

# The Last Cessna 195

*Cessna's beefy, radial-engine classic is demanding and charismatic.*

BY DON DOWNIE

AOPA 188441

There's one thing that owners of the classic Cessna 195 series seldom worry about. They're not bothered by flying friends who want to borrow their airplanes. This big, beautiful beast is a great flying airplane but can become quite cantankerous on the ground. Few of today's tricycle-gear-trained flyers can handle the limited ground visibility and predictably capricious takeoff and landing characteristics of this formidable flying lady.

Dwight Ewing (AOPA 183223),

founder and president of the International 195 Club, owns the last Cessna 195 built. It rolled out the factory doors in August 1954. Ewing has owned the ship, N195DE, since 1969 when he tracked it down to a Delta Airline captain. This was his second 195, and he purchased it for \$9500. In all these years, the only pilot that he has turned loose in the ship was his son, Buck, who soloed the 195 from the right seat.

No, the 195 isn't really difficult to fly; however, it is different; and it is

not at all forgiving of mistakes. It will groundloop "awfully fast" according to Ewing. He admits going around on the ground with his ship when he landed in a crosswind with weak brakes. However, he didn't drag a wing.

"You're the second person that's actually made a takeoff and landing in my ship," said Ewing as we talked flying at his comfortable 75-year-old house in Merced, Calif. We'd just come back from the airport after a session of air-to-air pictures where





Ewing and his wife Veta had flown some mighty sharp formation over the farms east of Merced. Then Ewing and I had taken "Old Squirrely" and bored holes in the darkening sky.

When you climb into Ewing's well-equipped classic, you'll find comfortable deep-pile, wool rugs, matching Naugahyde seat covers and a well-equipped panel configuration. The radios are not "stacked" in the middle of the panel but spread out within reach. Cessna 195DE has two King KX 175's, a Bendix digital ADF, Narco AT-50 transponder

with encoder, King DME, Brittain D-2 autopilot and a King KN-20 audio panel, and it is fully IFR equipped.

The electrical system has organ-style depress-to-engage switches across the bottom of the instrument panel. Ewing has retained the original 195 organ-type switches across the bottom of the instrument panel. Similar designs were used on the contemporary ragwing Cessna 170, the first Beech Bonanzas and the Hudson Terraplane. Circuit breakers are on the left cabin wall. While a throw-

## 195

*Owners report 150 mph-plus on 15 gph and good visibility, although the Jacobs engines have a reputation for consuming oil.*





over control column was standard equipment, Ewing reports that most owners have installed the optional dual yoke. All three axis trim controls are mounted conveniently on the pedestal, which can be locked in the full-forward position.

The 195's sub-panel originally contained a built-in booby trap perpetuated by Cessna on other models. The carburetor heat knob has a pinch-to-pull handle located just to the left and below the throttle. Original 195's had a mixture control equidistant and just to the right. This

mixture control has been replaced by Ewing with a larger vernier identical in size to the prop control.

