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Grumman American's Cougar Twin

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Grumman American's Cougar:

New Thrust for an Outfit on the Move

In its new and more expansive Savannah home, GA has added a twin to its burgeoning line. The Big Three may have to make room for a fourth member in their exclusive club.

by Richard L. Collins


N777GA

IF YOU ASKED the Grumman Americans of Savannah whether it was more difficult to move a factory or to develop a new light twin, their answers would probably be mixed. Neither task is easy, but both are rewarding.

The big move is finished now. The Grumman American plant in Cleveland, which was built in 1965 as a factory for the Bede Aviation Corporation, has produced its last brightly painted Trainer, Tr2, Cheetah and Tiger. The airplanes now roll off the line at Savannah, Georgia, and the pain and confusion of moving is abating.

Their new twin, the Cougar, is a bit behind the plant move, but it's coming along, too, and will be ready for a *Flying* pilot report this fall and for deliveries next year.

There's a stronger relationship between the new plant and the new airplane than you might imagine. The Cleveland facility was capable of producing about 500 singles a year, which is the number Grumman American was selling. The plant was chock full of airplanes abuilding, and GA's land was full of structures and ramp area. To add the Cougar to the line, they had to do something. Furthermore, the Cleveland weather may have been a factor in causing Grumman American to scan the southern climes for a new place to build airplanes. Although lovely during warmer parts of the year, in the wintertime, the climate downwind of Lake Erie becomes thoroughly opposed to such activities as airplane testing and delivery.

The company had contemplated the move for a while, and then the coming of the Cougar marked a good time to make the change. Grumman American studied possible sites in the mid-U.S., where airplane delivery would be most efficient, but Savannah was the final choice.

Savannah was already the site of one Grumman American plant, where the Gulfstream II is manufactured, which provides an advantage in shared administrative areas and better utilization of facilities such as computers. The company probably had a good feel for available labor in the Savannah area, too, and this was an important consideration in the move. As the Cougar comes on line, and as production of the other models increases, they'll need more people. (Savannah is also a nice town and adds variety to the general aviation ports of call.)

The plant for the Tiger and its friends at Savannah is co-located with the Gulfstream II plant, but the singles' production facility is new from the ground up and is modern—it's air conditioned and designed especially to build these airplanes. There are many things to notice when looking around. Production was just beginning when I was there, but a complete array of brand-new equipment for metal cleaning, bonding and baking to complete the bond, was already in place. This new capability would add

Cougar

Simple and salable has been the successful formula for Grumman American's singles. No surprise, then that the first twin by GA is endowed with an impressive lack of complexity. Clean lines, bonded skin and generally high efficiency should find the airplane a ready market. The Cougar should also offer a particularly easy step upward for current Tiger, Cheeta and Traveler pilots looking for more speed.

to that provided by the equipment that was being moved from Cleveland to Savannah. With the new equipment plus the machinery from Cleveland, the bonding capacity (in fact, the total capacity) of the Savannah operation will be much greater than was ever dreamed of in Cleveland.

The Savannah plant will eventually work up from Cleveland's 500 airplanes per year to a one-shift, annual production capacity of 1,500, including a fair share of twins. The investment is great, the stakes are high, the commitment is a clear indication of Grumman American's serious intentions in the general aviation market.

In developing their airplanes and production methods, GA has solved many of the problems that plague beginning manufacturers as they compete with companies that have been strong in the business for years. Any observer of the scene will tell you that the biggest concern of a new company is profitability. The only reason people quit building airplanes, the only reason such good names as Ercoupe, Stinson, Luscombe and others are no longer around, is that nobody could make a buck building the airplanes. Grumman American appears to be in good shape on this score. Their airplanes are competitive in both performance and production efficiency. It takes both to survive.

There is a lot of commonality among Grumman American's single-engine airplanes—the machines are basically quite simple. This minimizes the man-hours of labor for each airplane as well as the bill of materials. The bonding process must also help to cut the labor requirement. The designs of the airplanes are aerodynamically efficient. Both the Tiger and the Cheetah offer cruise performance that is on a par with that of airplanes in a higher horsepower category—and, in the case of the fixed-gear Tiger, with some of the retractables.

While the move to Savannah will bring long-term benefits to the GA program, it no doubt has caused some short-term twitches. The 1977 models won't debut until January 1977 while customary practice would have meant fall 1976 introductions. And while Grumman American had hoped to maintain a steady stream of deliveries from a combination of the two plants as one wound down and the other wound up, a flat spot in production occurred during the critical portion of the move. This was a temporary glitch, and airplanes are now flowing from the Savannah plant at a rate that will make up for any shortage during the move.

