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# MOT inspection manual: cars and passenger vehicles

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# 4. Lamps, reflectors and electrical equipment

Headlamp, position lamps, daytime running lamps, stop lamps, indicators, hazard warning lamps, fog lamps, reversing lamps, lighting 'tell-tales', trailer electrical socket, electrical wiring and battery rules and inspection for car and passenger vehicle MOT tests.

# 4.1. Headlamps

#### In this section

- 4.1.1. Presence, condition and operation
- 4.1.2. Headlamp alignment
- 4.1.3. Switching
- 4.1.4. Compliance with requirements
- 4.1.5. Levelling devices
- 4.1.6. Headlamp cleaning devices

#### 4.1.1. Presence, condition and operation

## 4.1.1. Presence, condition and operation

You must test all mandatory headlamps.

'Mandatory headlamps' are a matched pair of main beam headlamps and a matched pair of dippedbeam headlamps. These can be separate or a single pair of headlamps.

Lamps are matched if they:

- emit light of substantially the same colour and intensity
- are the same size and shape that they are symmetrical to each other

You do not need to test headlamps on vehicles if:

- they're not fitted with front or rear position lamps
- they have front or rear position lamps that are permanently disconnected, painted over or masked

Vehicles first used before 1 January 1931 do not need headlamps.

Buses first used before 1 October 1969 only need one headlamp. If 2 are fitted, neither the main beam or dipped beams need to be a matched pair.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Tricycle and quadricycle headlamps must be:

- · mounted centrally if there's only one lamp
- mounted symmetrically about the centre if they're adjacent to another lamp, such as there's one dipped beam lamp and one main beam lamp
- · mounted symmetrically if there's 2 lamps

The following must have a pair of main beam headlamps and a pair of dipped beam headlamps – can be separate or a single pair of headlamps:

- tricycles and quadricycles with a maximum width over 1,300mm
- motorcycle derived tricycles with a maximum width over 1,700mm

Tricycles and quadricycles classed as mopeds do not need a main beam headlamp.

A 'light source' means any bulb, LED or other means of emitting light.

Defect	Category
(a) A headlamp:	
(i) with up to $\frac{1}{2}$ light sources not functioning in the case of LED (ii) missing, inoperative or more than $\frac{1}{2}$ not functioning in the case of LED	Minor Major
(b) Headlamp reflector or lens:	
(i) slightly defective (ii) seriously defective or missing	Minor Major

Defect	Category
(c) Lamp not securely attached	Major

## 4.1.2. Headlamp alignment

You must inspect all dipped beam headlamps fitted.

The type of headlamp will determine whether the aim must be checked on dipped or main beam (see Diagrams 1, 2 and 3).

A flat top or other alternative headlamp dipped beam pattern is acceptable as long as all of the beam upper edge, including any 'peak' is contained within the appropriate tolerance band.

It's acceptable for masks or converter kits to be fitted to right hand dip headlamps to temporarily alter the lamp for use in the UK by removing the beam 'kick-up' to the right.

If driver's beam aim controls are fitted, you should test the beam aim without altering the control setting. If this would result in failure for beam aim being too low, you should re-check the beam aim with the control set at its 'highest' position.

On vehicles with hydro-pneumatic suspension systems, it's necessary to have the engine running when checking headlamp aim.

To check the aim:

- 1. Position the vehicle on the designated headlamp aim standing area.
- 2. Align the headlamp aim testing equipment to the vehicle in accordance with the manufacturer's instructions.
- 3. Determine the appropriate headlamp beam image and its aim (see Diagrams 1, 2 and 3).

For complex lens systems - meaning those that have more than one lamp behind a single lens - make sure the test equipment is aligned exactly on the centre of the dipped beam pocket.

You must not carry out repairs during an MOT test, but you can make minor adjustments to the headlamp aim.

### European type - check on dipped beam

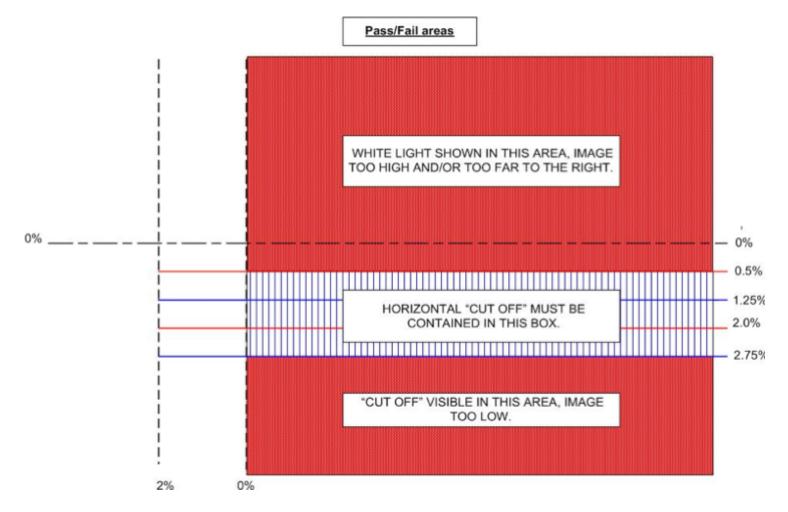
European type lamps have one of the following:

