

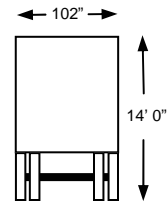
CHAPTER 4: SIZE & WEIGHT REGULATIONS

This handbook addresses requirements for commercial vehicles on South Dakota's state-maintained highway system. Municipal and county authorities may impose additional requirements for oversize or overweight vehicles on their roads. Local government phone numbers are found in the SD City and County Permit Contacts section on page 7 of this handbook.

Vehicle Size Regulations

Height Limitations

The maximum height for any vehicle, including load, is 14 feet.



Exceptions:

1. *A vehicle with a load of baled hay is permissible up to 14 feet 3 inches*
2. *Farm Machinery and Fire Equipment: No Height Limit*

Width Limitations

The maximum width of any vehicle is 102 inches (8 feet 6 inches).

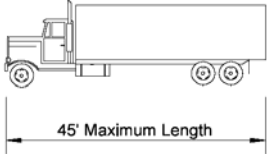
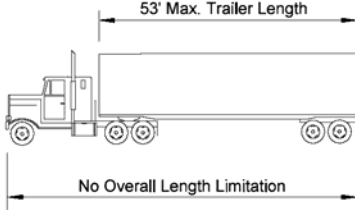
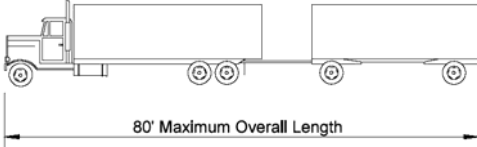
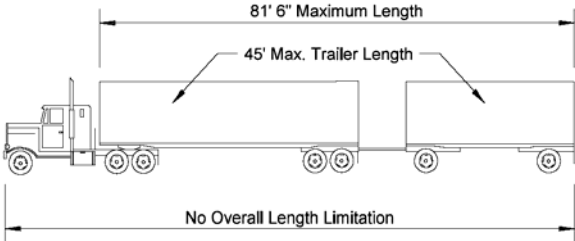
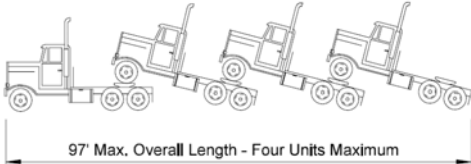
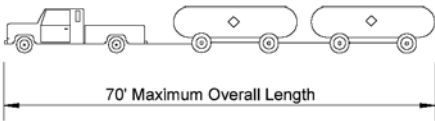
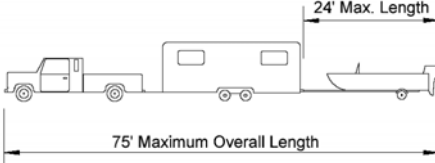
Exception:

Farm Machinery Operated by a Farmer: No Width Limitation (daylight hours only)

Length Limitations

Length limitations are illustrated in Table 5. Unless specifically addressed, the length limits shown only apply to the vehicle, and do not apply to the load carried on it. They are exclusive of the load overhang, retractable extensions used to support loads, and safety or energy conservation devices such as mirrors, turn signal lamps, hand holds, flexible fender extensions, and mud flaps. Retractable extensions must be retracted if not being used to support overhanging loads.

Table 5: Length Limitations

<p>Single Truck or Bus</p>	 <p>45' Maximum Length</p>
<p>Truck Tractor-Semitrailer</p>	 <p>53' Max. Trailer Length</p> <p>No Overall Length Limitation</p>
<p>Straight Truck-Trailer Combination</p>	 <p>80' Maximum Overall Length</p>
<p>Truck Tractor-Semitrailer-Semitrailer or Truck Tractor-Semitrailer-Trailer Combination</p>	 <p>81' 6" Maximum Length</p> <p>45' Max. Trailer Length</p> <p>No Overall Length Limitation</p>
<p>Saddlemount Combination</p>	 <p>97' Max. Overall Length - Four Units Maximum</p>
<p>Towing Vehicle & Two Anhydrous Ammonia Fertilizer Tank Trailers</p>	 <p>70' Maximum Overall Length</p>
<p>Towing Vehicle & Two-Trailer Combinations</p>	 <p>24' Max. Length</p> <p>75' Maximum Overall Length</p>

Overhang

Loads or retractable extensions on any vehicle may not extend more than four feet beyond the rear bumper, bed or body, or more than three feet beyond the front bumper, bed or body of the vehicle carrying the load.

