TWIN & TURBINE®

FOR THE PILOTS OF OWNER-FLOWN, CABIN-CLASS AIRCRAFT

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Nearly New Navajo

Lock & Key

Panther Navajo

New Navajo?

by Ken Ibold

New cabin-class piston twin.

That describes one airplane on the market, the pressurized pushme-pullyou A500 created by upstart Adam Aircraft. If you're willing to push the definition of "cabin class" more than a little, you can add light twins from Beech and Piper. Wannabe owners of cabin-class piston twins have long reconciled themselves to the fact that they would be induced to buy airplanes that predated the Reagan Administration – along with the maintenance headaches that accompany any piece of machinery that's been in service for a generation.

Enter Mike Jones, a former airline pilot who had a sideline business selling airplanes. He got the bright idea to refurbish the popular Navajo and, well, just kept going. The result is what he has branded the Lock & Key Navajo Panther – the closest thing to a new Navajo you're likely to get without some help from Jules Verne's time machine.

It would be a mistake to say the Lock & Key Navajo is a refurbished airplane; that would be like calling a gourmet dinner a bite to eat. A closer approximation is that the airplane is remanufactured.

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Mike Jones turns a vintage workhorse into a modern machine

Photos by Ken Ibold

Photos by Ken Iboshi

'Look at the detail. Can you tell me this isn't brand new? It's not just a surface job.' – Mike Jones

"Can I zero-time the airframe? No," Jones says, "but we can make you have an incredible experience in a Navajo that you won't ever feel like you flew a used airplane."

Jones calls the treatment "Lock & Key" because, he says, "turnkey" sounds too much like "turkey." The airplane carries with it a warranty, and Jones is confident the only thing buyers will have to pay for during the first year of ownership is fuel and oil.

The idea was born just over two years ago. A customer wanted to sell his airplane and asked Jones to broker it. Jones said he'd fix it up a bit first. He had it painted and put a new interior in it, and then modernized the panel. At the time, nice Navajos were selling for about $350,000 to $400,000. Jones asked $500,000 and got within spitting distance of that.

He then got hold of another Navajo, put some work into it and offered a 90-day warranty. He asked $600,000 for that and got nearly that. The idea for the Lock & Key Navajo Panther was born.

He bought a Navajo and sunk $350,000 into refurbishing it and installing Colemill's Panther conversion. He sold that one for $675,000. Although that was far higher than other Navajos were selling for, Jones only made a few thousand dollars on the deal. That didn't stop him from further refining the Lock & Key idea. His most recent airplane includes nearly $700,000 in refurbishment costs – hence the nearly $1 million price tag.

"Prior to my first Lock & Key Navajo Panther, the market was about $400,000. Now you see junk for $500,000. Why? It's not because all the sudden the market got heavy on the Navajo, that's for sure," Jones says.

Piper says a new-production Navajo C/R or Chieftain would cost about $2 million if built today, which would be a non-starter with no pressurization. Jones hopes to tap into that group of people who would like to buy new but don't have the experience or the budget to make a go of a new twin turboprop. He also sees opportunity among buyers who might otherwise spring for a turboprop single, but then decide to fly with two engines instead.

Jones sees a prime market among owners of late model singles, including Cirrus, Saratoga and

Bonanza buyers. He says he can get insurance for pilots with as little as 400 hours total time – pilots for whom a turbine would be too big a step.

He cites the case of a previous buyer who bought one with a plan to fly it for a couple of years, then transition to a new King Air 300. The pilot bought the King Air, but did not ask Jones to sell the Navajo for him. When Jones asked why, the pilot said he loved flying the Navajo and found the King Air too expensive to operate.

The Navajo – specifically the C/R and Chieftain models Jones uses – cut its teeth as a charter airplane and was designed to be flown by pilots near the beginning of their career paths. The approach speed of the stock airplane is a reasonable 97 knots, which gets reduced to 84 knots through the use of vortex generators, which as an added bonus improve the single-engine climb rate and boost gross weight by 200 pounds.

