

Yankee Rotors

June 2010

The Official Newsletter of Yankee Rotors

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**Regular meetings every
3rd Sunday of each
month at 1:00 p.m.**



Next Meeting

Sunday June 20th at 1:00 PM at John Christopher's house. As usual, meeting will be held in the tall shed as you enter the driveway. Topics will include Spring Fling, Greenland, and other topics attending members wish to discuss.

Editorial

I want to take this opportunity to thank all members who attended and helped make Spring Fling 2010 the success it is. Our members help as a labor of love for gyroplanes. We did have a number of non-members who came as far as Connecticut to see what we are all about. This included several fixed wing pilots and also several helicopter pilots, commercial and ATP ratings who are interested in gyroplanes. This emphasizes the important role we play which is part of General Aviation. We fill a huge information gap in the rotary wing area. Yankee Rotors is the only organization providing information to others interested in this aircraft. A hearty thanks to all who helped.



Bob Day made our event the success it is, It is a day's drive for him .

For Sale

Parsons two-place gyro for sale. Contact Rusty Blake: 207-663-4404. B8-

Bensen B8-M

This is a dismantled, frame, packed and ready for shipping. It includes the wheels and other items. It is a project, half the price of any pre-made airframe. The price is \$500 plus shipping. Interested parties should contact John Christopher. Phone number is 603-744-6232.

Barnett JB-4

We have a near complete two seat Barnett for sale. Normally for about 5k, this rolling frame needs an engine, rotors, and some instruments. Then up you go. Price reduced to \$1,000. This is pennies on the dollar for what it would cost.

Drop Keel Gyro

This Dominator style drop keel gyro sports a huge horizontal stab with centerline thrust, an 1100 cc Yamaha engine, seats two people and is a great flyer. Call Ray Maheu at 207-465-3203.

Original Bensen B8-M with 72 hp Mc Colloch engine, 22' Dragon Wings rotors, mufflers, electric pre-rotator. A beautiful example of a flying modified Bensen, very clean. \$2,000.00

Bill Parent's Monarch

Bill is a fixed wing pilot with a private pilot certificate. He came to our very first flying almost ten years ago and was so overtaken by the sight of a gyroplane flying that he never forgot what he saw. He became inspired, driven, and Bill is a doer. He goes after and pursues in life that which makes him happy. Today he is building a Monarch gyroplane sporting the "G-Force landing gear. At left Bill's gyro is fresh off the trailer. It has come a long way since Norridgewock.



Bill is a machinist by trade. Not only can he make any part he needs, his mind is one of innovation. How many times have we taken something apart and asked ourselves, "What was this guy thinking when he designed this?" Bill is no different and that is obvious looking at his panel. His full instrumented panel will provide him with all necessary flight data and then some. Also notice the hydraulic toe brakes above the left pedal. The kit didn't come that way and Bill wanted toe brakes much like that of a Cessna 150 allowing him excellent ground handling turns.



Here's an interesting feature that is becoming an industry standard. Many gyro kits control system employs round tubes that bolt through a flat surface at the cyclic end. I always thought this was a bad idea, putting undue stress on the bushing inside the control rods. I always thought a flat tube against a square surface is a better idea.



Above you see just that. Bill's control system is designed with square tubing that fits well into his cyclic assembly. I change mine years ago but used solid rods, a little over kill. Above Bill shows the majority of this system and though difficult to see here, does show flat surface against flat surface thus spreading out the stress forces this component will endure during flight. I've also noticed other manufacturers utilizing this design in their gyroplanes as well. Dam, another one of my ideas stolen.



Above the odd looking "G-Force" landing gear employs progressive resistance as it compresses. If Bill had to, he could come straight down, no flare and the gear would absorb all the shock leaving the aircraft intact. Nice job.

Spring Fling 2010 by John Christopher

The weather was beautiful, skies were clear, some members came but only one made this event a success, Bob Day. Bob is the only member who currently has a gyro that is flying and he is the pilot that flies it. John, Al, Bill, Dale, and I think a few other members have gyroplane projects they are building, but none of them are flying. When the call for help went out only Bob stepped up to the plate and volunteered to bring his gyro and fly not for us, but for the people that have never seen a gyroplane fly before.



Bob drove a very long distance to travel to Plymouth Municipal Airport in New Hampshire. He tries some shortcuts but like all shortcuts, sometimes they take even longer. Once at the airport Bob wasted no time in getting his ship off the trailer, put on the rotors, and gave the ship a preflight. It's obvious Bob is no beginner as he had the blades on in about fifteen minutes and was soon up in the air. We did have a little wind Saturday, but Bob using this to his advantage took the opportunity to hover his gyro over the runway at an altitude of only about 100'. He's a great



Pilot and put on a wonderful display of what his gyroplane can do. With that light wind he hovered, flew extremely slow, was able to become airborne in probably 100-200 feet. He made many low passes showing all spectators how well his aircraft flies. It was a great spectacle that all who attended really enjoyed.