Vehicle Weight Regulations

The maximum allowable weight of a vehicle depends upon the number and spacing of its axles and upon the size of its tires, as described below. An online legal weight calculator is available at <http://apps.sd.gov/applications/hy30commpermit/legalcal.asp> to help operators determine the maximum allowable weight for specific truck configurations.

Axle Group Limitations

The maximum allowable weight for all individual axles and axle groups is limited by statute (Table 6).

Table 6: Axle Group Weight Limits

Group Type	Maximum Allowable Weight
Single Axles	20,000 pounds
Tandem Axles	34,000 pounds
Other Axle Groups	based on the Bridge Weight Formula.

Tire Limitations

The weight supported on a tire may not exceed 600 pounds per inch width of tire, if that tire is on:

- A steering axle;
- An axle equipped with dual tires; or
- A trailer towed by a vehicle with a Gross Vehicle Weight Rating of 11,000 pounds or less.

The weight supported by tires mounted on other axles may not exceed 500 pounds per inch width of tire.

Table 7: Allowable Weight by Tire Size

Manufacturer's Tire Size	Inch Width	500 lb/inch	600 lb/inch
8.00 inches	8.00 inches	4000	4800
8.25 inches	8.25 inches	4125	4950
215 millimeters	8.47 inches	4235	5082
8.75 inches	8.75 inches	4375	5250
225 millimeters	8.86 inches	4430	5316
9.00 inches	9.00 inches	4500	5400
235 millimeters	9.25 inches	4625	5550
238 millimeters	9.37 inches	4685	5622
9.5 inches	9.50 inches	4750	5700
245 millimeters	9.64 inches	4820	5784
10.00 inches	10.00 inches	5000	6000
255 millimeters	10.04 inches	5020	6024
265 millimeters	10.43 inches	5215	6258
275 millimeters	10.83 inches	5415	6498
11.00 inches	11.00 inches	5500	6600
285 millimeters	11.22 inches	5610	6732
295 millimeters	11.62 inches	5810	6972
12.00 inches	12.00 inches	6000	7200
315 millimeters	12.40 inches	6200	7440
365 millimeters	14.37 inches	7185	8622
385 millimeters	15.16 inches	7580	9096
425 millimeters	16.73 inches	8365	10,038
18.00 inches	18.00 inches	9000	10,800

Bridge Weight Formula

The maximum weight on any group of consecutive axles is limited by the Bridge Weight Formula:

$$W = 500 \left[\frac{L \times N}{N - 1} + 12N + 36 \right]$$

where:

W = Maximum Weight, rounded to the nearest 500 pounds

L = Distance in feet between the extreme axles of a group

N = Number of axles in a group

Bridge Weight Table

The Bridge Weight Table (Table 8) shows the maximum allowable weight for various axle groupings and spacings. To use the Bridge Weight Table, round axle spacings to the nearest whole foot (for example, round 15'-5" to 15', 15'6" to 16').

Table 8: Bridge Weight Table

Axle Spacing	Number of Axles											
	2	3	4	5	6	7	8	9	10	11	12	
Feet	Maximum Gross Weight – Pounds											
96"	34 000											
>96"	38 000	42 000										
9	39 000	43 000										
10	40 000	43 500	48 500									
11	40 000	44 500	49 500									
12	40 000	45 000	50 000									
13	40 000	46 000	50 500									
14	40 000	46 500	51 500	57 000								
15	40 000	47 500	52 000	57 500								
16	40 000	48 000	52 500	58 000								
17	40 000	49 000	53 500	58 500	64 000							
18	40 000	49 500	54 000	59 500	65 000							
19	40 000	50 500	54 500	60 000	65 500							
20	40 000	51 000	55 500	60 500	66 000	71 500						
21	40 000	52 000	56 000	61 000	66 500	72 500						
22	40 000	52 500	56 500	62 000	67 000	73 000						
23	40 000	53 500	57 500	62 500	68 000	73 500						
24	40 000	54 000	58 000	63 000	68 500	74 000	79 500					
25	40 000	55 000	58 500	63 500	69 000	74 500	80 500					
26	40 000	55 500	59 500	64 500	69 500	75 000	81 000					
27	40 000	56 500	60 000	65 000	70 000	76 000	81 500	87 000				
28	40 000	57 000	60 500	65 500	71 000	76 500	82 000	88 000				
29	40 000	58 000	61 500	66 000	71 500	77 000	82 500	88 500				
30	40 000	58 500	62 000	67 000	72 000	77 500	83 000	89 000	94 500			
31	40 000	59 500	62 500	67 500	72 500	78 000	83 500	89 500	95 000			
32	40 000	60 000	63 500	68 000	73 000	78 500	84 500	90 000	96 000			
33	40 000	60 000	64 000	68 500	74 000	79 500	85 000	90 500	96 500			
34	40 000	60 000	64 500	69 500	74 500	80 000	85 500	91 000	97 000	102 500		
35	40 000	60 000	65 500	70 000	75 000	80 500	86 000	91 500	97 500	103 500		
36 *	40 000	60 000	66 000 *	70 500	75 500	81 000	86 500	92 500	98 000	104 000		
37 *	40 000	60 000	66 500 *	71 000	76 000	81 500	87 000	93 000	98 500	104 500	110 000	
38 *	40 000	60 000	67 500 *	72 000	77 000	82 000	87 500	93 500	99 000	105 000	110 500	

