



THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE ~~APPROVAL GRANTED⁽⁴⁾~~/ APPROVAL EXTENDED ⁽¹⁾/
~~APPROVAL REFUSED⁽⁴⁾~~/ ~~APPROVAL WITHDRAWN⁽⁴⁾~~/ ~~PRODUCTION DEFINITELY~~
~~DISCONTINUED⁽⁴⁾~~ OF A TYPE OF REAR-VIEW MIRROR PURSUANT TO REGULATION NO. 81.



Approval No: 81R-001036

Extension No: 08

1. Trade name or mark of the equipment: Fu Hwa
2. Equipment type: FV-026
3. Brief description including in particular the following information:
 - 3.1. Main dimensions: The diameter=112.8mm
 - 3.2. Nominal radius of curvature: 1350/1200 mm
4. Manufacturer's name and address:

Fu Hwa Mirror Co.,Ltd
NO.688, Zhanglu Road Seven Segment
Qiaotou Village
Fuxing Country
Zhanghua Country
Taiwan (R.O.C.)
5. If applicable, name and address of manufacturer's representative: Not applicable
6. Equipment submitted for approval on: As before and 31 January 2022
7. Technical service responsible for conducting approval tests: Vehicle Certification Agency

8. Date of report issued by that service: As before and 28 February 2022
9. Number of report issued by that service: As before and CSY558788
10. Vehicles for which the equipment is designed: DUCATI
11. Approval is ~~GRANTED/REFUSED/EXTENDED/WITHDRAWN~~⁽⁴⁾
12. Reason (s) for extension of approval: To cover:
1) The Stay size different
2) Update of address
13. Place: BRISTOL
14. Date: 01 March 2022
15. Signature:



C McCABE
Chief Technical and Statutory Operations Officer

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

Any Remarks: Approval to supplement 2

- (1) Strike out what does not apply

APPLICATION FOR APPROVAL

Subject: Motorcycle mirrors

Manufacturer: Fu Hwa Mirror Co.,Ltd.

Type: FV-026

Category: L

Existing Approval number: 81R-001036 Extension No: 07

APPROVAL HISTORY

EXTENSION No.	REASON FOR EXTENSION	JOB NUMBER	APPLICATION DATE
NA(Base approval)	Not applicable	EAB014795	17 April 2002
01	Change the model name	EAG074689	3 May 2006
02	1) Change the model name 2) Mirror change to the lens and angle of the mirror arm	EAG173476	29 November 2006
03	Changing the fastening nut torque	CSJ199750	11 March 2009
04	1) The Stay length 155mm change to 90mm 2) The mirror surface Cr plating change to Al plating	JSN272317	23 May 2013
05	1) The Stay length 155mm change to 158.9mm 2) The mirror surface Cr plating change to Al plating	CSQ302214	30 June 2014
06	1) External surface treatment ED+Black Painting 2) The Stay size different shape	CSQ308937	28 September 2014
07	1) The Stay size different 2) Addition of information of assembly plants	CSS369065	15 August 2016
08	1) The Stay size different 2) Update of address	CSY558788	31 January 2022

Fu-Hwa Mirror Co., Ltd

福 華 明 鏡 股 份 有 限 公 司

ECE Regulation 81.00, Rear View Mirrors

Application for Extension **08** to Approval Number E11 81R 001036 (Extension **07**)

