

§ 393.9

49 CFR Ch. III (10-1-04 Edition)

Subpart B—Lighting Devices, Reflectors, and Electrical Equipment

§ 393.9 Lamps operable.

All lamps required by this subpart shall be capable of being operated at all times.

(49 U.S.C. 304, 1655; 49 CFR 1.48(b) and 301.60)
[47 FR 47837, Oct. 28, 1982]

§ 393.11 Lighting devices and reflectors.

The following Table 1 sets forth the required color, position, and required

lighting devices by type of commercial motor vehicle. Diagrams illustrating the locations of lighting devices and reflectors, by type and size of commercial motor vehicle, are shown immediately following Table 1. All lighting devices on motor vehicles placed in operation after March 7, 1989, must meet the requirements of 49 CFR 571.108 in effect at the time of manufacture of the vehicle. Motor vehicles placed in operation on or before March 7, 1989, must meet either the requirements of this subchapter or part 571 of this title in effect at the time of manufacture.

TABLE 1—REQUIRED COMMERCIAL VEHICLE LIGHTING EQUIPMENT

Item on the vehicle	Quantity	Color	Location	Position	Height above road surface in inches measured from the center of the lamp at curb weight	Required lighting devices/vehicles
Headlamps	2 At Least	White	Front	On the front at the same height, an equal number at each side of the vertical centerline as far apart as practicable.	Not less than 22 nor more than 54.	A, B, C
Turn Signal (Front) See Footnotes #2 & 12.	2	Amber	At or Near Front	One on each side of the vertical centerline at the same height and as far apart as practicable.	Not less than 15 nor more than 83.	A, B, C
Identification Lamp (Front) Footnote #1	3	Amber	Front	Mounted on the vertical centerline of the vehicle or the vertical centerline of the cab where different from the centerline of the vehicle.	All three on same level as close as practicable to the top of the vehicle with lamp centers spaced not less than 6 inches or more than 12 inches apart.	B, C
Tail Lamp See Footnotes #5 & 11	2	Red	Rear	One lamp each side of the vertical centerline at the same height and as far apart as practicable.	Both on the same level between 15 and 72.	A, B, C, D, E, F, G, H
Stop Lamp See Footnotes #5 & 13	2	Red	Rear	One lamp each side of the vertical centerline at the same height and as far apart as practicable.	Both on the same level between 15 and 72.	A, B, C, D, E, F, G
Clearance Lamps See Footnotes #9, 10, & 15.	2	Amber	One on each side of front.	One on each side of the vertical centerline to indicate width.	Both on same level as high as practicable.	B, C, D, G, H
	2	Red	One on each side of rear.	One on each side of the vertical centerline to indicate overall width.	Both on same level as high as practicable.	B, D, G, H
Side Marker Lamp, Intermediate	2	Amber	One on each side.	At or near midpoint between front and rear side marker lamps, if over 30' in length.	Not less than 15	A, B, D, F, G
Reflex Reflector Intermediate (Side)	2	Amber	One on each side.	At or near midpoint between front and rear side reflectors if over 30' in length.	Between 15 and 60	A, B, D, F, G
Reflex Reflector (Rear) See Footnotes #5, 6, & 8.	2	Red	Rear	One on each side of vertical centerline, as far apart as practicable.	Both on same level, between 15 and 60.	A, B, C, D, E, F, G
Reflex Reflector (Rear Side) Footnote #4.	2	Red	One on each side (rear).	As far to the rear as practicable	Both on same level, between 15 and 60.	A, B, D, F, G
Reflex Reflector (Front Side)	2	Amber	One on each side (front).	As far to the front as practicable	Between 15 and 60	A, B, C, D, F, G
License Plate Lamp Rear See Footnote #11.	1	White	At rear license plate.	To illuminate the license plate from the top or sides.	No requirements	A, B, C, D, F, G
Side Marker Lamp (Front)	2	Amber	One on each side.	As far to the front as practicable	Not less than 15	A, B, C, D, F
Side Marker Lamp (Rear) See Footnotes #4 & 8.	2	Red	One on each side.	As far to the rear as practicable	Not less than 15 and on the rear of trailer, not more than 60.	A, B, D, F, G
Turn Signal (Rear) See Footnotes #5 & 12.	2	Amber or Red.	Rear	One lamp on each side of the vertical centerline as far apart as practicable.	Both on the same level, between 15 and 83.	A, B, C, D, E, F, G

