The *Official* **VKA Newsletter**

March 2013

www.VKAkarting.com

Editor – Rolf Hill

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Join the Fun!

IN THIS ISSUE

RIVERSIDE RESULTS – MEMBER MEMORY – COMPRESSION RATIOS – ELECTRONIC IGNITION and more.

VKA EVENTS & TBO

1/24 – 26	Jacksonville, FL	6/13 – 15	New Castle, IN	Oct TBD	Atwater, CA
1/31 – 2/1-2	Riverside, CA	7/11-13	Brodhead, WI	9/26 – 29	Alton, VA (VIR Sprint & Enduro)
3/14 – 16	Barnesville, GA	7/26 – 28	Avon, NY		
4/27 – 28	Whiteland, IN	8/9 – 10	Circleville, OH	9/27 – 28	Delmar, IA
5/9 – 11	Camden, OH	8/31 – 9/1	Fremont, OH (TBO)	10/11 – 13	Cuddebackville, NY
5/24 – 25	Springfield, IL	9/6 – 8	Quincy, IL/MO		

TBO = The Big One TBD = To Be Determined VIR – Va. International Raceway

Please check the official schedule posted on the VKA web site for any last minute corrections: www.VKAkarting.com

EDITOR'S COMMENTS

VKA Membership is growing. That's a good thing. But could we do better? The simple answer is "yes." You may ask "why." That answer is also simple. The stronger the membership … the stronger the organization. Although VKA is run by unpaid volunteers, it takes member-support to ensure the organization grows, not only this year, but in the years to come. VKA purchases advertisements in some karting publications to promote "vintage karting" to those who are active in the modern karting arena. (One day, they too may be "vintage" or may have a secret desire to relive the golden years of karting.) Ambassador Packages are distributed at VKA and non-VKA events and trade shows. The VKA Publication, **FIRSTURN**©, is prepared by volunteers, but it costs to print and mail.

For nearly 12 years, VKA has been the focal point for vintage karting events in the United States … from coast to coast. The stronger VKA is, the more people can **Join The Fun**, now and in the future.

You can help establish a stronger membership by convincing one of your racing buddies to join. It's simple. If every existing member would convince just one non-member to join, VKA would DOUBLE in size.

"What's in it for me," you say. Well, look around you at the track. Need help fixing a problem at the track or getting through the Safety Tech? Help is there. (Promoters should take note. What a great way to encourage membership.) What a great bunch of people! Friendly, helpful, sharing, a wealth of knowledge, fun, willing to help … you get the idea. Ask a friend today. Let's make VKA better … together.

Rolf

JANUARY BOARD MEETING SUMMARY

Membership numbers are no longer being used on Membership Cards. Total membership is at 212, including 23 Associate Members, 10 Life Members and two Media Members. Upgrades to Safety Guidelines are being drafted. One hundred laminated cards will be printed and given to Promoters and Starters. Show Certificates were done for Jacksonville and Riverside. Ambassador Packages are being put together for two events in January and two trade shows at the end of the month. Balance as of 1/31/13 was $10,661.87.

CORRECTION

I'm the only idiot that didn't know Power Products were numbered AH not AN. At Jacksonville, Ernie Shore's People Choice engines were AH-58's. *Rolf*

RIVERSIDE, CA 1/3 – 2/2/13 BY LOUIE FIGONE

It's over and in the books as history now. It was one of the best events we had, not because the kart count was good, 117, but the mood of the people, the excellent weather, sunny, mid to high 70's, light breeze, and good track conditions made for a smooth event. There were a lot of new people that came to see what vintage karting is all about and a lot of interest in the event.

We held a short drivers meeting and opened the track at 9:30 am for open practice. We had open practice all three days and everyone respected each other on the track. The only incident we had was in the Single-Rear, 8.2 class; a cast aluminum brake bracket broke and the kart had no brakes going into the sand box turn; results, one driver sore and hurting.

We had some long distant travelers; Frank Weir from Ireland of *Varoom Magazine* and nine from Australia with two of them driving karts. Graeme Barwick had his Maico powered Chaparral in the Dual-Rear class and Bruce Barwick in the Single-Sidewinder, 6.1 class. Brad Fultz and Bob Lapke made the trip from Illinois; Brad drove Terry Ives dual-rear SAE kart and did a very good job. Bob visited with old and new friends and also made a new friend, Sally[1]. Scott Kneisel and Chris Marchand also made the trip out. I know I have missed some, but I thank all of you for coming, because without you, we would not have an event. Jim Donovan was there doing what he loves, cooking his great pulled pork sandwiches on Thursday for lunch and helping anyone that needed help, and that went beyond clutches. Thank you Jim and, Sally thanks you too!

