

MEASURING TONGUE WEIGHT

In order to select the correct components to safely tow your trailer, you need to know its tongue weight. This is the weight that the fully loaded trailer exerts downward on the hitch ball of the tow vehicle. If you do not know the tongue weight of your trailer, there are several different ways you can determine it.

1. Tongue weight scale
2. Bathroom scale
3. Commercial scale

Remember, if you intend to use a weight distribution system, you will want to keep in mind the weight of the contents that you will carry in your vehicle behind the rear axle. You need to know this because the spring bars, which provide the support in a weight distribution system, are available in different sizes. And any weight that is located behind your rear axle affects the performance of the spring bars. You will need to include this weight so you can select spring bars of the proper size for your vehicle and trailer.

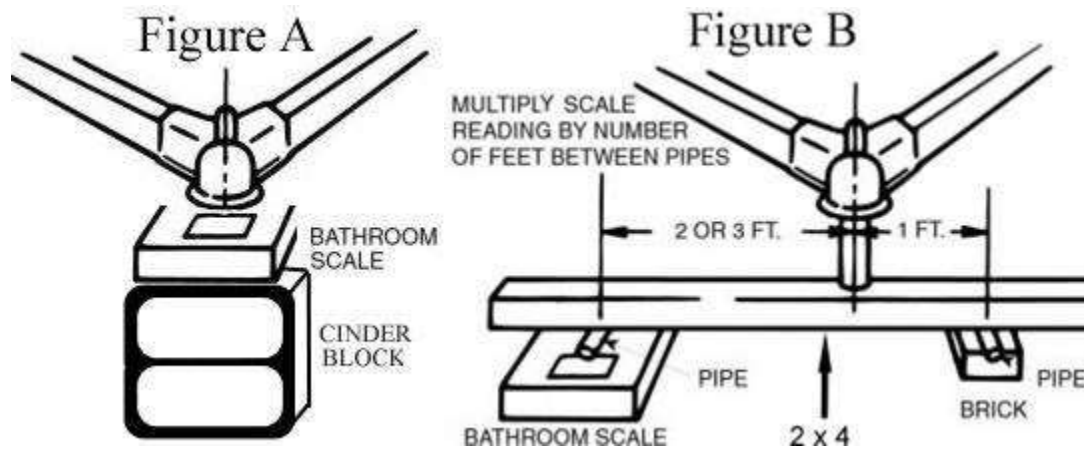
Tongue Weight Scale

A tongue weight scale quickly, easily and accurately allows you to get the weight of the trailer tongue. This scale can weigh a trailer tongue with a weight of up to 2,000 lbs. Since tongue weight is typically 10% to 15% of the weight of the trailer, this scale can handle a gross trailer weight of up to 20,000 lbs.



These images show the tongue weight scale in use. Be sure that the trailer is level and parked on level ground when you weigh it.

Bathroom Scale



You can use a bathroom scale and a box to measure tongue weight of smaller trailers. Place the coupler of the loaded trailer on the scale at normal towing height (Figure A). For heavier tongue weights, use the second method (Figure B). Be sure to perform these measurements on a level surface and with a leveled trailer.

To use the method in Figure B, follow these guidelines:

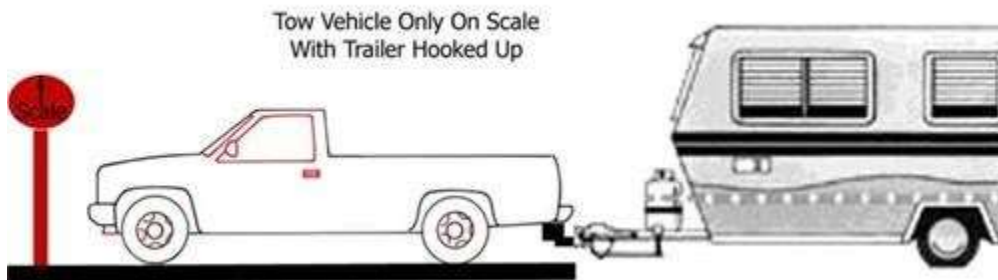
- Always place the trailer tongue 1 foot from the pipe on the support brick
- Multiply the reading on the scale by the total distance between the 2 support pipes
- Use a brick that is the same thickness as the scale so that the 2 x 4 is level when you weigh your trailer

For example, if the distance between the trailer tongue and the pipe on the scale is 2 feet and the distance between the trailer tongue and the pipe on the support brick is 1 foot, then you would multiply the reading on the scale by 3 to get the tongue weight. If the distance between the trailer tongue and the pipe on the scale is 3 feet and the distance between the trailer tongue and the pipe on the support brick is 1 foot, then you would multiply the reading on the scale by 4 to get the tongue weight.

Commercial Scale

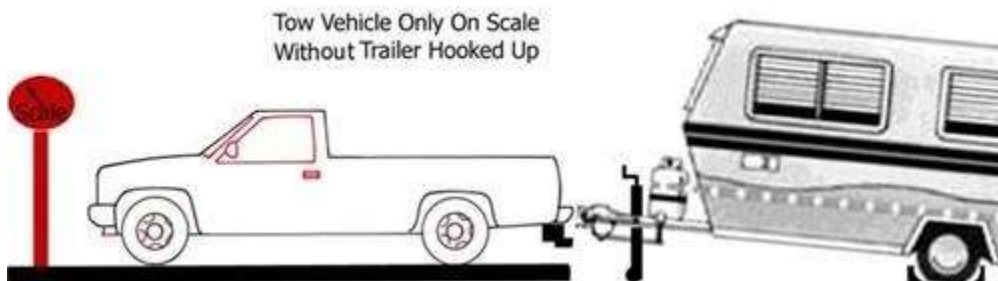
Another way to determine your trailer's tongue weight (and get your vehicle and trailer weights) is to take the trailer with your tow vehicle to a scale at a truck stop, quarry or material supply center. For a small fee, you can weigh your tow vehicle and trailer there.

