

**From: National Control Line Racing Association
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TO

SPECIAL PITTING ISSUE!



Vic Garner pitting his Clown entry

***Torque
Roll!!!***

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President's Column – Bill Lee

Rules Interpretation: Recently there was a discussion on the Delphi CL Racing forum regarding the possibility of using fuel in CL Racing events with mixtures other than the normally specified 10% nitro/20% oil.

The rules as currently written say "... not more than 10 percent nitromethane, not less than 20 percent lubricant, ...". One member of the forum wondered if we could have alternative fuels as long as this rule was met. The suggestion was "FAI fuel" (although there really isn't such a thing).

I asked the CL Racing Contest Board (which has the AMA authority for making and interpreting rules for us) for an interpretation of this rule. The CLRCB has ruled that fuel for CL Racing must be supplied by contest management and must be EXACTLY 10% nitro and EXACTLY 20% oil.

So: that's what the rule means, and AMA Competition department has told me that this will be incorporated into the official AMA rules.

For the NATs: I have asked PowerMaster if they can provide this specific mixture, even though it is not a standard product for them they will, and it will be 10%/10% synthetic/castor and 10% nitro. This fuel will be used in all events except Fox Race/Super Slow Rat where we will be using Duke's Fuel from Fox.
Again: thanks to PowerMaster and Fox for their support.

Balloting: You will find a ballot included with this copy of the newsletter. This is the year where we elect our District Reps. Please fill out the ballot for your District and get it back to Tim.

Also on the ballot is a Bylaws change that was submitted and described in an earlier *TorqueRoll*. Please vote on that one, too.

NATs: The 2005 NATs will be held soon after you get this issue of the *TorqueRoll*. If you have any questions about the operation of the NATs or special rules, please visit the NCLRA website at

<http://www.NCLRA.org>

where you will find a link to all of the 2005 NATs information. Of special note is the requirement that pitmen will be required to wear a helmet whenever pitting a model. (As in the past, the Dallas Model Aircraft Association will have loaners for anyone who forgets their own helmet.)

Reminder: Just a reminder that the venturi size for Quickie Rat is now .292", down from .315" previously. The rules read:

"The venturi shall have an inside circular bore of not more than .292". The venturi will maintain this diameter for at least 0.155" at the throat of the venturi where the spraybar will be located at the midpoint of the area.

The spraybar assembly will be located precisely through the centerline of the venturi bore and shall have a constant circular cross section of diameter not less than 0.155" for the portion in the throat of the venturi."

Make sure your venturi is sized properly, and that the spray bar is properly located directly in the center of the .292" diameter by .155" section. We will have a bore gauge at the NATs for verification of venturis.

Note that the rules still read .155" for the diameter of the spraybar, but as in previous years, we will use .153" to allow for the production units that are available (from Henry) that are slightly under .155". (Note: we will probably make this the official rule later.)

North Central Report - Les Akre

Not too much happening this early in the season, so I would like to use this month's space to bid a fond farewell to Vic Garner, who has decided to hang up the old "pit glove".

I don't know how long Vic has been racing, certainly many years before I became involved. I remember reading about him in a Model Airplane News control line column back in 1976. The article had to do with pitting procedures, and included a picture that showed Vic in what looked like his living room, with a fleet of racers set up for WAM racing rules.

From what I understand, WAM has always required mufflers on racers. Imagine...Fast Rats with mufflers!

For as long as I have known Vic, he has always been an intense competitor, and I have had the privilege of many memorable races with him. Every sport has its "characters of the game", and everyone who knew Vic, knew of his "character". He had many "sayings" and they all fit the situation perfectly. Over the years Vic has slowed some, not entering as many events as when I first met him, but could always be counted on to be in the "hunt" for a trophy position.

As many of you know, Vic has supplied a great deal of the K&B .40's used in the TQR event, as well as for use in the N.W. Super Sport event. Even though he feels he can no longer compete, I believe he still has plans to continue supplying engines for these two events. Who knows, maybe he'll even show up at the odd contest. Does modeling ever really leave your blood!

I have to say that I'm sad not to be able to compete against Vic anymore. With our ranks dwindling, and very few newcomers joining the fray, every loss is deeply felt.

A truly competitive racer; "He flew until he couldn't fly anymore, then he pitted until he couldn't pit anymore".

In closing, I'll add that if there was an "Iron man" award, for contest attendance, perseverance, and dedication to the sport of control line racing, Vic would be as likely a candidate as I could ever imagine.

I only hope that I can make it to Vic's age before having to "hang it up". We should all be so lucky.

Happy flying.

SOUTHEAST REPORT-BOB WHITNEY

Next week is our first race of the year, in Titusville. Sat will be speed and Sun racing. By the time you get this, all done, will get results out looks like we will have three good F2C teams coming to get some 3 up racing in. Speaking of F2C the team trials look pretty much set, now just the long wait.

We have a few people trying to unite the Fla controlliners the same way the free flighters are this can only be good, the first meeting will be at the REBEL RALLY in Jax.

Had a call from the pres of the Jax club to tell me all the rumors are false. We still have Whitehouse as a flying site and plans are going on for the Rebel Rally in Nov.

Tampa is still looking for a new permanent flying site.

Did anyone see the glo-driver on page 91 of the May issue of M.A. have one ordered, will report on it next time.

See ya at the Nats RAD

SOUTH CENTRAL REPORT-RUSS GREEN

Race Report

DMAA Spring Warm Up

Dallas Hobby Park

April 15, 2005

The Dallas Model Aircraft Association (DMAA) held their first racing contest of the year on April 15th. The weather was good; 76 degrees, 50% humidity, and wind at 10 to 15 MPH. Note the times for Quickie Rat, only 0.14 seconds separated first and second. This was some really great racing and a lot of fun. The contest was well organized and I feel all the contestants had a good time.

