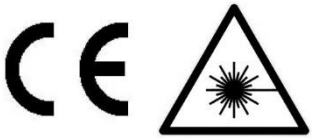
engineering
garage equipment

MADE IN ITALY

PH 2066UK
PH 2066UK/HGV

HEADLIGHT
BEAM TESTER

Installation
Operation
Maintenance



CONTENTS

Changes to this manual are as shown below. Revised or additional issues of this manual are available from WT Engineering s.r.l. , Via U.Foscolo 96/F 24024 Gandino (BG) ITALY
Minor changes are indicated by the use of a broad line adjacent to the affected text.

ISSUE STATUS DATE

Issue 2 15/01/2019

Manuale d'istruzioni apparecchiatura centrafari :
Headlight setter equipement instruction manual:
Manuel d'instruction réglophare:

PH2066UK -PH2066UK/HGV

Matricola N°

Anno di Costruzione

Costruttore :

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1° Emissione 09/09/2013

CENTRO DI ASSISTENZA AUTORIZZATO

HEALTH AND SAFETY

In order to comply with your responsibilities under the Health and Safety at Work Act 1974, it is essential that this vehicle headlamp tester and any optional accessories are sited, installed, operated, and maintained by *competent persons in accordance with the instructions in this manual.

A competent person should be a minimum of 18 years of age and have a minimum qualification of NVQ 3 (or an equivalent qualification) and / or experience within their own field of responsibility, e.g. Installation engineering, automobile engineering etc.

It is important that all persons installing, operating, maintaining or calibrating this headlamp tester and optional accessories must be familiar with the layout of the equipment, safety precautions, using appropriate training methods and supervision as may be required, prior to installing, using, maintaining or calibrating this headlamp tester.

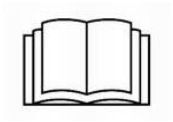
WARNINGS, CAUTIONS AND NOTES

'WARNING' is used in the text of this manual to identify specific hazards which can cause injury or death.

'CAUTION' is used in the text of this manual to identify incorrect procedures which can cause damage to the lift.

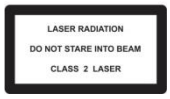
'NOTE' is used in the text of this manual to draw attention to specific points of importance.

WARNING OR CAUTIONS



READ FOR FURTHER INFORMATION

WARNING: CLASS 2 LASER
FOLLOW ALL SAEFTY PRECAUTIONS



DESCRIPTION

The PH 2066UK is designed to VOSA 2005 specification to facilitate the rapid accurate testing and adjustment of car and commercial vehicle headlamps in accordance with VOSA MOT test requirements.

The optical box is mounted on a single vertical column and it is easily adjusted for height and it will remain in the position selected. The column is rigidly connected to a four wheeled trolley which moves on two rails fastened to the floor. The wheels of the trolley are machined in a wide 'V' section, to run on a similar section rail. The 'V' section reduces the likelihood of the trolley assembly rocking and therefore increases the stability and the accuracy of measurement.

The optical box consists of a condensing lens and aiming screen which can be viewed through the observation panel in the top of the unit. A light cell fitted to ensure that the 'hot spot' can be accurately determined. Provision is made for the instrument to traverse each side of center, to permit alignment with the longitudinal axis of the vehicle.

To calibrate the PH 2066UK in accordance with the requirements of VOSA requirements, it is necessary to use Calibration kit WTLASER. This consists of a Class 2 laser device mounted on a stand. The calibration of the PH 2066UK should only be completed by an authorized competent person.

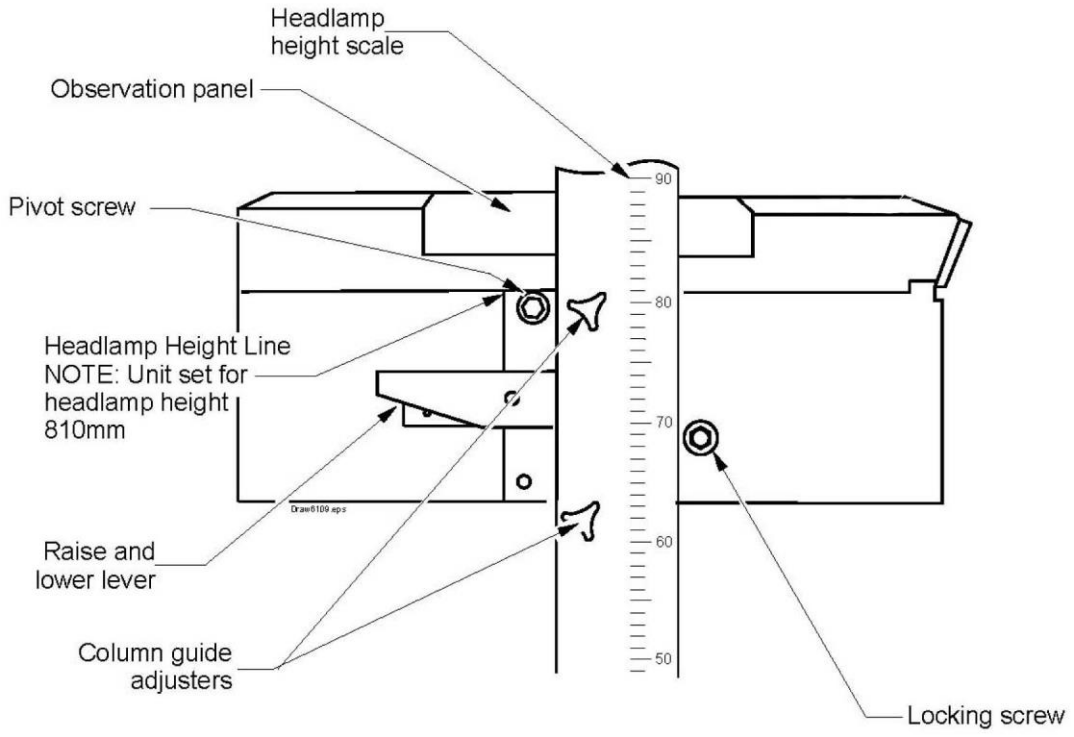
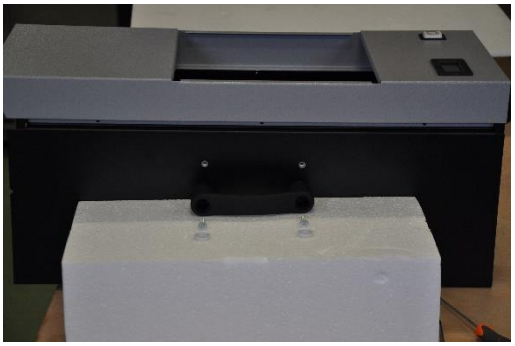


