



NORTH DAKOTA VEHICLE LEGAL SIZE AND WEIGHT GUIDE

NDHP Motor Carrier Operations

Ref: 9-1 (12/11)

A. Legal Width

1. 8 feet 6 inches on all highways.
2. Exceptions.
 - a. Construction and building contractors' equipment and vehicles used to move such equipment which does not exceed ten feet in width when being moved by contractors or resident carriers. Nighttime travel is allowed provided moving equipment is properly lighted.
 - b. Implements of husbandry being moved by resident farmers, ranchers, dealers, or manufacturers or government entities between sunrise and sunset. Nighttime travel is allowed provided the implements are properly lighted and not being moved on the interstate highway system.
 - c. Hay in the stack being moved along the extreme right edge of a roadway between sunrise and sunset by someone other than a commercial mover. Commercial haystack movers, overwidth self-propelled fertilizer spreaders, overwidth self-propelled agricultural chemical applicators, hay grinders, grain cleaners, and forage harvesters if the owners have seasonal permits.
 - d. All vehicles exempt from width limitations are subject to safety rules adopted by the Highway Patrol.

B. Legal Height

1. 14 feet whether loaded or unloaded, unless routes of travel include structures such as bridges and underpasses that are not 14 feet in height.
2. Exception.
 - a. Implements of husbandry may not exceed 15 feet 6 inches in height when being moved by resident farmers, ranchers, dealers, or manufacturers between sunrise and sunset. The distance traveled cannot exceed 60 miles and travel on the interstate system is not allowed.

C. Legal Length

1. A single unit vehicle with two or more axles including the load thereon shall not exceed a length of 50 feet.
2. A combination of two, three, or four units including the load thereon shall not exceed a length of 75 feet on non-designated highways. Three and four unit combinations are subject to safety rules adopted by the NDDOT Director.
3. A combination of two, three, or four units including the load thereon may exceed 75 feet in length but shall not exceed 95 feet or 110 feet in length when traveling on four-lane divided highways and those highways designated by the NDDOT Director and local authorities as to the highways under their respective jurisdictions. The NDDOT designated highway map identifies those designated state highways. All such combinations are subject to safety rules adopted by the NDDOT Director.
4. The length of a trailer or semitrailer including the load thereon may not exceed 53 feet; however, trailers and semi-trailers titled and registered in North Dakota prior to July 1, 1987, and towed vehicles may not exceed a length of 60 feet.
5. Exceptions to length limitations.
 - a. Building moving equipment.
 - b. Emergency tow trucks towing disabled lawful combinations of vehicles to a nearby repair facility.
 - c. Vehicles and equipment owned and operated by the armed forces of the United States or the national guard of this state.
 - d. Structural material of telephone, power, and telegraph companies.
 - e. Truck-mounted haystack moving equipment, provided such equipment does not exceed a length of 56 feet.
 - f. A truck-tractor and semitrailer or truck-tractor, semitrailer and trailer when operated on interstate highway systems or parts of the federal aid primary system designated by the NDDOT Director.
 - 1) The cargo carrying length shall not exceed 100 feet on a semitrailer and trailer or semitrailer converted to a trailer by use of a converter dolly and fifth wheel when the power unit is a truck-tractor.
6. Towing converter dollies.
 - a. Converter dollies that are used to convert semitrailers to trailers are considered trailers if they

meet all lighting requirements and are equipped with brakes and safety chains.

- b. No more than one converter dolly can be towed behind a truck-tractor, semitrailer, and trailer; and no more than two converter dollies can be towed behind a truck-tractor and semitrailer.

D. Mobile Homes

1. A mobile home permit is needed when the mobile home itself exceeds 8 feet 6 inches in width, 14 feet in height, or 75 feet in overall length including the towing vehicle.

E. Legal Weight Limitations

1. Gross vehicle weight on interstate system.

- a. The gross vehicle weight of any vehicle or combination of vehicles is determined by the following weight formula of:

$$\frac{LN}{N-1 + 12N + 36}$$

$$W = 500 (N-1 + 12N + 36)$$

where W equals maximum weight in pounds carried on any group of two or more axles; L equals distance in feet between the extremes of any group of two or more consecutive axles; and N equals number of axles in the group under consideration except that two consecutive sets of tandem axles may carry a gross load of 34,000 pounds each, providing the overall distance between the first and last axles of the consecutive sets of tandem axles is at least 36 feet.

- b. The maximum gross vehicle weight on the interstate highway system is 80,000 pounds.