Mirror Type: **FV-026**

Reason(s) for Application: **The Stay size different**

VCA Job Number: **CSY558788**

Attachments: **N/A**

Drawing Number: **8D245N001B0**

Annex 1: E Mark History



Fu-Hwa Mirror Co.,Ltd

福 華 明 鏡 股 份 有 限 公 司

INFORMATION DOCUMENT

For application for extension 08 to approval number

E11 81R 001036

with regard to the

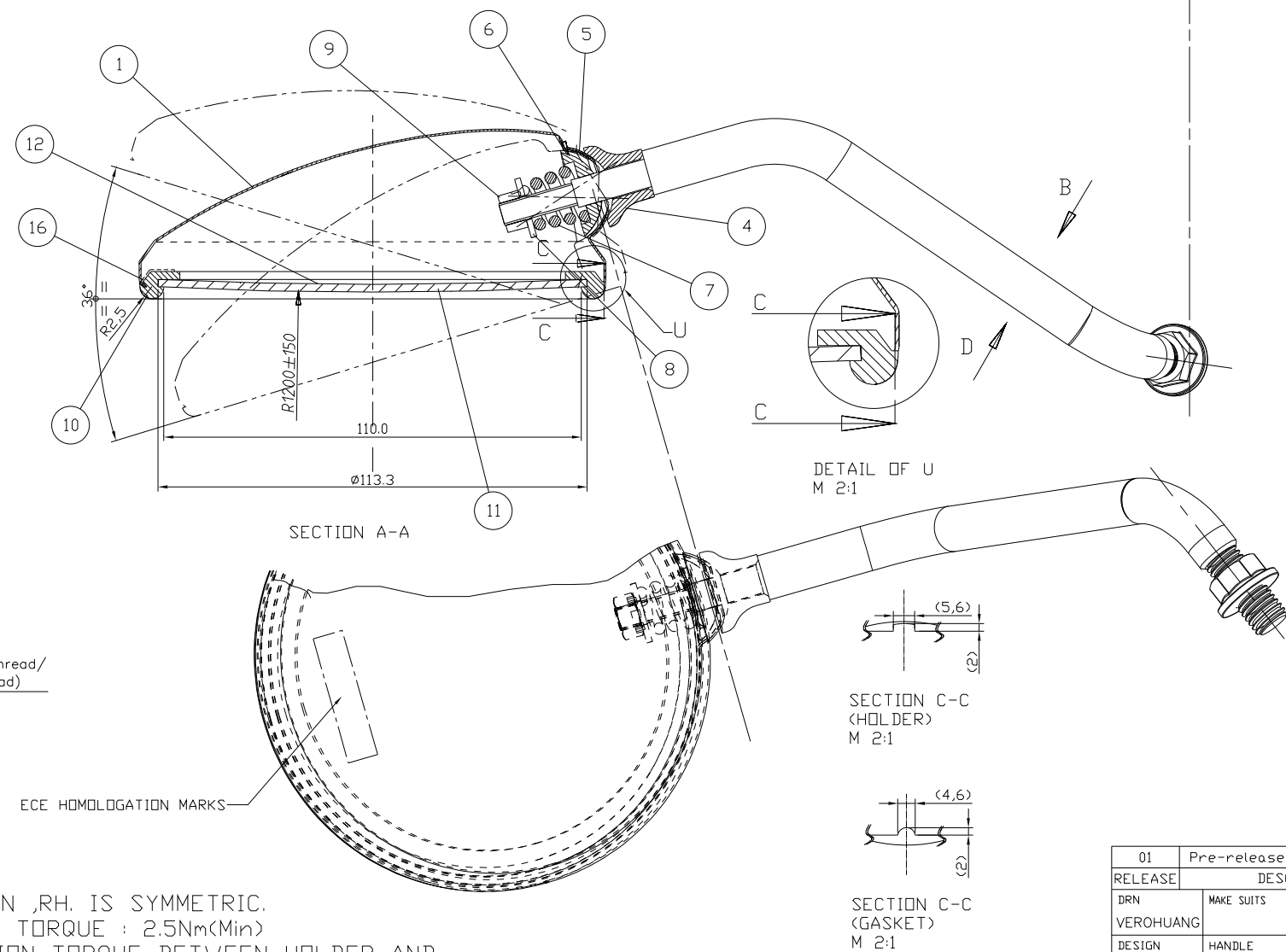
