

Legal Dimension and Weight Limits for Highway Vehicles (As per Ohio Revised Code, Sections 5577.04, 5577.05)

Maximum Overall Dimensions (Including any loads)

Width (except municipal bus or traction engine)	8'-6"
Width of municipal bus	8'-8"
Width of traction engine	11'-0"
Height (of all vehicles)	13'-6"
Length of passenger bus operated within a municipal corporation	60'-0"
Length of other passenger bus type vehicle	40'-0"
Length of automobile transporter or boat transporter (plus load overhang of 3'-0" in front and 4'-0" in rear)	65'-0"
Saddlemount vehicle transport	75'-0"
Length of any stinger-steered automobile transporter or stinger-steered boat transporter (plus load overhang of 3'-0" in front and 4'-4" in rear)	75'-0"
Length of semi-trailer used in a commercial tractor-semi-trailer combination	53'-0"
Length of semi-trailer or full trailer used in a commercial tractor-trailer-trailer combination	28'-6"
Length of all other vehicles	40'-0"
Length of any other combination	65'-0"

Sec. 5577.05. No vehicle shall be operated upon the public highways, streets, bridges and culverts within the state whose dimensions exceed those specified in this section.

A. No such vehicle shall have a width in excess of:

(1) One hundred four inches for passenger bus type vehicles operated exclusively within municipal corporations;

(2) One hundred tow inches, excluding such safety devices as are required by law, for passenger bus type vehicles operated over freeways, and such other state roads with minimum pavement widths of twenty-two feet, except those roads or portions thereof over which operation of one hundred two inches is prohibited by order of the Director of Transportation;

(3) One hundred thirty-two inches for traction engines;

(4) One hundred two inches, including load, of all other vehicles, except that the Director may, by journal entry, prohibit the operation of one hundred two inch vehicles on such state highway or portions thereof as the Director designates.

B. No such vehicle shall have a length in excess of:

(1) Sixty feet for passenger bus type vehicles operated by a regional transit authority pursuant to sections 306.30 to 306.54 of the Revised Code;

(2) Forty feet for all other passenger bus type vehicles;

(3) Fifty-three feet for any semi-trailer when operate din a commercial tractor-semi-trailer combination, with or without load, except that the Director may, by journal entry, prohibit the operation of any such commercial tractor-trailer-trailer or commercial tractor-trailer-trailer combination on such state highways or portions thereof as the Director designates;

(4) Twenty-eight and one-half feet for any semi-trailer or trailer when operated in a commercial tractor-trailer-trailer or commercial tractor-trailer-trailer combination; except that the Director may, by journal entry, prohibit the operation of any such commercial tractor-semitrailer-semitrailer combination on such state highways or portions thereof as the Director designates;

(5) Seventy-five feet for drive-away saddlemount vehicle transporter combinations and drive-away saddlemount with fullmount vehicle transporter combinations, not to exceed three saddlemounted vehicle, but which may include one fullmount;

(6) Sixty five feet for any other combination of vehicles coupled together, with or without load, except as provided in divisions (B)(3) and (4), and in division of this section;

(7) Forty feet for all other vehicles except trailers and semi-trailers, with or without load.

C. No such vehicle shall have a height in excess of thirteen feet six inches, with or without load.

D. Any automobile transporter or boat transporter shall be allowed a length of sixty-five feet and any stinger-steered automobile transporter or stinger-steered boat transporter shall be allowed a length of seventy-five feet, except that the load thereon may extend no more than four feet beyond the rear of such vehicles and may extend no more than thee feet beyond the front of such vehicles, and except further that the Director may, by journal entry, prohibit the operation of any stinger-steered automobile transporter, the stinger-steered boat transporter, or a B-train assembly

on any state highways or portion thereof that the director designates.

The lengths prescribed in divisions (B)(2) of this section shall no include safety devices, bumpers attached to the front or rear os such bus or combination, B-train assembly used between the first and second semi-trailer or a commercial tractor-semitrailer-semitrailer combination, energy conservation devises as provided in any regulations adopted by the secretary of the United States Department of Transportation, or any non-cargo carrying refrigeration equipment attached to the front of trailers and semi-trailers. In special cases, vehicles, whose dimensions exceed those prescribed by this section may operate in accordance with rules promulgated by the Director of Transportation.

This section does not apply to fire engines, fire trucks or other vehicles or apparatus belonging to any municipal corporation or to the volunteer fire department of any municipal corporation or sued by such department in the discharge of its functions. This section does not apply to vehicles and pole trailers used in the transportation of wooden and metal poles nor to the transportation of pipes or well drilling equipment, nor to farm machinery and equipment. The owner or operator of any such vehicle, machinery or equipment no specifically enumerated in this section but the dimensions provided by this section, shall when operating the same on the highways and streets of this state comply with the rules of the Director governing such movement, which rules the Director may adopt and promulgate. Sections 119.01 to 119.13 of the Revised Code apply to any rules adopted under this section, or the amendment or secession thereof, and any person adversely affected shall have the same right of appeal provided in such sections.

