

Founded by Dave and Beth Carr in 1995

August 2006

<http://www.portlandmodelengineers.org>

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For The Beginner #31 by Wes Ramsey

Limit and tolerance.

Since it is impossible to machine a part to an exact size, a designer must specify an acceptable range of sizes that will permit the part to fit and function as intended. The maximum and minimum sizes in part dimensions that are acceptable are limits between which the actual part dimensions must fall. The difference between the maximum and minimum limits is tolerance, or the total amount by which a part dimension may vary. Tolerances on drawings are often indicated by specifying a limit, or by plus and minus notations. With plus and minus tolerancing, when the tolerance is both above and below the nominal size, it is said to be bilateral (two sided). When the tolerance is indicated all on one side of nominal, it is said to be unilateral (one sided).

Next time: "How Tolerance Affects Mating Parts".

July Meeting Summary

We met once again at Grant Carson's shop. The sunshine seems to have kept our usual numbers away. Still it was great to get together and chat about engines, modeling and whatever else. Grant had some additions to his two locomotives in progress.

Next month we will also met at his shop. It is scheduled for Saturday, August 12th, 1:00pm at:

A & G Products
7360 SW Bonita Road, Unit C
Tigard, OR 97224

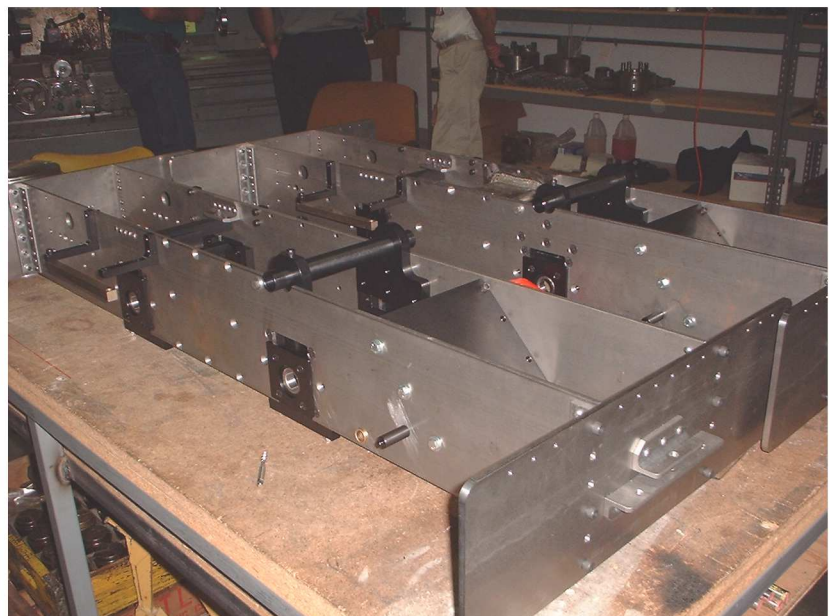
Bring a project to show -- complete or not. It's interesting and instructive to see projects in various stages as they progress.

Upcoming Events

Northwest Steam Society hosts annual steam-in scheduled for Aug 11-13th in St. Helens. Over 16 steamboats to appear. The highlight seems to be the Aug 12 steam parade from 1-3pm. Details at: <http://www.pcez.com/~artemis/NWSS2006.htm>

Casting Demonstration and Picnic Sept 9th. We will be meeting throughout the day at Bud Statton's shop. Lunch will be provided and you can see the whole process from ram-up through shaking out the casting. If you are interested in casting a pattern or would like to learn how to ram up call or send Bud an email. Ideally, we would like to have several (read as many as we can sign up) people to help ram up patterns. We'll show you how if you haven't done it before. So bring your pattern and give it a try!