Fig. 1

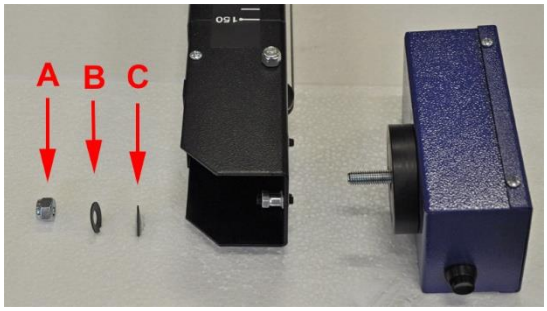
PREPARING THE HEADLIGHT SETTER

1) Fit the third wheel on the base (Screw 8X60)

2) Mount the handle of the optical chamber. (Screws 5X25)



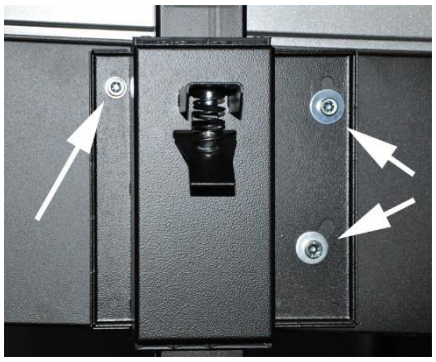
3) Mount the laser on the column. Be careful the cup springs must have the concave part side by side.



4) Mount the column on the base

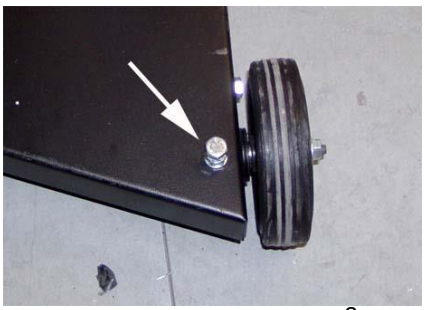
5) Fit the fixing screw under the column with the appropriate washer.

6) Install the optical camera with the three screws indicated by the arrows without tightening them definitively.

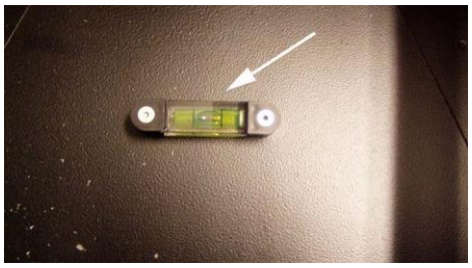


7) Align the column perpendicularly to the floor using the screw located on the base.

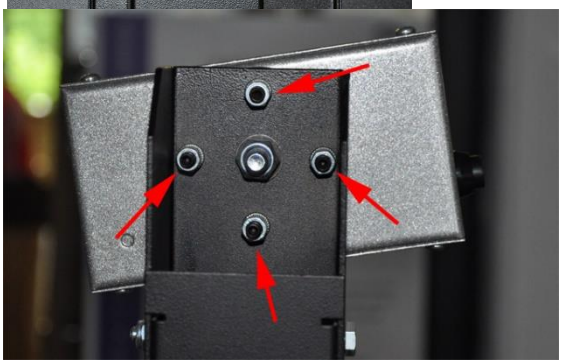
8) Adjust the optical camera until it is aligned with the measurement

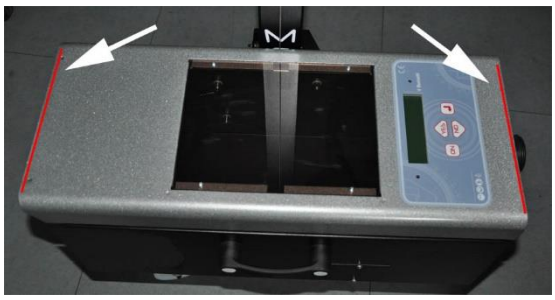


surface. Use the three screws to secure it.
If necessary adjust the internal level, bringing the bubble to the exact centre.



9) Adjust the laser line using the screws indicated so that the line drawn is parallel to the edges of the optical chamber, both front and rear.





INSTALLATION

Site
The floor area designated for headlamp testing requires careful selection and preparation. For MOT requirements the vehicle standing area and the equipment area where the rails are to be fitted must be level as follows:

Rails +/-2mm
Standing Area +/-6mm over 3 meters.

For non MOT requirements the vehicle standing area does not need to be precisely level as a slight continuous gradient, maximum 0.4% will not affect accuracy.

NOTE: Preparation of the site to these standards is the customer's responsibility.

Installing Rails

Two sets of rails, each secured to the floor by screws and plastic raw plugs. The rails are positioned at right angles to the vehicle's longitudinal axis. The two rails must be leveled with each other, shimmed as necessary, and re-checked after tightening down. In the final position the rails must be level within +/-2 mm.

Where the vehicle tested, or any other traffic, will pass over the rails, each rail must be recessed into the floor and fully supported along its entire length by grouting as necessary, see Fig. 2. It is helpful if lines are painted on the floor at 90 degrees to the Tester's rails to enable the accurate positioning of vehicles for testing.

Leveling the trolley

The two rear wheels are equipped with an integral cams which are factory set and normally do not require adjustment. The level can be checked placing a spirit level on the trolley base together with the use of a plumb line attached to the column. Should any adjustment be required the cams can be adjusted as follows (See Fig. 3):

Loosen screw 1 and just slacken screw 2.

Raise or lower the wheel as necessary.

• Fully tighten both screws.

Re-check level of trolley base using a spirit level.

Re-check that the column is vertical, using a plumb line.

