

THP-68

Use of the Federal Lighting Standard (FMVSS 108) in Texas



This form contains a synopsis of the information and tables in the current FMVSS 108 Lighting Standard. For full details, visit [49 C.F.R. 571.108](#). The green column in this form describes state law requirements for vehicles that are not subject to the federal standards (typically 1967 and older year models).

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Adoption of the Federal Lighting Standard in Texas and Enforcement by Any Peace Officer

Texas Transportation Code 547.3215 – Use of Federal Standard:

Unless specifically prohibited by this chapter, lighting, reflective devices, and associated equipment on a vehicle or motor vehicle must comply with:

- (1) the current federal standards in [49 C.F.R. Section 571.108](#); or*
- (2) the federal standards in that section in effect, if any, at the time the vehicle or motor vehicle was manufactured.*

The adoption of the federal lighting standards into state law means **any vehicle that is model year 1968 or newer must be equipped with lights and reflective devices that conform to the federal manufacturer's lighting standards in effect at the time the vehicle was manufactured.**

Oftentimes the federal standards are the same or similar to standards found in Texas Transportation Code Chapter 547, however on issues of light performance, mounting height, color, and number, the federal lighting standard controls. These requirements can be enforced by any peace officer in the state of Texas, as the above referenced state law requires vehicles to comply with federal lighting standards.

A vehicle manufactured prior to January 1, 1968, is not required to conform to federal standards and is only required to be equipped according to Texas Transportation Code Chapter 547.

In TC [§ 547.101](#), the Texas Department of Public Safety is granted authority to adopt rules necessary to administer Chapter 547, including the implementation of the Federal Lighting Standards. The adoption of these standards is clarified in [Texas DPS Administrative Rule Title 37, Part 1, Chapter 21, Rule 21.2](#):

(a) Standards--Federal Motor Vehicle Safety Standard (FMVSS). The standard for vehicle equipment established by the Texas Department of Public Safety is identical to the applicable federal standard.

*(1) Lamps, Reflective Devices, and Associated Equipment--FMVSS 108. The standard detailed in this paragraph applies to lamps, reflective devices, and associated equipment installed on a vehicle as original, replacement, or aftermarket equipment. No additional lamp, reflective device, equipment, or other material is permitted to be installed on a vehicle that impairs the effectiveness of, or interferes with, lighting or reflective devices required by this standard. **A lamp or reflective device installed in a location and manner described by FMVSS 108 must meet the prescribed color requirements regardless of whether or not the lamp or device is required equipment.***

Violations of the federal standard include defective or missing required lamps, wrong color lamps, or improperly mounted lamps. Additionally, **a vehicle may not be equipped in a manner that impairs the effectiveness of a required lamp or device** ([S6.2](#)). This provision means equipment such as tinted/smoked lamp covers that impair a required lamp are illegal.

Permitted Lamps vs. Required Lamps

Required Lamps

A lamp that is required by state law or by the Federal 108 Lighting Standard must comply with very specific display requirements. The lamp must be positioned correctly and must display only specific colors. The lamp must be kept in operational condition.

Permitted Lamps

At times, vehicles display lamps that are defined and permitted to be present, but that are not required to be present. A permitted lamp is not required to function, however if it is functioning it must still meet specific display and color requirements for that particular type of lamp (see bolded text in admin code above).

Table 1-A Required Lamps and Reflective Devices (All Passengers Cars, MPVs, Trucks, and Buses)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses					
Lower Beam Headlamps	White, of a headlighting system listed in Table II	On the front , at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 22 inches nor more than 54 inches	The wiring harness or connector assembly of each headlighting system must be designed so that only those light sources intended for meeting lower beam photometrics are energized when the beam selector switch is in the lower beam position, and that only those light sources intended for meeting upper beam photometrics are energized when the beam selector switch is in the upper beam position, except for certain systems listed in Table II and semiautomatic headlamp beam switching devices certified to S9.4.1.6 . Steady burning, except that may be flashed for signaling purposes or vary in intensity for adaptive driving beam functionality.	547.321 Headlamp mounting requirement is 24 – 54 inches for vehicles not subject to the federal standard. 547.333 Most vehicles are required to have high beams and low beams in state law. 547.334 provides an exception to the multiple-beam requirement for motor vehicles manufactured prior to September 4, 1948, and for farm tractors.
Upper Beam Headlamps	White, of a headlighting system listed in Table II	On the front , at the same height, symmetrically about the vert. centerline, as far apart as practicable	Not less than 22 inches nor more than 54 inches		
Turn Signal Lamps	2 Amber	At or near the front , at the same height, symmetrically about the vert. centerline, as far apart as practicable	Not less than 15 inches nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.	547.324 Front turn signals can be white or amber for vehicles not subject to the federal standard. Rear turn signals are still required to be red or amber . Turns signals are not required on vehicles manufactured prior to 1960 if less than 80" wide.
	2 Amber or red (Truck tractor exception, see S6.1.1.3)	On the rear , at the same height, symmetrically about the vert. centerline, as far apart as practicable	Not less than 15 inches nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.	

Table 1-A Required Lamps and Reflective Devices (All Passengers Cars, MPVs, Trucks, and Buses)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required – All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses					
Taillamps	2 Red	On the rear , at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated when the headlamps are activated in a steady burning state or the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated. May be activated when the headlamps are activated at less than full intensity as Daytime Running Lamps (DRL).	547.322 Model year 1959 or older – only one taillamp is required.
Stop Lamps	2 Red	On the rear , at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing. May also be activated by a device designed to retard the motion of the vehicle.	547.323 Stop lamps may be red or amber for vehicles not subject to the federal standard. No height requirement. Model year 1959 or older – only one stop lamp is required.
Note: a high-mounted stop lamp is also required for most vehicles – see page 6.					
Side Marker Lamps	2 Amber	On each side as far to the front as practicable	Not less than 15 inches	Steady burning except may be flashed for signaling purposes. Must be activated when the headlamps are activated in a steady burning state or the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.	State law does not require side marker lamps on vehicles not subject to the federal standard.
	2 Red (not req. on truck tractor).	On each side as far to the rear as practicable	Not less than 15 inches		
Reflex Reflectors	2 Amber	On each side as far to the front as practicable	Not less than 15 inches nor more than 60 inches	Not applicable.	State law does not require side reflex reflectors on vehicles not subject to the federal standard.
	2 Red (not req. on truck tractor).	On each side as far to the rear as practicable	Not less than 15 inches nor more than 60 inches	Not applicable.	
Reflex Reflectors	2 Red	On the rear , at the same height, symmetrically about the vert. centerline, as far apart as practicable. On a truck tractor May be mounted on back of the cab not less than 4 inches above the height of the rear tires	Not less than 15 inches nor more than 60 inches	Not applicable.	547.325 2 red reflectors mounted 15 – 60 inches are required on the rear of a vehicle not subject to the federal standard, however they are not required to be spaced as far apart as practicable.