- an asymmetric dipped beam pattern with
  - a horizontal cut-off on the right
  - a wedge of light above the horizontal towards the left, known as the 'kick up'
- lens may have European approval mark

For European type lamp to pass, you must make sure that:

- beam image 'kick up' is visible on the screen, unless it has been masked or it has a flat top beam pattern
- for headlamps with centres at 850mm or less from the ground, the beam image horizontal cut-off is between the 0.5% and 2.75% horizontal lines
- for headlamps with centres more than 850mm from the ground, the beam image horizontal cut-off is between the 1.25% and 2.75% horizontal lines
- white light does not show in the zone formed by the 0% vertical and 0.5% horizontal line

**Diagram 1.** Criteria for European beam headlamp aim



#### British American headlamp - check on main beam

British American type headlamps are checked on main beam if they have an asymmetric main beam pattern with a central area of maximum intensity, known as a 'hot spot'.

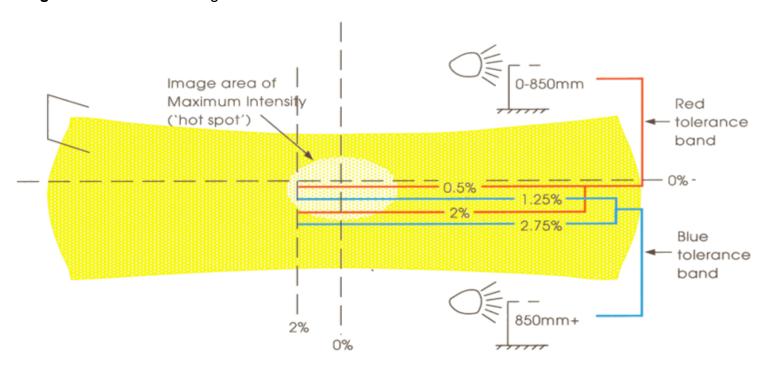
The generally also have a circular lens marked with a figure '1' followed by an arrow indicating the direction of dip.

You must fail a British American type lamp if its 'hot spot' centre is any of the following:

- · above the horizontal 0% line
- below the horizontal 2% line for headlamps with centres at 850mm or less from the ground
- below the horizontal 2.75% line for headlamps with centres more than 850mm from the ground
- to the right of the vertical 0% line
- to the left of the vertical 2% line

For a British American type lamp to pass, you must also make sure the brightest part of the image moves downwards when the lamp is dipped.

Diagram 2. Main beam image



#### British American headlamp - check on dipped beam

Check British American headlamps on dipped beam if they have:

- an asymmetric dipped beam pattern with a flat-topped area of high intensity extending above and parallel with the horizontal 0% line on the nearside
- a circular lens marked with the figure 2 it might also have an arrow showing the direction of dip

You must fail this lamp if the upper edge of the 'hot spot' is:

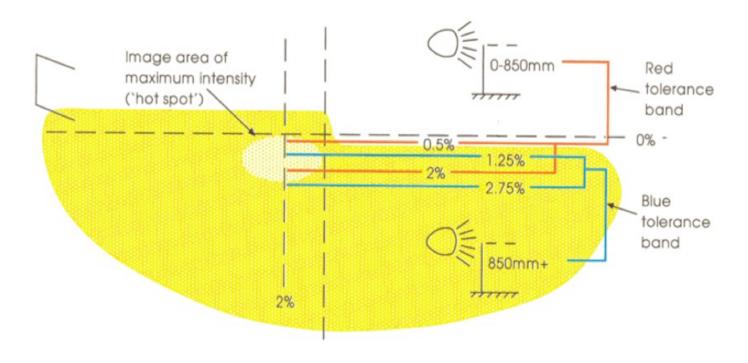
- · above the horizontal 0% line
- below the horizontal 2.75% line

You must fail this lamp if the right-hand edge of the 'hot spot' is:

to the right of the vertical 0% line

to the left of the vertical 2% line

Diagram 3. Dipped beam image



Defect	Category
(a) The aim of a headlamp is not within limits laid down in the requirements	Major
(b) Headlamp aim unable to be tested	Major
(c) Beam image obviously incorrect	Major

## 4.1.3. Switching

Dipped or main beam headlamps must immediately light up when they're switched on (depending on the position of the dip switch).

Headlamps must switch immediately between main beam and dipped beam when you move the dip switch.

Moving the dip switch must do one of the following:

- extinguish all main beam headlamps and leave on at least one pair of dipped-beam headlamps
- deflect the main beams to make them dipped beams

Dipped beam headlamps can remain on or switch off when main beam is selected.

