Bay Area Engine Modelers Club, Branch 57 of EDGE&TA

The Crank Calls

President	Don Jones	(510) 566-3153	dj712@sbcglobal.net
Secretary	Bob Kradjian		bkradjian@aol.com
Treasurer	John Gilmore	(925) 228-8483	jgilmoreco@aol.com
Events	Ken Hurst	(707) 257-2481	icengine@comcast.net
Tech Topics	Carl Wilson		toolcarl@comcast.net
Editor/Printer	Larry Zurbrick	(408) 448-5752	baem_editor @pacbell.net

May 2015

MEMBERSHIP $25.00 US
Contact John Gilmore at
jgilmoreco@aol.com

2015 Dues are now due!

NEXT MEETING
May 16, 2015 at
Chabot College, building 1500
25555 Hesperian Blvd, Hayward 94545
Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

BAEM meetings: 3rd Saturday of the month

MEETING NOTES

April 18, 2015
Carl Wilson

President Don Jones called the meeting to order at 10:00 a.m.

TREASURER'S REPORT:. John Gilmore says that we are solvent, but that dues are due. Please make your check out to "BAEM" and mail to:

John Gilmore
1414 Linton Place
Martinez, CA 94553

CLUB BADGES: If you need a badge, contact Mike Rehmus (mrehmus@byvideo.com) who has offered to produce them.

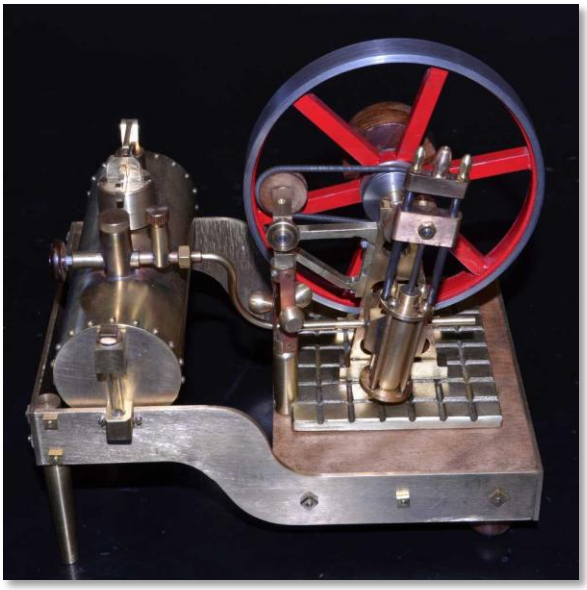
John Gilmore announced that this year is his last as Manager of the Western Engine and Model Show. The echoes had hardly finished bouncing off the walls and Steve Hazelton accepted the challenge and will step into his apprenticeship this year. Thank you, Steve.

But that is not all for which to say thanks to Steve. Bay Area Engine Modelers now has its own Facebook page which may be accessed through www.facebook.com. You will have to create your own account with an email address: Steve suggests that you first create a mail account used only for this. He said that for many people Facebook is the the primary portal for learning about what is going on. It is an easy way to share and communicate our activities and to find new members. Steve will manage the account and continue to post new material. Once again, thank you, Steve.

Additive machining is big and getting bigger. Mike Rehmus talked about some of the progress in this technology. General Electric has printed a small jet engine and several cars have been made. Extruder heads are available for installation on your CNC mill on eBay: search on 3D printer head for CNC mill.

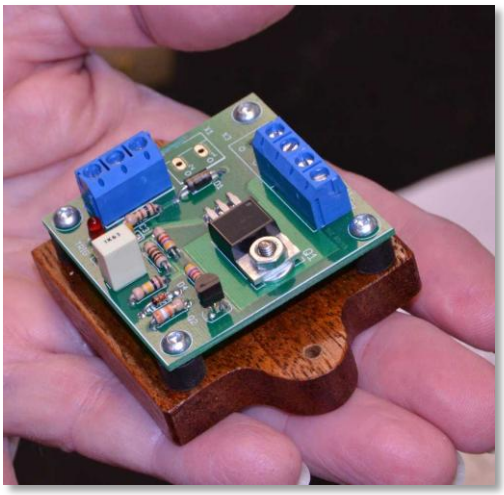
Don Jones has invested in two of the new crowd-funded 3D printers, the Tiko Unibody. The movement of the print head is controlled by a linkage of variable length legs rather than in a rectangular (x, y) positioning. This is a complete and ready to run system which will print with a variety of plastics. Looking forward to seeing this: http://www.tiko3d.com/

BITS AND PIECES:

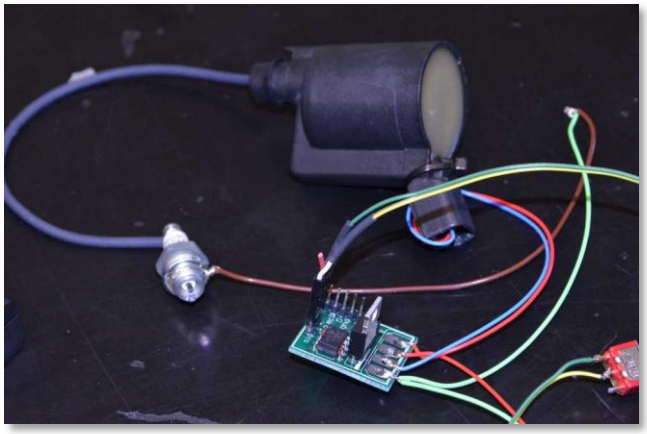


Jim Bove calls this steam engine #3: the back story is he saw a picture of the 1850's era original and decided to make one. He liked that so much that he made #2 smaller and then #3 even smaller. It is made to Jim's usual fine fit and finish.

