

Test report No.: 20-00026-CP-PRG-00  
Manufacturer: NMI Safety Systems Ltd., United Kingdom  
Type: NLR22



## Test report

### No.: 20-00026-CP-PRG-00

Test of NMI Lite Rail  
with regard to Directive / Regulation (EC/EU) / Regulation No. **ECE R14**  
taking into consideration amendment No. 07, **Supplement 8**

Approval subject:  
**Strength of safety belt anchorages**

Approval status		
<input type="checkbox"/>	Granting of a type approval	N/A
<input type="checkbox"/>	Extension/correction to type approval no.	N/A

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## I. General

Make: NMI Lite Rail

Type: NLR22

Commercial name(s) (if available): NMI Lite Rail

Category of vehicle: M1, N1, M2, N2, M3, N3

Name and address of manufacturer: Base:  
NMI Safety Systems Ltd.  
16 IO Centre, Arlington Business Park,  
Whittle Way, Stevenage, Herts SG1 2BD  
United Kingdom

Manufacturer  
NMI Lite Rail: NMI Safety Systems Ltd.  
16 IO Centre, Arlington Business Park,  
Whittle Way, Stevenage, Herts SG1 2BD  
United Kingdom

Seats:  
INTAP Advanced Technology Sp. z o.o Sp. K..  
ul. Rokicińska 110/112  
95-006 Bukowiec k/Łodzi  
Poland  
SEGE TAŞIT KOLTUKLARI ve OTOMOTİV  
SAN ve TİC A.Ş.  
Alaşar Köy Mah. 273. İsimsiz Sk. No: 24,  
16370, Bursa,  
Turkey

Phoenix Seating Ltd.  
Unit 47, Bay 3, Second Avenue,  
The Pensnett Estate, Kingswinford,  
West Midlands, DY6 7UZ  
United Kingdom  
Cogent Passenger Seating Ltd.  
Prydwen Road Swansea West  
Industrial Park, SA5 4HN  
United Kingdom

NMI Safety Systems Ltd.  
16 IO Centre, Arlington Business Park,  
Whittle Way, Stevenage, Herts SG1 2BD,  
United Kingdom  
BE-GE JANY A/S  
Vestergade 63-65  
7741 FRØSTRUP  
Denmark

Name and address of representative: N/A

Reference number of information folder: LR-01/2020/00

Date of issue of information folder: 20.05.2020

**II. Test results**

Refer to the Annex

**III. Enclosures**

Information Folder

**IV. Statement of conformity**



The mentioned information folder and the type described therein are in accordance with the test basis mentioned above. The worst-case was selected in accordance with document "Requirements for Test Reports (AS-PB-T-02)".

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Kraftfahrt-Bundesamt (KBA)	Deutschland <i>Germany</i>	KBA-P 00100-10
Vehicle Certification Agency (VCA)	Vereinigtes Königreich <i>United Kingdom</i>	VCA-TS-006
Approval Authority of the Netherlands (RDW)	Niederlande <i>The Netherlands</i>	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Irland <i>Ireland</i>	Technical Service Number: 49
Société Nationale de Certification et d'Homologation s.à r.l.	Luxemburg <i>Luxembourg</i>	13/B(g)

Munich, 26.06.2020

**Ing. Vít Bursík**  
 Authorized signatory

## Annex

### Test report

#### 1. Technical data of the test sample

- 1.1. Test object: NMI Lite Rail type NLR22 installed to various vehicles bodies or on rigid test rig with several types of seats and legs installed on the floor.  
 Details see below and in manufacturer's information document.
- 1.1.1. Location and arrangement: Seats can be mounted in any position in the vehicle, provided in one row there are not more than 4 seats.
- 1.1.2. Number of seating positions: Not limited
- 1.1.3. Seats tested for installation on NMI Lite Rail:

Dummy seat	Production seats	
	Category M1	Category M2/M3
Dummy Seat 2 (DS-02) Dummy Seat 3 (DS-03)	S1MED01, S1TAX01, S1TAX02, S1TAX03, S1TAX08 S1NOV04, S1ERB08, S1KAR02, S1KAR03, S1KAR06, S1AMB01 805 Police seat	Single seats: S1NOV01, S1LID17, S1LID18, S1LID25 S1POL01, S1ERB01, S1ERB02 S1NGR01, S1NGR02 SitSafe STS01 COGHWK-417, COGSLB-412, COGKAS-571, Sirius, Blenheim, Smartline, Buscomfort  Double seats: S2NOV01, S2LID17, S2LID18, S2LID25 S1POL01 <sup>D</sup> , S2ERB01, S2ERB02, S2NGR01, S2NGR02

<sup>D</sup> – double seat

All production seats have anchorages points lower or in same height as a dummy seat. Results of tests with dummy seats used cover installation of any production seat if such seat is separately tested and positions of seatbelt anchorage points are not higher than on these dummy seats.

1.1.4. Table of vehicles types for which are test results valid:

Manufacturer	Commercial description / Type	Wheelbase
Mercedes Benz	Sprinter (906, 907)	3250, 3665, 4325
	Sprinter (910)	3259, 3924
	Vito/Viano/V-klasse (639, 639/2, 639/4)	3200, 3430
VW	Crafter (2E_)	3250, 3665, 4325
	Crafter (SY___ e.g. SYN1E, SYM1E, SYN2E, SYN2Z, SYM2Z)	3640, 4490
	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6 (7H_, 7E_, 7J_)	3000, 3400
Citroen	Jumper (Y)	3000, 3450, 4035
	Jumpy (X)	3000, 3122
	Jumpy (2016)	2925, 3275
	SpaceTourer	2925, 3275
Peugeot	Boxer (Y)	3000, 3450, 4035
	Expert (VF3_)	3000, 3122
	Expert (2016)	2925, 3275
	Traveller	2925, 3275
Fiat	Ducato (250)	3000, 3450, 4035
	Scudo (270)	3000, 3122
	Talento (FJL, FFL)	3098, 3498
Opel	Movano (MR, MS, MW)	3182, 3682, 4332
	Vivaro (F7)	3098, 3498
Renault	Master (FV, MA, VA)	3182, 3682, 4332
	Trafic (FL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Truck	Master (MF)	3182, 3682, 4332
Ford	Transit (FA_, FD_)	2933, 3300, 3750
	Transit (FC_)	3300, 3750, 3954
	Transit Custom (FA_, FC_)	2933, 3300
	Transit Connect (PU2)	2662, 3062
Iveco	Daily (IS_)	3000, 3300, 3520, 3595, 3950, 4100, 4175, 4750
Nissan	NV200	2725
	NV300	3098, 3498
	Primastar	3098, 3498
	NV400	3182, 3682, 4332
Toyota	Pro Ace, Pro Ace Verso (2016)	2925, 3275
MAN	TGE (SY___ e.g. SYN1E, SYM1E, SYN2E, SYN2Z, SYM2Z)	3640, 4490
LDV	V80, Maxus (SV6C)	3100, 3850
Hyundai	H350 (EU(V))	3435, 3670

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1.1.5. Table of seats tested for installation on NMI Lite Rail – INTAP seats

Seat type	Legs and consoles	Category seats	Weight of maximum mass configuration
S1MED01	V-leg*, N0AZM06*, N0BLS10, N0AZM09, Millennium leg	M1/N1	26 kg
	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	26 kg
S1TAX01	V-leg*, N0AZM06*, N0BLS10, N0AZM09, Millennium leg	M1/N1	26 kg
	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	26 kg
S1TAX02	V-leg*, N0AZM06*, N0BLS10, N0AZM09, Millennium leg	M1/N1	26 kg
	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	26 kg
S1TAX08	V-leg*, N0AZM06*, N0BLS10, N0AZM09, Millennium leg	M1/N1	28 kg
	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	28 kg
S1NOV04	V-leg*, N0AZM06*, N0BLS10, N0AZM09, Millennium leg	M1/N1	27 kg
	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	27 kg
S1TAX03	VR-leg*	M1/N1, M2/N2, M3/N3	36 kg
	A-leg	M1/N1, M2/N2, M3/N3	42 kg
S1ERB08	VR-leg*	M1/N1, M2/N2, M3/N3	36 kg
	A-leg	M1/N1, M2/N2, M3/N3	42 kg
S1KAR02	VR-leg*	M1/N1, M2/N2, M3/N3	36 kg
S1KAR03	A-leg	M1/N1, M2/N2, M3/N3	42 kg
S1KAR04			
S1AMB01	VR-leg*	M1/N1, M2/N2, M3/N3	36 kg
	A-leg	M1/N1, M2/N2, M3/N3	42 kg
S1NOV01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	20 kg
S1LID17	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	17 kg
S1LID18	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	17 kg
S1LID25	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	20 kg

S1POL01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	17 kg
S1NGR01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M3/N3	21 kg
S1NGR02	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M3/N3	20 kg
Double seat			
S1NOV01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	36 kg
S2LID17, S2LID18	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	30 kg
S2LID25	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	42 kg
S2POL01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M2/N2, M3/N3	30 kg
S2NGR01	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M3/N3	37 kg
S2NGR02	V-leg*, N0AZM06*, N0BLS10, N0BLS15, N0BLS17, N0AZM09, Millennium leg	M3/N3	36 kg

\* – with T-bolts or W-fitting/W-fitting VL

Remark: Any seat can be used if tested for appropriate vehicle category and seatbelt anchorages not higher than on the dummy seat.

#### 1.1.6. Table of seats tested for installation on NMI Lite Rail – JANY seat

Seat type	Leg	Category seat	Weight of maximum mass configuration
805 Police seat	Police seat leg assy 300 wensum type	M1/N1	31 kg
		M2/N2, M3/N3	31 kg

#### 1.1.7. Table of seats tested for installation on NMI Lite Rail – Phoenix Seating seat

Seat type	Leg	Category seats	Weight of maximum mass configuration
Sirius	Millennium leg, V-leg, Sirius NMI leg	M2/N2, M3/N3	14,0 kg
Blenheim	Millennium leg, V-leg, Blenheim Light NMI leg, Blenheim leg	M2/N2, M3/N3	17,0 kg

#### 1.1.8. Table of seats tested for installation on NMI Lite Rail – SEGE seat

Seat type	Leg	Category seats	Weight of maximum mass configuration
Smartline	Sege Kraft Leg, Millennium leg, V-leg	M2/N2, M3/N3	20,0 kg
Buscomfort	Sege Kraft Leg, Millennium leg, V-leg	M2/N2, M3/N3	22,0 kg

1.1.9. Table of seats tested for installation on NMI Lite Rail – Cogent Passenger Seating seat

Seat type	Leg	Category seat	Weight of maximum mass configuration
COGHWK-417	Aero leg	M2/N2, M3/N3	17,0 kg
COGSLB-412	Millennium leg, Aero leg	M2/N2, M3/N3	16,0 kg
COGKAS-571	Cogent leg, N-leg	M2/N2, M3/N3	13,0 kg

1.1.10. Table of seats tested for installation on NMI Lite Rail – NMI seat

Seat type	Leg	Category seat	Weight of maximum mass configuration
SitSafe STS01	Millennium leg / N0AZM09	M2/N2, M3/N3	34,0 kg

1.1.11. Table of legs / base tested for installation on NMI Lite Rail

Leg/base type	Configuration	Mass of the heaviest configuration
Base V-leg	2	max 3,2 kg
V-leg single	1	max 1,3 kg
Base VR-leg***	2	max 2,8 kg
VR-leg single	1	max 1,2 kg
A-leg	1	max 8,0 kg
N0AZM06	1	2,5 kg
N0AZM09*	1	4,1 kg
N0BLS10	1	3,0 kg
N0BLS15	1	2,1 kg
N0BLS17	1	2,1 kg
Police seat leg assy 300 wensum type	2	8,0 kg
Aero leg	2	max 7,0 kg
Millennium leg**	1	3,0 kg
Sege Kraft leg	1	2,75 kg
Cogent leg	1	2,5 kg
Sirius NMI leg	1	2,5 kg
Blenheim Light NMI leg	1	2,5 kg
Pi leg M2 M2	1	2,8 kg

1 – single leg

2 – double leg or console

\* N0AZM09 (without W-fitting / W-fitting VL)

\*\* Millennium leg (without W-fitting / W-fitting VL)

\*\*\* Base VR-leg (with T-bolts or with W-fitting/W-fitting VL)



1.1.12. Table of fixation elements tested for installation on NMI Lite Rail

Fixation elements	Mass
W-fitting	0,5 kg
W-fitting VL	0,55 kg
LCK-04	0,03 kg
LCK-05	0,05 kg
TMI-17	0,07 kg
TMI	0,1 kg
TMDS	0,05 kg
NMI T-Bolt	0,05 kg
NMI U fitting	2,8 kg
NMI V fitting 03	2,5 kg
WZP-01	0,27 kg

For All possible combinations of legs with seats and design details see manufacturer's information document.

All production seats have anchorages points lower or in same height as a dummy seat.

Results of tests with dummy seats used cover installation of any production seat if such seat is separately tested and positions of seatbelt anchorage points are not higher than on these dummy seats.

## 2. Test conditions

- 2.1. Test procedures used (ECE R14):  
Strength test of safety belt anchorages according to ECE R 14.07 concerning to strength of NMI M1 composite floor.
- 2.2. Measuring and test equipment:
- Digital ballance
  - Electrohydraulic test device and respective fixtures
  - Force measuring chain with load cells
  - Interface 1210AF
  - Tape rule
- 2.3. Test track or site: OKB testing laboratory, Bukowiec, Poland

## 3. Test results

The below mentioned test results cover all variants including the maximum mass stated in the enclosed information document (seat, leg design, seat-to-vehicle anchorages, seat arrangement, floor to vehicle attachment).

Geometrical requirements are fulfilled; all the seat belts anchorages are provided on- seat.

Production seats test results – safety belts anchorages strength:

- 3.1. First row of seats: N/A
- 3.2. Other row of seats:

Test report No.:  
 Manufacturer:  
 Type:

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 NMI Safety Systems Ltd., United Kingdom  
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### 3.2.1. Table of seat with technical report

Seat manufacturer	Seat type	Fulfilling of requirements
INTAP	S1MED01 S1AMB01	See Technical report No. BLB.060.10B
	S1TAX01	See Technical report No. BLB.036.12B and see point 3.3.9.
	S1TAX02 S1TAX03	See Technical report No. PL13040008 and see point 3.3.9.
	S1NOV04	See Technical report No. 15-00057-CP-PRG-00 and see point 3.3.21.
	S1NOV01 S2NOV01	See Technical report No. BLB.056.12B
	S1POL01 S1POL01 <sup>D</sup>	See Technical report No. BLB.006.10B
	S1LID17, S1LID18 S2LID17, S2LID18	See Technical report No. BLB.059.10B
	S2LID25, S1LID25	See point 3.3.1. and 3.3.17.
	S1TAX08	See point 3.3.2.
	S1NGR01, S1NGR02	See Technical report No 120451-20-TAC
	S1KAR02*, S1KAR03**, S1KAR06***	See Technical report No. BLB.163.09B
Phoenix Seating	Sirius	See point 3.3.13.
	Blenheim	See point 3.3.14. and 3.3.15., 3.3.18.
NMI	SitSafe STS01	See Technical report No 121172-14-TAC
JANY	805 Police seat	See point 3.2.25.
Cogent Passenger	COGHWK-417	See point 3.3.3.
	COGSLB-412	See point 3.3.4. and 3.3.5.
	COGKAS-571	See point 3.3.10. and 3.3.11.
SEGE	Smartline	See Technical report No. 13-00574-CT-IST-00
	Buscomfort	See Technical report No. 13-00574-CT-IST-00
Dummy seat (DS-02)	with V-leg with V-bolts	See point 3.3.16.
	On swivel A-leg	See point 3.3.22.
	NMI leg with mill lock	See point 3.3.19.
	V-leg	See point 3.3.8. and 3.3.20.
	NOAZM09 Millenium leg	See point 3.3.6. and 3.3.7.
	VR leg with V bolts	See point 3.3.24.
	VR leg with W fittings	See point 3.3.23.
	Pi-Leg	See point 3.3.12.

\* S1KAR02 – seat on right-hand side swivel

\*\* S1KAR03 – seat on left-hand side swivel

\*\*\* S1KAR06 – seat on central swivel

3.2.2. Verification of installation of the floor in vehicle body. For this verification were chosen worst case representatives of vehicles intended for mount of floor and seats and most unfavorable seat arrangements and seat masses.

3.3. Additional tests of seat belt anchorages and seat to floor attachment.

3.3.1. Double Seat S1LID25 (Ekolider II adjustable) with Floor-wall on pressed legs (N0BLS15) mounted on rigid plate.

Mass of the heaviest possible seat configuration covered by the test (double seat with legs)  $m_s = 45$  kg.

Additional force applied  $F_z = 10 \times m_s \times g$  (N) as relevant for category M2/N2.

Additional force applied to the lab belt.

Seat	Left seat	Right seat
Safety belt	Ar	Ar
Upper belt anchorage	Seat structure	Seat structure
Lower belt anchorages	Seat structure	Seat structure
Required force shoulder belt portion	6 750 ± 200 N	6 750 ± 200 N
Required force lap belt portion	8 850 ± 200 N	8 850 ± 200 N
Force in the shoulder belt	6 900 N / > 0,2 s	7 000 N / > 0,2 s
Force in the lap belt	9 600 N / > 0,2 s	9 900 N / > 0,2 s
Displacement of upper anchorage point	285 mm	263 mm
Remark: No ruptures occurred. Displacement of upper anchorage points was in tolerance. Inertia load is added to the lab belt portion.		

3.3.2. Seat S1TAX08 on N0AZM06 legs mounted on rigid plate.

Mass of the heaviest possible seat configuration covered by the test  $m_s = 42,5$  kg.

$F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.

Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	6 200 N
Force in the shoulder belt	13 750 N / > 0,2 s
Force in the lap belt	15 100 N / > 0,2 s
Inertia force in the seat base	6 900 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 345 mm.	

3.3.3. Seat Cogent Hawk M2 400 (417) mounted on Aero leg with V-fitting in representative vehicle body.

Mass of the heaviest possible seat configuration covered by the test  $m_s = 17 \text{ kg}$ .

$F_z = 10 \times m_s \times g \text{ (N)}$  as relevant for M2 and N2 vehicle category.

Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 450 ± 200 N
Force in the shoulder belt	6 650 N / > 0,2 s
Force in the lap belt	8 450 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 340 mm.	

3.3.4. Seat Cogent Solo (412) mounted on Aero leg with V-fitting in representative vehicle body.

Mass of the heaviest possible seat configuration covered by the test  $m_s = 16 \text{ kg}$ .

$F_z = 10 \times m_s \times g \text{ (N)}$  as relevant for M2 and N2 vehicle category.

Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 350 ± 200 N
Force in the shoulder belt	6 600 N / > 0,2 s
Force in the lap belt	8 400 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 255 mm.	

3.3.5. Seat Cogent Solo (412) mounted on Millenium leg mounted in representative vehicle body.

Mass of the heaviest possible seat configuration covered by the test  $m_s = 16 \text{ kg}$ .  
 $F_z = 10 \times m_s \times g \text{ (N)}$  as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 350 ± 200 N
Force in the shoulder belt	6 700 N / > 0,2 s
Force in the lap belt	8 250 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 180 mm.	

3.3.6. Dummy seat (DS-02) mounted on N0AZM09 leg in representative vehicle body.

Mass of the single seat with leg  $m_s = 30 \text{ kg}$ .  
 $F_z = 10 \times m_s \times g \text{ (N)}$  as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	9 750 ± 200 N
Force in the shoulder belt	6 750 N / > 0,2 s
Force in the lap belt	9 750 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 138 mm.	

### 3.3.7. Millenium leg

Dummy seat (DS-02) mounted on Millenium leg in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 28$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	9 550 ± 200 N
Force in the shoulder belt	6 750 N / > 0,2 s
Force in the lap belt	9 750 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 132 mm.	

### 3.3.8. Dummy seat (DS-02) mounted on V-leg with v-bolt in representative vehicle body.

Mass of the single seat with leg  $m_s = 30$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	9 750 ± 200 N
Force in the shoulder belt	6 750 N / > 0,2 s
Force in the lap belt	9 700 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 191 mm.	

3.3.9. Taxi seat type S1TAX02 on V-leg mounted on NMI Lite Rail M1 in representative vehicle body.

Mass of the single seat with leg  $m_s = 26$  kg.

$F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.

Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	18 700 ± 200 N
Force in the shoulder belt	13 650 N / > 0,2 s
Force in the lap belt	18 900 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 112 mm.	

3.3.10. Cogent Kite seat (571) mounted on Cogent leg mounted in representative vehicle body.

Mass of the single seat with leg  $m_s = 13$  kg.

$F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.

Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 050 ± 200 N
Force in the shoulder belt	6 600 N / > 0,2 s
Force in the lap belt	8 100 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 411 mm.	



- 3.3.11. Cogent Kite seat (571) mounted on Legs with T-bolts in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 13$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 050 ± 200 N
Force in the shoulder belt	6 700 N / > 0,2 s
Force in the lap belt	8 050 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 432 mm. Displacement was in tolerance.	

- 3.3.12. Pi legs  
 Dummy seat (DS-02) mounted on Pi legs in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 18$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 550 ± 200 N
Force in the shoulder belt	6 750 N / > 0,2 s
Force in the lap belt	8 500 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 193 mm.	

- 3.3.13. Phoenix Sirius seat mounted on Sirius NMI Legs in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 14$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 150 ± 200 N
Force in the shoulder belt	6 750 N / > 0,2 s
Force in the lap belt	8 200 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 224 mm.	

- 3.3.14. Phoenix Blenheim seat mounted on Blenheim Light NMI legs  
 in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 17$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 450 ± 200 N
Force in the shoulder belt	6 800 N / > 0,2 s
Force in the lap belt	8 450 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 225 mm.	

- 3.3.15. Phoenix Blenheim seat mounted on Blenheim Legs in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 13$  kg.  
 $F_z = 10 \times m_s \times g$  (N) as relevant for M2 and N2 vehicle category.  
 Additional force applied to the lab belt portion.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	6 750 ± 200 N
Required force lab belt portion	8 050 ± 200 N
Force in the shoulder belt	6 650 N / > 0,2 s
Force in the lap belt	8 100 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to lab belt. Displacement of upper anchorage point was 101 mm.	

- 3.3.16. Dummy seat mounted on V-leg with V-bolts in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 26$  kg.  
 $F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.  
 Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	5 200 N
Force in the shoulder belt	13 600 N / > 0,2 s
Force in the lap belt	13 900 N / > 0,2 s
Inertia force in the seat base	5 500 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 43 mm.	

3.3.17. 4 seats - Ekolider II double in one row mounting on leg NOBLS17 (S1LID25 and S2LID25) in representative vehicle body.

Mass of the single seat with leg  $m_s = 25 \text{ kg}$ .

Additional force applied  $F_z = 10 \times m_s \times g \text{ (N)}$  as relevant to M2.

Seat	Forward facing			
	Right	Right centre	Left centre	Left
Safety belt	Ar	Ar	Ar	Ar
Upper belt anchorage	Seat structure	Seat structure	Seat structure	Seat structure
Lower belt anchorages	Seat structure	Seat structure	Seat structure	Seat structure
Required force in shoulder belt portion	6 750 ±200 N	6 750 ±200 N	6 750 ±200 N	6 750 ±200 N
Required force in lap belt portion	9 250 ±200 N	9 250 ±200 N	9 250 ±200 N	9 250 ±200 N
Force in the shoulder belt measured	7 000N / > 0,2 s	7 250 N / > 0,2 s	7 000 N / > 0,2 s	6 850 N / > 0,2 s
Force in the lap belt measured	10 500 N / > 0,2 s	10 000 N / > 0,2 s	9 750 N / > 0,2 s	9 500 N / > 0,2 s
Remark: No ruptures occurred. Additional force was applied to lap belt portion.				

