

Comprehensive Truck Size and Weight (TS&W) Study

Phase 1-Synthesis

Documentation of

Truck Size and Weight Regulations

Working Paper 14

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Prepared by

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DOCUMENTATION OF EXISTING TRUCK SIZE & WEIGHT REGULATIONS

The attached tables summarize the basic and most important size and weight limits which generally apply in each State, on the Interstate System and on other non-Interstate State highways. The four tables include 1) Vehicle Weight Limits in normal operation, including "routine" permit limits, 2) Maximum Semitrailer Lengths, 3) Cargo Carrying Length Limits for longer combination vehicles (LCVs) and other commercial vehicles with two or more cargo carrying units, and 4) LCV Weight Limits.

The definition of "LCV" used in tables 3 and 4 is that provided by Congress in the ISTEA of 1991, that is, any combination of a truck tractor and 2 or more trailers or semitrailers which operates on the Interstate System at a gross vehicle weight greater than 80,000 pounds.

In each case, the value listed in all four tables are an attempt to represent in summary form statutes and regulations which, in almost every State, are lengthy, detailed and often extremely complicated. Table 1 (Vehicle Weight Limits), for example, is perhaps best described as a "table of contents" to State weight laws. While it contains a listing of the basic weight limits for each State, it does not include information on the wide range of exceptions, variances and other privileges accorded important local industries in nearly every State. That information is available in each state's statutes and regulations, as well as from several commercial sources that constantly track these regulatory actions. The information is quite voluminous and subject to regular amendment as conditions in a particular state change. Accordingly, it is not included with this summary.

The data contained in Tables 3 and 4 involving LCVs and other multi-unit vehicles, are the result of a rulemaking process to implement the LCV "freeze" mandated by the ISTEA of 1991. That process, which ultimately had direct effect on only 24 States, required two and one-half years to complete. A similar freeze of all State size and weight limits on non-Interstate NHS highways that captured all of the special interest provisions of existing law would require a vastly more involved rulemaking procedure.

Vehicle size and weight laws in each State are continually evolving due to several factors including, but not limited to, the nature and extent of natural resources, local industrial development, climate, the relative strength of special interest groups, and the national economic condition. The tables represent a summary "snap-shot" of existing conditions. Several points highlighted from each table as follows, serve to emphasize the diverse nature of truck size and weight control.

TABLE 1 VEHICLE WEIGHT LIMITS

General comments

When considering the four basic weight limits that apply in a State (single axle, tandem axle, bridge formula and gross vehicle) both on and off the Interstate:

- The 50 States and the District of Columbia represent 40 different combinations of these eight limits.

- If the basic limits are considered to be single axle 20,000 pounds, tandem axle 34,000 pounds, gross vehicle 80,000 pounds and Federal Bridge Formula "B", these limits apply statewide without modification or "grandfather right" adjustment in only seven States.

- Even in these seven States, however, the upper limits for routine permits are all different. In a sense each State has a different weight limit "package".

Gross Weight Limits

- Four States have a grandfather right to exceed 80,000 pounds on the Interstate.

- 18 States have a gross vehicle weight limit higher than 80,000 for at least some non-Interstate State highways.

- Five States have gross vehicle weight limits less than 80,000 pounds on some non-Interstate highways in the State.

Single Axle (SA) Limits

- 14 States have a limit greater than 20,000 pounds on the Interstate under at least some conditions.

- 17 States have a SA limit greater than 20,000 pounds on the non-Interstate State system.

- Three States have non-Interstate mileage subject to a SA limit below 20,000 pounds.

Tandem Axle (TA) Limits

- 15 States have a limit greater than 34,000 pounds on the Interstate under at least some conditions.

- 21 States have a TA limit greater than 34,000 pounds on the non-Interstate State system.

- Two States have non-Interstate mileage subject to a TA limit below 34,000 pounds.

"Routine" Permit Limits

- For a 5-axle unit there are 28 different permitted maximum gross weight limits ranging from 80,000 to 155,000. The mode value (the value of a variable that occurs most frequently) is 100,000 pounds (seven States) and the median value is 104,000 pounds.

- For any number of axles there are 25 different maximum permitted gross weight limits ranging from 105,500 to 250,000 pounds. The mode value is 120,000 pounds (10 States) and the median value is 140,000 pounds.

- For single axles there are 16 different limits ranging from 13,000 to 32,000 pounds. The mode value is 20,000 (15 States) and the median value is 24,000 pounds.

