TUBE AND FABRIC

THE•STINSON•108

TIME AND TIDE

A true heritage bargain: Classic lines, low price.

BY MARC E. COOK

Classics are bred, not born. To become one, the subject must withstand the ravages of time, the unpredictable twists of fashion, and, when the item in question is an airplane, the roller-coaster ride of the industry itself. Age alone will not do in this discussion. To emerge on the other side of sev-

PHOTOGRAPHY BY MIKE FIZER

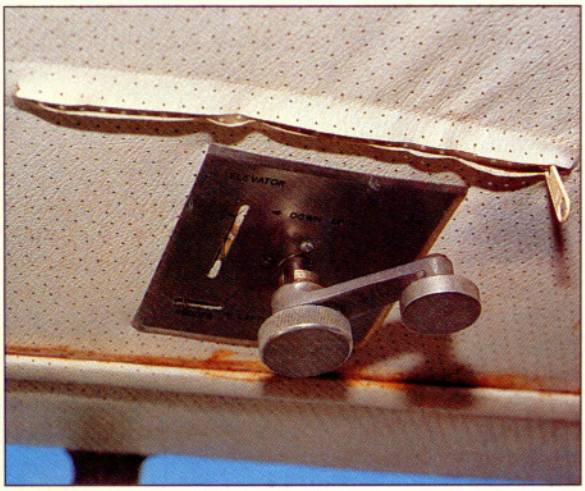
eral decades a classic, the airplane must have danced toe-to-toe with time and fate and have arrived, metaphorically speaking, with its head held high.

Surely, the Stinson 108 is a classic. Though the Stinson name might first evoke images of grand old gull-wing singles or even olive-drab liaison models, it was the 108 series in the postwar period that put the company on the map in terms of production quantity. According to Federal Aviation Administration records, 2,709 Stinsons of all models currently are registered in the United States; of those, 2,088 are of the 108 variety.

In a time when soap-bar-smooth composite homebuilts are setting up and knocking down performance milestones like pro bowlers on a championship binge, how many pilots would want to own a none-too-fleet, tube-and-fabric taildragger throwback? Plenty, as it turns out, because the market for the 108s seems to be expanding, with ever more activity, say Stinson aficionados. That body of some 2,000 Voyagers and Station Wagons (as later variants were called) represents not only an opportunity to own a small slice of rag-wing history, but also a tremendous value in four-seat transportation. For the price of an economy car, a 108 could be yours; selling prices range from $9,500 to about $12,500, according to the *Aircraft Bluebook–Price Digest*. Because the airframe is supported by Aurora, Colorado–based Univair, more than 90 percent of all major airframe components can be purchased from stock. And though out of production for two decades, the Stinson's Franklin parts availability is surprisingly good—although direct factory support is virtually nonexistent because the type certificate belongs to PZL in Poland.

Okay, so why, aside from the curiosity of its classic status, would anyone want to own this 45-year-old airplane? To put it succinctly, because it feels good. If you love an airplane that handles honestly and predictably but with a kind of fluidity missing from your everyday Cessnas and Pipers, the Stinson might be for you. Not one pilot we talked to had anything but praise for the 108's handling, and this group included a few who have time in many different makes.

Add to the Stinson's fine handling qualities good utility, and you have a winning combination. Unlike the other postwar models, of which the two-place taildragger is the most common species, the Stinson 108, like its Cessna 170 contemporary, brings enough utility to be a fine pleasure transport. Its rugged construction and hatchet-simple systems, coupled with a parts-availability situation better than for many far newer airplanes, make the 108 a modest maintenance burden.



