first eight aircraft for flight test. Ship one was to be the prototype; this airplane was later leased to National Airlines.

The DC-8 design team, led by Arthur Raymond, vice president of Engineering, featured several original members of the DC-1/2/3 design team. Along with Raymond were Chief Engineer Ed Burton, Assistant Chief Engineer Harold Adams and Chief Project Engineer Ivar Shogran.

The DC-8's luxurious interior, developed by Douglas engineers, was described as a "penthouse in the sky." Passengers sat six in a row in "Palomar chairs," which company engineers designed to enhance comfort. The cabin featured an 8-foot ceiling with large 18- by 15-inch windows.

But where would the airplane be built? The Douglas plant in Santa Monica, Calif., was busy producing DC-6 and DC-7 series aircraft. The decision was made on April 2, 1956, to build a new assembly facility at the Long Beach plant for DC-8 production. A new facility of about 1 million square feet was completed in 13 months at a cost of more than \$20 million. Also helping Douglas' effort was the city of Long Beach, whose citizens approved a \$5.5 million bond to finance an extension to the Long Beach Airport runway to accommodate the jet.

By the time of the rollout, 17 airlines had placed orders worth \$700 million for 138 aircraft. Donald Douglas Sr. termed the DC-8 a "billion dollar expression of faith in the economic future of the nation and the world."

Initially the DC-8 was offered in five models: Series 10, 20, 30, 40 and 50. All were essentially the same size and could accommodate 124 to 189 passengers. As was common with Douglas Commercial designs, a stretched version of the basic Series 50 was offered, as the Series 61.

Two more "stretch 8" models, with increased wingspan and aerodynamic improvements, were added, called the Series 62 and the Series 63. After DC-8 production had ended, a number of these stretch 8s were converted with CFM International engines to become the three models of Series 70.

Of the original 556 DC-8s built, more than 200 are still in service. ■

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In this 1955 photo, Donald W. Douglas Sr., president of Douglas Aircraft, holds a model of the DC-8. Upon watching the first take-off of the real-life DC-8, Douglas simply said, "Well, she's up."

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## DC-8: Tale of the tape

- Wingspan: 139 feet 9 inches (42.6 meters)
- Length: 150 feet 6 inches (45.9 meters)
- Height: 42 feet 4 inches (12.9 meters)
- Maximum takeoff weight: 265,000 pounds (120,200 kilograms)
- Speed: 550 mph (885 kilometers per hour)
- Range: 3,550 miles (5,713 kilometers)
- Number of airplanes produced: 556