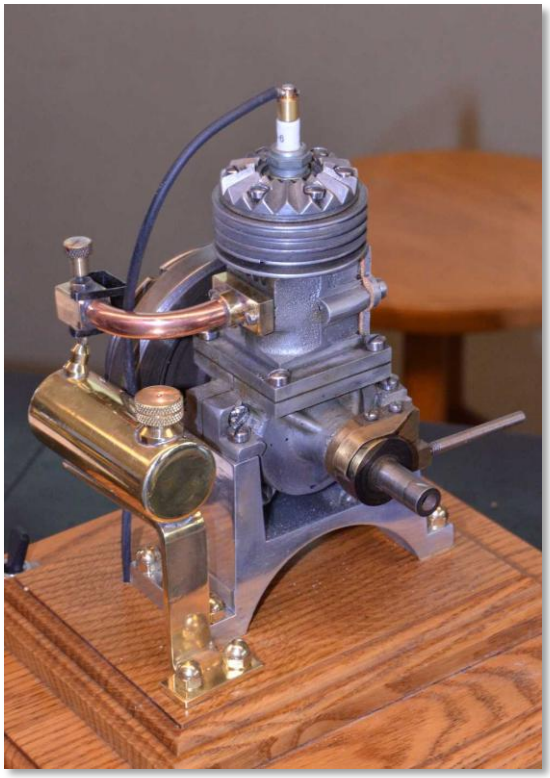
These castings for a small two cylinder IC engine were like the ol' boll weevil: "Looking for a home." They have migrated from Dwight Giles to Jim Bove and now Paul Denham has taken them home. Nothing is known about the designers intent so they are a blank slate for Paul to build upon.



Mike Rehmus presented this transistor ignition circuit board by John Gedde and Dave Sage. This simple and cheap design is intended for use in multiple cylinder engines at high RPMs thus overcoming the limitations of the various TIM circuits which were designed for model aero engines. It may be used on a V8 with standard coils at 4.5 – 14 volts and 12K RPM with points or Hall effects. This circuit will be featured in a forthcoming issue of Model Engine Builder.

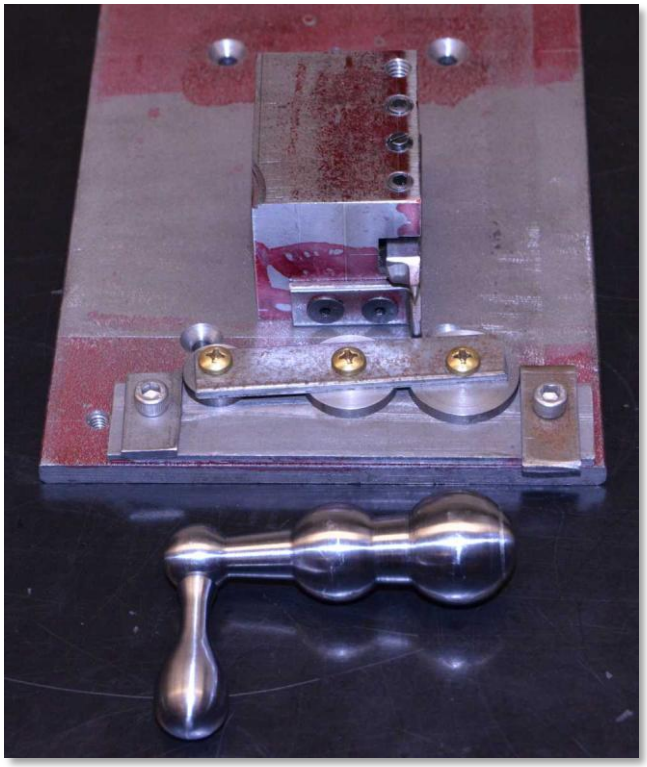


Paul Denham brought his latest ignition but the electronic gremlins got him. It worked at home both before and after the meeting but was stubbornly silent while being shown off. Shy, maybe? This system will replace a Ford Model T buzz coil and uses a small micro-processor to time the sparks at 4 milliseconds spark to spark. Paul explained that it takes time to generate the magnetic circuit in the primary of the coil and that insufficient time will reduce the voltage at the spark plug and possibly cause a miss-fire.

