

**APPLICATION FOR APPROVAL OF DEVICES FOR INDIRECT VISION
ACCORDING TO ECE REGULATION No. 46, 02 SERIES OF AMENDMENTS**

1. Trade name or mark of the Device :
2. Manufacturer's name of the Device :
3. Manufacturer's name and address :
4. If applicable, name and address of : Not applicable
manufacturer's representative
5. Brief description : Exterior rear-view mirrors for towing vehicle
6. Submitted for approval on (date) : June 3, 2008

We herewith certify that we didn't apply nor receive a certificate for the above mentioned type in any other EC/ECE member state.

This application is accompanied with:
-The test report



**THE NETHERLANDS
(N E D E R L A N D)****COMMUNICATION**Concerning ⁽¹⁾:

- approval granted
- ~~- approval extended~~
- ~~- approval refused~~
- ~~- approval withdrawn~~
- ~~- production definitely discontinued~~

of a type of device for indirect vision to Regulation number 46.

Approval number: E4-46R-022918**Extension number: 00***Approval mark:*

III (E4) 022918

1. Trade name of mark of device : .
2. Manufacturer's name for the type of device : .
3. Manufacturer's name and address : .
4. If applicable, name and address of manufacturer/s representative : Not applicable
5. Submitted for approval on : April 22 to May 2, 2008
6. Technical service responsible for conducting approval tests : TÜV Rheinland Kraftfahrt GmbH
Technologiezentrum Verkehrssicherheit
Typprüfstelle Fahrzeuge/Fahrzeugteile
Postfach 91 09 51
D-51101 Köln / Germany
7. Date of report issued by that service : June 19, 2008
8. Number of report issued by that service : R46-00513/08



9. Brief description : Exterior rear-view mirror mounted on the external parts of a vehicle
- Identification of the device : Mirror/~~camera monitor/other device~~⁽¹⁾
- Device for indirect vision of class : ~~I/II/III/IV/V/VI/S~~⁽¹⁾
- Symbol Δ
2m as defined in paragraph 6.1.3.1.1. of this Regulation : Yes/no⁽¹⁾
10. Position of the approval mark : On the housing
11. Reason(s) for extension (if applicable) : Not applicable
12. Approval : Granted/~~refused/extended/withdrawn~~⁽¹⁾
13. Place : Zoetermeer
14. Date : 30-JUN-2008
15. Signature :



P. Berger

16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.

⁽¹⁾ Strike out what does not apply.

Type :
Manufacturer :

TEST REPORT

according to ECE-Regulation

Uniform provisions concerning the approval of devices for indirect vision

No.: **ECE-R46**
including all amendments until
No.: **02 series of amendments**

| |
|---------------------------------|
| Previously granted |
| ECE - system type approval : -- |

Structure of report:

0. General information
1. Test object(s) and general test information
2. Test minutes
3. Remark concerning tested object(s)
4. Appendices
5. Statement of conformity

The Test Report shall be reproduced and published in full by the client only. It shall however be reproduced partially with the written permission of the Testing Laboratory only.

Type :
Manufacturer :

0. General information

- 0.1. Trademark or trade name of the mirror :
0.2. Manufacturer's name for the type of the mirror :
0.3. Name and address of the manufacturer :
0.4. Name and address of the manufacturer's authorized representative : Not applicable
0.5. No. of information document : 3012-00
date of issue : June 3, 2008
date of last amendment : --

Type :
Manufacturer :

1. Test object(s) and general test information

1.1. Test object(s)

1.1.1 Identification no. : Not applicable

Model :

Remark : --

1.2. General test information

1.2.1 Order issued by : --
(if different from manufacturer)

1.2.2 Test object received on : --

1.2.3 Test date : April 22 to May 2, 2008

1.2.4 Test site :

1.2.5 Remark : The results of the test refer exclusively to the object(s) mentioned under point 1.1. of this report.

Type :
Manufacturer :

2. Test minutes

- 2.1. Test facilities** : The test facilities used are in compliance with the requirements of the Regulation.
- 2.2. Test results** : ~~The mirror type has been tested according to the amendments mentioned in appendix 0. The test results were carried over from the basic report.~~
- 2.2.3 General requirements : The mirror type complies with the general requirements of the Regulation.
- 2.2.3 Special requirements : The mirror type complies with the special requirements of the Regulation. Test results see Appendix 1.
- 2.2.3 Test data : The mirror type complies with the requirements of the regulation concerning the impact and bending tests. Test results see Appendix 1.
- 2.3. Variants and components**
- Variant(s) : --
- Version(s) : --

Type :
Manufacturer :

3. Remark concerning tested object(s)

All versions of the indirect vision device type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

4. Appendices

- 0 List of modifications
- 1 Test minutes
- 2 Information folder no. : 3012-00 (3 pages)
(excluding drawings)

5. Statement of conformity

The above mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

Cologne, June 19, 2008
KWU/BL



M.S.M.E. K. Wu

Type :
 Manufacturer :

