

ON THE RIM OUT OF ALIGN or CIRCLING THE RIM

by Idylwilde

If you are contemplating new rims for your marvelous machine, here are a few thoughts to bear in mind.

If you are taken by that new modular gold center rim, or any other rim that may be all steel, there are some advantages and serious drawbacks. One definite advantage is that, shops will be more amicable about mounting and dismounting tires on if they can use their power tools. With magnesium or aluminum, the pressure on the side of the rim is great and in some cases can break the rim. Remember too, that those breaks are not always that visible: they may appear as a hair stuck to the rim but this hairline fracture can then spread and if you are high speed testing the balance of your new tires, I should imagine would not be very pleasant to say the least! Therefore, all steel rims do have important advantages.

As to the disadvantages, the biggest is handling. I'm sure you have read in past issues of P.I. NEWS how the disc brakes are **very** heavy. Couple this with a suspension system designed to let you know what the road is doing via rack & pinion steering, and you have a car very sensitive to heavy rims. The weight factor is in fact why magnesium and aluminum were incorporated into rims in the first place. What happens is, all the bumps and road variations are transmitted and amplified. My rough estimates would be as follows:

Stock campagnolo - used as the standard

Steel rim, aluminum centers—10% more steering wheel deviation.

All steel rims—20% more steering wheel deviation.

Add to this, the fact that many will need or want spacers between the rim and the hub and this will multiply the deviation of the steering wheel even more, perhaps by as much as 5%, and that can indeed be very noticeable. Oddly enough, the weight differences are not that great between the all steel and the aluminum center, steel rimmed wheels.

*A) Steel rim, aluminum centers by Crager - 24 lbs @ 15"x7"

*H) All steel rims by Crager - 26 lbs ! 15"x7"

*F) Aluminum alloy wheel by Crager 18 lbs @ 15"x7"

* Original Campagnolo - 12 lbs @ 15"x7"

Now the best situation really would be the stock rims but for three drawbacks: 1) mounting new tires is a horror story unless you have a **real** expert. 2) hitting a curb will most certainly hit your wallet harder in return. 3) from the rear of the car they look ridiculous, they are sitting in too far!



You can cure the last item three ways; buy some 10 inch wide Campies at around \$1700—American dollars, your dollars, your hard-earned dollars, those rapidly depressing dollars, or get some spacers and knock the suspension out of whack, or move (buy some new parts @ \$185.) the A-arms outward.

Now Jeff Burgy used to do a neat thing, he took the stock narrow rims (much cheaper) and had them widened, and the total price was very low! However, I don't think he does that any more, but you can get his address out of P.I. NEWS Vol. 6, No. 4 under Diane Burgy, Convention News, just in case.

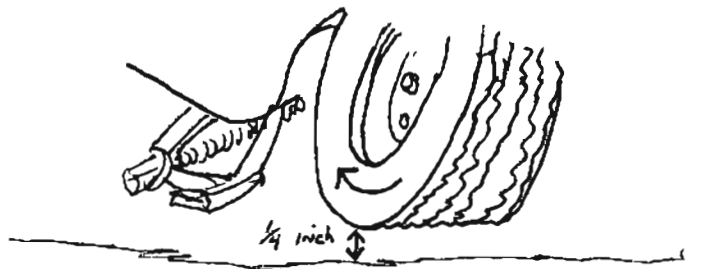


**10" Wide European
GTS Rear Wheels**

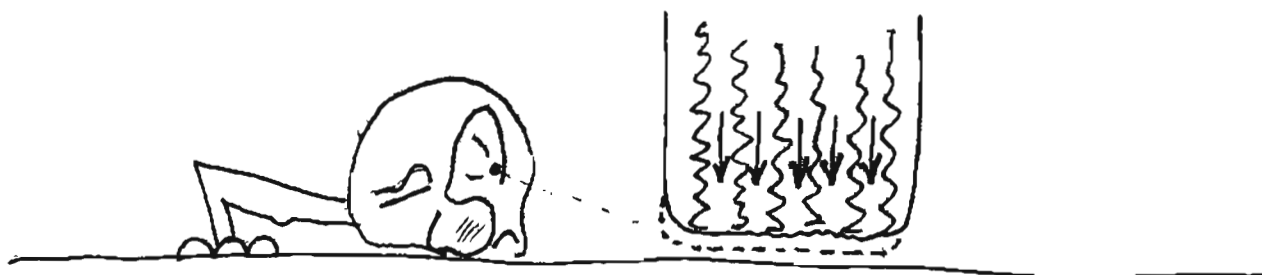


Now, a very serious and expensive problem. The Crager rims mentioned above are very inexpensive rims and in being so, cannot be truly compared to a precision rim which would cost proportionately more. They have to cut corners in production somewhere in order to offer them so cheaply. Crager as well as many other companies cut costs by making a **ONE SIZE FITS ALL** bolt pattern. This bolt pattern happens to be in our size range and it is a very touchy item to properly place on the hub, especially if you are going to use spacers (1 inch) to make the wheel fit the wheel well and stop the rubbing on tight corners. It also makes the turning circle smaller. If the wheel is not properly placed when bolted up, you cannot balance the tire, and the tire stores will simply tell you that your tire is out of round and that you need a new set. This can happen even on a properly fitted rim if you hit a bump hard enough and even with rims that have correct bolt holes. I have had this happen twice with two different sets of tires and two sets of rims. To make certain the wheel is on properly, here is one method.

- 1) Jack the wheel up so that it just barely has enough clearance to spin.

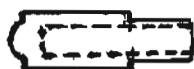


- 2) Get down at eye level with the ground under the tire, and spin the wheel.