3.3.18. Seat Blenheim mounted on Millenium leg in representative vehicle body.

Mass of the single seat with leg  $m_s = 23 \text{ kg}$ .

Additional force applied  $F_z = 20 \times m_s \times g \text{ (N)}$  as relevant for category M1/N1.

Additional force applied to the lab belt.

Seat	Forward facing
Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force shoulder belt portion	13 500 ± 200 N
Required force lap belt portion	18 100 ± 200 N
Force in the shoulder belt	13 500 N / > 0,2 s
Force in the lap belt	18 100 N / > 0,2 s
Remark: No ruptures occurred. Upper anchorage point displacement was 210 mm. Additional force is added to the lab belt portion.	

3.3.19. 4 x Dummy seat (DS-02) on NMI leg mounted on NMI Lite Rail in representative vehicle bodywork

Mass of the single seat with leg  $m_s = 25 \text{ kg}$ .  
 Additional force applied  $F_z = 20 \times m_s \times g \text{ (N)}$  as relevant to M1.

Seat	Forward facing			
	Seat 1 (right)	Seat 2 (Right centre)	Seat 3 (Left centre)	Seat 4 (Left)
Safety belt	Ar	Ar	Ar	Ar
Upper belt anchorage	Seat structure	Seat structure	Seat structure	Seat structure
Lower belt anchorages	Seat structure	Seat structure	Seat structure	Seat structure
Required force in shoulder belt portion	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N
Required force in lap belt portion	18 900 $\pm$ 200 N	18 900 $\pm$ 200 N	18 900 $\pm$ 200 N	18 900 $\pm$ 200 N
Force in the shoulder belt measured	13 700N / > 0,2 s	13 600N / > 0,2 s	13 800N / > 0,2 s	13 750N / > 0,2 s
Force in the lap belt measured	19 000 N / > 0,2 s	19 100 N / > 0,2 s	19 400 N / > 0,2 s	19 000 N / > 0,2 s
Displacement of upper anchorage point	123 mm	87 mm	91 mm	80 mm
Remark: No ruptures occurred. Additional force was applied to lap belt portion.				

3.3.20. 4 x Dummy seat (DS-02) on V leg mounted on NMI Lite Rail in representative vehicle bodywork

Mass of the single seat with leg  $m_s = 28 \text{ kg}$ .  
 Additional force applied  $F_z = 20 \times m_s \times g \text{ (N)}$  as relevant to M1.

Seat	Forward facing			
	Seat 1 (right)	Seat 2 (Right centre)	Seat 3 (Left centre)	Seat 4 (Left)
Safety belt	Ar	Ar	Ar	Ar
Upper belt anchorage	Seat structure	Seat structure	Seat structure	Seat structure
Lower belt anchorages	Seat structure	Seat structure	Seat structure	Seat structure
Required force in shoulder belt portion	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N
Required force in lap belt portion	19 100 $\pm$ 200 N	19 100 $\pm$ 200 N	19 100 $\pm$ 200 N	19 100 $\pm$ 200 N
Force in the shoulder belt measured	13 700N / > 0,2 s	13 700N / > 0,2 s	13 750N / > 0,2 s	13 800N / > 0,2 s
Force in the lap belt measured	19 100 N / > 0,2 s	19 100 N / > 0,2 s	19 300 N / > 0,2 s	19 250 N / > 0,2 s
Displacement of upper anchorage point	80 mm	67 mm	73 mm	74 mm
Remark: No ruptures occurred. Additional force was applied to lap belt portion.				

- 3.3.21. Veris seat type S1NOV04 on V leg mounted on NMI Lite Rail M1 in representative vehicle body  
 Mass of the single seat with leg  $m_s = 30$  kg.  
 Additional force applied  $F_z = 20 \times m_s \times g$  (N) as relevant for category M1/N1.  
 Additional force applied to the lab belt.

Seat	Forward facing
Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force shoulder belt portion	13 500 ± 200 N
Required force lap belt portion	19 500 ± 200 N
Force in the shoulder belt	13 800 N / > 0,2 s
Force in the lap belt	19 600 N / > 0,2 s
Remark: No ruptures occurred. Upper anchorage point displacement was 282 mm. Additional force is added to the lab belt portion.	

- 3.3.22. Dummy seat on swivel on the A-leg (Floor -wall) mounted on NMI Lite Rail M1 in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 40$  kg.  
 $F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.  
 Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	8 000 N
Force in the shoulder belt	13 600 N / > 0,2 s
Force in the lap belt	13 600 N / > 0,2 s
Inertia force in the seat base	8 200 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 52 mm.	

- 3.3.23. Dummy seat (DS-02) on VR leg with W fittings mounted on NMI Lite Rail M1 in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 36$  kg.  
 $F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.  
 Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	7 200 N
Force in the shoulder belt	14 100 N / > 0,2 s
Force in the lap belt	13 900 N / > 0,2 s
Inertia force in the seat base	7 600 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 59 mm.	

- 3.3.24. Dummy seat (DS-02) on VR leg with V bolts mounted on NMI Lite Rail M1 in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 34$  kg.  
 $F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.  
 Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	7 200 N
Force in the shoulder belt	13 800 N / > 0,2 s
Force in the lap belt	13 500 N / > 0,2 s
Inertia force in the seat base	7 600 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 81 mm.	

- 3.3.25. Jany seat type mounted on Aero leg with V-fitting in representative vehicle body.  
 Mass of the single seat with leg  $m_s = 31$  kg.  
 $F_z = 20 \times m_s \times g$  (N) as relevant for M1 and N1 vehicle category.  
 Additional force applied to the seat base.

Safety belt	Ar
Upper belt anchorage	Seat structure
Lower belt anchorages	Seat structure
Required force in shoulder belt portion	13 500 ± 200 N
Required force lab belt portion	13 500 ± 200 N
Required force inertia	6 200 N
Force in the shoulder belt	13 700 N / > 0,2 s
Force in the lap belt	14 000 N / > 0,2 s
Inertia force in the seat base	6 600 N / > 0,2 s
Remark: No ruptures occurred. Additional force is added to seat base. Displacement of upper anchorage point was 94 mm.	

Remark:

Verification of installation of the floor in vehicle body. For this verification were chosen worst case representatives of vehicles intended for mount of floor and seats and most unfavorable seat arrangements and seat masses.



3.4. Safety belts anchorages intended for disabled persons and for wheelchair attachment:

3.4.1. Forward pull - NMI kit NMI Lite Rail

To the floor and side rails were mounted safetybelts for disabled persons and belts for wheelchair attachment. Arrangement of test (wheelchair mounting) – see manufacturer’s information document – were provided according to requirements of ISO 10542 and forces were applied according to ECE R 14 and Directive 2007/46/EC.

Seat	Wheelchair
Wheelchair adjustment	According to ISO 10542
Safety belt	Ar + wheelchair belts
Belt anchorages	Rails on vehicle structure
Required force in shoulder belt portion	13 500 ±200 N
Required force in lap belt portion	13 500 ±200 N
Required additional force on wheelchair	24 500 N
Force in the shoulder belt	14 000 N
Force in the lap belt	14 100 N
Additional force	25 000 N applied on wheelchair
Remark: No ruptures or detaching of restraint system parts occurred. After test there was no permanent deformations noticed.	

3.4.2. Backward pull - NMI kit NMI Lite Rail

Strength of wheelchair tie down and occupant restraint system – rearward direction.

Fixation of wheelchair	Wheelchair is tie-down to attachment points placed on the floor.
Required force on	8200 N
Force on wheelchair	9 000 N
Remark: No ruptures or detaching of restraint system parts occurred. After test there was no permanent deformations noticed.	

3.5. ISOFIX and Top Tether anchorages strength (if provided):

Seat manufacturer	Seat type	Fulfilling of requirements
INTAP	S1MED01, S1KAP02, S1TAX01, S1TAX02, S1TAX03, S1TAX08*, S1AMB01, S1NOV04, S1ERB08 S1KAR02, S1KAR03, S1KAR06	See Technical report No. 120731-15-TAC

\* construction of seat S1TAX08 and position of backrest, ISOFIX and Top Tether are the same as in case of seat S1TAX02

For M1 category minimum 2 seats with ISOFIX anchorage systems and their ISOFIX top tether anchorages shall be mounted. At least one of them shall be in 2<sup>nd</sup> row of seats.

3.6. Final confirmation

All results mentioned for M1 category cover N1, M2/N2 and M3/N3 category as well.

All results mentioned for M2 category cover N2 and M3/N3 category as well.

All possible combinations of seats, legs to floor attachment, attachment of floor and vehicles mentioned in manufacturer's information document are covered by above mentioned tests.

### 3.7. Test records

#### 3.7.1. Photos

3.3.1. Double Seat S1LID25 (Ekolider II adjustable) with Floor-wall on pressed legs (N0BLS15) mounted on rigid plate.

Before test



After test



3.3.2. Seat S1TAX08 on NOAZM06 legs mounted on rigid plate.

Before test



After test



3.3.3. Seat Cogent Hawk M2 400 (417) mounted on Aero leg with V-fitting

Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

### 3.3.4. Seat Cogent Solo (412) mounted on Aero leg with V-fitting

Before test

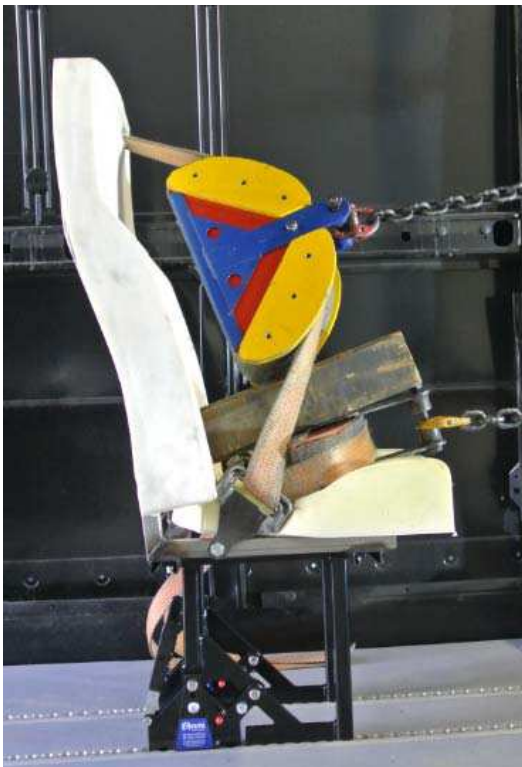


After test



### 3.3.5. Seat Cogent Solo (412) mounted on Millenium leg

Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

3.3.6. Dummy seat (DS-02) mounted on N0AZM09 leg  
Before test



After test



3.3.7. Dummy seat (DS-02) mounted on Millenium leg  
Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

3.3.8. Dummy seat (DS-02) mounted on V-leg with v-bolt  
Before test



After test



3.3.9. Seat type S1TAX02 mounted on V-leg  
Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22

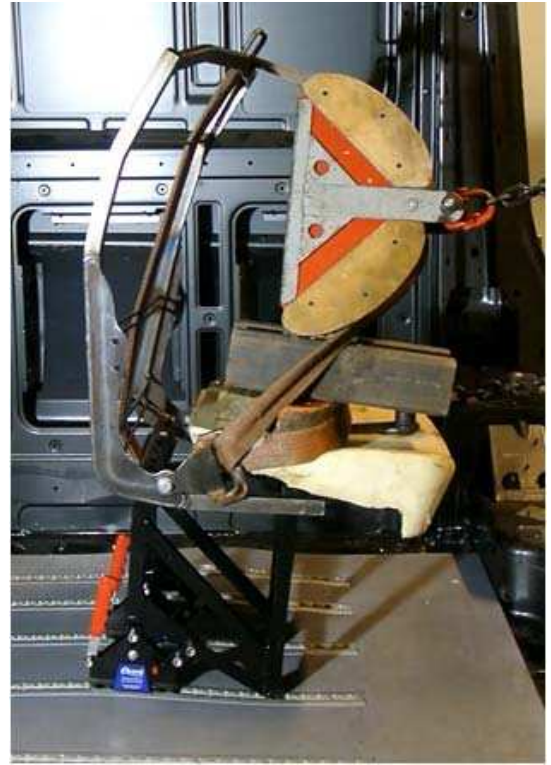


Auto Service

3.3.10. Cogent Kite seat mounted on Cogent leg  
Before test



After test



3.3.11. Cogent Kite seat mounted on Legs with T-bolts  
Before test



After test





Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22

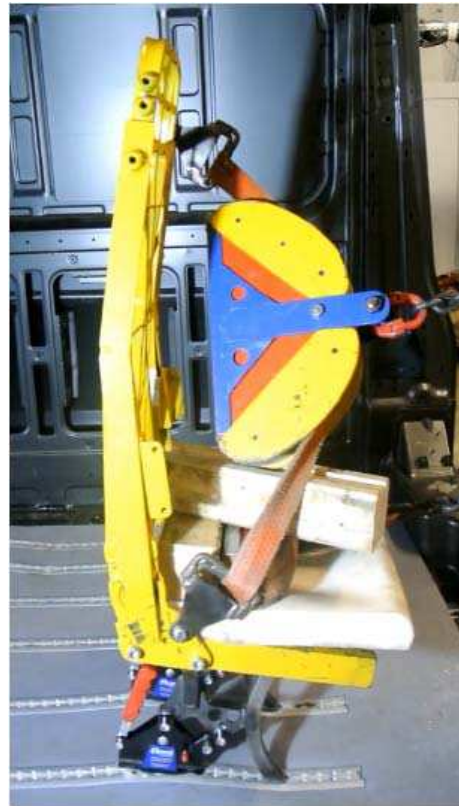


Auto Service

3.3.12. Dummy seat (DS-02) mounted on Pi legs  
Before test



After test



3.3.13. Phoenix Sirius seat mounted on Sirius NMI leg  
Before test



After test



3.3.14. Phoenix Blenheim seat mounted on Blenheim Light NMI leg

Before test



After test



3.3.15. Blenheim seat mounted on Blenheim legs

Before test



After test



3.3.16. Dummy seat (DS-02) mounted on V-leg with V-bolts  
Before test



After test



### 3.3.17. Ekolider II double + NOBLS17 (S1LID25 and S2LID25)

Before test



After test



Test report No.: 20-00026-CP-PRG-00  
Manufacturer: NMI Safety Systems Ltd., United Kingdom  
Type: NLR22

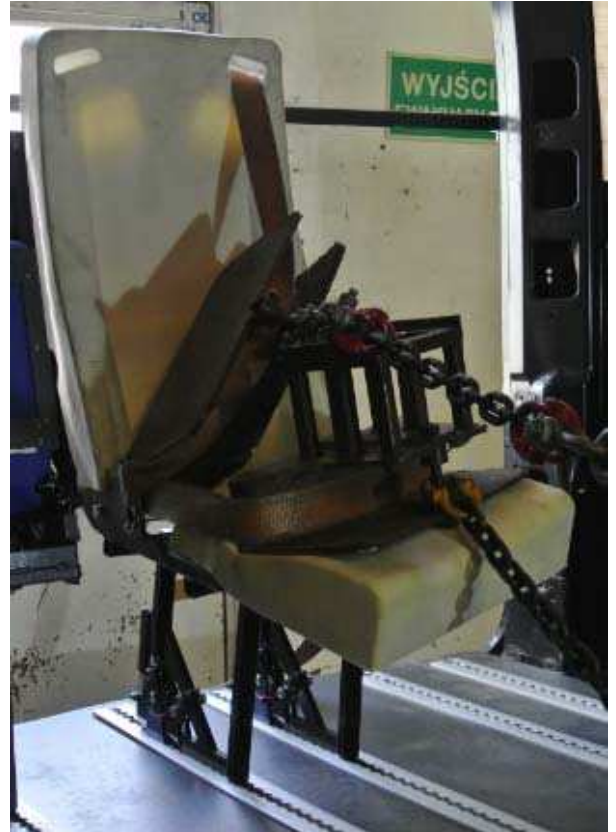


Auto Service

3.3.18. Seat Blenheim mounted on Millenium leg  
Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22

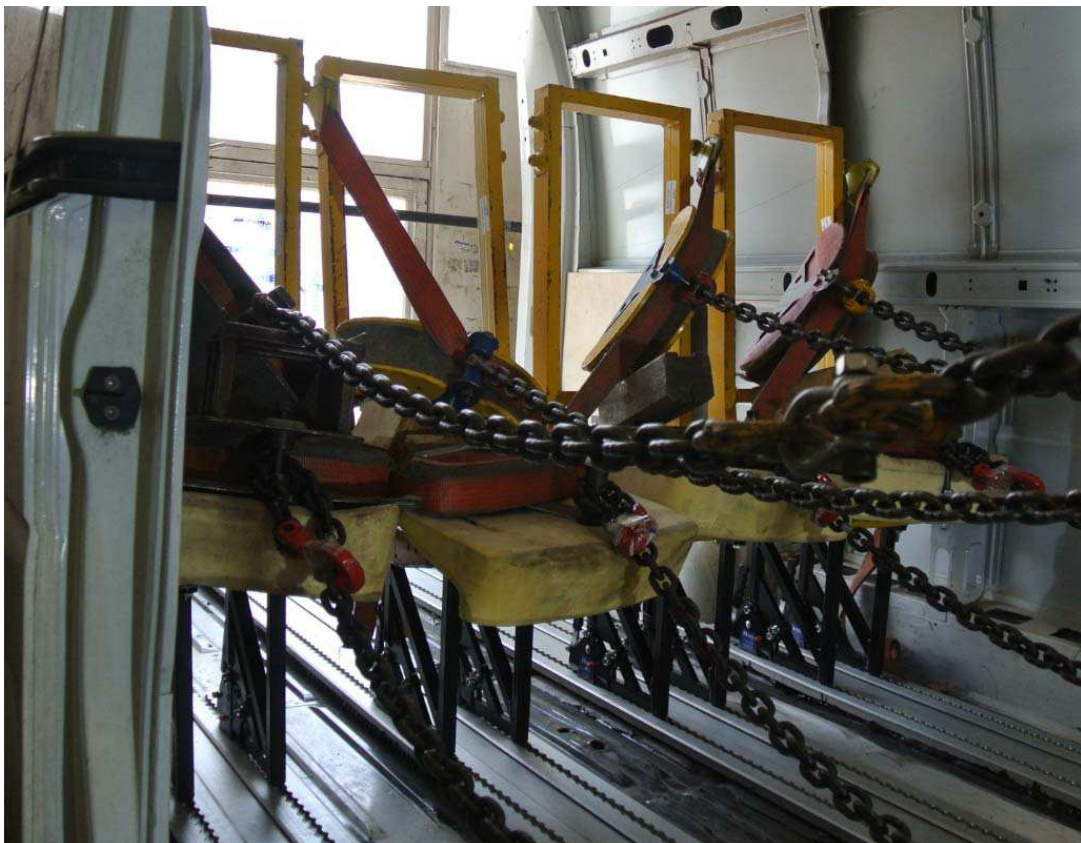


Auto Service

3.3.19. 4 x Dummy seat (DS-02) mounted on NMI leg  
Before test



After test



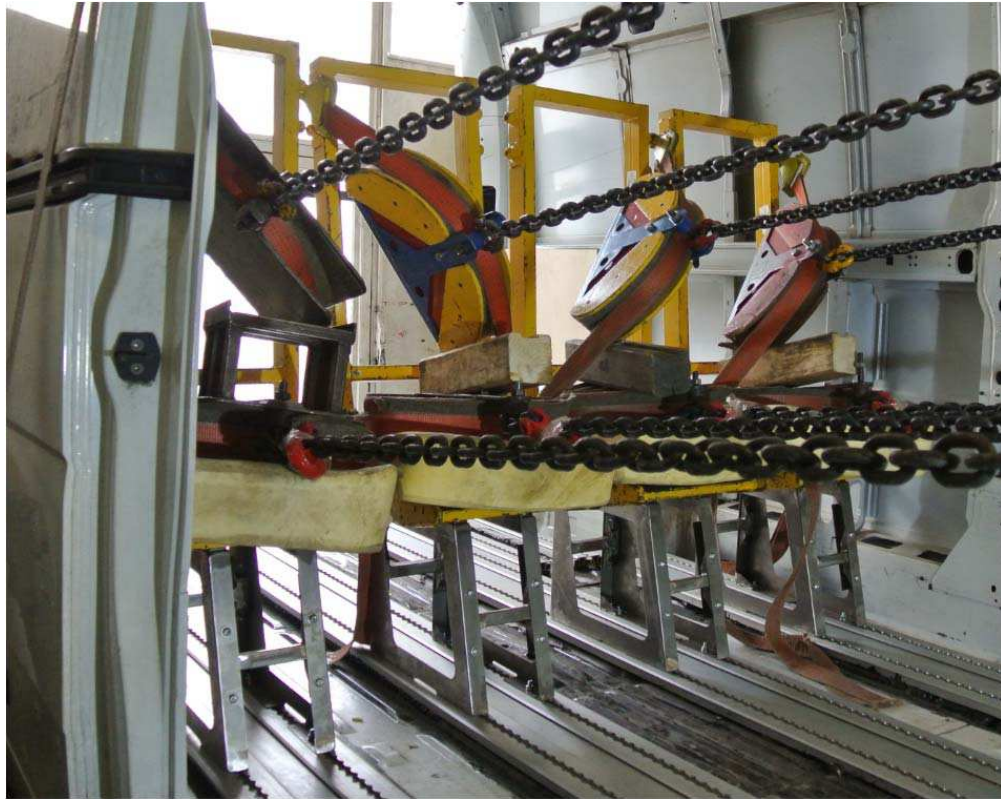
Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

3.3.20. 4 x Dummy seat (DS-02) mounted on V leg  
Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