In the meantime, the Cougar is moving along steadily and will soon join the other airplanes on the Savannah production line. The airplane pictured here is the prototype, used for much of the initial flight testing; production models are now being built. The total 1977 Cougar production will be about 100 airplanes. Certification is

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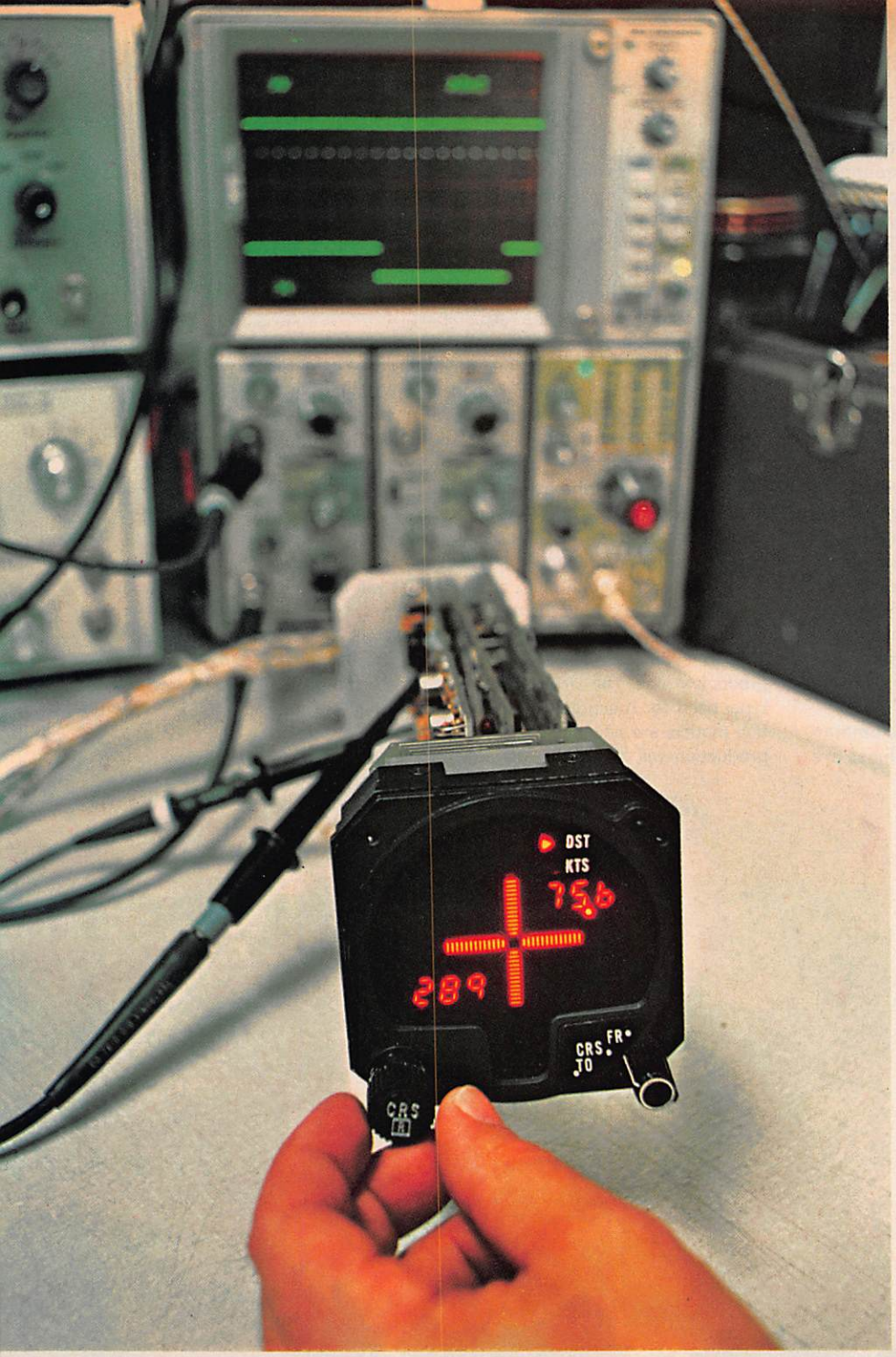

Integrated Avionics

The Smart Set

by John W. Olcott

Outfit on the Move

continued from page 69

expected in January and first deliveries are scheduled in March.

There are differences between the Cougar prototype and the production airplane. After much deliberation, Grumman American decided that the sliding canopy, such as was installed on the first prototype, would give way to a door (on the left side) on the production airplane. The fuselage will be four inches wider, and the vertical dimensions will be increased slightly to allow more headroom.

Canopy lovers may flinch at the decision to use a door on the Cougar, but Grumman American reasoned that this airplane will appeal to a different market from that of their popular singles, which have sliding canopies. While looking at the prototype with the canopy, I found it hard to disagree. The Cougar canopy is very large, and when opened on a rainy day, it would certainly allow a thorough hosing of the interior of the airplane. In charter and corporate use, too, a canopy might be considered nonconformist. The company would run a risk of customer nonacceptance by fitting a canopy on the Cougar, while there is certainly no risk in using a door.

When I first heard of the Cougar, the suggestion was that it would be a twin-engine Tiger with retractable gear. As I walked up to the first prototype, I knew that the plan had changed. The Cougar is a bunch more than a twin Tiger. The fuselage is longer, the tail feathers are quite large, and the wing's chord and span exceed the Tiger's by a considerable margin. The Cougar sits high atop a tough-looking landing gear, and the size of the airplane is more suggestive of an airplane in the Cessna 310-size class than one in the Tiger class.

