



Texas City Wings



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Refuel Fill Valves

From the Wiregrass

Radio Control Club

Enterprise, Alabama

By Jim Kale

I have noticed many having problems with refuel fill valves for the last couple of years. It is just my opinion; however, many of the refuel valves that require a special plug to be inserted into a special jack just don't work too well in the long run. Valves such as the Du-Bro quick fill often seem to work well in the beginning, but in a year or two, they become difficult to connect, possibly leak, can easily get dirt and debris into your fuel system when you connect the refill fittings, etc. When they have a problem like this, they often cause lots of difficulty, frustration, and bad language at the flying field.

Recently, Phil was trying to fly one of his big gasser models that was having engine run problems for more

than two years. Phil had picked up the model at Perry, and it looked to be in great condition; however, there is no way to know how long it had been hanging in a workshop somewhere.

After lots of frustration, bad language, and trouble shooting, we finally traced the problem to the refuel fill valve. It was letting air get into the fuel line and the engine would not run reliably. When the refuel fill valve was removed and replaced with a short brass tube, all of the problems went away and the engine ran like a new one. Unfortunately, on the next flight, the airplane stalled and spun in, possibly because of radio problems. Phil said it was really great though to have the engine perform well—for at least one flight.

I am a firm believer that the best way to refuel is a dedicated third fuel tube that goes straight to the tank. It

should have a plug to close it off after refueling is complete. That means you have three lines coming from the tank: one for the vent, one for the feed line to the engine with a clunk inside the tank and a filter as close to the engine as is practical; and one is the refuel line with a plug in it when it is not used for refueling. A fuel dot is the ideal way to keep this line easy to get to for refueling the model. This is about as simple and fool-proof as you can get. You could use a T-fitting in the fuel between the filter and the tank, and put a line on the end of the T and keep it capped off except to refuel. However the problem with this arrangement is that often when you pump fuel into the line, some of it will go out the carb and onto the ground.

Always use a filter as close to the engine as you can put it. If you use a filter on the

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Texas City Radio Club Meeting Minutes June—

These are the minutes for the Texas City Radio Control Club meeting for June 27th, 2009. The meeting at the TCRCC flying field was called to order at 9:00am by President Michael Grassmuck. A quorum was met with 20 members in attendance.

Visitors: Seven Detullio and David Hammer. Seven and David joined the club after the meeting. Welcome to TCRCC.

Secretary's Report - David Gatling: A motion was made, seconded, and accepted by the members to accept the May meeting minutes as presented in the May Newsletter.

Treasurer's Report – Ray Saenz:

Ray presented the treasurers report for the club.

Ray stated that the profit from the Big Bird Fly In was approximately \$621.00.

Mike reminded the auditors of their duty to audit the treasury books.

President's Report – Michael Grassmuck:

Mike thanked those members that helped in replacing the concession stand siding

with Hardee board. Thanks to Mike for organizing the effort and obtaining the materials which resulted in a much improved concession stand and to Dick Suggs for the new counter at the serving window.

The Big Bird event was a success. The club thanks Randy Brown for his effort in organizing the event and the extra effort in making many calls to other clubs to bring in flyers out side of our membership.

Mike stated that David Gatling and Randy Brown are looking into what obligation the club has to the IRS. The club is classified under internal revenue code section 501(c) (7) which is for social and recreation clubs.

Event's Section Report

– Mike Grassmuck ask for suggestions for a future Fun Fly event as to date and activities for members only.

Mark Weiss and Mike Walther stated that the Club 40 races opened to all clubs scheduled for July 11th. They will need 9 volunteers for the races. An organization meeting is scheduled for July 9th at the Faith Lutheran Church in Dickinson.

Mark and Mike are also planning for pylon races in September.

Newsletter Editor Report – Kyle Tupin: Kyle requested articles for the

Newsletter. These articles provide information to many of the club members.

Safety Officer's Report – Butch McEachern:

Butch commented that all is quite safety wise. He warned all to stay aware of they are doing and not to become complacent in safety matters.

Pilot Instruction – Harvey Cappel:

Harvey stated there were no trainees during the month.

Field Marshall's Report

– Mowers are doing an excellent job of keeping the field mowed.

Harvey stated that if the water pump is found cycling, close the valve outside the south end of the mower shed which should stop the cycling. A sprinkler solenoid valve sometimes hangs up and causes the pump to cycle.

Old Business none

New Business The board of directors approved an airplane catch net to be installed at the end of the south runway. The net will hopefully stop aircraft from going into the fence and causing damage. Harvey Cappel will install three volleyball nets held by bungee cords tied to post on each side of the run-

ARF Tips

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way. Cost estimate around \$50.00.

If anyone hits the net, please report the incident to Harvey Cappel or Butch McEachern.

Steve Detullio, a new member, donated shingles for the concession stand roof. Thanks Steve.

Show and Tell – Butch

McEachern had a scale fiber glass model, in process, of the German rocket fighter Me 163 Komet. The plane will be electric powered and the kit cost approximately \$200.00.

Sonny Shepard displayed battery packs he fabricates for sale. They are NiCad and are 1400 and 1600 mah size. Sonny sells the packs for approximately \$20.00. Contact Sonny at 281-470-0233 for your battery needs.

Meeting was adjourned at 9:45am.

Next members meeting will be at the field July 25th at 9:00 am.

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Refuel Fill Valves

clunk inside the tank and then refuel through this line, you will pump debris into the filter from the engine side and it will quickly go back up the line to the carb as soon as you start the engine. We have all seen pilots who spend the bulk of their day at the field having engine run problems because they failed to take these simple precautions when they installed the fuel system. Don't make your flying life miserable and difficult when it is easy to do it correctly the first time.

