

Test report No.: 21-00108-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



Test report
No.: 21-00108-CP-PRG-00

Test of a type of a vehicle
with regard to ECE Regulation No. **14.00**
taking into consideration amendment No. **14.09, Supplement 1**
Approval subject: **Strength of safetybelt anchorages**

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

Test report only.

Test report No.: 21-00108-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



I. General

Type OB

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

Reference number of information folder MOBIFRAME/04/2021-00

Date of issue of information folder 12.10.2021

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. 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.

Test report No.: 21-00108-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



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

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

München, 08.11.2021




Ing. Vít Bursík
Authorized signatory

Annex

1. Technical data of the test sample

- 1.1 Make: MOBIFRAME
1.2 Type: OB
1.2.1. Variant-version: OB-?

"?" – dedicated for the vehicles:

A – Volkswagen T5, Volkswagen T6 – single swivel (driver's and/or single passenger's seat)
D – Volkswagen T5, Volkswagen T6 – double swivel (double passenger's seat)

- 1.2.2. Type of bodywork using the codes 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: AC, AF, BB, BX, CA, SA, SH

- 1.3 Category of vehicle: M1, N1, M2, N2

- 1.4 Test object: Body of vehicle VW T5/T6 as representative vehicle body with installed MOBIFRAME type OB swivel for driver's and/or passengers seats.
For details
see manufacturer's information folder.

- 1.4.1. Vehicle types for which is device intended to use: See manufacturer's information document
Enclosure 1

2. Test conditions

2.1. Instrumentation:

- Digital ballance
- Electrohydraulic test device and respective fixtures
- Force measuring chain with load cells
- Interface 1210AF
- Tape rule

2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

3. Test results

3.1 Test procedures used (ECE R14):

Test of swivels MOBIFRAME type OB strength of safety belt anchorages according to ECE R 14.09 concerning to strength of connection between original seat anchorages, swivels and original seats.

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

Geometrical requirements are fulfilled; no changes from base vehicle.

3.1.1. Mass:

Mass of original driver's/passenger seat and base with additional swivel MOBIFRAME OB – 70 kg (allowable mass in the heaviest configuration).

Vehicle(-s)	Maximum mass of original driver's/passenger seat with base	Mass of additional swivel
Volkswagen T5	40 kg – single seat	15 kg – single swivel
Volkswagen T6	40 kg – double seat	24 kg – double swivel

3.2 Forward facing seats for M1/N1 vehicles:

3.2.1 MOBIFRAME type OB and single seat in VW T5/T6 bodywork.

Mass of the seat with base and swivel $m_s = 70 \text{ kg}$.

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

Seat	Driver's/ Passenger's (single)
Safety belt	Ar
Required force in shoulder belt portion	13 500 $\pm$ 200 N
Required force in lap belt portion	27 500 $\pm$ 200 N
Max force in upper anchorage point	14 300 N / > 0,2 s
Max. force in lower anchorage point	29 600 N / > 0,2 s
Displacement of upper anchorage point	18 mm
Remark: No rupture occurred.	

3.2.2 MOBIFRAME type OB and double passenger seat in VW T5/T6 bodywork.

Mass of the double seat with base and swivel $m_s = 70 \text{ kg}$.

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

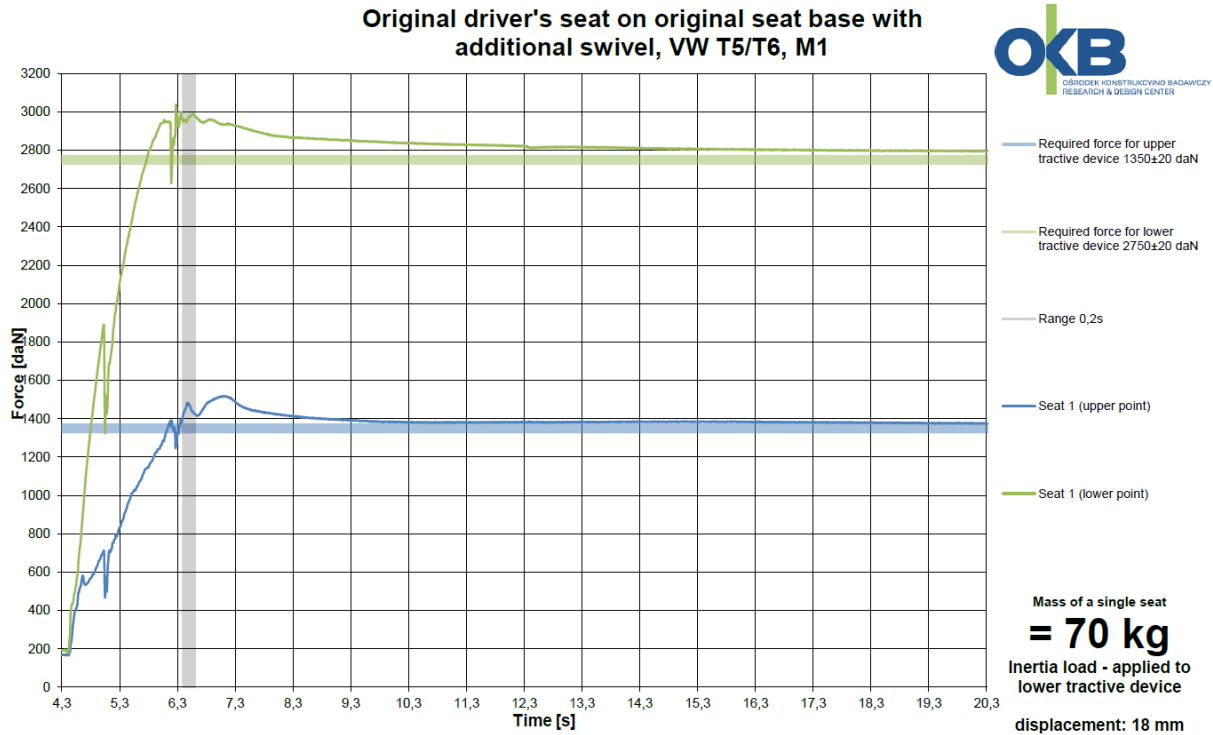
Seat	Passenger's (double)	
Position	left	right
Mass	35 kg	35 kg
Safety belt	Ar	Ar
Required force in shoulder belt portion	13 500 $\pm$ 200 N	13 500 $\pm$ 200 N
Required force in lap belt portion	20 500 $\pm$ 200 N	20 500 $\pm$ 200 N
Max force in upper anchorage point	14 000 N / > 0,2 s	14 600 N / > 0,2 s
Max. force in lower anchorage point	21 000 N / > 0,2 s	22 200 N / > 0,2 s
Displacement of upper anchorage point	218 mm	22 mm
Remark: No rupture occurred.		

Test report No.: 21-00108-CP-PR-00
 Manufacturer: OKB SP. Z O.O., Poland
 Type: OB