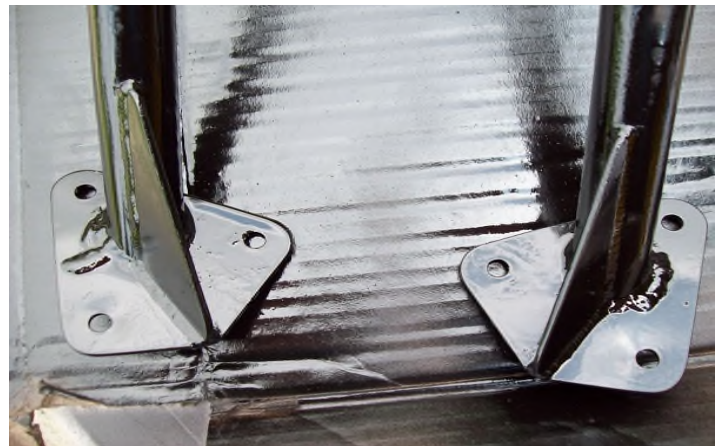
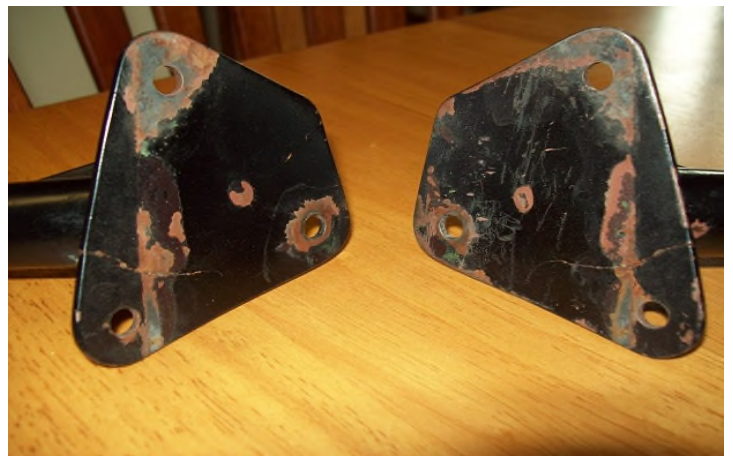
But most of all, Bob spent lots of time talking to people that came. He explained how his gyro flies, the different parts, all the different facets of flying gyros. And this is what Yankee Rotors is all about. We are in the business of supplying people with information about homebuilt rotorcraft. We are an educational component of the non-profit segment of the IRS. We are the only organization in New England that does this and the only source. Bob, you did a wonderful job and are a credit to our group. You



may not realize it but you didn't just help us host this flyin. You also helped General Aviation and the general public become more familiar with home built gyroplanes.

Watch Those Cracks

I should have seen these cracks on the engine mounts during my annual inspection, but, I did discover the cracks after I got home from hauling the Gyro home on a trailer from Spring Fling at Plymouth N.H. Round trip would be a little over four hundred miles. Went through about a half dozen construction sites that were very rough. That was a large cause to the cracking or just finished cracks that were there and brought them out large enough to be detected. I felt and looked at all those areas during preflight and did not detect them. After unloading at home I checked everything and found the cracks. I remember watching the Gyro very closely during the rough road areas and felt the prop was moving more than it should and said to myself, Self, you should check it out as soon as you get home. These ears that cracked are out beyond the mast, the other two holes are through the mast and did not move. I have put a spacer to prevent the ears from flexing in the future. This area will have extra attention during preflight.



What About The Others

They were there too. Al, Dale, Mike, Bob, John, and Bill were present. A couple of new faces were there, one a commercial helicopter pilot from Boston and a friend of Bill, Frank an ATP rescue helicopter pilot. All had experiences to share with all present. Like anything, you never stop learning. At left Al notices Bob disassembling his Brock rotor blades, which are essentially the same as Bensen blades. The hub bar is adjustable and can be bolted together in two or three different ways.



If you haven't seen enough of John's RAF here it is again. It's all there, cabin, rudder, mast, rotorhead, and prop are all installed, but not adjusted yet. If you look closely you can see the T tail horizontal stabilizer well into the prop wash. Just four inches below the center of thrust, his hope are a less tendency for the ship to get into PIO, John soloed an RAF without one so only flight testing will determine what this will do for the aircraft's tendency to get into that condition. John's opinion is that it can't hurt.



Dale cooks up a storm of hamburgers and hot dogs. All this excitement, having a meeting, flying, and talking to people does work up an appetite. I believe we even picked up a new member, the helicopter pilot from Boston is very interested in learning to fly a gyro.



A hearty thanks to Bob Day, the only member to volunteer to fly for this event thus making it possible. No one wants to see a gyro on the ground; they want to see it in the air. Thank-you Bob and others for a successful event.