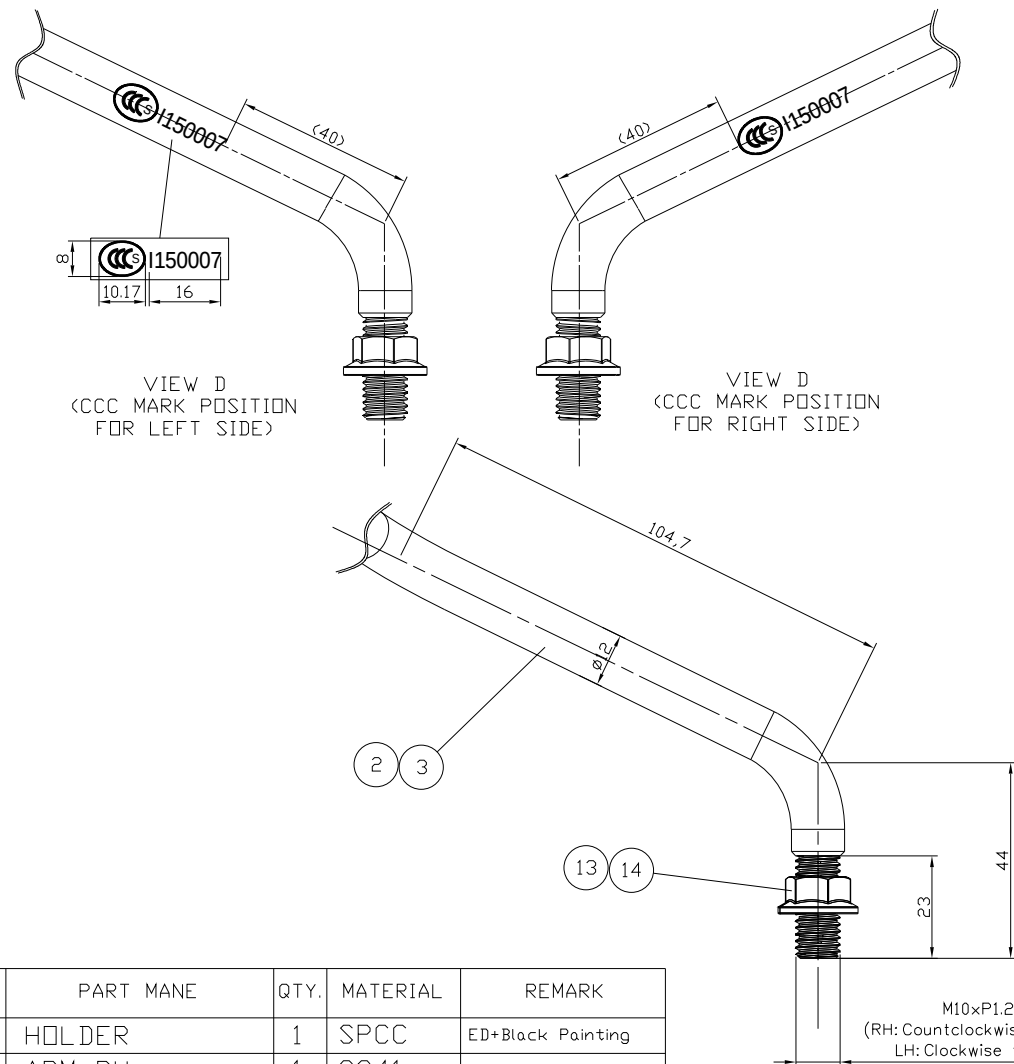
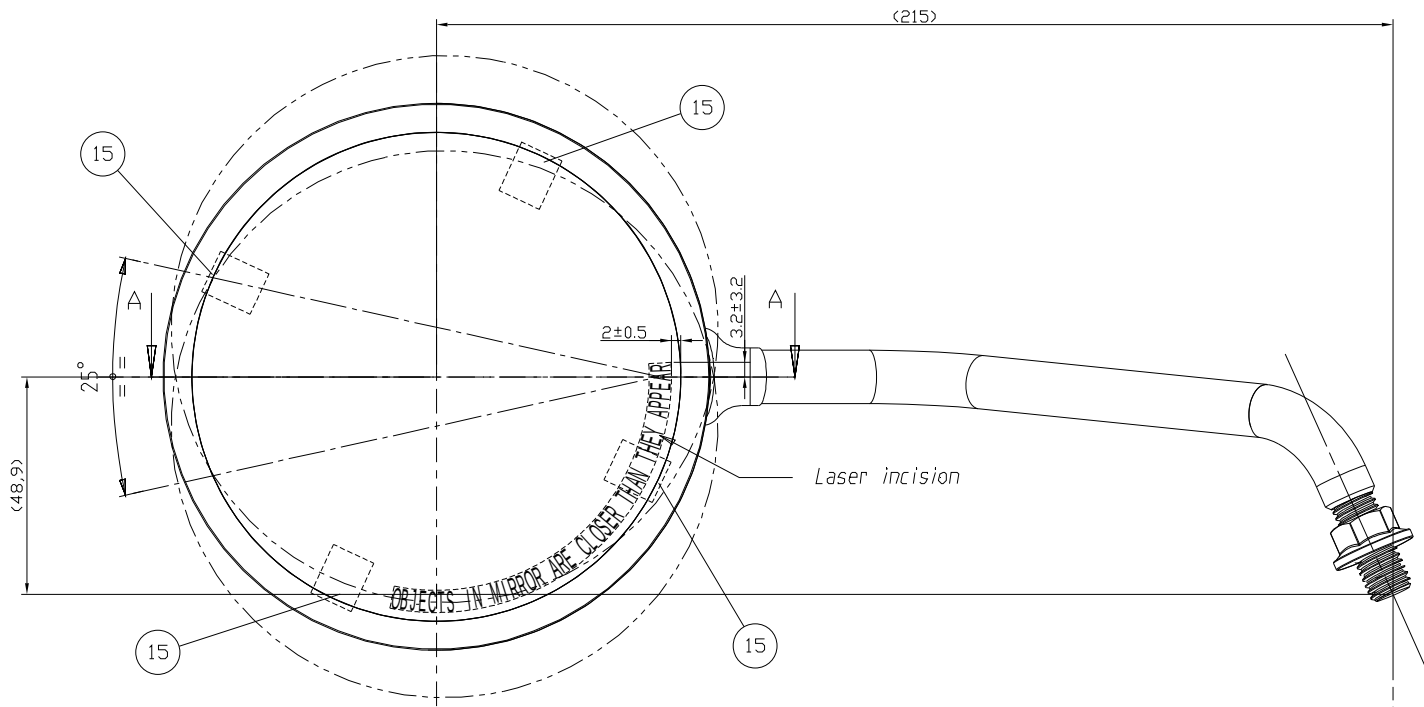
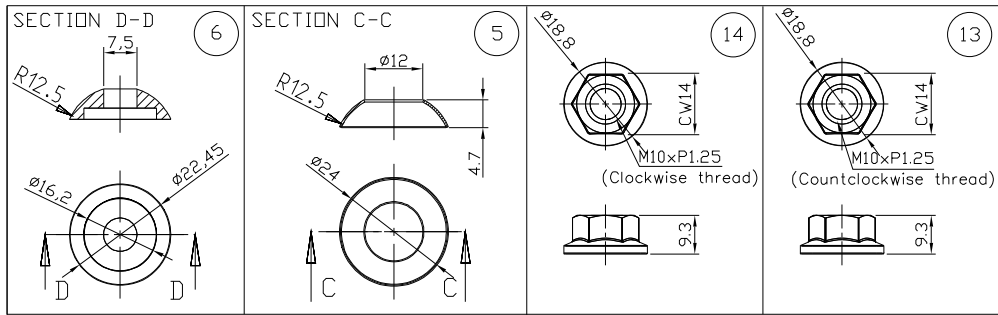
MOUNTING OF REAR-VIEW MIRRORS ON HANDLEBARS

