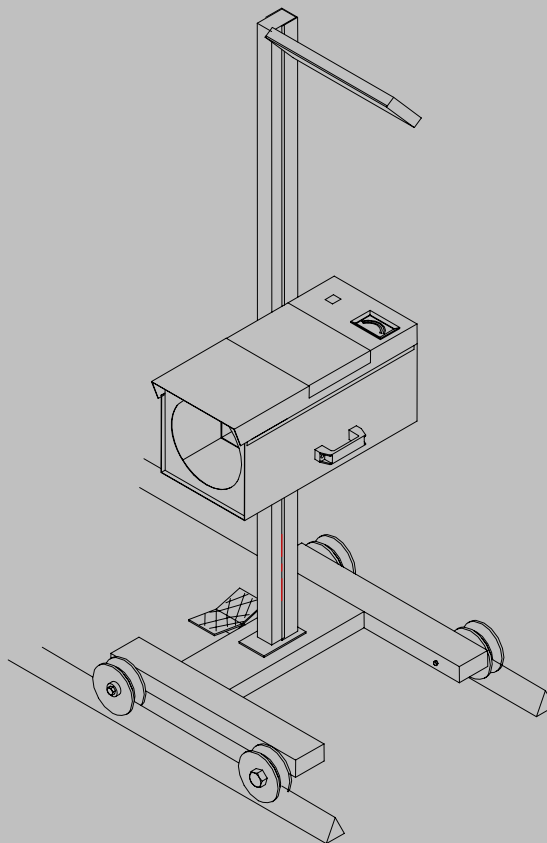


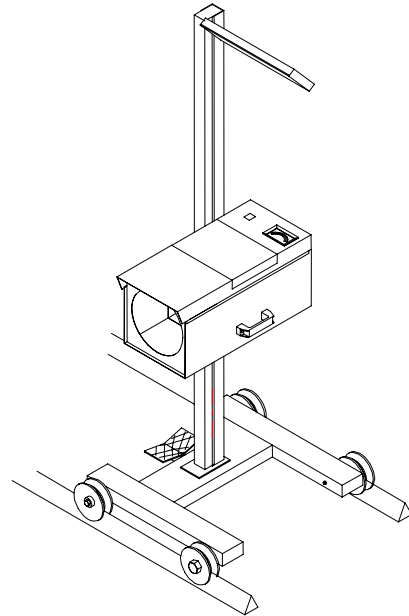
OMA



INSTRUCTION MANUAL HEADLIGHT BEAM TESTER

Model: 32400UKR





1 - GENERAL REGULATIONS

Read carefully the instructions in this manual, before using the headlight beam tester. Do not allow unqualified persons to use this device, this to prevent damage to the device. The work place should be dry, lighted and ventilated. Working areas should be equipped with an exhausts gaz aspirator, since the headlights test must be effected with the engine on. Breathing carbon monoxide can seriously damage the human organism, sometimes with lethal results. Put the handbrake on. Do not use the device to direct sunlight, avoid sudden changes of temperature and vibrations, to avoid mistakes.

2 - DESCRIPTION OF THE DEVICE

Headlight beam tester (HBT): equipment for the control of car, motorcycle and heavygoods vehicle headlights.

Supplied with:

Turning column

Mirror-visor

Coloured luxmeter

Also available in the various versions.

Technical characteristics:

height: 177 cm.

width: 61 cm.

length: 61 cm.

maximum measurement height: 141 cm.

minimum measurement height: 24 cm.

focal length: 500 mm.

3 - PACKING

The HBT is delivered in a recycled carton box.

4 - HEADLIGHT BEAM TESTER ASSEMBLY

A- Base

B- Column

C- Vertical sliding system (VSS)

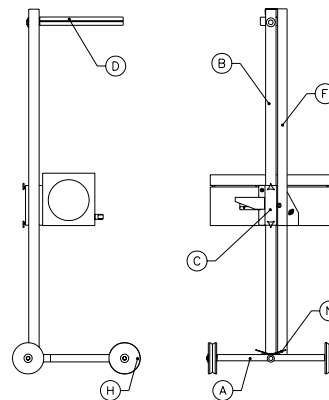
D- Mirror-visor

E- Optical system

F- Spring protection

H- Wheels

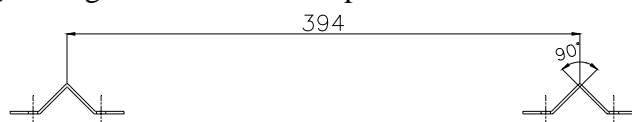
N- Brake



- 4.1 Fix the mirror-visor D with two screws.
- 4.2 The stand is calibrated and locked in the correct Position at the moment of the test of the device.

