



172

GOOD AS NEW 172. REALLY.

All spiffed up and ready to go

BY THOMAS B. HAINES

Darkened windows in the AOPA office building signify that most of the staff has gone home for the day as N172GN rolls into an empty tiedown on the ramp out front. The Cessna 172 left the same spot more than a month ago as N13057. Now, with its fresh new paint and interior, bright panel, and new registration, the Skyhawk seems incognito. Few would recognize it as the same rumped, chipped, and dull airplane it had been. ■ After knotting the tiedown ropes through the rings and chocking the wheels, I plunk down on the bank behind the airplane and watch the sunset reflect off the shiny new windows; the low rays turn the dazzling white to a warm yellow, then a soft orange, a misty violet, and finally a light gray. Good thing no one's around to see me grinning ridiculously as I relive the past nine months of the

PHOTOGRAPHY BY MIKE FIZER

refurbishment project. Nine months. Hmm. Yes, it is a bit like having a child. Joy one minute, frustration the next, and worry all around.

AOPA bought the 1974 172M last February for \$22,000. The ragtag airplane, with its solid airframe but runout engine, hodgepodge avionics, and weather-beaten paint, would serve two purposes for the association. First, the refurbishment would serve

bership sweepstakes.

The project seems to have been a big hit on both fronts. We've received dozens of letters and calls from enthusiastic members wanting to know more about the refurbishment and how they can go about such a process. The industry, too, has been supportive. Some generous companies have shown their endorsement by donating or discounting services or products for the project.

On the sweepstakes side, the numbers speak for themselves. Early in 1993, the membership was at just over 300,000. Today, it has climbed to more than 315,000, and this at a time when the pilot population is shrinking. The draw of the sweepstakes has played an important part in the growth. Members who renewed before the end of 1993 were automatically entered in the contest, and those who signed up additional members got extra chances to win. The mailroom here at AOPA put on temporary help to handle the 200,000 postcards that members and nonmembers alike sent in vying for additional chances.

The drawing for the airplane is scheduled for early January. Some lucky winner will get delivered to him or her one fine airplane, but not before they hear from me on how they *will* take care of it. I wonder if it's possible to sort out only those prospective winners who have hangars? Can I reserve visiting rights?

If it's not your telephone that rings with the good news, fear not; there's always next

year (actually this year). We're going to outdo ourselves with a new project for 1994. See "Next: Better Than New 172" on p. 44 for the details on our Better Than New 172.

The Good As New 172 has been an excellent exercise, but does refurbishing an airplane really make sense for an individual? Your accountant will tell you no, but your heart might dictate otherwise. Had we paid full retail, we would have about \$48,000 in the refurbishment, including the fresh engine, avionics, paint, interior, and accessories. With the airframe pur-



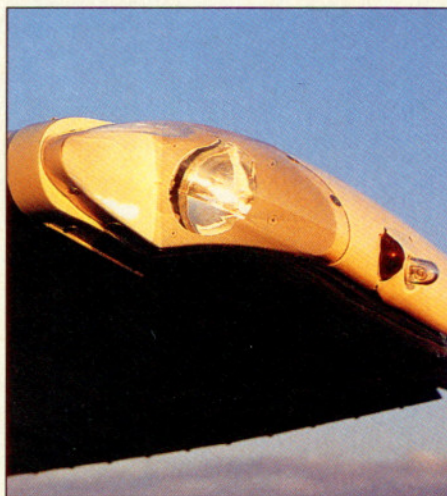
as a project for the editorial staff of the magazine (a case where the editorial "we" became "me"). What's it really cost in dollars, time, and know-how to take a 19-year-old airplane and make it as good as a new 172 ever was? We've shared the process with you in five previous articles, beginning with the April 1993 issue (see the "Aircraft Ownership" category in the *AOPA Pilot* 1993 Editorial Index, p. 95, for the topics and months).

