

The Stinson 108 Voyager Prototypes
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Larry Westin - 12/01/97
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Researching the Stinson 108 indicates there were two prototype airplanes. These were registered as NX31519 (model 108 prototype serial number 1) and NX31532 (model 108 prototype serial number 2). Both airplanes were originally built as Model 10A Voyagers and modified to model 108 standard. Reviewing the FAA (then CAA) paperwork for these airplanes reveals the following information.

An important note on serial numbers for the Stinson 108. Prototype 1, NX31519 is identified as serial number 1. Prototype 2, NX31532 is identified as serial number 2. After the Stinson 108 was approved by the CAA the first production airplane is also listed as serial number 108-1 with the second production airplane serial number 108-2, with serial numbers incrementing with further production. For a short period there were actually two serial number 108-1 airplanes; the first prototype and the first production airplane. There was also two serial number 108-2 airplanes; the second prototype and the second production airplane. The prototypes were scrapped soon after approval. Stinson documentation references to serial numbers 108-1 and 108-2 refer to the production airplanes, not the prototypes.

Stinson model 108 Voyager 125 Prototype Serial number 1 - NX31519

Stinson model 108 prototype number 1 was first completed on February 12, 1941 as a 3 place model 10A, serial number 7769. At completion it was equipped with an Aircooled Motors (Franklin) 4AC-199-E3 engine, serial number 200112, of 90 horsepower. It was equipped with a 12 volt electrical system, a single 20 gal tank in the right wing, and an RCA radio receiver with antenna. In this configuration it weighed 1025 pounds empty. Initial paperwork was completed on 2/14/41. Vultee Aircraft, Inc., Stinson Aircraft Division, Wayne Michigan is the first registered owner. Listed for uses on the application is as a special purpose is "demonstrations."

At its first periodic inspection, March 6, 1942, the airplane was still registered to Vultee, but flying from Vultee field near Los Angeles, California. Major changes occurred at this time. A second 20 gallon tank was added in the left wing root, an RCA AVT 110 transmitter added along with reel antenna, the oil sump was enlarged from 5 to 8 quarts, and the propeller was changed. Empty weight climbed to 1071 pounds.

On June 16, 1943 the airplane was purchased by the Defense Plant Corporation. This transfer required approval since airplanes were a restricted commodity in 1943. It was leased to the Civil Aeronautics Administration for license use to a CAA War Training Service contractor. Several documents were completed at the time the CAA became the owner but were basically identical to the original Stinson documentation. Unfortunately no paperwork is available indicating how the airplane was used by the CAA.

Next document in the airplane records is a telegram from Consolidated Vultee Aircraft dated November 15, 1944. Message to CAA asking registration NC31519 10A airplane be canceled, and reassignment of NX-31519 to Model 108 Type Revised 10A airplane. At CAA request Stinson provided the following additional information: airplane has structural changes made, higher horsepower engine installed, new designation is Stinson Voyager 125, serial number 1. This airplane cannot be converted back to a 10A.

At this time the airplane was listed as a 3 place and experimental. Registration NX31519 issued Dec. 1, 1944, which is also the listed date of manufacture, good for 6 months. Specific engine installed is not listed, but other sources indicate it was a Lycoming O-290D of 125 HP.

Since the airplane was experimental the airworthiness had to be renewed every 6 months. On November 9, 1945 demonstrate to prospective purchasers were permitted if at least 10 flying hours since last major change in design.

During its experimental stage the airplane went through several known modifications. "The Stinsons, a Pictorial History" has a photograph of this airplane with a model 10A tail. Later photographs, see Skyways and Flying magazines, show the airplane with the standard small tail model 108 tail assembly. An article in the AOPA Pilot magazine, January 1983, by Peter Bowers, indicates the prototype was modified with yet another fuselage extension and replacement of the Lycoming with the Franklin engine (6A4-150-B3). Bower's article goes further to say the airplane rear seat area was enlarged to accommodate 2 becoming a 4 place airplane. I cannot locate documentation to know if NX31519 actually had these changes, or if it was the second prototype, NX31532.

All CAA records plus photographs I have show the airplane as NX31519, and it started as a Stinson Voyager 125. Approved Type Certificate 767 for model 108 was issued July 19, 1946. Unfortunately I do not have some CAA form 309's, and no CAA forms 337's are included while the airplane is a model 108 (a couple 337's are available when it was a model 10A).

