

Iowa:

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Iowa Code

Title 8 - Transportation

Subtitle 2 - Vehicles

CHAPTER 321 - MOTOR VEHICLES AND LAW OF THE ROAD

321.123 - TRAILERS

321.1 Definitions of words and phrases. The following words and phrases when used in this chapter shall, for the purpose of this chapter, have the meanings respectively ascribed to them.

9. “*Combination*” or “combination of vehicles” shall be construed to mean a group consisting of two or more motor vehicles, or a group consisting of a motor vehicle and one or more *trailers*, *semitrailers* or vehicles, which are coupled or fastened together for the purpose of being moved on the highways as a unit.

71. “*Semitrailer*” means every vehicle without motive power designed for carrying persons or property and for being drawn by a motor vehicle and so constructed that some part of its weight and that of its load rests upon or is carried by another vehicle. Wherever the word “*trailer*” is used in this chapter, same shall be construed to also include “*semitrailer*”. A “*semitrailer*” shall be considered in this chapter separately from its power unit.

85. “*Trailer*” means every vehicle without motive power designed for carrying persons or property and for being drawn by a motor vehicle and so constructed that no part of its weight rests upon the towing vehicle.

d. “*Motor home*” means a motor vehicle designed as an integral unit to be used as a conveyance upon the public streets and highways and for use as a temporary or recreational dwelling and having at least four, two of which shall be systems specified in subparagraphs (1), (4), or (5) of this paragraph, of the following permanently installed systems which meet American national standards institute and national fire protection association standards in effect on the date of manufacture:

- (1) Cooking facilities.
- (2) Ice box or mechanical refrigerator.
- (3) Potable water supply including plumbing and a sink with faucet either self-contained or with connections for an external source, or both.
- (4) Self-contained toilet or a toilet connected to a plumbing system with connection for external water disposal, or both.
- (5) Heating or air conditioning system or both, separate from the vehicle engine or the vehicle engine electrical system.
- (6) A one hundred ten – one hundred fifteen volt alternating current electrical system separate from the vehicle engine electrical system either with its own power supply or with a connection for an external source, or both, or a liquefied petroleum system and supply.

e. “Motorsports recreational vehicle” means a modified motor vehicle used for the purpose of participating in motorsports competitions and consisting of a conversion unit mounted on a truck tractor or motor truck chassis such that the motor vehicle can be used as a conveyance on the highway and as a temporary or recreational dwelling. The motor vehicle must have at least four of the permanently installed systems listed in paragraph “d”, two of which shall be systems specified in paragraph “d”, subparagraph (1), (4), or (5).

321.454 Width of vehicles. The total outside width of a vehicle or the load on the vehicle shall not exceed eight feet six inches. This limitation on the total outside width of a vehicle or the load on the vehicle does not include safety equipment on a vehicle or incidental appurtenances or retracted awnings on motor homes, motorsports recreational vehicles, travel *trailers*, or fifth-wheel travel *trailers* if the incidental appurtenance or retracted awning is less than six inches in width. However, if hay, straw, or stover is moved on an implement of husbandry and the total width of load of the implement of husbandry exceeds eight feet six inches, the implement of husbandry is not subject to the permit requirements of chapter 321E. If hay, straw, or stover is moved on any other vehicle subject to registration, the moves are subject to the permit requirements for transporting loads exceeding eight feet six inches in width as required under chapter 321E.

321.456 Height of vehicles. A vehicle unladen or with load shall not exceed a height of thirteen feet, six inches, except that a vehicle or combination of vehicles coupled together and used exclusively for the transportation of passenger vehicles, light delivery trucks, panel delivery trucks, pickup trucks, or recreational vehicle chassis may operate with a height not to exceed fourteen feet. This section shall not be construed to require any railroad or public authorities to

provide sufficient vertical clearance to permit the operation of such vehicle upon the highways of this state. Any damage to highways, highway or railroad structures, or underpasses caused by the height of any vehicle provided for by this section shall be borne by the operator or owner of the vehicle.

