



EU WHOLE-VEHICLE TYPE-APPROVAL CERTIFICATE

Communication concerning:

- EU whole vehicle type approval
- ~~Extension of EU whole vehicle type approval~~
- ~~Refusal of EU whole vehicle type approval~~
- ~~Withdrawal of EU whole vehicle type approval~~

} Of a complete vehicle type



With regard to Regulation (EU) No 168/2013, as last amended by Regulation (EU) No 2020/1694

EC type approval No: **e49*168/2013*10017*00**

Reason for extension: Not applicable

SECTION I

- 0.1. Make (trade name of manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MALCOR IBÉRICA, R RETELLI, MINGTO, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
- 0.2.1. Variant(s): 00
- 0.2.2. Version(s): 00
- 0.2.3. Commercial name(s) (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle : L1e-B
- 0.4. Company name and address of manufacturer of the complete vehicle: ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE
NO. 2-16 FA YUEN STREET MONG KOK, KOWLOON
HONG KONG



**ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΜΕΤΑΦΟΡΩΝ,
ΕΠΙΚΟΙΝΩΝΙΩΝ ΚΑΙ ΕΡΓΩΝ**

**ΤΜΗΜΑ ΟΔΙΚΩΝ ΜΕΤΑΦΟΡΩΝ
ΛΕΥΚΩΣΙΑ 1425 - ΚΥΠΡΟΣ**

0.4.1. Name(s) and address(es) of assembly plant(s):

ZHEJIANG YIXING INDUSTRY&TRADE CO., LTD.
Gangtou Industrial Functional Area, Lutan Town,
Wuyi County, Jinhua City, Zhejiang Province, The
People's Republic of China, ZIP: 321200

0.4.2. Name and address of manufacturer's authorised representative, if any:

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLENT,
ALICANTE, SPAIN

SECTION II

1. Technical service responsible for carrying out the tests: CETOC Technical Service srl
Via della Bufalotta, 374, 00139 Roma, Italy.
2. Date of test report: 20/09/2022
3. Number of test report: CN-40-2-217-WHO22-03974-FIR

SECTION III

The undersigned hereby certifies the accuracy of the manufacturer's description in the attached information document of the vehicle(s) described above, for which one or more representative samples, selected by the EU type-approval authority, have been submitted as prototypes of the vehicle type and that the attached test results are applicable to the vehicle type.

1. The complete vehicle type meets/~~does not meet~~⁽¹⁾ all relevant requirements as listed in Annex II to Regulation (EU) No 168/2013. The complete vehicle type meets/~~does not meet~~⁽¹⁾ all relevant requirements as listed in Annex II to Regulation (EU) No 168/2013.
 - 1.1 Restrictions of validity : Not applicable
 - 1.2. Waivers applied : Not applicable
 - 1.2.1. Reasons for the waivers : Not applicable
 - 1.2.2. Alternative requirements : Not applicable
2. The approval is GRANTED/EXTENDED/REFUSED/WITHDRAWN
 - 2.1. ~~The approval is granted in accordance with Article 40 of Regulation (EU) No 168/2013 and the validity of the approval is thus limited to DD/MM/YYYY.~~



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ΤΜΗΜΑ ΟΔΙΚΩΝ ΜΕΤΑΦΟΡΩΝ
ΛΕΥΚΩΣΙΑ 1425 - ΚΥΠΡΟΣ

Place: Nicosia, Cyprus

Date: 20/09/2022

Signature:

Iosif Miltiadous
(Road Transport Officer)



Attachments: Information package.

Test report.

Name(s) and specimen(s) of the signature(s) of the person(s) authorised to sign certificates of conformity and a statement of their position in the company.

A completed specimen of the certificate of conformity





ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ
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ΛΕΥΚΩΣΙΑ 1425 - ΚΥΠΡΟΣ



INDEX TO APPROVAL

EC vehicle type-approval number:	e49*168/2013*10017*00
Manufacturer's name	ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
Type	HM-2
Variant(s)/Version(s)	00/00
Report Nr.:	CN-40-2-217-WHO22-03974-FIR
Information Document:	Pages 1~76
List of contents:	Page 1
Annexes:	Pages 2~41
Other documents annexed	
1) List of the persons authorized to sign EC Certificate of conformity	Page 42
2) Completed Specimen of the Certificate of Conformity	Page 43~44



CETOC TS

CETOC Technical Service srl
Via della Bufalotta, 374,
00139 Roma

Inspection Report Nr.: CN-40-2-217-WHO22-03974-FIR
Manufacturer: ZHEJIANG YIXING INDUSTRY AND
TRADE LIMITED
Type: HM-2

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ISP N° 0184 E

Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

Approval and Market Surveillance of Two or Three Wheel Vehicles and Quadricycles

0. Legislation:

- 0.1. Requirements according to : Reg. (EU) 168/2013 amended by Reg. (EU) 134/2014, Reg. (EU) 2019/129, Reg. (EU) 2020/1694.
Including Delegated act (EU) 3/2014 amended (EU) 2016/1824
Including Delegated act (EU) 44/2014 amended (EU) 2018/295
Including Delegated act (EU) 134/2014 amended (EU) 2018/295
Including Delegated act (EU) 901/2014 amended (EU) 2020/239

1. General

- 1.1. Reason for Inspection Report : New approval / ~~Extension of approval~~ / Test report only / COP
1.2. Manufacturer's Representative(s) : MINIMOTOS SPORT, S.L.
1.3. CETOC TS Representative(s) : Erich Zhang
1.4. Location of Test : See annexes
1.5. Data of test : See annexes

2. Manufacturer Details

- 2.1. Make : SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, R RETELLI, MALCOR IBÉRICA, MINGTO, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
2.2. Type : HM-2
2.3. Variant/Version : 00/00
2.4. Commercial Name : electric scooter
2.5. Category : L1e-B
2.6. Name and Address of manufacturer : ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103,21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK, KOWLOON HONG KONG

3. Conclusion:

- 3.1. Final conclusion of the inspection: The above mentioned type was tested in accordance with the above mentioned legislation and was found to comply in all respects. This Inspection report relates only to the items tested.

Signature: :

Name: : Erich Zhang

Massimo Peraboni

Position: : Type Approval Engineer

Technical Manager

Place and date: : Shanghai, 15/08/2022

Roma, 20/09/2022



CETOC TS

CETOC Technical Service srl
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4. List of annexes:

- Appendix 1 : Test report history
- Appendix 2.1 : Vehicle specification of tested if equipped with combustion engine.
- Appendix 2.2 : Vehicle specification of tested vehicle if equipped with electric motor.
- Appendix 3 : Addendum to the EU type approval certificate

APPENDIX 1 - TEST REPORT HISTORY

List this report and previous reports, with extension details.

Inspection Report Number	Reason for Extension	Date of Issue
CN-40-2-217-WHO22-03974-FIR	Not applicable	20/09/2022



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APPENDIX 2.1 – VEHICLE SPECIFICATION OF TESTED VEHICLE IF EQUIPPED WITH COMBUSTION ENGINE

1.1.	Variant/Version	:	Not applicable
1.2	Vehicle Identification Number	:	Not applicable
1.3.	Engine Type	:	Not applicable
1.3.1.	Engine family	:	Not applicable
1.4.	Engine Capacity (cm3)	:	Not applicable
1.5	No. of Cylinders	:	Not applicable
1.6	Engine Layout	:	Not applicable
1.7	Engine Cooling	:	Not applicable
1.8	Reference Fuels	:	Not applicable
1.9	Fuel Tank	:	Not applicable
1.10	Canister	:	Not applicable
1.11	Fuel Feed	:	Not applicable
1.12	Spark Plug	:	Not applicable
1.13	Intake System	:	Not applicable
1.14	Exhaust System	:	Not applicable
1.14.1	Lambda Sensor	:	Not applicable
1.14.2	Secondary Air	:	Not applicable
1.14.3	Catalyst	:	Not applicable
1.15	ECU	:	Not applicable
1.16	OBD	:	Not applicable
1.17	Maximum Power (kW)	:	Not applicable
1.18	Maximum Torque(Nm)	:	Not applicable
1.19	Idle Speed	:	Not applicable
1.20	Transmission	:	Not applicable
1.20.1	Primary	:	Not applicable
1.20.2	Secondary	:	Not applicable
1.20.3	Final	:	Not applicable
1.21	Actual mass (kg)	:	Not applicable
1.22	Inertial Mass (kg)	:	Not applicable
1.23	Vehicle Length:	:	Not applicable
1.24	Maximum Design Speed	:	Not applicable
1.25	PMR	:	Not applicable
1.26	aWot,ref	:	Not applicable
1.27	aUrban	:	Not applicable
1.28	Reference Length (lRef)	:	Not applicable
1.29	Gear Weighting Factor (K)	:	Not applicable
1.30	Partial Power Factor (Kp)	:	Not applicable



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1.31	Tyre	:	Not applicable
1.31.1	Dimension	:	Not applicable
1.31.2	Pressure (kPa)	:	Not applicable
1.31.3	Rolling Circ. (mm)	:	Not applicable



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APPENDIX 2.2 – VEHICLE SPECIFICATION OF TESTED VEHICLE IF EQUIPPED WITH ELECTRIC MOTOR

1.1.	Variant/Version	:	00/00	
1.2.	Vehicle Identification Number	:	R68HM2004NA000001	
1.3.	Type of propulsion	:	Electric motor	
1.4.	Electric motor code	:	HM2SS	
1.5.	Electric motor layout	:	Rear	
1.6.	Electric motor cooling	:	Not applicable	
1.7.	ECU Electric motor control unit	:	HS60V	
1.8.	OBD	:	Not applicable	
1.9.	Propulsion battery	:		
1.9.1.	Kind of electrochemical couple	:	Lithium battery (Type: HS60V20AH)	
1.9.2.	Battery voltage	:	60V	
1.9.3.	Battery capacity	:	20 Ah	
1.10.	Charger	:	HS / HS60V2A	
1.11.	Maximum continuous-rated power electric motor (45 /30 minutes power)	:	1.5 kW at 350 min ⁻¹	
1.12.	Maximum continuous-rated torque electric motor	:	41.0 Nm at 350 min ⁻¹	
1.13.	Transmission	:	W (Wheel-hub motor)	
1.13.1.	Internal ratio / primary ratio / secondary ratio	:	Not applicable	
1.13.2.	Final	:	Not applicable	
1.14.	Actual mass (kg)	:	156	
1.14.1.	Inertial Mass (kg)	:	160	
1.15.	Maximum Design Speed:		45 km/h	
1.16.	tyres		Front Tyre	Rear Tyre
	Dimension	:	130/70-12	225/40-10
1.16.1.	Pressure (kPa)	:	280 kPa	250 kPa
1.16.2.	Rolling Circ. (mm)	:	1560 mm	1360 mm



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APPENDIX 3 - ADDENDUM TO THE EU TYPE- APPROVAL CERTIFICATE

A. ENVIRONMENTAL AND PROPULSION UNIT PERFORMANCE REQUIREMENTS (EPPR)

Nr.	Subject	Commission Delegated Regulation (EU) No Including last amendment	PASS	FAIL	N/A	COVER BY PREVIOUS EXTENSION
A1.	Tailpipe emissions after cold start	134/2014 Annex II (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Tailpipe emissions at (increased) idle/ free acceleration	134/2014 Annex III (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Durability of pollution- control devices	134/2014 Annex VI (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	CO ₂ emissions, fuel consumption, electric energy consumption and electric range	134/2014 Annex VII (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2	Emissions crankcase gases	134/2014 Annex IV (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A3	Evaporative emissions	134/2014 Annex V (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A4	OBD Environmental tests	134/2014 Annex VIII (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A5	Sound level	134/2014 Annex IX (EU) 2018/295 UNECE R41.04	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A6	Procedures and technical requirements on maximum vehicle design speed, maximum torque, maximum continuous total power and maximum peak power	134/2014 Annex X (EU) 2018/295 UNECE R85.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7	Vehicle propulsion family definition	134/2014 Annex XI (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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B. VEHICLE FUNCTIONAL SAFETY REQUIREMENTS (VFSR)

Nr.	Subject	Commission Delegated Regulation (EU) No including last amendment	PASS	FAIL	N/A	COVER BY PREVIOUS EXTENSION
B1	Audible warning devices	3/2014 Annex II 2016/1824 UNECE R28.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B2	Braking, including anti- lock and combined brake systems	3/2014 Annex III 2016/1824 UNECE R78.04	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B3	Electrical safety	3/2014 Annex IV 2016/1824 UNECE R100.02	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B4	Endurance Testing of Functional Safety Critical Systems, Parts and Equipment	3/2014 Annex V 2016/1824	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B5	Front and rear protective structures	3/2014 Annex VI 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B6	Glazing, windscreen wipers and washers, and defrosting and demisting systems	3/2014 Annex VII 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B7	Driver-operated controls including identification of controls, tell-tales and indicators	3/2014 Annex VIII 2016/1824 UNECE R60.00 UNECE R30.01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B8	Installation of lighting and light- signalling devices, including automatic switching of lighting	3/2014 Annex IX 2016/1824 UNECE R74.01 (Moped)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B9	Rearward visibility	3/2014 Annex X 2016/1824 UNECE R81.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B10	Rollover protective structure (ROPS)	3/2014 Annex XI 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B11	Safety-belt anchorages and safety- belts	3/2014 Annex XII 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B12	Seating positions (saddles and seats)	3/2014 Annex XIII 2016/1824	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B13	Steer-ability, cornering properties and turn- ability	3/2014 Annex XIV 2016/1824	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B14	Installation of tyres	3/2014 Annex XV 2016/1824 UNECE R75.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B15	Vehicle maximum speed limitation plate and its location on the vehicle	3/2014 Annex XVI 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B16	Vehicle occupant protection, including interior fittings and vehicle doors	3/2014 Annex XVII 2016/1824	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B17	Maximum continuous total power and/or maximum vehicle speed limitation by design	3/2014 Annex XVIII 2016/1824	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B18	Vehicle structure integrity	3/2014 Annex XIX 2016/1824	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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C. VEHICLE CONSTRUCTION AND GENERAL TYPE-APPROVAL REQUIREMENTS (VCR)

Nr.	Subject	Commission Delegated Regulation (EU) No including last amendment	PASS	FAIL	N/A	COVER BY PREVIOUS EXTENSION
C1	Powertrain tampering prevention (anti-tampering) measures	44/2014 Annex II (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C2	Arrangements for type-approval	44/2014 Annex III (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C3	Conformity of production (CoP)	44/2014 Annex IV (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C4	Coupling devices and attachments	44/2014 Annex V (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C5	Devices to prevent unauthorised use	44/2014 Annex VI (EU) 2018/295 UNECE R62.01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C6	Electromagnetic compatibility (EMC)	44/2014 Annex VII (EU) 2018/295 UNECE R10.06	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C7	External projections	44/2014 Annex VIII (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C8	Fuel storage	44/2014 Annex IX (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C9	Load platforms	44/2014 Annex X (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C10	Masses and dimensions	44/2014 Annex XI (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C11	Functional on-board diagnostics (OBD)	44/2014 Annex XII (EU) 2018/295	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C12	Passenger handholds and footrests	44/2014 Annex XIII (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C13	Registration plate space	44/2014 Annex XIV (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C14	Access to repair and maintenance information	44/2014 Annex XV (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C15	Stands	44/2014 Annex XVI (EU) 2018/295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. VEHICLE CONSTRUCTION AND GENERAL TYPE-APPROVAL REQUIREMENTS (VCR)

Nr.	Subject	Commission Delegated Regulation (EU) No including last amendment	PASS	FAIL	N/A	COVER BY PREVIOUS EXTENSION
D1	Statutory plate	901/2014 Annex V (EU) 2020/239	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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APPENDIX 3 A1

Test Type I Requirements Tailpipe Emissions after Cold Start Test Type II Requirements Tailpipe Emissions at (increased) Idle and Free Acceleration Test Type V Requirements Durability of Pollution-control Devices

Test Type VII Requirements Energy efficiency: CO2 emissions, fuel consumption, electric energy consumption and electric range

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 134/2014, Annex VII Including amendment (EU) 2018/295
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	11~12/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
1.6.	Facility and Equipment Checks	:	
1.6.1.	Calibration certificates checked and valid, recorded in the following table	:	Conform
1.6.2.	All instruments are equipped with identification label	:	Yes
1.6.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes
1.6.4.	Guideline Cetoc TS IST71D has been compiled	:	Yes

Equipment	Serial / Certificate No.	Calibration due
MCJ-400 motorcycle chassis dynamometer	CN CGEL051220220924	11/05/2023
Digital power meter	CN 37XJ22032730-0021	11/05/2023

2.	Annex II - Test results sheet	
2.2.1.	(A) Environmental and propulsion unit performance	
2.2.1.1.	Generic information on environmental performance	
2.2.1.1.1.	Description of propulsion, propulsion family and drive-train of test vehicle(s)	: Wheel-hub motor
2.2.1.1.2.	Environmental step of test vehicle:	: Euro 4 / Euro 5 / Euro 5+
2.2.1.1.3.	Description of emission test bench(es), specifications and settings	: Zhongcheng / MCJ-400 (Roller diameter: 526 mm)
2.2.1.1.4.	Chassis/engine dynamometer(s) specifications	: YH / ZF-200KB



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- 2.2.1.1.5. Inertia (reference) mass and running resistance settings for single/dual roll chassis dynamometer : Inertia= 160 kg
a= 14.1 N
b= 0.0224 N/(km/h)²
c= ---
- 2.2.1.1.6. Comprehensive report of road test results for the determination of test bench settings, including coast down times for single/dual roll chassis dynamometer : Not applicable
- 2.2.1.1.7. Applicable test type I driving schedule: (ECE R40 (with/without EUDC), ECE R47, WMTC stage 1, WMTC stage 2, revised WMTC) : Revised WMTC
- 2.2.1.1.8. Description gearshift prescriptions for environmental testing : Not applicable

2.2.1.2. Test type I: requirements: tailpipe emissions after cold start
The following items specific to test type I shall be provided

- 2.2.1.2.1. Description of tested vehicle(s) (prototype (s) or series production, hardware and software levels, VIN) : Not applicable
- 2.2.1.2.2. Any deviations by test vehicle(s) from data provided in information document, Annex I If yes, please provide list with deviations. : Not applicable
- 2.2.1.2.3. Type-approval number if not parent vehicle: : Not applicable
- 2.2.1.2.4. Mileage(s) of test vehicle(s) :
- 2.2.1.2.5. Test fuel(s) used : Not applicable
- 2.2.1.2.6. Description of test type I measurement methods for hybrid L-category vehicles referred to in Appendix 11 to Annex II to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.2.7. Description of test type I measurement methods for gas-fuelled vehicles referred to in Appendix 12 to Annex II to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.2.8. Description of test type I measurement methods for vehicles equipped with a periodically regenerating system referred to in Appendix 13 to Annex II to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.2.9. Information on regeneration strategy :
 - D (number of operating cycles between 2 cycles when regenerative phases occur) : Not applicable
 - d (number of operating cycles required for regeneration) : Not applicable
- 2.2.1.2.10. Description of weighting of type I test results as referred to in point 6.1.1.5. of Annex II to Commission Delegated Regulation (EU) No 134/2014 including equation number and weighting factors : Not applicable



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- 2.2.1.2.11. Number of type I operating cycles between two cycles where regenerative phases occur under the conditions equivalent to type I test (Distance 'D' in Figure Ap13-1 in Appendix 13 to Annex II to Commission Delegated Regulation (EU) No 134/2014) : Not applicable
- 2.2.1.2.12. Description of method employed to determine the number of cycles between two cycles where regenerative phases occur : Not applicable
- 2.2.1.2.13. Parameters to determine the level of loading required before regeneration occurs (i.e. temperature, pressure etc.) : Not applicable
- 2.2.1.2.14. Description of method used to load system in the test procedure described in point 3.1. of Appendix 13 to Annex II to Commission Delegated Regulation (EU) No 134/2014) : Not applicable
- 2.2.1.2.15. Test records according to point 7 of Annex II to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.2.16. Type I test results : Not applicable

Euro 5 limit

Table 5-1

Test type 1 results

Test Type I Test Results (TR _{TTIx})	Test No.	CO	THC	NMHC	NO _x	THC+ NO _x	PM
TR TTI Measured x (i) (iv) (mg/km)	1	--	--	--	--	--	--
	2	--	--	--	--	--	--
	3	--	--	--	--	--	--
TR TTI Measured x Mean (i) (iv) (mg/km)		--	--	--	--	--	--
Ki (i) (v) (vii)		1	1	1	1	--	--
TR TTI x (i) (iv) = Ki · TR _{TTI Measured x Mean} (mg/km)		--	--	--	--	--	--
(% of L x)		--	--	--	--	--	--
Limit value L x (viii) (mg/km)		1000	100	68	60	--	--

2.2.1.3. Test type II requirements: tailpipe emissions at (increased idle)/free acceleration

- 2.2.1.3.1. Details of test vehicle(s) if different from vehicle used for type I testing: (items 2.1.2.1.1. to 2.1.2.1.4. where different) : Not applicable
- 2.2.1.3.2. Description of propulsion idling activation method in case of stop-start system: : Not applicable



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Table 5-2 Test type II results						
Test	HC (ppm)	CO (% vol.)	Lambda	Engine speed (min-1)	Engine oil temperature (K)	Measured & corrected value of absorption coefficient (m-1)
Pt: Low idle test	--	--	--	--	--	--
Pt: High idle test	--	--	--	--	--	--
CI — Free acceleration test / Smoke opacity test results	--	--	--	--	--	--

2.2.1.6. Test type V requirements: durability of pollution-control devices

- 2.2.1.6.1. Details of test vehicle(s), its powertrain and pollution-control devices explicitly documented and listed, emission test laboratory equipment and settings, if different from data reported under items 2.1.2.1.1. to 2.1.2.1.10 : Not applicable
- 2.2.1.6.2. Test type V carried out on : ~~test track, on the road, on a chassis dynamometer~~
- 2.2.1.6.3. The test type V data outcome and the correspondent test report shall vary in relation with the chosen durability procedure set out in Article 23(3) of Regulation (EU) No 168/2013, established as follows : Not applicable
- 2.2.1.6.3.1. Test type V conducted according to Article 23(3a) : ~~full mileage accumulation~~
- 2.2.1.6.3.1.1. Test cycle used : ~~US EPA AMA cycle, SRC-LeCV~~
- 2.2.1.6.3.1.2. In the case of SRC-LeCV, applicable durability test cycle vehicle group, refer to Appendix 1 to Annex V to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.6.3.1.3. In the case of SRC-LeCV, amount of test type V soak procedures : Not applicable
- 2.2.1.6.3.1.4. In the case of US EPA AMA cycle, classification according to Appendix 2 to Annex V to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.6.3.1.5. Mileage test vehicle(s) : Not applicable
- 2.2.1.6.3.1.6. Catalyst time-at-temperature data histogram : Not applicable
- List of maintenance and adjustments over mileage accumulation : Not applicable
- 2.2.1.6.3.1.7. The collection of test type I results (1 to n), (see 2.2.1.2.16.), the calculated slopes and offsets, and the calculated test type V results shall be entered in the table below : Not applicable



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Table 5-5

Test type V results in case of compliance with Article 23(3a) of Regulation (EU) No 168/2013

Test Type V Test Results (TR TTV _x)	Test No.	Accumulated mileage (km)	CO		THC		NMHC		NO _x		THC+NO _x		PM	
			mg/km	% of L _x	mg/km	% of L _x	mg/km	% of L _x	mg/km	% of L _x	mg/km	% of L _x	mg/km	% of L _x
TR TTV _x	1	--	--	--	--	--	--	--	--	--	--	--	--	--
TR TTV _x	2	--	--	--	--	--	--	--	--	--	--	--	--	--
TR TTV _x	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR TTV _x	N	--	--	--	--	--	--	--	--	--	--	--	--	--
Limit value L _x	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- 2.2.1.6.3.2. Test type V conducted according to Article 23(3b) : Not applicable
- 2.2.1.6.3.2.1. Test cycle used (SRC-LeCV) : Not applicable
- 2.2.1.6.3.2.2. Applicable SRC-LeCV durability test cycle vehicle group: refer to Commission Delegated Regulation (EU) No 134/2014 : Not applicable
- 2.2.1.6.3.2.3. Amount of SRC-LeCV soak procedures : Not applicable
- 2.2.1.6.3.2.4. Mileage test vehicle(s) : Not applicable
- 2.2.1.6.3.2.5. Applied stop criteria : Not applicable
- 2.2.1.6.3.2.6. List of 'golden components' complete with series, part and marking number : Not applicable
- 2.2.1.6.3.2.7. List of 'new components' complete with series, part and marking number : Not applicable
- 2.2.1.6.3.2.8. Catalyst time-at-temperature data histogram : Not applicable
- 2.2.1.6.3.2.9. List of maintenance and adjustments over mileage accumulation : Not applicable
- 2.2.1.6.3.2.10. The collection of test type I results (1 to n), (see 2.2.1.2.16.), the calculated slopes and offsets, and the calculated test type V results shall be entered in the table below : Not applicable



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Table 5-6

Test type V results in case of compliance with Article 23(3b) of Regulation (EU) No 168/2013

Test Type V Test Results (TR TTVx)	Test No.	Accumulated mileage (km)	CO		THC		NMHC		NOx		THC+NOx		PM	
			mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx
TR TTVx	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Slope a	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Offset b	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Final calculated TR TTVFin = a · TR TTVnx + b	N	--	--	--	--	--	--	--	--	--	--	--	--	--
Limit value L x	--	--	--	--	--	--	--	--	--	--	--	--	--	--

2.2.1.6.3.3. Test type V conducted according to Article 23(3c) of Regulation (EU) No 168/2013

: mathematical durability procedure

2.2.1.6.3.3.1. The Test Type I results of a vehicle with a mileage of 100 km or more, (see 2.2.1.2.16.), and the applicable deterioration factors set out in Annex VII(B) to Regulation (EU) No 168/2013 shall be entered in the table below along with the calculated test type V results

Not applicable

Table 5-7

Test type V results in case of compliance with Article 23(3c) of Regulation (EU) No 168/2013

Test Type V Test Results (TR TTVx)	Test No.	Accumulated mileage (km)	CO		THC		NMHC		NOx		THC+NOx		PM	
			mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx	mg/km	% of Lx
TR TTVx	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Deterioration Factor DFx			1.3		1.3		1.3		1.3		--		--	
Final calculated TR TTVFin= DFx · TR TTVnx			--		--		--		--		--		--	
Limit value L x			1000		100		68		60		--		--	

2.2.1.7. Test type VI has not been assigned; consequently there are no results to be submitted

2.2.1.8. Test type VII requirements: measurement of CO₂ emissions, fuel consumption, electric energy consumption and electric range determination

2.2.1.8.1. Details of test vehicle(s), its powertrain and pollution-control devices explicitly documented and listed, emission test laboratory equipment and settings if different from data reported under items 2.1.2.1.1. to 2.1.2.1.10

: Not applicable

2.2.1.8.2. Documentation added according to UNECE Regulation No 101 (OJ L 138, 26.5.2012, p. 1)

: yes/no



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- 2.2.1.8.3. The vehicle manufacturer has ensured that the CO₂ emissions, fuel consumption, electric energy consumption and electric range data are provided to the buyer of the vehicle at the time of purchase of a new vehicle : Not applicable
- 2.2.1.8.4. A completed specimen of the test type VII result format used to inform the buyer of the new vehicle is added to the information document : Not applicable
- 2.2.1.8.5. Type VII test results, where applicable and for each reference fuel tested : Not applicable
- 2.2.1.8.6. CO₂ emissions and fuel consumption**

Table 5-8 Test Type VII result table for propulsions equipped with a combustion engine only or equipped with not-externally-chargeable (NOVC) hybrid electric propulsion			
Test Type VII Test Results (TR _{TTVII})	Test No	CO ₂	Fuel consumption
		g/km	(l/100km) or (kg/100-km)
TR _{TTI Measured x}	1	--	--
	2	--	--
	3	--	--
TR _{TTI Measured Mean}	--	--	--
Ki	--	1	1
TR _{TTVIIx} = Ki · TR _{TTI Measured x Mean}	--	--	--
CO ₂ and Fuel consumption as declared by the manufacturer	--	--	--



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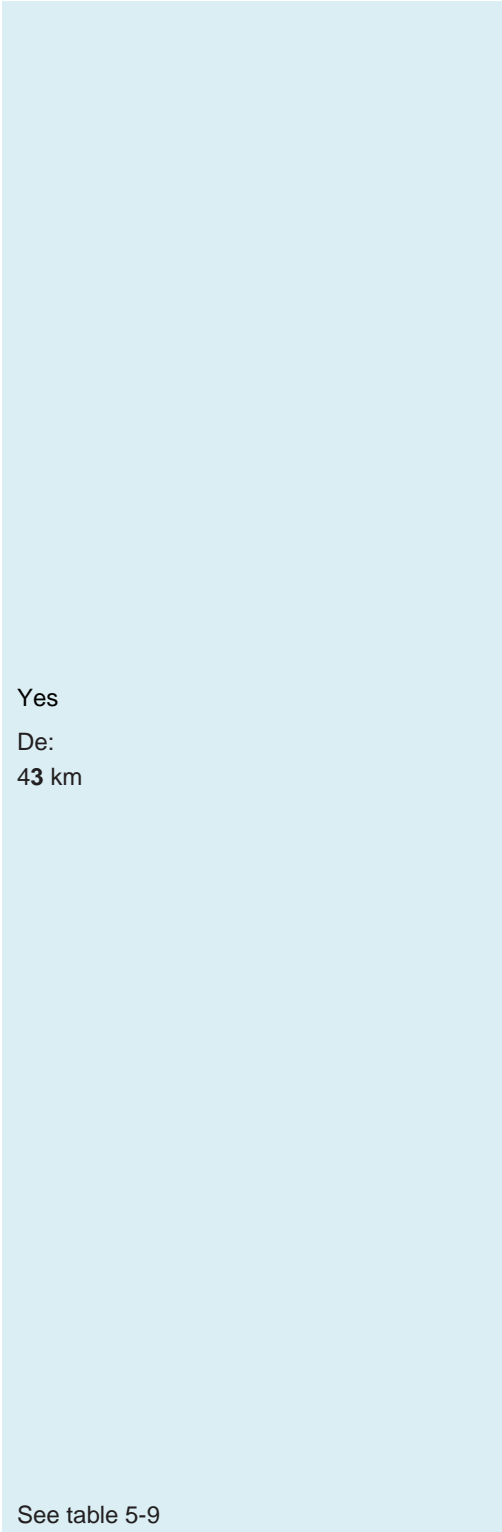
2.2.1.8.7. Electric energy consumption and electric range

Measurement of the electric range

- 2.2.1.8.7.1. If the vehicle has several driving modes which may be selected by the driver, the operator shall select that which best matches the target curve : ~~Conform~~/not applicable
- 2.2.1.8.7.2. The vehicle tyres shall be inflated to the pressure specified by the vehicle manufacturer when the tyres are at ambient temperature : Yes
- 2.2.1.8.7.3. The viscosity of the oils for the mechanical moving parts shall conform to the vehicle manufacturer's specification : Yes
- 2.2.1.8.7.4. The lighting, signalling and auxiliary devices shall be off, except those required for the testing and usual day-time operation of the vehicle : Yes
- 2.2.1.8.7.5. All energy storage systems for other than traction purposes (electric, hydraulic, pneumatic, etc.) shall be charged to their maximum level as specified by the manufacturer. : Yes
- 2.2.1.8.7.6. If the batteries are operated above the ambient temperature, the operator shall follow the procedure recommended by the vehicle manufacturer in order to keep the battery temperature in the normal operating range : Yes
- 2.2.1.8.7.7. The vehicle shall have travelled at least 300 km in the seven days before the test with the batteries installed for the test : Yes
- 2.2.1.8.7.8. Climatic conditions
For testing performed outdoors, the ambient temperature shall be between 278,2 K and 305,2 K (5 °C and 32 °C). The indoor testing shall be performed at a temperature of between 275,2 K and 303,2 K (2 °C and 30 °C). : Yes
- 2.2.1.8.7.9. Initial charge of the battery
Charging the battery consists of the following procedure:
The 'initial charge' of the battery means the first charge of the battery, on reception of the vehicle. Where several combined tests or measurements are carried out consecutively, the first charge shall be an 'initial charge' and the subsequent charges may follow the 'normal overnight charge' procedure set out in 3.2.2.4. of Appendix 3 of reg. EU 134/2014. : Yes
- 2.2.1.8.7.10. Discharge of the battery
For pure electric vehicles:
The procedure starts with the discharge of the battery of the vehicle while driving (on the test track, on a chassis dynamometer, etc.) at a steady speed of 70 percent ± 5 percent of the maximum design vehicle : Yes



<p>2.2.1.8.7.11.</p> <p>2.2.1.8.7.12.</p> <p>2.2.1.8.7.13.</p>	<p>speed, which is to be determined according to the test procedure in Appendix 1 to Annex X. Discharging shall stop under any of the following conditions: (a) when the vehicle is unable to run at 65 percent of the maximum thirty minutes speed; (b) when the standard on-board instrumentation indicates that the vehicle should be stopped; (c) after 100 km. By means of derogation if the manufacturer can prove to the technical service to the satisfaction of the approval authority that the vehicle is physically not capable of achieving the thirty minutes speed the maximum fifteen minute speed may be used instead.</p> <p>Normal overnight charge For a pure electric vehicle, the battery shall be charged according to the normal overnight charge procedure, as defined in point 2.4.1.2. of Appendix 2, for a period not exceeding twelve hours.</p> <p>Application of the cycle and measurement of the range. For pure electric vehicles: The test sequence set out in the Appendices shall be carried out on a chassis dynamometer adjusted as described in Annex II, until the test criteria are met. The test criteria shall be deemed as having been met when the vehicle is unable to meet the target curve up to 50 km/h, or when the standard on-board instrumentation indicates that the vehicle should be stopped. The vehicle shall then be slowed to 5 km/h without braking by releasing the accelerator pedal, and then stopped by braking. At speeds of over 50 km/h, when the vehicle does not reach the acceleration or speed required for the test cycle, the accelerator pedal shall remain fully depressed, or the accelerator handle shall be turned fully, until the reference curve has been reached again. Up to three interruptions, of no more than 15 minutes in total, are permitted between test sequences. The distance covered in km (De) is the electric range of the electric vehicle. It shall be rounded to the nearest whole number.</p> <p>Final Test result</p>	<p>:</p> <p>De:</p> <p>43 km</p> <p>:</p> <p>:</p> <p>: See table 5-9</p>
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2.2.1.8.8. Electric energy consumption and electric range
Method of measuring the electric energy consumption of a vehicle powered by an electric powertrain only

2.2.1.8.8.1. to 2.2.1.8.8.7	Refer from 2.2.1.8.7.1. to 2.2.1.8.7.7.	Yes
2.2.1.8.8.8.	In order to measure its electric consumption in the type I test cycle, the test vehicle shall be classified according to the achievable maximum design vehicle speed thresholds only, set-out in point 4.3. of Annex II.	Selected Test cycle: Revised WMTC
2.2.1.8.8.9.	All the tests are conducted at a temperature of between 293,2 K and 303,2 K (20 °C and 30 °C).	12/08/2022: 26.2 °C
2.2.1.8.8.10.	Initial charge of the battery Charging the battery consists of the following procedures:	
2.2.1.8.8.10.1.	Discharge of the battery The battery is discharged while the vehicle is driven (on the test track, on a chassis dynamometer, etc.) at a steady speed of 70 percent ± 5 percent of the maximum design vehicle speed, as determined according to the test procedure in Appendix 1 to Annex X. Discharging shall stop: (a) when the vehicle is unable to run at 65 percent of the maximum thirty minutes speed, or (b) when the standard on-board instrumentation indicates that the vehicle should be stopped, or (c) after 100 km. By means of derogation if the manufacturer can prove to the technical service to the satisfaction of the approval authority that the vehicle is physically not capable of achieving the thirty minutes speed the maximum fifteen minute speed may be used instead.	Fulfilled by 2.2.1.8.7.6.
2.2.1.8.8.10.2.	Application of a normal overnight charge The battery shall be charged according to the following procedure: Normal overnight charge procedure The charge shall be carried out: (a) with the on-board charger if fitted; (b) with an external charger recommended by the manufacturer, using the charging pattern prescribed for normal charging; (c) in an ambient temperature of between 293,2 K and 303,2 K (20 °C and 30 °C). This procedure excludes all types of special charges that could be automatically or manually initiated, e.g. equalisation or servicing charges.	Yes



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2.2.1.8.8.10.2.1. The end-of-charge criteria shall correspond to a charging time of 12 hours except where the standard instrumentation indicates clearly that the battery is not yet fully charged, in which case:

the maximum time is $=3 \times \text{claimed battery capacity (Wh)} / \text{mains power supply (Wh)}$

2.2.1.8.8.11. The end of charging time t_0 (plug off) shall be reported.
The chassis dynamometer shall be set according to the method in point 4.5.6. of Annex II. Starting within four hours of t_0 , the applicable type I test shall be run twice on a chassis dynamometer, following which the distance covered in km (D_{test}) is recorded. If the manufacturer can demonstrate to the approval authority that twice the type I test distance can physically not be attained by the vehicle, the test cycle shall be conducted once and subsequently followed by a partial second test run. The second test run may stop if the minimum state of charge of the propulsion battery is reached as referred to in Appendix 3.1.

