

1.8 Headlamp Aim

Information	Method of Inspection	Reason for Rejection
<p>This inspection applies to all obligatory headlamps and any optional (additional) dipped beam headlamps.</p> <p>The type of headlamp will determine whether the aim must be checked on main or dipped beam. See diagrams 1, 2 and 3, which include details appropriate to each headlamp type.</p> <p>A flat top or other alternative headlamp dipped beam pattern (not being one of the examples) is acceptable providing all of the beam upper edge, including any “peak” is contained within the appropriate tolerance band.</p> <p>These methods of inspection involve the use of beam checking equipment with a collecting lens.</p> <p>Masks or converter kits may 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.</p> <p>A headlamp altered in this way is not a reason for rejection, if:</p> <ol style="list-style-type: none">the headlamp aim is not rejected for the reasons listed under diagram 1 (except that the top of the beam image will be a straight line)the light output is not unduly reduced - not usually a problem with commercially produced kitsthe mask or converter is securely attached. <p style="text-align: right;">Cont'd ↓</p>	<p>A. All Headlamps</p> <p>Position the vehicle on the designated headlamp aim standing area.</p> <p>Follow the headlamp tester manufacturer’s user manual instructions, and align the headlamp aim equipment with the longitudinal axis of the vehicle.</p> <p>Align the centre of the collecting lens with the centre of the headlamp under test.</p> <p>Switch on the headlamps to the beam on which the headlamp is to be checked.</p> <p>Note: When checking headlamp aim on vehicles with hydro-pneumatic suspension systems, it is necessary to have the engine idling.</p> <ol style="list-style-type: none">Determine the appropriate headlamp beam image and its aim (See diagrams 1, 2 and 3). Note: Older vehicles (approx. pre 1950) headlamps beam image may not conform to either Diagrams 1, 2 or 3. In such cases check:<ul style="list-style-type: none">dip beam headlamps are aimed so they do not dazzle, ie the beam image brightest part is aimed at least 0.5% below the horizontalor for headlamps which cannot be checked on dipped beam,<ul style="list-style-type: none">main beam headlamps are aimed so that the beam image centre is on or slightly below the horizontal.	<ol style="list-style-type: none"><ol style="list-style-type: none">A headlamp which does not conform to diagrams 1, 2 or 3 that has a beam image which is aimed so that it dazzles other road users.Projected beam image obviously incorrect, e.g. where the headlamp bulb is incorrectly fitted or the reflector is seriously corroded.Headlamp aim unable to be tested.

1.8 Headlamp Aim

Information

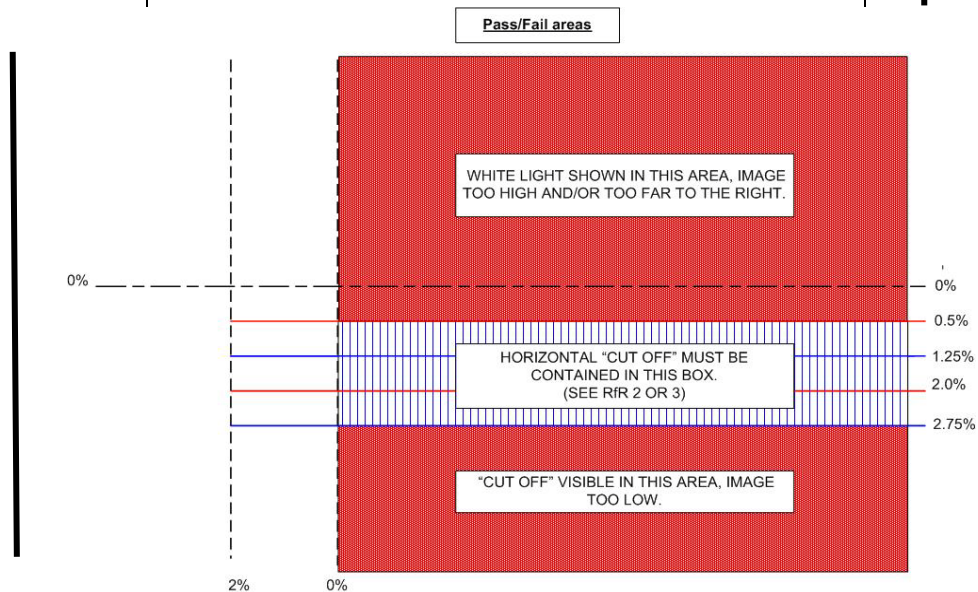
Where driver's beam aim controls are fitted the beam aim should be tested without altering the control setting except where this would result in failure for beam aim being too low. In such cases the beam aim should be re-checked with the control set at its 'highest' position.

