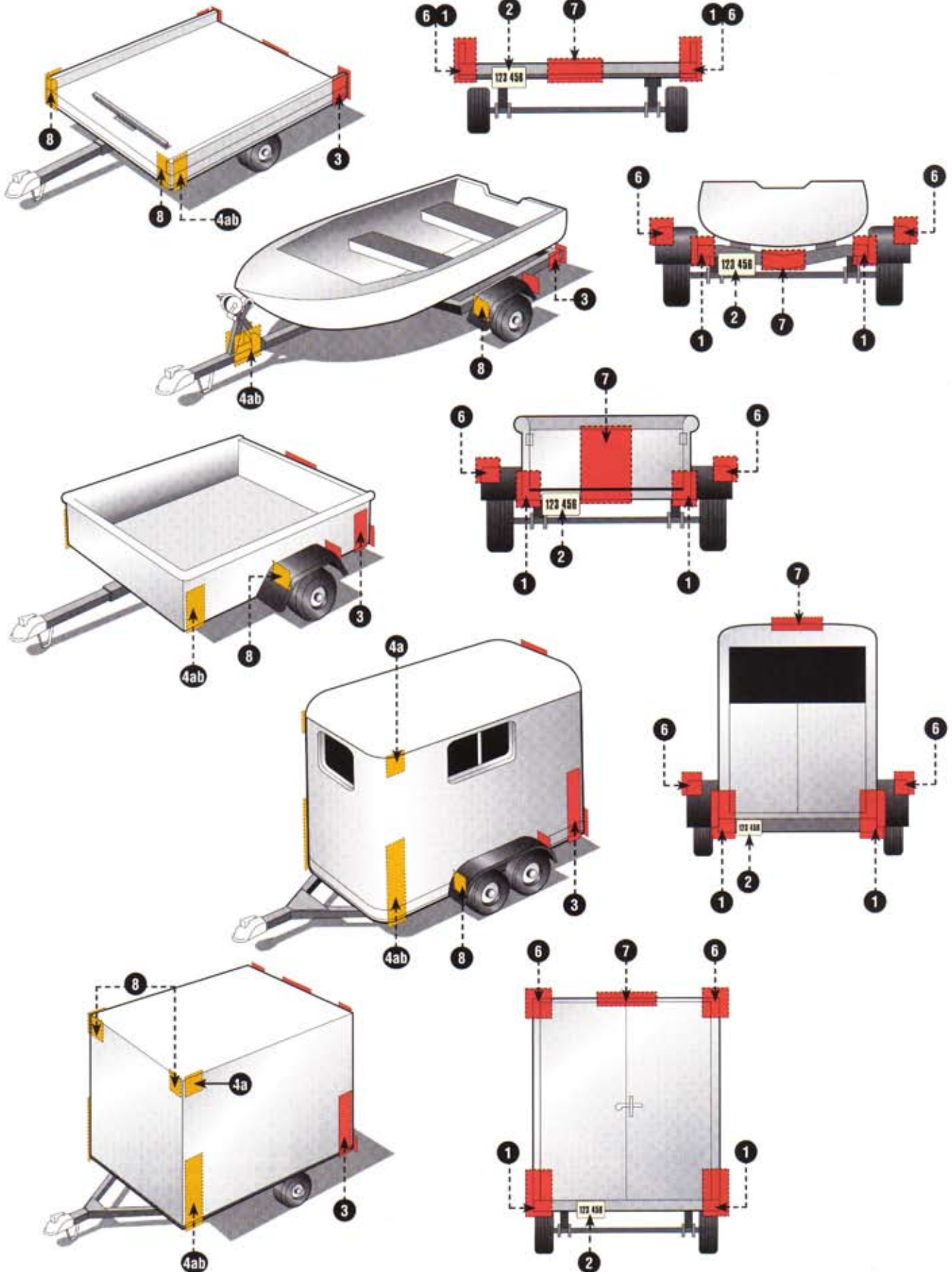


FEDERAL LIGHTING REQUIREMENTS



FEDERAL LIGHTING TECHNICAL REFERENCE

IMPORTANT NOTE: Every lamp, reflex reflector, and conspicuity treatment must be permanently attached in the location specified below and must comply with all applicable requirements prescribed for it by FMVSS/CMVSS 108. The face of any device on the front/rear and sides should be, respectively perpendicular and parallel to the vehicle's centerline, unless it is photometrically certified at installation angle. No part of the vehicle shall prevent any device from meeting its prescribed requirements unless an auxiliary device meeting all prescribed requirements is installed.

