

# North Dakota Weight Limitations Chart

North Dakota Highway Patrol

Effective 11/2013

Computed to nearest foot by the weight formula in Section 39-12-05 and Section 39-12-05.3 of the North Dakota Century Code.

## Formula

$$W = 500 \left( \frac{LN}{N-1} + 12N + 36 \right)$$

W= Maximum weight in pounds on any group of two or more axles.

L = Distance in feet between extremes of any group of two or more consecutive axles.

N= Number of axles in group under consideration.

### I Maximum load in pounds carried on any group of 2 or more consecutive axles

Distance in feet between the extremes of any groups of 2 or more consecutive axles	2 Axles	3 Axles	4 Axles	5 Axles	6 Axles	7 Axles	8 Axles	9 Axles
4	34,000	/	/	/	/	/	/	/
5	34,000	/	/	/	/	/	/	/
6	34,000	/	/	/	/	/	/	/
7	34,000	34,000	/	/	/	/	/	/
8	38,000	42,000	/	/	/	/	/	/
9	40,000	43,000	/	/	/	/	/	/
10	/	43,500	/	/	/	/	/	/
11	/	44,500	/	/	/	/	/	/
12	/	45,000	50,000	/	/	/	/	/
13	/	46,000	50,500	/	/	/	/	/
14	/	43,000	51,500	57,000	/	/	/	/
15	/	43,500	52,000	57,500	/	/	/	/
16	/	44,500	52,500	58,000	/	/	/	/
17	/	45,000	53,500	58,500	/	/	/	/
18	/	46,000	54,000	59,500	/	/	/	/
19	/	50,500	54,500	60,000	/	/	/	/
20	/	51,000	55,500	60,500	66,000	/	/	/
21	/	52,000	56,000	61,000	66,500	/	/	/
22	/	52,500	56,500	62,000	67,000	/	/	/
23	/	53,500	57,500	62,500	68,000	/	/	/
24	/	54,000	58,000	63,000	68,500	74,000	/	/
25	/	55,000	58,500	63,500	69,000	74,500	/	/
26	/	55,500	59,500	64,500	69,500	75,000	/	/
27	/	56,500	60,000	65,000	70,000	76,000	/	/
28	/	57,000	60,500	65,500	71,000	76,500	82,000	/
29	/	58,000	61,500	66,000	71,500	77,000	82,500	/
30	/	58,500	62,000	67,000	72,000	77,500	83,000	/
31	/	59,500	62,500	67,500	72,500	78,000	84,000	/
32	/	60,000	63,500	68,000	73,000	78,500	84,500	90,000
33	/	/	64,000	68,500	74,000	79,500	85,000	90,500
34	/	/	64,500	69,500	74,500	80,000	85,500	91,000
35	/	/	65,500	70,000	75,000	80,500	86,000	91,500
36	/	/	66,000	70,500	75,500	81,000	86,500	92,500
37	/	/	66,500	71,000	76,000	81,500	87,000	93,000

38	/	/	67,500	72,000	77,000	82,000	87,500	93,500
39	/	/	68,000	72,500	77,500	83,000	88,500	94,000
40	/	/	68,500	73,000	78,000	83,500	89,000	94,500
41	/	/	69,500	73,500	78,500	84,000	89,500	95,000
42	/	/	70,000	74,500	79,000	84,500	90,000	95,500
43	/	/	70,500	75,000	80,000	85,000	90,500	96,000
44	/	/	71,500	75,500	80,500	85,500	91,000	97,000
45	/	/	72,000	76,000	81,000	86,500	91,500	97,500
46	/	/	72,500	77,000	81,500	87,000	92,500	98,000
47	/	/	73,500	77,500	82,000	87,500	93,000	98,500
48	/	/	74,000	78,000	83,000	88,000	93,500	99,000
49	/	/	74,500	78,500	83,500	88,500	94,000	99,500
50	/	/	75,500	79,500	84,000	89,000	94,500	100,000
51	/	/	76,000	80,000	84,500	90,000	95,000	100,500
52	/	/	76,500	80,500	85,000	90,500	95,500	101,500
53	/	/	77,500	81,000	86,000	91,000	96,500	102,000
54	/	/	78,000	82,000	86,500	91,500	97,000	102,500
55	/	/	78,500	82,500	87,000	92,000	97,500	103,000
56	/	/	79,500	83,000	87,500	92,500	98,000	103,500
57	/	/	80,000	83,500	88,000	93,500	98,500	104,000
58	/	/	/	84,500	89,000	94,000	99,000	104,500
59	/	/	/	85,000	89,500	94,500	99,500	105,000
60	/	/	/	85,500	90,000	95,000	100,500	105,500
61	/	/	/	86,000	90,500	95,500	101,000	/
62	/	/	/	87,000	91,000	96,000	101,500	/
63	/	/	/	87,500	92,000	97,000	102,000	/
64	/	/	/	88,000	92,500	97,500	102,500	/
65	/	/	/	88,500	93,000	98,000	103,000	/
66	/	/	/	89,500	93,500	98,500	103,500	/
67	/	/	/	90,000	94,000	99,000	104,500	/
68	/	/	/	90,500	95,000	99,500	105,000	/
69	/	/	/	91,000	95,500	100,500	105,500	/
70	/	/	/	92,000	96,000	101,000	/	/
71	/	/	/	92,500	96,500	101,500	/	/
72	/	/	/	93,000	97,000	102,000	/	/
73	/	/	/	93,500	98,000	102,500	/	/
74	/	/	/	94,500	98,500	103,000	/	/
75	/	/	/	95,000	99,000	104,000	/	/
76	/	/	/	95,500	99,500	104,500	/	/
77	/	/	/	96,000	100,000	105,000	/	/
78	/	/	/	97,000	101,000	105,500	/	/
79	/	/	/	97,500	101,500	/	/	/
80	/	/	/	98,000	102,000	/	/	/
81	/	/	/	98,500	102,500	/	/	/
82	/	/	/	99,500	103,000	/	/	/
83	/	/	/	100,000	104,000	/	/	/
84	/	/	/	/	104,500	/	/	/
85	/	/	/	/	105,000	/	/	/
86	/	/	/	/	105,500	/	/	/