Friday was practice and when the Geritol Gang luncheon was on, the people thinned out at the track; lots of track time for those who stayed at the track. The track was closed at 3:30 pm for the kart show. Forty-plus karts in the show; Jack Murray, Tom Thorin and Frank Weir did the judging. Thank you guys for setting up the show; that is a lot of work. (Results on p.3)

I want to thank Tom Corso, Terry Ives and Scott Wigginton for doing pre-tech and Peter Preschern and son Sean for handling the grid and Peter's wife Carolyn for taking care of the scoring. Saturday's events went well with the exception of the one incident which caused a **RED FLAG** for that class. I combined some classes as they were light in numbers and I wanted to get done early. Dual-Sidewinder and Dual-Rear were combined.

The Adams served us dinner while the kart show was going on and it was fabulous as it always has been. Thanks to the Adams family for allowing us to have our event at the renowned Adams Track.

We were done with the awards by 5:00 PM and left the track at 5:30 and we were home at 2:00 AM. It went by too fast and now it is over until next year, **Jan 31-Feb 2, 2014**. Plan on it!

I also need to thank Mona Sturgeon for handling the pre-registrations for me and also Faye Pierson for keeping me going. **Louie Figone**

RACE RESULTS

CLASS	WINNER
Historic	Leon Rippy
MAC-49	Steve O'Hara
Sportsman	Greg Richardson
Single Rear 6.1	Matt Minnis
Single Sidewinder 8.2	Steve O'Hara
Single Rear 8.2	Tom Wilms
Single Sidewinder	Jon Woods
Dual Rear Sportsman	Graeme Barwick
Dual Sidewinder	Rich Swantek
80-85 Sidewinder	Bob Kindoll
Senior Sprotsman	Leon Rippy

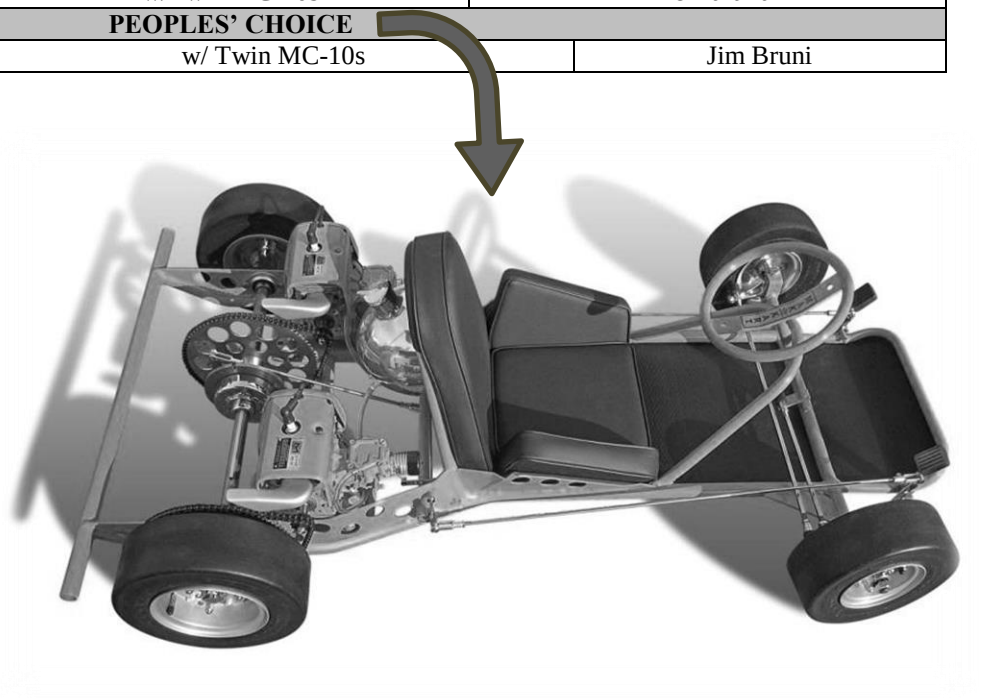
[1] See p. 3 for a close-up of Sally

RIVERSIDE SHOW RESULTS

GROUP	FRAME	ENGINE(S)	OWNER/PRESENTER
REAR			
Unrestored	’60 Bug	w/Twin MC-10s	Mike Hartman
Restored	’59 Blitz		Tim Hinson
Modified	MaxTorque Special	w/Twin MC-10s	Tom Smith
SIDEWINDER			
Unrestored	’80 Pink Bug Scorpion		Bernie Lacotta
Restored	’80 Margay Expert I		Paul Wright
Modified	Black Bug Wasp		Jerry Milazzo