2.2.1.8.8.12. Charge of the battery
The test vehicle shall be connected to the mains within 30 minutes of the second run of the applicable type I test cycle.
The vehicle shall be charged according to the normal overnight charge procedure in point 2.2.1.8.7.10.2.
The energy measurement equipment, placed between the mains socket and the vehicle charger, measures the energy charge E delivered from the mains and its duration.
Charging shall stop 24 hours after the end of the previous charging time (t_0).

Note:

In the event of a mains power cut, the 24 hour period may be extended in line with the duration of the cut. The validity of the charge shall be discussed between the technical services of the approval laboratory and the vehicle manufacturer to the satisfaction of the approval authority.

2.2.1.8.8.13. Electric energy consumption calculation
Energy E in Wh and charging time measurements are to be recorded in the test report.
The electric energy consumption c shall be determined using the formula: $c = E / D_{test}$ (expressed in Wh/km and rounded to the nearest whole number).
where D_{test} is the distance covered during the test (in km).

2.2.1.8.8.14. Final Test result

Yes

End of charging time t_0 (plug off):
12/08/2022, 10:38 a.m.

D_{test} :
14.9 km

Charge stop at $t_0 + 24h$
Charging time: 5 h

E :
468 Wh

: See table 5-9



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Table 5-9 Test Type VII result table for pure electric propulsion or not-externally-chargeable (NOVC) propulsions equipped with an electric motor for propulsion				
	Measured electric energy consumption** (Wh/km)*	Declared electric energy consumption (Wh/km)	Measured electric range (km)*	Declared electric range (km)
Pure electric powertrain	31	31	43	43
NOVC hybrid electric powertrain	--	--	--	--

*Rounded to Whole Number

**Measured Electric Energy Consumption within 4 % of declared.



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APPENDIX 3– A6

Testing Procedures and Technical Requirements as Regards Propulsion Unit Performance

- 0. Main Requirements** :
- 0.1. Requirements according to : Reg. (EU) 3/2014, Annex X
Including amendment (EU) 2018/295
UNECE R85.00 Supplement 10
- 1. Witness details** :
- 1.1. Witness : Erich Zhang
- 1.2. Location of Test : Zhejiang Labs Vehicle Testing Co., Ltd.
No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang
Street, Yuhang District, Hangzhou City, Zhejiang
Province, China
- 1.3. Date of Test : 09/08/2022
- 1.4. Worst Case Rationale : Single specification
- 1.5. Tested vehicle : R68HM2004NA000001
- 1.6. Facility and Equipment Checks** :
- 1.7.1. Calibration certificates checked and valid,
recorded in the following table : Conform
- 1.7.2. All instruments are equipped with identification
label : Yes
- 1.7.3. Calibration certificates are complete of
calibration-chain with detailed information
regarding primary used. : Yes

Equipment	Serial / Certificate No.	Calibration due
V-Box	CN 202210000804	23/04/2023

- 2. Test Results**
- 2.2.1.11. Propulsion unit performance test results**
- 2.2.1.11.1. Propulsion unit performance data to be
provided to measure/determine the
maximum vehicle design speed : Yes
- 2.2.1.11.1.1. Details of hardware and software of test
vehicle(s), fitted components and
accessories referred to in Annex X to
Commission Delegated Regulation (EU) No
134/2014, Any deviations by test vehicle(s)
from data provided in information document,
Annex I : Not applicable
- If yes, please provide list with deviations
relevant for measuring the maximum vehicle
design speed and gear in which it was
reached : Not applicable
- 2.2.1.11.1.2. Test mass in running order :



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	mass plus rider/driver	:	156 kg
2.2.1.11.1.3.	Test fuel specifications	:	Not applicable
2.2.1.11.1.4.	Powertrain lubricant specifications	:	Not applicable
2.2.1.11.1.5.	Atmospheric pressure (kPa)	:	100.6 kPa
2.2.1.11.1.6.	Relative humidity (%)	:	60.3
2.2.1.11.1.7.	Ambient temperature (K)	:	310.2
2.2.1.11.1.8.	Wind speed and direction on test track (km/h)	:	0.4, (E-W)
2.2.1.11.1.9.	Test track condition (temperature, level of moisture etc.)	:	Yes
2.2.1.11.1.10.	Maximum vehicle design speed measured and gear in which it is reached	:	45 km/h and no gear
2.2.1.11.1.11.	Maximum vehicle design speed	:	45 km/h
2.2.1.11.1.12.	Exemption L3e-A3 and L4e-A3 vehicles; maximum vehicle design speed declared by manufacturer	:	Not applicable
2.2.1.11.2.	Propulsion unit performance data to be provided to measure/determine the torque and power of the propulsion on the engine dynamometer	:	Not applicable
2.2.1.11.2.1.	Details of propulsion(s) hardware and software tested, test equipment and settings relevant for propulsion unit performance measurements on engine dynamometer tests	:	Not applicable
2.2.1.11.2.1.1.	List of components and part numbers/markings relevant for propulsion unit performance measurement on engine dynamometer, referred to in Annex X to Commission Delegated Regulation (EU) No 134/2014	:	Not applicable
2.2.1.11.2.1.2.	Test fuel	:	Not applicable
2.2.1.11.2.1.3.	Powertrain lubricant specifications	:	Not applicable
2.2.1.11.2.1.4.	Atmospheric pressure (kPa)	:	Not applicable
2.2.1.11.2.1.5.	Relative humidity (%)	:	Not applicable
2.2.1.11.2.1.6.	Ambient temperature (K)	:	Not applicable
2.2.1.11.2.1.7.	Correction factor for reference atmospheric conditions α_1	:	Not applicable
2.2.1.11.2.1.8.	Correction factor for the efficiency of the transmission α_2	:	Not applicable
2.2.1.11.2.1.9.	Engine cooling temperature (K)	:	Not applicable
2.2.1.11.2.1.10.	Oil temperature at measuring point (K)	:	Not applicable
2.2.1.11.2.1.11.	Exhaust temperature (K)	:	Not applicable



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2.2.1.11.2.1.12.	The manufacturer shall indicate the propulsion unit performance test results below	:	
2.2.1.11.2.1.13.	Maximum permitted combustion engine/electric motor/propulsion rotation speed (min ⁻¹)	:	Not applicable
2.2.1.11.2.1.14.	Maximum net power combustion engine	:	Not applicable
2.2.1.11.2.1.15.	Maximum net torque combustion engine	:	Not applicable
2.2.1.11.2.1.16.	Maximum continuous-rated power electric motor	:	1.5 kW at 350 min ⁻¹
2.2.1.11.2.1.17.	Maximum continuous-rated torque electric motor	:	41.0 Nm at 350 min ⁻¹
2.2.1.11.2.1.18.	Maximum current e-motor at maximum continuous-rated power	:	29 A
2.2.1.11.2.1.19.	Maximum continuous total power for propulsion(s)	:	Not applicable
2.2.1.11.2.1.20.	Maximum continuous total torque for propulsion(s)	:	Not applicable
2.2.1.11.2.1.21.	Maximum peak power for propulsion(s)	:	1.9 kW at 320 min ⁻¹
2.2.1.11.2.1.22.	Power/mass in running order ratio	:	Not applicable
2.2.1.11.2.1.23.	Specific fuel consumption, g/kWh at maximum net power and power	:	Not applicable
2.2.1.11.2.1.24.	Propulsion unit performance sweep graphs of total power and torque vs. engine speed (1 200 rpm to propulsion speed governor rpm, step 400 rpm). Secondary variables: spark angle, A/F ratio and mass air-flow (measured or calculated)	:	Not applicable
2.2.1.11.2.1.25.	Maximum speed of vehicle and gear in which it is reached km/h) (only for subcategories: L1e, L2e, L6e, L7e-B1, L7e-C)	:	45 km/h and no gear
2.2.1.11.2.1.26.	Maximum declared vehicle speed (only for subcategories without maximum vehicle speed limitation: L3e, L4e, L5e, L7e-A and L7e-B2)	:	



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APPENDIX 3 – B1 Audible Warning Devices

0. Main Requirements

0.1. Requirements according to : Reg. (EU) 3/2014 Annex II
Including amendment (EU) 2016/1824
UNECE 28.00 Supplement 6

1. Witness details

1.1. Witness : Erich Zhang
1.2. Location of Test : Zhejiang Labs Vehicle Testing Co., Ltd.
No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang
Street, Yuhang District, Hangzhou City, Zhejiang
Province, China
1.3. Date of Test : 09/08/2022
1.4. Worst Case Rationale : Single specification
1.5. Tested vehicle : R68HM2004NA000001

2. Facility and Equipment Checks

2.1. Calibration certificates checked and valid,
recorded in the following table : Conform
2.2. All instruments are equipped with
identification label : Yes
2.3. Calibration certificates are complete of
calibration-chain with detailed information
regarding primary used. : Yes

Equipment	Serial / Certificate No.	Calibration due
Sound-level meter	CN 37XJ22032730-0013	05/12/2023
Acoustic calibrator	CN 37XJ22032730-0011	05/12/2023
Measure tape	CN 37XJ22032730-00095	05/12/2023

3. Details of Horns Fitted

3.1. Make and Type: LVEE / DL70-II
3.2. Voltage Rating: 12V
3.3. Number Fitted: 1
3.4. Approval Number: E32-28R-000002
3.5. Position: Front of the vehicle

4. Condition of test:

4.1. Wind: 0.4 m/s
4.2. Test area, general condition: Industrial zone

5. Test Results

5.1. Height of microphone above ground (m) 0.75
5.2. Sound level value (dB) 86



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APPENDIX 3 – B2 Braking, including anti- lock and combined brake systems

0. Main Requirements

0.1. Requirements according to : Reg. (EU) 3/2014 Annex III
Including amendment (EU) 2016/1824
UNECE 78.04 Supplement 1

1. Witness details

1.1. Witness : Erich Zhang
1.2. Location of Test : Zhejiang Labs Vehicle Testing Co., Ltd.
No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang
Street, Yuhang District, Hangzhou City, Zhejiang
Province, China
1.3. Date of Test : 09/08/2022

1.4. Worst Case Rationale

1.5. Tested vehicle : R68HM2004NA000001

3. Facility and Equipment Checks

3.1. Calibration certificates checked and valid : Conform
3.2. All instruments are equipped with
identification label : Yes
3.3. Calibration certificates are complete of
calibration-chain with detailed information
regarding primary used. : Yes

Equipment	Serial / Certificate No.	Calibration due
V-Box	CN 202210000804	24/04/2023
Force sensor	CN 37XJ22032730-0024	05/12/2023
Manometer	CN 37XJ22032730-0007	05/12/2023
Thermometer	CN 37XJ22032730-0003	05/12/2023

4. Summary of test results

4.1. Applicability :

	PASS	FAIL	N/A	COVERED PREVIOUS EXTENSION	See approval/Report Nr.
Dry Stops - Single Brake Control Actuated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dry Stop - All Service Brake Controls Actuated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
High Speed Stop	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wet Brake Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



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	PASS	FAIL	N/A	COVERED PREVIOUS EXTENSION	See approval/Report Nr.
Heat Fade Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hot Brake Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Determination of Peak Braking Coefficient (PBC)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Stops on a High Friction Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Stops on a High Friction Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wheel lock checks on high and low friction surfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wheel lock checks high to low friction surface transition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wheel lock checks low to high friction surface transition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Stops With an ABS Electrical Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5. Vehicle Details:

5.0.1. *Mass of the vehicle*

	MRO + Rider	Laden
Front Axle (kg) :	64	70
Rear Axle (kg) :	92	161
Total (kg) :	156	231

Braking system :

	Front	Rear
5.0.2. No of discs/drums and diameters (mm):	Disc, Ø 220 mm	Disc, Ø 155 mm
5.0.3. Linings (Manufacturer and material):	Huating / HMZ-7006	Huating / HMZ-7006
5.0.4. Hand or foot operated:	Hand	Hand
5.0.5. Lever ratio:	7.35	7.35
5.0.6. Brake calliper	1	1
5.0.7. Brake pump	2-Ø25 mm	1-Ø25 mm
5.0.8. Front/rear, CBS or split system:	Front/rear	
5.0.9. Brake distribution valve:	Not applicable	
5.0.10. Power assistance:	Not applicable	
4.0.11. ABS (controlled wheels, calibration):	Not applicable	



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5.1 Dry Stops - Single Brake Control Actuated

- 5.1.1 Performed laden, engine disconnected : Conform
- 5.1.2 Vehicles with CBS and split service brakes: also perform test lightly loaded : Not applicable
- 5.1.3 Initial brake temperature: $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$: Conform
- 5.1.4 Each service brake control is operated separately : Conform

Loaded conditions, engine disconnected

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Control Force (N)
Front	40	38,23	18,33	20,07	3,54	90
Rear	40	38,49	22,24	24,03	3,16	57
Limits (L1): Front				21,76	$L1 \geq 3,4$	≤ 200
Limits (L1): Rear				26,88	$L1 \geq 2,7$	≤ 200

5.2 Dry Stop - All Service Brake Controls Actuated

- 5.2.1 Performed lightly loaded, engine disconnected : Not applicable
- 5.2.2 Initial brake temperature: $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$: Not applicable
- 5.2.3 Simultaneous actuation of both service brake controls if so equipped or the single service brake system control for a service brake that operates on all wheels : Not applicable
- 5.2.4 Must achieve specified performance with no more than 6 stops : Not applicable

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	Front Control Force (N)	Rear Control Force (N)
All brakes	--	--	--	--	--	--
Limits (L3):				--	≤ 250	≤ 400

5.3 High Speed Stop

- 5.3.1 Performed lightly loaded, engine connected with transmission in highest gear : Not applicable
- 5.3.2 Initial brake temperature: $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$: Not applicable
- 5.3.3 Simultaneous actuation of both service brake controls if so equipped or the single service brake system control for a service brake that operates on all wheels : Not applicable



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5.3.4 Must achieve specified performance with no more than 6 stops : Not applicable

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Front Control Force (N)	Rear Control Force (N)
All brakes	-	-	-	-	-	-	-
Limits (L3):						≤ 200	≤ 350

5.4 Wet Brake Test

5.4.1 Each service brake control is tested separately : Conform

5.4.2 Performed laden, engine disconnected : Conform

5.4.3 Vehicles with CBS and split service brakes: also perform test lightly loaded : Not applicable

4.4.4 Run baseline test to achieve 2.5 - 3.0 m/s²: : Conform

Loaded conditions, engine disconnected

Baseline Tests	Nominal Speed (km/h)	Actual Speed (km/h)	Average Decel 0.5 - 1.0 s (m/s ²)	Highest Decel (m/s ²)	Av Control Force (N)
Front	40	38,77	2,15	3,73	69
	40	39,94	2,49	3,35	70
	40	38,91	2,26	4,12	62
Average:			2,30	3,73	67

Tests	Baseline	Nominal Speed (km/h)	Actual Speed (km/h)	Average Decel 0.5 - 1.0 s (m/s ²)	Highest Decel (m/s ²)	Av Control Force (N)
Rear		40	38,76	2,09	4,92	67
		40	39,07	1,54	3,73	66
		40	38,37	2,43	3,93	51
Average:			2,02	4,19	61	

5.4.5 Ride the vehicle with water delivery for ≥ 500 m : Not applicable

5.4.6 Make a stop using the average control force from the baseline test : Conform



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Wet Tests	Nominal Speed (km/h)	Actual Speed (km/h)	Average Decel 0.5 - 1.0 s (m/s ²)	Highest Decel (m/s ²)	Av Control Force (N)
Front	40	38,60	2,34	3,95	65
Rear	40	38,49	1,89	4,58	57
Limits: Front			1,4	4.5	67
Limits: Rear			1,2	5.0	61

5.5 Heat Fade Test

5.5.1 Heating Procedure

5.5.1.1 Test Speed	:	Not applicable
5.5.1.2 Vehicle weight and Engine status	:	Not applicable
5.5.1.3 Initial brake temperature	:	Not applicable
5.5.1.4 First stop	:	Not applicable
Subsequent stops		Not applicable

5.5.2 Hot Brake Stops

5.5.2.1 Within 1 minute of completing the heating procedure perform one stop under the same conditions as the baseline test but with a control force of no more than that used in the actual test		Not applicable
---	--	----------------

Loaded conditions, engine disconnected

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Control Force (N)
Front	--	--	--	--	--	--
Rear	--	--	--	--	--	--
Limits (L1): Front				--	--	≤ --
Limits (L1): Rear				--	--	≤ --



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5.6 ABS TEST REQUIREMENTS

5.6.1 Determination of Peak Braking Coefficient (PBC)

Friction type	Time	Peak braking coefficient	
		measured	required
High	--	--	≥ 0,9
Low	--	--	≤ 0,45

5.6.2 Stops on a High Friction Surface

5.6.2.1	Test Speed	:	Not applicable
5.6.2.2	Simultaneous actuation of both service brake controls if so equipped or the single service brake system control for a service brake that operates on all wheels	:	Not applicable
5.6.2.3	If one wheel is not equipped with ABS, actuate the control so as not to cause wheel lock	:	Not applicable
5.6.2.4	Apply control force so ABS is fully cycling throughout stop, down to 10 km/h	:	Not applicable
5.6.2.5	Must achieve specified performance with no more than 6 stops	:	Not applicable

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Front Control Force (N)	Rear Control Force (N)
ABS both brakes	--	--	--	--	--	--	--
Limits (L1):				--	≥ --		



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5.6.3 Stops on a Low Friction Surface

- 5.6.3.1 Test Speed : Not applicable
- 5.6.3.2 Simultaneous actuation of both service brake controls if so equipped or the single service brake system control for a service brake that operates on all wheels : Not applicable
- 5.6.3.3 If one wheel is not equipped with ABS, actuate the control so as not to cause wheel lock : Not applicable
- 5.6.3.4 Apply control force so ABS is fully cycling throughout stop, down to 10 km/h : Not applicable
- 5.6.3.5 Must achieve specified performance with no more than 6 stops : Not applicable

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Front Control Force (N)	Rear Control Force (N)
ABS – both brakes	--	--	--	--	--	--	--
Limits (L1):				--	≥ --		

5.6.4 Wheel lock checks on high and low friction surfaces

- 5.6.4.1 Initial brake temperature ≥ 55 ° C and ≤ 100 ° C. : Not applicable
- 5.6.4.2 Test speed:
 - High friction: Lower of 80 km/h or 0.8 Vmax : Not applicable
 - Low friction: Lower of 80 km/h or 0.8 Vmax : Not applicable
- 5.6.4.3 Each service brake control actuated separately : Not applicable
- 5.6.4.4 If each brake system has ABS, also test both controls together : Not applicable
- 5.6.4.5 Apply control force so ABS is fully cycling throughout stop, down to 10 km/h : Not applicable
- 5.6.4.6 There must be no wheel lock and the vehicle must remain in the test lane : Not applicable
- 5.6.4.7 Vehicle meets requirements on high friction surface : Not applicable
- 5.6.4.8 Vehicle meets requirements on low friction surface : Not applicable



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Manufacturer: ZHEJIANG YIXING INDUSTRY AND
TRADE LIMITED
Type: HM-2

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5.6.5 Wheel lock checks high to low friction surface transition

- | | | | |
|---------|--|---|----------------|
| 5.6.5.1 | Initial brake temperature $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$. | : | Not applicable |
| 5.6.5.2 | Test speed: that which will result in a transition speed of the lower of 50 km/h or 0.5 Vmax | : | Not applicable |
| 5.6.5.3 | Each service brake control actuated separately | : | Not applicable |
| 5.6.5.4 | If each brake system has ABS, also test both controls together | : | Not applicable |
| 5.6.5.5 | Apply control force so ABS is fully cycling throughout stop, down to 10 km/h | : | Not applicable |
| 5.6.5.6 | Actuate the brake before the vehicle reaches the transition | : | Not applicable |
| 5.6.5.7 | There must be no wheel lock and the vehicle must remain in the test lane | : | Not applicable |

5.6.6 Wheel lock checks low to high friction surface transition

- | | | | |
|---------|--|---|----------------|
| 5.6.6.1 | High friction surface has PBC ≥ 0.9 | : | Not applicable |
| 5.6.6.2 | Initial brake temperature $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$. | : | Not applicable |
| 5.6.6.3 | Test speed: that which will result in a transition speed of the lower of 50 km/h or 0.5 Vmax | : | Not applicable |
| 5.6.6.4 | Each service brake control actuated separately | : | Not applicable |
| 5.6.6.5 | If each brake system has ABS, also test both controls together | : | Not applicable |
| 5.6.6.6 | Apply control force so ABS is fully cycling throughout stop, down to 10 km/h | : | Not applicable |
| 5.6.6.7 | Actuate the brake before the vehicle reaches the transition | : | Not applicable |
| 5.6.6.8 | There must be no wheel lock and the vehicle must remain in the test lane | : | Not applicable |



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5.6.7 Stops With an ABS Electrical Failure

- 5.6.7.1 With the ABS electrical system disabled perform the Section 3 test (dry road, single brake control actuated): : Not applicable
- 5.6.7.2 Warning Lamp Performance: : Not applicable
- 5.6.7.3 A yellow warning lamp shall illuminate whenever there is a malfunction that affects the generation or transmission of signals in the ABS system : Not applicable
- 5.6.7.4 The warning lamp shall illuminate with the activation of the ignition switch and extinguish when the check has been completed : Not applicable
- 5.6.7.5 Whenever the ignition switch is on, the lamp must remain illuminated while a failure condition exists : Not applicable
- 5.6.7.6 Initial brake temperature: $\geq 55^{\circ}\text{C}$ and $\leq 100^{\circ}\text{C}$: Not applicable
- 5.6.7.7 Each service brake control is operated separately : Not applicable
- 5.6.7.8 Must achieve specified performance with no more than 6 stops : Not applicable

Lightly loaded, engine disconnected

Brake System	Nominal Speed (km/h)	Actual Speed (km/h)	Actual Distance (m)	Corrected Distance (m)	MFDD (m/s ²)	Control Force (N)
Front	--	--	--	--	--	--
Rear	--	--	--	--	--	--
Limits (L1): Front				--	$L1 \geq --$	$\leq --$
Limits (L1): Rear				--	$L1 \geq --$	$\leq --$



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APPENDIX 3 – B3 Electrical Safety

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex IV Including amendment (EU) 2016/1824 UNECE R100.02 Supplement 4
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested sample	:	R68HM2004NA000001
1.5.	Facility and Equipment Checks	:	
1.5.1.	Calibration certificates checked and valid, recorded in the following table	:	Conform
1.5.2.	All instruments are equipped with identification label	:	Yes
1.5.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

		PASS	FAIL	N/A
1.3.1.3.1.	General requirements concerning the protection against electrical shock and electrical safety applying to high voltage buses under conditions where they are not connected to external high voltage power supplies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.2.	The protection against direct contact with live parts. The protections provided (e.g. solid insulator, barrier, enclosure) shall not be able of being opened, disassembled or removed without the use of tools.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.3.	The protection against indirect contact with live parts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.4.	Isolation resistance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.5.	Requirements concerning the REESS			
1.3.1.3.5.1	Protection in case of excessive current	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.6.	Prevention of accumulation of gas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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	PASS	FAIL	N/A
1.3.1.3.7. Protection against electrolyte spills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.3.1.3.8. Accidental or unintentional detachment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.9. In-use safety requirements			
1.3.1.3.9.1 Propulsion system power-on and power-off procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.10. Driving with reduced power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.11. Driving backwards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1.3.12. Determination of hydrogen emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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APPENDIX 3 – B4

Endurance Testing of Functional Safety Critical Systems, Parts and Equipment

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex V Including amendment (EU) 2016/1824
1.	Detail	:	
1.1.	Remarks	:	See manufacturer information declaration

PASS FAIL N/A

<i>Ann V</i>	Vehicles and their systems, parts and equipment critical for functional safety are capable of withstanding use under normal conditions and when serviced in accordance with the manufacturer's recommendations, taking into account regular and scheduled maintenance and specific equipment adjustments, carried out as per the clear and unambiguous instructions provided by the vehicle manufacturer in the instruction manual provided with the vehicle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ann V</i>	Normal use of a vehicle covers five years after first registration and a total distance travelled equal to 1.5 times the distance, as specified in Annex VII to Regulation (EU) No 168/2013, in direct relation to the vehicle category in question and the emission stage (i.e. Euro level), according to which the vehicle is to be type approved; however, the required distance does not exceed 60,000 km for any vehicle category. <i>Note: Normal use does not include use under harsh conditions (e.g. extreme cold or heat) and road conditions inflicting damage to the vehicle due to its state of repair.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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APPENDIX 3 – B7
Driver-operated controls including identification of controls, tell-tales and indicators

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex VIII Including amendment (EU) 2016/1824 UNECE R60.00 Supplement 5 UNECE R39.01 Supplement 1
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	09/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested sample	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2	All instruments are equipped with identification label	:	Yes
2.3	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
V-Box	CN 202210000804	23/04/2023

3.	Condition of test:	:	
3.1.	Ambient temperature (K)	:	Speedometer temperature within range 23 ± 5 °C: 26 °C <i>Note: The technical service may accept an increased temperature range of 296 ± 15 K (23 ± 15 °C) instead of the range stated in point 5.2.3 of UNECE Regulation 39 if it can be demonstrated that the speedometer equipment is not sensitive to such temperature variations.</i>
3.2.	Tyre Fitted on a vehicle	:	Front : 130/70-12 Rear : 225/40-10
3.3.	Tyre pressure (kPa)	:	Front: 280 kPa, rear: 250 kPa
3.5.	Test area, general condition	:	Industrial zone
3.6.	Mass of vehicle in running order	:	156 kg



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4. Speedometer Specification

- 4.1. Make : Lingde
- 4.2. Type : DN2.0
- 4.3. Location : conform
- 4.4. Legible day and night : conform
- 4.5. Range of speed indicated (scale) : 0~80 km/h
- 4.6. Manufacturer's quoted maximum speed : 45 km/h
- 4.7. Analogue scale/Digital display : Digital display
- 4.8. Steps for marked speed indication : 1 km/h
- 4.9. Overall transmission ratio : Not applicable

5. Test Results

Requirement: $0 \leq V_1 - V_2 \leq (V_2/10) + 4 \text{ km/h}$

Test no.	Indicated speed V_1	True speed V_2	$V_1 - V_2$	$(V_2/10) + 4$ km/h
	(km/h)	(km/h)	(km/h)	(km/h)
1	36	32.7	3.3	7.27
2	n.a.	<u>80,0</u> or 80% Vmax	n.a.	n.a.
3	n.a.	120,0	n.a.	n.a.



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Control fitted	Y	Y	Y	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Correct symbol	Y	Y	Y	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Visibility and clarity requirements met	Y	Y	Y	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Symbol on (o) or close (c) to control	C	C	C	N/A	N/A	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Tell-tale required: Y/N/O (Optional)	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y*	N	N	N	N	N
Tell-tale fitted	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y*	N/A	N/A	N/A	N/A	N/A
Colour requirements of tell-tale	Blue	N/A	Green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Colour of tell-tale complies	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tell-tale has correct symbol	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Symbol on or close to tell-tale	O	N/A	O	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Can be via panel lamp, provided panel lamp cannot be turned off; brightness adjustment acceptable.



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APPENDIX 3 - B8

Installation of lighting and light- signalling devices, including automatic switching of lighting

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 3/2014 Annex IX Including amendment (EU) 2016/1824 UNECE 74.01 Supplement 7 (Moped)
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1 Calibration certificates checked and valid, recorded in the following table	:	Yes
2.2 All instruments are equipped with identification label	:	Conform
2.3 Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Conform

Equipment	Serial / Certificate No.	Calibration due
Tape	CN 37XJ22032730-0005	12/05/2023

Requirement	Vehicle and lamps are as specified in documentation	All lamps and reflectors securely mounted	Not likely to become obscured or misaligned	Headlamp can be easily adjusted	All pairs of lamps are symmetrically mounted	All pairs of lamps appear to be the same colour and brightness	No red light visible to the front and no white light visible to the rear
All lamps comply	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Specifications of Individual Lamps					
Requirement	Any specific mounting recommendations have been complied with	All lamps and reflectors (except head, front fog and reversing lamps) have reference axis $\pm 3^\circ$ parallel to the ground and to the longitudinal plane	All side reflectors have their reference axis $\pm 3^\circ$ perpendicular to the longitudinal median plane	All the requirements of sub-paragraphs (6.1) to (6.12) are complied with as appropriate to the motorcycle category	Dipped (passing) headlamp – possible to re-set alignment using normal screws
All lamps comply	Yes	Yes	Yes	Yes	Yes



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3. Test results

3.1	Lighting and light-signalling devices	:	Conform
3.2	Devices fitted	:	Conform
3.3	Grouping and electrical connections	:	Conform

Component Approval Mark Details

Main beam head lamp	CR-BS PL E57 020031
Dip beam head lamp	
Front position lamp	E57 R50-000031
Front direction indicators	Option 1: 11 E4 50R-002854 Option 2: 11 E4 50R-01 3107 Option 3: 11 E57 50R-01 0151
Front fog lamps	---
Day time running lamp(s)	---
Rear direction indicators	Option 1: 11 E4 50R-002854 Option 2: 11 E4 50R-01 3107 Option 3: 11 E57 50R-01 0151
Rear position lamp	Option 1: E4 50R-00 26277
Rear stop lamp	Option 2: E4 50R-01 3108
Licence plate lamp	Option 1: E4 50R-00 26277 Option 2: E4 50R-01 3108
Rear fog lamp	---
Rear reflector	IA E4-02.3713
Side reflectors	IA E4-02.3713



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APPENDIX 3 - B9 Rearward visibility

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex X Including amendment (EU) 2016/1824 UNECE 81.00 Supplement 2
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2	All instruments are equipped with identification label	:	Yes
2.3	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Tape	CN 37XJ22032730-0005	12/05/2023

3.	Test results	:	
3.1.	Mirror fitted on a vehicle (approval number)	:	E11 81R-002066



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APPENDIX 3 – B12 Seating positions (saddles and seats)

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 3/2014 Annex XIII Including amendment (EU) 2016/1824
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1. Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Tape	CN 37XJ22032730-0005	12/05/2023

	PASS	FAIL	N/A
General Requirements			
1.1. Vehicles are fitted with at least one seat or saddle: - One seat* - Saddle* <i>*Strikethrough, as appropriate.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1.1. All seating positions are forward-facing.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2. Vehicles without bodywork may have saddles.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3. Vehicles of categories L2e, L5e, L6e and L7e, which are fitted with bodywork, have seats.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.5. All seats have seat backs.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.1. Spaces resembling seats, and on which a 5 th percentile adult female manikin can be seated, are regarded as seats and therefore meet all the relevant requirements of this annex.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.7. Height of the R-point of the seating position of the driver or rider is: - ≥ 400 mm in the case of vehicles of categories L2e, L5e, L6e and L7e (*) <i>*Strikethrough, as appropriate.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	PASS	FAIL	N/A
1.8. All seats and saddles, which are fitted with safety belt anchorage points and/or safety belts, are capable of withstanding a deceleration of 10 g for 20 ms in forward direction without breakage. If fitted, locking, adjustment and displacement systems do not malfunction or release. Displacement systems fitted to seats are capable of being manually activated once, after being subjected to the deceleration.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
For seats:			
By submitting representative parts of the vehicle to a deceleration of 10 g in forward direction for at least 20 ms;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>or</u>			
By performing the test in points 3.4.4 to 3.4.4.2 of Part 2 of Annex XII.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
For saddles:			
By exerting in the forward direction, in its centre of gravity, a force equal to 10 times the weight of the complete saddle in question.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Child Restraint Systems			
2.1. Child restraint systems complying with UNECE Regulation 44 (1) may be recommended by the vehicle manufacturers for use in vehicles of categories L2e, L5e, L6e and L7e, fitted with safety belts and/or ISOFIX.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.1.1. In this case, all relevant requirements of UNECE Regulation 16 regarding the installation of child restraint systems are met, including those regarding information provided in the vehicle's instruction manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2. Child restraint systems complying with UNECE Regulation 44 may be recommended by the vehicle manufacturers for use in side-cars of vehicles of category L4e, fitted with safety belts and/or ISOFIX.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.1. In this case, the safety belt anchorages comply with the requirements of points 1.3 to 1.6.2 of Part 1 of Annex XII, and points 1 to 3.6.1 of Part 2 of Annex XII; however, seats in side-cars may be fitted with two-point lap belts.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2.2. All relevant requirements of UNECE Regulation 16 regarding the installation of child restraint systems are met, including those regarding the information to be provided in the vehicle's instruction manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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APPENDIX 3 – B13 Steer-ability, cornering properties and turn- ability

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 3/2014 Annex XIV Including amendment (EU) 2016/1824
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	09/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1 Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2 All instruments are equipped with identification label	:	Yes
2.3 Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
V-Box	CN 202210000804	24/04/2023

3. Condition of test:	
3.1. Tyre pressure (kPa):	Front: 280 kPa, rear: 250 kPa
3.2. Test area, general condition:	Industrial zone
3.3. Vehicle mass:	231 kg
4. Test results:	
4.1. Turning from straight ahead:	Yes
4.2. Test of speed on turning circle:	23 km/h
4.3. Straight test:	36 km/h
4.4. Constant turning	Yes
4.5. Requirements as per directive described in this test record:	Conform



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APPENDIX 3 – B14 Installation of tyres

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex XV Including amendment (EU) 2016/1824 UNECE R75.00 supplement 18
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Not applicable
2.2.	All instruments are equipped with identification label	:	Not applicable
2.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Not applicable

Equipment	Serial / Certificate No.	Calibration due
--	--	--

3.	Vehicle specifications	
3.1.	Mass of the vehicle in running order (declared):	74 kg
3.2.	Technically permissible maximum mass (declared):	231 kg
3.3.	Front technically permissible maximum mass (declared):	70 kg
3.4.	Rear technically permissible maximum mass (declared):	161 kg
3.5.	Maximum designed speed	45 km/h



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4. Test Results

	Size	LCI	Load (kg)	Speed (rating)	Speed (km/h)	Type approval No.
Front	130/70-12	62	265	J	100	E9-75R-001205
Rear	225/40-10	58	236	M	130	E9-75R-001219
Spare	-	-	-	-	-	--

*All tyres fitted to vehicles, including any spare tyre, are type approved according to UNECE Regulation 75, as referred to in paragraph 1.1 to Regulation 3/2014/EU.