Secondly, the finished airplane, which you see on these pages, would be the subject of AOPA's annual mem-

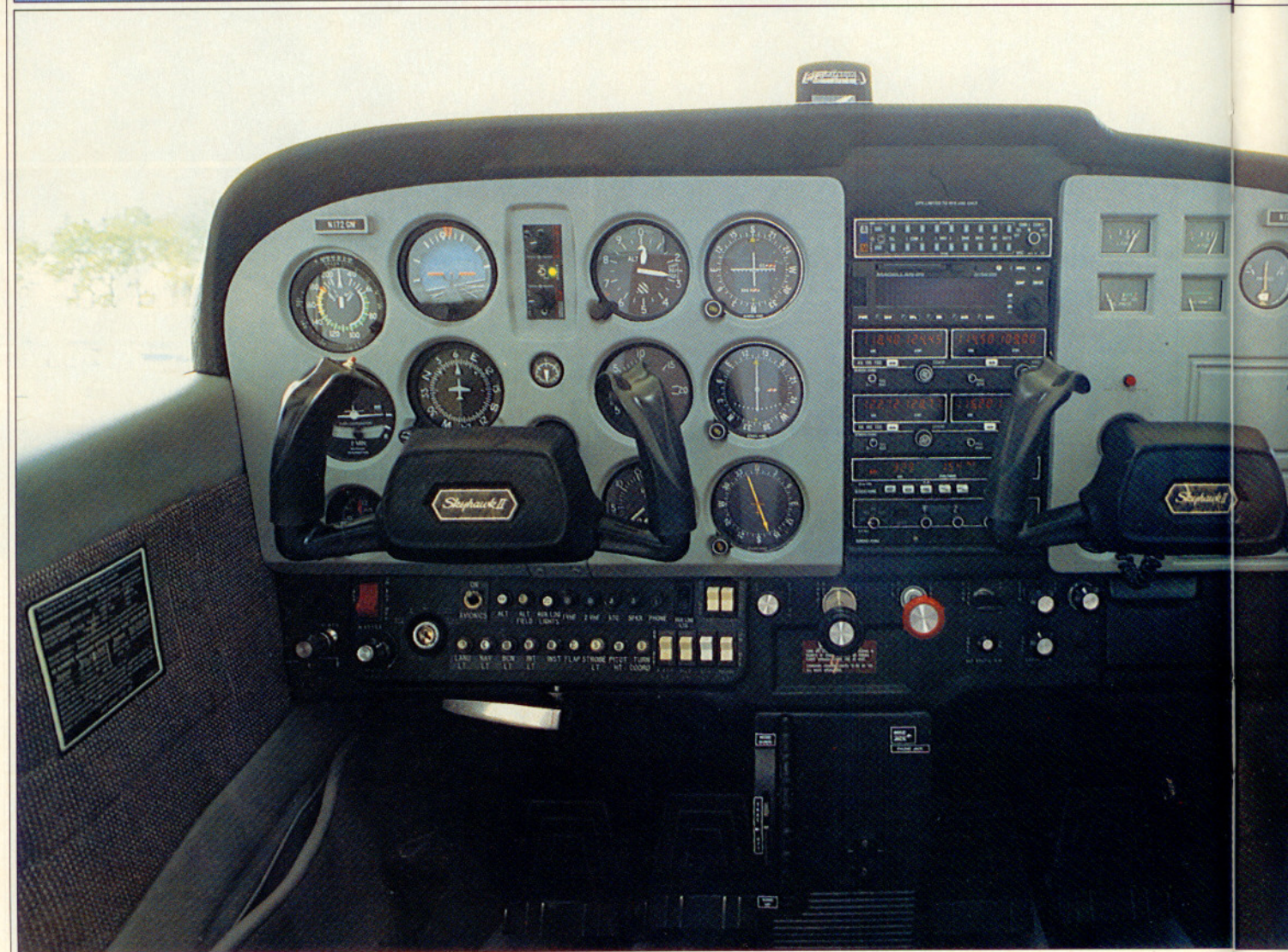


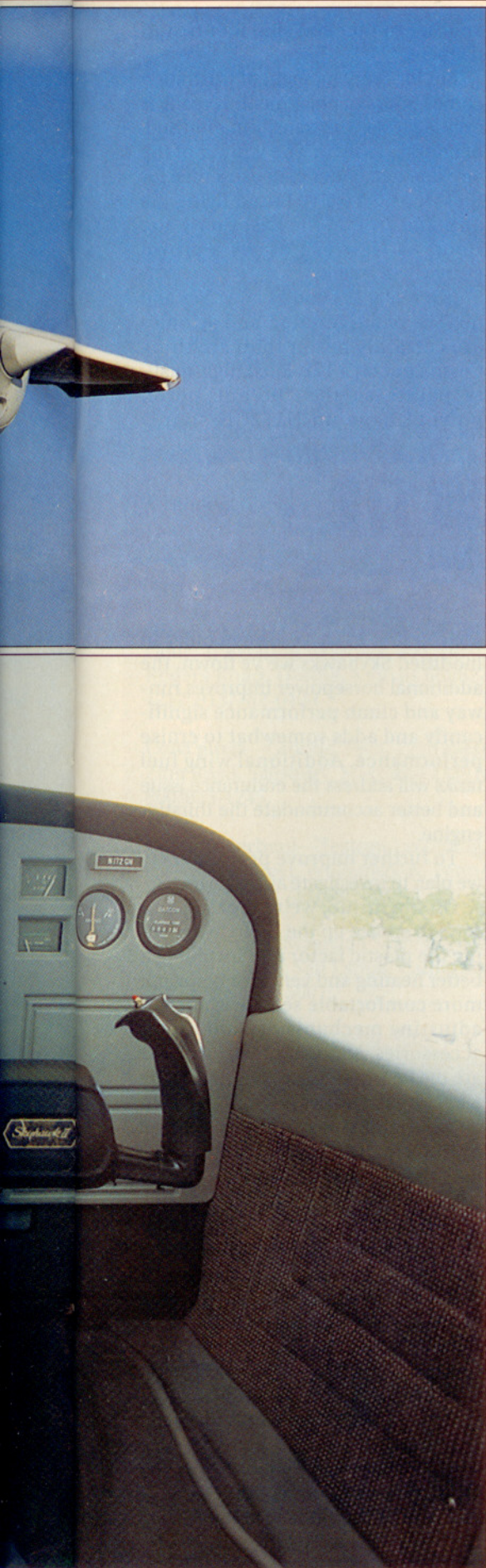
The Good As New 172 has been an excellent exercise, but does refurbishing an airplane really make sense?

Contrasting the "before" photos (left) to the "after" ones on these pages shows just how far N172GN, née N13057, has come.









chase, that makes a retail price of \$70,000. Let's say you're a good negotiator and can get 15 percent off retail on the various components, a \$7,200 savings. Net: \$62,800. Could you sell a 1974 2,000-hour Skyhawk with a premium paint job and interior, new windows, nice avionics, and factory-overhauled engine for that? Probably not, according to Mark E. Peters, president of Blue Sky Aviation, Incorporated. Blue Sky, in Leesburg, Virginia, specializes in selling cream-puff Cessnas, particularly Skyhawks. Peters says he would not hesitate at all to ask from \$54,000 to \$57,000 for an airplane such as N172GN. Selling it at that price might take awhile, but buyers willing to pay that for good airplanes are out there.

Though you might not be able to immediately sell your refurbished airplane for quite what you have invested, you could fly and enjoy it and turn a lot of heads on the ramp for a number of years and, with the escalating price of Skyhawks, then sell it and probably make a profit, according to Peters. The value of Skyhawks has been steadily climbing. In the third quarter of 1993, Peters estimates the values went up about 3 percent.

Other advantages of managing the refurbishment yourself is the experience gained and the knowledge of who has done the work. And you end up with an airplane equipped exactly as you want.

