LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Mobilité
et des Travaux publics

Département de la mobilité
et des transports

SOCIÉTÉ NATIONALE DE
CERTIFICATION ET D'HOMOLOGATION
S.A.

Registre de Commerce: B 27180

L-8070 Bertrange

Référence: e13*168/2013*01086*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Bertrange, le 24 février 2021

FICHE DE RÉCEPTION UE PAR TYPE D'UN VÉHICULE ENTIER

EU WHOLE-VEHICLE TYPE-APPROVAL CERTIFICATE

Communication concernant:
Communication concerning:

- **la réception UE par type d'un véhicule entier**
  EU whole-vehicle type-approval
- ~~**l'extension de la réception UE par type d'un véhicule entier**~~
  ~~extension of EU whole-vehicle type-approval~~
- ~~**le refus de la réception UE par type d'un véhicule entier**~~
  ~~refusal of EU whole-vehicle type-approval~~
- ~~**le retrait de la réception UE par type d'un véhicule entier**~~
  ~~withdrawal of EU whole-vehicle type-approval~~

pour un type de véhicule complet
of a complete vehicle type

en vertu du règlement (UE) N° 168/2013,
modifié en dernier lieu par le règlement (délégué de la Commission) (UE) N° 2020/1694
complété par les règlements (UE) N° 3/2014, N° 44/2014 et N° 134/2014 modifiés en dernier lieu par le règlement (UE) N° 2018/295
with regard to Regulation (EU) N° 168/2013, as last amended by (Commission Delegated) Regulation (EU) N° 2020/1694
supplemented by regulations (EU) N° 3/2014, N° 44/2014 and N° 134/2014 as last amended by regulation (EU) N° 2018/295

Numéro de réception UE par type:
EU type-approval number: e13*168/2013*01086*00

Raison de l'extension:
Reason for extension: not applicable

SECTION I

SECTION I

0.1.	**Marque (dénomination commerciale du constructeur):** Make (trade name of manufacturer):	yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA
0.2.	**Type:** Type:	HF-ET03
0.2.1.	**Variante(s):** Variant(s):	0
0.2.2.	**Version(s):** Version(s):	0
0.2.3.	**Appellation(s) commerciale(s) (le cas échéant):** Commercial name(s) (if available):	HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA
0.3.	**Catégorie, sous-catégorie et sous-sous-catégorie du véhicule:** Category, subcategory and sub-subcategory of vehicle:	L2e-P
0.4.	**Raison sociale et adresse du constructeur du véhicule complet:** Company name and address of manufacturer of the complete vehicle:	Huafu New Energy Technology Co., Limited. Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG
0.4.1	**Nom(s) et adresse(s) de(s) usines d'assemblage:** Name(s) and addresse(s) of assembly plant(s):	Wuxi Huafu Vehicle Co., Ltd. No.9, Yuansheng Road, Zone A, Industrial Park, Yangjian Town, Xishan District, Wuxi City, Jiangsu Province, China Volta Motor Sanayi ve Ticaret Anonim Sirketi MERKEZ MAH. YILDIZTEPE CAD. NO:10 GUMUSOVA/DUZCE/TURKEY ISILDAR OTOMOTIV INSAAT TURIZM VE DAYANIKLI TUKETIM MALLARI TICARET LIMITED SIRKETI AOSB1KISIM Mahallesi 2. Cad. No: 24 Dosemealti/ Antalya, Turkey BORBIS BISIKLET VE DAYANIKLI TUK.MAL.SAN.TIC. LTD. STI T. CEMAL BERIKER BLV. NO:491 SEYHAN / ADANA / TURKEY
0.4.2.	**Nom et adresse du mandataire du constructeur (le cas échéant) :** Name and address of manufacturer's 2uthorized representative, if any:	VLM KERESKEDES KFT 6000 Kecskemet, Mindszenti krt. 32. Hungary

SECTION II

SECTION II

1.	**Service technique responsable de la réalisation des essais:** Technical service responsible for carrying out the tests:	ATEEL S.à r.l. 14, op Huefdreisch L-6871 Wecker
2.	**Date du rapport d'essais:** Date of test report:	28.01.2021
3.	**Numéro du rapport d'essais:** Number of test report:	CN66HF-AL-00002-00

SECTION III
SECTION III

Le soussigné certifie l'exactitude de la description, faite par le constructeur dans la fiche de renseignements jointe, du type de véhicule décrit ci-dessus, dont un ou plusieurs échantillons représentatifs, sélectionnés par l'autorité compétente en matière de réception UE par type, ont été présentés en tant que prototypes du type de véhicule, et que les résultats d'essais joints s'appliquent au type de véhicule.

The undersigned hereby certifies the accuracy of the manufacturer's description in the attached information document of the vehicle type 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 apply to the vehicle type.

1.	**Le type de véhicule complet satisfait/ ~~ne satisfait pas~~ à l'ensemble des prescriptions pertinentes énumérées dans l'annexe II du règlement (UE) N° 168/2013.** The complete vehicle type meets/~~does not meet~~ all relevant requirements as listed in Annex II to Regulation (EU) N° 168/2013	The complete vehicle type meets all relevant requirements as listed in Annex II to Regulation (EU) N° 168/2013
1.1.	**Restrictions de validité:** Restrictions of validity:	not applicable
1.2.	**Dérogations accordées:** Waivers applied:	not applicable
1.2.1.	**Raisons des dérogations:** Reasons for the waivers:	not applicable
1.2.2.	**Autres exigences applicables:** Alternative requirements:	not applicable
2.	**La réception est ~~accordée~~/étendue/~~refusée~~/ ~~retirée~~:** The approval is ~~granted~~/extended/~~refused~~/~~withdrawn~~	the approval is granted
2.1.	**La réception est accordée conformément à l'article 40 du règlement (UE) no 168/2013 et sa validité expire, par conséquent, le jj/mm/aaaa.** 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.	not applicable

Lieu:
Place: Bertrange

Date:
Date: 24 février 2021

Signature:
Signature:

Pour le Ministre de la Mobilité et des Travaux publics

Alain DISIVISCOUR
Conseiller

Pour la SNCH

Laurent LINDEN
Directeur opérationnel

Pièces jointes:
Attachments:

- **Dossier de réception**
  Information package
- **Résultats d'essai**
  Test results
- **Nom(s) et spécimen(s) de signature de la ou des personnes autorisées à signer les certificats de conformité et indication de leurs fonctions dans la société**
  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
- **Spécimen complété du certificat de conformité**
  A completed specimen of the certificate of conformity

NB:
NB: not applicable

Addendum à la fiche de réception UE par type
Addendum to the EU type-approval certificate

Liste des actes réglementaires aux prescriptions desquels le type de véhicule satisfait
List of regulatory acts with which the type of vehicle complies

refer to Annex S of technical report N° CN66HF-AL-00002-00

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Registre de Commerce: B 27180

L-8070 Bertrange

Référence: e13*168/2013*01086*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Bertrange, le 24 février 2021

Index du dossier de réception

Index to type-approval report

	Numéro de réception UE par type: EU type-approval number:	e13*168/2013*01086*00
	Révision: Revision:	00
	Marque de fabrique ou de commerce: Trade name or mark:	yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA
	Type: Type:	HF-ET03
1.	**Procès-verbal d'essai:** Test report:	N° CN66HF-AL-00002-00
	- Technical report:	Page 1 & 2;
	- Index of dossier:	Annex I1 - Page 1;
	- General information:	Annex GI1 - Page 1 to 7;
	- List of regulatory acts:	Annex S - Page 1 to 3;
	- General test report:	Annex T1 - Page 1 to 16;
	- Detailed test reports:	Annex T2 - Page 1 to 7; Annex T3 - Page 1 to 4; Annex T4 - Page 1; Annex T5 - Page 1 to 3; Annex T6 - Page 1 & 2; Annex T7 - Page 1 to 3; Annex T8 - Page 1 to 2; Annex T9 - Page 1 & 2; Annex T10 - Page 1; Annex T11 - Page 1; Annex T12 - Page 1 to 12; Annex T13 - Page 1; Annex T14 - Page 1 & 2; Annex T15 - Page 1; Annex T16 - Page 1.

2.	**Dossier du constructeur:**	
	Report of the manufacturer:	N° HF-ET03-00
	- Manufacturer's Information folder:	refer to Annex I1 of technical report
3.	**Autres documents annexés:**	
	Other documents annexed:	not applicable
4.	**Date de délivrance de la réception initiale:**	
	Date of issue of initial type approval:	24.02.2021
5.	**Date de la dernière délivrance de pages révisées:**	
	Date of last issue of revised pages:	not applicable
6.	**Date de la dernière délivrance d'une réception révisée:**	
	Date of last extension:	not applicable

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Registre de Commerce: B 27180

L-8070 Bertrange

Référence: e13*168/2013*01086*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Bertrange, le 24 février 2021

Annexe VIII
Annex VIII

Fiche des résultats d'essais
Test results sheet

refer to Annex GI - Page 4 to 6 & Annexes T1 to T16 of technical report N° CN66HF-AL-00002-00

Tests and inspection concerning

approval and market surveillance of two- or three-wheel vehicles and quadricycles

according to the Regulation (EU) No 168/2013 of the Council of the European Communities including all amendments up to Commission Regulation (EU) 2020/1694 of 11.11.2020

Manufacturer: Huafu New Energy Technology Co., Limited
Room C, 21/F, CENTRAL 88, 88 DES
VOEUX ROAD CENTRAL, HONG KONG

Type:	**Type Approval No.:**	**Manufacturer:**
HF-ET03	e13*168/2013*……*00	Huafu New Energy Technology Co., Limited

CONCLUSION: The tests and checks carried out have shown the compliance of the type described in this report and the attached annexes with the Regulation mentioned above.

Shanghai, 28.01.2021

Mengting Xu
Ingénieur Inspecteur

Index see Annex I1

e13*168/2013*01086*00
Société Nationale de Certification et d'Homologation

ATEEL S.à r.l.
14, op Huefdreisch
L-6871 Wecker

Tel.: +352 26 787 715
Fax: +352 26 787 716
admin@ateel.com

1 Tests and inspection results

Refer to Annex T*

2 Type and variants

The tests and inspections carried out and described in this technical report have been selected in order to include the following variants and versions of the type and its equipments, as far as these are relevant for the topic of this report, into the judgement:

As stated in Annex MID (Manufacturer's Information Document):	**Item**
- Audible warning devices	6.1.1
- Lighting devices	6.11.1
- Rear-view mirrors	6.12.1
- Tyres	6.18.1.

3 Remark

3.1 General

None

ATEEL S.à r.l.
14, op Huefdreisch
L-6871 Wecker

Tel.: +352 26 787 715
Fax: +352 26 787 716
admin@ateel.com

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Compilation of Dossier No.: CN66HF-AL-00002

Extension 00

Technical report no.: CN66HF-AL-00002-00 page 1 to 2

Composition of Annex:

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

General Information

Numbering according to Appendix 1 to Annex VI to Regulation (EU) No 901/2014 as last amended by (EU) 2020/239

for type of complete vehicle	Yes: ☑	No: ☐
for type of completed vehicle	Yes: ☐	No: ☑
for type of incomplete vehicle	Yes: ☐	No: ☑
for type of vehicle with complete and incomplete variants	Yes: ☐	No: ☑
for type of vehicle with completed and incomplete variants	Yes: ☐	No: ☑

SECTION I

0.1.	Make (trade name of manufacturer):	yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA
0.2.	Type:	HF-ET03
0.2.1.	Variant(s):	0
0.2.2.	Version(s):	0
0.2.3.	Commercial name(s) (if available):	HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA
0.3.	Category Subcategory Sub-subcategory	L2e L2e-P Not applicable
0.4.	Company name and address of manufacturer of the complete vehicle:	Huafu New Energy Technology Co., Limited Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

General Information

0.4.1.	Name(s) and address(es) of assembly plant(s):	Assembly plant 1: Wuxi Huafu Vehicle Co., Ltd. No.9, Yuansheng Road, Zone A, Industrial Park, Yangjian Town, Xishan District, Wuxi City, Jiangsu Province, China Assembly plant 2: Volta Motor Sanayi ve Ticaret Anonim Sirketi MERKEZ MAH. YILDIZTEPE CAD. NO:10 GUMUSOVA/DUZCE/TURKEY Assembly plant 3: ISILDAR OTOMOTIV INSAAT TURIZM VE DAYANIKLI TUKETIM MALLARI TICARET LIMITED SIRKETI AOSB1KISIM Mahallesi 2. Cad. No: 24 Dosemealti/ Antalya, Turkey Assembly plant 4: BORBIS BISIKLET VE DAYANIKLI TUK.MAL.SAN.TIC. LTD. STI T. CEMAL BERIKER BLV. NO:491 SEYHAN / ADANA / TURKEY
0.4.2.	Name and address of manufacturer's authorised representative, if any:	VLM Kereskedés Kft 6000 Kecskemét Mindszenti krt. 32 Hungary

SECTION II

1.	Technical service responsible for carrying out the tests:	ATEEL S.à r.l. 14, op Huefdreisch L-6871 Wecker
2.	Date of test report:	28.01.2021
3.	Number of test report:	CN66HF-AL-00002-00

General Information

SECTION III

The undersigned hereby certifies the accuracy of the manufacturer's description in the attached information document of the vehicle type 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 apply to the vehicle type.

1.	The complete vehicle type meets/~~does not meet~~ 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.		
2.1.		

Addendum to the EU type-approval certificate

List of regulatory acts with which the type of vehicle complies
To be filled in only in the case of type-approval in accordance with Article 30(6)of Regulation (EU) No 168/2013
See Annex S

General Information

Test result sheet

Executive summary of the test results according to item 2.2. of Annex VIII of Regulation (EU) No 901/2014 as last amended by (EU) 2020/239

2.2.1.	(A) Environmental and propulsion unit performance	See technical report Annex T2
2.2.2.	(B) Functional safety test reports	
2.2.2.1.	Front and rear protective structures	Not applicable
2.2.2.1.1.	Description and justification of the relevant provisions against which the vehicles has been assessed:	Not applicable
2.2.2.2.	Driver-operated controls including identification of controls, tell-tales and indicators	
2.2.2.2.1.	Detailed list of controls, tell-tales, tell-tales colours and indicators of the vehicle:	See technical report Annex T6
2.2.2.2.2.	Assessment of the visibility:	Visible under all circumstances
2.2.2.3.	Installation of lighting and light-signalling devices, including automatic light switching	
2.2.2.3.1.	Specific test conditions (e.g. indicator-bulb malfunction):	The tests have been carried out in accordance with the requirements of (EU) No 3/2014 Annex IX.
2.2.2.4.	Safety belt anchorages and safety belts	Not applicable
2.2.2.4.1.	Description and justification of the relevant provisions against which the vehicle has been assessed:	Not applicable
2.2.2.5.	Installation of tyres	
2.2.2.5.1.	Maximum tyre envelope sizes applied for the clearance assessment:	Yes
2.2.2.6.	Vehicle occupant protection, including interior fittings and vehicle doors	Not applicable

General Information

2.2.2.6.1.	Values of radii measurement of interior projections in sufficient detail:	Not applicable			
2.2.2.7.	Maximum continuous total power and/or maximum vehicle speed limitation by design				
2.2.2.7.1.	Maximum vehicle speed and/or maximum continuous total power for vehicles equipped with PI/~~CI~~ combustion engine limited by:	Not applicable			
	(a) the properties, timing or presence of the spark igniting the fuel/air mixture in the cylinder(s):	Yes:	☐	No:	☑
	(b) the amount of air intake of the engine:	Yes:	☐	No:	☑
	(c) the amount of fuel intake of the engine:	Yes:	☐	No:	☑
	(d) the mechanically-controlled output rotation speed of the drive-train, such as clutch, transmission or final drive:	Yes:	☐	No:	☑
2.2.2.7.2.	Maximum vehicle speed ~~and/or maximum power~~ shall be limited by means of two or more of the following, for vehicles which are propelled by means of one or more electric motors, including pure and hybrid electric vehicles:				
	(a) 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:	Yes:	☑	No:	☐
	(b) 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:	Yes:	☑	No:	☐
	(c) physical vehicle speed limitation by means of internal or external components such as a maximum achievable revolution speed of an electric motor:	Yes:	☐	No:	☑
2.2.2.7.3.	Maximum vehicle speed and/or maximum power shall be limited by means of two or more of the following, for vehicles which are propelled by other means than those referred to in 2.2.7.1. and 2.2.7.2.:	Not applicable			

General Information

2.2.3. (C) Vehicle construction test reports

2.2.3.1. Arrangements for type-approval procedures

Delegated act reference	Annex No	Virtual and/or self-testing	Subject	Restrictions / Comments	Applied
Commission Delegated Regulation (EU) No 134/2014	X	Self-testing	Testing procedures on maximum vehicle design speed	Only for subcategories L3e, L4e and L5e and does not include any other propulsion unit performance testing	~~yes~~/no
Commission Delegated Regulation (EU) No 3/2014	II	Self-testing	Audible warning devices	Installation only	~~yes~~/no
Commission Delegated Regulation (EU) No 3/2014	VIII	Self-testing	Driver-operated controls including identification of controls, tell-tales and indicators	Speedometer only	~~yes~~/no
Commission Delegated Regulation (EU) No 3/2014	IX	Virtual testing	Installation of lighting and light- signalling devices	Dimensions only	~~yes~~/no
Commission Delegated Regulation (EU) No 3/2014	X	Virtual testing	Rearward visibility	Installation only; only according to UNECE Regulation No 81	~~yes~~/no
Commission Delegated Regulation (EU) No 3/2014	XV	Virtual testing	Installation of tyres	Only where clearance exceeds 10 mm.	~~yes~~/no
Commission Delegated Regulation (EU) No 44/2014	XIV	Self & virtual testing	Registration plate space		~~yes~~/no
Commission Delegated Regulation (EU) No 44/2014	XVI	Self-testing	Stands	Only point 2.5. stand retention systems.	~~yes~~/no
Commission Implementing Regulation (EU) No 901/2014	V	Self-testing	Statutory plate and EU type-approval mark		~~yes~~/no

2.2.3.2. Requirements applying to coupling devices and attachments — Not applicable

General Information

2.2.3.2.1.	Dynamic strength test (endurance test) coupling ball and/or head:	~~passed/failed~~
2.2.3.2.2.	Test results dynamic strength test (endurance test):	Not applicable
2.2.3.3.	Requirements applying to external projections	
2.2.3.3.1.	Values of radii measurement of exterior projections in sufficient detail:	See Annex MID and technical report Annex T13
2.2.3.3.2.	Description and justification of the relevant provisions against which the vehicle has been assessed:	The vehicle is assessed in accordance with the general requirements and special provisions for category L2e-P.
2.2.3.4.	On-board diagnostics (OBD) functional requirements:	Not applicable
2.2.3.5.	Stands	Not applicable
2.2.3.5.1.	Detailed description and assessment of the system used to prevent propulsion of the vehicle when the stand is in use:	Not applicable

List of Regulatory Acts

Item	Subject	Regulatory Act Reference	As amended by	Applicable to variant/version
ENVIRONMENTAL AND PROPULSION UNIT PERFORMANCE REQUIREMENTS(REPPR)				
1	Tailpipe emissions after cold start	Not applicable		
2	Tailpipe emissions at (increased idle)/ free acceleration test	Not applicable		
3	Emissions crank-case gases	Not applicable		
4	Evaporative emissions	Not applicable		
5	Durability of pollution-control devices	Not applicable		
6	Measurement of CO_2 emissions, fuel consumption, electric energy consumption and electric range determination	(EU) No 134/2014 Annex VII	(EU) 2018/295	0/0
7	Environmental on-board diagnosis (OBD) tests	Not applicable		
8	Permissible sound level	Not applicable		
9	Procedures and technical requirements on maximum vehicle design speed, maximum torque, maximum continuous total power and maximum peak power	(EU) No 134/2014 Annex X	(EU) 2018/295	0/0
10	Vehicle propulsion family definition	Not applicable		
VEHICLE FUNCTIONAL SAFETY REQUIREMENTS(RVFSR)				
1	Audible warning devices	(EU) No 3/2014 Annex II	(EU) 2016/1824	0/0
2	Braking, including anti-lock and combined brake systems	(EU) No 3/2014 Annex III	(EU) 2016/1824	0/0
3	Electrical safety	(EU) No 3/2014 Annex IV	(EU) 2016/1824	0/0
4	Manufacturer declaration requirements regarding endurance testing of functional safety-critical systems, parts and equipment	(EU) No 3/2014 Annex V	(EU) 2016/1824	0/0

List of Regulatory Acts

Item	Subject	Regulatory Act Reference	As amended by	Applicable to variant/version
5	Front and rear protective structures	Not applicable		
6	Glazing, windscreen wipers and washers, and defrosting and demisting systems	Not applicable		
7	Driver-operated controls including identification of controls, tell-tales and indicators	(EU) No 3/2014 Annex VIII	(EU) 2016/1824	0/0
8	Installation of lighting and light- signalling devices, including automatic switching of lighting	(EU) No 3/2014 Annex IX	(EU) 2016/1824	0/0
9	Rearward visibility	(EU) No 3/2014 Annex X	(EU) 2016/1824	0/0
10	Rollover protective structure (ROPS)	Not applicable		
11	Safety-belt anchorages and safety- belts	Not applicable		
12	Seating positions (saddles and seats)	(EU) No 3/2014 Annex XIII	(EU) 2016/1824	0/0
13	Steer-ability, cornering properties and turn-ability	(EU) No 3/2014 Annex XIV	(EU) 2016/1824	0/0
14	Installation of tyres	(EU) No 3/2014 Annex XV	(EU) 2016/1824	0/0
15	Vehicle maximum speed limitation plate and its location on the vehicle	Not applicable		
16	Vehicle occupant protection, including interior fittings and vehicle doors	Not applicable		
17	Maximum continuous total power and/or maximum vehicle speed limitation by design	(EU) No 3/2014 Annex XVIII	(EU) 2016/1824	0/0
18	Requirements on vehicle structure integrity	(EU) No 3/2014 Annex XIX	(EU) 2016/1824	0/0

List of Regulatory Acts

Item	Subject	Regulatory Act Reference	As amended by	Applicable to variant/version
VEHICLE CONSTRUCTION AND GENERAL TYPE-APPROVAL REQUIREMENTS(RVCR)				
1	Powertrain tampering prevention measures (anti-tampering)	(EU) No 44/2014 Annex II	(EU) 2018/295	0/0
2	Arrangements for type-approval procedures	(EU) No 44/2014 Annex III	(EU) 2018/295	0/0
3	Conformity of production	(EU) No 44/2014 Annex IV	(EU) 2018/295	0/0
4	Coupling devices and attachments	Not applicable		
5	Devices to prevent unauthorised use	(EU) No 44/2014 Annex VI	(EU) 2018/295	0/0
6	Electromagnetic compatibility (EMC)	(EU) No 44/2014 Annex VII	(EU) 2018/295	0/0
7	External projections	(EU) No 44/2014 Annex VIII	(EU) 2018/295	0/0
8	Fuel storage	Not applicable		
9	Load platforms	Not applicable		
10	Masses and dimensions	(EU) No 44/2014 Annex XI	(EU) 2018/295	0/0
11	On-board diagnostics (OBD) functional requirements	Not applicable		
12	Passenger handholds and footrests	(EU) No 44/2014 Annex XIII	(EU) 2018/295	0/0
13	Registration plate space	(EU) No 44/2014 Annex XIV	(EU) 2018/295	0/0
14	Access to repair and maintenance information	(EU) No 44/2014 Annex XV	(EU) 2018/295	0/0
15	Stands	Not applicable		

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

General Test Report

1. Dates and resources

1.1	Date of receipt of the test item :	16.11.2020
1.2	Date of tests :	16.11.2020 - 08.01.2021
1.3	Place of tests:	Nanchang Motorcycle Quality Supervision and Inspection Institute Hongdu Courtyard, Xinxi Bridge Road, Qingyunpu District, Nanchang, Jiangxi, China Nanjing Rongce Testing Technology Co.,Ltd No.2108, Chengxin, Avenue, High-Tech Park, Jiangning District, Nanjing, Jiangsu, China

1.4 Testing site and testing equipment:

All measuring and test equipment used to carry out the inspections are in accordance with ISO 17025 and the regulatory act(s) applied.

2. Test item identification

The tests were conducted with test vehicle(s) which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

Type:	HF-ET03
Variant/Version:	0/0
Description:	Three-wheel moped designed for passenger transport
Category and Subcategory:	L2e-P
VIN:	R2SJ2C204M0100001

3 Tests and inspections

3.1 Verification of separate regulatory acts test reports

3.1.1. Conformity tests

3.1.1.1. Applicability of regulatory acts

The necessary tests and checks as required by each of the relevant regulatory acts have been performed.

3.1.1.2. Information package content

The vehicle information folder meets the technical requirements of each of the relevant regulatory acts.

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3.1.1.3. Vehicle inspections

The relevant installation checks in respect of separate technical units have been performed.
All necessary checks in respect of the presence of the devices required in Annex II to Regulation (EU) No 168/2013 have been performed.

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4. Tests and inspections according to the regulatory acts for vehicles of category L2e-P
Summary table

No.	(EU) No 168/2013 Article	Subject	Category applicable	Requirements fulfilled	Item No. in test report
A	(EU) No 134/2014 as amended by (EU) 2018/295 ENVIRONMENTAL AND PROPULSION UNIT PERFORMANCE REQUIREMENTS (REPPR)				
1	23&24	Tailpipe emissions after cold start	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	4.A1.
		Tailpipe emissions at (increased idle)/ free acceleration test	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	
		Emissions crank-case gases	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	
		Evaporative emissions	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	
		Durability of pollution-control devices	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	
		Measurement of CO_2 emissions, fuel consumption, electric energy consumption and electric range determination	Yes ☑ / No ☐ / N.A. ☐	Yes ☑ / No ☐ / N.A. ☐	
		Environmental on-board diagnosis (OBD) tests	Yes ☐ / No ☐ / N.A. ☑	Yes ☐ / No ☐ / N.A. ☑	
		Vehicle propulsion family definition	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	
2		Procedures and technical requirements on maximum vehicle design speed	Yes ☑ / No ☐ / N.A. ☐	Yes ☑ / No ☐ / N.A. ☐	4.A2.
		Procedures and technical requirements on maximum torque, maximum continuous total power and maximum peak power	Yes ☑ / No ☐ / N.A. ☐	Yes ☑ / No ☐ / N.A. ☐	
3		Permissible sound level	Yes ☑ / No ☐ / N.A. ☐	Yes ☐ / No ☐ / N.A. ☑	4.A3.

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Type: HF-ET03

General Test Report

B	(EU) No 3/2014 as amended by (EU) 2016/1824 VEHICLE FUNCTIONAL SAFETY REQUIREMENTS(RVFSR)				
1	22	Audible warning devices	Yes ☑ No ☐ N.A. ☐	Yes ☑ No ☐ N.A. ☐	4.B1.
2		Braking, including anti-lock and combined brake systems	Yes ☑ No ☐	Yes ☑ No ☐	4.B2.
3		Electrical safety	Yes ☑ N.A. ☐	Yes ☑ N.A. ☐	4.B3.
4		Manufacturer declaration requirements regarding endurance testing of functional safety-critical systems, parts and equipment	Yes ☑ No ☐ N.A. ☐	Yes ☑ No ☐ N.A. ☐	4.B4.
5		Front and rear protective structures	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.B5.
6		Glazing, windscreen wipers and washers, and defrosting and demisting systems	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.B6.
7		Driver-operated controls including identification of controls, tell-tales and indicators	Yes ☑ No ☐ N.A. ☐	Yes ☑ No ☐ N.A. ☐	4.B7.
8		Installation of lighting and light- signalling devices, including automatic switching of lighting	Yes ☑ No ☐	Yes ☑ No ☐	4.B8.
9		Rearward visibility	Yes ☑ No ☐ N.A. ☐	Yes ☑ No ☐ N.A. ☐	4.B9.
10		Rollover protective structure (ROPS)	Yes ☐ No ☑ N.A. ☐	Yes ☐ No ☐ N.A. ☑	4.B10.
11		Safety-belt anchorages and safety- belts	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.B11.
12		Seating positions (saddles and seats)	Yes ☑ No ☐	Yes ☑ No ☐	4.B12.
13		Steer-ability, cornering properties and turn-ability	Yes ☑ No ☐	Yes ☑ No ☐	4.B13.
14		Installation of tyres	Yes ☑ No ☐	Yes ☑ No ☐	4.B14.
15		Vehicle maximum speed limitation plate and its location on the vehicle	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.B15.
16		Vehicle occupant protection, including interior fittings and vehicle doors	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.B16.
17		Maximum continuous total power and/or maximum vehicle speed limitation by design	Yes ☑ No ☐ If ☐	Yes ☑ No ☐ N.A. ☐	4.B17.
18		Requirements on vehicle structure integrity	Yes ☑ No ☐	Yes ☑ No ☐	4.B18.

General Test Report

C	(EU) No 44/2014 as amended by (EU) 2018/295 VEHICLE CONSTRUCTION AND GENERAL TYPE-APPROVAL REQUIREMENTS(RVCR)				
1	20	Powertrain tampering prevention measures (anti-tampering)	Yes ☑ No ☐ N.A. ☐	Yes ☑ No ☐ N.A. ☐	4.C1.
2	25	Arrangements for type-approval procedures	Yes ☑ No ☐	Yes ☑ No ☐	4.C2.
3	33	Conformity of production	Yes ☑ No ☐	Yes ☑ No ☐	4.C3.
4	18	Coupling devices and attachments	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.C4.
5	18	Devices to prevent unauthorised use	Yes ☑ No ☐	Yes ☑ No ☐	4.C5.
6	18	Electromagnetic compatibility (EMC)	Yes ☑ No ☐	Yes ☑ No ☐	4.C6.
7	18	External projections	Yes ☑ No ☐	Yes ☑ No ☐	4.C7.
8	18	Fuel storage	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.C8.
9	18	Load platforms	Yes ☐ No ☐ If ☑	Yes ☐ No ☐ N.A. ☑	4.C9.
10	18	Masses and dimensions	Yes ☑ No ☐	Yes ☑ No ☐	4.C10.
11	21	On-board diagnostics (OBD) functional requirements	Yes ☐ No ☑ N.A. ☐	Yes ☐ No ☐ N.A. ☑	4.C11.
12	18	Passenger handholds and footrests	Yes ☐ No ☐ If ☑	Yes ☑ No ☐ N.A. ☐	4.C12.
13	18	Registration plate space	Yes ☑ No ☐	Yes ☑ No ☐	4.C13.
14	18	Access to repair and maintenance information	Yes ☑ No ☐	Yes ☑ No ☐	4.C14.
15	18	Stands	Yes ☐ No ☐ N.A. ☑	Yes ☐ No ☐ N.A. ☑	4.C15.
D	(EU) No 901/2014 as amended by (EU) 2020/239 ADMINISTRATIVE REQUIREMENTS(RAR)				
1	39	Statutory plate and EU type-approval mark	Yes ☑ No ☐	Yes ☑ No ☐	4.D1.

Remark:'If' means 'if fitted'. If the system, component or separate technical unit referred to in the table is fitted on the vehicle, because it is mandatory only for some of the vehicles falling into this category; Equally, if the vehicle manufacturer chooses to equip the vehicle with the system, component or separate technical unit on a voluntary basis, it shall fulfil the requirements laid down in the delegated and implementing acts.

General Test Report

4.A1. ~~**(EU) No 134/2014 Annex II; Tailpipe emissions after cold start**~~
~~**(EU) No 134/2014 Annex III; Tailpipe emissions at (increased idle)/ free acceleration test**~~
~~**(EU) No 134/2014 Annex IV; Emissions crank-case gases**~~
~~**(EU) No 134/2014 Annex V; Evaporative emissions**~~
~~**(EU) No 134/2014 Annex VI; Durability of pollution-control devices**~~
(EU) No 134/2014 Annex VII; Measurement of electric energy consumption and electric range determination
~~**(EU) No 134/2014 Annex VIII; Environmental on-board diagnosis (OBD) tests**~~
~~**(EU) No 134/2014 Annex XI; Vehicle propulsion family definition**~~

4.A1.1. Tests and inspections

The tests have been carried out in accordance with the ~~Euro 5~~ requirements of ~~Annex II, III, IV, V, VI,~~ VII, ~~VIII, XI~~ to Regulation (EU) No 134/2014.

4.A1.2. Test results

For detailed test results see Annex T2.

4.A2. (EU) No 134/2014 Annex X; Procedures and technical requirements on maximum vehicle design speed, maximum torque, maximum continuous total power and maximum peak power

4.A2.1. Tests and inspections

The tests have been carried out in accordance with the requirements of Annex X to Regulation (EU) No 134/2014 and UNECE regulation No 85.

4.A2.2. Test results

For detailed test results see Annex T3.

4.A3. (EU) No 134/2014 Annex IX; Permissible sound level

Not applicable, the vehicle is propelled by pure electric motor.

Confirmation

The tests and inspections have shown the conformity of the vehicle type, described in this report and its annexes, with Regulation (EU) No 134/2014 including all amendments up to the Regulation (EU) 2018/295 of 15/12/2017.