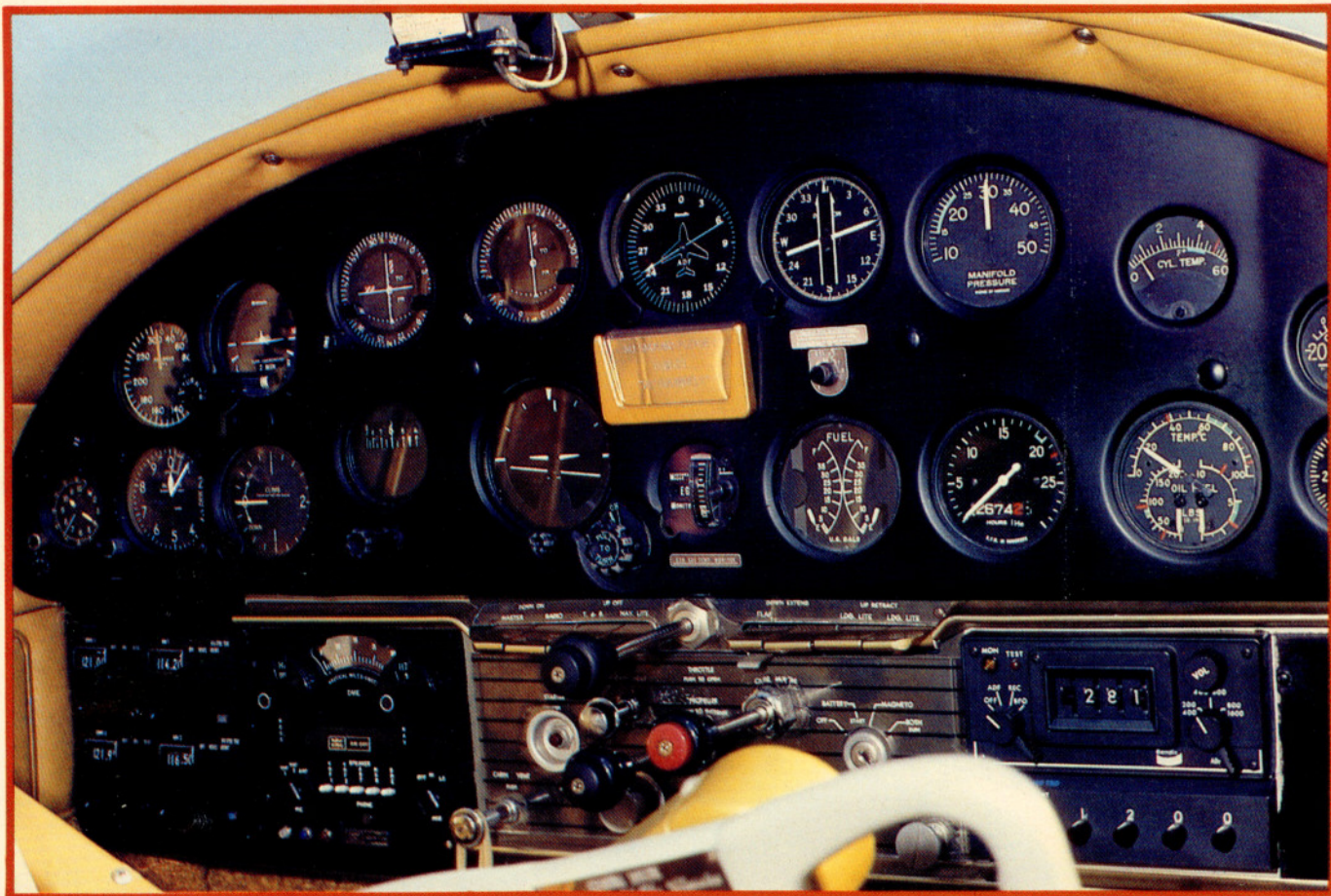
While most 195's were equipped with a Stewart Warner gas heater, Ewing feels it unnecessary for moderate climates. The cabin seals well, and the five-gallon oil tank, usually running at 140° F to 160° F, is mounted aft of the firewall and above the pilot's toes.

Ewing's 195 has a seaplane door on the left side of the cabin. This "escape hatch" also was included on the military LC-126 units.

The flaps are electrically controlled drag units that extend 45 degrees below the inboard section of the wings to increase drag. No lift is generated, but Ewing says that a go-around can be made, although not recommended, with full flaps.

Ewing's 195 is equipped with the much-discussed Goodyear crosswind landing gear. He had installed the gear to try it for 50 hours. That was in 1970, and he still has the gear. With a side load, the gear will castor some 30 degrees to compensate for drift on a landing. The gear is used





by pilots when taxiing to "kick the tail" to one side and taxi with the gear castoring for better visibility. As with just about everything about the 195 on the ground, it is different.