Table 1-A Required Lamps and Reflective Devices (All Passengers Cars, MPVs, Trucks, and Buses)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses					
Backup Lamp	1 White Additional lamps permitted to meet requirements	On the rear	No Requirements	Steady burning. Must be activated when the ignition switch is energized and reverse gear is engaged. Must not be energized when the vehicle is in forward motion.	547.332 A white or amber backup lamp is permitted but not required for vehicles not subject to the federal standard.
License Plate Lamp	1 White Additional lamps permitted to meet requirements	On the rear to illuminate license plate from top or sides (see standard below)	No Requirements	Steady burning. Must be activated when the headlamps are activated in a steady burning state or when the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.	547.322(f) A white license plate lamp is required to make the plate clearly legible at a distance of 50 feet .

Discussion – License Plate Lamp Performance: [FMVSS 571.108, S7.7.15.1](#) - Each license plate lamp installed on a vehicle other than a motorcycle must be of such size and design as **to provide illumination on all parts of a 150 mm by 300 mm test plate** (standard license plate size). A vehicle subject to the federal lighting standards (year model 1968 and newer) must have a license plate lamp that illuminates all of the license plate. When articulating reasonable suspicion for a stop based on a license plate lamp that is not functioning properly, officers should rely on the federal standard’s performance requirements rather than the 50 foot visibility requirement found in the Transportation Code if the vehicle was manufactured after 1967.

Hazard Lamps

Although the 108 Lighting Standard does not specifically describe hazard lamps in its tables, a hazard warning operating unit is required by [S6.6.2](#):

All vehicles to which this standard applies except trailers and motorcycles must be equipped with a vehicular hazard warning operating unit, a vehicular hazard warning signal flasher, and a vehicular hazard warning signal pilot indicator meeting the requirements of [S9](#).

State law only requires hazard lamps on vehicles 80 inches or wider ([547.352](#)), however a vehicle subject to the federal lighting standards is required to be equipped with hazard lamps. State law requires larger vehicles to utilize hazard lamps when stationary in specific situations ([547.503](#)), but use of hazard lamps is otherwise not specifically regulated. For most motor vehicles, hazard lamps are not required to be activated and they are not prohibited from being activated in any given situation.

Required - Additional Lamps Required on All Passenger Cars, and on Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, Less Than 80 inches in Overall Width					
Parking Lamps	2 amber or white	On the front , at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated when the headlamps are activated in a steady burning state.	547.383 A parked vehicle must emit a white or amber light 1,000 feet to the front and a red light 1,000 feet to the rear.

Table 1-A Required Lamps and Reflective Devices (High-Mounted Stop Lamp for Certain Vehicles)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Additional Lamp(s) Required on All Passenger Cars, and on Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, Less Than 80 inches in Overall Width and with a GVWR of 10,000 Lbs. or Less					
High mounted stop lamp	1 Red, or 2 red where exceptions apply. See Section 6.1.1.2	On the rear including glazing, with the lamp center on the vertical centerline as viewed from the rear	Not less than 34 inches except for passenger cars. See Section 6.1.4.1	Steady burning. Must only be activated upon application of the service brakes. *See note below regarding momentary pulsing upon brake application.	State law does not require a high-mounted stop lamp on vehicles not subject to the federal standard.

The following are effective dates for the high-mounted stop lamp requirement:

- **Passenger Cars** – Required if manufactured on or after [September 1, 1985](#).
- **MPVs, Trucks, and Buses less than 80” wide and with a GVWR of 10,000 lbs. or less** – Required if manufactured on or after [September 1, 1993](#).
- **MPVs, Trucks, and Buses 80” or more in overall width** – not required
- **MPVs, Trucks, and Buses with a GVWR of over 10,000 lbs.** – not required

***Note:** Although high-mounted stop lamps are required to be “steady burning”, [SB 1493](#) (effective 9/1/25) also permits a high-mounted stop lamp to “pulse” or vary in intensity momentarily upon brake application. **High-mounted stop lamps may pulse four or fewer times within two seconds of brake application.**

If a high-mounted stop lamp pulses more than four times or continues pulsing beyond 2 seconds, the lamp would be considered a non-compliant high-mounted stop lamp.

Summary Diagram: Required lighting on all Passenger Cars, and on Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, Less Than 80 inches (2032 MM) in Overall Width – Federal Lighting Standard

