



Tom Needham and his son Daniel worked on the Sportsman project together.

MAN ON A MISSION

Using a Sportsman 2+2 in Africa, Tom Needham provides flight services to people badly in need.

BY DAVE PRIZIO

Here's the objective: Fly yourself and sometimes one or two other people and assorted supplies around in the mountains of Cameroon (Africa) three or four times a week. Good point-to-point speed is important, but so is the ability to land on rough mountain strips. The

plane you pick has to be reasonable to acquire and easy to maintain by a non-A&P. What plane would you choose?

A person need not spend too many days in Cameroon to see how much time can be saved with an airplane. More often than not getting from one

village to another means traveling on a poor road or none at all. Many hours of tough driving or even tougher hiking are the only ways to cover painfully short distances on a map. In many cases, days could be reduced to minutes with an airplane and a well-placed jungle



The Sportsman's generous cargo area makes it ideally suited for Needham's missionary work in Africa, where economizing to get the most of each trip is essential.

airstrip. In this environment, an airplane of some sort makes a great deal of sense, even for a missionary pilot on a tight budget (is there any other kind?). Tom Needham originally chose the GlaStar for his mission, because it did the best job of meeting his needs, and by building it he would learn enough to maintain the plane when he was on his own in Africa. That was back in 1997.

Move forward several years, and Needham's mission now strains the capabilities of the GlaStar to the limit. Rough strips have been cut out of the forest in many locations in western

Cameroon, so he can serve the needs of a great many people. The sight and sound of the GlaStar approaching means welcome hope to villagers in remote locations seldom served by anyone else. But there is more that could be done if only the GlaStar were bigger. With the advent of Glasair's Sportsman 2+2, a solution appeared. Three hundred pounds more useful load, a real back seat, more cabin space all around, better flaps and stronger gear—what more could you ask for? Well, for one thing the financial means to acquire it, but that's what friends are for, and Needham has many of them.

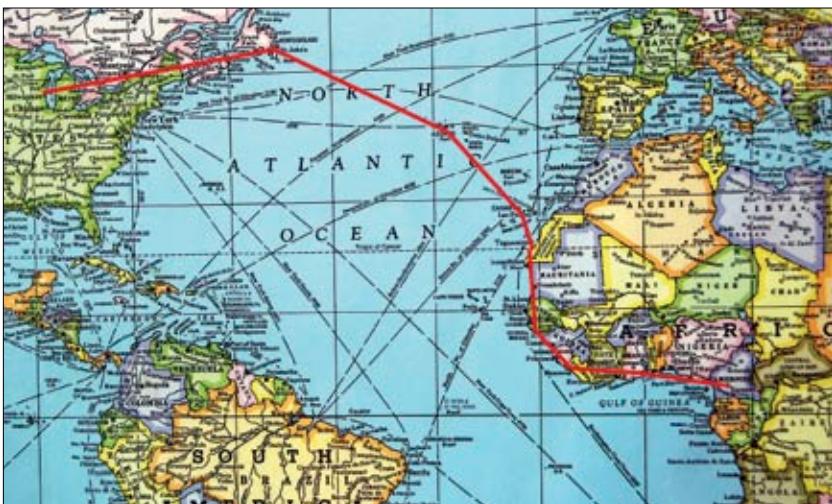


An optional opening window provides a great photo platform but also allows dropping items from a low-flying aircraft.

With a Little Help from His Friends

At first he resisted the suggestion to build a Sportsman. It would mean time away from his missionary work to build the plane, and more time and effort to raise the needed funds. But on a visit to the United States he got to fly a Sportsman and made the big decision: It would be worth it. The Sportsman is just so much more capable that he couldn't wait to get started.

At his first plea for support, a young girl came forward with \$5 she had been saving. She wanted to be the first one to contribute to the new airplane. Other



To make a transatlantic flight, you need a lot of fuel. These tanks allowed for 145 gallons of it.

larger, if no more meaningful, gifts soon followed. Glasair Aviation gave Needham a very good deal on a new Sportsman kit. Ted Setzer, a Glasair employee who remains from the original Stoddard-Hamilton crew, pitched in with invaluable help and advice for the second time, having also assisted with Needham's GlaStar. Aerosport Power came through with a nice discount on a new Lycoming IO-390 engine, and others, as they could, all helped to make the project come together more easily than Needham could have ever imagined.