Headlamps are not needed on vehicles first used before 1 January 1931.

When optional headlamps are fitted:

- · if one is fitted it must dip
- if 2 are fitted, either both must dip or one must dip and the other switch off

Defect	Category
(a) Headlamp 'on' switch does not operate in accordance with the requirements	Minor
(b) Headlamp 'dip' switch does not operate in accordance with the requirements	Major

## 4.1.4. Compliance with requirements

You must inspect all 'mandatory' headlamps fitted.

Mandatory headlamps consist of a matched pair of main beam headlamps and a matched pair of dipped-beam headlamps. These can be separate or a single pair of headlamps.

Lamps are matched if they:

- emit light of substantially the same colour and intensity
- are the same size and shape that they are symmetrical to each other

Vehicles first used before 1 January 1931 do not need headlamps.

Buses first used before 1 October 1969 only need one headlamp. If 2 are fitted, neither the main beam or dipped beams need to form matched pair.

The colour of the light headlamps emit must be one of the following:

- white
- · predominantly white with blue tinge
- yellow

In a four-headlamp system the outer headlamps do not need to emit the same colour light as the inner pair.

The precise position of lamps is not part of the inspection, but you should check visually that they are at about the same height and the same distance from each side of the vehicle.

Existing halogen headlamp units should not be converted to be used with HID bulbs. If such a conversion has been done, you must fail the headlamp.

Tricycle and quadricycle headlamps must be:

mounted centrally - if there's only one lamp

- mounted symmetrically about the centre if they're adjacent to another lamp, such as there's one dipped beam lamp and one main beam lamp
- mounted symmetrically if there's 2 lamps

The following must have a pair of main beam headlamps and a pair of dipped beam headlamps – can be separate or a single pair of headlamps:

- tricycles and quadricycles with a maximum width over 1,300mm
- motorcycle derived tricycles with a maximum width over 1,700mm

Tricycles and quadricycles classed as mopeds do not need main beam headlamps.

A 'light source' means any bulb, LED or other means of emitting light.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Defect	Category
(a) Headlamp emitted colour, position or intensity not in accordance with the requirements	Major
(b) Product on the lens or light source which obviously reduces light intensity or changes emitted colour to other than white or yellow	Major
(c) Light source and lamp not compatible	Major
(d) Mandatory headlamps, intended to be a matched pair, are not the same shape, size or colour	Major

# 4.1.5. Levelling devices

Make sure any manual headlamp levelling devices (driver controls) work by:

- · switching on the dipped beam headlamps
- operating the manual levelling device
- checking that the headlamp beams move up and down
- returning the levelling device control to its original position

Vehicles with high intensity discharge (HID) or LED dipped beam headlamps may be fitted with a suspension or headlamp self-levelling system. If these systems have been fitted, they must work.

Sometimes it is not easy to determine if the self-levelling systems work. In such cases you should give the benefit of the doubt.

You can identify HID headlamps from:

- 'DCR' mark on the headlamp lens or body
- an igniter module or inverter behind the headlamp
- taking a few seconds to reach full intensity

• a bluish tinge to the light

HID headlamps use high voltage. You should take care when inspecting these headlamps.

The check of headlamp levelling devices does not apply to motor caravans.

Defect	Category
(a) Headlamp levelling device inoperative	Major
(b) Manual levelling device cannot be operated from the driver's seat	Major

## 4.1.6. Headlamp cleaning devices

You must inspect vehicles first used on or after 1 September 2009 equipped with headlamp washers.

You can identify HID headlamps from:

- 'DCR' mark on the headlamp lens or body
- an igniter module or inverter behind the headlamp
- taking a few seconds to reach full intensity
- a bluish tinge to the light

HID headlamps use high voltage. You should take care when inspecting these headlamps.

Defect	Category
(a) Headlamp cleaning device:	
(i) inoperative (ii) inoperative in the case of LED or gas discharge systems (HID)	Minor Major

## 4.2. Front and rear position lamps, daytime running lamps and end-outline marker lamps

#### In this section

- 4.2.1. Presence, condition and operation
- 4.2.2. Switching
- 4.2.3. Compliance with requirements

# 4.2.1. Presence, condition and operation

This inspection is for:

- mandatory position lamps
- mandatory end-outline marker lamps
- daytime running lamps (DRLs) fitted to M1 vehicles first used on or after 1 March 2018

Vehicles do not need to be fitted with position lamps, or they can have such lamps permanently disconnected, painted over or masked. In this situation you should issue an advisory notice. These vehicles do not need end-outline marker lamps.

#### All lamps

You must assess damaged or repaired lamps for security, colour, light output and durability.

#### Front and rear position lamps

Vehicles must have 2 front and 2 rear position lamps, except for tricycles or quadricycles that are less than 1,300mm wide.