It is typically configured to carry two up front and four in the back, with an added belted potty and sometimes a second seat next to the potty. The fuselage is egalitarian, with a nearly constant cross section that gives all passengers excellent head, shoulder and foot room. Some passengers even contend the big windows make up for the lack of pressurization – especially when the Colemill four-blade Q-tip props are there to cut down on the noise level.

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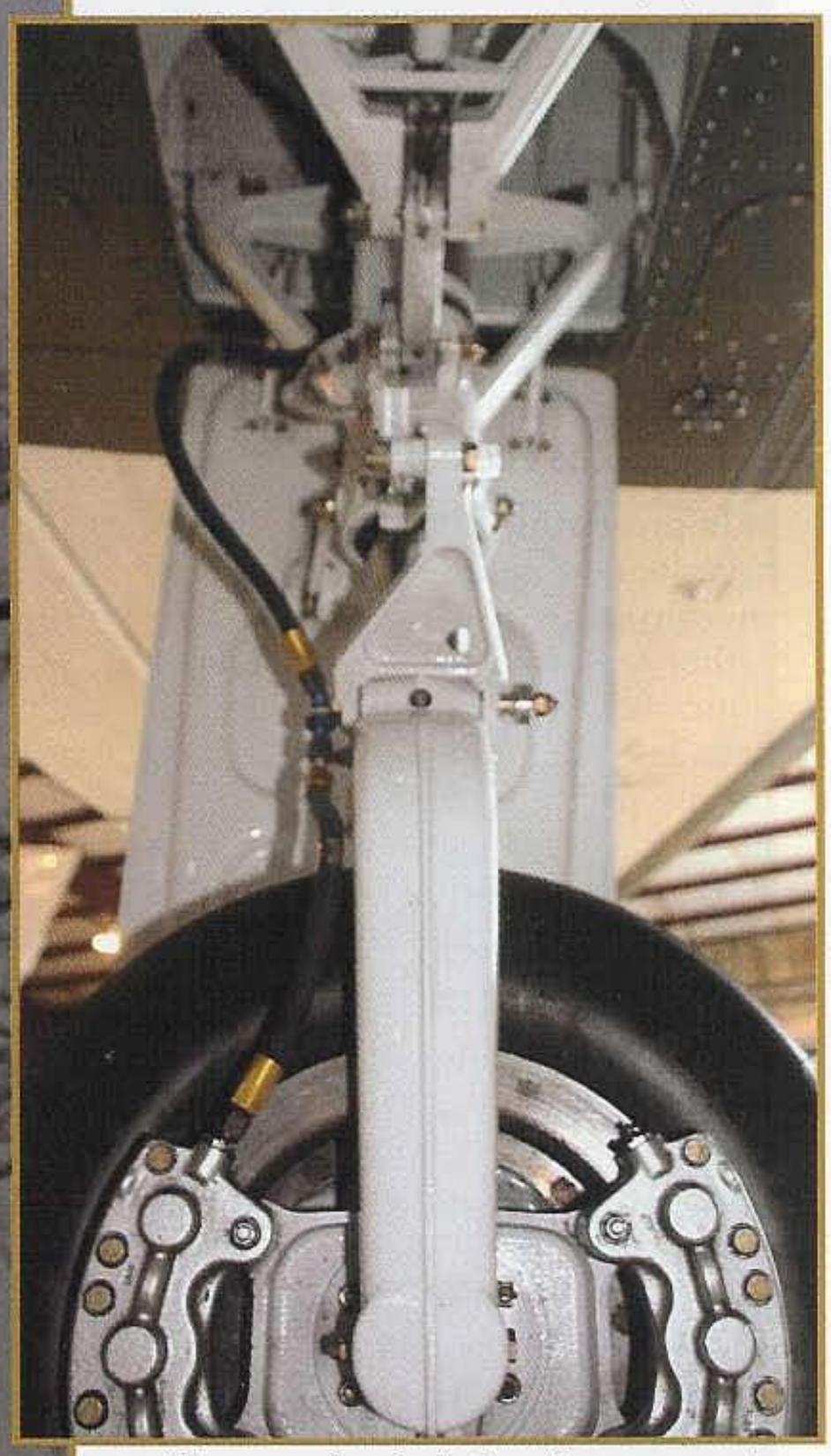
The iridescent paint shimmers different colors from different angles.



