



MIKE BUSCH

COMMENTARY / SAVVY AVIATOR



This 1975 Cessna 172M looked and flew nicely enough. Then we looked under the hood...

Scuzzy Skyhawk

A thorough, independent pre-buy examination is essential, even for a simple 172

THE PROSPECTIVE BUYER was looking for a Lycoming-powered Cessna 172 Skyhawk, and had a budget of \$35,000. He searched online and found one being offered with an asking price in the high \$20,000 range, a price that left some room in his budget to fix and upgrade a few things.

A Google search revealed that the subject aircraft had served in the Texas Civil Air Patrol and then somehow made its way to another owner in the Midwest, several hundred miles from the prospective buyer's home base. Recognizing that he needed help in arranging for an impartial pre-buy in a distant location, the prospective buyer decided to use my company to manage a pre-buy on his behalf.

My company works with hundreds of service centers all across the nation. We consulted our database, quickly recommended a trustworthy shop near the seller's location, and set up the pre-buy examination on the shop's schedule. As is our practice with all managed pre-buys, we provided the pre-buy shop with a two-phase checklist customized to the aircraft being examined.

TWO-PHASE APPROACH

Our two-phase approach to pre-buy examinations is deliberate. Phase one of our pre-buy checklist focuses mainly on the engine, propeller, and other items forward of the firewall. We do things this way because firewall-forward is where high-cost discrepancies are found most often and can be detected quickly with little disassembly of the aircraft required.

If we find any showstoppers during this phase, it gives our client (the prospective buyer) an opportunity to walk away from the deal with minimum expenditure. On the other hand, if the aircraft looks clean during phase one, then our client can opt to proceed to phase two, which concentrates on airframe items, including landing gear, empennage, interior, and instrument panel items.

While awaiting the appointment for the pre-buy examination, we performed a preliminary review of the aircraft logbooks and arranged for the aircraft to be test-flown by a local CFI. The logbooks seemed to show a decent maintenance history, with no extended periods of disuse. The CFI came back with a favorable report: The airplane's systems appeared to be in working order, and the airplane seemed to fly straight and perform well.

So far, so good.

PHYSICAL EXAM FINDINGS

Once the aircraft arrived at the shop and the phase one examination was performed, however, it told quite a different story. My technical director Jeff Iskierka reported on the client's ticket:

"What is under the hood is NOT in line with how it flies and the story told by the logbooks..."

Jeff provided the client with a series of annotated high-resolution photographs to help the client understand the issues that had been found. They documented a dozen and a half discrepancies, some of them fairly serious airworthiness items that definitely should have been caught and cured during the previous annual inspection.

This certainly didn't speak well of how this airplane had been maintained during the past several years during its post-CAP

career. Jeff's recommendation to the client: "Walk away from this one. ... This would be a significant project, and has potential to become a real money pit."

One of the advantages of using a professionally managed pre-buy service is having access to a team of seasoned maintenance experts. Having some additional sets of experienced eyes is often extremely helpful in gaining perspective.

My colleague Paul New—a world-class expert on Cessna maintenance who was honored by the FAA in 2007 as National Aviation Maintenance Technician of the Year—offered this thought after reviewing the photographic evidence: "This looks to me more like a restoration project. The items in the photographs are all fairly obvious indications of flagrant maintenance neglect. I can only imagine what might be found in the hard-to-see places..."

"What is under the hood is NOT in line with how it flies and the story told by the logbooks...."

As usual, our checklist clearly instructed the shop to stop work after reporting the results of phase one, and await further instructions before proceeding with the phase two items. The client did not waste much time in reaching his decision: "A picture truly is worth a thousand words...it sounds like I could easily put another 10 grand into this airplane and still have a Skyhawk with a high-time engine and a slew of other problems. I am not looking for a project airplane; I want something I can fly now. If everyone agrees, I am going to pass on this one, and try to find another Lycoming-

powered Skyhawk that doesn't need a restoration."