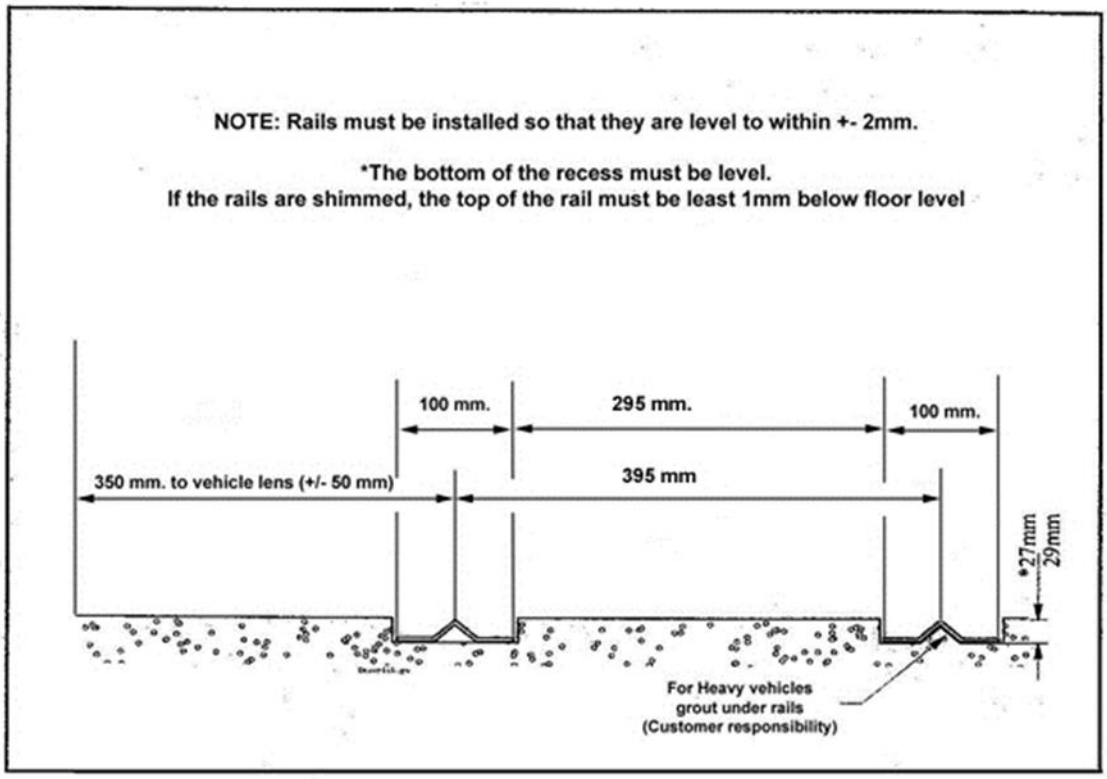

NOTE: Rails must be installed so that they are level to within +- 2mm.
*The bottom of the recess must be level.
If the rails are shimmed, the top of the rail must be least 1mm below floor level
100 mm.
295 mm.
100 mm.
350 mm. to vehicle lens (+/- 50 mm)
395 mm
*27mm
29mm
For Heavy vehicles
grout under rails
(Customer responsibility)

FIG. 2

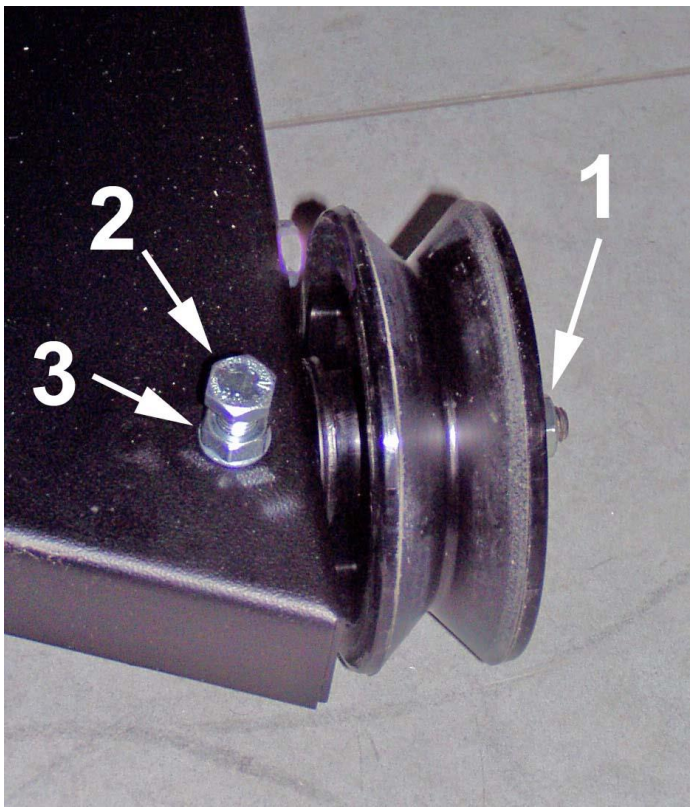

1
2
3

FIG. 3

GENERAL INSTALLATION

The PH 2066UK comes ready assembled, with exception of the column, which are fitted as follows:

Column

• Insert the column into the appropriate hole of the base .

• Check column locks correctly when the pedal is operated.

• Retain column in position with the lower screw.

Alignment Laser

• Ensure that it rotates smoothly and that the leading edge of the optical box aligns correctly with the line of the laser.

