

§ 20-118. Weight of vehicles and load.

(a) For the purposes of this section, the following definitions apply:

- (1), (2) Repealed by Session Laws 2018-142, s. 5(b), effective December 14, 2018.
- (3) Axle group. – Any two or more consecutive axles on a vehicle or combination of vehicles.
- (4) Gross weight. – The weight of any single axle, tandem axle, or axle group of a vehicle or combination of vehicles plus the weight of any load thereon.
- (5) Light-traffic roads. – Any highway on the State Highway System, excepting routes designated I, U.S. or N.C., posted by the Department of Transportation to limit the axle weight below the statutory limits.
- (6) Single axle weight. – The gross weight transmitted by all wheels whose centers may be included between two parallel transverse vertical planes 40 inches apart, extending across the full width of the vehicle.
- (7) Tandem axle weight. – The gross weight transmitted to the road by two or more consecutive axles whose centers may be included between parallel vertical planes spaced more than 40 inches and not more than 96 inches apart, extending across the full width of the vehicle.

(b) The following weight limitations apply to vehicles operating on the highways of the State:

- (1) The single-axle weight of a vehicle or combination of vehicles shall not exceed 20,000 pounds.
- (2) The tandem-axle weight of a vehicle or combination of vehicles shall not exceed 38,000 pounds.
- (3) The gross weight imposed upon the highway by any axle group of a vehicle or combination of vehicles shall not exceed the maximum weight given for the respective distance between the first and last axle of the group of axles measured longitudinally to the nearest foot as set forth in the following table:

Distance Between Axles	Maximum Weight in Pounds for any Group of Two or More Consecutive Axles					
	2 Axles	3 Axles	4 Axles	5 Axles	6 Axles	7 Axles
4	38000					
5	38000					
6	38000					
7	38000					
8 or less more than 8	38000	38000				
9	38000	42000				
10	39000	42500				
11	40000	43500				
12		44000				
13		45000	50000			
14		45500	50500			
15		46500	51500			
16		47000	52000			
		48000	52500	58000		

17	48500	53500	58500		
18	49500	54000	59000		
19	50000	54500	60000		
20	51000	55500	60500	66000	
21	51500	56000	61000	66500	
22	52500	56500	61500	67000	
23	53000	57500	62500	68000	
24	54000	58000	63000	68500	74000
25	54500	58500	63500	69000	74500
26	55500	59500	64000	69500	75000
27	56000	60000	65000	70000	75500
28	57000	60500	65500	71000	76500
29	57500	61500	66000	71500	77000
30	58500	62000	66500	72000	77500
31	59000	62500	67500	72500	78000
32	60000	63500	68000	73000	78500
33		64000	68500	74000	79000
34		64500	69000	74500	80000
35		65500	70000	75000	
36		66000	70500	75500	
37		66500	71000	76000	
38		67500	72000	77000	
39		68000	72500	77500	
40		68500	73000	78000	
41		69500	73500	78500	
42		70000	74000	79000	
43		70500	75000	80000	
44		71500	75500		
45		72000	76000		
46		72500	76500		
47		73500	77500		
48		74000	78000		
49		74500	78500		
50		75500	79000		
51		76000	80000		
52		76500			
53		77500			
54		78000			
55		78500			
56		79500			
57		80000			

Distance in Feet Between the Extremes of any Group of Two or More Consecutive Axles.
See exception in subdivision (c)(1) of this section.

- (4) The Department of Transportation may establish light-traffic roads and further restrict the axle weight limit on such light-traffic roads lower than the statutory limits. The Department of Transportation has the authority to designate any highway on the State Highway System, excluding routes designated by I, U.S. and N.C., as a light-traffic road when in the opinion of the Department of Transportation, the road is inadequate to carry and will be injuriously affected by vehicles using the road carrying the maximum axle weight. All such roads

so designated shall be conspicuously posted as light-traffic roads and the maximum axle weight authorized shall be displayed on proper signs erected thereon.

