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Features

- 10 Programmable memory channels
- Large liquid crystal displays (Illuminated)
- Priority range and memory channel scanning
- Quick change, rechargeable NiCAD battery pack
- Spare alkaline battery pack, optional
- VOR navigation capable with CDI and To/From bearing display
- Inputs for normal and quick battery charge
- 760 COM channels
- 200 NAV channels (160 channels are VOR navigation capable)
- Pilot friendly, easy to use, keyboard data entry

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The HT 870 functions well as a NAV or COM. However, utilization of advanced, shared receiver technology prevents simultaneous NAV and COM operation. An external NAV antenna is necessary for optimum navigation performance.

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Fort Washington, PA



Grumman-American Tiger

CAT'S MEOW

This cat has begun clawing its way to the top of the used-airplane wild kingdom.

BY MARC E. COOK

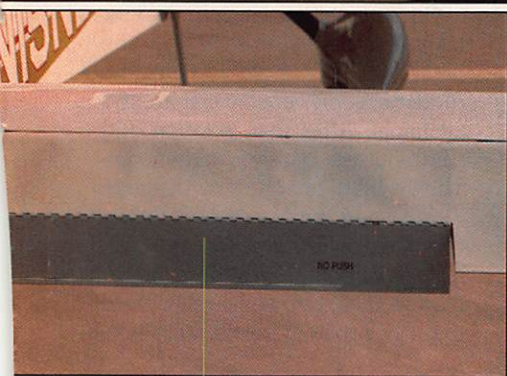
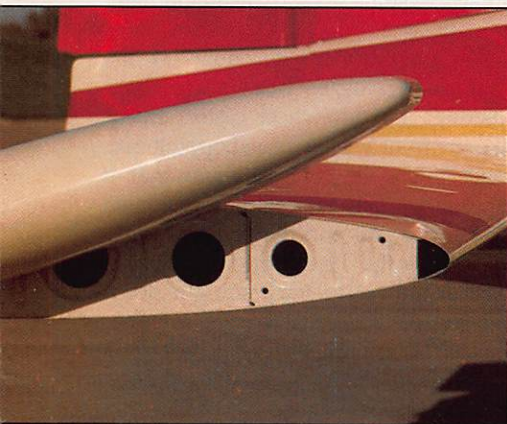
From a distance, the Grumman-American Tiger offers little indication that it is one of the fastest light singles flying.

Sure, there's the fighter-replica canopy and a rakish cowl and spinner, details known to elicit images of high performance in the minds of pilots. But then you notice the fixed gear and propeller, and if you're especially observant you'll notice the four-cylinder Lycoming under the cowl,



PHOTOGRAPHY BY MIKE FIZER





which means there isn't a ton of horsepower, either. Some would dismiss the Tiger right there: Speedy, maybe, but certainly not faster than anything else in its class. Marlin Perkins would give the duckbill platypus better odds.

Appearances notwithstanding, the Grumman Tiger is one quick single. The four-seat AA5B will walk away from its 180-hp competitors like a greyhound rocketing away from a mutt. Owners report that 140 knots is a reasonable cruise figure, with nearly 150 available if you're willing to run the O-360 wide open. Expect to burn about 10 gph at 75-percent cruise. Compared to a Piper Archer, for example, the Tiger is 15 knots faster on the same fuel; the Cessna Cardinal, Cessna Hawk XP, and Beech Sundowner all would end up in the Tiger's slipstream in a race. Credit the Tiger's relatively small size and comparatively light weight for that victory.

The Tiger doesn't sacrifice climb performance for its impressive cruise numbers, either. Norm Bresky's 1979 Tiger, N15NB, which carries a full load of avionics in the panel, shows more than 1,000 fpm on initial climb with two aboard and full fuel. Bresky prefers to point the nose down and cruise-climb at 120 knots or more for better visibility and engine cooling; even so the rate of climb at that speed exceeds 500 fpm.

With such snappy performance going for it, it seems a shame that the Tiger's production life was so short. Produced for only five years, Tigers number just over 1,300. When Grumman-American was sold as part of a deal including Gulfstream American in 1979, the decision came almost immediately to shut down the light airplane line; only the twin Cougar lived on, and only for little more than a year.

