

Massachusetts Code

CHAPTER 90 MOTOR VEHICLES AND AIRCRAFT

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540 CMR 4.02: Special Definitions

(24) Commercial Motor Vehicle shall mean any motor vehicle which is not a private passenger motor vehicle, antique motor car, motorcycle, auto home, house trailer, taxicab, ambulance, hearse, livery vehicle, or school pupil transport vehicle. A commercial motor vehicle shall include the following vehicles:

- (a) The vehicle has a gross vehicle weight rating or gross combination weight rating of 10,001 or more pounds; or
- (b) The vehicle is designed to transport more than 15 passengers, including the driver; or
- (c) The vehicle is used in the transportation of hazardous materials in a quantity requiring placarding in accordance with the Hazardous Materials Regulations of the United States Department of Transportation. Any commercial motor vehicle that singularly has a gross vehicle weight rating of 10,001 pounds or less and is designed to meet emissions standards, shall be submitted for an emissions inspection in addition to all applicable safety inspection requirements; or
- (d) A single, full or semi-trailer, used in commerce, with a manufacturer's gross vehicle weight rating over 3,000 lbs; or
- (e) Any vehicle which has a vehicle weight, or curb weight, of more than six thousand pounds, as per the manufacturer's description of said vehicle, unless such vehicle is a sport utility vehicle or passenger van, or a pickup truck or cargo van meeting the definition of private passenger vehicle; or
- (f) Any vehicle which has five or more wheels on the ground.

PART I ADMINISTRATION OF THE GOVERNMENTNEXT
TITLE XIV PUBLIC WAYS AND WORKSPREV NEXT
CHAPTER 90 MOTOR VEHICLES AND AIRCRAFTPREV NEXT
Section 19 Dimensions and weights of motor vehicles, trucks and trailers

Section 19. Except as otherwise provided in sections nineteen F and nineteen G, or when a vehicle has been authorized by permit to transport an irreducible load, the following provisions shall apply:

No motor vehicle or trailer, the outside width of which is more than one hundred and two inches or the extreme overall length of which is more than thirty-three feet, or in the case of a truck, or house trailer, 40 feet, or, in the case of a motor bus or auto home, 45 feet, or in the case of an articulated bus, sixty feet, or in the case of a traditional automobile transporter, a traditional boat transporter and a truck-trailer boat

transporter, sixty-five feet not including load overhang which shall not exceed three feet beyond the foremost part of the front transporting vehicle or more than four feet beyond the rear bed of the body, or in the case of a stringer-steered automobile transporter or stringer-steered boat transporter, seventy-five feet not including load overhang which shall not exceed three feet beyond the foremost part of the front transporting vehicle or more than four feet beyond the rear bed of the body, or in the case of a semi-trailer in a semi-trailer unit or trailer in a tractor-trailer unit, 53 feet, or in the case of a semi-trailer or trailer in tandem unit, twenty-eight feet, or in the case of semi-trailers in a B-train assembly unit, twenty-eight feet, such a length being exclusive of the B-train assembly when being used between the first and second semi-trailer, but the B-train assembly is to be included in the length measure of the semi-trailer when no second semi-trailer is mounted on the B-train assembly with the length limitation of the semi-trailer to be forty-eight feet in that instance, or in the case of a driveaway saddlemount with fullmount vehicle transporter combination including double and triple saddlemount combinations conforming to safety regulations at 49 CFR 393.71, seventy-five feet, shall be operated on any way without a special permit so to operate from the board or officer having charge of such way, or in the case of a state highway or a way determined by the department of highways to be a through route, from said department. The lengths of semi-trailers or trailers operating under the provisions of this section shall be inclusive of load-holding devices and exclusive of safety devices without load-holding capacity. The overall length of any vehicle and trailer combination or semi-trailer combination or any driveaway saddlemount vehicle or fullmount vehicle transporter combination authorized to operate under this section shall not exceed sixty feet or, in the case of a house trailer and tow vehicle combination authorized by this section, 65 feet except as otherwise specifically authorized by this section or authorized by special permit as aforesaid; provided, however that no overall length limitation shall apply to semi-trailer units or tractor-trailer units when the trailer or semi-trailer in such units does not exceed 53 feet, or to tandem units or B-train assembly units when the trailer or semi-trailer in such units does not exceed twenty-eight feet. The one hundred and two inches width provided in this section shall be

