

## (APPLICABLE) SAE CODES

FUNCTION	DESCRIPTION
A	Reflex Reflector
A2	Reflex reflector for use on motor vehicles 2032mm or more in overall width
A3	Reflex reflector for conspicuity treatment (CT) for use on vehicles 2032mm or more in overall width
A4	Reflex reflector for CT vehicles > 2032mm-50mm wide ( truck/trailer)
A5	Reflex reflector for CT vehicles > 2032mm width ( truck/trailer)
A6	Reflex reflector for CT (vehicles.2032 mm width)-100 mm wide (truck/trailer)
A7	Reflex reflector for CT (vehicles.2032 mm width)-100 mm wide (school bus)
E	Side Turn Signal lamps-vehicles 12m or more in length
E2	Side turn signal lamps-vehicles less than 12m in length
F	Front Fog lamp
G	Truck cargo lamp
H	Sealed beam headlamp
HR	Replaceable bulb headlamp
I	Turn signal lamp spaced greater than 100mm from headlamp
I3	Turn signal lamps spaced from 75 mm to less than 100 mm from headlamp
I4	Turn signal lamps spaced from 60 mm to less than 75 mm from headlamp
I5	Turn signal lamps spaced less than 60 mm from headlamp
I6	Rear mounted turn signal lamp and front mounted turn signal lamps mounted 100 mm or more from the headlamp, for use on vehicles 2032mm or more in overall width
I7	Front mounted turn signal lamp mounted less than 100 mm from the headlamp, for use on vehicles 2032 mm or more in overall width
J1690	Flasher
K	Front cornering lamps
K2	Rear cornering lamps
L	License plate lamps
M	Motorcycle and motor driven cycle headlamps-motorcycle type
N	Motorcycle and motor driven cycle headlamps-motor driven cycle type
O	Spot lamps
P	Parking lamps
P2	Sidemarkers lamp for use on vehicles 2032 mm or less in overall width
P3	Clearance, sidemarkers and identification lamp for use on vehicles 2032 mm or more in overall width
PC2	Combination clearance and sidemarkers lamp for use on vehicles 2032 or more in overall width
Q	Turn signal operating unit-class A
QB	Turn signal operating unit-class B
QC	Vehicular hazard warning signal operating unit
QD1	Turn signal operating unit for use on vehicles 2032 mm in overall width-Type 1
QD2	Turn signal operating unit for use on vehicles 2032 mm in overall width-Type 2
R	Reversing (Backup) lamps
S	Stop lamps
S2	Stop lamp for use on vehicles over 2032 mm or more in overall width
T	Tail lamps ( rear position lamp)
T2	Tail lamp ( rear position lamp) for use on vehicles 2032mm or more in overall width
U	Supplemental high-mounted stop and turn signal lamp
U2	High mounted stop lamp for trucks 2032 mm or more in overall width
U3	Center high-mounted stop lamp for passenger cars, light trucks, and MPV's
W	Warning lamps for emergency, maintenance, and service vehicles
W2	Warning lamp for school buses
W3-1	Optical warning device-Class 1
W3-2	Optical warning device-Class 2
W3-3	Optical warning device-Class 3
W4	Emergency warning device ( triangular shape)
W5-1	360° gaseous discharge lamp-Class 1
W5-2	360° gaseous discharge lamp-Class 2
W5-3	360° gaseous discharge lamp-Class 3
Y2	Daytime running lamp
Z	Auxiliary low beam lamps

# TRUCKS, BUSES, MPVs: FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS

**IMPORTANT NOTE:** Every lamp, reflex reflector, and conspicuity treatment (device) 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 vehicle 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 TRUCKS, BUSES & MPVs