TABLE 1—REQUIRED COMMERCIAL VEHICLE LIGHTING EQUIPMENT—Continued

Item on the vehicle	Quantity	Color	Location	Position	Height above road surface in inches measured from the center of the lamp at curb weight	Required lighting devices/vehicles
Identification Lamp (Rear) See Footnotes #3, 7 & 15.	3	Red	Rear	One as close as practicable to vertical centerline. One on each side with lamp centers spaced not less than 6' or more than 12' apart.	All three on same level as close as practicable to the top of the vehicle.	B, D, G
Vehicular Hazard Warning Lamps See Footnote #12.	2	Amber	Front	One lamp on each side of vertical centerline as far apart as practicable.	Both on same level, between 15 and 83.	A, B, C, D, E, F, G
Backup Lamp See Footnote #14	2	Amber or Red.	Rear
Parking Lamp	1	White	Rear	Rear	No requirement	A, B, C
	2	Amber or white.	Front	One lamp on each side of vertical centerline as far apart as practicable.	Both on same level, between 15 and 72.	A

* Lighting Required per Type of Commercial Vehicle as Shown Last Column of Table.

A. Small buses and trucks less than 80 inches in overall width.

B. Buses and trucks 80 inches or more in overall width.

C. Truck Tractors.

D. Large semitrailers and full trailers 80 inches or more in overall width except converter dollies.

E. Converter dolly.

F. Small semitrailers and full trailers less than 80 inches in overall width.

G. Pole Trailers.

H. Projecting loads.

Lamps and reflectors may be combined as permitted by Paragraphs 393.22 and S4.4 of 49 CFR 571.108, Equipment combinations.

Footnote—1

Identification lamps may be mounted on the vertical centerline of the cab where different from the centerline of the vehicle, except where the cab is not more than 42 inches wide at the front roofline, then a single lamp at the center of the cab shall be deemed to comply with the requirements for identification lamps. No part of the identification lamps or their mountings may extend below the top of the vehicle windshield.

Footnote—2

Unless the turn signals on the front are so constructed (double-faced) and located as to be visible to passing drivers, two turn signals are required on the rear of the truck tractor, one at each side as far apart as practicable.

Footnote—3

The identification lamps need not be visible or lighted if obscured by a vehicle in the same combination.

Footnote—4

Any semitrailer or full trailer vehicles manufactured on and after March 1, 1979, shall be equipped with rear side-marker lamps at a height of not less than 15 inches (381 mm) nor more than 60 inches (1524 mm) above the road surface, as measured from the center of the lamp on the vehicle at curb weight. The rear side marker lamps shall be visible in the vehicle's rearview mirrors when the trailer is tracking straight.

Footnote—5

For purposes of these regulations, each converter dolly shall be equipped with one stop lamp, one tail lamp, and two reflectors on the rear at each side when towed singly by another vehicle. Each converter dolly shall be equipped with turn signals at the rear if the converter dolly obscures the turn signals at the rear of the towing vehicle when towed singly by another vehicle.

Footnote—6

Pole trailers will have two reflectors, one on each side, placed to indicate extreme width of the trailer.

Footnote—7

Pole trailers may have three identification lamps mounted on the vertical centerline of the rear of the cab of the truck tractor drawing the pole trailer, and higher than the load being transported, in lieu of the three identification lamps mounted on the rear vertical centerline of the trailer.

Footnote—8

Pole trailers shall have on the rearmost support for the load, one combination marker lamp or two single lamps showing amber to the front and red to the rear and side, mounted on each side to indicate maximum width of the pole trailer; and one red reflector on each side of the rearmost support for the load.

Footnote—9

Any motor vehicle transporting a load which extends more than 4 inches beyond the width of the motor vehicle, or having projections beyond the rear of such vehicles, shall be equipped with the following lamps in addition to other required lamps, have the loads marked

Loads projecting more than 4 inches beyond sides of motor vehicles:

(1) The foremost edge of the projecting load at its outermost extremity shall be marked with an amber lamp visible from the front and both sides.

(2) The rearmost edge of the projecting load at its outermost extremity shall be marked with a red lamp visible from the rear and side.

(3) If any portion of the projecting load extends beyond both the foremost and rearmost edge, it shall be marked with an amber lamp visible from the front, both sides, and rear.

(4) If the projecting load does not measure more than 3 feet from front to rear, it shall be marked with an amber lamp visible from the front, both sides, and rear, except that if the projection is located at or near the rear it shall be marked by a red lamp visible from front, side, and rear.

