

## THE NETHERLANDS

## TEST REPORT

Concerning vehicles with regard to safety-belt anchorages in accordance with ECE Regulation number 14.09 Supplement 2 and as specified by Regulation (EU) 2018/858, Annex II, Part III, Appendix 3, last amended by Regulation (EU) 2022/2236

**Test report number** : RDW-14R-0141801

0.1. Make : Renault / Mercedes-Benz / Nissan

0.2. Type : XFKT

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

**Applicability** : All results in this report relate only to the tested system, that is (are) assessed as representative for the vehicle type to be approved.  
See documentation: "XFKT-2018/858-00116" dated 11 October 2024, 124 pages

**Statement of conformity** : The test(s) has (have) been carried out in accordance with the requirements laid down in the above-mentioned Regulation and have been supervised by RDW as a category B technical service.

The tested system complies with the stated requirements of the above-mentioned Regulation.

**Test(s) supervised on** : 10 June 2024

**Test(s) supervised by** : R.T.F.W. Callaars

On behalf of the head of RDW  
Technical Service, authorized by:



R.T.F.W. Callaars RDW

Type approval inspector  
Zoetermeer (NL), 11 October 2024



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**Reason for testing**

1<sup>st</sup> Stage vehicle modified to wheelchair accessible vehicle (cat. SH)

**Worst case description**

The base vehicle has been modified to a wheelchair accessible vehicle with a lowered floor and wheelchair position including a OEM 2<sup>nd</sup> row and a 3<sup>rd</sup> row with two single seats. All seats/seat rows affected by this modification are tested and described in this report. OEM 1<sup>st</sup> row of seats is not affected by the changes and therefore not tested and described in this report. The adjustable OEM 2<sup>nd</sup> seat row is tested in the most rearward position because in this case it is closest by the newly added floor construction.

**General information of the representative test object**

Make and type of the vehicle : Renault / Mercedes-Benz / Nissan XFKT  
Type of bodywork : AF (multi-purpose vehicle)  
Number of doors : 5  
Vehicle category : M1  
Number of seating positions on 1<sup>st</sup> seating row : 2 (OEM/not affected)  
Number of seating positions on 2<sup>nd</sup> seating row : 3  
Number of seating positions on 3<sup>rd</sup> seating row : 2  
Description of seating position(s) solely for use when the vehicle is stationary : N/A

**General test information**

Test performed by/ at : OEM  
Place : Tripod Mobility B.V.  
Collseweg 10  
5674 TR Nuenen  
The Netherlands  
Date : 10 June 2024  
Supervised by : R.T.F.W. Callaars

**Used test equipment**

Item	Required accuracy	Identification
Load transducer 1	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-01
Load transducer 2	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-02
Load transducer 3	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-03
Load transducer 4	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-04
Load transducer 5	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-05
Load transducer 6	± 20 daN	TU/e, Tripod 4; s/n: TRK 4-06
Tape measure	Class II	Gedore 6698060; ID: rmb03BID

All used equipment meets the requirements laid down in ISO 17025:2017 and critical equipment has been subject to functional checks, in accordance with the RDW-policy set forth in document AI 3-001 1.

**Remarks**

This test report describes L2-variants with respect to the requirements per ECE Regulation number 14.09 Supplement 2 and Regulation (EU) 2018/858, Annex II, Part III, Appendix 3, last amended by Regulation (EU) 2022/2236. For WTORS test results, see VCA test report VCAE007617-3, dated 23 September 2024. L1-variants are covered by test report RDW-14R-0123068, dated 28 November 2022 and WTORS test results are covered by VCA test report VCAE009233-5, dated 30 July 2024 and ESA564413, dated 28 October 2022.

For all items unaffected by the modifications see approval(s)/ test report(s) listed in stage 1 approvals. Relevant data and approval(s) valid for donor vehicle and completed vehicle (if applicable):

<u>Make</u>	<u>Type</u>	<u>Approval</u>
Renault	RFK	E2*14R09/??*20420*..
Mercedes-Benz	MFK	E2*14R09/??*20418*..
Nissan	NFK	E2*14R09/??*20419*..

