receded in recent years. But any buyer of a 1975 or early 1976 Tiger should be aware of the potential for problems. As for the Cheetah, since it came along a year later, only a tiny handful of the earliest Cheetahs used the purple stuff. (Incidentally, you can check for the defective glue by pulling off the wingtip and inspecting the bonded seam at the spar-to-rib or rib-to-skin joint. If there's a purple line, you may have a problem.

• Nosewheel shimmy. The Tiger/Cheetah nosewheel not only looks like a shopping cart wheel, sometimes it acts like one, too. The shimmy problem is caused by a variety of factors: improper tension in the spring washers (they may be worn out, or the shop may have adjusted them too loose by improperly interpreting the 18 to 22-pound side-pull requirement as a torque requirement); loose axle nuts, bad tire, or loose torque tube strut. The nosegear demands a lot of maintenance, and must be lubricated and adjusted strictly by the book. (Not many shops even have the book.) In particular, the strut inside the torque tube should be free of corrosion and well lubricated.

The 1977 and later models have a shock absorber in the nosewheel, which helps to some degree, but they make removal of the nose gear rather tricky. If you have persistent shimmy problems, see a good mechanic who specializes in Grumman American aircraft.

• Cracking prop spinner. Pre-1979 Tigers (s/n 1047 and below) had problems with cracking spinners, possibly related to propeller vibration. Virtually all Tigers in the field have been retrofitted with improved spinners, but check to make sure.

• Magneto problems. The Slick mags in the AA-5s just don't seem to last. We have numerous reports of failures in 500 hours or less. Reports one Tiger owner, "The most expensive and annoying items have been the Slick magnetos. My airplane has needed five mags in 1,000 hours. Slick mags belong on garden tractors, not airplanes." Another owner referred to them as "those throwaway Slick mags."

• Leaky fuel tanks. Several owners reported leaks, and blamed it on the aromatics in low-lead fuel. The Cheetah, incidentally, may legally use leaded autogas, which should save a lot of many in addition to cutting down fuel tank sealant problems.

• High brake wear. Because of the steer-by-brakes system, pads wear out quickly. Clever AA-5 pilots manage to minimize brake use, however. Good brake maintenance is important; if there's a failure, the plane cannot be taxied.

• Fragile rudder return springs. Several owners reported repeated breaking of the rudder springs. One fellow took to always carrying a spare, just in case.

Airworthiness Directives

Tiger owners face two major repetitive AD annoyances. The first is the 200-hour inspection of the McCauley prop hub for cracks. Second is the 100-hour inspection of the ailerons.

In addition to the usual shotgun ADs that apply to many aircraft—Lycoming oil pumps, Airborne vacuum pumps, oil coolers, ELTs, air filters, altimeters, Bendix and Slick mags, etc.—the Tiger and/or Cheetah have had one-time ADs on the rudder bar, cowl hinge, mixture control, bonded skin, alternate static source, carb air box and carb heat valve. All of these should have been complied with, of course, on any aircraft considered for purchase.

Parts Supplies

Although Grumman American/Gulfstream has historically done a good job supporting the airplanes, parts are getting more and more expensive, with longer lead times for shipment. Some parts are now on a build-to-order basis, at astronomical prices. A good source of parts is Fletcher Aviation at Hobby Airport in Houston. (7786 Braniff St., Houston, Tex. 77061 (713)641-2023.) In addition to being a factory distributor with a big stock, Fletcher also sells aftermarket parts. One owner described how he got a quote from Gulfstream of $487 for a nosegear boot. Fletcher supplied the part for $75. Owner David Fletcher is a Grumman fanatic who can provide expert technical info (the Grumman factory reps call him for advice.

Modifications

We'd recommend three modifications for the Tiger. First, a Sensenich propeller in place of the AD-plagued McCauley. In addition to eliminating the AD inspection, the new prop also does away with an annoying rpm restriction between 1850 and 2250 rpm in descending flight. This yellow arc, due to vibration problems of the particular engine/prop combination, sits unfortunately right at the usual ILS approach speed. In addition, the Sensenich is claimed to increase speed two to four mph. It's available form Aeromod Corp., Bldg C-3, Paine Field, Everett, Wash. 98204 (206)353-3559. Cost is $1,855.