This was clearly a well-informed decision by the client, and a wise one in our judgment.

SOME LESSONS LEARNED

So what can be learned from this prospective buyer's experience?

A good pre-buy is cheap insurance. Imagine the horror story that would have unfolded for the owner if no pre-buy had been conducted.

The pre-buy needs to be independent. Sellers commonly offer to provide an airplane with a "fresh annual." Considering the condition of this aircraft, would it be a good idea to trust the judgment of the seller's mechanic?

The pre-buy must include a physical examination. Remember the logbooks looked good and the airplane reportedly

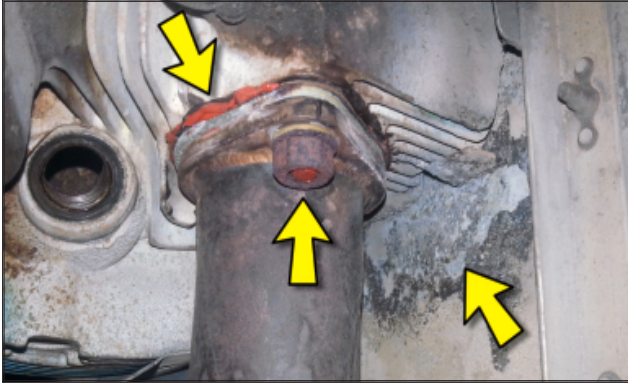


New
Garmin **G3X Touch™** Available Now

CUBCRAFTERS

Learn more at cubcrafters.com/touch
Yakima, WA | 509.248.8481

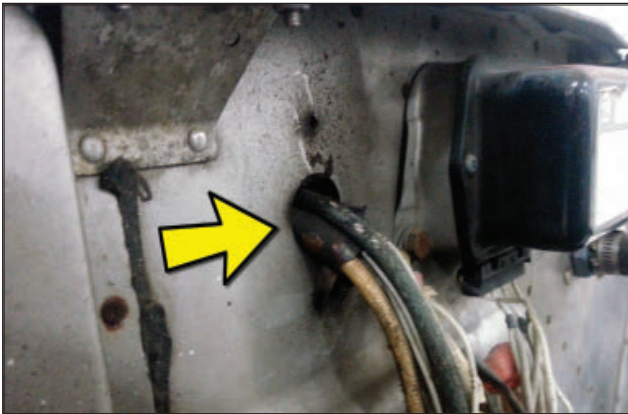
PRE-BUY MUG SHOTS



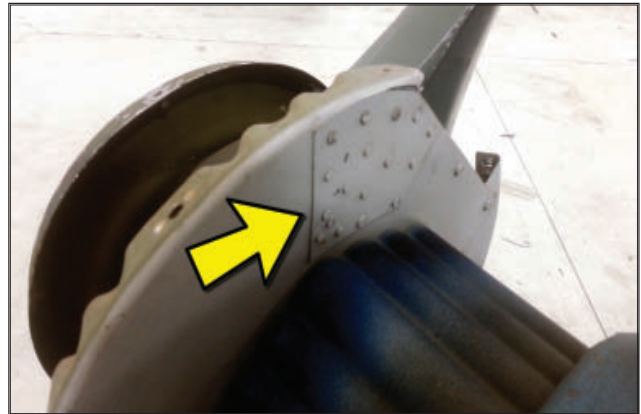
Shame on the A&P who let this pass. Exhaust gasket leaking badly. Attempted to fix using RTV (a no-no). No exhaust stud threads protruding through nut. Exhaust damage to firewall. This cylinder and exhaust riser flange are probably unrepairable at this point. A neighboring cylinder looks much the same.



Oil leaking at crankcase top spine bolt. Attempt to stop leak with RTV unsuccessful. Leak will continue until engine is overhauled.



Firewall grommet assembly missing, allowing main battery lead to chafe on firewall. If left uncorrected, this could result in a total electrical failure and/or electrical fire.



Unauthorized patch to cracked spinner bulkhead. No repairs are permissible here because of balance and vibration issues. The bulkhead must be replaced with a new one.