**Where a vehicle is designed for conditions of use that are incompatible with the characteristics of tyres type approved according to UNECE Regulation 75 and is therefore necessary to fit tyres with different characteristics, the requirements of paragraph 1.1 do not apply, provided that the following conditions are met:

- The tyres are type approved according to Council Directive 92/23/EEC (1), Regulation (EC) No 661/2009 of the European Parliament and of the Council (2), or UNECE Regulation No 106;
- Approval authority and technical service are satisfied that the tyres fitted are suitable for the operating conditions of the vehicle. The nature of the exemption and reasons for acceptance are clearly stated in the test report.

PASS FAIL N/A

General Requirements

1.1.	All tyres fitted to vehicles, including any spare tyre, are type-approved according to UNECE Regulation 75.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1.2.	Vehicles of categories L1e, L2e and L6e with a technically permissible maximum mass ≤ 150 kg may be fitted with non-type approved tyres, with a section width ≤ 67 mm.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.1.	All tyres normally fitted to the same axle, except those on side-cars of L4e category vehicles, are of the same type.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.	The vehicle manufacturer may restrict the category of use of original and replacement tyres that may be installed on the vehicle. In this case, the categories of use of tyres that may be fitted to the vehicle shall be clearly stated in the vehicle's instruction manual	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.3.	The space in which each wheel revolves shall be such as to allow unrestricted movement when using the maximum permissible size of tyres and rim widths, taking into account the minimum and maximum wheel off-sets if applicable, within the minimum and maximum suspension and steering constraints as declared by the vehicle manufacturer.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3.1.	All tyres that may be fitted to the vehicle in accordance with point 2.2. shall be taken into account for the determination of the permissible overall dimensions (i.e. the maximum envelope) of the relevant tyre, as applicable in the Union legislation at the time of type-approval testing of the vehicle. For this purpose, either the specifications as provided for in Annex 5 of UNECE Regulation No 75 or the permitted percentages as provided for sizes not included in that Annex shall be taken into account (e.g. overall width of multiservice tyres (MST) + 25 %, normal and snow service tyres + 10 % in case of rim diameter code 13 and above and + 8 % in case of rim diameter codes up to 12 inclusive).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3.2.	the vehicle manufacturer shall take into account both the permitted categories of use as well as the speed category that is compatible with the maximum design vehicle speed, for the determination of the permitted tolerance laid down in point 4.1. of Annex 9 to UNECE regulation No 75 (i.e. $H_{dyn} = H \times 1,10$ up to $H_{dyn} = H \times 1,18$). More stringent categories may be taken into account at the discretion of the vehicle manufacturer.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4.	The technical service may agree to an alternative test procedure (e.g. virtual testing) to verify that the requirements of point 2.3. to 2.3.2. are met, provided that the clearance between the tyre's maximum envelope and vehicle structure exceeds 10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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PASS FAIL N/A

mm at all points.';

- 3.1. Maximum load rating of each tyre with which the vehicle is fitted is at least equal to the following:
- Maximum permissible mass on the axle where the axle is equipped with one tyre only; PASS FAIL N/A
 - Half of the maximum permissible mass on the axle where the axle is equipped with 2 tyres in single formation; PASS FAIL N/A
 - 0.54 times the maximum permissible mass on the axle where the axle is equipped with 2 tyres in dual (twin) formation; PASS FAIL N/A
 - 0.27 times the maximum permissible mass on the axle where the axle is equipped with 2 sets of tyres in dual (twin) formation; PASS FAIL N/A
 - With reference to the maximum permissible mass on each axle, as declared by the vehicle manufacturer. PASS FAIL N/A



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APPENDIX 3 – B17

Maximum continuous total power and/or maximum vehicle speed limitation by design

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 3/2014 Annex XVIII Including amendment (EU) 2016/1824
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	09/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.		:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid	:	Conform
2.2.	All instruments are equipped with identification label	:	Yes
2.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

PASS FAIL N/A

1.1.2.01	For vehicles with positive ignition engines propelling the vehicle either directly or through a mechanical or hydraulic transmission, maximum vehicle speed and/or maximum power is limited by adjusting two or more of the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.1.	- Properties, timing or presence of the spark igniting the fuel/air mixture in the cylinder(s)* - Amount of air intake of the engine* - Amount of fuel intake of the engine* - Electronically and/or mechanically controlled output rotation speed of the drive-train, such as clutch, gearbox or final drive*			
1.1.2.1.1.	Adjustment of the spark properties, including timing and/or presence, in order to limit the maximum design vehicle speed and/or maximum power shall be allowed for (sub)categories L3e-A2 (only if maximum net power ≥ 20 kW), L3e-A3, L4e-A, L5e, L6eB and L7eC. It may also be allowed for other (sub)categories provided that the adjustment concept does not negatively affect emission of gaseous pollutants, CO2 emissions and fuel consumption while at maximum design vehicle speed and/or maximum power conditions which shall be verified by the technical service.;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.2.	For vehicles with compression ignition engines propelling the vehicle either directly or through a mechanical or hydraulic transmission, maximum vehicle speed and/or maximum power is limited by adjusting two or more of the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	- Amount of air intake of the engine* - Amount of fuel intake of the engine* - Electronically and/or mechanically controlled output rotation speed of the drive-train, such as clutch, gearbox or final drive*			



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	PASS	FAIL	N/A
1.1.2.3. For vehicles that are propelled by means of one or more electric motors, including pure and hybrid electric vehicles, maximum vehicle speed and/or maximum power are limited by means of two or more of the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Reduction of the maximum power output of one or more electric motors, based on the vehicle or rotation speed, as sensed internally to the electric motor*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Reduction of the maximum power output of one or more electric motors, based on the actual vehicle speed, as sensed fully externally to the electric motor*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Physical vehicle speed limitation by means of internal or external components, such as a maximum achievable revolution speed of an electric motor*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.4. For vehicles that are propelled by means other than those listed above, the maximum vehicle speed and/or maximum power is limited by two or more separate means, which are, as far as possible, based on the abovementioned adjustment, reduction or physical speed limitation principles.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.5. At least two of the limitation methods used, as referred to in points 1.1.2.1 to 1.1.2.4., shall operate independently of each other, be different in nature and have different design philosophies, although they may apply similar elements (e.g. both methods based on the notion of rotation speed as a criterion, but one measured inside a motor and the other in the drive-train's transmission). Failure of one method to work as intended (e.g. due to tampering) shall not impair the limitation function of other methods. In this case, the maximum power and/or vehicle speed which can be attained may be lower than under normal conditions. Without prejudice to the conformity of production tolerance set 15.10.2016 L 279/10 Official Journal of the European Union EN out in point 4.1.4. of Annex IV to Regulation (EU) No 44/2014, the maximum power and/or vehicle speed may not be higher than demonstrated at type-approval, if one out of the two redundant limitation methods is eliminated.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1.2.6. The vehicle manufacturer shall be allowed to make use of limitation methods other than those listed in points 1.1.2.1 to 1.1.2.4. if the manufacturer can prove to the technical service and to the satisfaction of the type approval authority that those alternative limitation methods meet the principles of redundancy set out in point 1.1.2.5. and provided that at least one of the parameters listed in points 1.1.2.1., 1.1.2.2. or 1.1.2.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.7. The manufacturer shall be allowed to combine two or more of the individual limitation methods referred to in points 1.1.2.1 to 1.1.2.4. as part of a limitation strategy.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.8. Individual limitation methods or combinations of the limitation methods referred to in points 1.1.2.1 to 1.1.2.4. may be applied more than once provided that their multiple uses operate independently of each other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.2.9. A limitation strategy that in case of failure includes the activation of a special operating mode with substantially reduced maximum vehicle speed and/or maximum power not suitable for normal operation or that activates an ignition interlock preventing the engine from running for as long as the failure remains, shall be regarded as one limitation method	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.3. Maximum vehicle speed or power is not limited by means of a mechanical throttle stop or any other mechanical stop that limits the opening of a throttle to restrict the engine's air intake.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.4. The provision and use of any other means enabling the vehicle operator to directly or indirectly adjust, set, select or alter the maximum propulsion unit performance determined on the basis of the information submitted in accordance with Annex I, Part B, point 2.8., items 1.8.2. to 1.8.9. of Regulation (EU) No 901/2014 resulting in exceedance is prohibited	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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PASS FAIL N/A

- 2.1. The vehicle manufacturer shall demonstrate compliance with the specific requirements of points 1.1 to 1.1.2.9 by proving that two or more of the methods implemented, by integrating specific devices and/or functions in the vehicle propulsion system, ensure the required maximum continuous rated or net power and/or maximum vehicle speed limitation and that each method does so in a fully independent manner



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APPENDIX 3 – C1

Powertrain tampering prevention (anti-tampering) measures

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 44/2014 Annex II Including amendment (EU) 2018/295
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	09/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1. Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
V-Box	CN 202210000804	24/04/2023

		PASS	FAIL	N/A						
2.3.1.	Interchangeability of the following parts, in an individual or combined way, does not result in an increase of the propulsion unit performance exceeding the values measured and reported at type approval, meaning that in any case the maximum design vehicle speed and/or the maximum continuous rated and/or net engine power of the relevant category remains within the conformity of production boundaries set out in paragraph 4.1.4 of Annex IV.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
2.4.	In no case may the approved maximum design vehicle speed, and/or the maximum continuous rated and/or net engine power of the relevant (sub)-category set out in Annex I to Regulation (EU) No 168/2013, be exceeded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
2.5.	In the case of chains or cogged belts, the number of teeth is displayed on the pinions.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="2">Number of teeth</th> </tr> </thead> <tbody> <tr> <td>Chains:</td> <td>--</td> </tr> <tr> <td>Cogged belts:</td> <td>--</td> </tr> </tbody> </table>	Number of teeth		Chains:	--	Cogged belts:	--			
Number of teeth										
Chains:	--									
Cogged belts:	--									
2.7.	If the ignition timing is adjustable, the propulsion unit performance is measured with the ignition advance set within $\pm 5^\circ$ of the value at which the maximum engine power is achieved.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						

Specific Requirements for (Sub)-category L1e, L2e and L6e Vehicles



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		PASS	FAIL	N/A
3.1.	Acceptable tolerance for maximum vehicle speed and/or power limitation of category L1e, L2e and L6e vehicles is $\pm 5\%$ of the maximum design vehicle speed and/or net, and/or continuous rated power classification criteria referred to in Annex I to Regulation (EU) No 168/2013.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements for Category L1e, L2e and L6e Vehicles Equipped with a Combustion Engine				
3.2.1.1.	Each intake pipe is fixed with shear-bolts or bolts removable only using special tools. A restricted section, indicated on the outside, is located inside the pipes; at that point, the wall is less than 4 mm in thickness, or 5 mm if composed of a flexible material, such as rubber.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.1.2.	Any interference with the pipes aimed at modifying the restricted section leads to either the destruction of the pipes, or complete and permanent malfunctioning of the engine until they are restored to their approved condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.1.3.	A marking with indication of the vehicle (sub-) category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the pipes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.2.1.	If an engine is equipped with (a) reed valve(s), it (they) are fixed with shear-bolts, which prevent re-use of its support, or bolts removable only using special tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.2.2.	After mounting, the maximum thickness of a cylinder-head gasket, if any, does not exceed 1.3 mm.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.2.3.	For two-stroke engines, the piston, when in position at top dead centre, does not cover the inlet port. <i>Note: This requirement does not apply to those parts of the transfer/scavenging port that coincide with the inlet port in the case of vehicles, the engine of which is equipped with an induction system incorporating reed valve(s).</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.2.4.	For two-stroke engines, rotation of the piston through 180° does not increase engine performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.2.5.	For two-stroke engines, the maximum thickness of any gasket between the base of the cylinder and the crankcase, if any, may not exceed 0,5 mm, after mounting.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.3.1.	No artificial restriction is permitted in the exhaust system. <i>Note: Valve guides of a four-stroke engine are not to be considered artificial restrictions.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.3.2.	Removing the resonator tube, if installed, does not result in an increase in propulsion unit performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2.3.3.	Part(s) of the exhaust system inside the silencer(s) that determine(s) the effective length of the exhaust pipe are affixed to the silencer(s) or expansion box(es) in such a way that it (they) cannot be removed.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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Continuous Variable Transmission (CVT)

- | | | | | |
|--------|---|--------------------------|--------------------------|-------------------------------------|
| 3.3.1. | CVT Transmission covers, if available, shall be fixed by means of at a minimum 2 shear bolts or be disassembled only by using special tools | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3.3.2. | The CVT mechanism intended to limit the drive ratio by limitation of the effective distance between two discs shall be fully integrated in one or both discs in such a way that it is impossible to modify the effective distance beyond a limit that would result in an increase of the maximum vehicle speed of more than 10 % of this maximum permissible vehicle speed without destroying the disc system. If the manufacturer employs interchangeable spacer rings in the CVT to adjust the maximum vehicle speed, the complete removal of these rings shall not increase the maximum vehicle speed with more than 10 %. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Specific Requirements for (Sub)-categories L3e-A1 and L4e-A1

- | | | | | |
|---------|--|--------------------------|--------------------------|-------------------------------------|
| 4.1. | Subcategory L3e-A1 and L4e-A1 vehicles shall comply with the requirements of either points 4.2. to 4.2.3., or points 4.3., 4.3.1. and 4.3.2., or points 4.4., 4.4.1. and 4.4.2., and with points 4.5., 4.6. and 4.7. In addition, they shall comply the requirements of points 3.2.2.1., 3.2.2.3., 3.2.2.4., 3.2.2.5., 3.2.3.1. and 3.2.3.3. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2. | An irremovable sleeve must be located in the inlet conduit. If such a sleeve is located in the intake pipe, the latter shall be fixed to the engine block by means of shear-bolts or bolts removable only using special tools | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.1. | Sleeve has a minimum hardness of 60 HRC. In the restricted section, it does not exceed 4 mm in thickness. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.2. | Any interference with the sleeve aimed at removing or modifying it leads to either the destruction of the sleeve and its support, or complete and permanent malfunctioning of the engine until it is restored to its approved condition. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.3. | Marking with indication of the vehicle category or categories is:
- Legible on the surface of the sleeve*
- Not far from it*
<i>*Strikethrough, as appropriate.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.5. | Each intake pipe is fixed with shear-bolts or bolts removable only using special tools. A restricted section, indicated on the outside, is located inside the pipes; at that point, the wall is:
- < 4 mm in thickness*
- 5 mm, if composed of a flexible material, such as rubber*
<i>*Strikethrough, as appropriate.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.6. | Any interference with the pipes aimed at modifying the restricted section leads to either the destruction of the pipes or complete and permanent malfunctioning of the engine until they are restored to their approved condition. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.7. | Marking with indication of the vehicle (sub)-category, as defined in Articles 2 and 4 of Annex I to Regulation (EU) No 168/2013, is legible on the pipes. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.8. | Part of the inlet conduit located in the cylinder head has a restricted section. In the whole inlet passage, there is not a more restricted section (except the valve-seat section). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.9. | Any interference with the conduit aimed at modifying the restricted section leads to either the destruction of the pipe, or complete and permanent malfunctioning of the engine until it is restored to its approved condition. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.2.10. | Marking with indication of the vehicle category, as referred to in Article 39 of Regulation (EU) No 168/2013, is legible on the cylinder head. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



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4.2.11.	Diameter of the restricted sections referred to in paragraph 4.2 may vary according to the (sub)-category vehicle concerned.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.3.	Each intake pipe shall be fixed with shear-bolts or bolts removable only using special tools. A restricted section, indicated on the outside, shall be located inside the pipes; at that point the wall shall be less than 4 mm in thickness, or 5 mm if composed of a flexible material such as rubber	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.3.1.	Any interference with the pipes aimed at modifying the restricted section shall lead to either the destruction of the pipes or complete and permanent malfunctioning of the engine until they are restored to their approved condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.3.2.	A marking with indication of the vehicle (sub-) category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the pipes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.	The part of the inlet conduit located in the cylinder head shall have a restricted section. In the whole inlet passage, there shall not be a more restricted section (except the valve-seat section).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.1.	Any interference with the conduit aimed at modifying the restricted section shall lead to either the destruction of the pipe or complete and permanent malfunctioning of the engine until it is restored to its approved condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.2.	A marking with indication of the vehicle category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the cylinder head.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.5.	The diameter of the restricted sections referred to in point 4.2. may vary according to the (sub-) category vehicle concerned.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.6.	The manufacturer shall supply the diameter(s) of the restricted section(s) and demonstrate to the approval authority and technical service that this restricted section is the most critical for the passage of gases, and that there is no other section which, if modified, could increase propulsion unit performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.7.	After mounting, the maximum thickness of a cylinder-head gasket shall not exceed 1,6 mm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Specific Requirements for Other (Sub)-categories of Vehicle within the Scope of Point 1.3				
5.1.	Any variant or version under the same type of vehicle of subcategory L3e-A2 or of subcategory L4e-A2 complying with the conversion requirements set out in point 4 of Annex III, shall not be derived from a L3e-A3 or L4e-A3 type, variant or version with a maximum net engine power and/or maximum continuous rated power more than twice the values set out in the classification of subcategories L3e-A2 or L4e-A2 in Annex I to Regulation (EU) No 168/2013 (e.g. 70 kW to 35 kW or lower, 50 kW to 35 kW or lower).';	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.	The manufacturer shall declare that modifications and interchangeability of the characteristics and components listed below shall not lead to: - for vehicles of subcategory L3e-A2 and L4e-A2, exceeding the double of the net engine power or maximum continuous rated power - for vehicles of category L7e, exceeding the approved propulsion unit performance; *Strikethrough, as appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.1.	Spark delivery of the ignition system, if applicable;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.3.	Fuel feed and delivery system;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.4.	Air intake system including air filter(s) (modification or removal);	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.5.	The drive train;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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- | | | | | |
|-------|---|--------------------------|--------------------------|-------------------------------------|
| 5.2.6 | The control unit(s) that control(s) the propulsion unit performance of the powertrain; | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5.2.7 | Removal of any component (mechanical, electrical, structural, etc.) which limits full engine load leading to any change in the propulsion unit performance approved in accordance with Annex II (A) to Regulation (EU) No 168/2013. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Additional requirements for (sub) categories L1e, L2e, L3e-A1, L4e-A1 and L6e

- | | | | | |
|---------|--|--------------------------|--------------------------|-------------------------------------|
| 6.2. | The marking referred to in point 6.1. shall in principle be visible without dismantling the part in question or other parts of the vehicle. Where the bodywork or other parts of the vehicle obscure a marking, the vehicle manufacturer shall provide the competent authorities with indications for opening or dismantling the parts in question and the location of the marking | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.3. | The characters, figures or symbols used shall be at least 2,5 mm in height and be easily legible | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4. | The parts, equipment and components must be marked are the following, for all (sub) categories | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.1. | any electrical/electronic device for the purpose of combustion engine or electric propulsion motor management (ECU ignition module, injectors, intake air temperature etc.), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.2. | carburettor or equivalent device, | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.3. | catalytic converter(s) (only if not integrated in the silencer), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.4. | crankcase, | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.5. | cylinder | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.6. | cylinder head, | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.7. | exhaust pipe(s) (if separate from the silencer), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.8. | inlet pipe (if cast separately from the carburettor or cylinder or crankcase), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.9. | intake silencer (air filter), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.10. | restricted section (sleeve or other), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.11. | noise abatement device (silencer(s)), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.12. | transmission driven part (rear chain wheel (sprocket) or pulley), | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.4.13. | transmission driving part (front chain wheel (sprocket) or pulley). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.5. | For categories L1e, L2e, and L6e | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.5.1. | transmission CVT, | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6.5.2. | transmission controller | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



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APPENDIX 3 – C5
Devices to prevent unauthorised use

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 44/2014 Annex VI Including amendment (EU) 2018/295 UNECE R62.01 Supplement 3
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2.	All instruments are equipped with identification label	:	Yes
2.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Torque meter (5 N·m)	CN 37XJ22032730-0009	12/05/2023
Torque meter (250 N·m)	CN 37XJ22032730-0010	12/05/2023

Test Results

	PASS	FAIL	N/A
2.3. Type number of device (1, 2, 3 or 4):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> - Type 1: Solely and positively operated on the steering alone* - Type 2: Positively operated on the steering in conjunction with the device, which deactivates the engine* - Type 3: Pre-loaded, operating on the steering in conjunction with the device, which deactivates the engine* - Type 4: Positively operated on the transmission* <p>*Strikethrough, as appropriate.</p>			
5.1. Protective device is so designed that:			
5.1.1. It is necessary to put it out of action in order to enable the vehicle to be steered, or to be driven or moved forward in a straight line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.2. In the case of protective devices of Type 4, the device is so designed that it is necessary to put it out of action in order to release the transmission. If this device is activated by the control of the parking device, it acts in conjunction with the device that deactivates the engine of the vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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5.1.3.	It is only possible to extract the key with the bolt in the fully engaged or fully disengaged position. Any intermediate position of the key that risks subsequent engagement of the bolt – even if the key of the protective device is inserted – is excluded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3.	Protective device referred to in paragraph 5.1 above – and the vehicle components on which it operates – is so designed that it cannot rapidly and without attracting attention be opened, rendered ineffective, or destroyed by, for example, the use of low-cost, easily concealed tools, equipment or fabrications readily available to the public at large.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4.	Protective device is mounted on the vehicle as an item of original equipment (i.e. equipment installed by the vehicle manufacturer prior to first retail sale). Lock is securely assembled in the protective device. <i>Note: If the lock can be extracted using the key after the cover or any other retention device has been removed, this is not in contradiction with the requirement.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.5.	Key locking system provides at least 1,000 different key combinations, or a number equal to the total number of vehicles manufactured annually, if less than 1,000. In vehicles of one type, the frequency of occurrence of each combination is roughly one per 1,000.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.6.	Key and lock are not visibly coded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.7.	Lock is so designed, constructed and fitted that the turning of the lock cylinder (when in the locked position) with a torque of less than 0.245 mdaN, is not possible with anything other than the mating key.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.7.1.	For lock cylinders with pin tumblers, no more than two identical tumblers operating in the same direction are positioned adjacent to each other, and in a lock there are not > 60 % identical tumblers.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.7.2.	For lock cylinders with disc tumblers, no more than two identical tumblers operating in the same direction are positioned adjacent to each other, and in a lock there are not > 50 % identical tumblers.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.8.	Protective devices are such as to exclude any risk, while the vehicle is in motion with the engine running, of accidental blockage likely to compromise safety in particular.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.9.	Protective device, if it is of Type 1, Type 2 or Type 3 is, in its activated position, strong enough to withstand, without damage to the steering mechanism likely to compromise safety, the application of a torque of 20 mdaN about the axis of the steering shaft in both directions under static conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.10.	Protective device, if it is of Type 1, Type 2 or Type 3, is so designed that the steering can only be locked at an angle of $\geq 20^\circ$ to the left and/or the right of the straight-ahead position.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Particular Specifications

6.1.1.	Lockable only by movement of key (handlebars being in appropriate position for bolt to engage in slot). <i>Note: Types 1 and 2 only.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6.1.2.	Pre-loading of bolt only possible by separate action combined with or in addition to turning of key/Removal of key not possible after bolt has been pre-loaded other than in accordance with 5.1.3. <i>Note: Type 3 only.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.2.	Bolt prevented from engaging when device is in position that permits starting of engine. <i>Note: Types 2 and 3 only.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3.	Impossible to prevent device functioning when set. <i>Note: Type 3 only.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Device subjected to wear test for 2,500 cycles. <i>Note: Type 3 only.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.4.	Device in good working order and complies with 5.7, 5.8, 5.9 and 6.3 after wear test. <i>Note: Type 3 only.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Vehicles of Categories L1e, L2e, L3e, L4e, L5e, L6e and L7e, which are not fitted with Handlebars: Not applicable



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APPENDIX 3 - C6 Electromagnetic compatibility (EMC)

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 44/2014 Annex VII Including amendment (EU) 2018/295 UNECE R10.05
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Kezheng Electronic Information Product Testing Co., Ltd. No.316, Jianghong South Road, Binjiang District, Hangzhou, Zhejiang, China
1.3.	Date of Test	:	04~05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2.	All instruments are equipped with identification label	:	Yes
2.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Measurement equipment	CN LAWXD202109100020	09/09/2022
Receiving antenna	CN LAWXD202203060088	05/03/2023
Field generator	CN LAWXD202203060078	05/03/2023
Harmonics, flicker	CN LAWXD202109100006	09/09/2022
Conducted disturbances	CN LAWXD202203060035	05/03/2023
Electrical fast transients -bursts	CN LAWXD202203060054	05/03/2023
Surges	CN LAWXD202109100028	09/09/2022

3	Test results:	
3.1.	Specifications in configurations other than REESS charging mode coupled to power grid	
3.1.1.	Broadband electromagnetic radiation from vehicles	: Test results as below
3.1.2.	Narrowband electromagnetic radiation from vehicles	: Test results as below
3.1.3.	Immunity of vehicles to electromagnetic radiation	: Conform: 20M~2G, 30V/m



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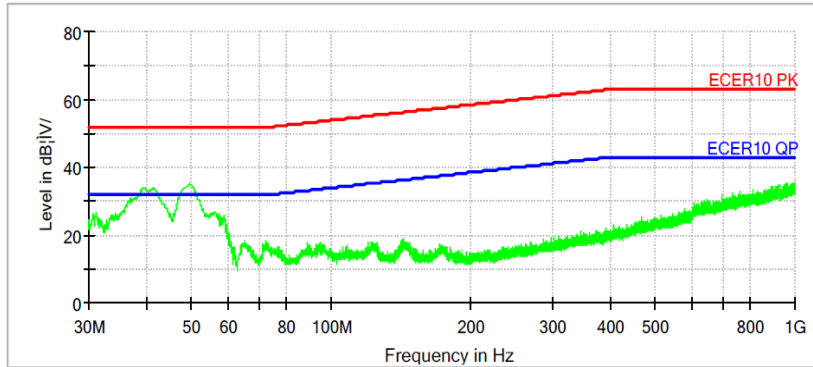
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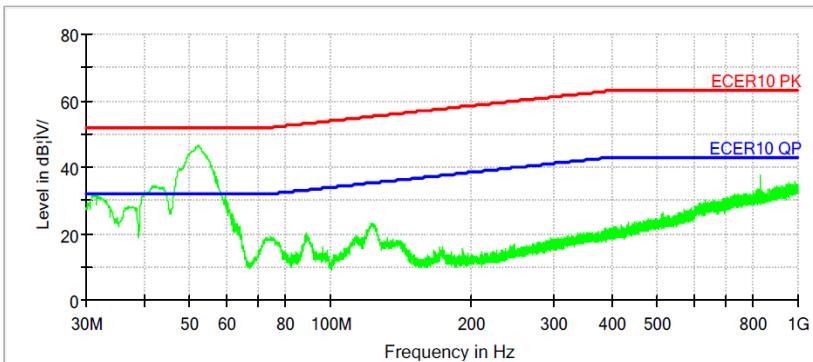
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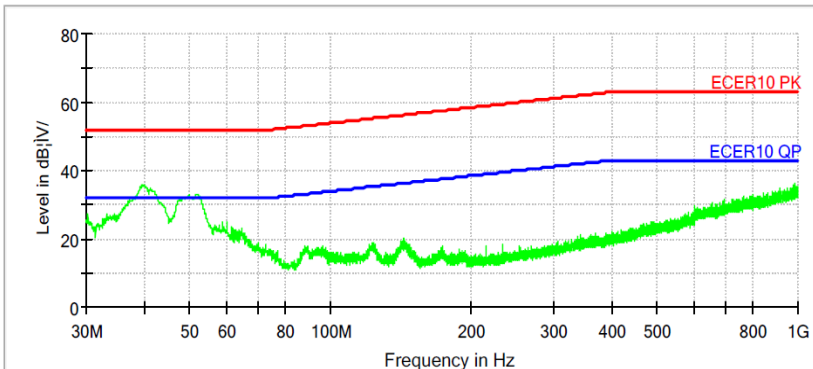
Broadband: Horizontal, right-hand side



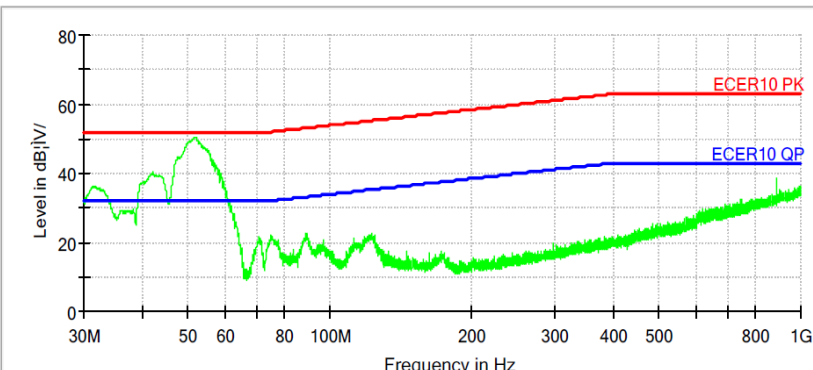
Broadband: Vertical, right-hand side



Broadband: Horizontal, left-hand side



Broadband: Vertical, left-hand side





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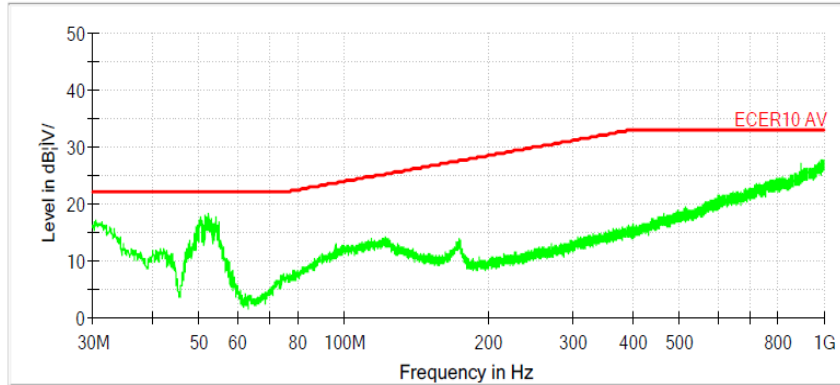


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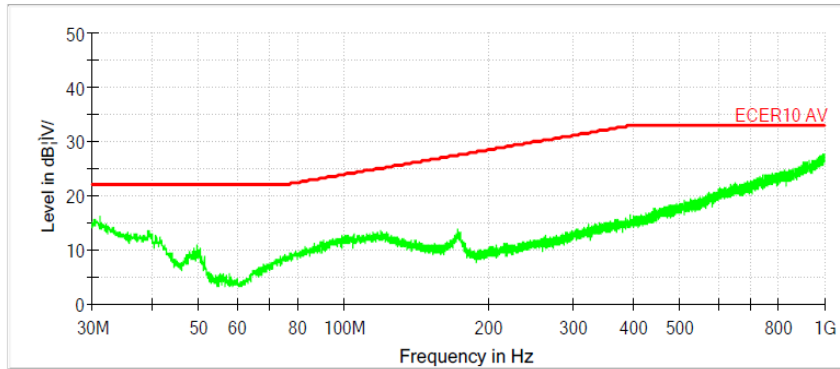
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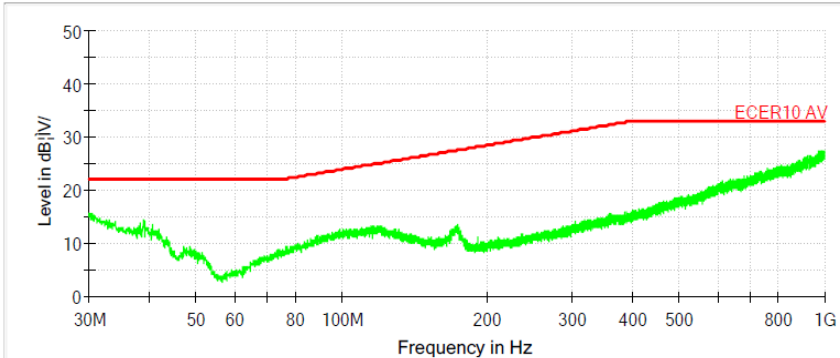
Narrowband: Horizontal, right-hand side