This section does not require the state, a municipal corporation, county, township or any railroad or other private corporation to provide sufficient vehicle clearance to permit the operation of such vehicle, or to make any changes in or about existing structures now crossing streets, roads, and other public through fares in this state.

Maximum Weights

Sec. 5577.04 Maximum axle load, wheel load, gross weights, for pneumatic tired vehicles

(A) The maximum wheel load of any one wheel of any vehicle, trackless trolley, load object or structure operated or moved upon improved public highways, streets bridges or culverts shall not exceed six hundred fifty pounds per inch width of pneumatic tire, measured as prescribed by section 5577.03 of the Revised Code

(B) The weight of vehicle and load imposed upon the road surface by vehicle with pneumatic tires shall not exceed any of the following weight limitations:

- (1) On any axle, twenty thousand pounds;
- (2) On any tandem axle, thirty-four thousand Pounds;
- (3) On any two or more consecutive axles, the maximum weight as determined by application of the formula provided in division (C) of this section

(C) For purpose of division (B)(3) of this section, the maximum gross weight on any two or more consecutive axles shall be determined by application of the following formula;

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

In this formula, W equals the overall gross weight on any group of two or more consecutive axles to the nearest five hundred pounds, L equals the distance in rounded whole feet between the extreme of any group of two or more consecutive axles, and N equals the number of axles in the group under consideration. However, two consecutive sets of tandem axles may carry a gross load of thirty-four thousand pounds each, provided the overall distance between the first and last axles of such consecutive sets of tandem axles is thirty-six feet or more.

D. Notwithstanding division (B) of this section, the maximum overall gross weight of vehicle and load imposed upon the road surface shall not exceed eighty thousand pounds.

(E) Notwithstanding any other provision of law, when a vehicle is towing another vehicle, such drawbar of other connection shall be of a length such as will limit the spacing between nearest axles of the respective vehicles to a distance not in excess of twelve feet and six inches.

(F) As used in provision (B) of this section, tandem axle means two or more consecutive axles whose centers may be included between parallel transverse vertical planes spaced more than forty inches but not more than ninety-six inches apart, extending across the full width of the vehicle.

(G) This section does not apply to passenger bus type vehicles operated by a regional transit authority pursuant to sections 306.30 to 306.54 of the Revised Code

The following definitions are used in conjunction with the bridge formula table.

GROSS WEIGHT: The weight of a vehicle combination without load plus the weight of any load thereon. the maximum overall gross weight of vehicle and load imposed upon the road surface shall not exceed eighty thousand pounds

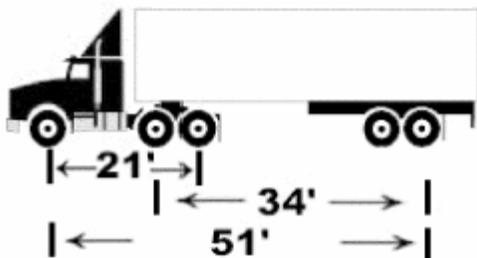
SINGLE AXLE WEIGHT: The total weight imposed upon the road surface by all wheels whose centers may be included between two parallel transverse vertical planes forty inches apart, extended across the full width of the vehicle. The maximum single axle weight shall not exceed twenty thousand pounds

TANDEM AXLE WEIGHT: The total weight imposed upon the road surface by two or more consecutive axles whose centers may be included between parallel transverse vertical planes spaced more than forty inches but not more than ninety-six inches apart, extending across the full width of the vehicle. The maximum tandem axle weight shall not exceed thirty -four thousand pounds.

CONSECUTIVE AXLE WEIGHT: Any consecutive two or more axles may not exceed the weight as computed by the formula even though the single axles, tandem axles and gross weight are within legal requirements

Checking a Vehicle

The illustration of a tractor-semitrailer combination is used to illustrate a bridge formula check. Before beginning to check your vehicle, be sure that the single axle 1 does not exceed 20,000 lbs., tandem axles 2-3 and 4-5 do not exceed 34,000 lbs. each and that the gross vehicle weight does not exceed 80,000 lbs. If these weight requirements are satisfactory, the following combinations should be checked as follows:



Axle 1 is 12,000 lbs.

Axes 2,3,4,5 are 17,000 lbs. each and show a spacing violation

Check axles 1 through 3 using the illustration.

W (actual weight)

$$= 12,000 + 17,000 = 46,000\text{lbs.}$$

N=3 axles; L=21 feet

W=maximum

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

$$= 500 \left[\frac{(21 \times 3)}{(3-1)} + (12 \times 3) + 36 \right]$$

$$= 51,500 \text{ lbs}$$

The actual weight of axles 1 through 3 of the illustrated combination is 46,000 lbs. so the bridge formula requirement is satisfied.

