

President:	Gary Martin	(503) 452-9544	martinmodel@hotmail.com
Vice President	Bart Pond	(503) 640 5545	aldenb@teleport.com
Treasurer	Bud Statton	(503) 324 9514	BudStatton@worldnet.att.net
Membership	Dave Francisco	(503) 761 4446	frisco@hevanet.com
Photographer	Gary Hart	(360) 695 3740	hartmetal@msn.com
Editor	Bob Diffely	(503) 246 9206	blinda@saw.net
Webmaster	Greg Dermer	(503) 281 9238	depcco@easystreet.co
Member at large	Bill Miller	(503) 246 2175	bilau@gte.net

Last meeting was held in the OMSI fabrication shop - courtesy of **Roger Rupert**. We had more exhibits than we've had for a long time as can be seen from the variety of pictures. Thanks Roger.

Next Meeting is scheduled for **March 8th 1pm** at **Battin Power Service** located at **5004 SE Johnson Creek Blvd.** Battin can be reached from I205 (Johnson Creek Blvd exit and turn West) or from 99E (turn East at Tacoma. After a few blocks turn left (north) on Johnson Creek Blvd (JCB). Follow JCB for several winding blocks [be sure to turn right (east) at the light where JCB turns right]. Look for a gravel driveway **across the street from Precision Castparts** company. See enclosed map.



Roger showing off one of his many state of the art machines. Actually, this lathe is a rather old one but the shop does have an impressive array of both woodworking and metalworking equipment including a CNC router

FOR THE BEGINNER

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HEAT TREATING

Steel can be heat-treated to harden it; iron in its natural state doesn't harden well. If the part you are working on has to be harder than mild steel, use carbon steel. There are many types of steel but most of the stuff we get hold of will harden very easy. To harden steel, (not temper), heat it to a cherry red color. Cool it fast by swishing it around in water, oil or a water salt solution. The heat has to be removed fast to harden the steel. If the steel cools slowly it will be soft. To temper the steel after you have hardened it, sand or file it so you can see the bright shiny color. Bring this to a straw brown color, about 400 to 425 degrees. This can be done in a house oven, if your wife isn't home. Cool this also quickly. It should be hard. There are many other tricks that can be used but these are the basic steps to getting steel hard. From the high school text book.

Editor's notes: (1) We are including in this month's issue the first of a beginner's series of articles about metalworking. These are contributed by Wes Ramsey who also teaches the small engine class. (2) The club needs your ideas on interesting meeting places. Any of the officers would like your suggestions.

Can't Start Your Lawnmower? Take AM127E **Small Engine Class at Mt Hood Community College.** Tuneup, Repair & Maintenance. Call 503-491-6000 or 503-491-6488. For more information call Auto Department 503-491-7470. Register for Spring Term.

For Sale - Only \$900 US. Your choice of either:
 (1) Barbur Colman **Gear Hobbing Machine**, or
 (2) Traub **Automatic Lathe**. 1" capacity, with extras. These are limited supply items. Therefore, only one (of each) is allowed to a customer.
 Contact **Al Pohlpetter** 503 628 2161



Wes Ramsey shows his WWII pump powered by a two cylinder gas engine used in fire fighting and pumping out bilges aboard ships.

Gary Hart built these two Stuart model DV-10s.



Chris Patrick shows his super sized model airplane engine. It's a 5 cylinder radial. This 1/3 scale Jemma was built from barstock based on a series that appeared in *Strictly IC* magazine in 1999.



Wanted by **Bob Eaton**: a new or used set of construction drawings for the Sealion 4 cylinder, 4 stroke, water cooled overhead cam engine. If none are for sale, he asks where he might get a set. Bob can be reached at rbieaton@webtv or at (360) 891-1862.

Editor's note (3) If any of you would like to receive a pdf version of this newsletter (readable by Adobe Acrobat), please send me an email requesting such and I will include you on my mailing list. I expect its size to be about 1/4 megabytes.