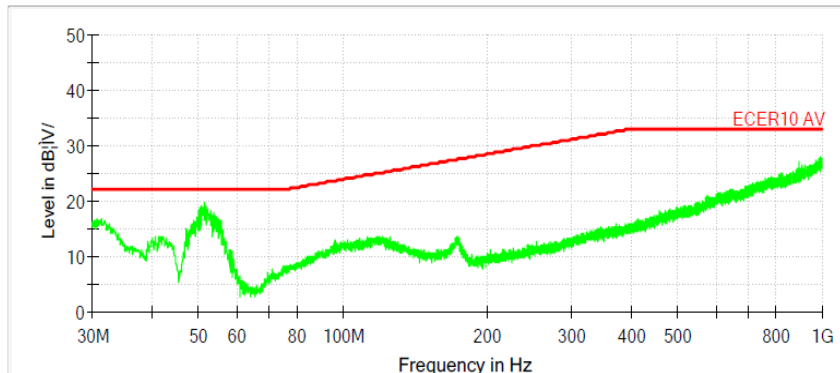
Narrowband: Vertical, right-hand side



Narrowband: Horizontal, left-hand side



Narrowband: Vertical, left-hand side





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Type: HM-2

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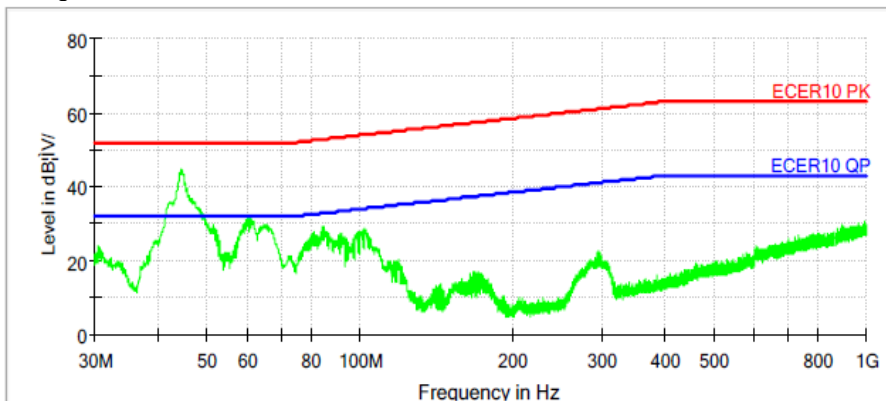
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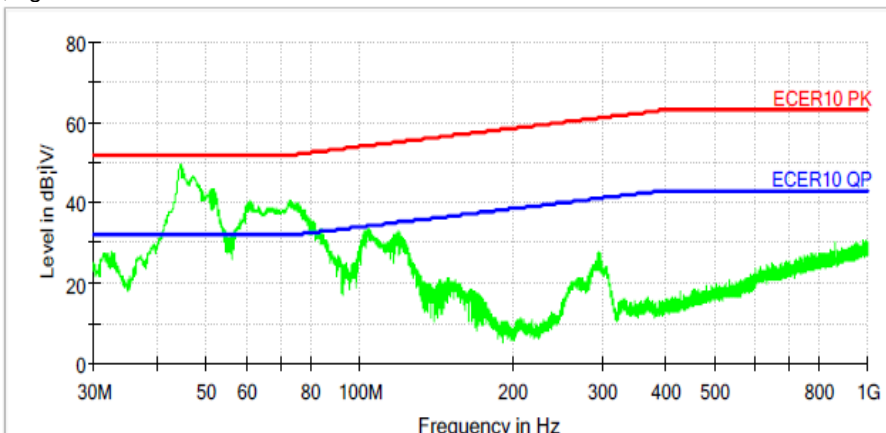
3.2. Additional specifications in configuration REESS charging mode coupled to power grid

- 3.2.1. Broadband electromagnetic radiation from vehicle : Test results as below
- 3.2.2. Emission of harmonics on AC power lines from vehicle : Conform
- 3.2.3. Emission of voltage changes, fluctuations, flickers on AC power lines from vehicle : Test results as below
- 3.2.4. Emission of radiofrequency conducted disturbances on AC or DC power lines from vehicle : Test results as below
- 3.2.5. Emission of radiofrequency conducted disturbances on network and telecommunication access from vehicle : Not applicable
- 3.2.6. Immunity of vehicle to electromagnetic radiation : 20M~2G, 30V/m
- 3.2.7. Immunity of vehicle to electrical fast transient/burst disturbances conducted along AC and DC power lines : Conform
- 3.2.8. Immunity of vehicle to surge conducted along AC and DC power lines : Conform

Broadband: Horizontal, right-hand side



Broadband: Vertical, right-hand side





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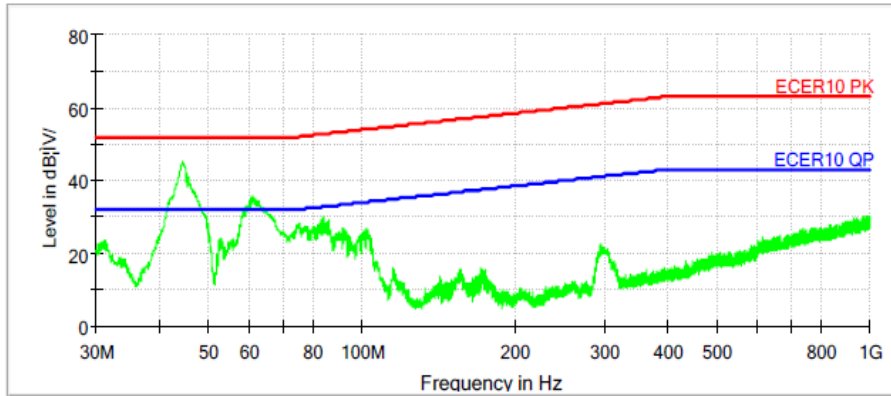


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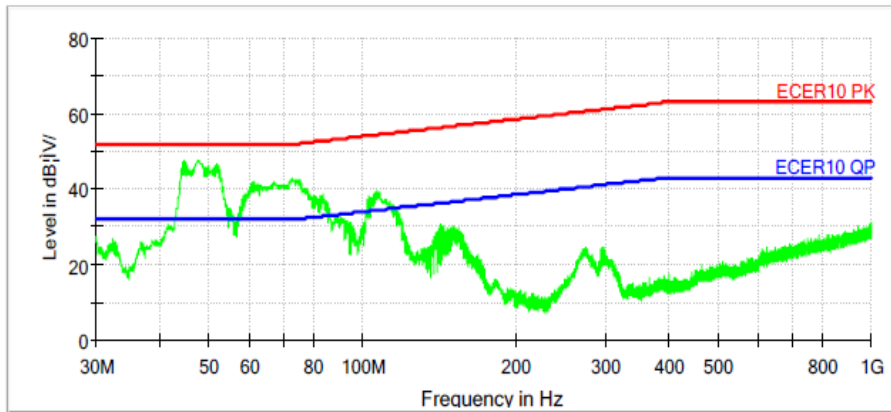
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Broadband: Horizontal, left-hand side



Broadband: Vertical, left-hand side



Flickers:

	Max measured value	Limit
Short duration flicker	0.028	1.000
Long duration flicker	0.028	0.650



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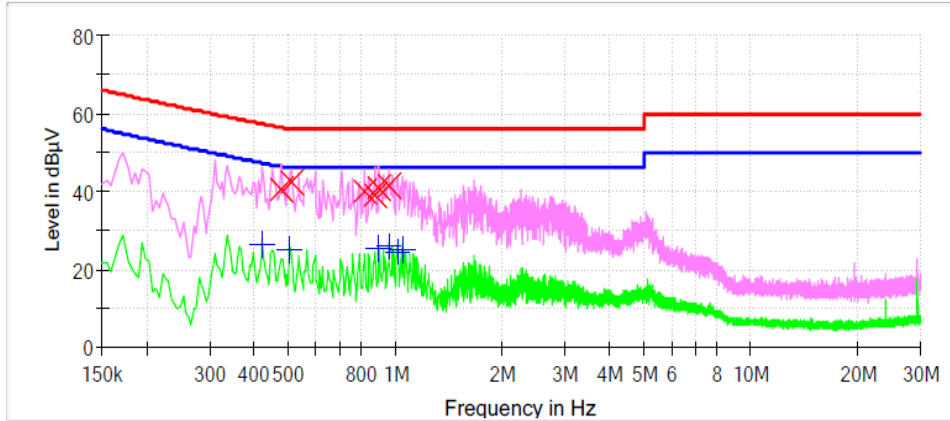
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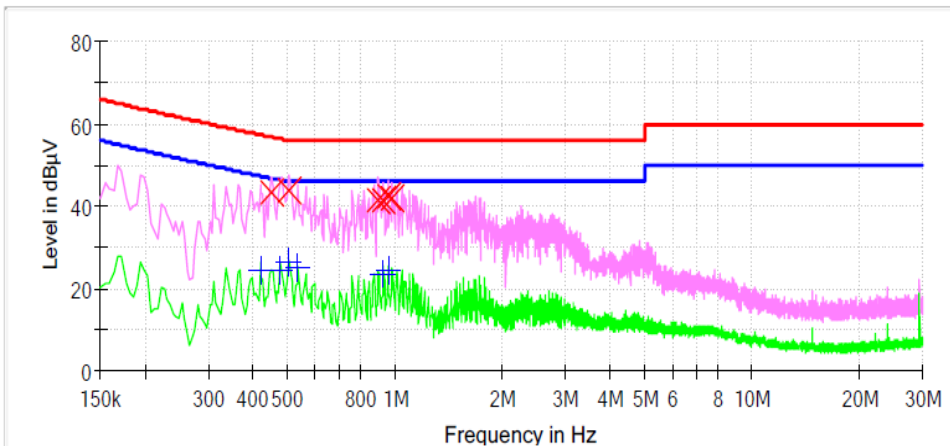
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Conducted disturbances:

Live line



Neutral line





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APPENDIX 3 - C7 External projections

0.	Main Requirements	:	
0.1.	Requirements according to	:	Reg. (EU) 44/2014 Annex VIII Including amendment (EU) 2018/295
1.	Witness details	:	
1.1.	Witness	:	Erich Zhang
1.2.	Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3.	Date of Test	:	05/08/2022
1.4.	Worst Case Rationale	:	Single specification
1.5.	Tested vehicle	:	R68HM2004NA000001
2.	Facility and Equipment Checks	:	
2.1	Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2.	All instruments are equipped with identification label	:	Yes
2.3.	Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Test dummy	CN CGEL051220220921	12/05/2023

3.	Test results:	
3.1.	Vehicle assessment	: Vehicle is in a straight line, vertical position as level floor with 50 percentile rider and steering free to move.
3.2.	Group 1 parts: Grazing ($0^\circ \leq \alpha < 45^\circ$)	: Conform as per requirements
3.3.	Group 1 parts: Collision: ($45^\circ \leq \alpha < 90^\circ$)	: Conform as per requirements
3.4.	Windscreen	: Not applicable
3.5.	Covers that resemble windscreens or fairings installed to protect instrument cluster or head lamp	: Not applicable
3.6.	Uncovered levers	: Conform as per requirements
3.7.	Mudguard	: Conform as per requirements
3.8.	All others outward pointed and protruding parts of the vehicles	: Conform as per requirements
3.9.	Other requirements as per directive described in this test record	: Conform as per requirements



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APPENDIX 3 - C10 Masses and dimensions

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 44/2014 Annex XI Including amendment (EU) 2018/295
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1 Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Weighing scales	CN 37XJ22032730-0015	12/05/2023
Weighing scales	CN 37XJ22032730-0016	12/05/2023
Tape	CN 37XJ22032730-0005	12/05/2023

MASSES	Measured	Declared	Limit	Comply (Yes / No)
In running order	74 kg	74 kg	5%	Yes
Actual Mass	156 kg	156 kg	5%	Yes
Technically permissible mass	--	231 kg	--	Yes
Maximum payload	--	75 kg	--	Yes

Dimension	Measured (mm)	Declared (mm)	Limit (mm)	% between the declared and tested (< 3 %)	Comply (Yes / No)
Length	1850	1850	4000	< 3 %	Yes
Width	750	750	1000	< 3 %	Yes
Height	1030	1030	2500	< 3 %	Yes
Wheelbase	1350	1350	--	< 3 %	Yes
Ground clearance	--	--	≥ 310 (L3e-AxE) ≥ 280 (L3e-AxT)	< 3 %	--
Length loading bed	--	--	N/A	N/A	--
Width loading bed	--	--	N/A	N/A	--



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APPENDIX 3 – C12 Passenger handholds and footrests

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 44/2014 Annex XIII Including amendment (EU) 2018/295
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1. Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Load cell	CN 37XJ22032730-0012	12/05/2023

3. Passenger handholds and footrests Specification:

3.1. Type and number of driver footrest	:	Two footrests
3.2. Type and number of passenger handhold	:	Not applicable
3.3. Type and number of passenger footrest	:	Not applicable

	PASS	FAIL	N/A
1.2. For vehicles designed to carry one or more passengers but not equipped with safety belts for those passengers, the seating positions in question are fitted with a passenger handhold system consisting of either a strap, or one or two hand-grip bars.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.1. Strap is easily used by the passenger.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strap withstood a vertical traction force of 2,000 N (load).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pressure (maximum 2 Mpa) (Force/area)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.2. Hand-grip is close to the saddle and symmetrical to the median longitudinal plane of the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hand-grip withstood a vertical traction force of 2000 N (load).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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	PASS	FAIL	N/A
Pressure (maximum 2 Mpa).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.3. If two hand-grips are used, they are fitted one on each side in a symmetrical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hand-grip withstood a vertical traction force of 1,000 N. <i>Pressure: Maximum 1 Mpa each</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.2.4. Design features of the vehicle, which could be confused with the designated passenger handhold system, are not permitted, unless they also meet the requirements of points 1.2.1 to 1.2.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.3. All seating positions of the vehicle are fitted either with designated footrests, or a floor or floor boards on which both of the rider's, driver's, or passenger's feet can rest.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1. Vehicle's floor, each designated floor board and each designated footrest are capable of withstanding, without any resulting permanent deformation that is harmful to its function, a vertical compression force of 1,700 N, applied statically to any point on the floor or floor board, or 15 mm from the end of the footrest, at a maximum pressure of 2.0 MPa.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2. Space provided by each designated footrest, including the space on the floor or floor board, is sufficient for a foot ≥ 300 mm long and ≥ 110 mm wide to be placed safely without hampering the vehicle operator's feet. Footrests are located so that no direct contact between the foot/leg and rotating parts (e.g. tyres) of the vehicle is possible when in use.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.3. Design features of the vehicle, which could be confused with the designated footrests, floor boards or vehicle floor are not permitted, unless they also meet the requirements of points 1.3.1 to 1.3.2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.4. Pedals enabling the vehicle to be propelled by the rider's muscular leg power are deemed to meet the requirements of points 1.3 to 1.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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APPENDIX 3 – C13 Registration plate space

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 44/2014 Annex XIV Including amendment (EU) 2018/295
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1. Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Goniometer (digital)	CN 37XJ22032730-0002	12/05/2023

	PASS	FAIL	N/A
1.2. Vehicles are equipped with a space for mounting and fixing rear registration plates.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3. Vehicles of categories L6e and L7e are, in addition, equipped with a space for mounting and fixing front registration plates.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.4.1. Space for mounting comprises of a rectangular area with the following minimum dimensions:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For vehicles of categories L1e, L2e and L6e:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Width: 100 mm; Height: 175 mm*			
- Width: 145 mm; Height: 125 mm*			
*Strikethrough, as appropriate.			
For vehicles of categories L3e, L4e, L5e and L7e:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Width: 280 mm; Height: 200 mm			
Mounting and Fixing of a Rear Registration Plate on Vehicles of Categories L1e, L2e, L3e, L4e and L5e			
1.5.1.1.1. Space for mounting a registration plate at the rear of the vehicle is such that the plate can be positioned entirely within the two parallel longitudinal vertical planes passing through the outer extremities of the vehicle, not taking into account any	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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		PASS	FAIL	N/A
	rear view mirrors. The space itself does not form the widest point of the vehicle.			
1.5.1.2.	Plate is perpendicular to the longitudinal median plane of the vehicle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5.1.3.1.	Plate may be inclined to the vertical at $\geq -15^\circ$ and $\leq 30^\circ$.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5.1.4.1.	Lower edge of the plate is ≥ 0.20 m above the ground or not less than the radius of any rear wheel above the ground if that is less than 0.20 m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5.1.4.2.	Height of the upper edge of the plate from the ground does not exceed 1.50 m.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5.1.5.1.	Plate is visible in the whole space within the following four planes: - Two vertical planes touching the two lateral edges of the plate and forming an angle measured outwards to the left and to the right of the plate of 30° to the longitudinal plane, parallel to the longitudinal median plane of the vehicle, passing through the centre of the plate; - Plane touching the upper edge of the plate and forming an angle measured upwards of 15° to the horizontal; - Horizontal plane through the lower edge of the plate.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5.1.5.2.	No structural element, even when fully transparent, is located in the space described above.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6.	Mounting and fixing of front and rear registration plates on vehicles of categories L6e and L7e			
1.6.1	The space for mounting a front or rear registration plate shall comprise a flat or virtually flat rectangular surface. A "virtually flat surface" means a surface of solid material, which may also consist of patterned mesh or grille, with a radius of curvature of at least 5000mm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.2.	The surface to be covered by a front or rear registration plate may have holes or gaps; however, these shall be no more than 40mm wide without having to take into account their length	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.3.	The surface to be covered by a front or rear registration plate may have a protrusion, provided that these do not project more than 5,0 mm from the nominal surface. Patches of very soft materials, such as foam or felt to stop the registration plate vibrating, shall not be taken into account.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.1.1	The space for mounting a registration plate at the front of the vehicle shall be such that the plate can be positioned entirely within the two parallel longitudinal vertical planes passing through the outer extremities of the vehicle, not taking into account any rear-view mirrors. The space itself shall not form the widest point of the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.1.2	The space for mounting a registration plate at the rear of the vehicle shall be such that the plate can be positioned entirely within the two parallel longitudinal vertical planes passing through the outer extremities of the vehicle, not taking into account any rear-view mirrors. The space itself shall not form the widest point of the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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		PASS	FAIL	N/A
1.6.4.1.3	Front and rear registration plates shall be perpendicular to the longitudinal median plane of the vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.2.1	The plate may be inclined to the vertical at not less than – 15° and not more than 30°.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.3.1	The lower edge of the plate shall not be less than 0,20 m above the ground or less than the radius of any front wheel above the ground if that is less than 0,20 m	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.3.2	The height of the upper edge of the plate from the ground surface shall not exceed 1,50 m.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.4.1	Front and rear plates shall be visible in the whole space within the following four planes: - the two vertical planes touching the two lateral edges of the plate and forming an angle measured outwards to the left and to the right of the plate of 30° to the longitudinal median plane of the vehicle, - the plane touching the upper edge of the plate and forming an angle measured upwards of 15° to the horizontal, - the horizontal plane through the lower edge of the plate.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.4.2.	No structural element, even when fully transparent, shall be located within the space described above.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.5	The gap between the edges of a mounted and fixed registration plate and the actual surface of the plate space shall not exceed 5,0 mm along the complete outline of the plate.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.6.4.5.1	This gap may be exceeded if measured at a hole or gap in the surface of patterned mesh or between parallel bars in a surface of a grille.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Requirements				
1.7.1.	Presence of a registration plate may not form the basis or part of the basis for attaching, mounting, or clipping any other vehicle part, component or device onto it (e.g. lighting device supports may not be fixed onto a registration plate).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7.2.	No vehicle part, component or device becomes loosened or detached as a result of removal of a registration plate.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7.3.	When a registration plate is fixed, its visibility is not reduced under normal conditions of use due, in particular, to vibrations and dynamic forces, such as driving wind forces.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7.4.	It is not permitted to provide a registration plate mounting location that can easily pivot up and/or down beyond the angles laid down in paragraphs 1.5.1.3.1 and 1.6.4.2.1, in relation to the vehicle structure in normal driving conditions (i.e. with doors or access panels closed).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7.5.	If the vehicle has the tendency to lean, a mounted registration plate of the applicable maximum dimensions, which is not located in the longitudinal median plane of the vehicle, is not the limiting factor of the maximum lean angle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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APPENDIX 3 – C14

Access to repair and maintenance information

- 0. Main Requirements** :
- 0.1. Requirements according to : Reg. (EU) 44/2014 Annex XV Including amendment (EU) 2018/295
- 1. Witness details** :
- 1.1. Witness : Erich Zhang
- 1.2. Location of Test : Zhejiang Labs Vehicle Testing Co., Ltd.
No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
- 1.3. Date of Test : 05/08/2022
- 1.4. Worst Case Rationale : Single specification
- 1.5. Tested vehicle : R68HM2004NA000001
- 2. Facility and Equipment Checks** :
- 2.1. Calibration certificates checked and valid, recorded in the following table : Not applicable
- 2.2. All instruments are equipped with identification label : Not applicable
- 2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used. : Not applicable

Equipment	Serial / Certificate No.	Calibration due
--	--	--

- 3. Test results:**
- 3.1. The manufacturers certificate on access to vehicle OBD stage I and vehicle repair and maintenance information : The manufacturers certificate providing proof of compliance to the type-approval authority on access to ~~vehicle on-board diagnostic (OBD) systems~~ and to vehicle repair and maintenance information as referred to in Article 57(8) of Regulation (EU) No 168/2013 and set out in Annex III to Regulation (EU) No 901/2014 is provided
- 3.2. Access to vehicle OBD and vehicle repair and maintenance information (website) : www.maxmovsports.com
- 3.2.1. Date from which it is available: : 6 months from the date of type approval
- 3.2.2. Terms and conditions of access : according to point 3 of Annex XV to this Regulation
- 3.2.3. Format of vehicle repair and maintenance information accessible through website: : according to Appendix 1 of Annex XV to this Regulation
- 3.3. Service parts, diagnostic tools and test equipment : The manufacturer makes the necessary information in the context of Article 57 (6) of Regulation (EU) No 168/2013 available to interested parties on the basis of individual arrangements to which the principle of Article 59 of Regulation (EU) No 168/2013 apply and to provide contact details on its website.
- 3.4. Multi-stage type approval : Not applicable



CETOC TS

CETOC Technical Service srl
Via della Bufalotta, 374,
00139 Roma

Inspection Report Nr.: CN-40-2-217-WHO22-03974-FIR
Manufacturer: ZHEJIANG YIXING INDUSTRY AND
TRADE LIMITED
Type: HM-2

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Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC

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Mutual Recognition Agreements

3.5. Small volume manufacturers : Not applicable



CETOC TS

CETOC Technical Service srl
Via della Bufalotta, 374,
00139 Roma

Inspection Report Nr.: CN-40-2-217-WHO22-03974-FIR
Manufacturer: ZHEJIANG YIXING INDUSTRY AND
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APPENDIX 3 – C15

Stands

- 0. Main Requirements** :
- 0.1. Requirements according to : Reg. (EU) 44/2014 Annex XVI
Including amendment (EU) 2018/295
- 1. Witness details** :
- 1.1. Witness : Erich Zhang
- 1.2. Location of Test : Zhejiang Labs Vehicle Testing Co., Ltd.
No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang
Street, Yuhang District, Hangzhou City, Zhejiang
Province, China
- 1.3. Date of Test : 05/08/2022
- 1.4. Worst Case Rationale : Single specification
- 1.5. Tested vehicle : R68HM2004NA000001
- 2. Facility and Equipment Checks** :
- 2.1. Calibration certificates checked and valid,
recorded in the following table : Conform
- 2.2. All instruments are equipped with
identification label : Yes
- 2.3. Calibration certificates are complete of
calibration-chain with detailed information
regarding primary used. : Yes

Equipment	Serial / Certificate No.	Calibration due
Goniometer (digital)	37XJ22032730-0002	12/05/2023

- 3. Test results:**
- 3.1 Type of Stand : Prop stand / ~~Centre stand~~ / Prop & ~~Centre stand~~

Stand	Direction	MOPED Requirement (ECE)	Motorcycle Requirement (ECE)	Test Angle Achieved
Prop stand	Upstream	6 %	8 %	6 %
Prop stand	Downstream	5 %	6 %	5 %
Prop stand	Transverse left	5 %	6 %	5 %
Prop stand	Transverse right	5 %	6 %	5 %
Centre stand	Upstream	12 %	14 %	---
Centre stand	Downstream	6 %	8 %	---
Centre stand	Transverse left	6 %	8 %	---
Centre stand	Transverse right	6 %	8 %	---



CETOC TS

CETOC Technical Service srl
Via della Bufalotta, 374,
00139 Roma

Inspection Report Nr.: CN-40-2-217-WHO22-03974-FIR
Manufacturer: ZHEJIANG YIXING INDUSTRY AND
TRADE LIMITED
Type: HM-2

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APPENDIX 3 – D1

Statutory plate

0. Main Requirements	:	
0.1. Requirements according to	:	Reg. (EU) 901/2014 Annex V Including amendment (EU) 2020/239
1. Witness details	:	
1.1. Witness	:	Erich Zhang
1.2. Location of Test	:	Zhejiang Labs Vehicle Testing Co., Ltd. No.5 shengyi Road, Yiqiao Industrial Zone, Yuhang Street, Yuhang District, Hangzhou City, Zhejiang Province, China
1.3. Date of Test	:	05/08/2022
1.4. Worst Case Rationale	:	Single specification
1.5. Tested vehicle	:	R68HM2004NA000001
2. Facility and Equipment Checks	:	
2.1. Calibration certificates checked and valid, recorded in the following table	:	Conform
2.2. All instruments are equipped with identification label	:	Yes
2.3. Calibration certificates are complete of calibration-chain with detailed information regarding primary used.	:	Yes

Equipment	Serial / Certificate No.	Calibration due
Tape	37XJ22032730-0005	12/05/2023

3. Test results:	
3.1. Positioning of statutory plate	: On the left of the vehicle
3.2. Height of characters [mm]	: More than 4 mm
3.3. Material of statutory plate	: Aluminium
3.4. Requirements as per directive described in this test record	: Conform

Remarks

None

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

Type: HM-2	ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED	Date: June 22. 2022 Ext. : 00
EUROPEAN TYPE-APPROVAL OF TWO OR THREE-WHEEL VEHICLES AND QUADRICYCLES (Information Folder No. HM-2-00)		

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| 6 | STATEMENTS ON STRUCTURE INTEGRITY |
| 7 | MANUFACTURER'S CERTIFICATES PROVIDING PROOF OF COMPLIANCE TO THE TYPE APPROVAL AUTHORITY ON ACCESS TO VEHICLE ON-BOARD DIAGNOSTICS (OBD) AND TO VEHICLE REPAIR AND MAINTENANCE INFORMATION |
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Document revisions history

Ext. No. / Corr. No.	Extension reason	Date
00	First application	June 22. 2022

**Information
on the type-approval procedure chosen in accordance with Article 25(1) of
Regulation (EU) No 168/2013
-Information folder sheet-**

The undersigned: Wu qiang /General manager

Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK,
KOWLOON HONG KONG

Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLEN, ALICANTE, SPAIN

Hereby applies for type-approval procedure:

~~(a) step-by-step type-approval~~

(b) single-step type-approval

~~(c) mixed type-approval~~

Where procedures (a) or (c) are chosen, compliance with requirements as under (b) is declared for all systems, components and separate technical units.

Multi-stage type-approval chosen in accordance with Article 25(5) of Regulation (EU) No 168/2013:
yes/no

Information on the vehicle(s) to be filled in, if application is for EU whole-vehicle type- approval:

Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MALCOR IBÉRICA, R RETELLI, MINGTO, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility

0.1.

0.2. Type: HM-2

0.2.1. Variant(s): 00

0.2.2. Version(s): 00

0.2.3. Commercial name(s) (if available): electric scooter

0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B

Information on the vehicle(s) to be filled in, if application is for type-approval of a system/
component/ separate technical unit: N.A.

0.7. Make (trade name of the manufacturer): N.A

0.8. Type: N.A

0.8.1. Commercial name(s) (if available): N.A

1.6. Virtual and/or self-testing


1.6.1. Overview list with virtual and/or self-tested systems, components or separate technical units pursuant to point 6 of Annex III to Commission Delegated Regulation (EU) No 44/2014 below: N.A.

1.6.2. Detailed report on validation of virtual and/or self-testing added: ~~yes~~/no

Place: Hong Kong

Date: June 22. 2022

Signature:



Name and position in the company : Wu qiang /General manager

Type-approval numbers and Test Reports overview

Item No.	subject	Type-approval number or test report number	Date of issue of the type-approval or of its extension or of the test report	Member State or contracting party issuing the type-approval or technical service issuing the test report	Reference to the regulatory act and its latest amendment	Variant(s)/ version(s)
A1	Environmental test procedures related to exhaust emissions, evaporative emissions, greenhouse gas emissions, fuel consumption and reference fuels	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 134/2014 Annex II to VIII * (EU) 2018/295	00/00,
A2	Maximum design vehicle speed, maximum torque, maximum continuous total engine power of propulsion	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 134/2014 Annex X* (EU) 2018/295	00/00
A3	Test procedures related to sound	N.A.	N.A.	N.A.	N.A.	N.A.
B1	Audible warning devices Installation	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex II* (EU) 2016/1824	00/00
	Audible warning devices	E32-28R-00 0002	15.04.2015	Latvia	UNECE R28 Series 00 Supplement 3	00/00
B2	Braking, including anti-lock and combined brake systems	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex III* (EU) 2016/1824	00/00
B3	Electrical safety	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex IV* (EU) 2016/1824	00/00
B4	Manufacturer declaration requirements regarding endurance testing of functional safety-critical systems, parts and equipment	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex V* (EU) 2016/1824	00/00
B5	Front and rear protective structures	N.A.	N.A.	N.A.	N.A.	N.A.
B6	Glazing, windscreen wipers and washers, and defrosting and demisting systems	N.A.	N.A.	N.A.	N.A.	N.A.
B7	Driver-operated controls including identification of controls, tell-tales and indicators	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex VIII* (EU) 2016/1824	00/00

B8	Installation of lighting and light- signalling devices, including automatic switching of lighting	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex IX* (EU) 2016/1824	00/00
	Driving beam Headlamp Passing beam Headlamp	E57*113R02/00*0031*00	14.05.2019	San Marino	UNECE R113 Series 02 Supplement 00	00/00
	Front position lamp	E57*50R00/20*0031*00	14.05.2019	San Marino	UNECE R50 Series 00 Supplement 20	00/00
	Front & rear direction indicator (option 1)	E4*50R00/19*2854*00	10.02.2018	Netherlands	UNECE R50 Series 00 Supplement 19	00/00
	Front & rear direction indicator (option 2)	E4*50R01/00*3107*00	02.09.2020	Netherlands	UNECE R50 Series 01 Supplement 00	00/00
	Front & rear direction indicator (option 3)	E57*50R01/00*0151	E57*50R01/00*0151	San Marino	UNECE R50 Series 01 Supplement 00	00/00
	Rear position lamp Stop lamp (option 1)	E4*50R00/19*26277*00	10.02.2018	Netherlands	UNECE R50 Series 00 Supplement 19	00/00
	Rear position lamp Stop lamp (option 2)	E4*50R01/00*3108*00	02.09.2020	Netherlands	UNECE R50 Series 01 Supplement 00	00/00
	Rear registration plate lamp (option 1)	E4*50R00/19*26277*00	10.02.2018	Netherlands	UNECE R50 Series 00 Supplement 19	00/00
	Rear registration plate lamp (option 2)	E4*50R01/00*3108*00	02.09.2020	Netherlands	UNECE R50 Series 01 Supplement 00	00/00
	Rear retro-reflector	E4*3R02/17*3713*01	10.12.2019	Netherlands	UNECE R3 Series 02 Supplement 17	00/00
	Side retro-reflector	E4*3R02/17*3713*01	10.12.2019	Netherlands	UNECE R3 Series 02 Supplement 17	00/00
B9	Rearward visibility	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex X* (EU) 2016/1824	00/00
	Rear-view mirrors	E11-81R-002066	23.09.2013	United Kingdom	UNECE R81 Series 00 Supplement 02	00/00
B10	Rollover protective structure (ROPS)	N.A.	N.A.	N.A.	N.A.	N.A.
B11	Safety-belt anchorages and safety- belts	N.A.	N.A.	N.A.	N.A.	N.A.
B12	Seating positions (saddles and seats)	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex XIII* (EU) 2016/1824	00/00


B13	Steer-ability, cornering properties and turn-ability	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex XIV* (EU) 2016/1824	00/00
B14	Installation of tyres	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex XV* (EU) 2016/1824	00/00
	Tyres-Front	E9*75R00/17*1 205*00	30.12.2019	Spain	UNECE R75 Series 00 Supplement 17	00/00
	Tyres- Rear	E9*75R00/17* 1219*00	18.12.2019	Spain	UNECE R75 Series 00 Supplement 17	00/00
B15	Vehicle maximum speed limitation plate and its location on the vehicle	N.A.	N.A.	N.A.	N.A.	N.A.
B16	Vehicle occupant protection, including interior fittings and vehicle doors	N.A.	N.A.	N.A.	N.A.	N.A.
B17	Maximum continuous total power and/or maximum vehicle speed limitation by design	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex XVIII* (EU) 2016/1824	00/00
B18	Vehicle structure integrity	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 3/2014 Annex XIX* (EU) 2016/1824	00/00
C1	Anti-tampering measures	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex II* (EU) 2018/295	00/00
C2	Arrangements for type-approval procedures	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex III* (EU) 2018/295	00/00
C3	Conformity of production requirement	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex IV* (EU) 2018/295	00/00
C4	Coupling devices and attachments	N.A.	N.A.	N.A.	N.A.	N.A.
C5	Devices to prevent unauthorised use	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex VI* (EU) 2018/295	00/00
C6	Electromagnetic compatibility (EMC)	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex VII* (EU) 2018/295	00/00
C7	External projections	CN-40-2-217-WHO22-03974-IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex VIII* (EU) 2018/295	00/00
C8	Fuel storage	N.A.	N.A.	N.A.	N.A.	N.A.
C9	Load platforms	N.A.	N.A.	N.A.	N.A.	N.A.