Of course, you don't have to delve into the refurbishment head first. You can do a little at a time. Putting a \$63,000 airplane on your Platinum card may prompt an inquiry from the friendly folks at American Express, but four or five thousand here and there for a couple of years might be easier for them and your spouse to take.

The problem with the piecemeal approach is that some parts of the refurbishment are easier and cheaper when combined with other parts. Paint and interior, for example, almost go hand in hand. That's also when the new windows are easiest to install, along with all those new fiberglass fairings. You'll end up with nicer versions of both if you do them at the same time. If the pocketbook demands they be done separately, con-

sider doing the interior first. It is less likely to be damaged during the painting process than the paint is if you outfit the interior second.

Combined, paint and interior can easily demand \$10,000. Expect a quality engine overhaul to top out at about the same price. Too big of a sting? Check with AOPA's Air Power Loan representatives, your local bank, or a bank that specializes in aviation financing. You may even be able to pay for the aircraft purchase and refurbishment with a home equity loan and deduct the interest. Today's low interest rates make aircraft purchases, new and used, the best deal they've been in a long time.

The panel refurb lends itself more to the piecemeal plan. Map out what components you want and where they

will go in the panel and then buy the boxes as the budget allows, but you still run the risk of damaging avionics and instruments during multiple trips behind the panel.

Things learned enroute to a refurbished airplane parallel things learned along all of life's airways: Expect the unexpected; plan ahead; compute the amount of time needed for the project and then double it; pad your cost estimates by 50

percent; get involved in the process; know what you want; and learn the lingo.

