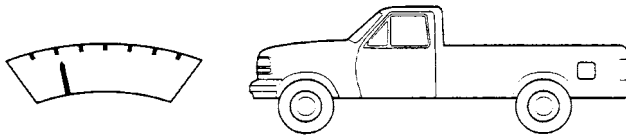


Basic Truck Weight Definitions

Actual Weights

• Base Curb Weight

- The weight of the vehicle including standard equipment, oil, lubricants and a full tank of fuel (less fuel on F-650/F-750 models). It does not include the weight of driver, passengers, cargo or any optional or aftermarket equipment
- **Base curb weights for each engine/standard equipment transmission combination are listed in the Weight Ratings pages of each vehicle section (see the chart on page 4-3 for reference pages)**
- Actual Regular Production Option Content Weights can be found in the charts on pages 4-8 to 4-17



- **Option Weights:** The weight of any added equipment that is not included in the base curb weight

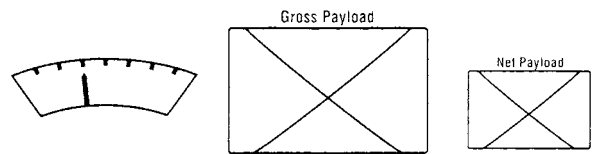


- **Passenger Weight:** Defined as 150 lbs. multiplied by the number of safety-belted seating positions, including the driver, that the vehicle can carry

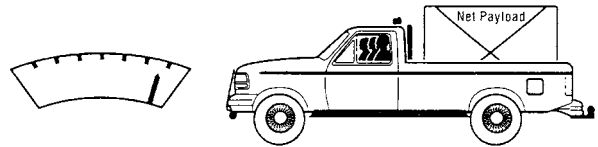


• Payload

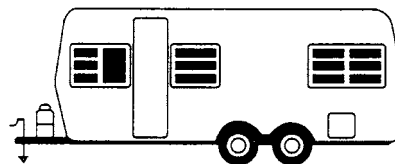
- Maximum payload is defined as the weight of all passengers, optional and aftermarket equipment, and cargo
- Net payload is defined as the weight that can be placed in the truck after subtracting for driver, passengers, and optional and aftermarket equipment



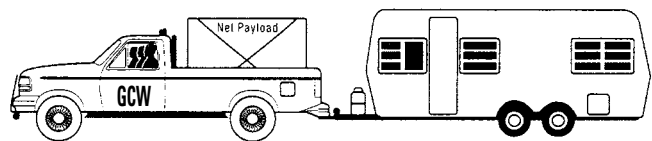
- **Gross Vehicle Weight (GVW):** The weight of the vehicle including driver, passengers, optional and aftermarket equipment, and all cargo



- **Trailer Weight:** The weight of a fully loaded trailer, including all attachments, lights, etc.



- **Gross Combination Weight (GCW):** Gross Vehicle Weight plus the trailer weight



Basic Truck Weight Definitions cont'd

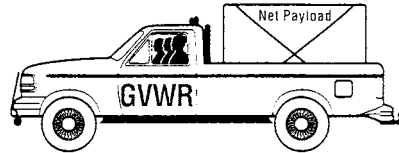
- **Gross Axle Weight:** The total weight placed on each axle of the vehicle (front and rear)
- **Tongue Weight:** The amount of the trailer's weight that bears down on the trailer hitch (10 to 15 percent of the total loaded conventional trailer weight or 15 to 25 percent of the total loaded 5th-wheel trailer weight)

Weight Ratings

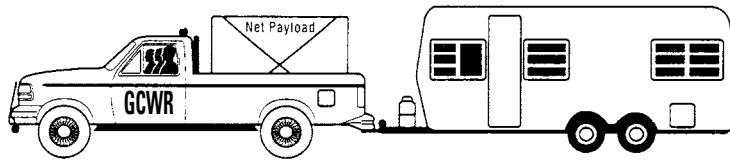
- **Maximum Payload Weight Rating:** This is the advertised payload rating. It is the maximum allowable payload for the truck, including driver, passengers, optional and aftermarket equipment, and cargo. The weight of the engine and its standard transmission is already factored into the Maximum Payload Weight Rating. If the engine is also available with an optional transmission, that engine/transmission weight can be found in the Actual Regular Production Option Content Weight charts (pages 4-8 to 4-17)