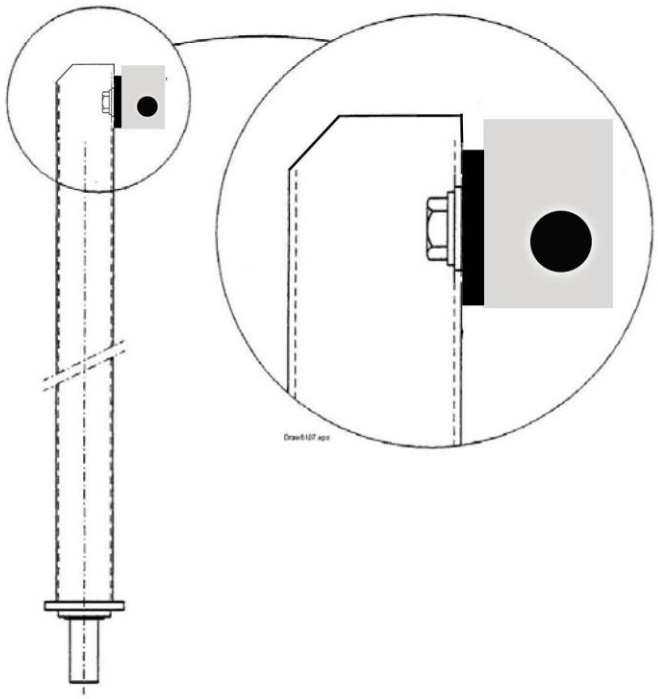


Fig. 4

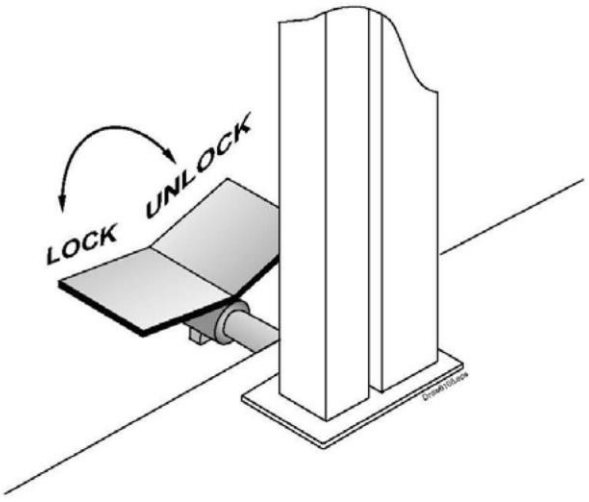


Fig. 5

METHOD OF INSPECTION

Positioning the vehicle (See Fig. 7)

To check headlamp aim:
1 Refer to the Tester's Manual for guidance on test procedures, types of headlights and pass/fail criteria.

2 Position the vehicle as accurately as possible at 900 to the tester rails. The headlamp lens should be positioned 350mm (+/- 150mm) from the lens of the beam tester. Ensure that the headlight lens is clean.

3 Measure the height to the centre of the headlight lens from the floor and adjust the height of the optical box to the same height. If the rails are recessed then this must be added to ensure the optical box is at the correct height. There is a tolerance of +/- 10mm.

(NOTE 1) The above information is based on the criteria published in the MOT Inspection Manual which is an HMSO publication and is available from most bookshops. Always refer to the current edition for any amendments or changes to current legislation.

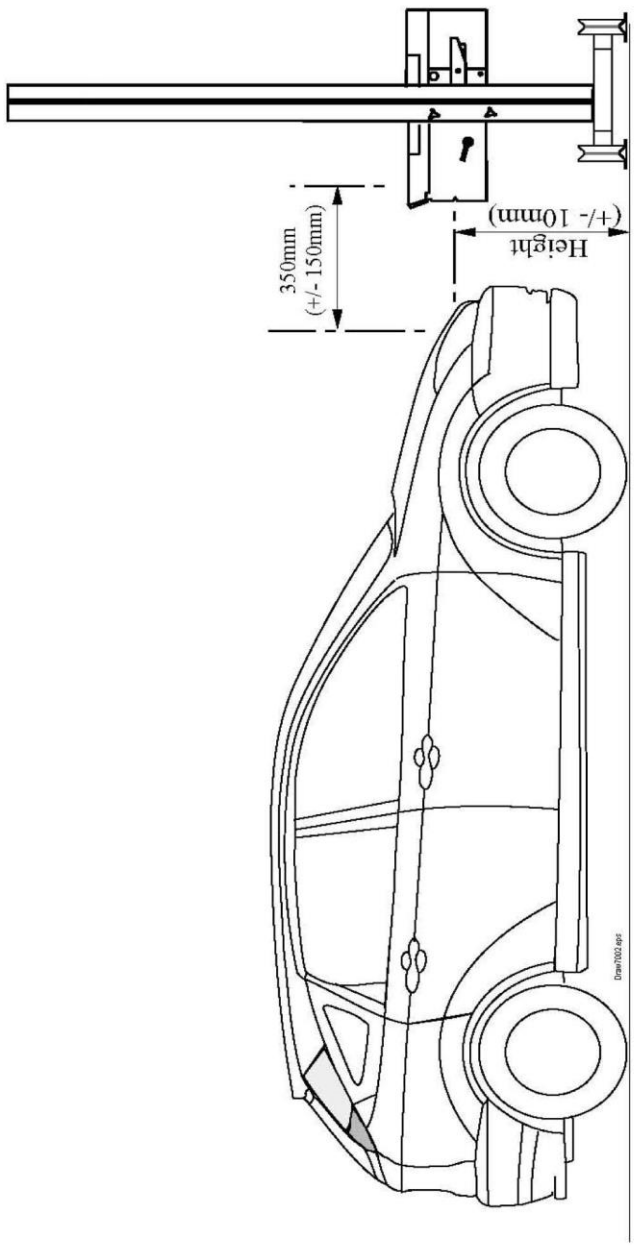


Fig. 7

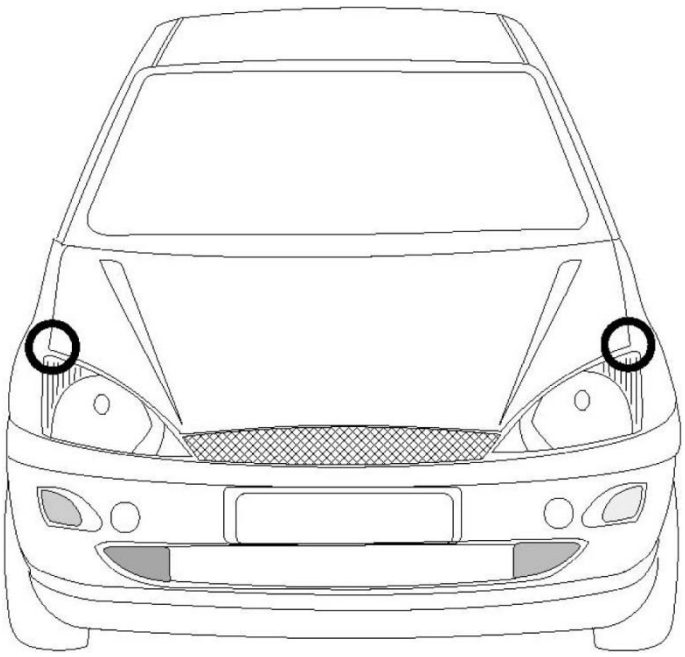
Checking the optical box alignment.

It is very important to align the optical box with the longitudinal axis of the vehicle. This is to ensure that the aim of the headlight to the left or to the right is correct. To verify and adjust the position of the optical box is as follows:

•Position the laser so that it is facing downwards towards the optical box.