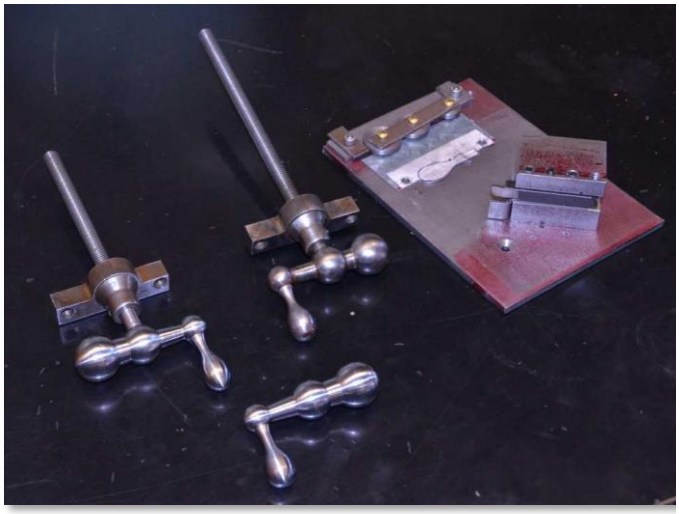


Dwight Giles is doing a "Get 'er running" for Jim Kipp on a rare 1930's two stroke model boat motor. Most of the work so far has been the fuel tank and miscellaneous repairs. Dwight did not mention it but I suspect that he also made the mounting box.

Dwight talked about a Paul Knapp gear type oil pump. Paul's design used a 0.250" shaft: Dwight redesigned it for a 0.375" shaft and larger bore ball bearings. At the same time he changed the gears from 20 to 14.5 DP. He also modified the bypass plunger for better control of maximum output pressure. Gear pumps, like all positive displacement pumps have a linear pump curve: if the output volume is restricted, the pressure rises. Jaime Quevedo has measured 180 psi on one of these pumps.



Carl Wilson is restoring a KO Lee radius grinding attachment which was missing a balanced (three ball) handle. He used a manual tracing attachment on the compound of his lathe. The cutting tool is in the rectangular block and the trace point is directly below it. The template is made from the three discs connected by the straight strip. Carl saw this tracer in David Palmer's shop and David confesses to have seen it at a PRIME show many years ago. If a picture is worth a thousand words, a video is precious: the operation of this tracer will be the subject of a YouTube video and a link to it will appear in the club newsletter in the future.

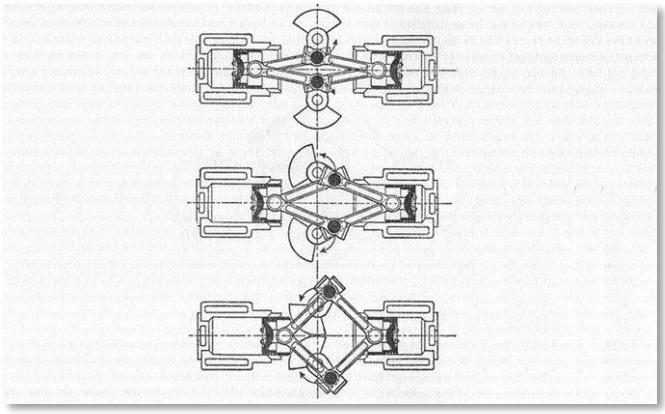


Dwight Giles passed to us some words of advice on sparking over inside distributor caps. This problem can fixed by reducing the spark plug gap and/or the gap between the rotor and cap contacts – these mods reduce the secondary circuit voltage inside the cap. Another idea is to make a cap from clear acrylic and see where the sparking occurs.

Jaime Quevedo is moving and would like to clear a 9" import (KBC) lathe from his inventory. A Switzer type cam grinder and Paul Knapp's crankshaft grinder are also up for grabs.

TECH TOPICS

It was a dark and stormy night – no that's not the right story. It was a slow day at work, that's better, and Bobby May's boss was effectively paying him to search the web. He got to wondering about engine balance, searched on "smoothest engine" and found the Lanchester Horizontal Motor.



This horizontal opposed (boxer) two cylinder featured two crankshafts, one above the other, to cancel primary vibrations due to the movement of the reciprocating masses.

The web source for these drawings is:

http://www.caranddriver.com/features/the-10-most-unusual-engines-of-all-time-feature

Each piston has three connecting rods: two go to one crank and the other crank gets one rod. That makes lots of mass to balance but engine speeds were low in the late 1890's and mass was not as great as problem as it would be as engine speeds rose during the development of the automobile.

The unusual connecting rod layout of the Lanchester motor brought out a mention of the Ducati Elenore V8 which uses a 180 degree two throw crankshaft for all eight cylinders. This is achieved by connecting the inner four pistons to the crank with sorta normal connecting rods and the outer four cylinders are operated via a rocking lever from the inner piston rods. Take a look at the website for more information:

http://thekneeslider.com/ducati-elenore-v8-update/

IN REMEMBERANCE

Bob Johnson reported the death on Feb. 1, 2015 of club member Gary Moore. An obituary will be in the June newsletter.

WEME: LATE BREAKING NEWS

Steve Hazelton suggested that we display some air horns and whistles to compete with the IC engines for noise while entertaining the kids. If you have a horn, whistle, or siren you can loan, talk to Steve. We'll hook it up to the air system and have a blast.