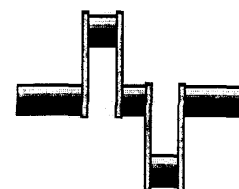


# The Crank Calls



December 2003

President.....Ken Hurst.....(707) 257-2481.....icengine@napanet.net  
Secretary.....Bob Kradjian.....(650) 343-7585.....bkradjian@aol.com  
Treasurer.....Lewis Throop.....(650) 941-8223.....lthroop@aol.com  
Editor.....Bill Nickels.....(408) 739-2407.....whnickels@aol.com  
Tech Topics....Pat O'Connor.....(408) 733-3710.....pat1650@yahoo.com

**HAPPY HOLIDAYS**  
**NEXT MEETING**  
**POTLUCK HOLIDAY PARTY**  
**December 13, 2003 – 11AM**  
**At Robert Schutz's Shop**  
**366 40th St. Oakland, CA**  
**Bring your favorite engine**  
**and food dish**

**Dues Are Due**  
**Contact Lewis Troop at**  
**27272 Byrne Park Ln.**  
**Los Altos Hills 94022-4324**  
**650-941-8223**  
**lthroop@aol.com**  
**MAKE CHECK PAYABLE**  
**LEWIS THROOP**

**Check out the BAEM Web**  
**Site at [www.baemclub.com](http://www.baemclub.com)**  
**Send your project photos to**  
**the Web Master Jim Piazza.**  
**Phone: 408-446-4825**  
**Email: [jpiazza@ix.netcom](mailto:jpiazza@ix.netcom).**

## President Notes:

I want to wish all the members and family a happy holidays. The B.A.E.M. had a great year. I want to thank the staff for the outstanding job they did to make it happen. This up coming year should be full of fun for all of us. The club has a lot of new members and engine projects. The best part of being a club member and coming to the meeting is the talent & desire all of you have. That's what fuels my drive. Keep making those chips and be safe always. It's been my pleasure to serve as your President this year.

**Ken Hurst**

## Meeting Notes

November 15, 2003  
Bob Kradjian,

President, Ken Hurst, called the meeting to order at 10:05. There were 54 in attendance.

We were pleased to welcome six visitors. Al Marconett from Santa Cruz. Bob Saric, a friend of Paul Bennett. Dick Pattee retired from the Department of Corrections and a former automotive engineer; and his son, David Pattee. Their plan is to build a four-cycle engine for use in an RC airplane of David's making. Karel

Vystrcil from Newark came with former member, Jim Bove. Karel is an engineer who now does watch making in his home. My cousin, Rick Avedikian from Oakland, a talented electronics expert, made his first visit. Welcome to all!

Welcome also to new out-of-state members, Gared Schoenly and Virgil Jeffries.

## Treasurer's Report:

Lew Throop tells us of over a thousand dollars in the club treasury.

Remember, "Dues is due!" as our past newsletter editor, Bob Allen, used to tell us. Contact Lew Throop for your update.

## Secretary's Report:

We have completed a very successful series of engine shows as well as attending the last PRIME and the first Men, Metal, and Machines. My thanks to all who participated.

Globetrotting member, Chris Leggo, has just returned from a trip to the Midlands Exhibition in England. He passed around photos of the show and gave a brief report.

### Bits and Pieces:

The amazing Al Vas-salo brought in another original engine. This one a Stirling engine featuring a Scotch Yoke. As with all of Al's engines, it runs perfectly on a modest amount of heat. When asked when he finished it, the response was: "Two weeks ago."



Carl Wilson showed us an intriguing, old tool. This was a 2-inch drill bit on a ratchet with a screw feed. Old time machinists could successfully drill hard steel with this simple device. Some in the club remember it as "the old man," presumably because it will make an old man out anyone using it.



Carl mentioned that novelist, Richard McKenna, described such a device used in emergency repairs on a Yangtze River gunboat engine in the 1930's in his novel "The Sand Pebbles." According to his AP obituary: "He loved machinery the way some men love God, women, and their country."



