Tridem Drive 9 Axle B-Train Regulation Summary

Part 1 – Dimension Limits

Figure 1 – Tridem Drive B-Train

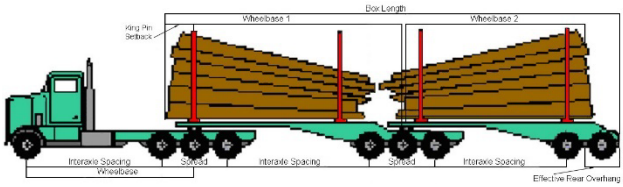
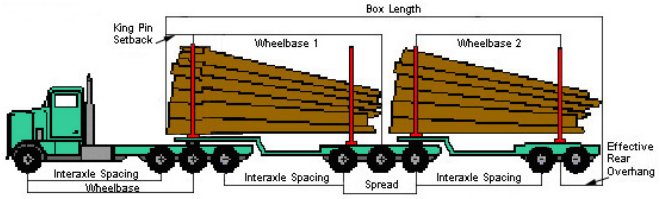


Figure 2 – Tridem Drive Double Pole B-Train – No Hinge



DIMENSION LIMIT	
Overall Length	Maximum 27.5 metres
Overall Width	Maximum 2.6 metres
Overall Height	Maximum 4.15 metres
Box Length	Maximum 20.0 metres
Tractor	
Wheelbase	Minimum 6.6 metres / Maximum 6.8 metres
Tridem Axle Spread	Maximum 2.8 metres
Tridem Axle Semi – Trailer (Front)	
Length	Maximum 16.2 metres
King Pin Setback	Maximum 2.0 metres
Wheelbase 1	Minimum 6.25 metres / Maximum 12.5 metres
Tridem Axle Spread	Minimum 2.4 metres / Maximum 3.1 metres
Track Width	Minimum 2.5 metres / Maximum 2.6 metres
Tandem Axle Semi – Trailer (Rear)	
Length	Maximum 16.2 metres
King Pin Setback	Maximum 2.0 metres
Wheelbase 2	Minimum 6.25 m / Maximum 12.5
Tandem Axle Spread	Minimum 1.0 m / Maximum 1.85 m
Track Width	Minimum 2.5 m / Maximum 2.6 m
Effective Rear Overhang	Maximum 35% of trailer wheelbase
Interaxle Spacings	
Single Steer to Tandem Axle	Minimum 3.0 metres
Tandem Axle to Tridem Axle	Minimum 5.5 metres
Tridem Axle to Tridem Axle	Minimum 5.5 metres

Double Pole – B-Train

The double pole configuration without a hinge is a B-train; a combination of a tractor and two pole frame trailers. The lead trailer is a tridem towed by a pole-frame connected by means of a fifth wheel to the tractor unit. The

main purpose of the pole-frame is to steer the tridem. The tridem consists of three equally spaced axles, with one suspension system. The second trailer also consists of a pole-frame connected to the preceding vehicle by means of a fifth wheel. While it may be an efficient and effective configuration in some applications, it may not be a suitable unit for all applications. (Figure 2 and 2a)

Definitions as per Commercial Vehicle Dimension and Weight Regulation AR315/2002

Effective rear overhang

The longitudinal distance from the turn centre of the rear axle group of a commercial vehicle to the rearmost point of:

(i) the vehicle, or
(ii) the load on the vehicle,

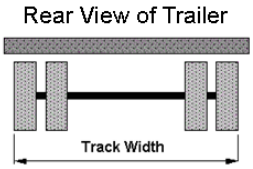
whichever is the greater distance

Kingpin setback

The longitudinal distance from the centre of the kingpin to the front of the semi-trailer or the load, whichever is further forward, excluding any auxiliary equipment attached to the front of the semitrailer that is not designed for the transportation of goods.

Track Width

The overall width of an axle measured from the outside of the outside tire located on one side of the vehicle to the outside of the outside tire located on that axle on the other side of the vehicle at any point above the lowest point of the rim



Trailer Wheelbase

The longitudinal distance from the centre of the kingpin on a semi-trailer, the centre of the turntable on a full trailer or the centre of the hitch device on a pony trailer, to the trailer turn centre.

Tridem axle group

An axle group, on a trailer, consisting of any 3 consecutive axles of a vehicle where the axles are evenly spaced over a distance of not less than 2.4 metres and not greater than 3.7 metres.