- | | | |
|-----|---|--|
| 1 | Make | : Fu Hwa |
| 2 | Type | : FV-026 |
| 2.1 | Variant / Version | : FV-026 、 FV-026-1 、 FD-245 、 FV-025-3
CM181603 、 CM020411 、 FD-245B 、
FV-026C 、 FD-245-1B |
| 3 | Class of rear-view mirror | : L |
| 4 | Name and address of manufacturer | : Fu Hwa Mirror Co.,Ltd
NO.688,Zhanglu Road Seven
Segment,Qiaotou Village,Fuxing
Country,Zhanghua Country,Taiwan.
(R.O.C.) |
| 4.1 | Name and address of assembly plants | : Fu Hwa Mirror Co.,Ltd
NO.135,Panjin Road,Yongping
Village,Puyan Country,Taiwan.
(R. O. C.) |
| 4.2 | Name and address of manufacturer`s
authorized representative, if any | : Not applicable |
| 5 | Description of mirror (drawings / data) | |
| 5.1 | Mounting instruction | : Drawing no. 8D245N001B0..... |
| 5.2 | Dimensions (plane surface / holder) | : Drawing no. 8D245N001B0..... |
| 5.3 | Position of Marking | : Drawing no. 8D245N001B0..... |



VCA Job Number: CSY558788





RH SIDE		LH SIDE				
ITEM NO.		PART NAME	QTY.	MATERIAL	REMARK	
○	○	1	HOLDER	1	SPCC	ED+Black Painting
○		2	ARM RH	1	SS41	ED+Black Painting
	○	3	ARM LH	1	SS41	ED+Black Painting
○	○	4	CAP LOCK	1	SPCC	ED+Black Painting
○	○	5	RETAINER OUTER	1	SPCC	Black Cr. Plating
○	○	6	RETAINER INNER	1	ZDC2	
○	○	7	SPRING	1	SWPB	
○	○	8	WASHER	1	SPCC	
○	○	9	NUT	1	SWRM	
○	○	10	GASKET	1	PVC	
○	○	11	MIRROR	1	GLASS	
○	○	12	TAPE	1		
○		13	LOCK NUT RH	1	SWRM	ED+Black Painting
	○	14	LOCK NUT LH	1	SWRM	ED+Black Painting
○	○	15	ADHESIVE	4	NORTON Z-545H	10x12x1

NOTES :

1. LH. IS SHOWN ,RH. IS SYMMETRIC.
2. ADJUSTMENT TORQUE : 2.5Nm(Min)
3. ANTI-ROTATION TORQUE BETWEEN HOLDER AND GASKET : 8.8Nm(Min)
4. ANTI-ROTATION TORQUE BETWEEN MIRROR AND GASKET : 4.5Nm(Min)
5. DUCATI P/N 52310721A RIGHT MIRROR
P/N 52310731A LEFT MIRROR

01	Pre-release		2022.01.19	Chen
RELEASE	DESCRIPTION		DATE	NAME
DRN	MAKE SUITS	NO.	SCALE	
VEROHUANG		8D245R/L001B	1:1	
DESIGN	HANDLE	MATERIAL	PROJECTION	
VEROHUANG				
CHD		FD-245-1B	DWG NO.	
J.H. CHEN			8D245N001B0	
APPD	NAME	DUCATI 1900 MIRROR	DATE	
J.H. CHEN			2022.01.19	
FU HWA MIRROR CO., LTD.				

UK Approval Authority	Vehicle Certification Agency
DWG NO.	8D245N001B0
DATE	2022/01/19