Ken Hurst and Dwight Giles described their efforts in reviving my venerable "Challenger" flat head. It was fitted with a snowmobile starter driving a Torrington

clutch, a stainless steel fuel tank pressured by a 12volt fuel pump, electronic ignition, and a new copper and brass radiator built by Jonney of Concord. His telephone number is 800-525-0079. Dwight says that he will make radiators, to order, for club members. The prices are in the 50 to 60 dollar range. Dwight fashioned the 5052, 0.050" aluminum shell over a buck then welded the seams.

My thanks to Ken and Dwight for their splendid assistance in reviving this engine. This engine was the first one demonstrated by our club at a public showing (in 1996 at the Air Museum at Morgan Hill). The response was so positive that we (Robert Allen and I) arranged for additional shows at Spreckel's Lake and then the Palo Alto Concours. This set off a chain of events that has resulted in a total of more than fifty shows. It will be good to have this veteran engine back on the show circuit next year.

Ken gave us an update on the five main-bearing V-8. He has decided to call it the "Black Widow." He and John Vlavianos has proofed out two crankshafts in aluminum, and plan to pour 4130 for the final product. The pistons, rods, and heads are also completed.

This engine kit should make an historic contribution to our hobby and replace the Challenger, which is based on technology from the early 1930's.



Ken also showed a very cute, miniature, hydraulic floor jack. Member Bob Haagensen in Pomona sent this to him. It will display nicely with his Willys V-8 powered hot rod.

Sargon DRO's are apparently still on sale at

Photos by Jim Piazza

one half off. Heck of a deal! Quite a few hands shot up when members were asked if they bought a unit.

After the meeting a few of us took a pilgrimage to Paul Bennett's new work place. We all have a strong bond with Paul who was our strong support during our early lean days. It was gratifying to see the work he is doing on VERY large equipment designed to quickly fasten huge, square steel girders to each other in an Erector Set fashion to create buildings (mostly residential) up to eight stories in height. He is fashioning jigs, fixtures, mounts, clamps and other ingenious devices to fabricate these components. In addition, he is mastering CAD/CAM and CNC for the megabuck milling centers there. Congratulations Paul, your employer was fortunate to find someone with the multifaceted talents you possess.

This month's meeting is the fun one. We dis-

pense with all club business, and concentrate on enjoying each other's company and running engines. Be sure to bring your "runner", even if it's been to the meetings before. (Remember, it's at 11 O'clock, not 10am.)

The meeting is also a "pot-luck" luncheon. So, bring along whatever you wish and I know we'll have more than we need if past years are a guide.

Although this meeting will be without business, we will have our annual election in the January meeting. Give some thought to those who will be nominated. If anyone wishes to nominate and elect me to the secretary position for another term---that would be fine, but I need someone else to take over the special events coordinator position. It's a lot of fun and not much work, but I have to pass on it for next year due to increased family duties.

***PRIME 2003***  
***Photos by Barry O'Connor***



Clen Tomlinson's Deltic & Blower



*PRIME 2003*  
*Photos by Barry O'Connor*



Eugene Corls' V8



Jim Moyer's V8 block and cam



## TECH TOPICS BY PAT O'CONNOR

At the January 2004 meet we will have a talk by John Servin, of HS&S, on the rewards and pitfalls of buying used machinery, how to recognize a serious problem, and the methods/costs of repairing your new jewel.

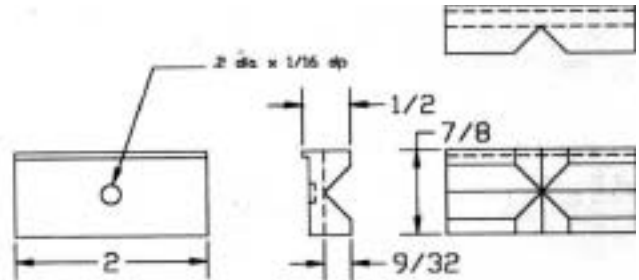
### NOVEMBER TECH TIPS AND TOPICS

#### Tech Tips by Carl Wilson

Steve Jasik modified his three spoked speed handle for the milling vise to give it warp speed. Steve uses water-based coolant on the mill and likes to clean under the moving jaw. The speed handle was too slow for him so he added a speeder knob. He bolted a piece of rectangular steel to a slot milled into the aluminum hub of the handle. A plastic handle is in turn bolted to this piece at a radius of about 2". Now he can quickly open the moving jaw, clean the base of the vise, and return the jaw.