Daytime running lamps (DRLs) or headlamps may function as front position lamps. If the DRLs function as front position lamps, they may or may not dim when rear position lamps are switched on and may dim or turn off when headlamps are switched on.

Front position lamps can switch off when the front fog lamps are switched on.

The front and rear position lamps must light up at the same time with the registration plate lamps and end-outline marker lamps.

Tricycles and quadricycles less than 1,300mm wide must have at least one front and one rear position lamp. However, if the maximum vehicle width is more than 1,300mm, it must have 2 front and 2 rear position lamps.

Tricycle and quadricycle lamps must be:

- mounted centrally if there's one lamp
- mounted symmetrically if there's 2 lamps
- mounted symmetrically about the centre if there's a single front position lamp next to another front lamp, such as a headlamp

Buses first used before 1 April 1955 only need one rear position lamp. The lamp must be on the centre line or to the offside.

#### **End-outline marker lamps**

You must inspect end-outline marker lamps on vehicles first used on or after 1 April 1991 that are wider than 2,100mm, excluding side mirrors.

Class 3 vehicles do not need end-outline marker lamps.

The front and rear end outline marker lamps on each side can be combined in one lamp.

#### **Daytime running lamps**

You only need to inspect daytime running lamps (DRLs) if they're fitted as original equipment to vehicles first used on or after 1 March 2018.

Defect	Category
(a) Lamp:	
(i) multiple light source up to a half not functioning (ii) missing, inoperative or in the case of a multiple light source more than a half not functioning	Minor Major
(b) Defective lens	Major
(c) Lamp:	
(i) not securely attached (ii) likely to become detached	Minor Major

## 4.2.2. Switching

It must be possible to switch on the position lamps from the driver's seat with a single operation of the switch. The position lamps must light up at the same time as the registration plate lamps and any end-outline marker lamps where they are fitted.

Some vehicles have position lamps that come on automatically when the engine is running.

Daytime running lamps (DRLs) or headlamps may function as front position lamps. If the DRLs function as front position lamps, they may or may not dim when rear position lamps are switched on and may dim or turn off when headlamps are switched on.

The front position lamps may turn off when the headlamps or front fog lamps are switched on. If position lamps are combined with direction indicators, position lamps may or may not switch off when the relevant direction indicator is flashing.

The front and rear position lamps must light up at the same time with the end-outline marker lamps where they are fitted.

You only need to inspect daytime running lamps (DRLs) if they're fitted as original equipment to vehicles first used on or after 1 March 2018.

DRLs must switch on and off when the engine is switched on and off.

DRLs might not operate when:

- the parking brake is on
- the park position is selected on automatic transmissions

If DRLs have been manually switched off, sometimes they do not light up until the vehicle is travelling faster than 10 kilometres per hour (6.2mph) or the vehicle has travelled 100m (328ft).

Military vehicles may have a multi-position switch which cannot turn the front and rear position lamps on with a single operation of the switch. This should not be regarded as a defect.

Defect	Category
(a) Switch does not operate in accordance with the requirements or the rear position lamps can be switched off when the headlamps are on	Major
(b) Function of the switch impaired	Major

## 4.2.3. Compliance with requirements

You must inspect:

- mandatory position lamps
- · mandatory end-outline marker lamps
- daytime running lamps (DRLs) fitted to M1 vehicles first used on or after 1 March 2018

#### All lamps

The precise position of lamps is not part of the inspection. You should check visually that they are at about the same height and distance from each side of the vehicle.

A 'light source' means any bulb, LED or other means of emitting light.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Switch on the position lamps and daytime running lamps and operate all the other lamps in turn. Check if the position lamps, end-outline marker lamps or daytime running lamps are adversely affected.

#### **Position lamps**

Rear position lamps must emit a steady red light.

For front position lamps, the following colour of light is acceptable:

- white light
- · predominantly white light with a blue tinge
- yellow light if combined in a yellow headlamp

If position lamps are combined with direction indicators, position lamps may or may not switch off when the relevant direction indicator is flashing.

Daytime running lamps (DRLs) or headlamps may function as front position lamps. If the DRLs function as front position lamps, they may or may not dim when rear position lamps are switched on and may dim or turn off when headlamps are switched on.

#### **End-outline marker lamps**

Vehicles first used on or after 1 April 1991 that are wider than 2,100mm must have their end-outline marker lamps inspected.

Class 3 vehicles do not need end-outline marker lamps.

There must be:

- 2 white lamps visible from the front and positioned at windscreen upper edge level or higher
- 2 red lamps visible from the rear and positioned as high as is practicable

The front and rear end outline marker lamps on each side can be combined in one lamp.

#### **Daytime running lamps**

You only need to inspect daytime running lamps (DRLs) fitted as original equipment to vehicles first used on or after 1 March 2018.

There must not be more than 2 DRLs fitted and they must emit white light.