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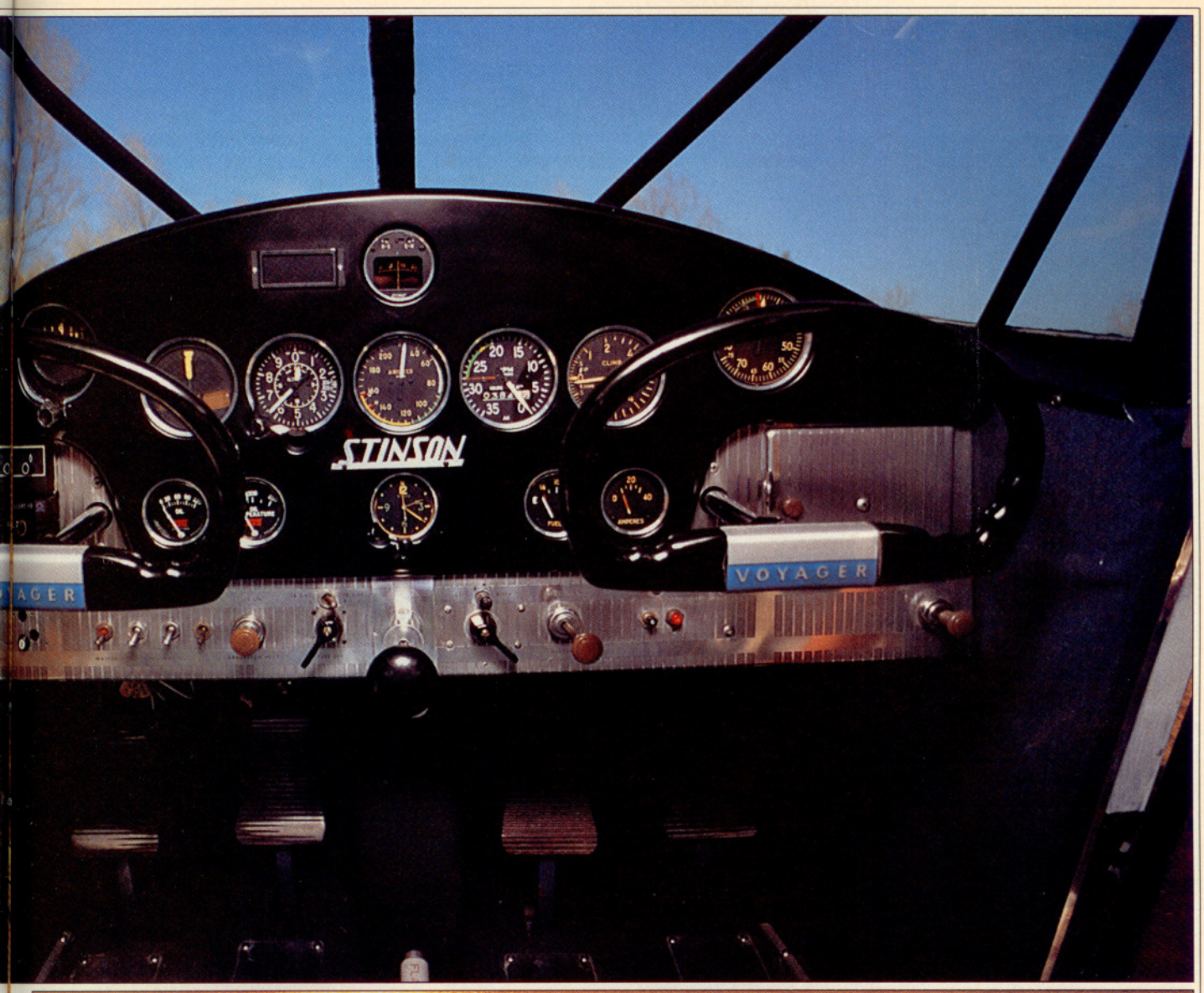
Commonality among the four versions of the 108 helps the maintenance profile, too. Introduced in 1946, the first 108 rolled out behind a 150-horsepower Franklin six-cylinder engine and a choice of propellers, including a fixed-pitch McCauley, a two-position Sensenich, and the variable-pitch Aeromatic; most Stinsons now have the fixed-pitch prop. The 108 differed from other postwar airplanes largely in the details. Its tail was metal, as were the flaps, but the rest was familiar: constant-chord, fabric-covered wing and conventional gear with steerable tailwheel.

Improvements to the design came quickly. For the 1947 models, dubbed the 108-1, Stinson boosted the airplane's maximum gross weight from 2,150 to 2,230 pounds, made modifi-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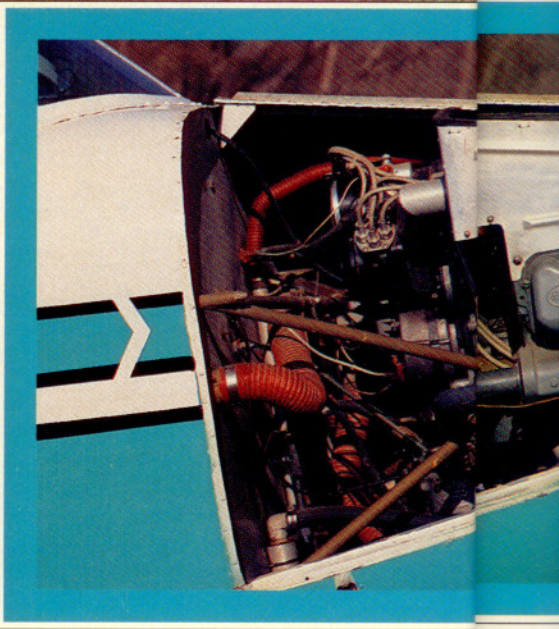