General Test Report

4.B1. (EU) No 3/2014 Annex II; Audible warning devices

4.B1.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex II to Regulation (EU) No 3/2014.

4.B1.2. Test results

For detailed test results see Annex T4.

4.B2. (EU) No 3/2014 Annex III; Braking, including anti-lock and combined brake systems

4.B2.1. Tests and inspections

The tests have been carried out in accordance with the requirements of UNECE regulation No 78.

4.B2.2. Test results

For detailed test results see Annex T5.

4.B3. (EU) No 3/2014 Annex IV; Electrical safety

4.B.3.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex IV to Regulation (EU) No 3/2014.

4.B.3.1.1. 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

The requirements of point 2 of Annex IV to Regulation (EU) No 3/2014 are fulfilled.

4.B.3.1.2. Requirements concerning the REESS

The requirements of point 3 of Annex IV to Regulation (EU) No 3/2014 are fulfilled.

4.B.3.1.3. In-use safety requirements

The requirements of point 4 of Annex IV to Regulation (EU) No 3/2014 are fulfilled.

4.B.3.1.4. Enhanced functional safety requirements on electrical safety of Annex VIII to Regulation (EU) No 168/2013 are fulfilled.

General Test Report

4.B4. (EU) No 3/2014 Annex V; Manufacturer declaration requirements regarding endurance testing of functional safety-critical systems, parts and equipment

4.B4.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex V to Regulation (EU) No 3/2014.

4.B4.1.1. General requirements

The manufacturer's statement on endurance of functional safety-critical systems, parts and equipment as referred to in Article 22(2) of Regulation (EU) No 168/2013 and set out in Annex II to Regulation (EU) No 901/2014 is provided.
Enhanced functional safety requirements of Annex VIII to Regulation (EU) No 168/2013 are fulfilled.

4.B5. (EU) No 3/2014 Annex VI; Front and rear protective structures

Not applicable.

4.B6. (EU) No 3/2014 Annex VII; Glazing, windscreen wipers and washers, and defrosting and demisting systems

Not applicable.

4.B7. (EU) No 3/2014 Annex VIII; Driver-operated controls including identification of controls, tell-tales and indicators

4.B7.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex VIII to Regulation (EU) No 3/2014.

4.B7.1.1. Identification of controls, tell-tales and indicators

The tests have been carried out in accordance with the requirements of Annex VIII to Regulation (EU) No 3/2014.
Requirements of point 2 to 2.2.1.6 of Annex VIII to Regulation (EU) No 3/2014 are fulfilled.
For detailed test results see Annex T6.

4.B7.1.2. Speedometer and odometer

The vehicle with a maximum design vehicle speed does not exceed 25 km/h, the odometer is not fitted according to the point 1.2.1 of Annex VIII to Regulation (EU) No 3/2014
The tests have been carried out in accordance with the requirements of UNECE regulation No 39.
For detailed test results see Annex T6.

General Test Report

4.B8. (EU) No 3/2014 Annex IX; Installation of lighting and light- signalling devices, including automatic switching of lighting

4.B8.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex IX to Regulation (EU) No 3/2014.

4.B8.2. Test results

Enhanced functional safety requirements on improvement of vehicle and rider visibility by automatic switching-on of lighting of Annex VIII to Regulation (EU) No 168/2013 are fulfilled.
Requirements of point 1.10. to 2.5. of Annex IX to Regulation (EU) No 3/2014 are fulfilled.
For detailed test results see Annex T7.

4.B9. (EU) No 3/2014 Annex X; Rearward visibility

4.B9.1. Tests and inspections

The tests have been carried out in accordance with the requirements of UNECE regulation No 81 and Annex X to Regulation (EU) No 3/2014.

4.B9.2. Test results

For detailed test results see Annex T8.

4.B10. (EU) No 3/2014 Annex XI; Rollover protective structure (ROPS)

Not applicable.

4.B11. (EU) No 3/2014 Annex XII; Safety-belt anchorages and safety- belts

Not applicable.

4.B12. (EU) No 3/2014 Annex XIII; Seating positions (saddles and seats)

4.B12.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XIII to Regulation (EU) No 3/2014.
The vehicle has no bodywork.

General Test Report

4.B12.1.1. General specifications

The vehicle is fitted with one seat with two seats.
All seating positions are forward-facing.
The height of the R-point of the seating position of the driver or rider is more than 400 mm as measured from the ground surface.
The requirements of point 1 of Annex XIII to Regulation (EU) No 3/2014 are fulfilled.

4.B12.1.2. Seat tests

Not applicable. The seats are not fitted with safety belt anchorage points and/or safety belts.

4.B12.1.3. Child restraint systems

Not applicable. The vehicle are not fitted with child restraint systems.

4.B13. (EU) No 3/2014 Annex XIV; Steer-ability, cornering properties and turn-ability

4.B13.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XIV to Regulation (EU) No 3/2014.
The vehicle has no bodywork.
The vehicle is not equipped with assistance steering systems.

4.B13.2. Test results

Enhanced functional safety requirements on safe cornering on hard-surfaced roads of Annex VIII to Regulation (EU) No 168/2013 are fulfilled.
For detailed test results see Annex T9.

4.B14. (EU) No 3/2014 Annex XV; Installation of tyres

4.B14.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XV to Regulation (EU) No 3/2014.

4.B14.2. Test results

For detailed test results see Annex T10.

General Test Report

4.B15. (EU) No 3/2014 Annex XVI; Vehicle maximum speed limitation plate and its location on the vehicle

Not applicable.

4.B16. (EU) No 3/2014 Annex XVII; Vehicle occupant protection, including interior fittings and vehicle doors

Not applicable.

4.B17. (EU) No 3/2014 Annex XVIII; Maximum continuous total power and/or maximum vehicle speed limitation by design

4.B17.1. Tests and inspections

Maximum vehicle speed ~~and/or maximum power~~ shall be limited by means of two or more of the following, for vehicles which are propelled by means of one or more electric motors, including pure and hybrid electric vehicles:

(a) 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: Yes: ☑ No: ☐

(b) 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: Yes: ☑ No: ☐

(c) physical vehicle speed limitation by means of internal or external components such as a maximum achievable revolution speed of an electric motor: Yes: ☐ No: ☑

General Test Report

4.B18. (EU) No 3/2014 Annex XIX; Requirements on vehicle structure integrity

4.B18.1. Tests and inspections

The manufacturer's statement on vehicle structure integrity as referred to in Article 22(5) of Regulation (EU) No 168/2013 and set out in Annex II to Regulation (EU) No 901/2014 is provided.
Enhanced functional safety requirements on vehicle structure integrity of Annex VIII to Regulation (EU) No 168/2013 are fulfilled.

Confirmation

The tests and inspections have shown the conformity of the vehicle type, described in this report and its annexes, with Regulation (EU) No 3/2014 including all amendments up to the Regulation (EU) 2016/1824 of 14/07/2016.

4.C1. (EU) No 44/2014 Annex II; Powertrain tampering prevention measures (anti-tampering)

4.C1.1. Tests and inspections

4.C1.1.1. General specifications

The manufacturer's declaration on powertrain tampering prevention measures (anti-tampering) as referred to in Article 20(2) of Regulation (EU) No 168/2013 and in points 2.2., 2.6. ~~and 5.2.~~ of Annex II to Regulation (EU) No 44/2014 and set out in Appendix 25 of Annex I to Regulation (EU) No 901/2014 is provided.
The requirements of point 2 of Annex II to Regulation (EU) No 44/2014 are fulfilled.

4.C1.1.2. Additional specific requirements for other (sub)categories of L2e-P

The requirements of points 3 and 6 of Annex II to Regulation (EU) No 44/2014 are fulfilled.

General Test Report

4.C2. (EU) No 44/2014 Annex III; Arrangements for type-approval procedures

4.C2.1. Tests and inspections

4.C2.1.1. Type-approval process

Single-step type-approval is chosen by manufacturer	Yes:	☑	No:	☐
Step-by-step type-approval is chosen by manufacturer	Yes:	☐	No:	☑
Mixed step type-approval is chosen by manufacturer	Yes:	☐	No:	☑

4.C2.1.2. Combination of technical specifications

The number of vehicles to be is sufficient to permit the proper check of the various combinations to be type-approved according to the vehicle criteria.

4.C2.1.3. Provisions regarding conversion of subcategories (L3e/L4e)-A2 and (L3e/L4e)-A3 motorcycles

Not applicable.

4.C2.1.4. Procedures to be followed during multi-stage EU type-approval

Not applicable.

4.C2.1.5. Specific conditions required of virtual testing methods and regulatory acts for which virtual and/or self-testing methods may be used by a manufacturer or a technical service

Not applicable.

4.C3. (EU) No 44/2014 Annex IV; Conformity of production

4.C3.1. Tests and inspections

4.C3.1.1. Initial assessment

The manufacturer's certification complies with the international EN ISO 9001:2015.
The requirements of point 1 of Annex IV to Regulation (EU) No 44/2014 are fulfilled.

4.C3.1.2. Product conformity arrangements

Existence of procedures for effective control of the conformity of product.
The requirements of point 2 of Annex IV to Regulation (EU) No 44/2014 are fulfilled.

General Test Report

4.C4. (EU) No 44/2014 Annex V; Coupling devices and attachments

Not applicable.

4.C5. (EU) No 44/2014 Annex VI; Devices to prevent unauthorised use

4.C5.1. Tests and inspections

The tests have been carried out in accordance with the requirements of UNECE regulation No 62.

4.C5.2. Test results

For detailed test results see Annex T11.

4.C6. (EU) No 44/2014 Annex VII; Electromagnetic compatibility (EMC)

4.C6.1. Tests and inspections

The tests have been carried out in accordance with the requirements of UNECE regulation No 10.

4.C6.2. Test results

For detailed test results see Annex T12.

4.C7. (EU) No 44/2014 Annex VIII; External projections

4.C7.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex VIII to Regulation (EU) No 44/2014.

4.C7.2. Test results

For detailed test results see Annex T13.

4.C8. (EU) No 44/2014 Annex IX; Fuel storage

Not applicable, the vehicle is powered by battery.

4.C9. (EU) No 44/2014 Annex X; Load platforms

Not applicable.

General Test Report

4.C10. (EU) No 44/2014 Annex XI; Masses and dimensions

4.C10.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XI to Regulation (EU) No 44/2014.

4.C10.2. Test results

For detailed test results see Annex T14.

4.C11. (EU) No 44/2014 Annex XII; On-board diagnostics (OBD) functional requirements

Not applicable.

4.C12. (EU) No 44/2014 Annex XIII; Passenger handholds and footrests

4.C12.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XIII to Regulation (EU) No 44/2014.

4.C12.2. Test results

For detailed test results see Annex T15.

4.C13. (EU) No 44/2014 Annex XIV; Registration plate space

4.C13.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex XIV to Regulation (EU) No 44/2014.

4.C13.2. Test results

For detailed test results see Annex T16.

General Test Report

4.C14. (EU) No 44/2014 Annex XV; Access to repair and maintenance information

4.C14.1. Tests and inspections

4.C14.1.1. The manufacturer's certificate on access to ~~vehicle OBD stage I and~~ vehicle repair and maintenance information

The manufacturer's 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.

4.C14.1.2. Access to ~~vehicle OBD and~~ vehicle repair and maintenance information

Address of website for access to vehicle repair and maintenance information:.	www.jshuafu.com
Date from which it is available:	6 months from the date of type approval
Terms and conditions of access (i.e., duration of access, price of access on a hourly, daily, monthly, annual and per-transaction basis):	according to point 3 of Annex XV to this Regulation
Format of vehicle repair and maintenance information accessible through website:	according to Appendix 1 of Annex XV to this Regulation

The technical requirements in Appendix 1 of Annex IV to Regulation (EU) No 44/2014 regarding access to ~~vehicle OBD and~~ vehicle repair and maintenance information are fulfilled.

4.C14.1.3. 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.

4.C14.1.4. Multi-stage type-approval

Not applicable.

4.C14.1.5. Small volume manufacturers

Not applicable.

4.C14.1.6. Carry-over systems

Not applicable.

General Test Report

4.C15. (EU) No 44/2014 Annex XVI; Stands

Not applicable.

Confirmation

The tests and inspections have shown the conformity of the vehicle type, described in this report and its annexes, with Regulation (EU) No 44/2014 including all amendments up to the Regulation (EU) 2018/295 of 15/12/2017.

4.D1. (EU) No 901/2014 Annex V; Statutory plate and EU type-approval mark

4.D1.1. Tests and inspections

The tests and inspections have been carried out in accordance with the requirements of Annex V to Regulation (EU) No 901/2014.

4.D1.1.1. General requirements for vehicle marking

The requirements of point 1 of Annex V to Regulation (EU) No 901/2014 are fulfilled.

4.D1.1.2. Statutory plate

The requirements of point 2 of Annex V to Regulation (EU) No 901/2014 are fulfilled.

4.D1.1.3. Requirements for the VIN

The requirements of point 3 of Annex V to Regulation (EU) No 901/2014 are fulfilled.

4.D1.1.4. Marking requirements for a multi-stage approval

Not applicable.

Confirmation

The tests and inspections have shown the conformity of the vehicle type, described in this report and its annexes, with Regulation (EU) No 901/2014 including all amendments up to the Regulation (EU) 2020/239 of 20/02/2020.

Detailed Test Report

~~**(EU) No 134/2014 Annex II; Tailpipe emissions after cold start**~~
~~**(EU) No 134/2014 Annex III; Tailpipe emissions at (increased idle)/ free acceleration test**~~
~~**(EU) No 134/2014 Annex IV; Emissions crank-case gases**~~
~~**(EU) No 134/2014 Annex V; Evaporative emissions**~~
~~**(EU) No 134/2014 Annex VI; Durability of pollution-control devices**~~
(EU) No 134/2014 Annex VII; Measurement of electric energy consumption and electric range determination
~~**(EU) No 134/2014 Annex VIII; Environmental on-board diagnosis (OBD) tests**~~
~~**(EU) No 134/2014 Annex XI; Vehicle propulsion family definition**~~

[ ] Numbering according to the item 2.2.1."(A) Environmental and propulsion unit performance" of Annex VIII of Regulation (EU) No 901/2014 as last amended by (EU) 2020/239

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1. Vehicle description

- Vehicle: HF-ET03
- Variant(s)/Version(s): 0/0
- VIN: R2SJ2C204M0100001

2.2. [2.2.1.1.1] Description of propulsion, propulsion family and drive-train of test vehicle(s)

2.2.1. Propulsion family: Not applicable

2.2.2. Electric motor

- Type designation: YWDJ010
- Maximum continuous power[kW]: 1.0
- Battery capacity[Ah]: 20
- Battery voltage[V]: 60

2.2.3. Drive-train

2.2.3.1. Transmission: Not applicable

2.2.3.2. Test vehicle tyre

Axle	Tyre make	Tyre dimension	Approval number	Inflation pressure [kPa]
Front	YUANXIN	3.00-10	E4-75R-0006927	250
Rear	YUANXIN	3.00-10	E4-75R-0006927	250

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Range of tyre size: dynamic rolling circumference [mm]

	Type approval tyre	Tested tyre
from	1297	1297
to	1297	

2.2.4. Maximum speed[km/h]: 25

2.2.5. Test vehicle equipment:

Electric motor control unit:	Make	LINGBO
	Type	LBMC060122HK2AUE-M6C3-C

2.2.6. Stop-start system fitted: ~~Yes~~/No

2.2.7. Mass of the vehicle at the time of testing[kg]:

	m_k (1)	m_{ref} (2)
Front	33	65
Rear	68	111
Total	101	176

(1): Mass in running order and propulsion batteries plus optional equipment

(2): Mass(1) plus mass of driver.

2.3. [2.2.1.1.2.] Environmental step of test vehicle: Not applicable

2.4. [2.2.1.1.3.] Description of emission test bench(es), specifications and settings:

Gas sampling device:	Make	Not applicable
	Type	Not applicable
Gas analysing device:	Make	Not applicable
	Type	Not applicable

Detailed Test Report

2.5. [2.2.1.1.4.] Chassis/engine dynamometer(s) specifications:

Chassis:	Make	Hangzhou Zhongcheng Test Equipment Co., Ltd.
	Type	MCJ-400

2.6. [2.2.1.1.5.] Inertia (reference) mass and running resistance settings for single/~~dual~~ roll chassis dynamometer:

Equivalent inertia mass [kg]	Rolling resistance of front wheel a [N]	Aero drag coefficient b [N/(km/h)^2]
180	15.8	0.0227

2.7. [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

2.8. [2.2.1.1.7.] Applicable test type I driving schedule: WMTC stage 3

2.9. [2.2.1.1.8.] Description gearshift prescriptions for environmental testing: Not applicable

3. Test conditions

Test type VII

- Ambient Temperature[°C] :	24
- Relative Humidity[%]:	51.0
- Atmospheric pressure[kPa]:	102.2

4. Test results

4.1. [2.2.1.2.] Test Type I requirements: tailpipe emissions after cold start: Not applicable

4.2. [2.2.1.3.] Test type II requirements: tailpipe emissions at (increased idle)/free acceleration: Not applicable

4.3. [2.2.1.4.] Test type III requirements: emissions of crank-case gases: Not applicable

4.4. [2.2.1.5.] Type IV test requirements: evaporative emissions: Not applicable

4.5. [2.2.1.6.] Test type V requirements: durability of pollution-control devices: Not applicable

Detailed Test Report

4.6. [2.2.1.7.]	Test type VI has not been assigned; consequently there are no results to be submitted	
4.7. [2.2.1.8.]	Test type VII requirements: measurement of ~~CO_2 emissions, fuel consumption,~~ electric energy consumption and electric range determination	**passed**
4.7.1. [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 test type I:	Not applicable
4.7.2. [2.2.1.8.2.]	Documentation added according to UNECE Regulation No 101:	No
4.7.3. [2.2.1.8.3.]	The vehicle manufacturer has ensured that the ~~CO_2 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:	Yes
4.7.4. [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:	Yes
4.7.5. [2.2.1.8.5.]	Type VII test results, where applicable and for each reference fuel tested:	Not applicable
4.7.6. [2.2.1.8.6.]	Test type VII test results CO_2 emissions, fuel consumption	Not applicable

4.7.7. [2.2.1.8.7.] Electric energy consumption and electric range:

Test Type VII result table for pure electric propulsion ~~or not externally chargeable (NOVC) propulsions equipped with an electric motor for propulsion~~

	Electric energy consumption [Wh/km]		Electric range [km]	
	Measured	Declared	Measured	Declared
Pure electric powertrain	64	64	24	24
Difference between Test Type VII Test Results and Manufacturer's declared values[%]	0.00%		0.00%	

For L2e, L5e-B, L6e-B and L7e vehicles equipped with a passenger compartment; the maximum electrical consumption owing to auxiliary heating such as heating systems for the passenger compartment/seats/other: Not applicable

Detailed Test Report

4.8. [2.2.1.9.]	Test type VIII requirements: environmental on-board diagnostic (OBD)	Not applicable
4.9. [2.2.1.10.]	Test type IX requirements: sound level	Not applicable
4.10. [2.2.1.11.]	Propulsion unit performance test results	
4.10.1. [2.2.1.11.1.]	Propulsion unit performance data to be provided to measure/determine the maximum vehicle design speed:	
4.10.1.1. [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:	See Annex T3
	Any deviations by test vehicle(s) from data provided in information document, Annex I:	No
	If yes, please provide list with deviations relevant for measuring the maximum vehicle design speed and gear in which it was reached :	Not applicable
4.10.1.2. [2.2.1.11.1.2.]	Test mass in running order: mass plus rider/driver:	See Annex T3
4.10.1.3. [2.2.1.11.1.3.]	Test fuel specifications:	Not applicable
4.10.1.4. [2.2.1.11.1.4.]	Powertrain lubricant specifications:	Not applicable
4.10.1.5. [2.2.1.11.1.5.]	Atmospheric pressure:	See Annex T3
4.10.1.6. [2.2.1.11.1.6.]	Relative humidity:	See Annex T3
4.10.1.7. [2.2.1.11.1.7.]	Ambient temperature:	See Annex T3
4.10.1.8. [2.2.1.11.1.8.]	Wind speed and direction on test track:	See Annex T3
4.10.1.9. [2.2.1.11.1.9.]	Test track condition (temperature, level of moisture etc.):	Not applicable
4.10.1.10. [2.2.1.11.1.10.]	Maximum vehicle design speed measured and gear in which it is reached: in gear no:	See Annex T3
4.10.1.11. [2.2.1.11.1.11.]	Maximum vehicle design speed	See Annex T3
4.10.1.12. [2.2.1.11.1.12.]	Exemption L3e-A3 and L4e-A3 vehicles; maximum vehicle design speed declared by manufacturer:	Not applicable
4.10.2. [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	
4.10.2.1. [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:	See Annex T3

Detailed Test Report

4.10.2.1.1. [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:	See Annex T3
4.10.2.1.2. [2.2.1.11.2.1.2.]	Test fuel:	Not applicable
4.10.2.1.3. [2.2.1.11.2.1.3.]	Powertrain lubricant specifications:	Not applicable
4.10.2.1.4. [2.2.1.11.2.1.4.]	Atmospheric pressure:	See Annex T3
4.10.2.1.5. [2.2.1.11.2.1.5.]	Relative humidity:	See Annex T3
4.10.2.1.6. [2.2.1.11.2.1.6.]	Ambient temperature:	See Annex T3
4.10.2.1.7. [2.2.1.11.2.1.7.]	Correction factor for reference atmospheric conditions α1:	Not applicable
4.10.2.1.8. [2.2.1.11.2.1.8.]	Correction factor for the efficiency of the transmission α2:	Not applicable
4.10.2.1.9. [2.2.1.11.2.1.9.]	Engine cooling temperature:	Not applicable
4.10.2.1.10. [2.2.1.11.2.1.10.]	Oil temperature at measuring point:	Not applicable
4.10.2.1.11. [2.2.1.11.2.1.11.]	Exhaust temperature	Not applicable
4.10.2.1.12. [2.2.1.11.2.1.12.]	The manufacturer shall indicate the propulsion unit performance test results below:	
4.10.2.1.13. [2.2.1.11.2.1.13.]	Maximum permitted combustion engine/electric motor/propulsion rotation speed:	3331 min^{-1}
4.10.2.1.14. [2.2.1.11.2.1.14.]	Maximum net power combustion engine:	Not applicable
4.10.2.1.15. [2.2.1.11.2.1.15.]	Maximum net torque combustion engine:	Not applicable
4.10.2.1.16. [2.2.1.11.2.1.16.]	Maximum continuous-rated power electric motor:	See Annex T3
4.10.2.1.17. [2.2.1.11.2.1.17.]	Maximum continuous-rated torque electric motor:	See Annex T3
4.10.2.1.18. [2.2.1.11.2.1.18.]	Maximum current e-motor at maximum continuous-rated power:	See Annex T3
4.10.2.1.19. [2.2.1.11.2.1.19.]	Maximum continuous total power for propulsion(s):	Not applicable
4.10.2.1.20. [2.2.1.11.2.1.20.]	Maximum continuous total torque for propulsion(s):	Not applicable
4.10.2.1.21. [2.2.1.11.2.1.21.]	Maximum peak power for propulsion(s):	See Annex T3
4.10.2.1.22. [2.2.1.11.2.1.22.]	Power/mass in running order ratio:	Not applicable

Detailed Test Report

4.10.2.1.23. [2.2.1.11.2.1.23.]	Specific fuel consumption, g/kWh at maximum net power and power:	Not applicable
4.10.2.1.24. [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
4.10.2.1.25. [2.2.1.11.2.1.25.]	Maximum speed of vehicle and gear in which it is reached: (only for subcategories: L1e, L2e, L6e, L7e-B1, L7e-C)	See Annex T3
4.10.2.1.26. [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)	Not applicable

TEST PASSED

Detailed Test Report

(EU) No 134/2014 Annex X; Procedures and technical requirements on maximum vehicle design speed, maximum torque, maximum continuous total power and maximum peak power
UNECE regulation No 85 including all amendments up to Series 00, Supplement 7

1. Test item identification

The tests were conducted with a test engine which is representative of the engine type to be approved.
The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1. Vehicle description

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

2.2. Description of propulsion and drive-train of test vehicle(s)

2.2.1. Electric motor

- Type designation:	YWDJ010
- Maximum continuous power[kW]:	1.0

2.2.2. Transmission — Not applicable

2.2.3. Test vehicle tyre

Axle	Tyre make	Tyre dimension	Approval number	Inflation pressure [kPa]
Front	YUANXIN	3.00-10	E4-75R-0006927	250
Rear	YUANXIN	3.00-10	E4-75R-0006927	250

2.3. Test vehicle equipment

Electric motor control unit:	Make	LINGBO
	Type	LBMC060122HK2AUE-M6C3-C

Detailed Test Report

3. Maximum vehicle design speed

3.1. Mass of the vehicle at the time of testing [kg]:

	Mass in running order and propulsion batteries plus driver
Front	65
Rear	111
Total	176

3.2. Test conditions

3.2.1.	Atmospheric pressure	100.4 kPa
3.2.2.	Relative humidity	53%
3.2.3.	Ambient temperature	280 K
3.2.4.	Wind speed and direction on test track	0.5 m/s(N-S)
3.2.5.	Test track condition (temperature, level of moisture etc.)	Temperature: 279 K, dry and flat. Test track configuration according to item 4.2.1 of Appendix 1 of Annex X to (EU) No 134/2014.

3.3. Test result

Variant(s)/ version(s)	Measured max. speed[km/h]	Declared max. Speed[km/h]	Tolerance min.[km/h]	Tolerance max. [km/h]
0/0	24	25	22.5	27.5

4. Maximum torque and maximum continuous rated power

4.1. Characteristics of the dynamometer

Make:	Keda
Type:	583-411

4.2. Accessories

4.2.1.	Accessories to be fitted	The accessories needed for operation of the motor in the application in question is located on the test bench as far as possible in the positions that they would occupy for that application.

Detailed Test Report

4.2.2.	Accessories to be removed	Not applicable.
4.2.3.	Setting conditions	The conditions applying to settings during the tests to determine maximum torque and maximum continuous rated power are set out in UNECE regulation No 85.
4.3.	Test conditions	
4.3.1.	Atmospheric pressure:	99.8 kPa
4.3.2.	Relative humidity:	65%
4.3.3.	Ambient temperature:	291 K
4.4.	Detailed results of measurements	
	Maximum peak power	
	- stated by the manufacturer:	1.4 kW at 3054 min^{-1}
	- measured:	1.4 kW at 3054 min^{-1}
	Maximum continuous-rated power electric motor	
	- stated by the manufacturer:	1.0 kW at 3007 min^{-1}
	- measured:	1.0 kW at 3007 min^{-1}
	Maximum continuous-rated torque electric motor	
	- stated by the manufacturer:	3.3 Nm at 3007 min^{-1}
	- measured:	3.3 Nm at 3007 min^{-1}
	Maximum current e-motor at maximum continuous-rated power	
	- stated by the manufacturer:	28.6 A
	- measured:	28.6 A

Detailed Test Report

4.4.1. Engine performance data

4.4.1.1. Thirty minutes power

Elapsed time [min]	Motor speed [min^{-1}]	Test voltage [V]	Power [kW]	Torque [Nm]
1	2992	60	1.0	3.3
2	2992	60	1.0	3.3
3	2997	60	1.0	3.3
4	2997	60	1.0	3.3
5	2997	60	1.0	3.3
6	2997	60	1.0	3.3
7	3002	60	1.0	3.3
8	3002	60	1.0	3.3
9	3002	60	1.0	3.3
10	3007	60	1.0	3.3
11	3002	60	1.0	3.3
12	3007	60	1.0	3.3
13	3002	60	1.0	3.3
14	3007	60	1.0	3.3
15	3002	60	1.0	3.3
16	3012	60	1.0	3.3
17	3012	60	1.0	3.3
18	3012	60	1.0	3.3
19	3007	60	1.0	3.3
20	3007	60	1.0	3.3
21	3007	60	1.0	3.3
22	3018	60	1.0	3.2
23	3012	60	1.0	3.3
24	3018	60	1.0	3.3
25	3012	60	1.0	3.3
26	3018	60	1.0	3.3
27	3023	60	1.0	3.3
28	3018	60	1.0	3.3
29	3018	60	1.0	3.3
30	3023	60	1.0	3.3
Average	3007	60	1.0	3.3

TEST PASSED

Detailed Test Report

(EU) No 3/2014 Annex II; Audible warning devices

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3 Tests and inspections

3.1 Audible warning devices

		Optional 1	Optional 2
3.1.1	Make	LVEE	JG, MW, DC, DB
3.1.2	Type of horn	resonator disc, single-tone	Electro-magnetic with resonator disc
3.1.3	Designation	DL70-II	DL127
3.1.4	Type approval number	E32 28R-00 0002	I-E9-00.1282
3.1.5	Specified frequencies	440±40 Hz	high tone: 480±30 Hz Low tone: 440±30 Hz
3.1.6	Nominal voltage [V]	12	12
3.1.7	Number of horns	1	1
3.1.8	Installation at the vehicle	according to Annex MID, item 6.1.2.	according to Annex MID, item 6.1.2.

4. Test results

Maximum sound pressure level [dB(A)] Optional 1: 90 Optional 2: 95
(max. value between 0,5 to 1,5 m above ground)

Sound-pressure level measured [dB(A)]:	**Optional 1: 90**	**Optional 2: 95**
Minimum limit value [dB(A)]:	75	
Maximum limit value [dB(A)]:	112	

The requirements according to item 2.1.7 of part 2 of the Annex II to Regulation (EU) No 3/2014 are fulfilled.

TEST PASSED

technology experts

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 3/2014 Annex III; Braking, including anti-lock and combined brake systems
UNECE regulation No 78 including all amendments up to Series 04, Supplement 1

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1. Vehicle description

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

2.2. Electric motor

- Type designation:	YWDJ010
- Maximum continuous power[kW]:	1.0

2.3. Transmission — Not applicable

2.4. Test vehicle tyre

Axle	Tyre make	Tyre dimension	Approval number	Inflation pressure [kPa]
Front	YUANXIN	3.00-10	E4-75R-0006927	250
Rear	YUANXIN	3.00-10	E4-75R-0006927	250

2.5. Characteristics of the braking system

The characteristics of the braking system correspond to item 5 of the Regulation.
The requirements are fulfilled.

The type of vehicle is equipped with a parking brake system and two separate service brake system which one brake operating on the front wheel and the other one brake operating on rear wheel.

Braking device description
- Front: One Ø 155 mm disc, a hydraulically actuated caliper with two parallel wheel cylinders (Two Ø 28 mm pistons).

- Rear One Ø 110 mm mechanical drum.

Brake pads and/or linings
- Front: Karasawa/YD1000D -08
- Rear : TANGZE/KG2110IVF

Antilock brake system (ABS) description
Not applicable.

Detailed Test Report

3. Test conditions

- Ambient Temperature[°C] : 17
- Relative Humidity[%]: 42
- Wind speed[m/s]: Up to 0.5
- Wind direction: N-S

4 Test results

4.1 Mass of the vehicle at the time of testing [kg]:

	Laden mass (2)	Lightly Loaded mass(1)
Front	80	70
Rear	171	121
Total	251	191

(1): as defined in item 2.15. of the Regulation ECE R78.
(2): as defined in item 2.14. of the Regulation ECE R78.

4.2 Maximum speed[km/h]: 25 km/h

4.3 Results of tests

4.3.1 Dry stop with single brake control action

Laden vehicle tests

Brake	Test Speed [km/h]	MFDD [m/s^2]	Actuation force [N]
Front	24.7	3.31 [≥2.7]	89 [≤200]
Rear	24.1	3.24 [≥2.7]	71 [≤200]

4.3.2 Wet brake test

Laden vehicle tests

Front disk brake test

	Test Speed [km/h]	Deceleration [m/s^2]			Actuation force [N]
		d_{avg} (1)	d_{max} (2)	d_i (3)	
Baseline	22.5	2.70	3.28	2.69	101
Wet test	22.5	2.52	2.98[*]	2.52[**]	98

(1) Average deceleration
(2) Maximum vehicle deceleration during the complete stop but excluding the final 0.5 seconds
(3) Average deceleration in the period 0.5 to 1.0 seconds after the point of actuation of the brake control
[*]:[≤1.2 x baseline value]
[**]:[≥0.6 x baseline value]

Detailed Test Report

4.3.3 ABS system

Not applicable, the vehicle is not fitted with ABS system.

4.3.4 Parking brake system test

4.3.4.1 Static performance test

Laden vehicle tests	Gradient slop / facing of the vehicle	Measured force applied to control [N]
Parking brake	18% / up	94 [⩽400]
Parking brake	18% / down	97 [⩽400]

4.3.5 Power assisted braking system failure

Not applicable.