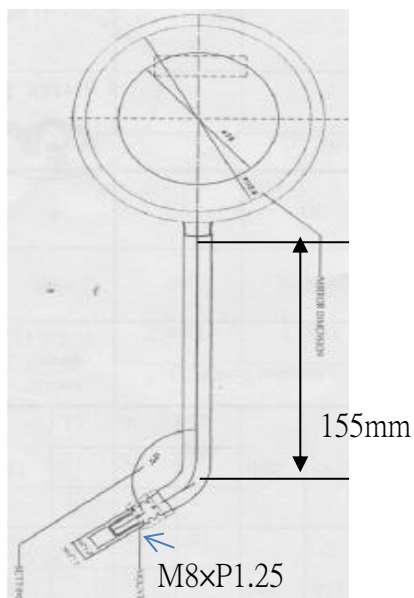
E-MARK type approval history

Approval no : E11-001036

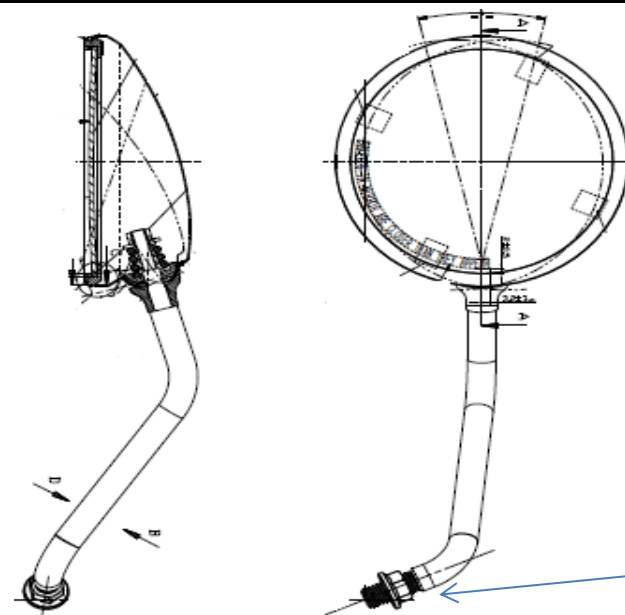
NO	Type	Approval no	NO	Extensions	model name	Customer	Variant description		Extension no
							STAY	MIRROR	
1	FV-026	L E11 001036	0	FV-026	X-8	PIAGGIO	NUT鎖付 , M8×P1.25	Cr PLATING : R1350±150	R81-001036
			1	FV-026-1	X-8	PIAGGIO	NUT料號不同	Cr PLATING : R1200±150	R81-001036 EXT 01
			2	FD-245		DUCATI	M8×P1.25→M10×P1.25	Cr PLATING : R1200±150	R81-001036 EXT 02
			3	FV-025-3	VESPA LX	PIAGGIO	NUT鎖付→基座組合鎖付	Cr PLATING : R1200±150	R81-001036 EXT 03
			4	CM181603	LIBERTY LEM	PIAGGIO	鏡骨長度155mm→90mm	Al PLATING : R1200±150	R81-001036 EXT 04
			5	CM020411		PIAGGIO	鏡骨長度155mm→158.9mm	Al PLATING : R1200±150	R81-001036 EXT 05
			6	FD-245B	1107 (400CC)	DUCATI	M10×P1.25 , ED+Black Painting	Cr PLATING : R1200±150	R81-001036 EXT 06
			7	FV-026C	VESPA GTS	PIAGGIO	M8×P1.25 , 尺寸B.不同	Cr PLATING : R1200±150	R81-001036 EXT 07
			8	FD-245-1B	1900	DUCATI	M10×P1.25 , ED+Black Painting	Cr PLATING : R1200±150	R81-001036 EXT 08

Group Mirror:

FV-026



FD-245-1B



M10×P1.25

RH:Countclockwise thread

LH:Clockwise thread



Inspection/Test Report: Motorcycle Mirrors - Component

Legislation

UNECE Regulation 81.00 to Supplement 2

Inspection/Test Details

Location of Inspection/Test: Tianjin Motorcycle Quality Supervision & Testing Institute
Date of Inspection/Test: 22 February 2022
VCA Representative(s): Leo Li
Inspectors office location: ~~VCA HQ/VCA MC/VCA Europe/VCA USA/VCA SA/VCA East Asia/VCA Australia/VCA India/VCA China~~
Manufacturer's Representative(s): Hui Ya Huang
Reason for Test Report: ~~New approval~~ / Extension of approval / ~~Report only~~

Manufacturer Details

Name and Address: Fu Hwa Mirror Co.,Ltd
NO.688,Zhanglu Road Seven Segment,Qiaotou
Village,Fuxing Country,Zhanghua Country,Taiwan.
(R.O.C.)
Type: FV-026
Commercial Description: NA
Category: L

Conclusion

The above mentioned mirror/camera was tested in accordance with the above mentioned legislation and was found to comply in all respects. This report relates only to the items tested.

Witness Engineer/Test Engineer
Signature:

Name: Leo Li
Position: Type Approval Engineer Type approval engineer
Date: 28 February 2022

List of Annexes

Annex	No of Pages	Subject
I		
II		



Report Number: CSY558788 Issue: 0

This test report shall not be reproduced except in full, without
written approval of the technical service.

Issue Record

Issue 0 is original report

Worst Case Rationale

Extension for:

- 1) The different Stay size
- 2) Update of address

Impact test for different stay.

Other details, see former test report.

Note: Include information on variants and versions this report covers, as applicable. Supporting documents may be annexed to this report.

