

Axle Position When Building A Trailer

Axle position is important for proper weight distribution.

1. Weigh the trailer (under wheels) "Wheel Weight"
2. Obtain "Tongue Weight" (Actual)
3. Measure distance from tongue to axle, or to C between Dual Axle Set (D)
4. Determine Total Weight
TOTAL WEIGHT = TONGUE WEIGHT + WHEEL WEIGHT



Figure 5: Axle Position

If tongue weight is greater than 10% of Total Weight, decrease distance "D" by "X" where:

$$X = \frac{(\text{Tongue Weight} - 10\% \text{ Total}) \text{ Times } D}{\text{Total Weight}}$$

Example #1

Tongue greater than 10% of Wheel Weight

Tongue Weight = 1025#

Wheel Weight = 7200#

D = 264" Total Weight = 8225#

% Tongue Weight = $1025 / 8225 = 0.125$ or 3.5%

"X" = $1025 - 822.5 / 8225 \text{ Times } 264 = 6.499"$

Move the Axle(s) toward the Tongue of the trailer approximately 6 1/2"

New D = $264 - 6 \frac{1}{2}" = 257.5$

If tongue weight is less than 10% of Total Weight, increase distance "D" by "X" where:

$$X = \frac{(10\% \text{ Total} - \text{Tongue Weight}) \text{ Times } D}{\text{Total Weight}}$$

Example #2

Tongue less than 10% of Wheel Weight

Tongue Weight = 300#

Wheel Weight = 8200#

D = 264" Total Weight = 8500#

% Tongue Weight = $300 / 8500 = 0.035$ or 3.5%

"X" = $850 - 300 / 8500 \text{ Times } 264 = 17"$

Move the Axle(s) toward the rear of the trailer approximately 17"

New D = $D + 17" + 264 + 17 = 281"$