

# The Crank Calls



September 2014

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## **MEMBERSHIP \$25.00 US**

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### **NEXT MEETING**

**September 20, 2014** 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

**September meeting Tech Topic:**  
**Balancing 1A: Static and Dynamic**

Ironstone Concours d'Elegance - Saturday,  
September 27. Murphys, California

## **MEETING NOTES**

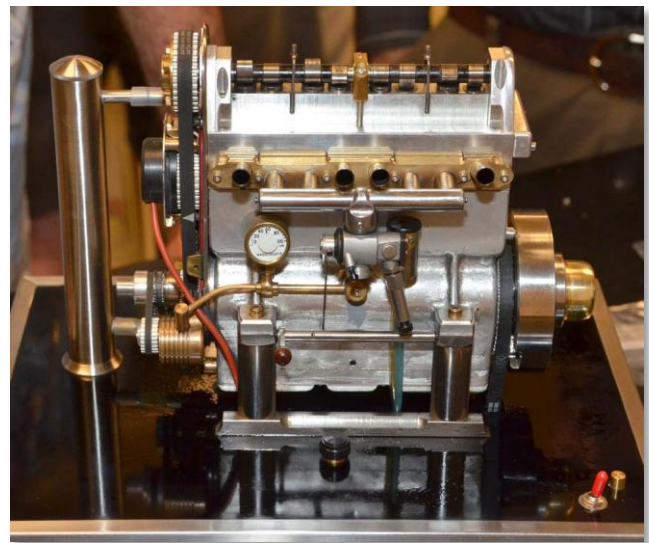
August 16, 2014  
Bob Kradjian

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

**VISITORS:** John Gentilin from Castro Valley visited us and also subscribed to *Model Engine Builder*. John's technical background is in embedded systems control, both hardware and software design. His current interest is in free piston linear generators. Welcome, John!

Dwight's fine protégé, Yuan Mogle, returned for another visit and this time brought a freshly finished engine. This will be described below.

**FIRST POPS:** Bob Hettinger showed us his latest efforts on a beautiful Sea Lion. He delayed his project several years to first obtain a milling machine, and then to develop and build his own version of a cam grinder. The engine is now finished and is lovely. His version of a self-



contained starter works well on drive, but is hanging up on release. The 30 cc overhead cam, in-line, four-cylinder design is by Edgar Westbury. The design uses full oil pressure to the main bearings, but no provision other than direct oiling for the camshaft. The fitting of oiled felts is planned for

this application. Two important modifications were the use of a belt instead of gears to drive the cam and the elimination of rocker arms. The cam lobes are direct on the buckets as in Offenhauser practice. Bob uses Evan's Coolant to obtain a high boiling point and to avoid rust. Despite forgetting to fuel the engine, it still had enough fuel to give a nice, smooth but short run.

**EVENTS:** Another reminder, the Ironstone Concours d'Elegance is next Saturday, September 27. This show is in Murphys, California. At this late time, we don't have a member committed to show. If interested, please let Bob Kradjian know.

**TREASURER'S REPORT:** s reported last month, we now have insurance. Thanks to John Gilmore and Mike Rehmus for their efforts.

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

**WEME REPORT:** Our annual WEME show in conjunction with the Good Guys West Coast Nationals was a success. Although we had a few defections from our list of scheduled exhibitors, we had good crowds and excellent displays for the entire three days. We were pleased to have members Randall Cox and John Vietti make the long trek from Wyoming. Two welcome visitors were Paul Chretien and Ken Richter who came up from Southern California representing the Southern California Machinists. That club meets at the El Camino College in Torrance. See [www.SCHSM.org](http://www.SCHSM.org) for details. They had a fine display and both plan to return next year. Also making the journey from Southern California was Jim and David Kipp. They are hard at work making a fine series of modified Black Widow V-8's

Show manager, John Gilmore, did his usual fabulous job of orchestrating the equipment, ferrying the members from the parking lot, dealing with the Good Guys staff, setting up and taking down the compressor and lines, and a dozen other tasks. It's a full week of work for him and it's greatly appreciated. If an attempt is made to list all exhibitors and workers it will probably leave out a few, but here are some listed by last name: Hurst, Giles, Gravatt, Gilmore, Ellerbusch, Rehmus, Armstrong, Cooper, Bove, Horn, Denham, Vystrcil,

Hettinger, Fontaine, Anderson, Meredith, David and Jim Kipp, Knapp, Kradjian, Palmer, Mogle, Chretien, Richter, and Jim with the race car body. Of course, the terrific tank display was busy all three days

Our good friend, Mr. Goodguys himself, Gary Meadors, spent an hour with us and loved our entire production. He also connected with Paul Knapp and perhaps can find a suitable facility for Paul and Mike's fine display at the Scottsdale, Arizona Good Guys show next year. Paul and Mike's contribution to the show is immense. They were fabulous new additions to last year's showings. How they get all those engines into one van is modern miracle. Thanks from the rest of the club!