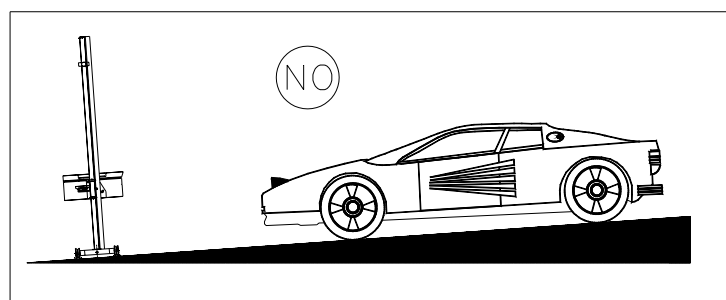
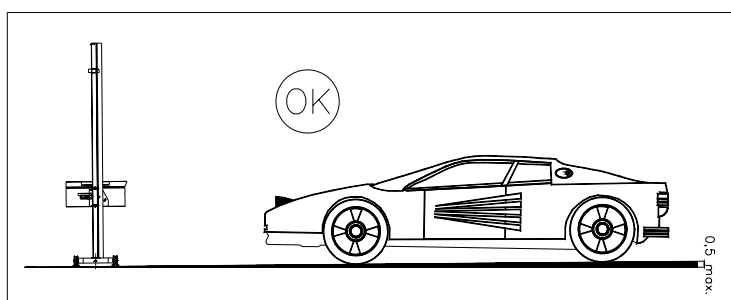
INSTALLING RAILS

Two sets of rails, each secured to the floor by screws and plastic rawlplugs. The rails are positioned at right angles to the test vehicle's line of travel. The two rails must be levelled with each other, shimmed as necessary, and re-checked after tightening down. In the final position the rails must be flat within +/- 2mm.



5 – WORKING SURFACE

During the positioning the floor must be perfectly flat and level. If it is no possible car and HBT must be, at least, on the same slope and it must not exceed 0,5%. It is inadvisable to check headlights on an unlevel surface, or the regulation will not be precise.



6 – CAR PREPARATION

Straighten the car wheels up. Check the tyre pressure. Ascertain the headlights are clean and dry. Set, if there are inside the passenger compartment, all “position correcting” devices in the position corresponding to the “vehicle with normal load (0)”. Eliminate anything could alter the position of the vehicle: ice, snow, mod, ... Switch the engine on. Proceed to the checking with engine on. In case of vehicles with automatic damper switch the engine on 5 minutes before the test and proceed with the engine on.

7 – OPTICAL POSITIONING

Put the HBT in the front of one of the car lights, about 20-50 cm. from the car.

Look trough the visor and look for a horizontal part of the car, or two symmetrical points on the car, for example the top part of the windshield or the bonnet.

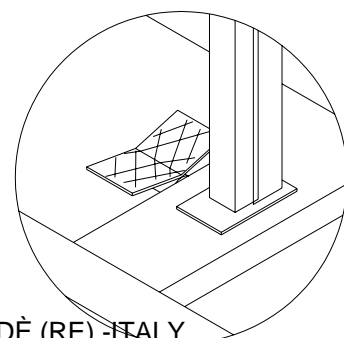
Make sure that the visor lines match with these lines, so that all the device is parallel to the car.

Otherwise slightly turn the HBT, until the lines match.

Measure the height from the floor to the centre of the light and put the optical box at the correspondent height, using the scale situated on the carter.

You must use as a point of reference, the top of part VSS.(E.g.: if the height from the floor is 80 cm., put the VSS at the 80 cm. mark as in the picture).There is a allowance of 3 cm. more or less.

The HBT is equipped with a rotating column and brake that allow the device to be easily rotated and locked in the desired position. The brake is operated by pressing the pedal.



8 – EUROPEAN TYPE HEADLAMP CHARACTERISTICS (NOTE:1)

- 8.1 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.
- 8.2 A lens with one or more asymmetric stepped patterns moulded in the glass.
- 8.3 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.

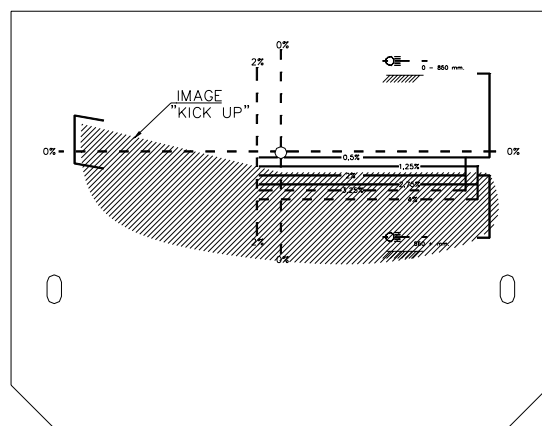
For vehicles without a marking, the downward aim should be set as follows:

- **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 centres 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

(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.