• Identify two symmetrical points as close to the sides of the vehicle as possible. See Fig.8

• Check that the line of the laser accurately bisects both points. See Fig. 9



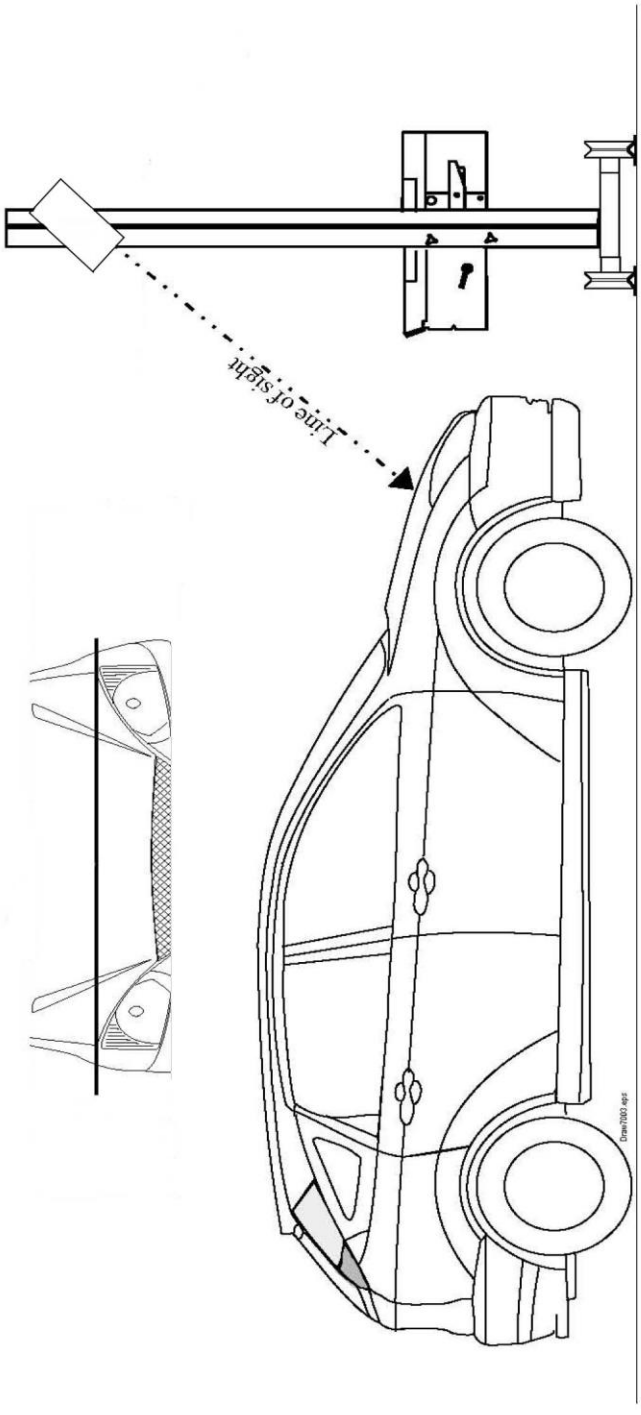


Fig. 9

Adjusting the alignment of the optical box.

If the line of the laser does not accurately bisect the two points, then the optical box has to be realigned. To realign the optical box, release column by pressing the foot pedal and rotate the optical box and column until the correct alignment is obtained. Lock column by pressing the foot pedal. Re-check that the alignment is correct..

CHECKING THE HEADLIGHT AIM.

With an assistant sitting on the driving seat switch on the headlamps to the beam on which the headlamp is to be checked. Note: When checking headlamp aim on vehicles with hydro-pneumatic suspension systems, it may be necessary to have the engine idling. If this is required, ensure that the handbrake has been applied and the transmission is in neutral or park before starting the engine. To check headlight aim, proceed as follows:

• Determine the appropriate headlamp beam image and its aim.

NOTE: Pre C.1950 headlamp beam images may not conform to either diagrams 12, 13 or 14. In such cases check that dip beam headlamps are aimed so they do not dazzle, i.e. the beam image brightest part is aimed at least 0.5% below the horizontal or for headlamps which cannot be checked on dip beam, check that the main beam headlights are aimed so that the beam image centre is on or slightly below the horizontal 0% Line If the outline of the hot spot is difficult to determine then move the optical head and observe the readings on the Luxmeter, until the highest reading is obtained.

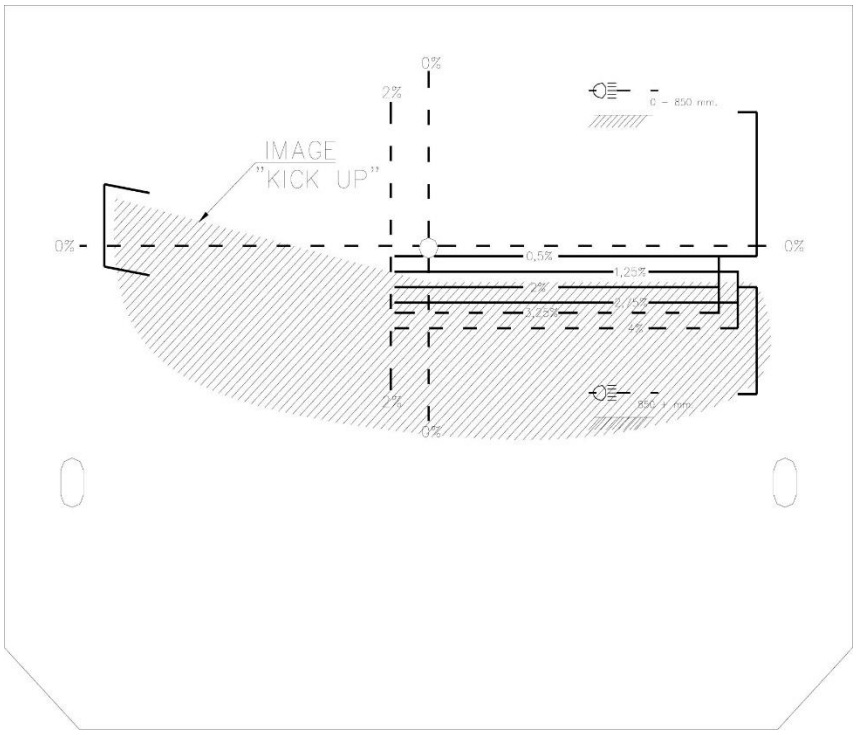
EUROPEAN TYPE HEADLAMP CHARACTERISTICS (NOTE: 1)