## 5 Specifications

### 5.2. General specifications

- 5.2.1. Anchorages for safety-belts shall be so designed, made and situated as to:
- 5.2.1.1. Enable the installation of a suitable safety-belt : pass
- The belt anchorages of the front outboard positions shall be suitable for safety-belts incorporating a retractor and pulley, taking into consideration in particular the strength characteristics of the belt anchorages <sup>(1)</sup> : pass
- If the anchorages are suitable only for particular types of safety-belts, these types shall be stated on the certificate : N/A
- 5.2.1.2. Reduce to a minimum the risk of the belt's slipping when worn correctly : pass
- 5.2.1.3. Reduce to a minimum the risk of strap damage due to contact with sharp rigid parts of the vehicle or seat structures : pass
- 5.2.1.4. Enable the vehicle, in normal use, to comply with the provisions of this Regulation : pass
- 5.2.1.5. For anchorages which take up different positions to allow persons to enter the vehicle and to restrain the occupants, the specifications shall apply to the anchorages in the effective restraint position : N/A

### 5.3. Minimum number of belt anchorages to be provided

- 5.3.1. Any vehicle in categories M and N <sup>(2)</sup> shall be equipped with safety-belt anchorages which satisfy the requirements of this Regulation : pass
- 5.3.1.1. The anchorages of a harness belt system approved as a S-type belt (with or without retractor(s)) according to UNECE R16 shall comply with the requirements, but the additional anchorage or anchorages provided for the fitting of a crotch strap (assembly) are exempted from the strength and location requirements of this Regulation : pass
- 5.3.2. The minimum number of safety-belt anchorages for each forward, rearward and side-facing seating position shall be those specified below : see test results

Vehicle category	Forward facing seating positions				Rearward facing	Side facing
	Outboard		Centre			
	Front	Other	Front	Other		
M1	3	3	3	3	2	--
M2 ≤ 3.5 tonnes	3	3	3	3	2	--
M2 > 3.5 tonnes	3 ◇	3 or 2 ††	3 or 2 ††	3 or 2 ††	2	--
M3	3 ◇	3 or 2 ††	3 or 2 ††	3 or 2 ††	2	2
N1	3	3 or 2 Ø	3 or 2 *	2	2	--
N2 & N3	3	2	3 or 2 *	2	2	--

key symbols:

∅ Refers to paragraph 5.3.3. of UNECE R14

\* Refers to paragraph 5.3.4. of UNECE R14

† Refers to paragraph 5.3.5. of UNECE R14

◇ Refers to paragraph 5.3.7. of UNECE R14

<sup>(1)</sup> Unless the manufacturer supplies the vehicle equipped with other types of safety-belts which incorporate retractors.

<sup>(2)</sup> Except those vehicles of categories M2 or M3 which belong to Classes I or A1.



- 5.3.6. For all seats, intended solely for use or seating intended solely for use when the vehicle is stationary as well as for all the seats of any vehicle which are not covered by items 5.3.1. to 5.3.4., no belt anchorages are required <sup>(3)</sup> : N/A
- 5.3.7. In the case of the upper deck of a double-deck vehicle, the requirements for the centre front seating position shall apply also in the outboard front seating positions : N/A
- 5.3.8. In the case of seats capable of being turned to or placed in other orientations, for use when the vehicle is stationary, the requirements of item 5.3.1. shall apply only to those orientations designated for normal use when the vehicle is travelling on a road <sup>(4)</sup> : N/A
- 5.4. Location of belt anchorages**
- 5.4.1. General
- 5.4.1.1. The belt anchorages for any one belt may be located either wholly in the vehicle structure or in the seat structure or any other part of the vehicle or dispersed between these locations : see test results
- 5.5. Dimensions of threaded anchorage holes**
- 5.5.1. An anchorage shall have a threaded hole of 7/16 inch (20 UNF 2B) : pass
- 5.5.2. If the vehicle is fitted by the manufacturer with safety-belts which are attached to all anchorages prescribed for the seat in question, these anchorages need not meet the requirement set out in item 5.5.1., provided that they comply with the other provisions of this Regulation : pass
- In addition, the requirement set out in item 5.5.1 shall not apply to additional anchorages which is/are intended for a harness belt <sup>(5)</sup> : N/A
- 5.5.3. It shall be possible to remove the safety-belt without damaging the anchorage : pass



<sup>(3)</sup> However, if the vehicle is fitted with anchorages for such seats, these anchorages must comply with the provisions of this Regulation. Any anchorage intended solely for use in conjunction with a disabled person's belt, or any other restraint system according to UNECE R107.02, Annex 8, do not need to conform to the requirements of this Regulation.

<sup>(4)</sup> A note to this effect shall be included in the information document.