With financial challenges well under control, the next thing on the list was a place to build the plane. Wings as Eagles, a missionary flying group out of Oshkosh, Wisconsin, offered its hangar, free labor, and housing for Needham and his son. With all this help the project came together quickly over a period of about six months. Needham was especially happy that his 15-year-old son Daniel could get involved with the construction of the new plane. Needham will repay the kindness by selling his GlaStar at a favorable price to a new pilot/missionary from Wings as Eagles,



Needham's ship has high-tech equipment—in the form of the Advanced Flight Systems AF-3500 EFIS/engine monitor and TruTrak autopilot—but also backups.

Sam Sanderlin, who will be joining him in Cameroon soon. Sanderlin will rely heavily on Needham to teach him the finer points of missionary work, bush flying and backcountry airplane maintenance.

Just as the Sportsman was coming together smoothly, things in Cameroon were sliding downhill. Through some mysterious workings of the Cameroon bureaucracy, Needham lost his flying authorization, both for the GlaStar that was already there and for the new Sportsman. Thirteen months of patient effort and a little assistance from the

U.S. ambassador finally got things worked out. With the new Sportsman sitting in America all that time ready to go, it was certainly frustrating, but all's well that ends well. As the saying there goes, *C'est l'Afrique* (loosely, such is life in Africa).

With the Sportsman finished and the flying permits restored, it was time to get the new plane to Africa. John Douglas, a pilot and mechanic for Wings as Eagles, volunteered for the transatlantic flight, and Needham, who had already spent too much time away from his calling, gladly agreed. The Oshkosh crew built and tested ferry tanks to increase the Sportsman's fuel capacity to 145 gallons for the trip. That would be quite a bit more than needed, but it is hard to have too much fuel when you are in the middle of the ocean possibly bucking a 30-knot headwind. The fuel fit easily into the spacious Sportsman interior, so why not take it?

On the Spot

This flight would also be a good test for the new SPOT satellite personal tracker. Needham had picked one up at AirVenture after being assured that it would work in Cameroon. As it turns out, it does. Many of the plane's supporters tracked the progress of Douglas in Sportsman N211PH on the web as he made his way from Oshkosh to Africa. With the company's nice web

N211PH takes off for Akwaya from its home strip near Needham's house at Sabga.





It is common for locals to crowd around the airplane wherever it goes, such as here at Meyerim, where a medical clinic is located.



Maybe the Sportsman 2+2 should be renamed Sportsman 2+3. Happy passengers don't seem to mind cozying up.



A 40-gallon ferry tank fits in the front seat with another 60 gallons in the back.



When the locals can avail themselves of a ride, they do. It beats walking.

site and the SPOT data, we could share the adventure with him. It is truly amazing to have this information available so easily and cheaply. The SPOT handheld worked flawlessly and gave everyone a great deal of peace of mind. Needham plans to use it even for local flights in Cameroon.

The big flight traversed water much of the time. Upon the advice of experienced ferry pilots, the more traditional route over Europe and the Sahara Desert was avoided in favor of more time over open water. Some of the surly characters who inhabit the Sahara have given the region a bad reputation among ferry pilots. Such are the times we live in.

The trip began with a flight to Pawtucket, Rhode Island, where Douglas picked up a few items he needed for the crossing. From there he flew to St. John's,

Newfoundland, where he would leave North America behind and head out across the Atlantic Ocean. Santa Maria, Azores, was the next stop, and then on to the Canary Islands. A relatively short hop from there to Bamako, Mali, put the big over-water flying behind him. Following the coast of western Africa, Douglas next stopped in Lome, Togo. From there he made his way to Yaoundé to clear customs into Cameroon. The last leg brought him to Needham's encampment at Sabga, where he received a warm welcome from the Needhams and many local villagers. What a trip! It is a good thing Douglas is a sharp pilot. The strip at Sabga is high on a mountainside at 5800 feet and is a mere 1300 feet long.

Now that the Sportsman is in Cameroon, just what will it be doing? The plane operates much like a bush taxi service, except no one pays a fare. The day typically starts with two or three preachers flying out to different villages. On the way back someone, or several people needing medical attention, will get a ride to the local medical center. Oftentimes the payload is a mixture of people and supplies. The idea

is to keep the plane full to get the most value out of the cost of operating it. Air-strip maintenance, visiting tribal leaders, and working with local government officials are also on the agenda. There is always a certain amount of politicking that must be done to keep things running smoothly. Most flights are short, less than 30 minutes, and many are into what most would consider rough strips. Alternates and escape routes must be

John Douglas prepares for departure from Oshkosh on his epic journey.



considered for every flight, because there is virtually no weather reporting or current information on facilities.