Grumman was making the Tiger's progenitors, the four-seat Traveler and two-seat AA1, when Roy LoPresti came aboard in the early 1970s. LoPresti created the Tiger through refinement of the Traveler by adding, among other things, wing-root fairings, fairings to the fiberglass-laminate landing gear legs, and a new cowl. The last change was said to reduce cooling drag significantly. The Tiger's rudder was increased in size, allowing G-A to delete the Traveler's ventral fin, and the elevator and stabilizer were increased in span. The Tiger recipe was completed with the added spice of the O-360's extra 30 hp. For 1975, the 150-hp Traveler remained in the G-A lineup but was replaced the next year by

the Cheetah, which sported all the refinements of the Tiger save one; it retained the Traveler's 150-hp Lycoming.

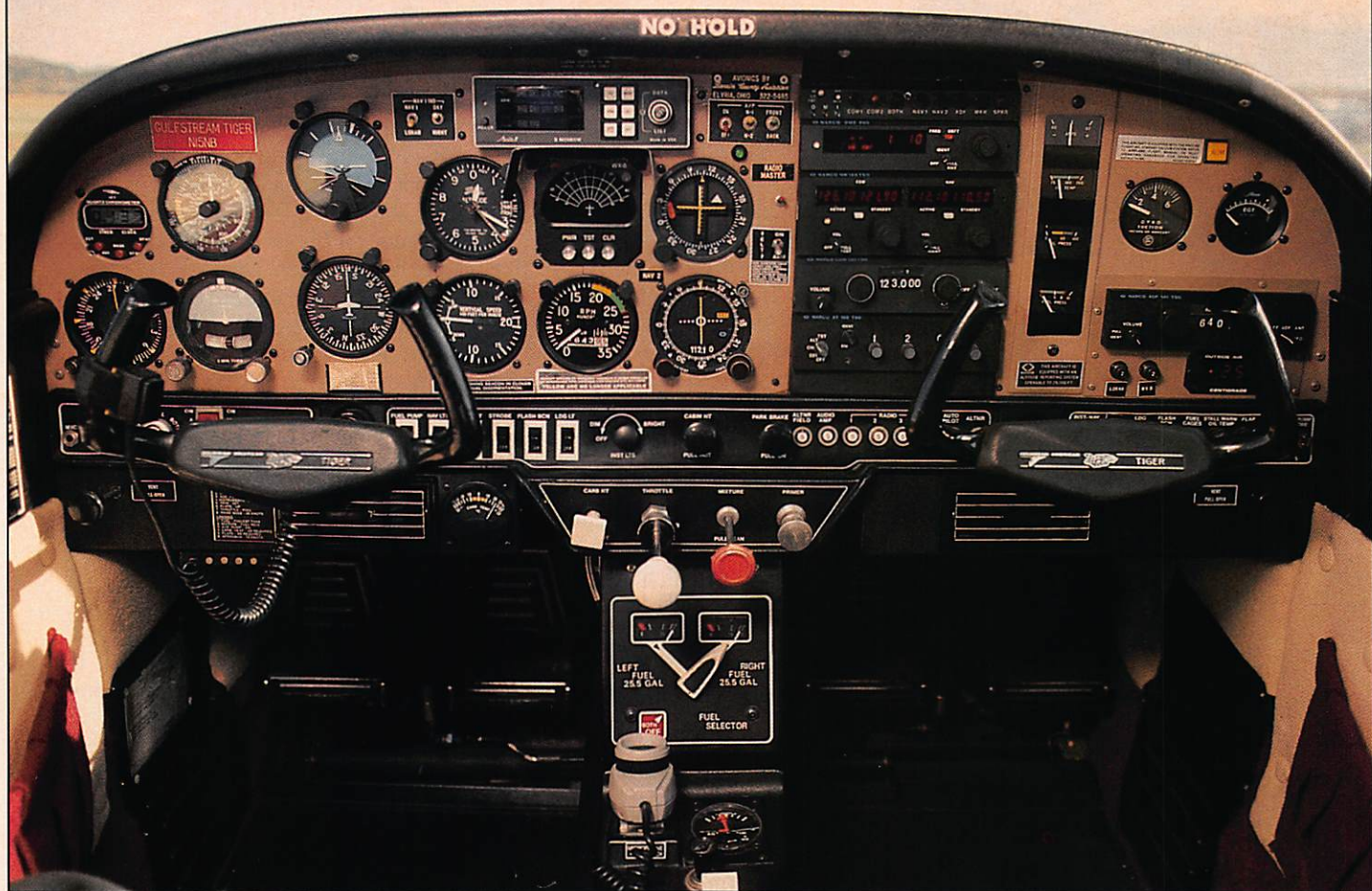
That LoPresti had a good basic platform with which to work was partly responsible for his success with the Tiger. The Tiger's rivetless bonded-metal wing skins and aluminum-honeycomb construction in the cockpit area were quite a departure from traditional airplane practice of the time. So was the tubular wing spar, which in the two-seat aircraft was used as a fuel tank. The construction has withstood aging, too. A few Tigers and Cheetahs rolled off the line in 1975 and 1976 with the wrong bonding agent, causing localized delamination, but the fleet has proven durable.