<sup>(5)</sup> These anchorage(s) complies/comply with the requirements laid down in item 5.4.3.6. if it lie(s) behind the transverse plane passing through the reference line and is/are located:

- In the case of a single anchorage, within the area common to two dihedrals defined by the verticals passing through points J1 and J2 as defined in paragraph 5.4.3.1. of this Regulation and whose horizontal sections are shown in Figure 2 of Annex 3 of this Regulation;
- In the case of two anchorages, within whichever of the above defined dihedrals is suitable, provided that each anchorage is not more than 50 mm distant from the symmetrically-located, mirror-image position of the other anchorage about plane P, as defined in paragraph 5.1.6. of the seat in question.

## Test results

### Tests of the safety belt anchorages (2<sup>nd</sup> seating row OEM)

#### Description of test object and test setup

Body style	: AF (multi-purpose vehicle)
State of the body	: Body-in-white, without doors and windows
Securing of the body to the test platform	: Fixed
Number of seating positions	: 3 (OEM 2 <sup>nd</sup> seat row)
Type of seat	
- left hand seat	: bucket (manual adjustable)
- center seat	: bucket (manual adjustable)
- right hand seat	: bucket (manual adjustable)
Mass of front seat	
- left hand seat	: 24.2 kg
- center seat	: 23.2 kg
- right hand seat	: 24.2 kg
Longitudinal position of the seat during the test	
- left hand seat	: rearmost
- center seat	: rearmost
- right hand seat	: rearmost
Height adjustment of the seat during the test	
- left hand seat	: not adjustable
- center seat	: not adjustable
- right hand seat	: not adjustable
Position of the belt height adjuster during the test	
- left hand side	: not adjustable
- center	: not adjustable
- right hand side	: not adjustable
Type of safety belt that can be fitted	
- left hand side	: Are
- center	: Are
- right hand side	: Are
Location of belt anchorages	
- left hand seat	lower outboard : vehicle structure lower inboard : seat structure upper : vehicle structure
- center seat	lower outboard : seat structure lower inboard : seat structure upper : vehicle structure
- right hand seat	lower outboard : vehicle structure lower inboard : seat structure upper : vehicle structure
Dimension S <sup>(6)</sup>	
- left hand side	: 223.5 mm
- center	: 506.4 mm
- right hand side	: 223.5 mm
Vertical distance between	
- left hand R-point and the upper effective point	: 623.4 mm
- center R-point and the upper effective point	: 930.7 mm
- right hand R-point and the upper effective point	: 623.4 mm

<sup>(6)</sup> The value of S shall not be less than 140 mm.  
TR R014.09 Sup.2 Safety belt anchorages TLI v1.0 RvA

**Measurements during the strength test**

<b>2<sup>nd</sup> seating row</b>					
		left	centre	right	requirements
Tractive force	lap belt [daN]	1842	1786	1806	(7)(8)
	torso belt [daN]	1384	1359	1379	
Angle of tractive force	lap belt [°]	9.8	9.2	9.3	10° ± 5°
	torso belt [°]	7.7	8.8	8.7	
Extra force for seat structure [daN]		in lap force	in lap force	in lap force	(9)
Angle of extra force for seat structure [°]		in lap force	in lap force	in lap force	0° ± 5°
Diagram [--]		1			--

Forward displacement of the effective upper belt anchorage in case it is located on the seat structure

- Is the effective upper belt anchorage displaced forward of the required plane <sup>(10)</sup> : no
- If the displacement exceeds the above-mentioned limitation, the manufacturer shall demonstrate that there is no danger to the occupant. i.e. performing a test according to UNECE R94 or a sled test with the corresponding pulse : N/A

Distance between the lower belt anchorage points <sup>(11)</sup>

- left-hand seating position : 472 mm
- center seating position : 359 mm
- right-hand seating position : 472 mm

Vertical distance between the R-point and the upper effective point(s) <sup>(12)</sup>

- left-hand seating position : 613.4 mm
- center seating position : 910.7 mm
- right-hand seating position : 598.4 mm

**Measurements after the strength test**

After the test, it shall be possible to actuate the displacement and release systems manually to enable all occupants to leave the vehicle : N/A (5-door vehicle)



<sup>(7)</sup> A test load of 1350 daN (M1 + N1), 675 daN (except for M3 and N3) and 450 daN (M3 and N3) ± 20 daN shall be applied, in case of a lap belt a test load of 2225 daN (M1 + N1), 1110 daN (except for M3 and N3) and 740 daN (M3 and N3) ± 20 daN shall be applied.

<sup>(8)</sup> A test load of 1350 daN (M1 + N1), 675 daN (except for M3 and N3) and 450 daN (M3 and N3) ± 20 daN shall be applied.