The overhauled landing gear is stripped and inspected for condition, and then all new hardware is used.

Photos by Ken Ibold

The panel has the look of new, with every label and instrument redone. A glass panel option is on the way.

The Navajo according to Jones is a nice-looking package, but Jones encourages potential buyers to find the beauty that's more than skin deep.

The Look of New

In presenting his creation, Jones asks lookers to mentally compare the airplane with a new airplane rather than one with thousands of hours of service over several decades. He actively challenges people to try to find flaws – cosmetic or otherwise – and proudly watches most of them fail. Clearly, this isn't your average used-airplane broker.

Jones starts the Lock & Key conversion with a low-time, no-damage-history airplane and gets to work. The work falls into three categories: the Colemill Panther conversion, refurbishing the airframe and interior, and bringing the instrument panel up to modern standards.

The Panther conversion is the

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work of Colemill Enterprises of Nashville, Tenn. It includes factory fresh engines – either new or remans – four-blade Q-tip props, winglets, prop synchrophaser, and new engine instrumentation. The motor mounts are powder coated, the firewall is polished, and everything firewall forward is new.

The cowl bowls are also part of the conversion, which removes a factory spacer between the engine and the prop.

"Now you have more ram air, now you can shut your cowl flaps on takeoff," Jones says. Closing the flaps increases climb by 50 fpm and improves cruise-climb speed by 15 knots, up to 145 knots.

"The Panther is Colemill's STC. All I've done is brought the Navajo market – with their Panther conversion – up to incredible standards. There's no affiliation, other than I couldn't do this if I wasn't on their doorstep," Jones says. "They're 30 miles down the road. It takes so many trips up there and so much detail to make sure this thing goes back together right it just wouldn't work remotely."

On the airframe, the place to start is the landing gear, which is removed, disassembled and checked for condition. The components are then painted and reassembled using all new hardware, bearings and bushings, new hydraulic lines, and new tires, brakes and rotors. The hydraulic power pack is overhauled, along with all five gear actuators and both hydraulic pumps.

Photos by Ken Ibold

On each wingtip, the Colemill recognition lights are augmented with a second HID light on each side. Landing lights on the airplane total 1 million candlepower, up from the 300,000 candlepower stock, but draw only five amps – one sixth of stock. Even better, the lights themselves are warranted for five years or 2,000 hours.

The air-conditioning system boasts a new compressor, new belt and net clutch. The drier is replaced, as are the expansion valves. The high-speed blowers are overhauled. The system is cleaned and upgraded with new Freon.

"The net result is it's going to blow better," Jones says. "It's going to cool about five degrees more than it's designed to by the factory, so we've got unbelievable cooling out of the airplane."

Jones repeats the same superlatives system by system. Polished exhaust, four coats of clear coat, chromed or polished brightwork throughout. The paint job alone costs $45,000. Even the insides of the engine cowlings are painted with Alumigrip.

