

CLUB, STATE AND INTERNATIONAL NEWS

UNITED STATES

LONG DISTANCE FLIGHT

The idea and challenge of making a long distance flight in Woodstock had been one of my dreams from the early days of designing and building her.

I knew we needed a reliable, light, high-altitude engine and a fuselage that was strong and slim in frontal area. Ron (Herron) and I decided to limit the width of Woodstock so as to accommodate my body from shoulder to shoulder, leaving enough room to provide a little comfort during a long distance flight.

I also knew that I would need 8 hours fuel if I was to attempt this flight.

Woodstock's in-cabin fuel tanks held 35 gallons, and that amount was perfect for the transcontinental flights. I calculated that to do this flight, I would need an additional 15-gallon capacity belly tank. Over weeks of part time work and effort, Ron fabricated one, plumbing and installing it, then leaving it standing full of fuel for a month to see if it showed any leaks.

In the meanwhile, Ron had given Woodstock a thorough inspection, and found that she was robust and nothing had shaken or worn loose in the previous transcontinental flights. There was some brinelling of the bearings for the teeter bolt, but these were replaced and the oil and coolant were renewed.

One of my major concerns was how to stay warm during this flight, which was to be done in the middle of winter. Woodstock was anything but airtight, and did not have a heating system, and I was planning to fly at altitudes where -17 degrees Celsius were common. To tell you how concerned I was about flying cold for 7 or 8 hours, I had bought an array of silk and woollen arctic aviator mittens and gloves (and that was just for my hands) and socks, silk undershirts, wool-lined boots, and an electrically-heated suit! I even had advice from a NASA extreme arctic weather expert!

Ron patiently understood my concern, and came up with an ingenious way to heat the cabin, seal it from the rear end of the fuselage, and tighten the gaps at the edges of the window and the door.

Another concern I had was, of course, the weather. Fortunately, there was a national weather station on the field, and the guys there were helpful and accurate in their predictions, so much so that I knew my flight date 4 days in advance of it.

However, I still needed to know whether the new belly tank affected the airflow around the tail, and if there were any C of G changes with the tank full.

To my relief, there were no noticeable control changes in either case. However, on the second flight, I also decided to check the effectiveness of the heater in a power climb, and in doing so, I noticed white smoke coming from the front starboard side of the cabin. I quickly throttled back and returned to the airport. Smoke was definitely not a welcome sight!

Ron found that hot exhaust gas from a slip joint had made direct contact with the aluminium ducting, which had then oxidised producing the white smoke. As I had to leave the next morning we didn't have time to repair it, so we simply removed it. However, the plus for the day was an extra flight in Woodstock so that Zane Anderson's TV Jetranger, complete with a gyro-stabilised camera, could video her.

Early the next morning, we arrived at the airport to find that the top surface of the belly tank had "oil canned" upward pressing against the bottom of the fuselage. It was caused by the head of pressure from the cabin tank above. The space between the tank and the fuselage was about 1/2" and looked peculiar to me. There was a slight stretch on the fuel line between the tanks. For a while I had doubts that I would be able to fly. To fail at this point would mean that I would have to wait another year to get the same favourable weather conditions.

However, the guys, who knew what they were doing, jumped in to fix it. They realised that each of the 4 straps had a strength of 5250 lbs (about 10 tons total) and that the belly tank, full of fuel, weighed only 100 lbs. In fact there was no real cause for concern.

Reassured, I suited up, got aboard and started the engine, and departed North Little Rock heading east toward Memphis. The mighty Mississippi came into view, and crossing it is always a milestone, whether coming or going. Then, shortly there was the Tennes-



Above—Little Rock in the background



Above— The Little Wing flying over Swamps. (Now that's a place you wouldn't want an engine out.

see River. I could imagine Nashville 70 miles off to the northeast, and as I crossed the Cumberland Plateau, Chattanooga was on the right, and Knoxville on the left in the distance. We then crossed the lowlands at the southern end of the Shenandoah Valley, before passing into the great Smokey Mountains, and finally, the expanse of the almost pristine Appalachian Mountains.

While being able to fleetingly appreciate the passing scenery, I was busy with time and distance calculations, navigation, and fuel management. However, it became obvious quite early that I had ample fuel for the flight. So I was able to relax.

Woodstock made exceptional time, and I spent the last hour regretting that I had not aimed at setting a longer distance for her to cover. The official requirement is that, before leaving, you state the distance to be flown as well as naming the destination airport. Little did I know that I would land with 2 hours of fuel remaining? Enough for more than another 200 nautical miles. A bird in the hand.... is good enough.

- Sub-class:** E-3a (Autogyros: take-off weight less than 500 kg)
- Category:** General
- Group 1:** Piston engine
- Distance without landing:** 993 km
- Date of flight:** 22/02/2004
- Pilot:** Andrew C. KEECH (USA)
- Course/place:** Little Rock, AR (USA) - Hickory, NC (USA)
- Rotorcraft:** Little Wing LW-5

Dear Andy

Congratulations! Your records claimed on October 13 and 22, 2003, have been approved as United States records follows:

Speed Over a Recognised Course Kitty Hawk, NC to San Diego, CA 10.22 mph

Transcontinental, East to West 10.22 mph San Diego,

CA to Kitty Hawk, NC 19.82 mph

Transcontinental, West to East 19.82 mph

Kitty Hawk to San Diego to Kitty Hawk (round trip) 10.20 mph

Transcontinental, Round Trip 10.20 mph

The records dossier has been forwarded to the Fidiration AiroNautique Internationale in Switzerland for approval as World Records.

Once again congratulations on these great records!

Mike

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For those who are wondering why I am putting all this information about Andy, well, he is an Australian living in Washington. Ed



WESTERN AUSTRALIA

A number of you have requested that I publish a picture of my gyro, so below I have included a picture of some of us from Bindoon, after a great weekend of flying.

Mine is G198, a tall tail, true centreline thrust, powered by an EA81 Turbo with 26' Blades. Great for mustering, but you need to climb up to the seat, a small price to pay for a well-balanced machine!

The others from the left are Ned Byne, Glen Swadling, Malcom Pascoe, myself, Murray Beeck.