Class I Mouse 100 laps 2 pits

1st John McCollum Time = 4:55.06

2nd Russ Green Time = 6:34.32

Slow Rat 140 laps 3 pits

1st Mike Greb Time = 5:33.97

Texas Quickie Rat 140 laps 3 pits

1st Russ Green Time = 6:40.66

2nd Mike Greb Time = 6:40.73

2nd Bill Lee Time = 7:14.62

Sportsman Goodyear 160 laps 3 pits

1st Mike Greb Time = 7:43.60

2nd Dale Gleason Time = 8:03.84

Russ Green DNF

Goldberg 140 laps 4 pits

1st Russ Green Time = 10:21.73

2nd Dale Gleason Time = 11:09.69

3rd Dave Ek Time = 13:28.85

VIC GARNER ANNOUNCES RETIREMENT



In his own words from the Delphi forum;

"There are too many miles on the old body. I am just too exhausted after pitting a final race. So I am calling it an end to my competing in C/L racing. With that in mind I have some first class racing airplanes that now are for sale. I have in the collection..." "Thanks for your good thoughts. I don't want to go out like Jerry Who or the Whiz so this is the time to hang it all up. I was at a contest last Sunday and had warnings from the old body after pitting in Clown and TQR. Yes I will miss all you guys but now is the time to hang it all up."

MEMBER COMMENTS

Dear Vic, I guess you only stopped flicking the prop. Now there is a new chapter in your life: more fast engines tuned for the "survivors" of control line racing, giving us your advise and a bit of your know how. You have a lot of work to do. Kindest regards from the "fellow overseas", **Julio Isidro**

I wish I could afford to buy ALL your stuff. But I can't. Worse than that, I'll miss the opportunity to really test my skills against "The Great One".

From one old relic to another, I would like to talk you out of your decision simply so I wouldn't be thought of as "Old" whenever I get a chance to compete.

Although I could never seem to pay the price of commitment and dedication you payed so eagerly to become what you are, I could always look to you as an ideal. You were and will always remain a target for all us "old guys" to aspire to.

God bless you richly, and continue to care for you in every way possible.

Vic; "Thanks for the memories", and the dreams this old man still dares to dream once in a while. **John Bruman**

If there is anything I am getting better at as I get older it is appreciating people not just for their knowledge but for their friendship. To this extent, I appreciated getting to know Vic some time ago. I always look to him when I have a problem that I just can't figure out myself. Vic has forgotten more than most people will ever know about racing and engine rework. He has helped me quite a lot over the years and saved me much R&D time. Unlike others that tend to be secretive Vic is always straight up with me. A man of few words and infinite abilities. My kind of guy. I'll miss you in the circle, but look forward to corresponding with you on the forum & phone.

Tim Stone

Vic is the reason I participate in control line racing today. He purchased some old K&B 40 parts I was selling on Ebay and we started emailing each other. It had been over 25 years since I was involved in control line racing, but Vic rekindled my interest and helped me contact racing people in my area. Hate to see him retire. **Russ Green**

Vic is a great guy and I am sorry to see him go and happy to say I managed to buy his B team racer from him, which I shall treasure. Kind regards **John Starkey**

I first met Vic at the 1993 Nats. Since 1999 when Steve & I started attending the Nats in Muncie. I came to know Vic for the gentleman that he is. His presence in the pits will be missed. He has put up with some of my harassing comments with a smile and accepted it for what it was. If you can't have a little fun each day you should stay in bed. **Tom Wilk**

The only dealings I have had with Vic (other than the helmet bit at the Nats) was three years ago when my K&B 40 TQ engines were late in getting to me, knowing that they were coming from another source, he still offered me one of his to use at the Nats, it don't get any better then that!! Thanks VIC, **Bob Whitney**

It is a shame that we all have to get old. Vic Garner was always a contender to watch out for during competitions. I don't think that there are many of us that are capable of competing at the level that Vic always competed at. Even as a

senior competitor he could turn better times than most of the younger guys could turn. He has a lot of integrity and is true to his words about all aspect of the hobby. I have had quite a few dealings with Vic over the years and am saddened to see him not to be able to compete any more. This doesn't mean that he isn't still around to talk to. I will miss his presence around the circle at the Nats as will a lot of other people.

It has been my good fortune to have been a fellow competitor with him for all of these years. We will all miss Vic. It has been a great pleasure to have gotten to know him as a fellow competitor and as a friend and mentor in this great hobby. I am thankful to have gotten to know him and hope to still see him around the circle sometimes even if he isn't competing. **Bob Oge**

I'm saddened to hear of Vic's retirement. He's been a West coast racing icon since Arizona was a territory. Hope he still has time to attend and schmooz with us.

Chris Peter

I have only known and competed against Vic for the past three years. He was the one everyone looked to for the fastest equipment. His tuning of K&B 40s for TQ produces probably the fastest engines around. Although I don't take Quickie too seriously, we have met head to head in BTR several times. Right now I think it's a draw on who beat whom between us. I have managed to "steal" a couple of his speed secrets and he's never let me forget the source.

I can fully understand why he is hanging it up, and I am surprised he has held off for so long. I admired seeing the "old fart" out there doing his thing. He will be missed in the circle, but I know he won't be gone from participation. I'm sure he'll still supply parts for those of us who can't do it for themselves.

I do have one question for Vic.. Where did you get the gallons of red paint for your airplanes?

Don Burke

I've got to know Vic pretty well in the five years that have passed since I first met him. I feel it is no coincidence that my own racing results started to improve dramatically after I moved to Livermore and started to spend a lot of time with him.

I believe that what made Vic special as a competitor was his focus and dedication. He would identify an objective and go after it, employing an impressive array of skills to get him where he needed to be. There are other people out there who can build better planes than him, there are some people out there who can pit better or produce a better prop, and (maybe) there are one or two people in the U.S.A. who are sharper working on a race engine, but the fact is that Vic could take all his skills and combine them to produce racing airplanes that would run at the front of their class. Vic is a person who likes a challenge and having people throw rule changes at him to slow him down seems to have usually produced the opposite result - he'd go back to his shop, work on some engines and come back with something that met the changed rules and went faster.

