

the speed division in a Piper Seneca II. Racing for maximum speed is not for everyone. Winning necessitates punching through turbulence at high speed and flying at very low altitudes (to achieve maximum performance in normally aspirated airplanes). Those preferring a more conservative approach to competition flying can opt for the proficiency division, the winner of which most accurately calculates and predicts the time and fuel required to fly the two-day route.

Aimee Kuprash, an instructor for Oahu Aviation, and her copilot, Evelyn Ogata, won the proficiency division in a rented Cessna 172. It was Kuprash's stepgrandfather, Art Goebel, who had won the Dole Air Derby 72 years ago.

For those wanting to know where Somers and I placed in the race, we prefer that you don't ask. Suffice it to say that my son Paul, who came in twentieth, beat us handily. We did, however, enjoy the flying, the festivities, and the camaraderie as much as anyone did, which—for us—made the race an overwhelming success.

Most of the race participants rented their aircraft, and mainland pilots (from 22 states) found that hourly rates in Honolulu are not much higher than those at home. A Cessna 152 rents for between \$55 and \$62 per hour, a Cessna 172 for \$68 to \$75, a Cessna Cardinal for \$75, and so forth.

A checkout in Hawaii requires more than a few circuits and bumps. It usually includes a demonstration of cross-wind takeoffs and landings, a familiarity with airspace restrictions, and an awareness of how terrain influences wind characteristics. Pilots new to flying in Hawaii also will learn something about the fine art of ocean ditching and the need to wear Mae Wests when over water. Most rental aircraft are equipped with life jackets and rafts.

Newcomers also need to become familiar with unique local procedures. To reduce the likelihood of traffic conflict, for example, pilots of interisland flights and those flying along certain sightseeing routes at and below 3,000 feet msl are urged to maintain 1,000, 2,000, or 3,000 feet msl when westbound and 1,500 or 2,500 feet msl when eastbound. Also, those circling volcanoes should maintain a counterclockwise traffic flow.

The State of Hawaii publishes an informative book titled *Hawaii Airports and Flying Safety Manual*, which is available at no charge by writing to the

Airports Division, Department of Transportation, Honolulu International Airport, 400 Rodgers Boulevard, Suite 700, Honolulu, Hawaii, 96819-1880.

Although Mott and Kuprash won the major prizes, the biggest winner was the Make-A-Wish Foundation of Hawaii, which grants wishes to children with life-threatening illnesses. More than \$30,000 was raised by the race on its behalf, making GHAR its most successful fund-raising event ever.

According to Hank Bruckner, presi-

dent of the General Aviation Council of Hawaii, the Great Hawaiian Air Race was the largest aviation event in the state since December 7, 1941.

Next year's race, GHAR 2000, is slated for February 18 to 21 and will include two nights and a full day in Hana. Those interested should contact race cochairman Greg Marshall at 5779 Haleola Street, Honolulu, Hawaii 96821; telephone 808/373-1889. His e-mail address is RacePilotGreg@compuserve.com, or you may visit the GHAR Web site (www.flyhawaii.com/GHAR.html). □