Vehicle Payload Calculation	Front/Total (lb.)
Maximum Payload Weight Rating ⁽¹⁾	____ / ____
Less Total Actual Regular Production Option Content Weight (from Line A, Payload/GVWR Worksheet)	____ / ____
Equals NET TOTAL VEHICLE PAYLOAD (Front and rear axles and spring capacities will be sufficient to carry this payload uniformly distributed in vehicle cargo area)	____ / ____

- **Gross Vehicle Weight Rating (GVWR):** The maximum allowable weight of the fully loaded vehicle (including passengers and cargo)



- **Gross Axle Weight Rating (GAWR):** The maximum allowable weight to be placed on an individual axle (front or rear). Gross Axle Weight Ratings are provided for both front and rear axles
- **Gross Combination Weight Rating (GCWR):** The maximum allowable weight of the towing vehicle, the trailer and all associated passengers, cargo and equipment



The point to remember is that the actual weights should never exceed the listed weight ratings. And remind your customers that if they do exceed the recommended weight ratings, they could disqualify their warranty coverage.

- **Weight Distribution:** That portion of a vehicle's total weight that will be supported by each axle and each tire. Proper distribution of vehicle weight is critical to braking, handling and to the service life of components such as axles, springs, bearings and tires

(1) Weight for driver and passengers must be deducted. Refer to the individual vehicle weight rating pages for maximum payload weight ratings. Refer to pages 4-8 to 4-17 for Regular Production Option Content Weight.

NOTE: Front springs are computer selected to meet specific option requirements for each vehicle (except F-Series Super Duty® Chassis Cab models); HD front springs are standard if vehicle option weights require.

Maximum Payload Weight Ratings

The Payload Weight Ratings and the Accessory Reserve Capacity⁽¹⁾ (ARC) or maximum allowable weight for regular production option charts are published and can be found in the weight ratings pages of the individual vehicle sections. This information is grouped together with other model, engine/transmission and maximum Gross Vehicle Weight Rating (GVWR) data for ease of use.

The chart below will serve to direct you to the exact pages where the vehicle weight ratings can be located.

2011 Vehicle Section	Maximum Payload and ARC ⁽¹⁾ Weight Page(s)
Ranger	28
F-150 and F-150 SVT Raptor	73
F-Series Super Duty [®] Pickup	
F-250	58
F-350 SRW	59-60
F-350 DRW	61
F-450 DRW	62
F-Series Super Duty Chassis Cab	
F-350 SRW Standard GVWR	45
F-350 SRW Upgrade GVWR	46
F-350 DRW	47
F-450	48
F-550	49-50
Transit Connect	24 (Payload only)
E-Series	
Wagon	31
Vans	43
Cutaway/Stripped Chassis	44-44

NOTE: Calculate approximate maximum payload weight ratings for F-650/F-750 trucks by subtracting the vehicle curb weight from the vehicle Gross Vehicle Weight Rating (GVWR). When performing this calculation, include the weight of any upfit equipment (container bodies, booms, spreaders, etc.) as part of the curb weight and subtract from the GVWR.

Exact maximum payload ratings will automatically be calculated and displayed when configuring the F-650/F-750 models using the Commercial Truck Tools (CTT) software.

Learning Path

To use this section more easily and effectively, some background in payload basics may be useful. Refer to the following courses for help. More information on these courses, and additional truck spec'ing courses, may be found at the MyTraining Web site at fmcdealer.com/mytraining.

Course Code	Course Name	Description
3467W	Truck — Essential Truck Basics	Web-based course covering basic concepts and information related to trucks and truck spec'ing
3461W	Truck — Essential Knowledge for Spec'ing Trucks	Web-based course covering key concepts for spec'ing trucks for a variety of applications

(1) Accessory Reserve Capacity (ARC) weight is the maximum allowable weight for regular production options and aftermarket equipment for models with standard equipment and the indicated engine/transmission combination.