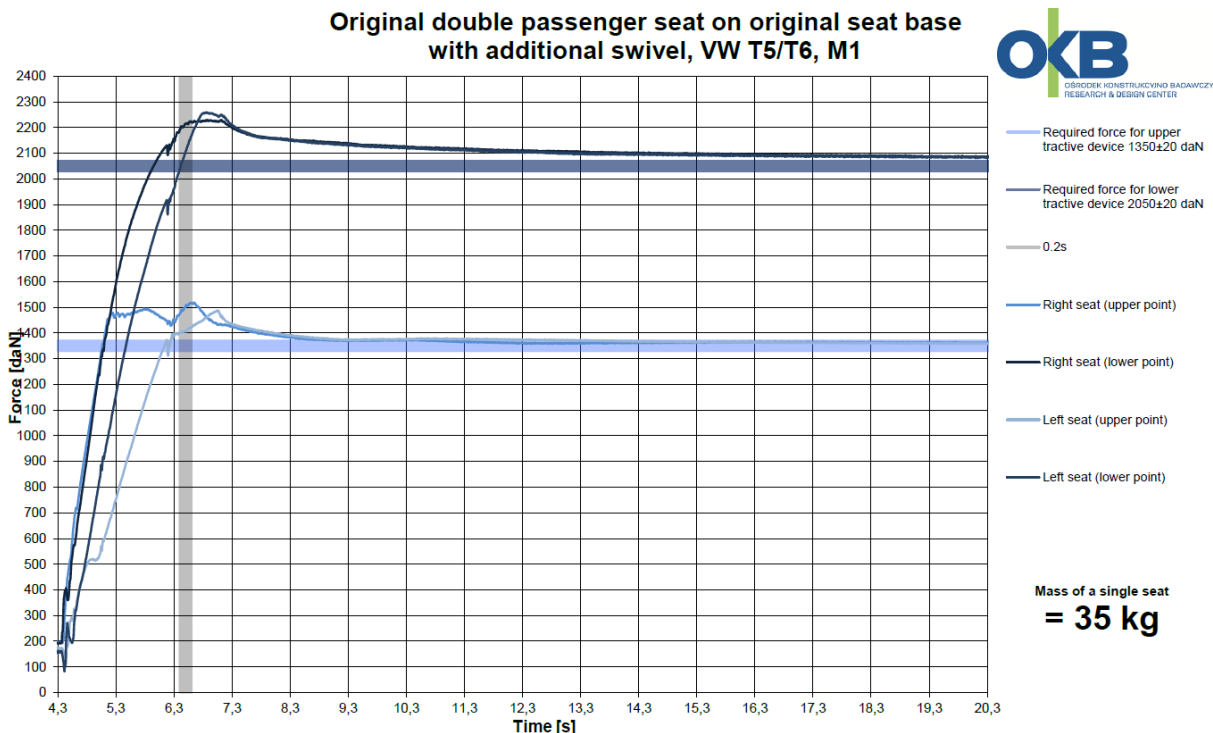


3.3 Test records – diagrams:

3.2.1 MOBIFRAME type OB and single driver's or passenger's seat in VW T5/T6 bodywork



3.2.2. MOBIFRAME type OB and double passenger seat in VW T5/T6 bodywork.

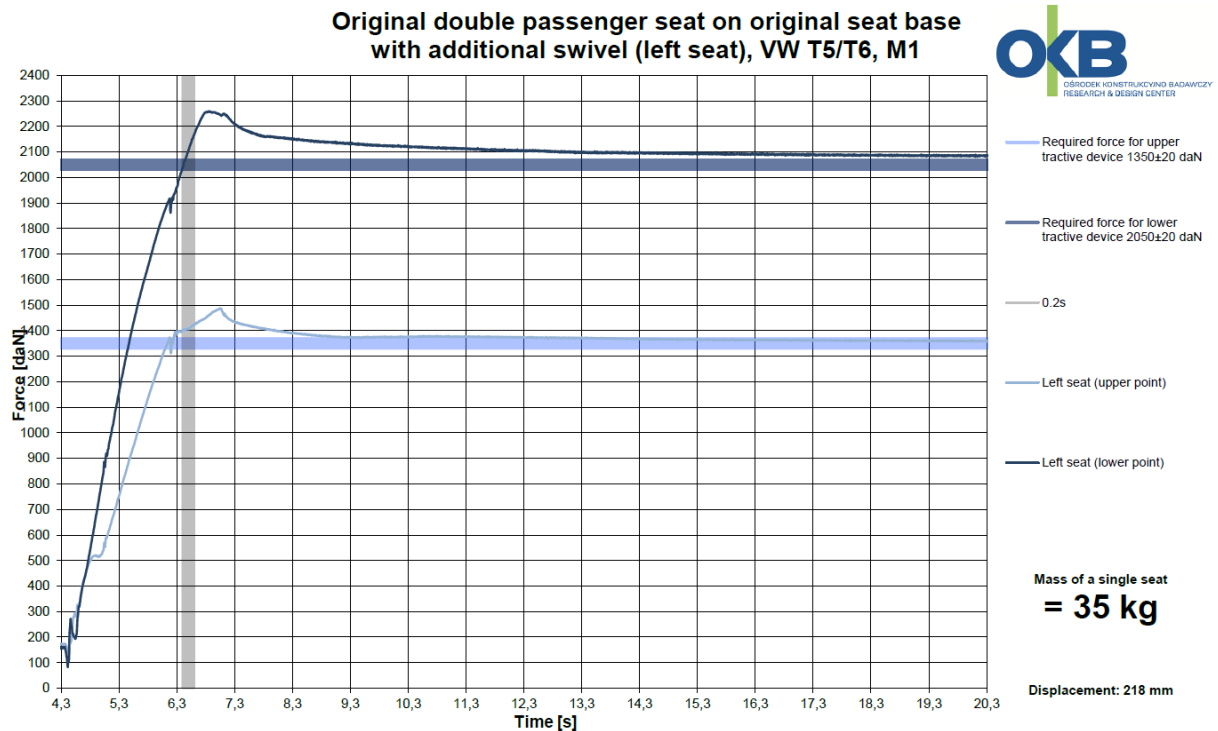


Test report No.: 21-00108-CP-PR-00
 Manufacturer: OKB SP. Z O.O., Poland
 Type: OB

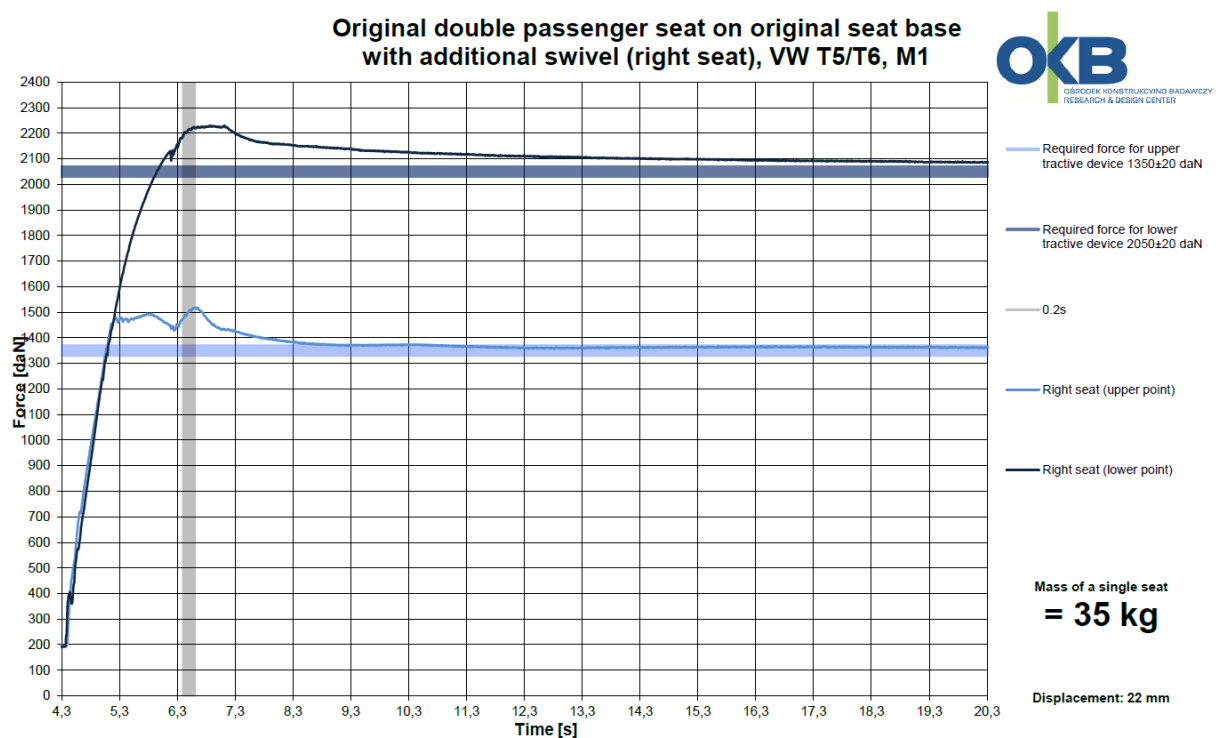


3.3 Test records – diagrams:

3.2.2. MOBIFRAME type OB and double passenger seat in VW T5/T6 bodywork – left seat



3.2.2. MOBIFRAME type OB and double passenger seat in VW T5/T6 bodywork – right seat



Test report No.: 21-00108-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB

3.4 Photos:

3.2.1 MOBIFRAME type OB and single driver's or passenger's seat in VW T5/T6 bodywork.

3.2.2. MOBIFRAME type OB and double passenger seat in VW T5/T6 bodywork.

Pre-test



Post-test



4. Place and date of testing

16. 12. 2019

OKB laboratory, Bukowiec, Poland

Test report No.: 21-00109-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



Test report
No.: 21-00109-CP-PRG-00

Test of a type of a vehicle
with regard to ECE 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

Test report only.

Test report No.: 21-00109-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



I. General

Type OB

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

Reference number of information folder MOBIFRAME/04/2021-00

Date of issue of information folder 12.10.2021

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. 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.

Test report No.: 21-00109-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



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

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

München, 08.11.2021



A handwritten signature in blue ink, appearing to read 'Bursík'.

Ing. Vít Bursík
Authorized signatory

Annex

1. Technical data of the test sample

- 1.1 Make: MOBIFRAME
1.2 Type: OB
1.2.1. Variant-version: OB-?

"?" – dedicated for the vehicles:

A – Volkswagen T5, Volkswagen T6 – single swivel (driver's and/or single passenger's seat)
D – Volkswagen T5, Volkswagen T6 – double swivel (double passenger's seat)

- 1.2.2. Type of bodywork using the codes 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: AC, AF, BB, BX, CA, SA, SH

- 1.3 Category of vehicle: M1, N1, M2, N2

- 1.4 Test object: Body of vehicles VW T5/T6 and representative vehicle body with installed MOBIFRAME type OB swivel for driver's and/or passengers seats. For details see manufacturer's information folder.

- 1.4.1. Vehicle types for which is device intended to use: See manufacturer's information document Enclosure 1

2. Test conditions

2.1. Instrumentation:

- Digital balance
- Dynamic sled test rig
- Accelerometre
- High speed camera

2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

3. Test results

3.1 Test procedures used (ECE R17):

Dynamic test of strength of seat anchorages, adjustment and displacement mechanisms according to ECE R17.09 par. to 5.2.5, 5.2.6. and 6.3 and Annex 9 (corridor) with focus on swivel MOBIFRAME type OB.

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

3.2 Forward facing seats for M1/N1 vehicles:

3.2.1 MOBIFRAME type OB in VW T5/T6 bodywork – frontal impact

Single swivel and original base vehicle seat fixed inside the vehicle body, positioned front to driving direction.

Test speed and achieved deceleration

	Requirement	Measured
Impact speed v_0	50^{+0}_{-2} km/h	49,8
Acceleration	corridor	OK – see 3.4

3.2.1 Results

Paragraph of the regulation ECE 17.09 marked in *italics*

5.2.5	There was no failure of the swivel unit, seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test
5.2.6	There was no release of the locking systems during the tests

3.2.2 MOBIFRAME type OB in representative bodywork – rear impact

Single swivel and original base vehicle seat fixed inside the vehicle body, positioned front to driving direction.

Test speed and achieved deceleration

	Requirement	Measured
Impact speed v_0	50^{+0}_{-2} km/h	49,9
Acceleration	corridor	OK – see 3.4

3.2.2 Results

Paragraph of the regulation ECE 17.09 marked in *italics*

5.2.5	There was no failure of the swivel unit, seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test
5.2.6	There was no release of the locking systems during the tests

3.3 Forward facing seats for M1/N1 vehicles:

3.3.1 MOBIFRAME type OB in VW T5/T6 bodywork – frontal impact

Double swivel and seat (original base vehicle bench), fixed in the first row of the vehicle body, positioned front to the driving direction.

Test speed and achieved deceleration

	Requirement	Measured
Impact speed v_0	50^{+0}_{-2} km/h	49,8
Acceleration	corridor	OK – see 3.4

3.3.1 Results

Paragraph of the regulation ECE 17.09 marked in *italics*

5.2.5	There was no failure of the swivel unit, seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test
5.2.6	There was no release of the locking systems during the tests

Test report No.: 21-00109-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



3.3.2 MOBIFRAME type OB in VW T5/T6 bodywork – rear impact

Double swivel and seat (original base vehicle bench), fixed in the first row of the vehicle body, positioned front to the driving direction.