When testing headlamps with complex lens systems i.e. those that have more than one lamp behind a single lens, it is essential that the headlamp aim test equipment is aligned exactly on the centre of the dipped beam pocket.

Repairs must not be carried out during an MOT test; however, minor adjustments to the headlamp aim are acceptable.

1.8 European 'E' Beam Headlamp (Checked on Dipped Beam)

Information	Method of Inspection	Reason for Rejection
<p>European type (Checked on dipped beam)</p> <p>Characteristics:</p> <p>(a) an asymmetric dipped beam pattern with:</p> <ul style="list-style-type: none">• a distinctive horizontal cut-off on the right, and• a visible wedge of light above the horizontal (the 'Kick up') towards the left <p>(b) a lens may carry a European approval mark.</p>	<p>B. European 'E' Beam Headlamp</p> <p>1. Align the headlamp aim testing equipment to the vehicle in accordance with the manufacturer's instructions.</p>	<p>1. The beam image contains a "Kick up" that is not visible on the screen.</p> <p>2. For headlamps with centres not more than 850mm from the ground the beam image horizontal cut-off is not between the horizontal 0.5% and 2.75% lines.</p> <p>3. For headlamps with centres more than 850 mm from the ground, the beam image horizontal cut-off is not between the horizontal 1.25% and 2.75% lines.</p> <p>4. White light shows in the zone formed by the 0% vertical and 0.5% horizontal lines.</p>



1.8 British American Headlamp (Checked on Main Beam)

Information

British American type (checked on main beam)

Characteristics:

- (a) headlamps tested on main beam have a symmetrical main beam pattern with a central area of maximum intensity ('hot spot')
- (b) this type of lamp generally has a circular lens which may be marked with a figure '1' followed by an arrow indicating the direction of dip.

Method of Inspection

C. British American Type (Main Beam)

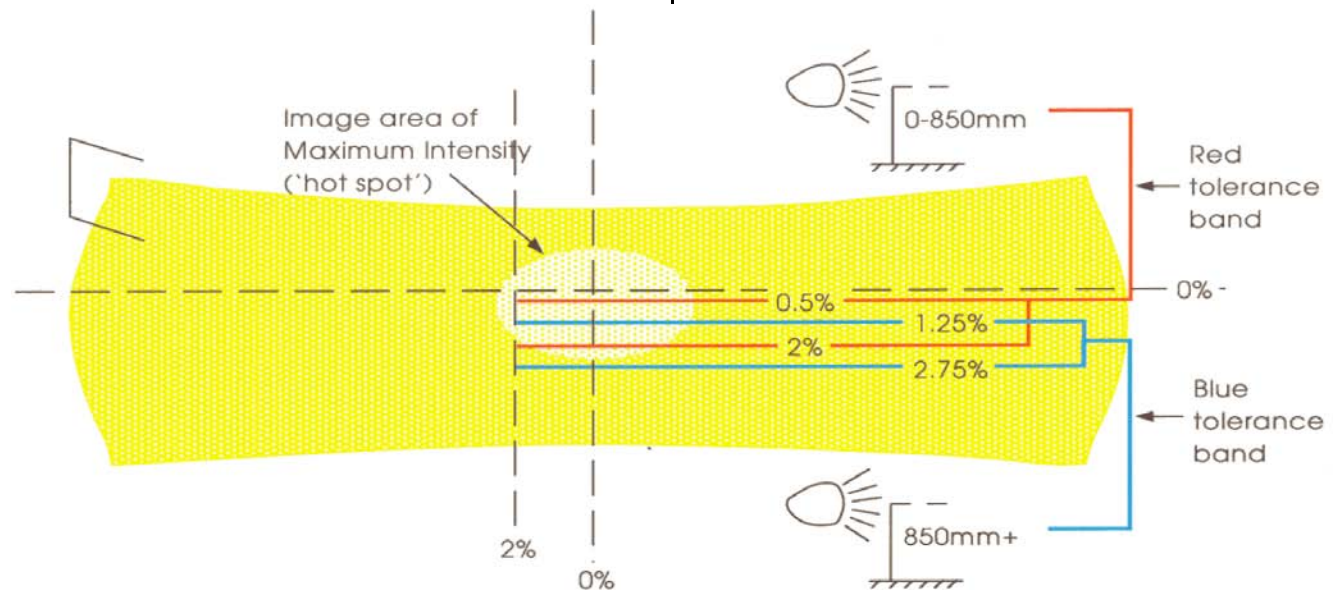
1. Align the headlamp aim testing equipment to the vehicle in accordance with the manufacturer's instructions

Reason for Rejection

1. The 'hot spot' centre is above the horizontal 0% line.
2. For headlamps whose centre is **not more than** 850 mm from the ground the 'hot spot' centre is below the horizontal 2% line.
3. For headlamps whose centre is **more than** 850 mm from the ground, the 'hot spot' centre is below the horizontal 2.75% line.
4. When dipped the brightest part of the image does not move downwards.
5. The 'hot spot' centre is to the right of the vertical 0% line, or to the left of the vertical 2% line.