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height mm (in.) from the ground
1	Headlamp - Lower Beam	(H, HR) Attention: US *DOT lettering required on lens Attention: US & Canada: light source code required on lens	Forward road illumination	Minimum 2	White	On the front - symmetrical - as far apart as practicable (if 4 lamp system - outboard or above upper beams)	560-1370 (22-54)
	Headlamp - Upper Beam	(H, HR) Attention: US *DOT lettering required on lens Attention: US & Canada: light source code required on lens	Forward road illumination	Minimum 2	White	On the front - symmetrical - (if 4 lamp system - inboard or below lower beams)	560-1370 (22-54)
	Parking lamps Attention: required only on vehicles less than 2032mm wide	(P)	Indicate parked vehicle	Minimum 2	White or Yellow	Front - symmetrical - as far apart as practicable	380-1530 (15-60)
	Daytime Running lamps - Attention: for Canada required, for US optional	(Y2) Attention: for US, "DRL" lettering required on lens if device is not headlamp	Indicate in use vehicle	Minimum 2	White or Yellow	Front - symmetrical - as far apart as practicable	380(15) minimum Maximum depends type of DRL
	Front Turn signal/Hazard Warning Lamps	(I)	Indicate direction of turn / identify disabled vehicle	Minimum 2	Yellow	Front - symmetrical - as far apart as practicable	380-2110 (15-83)
2	Front Clearance Lamps- Attention: Required for vehicle 2032mm wide or wider	(P2, PC* or P3*, PC2) *photometrically certified at installation angle	Show vehicle's width	Minimum 2	Yellow	At widest point-symmetrical-on the front or near the front-facing forward	As high as practicable
3	Front identification Lamps (ID)	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 3	Yellow	on the front-center horizontally spaced 150mm (6 in.) to 300mm (12 in.) apart	As high as practicable or on top of cab

# TRUCKS, BUSES, MPVs: (continued) FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS

## BASIC EQUIPMENT REQUIRED ON ALL TRUCKS, BUSES & MPVs

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height mm (in.) from the ground
4a	Front Side Marker Lamps	( P2, PC* or P3 ,PC2*)*photometrically certified at installation angle		Minimum 2	Yellow	Each side at front - as far forward as practicable	380 (15) minimum
4b	Front Side Reflex Reflectors	(A)	Front and Rear side marker lamps / side	Minimum 2	Yellow	At front - symmetrical - as far forward as practicable - facing sideward	380-1530 (15-60)
5a	Rear Side Marker Lamps **	(P2, PC* or P3, PC2*)*photometrically certified at installation angle	reflex reflector indicate vehicle's presence and length	Minimum 2	Red	Each side at rear - as far back as practicable	380 (15) minimum
5b	Rear Side Marker Lamps ** Rear Side Reflex Reflectors**** not required on Truck Tractors	(A)		Minimum 2	Red	Each side at rear - as far back as practicable - facing sideward	380-1530 (15-60)
6	Rear Clearance Lamps Attention: Required for vehicles 2032mm wide or wider, but not required on Truck Tractors	(P2, PC* or P3, PC2*)*photometrically certified at installation angle	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 rear ID lamps are at the top
7	Rear Identification Lamps(ID)Attention: Required for vehicles 2032mm wide or wider, but not required on Truck Tractors	(P2 or P3 )	Indicate presence of a wide vehicle	Exactly 3	Red	Rear - center - horizontally spaced 150 mm (6 in.) to 300 mm (12 in.) apart, facing rearward	in Canada : at the top - maybe lower only if door header narrower than 25mm USA: as high as practicable
8	Tail Lamps	(T)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical - as far apart as practicable	380-1830 (15-72)

# TRUCKS, BUSES, MPVs: (continued) FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS

## BASIC EQUIPMENT REQUIRED ON ALL TRUCKS, BUSES & MPVs

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height mm (in.) from the ground
	Stop Lamps	(S)	Indicate braking	Minimum 2	Red	On the rear - symmetrical - as far apart as practicable	380-1830 (15-72)
	Rear Turn Signal/Hazard Warning Lamps	(I)	Indicate direction of turn/ identifies disabled vehicle	Minimum 2	Red and Yellow	On the rear - symmetrical - as far apart as practicable	380-2110 (15-83)
	Rear Reflex Reflectors	(A)	Show vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical - as far apart as practicable - facing rearward	380-1530 (15-60)
9	Backup Lamp	(R)	Illuminate ground behind the vehicle and alert road users	Minimum 1	White	Rear	No requirement
10	License Plate Lamp(s)	(L)	Illuminates license plate	Minimum 1	White	On the rear - above or at the sides of license plate	No requirement
11	Center High Mounted Stop Lamp Attention: Required for vehicles less than 2032mm wide and 4536kg	(U3)	Indicates braking	Minimum 1	Red	On the rear - centerline of the vehicle	860 (34) minimum

