VCA Headquarters
1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Direct line: +44 (0) 117 952
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk

Your Reference:

Date: 02 JANUARY 2008

Dear

MANUFACTURER OR ACCREDITED AGENT:

ECE REGULATION/EEC DIRECTIVE: ECE R81.00

Job No.	~~Vehicle Type~~/Component	Approval No.	Index Rev. No.
KSH185585	**/ Rear View Mirror**	**E11 81R-001168**	**-**

1. This vehicle type/component has been tested and meets the requirements of the above ECE Regulation/EEC Directive. I enclose a set of approval documents, comprising the approval, test report and your documentation duly authenticated.

2. If you think there are any errors in the enclosed package, please contact Andrew Meadows, telephone 0117 952 4187, e-mail andrew.meadows@vca.gov.uk Patricia Britton, telephone 0117 952 4171, e-mail pat.britton@vca.gov.uk immediately. Please be aware that from the date of issue we have a three week holding period, any corrections required after this time will need to be corrected via an extension, index revision or correction 1 certificate, as appropriate.

ROAD TRAFFIC ACT 1988 - SECTION 80

3. The Secretary of State for Transport authorises, under section 80 of the Road Traffic Act 1988, the above manufacturer or accredited agent to apply to the motor vehicle type/part specified, the appropriate mark designated in the Motor Vehicles (Designation of Approval Marks) Regulations 1979, as amended. The conditions attached to this authorisation are set out overleaf.

4. If this approval/extension results in a change being needed to a vehicle information document issued under the goods vehicle or passenger car national type approval scheme, you should notify us (i.e. submit a 'notifiable alteration') as soon as possible, using the address VCA (Whole Vehicle), Room 1.2, The Eastgate Office Centre, Eastgate Road, Bristol BS5 6XX.

5. VCA is continually scrutinising the quality of the service it provides to customers, in order to discover more ways in which the standard can be improved. If you have a specific complaint concerning the way this job has been dealt with, our customer services leaflet gives guidance on the best approach. If you would like a copy, please contact the undersigned.

Yours sincerely

Product Certification

02-Jan-08
UK Approval Authority

VCA Midlands Centre
Nuneaton, Warwickshire, UK
Switchboard: +44 (0)247 632 8421
Fax: +44 (0)247 632 9276
Email: enquiries@vca.gov.uk

VCA Millbrook Centre
Millbrook, Bedford, UK
Telephone: +44 (0)1525 408466
Email: millbrook@vca.gov.uk

VCA North America
Northville, Michigan, USA
Switchboard: +1 248 4680151
Main Fax: +1 248 3499261
Email: general@vcana.com
Web: www.vcana.com

Ohio office
Ashland, Ohio, USA
Telephone: +1 419 207 8123
Fax: +1 419 207 1193
Email: c.gepper@vcana.com
Web: www.vcana.com

VCA East Asia
Naka-ku, Nagoya, Japan
Telephone: +81 52 683 8831
Fax from Europe: +44 (0) 870 125 3704
Fax from East Asia: +81 (0)6 7500 1280
Email: enquiries@vca-asia.jp
Web: www.vca-asia.net

VCA Malaysia
Selangor, Malaysia
Telephone: +6 037 494 0221
or +6 037 494 4868
Fax: +6 037 494 0225
Email: paultownend.vca@myjaring.net

VCA China
Beijing
Telephone: +8610 852 83091/2/3
Fax: +8610 852 83097

1. CONDITIONS

1.1 This Approval may be withdrawn at any time and while held is subject to the following conditions.

2. CONDITIONS OF MOTOR VEHICLE PARTS

2.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended only on Motor Vehicle Parts that:

a. Have been manufactured, assembled or completed in factories under his control and

b. Conform in all material respects with the samples, which were tested before this approval was issued.

