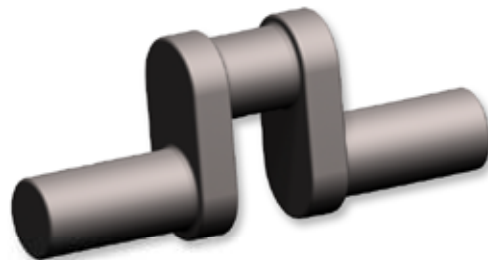


The Crank Calls



May 2010

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MEMBERSHIP

\$25.00 US

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NEXT MEETING

May 15, 2010 at
Chabot College, **building 1500**
25555 Hesperian Blvd, Hayward 94545
Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

EDGE&TA 50th Anniversary National Show, June 24-27,
Santa Margarita Ranch, CA www.edgeta2010national.com
Annual WEME Show July 10 & 11 Veterans Building,
Vallejo, CA
Good Guys Car Show Aug 27-28-29

MEETING NOTES

Carl Wilson 04-17-2010

We had a plethora of guests at the April meeting: Peter Stoimenov, Mike & Charlie Cooper, John Unger, John Lunberg, and Dan Orazem. Thanks for joining us and come back soon.

First Pop Honors this month went to Mike Stimmann for his Upshur engine and to George Gravatt for his free-lance opposed piston engine.

Treasurer Ken Hurst reported that he has paid the insurance to our parent organization Early Days Gas Engine and Tractor Association.

Pat O'Connor asked "If you are going to exhibit at this year's WEME show, please register and sign up for a table as soon as possible.

Bits and Pieces



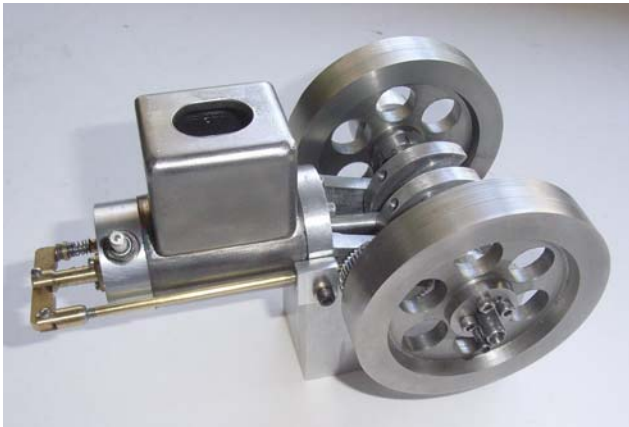
Steve Jasik is knee deep in building his rapid prototype machine. The brass and aluminum parts in the middle are blanks for the feed roller which grips and feeds the ABS rod to the right. The Aloris toolholder holds the feed roller while hobbing the teeth with a 3mm tap. The part at the lower right is the feed idler wheel. At the top right is a spider for holding thin work in a three jaw chuck. Magnets in the arm hold the spacer to the chuck and work is pressed against the spacer.



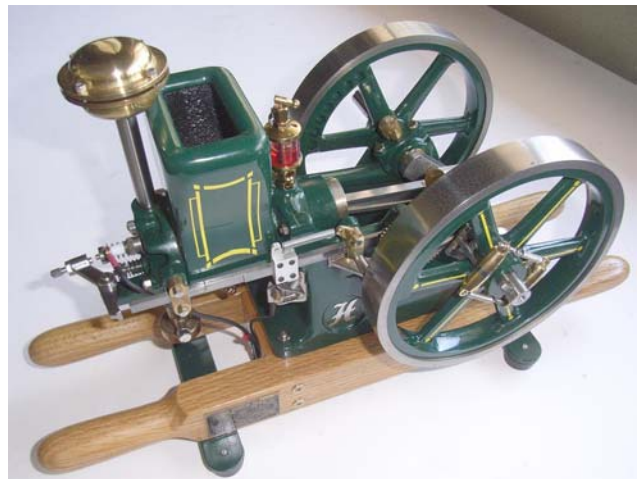
Mike Stimmann built this Stirling engine for his father, but it did not run when completed. Mike has since fixed it up with a stainless power piston and a displacer piston made from pumice stick glued to the displacer rod. Pumice is a form of volcanic ash and should be able to easily handle the temperature variations. It ran nicely on a small butane torch.



Dwight Giles brought a variety of miscellaneous pieces for display. At top center is a mandrel for eccentric turning of the flank arcs of an IC engine cam and immediately below it a cam lobe ready to be assembled onto its gear (60T at 48 DP) and finished cam and gear is on the right. These parts are for an Upshur farm engine. The brass flare fittings are copied from aircraft style fittings and are for his 4 cylinder Black Widow engine.