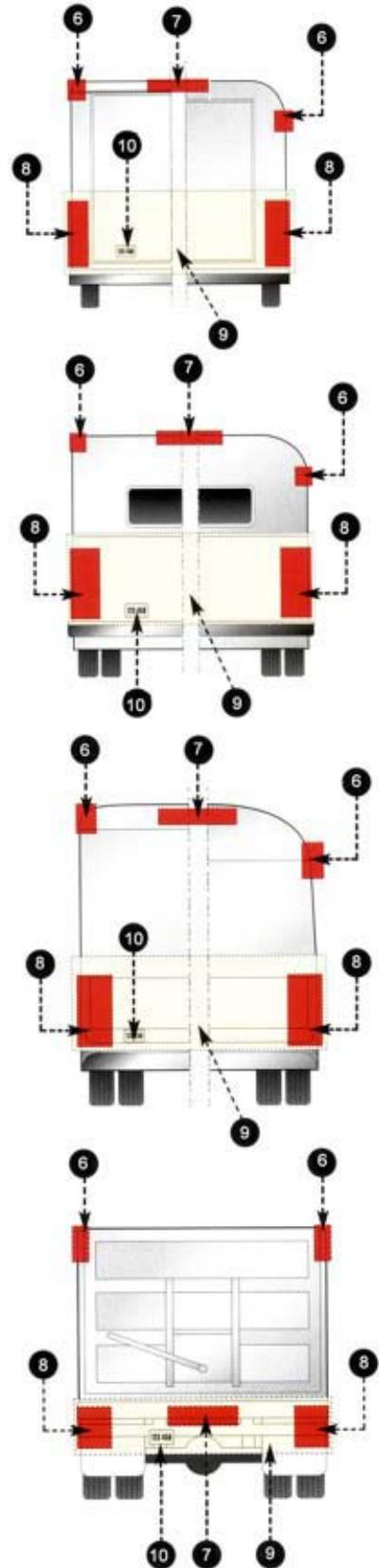
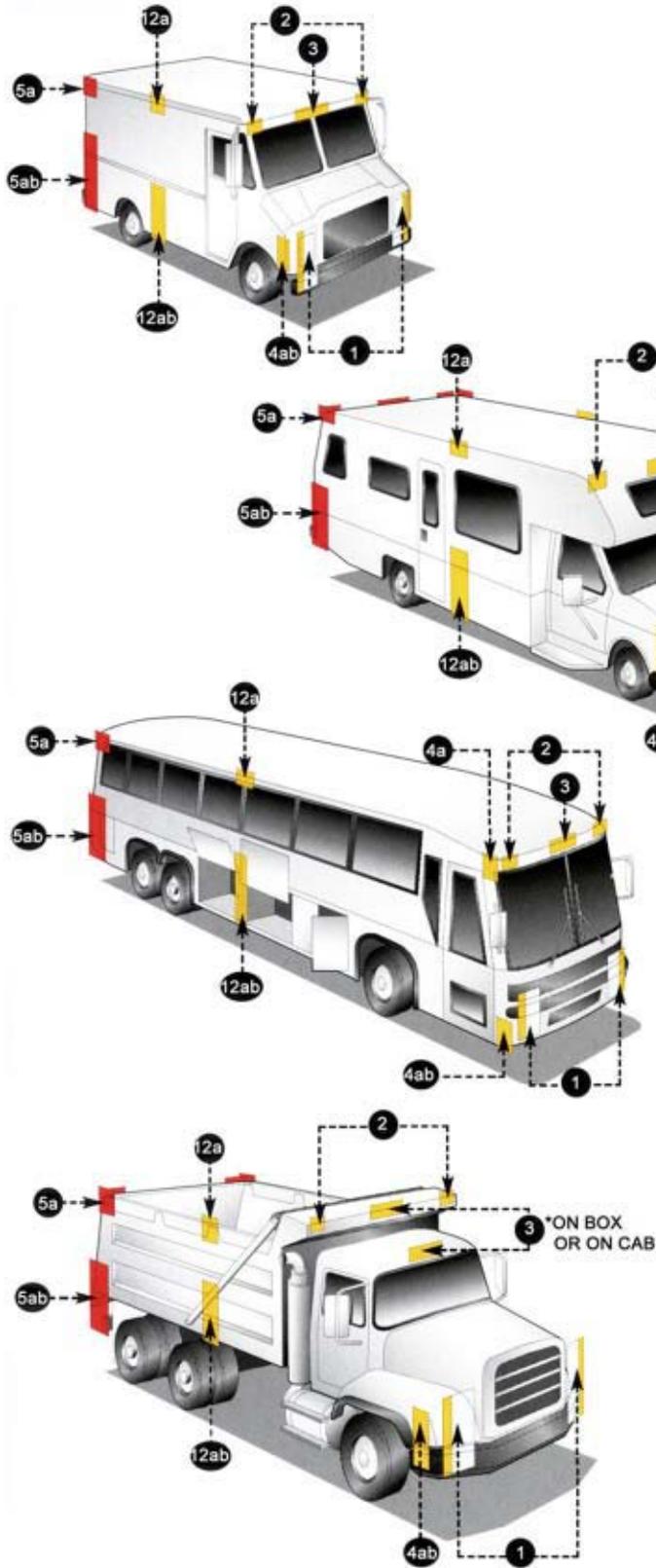
## ADDITIONAL EQUIPMENT FOR SPECIFIC VEHICLES VEHICLES 9.1m (30ft.) LONG OR LONGER