2.2 The holder of this approval shall mark his products in the manner set out in the relevant Regulation/Directive as given in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended together with:

a. The approval number allocated by the Secretary of State for Transport.
b. His name or trademark
c. Any other markings specified in the appropriate international Regulation

2.3 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department, that the quality of the part being produced and marked or intended to be by him with the approval marking conforms in all material respects with that of the samples tested as the International Regulation requires.

2.4 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which parts marked or intended to be marked are being manufactured, assembled or stored and to permit any such official or agent to inspect parts and all records relating to them and their production processes.

2.5 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice being given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.

3. CONDITIONS FOR MOTOR VEHICLES

3.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended only on Motor Vehicles fitted with Motor Vehicle parts which Motor Vehicles as fitted with such parts conform with the type of Motor Vehicle approved by as on behalf of the Secretary of State for Transport and only on Motor Vehicles that:

a. Have been manufactured, assembled or completed in factories under his control and

b. Conform in all material respects with the type of Motor Vehicle, which was tested before an approval certificate was issued.

3.2 The holder of this approval shall mark motor vehicles of the type approved. In the matter set out in the relevant Regulation/Directive using the authorised approval mark as given in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended together with the approval number allocated by the Secretary of State for Transport.

3.3 The holder of this approval shall mark Motor Vehicles of the type approved in the manner set out in the relevant Regulation annexed to the United Nations agreement of 1958 as amended using the authorised approval mark which comprises a capital letter E followed by the number 11 within a circle together with the approval number allocated by the Secretary of State for Transport.

3.4 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department that Motor Vehicles of the type approved which have been produced and marked or that are intended to be marked by him conform in all material respects with the type of vehicle approved.

3.5 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which the Motor Vehicles of the type approved which have been or are intended to be marked are manufactured, assembled or stored and to permit any such official or agent to inspect the Motor Vehicles and all records relating to them and their production processes.

3.6 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.

VCA
02-Jan-08
UK Approval Authority

VCA Headquarters
1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Direct line: +44 (0) 117 952
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 6/97

E11

COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A TYPE OF A TYPE OF REAR-VIEW MIRROR PURSUANT TO REGULATION NO. 81.00

Approval No: 81R-001168 Extension No:00

1. Trade name or mark of the equipment: [redacted]

2. Equipment type:

3. Brief description including in particular the following information:

3.1. Main dimensions of the reflecting surface: Height : 85mm, Width : 157mm

3.2. Nominal radius of curvature of the reflecting surface: 1312mm

4. Manufacturer's name and address: [redacted]

5. If applicable, name and address of manufacturer's representative: N/A

6. Equipment submitted for approval on: 26 December 2007

7. Technical service responsible for conducting approval tests: Vehicle Certification Agency

8. Date of report issued by that service: 26 December 2007

9. Number of report issued by that service: KSH185585(1168)

10. Vehicles for which the equipment is designed: Motorcycle

02-Jan-08
UK Approval Authority

11. Approval GRANTED

12. Reason (s) for extension of approval: Not applicable

13. Place: BRISTOL

14. Date: 02 JANUARY 2008

15. Signature:

A. W. STENNING
Head of Product Certification

16. A list of documents contained in the approval files transmitted to the administrative service which has granted approval is annexed to this communication.

KSH185585

02-Jan-08
UK Approval Authority

Application of the type approval of
a component in respect of a type of rear view mirror
to be intended for two or three-wheel motor vehicles

According to ECE Regulation No. 81.00

Type : (Exterior rear view mirror)

List of attachment:

Page 2 – Technical Description
Page 3 – Rear View Assembly(Right Hand)
Page 4 – Reflecting surface
Page 5 – Mirror Shell
Page 6 – Hinge
Page 7 – Mirror bracket