Test speed and achieved deceleration

	Requirement	Measured
Impact speed v_0	50^{+0}_{-2} km/h	48,7
Acceleration	corridor	OK – see 3.4

3.3.2 Results

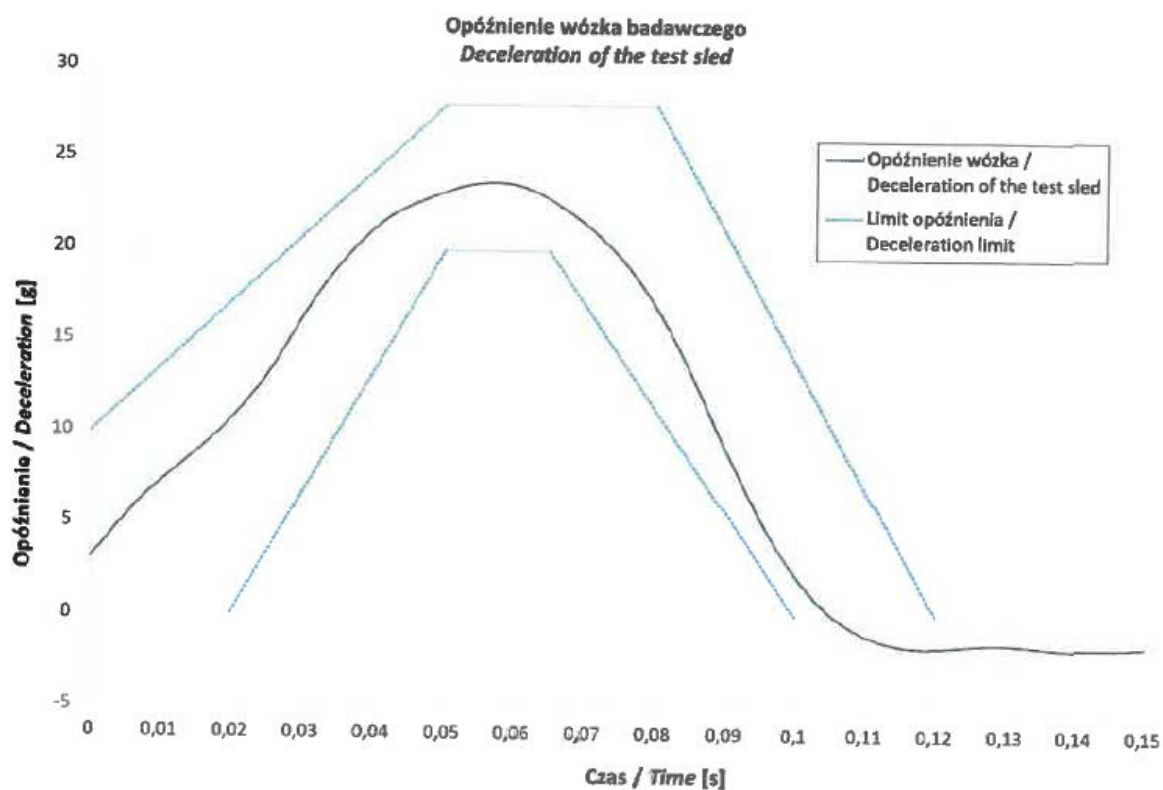
Paragraph of the regulation ECE 17.09 marked in *italics*

5.2.5	There was no failure of the swivel unit, seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test
5.2.6	There was no release of the locking systems during the tests

3.4 Test records – diagrams:

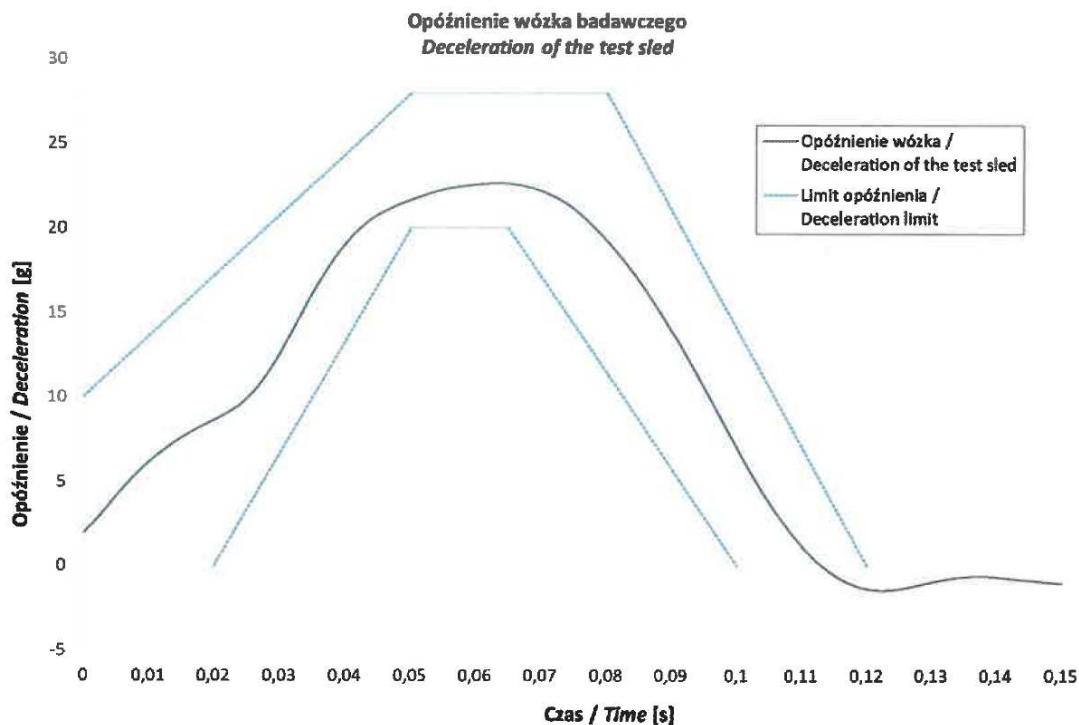
3.2.1 VW T5/T6 – frontal impact

Single swivel and original base vehicle seat fixed inside the vehicle body, positioned front to driving direction.



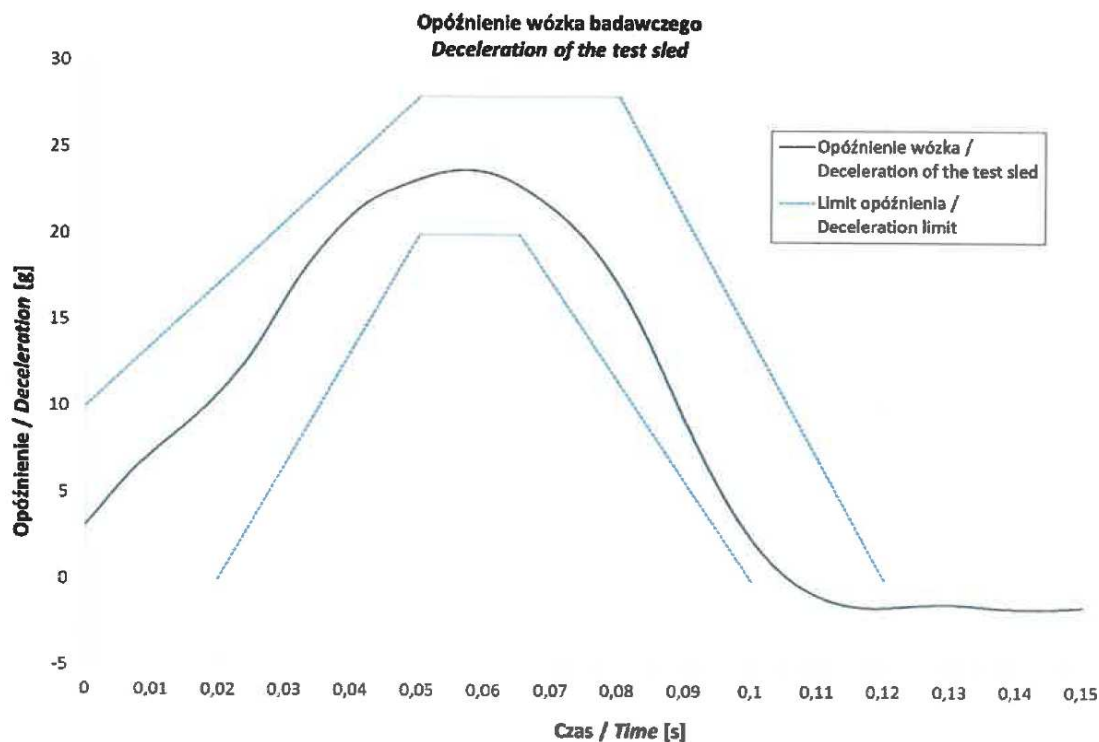
3.4 Test records – diagrams:

3.2.2 MOBIFRAME type OB in representative bodywork – rear impact



3.3.1 VW T5/T6 – frontal impact

Double swivel and seat (original base vehicle bench), fixed in the first row of the vehicle body, positioned front to the driving direction.

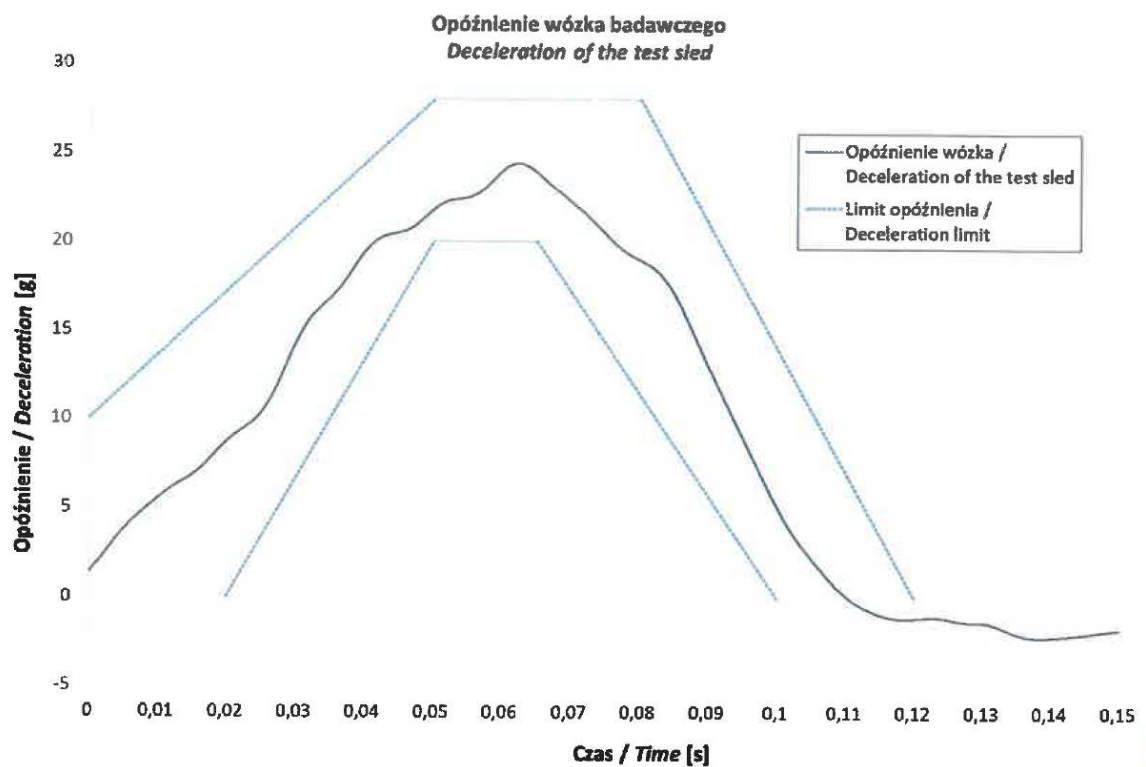


Test report No.: 21-00109-CP-PR-00
Manufacturer: OKB SP. Z O.O., Poland
Type: OB



3.4 Test records – diagrams:

3.3.2 VW T5/T6 – rear impact



4. Place and date of testing

PIMOT Laboratory, Warsaw, Poland

24.08. 2021

02.09. 2021

INFORMATION FOLDER / DOCUMENT:
MOBIFRAME/04/2021-00

PURSUANT TO UN/ECE REGULATIONS
No. 14-09
“UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH
REGARD TO SAFETY-BELT ANCHORAGES”
(as last amended)

FOR THE SEATS EQUIPPED WITH SWIVEL *MOBIFRAME*
TYPE *OB*

No. 17-09
“UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH
REGARD TO THE SEATS, THEIR ANCHORAGES AND ANY HEAD RESTRAINTS”
(as last amended)

FOR THE SEATS EQUIPPED WITH SWIVEL *MOBIFRAME*
TYPE *OB*



Damian Goliński
Vice President

Total number of pages: 21
Date of issue: 12.10.2021



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 1/21

List of documentation and supplements

Confirmation	3
0. General.....	4
1. General construction characteristics of the vehicle	5
9. Bodywork.....	5

List of enclosures

Table of vehicles types	Enclosure 1
Seats and seat belt anchorages	Enclosure 2
Seat anchorages	Enclosure 3



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 2/21

Confirmation

We hereby declare that the vehicle specimens submitted for this approval test have been manufactured and assembled on conditions of ordinary mass production and that they are compatible with the enclosed documentation.