Aeromod, which specializes in AA-1 and AA-5 mods, also offers an oil cooler and baffle modification that is claimed to reduce oil temps by 25 to 40 degrees. Considering the Tiger/Cheetah's tendency to run hot, that's a good idea. Cost of the kit, which takes about four hours to install, is $375 (1987 price).

The third nice-to-have mod is modified cooling exit and baffle reseal/fixup by a fellow named Bill Heard (213)641-1729. The mod is

basically an enlarged cooling outflow with a small fixed cowl flap. Heard claims a CHT drop of 50-75 degrees and no loss of performance. There's no STC, so the work must be done by Heard under a field approval.

Other mods are available to boost performance and cut maintenance costs. Aeromod offers three engine conversions for the AA-5:

- The Sabre-tooth Tiger, a 260-hp Lycoming installation with constant-speed prop. Claimed speed is 180 mph, with a 1,800-fpm climb rate, but the useful load penalty is about 100 pounds. And watch that fuel consumption! Cost in 1987 was $20,000 for a low-time used engine, more for a new one.

- A more practical conversion is Aeromod's upgrade to a 200-hp Lycoming and constant-speed prop. Cruise speed is up 10 mph to 170, and climb rate soars to 1,300 fpm. Useful load penalty on a Tiger is about 70 pounds. Cost in 1987 was about $16,000 for a low-time used engine.

- Aeromod can also turn a Cheetah into a Tiger with a 180-hp conversion. Total cost in 1987 was about $11,000 (for a mid-time engine). If a Cheetah owner wants to have the work done locally, the STC paperwork alone is $500. This mod might be a good way to take advantage of the big price difference between the Cheetah and Tiger. If you can't find a good Tiger, get a run-out Cheetah and modify it. You've got a nice mid-time Tiger that will return the full value of the conversion.

- Aeromod also offers an improved air box that lets the engine breathe easier and is cheaper to maintain. Aeromod also can offer advice on antenna locations that improve reception and add a couple of knots speed. Fletcher Aviation also offers hints for aerodynamic cleanups, and operates what it claims to be a perfectly stock 180-mph Tiger.

Owner Group

We also throw our full support behind the American Yankee Assn., the owners group for the Tiger and Cheetah (as well as all other Grumman American light aircraft). In addition to the usual newsletter and fly-in activities, the AYA is a useful source of technical and maintenance information. Such specialized expertise is almost a necessity to own and fly an oddball airplane like the AA-5 that may not be familiar to every local mechanic. The AYA also has a special group insurance plan that may save you some bucks, and can put you in touch with approved pilots for a proper AA-5 checkout. American Yankee Assn., P.O. Box 11757, Fresno, Calif.

Owner Comments

As an obvious supporter of the Grumman line of aircraft, let me turn the tables and contribute what I find to be the drawbacks of owning a Tiger. I have had a 1976 model for 10 years, and have some 1,500 hours on the airplane.

My major complaint is that the service ceiling is only 13,800 feet. While this is adequate for many, those of us who fly across the Sierras and Rockies find it occasionally restrictive. A second drawback is that without cooling modifications, the engine tends to run hot, necessitating cylinder work before TBO on most planes. My aircraft has a modification designed by Bill Heard (213)641-1729 (evenings) and I highly recommend it.

And that's it. I consider the Tiger to be the best bargain in aviation today. The aircraft provides an honest 130-knot cruise. Typical owner-assisted annuals run about $350, and aside from the usual maintenance items (tires, brakes, etc.) nothing much goes wrong.

Incidentally, we have a group insurance program and a pilot familiarization program to inform our new members about flight characteristics. Airspeed control is of great importance on final approach. but properly taught, this presents no problem.

William M. Marvel
President, American Yankee Assn.
Fresno, Calif.

