



Senate Bill 501 (as introduced 9-14-23)
Sponsor: Senator Darrin Camilleri
Committee: Transportation and Infrastructure

Date Completed: 10-23-23

CONTENT

The bill would amend the Michigan Vehicle Code to allow an electric truck tractor to exceed current axle loading and weight load maximums by up to 2,000 pounds; however, the gross weight of an electric truck tractor or a combination of an electric truck tractor and semitrailer could not exceed 82,000 pounds.

Among other things, the Code prescribes the *normal loading maximum*, the maximum axle loads for vehicles exceeding 80,000 pounds in gross weight, as follows:

- If the axle spacing on a vehicle is nine feet or more between axles, the maximum axle load must not exceed 18,000 pounds for vehicles equipped with high pressure pneumatic or balloon tires.
- If the axle spacing is less than nine feet between two axles but more than three and a half feet, the maximum axle load must not exceed 13,000 pounds for high pressure pneumatic or balloon tires.
- If the axles are spaced less than three and a half feet apart, the maximum axle load must not exceed 9,000 pounds per axle.

("Maximum axle load" means the gross weight over the axle which includes vehicles and load. "Gross weight" means the weight of a vehicle without load plus the weight of any load thereon.)

Vehicles that have a gross vehicle weight of *up to* 80,000 pounds are subject to the following load maximums:

- 20,000 pounds on any one axle, including all enforcement tolerances.
- A tandem axle weight of 34,000 pounds, including all enforcement tolerances.¹
- An overall gross weight on a group of two or more consecutive axles equaling:
 $W=500[(LN)/(N-1)+12N+36]$.²

(For more information, see **BACKGROUND**).

Under the bill, an electric truck tractor could exceed the above axle loading maximums and the weight load maximums by a gross weight of not more than 2,000 pounds. An electric truck tractor or a combination of an electric truck tractor and a semitrailer could not exceed a maximum gross weight of 82,000 pounds.

¹ A tandem axle is two axles, one placed in front of the other in close proximity.

² In this equation, W = the overall gross weight on a group of two or more consecutive axles to the nearest 500 pounds, L = distance in feet between the extreme of a group of two or more consecutive axles, and N = number of axles in the group under consideration.

"Electric truck tractor" would mean a truck tractor that is an electric vehicle. "Electric vehicle" means a vehicle that is propelled solely by electrical energy and that is not capable of using gasoline, diesel fuel, or alternative fuel to propel the vehicle.³

MCL 257.722

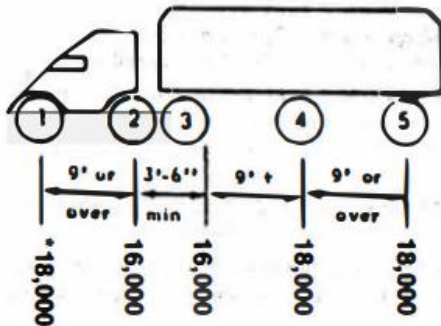
BACKGROUND

The Code establishes axle loading maximums as follows:

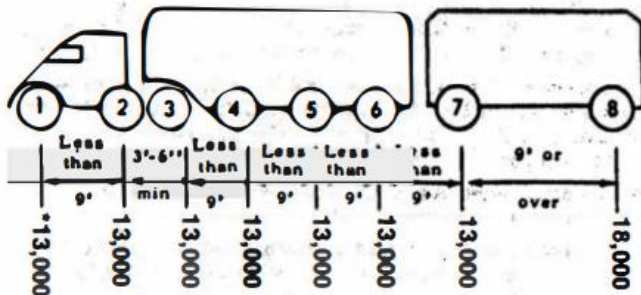
MAXIMUM ALLOWABLE GROSS AXLE LOADINGS				
Spacing Between Axles	Normal Loadings When Seasonal Load Limitations Are Not In Force		Seasonal Load Limitations (Speed Limit 35 MPH)	
	Vehicles Exceeding 80,000 lbs. Gross Weight	† Vehicles 80,000 lbs. OR Under Gross Weight	Rigid	Flexible
9 feet or over	18,000 lbs.	20,000 lbs.	25% reduction	35% reduction
More than or equal to 3 ½ feet but less than 9 feet	13,000 lbs.		13,500 lbs.	11,700 lbs.
When part of a tandem axle assembly	*16,000 lbs.	34,000 lbs. on tandem	**12,000 lbs.	***10,400 lbs.
When less than 3 ½ feet	9,000 lbs.		9,750 lbs.	8,450 lbs.
Maximum load on any wheel shall not exceed: (lbs. per inch of tire width)	700 lbs.	700 lbs.	525 lbs.	450 lbs.

† Gross vehicle weight may not exceed 80,000 lbs. and the Bridge Gross Weight Formula as follows: An overall gross weight on a group of 2 or more consecutive axles equaling: $W = 500 [(LN / (N - 1)) + 12N + 36]$

The following are examples of axle loading maximums for a vehicle over 80,000 pounds:



Axles 2 and 3 are part of a tandem axle assembly. As such, their maximum allowable gross axle loadings are 16,000 pounds. Because axles 1, 4, and 5, are at least 9 feet away from another axle, their maximum loadings are 18,000 pounds.



³ MCL 257.801

Because axles 1 through 7 are less than nine feet but more than three and a half feet away from each other, their maximum allowable gross axle loadings are 13,000 pounds. Axle 8 is at least nine feet from axle 7. As such, its maximum allowable gross axle loading is 18,000 pounds.

(The chart and images are from the Michigan Department of Transportation's *Maximum Legal Truck Loadings and Dimensions*).

Legislative Analyst: Abby Schneider

FISCAL IMPACT

This bill would not have an immediate fiscal impact on the State or local units of government. In the long run, allowing these heavier vehicles on the road would wear down the roads and bridges faster and require higher funding at the State and local level to maintain road and bridge quality.

Fiscal Analyst: Bobby Canell

SAS\S2324\s501sa

This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.