exclusive of load-induced tire bulge, rearview mirrors, turn signal lamps, shade awnings on auto homes and house trailers, hand-holds for cab entry and egress and splash and spray suppressant devices; provided, however, that such mirrors and other devices are mounted so as not to cause a hazard to pedestrians on or adjacent to any way. Other safety devices which the department determines are necessary for the safe and efficient operation of motor vehicles shall not be included in the calculation of the one hundred and two inches width specified in this section; provided, however, that such other safety devices may be so mounted and so extend beyond the permitted width only in such manner and to such extent as determined by the department, but in no event shall such safety device extend more than three inches beyond the maximum vehicle width on each side. For the purposes of this section, all appurtenances at the front or rear of a commercial motor vehicle, semi-trailer, or trailer, whose functions relate to the safe and efficient operation of such vehicle, semi-trailer, or trailer, shall be excluded from the length computation of such vehicle, semi-trailer or trailer; provided, however, that such appurtenances shall not be designed or used for carrying cargo.

Notwithstanding the provisions of this section authorizing operation of vehicles on ways within the commonwealth, the department for specific safety reasons, may declare individual ways, unavailable for through-route travel by particular vehicles, provided signs are erected to indicate such vehicle exclusions.

Notwithstanding other provisions of this section, the combined overall length of a pole dolly or pole dickey and the load being carried thereon may, while being used for transportation of poles or single units of lumber or metal, exceed forty-eight feet, but the overall length when considered in combination with the motor vehicle accompanying it shall not exceed sixty-five feet or, in the case of an electric company as defined in chapter one hundred and sixty-four, or a telephone company regulated under chapter 166, seventy-five feet, without a special permit as provided for in this paragraph.

Notwithstanding the provisions of this section, no passenger motor vehicle shall be operated on any way if such vehicle has the side wall or thread of any tire projecting

outward beyond the outer portion of the fender or side body panel, unless such vehicle is equipped with four-wheel drive or is otherwise modified and intended for off-the-way use. No vehicle shall exceed a height of thirteen feet six inches, except that a special permit may be issued by the board or officer having charge of the ways for the operation of a vehicle of a height in excess of this limitation. The aforesaid dimensions of width, length and height shall be inclusive of the load and load-holding devices. No motor vehicle registered under the provisions of this chapter which has a total height exceeding ten feet, excluding the height of any load thereon shall be operated on any way unless such total height is painted or printed in letters and numerals at least four inches high in a conspicuous place upon the side or front of such vehicle. The foregoing limitations on length shall not apply to any vehicle or combination of vehicles being towed because of disablement or emergency. Except as provided in this section, no trailer which with its load weighs more than five thousand pounds, other than a semitrailer, a heavy duty platform trailer, a cable-reel trailer, a house trailer, a trailer having at least two axles and used to collect and carry bulk milk from dairy farms to processing plants, a trailer which is an apparatus or other object on wheels not used to transport other things for delivery, or a trailer having at least two axles which, when used for agricultural purposes with its load weighs not more than ten thousand pounds; provided, however, that the gross weight of such vehicle as operated does not exceed the gross vehicle weight rating as established by the original manufacturer of the trailer, shall be operated or drawn on any way without a permit so to operate from the board or officer having charge of such way or, in case of a state highway or a way determined by the department to be a through route, from said department. Any motor vehicle, trailer or other vehicle which carries a crane, or boom whether or not permanently or temporarily attached to said vehicle or trailer shall, if such crane or boom extends more than four feet beyond the bed or body of such vehicle or trailer, display at the extreme rear end of such crane or boom a red light or red flag or cloth in the manner provided in section seven; provided, however, that if such crane or boom extends more than fifteen feet beyond the bed or body of such vehicle or trailer, such vehicle or trailer shall not be operated or drawn on any way unless another vehicle

follows immediately behind the projecting extremity of such crane or boom for the purpose of protecting other vehicles approaching from the rear. A trailer which with its load weighs not more than six thousand pounds, or farm machinery or implement which exceeds the maximum width dimensions aforementioned, may be operated, drawn or carried upon any way, if such trailer, farm machinery or implement is used exclusively for agricultural purposes, but this provision shall not prevent any trailer, farm machinery or implement, if used exclusively for such purposes, from being operated without registration upon any way in the manner provided in section nine. A trailer which with its load weighs more than three thousand pounds may be operated or drawn upon any way for a distance not exceeding three hundred yards, if such trailer is used for industrial purposes other than agricultural purposes, for the purpose of going from property owned or occupied by the owner of such trailer to other property so owned or occupied. Unless otherwise specifically authorized by law, no motor vehicle shall be operated on any way to draw more than one trailer or other vehicle without a permit so to operate from the department of highways.