What many people don't realize is that Vic also has a sense of humor - I'd like to think I am responsible for encouraging it, but a few other people (notably John Ballard, Bob Oge and John McCollum) should receive credit. On a number of occasions when I've been out having lunch with him and the waitress has asked 'Is that your son?' he's been able to smile while I give my standards reply 'No, I'm too good looking!'

Vic is also not nearly as frugal (tight-fisted) as a lot of people believe. While it is true that the first time I saw him he was digging through a garbage can for a nickel he thought he'd dropped in it by mistake, he actually credited me that amount on the first engine I bought from him after I told him that he could probably make more money by recycling the aluminum cans.

Vic is retiring, but I doubt he will disappear. I know he'll be seen at contests in California for as long as he wants to. I also know that he'll still come out and flip a prop for me at a Sunday practice session - I just wish he hadn't sold his hot thumb setup! **Jim Holland**

EDITOR'S COLUMN- TIM STONE

I have heard news that Bob Oge is getting his very own paved flying circle on his property as a birthday gift from his better half, Marty. When's the first contest, Bob???

NEW HAMSTERS

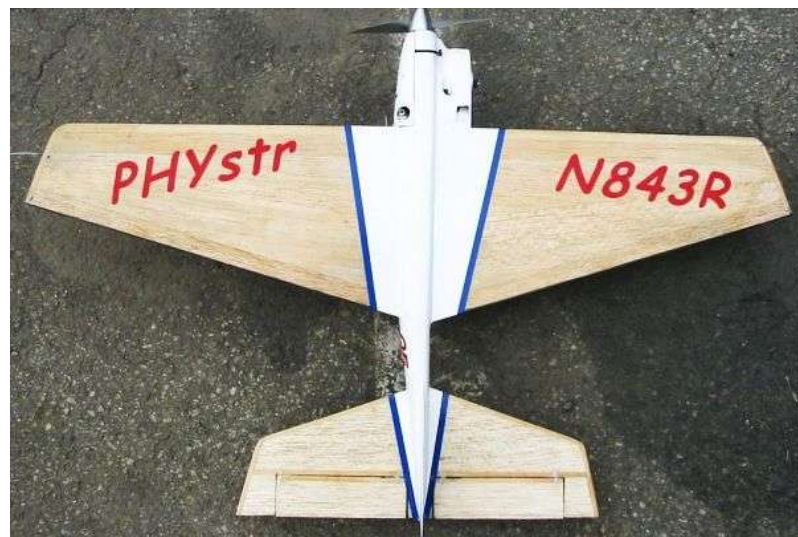
They're breeding! New .15 rats by Jim Holland & Don Burke are both sidewinder style using Nelson .15's set up by Henry with a minipipe.



Jim Holland's Hamster. Aluminum crutch & wood construction. Jim has gone to great lengths to fair in all the mechanicals & engine. Is it worth it? Back in the late '60's Rat racers Pat Flynn & John Kilsdonk both reported a 2 to 3 MPH increase in speed when they started covering the top of motor rather than leaving it exposed. This translates to around 3 tenths of a second for 7 laps, or 3 seconds for a 70 lap race, 6 seconds for a 140 lap race.



Don Burke's new A-Rat. Note that both Holland & Burke's Rats use a sub-rudder as has become the norm in some speed events. A lower angle of attack makes takeoffs & landings sweeter than a nose-high ground stance. Notice also that both have a generous elevator area necessary to flap down for pit stops. Both use what appears to be a replaceable titanium strut for landing gear.



Top view of Don's Hamster. Don's original design is unique in several ways. Wing is very low aspect ratio compared to most, and features team race style cross-laminations of wood. The cowl is fixed on the outboard side & serviced from the inboard side; a clever solution. Here's Don's comments;

"About the PHYSTR. It is Nelson powered, FAI TR size, I had a wing and stab laying around from a stillborn F2CN project. (That's where the name comes from "FAI (PHY) sized Hamster (STR). Sooo.

It's a profile crutch just like a quickie, but the engine goes in from the inboard side. The wing is 3/8 balsa just has CF strips inside the LE and TE. Outboard LE is basswood. We've had it for almost a year and have gotten two good flights. Starting and fuel feed problems. It only goes about 15 flat for seven. So it needs a little help there, but we're working on it."

MBS MODEL SUPPLY HAS MOVED

I received this update from Melvin & Brenda Schuette; "We are pleased to announce that MBS Model Supply has a new and improved web site, check us out at "members.cox.net/mbschuette". We have one item to fix

(being able to download our price list) which I hope to have fixed within a week.

We look forward to helping you out in the future

“WINGS OF PORTUGAL” CONTEST

By now many of you may have received an email from Julio Isidro about this event. Here is the text Julio sent;

“I’m pleased to inform that on the 9, 10 and 11 of September will take place the international tournament “Wings of Portugal” Évora 2005 in C/L and R/C.

The site is the local aerodrome of Évora a wonderful Roman town, 70 miles east of Lisbon.

We have a lot of classes in C/L, Vintage Speed and Team Racing, Goodyear, F2C National, Fox and Quickie Rat, Clown Racing, Old Time Stunt, F2B etc. In R/C we fly Old Time Powered and F3J National.

As usual I offer to all foreign participants, accomodation in a bed and breakfast basis, a banquet and a bus from the airport to the site.

You are very welcomed to enjoy our hospitality, lots of sun, good food and fun. “ Contact info for this event is via the web at www.clportugal.com

NATS NCLRA BANQUET

The NCLRA Banquet has been scheduled for Wednesday July 13th 7 PM at the Sirloin Stockade in Muncie.