(c) Exceptions. – The following exceptions apply to subsections (b) and (e) of this section:

- (1) Two consecutive sets of tandem axles may carry a gross weight of 34,000 pounds each without penalty provided the overall distance between the first and last axles of the consecutive sets of tandem axles is 36 feet or more.
- (2) When a vehicle is operated in violation of subdivision (b)(1), (b)(2), or (b)(3) of this section, but the gross weight of the vehicle or combination of vehicles does not exceed that permitted by subdivision (b)(3) of this section, the owner of the vehicle shall be permitted to shift the load within the vehicle, without penalty, from one axle to another to comply with the weight limits in the following cases:
 - a. Where the single-axle load exceeds the statutory limits, but does not exceed 21,000 pounds.
 - b. Where the vehicle or combination of vehicles has tandem axles, but the tandem-axle weight does not exceed 40,000 pounds.
- (3) When a vehicle is operated in violation of subdivision (b)(4) of this section, the owner of the vehicle shall be permitted, without penalty, to shift the load within the vehicle from one axle to another to comply with the weight limits where the single-axle weight does not exceed the posted limit by 2,500 pounds.
- (4) A truck or other motor vehicle shall be exempt from the light-traffic road limitations provided for pursuant to subdivision (b)(4) of this section, when transporting supplies, material, or equipment necessary to carry out a farming operation engaged in the production of meats and agricultural crops and livestock or poultry by-products or a business engaged in the harvest or processing of seafood when the destination of the vehicle and load is located solely upon a light-traffic road.
- (5) The light-traffic road limitations provided for pursuant to subdivision (b)(4) of this section do not apply to a vehicle while that vehicle is transporting only the following from its point of origin on a light-traffic road to either one of the two nearest highways that is not a light-traffic road. If that vehicle's point of origin is a non-light-traffic road and that road is blocked by light-traffic roads from all directions and is not contiguous with other non-light-traffic roads, then the road at point of origin is treated as a light-traffic road for purposes of this subdivision:
 - a. Processed or unprocessed seafood transported from boats or any other point of origin to a processing plant or a point of further distribution.
 - b. Meats, live poultry, or agricultural crop products transported from a farm to a processing plant or market.
 - c. Forest products originating and transported from a farm or from woodlands to market without interruption or delay for further packaging or processing after initiating transport.
 - d. Livestock or live poultry transported from their point of origin to a processing plant or market.
 - e. Livestock by-products or poultry by-products transported from their point of origin to a rendering plant.

- f. Recyclable material transported from its point of origin to a scrap-processing facility for processing. As used in this subpart, the terms "recyclable material" and "processing" have the same meaning as in G.S. 130A-290(a).
 - g. Garbage collected by the vehicle from residences or garbage dumpsters if the vehicle is fully enclosed and is designed specifically for collecting, compacting, and hauling garbage from residences or from garbage dumpsters. As used in this subpart, the term "garbage" does not include hazardous waste as defined in G.S. 130A-290(a), spent nuclear fuel regulated under G.S. 20-167.1, low-level radioactive waste as defined in G.S. 104E-5, or radioactive material as defined in G.S. 104E-5.
 - h. Treated sludge collected from a wastewater treatment facility.
 - i. Apples when transported from the orchard to the first processing or packing point.
 - j. Trees grown as Christmas trees from the field, farm, stand, or grove, and other forest products, including chips and bark, to a processing point.
 - k. Water, fertilizer, pesticides, seeds, fuel, and animal waste transported to or from a farm by a farm vehicle as defined in G.S. 20-37.16(e)(3).
- (6) A truck or other motor vehicle shall be exempt from the light-traffic road limitations provided by subdivision (b)(4) of this section when the motor vehicles are owned, operated by or under contract to a public utility, electric or telephone membership corporation or municipality and are used in connection with installation, restoration, or emergency maintenance of utility services.
 - (7) A wrecker may tow any disabled truck or other motor vehicle or combination of vehicles to a place for repairs, parking, or storage within 50 miles from the point that the vehicle was disabled and may tow a truck, tractor, or other replacement vehicle to the site of the disabled vehicle without being in violation of this section provided that the wrecker and towed vehicle or combination of vehicles otherwise meet all requirements of this section.
 - (8) A firefighting vehicle operated by any member of a municipal or rural fire department in the performance of the member's duties, regardless of whether members of that fire department are paid or voluntary, and any vehicle of a voluntary lifesaving organization, when operated by a member of that organization while answering an official call, shall be exempt from the light-traffic road limitations provided by subdivision (b)(4) of this section.
 - (9) Repealed by Session Laws 1993 (Reg. Sess., 1994), c. 761, s. 12.
 - (10) Fully enclosed motor vehicles designed specifically for collecting, compacting, and hauling garbage from residences or from garbage dumpsters shall, when operating for those purposes, be allowed a single axle weight not to exceed 23,500 pounds on the steering axle on vehicles equipped with a boom, or on the rear axle on vehicles loaded from the rear. This exemption does not apply to vehicles operating on interstate highways, vehicles transporting hazardous waste as defined in G.S. 130A-290(a)(8), spent nuclear fuel regulated under G.S. 20-167.1, low-level radioactive waste as defined in G.S. 104E-5(9a), or radioactive material as defined in G.S. 104E-5(14).