For example, after talking with a few overhaul shops, I learned that in order to speak intelligently, I needed to know the differences between a field overhaul, factory overhaul, and remanufactured engine. Did I want new cylinder assemblies, and why was it important to consider them? What's an acid etch wash, anyhow? Flight control surfaces must be rebalanced before they are reinstalled, and any shop that tells you otherwise is not following the airframe manufacturer's recommended procedures.

We had set goals for the project, with certain phases to be completed in time to show the developing airplane at certain events such as the AOPA Fly-in and the Experimental Aviation Association's Oshkosh show, and the completed airplane at AOPA Expo '93. We built in what we thought were generous time margins, but in almost



every case, it was a last-minute scramble to meet the deadlines. Problems with installing the flat metal instrument panel nearly kept us from making Oshkosh, so we put the new avionics in the old panel with the intent to put the new panel in before the Expo. Despite lots of promises in the meantime, paperwork and vendor problems cropped up again at the last minute, and we ended up scrapping the metal panel idea and instead bought new plastic overlays for the old panel. Painted up to match the interior, they look quite nice and indeed make our 20-year-old look as good as it did the day it left Wichita.

The United Parcel Service busted our time budget on the paint job when it nearly folded in half a rudder we had shipped out for repairs. The rudder had several external patches from some previous wind damage. Rather than paint over the patches, we elected to have the skin replaced. Rocky Fork Aero in Hillsboro, Ohio, a repair station recommended by the paint shop, Oxford Aviation, offered to donate the labor to repair the rudder. The company returned the repaired rudder via UPS, but when the part arrived at Oxford, it had been severely damaged in shipping. It took about a week for Rocky Fork Aero to find

another rudder and ship it out. Stuff happens.

But for every moment of frustration comes hours of enjoyment. It really is exciting to see the transformation and, of course, to fly it. The winner of the airplane had better plan extra time for fuel stops. As we've found flying the airplane around the East Coast, the Good As New 172 draws a crowd everywhere it goes.

Is it really as good as new? Yes and no. The paint, interior, and avionics are certainly better than anything Cessna put on a 172. Such high-quality paints as the DuPont Imron polyurethane on N172GN simply

NEXT: BETTER THAN NEW 172

A new sweepstakes, another project

BY THOMAS B. HAINES



Throughout 1993 as we worked on the Good As New 172 project, we gained a deeper understanding of the inherent limitations of the Skyhawk, namely power and performance. Even dressed up as nice as N172GN, our 1993 refurbishment project, the airplane didn't seem to have reached its potential.

A 172M's fuel capacity of 38 gallons, for example, limits IFR endurance to only about three hours. Skyhawk interiors contain too much fragile plastic. The cabins are drafty and noisy, and they frequently leak. Avionics on even the newest airplanes are no match for what can be had today. Also lacking on many models are some prudent safety features such as rear shoulder harnesses and redundant systems.

Some of the shortcomings, such as powerplant choice, panel layout, and fuel capacity, are design related or simply decisions made long ago by the manufacturer. In a few cases, such as the powerplant, Cessna addressed the issues over the years. The 172 increased in power from 145 horsepower when it debuted in 1956 to 160 hp when production stopped in 1986. Cessna also produced 180-hp variants (the Cutlass, both fixed- and retractable-gear versions) and 195-hp editions called the Hawk XP.

Others limitations, such as the avionics, simply were facts of life in the time the Skyhawk was manufactured.

With the benefit of seven or eight

years of technology and the usual 20/20 hindsight, we're going to see if we can fix some of the shortcomings and make the Skyhawk better than it was when it was built. To contrast the project and the accompanying membership sweepstakes to the 1993 endeavor, we've dubbed the 1994 edition "Better Than New 172."

Our goal is to purchase a 172 and, with the help of that new technology and interior shops, avionics manufacturers, and airframe and engine modifiers, turn it into something better than the Skyhawks Cessna produced. We'll document the project in the magazine, and then come early 1995, the airplane will be given away to some lucky pilot who renews his AOPA membership this year. Sound familiar?

Our goal was to have the 172 purchased by the end of 1993. First up in the refurbishment will be an engine swap. We plan to trade out the stock 150- or 160-hp engine for a 180-hp offered by several modifiers around

the country. As we've seen in other so modified Skyhawks we've flown, the additional horsepower improves runway and climb performance significantly and adds somewhat to cruise performance. Additional wing fuel tanks will address the endurance issue and better accommodate the thirstier engine.