Proof that the Tiger was done right the first time is reflected in the paucity of speed modifications for the aircraft. If anything, the bulk of the Grumman-American mods attempt to turn Cheetahs or Travelers into Tigers; the 180-hp Lycoming can be retrofitted to the Cheetah and has proven to be a popular modification.

Another modification for which many Tiger owners have opted is a propeller swap. The standard McCauley prop carries an airworthiness directive that requires 200-hour inspections and a yellow arc on the tachometer restricting continuous operation between 1,850 and 2,200 rpm. A Sensenich propeller can be fitted, which obviates the AD, eliminates the yellow-arc restriction, and reportedly boosts cruise speed slightly. Many Tigers carry this mod; Bresky says that the \$2,000 swap was well worth the money.

The only other prominent AD applying to the Tiger mandates recurring inspection of the aileron hinge bracket, which is said to be prone to cracking. Otherwise, Tiger owners like to point out, the airplane has a fairly clean history, and one owner reports that expenses for complying with ADs have been minimal.

Owners like Bresky are quick to call attention to the Tiger's frugality, too. The Tiger isn't particularly expensive on the used-airplane market, especially considering its speed. According to the *Aircraft Bluebook—Price Digest*, the average price of a first-year (1975) Tiger is \$23,750, while a 1979 model (the last year of production) runs \$32,000. A Piper Archer, by far the most popular 180-hp fixed-gear airplane, commands \$8,500 more for a 1979 model than does a Tiger of the same vintage.



The Archer's lead in resale value might have something to do with its reputation. The Piper is well known as a comfortable, docile airplane, one that will not bite the infrequent flyer. Unfortunately, the Tiger does not share that reputation for benign behavior. The Grumman's controls are light and responsive compared to those of a Cessna Skyhawk or Piper Cherokee, aircraft from which many low-time Tiger pilots transition. Pilots inexperienced in the breed tend to overcontrol because of the Tiger's quick reflexes, according to the American Yankee Association, the active booster of Grumman-American light singles and twins.

Landing mishaps lead the Tiger's cause-of-accident list. The Tiger's flaps don't provide a lot of drag, so approaches tend to be flat, and if too much airspeed is carried to the flare, the Tiger will float quite a distance. The typical "low-time pilot involved in accident" scenario includes a slightly hot approach combined with the pilot's attempts to force the Tiger onto the runway. Predictable results are a forceful porpoise, which, when it gets out of hand, can cause serious damage to the nosewheel and propeller.

According to recent Federal Avia-

tion Administration accident and incident reports, the overwhelming majority of landing accidents occurred with a low-time pilot at the controls, typically with less than 20 hours in type. The lesson here is clear: One shouldn't just hop in a Tiger and assume that because of its relative simplicity it will be simple to fly.

The AYA offers transition courses for the Tiger, and the group claims that pilots who successfully complete the course seldom have this type of landing accident. Because the Tiger's flaps create little drag, savvy pilots soon learn the

value of slipping the airplane. Turn the Tiger's ear to the wind, and it will descend convincingly. Another skill the AYA courses must teach is how to steer with brakes alone. For those of us long chided by instructors to "stay off the brakes," taxiing a Tiger is something of an education.

For simplicity's sake, none of the Grumman singles have nosewheel steering; the nosewheel casters freely, like the front wheels of a shopping cart. Tiger pilots like Bresky claim that it takes little effort to become accustomed to the drill and that even in gusty winds the Tiger has enough braking power to track straight down the runway. Pilots used to nosewheel steering likely will describe a serpent-like track down the taxiway the first few times.