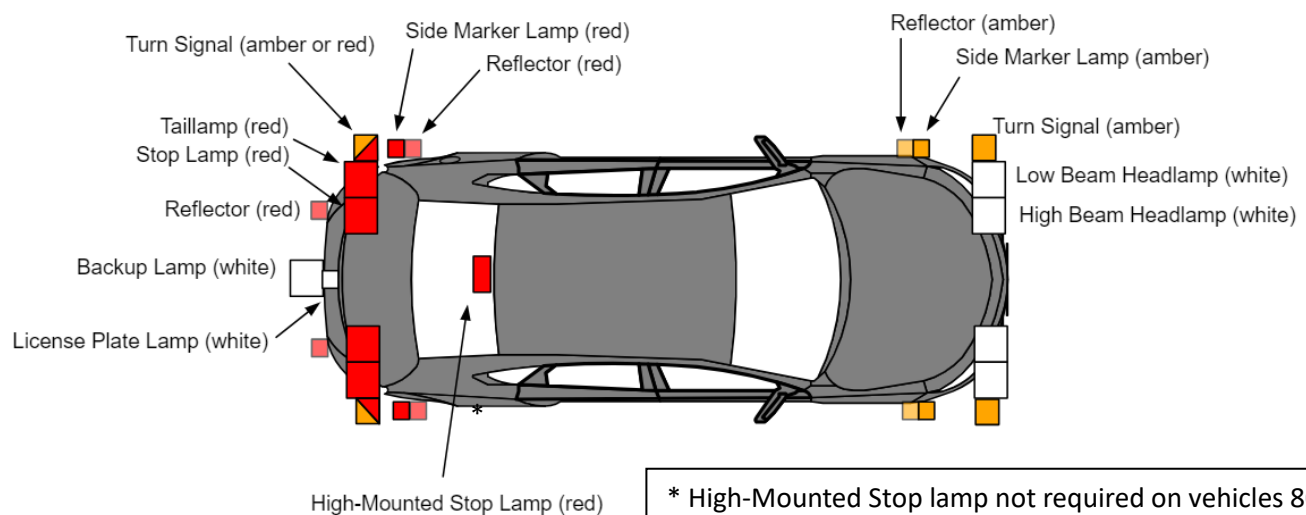


Table 1-A Required Lamps and Reflective Devices (30 Feet or Longer)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Additional Lamps and Reflective Devices Required on All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, 30 Feet or Longer					
Intermediate side marker lamps	2 Amber	On each side located at or near the midpoint between the front and rear side marker lamps	Not less than 15 inches	Steady burning except may be flashed for signaling purposes. Must be activated when the headlamps are activated in a steady burning state or when the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.	State law does not require intermediate side marker lamps on motor vehicles not subject to the federal standard.
Intermediate side reflex reflectors	2 Amber	On each side located at or near the midpoint between the front and rear side reflex reflectors	Not less than 15 inches nor more than 60 inches	Not applicable.	State law does not require intermediate side reflex reflectors on motor vehicles not subject to the federal standard.

Diagram: Additional Lamps and Reflective Devices Required on All Passenger Cars, MPVs, Trucks, and Buses - 30 Feet or Longer

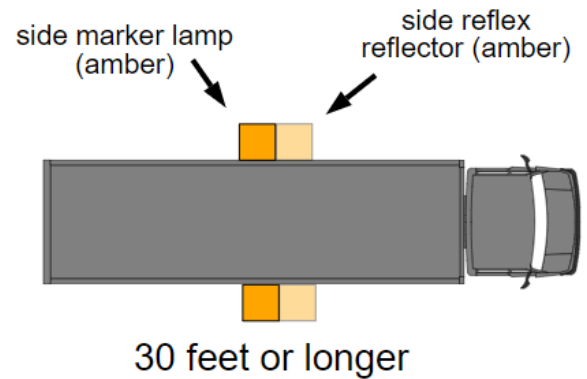
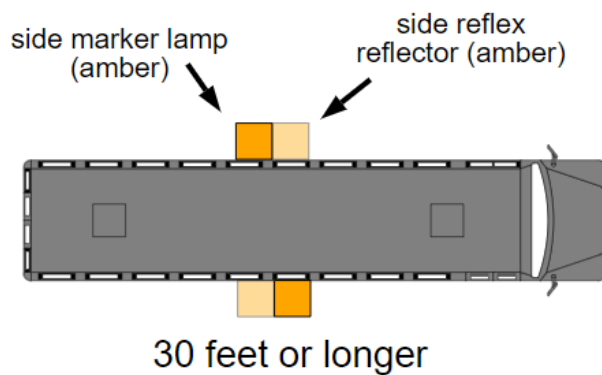
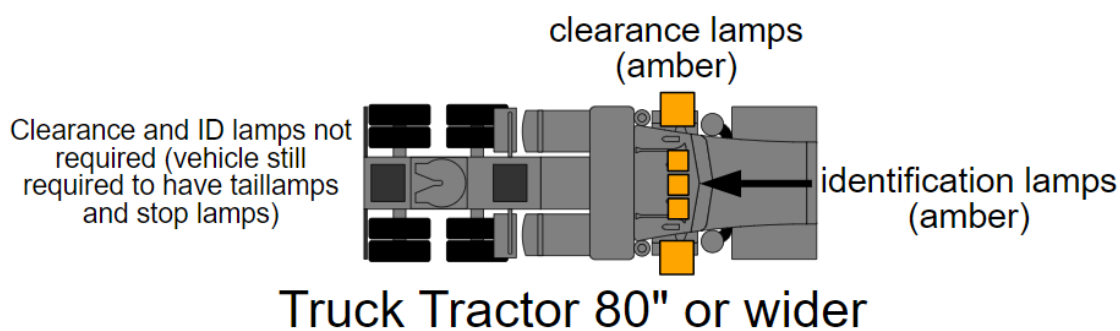
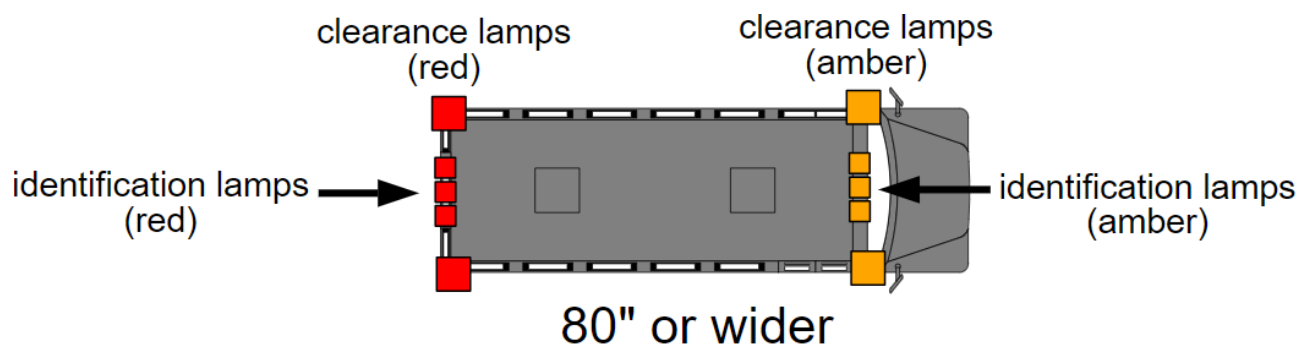


Table 1-A Required Lamps and Reflective Devices (80" or More in Overall Width)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Additional Lamps Required on All Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, 80 inches or More in Overall Width					
Clearance Lamps	2 Amber	On the front to indicate the overall width of the vehicle, or width of cab on truck tractor, at the same height, symmetrically about the vertical centerline May be located at a location other than the front if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle. May be combined with the side marker lamp	As near the top as practicable	Steady burning.	547.352 Same requirements as the federal standard.
	2 Red (not req. on truck tractor)	On the rear to indicate the overall width of the vehicle, at the same height, symmetrically about the vertical centerline May be located at a location other than the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle. May be combined with the side marker lamp, but not the taillamp	As near the top as practicable, except where the rear identification lamps are mounted at the extreme height of the vehicle	Steady burning.	547.352 Same requirements as the federal standard.
Identification Lamps	3 Amber	On the front , at the same height, as close as practicable to the vertical centerline , with lamp centers spaced not less than 6 inches or more than 12 inches apart	As near the top of the vehicle or top of the cab as practicable	Steady burning.	State law does not require identification lamps on vehicles not subject to the federal standard. 547.352(6) permits a vehicle at least 80 inches wide to have not more than three identification lamps to the front and rear.
	3 Red (not req. on truck tractor)	On the rear , at the same height, as close as practicable to the vertical centerline , with lamp centers spaced not less than 6 inches or more than 12 inches apart	As near the top as practicable Practicability of locating lamps on the vehicle header is presumed when the header extends at least 25 mm (1 inch) above the rear doors	Steady burning.	