TEST PASSED

Detailed Test Report

(EU) No 3/2014 Annex VIII; Driver-operated controls including identification of controls, tell-tales and indicators
UNECE regulation No 39 including all amendments up to Series 01, Supplement 1

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1. Vehicle description

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

2.2. Test vehicle tyre

Axle	Tyre make	Tyre dimension	Approval number	Inflation pressure [kPa]
Front	YUANXIN	3.00-10	E4-75R-0006927	250
Rear	YUANXIN	3.00-10	E4-75R-0006927	250

2.3. Speedometer:

Manufacturer:	MEICHENG
Method of operation:	Directly connect to the controller, to drive speedometer through the signal from controller.
Transmission ratio:	N.A
Instrument constant:	1V≈0.8km/h
Specification:	According to annex MID, item 6.10

3. Tests and inspections

3.1. Identification of controls, tell-tales and indicators

3.1.1 Special requirements

The special requirements set out in item 2.1 of Annex VIII to Regulation (EU) No 3/2014 are fulfilled.

3.1.2 Common space for displaying multiple information

Not applicable.

3.1.3. Details of the Controls, tell-tales, indicators

See Annex MID item 6.9.3, 6.9.4, 6.9.5

Detailed Test Report

3.2 Speedometer and odometer

3.2.1. The specifications regarding visibility and legibility of the speedometer are fulfilled.

3.2.2. The specifications regarding the graduation of the speedometer

The graduation is 2 km/h.
The specifications regarding the graduation of the speedometer are fulfilled.

3.2.3. Accuracy of the speedometer [km/h]:

Indicated speed V_1	True speed V_2	Deviation V_1-V_2	Permitted deviation $0 \leqslant (V_1-V_2) \leqslant 0.1V_2+4$
20	19.2	0.8	5.9

The indicated speed on the speedometer is in accordance to the specifications of UNECE regulation No 39.

TEST PASSED

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 3/2014 Annex IX; Installation of lighting and light- signalling devices, including automatic switching of lighting

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3 Tests and inspections

3.1. The requirements of point 1.10 to 1.12 of Annex IX to Regulation (EU) No 3/2014 are fulfilled.

3.1.1. The auxiliary light sources requirements

The requirements of point 1.10 of Annex IX to Regulation (EU) No 3/2014 are fulfilled.

3.1.2. The characteristics of lighting devices

The requirements of point 1.11 of Annex IX to Regulation (EU) No 3/2014 are fulfilled.

3.1.3. Automatically switched-on headlamp ~~or daytime running lamp activation~~

The passing-beam headlamp is automatically on when activation of the master control switch.
The requirements of point 1.12 of Annex IX to Regulation (EU) No 3/2014 are fulfilled.

Detailed Test Report

3.2. Number, make, type-approval number, colour and tell-tale of the lighting and light-signalling devices

3.2.1. Devices of mandatory installation

Name	Installation	Number, make, type-approval number, colour and tell-tale of the lighting and light-signalling devices
Passing-beam headlamp	X	See Annex MID, item 6.11.1.
Front position lamp	X	
Front direction indicator lamp	X	
Rear direction indicator lamp	X	
Stop lamp	X	
Rear position lamp	X	
Rear-registration-plate illuminating device	X	
Rear retro-reflector	X	
Side retro-reflector	X	

3.2.2. Devices of optional installation

Name	Installation	Number, make, type-approval number, colour and tell-tale of the lighting and light-signalling devices
Driving-beam headlamp	X	See Annex MID, item 6.11.1.
Front fog lamp	---	---
Rear fog lamp	---	
Reversing lamp	---	
Hazard warning signal	---	
Daytime running lamp	---	
Side marker lamps	---	

Remark: X=Installed, O=Optional, ---=Not installed.

3.3. The general requirements set out in item 2.1 and 2.2 of the Annex IX to Regulation (EU) No 3/2014 are fulfilled.

Detailed Test Report

3.4. The individual requirements set out in item 2.3 of Annex IX to the Regulation (EU) No 3/2014 are fulfilled.

Device	Number	Arrangement	Position	Geometric visibility	Orientation	Grouped	Combined	Incorporated	Electrical connections	Other requirements
Driving-beam headlamp	1	No special requirement	Fulfilled	Fulfilled	Towards the front	No	No	Yes	Fulfilled	None
Passing-beam headlamp	1	No special requirement	Fulfilled	Fulfilled	Towards the front	No	No	Yes	Fulfilled	None
Front position lamp	1	No special requirement	Fulfilled	Fulfilled	Front	No	No	Yes	No special requirement	None
Front direction indicator lamp	2	Fulfilled	Fulfilled	Fulfilled	Front	No	No	No	Fulfilled	Fulfilled
Rear direction indicator lamp	2	Fulfilled	Fulfilled	Fulfilled	Rear	No	No	No	Fulfilled	Fulfilled
Stop lamp	1	No special requirement	Fulfilled	Fulfilled	Towards the rear	No	No	Yes	Fulfilled	Not applicable
Rear position lamp	1	No special requirement	Fulfilled	Fulfilled	Towards the rear	No	Yes	Yes	No special requirement	None
Rear-registration-plate illuminating device	1	Such that the device illuminates the space reserved for the registration plate				No	Yes	No	No special requirement	None
Rear retro-reflector	1	No special requirement	Fulfilled	Fulfilled	Towards the rear	No	No	No	Not applicable	None
Side retro-reflector	2	No special requirement	Fulfilled	Fulfilled	Towards the side	No	No	No	Not applicable	None

TEST PASSED

Detailed Test Report

(EU) No 3/2014 Annex X; Rearward visibility
UNECE regulation No 81 including all amendments up to Series 00, Supplement 2

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001
- Maximum speed [km/h]:	25 km/h

3 Tests and inspections

3.1 General requirements

The rear view mirrors installed on the vehicle are Class L type approved
Rear-view mirrors are fixed in such a way that they remain steady under normal conditions of use.
The requirements of item 16.1. of the Regulation are fulfilled.

3.2 Mirrors

3.2.1 Number

The vehicle is fitted with the following mirrors:

Optional 1

Number of mirrors	Approval mark	Location	Class
1	L E11 001192	Left side	L
1	L E11 001192	Right side	L

Optional 2

Number of mirrors	Approval mark	Location	Class
1	L E13 006473	Left side	L
1	L E13 006473	Right side	L

Optional 3

Number of mirrors	Approval mark	Location	Class
1	L E11 002090	Left side	L
1	L E11 002090	Right side	L

Detailed Test Report

Optional 4

Number of mirrors	Approval mark	Location	Class
1	L E13 029845	Left side	L
1	L E13 029845	Right side	L

Optional 5

Number of mirrors	Approval mark	Location	Class
1	L E13 029846	Left side	L
1	L E13 029846	Right side	L

Optional 6

Number of mirrors	Approval mark	Location	Class
1	L E32 020025	Left side	L
1	L E32 020025	Right side	L

Optional 7

Number of mirrors	Approval mark	Location	Class
1	L E32 020027	Left side	L
1	L E32 020027	Right side	L

Optional 8

Number of mirrors	Approval mark	Location	Class
1	L E32 020028	Left side	L
1	L E32 020028	Right side	L

Optional 9

Number of mirrors	Approval mark	Location	Class
1	L E4 000313	Left side	L
1	L E4 000313	Right side	L

The requirements of item 16.2. of the Regulation are fulfilled.

3.2.2 Position

The requirements of item 16.3. of the Regulation are fulfilled.

3.2.3 Adjustment

The requirements of item 16.4. of the Regulation are fulfilled.

TEST PASSED

technology experts

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 3/2014 Annex XIV; Steer-ability, cornering properties and turn-ability

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1.
- Vehicle: HF-ET03
- Variant(s)/Version(s): 0/0
- VIN: R2SJ2C204M0100001

2.2. Electric motor

- Type designation: YWDJ010
- Maximum continuous power[kW]: 1.0

2.3. Transmission: Not applicable

2.4. Test vehicle tyre

Axle	Tyre make	Tyre dimension	Approval number	Inflation pressure [kPa]
Front	YUANXIN	3.00-10	E4-75R-0006927	250
Rear	YUANXIN	3.00-10	E4-75R-0006927	250

2.5. Maximum speed [km/h]: 25 km/h

3. Test conditions

Test surface: even, non-slip and dry asphalt

Vehicle: laden condition up to technically permissible maximum mass

Tyre pressure: according the manufacturer's recommendation for laden condition

Detailed Test Report

4. Test results

4.1. Specific construction requirements

Vehicle is constructed so that all wheels are capable of rotating at different individual speeds at all times. A device such as a differential is installed and can not be locked automatically or by external means.
The vehicle is equipped with a device for reversing which can be operated from the driver's position.
The requirements of point 1.2 of Annex XIV to Regulation (EU) No 3/2014 are fulfilled.

4.2. Mass of the vehicle at the time of testing [kg]:

	Laden mass (1)
Front	80
Rear	171
Total	251

(1): laden condition up to technically permissible maximum mass.

4.3. Results of tests

4.3.1. The requirements of point 2.4 are fulfilled. The test was performed with a vehicle speed of 6 km/h with turning radius 12 m.

4.3.2. The requirements of point 2.5 are fulfilled. The test was performed with a vehicle speed of 23 km/h with turning radius 10 m.

4.3.3. The requirements of point 2.6 are fulfilled. The test was performed with a vehicle speed of 0.8Vmax km/h.

4.3.4. The requirements of point 2.7 are fulfilled. The test was performed in a circle with its steered wheels at approximately half lock and a constant speed of at least 6 km/h,

TEST PASSED

technology experts

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 3/2014 Annex XV; Installation of tyres

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001
- Maximum speed [km/h]:	25 km/h

3 Tests and inspections

3.1. Description of the tyres

See Annex MID, item 6.18.

3.2. Tyre installation

Maximum tyre envelope sizes applied for the clearance assessment:	Front: 3.50-10
The installed tyres can move freely in their intended position.	Rear: 3.50-10

3.3. Load capacity

The tyres fitted have a load capacity at least equal to the declared maximum permissible axle mass.

3.4. Speed capability

The tyres fitted have a speed category symbol compatible with the maximum design speed of the vehicle.

3.5. Tyre pressures

The declared cold tyre pressure for each tyre for normal on-road use is stated on the vehicle and in the vehicle's instruction manual.

TEST PASSED

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 44/2014 Annex VI; Devices to prevent unauthorised use
UNECE regulation No 62 including all amendments up to Series 00, Supplement 3

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3 Tests and inspections

The device to prevent unauthorised use of the vehicle is type 2.
The device positively operates on the steering in conjunction with the device which de-activates the engine of the vehicle.
It is not electromechanical and electronic devices to prevent unauthorized use.

3.1 General requirements

The general requirements set out in item 5 of the Regulation are fulfilled.

3.2 Particular requirements

The special requirements set out in item 6 of the Regulation are fulfilled.

TEST PASSED

Detailed Test Report

(EU) No 44/2014 Annex VII; Electromagnetic compatibility (EMC)
UNECE regulation No 10 including all amendments up to Series 05, Supplement 1

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

2.1. Vehicle description

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

2.2. Electric motor

- Type designation:	YWDJ010
- Maximum continuous power[kW]:	1.0

3 Tests and inspections

3.1 Configuration other than "REESS charging mode coupled to the power grid"

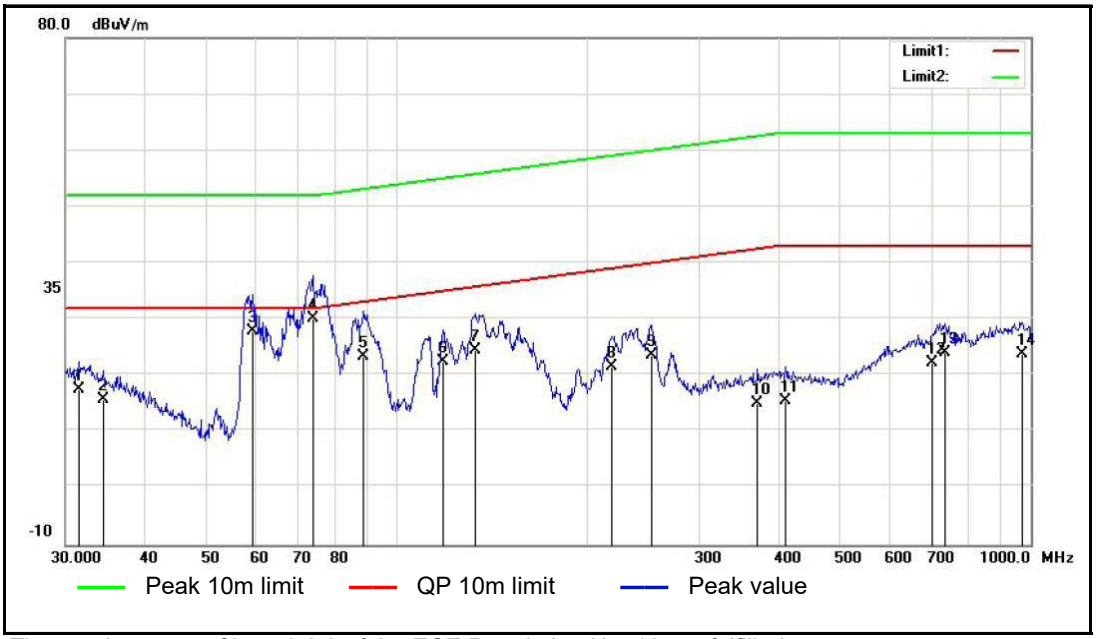
3.1.1 Measurement of radiated broadband electromagnetic emissions from vehicles

Antenna position:	According to App. 1 of Annex 4 to the ECE Regulation No. 10
Bandwidth:	120 kHz
Frequency range:	30 to 1000 MHz
Detector:	Peak (CISPR)
Vehicle condition:	According to item 2.1 of Annex 4 of the ECE Regulation No. 10

Detailed Test Report

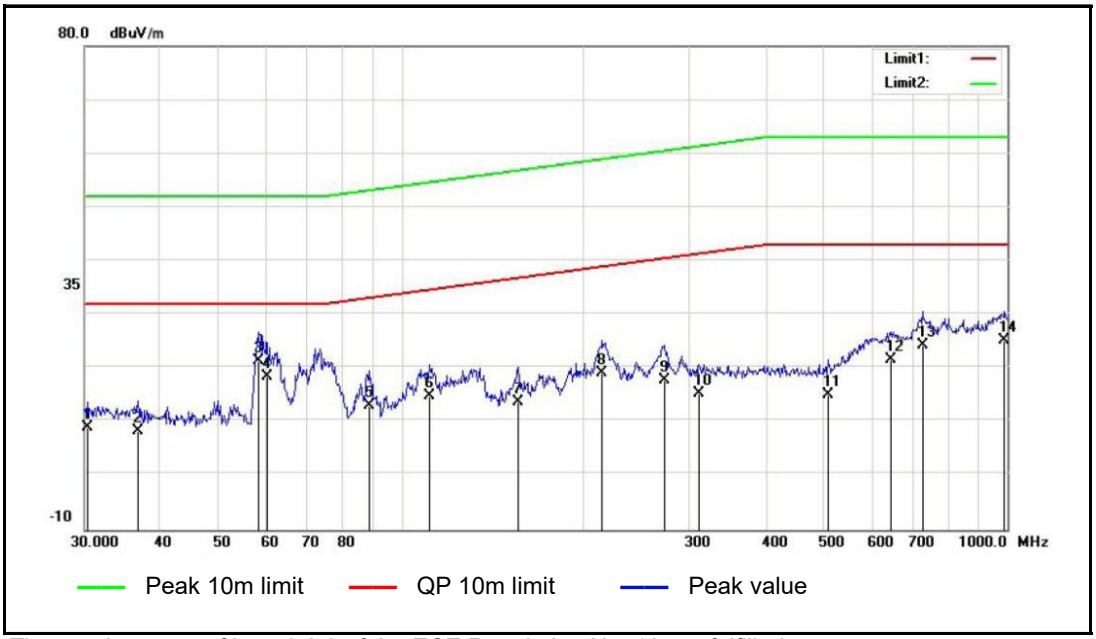
3.1.1.1 Test results:

3.1.1.1.1 Left side - Vertical antenna



The requirements of item 6.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

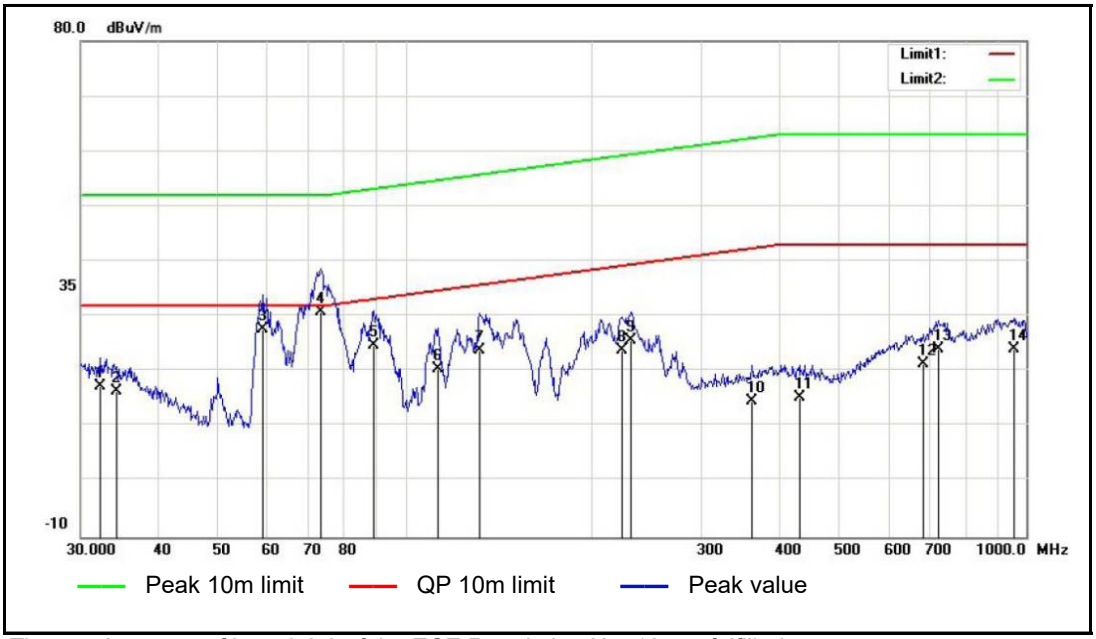
3.1.1.1.2 Left side - Horizontal antenna



The requirements of item 6.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

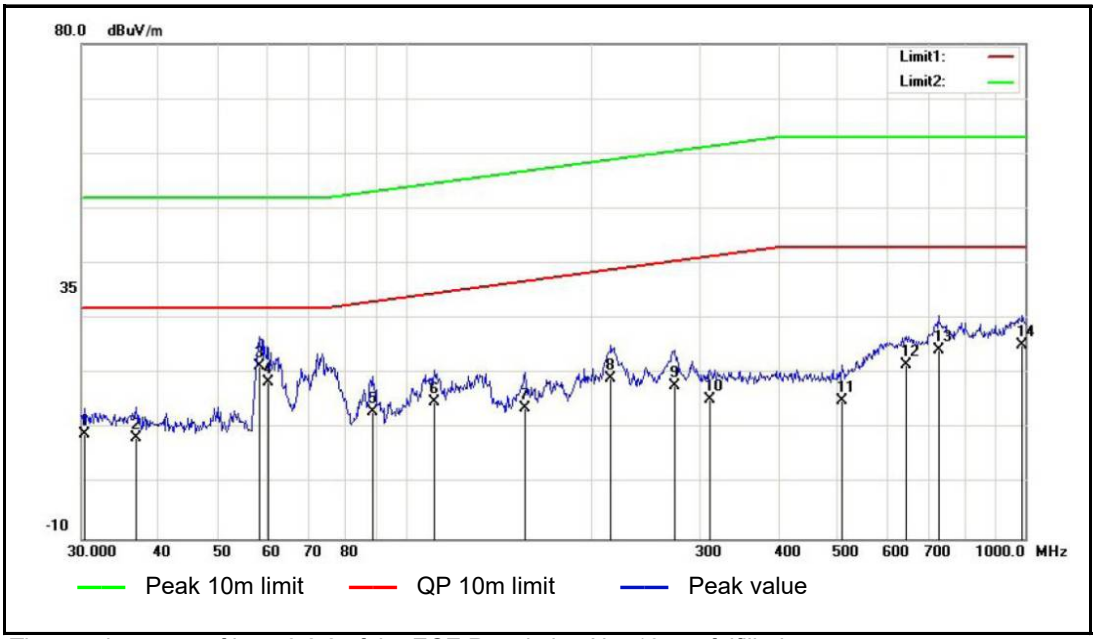
Detailed Test Report

3.1.1.1.3 Right side - Vertical antenna



The requirements of item 6.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.1.1.1.4 Right side - Horizontal antenna



The requirements of item 6.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

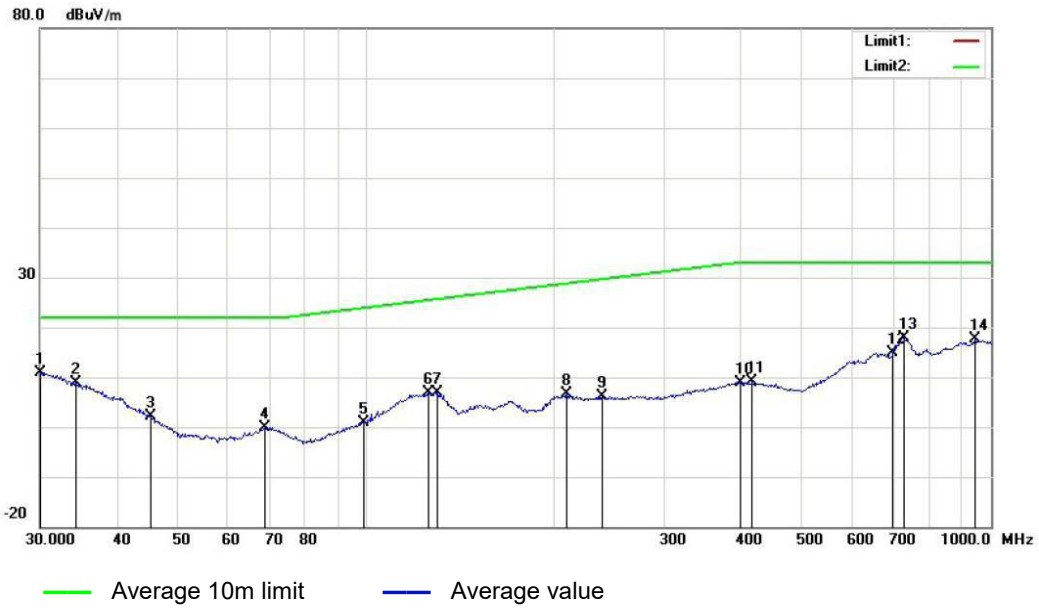
Detailed Test Report

3.1.2 Measurement of radiated narrowband electromagnetic emissions from vehicles

Antenna position:	According to Annex 5 of the ECE Regulation No. 10
Bandwidth:	120 kHz
Frequency range:	30 to 1000 MHz
Detector:	Average detector
Vehicle condition:	According to item 2 of Annex 5 of the ECE Regulation No. 10

3.1.2.1 Test results:

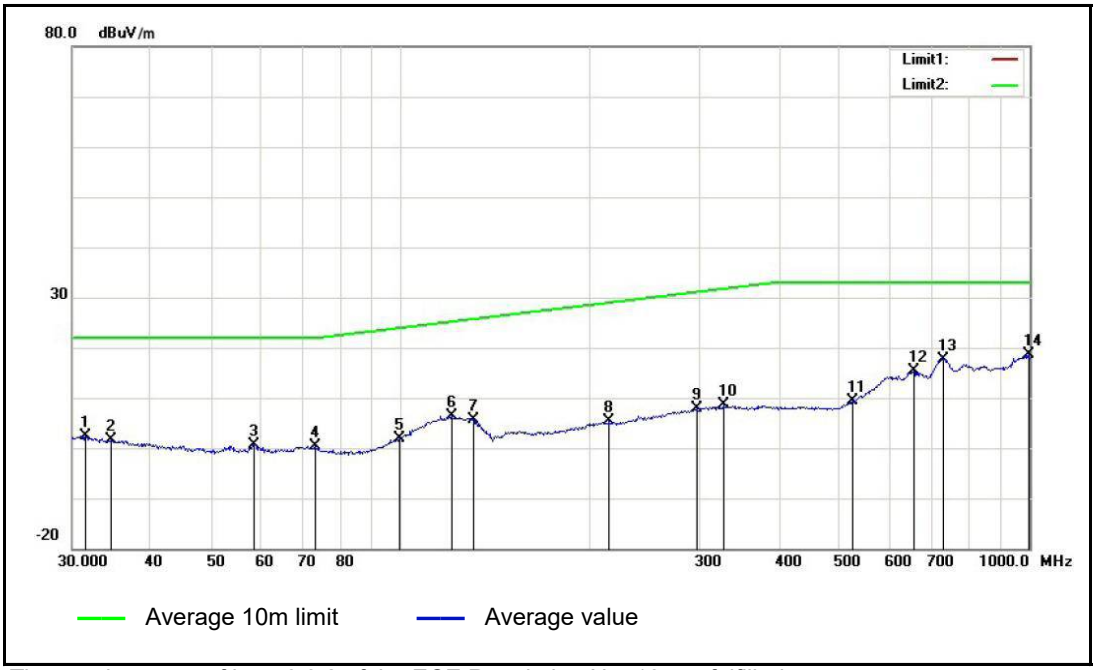
3.1.2.1.1 Left side - Vertical antenna



The requirements of item 6.3.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

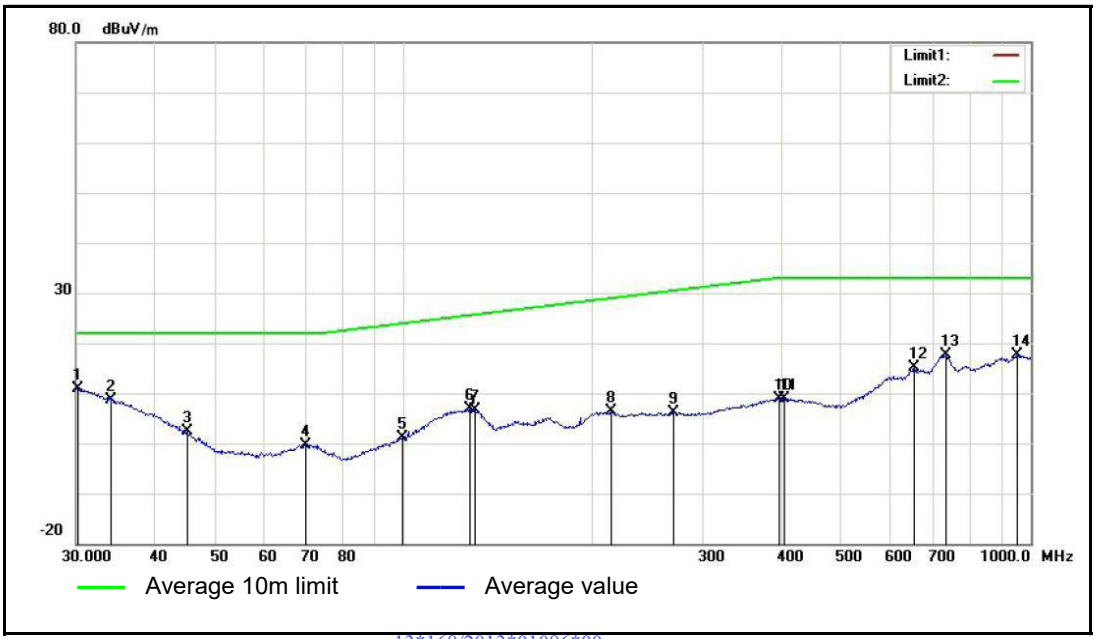
Detailed Test Report

3.1.2.1.2 Left side - Horizontal antenna



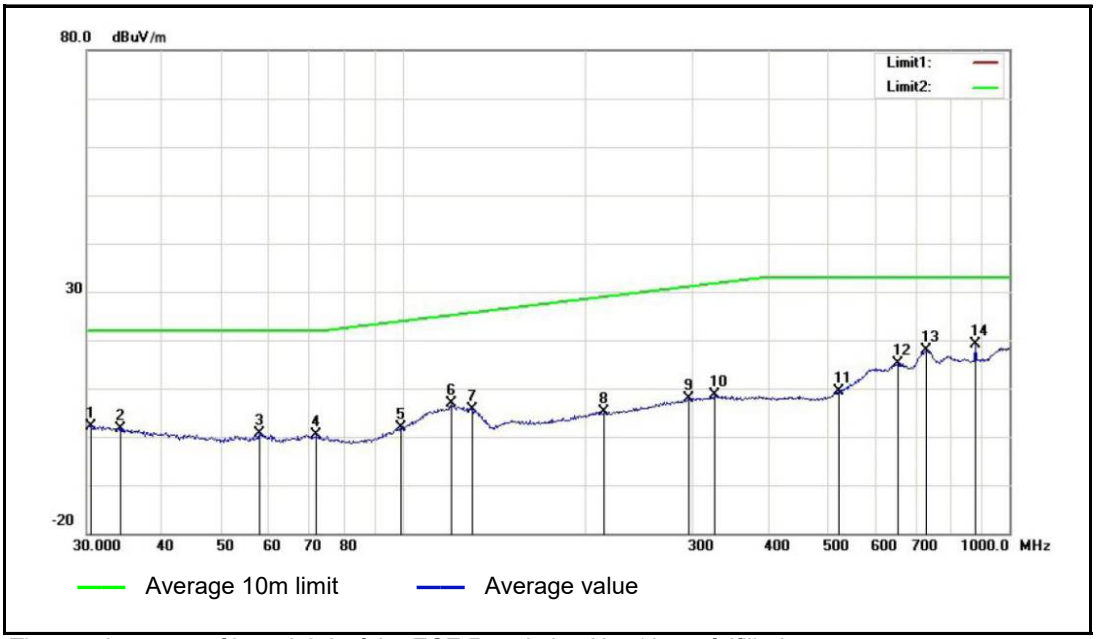
The requirements of item 6.3.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.1.2.1.3 Right side - Vertical antenna



The requirements of item 6.3.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.1.2.1.4 Right side - Horizontal antenna



The requirements of item 6.3.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.1.3 Immunity to electromagnetic radiation

Field strength: According to item 5 of Annex 6 to the ECE Regulation No. 10

Vehicle condition:

- '50km/h cycle' vehicle test conditions: According to item 2.1 of Annex 6 of the ECE Regulation No. 10

- 'Brake cycle' vehicle test conditions: According to item 2.1 of Annex 6 of the ECE Regulation No. 10

3.1.3.1 Test results

No degradation of performance of 'immunity-related' functions was observed during the tests performed in accordance with Annex 6 of the ECE Regulation No. 10.
The requirements of item 6.4.2.2. of the ECE Regulation No. 10 are fulfilled.
Test passed.