cations to the fuselage structure, and added a baggage compartment with a right-side door. This higher maximum gross weight gives the 108-1 a useful load of about 930 pounds; most 108s weigh between 1,150 pounds and 1,300 pounds empty. Subtract the 40 gallons of fuel aboard, and you can fill the seats and baggage compartments with 690 pounds of people and possessions.

Later in 1947, the 108-2 debuted with the 165-hp version of the Franklin six and a host of other minor changes. With the -2 designation came the names, namely "Voyager" for the basic airplane and "Station Wagon" for the cargo-hauling model; its reinforced floor could handle up to 600 pounds of cargo. Beautiful wood side panels and floor came with the Station Wagon package, making the inside look something like an aerial Woodie.

For 1948, Stinson brought out the 108-3, which mated the more powerful engine with fuel tanks holding 50 gallons and another boost in maximum gross weight, to 2,400 pounds; it was barely heavier than the -2 empty, so virtually all of the increase went into useful load. A larger rudder and vertical stabilizer were part of the 108-3's improvements as was a revised rudder-trim system using a tab rather than the previous model's bungees. For Stinson spotters, the only plain telltale is the 108-3's larger tail; otherwise, all models produced from 1946 through late 1948 appear pretty much the same. Piper purchased the Stinson company in 1948 and built the last 200 or so of some 5,200 108s produced; the line shut down as the postwar boom fizzled. Stinson historians report that Piper took until 1950 to sell off the remaining 108 inventory.

As with most airplanes the Stinson's age, the interior is a quaint mix of Art-Deco style joined by a crazy-quilt instrument layout. Although some 108s have been given more modern instrument panels with the radios stacked in the center rather than off to the sides and up-to-date gyro systems, most remain largely original. Another impediment to serious IFR work for the Stinson is the fact that the Franklins had no provision for vacuum pumps, so any gyro power came from good old venturis. (This shortcoming is addressed by the several engine swaps available for the 108; more about that later.) This means that the chances of finding a Stinson with a modern, full-IFR panel are practically nil. Moreover, at the 108's *Bluebook* price, the chances of getting up-to-date radios and a complete IFR package are not good at all.

It's likely that most Stinsons are used for sunny-day flying, and here they excel. Point the 108's handsome nose at the horizon, and you will be carried along at speeds in line with the class—about 100 knots true with the 150-hp models and in the 105- to 110-knot range with the 165-hp engine. A few Stinson boosters claim that a clean, well-rigged airframe with no venturis can scamper along at 113 knots, a bit better than the Cessna 170, albeit on more horsepower. Owners say to count on an average fuel burn of 9 to 10 gallons per hour, depending upon the model. Expect about 3.4 hours' endurance with a 60-minute reserve for all but the -3 models, which can soldier on another half hour or so.

An improvement to the design was a baggage compartment with a right-side door.

Cabin comfort is on par with other four-placers in this class, with two notable exceptions. While front-seat room is adequate (meaning not cramped but you'll never mistake the airplane for a Centurion), back-seat

passengers must get by with marginal legroom. At least the high-backed seat is comfortable. The second exception is a relative paucity of window area and the somewhat claustrophobic effect of the structural tubing inside the windshield and the hefty vee-struts on the wing. You find yourself ducking and swiveling your head more in the Stinson to see traffic than in many other airplanes.

Take the controls, however, and such complaints quickly move to the back of your mind. The 108 has wonderfully smooth and authoritative controls and remains well-mannered in all flight regimes. Slots ahead of the ailerons keep airflow moving deep into the stall, preserving roll control, and the generous rudder area makes picking up a wing with the pedals easy. In fact, you must get used to using your feet in this airplane more so than in other airplanes. Lead it into the turns with your feet, and keep your toes alive during maneuvering, and you'll have no trouble keeping the ball in the center.