My partner and I owned both a Tiger and a Mooney 231. The Tiger is a much easier airplane to operate than the Mooney, especially on the ground. I fly the Tiger long distances, with quite a bit of IFR. I flight plan for 130 knots, and almost always beat that number from lift-off to touchdown. Out west, most of the flying is at 9,000 feet or higher. At lower altitude, the 139-knot book cruise speed is easily bettered. Fuel burn is 10.5 gph down low, declining to 10.0 up high. I almost always fly at full throttle and/or 2,700 rpm.

The Tiger is considerably more difficult to fly on instrument approaches than the Mooney. The controls on the Grumman are sensitive, so a little goes a long way. Speed control on approaches is also more difficult. The Tiger is very clean in approach configuration, so very little power is required to hold 100 knots. The fixed-pitch prop also makes it harder to establish a stable power setting.

There are a couple of ADs that help keep maintenance costs up. Every 100 hours the ailerons have to be checked, and every 200 hours the prop has to be pulled and checked for cracks. That costs $100, including profiling and repaint. Annual inspections run about $600 when I don't do anything, and about $200 when I do the grunt work. The direct operating costs have worked out to $24 per hour, including a reserve for overhaul.

The interior is pretty noisy at cruise speed. Earplugs or a headset are a

necessity. After 11 years use, everything in the interior is warped, faded, cracked or all three. The new replacements don't look much better. Parts are no problem at all. Fletcher Aviation in Houston seems to have everything required, and the parts are generally inexpensive.

William Barton
Encinitas, Calif.

I have been flying Grumman Tigers since 1981 and have owned a 1978 model for three years. I consider the Tiger a most economical aircraft that allows me to justify it for leisure-time purposes.

Initial investment is reasonable, maintenance minimal, fuel consumption averages about 9.6 gallons per tach-hour, insurance about $1,000 per year, annuals average about 16 hours' labor.

In IFR conditions, it bounces and rolls with turbulence, but is comfortable if you go with the flow. There is some learning curve in the transition from a Piper or Cessna. The Tiger has lots of fuel capacity. With full tanks, I carry 675 pounds payload, and consider it a good "three people and gear" plane for weekending. I recently replaced the McCauley prop with a Sensenich, and it eliminates the yellow arc from 1,850 to 2,250 rpm. It is also smoother, quieter and quicker on the climbout.

Ronald Esau
Edina, Minn.

I bought my 1976 Cheetah, serial number 60, in 1986 and have flown it 260 hours in 18 months. I cruise at 125 mph true at around 2475 rpm, and it uses about eight gph. My only performance complaint is its climb capability. At my usual weight of about 150 pounds under gross, I can only get about 500 fpm at best rate at sea level. I have long-range tanks, which come in very handy, but contribute to poor climb performance.

The airplane handles very crisply, but is a tailwagger in turbulence, and isn't as stable as a Cardinal or 172 on instrument approaches.

Insurance the first year was $1,174, declining to $1,074 the second year because I had gotten an instrument rating.

It's a bit tough getting passengers in through the canopy and over the front seats into the back. But otherwise it's a comfortable airplane. Visibility is great. In spite of it being the most accident-prone airplane in its class, it seems fairly docile. It mushes rather than breaks in the stall. Landings are smooth, but it's squirrelly on rollout because of the lack of nosewheel steering. Backing into a tiedown spot requires a towbar.

Gary Keck
San Diego, Calif.

Grumman Tiger/Cheetah

The Grumman American Cheetah and Tiger have always been popular among pilots who prized speed, efficiency, and sportiness. "The best plane on three wheels," is a typical owner comment.

