



INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

[A Division of NATRiP Implementation Society (NATIS), Govt. of India]

TAC/Reference No. **C M 2 1 6 4**

Date : 2nd September 2021

Cert	Dwg	Total
1	1	02 pgs

TYPE APPROVAL CERTIFICATE

(For compliance to AIS - 037)

Non- Transferable

1	Customer's Name	M/s. Caterpillar India Engineering Solutions Private Limited	
2	Customer's Address	7th Floor, Unit No.1, International Technology Park, Taramani Road, Taramani Chennai, Tamil Nadu 600113.	
3	Manufacturing / Assembly Plant Address	M/s. Jiangsu Danhong Auto Lamp Co., Ltd. Jeibel Village, Jeipai Town, Danyang City, Jiangsu Province, China 212323	
4	Description of the Test Component(s)	Component	Interior Rear View Mirror
		Class of Mirror	I
		Type of Coating	Aluminium
		Part No./Dwg No.	553-6220
		Applicable Vehicle Model	SEM 919 & SEM 915 Motor Graders SEM 636D & SEM 656D Wheel loaders
	Trade mark	DANHONG	
5	Applicable Notified Standard	AIS-001 (Part 1) (Rev.1) : 2011	
6	Test Report No.	CT0CQ2163 dated 02.09.2021	
6.1	List of supporting documents	Drawing No. 553-6220	
7	Pre-test inspection Visit Report No.	Not applicable	
8	Details of Quality Management System (QMS)	IATF 16949: 2016 , IATF Certificate No. 0378832 valid upto 23.12.2023	
9	Approval	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Granted/ Not Granted/ Extended	
10	The CoP period for the component mentioned in Sr. No. 4 above shall begin from the date of production & 1st CoP shall be completed before 30.09.2023.		



ICAT Reference	152404	Please turn over for DISCLAIMER	
AUTHORISED SIGNATORY			
 ICAT HARISH JOSHI Manager	 ICAT PAMELA TIKKU Sr. General Manager	 INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY MANESAR	 ICAT DINESH TYAGI Director
			 Page 1 of 1

Office Address : Centre-I : Plot No.-26, Sector-3, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)

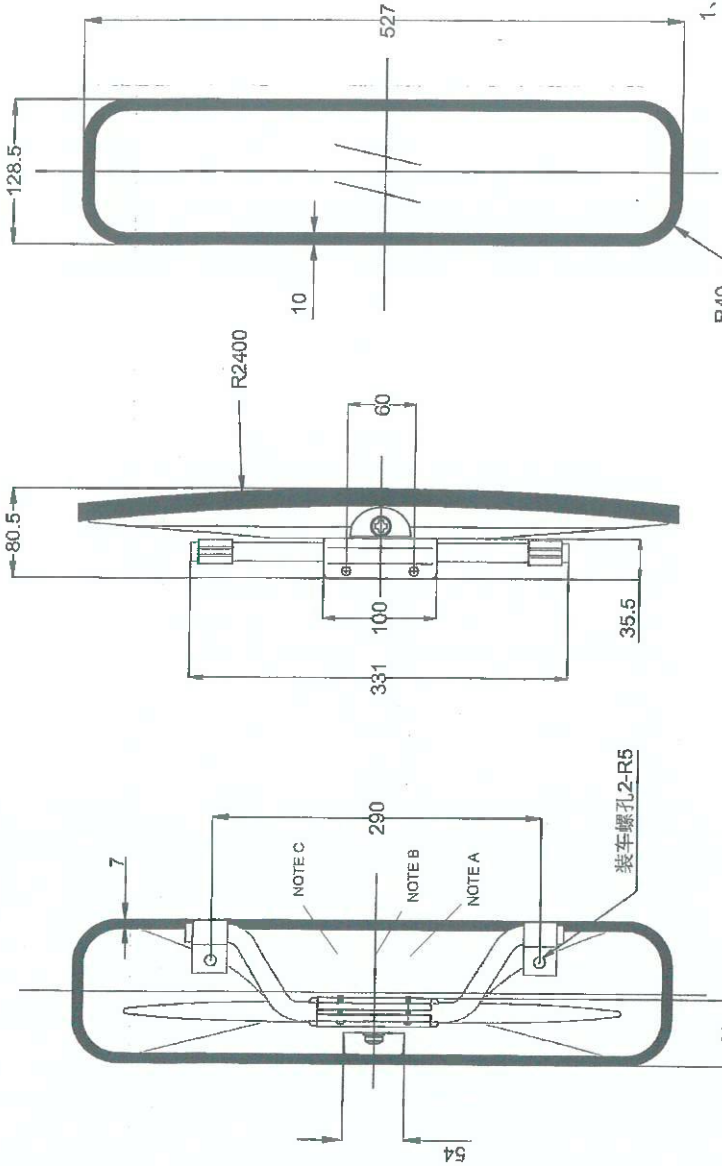
Centre-II : Plot No.-01, Sector-M-11, HSIIDC, IMT-Manesar, Gurugram-122051. Haryana (India)