Date of issue: 12th October 2021



.....
Damian Goliński
Vice President



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 3/21

0. GENERAL

0.1 Make (trade name of manufacturer): MOBIFRAME

0.2 Type: OB

Variant/Version:

OB-?

"?" – dedicated for the vehicles:

A – Volkswagen T5, Volkswagen T6 –
single swivel (driver's and/or single
passenger's seat)

D – Volkswagen T5, Volkswagen T6 –
double swivel (double passenger's seat)

0.2.1 Dedicated for vehicle(s): See Enclosure 1

0.4 Category of vehicle: M1, N1, M2, N2

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



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 4/21

1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

- 1.1 Photographs and/or drawings of a representative vehicle: See base vehicle approvals listed in Enclosure 2

9. BODYWORK

- 9.1 Type of bodywork using the codes 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: AC, AF, BB, BX, CA, SA, SH

9.10 Interior arrangement

9.10.3 Seats

- 9.10.3.1 Number of seating positions: 1 or 2 or 3 (driver and/or passenger – single or double)

- 9.10.3.1.1 Location and arrangement: 1st row of seats (in driver's cab)

- 9.10.3.2 Seat(s) designated for use only when the vehicle is stationary: N/A

9.10.3.3 Mass:

Mass of original driver's/passenger seat and base with additional swivel
MOBIFRAME OB – 70 kg (allowable mass in the heaviest configuration)

Vehicle(-s)	Maximum mass of original driver's/passenger seat with base	Mass of additional swivel
Volkswagen T5	40 kg	15 kg – single swivel
Volkswagen T6	40 kg	24 kg – double swivel

Details – see Enclosures

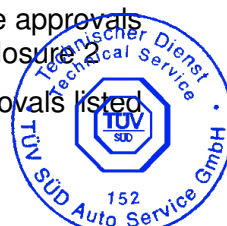
- 9.10.3.4 Characteristics: for seats not type-approved as components, description and drawings of

- 9.10.3.4.1 The seats and their anchorages: See base vehicle approvals listed in Enclosure 2 and Enclosure 3

- 9.10.3.4.2 The adjustment system: See base vehicle approvals listed in Enclosure 2

- 9.10.3.4.3 The displacement and locking systems: See listed base vehicle approvals and description in Enclosure 2

- 9.10.3.4.4 The seat-belt anchorages (if incorporated in the seat structure): See base vehicle approvals listed in Enclosure 2



	Date: 12.10.2021
MOBIFRAME/04/2021-00	Page / pages: 5/21

9.10.3.4.5	The parts of the vehicle used as anchorages:	See base vehicle approvals listed in Enclosure 2
9.10.3.5	Coordinates or drawing of the R-point	
9.10.3.5.1	Driver's seat:	See base vehicle approvals listed in Enclosure 2
9.10.3.5.2	All other seating positions:	See base vehicle approvals listed in Enclosure 2
9.10.3.6	Design torso angle	
9.10.3.6.1	Driver's seat:	See base vehicle approvals listed in Enclosure 2
9.10.3.6.2	All other seating positions:	See base vehicle approvals listed in Enclosure 2
9.10.3.7	Range of seat adjustment	
9.10.3.7.1	Driver's seat:	See base vehicle approvals listed in Enclosure 2
9.10.3.7.2	All other seating positions:	See base vehicle approvals listed in Enclosure 2
9.10.4.	Head restraints	
9.10.4.1.	Type(s) of head restraints:	See base vehicle approvals listed in Enclosure 2
9.10.4.2.	Type-approval number(s), if available:	See base vehicle approvals listed in Enclosure 2
9.10.4.3.	For head restraints not yet approved	See base vehicle approvals listed in Enclosure 2
9.13	Safety belt anchorages	
9.13.1	Photographs and/or drawings of the bodywork showing the position and dimensions of the actual and effective anchorages including the R-points:	See base vehicle approvals listed in Enclosure 2 and Enclosure 3
9.13.2	Drawings of the belt anchorages and parts of the vehicle structure where they are attached (with the material indication):	See base vehicle approvals listed in Enclosure 2



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 6/21

- 9.13.3 Designation of the types of safety belt authorised for fitting to the anchorages with which the vehicle is equipped:

	Anchorage location	
	Vehicle structure	Seat structure
First row of seats	See base vehicle approvals listed in Enclosure 2	See base vehicle approvals listed in Enclosure 2

- 9.13.4 Description of a particular type of safety belt where an anchorage is located in the seat backrest or incorporates an energy dissipating device: See base vehicle approvals listed in Enclosure 2



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 7/21

Enclosure 1: TABLE OF VEHICLES TYPES

Manufacturer	Commercial description / Type	Wheelbase
VW	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6, T6.1 (7H_, 7E_, 7J_)	3000, 3400



		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 8/21

Enclosure 2: SEATS AND SEATBELTS ANCHORAGES

Driver's and passenger seat is equipped with additional swivel, which allows to lock the seat in forward- or rearward-facing direction (180 degrees). Single swivel is mounted between original driver's/passenger seat and seat base. Double swivel is mounted between original passenger seat base and vehicle floor. Details of seat and base construction in type approvals according to ECE R14 and ECE R17 presented table below.

Vehicle(-s)	Number of type approval according to (1 st stage of production)		Max mass of original driver's/passenger seat with base
	ECE R14	ECE R17	
Volkswagen T5 Volkswagen T6	E4 14R 070097	E4 17RA 080112	40 kg

Swivel can be locked only in forward-facing direction when the vehicle is in motion and in forward- or rearward-facing direction when the vehicle is stationary.

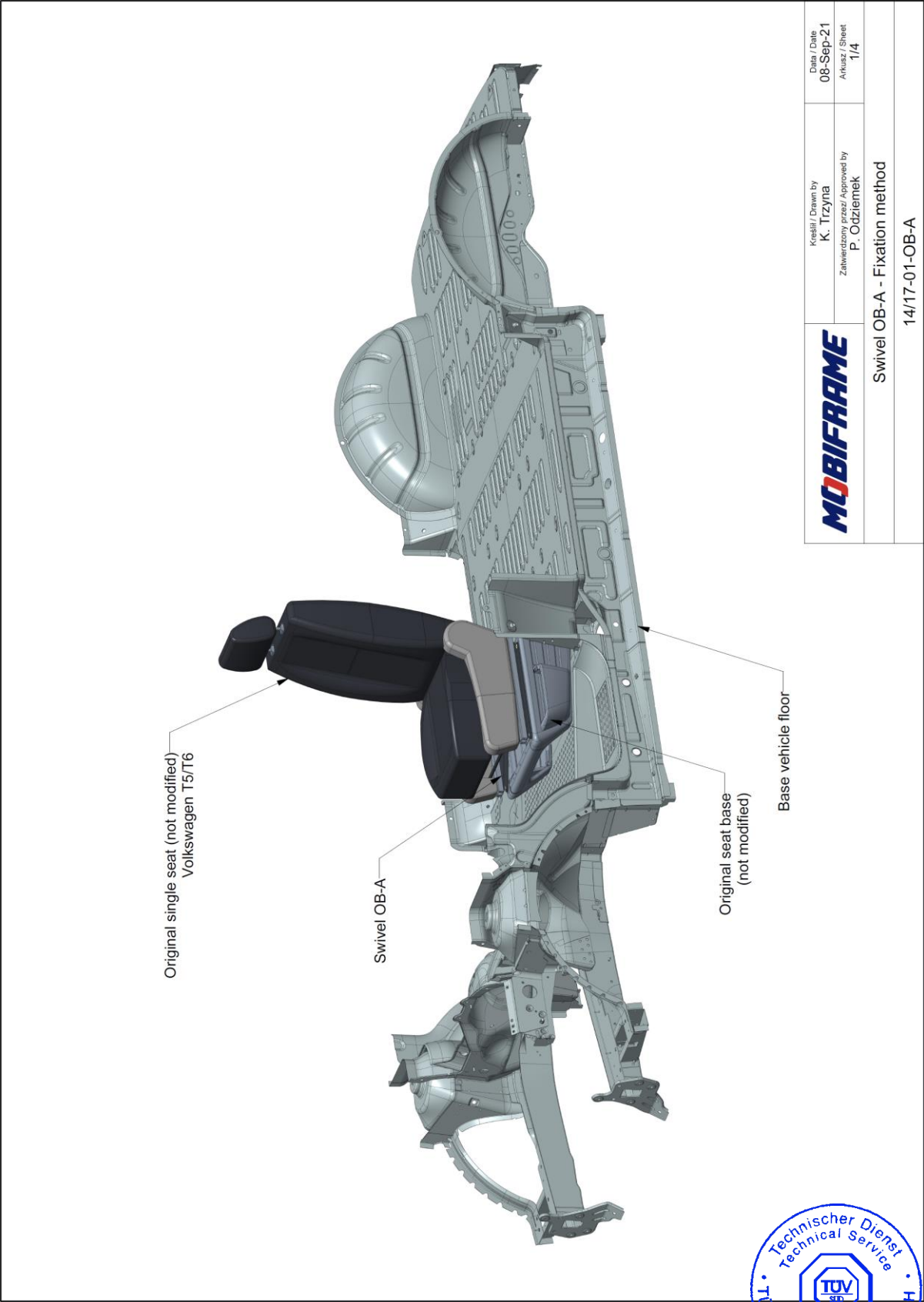
Anchorage points of seats to the vehicle floor are the same both before and after swivel installation.