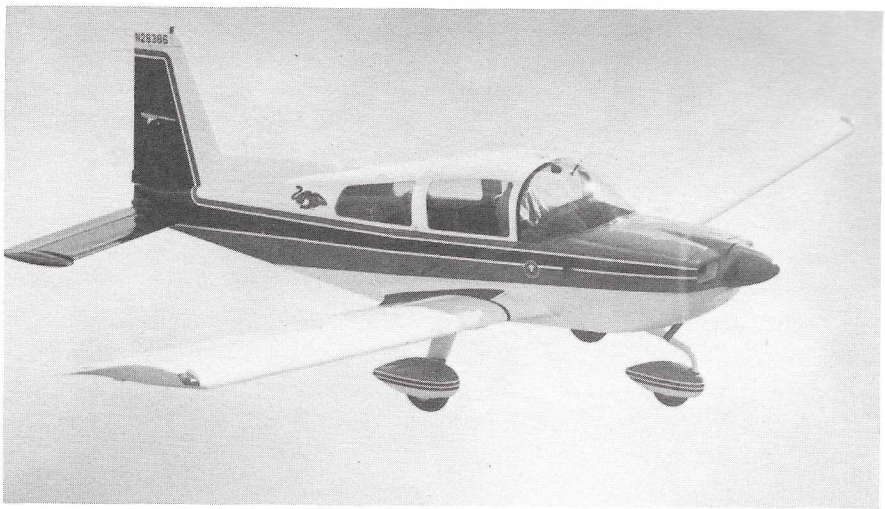
But one big knock against them has been their orphan status—out of production, with expensive, hard-to-get parts from a company that only grudgingly supports them.

But recently, that competitive disadvantage has disappeared—not because the Cheetah/Tiger situation has gotten any better, but because everybody else has gotten worse. Now virtually every single-engine plane is out of production, and the parts situation is stinko throughout the industry. So the Cheetah and Tiger suddenly have a new allure: if you're going to be buying an out-of-production model with a shaky factory support system anyway, hey, why not get one that's fast, good-handling and sporty-looking in the bargain?

Used-Plane Market

Both Tiger and Cheetah are quite modestly priced on today's market—from a top of about $30,000 down to about $15,000 for a raggedy old Tiger (1987 prices). The range for a Cheetah is about $12,000 to $20,000. Dare we say it, they might even be considered a bargain.

In the four-place fixed-gear arena, the Cheetah and Tiger rank about in the middle, well behind Piper and Cessna, in terms of buyer esteem. Leader in the 180-hp class is the Piper Cherokee Archer; in 1987 a 1979 model had a retail price of about $36,000. The Cessna Cardinal ran a close second at $30,000 for 1978 model (there was no 1979 Cardinal), followed by the Tiger at $28,000 for a '79. Bringing up the rear was the woeful Beech Sundowner at $24,000.



The Tiger, left, with 20 more horses, has a surprising margin of performance and price - over the Cheetah (right).

In the Cheetah's 150/160-hp class, the price story is the same: Warrior, Skyhawk, Cheetah, Sport, in that order. What's remarkable is the huge price difference between the Cheetah and the Tiger, which are essentially identical except for the extra 30 hp of the Tiger. Although the difference between the Lycoming list price of the two engines was only a couple of hundred dollars back in 1979, and the original price difference of the two airplanes was $6,500 (about 20 percent), the difference in value of the two models was $8,000 in 1987—or better than 40 percent of the Cheetah's value.

Genealogy

The AA-5 series was born in 1972 as the Traveler, a 150-hp stretched version of the AA-1 Yankee two-seater. The Traveler was an okay airplane, but Grumman-American's chief engineer Roy Lopresti (later of Mooney and Beech fame) put in a new engine, redesigned the cowling and cooling baffles, enlarged the elevator and did a detail drag cleanup program. The result, in 1975, was the Tiger.

The next year came the Cheetah, which was essentially a Tiger with the Traveler's old 150-hp engine. The two planes were in production only until 1979, when Allen Paulsen bought Grumman American and killed the Cheetah and Tiger to concentrate on the Gulfstream II bizjet. About 200 tigers were sitting at the factory when production stopped, and it took more than two years to sell them all off. (Paulsen, in retrospect, looks like a genius; he stopped production just before the aviation industry began its eight-year slide toward extinction.)

A total of about 1,300 Tigers and 800 Cheetahs were built. There were no major changes during the production runs, but some refinement occurred: in 1977, soundproofing was improved and windshield thickness doubled to a quarter-inch. Other changes: minor aerodynamic refinements, includ-