Significant Interpretations, Alternative Test Methods, New Technologies

None

Inspection/Tests Required

	Yes, NA, See Report ... / Approval ... / Annex ...
Markings	See former test report
General	See former test report
Dimensions	See former test report
Impact test	Yes
Reflectivity	See former test report
Radius of reflecting surface	See former test report

Component Specification

Component Identification	NA
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Manufacturer's Documentation

Manufacturer's documentation is complete and reflects the agreed specification for the component tested and covers all variants and versions agreed in the worst case rationale. Information document uploaded to job folder and identified by job number.

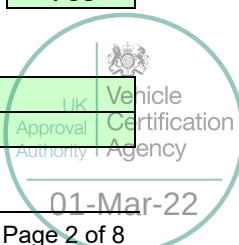
Yes

Facility and Equipment Checks

Calibration certificates checked and valid, recorded in the following table:

Yes

Equipment	Serial / Certificate No.	Calibration due*
Impact tester	MH200	10 Mar 2022





Vehicle
Certification
Agency

VCA, 1 Eastgate Office Centre,
Eastgate Road, Bristol, BS5 6XX, United Kingdom
enquiries@vca.gov.uk |
www.vehicle-certification-agency.gov.uk |
+44(0) 300 330 5797

Report Number: CSY558788 Issue: 0

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**Specify calibrated date + (interval) or calibration due date.*





Inspection/Test Requirements

Markings

4.1.	Samples of the device for indirect vision shall bear the trade name or mark of the manufacturer; this marking shall be clearly legible and be indelible.	NA
4.2.	The approval mark shall be legible when the device is mounted in the vehicle.	NA

Device name(s)	Marking or means of identification, and or approval mark
NA	NA

General Requirements

6.1.	All rear-view mirrors shall be adjustable	NA
6.2.	The edge of the reflecting surface shall be enclosed in a holder which, on its perimeter shall have a value of "c" ≥ 2.5 mm 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 2.5 mm, and shall return into the holder under a force of 50 N 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.	NA
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 100 mm in diameter shall have a radius of curvature "c" of not less than 2.5 mm.	NA
6.3.1.	Edges of fixing holes or recesses, which are less than 12 mm in width, are exempt from the radius requirements of paragraph 6.3 provided they are blunted.	NA
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.	NA

Dimensions



7.1.1.1.	The reflecting area $\square$ 69 cm ² :	NA
7.1.1.2, 7.1.2.1	In the case if circular mirrors, 94 mm $\square$ the diameter $\square$ 150 mm :	NA
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:	NA
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:	NA

Reflecting Surface

7.2.1.	The reflecting surface of a rear-view mirror shall spherically convex				NA
7.2.2.	Differences between the radii of curvature:				NA
7.2.2.1, 7.2.2.2, 7.2.3		Point 1	Point 2	Point 3	Requirement
	ri				-
	r'i				-
	rp				-
	ri-rp				≤ 0.15r
	r'i-rp				≤ 0.15r
	r-rp				≤ 0.15r
	Average of rp = r =				1000 ≤ r ≤ 1500
0.15r =				-	
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 % :				NA
	Value				
	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.				NA
	The value of the normal coefficient of reflection in the "night" position shall not be less than 4 %.				NA
7.2.5.	The reflecting surface shall retain the characteristics specified in paragraph 7.2.4., in spite of prolonged exposure to adverse weather conditions, in normal conditions of use.				NA

Impact Test

8.2.1, 8.2.1.1, 8.2.1.2.	The pendulum shall comprise a hammer formed by a rigid sphere	Yes
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	with a diameter of 165 ± 1 mm and having a 5 mm-thick rubber covering of Shore A 50 hardness. Centre of percussion is $m_o = 6.8 \pm 0.05$ kg. And device constructions conform Figure 1	
8.2.2.2.1.	Rear-view mirrors shall be installed in accordance with the manufacturers' mounting instructions on the pendulum impact rig	Yes
8.2.2.2.2.	When a rear-view mirror is adjustable in relation to the base, the test position shall be the least favourable for any pivoting device to operate within the limits provided by the mirror or vehicle manufacturer.	Yes
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	NA
8.2.2.2.4.	When the reflecting surface is mobile in the holder, it shall be adjusted so that the upper corner which is furthest from the vehicle, is in the position of greatest projection relative to the holder.	NA
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.	Yes
	The longitudinal direction of oscillation of the pendulum shall be parallel to the longitudinal plane of the vehicle.	Yes
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 direction perpendicular to the axis of rotation or pivot in question.	Yes
	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.	Yes
8.4.1.1.	The accuracy of the angle measurement shall be $\pm 1^\circ$	Yes
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	Yes



position.