Phone : 0124-4586111, Fax : +91-124-2290005. E-mail: team@icat.in, Website : www.icat.in

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TACNO:- CM2164



2010年 1月 6日

技术说明

- 1、玻璃镜面半径: R2400
- 2、周围由橡胶圈包裹
- 3、后视镜外壳材料: ABS
- 4、锁紧螺丝规格: 2-M4x16
- 5、配用镜杆规格: $\varnothing 16.5$

NOTE A: Standard supplier. Trademark to be provided
 NOTE B: Class of Mirror
 NOTE C: Type approval certificate number to be provided

设计代号	MS10 D	设计	日期	10-11-05
物料编号	W48000287	审核	日期	
供应商代码	29107	批准	日期	
物料名称	后视镜	工艺	日期	
物料规格		材料	日期	
物料重量		重量	日期	
物料长度		长度	日期	
物料宽度		宽度	日期	
物料高度		高度	日期	
物料厚度		厚度	日期	
物料颜色		颜色	日期	
物料表面处理		表面处理	日期	
物料包装		包装	日期	
物料备注		备注	日期	
物料图号		图号	日期	
物料版本号		版本号	日期	
物料修改人		修改人	日期	
物料审核人		审核人	日期	
物料批准人		批准人	日期	
物料日期		日期	日期	
物料地点		地点	日期	
物料状态		状态	日期	
物料备注		备注	日期	



CATERPILLAR

MIRROR (SEM)
 553-6220

NOTE A: REFER TO EDS
 (料号: 4804) (料号: W48000287)
 (重量: 1.209 kg) (SCALE 1:1)

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INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

[A Division of NATRIP Implementation Society (NATIS), Govt. of India]

Non - Transferable

TEST REPORT

ULR No.	TC536021030000127F						
Test Report No.	C	T	O	C	Q	2 1 6 3	Date: 02.09.2021
1.0	Name and Address of the Customer	:	M/s. Caterpillar India Engineering Solutions Private Limited 7th Floor, Unit No.1, International Technology Park, Taramani Road, Taramani Chennai, Tamil Nadu 600113.				
2.0	Customer Reference	:	IOCS Registration No.	152404			
3.0	Name and Address component manufacturer	:	M/s. Jiangsu Danhong Auto Lamp Co., Ltd. Jeibei Village, Jeipai Town, Danyang City, Jiangsu Province, China 212323				
4.0	Description of Test Components	:	Interior Rear View Mirror (Class I)				
5.0	Date of Receipt of sample (DUT)	:	27.03.2021				
6.0	Condition of submitted Sample	:	No physical damage observed.				
7.0	Test Objective	:	To conduct Full Testing on Test samples mentioned at Sr. No. 4.0 above as per "AIS:001 (Part 1) (Rev. 01):2011".				
8.0	Test Method	:	As per AIS:001 (Part 1) Rev. 01:2011				
9.0	Functional Verification	:	No functional verification required for these components.				
10.0	Type of Reflective coating	:	Aluminium (Al)				
11.0	Applicable Vehicle Model	:	SEM 919 & SEM 915 Motor Graders SEM 636D & SEM 656D Wheel loaders				
12.0	Part No. / Drawing No.	:	553-6220				
13.0	Sample Identification	:	ICAT-CTL/152404/01-04				
14.0	Test Procedure/Test Results	:	Please refer Annexure-I for test procedure/test results.				
15.0	Test Location	:	ICAT Centre I				
16.0	Date of performance of Test	:	07.04.2021-16.04.2021				
17.0	Conclusion	:	The components specified in Sr. No. 4.0 of this test report met the requirement of all applicable tests when tested as per AIS:001 (Part 1) (Rev. 01):2011.				

