CESSNA CARDINAL

Style isn't everything, but it helps

BY MARC E. COOK

Call it style. Away from the hard-numbers reality of engineering, or the cold stare of a CAD/CAM computer, few things say as much about an airplane as the way it looks. Would a Lockheed Constellation, for example, captivate us as much without its gently curved fuselage, its classic triple-rudder tail? Style can, when backed up with performance, take an airplane from the realm of the average to that of something special.

In the mid-1960s Cessna was aware that much of its product lacked that elusive element of style. Though a tenacious seller, the 172, for example, could hardly be called beautiful, and much of the product line held fast to the high-wing, strut-braced look. It was with this image in mind that Cessna set about making the Cardinal. The new airplane would use a cantilever wing (à la Centurion) and a stabilator at the rear (Cessna's first)—and, most important, it would be as sleek as the 172 was staid.

The airplane Cessna rolled out in late 1967 looked like nothing else from Wichita. To some it also looked like the end of the venerable Skyhawk. Rumors were fueled by the Cardinal's first internal designation as a Model 172. At the same time, Continental stopped making the O-300, then used in the Skyhawk. Cessna cleared up the question of the 172's demise when it announced that the Skyhawk would share the Cardinal's 150-horsepower Lycoming.

So while the Skyhawk remained firmly entrenched in the lineup, Cessna nonetheless spared no expense promoting the fixed-gear Cardinal. It was played up as a lifestyle accessory more than as an airplane. Amid a rampful of Cherokees and Skyhawks the Cardinal stood out like a Ferrari in a Buick dealership—precisely what Cessna wanted.

The Cardinal also showed some functional advantages over its more pedestrian brethren. It had a capacious interior—although the proportions were opposite those

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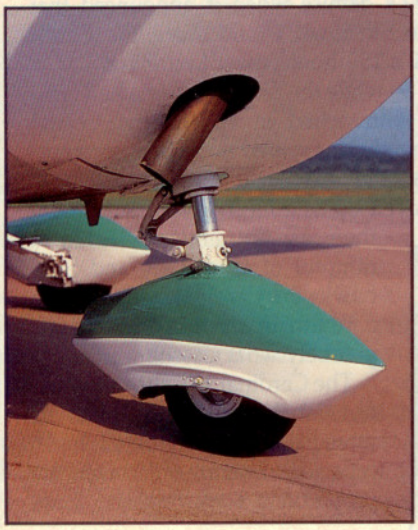


of a 172: The Cardinal was wide and low where the Skyhawk was high and narrow—and the famous four-foot-wide doors made access to the Cardinal's front and rear seats a simple matter. The visibility afforded by the Cardinal's setback wing and steeply raked windshield put most four-place singles to shame.

A few styling points were received with something less than enthusiasm, the instrument panel being one of them. Designed to resemble the dashboards of 1970s-vintage automobiles, the Cardinal's panel sloped down to the right of the radio stack, limiting panel space. Those huge doors leaked, and even today many Cardinal owners have given up trying to get them to seal completely.

In its rush to get the Cardinal to market, Cessna had not taken enough time to iron out all the inevitable wrinkles of a new model. Its greatest shortcoming, reflected both in pilot opinion and accident reports, was its lackluster climb performance. With 150 hp on tap, the book climb rate for the Cardinal was 670 fpm; not exactly the performance promised by the airplane's looks—the same, in fact, as that of a 1968 Skyhawk.

In any case, accident reports tell the tale: The 1968 Cardinal has a higher incidence of takeoff accidents where the aircraft's climb rate was a causal factor than that of the later 180-hp A- and B-model Cardinals. According to the Federal Aviation Administration's accident and incident reports for January 1982 through February 1988, four 150-hp Cardinals were lost during climb; none of the 180-hp Cardinal accidents could be directly attributed to climb performance. Apparently, 150 hp just wasn't enough for the Cardinal.

The first Cardinals also possessed some unusual handling characteristics. Unlike many Cessnas, and the Skyhawk in particular (from which many pilots were transitioning), the Cardinal had quite light controls, especially in pitch. The stabilator also had a tendency to stall before the wing, which often resulted in a hard, nosewheel-first arrival. Cessna quickly paid for all Cardinals in the field to have slots cut in the stabilator, reducing its tendency to stall.

Cessna turned out nearly 1,200 of the 1968 Cardinals. Style, it seems, was selling Cessna's bold new aircraft—at least in the beginning. The second year's production plummeted, however, and just over 200 Cardinals rolled out of the plant in 1969. This was a sales spiral from which the Cardinal would never recover. The entire run of fixed-gear Cardinals, terminating in 1978, would number less than 2,700.

Poor sales or not, Cessna didn't give up on the Cardinal. The 1969 model, for example, got a 180-hp Lycoming and a revised control-wheel/stabilator ratio. These changes addressed the Cardinal's climb performance and its light pitch response. With more power on tap, the A-model Cardinal boasted a book climb rate of 760 fpm; it also gained a few knots in cruise, to a book figure of 118 at 75-percent power. Gross weight rose 150 pounds, to 2,500 pounds.