Footnote—10

Projections beyond rear of motor vehicles. Motor vehicles transporting loads which extend more than 4 feet beyond the rear of the motor vehicle, or which have these tailboards or tailgates extending more than 4 feet beyond the body, shall have projections marked as follows:

(1) On each side of the projecting load, one red lamp, visible from the side, located so as to indicate maximum overhang.

(2) On the rear of the projecting load, two red lamps, visible from the rear, one at each side; and two red reflectors visible from the rear, one at each side, located so as to indicate maximum width.

Footnote—11

To be illuminated when tractor headlamps are illuminated.

Footnote—12

Every bus, truck, and truck tractor shall be equipped with a signaling system that, in addition to signaling turning movements, shall have a switch or combination of switches that will cause the two front turn signals and the two rear signals to flash simultaneously as a vehicular traffic signal warning, required by § 392-22(a). The system shall be capable of flashing simultaneously with the ignition of the vehicle on or off.

Footnote—13

To be actuated upon application of service brakes.

Footnote—14

Backup lamp required to operate when bus, truck, or truck tractor is in reverse.

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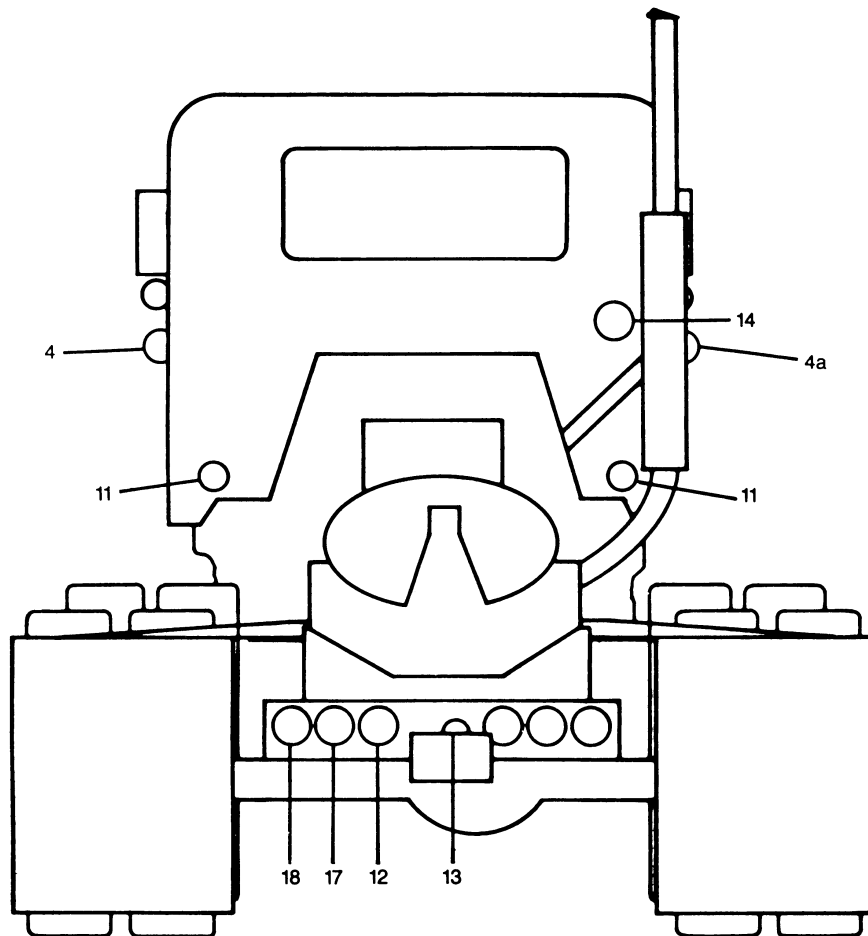
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Footnote—15

