

THE NETHERLANDS

TEST REPORT

Concerning the approval of vehicles with regard to specific requirements for the electric power train in accordance with ECE Regulation number 100.02 supplement 4.

Test report number : RDW-100R-0128398

0.1. Make : Peugeot / Citroën / Opel / Vauxhall / Toyota / Fiat

0.2. Type : ETP / ETO / ETT / ETN

0.3. Category of vehicle : M1 (SH)

0.4. Name and address of the manufacturer : Tripod Mobility B.V.
Collseweg 10
5674 TR Nuenen
The Netherlands

General : The vehicle type as described in the document below has been inspected in accordance with the requirements laid down in the above-mentioned Regulation. See documentation: "ETX-100R-0128398", dated 8 June 2023, total pages: 9

Tests : The tests have been carried out according Annex 8 of the above-mentioned Regulation. The tested system/component/separate technical unit is representative in terms of the type to be approved. See page 2 to 7.

Conclusion : The type of vehicle ~~does not~~ comply with the stated requirements of the above-mentioned Regulation.

Tests conducted on : 15 June 2023

By : S.D. Hulscher

Zoetermeer (NL), 16 June 2023
The test engineer,



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Test report number: RDW-100R-0128398

Reason for testing

1st Stage vehicle modified to wheelchair accessible vehicle.

Worst case description

Single specification according to the requirements.

General information of representative test object

Make of the vehicle : Peugeot / Citroën / Opel / Vauxhall / Toyota / Fiat
Type of the vehicle : ETP / ETO / ETT / ETN
Vehicle category : M1 (SH)
Battery casing : OEM

General test information

Inspected by : S.D. Hulscher
Place : Ingenieurbüro Walter & Weißgerber
Machinhalle / Crashanlage an der Hochschule Trier
54293 Trier
Germany
Date : 15 June 2023

Used test equipment

Item	Required accuracy	Identification
Accelerometer sled	±1.5%	Endevco 2262CA-1000, s/n EN07
Accelerometer sled	±1.5%	Endevco 2262CA-1000, s/n EN01

Remarks

Only the anchorages to mount the casing enclosing the cells have been modified. Therefore the mechanical shock tests are performed with a dummy casing.

For all not by the modification effected items see approval(s)/ test report(s) listed in stage 1 approval. Relevant data and approval(s) valid for donor vehicle and completed vehicle if applicable:

<u>Make</u>	<u>Type</u>	<u>Approval</u>
Peugeot / Citroën / Fiat	ETP / ETN	E2*100R02/??*21053*??
Opel / Vauxhall	ETO / ETN	E2*100R02/??*21055*??
Toyota	ETT / ETN	E2*100R02/??*21054*??



- 6. **Requirements of a Rechargeable Electrical Energy Storage System (REESS) with regard to its safety**
- 6.4. ***Mechanical Impact***
- 6.4.1. Mechanical Shock
- 6.4.1.1. Vehicle based test : N/A
- 6.4.1.2. Component based test
The test shall be conducted in accordance with Annex 8C of this Regulation. : see annex 8C
- 6.4.1.3. Acceptance criteria : pass



Annex 8C Mechanical shock

2. Installation

2.1. This test shall be conducted either with the complete REESS or with REESS subsystem(s). : dummy casing

If the manufacturer chooses to test with REESS subsystem(s), the manufacturer shall demonstrate that the test result can reasonably represent the performance of the complete REESS with respect to its safety performance under the same conditions. If the electronic management unit for the REESS is not integrated in the casing enclosing the cells, then the electronic management unit may be omitted from installation on the Tested-Device if so requested by the manufacturer : for 2nd stage modifications only casing enclosure anchorages are modified

2.2. The Tested-Device shall be connected to the test fixture only by the intended mountings provided for the purpose of attaching the REESS or REESS subsystem to the vehicle. : pass

3. Procedures

3.1. General test conditions and requirements

(a) The test shall be conducted at an ambient temperature of $20 \pm 10^{\circ}\text{C}$, : pass

(b) At the beginning of the test, the SOC shall be adjusted to a value in the upper 50 per cent of the normal operating SOC range, : N/A

(c) At the beginning of the test, all protection devices which effect the function of the tested-device and which are relevant to the outcome of the test, shall be operational. : N/A

3.2. Test Procedure

The Tested-Device shall be decelerated or accelerated in compliance with the acceleration corridors. The manufacturer shall decide whether the tests shall be conducted in either the positive or negative direction or both. : pass