321.457 Maximum length.

1. A combination of four vehicles is not allowed on the highways of this state, except for power units saddle mounted on other power units which shall be restricted to a maximum overall length of ninety-seven feet.
2. The maximum length of any motor vehicle or combination of vehicles operated on the highways of this state is as follows:
 - a. A single truck, unladen or with load, shall not have an overall length, inclusive of front and rear bumpers, in excess of forty-one feet. When determining the overall length of a single truck, the following shall be excluded:
 - (1) Cargo extending not more than three feet beyond the front bumper and not more than four feet beyond the rear bumper when transporting motor vehicles, boats, and chassis.
 - (2) An unladen cargo carrying device extending no greater than twenty-four inches from the rear of the bed of the truck.
 - (3) A cargo carrying device with load.
 - b. A single bus shall not have an overall length, inclusive of front and rear bumpers, in excess of forty-five feet, except that buses constructed so as to contain a flexible part allowing articulation shall not exceed sixty-one feet.
 - c. A manufactured or mobile home not in excess of forty-eight feet in length may be drawn by any motor vehicle, except a motor truck, provided that the manufactured or mobile home and its towing unit are not in excess of an overall length of sixty feet. For the purposes of this subsection, a light delivery truck, panel delivery truck, or "pickup" is not a "motor truck". A portable livestock loading chute not in excess of a length of thirteen feet including its hitch or tongue may be drawn by any vehicle or combination of vehicles, provided that the vehicle or combination of vehicles drawing the loading chute is not in excess of the legal length provided for such vehicles or combinations.
 - d. A combination of three vehicles coupled together one of which is a motor vehicle, unladen or with load, other than a truck tractor, shall not have an overall length, inclusive of front and rear bumpers, in excess of seventy feet.
 - e. A motor vehicle or combination of vehicles may be operated upon the highways of this state, irrespective of the length and weight limitations imposed by the laws of this state, if the motor vehicle or combination of vehicles is operated within the corporate limits of a city abutting a border of this state and such operations have been approved by ordinance of the city council and

if the length and weight of the motor vehicle or combination of vehicles is in conformity with the laws relating to length and weight of the abutting state. If a city council has authorized such operation upon highways within the corporate limits, then the limit of travel for such motor vehicles or combination of vehicles within the state is extended to the commercial zones as described by federal regulations concerning interstate commerce, 49 C.F.R. §1048.101, and to the interstate system as provided in 23 U.S.C. §127 and 49 U.S.C. §31112(c), as amended by Pub.L. No.104-59.

f. A trailer or semitrailer, laden or unladen, shall not have an overall length in excess of fifty-three feet when operating in a truck tractor-semitrailer combination exclusive of retractable extensions used to support the load. However, when a trailer or semitrailer is used exclusively for the transportation of passenger vehicles, light delivery trucks, panel delivery trucks, pickup trucks, recreational vehicle chassis, or boats, the load carried on the trailer or semitrailer may extend up to three feet beyond the front bumper and up to four feet beyond the rear bumper of the trailer or semitrailer. A lowboy semitrailer, laden or unladen, which is designed and exclusively used for the transportation of construction equipment shall not have an overall length in excess of fifty-seven feet when used in a truck tractor-semitrailer combination.

g. A trailer or semitrailer, laden or unladen, shall not have an overall length in excess of twenty-eight feet six inches when operating in a truck tractor-semitrailer-trailer combination or truck tractor-semitrailer-semi-trailer combination. When the semitrailers in a truck tractor-semitrailer-semi-trailer combination are connected by a rigid frame extension including a fifth-wheel connection point attached to the rear frame of the first semitrailer, the length of the frame extension shall not be included when determining the overall length of the first semitrailer.

h. Power units designed to carry cargo, when used in combination with a trailer or semitrailer shall not exceed sixty-five feet in overall length for the combination exclusive of retractable extensions used to support the load. However, if a combination of vehicles is used exclusively for the transportation of passenger vehicles, light delivery trucks, panel delivery trucks, pickup trucks, recreational vehicle chassis, or boats, the load may extend up to three feet beyond the front bumper of the power unit and up to four feet beyond the rear bumper of the trailer or semitrailer.