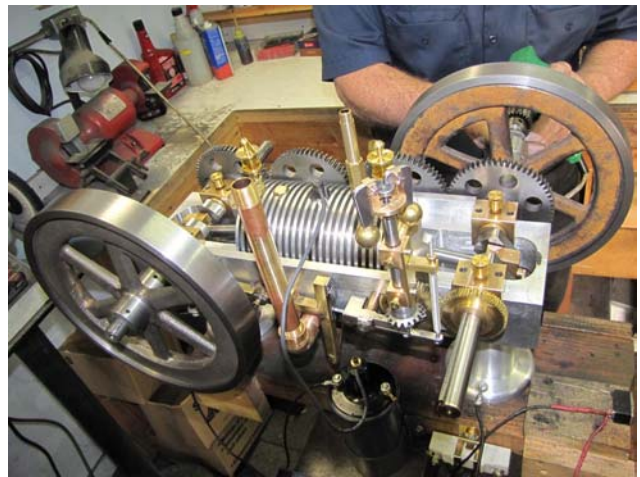
Mike continues to work on his Upshur farm engine. Mike made the ignition points from tungsten TIG electrodes soft soldered to a rod.



Bob Hettinger built this fine one third scale model of an Associated farm engine. It features a transistorized ignition system and spark plug rather than a magneto or low tension coil feeding an igniter.



Here is a detailed view of the plaque on Bob's engine.



George Gravatt's opposed piston engine. (Photo is courtesy of Ken Hurst.) As noted, it has had First Pops, but does not yet run well. Not to worry, George is the club's expert at getting these engines to run.



Don Jones is setting up to line bore the mains in the block of his Wall 4. He made a plate to fixture the block on the cross-slide of his lathe and the boring bar will be between the lathe centers. The tool bit in the bar is for illustration only. A shorter tool bit will be adjusted for size by a micrometer head mounted on a vee block.

Tech Tip

Ken Hurst offers this suggestion for boring the main bearing seats in a Wall 4: bore one end of the block in the vertical mill, remove the block and bolt a spud on the table. Mill this spud to a push fit in the finished bore in the block and then bore the second end. Make and install bushings in both ends and line bore the remaining bearing seats from the bushings. The bearing caps should be made from material with the same hardness and machining characteristics as the block material to avoid tool deflection caused by differing machine ability.

Tech Topic

I remember the first meeting that John Gilmore attended. As I passed him the Guest Register clipboard I asked John about his interests. He said "I build hot rods." Gosh all fish-hooks, he does build hot rods - award winning hot rods - and he brought his latest project to the April meeting. Seven years and a bunch of bucks produced this custom '37 Ford Northstar, named for the body prototype and the Cadillac engine and transaxle which push power to the tires.

John started with a fiberglass reproduction body, which incidentally required a lot of body work.

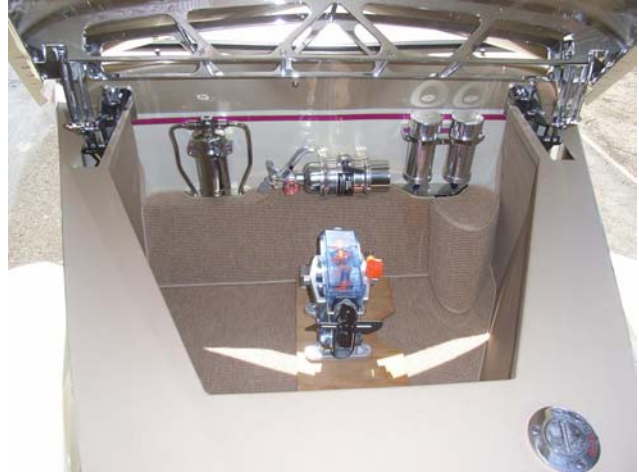
He said there is nothing like working fiberglass for months and itching all the time. The frame is 1/8" wall x 1 3/4" OD drawn-over-mandrel tube, custom bent, and TIG welded. Some of the frame tubes do double duty as conduits for coolant. John made extensive use of templates and mockups of various materials before nailing down the design.



The Northstar engine was transplanted from a Cadillac El Dorado. Everything from the transaxle case to the wheels is John's design and fabrication. The two rear shocks are mounted in a unique position and are connected to the suspension by bell cranks and levers. The mufflers are located beneath the shock cross member and there is plenty of spaghetti leading to and from them.



The extensive plumbing and wiring is not fully visible in these photos – you just had to be there to fully appreciate the complex layout and fantastic craftsmanship. John said that he mocked up the plumbing with wood dowels and hot melt glue before bending the stainless tubing.



Being a mid-engine car, the "boot" is in the front. This photo is looking at the – well, I don't know what to call it, 'cause the firewall is in the rear. The brake system uses a Hydroboost system which takes pressure from the power steering pump rather than from engine vacuum. This is typical of diesel engined vehicles. Note the girder or bridge across the width of the hood at the top of the photo. This strengthens the fiberglass hood in this area and connects it to the hinges. Those are complex fabrications designed to move the hood forward as it swings up. This was necessary to prevent the rear outer tips of the hood from contacting the body.

John took the car to 11 shows in 3 1/2 months and won 23 awards. The members of Bay Area Engine Modelers spontaneously gave John his 24th award. From the audience came "YOU'RE NUTS!!" followed by sustained applause. That's a heart-felt award though it's going to be hard to pin it to your wall of fame. Congratulations, John!