Section 19A Weight limitations for certain motor vehicles, semi-trailers, etc.; scales; penalties for violations

Section 19A. Any provisions of sections thirty and thirty A of chapter eighty-five to the contrary, notwithstanding a motor vehicle having two axles, which vehicle with its load weighs not more than forty-six thousand pounds, and a motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit having three or more axles, which unit or vehicle with its load weighs not more than eighty thousand pounds, may travel on a public way without a permit as required by sections thirty and thirty A of chapter eighty-five; provided, however, that no such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit, the weight on any axle of which, measured at the ground, exceeds twenty-two thousand four hundred pounds, or, in the case of axles spaced less than six feet apart, eighteen thousand pounds, shall so travel without such a permit; and provided, further, that such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit may not travel on a public way without such a permit if the overall gross weight on a group of two or more consecutive axles thereof exceeds the gross weight produced by application of the following formula:

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

where W = overall gross weight on any group of two or more consecutive axles to the nearest 500 pounds, L = distance in feet between the extreme of any group of two or more consecutive axles, and N = number of axles in 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 such consecutive sets of tandem axles is thirty-six feet or more; provided, that such overall gross weight may not exceed eighty thousand pounds.

Every operator of a motor vehicle operated on a way shall, upon request or direction of any officer authorized to enforce the provisions of this chapter, operate such motor vehicle with any trailer which may be attached thereto to and upon the nearest scales available to the commonwealth within a distance of not more than five miles and permit the weighing thereof together with its load. Whoever refuses to comply with the request or direction of such officer shall be punished by a fine of not less than three hundred nor more than five hundred dollars and the registrar may suspend such operator's license for not more than ninety days. Whenever such vehicle has been so weighed and is found to weigh in excess of the limits provided by this chapter, no person shall further operate it upon a way unless the gross weight shall have been reduced to comply with said limits by removal of the excess weight.

No motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit shall be operated, nor shall the owner or bailee thereof require or authorize such operation, when the gross weight of such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit exceeds the weight provided by this chapter or that specified in any permit issued by the commissioner of highways under sections thirty and thirty A of chapter eighty-five, whichever is greater, but in no event in excess of the gross weight for which such vehicle is registered, except in the case of a vehicle owned or leased by a carrier that is not domiciled in this commonwealth and which has a permit under section thirty A of chapter eighty-five to operate in excess of its registered gross weight; nor shall any person load or cause to be loaded such vehicle in excess of such weights. If the gross weight of any such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit

does not exceed one hundred and five per cent of the maximum gross weight provided by such permit, such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit shall not be deemed to be operating in violation of the provisions of sections thirty and thirty A of chapter eighty-five; but if the gross vehicle weight of such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit does exceed the said one hundred and five per cent of the maximum gross weight provided by said permit, any penalty provided by this chapter shall be determined on the difference between the actual gross weight of such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit and the weight authorized by this section or the weight authorized by the said permit for such motor vehicle, trailer, semitrailer, semitrailer unit or tandem unit, whichever weight is greater, at the time of such violation.

Upon the finding by an officer authorized to enforce the provisions of this chapter that a motor vehicle, trailer, semitrailer or semitrailer unit exceeds the said one hundred and five per cent of the maximum gross weight provided in said permit, or otherwise violates the conditions of any permit issued under sections thirty and thirty A of chapter eighty-five or section nineteen of this chapter, said officer may exercise reasonable discretion to prevent the continued transport of a load that is the principle cause of the violation. Neither the finding of such violation, nor the exercise of such reasonable discretion, however, shall be construed as nullifying or revoking any such permit, or as having any effect, beyond the actual citation of the violation, on the assessment of any penalties provided under section twenty.

In the weighing of any motor vehicle or trailer or semitrailer or semitrailer unit or tandem unit under this chapter, portable scales may be used; provided, however, that such scales have been approved by the director of standards under section twenty-nine of chapter ninety-eight; and, provided further, that such scales shall be inspected at least once in each year by the director of standards or his inspectors. No officer authorized to enforce the provisions of this chapter shall detain for weighing on portable scales more than two motor vehicles, with or without trailers or semitrailers attached thereto, at any one place at any one time.