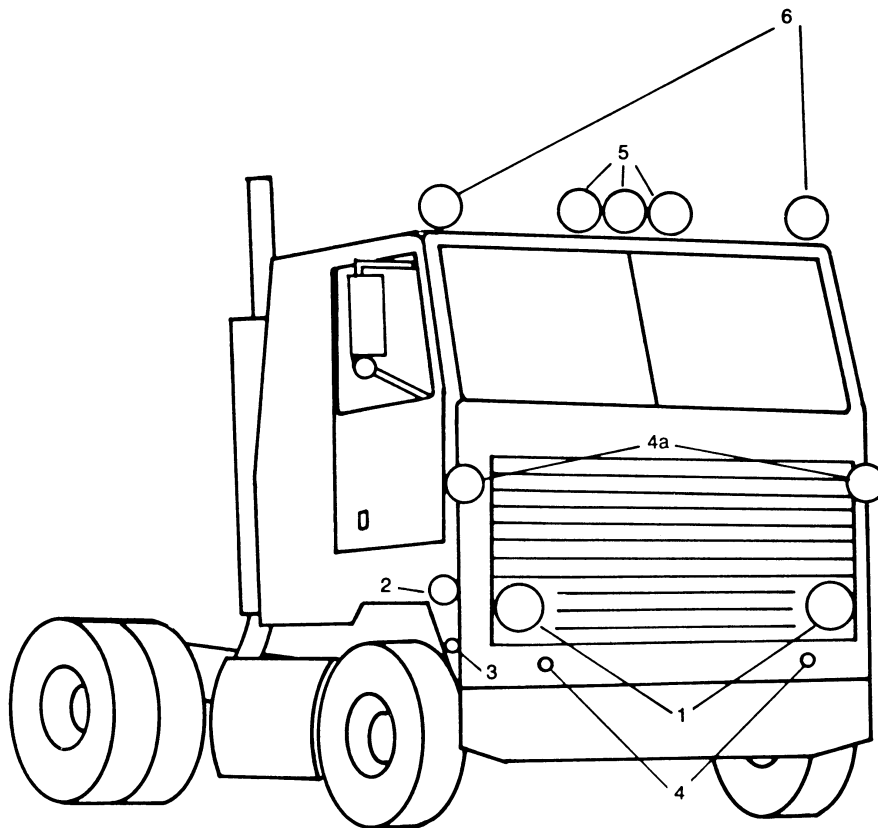
When the rear identification lamps are mounted at the extreme height of a vehicle,

rear clearance lamps need not meet the requirement that they be located as close as practicable to the top of the vehicle.

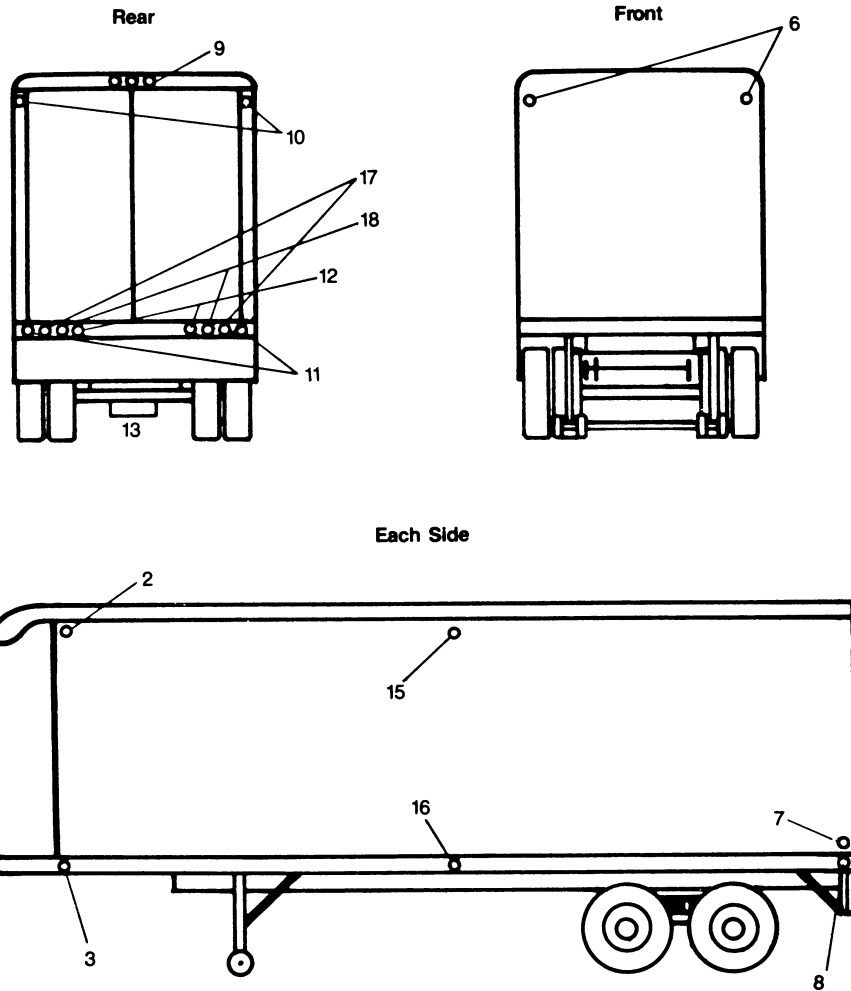
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Rear View**