Diagram: Additional Lamps Required on All Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, 80 inches (2032 MM) or More in Overall Width

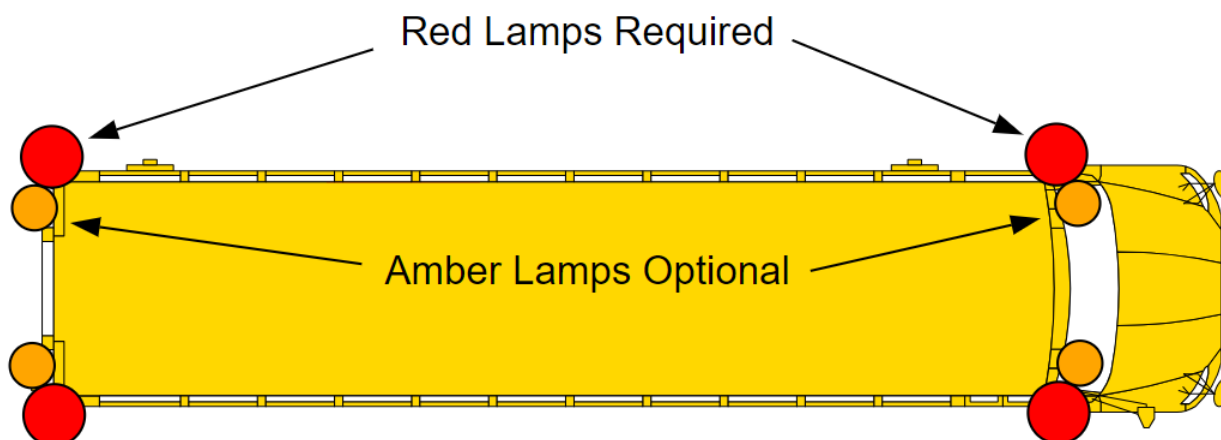


Note: See also "[Conspicuity Systems](#)" for truck tractors for additional reflective device requirements

Table 1-A Required Lamps and Reflective Devices (all School Buses)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Additional Lamps Required on All School Buses Except Multifunction School Activity Buses					
Signal Warning Lamps	2 Red plus 2 Amber optional	On the front of the cab as far apart as practicable , but in no case shall the spacing between lamps be less than 40 inches. Amber lamps, when installed, at the same height as and just inboard of the red lamp	As high as practicable but at least above the windshield	Flashing alternately between 60 to 120 cycles per minute, with an activation period sufficient to allow the lamp to reach full brightness, when actuated by a manual switch. Amber lamps, when installed, may only be activated by manual or foot operation, and must be automatically deactivated and the red lamps must be automatically activated when the bus entrance door is opened.	547.701 Same requirement as the federal standard, although number of flashing cycles per minute is not specified. Light must be visible at a distance of 500 feet.
	2 Red plus 2 Amber optional	On the rear cab as far apart as practicable , but in no case shall the spacing between lamps be less than 40 inches. Amber lamps, when installed, at the same height as and just inboard of the red lamp	As high as practicable but at least above the top of any side window opening	Flashing alternately between 60 to 120 cycles per minute, with an activation period sufficient to allow the lamp to reach full brightness, when actuated by a manual switch. Amber lamps, when installed, may only be activated by manual or foot operation, and must be automatically deactivated and the red lamps must be automatically activated when the bus entrance door is opened.	

Diagram: Signal Warning Lamps Required on All School Buses



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Table 1-A Required Lamps and Reflective Devices (Permitted by not Required)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Daytime Running Lamps Permitted But Not Required on Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses					
Daytime Running Lamp (DRL)	2 identically colored either white, white to yellow, white to selective yellow, selective yellow, or yellow	On the front , symmetrically disposed about the vertical centerline if not a pair of lamps required by this standard or if not optically combined with a pair of lamps required by this standard	Not more than 42 inches above the road surface if not a pair of lamps required by this standard or if not optically combined with a pair of lamps required by this standard See S7.10.13(b) for additional height limitation	Steady burning. Automatically activated as determined by the vehicle manufacturer and automatically deactivated when the headlamp control is in any “on” position. Each DRL optically combined with a turn signal lamp must be automatically deactivated as a DRL when the turn signal lamp or hazard warning lamp is activated, and automatically reactivated as a DRL when the turn signal lamp or hazard warning lamp is deactivated. See S7.10.10.1(c) for additional activation requirements when mounted close to, or combined with, a turn signal lamp.	State law does not require or regulate daytime running lamps on vehicles not subject to the federal standard.

Table 1-B Required Lamps and Reflective Devices (All Trailers)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Trailers					
Turn Signal Lamps	2 Red or Amber	On the rear , at the same height, symmetrically about the vert. centerline, as far apart as practicable	Not less than 15 inches nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.	547.324 2 amber or red required, however turn signals are not required on trailers manufactured prior to model year 1960. See also applicability exceptions in 547.304 .
Taillamps	2 Red , or 1 red on trailers less than 30 inches wide	On the rear , at the same height, symmetrically about the vertical centerline, as far apart as practicable. If a single lamp, must be mounted at or near the vert. centerline	Not less than 15 inches nor more than 72 inches	Steady burning.	547.322 Same requirements as federal standard. See also applicability exceptions in 547.304 .
Stop Lamps	2 Red , or 1 red on trailers less than 30 inches wide	On the rear , at the same height, symmetrically about the vertical centerline, as far apart as practicable. If a single lamp, must be mounted at or near the vert. centerline	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing. May also be activated by a device designed to retard the motion of the vehicle.	547.323 Same requirements as federal standard. See also applicability exceptions in 547.304 .
Side Marker Lamps	2 Amber , none required on trailers less than 6 feet in overall length	On each side as far to the front as practicable exclusive of the trailer tongue	Not less than 15 inches	Steady burning except may be flashed for signaling purposes.	547.352 For trailers not subject to the federal standard, state law only requires front and rear side marker lamps if the trailer is at least 80 inches wide . See also applicability exceptions in 547.304 .
	2 Red	On each side as far to the rear as practicable	Not less than 15 inches. Not more than 60 inches on trailers 80 inches or more in overall width		

