

TRANSPORT AIRCRAFT TECHNICAL SERVICES COMPANY, INC.

*An Aircraft Remarketing Services Company
Providing Technical and Remarketing Services Since 1974*

***** NEWSLETTER *****

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With the roll-out of the 787 a “historical event” take a few minutes and review some other “historical events” to determine if YOU can predict the first flight and certification date.

FROM INITIAL ROLL-OUT TO CERTIFICATION

THE BOEING 367-80 THE PROTOTYPE

The prototype Boeing jet transport was the 367-80. It was rolled out on May 14, 1954 and first flew on July 15, 1954 — 62 days after the roll-out. It remained in service as a flight test aircraft until 1972.

THE BOEING KC-135 TANKER/TRANSPORT SERIES

The first production KC-135¹ was rolled out on July 18, 1956² concurrently with the rollout of the last piston engine powered KC-97³ its first flight was August 31, 1956 — 44 days after the roll out.

THE 707 SERIES

The first production⁴ 707 Series aircraft was Line number 1⁵ — serial number 17596, a 707-121⁶. It was rolled-out of the factory on October 28, 1957. We estimate 200 KC-135 tanker/transport versions were delivered to the U.S. Air Force prior to the roll out of the first 707.

The first flight was on December 20, 1957 — 53 days after the roll-out. It appears (fifty years later), that 3 or 4 aircraft were used in the flight test program.

L/N 3 was delivered to PAN AM on 15 August, 1958 — 291 days after the roll-out.

¹ The KC-135 was based on the “Dash 80” but it was not the same as the prototype.

² I was, as a PAN AM Stratocruiser Flight Engineer, a guest of Boeing for this ceremony.

³ 1000 KC-97s were produced.

⁴ There wasn't a Prototype 707 (Note: prototype aircraft or engines cannot be used in FAA required Certification activities).

⁵ Boeing uses Line numbers, not Serial numbers, to indicate the production sequence.

⁶ The “-” number indicates the customer code for the particular aircraft; the same code is used across all models, *i.e.* a -21, 121, 221, or 321 would denote a PAN AM aircraft. A “B”, *i.e.*, -121B, would be a 707 (or 720) equipped, either in production or by post production modification, with the P&W JT3D turbofan engines replacing the original turbojet engines.

FAA TYPE CERTIFICATION⁷ (4A21), was granted on September 18, 1958 — 316 days FROM INITIAL ROLL-OUT TO FAA CERTIFICATION.

1,012⁸ aircraft of the 707 Series, including some military versions, were produced, with the last one delivered in 1995 — 37 years after the delivery of the first aircraft.

720 SERIES

The first production 720 Series aircraft was Line number 85⁹ — serial number 17907, a 720-022 — rolled-out of the factory on October 30, 1959. It was preceded by 84 production models of the 707.

The 720 was a “domestic” version of the 707 series, with a shorter fuselage and advanced aerodynamic features enabling operation from shorter runways. Its maximum take-off weight was approximately 23,000 pounds less than the 707-100 series¹⁰. The first flight of the 720 was on November 23, 1959— 24 days after the roll-out. It appears that four aircraft were used in the flight test program. L/N 130, the fourth 720 Series aircraft, was delivered to United Airlines on May 21, 1960 — 174 days after the roll out.

FAA TYPE CERTIFICATION (4A28) was granted on June 30, 1960.— 244 days FROM INITIAL ROLL-OUT TO FAA CERTIFICATION.

154 aircraft of the 720 Series were produced, with the last one delivered on September 20, 1967.

727 SERIES

The first production 727 Series aircraft was Line number 1 — serial number 18293 — a 727-22 rolled out of the factory on November 27, 1962. It was preceded by approximately 321 production models of the 707/720s.

The first flight was on February 9, 1963 — 74 days after the roll-out. It appears that eight aircraft were used in the flight test program. L/N 9 was delivered to United Airlines on October 29, 1963 — 336¹¹ days after the roll-out of the first aircraft. FAA TYPE CERTIFICATE A3WE was granted on December 24, 1963 — 392 DAYS FROM INITIAL ROLL-OUT TO FAA CERTIFICATION.

1,832 aircraft of the 727 Series were produced with the last one delivered to FEDEX on September 18, 1984.

⁷ The TCDS is part of the Type Certificate — it prescribes conditions and limitations under which the product for which the type certificate was issued meet the airworthiness requirements of the Civil (or Federal Aviation) Air Regulations.

⁸ Including United States and Foreign military (not as KC-135s).

⁹ The 720 Series, built on the same assembly line as the 707 Series adopted 707 Line Numbers.