Test minutes**Appendix 1****Dimensions of the reflecting surface according to ECE-R46**

base length "a" of a rectangle 4 cm : 163 mm
 high inscribed in the reflecting
 surface

required minimum value of "a" : 130 mm

length of segment "b", parallel to : 115 mm
 the height of the rectangle

required minimum value of "b" : 70 mm

Reflecting surface and coefficient of reflection according to ECE-R46

radius of curvature : Flat surface

$r_{p1} = (r_i + r'_i) / 2$: -- mm

$r_{p2} = (r_i + r'_i) / 2$: -- mm

$r_{p3} = (r_i + r'_i) / 2$: -- mm

$r = (r_{p1} + r_{p2} + r_{p3}) / 3$: -- mm

required minimum value of r : $1200 \text{ mm} \leq r$

maximum difference between any
 of the radii (r_{p1} , r_{p2} , r_{p3}) and r : -- mm

allowable maximum difference : -- mm ($0.15 \times \text{-- mm}$)

coefficient of reflection : 94 %

required minimum coefficient : 40 %

resistance to corrosion and ageing : Manufacturer's statement attached

recognition of colours : Red, yellow, green, blue, white

tinting of mirrors : Without

Type :
Manufacturer :

Impact tests according to ECE-R46

Impact point according to “ Test No. 1”
angle for raising pendulum and the vertical : 50°

breakage of mirror : No

Impact point according to “ Test No. 2”
angle for raising pendulum and the vertical : 54°

breakage of mirror : No

The fragments of the glass adhered to the surface attached to the holder. No partial separation occurred exceeding 2.5mm either side of the crack.



Type :
Manufacturer :

List of modifications

Appendix 0

Correction of : --

Modification of : --

Addition of : --

Deletion of : --

INFORMATION FOLDER NO. 3012-00

June 3, 2008

1. Make (trade name of manufacturer) :
2. Type and general commercial description(s) : towing mirror
3. Means of identification of the type, if indicated on the device : Not applicable
4. Category of vehicle for which the device is intended : M1
5. Name and address of manufacturer :
6. Location and method of affixing of the approval mark : Molded on the back of the mirror housing
7. Address(es) of assembly plant(s) :
8. Mirrors (state for each mirror) : Exterior rear view mirror
 - 8.1. Variant : Not applicable
 - 8.2. Drawing(s) for the identification of the mirror : Drawing No. 3012-00/1, 3012-00/2
 - 8.3. Details of the method of attachment : Fixed on the external parts of a vehicle by one rubber band
9. Devices for indirect vision other than mirrors : Not applicable
10. Applicable regulation : ECE-R46,02 series of amendment
11. Device for indirect vision of class : III



INFORMATION FOLDER NO. 3012-00

June 3, 2008

12. Symbol $\frac{\triangle}{2m}$ as defined in paragraph 6.1.3.1.1. of this regulation : Not applicable
13. Construction of reflecting surface
- 1) Radius of curvature : Flat surface, ∞ mm
 - 2) Mirror thickness : 2 mm
 - 3) Main dimension : a= 163 mm, b= 115 mm
14. Construction of components
- | Parts | Material |
|---------------|----------------------|
| 1) Housing | : ABS |
| 2) Mirror arm | : Steel |
| 3) Mirror | : Glass (Al coating) |
| 4) Clasp | : Rubber |
15. Models of vehicles to be fitted : Not applicable
16. Remarks : Manual control



INFORMATION FOLDER NO. 3012-00

June 3, 2008

TO WHOM IT MAY CONCERN

REAR-VIEW MIRROR FOR MOTOR VEHICLES

- RESISTANCE TO CORROSION AND AGING OF THE REFLECTIVE SURFACE.

HERE BY WE DECLARE THAT THE REAR-VIEW MIRROR FOR MOTOR VEHICLES

TYPE:

- COMPLIES WITH PARAGRAPH 6.1.2.2.6. OF ECE R46,02 SERIES OF AMENDMENTS.