**NOTES:**

- Final column amount is the Maximum Gross Weight

- On highways other than the Interstate System, only the exterior bridge measurement shall be used to determine the gross vehicle weight of a vehicle or combination of vehicles.
- For 4-axle, rows 36, 37, and 38: Two consecutive sets of tandem axles may carry a gross load of 34,000 pounds each provided the overall distance between the first and last axles of such consecutive sets of tandem axles is 36 feet or more.
- Gross weight limit on county and local highways is 80,000 pounds, unless otherwise posted.
- Gross weight limit on Interstate is 80,000 pounds without special permit/s.

### North Dakota Axle Weight Limitations

No single axle shall carry a gross weight in excess of 20,000 pounds. Axles spaced 40 inches or less apart are considered one axle. Axles spaced eight (8) feet apart or over are considered as individual axles. The gross weight of two individual axles may be restricted by the weight formula except that on highways other than the interstate, two axles spaced eight (8) feet apart or more may have a combined gross weight not to exceed 40,000 pounds. Spacing between axles shall be measured from axle center to axle center.

Axles spaced over 40 inches apart and less than eight (8) feet apart shall not carry a gross weight in excess of 19,000 pounds per axle. The gross weight on a tandem axle shall not exceed 34,000 pounds. The gross weight of three or more axles in a grouping is determined by the measurement between the extreme axle centers except that on highways other than the interstate, groupings of three or more axles may have a gross weight not to exceed 48,000 pounds.

The weight per inch width of tire shall not exceed 550 pounds. Metric tire sizes are converted to inches by dividing millimeters by 25.4. The width of tire for solid tires shall be the rim width. For pneumatic tires the width of tire shall be the manufacturer's width. The weight in pounds on any one wheel shall not exceed one-half the allowable axle weight. Dual tires are considered one (1) wheel.

The weight on the steering axle shall be determined by the manufacturer's axle rating and shall not exceed 20,000 pounds when travel is on the interstate system or on Defense Highways. When travel is on Defense Highways, the load shall be for the US Department of Defense.