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°):

Yes

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°):

Yes

Bending Test

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

NA

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.

NA

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)

NA

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.

NA

8.3.2.

The test load shall be 25 kg applied for one minute.

NA

Results of the Tests

8.4.2.

The mirror shall not break during the tests described in para. 8.2 and 8.3 above

Yes

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 ($\square$ 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

NA

OR

8.4.2.2.

The mirror is made of safety glass

NA

Remarks

None

Note: VCA apply measurement uncertainty to calibrated items but not test results.



G4013



天津市计量监督检测科学研究院

Tianjin Institute of Metrological Supervision and Testing

测试报告

Test Report

报告编号:
Report No. TCJt21013324

委 托 单 位

Client

天津摩托车质量监督检验所

样 品 名 称

Description of Sample

摩托车后视镜试验台

型 号 / 规 格

Model/Type

MH200

出 厂 编 号

Serial No.

150415

制 造 单 位

Manufacturer

天津市天波科达科技有限公司

(机构测试专用章)



批准人:

Approved by

王克喜

王克喜

核验员:

Checked by

王克喜

王克喜

测试员:

Tested by

王伟

王伟



测 试 日 期

Date of Test

2021

年

03

月

10

日

Year

Month

Day

本院地址: 天津市南开区科研西路4号

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电子邮件: timstbmd@126.com

E-mail

服务电话: 022-23009329

Telephone

传真号码: 022-23009354

Fax

投诉电话: 022-23009322

Complaint Tel.

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01-Mar-22



天津市计量监督检测科学研究院测试报告

Test Report of TIMST

报告编号: TCJjt21013324

Report No.

天津市计量监督检测科学研究院是国家法定计量检定机构

Tianjin Institute of Metrological Supervision and Testing is National Legal Metrological Verification Organization.

国家法定计量检定机构授权证书号: (国) 法计[2017]01009号

The number of Certificate of metrological authorization to The Legal Metrological Verification Institution is No.[2017]01009

所依据/参照的技术文件

Reference Documents

JJG652-2012 《旋转纯弯曲疲劳试验机》

测试环境条件及地点

Test Environmental Conditions and Location

测试地点 Location	天津摩托车质量监督检验所实验室			
温度 Temperature	20.0℃	相对湿度 Relative Humidity	40%	其它 Others

本次测试所用的主要测量设备

Main measurement instrument used in this test

名称 Name	出厂编号 Serial No.	测量范围 Measurement Range	不确定度/准确度/最大允许误差 Uncertainty/Accuracy /Maximum permissible error	证书有效期至 Valid date to
水准仪	MC6240	(0~360)°	MPE: ±6"	2022-03-08
钢卷尺	02	(0~5)m	1级	2021-05-24

☐ 我院仅对加盖“天津市计量监督检测科学研究院测试专用章”的完整证书负责;

Our Institute only takes responsibility for complete certificates stamped with the specified testing seal of 'Tianjin Institute of Metrological Supervision and Testing'.

☐ 本测试结论仅对本被测样品的本次测试有效。

The results represent only the sample(s) of this test.

☐ 报告中英文两种语言表达, 准确含义以中文为准。

The report is issued by both Chinese and English; any objection should be based on the Chinese expression.

第 2 页 共 3 页

Page of





测试结果

Results of Test

一、外观检查: 良好, 符合要求

二、测试结果:

1. 摆臂长度:

单位: mm

标称值	实测值
1000	1000

2. 摆臂角度:

位: °

单

标称值	实测值
59	59.3
60	60.0

注: 摆臂角度指摆臂与铅垂之间的夹角

以下空白