26 December 2007

VCA
02-Jan-08
UK Approval Authority

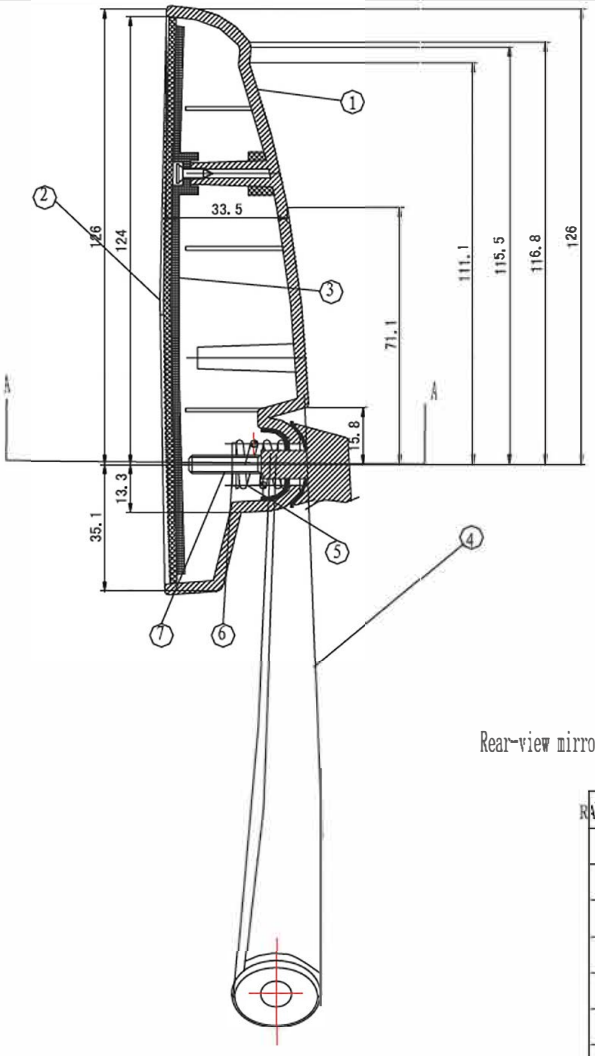
Technical Description

1. Make	:	[redacted]
2. Type	:	(Convex Type, Main Exterior Rear View Mirror)
3. Name and address of manufacturer	:	[redacted]
4. Name and address of representative of manufacturer	:	Not applicable
5. Class	:	L
6. Mounted method	:	Shaft screw drive into the front body
7. Construction of reflecting surface		
7.1 Radius of curvature	:	1312 mm
7.2 Dimension	:	157mm x 85mm
7.3 Maximum diameter of circle to be prescribed on non-circle rear view mirror	:	85mm
8. Model of vehicle to be fitted	:	Motorcycle

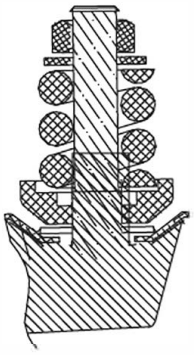
VCA 02-Jan-08 UK Approval Authority

Information folder NO. [redacted]

Application date:December 06,2007



incise A-A



Rear-view mirror located on left and right hand of motorcycle are symmetric

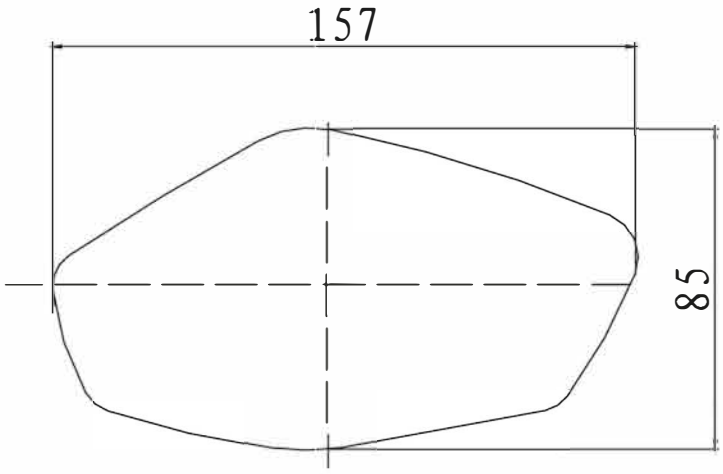
PART NO	NAME		QTY	REMARKS
1	Housing	51900100	1	ABS
2	Mirror	51900200	1	Glass
3	Mirror bracket	51900300	1	ABS
4	Shaft	51900400	1	
5	spring	51900500	1	
6	washer(M5)	51900600	1	
7	Nut(M5)	51900700	1	