- (11) A truck or other motor vehicle shall be exempt for light-traffic road limitations issued under subdivision (b)(4) of this section when transporting heating fuel for on-premises use at a destination located on the light-traffic road.
- (12) Subsections (b) and (e) of this section do not apply to a vehicle or vehicle combination that meets all of the conditions set out below:
 - a. Is transporting any of the following items within the official State border of North Carolina:
 - 1. Agriculture, dairy, and crop products transported from a farm or holding facility to a processing plant, feed mill, or market.
 - 2. Water, fertilizer, pesticides, seeds, fuel, or animal waste transported to or from a farm.
 - 3. Meats, livestock, or live poultry transported from the farm where they were raised to a processing plant or market.
 - 3a. Feed or feed ingredients that are used in the feeding of poultry or livestock and transported from a storage facility, holding facility, or mill to a farm.
 - 4. Forest products originating and transported from a farm or woodlands to market with delay interruption or delay for further packaging or processing after initiating transport.
 - 5. Wood residuals, including wood chips, sawdust, mulch, or tree bark from any site.
 - 6. Raw logs to market.
 - 7. Trees grown as Christmas trees from field, farm, stand, or grove to a processing point.
 - b. Repealed by Session Laws 1993 (Reg. Sess., 1994), c. 761, s. 13.
 - b1. Does not operate on an interstate highway or exceed any posted bridge weight limits during transportation or hauling of agricultural products.
 - c. Meets any of the following vehicle configurations:
 - 1. Does not exceed a single-axle weight of 22,000 pounds, a tandem-axle weight of 42,000 pounds, or a gross weight of 90,000 pounds.
 - 2. Consists of a five or more axle combination vehicle that does not exceed a single-axle weight of 26,000 pounds, a tandem-axle weight of 44,000 pounds and a gross weight of 90,000 pounds, with a length of at least 48 feet between the center of axle one and the center of the last axle of the vehicle and a minimum of 11 feet between the center of axle one and the center of axle two of the vehicle.
 - 3. Consists of a two-axle vehicle that does not exceed a gross weight of 37,000 pounds and a single-axle weight of no more than 27,000 pounds, with a length of at least 14 feet between the center of axle one and the center of axle two of the vehicle.
 - d. Repealed by Session Laws 2012-78, s. 6, effective June 26, 2012.
- (13) Vehicles specifically designed for fire fighting that are owned by a municipal or rural fire department. This exception does not apply to vehicles operating on interstate highways.
- (14) Subsections (b) and (e) of this section do not apply to a vehicle that meets all of the conditions below, but all other enforcement provisions of this Article remain applicable:

- a. Is hauling aggregates from a distribution yard or a State-permitted production site located within a North Carolina county contiguous to the North Carolina State border to a destination in another state adjacent to that county as verified by a weight ticket in the driver's possession and available for inspection by enforcement personnel.
 - b. Does not operate on an interstate highway or exceed any posted bridge weight limits.
 - c. Does not exceed 69,850 pounds gross vehicle weight and 53,850 pounds per axle grouping for tri-axle vehicles. For purposes of this subsection, a tri-axle vehicle is a single power unit vehicle with a three consecutive axle group on which the respective distance between any two consecutive axles of the group, measured longitudinally center to center to the nearest foot, does not exceed eight feet. For purposes of this subsection, the tolerance provisions of subsection (h) of this section do not apply, and vehicles must be licensed in accordance with G.S. 20-88.
 - d. Repealed by Session Laws 2001-487, s. 10, effective December 16, 2001.
 - e. Repealed by Session Laws 2012-78, s. 6, effective June 26, 2012.
- (15) Subsections (b) and (e) of this section do not apply to a vehicle or vehicle combination that meets all of the conditions below, but all other enforcement provisions of this Article remain applicable:
- a. Is transporting bulk soil, bulk rock, sand, sand rock, or asphalt millings from a site that does not have a certified scale for weighing the vehicle.
 - b. Does not operate on an interstate highway, a posted light-traffic road, except as provided by subdivision (c)(5) of this section, or exceed any posted bridge weight limits.
 - c. Does not exceed a maximum gross weight 4,000 pounds in excess of what is allowed in subsection (b) of this section.
 - d. Does not exceed a single-axle weight of more than 22,000 pounds and a tandem-axle weight of more than 42,000 pounds.
 - e. Repealed by Session Laws 2012-78, s. 6, effective June 26, 2012.
- (16) Subsections (b) and (e) of this section do not apply to a vehicle or vehicle combination that meets all of the conditions below, but all other enforcement provisions of this Article remain applicable:
- a. Is hauling unhardened ready-mixed concrete.
 - b. Does not operate on an interstate highway or a posted light-traffic road, or exceed any posted bridge weight limits.
 - c. Has a single steer axle weight of no more than 22,000 pounds and a tandem-axle weight of no more than 46,000 pounds.
 - d. Does not exceed a maximum gross weight of 66,000 pounds on a three-axle vehicle with a length of at least 21 feet between the center of axle one and the center of axle three of the vehicle.
 - e. Does not exceed a maximum gross weight of 72,600 pounds on a four-axle vehicle with a length of at least 36 feet between the center of axle one and the center of axle four. The four-axle vehicle shall have a maximum gross weight of 66,000 pounds on axles one, two, and three with a length of at least 21 feet between the center of axle one and the center of axle three.

For purposes of this subdivision, no additional weight allowances in this section apply for the gross weight, single-axle weight, and tandem-axle weight, and the tolerance allowed by subsection (h) of this section does not apply.

- (17) Subsections (b) and (e) of this section do not apply to a truck owned, operated by, or under contract to a public utility, electric or telephone membership corporation, or municipality that meets all of the conditions listed below, but all other enforcement provisions of this Article remain applicable:
- a. Is being used in connection with the installation, restoration, or maintenance of utility services within a North Carolina county located in whole or in part west of Interstate 77, and the terrain, road widths, and other naturally occurring conditions prevent the safe navigation and operation of a truck having more than a single axle or using a trailer.
 - b. Does not operate on an interstate highway.
 - c. Does not exceed a single-axle weight of more than 28,000 pounds.
 - d. Does not exceed a maximum gross weight in excess of 48,000 pounds.
- (18) Subsections (b) and (e) of this section do not apply to a vehicle or vehicle combination that meets all of the conditions set out below:
- a. Is transporting metal commodities or construction equipment.
 - b. Does not operate on an interstate highway, a posted light traffic road, or exceed any posted bridge weight limit.
 - c. Does not exceed a single-axle weight of 22,000 pounds, a tandem-axle weight of 42,000 pounds, or a gross weight of 90,000 pounds.
- (19) Any additional weight allowance authorized by 23 U.S.C. § 127, and applicable to all interstate highways, also applies to all State roads, unless the road is a posted road or posted bridge, or unless specifically prohibited by State law or a Department ordinance applicable to a specific road.