NATS TROPHIES

Lonnie Estep has informed us that at the 2005 Nats there will be trophies awarded for both the Pilot & the Pitman. This is a nice addition and recognizes the team aspect of racing.

REBUILD #2

I recently completed rebuild #2 of one of Jerry Meyer’s Medflys for the 2005 season. I kept as much as the original airframe intact as I could, but I wanted to update it to keep it competitive.



A complete rebuild was in order this time as the nose had become oil soaked from years of racing. I have also made some improvements that should add to the life of the plane. The tailskid & landing gear are now replaceable bolt-on items, and so is the new main tank that I fabricated. The old tank was adhered to the wing with silicone, so if a leak developed it was not something that could be easily fixed. I have found that with these large airplanes the tailskid really takes a beating and needs to be replaced over time. The nose is quite a bit beefier than the original with CF plate doubler & ¼” aluminum mounts on top of, rather than recessed into the motor bearers. I used Klasskote paint, and am pretty happy with the results. Overall it is 4 OZ lighter than the original which should lessen the pull at the handle by about 5 LBS at racing speeds.



Photo sent to me by Bill Lee of Dave Hull’s new Texas Quickie Rat. Dave is starting off right with the proven Matson ‘Scorpion’ design & one of Vic’s K&B’s. Good pits & you should make the show, Dave...

GOODYEAR ADDENDUM

A lack of space in the April issue prevented me from including all the material that was sent to me. Les Akre submitted the following photos of Tim Gillott's Shoestring fueling & shutoff setup.



Jim Holland also sent me some better detail photos of his Bob Fogg composite Ohm Special.



Detail photo of wing, composite skins with balsa spars. Note the outboard wing leading edge is solid balsa; inboard wing is skins over the ribs. Tiny access holes for flying wire connection.



Front end detail minus engine. Note tank moulded into the wing structure. Conventional mouse trap shutoff.



From any angle a very slick setup. This plane holds both the current Goodyear record as well as the .15 Rat record! Semi transparent body reveals underlying crutch structure. This model is over 10 years old, but still a standout in design & innovation.

NEW CONTEST –NORTHERN CALIFORNIA

Randy Bush sends this info;

“I hope you can make it to the Northern California Race at Napa on Aug 6 & 7. This is a new, dedicated control line circle in the Napa Valley - a great site for a two-day contest. Many members of the Southern California Air Racers (SCAR) live in Northern California. And many of us have enjoyed racing in the NorthWest and the SouthWest. Now that we have a central west coast venue worthy of your travel time, SCAR and CD Jim Persson look forward to seeing you there.

For more information, you can contact me, Randy Bush, rbush88@juno.com , 510-533-7134, or Jim Persson, Contest Director, at 925-846-3999.

PITTING- BOB WHITNEY

Why would anyone want to stick their finger in a prop time after time, just to get it hit time after time?

I used to think I was a good pitman, and then I met Dick Lambert, the GENERAL!. Anyone can learn how to start an engine. I will get back to that later. Dick knows how fast his plane goes and he knows how fast yours is going, he will ask you when you want to pit, and pit accordingly, 2/3 the way through the race he can tell you how many laps he has, and who is leading, his planes are always ready when he gets to the field, he knows what prop and glow plug [the old days] he is going to run because he spends time testing.

Starting an engine is a matter of practice. If you listen to an engine 99% of the time it will tell you what it wants to start. It will tell you if its flooded or dry. Two common things I see at almost every contest is 1, two min warm up, the pitman starts engine two or 3 times with no problem then at 30 sec completely changes his procedure, why he just started it 3 times!! The other thing is usually in Fox racing, the pitman finger chokes engine when he flips the prop the engine starts with a gurgle and dies, this engine is case flooded, pitman again finger chokes the engine with the same results. A 3rd problem is engine starts and dies as if shut off is closed [is it] this engine is dry and needs to be primed before it will start.

You must be comfortable when you are pitting. Some keep the plane on the ground others lift it up to start it. When using a hot glove you must find a way to hold the plane that feels good to you. I find that when using a quick clip, a second person makes for a faster pit. Again practice so you don't bump into each other. He can put the clip on as you are filling the tank. When the engine starts the second person pops the clip off with a flick of the wrist.

One trick I have found to work well in Clown, and in Fox, when tank is full tip nose down, give short squeeze, the fuel will run out the venturi, then hit that mother!

The battery is next, more than once I have had a nicad go dead in the middle of a race. I have found that a 12 volt power panel will stay charged for a month or more on a charge, pick a panel with a dial to adjust the glow it should be a dull red, for mouse 1&2 I use a battery from radio south strapped to my arm, I use one for mouse 1, and one for mouse 2.

In the actual pitting you need to try to set up the plane so that you catch it with your right hand, a quick fill should be filled with the left hand as the shut off is reset with the right hand. If on suction have the bulb close to switch hands and fill with right hand. Every extra move you make is at least ½ lap lost!.

When starting an engine on pressure, make sure you don't flood the engine through the pressure line. Find out if it needs to be turned over once or twice or just flipped, or hit.

You and your pilot need to practice together so he knows how fast he can safely bring the plane to you. You need a signal to tell the pilot when to pit. I use a horn to tell my pilot he has two laps to get the plane on the ground. I hope all this gibberish is of some help.

PITTING AMA RACERS-DON BURKE

(Photos: Pete Soule and the author.)

Pit stop technique is a subject that is generally taken for granted. This article pertains to rules and procedures for AMA racing (FAI (F2C) uses some different procedures). To be done right, pit stops have to be PRACTICED with your usual pilot. Although "teams" can be formed on the fly at a contest, the consistently successful teams practice together enough to know what each other is going to do when an abnormal situation occurs during a race. Even with practice dumb things happen (more about that later). Years back I was part of an FAI Team Race team. Even though we had practiced almost every weekend for a year, with contests at least once a month, when we got to the World Champs there were enough inexperienced teams flying unusual situations happened. For instance, we had never practiced what to do when someone else occupied our pit. At that time in FAI races you had to pit at specified unoccupied stations on the circle. I had to move just before a pit, but my pilot didn't know I had moved. He landed a little hot and I missed the catch. Things like that had never happened to us before because we flew with other experienced teams at home. Unusual things happen when inexperience is a factor. You have to know what to do.