1 An asymmetric dipped beam, pattern with a distinctive horizontal cut-off on the right, and a 15-degree wedge of light above the horizontal (the “Kick up”) towards the left.
2 A lens with one or more asymmetric stepped patterns moulded in the glass.
3 A lens may carry:
- European approval mark – a circle containing an “E” and a number, or
- Rectangle containing an “e”, and a number

The European approval mark should incorporate a single or double-headed arrow.
The dipped beam is denoted by either:
- Capital letter “C” above a capital “E”
- Capital letter “C” above an “e”

NOTE: Setting “E” Beam Headlamp aim
These dip-beam headlamps should be set to aim downwards the amount shown on a marking which is either close to the vehicle manufacturer’s plate or the headlamp.
For vehicles without a marking, the downward aim should be set as follows:
- 1,3%, if the headlamp centre is not more than 850 mm. from the ground
- 2.0%, if the headlamp centre is more than 850 mm. from the ground

Reason for rejection
1 The beam image “Kick-up” is to the offside.
2 For headlamps with centers not more than 850 mm. from the ground, the beam image horizontal cut-off is not between the horizontal 0,5% and 2% lines, i.e. the red tolerance band.
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, i.e. the blue tolerance band.
4 The beam image “break point” is:
- To the right of the 0% vertical line or
- To the left of the vertical 2% line



BRITISH AMERICAN TYPE (CHECKED ON MAIN BEAM) - CHARACTERISTICS: (NOTE: 1)

1. Headlamps tested on main beam have a symmetrical main beam pattern with a central area of maximum intensity (hot spot)

2. 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

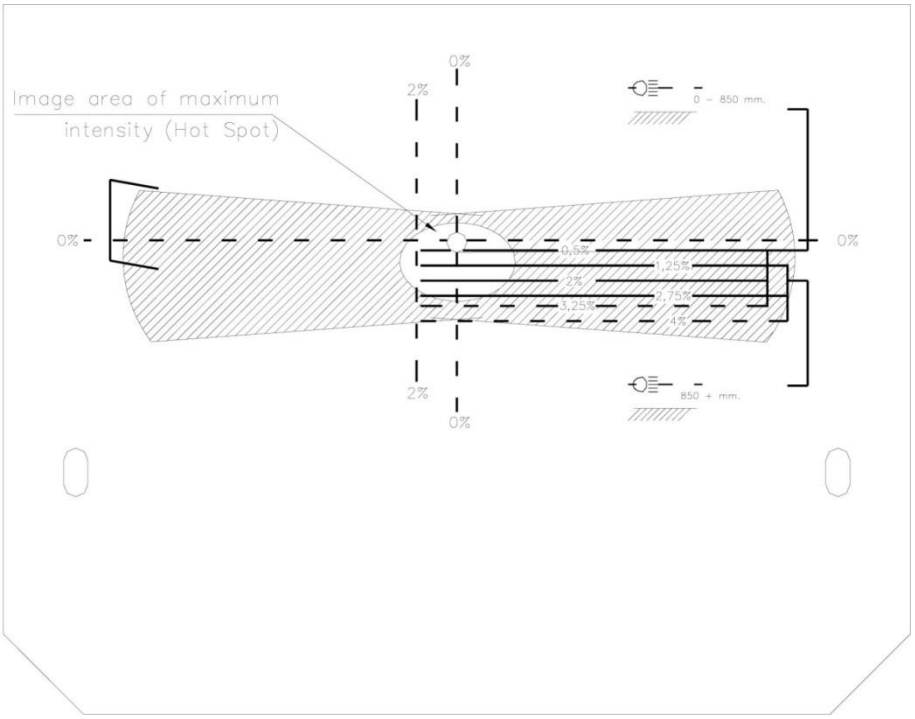
Reason for Rejection

1. The 'hot spot' centre is above the horizontal 0% line.

2. The 'hot spot' centre is to the right of the vertical 0% line, or to the left of the vertical 2% line.

3. For headlamps whose centre is not more than 850 mm from the ground, the 'hot spot' centre is below the horizontal 2% line.

4. For headlamps whose centre is more than 850 mm from the ground, the 'hot spot' centre is below the horizontal 2.75% line.



BRITISH AMERICAN TYPE (CHECKED ON DIPPED BEAM)- CHARACTERISTICS: (NOTE:1)

1 Asymmetric dipped beam pattern with an area of high intensity intended to be directed along the nearside of the road.

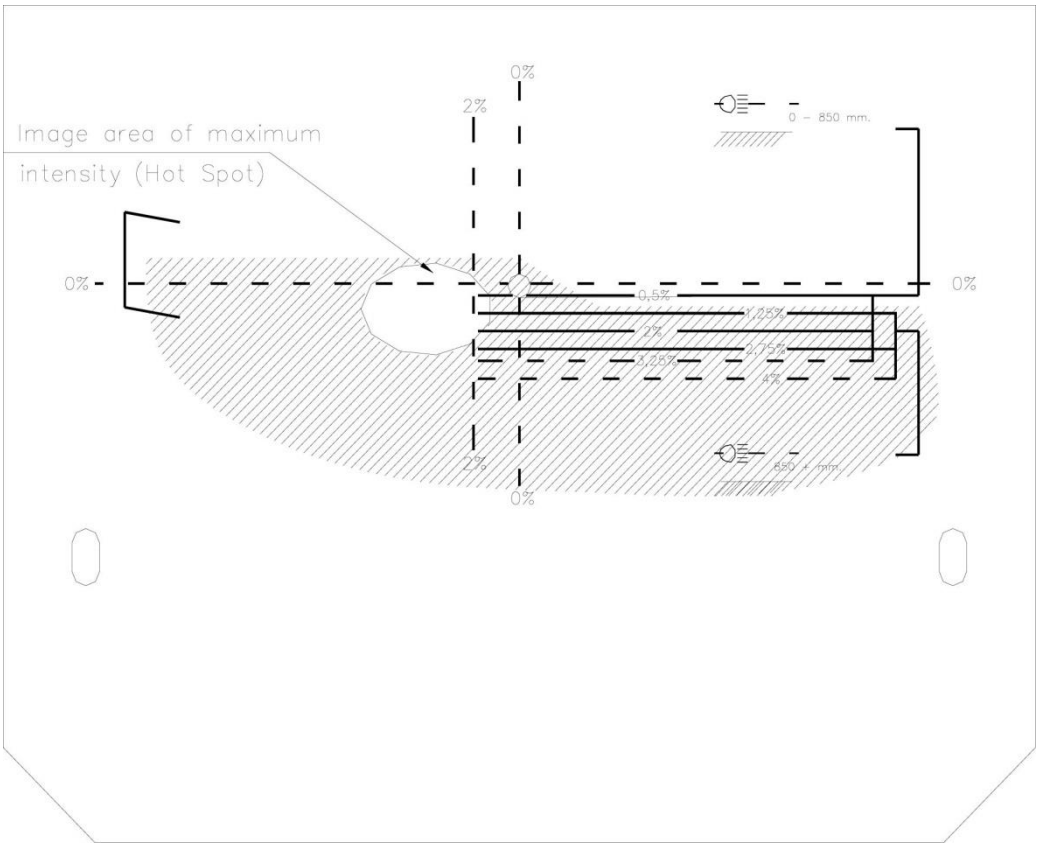
2 Circular lens.