Detailed Test Report

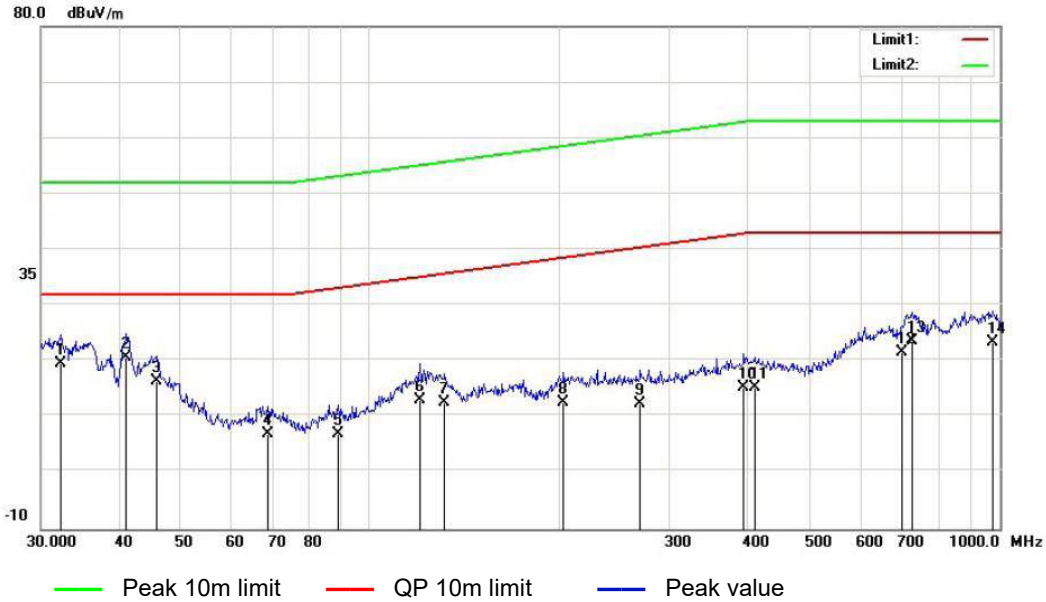
3.2 Configuration "REESS charging mode coupled to the power grid"

3.2.1 Measurement of radiated broadband electromagnetic emissions from vehicles

Antenna position:	According to App. 1 of Annex 4 to the ECE Regulation No. 10
Bandwidth:	120 kHz
Frequency range:	30 to 1000 MHz
Detector:	Peak (CISPR)
Vehicle condition:	According to item 2.2 of Annex 4 of the ECE Regulation No. 10

3.2.1.1 Test results:

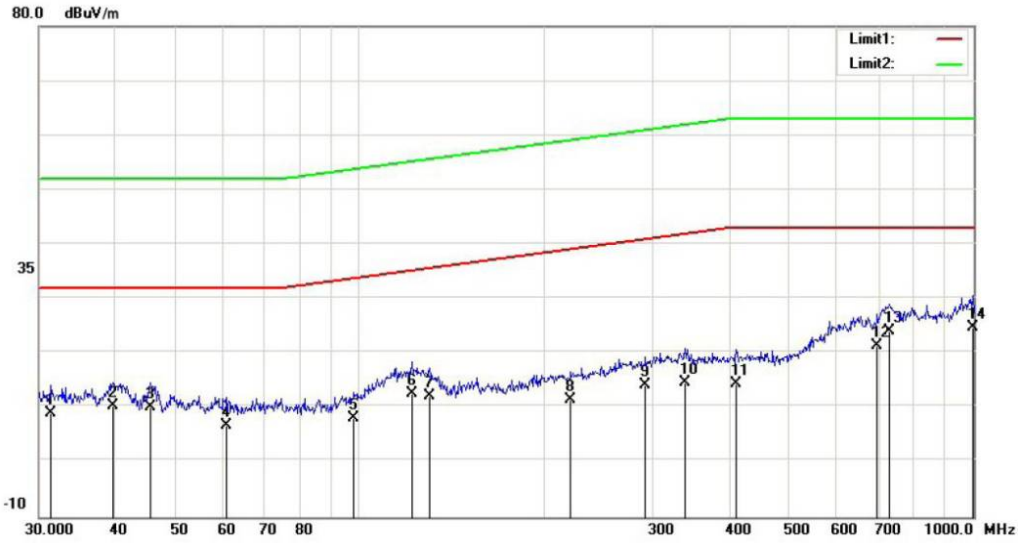
3.2.1.1.1 Left side - Vertical antenna



The requirements of item 7.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

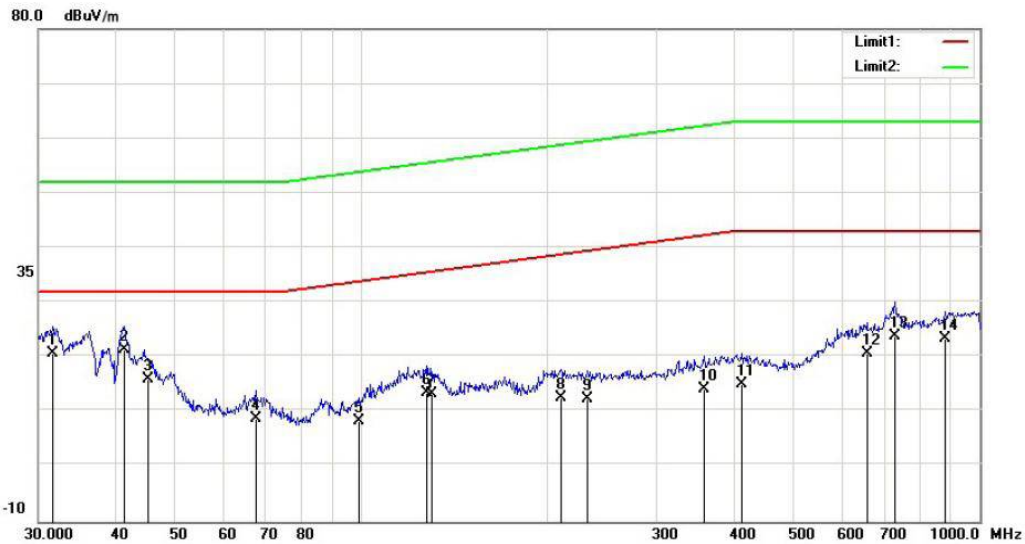
Detailed Test Report

3.2.1.1.2 Left side - Horizontal antenna



The requirements of item 7.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

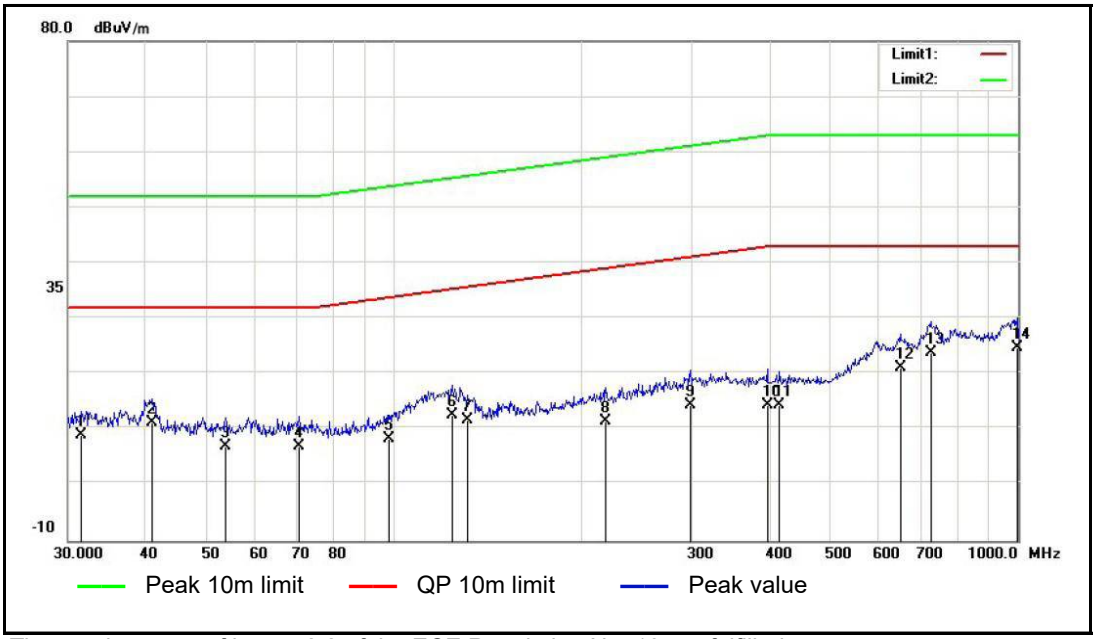
3.2.1.1.3 Right side - Vertical antenna



The requirements of item 7.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

Detailed Test Report

3.2.1.1.4 Right side - Horizontal antenna



The requirements of item 7.2.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.2.2 Immunity to electromagnetic radiation

Field strength: According to item 5 of Annex 6 to the ECE Regulation No. 10

Vehicle condition:

- 'REESS charging mode'
vehicle test conditions: According to item 2.2 of Annex 6 to the ECE Regulation No. 10

3.2.2.1 Test results

No degradation of performance of 'immunity-related' functions was observed during the tests performed in accordance with Annex 6 of the ECE Regulation No. 10.
The requirements of item 7.7.2.2. of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.2.3 Measurement of harmonics emission generated on AC power lines from vehicle

Vehicle condition: According to item 2 of Annex 11 of the ECE Regulation No. 10
Test arrangement: According to item 3 of Annex 11 of the ECE Regulation No. 10

3.2.3.1 Test results:
Standard: EN/IEC 61000-3-2 Ed.3 Quasi-stationary
Class A <= 150% of the limit value
10 Periods - (EN/IEC 61000-4-7 Edition 2002 + A1:2008)

Test results E.U.T.:

Harmonics > 150%:	order (n):	**none**
Harmonics with average > 100%:	order (n):	**none**

Test results AC source:

First data exceeding limit value:	DS (time):	**none**
Harmonics exceeding limit value:	order (n):	**none**

The requirements of item 7.3.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.2.4 Measurement of emission of voltage changes, voltage fluctuations and flicker on AC power lines from vehicle

Vehicle condition: According to item 2 of Annex 12 of the ECE Regulation No. 10
Test arrangement: According to item 3 of Annex 12 of the ECE Regulation No. 10

3.2.4.1 Test results:
Standard: EN/IEC 61000-3-3 Flicker Zref (IEC 60725)
230V / 50Hz according IEC 61000-4-15 Ed2

	E.U.T value	Limit	Test result
Pst	0.064	1.00	passed
Plt	0.028	0.65	passed
dc [%]	0.000	3.30	passed
dmax [%]	0.000	4.00	passed
dt [s]	0.000	0.50	passed

The requirements of item 7.4.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

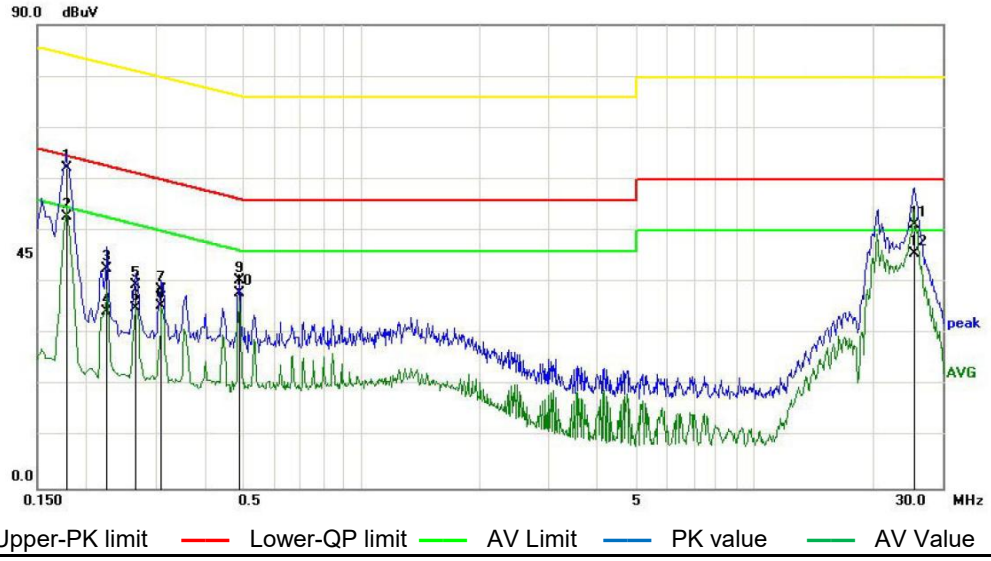
Detailed Test Report

3.2.5 Measurement of emission of radiofrequency conducted disturbances on AC or DC power lines from vehicle

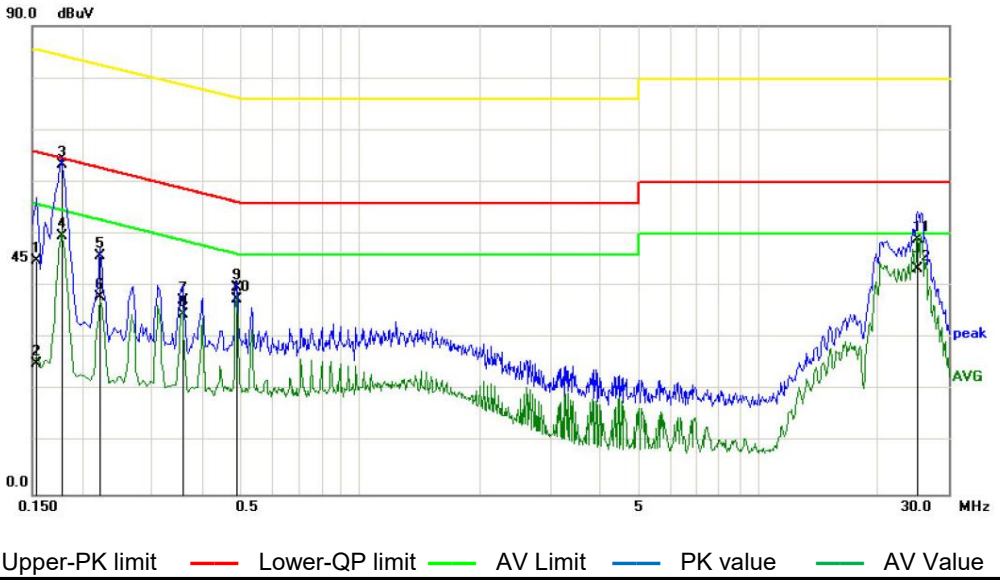
Vehicle condition: According to item 2 of Annex 13 of the ECE Regulation No. 10
Test arrangement: According to item 3 of Annex 13 of the ECE Regulation No. 10

3.2.5.1 Test results:

Live line



Neutral line



The requirements of item 7.5.2 of the ECE Regulation No. 10 are fulfilled.
Test passed.

Detailed Test Report

3.2.6 Measurement of emission of radiofrequency conducted disturbances on network and telecommunication access from vehicles

Not applicable.

3.2.7 Immunity to electrical fast transient/burst disturbances conducted along AC and DC power line

Vehicle condition: According to item 2 of Annex 15 of the ECE Regulation No. 10
Test setup: According to item 4 of Annex 15 of the ECE Regulation No. 10

3.2.7.1 Test results

No degradation of performance of 'immunity-related' functions was observed during the tests performed in accordance with Annex 15 of the ECE Regulation No. 10.
The requirements of item 7.8.2.2. of the ECE Regulation No. 10 are fulfilled.
Test passed.

3.2.8 Immunity to surges conducted along AC and DC power lines

Vehicle condition: According to item 2 of Annex 15 of the ECE Regulation No. 10
Test setup: According to item 4 of Annex 15 of the ECE Regulation No. 10

3.2.8.1 Test results

No degradation of performance of 'immunity-related' functions was observed during the tests performed in accordance with Annex 16 of the ECE Regulation No. 10.
The requirements of item 7.9.2.2. of the ECE Regulation No. 10 are fulfilled.
Test passed.

TEST PASSED

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 44/2014 Annex VIII; External projections

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3. Tests and inspections

3.1. General requirements

As an alternative to the requirements in point 2.1.2.1, choose to apply the requirements of points 1.1 to 1.1.2.1 and points 1.2 to 1.3.8. of Annex VIII to Regulation (EU) No 44/2014.
The requirements of point 1.1 of Annex VIII to Regulation (EU) No 44/2014 are fulfilled.

3.2. Specific requirements

The vehicle is not fitted with a form of structure or panels intended to partially or fully enclose the rider, passenger or luggage or to cover certain vehicle components.
The tests and inspections have been carried out in accordance with the requirements of point 1 of Annex VIII to Regulation (EU) No 44/2014.

3.2.1. Radius requirements concerning group 1 parts (contacted by grazing) and group 2 parts (contacted by collision)for plates and stems are fulfilled.

3.2.2. ~~The upper edge of a fairing or windscreen has a radius of curvature of more than 2.0 mm and it is less than 0.70 times the thickness of the fairing or windscreen as measured at the upper edge.~~

3.2.3. The end of ~~clutch and~~ brake levers mounted on the steering control is perceptibly spherical and have a radius of curvature of at least 7.0 mm. The remaining outward edges of these levers have a radius of curvature of more than 2.0 mm along the complete grip application area.

3.2.4. The leading edge of the front mudguard has a radius of curvature of more than 2.0 mm and it is less than 0.70 times the thickness of the mudguard as measured at the leading edge.

~~3.2.5.~~ ~~Fuel filler caps or similar shaped devices which are not placed forward of the rider or located below the level of the rider's seating position are exempted from the requirements.~~

3.2.6. Ignition key heads shall have a protective cap made from rubber or plastic with blunted edges.

The requirements of point 1.3 of Annex VIII to Regulation (EU) No 44/2014 are fulfilled.

TEST PASSED

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 44/2014 Annex XI; Masses and dimensions

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle: HF-ET03
- Variant(s)/Version(s): 0/0
- VIN: R2SJ2C204M0100001

3 Tests and inspections

3.1. Vehicle masses

3.1.1. The vehicle masses are determined in accordance with the requirements of point 2 of Annex XI to Regulation (EU) No 44/2014.

Variant(s)/Version(s): 1/0, 2/0

Items		Measured [kg]	Declared [kg]
Mass in running order	Axle 1	21	21
	Axle 2	45	45
	Total	66	66
Technically permissible maximum laden mass	Axle 1	80	
	Axle 2	171	
	Total	251	

3.1.2. Prescriptions

The mass in running order is less than the mass in running order limit for category L2e-P.
The sum of the technically permissible maximum axle load is not less than the technically permissible maximum laden mass of the vehicle.
The mass of optional equipment is less than 10% of the mass in running order limit for category L2e-P laid down in Annex I to Regulation (EU) No 168/2013.
The technically permissible maximum mass is not less than the actual mass.
Where the vehicle is laden to the technically permissible maximum laden mass, the mass on each axle shall not exceed the technically permissible maximum mass on that axle.
When the vehicle is laden to the technically permissible maximum mass, the mass on the front axle is not less than 30% of the technically permissible maximum mass of the vehicle.
The maximum permissible pay-mass of the vehicle is limited to mass in running order limit of the (sub)category.

Detailed Test Report

3.2. Vehicle dimensions
The vehicle dimensions are determined in accordance with the requirements of point 3 of Annex XI to Regulation (EU) No 44/2014.

Items	Measured [mm]	Declared [mm]	Difference [⩽3%]
Length(⩽4000 mm)	1725	1750	1.45%
Width(⩽2000 mm)	745	740	0.67%
Height(⩽2500 mm)	1000	1010	1.00%
Wheelbase	1270	1250	1.57%
Rear track width	580	580	0.00%
R point(⩾400 mm)	N.A.	850	N.A.

3.3. Specific requirements regarding the vehicle masses and dimensions of subcategories L6e-A, L7e-A and L7e-B relating to static vehicle stability

Not applicable

TEST PASSED

technology experts

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 44/2014 Annex XIII; Passenger handholds and footrests

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3 Tests and inspections

3.1. Passenger handholds

Not applicable. The vehicle is not designed to carry passenger(s) .

3.2. Footrests

All seating positions of the vehicle is fitted with designated ~~footrests or a~~ floor ~~or floor boards.~~
The vehicle's each designated ~~footrest or~~ floor ~~or floor boards~~ is capable of withstanding a vertical compression force of 1700 N at a maximum pressure of 2.0 Mpa.
The space provided by each designated ~~footrest or~~ the space on the floor ~~or floor board~~ is sufficient for a foot at least 300 mm long and at least 110 mm wide to be placed safely without hampering the feets.
The requirements of point 1.3 of Annex XIII to Regulation (EU) No 44/2014 are fulfilled.

TEST PASSED

Technical Report No. CN66HF-AL-00002-00
Type: HF-ET03

Detailed Test Report

(EU) No 44/2014 Annex XIV; Registration plate space

1. Test item identification

The tests were conducted with a test vehicle which is representative of the vehicle type to be approved.
The characteristics of the selected vehicle represent the worst case.

2. Vehicle data

- Vehicle:	HF-ET03
- Variant(s)/Version(s):	0/0
- VIN:	R2SJ2C204M0100001

3. Tests and inspections

3.1. Dimensions of the mounting surface

Width :	145 mm	or	100 mm
Height :	125 mm		175 mm

3.2. General location

The rear registration plate is located at the rear of the vehicle and positioned entirely within the two parallel longitudinal planes passing through the outer extremities of the vehicle.

3.3. Inclination

The rear registration plate is at right angles to the median longitudinal plane of the vehicle.
The rear registration plate faces upwards but is not inclined more than 30° from the vertical.

3.4. Height over ground

The upper edge of the space for mounting the registration plate is not higher than 1.5 m and the lower edge is not lower than 0.2 m.

3.5. Geometric visibility

The requirements regarding angles of visibility for the space of mounting the rear registration plate are fulfilled.

3.6. Other requirements

The requirements of point 1.7 of Annex XIV to Regulation (EU) No 44/2014 are fulfilled.

TEST PASSED

Type: HF-ET03	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

EUROPEAN TYPE-APPROVAL OF TWO OR THREE-WHEEL VEHICLES AND QUADRICYCLES
(Information Folder No. HF-ET03-00)

INDEX OF INFORMATION DOCUMENT

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Document revisions history

Ext. No. / Corr. No.	Extension reason	Date
00	First application	28 Jan , 2021

Type: HF-ET03 Appendix 1	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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

The undersigned: Mr. Zhang Zifu/ General Manager

Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

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:

0.1 Make (trade name of the manufacturer): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu,

RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1. Variant(s): 0

0.2.2. Version(s): 0

0.2.3. Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3. Category, subcategory and sub-subcategory of vehicle: L2e-P

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

Type: HF-ET03 Appendix 1	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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: HongKong Date: 28 Jan, 2021

Signature:  Name and position in the company: Mr. Zhang Zifu/ General Manager

Type: HF-ET03 Appendix 2	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 134/2014 Annex II to VIII* (EU) 2018/295	0/0
A2	Maximum design vehicle speed, maximum torque, maximum continuous total engine power of propulsion	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 134/2014 Annex X* (EU) 2018/295	0/0
A3	Test procedures related to sound	N.A.	N.A.	N.A.	N.A.	N.A.
B1	Audible warning devices Installation	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex II* (EU) 2016/1824	0/0
	Audible warning devices(option 1)	E32-28R-00 0002	15.04.2015	Latvia	UNECE R28 Series 00 Supplement 3	0/0
	Audible warning devices(option 2)	I-E9-00.1282	11.04.2014	Spain	UNECE R28 Series 00 Supplement 3	
B2	Braking, including anti-lock and combined brake systems	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex III* (EU) 2016/1824	0/0
B3	Electrical safety	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex IV* (EU) 2016/1824	0/0
B4	Manufacturer declaration requirements regarding endurance testing of functional safety-critical systems, parts and equipment	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex V* (EU) 2016/1824	0/0
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

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B7	Driver-operated controls including identification of controls, tell-tales and indicators	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex VIII* (EU) 2016/1824	0/0
B8	Installation of lighting and light- signalling devices, including automatic switching of lighting	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex IX* (EU) 2016/1824	0/0
	Driving beam headlamp Passing beam headlamp (option 1)	E13*113R00* 113R01*24415* 00	02.02.2015	Luxembourg	UNECE R113 Series 01 Supplement 3	0/0
	Driving beam headlamp Passing beam headlamp (option 2)	E32-113R-010023	12.02.2016	Latvia	UNECE R113 Series 01 Supplement 5	0/0
	Front position lamp (option 1)	E13*50R00*50R 00*24415*00	02.02.2015	Luxembourg	UNECE R50 Series 00 Supplement 17	0/0
	Front position lamp (option 2)	E32-50R-000023	12.02.2016	Latvia	UNECE R50 Series 00 Supplement 17	0/0
	Front direction indicator (option 1)	E32-50R-000021	06.11.2015	Latvia	UNECE R50 Series 00 Supplement 16	0/0
	Front direction indicator (option 2)	E13*50R00*50R 00*24417*00	02.02.2015	Luxembourg	UNECE R50 Series 00 Supplement 16	0/0
	Rear direction indicator	E13*50R00*50R 00*24417*00	02.02.2015	Luxembourg	UNECE R50 Series 00 Supplement 16	0/0
	Rear position lamp Stop lamp	E13*50R00*50R 00*24416*00	02.02.2015	Luxembourg	UNECE R50 Series 00 Supplement 16	0/0
	Rear registration plate lamp	E13*50R00*50R 00*24416*00	02.02.2015	Luxembourg	UNECE R50 Series 00 Supplement 16	0/0
	Side retro-reflector (option 1)	E4-3R-023298 Ext. 01	28.09.2009	Netherlands	UNECE R3 Series 02 Supplement 10	0/0
	Side retro-reflector(option 2)	E4-3R-023256 Ext. 00	24.08.2005	Netherlands	UNECE R3 Series 02 Supplement 9	0/0
	Side retro-reflector(option 3)	E32*3R02/17* 0013*00	10.05.2019	Latvia	UNECE R3 Series 02 Supplement 17	0/0
	Side retro-reflector(option 4)	IA-E9-02.1270	11.11.2004	Spain	UNECE R3 Series 02 Supplement 9	0/0
	Rear retro-reflector (option 1)	E32*3R02/17* 0012*00	10.05.2019	Latvia	UNECE R3 Series 02 Supplement 17	0/0
	Rear retro-reflector (option 2)	E4-3R-023712	01.12.2014	Netherlands	UNECE R3 Series 02 Supplement 15	0/0

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	Rear retro-reflector (option 3)	E4-3R-023257	24.08.2005	Netherlands	UNECE R3 Series 02 Supplement 09	0/0
B9	Rearward visibility	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex X* (EU) 2016/1824	0/0
	Exterior rear-view mirror (Option 1)	E11 R81-001192 Ext. 00	09.09.2008	United Kingdom	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 2)	E13*81R00/02*6473*00	22.09.2017	Luxembourg	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 3)	E11-81R-002090	21.07.2015	United Kingdom	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 4)	E13*81R00/02*9845*00	18.09.2019	Luxembourg	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 5)	E13*81R00/02*9846*00	09.09.2019	Luxembourg	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 6)	E32*81R00/02*0025*00	06.11.2019	Latvia	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 7)	E32*81R00/02*0027*00	06.11.2019	Latvia	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 8)	E32*81R00/02*0028*00	06.11.2019	Latvia	UNECE R81 Series 00 Supplement 2	0/0
	Exterior rear-view mirror (Option 9)	E4-81R-000313	18.04.2011	Netherlands	UNECE R81 Series 00 Supplement 2	0/0
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)	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex XIII* (EU) 2016/1824	0/0
B13	Steer-ability, cornering properties and turn-ability	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex XIV* (EU) 2016/1824	0/0
B14	Installation of tyres	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex XV* (EU) 2016/1824	0/0
	Tyres-Front & Rear (option 1)	E4-75R-0005902 Ext. 04	02.07.2019	Netherlands	UNECE R75 Series 00 Supplement 17	0/0
	Tyres-Front & Rear (option 2)	E11 75R-000207 Ext. 07	22.04.2013	United Kingdom	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 3)	E4-75R-0008326 Ext. 00	12.10.2011	Netherlands	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 4)	E9-75R-001016 Ext. 00	18.10.2012	Spain	UNECE R75 Series 00 Supplement 13	0/0

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	Tyres-Front & Rear (option 5)	E4-75R-0004698 Ext. 02	11.03.2014	Netherlands	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 6)	E4-75R-0006927 Ext. 03	18.07.2014	Netherlands	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 7)	E4-75R-0004662 Ext. 03	21.12.2015	Netherlands	UNECE R75 Series 00 Supplement 15	0/0
	Tyres-Front & Rear (option 8)	E4-75R-0005901 Ext. 02	12.07.2010	Netherlands	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 9)	E4-75R-0004663 Ext. 05	28.11.2014	Netherlands	UNECE R75 Series 00 Supplement 13	0/0
	Tyres-Front & Rear (option 10)	E4-75R-0005059 Ext. 04	28.10.2015	Netherlands	UNECE R75 Series 00 Supplement 15	0/0
	Tyres-Front & Rear (option 11)	E9-75R-001019	18.10.2012	Spain	UNECE R75 Series 00 Supplement 13	0/0
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	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex XVIII* (EU) 2016/1824	0/0
B18	Vehicle structure integrity	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 3/2014 Annex XIX* (EU) 2016/1824	0/0
C1	Anti-tampering measures	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex II* (EU) 2018/295	0/0
C2	Arrangements for type-approval procedures	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex III* (EU) 2018/295	0/0
C3	Conformity of production requirement	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex IV* (EU) 2018/295	0/0
C4	Coupling devices and attachments	N.A.	N.A.	N.A.	N.A.	N.A.
C5	Devices to prevent unauthorised use	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex VI* (EU) 2018/295	0/0
C6	Electromagnetic compatibility (EMC)	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex VII* (EU) 2018/295	0/0

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C7	External projections	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex VIII* (EU) 2018/295	0/0
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	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex XI* (EU) 2018/295	0/0
C11	On-board diagnostics	N.A.	N.A.	N.A.	N.A.	N.A.
C12	Passenger handholds and footrests	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex XIII* (EU) 2018/295	0/0
C13	Registration plate space	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex XIV* (EU) 2018/295	0/0
C14	Repair and maintenance information	CN66HF-AL-00002-00	28.01.2021	ATEEL	(EU) No 44/2014 Annex XV* (EU) 2018/295	0/0
C15	Stands	N.A.	N.A.	N.A.	N.A.	N.A.

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

Place: HongKong Date: 28 Jan, 2021

Signature: ZHANGZIFU Name and position in the company: Mr. Zhang Zifu/ General Manager

Type: HF-ET03 Appendix 3	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

Variants and Versions matrix

Item No.	Variant	Version	Description
See Appendix 4	0	0	1.0 kW, 25 km/h, 60 V, 20Ah lead-acid Battery

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

INFORMATION DOCUMENT AND DRAWINGS

A. GENERAL INFORMATION CONCERNING VEHICLES

0.1 Make (trade name of manufacturer): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1. Variants: 0

0.2.2. Versions: 0

0.2.3. Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3. Category, subcategory and sub-subcategory of vehicle: L2e-P

0.4. Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

Assembly plant 1:
Wuxi Huafu Vehicle Co., Ltd.
No.9, Yuansheng Road, Zone A, Industrial Park, Yangjian Town, Xishan District, Wuxi City, Jiangsu Province, China

Assembly plant 2:
Volta Motor Sanayi ve Ticaret Anonim Sirketi
MERKEZ MAH. YILDIZTEPE CAD. NO:10 GUMUSOVA/DUZCE/TURKEY

Assembly plant 3:
ISILDAR OTOMOTIV INSAAT TURIZM VE DAYANIKLI TUKETIM MALLARI TICARET LIMITED SIRKETI
AOSB1KISIM Mahallesi 2. Cad. No: 24 Dosemealti/ Antalya, Turkey

Assembly plant 4:
BORBIS BISIKLET VE DAYANIKLI TUK.MAL.SAN.TIC. LTD. STI
T. CEMAL BERIKER BLV. NO:491 SEYHAN / ADANA / TURKEY

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

0.5. Manufacturer's statutory plate(s):

0.5.1. Location of the manufacturer's statutory plate:

R, X1030, Y120, Z320, Refer to Drawing No. HF-ET03-01

0.5.2. Method of attachment:

Riveted on the right side of the frame

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

Refer to Drawing No. HF-ET03-01

0.6. Location of the vehicle identification number:

R, X 300, Y5, Z 350(r/o), See the drawing of HF-ET03-02

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

Refer to Drawing No. HF-ET03-02

0.6.1.1. The serial number of the type begins with:

☆R2SJ2C20?????????☆

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:

www.jshuafu.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.

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

1. GENERAL CONSTRUCTION CHARACTERISTICS

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

See the drawing of HF-ET03-03

1.2. Scale drawing of the whole vehicle:

See the drawing of HF-ET03-04

1.3. Number of axles and wheels: 2 axles /3 wheels

1.3.1. Axles with twinned wheels: N.A.

1.3.2. Powered axles: R

1.4. Chassis (if any) (overall drawing): See the drawing of HF-ET03-05

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

Steel and plastic

1.6. Position and arrangement of the propulsion(s): In the rear of vehicle

1.7. (L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C) Hand of drive: 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:

Both right and left hand traffic with metric and imperial 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: 25 km/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 (~~15~~/30 minutes power):

1.0 kW at 3007 min^{-1}

1.8.6. Maximum continuous-rated torque electric motor:

3.3 Nm at 3007 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): N.A.

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

2. MASSES AND DIMENSIONS (in kg and mm.) refer to drawings where applicable

2.1. Range of vehicle mass (overall)

2.1.1. Mass in running order:

66 kg

2.1.1.1. Distribution of mass in running order between the axles:

Front axle: 21 kg
Rear axle: 45 kg

2.1.2. Actual mass:

176 kg

2.1.2.1. Distribution of actual mass between the axles:

Front axle: 65 kg
Rear axle: 111 kg

2.1.3. Technically permissible maximum laden mass: 251 kg

2.1.3.1. Technically permissible maximum mass on front axle: 80 kg

2.1.3.2. Technically permissible maximum mass on rear axle: 171 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: Lead Acid: 7 kg*5

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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: 1750mm

2.2.2. Width: 740mm

2.2.3. Height: 1010mm

2.2.4. Wheelbase: 1250mm

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: 580 mm.

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.

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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.

3.1.1.1. Manufacturer: N.A.

3.1.1.2. Engine code (as marked on the engine or other means of identification): N.A.

3.1.1.3 Fuel identification marking (if available): N.A.

3.1.2. Electric motor

3.1.2.1. Manufacturer:

ZHEJIANG UNITE MOTOR CO., LTD

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

YWDJ010

3.1.3. Hybrid application: N.A.

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.