*Two consecutive sets of tandems may carry a load of 34,000 pounds each if the overall distance between the first and last axles is 36 feet or more.

Table 8: Bridge Weight Table (continued)

Axle Spacing Feet	Number of Axles										
	3	4	5	6	7	8	9	10	11	12	13
	Maximum Gross Weight – Pounds										
39	60 000	68 000	72 500	77 500	83 000	88 500	94 000	99 500	105 500	111 500	117 000
40	60 000	68 500	73 000	78 000	83 500	89 000	94 500	100 000	106 000	112 000	117 500
41	60 000	69 500	73 500	78 500	84 000	89 500	95 000	101 000	106 500	112 500	118 000
42	60 000	70 000	74 500	79 000	84 500	90 000	95 500	101 500	107 000	113 000	119 000
43	60 000	70 500	75 000	80 000	85 000	90 500	96 000	102 000	107 500	113 500	119 500
44	60 000	71 500	75 500	80 500	85 500	91 000	97 000	102 500	108 000	114 000	120 000
45	60 000	72 000	76 000	81 000	86 500	91 500	97 500	103 000	109 000	114 500	120 500
46	60 000	72 500	77 000	81 500	87 000	92 500	98 000	103 500	109 500	115 000	121 000
47	60 000	73 500	77 500	82 000	87 500	93 000	98 500	104 000	110 000	115 500	121 500
48	60 000	74 000	78 000	83 000	88 000	93 500	99 000	104 500	110 500	116 000	122 000
49	60 000	74 500	78 500	83 500	88 500	94 000	99 500	105 000	111 000	116 500	122 500
50	60 000	75 500	79 500	84 000	89 000	94 500	100 000	106 000	111 500	117 500	123 000
51	60 000	76 000	80 000	84 500	90 000	95 000	100 500	106 500	112 000	118 000	123 500
52	60 000	76 500	80 500	85 000	90 500	95 500	101 500	107 000	112 500	118 500	124 000
53	60 000	77 500	81 000	86 000	91 000	96 500	102 000	107 500	113 000	119 000	124 500
54	60 000	78 000	82 000	86 500	91 500	97 000	102 500	108 000	113 500	119 500	125 500
55	60 000	78 500	82 500	87 000	92 000	97 500	103 000	108 500	114 500	120 000	126 000
56	60 000	79 500	83 000	87 500	92 500	98 000	103 500	109 000	115 000	120 500	126 500
57	60 000	80 000	83 500	88 000	93 500	98 500	104 000	109 500	115 500	121 000	127 000
58	60 000	80 000	84 500	89 000	94 000	99 000	104 500	110 000	116 000	121 500	127 500
59	60 000	80 000	85 000	89 500	94 500	99 500	105 000	111 000	116 500	122 000	128 000
60	60 000	80 000	85 500	90 000	95 000	100 500	106 000	111 500	117 000	122 500	128 500
61	60 000	80 000	86 000	90 500	95 500	101 000	106 500	112 000	117 500	123 500	129 000
62	60 000	80 000	87 000	91 000	96 000	101 500	107 000	112 500	118 000	124 000	129 500
63	60 000	80 000	87 500	92 000	97 000	102 000	107 500	113 000	118 500	124 500	130 000
64	60 000	80 000	88 000	92 500	97 500	102 500	108 000	113 500	119 000	125 000	130 500
65	60 000	80 000	88 500	93 000	98 000	103 000	108 500	114 000	120 000	125 500	131 000
66	60 000	80 000	89 500	93 500	98 500	103 500	109 000	114 500	120 500	126 000	132 000
67	60 000	80 000	90 000	94 000	99 000	104 500	109 500	115 000	121 000	126 500	132 500
68	60 000	80 000	90 500	95 000	99 500	105 000	110 500	116 000	121 500	127 000	133 000
69	60 000	80 000	91 000	95 500	100 500	105 500	111 000	116 500	122 000	127 500	133 500
70	60 000	80 000	92 000	96 000	101 000	106 000	111 500	117 000	122 500	128 000	134 000
71	60 000	80 000	92 500	96 500	101 500	106 500	112 000	117 500	123 000	128 500	134 500
72	60 000	80 000	93 000	97 000	102 000	107 000	112 500	118 000	123 500	129 500	135 000
73	60 000	80 000	93 500	98 000	102 500	107 500	113 000	118 500	124 000	130 000	135 500
74	60 000	80 000	94 500	98 500	103 000	108 500	113 500	119 000	124 500	130 500	136 000
75	60 000	80 000	95 000	99 000	104 000	109 000	114 000	119 500	125 500	131 000	136 500
76	60 000	80 000	95 500	99 500	104 500	109 500	115 000	120 000	126 000	131 500	137 000
77	60 000	80 000	96 000	100 000	105 000	110 000	115 500	121 000	126 500	132 000	137 500
78	60 000	80 000	97 000	101 000	105 500	110 500	116 000	121 500	127 000	132 500	138 500