Accessory Reserve Capacity (ARC) Calculation

This section provides the information needed to calculate the effect that vehicle options have on the payload capacity of Ford light trucks.

This information is useful to customers who plan to add aftermarket accessories or haul cargo at or near the vehicle's maximum capacity.

This section includes charts for each series, listing the maximum allowable weights for each GVWR.

Accessory Reserve Capacity

You can help prospective buyers estimate the total weight of accessories, equipment and modifications that may be added to the completed vehicle.

Ford vehicles are certified for compliance with the following FMVSS (Federal Motor Vehicle Safety Standards) or CMVSS (Canadian Motor Vehicle Safety Standards):⁽¹⁾

- 204 — Steering Column Rearward Displacement
- 208 — Occupant Crash Protection
- 212 — Windshield Mounting
- 219 — Windshield Zone Intrusion
- 301 — Fuel System Integrity
- 303 — CNG Fuel System Integrity (Canadian Standard 301.2)

The total added accessory weight must not exceed the allowable weight shown in the tables. You should make retail customers who intend to modify or install accessories or equipment aware of this fact.

If the modification or installation of accessories or equipment causes the unloaded weight of the vehicle, as revised with the added equipment, to exceed the test vehicle weight, the U.S. vehicle alterer⁽²⁾ may be responsible to certify the altered vehicle according to Title 49, Code of Federal Regulations 567.7 and 568.8. A Canadian vehicle alterer may be responsible to certify the altered vehicle according to Section 6 of the Canadian Motor Vehicle Safety Regulations.

In this section, each vehicle has a worksheet that addresses Total Accessory Reserve Capacity only. It does not consider Front Axle Accessory Reserve Capacity and does not include DSO option weights in the calculations.

(1) Ford Motor Company's certification of compliance with FMVSS/CMVSS is based on specific vehicle test weights. These standards are applicable to completed vehicles of 10,000-lb. GVWR or less. Maximum allowable weights shown in the tables for vehicles above 10,000-lb. GVWRs are maximum recommended values for optimum performance, durability and customer satisfaction.

(2) The same procedure to estimate the "Total Accessory Reserve Capacity" is recommended to completed vehicle alterers in Canada.

Accessory Reserve Capacity (ARC) Calculation cont'd

To approximate the amount of accessory equipment or modification weight that can be added to a Ford light truck without exceeding the test vehicle weight, calculate an estimated Total Accessory Reserve Capacity as follows:

1. Determine the "Total Actual Regular Production Option Content Weight" of the desired regular production options from the corresponding Accessory Reserve Capacity Calculation/Worksheet on the following page.
2. Subtract the "Total Actual Regular Production Option Content Weight" from the "Maximum Allowable Weight (Regular Production Options & Aftermarket Equipment)" for the appropriate model. The difference is the estimated "Total Accessory Reserve Capacity."

Maximum Allowable Weight (Regular Production Options & Aftermarket Equipment)

– Total Actual Regular Production Option Content Weight

= Total Accessory Reserve Capacity

(See next page for example.)

Warning: The Accessory Reserve Capacity weight information addresses FMVSS and CMVSS Nos. 204, 208, 212, 219, 301 and 303 compliance only. For all light-duty trucks with a GVW rating under 8500 lbs., federally certified trucks with a GVW rating of 8500 to 10,000 lbs. that are optionally emission certified to light-duty standards and all California complete vehicles with a GVW rating of 14,000 lbs. or less, if more than 500 lbs. is added to the vehicle's "maximum vehicle weight,"⁽¹⁾ the modifier may be responsible for recertification to the applicable EPA or CARB emissions standards.

(1) **Important:** "Maximum vehicle weight" is calculated in accordance with the definition provided in an EPA guidance letter dated July 13, 1979 from C.N. Freed of the EPA to M.H. McBride, legal counsel of the Recreation Vehicle Industry Association. The preceding conditions are based on that letter and on EPA Advisory Circular No. 64 — a March 7, 1977, publication that provides guidance on the need for separate certification of vehicles modified after original manufacture, but prior to sale and delivery to the ultimate purchaser. Additional guidance or questions concerning EPA's policies with respect to alters of completed vehicles should be directed to legal counsel or the Environmental Protection Agency.