

## THE NETHERLANDS

## TEST REPORT

Concerning the approval of category M, N and O vehicles with regard to their masses and dimensions,  
in accordance with Regulation (EC) No 2019/2144  
as implemented by Commission Regulation (EU) 2021/535 as last amended by (EU) 2021/535 and  
as specified by Regulation (EU) 2018/858, Annex II, Part III, Appendix 3

**Test report number** : RDW-2021/535/XIII-0135312

0.1. Make : Renault / Mercedes-Benz / Nissan

0.2. Type : XFKT

0.4. Category of vehicle : M1-SH

0.5. 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: "XFKT-2018/858-00116" dated 5 December 2023

**Tests** : The tests have been carried out according to the above-mentioned Regulation.

**Conclusion** : The above mentioned type of vehicle does comply with the stated requirements  
in the above-mentioned Regulation.

**Tests conducted on** : 5 December 2023

**By** : S.D. Hulscher

Zoetermeer (NL), 5 December 2023  
The test engineer,



R.T.F.W. Callaars



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### Reason for testing

1<sup>st</sup> stage vehicle modified to wheelchair accessible vehicle.  
Addition of new variant/versions to the vehicle type.

### Explanation of modification(s)

The base vehicle has been modified to a wheelchair accessible vehicle with a lowered floor and ramp.

### Worst case description

All configurations have been checked.

### General information of the test object

Make and type of the vehicle : Renault / Mercedes-Benz / Nissan XFKT  
Vehicle category : M1-SH  
Vehicle Identification Number : N/A  
Type of vehicle body : AF (Multi-purpose vehicle)  
Off-Road Vehicles (ORV) : ~~yes~~/no

### General test information

Test conducted by : S.D. Hulscher  
Place : Zoetermeer, The Netherlands  
Date : 5 December 2023

### Used test equipment

Item	Required accuracy	Identification
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### Remarks

This test report is a supplement to previous test reports.

Relevant approval(s) valid for donor vehicle and completed vehicle:

<u>Make</u>	<u>Type</u>	<u>Approval</u>
Renault	RFK	e2*2018/858*00001*..
Mercedes-Benz	MFK	e2*2018/858*00014*..



**Part 2            Technical specifications**

**2.                General provision**

- 2.1.            The following masses shall be determined by the manufacturer for each version within a vehicle type, irrespective of the state of completion of the vehicle:
- (a) the technically permissible maximum laden mass : see documentation
  - (b) the technically permissible maximum laden mass of the combination : see documentation
  - (c) the technically permissible maximum towable mass : see documentation
  - (d) the technically permissible maximum mass on the axles or the technically permissible maximum mass on a group of axles : see documentation
  - (e) the technically permissible maximum masses at the coupling point(s), taking into account the technical features of the couplings that are fitted or can be fitted to the vehicle : see documentation

**3.                Mass distribution calculations**

For the purposes of mass distribution calculations, the manufacturer shall provide the type-approval authority, for each technical configuration within the vehicle type, the following masses:

- 3.1.            Where the optional equipment significantly affects the masses and dimensions of the vehicle, the manufacturer shall provide the technical service with the location, mass and geometrical position of the gravity centre with respect to the axles of the optional equipment that can be fitted to the vehicle : N/A
- 3.2.            For groups of axles, the manufacturer shall indicate the load distribution among the axles of the total mass applied to the group of axles <sup>(1)</sup> : N/A
- 3.3.            The manufacturer shall, upon a request by the type-approval authority or the technical service, make available for test purposes a vehicle representative of the type to be approved : see page 3
- 3.4.            The vehicle manufacturer may submit an application for recognition of the equivalence of a suspension to air suspension to the type-approval authority : N/A

- 4.                Special provisions as regards registration/in-service maximum permissible masses** : N/A



<sup>(1)</sup> Where necessary, the manufacturer shall state the distribution formulae or produce the relevant distribution graphs.