The first thing to know is all the rules. "Ignorance of the rules is never an excuse!" Go online and download the CL Racing Rules from the AMA web site. They're in PDF format, downloadable with the free ADOBE "ACROBAT READER". This can take a while on basic internet service but is essential for everyone to be aware of.

The field layout consists of four concentric circles. The smallest is the Pilot's Circle and is the one where all pilots are supposed to be while racing. The next one, the "Pitting Circle", is the limit of where the pilot can maneuver while the airplane is moving. The next, the "Safety Circle" is the limit where a pitman can enter the racing zone without the Event Director's OK. The "Outer Circle" defines where an airplane can be serviced.

Know for sure ahead of time where the Safety Circle and Outer Circle are and your pilot should know that he can't cross the Pitting Circle while the airplane is moving. With the multiple layouts on our circles it's easy to get confused. Some pilots use a small colored sandbag on the ground just outside the Pitting Circle so they have a visual reference of where they should be when the airplane is being serviced.

Make sure that when you pit at least the airplane centerline is on or outside the Outer Circle. Don't succumb to what I've heard after DQing a team, "Aw, today's only a practice race, not the NATS!" If you get used to doing things at a "practice race" you'll do it at the NATS too!

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In this picture the airplane centerline is on the outer circle. Though he's kneeling his legs won't get hit by the outboard wing.



In this picture the pitman is well equipped. There's a little problem, he's a little inside the racing zone! The pilot caused this by standing at the Pilot's Circle. He should have been at the proper Pitting Circle for the line length. This was taken during a practice and the pilots and pitmen were informed and in the right place for the race.

Know what to do for unusual happenings. For instance, the pilot doesn't quite get the airplane to you or you miss a catch. With your battery and fuel bottle in hand run around the circle to outside where the airplane stops. Never cut across the circle to get there! If you're lucky and it's close enough to reach without crossing the Outer Circle just grab it and do your thing. If it is not inside the Safety Circle you don't need the event director's OK to pick it up, just be aware of what's going on. Move on a circle radius and pull it out to the Outer Circle and get to work. If it's in the "Racing Zone" (inside the Safety Circle), inside the inner circle, wait for the event director to give you a signal before entering the racing zone to pick it up. NEVER, NEVER, NEVER, move the airplane around the circle. I have been pitting and had an inexperienced pitman jump over me and my airplane because he thought he could save time by taking the airplane back to the fuel and battery he left behind. He jumped over just when I started the engine. My pilot used the shutoff and prevented what could have been a really nasty occurrence. That was one time we were fortunate to have had a "safety-only" shutoff on the airplane.

Practice starting your engine, even on a test stand, and remember an engine on its side will start differently from an engine on upright or inverted one. A lot can be learned when there's no "pressure of the moment." If you MUST pick up your airplane to get a good whack on the prop two things are

required. First, be sure that your lines off the ground are not a hazard to other teams. I've seen one pitman who had his airplane so far off the ground while flipping that the next airplane taking off behind his location went UNDER his lines. Needless to say it was a preventable error. Secondly, a much better thing to do is find a prop position on the engine that allows you to give the proper flip while the airplane is on the ground. Make sure the prop is in the right position to be flipped. Some need a more upright location so they can be firmly whacked.

All racing rules that I know about require "Rise Off Ground" (ROG) takeoffs. So, if you've picked your airplane up to start it place it back down on the ground again for release. Hand launching is a no-no. Some events specify "Unassisted ROG" which is defined as no part of the pitman moving in the same direction as the airplane.

Pay attention to little details:

At the NATS and at some local races the pitmen must wear hardhats. If your local rules don't require them, get them changed! In any case ALWAYS wear a hard hat. I've been bonked by a taking off FAI TR, tain't no fun. I use a baseball type because that kind of helmet has ear/temple protection. The bicycle types don't have this feature. Always keep the chinstrap in use, leaning over and dropping your hat onto the airplane can be a real bummer! That also applies to things in a shirt pocket!

Do you have adequate protection for the hand you use for starting? One of the best things I've been introduced to is a "filet glove" inserted into a leather glove. Check with your local fishing supply store. You don't have to worry about cut fingers with one of these! Or you can use a "chicken stick."



He's using a chicken stick- but could be DQ'd for being inside the Outer Circle!

-Is the needle valve sticking out enough to be hit by you when flipping the prop?

-Is the needle valve accessible without sticking your finger into the prop, OUCH!.

-Do you have access to the venturi to choke it if necessary without hitting the prop? If not what do you do to get the proper prime, in the exhaust, in the venturi, or by forcing fuel into the engine with fuel bottle pressure?

-Where's the tank filler? Can you reach it when the glo-plug connector is on, or when the hot glove is on the contacts?



About to give it a drink! The tank filler is easy to get at.

-Where does the tank overflow go? Inboard or directed at the ground outboard are safest. Some classes have engines that run a little hot. For those I direct the overflow at the cylinder head to help the restarts. I haven't had a fire yet, but that possibility exists!

If you have a pinch off on the tank vent put it where you can easily get to it while filling the tank.

Knowing how much "prime" a particular engine needs is essential; they all seem to be different. Some need the feed line to the engine filled by the filler bottle, some flood immediately if you don't stop filling when the fuel appears in the overflow. If a shutoff is allowed it can be used to either help a prime or prevent a flood by knowing when it needs to be reset.

How much fuel do you need in the bottle for a race? I generally use an 8 oz squish bottle as they're easier to handle. I keep at least one spare filled with race fuel so I can swap the filler neck between pits. I like to keep the bottle at least half full so I don't have to worry about whether fuel is going into the tank or not.



