

What's Your Weight?

Base Curb Weight

is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo or any optional equipment. Your dealership sales consultant can give you this number for the vehicle(s) you are considering.

Cargo Weight

includes all weight added to the Base Curb Weight, including cargo and optional equipment (check with your sales consultant). When towing, trailer tongue load or king pin weight is also part of the Cargo Weight.

Payload

is the combined maximum allowable weight of cargo and passengers that the truck is designed to carry. It is the Gross Vehicle Weight Rating minus the Base Curb Weight.

Measuring Tongue Load With Commercial Scale

To measure actual tongue load or king pin weight, disconnect the trailer and place only the tongue (king pin) on a scale (at hitch ball or 5th-wheel king pin receiver height). If the tongue load/king pin weight exceeds the upper weight limit, move more of the trailer contents rearward to achieve the recommended tongue load/king pin weight. If the tongue load or king pin weight is less than the lower limit, shift the load forward.

Gross Vehicle Weight (GVW)

is the Base Curb Weight plus actual Cargo Weight plus passengers. It is important to remember that GVW is not a limit or specification – it is the actual weight that is obtained when the fully-loaded vehicle is driven onto a scale.

Gross Vehicle Weight Rating (GVWR)

is the maximum allowable weight of the fully-loaded vehicle (including passengers and cargo). This number – along with other weight limits, as well as tire, rim size and inflation pressure data – is shown on the vehicle's Safety Compliance Certification Label, located on the left front door lock facing or the door latch post pillar (see facing page). **The GVW must never exceed the GVWR.**

Gross Axle Weight (GAW)

is the total weight placed on each axle (front and rear). To determine the Gross Axle Weights for your vehicle and trailer combination, take your loaded vehicle and trailer to a scale. With the trailer attached, place the front wheels of the vehicle on the scale to get the front GAW. For rear GAW, weigh the towing vehicle with trailer attached, but with just the four wheels of the vehicle on the scale. Subtracting front GAW from that amount gives you rear GAW.

Gross Axle Weight Rating (GAWR)

is the maximum weight to be carried by a single axle (front or rear). These numbers are also shown on the Safety Compliance Certification Label. **The total load on each axle must never exceed its GAWR.**

$$\text{Base Curb Weight} + \text{Cargo Weight} + \text{Passenger Weight} = \text{Gross Vehicle Weight (GVW)}$$

GVW must not exceed GVWR (obtain from Safety Compliance Certification Label on the left front door lock facing or the door latch post pillar).

$$\text{GVW} + \text{Loaded Trailer Weight} = \text{Gross Combination Weight (GCW)}$$

GCW must not exceed GCWR (obtain from charts on pages 19-25 or your vehicle's Owner Guide).



Gross Combination Weight (GCW)

is the weight of the loaded vehicle (GVW) plus the weight of the fully loaded trailer. It is the actual weight obtained when the vehicle and trailer are weighed together on a scale.

Gross Combination Weight Rating (GCWR)

is the maximum allowable weight of the towing vehicle and the loaded trailer – including all cargo and passengers – that the vehicle can handle without risking damage. (Important: The towing vehicle’s brake system is rated for operation at the GVWR – NOT GCWR. Separate functional brake systems should be used for safe control of towed vehicles and for trailers weighing more than 1,500 lbs. when loaded.) The measured GCW must never exceed the GCWR.

Maximum Loaded Trailer Weight

(as shown in the Trailer Towing Selector charts pages 19-25) is the highest possible weight of a fully loaded trailer the vehicle can tow, based on a minimum towing vehicle GVW. It assumes a towing vehicle with any mandatory options, no cargo, tongue load of 10-15% (conventional trailer) or king pin weight of 15-25% (5th-wheel trailer), and driver only (150 lbs.). F-Series Super Duty® Chassis Cab models also assume a second-unit body weight of 1,000 lbs. Weight of additional options, passengers, cargo and hitch must be deducted from this weight.

Tongue Load or 5th-Wheel King Pin Weight

is another critical measurement that must be made before towing. It refers to the amount of the trailer’s weight that presses down on the trailer hitch. Too much tongue load or king pin weight can cause suspension/drivetrain damage, and can press the vehicle down in back causing the front wheels to lift to the point where traction, steering response and braking can be severely decreased. Too little tongue load or king pin weight can reduce rear-wheel traction and cause instability, which may result in tail wagging or jackknifing.