C10	Masses and dimensions	CN-40-2-217- WHO22-03974- IR	15.08.2022		(EU) No 44/2014 Annex XI* (EU) 2018/295	00/00
C11	On-board diagnostics	N.A.	N.A.	N.A.	N.A.	N.A.
C12	Passenger handholds and footrests	CN-40-2-217- WHO22-03974- IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex XIII* (EU) 2018/295	00/00
C13	Registration plate space	CN-40-2-217- WHO22-03974- IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex XIV* (EU) 2018/295	00/00
C14	Repair and maintenance information	CN-40-2-217- WHO22-03974- IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex XV* (EU) 2018/295	00/00
C15	Stands	CN-40-2-217- WHO22-03974- IR	15.08.2022	CETOC TS	(EU) No 44/2014 Annex XVI* (EU) 2018/295	00/00

Remark: In respect of the applicable subjects for the vehicle set out in Annex II to Regulation (EU) No 168/2013.

Place: Hong Kong, China

Date: June 22. 2022

Signature: 

Name and position in the company: Wu qiang /general manager

Variants and Versions matrix

Item No.	Variant	Version	Description
See Appendix 4	00	00	Electric motor type “HS60V1500W30H” , and electric motor is inside the rear wheel. Maximum continuous-rated power: 1.5 kW at 350 min ⁻¹ . Max. speed 45 km/h, front disc brake, rear disc brake.

Type: HM-2	ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED	Date: June 22. 2022
Appendix 4		Ext.: 00

INFORMATION DOCUMENT AND DRAWINGS

0. GENERAL INFORMATION

A. GENERAL INFORMATION CONCERNING VEHICLES

0.1. Make (trade name of manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MINGTO, MALCOR IBÉRICA, R RETELLI, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility

0.2. Type: HM-2

0.2.1. Variants: 00

0.2.2. Versions: 00

0.2.3. Commercial name(s) (if available): electric scooter

0.3 Category, subcategory and sub-subcategory of vehicle: L1e-B

0.4 Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET
MONG KOK, KOWLOON HONG KONG

0.4.1. Name(s) and address(es) of assembly plants:

ZHEJIANG YIXING INDUSTRY&TRADE CO., LTD
Gangtou Industrial Functional Area, Lutan Town, Wuyi County, Jinhua City,
Zhejiang Province, The People's Republic of China, ZIP: 321200

0.4.2. Name and address of manufacturer's authorised representative, if any:

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLEN, ALICANTE, SPAIN

0.5. Manufacturer's statutory plate(s)

0.5.1. Location of the manufacturer's statutory plate:

L, x 400, y -120, z 500, See the drawing of HM-2-01

0.5.2. Method of attachment:

Riveted

0.5.3. Photographs and/or drawings of the statutory plate (completed example with dimensions):

See the drawing of HM-2-01

0.6. Location of the vehicle identification number:

R, x 400, y 20, z 710, See the drawing of HM-2-02

0.6.1. Photographs and/or drawings of the locations of the vehicle identification number (completed example with dimensions):

See the drawing of HM-2-02

0.6.1.1. The serial number of the type begins with:

☆R68HM200????????☆☆

B. GENERAL INFORMATION CONCERNING SYSTEMS, COMPONENTS OR SEPARATE TECHNICAL UNITS
N.A.

C. GENERAL INFORMATION REGARDING CONFORMITY OF PRODUCTION AND ACCESS TO REPAIR AND MAINTENANCE INFORMATION

0.12. Conformity of production

0.12.1. Description of overall quality-assurance management systems: ISO 9001:2015

0.13. Access to repair and maintenance information

0.13.1. Address of principal website for access to vehicle repair and maintenance information:

<http://www.zjshansu.com/>

0.13.2. In the case of multi-stage type-approval, address of principal website for access to vehicle repair and maintenance information from manufacturer(s) at previous stage(s): N.A.

1. GENERAL CONSTRUCTION CHARACTERISTICS

1.1. Photographs and/or drawings of a representative vehicle:

See the drawing of HM-2-03

1.2. Scale drawing of the whole vehicle:

See the drawing of HM-2-04

1.3. Number of axles and wheels: 2 axles /2 wheels

1.3.1. Axles with twinned wheels: N.A.

1.3.2. Powered axles: R (rear)

1.4. Chassis (if any) (overall drawing): See the drawing of HM-2-05

1.5. (L2e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C) Material used for the bodywork: N.A.

1.6. Position and arrangement of the propulsion(s): Rear wheel hub motor

1.7. (L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C) Hand of drive: left/right/centre: N.A.

1.7.1. Vehicle is equipped to be driven in right/left-hand traffic and in countries that use metric/metric and imperial units:

Right and left-hand traffic; metric units.

1.8. Propulsion unit performance

1.8.1. (L3e, L4e, L5e, L7e-A, L7e-B2) Declared maximum vehicle speed: N.A.

1.8.2. (L1e, L2e, L6e, L7e-B1, L7e-C) Maximum design vehicle speed:

45km/h

1.8.3. Maximum net power combustion engine: N.A.

1.8.4. Maximum net torque combustion engine: N.A.

1.8.5. Maximum continuous-rated power electric motor (45/30 minutes power):

1.5 kW at 350 min⁻¹

1.8.6. Maximum continuous-rated torque electric motor:

41.0 Nm at 350 min⁻¹

1.8.7. Maximum continuous total power for propulsion(s): N.A.

1.8.8. Maximum continuous total torque for propulsion(s): N.A.

1.8.9. Maximum peak power for propulsion(s):

1.9 kW at 320 min⁻¹

- 2.1. Range of vehicle mass (overall)
 - 2.1.1. Mass in running order:
 - 74 kg
 - 2.1.1.1. Distribution of mass in running order between the axles:
 - Front axle: 34 kg
 - Rear axle: 40 kg
 - 2.1.2. Actual mass:
 - 156 kg
 - 2.1.2.1. Distribution of actual mass between the axles:
 - Front axle: 64 kg
 - Rear axle: 92 kg
 - 2.1.3. Technically permissible maximum laden mass: 231 kg
 - 2.1.3.1. Technically permissible maximum mass on front axle: 70 kg
 - 2.1.3.2. Technically permissible maximum mass on rear axle: 161 kg
 - 2.1.3.3. (L4e) Technically permissible maximum mass on sidecar axle: N.A.
 - 2.1.4. Maximum hill-starting ability at the maximum technically permissible mass declared by the manufacturer:
 - 15° slope
 - 2.1.5. Maximum pay mass declared by manufacturer: 75 kg
 - 2.1.6. Safe load carrying capacity of load platform declared by manufacturer: N.A.
 - 2.1.7. Technically permissible maximum towable mass in case of: Braked: N.A., Unbraked: N.A.
 - 2.1.7.1. Technically permissible maximum laden mass of the combination: N.A.
 - 2.1.7.2. Technically permissible maximum mass at the coupling point: N.A.
 - 2.1.8. Mass of the optional equipment: N.A.
 - 2.1.9. Mass of the superstructure: N.A.
 - 2.1.10. Mass of the propulsion battery: 7kg
 - 2.1.11. (L2e, L4e, L5e, L6e, L7e) Mass of the doors: N.A.

2.1.12. (L2e-U, L5e-B, L6e-BU, L7e-CU) Mass of the machines or equipment installed on the load platform area: N.A.

2.1.13. Mass of the gaseous fuel system as well as storage tanks for gaseous fuel: N.A.

2.1.14. Mass of the storage tanks to store compressed air: N.A.

2.2. Range of vehicle dimensions (overall)

2.2.1. Length: 1850mm, See the drawing of HM-2-04

2.2.2. Width: 750mm, See the drawing of HM-2-04

2.2.3. Height: 1030mm, See the drawing of HM-2-04

2.2.4. Wheelbase: 1350mm, See the drawing of HM-2-04

2.2.4.1. (L4e)Wheelbase sidecar: N.A.

2.2.5. Track width

2.2.5.1. (L1e — L7e if equipped with twinned wheels L2e, L4e, L5e, L6e, L7e)
Track width front: N.A.

2.2.5.2. (L1e — L7e if equipped with twinned wheels L2e, L4e, L5e, L6e, L7e)
Track width rear: N.A.

2.2.5.3. (L4e) Track width sidecar: N.A.

2.2.6. (L7e-B) Front overhang: N.A.

2.2.7. (L7e-B) Rear overhang: N.A.

2.2.8. Load platform dimensions

2.2.8.1. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Length of the load platform: N.A.

2.2.8.2. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Width of load platform: N.A.

2.2.8.3. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Height of load platform: N.A.

2.2.9. Centre of gravity

2.2.9.1. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Location of the centre of gravity forward of the rear axle Lcg: N.A.

2.2.9.2. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Location of the centre of gravity above the ground plane Hcg: N.A.

2.2.9.3. (L2e-U, L5e-B, L6e-BU, L7e-B2, L7e-CU) Location centre of gravity of loaded platform forward of the rear axle LcgLP: N.A.

2.2.10. Miscellaneous dimensions

- 2.2.10.1. (L7e-B2) Approach angle: N.A.
- 2.2.10.2. (L7e-B2) Departure angle: N.A.
- 2.2.10.3. (L7e-B2) Ramp angle: N.A.
- 2.2.10.4. (L7e-B2) Ground clearance under the front axle: N.A.
- 2.2.10.5. (L7e-B2) Ground clearance under the rear axle: N.A.
- 2.2.10.6. (L3e-AxE (x=1, 2 or 3), L3e-AxT (x=1, 2 or 3), L7e-B) Ground clearance between the axles: N.A.
- 2.2.10.7. (L7e-B) Wheelbase to ground clearance ratio: N.A.
- 2.2.10.8. (L7e-B2) Static stability coefficient — Kst: N.A.
- 2.2.10.9. (L3e-AxE, L3e-AxT) Seat height: N.A.
- 2.2.10.10. (L3e-AxE, L3e-AxT) Ground clearance: N.A.

3. GENERAL POWERTRAIN CHARACTERISTICS

3.1. Manufacturer of the propulsion unit

3.1.1. Combustion engine: N.A.

3.1.2. Electric motor

3.1.2.1. Manufacturer:

TAIZHOU HENGSHENG SPINNING MACHINERY CO., LTD.

3.1.2.2. Electric motor code (as marked on the engine or other means of identification):

HM2SS

3.1.3. Hybrid application: N.A.

3.2. Combustion engine: N.A.

3.3. Pure electric and hybrid electric propulsion and control

3.3.1. Electric vehicle configuration: pure electric/~~hybrid electric/manpower~~ — electric

3.3.2. Brief description and schematic drawing of pure and hybrid electric propulsions and its control systems:

See the drawing of HM-2-06

3.3.3. Electric propulsion motor

3.3.3.1. Number of electric motors for propulsion: 1

3.3.3.2. Type (winding, excitation): winding

3.3.3.3. Operating voltage: 60 V

3.3.3.4. 45/30 minutes power:

1.5 kW

3.3.4. Propulsion batteries

3.3.4.1. Primary propulsion battery

3.3.4.1.1. Number of cells: 128

3.3.4.1.2. Mass: 7kg

3.3.4.1.3. Capacity: 20Ah

3.3.4.1.4. Voltage: 60V

3.3.4.1.5. Position in the vehicle:

See the drawing of HM-2- 07

3.3.4.2. Secondary propulsion battery: N.A.

3.3.5. Hybrid electric vehicle: N.A.

3.3.6. Energy storage device

3.3.6.1. Description: (battery, capacitor, flywheel/generator)

3.3.6.2. Identification number: HS60V20AH

*3.3.6.3. Kind of electrochemical couple: Lithium battery

3.3.6.4. Energy (for battery: voltage and capacity Ah in 2h, for capacitor: J,..., for flywheel/generator: J,...):

60V, 20Ah,

3.3.6.5. Charger: ~~on-board~~/external/~~without~~

3.3.7. Electric motor (describe each type of electric motor separately)

3.3.7.1. Primary use: propulsion motor/~~generator~~

3.3.7.2. When used as propulsion motor: single-motor

3.3.7.3. Working principle:

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Permanent magnet brushless DC motor

3.3.7.4. Direct current/alternating current/number of phases: Direct current / three phases

3.3.7.5. Separate excitation/series/compound: series

3.3.7.6. Synchronous/asynchronous: Synchronous

3.3.8. Electric motor control unit

3.3.8.1. Identification number:

HS60V

3.3.9. Power controller

3.3.9.1. Identification number: HS60V

3.4. Other engines, electric motors or combinations
(specific information concerning the parts of these motors)

3.4.1. Cooling system (temperatures permitted by the manufacturer): N.A.

3.4.1.1. Liquid cooling: N.A.

3.4.1.1.1. Maximum temperature at outlet: N.A.

3.4.1.2. Air cooling: N.A.

3.4.1.2.1. Reference point: N.A.

3.4.1.2.2. Maximum temperature at reference point: N.A.

3.4.2. Lubrication system: N.A.

3.4.2.1. Description of lubrication system: N.A.

3.4.2.2. Location of oil reservoir (if any): N.A.

3.4.2.3. Feed system (pump/injection into induction system/mixed with the fuel, etc.): N.A.

3.4.2.4. Lubricant mixed with the fuel: N.A.

3.4.2.4.1. Percentage: N.A.

3.4.2.5. Oil cooler: ~~yes/no~~-N.A.

3.5. Drive-train control

3.5.1. Brief description and schematic drawing of the vehicle drive-train and its control system
(gear shift control, clutch control or any other element of drive-train):

See the drawing of HM-2-09

3.5.2. Clutch

3.5.2.1. Brief description and schematic drawing of the clutch and its control system:

N.A.

3.5.3. Transmission

3.5.3.1. Brief description and schematic drawing of gear shift system(s) and its control:

N.A.

3.5.3.2. Drawing of the transmission: N.A.

3.5.3.3. Type (~~mechanical, hydraulic, electric, manual/manual-automated/automatic/CVT~~ /other (indicate).): Wheel-hub motor

3.5.3.4 . A brief description of the electrical/electronic components (if any): N.A.

3.5.3.5. Location relative to the engine: N.A.

3.5.3.6. Method of control: ~~by hand/foot~~

3.5.4. Gear ratios: N.A.

3.5.4.1. (L3e-AxE, L3e-AxT) Final drive ratio: N.A.

3.5.4.2. (L3e-AxE, L3e-AxT) Overall gear ratio in highest gear: N.A.

3.6. Safe-cornering device: N.A.

3.7. Suspension and control

3.7.1. Brief description and schematic drawing of suspension and its control system:

See the drawing of HM-2-10, HM-2-11

3.7.2. Drawing of the suspension arrangements:

See the drawing of HM-2-10, HM-2-11

3.7.3. Level adjustment: ~~yes/ no/ optional~~

3.7.4. Brief description of the electrical/electronic components: N.A.

3.7.5. Stabilisers: ~~yes/ no/ optional~~

3.7.6. Shock absorbers: ~~yes/ no/ optional~~

3.8. Passenger-compartment heating system and air-conditioning: N.A.

3.9. Cycles designed to pedal: N.A.

4. GENERAL INFORMATION ON ENVIRONMENTAL AND PROPULSION PERFORMANCE

4.0. General information on environmental and propulsion performance

4.0.1. Environmental step: Euro 5

4.0.2 Fuel consumption (provide details for each reference fuel tested): N.A.

4.0.3 CO₂ emissions: N.A.

4.0.4 Energy consumption:

31 Wh/km

4.0.5 Electric range:

43 km

4.1. Tailpipe emission-control system: N.A.

4.2. Crankcase emission control system: N.A.

4.3. Evaporative emission control system: N.A.

4.4. Additional information on environmental and propulsion unit performance: N.A.

5. VEHICLE PROPULSION FAMILY

5.1. To define the vehicle propulsion family, the manufacturer shall submit the information required for classification criteria set out in point 3 of Annex XI to Commission Delegated Regulation (EU) No 134/2014, if not already provided in the information document: N.A.

6. INFORMATION ON FUNCTIONAL SAFETY

6.1. Audible warning devices

6.1.1. Summary description of device(s) used and their purpose:

Make	Type	Approval Number	Description
LVEE; 立伟; 永一·立伟	DL70-II	E32-28R-00 0002	Electro-magnetic with resonator disc, single-tone

6.1.2. Drawing(s) showing the location of the audible warning device(s) in relation to the structure of the vehicle:

See the drawing of HM-2-12

6.1.3. Details of the method of attachment, including the part of the vehicle structure to which the audible warning device(s) is (are) attached:

See the drawing of HM-2-12

6.1.4. Electrical/pneumatic circuit diagram: See the drawing of HM-2-13

6.1.4.1. Voltage: AC/DC

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6.1.4.2. Rated voltage pressure: 12V

6.1.5. Drawing of the mounting device: See the drawing of HM-2-12

6.2. Braking, including anti-lock and combined braking systems

6.2.1. Characteristics of the brakes, including details and drawings of the drums, discs, hoses, make and type of shoe/pad assemblies and/or linings, effective braking areas, radius of drums, shoes or discs, mass of drums, adjustment devices, relevant parts of the axle(s) and suspension, levers, pedals:

See the drawing of HM-2-14 HM-2-14-1, HM-2-14-2, HM-2-14-3, HM-2-14-4, HM-2-14-5, HM-2-14-6, HM-2-14-7

6.2.2. Operating diagram, description and/or drawing of the braking system, including details and drawings of the transmission and controls as well as a brief description of the electrical and/or electronic components used in the braking system:

See the drawing of HM-2-14 HM-2-14-1, HM-2-14-2, HM-2-14-3, HM-2-14-4, HM-2-14-5, HM-2-14-6, HM-2-14-7

6.2.2.1. Front, rear ~~and side~~ brakes, disc and/or drum:

Front: disc
Rear: disc

6.2.2.2. Parking braking system: N.A.

6.2.2.3. Any additional braking system: N.A.

6.2.3. Vehicle is equipped to tow a trailer with no brake/overrun brake/electric/pneumatic/hydraulic service brakes: N.A.

6.2.4. Anti-lock/Combined braking system

6.2.4.1. Anti-lock braking system: ~~yes/no/optional~~

6.2.4.2. Combined braking system: ~~yes/ no/optional~~

6.2.4.3. Anti-lock and combined braking system: ~~yes/no/optional~~

6.2.4.4. Schematic drawing(s): N.A

6.2.5. Hydraulic reservoir(s) (volume and location):

See the drawing of HM-2-14-1

6.2.6. Particular characteristics of the braking system(s)

6.2.6.1. Brake shoes and/or pads:

See the drawing of HM-2-14-5, HM-2-14-6

6.2.6.2. Linings and/or pads (indicate make, type, grade of material or identification mark):

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See the drawing of HM-2-14-5, HM-2-14-6

6.2.6.3. Brake levers and/or pedals:

See the drawing of HM-2-14-3, HM-2-14-4

6.2.6.4. Other devices (where applicable): drawing and description: N.A.

6.3. Electrical safety

6.3.1. Brief description of the power circuit components installation and drawings/photographs showing the location of the power circuit components installation:

See the drawing of HM-2-15

6.3.2. Schematic diagram of all electrical functions included in power circuit:

See the drawing of HM-2-13

6.3.3. Working voltage(s):

Power working voltage: 60V

Other electrical components voltage: 12V DC

6.3.4. Description of protection against electric-shocks:

Using terminal box that made by high and low pressure polyethylene material, and nylon plug to protect against electric-shocks

6.3.5. Fuse and/or circuit breaker: ~~yes/no/optional~~ , circuit breaker

6.3.5.1. Diagram showing the functional range: 94.5 A

6.3.6. Configuration of power wiring harness: See the drawing of HM-2-13, HM-2-15

6.4. Front and rear protective structures: N.A.

6.5. Glazing, windscreen wipers and washers, and defrosting and demisting systems: N.A.

6.6. Windscreen wiper(s): N.A.

6.7. Windscreen washer: N.A.

6.8. Defrosting and demisting: N.A.

6.9. Driver-operated controls including identification of controls, tell- tales and indicators

6.9.1. Arrangement and identification of controls, tell-tales and indicators:

See the drawing of HM-2-16

6.9.2. Photographs and/or drawings of the arrangement of symbols and controls, tell-tales and indicators:

See the drawing of HM-2-16

6.9.3. Controls, tell-tales and indicators for which, when fitted, identification is mandatory, including the identification symbols to be used for that purpose: See table 6.9.4.

6.9.4. Summary table: the vehicle is equipped with the following driver-operated controls, including indicators and tell-tales: See table 6.9.4.

6.9.5. Controls, tell-tales and indicators for which, when fitted, identification is optional, and symbols which shall be used if they are to be identified: See table 6.9.5.

6.10. Speedometer and odometer

6.10.1. Speedometer

6.10.1.1. Photographs and/or drawings of the complete system:

See the drawing of HM-2-17

6.10.1.2. Vehicle speed range displayed: 0~80 km/h

6.10.1.3. Tolerance of the measuring mechanism of the speedometer:

$$0 \leq (V1-V2) \leq 0.1 \cdot V2 + 4 \text{ km/h}$$

V1: display speed, V2: actual speed

6.10.1.4. Technical constant of the speedometer:

$$1 \text{ pluse/min} = 0.262 \times 10^{-3} \text{ km/h}$$

6.10.1.5. Method of operation and description of the drive mechanism:

Directly connect to the controller, to drive speedometer through the signal from controller.

6.10.1.6. Overall transmission ratio of the drive mechanism: 310 pluse / 1 wheel rotation

6.10.2. Odometer

6.10.2.1. Tolerance of the measuring mechanism of the odometer: 0~+5 km

6.10.2.2. Method of operation and description of the drive mechanism:

Directly connect to the controller, to drive odometer through the signal from controller.

6.11. Installation of lighting, light-signaling devices, including automatic switching of lighting

6.11.1. List of all devices (mentioning the number, make(s), type, component type- approval mark(s), the maximum intensity of the main-beam headlamps, colour, the corresponding tell-tale): See table 6.11.1.

6.11.2. Diagram showing the location of the lighting and light-signaling devices:

See the drawing of HM-2-18

6.11.3. Hazard warning lamps: N.A.

6.11.4. Brief description of the electrical and/or electronic components used in the lighting system and in the light-signaling system: N.A.

6.11.5. For every lamp and reflector, supply the following information (in writing and/or by diagram):

6.11.5.1. Drawing showing the extent of the illuminating surface:

See lightings component type-approval

6.11.5.2. Method used to define the apparent surface in accordance with point 2.10 of UNECE Regulation No 48 (OJ L 323, 6.12.2011, p. 46): The light-emitting surface

6.11.5.3. Axis of reference and centre of reference: See lighting component type-approval

6.11.5.4. Method of operation of concealable lamps: N.A.

6.11.6. Description/drawing and type of headlamp leveling device (e.g. automatic, stepwise manually adjustable, continuously manually adjustable):
continuously manually adjustable

6.11.6.1. Control device: Set screw

6.11.6.2. Reference marks: N.A.

6.11.6.3. Marks assigned for loading conditions: N.A.

6.12. Rearward visibility

6.12.1. Rear-view mirrors (stating for each mirror)

6.12.1.1. Drawing(s) for the identification of the mirror showing the position of the mirror relative to the vehicle structure:

See the drawing of HM-2-19

6.12.1.2. Details of the method of attachment including that part of the vehicle structure to which it is attached: See the drawing of HM-2-19

6.12.1.3. A brief description of the electronic components of the adjustment system: N.A.

6.12.2. Devices for indirect vision other than mirrors: N.A.

6.12.2.1. Description of the device: N.A.

6.12.2.2. In the case of a camera-monitor device, the detection distance (mm), contrast, luminance range, glare correction, display performance (black and white/colour), image repetition frequency, luminance reach of the monitor: N.A.

- 6.12.2.3. Sufficiently detailed drawings to identify the complete device, including installation instructions; the position for the EU type-approval mark has to be indicated on the drawings: N.A.
- 6.13. Rollover protective structure (ROPS): N.A.
- 6.14. Safety belts and/or other restraints: N.A.
- 6.15. Safety belt anchorages: N.A.
- 6.16. Seating positions (saddles and seats)
 - 6.16.1. Number of positions: 1
 - 6.16.1.1. (L2e, L5e, L6e, L7e) Location and arrangement: N.A.
 - 6.16.2. Seating position configuration: ~~seat~~/saddle
 - 6.16.3. Description and drawings of:
 - 6.16.3.1. The seats and their anchorages: N.A.
 - 6.16.3.2. The adjustment system: N.A.
 - 6.16.3.3. The displacement and locking systems: N.A.
 - 6.16.3.4. The seat-belt anchorages incorporated in the seat structure: N.A.
 - 6.16.3.5. The parts of the vehicle used as anchorages: N.A.
 - 6.16.4. (L2e, L4e, L5e-B, L6e-B, L7e) Coordinates or drawing of the R-point(s) of all seating positions: N.A.
 - 6.16.4.1. (L2e, L4e, L5e-B, L6e-B, L7e) Driver's seat: N.A.
 - 6.16.4.2. (L2e, L4e, L5e-B, L6e-B, L7e) All other seating positions: N.A.
 - 6.16.5. Design torso angle: N.A.
 - 6.16.5.1. Driver's seat: N.A.
 - 6.16.5.2. All other seating positions: N.A.
 - 6.16.6. Range of seat adjustment: N.A.
 - 6.16.6.1. Driver's seat: N.A.
 - 6.16.6.2. All other seating positions: N.A.
- 6.17. Steer-ability, cornering properties and turn-ability
 - 6.17.1. Schematic diagram of steered axle(s) showing steering geometry:

See the drawing of HM-2-20

6.17.2. Transmission and control of steering

6.17.2.1. Configuration of steering transmission (specify for front and rear):

See the drawing of HM-2-20

6.17.2.2. Linkage to wheels (including other than mechanical means; specify for front and rear): See the drawing of HM-2-20

6.17.2.2.1. A brief description of the electrical/electronic components: N.A.

6.17.2.3. Diagram of the steering transmission: N.A.

6.17.2.4. (L2e, L5e, L6e, L7e) Schematic diagram(s) of the steering control(s): N.A.

6.17.2.5. (L2e, L5e, L6e, L7e) Range and method of adjustment of the steering control(s): N.A.

6.17.2.6. (L2e, L5e, L6e, L7e) Method of assistance: N.A.

6.17.3. Maximum steering angle of the wheels

6.17.3.1. To the right: 40°; ~~number of turns of the steering wheel (or equivalent data):~~

6.17.3.2. To the left: 40°; ~~number of turns of the steering wheel (or equivalent data):~~

6.18. Tyres/wheels combination:

6.18.1. Tyres:

6.18.1.1. Size designation

6.18.1.1.1. Axle 1: See table 6.18.

6.18.1.1.2. Axle 2: See table 6.18.

6.18.1.1.3. (L4e) Sidecar wheel: N.A.

6.18.1.2. Minimum load-capacity index:

Front: 16 with the maximum load on tyre 71 kg
Rear: 45 with the maximum load on tyre 165 kg

6.18.1.3. Minimum-speed category symbol compatible with the theoretical maximum design vehicle speed: B

6.18.1.4. Tyre pressure(s) as recommended by the vehicle manufacturer: See table 6.18.

6.18.2. Wheels:

6.18.2.1. Rim size(s): See table 6.18.

- 6.18.2.2. Categories of use compatible with the vehicle: normal
- 6.18.2.3. Nominal rolling circumference: See table 6.18.
- 6.19. Vehicle maximum speed limitation plate and its location on the vehicle: N.A.
- 6.20. Vehicle occupant protection, including interior fittings and vehicle doors: N.A.
- 6.21. Maximum continuous total power and/or maximum vehicle speed limitation by design.
- 6.21.1. Propulsion and/or drive-train output governors:
- 6.21.1.1. Number (minimum two, exemption L3e-A3 and L4e-A3): Two
- 6.21.1.2. How is the redundancy of governors ensured:
- (1) reduction of the maximum power output of one electric motors based on the vehicle or rotation speed as sensed internally to the electric motor
 - (2) physical vehicle speed limitation by means of external components such as a maximum achievable revolution speed of an electric motor
- 6.21.1.3. Nominal cut-off point no 1:
- 6.21.1.3.1. Engine/motor/drive-train rotation speed at which cut-off starts under load:
520 min⁻¹
- 6.21.1.3.2. Maximum rotation speed at the minimum engine load:
575 min⁻¹
- 6.21.1.4. Nominal cut-off point no 2:
- 6.21.1.4.1. Engine/motor/drive-train rotation speed at which cut-off starts under load:
N.A.
- 6.21.1.4.2. Maximum rotation speed at the minimum engine load:
N.A.
- 6.21.1.5. The stated purpose of governor(s): maximum design vehicle speed limitation/~~maximum power limitation/engine over-speed protection~~
7. INFORMATION ON VEHICLE CONSTRUCTION
- 7.1. Coupling devices and attachments: N.A.
- 7.1.1. L-category vehicle equipped with coupling device: ~~yes/no/optional~~ N.A.
- 7.1.2. Guidelines and information for consumers in all EU languages regarding the impact on the driveability of using a trailer with an L-category vehicle included in the owner's manual:
~~yes/no~~ N.A.

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- 7.1.3. For coupling-device approved as separate technical unit: installation and operating instructions added to documentation: ~~yes~~/no N.A.
- 7.1.4. Photographs and/or drawings showing the position and the construction of the coupling-devices: ~~yes~~/no N.A.
- 7.1.5. Instructions for attaching the coupling-type to the vehicle and photographs or drawings of the fixing points on the vehicle as stated by the manufacturer; additional information, if the use of the coupling-type is restricted to certain variants or versions of the vehicle type: N.A.
- 7.1.6. Attachment points for a secondary coupling and/or breakaway cable (drawings and pictures may be used as appropriate): ~~yes~~/no N.A.
- 7.2. Devices to prevent unauthorised use
- 7.2.1. Protective device
- 7.2.1.1. Summary description of protective device(s) used:
- Type 2, positively operated on the steering in conjunction with the device which deactivates the motor of the vehicle.
See the drawing of HM-2-22
- 7.2.2. Vehicle immobiliser:
- 7.2.2.1. Technical description of the vehicle immobiliser and of the measures taken against inadvertent activation: N.A
- 7.2.3. Alarm system: N.A
- 7.2.3.1. Description of the alarm system and of the vehicle parts involved in installation: N.A
- 7.2.3.2. List of the main components comprising the alarm system: N.A
- 7.3. Electromagnetic compatibility (EMC)
- 7.3.1. Requirements under UNECE Regulation No 10 (OJ L 254, 20.9.2012, p. 1) are met with relevant documentation included in the information document: ~~yes~~/no
- 7.3.2. Table or drawing of radio-interference control equipment:
- See the drawing of HM-2-15
- 7.3.3. Particulars of the nominal value of the direct-current resistance, and, in the case of resistive ignition cables, of their nominal resistance per metre:
1. 1.50 mm² (max. resistance: 13.3 Ohm/km)
 2. 1.00 mm² (max. resistance: 19.5 Ohm/km)
 3. 0.75 mm² (max. resistance: 26.0 Ohm/km)
 4. 0.50 mm² (max. resistance: 39.0 Ohm/km)
 5. 0.30 mm² (max. resistance: 69.2 Ohm/km)
- 7.4. External projections

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7.4.1. (L1e-L7e vehicles with bodywork)

General arrangement (drawing or photographs accompanied if necessary by dimensional details and/or text) indicating the position of the attached sections and views, of any parts of the exterior surface which can be regarded as critical for external projections, for example, and where relevant: bumpers, floor line, door and window pillars, air-intake grilles, radiator grille, windscreen wipers, rain gutter channels, handles, slide rails, flaps, door hinges and locks, hooks, eyes, winches, decorative trim, badges, emblems and recesses and any other parts of the exterior surface which can be regarded as critical (e.g. lighting equipment): N.A.

7.5. Fuel storage

7.5.1. Fuel tank(s)

7.5.2. Compressed natural gas (CNG) container(s): N.A.

7.5.3. Liquefied petroleum gas (LPG) container(s): N.A.

7.6. On-board diagnostics (OBD) functional requirements: N.A.

7.7. Passenger handholds and footrests

7.7.1. Handholds

7.7.1.1. Configuration: ~~strap and/or handle~~

7.7.1.2. Photographs and/or drawings showing the location and the construction: N.A

7.7.2. Footrests

7.7.2.1. Photographs and/or drawings showing the location and the construction:

See the drawing of HM-2-23

7.8. Registration plate space

7.8.1. Location of rear registration plate (indicate variants where necessary; drawings may be used as appropriate): See the drawing of HM-2-24

7.8.1.1. Height above road surface, upper edge: See the drawing of HM-2-24

7.8.1.2. Height above road surface, lower edge: See the drawing of HM-2-24

7.8.1.3. Distance of the centre line from the longitudinal median plane of the vehicle: 0

7.8.1.4. Dimensions (length x width): See the drawing of HM-2-24

7.8.1.5. Inclination of the plane to the vertical: See the drawing of HM-2-24

7.8.1.6. Angle of visibility in the horizontal plane:

To the left and to the right of the plate of 30° and more.

