

**42-4-507. Wheel and axle loads.**

(1) The gross weight upon any wheel of a vehicle shall not exceed the following:

- a) When the wheel is equipped with a solid rubber or cushion tire, eight thousand pounds
- b) When the wheel is equipped with a pneumatic tire, nine thousand pounds.

(2) The gross weight upon any single axle or tandem axle of a vehicle shall not exceed the following:

(a) When the wheels attached to said axle are equipped with solid rubber or cushion tires, sixteen thousand pounds;

(b) Except as provided in paragraph (b.5) of this subsection (2), when the wheels attached to a single axle are equipped with pneumatic tires, twenty thousand pounds;

(b.5) When the wheels attached to a single axle are equipped with pneumatic tires and the vehicle or vehicle combination is a digger derrick or bucket boom truck operated by an electric utility on a highway that is not on the interstate system as defined in section 43-2-101 (2), C.R.S., twenty-one thousand pounds;

(c) When the wheels attached to a tandem axle are equipped with pneumatic tires, thirty-six thousand pounds for highways on the interstate system and forty thousand pounds for highways not on the interstate system.

(3) (a) Vehicles equipped with a self-compact and used solely for the transporting of trash are exempted from the provisions of paragraph (b) of subsection (2) of this section.

(b) After January 1, 1987, the provisions of this subsection (3) shall be reviewed at a joint meeting of the senate transportation committee and the house transportation and energy committee in order to determine the effects of such provisions.

(4) For the purposes of this section:

(a) A single axle is defined as all wheels, whose centers may be included within two parallel transverse vertical planes not more than forty inches apart, extending across the full width of the vehicle.

(b) A tandem axle is defined as two or more consecutive axles, the centers of which may be included between parallel vertical planes spaced more than forty inches and not more than ninety-six inches apart, extending across the full width of the vehicle.

(5) The gross weight upon any one wheel of a steel-tired vehicle shall not exceed five hundred pounds per inch of cross-sectional width of tire.

(6) Any person who drives a vehicle or owns a vehicle in violation of any provision of this section commits a class 2 misdemeanor traffic offense.

**42-4-508. Gross weight of vehicles and loads.**

(1) Except as provided in subsection (1.5) of this section, no vehicle or combination of vehicles shall be moved or operated on any highway or bridge when the gross weight thereof exceeds the limits specified below:

(a) (I) The gross weight upon any one axle of a vehicle shall not exceed the limits prescribed in section 42-4-507.

(II) Subject to the limitations prescribed in section 42-4-507, the gross weight of a vehicle having two axles shall not exceed thirty-six thousand pounds.

(III) Subject to the limitations prescribed in section 42-4-507, the gross weight of a single vehicle having three or more axles shall not exceed fifty-four thousand pounds.

(b) Subject to the limitations prescribed in section 42-4-507, the maximum gross weight of any vehicle or combination of vehicles shall not exceed that determined by the formula  $W \text{ equals } 1,000 (L \text{ plus } 40)$ ,  $W$  = the gross weight in pounds,  $L$  = the length in feet between the centers of the first and last axles of such vehicle or combination of vehicles, but in computation of this formula no gross vehicle weight shall exceed eighty-five thousand pounds. For the purposes of this section, where a combination of vehicles is used, no vehicle shall carry a gross

weight of less than ten percent of the overall gross weight of the combination of vehicles; except that these limitations shall not apply to specialized trailers of fixed public utilities whose axles may carry less than ten percent of the weight of the combination. The limitations provided in this section shall be strictly construed and enforced.

(c) Notwithstanding any other provisions of this section, except as may be authorized under section 42-4-510, no vehicle or combination of vehicles shall be moved or operated on any highway or bridge which is part of the national system of interstate and defense highways, also known as the interstate system, when the gross weight of such vehicle or combination of vehicles exceeds the following specified limits:

(I) Subject to the limitations prescribed in section 42-4-507, the gross weight of a vehicle having two axles shall not exceed thirty-six thousand pounds.

(II) Subject to the limitations prescribed in section 42-4-507, the gross weight of a single vehicle having three or more axles shall not exceed fifty-four thousand pounds.

(III) (A) Subject to the limitations prescribed in section 42-4-507, the maximum gross weight of any vehicle or combination of vehicles shall not exceed that determined by the formula  $W = 500 [(LN/N-1) + 12N + 36]$ .

(B) In using the formula in sub-subparagraph (A) of this subparagraph (III), W equals overall gross weight on any group of two or more consecutive axles to the nearest 500 pounds, L equals distance in feet between the extreme of any group of two or more consecutive axles, and N equals number of axles in the group under consideration; but in computations of this formula no gross vehicle weight shall exceed eighty thousand pounds, except as may be authorized under section 42-4-510.

(IV) For the purposes of this subsection (1), where a combination of vehicles is used, no vehicle shall carry a gross weight of less than ten percent of the overall gross weight of the combination of vehicles; except that this limitation shall not apply to specialized trailers whose specific use is to haul poles and whose axles may carry less than ten percent of the weight of the combination.

(1.5) The gross weight limits provided in subsection (1) of this section are increased by one thousand pounds for any vehicle or combination of vehicles if the vehicle or combination of vehicles contains an alternative fuel system and operates on alternative fuel or both alternative and conventional fuel. The provisions of this subsection (1.5) apply only when the vehicle or combination of vehicles is operated on a highway that is not on the interstate system as defined in section 43-2-101 (2), C.R.S. For the purposes of this subsection (1.5), "alternative fuel" has the same meaning provided in section 25-7-106.8 (1) (a), C.R.S.

(2) The department upon registering any vehicle under the laws of this state, which vehicle is designed and used primarily for the transportation of property or for the transportation of ten or more persons, may acquire such information and may make such investigation or tests as necessary to enable it to determine whether such vehicle may safely be operated upon the highways in compliance with all the provisions of this article. The department shall not register any such vehicle for a permissible gross weight exceeding the limitations set forth in sections 42-4-501 to 42-4-512 and 42-4-1407. Every such vehicle shall meet the following requirements:

(a) It shall be equipped with brakes as required in section 42-4-223;

(b) Every motor vehicle to be operated outside of business and residence districts shall have motive power adequate to propel at a reasonable speed such vehicle and any load thereon or to be drawn thereby.

(3) If the federal highway administration or the United States congress prescribes or adopts vehicle size or weight limits greater than those now prescribed by the "Federal-Aid Highway Act of 1956", which limits exceed in full or in part the provisions of section 42-4-504 or paragraph (b) or (c) of subsection (1) of this section, the transportation commission, upon determining that Colorado highways have been constructed to standards which will accommodate such additional size or weight and that the adoption of said size and weight limitations will not jeopardize any distribution of federal highway funds to the state, may adopt size and weight limits comparable to those prescribed or adopted by the federal highway administration or the United States congress and may authorize said limits to be used by owners or operators of vehicles while said vehicles are using highways within this state; but no vehicle size or weight limit so adopted by the commission shall be less in any respect than those now provided for in section 42-4-504 or paragraph (b) or (c) of subsection (1) of this section.

(4) Any person who drives a vehicle or owns a vehicle in violation of any provision of this section commits a class 2 misdemeanor traffic offense.