3.3.21. Veris seat type S1NOV04 mounted on V leg  
Before test



After test



3.3.22. Dummy seat on swivel on the A-leg  
Before test



After test





Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

3.3.23. Dummy seat on VR leg with V bolts  
Before test



After test



3.3.24. Dummy seat on VR leg  
Before test



After test



3.3.25. Jany seat type mounted on Aero leg with V-fitting  
Before test



After test



3.4.1. Static test - Forward pull - NMI kit NMI Lite Rail  
Before test



After test



3.4.2. Static test - Backward pull - NMI kit NMI Lite Rail  
Before test



After test



Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22

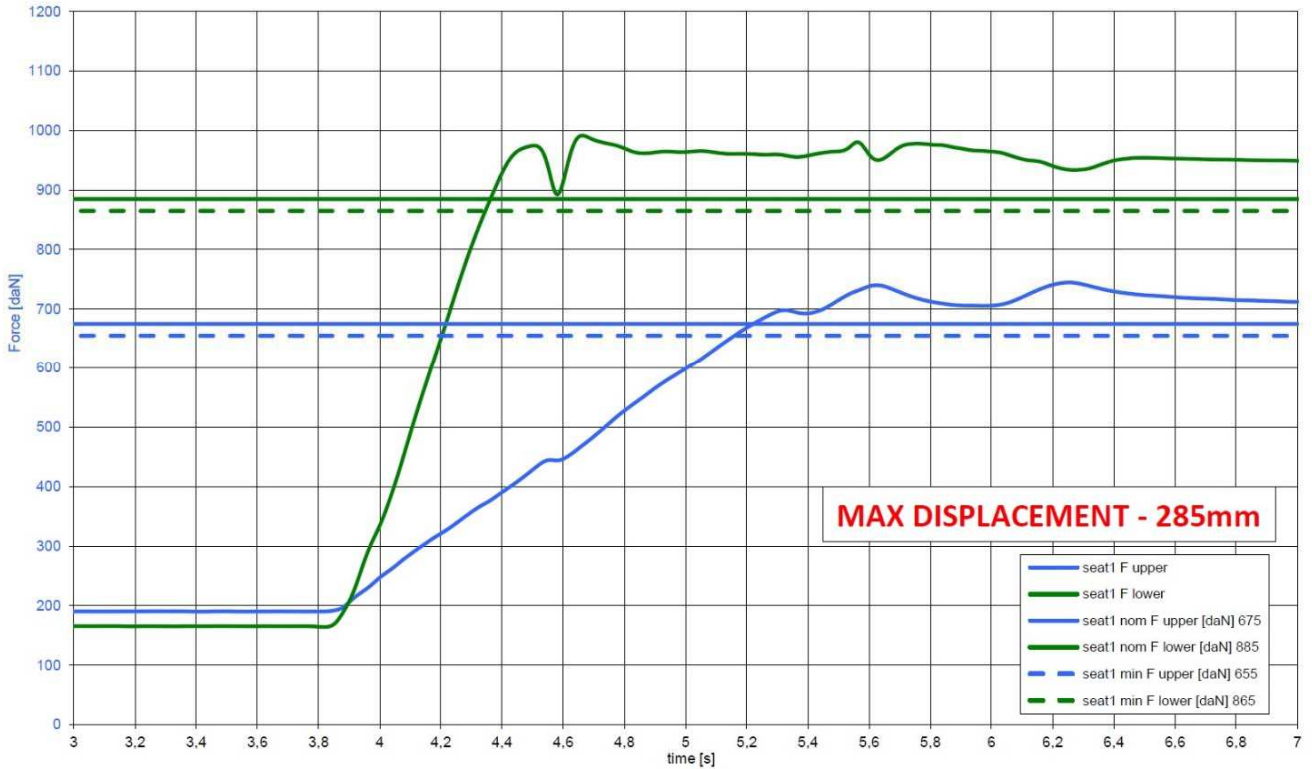


Auto Service

### 3.7.2. Graphs:

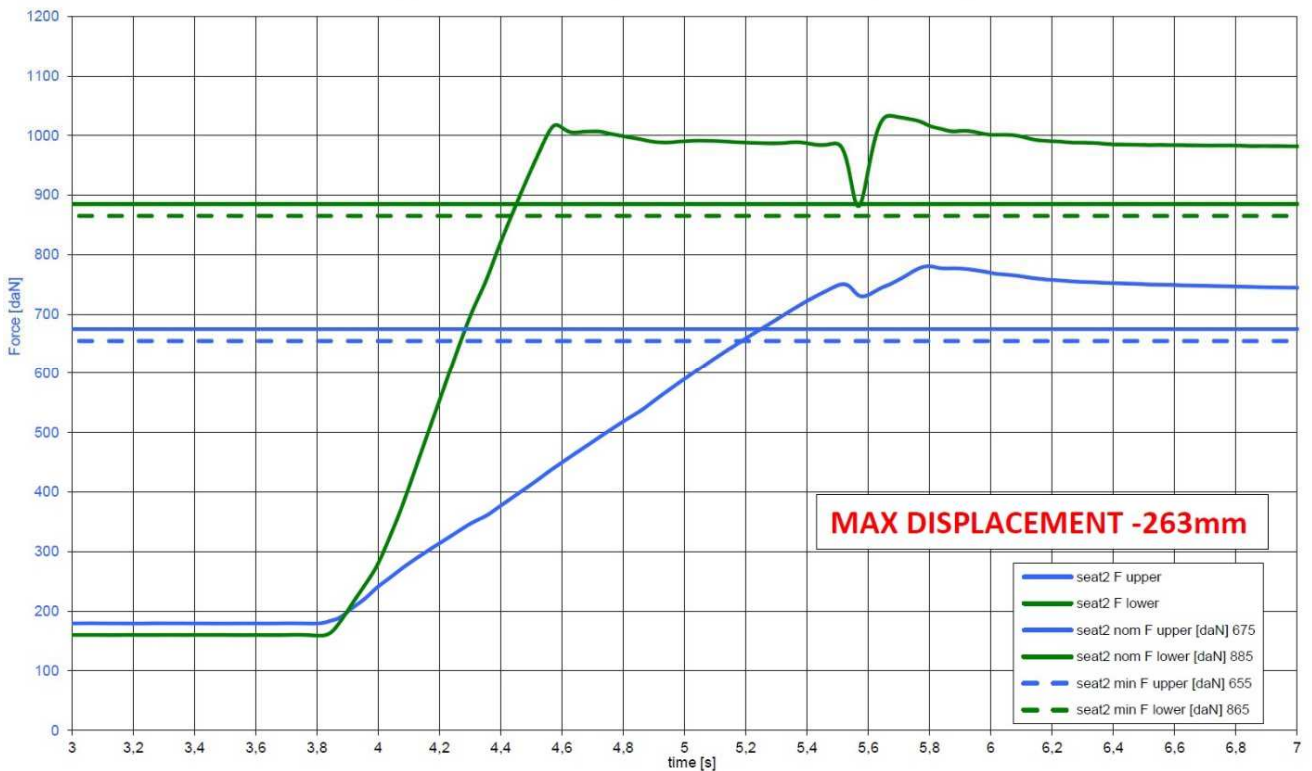
#### 3.3.1. Double Seat S1LID25 on pressed legs (N0BLS15) mounted on rigid plate – Left seat

20180316\_02 Ekolider II adjustable, double seat, 3p belt, floor-wall mounted on pressed legs H290, internal test, M2



#### Right seat

20180316\_02 Ekolider II adjustable, double seat, 3p belt, floor-wall mounted on pressed legs H290, internal test, M2



Test report No.:  
 Manufacturer:  
 Type:

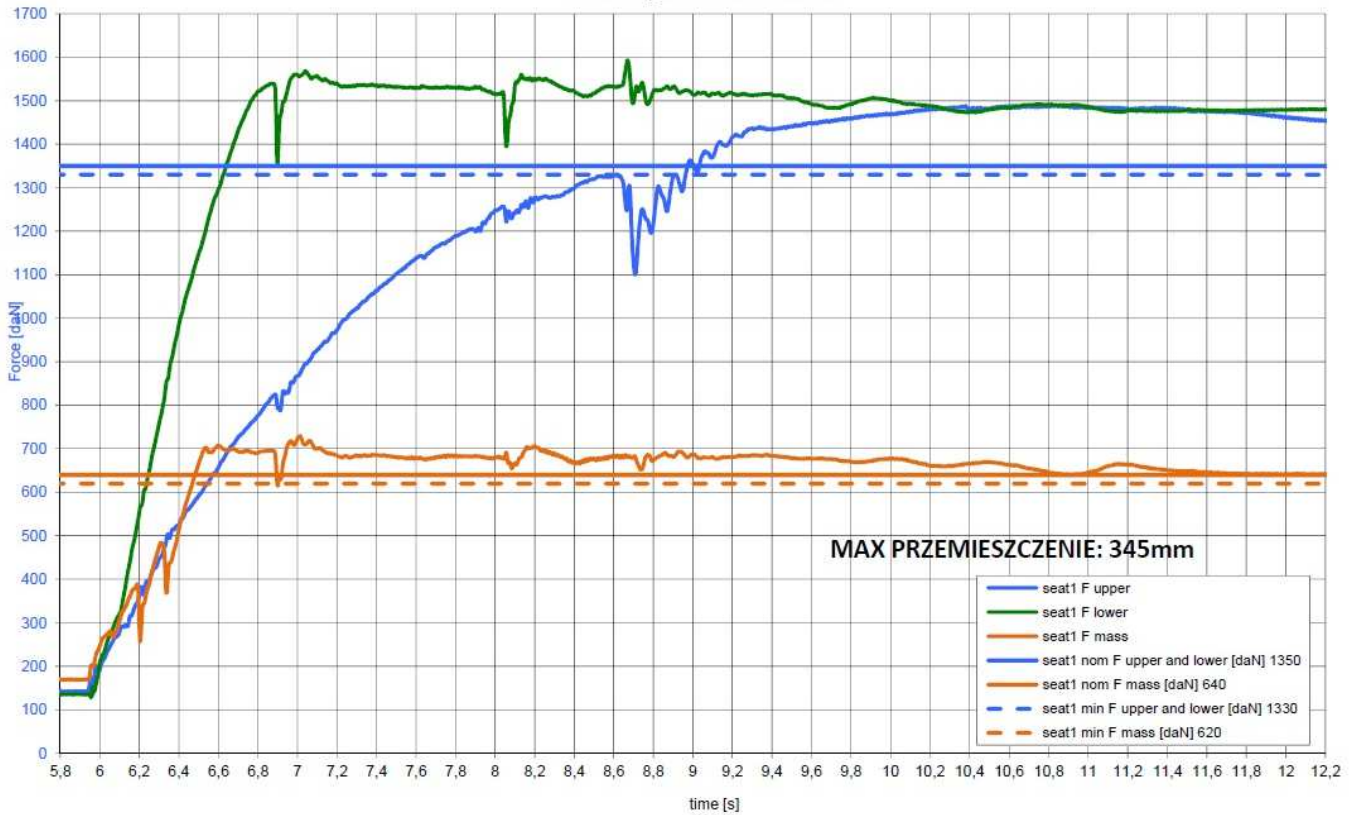
20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

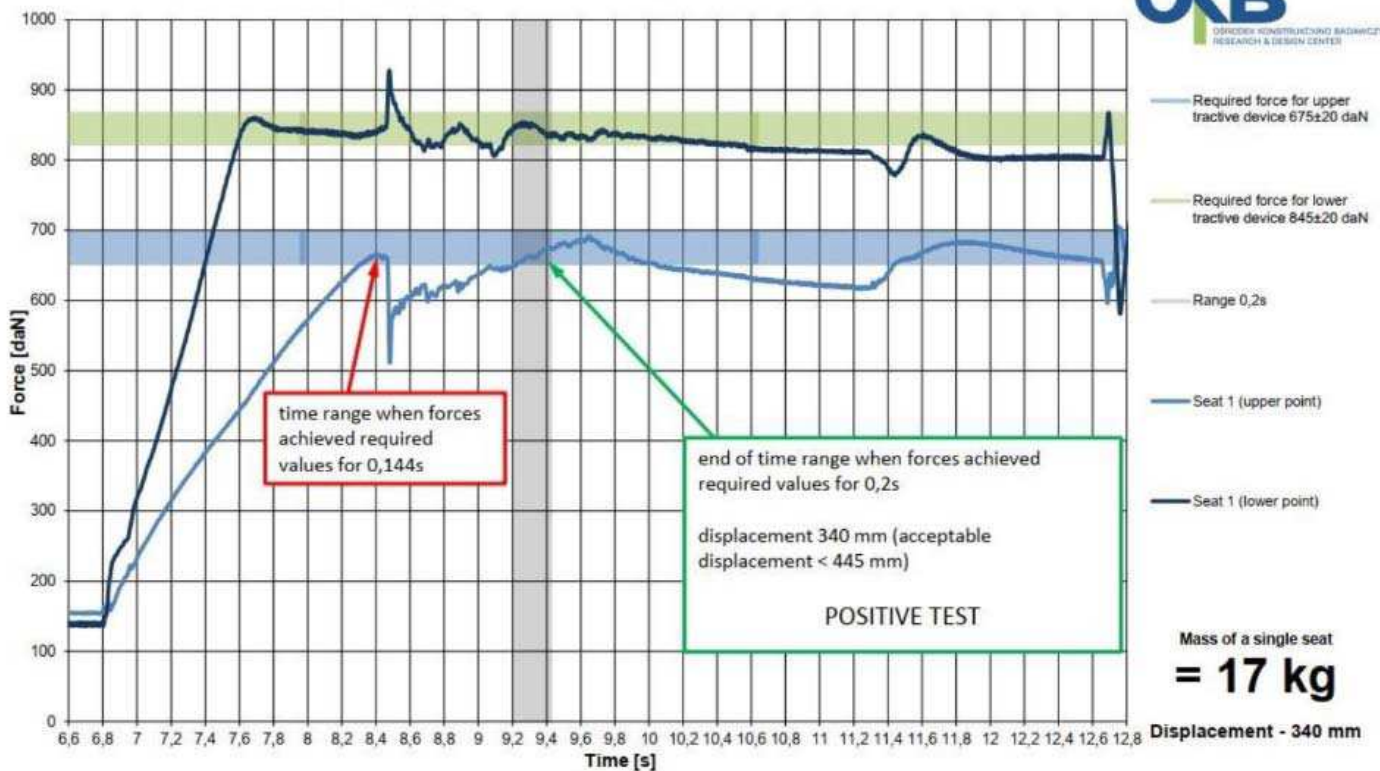
### 3.3.2. Seat S1TAX08 on leg NOAZM06 mounted on rigid plate

20181204\_01 S1TAX08 cat. M1



### 3.3.3. Seat Cogent Hawk M2 400 (417) mounted on Aero leg with V-fitting

**Cogent Hawk M2 400 + Aero leg + V-fitting + cat. M2**



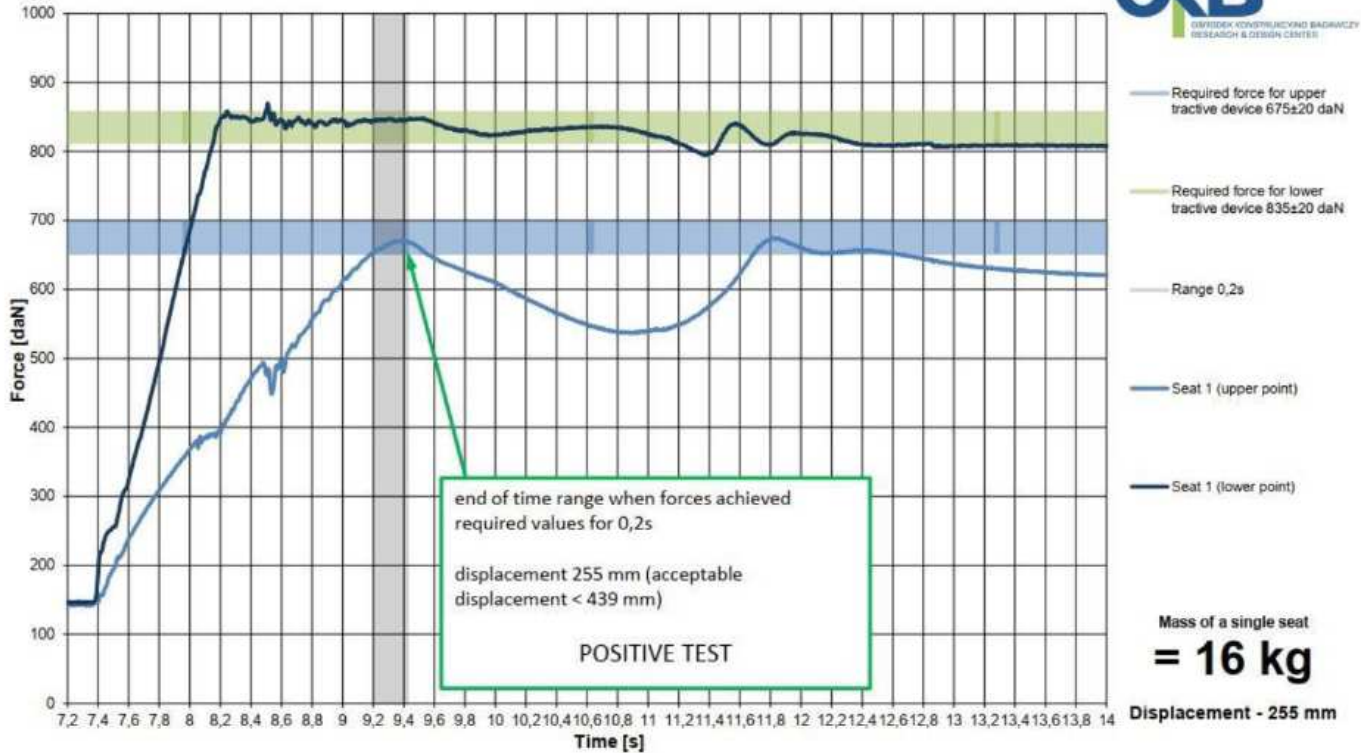
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22

