

Mountaineer R/C Flying Club



Club News

The weather has been improving and the attendance at the field is thankfully picking up again. New planes have been showing up which adds to the fun. There seems to be quite a bit of interest by potential flyers already and our member renewal rate for 2002 was much higher than expected. All in all it looks like things are shaping up to be a great year for the club.

There seems to be activity out at the field that I'm not aware of. The runway looks like we had a ticker tape parade with all the pieces of wood, covering, etc. scattered all over it. I fessed up to all of my new year encounters with mother earth and vehicles. So who else has been having fun? Inquiring minds want to know. We also seemed to have had a car wreck on the road. Pieces of a Toyota pickup grill have be found all up and down the road. There has to be a great story behind this one.

You will notice there are no February meeting notes in this newsletter. About a half dozen of us showed up for the meeting, there was no one to unlock the building, so we handed out the proposed bylaw changes to those who were there and packed it in. The next meeting will be held at Mountain CAD's office in So. Charleston. Directions are as follows:

From the Interstate, get off the Montrose Drive exit

and head down the hill to the light at Rt. 60. Turn left and stay in the left lane. A few hundred yards from the light you will see a Chevron on the left and a Speedway. Turn down behind the Speedway and go to the stop sign. Turn right and go 2 blocks. Turn left on Sixth Ave. and it is the second building on the right. It is a white one story block building and the number is 339.

From 60, go to the mound. Turn down D Street. The first stop sign is Sixth Ave. Turn left and go almost to the end. Mountain CAD is on the left before you get to the stop sign. Parking is along the street on both sides.

What is going on in your engine?

I originally wrote this article outlining my experience in replacing bearing in one of my Saito engines. It was about two pages and I decided that it was too long and most of you would not have been all that interested in it. However, if any one would like a step by step set of instructions, give me a call or drop me an email.

With my ever growing population of engines I've been getting concerned about their long term health care. I certainly don't have enough airplanes to mount them in and I know many of them will sit patiently on the shelf until their day is called. I've also wondered about the condition of the engines that are in planes but seldom fly. Sure there are published procedures to maintain

(...continued on page 2)



Next Meeting - Tuesday, March 12th, 7:00PM at Mountain CAD Corp. located at 339 Sixth Ave. in So. Charleston across from the Good Shepherd parking lot.

(What is going on in your engine? continued...)

our engines, but who really goes through the pain of routine maintenance after a session of flying? I certainly don't. For me, it has to be a hobby and not a chore.

So, what can go wrong with our engines we sometimes neglect or haven't flown in a while? Our engines are primarily constructed of aluminum and there is not much to corrode or rust up on those parts. Other pieces to the puzzle are brass, steel and iron. As I've been learning, the bearings seem to be big problem with neglecting an engine. For the most part, they are steel and begin corroding immediately once fuel is introduced to them. The fuel we use mixed with air is very corrosive to steel.



Top: The old bearings from the Saito FA-65
Bottom: New bearings for the .65 from Saito.

What can be done to slow down the corrosion? Fuel selection can be a part of the puzzle. There are many different fuels available. Some with castor oil and some with synthetic oil. Castor has long time been noted as being the best at protecting engines. The synthetics probably hold up better under the extreme RPMs. Personally I've settled on Wildcat fuel with a blend of castor and synthetic. Sort of the best of both worlds. Castor while being a great lubricant tends to leave carbon deposits on the valves and piston rings. Synthetics may or may not protect enough. I haven't seen the data, but I suspect the synthetics are probably far and away better than castor in all aspects. But who am I to question tried and true methods. Using an "after run" oil probably will extend the life. After run oil doesn't

have to be wildly over priced oil found at the hobby shop (*sorry Cindy*). Marvel Mystery Oil and most air tool oils work great. You can pick up a quart of Marvel at most automotive stores for less than what you would pay for a small bottle of hobby shop After Run oil. Marvel is also a great moisture dispersant and I know many full scale pilots that use it in their engines.

Getting back to the point of this article, what is our exposure for not caring for an engine long term? Basically it is the bearings or bushings. There is very little else to fail. The engine can get varnished and gummed up which can be easily resolved. I would think it would be possible after years for the iron piston ring if the engine has one, to seize to the cylinder wall.

For most of our engines a new set of bearings from Boca Bearings is going to run you about \$20. So if you have an engine laying on the shelf and you keep kicking yourself for not doing something with it, don't worry. It is only going to cost your \$20 and a little time in the future to return it to flight status.



Product Alert!