"I had a guy picking up one of these Lock & Keys from me. Right where the prop governor is it dropped a little spot of oil – I'm talking about two or three little

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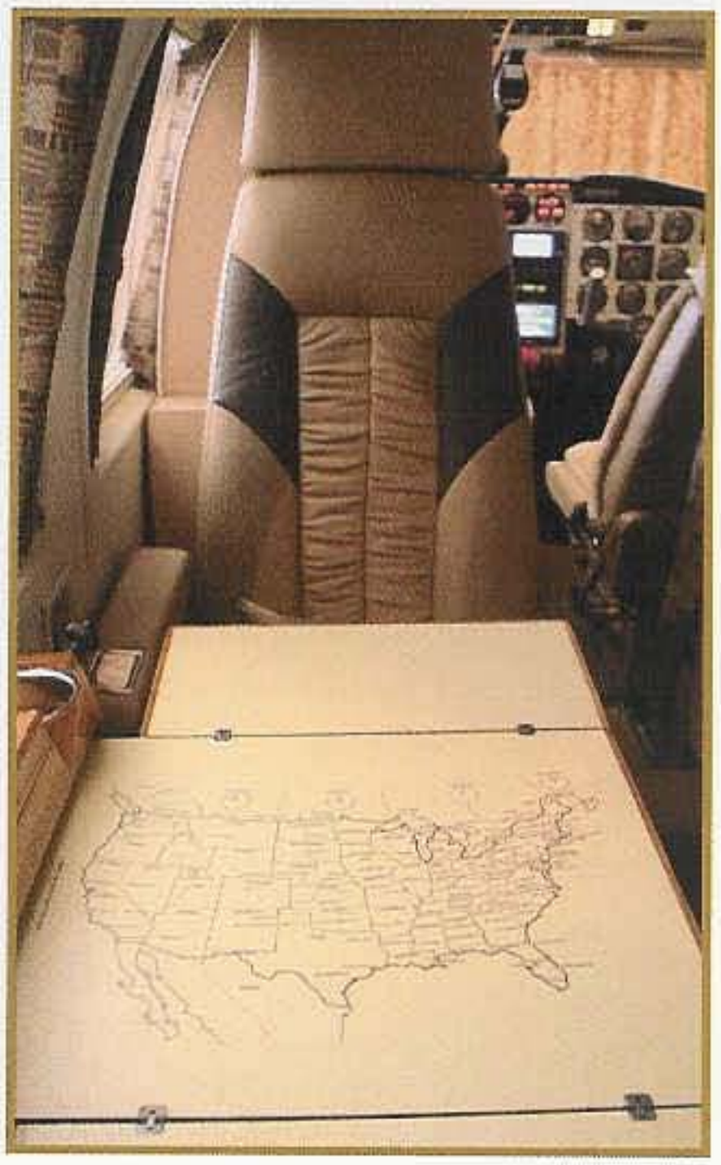

Photos by Ken Ibold

pinheads of oil – and he said 'Where did the oil come from?' Now, would you normally have seen that? Absolutely not because it would have blended in with all the other oil in there," Jones says.

Inside Job

Inside, all of the plastic side panels and headliners are removed, covered in leather and French stitched. Interior components down to the seat tracks are chromed or polished. The cabinetry is reworked and a DVD player with four screens installed. All told, the interior work costs another $40,000.

"Look at the detail. Can you tell me this isn't brand new?" he asks. "It's not just a surface job. We want a customer who buys this airplane to have the best experience they've ever had owning an airplane."

The panel is also upgraded with a Garmin 530/430 combination, Sandel or King electronic HSI, PS Engineering audio panel and Garmin TXP327 transponder. An Avidyne multifunction display shows traffic, Nexrad weather, Stormscope and CMAX approach charts. A backup power pack will power the 530, audio panel and transponder for 30 minutes in the case of main electrical bus failure for any reason.

All of the instrumentation is removed and overhauled, with new cables put in where necessary. All placards are silkscreened rather than decaled, and the overhead switch panel is upgraded with an electroluminescent one that includes color-coded labels on the switches.

Jones says he plans to offer a Garmin G600 glass panel as an option – just as soon as someone develops an STC that can apply to the Navajo.

"The main thing is we're going through every system on the airplane, bringing it up to better than the factory," he says.

