







#### AMA CLUB 668 **SINCE 1968 RACINE RADIO CONTROL CLUB INC SINCE 1968**

**RRCC** November Issue November 12, 2023 Newsletter

## WE ARE ON THE WEB www.racinercclub.com

	<u>1</u>			
Club Officers	Racine R/C Club Meeting Minutes			
President	October 15, 2023			
James Litwin $2(2, (27, 2787, (C_1), 2(2, 020, 7026)))$	Time: 1:00 PM			
202-03/-2/8/ (Cell 202-939-/920)	Location: R/C Flying Field			
president@racinercerub.com	<b>Open Meeting</b> - Jim opened the meeting at			
Vice President	1:00PM. 17 members in attendance.			
Koger Nickolaus	Welcome - New Members & Guests – There were			
414-403-8004	no quests or new members.			
	Minutes - Last Meeting – There were no changes			
Secretary/Treasurer	to the published minutes			
Bob Johnson 84/-421-5494	Reports			
secretary@racinercclub.com	<b>President</b> , lim Litwin thanked everyone who			
Field Chairman	showed up to help enclose the shelter. Nice to he			
Irygve Smalley	warm and dry as we approach the winter months			
414-940-0929 field@reginercalub.com	Reminder we will be voting on proposed Field Rule			
	changes at our next meeting. Let lim know if you			
Safety Officer	want to add your name to the ballot for an officer's			
Jarrel Hoss Hossalla	nosition			
414-031-0900 safety@racinercclub.com	The Board of Directors and two members at large			
	(Terry Poterson and Stove Knackert) did meet prior			
Iractor Chairman	to the publiching of the Newsletter and recommend			
262 408 1035	ed no now or alternate changes to the Ry Laws or			
tractor@racinercclub.com	Evention new of alternate changes to the by-Laws of Events			
Compost Director	Field Rules.			
Chuck Roberts	to report			
224-717-9998	to report. Coerctery/Tressurer Dah, Johnson, unable, to at			
compost@racinercclub.com	Secretary/ireasurer-bob Johnson unable to at-			
Webmester	tend. Jim Litwin gave a report on membership sta-			
Ron Haves	lus and checkbook balance.			
224-355-7651	Current membership as of this newsletter.			
web@racinercclub.com	Conjor Momboro (11			
Newsletter Editor	Open Members 41			
Dennis Vollrath	Upen Members 15			
Cell 262-994-6342	Junior Members			
newsletter@racinercclub.com	10tai 58			
	Norralattan Editan Dannia Mallmath Isada (1.1			
	<b>Newsietter Editor</b> -Dennis Vollrath had nothing new			

to report. <b>Field Chairman-</b> Trygve Smalley thanked everyone for the help setting up the shelter walls. Still need grass cut- ters. <b>Tractor Chairman-</b> Eric Armantrout had nothing new to report. <b>Web Master-</b> Ron Hayes had nothing new to report. <b>Safety Officer-</b> Darrell Hossalla had	discuss. <b>New Pilots</b> – None <b>Show &amp; Tell</b> – Wayne Greisen had a Funtana 40" plane he offered free for the taking. Dennis Vollrath gave a demon- stration of a "Fire Breathing" engine he built years ago. <b>Raffle Drawing</b> – Jim Litwin won the raf- fle and donated \$11,00 to the club. Total				
nothing new to report. <b>Compost Director</b> - Chuck Roberts re- ported that everything is going well. <b>Old Business-</b> Nothing to discuss. <b>New Business</b> – Nothing brought up to	raffle was \$23.00. <b>Close Meeting</b> – Jim closed the meeting with a reminder the next club meeting will be Sunday November 12 <sup>th</sup> and we will be voting for 2024 officers and Field Rule changes.				
JIM'S CORNER As I write this article, winter has arrived. Snow and salt trucks on Halloween? We	posed Field Rule changes in the previous newsletter, or elsewhere in this newslet-ter.				
<ul> <li>don't need that already. Enough complaining.</li> <li>Our next club meeting is on Sunday, Nov. 12<sup>th</sup>, a week earlier than usual to accommodate the deer hunters. At this meeting we will be voting for the year 2024 club officers, and on the proposed Field Rule changes.</li> <li>As expected there has not been any requests from anyone to be included on the ballot for consideration as a club officer. There is still time to be nominated for an</li> </ul>	Either way, the ballot to be used for vot- ing on these proposals will include the existing language, as well as the pro- posed change / language. There will be an opportunity for discussion on each be- fore you mark your ballot. I'm hoping there is another day or two of nice weather for flying before packing it all away for the season, but we'll have wait and see. Fly Safe & Have Fun!!				
officer's position prior to the vote for these positions. Hopefully you have reviewed the pro-	Jim Litwin President				
PROPOSED 2023 FIELD RULE CHANGES Published in the Oct & Nov newsletters Voted on at the Nov 12 <sup>th</sup> Club meeting					
Current Field Rule # 3 3. No flying while grass is being cut or fieldwork is being done.					