Section B      **Vehicles of category M1 and N1**

1.                    **Maximum authorised dimensions**                    : not changed,  
see remarks
- 2                    Mass distribution**
- 2.1.                The sum of the technically permissible maximum mass on the  
axles shall not be less than the technically permissible maximum  
laden mass of the vehicle                    : pass
- 2.2.                The technically permissible maximum laden mass of the vehicle  
shall not be less than the mass of the vehicle in running order  
plus the mass of the passengers plus the mass of the optional  
equipment plus the mass of the coupling if not included in the  
mass in running order                    : pass
- 2.3.                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                    : pass
- 2.4.                Where the vehicle is laden to the technically permissible  
maximum laden mass, the mass on the front axle shall in no  
event be less than 30% for M1 vehicles, and no less than 20%  
for N1 vehicles of the technically permissible maximum laden  
mass of the vehicle                    : pass
- 2.5.                Where the vehicle is laden to the technically permissible  
maximum laden mass plus the technically permissible maximum  
mass at the coupling point, the mass on the front axle shall in no  
event be less than 20% of the technically permissible maximum  
laden mass of the vehicle                    : pass
- 2.6.                Where a vehicle is equipped with removable seats, the  
verification procedure shall be limited to the condition with the  
maximum number of seating positions                    : pass



2.7.	For the purposes of verifying the requirements laid down in items 2.2., 2.3. and 2.4.:	
	(a) The seats shall be adjusted as prescribed in point 2.7.1.	
	(b) The masses of the passengers, the pay-mass and the mass of the optional equipment shall be distributed as prescribed in points 2.7.2. to 2.7.4.2.3.	
2.7.1.	Seat adjustment <sup>(2)</sup>	: pass
2.7.2.	Distribution of the mass of passengers	
2.7.2.1.	The mass representing each passenger shall be 75 kg	: pass, see calculations
2.7.2.2.	The mass for each passenger shall be located at the seating reference point	: pass
2.7.2.3.	In the case of special purpose vehicle, the requirement of item 2.7.2.2 shall apply mutatis mutandis <sup>(3)</sup>	: N/A
2.7.3.	Distribution of the mass of the optional equipment	: see test results
2.7.4.	Distribution of the pay-mass	
2.7.4.1.	M1 vehicles	
2.7.4.1.1.	The pay-mass shall be distributed in accordance with the manufacturer's specifications in agreement with the technical service	: pass
2.7.4.1.2.	Motor caravans the minimum pay-mass (PM) shall meet the following requirement: $PM \geq 10 (n + L)$ <sup>(4)</sup>	: N/A
2.7.4.2.	N1 vehicles	
2.7.4.2.1.	As regards vehicles with bodywork, the pay-mass shall be distributed uniformly on the cargo bed	
2.7.4.2.2.	As regards vehicles without bodywork (e.g. chassis-cab), the manufacturer shall state the extreme permissible positions of the centre of gravity of the pay-mass increased by the mass of the equipment intended to accommodate goods <sup>(5)</sup>	: N/A
2.7.4.2.3.	As regards vehicles intended to be fitted with a fifth wheel coupling, the manufacturer shall state the minimum and maximum fifth wheel lead	: N/A



<sup>(2)</sup> The seats where adjustable shall be moved to their rearmost position.  
Where there are other possibilities for adjusting the seat (vertical, angled, seat back, etc.) the adjusted positions shall be as specified by the vehicle manufacturer.  
In the case of suspension seats, the seat shall be locked in the position specified by the manufacturer.

<sup>(3)</sup> For example, mass of an injured person lying on the stretcher in the case of an ambulance.

<sup>(4)</sup> 'n' is the maximum number of passengers plus the driver and 'L' is the overall length of the vehicle in metre.

<sup>(5)</sup> E.g. bodywork, tank, etc..

- 2.8. Additional requirements where the vehicle is capable of towing a trailer
- 2.8.1. The requirements referred to in items 2.2., 2.3. and 2.4. shall apply taking into account the mass of the coupling and the technically permissible maximum mass at the coupling point : N/A
- 2.8.2. Without prejudice to the requirements of item 2.4., the technically permissible maximum mass on the rear axle(s) may be exceeded by not more than 15% : N/A
- 2.8.2.1. Where the technically permissible maximum mass on the rear axle(s) is exceeded by not more than 15%, the requirements of paragraph 5.2.4.1. of UN Regulation No 142 (4) shall apply  
- minimum load index required : --
- 2.8.2.2. In the Member States where the road traffic legislation allows it, the manufacturer may indicate in an appropriate supporting document, such as the owner's manual or the maintenance book that the technically permissible maximum laden mass of the vehicle may be exceeded by not more than 10% or 100 kg, whichever value is lower : --
- Does the manufacturer indicate the possibility of exceeding the technically permissible maximum laden mass : --
- If yes, operating speed shall be restricted to 100 km/h or less : --
3. ***Towable mass and mass at the coupling point*** : N/A
4. ***Mass of the combination*** : N/A
5. ***Hill starting ability*** : N/A