These are two of the bottles I use. The one on the left is for "fast-fill" type tanks and the other non-fast-fill.

Does your fuel bottle match up to the tank effortlessly or do you have to plug something into something else?

What kind of battery do you use and where is it located? A wrist mount gives me the best results. I have two setups, a "Radio-South" glo-driver and a normal metered glo-driver from Hobby People. One has an LED string and the other a meter to show glo-plug condition. I have modified both with a connector at the unit. I have a variety of interchangeable leads depending whether a hot glove can be used. Also each is mounted on a "wrist brace" that I got at a bowling alley. They're very easy to take on and off.



How easy is it for your glo plug clip to come off the engine when it starts? For classes that do not allow hot gloves, I work on the clip with a small diameter DREMEL bit to make sure they won't hang up and cause a wingover on takeoff. Some think that having two pitmen is quicker. One fills the tank and flips the prop; the other puts the clip on the plug. To me, though successful, it introduces another human into the process and would take more practice to get it right.

Hot glove contacts. I have used fuselage and the wing leading and trailing edge contacts. I prefer the fuselage types. Using the wing contacts is in my opinion the primary cause of takeoff crashes. I think that by holding the airplane by the wing it's easy to impart an inboard yaw when releasing. Pilots get a little irate when staring down a crankshaft!

Do you have a spare plug, plug wrench, prop and prop wrench handy? In most cases if you have to change a prop or plug the race is over for you. But I have won a final race (including a plug change) when the other teams had more trouble than we did! See the pic of Vic Garner's outfit; he's got everything in a nice little tray with a handle. I usually forget to set up something like that, but I intend to! The road to H*** is paved with good intentions.

If you're competing in a class with shutoffs, know when to make a pit stop. There is a small advantage to staying up if the others in the race are pitting. And if you pit while they are flying you don't have to worry about avoiding them on the ground. Even though the rules put the safety responsibility on the airplane on the ground, it's a lot easier to finish a race than possibly have to make repairs and start over.

When the engine cuts off, by shutoff or runs out of fuel, get ready for the landing. You will normally have your battery on your left arm (right-handed pitmen), and your fuel bottle in your left hand.

PITTING- BY BOB OGE



Here everything is in an easily moved tray, right where it should be.

A good glove on your right (catching) hand helps take some of the blow, especially for a prop catch. The major disadvantage of a prop catch is the possibility of breaking the prop.. Your pilot should know whether he/she should land fast for a wing catch or a little gentler for a prop catch. Both have their advantages. The wing catch is faster, the prop catch better for airplanes with built-up wings. In either case I have found that if the pilot is having trouble getting the airplane on the ground, arrange ahead of time with him/her to have the airplane moving flat & level, even if it's off the ground. If it's bouncing around it's a much worse target to catch. Most rules permit mid-air catches, some specify that the airplane must have contacted the ground at least once before the pitman can touch it.

During the race, know what lap you're on or how many laps you've gone since the last pit. You should have practiced enough to know how many laps you can get per tank with a particular setup. That way you can signal your pilot to shutoff, or be ready for the next stop when you can't use a shutoff. Don't do what I recently did. I started watching how another team's pit stop was going and missed the engine cutoff on ours. My pilot made a really good landing, but I wasn't looking at him or it. My first clue was an airplane coasting to a stop 1/8th of a circle away. Just plain dumb on my part. Lesson learned, "Watch your airplane and pilot, know what's going on all the time. Don't become a spectator!"

One last comment. This article discussed pitting techniques, there are some piloting issues that need to be addressed. The least of which being the pilot needs to know where he should be when he's not flying and others are. Sitting or lying down is required by the rules. Most important he needs to be outside the Pitting Circle so he won't interfere with other pilots taking off or landing.

And to repeat **PRACTICE, PRACTICE, PRACTICE.** There's nothing better than having a "motor reflex" response. If you have to think about what to do next, you're burning daylight!

Almost everything I learned from pitting was self taught with the help & guidance from my Father. Back when I was a kid I used to cut lawns. My Dad gave me an old 2 cycle mower with an exposed rope-wound starter on top. Having seen my Dad start it by hand with no rope, I decided I could too! I would grab the bare pulley and flick it quickly to start it. Many years later people are amazed to see me hand start a .65 speed engine, but they are much smaller than what I learned on!

My first models were 1/2 A like many people. OK Cubs and Wen Macs were the first motors I started out with. My Dad designed a plane that looked like a bird, and I flew the heck out of it! I still have that plane minus the tail feathers.

Well enough of this other stuff. So you would like to know my opinion about how to pit model airplanes. The first thing that should be done is to take the engine and put it on a test stand and give it a proper fuel supply. Next, take off the glow plug and check it to see if the element is in the correct shape and in working order by lighting it up in your hand. If the plug glows real bright you need to cut down the power a little. If the plug does not glow at all you need to turn up the power until you can see the red glow a little. Or if necessary replace the glow plug making sure the new plug is good. Then reinstall the glow plug. According to its displacement, you have to put in a prime. I have found out over the years that on a cold start you need to put in four drops of fuel into an .049s intake and one drop in the exhaust. Make sure that the fuel is up to the needle valve. Flip the prop through several times to get this small amount of fuel sloshed throughout the insides of the engine. Put the power supply to the glow plug and then flip the prop hard, fast, and completely through compression. When you flip the prop you need to flip it from the area near the hub. This will make the prop go through the compression faster than if you flip it from the outer parameters of the prop. If the engine does not start with this, put in one more drop of fuel into the exhaust, and try to start it again. If it does not start this time it is obviously a bad engine and you should just throw it away! No, just kidding. You have to remember that the smaller the displacement an engine is, the easier that it is to flood. If it is flooded the only thing to do is flip flip flip until it starts.