The next year brought what many have said should have been the first Cardinal. In 1970, Cessna unveiled the 177B, the first (and last) major change to the fixed-gear Cardinal. Though the engine remained the O-360 Lycoming, it was now mated to a constant-speed propeller. Moreover, a 2400-series airfoil replaced the Learjet-style 6400-series wing from the 177 and 177A—giving the airplane a tamer stall and better climb performance. Book climb rate was now 840 fpm, and 75-percent-power cruise speed crept to 120 knots.

Cessna then elected to produce a retractable-gear version, starting in 1971. A modified version of the Centurion's retraction system—sans the main gear door that had been problematic on the 210—appeared along with a 200-hp fuel-injected Lycoming. This provided a substantial increase in cruise performance, to around 140 knots. Compared to an Arrow of similar vintage, the Cardinal RG was five to 10 knots faster.

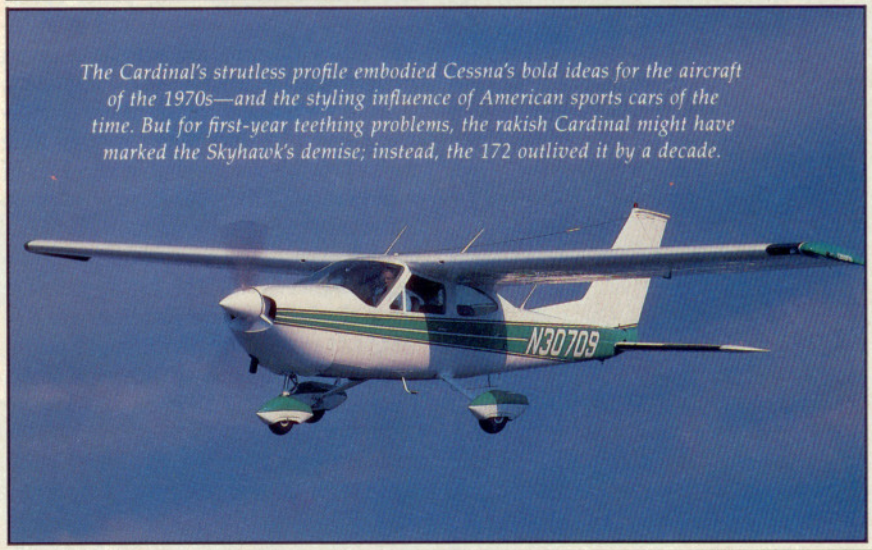
The early RGs also had their share of teething pains, much of it centering on

the landing gear. In the first two years' Cardinals, the hydraulic gear used a number of solenoids and electric squat and gear-position switches. In practice, the electrical portion of the gear proved troublesome, with frequent cleaning of microswitches and solenoids necessary.

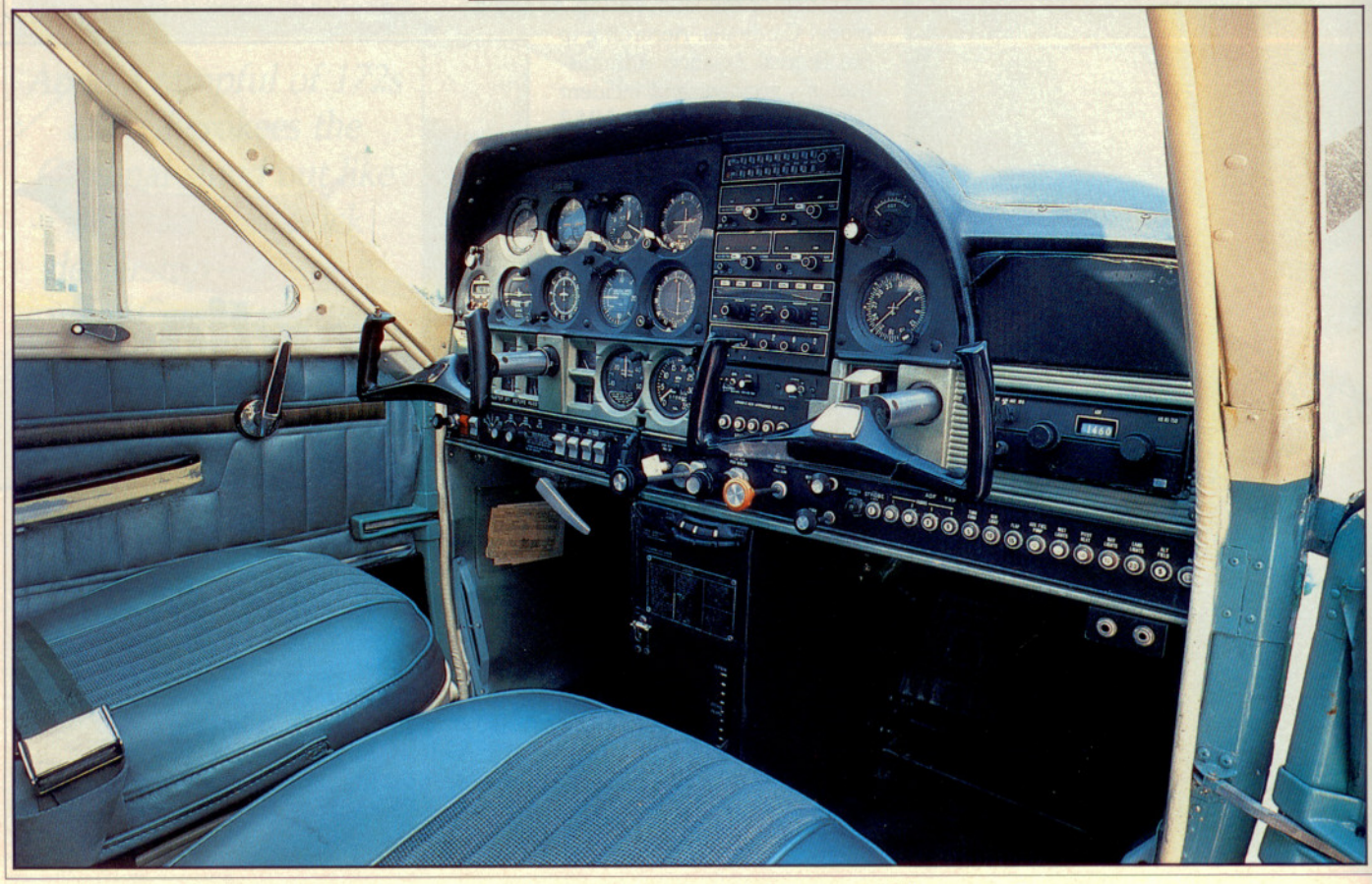
Over the course of the RG's run, from 1971 to 1978, Cessna tried four different gear actuation systems. For 1976, Cessna turned over many of the chores handled by the electrics—like the uplocks—to hydraulic actuation; the gear handle itself became a hydraulic valve. The latter systems seemed to be the best of the lot. Much the same arrangement was used on the 182RG, which is considered to be the most trouble-free of retractable-gear Cessnas.