<sup>(9)</sup> A test load of a force equal to 20 times the mass of the relevant parts of the seat assembly shall be applied.

<sup>(10)</sup> Only applicable to vehicles of category M<sub>1</sub> with a maximum mass not exceeding 2.5 t; plane passing through the R-point and point C. Applicable to all other vehicles; a transverse plane inclined 10° in forward direction and passing through the R-point.

<sup>(11)</sup> A minimum distance of 350 mm and 120 mm from median longitudinal plane through the seat is required.

<sup>(12)</sup> A minimum height of 450 mm above the R-point and in some cases 500 mm, see Regulation, is required.

**Tests of the safety belt anchorages (3<sup>rd</sup> seating row with 2 TriflexAIR seats)**

*Description of test object and test setup*

Body style	: AF (multi-purpose vehicle)
State of the body	: Body-in-white, without doors and windows
Securing of the body to the test platform	: Fixed
Number of seating positions	: 2 (TriflexAIR Fixed left / right)
Type of seat	
- left hand seat	: bucket (non-adjustable)
- right hand seat	: bucket (non-adjustable)
Mass of front seat	
- left hand seat	: 24.1 kg
- right hand seat	: 24.1 kg
Longitudinal position of the seat during the test	
- left hand seat	: fixed
- right hand seat	: fixed
Height adjustment of the seat during the test	
- left hand seat	: N/A (non-adjustable)
- right hand seat	: N/A (non-adjustable)
Position of the belt height adjuster during the test	
- left hand side	: N/A (non-adjustable)
- right hand side	: N/A (non-adjustable)
Type of safety belt that can be fitted	
- left hand side	: Ar
- right hand side	: Ar
Location of belt anchorages	
- left hand seat	lower outboard : seat structure
	lower inboard : seat structure
	upper : seat structure
- right hand seat	lower outboard : seat structure
	lower inboard : seat structure
	upper : seat structure
Dimension S <sup>(13)</sup>	
- left hand side	: 177.0 mm
- right hand side	: 177.0 mm
Vertical distance between	
- left hand R-point and the upper effective point	: 533.0 mm
- right hand R-point and the upper effective point	: 533.0 mm

<sup>(13)</sup> The value of S shall not be less than 140 mm.  
TR R014.09 Sup.2 Safety belt anchorages TLI v1.0 RvA



**Measurements during the strength test**

<b>3<sup>rd</sup> seating row</b>				
		left	right	requirements
Tractive force	lap belt [daN]	1895	1893	(14)(15)
	torso belt [daN]	1366	1365	
Angle of tractive force	lap belt [°]	9.6	9.8	10° ± 5°
	torso belt [°]	9.3	9.3	
Extra force for seat structure [daN]		in lap force	in lap force	(16)
Angle of extra force for seat structure [°]		in lap force	in lap force	0° ± 5°
Diagram [--]		2		--

Forward displacement of the effective upper belt anchorage in case it is located on the seat structure

- Is the effective upper belt anchorage displaced forward of the required plane <sup>(17)</sup> : N/A
- If the displacement exceeds the above-mentioned limitation, the manufacturer shall demonstrate that there is no danger to the occupant. i.e. performing a test according to UNECE R94 or a sled test with the corresponding pulse : N/A

Distance between the lower belt anchorage points <sup>(18)</sup>

- left-hand seating position : 308.0 mm
- right-hand seating position : 308.0 mm

Vertical distance between the R-point and the upper effective point(s) <sup>(19)</sup>

- left-hand seating position : 520.0 mm
- right-hand seating position : 519.0 mm

**Measurements after the strength test**

After the test, it shall be possible to actuate the displacement and release systems manually to enable all occupants to leave the vehicle : N/A (5-door vehicle)



<sup>(14)</sup> A test load of 1350 daN (M1 + N1), 675 daN (except for M3 and N3) and 450 daN (M3 and N3) ± 20 daN shall be applied, in case of a lap belt a test load of 2225 daN (M1 + N1), 1110 daN (except for M3 and N3) and 740 daN (M3 and N3) ± 20 daN shall be applied.

<sup>(15)</sup> A test load of 1350 daN (M1 + N1), 675 daN (except that for M3 and N3) and 450 daN (M3 and N3) ± 20 daN shall be applied.