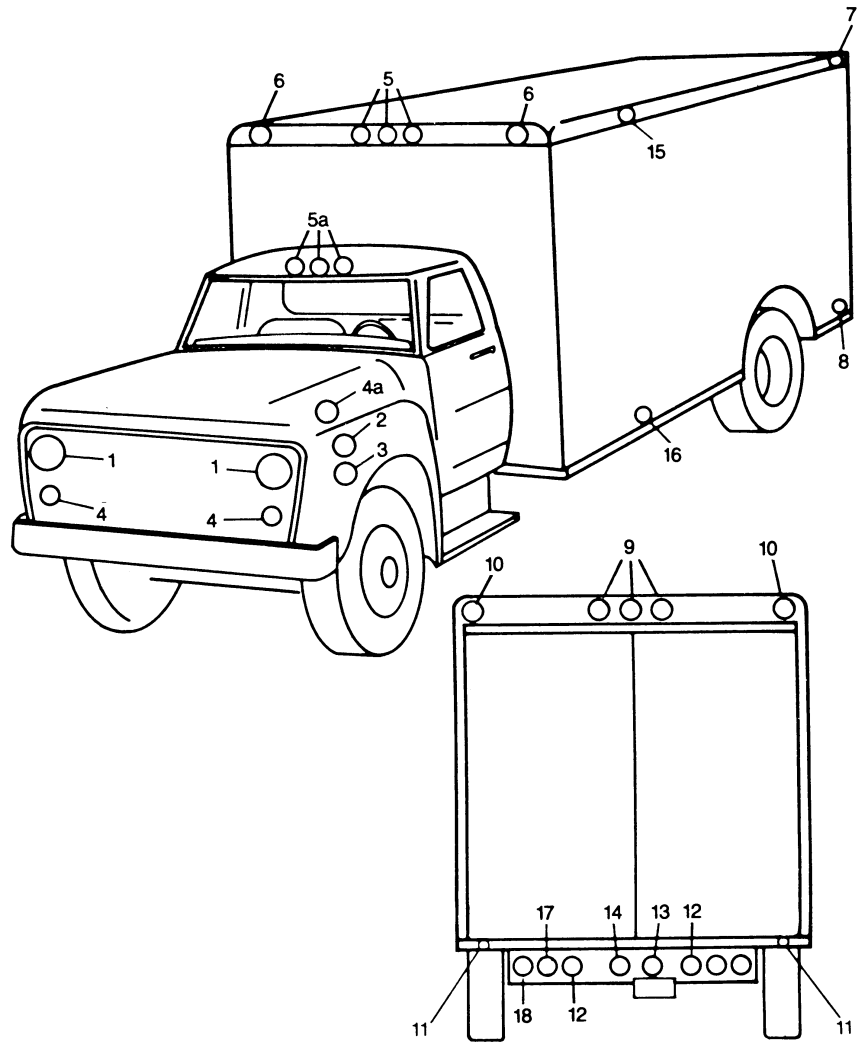
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Front & Side View**