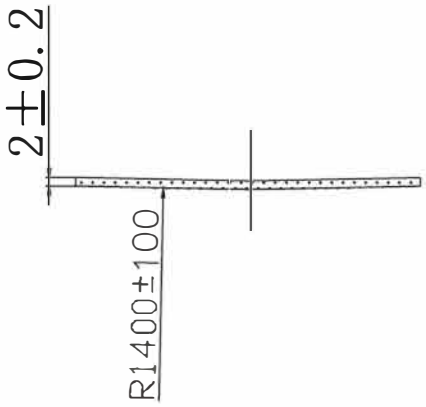
	Rear—View Assembly (Right Hand)	
	Drawing NO:	00-01
	Type	
	page	3

VCA
02-Jan-08
UK Approval Authority

Information folder NO. [redacted]

Application date:December 06, 2007



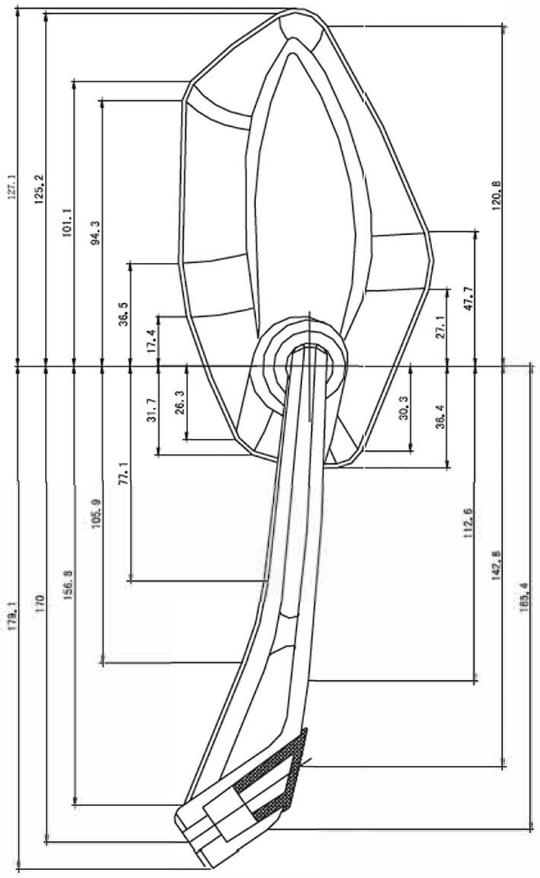


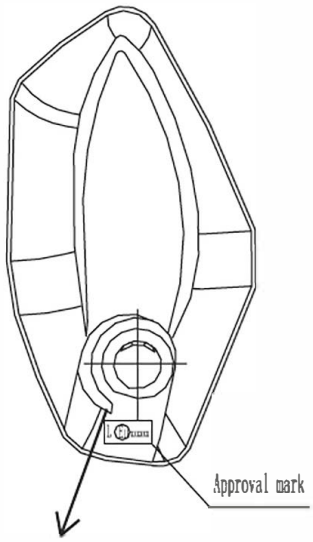
	Reflecting surface	
	Drawing NO:	02
	Type	
	page	4

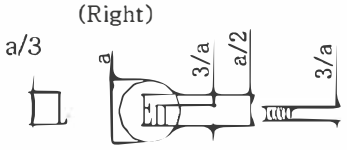
02-Jan-08
UK Approval Authority

Information folder NO. [redacted]

