

Correct as at 27th April 2026. It may be superseded at any time.

Extract taken from: In-service certification (WoF and CoF) > Unclassified vehicles > Lighting > Headlamps

## 4-1 Headlamps

### Reasons for rejection

#### Mandatory, permitted and prohibited equipment

1. A self-propelled vehicle is not fitted with either:
  - a) one pair of dipped-beam headlamps, or
  - b) one pair of forward-facing work lamps.
2. A self-propelled vehicle is fitted with more than:
  - a) one pair of dipped-beam headlamps, or
  - b) two pairs of main-beam headlamps.
3. A self-propelled vehicle is fitted with a headlamp that is not in a pair.
4. A retrofitted pair of headlamps is not fitted:
  - a) symmetrically, or
  - b) as far towards each side of the vehicle as is practicable.
5. A self-propelled vehicle is fitted with a dipped-beam headlamp where the maximum intensity of the beam is projected to the right.
6. A trailer is fitted with headlamps.

#### Condition

7. A lamp is insecure.
8. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
9. A reflector or reflector is damaged or has deteriorated so that light output is reduced.
10. A mandatory lamp is obscured or contains dirt or moisture in the form of large droplets, runs or puddles.
11. A main-beam headlamp warning device is obscured from the driver's vision.

#### Performance

12. When switched on, a headlamp emits a light that is:
  - a) not substantially white or amber, or
  - b) not approximately equal in colour or intensity to the other lamp in a pair, or
  - c) not steady, or

- d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
- e) too bright, eg due to the fitment of an HID or LED conversion kit (Note 6) or other incorrect light source.

13. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than two lamps operate on dipped beam, or
- c) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
- d) the centreline of the light beam is too far to the left or slopes down too far so that the headlamp is no longer capable of illuminating the road at least 50m ahead (Figure 4-1-1), or
- e) the centreline of the light beam:
  - i. projects to the right of the vehicle's centreline, or
  - ii. does not dip at an angle specified in Table 4-1-1.

14. When the main-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than four lamps operate on main beam, or
- c) the centreline of the light beam projects to the right of the vehicle's centreline or up from the horizontal (Figure 4-1-2), or
- d) the lamps are not capable of being switched to dipped beam or turned off from the driver's seating position, or
- e) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.

15. On a self-propelled vehicle with no headlamps, when the forward-facing work lamps are switched on a mandatory lamp does not operate.

16. On a self-propelled vehicle with no headlamps, when the forward-facing work lamps are switched on a lamp emits a light that is:

- a) not substantially white or amber, or
- b) not approximately equal in colour or intensity to the other lamp in a pair, or
- c) not steady, or
- d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
- e) dazzling to other road users, eg due to inappropriate alignment (Figure 4-1-2 - Work lamp beam pattern).

#### Note 1 Definitions

**Work lamp** means a high-intensity lamp that is not necessary for the operation of the vehicle but is designed to illuminate a work area or scene, and includes a scene lamp, a spot lamp and an alley lamp. In the case of a vehicle without headlamps, forward-facing work lamps must be fitted to illuminate the road ahead during the hours of darkness.

**Headlamp** means a lamp designed to illuminate the road ahead of a vehicle, and that is:

- a) a dipped-beam headlamp (single lamp), or
- b) a main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) a combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

**Note 2**

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

**Note 3**

If the vehicle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

**Note 4**

If a headlamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the headlamp.

**Note 5**

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

**Note 6**

A high-intensity discharge (HID or Xenon HID) or LED conversion kit consists of an HID or LED bulb which fits into the original headlamp unit in place of the original bulb with no change to the headlamp lens, reflector or housing.

It is illegal to fit an HID or LED conversion kit to a vehicle as it brings the headlamp out of standards compliance by producing poor beam patterns and light that is often far too bright to be safe. The bulbs can also produce light that is noticeably blue and not the required substantially white or amber colour. Vehicle and headlamp manufacturers do not permit this modification, and these kits cannot be LVV certified.

It is permitted to replace a complete halogen headlamp unit with a complete HID or LED headlamp unit. If the vehicle is required to meet an approved safety standard for headlamps, only approved headlamps can be retrofitted.

