

THE NETHERLANDS

TEST REPORT

Concerning vehicles of categories M and N with regard to their anchorages for safety-belts intended for adult occupants of forward-facing or rearward-facing or side-facing seats in accordance with ECE Regulation number 14.09 Supplement 2.

Test report number : RDW-14R-0123126 Cor.01

0.1. Make : Volkswagen, VW, Ford

0.2. Type : SKT

0.3. Category of vehicle : M1-SH

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

General : The vehicle type as described in the document below has been inspected in accordance with the requirements laid down in the above-mentioned regulation. See documentation: "SKT-14R-16R-17R- 0012", dated 31 October 2022

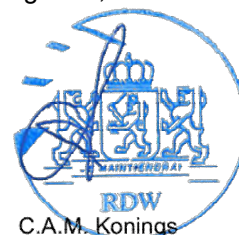
Tests : The tests have been carried out according to the above-mentioned regulation. The tested system/component/separate technical unit is representative in terms of the type to be approved.

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

Tests conducted on : 8 September 2022

By : C.A.M. Konings

Zoetermeer (NL), 31 October 2022
The test engineer,



RDW
C.A.M. Konings

List of contents	Page
Reason for testing	3
Worst case description	3
General information of the representative test object	3
General test information	3
Used test equipment	3
Remarks	3
Specifications	4
General specifications	4
Minimum number of belt anchorages to be provided	4
Location of belt anchorages	5
Dimensions of threaded anchorage holes	5
Tests	6
General tests for seat belt anchorages	6
Securing the vehicle for seat belt anchorages tests	6
Test results	7
Second row	7

List of attached diagrams	Page
Diagram 1 Belt anchorage strength test (second row)	8

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Reason for testing

TriflexAir seat have been relocated (7cm more rearward).
Vehicle type Ford Connect SK and new type of WTORS are added.

Worst case description

Only the relocated TriflexAir seats are reviewed and documented in this test report.

General information of the representative test object

Make and type of the vehicle : Volkswagen, VW, Ford SKT
Vehicle category : M1-SH
Body style : AF (SH)

General test information

Inspected by : C.A.M. Konings
Place : Nuenen (NL)
Date : 8 September 2022

Used test equipment

Item	Required accuracy	Identification
Load transducer 3	± 20 daN	TU/e, Tripod 3; s/n: TRK 4-03
Load transducer 5	± 20 daN	TU/e, Tripod 5; s/n: TRK 4-05
Load transducer 6	± 20 daN	TU/e, Tripod 6; s/n: TRK 4-06
Load transducer 7	± 20 daN	TU/e, Tripod 7; s/n: TRK 4-07

Remarks

In this testreport only dummy-seats are tested. For the results of the TriflexAir seat on a rigid floor see test report: RDW-14R-0119807 cor.01, dated 6 September 2022. The results of the upper effective anchorage displacement of the rigid floor test and the dummy seat test are added up and the lowest applied forces are mentioned in the test results.

For all uneffected items see approval(s):

<u>Make</u>	<u>Type</u>	<u>Approval</u>
Volkswagen AG	SKT	E4*14R09/??*0922*..
Ford-Werke GmbH	SKT	E4*14R09/??*0993*..



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 ⁽¹⁾ : pass
- 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 of this Regulation 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.. The vehicle is equipped with sufficient safety-belt anchorages which satisfy the requirements of this Regulation : pass

Vehicle Category	Forward facing seating positions				Rearward facing	Side facing
	Outboard		Centre			
	Front	Other	Front	Other		
M ₁	3	3	3	3	2	--
M ₂ ≤ 3.5 tonnes	3	3	3	3	2	--
M ₂ > 3.5 tonnes	3 ◇	3 or 2 ‡	3 or 2 ‡	3 or 2 ‡	2	--
M ₃	3 ◇	3 or 2 ‡	3 or 2 ‡	3 or 2 ‡	2	2
N ₁	3	3 or 2 Ø	3 or 2 *	2	2	--
N ₂ & N ₃	3	2	3 or 2 *	2	2	--

- 2: Two lower anchorages, which allow the installation of a safety-belt type B, or of safety-belts types Br, Br3, Br4m or Br4Nm, where required by the Consolidated Resolution on the Construction of Vehicles (R.E.3), Annex 13, Appendix 1
- 3: Two lower anchorages and one upper anchorage which allow the installation of a three-point safety-belt type A, or of safety-belts types Ar, Ar4m or Ar4Nm, where required by UN Regulation No. 16, Annex 16
- Ø: Refers to paragraph 5.3.3. (Two anchorages permitted if a seat is inboard of a passageway)
- *: Refers to paragraph 5.3.4. (Two anchorages permitted if the windscreen is outside reference zone)
- ‡: Refers to paragraph 5.3.5. (Two anchorages permitted if nothing is in the reference zone)
- ◊: Refers to paragraph 5.3.7. (Special provision for the upper deck of a vehicle)

- 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 item 5.3.1. to 5.3.4., no belt anchorages are required : N/A
- However, if the vehicle is fitted with anchorages for such seats, these anchorages must comply with the provisions of this Regulation ⁽²⁾ : 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



⁽¹⁾ 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, unless the manufacturer supplies the vehicle equipped with other types of safety-belts which incorporate retractors. If the anchorages are suitable only for particular types of safety-belts, these types shall be stated

⁽²⁾ 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.