Despite its large look, the Cougar will occupy a spot in the light-twin category last occupied by the Piper Twin Comanche. The airplane is powered by two 160-hp Lycoming engines, target gross weight is 3,700 pounds, and GA hopes to keep the empty weight down to 2,350 pounds. Add 150 pounds for extras, plus 500 to 600 pounds of fuel with full tanks, and the Cougar's numbers suggest a four-place airplane with good range.

Four-place it will be, too, even though the cabin will be large enough to accommodate six seats. Putting in six full-size seats would promote misuse of the airplane, so the only exception to the standard four-place seating will be the offering of a fifth, child's, seat.

Grumman American is ever mindful that a light twin like the Cougar will be used for training, and that in transportation use, it will be flown by many pilots stepping up from singles. As a result, the Cougar should be a docile airplane. Their goal is to make the Cougar fly as much like the Tiger as possible.

During my introduction to the airplane, there was talk of stalls with one engine operating at maximum power and the other windmilling. A 300-fpm single-engine rate of climb was also mentioned. The airplane's large tail surfaces suggest good controllability, and the high aspect ratio wing should help the climb performance. Just looking and listening suggest good things. Flying it will be the proof, and we'll do that as soon as possible.

Nobody offered a specific number as to maximum cruising speed, but the allusion was to something up around 170 or 175 knots.

What price all this glory? There's no price yet, but Grumman American makes no bones about the Cougar's being offered to compete with the single-engine Cessna Centurion and other similarly priced airplanes. It'll be an interesting competition to watch: "Want a six-place single or a four-place twin, Mister? Take your choice, same price."

Past the immediate future, the size and shape of the Cougar make some very definite suggestions about things to come. Grumman American certainly would not develop the airframe and then be content to let it serve just one model. With larger engines, it could be a full six-place twin. How about pressurization someday? And when and if Grumman American decides in favor of a big six-place single, wouldn't the Cougar airframe be a natural? In the beginning, the Cougar will have almost no parts in common with other Grumman American airplanes. However, you can bet that someone already has a vision of the Cougar's developing into a very production-efficient series of airplanes that will fill a lot more than one of the gaps between the Tiger and the Gulfstream II.

There is an exciting atmosphere at Savannah. It's almost as if the years spent in Cleveland were the formative and developmental ones, and that Grumman American is now ready to do the real thing, to pose a major challenge in a rapidly broadening market area.

Walking around their Savannah plant as it was awakening and starting to produce, I was reminded a lot of the first time I walked through Piper's plant at Vero Beach in the early 1960s. It was modern, well equipped and ready to meet any challenge that the marketing folk could send its way. Last year, Piper Vero Beach built well over 2,000 airplanes, about 400 of which were twins. Will Savannah develop that sort of capability? If it doesn't, it surely won't be for lack of competitive airplanes and effort.

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BAX SEAT
WHISPER CAT

by Gordon Baxter

I WATCHED this jet-powered biplane coming at me head high across the rice, and I told my mind, "Yonder comes a jet-powered biplane." My mind replied, "Jet biplane? This information has been received but not accepted."

My eyes looked some more. Biplane, all right; from the front it looked sort of like a World War I British pursuit ship they called the S.E. 5. It had the cocky wings, both in high dihedral, that made the S.E. such a stable gun platform. It had the S.E. 5's long, dangling gear, too, and the pilot's head was visible in the wide wing gap. He was looking down from where the gun barrels ought to be. Right out of 1918, but running on a jet.

The nose lifted slightly, and Miss Blanche tucked her big white flag under her arm and came stepping off smartly for the next swatch. From about 30 feet, I thought Miss Blanche was a farm-boy flagman. She's wiry, has short blonde hair and is part owner of this ranch. They say she's about 50 and is one of the smartest hands with horses and stock you ever saw. As she whipped by me, she said politely, "Good ol' Carl, he's the most considerate pilot. Always holds a little downwind so none of that stuff will fall on me."

Good ol' Carl had gone by us about 20 feet away at 100 knots and was now doing a very tight flipper turn and lining up on Blanche's flag for the next pass. As he went over, I got another look at the biplane. This time it looked like a different British fighter plane. In the mid 1930s, just before they came out with the Hawker Hurricane, the Hawker company had carried the biplane design to its ultimate form of beauty and refinement with a long, rakish single-seater—the Fury, I think they called it. Its pointed spinner flowed unbroken into a slender cowling that swelled gradually back to house a big liquid-cooled in-line engine. From the side, that's what this jet biplane looked like. Its proportions were lovely.

Now watching it in the turn, I saw there was no mistaking what the biplane really was under all that wolf's clothing. It was a broad-winged Grumman Ag-Cat, only instead of there being that heaving and hauling and turf-beating roar that you get out of a 600-hp Ag-Cat that is trying to change the direction of a thousand pounds of liquid fertilizer, this thing was nimbly flashing its ailerons and rolling around like a ball in the hand or a frisky Pitts.

"He sure gets back fast, don't he?" observed Blanche. Yeah, and spooky, too. The only thing I could hear was the wind in the