¹⁰ The FAA did not require a new TYPE CERTIFICATE for later Boeing models in the same family, — *i.e., the 707-200s, 707-300s or the 707-400s* — allowing them to be included on the same TYPE CERTIFICATE as the 707-100 Series.

¹¹ The FAA issues Provisional Airworthiness Certificates to allow aircraft in the Type Certificate process to be flown for various purposes, including airline flight crew training before issuance of the Type tificate.

737 SERIES

The first production 737 Series aircraft was Line number 1 — serial number 19437 — a 727-130 rolled out of the factory on 21 February, 1967. It was preceded by approximately 977 production models of the 707/720s and 727s .

The first flight was on April 9, 1967¹² — 47 days after the roll-out. It appears that eight aircraft were used in the flight test program. FAA TYPE CERTIFICATE A16WE was granted on December 15, 1967 — 297 days FROM INITIAL ROLL-OUT TO CERTIFICATION. L/Ns 3 and 4 were delivered to Lufthansa on December 27, 1967.

More than 5,000 737 Series have been produced and production continues.

747 SERIES

The first production 747 Series aircraft was Line number 1 — serial number 20235 — a 747-121 rolled out on September 30, 1968. It was preceded by approximately 1,440 production models of the 707/720s, 727 and 737s .

The first flight was on February 9, 1969 — 132 days after the roll-out. It appears that eight or nine aircraft were used in the flight test program. L/N 6 was delivered to PAN AM on December 12, 1969 — 438 days after the roll-out. FAA TYPE CERTIFICATE A20WE was granted on December 30, 1969 — 456 days FROM INITIAL ROLL-OUT TO CERTIFICATION.

More than 1,300 747 Series have been produced and production continues.

757 SERIES

The first production 757¹³ Series aircraft was Line number 1 — serial number 22212 — a 757-200 was rolled out on January 13, 1982. It was preceded by approximately 4,100 production models of the 707/720s, 727, 737, 747 and 767s.

The first flight was on February 19, 1969 — 37 days after the roll-out. FAA TYPE CERTIFICATE A2NM was granted on December 21, 1982 342 days FROM INITIAL ROLL-OUT TO CERTIFICATION. L/N 7 was delivered to Eastern Airlines on December 22, 1982.

It appears that 8 aircraft were used in the flight test program. 1,050 757s had been produced when production ceased on in early 2005 after the delivery of s/n 33967 to Shanghai Airlines on April 26, 2005.

767 SERIES

The first production 767 Series aircraft was Line number 1 — serial number 22233 — a 767-200 rolled out August 4, 1981. It was preceded by approximately 4000 production models of the 707/720s, 727, 737 and 747s.

¹² My 35th birthday present from Boeing..

¹³ The 757 incorporated many of the same systems used on the 767s.

The first flight was on September 26, 1981 — 53 days after the roll-out. FAA TYPE CERTIFICATE A1NM was granted on July 30, 1982 and L/N 7 was delivered to United Airlines on November 30, 1982 — 360 days FROM INITIAL ROLL-OUT TO CERTIFICATION.

It appears that six aircraft were used in the flight test program. Production continues and more than 950 aircraft have been delivered.

777 SERIES

The first production 777 Series aircraft was Line number 1 — serial number 27116 — a 777-222¹⁴ rolled out April 9, 1994¹⁵. It was preceded by approximately 7,600 production models of the 707/720s, 727, 737, 747, 757 and 767s .

The first flight was on June 12, 1994 — 64 days after the roll-out. FAA TYPE CERTIFICATE T00001SE was granted on April 19, 1995. 370 days FROM INITIAL ROLL-OUT TO CERTIFICATION. L/N 7 was delivered to United Airlines on May 15, 1995.

It appears eight aircraft, including those powered by Pratt & Whitney, General Electric and Rolls Royce engines, were used in the flight test program.

Production continues and more than 650 have been delivered.

THE AVERAGE DAYS BETWEEN ROLL OUT AND FIRST FLIGHT HAS BEEN 61 DAYS — TO CERTIFICATION — 349 DAYS.

WE REPORT — YOU DECIDE, WHEN WILL THE 787 MAKE ITS FIRST FLIGHT?

_____.

WHEN WILL THE FAA TYPE CERTIFICATE BE ISSUED? _____.

SEE YOU NEXT MONTH.

SEND YOUR COMMENTS OR QUESTIONS TO — <mailto:jim@tatsco.com>

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Jim Helms, President

¹⁴ It was later converted by Boeing to a 777-267 and delivered to Cathay Pacific.

¹⁵ My 1994 birthday present from Boeing.