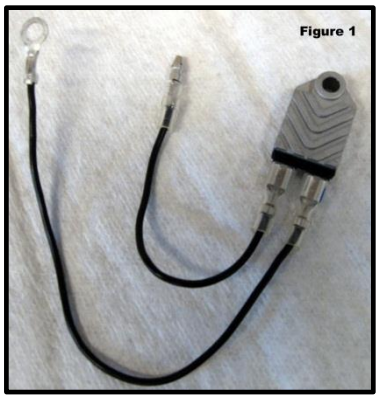
FRAME	ENGINE	OWNER/PRESENTER
FAYE PIERSON’S BUG KART AWARD		
’60 Bug	w/Twin MC-10s	Mike Hartman
PEOPLES’ CHOICE		
’59 Fox Mak-Kart	w/ Twin MC-10s	Jim Bruni

This is “Sally,” Lou Figone’s 12-year old German Short-Hair Pointer.



ELECTRONIC IGNITION FOR 80CC/100CC MCCULLOCHS BY BILL MCCORNACK

Building McCullochs over the years, I've found that having a really good spark is essential to performance.



I've done a number of these ignition conversions over the years and people have liked how well they work. Many of us have experienced issues using points and condensers and the problems they can cause:

- timing retards as the arm that rides on the crank cam wears;
- point gap can be difficult to set properly;
- point contact faces get burned; and
- bad conductivity on the wire connectors between terminals.

(Continued on p.5)

MEMBER MEMORY: A WEST BEND STORY BY LOUIE FIGONE

I started karting in 1960 and bought my first kart from a Kart Shop located in an old converted gas station in San Bruno, CA (my home town). It was a dead axle kart, probably home made with a Clinton A400 engine. I played and raced this kart with no success, and at a race at the Petaluma track, I pushed the rod through the crankcase.

My next move was to upgrade to a new Go Kart 800 with a West Bend 580 standard engine. The standard engine came with a MT34 float carburetor. I raced this combo and then started modifying the engine with the standard modifications (Wiseco thin-ring piston, ported intake and exhaust, Go Power intake with a Tillotson pumper carburetor, Azusa exhaust header, *etc*.). I had a fun and success racing this setup in the Sportsman class that was being run at the time.

I had read about some five ported 580's, but I did not have the experience or tooling to convert my engine. Then the five port engine came out in mid-1961 and I was thinking about buying the conversion kit. There was also rumor that West Bend was going to come out with a loop scavenged engine, so I decided I would wait. In 1962, I traded my 580 and $60.00 for a new 610 and off I went, never to think about the 580's again.

I retired from karting after running the 1967 Nationals at Riverside and then re-entered the scene in April 1986 when my son, Joey, showed an interest in karts. Our racing took us nation-wide and we met a lot of good people. One of those was Bob Snow who had a mold shop in San Jose, CA, and we became very good friends. Bob's uncle, Jake Snow, would often accompany Bob to the races as did Bob's wife Kelly and two boys, Anthony and Clay who were little at the time.

Bob started to tell me about his uncle Jake and the West Bends that he modified while he was in the service. He claimed that Jake was one of the first to five-port the West Bend 580 engines and was doing this for Jack Peck of Hornet fame. I of course doubted this, but then when I attended the first Vintage Kart event at New Castle, I ran into Richard Peck and asked him if he knew Jake Snow. At first he looked at me with a question mark in his face and then his face lit up and he said "**Glen** Snow!"

Richard then told me how Glen (Jake) modified these little engines, and that his dad (Jack) modified the McCulloch ignition for the West Bend because they were blowing up the flywheels. Richard also told me that he would take the Snow-modified 580's to the east coast and beat the best MC10's that were running at the time. I was amazed when Bob's story was all backed up by Richard Peck, so I decided to do a little interview with Jake.

Jake (Glen) Snow - 2012

It has taken me some time (most of you who know me, know I am a little slow at getting things done), but in August, 2012, I set up an interview at Bob's house with his uncle Jake. It was a great time since I was able to visit with Bob's wife Kelly and also their son, Anthony. (Clay was at Rock Island wrenching for a karting team.) Here's what I got from the interview:

Glen (Jake) Snow was born in 1930 in Gilliam, West Virginia. He does not know how he got the nickname of Jake, but says that's what he has always been called. Gilliam was a coal mining town. In 1948, Jake entered the Air Force and during 1948 and 1949 he was part of a team that flew coal into Berlin, Germany, because of the Russian blockade. In 1950, Jake was stationed at Connally Air Force Base in Waco, TX. His first involvement in karting was a home-made kart that he built from water pipe with a West Bend engine that he bought from Jack Peck. In 1959, he bought a Cates Kart also with a West Bend engine. Jake was living off-post in an 8 x 36 foot trailer.