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height mm (in.) from the ground
12a	Intermediate Side Marker Lamps	(P2 or PC)	Indicate presence of a long vehicle	Minimum 2	Yellow	Each side near center	380 (15) minimum
12b	Intermediate Side Reflex Reflectors	(A)	Indicate presence of a long vehicle	Minimum 2	Yellow	Each side near center - facing sideward	380-1530 (15-60)

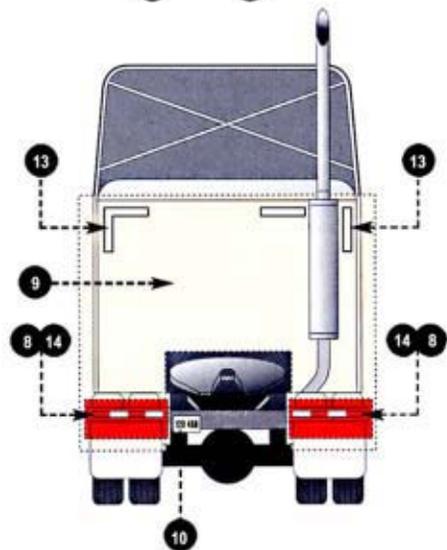
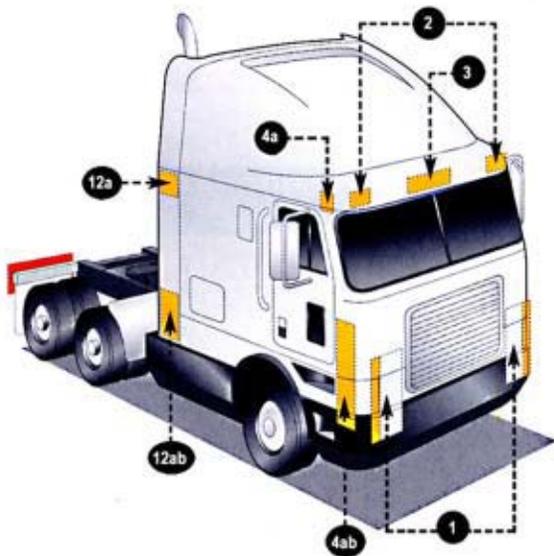
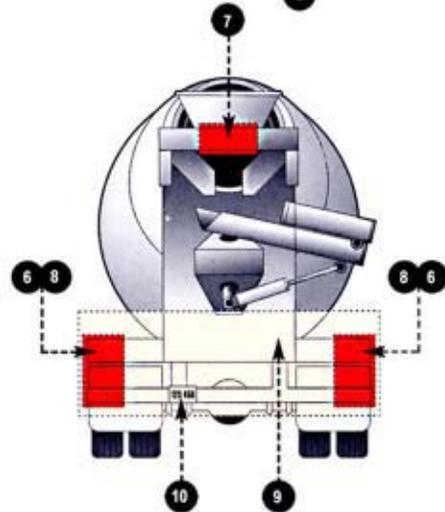
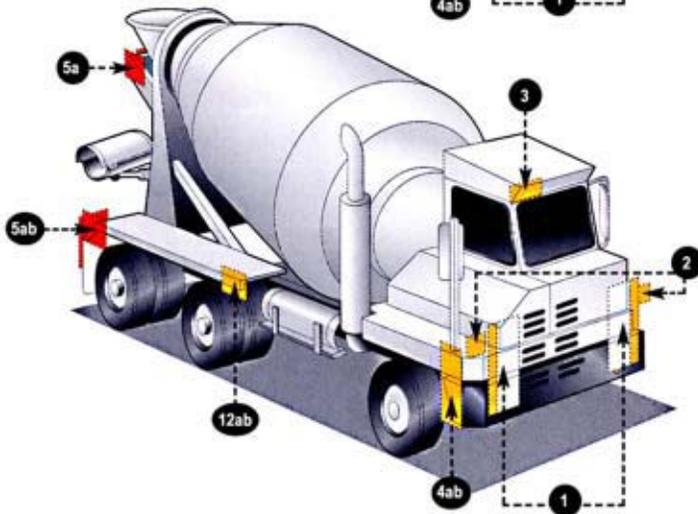
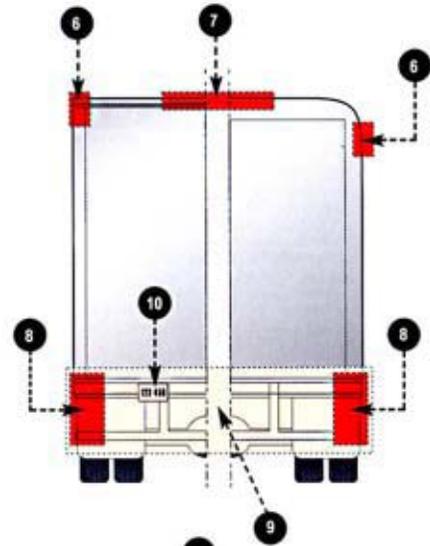
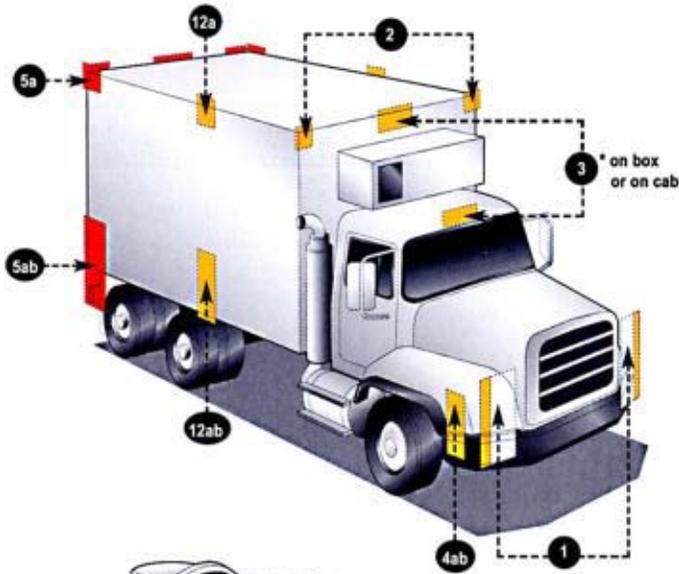
## TRUCK TRACTORS

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Conspicuity Treatment	DOT Code	Quantity	Color	Location	Height	Options
13	Rear Upper Body Marking	DOT-C, DOT-C2, DOT-C3, or DOT-C4	Exactly 2 pairs of 300mm long strips	White	Rear upper corners of cab - facing rearward	As high as practicable excluding fairings	
14	Rear Marking	DOT-C, DOT-C2, DOT-C3, or DOT-C4	Exactly 2 sections of min. 600mm each	Red/White	Rear - facing rearward - on fenders, on mud flaps brackets, or within 300mm below of the top of mud flaps	If mud flaps not used - on the cab or frame mounted brackets	If mud flaps not used - on the cab or frame mounted brackets