Oscar Ortiz reached into his pocket and brought out a neat vee block soft jaw for the milling vise. This accessory has two 90-degree vee grooves, which are handy for holding round stock horizontally or vertically in the vise. A shoulder and magnet on the back side hold and align the vee block to the fixed jaw of the vise.

These blocks are made from small pieces of cold rolled steel. The drawing has some suggested dimensions but they are only suggestions. Use what stock you have. Oscar makes these 2 or 3 at a time in a stick 4 to 6 inches long. The stock is held in a pair of vee blocks in the vise for milling the long groove. A bit of moving the vee-block clamps is going to be necessary. The stick is cut into individual blocks and then the cross vee is milled. Put a 45-degree angle plate in the vise and rest the block against it to cut the cross vee. The magnet is from Radio Shack



(#64-1895).

#### Tech Topics by Carl Wilson

Steve Jasik talked about deburring, polishing, and buffing using abrasive wheels or cotton buffing wheels. These are non-precision methods for improving the appearance of machined parts. Deburring removes the small burrs left on edges by machining. It is the coarsest operation, frequently removing visible pieces of the workpiece. Deburring can be done with hand tools: files, sandpaper (shop roll), or deburring tools (Rout-a-burr, Vargus), or with special wheels. Steve uses Scotchbrite EXL Convolute Deburring wheels mounted in a cheap bench grinder. Norton BearTex is a similar product. A part at this stage would still have machining marks on its surfaces.

The next step is polishing. This process removes all machining marks and prepares the surface for buffing. Polishing media have



the abrasive glued or bonded to the wheel. Many of the deburring wheels are also used for “surface conditioning,” a polishing operation. Cratex wheels are a rubber bonded polishing medium. For some applications, polishing may be the final surface preparation. These wheels can also remove rust.

Buffing generates a high surface finish that is grainless: the surface reflects light evenly in all directions. Steve showed buffing wheels, buffing compounds, and a rake that is used for cleaning and truing the wheel before changing the compound. The buffing compound is an abrasive in a stick form that is rubbed onto the rotating wheel. The compound is chosen to match the workpiece material and the finish desired. Buffing compounds are loosely grouped into the categories of “cut” for roughing and “color” for finishing. (The visual color of the compound has no relation to its function – cut or color.) Further sources of information are machine tool catalogs (MSC, Travers, etc.) and

Brownell’s gun smith catalog.

Deburring, polishing and buffing with power wheels are dirty operations. Dust masks or full respirators to filter the dust particles, and eye protection should be used. Wear gloves, the workpiece can get hot. Present the work to the wheel below the centerline of the wheel. Buffing and polishing wheels can grab work and throw it a long ways, and working above the centerline increases that risk. Whenever possible work with the wheel rotating parallel to an edge or off of it. Working onto an edge is dangerous: the wheel can grab it. Some round parts can be placed onto a mandrel and spun by the wheel.