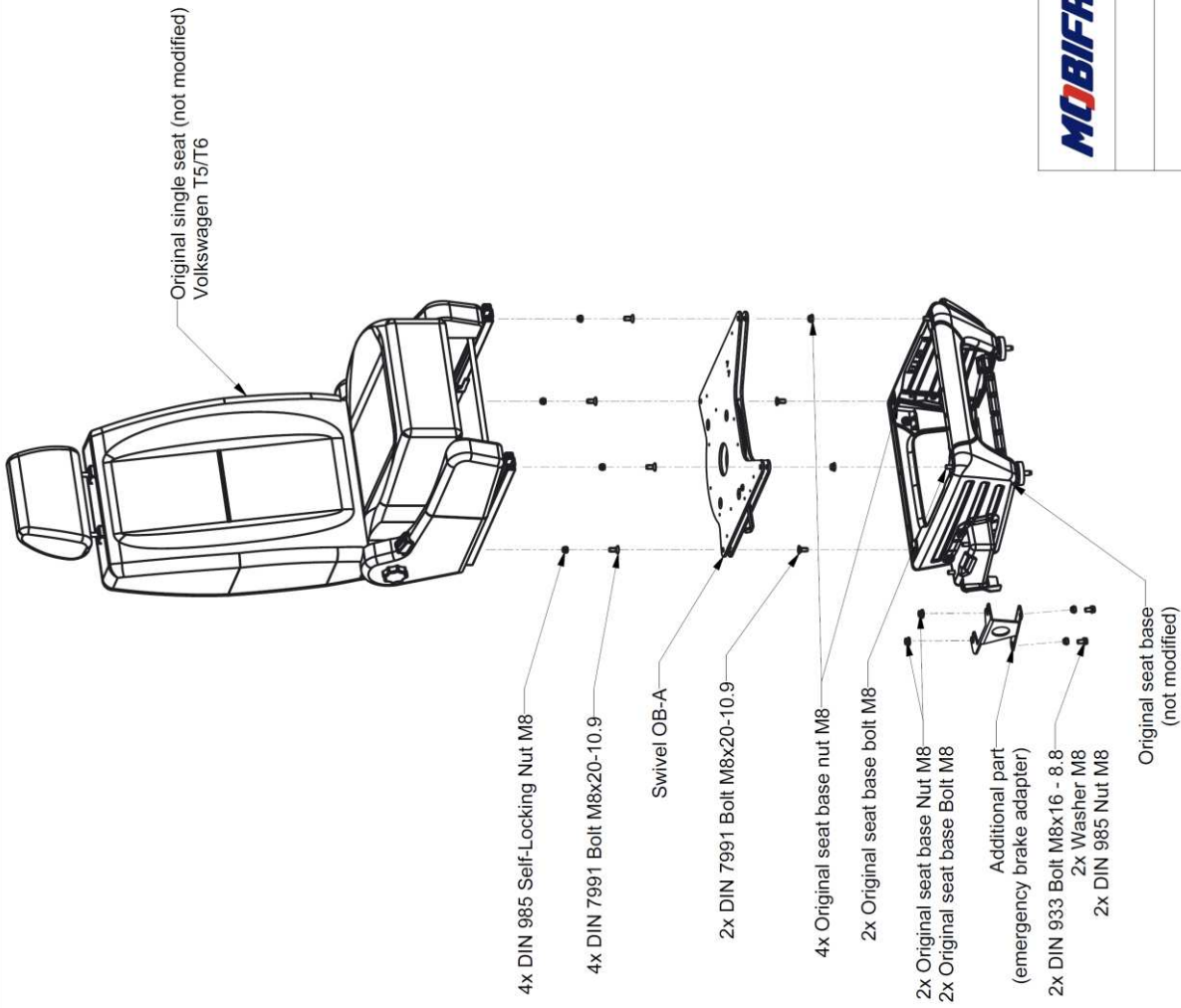


		Date: 12.10.2021
	MOBIFRAME/04/2021-00	Page / pages: 9/21

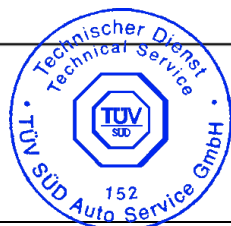
Enclosure 3: SEAT ANCHORAGES

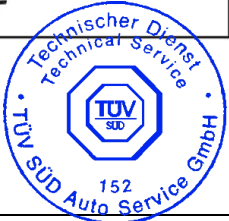
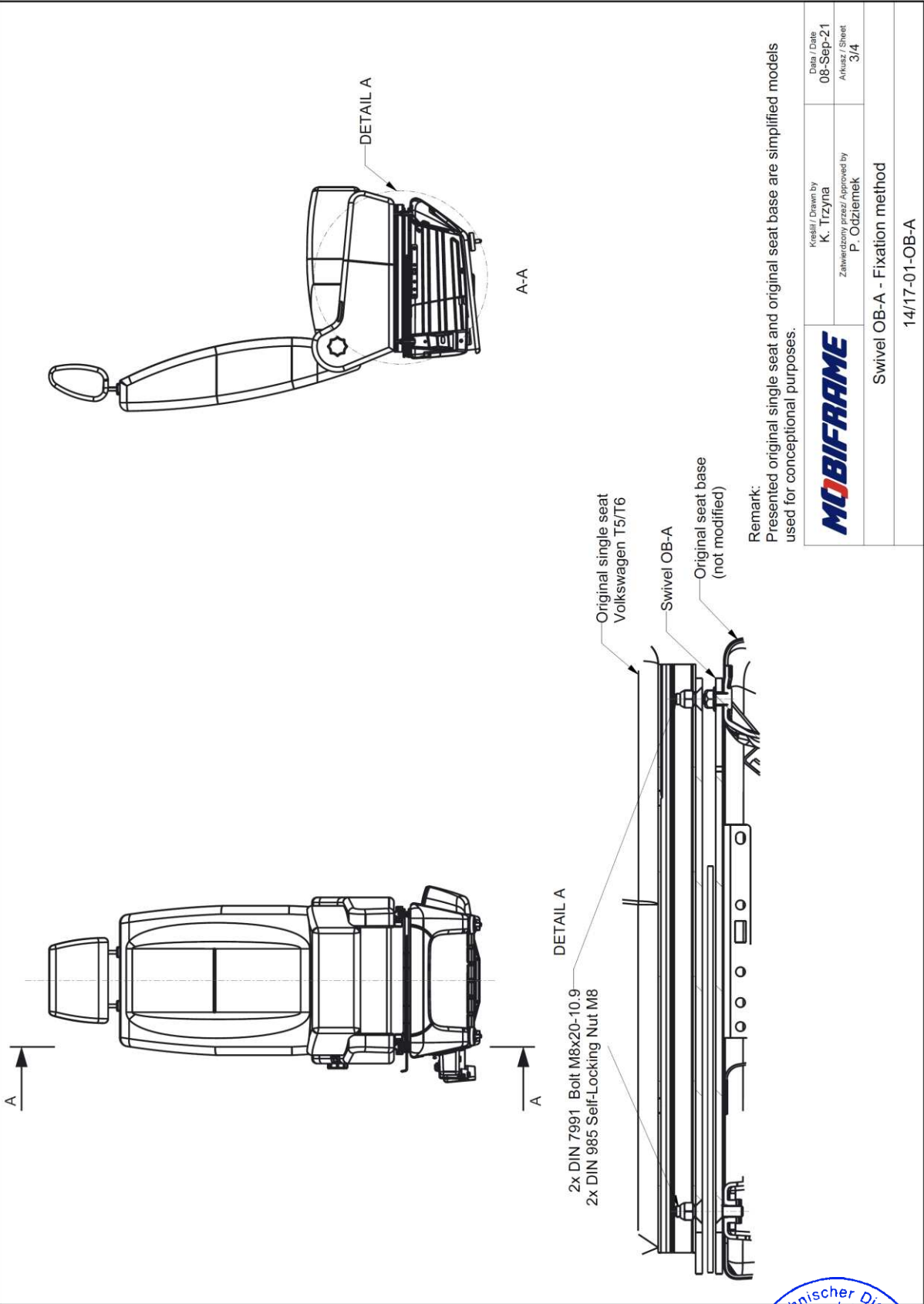
Single swivel – driver's and/or passenger single seat

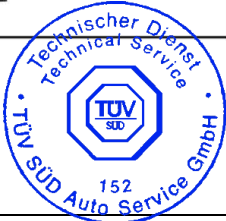
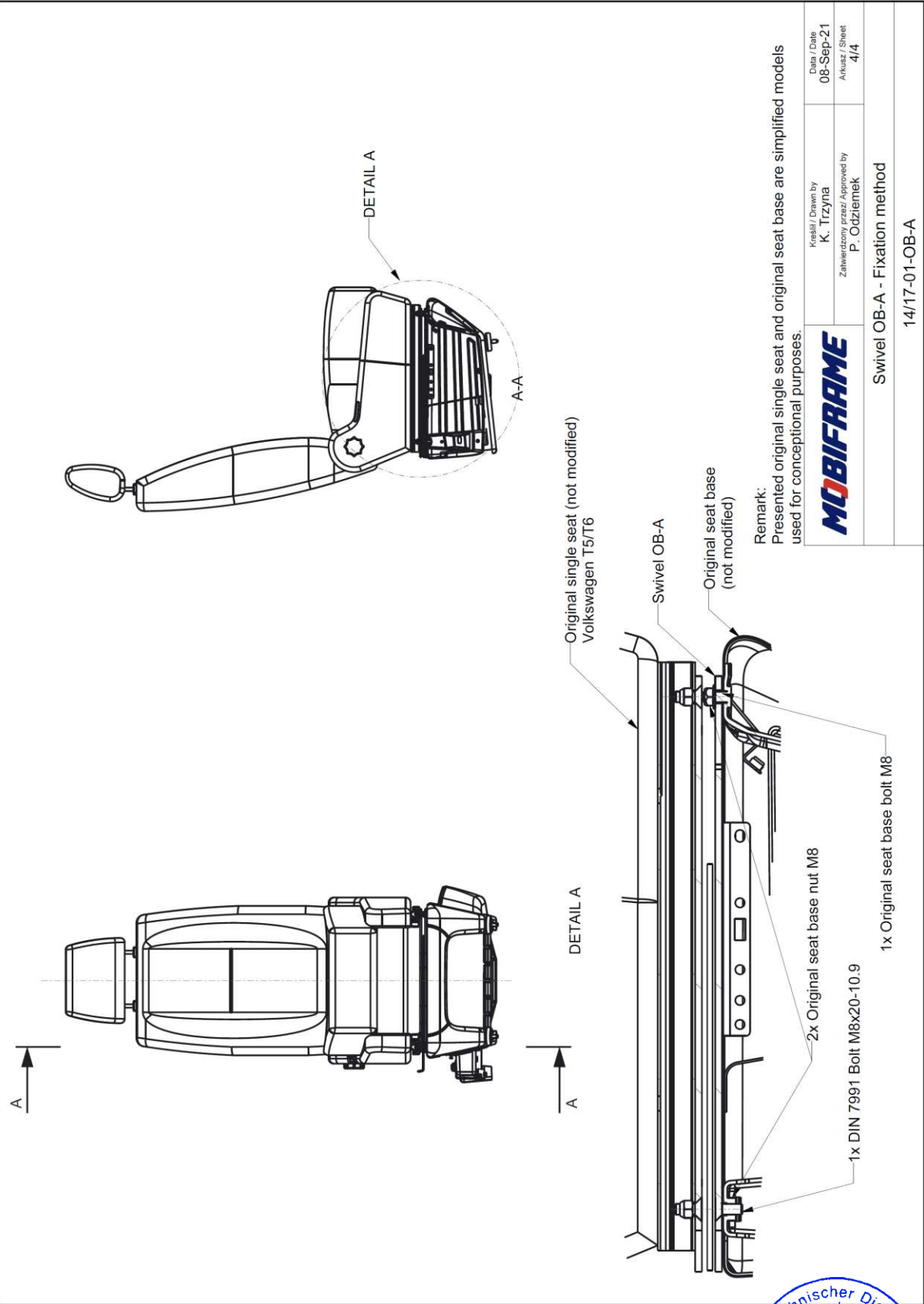