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.



(NOTE:1)
The above information is based on the criteria published in the MOT Inspection Manual which is an HMSO publication and is available from most bookshops. Always refer to the current edition for any amendments or changes to current legislation

MAINTENANCE

The PH 2066UK requires a minimal amount of maintenance.

Weekly

• Clean external paintwork and lens with a damp cloth.

• Check the operation of the Luxmeter.

• Check security of rails.

Six Monthly

• Check calibration.

MAINTENANCE - LUXMETER

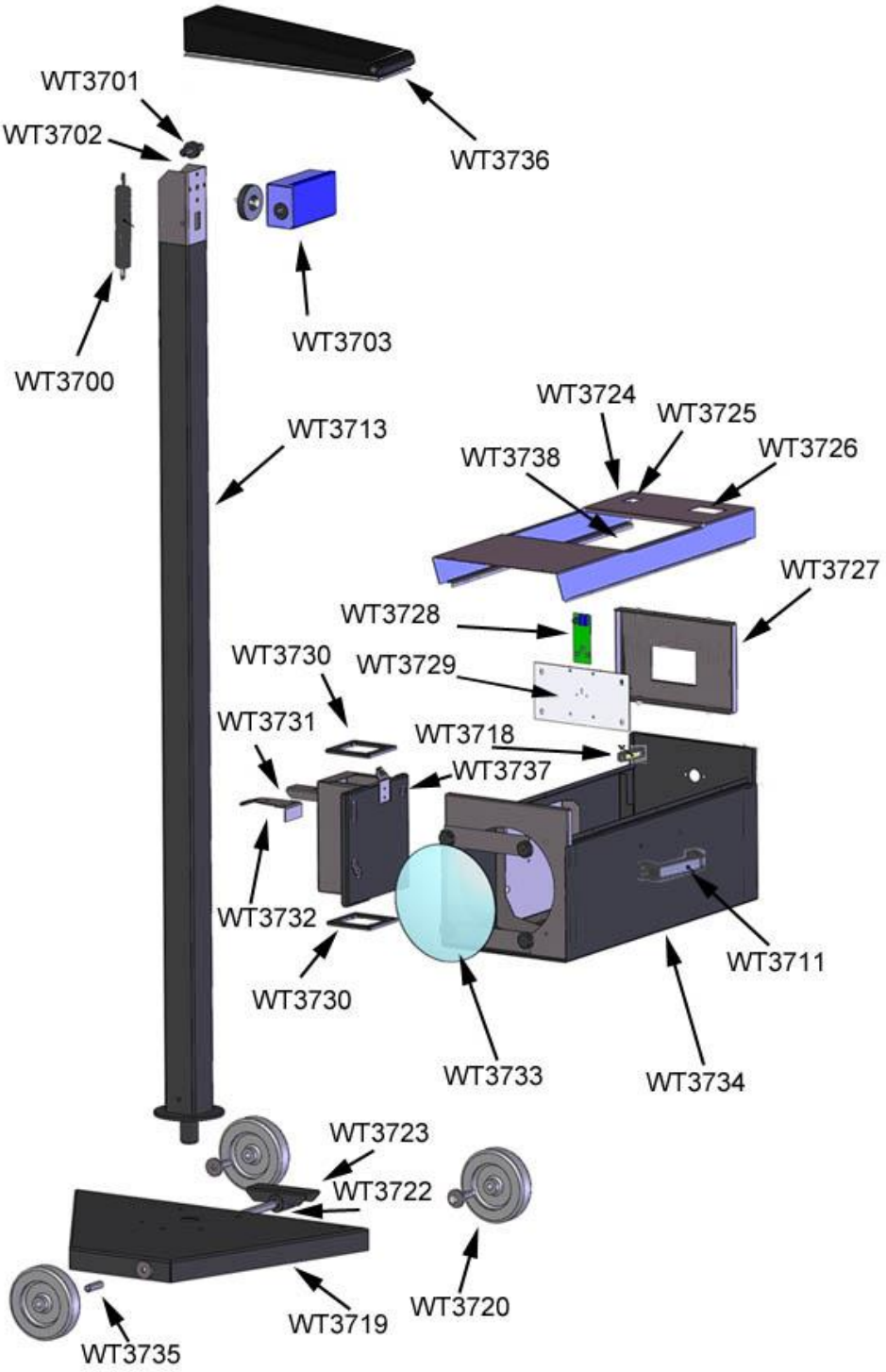
If the Luxmeter is damaged or defective the Optical Box should be returned for a Service repair or replacement.

DISPOSAL

The PH2066UK must be disposed of in accordance with Local Authority regulations.

STEEL: Optical box, Column, trolley and rails.
LENS: Glass.
COPPER: Wiring and Luxmeter coils.
PLASTIC: Observation panel and miscellaneous small components.
PAPER: Packaging and instruction manual.
BATTERIES Not recyclable

SPARE PARTS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WT3722
WT3720
WT3719
WT3735

CODE LIST

CODICE	Descrizione
WT3734XX	varnished optical camera body
WT3724XX	varnished optical camera cover
WT3713XX	varnished column
WT3737XX	varnished cart group
WT3719XX	varnished base
WT3723XX	varnished pedal
WT3729UK	Screen
WT3732XX	varnished brake lever
WT3731	Brake spring
WT3720	Rail wheel
WT3722	Pedal hub
WT3702	Cable
WT3701	Cable trundle
WT3700	Return spring
WT3738	Plexiglas cover
WT3733	Lens
WT3718	Level
WT3711	Handle
WT3725	Lux switch
WT3726	Luxmeter
WT3727	Support panel
WT3728UK	Photodiodes card
WT3730	Flat slide
WT3736	Mirror group
WT3703	Complete line laser