**Table 4-1-1. Allowable dipped-beam headlamp alignment**

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	As specified by the vehicle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2m	1.0–2.0	30–60	0.57–1.15
		more than 1.2m	2.0–2.5	60–75	1.15–1.43

**Table 4-1-2. Dipped-beam angle conversions**

Percent (%)	mm/3m	Degrees (°)		Percent (%)	mm/3m	Degrees (°)
1.0	30	0.6		2.3	69	1.3
1.1	33	0.6		2.4	72	1.4
1.2	36	0.7		2.5	75	1.4
1.3	39	0.7		2.6	78	1.5
1.4	42	0.8		2.7	81	1.5
1.5	45	0.9		2.8	84	1.6
1.6	48	0.9		2.9	87	1.7
1.7	51	1.0		3.0	90	1.7
1.8	54	1.0		3.1	93	1.8
1.9	57	1.1		3.2	96	1.8
2.0	60	1.1		3.3	99	1.9
2.1	63	1.2		3.4	102	1.9
2.2	66	1.3		3.5	105	2.0

Figure 4-1-1. Minimum illuminated area

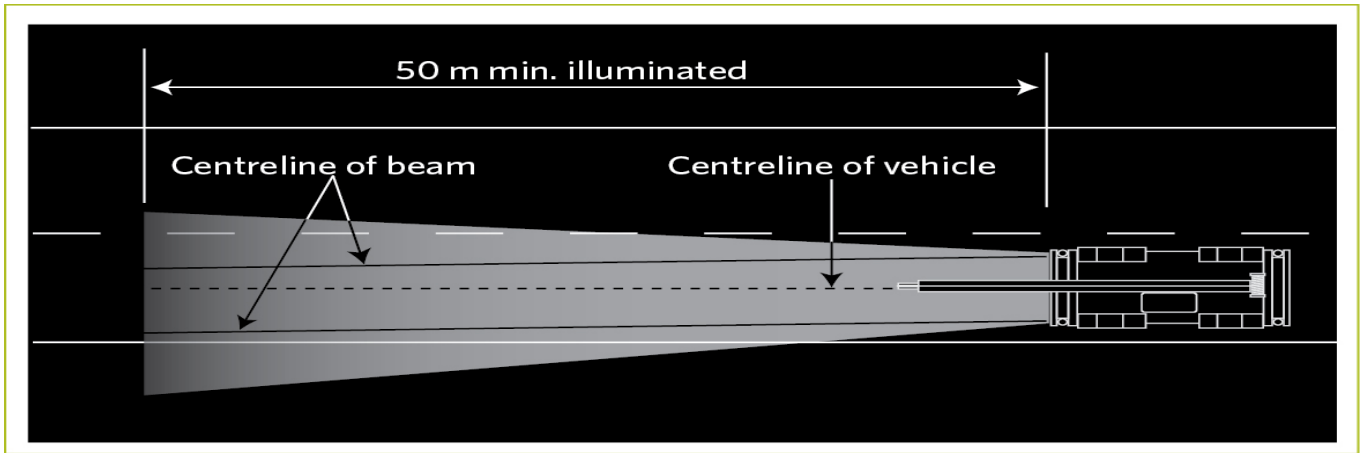
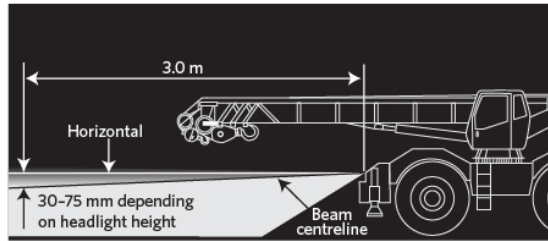
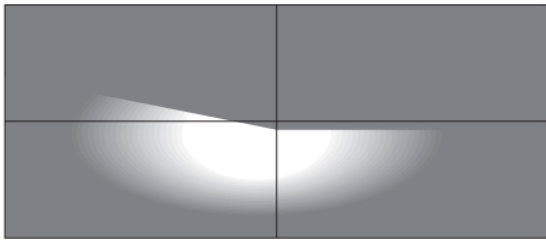