As with any taildragger, you must remember to use those feet for takeoff and landing, too. Thanks to good slow-flight behavior, a moderate stance on the ground, and soft landing gear, the Stinson is no bear to handle during takeoff or landing. Visibility over the nose is excellent, and the airplane's responses are quick enough to help keep you out of trouble. Stinson owners complain, however, of the airplane's strong tendency to weathervane in stiff winds due to the large tail.

One look at the accident record of the 108 tells the tale, so to speak, of the airplane's ground handling. The AOPA Air Safety Foundation's compilation of National Transportation Safety Board data—in the *General Aviation Accident Analysis Book*—shows 99 Stinson accidents. Of those, 28 were caused by pilots losing directional control during takeoff or landing (both with and without crosswinds and/or gusty winds), excessive or improper use of brakes, and landing long. Another seven accidents occurred when pilots attempted to take off with insufficient runway length or poor runway conditions, or they failed to maintain airspeed, or they hit something shortly after takeoff. Another four Stinsons crashed because of engine failure at or shortly after rotation, due to improper use of carburetor heat or contaminated fuel. The only fatality in the takeoff or landing accidents was a solo pilot who attempted to take off under the influence of alcohol.

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Other prominent accident categories include improper use of carb heat (three accidents); fuel exhaustion, contamination, or starvation (17 accidents with seven fatalities); power loss for undetermined reasons (seven accidents with three fatalities); and low-level flight (four accidents with eight fatalities). But the worst killer in the Stinson's accident record, as is true generally, concerns weather; nine people were killed in six accidents

where VFR flight into instrument conditions or deteriorating weather was either initiated or continued. Mechanical maladies include the aforementioned power losses for undetermined reasons plus a smattering of crankshaft and valve-train failures and fuel system malfunctions resulting in accidents.

The Franklins in the 108 series have a history of cracking crankcases, and many have been retrofitted with heavier cases. When shopping for a Voyager or Station Wagon, check the case carefully. Although the brief listing of service difficulty reports listed only one cracked case, those who know the 108 say that even the heavier case tends to crack. An airworthiness directive issued in 1951 calls for inspection and replacement of some "light" cases.

Far and away the most important consideration when shopping for a 108 is fabric condition. A few have been metalized, but the Stinson purists curl their collective lips at this modification, claiming it increases the weight unacceptably and creates an even greater ear-shattering din in the cockpit than the stock airplane. Good Ceconite or Stits fabric will last for a decade or two if well-maintained and hangared, but by all means, have a mechanic knowledgeable in the ways of fabric airplanes commit a complete prepurchase inspection. Also be on the lookout for rusted tubes in the tailwheel area, which can collect water.

For those worried about the parts availability on the Franklin, there are alternatives. Turbotech, Incorporated, in Kelso, Washington (206/423-7699), holds supplemental type certificate approval for installation of a 230-hp Continental O-470 from a Cessna 180 in the 108. Cost of the kit, which includes everything except engine and propeller, is $10,995. Add a used engine and prop to this kit, and factoring in the estimated installation time of 115 to 140 man-hours, you could easily triple your Stinson investment. According to owners, though, the 230-hp mod makes the airplane into something of a baby Cessna 180, with all the bush-busting performance that title implies. Turbotech also offers oil cooler and oil filter kits for the Franklin-powered 108s, for $595 and $545, respectively.

From the Stinson's parent company, Univair (303/375-8882), there are two engine retrofits available, one using the 180-hp Lycoming O-360 with a Sensenich fixed-pitch prop and one using the 200-hp IO-360 with a Hartzell constant-speed airscrew. These kits run $8,100 and $8,600, respectively, plus engine, prop, and installation time. Again, after getting all the pieces together, one could easily drop more than twice the airplane's intrinsic worth into the modifications.

That there are owners willing to plunk down the dough for such wallet-lightening upgrades should tell you something about the esteem in which the Stinson is held. As prices for other quasi-collectibles (the aforementioned Cessna 180 and 170, the Piper Pacer, and the like) continue to rise, the Stinson becomes ever the better bargain. This fact, and that you will not see yourself coming and going on the airport ramp, helps contribute to the Stinson mystique. And with the enthusiastic support of Univair and the National Stinson Club (813/465-6101), the airplane should be well supported into its fifth decade and beyond—as is only fitting a classic. □