**Attachment 1** Calculations of the mass distribution – without seat reduction

**General information of the tested vehicle**

Make and type of the vehicle : Renault / Mercedes-Benz / Nissan XFKT  
 Vehicle category : M1-SH  
 Vehicle Identification Number : N/A  
 Tested variant/version : RW? / MBB????G1000-20M

**Weights**

- mass in running order (MRO) : 1702 kg  
 - front axle mass at MRO : 948 kg  
 - rear axle mass at MRO : 754 kg  
 - technically permissible maximum laden mass : 2090 kg  
 - technically permissible maximum mass on front axle : 1110 kg  
 - technically permissible maximum mass on rear axle : 1140 kg  
 - mass of the coupling device : 0 kg  
 - maximum vertical load on the coupling device : 0 kg  
 - total mass of the optional equipment on front axle : 1.5 kg  
 - total mass of the optional equipment on rear axle : 1.5 kg

**Dimensions**

- Wheel base : 2716 mm  
 - from front axle to R-point front passenger : 1301 mm  
 - from front axle to R-point second row outboard passenger : 2120 mm  
 - from front axle to R-point second row center passenger : 2120 mm  
 - from front axle to R-point third row outboard passenger : --  
 - from front axle to R-point third row center passenger : 2778 mm  
 - from front axle to centre of luggage compartment/cargo bed : --  
 - from front axle to centre of gravity coupling device : --  
 - rear overhang of the coupling device : --

**Number of passengers**

- on the first row : 1  
 - on the second row outboard : 2  
 - on the second row center : 1  
 - on the third row outboard : --  
 - on the third row center (wheelchair position) : 1



**Measured weights**

	front axle [kg]	rear axle [kg]	total [kg]
unladen mass of the vehicle as measured	N/A		
mass of the optional equipment fitted to the test vehicle			
calculated unladen mass without options			

**Calculated mass distribution**

	front axle [kg]	rear axle [kg]	total [kg]
MRO	948.0	754.0	1702.0
MRO + optional equipment (maximum actual mass)	949.5	755.5	1705.0
MRO + optional equipment + all seats occupied	1034.3	1130.7	2165.0
MRO + optional equipment + all seats occupied + coupling	N/A	N/A	N/A
MRO + optional equipment + all seats occupied + coupling, trailer operation	N/A	N/A	N/A



## Attachment 2 Calculations of the mass distribution – with seat reduction

### General information of the tested vehicle

Make and type of the vehicle : Renault / Mercedes-Benz / Nissan XFKT  
 Vehicle category : M1-SH  
 Vehicle Identification Number : N/A  
 Tested variant/version : RW? / MBB????G1000-20M

### Weights

- mass in running order (MRO) : 1702 kg  
 - front axle mass at MRO : 948 kg  
 - rear axle mass at MRO : 754 kg  
 - technically permissible maximum laden mass : 2090 kg  
 - technically permissible maximum mass on front axle : 1110 kg  
 - technically permissible maximum mass on rear axle : 1140 kg  
 - mass of the coupling device : 0 kg  
 - maximum vertical load on the coupling device : 0 kg  
 - total mass of the optional equipment on front axle : 1.5 kg  
 - total mass of the optional equipment on rear axle : 1.5 kg

### Dimensions

- Wheel base : 2716 mm  
 - from front axle to R-point front passenger : 1301 mm  
 - from front axle to R-point second row outboard passenger : 2120 mm  
 - from front axle to R-point second row center passenger : 2120 mm  
 - from front axle to R-point third row outboard passenger : --  
 - from front axle to R-point third row center passenger : 2778 mm  
 - from front axle to centre of luggage compartment/cargo bed : --  
 - from front axle to centre of gravity coupling device : --  
 - rear overhang of the coupling device : --

### Number of passengers

- on the first row : 1  
 - on the second row outboard : --  
 - on the second row center : 1  
 - on the third row outboard : --  
 - on the third row center (wheelchair position) : 1



### Measured weights

	front axle [kg]	rear axle [kg]	total [kg]
unladen mass of the vehicle as measured	N/A		
mass of the optional equipment fitted to the test vehicle			
calculated unladen mass without options			

### Calculated mass distribution

	front axle [kg]	rear axle [kg]	total [kg]
MRO	948.0	754.0	1702.0
MRO + optional equipment (maximum actual mass)	949.5	755.5	1705.0
MRO + optional equipment + all seats occupied	1001.4	1013.6	2015.0
MRO + optional equipment + all seats occupied + coupling	N/A	N/A	N/A
MRO + optional equipment + all seats occupied + coupling, trailer operation	N/A	N/A	N/A