Jack Peck had an inventory of 580 engines that he supplied to Jake for five porting. Jake told me his trailer had so many boxes of West Bend cylinders he could hardly walk through it. Jake would have the tubing bent-up at the hydraulic shop at the Air Force base. He would put the extra ports in, put the tubing on with epoxy and bake the cylinders in the oven. Jake would put the cylinders in the kitchen sink and run water through the ports to see how they would flow; a poor-man's flow bench! Jake had a contract with Jack to five-port the 580's, and Jake received $10.00 for each cylinder that he supplied to Jack.

Jack also gave Jake the key to the track and sometimes he would go out at 2 in the morning to test under the lights. Jake polished the rods, set the ignition at 30 degrees and, according to him, they pulled 10 HP out of the 580's. He did admit to running heavy loads of nitro fuel.

In 1963, Jake was shipped to Vietnam and that was the end of his karting career. Jake also said that when West Bend came out with the five port cylinder, they put the ports in the wrong place.

I also talked to Terri Buffam of Go Power and he said that Jack worked close with the West Bend Aluminum Co and had sent several of the Snow-modified engines to them for testing before they came out with their own five port engines.

I did put Jake and Richard in touch with each other and they had a great visit reminiscing about the old days, just as we do at our vintage events. **Louie Figone**

ELECTRONIC IGNITION BY BILL MCCORNACK (CONTINUED FROM P.3)

In this article, I'll explain the reasons you many want to make the trouble-free conversion to electronic ignition, and I'll explain step-by-step how to install the "*Mega Fire*" electronic ignition unit on your 80cc or 100cc McCulloch.

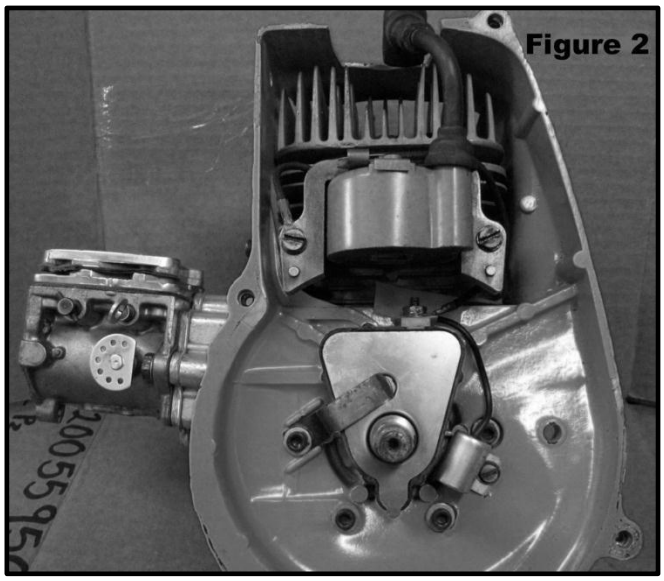


Figure 2

First, a word about the cost of stock ignitions *vs.* the *Mega Fire*; a set of points can cost between $14.50 and $20.00. The Malory condenser costs about $14.50. A *Mega Fire* unit sells for $29.00 which is roughly the same. (Yes, I am one of the vintage shops selling the *Mega Fire* ignition.) If you are searching on your own for one of these units, be careful as there are many different types that won't work properly with these engines.

The *Mega Fire* unit is not hotter nor does it have a more intense spark compared to conventional points/condenser. However, firing at about 27degrees BTDC, it is as good as points and condenser, at their best operation.

Tools needed:

- cordless hand drill
- 3/16" drill bit
- Dremel grinder
- 6" ruler

To fasten the ignition module to the yellow sideplate, you'll need:

- one, Allen head bolt 10-24 x 3/4" long; and
- one, 10-24 lock nut.