One of the many niceties about this Cessna is the hinged engine mount for easy maintenance access. By removing the two right-engine mount bolts, the entire engine and accessory system will swing away from the firewall with all accessories attached.

The care and feeding of a radial engine can be a new experience to pilots brought up in the era of "flat engines." Ewing always pulls his prop through 14 blades every day before starting. Starting calls for the prop in low rpm and the switch on battery where the timing is retarded 32 degrees. Otherwise, the Jacobs can backfire and possibly start a fire. Standard procedure is to use primer and prayer during starting with a single primer shot for a hot start.

Merced Ground Control gave us Runway 30 with five knots of wind from 290 degrees. The temperature was 80° F and the sky was hazy. Airport altitude was 155 feet. Each of us kept a neck stretched to see

## 195

*The 195 will ground-loop "awfully fast" says Ewing. This most often happens with the owner flying in the right seat and a friend or prospective buyer in the left.*

around our respective sides of the cowlings as we taxied out. Ewing has a wide-angle co-pilot mirror located in the right top corner of the cockpit so that he can see from that side when he's alone.

With two of us aboard and just over half fuel, we were perhaps 200 pounds below the 3350 pound gross weight and approaching forward cg. Normal takeoff roll is only 800 feet, but I took considerably longer than that on the 5900-foot runway because of the predictable built-in tendency to head to the left corner of the runway with rapid power application. This behavior is caused by gyroscopic, or "p" effect, sometimes called "pixie" effect. Ewing notes that "old pilots in 195's learn to watch for pixies that can take control of an aircraft at the most inappropriate time. The 195 Club has many pixies."

To wit, shortly after returning from flying 24-ton military transports, I made a flight with a friend in his 195. By contrast, it was then a "little airplane", and I applied take-off power briskly. Then I promptly reached back and pulled the power all the way off just as briskly because we were then headed almost 90 de-



greets to the left of the runway, and there just wasn't anything I could do about it. Fortunately, the only damage was to my ego.

The 195 will break ground comfortably with the tail very low, or you can push the tailwheel into the air for better visibility and a longer take-off roll. I chose to see ahead. Rudder control was more than adequate as the tail came up. I broke ground at about 65 mph, 10 mph higher than a tail-low launch. Best angle of climb is only 75 mph, but forward visibility is zilch. We came right forward to a 110-mph cruise-climb and reduced power to 2000 rpm and 23 inches for a 700-fpm rate of climb.

A left turn took us away from the busy B-52 pattern at Castle AFB. At 3000 feet, OAT was 72° F, our 65 percent cruise power setting was 19¼ inches and 2150 rpm, producing a true airspeed of 155 mph on less than 15 gph. The airspeed indicator on 195DE was some 20 mph slow in cruise but about normal at approach speeds, according to Ewing, who believes that older airplanes tend to become a little slower with age because of dings in their surfaces, and engine and prop wear.

Visibility in moderate and steep turns was excellent through the clear sunroof that extended back to the five-inch main spar well. Control touch is fine in all three axes and the center-mounted trim tabs on the yoke are easy to reach.

Power-on and -off stalls present an almost ridiculously nose-high attitude. At approach power—15 inches and 2150 rpm—the stall warner beeped at an indicated 55 mph, and the wing's angle was almost 45 degrees to the horizon. Power off, the true stall was 64 mph and the big 195 showed no tendency to duck a wing with the wheel held all the way back. Full flaps make a somewhat more abrupt stall but very little change in airspeed. At these high angles of attack, the airspeed indicator is completely inaccurate.

