

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

The Crank Calls



March 2013

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MEMBERSHIP \$25.00 US

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NEXT MEETING

March 16, 2013 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:
March 16, 2013
April 20, 2013
May 18, 2013

2013 Membership Dues are due

MEETING NOTES

February 16, 2013

Bob Kradjian, Secretary

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

Guests: Darrell Foote returned as a guest of John Gilmore. He has access to a Three-in-one lathe/mill. At work, he deals with ultra precision tools for scribing and breaking 100-micron silicon wafers. Small parts shouldn't be a problem for him. We hope he starts a small engine soon.

Barry O'Connor, Pat's son also visited. Welcome to both!

EVENTS:

NAMES will be April 23 and 24 and Cabin Fever has been shifted from the dead of winter to just a few days away on April 13-14 in York, Pennsylvania.

EDGE & TA is having a car show in Saratoga Blossom Festival with the Model A and Model T clubs taking part at the Saratoga Historical Park. John Palmer reminded us that we are the only

miniature engine club in the EDGE &TA national organization. We have just paid our annual dues.



Photographs courtesy of Karen Palmer

Several members reported on the "Hobby Expo 2013" at the Petaluma Community Center. Their exhibit was packed after 10 am. Al ran Ken and Dwight's engines to enthusiastic crowds. This show looks like a winner for next year. Our members received TV and newspaper attention. See:

<http://www.pressdemocrat.com/article/20130210/ARTICLES/302101110/1334/news?Title=Hobbyists-unite-in-Petaluma>

BREAKING NEWS on GEARS. We have learned that GEARS will reappear this year. The dates will be: September 27-29 at the Oregon Rail Heritage Center in Downtown Portland, Oregon.

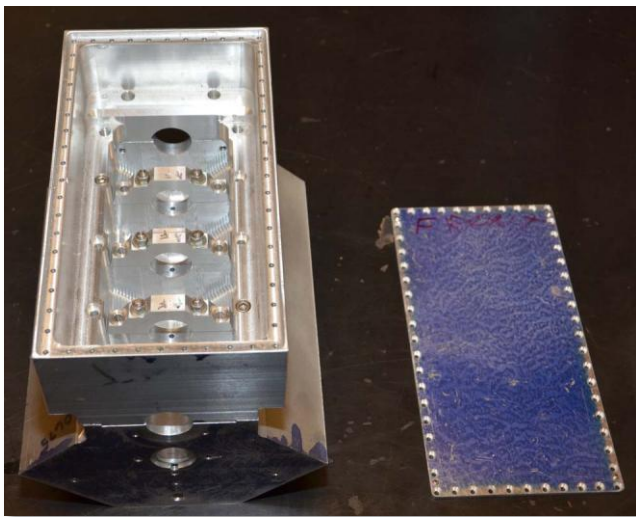
TREASURER'S REPORT: Ken is away in Southern California but Dwight Giles reports we are solvent.

Checks for dues can be mailed to Ken or given to Dwight at club meetings.

FIRST POPS: There were no first pops.

George Gravatt, as reported last month, went to the repair shop for a shoulder joint replacement. He is doing well but experiencing the usual nasty postoperative pain. We send all best wishes for your recovery and return.

BITS AND PIECES:

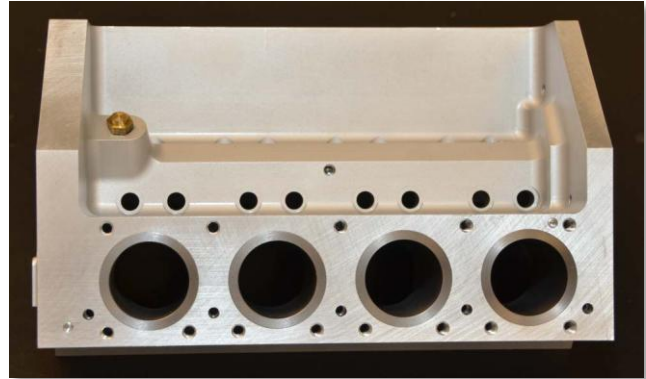


John Gilmore reports that: "I have just been carving!" on his V-8 block. The galley between the cylinder blocks required 400 passes with a quarter-inch ball mill.