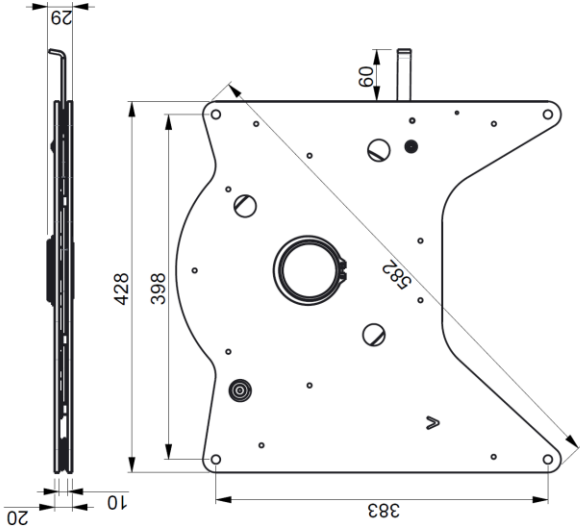
Kreslilo / Drawn by K. Trzyna	Data / Date 08-Sep-21
Zatwierdzony przez / Approved by P. Odziemek	Arkusz / Sheet 2/4
Swivel OB-A - Fixation method	
14/17-01-OB-A	



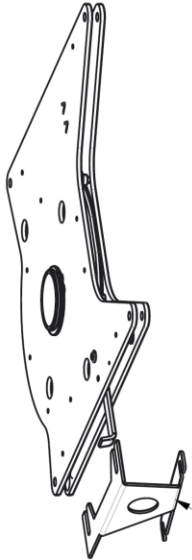




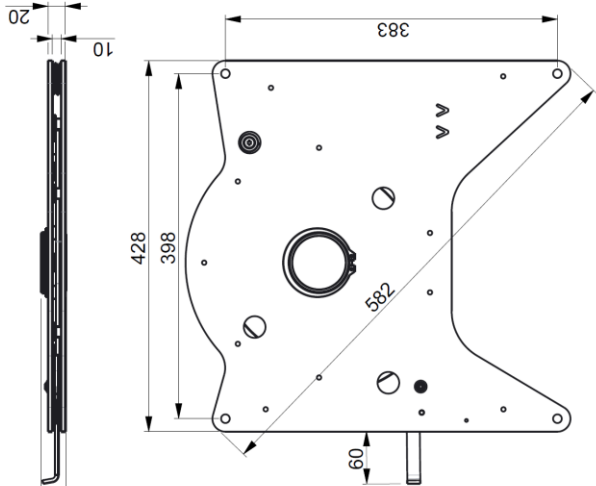
Passenger seat swivel



Driver's seat swivel



Optional additional part



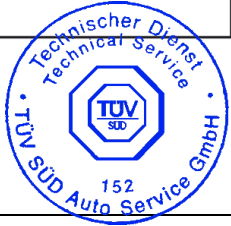
MOBIFRAME

Kreślił / Drawn by
K. Trzyna
Zatwierdzony przez / Approved by
L. Walczak

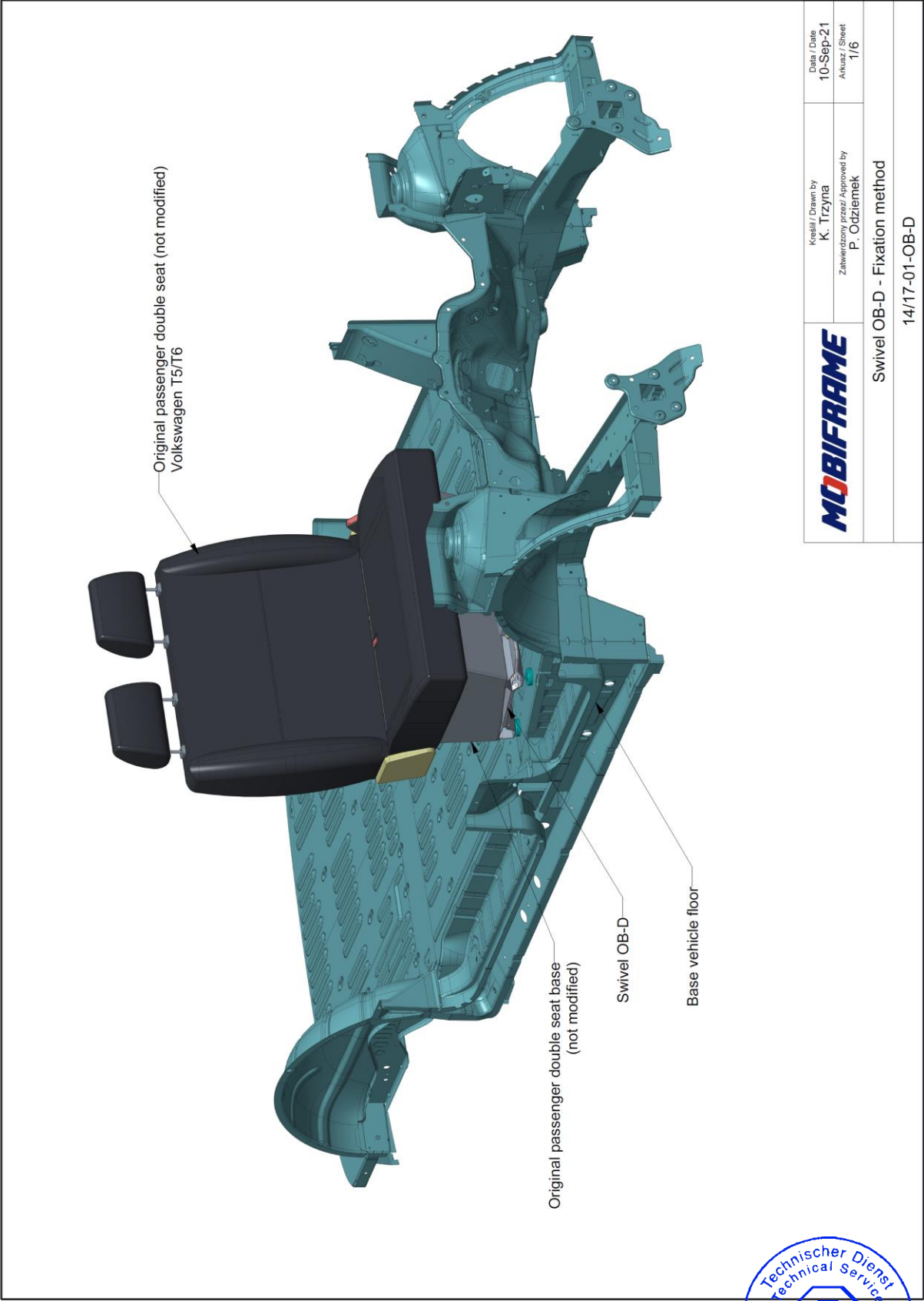
Data / Date
13-Aug-21
Arkusz / Sheet
1/1

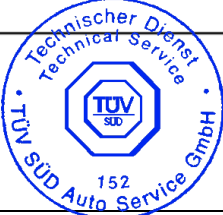
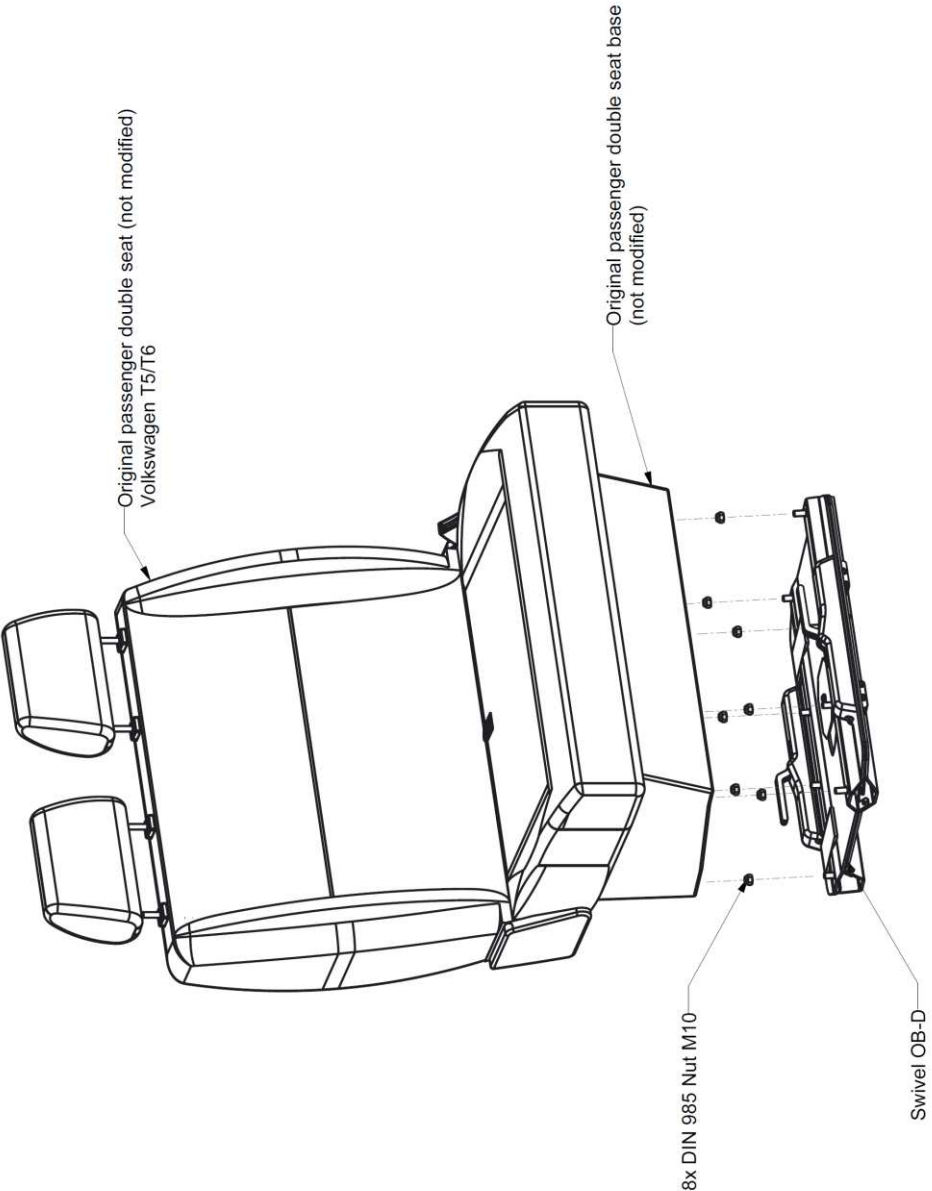
Driver's and passenger swivel for Volkswagen T5 and T6