Proposed Field Rule #3 Delete Rule (Content included in proposed Field Rule #10)

## Current Field Rule # 7

7. No flyer, except those using only 2.4 ghz radios, shall turn on his/her transmitter un-

less he/she has inserted their Club card into the frequency board slot showing their transmitter channel number. Guests are only required to insert their AMA card.

#### Proposed Field Rule # 7 Delete Rule

### **Current Field Rule # 10**

10. There should be NO intentional flying over pits, parking lot or railroad tracks at any time. Furthermore, when the compost site is open for residents, there should be no intentional flying over the compost site, and our grass flying field immediately to the south of the compost site and north of our pits (marked "compost no-fly zone" on the diagram below).

When the compost site is closed to residents, and only maintenance staff are working the compost site area, club members may fly over our west end grass field while the maintenance staff are in the compost site. WE CANNOT FLY OVER THE COMPOST SITE !!

Pilots may land, takeoff, or fly through the "slot" between the flight line and the compost site and do a "Split S", an "Immelmann Turn" or a "Procedure Turn" or "Turnabout" maneuver over the farm field to the west of our flying field, and return back east staying over our grass field. STAY AWAY FROM THE COMPOST SITE.

### **Proposed Field Rule # 10**

**10.Restricted flying:** 

There shall be no flying while flying field grass is being cut or fieldwork is being done. There shall be NO intentional flying over the pit area, parking lot, or railroad tracks, or south beyond flying field wind socks.

There shall be NO flying when the compost site is open for residents.

When ONLY Village workers are in the compost site, limit flying so as to not fly directly over the Village workers.

When the orange safety flag is displayed on the west wind sock pole, Drone Company (MENET AERO) may be testing drones by flying them. Do NOT fly near trees located northwest of flying field / compost site.

See Diagram below for guidance

\_\_\_\_\_

#### **Current Field Rule #11**

11. Antenna must be down, transmitter placed in impound rack and AMA or Club membership card removed from frequency board, when you do not have access to the frequency for all radios except for 2.4 ghz radios.

## Proposed Field Rule # 11

Delete Rule

#### \_\_\_\_\_

**NOTE:** If any existing Field Rules are deleted, remaining Field Rules will be renumbered to a new sequential listing.



# **Dennys Stuff**

The RRCC members that attended the October meeting saw your editors "Fire Eater" engine running. This is a rather strange engine that was only designed as a "Toy" and never saw any commercial power use.

But, now it would be interesting to cover just how we got here, based on where we came from back in the mid 1850's.

Back then, steam power was the only source of power, and the main use was for locomotives of that era. These steam locomotives used a phenomenal amount of coal, with their boilers running at a few hundred Pounds per Square Inch. And, they had pistons that were a foot or more in diameter.

The efficiency of those old steamers was awful to say the least. Most steam engines of that era converted only around 5 or 6% of the energy in the coal fire to turning its wheels.

Next, we had the sterling engines around the late 1800's time period. Both the Steam engines and the Sterling engines were "External Combustion" engines that depended on an external fire to provide the energy to move the engine piston back and forth.

How those Sterling engines takes more details than is appropriate for the RRCC newsletter. But there is a LOT of information on them in the Internet. The Sterling engines were often used to pump water a century ago, and a 1000 pound Sterling engine had less than one horsepower.