7.9. Stands

- 7.9.1. (L1e, L3e) Configuration: ~~central~~ and side
- 7.9.2. (L1e, L3e) Construction material used: metal
- 7.9.3. (L1e, L3e) Photographs and drawings showing the location of the stand(s) in relation to the structure of the vehicle:
- See the drawing of HM-2-25
- 7.9.4. (L1e, L3e) Description of the method to prevent contact of the stand with the ground when the vehicle is being propelled :
- See the drawing of HM-2-25

Table 6.9.4.
Controls, tell-tales and indicators for which, when fitted, identification is mandatory, and symbols to be used for that purpose

Symbol No.	Device	Control /indicator available (*)	Identified by symbol(*)	Where (**)	Tell-tale available (*)	Identified by symbol(*)	Where (**)
1	Maser light	-	-	-	-	-	-
2	Dipped-beam head lamps	x	x	c	-	-	-
3	Main-beam head lamps	x	x	c	x	x	d
4	Position (side) lamps	-	-	-	-	-	-
5	Front fog lamps	-	-	-	-	-	-
6	Rear fog lamps	-	-	-	-	-	-
7	Headlamp leveling device	-	-	-	-	-	-
8	Parking lamps	-	-	-	-	-	-
9	Direction indicators	x	x	c	x	x	d
10	Hazard warning	-	-	-	-	-	-
11	Windscreen wiper	-	-	-	-	-	-
12	Windscreen washer	-	-	-	-	-	-
13	Windscreen wiper and washer	-	-	-	-	-	-
14	Headlamp cleaning device	-	-	-	-	-	-
15	Windscreen demisting and defrosting	-	-	-	-	-	-
16	Rear window demisting and defrosting	-	-	-	-	-	-
17	Ventilating fan	-	-	-	-	-	-
18	Diesel pre-heat	-	-	-	-	-	-
19	Choke	-	-	-	-	-	-
20	Brake failure	-	-	-	-	-	-
21	Fuel level	-	-	-	-	-	-
22	Battery charging condition	-	-	-	-	-	-
23	Engine coolant temperature	-	-	-	-	-	-
24	Malfunction indicator light (MI)	-	-	-	-	-	-

(*) x = yes
 - = no or not separately available
 o = optional
 (**) d = directly on control, indicator or tell-tale
 c = in close vicinity



Table 6.9.5.
Controls, tell-tales and indicators for which, when fitted, identification is optional, and symbols which shall be used if they are to be identified

Symbol No.	Device	Control /indicator available (*)	Identified by symbol(*)	Where (**)	Tell-tale available (*)	Identified by symbol(*)	Where (**)
1	Parking brake	-	-	-	-	-	-
2	Rear window wiper	-	-	-	-	-	-
3	Rear window washer	-	-	-	-	-	-
4	Rear window wiper and washer	-	-	-	-	-	-
5	Intermittent windscreen wiper	-	-	-	-	-	-
6	Audible warning device (horn)	x	x	d	-	-	-
7	Front hood (bonnet)	-	-	-	-	-	-
8	Rear hood (boot)	-	-	-	-	-	-
9	Seat belt	-	-	-	-	-	-
10	Engine oil pressure	-	-	-	-	-	-
11	Unleaded petrol	-	-	-	-	-	-
12	Neutral indicator	-	-	-	-	-	-
13	Optical warning device	-	-	-	-	-	-
14	Ignition switch	-	-	-	-	-	-
15	External cord connect	-	-	-	-	-	-
16	Electric motor enabled	-	-	-	x	x	d
17	Cruise control	-	-	-	-	-	-
18	Battery failure	-	-	-	-	-	-
19	Reversing switch	x	x	d	-	-	-
20	Parking button	-	-	-	-	-	-
21	Gear selection	x	x	c	x	x	d

(*) x = yes
 - = no or not separately available
 o = optional
 (**) d = directly on control, indicator or tell-tale
 c = in close vicinity

Table 6.11.1.

List of all devices (mentioning the number, make(s), type, component type- approval mark(s), the maximum intensity of the main-beam headlamps, colour, the corresponding tell-tale)

DEVICES	MAKE/MODEL	NUMBER/ COLOUR	TELL-TALE	APPROVAL NUMBER	MAXIMUM INTENSITY
DRIVING BEAM HEADLAMP, PASSING BEAM HEADLAMP	HS/HS-TF1	1 / white	YES/ Blue	E57*113R02/00*0 031*00	23000 cd
		1 / white	---	E57*113R02/00*0 031*00	----
FRONT POSITION LAMP	HS/HS-TF1	1 / white	---	E57*50R00/20*00 31*00	----
FRONT & REAR DIRECTION INDICATOR (option 1)	SHIJIN/SJ-LED-Z10	2 /amber	YES / Green	E4*50R00/19* 2854*00	----
FRONT & REAR DIRECTION INDICATOR (option 2)	 /CG/D-ZX-HL	2 /amber	YES / Green	E4*50R01/00* 3107*00	----
FRONT & REAR DIRECTION INDICATOR (option 3)	Xiaosongshu/KL-602	2 /amber	YES / Green	E57*50R01/00*01 51	----
REAR POSITION LAMP	SHIJIN/SJ-LED-W01	1 / red	*	E4*50R00/19* 26277*00	----
STOP LAMP (option 1)		1 / red	NO		----
REAR REGISTRATION PLATE LAMP(OPTION 1)		1 / white	*		----
REAR POSITION LAMP	 /CG/D-W-HL	1 / red	*	E4*50R01/00* 3108*00	----
STOP LAMP(option 2)		1 / red	NO		----
REAR REGISTRATION PLATE LAMP(OPTION 2)		1 / white	*		----
REAR RETRO-REFLECTOR	K-LITE, KYI, HILUX K- LITE/KM206	1 / red	NO	E4*3R02/17*3713* 01	----
SIDE RETRO-REFLECTOR	K-LITE, KYI, HILUX K- LITE/KM206	2 / amber	NO	E4*3R02/17*3713* 01	----

*Instrument panel illumination

Type: HM-2	ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED	Date: June 22. 2022
Appendix 4		Ext.: 00

Table 6.18.
Tyres/wheels combination

Axle	Type approval number	Dimension	Max. loading	Speed Category	Rims	Nominal rolling circumference	Tyre pressure
Front	E9*75R00/17*120 5*00	130/70-12	62	J	3.50X 12	1560 mm	280 kPa
rear	E9*75R00/17*121 9*00	225/40-10	58	M	7.0X10	1360 mm	250 kPa

INDEX OF DRAWINGS

Drawing No	Drawing description
HM-2-01	Manufacturer's Statutory Plate
HM-2-02	Vehicle Identification Number
HM-2-03	Photos of A Representative Vehicle
HM-2-04	Dimension Measured on Vehicle
HM-2-05	Chassis
HM-2-06	Electric Motor
HM-2-07	Location of The Propulsion Batteries
HM-2-08	Controller
HM-2-09	Drive train
HM-2-10	Front suspension
HM-2-11	Rear suspension
HM-2-12	Location of The Audible Warning Device
HM-2-13	Electrical Circuit Diagram
HM-2-14	Brake System
HM-2-14-1	Hydraulic reservoir
HM-2-14-2	Brake hose
HM-2-14-3	Front brake system
HM-2-14-4	Rear brake system
HM-2-14-5	Front Brake pads
HM-2-14-6	Rear Brake pads
HM-2-14-7	Brake Levers
HM-2-15	Power Circuit Components Installation
HM-2-16	Controls, Tell-tales and Indicators
HM-2-17	Speedometer and odometer
HM-2-18	Location of Lights
HM-2-19	Location of Rear View Mirror
HM-2-20	Transmission and Control of Steering
HM-2-21	The seats and R point
HM-2-22	Protective Device
HM-2-23	Footrest
HM-2-24	Rear Registration Plate
HM-2-25	Side Stand

Manufacturer's statement on endurance testing (Annex V to Commission Delegated Regulation (EU) No 3/2014)

The undersigned: Wu qiang /general manager

Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK,
KOWLOON HONG KONG

Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLENT, ALICANTE, SPAIN

Hereby states that the vehicles:

- 0.1. Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MINGTO, MALCOR IBÉRICA, R RETELLI, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
 - 0.2.1. Variant(s): 00
 - 0.2.2. Version(s): 00
 - 0.2.3. Commercial name(s) (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B


for which type-approval is sought shall withstand normal use as intended for at least 16500 km travelled within five years of first registration, taking into account regular and scheduled maintenance and specific equipment adjustments, as described clearly and unambiguously in the instructions manual delivered with the vehicles.

The undersigned furthermore confirms that the endurance of the systems, parts and equipment critical for functional safety is ensured through appropriate testing and the use of good engineering practice.

This declaration has no bearing on any vehicle warranty.

Place: Hong Kong, China

Date: June 22. 2022

Signature: 

Name and position in the company: Wu qiang /General manager

Manufacturer's statement on structure integrity (Annex XIX to Commission Delegated Regulation (EU) No 3/2014)

The undersigned: Wu qiang /general manager

Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK,
KOWLOON HONG KONG

Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLENT, ALICANTE, SPAIN

Hereby states that the vehicles:

- 0.1. Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MINGTO, MALCOR IBÉRICA, R RETELLI, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
 - 0.2.1. Variant(s): 00
 - 0.2.2. Version(s): 00
 - 0.2.3. Commercial name(s) (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B


shall be constructed in a proper manner and are designed to be sufficiently robust to withstand the intended use over the vehicle's lifetime, taking into account regular and scheduled maintenance and specific equipment adjustments, as described clearly and unambiguously in the instructions manual delivered with the vehicles.

The undersigned furthermore agrees to and guarantees that specific analyses of vehicle structures, components and/or parts using engineering calculations, virtual testing methods and/or structural testing shall be made available in a timely manner to the approval authority and the European Commission upon request in case of a recall due to a serious safety risk.

This declaration applies to all vehicles covered by the type-approval to which this statement is annexed and has no bearing on any vehicle warranty.

Place: Hong Kong, China

Date: June 22. 2022

Signature: 

Name and position in the company: Wu qiang /General manager

Manufacturer's certificate on access to ~~vehicle OBD (stage I)~~ and vehicle repair and maintenance information

Reference number: HM-2-00

The undersigned: Wu qiang /general manager

Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK,
KOWLOON HONG KONG

Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLENT, ALICANTE, SPAIN

Hereby states that the vehicles:
it provides access to ~~vehicle OBD~~ and vehicle repair and maintenance information in compliance with


- Chapter XV of Regulation (EU) No 168/2013
with respect to the types of vehicle, engine and pollution-control device listed in Addendum 1 to this certificate.

The following derogation is applied: ~~carry-over systems.~~

The principal website addresses, through which the relevant information may be accessed and which are hereby certified to be in compliance with the above provisions, are listed in Addendum 2 to this certificate along with the contact details of the manufacturer's representative listed in Addendum 3 to this certificate, whose signature is below.

Where applicable: The manufacturer hereby also certifies that it has complied with the obligation in Article 57(8) of Regulation (EU) No 168/2013 to provide the relevant information for previous approvals of these vehicle types no later than six months after the date of type-approval.

Place: Hong Kong, China Date: June 22. 2022

Signature:  Name and position in the company: Wu qiang /General manager

- Addenda:
- 1: List of the types of vehicle, engine and pollution-control device
 - 2: Web sites addresses
 - 3: Contact details

Type: HM-2 Appendix 7	ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED	Date: June 22. 2022 Ext. : 00
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Addendum 1

to

Manufacturer's certificate with reference number HM-2-00 on access to ~~vehicle OBD (stage I) and~~
vehicle repair and maintenance information

List of the types of vehicle:

0.2. Type: HM-2

0.2.1. Variant(s): 00

0.2.2. Version(s): 00

0.2.3. Commercial name(s) (if available): electric scooter

0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B

1. Type-approval number including extension number (if available): N.A.

1.1. Type-approval issued on (date, if available): N.A.

List of the types of engines:

3. ~~Combustion engine~~/ electric motor/~~hybrid~~ application code: HS60V1500W30H

3.1. Type-approval number (if available): N.A.

3.2. Type-approval issued on (date, if available): N.A.

List of the types of pollution-control devices:

0.7. Make(s) (trade name(s) of manufacturer): N.A.

0.8. Type: N.A.

0.8.1. Commercial name(s) (if available): N.A.

0.8.2. Type-approval number including extension number (if available): N.A.

0.8.3. Type-approval issued on (date, if available): N.A.

Addendum 2

to

Manufacturer's certificate with reference number HM-2-00 on access to ~~vehicle OBD (stage I) and~~
vehicle repair and maintenance information

Web site addresses referred to in this certificate:

<http://www.zjshansu.com/>

Type: HM-2
Appendix 7

ZHEJIANG YIXING INDUSTRY AND
TRADE LIMITED

Date: June 22. 2022
Ext. : 00

Addendum 3

to

Manufacturer's certificate with reference number HM-2-00 on access to ~~vehicle OBD (stage I) and~~
vehicle repair and maintenance information

Contact details of the manufacturer's representative referred to in this certificate:

Name and position in the company: ABDELLATIF KHALFI NASIRI

TEL: + 00346763856697

E-mail: abdulkhalfi@gmail.com

**Manufacturer's declaration on powertrain tampering prevention measures
(anti-tampering)**

1. Vehicle manufacturer's declaration on powertrain tampering prevention measures (anti-tampering):
- not to market interchangeable components which could enable propulsion unit performance to exceed levels applicable to the relevant (sub) category;
 - manufacturer-facilitated modifications shall not increase the propulsion unit performance of the vehicle;
 - modifications and interchangeability of parts and components

Manufacturer's declaration not to market interchangeable components which could enable propulsion unit performance to exceed levels applicable to the relevant (sub) category

0.4. Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET
MONG KOK, KOWLOON HONG KONG

0.4.2 Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLEN, ALICANTE, SPAIN

Hereby declares that:

For the ~~L1e/L2e, (L3e/L4e)-A1/(L3e/L4e)-A2/L6e/L7e~~ category vehicle:

- 0.1. Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MINGTO, MALCOR IBÉRICA, R RETELLI, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
- 0.2.1. Variant(s): 00
- 0.2.2. Version(s): 00
- 0.2.3. Commercial name(s) (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B

Will not market interchangeable components which could enable propulsion unit performance to exceed levels applicable to the relevant (sub) category;

and that

The manufacturer-facilitated modifications of the following characteristics:

- ~~(a) spark delivery of the ignition system if applicable;~~
- ~~(b) fuel feed and delivery system;~~

- ~~(c) air-intake system including air filter(s) (modification or removal);~~
- (d) propulsion battery configuration or electric power to the electric motor(s) if applicable;
- (e) drive-train;
- (f) and the control unit(s) that control(s) the propulsion unit performance of the powertrain.

shall comply with the requirements set out in point 2.6. of Annex II to Commission Delegated Regulation (EU) No 44/2014


For L3e-A2/L4e-A2/L7e category vehicles the manufacturer declares that:

The modifications and interchangeability of:

- ~~(a) spark delivery of the ignition system, if applicable;~~
- ~~(b) fuel feed and delivery system;~~
- ~~(c) air-intake system including air filter(s) (modification or removal);~~
- ~~(d) the drive-train;~~
- ~~(e) the control unit(s) for the propulsion unit performance of the powertrain;~~
- ~~(f) removal of any component (mechanical, electrical, structural, etc.) which limits full engine load, leading to any change in the propulsion unit performance as approved in accordance with Annex II (A) to Regulation (EU) No 168/2013~~

~~shall comply with the requirements set out in point 5.2 of Annex II to Commission Delegated Regulation (EU) No 44/2014~~

Place: Hong Kong, China Date: June 22. 2022

Signature: 

Name and position in the company: Wu qiang /General manager

STATEMENT ON NONE "DEFEAT DEVICE"

The undersigned: Wu qiang, general manager

Company name and address of manufacturer:

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET
MONG KOK, KOWLOON HONG KONG

Name and address of the manufacturer's representative (if any):

MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLEN, ALICANTE, SPAIN


Hereby states that the vehicles:

- 0.1. Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MINGTO, MALCOR IBÉRICA, R RETELLI, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
 - 0.2.1. Variant(s): 00
 - 0.2.2. Version(s): 00
 - 0.2.3. Commercial name(s) (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B

are not using any software or device that can be considered as "defeat device" which may impact the emission performance of the vehicles.

Place: Hong Kong, Chnia

Date: June 22, 2022

Signature: 


Name and position in the company: Wu qiang, General manager

Statement Concerning Authority of Signature on COC Paper

We, **ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED** declare that the undersigned persons will be the authorized person to sign the COC paper of the vehicle.

Type: HM-2

Specification of signature of COC:

Name	Position	Signature
Wu qiang	General manager	

ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED

Place: Hong Kong, China

Date: June 22. 2022

COMPLETE VEHICLE EU CERTIFICATE OF CONFORMITY

The undersigned, Wu qiang < General Manager >
Hereby certifies that the following complete vehicle:

- 0.1. Make (trade name of the manufacturer): SHANSU, Easycool, yuki, HIMOTO, aMoto, CITYCOCO, Rooley, Rooder, Strollwheel, HECHT MOTORS, ZMOTOS, MALCOR IBÉRICA, R RETELLI, MINGTO, JHR, RONZLLA, WS-ELECTRO, WHITE SIBERIA, YUHANZHEN, DINGYITOP, eMobility
- 0.2. Type: HM-2
0.2.1. Variant: 00
- 0.2.2. Version: 00
- 0.2.3. Commercial name (if available): electric scooter
- 0.3. Category, subcategory and sub-subcategory of vehicle: L1e-B
- 0.4. Company name and address of manufacturer:
ZHEJIANG YIXING INDUSTRY AND TRADE LIMITED
ROOM 2103, 21/F HO KING COMMERCIAL CENTRE NO. 2-16 FA YUEN STREET MONG KOK, KOWLOON HONG KONG
- 0.4.2. Name and address of manufacturer's authorized representative (if any):
MINIMOTOS SPORT, S.L.
C/ LA MITJANA 7 - POLIGONO EL BOCH, CREVILLENT, ALICANTE, SPAIN
- 0.5.1. Location of the manufacturer's statutory plate(s): L, x 400, y -120, z 500
- 0.5.2. Method of attachment of the manufacturer's statutory plate(s): Riveted
- 0.6. Location of the vehicle identification number: R, x 400, y 20, z 710
1. Vehicle identification number: ☆R68HM200????????☆

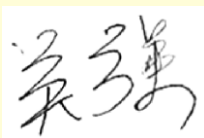
conforms in all respects to the type described in EU type-approval (e49*168/2013*10017*00 type-approval number including extension number) issued on (DD, MM, YYYY date of issue) and can be permanently registered in Member States having right/left-hand traffic and using metric/imperial units for the speedometer.

Hong Kong, China

DD, MM, YYYY

(place)

(date)



(signature)

General construction characteristics

- 1.3. Number of axles: 2 and wheels: 2
1.3.1. Axles with twinned wheels: N.A.
1.3.2. Powered axles: R
6.2.4. Advanced braking system: ~~ABS / CBS / Both ABS and CBS / None~~

Main dimensions

- 2.2.1. Length: 1850 mm
2.2.2. Width: 750 mm
2.2.3. Height: 1030 mm
2.2.4. Wheelbase: 1350 mm
2.2.4.1. Wheelbase sidecar: N.A.
2.2.5. Track width
2.2.5.1. Track width front: N.A.
2.2.5.2. Track width rear: N.A.
2.2.5.3. Track width sidecar: N.A.
2.2.10.6. Ground clearance between the axles: N.A.
2.2.15. Wheelbase to ground clearance ratio: N.A.
2.2.17. Seat height: N.A.

Masses

- 2.1.1. Mass in running order: 74 kg
2.1.2. Actual mass: 156 kg
2.1.3. Technically permissible maximum laden mass: 231 kg
2.1.3.1. Technically permissible maximum mass on front axle: 70 kg
2.1.3.2. Technically permissible maximum mass on rear axle: 161 kg
2.1.3.3. Technically permissible maximum mass on sidecar axle: N.A.
2.1.7. Technically permissible maximum towable mass:
Braked: N.A. Unbraked: N.A.
2.1.7.1. Technically permissible maximum laden mass of the combination: N.A.
2.1.7.2. Technically permissible maximum mass at the coupling point: N.A.

Powertrain

- 3.1.1.1. Manufacturer: N.A.
3.1.1.2. Engine code (as marked on the engine or other means of identification): N.A.
3.2.1.2. Working principle of the combustion engine: ~~internal combustion engine (ICE)/positive ignition/ compression ignition/external combustion engine (ECE)/turbine/compressed air - N.A.~~
3.2.1.4.1. Number of cylinders: N.A.
3.2.1.4.2. Arrangement of cylinders: ~~L/V/O/S~~ N.A.
3.2.1.5. Engine capacity: N.A.
1.9. Maximum net power: N.A.
1.10. Ratio maximum net power/mass of the vehicle in running order: N.A.
3.2.3.1. Fuel type: N.A.
3.2.3.2. Vehicle fuel combination: ~~mono-fuel/bi-fuel/flex-fuel~~ N.A.
3.2.3.2.1. Maximum amount of bio-fuel acceptable in fuel: N.A.
3.1.2.1. Manufacturer: TAIZHOU HENGSHENG SPINNING MACHINERY CO., LTD.
3.1.2.2. Electric motor code (as marked on the engine or other means of identification): HM2SS / ??????????

3.3.3.4. 45/30 minutes power: 1.5 kW
 3.1.3.1. Manufacturer: N.A.
 3.1.3.2. Application code (as marked on the engine or other means of identification): N.A.
 3.3.1. Electric vehicle configuration: ~~pure electric/hybrid electric/manpower electric~~
 3.3.5.2. Category of hybrid electric vehicle: ~~off-vehicle charging/hot off-vehicle charging~~ N.A.
 3.9.2. Maximum assistance factor: N.A.

Maximum speed

1.8. Maximum speed of vehicle: 45 km/h
 3.9.3. Maximum vehicle speed for which the electric motor gives assistance: N.A.

Drive-train and control

3.5.3.9. Transmission (type): W
 3.5.4. Gear ratios: N.A.
 3.5.4.1. Final drive ratio: N.A.
 3.5.4.2. Overall gear ratio in highest gear: N.A.

Installation of tyres

6.18.1.1. Tyre size designation:
 Axle 1: 130/70-12 62J 3.50x12 280 kPa
 Axle 2: 225/40-10 58M 7.0X10 250 kPa
 Sidecar wheel: N.A.

Bodywork

6.20.2.1. Door configuration and number of doors: N.A.
 6.16.1. Number of seating positions: 1
 6.16.1.1. Location and arrangement: N.A.

Coupling devices

7.2.8. Type-approval number of coupling-device: N.A.

Environmental performance

4.0.1. Environmental step: Euro 5
 4.0.6. Sound level measured according to: N.A.
 4.0.6.1. Stationary: N.A. at engine speed: N.A.
 4.0.6.2. Drive-by: N.A.
 4.0.6.3. Limit value for Lurban: N.A.

3.2.15. Exhaust emissions measured according to Regulation (EU) No 134/2014 including all amendments up to (EU) 2018/295
 3.2.15.1. Type I test: tailpipe emissions after cold start, including the deterioration factor, if applicable:

CO : N.A.
 THC : N.A.
 NMHC : N.A.
 NOx : N.A.
 THC+NOx : N.A.
 PM : N.A.

3.2.15.2. Type II test: tailpipe emissions at (increased) idle and free acceleration:
 HC: N.A.
 CO: N.A.

3.2.15.3. Smoke corrected absorption coefficient: N.A.

Energy efficiency

4.0.2. Fuel consumption: N.A.
 4.0.3. CO₂ emissions: N.A.
 4.0.4. Energy consumption: 31 Wh/km
 4.0.5. Electric range: 43 km

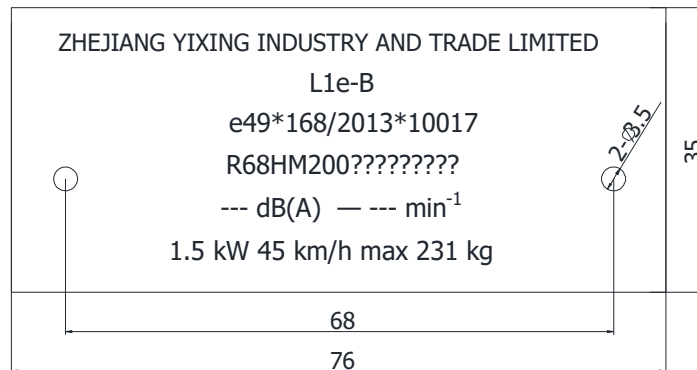
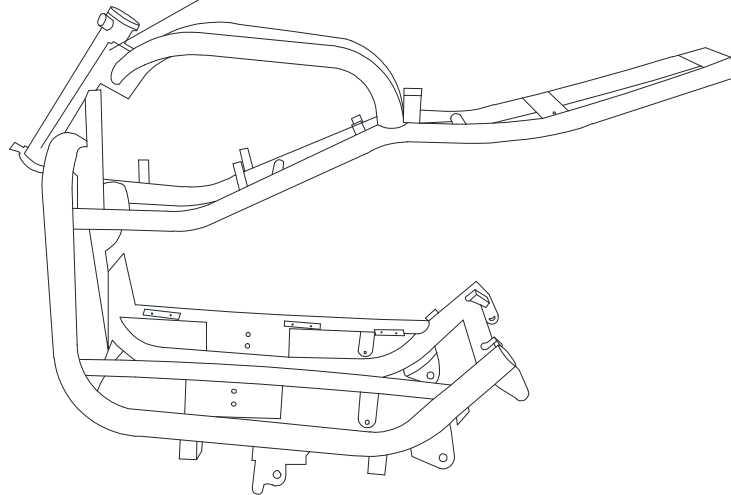
Conversion of the performance of the vehicle:

8.1. Vehicle appropriate for converting its performance level between subcategories (L3e/L4e)-A2 and (L3e/L4e)-A3 and vice versa: ~~yes/no~~-N.A.

Additional information:

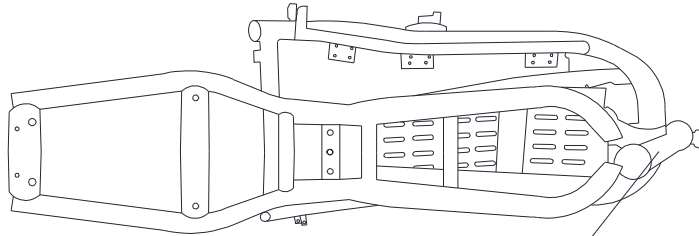
9.1. Remarks: N.A.
 9.2. Exemptions: N.A.

Riveted on the chassis
 Manufacturer's Data Plate
 L, x400,y-120,z500

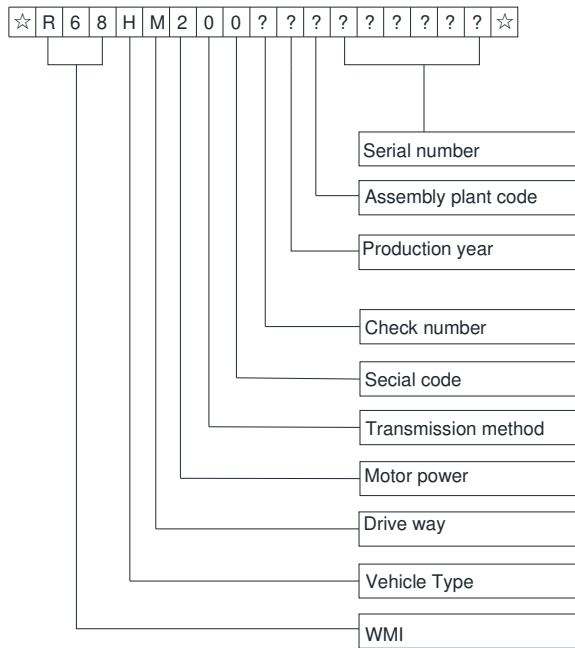


Text height:>4 mm
 Text depth:0.3 mm

Title	Manufacturer's Statutory Plate
Drawing NO.	HM-2-01



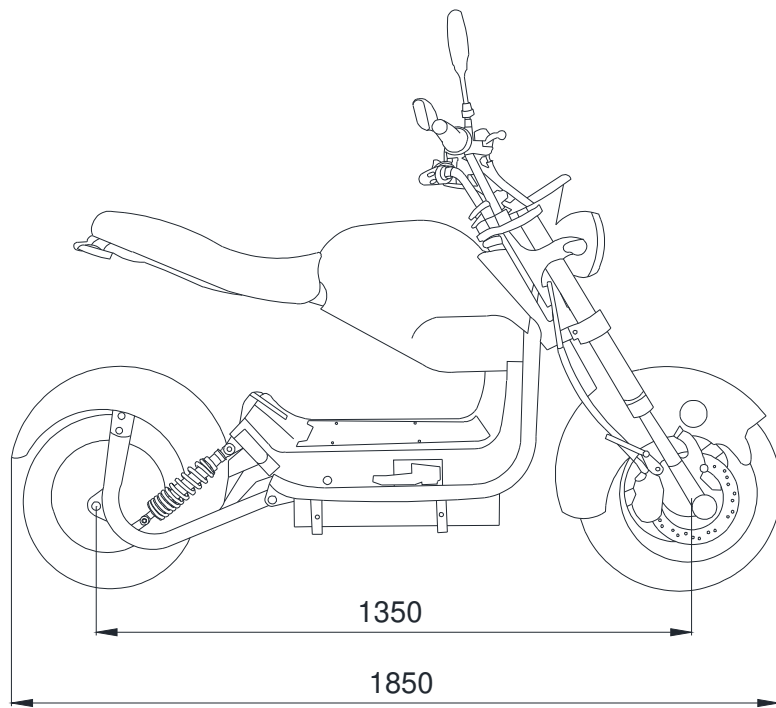
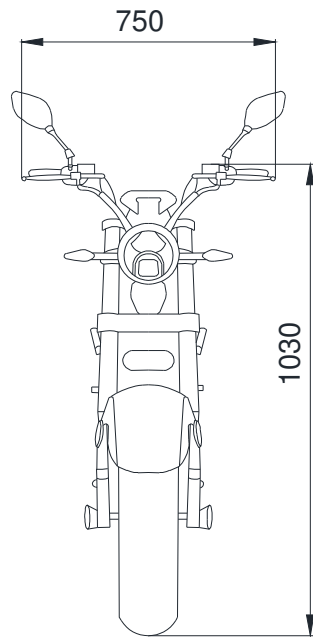
Stamped on the right side of frame
 R, x400,y20,z710
 Text height: 7 mm



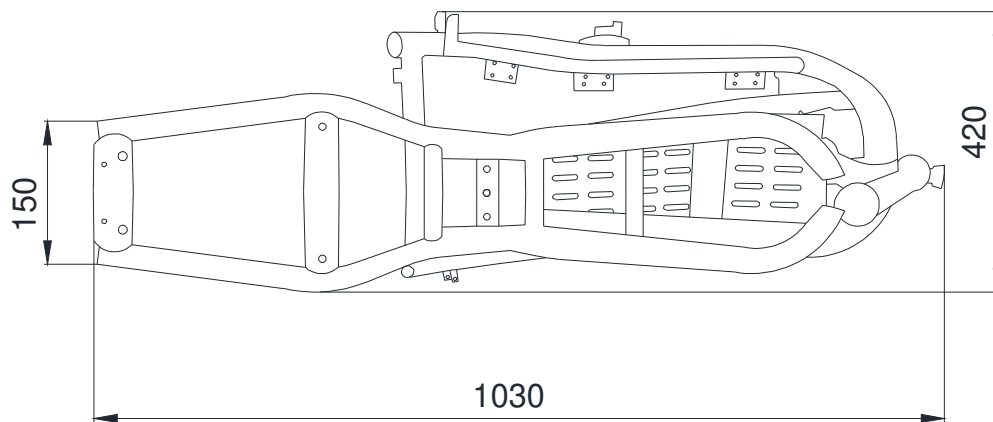
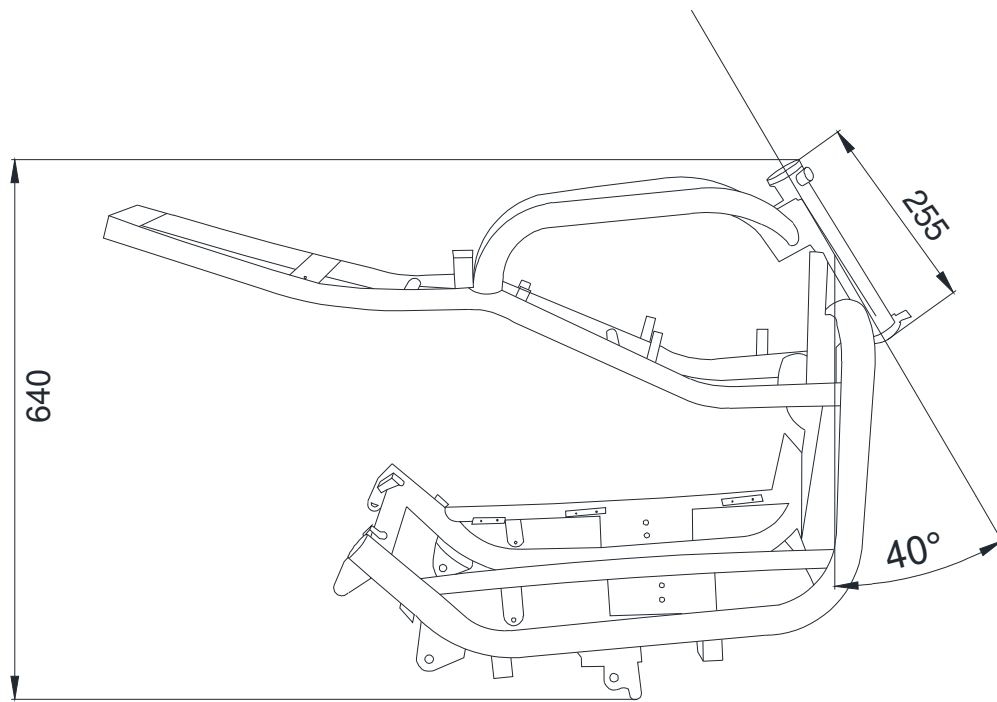
Title	Vehicle Identification Number
Drawing NO.	HM-2-02



Title	Photos of A Representative Vehicle
Drawing NO.	HM-2-03

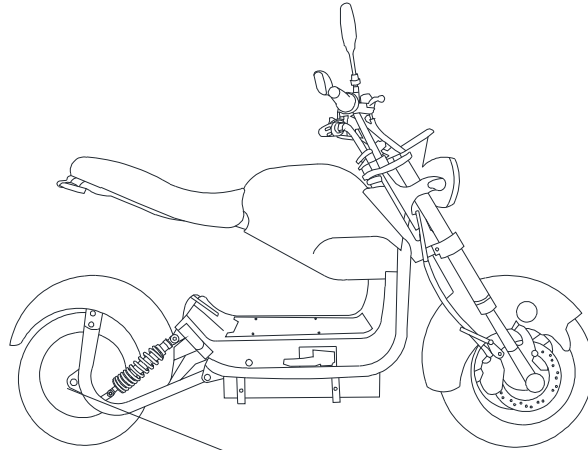


Title	Dimension Measured on Vehicle
Drawing NO.	HM-2-04

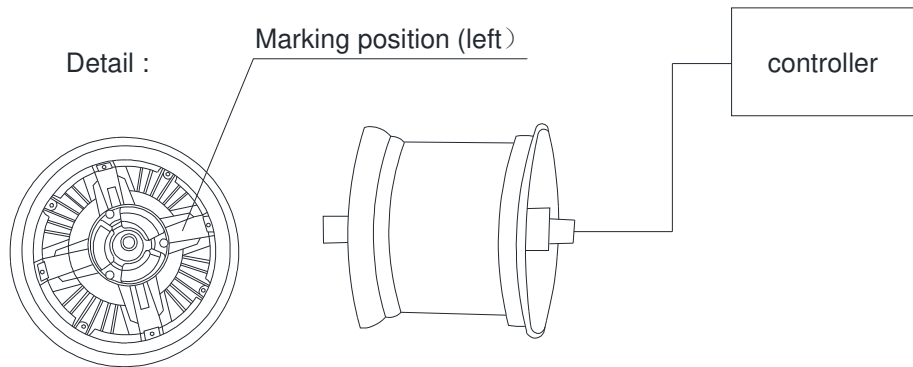


Material: steel

Title	Chassis
Drawing NO.	HM-2-05

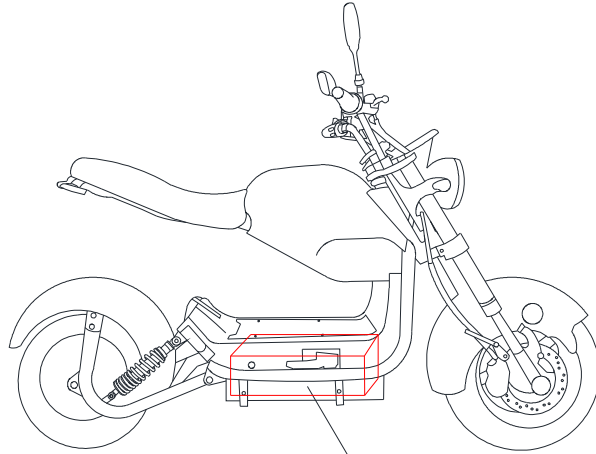


Electric motor position



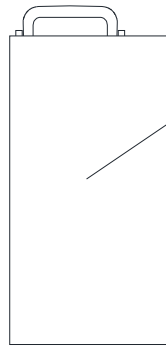
Manufacturer: TAIZHOU HENGSHENG SPINNING MACHINERY CO., LTD.
 Type: HM2SS
 Marking: HM2SS ??????????