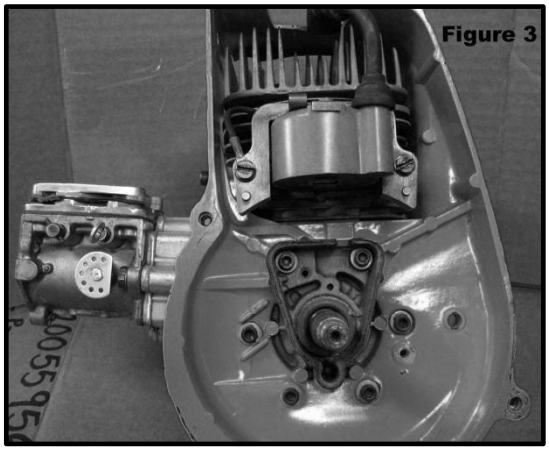


Figure 3

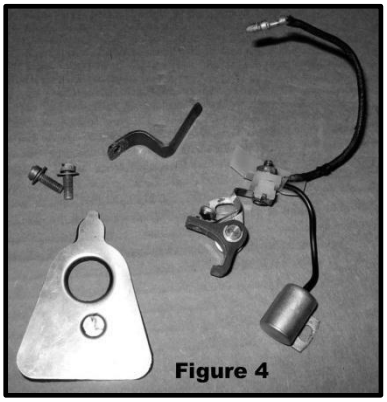


Figure 4

Figure 1 shows the *Mega Fire* electronic ignition module and **Figure 2** shows your McCulloch at the start with all the original ignition components in place. In **Figure 3** you can see the ignition area with all the parts removed and **Figure 4** shows all the parts that are no longer needed. **Figure 5** shows where to grind away the casting rib and pad area in order to properly mount the *Mega Fire* unit. **Figure 6** illustrates (from the back of the engine's sideplate) where to layout to drill the 3/16" diameter hole in order to mount the unit. Finally, in **Figure 7**, you can see the position of the wires after the unit has been mounted and is ready for operation. Don't switch the wires!

For the traditionalist, this may not be a wonderful thing, but for a lot of us running at the track, it's one big thing we don't have to worry about. See ya at the grid.

Bill McCornack

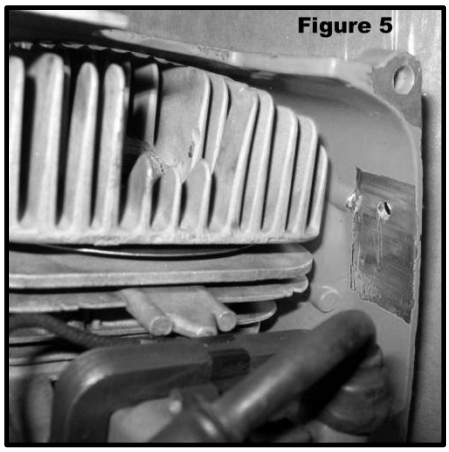


Figure 5

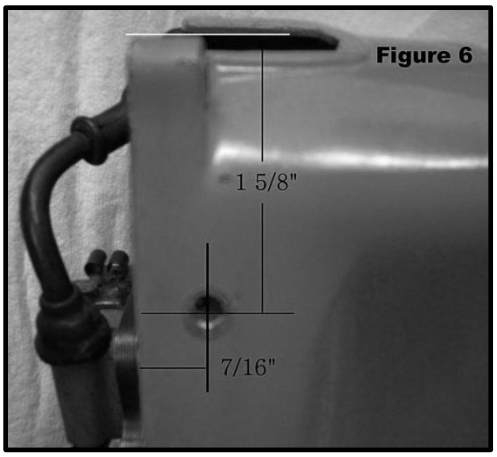


Figure 6

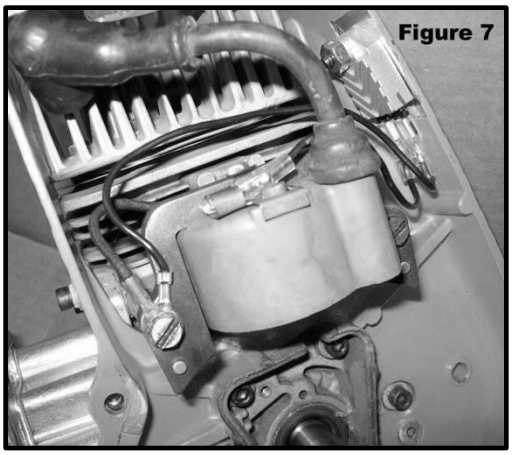


Figure 7

COMPRESSION RATIO – HOW TO CALCULATE BY DICK TEAL

Richie Engel, a VKA member from Canada, sent me this article on the "Calculation and use of Compression Ratios", and it brought back a lot of old memories.

Back in the 1960's, when I was actively building engines, I spent a lot of time on compression ratio calculations. I messed with the #1 and #3 ways covered in the article (see bracket). I settled on the #1 option because it provides the exact measurement. I also found that a West Bend 820 sprint engine worked best for me with a compression ratio of 11 to 1 with 37 degrees of ignition advance. I ran 11.5 to 1 with the high advance, but found that I was getting pre-ignition. I used the side-fire Autolite spark plug #AE301 to control the pre-ignition. These compression ratios were used when I was running alcohol not gas and oil.