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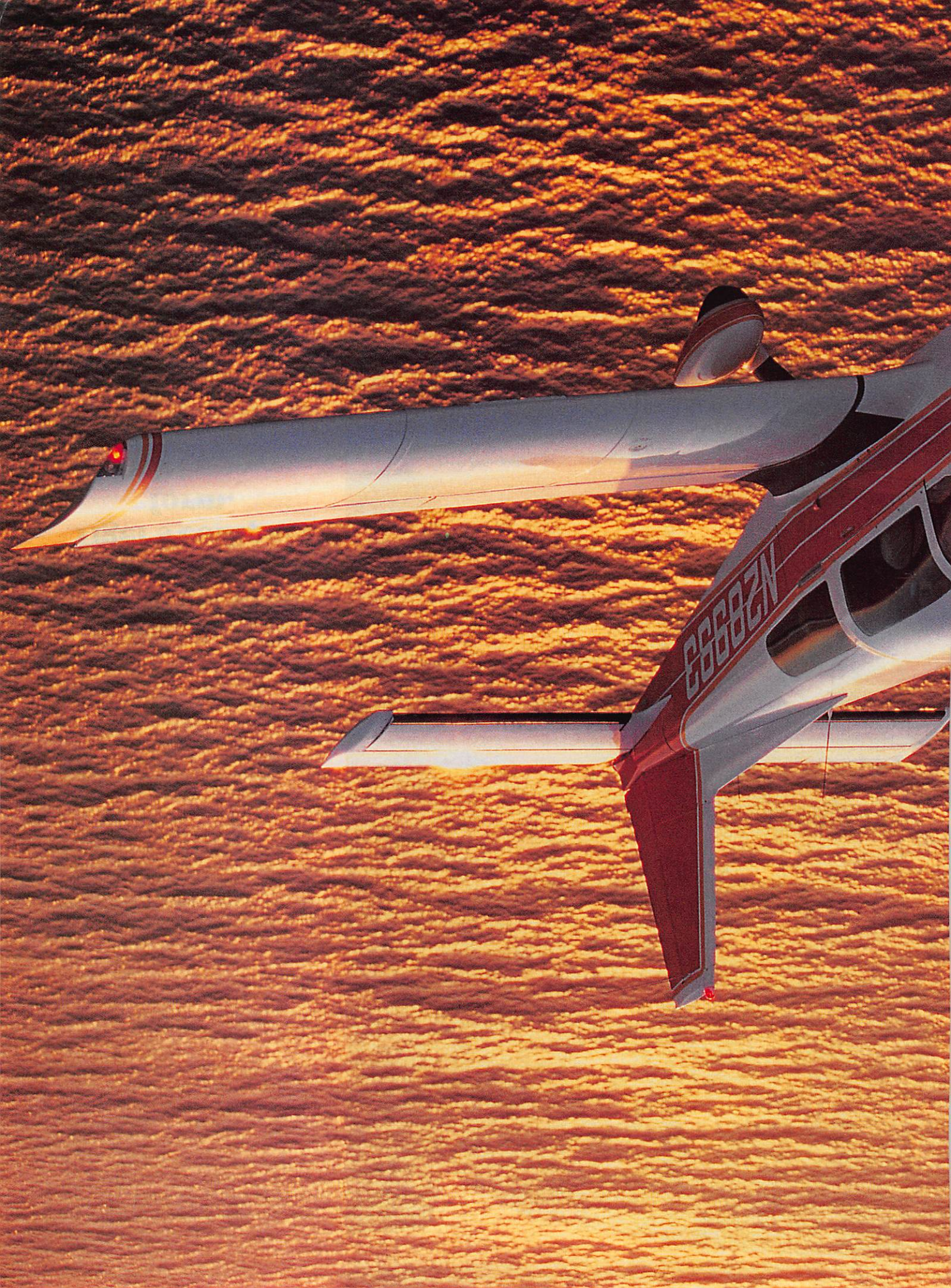
All airplanes embody compromise. Trade simplicity for speed; send off climb performance for payload; or sacrifice fuel economy for a roomy cabin. Among the difficulties faced by aircraft designers is the careful balancing of these qualities. Worse yet is the task given to the engineer hired to improve an existing, certified design; he doesn't have the luxury of making radical changes. His design box is impossibly small. ■ So it is that Grumman Tiger owners owe Roy LoPresti a debt of gratitude for tweaking this design into one of the most successful compromises

Grumman's Tiger continues as a blue-chipper

BY MARC E. COOK

PHOTOGRAPHY BY MIKE FIZER





around. It's a simple airplane, powered by a 180-horsepower Lycoming O-360 driving a fixed-pitch prop. It drags along fixed tricycle gear and rides on an easy-to-build constant-chord wing. Its systems are stone simple. And yet the airplane is capable of transporting four adults in an admirably comfortable cabin at nearly 140 knots true.

LoPresti's role in the Tiger transformation is well known among AA-5 boosters. The Tiger traces its roots back to the AA-1 Yankee, made by American Aviation in 1969. This two-place trainer-to-be boasted some innovative construction methods, such as glued metal skins and a tubular main wing spar that doubled as a fuel tank. With a small, clean wing, the AA-1 was stunningly fast for the power—108 hp at first from a Lycoming O-235—putting in some 117 kt true at optimum altitude. That early iteration AA-1 was a poor trainer thanks to its mediocre climb performance and the requirement for strict airspeed control.

