

TWO TEN

The three members of this family reveal distinctly different personalities

BY RICHARD L. COLLINS

THE

first-ever Cessna 210, flown more than 30 years ago, was a 182 with a retractable landing gear—straight vertical tail and all. The first production 210 had a swept tail and a substantially different cowling from a 182's, but the cabin section was still the same as a 182's and, for that matter, as a 172's. And even though it has kept the same type designation, it has gone through four separate airframe shapes in becoming one of the most successful singles ever. It is also one of three general aviation airplanes (the Skymaster and Baron are the other two) built in quantity with normally aspirated engines, turbocharged engines, and pressurized cabins. Cessna hasn't built any for the past couple of years, but in every plan for a resumption of production, the 210 looms large. It is what might be called a classic airframe that begs for a revival. In its best year, 1979, almost 1,000 were built—nearly as many as the total number of airplanes built in 1987.

The classic 210 is the N model, built from 1978 through 1984. Powered by a 285-horsepower Continental, with a higher rating for takeoff, the airplane's maximum takeoff weight evolved up to



3,800 pounds for the normally aspirated model and 4,000 pounds for the ones with turbocharging, including the pressurized 210. The airplane gained empty weight over the years, with the 1979 model probably the lightest of all. Until 1978, doors faired the main gear when it was retracted. The weight and maintenance complexity of these doors was deemed not worth the cost, and the 1979 model was the first without them. Cessna originally showed no performance decrease without the gear doors, but in reality about five knots disappeared—especially at high altitudes and low power settings. Another thing that added a lot of weight was an air conditioning system offered on later models. The system is not very effective and, in a high-wing airplane, is not as necessary as in an airplane where you sit in the sun all the time.

The 210 has been a trailblazer in a lot of areas. It was the first single with factory-installed deicing and later the first single approved for flight in icing conditions. It was also the first single offered with factory-installed weather radar, with the receiver/transmitter and antenna mounted in a pod slung beneath the right wing. It was not the first pressurized single—the Mooney Mustang took that honor—but it was the first pressurized single built in quantity. After an original spate of airworthiness directives, the P210 has been stable for a number of years, as have its siblings.

One thing the 210 is not renowned for is its handling qualities. Some maintain that flying the airplane is like driving a truck, and even the most devoted 210 fan will agree that it is a touch heavy on the controls. The reason for this is an incredibly wide allowable center of gravity range. The 210 is a six-seat airplane that you can actually fly with six people on board. The amount of fuel carried would have to be restricted to keep the airplane within weight limits, and you would just naturally put the two smallest people in the rear seats, which are crowded at best. The center of gravity should always be checked, but it is almost always well within limits.

There is a difference in the way the 210 flies with aft CG. Forward, the elevator forces are quite high. Aft, the elevator forces become quite light. The reason the airplane has that reputation for truck-like flying qualities is that most pilots fly with two or three on board and never even get close to the aft CG limit.

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mally aspirated airplane. Why it flies differently from a turbocharged airplane is a mystery—the airframes are identical. This might be because the CG is a bit farther aft on the straight 210 due to the lack of the weight of a turbocharging system in the cowl. A regular 210N is fun to fly and feels like a much lighter and responsive airplane than the ones with turbocharging.

The turbocharged 210 is a hot rod at altitude, turning in substantially better climb and cruise performance than the pressurized airplane. The reasons for this are simple: It takes horsepower to pump up that cabin, and some weight is added to the structure for pressurization. On the other hand, the pressurized airplane is substantially quieter and smoother because of thicker fuselage skins and windows. It is interesting that as the airplane evolved it gained so much poundage that a late model turbocharged 210 weighs more than a 1979 pressurized airplane.

All the N models carry 90 gallons of fuel, with slightly less of it usable in later models because of a change in the fuel system that allowed operation on both

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tanks simultaneously. This was a good change because on the earlier airplanes the fuel selector and the gauges were near the floor, on the console, out of sight and out of mind. Any old 210N pilot who has not inadvertently run a tank dry, raise your hand.