My method is pretty simple to do if you have a way to determine TDC (top dead center) and a syringe.

a. Find TDC
b. Fill the cavity with light oil to the bottom of the spark plug hole and record how much was used.
c. Rotate the crankshaft until the top of the piston is at the top of the exhaust port.
d. Add oil until it's to the bottom of the spark plug hole and record how much was added.
e. Combine the two amounts of oil together and divide the total by the first amount from item #2.

The method is pretty simple and you don't have to know any difficult math formulas.

Dick Teal, W.E. Bowers (Gamut Racing Team, Texas) & Richie Engel

FROM KARTING WORLD, AUGUST 1965

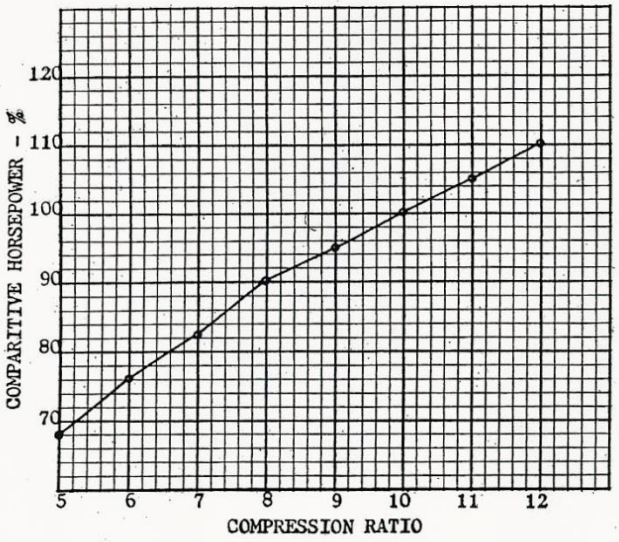


Fig. 1.

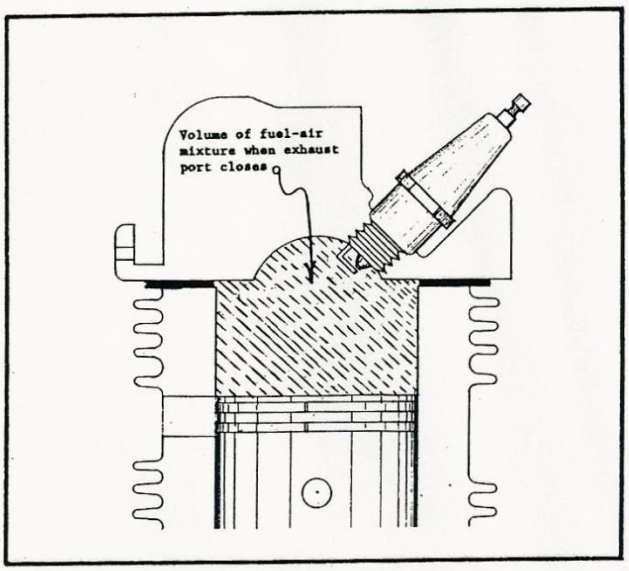


Fig. 2.

CALCULATION AND USE OF COMPRESSION RATIOS

By W. E. BOWERS, Gamut Racing Team, Texas

ALL TECHNICAL INFORMATION about kart engines and engine modifications gives important consideration to the compression ratio of the engine. This importance is justified for, within limits set by heat and detonation, the torque and power output of an engine increases with increased compression ratio, as shown in figure 1. Correct values of compression ratio for different fuel mixtures and ignition timing have frequently been given in answers to letters published in Karting Korner. The problem to the average karter is not what compression ratio to try but, rather, how the compression ratio of an engine can be determined.

Before delving into methods of determining compression ratio (CR) the definition of compression ratio needs to be established.

$$CR = \frac{\text{Vol. of fuel-air mixture in cylinder when exhaust port closes}}{\text{Volume of fuel-air mixture in cylinder with piston at TDC}}$$

This definition of compression ratio is slightly different than that used for four-stroke engines, but this is the definition now used by all two-cycle engine manufacturers. The volume of mixture above the piston when the exhaust port closes is shown in figure 2.

Compression ratio is commonly obtained in one of three ways:

(1) Measuring the amount of light oil required to fill the space above the piston under the two conditions required for the CR Formula.

(2) Crank the engine and measure the peak pressure with an automotive-type compression gauge.