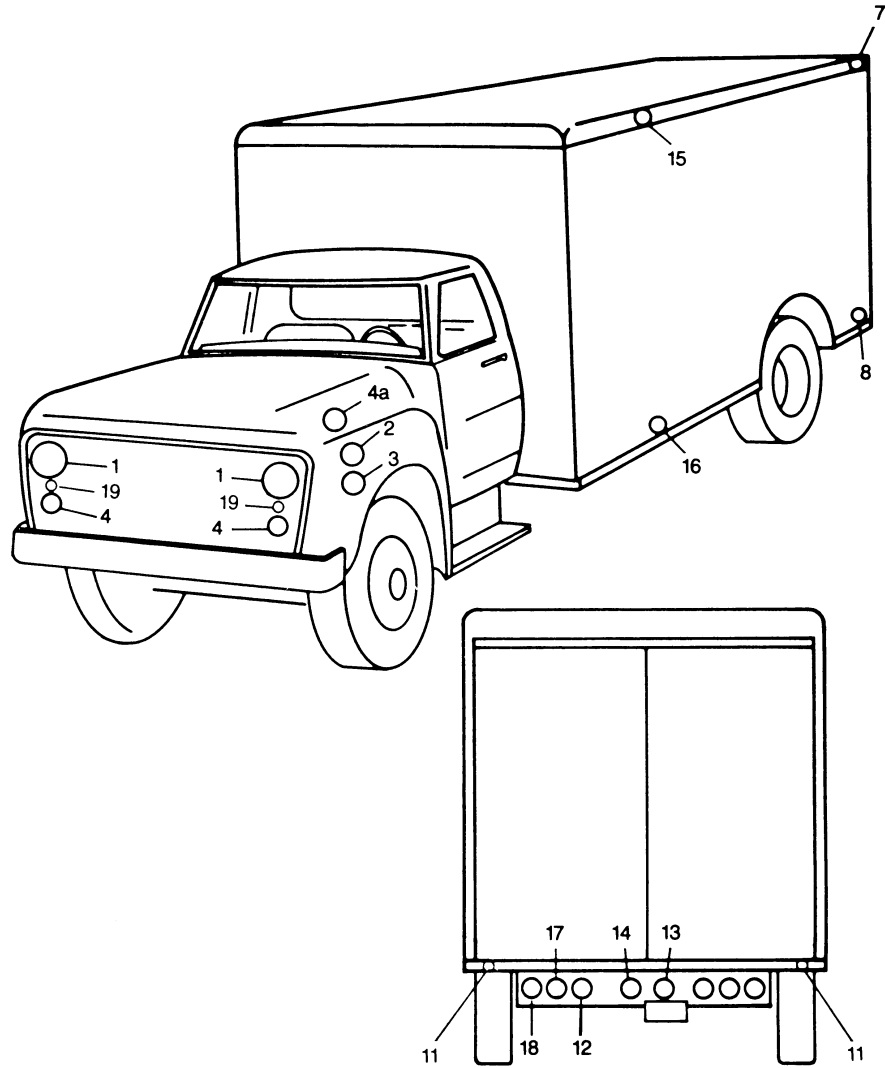
Large Trailers



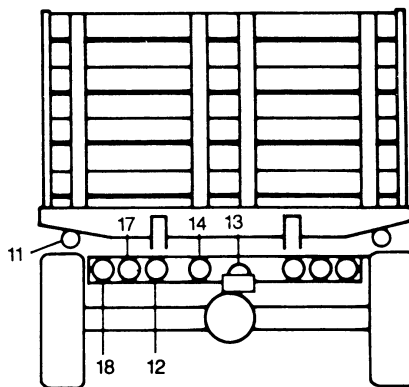
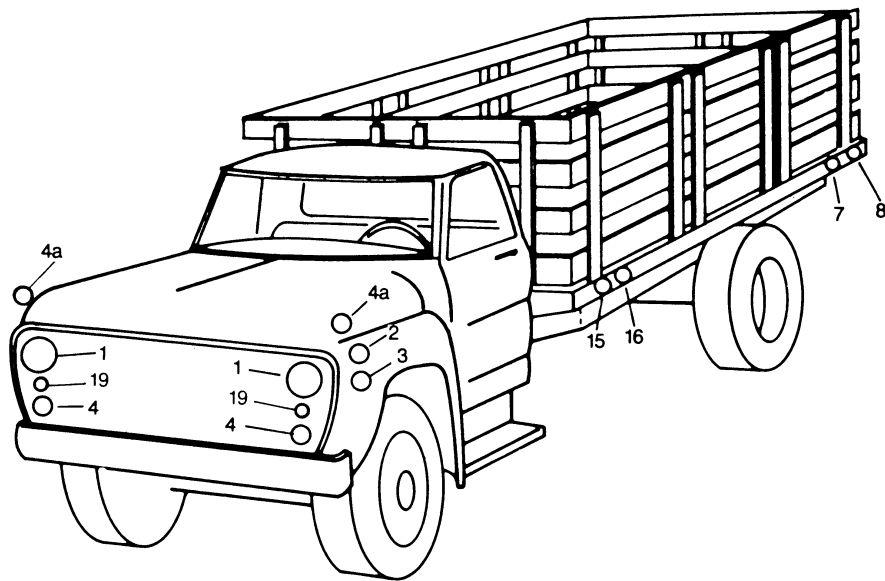
Over 80 Inches