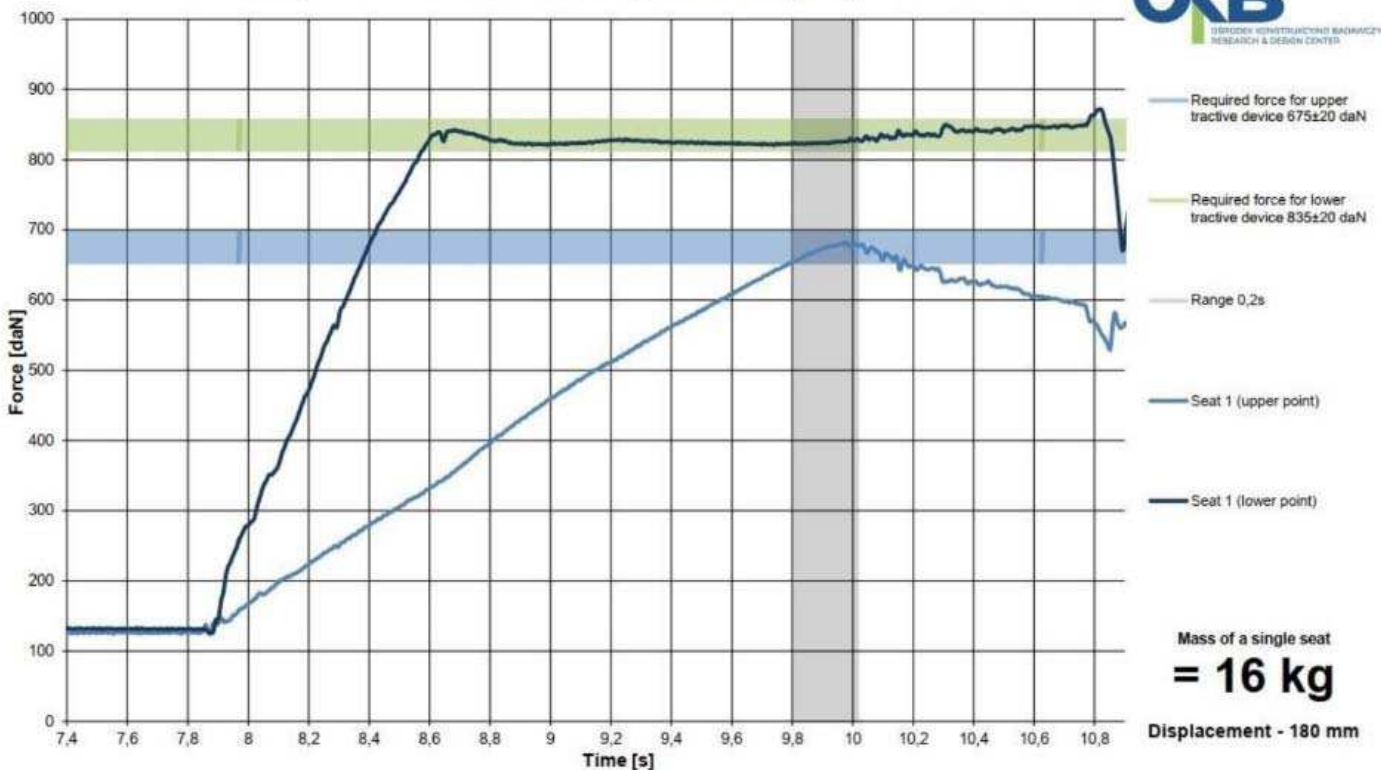


Auto Service

3.3.4. Seat Cogent Solo (412) mounted on Aero leg with V-fitting  
**Cogent Solo + Aero leg + V-fitting + cat. M2**

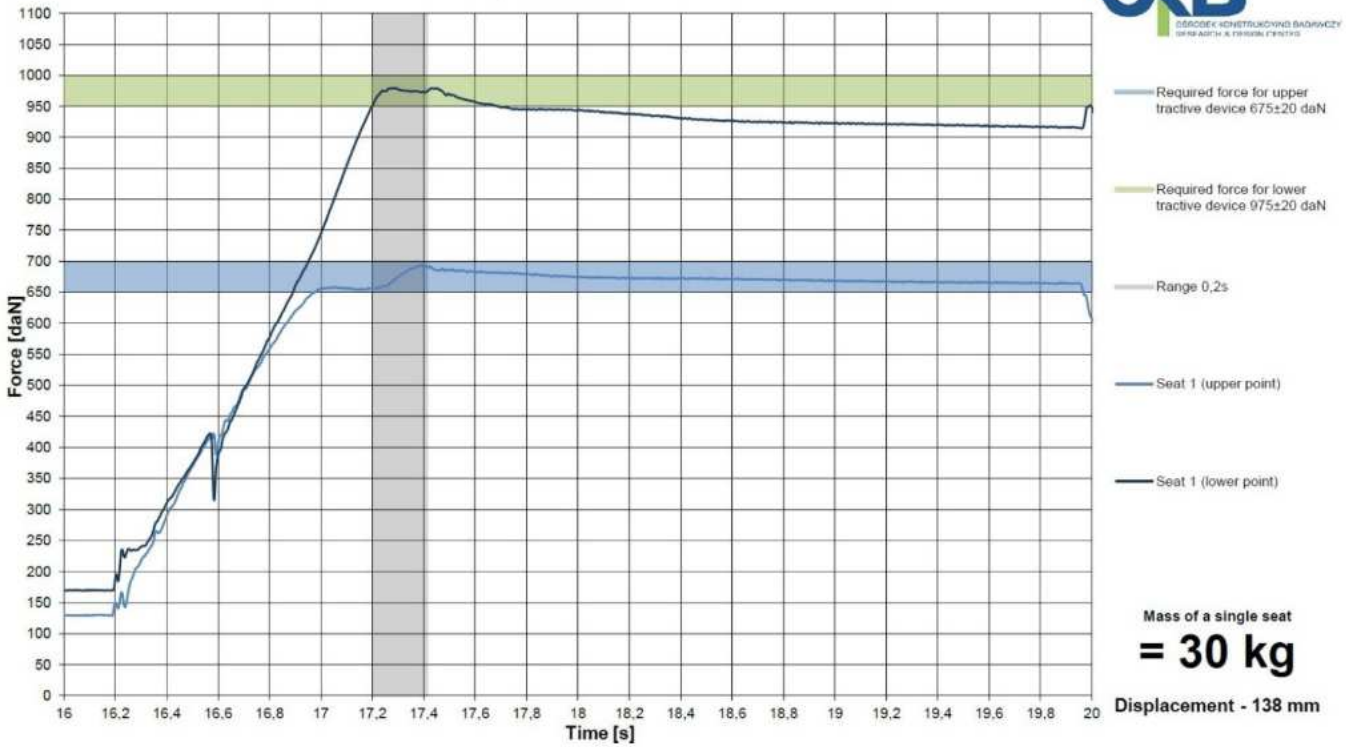


3.3.5. Seat Cogent Solo (412) mounted on Millenium leg  
**Cogent Solo + Millenium Leg + cat. M2 (NMI)**

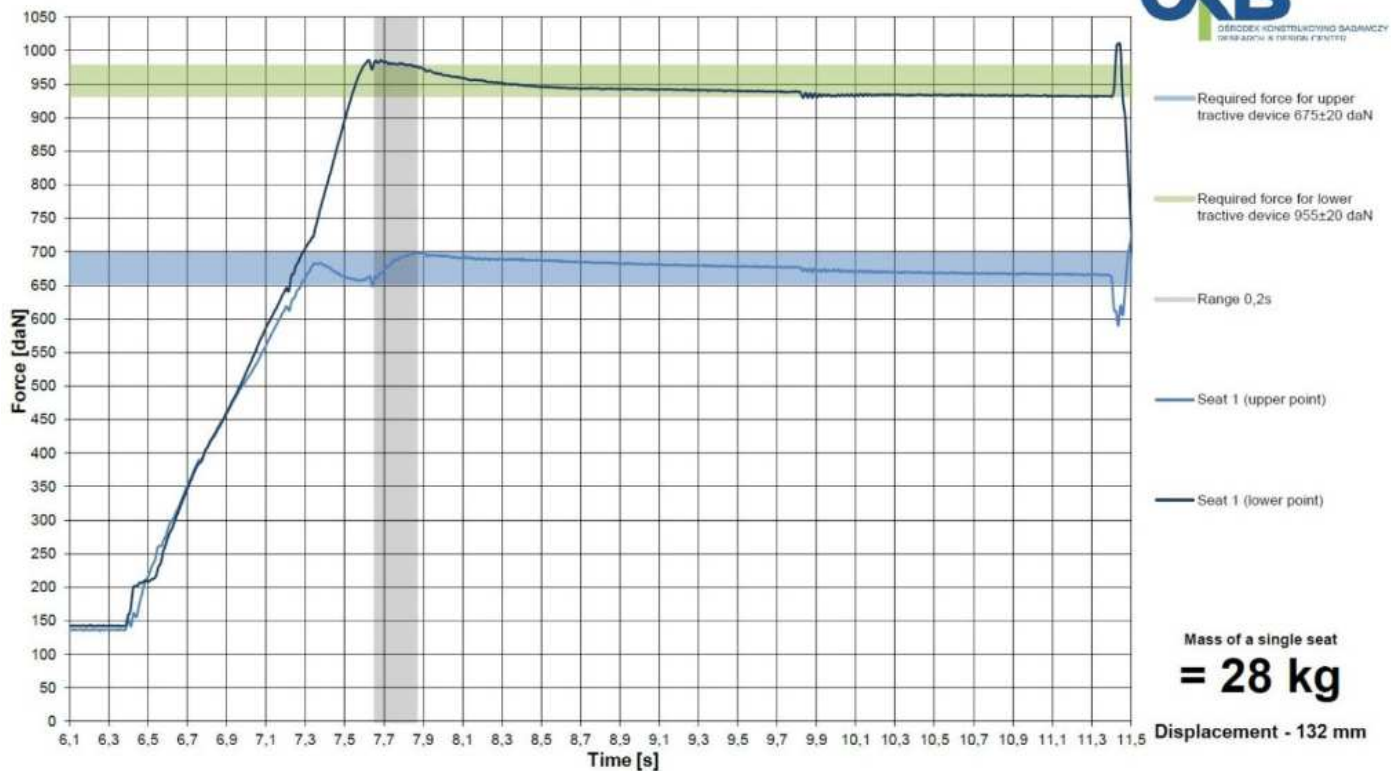




3.3.6. Dummy seat 2 mounted on N0AZM09 leg  
**Dummy seat + N0AZM09 + cat. M2 (NMI)**



3.3.7. Dummy seat 2 mounted on Millenium leg  
**Dummy seat + Millenium Leg + cat. M2 (NMI)**

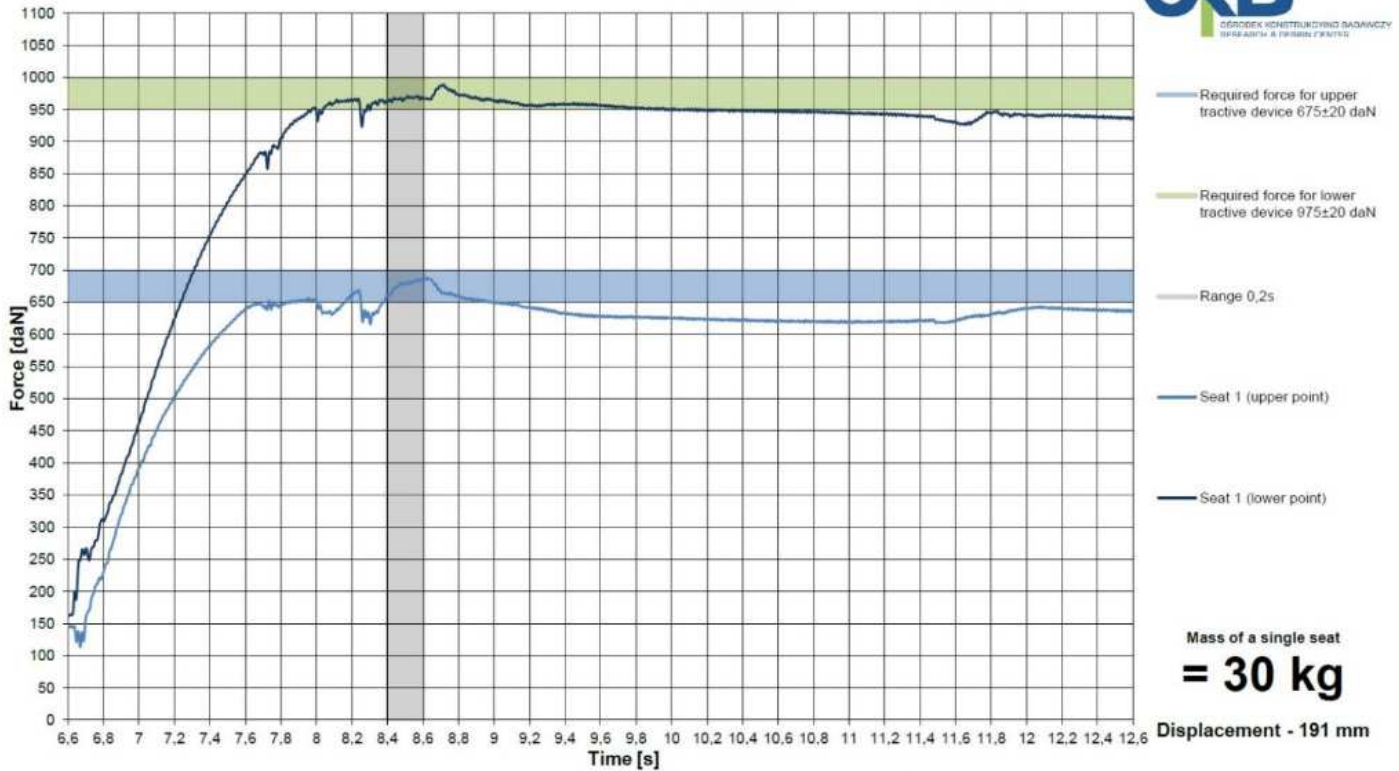




### 3.3.8. Dummy seat (DS-02) mounted on V-leg with V-bolt

Date: 07.06.2019  
 Test number: 2019\_06\_07\_02

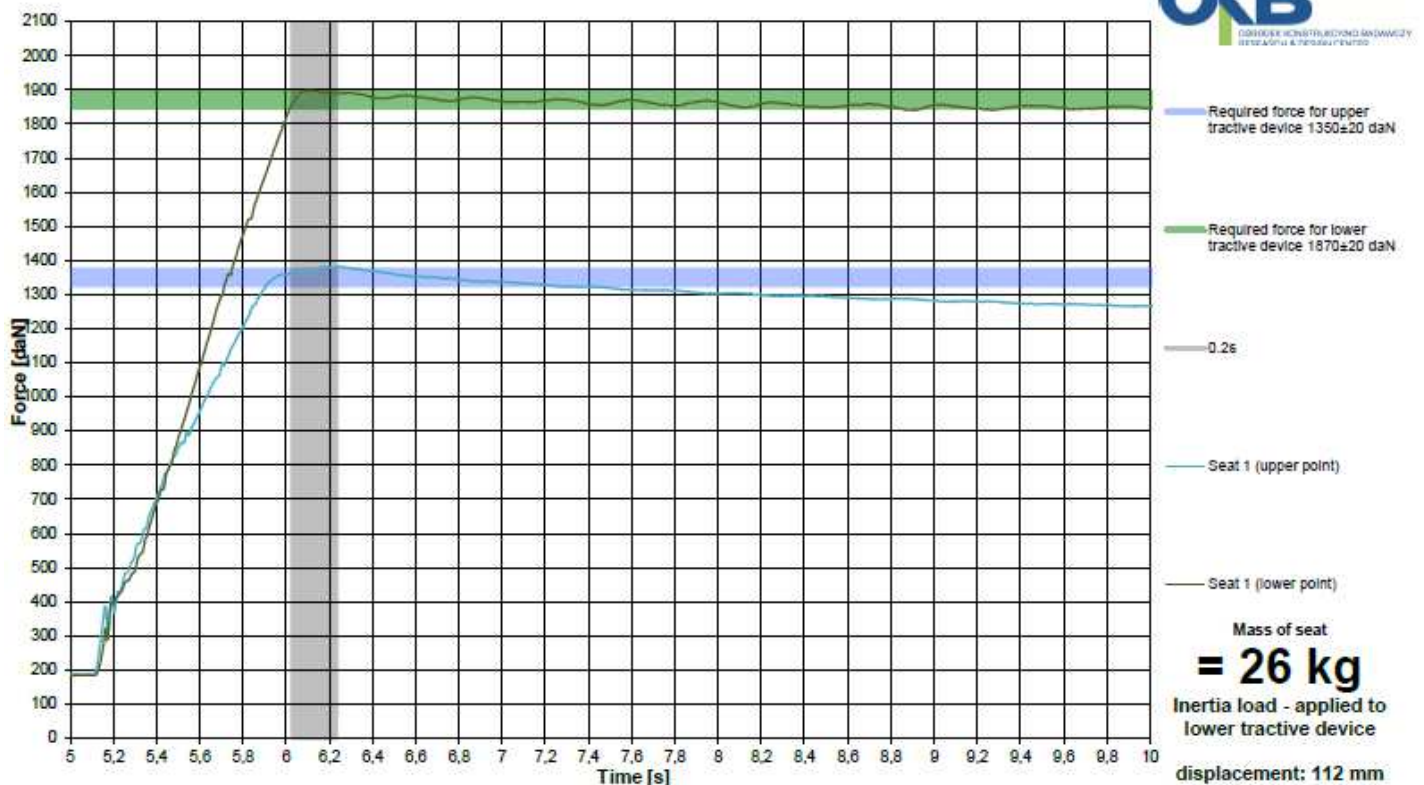
#### Dummy seat + v-leg + v-bolt + cat. M2 (NMI)



### 3.3.9. Seat type S1TAX02 mounted on V-leg

Date: 28.04.2020  
 Test number: 2020\_04\_28\_03

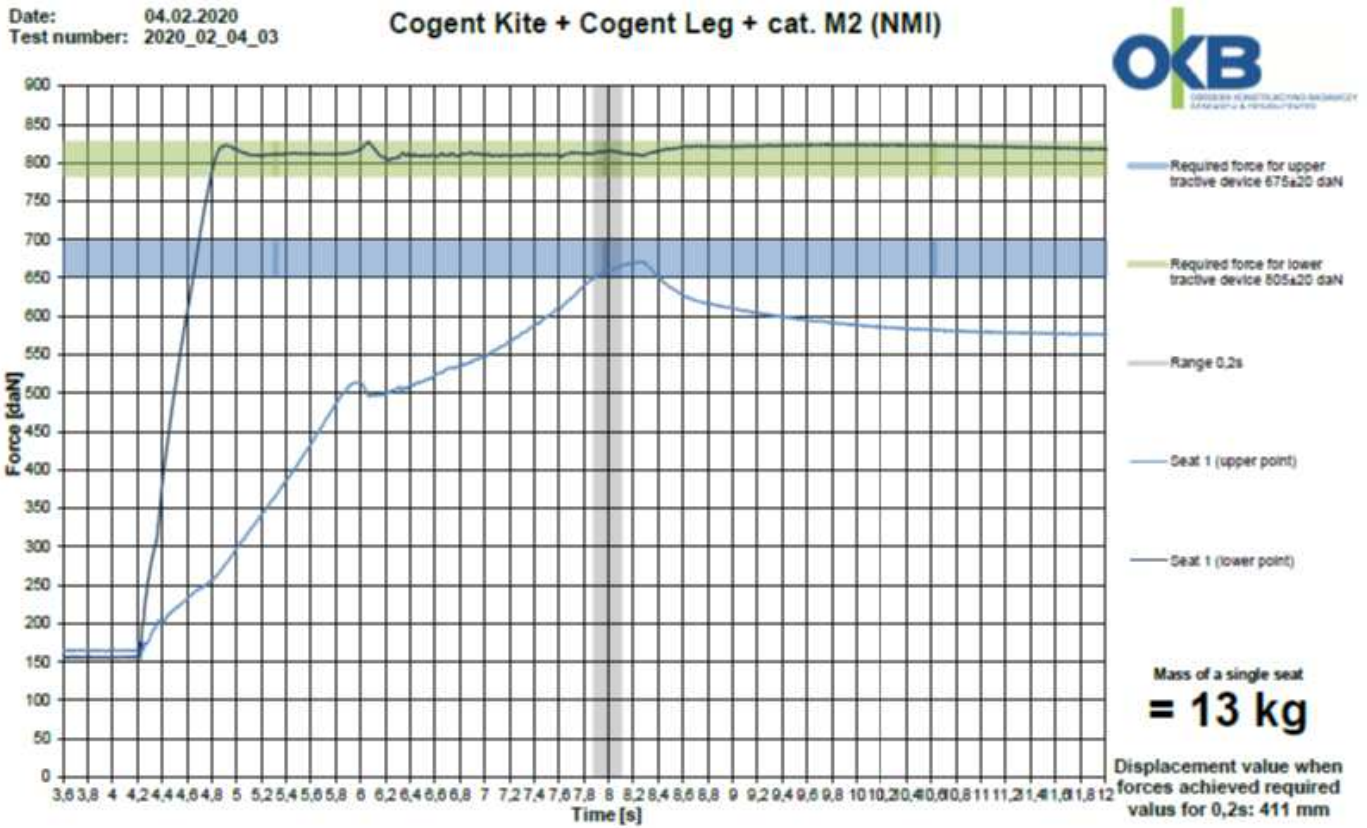
#### Taxi seat on V leg, NMI LiteRail, M1



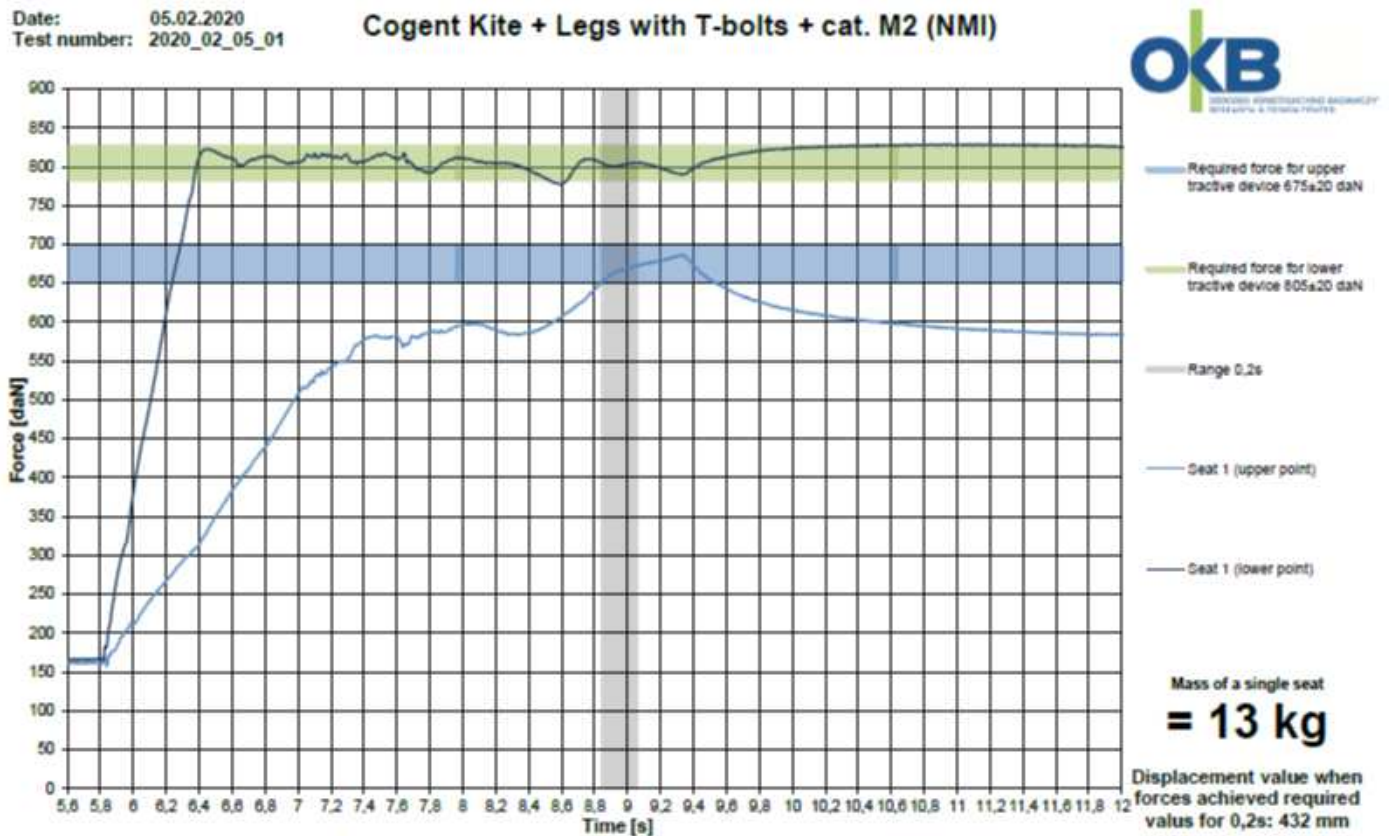




### 3.3.10. Cogent Kite seat mounted on Cogent leg



### 3.3.11. Cogent Kite seat mounted on Legs with T-bolts

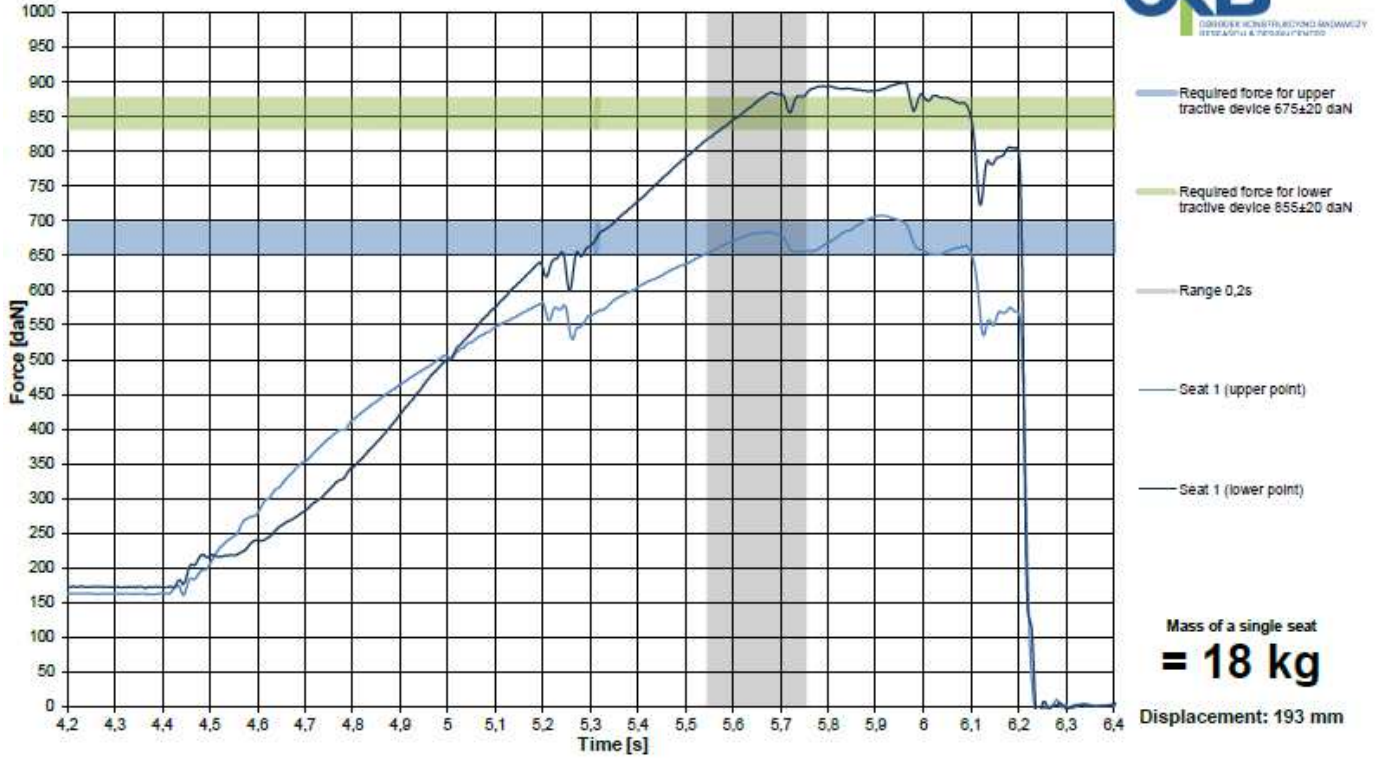




### 3.3.12. Dummy seat mounted on Pi legs

Date: 05.02.2020  
 Test number: 2020\_02\_05\_04

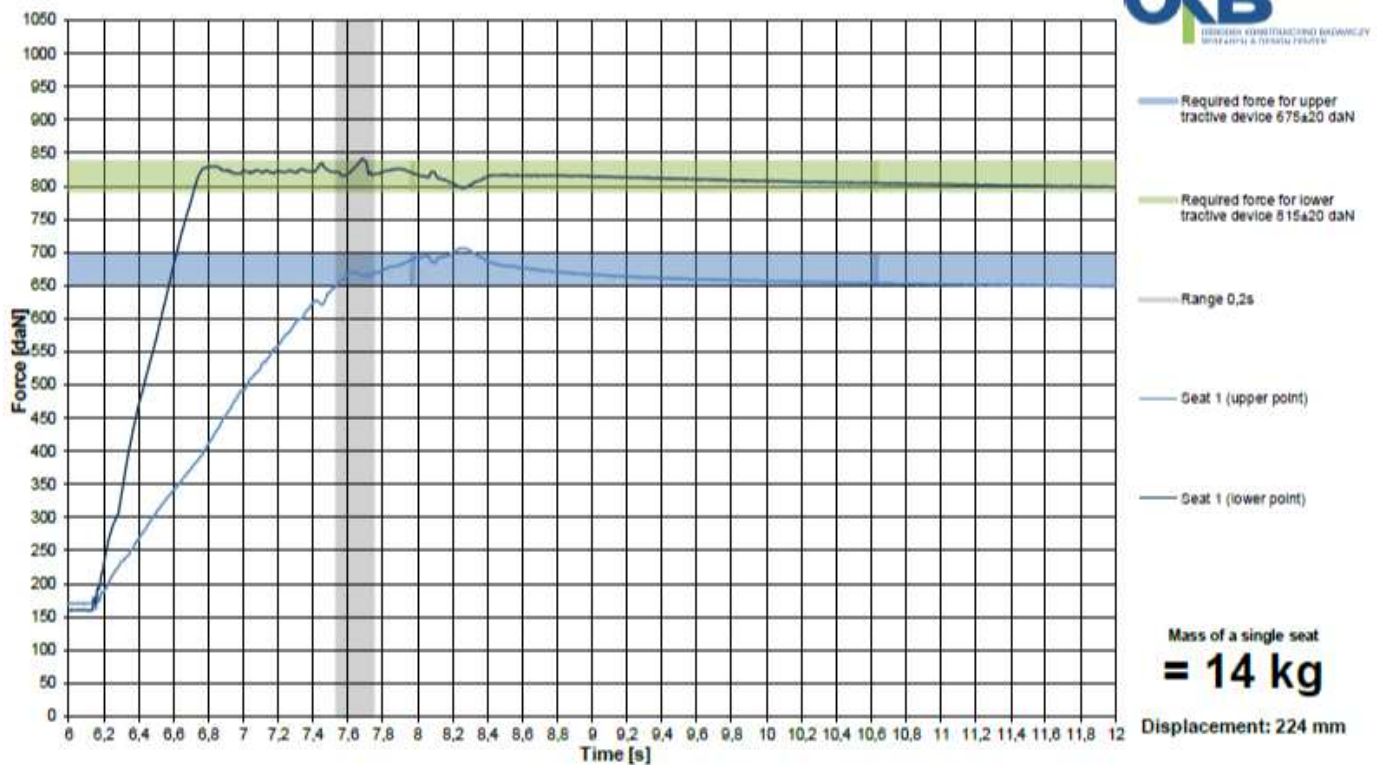
#### Dummy seat + Pi legs + cat. M2 (NMI)