3.1.3.3 Fuel identification marking (if available): N.A.

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3.1.3.4. Photographs and/or drawings of the location of the code(s) and/or type-approval numbers (completed example with dimensions): 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:

Refer to Drawing No. HF-ET03-06

3.3.3. Electric propulsion motor

3.3.3.1. Number of electric motors for propulsion: 1

3.3.3.2. Type (winding, excitation): Permanent magnet

3.3.3.3. Operating voltage: 60V

3.3.3.4. ~~15~~/30 minutes power:

1.0 kW at 3007 min^{-1}

3.3.4. Propulsion batteries

3.3.4.1. Primary propulsion battery: Lead-acid battery

3.3.4.1.1. Number of cells:: 5

3.3.4.1.2. Mass: 7kg*5=35 kg

3.3.4.1.3. Capacity: 20Ah

3.3.4.1.4. Voltage: 60V

3.3.4.1.5. Position in the vehicle: Refer to Drawing No. HF-ET03-07

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: 6-DZM-20

3.3.6.3. Kind of electrochemical couple: N.A.

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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-/multi-motors (number): Single-motor

3.3.7.3. Working principle:

Refer to Drawing No. HF-ET03-06

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

3.3.7.5. Separate excitation/series/compound: Permanent magnet

3.3.7.6. Synchronous/asynchronous: Synchronous

3.3.8. Electric motor control unit

3.3.8.1. Identification number: see the drawing of HF-ET03-08

3.3.9. Power controller

3.3.9.1. Identification number: N.A

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

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.

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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): N.A.

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:

3.5.3.2. Drawing of the transmission: Refer to Drawing No. HF-ET03-09

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

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: Refer to Drawing No. HF-ET03-09

3.5.3.6. Method of control: by han~~d/foot~~

3.5.4. Gear ratios

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:

3.6.1. (L1e — L7e equipped with twinned wheels, L2e, L5e, L6e, L7e)
Safe-cornering device: Annex VIII to Regulation (EU) No 168/2013:
~~yes~~/ no: differential/~~other~~

3.6.2. (L1e — L7e equipped with twinned wheels, L2e, L5e, L6e, L7e)
Differential lock: ~~yes~~/no~~/optional~~

3.6.3. Brief description and schematic drawing of the safe-cornering device, the differential lock and their control systems: see the drawing of HF-ET03-09

3.7. Suspension and control

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

Refer to Drawing No. HF-ET03-10, HF-ET03-11

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3.7.2. Drawing of the suspension arrangements:

Refer to Drawing No. HF-ET03-10, HF-ET03-11

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: N.A.

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

3.8.1. Passenger-compartment heating system

3.8.1.1. (L2e, L5e-B, L6e-B, L7e)
An overall drawing of the heating system giving its location on the vehicle (and the arrangement of the sound damping devices (including the position of the heat exchange points)): N.A

3.8.1.2. (L2e, L5e-B, L6e-B, L7e)
An overall drawing of the heat-exchanger used in systems utilising the heat from the exhaust gases, or of the parts where that exchange takes place (in the case of heating systems using the heat provided by the engine cooling air): N.A

3.8.1.3. (L2e, L5e-B, L6e-B, L7e)
A sectional drawing of the heat-exchanger or parts where heat exchange takes place, together with a statement of the wall thickness, of the materials used and the characteristics of their surface: N.A

3.8.1.4. (L2e, L5e-B, L6e-B, L7e)
Specifications regarding the method of manufacture and technical data relating to other major components of the heating system, such as the fan: N.A

3.8.2. Air-conditioning

3.8.2.1. (L2e, L5e-B, L6e-B, L7e)
Brief description and schematic drawing of air-conditioning and its control system: N.A

3.8.2.2. (L2e, L5e-B, L6e-B, L7e)Gas used as refrigerant in the air-conditioning system: N.A

3.8.2.3. (L2e, L5e-B, L6e-B, L7e)
The air-conditioning system is designed to contain fluorinated greenhouse gases with global warming potential higher than 150: N.A

3.8.2.3.1. (L2e, L5e-B, L6e-B, L7e)
Drawing and brief description of the air-conditioning system, including the reference or part number and material of the leak components: N.A.

3.8.2.3.2. (L2e, L5e-B, L6e-B, L7e) Leakage of the air-conditioning system: N.A.
Reference or part number and material of the components of the system and test information (e.g. test report number, Type-approval number, etc.): N.A.

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3.8.2.3.4. (L2e, L5e-B, L6e-B, L7e) Overall leakage/year of the entire system: 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~~ 3 /4/5/5+~~N.A.

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

4.0.3 CO_2 emissions: N.A.

4.0.4 Energy consumption:

64 Wh/km

4.0.5 Electric range:

24 km

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

4.1.1. Brief description and schematic drawing of the tailpipe emission-control system and its control system: N.A.

4.1.2. Catalytic converter: N.A.

4.1.2.1. Configuration, number of catalytic converters and elements (information to be provided for each separate unit): N.A.

4.1.2.2. Drawing with dimensions, shape and volume of the catalytic converter(s): N.A.

4.1.2.3. Catalytic reaction: N.A.

*4.1.2.4. Total charge of precious metals: N.A.

*4.1.2.5. Relative concentration: N.A.

*4.1.2.6. Substrate (structure and material): N.A.

*4.1.2.7. Cell density: N.A.

*4.1.2.8. Casing for the catalytic converter(s): N.A.

4.1.2.9. Location of the catalytic converter(s) (place and reference distance in the exhaust line): N.A.

4.1.2.10. Catalytic heat-shield: N.A.

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4.1.2.11. Brief description and schematic drawing of the regeneration system/ method of exhaust after-treatment systems and its control system: N.A.

*4.1.2.11.1. Normal operating temperature range: N.A.

4.1.2.11.2. Consumable reagents: N.A

4.1.2.11.3. Brief description and schematic drawing of the reagent flow (wet) system and its control system: N.A

4.1.2.11.4. Type and concentration of reagent needed for catalytic action: N.A

*4.1.2.11.5. Normal operational temperature range of reagent: N.A

4.1.2.11.6. Frequency of reagent refill: N.A

4.1.2.12. Identifying part number: N.A.

4.1.3. Oxygen sensor(s)

4.1.3.1. Oxygen sensor component(s) drawing(s): N.A.

4.1.3.2. Drawing of exhaust device with oxygen sensor location(s) (dimensions relative to exhaust valves): N.A.

4.1.3.3. Control range(s): N.A.

4.1.3.4. Identifying part number(s): N.A.

4.1.3.5. Description of oxygen sensor heating system and heating strategy: N.A.

4.1.3.6. Oxygen sensor heat shield(s): N.A.

4.1.4. Secondary air-injection (air-inject in exhaust): N.A.

4.1.4.1. Brief description and schematic drawing of the secondary air-injection system and its control system: N.A.

4.1.4.2. Configuration (mechanical, pulse air, air pump ect.): N.A.

4.1.4.3. Working principle: N.A.

4.1.5. External exhaust gas recirculation (EGR): N.A.

4.1.5.1. Brief description and schematic drawing of EGR system (exhaust flow) and its control system: N.A.

4.1.5.2. Characteristics: N.A.

4.1.5.3. Water-cooled EGR system: N.A.

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4.1.5.4. Air-cooled EGR system: N.A.

4.1.6. Particular filter: N.A.

4.1.6.1. PT component drawing with dimensions, shape and capacity of the particulate filter: N.A.

4.1.6.2. Design of the particulate filter: N.A.

4.1.6.3. Brief description and schematic drawing of the particulate filter and its control system: N.A.

4.1.6.4. Location (reference distance in the exhaust line): N.A.

4.1.6.5. Method or system of regeneration, description and drawing: N.A.

4.1.6.6. Identifying part number: N.A.

4.1.7. Lean NOx trap: N.A.

4.1.7.1. Operation principle of lean NOx trap: N.A.

4.1.8. Additional tailpipe emission-control devices (if any not covered under another heading): N.A.

4.1.8.1. Working principle: N.A.

4.2. Crankcase emission control system: N.A.

4.2.1. Configuration of crank-case gas recycling system (breather system, positive crank-case ventilation system, other) (description and drawings): N.A.

4.3. Evaporative emission control system: N.A.

4.3.1. Evaporative emission control system: N.A.

4.3.2. Drawing of the evaporative control system: N.A.

4.3.3. Drawing of the canister (including dimensions and indicating vent and purge mechanism): N.A.

4.3.4. Working capacity: N.A.

4.3.5. Adsorption material: N.A.

4.3.6. Housing material:N.A.

4.3.7. Schematic drawing of the fuel tank, indicating capacity and material:N.A.

4.3.8. Drawing of the heat-shield between tank and exhaust device: N.A.

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

4.4.1. Description and/or schematic drawings of additional pollution-control devices: N.A.

4.4.2. Location of the coefficient of absorption symbol (compression-ignition engines only): N.A.

4.4.3. Applicable information document set out in respectively UN Regulation No 9, 41 or 63 shall supplement this information document with regard to the sound level: N.A.

4.4.4. Applicable information document set out in respectively UN Regulation No 92 shall supplement this information document with regards to the noise-abatement devices installed on the vehicle: N.A.

5. VEHICLE PROPULSION FAMILY: N.A.

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: Electromagnetic horn

Make	Type	Approval Number	Description
LVEE (Option 1)	DL70-II	E32 28R-00 0002	Electro-magnetic with resonator disc, single-tone
JG, MW, DC, DB (Option 2)	DL127	I-E9-00.1282	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: Refer to Drawing No. HF-ET03-12

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: Refer to Drawing No. HF-ET03-12

6.1.4. Electrical/pneumatic circuit diagram: Refer to Drawing No. HF-ET03-13

6.1.4.1. Voltage: ~~AC/~~DC

6.1.4.2. Rated voltage pressure: 12V

6.1.5. Drawing of the mounting device: Refer to drawing No. HF-ET03-12

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:

Refer to drawing No. HF-ET03-14, HF-ET03-15, HF-ET03-16, HF-ET03-17

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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:

Refer to drawing No. HF-ET03-14, HF-ET03-15, HF-ET03-16, HF-ET03-17

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

Front: disc
Rear: drum

6.2.2.2. Parking braking system: Refer to drawing No. HF-ET03-17

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): Refer to drawing No. HF-ET03-15

6.2.6. Particular characteristics of the braking system(s)

6.2.6.1. Brake ~~shoes and/or~~ pads: Refer to drawing No. HF-ET03-16, HF-ET03-17

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

Refer to drawing No. HF-ET03-16

6.2.6.3. Brake levers and/or pedals:

Refer to drawing No. HF-ET03-14, No.HF-ET03-15, No.HF-ET03-16, No. HF-ET03-17

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:

Refer to drawing No. HF-ET03-13, No. HF-ET03-18

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

Refer to drawing No. HF-ET03-18

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6.3.3. Working voltage(s): 60V

6.3.4. Description of protection against electric-shocks:

With the high-voltage indicator on the high voltage parts.

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

6.3.5.1. Diagram showing the functional range: 40A

6.3.6. Configuration of power wiring harness: Refer to Drawing No. HF-ET03-13

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

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

6.5.1 Windscreen

6.5.1.1 (L2e, L5e, L6e, L7e) Materials used: N.A

6.5.1.2 (L2e, L5e, L6e, L7e) Method of mounting : N.A

6.5.1.3 (L2e, L5e, L6e, L7e) Angle of inclination :N.A

6.5.1.4 (L2e, L5e, L6e, L7e) Windscreen accessories and the position in which they are fitted together with a brief description of any electrical/electronic components involved: N.A

6.5.1.5 (L2e, L5e, L6e, L7e) Drawing of the windscreen with dimensions: N.A

6.5.2 Other windows

6.5.2.1 (L2e, L5e, L6e, L7e) Materials used: N.A

6.5.2.2 (L2e, L5e, L6e, L7e) A brief description of the electrical/electronic components (if any) of the window lifting mechanism : N.A

6.5.3 Opening roof glazing

6.5.3.1 (L2e, L5e, L6e, L7e) Materials used: N.A

6.5.4 Other glass panes N.A.

6.5.4.1 (L2e, L5e, L6e, L7e) Materials used: N.A.

6.6. Windscreen wiper(s):

6.6.1. (L2e, L5e, L6e, L7e) Detailed technical description (including photographs or drawings): N.A

6.7. Windscreen washer:

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6.7.1. (L2e, L5e, L6e, L7e) Detailed technical description (including photographs or drawings):
N.A

6.8. Defrosting and demisting:

6.8.1. (L2e, L5e, L6e, L7e) Detailed technical description (including photographs or drawings):
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:

Refer to Drawing No. HF-ET03-19

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

Refer to Drawing No. HF-ET03-19

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:

Refer to Drawing No. HF-ET03-19

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:

Refer to Drawing No. HF-ET03-20

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

6.10.1.3. Tolerance of the measuring mechanism of the speedometer:

$0 \le (V_1-V_2) \le 0.1*V_2+4$
V_1: the speed of the speedometer
V_2: the actual testing speed

6.10.1.4. Technical constant of the speedometer: 1V≈0.8km/h

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

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

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6.10.1.6. Overall transmission ratio of the drive mechanism: N.A

6.10.2. Odometer

6.10.2.1. Tolerance of the measuring mechanism of the odometer: 1.5%

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

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:

Refer to Drawing No. HF-ET03-21

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):

See lightings component type-approval

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): N.A.

6.11.6.1. Control device: N.A.

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):

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

Refer to Drawing No. HF-ET03-22

6.12.1.2. Details of the method of attachment including that part of the vehicle structure to which it is attached

Refer to Drawing No. HF-ET03-22

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:

6.14.1. (L2e, L4e, L5e-B, L6e-B, L7e) Number and position of safety belts and restraint systems and seats on which they can be used, please fill out table below: N.A

6.14.2. (L2e, L4e, L5e-B, L6e-B, L7e) Description of a specific type of belt, with one anchorage attached to the seat back-rest or incorporating an energy-dissipation device: N.A

6.14.3. (L2e, L4e, L5e-B, L6e-B, L7e) Number and location of the anchorages: N.A

6.14.4. (L2e, L4e, L5e-B, L6e-B, L7e) Brief description of electrical/electronic components: N.A.

6.15. Safety belt anchorages:

6.15.1. (L2e, L4e, L5e-B, L6e-B, L7e) Photographs and/or drawings of the bodywork showing the true, effective location and dimensions of the anchorages, together with an indication of the R-point: N.A

6.15.2. (L2e, L4e, L5e-B, L6e-B, L7e) Drawings of the anchorages and the parts of the vehicle structure to which they are attached (together with a statement on the nature of the materials used): N.A

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6.15.3. (L2e, L4e, L5e-B, L6e-B, L7e) Designation of the types of belts authorised for attachment to the anchorages on the vehicle: N.A

6.15.4. (L2e, L4e, L5e-B, L6e-B, L7e) Type-approval mark for each position: N.A.

6.15.5. (L2e, L4e, L5e-B, L6e-B, L7e) Special devices (example: seat-height adjustment, preloading device, ect.): N.A.

6.15.6. (L2e, L4e, L5e-B, L6e-B, L7e) Photographs and/or drawings of the bodywork showing the true, effective location and dimensions of the anchorages, together with an indication of the R-point: N.A

6.15.7. (L2e, L4e, L5e-B, L6e-B, L7e) Observation: N.A.

6.16. Seating positions (saddles and seats)

6.16.1. Number of positions: 2

6.16.1.1. (L2e, L5e, L6e, L7e) Location and arrangement: 2, r1: 1C ;r2:1C

6.16.2. Seating position configuration: seat~~/saddle~~

6.16.3. Description and drawings of:

6.16.3.1. The seats and their anchorages: Refer to Drawing No. HF-ET03-22

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: Refer to Drawing No. HF-ET03-22

6.16.4.1. (L2e, L4e, L5e-B, L6e-B, L7e) Driver's seat: Refer to Drawing No. HF-ET03-22

6.16.4.2. (L2e, L4e, L5e-B, L6e-B, L7e) All other seating positions: N.A

6.16.5. Design torso angle:

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:

6.16.6.1. Driver's seat: N.A

6.16.6.2. All other seating positions: N.A

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6.17. Steer-ability, cornering properties and turn-ability

6.17.1. Schematic diagram of steered axle(s) showing steering geometry:

Refer to Drawing No.HF-ET03-24

6.17.2. Transmission and control of steering

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

Refer to Drawing No.HF-ET03-24

6.17.2.2. Linkage to wheels (including other than mechanical means; specify for front and rear):

Refer to Drawing No.HF-ET03-24

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

6.17.2.3. Diagram of the steering transmission: Refer to Drawing No.HF-ET03-24

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

Refer to Drawing No.HF-ET03-24

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: 43°；~~number of turns of the steering wheel (or equivalent data): 2.8~~

6.17.3.2. To the left: 44°；~~number of turns of the steering wheel (or equivalent data):2.8~~

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: 20
Rear: 47

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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

6.20.1. Bodywork

6.20.1.1. (L2e, L5e-B, L6e-B, L7e) Materials used and methods of construction: N.A

6.20.2. Occupant doors, latches and hinges

6.20.2.1. (L2e, L5e, L6e, L7e) Number of doors, and its configuration, dimensions and maximum angle of opening: N.A

6.20.2.2. (L2e, L5e, L6e, L7e) Drawing of latches and hinges and of their position in the doors: N.A

6.20.2.3. (L2e, L5e, L6e, L7e) Technical description of latches and hinges: N.A

6.20.2.4. (L2e, L5e, L6e, L7e) Details, including dimensions, of entrances, steps and necessary handles where applicable: N.A.

6.20.3. Interior protection for occupants

6.20.3.1. (L2e, L5e, L6e, L7e) Photographs, drawings and/or an exploded view of the interior fittings, showing the parts in the passenger compartment and the materials used (with the exception of interior rear view mirrors, arrangement of controls, seats and the rear part of seats), roof and opening roof, backrest: N.A

6.20.4.Head restraints

6.20.4.1. (L2e, L5e, L6e, L7e) Head restraints:

6.20.4.2. (L2e, L5e, L6e, L7e) Detailed description of the head restraint, specifying in particular the nature of the padding material or materials and, where applicable, the position and specifications of the braces and anchorage pieces for the type of seat for which approval is sought: N.A

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6.20.4.3. (L2e, L5e, L6e, L7e) In the case of a 'separate' had restraint : N.A

6.20.4.3.1. (L2e, L5e, L6e, L7e) Detailed description of the structural zone to which the head restraint is intended to be fixed: N.A

6.20.4.3.2. (L2e, L5e, L6e, L7e) Scale drawings of the significant parts of the structure and the head restraint: 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 :

By the controller and the winding of armature

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:

3331 rev/min

6.21.1.3.2. Maximum rotation speed at the minimum engine load:

3331 rev/min

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:

3331 rev/min

6.21.1.4.2. Maximum rotation speed at the minimum engine load:

3331 rev/min

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.

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:

Refer to Drawing No. HF-ET03-25

7.2.2. Vehicle immobiliser: N.A.

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 its 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

7.3.2. Table or drawing of radio-interference control equipment:

Refer to Drawing No. HF-ET03- 18

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 N.A.

7.6. On-board diagnostics (OBD) functional requirements

7.6.1. On-board diagnostics system

7.6.1.1. Stage I: ~~yes~~/no~~, and/or~~

7.6.1.2. Stage II: ~~yes~~/no

7.6.2. OBD system general information

7.6.2.1. (L3e-L7e) Written description and/or drawing of the malfunction indicator (MI):

N.A.

7.6.2.2. (L3e-L7e) List and purpose of all components monitored by the OBD system:

N.A.

7.6.2.3. (L3e-L7e) Written description (general working principles) for all OBD stage I circuit (open circuit, shorted low and high, rationality) and electronics (PCU/ECU internal and communication) diagnostics: N.A.

7.6.2.4. (L3e-L7e) Written description (general working principles) for all OBD stage I diagnostic triggering any operating mode which significantly reduces engine torque in case of fault detection: N.A.

7.6.2.5. (L3e-L7e) Written description of the communication protocol(s) supported: N.A.

7.6.2.6. (L3e-L7e) Physical location of diagnostic-connector (add drawings and photographs): N.A.

7.6.2.7. (L3e-L7e) Written description in case of voluntary compliance with OBD stage II (general working principles): N.A.

7.6.2.7.1. (L3e-L7e) Positive-ignition engines: N.A.

7.6.2.7.1.1. (L3e-L7e) Catalyst monitoring: N.A.

7.6.2.7.1.2. (L3e-L7e) Misfire detection: N.A.

7.6.2.7.1.3. (L3e-L7e) Oxygen sensor monitoring: N.A.

7.6.2.7.1.4. (L3e-L7e) Other components monitored by the OBD system: N.A.

7.6.2.7.2. (L3e-L7e) Compression-ignition engines: N.A.

7.6.2.7.2.1. (L3e-L7e) Catalyst monitoring: N.A.

7.6.2.7.2.2. (L3e-L7e) Particulate filter monitoring: N.A.

7.6.2.7.2.3. (L3e-L7e) Electronic fuelling system monitoring: N.A.

7.6.2.7.2.4. (L3e-L7e) deNOx system monitoring: N.A.

7.6.2.7.2.5. (L3e-L7e) Other components monitored by the OBD system: N.A.

7.6.2.7.3. (L3e-L7e) Criteria for MI activation (fixed number of driving cycles or statistical method): N.A.

7.6.2.7.4. (L3e-L7e) List of all OBD output codes and formats used (with explanation of each): N.A.

7.6.3. OBD compatibility

The following additional information shall be provided by the vehicle manufacturer to enable the manufacture of OBD-compatible replacement or service parts, diagnostic tools and test equipment

7.6.3.1. (L3e-L7e) A comprehensive document describing all sensed components concerned with the strategy for fault detection and MI activation (fixed number of driving cycles or statistical method). This shall, include a list of relevant secondary sensed parameters for each component monitored by the OBD system. The document shall also list all OBD output codes and formats (with an explanation of each) used in association with individual emission- related powertrain components and individual non-emission-related components, where monitoring the component is used to determine MI activation. This shall contain, in particular, a comprehensive explanation for the data given in service $05 Test ID $ 21 to FF and the data given in service $06: N.A.

7.6.3.2. (L3e-L7e) For vehicle types using a communication link in accordance with ISO 15765-4 ‘Road vehicles, diagnostics on controller area network (CAN) — Part 4: requirements for emissions-related systems’, the manufacturer shall provide a comprehensive explanation for the data given in service $06 Test ID $00 to FF, for each OBD monitor ID supported: N.A.

7.6.3.3. (L3e-L7e) The information required above may be provided in table form as described below: N.A.

7.6.3.4. (L3e-L7e) Description of ETC diagnostic fault codes: N.A.

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7.6.4. Communication protocol information

The following information shall be referenced to a specific vehicle make, model and variant, or identified using other workable definitions such as VIN or vehicle and systems identification

7.6.4.1. (L3e-L7e) Any protocol information system needed to enable complete diagnostics in addition to the standards prescribed in point 3.8. of Appendix 1 to Annex XII to Commission Delegated Regulation (EU) No 44/2014, such as additional hardware or software protocol information, parameter identification, transfer functions, 'keep alive' requirements, or error conditions

N.A.

7.6.4.2. (L3e-L7e) Details of how to obtain and interpret all fault codes not in accordance with the standards prescribed in point 3.11. of Appendix 1 to Annex XII to Commission Delegated Regulation (EU) No 44/2014:
N.A.

7.6.4.3. (L3e-L7e) A list of all available live data parameters including scaling and access information:
N.A.

7.6.4.4. (L3e-L7e) A list of all available functional tests including device activation or control and the means to implement them: N.A.

7.6.4.5. (L3e-L7e) Details of how to obtain all component and status information, time stamps, pending DTC and freeze frames:

N.A.

7.6.4.6. (L3e-L7e) PCU/ECU identification and variant coding:

N.A.

7.6.4.7. (L3e-L7e) Details of how to reset service lights: N.A.

7.6.4.8. (L3e-L7e) Location of diagnostic connector and connector details: N.A.

7.6.4.9. (L3e-L7e) Engine code identification: N.A.

7.6.5. Test and diagnosis of OBD monitored components

7.6.5.1. (L3e-L7e) A description of tests to confirm its functionality, at the component or in the harness: N.A.

7.7. Passenger handholds and footrests: N.A.

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7.7.1. Handholds

7.7.1.1. Configuration: Refer to Drawing No. HF-ET03-26

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

Refer to Drawing No. HF-ET03-26

7.7.2. Footrests

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

Refer to Drawing No. HF-ET03-27

7.8. Registration plate space

7.8.1. Location of rear registration plate (indicate variants where necessary; drawings may be used as appropriate):

Refer to Drawing No.HF-ET03-28

7.8.1.1. Height above road surface, upper edge: Refer to Drawing No.HF-ET03-28

7.8.1.2. Height above road surface, lower edge: Refer to Drawing No.HF-ET03-28

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): 145mm*125mm or 100mm*175mm

7.8.1.5. Inclination of the plane to the vertical: 25°

7.8.1.6. Angle of visibility in the horizontal plane:

Refer to Drawing No. HF-ET03-28

7.9. Stands: N.A.

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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	Driving beam head lamps	x	x	c	x	x	d
3	Passing beam head lamps	x	x	c	-	-	-
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	x	x	d	-	-	-
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

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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	Supplemental engine stop control Off	-	-	-	-	-	-
15	Supplemental engine stop control Run	-	-	-	-	-	-
16	Gear position	x	x	d	-	-	-
17	Momentary indication	-	-	-	-	-	-
18	Exterior rear-view-mirror heating	-	-	-	-	-	-
19	Reverse gear	x	x	d	x	x	d
20	Electric motor enabled	-	-	-	x	x	d
21	Ignition switch	x	x	d	-	-	-
22	Electric starter	x	x	d	-	-	-

(*) x = yes
- = no or not separately available
o = optional

(**) d = directly on control, indicator or tell-tale
c = in close vicinity

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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
PASSING/DRIVING BEAM HEADLAMP (OPTION 1)	TZCK/ 16-01	1 / white	*/Yes, Blue	E13*113R00*113R 01*24415*00	32250 cd
FRONT POSITION LAMP (OPTION 1)		1 / white	*	E13*50R00*50R00 *24415*00	----
PASSING/DRIVING BEAM HEADLAMP (OPTION 2)	GUANGHUAN/ GH-CH-HH-A	1 / white	*/Yes, Blue	E32-113R-010023	32250 cd
FRONT POSITION LAMP (OPTION 2)		1 / white	*	E32-50R-000023	----
FRONT DIRECTION INDICATOR (OPTION 1)	GUANGHUAN/ GH-CN-FD	2 /amber	YES / Green	E32-50R-000021	----
FRONT DIRECTION INDICATOR(OPTION 2)	TZCK/ 16-03	2 /amber	YES / Green	E13*50R00*50R00 *24417*00	----
REAR DIRECTION INDICATOR	TZCK/ 16-03	2 /amber	YES / Green	E13*50R00*50R00 *24417*00	----
REAR POSITION LAMP	TZCK/ 16-02	1 /red	*	E13*50R00*50R00 *24416*00	----
STOP LAMP		1 / red	NO		
REAR REGISTRATION PLATE LAMP		1 / white	*		
REAR RETRO-REFLECTOR(OPTION 1)	钻石峰 ZUANSHIFENG / CHP-PH-719	1 / red	NO	E32*3R02/17* 0012*00	----
REAR RETRO-REFLECTOR(OPTION 2)	K-LITE,KYI,HILUX K-LITE / KM202	1 / red	NO	E4-3R-023712	----
REAR RETRO-REFLECTOR(OPTION 3)	SHIJIN/SJ-F02	1 / red	NO	E4-3R-023257	----
SIDE RETRO-REFLECTOR(OPTION 1)	K-LITE / KM-101	2 / amber	NO	E4-3R-023298	----
SIDE RETRO-REFLECTOR(OPTION 2)	SHIJIN/SJ-F01	2 / amber	NO	E4-3R-023256	----
SIDE RETRO-REFLECTOR(OPTION 3)	钻石峰 ZUANSHIFENG /CHP-PC-752	2 / amber	NO	E32*3R02/17* 0013*00	----
SIDE RETRO-REFLECTOR(OPTION 4)	DBM, K-LITE/KM-101	2 / amber	NO	IA-E9-02.1270	----

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Table 6.18.
Tyres/wheels combination

Axle	Type approval number	Dimension	Max. loading	Speed Category	Rims	Nominal rolling circumference	Tyre pressure
Front & Rear (optional 1)	E4-75R-0005902	3.00 - 10	42	J	2.15 x 10	1297mm	250 kPa
Front & Rear (optional 2)	E11 75R-000207	3.00 - 10	42	J	2.15 x 10	1297mm	250kPa
Front & Rear (optional 3)	E4-75R-0008326	3.00 - 10	42	J	2.15 x 10	1297mm	250kPa
Front & Rear (optional 4)	E9 75R-001016	3.00 - 10	42	J	2.15 x 10	1297mm	250kPa
Front & Rear (optional 5)	E4-75R-0004698	3.00 - 10	42	J	2.15 x 10	1297mm	250kPa
Front& Rear (optional 6)	E4-75R-0006927	3.00 - 10	42	J	2.15 x 10	1297mm	250kPa
Front & Rear (optional 7)	E4-75R-0004662	3.00 - 10	47	J	2.15 x 10	1297mm	250kPa
Front & Rear (optional 8)	E4-75R-0005901	3.50-10	51	J	2.15 x 10	1373mm	250kPa
Front & Rear (optional 9)	E4-75R-0004663	3.50-10	56	J	2.15 x 10	1373mm	250kPa
Front & Rear (optional10)	E4-75R-0005059	3.50-10	51	J	2.15 x 10	1373mm	250kPa
Front & Rear (optional11)	E9-75R-001019	3.50-10	51	J	2.15 x 10	1373mm	250kPa

Type: HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

INDEX OF DRAWINGS

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HF-ET03-01	Manufacturer's Date Plate
HF-ET03-02	Vehicle Identification Number
HF-ET03-03	Photos of A Representative Vehicle
HF-ET03-04	Dimension Measured on Vehicle
HF-ET03-05	Frame
HF-ET03-06	Pure Electric Propulsions and Control System
HF-ET03-07	Location of the propulsion batteries
HF-ET03-08	Controller
HF-ET03-09	Differential and drive train
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HF-ET03-12	Location of audible warning device
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HF-ET03-14	Brake system
HF-ET03-15	Front brake
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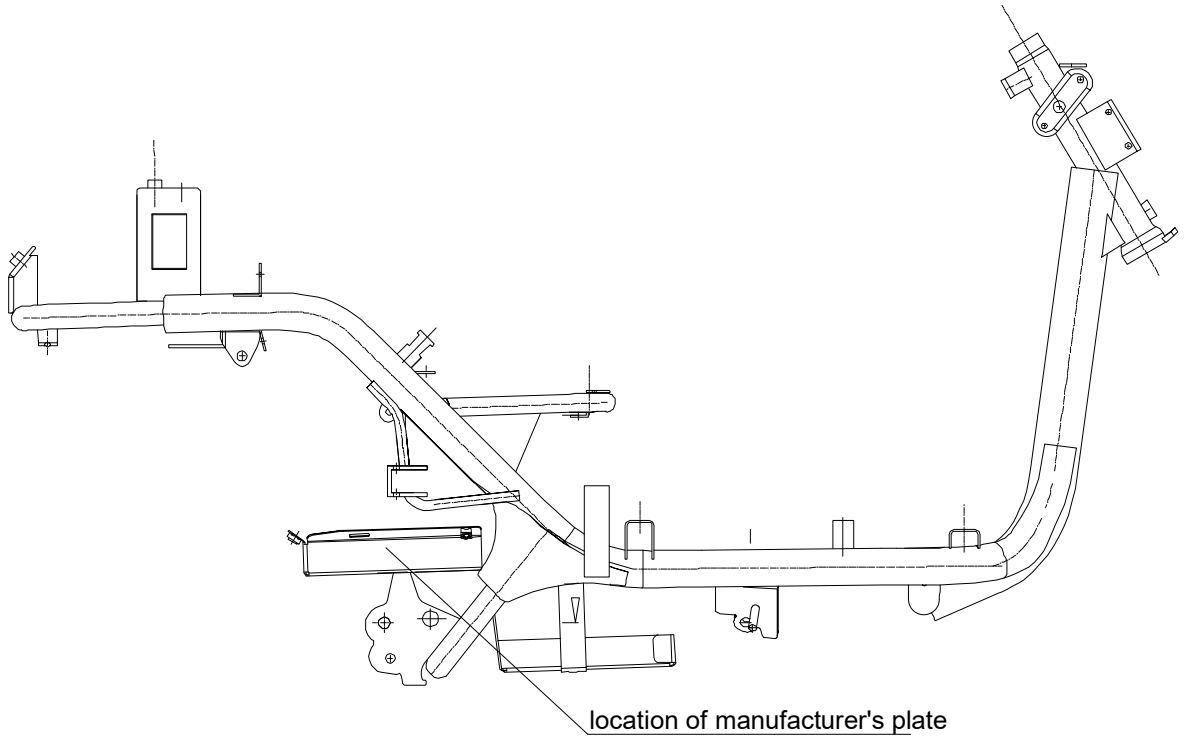
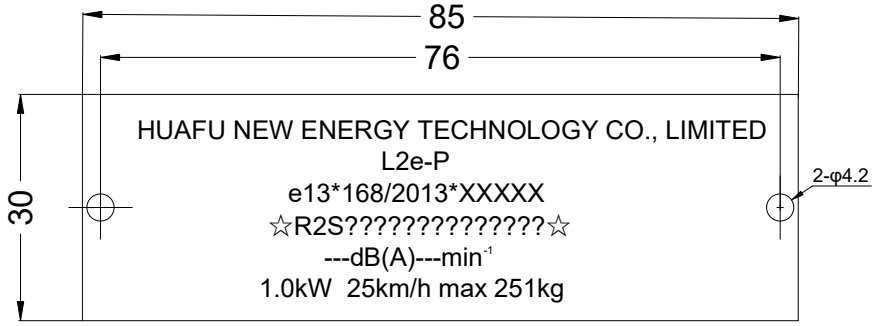
HF-ET03-23	Seats
HF-ET03-24	Transmission and Control of Steering
HF-ET03-25	Protective Device
HF-ET03-26	Handhold
HF-ET03-27	Footrests
HF-ET03-28	Rear Registration plate