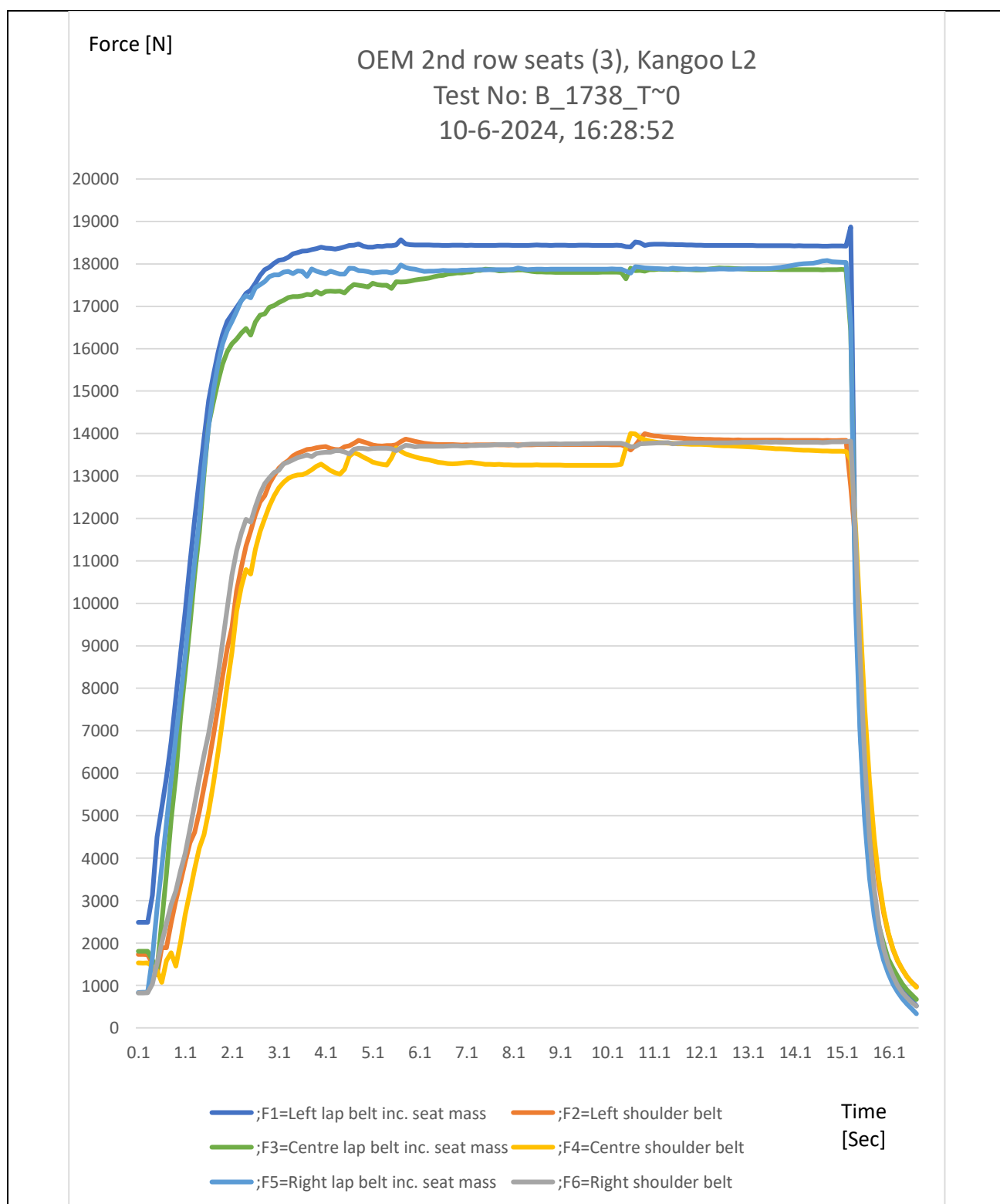
<sup>(16)</sup> A test load of a force equal to 20 times the mass of the relevant parts of the seat assembly shall be applied.

<sup>(17)</sup> Only applicable to vehicles of category M<sub>1</sub> with a maximum mass not exceeding 2.5 t; plane passing through the R-point and point C. Applicable to all other vehicles; a transverse plane inclined 10° in forward direction and passing through the R-point.

<sup>(18)</sup> A minimum distance of 350 mm and 120 mm from median longitudinal plane through the seat is required.

<sup>(19)</sup> A minimum height of 450 mm above the R-point and in some cases 500 mm, see Regulation, is required.

**Diagram 1** Tests of the safety belt anchorages (2<sup>nd</sup> seating row OEM)



**Diagram 2** Tests of the safety belt anchorages (3<sup>rd</sup> seating row with 2 TriflexAIR seats)

