

TECHNICAL BULLETIN

445/50 Wide Base Tire Configuration

SUBJECT: Wide Base Tire Configurations

LIT NO: L846

DATE: January 2004

The new 445/50 R22.5 wide-base "super single" tire has been introduced to provide the performance of a 275/80 R22.5 dual tire arrangement at the same tire diameter. This new tire requires a 14-inch wide rim that is currently available with zero, 1.13- or 2-inch wheel offsets.

The zero offset wheel does not change Hendrickson's axle and suspension rating for its VANTRAAX® or INTRAAX® product offering. However, due to the reduction in overall tire-to-tire width of the axle/wheel assembly (figure 1), Hendrickson recommends the use of a wider axle track in order to place the tires at the same approximate outside-to-outside spacing of a dual tire installation.

Due to the increased loading that will occur at the wheel bearings, using the 1.13- or 2-inch wheel offset will reduce the VANTRAAX and INTRAAX system ratings to 20,000 pounds per axle when used with the HP or HUS™ spindle designs. The VANTRAAX HKANT 40K model with HP or HUS spindles and a standard duty axle is reduced to a 34,000 pound rating. The HN spindle design is not approved for use with these wheel offsets.

The above rating limits apply to systems where Hendrickson supplies the wheel bearings. Axle ratings may be further limited by the brake, hub or tire ratings. For components not supplied by Hendrickson, we recommend that the anticipated component performance be reviewed with the manufacturer.

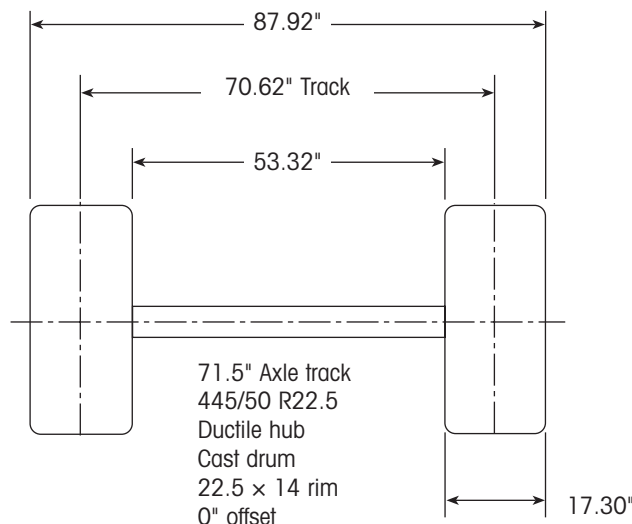


Figure 1. Tire-to-tire dimension

A 71.5-inch or 77.5-inch track axle is recommended for use with the two-inch offset wheel. The resulting tire and track dimensions used with our 71.5-inch track axle are shown below (figure 2). As a comparison, the tire and axle track dimensions for a typical dual tire arrangement are also shown below (figure 3).

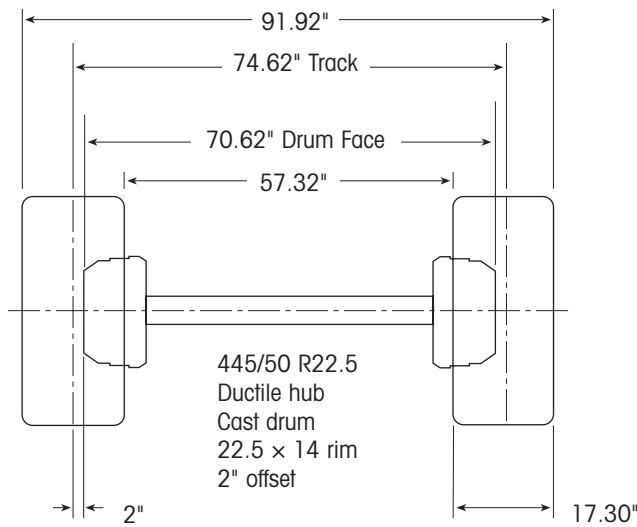


Figure 2. Wide base tire arrangement

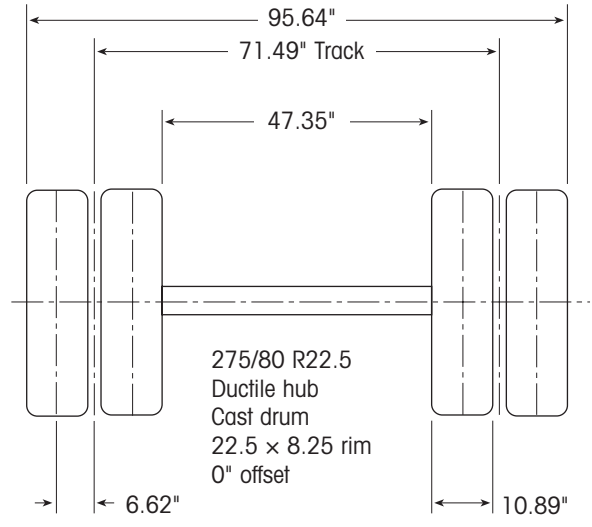


Figure 3. Typical dual tire arrangement

Referencing figures 2 and 3, the following table quantifies the variation between a wide base versus dual tire set-up.

WIDE BASE vs. DUAL VARIATION PER WHEEL END	
WIDE BASE TIRE	VARIANCE (inches)
Outer Tire Edge	-1.86 per side
Track	+1.56 per side
Inside Tire Edge	+4.99 per side

The standard suspension system warranty as stated in Hendrickson publication L583, *Comprehensive Warranty Statement*, will continue to apply to those components provided by Hendrickson. This would include the standard one-year coverage for the wheel hubs (when available) and bearings when installed by Hendrickson. An extended service warranty is not available at this time.



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