A. Determine Weight of Vehicle with Tongue Weight



Your vehicle and trailer must be fully loaded and fueled just as they will be when you are leaving for a trip. First, drive on to the scale with all 4 wheels of the truck and record the weight of the truck with the trailer attached.

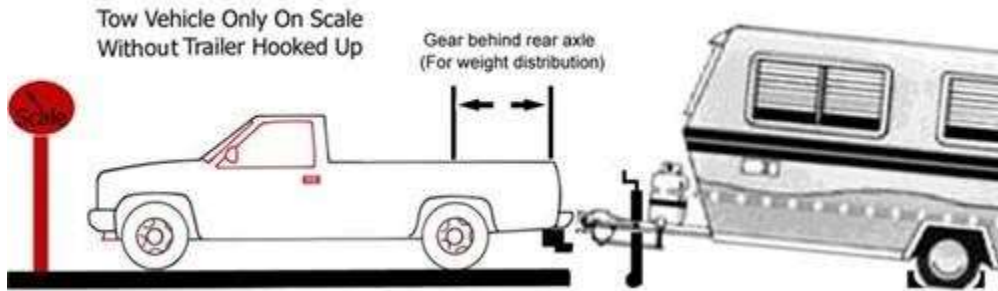
B. Determine Weight of Vehicle without Tongue Weight



Next, unhook the trailer and jack up the trailer tongue so there is no weight on the hitch ball. Make sure that the trailer jack is not on the scale. Record the weight of only the truck on the scale. This is your gross vehicle weight (GVW). Now, subtract the GVW from the weight of the truck with the trailer attached. This will give you the tongue weight of your trailer.

$A - B = \text{Tongue Weight}$

Determine Tongue Weight for Weight Distribution System



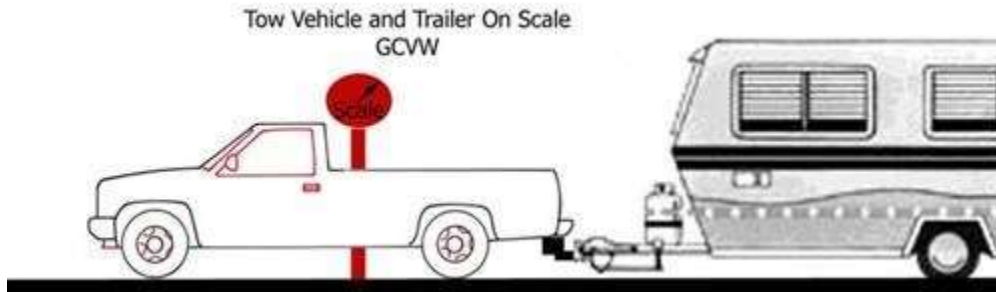
If you want to use a weight distribution system, remember to include the weight of any gear you might load behind the rear axle of the tow vehicle. You should add the weight of this gear to your tongue weight to select a weight distribution system of the proper size. To get the weight of the gear behind the rear axle, weigh your vehicle with this gear and without. Then subtract the weight without the gear from the weight with the gear. This difference is the weight of your gear. In the formula below, C represents the weight of your gear. A represents the weight of your tow vehicle including the tongue weight. B represents the weight of your tow vehicle without the tongue weight.

A good time to get this weight is when you are determining your tongue weight as described in step B, above. You can get the weight of your gear while you are weighing your tow vehicle.

Weight of Vehicle with Gear Behind Rear Axle - Weight of Vehicle without Gear Behind Rear Axle = C (Weight of Your Gear)

$A - B + C = \text{Tongue Weight for Weight Distribution System}$

Determine Additional Weights



Weight of Your Trailer

While you are at the scale you can also make sure that your towing setup is within the rated capacity of your tow vehicle. To do this, you need to get the weight of your trailer. To weigh your trailer, pull it with your tow vehicle onto the scale so you can weigh them together. This weight is your Gross Combined Vehicle Weight (GCVW). You can get the weight of your trailer (Gross Trailer Weight - GTW) by subtracting the weight of your tow vehicle alone (GVW (Step B, above)) from the weight of your tow vehicle and trailer combined (GCVW). Then check your owner's manual or with your dealer to determine if the weight of your trailer is within the towing capacity of your tow vehicle.

$$\text{GCVW} - \text{GVW} = \text{GTW}$$

Eaz-Lift Spring Corporation, P.O. Box 489, Sun Valley, California 913530489, (800) 636-9412; PullRite/Pulliam Enterprises Incorporated, 13790 E. Jefferson Boulevard, Mishawaka, Indiana 46545, (800) 443-2307; Reese Products, P.O. Box 1706, Elkhart, Indiana 46515, (800) 326-1090.

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Hitches that virtually eliminate sway are the Hensley and the ProPride 3P. These work but they range in price from \$2500 to over \$3000.

http://blog.hensleymfg.com/free-report-how-to-tow-safely?gclid=CJ_5p_x38QCFdgVgQod70kAeg

<http://www.propridehitch.com/products/ProPride-3P-Trailer-Sway-Control-Hitch.html?gclid=CMf-2rbx38QCFS9o7AodQ04Ayw>