For each of the test pulses specified, a separate Tested-Device may be used. : single dummy casing

The test pulse shall be within the minimum and maximum value as specified. A higher shock level and /or longer duration as described can be applied to the Tested-Device if recommended by the manufacturer. : pass

Results of frontal collision imitation:

Sled acceleration : see diagram 1

Results of lateral collision imitation:

Sled acceleration : see diagram 2



Diagram 1 - strength of the casing enclosure anchorages imitating a frontal collision

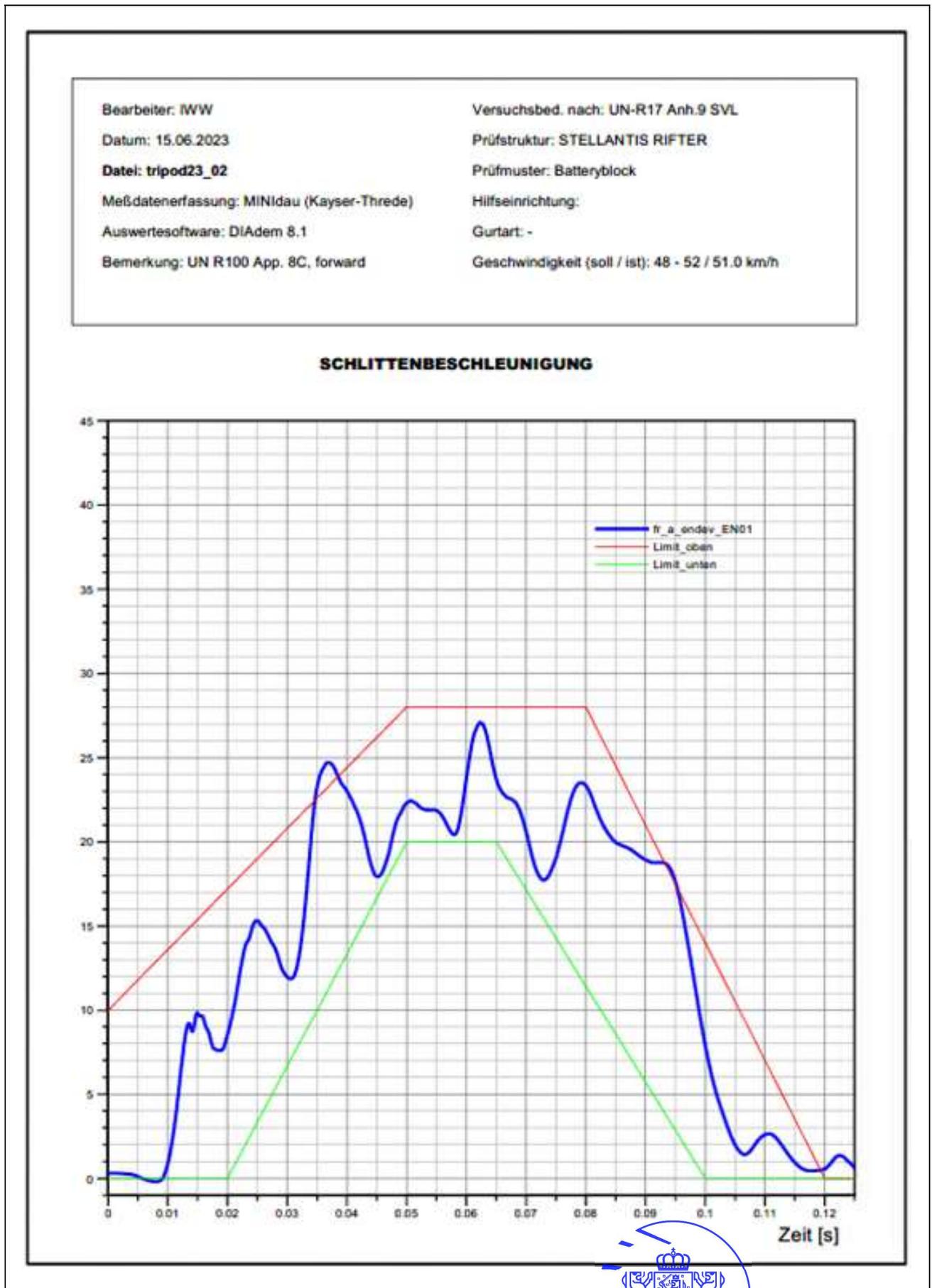


Diagram 2 - strength of the casing enclosure anchorages imitating a lateral collision