In any prosecution for a violation of this section or of section nineteen or section thirty of chapter eighty-five, a signed certificate on oath of any person appointed under section eighty-seven A of chapter forty-one of the weight of any motor vehicle or trailer or semitrailer shall be admissible in evidence without further proof, and shall constitute prima facie evidence of the weight of the motor vehicle or trailer or semitrailer or semitrailer unit or tandem unit described in such certificate. The said certificate shall be in such form as the registrar shall prescribe and shall be signed and sworn to by a person appointed under said section eighty-seven A and present at the weighing of such motor vehicle or trailer or semitrailer or semitrailer unit or tandem unit, and the court shall take judicial notice of the signature of such person and that he is so appointed.

In any claim for bodily injuries or for damage to property arising out of such direction to a scale location or such weighing, any officer or employee of the commonwealth authorized to enforce the provisions of this chapter may file a written request with the attorney general that the attorney general defend him against an action for damages for bodily injuries, including death, or for damage to property arising out of such officer's enforcement of this section, and the provisions of section three B of chapter twelve shall apply to such action as if it had arisen out of the operation of a motor vehicle.

Notwithstanding the foregoing provisions of this section, nor any contrary provisions of section thirty of chapter eighty-five, a construction type motor vehicle or a motor vehicle designed and used for the hauling of refuse having two axles, which vehicle with its load weighs not more than twenty-three tons, or a motor vehicle carrying bulk feed, or a construction type semitrailer unit or tandem unit or motor vehicle having three axles, or a semitrailer unit or a tandem unit or motor vehicle having three axles while carrying liquid petroleum products, or a motor vehicle having three axles and designed and used for the hauling of refuse, which vehicle with its load weighs not more than thirty tons, may travel on a way while engaged in hauling construction materials or liquid petroleum products or bulk feed or refuse without a permit as required by said

section thirty of said chapter eighty-five; provided, however, that the gross weight of such vehicle as operated does not exceed the gross vehicle weight rating as established by the original manufacturer of the chassis; and, provided further, that the vehicle is duly registered in this commonwealth for such weight. The operator of such a vehicle shall at all times comply with the speed limitations as provided by section seventeen.

§ 22-301. **Brake equipment required**

- (a) **"Driveaway or towaway operation" defined.** -- "Driveaway or towaway operation" means any operation in which any motor vehicle, **trailer**, or semitrailer, singly or in combination, new or used, is the commodity being transported, when one set or more of wheels of the vehicle are on the roadway during the transportation, whether or not the vehicle furnishes the motive power.
- (b) **In general.** -- Every motor vehicle, **trailer**, semitrailer, and pole **trailer**, and any combination of these vehicles, while operating on a highway in this State, shall be equipped with **brakes** in compliance with the requirements of this title. All the vehicles and combinations of vehicles shall be equipped with service **brakes** complying with the performance requirements of § 22-302 of this subtitle and, except as provided in subsection (l) of this section, adequate to control the movement of and to stop and hold the vehicle under all conditions of loading, and on any grade incident to its operation.
- (c) **Parking brakes; adequate.** --
 - (1) All the vehicles and combinations of vehicles, except motorcycles, shall be equipped with parking **brakes** adequate to hold the vehicle on any grade on which it is operated, under all conditions of loading, on a surface free from snow, ice, or loose material.
 - (2) The parking **brakes** shall be capable of being applied in conformance with the foregoing requirements by the driver's muscular effort or by spring action or by equivalent means. Their operation may be assisted by the service **brakes** or other source of power, provided that failure of the service **brake** actuation system or other power assisting mechanism will not prevent the parking **brakes** from being applied in conformance with the foregoing requirements.
 - (3) The parking **brakes** shall be so designed that when once applied they shall remain applied with the required effectiveness despite exhaustion of any source of energy or leakage of any kind.
 - (4) The same **brake** drums, **brake** shoes and lining assemblies, **brake** shoe anchors and mechanical **brake** shoe actuation mechanism normally associated with the wheel **brake** assemblies may be used for both the service **brakes** and the parking **brakes**. If the means of applying the parking **brakes** and the service **brakes** are connected in any way, they shall be so constructed that failure of any one part does not leave the vehicle without operative **brakes**.
- (d) **Brakes on all wheels.** -- Every vehicle shall be equipped with **brakes** acting on all wheels, except:
 - (1) **Trailers**, semitrailers, or pole **trailers** of a registered gross weight not exceeding 3,000 pounds, provided that:

- (i) The total weight on and including the wheels of the **trailer** or **trailers** does not exceed 40 percent of the gross weight of the towing vehicle when connected to the **trailer** or **trailers**; and
 - (ii) The combination of vehicles, consisting of the towing vehicle and its total towed load, is capable of complying with the performance requirements of § 22-302 of this subtitle;
 - (2) **Trailers**, semitrailers, or pole **trailers** of a registered gross weight exceeding 3,000 pounds and not exceeding 10,000 pounds that:
 - (i) Have 2 or more axles;
 - (ii) Are equipped with **brakes** acting on all wheels of at least 1 axle; and
 - (iii) As part of a combination of vehicles, consisting of the towing vehicle and the total load, is capable of complying with the performance requirements of § 22-302 of this subtitle;
 - (3) Any vehicle being towed in driveaway or towaway operations, provided that the combination of vehicles is capable of complying with the performance requirements of § 22-302 of this subtitle;
 - (4) Trucks, truck tractors, and special mobile equipment manufactured before July 24, 1980 with three or more axles need not have **brakes** on the front wheels. However, the trucks and truck tractors must be capable of complying with the performance requirements of § 22-302 of this subtitle;
 - (5) The wheel of a sidecar attached to a motorcycle or to a motor-driven cycle, or the front wheel of a motor-driven cycle need not be equipped with **brakes**, provided that the motorcycle or motor-driven cycle is capable of complying with the performance requirements of § 22-302 of this subtitle; and
 - (6) Any vehicle equipped with at least 2 steerable axles need not have **brakes** on the wheels of 1 of the axles. However, the vehicle must be capable of complying with the performance requirements of § 22-302 of this subtitle.
- (e) **Automatic trailer brake application upon breakaway. --**
 - (1) Every **trailer**, semitrailer, and pole **trailer** equipped with air or vacuum actuated **brakes**, and every **trailer**, semitrailer, and pole **trailer** with a registered gross weight in excess of 10,000 pounds, manufactured or assembled after June 1, 1970, shall be equipped with **brakes** acting on all wheels and of a character to be applied automatically and promptly, and remain applied for at least 15 minutes on breakaway from the towing vehicle.
 - (2) Every **trailer**, semitrailer, and pole **trailer** with a registered gross weight of more than 3,000 pounds and not more than 10,000 pounds, manufactured or assembled after June 1, 1970, shall be equipped with **brakes** acting on all wheels of at least 1 axle and of a character to be applied automatically and promptly, and remain applied for at least 15 minutes on breakaway from the towing vehicle.
- (f) **Tractor brakes protected. --** Every motor vehicle manufactured or assembled after June 1, 1970, and used to tow a **trailer**, semitrailer, or pole **trailer** equipped with **brakes**, shall be equipped with means for providing that, in case of breakaway of the towed vehicle, the towing vehicle will be capable of being stopped by the use of its service **brakes**.
- (g) **Trailer air reservoirs safeguarded. --** Air **brake** systems installed on **trailers** manufactured or assembled after June 1, 1970, shall be so designed that the

supply reservoir used to provide air for the **brakes** is safeguarded against backflow of air from the reservoir through the supply line.