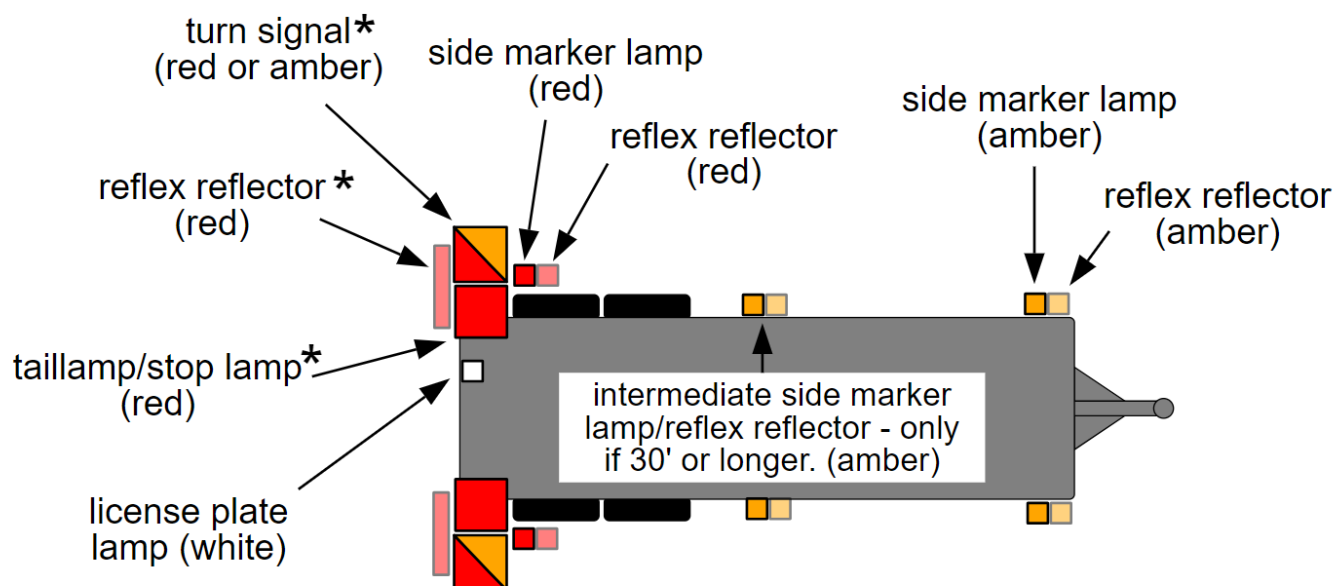
Table 1-B Required Lamps and Reflective Devices (All Trailers)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Trailers					
Reflex Reflectors. A trailer equipped with a conspicuity treatment in conformance with S8.2 of this standard (retroreflective sheeting) need not be equipped with reflex reflectors if the conspicuity material is placed at the locations of the required reflex reflectors.	2 Amber None required on trailers less than 6 ft in length	On each side as far to the front as practicable exclusive of the trailer tongue	Not less than 15 inches nor more than 60 inches	Not applicable.	547.352 , 547.354 For trailers not subject to the federal standard, state law only requires front and rear side reflectors if the trailer is at least 80 inches wide (mounted 24-60 inches high).
	2 Red	On each side as far to the rear as practicable	Not less than 15 inches nor more than 60 inches	Not applicable.	
	2 Red or 1 red on trailers less than 30 inches wide	On the rear , at the same height, symmetrically about the vertical centerline, as far apart as practicable When a single reflector is installed it must be mounted at or near the vertical centerline	Not less than 15 inches nor more than 60 inches	Not applicable.	547.325 2 red reflectors mounted 15 - 60 inches are required on the rear of a vehicle not subject to the federal standard, however they are not required to be spaced as far apart as practicable.
License Plate Lamp	1 White Additional lamps permitted to meet requirements	On the rear to illuminate license plate from top or sides	No requirement	Steady burning.	547.322(f) A white license plate lamp is required to make the plate clearly legible at a distance of 50 feet .

Table 1-B Required Lamps and Reflective Devices (Trailers 30 Feet or Longer)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - Additional Lamps and Reflective Devices Required on all Trailers 30 Feet or Longer					
Intermediate Side Marker Lamps	2 Amber	On each side located at or near the midpoint between the front and rear side marker lamps	Not less than 15 inches	Steady burning except may be flashed for signaling purposes.	547.352 2 amber , centrally located, one on each side.
Intermediate Side Reflex Reflectors A trailer equipped with a conspicuity treatment in conformance with S8.2 of this standard need not be equipped with reflex reflectors if the conspicuity material is placed at the locations of the required reflex reflectors	2 Amber	On each side located at or near the midpoint between the front and rear side reflex reflectors	Not less than 15 inches nor more than 60 inches	Not applicable.	547.352 , 547.354 2 amber , centrally located, one on each side, mounted 24-60 inches .

Summary Diagram: All Trailers (some exceptions for trailers less than 30 inches wide and less than 6 feet long)



*** Note:** on some trailers, the taillamp, stop lamp, turn signal lamp, and reflex reflector are optically combined

Table 1-B Required Lamps and Reflective Devices (Trailers 80 Inches or More in Overall Width)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - Additional Lamps Required on all Trailers 80 inches or More in Overall Width					
Clearance Lamps	2 Amber	On the front to indicate the overall width of the vehicle , at the same height, symmetrically about the vertical centerline May be located at a location other than the front if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle	As near the top as practicable	Steady burning.	547.352 Same requirements as federal standard.
	2 Red	On the rear to indicate the overall width of the vehicle , at the same height, symmetrically about the vertical centerline May be located at a location other than the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle. May be combined with the side marker lamp, but not the taillamp	As near the top as practicable , except where the rear identification lamps are mounted at the extreme height of the vehicle.	Steady burning.	547.352 Same requirements as federal standard.
	2 Amber to front and red to rear	On a boat trailer the requirement for front and rear clearance lamps may be met by installation at or near the midpoint on each side of a dual facing lamp so as to indicate the extreme width. May be located at a location other than the front and the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle	As near the top as practicable	Steady burning.	547.352 , 547.304 State law requires boat trailers not subject to the federal standard to have front and rear clearance lamps if over 80" wide. Not required on boat trailers with a GVWR of less than 4,500 lbs. unless operated at night or in conditions specified by 547.302(a) .
Identification Lamps	3 Red	On the rear , at the same height, as close as practicable to the vertical centerline , with lamp centers spaced not less than 6 inches or more than 12 inches apart	As near the top as practicable. Practicability of locating lamps on the vehicle header is presumed when the header extends at least 25 mm (1 inch) above the rear doors	Steady burning.	State law does not require identification lamps on vehicles not subject to the federal standard. 547.352(6) permits these vehicles to have not more than three identification lamps to the front and rear.