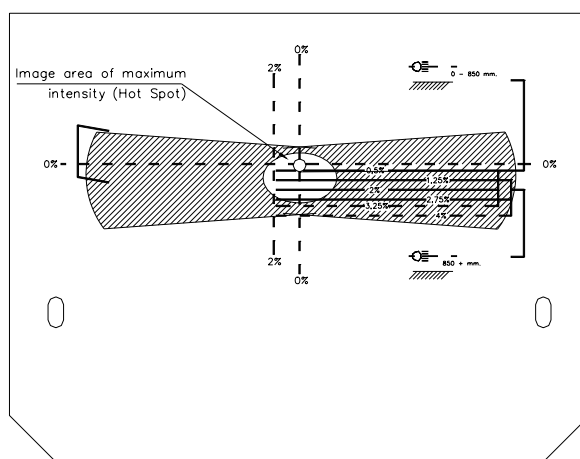
9 – BRITISH AMERICAN TYPE, (CHECKED ON MAIN BEAM)- CHARACTERISTICS: (NOTE:1)

- 9.1 Headlamps tested on main beam have a symmetrical main beam pattern with a central area of maximum intensity (hot spot).
- 9.2 This type of lamp generally has a circular lens

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.

(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.



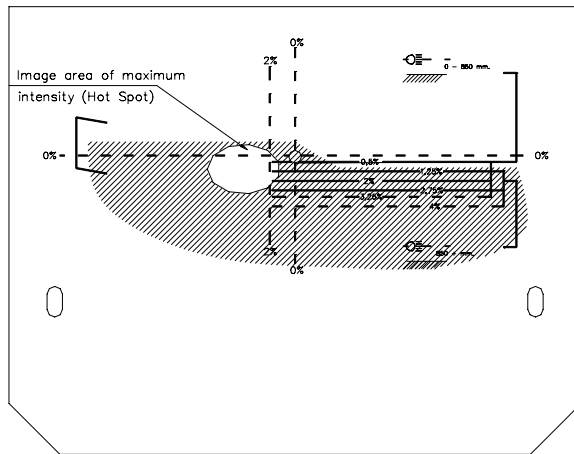
10 – BRITISH AMERICAN TYPE (CHECKED ON DIPPED BEAM)- CHARACTERISTICS: (NOTE:1)

- 10.1 Asymmetric dipped beam pattern with an area of high intensity intended to be directed along the nearside of the road.
- 10.2 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.



11 – READING OF THE LUXMETER WITH COLOUR GRADUATION

- Indicator at **BAD/GOOD** limit: for vehicles traveling under 40 Km/h (30mph) and motorbikes.
- Indicator at the center of **GOOD** for vehicles traveling over 40 Km/h.
- Indicator on **HALOGEN** for vehicles with halogen or iodine headlights.

CONTROL OF THE LIGHT INTENSITY OF HEADLIGHTS

- Switch on the high beams.
- Read the intensity on the luxmeter.



12 – CALIBRATION

We suggest the unit is periodically checked for calibration in situ. If the unit is covered by a service agreement with the MOT package installer, they will carry this out on your behalf. Should you wish to regularly check the calibration yourself, we recommend you purchase an Alignment Device from your local dealer. Full instructions are provided with the re-calibration tool.

13 – OTHER REGULATIONS AND CALIBRATIONS

The machine is equipped with a spirit level located on the base of the optical box and visible through the transparent panel, with headlights on. If necessary, to level the box open the clutch lever located on the side of the box itself and move the box until perfectly level, then re-close the clutch lever. This operation may prove necessary whenever the equipment is mounted on a different work surface.

Correct use of the machine permits long periods of use without significant maintenance.

Eventual calibration of the panel and luxmeter must be carried out on our premises, sending just the optical box that can be easily dismantled by removing the screws . . .

14 – CLEANING

It is good practise to protect the instrument from dust when not in use. A plastic cover for the optical box is available on request.

Occasionally clean with a damp cloth and remove any stains. Paintwork is detergent resistant. Do not oil the column, or use alcohol for stain removal.

Do not leave the machine in areas where corrosive vapour is present, for example in battery charging or painting areas.