(3) Measure the cylinder and head dimensions and calculate the compression ratio.

The latter method has been chosen as the most practical, as it required the minimum special tools. Further, using this method, once the basic measurements have been taken, the effect on compression ratio of head gasket, thickness, etc., can be accurately predicted without further measurements. The only disadvantage to this method is that it requires that you dust off your algebra book, pick up pencil and paper and put forth a little effort.

Dimensions, figure 4, of the engine which are required for CR calculations are as follows:

D - bore diameter in inches
A - distance from exhaust port to top of block, in inches
B - distance from top of piston to top of block with piston at TDC, in inches

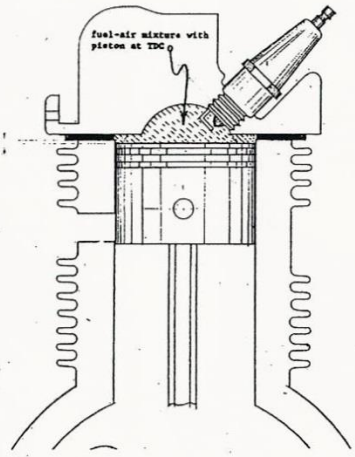


Fig. 3.

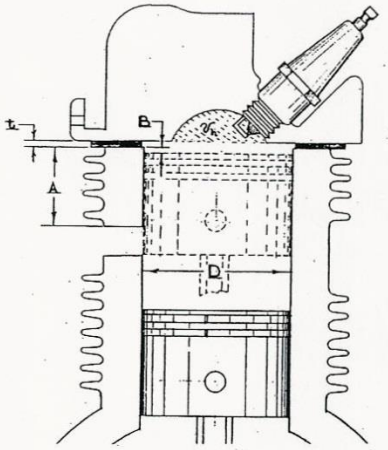
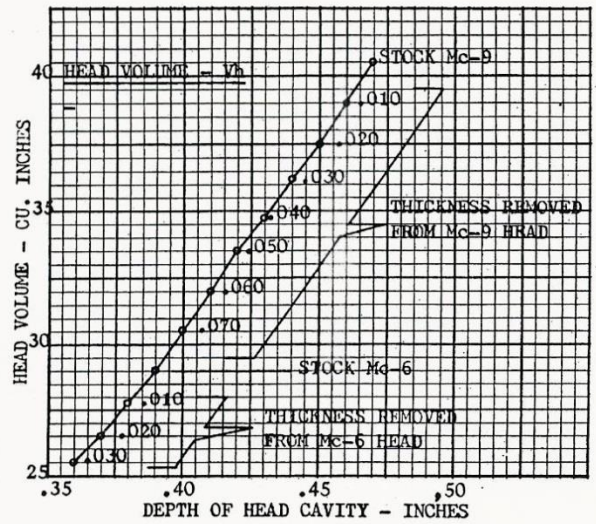
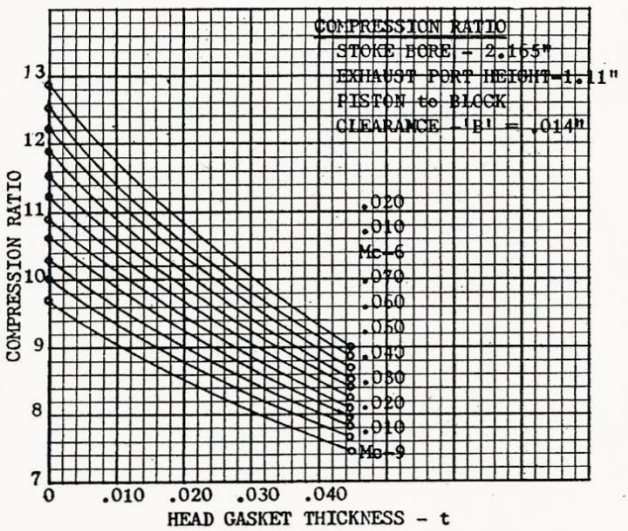


Fig. 4.





All of the above measurements with the exception of head volume can be easily obtained with vernier calipers. Values of head cavities for Mc-9 heads, with various amounts machined off, down through Mc-6 head and smaller are given in figure 5.

The complete formula for calculating CR (don't panic) is:

$$CR = \frac{.78\,D^2\,[t + A] + Vh}{.78\,D^2\,[t + B] + Vh}$$

(Note: If the piston extends out of the block at TDC, then dimension B is subtracted from t instead of added).