Much of the work is aimed at modernizing the airplane with features

not available when it was new, while other work falls into the category of preventive maintenance aimed at eliminating the $40,000 annuals faced by buyers who select a neglected Navajo. Besides reducing maintenance costs, the work also serves to improve dispatch reliability and allow the owner to fly worry-free for a while.

"After we get done with this whole process, I take it out, I break it in for 15 hours. I break in the engines according to manufacturer recommendations. I write up all the squawks I can find on the airplane," Jones says. "I bring it back into the shop and after we did all this work we tear it back down again. We take all the panels back up, all the panels underneath the airplane. I bring up a separate guy, who's a Navajo guru, to come in like a quality control, to double check. Not to say Colemill doesn't know what they're doing, but it keeps everybody honest and keeps everybody on their toes to make sure we have a good airplane."

That second inspection typically finds 100 squawks. "It's all little miscellaneous things. Ninety nine percent mean nothing to them, but it does to me," Jones says. "And that's what I want to find. The day you pick it up we guarantee that every single item on it down to the smallest light bulb works."

After the first year, the airplane is re-inspected free and any squawks addressed. He won't sign that off for an annual, but says whatever shop does the annual will not find "any squawks that amount to a hill of beans. You'll come out with a $1,500 annual bill."

After all the work and all the aggravation, Jones says pilots who are looking for a new airplane will find the Lock & Key Navajo Panther can pass for new.

"It's an incredible ride. Everything's tighter. Everything feels like new, flies like new, acts like new, looks like new, smells like new," he says.

But is the market willing to accept a million-dollar, 20-plus-year-old, unpressurized airplane, regardless of condition?

"At the time I started doing this it was $1.1 million or $1.2 million for a Baron, and it was like $900,000 for a Seneca," Jones says. "Why in the world would anyone spend that kind of money when they could get one of these that felt like new, looked like new and acted like new? Why wouldn't they buy this? The Seneca is a great airplane. The Baron is a great airplane. But look at the room you've got in this. You've got a private lavatory here. You've got phenomenal baggage space."

While the Lock & Key Navajo Panther is still a used airplane, Jones is convinced some buyers will see past the year the airplane was built by the factory, and instead tune in to the way it was rebuilt by him.

"You can go look at some of the nicest Navajos out there and you will be impressed right off the bat with a lot of them. But you won't see the quality and you won't see the detail and you won't see the preventative and you won't see the warranty." T&T

Lock & Key Navajo Panther

SPECIFICATIONS

	Lock & Key Chieftain	Lock & Key Navajo C/R
Standard Price:	$995,000	$995,000
DIMENSIONS		
Length	34.63 ft	32.60 ft
Cabin Length	151 in	131 in
Cabin Width	50 ft	50 ft
Cabin Height	51.5 in	51.5 in
Wing Span	45 ft	45 ft
Baggage Capacity	700 lbs	650 lbs
Ramp Weight	7,245 lbs	6,740 lbs
Avg Useful Load	2,150 lbs	2,000 lbs
w/Full Fuel	1,045 lbs	900 lbs
PERFORMANCE		
Service Ceiling/Single Engine	24,000 ft/13,700 ft	24,000 ft/15,300 ft
Rate of Climb	1,120 fpm	1,220 fpm
SE Rate of Climb	230 fpm	255 fpm
Max Speed	231 kts @ 20,000 ft	228 kts @ 20,000 ft
Cruise Speed	180-190 kts	190-200 kts
Landing Distance	1,880 ft	1,750 ft
over 50 ft Obstacle	2,780 ft	2,250 ft
Vso/Vmc	68 kts/76 kts	71 kts / 71 kts
Liftoff Speed/Approach Speed	81 kts/ 84 kts	81 kts/ 88 kts
Range w/45 min Reserve	550 nm	550 nm
Standard Fuel Capacity	192 gal	192 gal
Avg Fuel Burn	40 gph	40 gph

For more information, contact Mike Jones, 615-390-0915
or visit www.mikejonesaircraftsales.com