When you get the engine running you need to let it get completely warmed up. Then pinch the fuel line if it has one to stop the engine. Then after it is stopped for about 30 seconds put the battery on it again and try to start it again. If it won't start right back up you need to figure out just what you need to do to get started again. Does it need a small prime? Does it have too much fuel to start? Is the plug still good? These are the most important things to have to remember. You need to start and stop the engine as many time as it takes to see just what the engine needs to start on one flip. Then when you transfer the engine to a plane you will have a better idea as to what you need to do to have the engine cooperate for you. You might have to go through the same process when the engine is on your plane several times to see if the starting procedures are the same as when it is on the bench for the restarting process. Then you need to put in

the air and see if the starting procedures change again. Remember that these engines are made to run. They almost all can be made to start in one or two flips if you work with them. It is important to remember that each engine is different. What works on one engine may not work with another engine. Practice on how much fuel to prime with for each different engine you use and your pitting should go smoother.

Another thing, when pitting a plane in competition or in practice, try to be consistent in what methods you use for each engine and plane. Sometimes an engine will act differently when on the plane than how it started on the test stand. Subtle nuances will make a difference. Once you find out what method you used on a good start stay with it. If you have several engines, you may want to keep a log of how you started each different engine.

The best thing is practice, practice, practice until it comes naturally without thinking.

I have found that some engines like the K&B 40s start best when you bring the prop up to forward compression and hit it backwards hard. This engine will usually start best this way if it has the right prime.

Sometimes when pitting an airplane, it works out best to either bump the shutoff on a pressure system just for a moment to let the prime get to the engine first before filling the tank. You can flood the engine very easily if you do this too long. Sometimes you can fill the tank and open the shutoff on the last little squirt of fuel going in the tank. This also can help get good pits. But again, this can flood the engine if not done correctly. That is where the practice practice comes in. Knowing your engine and how it starts before competition is a big factor.

In regard to safety... Whether you are a beginner or an old pro, remember to think safety and protect your fingers. A good fitting leather glove really helps to avoid those nasty cuts and scars and even worse a trip to the emergency room.

Good luck with your pitting. I hope this helps. Now go out and hit it hard.



St. Louis May 15 Contest results

Nice weather but typically low turnout for the first Midwest race of the year. Weather was cool and field elevation of around 400 ft amsl always makes for some good times. Fox Racing had 2 times below record, and it was our first race with the .292 venturis on Texas Quickie Rat.

NCLRA Fox	Heat	Final
1) Tim Stone	5:42	5:27
2) Jason Stone	5:59	5:54
3) Gary Frost	5:35	DNF
4) Bob Oge	6:42	
5) Alan VanArtsdalen	8:08	
6) Steve Wilk	DNF	

Texas Quickie Rat (70 lap)

1) Tim Stone	3:17
2) Steve Wilk	3:24
3) Jason Stone	3:40
4) Bob Oge	4:05

2005 Contest Calendar

NOTE!! *Confirm dates, locations & events with the CD or contact listed below. NCLRA cannot be held responsible for changes, errors, omissions, etc.*

Dallas Aero Summer Heat June 18 Racing events will be held on Saturday the 18th. Site: Hobby Park Dale Gleason CD, 6003 E. Lone Oak Rd. Valley View TX 76272 940-637-2169 Events: Goldberg, TQR, Sport Goodyear and Mouse I

SCAR Race #3: Pre Nats Warmup

June 26, Merced, CA Merced High School

Events: AMA Scale Race, NCLRA B Team Race, NCLRA Clown Race, NCLRA Quickie Rat, LA Fox Race (Time Permitting)

Event Director: Jim Holland (209) 726-0357

E-Mail: jgmholland1959@yahoo.com

SOUTH JERSEY JUN 26

Warbird, Fox, Foxberg. CD Phil Valente 610-692-6469

AMA National Championships

July 10 – 15, Muncie Indiana

Events: See NCLRA web site for details

SOUTH JERSEY JULY 24

1 oz GY, Clown, Foxberg. CD Jim Gall 973-546-2099

SCAR Race #4-Northern California Control Line Racing Championship Sat. & Sun. Aug. 6 & 7, 2005, Kennedy Park, Napa, CA

Saturday Events: AMA Goodyear, NCLRA Flying Clown, SCAR Formula Unlimited, NCLRA Super Slow Rat / Fox (combined)
Sunday Events: AMA 15 Rat, NCLRA B Team Race, SCAR Goodyear, NCLRA Texas Quickie Rat
Prizes to 3rd in all classes
Start time: 9:00AM sharp both days
Hwy 121 to Napa. Turn into Kennedy Park and follow signs to model area. For info call: CD Jim Persson 925-846-3999

SOUTH JERSEY/ READING PA. AUG 13

Foxberg, Flying Dutchman, Reading, PA. CD Phil Valente 610-692-6469

SOUTH JERSEY AUG 28

2 oz Big GY, Warbird, TQR. CD Brian Silversmith 732-274-8945

DALLAS TX Charles Ash Memorial September 3

Racing events will be held on Saturday the 3rd.
Site: Hobby Park Bill Bischoff CD, 2609 Harris Dr. Garland TX 75041 972-840-2135 Events: Slow Rat, Goldberg, TQR, Sport Goodyear and Mouse I

Rocky Mtn. Aeromodelers Sept 3-4

All Speed, Mouse 1, NCLRA Fox.

F2C TEAM TRIALS SEPT 3-5 PALM BAY FLA.

