

CESSNA SKYHAWK SP Ponying up the Skyhawk

A few extra horses breathe more life into Cessna's new 172

Cessna never dives head-first into anything. The company took a very conservative approach to restarting its single-engine production line and has received plenty of bashing for announcing that it was to reintroduce what many called "the same old airplanes."

BY PETER A. BEDELL

PHOTOGRAPHY BY MIKE FIZER

As a longtime co-owner of a 1975 Cessna 172M who has had the privilege of flying the new Cessnas, I can tell you that they're not the same old airplanes. On the same 160 horsepower, the new R models are faster, exponentially safer, and have panels and interiors befitting the '90s. My Skyhawk is a 110-knot ride that still has boat-anchor-quality ARC radios and an interior shade of



green that only a 1970s lounge lizard could appreciate.

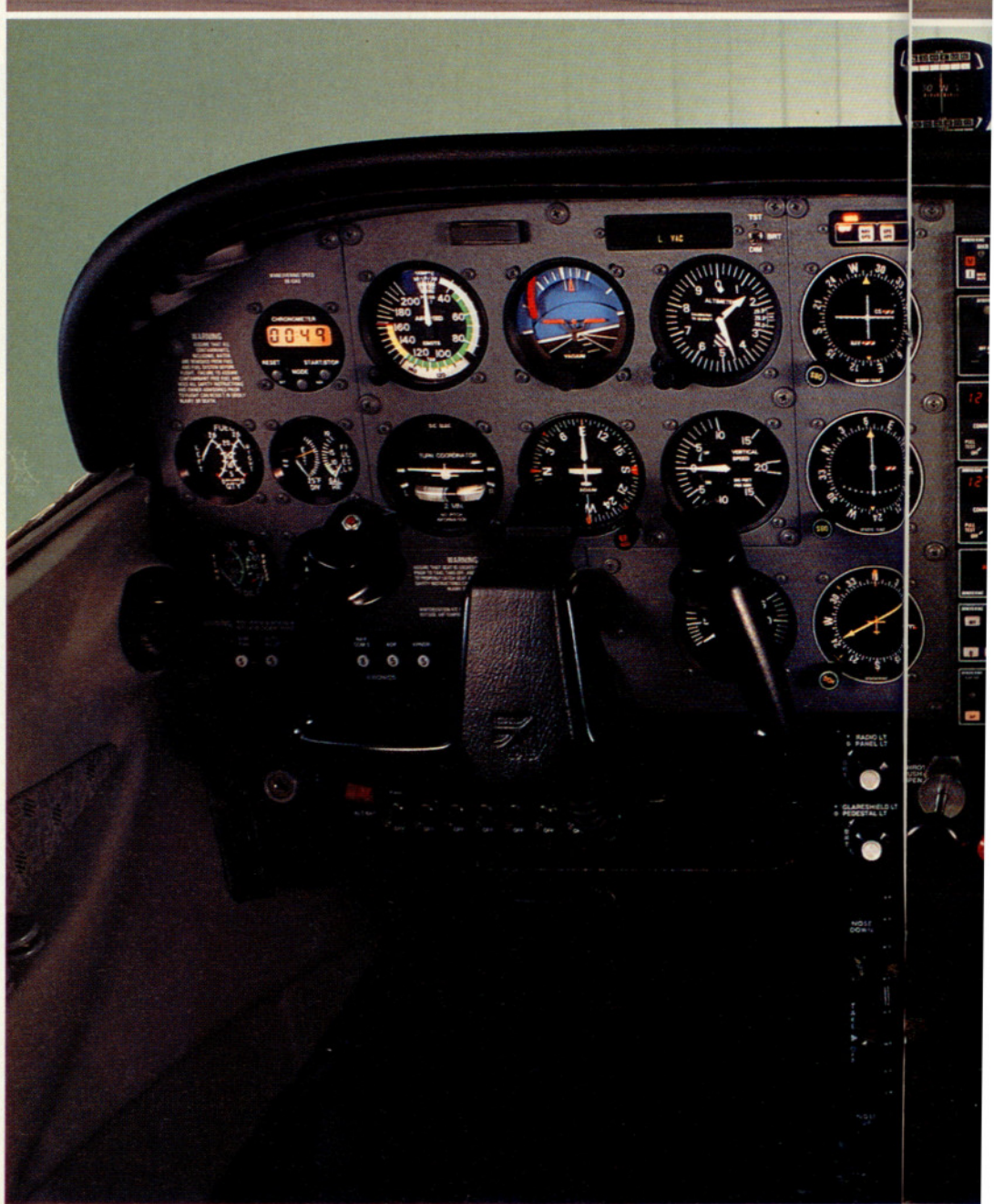
Cessna-slammung continued when the company announced that it was going to stick with a 160-horsepower powerplant by derating what is normally a 180-hp engine. Many people thought Cessna should have just come out with the 180-hp 172 in the first place, since the many aftermarket 180-horse conversions are so popular with owners of older Skyhawks. Those in the know threw up their hands, wondering why the manufacturer was installing a heavier engine and then derating it. Mostly, it was because Cessna's customers wanted only 160 hp. Most flight schools, the source of Cessna's largest