Next on the history trail is the gasoline engine. The very early gas engines of the late 1800's did not have spark plugs.



The "Points" of the ignition system was literally inside the combustion chamber. That made the ignition system unreliable at best, but that's what they had back in that time period.

The photo on the right shows a gas tractor of that era. It only had about a dozen horsepower.

This is something to keep in mind when you consider when the Wright brothers built their first airplane. The 12 Horsepower engines of that time era weighed around a half ton, obviously not suitable for aircraft use.

The Wright brothers had to design and build their aircraft engine from scratch back then.

The gasoline engines were the first power sources to use "Internal Combustion" where the gas vapors were first compressed, then ignited. The resulting expansion of the combustion then pushed the piston down, turning the engine crank shaft, while developing rotary power on the output shaft.

Here is were we first run into compression pressures in an engine. Typical compression pressures in a modern gas engine runs in the neighborhood of 120 Pounds per Square Inch (PSI). Back in the early 1900's efficiency of those gas engines wasn't very good. A modern gas engine can approach converting around 25% (maybe 30%) of the energy in a gallon of gas to rotating the engine crankshaft.

In that same time period, the Diesel engine came to life. Diesel engines have much higher compression than a gas engine.

A running diesel engine with 16/1 compression ratio hits 500 PSI as the piston hits the top of the combustion chamber. But, compressing air also generate considerable heat in it self. So the temperature of that compressed air is around 800 to 900 Degrees F.

When the Diesel engine injectors spray a diesel fuel mist into that 800F air, it immediately ignites, the expanding gasses again pushing the piston down, rotating the crankshaft in the process.

The efficiency of a big Diesel engine can be pretty high, turning some 38% to 40% of the energy of a gallon of diesel fuel into turning the engine crankshaft. That alone ended the old steam locomotives era.

Those diesel engines can be very massive. An example is one of those container ship diesel engines, where the engine crankshaft alone can weigh several hundred tons. Typically, these giant engines burn one gallon of heavy fuel for each revolution of their crankshaft.

Next on the list is those gas turbines, used all over the place, in aircraft, stationary gas turbine engines and the like. The efficiency of those giant gas turbines is pretty good, running around 50% or so. Typically they use the hot gas exiting the gas turbine to pre-heat the steam in a downline steam turbine, adding to the overall efficiency. Gas turbines and jet engines also have a whole rack of compressor blades, that compress the incoming air to several hundred PSI before the air is sprayed with jet fuel for combustion.

It's only been in the past several decades that these gas turbine engines have been miniaturized to where they can power a model airplane.

Your editor has had the chances many times to look at those giant gas turbine engines used as emergency power in a utility electric power plant. And, I've also seen those giant half million horsepower steam turbines in those power plants.

To say these turbines are massive is an understatement. The steam pressure in one of those power plant turbines is several thousand PSI. And, the boilers I've seen run a dozen stories high, with the base the size of a small house. At full power, the Oak Creek Power plant burns 500 pounds of coal a second!

FYI, if you look at your recent electric bill, it takes about one pound of coal to generate one Kilowatt Hour of power for your home. And, my home runs through a couple hundred KWH's of electric power every month.

Years ago, there have been a few people that have built a miniature steam engine and placed it into a model airplane. One can imagine that they were rather heavy with limited amount of power.

Many of the RRCC members grew up running glow engines that were very popular decades ago. For me, I had the Cox 049's, Cox 09 racing engine, Enya 09 RC (Still have it), Enya 15 RC, Enya 35 RC, Fox 40 control line engines, OS 58 RC (Still have it), and an Enya 60 RC that I sold to a Marks club member in 1970. He told me he'd pay me the next day. And, vanished. No forwarding address, GONE. No other Marks club members ever found out where he went.

Now, we have miniature gasoline engines such as the 30 cc DLE's 35 cc, 50 cc class, 100 cc class and much larger for a very few people.

The technology of these modern day model engines for the model airplanes amazes me, considering what we had when I started out in this RC hobby back in 1964. Back then, the mean time between radio failure was around 50 flights.