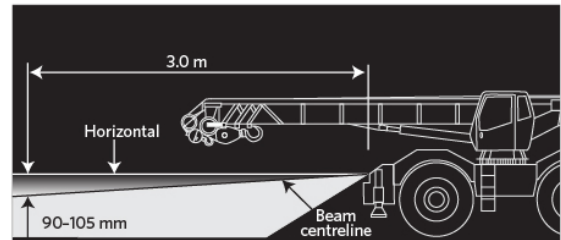
Figure 4-1-2. Dipped beams



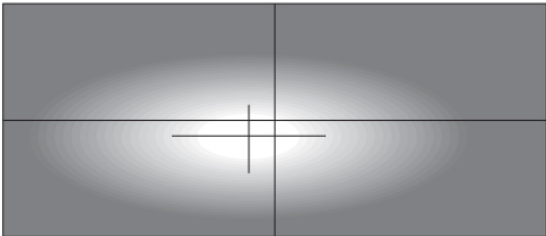
Asymmetric dipped beam



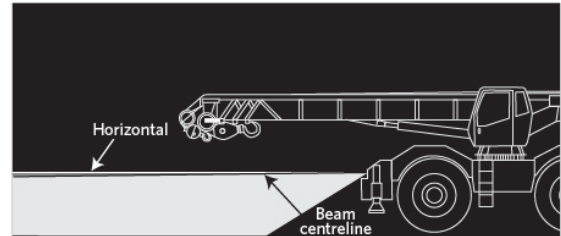
Asymmetric dipped-beam headlamp pattern on light board



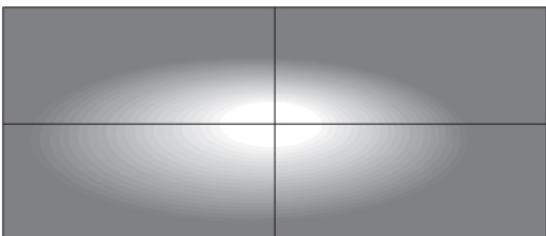
Symmetric dipped beam



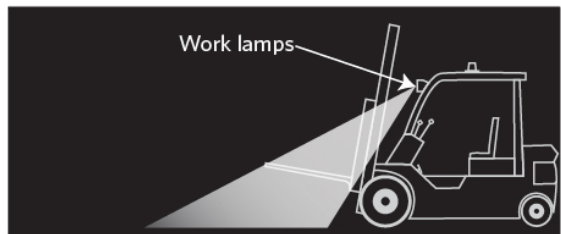
Symmetric dipped-beam headlamp pattern on light board



Main (high) beam



Main- (high-) beam headlamp pattern on light board



Work lamp beam pattern

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)

### Mandatory and permitted equipment

1. A self-propelled vehicle must be fitted with one pair of dipped-beam headlamps (Note 1).
2. A self-propelled vehicle may be fitted with one or two pairs of main-beam headlamps.

3. A warning device may be fitted that indicates that the main-beam headlamps are switched on.
4. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

### **Prohibited equipment**

5. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.
6. A trailer must not be fitted with headlamps.

### **Condition**

7. A headlamp must:
  - a) be in sound condition, and
  - b) not be obscured.

### **Performance**

8. A lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. A lamp must emit a steady light.
10. A lamp must provide sufficient illumination and light output to illuminate the road ahead.
11. A pair of lamps must emit light that is approximately of equal colour and intensity when switched on.
12. A lamp must emit a beam that is substantially white or amber.
13. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.
14. A warning device that indicates that the main-beam lamps are in operation must be in good working order.
15. When the headlamps are switched on and the vehicle's front wheels are pointing in the straight-ahead position:
  - a) the centre of a headlamp beam must be either parallel to or to the left of the longitudinal centreline of the vehicle, and
  - b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal and
  - c) the centre of a dipped-beam headlamp beam must dip at an angle specified in Table 4-1-1.
16. The dipped-beam headlamps must illuminate the road ahead for 50m in normal darkness.
17. A headlamp must be fitted with a light source that is specified by the vehicle manufacturer or the headlamp manufacturer.