Here's an important listing. If you go online, to You Tube (youtube.com) and type in:

BAEM goodguys show 2014.

You will see a one-hour video of our members being interviewed by Steve Hazelton! It is a terrific service that Steve performs, and is in addition to his one-hour show from last year. If you haven't had the pleasure to see last year's interviews, view it at:

BAEM Club good guys interviews mpeg

It is also on You Tube, of course. Thanks Steve!

While you're browsing You Tube, do yourself a favor and check out this listing:

"Junior" Model Chevy V8 Phillip

This is a 20-minute video of a first time start up of a South African builder's V-8. There is an informative and nicely done build-up of the entire engine. Don't miss this video---it's a gem. Guaranteed, you'll learn something about miniature engineering. These guys are good!

Finally a short video with a strange title:

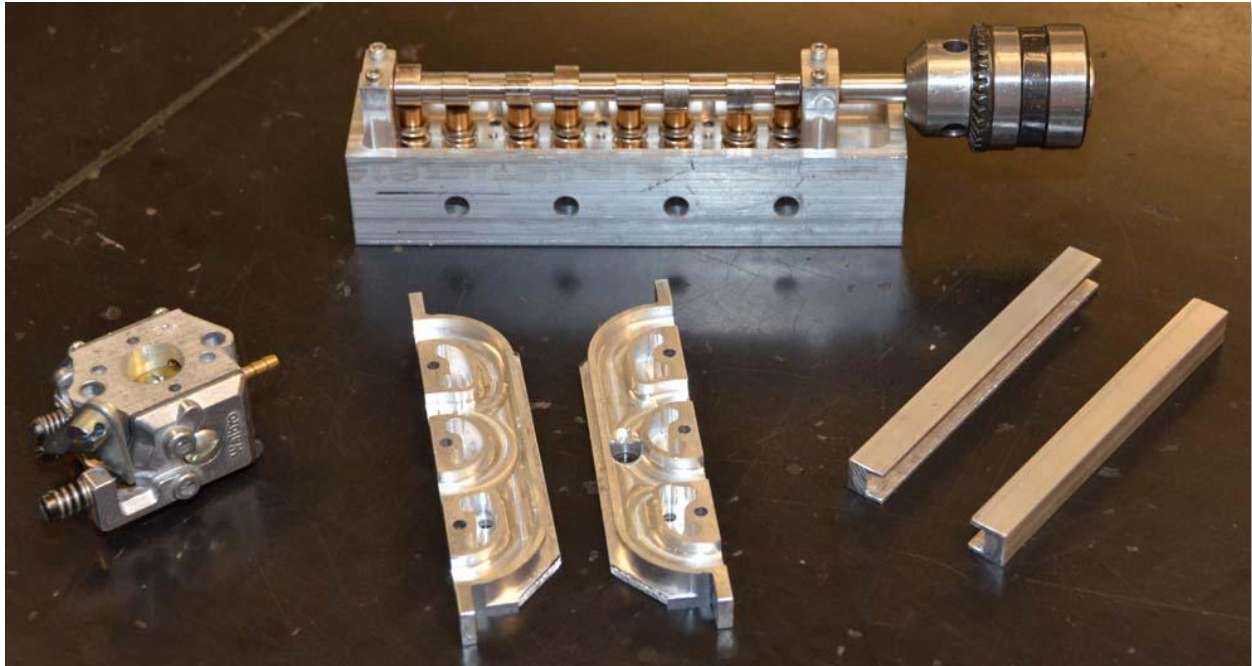
Model V8 Engine is too damn cool for words

A most elegant, detailed and refined engine at only 45 cc displacement and said to have fuel injection!

## **BITS AND PIECES:**

Pat O'Connor showed us some automotive hydraulic brake cylinders and pistons that could be converted to a small I.C. engine with a great deal of work. That's an interesting idea. We've all seen internal combustion engines made from air compressors.