IN CANADA: Manufacturers and importers of vehicles must have the proper certification test records demonstrating compliance of lighting components with all prescribed requirements.

BASIC EQUIPMENT REQUIRED ON ALL TRAILERS

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height in. (mm) from the ground
1	Tail Lamps	(T)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	15"-72" (380-1830)
	Stop Lamps	(S)	Indicate braking	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	15"-72" (380-1830)
	Rear Turn Signal Lamps	(I)	Indicate direction of turn	Minimum 2	Red or Yellow	On the rear - symmetrical as far apart as practicable	15"-83" (380-2110)
	Rear Reflex Reflectors	(A)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable facing rearward	15"-60" (380-1530)
2	License Plate Lamp(s)	(L)	Illuminates license plate	Minimum 1	White	On the rear - above or at the sides of license plate	No requirement
3	Rear Side Marker Lamps <small>*photometrically certified at installation angle</small>	(P2, PC* or P3, PC2*)	Front and rear side marker lamps / side reflex reflectors indicate vehicle's presence and length.	Minimum 2	Red	Each side at rear as far back as practicable	15"-60" (380-1530) no max for veh. under 80" (2032mm) wide
	Rear Side Reflex Reflectors	(A)		Minimum 2	Red	Each side at rear as far back as practicable	15"-60" (380-1530) facing sideward
4	a Front Side Marker Lamps <small>*photometrically certified at installation angle</small>	(P2, PC* or P3, PC2*)	Front and rear side marker lamps / side reflex reflectors indicate vehicle's presence and length.	Minimum 2	Yellow	Each side at front as far forward as practicable	15" (380) minimum
	b Front Side Reflex Reflectors	(A)		Minimum 2	Yellow	Each side at front as far forward as practicable facing sideward	15"-60" (380-1530)

ADDITIONAL EQUIPMENT FOR TRAILERS EXCEEDING THE FOLLOWING PARAMETERS

Length 30 ft. (9.1m) or longer

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height in. (mm) from the ground
5	a Intermediate Side Marker Lamps	(P2 or P3)	Indicate presence of a long vehicle	Minimum 2	Yellow	Each side near center facing sideward	15" (380) minimum
	b Intermediate Side Reflex Reflectors	(A)	Indicate presence of a long vehicle	Minimum 2	Yellow	Each side near center facing sideward	15"-60" (380-1530)

Width 80 in. (2032 mm) or wider

DESCRIPTION			MANDATORY REQUIREMENTS				
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height
6	Rear Clearance Lamps <small>*photometrically certified at installation angle</small>	(P2, PC* or P3, PC2*)	Show vehicle's width MAY NOT be combined with tail lamps	Minimum 2	Red	At widest point - symmetrical on the rear or near the rear facing rearward	As high as practicable may be lower only if ID lamps are at the top
7	Rear Identification (ID) Lamps	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 3	Red	On the rear - center horizontally spaced 6" (150mm) to 12" (300mm) apart facing rearward	In Canada: at the top - may be lower if door header narrower than 25mm In USA: as high as practicable
8	Front Clearance Lamps <small>*photometrically certified at installation angle</small>	(P2, PC* or P3, PC2*)	Show vehicle's width	Minimum 2	Yellow	At widest point - symmetrical on the front or near the front facing forward	As high as practicable

Width 80 in. (2032 mm) or wider AND GVWR 10,000 lb. (4536 kg) or more

DESCRIPTION		MANDATORY REQUIREMENTS					Options
Area	Conspicuity Treatment	DOT Coding	Quantity	Color	Location	Height	
9	Rear Upper Body Markings	DOT-C DOT-C2 DOT-C3 DOT-C4	Exactly 2 pairs of 300mm long strips	White	On the rear upper corners facing rearward	At the top	Reflex reflectors may not be required if they are replaced in their required location with conspicuity treatment.
10	Bumper Bar Marking		Continuous	Red/White	On the rear bumper bar's horizontal element full width - facing rearward	No requirement	
11	Rear Lower Body Marking		Continuous	Red/White (see options)	On the rear full width of the vehicle facing rearward	As horizontal as practicable and as close as practicable to the range of 375 to 1525mm from the ground	Optional in Canada: Rear lower body and side conspicuity treatment may also be solid white, solid yellow, or white and yellow.
12	Side Marking		(see location)	Red/White (see options)	Each side - facing sideward continuous, or evenly spaced over minimum of 50% of length starts and ends as close to the front and rear of the vehicle as practicable	As horizontal as practicable and as close as practicable to the range of 375 to 1525mm from the ground	