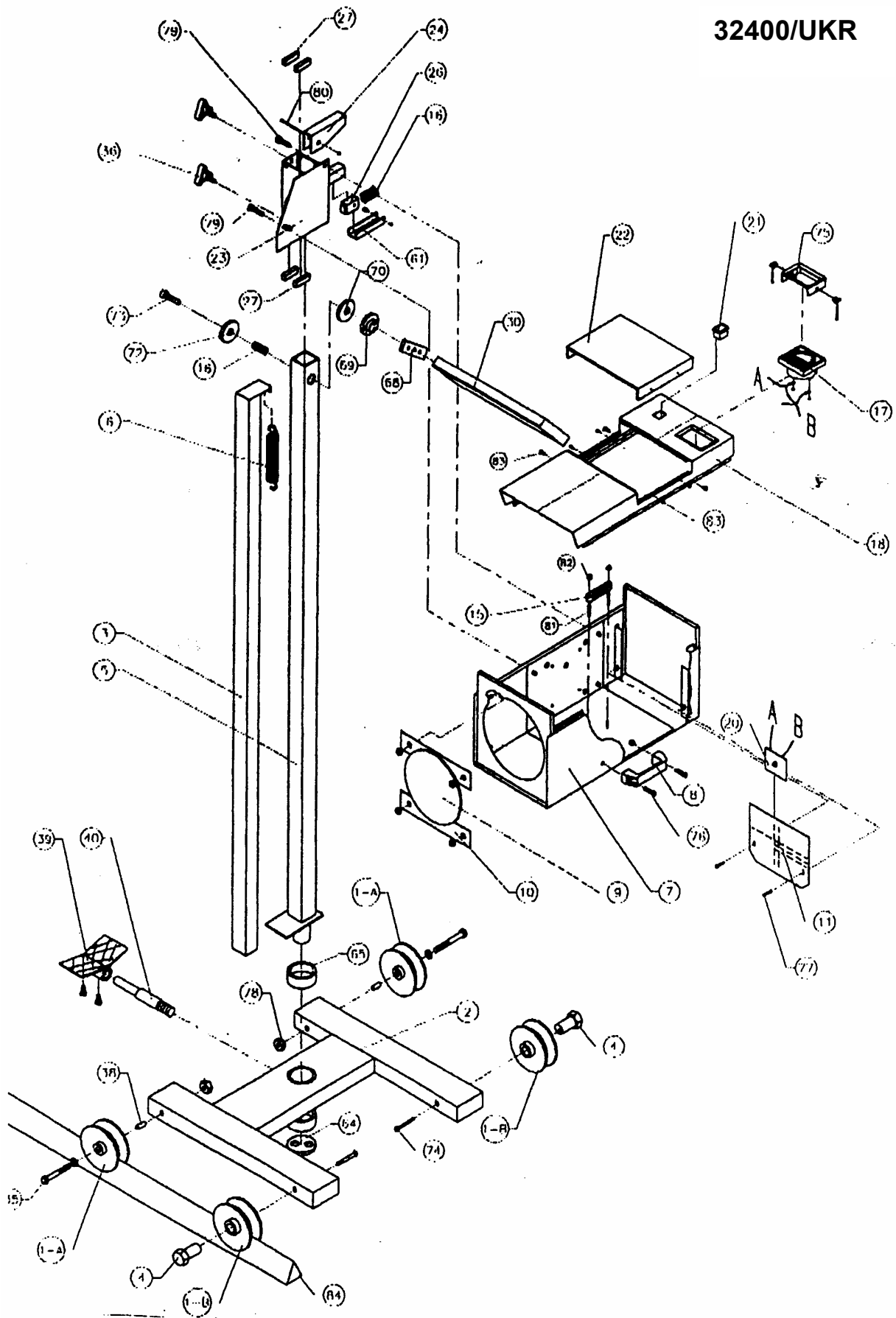
15 – DEMOLITION AND DISPOSAL

The machine is composed of:

- Glass (lens)
- Plastic (wheels, plexiglas cover, handles and other small details)
- Copper (wiring and luxometer coils)
- Steel (structure and mechanics) up to 80%
- Paper and cardboard (instruction manual, packaging)

The machine is constructed principally of steel. For disposal of this material, local authority regulations must be observed.