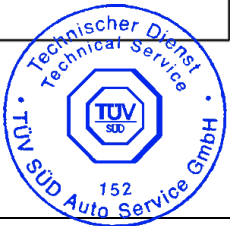
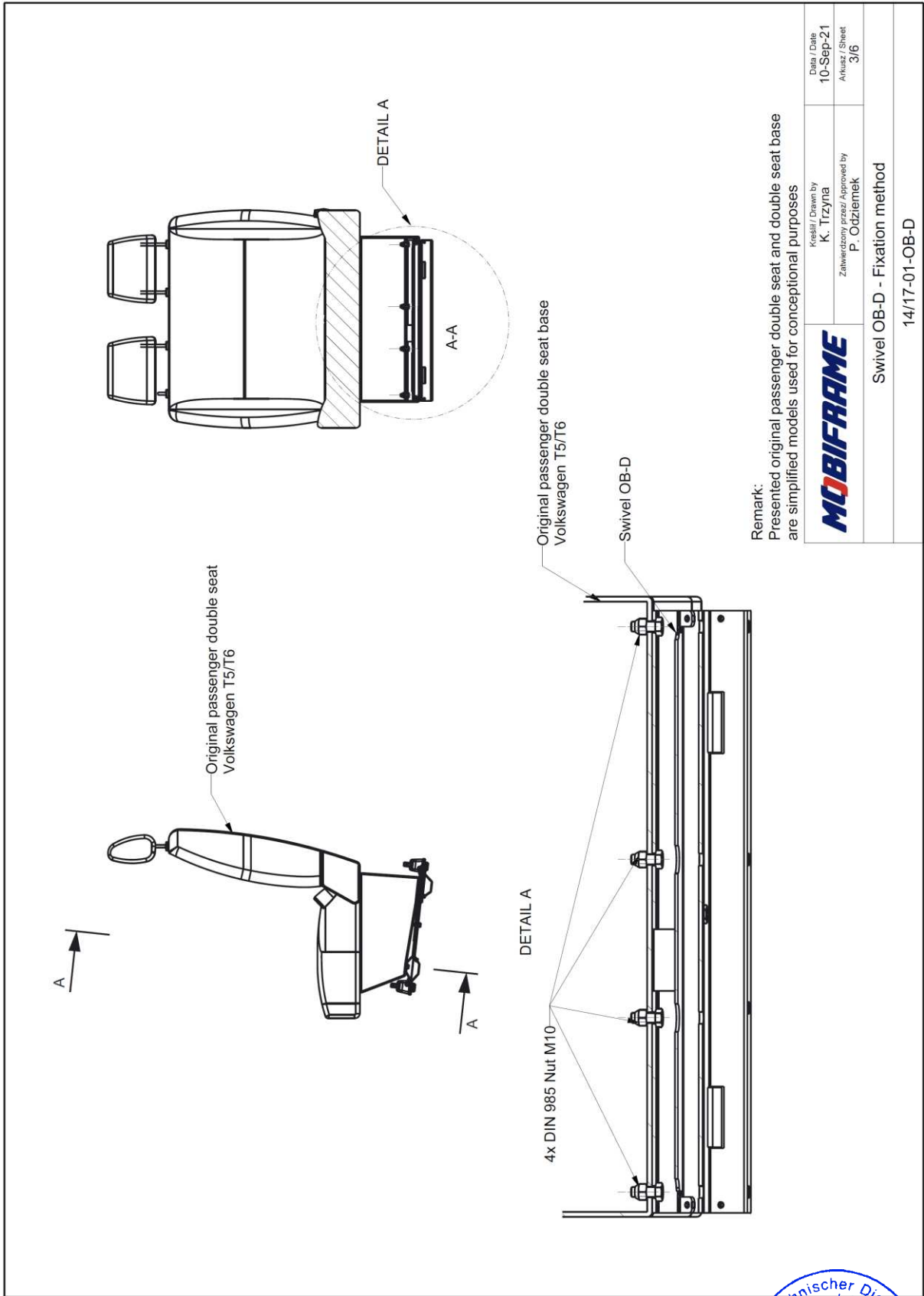
14/17-02-OB-A

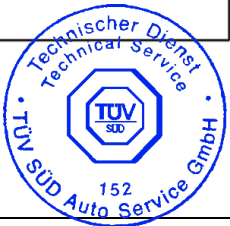
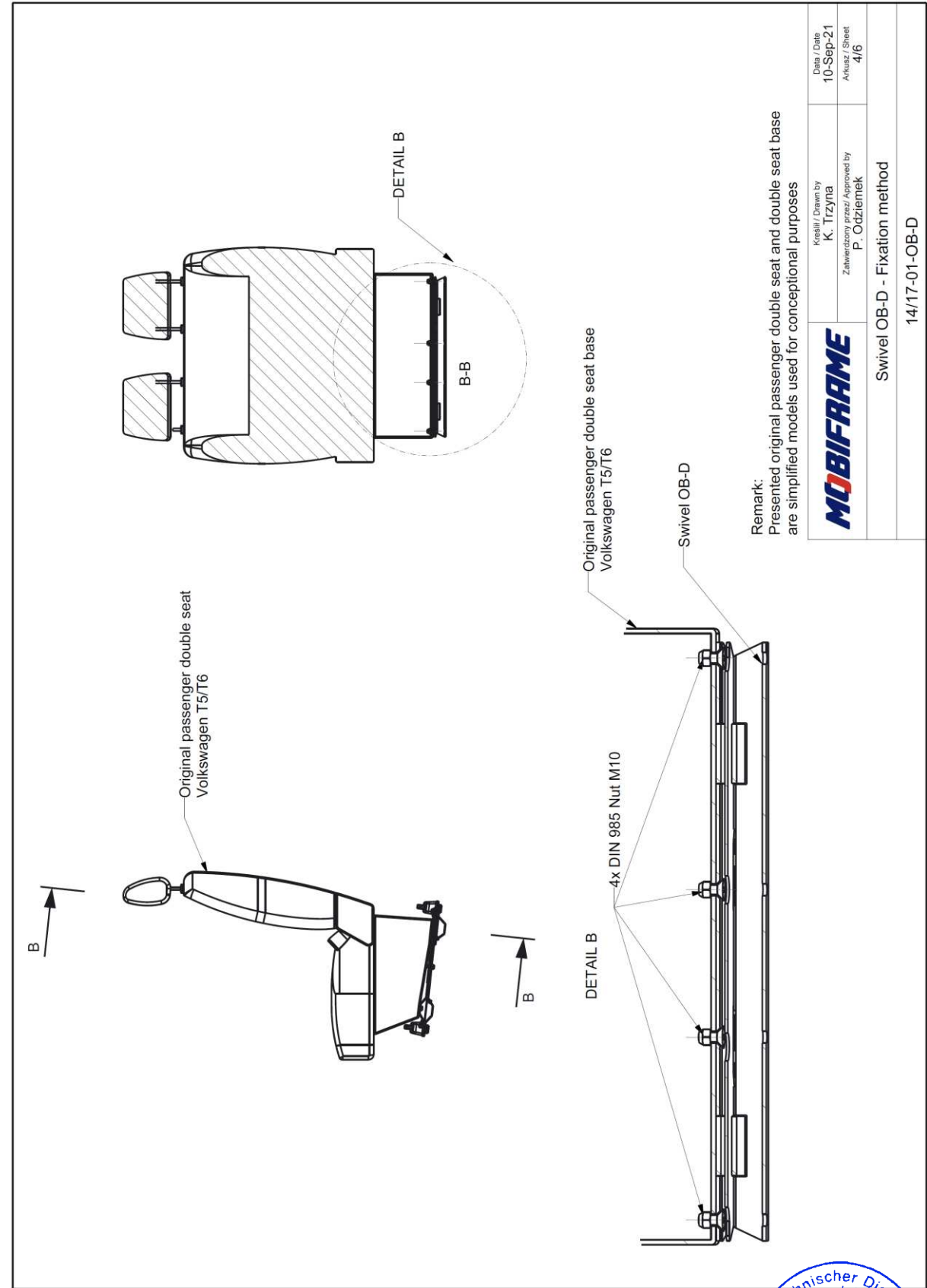