2. Gross vehicle weight **on highways other than the interstate system.**

- a. The gross vehicle weight of any vehicle or combination of vehicles is determined by the following weight formula of:

$$\frac{LN}{N-1 + 12N + 36}$$

$$W = 500 (N-1 + 12N + 36)$$

where W equals the maximum gross weight in pounds on any vehicle or combination of vehicles; L equals distance in feet between the two extreme axles of any vehicle or combination of vehicles; and N equals the number of axles of any vehicle or combination of vehicles under consideration.

- b. The maximum gross vehicle weight on state highways is 105,500 pounds unless otherwise posted. On all other highways the maximum gross vehicle weight is 80,000 pounds unless designated for more, not to exceed 105,500 pounds.

3. Axle weights.

- a. Steering axle:

- 1) The weight shall be determined by the manufacturer's axle rating and shall not exceed 20,000 pounds when travel:

- a) Is on the interstate system; or
- b) Is on Defense Highways and the load is for the US Department of Defense.

- 1)) Roadway segments designated as Defense Highways are:

- a)) US 83 from Bismarck to the Minot Air Force Base including the US 83 bypass and US 2; and
- b)) US 2 from Interstate 29 to the Grand Forks Air Force Base.

- 2) On the state system, the gross weight shall not exceed 20,000 pounds.

- a) No tire shall exceed 550 pounds per inch of tire width.

- b. 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 8 feet apart or over are considered as individual axles. (The gross weight of two individual axles may not exceed 40,000 pounds on highways other than the interstate system.) On the interstate system the gross weight of two individual axles **may** be restricted by the weight formula. Spacing between axles shall be measured from axle center to axle center. The weight per inch of tire width shall not exceed 550 pounds.

- c. Axles spaced over 40 inches apart and less than 8 feet apart shall not carry a gross weight in excess of 19,000 pounds per axle. The gross weight of a tandem axle may not exceed 34,000 pounds. The gross weight of three or more axles in a grouping may not exceed 48,000 pounds on highways other than the interstate system. On the interstate system the gross weight of

three or more axles **is** restricted by the weight formula. The weight per inch of tire width shall not exceed 550 pounds.

- 1) Axles that can be raised or lowered by air, hydraulic, or other pressure cannot be raised if it will cause any other axle to exceed legal limits when being operated on a public highway.
- d. During the spring breakup season or on otherwise posted highways, reductions in the above axle weights may be specified. Axle weights may also be reduced by the bridge load limitations map.
4. Wheel weight.
 - a. The weight in pounds on any one wheel shall not exceed one-half the allowable axle weight. Dual tires are considered one wheel.
5. Tire width.
 - a. The width of tire for solid tires shall be the rim width; for pneumatic tires, the manufacturer's width. Metric tire sizes are converted to inches by dividing millimeters by 25.4.
6. Auxiliary power or idle reduction unit (APU) weight.
 - a. A vehicle with a fully functional APU will be allowed an additional 400 pounds or the certified unit weight, whichever is less. The additional pounds may be allowed in gross, axles, or bridge formula weight limits above the legal weight limits.
 - b. Written certification showing weight of APU will be required.
 - c. Demonstration of or certification that the APU is fully functional at all times may be required.

F. Axles

1. Steerable, castering, or pivoting axles.
 - a. A single unit vehicle may not be equipped with more than four axles **unless** the additional axles are steerable, castering, or pivoting axles.
 - b. Any **vehicle** in a combination may not be equipped with more than four axles **unless** the additional axles are steerable, castering, or pivoting axles.
2. Retractable axle control requirements.
 - a. On all motor vehicles manufactured after July 31, 2005, the lock or pressure regulator valve for a lift axle shall be located outside the cab and inaccessible from the driver's compartment **only** if there is more than one lift axle.
 - 1) A lift axle is a retractable or variable load suspension axle that can be raised or lowered by air, hydraulic, or other pressure.
 - b. The control to lift and lower a retractable or variable load suspension axle may be accessible in the driver's compartment.
 - 1) The control shall not function as the pressure control device unless the motor vehicle has more than one lift axle.

Permits for oversize and overweight vehicles and loads, and other size and weight information can be obtained by visiting the NDHP website at www.nd.gov/ndhp, calling 701-328-2621 or writing to: North Dakota Highway Patrol, Motor Carrier Operations, 600 E Boulevard Avenue Dept. 504, Bismarck, ND 58505-0240.

Attachments: Weight Limitations Chart
Weight Limitations Map
Designated Highway Map