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

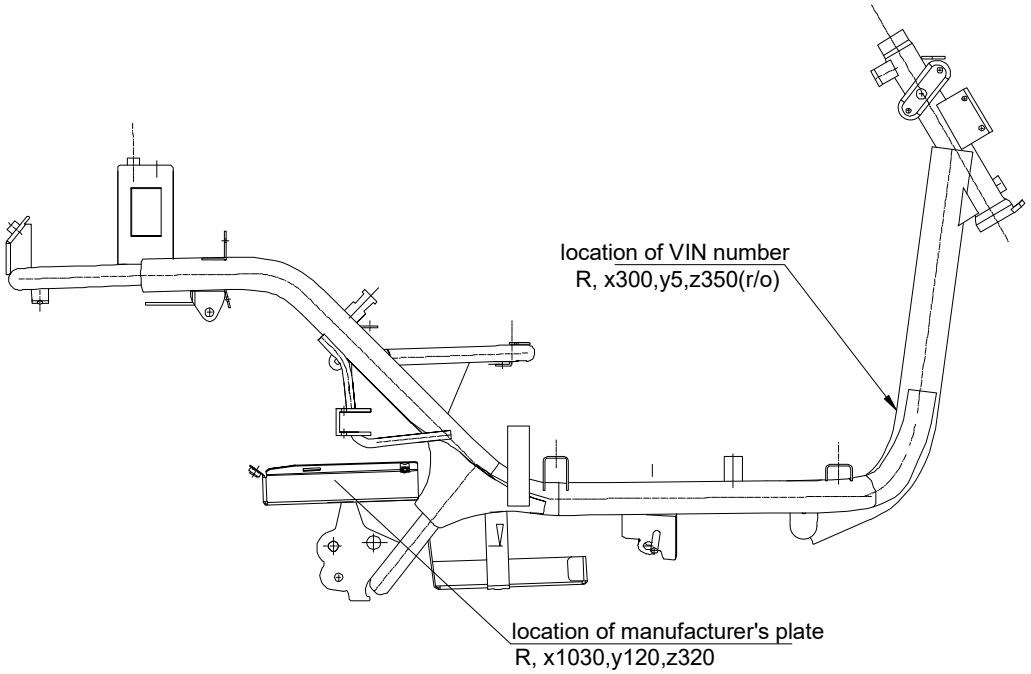


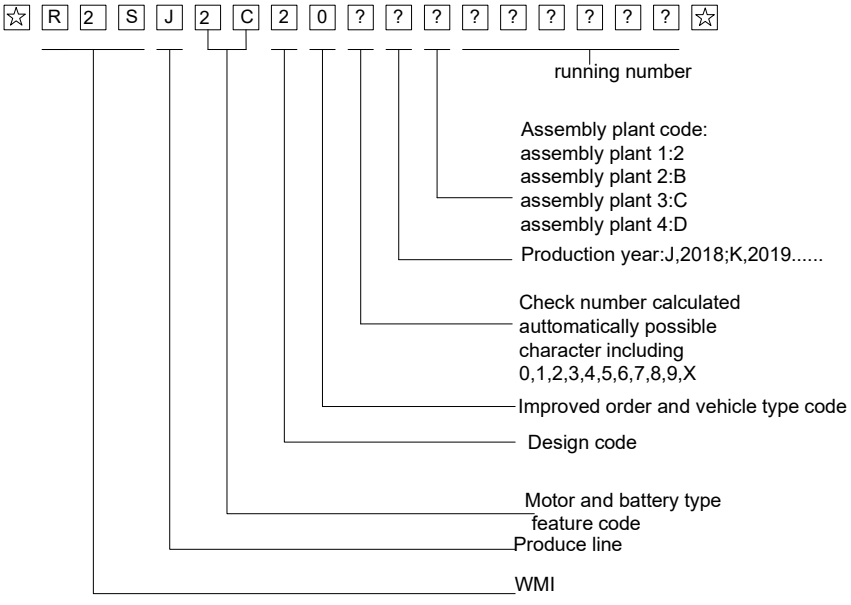


Text Height: 5 mm
Text Depth: 0.5 mm

Vehicle Type	HF-ET03
Manufacturer's Data Plate	
Drawing NO.	HF-ET03-01

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



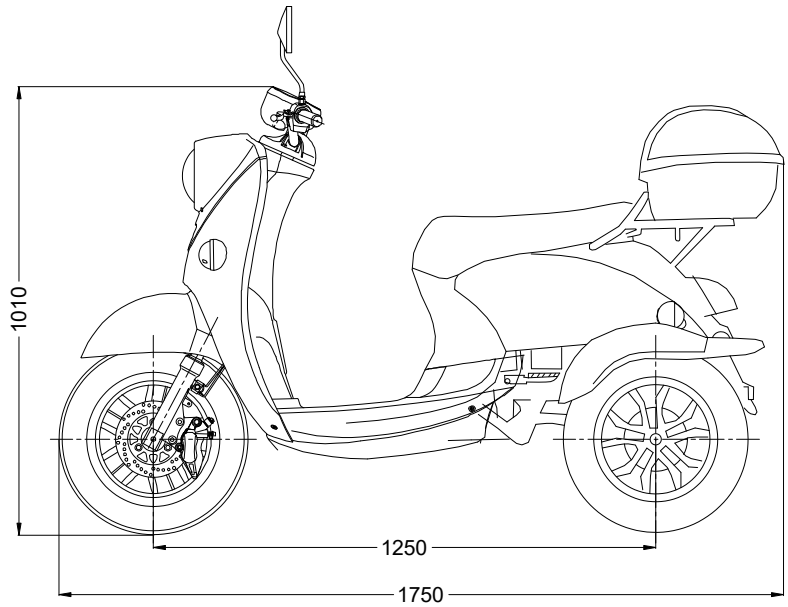


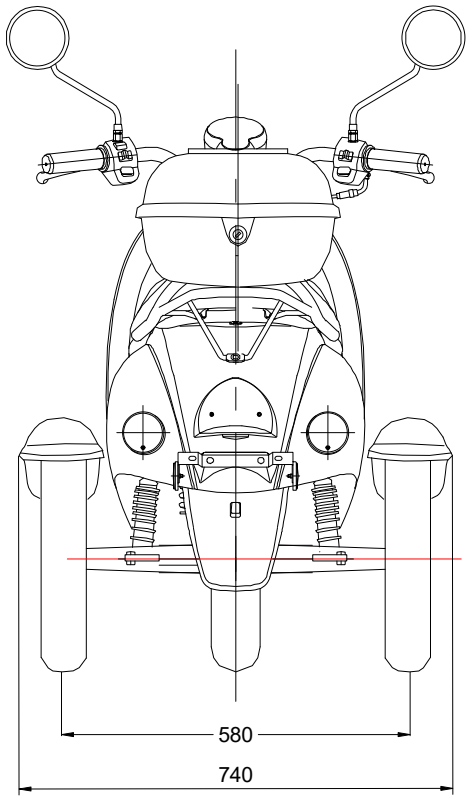
Vehicle Type	HF-ET03
Vehicle Identification Number	
Drawing NO.	HF-ET03-02

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

Vehicle Type	HF-ET03
Photos of A Representative Vehicle	
Drawing NO.	HF-ET03-03

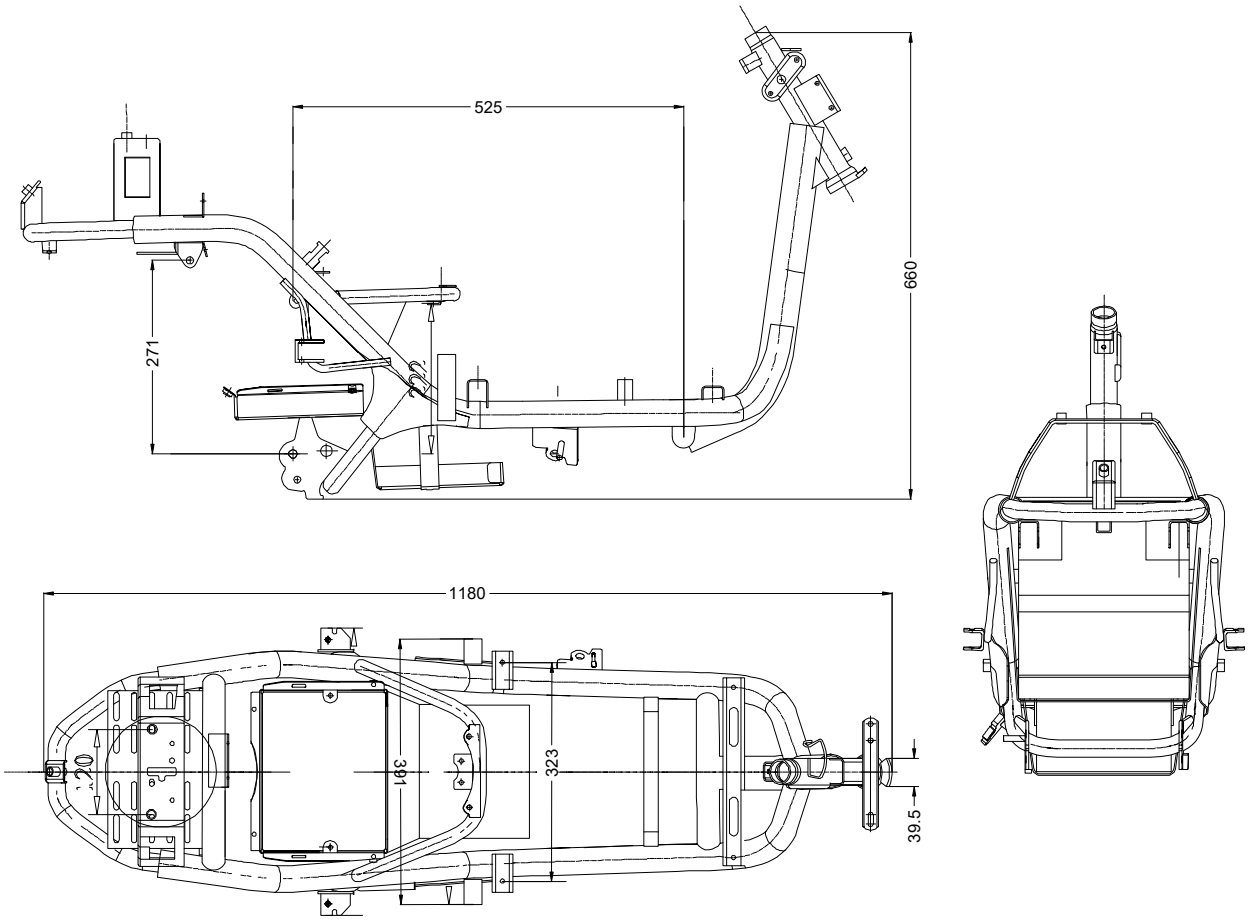
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00





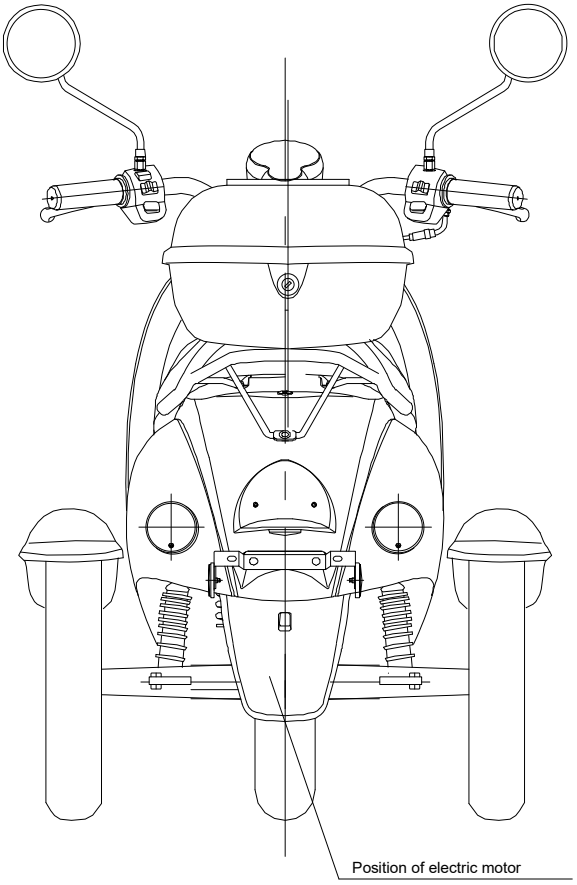
Vehicle Type	HF-ET03
Dimension Measured on Vehicle	
Drawing NO.	HF-ET03-04

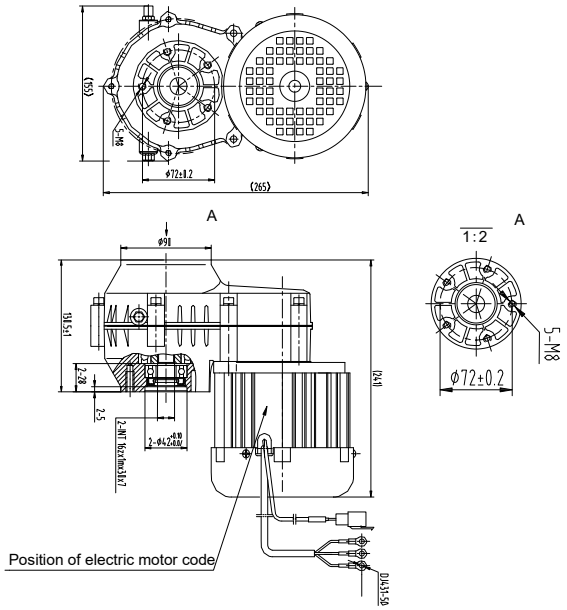
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Vehicle Type	HF-ET03
Frame	
DRAWING NO.	HF-ET03-05

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

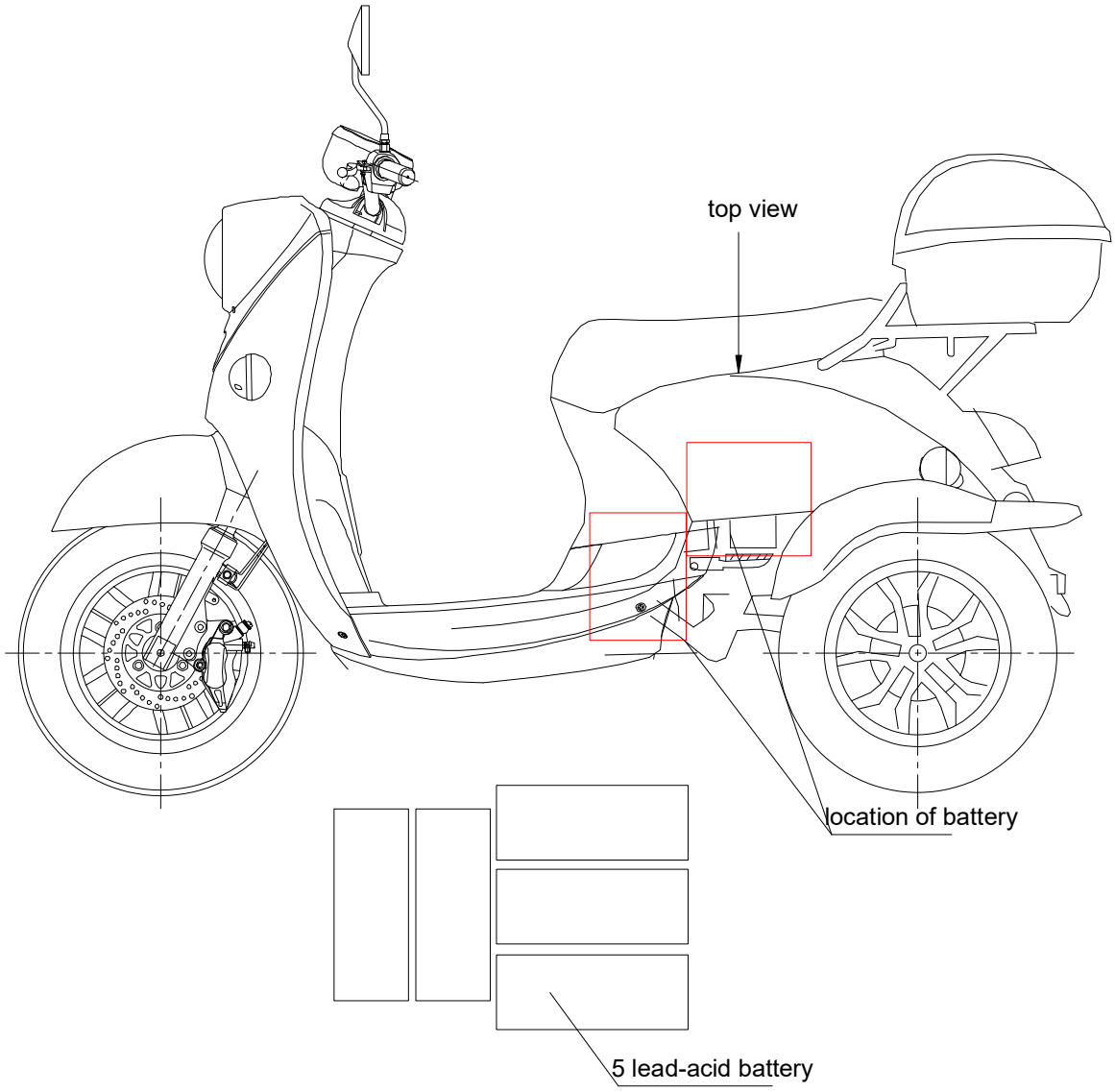




Make: UNITE
Type: YWDJ010
Manufacturer: ZHEJIANG UNITE MOTOR CO., LTD

Vehicle Type	HF-ET03
Pure Electric Propulsions and Control System	
DRAWING NO.	HF-ET03-06

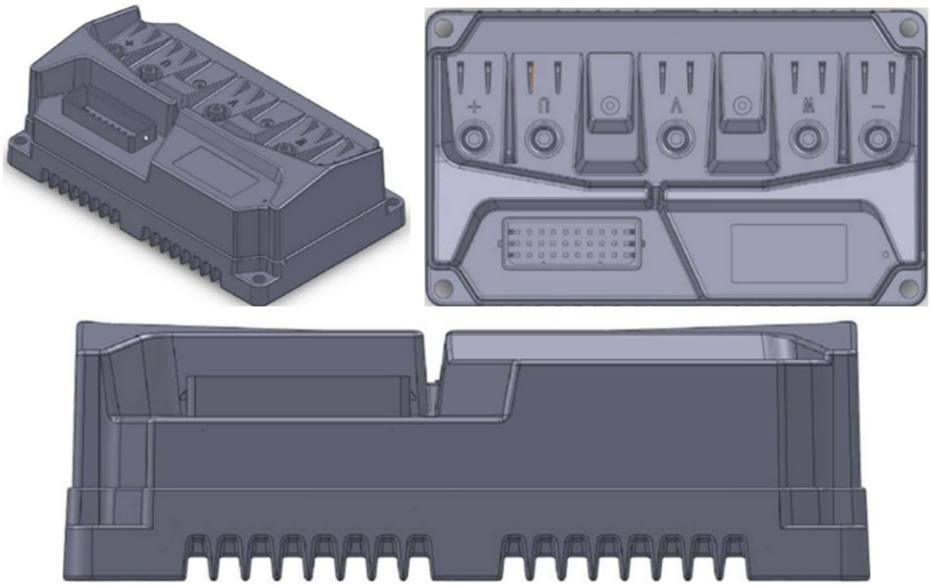
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Lead-acid battery
Make: XUPAI
Type: 6-DZM-20
Manufacturer: XUPAI BATTERY INTERNATIONAL DEPARTMENT

Vehicle Type	HF-ET03
Location of The Propulsion Batteries	
DRAWING NO.	HF-ET03-07

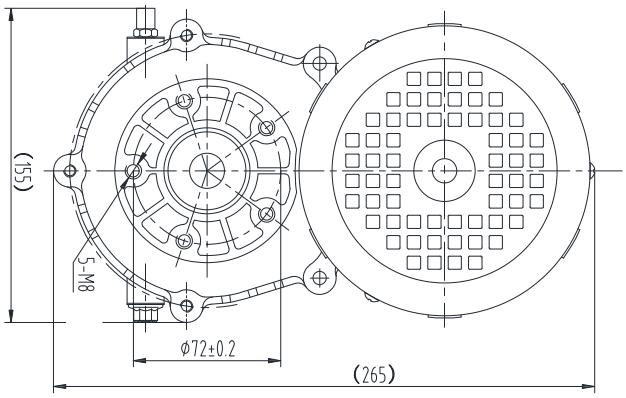
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



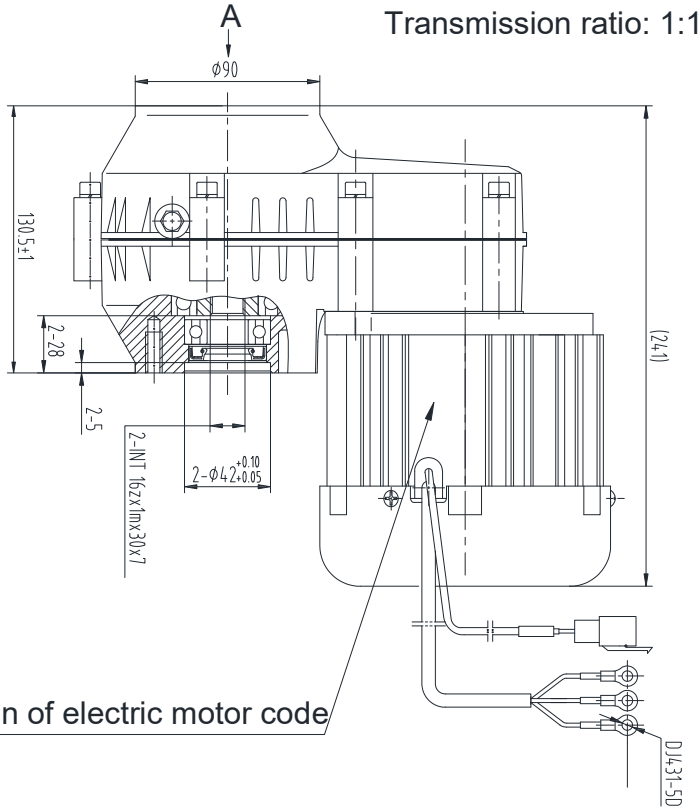
Controller
Make: LINGBO
Type: LBMC060122HK2AUE-M6C3-C
Manufacturer: Wuxi Lingbo-elec Electronic Technologies Co., Ltd

Vehicle Type	HF-ET03
Controller	
DRAWING NO.	HF-ET03-08

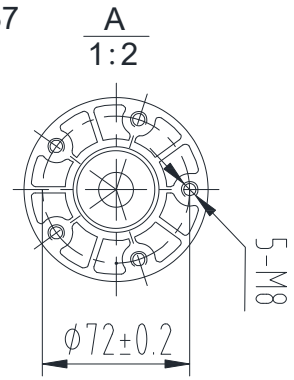
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Transmission ratio: 1:10.37

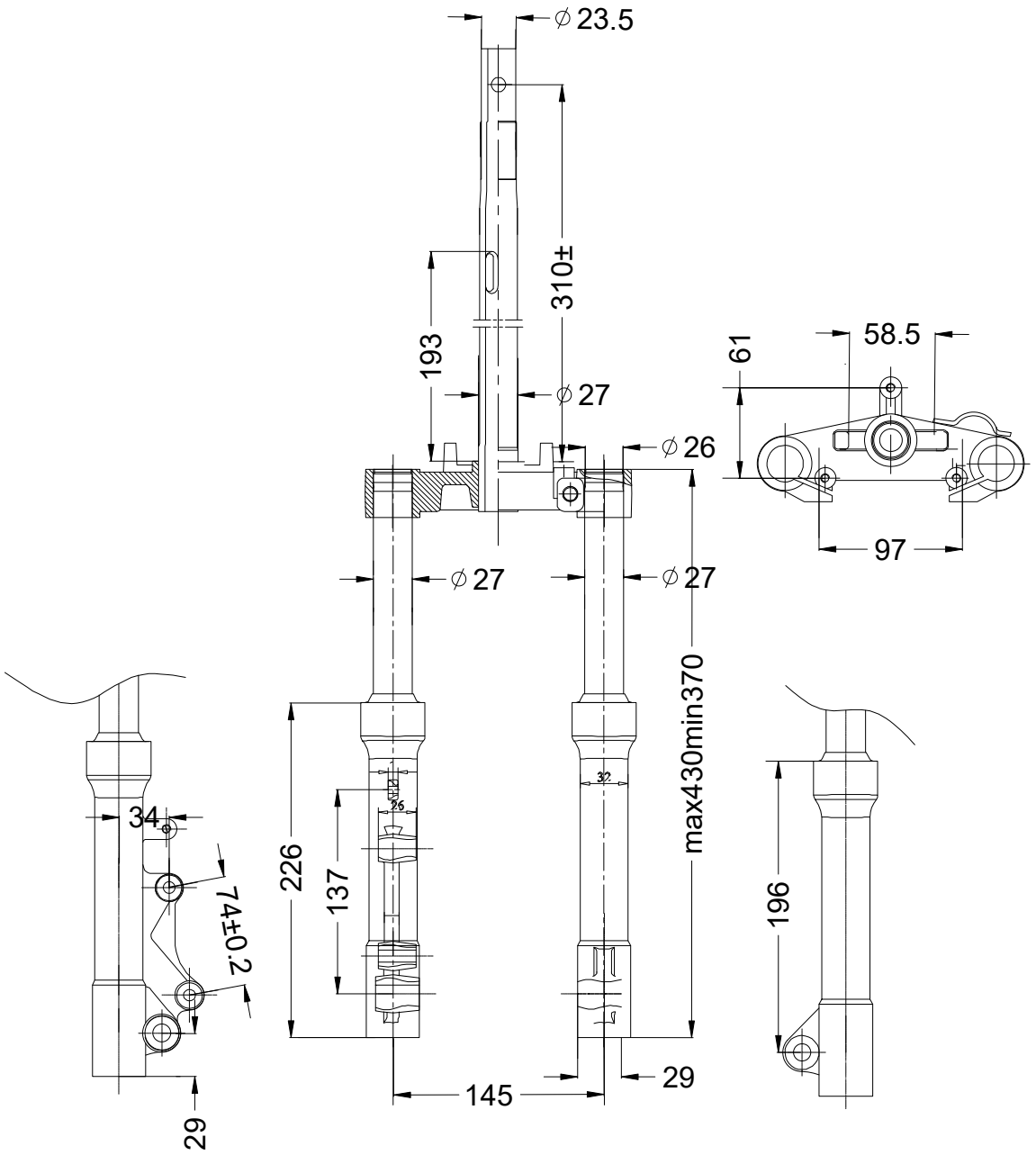


Position of electric motor code



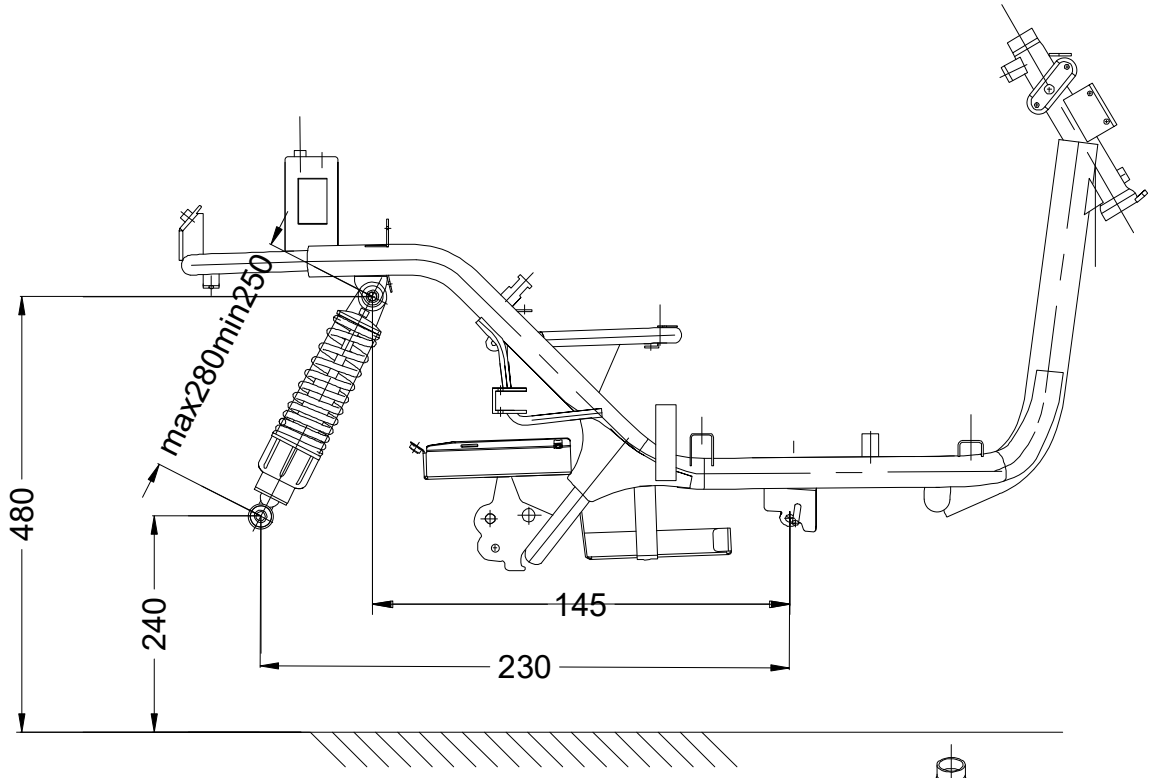
Vehicle Type	HF-ET03
Differential and drive train	
DRAWING NO.	HF-ET03-09

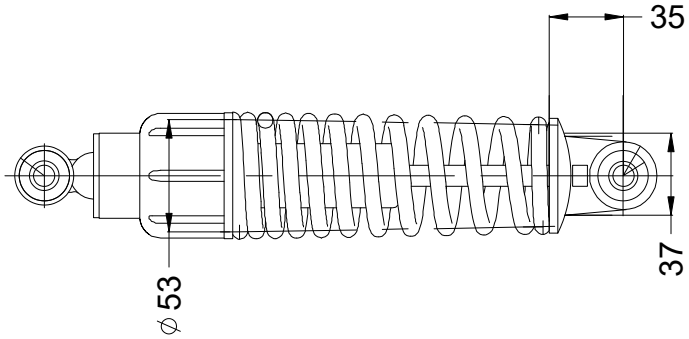
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