Title	Electric Motor
Drawing NO.	HM-2-06

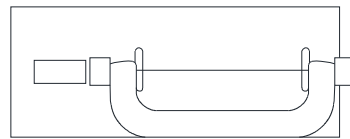


Battery installation position

Detail :



Marking position

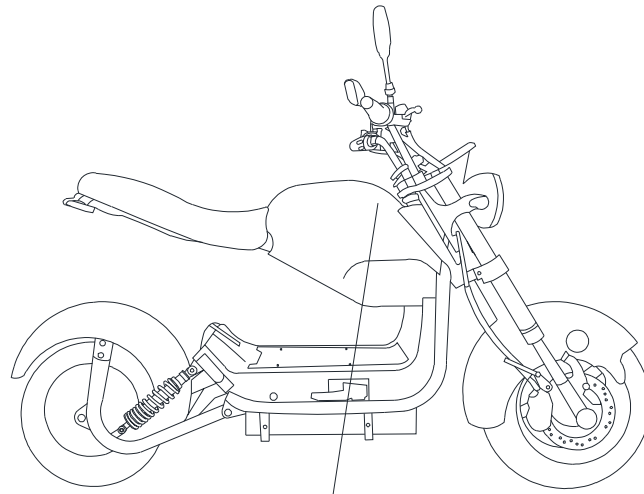


Manufacturer: TAIZHOU HENGSHENG SPINNING MACHINERY CO., LTD.

Type: HS60V20AH

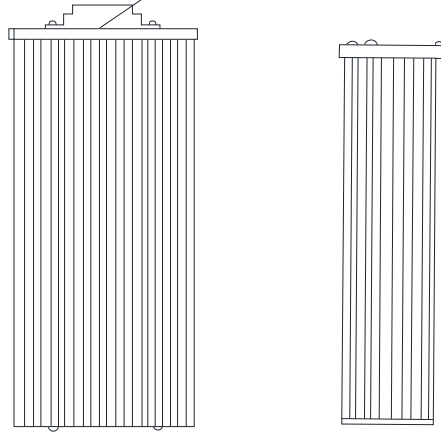
Marking: HS60V20AH

Title	Location of The Propulsion Batteries
Drawing NO.	HM-2-07



Controller position

Detail : Marking position

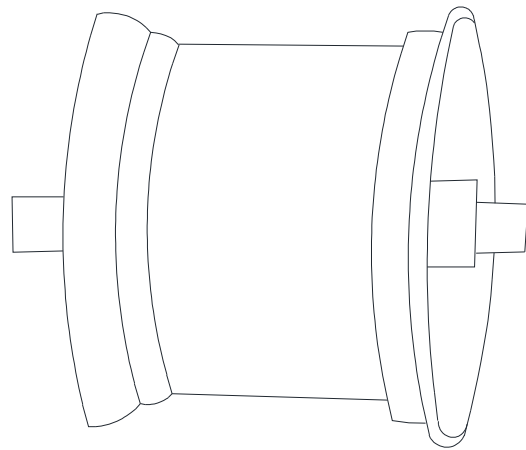
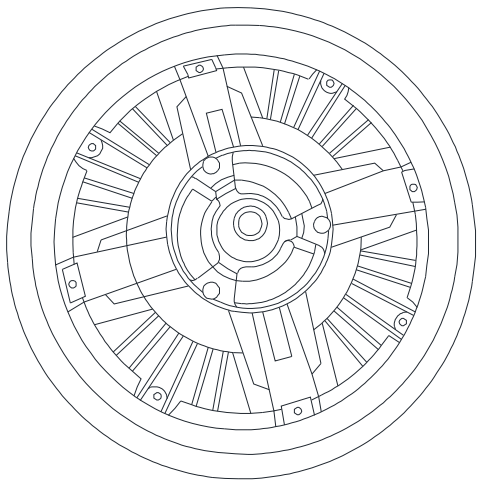


Manufacturer: TAIZHOU HENGSHENG SPINNING MACHINERY CO., LTD.

Type: HS60V

Marking: HS60V

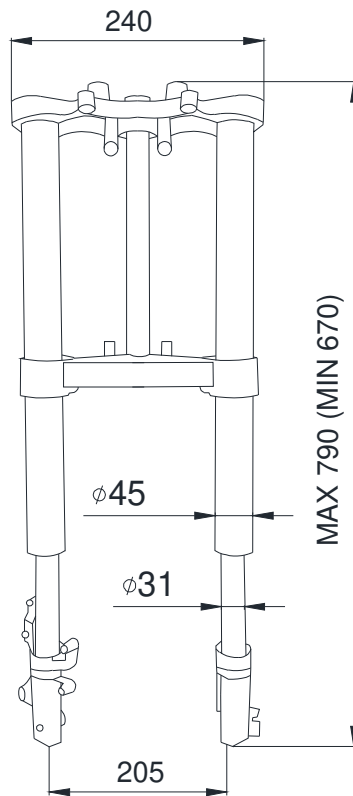
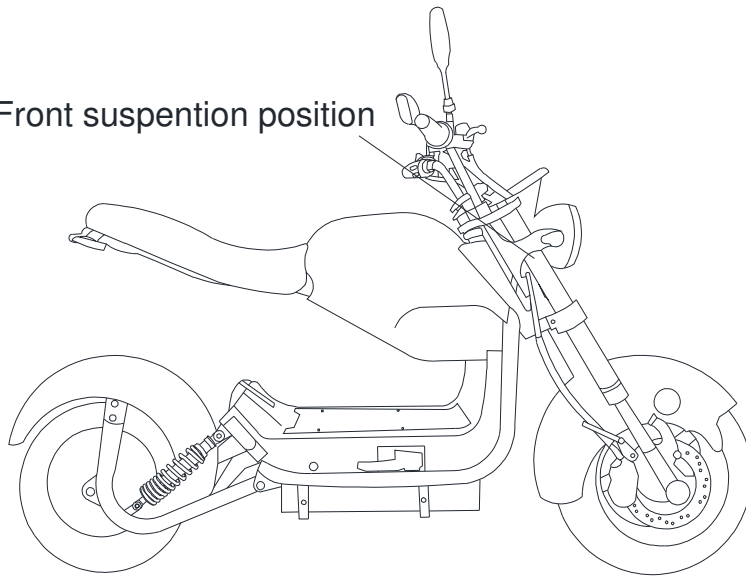
Title	Controller
Drawing NO.	HM-2-08



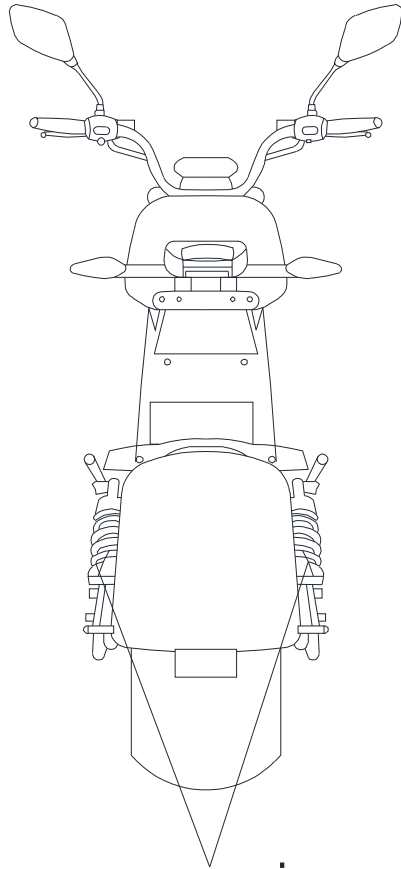
The wheel motor drives the wheels to rotate.

Title	Drive train
Drawing NO.	HM-2-09

Front suspension position

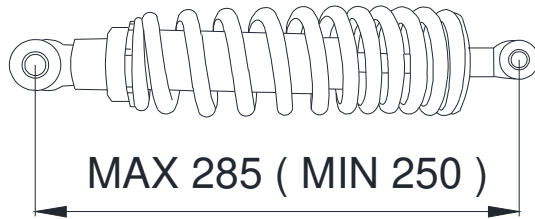


Title	Front suspension
Drawing NO.	HM-2-10

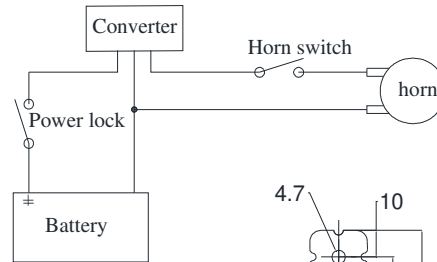
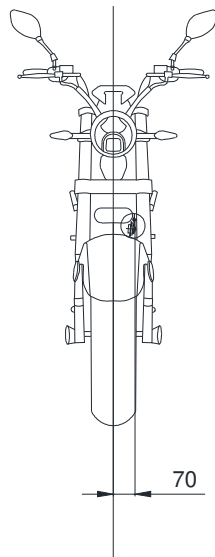
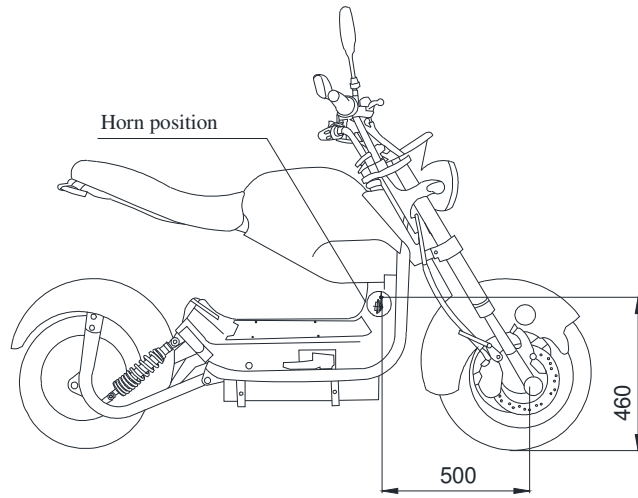


Rear suspension position

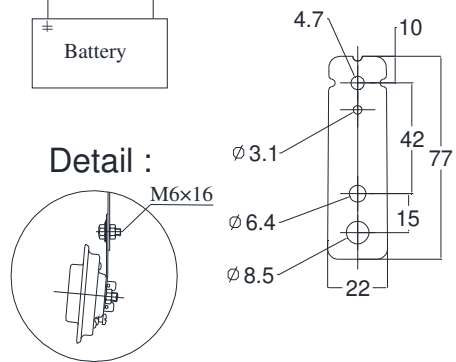
Detail :



Title	Rear suspension
Drawing NO.	HM-2-11

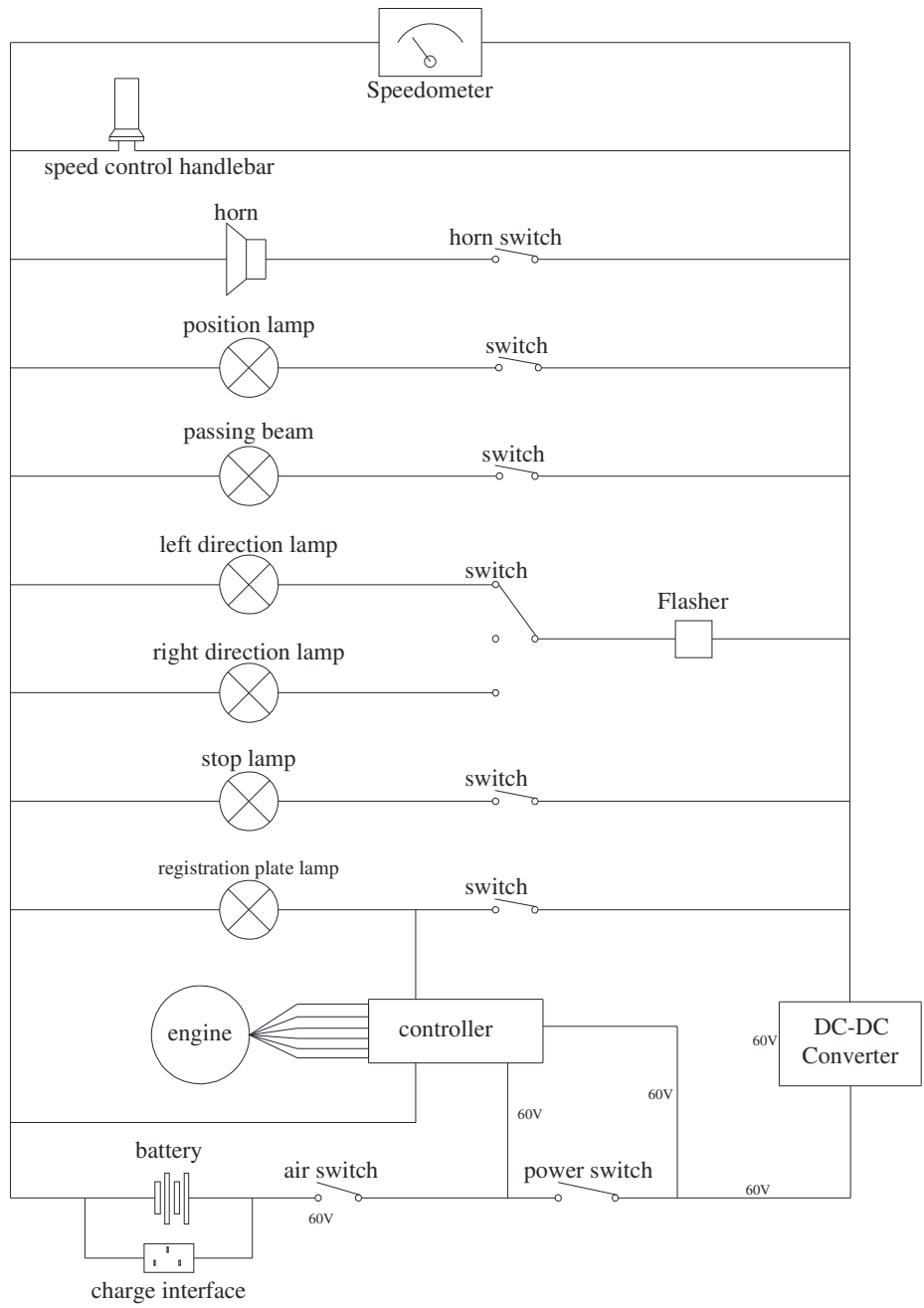


Detail :

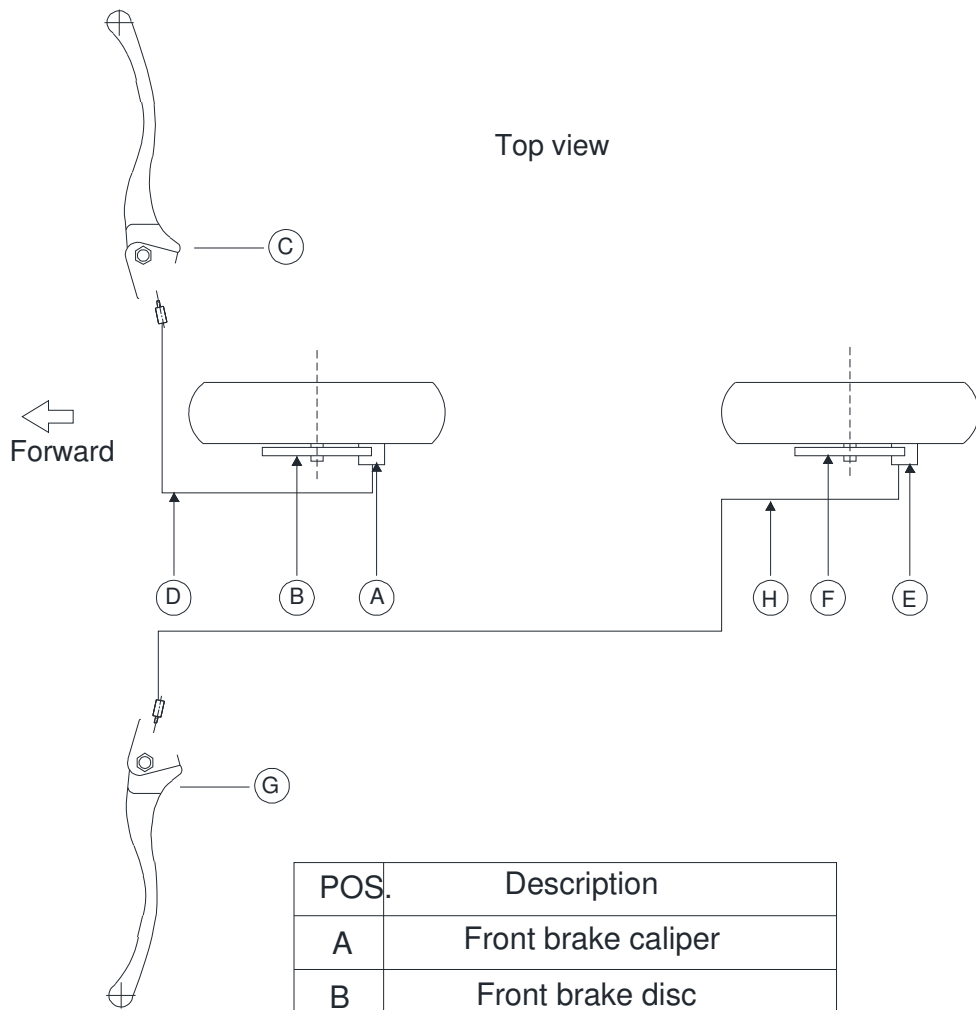


Make: LVEE
 Type: DL70-II
 Approval mark: II E32-000002

Title	Location of The Audible Warning Device
Drawing NO.	HM-2-12

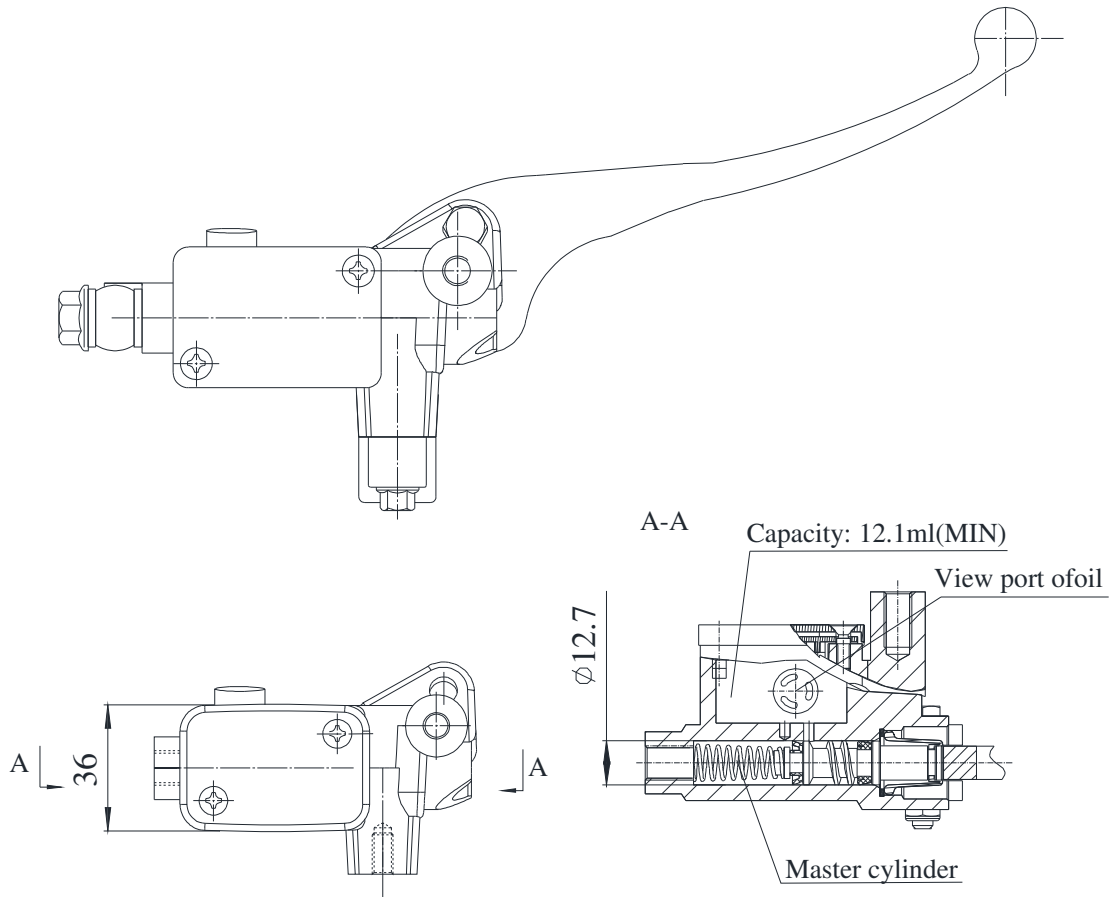


Title	Electrical Circuit Diagram
Drawing NO.	HM-2-13



POS.	Description
A	Front brake caliper
B	Front brake disc
C	Front brake pump with lever
D	Front brake oil pipe
E	Rear brake caliper
F	Rear brake disc
G	Rear brake pump with lever
H	Rear brake oil pipe

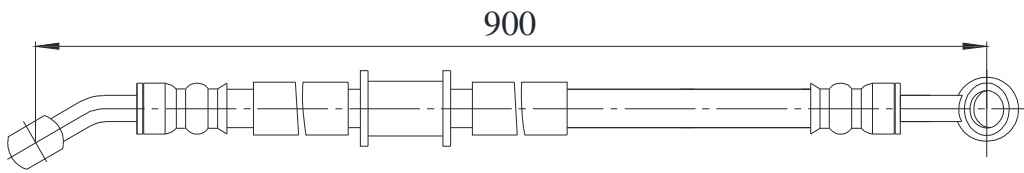
Title	Brake System
Drawing NO.	HM-2-14



Master cylinder piston area: 126.61 mm²

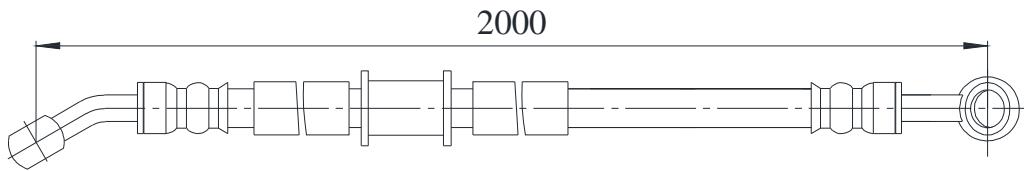
Title	Hydraulic reservoir
Drawing NO.	HM-2-14-1

Front brake oil pipe:



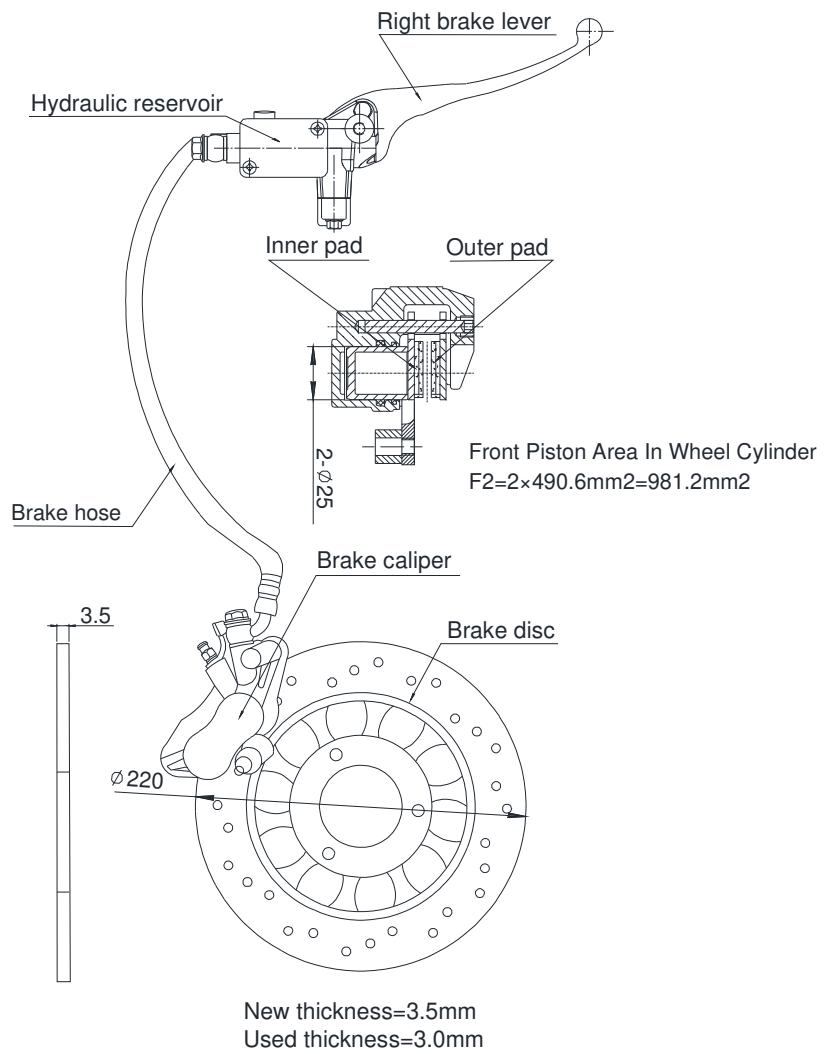
Brake pipe inner diameter: 3.2 mm, out diameter: 10.5 mm

Rear brake oil pipe:



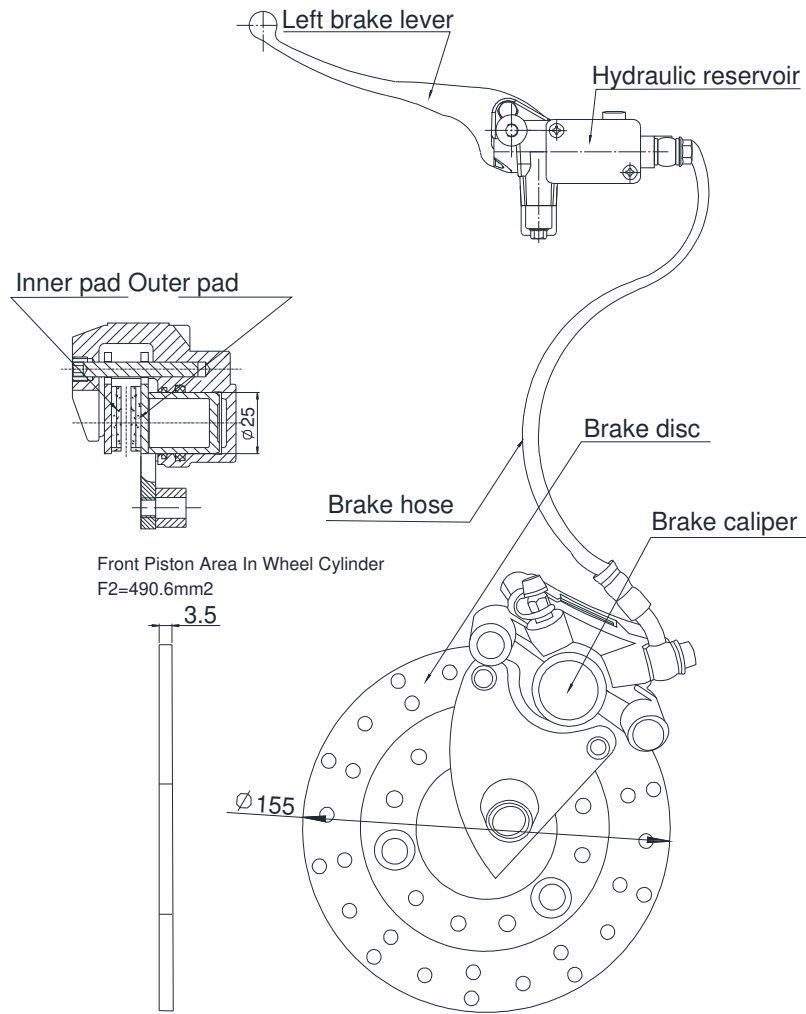
Brake pipe inner diameter: 3.2 mm, out diameter: 7.5 mm

Title	Brake hose
Drawing NO.	HM-2-14-2



Manufacturer: Ruian Huating Locomotive parts Co., Ltd.
 Type: TF1

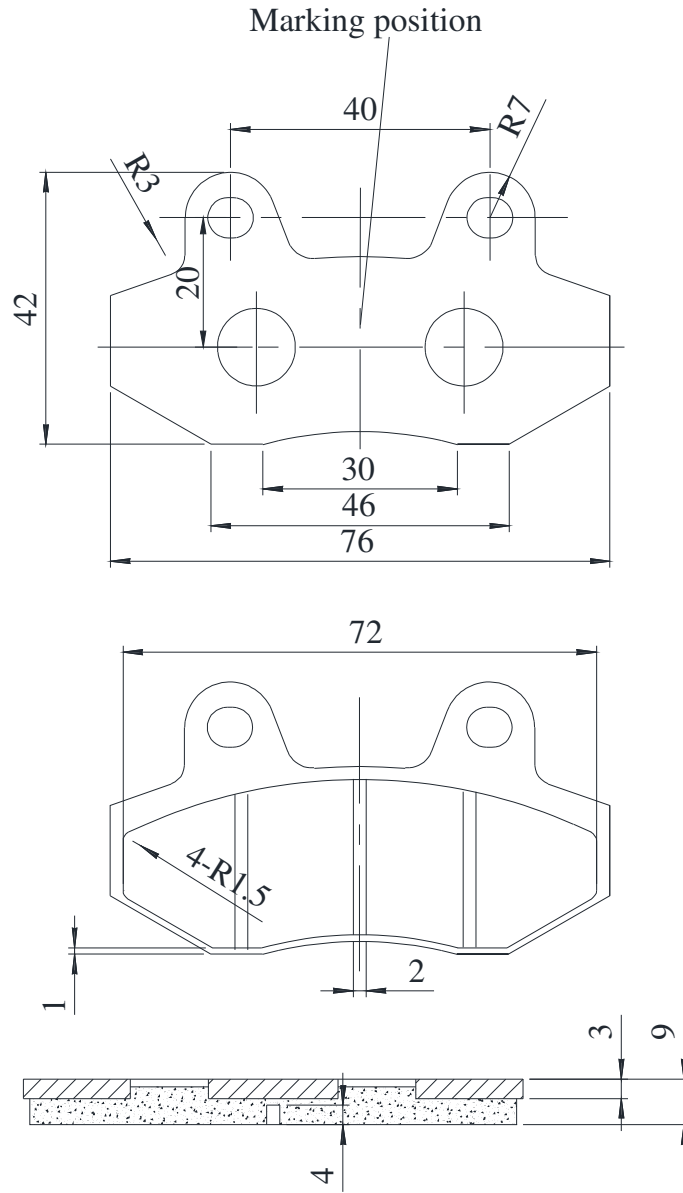
Title	Front brake system
Drawing NO.	HM-2-14-3



New thickness=3.5mm
Used thickness=3.0mm

Manufacturer: Ruian Huating Locomotive parts Co., Ltd.
Type: TF2

Title	Rear brake system
Drawing NO.	HM-2-14-4



Effective brake pad area: 1380 mm²

Manufacturer: Ruian Huating Locomotive parts Co., Ltd.