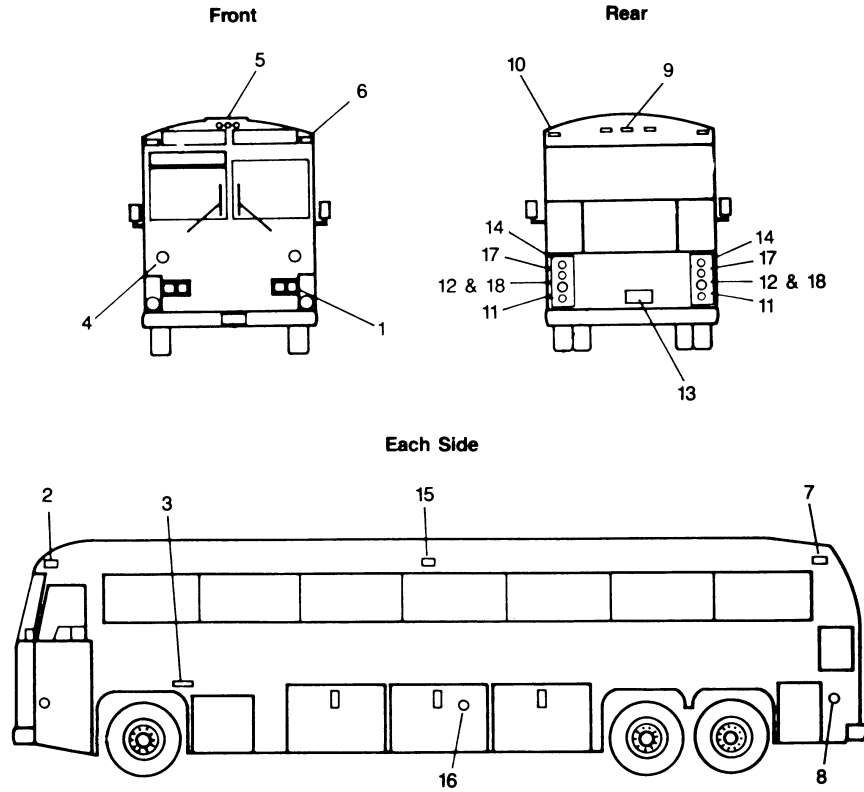
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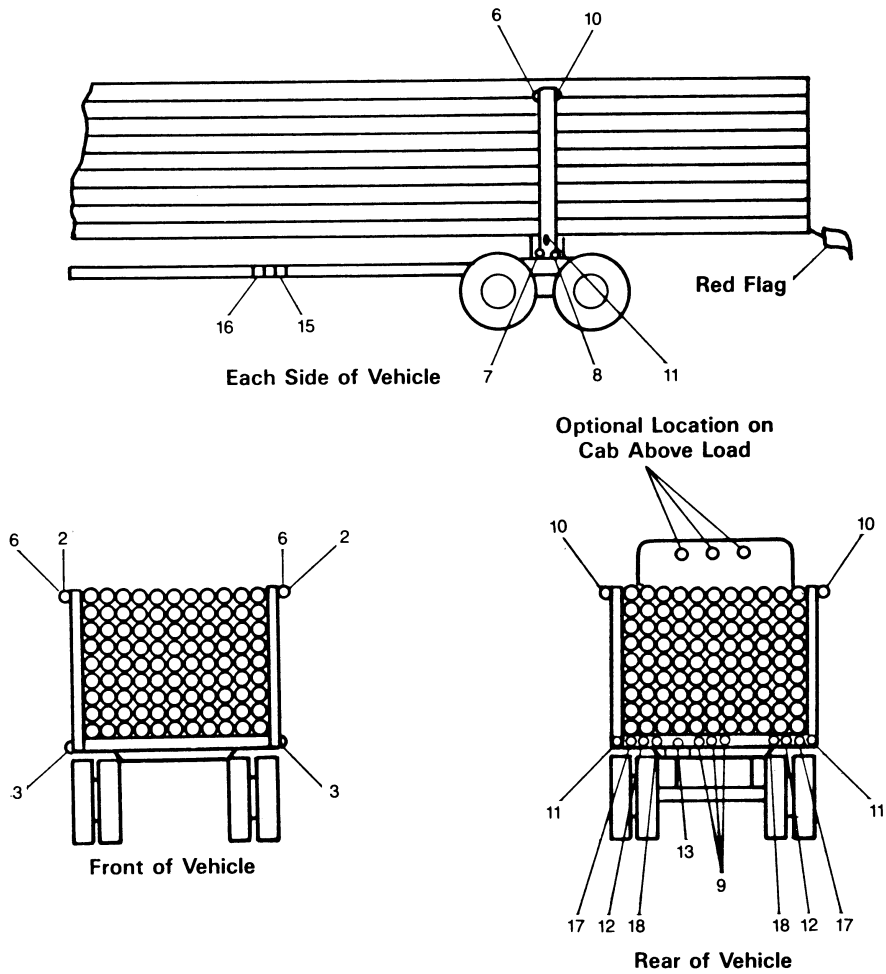
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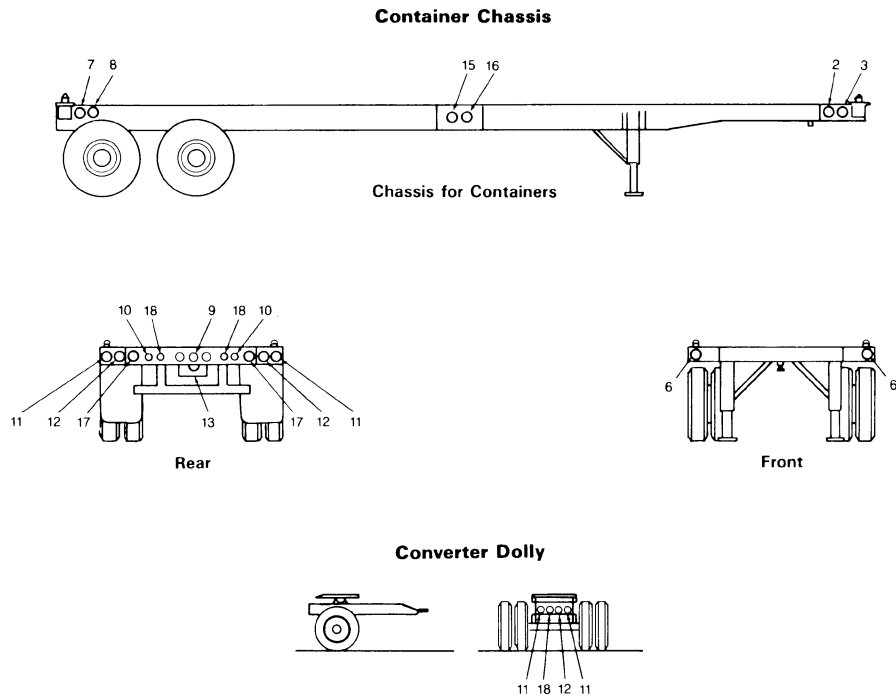


