Founded by Dave and Beth Carr in 1995

July 2004

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The **Last Meeting** was at the Iron Ranch courtesy of Alan Shurman. Once again, thanks, Alan. With literally acres of antique engines and paraphernalia to view, this ranch is an ideal meeting location for model engineers. The turnout was exceptional as witnessed by the photos inside.

The **July Meeting** is scheduled for 1pm on July 10 at **Cascade Microtech Machine Shop** thanks to the courtesy of **Jamie McAdams** and the leg work of Carl Petterson. Directions to the meeting are given elsewhere in this issue.

The club should also know that Carl has taken over the membership duties from Dave Francisco. Be sure to keep Carl informed of your current mailing address. Your dues can also be sent to him. Dave is recuperating steadily and plans to be at the next meeting.

Future Events

Steamup at Brooks **.....** July 31, Aug 1, 7 & 8
GEARS at Keiver armory **.....** Sep 25 & 26

Classic Craftsman table saw for sale
1950 vintage Craftsman Model 113.27700 with original manual.
22 x 20 cast iron table with 22 x 10 extension.
æ hp, 115 volt motor, belt drive
On movable stand with accessories.
$150 or best offer.
Carl Petterson, 503-245-8335

FOR THE BEGINNER # 17

CUTTING FLUID APPLICATIONS

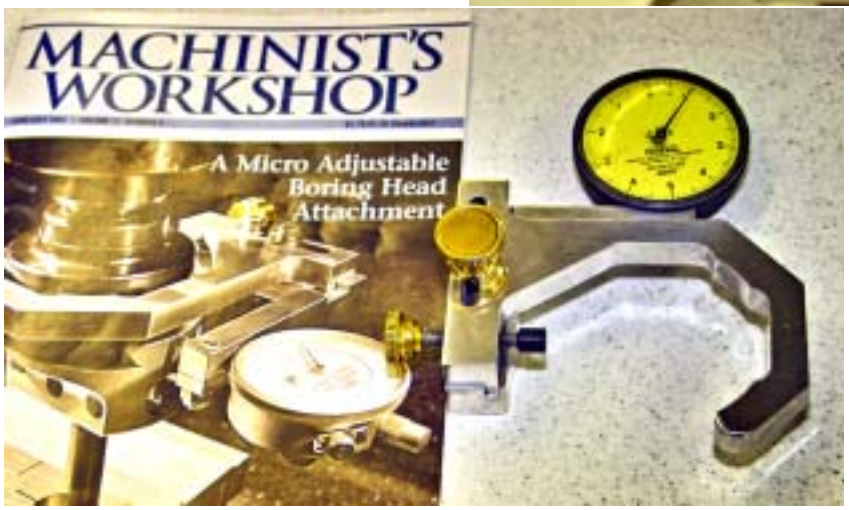
Emulsions (or water-soluble oils). Ordinary soap is an emulsifying agent, causing oil to combine with water in a suspension of tiny droplets. Special soaps and other additives such as amine soaps, rosin soaps, petroleum sulfonates, and naphthenic acids are blended with a naphtha-based or paraffin mineral oil to emulsify it. Other additions such as bactericides help to reduce bacteria, fungi, and mold and to extend emulsion life. Without these additives, an emulsion tends to develop a strong, offensive odor because of bacterial action and must be replaced with a new mix.

These ordinary emulsified oils contain particles large enough to reflect light and therefore they appear opaque or milky when combined with water. In contrast, many of the synthetic and semi synthetic emulsion particles are so small that the water remains clear or translucent when mixed with the chemical. The ratio of mixing oil and water varies with the requirement and can range from 5 to 70 parts water to 1 part oil. However, for most machining and grinding operations, a mixture of 1 part oil to 20 parts of water is generally used. A mixture that is to rich for the job can be needlessly expensive and a mixture that is to lean may cause rust to form on the work piece and machine parts. W hen mixing, oil should be poured into the water. Some emulsions are designed for great lubricating value, with animal or vegetable fats or oils providing a “super fated” condition. Sulfur, chlorine, and phosphorus provide even greater lubricating value for metal cutting operations where extreme pressures are encountered in chip forming. These fluids are mixed in somewhat rich ratios: 1 part oil with 5 to 15 parts water.

All these water-soluble cutting fluids are considered to be in the category of coolants even though they do provide some lubrication.