# TRUCKS, BUSES, MPVs: (continued) FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS



# TRUCKS, BUSES, MPVs: (continued) FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS



# TRAILERS

## FEDERAL LIGHTING EQUIPMENT LOCATION REQUIREMENTS

**IMPORTANT NOTE:** Every lamp, reflex reflector, and conspicuity treatment (device) 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 vehicle 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 TRUCKS, BUSES & MPVs

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height mm (in.) 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	380-1830 (15-72)
	Stop Lamps	(S)	Indicate braking	Minimum 2	Red	On the rear - symmetrical - as far apart as practicable	380-1830 (15-72)
	Rear Turn Signal Lamps	(I)	Indicate direction of turn	Minimum 2	Red or Yellow	On the rear - symmetrical - as far apart as practicable	380-2110 (15-83)
	Rear Reflex Reflectors	(A)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical - as far apart as practicable - facing rearward	380-1530 (15-60)
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	(P2, PC* or P3, PC2*)* photometrically certified at installation angle		Minimum 2	Red	Each side at rear - as far back as practicable	380-1530 (15-60) no max. for veh. under 2.032m(80") wide
	Rear Side Reflex Reflectors	(A)	Front and rear side marker lamps / side reflex reflectors				
	Minimum 2	Red	Each side at rear - as far back as practicable facing sideward	indicate vehicle's presence and length	380-1530 (15-60)		
4a	Front Side Marker Lamps	(P2, PC* or P3, PC2*)* photometrically certified at installation angle		Minimum 2	Yellow	Each side at front - as far forward as practicable	380 (15) minimum
4b	Front Side Reflex Reflectors	(A)					
	Minimum 2	Yellow	Each side at front - as far forward as practicable facing sideward	380-1530 (15-60)			