- For tandem axles there are 17 different limits ranging from 26,000 to 64,000 pounds. The mode value is 40,000 pounds (10 States) and the median value is 48,000 pounds.

TABLE 2 MAXIMUM SEMITRAILER LENGTHS

- Only two States (AK and RI) and DC do not already allow 53 foot semitrailers.
- 10 States allow semitrailers over 53 feet long.
- 21 States apply kingpin distance controls to semitrailers.
- Nationwide, 10 different semitrailer length limits apply under some conditions on at least some highways.

TABLE 3 LCV CARGO CARRYING LENGTH LIMITS

- 25 different cargo carrying length limits have been frozen by the ISTEA.

TABLE 4 LCV WEIGHT LIMITS

- 16 different maximum gross vehicle weight limits have frozen by the ISTEA.

TABLE 1

VEHICLE WEIGHT LIMITS
(in 1,000 pounds)

STATE	GROSS VEHICLE		SINGLE AXLE		TANDEM AXLE		FEDERAL BRIDGE FORMULA "B"		GROSS VEHICLE WEIGHT (1)	"ROUTINE" PERMIT	
	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	No-WT	Other Hwys.		SINGLE AXLE	TANDEM AXLE
ALABAMA	80	84	20	20	34	40	Yes	No-WT	110/150	22	44
ALASKA	--	90(2)	--	20	--	38	---	Yes	88.6(2)/150	30	50
ARIZONA	80	80	20	20	34	34	Yes	No-WT	106.5(3)/250	28	46
ARKANSAS	80	80	20	20	34	34	Yes	Yes	102/134	20	40
CALIFORNIA	80	80	20	20	34	34	Yes-mod	Yes-mod	119.8(4)/(5) 30	30	60
COLORADO	80	85	20	20	36	40	Yes	No	127/164	27	50
CONNECTICUT	80	80	22.4	22.4	36	36	Yes	Yes	120/160	22.4	NS
DELAWARE	80	80	20	20	34	40	Yes	No-WT	120/120	20	40
D.C.	80	80	22	22	38	38	Yes-mod	Yes-mod	155/248	31	62
FLORIDA	80	80	22	22	44	44	Yes(6)	No-WT	112/172	27.5	55
GEORGIA	80	80	20.34	20.34	34(7)	37.34	Yes	Yes(6)	100/175	23	46
HAWAII	80.8	88	22.5	22.5	34	34	Yes	No	Case-by-case above normal limits		
IDAHO	80	105.5	20	20	34	34	Yes	Yes	Case-by-case above normal limits		
ILLINOIS	80	80(8)	20	20(9)	34	34(9)	Yes	Yes(9)	100/120	20	48
INDIANA (10)	80	80	20	20	34	34	Yes	Yes	108/120	28	48

TABLE 1

VEHICLE WEIGHT LIMITS
(in 1,000 pounds)

STATE	GROSS VEHICLE		SINGLE AXLE		TANDEM AXLE		FEDERAL BRIDGE "ROUTINE" PERMIT		TANDEM AXLE		
	"I" Hwys.	Other Hwys.	"I" Hwys.	Other Hwys.	"I" Hwys.	Other Hwys.	FORMULA "B" Other Hwys.	GROSS VEHICLE WEIGHT (1)			
IOWA	80	80	20	20	34	34	Yes	Yes	100/160	20	40
KANSAS	80	85.5	20	20	34	34	Yes	Yes	95/120	22	45
KENTUCKY	80	80(11)	20	20	34	34	Yes	Yes	96/140	24	48
LOUISIANA	80(12)	80(12)	20	22	34	37	Yes	No	108/120	24	48
MAINE	80	80(13)	20(14)	22.4	34	38	Yes-mod	No	130/167	25	50
MARYLAND	80	80	20(15)	20(15)	34(15)	34(15)	Yes	Yes	110/110	30	60
MASSACHUSETTS	80	80	22.4	22.4	36	36	Yes	Yes	99/130	NS	NS
MICHIGAN (16)	80	80	20	20	34	34	Yes	Yes	80/164	13	26
MINNESOTA	80	80(17)	20	18	34	34	Yes	Yes-mod	92/144	20	40
MISSISSIPPI	80	80	20	20	34	34	Yes	Yes	113/190	24	48
MISSOURI	80	80(18)	20	20(18)	34	34(18)	Yes	Yes(18)	92/120	20	40
MONTANA	80	80	20	20	34	34	Yes	Yes	105.5/126	20	48
NEBRASKA	80	95	20	20	34	34	Yes	Yes	99/110	20	40
NEVADA	80	129(19)	20	20	34	34	Yes	Yes	110(20)/(21)	28	50.4
NEW HAMPSHIRE	80	80	20(15)	22.4	34(15)	36	Yes	No	130/150	25	50