Many of the ARFs Great Planes induced late last year are finally getting on the shelves. The SlowPoke being one of them. I had high expectations for this model which were quickly dashed. The wing is a three piece design with a center section and two wing halves. Upon fitting the wing together I realized the joiner ribs on the wing sections were bowed out. Enough to where there was either a 3/16" to 1/4" gap at the leading or trailing edge depending on which way you rocked the wing. I went ahead and sanded the wings to fit and glued it together. I had to removed enough wood to where I'm

(...continued on page 3)



MountainCAD

Specializing in Computer Aided
Design Systems and Networking

339 Sixth Avenue, So. Charleston, WV 25303
304-744-7911

(SlowPoke continued...)

not sure how stable the wing will be once in the air. The wings are very wide only utilizing a single joiner brace on each half which allows a lot of movement while gluing it together. I would have been much easier if there had been another brace or pin near the trailing edge. Also while gluing the wings together you are supposed to tie two strings together to pull the servo wires through later on. With epoxy dripping all over the place and on your hands it is an extremely difficult task. As I found out later, the strings glued themselves down and I had to fish new pull strings anyway. As you might imagine, with wrestling around with the wings while gluing and having to sand the wings, the joints did not turn out looking like I would have hoped. On the kit as a whole, the seams in the Monokote are not ironed down very well, and need to be re-ironed before doing any additional shrinking of the covering.

I've expressed my displeasure to Great Planes and to date have gotten no satisfaction other than a form letter telling me to cut the wing in half and send the whole kit back to see if it is covered under warranty. I wonder if it is not covered if they would be bold enough to ship it back and let me figure out how to piece the wing together again.

So if you are thinking of buying one of these ARFs, trial fit the wings at the store before buying it. At this point I've gotten so disgusted by the wing problem, I've tossed it into the corner. I cringe at the possible problems facing me when I get the fuse section.

Prop Primer

I'm sure this information is old hat to a lot of you, but perhaps some of our newer flyers will benefit from it. There always seems to be the question of which prop to use. Probably most of us use a particular prop size because that is what everybody else uses. For example, if ask what prop to use with a Saito 150 or 180 at the field you will probably get the answer of 16X8. I run that 16X8 on my Saito 180 and never really questioned why, it is what everyone else runs.

What do the numbers mean?

The first number is the prop diameter. The second number is the prop pitch. This is the theoretical distance that the prop would move forward if rotated one revolution. If you were to mount your prop on a shaft and submerge it in jello, you could see this in action... A 10x6 prop is 10" in diameter, and in theory, the prop will move forward 6" in one revolution. The pitch can be thought of similar to the transmission in your car. A low pitch (like on a 10x4) is like low gear on your car - lower speed, but more power. A high pitch is more like a high gear - higher speed, but it takes longer to get to top speed, and you may lose power on the verticals.

Propeller Rules of Thumb

First, for two blade props, the "load" the prop will give the engine is approximately the diameter times pitch. For example, a 9x7 (load factor of 63) prop will approximately load the engine the same as a 10x6 (load factor of 60).

Second, to move to three blade props and maintain the same load, drop one inch in diameter.

Third, a larger prop with lower pitch will provide more thrust but lower top end speed. A smaller prop with high pitch will speed the plane up on the horizontal, but the thrust will be reduced. Think of a helicopter prop - they have a huge diameter, but a low pitch for maximum thrust, but they travel at low speeds.

Fourth, the fewer the blades, the more efficient the prop is. Sure, four bladed props look cool on your scale plane, but they are inefficient, especially in the RPM ranges that our models run. Yes, I run 3 and 4 bladed props because I think they look cool and I don't care about efficiency.

Note that all of the different brands of propellers have different efficiencies and characteristics. For smaller planes, APC seems to be the best by quite a bit. They have a good stiff blade that is very efficient. With the larger planes & props, downline braking is a factor to consider. Because of this, the wider blades are popular.

From Around The Field

With the weather improving and despite the high winds, activity is picking up at the field. Some of the winter projects are making it out to fly.

I heard from Mark Chapman that his new Ultimate Bipe he built apparently didn't fair so well on its first flight sometime the first of January having a massive problem with gravity. He is currently building an Extra. Dave Gaines' Travelair Mystery Ship took its maiden flight near the end of February. I witnessed the flight and I'm sure Dave was sweating bullets for a minute getting it trimmed out. It seemed to step on it's toes on landing and flipped over knocking the tail off. I'm sure Dave will have it back out the next pretty weekend. Bob Rowe has had his new Telemaster he built out. Super flying airplane, but of course you could strap an engine on a broom stick and Bob would make it fly like a dream. Bob Yates should be in the process of covering his Mr. Mulligan and I bet we'll see it out sometime this month. John Dixon has had his new Fly Baby out getting it ready and John Clark has been seen taxing his new Decathlon about.

The windy weather has torn one strip of roofing off the shelter. If anyone is feeling energetic and wants to fix it, get with Dave Gaines, he mentioned picking up some roofing.

Barry

Club Contacts

President JR Weekley 984-2282
Vice Pres. Bob Yates 722-3634
email - Yatescot42@cs.com
Sec/Treas. Dave Gaines 727-1549
email - WVRCFlyer@hotmail.com
Newsletter Barry Thaxton 766-9180
email - barry@mountaineer-rc.com



Bob Rowe's new Telemaster



THE FOUNTAIN HOBBY CENTER
200 W. Washington Street
Charleston, WV 25302
344-1441



Bob Yates' Fokker DR-1 on a strafing run.



Before...



After...

Dave Gaines Travelair Mystery Ship scratch built from plans, powered by an Enya 1.20

NOTE: The newsletter banner this month features our two Bobs (Rowe and Yates) formation flying around the field.