Back then, we had receivers with individual components like capacitors and resistors "Standing on End" to save space. And, vibration broke them off, resulting in an immediate crash.

Now, we have electric power as an alternative to gasoline engines. These electric power systems depend on high power batteries. And the energy storage of a modern LiPo battery is far far short of the energy storage of an equal weight of a bottle of gasoline. (You might question that if you've ever seen a LiPo battery go into thermal run away and catch fire)

Back to that little "Fire Eating Engine" Just how did it work???

There isn't a lot to this engine. It has a crankshaft, a cam shaft, and a valve located at the top of the cylinder head, covering a port hole in the center of the cylinder head.

As the crankshaft turns from top dead center, the leaf spring valve opens, and as the piston moves to bottom dead center, the piston "inhales" red hot alcohol fire.

That spring valve closes, trapping that hot gas inside the cylinder, with the piston at the bottom dead center of the cylinder.



That hot gas quickly loses heat to the cylinder walls, and when gas cools, it forms a partial vacuum. That vacuum pulls the piston back to top dead center, where the whole action repeats it self. Over and over. This engine has been clocked at over 2000 RPM when it gets really going.

There is no compression involved, this engine operates on atmospheric pressure, which limits the maximum power one of these engines can ever generate.

Which as previously mentioned, makes these things "Toys".

All in all, many of us have two stroke gasoline powered weed whackers, chain saws, leaf blowers and similar items.

Just about all of them run on the century old flywheel activated magneto's. And, very rarely do you ever have a problem with them.

And, when is the last time you had a weed whacker quit on you while running if you still had a full tank of gas?

It seems that some of that very old technology still outperforms some of that "New Fangled" electronic ignition systems of our modern days!

DennyV RRCC Editor

<b>COMPOST SCHEDULE 2023</b>						
DATE	TIME	NAME (1)	NAME(2)	SUBSTITUTE		
09/06/23	12-2	Bob Johnson				
09/06/23	2-4	Bob Johnson				
09/06/23	4-6	Gary Bokowy				
09/13/23	12-2	Bob Johnson				
09/13/23	2-4	James Houtsinger				
09/13/23	4-6	Chuck Roberts				
09/20/23	12-2	Bill Flannery	Kenneth Dalton			
09/20/23	2-4	Bill Flannery	Kenneth Dalton			
09/20/23	4-6	Bill Flannery	Kenneth Dalton			
09/27/23	12-2	Jim Litwin				
09/27/23	2-4	Jim Litwin				
09/27/23	4-6	Jim Litwin				
10/04/23	12-2	Douglas Karge				
10/04/23	2-4	James Houtsinger				
10/04/23	4-6	Douglas Karge	Roman Kirykowicz	Helmut Schmidtke		
10/11/23	12-2	James Martinich	53			
10/11/23	2-4	James Houtsinger	James Martinich			
10/11/23	4-6	James Martinich	Roman Kirykowicz	Helmut Schmidtke		
10/18/23	12-2	Richard Stapleton	Charles Brzezicki			
10/18/23	2-4	Richard Stapleton	Charles Brzezicki			
10/18/23	4-6	Richard Stapleton	Charles Brzezicki			
10/25/23	12-2	Buzz Paricka	Michael Stein			
10/25/23	2-4	Buzz Paricka	Michael Stein			
10/25/23	4-6	Eric Armantrout	Michael Stein			
11/01/23	12-2	Carl Bergquist				
11/01/23	2-4	Edward Jenkins				
11/01/23	4-6	Edward Jenkins				
11/08/23	12-2	Carl Bergquist				
11/08/23	2-4	Jeffrey Lee	John Boticki			
11/08/23	4-6	James Strelitzer				
11/15/23	12-2	Carl Bergquist				
11/15/23	2-4	Edward Jenkins				
11/15/23	4-6	James Strelitzer				
11/22/23	12-2	Buzz Paricka				
11/22/23	2-4	Jeffrey Lee	John Boticki			
11/22/23	4-6	James Strelitzer				
11/29/23	12-2	Steven Navone				
11/29/23	2-4	Steven Navone				
11/29/23	4-6	Steven Navone				