DRLs might not operate when:

- · the engine is not running
- · the parking brake is on
- the park position is selected on automatic vehicles

If DRLs have been manually switched off, sometimes they do not light up until the vehicle is travelling faster than 10km/h (6.2mph) or the vehicle has travelled 100m (328ft).

Defect	Category
(a) Lamp:	
(i) emitted colour, position or intensity not in accordance with the requirements (ii) showing red light to the front, white light to the rear or has heavily reduced light intensity	Minor Major
(b) A lamp with a product on the lens or light source:	
(i) which obviously reduces light intensity or changes emitted colour (ii) which shows red light to the front, white light to the rear or has heavily reduced light intensity	Minor Major
(c) A lamp adversely affected by the operation of any other lamp	Major

# 4.3. Stop lamps

#### In this section

- 4.3.1. Presence, condition and operation
- 4.3.2. Switching
- 4.3.3. Compliance with requirements

## 4.3.1. Presence, condition and operation

You must inspect all stop lamps fitted.

Stop lamps must show a steady red light.

Stop lamps are not needed for vehicles that:

- do not have front and rear position lamps
- have front and rear position lamps that are permanently disconnected, painted over or masked
- were first used before 1 January 1936

Vehicles first used on or after 1 January 1971 must have 2 stop lamps, one on each side.

Vehicles first used before 1 January 1971 may be fitted with only 1 stop lamp, which can be mounted centrally or towards the offside.

Additional stop lamps, over and above the mandatory requirements, must be tested. However, if you are not sure if they are connected, you should give the benefit of the doubt.

A 'light source' means any bulb, LED or other means of emitting light.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Tricycles and quadricycles:

- not wider than 1,300mm can have only one stop lamp
- with 2 service brake controls both controls must operate the stop lamp(s)
- with 2 stop lamps must be mounted symmetrically
- with 1 stop lamp must be mounted centrally

Defect	Category
<ul> <li>(a) Stop lamp(s):</li> <li>(i) with a multiple light source up to 1/2 not functioning</li> <li>(ii) missing, inoperative or in the case of a multiple light source more than 1/2 not functioning</li> <li>(iii) all missing or inoperative</li> </ul>	Minor Major
(iii) all missing or inoperative	Dangerous

Defect	Category
(b) A lens defective:	
(i) which has no effect on emitted light	Minor
(ii) such that the emitted light is adversely affected	Major
(c) A stop lamp:	
(i) not securely attached	Minor
(ii) likely to become detached	Major

## 4.3.2. Switching

All stop lamps must light up immediately when the brake is applied and switch off immediately when the brake is released.

Vehicles first used on or after 1 January 1971 must have 2 stop lamps, one on each side.

Vehicles first used before 1 January 1971 can be fitted with only 1 stop lamp. The lamp can be mounted centrally or towards the offside.

Additional stop lamps, over and above the mandatory requirements, must be tested. However, if you are not sure that they're connected, you should give the benefit of the doubt.

Vehicles first used before 1 September 1965 may have a stop lamp combined with a direction indicator lamp.

Tricycles and quadricycles:

- not wider than 1,300mm can have only one stop lamp
- with 2 service brake controls both controls must operate the stop lamp(s)
- with 2 stop lamps must be mounted symmetrically
- with 1 stop lamp must be mounted centrally

Defect	Category
(a) Stop lamp(s):	
(i) switch does not operate in accordance with the requirements (ii) switch with a delay in operation (iii) remain on when the brakes are released	Minor Major Dangerous

# 4.3.3. Compliance with requirements

You must inspect all stop lamps.

Stop lamps are not needed for vehicles that:

- do not have front and rear position lamps
- have front and rear position lamps permanently disconnected, painted over or masked
- were first used before 1 January 1936

Vehicles first used on or after 1 January 1971 must have 2 stop lamps, one on each side.

Vehicles first used before 1 January 1971 can be fitted with only one stop lamp. The lamp can be mounted centrally or towards the offside.

Additional stop lamps, over and above the obligatory requirements, must be tested. However, if you are not sure that they're connected, you should give the benefit of the doubt.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Tricycles and quadricycles:

- not wider than 1,300mm can have only one stop lamp
- with 2 service brake controls both controls must operate the stop lamp(s)
- with 2 stop lamps must be mounted symmetrically
- with 1 stop lamp must be mounted centrally

Press the brake pedal to light up the stop lamps and operate all the other lamps in turn to see if the stop lamps are adversely affected.

Defect	Category
(a) A stop lamp:	
(i) emitted colour, position or intensity not in accordance with the requirements (ii) showing white light to the rear or significantly reduced light intensity	Minor Major
(b) A stop lamp adversely affected by the operation of any other lamp	Major

## 4.4. Direction indicators and hazard warning lamps

#### In this section

- 4.4.1. Presence, condition and operation
- 4.4.2. Switching
- 4.4.3. Compliance with requirements
- 4.4.4. Flashing frequency

## 4.4.1. Presence, condition and operation

You must inspect all direction indicators and hazard warning lamps.