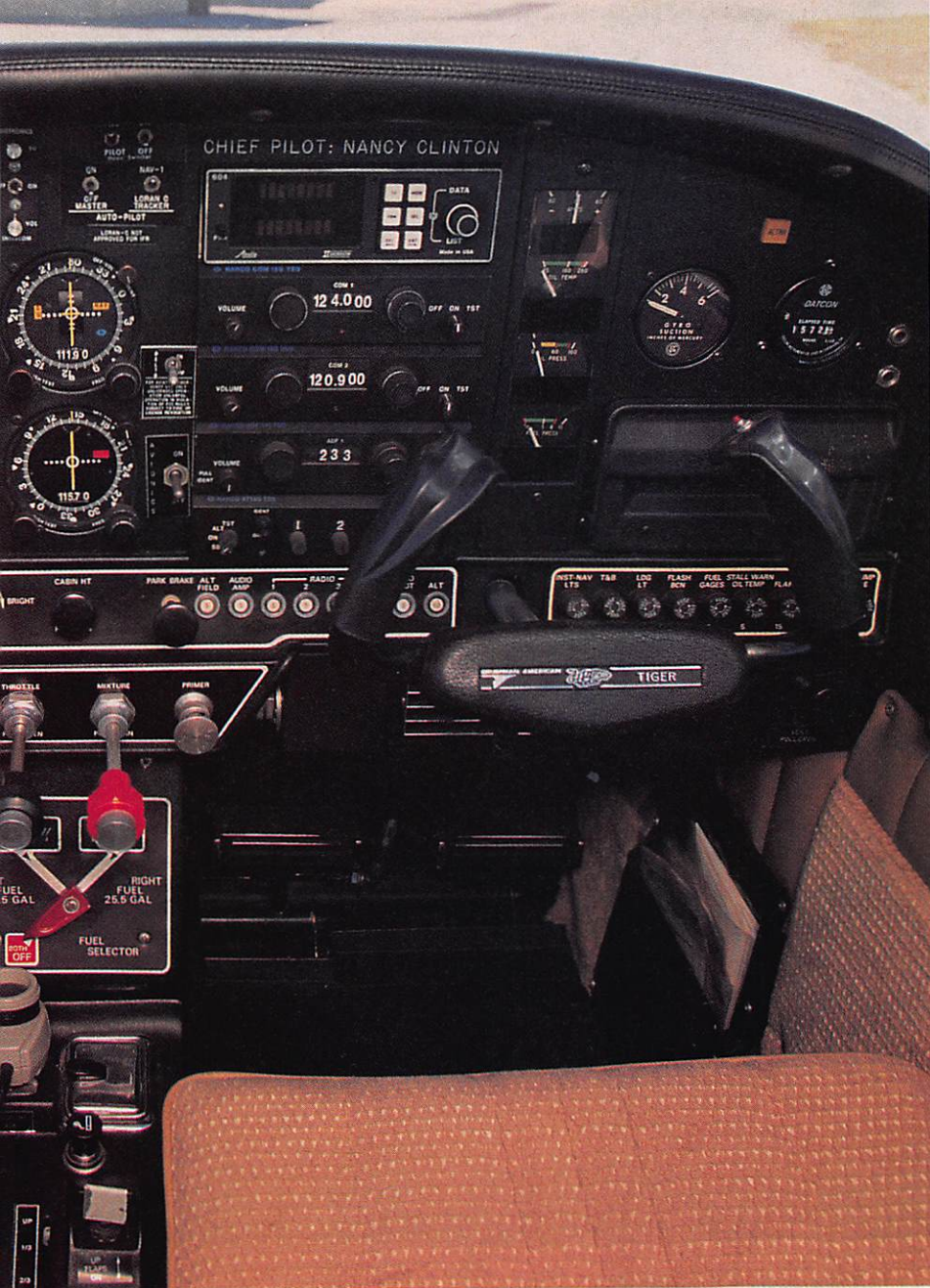
In the early 1970s, American Aviation started work on a much bigger,

A generously sized cockpit belies the Tiger's compact form.

more complicated four-seat follow-on model, but ended up with what appears to be a scaled-up AA-1. Thus was born the AA-5 Traveler, with 150 hp on board. Although it seemed a close derivative of the AA-1, the Traveler had several system and aerodynamic improvements.