- **(h) Two means of emergency brake operation. --**
 - **(1) Air Brakes.** After June 1, 1971, every towing vehicle, when used to tow another vehicle equipped with air controlled **brakes**, in other than driveaway or towaway operations, shall be equipped with two means for emergency application of the **trailer brakes**. One of these means shall apply the **brakes** automatically in the event of a reduction of the towing vehicle air supply to a fixed pressure, which shall be not lower than 20 pounds per square inch nor higher than 45 pounds per square inch. The other means shall be a manually controlled device for applying and releasing the **brakes**, readily operable by a person seated in the driving seat, and its emergency position or method of operation shall be clearly indicated. In no instance may the manual arrangement be arranged to permit its use to prevent operation of the automatic means. The automatic and the manual means required by this section may be, but are not required to be, separate.
 - **(2) Vacuum Brakes.** After June 1, 1970, every towing vehicle used to tow other vehicles equipped with vacuum **brakes**, in operations other than driveaway or towaway operations, shall have, in addition to the single control device required by subsection (i) of this section, a second control device that can be used to operate the **brakes** on towed vehicles in emergencies. The second control shall be independent of **brake** air, hydraulic, and other pressure, and independent of other controls, unless the **braking** system is so arranged that failure of the pressure on which the second control depends will cause the towed vehicle **brakes** to be applied automatically. The second control is not required to provide modulated **braking**.
- **(i) Single control to operate all brakes. --** Except as provided in subsection (l) of this section, after June 1, 1971, every motor vehicle, **trailer**, semitrailer, and pole **trailer**, and every combination of these vehicles, except motorcycles, equipped with **brakes** shall have the **braking** system so arranged that one control device can be used to operate all service **brakes**. This requirement does not prohibit vehicles from being equipped with an additional control device to be used to operate **brakes** on the towed vehicles. This regulation does not apply to driveaway or towaway operations unless the **brakes** on the individual vehicles are designed to be operated by a single control on the towing vehicle, nor does it apply to the operation of electric **trailer brakes**.
- **(j) Reservoir capacity and check valve. --**
 - **(1) Air Brakes.** Every bus, truck, or truck tractor with air operated **brakes** shall be equipped with at least one reservoir sufficient to insure that, when fully charged to the maximum pressure as regulated by the air compressor governor cut-out setting, a full service **brake** application may be made without lowering the reservoir pressure by more than 20 percent. Each reservoir shall be provided with means for readily draining accumulated oil or water.
 - **(2) Vacuum Brakes.** After June 1, 1971, every truck with three or more axles equipped with vacuum assist type **brakes** and every truck tractor and truck used for towing a vehicle equipped with vacuum **brakes** shall be equipped with a reserve capacity or a vacuum reservoir sufficient to insure that, with the reserve capacity or reservoir fully charged and with the engine stopped, a full

service **brake** application may be made without depleting the vacuum supply by more than 40 percent.

- (3) Reservoir Safeguarded. All motor vehicles, **trailers**, semitrailers, and pole **trailers**, when equipped with air or vacuum reservoirs or reserve capacity as required by this section, shall have reservoirs or reserve capacity so safeguarded by a check valve or equivalent device that, in the event of failure or leakage in its connection to the source of compressed air or vacuum, the stored air or vacuum is not depleted by the leak or failure.
- (k) **Warning devices.** --
 - (1) **Air Brakes.** Every bus, truck, or truck tractor using compressed air for the operation of its own **brakes** or the **brakes** on any towed vehicle, shall be provided with a warning signal, other than a pressure gauge, readily audible or visible to the driver, which will operate at any time that the air reservoir pressure of the vehicle is below 50 percent of the air compressor governor cut-out pressure. In addition, the vehicle shall be equipped with a pressure gauge visible to the driver, which indicates in pounds per square inch the pressure available for **braking**.
 - (2) **Vacuum Brakes.** After June 1, 1971, every truck tractor and truck used for towing a vehicle equipped with vacuum operated **brakes** and every truck with three or more axles using vacuum in the operation of its **brakes**, except those in driveaway or towaway operations, shall be equipped with a warning signal, other than a gauge indicating vacuum, readily audible or visible to the driver, which will operate at any time the vacuum in the vehicle's supply reservoir or reserve capacity is less than 8 inches of mercury.
 - (3) **Combination of Warning Devices.** When a vehicle required to be equipped with a warning device is equipped with both air and vacuum power for the operation of its own **brakes** or the **brakes** on a towed vehicle, the warning devices may be, but are not required to be, combined into a single device that serves both purposes. A gauge or gauges indicating pressure or vacuum is not an adequate means of satisfying this requirement.
- (l) **Surge brakes.** --
 - (1) In this subsection, "surge **brakes**" means a **braking** system designed to activate the **brakes** of a vehicle being towed as a result of the forward pressure of the vehicle against the towing vehicle during deceleration.
 - (2) A **trailer** or semitrailer may be equipped with surge **brakes** if:
 - (i) The **trailer** or semitrailer has a manufacturer's gross vehicle weight rating, or registered weight, whichever is less, of 10,000 pounds or less;
 - (ii) The combined gross vehicle weight rating, combined registered weight, and the gross combination weight of the **trailer** or semitrailer and the towing vehicle is 26,000 pounds or less;
 - (iii) The vehicle or combination of vehicles is not designed or used to transport 16 or more passengers including the driver of the towing vehicle;
 - (iv) The actual gross weight of the **trailer** or semitrailer and load does not exceed the manufacturer's gross vehicle weight rating or registered weight, whichever is less;