SPECIFICATION

Lens to headlight lens focal length	350mm (+/-150mm)
Distance of lens in the front of the first rail	110mm
Maximum headlight height	1500mm
Tolerance on aiming height	+/-10mm
Lens diameter	200mm
Focal length	500mm
Optical box size	250mm x 260mm x 600
Same or less than mW Accuracy	Same or less than 1mm per metre
Distance between rails	435mm
Rail recess dimension	100mm x 27mm (min) / 29mm (max)
Min clearance behind optical box	500mm (VOSA Requirements)

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2/3 Church Walk, Daventry, Northamptonshire NN11 4BL UK
tel: +44 (0) 1327 312616 fax: +44 (0) 1327 312606
email: info@gea.co.uk website: www.gea.co.uk

CERTIFICATE OF ACCEPTANCE

HEADLAMP BEAM TESTER (HBT)

HBT Make and Model:

WT Engineering PH2066UK

Equipment Identification Number:

EINHB19163A1113094--

Suitable to test All Classes excluding HGV

This is to certify that the above Headlamp Beam Tester meets the requirements of the VOSA 2005 HBT Specifications for the Classes listed above. It is therefore acceptable for performing beam tests and may be used as part of an Automated Test Lane (ATL).

26 November 2013

Chief Executive **Date**

For and on behalf of the Garage Equipment Association (GEA), administrators of the VOSA equipment approval scheme

For Manufacturers/Importers use

I certify that the test equipment of the above make and model, bearing the serial number: .....

is installed in VTS No: ..... and is suitable for MOT testing.

VTS Details:

Name .....

Address .....

.....

Postcode .....

Supplier's Details:

Name ..... Position .....

Signature ..... Company .....

Registered in London No. 2891852

GARAGE EQUIPMENT ASSOCIATION LIMITED
2/3 Church Walk, Daventry, Northamptonshire NN11 4BL UK
tel: +44 (0) 1327 312616 fax: +44 (0) 1327 312606
email: info@gea.co.uk website: www.gea.co.uk

CERTIFICATE OF ACCEPTANCE

HEADLAMP BEAM TESTER (HBT)

HBT Make and Model:

WT Engineering PH2066UK/HGV

Equipment Identification Number:

EINHB19163A1113095--

Suitable to test All Classes including HGV

This is to certify that the above Headlamp Beam Tester meets the requirements of the VOSA 2005 HBT Specifications for the Classes listed above. It is therefore acceptable for performing beam tests and may be used as part of an Automated Test Lane (ATL).

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Name .....

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.....

Postcode .....

Supplier's Details:

Name ..... Position .....

Signature ..... Company .....

Registered in London No. 2891852

GARAGE EQUIPMENT ASSOCIATION LIMITED
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Tel: +44 (0) 1327 312616 fax: +44 (0) 1327 312606
email: info@gea.co.uk website: www.gea.co.uk

CERTIFICATE OF ACCEPTANCE

HEADLIGHT BEAM TESTER (HBT)

Brand: - WT Engineering
Model: - PH2066UK/F
Equipment Identification Number: - EIN-HB19163A0919046--
Software Version: - N/a

Suitable to testing (ATL): - All Classes
Suitable to testing (Non ATL): - All Classes (excluding HGV)

This is to certify that the above Headlamp Beam Tester meets the requirements of the DVSA 2005 HBT Specifications for the Classes listed above. It is therefore acceptable for performing beam tests and may be used as part of an Automated Test Lane (ATL).

Chief Executive

29/07/2019
Date

For and on behalf of the Garage Equipment Association (GEA), administrators of the DVSA equipment approval scheme

For Manufacturers/Importers use

I certify that the test equipment of the above make and model, bearing the serial number: .....

is installed in VTS No: ..... and is suitable for MOT testing.

VTS Details:

Name .....

Address .....

.....

Postcode .....

Supplier's Details:

Name ..... Position .....

Signature ..... Company .....

GARAGE EQUIPMENT ASSOCIATION LIMITED
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Tel: +44 (0) 1327 312616 fax: +44 (0) 1327 312606
email: info@gea.co.uk website: www.gea.co.uk

CERTIFICATE OF ACCEPTANCE

HEADLIGHT BEAM TESTER (HBT)

Brand: - WT Engineering
Model: - PH2066UK/F HGV
Equipment Identification Number: - EIN-HB19163A0919047--
Software Version: - N/a

Suitable to testing (ATL): - All Classes
Suitable to testing (Non ATL): - All Classes (including HGV)

This is to certify that the above Headlamp Beam Tester meets the requirements of the DVSA 2005 HBT Specifications for the Classes listed above. It is therefore acceptable for performing beam tests and may be used as part of an Automated Test Lane (ATL).

Chief Executive

29/07/2019
Date

For and on behalf of the Garage Equipment Association (GEA), administrators of the DVSA equipment approval scheme

For Manufacturers/Importers use

I certify that the test equipment of the above make and model, bearing the serial number: .....

is installed in VTS No: ..... and is suitable for MOT testing.

VTS Details:

Name .....

Address .....

.....

Postcode .....

Supplier's Details:

Name ..... Position .....

Signature ..... Company .....

Dichiarazione di conformità
Declaration of Conformity
Konformitätserklärung
Déclaration de conformité
Declaración de conformidad

W.T.Engineering S.r.l.
via Ugo Foscolo, 96/F 24024 Gandino (BG) - Italy
Telefono 035/733399 Fax 035/7172834

con la presente dichiara che - déclare par la presente que - hereby declare that - erklären hiermit, daß - por la presente declara, que

il centrafari modello - le reglophare modèle - the light centering device model - der Scheinwerfereinstellgerät Modell los centrafaros modèlo

PH 2066UK – 2066UK/HGV

I	è stato costruito in conformità alle Direttive 2006/42/CE, 2006/95/CE e 2004/108/CE
F	a été construite en conformité avec les Directives 2006/42/CE, 2006/95/CE, 2004/108/
GB	was manufactured in conformity with the Directives 2006/42/EC, 2006/95/EC, 2004/108/
D	in Übereinstimmung mit den Bestimmungen der richtlinie 2006/42/EC, 2006/95/EC, 2004/108/EC,
E	está fabricada según las disposiciones de las Directivas 2006/42/EC, 2006/95/EC, 2004/108/EC

15/01/2021

Legale Rappresentante Claudio Peroni

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