

WDSC 422 Lab 3 - Assignment
Truck Axle Weight Laws and Calculation
Harvesting Forest Products

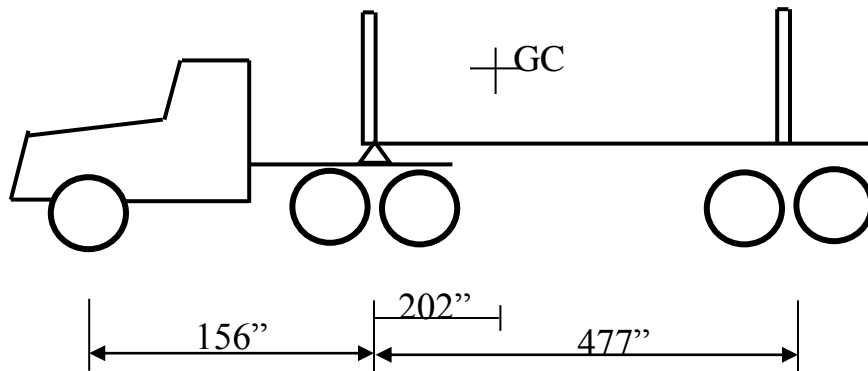
Several of our logging contractors are having problems understanding the West Virginia highway weight laws. In an effort to display a good public image and to follow both the spirit and letter of our laws, I suggest we assist them in determining how much wood they can legally load onto their trucks.

Schematics of trucks operated by three of our producers are attached. Please perform the necessary calculations to answer the attached questions about each producer. If we can do some of this work for them and provide them with good information, perhaps they will adhere to the legal loads instead of constantly being fined for hauling overweight.

Please provide me a 1-paged typed report with necessary calculation attachments by the beginning of lab next week.

1. Oak Timber Company

Their typical tractor/trailer used to haul tree-length hardwood is described below.

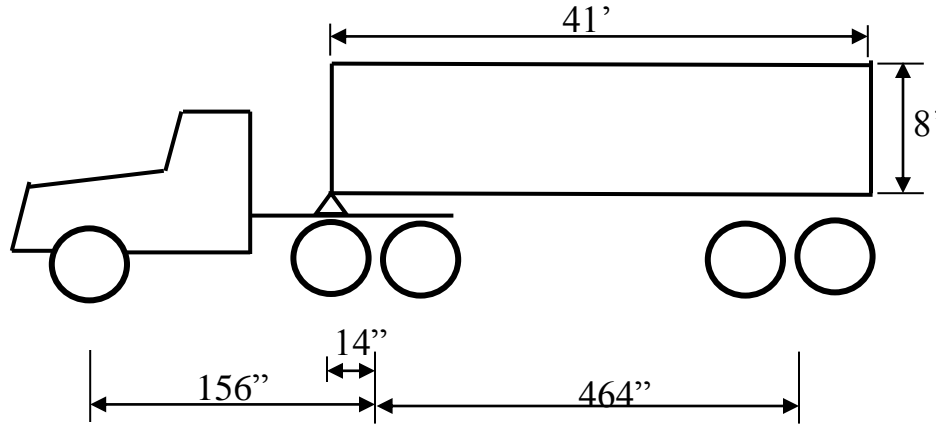


Front axle empty	8000 lb.
Tractor tandems empty	11000 lb.
Trailer tandems empty	7600 lb.
Average payload	25.6 tons

- (1) Compute the GVW and axle weights using the above information. On what highways would it be legal to operate this truck as loaded above?
- (2) What is the maximum load if the tractor/trailer is legally performed on West Virginia state highways?

2. Parker Wood Chipping Inc.

Their typical chip van rig is described as below.



Front axle empty	7800 lb.
Tractor tandems empty	9600 lb.
Trailer tandems empty	6500 lb.
Trailer width	7.8 feet
Density of wood chips	25 lb./cu.ft.

- (1) Assuming the trailer is fully loaded with chips, what regulations would be violated if this truck operated on West Virginia state highways?
- (2) How high could chips be stacked in the trailer without violation of weight laws?