Prepared By	Checked By		Approved By	
				
DEVYANI Asst. Engineer	HARISH JOSHI Manager		PAMELA TIKKU Sr. General Manager	

Page
1 of 4
+
Dwg (01)
[152404]

Office Address : Centre-I : Plot No.-26, Sector-3, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)

Centre-II : Plot No.-01, Sector-M-11, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)

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(An ISO 9001, ISO 14001 and ISO 45001 certified, scope-wise NABL accredited and BIS recognized Test House)



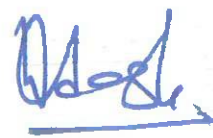
ULR No. TC536021030000127F

Test Report No. C T O C Q 2163

Date: 02.09.2021

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- The appropriate local court at Gurgaon shall have the jurisdiction in respect of any dispute, claim or liability arising out of this report.

Prepared By		Checked By	Page 2 of 4 + Dwg (01) [152404]
			
DEVYANI Asst. Engineer		HARISH JOSHI Manager	

ULR No. TC536021030000127F

Test Report No. C T O C Q 2163

Date: 02.09.2021

Annexure – I

1.0 TEST RESULTS

1.1 General Requirements:

The rear view mirrors met the requirements of AIS-001 (Part 1)(Rev. 1) : 2011.

1.2 Dimensions of Reflecting Surface: [Clause No. 6.1.2.1]

Sr. No.	ICAT Identification No.	Length of rectangle, 40 mm high inscribed (In 'mm')	
		Requirement [Min.]	Measured
1	ICAT-CTL/152404/02	101	517



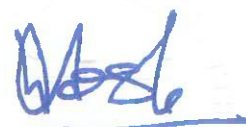
1.3 Reflecting Surface and Co-efficient of Reflection:

A) When checked, on the reflecting surface no cracks; cloudiness and spots were observed.

B) Radius of curvature:

[Clause No. 6.1.2.2 of AIS-001 (Part 1) (Rev.1) : 2011]

Sr. No.	ICAT Identification No.	Requirement In 'mm'	Measured in 'mm'	
			α	β
1	ICAT-CTL/152404/02	α_1 : difference between radii of curvature [(0.15 $\beta_1 = 320.6$), $\alpha_1 \leq 0.15 \beta_1$] β_1 : average of radii of curvature measured as per clause no. 6.1.2.2 of AIS-001 (Part 1) (Rev.1):2011 [$\beta_1 \geq 1200$ mm]	α_1	297.60
			β_1	2137.21
2	ICAT-CTL/152404/03	α_2 : difference between radii of curvature [(0.15 $\beta_2 = 308.3$), $\alpha_2 \leq 0.15 \beta_2$] β_2 : average of radii of curvature measured as per clause no. 6.1.2.2 of AIS-001 (Part 1) (Rev.1):2011 [$\beta_2 \geq 1200$ mm]	α_2	297.60
			β_2	2055.16
3	ICAT-CTL/152404/04	α_3 : difference between radii of curvature [(0.15 $\beta_3 = 301.3$), $\alpha_3 \leq 0.15 \beta_3$] β_3 : average of radii of curvature measured as per clause no. 6.1.2.2 of AIS-001 (Part 1) (Rev.1):2011 [$\beta_3 \geq 1200$ mm]	α_3	274.28
			β_3	2008.82

Prepared By		Checked By	Page 3 of 4 + Dwg (01) [152404]
			
DEVYANI Asst. Engineer		HARISH JOSHI Manager	

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ULR No. TC536021030000127F

Test Report No. C T 0 C Q 2163

Date: 02.09.2021

Annexure – I (Contd...)

C) Normal Co-efficient of Reflection Test:
 [Clause No. 6.1.2.2.5 of AIS-001 (Part 1) (Rev.1) : 2011]

Sr. No.	ICAT Identification No.	Co-efficient of Reflection in %	
		Requirement (Min.)	Measured
1	ICAT-CTL/152404/02	40	87.60
2	ICAT-CTL/152404/03		86.39
3	ICAT-CTL/152404/04		87.81




1.4 Impact Test:
 [Clause No. 6.1.3.2 of AIS-001 (Part 1) (Rev.1) : 2011]

Sr. No.	ICAT Identification No.	Swinging of Pendulum		Remarks
		Requirement (Min.)	Measured	
1	Impact on Reflecting Surface (ICAT-CTL/152404/01)	20°	40.1°	No breakage of reflecting surface observed
2	Impact on corner reflecting surface at 45° (ICAT-CTL/152404/01)		39.0°	No breakage of reflecting surface observed