The Experimental Advantage

When asked about some of his more unusual loads, Needham said that everything from generators to goats (yes, live ones) have been in the back of his airplane. If it will fit through the door, he has probably taken it to someone somewhere. The worst, he says, are the chickens. They really make a mess. But when someone gives him one as a thank you in return for a favor, he can hardly turn it down. Unusual passengers also make the trip from time to time. He once transported a man with elephantiasis to get treatment at a hospital in the city. The problem was that this fellow was unknowingly resting his badly swollen feet and legs on the rudder pedals just as Needham was trying to take off, which made for a scary departure.

Using an Experimental/Amateur-Built airplane for missionary work is something of a novelty. However, because missionary flying is not considered commercial work, pursuing it with



The typical landing strip is sort of like Catalina Island in Southern California, only shorter and without the buffalo burgers.

an Experimental, especially one with U.S. registration, offers a number of advantages. The typical missionary pilot will also be an A&P, but this means an extra two years of preparation and significant added expense. By using an Experimental airplane the missionary pilot/builder has a repairman's certificate, allowing him (or her) to perform all maintenance and yearly condition inspections without an A&P license. The result is a nice savings of time and

dollars, the latter being especially tough to come by for most missionaries.

In addition to Needham's ability to maintain his plane with a repairman's certificate, the Sportsman's performance fits his typical mission profile well. A solid 1000-pound useful load gives him the ability to carry a lot of stuff into the bush. He has configured his plane to handle three passengers in the back, two facing aft and one forward. Admittedly, they must be small people who are willing to travel in less than first-class comfort, but as they say, it beats walking. If he doesn't need to be a flying bus service, he can carry himself and about 700 pounds of supplies if he limits fuel to 30 gallons in the main tanks.

Thanks to some special attention from Aerosport Power, he can use premium auto gas and still make the full rated 210 horsepower from his Lycoming IO-390 engine. And with that power he can get out of those tough strips he gets into, some at elevations as high as 7500 feet. One particularly difficult one has a usable length of about 1000 feet at density altitudes typically well over 4000 feet. The 160-foot elevation change from one end of the strip to the other helps shorten the ground roll, which is good, because with its rough surface and a huge dip in the middle, Needham

Needham, a local Fulani man, Terry Rushing and his wife, Sarah.



is always glad to get off the ground there. As he describes it, "When the brakes are released, there is either going to be a takeoff or an accident."

For about the same initial cost of the Sportsman, Needham could have purchased a pretty nice Cessna 180. It would have had a comparable useful load, and it is possible to get an auto gas STC for it. However, he would have had a 30-year-old airplane that would inevitably need more maintenance than his new Sportsman, maintenance that he could not perform himself. This would mean higher costs and lower availability. The Cessna also has an engine that is more expensive to overhaul and burns more gas. Lastly, any modifications he might want to do to better suit his needs would require a lot of FAA paperwork that could not be done in Africa. The flexibility and ease of maintenance of the Experimental Sportsman made it an easy choice for Needham and his supporters.

Needham's success with his Sportsman brings attention to him that he welcomes only reluctantly. His humility makes him a bit uncomfortable with the notoriety, but even he admits that good can come from awareness of his work



A typical mountain strip near Sabga, Cameroon.

and the capabilities of the Sportsman airplane. Maybe other missionary pilots will come to see the benefit of "going Experimental." It has certainly worked out well for him and the people of western Cameroon.

Some members of the Wings as Eagles crew deserve special mention for their contribution to the success of Need-

ham's Sportsman project. They are John Douglas (mechanic and ferry pilot), Tore Mitchell, Don Wright, Dave Borlee and Terry Rushing, who provided many of the photos included with this story.

More information about the Wings as Eagles organization can be found at www.WingsAsEaglesMission.org. Don Wright is with another group called Gospel Flight (at www.GospelFlight.com), but he often helps out with Wings. A blog of the Sportsman's trip to Africa is available at www.sportsmantoafrica.blogspot.com. You'll find direct links at www.kitplanes.com. †



A local convert to Christianity preaches to the gathered people at Meyerim. Needham's family members are at the left (with their backs to the camera).

DAVE PRIZIO

Dave comes to KITPLANES® with 36 years of flying, three airplanes' worth of building, and seven years of experience writing, editing and publishing the GlaStar and Sportsman Flyer.