Direction indicators and hazard warning lamps are not needed for vehicles that:

- · do not have front and rear position lamps
- have front and rear position lamps that are permanently disconnected, painted over or masked
- were first used before 1 January 1936

Direction indicators must be amber.

Vehicles first used before 1 September 1965 may have white front indicators and red rear indicators, if the direction indicators are combined with stop lamps or combined with front or rear position lamps.

Vehicles first used before 1 April 1986 do not need to have hazard warning devices.

Vehicles first used on or after 1 April 1986 must be fitted with an amber side repeater indicator on each side.

The side repeater can be part of the front direction indicator if it has one of the following:

- a wraparound lens marked either with an 'E' mark in a circle or an 'e' mark in a rectangle with a number 5 above it
- an amber light coming through the front lens when viewed from 1m to the side of the rear bumper

Semaphore arms may flash but do not need to.

A 'light source' means any bulb, LED or other means of emitting light.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Direction indicators that function sequentially/dynamically are not to be considered a reason to fail.

Tricycles and quadricycles do not need side repeaters.

Tricycles and quadricycles classed as mopeds do not need hazard warning lamps. Only 'bodied' mopeds must have direction indicators.

Defect	Category
(a) A direction indicator:	
(i) lamp with a multiple light source up to 1/2 not functioning (ii) lamp missing, inoperative or in the case of a multiple light source more than 1/2 not functioning	Minor Major
(b) A lens defective:	
(i) which has no effect on emitted light (ii) such that the emitted light is adversely affected	Minor Major

Defect	Category
(c) A lamp:	
(i) not securely attached (ii) likely to become detached	Minor Major
(d) Mandatory hazard warning device not fitted	Major
(e) Mandatory hazard warning device inoperative	Major

### 4.4.2. Switching

Hazard warning lamps must operate using only one switch and with the engine or ignition switch in both the on and off positions.

For tricycles and quadricycles, hazard warning lamps must work both with the engine running and switched off. This may be by use of an engine kill switch or by turning the ignition off.

Defect	Category
(a) Indicator or hazard warning switch:	
(i) does not operate in accordance with the requirements (ii) inoperative	Minor Major

## 4.4.3. Compliance with requirements

Direction indicators must be amber.

Vehicles first used before 1 September 1965 may have white front indicators and red rear indicators, if the direction indicators are combined with stop lamps or combined with front or rear position lamps.

Switch on the direction indicator lamps and operate all the other lamps in turn to see if the direction indicator lamps are adversely affected.

On vehicles first used on or after 1 September 1965 with direction indicators combined with position lamps, the position lamp must go out when its direction indicator is flashing. The direction indicator must flash amber only, with no white or red light.

A semaphore arm must light up when switched on, but it does not need to flash.

The precise position of lamps is not part of the inspection. You should check visually that they are at about the same height and distance from each side of the vehicle.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Direction indicators that function sequentially/dynamically are not to be considered a reason to fail.

Defect	Category
(a) Lamp emitted colour, position or intensity not in accordance with the requirements	Major
(b) A direction indicator lamp adversely affected by the operation of any other lamp	Major

# 4.4.4. Flashing frequency

Indicators must flash at between 60 and 120 times per minute. Semaphore type direction indicators do not need to flash.

Defect	Category	
(a) Rate of flashing not between 60 and 120 times per minute	Minor	

## 4.5. Front and rear fog lamps

#### In this section

- 4.5.1. Presence, condition and operation
- 4.5.2. Not in use
- 4.5.3. Switching
- 4.5.4. Compliance with requirements

# 4.5.1. Presence, condition and operation

You only need to inspect:

- front fog lamps fitted to vehicles first used on or after 1 March 2018
- the 1 rear fog lamp which must be fitted to the centre or offside of vehicles first used on or after 1
   April 1980

A rear fog lamp is not needed on:

- · vehicles not fitted with front and rear position lamps
- vehicles with permanently disconnected, painted over or masked front and rear position lamps
- tricycles and quadricycles

Front and rear fog lamps are permitted to operate independently of any other lamps or ignition systems.

Fog lamps must produce a steady light which is:

- white for front fog lamps
- · red for rear fog lamps

Rear fog lamps may be combined with the rear position lamps.

A 'light source' means any bulb, LED or other means of emitting light.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Defect	Category
(a)	
(i) A front or rear fog lamp with a multiple light source up to 1/2 not functioning (ii) An obligatory rear fog lamp missing, or a front or rear fog lamp inoperative or in the case of a multiple light source more than 1/2 not functioning	Minor Major
(b) A lens defective:	
(i) which has no effect on emitted light	Minor
(ii) such that emitted light is adversely affected	Major
(c) A front or rear fog lamp:	
(i) not securely attached	Minor
(ii) likely to become detached	Major

#### 4.5.2. Not in use

# 4.5.3. Switching

Front and rear fog lamp switches may be combined or independent switches.