He showed us a nice video showing the line boring of the main bearings and the camshaft bearings. The boring is fairly easy. It's the jigs, fixtures, and set-up that take much time and great care. The camshaft

holes went 0.020" oversize and that can be made up with a bit more generosity on the cam journals. This follows an old rule of making the hole first and the shaft to fit. John says that other Black Widow V-8 builders can have access to his very solid block holding jig.



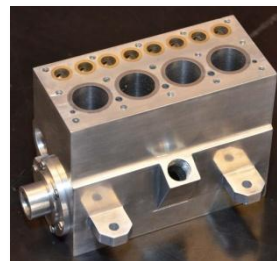
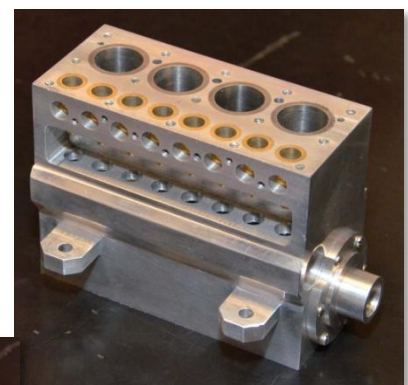
Continuing to share his rapid progress with his Black Widow V-8 project, Jim Freel now has the cylinder bores at final dimension and the liners drop in nicely. In addition, he has also CNC'd a lovely



oil pan with curves that would rival any casting. It required 156,000 lines of code and took 24 hours to

spin out using a SurfCam program. Yet to be completed is the hole for dipstick access. Dwight suggested using the stainless steel spline from a windshield wiper for the dipper.

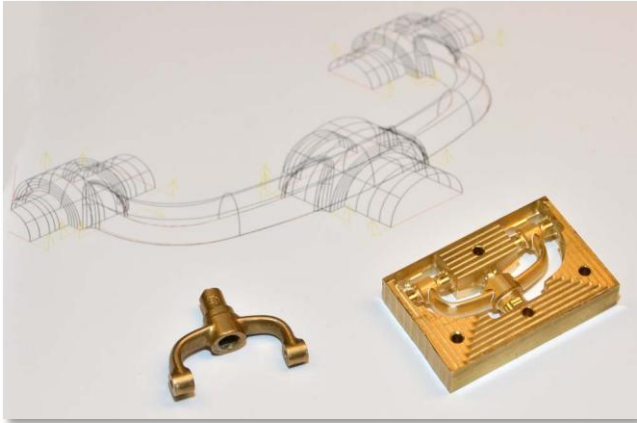
Joel Cohen brought us his Seal Minor block machined from a solid chunk of 6061 aluminum. He recommends that no one else try it. It was a daunting project but the



result is beautiful. His CAD designs are available for share with other members who wish to take on the same task. He plans

to bring his non-running “Kiwi” for the next meeting for some sorting out and problem solving. He is also planning a twin cylinder version of KIWI. Steve Jasik has been shopping on line at dx.com. This Chinese company has terrific bargains on a variety of optical magnifiers, electronic, and LED devices. Prices are quite low and include shipping to the U.S. He also showed us an improvised shield to closely view mill-cutting operations without getting splashed.

Mike Rehmus reported on the Humbug engine build in Model Engine Builder magazine. He has developed a fixture that will aid in the machining of the rear plate rotary valve. It uses a dummy spindle that fits a Sherline. He followed with a discussion of chuck spindles and the problem of reproducible registries after removal and replacement.



Roy Anderson formerly had a business creating delicate lost wax castings for scale railroad enthusiasts. In a move to share some this activity with his son in his son’s current machine shop, he is developing patterns. An old bell casting was programmed and machined. It took an hour and twenty minutes to machine with two ball mill sizes and cut depths. This makes a lovely alternate to the older pattern, foundry, and casting methods.

Don McRae wonders if there are any other Mach III Software owners to help him with some missing instruction sheets.

NEWSLETTER ISSUES: Paul Denham has kindly volunteered to help Jim Piazza and Don Jones and club members. Jim wants to transfer the web site name to the club with himself and Paul as custodians. At present, in the event of Jim’s incapacity we would lose title to the baemclub name.