(d) The Department of Transportation is authorized to abrogate certain exceptions. The exceptions provided for in subdivisions (c)(4) and (c)(5) of this section as applied to any light-traffic road may be abrogated by the Department of Transportation upon a determination of the Department of Transportation that undue damage to the light-traffic road is resulting from vehicles exempted by subdivisions (c)(4) and (c)(5) of this section. In those cases where the exemption to the light-traffic roads are abrogated by the Department of Transportation, the Department shall post the road to indicate no exemptions.

(e) Penalties. –

- (1) Except as provided in subdivision (2) of this subsection, for each violation of the single-axle or tandem-axle weight limits set in subdivision (b)(1), (b)(2), or (b)(4) of this section or axle weights authorized by special permit according to G.S. 20-119(a), the State Highway Patrol shall assess a civil penalty against the owner or registrant of the vehicle in accordance with the following schedule: for the first 1,000 pounds or any part thereof, four cents (4¢) per pound; for the next 1,000 pounds or any part thereof, six cents (6¢) per pound; and for each additional pound, ten cents (10¢) per pound. These penalties apply separately to each weight limit violated. In all cases of violation of the weight limitation, the penalty shall be computed and assessed on each pound of weight in excess of the maximum permitted.
- (2) The penalty for a violation of the single-axle or tandem-axle weight limits by a vehicle that is transporting an item listed in subdivision (c)(5) of this section is

one-half of the amount it would otherwise be under subdivision (1) of this subsection.

- (3) If an axle-group weight of a vehicle exceeds the weight limit set in subdivision (b)(3) of this section plus any tolerance allowed in subsection (h) of this section or axle-group weights or gross weights authorized by special permit under G.S. 20-119(a), the State Highway Patrol shall assess a civil penalty against the owner or registrant of the motor vehicle. The penalty shall be assessed on the number of pounds by which the axle-group weight exceeds the limit set in subdivision (b)(3) of this section, or by a special permit issued pursuant to G.S. 20-119, as follows: for the first 2,000 pounds or any part thereof, two cents (2) per pound; for the next 3,000 pounds or any part thereof, four cents (4) per pound; for each pound in excess of 5,000 pounds, ten cents (10) per pound. Tolerance pounds in excess of the limit set in subdivision (b)(3) of this section are subject to the penalty if the vehicle exceeds the tolerance allowed in subsection (h) of this section.

These penalties apply separately to each axle-group weight limit violated. Notwithstanding any provision to the contrary, a vehicle with a special permit that is subject to additional penalties under this subsection based on a violation of any of the permit restrictions set out in G.S. 20-119(d1) shall be assessed a civil penalty, not to exceed ten thousand dollars (\$10,000), based on the number of pounds by which the axle-group weight exceeds the limit set in subdivision (b)(3) of this section.

- (4) The penalty for a violation of an axle-group weight limit by a vehicle that is transporting an item listed in subdivision (c)(5) of this section is one-half of the amount it would otherwise be under subdivision (3) of this subsection.
- (5) A violation of a weight limit in this section or of a permitted weight under G.S. 20-119 is not punishable under G.S. 20-176.
- (6) The penalty for violating the gross weight or axle-group weight by a dump truck or dump trailer vehicle transporting bulk soil, bulk rock, sand, sand rock, or asphalt millings intrastate from a site that does not have a certified scale for weighing the vehicle is one-half of the amount it otherwise would be under subdivisions (1) and (3) of this subsection.
- (7) The clear proceeds of all civil penalties, civil forfeitures, and civil fines that are collected by the Department of Transportation pursuant to this section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2.

(f) Repealed by Session Laws 1993 (Reg. Sess., 1994), c. 761, s. 15.

(g) This section does not permit the gross weight of any vehicle or combination in excess of the safe load carrying capacity established by the Department of Transportation on any bridge pursuant to G.S. 136-72.

