

Light Aircraft Manufactured by Stinson
The Stinson 108 Predecessors - 01/07/96
By Larry Westin - Rev. B - 11/18/14 - Page 1 of 2

In the late 1930's Stinson was well known as the builder of business aircraft, specifically the large high wing Reliant series of radial engine cabin monoplanes. Entering the "light" airplane field in 1939, Stinson went on to design and build different light aircraft models. First was the model 105, HW-75, HW-80, the model 10 and 10A Voyager, the model 74 Stinson O-49 (later redesignated L-1), the model 76 L-5 Sentinel and finally the Stinson 108 Voyager, the last light plane built by Stinson.

All of these aircraft are similar in design having a steel tube framed fuselage covered with fabric. All used horizontally opposed engines of either 4 or 6 cylinders, made by Continental, Franklin or Lycoming. Basic wing design, a straight wing with parallel leading and trailing edges, incorporating slots at the tips for good low speed control.

Stinson's first light plane, the model 105, is also known by the designation HW-75 and HW-80, received its Approved Type Certificate number (ATC) #709 on May 20, 1939. A Continental A-75-3 engine powered the 1939 model 105 (HW-75) while the 1940 model 105 (HW-80) was powered by the Continental A-80-6 engine. Gross weight is 1580 pounds. While listed as a 3 seater the useful load of only 655 pounds makes carrying three people unrealistic. A top speed of 105 mph was the reason for the model number. One major innovation of the model 105 is the use of wing slots for better slow speed control. Wing slots would be a design feature of all future light Stinson aircraft. About 535 model 105's were built, with several purchased by celebrities including Jimmy Stewart and Edgar Bergen.

Stinson aircraft, named after Eddie Stinson, at the time of the 105 design, 1939, was part of Aviation Manufacturing Corporation. Headquarters and plant were at Wayne, Michigan. Vultee Aircraft Corporation purchased the Stinson Division in 1940 and moved headquarters to Downey, California. At the same time manufacturing was moved to Nashville, Tenn.

The first production batch of the 1940 model 105's was built in Nashville, Tenn. Military orders overtaxed that facility and production of the 105 returned to Wayne, Michigan.

Next came the model 10 Voyager which resembled the model 105 but included many refinements. ATC #738 was issued for the Stinson Voyager on March 3, 1941 and about 760 aircraft were built, all at Wayne, Michigan. Two models were built, the 10-A with a 90 h.p. Franklin engine, and the model 10-B with a 75 h.p. Lycoming. A major use of the Voyager before WWII was by the Civilian Pilot Training Program (CPTP) to train future pilots.

Stinson then built the model 74 designated O-49 by the USAAF, later redesignated as the L-1. The L-1 performed well, and 324 were built.

After the U.S. entry into WWII Voyager production ended in 1942. Stinson Voyager's were used by the Civil Air Patrol for courier and anti submarine duties. Some 20 Stinson Voyager 10A's were commandeered for use by the military. Initially they were designated AT-19A, later L-9A and L-9B.

America's entry into WWII resulted in a major change at Stinson. USAAF was building the O-49 (L-1); while it performed well it was expensive. The USAAF wanted a lower cost solution for a Liaison aircraft, which resulted in the Stinson model 76, the O-62 Sentinel (designation changed to L-5 before the first airplane was delivered). Stinson continued as a division of Vultee through 1942. A new company, Consolidated Vultee, resulted from the merger of Consolidated and Vultee in 1943. Stinson remained in Wayne, Mich as the Stinson Division of Consolidated Vultee.

The first 275 aircraft were built as the O-62, then the designation changed to L-5 with the name Sentinel. Data I now have indicates all the Stinson model 76 aircraft were delivered as the L-5 Sentinel. Voyager 10 features were a major influence on the design, but the L-5 was optimized as a two place liaison and observation aircraft. About 3,691 Sentinels were built during WWII for the US Army Air Force and the US Marines. Marine procurement did not begin until 1943 when Consolidated and Vultee had merged, with Marine aircraft designated, following Navy lines, the OY-1.

One L-5 aircraft, 57-6278, was purchased in 1957 for use by the Air Force Academy. It was still in use in 1962 when military aircraft designations were standardized between the services. That single USAF L-5 was redesignated U-19B in 1962.

While the official name was Sentinel, another popular name was often applied to the L-5 - "Flying Jeep." Equipped with a 185 h.p. Lycoming engine, the L-5 gross weight is 2020 pounds. Since most military aircraft are not produced to civilian airworthiness standards, Stinson did not seek an ATC for the L-5. After WWII, when appropriately modified, the L-5 is eligible for a standard airworthiness certificate under ATC #764. Near the end of WWII with production coming to an end, the remaining inventory of L-5 parts was purchased by Sentinel Aircraft, Inc. of Dexter, Michigan.

The next, and final light aircraft designed and built by the Stinson Division of Consolidated Vultee was the model 108 Voyager. Please see separate article describing the model 108.

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