By the way, when you cut brass tubing to be used in the fuel system, file the ends of it smooth so they are not sharp and cut into the line making a very hard-to-find air leak. A little good building practice will make life much more fun on the flying field. We all want to fly when we go to the field, not spend all of our time troubleshooting problems that we inadvertently caused by poor construction.

If your model survives several years, you should remove the fuel tank system every couple of years or so to make sure you don't have any problems developing. Alex Perez recently brought his 12-year-old model to the field and found that the engine would not run correctly. Then Alex remembered he had not checked the tank system since it was new. He did the correct thing and went home and restored the fuel system to a serviceable condition and it ran great the next time he came out.

It is very easy to forget how old a model is if it has been performing well for several years. I once flew a model for six years

without fuel difficulties. When the next flying season rolled around, somehow I thought about checking the fuel system. The fuel filter has so much crap in it that I doubt the engine would have run at all. So, I probably saved lots of possible frustration and agony at the field trying to get it started and running.Q

Telling Us About Your Club is as Simple as 1-2-3!

Print out our Club History Writing Guide online at www.modelaircraft.org/files/museum/PDF/clubwritingguide.pdf

Write as much as you can about the club. Make sure to read and complete the consent form, which is the last page of the guide.

Mail the completed Club History Writing Guide (with completed consent form) and additional materials to:

Academy of Model Aeronautics

Attn: History Program

5151 E. Memorial Drive

Muncie, Indiana 47302

or scan and send via e-mail to

historyprogram@modelaircraft.org

How to Convert a Gas Model to All Electric

From the Rogue Eagles, R. C. Club, Medford, Oregon

By Melvin S. Harder

1. Determine weight from catalogue. In the case of the Ultra Stick 120, the published weight is nine to 11 pounds. An electric conversion will weigh about 10 pounds, total flying weight.
2. Determine desired performance. I selected unlimited aerobic performance and 3-D; 150- to 200-watts-per-pound. 746 watts=one horsepower.
3. Motor selection. Ten pounds x 150 to 200 watts=1,500 to 2,000 max watts capability motor. I selected a Hacker C50-7XL, which has a max watts capability of 1,700 watts (again, watts=power). Select your motor based on cost, quality, and personal preference; my buddy has one. There's a lot to choose from.
4. Use the software program Moto Calc (motocalc.com).

Enter in: wingspan, wing area, weight, wing loading, and wing shape.

Enter in: motor constant, no-load current, resistance, weight, brushless, and out runner or in runner.

Enter in: gear ratio, propeller diameter (from motor recommendation range), and propeller pitch (from motor recommendation range).

You get from the Moto Calc calculated spread sheet: stall level, level flight speed, top speed, thrust, and max amps.
5. The speed of the propeller is regulated by the ESC, which regu-

lates the frequency of the max amps—low speed is less frequent, high speed is more frequent. Pulse technology.

6. ESC. From the max amps listed in Moto Calc, plus a little head room, select an ESC. Moto Calc told me that my max amps was 107.5 so I selected a Castle Creations Phoenix 125 (max capability of 125 amps). Again, ESC selection depends on cost, quality, and personal preference. There is a lot to choose from.

7. Use Moto Calc for a battery recommendation starting point. Battery capacity is the battery's C rating multiplied by amps (5,000 mAh=5 amps). For me, 25C x 5 amps=125 amps drawn capacity. 125 amp>107.5 amps.

8. The battery tray is formed using 1/8-inch plywood and some 1/4 x 1/4-inch guide rails on both sides of the tray. I used a Velcro strap to hold the battery in place.

9. For an electric airplane, the CG is constant; no gas is used causing the CG to move backwards during flight. Battery placement is used to balance the model.

10. Safety

Mount servo switch and motor arming plug well behind the propeller—best so you can stand behind the wing, well away from the propeller.

Keep in mind that electric motors have 100% torque at 1 rpm. Gas motors build up to that point.

11. Starting sequence

Put throttle in middle position

Turn transmitter on

Turn servo switch on

Check control surfaces

Plug motor arming plug (motor will make a tweaking sound)

When you are standing at the

pilot station, move the throttle back to the idle position, which will arm the motor (motor will make another tweaking sound). You are ready to fly. →

TIPS & TRICKS

Sandblaster Sandpaper and Foam Sanding Blocks

There has been some recent discussion on SAM Talk about the merits of a 3M product called Sandblaster Sandpaper. It's available at Sherwin Williams Paint Stores and at Home Depot, and is supposedly superior to all other forms of sandpaper. It doesn't like getting wet or high humidity—not usually a problem in Southern California. But it's said to last for a long time and cut very well.

The SAM Talkers had another tip about a source for sanding blocks. Apparently paint and dry wall stores carry white foam sanding blocks that are about a foot long and two- or three- inches wide. The back of the block is molded in a curved shape to fit your hand. The large block would be just the ticket for sanding an old timer wings, and the foam backer wouldn't tend to dig in. Of course you can chop that foam block up into just about any shape you want for smaller sanding blocks.

—From the Southern California Ignition Flyers newsletter

Tail Weight

During the process of building your next masterpiece, it may become apparent that tail weight is required. Lead weight for fishing lines is available at most sporting goods stores in the form of round (about 1/8-inch diameter) strips, several inches long. The strip lead is

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Tips and Tricks

Visit us on the web
www.tcrcc.org

easy to cut up and embedded in the model during construction. For example, strips of lead inserted under the triangle stock can be used
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to reinforce the fin or stabilizer on most model designs. It can also be inserted into wing tips to provide lateral balance.

—From the Concord Skyhawks, reprinted in Schoolcraft Skyhawks R/C Airplane Club newsletter

AMA Charter #1075