i. A stinger-steered automobile transporter shall not have an overall length exceeding seventy-five feet, exclusive of retractable extensions used to support the load and all other devices or appurtenances related to the safe and efficient operation of the vehicle, except that the load may extend up to three feet beyond the front bumper and up to four feet beyond the rear bumper.

j. A motor home or motorsports recreational vehicle shall not have an overall length, excluding front and rear bumpers and safety equipment, in excess of forty-five feet.

k. A combination of two vehicles coupled together, one of which is a motor home, shall not have an overall length in excess of sixty-five feet.

l. A combination of two vehicles coupled together, one of which is a travel trailer or fifth-wheel travel trailer, shall not have an overall length in excess of sixty-five feet.

m. Notwithstanding any other provision of this chapter, and to the extent allowed under federal law, the maximum length of a towaway trailer transporter combination operated on the highways of this state is eighty-five feet. For purposes of this paragraph, “towaway trailer transporter combination” means a combination of vehicles consisting of a towing vehicle and two unladen trailers or unladen semitrailers in which the trailers or semitrailers constitute inventory property of the manufacturer intended for sale and which are being transported from a trailer manufacturer to a trailer distributor or authorized trailer dealer.

n.(1) Notwithstanding paragraph “g” or any other provision of this chapter, the department is authorized to adopt rules providing for economic export corridors for the transportation of goods or products manufactured in Iowa to or through the state of South Dakota and for the return of unladen semitrailers or unladen full trailers used for the transportation of those goods or products. The rules may authorize the operation of the following combinations of vehicles on an economic export corridor:

(a) A truck tractor-semitrailer-semitrailer converted to a full trailer by use of a dolly equipped with a fifth wheel which is considered a part of the trailer for all purposes, and not a separate unit.

(b) A truck tractor-semitrailer-full trailer.

(c) A truck tractor-semitrailer-semitrailer combination, where the semitrailers are connected by a rigid frame extension including a fifth wheel connection point attached to the rear frame of the first semitrailer. The length of the frame extension shall not be included when determining the overall length of the first semitrailer.

(2) Rules adopted pursuant to this paragraph “n” shall provide that combinations of vehicles authorized to operate on an economic export corridor shall meet all of the following requirements:

(a) The length of the combination of vehicles, excluding the length of the truck tractor, shall not exceed eighty-one and one-half feet.

(b) The length of either semitrailer or full trailer shall not exceed forty-five feet.

(c) The weight of the second semitrailer or full trailer shall not exceed the weight of the first semitrailer by more than three thousand pounds.

(d) The gross weight of the combination of vehicles shall not exceed eighty thousand pounds and the combination of vehicles shall not exceed the gross axle weight limits of section 321.463, subsection 2.

(e) The load on each semitrailer or full trailer in the combination shall be an indivisible load. For the purpose of issuing permits for height or width under chapter 321E, the combination of vehicles shall be considered an indivisible load so long as the load on each semitrailer or full trailer in the combination remains an indivisible load.

(3) An economic export corridor established by the department shall not include any segment of the interstate system or any part of the national network of highways identified pursuant to 23 C.F.R. pt.658. This subparagraph does not prohibit operation on any segment of the interstate system or part of the national network of highways that is permitted under paragraph “e”.

(4) For purposes of this paragraph “n”, “full trailer” means as defined in 49 C.F.R. §390.5.

o. Notwithstanding any other provision of this chapter, and to the extent allowed under federal law, a combination of two vehicles coupled together, one of which is a motorsports recreational vehicle, shall not have an overall length in excess of eighty-five feet.

321.461 Trailers and towed vehicles.

1. When one vehicle is towing another the drawbar or other connection shall not exceed fifteen feet from one vehicle to the other except the connection between any two vehicles transporting poles, pipe, machinery, or other objects of structural nature which cannot readily be dismembered.