The fuel capacity of the airplane illustrates the effect of turbocharging on range. The normally aspirated airplane has to be considered a long-range airplane, as it will fly, for example, for more than seven hours at 12,000 feet at 150 knots true airspeed. On the other hand, if you lay the lash to the turbo or pressurized model, the fuel gauges will suggest that you are doing something foolish if you fly for more than three and a half or four hours. It's all a matter of

maintaining horsepower in the climb and at cruising altitude. Few people would ever find a reason to add auxiliary fuel tanks to a regular 210, but a brisk business is done in adding auxiliary fuel to the turbocharged airplanes. It is also an airplane on which you need to check the fuel level visually before a maximum-range trip. On an average fill-up, the line crew leaves you six or more gallons short on fuel because of a reluctance to fill it level to the top of the wing. It's a big long tank, and an inch down is a lot of gas.

The 210 has not achieved the status of the Bonanza in the retrofit business. Bonanzas get new instrument panels, windows, engines—almost everything but a change in the basic shape of the airplanes. For 210s the main offerings are intercoolers for the turbocharged airplanes, auxiliary fuel, and dual vacuum and electric systems that were offered as virtually standard options on later models. Also, one company offers a gear door removal mod for 1978 and earlier N models. Riley International offers a Riley Rocket version of the P210, but it is more of a rebuild and customizing of

styling than a modification. The primary change is an intercooler. (See "Pilot Précis: Rocket Redux," March *Pilot*, p. 93.)

The fact that people don't modify 210s is more a reflection of a difference in personalities of the airplanes and the people who fly them than anything else. The Bonanza simply brings out a bit more of the macho than does the 210.

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Flying a 210 is a straightforward exercise, though if you cut your teeth on a Skyhawk, the 210 comes across as a different breed. This is evident from the beginning, when the nose steering comes across as heavy and not too responsive. The turbocharged airplanes feel like they are quite heavy on the nose, and they are unless you have

210 BUYER'S GUIDE

The 210's long and prosperous production run began in 1959 and continued through 1986. During those 28 years, Cessna sold 8,437 normally aspirated and Turbo 210s. P210 production began in 1978 and ended 850 airplanes later in 1986. The only Cessnas that have sold in greater quantity are the 150, 172, and 182. The 210's ubiquity works in favor of the prospective buyer. There are plenty from which to choose—a spring 1988 issue of *Trade-A-Plane* contained classifieds for 62 normally aspirated 210s, 125 Turbos and 45 P210s—with prices ranging from subterranean to stratospheric.

Book prices for the earliest 210s begin at about \$18,000 to \$20,000 for an IFR-equipped 210 with good paint and interior and roughly 650 hours since major overhaul of the 260-hp Continental IO-470 engine. However, a perusal of the *Trade-A-Plane* classifieds unearthed a lowball asking price of \$9,999 ("More plane than I need. Fly it home. \$10,999 w/annual . . .") to a high of \$22,900 ("Fresh annual . . .") for 1960-vintage 210s.

Cessna switched to a 285-hp Continental IO-520 engine in the 1964 D model 210. Gross weight also increased, and optional fifth- and sixth-passenger kiddie seats were

offered. With the 1967 G model, the wing was changed to a fully cantilevered design. Expect to pay in the mid-twenties for a good mid-sixties 210. A 300-hp Continental IO-520-L engine was used in the 1970 210K through the end of production. Gross weight also increased 400 pounds with the K model. Cessna built 2,117 210s from 1977 through 1979, more than in any other period in 210 production history. Average prices for these vintages range from \$51,000 to \$61,500 for normally aspirated versions. If average retail price is compared to the original, equipped list price, then the 1981 210N, which sells for about \$77,000 or 58 percent of its price when new, represents the best value among all normally aspirated 210s.