(h) Tolerance. – A vehicle may exceed maximum and the inner axle-group weight limitations set forth in subdivision (b)(3) of this section by a tolerance of ten percent (10%). This exception does not authorize a vehicle to exceed either the single-axle or tandem-axle weight limitations set forth in subdivisions (b)(1) and (b)(2) of this section, or the maximum gross weight limit of 80,000 pounds. This exception does not apply to a vehicle exceeding posted bridge weight limitations as posted under G.S. 136-72 or to vehicles operating on interstate highways. The tolerance allowed under this subsection does not authorize the weight of a vehicle to exceed the weight for which that vehicle is licensed under G.S. 20-88. No tolerance on the single-axle weight or the tandem-axle weight provided for in subdivisions (b)(1) and (b)(2) of this section shall be granted administratively or otherwise. The Department of Transportation shall report

back to the Transportation Oversight Committee and to the General Assembly on the effects of the tolerance granted under this section, any abuses of this tolerance, and any suggested revisions to this section by that Department on or before May 1, 1998.

(i) Repealed by Session Laws 1993 (Reg. Sess., 1994), c. 761, s. 16.

(j) Repealed by Session Laws 1987, c. 392.

(k) A vehicle which is equipped with a self-loading bed and which is designed and used exclusively to transport compressed seed cotton from the farm to a cotton gin, or sage to market, may operate on the highways of the State, except interstate highways, with a tandem-axle weight not exceeding 50,000 pounds. Such vehicles are exempt from light-traffic road limitations only from point of origin on the light-traffic road to the nearest State-maintained road which is not posted to prohibit the transportation of statutory load limits. This exemption does not apply to restricted, posted bridge structures.

(l) A vehicle or vehicle combination that hauls unhardened ready-mixed concrete may be weighed with weigh in motion scales, but the vehicle or vehicle combination must be weighed static, allowing the drum to come to a complete stop. (1937, c. 407, s. 82; 1943, c. 213, s. 2; cc. 726, 784; 1945, c. 242, s. 2; c. 569, s. 2; c. 576, s. 7; 1947, c. 1079; 1949, c. 1207, s. 2; 1951, c. 495, s. 2; c. 942, s. 1; c. 1013, ss. 5, 6, 8; 1953, cc. 214, 1092; 1959, c. 872; c. 1264, s. 6; 1963, c. 159; c. 610, ss. 3-5; c. 702, s. 5; 1965, cc. 483, 1044; 1969, c. 537; 1973, c. 507, s. 5; c. 1449, ss. 1, 2; 1975, c. 325; c. 373, s. 2; c. 716, s. 5; c. 735; c. 736, ss. 1-3; 1977, c. 461; c. 464, s. 34; 1977, 2nd Sess., c. 1178; 1981, c. 690, ss. 27, 28; c. 726; c. 1127, s. 53.1; 1983, c. 407; c. 724, s. 1; 1983 (Reg. Sess., 1984), c. 1116, ss. 105-109; 1985, c. 54; c. 274; 1987, c. 392; c. 707, ss. 1-4; 1991, c. 202, s. 1; 1991 (Reg. Sess., 1992), c. 905, s. 1; 1993, c. 426, ss. 1, 2; c. 470, s. 1; c. 533, s. 11; 1993 (Reg. Sess., 1994), c. 761, ss. 10-16; 1995, c. 109, s. 3; c. 163, s. 4; c. 332, ss. 1-3; c. 509, s. 135.1(b); 1995 (Reg. Sess., 1996), c. 756, s. 29; 1997-354, s. 1; 1997-373, s. 1; 1997-466, s. 2; 1998-149, ss. 8, 9, 9.1; 1998-177, s. 1; 1999-452, s. 23; 2000-57, s. 1; 2001-487, ss. 10, 50(e); 2002-126, s. 26.16(a); 2004-145, ss. 1, 2; 2005-248, s. 1; 2005-276, s. 6.37(o); 2005-361, s. 3; 2006-135, s. 1; 2006-264, s. 37; 2008-221, ss. 7, 8, 9; 2009-127, s. 2; 2009-376, ss. 6, 16(a), 16(b); 2009-531, s. 1; 2010-129, s. 3; 2010-132, s. 10; 2011-71, s. 1; 2011-145, s. 19.1(g); 2011-200, s. 1; 2012-78, ss. 6, 13; 2013-120, s. 1; 2013-134, s. 1; 2015-263, s. 9(a); 2016-90, s. 2.1(a); 2018-74, s. 16.5; 2018-142, s. 5(b); 2024-30, s. 22(b); 2024-57, s. 3E.2(j).)