



Dunlap RV Center

6031 Hwy. 28 South • P.O. BOX 1888 • DUNLAP, TN 37327 • 423.949.7007

MATCHING TOW VEHICLE TO THE RIGHT TRAILER

A manufacturer determines a tow rating based on the vehicle when it is empty. It does not include the cargo, passengers, after market accessories or any additional weight placed in the vehicle. Any weight added to the tow vehicle reduces the tow rating by that amount.

| | | | |
|---------------|-------------------------------|------------------|--------------------|
| • For Example | Tow Rating of Vehicle: | 7,900 lbs | |
| | Cargo in the Tow Vehicle: | 200 lbs | |
| | Passengers & Driver: | 500 lbs | |
| | Additional 50 gal. Fuel Tank: | <u>305 lbs</u> | |
| | Actual Tow Rating: | 6,895 lbs | Tow Vehicle |

| | | | |
|-----------|------------------------------|------------------|--|
| • TRAILER | UVW in the Brochure: | 5,730 lbs | |
| | Dealer Ordered Options: | 370 lbs | |
| | Dealer Installed Options: | 100 lbs | |
| | Cargo in the Trailer: | 300 lbs | |
| | Water 8.3 X 32 gallons: | 266 lbs | |
| | LP gas 4.23 X 14 gallons: | <u>59 lbs</u> | |
| | Gross Trailer Weight: | 6,825 lbs | |

| | | |
|--|--------------------|------------------|
| | Tow Rating: | 6,895 lbs |
| | Minus GTW: | 6,825 lbs |

Equals: 70 lbs before tow rating is exceeded

There is another important weight rating that comes into play that is the Gross Combined Weight Rating (GCWR). This is the maximum allowable combined weight of the tow vehicle and the trailer when both are fully loaded for travel.

You should never tow a trailer that is pushing the limit on the manufacturers tow rating or a combined weight that is pushing the tow vehicle GCWR. Pushing the weights over the limits allowed put the driver and passengers in a dangerous situation for them and surrounding traffic.



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Remember to include all factors in your weight calculations:

1. Add the UVW of the trailer, make sure that it includes all options.
2. Add the weight of any after market accessories like a battery or a satellite dish.
3. Add the weight of any cargo you put in the trailer.
4. Add the weight of water and LP gas that will be on the trailer. Water weighs 8.3 pounds per gallon. LP gas weighs 2.4 pounds per gallon.
5. Add all weight of passengers in the tow vehicle.
6. Add the weight of any cargo in the tow vehicle.
7. Add the weight of any after market equipment added to the vehicle

There are two methods to ensure you do not put yourself or others in danger when towing. A simple method to use, that will add a built in safety margin, is to take the GCWR of the tow vehicle minus the GVW, the actual weight of the fully loaded tow vehicle, and this equals the maximum GVWR of a trailer that you can consider purchasing or renting for towing.

• For Example

GCWR - GVW = Maximum GVWR of the Trailer

| | |
|---------------------------------|-------------------------|
| GCWR of our Tow Vehicle | 14,000 lbs |
| Minus GVW of Tow Vehicle | <u>7,105 lbs</u> |
| Max. GVWR of Trailer | 6,895 lbs |

| | |
|----------------------------|------------------|
| GVWR of the Trailer | 6,900 lbs |
|----------------------------|------------------|

| | |
|----------------------------------|----------------------|
| UVW in the Brochure: | 4,355 lbs |
| Dealer Ordered Options: | 370 lbs |
| Dealer Installed Options: | 100 lbs |
| Cargo in the Trailer: | 300 lbs |
| Water 8.3 X 32 gallons: | 266 lbs |
| LP gas 4.23 X 14 gallons: | <u>59 lbs</u> |
| Gross Trailer Weight: | 5,450 lbs |

| | |
|-------------------|--------------------------|
| GCWR: | 14,000 lbs |
| GVW + GTW: | <u>12,555 lbs</u> |

1,445 lbs to spare



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To build a better safety margin you can use the 75% rule. The 75% rule ensures a built in margin of safety and is a good rule to follow if you plan to tow in higher elevations. At 10,000 feet above sea level you would need to reduce vehicle ratings by 20% to maintain performance. Before you can apply the 75% rule you need to reduce your ratings to see how you can safely tow at 10,000 feet above sea level.

• For Example

| | |
|---|--------------|
| Tow Vehicle GCWR X 80% to get a 20% reduction | 14,000 lbs |
| | <u>X 80%</u> |
| | 11,200 lbs |

| | |
|---|--------------|
| Tow Vehicle GVWR X 80% to get a 20% reduction | 8,800 lbs |
| | <u>X 80%</u> |
| | 7,040 lbs |

11,200 lbs minus 7,040 lbs = a maximum tow rating of 4,160 lbs at 10,000 feet above sea level.

- The 75% rate will calculate the most weight we should tow to still maintain performance.

| | |
|----------------------|--------------|
| Tow Vehicle GCWR 75% | 14,000 lbs |
| | <u>X 75%</u> |
| | 10,500 lbs |

| | |
|----------------------|--------------|
| Tow Vehicle GVWR 75% | 8,800 lbs |
| | <u>X 75%</u> |
| | 6,600 lbs |

10,500 lbs minus 6,600 lbs = maximum rating of 3,900 lbs at 10,000 feet above sea level.

By applying the 75% rule and keeping our trailer weight at below 3,900 lbs, we can keep the tow rating below the maximum 4,160 lbs required to maintain vehicle performance.

By applying the methods above combined with the proper match between your tow vehicle and trailer. However, the way to get true and accurate weights is to weigh both the tow vehicle and the trailer fully loaded for travel.