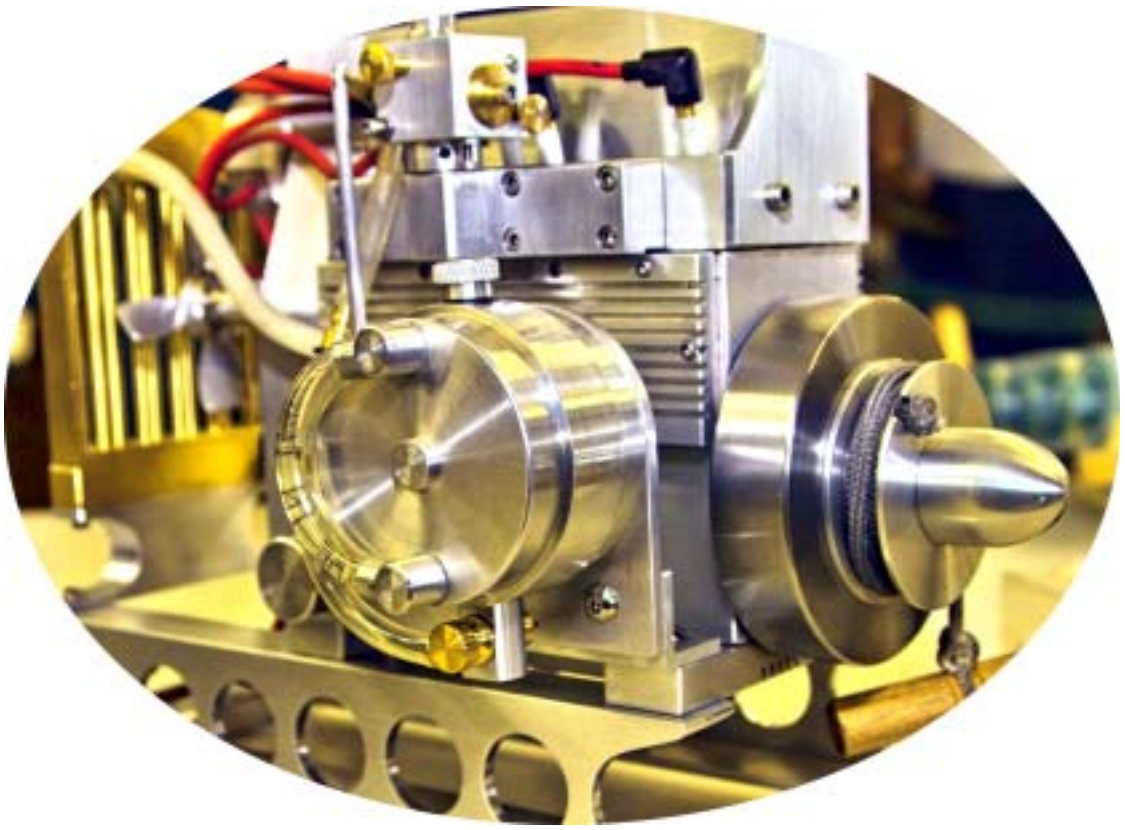
Wes Ramsey

Gary Hart continues the constuction of his 1911 Simplex (at right). Plans for this engine can be found beginning with issue 41 (October 1994) of *Strictly Internal Combustion* magazine.

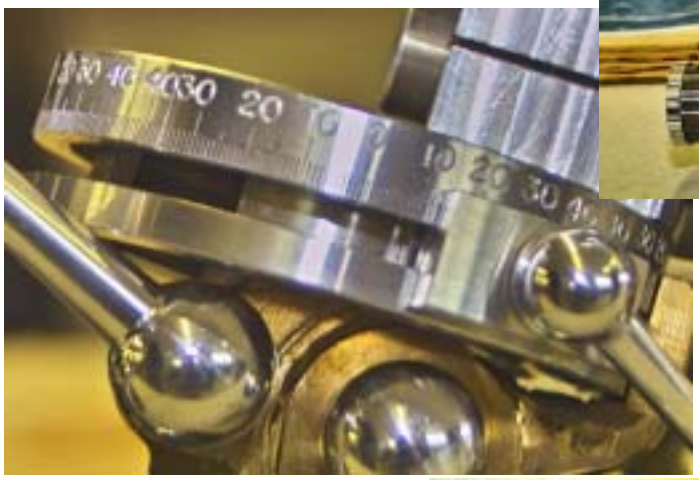


Gary Hart had 20 minutes spare time this month so he also constructed the micro adjustable attachment (at left) based on this month's edition of a *Machinist Workshop* article. This attachment fits on your boring head and allows adjusting the cutter diameter of the head to a greater accuracy and resolution than using the head markings. In this case, Gary used a dial indicator which resolves to .0001 inch.

Bob Eaton continues to improve his design of the Hafenouser engine shown at right. This month he created the circular fuel level sight glass shown on his engine. Bob says the circular design gives a far greater range of the fuel level than the standard vertical glasses. Bob is also a great experimenter and has been trying different types of carburetors and ignition systems with his engine. He didn't say why he was trying so many.



Tom Hammond, in his relentless pursuit of a perfect Quorn, (at right) has achieved accurately located numbering on five of the circular dials, one of which is shown in close up below. In addition, Tom has made toolholders to fit both R8 and C5 collets. Everybody should be satisfied with that combination.



Bud Statton brought the molds (right) for his drive wheels for the model locomotive he is constructing from scratch. Bud also sought advice for making a specially shaped spring for another of his projects.

Gary Martin brought the molds (at left) for the 1910 Holt caterpiller tractor parts he has been contracted to make.

So what are these scruffy guys (above) looking at? They're agruing about who built and brought the model shown at the bottom of this page.
At right are plaques made by **Mark Winlund** of the Mid Valley Model Engineers club. Mark should get a *best in show* plaque just for the quality of his plaques.

At left is a tailstock for a Hardinge turret lathe that was offered for sale by **Al Pohlpeter**. Although not evident in this picture, most of the six toolholders shown are microadjustable. A rare bargain for just $400.

And who wouldn't be proud as punch of this engine (at right)? Both **Bob Eaton** and **Gary Hart** denied it was theirs. Hmmm.

Portland Model Engineers July Membership meeting
Saturday, July 10,2004
Time: 1:00 pm
Host: PME member Jamie McAdam

Cascade Microtech Machine Shop
2430 NW 206th Avenue
Beaverton, OR 97006

Directions to meeting:
Drive west on Highway 26 to Cornelius Pass Road, one of the several exits leading to Hillsboro.
Turn south on Cornelius Pass,
Drive about one mile south and turn left (east) on NW Cornell Road.
Drive east about 1/2 mile to intersection of John Olson/ 206th Ave.
Turn right (south) on NW 206th Avenue.
Drive to Cascade Microtech at 2430.
The Machine is just south of main building.
Meet by large roll-up door.

Be sure to bring your projects since the Microtech staff is coming on their day off to see what our members are doing. There will be many table available for your projects.