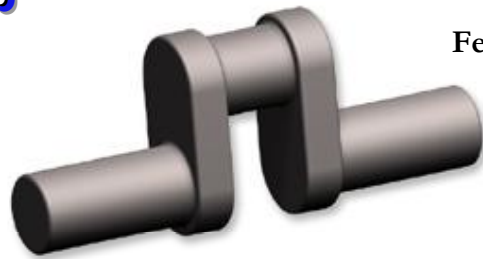


The Crank Calls



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MEMBERSHIP \$25.00 US

Contact Paul Denham at
pedenham@comcast.net
**Membership Dues are now
due!**

NEXT MEETING

**February 18, 2017 at
Golden Gate Live Steamers
Tilden Park
Berkeley, CA**

Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

BAEM meetings: 3rd Saturday of the month

**SWAP Meet at the February BAEM meeting!
Bring your stuff to swap!**

MEETING PLACE FOR February 18th

We will meet this month (February) at the Golden Gate Live Steamers meeting room in Tilden Regional Park, Berkeley, CA..

MEETING NOTES

January 21, 2017

Bob Kradjian, Secretary

President Paul Denham called the meeting to order at 10:06 am. We were privileged again to meet in the spacious conference room at the Redwood City TechShop.

VISITORS: Tom Trzpiak visited us today with his nicely turned out steam engine. See details in BITS AND PIECES. In addition, we are expecting a visit from a machinist in Tennessee for our next meeting. This is based on visits to our WEME showing.

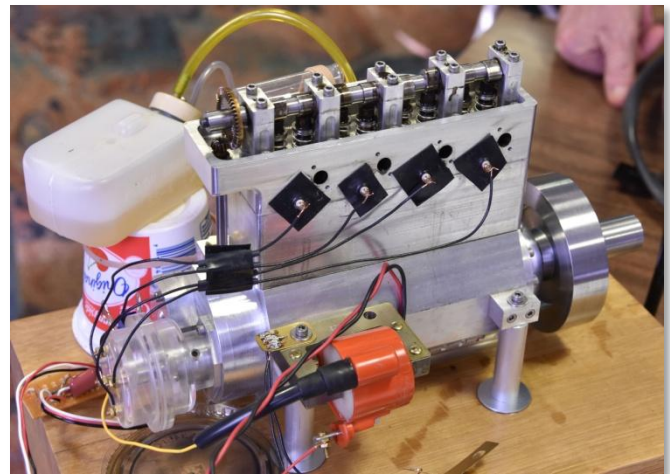
We also were pleased to re-connect with old member Dean Andrus. He has been busy with other pursuits and wanted to see how we were doing after seven years.

PROJECTOR PROJECT: The 55-inch Sony smart TV that we purchased is ready for the process of installation at the Golden Gate Live Steamers meeting room. A swing down mount is envisioned

and is being drawn up by Paul Denham. Dwight Giles has offered to fabricate the design. This will allow for videos and close ups of items on the front table to be shown in large scale on the video screen.

MEETINGS: This is not an outside meeting, but we plan a swap meet for the February meeting at the GGSL facility. If this goes well, perhaps we will have a follow-up swap meet at the Tech Shop in March.

FIRST POPS:



Last month we reported that Peter Lawrence had first pops (about five seconds) from his "test mule"

engine. It's a test bed for a Rolls Royce Merlin V-12 that has been in the works for several years. The "mule" is an original, four-cylinder in-line gem. It uses a single overhead camshaft driven by a bevel-gear vertical shaft. The bore is one inch. An ignition problem with the Hall-effect system sensor has been sorted out and he has had some short runs. Peter made no provision for water-cooling and will settle for short runs, however this precludes the sustained running useful for testing carburetion. The difficulty of providing cylinder head cooling for an overhead valve, Vee-Type aircraft engine was discussed, but not resolved. The technique of "gluing" components together in the fashion perfected by Ron Bement with his Offenhauser and the Duntov-Ford V-8 builds. He used a Loctite® epoxy to combine aluminum halves. This allows for coolant passages, holds coolant perfectly, and retains structural integrity. For the present, Peter has decided to omit water-cooling, but perhaps a two-piece head will be the next step. The 10-40 thread spark plugs were made by Peter; they have a habit of spitting the Corian insulators. This is not a new problem for BAEM members, Lou Throop wrote an article for "Strictly Internal Combustion" that will give you his reliable method of making spark plugs in the home workshop. It involves fashioning a thin collar that can be rolled down over a ceramic or Corian lip. The use of a high temperature ceramic glue or epoxy should complete the seal. Lots of these listed on a Google search. It's still best to pop for a set of Paul Knapp's superb 10-40 plugs.

