How to calculate your max. trailer weight

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This is a message exchange between me another happy camper having had questions about how much he can pull with his truck. If you want to know how much you can pull with your truck, take the following example and replace this truck's numbers with the ones from your truck.

For your F-250, you have to have:
- Gross Axle Weight Rating for your front axle (GAWR front)
- Gross Axle Weight Rating for your rear axle (GAWR rear)
- Gross Vehicle Weight Rating (GVWR)
- Gross Combined Vehicle Weight Rating (GCVWR)
- Payload

1. Take your payload, deduct your weight, your wife's weight, the hitch weight, gas, some tools and other stuff you might have in the cabin or the bed = remaining payload. This remaining payload has to be equal or higher than the pin weight, and I don't mean the dry pin weight! It has to be equal or higher than the wet, loaded, holiday pin weight.

2. Take your Gross Combined Vehicle Weight Rating and deduct your trucks Gross Vehicle Weight Rating = max. weight of any trailer you can tow. Be aware that some trucks have a different weight rating for bumper pull trailers and 5th-wheels.

3. In all these calculations, the Gross Axle Weight Ratings of your truck may never be exceeded. You find that out only when driving over a scale.

This covers the basics to find out what kind of a trailer/5th-wheel you can legally pull. Check the results from 1. and 2. to all the trailers you are looking at and unfortunately you will find out that with some trucks you can't legally pull something big.

Check out the following list:
http://www.trailerlife.com/wp-content/uploads/2012/01/Trailer-Life-Towing-Guide-...

Unfortunately, this list doesn't give you the payload or the GVWR and GCVWR of your truck but it is a start.

If you add the front axle weight rating and the rear axle weight rating of your truck it will be higher than the GVWR of your truck. There has to be a margin because you can put the payload in the front of the bed, right on top of the rear axle or at the back of the bed or evenly distribute it in the bed. However, each of these scenarios has an effect of the weight each axle is carrying but not on the overall gross vehicle weight.

So, take your legal payload and put it in the front of your bed. Some of this weight will be on the rear axle, some of it will be on the front axle. Now again, take the same legal payload and put it in the rear of your bed. All this weight will be on your rear axle and the front axle might even be up in the air (somewhat).

In both scenarios you didn't overload your truck, you didn't exceed the GVWR but in the 2nd scenario you most probably have overloaded the rear axle weight rating. That is why the GVWR has to be less than the added GAWR front and rear.

What you get while driving over the scale is your empty weight or curb weight of your truck. Unfortunately, the curb weight is never shown on any sticker because it will be different from truck to

truck depending on options installed at the factory or by the dealer.

So, with a front axle weight of 3440 lbs and a rear axle weight of 2660 lbs you have an empty weight of 6100 lbs.

The GAWR front is 4100 lbs and rear is 5330 lbs, added up it is 9430 lbs. So I assume your GVWR for the truck is somewhere around 8800 lbs and should be on your trucks sticker by the driver door, please verify.

Fact is, your GCWR is 18000 lbs as stated on your sticker. That's it! Under no circumstances can you legally be heavier at any time with whatever you are pulling.

Start with these 18000 lbs, deduct your truck's empty weight of 6100 lbs = 11900 lbs, deduct your weight, your wifes weight, the hitch weight, some gas and some minor stuff, maybe about 400 lbs (?) and that gives you a GVWR for the trailer of about 11500 lbs. Period!

Now, start looking at trailers with a GVWR of 11500 lbs or less and figure out what pin weight they might have. Probably somewhere around 2000 lbs, give or take. Let's assume your truck has a payload of more than 2000 lbs.

Start with your empty rear axle weight of 2660 lbs and add these 2000 lbs of pin weight and you are at 4660 lbs rear axle weight (remember the GAWR rear is 5330 lbs, so we are still good). But now add your weight, your wife's wight, the hitch, gas and some stuff of about 400 lbs and you are at about 5000 lbs, so not too far away from your rear GAWR. I agree, some of your weight, your wife's weight and so on might be on the front axle, not on the rear. But then again, who guarantees you that the pin weight is only 2000 lbs?

My 2001 Ti 29E34RL has a GVWR of 10367 lbs and has pin weight of 1562 according to the brochure. Effective on the scale it comes in with a pin weight of 2313 lbs! Who would have thought that???? Therefore, be very cautios while shopping around for a 5th-Wheel!

My Ti model is for the size of it very light. Anything newer in the same size is definitely 1000 lbs or 2000 lbs or even more heavier. So, if you are looking at newer models, you have to go way smaller.