1.5 Marking Requirements:
 [Clause No. 4.1 of AIS-001 (Part 1) (Rev.1) : 2011]

When checked on the Rear View Mirrors following markings were observed:

Manufacturer's Trade Mark/Trade Name	Identification marking observed on the Test sample
DANHONG	A7C0652

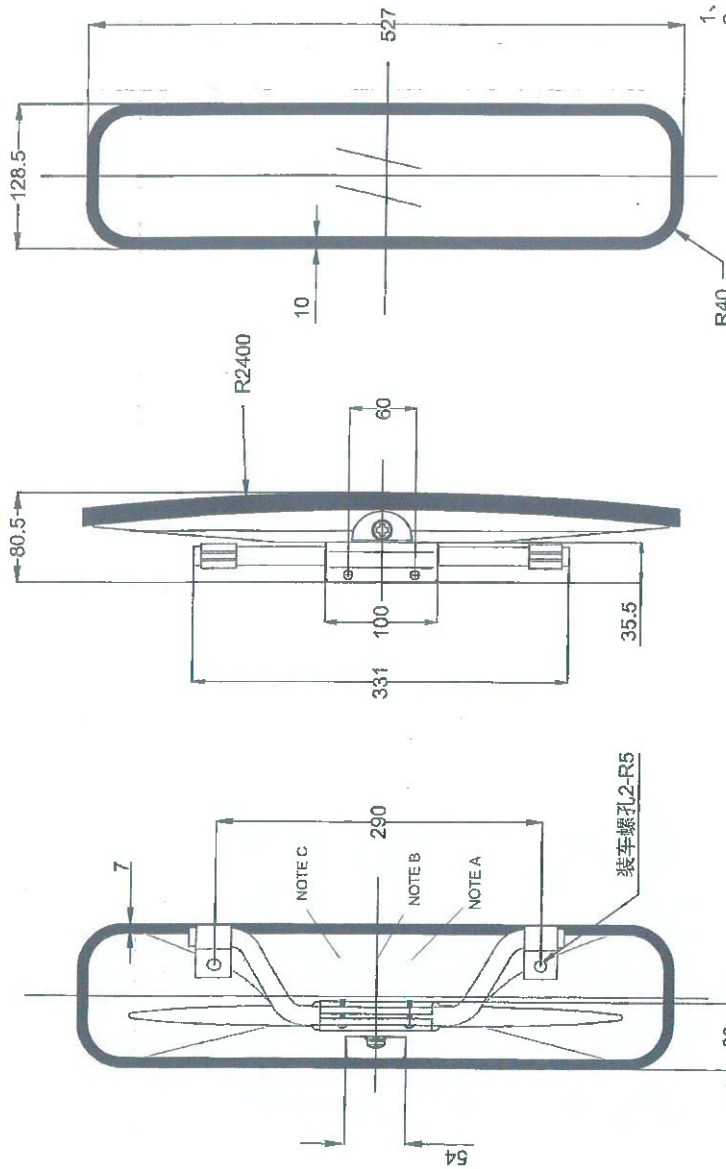
Prepared By		Checked By	Page 4 of 4 + Dwg (01) [152404]
			
DEVYANI Asst. Engineer		HARISH JOSHI Manager	

TRNO:- CTOCP2163

2010年 01月 08日

技术说明

- 1、玻璃镜面半径: R2400
- 2、周围由橡胶圈包裹
- 3、后视镜壳材料: ABS
- 4、锁紧螺丝规格: 2-M4x16
- 5、配用螺钉规格: $\varnothing 16.5$



NOTE A: Standard supplier. Trademark to be provided

NOTE B: Class of Mirror

NOTE C: Type approval certificate number to be provided

设计代号	149180	设计人		审核人		批准人	
物料编号	W48000087	零件名称	后视镜	图号		比例	
供应商代码	29107	零件图号		图名		图别	
零件名称	后视镜	图号		图名		图别	
零件图号		图名		图别		图号	



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MIRROR (SEM)

(料号: 149180) (重量: W48000087)

NOTE A: REFER TO EDS

(重量: 1.209 kg) (SCALE 1:1)

553-6220

DRAWING SHOWN IN FIRST ANGLE PROJECTION