The switch or switches must:

- be secure
- be able to be operated from the normal driving position
- · operate the fog lamps as intended

Rear fog lamps may be combined with the rear position lamps. Front and rear fog lamps are permitted to operate independently of any other lamps or ignition systems. The function of a fog lamp must not be adversely affected by the operation of any other lamp.

Defect	Category
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Defect	Category
(a) Front or rear fog lamp switch:	
(i) not operating in accordance with the requirements (ii) inoperative	Minor Major

# 4.5.4. Compliance with requirements

You must inspect:

- all front fog lamps fitted to vehicles first used on or after 1 March 2018
- the 1 rear fog lamp which must be fitted to the centre or offside of vehicles first used on or after 1
   April 1980

Fog lamps must produce a steady light which is:

- · white for front fog lamps
- red for rear fog lamps

Rear fog lamps may be combined with the rear position lamps.

A rear fog lamp is not needed on:

- vehicles not fitted with front and rear position lamps
- vehicles with permanently disconnected, painted over or masked front and rear position lamps that are
- tricycles and quadricycles

Switch on the rear fog lamps and operate all the other lamps in turn to see if the rear fog lamps are adversely affected.

You must assess damaged or repaired lamps for security, colour, light output and durability.

Defect	Category
(a) Front or rear fog lamp emitted colour or position not in accordance with the requirements	Major
(b) A rear fog lamp adversely affected by the operation of any other lamp	Major

# 4.6. Reversing lamps

#### In this section

4.6.1. Condition and operation

- 4.6.2. Compliance with requirements
- 4.6.3. Switching

## 4.6.1. Condition and operation

You must inspect all reversing lamps fitted to vehicles first used from 1 September 2009 other than quadricycles and Class 3 vehicles.

Reversing lamps must show a white light to the rear. On some vehicles it may be necessary to have the engine running before the reversing lamps will work.

At least one reversing lamp must be fitted.

Buses over 6m long may have 4 reversing lamps which may be:

- all showing white light to the rear
- 2 showing white light to the rear and one on each side

Defect	Category
(a) A reversing lamp inoperative	Major
(b) A reversing lamp lens defective	Major
(c) A reversing lamp:	
(i) not securely attached (ii) likely to become detached	Minor Major

## 4.6.2. Compliance with requirements

You must inspect all reversing lamps fitted to vehicles first used from 1 September 2009 other than quadricycles and Class 3 vehicles.

Reversing lamps must show a white light to the rear. On some vehicles it may be necessary to have the engine running before the reversing lamps will work.

At least one reversing lamp must be fitted.

Buses over 6m long may have 4 reversing lamps which may be:

- all showing white light to the rear
- 2 showing white light to the rear and 1 on each side

Defect	Category
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Defect	Category
(a) Reversing lamp emitted colour or position not in accordance with the requirements	Major

## 4.6.3. Switching

You must inspect all reversing lamps fitted to vehicles first used from 1 September 2009 other than quadricycles and Class 3 vehicles.

Reversing lamps must operate automatically when reverse gear is selected and extinguish when reverse gear is deselected.

On some vehicles it may be necessary to have the engine running before the reversing lamps will work.

Defect	Category	
(a) Reversing lamp switch not operating in accordance with the requirements	Major	

## 4.7. Rear registration plate lamps

#### In this section

- 4.7.1. Presence, condition and operation
- 4.7.2. Compliance with requirements

# 4.7.1. Presence, condition and operation

You must inspect the registration plate lamps on all vehicles fitted with front and rear position lamps.

Registration plate lamps must light up the rear registration plate. Some vehicles may have these lamps fitted behind the number plate.

A 'light source' means any bulb, LED or other means of emitting light.

Tricycles and quadricycles classed as mopeds do not need a rear registration plate lamp.

Defect	Category
(a) A rear registration plate lamp throwing direct white light to the rear	Minor
(b) A rear registration plate lamp or light source missing or inoperative:	
<ul><li>(i) when rear registration plate has 2 or more lamps or light sources</li><li>(ii) when rear registration plate has only one lamp or all lamps not working</li></ul>	Minor Major

Defect	Category
(c) A registration plate lamp:	
(i) not securely attached (ii) likely to become detached	Minor Major

## 4.7.2. Compliance with requirements

You must inspect the registration plate lamps on all vehicles fitted with front and rear position lamps.

Registration plate lamps must operate at the same time as the position lamps.

Tricycles and quadricycles classed as mopeds do not need a rear registration plate lamp.

Defect	Category
(a) Rear registration plate lamp does not illuminate simultaneously with the position lamps	Major

#### 4.8. Rear reflectors

#### In this section

- 4.8.1. Presence, condition and operation
- 4.8.2. Compliance with requirements

## 4.8.1. Presence, condition and operation

You must inspect the 2 mandatory red rear reflectors that must be fitted.