To further improve performance, we plan to investigate airframe mods.

On the inside, we're looking into ways to spruce up the cabin by reducing the plastic factor and installing a better heating and ventilation system, more comfortable seats with better adjusting mechanisms, and useful accessories. High on the priority list are the latest safety devices, including a backup vacuum system, upgraded cockpit lighting, modern engine instruments, and a stack of new avionics, possibly including an IFR-certified GPS receiver.

New paint and windows will dress up the outside to look as good as N172GN.

If you've got ideas on ways to improve a Skyhawk, mail them to us at Better Than New 172, Mail Stop 10, 421 Aviation Way, Frederick, Maryland 21701; fax us at 301/695-2180; or contact me in the *Pilot Forum* on AOPA Online.

Watch these pages about every other month for an update on the project, and look for the airplane at some of the large air shows and fly-ins. —TBH

weren't available in 1974. Even today's versions of the paints are better than those Cessna was using when it stopped piston aircraft production in 1986. Ditto on the interior fabrics. No one need be reminded of the great strides in avionics in the past decade. DME in light airplanes was big news when N13057 left the assembly line. Today, satellite-based GPS is *de rigueur* for the modern panel. But it's still a 20-year-old airplane with more than 2,000 hours on it, though it now has many new or recently overhauled parts. A new airplane will get you a brand-new engine, a wing spar and landing gear that have never been flexed by frustrated students, and a glareshield never gripped by a scared instructor. All of those new parts from spinner to tail strobe come with a warranty. If it breaks, go see the salesperson. If N172GN breaks, go see the maintenance manager, and bring your checkbook. Though we installed aft shoulder harnesses and the recommended seat track stop, new airplanes will bring you even more safety devices—better internal and external lighting, more annunciators, and probably a backup vacuum system, for example. But enough philosophizing. The sun has set. It's time to go home. Tomorrow my baby is a debutante. Someone else will be handed the keys. Take care of her for me. I'll be watching. □

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AOPA thanks the following companies that have donated or discounted their products or services for the "Good As New 172" project.

Aircraft paint—DuPont Finishes, 1007 Market Street, Wilmington, Delaware 19898; 800/553-2807.

Aircraft painting and interior completion—Oxford Aviation, RFD 1, Box 1275, Oxford, Maine 04270; 207/539-4779.

Avionics—Bendix/King, AlliedSignal General Aviation Avionics, 400 North Rogers Road, Olathe, Kansas 66062-1212; 913/782-0400.

Cowl plugs—Ground Tech, 2210 West Zion Road, Salisbury, Maryland 21801; 800/825-1245.

Engine overhaul—Textron Lycoming, 652 Oliver Street, Williamsport, Pennsylvania 17701; 717/327-7041.

GPS receiver—Magellan Systems, 960 Overland Court, San Dimas, California 91773; 909/394-5007.

Intercom—PS Engineering, 9800 Martel Road, Lenoir City, Tennessee 37771; 615/988-9800.

Review and certification of logbooks—Certified Logbook, Incorporated, 25321 Bellanca Way, Torrance, California 90505; 310/325-0824.

Rudder repair—Rocky Fork Aero, 9585 North Shore Road, Hillsboro, Ohio 45133; 513/393-3923.

Sun visors—Rosen Products, Post Office Box 21636, Eugene, Oregon 97402; 503/342-3802.

Wing tips with lights—RMD Aircraft Lighting, Incorporated, 3648 S.E. Roanoke Court, Hillsboro, Oregon 97123; 503/648-0331. □

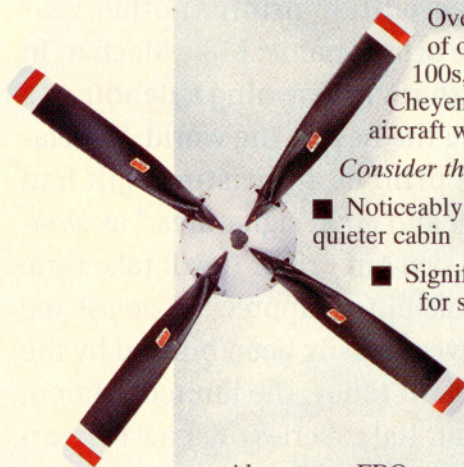
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