Tongue load or king pin weights must meet the following requirements:*

- For trailers up to 2,000 lbs., tongue load not to exceed 200 lbs.
- For conventional trailers over 2,000 lbs., tongue load 10-15% of loaded trailer weight.
- For 5th-wheel trailers, king pin weight 15-25% of loaded trailer weight.

Examples: For a 5,000-lb. conventional trailer, multiply 5,000 by .10 and .15 to obtain a proper tongue load range of 500 to 750 lbs. For an 11,500-lb. 5th-wheel trailer, multiplying 11,500 by .15 and .25 yields a king pin weight range of 1,725 to 2,875 lbs.

Note: Be sure the addition of tongue load or king pin weight does not cause the key towing vehicle weight limits (GVWR and Rear GAWR) to be exceeded. Remember, GVWR and GAWR are found on the vehicle’s Safety Compliance Certification Label. If either of these limits is exceeded, you should go with a larger vehicle or a smaller trailer.

*Refer to the chart on page 29 for tongue load recommendations with Ford factory-installed rear step bumpers and trailer hitch receivers.

M Metric Conversion – To obtain information in kilograms, multiply pounds by .45.

How to Find Your Truck’s Axle Ratio

If you do not know the axle ratio of your vehicle, check its Truck Safety Compliance Certification Label (located on the left front door lock facing or the door latch post pillar). Below the bar code, you will see the word AXLE and a two-digit code. Use this chart to find the axle ratio that corresponds to that code:

AXLE RATIOS

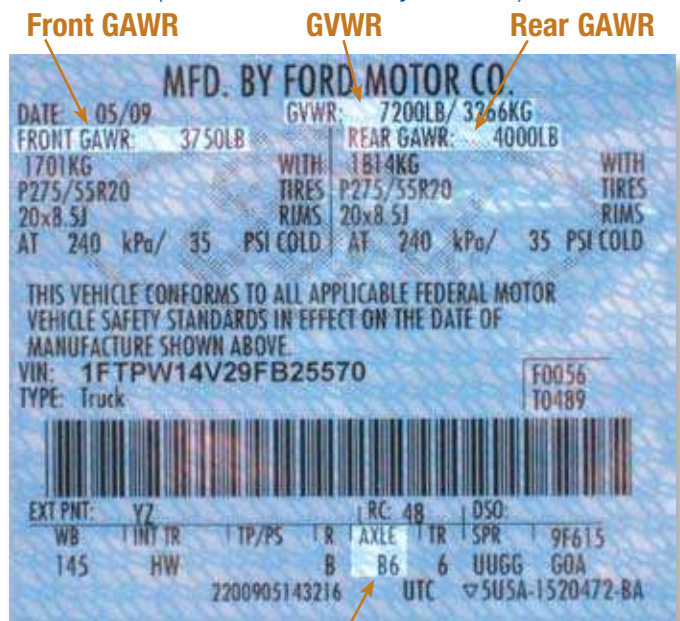
Vehicle	Rear Axle Ratio	Non-Limited Slip Rear Axle Code	Limited Slip Rear Axle Code
Super Duty	3.31	31	3H*
	3.55	35	3J*
	3.73	37	3L/3E*
	4.10	41	4E*/4N/4W**
	4.30	43	4L/4M*
	4.88	48	8L
F-150	3.15	15	A5
	3.31	27	Not Available
	3.55	19	H9
	3.73	26	B6
	3.73E	Not Available	L6*
	4.10E	Not Available	L4*
Ranger	3.55	95	R5
	3.73	96	R6
	4.10	97	R7
Expedition/Navigator	3.31	15	Not Available
	3.73	16	H6
E-Series	3.73	24/34/A2/A4	B4/C4/D2/D4
	4.10	22/32/52/56/82	B2/C2/E2/E6/F2
	4.56	83	F3
Motorhome Chassis	4.30	43	Not Available
	4.88	48	Not Available
	5.38	53	Not Available
	6.17	61	Not Available
Commercial Stripped Chassis	4.30	43	Not Available
	4.88	48	Not Available
	5.38	53	Not Available

*Electronic locking rear axle.

**Wide rear axle on F-350 Chassis Cab with Ambulance Package.

Sample Truck Safety Compliance Certification Label

(Refer to actual label on your vehicle)



Axle Code