### 3.3.13. Phoenix Sirius seat mounted on Sirius NMI leg

Date: 04.02.2020  
 Test number: 2020\_02\_04\_04

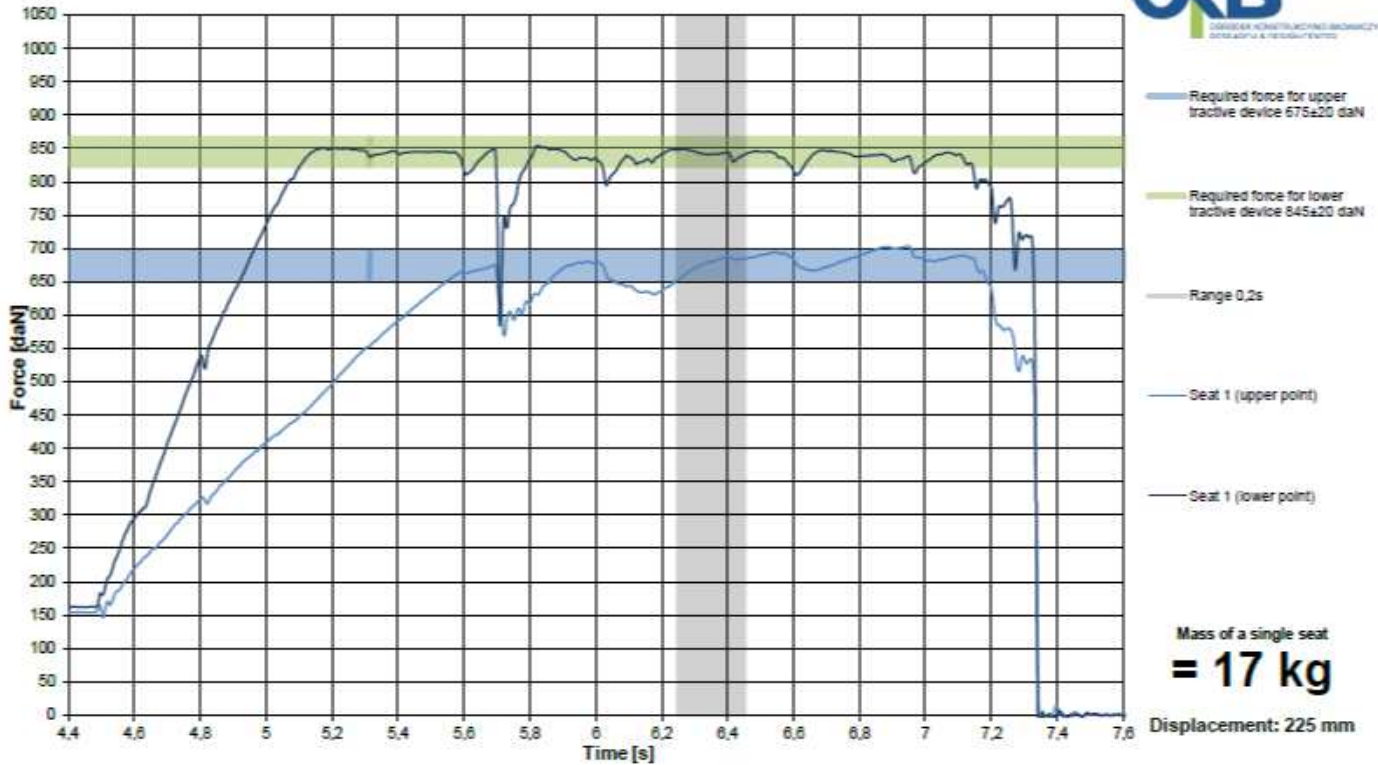
#### Phoenix Sirius + Sirius NMI leg+ cat. M2





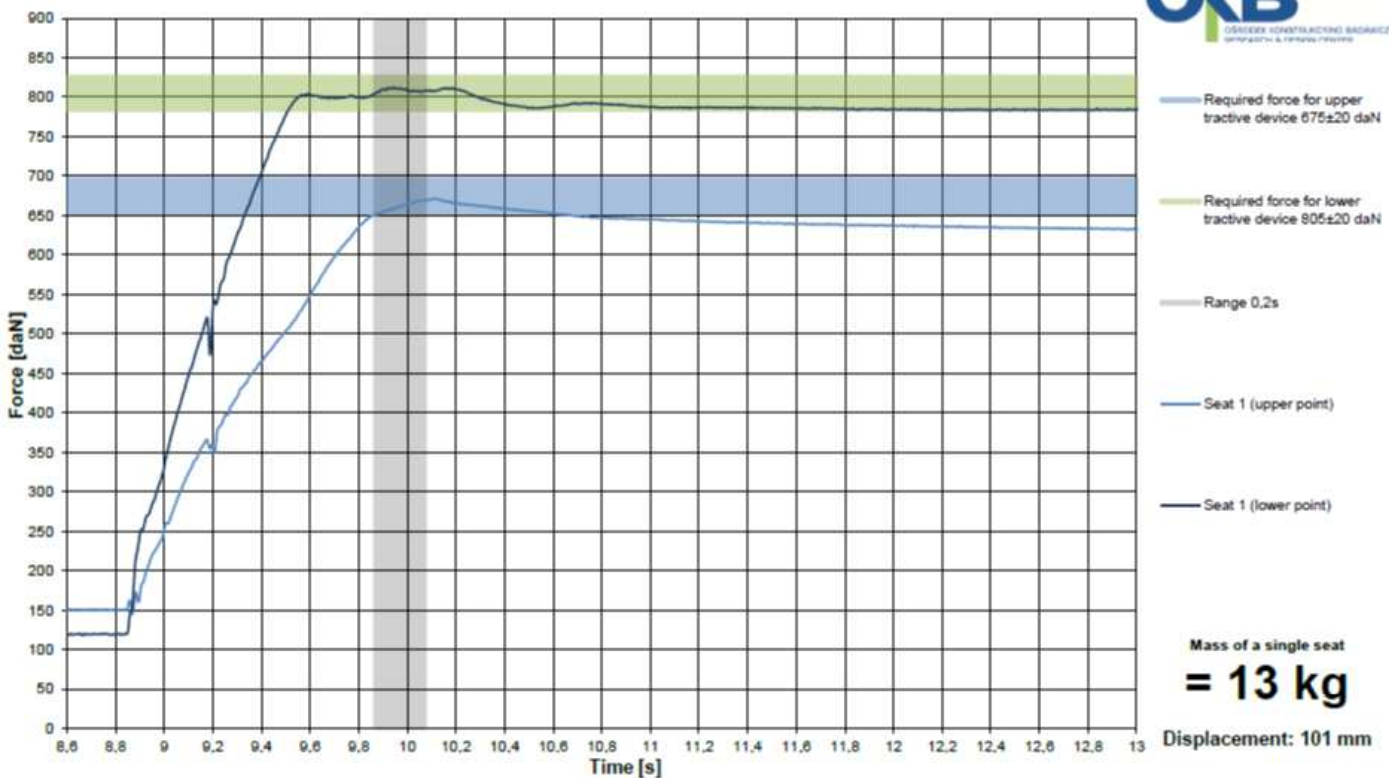
### 3.3.14. Phoenix Blenheim seat mounted on Blenheim Light NMI leg

Date: 04.02.2020  
 Test number: 2020\_02\_04\_01 **Phoenix Blenheim + Blenheim Light NMI leg+ cat. M2 (NMI)**



### 3.3.15. Blenheim seat mounted on Blenheim legs

Date: 12.05.2020  
 Test number: 2020\_05\_12\_06 **Phoenix Blenheim + Blenheim legs (spacing 50 mm) + cat. M2**



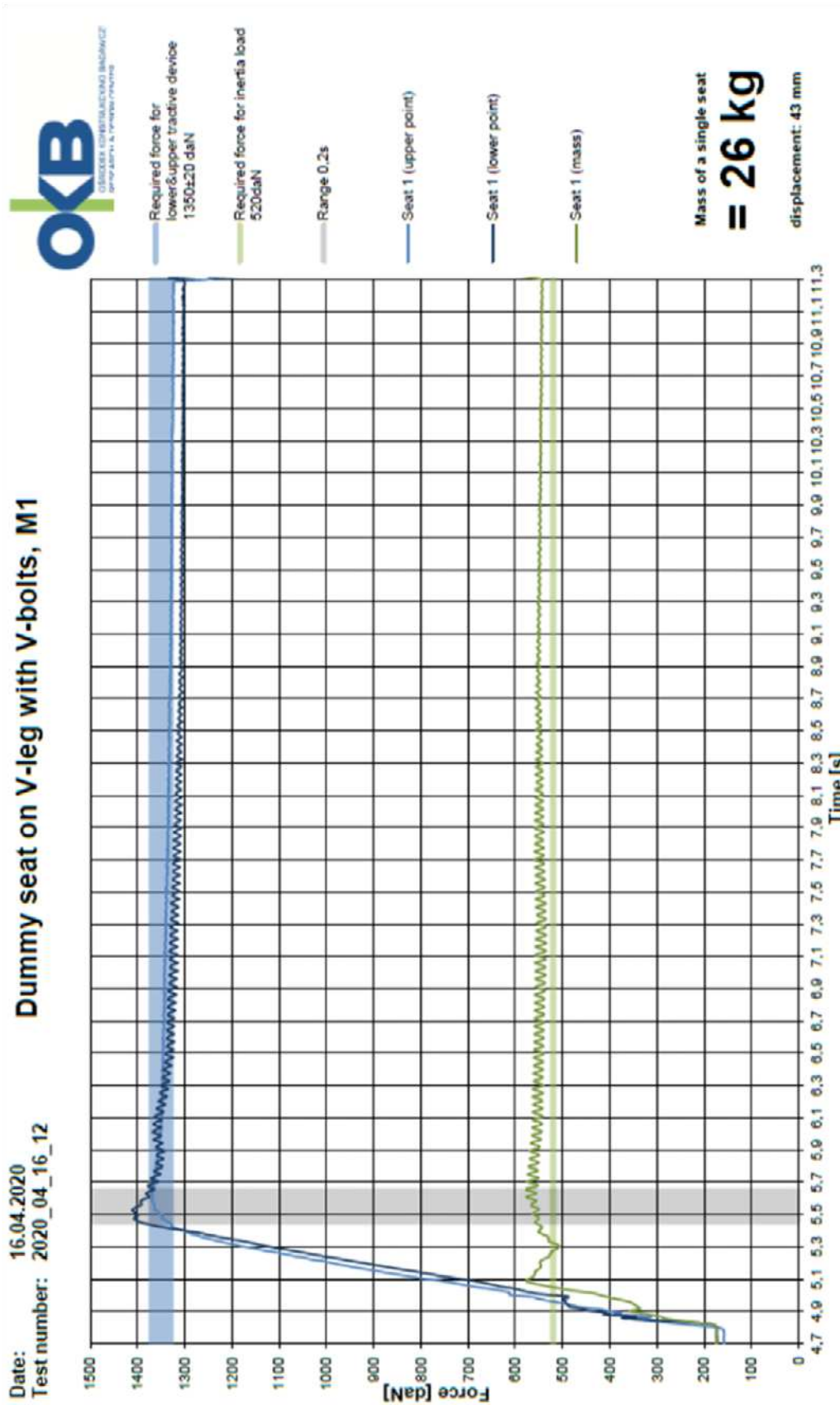
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.16. Dummy seat mounted on V-leg with V-bolts in representative vehicle body.



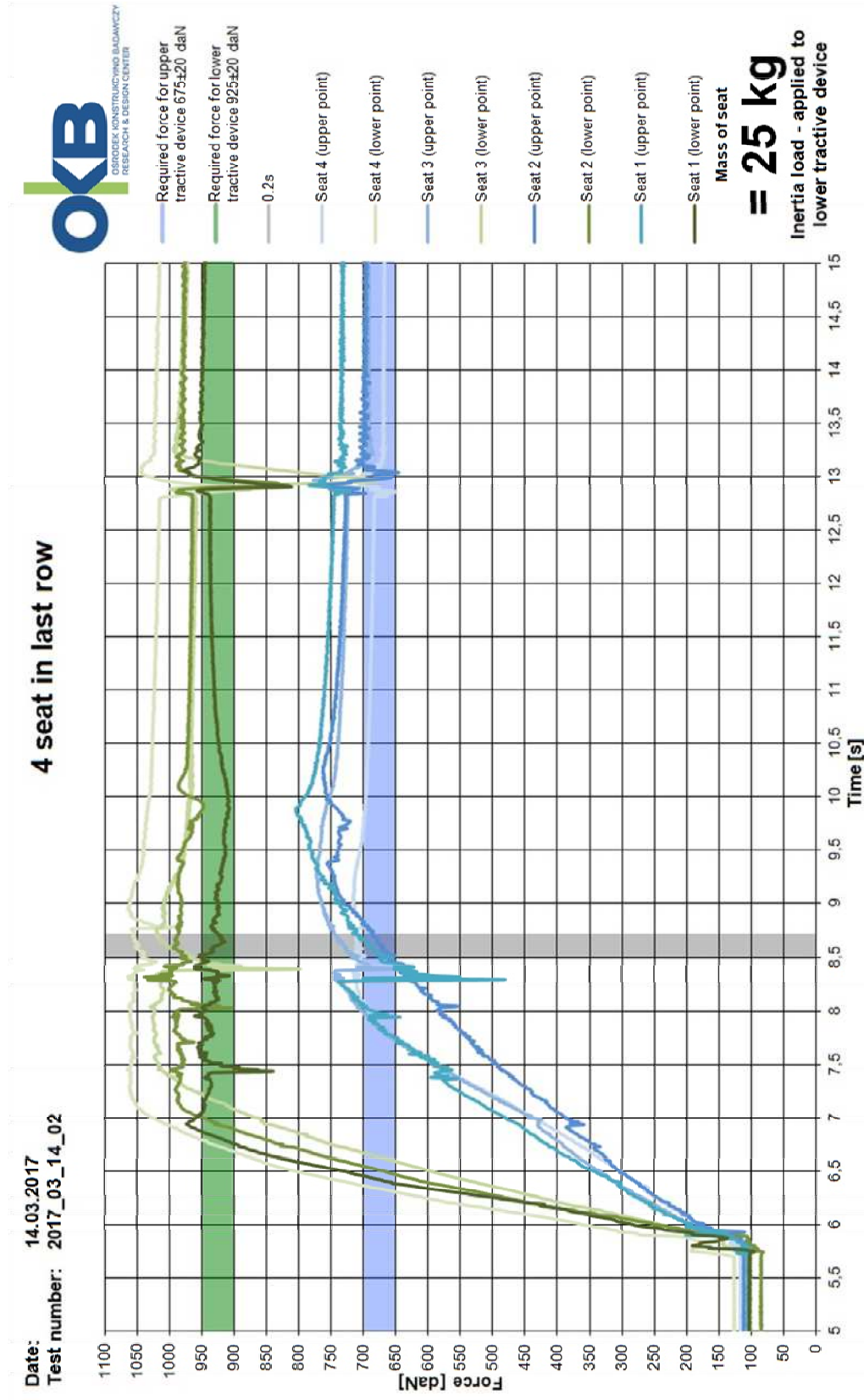
Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



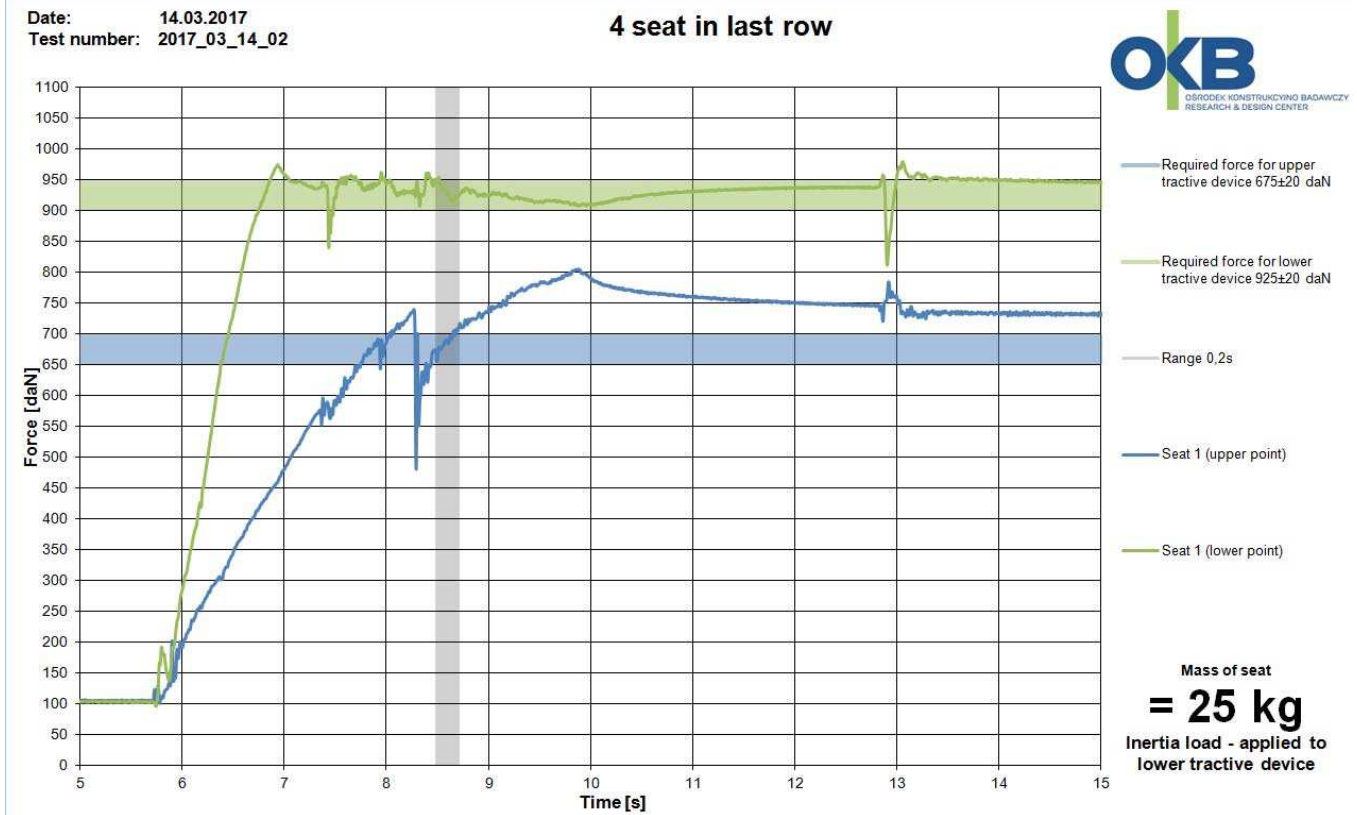
Auto Service

3.3.17. Ekolider II double + NOBS17 (leg), representative vehicle body  
Displacement: S1: 330mm, S2: 340mm, S3: 320mm, S4: 320mm