Table 8: Bridge Weight Table (continued)

Axle Spacing Feet	Number of Axles										
	3	4	5	6	7	8	9	10	11	12	13
	Maximum Gross Weight – Pounds										
79	60 000	80 000	97 500	101 500	106 000	111 000	116 500	122 000	127 500	133 000	139 000
80	60 000	80 000	98 000	102 000	106 500	111 500	117 000	122 500	128 000	133 500	139 500
81	60 000	80 000	98 500	102 500	107 500	112 500	117 500	123 000	128 500	134 000	140 000
82	60 000	80 000	99 500	103 000	108 000	113 000	118 000	123 500	129 000	134 500	140 500
83	60 000	80 000	100 000	104 000	108 500	113 500	118 500	124 000	129 500	135 500	141 000
84	60 000	80 000	100 000	104 500	109 000	114 000	119 500	124 500	130 000	136 000	141 500
85	60 000	80 000	100 000	105 000	109 500	114 500	120 000	125 000	131 000	136 500	142 000
86	60 000	80 000	100 000	105 500	110 000	115 000	120 500	126 000	131 500	137 000	142 500
87	60 000	80 000	100 000	106 000	111 000	115 500	121 000	126 500	132 000	137 500	143 000
88	60 000	80 000	100 000	107 000	111 500	116 500	121 500	127 000	132 500	138 000	143 500
89	60 000	80 000	100 000	107 500	112 000	117 000	122 000	127 500	133 000	138 500	144 000
90	60 000	80 000	100 000	108 000	112 500	117 500	122 500	128 000	133 500	139 000	145 000
91	60 000	80 000	100 000	108 500	113 000	118 000	123 000	128 500	134 000	139 500	145 500
92	60 000	80 000	100 000	109 000	113 500	118 500	124 000	129 000	134 500	140 000	146 000
93	60 000	80 000	100 000	110 000	114 500	119 000	124 500	129 500	135 000	140 500	146 500
94	60 000	80 000	100 000	110 500	115 000	119 500	125 000	130 000	135 500	141 500	147 000
95	60 000	80 000	100 000	111 000	115 500	120 500	125 500	131 000	136 500	142 000	147 500
96	60 000	80 000	100 000	111 500	116 000	121 000	126 000	131 500	137 000	142 500	148 000
97	60 000	80 000	100 000	112 000	116 500	121 500	126 500	132 000	137 500	143 000	148 500
98	60 000	80 000	100 000	113 000	117 000	122 000	127 000	132 500	138 000	143 500	149 000
99	60 000	80 000	100 000	113 500	118 000	122 500	127 500	133 000	138 500	144 000	149 500
100	60 000	80 000	100 000	114 000	118 500	123 000	128 500	133 500	139 000	144 500	150 000
101	60 000	80 000	100 000	114 500	119 000	123 500	129 000	134 000	139 500	145 000	150 500
102	60 000	80 000	100 000	115 000	119 500	124 500	129 500	134 500	140 000	145 500	151 000
103	60 000	80 000	100 000	116 000	120 000	125 000	130 000	135 000	140 500	146 000	152 000
104	60 000	80 000	100 000	116 500	120 500	125 500	130 500	136 000	141 000	146 500	152 500
105	60 000	80 000	100 000	117 000	121 500	126 000	131 000	136 500	142 000	147 500	153 000
106	60 000	80 000	100 000	117 500	122 000	126 500	131 500	137 000	142 500	148 000	153 500
107	60 000	80 000	100 000	118 000	122 500	127 000	132 000	137 500	143 000	148 500	154 000
108	60 000	80 000	100 000	119 000	123 000	127 500	133 000	138 000	143 500	149 000	154 500
109	60 000	80 000	100 000	119 500	123 500	128 500	133 500	138 500	144 000	149 500	155 000
110	60 000	80 000	100 000	120 000	124 000	129 000	134 000	139 000	144 500	150 000	155 500