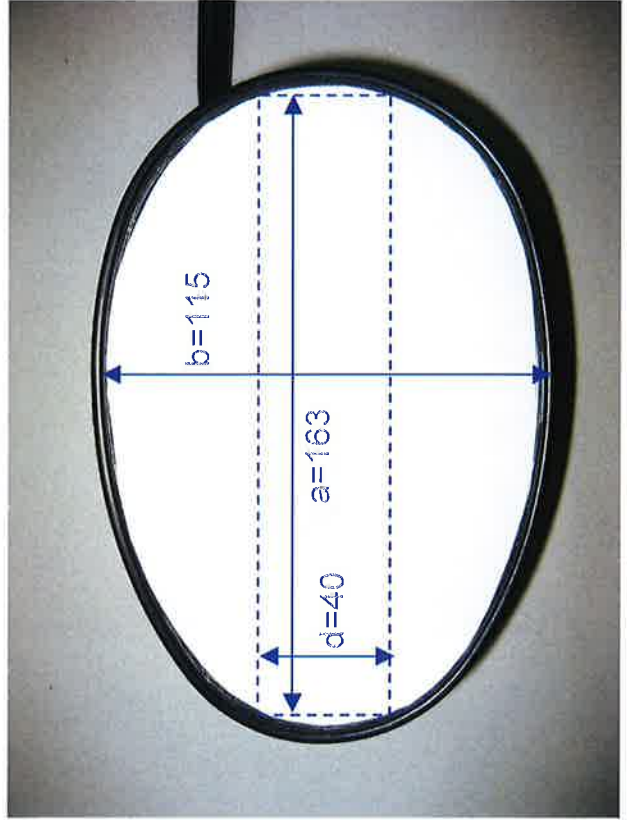
THE REFLECTING SURFACE RETAINS THE CHARACTERISTICS SPECIFIED IN PARAGRAPH 6.1.2.2.5. OF ECE R46.02, IN SPITE OF PROLONGED EXPOSURE TO ADVERSE WEATHER CONDITIONS, IN NORMAL CONDITIONS OF USE.



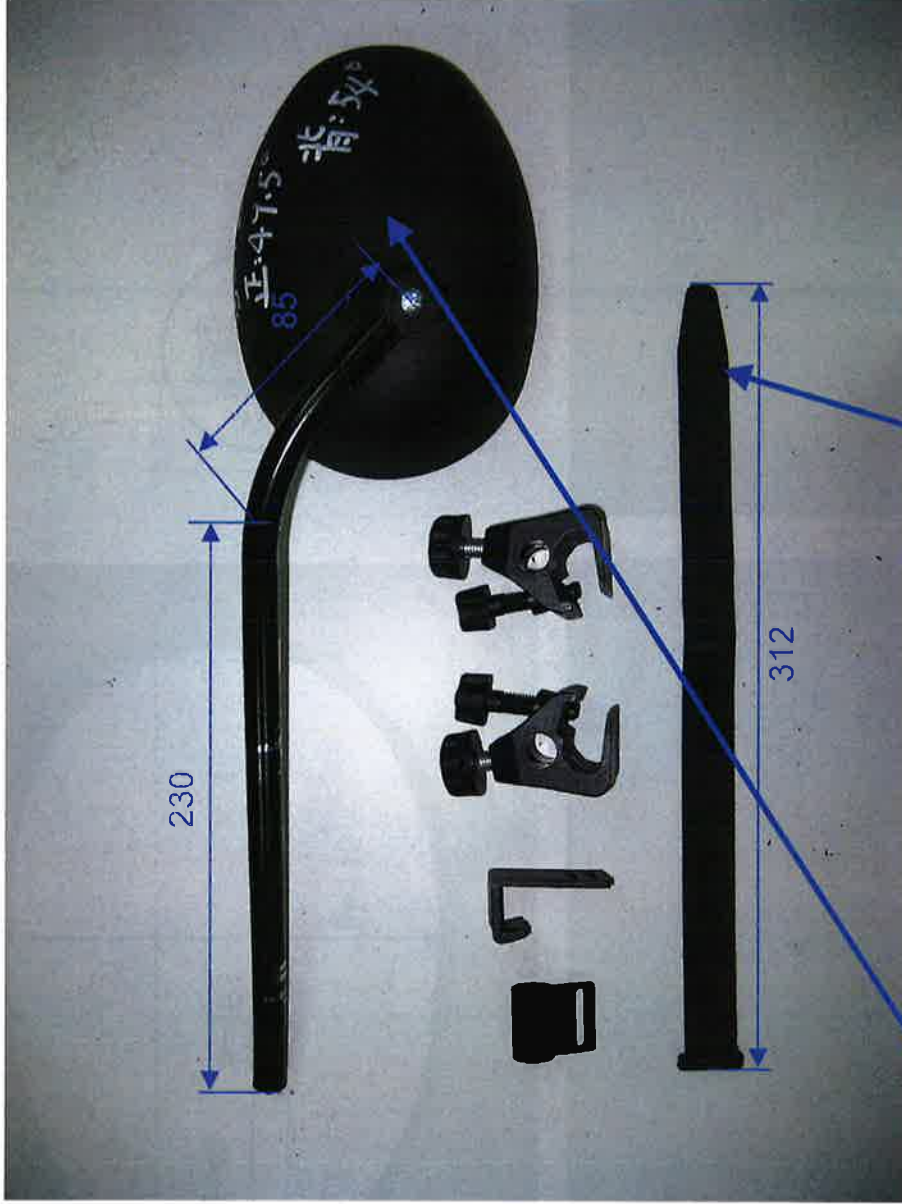
Installation of front view



Installation of back view



Drawing of components



III (E4 02 2918)

KDC

Rubber band:

Width: 20, thickness: 2.0

Drawing No. 3012-00/2