32400/UKR



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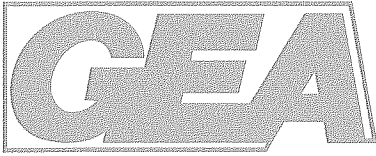
Tel. 0039/ (0)522/ 9431 – Fax 0039/ (0)522/941997

WEB <http://www.wertherint.com> – E-mail: sales@ wertherint.com

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<u>POS.</u>	<u>CODICE</u>	<u>DENOMINAZIONE</u>	<u>DESCRIPTION</u>	<u>Q.tà</u>	<u>Q.tà</u>
<u>POS.</u>	<u>CODE</u>				
1-A	024010004	Ruota a V con bussola	Wheel a V	2	R
1-B	024010005	Ruota a V per perno regolazione	Wheel a V	2	R
2	024010001	Base per rotaie	Base-rail	1	
3	025010003	Carter per colonna 1650	Case for column 1650	1	
4	020010045	Perno di regolazione ruota	Pivot of regulator wheel	1	
5	025010002	Colonna h. 1650 girevole	Turning column h. 1650	1	
6	025010004	Molla er sollevamento verticale	Spring for vertical sliding system	1	
7	024010002	Scatola ottica	Optical box		
8	025030011	Maniglia nera	Black handle	1	
9	025030014	Lente in vetro D. 200 mm.	Glass D. 200 mm.	1	
10	025030013	Fermalente	Lens stand	2	
11	027010037	Pannello di verifica	Inner panel	1	R
15	020010038	Livella	Spirit-level	1	
16	025020009	Molla di bloccaggio	Brake-spring	1	
17	021010006	Luxometro colorato Mod. CM70	Coloured luxmeter	1	R
18	020010028	Coperchio scatola ottica	Steel cover	1	
20	020020018	Scheda con 1 fotodiode	Electronic card with 1 photodiode	1	R
21	NR5020033	Tappo cieco 22x30	Stopper	1	
22	020010050	Carter plexiglass piegato forato	Plexiglass cover	1	
23	025020005	Scorrimento verticale	Vertical sliding system (VSS)	1	
24	025020007	Premimolla	Springpusher	1	
26	025020008	Tampone di bloccaggio	Stopper	1	
27	025020006	Pattino	Brake of VSS	4	R
30	025020011	Visore a specchio	Mirror visor	1	
35	NA2010037	Vite M8 x 110	Screw M8 x 110	2	
36	NR5020008	Volantino D. 35 nero	Wheelhandle D. 35	2	
38	020010047	Bussole ruote nera 15 x 45	Wheel-pipe mm 15 x 45	2	R
39	022040010	Pedale freno	Pedal brake	1	
40	022040006	Perno filettato freno	Pivot-thread brake	1	
61	025020010	Chiusura inferiore	Lower closing	1	
64	025010068	Rondella	Washer	1	
65	ND1010002	cuscinetto 6005 RS	Bearing 6005 RS	2	
68	025010122	Piatto frontale per visore	Plate for mirror visor	1	
69	025010121	Bussola regolazione visore	Compass for mirror visor	1	
70	025010123	Rondella scorrimento visore in PVC	Washer in PVC	1	
72	025010119	Rondella posteriore OT	Washer in OT	1	
73	NA1010034	Vite M10 x 80	Screw M 10 x 80	1	
74	NA2010011	Vite M 8 x 60	Screw M 8 x 60	2	
75	021010023	Cornice per luxmetro	frame for luxmeter	1	
76	NA0010009	Vite a brugola M6 x 16	Screw M 6 x 16	2	
77	NA1010034	Vite M4 x 16	Screw M4 x 16	2	
78	NB1010006	Dado M8 medio autobl.	Nut M8	2	
79	NA0010026	Vite M8 x 20	Screw M8 x 20	2	
80	NA0010005	Vite M6x50	screw M6x50	1	
81	020010037	Molla per livella	Spring for spirit-level	2	
82	NB0010005	Dado medio M4	Nut M8	2	
83	NA4010006	Vite 3,9x9,5	Screw 3,9 x 9,5	8	
84	025020059	Kit rotaia completo	Kit rail complete	1	

R=RECOMMENDED SPARE PARTS



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:

OMA 32400 UKR

EINHB15263A0909037--

**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).



Chief Executive

23 September 2009

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



***Dichiarazione di conformità
Declaration of Conformity***

WERTHER INTERNATIONAL S.p.A.
Via F. BRUNELLESCHI, 12 - 42124 CADÈ (RE) -ITALY

***con la presente dichiariamo che il centrafari modello
he reby we declare that the headlight beam tester model***

32400/UKR

è stato costruito in conformità alle Direttive 2006/95/CE – 2004/108/CE – 2006/42/CE
was manufactured in conformity with the Directives 2006/95/CE – 2004/108/CE – 2006/42/CE

Matricola N° - Serial N°

Fascicolo tecnico - Technical file

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Cadè, 03/01/2011

Vice president Iori Werter