Legal Weight Calculation Examples

Table 9 shows the allowable legal weight for several common truck configurations. Note that the tire size, number of axles, and axle spacing all affect the allowable legal weight. Smaller tire sizes, fewer axles, and closer axle spacing will reduce the legal weight for these truck configurations.

Table 10 and Table 11 illustrate how to calculate legal weights for any truck configuration. Table 12 is a worksheet that you can use to calculate the legal load of your own truck. An online, interactive legal weight calculator is also available at <http://apps.sd.gov/applications/hy30commpermit/legalcal.asp> to help operators determine the maximum allowable weight for specific truck configurations.

Tolerance for Hauling from Point of Harvest

Vehicles hauling agricultural products from a harvesting combine to the point of first unloading are given a tolerance of 10 percent in excess of the legal limits. These vehicles may not exceed a speed of 50 miles per hour, and are only granted this tolerance within a range of 50 miles from the harvested field. If enforcement action is taken, the fine or penalty will only apply to that portion of the load in excess of ten percent above the legal limit. This tolerance is not permitted on the Interstate Highway System.

Tolerance for Hauling from a Farm

Vehicles hauling agricultural products from farm storage or livestock from a farm are given a tolerance of five percent in excess of the legal limits. These vehicles may not exceed a speed of 50 miles per hour, and are only granted this tolerance within a range of 50 miles of the loading site. Such vehicles may not exceed any posted weight of any bridge or road. This tolerance does not apply during spring load restrictions and is not permitted on the Interstate Highway System. If enforcement action is taken, the fine or penalty will apply to the portion of the load in excess of five percent above the legal limit.

Table 9: Legal Weight Examples

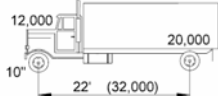
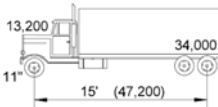
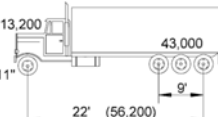
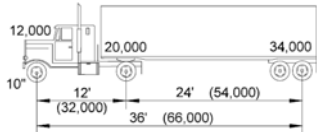
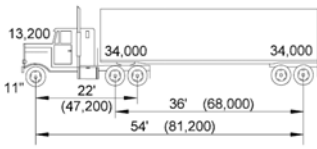
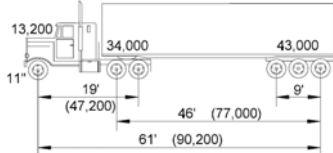
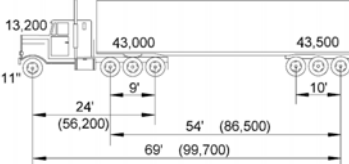
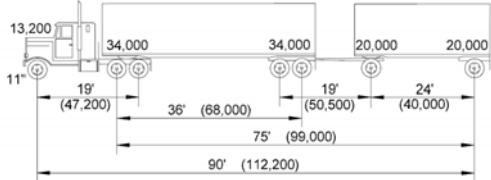
Vehicle Description	Allowable Weights
Single Unit, 2-axle Truck	
Single Unit, Tandem Axle Truck	
Single Unit, Tridem Axle Truck	
4-axle Tractor-Semitrailer	
5-axle Tractor-Semitrailer	
6-axle Tractor-Semitrailer	
7-axle Tractor-Semitrailer	
Tractor-Semitrailer-Trailer Combination	