Boosting the horsepower for the Skyhawk SP was a simple affair. Cessna simply bolted on a different propeller.

orders, did not want the extra fuel burn of a 180-hp engine.

The P-model Skyhawk, which ceased production in 1986, was powered by a carbureted Lycoming O-320, which was another item Cessna and the majority of its customers didn't want for the new airplanes. Therefore, the decision to use the derated IO-360 in the new R models was made to provide fuel injection, retain 160 hp to keep fuel burns low, and reap the benefits of a very quiet 2,400-rpm redline in order to be a better neighbor. The low redline opened up the large but noise-sensitive European market to Skyhawk sales. But, perhaps the biggest reason Cessna used the IO-360 was so that—say a few years after restart of piston production—it could very easily make a 180-hp version of its new Skyhawk. And here we are a few years later.

Derating the IO-360 to life in the 172R was a simple affair—Cessna simply bolted a higher-pitch, 75-inch-diameter prop on the 172R, which redlines the engine at 2,400 rpm. To return the engine to 180 hp, Cessna simply has to change the prop to a size and pitch that allows the engine to spin up to 2,700 rpm. *Voilà*, a “new” airplane easily designed and easily built to fit nicely into the company's Independence, Kansas, production line. So goes the story of how Cessna created its new 172S Skyhawk SP. Well, almost.





A swoopy new paint scheme is about the only exterior clue that this is a special Skyhawk (above left). On the inside, a 2,700-rpm redline on the tachometer—compared to the 2,400-rpm equivalent on the standard 172R—reveals the 172S's additional horsepower. The same standard avionics packages are offered for both Skyhawks.



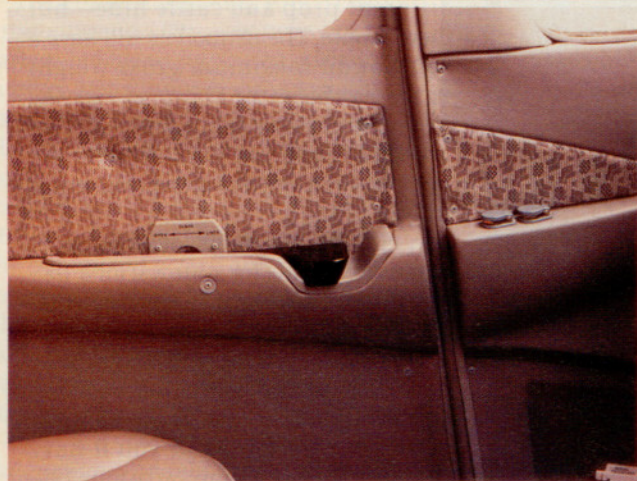
To further distance the SP from its lower-powered stablemate, Cessna has made a leather interior standard equipment. Ordinarily, leather is a \$2,500 option on the R model. The leather is the same as that used in Cessna's Citation business jets, so quality should not be an issue. Cloth interiors are available for the SPs—but, sorry, no credit will be issued to those who order them. In addition, a distinctive set of decal graphics will be used on the SP. Besides those changes, the only way to distinguish a 172R from a 172S is to look at the redline on the tachometer.