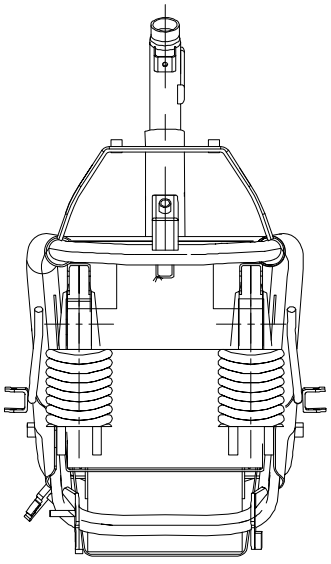


Vehicle Type	HF-ET03
Front Suspension	
Drawing NO.	HF-ET03-10

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

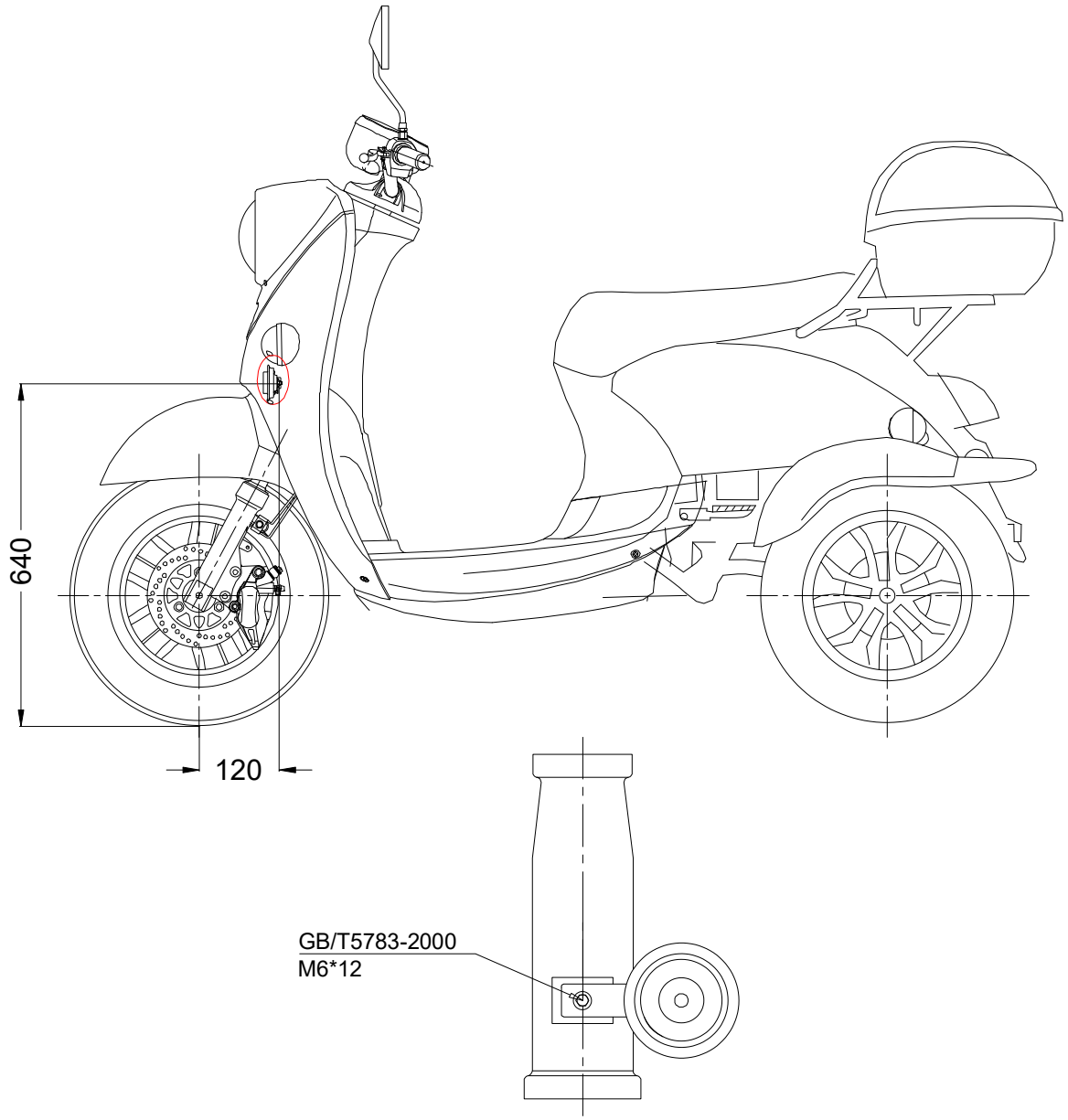






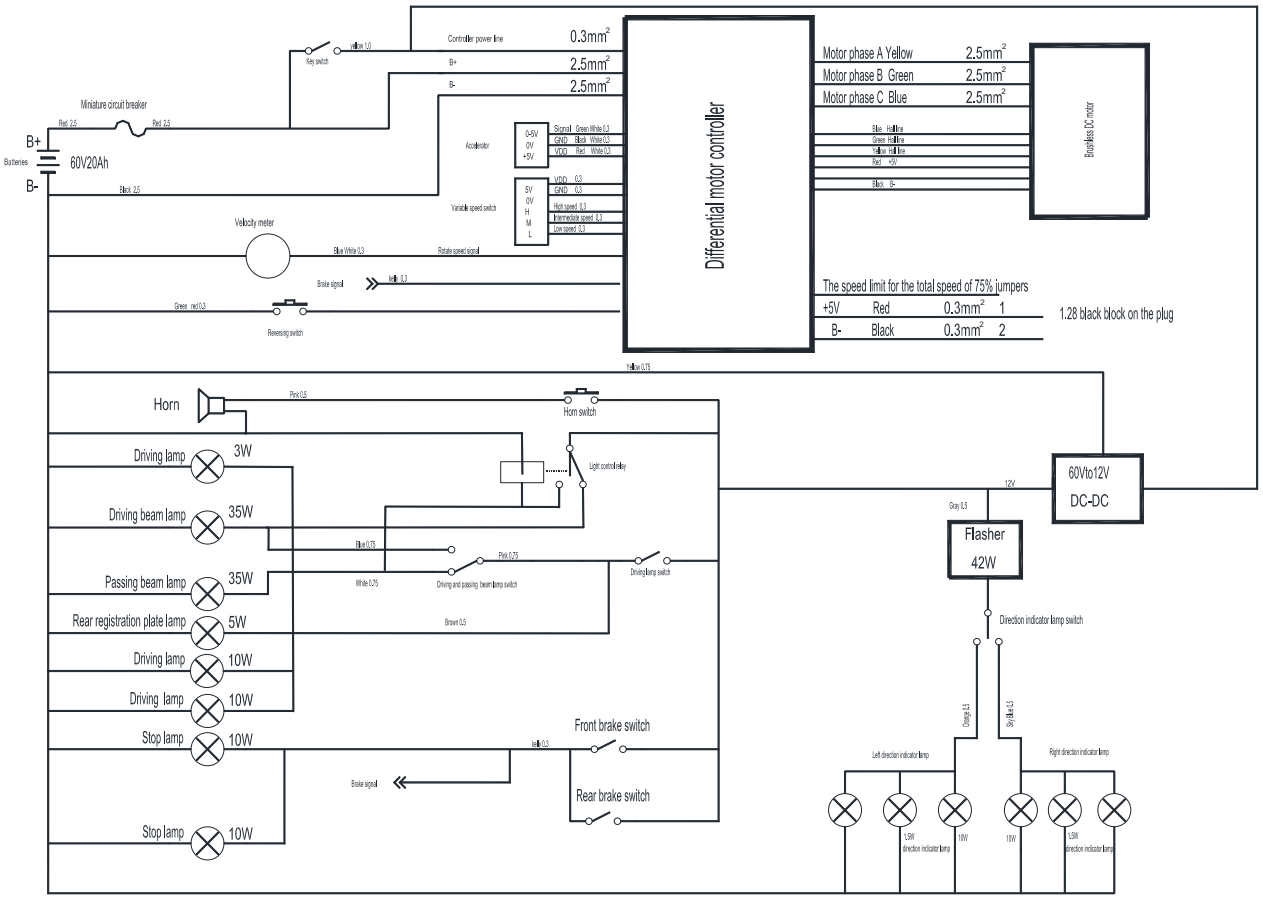
Vehicle Type	HF-ET03
Rear Suspension	
Drawing NO.	HF-ET03-11

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



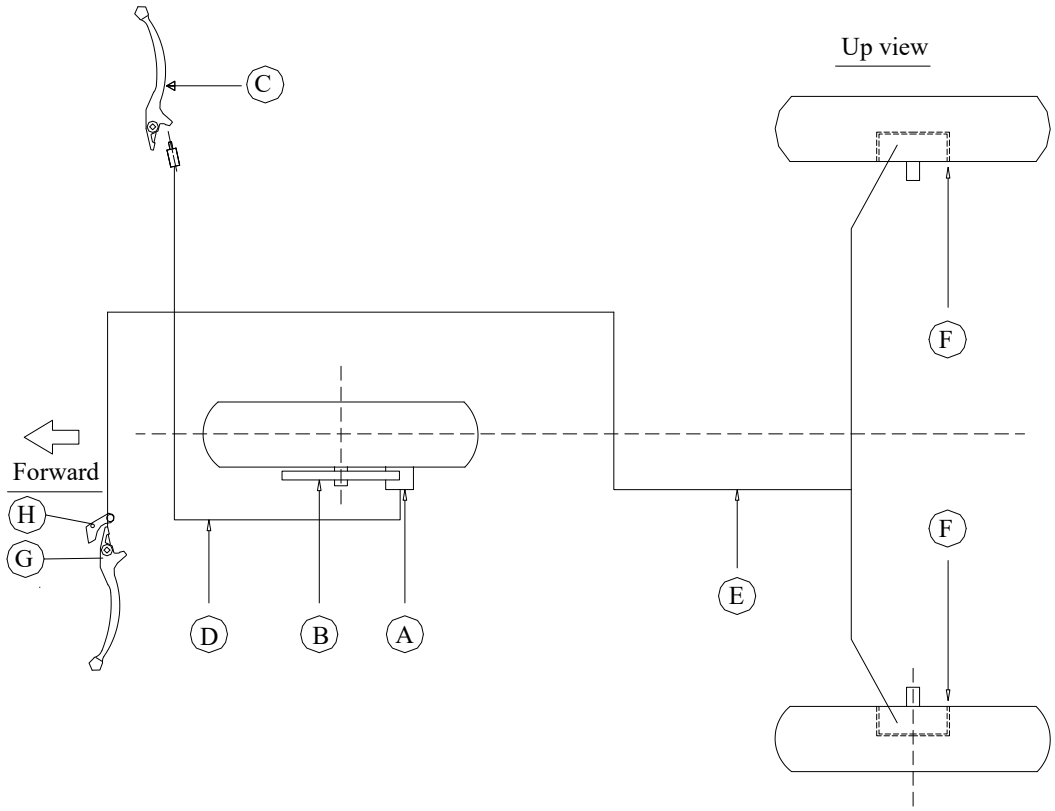
Vehicle Type	HF-ET03
Location of The Audible Warning Device	
Drawing NO.	HF-ET03-12

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: 28/01/2021 Ext.: 00



Vehicle Type	HF-ET03
Electrical Circuit Diagram	
Drawing NO.	HF-ET03-13

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

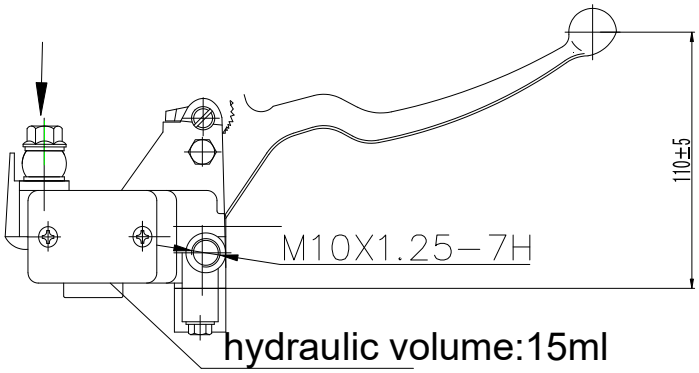


POS.	Description
A	Front brake caliper
B	Front brake disc
C	Front brake pump with lever
D	Front brake oil pipe
E	Rear brake rope
F	Rear brake drum
G	parking brake with lever
	Rear brake lever
H	Parking brake

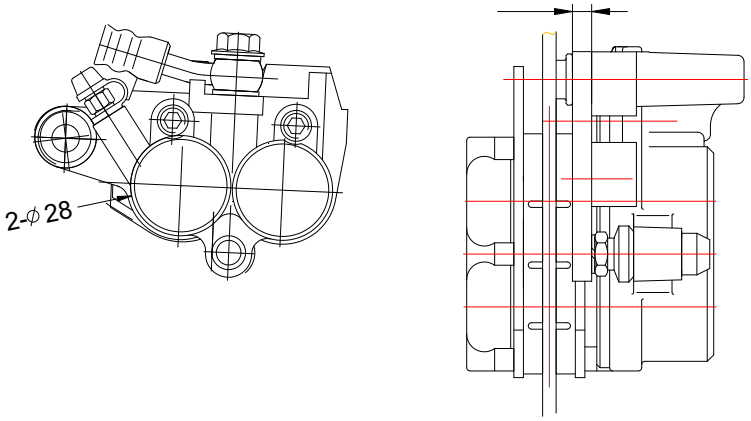
Vehicle Type	HF-ET03
Brake system	
Drawing NO.	HF-ET03-14

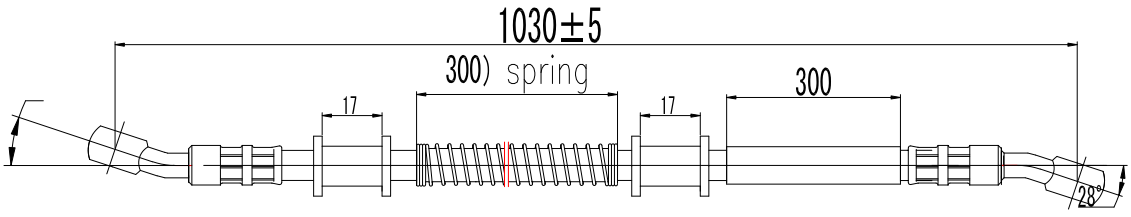
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

front brake lever(right)



hydraulic volume:15ml



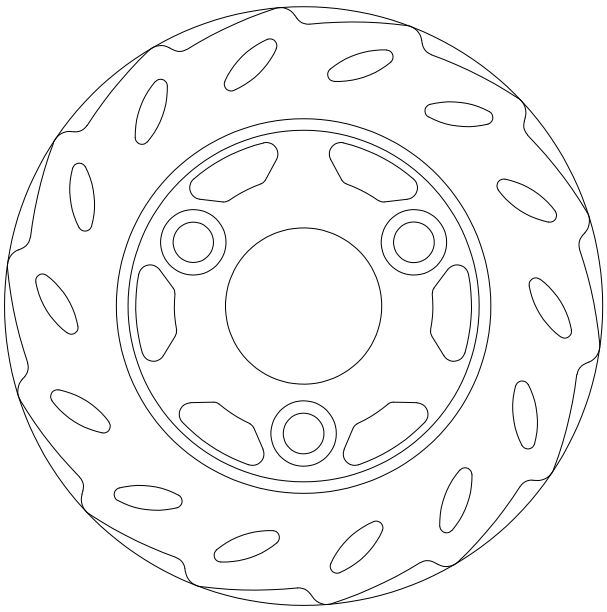


Make：Jiayi
Type:HF-ET03
Manufacturer:Wuxi Jiayi steam and friction accessories factory

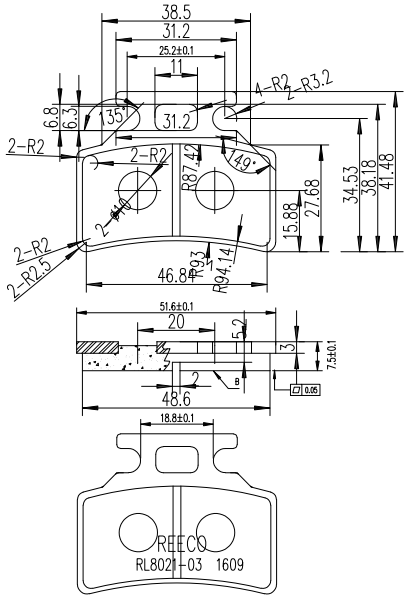
Vehicle Type	HF-ET03
Front Brake	
Drawing NO.	HF-ET03-15

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

front brake disc



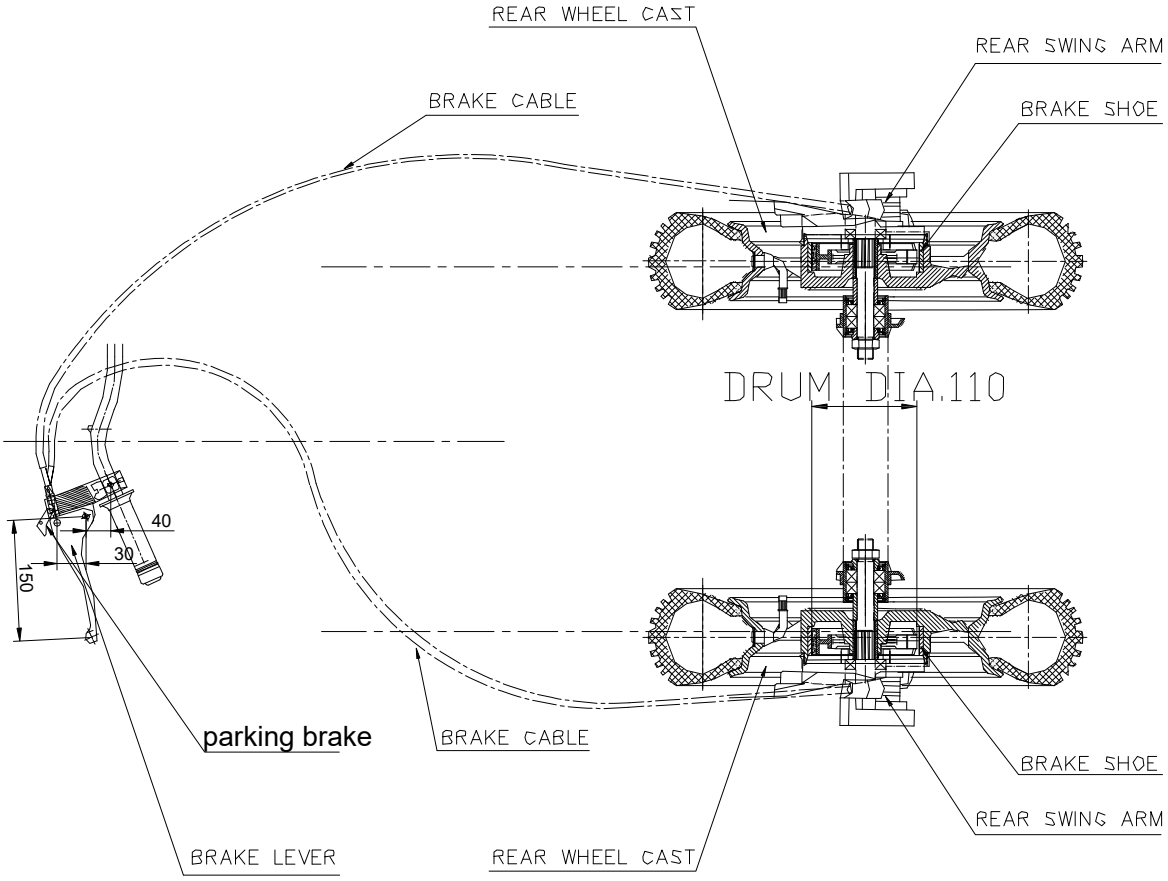
front brake pad

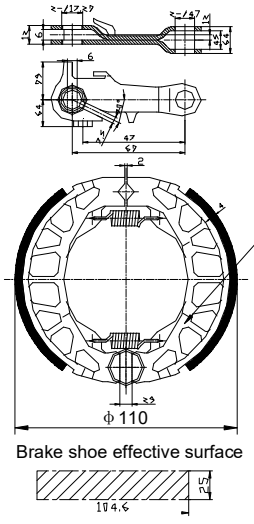


Brake disc:
Make: Jiayi
Type:HF-ET03P
Manufacturer:Wuxi Jiayi steam and friction accessories factory
Brake pad
Make: Karasawa
Type: YD1000D -08
Manufacturer: Karasawa Traffic Eouipment(Taizhou) Co., Ltd.

Vehicle Type	HF-ET03
Front Brake disc and brake pad	
Drawing NO.	HF-ET03-16

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



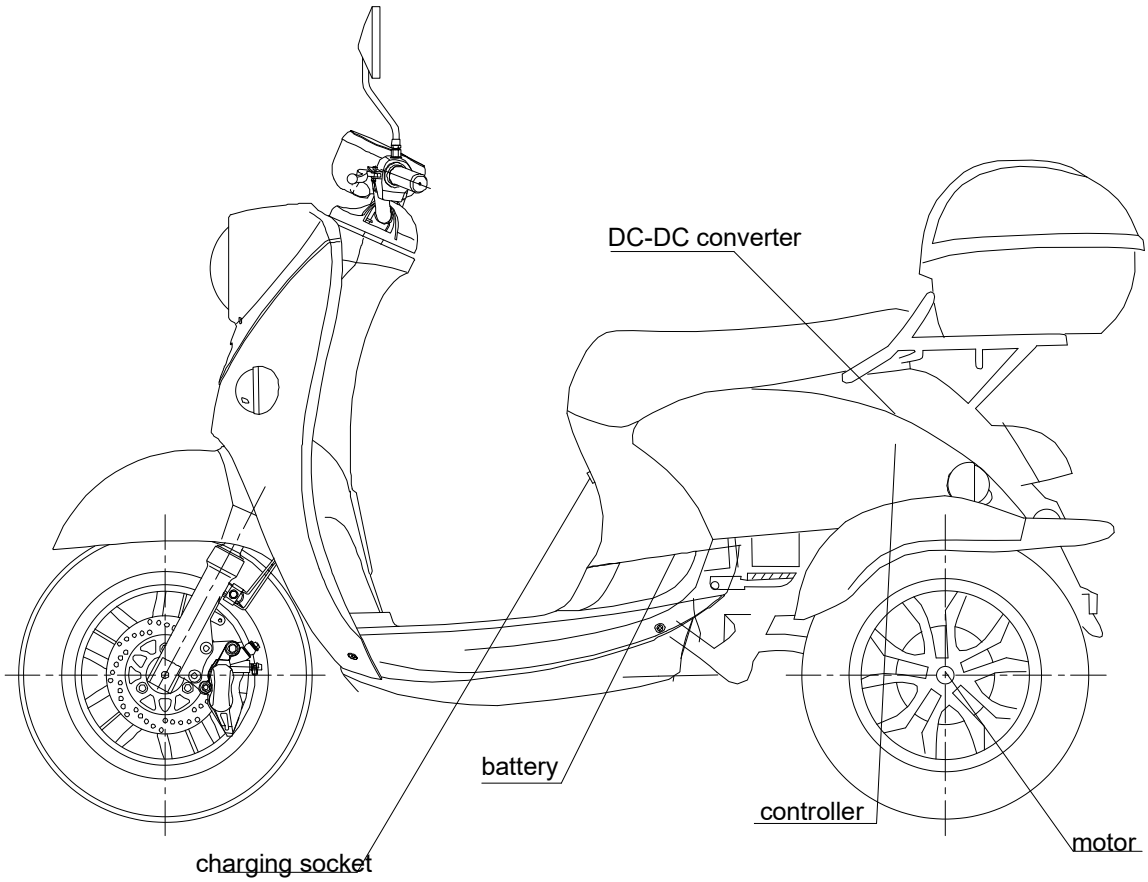


Rear brake shoe
Make: TANGZE
Type: KG2110IVF
Material: No asbestos
Brake plate area: 2615mm^2 X 2 = 5230mm^2

Make: Karasawa
Type: YD1000D -09
Manufacturer: Karasawa Traffic Eouipment(Taizhou) Co., Ltd.

Vehicle Type	HF-ET03
Parking Brake and rear brake	
Drawing NO.	HF-ET03-17

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



motor: make: UNITE
type: YWDJ010

controller: make: LINBO
type: LBMC060122HK2AUE-M6C3-C

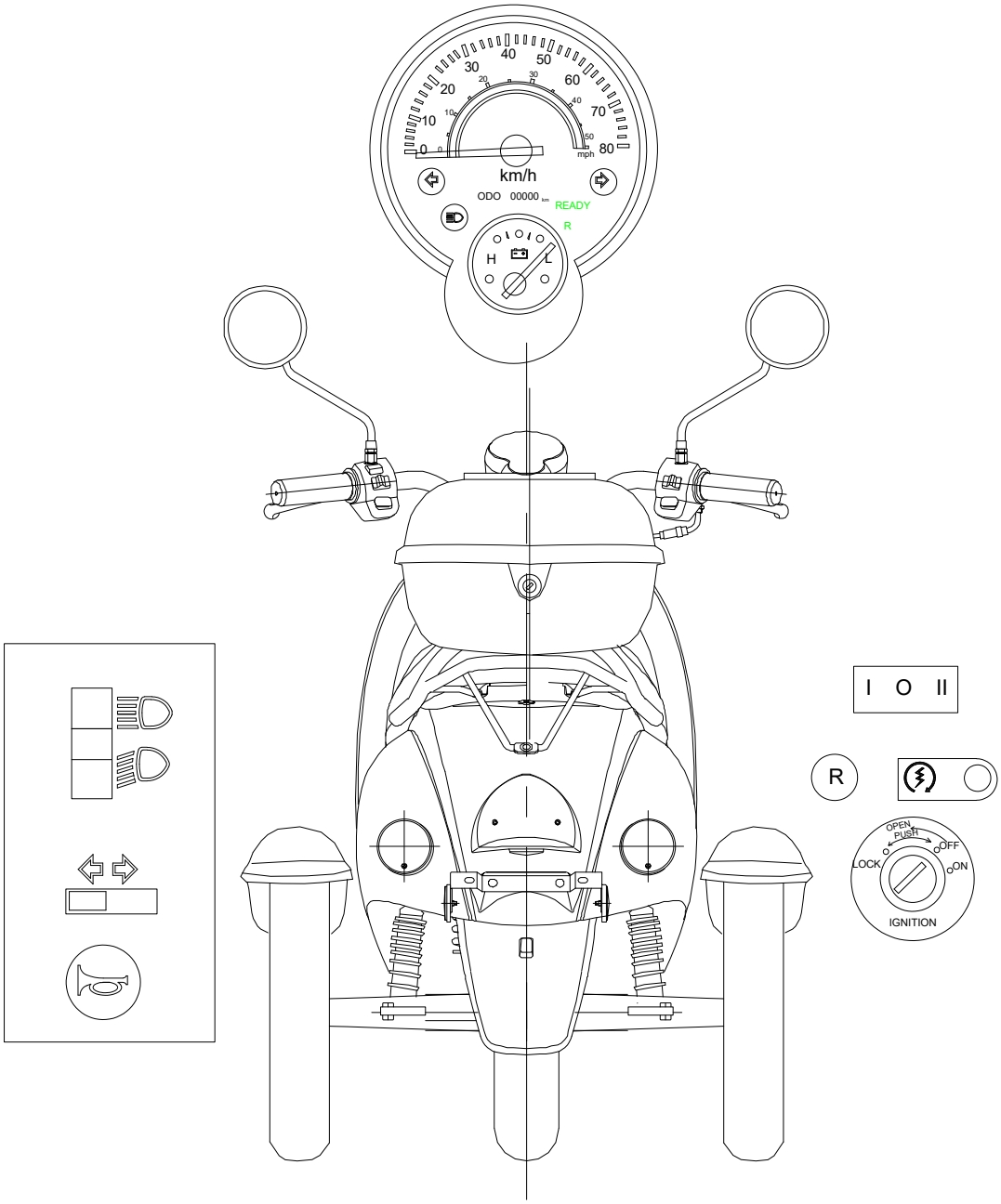
battery: make: XUPAI
type: 6-DZM-20

charger: make: CHENHUI
type: 60V20AH

DC-DC converter: make: GAOFEN
type: B40

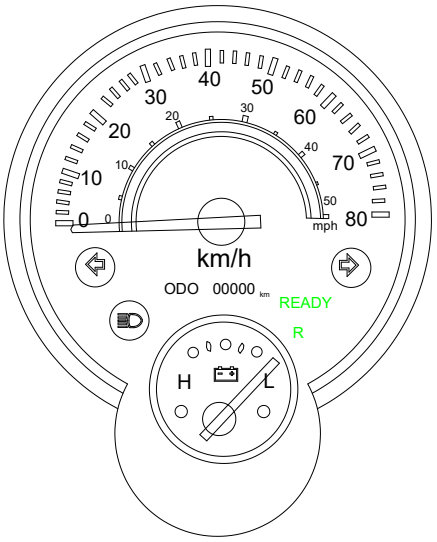
Vehicle Type	HF-ET03
Power Circuit Components Installation	
Drawing NO.	HF-ET03-18

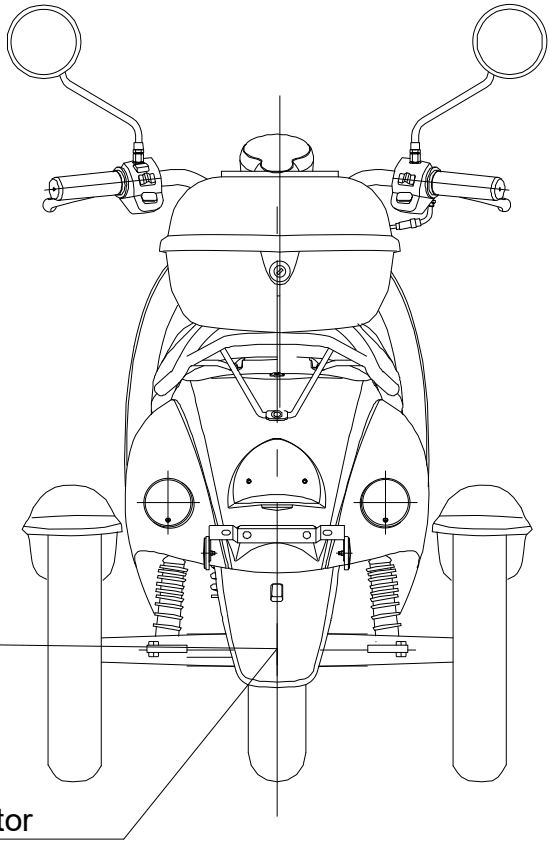
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Vehicle Type	HF-ET03
Controls, Tell-Tales And Indicators	
Drawing NO.	HF-ET03-19

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00





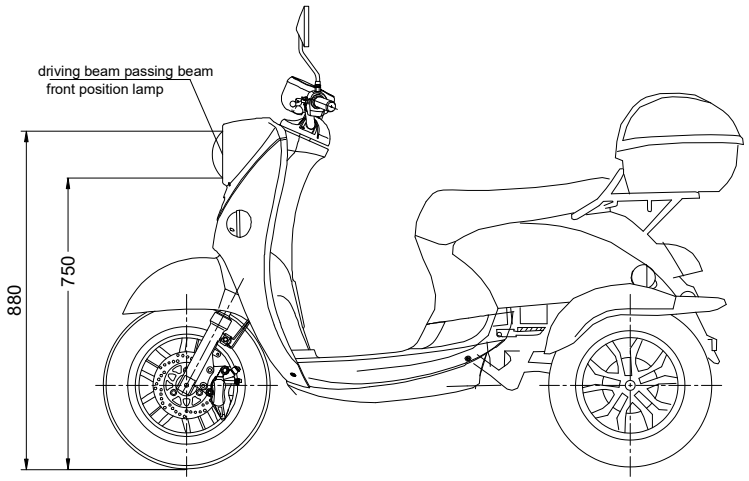
controller

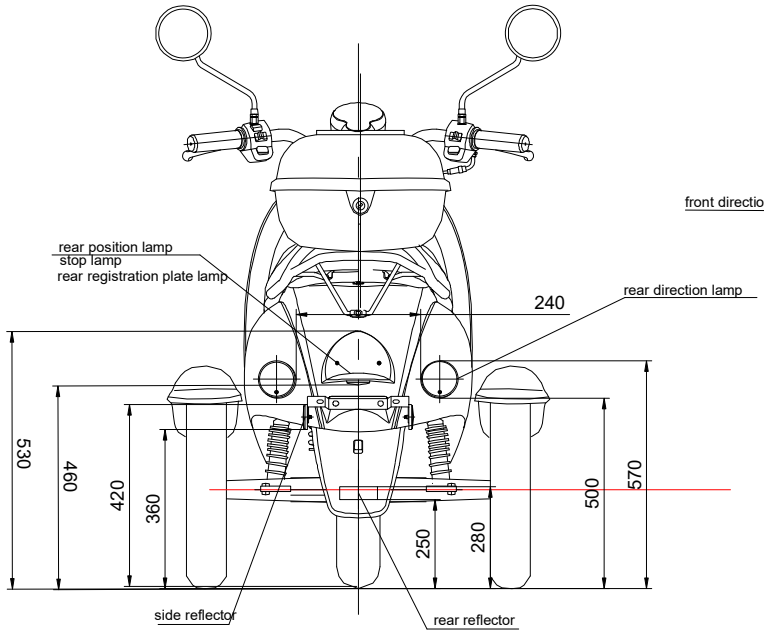
motor

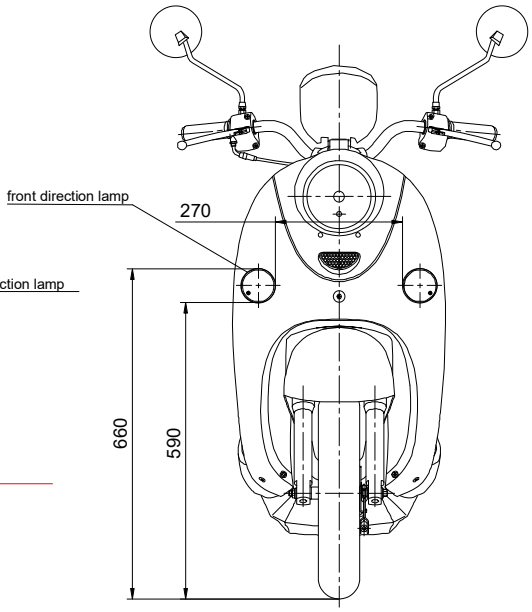
Speedometer
Make: MEICHENG
Type:HF-ET03
Manufacturer: Wuxi Meicheng Electronic Technology Co., Ltd