- (v) The actual gross weight of the towing vehicle and load does not exceed the manufacturer's gross vehicle weight rating or registered weight, whichever is less;
- (vi) The **trailer** or semitrailer **brakes** are designed and connected in such a manner that in case of accidental breakaway of the towed vehicle, the **brakes** will apply automatically;
- (vii) The vehicle or combination of vehicles is not used to transport hazardous materials of a type and quantity that requires placarding;
- (viii) The vehicle or combination of vehicles is not used to transport liquids or gases contained in packaging that exceeds a capacity of 119 gallons;
- (ix) The **trailer** or semitrailer has a gross weight rating, registered weight, or gross weight, whichever is greater, that is not more than one and one-half times the gross weight rating or registered weight, whichever is less, of the towing vehicle; and
- (x) For vehicles used for commercial purposes, the **trailer** or semitrailer is used only in intrastate commerce.

§ 24-107. **Trailers** and towed vehicles

- (a) **Definitions.** --
 - (1) In this section the following words have the meanings indicated.
 - (2) "Primary connecting system" means the combination of devices and their attaching structures that are used to connect a towed vehicle to a towing vehicle.
 - (3) "**Safety chain**" means a flexible tension member connected from the front of the towed vehicle to the rear of the towing vehicle for the purpose of retaining the connection between the towed and towing vehicles if the connection provided by the primary connecting system fails.
 - (4) "Tow dolly" means a vehicle having a tongue or towbar attachment designed to tow other vehicles and used to tow:
 - (i) Another vehicle when the front or rear wheels of the towed vehicle are placed in a cradle-like device that lifts the wheels from the highway; or
 - (ii) A **trailer** or semitrailer when the towing vehicle has a fifth-wheel attachment device.
 - (5) "Towbar" means a strut or column-like device temporarily attached between the rear of a towing vehicle and the front of the towed vehicle.
- (b) **Primary connection system.** -- When towing another vehicle, the driver shall ensure that:
 - (1) The towed vehicle is securely attached to the towing vehicle by a primary connecting system;
 - (2) The connection used is:
 - (i) Structurally adequate for the weight drawn; and
 - (ii) Mounted properly and securely, without excessive slack, but with enough slack to allow for articulation of the connection;
 - (3) The locking device that prevents separation of the towed and towing vehicles is working properly and is locked in place; and
 - (4) One or more **safety chains** are attached to the towed vehicle and the frame of the towing vehicle and have no more slack than is necessary for proper turning.

- (c) **Safety chains.** -- Attachment of the **safety chains** to the pintle hook does not satisfy the requirements of this section.
- (d) **Connection limit.** -- Except for the connection between any two vehicles carrying poles, pipes, machinery, or other objects that cannot be readily dismembered, the connection between vehicles may not exceed 15 feet.
- (e) **Fifth-wheel connection device.** -- A connection made with a fifth-wheel connection device is not required to use **safety chains** or cables as additional securing devices.
- (f) **Steering of towed vehicle.** -- If a vehicle is towed by a rope, **chain**, or cable, a driver must be in and capable of steering the towed vehicle.
- (g) **Sway limits.** -- A primary connecting system used in a combination of vehicles shall be designed, constructed, and installed to insure that a towed vehicle does not shift or swerve more than 6 inches to either side of the path of the towing vehicle while the towing vehicle is moving in a straight line on a level, smooth, paved surface.
- (h) **Display of warning flag.** -- While one vehicle is towing another and the connection is a **chain**, rope, or cable, a white, red, or orange-fluorescent warning flag or cloth at least 18 inches square shall be displayed on the connection.
- (i) **Tow dolly.** -- Except as otherwise provided in this title, or when one tow dolly is used to tow one other vehicle, a vehicle may not be operated in combination with more than one other vehicle.
- (j) **Regulations.** --
 - (1) The Administration may adopt regulations that establish standards for hitching devices and towing procedures for towing and towed vehicles.
 - (2) Except as otherwise provided in this section, this subsection applies to tractor-trailer combinations, semitrailer combinations, and any other vehicle combinations designed and used for carrying freight or merchandise in furtherance of any commercial enterprise.