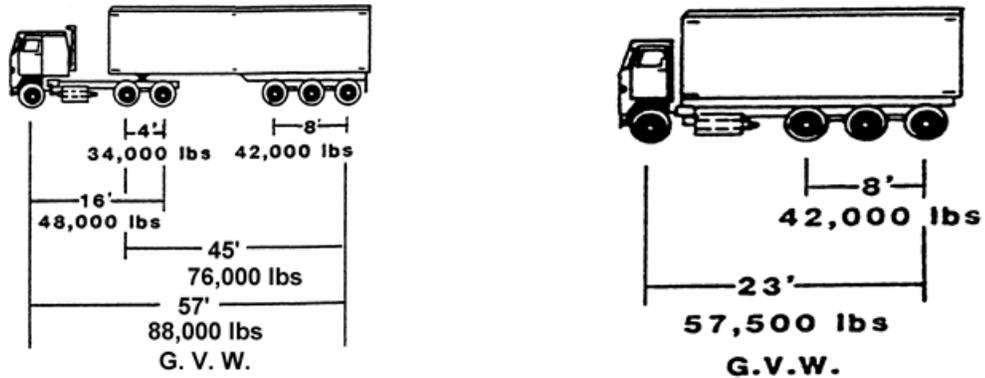
Tire Width	Single Axle (2 Tires)	Single Axle (4 Tires)	Tandem Axle (4 Tires)	Tandem Axle (8 Tires)	Triple Axle (6 Tires)	Triple Axle (12 Tires)
7 inch	7,700 lbs.	15,400 lbs.	15,400 lbs.	30,800 lbs.	23,100 lbs.	*DWF
7.50 inch	8,250 lbs.	16,500 lbs.	16,500 lbs.	33,000 lbs.	24,750 lbs.	*DWF
8 inch	8,800 lbs.	17,600 lbs.	17,600 lbs.	34,000 lbs.	26,400 lbs.	*DWF
8.25 inch	9,075 lbs.	18,150 lbs.	18,150 lbs.	34,000 lbs.	27,225 lbs.	*DWF
9 inch	9,900 lbs.	19,800 lbs.	19,800 lbs.	34,000 lbs.	29,700 lbs.	*DWF
10 inch	11,000 lbs.	20,000 lbs.	22,000 lbs.	34,000 lbs.	33,000 lbs.	*DWF
11 inch	12,100 lbs.	20,000 lbs.	24,200 lbs.	34,000 lbs.	*DWF	*DWF
12 inch	13,200 lbs.	20,000 lbs.	26,400 lbs.	34,000 lbs.	*DWF	*DWF
13 inch	14,300 lbs.	20,000 lbs.	28,600 lbs.	34,000 lbs.	*DWF	*DWF
14 inch	15,400 lbs.	20,000 lbs.	30,800 lbs.	34,000 lbs.	*DWF	*DWF
15 inch	16,500 lbs.	20,000 lbs.	33,000 lbs.	34,000 lbs.	*DWF	*DWF
16.5 inch	18,150 lbs.	20,000 lbs.	34,000 lbs.	34,000 lbs.	*DWF	*DWF
17.5 inch	19,250 lbs.	20,000 lbs.	34,000 lbs.	34,000 lbs.	*DWF	*DWF
18 inch	19,800 lbs.	20,000 lbs.	34,000 lbs.	34,000 lbs.	*DWF	*DWF

\*DWF-Determined by Weight Formula

**Notes:**

- Axle weights may be reduced during the spring breakup season or on otherwise posted highways.
- Axle weights may be reduced by Bridge Load Limitations Map.

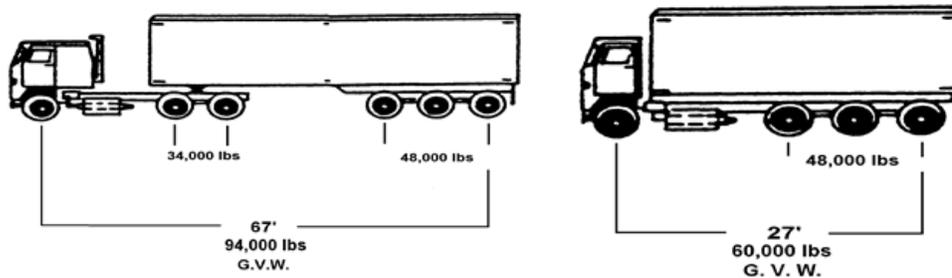
**Examples of Bridge Formula Application on the Interstate System**



**Notes:**

- On the Interstate System, the interior and exterior bridge measurement shall be used to determine the gross vehicle weight of a vehicle or combination of vehicles.
- Maximum legal gross vehicle weight on the interstate system is 80,000 pounds without a permit.

**Examples of Bridge Formula Application on the State Highway System**



**Notes:**

- On highways other than the Interstate System, only the exterior bridge measurement shall be used to determine the gross vehicle weight of a vehicle or combination of vehicles.
- Groupings of three or more axles may have a gross weight not to exceed 48,000 pounds.
- See Highway Patrol for additional information on 4-axle straight trucks.

**Examples of Metric Tire Conversion**

Metric Tire Size	Tire Width in Inches	Metric Tire Size	Tire Width in Inches
245/75R22.5	9.6 inches	315/75R22.5	12.4 inches
255/70R22.5	10.0 inches	385/65R22.5	15.1 inches
265/75R22.5	10.4 inches	425/65R22.5	16.7 inches
275/80R22.5	10.8 inches	445/65R22.5	17.5 inches
285/75R24.5	11.2 inches	455/65R22.5	17.9 inches
295/75R22.5	11.6 inches	465/65R22.5	18.3 inches

## Tire Size and Dimensional Definitions

<b>13/80R20</b>	<b>295/75R22.5</b>
13 = Tire width (inches)	295 = Tire width (millimeters)
80 = Ratio of tire width to tire height	75 = Ratio of tire width to tire height
R = Radial	R = Radial
20 = Rim diameter (inches)	22.5 = Rim diameter (inches)