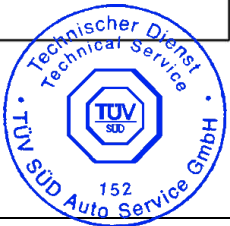
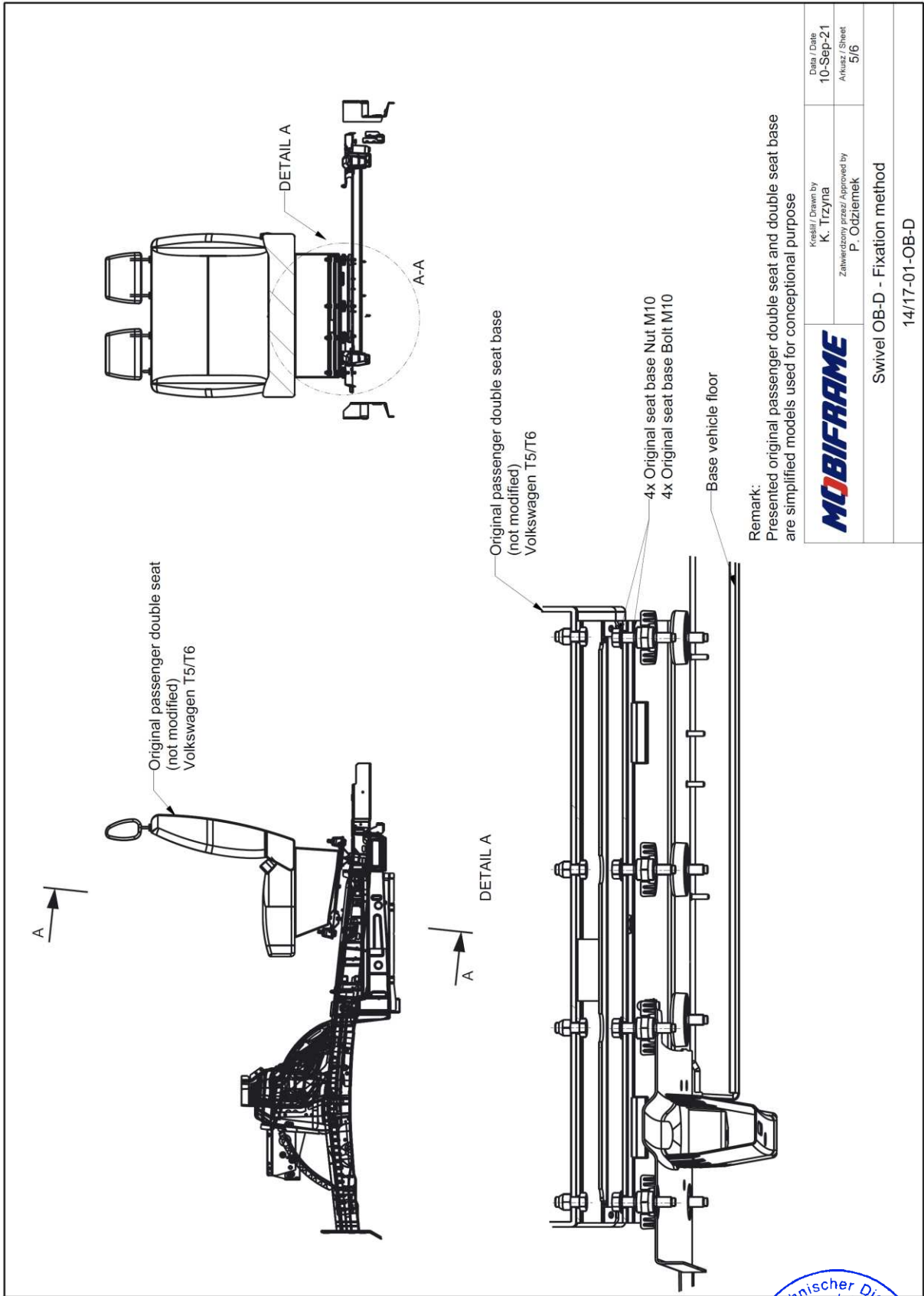
Double swivel – passenger seat

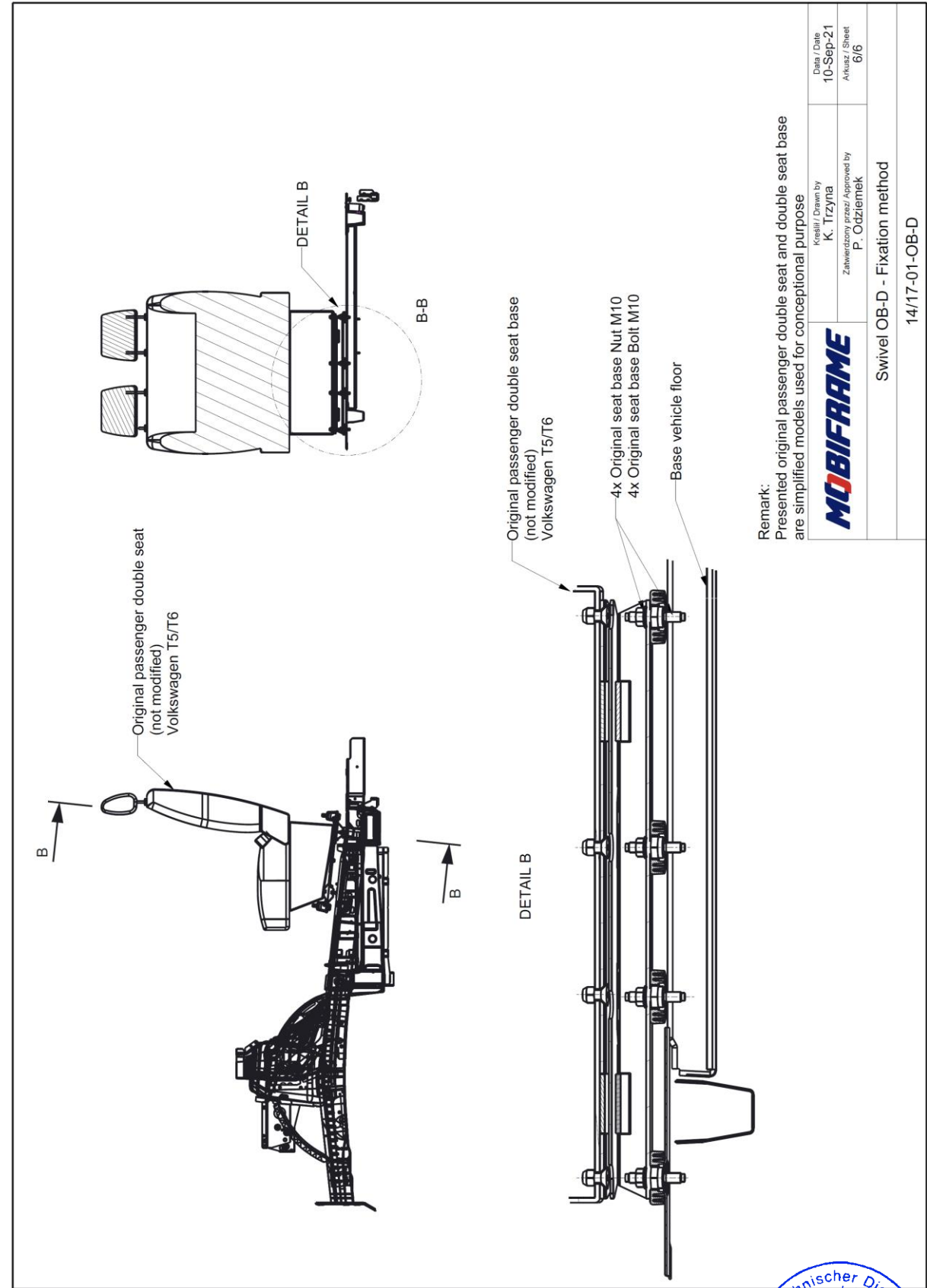






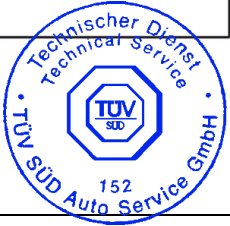


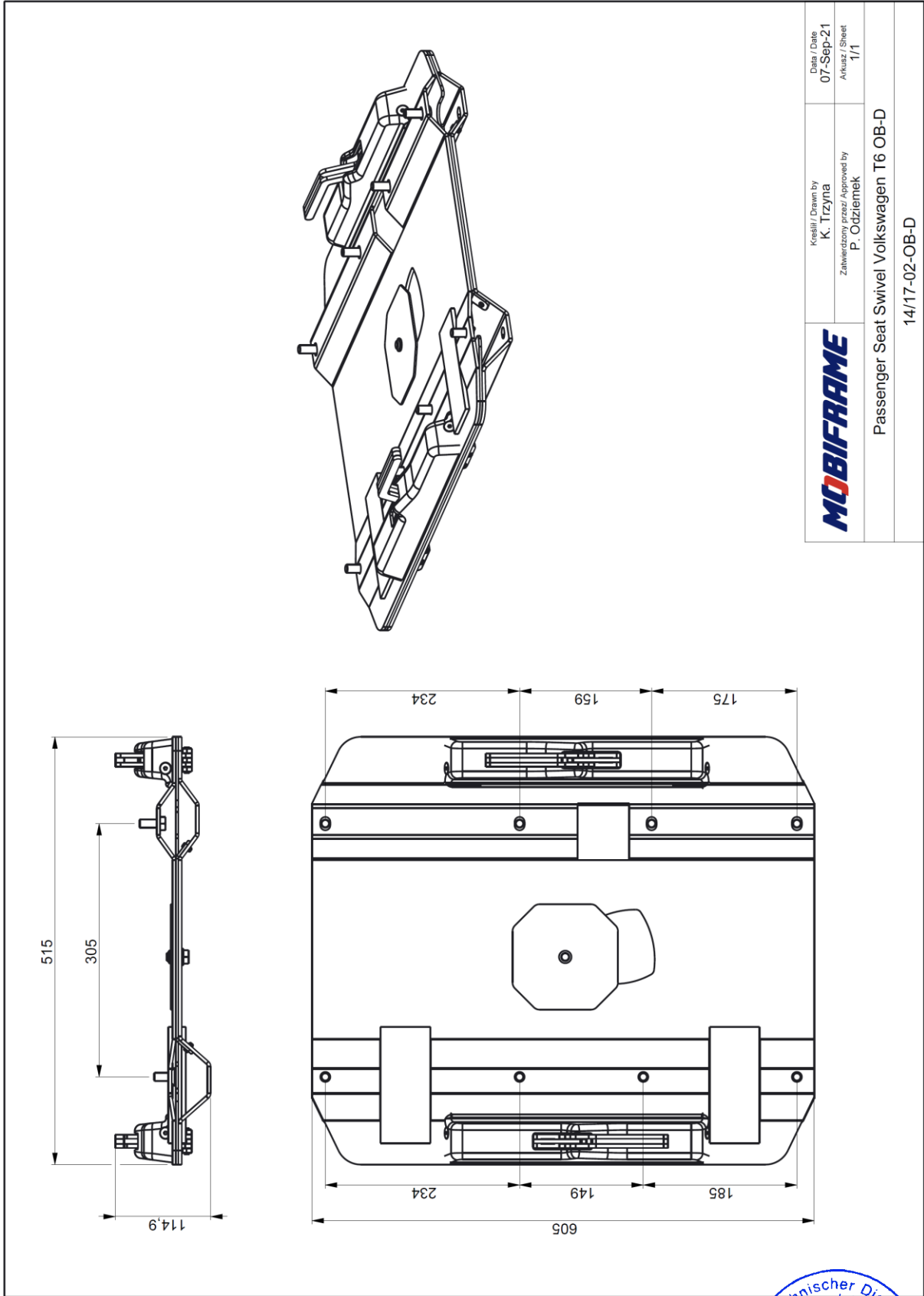




Remark:
Presented original passenger double seat and double seat base
are simplified models used for conceptual purpose

MOBIFRAME	Kreslil / Drawn by K. Trzyna	Data / Date 10-Sep-21
	Zatwierdzony przez / Approved by P. Odziemek	Aktualiz / Sheet 6/6
Swivel OB-D - Fixation method		
14/17-01-OB-D		





MOBIFRAME

Kreślił / Drawn by
K. Trzyna
Zatwierdził przez / Approved by
P. Odziemek

Data / Date
07-Sep-21
Arkusz / Sheet
1/1

Passenger Seat Swivel Volkswagen T6 OB-D

14/17-02-OB-D