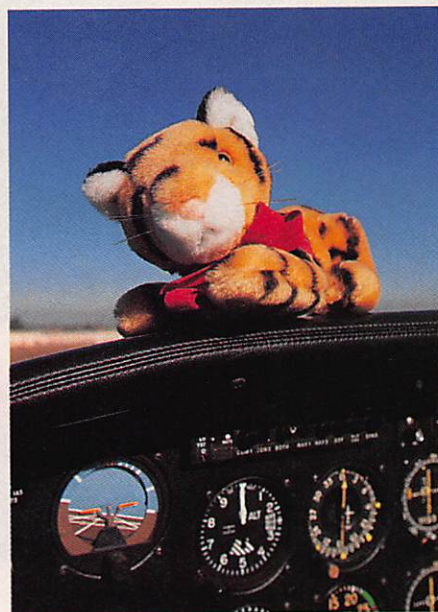
LoPresti came into the picture when Grumman bought the line in the early 1970s. Out of his efforts to improve the AA-5's performance grew a pair of significantly speedier siblings, the 150-hp AA-5A Cheetah and the AA-5B Tiger. (In fact, the Tiger debuted in 1975, a year earlier than the Cheetah.) Although they shared the wing, fuselage, and basic construction with the Traveler, the Grumman-made airplanes employed extensive aerodynamic improvements. Fairings sprouted everywhere





on the airframe, particularly noticeable around the wing root and at the junction of the belly and main landing gear legs. A revised cowling with significantly smaller cooling-air openings completed the picture.

Today, the Tiger is much sought-after on the used market. Its combination of speed and simplicity—along with that comes reduced maintenance costs—remains compelling for a lot of pilots. You don't need to feed a large six-cylinder engine or manage folding gear and cowl flaps to have respectable cruise performance. You don't need the maintenance headaches or insurance rates that go along with more complicated airplanes, either. The spread in cruise speeds between the



Tiger and a Bonanza amounts to about a half-hour's difference on a 500-nm flight.

The first time you climb into a Tiger you'll notice that it's just *different*. The sliding canopy offers either easy or difficult access, depending upon your agility level. Standard practice is to throw a leg over the cabin sidewall and flick back the seat cushion with the toe of your foot. Step down onto the spar carry-through with that foot and then drag the other one inside. If it's raining, you'll get wet. You'll settle into a cabin that's comparatively spacious and airy. Move the controls and you'll notice the telltales of pushrod and torque-tube actuation for the ailerons; the controls are pleasantly solid. Kick the rudder and you'll also be reminded that there's no



direct nosewheel steering; the brakes are all you've got.

Taxiing a Tiger is not difficult with some practice, although with a strong crosswind blowing you'll want to be confident of the quality of your brake maintenance. The Tiger's rudder is more effective than that of the smaller AA-1, so differential braking during the takeoff roll is almost unnecessary. Once up and flying, the Tiger delights. It's got light and smooth control forces, reasonably well balanced among the axes. Come over from a Cessna 172 or a Piper Warrior and you'll be pleasantly surprised, particularly with the control authority in roll.

Tigers induce few nosebleeds in the climb, with 750 fpm typical at mid weights. Maintaining the proper airspeed is a must to eke the best climb performance, though; stick to 90 kt or you'll sacrifice quite a lot.

Attention to aerodynamic detail makes the Tiger so swift.

This rather fast best-rate climb speed points to the small wing; at just 140 square feet, it's smaller than a Skyhawk's by some 30 square feet. The Tiger is much less forgiving of poor pilot technique than is the aforementioned Skyhawk or Warrior.

Push the nose over at cruise altitude and be prepared to wave *so long* to simple Cessnas and Pipers. On the same horsepower, the Tiger is nearly 20 kt faster than a Piper Archer and

can even hold its own against the retractable-gear Arrow. What's more, with 51 gallons of usable fuel, the Tiger has decent legs; figure on about 9.5 gph in cruise for a reasonable 4.3 hours' endurance. You'll need to push the little Lycoming to fairly high revs at altitude to get best performance, resulting in a fairly noisy cabin; all that glass contributes also to a cockpit that requires use of headsets.