Thanks to both Paul and Jim, and we appreciate Paul’s fine models displayed at meetings.

BAEM AND SILICON VALLEY HISTORY:

Are there any connections between our club and the history of electronics and the eventual Silicon Valley? I believe there are. Here is a clue: it involves the Presidents of two different hobby clubs. For starters, a number of our members work for high tech companies often making the machinery and devices for research and production. But there are two other key connections. The first is in the earliest days of what became the Valley. It involves our late member Jay Eitel and his older brother, Bill Eitel. The second connection is in a more modern era with Gordon French and the Homebrew Computer Club. In the 1920’s the Peninsula was a sleepy rural area noted more for orchards than technology. But there were a few small radio firms and a handful of technicians and engineers making radio products. After all, Philo Farnsworth did his pioneering work on television in San Francisco. There also was a heavy concentration of radio amateurs in the San Francisco and Peninsular areas. This was largely due to the maritime influence and the associated short wave radio services. Bill Eitel was hired in 1929 by Heintz and Kaufmann, a San Francisco vacuum tube manufacturing company. The 29 year old was hired based on the strength of his knowledge of ham radio procedures and his chairing of the Santa Clara County Radio Club (here’s that club membership). It was in this group he learned to design and build his own radio station and where he met his future partner Jack McCulloch. He also met Charles Litton there, later to head Litton Industries, at his ham radio “Hamfests”. Being the nephew of Col. E. J. Hall, the owner of Hall-Scott Motor Car Company probably increased his appeal. He learned lathe and milling machine practices in the Hall-Scott shops and also in shop classes at Los Gatos High School. At Heintz and Kaufmann, Eitel quickly developed the expertise involved in making power tubes. In 1934 Eitel and McCulloch left to start their own company, Eitel-McCulloch or EIMAC, in the teeth of the depression. They were given help from Litton who gave them castings and blueprints for the tube lathes Litton had developed. How did BAEM club member Jay Eitel fit into this story? Jay had to decide whether to go to college or

help his older brother (by eight years) with making the lathes, fixtures, devices, jigs, and tooling to make these large tubes. No one else was making them at the time, it was engineering from scratch. For over ten years, Jay was the machinist in charge of new tooling and development of the systems to make the tubes. He also was in charge of developing an entire new factory at Salt Lake City, Utah.

During leisure time with EIMAC, Jay also busied himself with an unusual sideline. It was a mechanical gadget to help him harvest cherries. Shortly after he had a working model of his "cherry picker", the local telephone company got wind of it, and visited him and his machine at EIMAC. This encounter resulted in verbal agreement and Jay later left EIMAC to devote full-time to the cherry picker that later became his Telsta Corporation and changed the telephone industry.

Meanwhile EIMAC became a huge success, employing 3,600 employees by 1943. Most Silicon Valley historians recognize Eitel-McCullough as the earliest and largest electronic corporation in the history of the Valley. It pre-dated Varian and Litton Industries and came well before Hewlett-Packard, Shockley Semiconductors, Fairchild, and Intel. Of interest, it was more in the San Carlos, San Bruno, and Redwood City areas rather than in the Valley proper.

A later and more direct connection between the development of Silicon Valley and our club was the Home Brew Computer Club. Perhaps some of our newer members may not know that Gordon was the founding president of the Bay Area Engine Modelers. On March 17, 1975, Gordon French and Fred Moore invited the local computer community to a meeting in Gordon's garage in Menlo Park. Gordon showed his Intel 8008 system and hosted the meeting for 32 people. By now, everyone knows that "the two Steves", Jobs and Wosniak, attended and later showed their Apple 1 in December of 1976. The club immediately became a focus for early micro-computer activity. Besides Apple and Osborne Computer, over 21 companies grew from the group that originated as the Home Brew Computer Club. The original intent of the club was more oriented to hardware than software, but the coincidental cover story of Popular Electronics in 1975 featuring the Altair 880 as the world's first

micro computer kit, changed the thrust of the club. The club soon moved to a larger venue and Lee Felsenstein took over the direction of the meetings. But for many years, Gordon held the position of secretary of the Home Brew Computer Club. The club newsletter was an influential force in the development of Silicon Valley. The Club disbanded in 1986.

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