



Flight view of a 1939 Stinson HW-75, or "105." The postwar Voyager stretched the basic 1938 design to a four-seater with 150-165 hp.

Yesterday's Wings

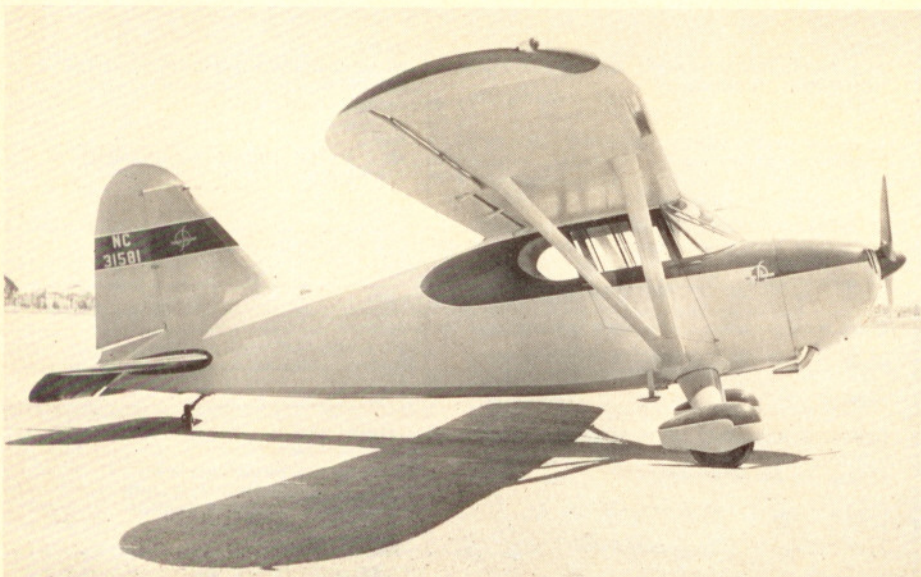
The Littlest Stinson

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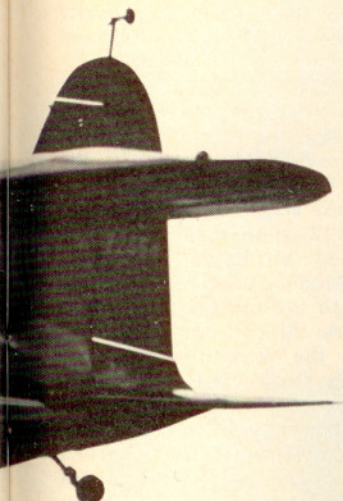
■ Early in 1939 the Stinson Aircraft Co., of Wayne, Mich., took a rather unprecedented step. At a time of increasing prosperity, when most manufacturers were adding weight, complexity, and cost to their current models, or were introducing larger ones, Stinson went the other way and introduced a baby that was barely a third of the weight of the company's "Reliant" 5-seater.

This was the Model HW-75, which progressed through several other designations but is best remembered as the "Voyager." Virtually in a class by itself, this little three-seater brought many heavy-airplane details and refinements into the lightplane field. Single-strut landing gear, starter and electrical systems, flaps, and luxurious cabin appointments were definitely not common to the 75-hp class at the time. These, combined with docile and viceless handling characteristics, made the new Stinson an immediate success.

The origin of the HW-75 was rather unusual. Instead of being worked up by an in-house engineering staff, the design



The Model 10A, with 90-hp Franklin, was the only one of the baby Stinsons to be officially named "Voyager," but the name quickly spread to the earlier versions. Principal recognition features were larger area of engine air inlets and wide spacing of bars on inlet grilles.



Specifications and Performance

	Stinson HW-75/105	Stinson 10A Voyager
Span	34 ft 0 in	34 ft 0 in
Length	22 ft 0 in	22 ft 2 in
Wing area	155 sq ft	155 sq ft
Powerplant	Continental A-75, 75 hp @ 2,600 rpm; Continental A-80, 80 hp @ 2,700 rpm	Franklin 4AC199E, 90 hp @ 2,500 rpm
Empty weight	925 lb	954 lb
Gross weight	1,580 lb	1,625 lb
High speed	112 mph (A-75)	115 mph
Cruise speed	105 mph (A-75)	109 mph
Initial climb	430 fpm	600 fpm
Service ceiling	12,000 ft (A-80)	13,000 ft
Range	420 mi	400 mi
Price	\$2,995	\$3,355

was developed at the University of Detroit by a team headed by Lewis E. Reisner, of Kreider-Reisner fame. All aspects of the design were conventional and, except for the engine, were well within the existing state of the art. Most of the innovations, from a light-plane standpoint, were simply adaptations of heavy-aircraft technology.

The fuselage and vertical tail were welded steel tubing, while the wings had wood spars and a metal frame. The horizontal tail was wood with plywood covering, and the rest of the covering was fabric. The fuselage was wide enough, by the standards of the day, to be comfortable for two side-by-side. The third occupant sat crosswise on a seat at the left behind the pilot.