Thanks to the Tiger's slightly higher wing loading—it's a couple of pounds per square inch greater than your typical Cessna or Piper—it handles turbulence well for a 2,400-pound max-gross airplane. Its sharp control reflexes also help keep it on an even keel in choppy air.

Although the Tiger and its AA-series siblings are overrepresented in landing accidents, there's really nothing difficult about getting an AA-5 on

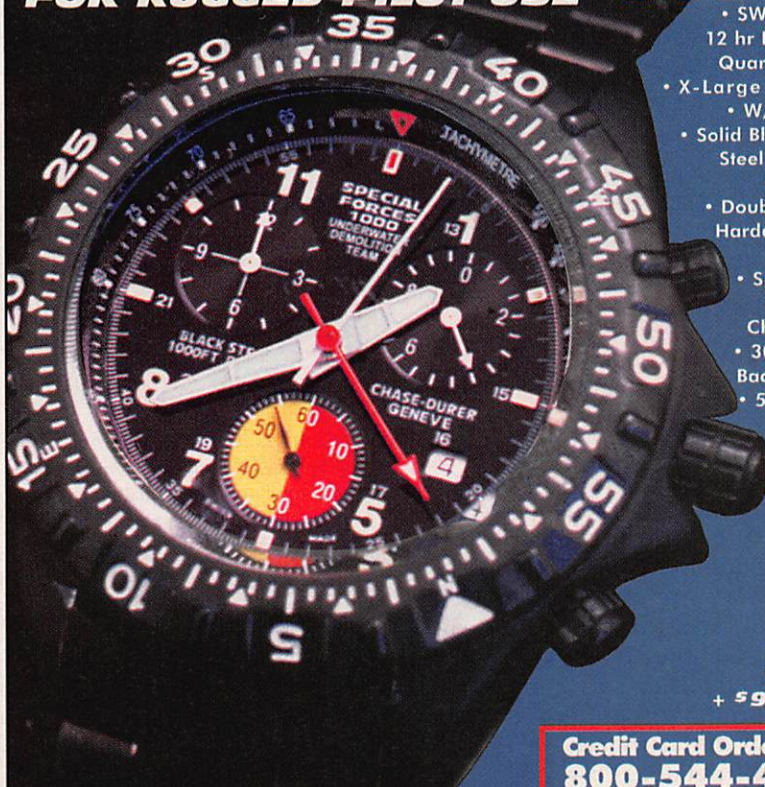


the ground. Adherence to the proper approach speed is important—72 kt should do it—because the flaps aren't as effective as, say, a Cessna Skyhawk's, so you have less variable drag to help you salvage a high, fast approach. And given that the Tiger's nosewheel steering comes just from brakes and rudder, you'll have to practice the rudder-pedal/toe-brake dance to perfect the transition from steering with the tail to steering with the brakes.

True to its simple self, the Tiger has few critical prepurchase inspection areas. Bond-line separation on the control surfaces—except the ailerons—is an ever-diminishing issue but still demands attention. The Tiger makes extensive use of bonded aluminum, and time has shown that the trailing edges of the flaps, rudder, and elevators are the places most likely to experience a

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debonding of the skin from its support structure. Another item demanding attention is the nose-wheel torque-tube support. There are four sockets that carry the nose-wheel structure into the cabin. You can bounce the nose gently and listen for a clicking sound; that's one indication that further inspection is needed. Fixing a loose torque-tube bond is about a \$2,000 proposition.

Otherwise, the Tiger's airframe is rugged enough that few specialized inspections are necessary; just look at the usual list of consumables—brakes, tires, propeller condition, etc. (There's a repetitive airworthiness directive on the McCauley prop and an annoying rpm limitation; many owners have switched over to the Sensenich prop with good results.) Engine baffling is perhaps more critical on the Tiger than on other O-360-powered airplanes. In their quest to extract maximum cruise speeds, Grumman and

Nancy Clinton's Tiger shows the hallmarks of the breed: sliding canopy, "mail slot" baggage door, and ancillary controls on the center console.



Four comfy seats under a canopy make the Tiger a good single-family hauler.