TABLE 1

VEHICLE WEIGHT LIMITS
(in 1,000 pounds)

STATE	GROSS VEHICLE		SINGLE AXLE		TANDEM AXLE		FEDERAL BRIDGE "ROUTINE" PERMIT			
	"I" Other Hwys.	80	"I" Other Hwys.	22.4	"I" Other Hwys.	34	FORMULA "B" Other Hwys.	GROSS VEHICLE WEIGHT (1)	SINGLE AXLE	TANDEM AXLE
NEW JERSEY	80	80	22.4	22.4	34	34	Yes	No 144(22)/240(22)	32(22)	64(22)
NEW MEXICO	86.4	86.4	21.6	21.6	34.32	34.32	Yes-mod	Yes-mod 104(23)/120	26	46
NEW YORK	80	80	20(24)	22.4	34(24)	36	Yes(24)	Yes(24) 100/150	25	42.5
NORTH CAROLINA	80	80	20	20	38	38	Yes-mod	Yes-mod 94.5/122	25	50
NORTH DAKOTA	80	105.5	20	20	34	34	Yes	Yes 103/136	20	45
OHIO	80	80	20	20	34	34	Yes	No 120/120	29	46
OKLAHOMA	80	90	20	20	34	34	Yes	Yes 95/140	20	40
OREGON	80	80	20	20	34	34	Yes-mod	Yes-mod 90/105.5	21.5	43
PENNSYLVANIA	80	80	20(25)	20(25)	34(25)	34(25)	Yes(25)	Yes(25) 116/136	27	52
RHODE ISLAND	80	80	22.4	22.4	36	36	Yes-mod	Yes-mod 104.8/(21)	22.4	44.8
SOUTH CAROLINA	80	80.6	20	22	34(26)	39.6	Yes(26)	No 90/120	20	40
SOUTH DAKOTA	80	129(19)	20	20	34	34	Yes	Yes 116(27)/(21)	31	52
TENNESSEE	80	80	20	20	34	34	Yes	Yes 100/160	20	40
TEXAS	80	80	20	20	34	34	Yes-mod	Yes-mod 106.1(28)/200	25	48.125
UTAH	80	80	20	20	34	34	Yes	Yes 100/123.5	20	40

TABLE 1

VEHICLE WEIGHT LIMITS
(in 1,000 pounds)

STATE	GROSS VEHICLE		SINGLE AXLE		TANDEM AXLE		FEDERAL BRIDGE "ROUTINE" PERMIT		GROSS VEHICLE WEIGHT (1)	SINGLE AXLE	TANDEM AXLE
	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	"I" Other Hwys.	Formula "B" "I" Other Hwys.	Formula "B" "I" Other Hwys.	Formula "B" "I" Other Hwys.	Formula "B" "I" Other Hwys.			
VERMONT	80	84	20	22.4	34	36	Yes	Yes	108(29)/120	24	48
VIRGINIA	80	80	20	20	34	34	Yes	Yes	110/150	25	50
WASHINGTON	80	105.5	20	20	34	34	Yes	Yes	103/156	22	43
WEST VIRGINIA	80	80(30)	20	20	34	34	Yes	Yes	104/110	20	45
WISCONSIN	80	80	20	20	34	34	Yes-mod	Yes-mod	100/191	20	60
WYOMING	117	117	20	20	36	36	Yes	No	85/135	25	55

VEHICLE WEIGHT LIMITS table footnotes

NS...Not specified

WT...Weight table

(1) "Routine" Permit Gross Vehicle Weight: the first number (left) is the highest weight a 5-axle unit can gross before special (other than routine) review and analysis of an individual movement is required. The second number (right) is the highest gross weight any unit with sufficient axles can gross before special review is required.

(2) State rules allow the more restrictive of the Federal Bridge Formula B or axle summation. The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with a 65' outer bridge (based on a 48' semitrailer).

(3) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with two 5' tandems @ 47.25K each + a 12K steering axle.

(4) Estimate based on State weight table values for a 4' tandem (drive) @ 46.2K, a rear tandem at the 60K maximum, and a 12.5K steering axle.

(5) Maximum based on the number of axles in the combination.

(6) Federal Bridge Formula applies if gross vehicle weight exceeds 73.28K.

(7) If gross vehicle weight is less than 73.28K, the tandem axle maximum is 40.68K.