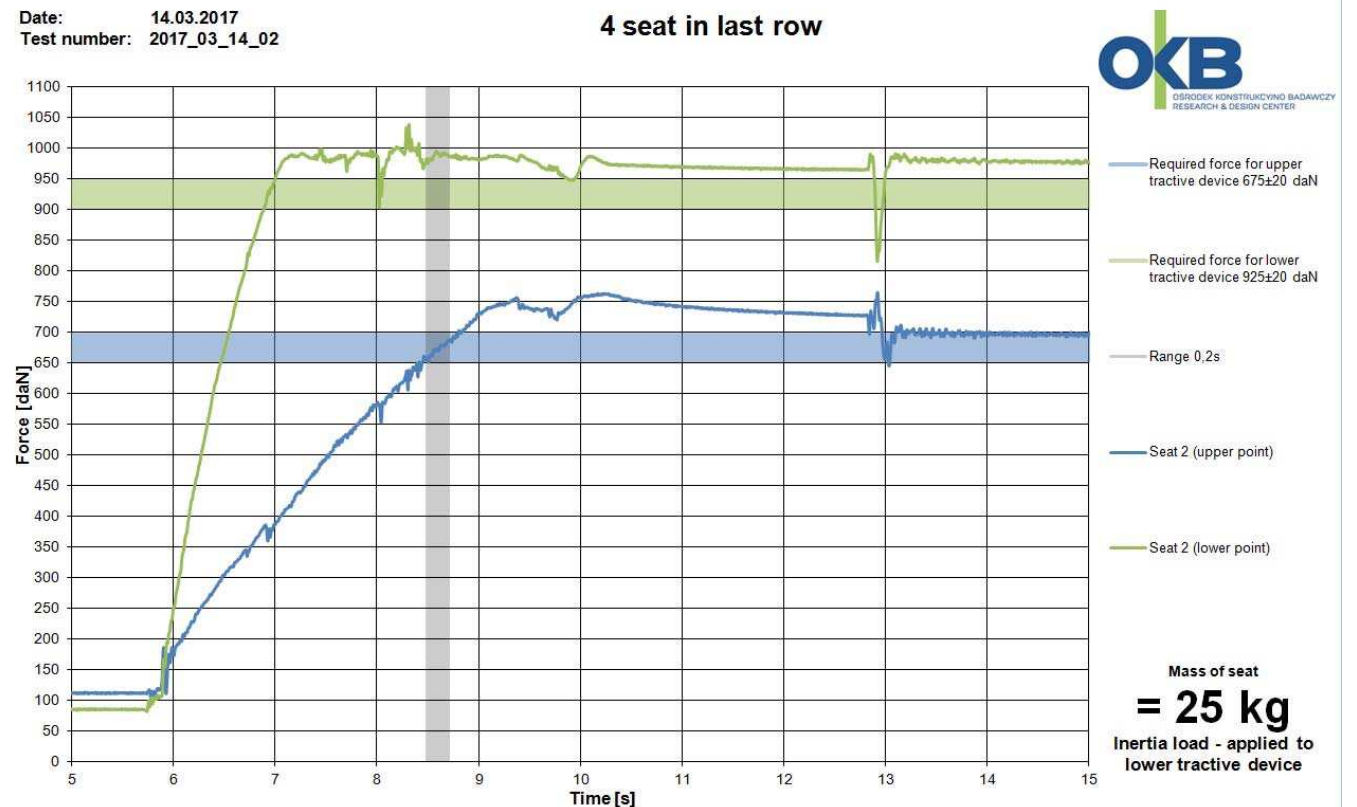




3.3.17. Seat S1, displacement = 330mm



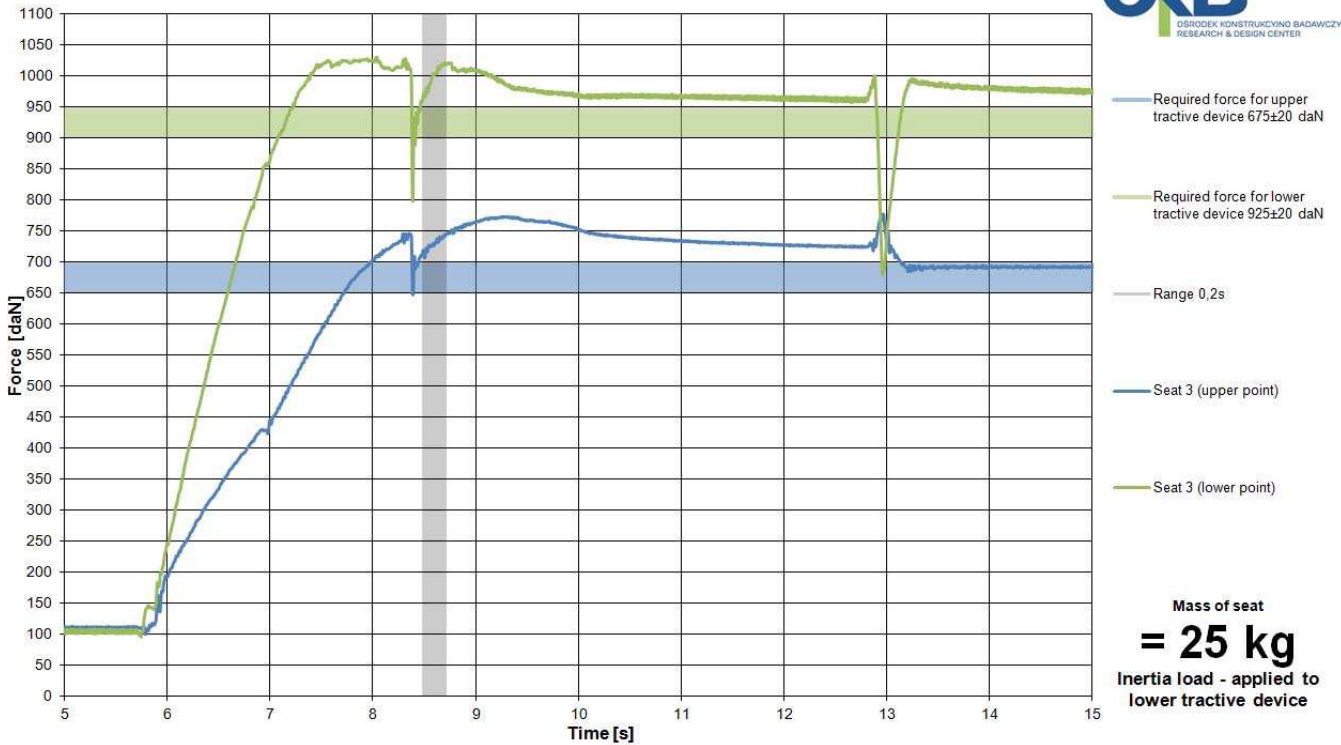
3.3.17. Seat S2, displacement 340 mm



### 3.3.17. Seat S3, displacement 320 mm

Date: 14.03.2017  
 Test number: 2017\_03\_14\_02

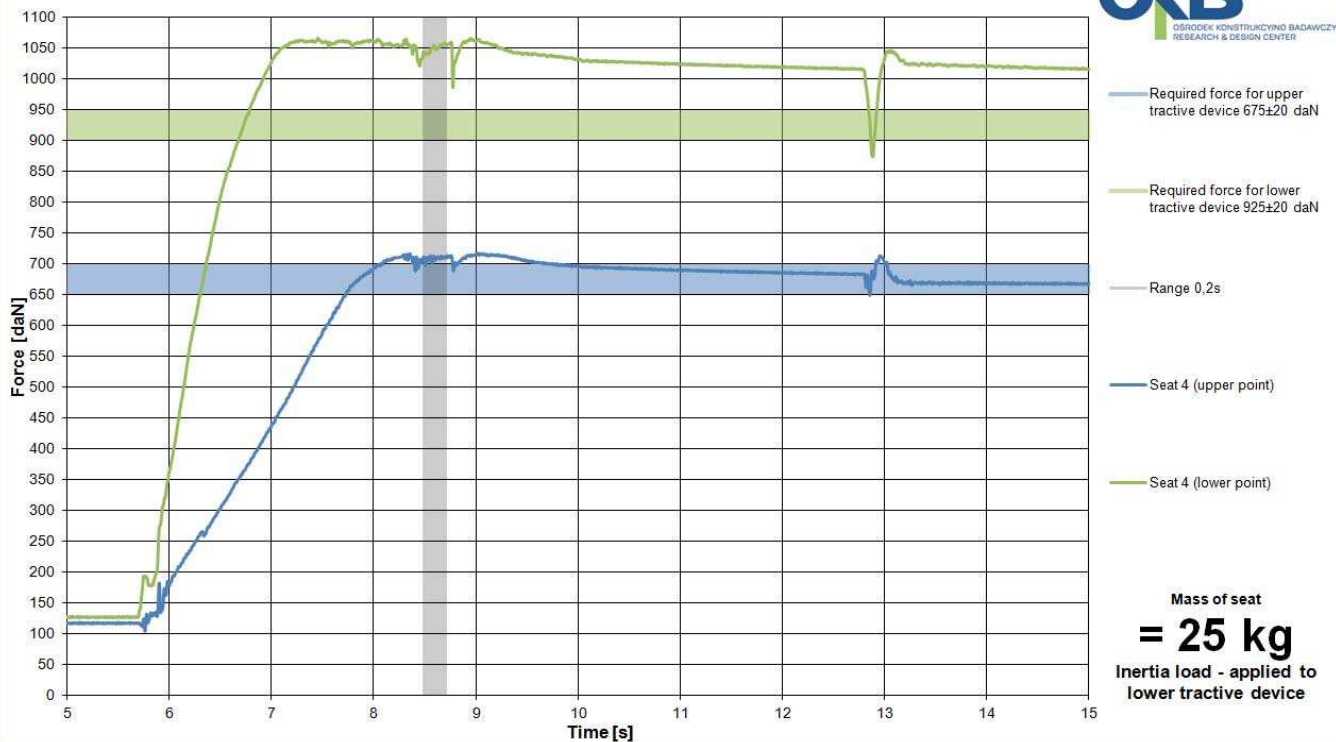
4 seat in last row



### 3.3.17. Seat S4, displacement 320 mm

Date: 14.03.2017  
 Test number: 2017\_03\_14\_02

4 seat in last row



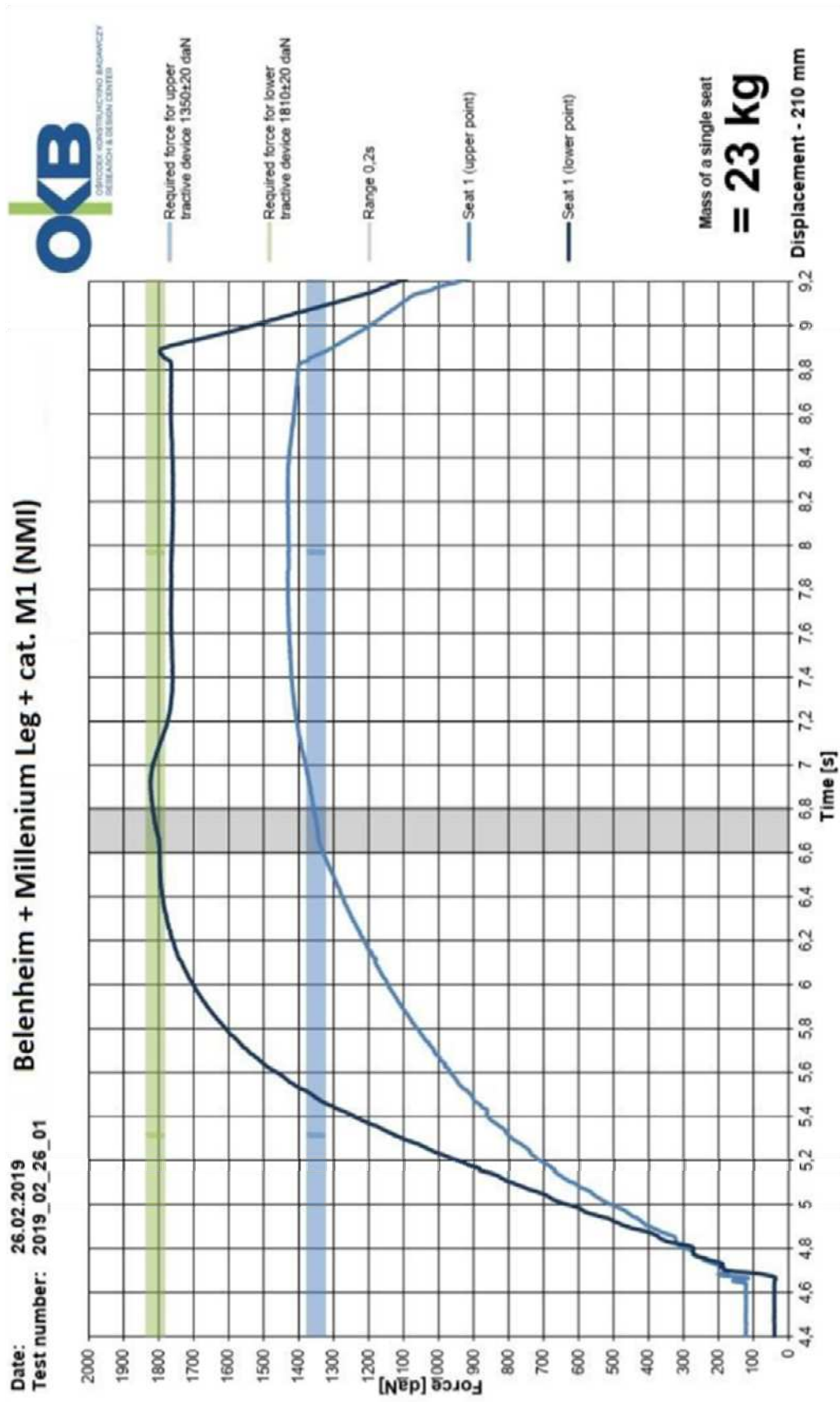
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.18. – Seat Blenheim mounted on Millenium leg





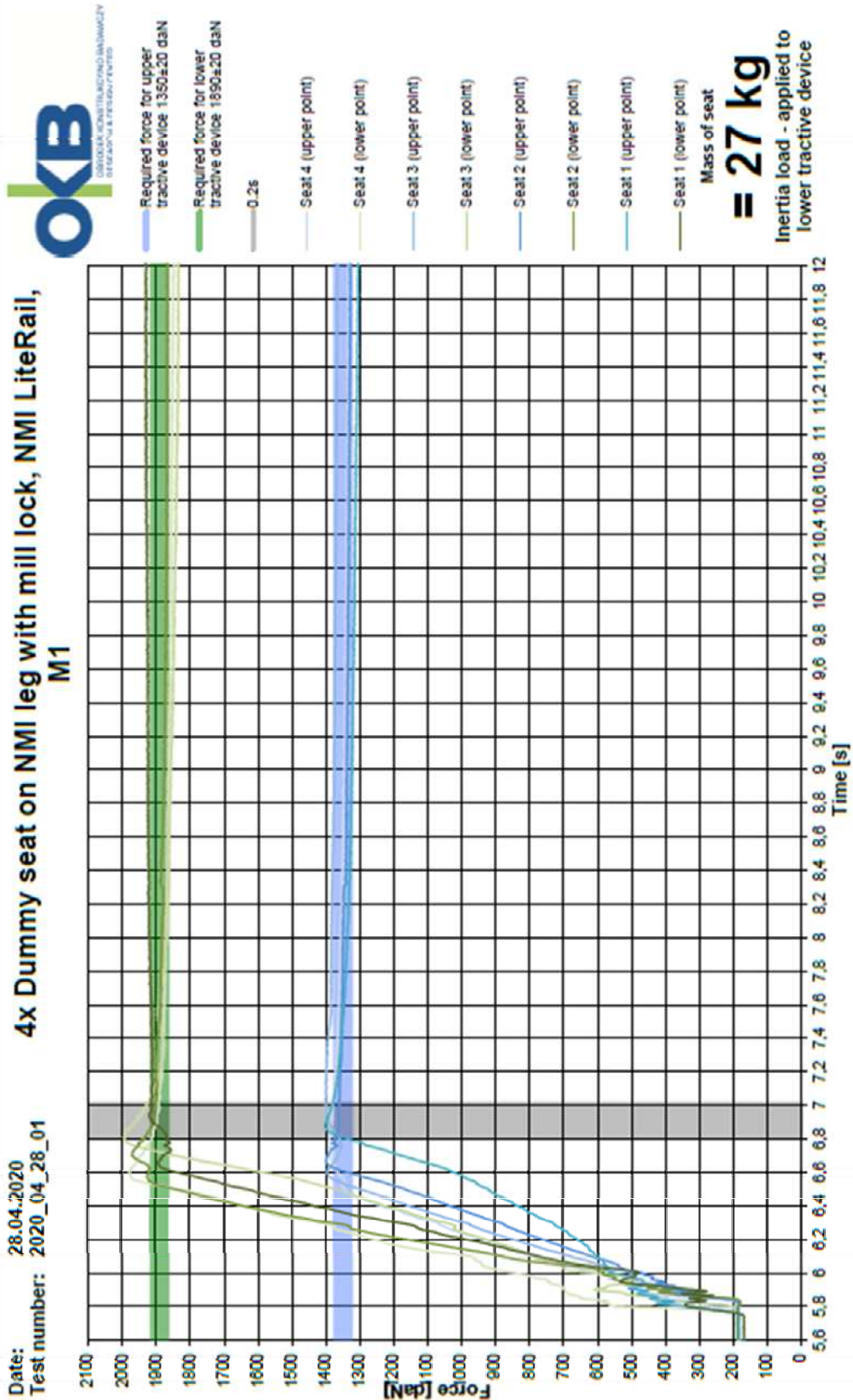
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.19. 4 x Dummy seat (DS-02) on NMI leg mounted on NMI Lite Rail

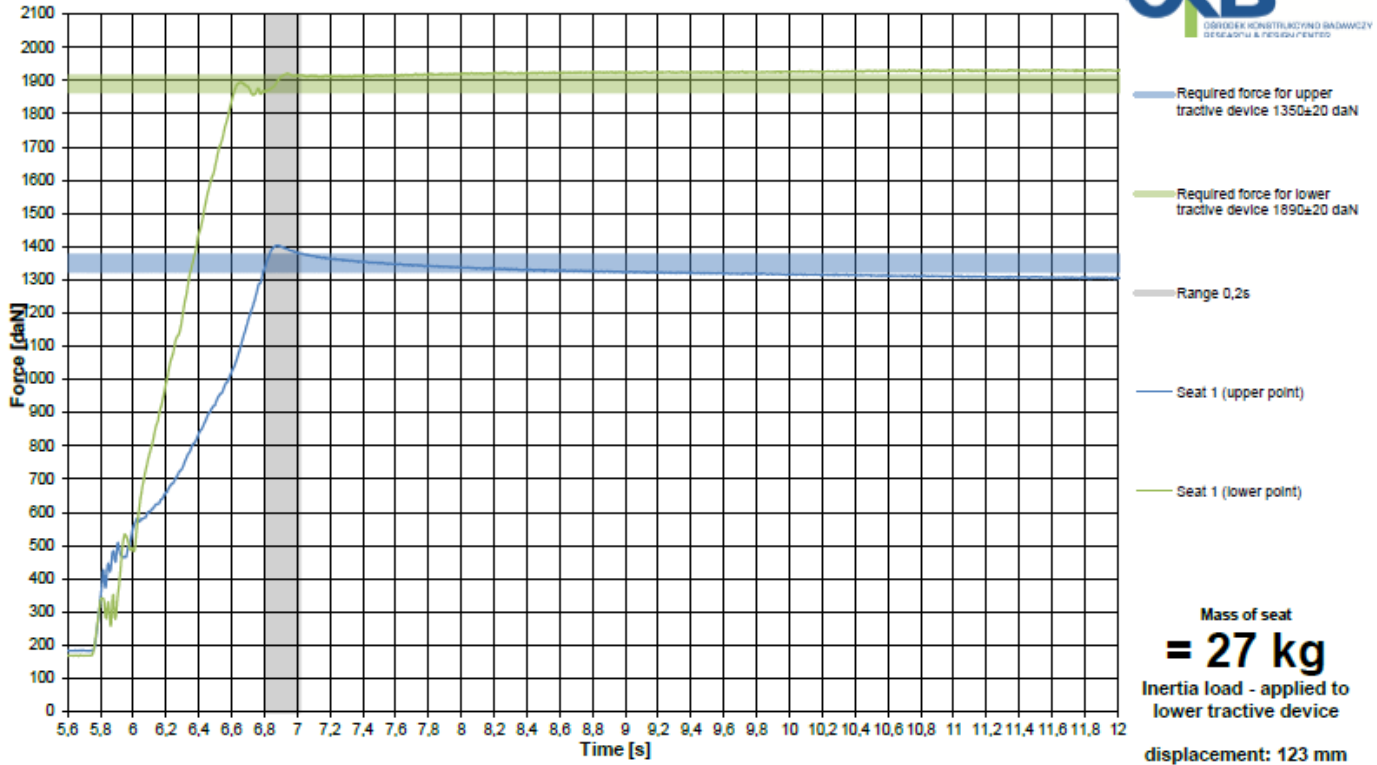




3.3.19. Seat 1

Date: 28.04.2020  
 Test number: 2020\_04\_28\_01

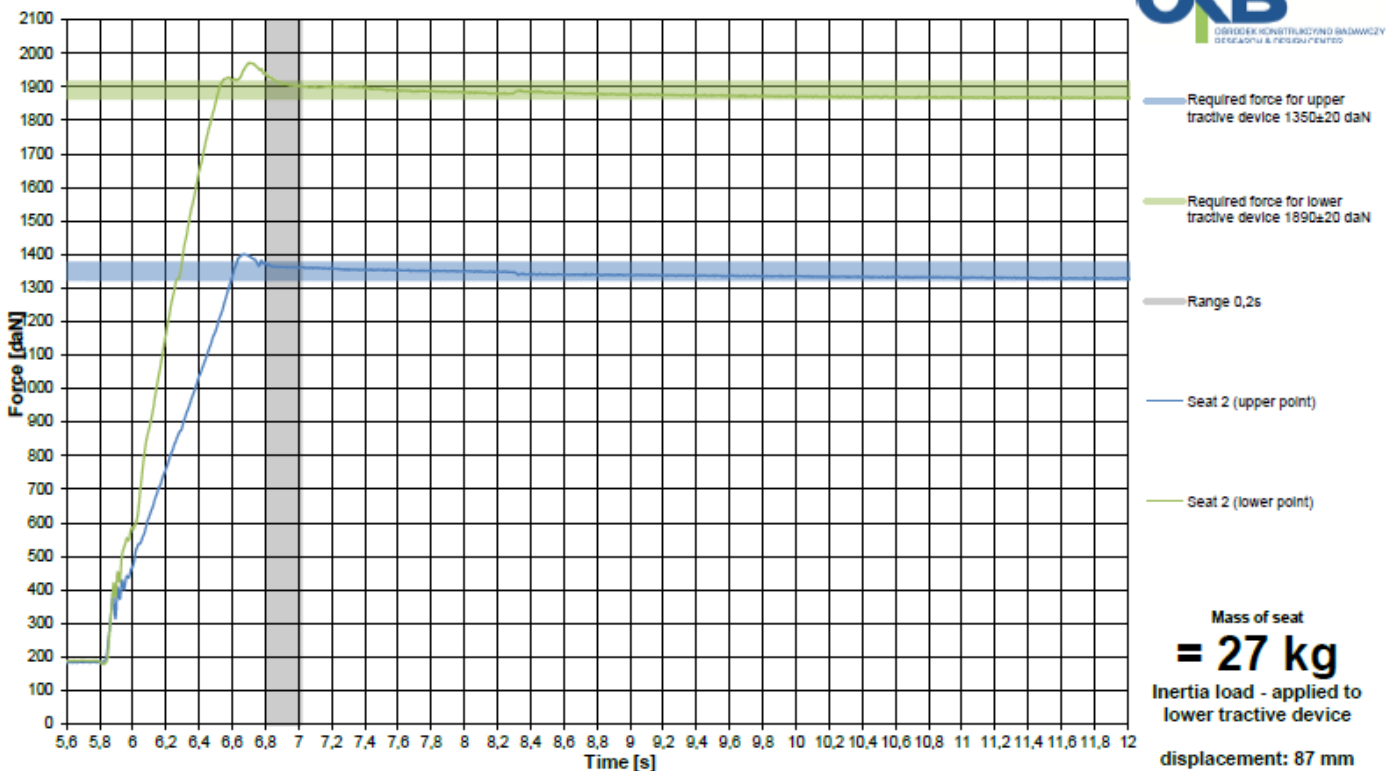
4x Dummy seat on NMI leg with mill lock, NMI LiteRail, M1



3.3.19. Seat 2

Date: 28.04.2020  
 Test number: 2020\_04\_28\_01

4x Dummy seat on NMI leg with mill lock, NMI LiteRail, M1

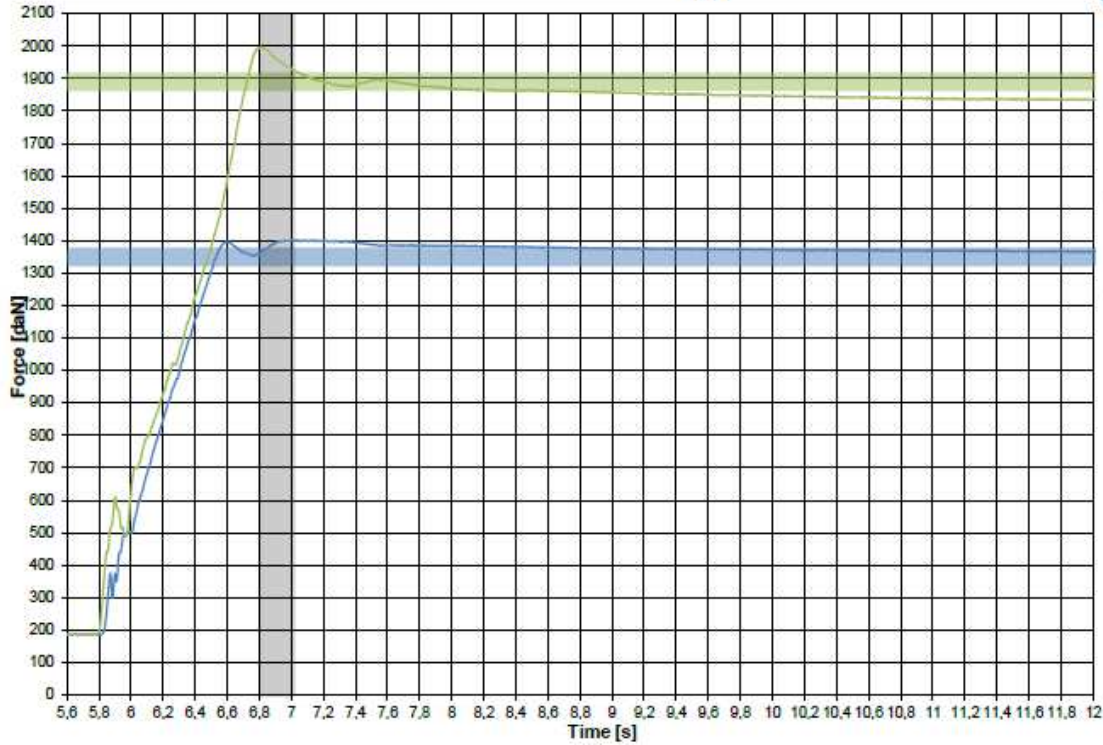




### 3.3.19. Seat 3

Date: 28.04.2020  
 Test number: 2020\_04\_28\_01

#### 4x Dummy seat on NMI leg with mill lock, NMI LiteRail, M1



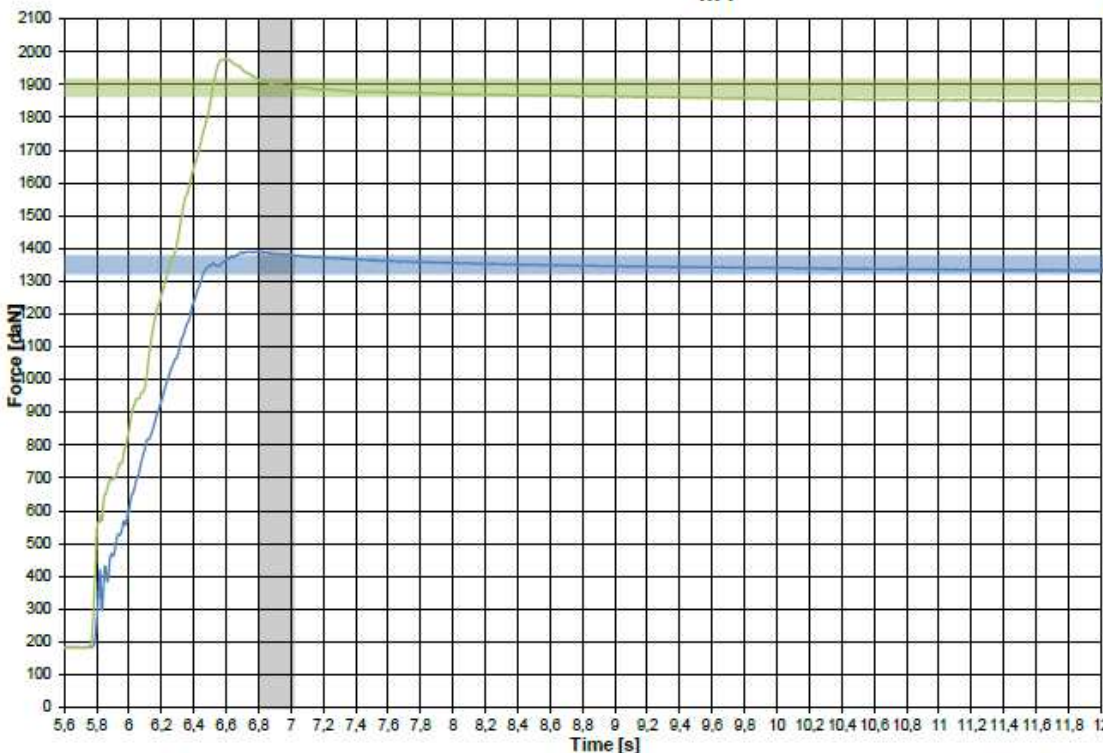
- Required force for upper tractive device 1350±20 daN
- Required force for lower tractive device 1890±20 daN
- Range 0,2s
- Seat 3 (upper point)
- Seat 3 (lower point)

Mass of seat  
**= 27 kg**  
 Inertia load - applied to lower tractive device  
 displacement: 91 mm

### 3.3.19. Seat 4

Date: 28.04.2020  
 Test number: 2020\_04\_28\_01

#### 4x Dummy seat on NMI leg with mill lock, NMI LiteRail, M1



- Required force for upper tractive device 1350±20 daN
- Required force for lower tractive device 1890±20 daN
- Range 0,2s
- Seat 4 (upper point)
- Seat 4 (lower point)

Mass of seat  
**= 27 kg**  
 Inertia load - applied to lower tractive device  
 displacement: 80 mm

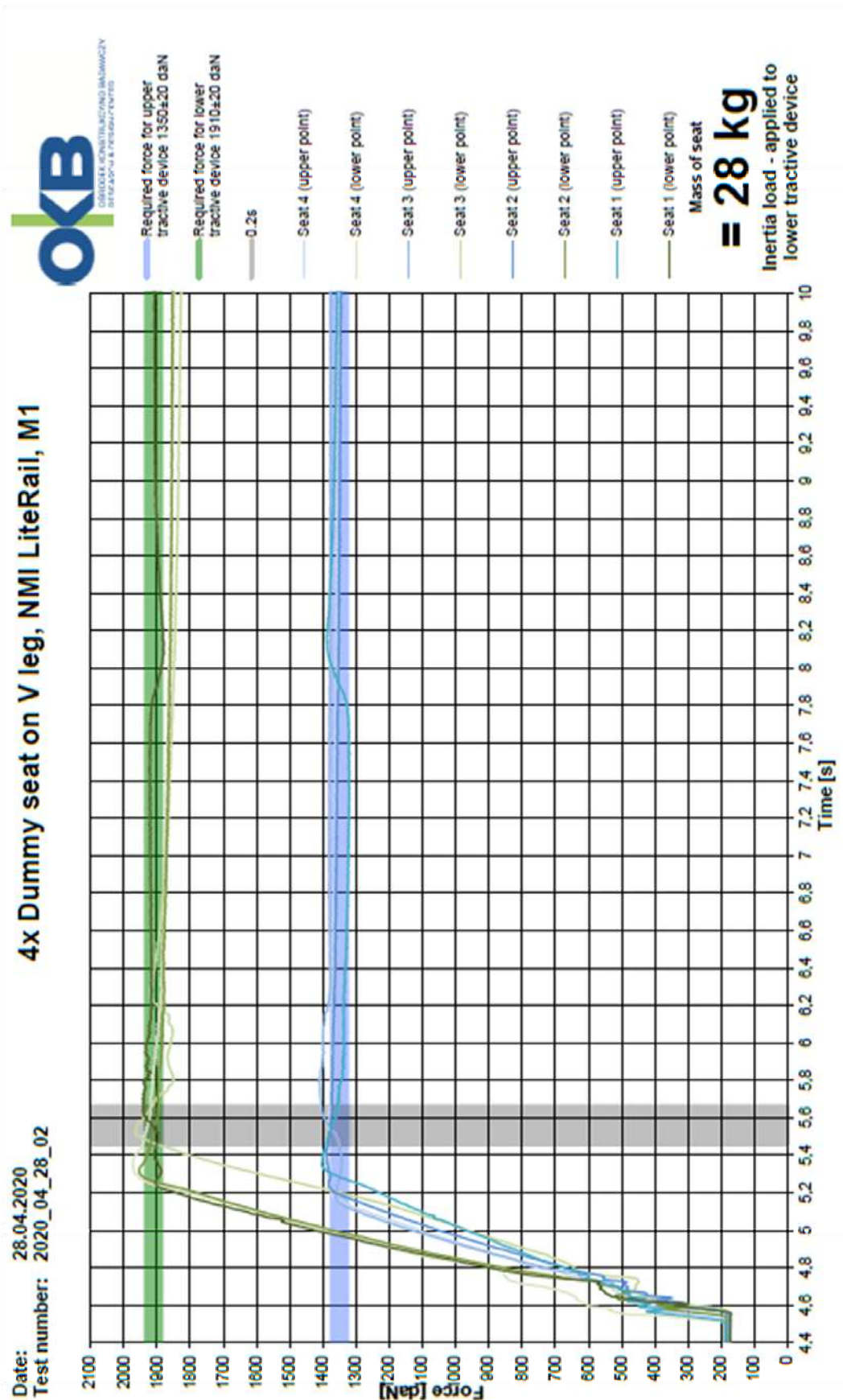
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.20. 4 x Dummy seat (DS-02) on V leg mounted on NMI Lite Rail



Test report No.: 20-00026-CP-PRG-00  
 Manufacturer: NMI Safety Systems Ltd., United Kingdom  
 Type: NLR22

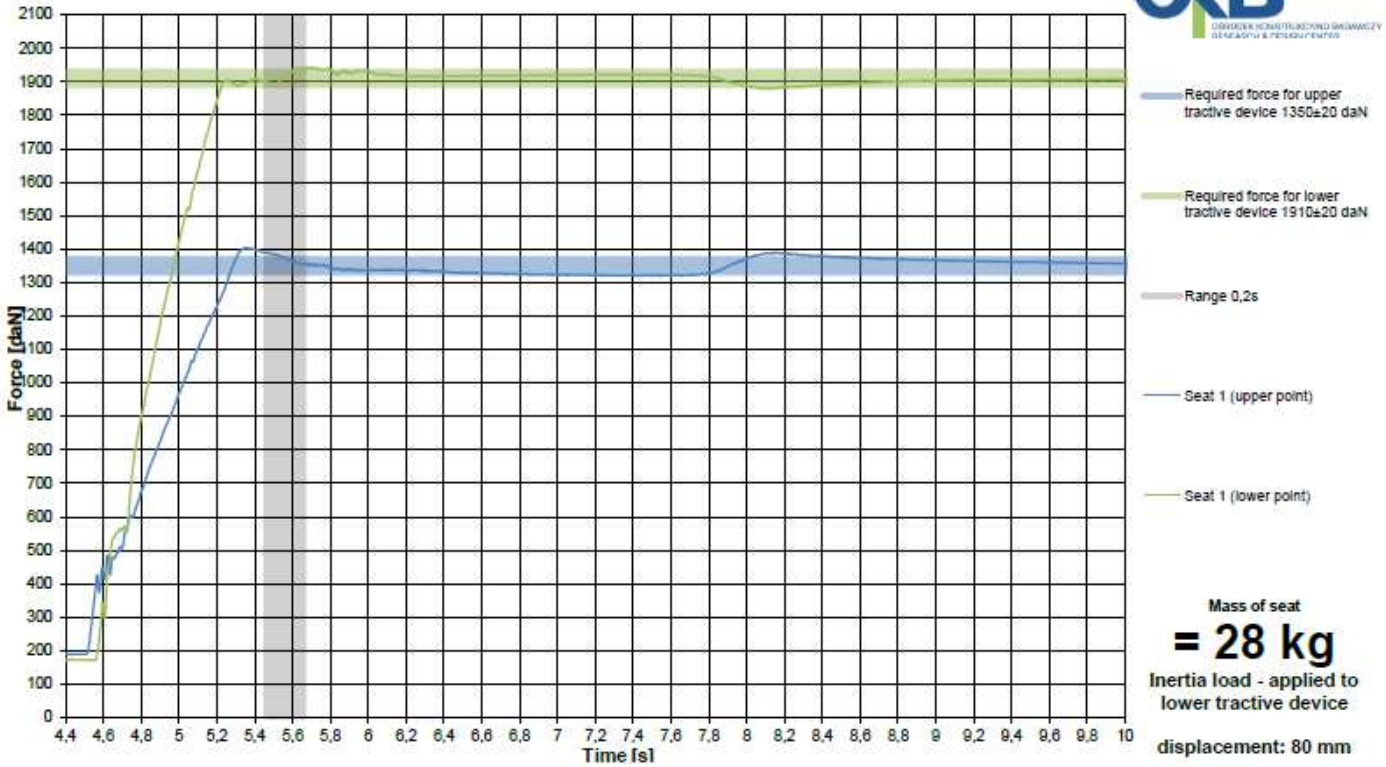


Auto Service

### 3.3.20. Seat 1

Date: 28.04.2020  
 Test number: 2020\_04\_28\_02

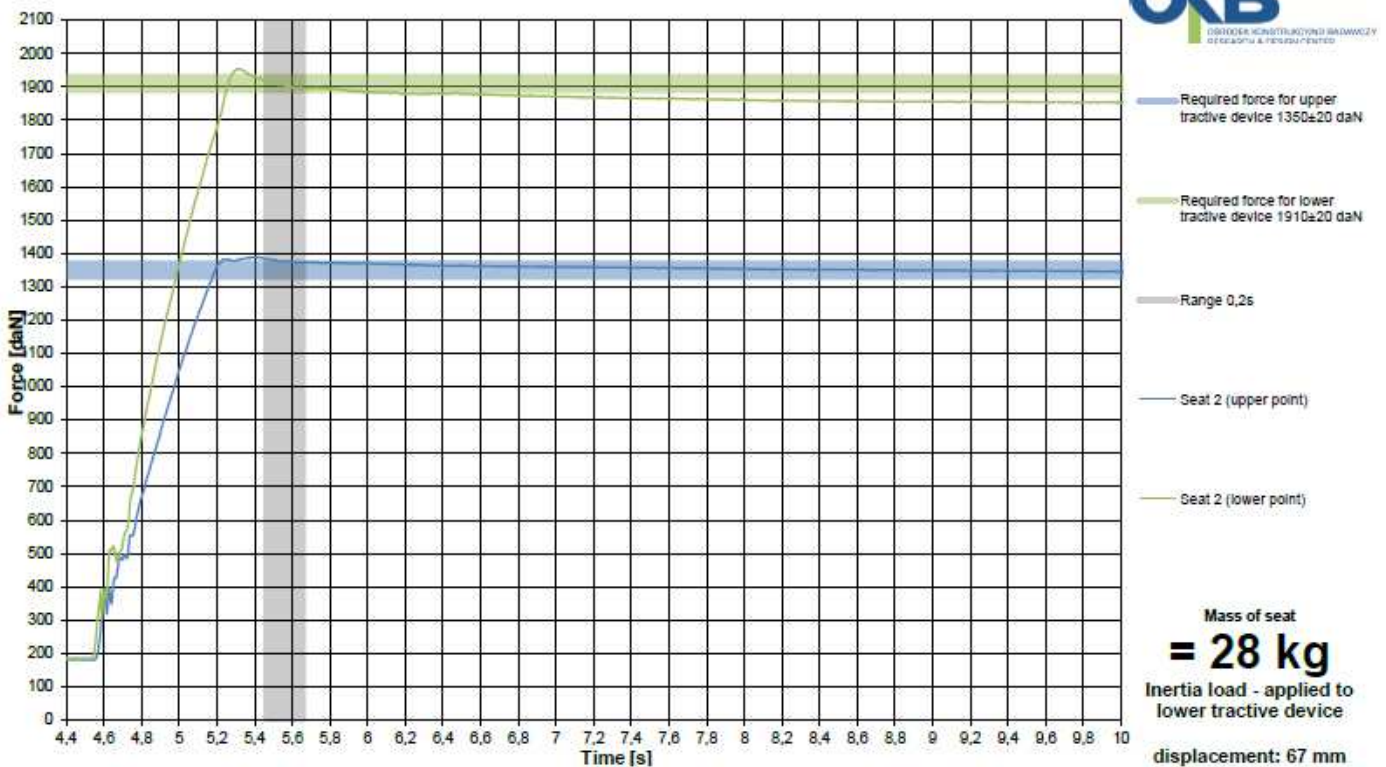
### 4x Dummy seat on V leg, NMI LiteRail, M1



### 3.3.20. Seat 2

Date: 28.04.2020  
 Test number: 2020\_04\_28\_02

### 4x Dummy seat on V leg, NMI LiteRail, M1



Test report No.: 20-00026-CP-PRG-00  
 Manufacturer: NMI Safety Systems Ltd., United Kingdom  
 Type: NLR22

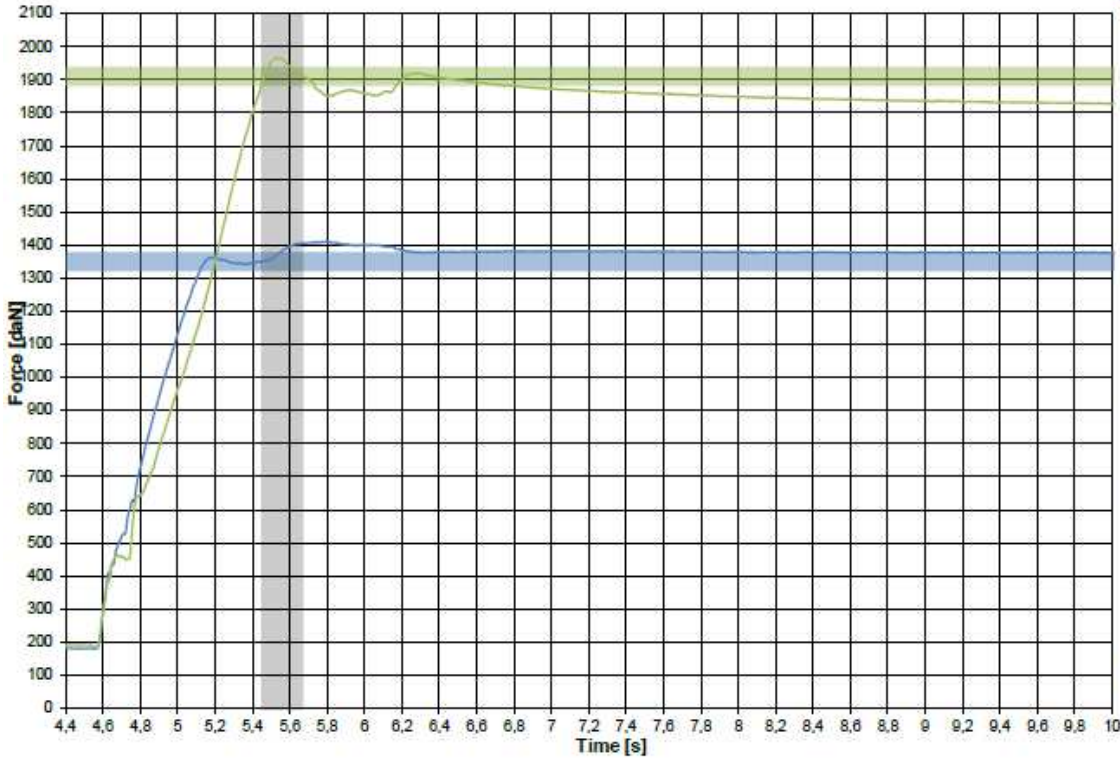


Auto Service

### 3.3.20. Seat 3

Date: 28.04.2020  
 Test number: 2020\_04\_28\_02

### 4x Dummy seat on V leg, NMI LiteRail, M1



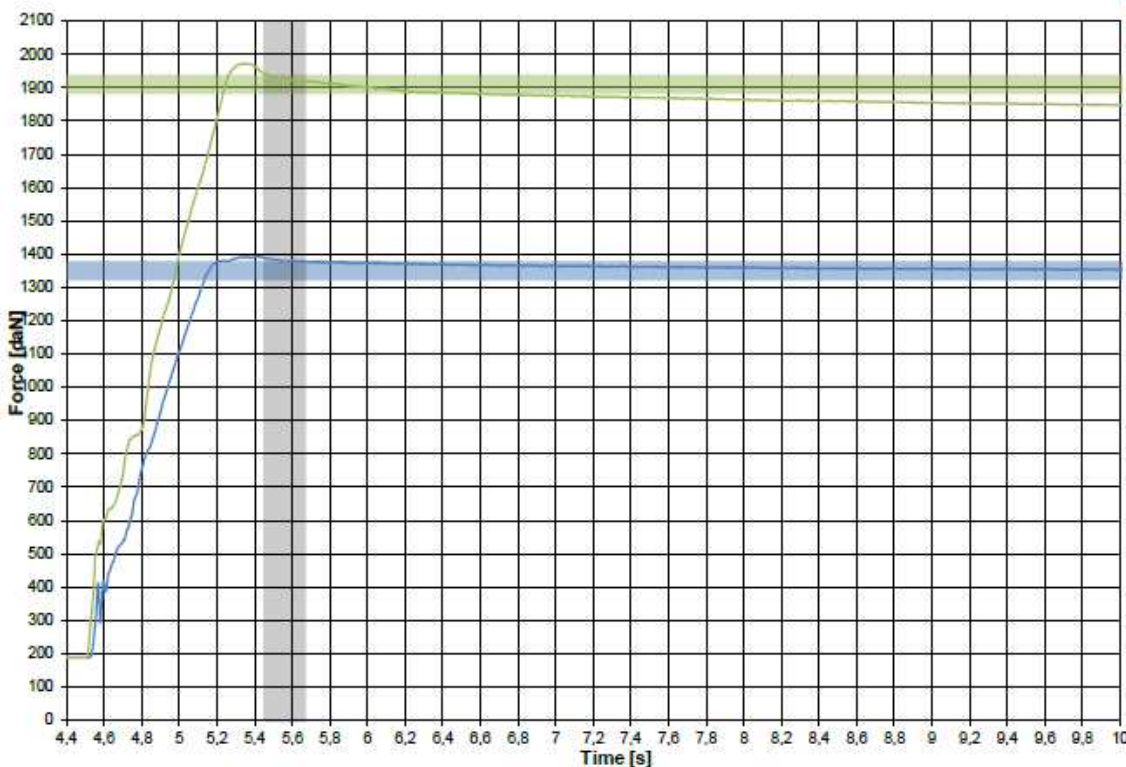
- Required force for upper tractive device 1350±20 daN
- Required force for lower tractive device 1910±20 daN
- Range 0,2s
- Seat 3 (upper point)
- Seat 3 (lower point)

Mass of seat  
**= 28 kg**  
 Inertia load - applied to lower tractive device  
 displacement: 73 mm

### 3.3.20. Seat 4

Date: 28.04.2020  
 Test number: 2020\_04\_28\_02

### 4x Dummy seat on V leg, NMI LiteRail, M1



- Required force for upper tractive device 1350±20 daN
- Required force for lower tractive device 1910±20 daN
- Range 0,2s
- Seat 4 (upper point)
- Seat 4 (lower point)

Mass of seat  
**= 28 kg**  
 Inertia load - applied to lower tractive device  
 displacement: 74 mm

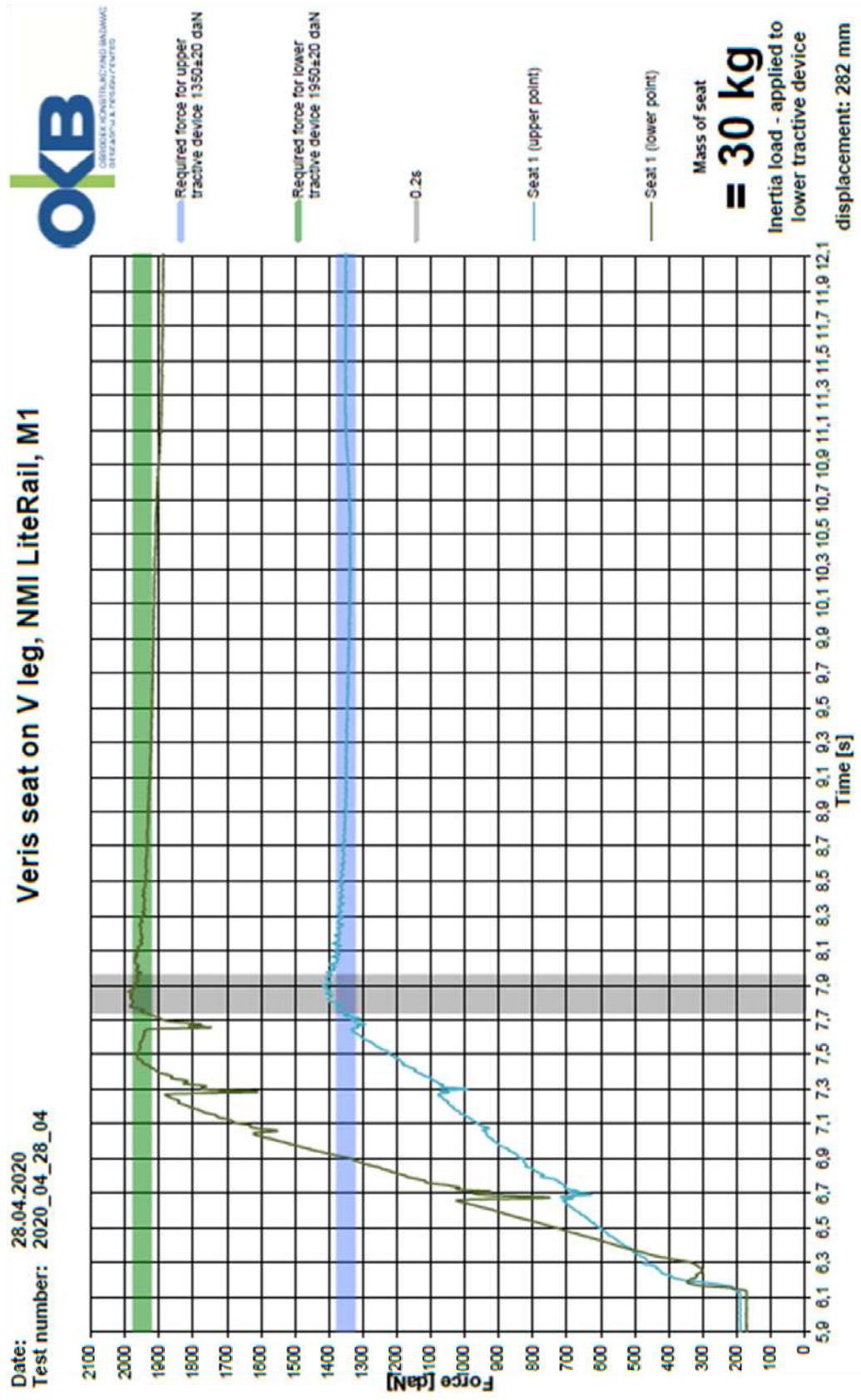
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.21. Veris seat type S1NOV04 mounted on V leg