Documentation I was able to obtain from the FAA shows Stinson requested regular airworthiness extensions through May 8, 1946. Next paperwork is a letter from the CAA to Stinson asking what the current status is of the airplane. The airplane was removed from the register on 8/13/48 at Stinson's request.

Discrepancies I cannot reconcile; two magazines have color photos of NX31519, Skyways 2/46, and Flying 5/46. Both show NX31519 as brown and cream (off white). Stinson service letter 1-D dated 4/2/48 lists serial number 1 as brown and green, likely the service letter refers to the second, production serial number 108-1. The Univair model 108 Voyager Parts Catalog I have, dated 1983, shows serial number 1 as NC87600, again this is likely for the first production model 108, not the first prototype. None of the paperwork I was able to obtain from the FAA ever indicated the airplane

was licensed as anything but experimental. Two drawings, the dust jacket on the book "Fly it Away" by Henry Lent, and the cutaway shown in Skyways 2/46 show the airplane, almost certainly inaccurately, with an "NC" license, (NC-31519). As an experimental airplane it would not have an "NC" license.

Stinson model 108 Prototype Serial number 2 - NX31532

Stinson model 10A Voyager was completed on March 4, 1941 as serial number 7782. Equipped with an Aircooled Motors (Franklin) 4AC-199-E3 engine, sn 200108, it was registered to Vultee Aircraft, Stinson Division, Wayne, Michigan as NC31532.

A year later the airplane had flown 149 hours at periodic inspection time. July and August 1942 saw the addition of an RCA transmitter, and installation of a 20 gallon fuel tank in the left wing. This was the last standard paperwork still available from the FAA.

During 1944 the Detroit City Airport wrote the CAA asking who owned NC31532. The CAA returned a letter dated 6/30/44 indicating Stinson Aircraft owned the airplane. This time frame was during WWII when private flying was severely restricted.

Apparently no activity occurred for this airplane until mid 1945. Six letters from May 9, 1945 and June 20, 1945, between Stinson and the CAA, were needed to obtain duplicates of lost documentation. Some of the letters concerned the specific cost of duplicating.

On June 5, 1945 Stinson sent the CAA a telegram "Request cancellation of Stinson Division Consolidated Vultee Aircraft Corp Register Number NC-31532 10A Airplane and reassignment of NX-31532 to model 108 type revised 10A airplane."

The CAA wanted clarification of the disposition of the original NC31532 and the serial number of NX-31532. Stinson replied the original "Stinson 10A, No. 33782, registration No. 31532 has been dismantled and converted into model 108, serial No. 2" The CAA officially removed NC31532, the model 10A, from the register June 6, 1945.

Second prototype NX31532 is listed as make of Stinson, model 108, serial no. 2. Aircraft registration certificate was issued June 5, 1945.

On June 5, 1945 the airplane is listed as a 4 place airplane, engine not specified. On January 3, 1946 it is at various points listed as a 4 place and later a 3 place airplane.

By January 3, 1946 the airplane was equipped with an Aircooled Motors (Franklin) 6A4-150-B31 engine, serial number T239.

On September 4, 1946 Stinson requested cancellation of registration NX-31532. "This airplane is being stripped of its engine, instruments, and all such salvageable items. The fuselage is being destroyed and salvaged as scrap." On Oct 22, 1946 the CAA

officially struck the airplane from the register.

From the available documentation I have the second prototype did have the Franklin 150 HP engine. All CAA documentation refers to the airplane as a Stinson model 108. I could locate no place in the documentation for NX-31532 where the name "Voyager" or the number "125" is used as on prototype 1.

Discrepancy I cannot reconcile; The Univair model 108 Voyager Parts Catalog I have, dated 1983, shows serial number 2 as NC87601, which really refers to the second production airplane, not the second prototype. None of the paperwork I was able to obtain from the FAA ever indicated the airplane was licensed as anything but an experimental prototype.

If anyone has additional information about the early Stinson 108's I would appreciate hearing from you. Both my postal and e-Mail addresses are listed below.

Postal Address

Larry Westin
21721 Verde St
Tehachapi, California
U.S.A. 93561-9437
Phone (661) 823-4707

E-Mail

Larry Westin
westin@westin553.net