(8) On class III and non-designated highways the maximum is 73.28K.

(9) On non-designated highways the single axle maximum is 18K, the tandem axle maximum is 32K, and the Bridge formula does not apply.

(10) On the Indiana Toll Road the single axle maximum is 22.4K, the tandem axle maximum is 36K, and the maximum practical gross is 90K.

(11) The maximum gross weight on class AA highways is 62K, on class A highways 44K.

(12) Six or seven axle combinations are allowed 83.4K on the Interstate System, and 88K on other State highways.

(13) A three axle tractor hauling a tri-axle semitrailer has a maximum gross vehicle weight of 90K.

- (14) If the gross vehicle weight is less than 73.28K, the single axle maximum is 22K.
- (15) If the gross vehicle weight is 73K or less, the single axle maximum is 22.4K, and the tandem axle maximum 36K.
- (16) Federal axle, gross and Bridge formula limits apply to 5-axle combinations if the gross vehicle weight is 80K or less. For other vehicles and gross vehicle weights over 80K other limits apply. State law sets axle weight controls which allow vehicles of legal overall length to gross a maximum of 164K.
- (17) Most city, county and township roads are considered "9-Ton Routes" with a maximum gross vehicle of 73.28K.
- (18) On highways other than Interstate, Primary, or other designated, the single axle maximum is 18K, the tandem axle maximum 32K, the Bridge formula is modified, and the gross vehicle weight maximum is 73.28K.
- (19) The maximum is directly controlled by the Federal Bridge Formula. Given the State's length laws, the maximum practical gross is 129K.
- (20) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with a 12.5K steering axle, a 47.25K drive tandem (5' spacing from State weight table), and a 50.4K spread tandem (8' spacing from the State weight table).
- (21) A determination is made on a case-by-case basis.
- (22) All "routine" permit value are calculated using 10" wide tires and a maximum 800 pounds/inch of tire width loading value.
- (23) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with two 46K tandems + a 12K steering axle.
- (24) If the gross vehicle weight is less than 71K, the single axle maximum is 22.4K, the tandem axle maximum 36K, and a modified Bridge formula applies.
- (25) If the gross vehicle weight is 73.28K or less, the single axle maximum is 22.4K, the tandem axle maximum 36K, and the Bridge formula does not apply.
- (26) If the gross vehicle weight is 75.185K or less, the tandem axle maximum is 35.2K, and the Bridge formula does not apply.
- (27) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with two 52K tandems + a 12K steering axle.

(28) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with a 13K steering axle, a 45K drive tandem, and a 48.125K spread tandem. Both tandem weight values are from the State weight chart.

(29) The 5-axle "routine" permit value is estimated using a truck tractor-semitrailer with two 48K tandems + a 12K steering axle.

(30) The maximum gross vehicle weight on non-designated State highways is 73.5K, and on county roads 65K.

Information sources:

J. J. Keller & Associates, Vehicle Sizes and Weights Manual. July 1, 1994.

Specialized Carriers & Rigging Association (SC&RA), Permit Manual. July 19, 1994.

Western Association of State Highway and Transportation Officials (WASHTO), Guide for Uniform Laws and Regulations Governing Truck Size and Weight. June 26, 1993.

TABLE 2

Maximum Semitrailer Lengths
(Length in feet and inches)

NATIONAL NETWORK (NN)			OTHER STATE HIGHWAYS		
<u>State</u>	<u>Length</u>	<u>Kingpin Setting</u>	<u>Length</u>	<u>Kingpin Setting</u>	<u>Overall Length</u>
Alabama	57-0	41-0 KCRA ₁ /	53-0		
Alaska	48-0		45-0		70-0
Arizona	57-6 ₇ /		53-0		65-0
Arkansas	53-6		53-6		
California	53-0	40-0 KCRTA ₈ / 38-0 KCSRA ₉ /	53-0	SAME AS NN	
Colorado	57-4		57-4		
Connecticut	53-0		48-0		
Delaware	53-0		53-0		60-0
Dist. of Col.	48-0		48-0		55-0
Florida	53-0	41-0 KCRT ₂ /	53-0	41-0 KCRT	
Georgia	53-0	41-0 KCRT	53-0	41-0 KCRT	67-6
Hawaii	No Limit		45-0		60-0
Idaho	53-0		48-0	39-0 KCRA	
Illinois	53-0	42-6 KCRA	53-0	42-6 KCRA	
Indiana	53-0	40-6 KCRA	53-0	40-6 KCRA	
Iowa	53-0		53-0	40-0 KCRA	60-0
Kansas	59-6		59-6		
Kentucky	53-0		No Limit		57-9
Louisiana	59-6		No Limit		65-0
Maine	53-0 ₃ /	43-0	53-0		65-0
Maryland	53-0 ₄ /	41-0 KCRT	53-0	41-0 KCRT	
Massachusetts	53-0 ₅ /		53-0		
Michigan	53-0	41-0 KCRT	50-0		
Minnesota	53-0	41-0 KCRT	53-0	41-0 KCRT	
Mississippi	53-0		53-0		
Missouri	53-0		No Limit		60-0
Montana	53-0		53-0		
Nebraska	53-0		53-0		
Nevada	53-0		53-0		70-0
New Hampshire	53-0 ₆ /	41-0 KCRT	53-0	41-0 KCRT	
New Jersey	53-0	41-0 KCRT	53-0	41-0 KCRT	
New Mexico	57-6		No Limit		65-0
New York	53-0 ₄ /	41-0 KCRT	48-0		65-0
North Carolina	53-0	41-0 KCRT	No Limit		60-0
North Dakota	53-0		53-0		