What a mess! Numerous places where wires are improperly secured and chafing. Primer lines are rubbing on engine mount. Engine has no oil filter installed, only a pressure screen.



View up the tailpipe. Flame tube is broken, and there's a crack around the base of the tailpipe. The entire muffler assembly will have to be replaced or overhauled.

flew well. When we looked under the hood, it was a whole different story.

It's smart to structure the pre-buy examination in phases. The prospective buyer's costs would have been much higher if we'd commissioned the entire pre-buy at once or, worse still, asked for a full annual inspection as so many buyers do. The staged approach allowed our client to walk away after a relatively small investment in phase one of the pre-buy checklist.

It's never a bad decision to walk away. My firm has managed hundreds of pre-buys, and we often see clients become so emotionally invested in an aircraft that they just can't imagine not buying it. Sometimes, even when faced with overwhelming evidence that they've fallen in love with a lemon, they still go ahead with the purchase (against our advice). In this case, the

client had the good sense to "know when to fold 'em." It won't be long before a better airplane comes along.

HOW COMMON ARE POST-PRE-BUY WALKAWAYS?

It depends. We've managed pre-buys on all sorts of aircraft from 50-year-old Piper PA-28s to 3-year-old Pilatus PC-12s, and just about everything you can imagine in between. As a general rule, we find that pre-buys on older, lower-priced aircraft tend to focus mainly on making a buy or no-buy decision, whereas pre-buys on newer, higher-priced aircraft tend to focus mainly on price.

The physical examination of older aircraft is far more likely to uncover serious issues like structural corrosion and improperly repaired damage that are uneconomical to repair and therefore outright deal-killers. The examination of newer aircraft often

reveals airworthiness discrepancies, but usually they are dealt with by renegotiating the selling price prior to closing the sale.

We try hard to eliminate the cats and dogs through diligent logbook review so that we're as sure as we can be that the aircraft is a viable purchase candidate before committing to a physical examination. But from time to time the logbooks don't tell the whole story and the physical examination exposes nasty surprises. That's certainly what happened with the Scuzzy Skyhawk. *EAA*

Mike Busch, EAA 740170, was the 2008 National Aviation Maintenance Technician of the Year, and has been a pilot for 44 years, logging more than 7,000 hours. He's a CFI and A&P/IA. E-mail him at mike.busch@savvyaviator.com. Mike also hosts free online presentations as part of EAA's webinar series on the first Wednesday of each month. For a schedule visit www.EAA.org/webinars.

DTC WEATHER & FLIGHT PLANNING SERVICES
WWW.DUAT.COM

FAA DUAT
WEATHER and FLIGHT PLANNING SERVICE
Reliable Weather and Flight Planning from a
FAA Certified Reliable Source!
Providing the DUAT Service for the FAA for 25 years!

Celebrating our
25th
ANNIVERSARY
Providing the DUAT Service for the FAA!

Always Stay Connected!
Follow us on Twitter! Like Us on Facebook!

AOPA Supporting Sponsor

www.duat.com
DTC DUAT • 108F Greentree Rd., Turnersville, NJ 08012 • 24/7 Help Desk 1-800-243-3828

Please visit us at the upcoming AOPA Regional events!

San Marcos Municipal Airport April 26, 2014 San Marcos, TX	Indianapolis Regional Airport May 31, 2014 Indianapolis, IN
---	--

FREE! FAA CERTIFIED! FREE!
Weather and Flight Planning Services

- FAA Certified Weather Briefings
- Weather Graphics
- State NEXRAD Graphics
- Stored Pilot Profiles
- Approach Plates
- Sectional Charts
- Forecast Graphics
- Enroute Charts

And much more...

Download the Free DUAT Weather and Flight Planning apps!

DUAT Mobile For Smart Phones www.duat.com/mobile	iPhone app Available for download from the Apple app store	Android app Available for download from the Google Play Store
--	--	---