Diagram 2
Main beam image

Check the position of the centre of the area of maximum intensity ('hot spot')



1.8 British American Type (Checked on Dipped Beam)

Information

British American type (Checked on dipped beam)

Characteristics:

- a. an asymmetric dipped beam pattern which when correctly aimed has a flat topped area of high intensity extending above and parallel with the horizontal zero line on the nearside
- b. a circular lens marked with the figure 2 which may also have an arrow showing the direction of dip.

Method of Inspection

D. British American Type (Dipped Beam)

- 1. Align the headlamp aim testing equipment to the vehicle in accordance with the manufacturer's instructions

Reason for Rejection

- 1. The upper edge of the 'hot spot' is above the horizontal 0% line.
- 2. The upper edge of the 'hot spot' is below the horizontal 2.75% line.
- 3. The right hand edge of the 'hot spot' is to the right of the vertical 0% line or to the left of the vertical 2% line.

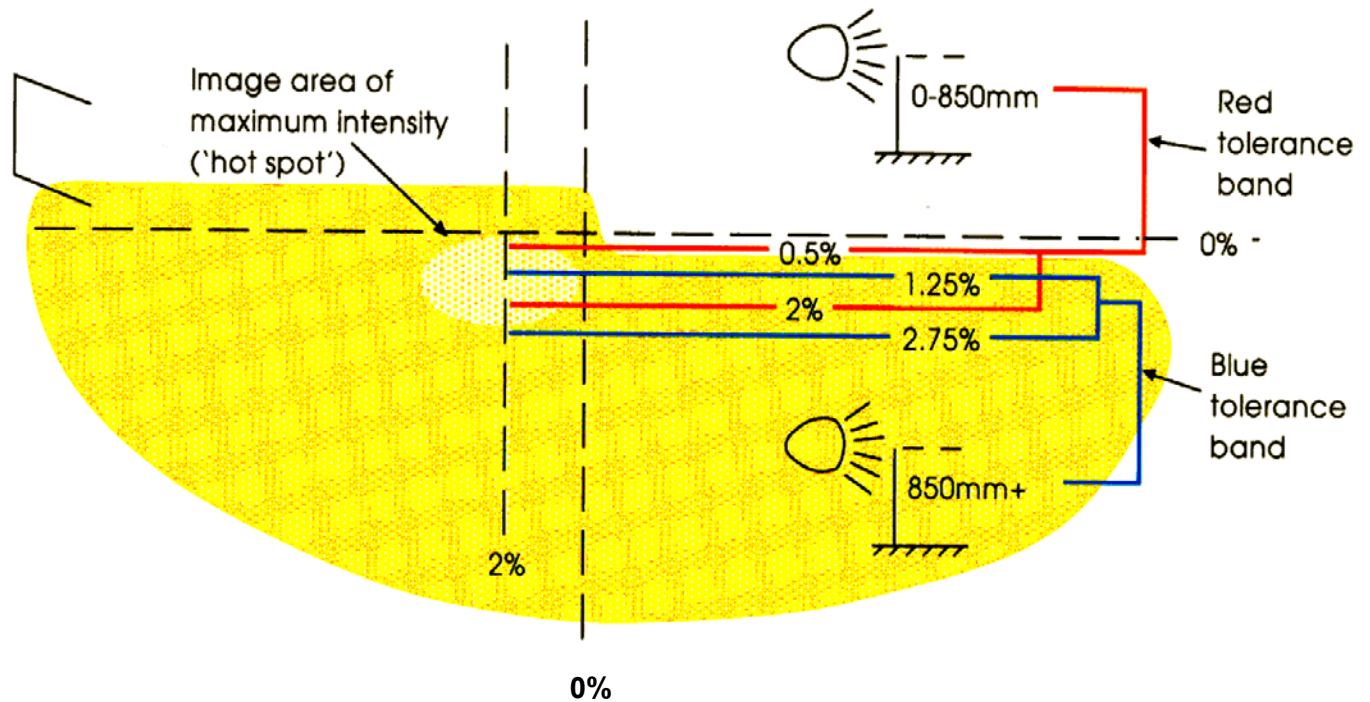


Diagram 3
Dipped beam image

Check the position of the upper and right hand edges of the 'hot spot'