2. If the towing vehicle is a motor truck and the towed vehicle is a single *trailer* with a single point of articulation at the hitch connection, the drawbar or other connection shall not exceed twenty-one feet. The length of the drawbar or other connection shall be measured from the centerline of the hitch assembly on the towing vehicle to the front of the body of the towed vehicle. A vehicle which has a drawbar or other connection which measures between fifteen and twenty-one feet in length shall have at least one yellow reflector visible on each vertical face of the drawbar or other connection, located near the midpoint between the towing and the towed vehicle. A vehicle which has a drawbar or other connection which measures between fifteen and twenty-one feet in length shall have affixed to the rear of the towed vehicle a sign indicating that the vehicle is a towed vehicle.

321.462 Drawbars and safety chains.

When one vehicle is towing or pulling another vehicle the drawbar or other connection shall be of sufficient strength to pull all weight towed thereby and shall be fastened to the frame of the towing vehicle in such manner as to prevent sideway, and in addition to such principal connection there shall be a safety chain which shall be so fastened as to be capable of holding the towed vehicle should the principal connection for any reason fail.

321.430 Brake, hitch, and control requirements.

- **1.** Every motor vehicle, other than a motorcycle, or motorized bicycle, when operated upon a highway shall be equipped with **brakes** adequate to control the movement of and to stop and hold such vehicle, including two separate means of applying the **brakes**, each of which means shall be effective to apply the **brakes** to at least two wheels. If these two separate means of applying the **brakes** are connected in any way, they shall be so

constructed that failure of any one part of the operating mechanism shall not leave the motor vehicle without **brakes** on at least two wheels.

- **2.** Every motorcycle and motorized bicycle, when operated upon a highway, shall be equipped with at least one **brake**, which may be operated by hand or foot.
- **3.** Every **trailer**, semitrailer, or travel **trailer** of a gross weight of three thousand pounds or more shall be equipped with **brakes** adequate to control the movement of and to stop and hold such vehicle when operated on the highways of this state. Every **trailer**, semitrailer, or travel **trailer** with a gross weight of three thousand pounds or more shall be equipped with a separate, auxiliary means of applying the **brakes** on the **trailer**, semitrailer, or travel **trailer** from the cab of the towing vehicle, or with self-actuating **brakes**, and shall also be equipped with a weight equalizing hitch with a sway control. **Trailers** or semitrailers with a truck or truck tractor need only comply with the **brake** requirements.
- **4.** Except as otherwise provided in this chapter, every new motor vehicle, **trailer**, or semitrailer hereafter sold in this state and operated upon the highways shall be equipped with service **brakes** upon all wheels of every such vehicle with the following exceptions:
 - **a.** Any motorcycle or motorized bicycle.
 - **b.** Any **trailer** or semitrailer of less than three thousand pounds gross weight need not be equipped with **brakes**.
 - **c.** Trucks and truck tractors equipped with three or more axles and manufactured before July 25, 1980, need not have **brakes** on the front wheels, except that such vehicles equipped with two or more front axles shall be equipped with **brakes** on at least one of the axles; however, the service **brakes** of the vehicle shall comply with the performance requirements of section 321.431.
 - **d.** Only such **brakes** on the vehicle or vehicles being towed in a driveaway-towaway operation need be operative as may be necessary to insure compliance by the combination of vehicles with the performance requirements of section 321.431. The term "driveaway-towaway" operation as used in this subsection means any operation in which any motor vehicle or motor vehicles, new or used, constitute the commodity being transported, when one set or more of wheels of any such motor vehicle or motor vehicles are on the roadway during the course of transportation, whether or not any such motor vehicle furnishes the motive power.

321.392 Clearance and identification **lights**.

- Every motor truck, and every **trailer** or semitrailer of over three thousand pounds gross weight, shall be equipped with the following **lighting** devices and reflectors in addition to other requirements of this chapter, and such devices shall be **lighted** at the times mentioned in section 321.384.