Practice Sat, Trials Sun & Mon. Contact Bob Whitney

SCAR Race #5-September Bash

September 11, Sepulveda Basin, CA

Events: AMA Mouse 1, SCAR Formula Unlimited, LA Fox, NCLRA Quickie Rat Event Director: Jim Holland (209) 726-0357 E-Mail: jgmholland1959@yahoo.com

EVORA AERODROME-PORTUGAL

SEPT 9,10,11 "WINGS OF PORTUGAL"

Control Line: Handicap and Vintage Speed, Old Time and Classic Stunt, F2B, Vintage Team Race, Barton B, Fox Racing, Quickie Rat, Clown Racing, Goodyear, F2C Nacional, Phantom Racing, Phantom Speed I and II. Register online at www.clportugal.com

SOUTH JERSEY SEPT 25

Warbird, TQR CD Tom Tabar 856-455-6436

Salem, Oregon, October 8 & 9, Fall Follies

racing event(s) to be announced

SOUTH JERSEY OCT 16

Fox, Foxberg, 1Oz GY. CD Lester Froelich 610-384-5046

SCAR Race #6: Virgil Wilbur Memorial October, Whittier Narrows, CA

Saturday Events: AMA Scale Race, SCAR Formula Unlimited, NCLRA .15 Rat, NCLRA Clown Race, NCLRA B Team Race
Sunday: AMA Mouse I, LA Fox Race, SCAR Goodyear, NCLRA Quickie Rat
Event Director: Jim Holland (209) 726-0357
E-Mail: jgmholland1959@yahoo.com

SOUTH JERSEY Oct. 30

1oz GY, Clown. CD Larry Bush 610-383-5045

SCAR Race #7: Toys for Tots

December 4, Whittier Narrows, CA

Events: NCLRA Clown Race, SCAR Goodyear, SCAR Formula Unlimited, NCLRA Quickie Rat
Event Director: Jim Holland (209) 726-0357
E-Mail: jgmholland1959@yahoo.com

RESULTS SCAR RACES - 5-1-2005

EVENT: TOR

PILOT	MECH	RACE1	RACE2	best	FINAL	AIRPLANE 1	ENGINE	PROP 1	WT1 - oz
Holland	Garner	3:05.40	dns	3:05.40	6:36.59	VG-special	K&B 40		23
Duly	Burke	3:29.53	3:23.69	3:23.69	7:00.29	LARQ	K&B 40	APC 7.8-7	24
Kovach	Dawson	3:33.97	dns	3:33.97	8:37.10	Dawson Special	OS MAX 40		
Hull	Patwell	3:42.94	4:11.66	3:42.94	dns	Rattler	K&B 40	APC 7.8-7	29-1/8
Kusik	Murphy	37 laps	dns	37 laps	dns	Barracuda	K&B40	APC 8-7	25-3/4
Kusik	Holland	4:15.50	dns	4:15.50	dns	Barracuda	K&B 40	APC 7.8-7	
Hart	Scroggin	6:06.85	DNF	6:01.85	dns	Prplpletr	OS MAX 40H		27-1/8
Hart	Scroggin	DQ	DNF	DNF	DNS	LE Brick	K&B 40		27

EVENT: CLOWN

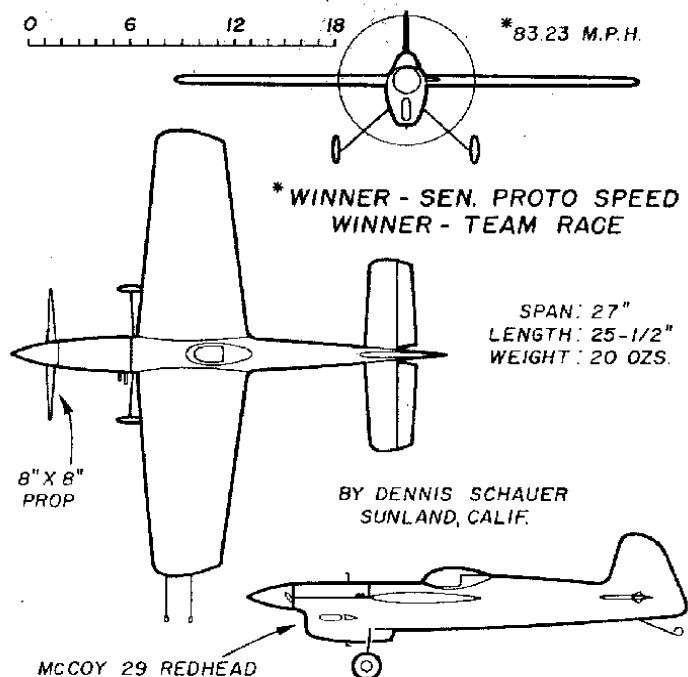
PILOT	MECH	RACE1	best	FINAL	AIRPLANE 1	ENGINE	PROP 1	WT1 - oz
Kusik	Holland	131	131	289	Kenn Smith	Profi	7-1/2	
Duly	Burke	150	150	264	Brodak	FORA 15	APC 6.5-6	16-1/2
Kovach	Garner	123	123	219	Kenn Smith	MOKI		19-5/8
Hull	Patwell	86	86		Kenn Smith	MVVS	APC 7-5	20-1/8
Turnberg	Patwell	55	67					
Kusik	Kusik	37	37					

EVENT: SCAR GY

PILOT	MECH	RACE1	FINAL	AIRPLANE 1	ENGINE	PROP 1	WT1 - oz
Turnberg	Patwell	10:51.66	10:20.35				
Hull	Patwell	8:37.57	16:56.51	SIG Buster	OS 15 CVA	APC 6.5-5	24-7/8
Kusik	Holland	4:38.46	DQ	Judy Wagner Solution	Moki 15	MA 7-6	19
Kovach	Dawson	73	not in				

EVENT: MOUSE II

PILOT	MECH	RACE1	RACE2	FINAL	AIRPLANE 1	ENGINE	PROP 1	WT1 - oz
Kusik	Holland	3:12.88	3:20.16	DNS	VG Special	Cyclon	APC 4.5-3.5	10
Kovach	Dawson	dnf	34laps	DNS	Dawson spec	cyclon	ukr combat	9-1/8



Ron Duly submitted this drawing of fellow club member Dennis Schauer's 1955 Nats winning team racer. Very nice lines and would probably be competitive today in 'B' team race.

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