Vehicle Type	HF-ET03
Speedometer	
Drawing NO.	HF-ET03-20

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

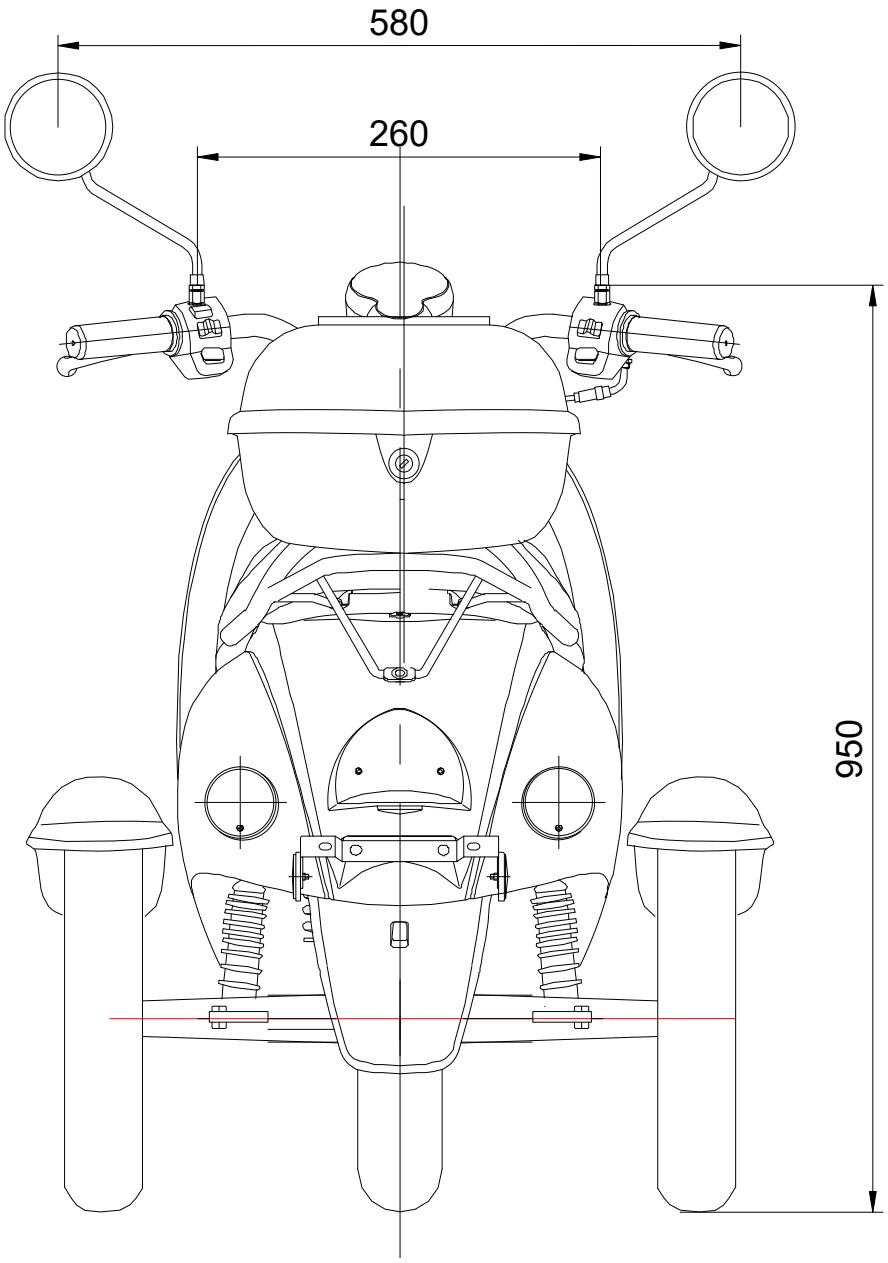






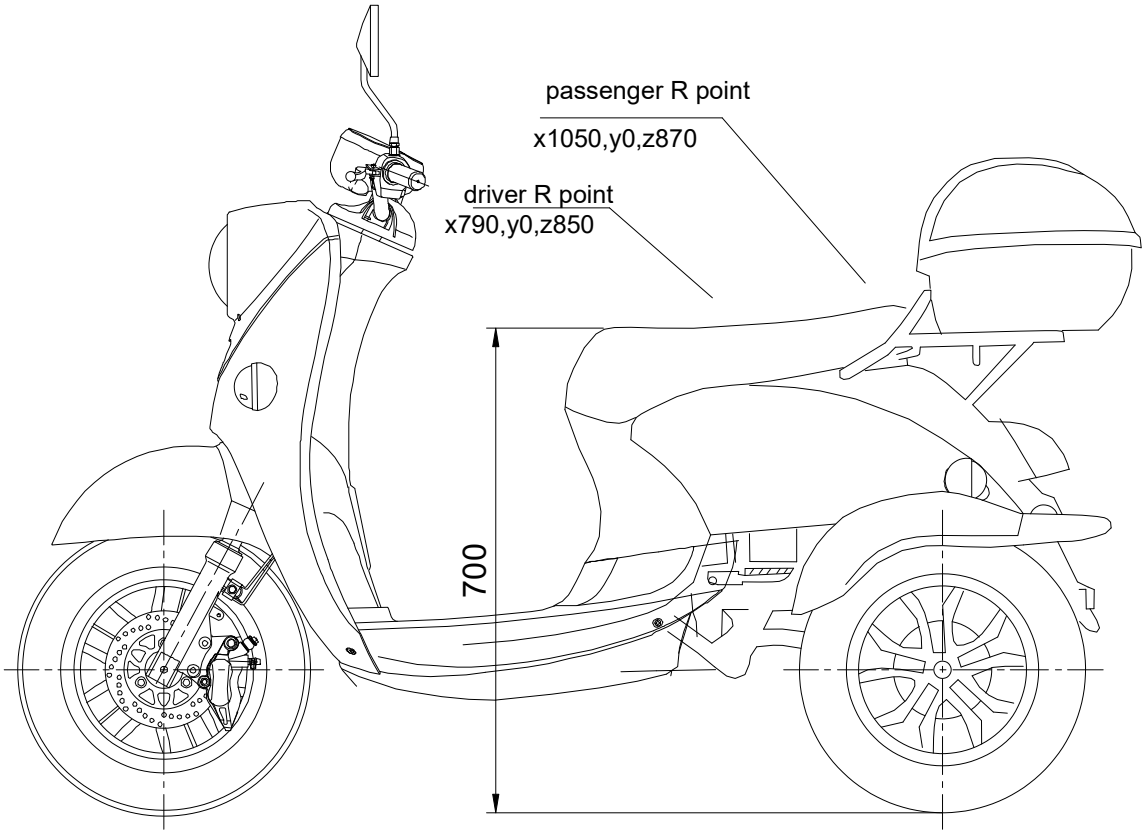
Vehicle Type	HF-ET03
Location of Lights	
Drawing NO.	HF-ET03-21

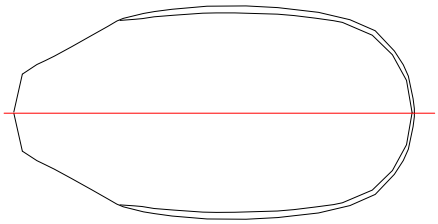
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Vehicle Type	HF-ET03
Location of Rear View Mirror	
Drawing NO.	HF-ET03-22

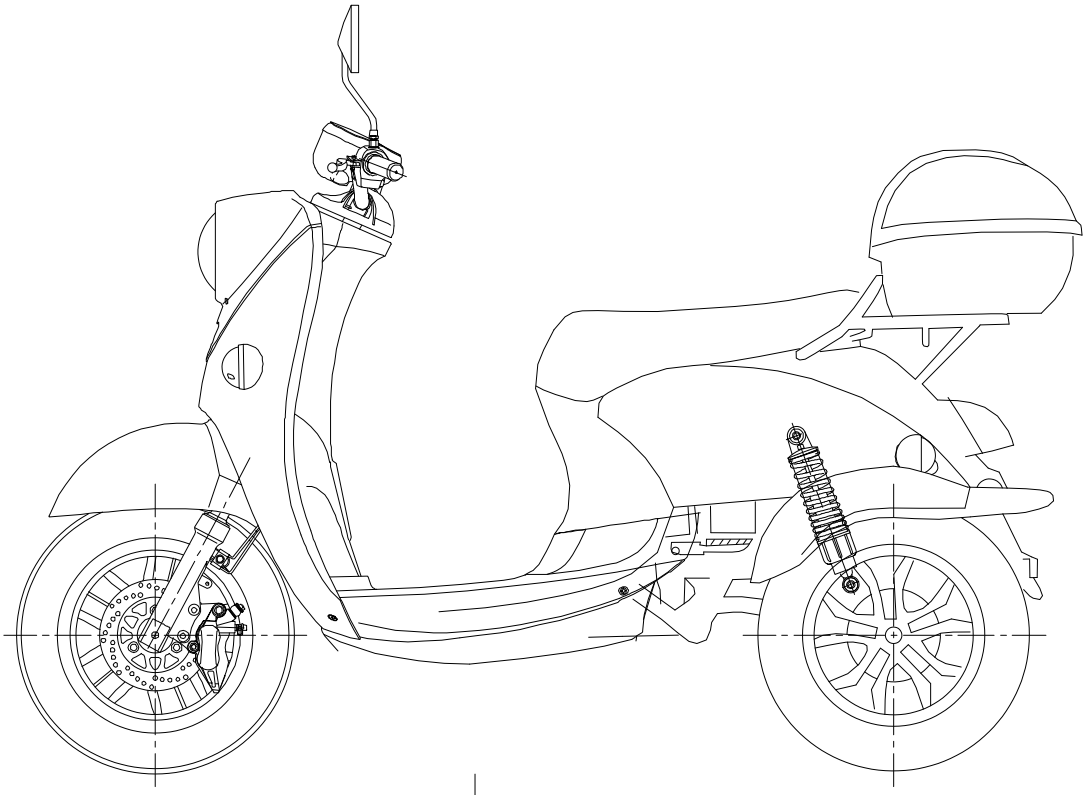
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

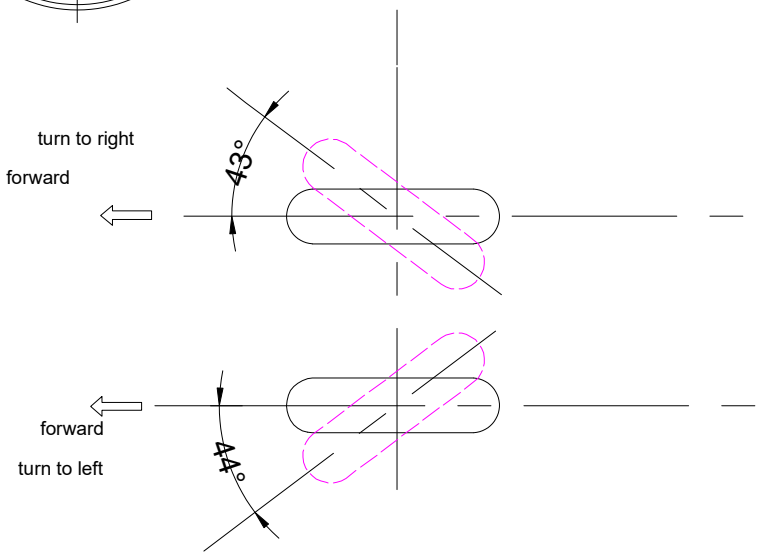




Vehicle Type	HF-ET03
Seats	
Drawing NO.	HF-ET03-23

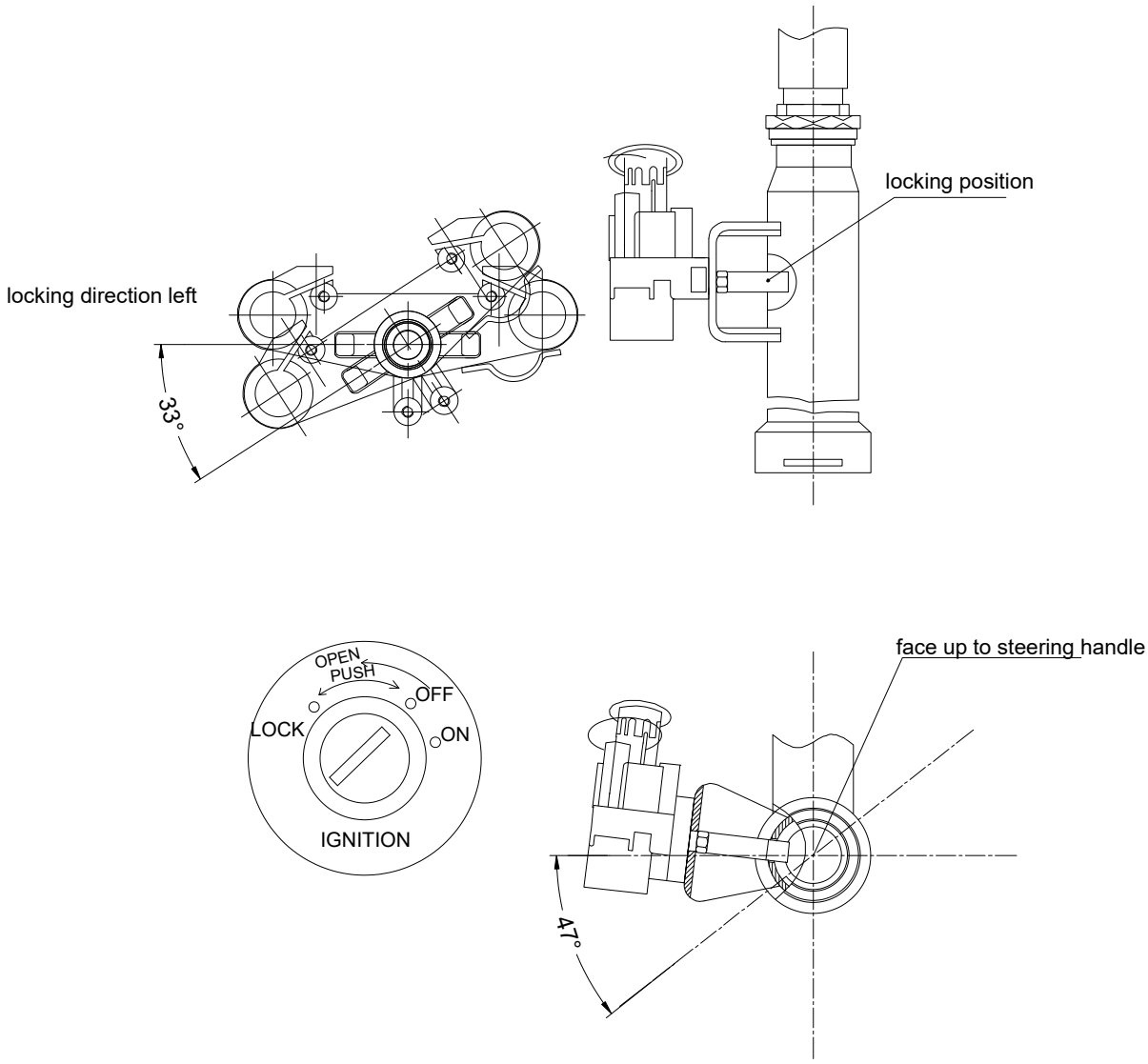
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00





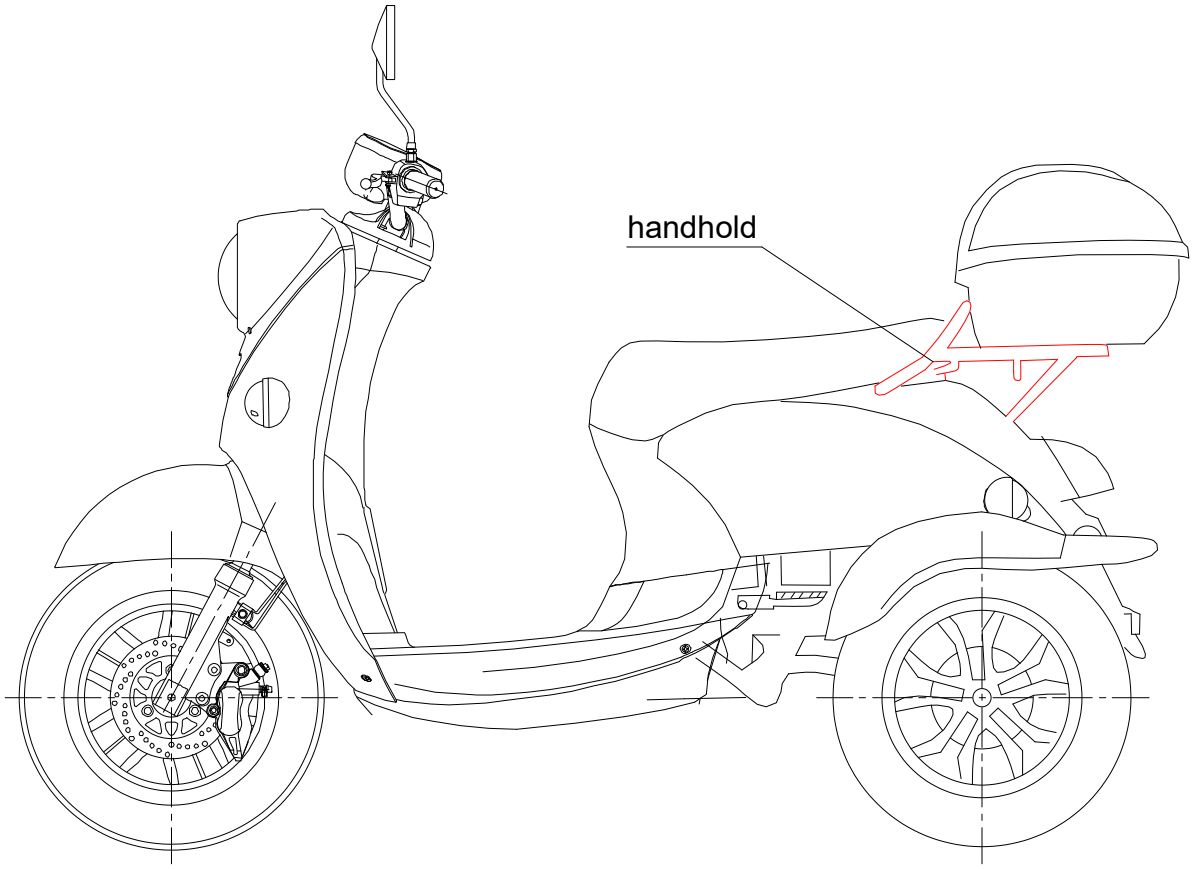
Vehicle Type	HF-ET03
Transmission and Control of Steering	
Drawing NO.	HF-ET03-24

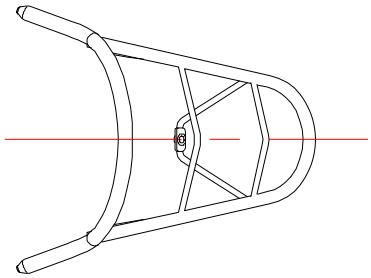
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



Vehicle Type	HF-ET03
Protective Device	
Drawing NO.	HF-ET03-25

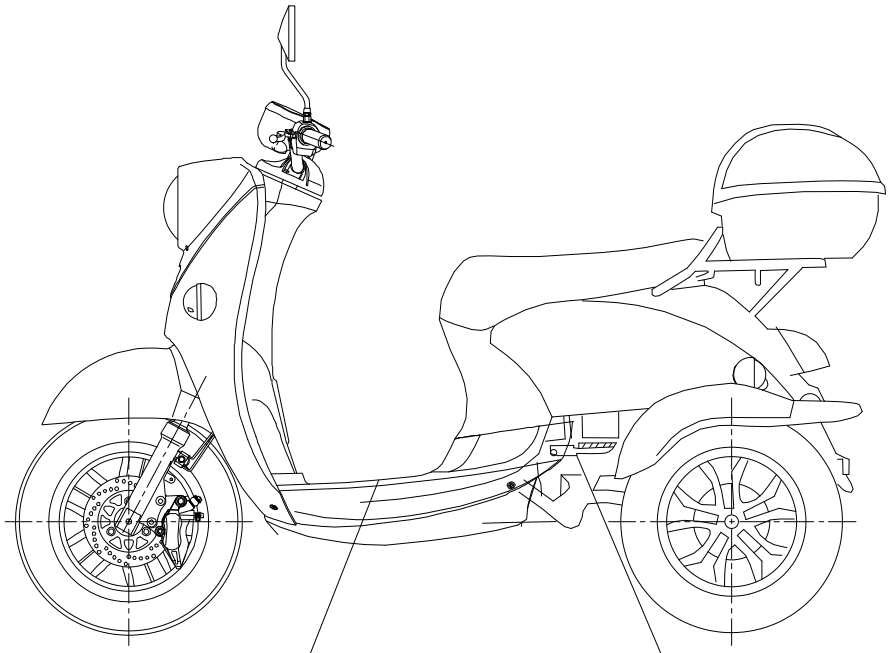
Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

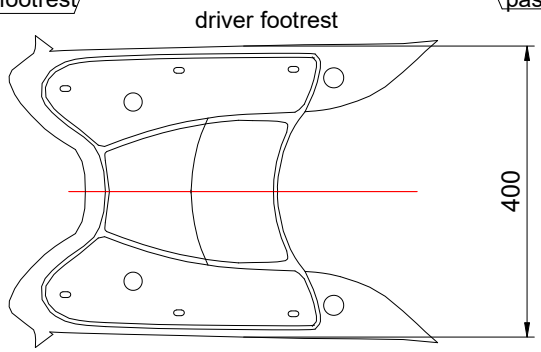


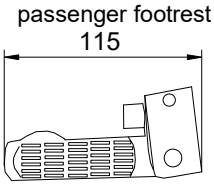


Vehicle Type	HF-ET03
Handhold	
Drawing NO.	HF-ET03-26

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00

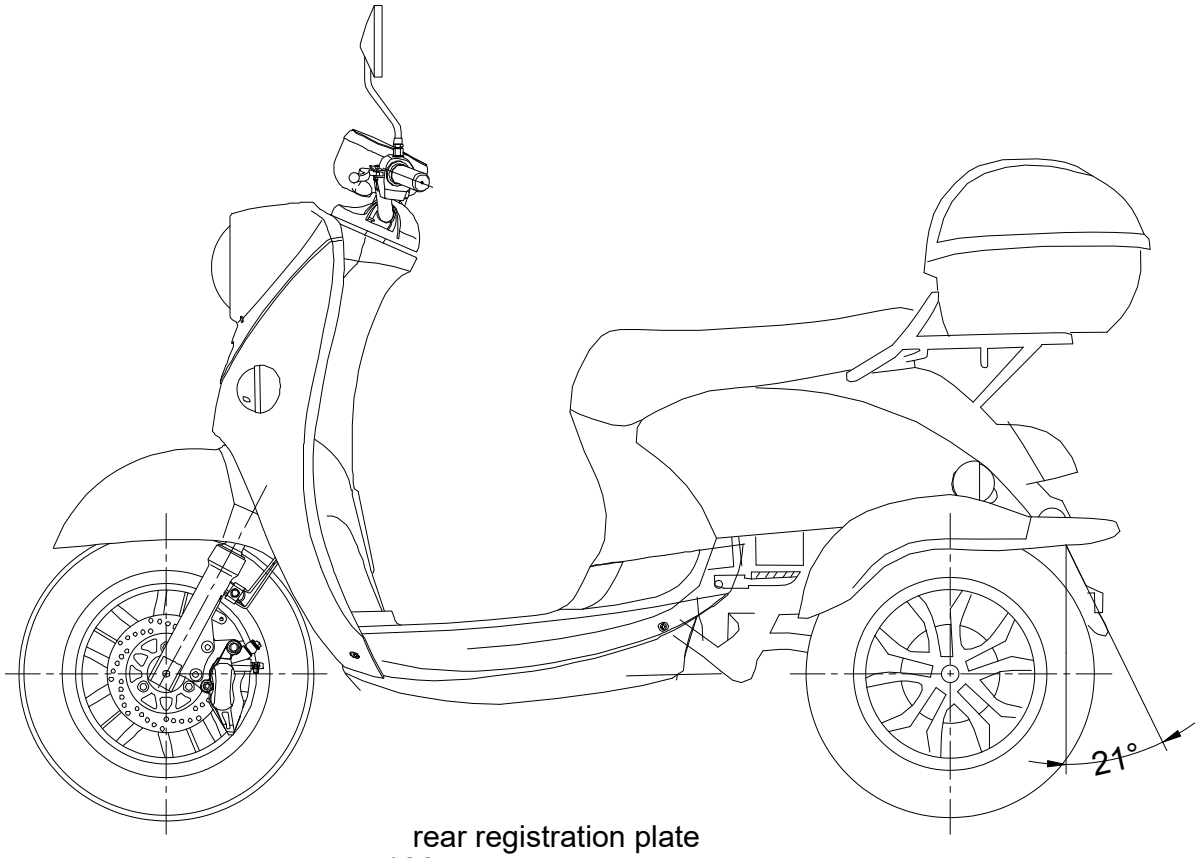




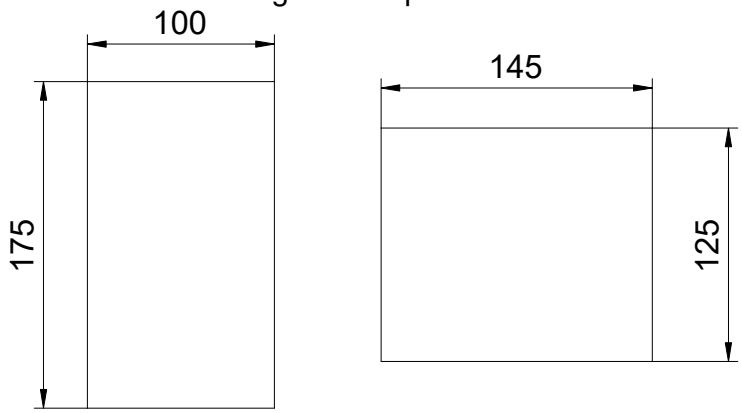


Vehicle Type	HF-ET03
Footrests	
Drawing NO.	HF-ET03-27

Type:HF-ET03 Appendix 4	Huafu New Energy Technology Co., Limited.	Date: Ext.:	28/01/2021 00



rear registration plate



	Lower point	High point
100*175	265mm	425mm
145*125	310mm	425mm

Vehicle Type	HF-ET03
Rear Registration Plate	
Drawing NO.	HF-ET03-28

Type: HF-ET03 Appendix 5	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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

The undersigned: Mr.Zhang Zifu, general manager

Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

Hereby states that the vehicles:

0.1. Make (trade name of the manufacturer): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1 Variant(s): 0

0.2.2 Version(s): 0

0.2.3 Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3 Category, subcategory and sub-subcategory of vehicle: L2e-P

for which type-approval is sought shall withstand normal use as intended for at least 30000 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: HongKong Date: 28 Jan, 2021

Signature: ZHANGZIFU Name and position in the company: Mr. Zhang Zifu/ General Manager

Type: HF-ET03 Appendix 6	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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

The undersigned: Mr.Zhang Zifu, general manager

Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

Hereby states that the vehicles:

0.1. Make (trade name of the manufacturer): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1 Variant(s): 0

0.2.2 Version(s): 0

0.2.3 Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3 Category, subcategory and sub-subcategory of vehicle: L2e-P

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: HongKong Date: 28 Jan, 2021

Signature: ZHANGZIFU Name and position in the company: Mr. Zhang Zifu/ General Manager

Type: HF-ET03 Appendix 7	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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

Reference number: HF-ET03-00

The undersigned: Mr.Zhang Zifu, general manager

Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

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: HongKong Date: 28 Jan, 2021

Signature: ZHANGZIFU Name and position in the company: Mr. Zhang Zifu/ General Manager

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

Type: HF-ET03 Appendix 7	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

Addendum 1
to
Manufacturer's certificate with reference number HF-ET03-00 on access to ~~vehicle OBD (stage I) and~~ vehicle repair and maintenance information

List of the types of vehicle:

0.2. Type: HF-ET03

0.2.1 Variant(s): 0

0.2.2 Version(s): 0

0.2.3 Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3 Category, subcategory and sub-subcategory of vehicle: L2e-P

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: N.A.

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 HF-ET03-00 on access to ~~vehicle OBD (stage I)~~ and vehicle repair and maintenance information

Web site addresses referred to in this certificate:
www.jshuafu.com

Type: HF-ET03 Appendix 7	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

Addendum 3
to
Manufacturer's certificate with reference number HF-ET03-00 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: BALINT LEVENTE /Director
TEL: +36305251033
E-mail:vlmkereskedes@gmail.com

Type: HF-ET03 Appendix 8	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

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:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

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): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1 Variant(s): 0

0.2.2 Version(s): 0

0.2.3 Commercial name(s) (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3 Category, subcategory and sub-subcategory of vehicle: L2e-P

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);~~

Type: HF-ET03 Appendix 8	Huafu New Energy Technology Co., Limited.	Date : 28.Jan 2021 Ext. : 00

(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 2.6 of Annex II to Commission Delegated Regulation (EU) No 44/2014~~

Place: HongKong Date: 28 Jan, 2021

Signature: ZHANGZIFU Name and position in the company: Mr. Zhang Zifu/ General Manager

Statement Concerning Authority of Signature on COC Paper

We, **Huafu New Energy Technology Co., Limited**. declare that the undersigned persons will be the authorized person to sign the COC paper of the vehicle.

Type: HF-ET03

Specification of signature of COC:

Name	Position	Signature
Mr. Zhang Zifu	General Manager	

Huafu New Energy Technology Co., Limited.
Date: 29 Jan. 2021

COMPLETE VEHICLE
EU CERTIFICATE OF CONFORMITY

The undersigned, Zhang Zifu, general manager
Hereby certifies that the following complete vehicle:

0.1. Make (trade name of the manufacturer): yadea, KUBA, YUKI, ARORA, E-MON, MOTORAN, REVOLT, Rolektro, TGB, ISILDAR, APACHI, HUAFU, huafu, RDB RAC DOBROGEA BIKE, KRAL, XIN RI, Skand, STMAX, SUNRA

0.2. Type: HF-ET03

0.2.1. Variant: 0

0.2.2. Version: 0

0.2.3. Commercial name (if available): HF-ET03, TDR41-Z RÜZGAR, Elite350, EFES, STX-01, SUNRA

0.3. Category, subcategory and sub-subcategory of vehicle: L2e-P

0.4 Company name and address of manufacturer:

Huafu New Energy Technology Co., Limited.
Room C, 21/F, CENTRAL 88, 88 DES VOEUX ROAD CENTRAL, HONG KONG

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

VLM Kereskedés Kft
6000 Kecskemét Mindszenti krt. 32 Hungary

0.5.1. Location of the manufacturer's statutory plate(s): R, x1030, y120, z320

0.5.2. Method of attachment of the manufacturer's statutory plate(s): Riveted on the right side of the frame

0.6. Location of the vehicle identification number: R, x300, y5, z350(r/o)

1. Vehicle identification number: ☆R2SJ2C20????????? ☆
conforms in all respects to the type described in EU type-approval (e13*168/2013*?????*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.

Hongkong, China ---------- (place)

DD, MM, YYYY ---------- (date)

ZHANGZIFU
---------- (signature)

e13*168/2013*01086*00
Société Nationale de Certification et d'Homologation

General construction characteristics

1.3. Number of axles: 2 and wheels: 3
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:	1750 mm
2.2.2.	Width:	740 mm
2.2.3.	Height:	1010 mm
2.2.4.	Wheelbase:	1250 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:	580 mm
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:	66 kg
2.1.2.	Actual mass:	176 kg
2.1.3.	Technically permissible maximum laden mass:	251 kg
2.1.3.1.	Technically permissible maximum mass on front axle:	80 kg
2.1.3.2.	Technically permissible maximum mass on rear axle:	171 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: ~~LI / 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: ZHEJIANG UNITE MOTOR CO., LTD	
3.1.2.2.	Electric motor code (as marked on the engine or other means of identification): YWDJ010	

3.3.3.4. ~~15~~/30 minutes power: 1.0 kW at 3007 min^{-1}
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/not off-vehicle charging~~ N.A.
3.9.2. Maximum assistance factor: N.A.

Maximum speed

1.8. Maximum speed of vehicle: 25 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): A.
3.5.4. Gear ratios: Forward gear: 10.37, Reverse gear: 10.37
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:
Optional 1~ 6:
3.00-10 42J 2.15x10 250 kPa
Optional 7
3.00-10 47J 2.15x10 250 kPa
Optional 8, 10, 11:
3.50-10 51J 2.15x10 250 kPa
Optional 9:
3.50-10 56J 2.15x10 250 kPa

Axle 2:
Optional 1~ 6:
3.00-10 42J 2.15x10 250 kPa
Optional 7
3.00-10 47J 2.15x10 250 kPa
Optional 8, 10, 11:
3.50-10 51J 2.15x10 250 kPa
Optional 9:
3.50-10 56J 2.15x10 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: 2
6.16.1.1. Location and arrangement: r1: 1C, r2,1C

Coupling devices

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

Environmental performance

4.0.1. Environmental step: Euro (~~3/ 4 /5/5+~~) N.A.
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 L_{urban}: 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. CO_2 emissions: N.A.
4.0.4. Energy consumption: 64 Wh/km
4.0.5. Electric range: 24 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.