- **1.** Every motor truck, whatever its size shall have the following:
 - **a.** On each side, one reflector, at or near the rear; and
 - **b.** On the rear, two reflectors, one at each side.
- **2.** Every motor truck, eighty inches or more in width shall have the following in addition to the requirements of subsection 1:
 - **a.** If thirty feet or less in overall length:
 - **(1)** On the front, two clearance lamps, one at each side; and
 - **(2)** On the rear, two clearance lamps, one at each side.
 - **b.** If more than thirty feet in overall length:
 - **(1)** On the front, two clearance lamps, one at each side;
 - **(2)** On each side, two side-marker lamps, one at or near the front, and one at or near the rear, and an additional reflector at or near the front; and
 - **(3)** On the rear, two clearance lamps, one at each side.
- **3.** Every truck tractor or road tractor shall have the following:
 - **a.** On the front, two clearance lamps, one at each side if the tractor cab is as wide as, or wider than, the widest part of the vehicle or vehicles towed;
 - **b.** On each side, one side-marker lamp at or near the front; and
 - **c.** On the rear, one tail lamp.
- **4.** Every **trailer** or semitrailer having a gross weight in excess of three thousand pounds shall have the following:
 - **a.** On the front, two clearance lamps, one at each side, if the **trailer** is wider in its widest part than the cab of the vehicle towing it;
 - **b.** On each side, one side-marker lamp at or near the rear; two reflectors, one at or near the front and one at or near the rear; and
 - **c.** On the rear, two clearance lamps, one at each side; one stop **light**; one tail lamp; and two reflectors, one at each side.
- **5.** Every motor truck or combination of motor truck and **trailer** having a length in excess of thirty feet or a width in excess of eighty inches shall be equipped with three identification **lights** on both front and rear. Each such group shall be evenly spaced not less than six nor more than twelve inches apart along a horizontal line near the top of the vehicle.

321.437 **Mirrors.**

- **1.** Every motor vehicle shall be equipped with a **mirror** so located as to reflect to the driver a view of the highway for a distance of at least two hundred feet to the rear of such vehicle. Any motor vehicle so loaded, or towing another vehicle in such manner, as to obstruct the view in a rear view **mirror** located in the driver's compartment shall be equipped with a side **mirror** so located that the view to the rear will not be obstructed; however, when such vehicle is not loaded or towing another vehicle the side **mirrors** shall be retracted or removed. All van or van type motor vehicles shall be equipped with outside **mirrors** of unit magnification, each with not less than nineteen point five square inches of reflective surface, installed with stable supports on both sides of the vehicle, located so as to provide the driver a view to the rear along both sides of the vehicle, and adjustable in both the horizontal and vertical directions to view the rearward scene.
- **2.** Notwithstanding this chapter or chapter 321E, a combination of vehicles coupled together which is used exclusively for the transportation of passenger vehicles, light delivery trucks, panel delivery trucks, pickups, boats, and recreational chassis, may permanently attach a convex-type **mirror** on either or both of the vertical supports, forward of the steering axle of the power unit, provided that the **mirror** shall not extend beyond the limit of any other rearview **mirror** on the vehicle.

321.461 **Trailers** and towed vehicles.

- **1.** When one vehicle is towing another the **drawbar** or other connection shall not exceed fifteen feet from one vehicle to the other except the connection between any two vehicles transporting poles, pipe, machinery, or other objects of structural nature which cannot readily be dismembered.
- **2.** If the towing vehicle is a motor truck and the towed vehicle is a single **trailer** with a single point of articulation at the hitch connection, the **drawbar** or other connection shall not exceed twenty-one feet. The length of the **drawbar** or other connection shall be measured from the centerline of the hitch assembly on the towing vehicle to the front of the body of the towed vehicle. A vehicle which has a **drawbar** or other connection which measures between fifteen and twenty-one feet in length shall have at least one yellow reflector visible on each vertical face of the **drawbar** or other connection, located near the midpoint between the towing and the towed vehicle. A vehicle which has a **drawbar** or other connection which measures between fifteen and twenty-one feet in length shall have affixed to the rear of the towed vehicle a sign indicating that the vehicle is a towed vehicle.