Prices range from \$149,900 for a VFR-equipped 172S to \$169,200 for a decked-out version with a single-axis autopilot and an IFR GPS. Lower introductory prices are being offered through October 31. For those of you cringing at the cost, keep in mind that a comparably equipped Archer III from the New Piper, which still uses a carbureted O-360, lists for \$10,000 more than the Skyhawk SP.

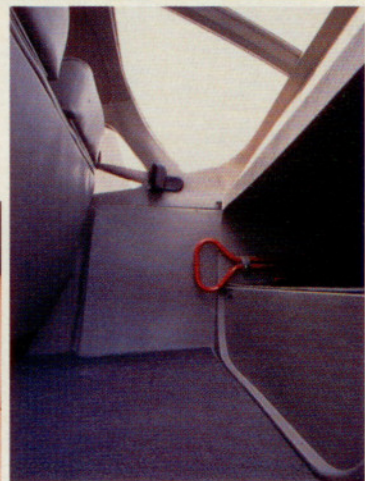
Sure, \$16,200 is a lot of money for a different prop and cattle hide—but there's more. The SP models will have a 100-pound maximum gross weight increase to boost the 172's load-carrying ability. So far, the aftermarket holders of 180-hp STCs for the R model have not been able to increase the max gross weight of their conversions, but that may change. Air Plains, of Wellington, Kansas, is waiting for approval for a 100-pound gross weight increase for its \$6,500, 180-hp R-model conversion.

Our evaluation copy of the new SP had a 914-pound useful load. Fill the tanks with four hours of fuel (approximately 40 gallons) and you'll have enough load left over to carry four 170-pounders, or three and lots of baggage. Full fuel (53 gallons usable) can keep you aloft for 4.5 hours with reserves and still leaves capacity for three adults and 80 pounds of gear. The engine burns about a gallon and a half more per hour than it does in the R model, so overall range at 75-percent power (8,500 feet) is about 518 nautical miles, compared to the R model's 580-nm range at 8,000 feet.

Cessna expects its customers to be those who need that little something extra for hot-weather/high-altitude performance. One such customer is Embry-Riddle Aeronautical University's



The inviting leather interior is standard equipment (above). Mic jacks include dust caps (left). Three-point harnesses for each seat are one of many safety enhancements (below).



Prescott, Arizona, campus. Prescott's Ernest A. Love Field lies at an elevation of 5,042 feet. On a warm day, density altitudes can reach higher than 7,500 feet. Load two students and their instructor into a 172R and you can imagine the pucker factor on takeoff, even with a light load of fuel.

Given the fact that published performance specifications reflect performance at the maximum gross weight, you won't see much of an improvement over the R model's book figures. At a gross weight of 2,550 pounds, the SP's cruise speed at 8,500 feet and 75-per-

Operators who require enhanced hot-and-high performance will be the Skyhawk SP's best prospects.

cent power is listed as 124 knots, only a few knots faster than the R model. Climb rate, as well, is only 10 feet per minute better than the R model, whose

max gross weight is 2,450 pounds.

Our flights with Cessna's demonstrator, N407ES, showed that the airplane performed better than book speeds, partially attributed to the fact that we were 140 pounds below the maximum gross weight. With three aboard and full fuel, the SP managed a 750-fpm initial climb rate at a density altitude of 1,100 feet. Level at a pressure altitude of 5,400 feet and 2,525 rpm registering on the tach, the SP trued out at 126 knots, while indicating a fuel burn of 9.5 gallons per hour. Using a portable decibel meter, the new Skyhawk SP shows that



it is a relatively quiet machine, registering a reasonable 89 dBA at ear level in the front seats. My 1975 Skyhawk scores 92 dBA under the same conditions, which says something for the sound-proofing used in the new models. R models, with their slower-turning props, are noticeably quieter still.

Anxious to test out the Skyhawk's new ponies, we took the SP to a few grass strips on Maryland's Eastern Shore for a short- and soft-field workout. With the same three people and nearly full fuel, the SP was 170 pounds under the max gross weight. Using 15 degrees of flaps, the Skyhawk lifted off after a 1,200-foot uphill ground roll. Using the best-angle-of-climb airspeed, the SP crossed 200 feet over the departure threshold of the 2,400-foot runway—not bad, considering it was a humid shorts-and-T-shirt kind of day.