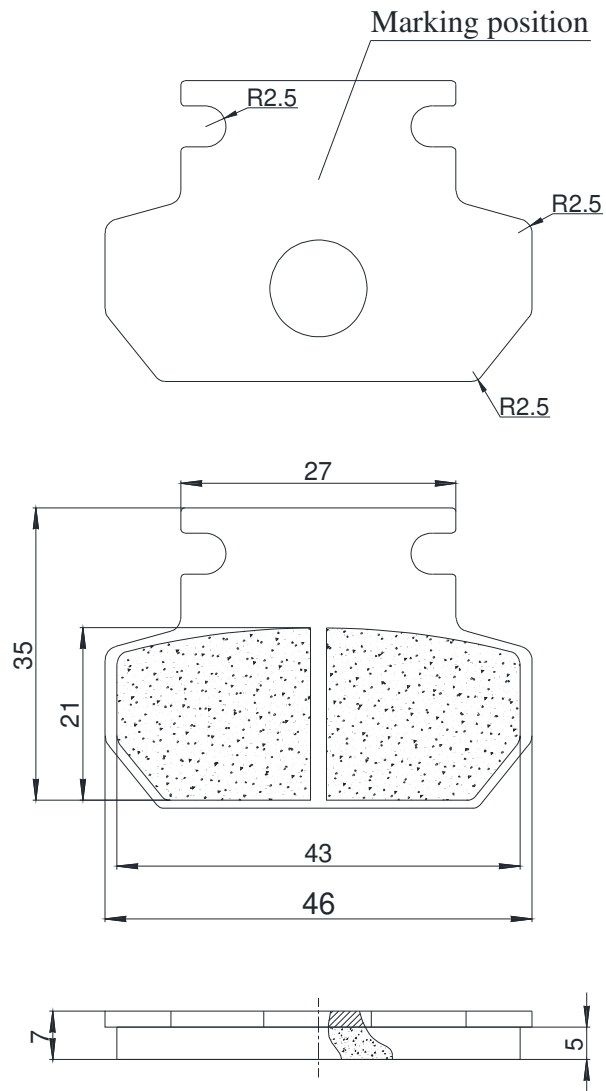
Marking: HMZ-7006

Type: HMZ-7006

Material: Metal ceramic

Asbestos free

Title	Front Brake pads
Drawing NO.	HM-2-14-5



Effective brake pad area: 700 mm²

Manufacturer: Ruian Huating Locomotive parts Co., Ltd.

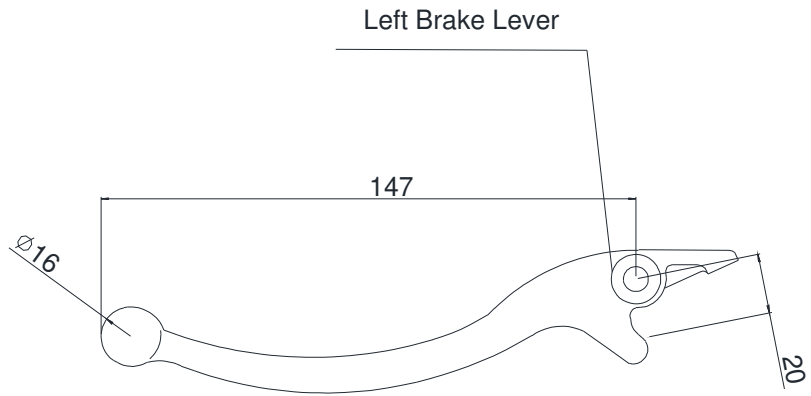
Marking: HMZ-7006

Type: HMZ-7006

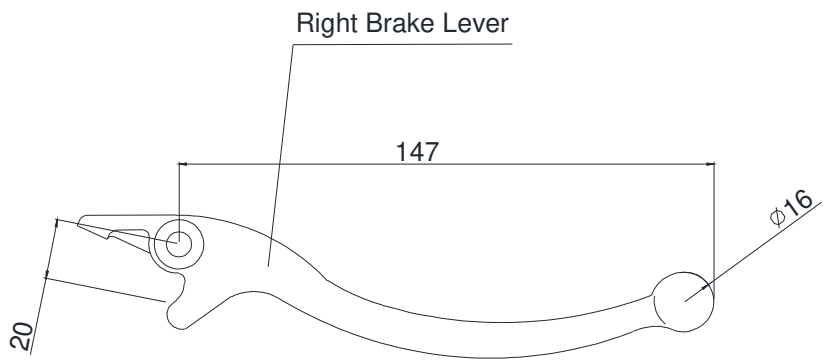
Material: Metal ceramic

Asbestos free

Title	Rear Brake Pads
Drawing NO.	HM-2-14-6

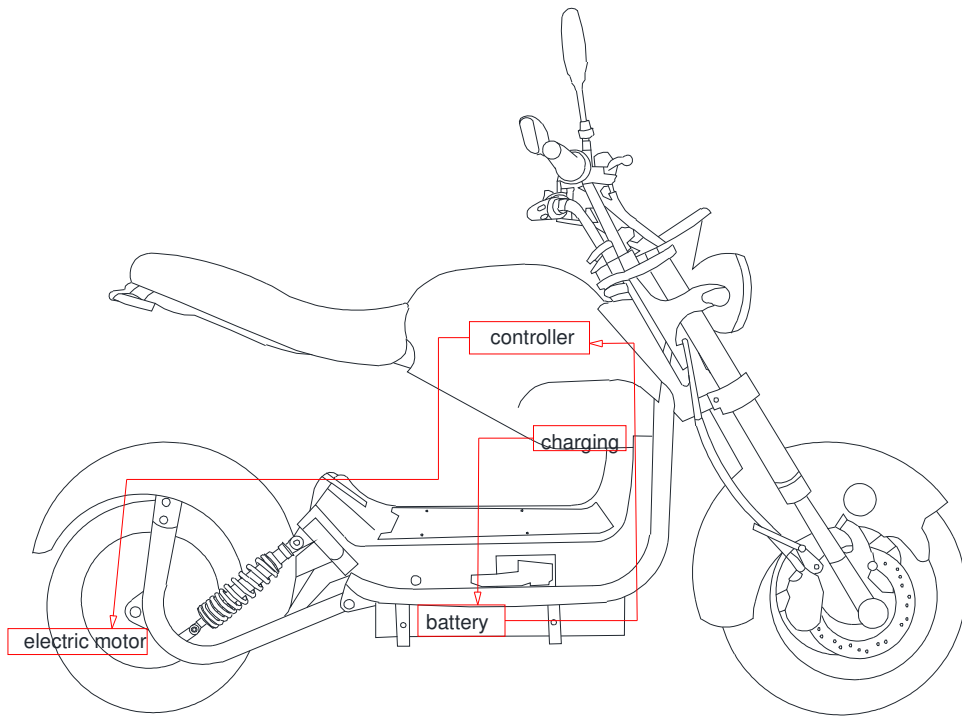


Lever ratio: 7.35



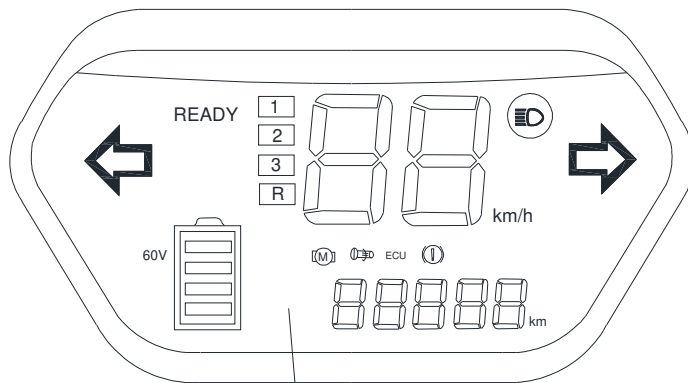
Lever ratio: 7.35

Title	Brake Levers
Drawing NO.	HM-2-14-7

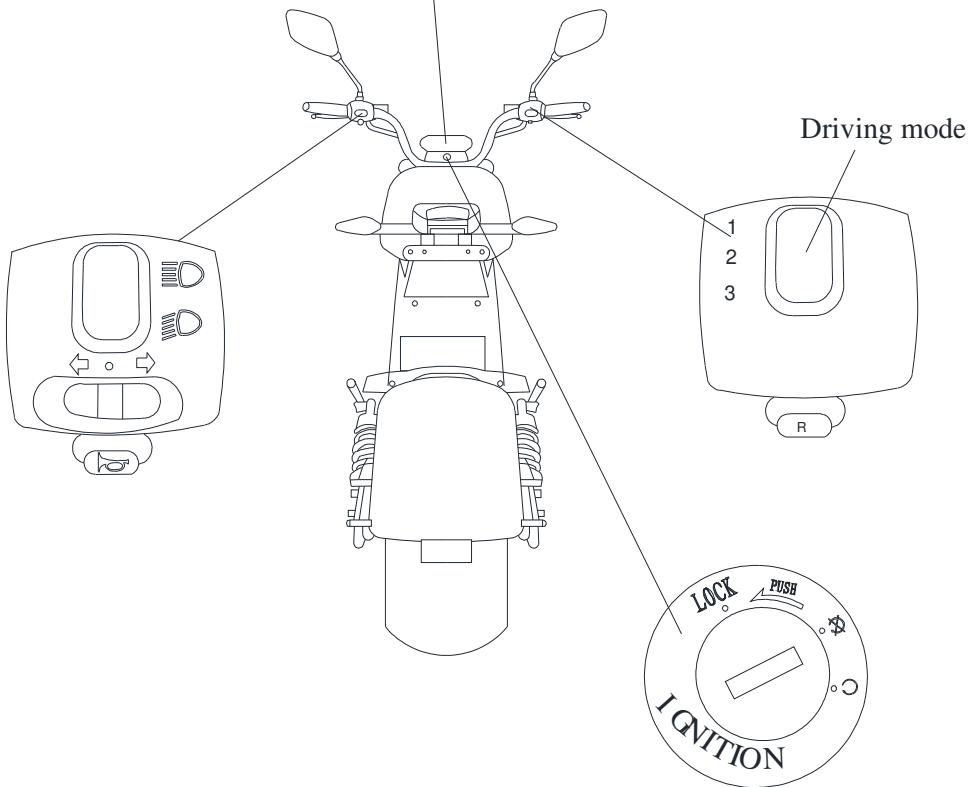


motor: make: HS
 type: HM2SS
 battery: make: HS
 type: HS60V20AH
 controller: make: HS
 type: HS60V
 charger: make: HS
 type: HS60V2A

Title	Power Circuit Components Installation
Drawing NO.	HM-2-15

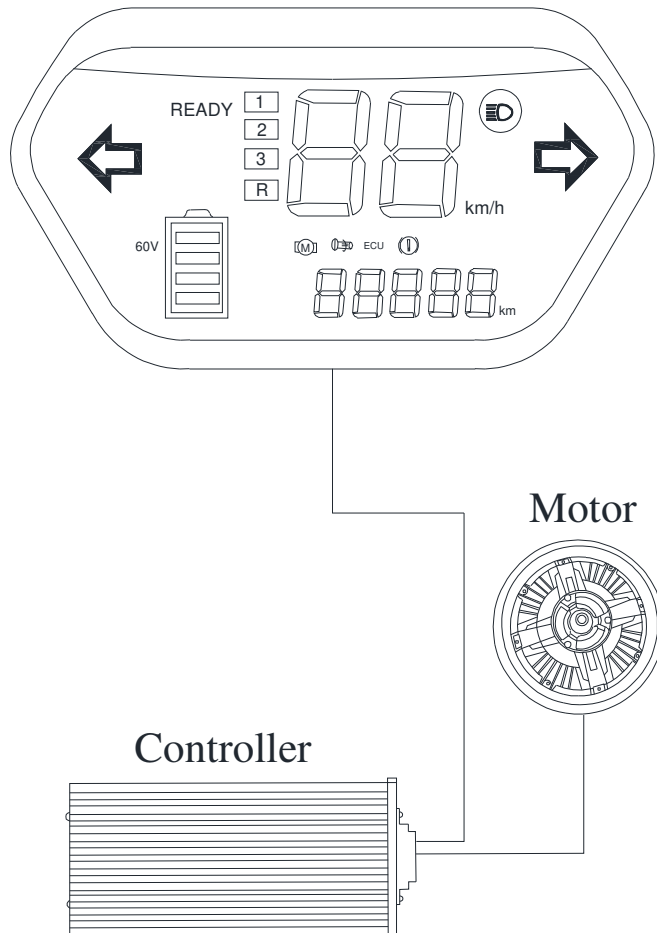


Name	Colour	Symbol
Electric motor warning	Red	(M)
Handle warning	Red	(Hand with wavy lines)
Controller warning	Red	ECU
Brake failure	Red	(!)



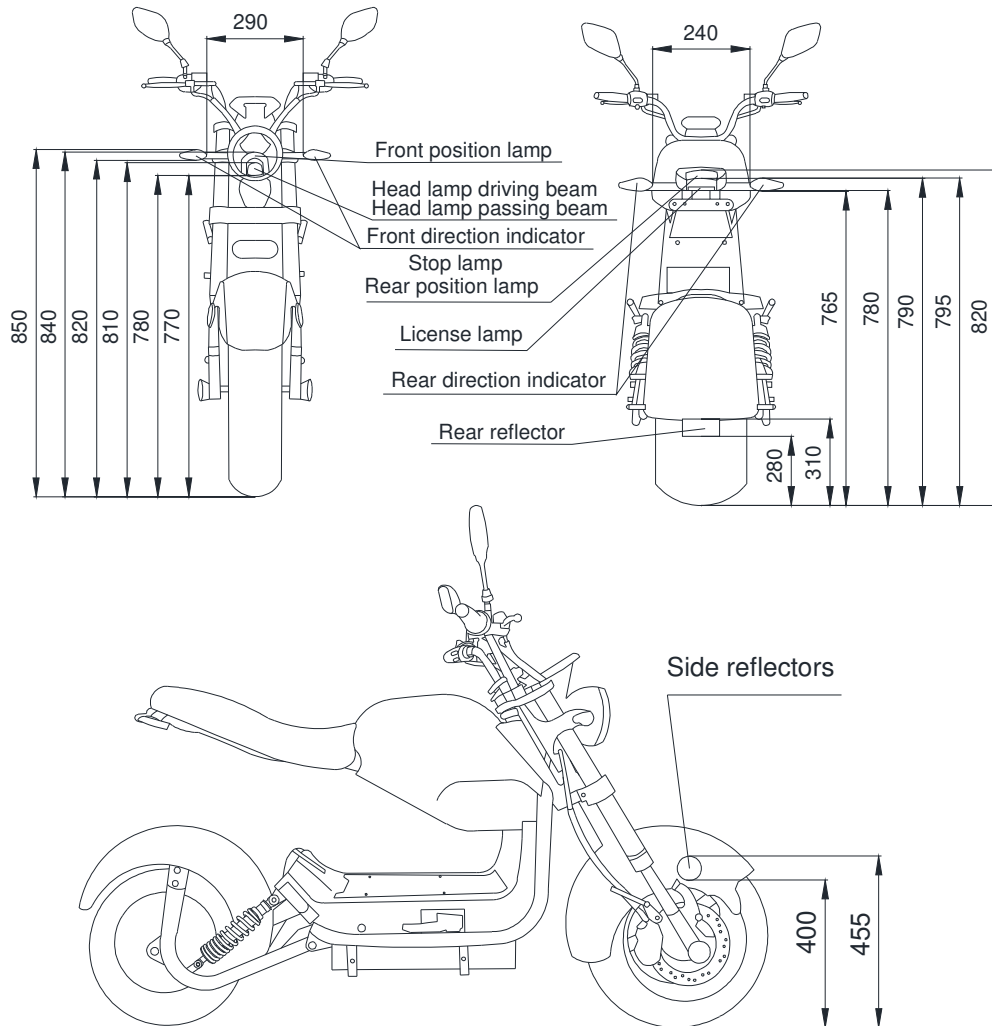
Title	Controls, Tell-Tales And Indicators
Drawing NO.	HM-2-16

Directly connected to the controller.

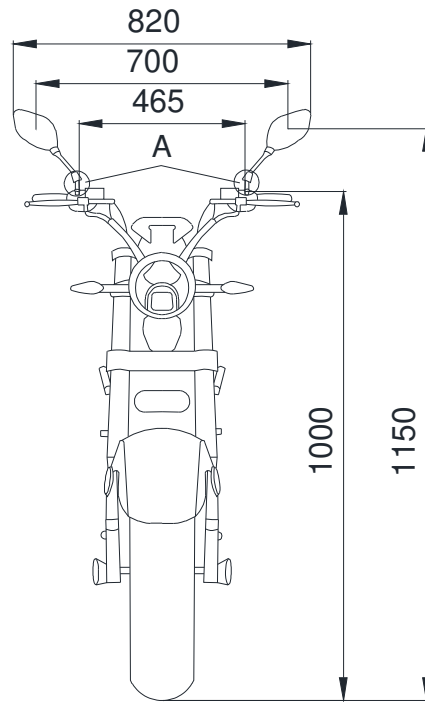


Make: Lingde
Type: DN2.0

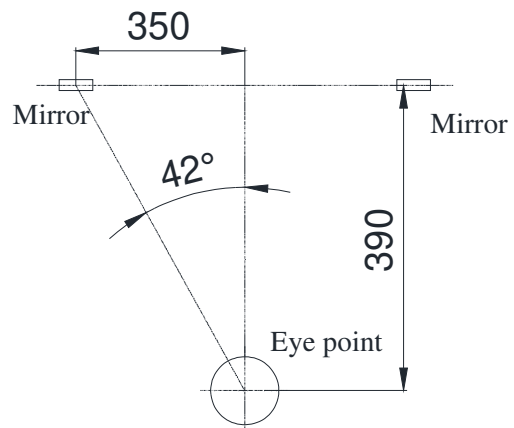
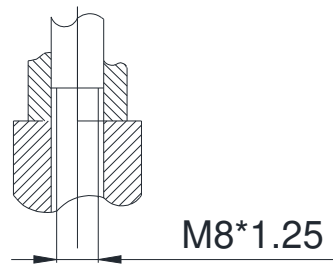
Title	Speedometer and odometer
Drawing NO.	HM-2-17



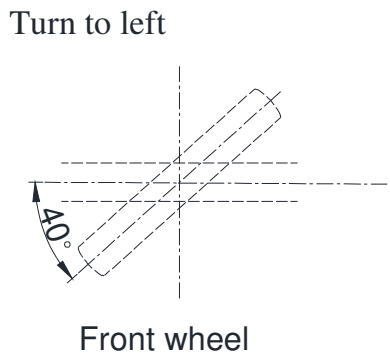
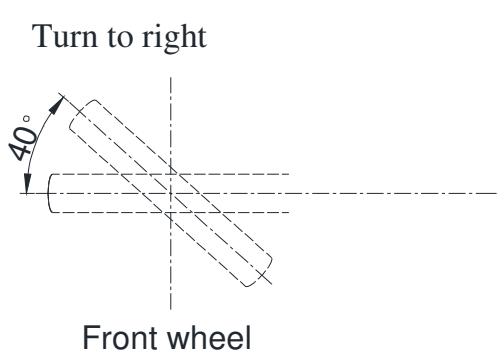
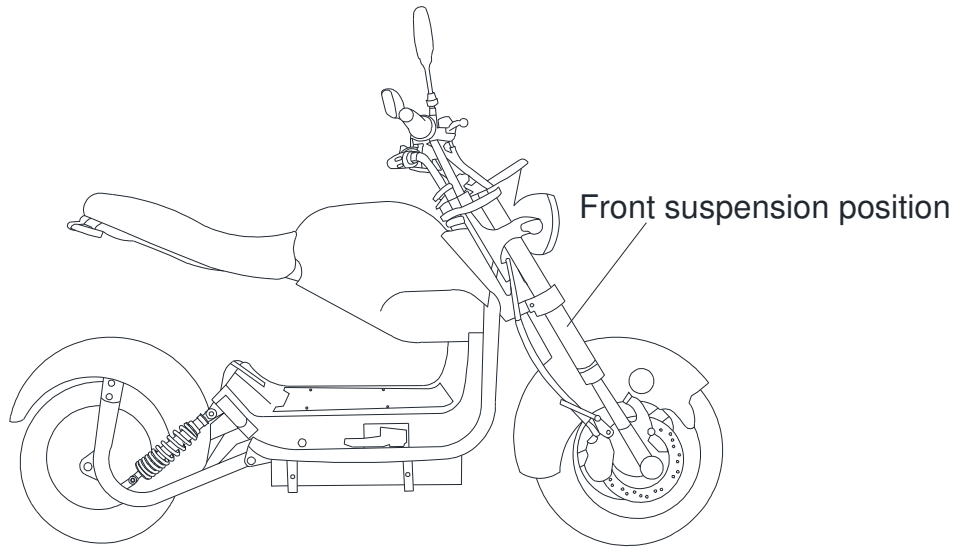
Title	Location of Lights
Drawing NO.	HM-2-18



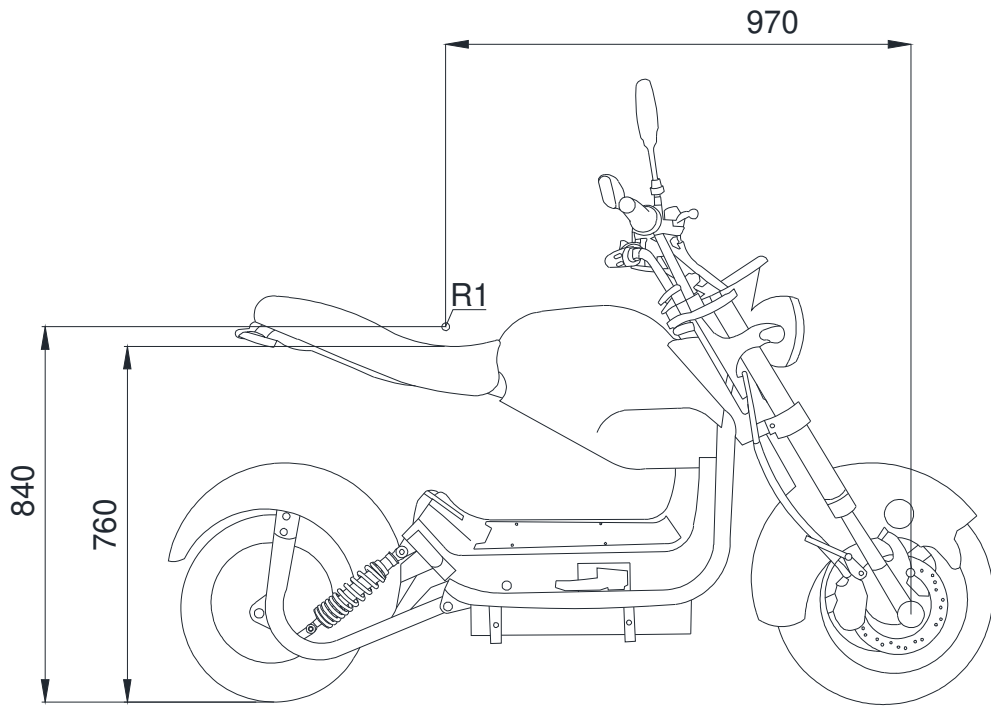
A Detail :



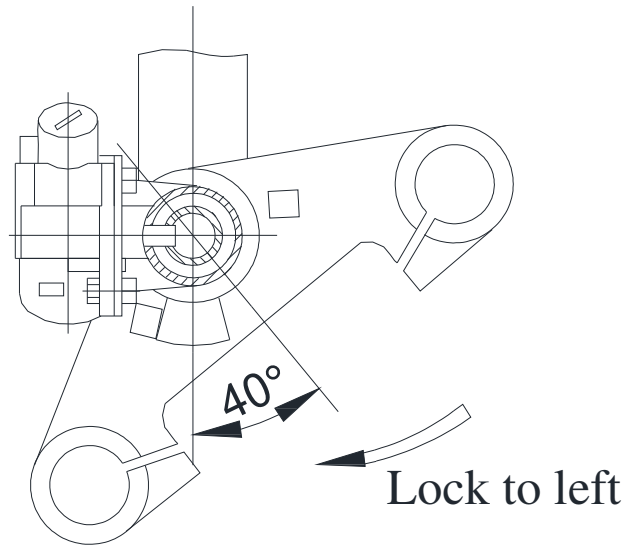
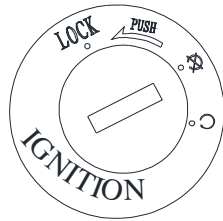
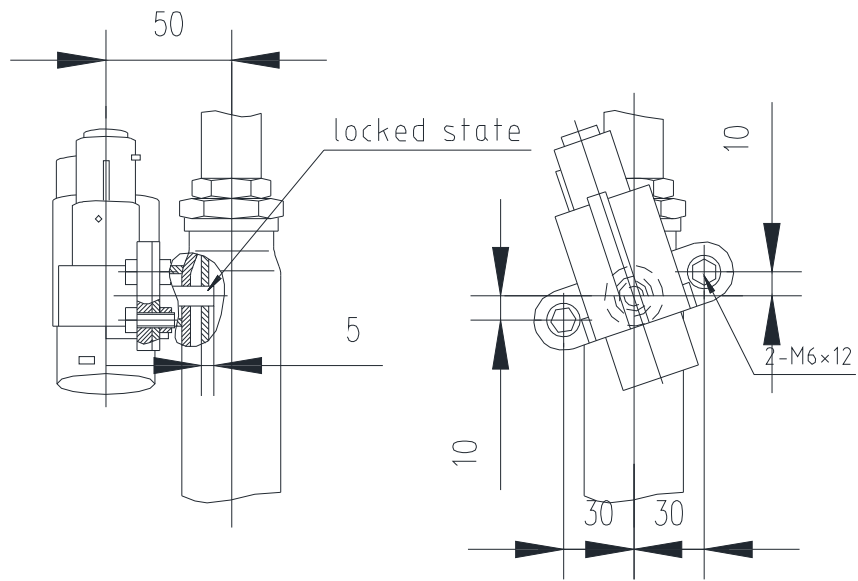
Title	Location of Rear View Mirror
Drawing NO.	HM-2-19



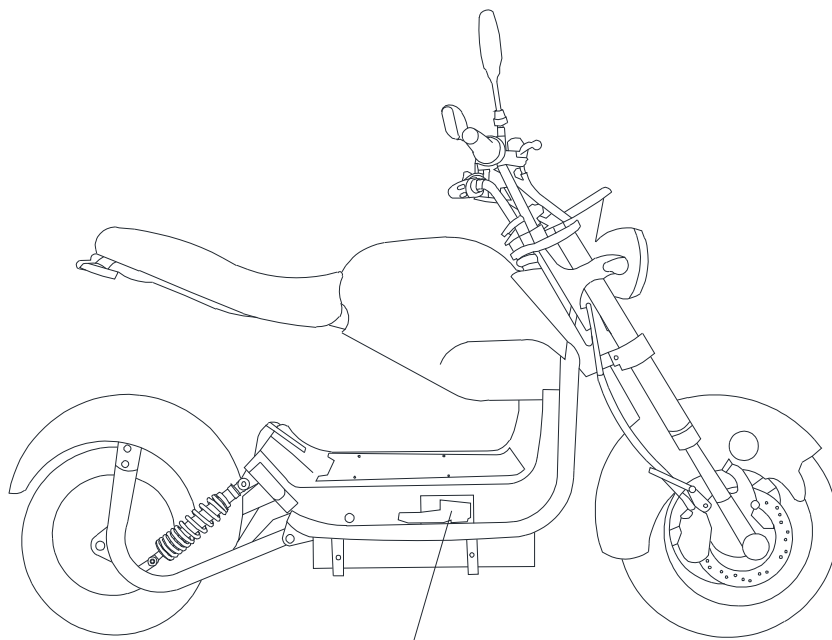
Title	Transmission and Control of Steering
Drawing NO.	HM-2-20



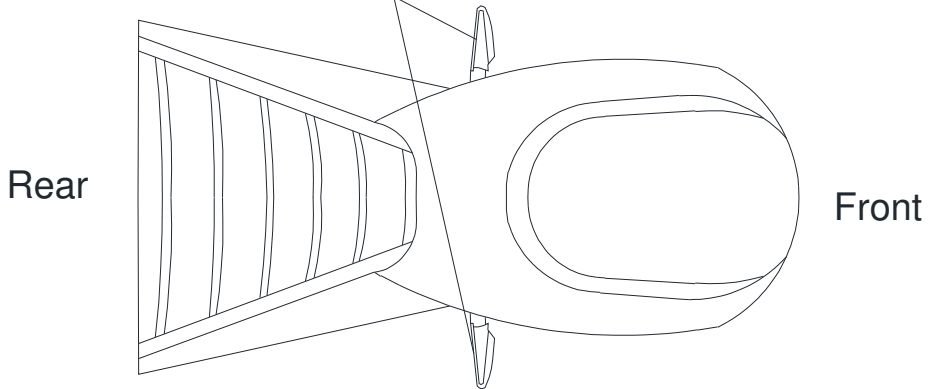
Title	The seats and R point
Drawing NO.	HM-2-21



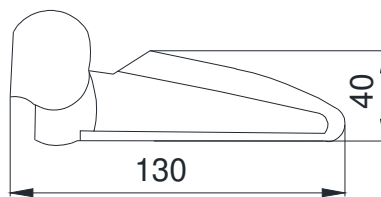
Title	Protective Device
Drawing NO.	HM-2-22



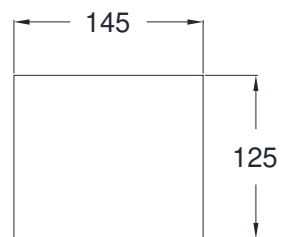
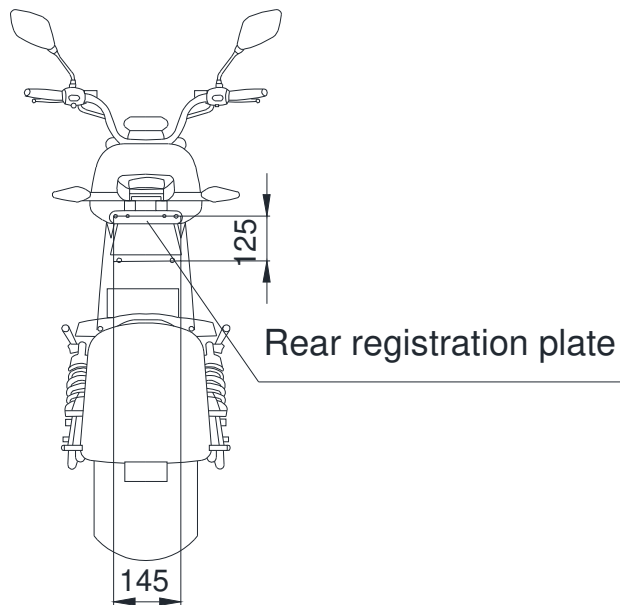
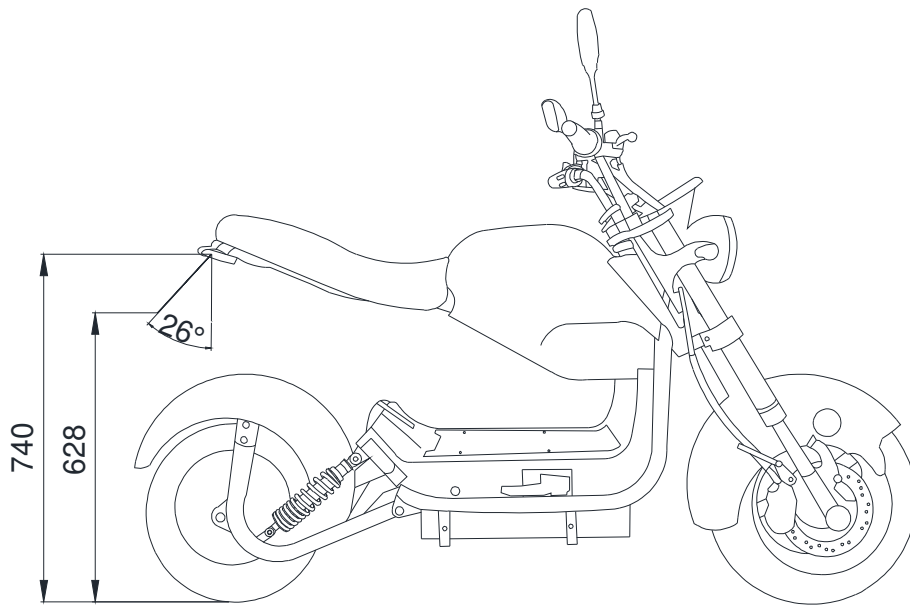
Footrest position



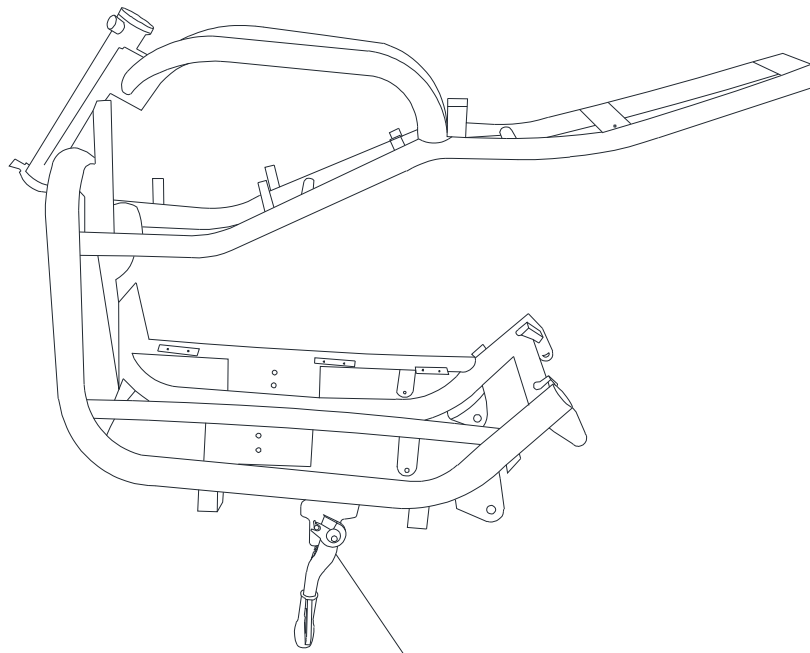
Detail :



Title	Footrest
Drawing NO.	HM-2-23

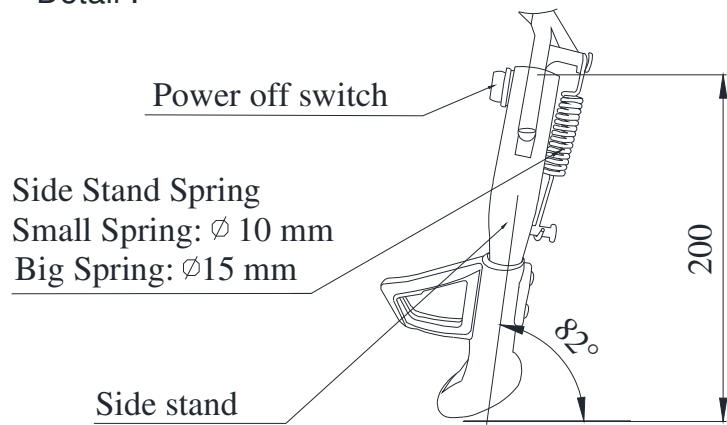


Title	Rear Registration Plate
Drawing NO.	HM-2-24



Side stand position

Detail :



Title	Side Stand
Drawing NO.	HM-2-25