Once power has been applied for takeoff, you need to steer with the brakes for only a short time; the rudder becomes effective at around 20 knots. After that, rotation and climb-out are purely conventional. The visibility provided by the large windshield and side windows, combined with a low cowl-line, makes scanning for traffic far easier than in most airplanes. Pilots used to other airplanes also tend to hike





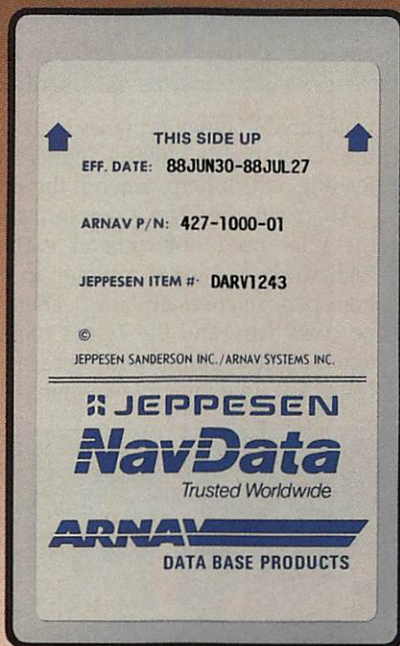
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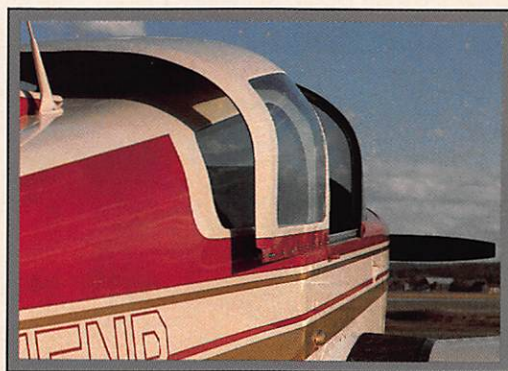
the nose up too high; at Bresky's cruise-climb, the Tiger's spinner sits at or below the horizon. In cruise, the cowl seems to drop away, and the generous glass area makes the Tiger's interior feel more spacious than it really is.

You can enjoy face-in-the-breeze flying, too; the canopy can be partially opened as long as the airspeed is kept under 118 knots. The canopy also ensures that boarding the airplane in the rain will result in a drenched interior. The flap switch, located on the center console, becomes a recipient of some of that water, which ultimately destroys the switch. The canopy is notorious for leaking air and being difficult to slide; a double-bead canopy seal and frequent lubrication of the tracks help cure the problems.

When there's nothing to see outside but clouds hugging the canopy, the Tiger becomes a bit more demanding. Instrument flight is when Tiger pilots pay for its light, snappy control response; though certainly not unstable, the Tiger requires constant attention and minor corrections to maintain attitude and altitude. Bresky has an autopilot aboard his Tiger and freely admits to making good use of it. Turbulence isn't a problem for the Tiger, though; its speedy roll rate and light controls make quick work of choppy air.

Compared to other airplanes in its class, the Tiger boasts slightly higher wing loading, which helps smooth the ride.

Thanks to the Tiger's simple systems, the pilot need not contend with the high-work-load items common to most high-performance airplanes. There are no cowl flaps, and the Tiger's fuel system is about as simple and logical as one could ask. Two integral wing tanks feed



the carbureted Lycoming. The Tiger carries 52 gallons usable; the Cheetah had standard 36-gallon tanks or the 52-gallon Tiger tanks as an option. Twin fuel gauges reside directly above the fuel selector, with the handle pointing to the indicator of the active tank. Understandably, fuel exhaustion accidents do not figure prominently in the Tiger's statistics.

For many years, the Tiger had been

virtually ignored on the used-aircraft market, with resale value clearly not commensurate with the airplane's performance. That's beginning to change. The Tiger's used price is creeping up; the winter 1988/1989 edition of the *Bluebook* depicts an increase of \$600 to \$1,200 in the average used retail price over the figures published four months before. And the AYA reports increased interest in the Grumman-American line, especially for the four-seat aircraft. Anyone interested in the Tiger owes himself a call to the American Yankee Association (3232 Western Drive, Cameron Park, California 95682; telephone 916/676-2022). The group not only provides a bimonthly newsletter and offers transition training, but it is an important source of spare parts information and operating tips.

Bresky summed up how he felt about his Tiger, patting its cowling. "I've thought about other airplanes, but I keep coming back to thinking about how the Tiger does everything I want. It's simple and plenty fast. Besides, it would cost a fortune to duplicate the panel," he says, pointing inside the airplane. The smile says it all: Norm Bresky doesn't care whether N15NB shows its speed to anyone else on the ramp, he is satisfied to know that his cat shows its fangs in the air. □