NATIONAL NETWORK

OTHER STATE HIGHWAYS

<u>State</u>	<u>Length</u>	<u>Kingpin Setting</u>	<u>Length</u>	<u>Kingpin Setting</u>	<u>Overall Length</u>
Ohio	53-0		53-0		
Oklahoma	59-6		59-6		
Oregon	53-0		Varies		
Pennsylvania	53-0		No Limit		60-0
Puerto Rico	48-0				
Rhode Island	48-6		48-6		
South Carolina	53-0	41-0 KCRT	48-0		
South Dakota	53-0		53-0		
Tennessee	53-0	41-0 KCRT	53-0	41-0 KCRT	
Texas	59-0		59-0		
Utah	53-0	40-6 KCRT	53-0	40-6 KCRT	
Vermont	53-04/	41-0 KCRT	48-0		60-0
Virginia	53-0	37-0 Last tractor axle to first trailer axle.	No Limit		60-0
Washington	53-0		53-0		
West Virginia	53-0	Same as VA	No Limit		60-0
Wisconsin	53-0	41-0 KCRT	No Limit		60-0
Wyoming	60-0		60-0		

- 1/ KCRA = Kingpin to center of rear axle
- 2/ KCRT = Kingpin to center of rear tandem
- 3/ Permit may be required
- 4/ Interstate and designated State routes.
- 5/ Requires annual letter of authorization. Does not apply on the Massachusetts Turnpike.
- 6/ Designated routes
- 7/ Only on Interstate System
- 8/ KCRTA = Kingpin to center of rearmost tandem axle.
- 9/ KCSRA = Kingpin to center of single rear axle.

TABLE 3

Cargo Carrying Length Limits for LCV's and Commercial Motor Vehicles with 2 or more cargo carrying units(1)

Feet	Truck Tractor and 2 trailing units	Truck Tractor and 3 trailing units	Other(2)
58	MI		IN
65	HI, MS		
68	OR, WA		NE, WA
69			AZ
73			SD
78			CO, ID, SD, WY
81	WY		
83			AK
85			WY
88			MT, UT
93	MT		
95	AK, AZ, ID, NE, NV, UT	AZ, ID, NE, NV, OH, OK, UT	
96		OR	
98			AZ, ID, NV
100	SD	MT, ND, SD	
102	NY, OH		
103	ND		MT, ND
104	MA		
104.5		IN	
105			UT
106	FL, IN		
109	KS, MO	KS, MO	
110	OK	AK	
111	CO		
115.5		CO	

- 1 Source of data is the Final rule on LCV's published in the Federal Register at 59 FR 30392 on June 13, 1994.
- 2 Typical combinations covered under "Other" are truck-trailer, truck-trailer-trailer, and truck-semitrailer-trailer.

TABLE 4

State LCV Weight Limits(1)

Pounds (1,000's)	Truck Tractor and 2 trailing units	Truck Tractor and 3 trailing units
86.4	NM	
90	OK	OK
95	NE	
105.5	ID,ND,OR,WA	ID,ND,OR
110	CO	CO
111	AZ	
115		OH
117	WY	
120	KS,MO	
123.5		AZ
127.4	IN,MA,OH	IN
129	NV,SD,UT	NV,SD,UT
131.06		MT
137.8	MT	
143	NY	
164	MI	

1 Source of data is the Final Rule on LCV's published in the Federal Register at 59 FR 30392 on June 13, 1994.