

## **The B-47 *Stratojet* Association**

### **B-47B**



**The B-47B in flight**

**The B-47B (Model 450-11-10) was the first true production Stratojet. Eighty-seven B-47Bs had been contracted for by the Air Force in November of 1949, but the outbreak of the Korean War in 1950 brought increased demands for Stratojets and the Stratojet program was destined to become the largest bomber production program since the end of the Second World War.**

**The first 87 B-47Bs contracted for in November of 1949 were due to be delivered between December of 1950 and December of 1951. The B-47B was to be built at the government-owned Boeing Plant II at Wichita, Kansas, since the Seattle plants were all committed to the manufacture of the B-50 and the C-97, and the conversion of obsolescent B-29s to tankers.**

**The B-47B was powered by six General Electric J47-GE-11 engines and had structural modifications that allowed takeoff weights as high as 200,000 pounds. It had a Nesa glass windshield with special rain repellent that replaced the earlier windshield wipers. The glass was coated with a transparent chemical conductor of electricity, which enabled it to be kept free of ice. A single-point ground and air-to-air refueling receptacle was fitted. It featured a two-gun tail turret controlled by a radar sight and a B-4 fire control system, although very few B-47s were actually fitted with this armament because of chronic problems with the system. The B-47B carried a K-4A bombing navigation system with a periscope sight in a modified nose, AN/APS-54 warning radar, and AN/APT-5A electronics countermeasures devices. A shorter bomb bay accommodated 18,000 pounds of nuclear or conventional bombs.**

**However, in the interest of saving weight, the ejection seats that had been fitted to the B-47A were deleted. The B-47B was provided with a spoiler door at the aircraft's main entrance to make in-flight escapes safer.**

**Following the outbreak of the Korean War, the USAF decided that it needed B-47s in greater quantity than the Boeing facilities could supply. Douglas and Lockheed were requested to join in the manufacture of B-47s in their own plants, reviving the "Boeing-Vega-Douglas" pool that had been established during World War II for the manufacture of the B-17 Flying Fortress.**

The Lockheed versions of the Stratojet were to be built at a government-owned plant in Marietta, Georgia (near Atlanta) which had been operated by Bell Aircraft during the war for the manufacture of the B-29-BA Superfortress. This plant had been shut down at the end of the war, but was reopened in January of 1951 for use by Lockheed to de-cocoon and prepare for operations 120 B-29s which had been in storage. The Lockheed-built Stratojets were designated B-47-LM.

The Douglas versions of the Stratojet were to be manufactured at a government owned plant at Tulsa, Oklahoma which had been built during World War II and reactivated for operation by Douglas for the fulfillment of government contracts. The Douglas-built Stratojets were designated B-47-DT.

The Boeing-Wichita B-47s were designated B-47-BW to distinguish them from Seattlebuilt Boeings, which used the suffix -BO. The Douglas company was awarded a production letter contract in December of 1950, Lockheed soon afterwards. However, neither the Douglas nor the Lockheed plants started production before 1953. The first Stratojets built by these two plants were actually assembled from components supplied by Boeing-Wichita. Only ten B-47Bs were completed by Douglas-Tulsa and eight by Lockheed-Marietta (all of them built from Boeing-supplied components) before production switched over to the more advanced B-47E version. Douglas and Lockheed went on to build considerable numbers of B-47E Stratojets from scratch.

The first B-47B was accepted in March of 1951, and 87 similar planes were delivered within a year. However, these B-47s were almost immediately deemed unsuitable for the Strategic Air Command, and the Air Force recommended no less than 2000 changes. The plane was now seriously overweight, the maximum weight being over 200,000 pounds, which made the aircraft unstable at high altitude and generally hard to maneuver.

In spite of the deficiencies of the first B-47Bs, plans were made for the acquisition of more Stratojets. In November of 1951, a definitive contract was issued for no less than 445 additional Stratojets. The number was reduced to 395 in March of 1952 after more realistic production schedules were established. Nevertheless, even more procurements soon followed. Fifty-two RB-47s and 510 B-47B were ordered in June of 1952, and three other contracts were issued during the year - in September for 540 B-47Bs, in October for 70 RB-47s and in December for another 193 B-47Bs. As it turned out, a total of 1760 B/RB-47s were ordered during 1952, but this order was later reduced and most of those that were built were actually delivered as B-47Es.

The omission of ejection seats from the B-47B turned out to be a serious mistake. SAC had always believed that ejection seats were the safest way to escape from a highspeed aircraft. Even under controlled flight conditions, escape from the B-47 via the escape hatch was hazardous, and it was, for all practical purposes, impossible to escape from an uncontrolled B-47 using such a system. In mid-1950, a request was made for the immediate reinstatement of the ejection seats, but it was clear that they could not be incorporated in production B-47s for quite a while, leaving as many as 400 B-47s still flying without ejection seats.

The K-2 bombing and navigation system fitted to the B-47B was unreliable and hard to maintain. It had 370 vacuum tubes and nearly 20,000 separate parts, with components scattered all throughout the aircraft. No in-flight maintenance was impossible and failures were frequent. By mid-1952, the K-2 had been made to work better, but it still needed improvement even after additional modifications had resulted in its redesignation as the K-4.