Numerous small changes were made to the Cardinal, both straight-leg and RG, through the years. In 1973 both aircraft were given a 60-gallon fuel capacity (optional on the fixed-gear). A new cowling came aboard the Cardinal that year, and the one-sided instrument panel gave way to a slightly larger one in 1976. The last year of the Cardinal's production, 1978, saw a 28-volt electrical system installed.

That year, Cessna added to the Cardinal name "Classic," boosting the fixed-gear's price from $39,195 for a 1977 Car-



The Cardinal's strutless profile embodied Cessna's bold ideas for the aircraft of the 1970s—and the styling influence of American sports cars of the time. But for first-year teething problems, the rakish Cardinal might have marked the Skyhawk's demise; instead, the 172 outlived it by a decade.



dinal to a whopping $50,760, according to the *Aircraft Bluebook-Price Digest.* That price did include a host of options and upgraded standard avionics.

The market didn't bite. Ironically, the greatest competition for the fixed-gear Cardinal came from Cessna itself; it was called the Hawk XP. Basically a Skyhawk with a 195-hp Continental IO-360 and a constant-speed prop, the XP sold four-to-one over the Cardinal its first year in production, 1977.

With those sales figures, plus the fact that the Cardinal was more expensive to produce than the 172, the Cardinal's fate was sealed. With fewer than 1,400 RGs made, the total run of Cardinals numbered just over 4,100 when production ended in 1978.

Perhaps it's this exclusivity that makes the Cardinal attractive to some buyers today. Peter Van Der Vate, owner of the fixed-gear Cardinal 177B pictured here, says his attraction was primarily aesthetic. "I like the way it looks," he says. "Besides, it's easy to fly. I'm a recreational pilot, flying about 60 hours a year. With the Cardinal, I feel comfortable doing that." Van Der Vate has not hesitated to spend money on his Cardinal, either. It has a recent paint job and Bendix/King avionics—"I just kept pouring money into the original Cessna radios," he says. He bought the Cardinal also because it seemed to be a lot of aircraft for the money.

The *Bluebook* numbers back that up. Fixed-gear Cardinals sport a used retail price ranging from $15,250 for a 1968 model (though *Trade-A-Plane* is rife with $12,000 1968 Cardinals) to $32,000 for a 1978 Cardinal Classic. Retractable Cardinals span in price from $22,500 to $34,500. In terms of resale value, 1978-vintage Archers and Arrows do somewhat better, and the same-year Mooney 201 gets a stunning $13,000 more than a Cardinal RG.

Even though in the eyes of many pilots the Cardinal never overcame its initial reputation, they are becoming more sought-after today. The fact that relatively few were made, and that the Cardinal looks fresh and modern even now, can only help the Cardinal's worth. In fact, now that style may be back in vogue—for proof, take a peek at the Socata Trinidad or the Grob G115 or any of the handful of sleek homebuilts—the Cardinal begins to look better and better. Some might say the Cardinal's only mistake was being born 20 years too early. □