The Turbo 210 first appeared in 1966 as an F model. The average retail price for a 22-year-old, 285-hp Turbo 210 is \$29,000. Cessna changed to a TSIO-520-R engine, with a five-minute takeoff rating of 310 hp, in the 1977 T210M. The latest T210 with a book price of under \$50,000 is the 1976 L model, but options and modifications such as intercoolers, speed brakes, additional avionics, and ice protection equipment can easily propel the asking price to well over \$50,000.

As one might expect, pressurization commands a premium price. P210s range in average price from \$74,000 for a 10-year-old model to \$293,000 for a 1986 P210R. Significant changes were incorporated in the 1982 model: new induction system matched to the larger turbocharger introduced the previous year, new fuel system, dual vacuum pumps and alternators, and new engine instrumentation. A 1982 P210 sells for \$128,500 on average. In 1985 Cessna made performance and aerodynamic improvements in the P210 in an attempt to recapture some of the pressurized single market lost to the then-new Piper Malibu. The changes, which included an intercooled 325-hp engine and a longer wing and horizontal tail, failed to make much of a dent in Malibu sales. Cessna sold 38 P210Rs before suspending production.

Many P210 owners have lavished their airplanes with sophisticated avionics, ice protection, radar, air conditioning, auxiliary fuel, intercooler, and leather interior. These items will be reflected in the asking price. A budget of \$100,000 should buy a well-equipped, low-time 1980 P210 or, for those expert at combing classifieds, that rare, late-model, "must sell" bargain. —Mark R. Twombly

This Cessna P210N's pressurization and weather radar offer the comfort, safety, and flexibility that only a high-speed, high-altitude, all-weather airplane can provide.



This 1979 Turbo 210N is owned by Jesse Heird of Hampstead, Maryland.



some weight in the rear. This is a disadvantage on a grass field.

A 210 sits level on the ground, and a good takeoff requires a bit of a fine touch. If the airplane is allowed to run level, the liftoff forces are quite high and the airplane will likely remain on the ground longer than necessary. The best procedure is a two-stage rotation for takeoff—lift the nose a little at the first of the run and then, when reaching the 70-knot liftoff speed, rotate to about 10 degrees nose up. Ten degrees of flaps are used for all normal takeoffs—without them the liftoff speed is higher and the rotation takes even more effort.

The 210 is one of the best airplanes in a crosswind ever, but it does have one peculiarity. At the very first of a crosswind takeoff roll, it tends to turn away from the wind instead of into the wind as you would expect. The airplane has excellent controllability, though, and runway handling and taxiing in strong winds works well. At some point it would reach a limit where it might just blow over, but this would happen only in an extremely strong wind.

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and resists deflection from the straight and narrow. Once it is established, whether during climb, cruise, or approach, it wants to stay put. This stability shouldn't be construed as identifying a pussycat, though. The 210 has an involvement in loss-of-control accidents on a par with the other retractables despite its apparent stability, and proportionately as many 210s as V-tail Bonanzas have been involved in airframe failure accidents. This is not a reflection of an airframe weakness but of the inevitability of what follows a loss of control in any airplane.

On approach the 210 has a pitch-up with flaps extension—strong enough that forewarned doesn't necessarily mean forearmed unless the arm is a strong one. If the approach speed is cor-

rect—not over 80 knots—the landing is okay, though the stick forces are high with the center of gravity forward. One slight complication is that you can't see the runway over the nose when the airplane is in a proper landing attitude.

Pilots tend to fly approaches in 210s with more airspeed than is necessary. The stall speed at maximum landing weight and forward center of gravity is about 60 knots; 1.3 times that is 78 knots, so the 90-knot approach speed used by some 210 pilots only serves to complicate landings. A real squeaker is elusive; it occasionally works out but is highly unpredictable. Night landings are best billed in advance as "arrivals."

The marketing people at Cessna hung the Centurion name on the 210 one year, and it more or less stuck. That is too many syllables for an airplane name, but some people like it. Otherwise, you can call it a 210 and everyone knows which airplane you are talking about. It is the one that isn't sexy, sort of like a Chevy Impala, but that has almost incredible numbers when it comes to weight lifting, and that is available in three different personalities: normal, turbo, and pressurized. □