To use the Bridge Formula Table to obtain the maximum load allowed on axles 1 through 3, read down the left column (Distance in feet between ...axles) to L=21 and across the number of axles to the right N=3 (axles). Now check axles 1 through 5 using the illustration and table.

W (actual weight)

$$= 12,000 + 17,000 + 17,000$$

$$+ 17,000 + 17,000 = 80,000 \text{ lbs.}$$

N=5 axles; L=51 feet

W maximum from the table for L of 51 feet and N of 5 (axles)= 80,000 lbs.

This axle spacing is satisfactory.

Now check axles 2 through 5 using the illustration and table.

W (actual weight)

$$= 17,000 + 17,000 + 17,000 + 17,000$$

$$= 68,000 \text{ lbs.}$$

N=4 axles; L=34 feet

W maximum from the table for L=34 feet and N=4 (axles) = 64,500 lbs.

This means the illustration shows a violation; the actual weight of 68,000 lbs. exceeds the maximum allowable weight of 64,500 lbs. for the given axle spacing. To correct the situation

some load must be removed from the vehicle or the 34 foot axle spacing must be increased.

5 axle trailer-semitrailer may be used to haul a full 34,000 lbs. on the tandem of the tractor (axles 2 and 3) and the tandem of the trailer (axles 4 and 5) providing there is a spacing of 36 or more feet between axles 2 and 5. A spacing of 36 feet or more for axles 2 through 5 is satisfactory for an actual W of 68,000 lbs. even though the formula or table computes W maximum to be 66,000 to 67,500 lbs. for spacing of 36 to 38 feet.

Exception to the Formula

There is one exception to the use of the formula and table: two consecutive sets of tandem axles may carry a gross load of 34,000 lbs. each providing the overall distance between the first and last axles of such consecutive sets of tandem axles is 36 feet or more. For example, a

SEC. 5577.99 PENALTIES

(A) Whoever violated the weight provisions of sections 5577.01 to 5577.07 of the weight provisions in regard to highways under section 5577.04 of the Revised Code shall be fined eighty dollars for the first two thousand pounds, or fraction thereof, of overload; for overloads in excess of two thousand pounds, but not in excess of five thousand, such person shall be fined one hundred dollars, and in addition thereto one dollar per one hundred pounds of overload; for overloads in excess of five thousand pounds, but not in excess of ten thousand pounds, such person shall be fined one hundred thirty dollars and in addition thereto two dollars per one hundred pounds of overload or imprisoned not more than thirty days, or both. For all overloads in excess of ten thousand pounds such person shall be fined one hundred sixty dollars and in addition thereto three dollars per one hundred pounds of overload, or imprisoned not more than thirty days, or both. Whoever violates the weight provisions of vehicle and load relating to gross load limits shall be fined not less than one hundred dollars. No penalty prescribed in this division shall be imposed on any vehicle combination if the overload on any axle does not exceed one thousand pounds, and if the immediately preceding or following axle, excepting the front axle of the vehicle combination, is under-loaded by the same or greater amount. For purposes of this division, two axles on one vehicle less than eight feet apart, shall be considered as one axle.

(B) Whoever violates the weight provisions of section 5571.071 (5571.07.1) or 5577.08 or the weight provisions in regard to bridges under section 5577.09, and whoever exceeds the carrying capacity specified under section 5591.42 of the Revised Code, shall be fined eighty dollars for the first two thousand pounds, or fraction thereof, of overload; for overloads in excess of two thousand but not in excess of five thousand pounds the person shall be fined one hundred dollars and in addition thereto one dollar per one hundred pounds of overload; for overloads in excess of five thousand pounds, but not in excess of ten thousand pounds, the person shall be fined one hundred thirty dollars, and in addition thereto two dollars per one hundred pounds of overload, or imprisoned not more than thirty days, or both. For all overloads in excess of ten thousand pounds, the person shall be fined one hundred sixty dollars, and in addition thereto three dollars per one hundred pounds of overload or imprisoned not more than thirty days, or both.

Notwithstanding any other provisions of the Revised Code that specifies a procedure for the distribution of fines, all fines collected pursuant to this section shall be paid into the treasury of the county and credited to any fund for the maintenance and repair of roads, highways, bridges or culverts.

(C) Whoever violates any other provision of sections 5577.01 to 5577.09 of the Revised Code shall be fined not more than twenty-five dollars for a first offense; for a second offense within one year thereafter, such person shall be fined not less than ten nor more than one hundred dollars, or

imprisoned not more than ten days, or both; for a subsequent offense within one year after the first offense, such person shall be fined not less than twenty-five nor more than two hundred dollars, or imprisoned not more than thirty days, or both.

(D) Whoever violates section 5577.10 of the Revised Code shall be fined not more than five thousand dollars or imprisoned for no less than thirty days nor more than six months, or both.

(E) Whoever violates section 5577.11 of the Revised Code shall be fined not more than twenty-five dollars.

Source: OS-8, Revised 01/99
Ohio Department of Transportation
Office of Highway Management
Special Hauling Permits Section
614-351-2300