Tridem drive axle group

A driving axle group n axle group, on a truck or truck tractor, consisting of 3 driving axles:

(i) equally spaced
(ii) with a track width of between 2.5 metres and 2.6 metres,
(iii) on a common suspension designed to equalize the weight between the axles,
(iv) with a minimum of 12 tires, and,
(v) with all tires of the same size and a minimum width of 255 millimetres, as determined by the manufacturer's width shown on the tire, but does not include a lift axle or a self steering axle

Truck Tractor Wheelbase

The longitudinal distance from the centre of the steering axle or twin steer axle group located on a truck tractor to the turn centre

Part 2 – Weight Limits

Figure 1a – Tridem Drive B-Train

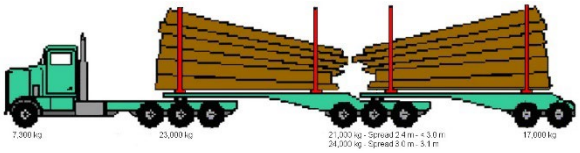
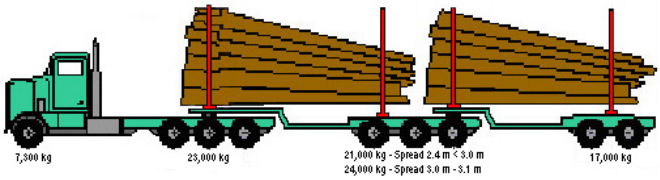


Figure 2a – Tridem Drive Double Pole B-Train



WEIGHT LIMITS

Steering Axle	Maximum 7,300 kg **Requires minimum steering axle weight of 27% of the drive axle weight**
Tridem Drive Axle – Dual tires	Maximum 23,000 kg
Tridem Trailer Axle – Dual tires	
Dual tires with axle spread from 2.4 m to less than 3.0 m	Maximum 21,000 kg
Dual tires with axle spread from 3.0 m to 3.1 metres	Maximum 24,000 kg
Tandem Trailer Axle – Dual tires	
Tandem axle – Dual tires	Maximum 17,000 kg
Gross Vehicle Weight Limits	63,500 kg subject to minimum interaxle spacing.

A 9 axle b-train logging truck is a regulated vehicle. Gross Vehicle Weight (GVW) cannot exceed 63,500 kg.

An annual equipment exemption permit (ANEX) may be available to allow a 9 axle b-train to maximize regulated axle weights and exceed 63,500 kg GVW.

Log trucks must operate with a monthly licensing (MOLICLOG) permit for the increased weight the ANEX allows, to be valid. The permitted weight on the monthly licensing permit is set at 71,300 kg.

Prior to issuance of these permits, a carrier must undergo a safety review and be approved by Alberta Transportation and Economic Corridors. Contact the Central Permit Office at 1 800 662-7138 or central.permits@gov.ab.ca for further information.

The application form is available at Permit Application Form for the Operation of Quad Axle Semi-Trailer OR 9/10 Axle B-Train (alberta.ca)

A copy of the attached permit conditions to allow the operation of these vehicles at weights exceeding 63,500 kg is available at the following link: 9 Axle Tridem Drive B-Train – Winter Weight (alberta.ca)

A copy of the attached conditions for this annual exemption permit is available for viewing at 9 Axle Equipment Exemption Permit Conditions | Alberta.ca

To qualify for weights exceeding 65,000 kg, all trailers used in a 9 Axle B-Train configuration manufactured after October 1, 2012 require a minimum track width of 2.9 metres.

Note: All axle weights are subject to minimum tire size. (Chart below)

Maximum steering axle weight as per Commercial Dimension and Weight Regulation AR 315/2002

9(1) Subject to section 62 of the Act and section 12(1) of this Regulation, no person shall operate a commercial vehicle on a highway when

(a) the gross weight on a tire exceeds the smallest of the following:
  (i) 3,650 kilograms;
  (ii) the capacity determined by multiplying the cross section dimension of the tire in millimetres, as determined by the manufacturer's width shown on the tire, by 10 kilograms;
(b) the gross weight on
  (i) a steering axle exceeds
    (A) in the case of a truck tractor, 5,500 kilograms;
    (B) in the case of a truck, bus, picker truck, bed, truck or winch truck, 7,300 kilograms.

STEERING AXLE TIRE WEIGHT CHART FOR TRUCKS

ALLOWABLE STEERING AXLE WEIGHTS		ALLOWABLE STEERING AXLE WEIGHTS		PICKER STEERING WEIGHTS WITH ANNUAL PERMIT		
Tire Size	Single Steer	Tire Size	Single Steer	Tire Size	Tire Size	Single Steer
(inches)	Maximum Weight (kg)	(mm)	Maximum Weight (kg)	(inches)	(mm)	Maximum Weight (kg)
210	5, 100	285	5, 700			
211	5, 600	305	6, 100			
212	6, 100	315	6, 300			
213	6, 600	335	6, 700			
214	7, 100	365	7, 300			
215	7, 300	385	7, 300	215	385	7,700
216	7, 300	425	7, 300	216	425	8,500
218	7, 300	445	7, 300	218	445	9,100