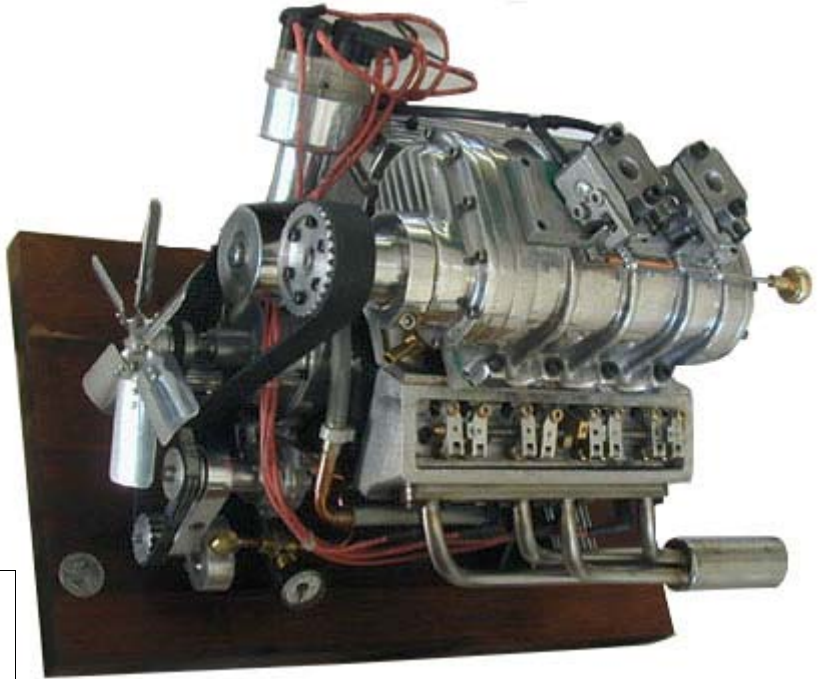
Lee Valley Tools (1-800-871-8158 or [www.leevalley.com](http://www.leevalley.com)) is selling reprints of The Bull of the Woods, J. R. Williams' cartoons set in the machine shops of WWII. They also sell the 4 volumes of The Boy Mechanic, and 26 volumes of Popular Mechanics Shop Notes (1903 to 1930.) Great stuff.

***PRIME 2003***  
***Photos by Barry O'Connor***



Randell Cox’s Open 6 Cylinder

*PRIME 2003*  
*Photos by Barry O'Connor*



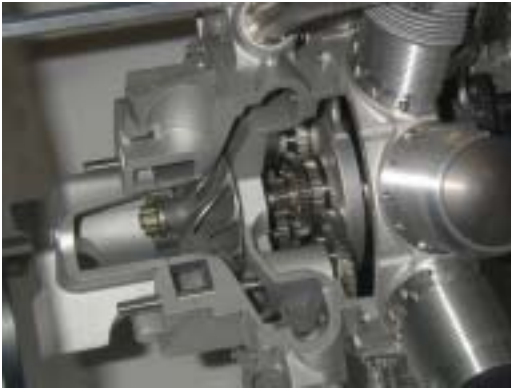
OHV V-8 Challenger  
Ken Hurst and Dwight Giles



Dave McMillan's rod  
and piston

**PRIME 2003**  
*Photos by Barry O'Connor*

Paul Knapp's cut away R-985



**FOR SALE**

Craftsman 6 x 18 Lathe. See photo below.  
 3 jaw chuck, 1/3 H.P. reversing motor  
 Table/wheels \$375

Rototiller 5 HP in Good condition \$150

Contact Jim Piazza 408-446-4825  
 Email: [jpiazza@ix.netcom.com](mailto:jpiazza@ix.netcom.com)



**WANTED**

1. Three jaw chuck, 1/2 X 20 with backplate.
2. Zero taper drill chuck

Contact Dick Pretel, 408-732-6507  
 Email: [RPM10K@SONIC.NET](mailto:RPM10K@SONIC.NET)

**FOR SALE**

Carolina Tool & Eq. HD-10 horizontal/vertical bandsaw, 3/4" blade \$250.

Contact Pat O'Connor 408-733-3710  
 Email: [pat1650@yahoo.com](mailto:pat1650@yahoo.com)

**FOR SALE**

Mutoh pencil pen plotter. D size.  
 HP compatible. \$100.00  
 Jim 408-446-4825 [jpiazza@ix.netcom.com](mailto:jpiazza@ix.netcom.com)

**FOR SALE**

UMAX, Astra 2000U Scanner with manual, software (Win 95, 98, XP and Mac OS 8.0+) and power adapter. Requires USB port in your PC, cable included. This unit has been tested using Win 98 and XP. This unit is in like new condition. \$40.00.

Contact Bill Nickels at 408-739-2407  
 Email: [whnickels@aol.com](mailto:whnickels@aol.com)