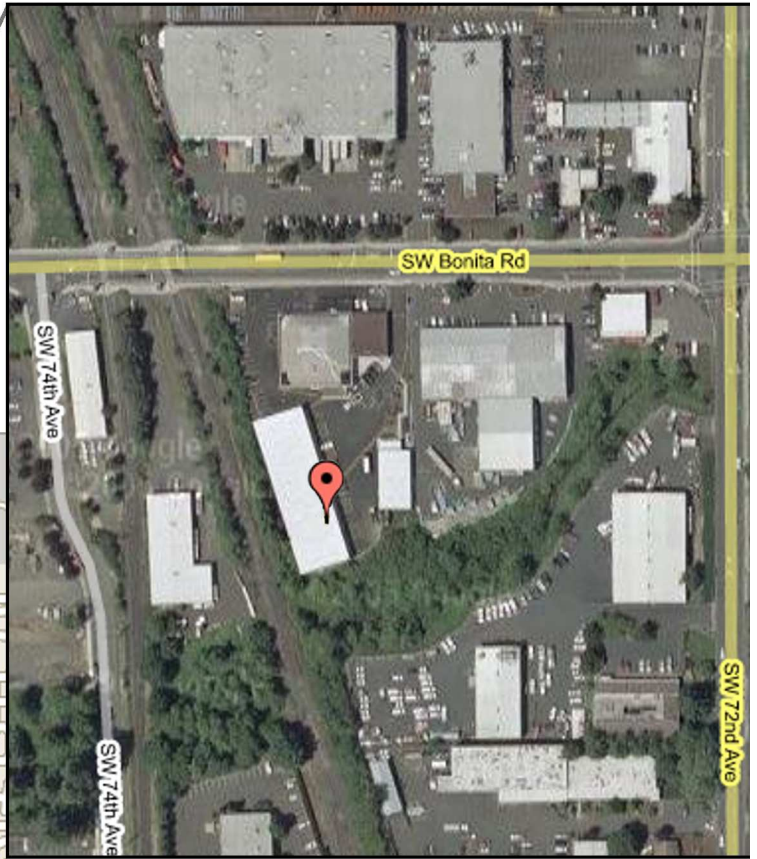
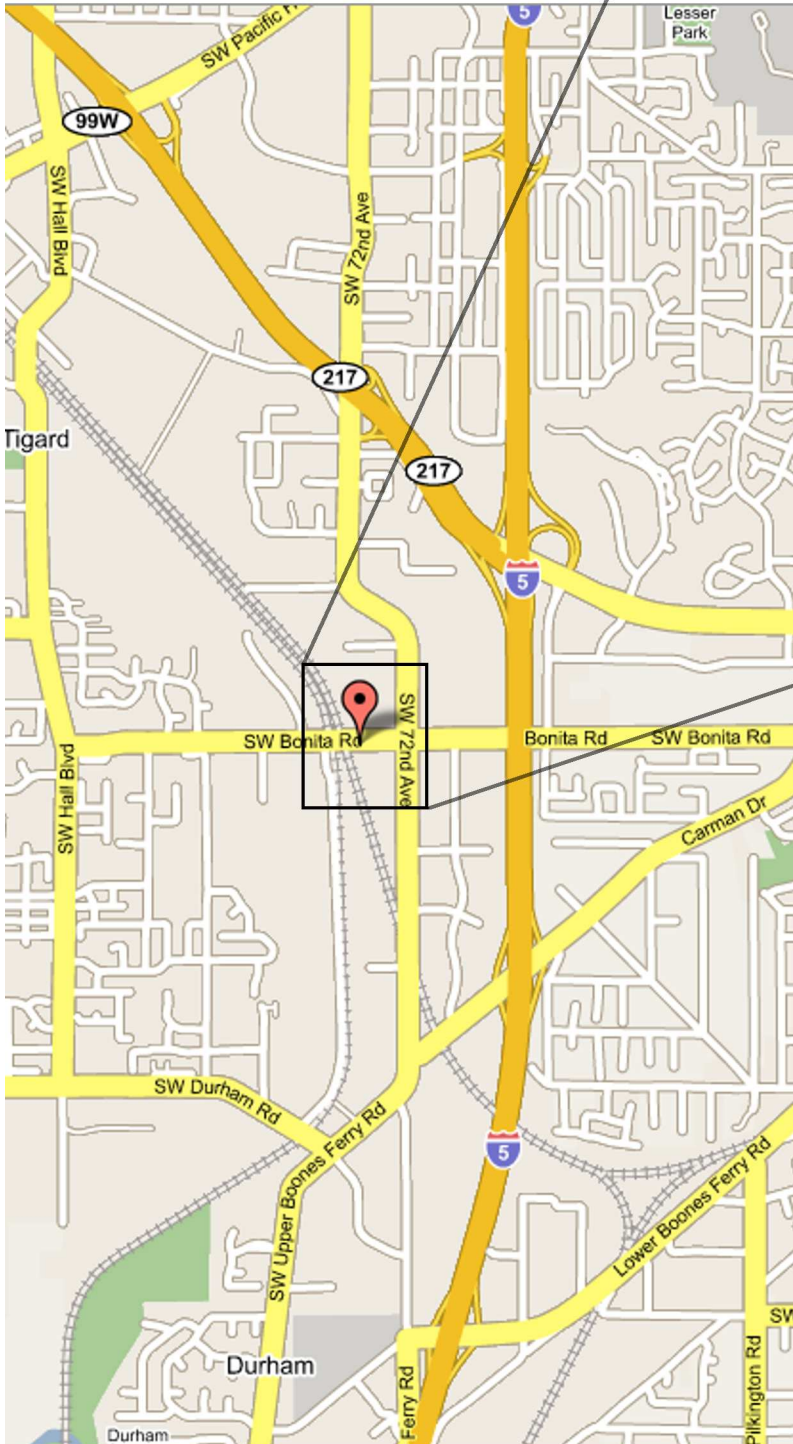
A shot of the two beauties that Grant is working on.



A & G PRODUCTS

Saturday, August 12th, 2006
Meeting, 1:00pm

A & G Products
7360 SW Bonita Road, Unit C
Tigard, OR 97224



Directions to Grant's

From I-5:

Use exit 292 to Hwy 217, go north about 1/4 mile toward Beaverton to SW 72nd exit. Turn left onto SW 72nd Ave, go about 3/4 mile to Bonita Road, turn right. A & G will be on your left.

