Balancing Instructions for Spline-Drive Wire Wheels

Special attention is required when balancing spline-drive (sometimes referred to as "center-lock" or "Dunlop style") wire wheels. To properly balance this style of wheel, it must be centered on the balance apparatus in exactly the same manner that it is centered on the car. The two seating surfaces that center the wheel can be seen in Figure #1. These two bevels are typically "machined" surfaces as opposed to less exact "rough-cast" surfaces. Note that the splines are used to drive the wheel, not center the wheel. Balancing spline-drive wheels by using a computer spin balancer is only effective if the wheel is centered as shown in Figure #1.

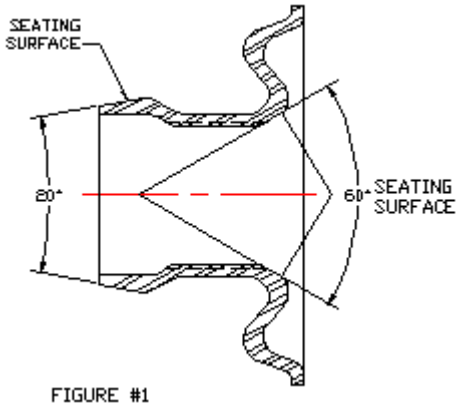


FIGURE #1

Correct Centering Position

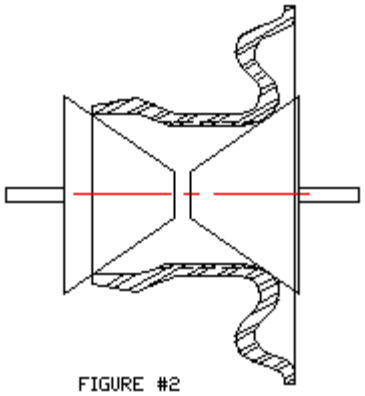


FIGURE #2

Can Use for Daytons Manufactured After 1990

Some spin balancers have a cone set designed specifically for spline-drive wheels but these are very rare. Dayton Wheel Products spline-drive wire wheels manufactured since 1990 have a fully machined hub that allow most cones to accurately center the wheel.

Another simple but very efficient method for balancing is the bubble balancer. This method was used when the cars were new. Spin balancing on the car is another alternative. This is especially effective if the suspension system is worn or brake drums are out of balance.

A properly balanced wheel will almost always require weights on both the front and rear sides of the rim.

To test a wheel for "trueness," mount it on the cars rear spline (without a tire). Tighten the knock-off cap and spin the wheel slowly using a dial indicator pointer on the inside bead of the rim (where the tire seats). Do not check for trueness on the outer edge of the rim. When measuring a movement of 1/16" or less is acceptable. Worn threads on the cap or hub or a worn bevel on the hub or cap can make the wheel appear out of true. If the wheel appears to have excessive runout, mark on the wheel the location of the highest reading. Remove the wheel and rotate it 180 degrees and place the wheel on the same hub. Recheck for runout. If the highest reading changes position from that marked a worn part or parts are indicated. (Figure # 3)

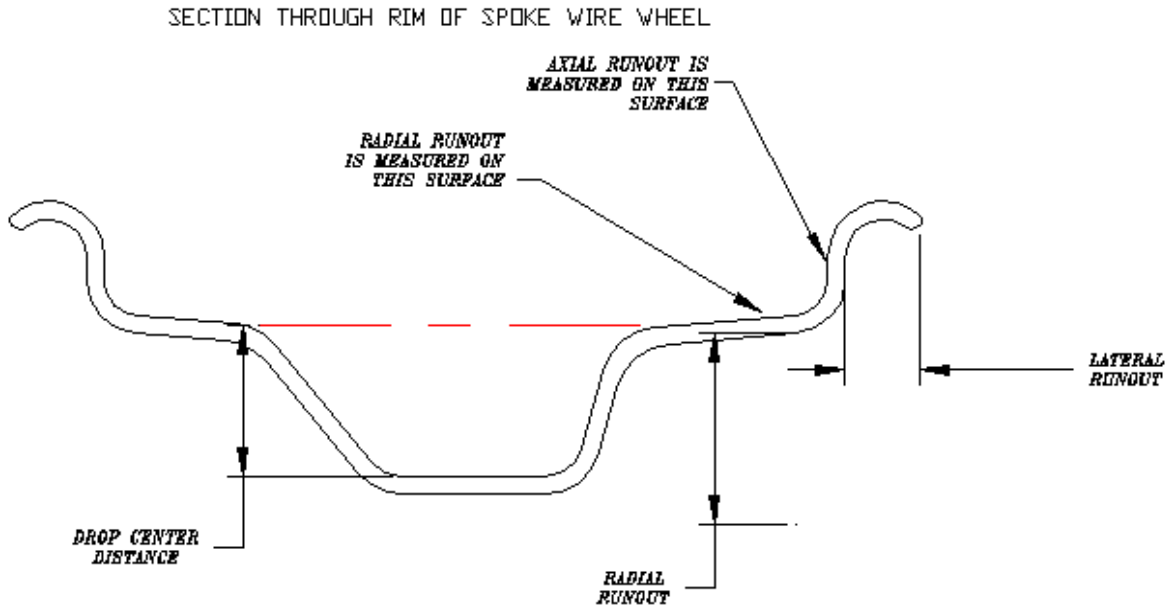
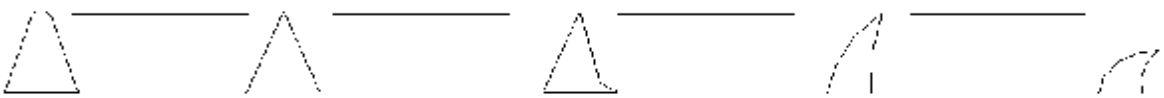


Figure #3

Worn splines on the hub of the car can quickly wear the good splines on a new wheel and vice-versa. On the hubshell of the wheel, the rear-most portion of the splines (about 3/8") will show no wear since they do not mesh with the splines on the car's hub. This allows for a visual comparison between the front-most worn splines and the rear-most unused splines (Figure #4). Fully stripped splines is a serious situation and should be resolved immediately.



New Spline *Slightly Worn* *Worn* *Dangerous* *Spun Wheel*

Figure #4

Repair of worn splines is not feasible. It is quicker, easier and less expensive to replace the wheel or wheels with new spline drive wheels from Dayton Wheel Products. More information is available by calling Dayton Wheel Products Customer Service at 800-862-6000 or by visiting our web site at: www.daytonwirewheel.com.