Application date:December 06, 2007







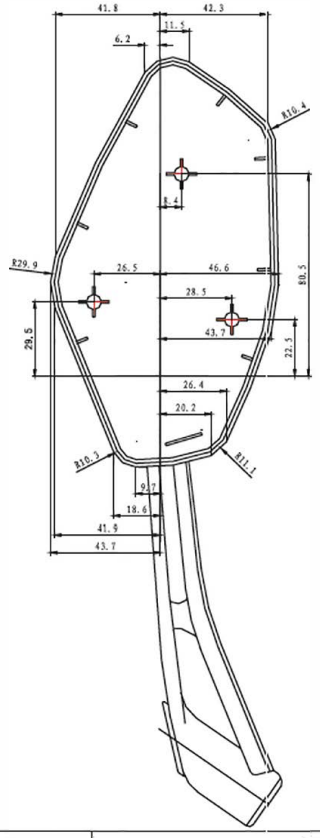
a=9mm

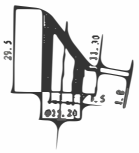
	Mirror Shell	
	Drawing NO:	003
	Type	
	page	5

02-Jan-08
UK Approval Authority

Information folder NO. [redacted]

Application date:December 06, 2007



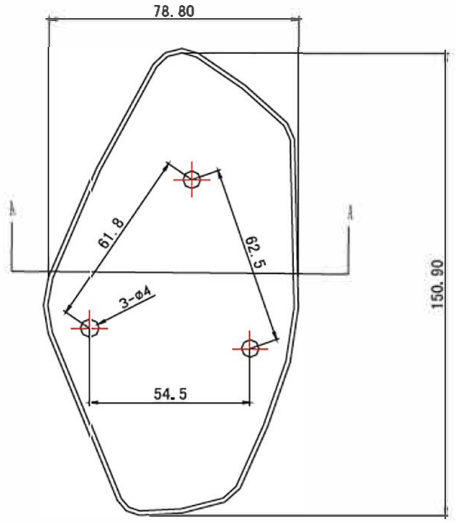


	Hinge	
	Drawing NO:	04
	Type	
	page	6

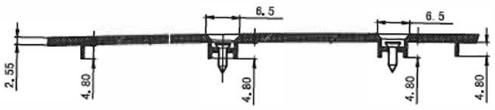
VCA
02-Jan-08
UK Approval Authority

Information folder NO. [redacted]

Application date:December 06, 2007



incise A-A



	Mirror bracket	
	Drawing NO:	05
	Type	
	page	7

02-Jan-08
UK Approval Authority

VEHICLE CERTIFICATION AGENCY

Vehicle Certification Agency, #822, Dongmum Goodmorning
Tower II, 1324 Baekseok-Dong,Ilsandong-Gu,
Goyang-Si, Gyeonggi-Do, Korea (410-911)
Tel : +82-31-920-8630
Fax : +82-31-920-8631
E-mail address: vcakorea@chol.com

TEST REPORT: **Rear-view Mirrors - Component**

Report/Job Number: **KSH185585(1168)**

TEST DETAILS	
Subject	Rear-view Mirror for two wheel or three wheeled vehicle - Component
EC Directive	Not applicable
ECE Regulation	81.00
Location of Test	
Date of Test	26 December 2007
VCA Representative	S.W.YOON
Manufacturer's Representative	New approval
Reason for Test	

MANUFACTURER DETAILS	
Manufacturer's Name	[redacted]
Manufacturer's Address	
Model Type & description	(Rear-view mirror)
Category	L

CONCLUSION

The above mentioned component was tested in accordance with ECE Regulation 81.00 Rear-view mirror and was found to comply in all respects

Signature:



Name: S.W.YOON

Position: Type Approval Engineer

Date: 26 December 2007

LIST OF ANNEXES

ANNEX	No of PAGES	SUBJECT
1		
2		



TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*

TEST SPECIFICATION:	
Type:	
General construction:	Convex type, Exterior fitting rear-view mirror
Method of fitting	Two bolts on the end of stem
Class:	L

WORST CASE RATIONALE:

-

LABORATORY

Reflection test equipment
Make:
Type: **FSJ-2007-003**
Calibration date: **2007.4.13 – 2008.4.12**