Diagram: Additional Lamps Required on all Trailers 80 inches or More in Overall Width

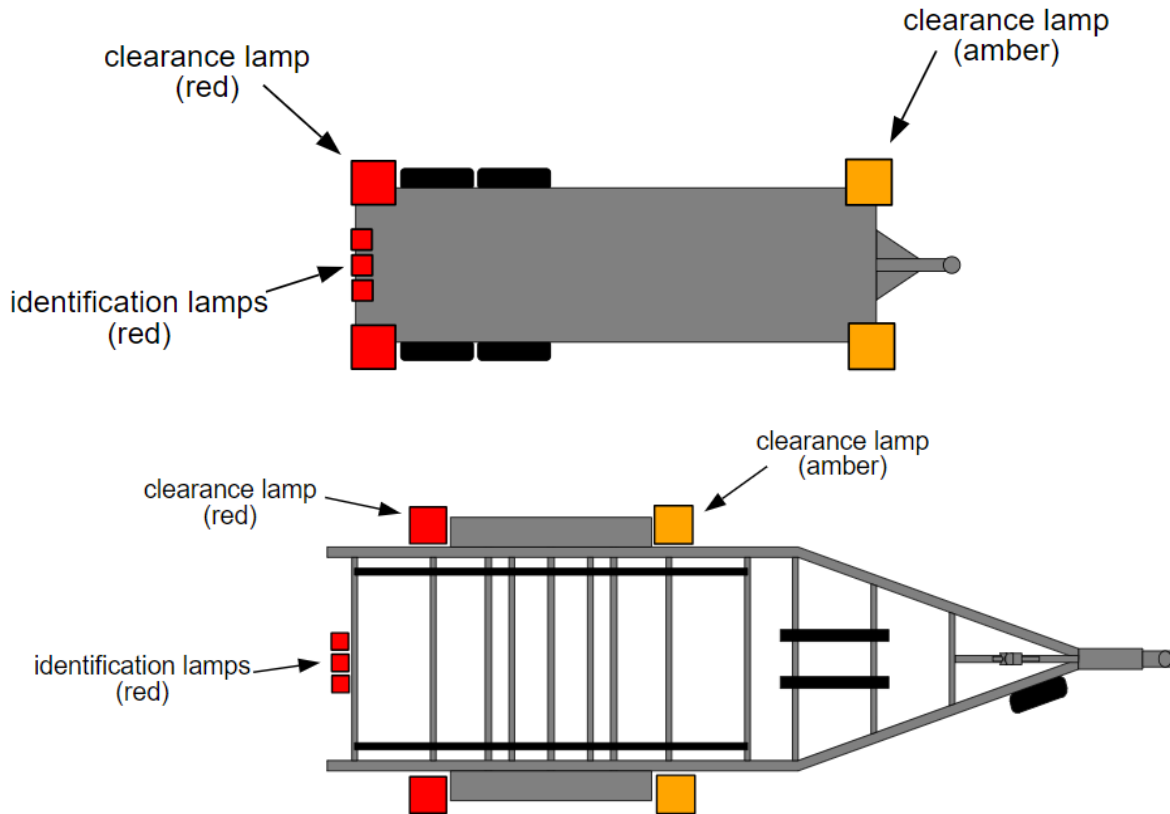
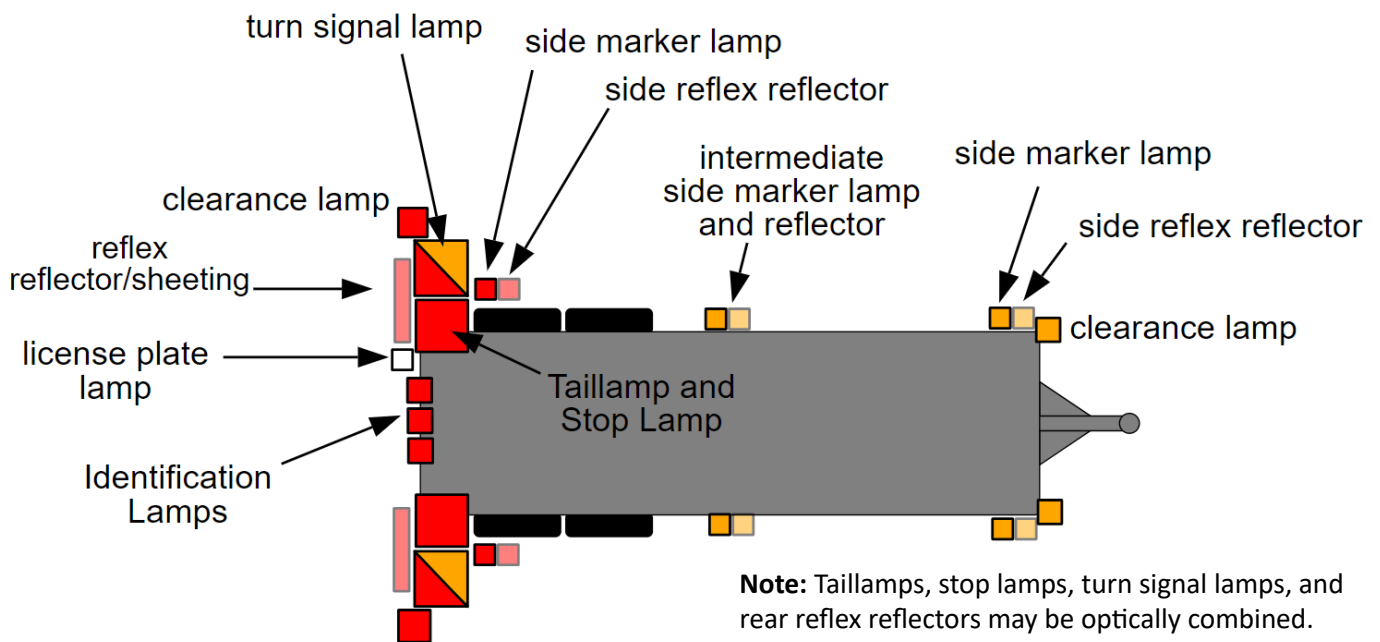


Diagram: All Lamps Required on all Trailers 80 inches or Wider and 30 Feet or Longer



Note: Taillamps, stop lamps, turn signal lamps, and rear reflex reflectors may be optically combined. Clearance lamps may be optically combined with side marker lamps, but not with taillamps.