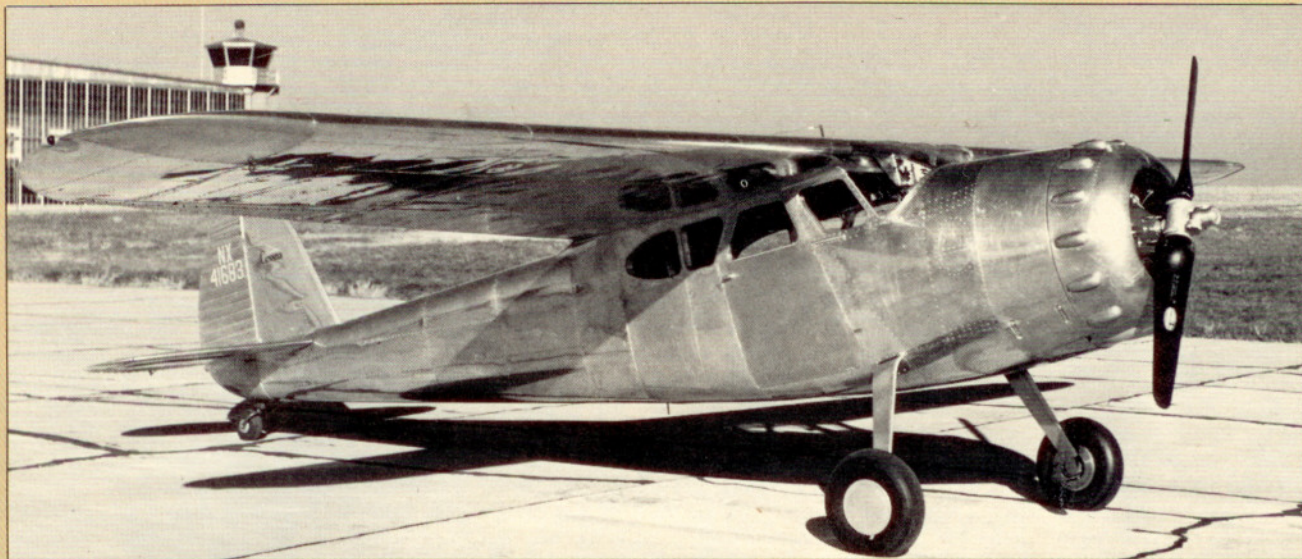
There's a sneaky way to keep the runway approach lights in sight and see the runway ahead until you start to flare. Just make an off-center final approach leg with the nose at least 10 degrees off to the side you're looking over. It was almost sunset, and I was in the right seat because Ewing didn't want to relinquish the seat where he normally flew. Thus, I ex-

tended our left base leg at Merced past the normal turning point and zeroed on the approach lights with an angle back toward the runway. I could see where I was going, plus or minus oil on the windshield, until it was time to turn 10 degrees to the right, parallel to the runway, and watch successive runway lights around the generous curvature of the cowling.

If you want to continue discussions far into the night, bring up the subject of how to land a 195. Ewing recommended a no-flap three-point attempt. I tried. Following my sneaky off-center final approach, I reluctantly kicked the nose back in front of me to minimize the wear-and-tear on the crosswind gear. Then I watched the passing runway lights to my right and started back—and back—and back on the yoke. The big 195 slowed, picked up that mush-ready-to-land feeling and floated some more. I came back again on the yoke and still kissed the main wheels first. As we ballooned a couple of feet, I brought the wheel all the way back into my breadbasket, and our second touchdown was acceptable. Somewhere on the other side of that







*The 1945 first-prototype Cessna 195. Changes later were made to the cowling, landing gear and tail section.*

smoothly idling Jacobs was the whole runway, but I couldn't see it.

Despite our fast approach (90 mph indicated over the numbers) without flaps, we "made" the second turnoff with little brake application and had to taxi another 2000 feet to the hangar turnoff. With practice, I'm sure that the 195 could be landed and stopped consistently in well under 800 feet.