Peter Lawrence is entering the field of making manifolds in split halves (see photo below). Practitioners of this art have made appearances at our shows in the form of Glen Tomlinson's complex Deltic 18 cylinder, and Ron Bement's unique engines. Methods of joining the halves were discussed. Welding, soldering, and epoxy joints have all been used



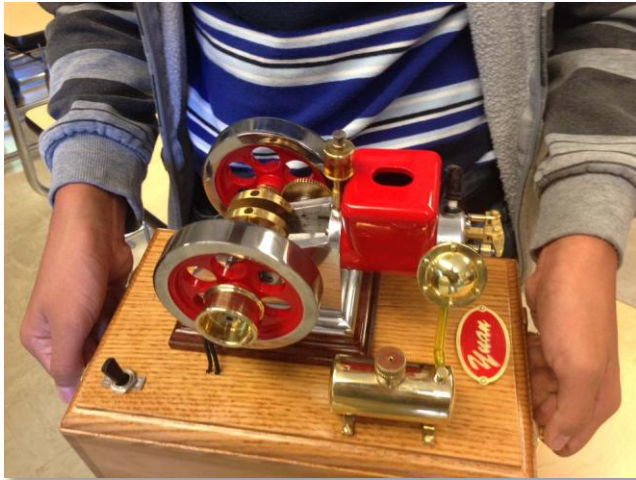
Peter's split manifold in center foreground. TIG welding practice pieces on the right

Peter is also venturing into the wonderful world of Walbro carburetors. The availability of a newer model, the WT 813, with a 5/16" throat was mentioned. The main new feature is an internal acceleration pump. The 813's are easily available on line for forty to 60 dollars. Overhaul kits also available for eight to thirteen dollars. Try davesmotors.com as one vendor. Club members have been struggling with these little Walbros for over ten years. Their basic shortcoming for us, is that they are specifically designed either idle, or to go to full throttle. No mid-range jetting or accelerator pump provisions were made before the 813. Despite this, with good line pressure pumps and careful restricting of the manifold volume, very impressive performances have been made. Ken Hurst, Dwight Giles, and Paul Knapp have coaxed excellent responses from their set ups on Challengers.



A pair of Perry carburetors (see above) was shown to the group. The first was stock with a plastic body. The second was a carburetor with stock Perry internal parts and jets, but a new aluminum housing. These latter carburetors work well. It was stressed

that the stock plastic body version is quickly destroyed after gasoline is used.



Yuan told us of his work with Dwight in both woodworking and metalworking. This culminated in his carbureted version of the Giles engine that is excellent in all regards. Yuan's attention to detail and finish is remarkable for a worker of any

experience level. The engine promptly fired and ran well, to applause from the group.

Anthony Rhodes showed us detailed plans of the compound steam engine used in the Doble steam car. A lively discussion of these engines as well as the Besler steam engine used for aircraft followed. This V-Twin Besler was based on the Doble design. The power plant was nearly silent in operation, and on landing, could reverse prop rotation and quickly bleed off speed without danger of ground looping. Their flights were made in Oakland, April of 1933. Roy Anderson had a similar engine for his boat engine and has a deep knowledge concerning these power plants.

We had a continuing discussion concerning the tendency of our current gasoline supply to gum and clog small carburetor passages. Paul Denham uses a chain saw fuel that stays in a copper tank without gumming. If I recall correctly, he said it was TRUFUEL. If this is so, they claim a longer than 2-year life after container opening, and 5 years unopened. They also claim only 30 days optimal usage for regular pump fuel. A close friend had a Ford model A in his barn. On his birthday, he would charge a battery and start up the engine for a few minutes. This annual ritual lasted for eleven years until the fuel no longer had the volatility to light off the engine. Without doubt, today's fuels would not begin to approach that performance.

### **FOR SALE:**

Newall C-80 3 axis DRO system (knee) for Bridgeport Type 1, 48" table. Excellent condition. \$1400 Contact Jim Piazza (408) 390-2024

Criterion boring head model TABH-250B, like new! Reads in thousandths and tenths! New units sell for over \$1500. Asking \$750. Set of 4 Mitutoyo digital micrometers like new in a wooden case. The 2"/3"/4" have not been used. the 1" was used a few times. The 2"/3"/4" have SPC outputs and the 1" does not. This four piece set also retails for over \$1500. Asking \$750. Contact Dick Pretel (408) 732-6507