The SP is noticeably heavier in the nose than O-320-powered Skyhawks, which we thought would hurt the airplane's soft-field performance. However, the added thrust blowing over the fully deflected elevator provided more than enough authority to pick the nose-wheel up out of the muck, even when the airplane was at a near-standstill. It's nice to know that despite the new-air-

The Skyhawk SP's repitched propeller allows the Lycoming IO-360 to spin at 2,700 rpm and produce 180 hp. Prop and paint scheme are the only differences from the standard Skyhawk.

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plane tightness, the fancy panel gadgets, and plush interior, the new Skyhawks have retained their exceptional short-field performance—this 180-hp SP variant is as good in these conditions



as anything else in the fixed-tricycle-gear, 180-hp-single class.

Cessna expects to sell one SP for every three or four R models that roll out of the Independence assembly facility. Cessna expects typical buyers to be those not quite ready for the initial cost, fuel burn, and complexity of a 182. The SPs will have the same options list as the R model: Standard equipment includes a AlliedSignal Bendix/King Silver Crown Plus navcom, transponder, and KMA 26 audio panel/intercom. The Nav I package adds a second navcom with glideslope, VFR GPS, and ADF. The Nav II package exchanges the VFR KLN 89 GPS for an approach-approved 89B version and adds a single-axis autopilot.

In terms of production, you have to be somewhat envious of how efficiently Cessna upped the power of its Skyhawk. In the automotive world it's done the same way—at the end of the production line one car goes in the plain-vanilla wrapper, while the other gets a larger V-6 engine, fatter tires, some fancy body cladding, and a 15-percent hike in the sticker price. Many buyers are fully aware that the car they're buying is a gussied-up version of something else, but they buy it anyway. In the case of

Cessna, the sticker cost of the SP is about 10 percent over the cost of the standard model. And, if it works in the automotive world without people hounding the manufacturers about the cost, it will probably work for Cessna. □

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Cessna 172S Skyhawk SP

Base price: \$149,900

Price as tested: \$169,200

Specifications

Powerplant	Lycoming IO-360-L2A
Recommended TBO	2,000 hr
Propeller	McCauley two-blade, fixed-pitch, 76-in diameter
Length	26 ft 11 in
Height	8 ft 11 in
Wingspan	36 ft 1 in
Wing area	176 sq ft
Wing loading	14.5 lb/sq ft
Power loading	14.1 lb/hp
Seats	4
Cabin length	11 ft 10 in
Cabin width	3 ft 3 in
Cabin height	4 ft
Empty weight	1,600 lb
Empty weight, as tested	1,644 lb
Maximum ramp weight	2,558 lb
Useful load	958 lb
Useful load, as tested	914 lb
Payload w/full fuel	640 lb
Payload w/full fuel, as tested	596 lb
Maximum takeoff weight	2,550 lb
Maximum landing weight	2,550 lb
Fuel capacity, std	56 gal (53 gal usable) 336 lb (318 lb usable)
Oil capacity	8 qt
Baggage capacity	5.2 cu ft, 120 lb

Performance

Takeoff distance, ground roll	960 ft
Takeoff distance over 50-ft obstacle	1,630 ft
Max demonstrated crosswind component	17 kt
Rate of climb, sea level	730 fpm
Maximum level speed, sea level	126 kt
Cruise speed/endurance w/45-min rsv, std fuel (fuel consumption)	
@ 72% power, best economy	122 kt/4.26 hr
8,000 ft	(59 pph/9.9 gph)
Service ceiling	14,000 ft
Landing distance over 50-ft obstacle	1,335 ft
Landing distance, ground roll	575 ft

Limiting and Recommended Airspeeds

V _X (best angle of climb)	62 KIAS
V _Y (best rate of climb)	74 KIAS
V _A (design maneuvering)	105 KIAS
V _{FE} (max flap extended)	110 KIAS
V _{NO} (max structural cruising)	129 KIAS
V _{NE} (never exceed)	163 KIAS
V _R (rotation)	55 KIAS
V _{SI} (stall, clean)	48 KIAS
V _{SO} (stall, in landing configuration)	40 KIAS

For more information, contact Cessna Aircraft Company, One Cessna Boulevard, Independence, Kansas 67301; telephone 800/4-Cessna or 316/941-7812; or visit the Web site (www.cessna.textron.com).

All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted.