

Test report No.: 23-00007-CP-PR-00
Manufacturer: OKB Sp. z o.o., Poland
Type: RAM03



Test report

No.: 23-00007-CP-PRG-00

Test of a seat bench
with regard to UN Regulation No. **17.00**
taking into consideration amendment No. **17.09, Supplement 1**
Approval subject: **Strength of seats and their anchorages and head restraints**

Approval status	
Granting of a type approval	N/A
Extension/correction to type approval no.	N/A

N/A - Test report only

Test report No.: 23-00007-CP-PR-00
Manufacturer: OKB Sp. z o.o., Poland
Type: RAM03



I. General

Make: MOBIFRAME

Type: RAM03

Version: N/A

Category of vehicle: M1, N1, M2, N2

Name and address of manufacturer: OKB SP. Z O.O.
ul. Szkolna 9
95-006 Bukowiec
Poland

Reference number of information folder: MOBIFRAME/05/2022-00

Date of issue of information folder: 20.01.2023

Dieser Prüfbericht kann nur mit Kaufnachweis von Freizeit WITTKKE GmbH (Komponenten aus diesem Prüfbericht) zu Fahrzeugabnahme oder Genehmigungszwecken verwendet werden.
This report is allowed to be used for vehicle inspection or registration purposes only with proof of purchase (of components associated with this report) from Freizeit WITTKKE GmbH.

Test report No.: 23-00007-CP-PR-00
Manufacturer: OKB Sp. z o.o., Poland
Type: RAM03



II. Test results

Refer to the Annex

III. Enclosures

Information Folder

IV. Statement of conformity

The mentioned type described therein is in accordance with the test basis mentioned above. Sampling plan or method result from the requirements of the test basis. The worst-case configuration was selected in accordance with process description "Requirements for Test Reports (AS-PB-T-02)". Valid decision rule in accordance with ILAC G8:2019, 4.2.1: in question of meeting the limits the measurement uncertainty was ignored.

The manufacturer is responsible for the information (III.) and the test specimens provided by him. The test results relate only to the test specimens as received and mentioned (II.). The test specimens are representative for the type described (III.).

The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

TÜV SÜD Auto Service GmbH is designated as Technical Service by:

Genehmigungsbehörde Approval authority	Land Country	Registriernummer Registration number
Kraftfahrt-Bundesamt (KBA)	Deutschland Germany	KBA-P 00100-10
Vehicle Certification Agency (VCA)	Vereinigtes Königreich United Kingdom	VCA-TS-006
Approval Authority of the Netherlands (RDW)	Niederlande The Netherlands	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Irland Ireland	Technical Service Number: 49
Vehicle Safety Certification Center (VSCC)	Taiwan/Taiwan	DE04-06-2
Société Nationale de Certification et d'Homologation s.à r.l.	Luxemburg Luxembourg	13/B(g)
Swedish Transport Agency (STA)	Schweden Sweden	TT 0024

Munich, 23.01.2023



Ing. Vít Bursík
Authorized signatory

Annex

1. Technical data of the test sample

- 1.1. Make: MOBIFRAME
 1.2. Type: RAM03
 1.3. Commercial description(s): RAM03
 1.3.1. Remark

Detailed drawings and description of benches type RAM03 (RAM03 is double seat frame with two single seats S1NGR03, NG500) their anchorages and the head restraint are included in Information Document MOBIFRAME/05/2022-00 attached to this test report.

- 1.4. Category of vehicle: M1, N1, M2, N2
 1.5. Test object: Double seat benches type RAM03.
 For details see manufacturer's information folder.
 1.6. Mass of seat benches: RAM03 – 62 kg – mass of the heaviest configuration.
 RAM03 is double seat frame with two single seats S1NGR03.
 1.7. Number of seating positions: 2
 1.8. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Commercial description / Type	Wheelbase
Daimler / Mercedes-Benz	Sprinter (906, 907)	3250, 3665, 4325
	Sprinter, e-Sprinter (910)	3259, 3924
	Vito/Viano/V-klasse, e-Vito (639, 639/2, 639/4)	3200, 3430
VW	Crafter (2E__)	3250, 3665, 4325
	Crafter, e-Crafter (SYN__ e.g. SYN1E, SYN2E, SYN2Z)	3640, 4490
	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6, T6.1, e-Transporter (7H_, 7E_, 7J_)	3000, 3400
Citroen	Jumper, e-Jumper (Y)	3000, 3450, 4035
	Jumpy (X)	3000, 3122
	Jumpy, e-Jumpy (2016)	2925, 3275
	SpaceTourer, E-SpaceTourer	2925, 3275
	Berlingo, E-Berlingo	2785, 2975

Test report No.: 23-00007-CP-PR-00
 Manufacturer: OKB Sp. z o.o., Poland
 Type: RAM03



1.8. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Commercial description / Type	Wheelbase
Peugeot	Boxer, e-Boxer (Y)	3000, 3450, 4035
	Expert (VF3__)	3000, 3122
	Expert, e-Expert (2016-...)	2925, 3275
	Traveller, e-Traveller	2925, 3275
	Rifter, e-Rifter	2785, 2975
Fiat	Ducato, e-Ducato (250)	3000, 3450, 4035
	Scudo (270)	3000, 3122
	Scudo (2022-...)	2925, 3275
	Talento (FJL, FFL)	3098, 3498
Opel	Movano (MR, MS, MW)	3182, 3682, 4332
	Movano, Movano-e (Y)	3000, 3450, 4035
	Vivaro (F7)	3098, 3498
	Vivaro, Vivaro-e, Vivaro e-Kombi, Zafira Life	2925, 3275
	Combo Life, Combo-e Life	2785, 2975
Renault	Master, Master E-Tech (FV, MA, VA)	3182, 3682, 4332
	Trafic (FL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Trucks	Master (MF, VF)	3182, 3682, 4332
Ford	Transit, (FA_, FD_)	2933, 3300, 3750
	Transit, e-Transit (FC_)	3300, 3750, 3954
	Transit Custom (FA_, FC_), Turneo Custom	2933, 3300
	Transit Connect (PU2)	2662, 3062
Iveco	Daily, Daily Electric (IS_)	3000, 3300, 3520, 3950, 4100, 4750
Nissan	NV200	2725
	NV300, Primastar	3098, 3498
	NV400	3182, 3682, 4332
Toyota	Pro Ace (2013-2016)	3000, 3122
	Pro Ace, Pro Ace Verso, Pro Ace Electric (2016)	2925, 3275
MAN	TGE, eTGE (SYN__ e.g. SYN1E, SYN2E, SYN2Z)	3640, 4490

Test report No.: 23-00007-CP-PR-00
 Manufacturer: OKB Sp. z o.o., Poland
 Type: RAM03



1.8. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Commercial description / Type	Wheelbase
MAXUS (LDV)	V80, Maxus (SV6C)	3100, 3850
	V90, Deliver 9, E-Deliver 9	3000, 3366, 3760
	Deliver 3, E Deliver 3	2910, 3285
Hyundai	H350 (EU(V))	3435, 3670
RAM	ProMaster	3000, 3450, 4035
Freightliner/Dodge	Sprinter	3250, 3665, 4325

1.9. Type of bodywork using the codes AC, AF, BB, CA, SA, SG, SH set out in Part C of Annex II of Directive 2007/46/EC or in Part C of Annex I to Regulation (EU) 2018/858:

Dieser Prüfbericht kann nur mit Kaufnachweis von Freizet WITTK GmbH Komponenten verwendet werden.
 This report is allowed to be used for vehicle inspection or registration purposes only with proof of purchase
 (of components associated with this report) from Freizet WITTK GmbH.

2. Test conditions

2.1. Instrumentation:

- Digital ballance
- Accelerometre
- Head restraint performance test device
- Linear impactor
- 3DH-point measurement device
- Caliper
- Measurement 2D frame

2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

3. Test results

3.1 Test procedures used (UN Regulation 17):

Static and energy dissipation test of strength of seat anchorages, adjustment and displacement mechanisms and head restraints according to UN Regulation No. 17.09.

The below mentioned test results cover all versions including the maximum mass stated in the enclosed information document.

(seat, seat-to-vehicle anchorages, seat arrangement).

Head restraint positioning

Rear rows – integrated head restraint

3.2 Strength test of seats and head restrains, energy absorption tests and dynamic test according ECE Regulation No. 17.09 – See point 3.2.2.

3.2.2. Head restraint/seat back performance

Static tests:

Test No. 62053-21_03, 06 and 11

H point measuring:

See Table 1

Table 1: H-point coordinates

H-point position	Seating position	NG500
	coordinate X [mm]	-123,33
	coordinate Z [mm]	87,82
	relatively to	armrest tilt axis
	torso angle [°]	24,3°

Head restraint/seat back performance

Definition and requirement	Paragraph		Measured values
	Requirement	Test procedure	Rear seats
No side facing seats in vehicles of the class M1, N1	5.1.	N/A	No side facing seats installed.
Adjusting and displacement automatic locking systems	5.2.1 – 5.2.2.	N/A	Adjustment and locking system lock automatically in the position for use.
Energy absorption of the rear parts of the seats, the deceleration of the headform $\leq 80 \text{ g}$ continuously for more than 3 ms under the impact	5.2.3	6.8.1.1, Annex 6	Pass, see par. 5.5
Roughness or sharp edges of the rear seat parts - radii 2,5 mm in area 1 - radii 2,5 mm in area 2 - radii 3,2 mm in area 3	5.2.4	6.8.1	Pass
No seat ruptures after tests	5.2.5	6.2	No ruptures occurred.
No release of the locking systems during the test	5.2.6.	6.3 and 2.1. of Annex 9	NG500 - PASS

Head restraint/seat back performance

Requirements for vehicles of category N, M ₂ and M ₃	5.3.		PASS
Installation of the head restraints (min. front outboard seats)	5.4.	N/A	Seat is equipped with head restraint
			NG500
No additional cause of danger to occupants of the vehicle by the head restraint; energy absorption - the deceleration of the headform ≤ 80 g continuously for more than 3 ms under the impact*	5.5.	6.8.1.1.3, Annex 6	Front head restraint surface: $a_{\max}=56,74$ g $v=24,24$ km/h Rear head restraint surface: $a_{\max}=84,16$ g $a_{3\text{ms}}=58,63$ g $v=24,34$ km/h
Highest distance of the head restraint top from R point: H ≥ 750 mm for rear seats	5.6.3.1	6.5	751 mm
Min. height in any position for use H ≥ 750 mm for rear outboard seat H ≥ 700 mm for rear middle seats	5.6.3.2 (5.6.5.)	6.5	N/A
Height of the head restraint effective area h ≥ 100 mm	5.7.1	6.5	> 100 mm
Gap between head restraint and seat-back m ≤ 25 mm	5.8	6.7	0 mm
Integral head restraints	5.9	6.7, 6.4.3.3.2	Pass
Head restraints with gaps	5.10	6.7	N/A (no gaps)
Width of head restraint 65 mm below its top L ≥ 170 mm	5.11	6.6	393 mm
Head rearward displacement X < 102 mm when loaded to moment 373 Nm around R point	5.12	6.4	24,4 mm
Loading force for head restraint F ≥ 890 N	5.13	6.4.3.6.	895,1 N without rupture
Raise the head restraint beyond the operational height	5.14	N/A	Not possible
Strength of the seat back under the load of 530 Nm per seating position	5.2.7, 5.15	6.2	Passed without ruptures
Luggage displacement retention requirements	5.16	Annex 9	N/A

Test report No.: 23-00007-CP-PR-00
Manufacturer: OKB Sp. z o.o., Poland
Type: RAM03



3.2.3. Dynamic tests seat NG500

For details see test report 120193-22-TAC

General note:

- 5.3.1. *Bench seats are firmly anchored to the vehicle floor.*
- 5.3.2. *Bench seats are automatically lockable in all the positions provided.*
- 5.3.3. *Adjustable seat-backs are lockable in all the positions provided (if applicable)*
- 5.3.4. *All Bench seats which can be tipped forward or have fold-on backs and folding seats are lock automatically in the position of use by occupants.*

Dieser Prüfbericht kann nur mit Kaufnachweis von Freizeit WITKE GmbH (Komponenten aus diesem Prüfbericht)
zu Fahrzeugabnahme oder Genehmigungszwecken verwendet werden.
This report is allowed to be used for vehicle inspection or registration purposes only with proof of purchase
(of components associated with this report) from Freizeit WITKE GmbH.

Test report No.: 23-00007-CP-PR-00
Manufacturer: OKB Sp. z o.o., Poland
Type: RAM03

3.4 Additional materials:

3D-H Manikin measurement - photos to the test



4. Place and date of testing

TÜV SÜD Czech, Prague, Czech Republic,
OKB laboratory, Bukowiec, Poland.
As before and 29.07.2021