Large Bus



Pole Trailers — All Vehicle Widths





LEGEND (USED IN ILLUSTRATIONS)

1. Headlamps (2)-White (4 optional)
2. Side-marker lamps. Front (2)-Amber
3. Side reflectors. Front (2)-Amber
4. Turn-signal lamps. Front (2)-Amber
- 4a. Turn-signal lamps. Front (2)-Amber (Optional location)
5. Identification lamps. Front (3)-Amber
- 5a. Identification lamps. Front (3)-Amber (Optional location)
6. Clearance lamps. Front (2)-Amber
7. Side-marker lamps. Rear (2)-Red
8. Side-reflectors. Rear (2)-Red
9. Identification lamps. Rear (3)-Red
10. Clearance lamps. Rear (2)-Red
11. Reflectors Rear (2)-Red
12. Stop lamps. Rear (2)-Red
13. License plate lamp. Rear (1)-White
14. Backup lamp. Rear (1)-White (location optional provided optional requirements are met)
15. Side-marker lamps. Intermediate (2)-Amber (if vehicle is 30' or more overall length)
16. Side reflectors. Intermediate (2)-Amber (if vehicle is 30' or more overall length)
17. Turn signal lamps. Rear (2)-Amber or Red
18. Tail lamps. Rear (2)-Red

19. Parking lamps. Front 2-Amber or White
- [53 FR 49385, Dec. 7, 1988]

§ 393.13 Retroreflective sheeting and reflex reflectors, requirements for semitrailers and trailers manufactured before December 1, 1993.

(a) *Applicability.* All trailers and semitrailers manufactured prior to December 1, 1993, which have an overall width of 2,032 mm (80 inches) or more and a gross vehicle weight rating of 4,536 kg (10,001 pounds) or more, except trailers that are manufactured exclusively for use as offices or dwellings, pole trailers (as defined in § 390.5 of this subchapter), and trailers transported in a driveaway-towaway operation, must be equipped with retroreflective sheeting or an array of reflex reflectors that meet the requirements of this section. Motor carriers operating trailers, other than container chassis (as defined in