Note: See also "[Conspicuity Systems](#)" for trailers 80 inches or wider for additional reflective device requirements.

Conspicuity Systems/Retroreflective Sheeting

[49 C.F.R. 571.108, S6.1.1.1](#)

The following vehicles are required to be equipped with rear and side conspicuity systems:

- Trailers 80 inches or wider with a GVWR over 10,000 pounds if manufactured after 12/1/1993. (does not include trailers designed exclusively for living or office use)
- Truck Tractors

The requirements for conspicuity systems may be met with retroreflective sheeting, conspicuity reflex reflectors, or a combination of both ([S8.2](#)). The pattern of conspicuity systems should be alternating red and white.

[S8.2.3](#) – Conspicuity System, Trailers 80 inches or wider with a GVWR over 10,000 pounds (manufactured after 12/1/93)

Element 1 – Alternating red and white reflective tape or reflectors, as horizontal as practicable, across the full width of the trailer. Mounted on the rear between 14.75 inches and 60 inches (375 mm to 1525 mm).

Element 2 – Two pairs of white strips measuring 11.8 inches (300 mm) applied horizontally and vertically to the right and left upper contours of the body, as viewed from the rear, as close to the top of the trailer and as far apart as practicable. If body is not rectangular, may be applied along the perimeter of the body. Not required for container chassis or platform trailers without bulkheads.

Element 3 – If vehicle is equipped with an underride protection device, red and white reflective tape or reflectors must be applied across the full width of the horizontal member of the rear underride protection device.

Element 4 – A strip of sheeting or conspicuity reflex reflectors must be applied to each side, as horizontal as practicable, originating and terminating as close to the front and rear as practicable, mounted between 14.75 inches and 60 inches high (375 mm to 1525 mm). The strip need not be continuous as long as not less than half the length of the trailer is covered and the spaces are distributed as evenly as practicable.



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S8.2.4 – Conspicuity System, Truck Tractors

Element 1 – Two strips of sheeting or conspicuity reflex reflectors, mounted horizontally, each not less than 23.6 inches long (600 mm), located as close as practicable to the edges of the rear fenders, mudflaps, or the mudflap support brackets. Must be applied to mark the width of the truck tractor. Strips on mudflaps must be mounted not lower than 11.8 inches (300 mm) below the upper edge of the mudflap. Truck tractors without mudflaps may mount devices on brackets behind the rear axles or on the back of the cab as close to the outer edges as practicable.

Element 2 – Two pairs of white strips measuring 11.8 inches (300 mm) must be applied horizontally and vertically as closely as practicable to the right and left upper contours of the cab as far apart as practicable.



Table 1-C Required Lamps and Reflective Devices (All Motorcycles)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Motorcycles					
Lower Beam Headlamps	White , of a headlight system listed in S10.17	On the front , at the same height, symmetrically about the vertical centerline, as far apart as practicable. See additional requirements in S10.17.1.1 , S10.17.1.2 , and S10.17.1.3	Not less than 22 inches nor more than 54 inches	The wiring harness or connector assembly of each headlighting system must be designed so that only those light sources intended for meeting lower beam photometrics are energized when the beam selector switch is in the lower beam position, and that only those light sources intended for meeting upper beam photometrics are energized when the beam selector switch is in the upper beam position, except for certain systems listed in Table II and semiautomatic headlamp beam switching devices certified to S9.4.1.6 .	547.801 Not more than 2 headlamps mounted from 24 to 54 inches . Motorcycles with an engine displacement over 250 cubic centimeters must have high beams and low beams. Motorcycles 250 cc's or less are not required to have high beams and low beams as long as a single headlight meets visibility requirements described in 547.801 .
Upper Beam Headlamps	White , of a headlight system listed in S10.17	On the front , at the same height, symmetrically about the vertical centerline, as far apart as practicable. See additional requirements in S10.17.1.1 , S10.17.1.2 , and S10.17.1.3	Not less than 22 inches nor more than 54 inches	Steady burning, except that may be flashed for signaling purposes or (for semiautomatic headlamp beam switching devices certified to S9.4.1.6) vary in intensity for adaptive driving beam functionality. The upper beam or the lower beam, but not both, may be wired to modulate from a higher intensity to a lower intensity in accordance with S10.17.5 .	
Turn Signal Lamps (front)	2 Amber None required on a motor driven cycle whose speed attainable in 1 mile is 30 mph or less	At or near the front , at the same height, symmetrically about the vertical centerline, and having a minimum horizontal separation distance (centerline of lamps) of 16 inches. Minimum edge to edge separation distance between a turn signal lamp and headlamp is 4 inches	Not less than 15 inches nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.	State law does not require turn signals on motorcycles not subject to the federal standard.