# TRAILERS (continued)

## ADDITIONAL EQUIPMENT FOR TRAILERS EXCEEDING THE FOLLOWING PARAMETERS

**LENGTH 9.1 m (30 ft.) OR LONGER**

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

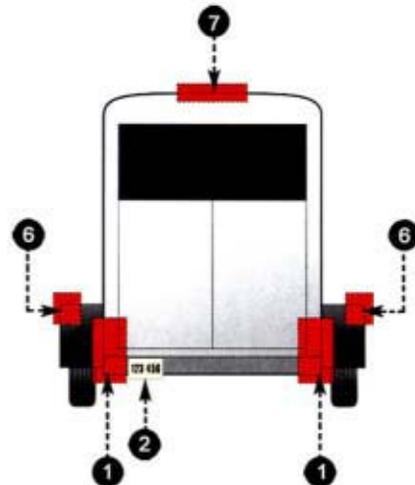
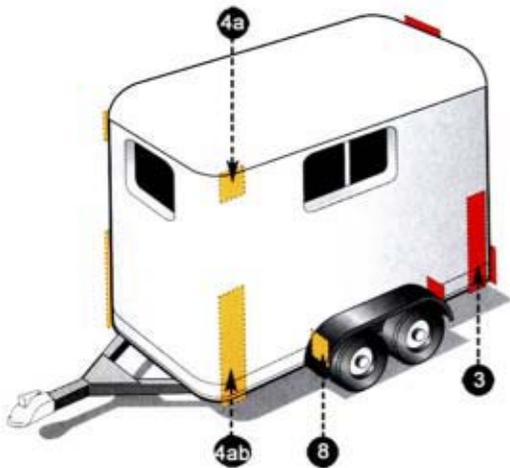
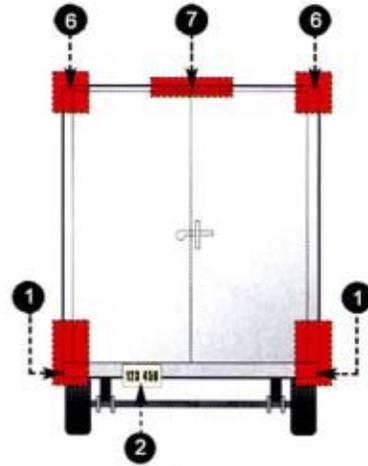
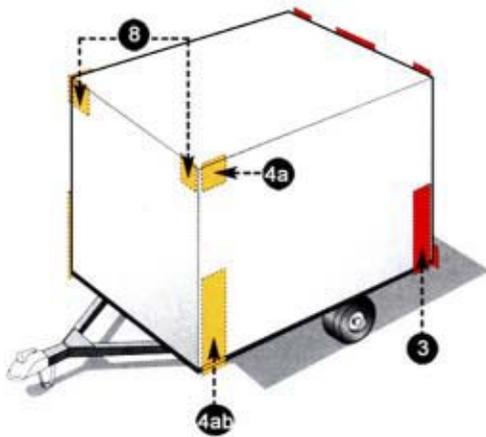
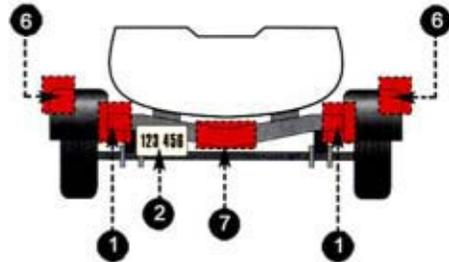
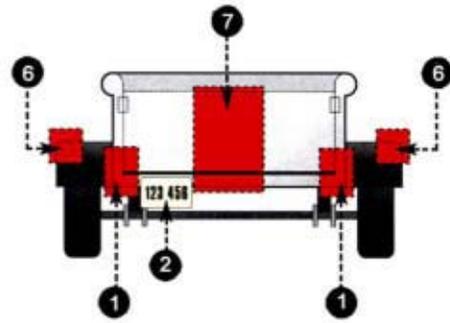
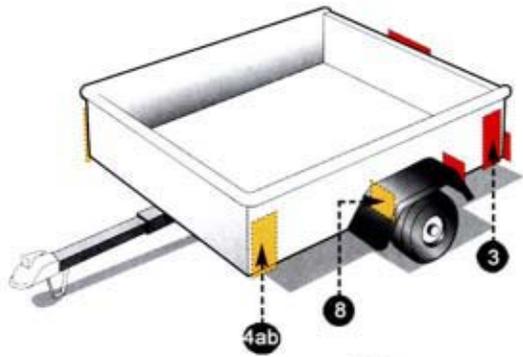
**WIDTH 2.032 m (80 in.) OR WIDER**

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	(SAE Lens Coding)	Functional Purpose	Quantity	Color	Location	Height
6	Rear Clearance Lamps	(P2, PC* or P3, PC2*)* photometrically certified at installation angle	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 Lamps	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 3	Red	On the rear - center, facing rearward - horizontally spaced 150 mm (6 in.) to 300 mm (12 in.) apart	in Canada : at the top - maybe lower if door header narrower than 25 mm in USA: as high as practicable
8	Front Clearance Lamps	(P2, PC* or P3, PC2*)* photometrically certified at installation angle	Show vehicle's width	Minimum 2	Yellow	At widest point - symmetrical - as far forward as practicable - facing forward	As high as practicable

**WIDTH 2.032 m (80 in.) OR WIDER AND GVWR 4536 kg (10,000 lb.) OR MORE**

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Conspicuity Treatment	DOT Coding	Quantity	Color	Location	Height	OPTIONS
9	Rear Upper Body Marking	DOT-C	Exactly 2 pairs of 300mm long strips	White	On the rear upper corners - facing rearward	At the top	
		DOT-C2,					
Reflex reflectors may not be required if they are replaced, in their required location, with conspicuity treatment	10	DOT-C3, or	Bumper Bar Marking	Continuous	Red/White	On the rear bumper bar's horizontal element - full width - facing rearward	No requirement
conspicuity treatment Optional in Canada	11	DOT-C4	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 1525 mm from the ground
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 or vehicle as practicable	As horizontal as practicable and as close as practicable to the range of 375 to 1525 mm from the ground	

# TRAILERS (continued)



# TRAILERS (continued)

