

Solutions “B”

Truck “B” Three Axle

The maximum allowable weight is computed by going to the gross weight chart. Go down the left side to 21 feet and follow across to the column with 3 axles. You should find the weight 52,000. This is the maximum allowable weight for this 3 axle truck.

The steering axle weight is exactly the same as truck “A” or 12,000 pounds. (same computations)

The tandem weight is determined by noting the distance between the last two axles (4 feet 4 inches). Again go to the gross weight chart, on the left note 4 feet, go across to the 2 axle column for two axles spaced 4 feet apart which allows 34,000 pounds. In both 9 and 10 ton transportation routes, the maximum legal weight is 34,000 pounds. The only difference is that on a 9 ton route neither of the individual axles in the tandem can exceed 18,000 pounds, and on a 10 ton route neither can exceed 20,000 pounds. Normally where axles have the same tire size, and factory suspension, this is not an issue.

The actual “legal” weight for this truck would be the total of the steering and tandem weights $12,000 + 34,000 = 46,000$ pounds. (both 9 and 10 ton routes)

Restricted Weights.

Looking at chart “I” the steering axle situation is the same as truck “A”. The maximum allowed is 12,000 pounds which is more than the 5 ton road limit of 10,000 pounds. 10,000 pounds would be the maximum allowable weight on the steering axle on a 5 ton road. The tandem would be limited by the chart to 18,889 pounds. (found in the “two axles spaced within 8 feet or less column.)

The total weight of this truck on a 5 ton road would be the sum of the allowable steering weight 10,000 plus the allowable tandem axle weight of 18,889. Total being 28,889 pounds. Any gross weight over that amount would indicate an overweight somewhere on the truck.

On a 7 ton route, the maximum allowable weight on a single axle would be 14,000 pounds which would exceed the tire rating for the steering axle. So, the maximum weight on the steering axle would remain at the rated 12,000 pounds. The tandem axle would be found on chart “I” as allowing 26,444 pounds. The maximum allowable weight of this truck on a 7 ton road would be the sum of the two being 38,444 pounds. Any weight over that amount would indicate an overweight somewhere on the truck.

10% Weight Increases.

The maximum weight possible is whatever the weight on the gross weight chart allows plus 10%. This truck is allowed 52,000 pounds by the chart. When a 10% increase is allowed, the truck cannot gross more than 57,200 pounds (52,000 + 5,200) and then only when the axles are within their legal limits. If it's not monitored, there are occasions where the axle weight increases may imply more gross weight than the increased chart limit would allow. Be careful!

As with truck 'A' the steering axle is at the maximum legal due to the tire ratings. The steering axle would not be able to be increased 10% because it would exceed the ratings. The tandem, assuming no tire rating issues) could be increased by 10% or 3400 pounds. This would make the maximum allowable tandem weight 37,400 pounds. Add to that the steering axle weight (12,000 pounds) and you have the maximum allowable weight for the 10% increase at 49,400 pounds.

In some rare cases, it would be possible to increase the axle weights more than the table weights on the gross weight chart. It's always important to make sure that you don't increase your individual axle weights beyond the 10% of any table weight. In this case the allowable weight is 49,400 pounds, far less than the possible allowable of 57,200 pounds you get when you simple add 10% to the table of 3 axles spaced 21 feet apart (which was the original 52,000 pounds).

Registration Increase?

If this truck was registered for 45,000 pounds ("M" sticker on license plate) you would immediately note the new weight could be 49,400 pounds. The State law allows you either 1,000 pounds, or 4% (whichever is greater) for you to exceed your registration weight without the need to increase. 4% of 45,000 pounds is 1800 pounds which is larger than 1,000. So if your truck exceeds a weight of 46,800 pounds it would be in violation of the registration law. You would need to increase your registration to the next increase and get an "N" sticker on your license plate which would allow 51,000 pounds.

Permit?

Same as truck "A". If you operate it during harvest on a state highway you need a permit to exceed otherwise legal weights. These are not valid on Interstate routes. If you operate during the winter load increase you would not need a permit for state highways **ONLY** interstate routes.

As always, city, county, and townships have their own processes which must be investigated before using their routes.