From Hwy 99 (Pacific Ave):

Turn south onto SW 72nd Ave, proceed about 1-1/2 miles to Bonita Road, turn right. A & G will be on your left.



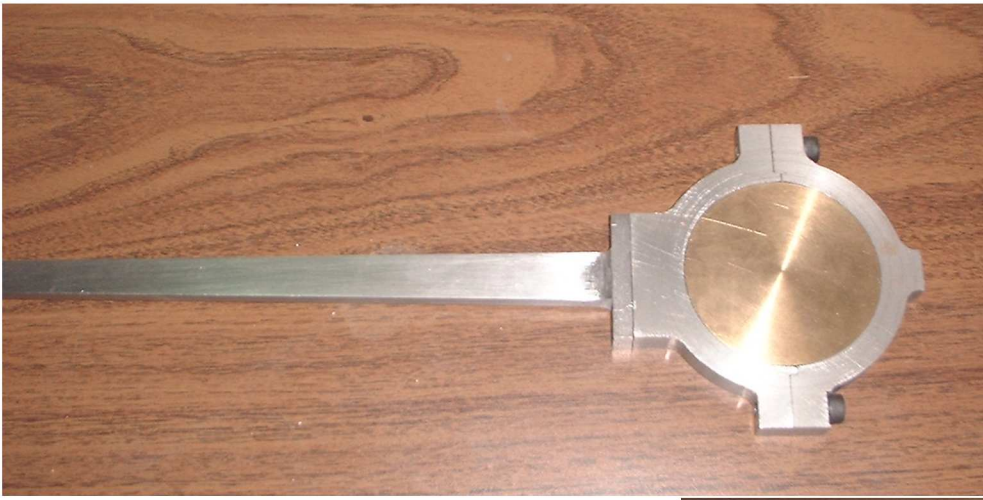
Above are the wheels for Grant's locomotive. Ready to attach to the axles. The parts that needed special black oxide treatment came back and were installed.



Bud Statton showed how his anchor project has turned out. The castings came back from the shop and were buffed to a high polish finish.

Gary Hart brought in a demo on how to create your own flexible couplers using his bandsaw. The trick is to calculate the exact angle... no wait, I guess he just figures out the right angle by good old fashioned trial-and-error.



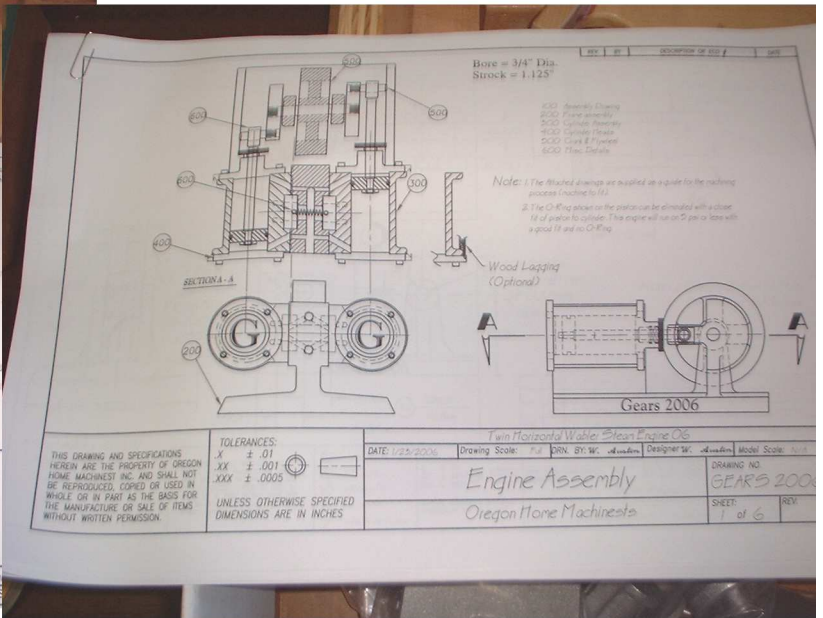


Al Pohlpetter explained the work so far on his locomotive project. Above is one of the valve connecting rods.

To the right, is the core box for the steam passages used with the pattern box below. It is the pedestal which supports the cylinder containing the firebox and steam channels.

Two of the cores are molded with No-Bake sand, glued together and inserted into the core prints visible on each end. Then the two halves representing the outside of the mold are glued around the core to finish the mold.





Above are plans and casting that go with the GEARS 2006 project. It is a Twin Horizontal Warbler Steam Engine.

Bill Miller was kind enough to auction off some donated parts. As you can see, the bidding was fast and furious. Someone went away happy.

Pat Wicker is currently fabricating new badges for those members who do not have one. This will take a bit of time but eventually he will get to every one.

He also requested that folks take fliers for GEARS and help spread the word to friends who might be interested. Contact him if you need some to hand out.