The scale of the V-12 Merlin is 1 to 5.1.

Bob Hettinger described his solution for cooling the Sea Lion OHV in-line four cylinder head. He created a ridge over the valve springs that allowed for the flow of coolant.

Peter is developing his V-12 Merlin from engineering drawings in books purchased from the Rolls-Royce Heritage Society in England.

TREASURER'S REPORT: Paul reports that we are solvent.

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

BITS AND PIECES



Tom Trzpik showed us his open column launch engine model built from 1972 plans. Featuring a one-inch bore, it is a project for a beginning college machining class. The completed engine tends to stall at bottom dead center under air pressure and Tom has been unsuccessful thus far in getting it to sustain running. He has altered the timing of the rotary valve to nearly all the possible settings without positive results. Paul felt that there was some internal friction and binding that should be eliminated. Others felt that the flywheel should be substantially increased. The use of additional air pressure was another thought. With all these suggestions implemented, Tom should be able to return with a nicely running engine.



Mike Rehmus has continued with his 3-D printing adventures. A 2 piece turbo impeller and a device to square up material in his chuck, and a device to help with tool changing followed. He also made a gadget to help lighting with the milling machine quill lowered for close-in work. The photo below is the rear of the device showing the magnets that attach it to the mill quill.



He is also having fun buying inexpensive electronic gadgets from Banggood.com. Some of the values are remarkable; shipping is free but be prepared for a several week delay.



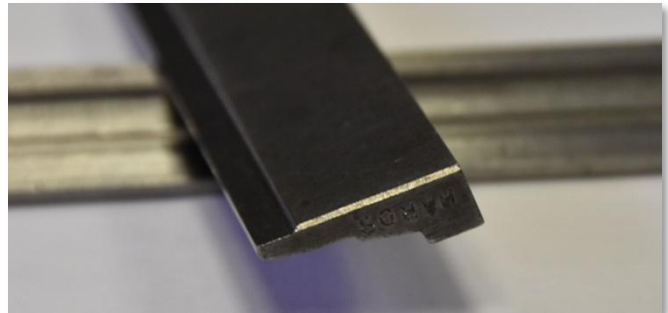
After he broke his 0.040" cut-off blade, he wasn't able to find an exact replacement for the English tool. However, he found a cut-off blade with a holder for \$14.99. On Amazon, it is listed as a Baban MGEHR 1212-2 with four inserts.



Dwight showed us a series of Chrome-moly metal stampings that he was commissioned to make for a World War II B-25 rebuilding project. His fifty-ton press doesn't break a sweat with this ten-ton application. He is also making control yoke parts for a Sikorsky S-39 under reconstruction.

Paul Denham told us about an electronic ignition system re-published in "Everyday Practical Electronics" but originally published in "Silicon Circuits". He has been interested in ignition that will not break down under high rpm and high compression applications.

This system will provide two milli-Joule sparks per fire of a V-8 engine at 15,000 rpm. To achieve this you must draw about four amps of direct current. He is about 80% finished with the system and should have it to show at our February meeting.



Lon Keeth showed us a "What is it" mystery tool. It is actually a pair of flat pieces. Some of our geniuses promptly identified them. These are "hold-down" devices for accurately lining up and securely holding irregular work pieces. Starrett lists them as a 54A "Hold Down" for \$93.00. The PDF file on their site will provide you the tricky angles involved in these tools. Lufkin also sells it as the Lufkin 902.

A book has been donated to the BAEM library by Mike Rehmus. This was written by a former

contributor to his magazine. This will be passed to Anthony Rhodes at our February meeting for your inspection.

The book is a collection of extremely eccentric and unusual engines. Some are truly mindboggling. There are no construction drawings, but if you have some of the imagination and skill that the late George Gravatt possessed, you could make a running engine from some of the plans shown.

Power Pioneers: The Art of the Engine-Pre 1956,
Vol. 1

ISBN 978-0-9981473-3-

Publication date: 2015

Author: Ron Cairns