



MIDWEST PETERBILT GROUP / SIOUX CITY TRUCK SALES / PETERBILT OF DES MOINES IOWA

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How Truck Specifications Are Determined For Application

Trucks are an integral tool of your business. Some truck buyers are not aware of their need to own a properly engineered truck for application. Factors and information that go into Peterbilt Trucks:

1. Application: Percentage of expected on highway and/or off highway use? What are the steepest grades the truck will operate? Desired cruise speed. Is the truck to be 80,000 lb. GCWR or different?
2. Rating of truck for application. The chassis is the first consideration. What GVWR is needed? To determine GVWR, there are five load carrying components that dictate the rated GVWR of a truck. The rated capacity of a truck is determined by the least of the five load carrying components: tires, wheels, axles, suspension and truck frame. The lesser of rating in pounds of the front axle five components, and the lesser of the load components of the rear, are added. The equation equals the legal GVWR. Example:

Front axle:

Tires rated at 12,400 lbs

Wheels rated at 16,000 lbs

Suspension rated at 12,000 lbs

Axle is rated at 14,000 lbs

Frame is rated at 33,000 lbs.

Front GAWR = 12,000 lbs for maximum rating. The suspension is the least of the five load carrying components

Rear axle:

Tires rated at 36,000 lbs

Wheels rated at 44,000 lbs

Suspension rated at 40,000 lb

Axle rated at 40,000 lbs

Frame rated at 33,000 lbs.

The rear GAWR is 36,000 lbs. The GVWR of the truck will be legally set at: 48,000 lbs. The least of the axle five load carrying components of the front axle is 12,000 lbs added to the least of the rear five load carrying components is 36,000 lbs. The sum of the two lesser ratings is: 48,000 lbs.

3. Terms used in building a truck: Startability, the ability of the truck to start a truck moving when loaded to its' maximum GVWR in the medium it will have the least ability to start, incline, dirt, level highway. On / Off roads should have a startability factor of 27+. Speedability, at full GVWR, how fast in MPH will a truck travel on a given road surface? Suspension creep, how much the front and rear suspension will compress under full load. Demand horsepower, the need for horsepower for expected sustained road speed.