LoPresti cut down the cooling margins. The wet-wing tanks aren't prone to leaking, but still look for telltale stains at the strap covering the junction of the inboard and outboard wing sections.

Tiger values reflect its vaunted standing in the used market. According to *Vref* (see: www.aopa.org/members/vref), a 1975 AA-5B should sell for \$47,000; prices climb predictably to the 1979's value of \$53,500. Put that in perspective: A 1972 Traveler is worth just \$28,000, while a 1979 Cheetah goes for just \$34,500. Meanwhile, a 1991

AG-5B is worth \$75,000 today; American General built just 150 of the Tigers between 1990 and 1993.

That the American General Tiger didn't survive is more a reflection of the economic times at the beginning of the 1990s than the design itself. More than two decades after the last Grumman Tiger rolled off the line, the plucky four-placer remains in solid demand, appreciating steadily



and earning accolades from new owners. Moreover, a new company is ready to build you a new one, for \$214,000. TLM Aircraft, a subsidiary of Tong Lung Metal Industries, has built a plant in Martinsburg, West Virginia; it intends to revive the AA-5A Cheetah as well. Consider this move just another testament to the

careful balance of performance over cost and maintenance requirements; few light aircraft have made these compromises as well as the Tiger. □

E-mail the author at marc.cook@aopa.org. For additional photography of the Tiger, see AOPA's Online Gallery (www.aopa.org/pilot/gallery).

Grumman American Tiger
Current market value: \$53,500

Specifications

Powerplant	Lycoming O-360-A4K, 180 hp at 2,700 rpm
Propeller	McCaughey or Sensenich, 76-in dia
Length	22 ft
Height	7 ft 10 in
Wingspan	31 ft 6 in
Wing area	140 sq ft
Wing loading	17.1 lb/sq ft
Power loading	13.3 lb/hp
Seats	4
Empty weight, typical	1,450 lb
Max gross weight	2,400 lb
Useful load	950 lb
Payload with full fuel	644 lb
Fuel capacity	53 gal (51 usable) 318 lb (306 lb usable)

Performance

Takeoff distance, over 50-ft obstacle 1,926 ft

Max demonstrated crosswind component	16 kt
Rate of climb, sea level	850 fpm
Cruise speed/endurance w/45-min rsv, std fuel (fuel consumption)	@75% power, best economy 139 KTAS/3.9 hr 8,500 ft (64.8 pph/10.8 gph)
Service ceiling	13,800 ft
Landing distance over 50-ft obstacle	1,499 ft

Limiting and Recommended Airspeeds

V _X (best angle of climb)	70 KIAS
V _Y (best rate of climb)	90 KIAS
V _A (design maneuvering)	112 KIAS
V _{FE} (max flap extended)	103 KIAS
V _{NO} (max structural cruising)	142 KIAS
V _{NE} (never exceed)	172 KIAS
V _{S1} (stall, clean)	56 KIAS
V _{S0} (stall, landing configuration)	53 KIAS