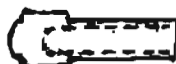


- 3) If you can see more than a $\frac{1}{32}$ of an inch movement up and down, adjustments are needed.

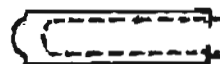
- 4) Loosen the lug nuts, (which when changing rims must be checked to be exactly the right length. Sometimes they bottom out inside the nut just before reaching the rim and you get a clunking rolling sound.)



Steel/spacers

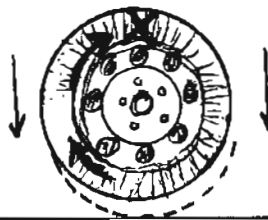
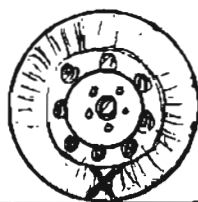


Mag Rims

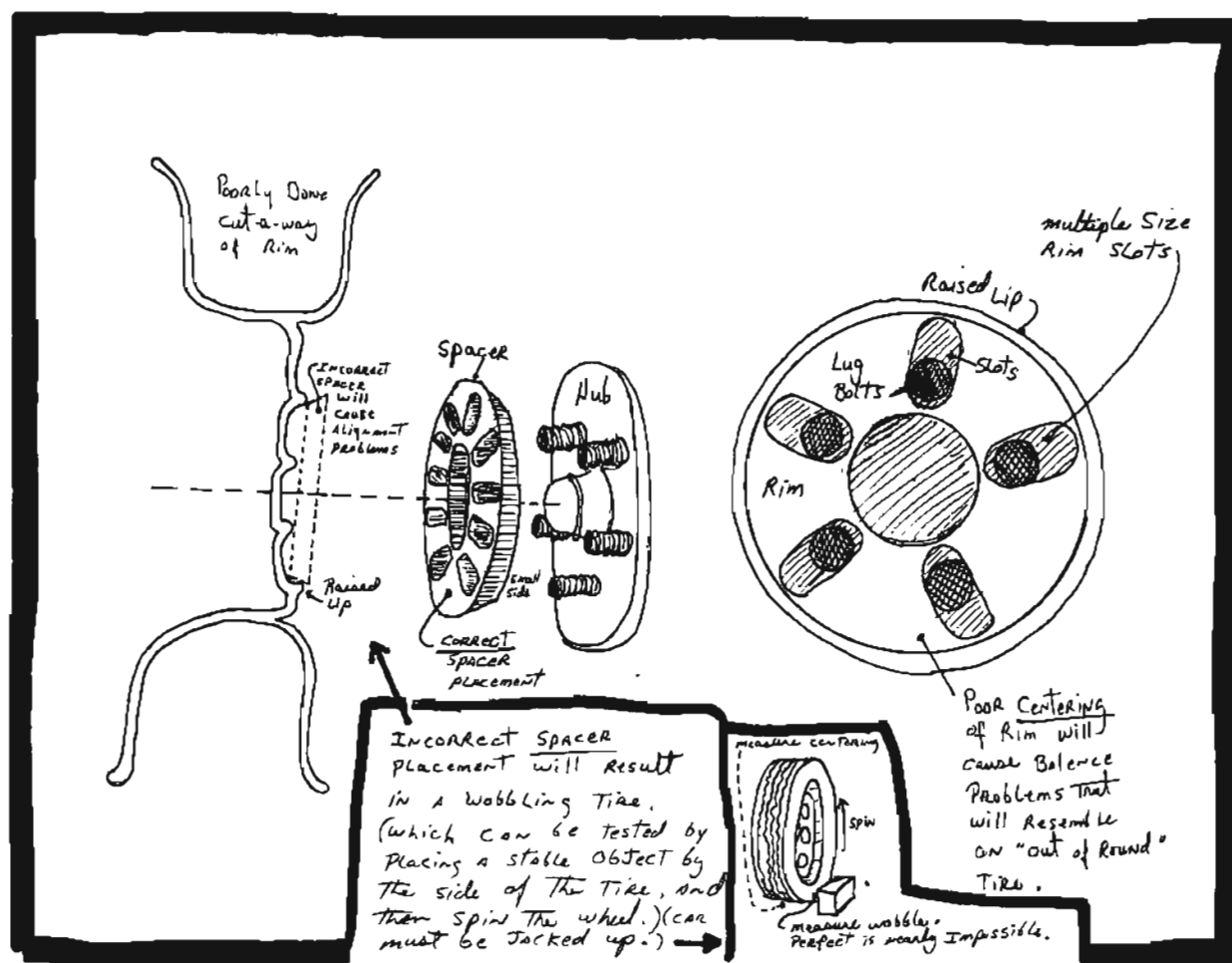


Steel rims, no spacers

- 5) Locate the highest point on the tire and rotate this point until it is at the top.



6) The weight of the tire will help make the adjustment, loosen the lug nuts very slightly, then firm up two or three of the nuts and check the spin. You could have the car jacked up so that the tire scrapes occasionally which will work just as well. Repeat this process as many times as there are several angles involved.



If I were to consider buying rims again, I would probably put a post in the backyard to mount and dismount tires, and get Campy 8" fronts and Burgy/Campy 10" rears. Balancing? Ah, that is another story, and the sequel, is equally gory.

I would not buy all steel rims even though they look nice, and, judging from

the way the chrome comes off the aluminum wheels, I would stay stock. By the way, the all steel rims that look like those modular wheels, are put out by many companies, the more expensive I would imagine have some light alloy instead of steel. The cheap ones are, of course, not modular and the little bolts are plastic.