Impact test equipment
Make:
Type: **2J165**
Calibration date: **2007.4.10 – 2008.4.9**

Bending test equipment
Make:
Type: -
Calibration date: **2007.4.17 – 2008.4.16**

Radius test equipment
Make:
Type: **BJ3162**
Calibration date: **2007.4.12 – 2008.4.11**

02-Jan-08
UK Approval Authority

TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*
	GENERAL REQUIREMENTS	
6.1.	All rear-view mirrors shall be adjustable	**Complies**
6.2.	The edge of the reflecting surface shall be enclosed in a holder which, on its perimeter shall have a value of "ç" ¸ 2.5mm at all points and in all directions. OR If the reflecting surface projects beyond the holder, the radius of curvature "c" of the edge of the projecting part shall be not less than 2.5mm, and shall return into the holder under a force of 50N applied to the point of greatest projection relative to the holder in a horizontal direction approximately parallel to the longitudinal median plane of the vehicle.	**Complies** **N/A**
6.3.	When the rear-view mirror is mounted on a plane surface, all its parts, irrespective of the adjustment position of the device, including those parts remaining attached to the holder after the test set out in paragraph 8.2, which are in potential static contact with a sphere 100mm in diameter shall have a radius of curvature "c" of not less than 2.5mm.	**Complies**
6.3.1.	Edges of fixing holes or recesses, which are less than 12mm in width, are exempt from the radius requirements of paragraph 6.3 provided they are blunted.	**Complies**
6.4.	The parts of rear-view mirrors that are made of a Shore A hardness not greater than 60 are exempt from the provisions set out in paragraphs 6.2 and 6.3 above.	**N/A**
	SPECIAL SPECIFICATIONS	
7.1.1.1.	The reflecting area ≥ 69 cm^2 : **99.69 cm^2**	cm^2
7.1.1.2, 7.1.2.1	In the case if circular mirrors, 94mm ≤ the diameter ≤ 150 mm :	**N/A**

VCA 02-Jan-08 UK Approval Authority

TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*
7.1.1.3.	In the case of non-circular mirrors the reflecting surface will permit the inscription of a circle with a diameter of 78 mm: **ϕ85mm**	**Complies**
7.1.2.2.	In the case of non-circular mirrors, the **reflecting surface shall fit into** a rectangle measuring 120 mm by 200 mm: **157 x 85**	**Complies**
7.2.	REFLECTING SURFACE AND COEFFICIENT OF REFLECTION	
7.2.1.	The reflecting surface of a rear-view mirror shall spherically convex	**Complies**
7.2.2.	Differences between the radii of curvature:	**Complies**

7.2.2.1, 7.2.2.2, 7.2.3

	Point 1	Point 2	Point 3	Requirements
ri	1275.3	1281.8	1265.6	-
r'i	1333.1	1416.2	1298.5	-
rp	1304.2	1349	1282.05	-
|ri-rp|	28.9	67.2	16.45	≤ 0.15r
|r'i-rp|	28.9	67.2	16.45	≤ 0.15r
|r-rp|	7.8	37	29.95	≤ 0.15r
Average of rp = r = 1312				1000 ≤ r ≤ 1500
0.15r = 196.8				-

7.2.4.	The value of the normal coefficient of reflection, determined according to the method described in annex 5 to this Regulation, shall not be less than 40% : **83.1%**	**Complies**
	If the mirror has two positions ("day" and "night"), the "day" position shall allow the colours of the signals used for road traffic to be recognised.	**N/A**
	The value of the normal coefficient of reflection in the "night" position shall not be less than 4%.	**N/A**
7.2.5.	The reflecting surface shall retain the characteristics specified in paragraph 7.2.4., in spite of prolonged exposure to adverse	**Complies**