The tail defense system originally earmarked for the B-47 was the Emerson A-2 which was to provide accurate defensive fire for the protection of the B-47 and to perform both search and track functions. However, the suitability of the A-2 for the B-47 was deemed too questionable to warrant its retention and it was canceled at the end of 1951. The Emerson A-2 system was replaced by the General Electric A-5 system. Since the A-5 system would not be ready until the end of 1953, a stopgap measure was necessary, and it was decided to retrofit early B-47s with a two-gun turret and an N-6 optical sight. The 89th B-47B and all later B-47Bs were equipped with more-powerful J47-GE-23 engines rated at 5800 pounds of thrust (Model number 450-67-27). The first 88 B-47Bs were retrofitted with these more powerful -23 engines.

Deliveries of the B-47B to the USAF began in mid-1951, the first unit to re-equip with the Stratojet being the 306th (Medium) Bomb Wing, comprising the 367th, 368th, and 369th Bomb Squadrons.

A refinement program began in January of 1952 to correct some of the B-47's problems. This involved the modification of 310 B-47Bs. The Strategic Air Command expected its first modified planes by July, and a monthly delivery of 75 by the end of the year, but this proved to be overly optimistic. At first, this work was to be done at the Grand Central Depot of Tucson, but it soon became apparent that the job was much too large for them and both Boeing and Douglas were asked to help. The original modification schedule began to slip, and in September of 1952, the few B-47Bs actually flying with SAC had to be grounded because of fuel cell leakages. In spite of the delays, SAC began to receive its first modified B-47Bs in October of 1952. SAC received 8 modified B-47Bs in October of 1952, 23 in November, 34 in December, and 13 in January of 1953. They went to the 305th and 306th Wings. In June of 1953, B-47Bs from the 306th Wing began a 90-day rotational training mission (TDY) to England, marking the first overseas deployment of the B-47B

The last B-47B was built in June of 1953, with the USAF taking delivery the next month. A total of 399 B-47Bs were built, all of them manufactured by Boeing-Wichita, although final assembly of a few B-47Bs was carried out at Lockheed and Douglas from components supplied by Boeing. Production was immediately shifted to the B-47E version, which was destined to become the major production version of the Stratojet. In a program begun in May of 1953, SAC's B-47Bs underwent an extensive modification and maintenance program to bring them up to the latest standards, which was essentially that of the B-47E. As approved in June of 1953, 165 of SAC's modified B-47Bs would go to a program known as High Noon, and the remainder would be upgraded during Ebb Tide, which was organized as High Noon's second phase. It featured ejector seats for all crew members, a more reliable bombing/navigation system, the deletion of the fixed JATO units in favor of a jettisonable 19 or 33 rocket assisted takeoff pack, a modified bomb bay that could carry the thermonuclear bomb, a reinforced landing gear which could handle higher takeoff weights, the A-5 fire control system (in place of the B-4), an AN/ARC-21 long-range radio, and better electronics countermeasures equipment. 6000 lb. static thrust J47-GE-25 engines with water injection were installed, and General Electric radar-directed 20-mm cannon were installed in the tail in place of the 50-caliber machine guns.

The High Noon program was finished in early 1956, and was immediately replaced by Ebb Tide. By 1957, the B-47Bs had effectively ceased to exist, having either been brought up to the B-47E standard or else having been sufficiently transformed as to acquire new designations. These modified B-47Bs are sometimes known as B-47B-II, although this was not an official Air Force designation. Outwardly, they could be distinguished from B-47Es only by their serial numbers.

**Serial Numbers of the Boeing B-47B Stratojet:**

49-2642/2646 (5)

50-001/082 0040 converted to a KB-47G hose and drogue tanker.

0069 converted to a YB-47F refueled by hose and drogue system.

0082 converted to a YB-47C (originally designated XB-56). (82)

51-2045/2356 2046 converted to an XB-47D testbed for Wright XT-49 turboprop.

2059 transferred to the RCAF as testbed for the Orenda Iroquois engine as a CL-52.

2103 converted to an XB-47D testbed for the Wright XT-49 turboprop.

2115 converted to a WB-47D weather aircraft.

2141, 2150, 2155, 2160, 2165, 2170, 2175, 2180, 2185 and 2190 were completed by Douglas from components supplied by Boeing.

2145 was completed by Lockheed as a mockup only.

2186 flew as a YDB-47B for the Rascal program.

2160, 2162/2191 were converted to DB-47Bs for drone controllers.

2197, 2204, 2210, 2217, 2224, 2231, 2237 and 2243 were completed by Lockheed from components supplied by Boeing.

2192/2234 were converted to DB-47Bs. (312)

**Specifications of the Boeing B-47B Stratojet:**

**Powerplant:**

Six General Electric J47-GE-23 turbojets, 5970 lbs. static thrust each.

**Performance:**

Maximum speed: 608 mph (528 knots) at 16,300 feet.

565 mph (491 knots) at 35,000 feet.

Cruising speed: 498 mph (433 knots).

Stalling speed: 177 mph (154 knots).

Service ceiling: 33,900 feet.

Combat ceiling: 40,800 feet.

Initial climb rate: 2560 feet per minute.

Combat climb rate: 4775 feet per minute (maximum power).

Combat radius: 1965 miles (1708 nautical miles) with 10,000 pounds of bombs.

Ferry range: 4444 miles (6853 nautical miles).

Takeoff ground run: 9100 feet.

7200 feet with JATO.

**Dimensions:**

Wingspan: 116 feet 0 inches.

Length: 106 feet 10 inches.

Height: 27 feet 11 inches.

Wing area: 1428 square feet.

**Weights:**

Empty: 78,102 pounds.

Combat: 122,650 pounds.

Gross: 184,908 pounds.

**Armament:**

Two 50-caliber machine guns in tail turret.

Bomb load: 18,000 pounds.

Additional material provided by Robert M. Robbins and Mark Natola