Table 10: Legal Weight Calculation Example 1

Axle No:	1	2	3	4	5	6	7
Axle Spacing:	16' 0"	4' 6"	4' 6"	32' 0"	4' 6"	4' 6"	
Tires:	2@11:00	2@11:00	4@11:00	4@11:00	2@12:00	2@12:00	2@12:00
Maximum Axle Wt: ¹	13,200	11,000	20,000	20,000	12,000	12,000	12,000
Group Description:							
4 axles in 25'	56,200	-----					
7 axles in 96'	92,200 ³	-----					
2 axles in 5'		31,000 ²	-----				
3 axles in 9'		43,000	-----				
6 axles in 50'		79,900	-----				
2 axles in 5'			34,000 ²	-----			
2 axles in 5'					24,000 ²	-----	
3 axles in 9'					36,000	-----	
2 axles in 5'						24,000 ²	-----
¹ Maximum weight on a single axle is limited to 20,000 pounds or the allowed weight per inch width per tire as defined in statute. In this configuration, the steering axle and axles equipped with dual tires are limited to 600 pounds per inch width of tire, while the remaining tires on axles 2, 5, 6, and 7 are limited to 500 pounds per inch width of tire.							
² Maximum weight on a two-axle group with axles spaced 96 inches or less apart is 34,000 pounds. Axles spaced 40 inches or less apart are considered a single axle.							
³ The maximum gross vehicle weight on Interstate Highways is limited to 80,000 pounds unless an annual Over 80,000 Pounds on Interstate Permit (page 45) has been issued to the vehicle. The Gross Vehicle Weight of this configuration is limited to 92,200 pounds.							

Table 11: Legal Weight Calculation Example 2

Axle No:	1	2	3	4	5	6	7
Axle Spacing:	15' 0"	4' 6"	27' 0"	4' 2"	16' 0"	24' 0"	
Tires:	2@12:00	4@11:00	4@11:00	4@11:00	4@11:00	4@11:00	4@11:00
Maximum Axle Wt: ¹	14,400	20,000	20,000	20,000	20,000	20,000	20,000
Group Description:							
3 axles in 20'	48,400	-----					
5 axles in 51'	80,000	-----					
6 axles in 67'	94,000	-----					
7 axles in 91'	113,000 ⁴	-----					
2 axles in 5'		34,000 ²	-----				
4 axles in 36'		68,000 ³	-----				
5 axles in 52'		80,500	-----				
6 axles in 76'		99,500	-----				
2 axles in 4'				34,000 ²	-----		
3 axles in 20'				51,000	-----		
4 axles in 44'				71,500	-----		
2 axles in 24'						40,000	-----
¹ Maximum weight on a single axle is limited to 20,000 pounds or the allowed weight per inch width per tire as defined in statute. ² Maximum weight on a two-axle group with axles spaced 96 inches or less apart is 34,000 pounds. Axles spaced 40 inches or less apart are considered a single axle. ³ Two consecutive sets of tandems may carry a gross load of 68,000 pounds (34,000 per tandem) provided the overall distance between the first and last axles of such consecutive sets of tandems is 36 feet or more. ⁴ The maximum gross vehicle weight on Interstate Highways is limited to 80,000 pounds unless an annual Over 80,000 Pounds on Interstate Permit (page 45) has been issued to the vehicle. The Gross Vehicle Weight of this configuration is limited to 113,000 pounds.							

Table 12: Legal Weight Calculation Worksheet

Sketch your own vehicle here

Axle No:	1	2	3	4	5	6	7
Axle Spacing:							
Tires:	@	@	@	@	@	@	@
Maximum Axle Wt.:							
Group Description:							
_ axles in __'							
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Notes:

Overweight Penalties

A vehicle that is overweight on a tire, wheel, axle, or axle group is not allowed to proceed until it is made legal by either shifting the load or unloading part of the load. An overweight violation is a Class 2 misdemeanor, and is punishable by a \$200 fine or 30 days in jail, or both. In addition, a civil penalty in the following amount is charged:

Table 13: Overweight Penalty Schedule

Pounds Overweight	Civil Penalty
1,001 pounds to 3,000 pounds	5 cents/pound
3,001 pounds to 4,000 pounds	15 cents/pound
4,001 pounds to 5,000 pounds	22.5 cents/pound
5,001 pounds to 10,000 pounds	37.5 cents/pound
Over 10,000 pounds	75 cents/pound

The penalty is assessed at a single rate according to the cents per pound penalty for the highest weight violation.