02-Jan-08
UK Approval Authority

TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*
	weather conditions, in normal conditions of use.	
8.2.	**IMPACT TEST**	
8.2.1, 8.2.1.1, 8.2.1.2.	The pendulum shall comprise a hammer formed by a rigid sphere with a diameter of 165 ± 1 mm and having a 5 mm-thick rubber covering of Shore A 50 hardness. Centre of percussion is m_o = 6.8 ± 0.05 kg. And device constructions conform Figure 1	**Complies**
8.2.2.2.1.	Rear-view mirrors shall be installed in accordance with the manufacturers' mounting instructions on the pendulum impact rig	**Complies**
8.2.2.2.2.	When a rear-view mirror is adjustable in relation to the base, the test position of any pivoting device to operate within the limits of manufacturer's instructions	**Complies**
8.2.2.2.3.	When the rear-view mirror has a device for adjusting its distance from the base, the device shall be set in the position where the distance between the holder and the base is shortest	**Complies**
8.2.2.2.4.	When the reflecting surface is mobile in the holder, it shall be adjusted so that the upper corner which if furthest from the vehicle, is in the position of greatest projection relative to the holder.	**Complies**
8.2.2.3.	When the pendulum is in a vertical position, the horizontal and longitudinal vertical planes passing through the centre of the hammer, shall pass through the centre of the mirror as defined in paragraph 2.7 above.	**Complies**
	The longitudinal direction of oscillation of the pendulum shall be parallel to the longitudinal plane of the vehicle.	**Complies**
8.2.2.4.	When, under the conditions governing adjustment prescribed in paragraphs 8.2.2.2.1. and 8.2.2.2.2. above, parts of the rear-view mirror limit the return of the hammer, the point of impact shall be shifted in a	

VCA 02-Jan-08 UK Approval Authority

TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*
	direction perpendicular to the axis of rotation or pivot in question.	**Complies**
	This displacement shall be limited in such a way that the point of contact of the hammer is located at least 10 mm from the periphery of the reflecting surface.	**Complies**
8.4.1.1.	The accuracy of the angle measurement shall be ± 1°	
8.2.2.5.	The hammer to fall from a height corresponding to a pendulum angle of 60° from the vertical so that the hammer strikes the rear-view mirror at the moment when the pendulum reaches the vertical position.	**Complies**
8.2.2.6.1 8.4.1	Test 1: The impact shall be such that the hammer strikes the rear-view mirror **on the reflecting surface side**(Vertical angle >20°): **30°**	**Complies**
8.2.2.6.2 8.4.1	Test 2: The impact shall be such that the hammer strikes the rear-view mirror **on the opposite side to the reflecting surface**(Vertical angle >20°): **30°**	**Complies**
8.3.	**BENDING TEST ON THE HOLDER FIXED TO THE STEM**	
8.3.1.1.	The holder shall be placed horizontally in a device in such a way that the adjustment parts of the mounting can be clamped securely	**Complies**
	In the direction of the greatest dimension of the holder, the end nearest to the point of fixing on the adjustment part shall be immobilised by means of a fixed step 15 mm wide, covering the entire width of the holder.	**Complies**
8.3.1.2.	At the other end, a step identical with the one described above shall be placed on the holder so that the specified test load can be applied to it (see figure 2)	**Complies**
8.3.1.3.	The end of the holder opposite that at which the force is applied may be clamped instead of kept in position as shown in figure 2.	**Complies**
8.3.2.	The test load shall be 25 kg applied for one minute.	**Complies**
8.4.2.	The mirror shall not break during the tests described in para. 8.2 and	**Complies**

02-Jan-08
UK Approval Authority

TEST REPORT: **Rear-view Mirrors - Component**

Paragraph	*Parameter*	*Complies*
	8.3 above	
	OR	
8.4.2.1.	The fragments of glass still adhere to the back of the holder or to a surface firmly attached to the holder, except that partial separation of the glass from its backing is permitted (≤2.5 mm either side of the crack). It is permissible for small splinters to become detached from the surface of the glass at the point of impact	**N/A**
	OR	
8.4.2.2.	The mirror is made of safety glass	**N/A**

02-Jan-08
UK Approval Authority