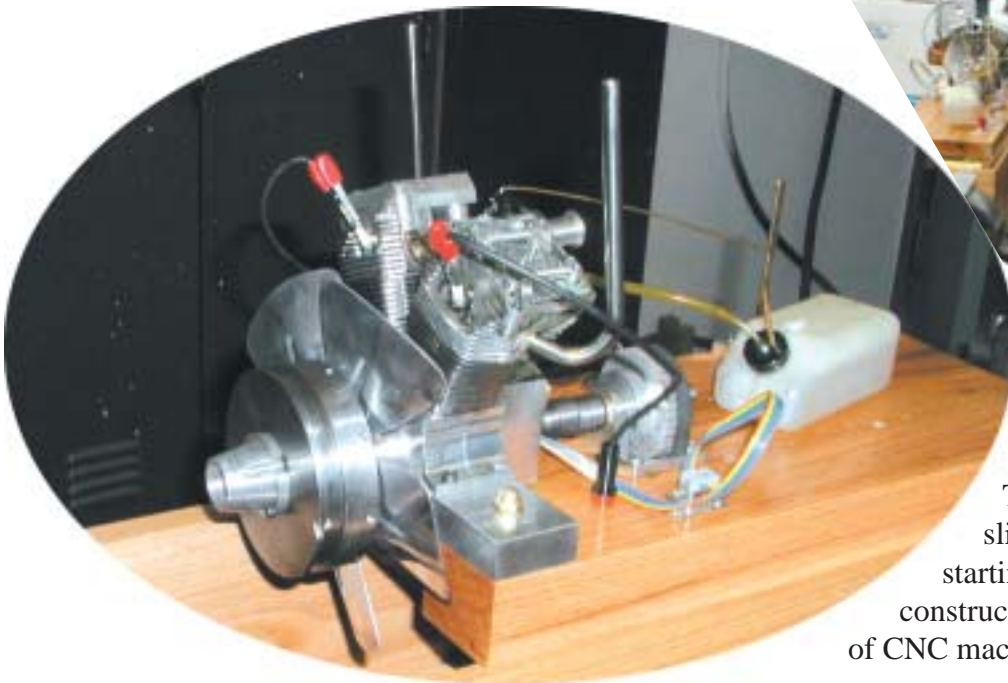
Hal May again displayed the clock parts he built (or are they from a clock he took apart - he can't remember exactly). Everyone agrees, however, that they are for a John Wilding designed skeleton clock.



Another view of **Chris Patrick's** super size model engine.



And would you believe that a working shaper can be built from scratch - including pouring the aluminum castings? This one, of course, is from the Gingery series. **Pat Wicker** is the builder.

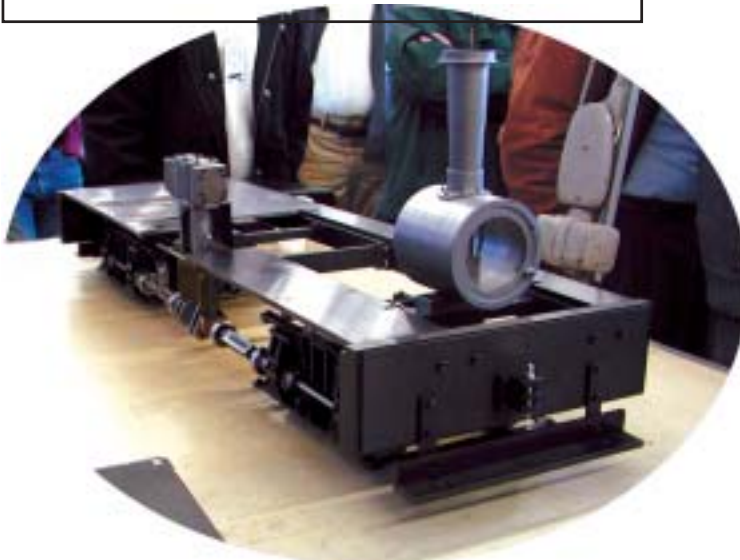


Virgil Jeffries (above) demonstrates one of his several model Harley motorcycle engines (left). This one includes a novel one way slip clutch used to disengage the starting motor. Although complicated in construction, Virgil says he made ample use of CNC machining equipment.



Bob Eaton (above) describes the process he used to etch the plates shown at upper left. Bob says this process is described in Guy Lautard's *The Machinist's Third Bedside Reader* on page 244. Although this process produces a most professional looking job, Bob says he is investigating another process that may be even better. So stay tuned for further information.

For sale: **Steady Rest** for 13 inch lathe. Fits Acra Turn, others. Has one V way. \$110. Contact Houston Rice at (503) 546-1951 or rices21@aol.com.



Grant Carsen displayed his mostly completed Shay. It's a 1.5" scale, 4.75" gauge all steel model described in a Live Steam article. Grant has worked on it on and off for the past two years.

Once again **Tom Hammond** wows the viewers with his impressive tools. This time he demonstrated his dividing head. It's based on a design by George H. Thomas published in *Model Engineer* magazine in 1984.