§ 22-411. Metal frame required for rear of **trailers** and semitrailers

- (a) **Permanent metal frames required.** -- Every **trailer** or semitrailer of a gross weight of 3,000 pounds or more, when operated on a highway, shall be equipped with a permanent metal frame attached to the underside of the rear of the **trailer**.
- (b) **Specifications of frame.** -- The frame may not be any wider than the width of the **trailer** and shall be not more than 30 inches above the highway when moving and constructed of heavy gauge steel.
- (c) **Maximum transverse distance.** -- The maximum transverse distance from the widest part of the vehicle at the rear to the frame may not exceed 18 inches.
- (d) **Interference with lights or other warning devices prohibited.** -- The frame shall be constructed so as not to interfere with lights or other warning devices.
- (e) **Trailers or semitrailers.** -- Any **trailer** or semitrailer so constructed and maintained that the body, chassis, or other parts of it afford the protection required by this section is in compliance with this section.
- (f) **Exceptions.** -- This section does not apply to pole **trailers** or to vehicles where the installation of the required frame would prevent operation of the vehicle to secure its designed use.

§ 22-204. Tail lamps; illumination of **rear** registration plate

- (a) **Equipment of at least 2 lamps.** -- Except as otherwise provided in this section, after June 1, 1971, every motor vehicle, **trailer**, semitrailer, and pole **trailer**, and any other

vehicle that is being drawn at the end of a combination of vehicles, shall be equipped with at least **2** tail lamps mounted on the **rear**, which, when **lighted** as required in § 22-201.1 of this subtitle, shall emit a red **light** plainly visible from a distance of 1,000 feet to the **rear**.

- **(b) Vehicles manufactured before June 1, 1971.** -- Every motor vehicle, **trailer**, semitrailer, and pole **trailer**, and any other vehicle that is being drawn at the end of a combination of vehicles, and that was manufactured or assembled before June 1, 1971, shall have at least 1 tail lamp mounted on the **rear** which, when **lighted** as required in § 22-201.1 of this subtitle, shall emit a red **light** plainly visible from a distance of at least 300 feet to the **rear**.
- **(c) Rearmost vehicle.** -- On a combination of vehicles, only the tail lamps on the rearmost vehicle need actually be seen from the distance specified in subsections (a) and (b) of this section.
- **(d) Placement where more than 1 lamp.** -- On vehicles equipped with more than 1 tail lamp, the lamps shall be mounted on the same level and as widely spaced laterally as practicable.
- **(e) Height.** -- Every tail lamp on every vehicle shall be located at a height of not more than 72 inches nor less than 20 inches.
- **(f) Illumination of rear registration plate.** -- Either a tail lamp or a separate lamp shall be constructed and placed to illuminate, with a white**light**, the **rear** registration plate and render it clearly legible from a distance of 50 feet to the **rear**. Any tail lamp or tail lamps, together with any separate lamp or lamps for illuminating the **rear** registration plate, shall be wired to be **lighted** whenever the headlamps or auxiliary driving lamps are **lighted**.
- **(g) Special mobile equipment.** -- Notwithstanding any provision of this section to the contrary, special mobile equipment that is being drawn at the end of a combination of vehicles is not required to be equipped with tail lamps unless:
 - **(1)** The special mobile equipment obstructs the tail lamps, stop lamps, turn signals, or, except for the registration plate lamp, any lamps of the towing vehicle required by law to be visible from the **rear**; or
 - **(2)** The special mobile equipment extends more than 12 feet from the **rear** of the towing vehicle.

§ 22-403. **Mirrors**

- **(a) Motor vehicles -- In general.** -- Every motor vehicle shall be equipped with at least one **mirror** located to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear of the vehicle.
- **(b) Motor vehicles -- Registered in this State.** -- Every motor vehicle registered in this State shall be equipped with an outside **mirror** on the driver's side located to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear of the vehicle and along the driver's side of the vehicle. This subsection does not apply to motorcycles, which are governed by subsection (c) of this section.
- **(c) Motorcycle.** -- Every motorcycle shall be equipped with two rearview **mirrors**, one each attached to the right and left handlebars, which shall meet applicable federal motor vehicle safety standards.
- **(d) Obstruction of inside view.** -- Where the view through the inside rearview **mirror** is obstructed, two outside rearview **mirrors** are required.