- 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 paragraph 5.3.1. shall apply only to those orientations designated for normal use when the vehicle is travelling on a road, in accordance with this Regulation : N/A
- A note to this effect shall be included in the information document : 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 : pass

2 nd seat row outer seating position	lower outboard	seat structure
	lower inboard	seat structure
	upper	seat structure

- 5.4.2. All effective lower belt anchorages shall be located within the effective lower belt anchorage zones as specified in this regulation : pass

- 5.4.3. All effective upper belt anchorages shall be located within the effective upper belt anchorage zones as specified in this regulation : pass

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

- 5.5.3. It shall be possible to remove the safety-belt without damaging the anchorage : pass



6. Tests

6.1. General tests for seat belt anchorages

6.1.1. Subject to application of the provisions of paragraph 6.2., and at the request of the manufacturer:

6.1.1.1. The tests may be carried out either on a vehicle structure or on a completely finished vehicle : vehicle structure

6.1.1.2. The tests may be restricted to the anchorages relating to only one seat or one group of seats on the condition that

(a) The anchorages concerned have the same structural characteristics as the anchorages relating to the other seats or group of seats : N/A

(b) Where such anchorages are fitted totally or partially on the seat or group of seats, the structural characteristics of the seat or group of seats are the same as those for the other seats or groups of seats : N/A

6.1.1.3. Windows : not fitted

Doors : not fitted

6.1.1.4. Any fitting normally provided and likely to contribute to the rigidity of the vehicle structure may be fitted : N/A

6.1.2. The seats shall be fitted and placed in the position for driving or use chosen by the technical service responsible for conducting approval tests to give the most adverse conditions with respect to the strength of the system. : pass

The position of the seats shall be stated in the report. : see test results

The seat-back shall, if its inclination is adjustable, be locked as specified by the manufacturer or, in the absence of any such specification, in a position corresponding to an effective seat-back angle as close as possible to 25° for vehicles of categories M₁ and N₁ and to 15° for vehicles of all other categories : see test results

6.2. Securing the vehicle for seat belt anchorages tests

6.2.1. The method used to secure the vehicle during the test shall not be such as to strengthen the seat belt anchorages and their anchorage area or to lessen the normal deformation of the structure. : pass

6.2.2. A securing device shall be regarded as satisfactory if it produces no effect on an area extending over the whole width of the structure and if the vehicle or the structure is blocked or fixed in front at a distance of not less than 500 mm from the anchorage to be tested and is held or fixed at the rear not less than 300 mm from that anchorage. : pass

6.2.3. It is recommended that the structure should rest on supports arranged approximately in line with the axes of the wheels or, if that is not possible, in line with the points of attachment of the suspension. : pass

6.2.4. If a securing method other than that prescribed in paragraphs 6.2.1. to 6.2.3. of this Regulation is used, evidence must be furnished that it is equivalent. : N/A



Test results

Second row	Left seat	Right seat
Seat type	TriflexAir Dummy Offset	TriflexAir Dummy Offset
Mass of seat/bench	24.09 kg	24.09 kg
Position of the seat: - longitudinal - vertical	fixed fixed	fixed fixed
Number of seat belt anchorage points: - vehicle structure - seat structure	0 3	0 3
Belt configuration: - Type - Height adjuster	3-point not applicable	3-point not applicable
Seatback angle	25°	25°
Vertical distance 'R-point – Upper effective anchorage' before test	533 mm	533 mm
Angle of tractive force: - lap ⁽³⁾ - torso ⁽¹³⁾ - seat structure ⁽⁴⁾	7.0° 7.0° in lap force	7.0° 7.0° in lap force
Applied force: - lap ⁽⁵⁾ - torso ⁽⁶⁾ - seat structure ⁽⁷⁾	1828 daN 1346 daN in lap force	1828 daN 1346 daN in lap force
Duration of applied force ⁽⁸⁾ : - lap - torso - seat structure	0.2 s 0.2 s 0.2 s	0.2 s 0.2 s 0.2 s
Vertical distance 'R-point – upper effective anchorage' after test ⁽⁹⁾	>450 mm	>450 mm
Distance between lower effective anchorages after test ⁽¹⁰⁾	>350 mm	>350 mm
Upper effective anchorage displaced forward of plane ⁽¹¹⁾	no, 351mm	no, 351mm
Displacement and locking devices still operable by hand after test ⁽¹²⁾	N/A	N/A
Damages to the anchorages and structures supporting load	N/A	N/A

⁽³⁾ Requirement $10 \pm 5^\circ$

⁽⁴⁾ Requirement extra force $0 \pm 5^\circ$

⁽⁵⁾ 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

⁽⁶⁾ 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

⁽⁷⁾ A test load of a force equal to 20 times the mass of the relevant parts of the seat assembly shall be applied

⁽⁸⁾ Requirement ≥ 0.2 seconds

⁽⁹⁾ Minimum height: 450 mm above the R-point and in some cases 500 mm, see Regulation

⁽¹⁰⁾ Minimum 350 mm and 120 mm from median longitudinal plane through the seat

⁽¹¹⁾ Only applicable to vehicles of category M₁ with a maximum mass not exceeding 2.5 tonnes; 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

⁽¹²⁾ Enabling the occupants of all seats to leave the vehicle



List of diagrams

Diagram 1 Belt anchorage strength test (second row)