Because the fuselage was so short for its width, an uncommonly large vertical tail was fitted. This paid off in flight but was apt to be troublesome in crosswind taxiing. Another feature that added to the overall docility was wing-tip slots. Limited elevator travel made the plane unspinnable.

The HW-75 was designed for the yet-untried Lycoming GO-145, which was actually the little 50-hp Lycoming, turning over a lot faster to get the additional power, and using gearing to keep the propeller speed down. The "75" in

the aircraft designation indicated the intended power.

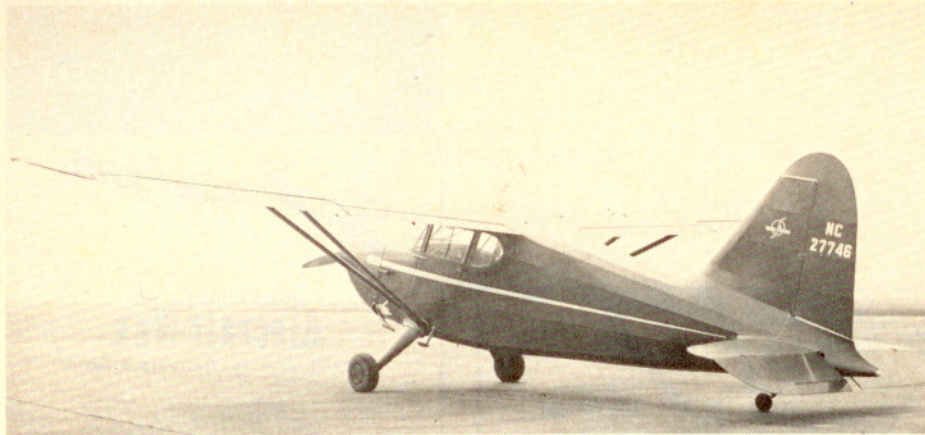
Since the engine wasn't ready when the prototype HW-75 was finished, it flew with the standard 50-hp model. The GO-145 still wasn't ready when the HW-75 went into production, so it was certificated (ATC 709) with the Continental A-75, which was merely the popular Continental A-65 turning a direct-drive propeller faster, for extra power.

Since the HW-75 showed a cruising speed of 105 mph, it was marketed under the designation "Stinson 105" rather than the "HW" number.

The 105 proved to be a little underpowered, so Stinson adopted the 80-hp Continental A-80 (more rpm from the same 170-cubic-inch engine) when producing the improved Model 10 in 1940. This had a slightly wider fuselage but was otherwise identical to the HW-75/105 and was built under the same Approved Type Certificate.

Power was still marginal, so a move was made to the 90-hp Franklin 4AC199 in 1941. This resulted in the Model 10A (ATC 738), which was the first of the line to be given the name "Voyager." The 10A was also known at times as the "HW-90" for its power and as the "110" for its cruising speed.

continued



This view of the improved Model 10 with 80-hp Continental emphasizes the large vertical tail common to all variants. Principal points of distinction were cowling details.

THE LITTLEST STINSON *continued*

There was to have been a Model 10B when the GO-145 eventually came along, but it was not produced.

While the little Stinson was not designed with military applications in mind, it backed into an extensive military career. In 1940, the U.S. Army held a competition for light observation planes, and Stinson submitted a stock Voyager with additional window area. This effort resulted in a service test order for six duplicates, designated

“YO-54.” No further “105” orders materialized, but the basic design was stretched into the famous L-5 “Sentinel,” or “Flying Jeep,” of World War II.

However, the Voyager was to continue in uniform. Early in 1940, the French purchasing commission ordered 600 105s and bought up others from private owners. Thirty-three of these were loaded aboard a French aircraft carrier in a Canadian port just before France fell. The carrier was diverted to Martinique, where its cargo of bona fide warplanes was unloaded and eventually scrapped. It is believed that the Stinsons

were off-loaded before leaving Canada, or were returned to Canada from Martinique aboard Canadian ships that brought home some of the Canadian advisers, for the RCAF took on a nearly identical number of Voyagers in mid-1940.

Britain’s RAF, meanwhile, had requisitioned two Voyagers from private owners and put them to work. At least one helped provide air cover at the evacuation of Dunkirk.

The U.S. Army acquired 20 additional Voyagers in 1942 when various types of privately owned airplanes were purchased. Eight Model 10As became L-9As when fitted with the military version of the 90-hp Franklin, known as the O-200-1, while the remaining 12 were L-9Bs with the stock civil 4AC-199EJ. These were used in utility roles state-side and did not really go to war. Other Voyagers with civil registrations turned out to be the principal patrol planes of the Civil Air Patrol for the duration of the war, and some even carried bombs.

Production of the littlest Stinson ended in 1942 when the firm, by then the Stinson Division of Vultee (later of Consolidated-Vultee), turned to war work. Altogether, 1,020 were built: 270 HW-75s, 250 Model 10s, and 500 Model 10As. Of this total, 88 are still active, a tribute to the soundness and popularity of Stinson’s Baby—whether called HW-75, 105, 10, O-54, or L-9. □