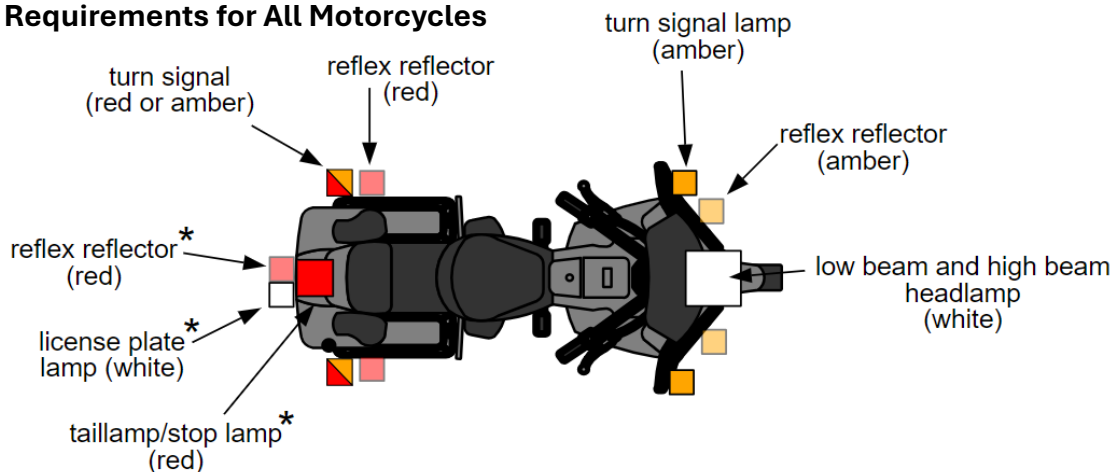
Table 1-C Required Lamps and Reflective Devices (All Motorcycles)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Motorcycles					
Turn Signal Lamps (rear)	2 Amber or red. None required on a motor driven cycle whose speed attainable in 1 mile is 30 mph or less	At or near the rear , at the same height, symmetrically about the vertical centerline, and having a minimum horizontal separation distance (centerline to centerline of lamps) of 9 inches. Minimum edge to edge separation distance between the turn signal lamp and the taillamp or stop lamp is 4 inches, when a single stop and taillamp is installed on the vertical centerline and the turn signal lamps are red	Not less than 15 inches nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.	State law does not require turn signals on motorcycles not subject to the federal standard.
Taillamps	1 Red	On the rear , on the vertical centerline except that if two are used, they must be symmetrically disposed about the vertical centerline	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated when the headlamps are activated in a steady burning state.	547.801 At least 1 taillamp mounted from 20 to 72 inches .
Stop Lamps	1 Red	On the rear , on the vertical centerline except that if two are used, they must be symmetrically disposed about the vertical centerline	Not less than 15 inches nor more than 72 inches	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing. May also be activated by a device designed to retard the motion of the vehicle.	547.801 At least 1 stop lamp visible at a distance of at least 300 feet (no specific height requirement).

Table 1-C Required Lamps and Reflective Devices (All Motorcycles)

Lighting device	Number and color	Mounting location	Mounting height	Device activation	State Law Differences (standard for pre-1968 vehicles)
Required - All Motorcycles					
Reflex Reflectors	2 Amber	On each side as far to the front as practicable	Not less than 15 inches nor more than 60 inches	Not applicable.	State law does not require side reflectors on motorcycles not subject to the federal standard.
	2 Red	On each side as far to the rear as practicable	Not less than 15 inches nor more than 60 inches	Not applicable.	
	1 Red	On the rear , on the vertical centerline except that, if two are used on the rear, they must be symmetrically disposed about the vertical centerline	Not less than 15 inches nor more than 60 inches	Not applicable.	547.801 Same requirements as federal standard.
License Plate Lamp	1 White	On the rear to illuminate license plate. Additional lamps permitted to meet requirements	No requirement	Steady burning. Must be activated when the headlamps are activated in a steady burning state.	547.801 A white license plate lamp is required to make the plate clearly legible at a distance of 50 feet .

Diagram: Requirements for All Motorcycles



*Note: on some motorcycles, the taillamp, stop lamp, rear reflex reflector, and license plate lamp are combined in one lamp housing

Additional Vehicle Lighting Regulated by State Law Only

Although most lamps and reflective devices are described in the Federal 108 Lighting Standard, the Texas Transportation Code does regulate several lamps that are not addressed in the federal standard.

[547.327 – Spotlamps Permitted](#)

Spot lamps are permitted, not required. A motor vehicle may be equipped with **not more than two spotlamps**. A spotlamp shall be aimed so that no part of the high-intensity portion of the beam strikes the windshield, window, mirror, or occupant of another vehicle in use.

[547.328 - Fog Lamps Permitted](#)

No more than two fog lamps may be present, they must be mounted **between 12 – 30 inches**, and may be used in conjunction with low beam headlamps. For lamps must be **white or yellow** (see next paragraph).

Fog lamps are not defined in the TRC or in the Federal Lighting Standard, however they are described in detail in the SAE J583. This document was adopted in DPS Admin Code ([Rule 21.2](#)) and requires that a fog lamp be white or yellow. Fog lamps of any other color are considered to be the wrong color, and therefore a violation of state law.

[547.329 - Auxiliary Passing Lamps Permitted](#)

A motor vehicle may be equipped with no more than two auxiliary passing lamps. An auxiliary passing lamp shall be mounted on the front of the vehicle at a height from **24 to 42 inches**. DPS Administrative Code ([Rule 21.2](#)) adopted the SAE definition and standards for auxiliary passing lamps in SAE J582. Auxiliary Passing Lamps supplement the low-beam headlamps and are required to be **white**. This is a mostly obsolete type of lamp and SAE J582 was cancelled in 2005. Some may still be in use on the road.

[547.330 – Auxiliary Driving Lamps Permitted](#)

A motor vehicle may be equipped with **no more than two** auxiliary driving lamps mounted on the front of the vehicle at a height from **16 to 42 inches**. They may be used with headlamps as long as they are used in compliance with [547.333](#), which requires that the lowermost distribution of light from headlamps and auxiliary driving lamps be selected when within 500 feet of an approaching vehicle and 300 feet when following another vehicle. The lowermost distribution of light would be low beams on, high-beams and auxiliary lamps off.

In other words, an LED light bar or other auxiliary driving lamp would have to be mounted between 16 and 42 inches and it could only be used with the high-beam headlights in situations where high-beam headlights are authorized.



Auxiliary Driving Lamps are not defined in the TRC or the Federal Lighting Standard, however they are described by SAE engineering code J-581 (adopted in Texas by administrative code – [Title 37, Part 1, Rule 21.2](#)).

3.1 AUXILIARY HIGH BEAM LAMP

A lighting device mounted to provide illumination forward of the vehicle and intended to supplement the high beam of a standard headlamp system. It is not intended for use alone or with the lower beam of a standard headlamp system. An auxiliary highbeam lamp may also be known as an, auxiliary upper beam lamp or auxiliary driving lamp.

Based on the definition for auxiliary driving lamp adopted by administrative code (J581 above), auxiliary driving lamps are not intended to be used alone or with lower beam headlamps, therefore such use is improper and in violation of [547.330](#).

J581 also requires that Auxiliary Driving Lamps be **white** in color.

Enforcement Guidance: The THP enforcement guidance for these lamps is that enforcement action should only be taken if the lamp is turned on and used improperly. Lamps that are turned off, even if improperly mounted, should not be used as PC for stops.