Using this formula the compression ratio for any set-up can be calculated. For any particular engine, the value of exhaust port height (A), piston to block clearance (B), and bore diameter (D) are constant and can be substituted into the formula and the formula simplified. The effects of head size and gaskets thickness can then easily be studied.

To illustrate the use of the CR formula, the compression ratio for a stock MC-9 engine can be computed using the published values of engine dimensions: D = 2.165"; A = 1.11"; B = .014"; t = .016"; Vh = .406 cu".

$$CR = \frac{.78\,(2.165)^2\quad [\,.016 + 1.11\,] + .405}{.78\,(2.165)^2\quad [\,.016 + .014\,] + .405}$$

CR = 8.85

The effect of different heads and gasket thickness on this same stock engine are shown in figure 6.

For endurance racing, experience has shown that a compression ratio of 10 to 10.5 is as high for reliable performance as practical. This ratio is used with ignition point setting of between 24° and 27° BTDC, straight methanol and oil as fuel, and a J2J plug. For most sprint racing where the engine is not lugging, the compression ratio can be safely increased to 11 without heating or detonation problems.

With these compression ratios as a starting point and with the formula and charts provided, you can vary the compression ratio of your engine by known

MEMBERSHIP REMINDER

New VKA Memberships are now issued for a 12 month period. Current members should receive a reminder along with your *VKA FIRSTURN© Magazine* two months before your membership expires.

Annual dues are: Full Membership = $30; Associate Membership = $10. Foreign Membership = $40
ONLY MEMBERS RECEIVE ALL THE *VKA FIRSTURN©MAGAZINES* AND *NEWSLETTERS*.

Checks should be made payable to: "Vintage Karting Association" and mailed to: Mary Jo McCornack, 7N057 Weybridge Drive, Campton Hills, IL 60175.

JOIN THE FUN!

AT PRESS-TIME, VKA MEMBERSHIP WAS 278 !

RESOURCES FOR VINTAGE KARTERS

Bill McCornack – McCulloch Engine building, Big Volume Pipes, Reed Cages - V-12's, Tillotson Carburetors, Mc49 Pistons, Rev Grip Springs, Electronic Ignition Module
Tele: 630-400-2645 Email; bill.mccornack@comcast.net

Terry Ives - McCulloch engine repair, pistons, rings & gaskets. Azusa and Hortsman
Tele; 916-201-7707 Email; tii@surewest.net

Ed Sahagian - Line boring, blueprinting, head surfacing, helicoiling & prototyping
Tele; 912-330-9120

David Nance - Clinton NOS engine parts.
Tele; 256-881-3254 Email; gnome1967@netzero.com

Greg Gouveia - Reproduction Chilton, Palmini & Azusa tanks
Tele; 805-541-4310

Thomas Thorin - Simplex decals, brake linings & 5 inch cast wheels
Tele; 818-708-7232 Email; tthorin@socal.rr.com

Carl Weakley - Early 70's Margay Cheetah reproduction seats
Tele; 618-656-3900 Email; clwcpa@aol.com

VKA resources advertising is reserved for MEMBERS ONLY and limited to three lines

Charles Groeteke - Vintage frame repair & parts, chrome stripping and re-plating
Tele; 636-942-9988 Email; slkcharlie@sbcglobal.net

K&P Manufacturing - Bug chassis, parts and repair "GEM-Style Pipes" Blendzall Dist., Bridgestone Vintage Slicks, N.O.S. Parts & Burco Clutch Nuts"
Tele; 626-334-0334 www.kpmfg.com

Robron Incorporated - Dart chassis, parts and repair
Tele; 800-624-7383 Email; robroninc@bellsouth.net

GL Doemelt Incorporated - King Kart chassis and parts
Tele; 217-268-4243 Email; gldoemelt@yahoo.com

Nils Gustafson - Reproduction vintage tires
Tele; 541-471-7212 www.vintagespeedtires.com

Brian & Dotty Thomas – Custom Kart Covers & Power Products base gaskets
Tele; 763-784-9095 www.blackdogvintageracing.com
Email; wrenchhead944@hotmail.com

Jim Donavan - Max-Torque Ltd. – Clutches for most engines
Tele; 630-369-9600 www.maxtorque.com

Lake Speed – B Bomb Engines – Parts – Buy – Sell – Service & Repair
Tele; 704-938-4912 Email; lcspeed@aol.com

Dick Teal – Reproduction Fox pedals – Swing Mounts – throttle arms – etc.
Tele; 920-485-2844 Email; teal@charter.net

Howard Kapland – DXL N.O.S. High temp, semi metallic friction discs
Nippondenso – W34EN – Alky racing plugs for most foreign & Yamaha
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