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



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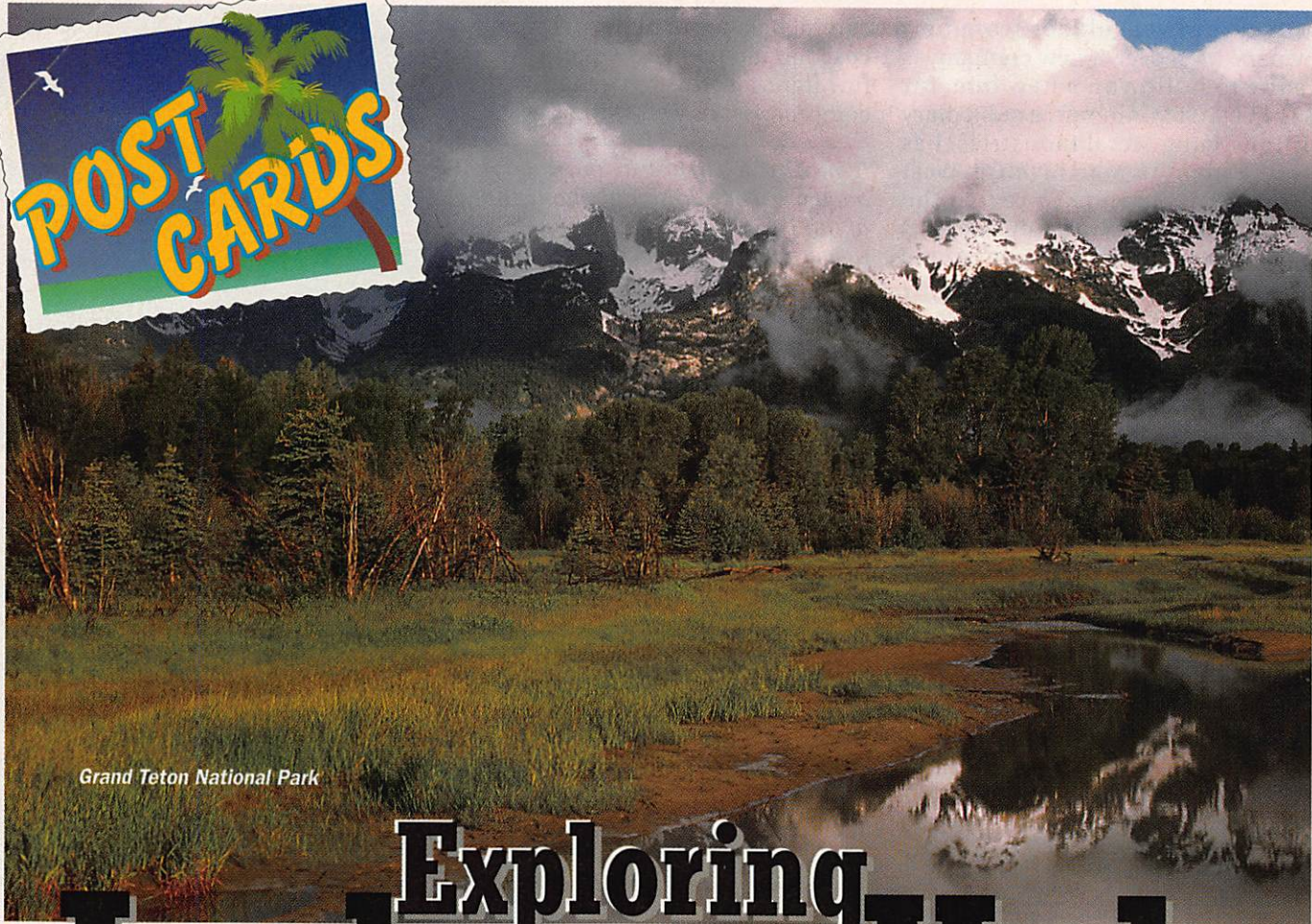
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ALTON K. MARSH

Exploring Jackson Hole

Be sure to bring your mountain flying skills

First things first: The name of the town is Jackson, not Jackson Hole. Valleys were once called holes, and this valley was named after a mountain man named Davey Jackson. Jackson was a rather ambitious mountain man, and worked his way in the 1820s from beaver trapper to corporate mogul for a fur-trading company. For a while it was called Jackson's Hole, but that has shortened over the years to Jackson Hole. So Jackson is the town, and Jackson Hole is the valley. Now you know. ■ Neither Jackson nor the Indians would stay there in the winter, though, when temperatures reach minus 40 and even minus 60 degrees Fahrenheit. "The Indians didn't ski," explains longtime resident Ron Diener. ■ The obvious attraction, other than the city itself, is Yellowstone National

BY ALTON K. MARSH

Park, 60 miles to the north. See elk and bison in their natural habitat by day, and then drive back to Jackson that evening for New Zealand elk and farm-raised bison meat in the Gun Barrel Steak and Game House restaurant. Another popular tourist attraction is the Million Dollar Cowboy Steak House, featuring saddles on the barstools and a knobbled pine interior decorated with Remington and Russel works of art. ■ Speaking of the airport, when was the last time you went to an uncontrolled airport with a 6,299-foot-long runway? (A control tower is to be built this year.) Be aware that this is the mountain flying your flight instructor warned you about. Spring and summer weather often creates microbursts at the Jackson Hole Airport, bringing brief winds of 60 knots. Having given you that warning, I made