Rear reflectors are not needed on vehicles:

- not fitted with front and rear position lamps
- · have front and rear position lamps permanently disconnected, painted over or masked

Reflective tape is not an acceptable substitute for a rear reflector.

Defect	Category
(a) Reflector defective or damaged:	
(i) by up to 50% of the reflecting surface (ii) by more than 50% of the reflecting surface	Minor Major

Defect	Category
(b) Reflector:	
(i) not securely attached (ii) likely to become detached	Minor Major

# 4.8.2. Compliance with requirements

You must inspect the 2 mandatory red rear reflectors that must be fitted.

Rear reflectors are not needed on vehicles:

- not fitted with front and rear position lamps
- have front and rear position lamps permanently disconnected, painted over or masked

Reflectors must be symmetrically mounted. Although the precise position of mandatory rear reflectors is not part of the inspection, check visually that they are at about the same height and distance from each side of the vehicle.

Tricycles and quadricycles:

- wider than 1,000mm must have 2 rear reflectors mounted symmetrically
- not more than 1,000mm wide only need one centrally mounted rear reflector

Defect	Category
(a) Reflector:	
(i) colour or position not in accordance with the requirements (ii) missing or reflecting white to the rear	Minor Major

## 4.9. 'Tell-tales' mandatory for lighting equipment

#### In this section

- 4.9.1. Presence, condition and operation
- 4.9.2. Compliance with requirements

# 4.9.1. Presence, condition and operation

You must inspect the following lighting 'tell-tales':

- · headlamp main beam
- · direction indicators
- hazard warning lamps
- · rear fog lamps

A main beam 'tell-tale' is only required on vehicles first used on or after 1 April 1986. Class 3 vehicles do not need to have the main-beam tell-tale inspected.

A direction indicator 'tell-tale' can be audible or visual.

A hazard warning 'tell-tale' must be a flashing light.

A rear fog 'tell-tale' is only required where a rear fog lamp is mandatory.

Defect	Category
(a) A mandatory tell-tale:	
(i) for direction indicators or hazard warning missing or inoperative (ii) for main beam headlamp or rear fog lamp missing or inoperative	Minor Major

## 4.9.2. Compliance with requirements

You must inspect the 'tell-tale' for hazard warning lamps, which must be a flashing light.

Defect	Category
(a) A hazard warning lamp tell-tale is not a flashing light	Minor

#### 4.10. Trailer electrical socket

You must only inspect the trailer electrical socket on vehicles fitted with a towing coupling.

If there's no tow ball or pin, but the attachment brackets are still in place, you must assess the electrical sockets if the tow ball or pin has been:

- detached
- unbolted
- · otherwise removed

You do not need to assess the electrical sockets if the attachment brackets have been deliberately made unfit for further use.

You do not need to assess the trailer electrical socket if you need tools or specialist equipment to remove access panels in the bumper or bodywork to gain access to the socket.

A trailer electrical socket with a defective or missing cover flap that incorporates a lug and spring to hold the plug in place is not considered to be a defect.

On vehicles fitted with a trailer 13 pin Euro-socket, use an approved device to check that the socket is wired to correctly operate the trailer:

- position lamps
- stop lamps
- · direction indicators
- rear fog lamp

Defect	Category
(a) A trailer electrical socket:	
(i) insecure	Minor
(ii) likely to become detached	Major
(b) Trailer electrical socket wiring:	
(i) insulation damaged or deteriorated	Minor
(ii) insulation damaged or deteriorated and likely to cause a short-circuit	Major
(c) A 13-pin trailer socket:	
(i) not functioning correctly	Major
(ii) not functioning at all	Dangerous

# 4.11. Electrical wiring

You must inspect all visible electrical wiring, other than on Class 3 vehicles.

This inspection does not apply to electrical wiring to brake pads.

Defect	Category
(a) Electrical wiring:	
<ul><li>(i) insecure or inadequately secured</li><li>(ii) insecure and in contact with sharp edges or connectors likely to become disconnected</li><li>(iii) likely to touch hot or rotating parts, drag on the ground or the connectors for braking or steering disconnected</li></ul>	Minor Major Dangerous

Defect	Category
(b) Electrical wiring:	
(i) slightly deteriorated	Minor
(ii) so damaged or deteriorated it is likely to cause a short-circuit	Major
(iii) for braking or steering components extremely deteriorated	Dangerous
(b) Electrical wiring insulation:	
(i) damaged or deteriorated	Minor
(ii) heavily deteriorated	Major
(iii) in such a condition there is an imminent risk of fire or formation of sparks	Dangerous

## 4.12. Not in use

# 4.13. Battery(ies)

You must inspect the battery(ies) on all vehicles including electric and hybrid vehicles. The check does not apply to Class 3 vehicles.

Defect	Category
(a) A battery insecure:	
(i) but not likely to fall from carrier (ii) and likely to fall from carrier or cause a short circuit	Minor Major
(b) A battery leaking	Major