Ewing stoutly defends the crosswind gear. "It really isn't a chicken way out. In my opinion, there isn't much justifiable macho in flying a 195 without a crosswind gear. It takes more accomplishment to handle the crosswind gear with finesse. You must learn to fly the mass of the airplane, not just going where you have the nose pointed," explained Ewing. "Even with the most severe crosswinds, I recommend a three-point landing so you have your moment of truth all at once rather than part of it when the upwind wheel touches, part during a fast roll-out and again when the tail comes down. With consistent three-point landings, I believe we'd save some 195's."

Ewing emphasizes his liking for the crosswind gear after frequent landings at San Francisco International where there is a perennial crosswind from the left on the main runway, 28L&R.

"If I landed short, I couldn't taxi all the way to the Butler hangars at the far end of the airport in a strong crosswind without having the downwind brake fade. I've done it a couple

## 195

of times and you feel mighty foolish with a whirley-round or two when your brakes fade on an international airport." The crosswind gear is easier on tires and carries a larger 7 inch x 8 inch tire than the 6.5 inch x 10 inch on the stock gear.

The tailwheel is steerable through 21 degrees. Ewing uses forward control to ease the tail to where it will castor easily. Then he applies aileron "away from" his turns on the ground to keep from loading up the wheel on the outside turns; i.e., in a right turn on the ground, use left aileron.

Engine shutdown is painstaking. Ewing comes back on his prop pitch while taxiing in, and the engine idles at about 600 rpm for one minute to get most of the oil out of the engine and prop and back into the five-gallon oil tank. While the big Jacobs engine will idle smoothly at very low rpm, specifications call for a minimum idle of 600 rpm to assure adequate piston lubrication.

Most cowlings have an indexing mark so that the owner can align the prop blade with the master rod straight up. In this position, the lowest cylinder has the bottom exhaust valve open to allow oil drainage from the bottom cylinder.

Most popular of the 195 engines is the Jacobs R-755 B-2 275-hp. A good supply of 245-hp Jacobs R-755-

9 engines and parts is available from Page Airmotive in Oklahoma City since this basic engine was used in the Cessna UC-78 World War II "double-breasted Cub." Ewing reports that 275-hp and 300-hp engines have a short supply of parts. About six years ago Page Airmotive certificated a turbocharged Jacobs that delivers 350 hp. Forty of these high-altitude units are now on 195's.

Cessna built 1179 Model 190 and 195's, and Ewing estimates that 275 of those units began life with 240-hp Continental W670-23's. Included in this total are 82 U.S. Army LC-126 models. Presently the 195 Club has 606 members who own and fly almost all the remaining 190's and 195's. At latest count, Ewing estimates that there are 670 of them still flying, although the club suffered three fatal accidents in the past few months. As reported in the club's newsletter, the crashes were caused by density altitude, oil starvation atop an overcast and suspected fuel contamination on a flight following re-painting.

The last 100 production 195's have minor modifications. Flaps are 4½ inches deeper, and the horizontal stabilizer is about 3½ inches narrower in an effort to dampen the approximate 14-second phugoid oscillation common to most 195's. Ewing solves this vertical oscillation problem with a "5¢ autopilot"—two rubber bands pulling the control yoke forward with just enough elevator trim nose up to compensate. Other owners have used somewhat similar quick fixes. One



has a three-foot bungee under the pilot's seat that wraps around the yoke.

All Cessna 190/195 control yokes pin forward with a small friction clip that tends to wear out. Ewing recommends a shear pin to secure the wheel in the forward position. An external lock is required for the rudder. Ewing notes that more than half of the 190/195 accidents are caused by groundloops. A large percentage of these are with the owner flying in the right seat either demonstrating to a prospective buyer or with a friend in the left. Frequently, these mishaps are after the ship has been down for rework, and the owner hasn't flown it in perhaps two years. The latest 195 Club letter has the following note: "Received a sad letter from a member. . . . She was truly a bird of which to be proud, but in one of those moments that we all have, or feel we will have, a strong crosswind and a weak left brake brought her to an end. After five years and 700 hours the pilot had to walk away from all the flying memories they had enjoyed together. Luckily he and his passenger were not injured. If anyone of you knows a good 195 that needs a home, let the pilot know."