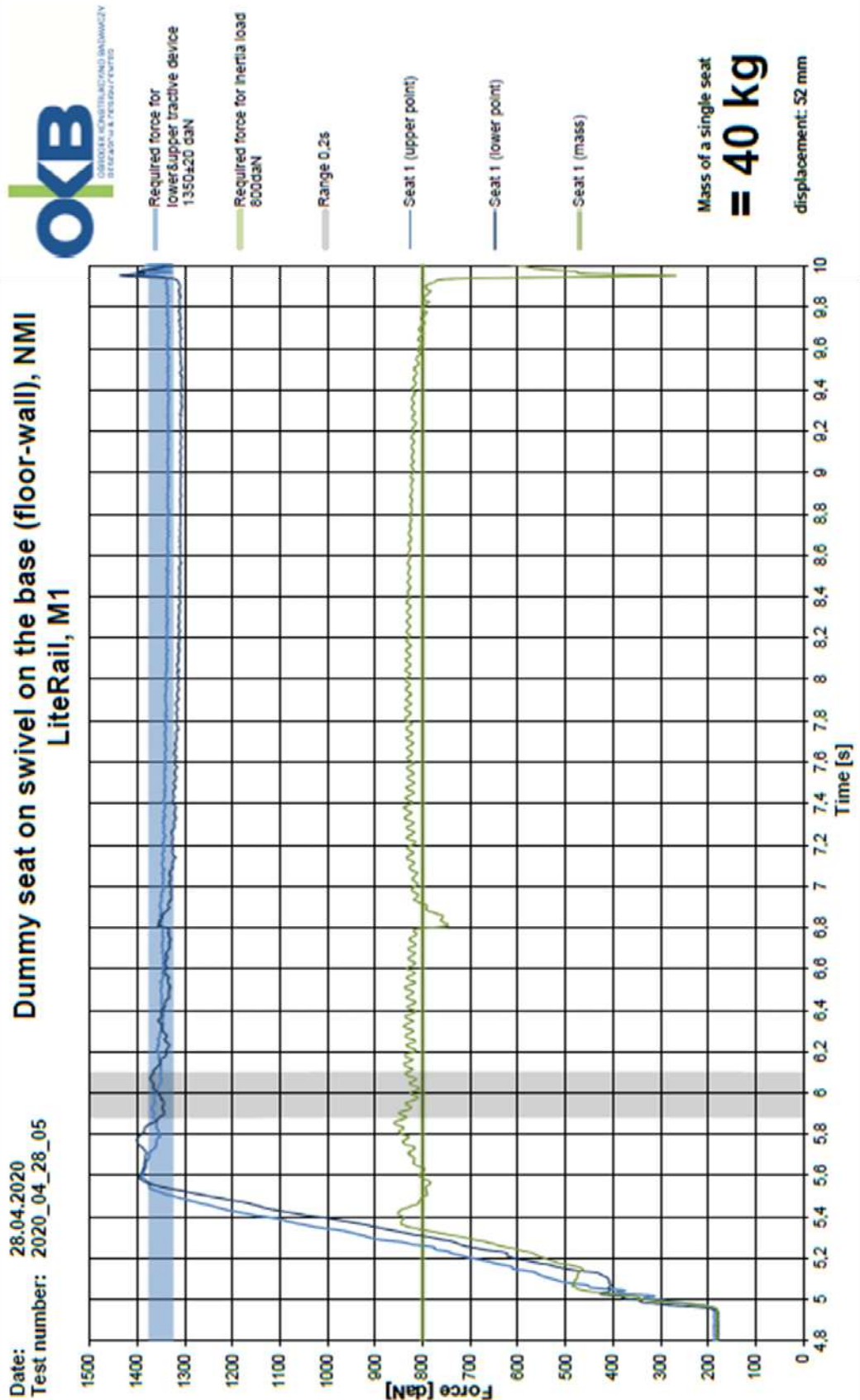
Test report No.:  
 Manufacturer:  
 Type:

20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

3.3.22. Dummy seat on swivel and on the A-leg



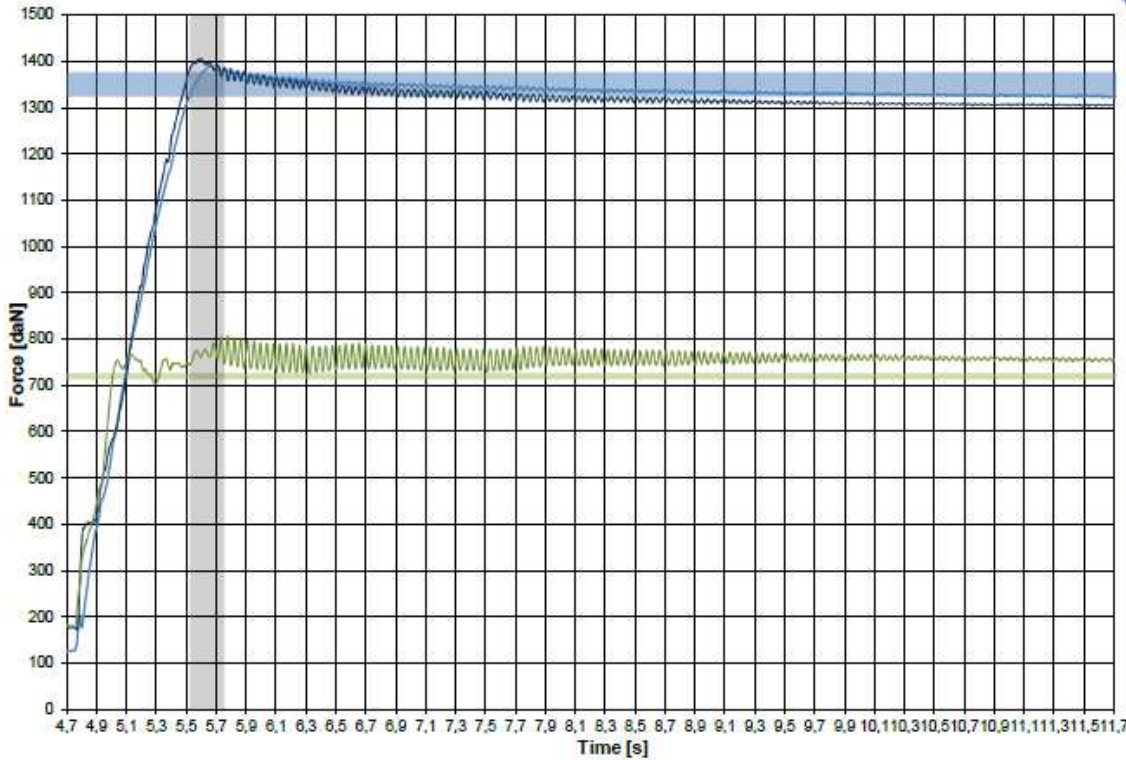




### 3.3.23. Dummy seat on VR leg with V bolts

Date: 12.05.2020  
 Test number: 2020\_05\_12\_03

#### Dummy seat on VR leg with V bolts, NMI LiteRail, M1

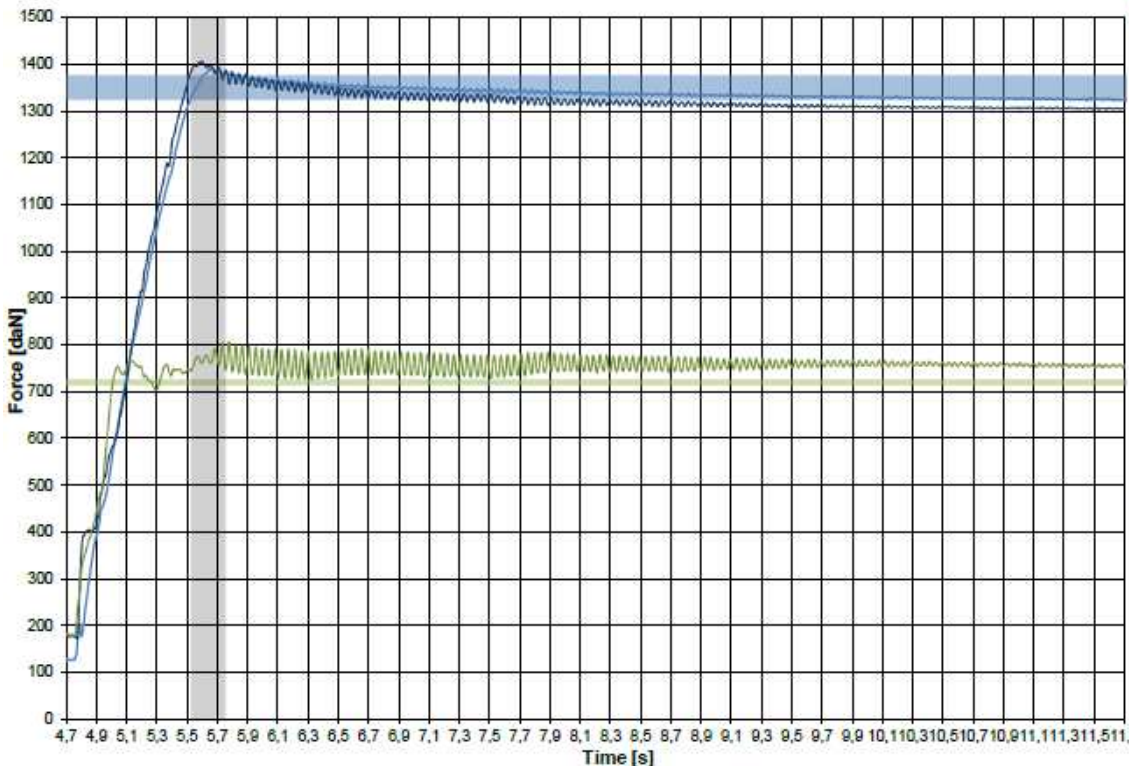


Required force for lower&upper tractive device 1350±20 daN  
 Required force for inertia load 720daN  
 Range 0,2s  
 Seat 1 (upper point)  
 Seat 1 (lower point)  
 Seat 1 (mass)  
 Mass of a single seat = **34 kg**  
 displacement: 81 mm

### 3.3.24. Dummy seat on VR leg

Date: 12.05.2020  
 Test number: 2020\_05\_12\_03

#### Dummy seat on VR leg with V bolts, NMI LiteRail, M1



Required force for lower&upper tractive device 1350±20 daN  
 Required force for inertia load 720daN  
 Range 0,2s  
 Seat 1 (upper point)  
 Seat 1 (lower point)  
 Seat 1 (mass)  
 Mass of a single seat = **34 kg**  
 displacement: 81 mm

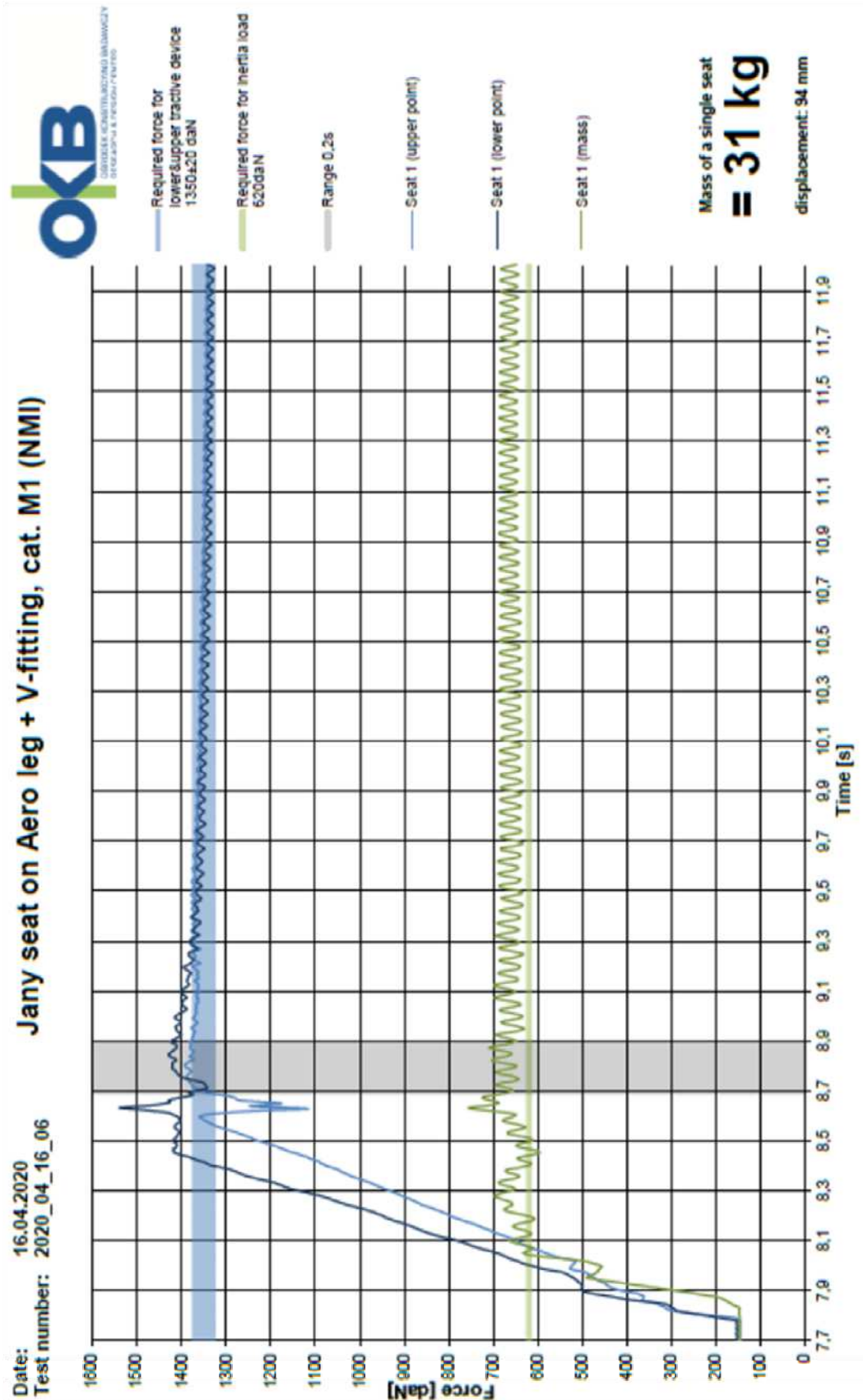
Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

### 3.3.25. Jany seat type mounted on Aero leg with V-fitting



Test report No.:  
 Manufacturer:  
 Type:

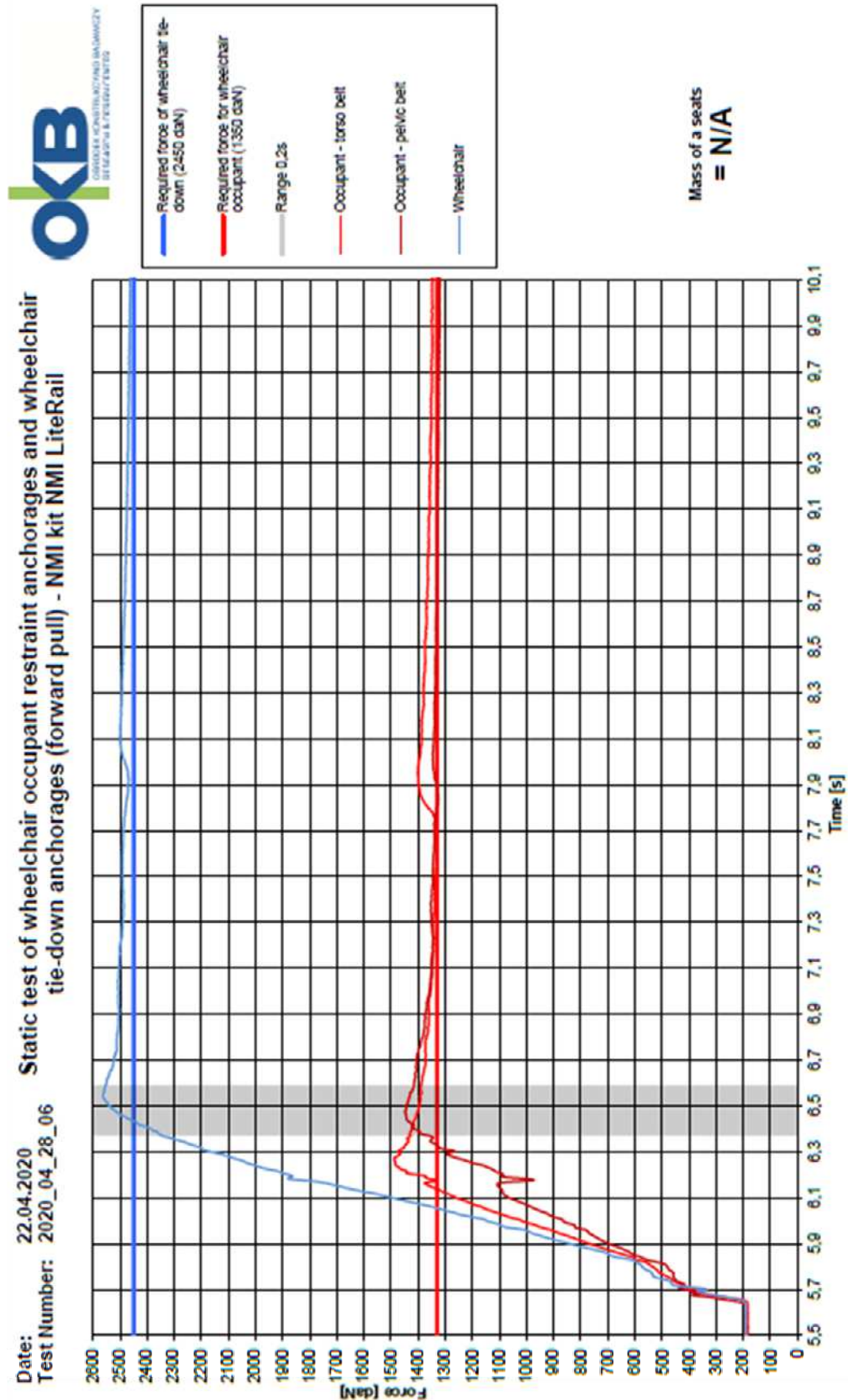
20-00026-CP-PRG-00  
 NMI Safety Systems Ltd., United Kingdom  
 NLR22



Auto Service

Safety belts anchorages intended for disabled persons and for wheelchair attachment:

3.4.1. Forward pull - NMI kit NMI Lite Rail



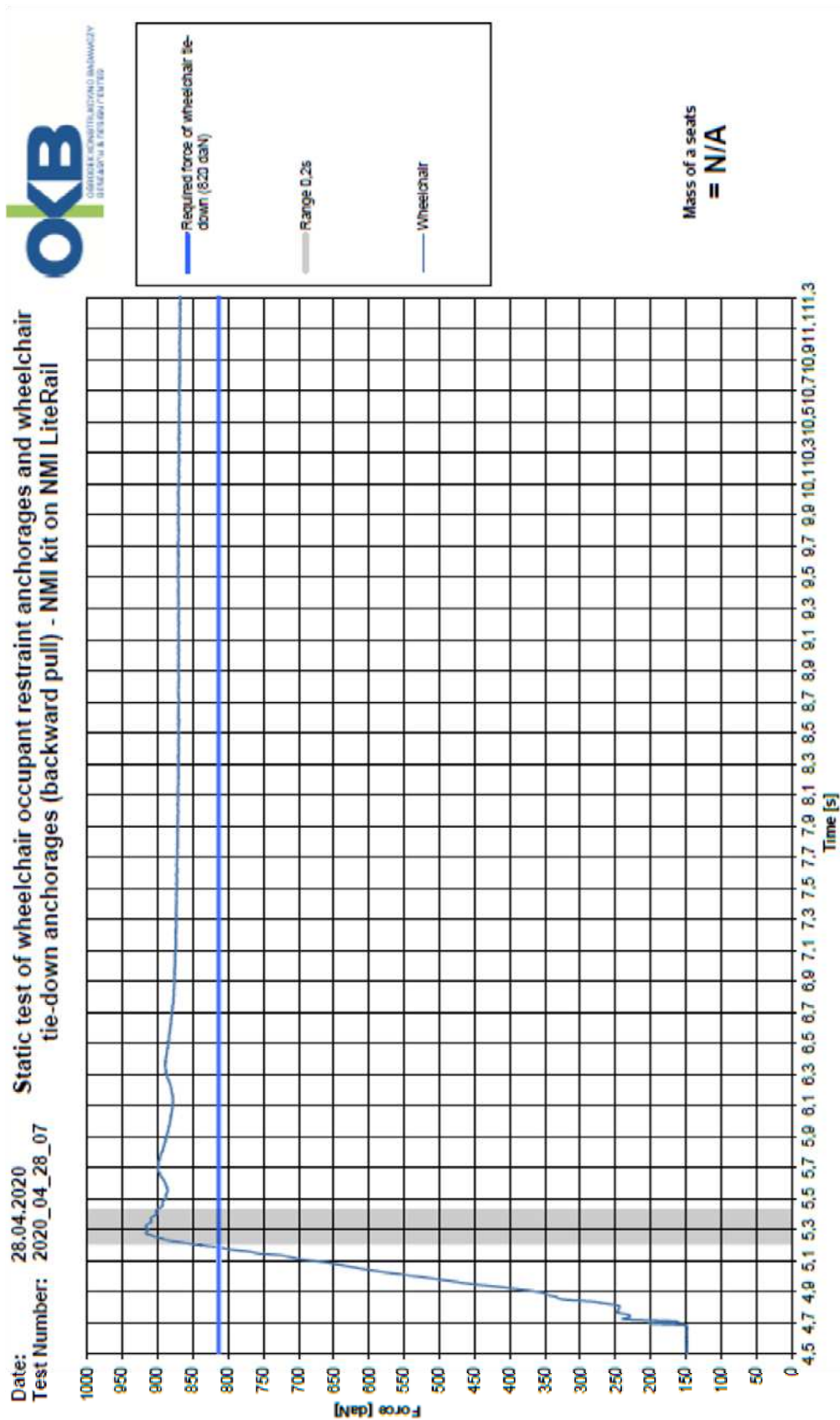
Test report No.:  
Manufacturer:  
Type:

20-00026-CP-PRG-00  
NMI Safety Systems Ltd., United Kingdom  
NLR22



Auto Service

### 3.4.2. Backward pull - NMI kit NMI Lite Rail



Test report No.: 20-00026-CP-PRG-00  
Manufacturer: NMI Safety Systems Ltd., United Kingdom  
Type: NLR22



Auto Service

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#### **4. Place and date of testing**

As before and 20.05.2020

TÜV SÜD Czech s.r.o., Mladá Boleslav, Czech Republic,  
PIMOT, Warszawa, Poland,

TUV SUD Automotive GmbH, Munich, Germany

OKB Laboratory, Bukowiec, Poland