The 195 has a reputation of being super-rugged. Take the report from club member Jerry L. Meyer, reported in the club's newsletter: "At Oshkosh '78, my Cessna 195 was destroyed in an accident. I was hit from behind by a P-51 taking off while I was on landing roll. If I had been in

any other type of aircraft, I would not have survived because the P-51 tailwheel broke off and hit the main wing spar behind my head. It's a sturdy airplane."

This sturdiness is reflected in a low number of airworthiness directives issued on the 195. In all, there have only been three relating to structural integrity, a respectable total for a plane that's been around for 33 years. One AD (51-10-4) required compliance with an inspection and strengthening of the cowl mounting channels; another (AD 51-11-2) had to do with cracks in the elevator spar webs at the outboard hinges; and the third (AD 63-30-2) involved modifying the wing spar-to-fuselage attach fittings.

Ewing explained that carrying a 195 Club roster in your map case is better than carrying a package of spare parts. "If there's an owner near where you have a problem, he'll undoubtedly have his own supply of spares to get you back into the air." Ewing's proud of the club he formed and the airplanes he flies.

If you are interested in a 195 or want to join the club, you can write to The International 195 Club, P.O. Box 737, Merced, Calif. 95340. Members share experiences through the newsletter and also are able to locate needed parts, as well as share tips on maintenance and modification questions.

Should you be in the market for a 195, you can expect to pay anywhere

## 195

*A 1949 Cessna 195 equipped with floats. Adding vertical fins to the tail improved stability.*





from \$13,500 for an early 275-hp model to about \$25,500 for a later 300-hp version. Prices can even reach \$30,000 for a fully restored 195.

Any time you spend at the controls of a clean 195 is not enough. This is the type of an airplane that just begs to get out of the home pasture and

go. It's roomy and plush-quiet inside. It handles nicely in the air with excellent in-flight visibility. Even by today's standards, its performance is good—150 mph-plus on 15 gph. Add the pride of taxiing up with a classic that takes better-than-average piloting, and you have a winner. □



*After the photo session, Dwight Ewing hangs his mint-condition Cessna 195 at Merced.*

## 195

### Cessna 195B

Original purchase price (1954) \$19,950

Price as tested \$24,500

#### Specifications

Engine	Jacobs 755-B2
	275 hp @2200 rpm
Propeller	Hamilton constant speed 78 in
Wing span	36 ft 2 in
Length	27 ft 3 in
Height	7 ft 2 in
Wing area	218 sq ft
Wing loading	15.3 lb/sq ft
Power loading	12.2 lb/hp
Passengers and crew	5
Cabin length	7 ft 2 in
Cabin length to baggage compartment	8 ft 8 in
Cabin width	46 in
Cabin height	46 in
Empty weight	2030 lb
Useful load	1320 lb
Payload with full fuel (80 gal)	780 lb
Gross weight	3350 lb

Fuel capacity (standard) 80 gal (76 usable)

Oil capacity 20 qt

Baggage capacity 220 lb (13 cu ft)

#### Performance

Takeoff distance (ground roll)	800 ft
Takeoff over 50 ft	1600 ft
Rate of climb	800 fpm
Maximum level speed	175 mph
Normal cruise speed (65% power, 6500 ft) 21½" and 1975 rpm	165 mph
Economy cruise speed (50% power, 6500 ft) 20" and 1850 rpm	142 mph
Range at normal cruise (with 45-min reserve)	741 sm
Range at economy cruise (with 45-min reserve)	723 sm
Service ceiling	18,300 ft
Stall speed—c.a.s. (clean)	62 mph
Stall speed—c.a.s. (gear and flaps down)	62½ mph
Landing distance (ground roll)	613 ft
Landing over 50 ft	1495 ft